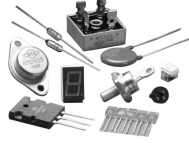




## Integrated Circuits



| Part Number | Description  |
|-------------|--|
| NTE4001B    | IC-CMOS, Quad 2-Input NOR Gate   |
| NTE4001BT   | IC-CMOS, Quad 2-Input NOR Gate (Surface Mount)   |
| NTE4002B    | IC-CMOS, Dual 4-Input NOR Gate   |
| NTE4002BT   | IC-CMOS, Dual 4-Input NOR Gate (Surface Mount)   |
| NTE4006B    | IC-CMOS, 18-Stage Static Shift Register  |
| NTE4007     | IC-CMOS, Dual Complementary Pair Plus Inverter   |
| NTE4007T    | IC-CMOS, Dual Complementary Pair Plus Inverter (Surface Mount)   |
| NTE4008B    | IC-CMOS, 4-Bit Full Adder w/Parallel Carry Out   |
| NTE4009     | IC-CMOS, Hex Buffer/Converter (Inverting)  |
| NTE40098B   | IC-CMOS, Hex 3-State Buffer (Inverting)  |
| NTE40100B   | IC-CMOS, 32-Stage Static Shift Left/Right, Shift Register  |
| NTE40106B   | IC-CMOS, Hex Schmitt Trigger   |
| NTE40106BT  | IC-CMOS, Hex Schmitt Trigger (Surface Mount)   |
| NTE4011B    | IC-CMOS, Quad 2-Input NAND Gate  |
| NTE4011BT   | IC-CMOS, Quad 2-Input NAND Gate (Surface Mount)  |
| NTE4012B    | IC-CMOS, Dual 4-Input NAND Gate  |
| NTE4012BT   | IC-CMOS, Dual 4-Input NAND Gate (Surface Mount)  |
| NTE4013B    | IC-CMOS, Dual D Type Flip-Flop   |
| NTE4013BT   | IC-CMOS, Dual D Type Flip-Flop (Surface Mount)   |
| NTE4014B    | IC-CMOS, 8-Stage Shift Register Synchronous Parallel or Serial Input/Serial Output                           |
| NTE4015B    | IC-CMOS, Dual 4-Stage Static Shift Register w/Serial Input/Parallel Output                                   |
| NTE4015BT   | IC-CMOS, Dual 4-Stage Static Shift Register w/Serial Input/Parallel Output (Surface Mount)                   |
| NTE40160B   | IC-CMOS, Synchronous Programmable 4-Bit BCD Counter w/Asynchronous Clear                                     |
| NTE40161B   | IC-CMOS, Synchronous Programmable 4-Bit Binary Counter w/Asynchronous Clear                                  |
| NTE40162B   | IC-CMOS, Synchronous Programmable 4-Bit BCD Counter w/Synchronous Clear                                      |
| NTE40163B   | IC-CMOS, Synchronous Programmable 4-Bit BCD Counter w/Synchronous Clear                                      |
| NTE4016B    | IC-CMOS, Quad Bilateral Switch for Transmission or Multiplexing of Analog or Digital Signals                 |
| NTE4016BT   | IC-CMOS, Quad Bilateral Switch for Transmission or Multiplexing of Analog or Digital Signals (Surface Mount) |
| NTE40174B   | IC-CMOS, Hex D-Type Flip-Flop  |
| NTE40174BT  | IC-CMOS, Hex D-Type Flip-Flop (Surface Mount)  |



## Integrated Circuits (cont.)

| Part Number | Description  |
|-------------|--|
| NTE40175B   | IC-CMOS, Quad D-Type Flip-Flop   |
| NTE4017B    | IC-CMOS, Decade Counter w/10 Decoder Outputs   |
| NTE40182B   | IC-CMOS, Look Ahead Carry Generator  |
| NTE4018B    | IC-CMOS, Presettable Divide-By-"N" Counter   |
| NTE4019B    | IC-CMOS, Quad AND/OR Select Gate   |
| NTE40192B   | IC-CMOS, Presettable Up/Down BCD Counter, Dual Clock w/Reset   |
| NTE40193B   | IC-CMOS, Presettable Up/Down Binary Counter, Dual Clock w/Reset  |
| NTE40194B   | IC-CMOS, 4-Bit Bidirectional Universal Shift Register w/Asynchronous Master/Reset  |
| NTE40195B   | IC-CMOS, 4-Bit Shift Register  |
| NTE4020B    | IC-CMOS, 14-Stage Ripple-Carry Binary Counter/Divider  |
| NTE4020BT   | IC-CMOS, 14-Stage Ripple-Carry Binary Counter/Divider (Surface Mount)  |
| NTE4021B    | IC-CMOS, 8-Stage Static Shift Register Asynchronous Parallel Input or Synchronous Serial Input/Serial Output                 |
| NTE4021BT   | IC-CMOS, 8-Stage Static Shift Register Asynchronous Parallel Input or Synchronous Serial Input/Serial Output (Surface Mount) |
| NTE4022B    | IC-CMOS, Octal Counter/Divider w/8 Decoded Outputs   |
| NTE4023B    | IC-CMOS, Triple 3-Input NAND Gate  |
| NTE4023BT   | IC-CMOS, Triple 3-Input NAND Gate (Surface Mount)  |
| NTE4024B    | IC-CMOS, 7-Stage Ripple-Carry Binary Counter/Divider   |
| NTE4025B    | IC-CMOS, Triple 3-Input NOR Gate   |
| NTE4025BT   | IC-CMOS, Triple 3-Input NOR Gate (Surface Mount)   |
| NTE4026B    | IC-CMOS, Decade Counter/Divider w/Decoded Seven-Segment Display Outputs and Display Enable                                   |
| NTE4027B    | IC-CMOS, Dual J-K Master-Slave Flip-Flop   |
| NTE4027BT   | IC-CMOS, Dual J-K Master-Slave Flip-Flop (Surface Mount)   |
| NTE4028B    | IC-CMOS, BCD-to-Decimal Decoder  |
| NTE4028BT   | IC-CMOS, BCD-to-Decimal Decoder (Surface Mount)  |
| NTE4029B    | IC-CMOS, Presettable Up/Down Counter, Binary or BCD Decade Decoder   |
| NTE4029BT   | IC-CMOS, Presettable Up/Down Counter, Binary or BCD Decade Decoder (Surface Mount)   |
| NTE4030B    | IC-CMOS, Quad Exclusive OR Gate  |
| NTE4031B    | IC-CMOS, 64-Stage Static Shift Register  |
| NTE4032B    | IC-CMOS, Triple Serial Positive Logic Adder  |
| NTE4033B    | IC-CMOS, Decade Counter/Divider w/Decoded Seven-Segment Display Outputs and Ripple Blanking                                  |
| NTE4034B    | IC-CMOS, 8-Stage Static Bi-Directional Parallel/Serial Input/Output Bus Register   |
| NTE4035B    | IC-CMOS, 4-Stage Parallel In/Parallel Out Shift Register w/J-K Serial Input and True Complement Output                       |
| NTE4038B    | IC-CMOS, Triple Serial Negative Logic Adder  |
| NTE4040B    | IC-CMOS, 12-Stage Ripple-Carry Binary Counter/Divider  |



# Semiconductors



## Integrated Circuits (cont.)

| Part Number | Description   |
|-------------|---|
| NTE4040BT   | IC-CMOS, 12-Stage Ripple-Carry Binary Counter/Divider (Surface Mount)               |
| NTE4041     | IC-CMOS, Quad True/Complement Buffer  |
| NTE4042B    | IC-CMOS, Quad, Clocked D-Type Latch   |
| NTE4042BT   | IC-CMOS, Quad, Clocked D-Type Latch (Surface Mount)                                 |
| NTE4043B    | IC-CMOS, Quad, 3-State NOR R/S Latch  |
| NTE4043BT   | IC-CMOS, Quad, 3-State NOR R/S Latch (Surface Mount)                                |
| NTE4044B    | IC-CMOS, Quad 3-State NAND R/S Latch  |
| NTE4044BT   | IC-CMOS, Quad 3-State NAND R/S Latch (Surface Mount)                                |
| NTE4045B    | IC-CMOS, 21-Stage Counter   |
| NTE4045BT   | IC-CMOS, 21-Stage Counter (Surface Mount)   |
| NTE4046B    | IC-CMOS, Phase-Lock Loop (PLL)  |
| NTE4046BT   | IC-CMOS, Phase-Lock Loop (PLL) (Surface Mount)                                      |
| NTE4047B    | IC-CMOS, Low-Power Monostable/Astable Multivibrator                                 |
| NTE4047BT   | IC-CMOS, Low-Power Monostable/Astable Multivibrator (Surface Mount)                 |
| NTE4048B    | IC-CMOS, Multi-Function Expandable 8-Input Gate                                     |
| NTE4049     | IC-CMOS, Hex Buffer/Converter, Inverting  |
| NTE4049T    | IC-CMOS, Hex Buffer/Converter, Inverting (Surface Mount)                            |
| NTE4050B    | IC-CMOS, Hex Buffer/Converter, Non-Inverting  |
| NTE4050BT   | IC-CMOS, Hex Buffer/Converter, Non-Inverting (Surface Mount)                        |
| NTE4051B    | IC-CMOS, Analog, Single 8-Channel Multiplexer/Demultiplexer                         |
| NTE4051BT   | IC-CMOS, Analog, Single 8-Channel Multiplexer/Demultiplexer (Surface Mount)         |
| NTE4052B    | IC-CMOS, Analog, Differential 4-Channel Multiplexer                                 |
| NTE4052BT   | IC-CMOS, Analog, Differential 4-Channel Multiplexer                                 |
| NTE4053B    | IC-CMOS, Triple 2-Channel Analog Multiplexer  |
| NTE4053BT   | IC-CMOS, Triple 2-Channel Analog Multiplexer (Surface Mount)                        |
| NTE4055B    | IC-CMOS, BCD-to-7 Segment Decoder/Driver w/"Display-Frequency" Output               |
| NTE4056B    | IC-CMOS, BCD-to-7-Segment Decoder/Divider w/Strobed Latch Function                  |
| NTE4060B    | IC-CMOS 14-Stage Ripple-Carry Binary Counter/Divider and Oscillator                 |
| NTE4060BT   | IC-CMOS 14-Stage Ripple-Carry Binary Counter/Divider and Oscillator (Surface Mount) |
| NTE4063B    | IC-CMOS, 4-Bit Magnitude Comparator (High-Voltage Type)                             |
| NTE4066B    | IC-CMOS, Quad Bilateral Switch  |
| NTE4066BT   | IC-CMOS, Quad Bilateral Switch (Surface Mount)                                      |
| NTE4067B    | IC-CMOS, Analog, Single 16-Channel Multiplexer/Demultiplexer                        |
| NTE4068B    | IC-CMOS, 8-Input NAND/AND Gate (High Voltage Type)                                  |
| NTE4068BT   | IC-CMOS, 8-Input NAND/AND Gate (High Voltage Type)                                  |
| NTE4069     | IC-CMOS, Hex Inverter (High Voltage Type)   |

## Integrated Circuits (cont.)

| Part Number | Description   |
|-------------|---|
| NTE4069T    | IC-CMOS, Hex Inverter (High Voltage Type) (Surface Mount)   |
| NTE4070B    | IC-CMOS, Quad Exclusive OR Gate   |
| NTE4070BT   | IC-CMOS, Quad Exclusive OR Gate (Surface Mount)   |
| NTE4071B    | IC-CMOS, Quad 2-Input OR Gate   |
| NTE4071BT   | IC-CMOS, Quad 2-Input OR Gate (Surface Mount)   |
| NTE4072B    | IC-CMOS, Dual 4-Input OR Gate   |
| NTE4073B    | IC-CMOS, Triple 3-Input AND Gate  |
| NTE4073BT   | IC-CMOS, Triple 3-Input AND Gate (Surface Mount)  |
| NTE4075B    | IC-CMOS, Triple 3-Input AND Gate (Surface Mount)  |
| NTE4075BT   | IC-CMOS, Triple 3-Input OR Gate   |
| NTE4076B    | IC-CMOS, 4-Bit D-Type Register (High Voltage Type)  |
| NTE4077B    | IC-CMOS, Quad Exclusive NOR Gate  |
| NTE4077BT   | IC-CMOS, Quad Exclusive NOR Gate (Surface Mount)  |
| NTE4078B    | IC-CMOS, 8-Input NOR Gate   |
| NTE4081B    | IC-CMOS, Quad 2-Input AND Gate  |
| NTE4082B    | IC-CMOS, Dual 4-Input AND Gate  |
| NTE4085B    | IC-CMOS, Dual 2-Wide, 2-Input AND/OR Invert Gate  |
| NTE4086B    | IC-CMOS, Expandable 4-Wide, 2-Input AND/OR Invert Gate  |
| NTE4089B    | IC-CMOS, Binary Rte Multiplier  |
| NTE4093B    | IC-CMOS, Quad 2-Input NAND Schmitt Trigger  |
| NTE4093BT   | IC-CMOS, Quad 2-Input NAND Schmitt Trigger (Surface Mount)  |
| NTE4094B    | IC-CMOS, 8-Stage Shift and Storage Bus Register   |
| NTE4094BT   | IC-CMOS, 8-Stage Shift and Storage Bus Register (Surface Mount)   |
| NTE4095B    | IC-CMOS, Gated J-K Master/Slave Flip-Flop w/Set-Reset Capability Non-Inverting J and K Inputs               |
| NTE4096B    | IC-CMOS, Gated J-K Master/Slave Flip-Flop w/Set-Reset Capability Inverting and Non-Inverting J and K Inputs |
| NTE4097B    | IC-CMOS, Analog, Differential 8-Channel Multiplexer/Demultiplexer   |
| NTE4098B    | IC-CMOS, Dual Monostable Multivibrator  |
| NTE4099B    | IC-CMOS, 8-Bit Addressable Latch  |
| NTE4164     | IC-NMOS, 64K Dynamic RAM, 150ns   |
| NTE4256     | IC-NMOS, 256K Dynamic RAM, 100ns  |
| NTE4501     | IC-CMOS, Dual 4-Input NAND Gate, 2-Input NOR/OR Gate, 8-Input AND/NAND Gate                                 |
| NTE4503B    | IC-CMOS, Hex 3-State Non-Inverting Buffer   |
| NTE4510B    | IC-CMOS, Presettable UP/Down BCD Counter  |
| NTE4510BT   | IC-CMOS, Presettable UP/Down BCD Counter (Surface Mount)  |
| NTE4511B    | IC-CMOS, BCD-to-Seven-Segment Latch Decoder Driver  |
| NTE4511BT   | IC-CMOS, BCD-to-Seven-Segment Latch Decoder Driver (Surface Mount)  |
| NTE4512B    | IC-CMOS, 8-Channel Data Selector  |





## Integrated Circuits (cont.)

| Part Number | Description  |
|-------------|--|
| NTE4513B    | IC-CMOS, BCD-to-Seven-Segment Latch Decoder Driver                             |
| NTE4514B    | IC-CMOS, 4-Bit Latch/4-to-16 Decoder Line (Output "High" on Select)            |
| NTE4515B    | IC-CMOS, 4-Bit Latch/4-to-16 Line Decoder (Output "Low" on Select)             |
| NTE4516B    | IC-CMOS, Presetable UP/Down Binary Counter                                     |
| NTE4517B    | IC-CMOS, Dual 64-Stage Static Shift Register                                   |
| NTE4518B    | IC-CMOS, Dual BCD UP-Counter   |
| NTE4518BT   | IC-CMOS, Dual BCD UP-Counter (Surface Mount)                                   |
| NTE4520B    | IC-CMOS, Dual Binary Up-Counter  |
| NTE4520BT   | IC-CMOS, Dual Binary Up-Counter (Surface Mount)                                |
| NTE4521B    | IC-CMOS, 24-Stage Frequency Divider  |
| NTE4522B    | IC-CMOS, Programmable Diode-by-"N" 4-Bit BCD Counter                           |
| NTE4526B    | IC-CMOS, Programmable Divide-by-"N" 4-Bit Binary Counter                       |
| NTE4527B    | IC-CMOS, BCD Rate Multiplier   |
| NTE4528B    | IC-CMOS, Dual Retriggerable/Resetable Monostable Multivibrator                 |
| NTE4528BT   | IC-CMOS, Dual Retriggerable/Resetable Monostable Multivibrator (Surface Mount) |
| NTE4529B    | IC-CMOS, Dual 4-Channel Analog Data Selector                                   |
| NTE4531B    | IC-CMOS, 12-Bit Parity Tree  |
| NTE4532B    | IC-CMOS, 8-Bit Priority Encoder  |
| NTE4536B    | IC-CMOS, Programmable Timer  |
| NTE4538B    | IC-CMOS, Dual Precision Monostable Multivibrator                               |
| NTE4539B    | IC-CMOS, Dual 4-Channel Data Selector/Multiplexer                              |
| NTE4541B    | IC-CMOS, Programmable Timer  |
| NTE4541BT   | IC-CMOS, Programmable Timer (Surface Mount)                                    |
| NTE4543B    | IC-CMOS, BCD-to-Seven-Segment Latch/Decoder/Driver for Liquid Crystals         |
| NTE4547B    | IC-CMOS, High Current BCD-to-Seven-Segment Decoder/Driver                      |
| NTE4553B    | IC-CMOS, 3-Digit BCD Counter   |
| NTE4555B    | IC-CMOS, Dual Binary to 1-of-4 Decoder/Demultiplexer (Output "High" on Select) |
| NTE4551B    | IC-CMOS, Quad 2-Input analog Multiplexer/Demultiplexer                         |
| NTE4556B    | IC-CMOS, Dual Binary to 1-of-4 Decoder/Demultiplexer (Output "Low" on Select)  |
| NTE4558B    | IC-CMOS, BCD-to-Seven-Segment Decoder  |
| NTE4566B    | IC-CMOS, Industrial Time Base Generator  |
| NTE4569B    | IC-CMOS, Programmable Divide-by-"N" Dual 4-Bit BCD/Binary Counter              |
| NTE4583B    | IC-CMOS, Dual Schmitt Trigger  |
| NTE4584B    | IC-CMOS, Hex Schmitt Trigger   |
| NTE4585B    | IC-CMOS, 4-Bit Magnitude Comparator  |



## Integrated Circuits (cont.)

| Part Number | Description  |
|-------------|--|
| NTE4597B    | IC-CMOS, 8-Bit, Bus Compatible Counter Latch   |
| NTE4598B    | IC-CMOS, 8-Bit, Bus Compatible Addressable Latch   |
| NTE7400     | IC-TTL, Quad 2-Input Pos NAND Gate   |
| NTE7401     | IC-TTL, Quad 2-Input Pos NAND Gate w/Open Collector Outputs                                |
| NTE7402     | IC-TTL, Quad 2-Input Positive NOR Gate   |
| NTE7403     | IC-TTL, Quad 2-Input Positive NAND Gate w/Open Collector Outputs                           |
| NTE7404     | IC-TTL, Hex Inverter   |
| NTE7405     | IC-TTL Hex Inverter w/Open Collector Outputs   |
| NTE7406     | IC-TTL, Hex Inverter Buffer/Driver w/Open Collector HV Outputs                             |
| NTE7407     | IC-TTL, Hex Buffer/Driver w/Open Collector HV Outputs                                      |
| NTE7408     | IC-TTL, Quad 2-Input Pos AND Gate  |
| NTE7409     | IC-TTL, Quad 2-Input Pos AND Gate w/Open Collector Outputs                                 |
| NTE7410     | IC-TTL, Triple 3-Input Pos NAND Gate   |
| NTE74107    | IC-TTL, Dual J-K Negative Edge Triggered Flip-Flop w/Clear and Preset                      |
| NTE74109    | IC-TTL, Dual J-K Pos Edge Triggered Flip-Flop w/Clear and Preset                           |
| NTE7411     | IC-TTL, Triple 3-Input Pos AND Gate  |
| NTE74110    | IC-TTL, AND Gated J-K Master/Slave Flip-Flop w/Data Lockout                                |
| NTE74116    | IC-TTL, Dual 4-Bit Latch   |
| NTE7412     | IC-TTL, Triple 3-Input Pos NAND Gate w/Collector Outputs                                   |
| NTE74120    | IC-TTL, Dual Pulse Synchronizer/Driver   |
| NTE74121    | IC-TTL, Monostable Multivibrator   |
| NTE74122    | IC-TTL, Retriggerable Monostable Multivibrator w/Clear                                     |
| NTE74123    | IC-TTL, Dual Retriggerable Monostable Multivibrator w/Clear                                |
| NTE74126    | IC-TTL, Quad Bus Buffer w/3-State Outputs  |
| NTE74128    | IC-TTL, Quad 2-Input NOR 50ohm Line Driver   |
| NTE7413     | IC-TTL, Dual 4-Input NAND Schmitt Trigger  |
| NTE74132    | IC-TTL, Quad 2-Input Pos NAND Schmitt Trigger  |
| NTE74136    | IC-TTL, Quad Exclusive OR Gate w/Open Collector Outputs                                    |
| NTE7414     | IC-TTL, Hex Schmitt Trigger  |
| NTE74141    | IC-TTL, BCD-to-Decimal Decoder/Driver, Driver Filled Cold Cathode Indicator Tubes Directly |
| NTE74145    | IC-TTL, BCD-to-Decimal Decoder/Driver for Lamps, Relays, MOS                               |
| NTE74147    | IC-TTL, 10-Line Decimal-to-4-Line BCD Priority Encoder                                     |
| NTE74148    | IC-TTL, 8-Line to 3-Line Octal Priority Encoder  |
| NTE74150    | IC-TTL, 1-of-16 Data Selector/Multiplexer  |
| NTE74151    | IC-TTL, 8-Channel Multiplexer  |
| NTE74152    | IC-TTL, 1-of-8 Data Selector/Multiplexer   |
| NTE74153    | IC-TTL, Dual 4-Line-to-1-Line Data Selector/Multiplexer                                    |
| NTE74154    | IC-TTL, 4-Line-to-16-Line Decoder/Demultiplexer  |



# Semiconductors



## Integrated Circuits (cont.)

| Part Number | Description   |
|-------------|---|
| NTE74155    | IC-TTL, Dual 2-Line-to-4-Line Decoder/Demultiplexer w/Totem Pole Outputs        |
| NTE74156    | IC-TTL, Dual 2-Line-to-4-Line Decoder/Demultiplexer w/Open Collector Outputs    |
| NTE74157    | IC-TTL, Quad 2-to-1-Line Data Selector/ Multiplexer w/Non-Inverted Data Outputs |
| NTE74158    | IC-TTL, Quad 2-to-1-Line Data Selector/ Multiplexer w/Inverted Data Outputs     |
| NTE7416     | IC-TTL, Hex Inverter Buffer/Driver w/Open Collector HV Outputs                  |
| NTE74160    | IC-TTL, Synchronous 4-Bit Decade Counter w/Direct Clear                         |
| NTE74161    | IC-TTL, Synchronous 4-Bit Binary Counter w/Direct Clear                         |
| NTE74162    | IC-TTL, Synchronous 4-Bit Binary Counter w/Synchronous Clear                    |
| NTE74163    | IC-TTL, Synchronous 4-Bit Binary Counter w/Synchronous Clear                    |
| NTE74164    | IC-TTL, 8-Bit Parallel-Out Serial Shift Register w/Async Clear                  |
| NTE74165    | IC-TTL, 8-Bit Parallel-In/Serial Out Shift Register                             |
| NTE74166    | IC-TTL, 8-Bit Parallel-In or Serial-In/Serial Out Shift Register                |
| NTE7417     | IC-TTL, Hex Buffer/Driver w/Open Collector HV Outputs                           |
| NTE74170    | IC-TTL, 4-by-4 Register File w/Open Collector Outputs                           |
| NTE74173    | IC-TTL, 4-Bit D-Type Flip-Flop w/3-State Outputs                                |
| NTE74174    | IC-TTL, Hex D-Type Flip-Flop w/Serial Rail Outputs and Common Direct Clear      |
| NTE74175    | IC-TTL, Quad D-Type Flip-Flop w/Common Direct Clear and Complementary Outputs   |
| NTE74176    | IC-TTL, Presettable Decade Counter/Latch  |
| NTE74177    | IC-TTL, Presettable Binary Counter/Latch  |
| NTE74179    | IC-TTL, 4-Bit Universal Shift Register w/Direct Clear                           |
| NTE74180    | IC-TTL, 9-Bit Odd/Even Parity Generator/Checker                                 |
| NTE74182    | IC-TTL, Look-Ahead Carry Generator  |
| NTE74191    | IC-TTL, Synchronous Up/Down Binary Counter                                      |
| NTE74192    | IC-TTL, Synchronous Up/Down BCD Counter (Dual Clock w/Clear)                    |
| NTE74193    | IC-TTL, Synchronous Up/Down Binary Counter (Dual Clock w/Clear)                 |
| NTE74195    | IC-TTL, 4-Bit Parallel Access Shift Register                                    |
| NTE74196    | IC-TTL, Presettable Decade Counter/Latch  |
| NTE74197    | IC-TTL, Presettable Modulo-16 Binary Counter/Latch                              |
| NTE74199    | IC-TTL, 8-Bit Bidirectional Universal Shift Register                            |
| NTE7420     | IC-TTL, Dual 4-Input NAND Gate  |
| NTE7421     | IC-TTL, Dual 4-Input AND Gate   |
| NTE7422     | IC-TTL, Dual 4-Input NAND Gate w/Open Collector Outputs                         |
| NTE74221    | IC-TTL, Dual Monostable Multivibrator   |
| NTE7423     | IC-TTL, Expandable Dual 4-Input NOR Gate w/Strobe                               |
| NTE74249    | IC-TTL, BCD-to-Seven-Segment Decoder/driver w/Open Collector Outputs            |
| NTE7425     | IC-TTL, Dual 4-Input Pos NOR Gate w/Strobe                                      |



## Integrated Circuits (cont.)

| Part Number | Description  |
|-------------|--|
| NTE74251    | IC-TTL, Data Selector/Multiplexer w/True and Inverted 3-State Outputs                        |
| NTE7426     | IC-TTL, Quad 2-Input High Voltage Interface NAND Gate  |
| NTE74265    | IC-TTL, Quad Complementary Output Elements   |
| NTE7427     | IC-TTL, Triple 3-Input Pos NOR Gate  |
| NTE74278    | IC-TTL, 4-Bit Cascadable Priority Register w/Latched Data Inputs and Priority Output Gating  |
| NTE74279    | IC-TTL, Quad Set-Reset Latch w/Diode-Clamped Inputs and Totem Pole Outputs                   |
| NTE7428     | IC-TTL, Quad 2-Input Pos NOR Buffer/Clock Driver w/Totem Pole Outputs                        |
| NTE74298    | IC-TTL, Quad 2-Input Multiplexer w/Storage   |
| NTE7430     | IC-TTL, 8-Input Pos NAND Gate  |
| NTE7432     | IC-TTL, Quad 2-Input OR Gate   |
| NTE7433     | IC-TTL, Quad 2-Input NOR Buffer w/Open Collector Outputs                                     |
| NTE74365    | IC-TTL, 3-State Hex Bus/Buffer Driver w/Non-Inverted Outputs                                 |
| NTE74366    | IC-TTL, 3-State Hex Bus/Buffer Driver w/Inverted Outputs                                     |
| NTE74367    | IC-TTL, Hex Bus/Buffer Driver w/Non-Inverted 3-State Outputs, Organized to Handle 4-Bit Data |
| NTE74368    | IC-TTL, Hex Bus/Buffer Driver w/Inverted 3-State Outputs, Organized to Handle 4-Bit Data     |
| NTE7437     | IC-TTL, Quad 2-Input NAND Buffer   |
| NTE74376    | IC-TTL, Quadruple J-K Flip-Flop  |
| NTE7438     | IC-TTL, Quad 2-Input NAND Buffer w/Open Collector Outputs                                    |
| NTE7439     | IC-TTL, Quad 2-Input NAND Buffer w/Open Collector Outputs                                    |
| NTE74390    | IC-TTL, Dual 4-Bit Decade Ripple Counter   |
| NTE74393    | IC-TTL, Dual 4-Bit Binary Ripple Counter   |
| NTE7440     | IC-TTL, Dual 4-Input NAND Buffer   |
| NTE7441     | IC-TTL, 1-of-10 Decoder Driver for Cold Cathode Indicator Tubes                              |
| NTE7442     | IC-TTL, 4-Line-to-10-Line BCD-to-Decimal Decoder   |
| NTE74426    | IC-TTL, Quad Gate w/3-State Outputs and Active High Enabling                                 |
| NTE7443     | IC-TTL, 4-Line-to-10-Line Excess-3-Decimal Decoder   |
| NTE7444     | IC-TTL, 4-Line-to-10-Line Excess-3-Gray-to Decimal Decoder                                   |
| NTE7445     | IC-TTL, BCD-to-Decimal Decoder/Driver  |
| NTE7446     | IC-TTL, BCD-to-Seven-Segment Decoder/Driver w/Active Low, Open Collector Outputs             |
| NTE7447     | IC-TTL, BCD-to-Seven-Segment Decoder/Driver w/Active Low, Open Collector Outputs             |
| NTE7448     | IC-TTL, BCD-to-Seven-Segment Decoder/Driver w/Internal Pull-Up Outputs                       |
| NTE74490    | IC-TTL, Dual BCD Decade Ripple Counter   |
| NTE7450     | IC-TTL, Dual 2-Wide, 2-Input, AND/OR Invert Gate (One Gate Expandable)                       |
| NTE7451     | IC-TTL, Dual 2-Wide, 2-Input, AND/OR Gate  |





## Integrated Circuits (cont.)

| Part Number | Description   |
|-------------|---|
| NTE7453     | IC-TTL, Expandable AND/OR Invert Gate   |
| NTE7454     | IC-TTL, 4-Wide AND/OR Invert Gate   |
| NTE7460     | IC-TTL, Dual 4-Input Expander   |
| NTE7470     | IC-TTL, AND Gated J-K Pos Edge Triggered Flip-Flop w/Present and Clear            |
| NTE7472     | IC-TTL, AND Gated J-K Master/Slave Flip-Flop w/Present and Clear                  |
| NTE7473     | IC-TTL, Dual J-K Flip-Flop w/Clear  |
| NTE7474     | IC-TTL, Dual D-Type Pos Edge Triggered Flip-Flop w/Present and Clear              |
| NTE7475     | IC-TTL, 4-Bit Bistable Latch  |
| NTE7476     | IC-TTL, Dual J-K Flip-Flop w/Present and Clear                                    |
| NTE7480     | IC-TTL, Gated Full Adder w/Complementary Inputs and Complementary Sum Outputs     |
| NTE7482     | IC-TTL, 2-Bit Binary Full Adder   |
| NTE7483     | IC-TTL, 4-Bit Binary Full Adder w/Fast Carry                                      |
| NTE7485     | IC-TTL, 4-Bit Magnitude Comparator  |
| NTE7486     | IC-TTL, Quad 2-Input Exclusive OR Gate  |
| NTE7489     | IC-TTL, 64-Bit Read/Write Memory  |
| NTE7490     | IC-TTL, Decade Counter (Divide by 2 and 5)  |
| NTE7491     | IC-TTL, 8-Bit Shift Register w/Gated Serial INputs and Serial Outputs             |
| NTE7492     | IC-TTL, Divide-by-Twelve Counter  |
| NTE7493A    | IC-TTL, 4-Bit Binary Counter (Divide by 2 and 8)                                  |
| NTE7495     | IC-TTL, 4-Bit Parallel In/Parallel Out Shift Register                             |
| NTE7496     | IC-TTL, 5-Bit Shift Register w/Async Preset                                       |
| NTE7497     | IC-TTL, Synchronous 6-Bit Binary Rate Multiplier                                  |
| NTE74C160   | IC-CMOS, Synchronous 4-Bit Decade Counter with Direct Clear                       |
| NTE74C161   | IC-CMOS, Synchronous 4-Bit Binary Counter with Direct Clear                       |
| NTE74C164   | IC-CMOS, 8-Bit Parallel-Out Serial Shift Register with Async Clear                |
| NTE74C173   | IC-CMOS, 4-Bit D-Type Flip-Flop w/3-State Outputs                                 |
| NTE74C174   | IC-CMOS, Hex D-Type Flip-Flop with Serial Rail Outputs and Common Direct Clear    |
| NTE74C175   | IC-CMOS, Quad D-Type Flip-Flop with Common Direct Clear and Complementary Outputs |
| NTE74C192   | IC-CMOS, Synchronous Up/Down BCD Counter (Dual Clock with Clear)                  |
| NTE74C193   | IC-CMOS, Synchronous Up/Down Binary Counter (Dual Clock with Clear)               |
| NTE74C221   | IC-CMOS, Dual Monostable Multivibrator  |
| NTE74C240   | IC-CMOS, Octal Buffer/Line Driver/Receiver with 3-State Inverted Outputs          |
| NTE74C244   | IC-CMOS, Octal Buffer/Line Driver/Receiver with 3-State Non-Inverted Outputs      |



## Integrated Circuits (cont.)

| Part Number | Description  |
|-------------|--|
| NTE74C373   | IC-CMOS, Octal D-Type Latch with 3-State Outputs and Common Output Control                   |
| NTE74C374   | IC-CMOS, Octal D-Type Flip-Flop w/3-State Outputs, Common Output Control and Common Clock    |
| NTE74C901   | IC-CMOS, Hex Inverting TTL Buffer  |
| NTE74C902   | IC-CMOS, Hex Non-Inverting TTL Buffer  |
| NTE74C903   | IC-CMOS, Hex Inverting DMOS Buffer   |
| NTE74C904   | IC-CMOS, Hex Non-Inverting DMOS Buffer   |
| NTE74C922   | IC-CMOS, 16-Key Keyboard Encoder with 3-State Output   |
| NTE74C923   | IC-CMOS, 20 Key Keyboard Encoder with 3-State Output   |
| NTE74C925   | IC-CMOS, 4-Digit Counter with Multiplexed Seven-Segment Output Driver                        |
| NTE74H00    | IC-TTL, High Speed, Quad 2-Input Pos NAND Gate   |
| NTE74H01    | IC-TTL, High Speed, quad 2-Input Pos NAND Gate with Open Collector Outputs                   |
| NTE74H04    | IC-TTL, High Speed, Hex Inverter   |
| NTE74H05    | IC-TTL, High Speed, Hex Inverter with Open Collector Outputs                                 |
| NTE74H101   | IC-TTL, High Speed, AND OR Gate J-K Neg Edge Triggered Flip-Flop w/Present                   |
| NTE74H102   | IC-TTL, High Speed, AND Gated J-K Neg Edge Triggered Flip-Flop w/Clear & Reset               |
| NTE74H103   | IC-TTL, High Speed, Dual J-K Neg Edge Triggered Flip-Flop w/Clears                           |
| NTE74H106   | IC-TTL, High Speed, Dual J-K Neg Edge Triggered Flip-Flop w/Present and Clear                |
| NTE74H108   | IC-TTL, High Speed, Dual J-K Neg Triggered Flip-Flop w/Presents, Common Clear & Common Clock |
| NTE74H183   | IC-TTL, High Speed Dual Carry/ Save Full Adder   |
| NTE74H21    | IC-TTL, High Speed, Dual 4-Input AND Gate  |
| NTE74H22    | IC-TTL, High Speed, Dual 4-Input NAND Gate with Open Collector Outputs                       |
| NTE74H30    | IC-TTL, High Speed, 8-Input Pos NAND Gate  |
| NTE74H40    | IC-TTL, High Speed, Dual 4-Input NAND Buffer   |
| NTE74H50    | IC-TTL, High Speed, Dual 2-Wide, 2-Input, AND/OR Invert Gate (One Gate Expandable)           |
| NTE74H51    | IC-TTL, High Speed, Dual 2-Wide, 2-Input AND/OR Gate   |
| NTE74H52    | IC-TTL, High Speed, Expandable 4-Wide AND/OR Gate  |
| NTE74H53    | IC-TTL, High Speed, Expandable AND/OR Inver Gate   |
| NTE74H54    | IC-TTL, High Speed, 4-Wide AND/OR Invert Gate  |
| NTE74H55    | IC-TTL, High Speed, Expandable, 2-Wide, 4-Input AND/OR Invert Gate                           |
| NTE74H60    | IC-TTL, High Speed Dual 4-Input Expander   |
| NTE74H61    | IC-TTL, High Speed Triple 3-Input Expander   |
| NTE74H62    | IC-TTL, High Speed 4-Wide AND/OR Expander  |
| NTE74H71    | IC-TTL, High Speed AND Gated J-K Master/Slave Flip-Flop with Preset and Clear                |
| NTE74H72    | IC-TTL, High Speed, AND Gated  |



# Semiconductors



## Integrated Circuits (cont.)

| Part Number | Description   |
|-------------|---|
| NTE74H73    | IC-TTL, High Speed, Dual J-K Flip-Flop w/Clear                                |
| NTE74H74    | IC-TTL, High Speed Dual D-Type Pos Edge Triggered Flip-Flop w/Present & Clear |
| NTE74H76    | IC-TTL, High Speed, Dual J-K Flip-Flop w/Present & Clear                      |
| NTE74H78    | IC-TTL, High Speed, Dual J-K Flip-Flop w/Present Common Clear & Common Clock  |
| NTE74H87    | IC-TTL, High Speed, 4-Bit True/ Complement Zero/One Element                   |
| NTE74HC00   | IC-TTL, High Speed CMOS, QUAD 2-Input NAND Gate                               |
| NTE74HC02   | IC-TTL, High Speed CMOS, Quad 2-Input NOR Gate                                |
| NTE74HC04   | IC-TTL, High Speed CMOS, Hex Inverter   |
| NTE74HC08   | IC-TTL, High Speed CMOS, Quad 2-Input AND Gate                                |
| NTE74HC10   | IC-TTL, High Speed CMOS, Triple 3-Input NAND Gate                             |
| NTE74HC109  | IC-TTL, High Speed CMOS, Dual J-K Flip-Flop w/Present & Clear                 |
| NTE74HC11   | IC-TTL, High Speed CMOS, Triple 3-Input AND Gate                              |
| NTE74HC123  | IC-TTL, High Speed CMOS, Dual Retriggerable Monostable Multivibrator          |
| NTE74HC125  | IC-TTL, High Speed CMOS, TRI-STATE Quad Buffer                                |
| NTE74HC126  | IC-TTL, High Speed CMOS, TRI-STATE Quad Buffer                                |
| NTE74HC132  | IC-TTL, High Speed CMOS, Quad 2-Input NAND Schmitt Trigger                    |
| NTE74HC138  | IC-TTL, High Speed CMOS, 3-to-8-Line Decoder/ Demultiplexer                   |
| NTE74HC139  | IC-TTL, High Speed CMOS, Dual 2-to-4-line Decoder/ Demultiplexer              |
| NTE74HC14   | IC-TTL, High Speed CMOS, Hex Schmitt Trigger Inverter                         |
| NTE74HC151  | IC-TTL, High Speed CMOS, 8-Channel Multiplexer                                |
| NTE74HC153  | IC-TTL, High Speed CMOS, Dual 4-Input, Multiplexer                            |
| NTE74HC154  | IC-TTL, High Speed CMOS, 4-to-16-Line Decoder/ Demultiplexer                  |
| NTE74HC161  | IC-TTL, High Speed CMOS, Synchronous 4-Bit Binary Counter w/Direct Clear      |
| NTE74HC163  | IC-TTL, High Speed CMOS, Synchronous 4-Bit Binary Counter w/Direct Clear      |
| NTE74HC164  | IC-TTL, High Speed CMOS, 8-Bit Serial-In/ Parallel-Out Shift Register         |
| NTE74HC165  | IC-TTL, High Speed CMOS, Parallel-In/ Serial-Out 8-Bit Shift Register         |
| NTE74HC173  | IC-TTL, High Speed CMOS, Tri-State Quad D-Type Flip-Flop                      |
| NTE74HC174  | IC-TTL, High Speed CMOS, Hex D-Type Flip-Flops w/Clock & Clear                |
| NTE74HC175  | IC-TTL, High Speed CMOS, Quad D-Type Flip-Flop w/Clear                        |
| NTE74HC240  | IC-TTL, High Speed CMOS, Inverting Octal TRI-STATE Buffer                     |
| NTE74HC244  | IC-TTL, High Speed CMOS, Octal TRI-STATE Buffer                               |
| NTE74HC257  | IC-TTL, High Speed CMOS, Quad 2-Channel TRI-STATE Multiplexer                 |
| NTE74HC259  | IC-TTL, High Speed CMOS, 8-Bit Addressable Latch/3-to-8 Line Decoder          |



## Integrated Circuits (cont.)

| Part Number  | Description  |
|--------------|--|
| NTE74HC273   | IC-TTL, High Speed CMOS, Octal D-Type Flip-Flop w/ Clear                   |
| NTE74HC299   | IC-TTL, High Speed CMOS, 8-Bit TRI-STATE Universal Shift Register          |
| NTE74HC32    | IC-TTL, High Speed CMOS, Quad 2-Input OR Gate.                             |
| NTE74HC373   | IC-TTL, High Speed CMOS, TRI-STATE Octal D-Type Latch                      |
| NTE74HC374   | IC-TTL, High Speed CMOS, TRI-STATE Octal D-Type Flip-Flop                  |
| NTE74HC377   | IC-TTL, High Speed CMOS, Octal D-Type Flip-Flop                            |
| NTE74HC390   | IC-TTL, High Speed CMOS, Dual 4-Bit Decade Counter                         |
| NTE74HC393   | IC-TTL, High Speed CMOS, Dual 4-Bit Binary Counter                         |
| NTE74HC40105 | IC-TTL, High Speed CMOS, 4-Bit x 16 Word FIFO Register                     |
| NTE74HC4020  | IC-TTL, High Speed CMOS, 14-Stage Binary Counter                           |
| NTE74HC4040  | IC-TTL, High Speed CMOS, 12-Stage Binary Counter                           |
| NTE74HC4053  | IC-TTL, High Speed CMOS, Triple 2-Channel Analog Multiplexer/Demultiplexer |
| NTE74HC4060  | IC-TTL, High Speed CMOS, 14-Stage Binary Counter/ Oscillator               |
| NTE74HC4067  | IC-TTL, High Speed CMOS, 16-Channel/ Multiplexer/Demultiplexer             |
| NTE74HC573   | IC-TTL, High Speed CMOS, TRI-STATE Octal D-Type Latch                      |
| NTE74HC574   | IC-TTL, High Speed CMOS, TRI-STATE Octal D-Type Edge Triggered Edge        |
| NTE74HC86    | IC-TTL, High Speed CMOS, Quad 2-Input Exclusive OR Gate                    |
| NTE74HCT00   | IC-TTL, High Speed CMOS, Quad 2-Input NAND Gate                            |
| NTE74HCT04   | IC-TTL, High Speed CMOS, Hex Inverter                                      |
| NTE74HCT08   | IC-TTL, High Speed CMOS, Quad 2-Input AND Gate                             |
| NTE74HCT138  | IC-TTL, High Speed CMOS, 3-to-8-Line Decoder/ Demultiplexer                |
| NTE74HCT14   | IC-TTL, High Speed CMOS, Hex Schmitt Trigger Inverter                      |
| NTE74HCT161  | IC-TTL, High Speed CMOS, 4-Bit Binary Counter w/Asynchronous Clear         |
| NTE74HCT163  | IC-TTL, High Speed CMOS, 4-Bit Binary Counter w/Asynchronous Clear         |
| NTE74HCT174  | IC-TTL, High Speed CMOS, Hex D-Type Flip-Flop w/ Clock and Clear           |
| NTE74HCT240  | IC-TTL, High Speed CMOS, Inverting Octal TRI-STATE Buffer                  |
| NTE74HCT244  | IC-TTL, High Speed CMOS, Octal TRI-STATE Buffer                            |
| NTE74HCT273  | IC-TTL, High Speed CMOS, TRI-STATE Octal D-Type Flip-Flop w/ Clear         |
| NTE74HCT32   | IC-TTL, High Speed CMOS, Quad 2-Input OR Gate.                             |
| NTE74HCT373  | IC-TTL, High Speed CMOS, TRI-STATE Octal D-Type Latch                      |
| NTE74HCT573  | IC-TTL, High Speed CMOS, TRI-STATE Octal D-Type Latch                      |
| NTE74HCT574  | IC-TTL, High Speed CMOS, TRI-STATE Octal D-Type Flip-Flop                  |
| NTE74L93     | IC-TTL, 4-Bit Counter (Divide by 2 & 8)                                    |





## Integrated Circuits (cont.)

| Part Number | Description  |
|-------------|--|
| NTE74LS00   | Quad 2-Input Pos NAND Gate   |
| NTE74LS01   | IC-TTL, Low Power Schottky, Quad 2-Input Pos NAND Gate w/Open Collector Outputs                  |
| NTE74LS02   | IC-TTL, Low Power Schottky, Quad 2-Input Pos NOR Gate  |
| NTE74LS03   | IC-TTL, Low Power Schottky, Quad 2-Input Pos NAND Gate w/Power Collector Outputs                 |
| NTE74LS04   | IC-TTL, Low Power Schottky, Hex Inverter   |
| NTE74LS05   | IC-TTL, Low Power Schottky, Hex Inverter w/Open Collector Outputs                                |
| NTE74LS06   | IC-TTL, Low Power Schottky, Hex Inverter Buffer/Driver w/Open Collector HV Outputs               |
| NTE74LS08   | IC-TTL, Low Power Schottky, Triple 3-Input Pos AND Gate  |
| NTE74LS09   | IC-TTL, Low Power Schottky, Triple 3-Input Pos NAND Gate w/Open Collector Outputs                |
| NTE74LS10   | IC-TTL, Low Power Schottky, Triple 3-Input Pos NAND Gate   |
| NTE74LS107  | IC-TTL, Low Power Schottky, Dual J-K Neg Edge Triggered Flip-Flop w/Clear                        |
| NTE74LS109A | IC-TTL, Low Power Schottky, Dual J-K Pos Edge Triggered Flip-Flop w/Clear & Present              |
| NTE74LS11   | IC-TTL, Low Power Schottky, Triple 3-Input Pos AND Gate  |
| NTE74LS112A | IC-TTL, Low Power Schottky, Dual J-K Neg Edge Triggered Flip-Flop w/Present & Clear              |
| NTE74LS113  | IC-TTL, Low Power Schottky, Dual J-K Neg Edge Triggered Flip-Flop w/Present                      |
| NTE74LS114  | IC-TTL, Low Power Schottky, Dual J-K Neg Edge Triggered Flip-Flop w/Present Common Clock & Clear |
| NTE74LS12   | IC-TTL, Low Power Schottky, Triple 3-Input Pos NAND Gate w/Open Collector Outputs                |
| NTE74LS122  | IC-TTL, Low Power Schottky, Retriggerable Monostable Multivibrator w/Clear                       |
| NTE74LS123  | IC-TTL, Low Power Schottky, Dual Retriggerable Monostable Multivibrator w/Clear                  |
| NTE74LS124  | IC-TTL, Low Power Schottky, Dual Voltage Controlled Oscillator                                   |
| NTE74LS125A | IC-TTL, Low Power Schottky, Quad Bus w/3-State Outputs   |
| NTE74LS126A | IC-TTL, Low Power Schottky, Quad Bus w/3-State Outputs   |
| NTE74LS13   | IC-TTL, Low Power Schottky, Dual 4-Input NAND Schmitt Trigger                                    |
| NTE74LS132  | IC-TTL, Low Power Schottky, Quad 2-Input Pos NAND Schmitt Trigger                                |
| NTE74LS133  | IC-TTL, Low Power Schottky, 13-Input Pos NAND Gate   |
| NTE74LS136  | IC-TTL, Low Power Schottky, Quad Exclusive OR Gate w/Open Collector Outputs                      |
| NTE74LS138  | IC-TTL, Low Power Schottky, 3-of-8 Decoder/Demultiplexer   |
| NTE74LS139  | IC-TTL, Low Power Schottky, Dual 4-to-4 Line Decoder/ Demultiplexer                              |
| NTE74LS14   | IC-TTL, Low Power Schottky, Hex Schmitt Trigger Inverter   |



## Integrated Circuits (cont.)

| Part Number | Description  |
|-------------|--|
| NTE74LS140  | IC-TTL, Ultra-High Speed, Dual 4-Input Pos NAND "W"50 Line Driver                                  |
| NTE74LS145  | IC-TTL, Low Power Schottky, BCD-to-Decimal Decoder/ Drive For Lamps, Relays MOS                    |
| NTE74LS147  | IC-TTL, Low Power Schottky, 10-Line Decimal-to-4-Line BCD Priority Encoder                         |
| NTE74LS148  | IC-TTL, Low Power Schottky, 8-Line-to-3-Line Octal Priority Encoder                                |
| NTE74LS15   | IC-TTL, Low Power Schottky, Triple 3-Input AND Gate w/Open Collector Outputs                       |
| NTE74LS151  | IC-TTL, Low Power Schottky, 8-Channel Multiplexer  |
| NTE74LS153  | IC-TTL, Low Power Schottky, Dual 4-Line-to-1 Line Data Selector/ Multiplexer                       |
| NTE74LS155  | IC-TTL, Low Power Schottky, Dual 2-Line-to-4-Line Decoder/ Demultiplexer w/Totem Pole Outputs      |
| NTE74LS156  | IC-TTL, Low Power Schottky, Dual 2-Line-to-4-Line Decoder/Demultiplexer w/Open Collector Outputs   |
| NTE74LS157  | IC-TTL, Low Power Schottky, Quad 2-to-1-Line Data Selector/Multiplexer w/Non-Inverted Date Outputs |
| NTE74LS158  | IC-TTL, Low Pwr Schottky, Quad 2-to-1- Line Data Selector/Multiplexer w/Inverted Data Outputs      |
| NTE74LS160A | IC-TTL, Low Power Schottky, Synchronous 4-Bit Decade Counter w/Direct Clear                        |
| NTE74LS161A | IC-TTL, Low Power Schottky, Synchronous 4-Bit Binary Counter w/Direct Clear                        |
| NTE74LS162A | IC-TTL, Low Power Schottky, Synchronous 4-Bit Decade Counter w/ Synchronous Clear                  |
| NTE74LS163  | IC-TTL, Ultra-High Speed, Synchronous 4-Bit Binary Counter w/Synchronous Clear                     |
| NTE74LS163A | IC-TTL, Low Power Schottky, Synchronous 4-Bit Binary Counter w/Synchronous Clear                   |
| NTE74LS164  | IC-TTL, Low Power Schottky, 8-Bit Parallel-Out Serial Shift Register w/Async Clear                 |
| NTE74LS165  | IC-TTL, Low Power Schottky, 8-Bit Parallel-In/Serial-Out Shift Register                            |
| NTE74LS166  | IC-TTL, Low Power Schottky, 8-Bit, Parallel-In/Serial-Out Shift Register                           |
| NTE74LS168A | IC-TTL, Low Power Schottky, Synchronous Presettable BCD Decade Up-Down Counter                     |
| NTE74LS169A | IC-TTL, Low Power Schottky, Synchronous Presettable 4-Bit Binary Up/Down Counter                   |
| NTE74LS170  | IC-TTL, Low Power Schottky, 4-by-4 Register File w/Open Collector Output                           |
| NTE74LS173A | IC-TTL, Low Power Schottky, 4-Bit D-Type Flip-Flop w/3-State Outputs                               |
| NTE74LS174  | IC-TTL, Low Power Schottky, Hex D-Type Flip Flop w/3-State Outputs                                 |
| NTE74LS175  | IC-TTL, Low Power Schottky, Hex D-Type Flip Flop w/Serial Rail Outputs & Common Direct Clear       |



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## Integrated Circuits (cont.)

| Part Number | Description   |
|-------------|---|
| NTE74LS181  | IC-TTL, Low Power Schottky, Quad D-Type Flip-Flop w/Common Direct Clear & Complementary Outputs |
| NTE74LS182  | IC-TTL, Ultra-High Speed, Lock-Ahead Carry Generator  |
| NTE74LS188  | IC-TTL, Schottky, 256-Bit (32 x 8) PROM w/Open Collector Outputs                                |
| NTE74LS189  | IC-TTL, Schottky, 64-Bit RAM w/3-State Outputs  |
| NTE74LS190  | IC-TTL, Low Power Schottky, Arithmetic Logic Unit/ Function Generator                           |
| NTE74LS191  | IC-TTL, Low Power Schottky, Synchronous Up/Down BCD Counter                                     |
| NTE74LS192  | IC-TTL, Low Power Schottky, Synchronous Up/ Down BCD Counter (Dual Clock w/Clear)               |
| NTE74LS193  | IC-TTL, Low Power Schottky, Synchronous Up/ Down Binary Counter (Dual Clock w/Clear)            |
| NTE74LS194  | IC-TTL, Low Power Schottky, 4-Bit BiDirectional Universal Shift Register                        |
| NTE74LS194A | IC-TTL, Low Power Schottky, 4-Bit BiDirectional Universal Shift Register                        |
| NTE74LS195A | IC-TTL, Low Power Schottky, 4-Bit Parallel Access Shift Register                                |
| NTE74LS196  | IC-TTL, Low Power Schottky, Presentable Decade Counter/Latch                                    |
| NTE74LS197  | IC-TTL, Low Power Schottky, Presetable Modulo-16 Binary Counter/Latch                           |
| NTE74LS20   | IC-TTL, Low Power Schottky, Dual 4-Input NAND Gate  |
| NTE74LS21   | IC-TTL, Low Power Schottky, Dual 4-Input AND Gate   |
| NTE74LS22   | IC-TTL, Low Power Schottky, Dual 4-Input NAND Gate w/Open Collector Outputs                     |
| NTE74LS221  | IC-TTL, Low Power Schottky, Dual Monostable Multivibrator                                       |
| NTE74LS240  | IC-TTL, Low Power Schottky, Octal Buffer/Line Driver/Receiver w/3-State Inverted Outputs        |
| NTE74LS241  | IC-TTL, Low Power Schottky, Octal Buffer/Line Driver/Receiver w/3-State Non-Inverted Outputs    |
| NTE74LS242  | IC-TTL, Low Power Schottky, Quad Bus Transceiver w/Inverted 3-State Outputs                     |
| NTE74LS243  | IC-TTL, Low Power Schottky, Quad Bus Transceiver w/Non-Inverted 3-State Outputs                 |
| NTE74LS244  | IC-TTL, Low Power Schottky, Octal Buffer/Line Driver/Receiver w/3-State Non-Inverted Outputs    |
| NTE74LS245  | IC-TTL, Low Power Schottky, Octal Bus Transceiver w/Non-Inverted 3-State Outputs                |
| NTE74LS247  | IC-TTL, Low Power Schottky, BCD-to-Seven-Segment Decoder/Driver w/3-State Non-Inverted Outputs  |
| NTE74LS248  | IC-TTL, Low Power Schottky, BCD-to-Seven-Segment Decoder/Driver w/International Pull-Up Outputs |
| NTE74LS249  | IC-TTL, Low Power Schottky, BCD-to-Seven-Segment Decoder/Driver w/Open Collector Outputs        |
| NTE74LS251  | IC-TTL, Low Power Schottky, Data Selector/Multiplexer w/True & Inverted 3-State Outputs         |



## Integrated Circuits (cont.)

| Part Number | Description   |
|-------------|---|
| NTE74LS253  | IC-TTL, Low Power Schottky, Quad Data Selector/Multiplexer w/3-State Outputs                                  |
| NTE74LS257  | IC-TTL, Low Power Schottky, Quad Data Selector/Multiplexer w/Non-Inverted 3-State Outputs                     |
| NTE74LS258  | IC-TTL, Low Power Schottky, Quad Data Selector/Multiplexer w/Non-Inverted 3-State Outputs                     |
| NTE74LS259  | IC-TTL, Low Power Schottky, 8-Bit Addressable Latch   |
| NTE74LS26   | IC-TTL, Low Power Schottky, Quad 2-Input High Voltage Interface NAND Gate                                     |
| NTE74LS260  | IC-TTL, Low Power Schottky, Dual 5-Input NOR Gate   |
| NTE74LS266  | IC-TTL, Low Power Schottky, Quad 2-Input Exclusive NOR Gate w/Open Collector Outputs                          |
| NTE74LS27   | IC-TTL, Low Power Schottky, Triple 3-Input Positive NOR Gate  |
| NTE74LS273  | IC-TTL, Low Power Schottky, Octal D-Type Flip-Flop w/Common Clock & Single Rail Outputs                       |
| NTE74LS279  | IC-TTL, Low Power Schottky, Quad Set-Reset Latch w/Diode-Clamped Inputs & Totem Pole Outputs                  |
| NTE74LS28   | IC-TTL, Low Power Schottky, Quad 2-Input NOR Buffer/Clock Driver w/ Totem Pole Outputs                        |
| NTE74LS280  | IC-TTL, Low Power Schottky, 9-Bit Odd/ Even Parity Generator/Checker (N-Bit Cascadable)                       |
| NTE74LS283  | IC-TTL, Low Power Schottky, 4-Bit Binary Full Adder   |
| NTE74LS287  | IC-TTL, Schottky, Bipolar 1024-Bit PROM, 50ns Max Addressable Access  |
| NTE74LS288  | IC-TTL, Schottky, 256-Bit (32 x 8) PROM w/TRI-STATE Outputs   |
| NTE74LS290  | IC-TTL, Low Power Schottky, Decade Counter (Divide by 2 & 5)  |
| NTE74LS293  | IC-TTL, Low Power Schottky, 4-Bit Binary Counter (Divide by 2 & 5)  |
| NTE74LS295  | IC-TTL, Low Power Schottky, 4-Bit Bidirectional Universal Shift Register                                      |
| NTE74LS295A | IC-TTL, Low Power Schottky, 4-Bit Bidirectional Universal Shift Register                                      |
| NTE74LS298  | IC-TTL, Low Power Schottky, Quad 2-Input Multiplexer w/Storage  |
| NTE74LS299  | IC-TTL, Low Power Schottky, 8-Bit Shift Register w/3-State Outputs  |
| NTE74LS30   | IC-TTL, Low Power, Schottky, 8-Input Pos NAND Gate.   |
| NTE74LS32   | IC-TTL, Low Power Schottky, Quad 2-Input OR Gate.   |
| NTE74LS324  | IC-TTL, Low Power Schottky, Voltage Controlled Oscillator   |
| NTE74LS327  | IC-TTL, Low Power Schottky, Dual Voltage Controlled Oscillator  |
| NTE74LS33   | IC-TTL, Low Power Schottky, Quad 2-Input NOR Buffer/Clock w/Open Collector Outputs                            |
| NTE74LS348  | IC-TTL, Low Power Schottky, 8-Line-to-3-Line Priority Encoder   |
| NTE74LS352  | IC-TTL, Low Power Schottky, Dual 4-Line-to-1-Line Data Selector/Multiplexer (Inverting Version of NTE74LS153) |







## Integrated Circuits (cont.)

| Part Number | Description   |
|-------------|---|
| NTE74LS353  | IC-TTL, Low Power Schottky, Dual 4-Line-to-1-Line Data Selector/Multiplexer                                     |
| NTE74LS363  | IC-TTL, Low Power Schottky, Octal Transparent Latch w/3-State Outputs   |
| NTE74LS365A | IC-TTL, Low Power Schottky, 3-State Hex Bus/Buffer w/Non-Inverted Outputs                                       |
| NTE74LS366A | IC-TTL, Low Power Schottky, 3-State Hex Bus/Buffer Drive w/Inverted Outputs                                     |
| NTE74LS367  | IC-TTL, Low Power Schottky, Hex Bus/Buffer Driver w/Non-Inverted 3-State Outputs, Organize to Handle 4-Bit Data |
| NTE74LS368  | IC-TTL, Low Power Schottky, Hex Bus/Buffer Driver w/Inverted 3-State Outputs, Organize to Handle 4-Bit Data     |
| NTE74LS37   | IC-TTL, Low Power Schottky, Quad 2-Input NAND Buffer  |
| NTE74LS373  | IC-TTL, Low Power Schottky, Octal D-Type Latch w/3-State Outputs & Common Output Control                        |
| NTE74LS374  | IC-TTL, Low Power Schottky, Octal D-Type Flip-Flop w/3-State Outputs, Common Output Control & Common Clock      |
| NTE74LS377  | IC-TTL, Low Power Schottky, Octal D-Type Flip-Flop w/Common Enable w/Clock & Single Rail Outputs                |
| NTE74LS378  | IC-TTL, Low Power Schottky, Hex D-Type Flip-Flop w/Clock Enable   |
| NTE74LS379  | IC-TTL, Low Power Schottky, Quad D-Type Flip-Flop   |
| NTE74LS38   | IC-TTL, Low Power Schottky, Quad 2-Input NAND Buffer w/Open Collector Outputs                                   |
| NTE74LS386  | IC-TTL, Low Power Schottky, Quad 2-Input Exclusive OR Gate  |
| NTE74LS387  | IC-TTL, Schottky, 1024-Bit (256 x 4) PROM w/Open Collector Outputs, 50ns Max Address Access                     |
| NTE74LS390  | IC-TTL, Low Power Schottky, Dual 4-Bit Decade Ripple Counter  |
| NTE74LS393  | IC-TTL, Low Power Schottky, Dual 4-Bit Binary Ripple Counter  |
| NTE74LS395A | IC-TTL, Low Power Schottky, 4-Bit Cascadable Shift Register w/3-State Outputs                                   |
| NTE74LS396  | IC-TTL, Low Power Schottky, Octal Storage Register w/Parallel Access  |
| NTE74LS398  | IC-TTL, Low Power Schottky, Quad 2-Port Register  |
| NTE74LS399  | IC-TTL, Low Power Schottky, Quad 2-Input Multiplexer w/Storage  |
| NTE74LS40   | IC-TTL, Low Power Schottky, Dual 4-Input NAND Buffer  |
| NTE74LS42   | IC-TTL, Low Power Schottky, 4-Line-to-10-Line BCD-to-Decimal Decoder  |
| NTE74LS445  | IC-TTL, Low Power Schottky, BCD-to-Decimal Decoder/Driver w/Open Collector Outputs                              |
| NTE74LS47   | IC-TTL, Low Power Schottky, BCD-to-Seven Segment Decoder/Driver w/Active Low, Open Collector Outputs            |
| NTE74LS472  | IC-TTL, Schottky, 4096-Bit (512 x 8) PROM w/3-State Outputs   |
| NTE74LS474  | IC-TTL, Schottky, 4096-Bit (512 x 8) PROM w/3-State Outputs   |
| NTE74LS48   | IC-TTL, Low Power Schottky, BCD-to-Seven-Segment Decoder/Driver w/International Pull-Up Outputs                 |



## Integrated Circuits (cont.)

| Part Number | Description  |
|-------------|--|
| NTE74LS49   | IC-TTL, Low Power Schottky, BCD-to-Seven -Segment Decoder/ Driver w/Open Collector Outputs                             |
| NTE74LS490  | IC-TTL, Low Power Schottky, Dual BCD Decade Ripple Counter   |
| NTE74LS51   | IC-TTL, Low Pwr Schottky, Dual 2-Wide2-Input AND/OR Gate.  |
| NTE74LS54   | IC-TTL, Low Power Schottky, 4-Wide AND/OR Invert Gate.   |
| NTE74LS540  | IC-TTL, Low Power Schottky, Octal Buffer/Line Driver w/Inverted 3-State Outputs  |
| NTE74LS541  | IC-TTL, Low Power Schottky, Octal Buffer/Line Driver w/Non-Inverted 3-State Outputs                                    |
| NTE74LS55   | IC-TTL, Low Power Schottky, Expandable 2-Wide 4-Input AND/OR Invert Gate   |
| NTE74LS570  | IC-TTL, Schottky, 2048-Bit PROM w/Open Collector Outputs   |
| NTE74LS571  | IC-TTL, Schottky, 2048-Bit PROM w/3-State Outputs  |
| NTE74LS572  | IC-TTL, Schottky, 4096-Bit PROM w/Open Collector Outputs   |
| NTE74LS624  | IC-TTL, Low Power Schottky, Voltage Controlled Oscillator  |
| NTE74LS625  | IC-TTL, Low Power Schottky, Dual Voltage Controlled Oscillator   |
| NTE74LS627  | IC-TTL, Low Power Schottky, Dual Voltage Controlled Oscillator   |
| NTE74LS629  | IC-TTL, Low Power Schottky, Dual Voltage Controlled Oscillator   |
| NTE74LS63   | IC-TTL, Low Power Schottky, Hex Current-Sensing Interface Gate   |
| NTE74LS640  | IC-TTL, Low Power Schottky, Inverting Octal Bus Transceiver w/3-State Outputs  |
| NTE74LS641  | IC-TTL, Low Power Schottky, Non-Inverting, Octal Bus Transceiver w/Open Collector Outputs                              |
| NTE74LS642  | IC-TTL, Low Power Schottky, Inverting Octal Bus Transceiver w/Open Collector Outputs                                   |
| NTE74LS643  | IC-TTL, Low Power Schottky, True & Inverting Octal Bus Transceiver w/3-State Outputs                                   |
| NTE74LS645  | IC-TTL, Low Power Schottky, Non-Inverting, Octal Bus Transceiver w/3-State Outputs                                     |
| NTE74LS670  | IC-TTL, Low Power Schottky, 4-By-4-Register File w/Simultaneous Read/Write, 3-State Outputs & Expandable to 1024 Words |
| NTE74LS73   | IC-TTL, Low Power Schottky, Dual J-K-Flip-Flop w/Clear   |
| NTE74LS74A  | IC-TTL, Low Power Schottky, Dual D-Type Pos Edge Triggered Flip-Flop w/Present & Clear                                 |
| NTE74LS75   | IC-TTL, Low Power Schottky, 4-Bit Bistable Latch   |
| NTE74LS76A  | IC-TTL, Low Power Schottky, Dual J-K-Flip w/Present & Clear  |
| NTE74LS77   | IC-TTL, Low Power Schottky, 4-Bit D-Type Latch   |
| NTE74LS78   | IC-TTL, Low Power Schottky, Dual J-K Flip-Flop w/Present, Common Clear & Common Clock                                  |
| NTE74LS83A  | IC-TTL, Low Power Schottky, 4-Bit Binary Full Adder w/Fast Carry   |
| NTE74LS85   | IC-TTL, Low Power Schottky, 4-Bit Magnitude Comparator   |



# Semiconductors



## Integrated Circuits (cont.)

| Part Number | Description   |
|-------------|---|
| NTE74LS86   | IC-TTL, Low Power Schottky, Quad 2-Input Exclusive OR Gate                                      |
| NTE74LS90   | IC-TTL, Low Power Schottky, Decade Counter (Divide by 2&5)                                      |
| NTE74LS91   | IC-TTL, Low Power Schottky, 8-Bit Shift Register w/Gated Serial Inputs & Serial Outputs         |
| NTE74LS92   | IC-TTL, Low Power Schottky, Divide - by - Twelve Counter  |
| NTE74LS93   | IC-TTL, Low Power Schottky, 4-Bit Binary Counter (Divide by 2 & 8)                              |
| NTE74LS95B  | IC-TTL, Low Power Schottky, 4-Bit Shift Register  |
| NTE74S00    | IC-TTL, Ultra-High Speed, Quad 2-Input Pos NAND Gate  |
| NTE74S02    | IC-TTL, Ultra-High Speed, Quad 2-Input Pos NOR Gate   |
| NTE74S03    | IC-TTL, Ultra-High Speed, Quad 2-Input Pos NAND Gate w/Open Collector Outputs                   |
| NTE74S04    | IC-TTL, Ultra-High Speed, Hex Inverter  |
| NTE74S05    | IC-TTL, Ultra-High Speed, Hex Inverter  |
| NTE74S08    | IC-TTL, Ultra-High Speed, Quad 2-Input Pos AND Gate   |
| NTE74S09    | IC-TTL, Ultra-High Speed, Quad 2-Input Pos AND Gate w/Collector Outputs                         |
| NTE74S10    | IC-TTL, Ultra-High Speed, Triple 3-Input Pos NAND Gate  |
| NTE74S11    | IC-TTL, Ultra-High Speed, Triple 3-Input Pos AND Gate   |
| NTE74S112   | IC-TTL, Ultra-High Speed, Dual J-K Neg Edge Triggered Flip-Flop w/Present & Clear               |
| NTE74S113   | IC-TTL, Ultra-High Speed, Dual J-K Neg Edge Triggered Flip-Flop w/Present                       |
| NTE74S114   | IC-TTL, Ultra-High Speed, Dual J-K Neg Edge Triggered Flip-Flop w/Present, Common Clock & Clear |
| NTE74S15    | IC-TTL, Ultra-High Speed, Triple 3-Input And Gate w/Open Collector Outputs                      |
| NTE74S20    | IC-TTL, Ultra-High Speed, Dual 4-Input NAND Gate  |
| NTE74S22    | IC-TTL, Ultra-High Speed, Dual 4-Input NAND Gate w/Open Collector Outputs                       |
| NTE74S30    | IC-TTL, Ultra-High Speed, 8-Input Pos NAND Gate   |
| NTE74S37    | IC-TTL, Ultra-High Speed, Quad 2-Input NAND Buffer  |
| NTE74S38    | IC-TTL, Ultra-High Speed, Quad 2-Input NAND Buffer w/Open Collector Outputs                     |
| NTE74S40    | IC-TTL, Ultra-High Speed, Dual 4-Input NAND Buffer  |
| NTE74S51    | IC-TTL, Ultra-High Speed, Dual 2-Wide 2-Input AND/OR Gate                                       |
| NTE74S64    | IC-TTL, Ultra-High Speed, 4-2-3-2 Input AND/OR Invert Gate w/Totem Pole Outputs                 |
| NTE74S65    | IC-TTL, Ultra-High Speed, 4-2-3-2 Input AND/OR Invert Gate w/Open Collector Outputs             |
| NTE74S74    | IC-TTL, Ultra-High Speed, Dual D-Type Pos Edge Triggered Flip-Flop w/Present & Clear            |
| NTE74S85    | IC-TTL, Ultra-High Speed, 4-Bit Magnitude Comparator  |
| NTE74S86    | IC-TTL, Ultra-High Speed, Quad 2-Input Exclusive OR Gate  |
| NTE75188    | IC-TTL, DTL Quad Line Driver RS232C   |
| NTE75450B   | IC-TTL, Dual Peripheral AND Driver  |
| NTE75189    | IC-TTL, DTL Quad Line Driver RS232C   |
| NTE75451B   | IC-TTL, Dual Peripheral AND Driver  |
| NTE75452B   | IC-TTL, Dual Peripheral NAND Driver   |
| NTE75453B   | IC-TTL, Dual Peripheral OR Driver   |

## Integrated Circuits (cont.)

| Part Number | Description                               |
|-------------|---|
| NTE75454B   | IC-TTL, Dual Peripheral NOR Driver        |
| NTE75491B   | IC-TTL, 4-Segment MOS TO LED Anode Driver |
| NTE75492B   | IC-TTL, 6-Digit MOS to LED Cathode Driver |
| NTE75493    | IC-TTL, 4-Segment MOS to LED Anode Driver |
| NTE75494    | IC-TTL, 6-Digit MOS to LED Cathode Driver |

## Transient Suppressors

| Part Number | Description   |
|-------------|---|
| NTE4900     | Overvoltage Transient Suppressor, Vr =5.0V                  |
| NTE4901     | Overvoltage Transient Suppressor, Bi-Directional Vr =5.0V   |
| NTE4902     | Overvoltage Transient Suppressor, Vr =5.8V                  |
| NTE4903     | Overvoltage Transient Suppressor, Bi-Directional Vr =5.50V  |
| NTE4904     | Overvoltage Transient Suppressor, Vr =6.40V                 |
| NTE4905     | Overvoltage Transient Suppressor, Bi-Directional Vr =6.40V  |
| NTE4906     | Overvoltage Transient Suppressor, Vr =7.02V                 |
| NTE4907     | Overvoltage Transient Suppressor, Bi-Directional Vr =7.02V  |
| NTE4910     | Overvoltage Transient Suppressor, Vr =8.55V                 |
| NTE4911     | Overvoltage Transient Suppressor, Bi-Directional Vr =8.55V  |
| NTE4914     | Overvoltage Transient Suppressor, Vr =10.20V                |
| NTE4915     | Overvoltage Transient Suppressor, Bi-Directional Vr =10.20V |
| NTE4918     | Overvoltage Transient Suppressor, Vr =11.1V                 |
| NTE4919     | Overvoltage Transient Suppressor, Bi-Directional Vr =11.1V  |
| NTE4920     | Overvoltage Transient Suppressor, Vr =12.80V                |
| NTE4921     | Overvoltage Transient Suppressor, Bi-Directional Vr =12.80V |
| NTE4922     | Overvoltage Transient Suppressor, Vr =13.60V                |
| NTE4923     | Overvoltage Transient Suppressor, Bi-Directional Vr =13.60V |
| NTE4926     | Overvoltage Transient Suppressor, Vr =15.3V                 |
| NTE4927     | Overvoltage Transient Suppressor, Bi-Directional Vr =15.3V  |
| NTE4928     | Overvoltage Transient Suppressor, Vr =17.1V                 |
| NTE4929     | Overvoltage Transient Suppressor, Bi-Directional Vr =17.1V  |
| NTE4932     | Overvoltage Transient Suppressor, Vr=20.50V                 |
| NTE4933     | Overvoltage Transient Suppressor, Bi-Directional Vr =20.50V |
| NTE4934     | Overvoltage Transient Suppressor, Vr =23.1V                 |
| NTE4935     | Overvoltage Transient Suppressor, Bi-Directional Vr =23.1V  |
| NTE4936     | Overvoltage Transient Suppressor, Vr =25.60V                |
| NTE4937     | Overvoltage Transient Suppressor, Bi-Directional Vr =25.60V |
| NTE4938     | Overvoltage Transient Suppressor, Vr =28.20V                |
| NTE4939     | Overvoltage Transient Suppressor, Bi-Directional Vr =28.20V |
| NTE4940     | Overvoltage Transient Suppressor, Vr =30.80V                |
| NTE4941     | Overvoltage Transient Suppressor, Bi-Directional Vr =30.80V |
| NTE4942     | Overvoltage Transient Suppressor, Vr =33.30V                |
| NTE4943     | Overvoltage Transient Suppressor, Bi-Directional Vr =33.30V |
| NTE4944     | Overvoltage Transient Suppressor, Vr =36.80V                |





## Transient Suppressors (cont.)

| Part Number | Description  |
|-------------|--|
| NTE4945     | Overvoltage Transient Suppressor, Bi-Directional Vr =36.80V  |
| NTE4946     | Overvoltage Transient Suppressor, Vr =40.2V                  |
| NTE4947     | Overvoltage Transient Suppressor, Bi-Directional Vr =40.20V  |
| NTE4950     | Overvoltage Transient Suppressor, Vr =43.6V                  |
| NTE4951     | Overvoltage Transient Suppressor, Bi-Directional Vr =43.6V   |
| NTE4952     | Overvoltage Transient Suppressor, Vr =47.80V                 |
| NTE4953     | Overvoltage Transient Suppressor, Bi-Directional Vr =47.80V  |
| NTE4954     | Overvoltage Transient Suppressor, Vr =53V                    |
| NTE4955     | Overvoltage Transient Suppressor, Bi-Directional Vr =53V     |
| NTE4958     | Overvoltage Transient Suppressor, Vr =58.1V                  |
| NTE4959     | Overvoltage Transient Suppressor, Bi-Directional Vr =58.1V   |
| NTE4960     | Overvoltage Transient Suppressor, Vr =64.10V                 |
| NTE4961     | Overvoltage Transient Suppressor, Bi-Directional Vr =64.10V  |
| NTE4962     | Overvoltage Transient Suppressor, Vr =70.10V                 |
| NTE4963     | Overvoltage Transient Suppressor, Bi-Directional Vr =70.10V  |
| NTE4964     | Overvoltage Transient Suppressor, Vr =77.80V                 |
| NTE4965     | Overvoltage Transient Suppressor, Bi-Directional Vr =77.80V  |
| NTE4966     | Overvoltage Transient Suppressor, Vr =85.80V                 |
| NTE4967     | Overvoltage Transient Suppressor, Bi-Directional Vr =85.50V  |
| NTE4968     | Overvoltage Transient Suppressor, Vr =94.00V                 |
| NTE4969     | Overvoltage Transient Suppressor, Bi-Directional Vr =94.00V  |
| NTE4970     | Overvoltage Transient Suppressor, Vr =102.00V                |
| NTE4971     | Overvoltage Transient Suppressor, Bi-Directional Vr =102.00V |
| NTE4972     | Overvoltage Transient Suppressor, Vr =111.00V                |
| NTE4973     | Overvoltage Transient Suppressor, Bi-Directional Vr =111.00V |
| NTE4974     | Overvoltage Transient Suppressor, Vr =121.00V                |
| NTE4975     | Overvoltage Transient Suppressor, Bi-Directional Vr =128.00V |
| NTE4976     | Overvoltage Transient Suppressor, Vr =136.00V                |
| NTE4977     | Overvoltage Transient Suppressor, Bi-Directional Vr =136.00V |
| NTE4978     | Overvoltage Transient Suppressor, Vr =145.00V                |
| NTE4979     | Overvoltage Transient Suppressor, Bi-Directional Vr =145.00V |
| NTE4980     | Overvoltage Transient Suppressor, Vr =154.00V                |
| NTE4981     | Overvoltage Transient Suppressor, Bi-Directional Vr =154.00V |
| NTE4982     | Overvoltage Transient Suppressor, Vr =185.00V                |
| NTE4983     | Overvoltage Transient Suppressor, Bi-Directional Vr =185.00V |
| NTE4984     | Overvoltage Transient Suppressor, Vr =214.00V                |
| NTE4985     | Overvoltage Transient Suppressor, Bi-Directional Vr =214.00V |
| NTE4988     | Overvoltage Transient Suppressor, Vr =171V                   |
| NTE4989     | Overvoltage Transient Suppressor, Bi-Directional Vr =171V    |
| NTE4990     | Overvoltage Transient Suppressor, Vr =256.00V                |
| NTE4991     | Overvoltage Transient Suppressor, Bi-Directional Vr =256.00V |
| NTE4992     | Overvoltage Transient Suppressor, Vr =273.00V                |
| NTE4993     | Overvoltage Transient Suppressor, Bi-Directional Vr =273.00V |

## Transient Suppressors (cont.)

| Part Number | Description  |
|-------------|--|
| NTE4994     | Overvoltage Transient Suppressor, Vr =300V                   |
| NTE4995     | Overvoltage Transient Suppressor, Bi-Directional Vr =300V    |
| NTE4996     | Overvoltage Transient Suppressor, Vr =342.00V                |
| NTE4997     | Overvoltage Transient Suppressor, Bi-Directional Vr =342.00V |
| NTE4998     | Overvoltage Transient Suppressor, Vr =376.00V                |
| NTE4999     | Overvoltage Transient Suppressor, Bi-Directional Vr =376.00V |

## Zener Diodes




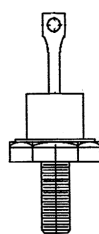
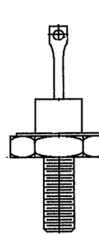
| Part Number | Description                                     |
|-------------|---|
| NTE5000A    | Zener Diode, 2.4V, 1/2W, 5% Tol                 |
| NTE5001A    | Zener Diode, 2.5V, 1/2W, 5% Tol                 |
| NTE5002A    | Zener Diode, 2.7V, 1/2W, 5% Tol                 |
| NTE5003A    | Zener Diode, 2.8V, 1/2W, 5% Tol                 |
| NTE5004A    | Zener Diode, 3.0V, 1/2W, 5% Tol                 |
| NTE5005A    | Zener Diode, 3.3V, 1/2W, 5% Tol                 |
| NTE5005SM   | Zener Diode, 3.3V, 300mW, 5% Tol, Surface Mount |
| NTE5007A    | Zener Diode, 3.9V, 1/2W, 5% Tol                 |
| NTE5007SM   | Zener Diode, 3.9V, 300mW, 5% Tol, Surface Mount |
| NTE5008A    | Zener Diode, 4.3V, 1/2W, 5% Tol                 |
| NTE5008SM   | Zener Diode, 4.3V, 300mW, 5% Tol, Surface Mount |
| NTE5009A    | Zener Diode, 4.7V, 1/2W, 5% Tol                 |
| NTE5009SM   | Zener Diode, 4.7V, 300mW, 5% Tol, Surface Mount |
| NTE5010A    | Zener Diode, 5.1V, 1/2W, 5% Tol                 |
| NTE5010SM   | Zener Diode, 5.1V, 300mW, 5% Tol, Surface Mount |
| NTE5010T1   | Zener Diode, 5.1V, 1/2W, 1% Tol                 |
| NTE5011A    | Zener Diode, 5.6V, 1/2W, 5% Tol                 |
| NTE5011SM   | Zener Diode, 5.6V, 300mW, 5% Tol, Surface Mount |
| NTE5011T1   | Zener Diode, 5.6V, 1/2W, 1% Tol                 |
| NTE5012A    | Zener Diode, 6.0V, 1/2W, 5% Tol                 |
| NTE5013A    | Zener Diode, 6.2V, 1/2W, 5% Tol                 |
| NTE5013SM   | Zener Diode, 6.2V, 300mW, 5% Tol, Surface Mount |
| NTE5013T1   | Zener Diode, 6.2V, 1/2W, 1% Tol                 |
| NTE5014A    | Zener Diode, 6.8V, 1/2W, 5% Tol                 |
| NTE5014SM   | Zener Diode, 6.8V, 300mW, 5% Tol, Surface Mount |
| NTE5015A    | Zener Diode, 7.5V, 1/2W, 5% Tol                 |



# Semiconductors




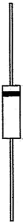

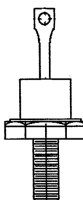
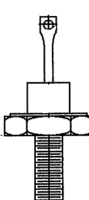
## Zener Diodes (cont.)

| Rated Voltage<br>±5% | P <sub>D</sub> | NTE Number Axial Leads  |   |   | NTE Number Stud Mount   |   |
|----------------------|----------------|---|---|---|---|---|
|                      |                | 1/2 Watt  | 1 Watt  | 5 Watt  | 10 Watt   | 50 Watt   |
| 2.4                  |                | 5000A   | 5061A   | -   | -   | -   |
| 2.5                  |                | 5001A   | 5062A   | -   | -   | -   |
| 2.7                  |                | 5002A   | 5063A   | -   | -   | -   |
| 2.8                  |                | 5003A   | 5064A   | -   | -   | -   |
| 3.0                  |                | 5004A   | 5065A   | -   | -   | -   |
| 3.3                  |                | 5005A   | 5066A   | 5111A   | -   | -   |
| 3.6                  |                | 5006A   | 134A  | 5112A   | -   | -   |
| 3.9                  |                | 5007A   | 5067A   | 5113A   | 5174A   | 5240A   |
| 4.3                  |                | 5008A   | 5068A   | 5114A   | 5175A   | 5241A   |
| 4.7                  |                | 5009A   | 5069A   | 5115A   | 5176A   | 5242A   |
| 5.1                  |                | 5010A   | 135A  | 5116A   | 5177A   | 5243A   |
| 5.6                  |                | 5011A   | 136A  | 5117A   | 5178A   | 5244A   |
| 6.0                  |                | 5012A   | 5070A   | 5118A   | 5179A   | 5245A   |
| 6.2                  |                | 5013A   | 137A  | 5119A   | 5180A   | 5246A   |
| 6.8                  |                | 5014A   | 5071A   | 5120A   | 5181A   | 5247A   |
| 7.5                  |                | 5015A   | 138A  | 5121A   | 5182A   | 5248A   |
| 8.2                  |                | 5016A   | 5072A   | 5122A   | 5183A   | 5249A   |
| 8.7                  |                | 5017A   | 5073A   | 5123A   | 5184A   | 5250A   |
| 9.1                  |                | 5018A   | 139A  | 5124A   | 5185A   | 5251A   |
| 10.0                 |                | 5019A   | 140A  | 5125A   | 5186A   | 5252A   |
| 11.0                 |                | 5020A   | 5074A   | 5126A   | 5187A   | 5253A   |
| 11.5                 |                | -   | 141A  | -   | -   | -   |
| Package Type         |                |  |  |  |  |  |
| Package Style        |                | DO35  | DO41/DO15   |   | DO4   | DO5   |





## Zener Diodes (cont.)




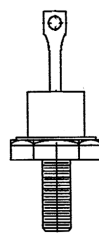
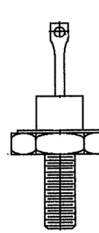
| Rated Voltage<br>±5% | P <sub>D</sub> | NTE Number Axial Leads  |   |   | NTE Number Stud Mount   |   |
|----------------------|----------------|---|---|---|---|---|
|                      |                | 1/2 Watt  | 1 Watt  | 5 Watt  | 10 Watt   | 50 Watt   |
| 12.0                 |                | 5021A   | 142A  | 5127A   | 5188A   | 5254A   |
| 13.0                 |                | 5022A   | 143A  | 5128A   | 5189A   | 5255A   |
| 14.0                 |                | 5023A   | 144A  | 5129A   | 5190A   | 5256A   |
| 15.0                 |                | 5024A   | 145A  | 5130A   | 5191A   | 5257A   |
| 16.0                 |                | 5025A   | 5075A   | 5131A   | 5192A   | 5258A   |
| 17.0                 |                | 5026A   | 5076A   | 5132A   | 5193A   | 5259A   |
| 18.0                 |                | 5027A   | 5077A   | 5133A   | 5194A   | 5260A   |
| 19.0                 |                | 5028A   | 5078A   | 5134A   | 5195A   | 5261A   |
| 20.0                 |                | 5029A   | 5079A   | 5135A   | 5196A   | 5262A   |
| 22.0                 |                | 5030A   | 5080A   | 5136A   | 5197A   | 5263A   |
| 24.0                 |                | 5031A   | 5081A   | 5137A   | 5198A   | 5264A   |
| 25.0                 |                | 5032A   | 5082A   | 5138A   | 5199A   | 5265A   |
| 27.0                 |                | 5033A   | 146A  | 5139A   | 5200A   | 5266A   |
| 28.0                 |                | 5034A   | 5083A   | 5140A   | 5201A   | 5267A   |
| 30.0                 |                | 5035A   | 5084A   | 5141A   | 5202A   | 5268A   |
| 33.0                 |                | 5036A   | 147A  | 5142A   | 5203A   | 5269A   |
| 36.0                 |                | 5037A   | 5085A   | 5143A   | 5204A   | 5270A   |
| 39.0                 |                | 5038A   | 5086A   | 5144A   | 5205A   | 5271A   |
| 43.0                 |                | 5039A   | 5087A   | 5145A   | 5206A   | 5272A   |
| 45.0                 | -              | -   | -   | -   | 5207A   | 5273A   |
| 47                   |                | 5040A   | 5088A   | 5146A   | 5208A   | 5274A   |
| 50.0                 | -              | -   | -   | -   | 5209A   | 5275A   |
| 51.0                 |                | 5041A   | 5089A   | 5147A   | 5210A   | 5276A   |
| Package Type         |                |  |  |  |  |  |
| Package Style        |                | DO35  | DO41/DO15   |   | DO4   | DO5   |



# Semiconductors



## Zener Diodes (cont.)

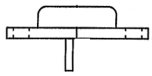
| Rated Voltage<br>±5% | P <sub>D</sub>  | NTE Number Axial Leads  |   |   | NTE Number Stud Mount   |         |
|----------------------|---|---|---|---|---|---------|
|                      |   | 1/2 Watt  | 1 Watt  | 5 Watt  | 10 Watt   | 50 Watt |
| 52.0                 | -   | -   | -   | -   | 5211A   | 5277A   |
| 55.0                 | -   | -   | 148A  | -   | -   | -       |
| 56.0                 | -   | 5042A   | 5090A   | 5148A   | 5212A   | 5278A   |
| 60.0                 | -   | 5043A   | 5091A   | 5149A   | 5213A   | 5279A   |
| 62.0                 | -   | 5044A   | 149A  | 5150A   | 5214A   | 5280A   |
| 68.0                 | -   | 5045A   | 5092A   | 5151A   | 5215A   | 5281A   |
| 75.0                 | -   | 5046A   | 5093A   | 5152A   | 5216A   | 5282A   |
| 82.0                 | -   | 5047A   | 150A  | 5153A   | 5217A   | 5283A   |
| 87.0                 | -   | 5048A   | 5094A   | 5154A   | 5218A   | -       |
| 91.0                 | -   | 5049A   | 5095A   | 5155A   | 5219A   | 5284A   |
| 100.0                | -   | 5050A   | 5096A   | 5156A   | 5220A   | 5285A   |
| 105.0                | -   | -   | -   | -   | 5221A   | 5286A   |
| 110.0                | -   | 5051A   | 151A  | 5157A   | 5222A   | 5287A   |
| 120.0                | -   | 5052A   | 5097A   | 5158A   | 5223A   | 5288A   |
| 130.0                | -   | 5053A   | 5098A   | 5159A   | 5224A   | 5289A   |
| 140.0                | -   | 5054A   | 5099A   | 5160A   | 5225A   | 5290A   |
| 150.0                | -   | 5055A   | 5100A   | 5161A   | 5226A   | 5291A   |
| 160.0                | -   | 5056A   | 5101A   | 5162A   | 5227A   | 5292A   |
| 170.0                | -   | 5057A   | 5102A   | 5163A   | 5228A   | -       |
| 175.0                | -   | -   | -   | -   | 5229A   | 5293A   |
| 180.0                | -   | 5058A   | 5103A   | 5164A   | 5230A   | 5294A   |
| 190.0                | -   | 5059A   | 5104A   | 5165A   | 5231A   | 5295A   |
| 200.0                | -   | 5060A   | 5105A   | 5166A   | 5232A   | 5296A   |
| Package Type         |  |  |  |  |  |         |
| Package Style        | DO35  | DO41/DO15   |   | DO4   | DO5   |         |



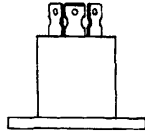


## Voltage Regulators

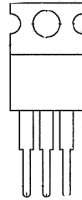
Positive, 3 terminal, arranged by output voltage



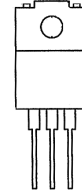
TO3



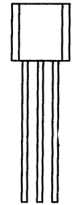
TO3P



TO220



TO220(Isol)



TO92

| Part Number | Case Style   | Description                         |
|-------------|--------------|-------------------------------------|
| NTE309K     | TO3          | IC-Vltg Reg, Pos, 5V, 1A            |
| NTE 1934    | TO3P         | IC-Vltg Reg, Pos, 5V, 2A            |
| NTE1934X    | TO3P         | IC-Vltg Reg, Pos, 5V, 2A            |
| NTE931      | TO3          | IC-Vltg Reg, Pos 5V, 3A             |
| NTE932      | TO3          | IC-Vltg Reg, Pos 5V, 5A             |
| NTE960      | TO220        | IC-Vltg Reg, Pos, 5V, 1A            |
| NTE 1960    | TO220 (Isol) | IC-Vltg Reg, Pos, 5V, 1A, Isol Tab  |
| NTE977      | TO92         | IC-Vltg Reg, Pos, 5V, 100mA         |
| NTE 1962    | TO220 (Isol) | IC-Vltg Reg, Pos, 6V, 1A, Isol Tab  |
| NTE988      | TO92         | IC-Vltg Reg, Pos, 6.2V, 100mA       |
| NTE964      | TO220        | IC-Vltg Reg, Pos, 8V, 1A            |
| NTE1964     | TO220 (isol) | IC-Vltg Reg, Pos, 8V, 1A, Isol Tab  |
| NTE981      | TO92         | IC-Vltg Reg, Pos, 8V, 100mA         |
| NTE1902     | TO92         | IC-Vltg Reg, Pos, 9V, 100mA         |
| NTE1910     | TO220        | IC-Vltg Reg, Pos, 9V, 1A            |
| NTE 1966    | TO220 (Isol) | IC-Vltg Reg, Pos, 9V, 1A, Isol Tab  |
| NTE1932     | TO220        | IC-Vltg Reg, Pos, 10V, 1A           |
| NTE 1968    | TO220 (Isol) | IC-Vltg Reg, Pos, 10V, 1A, Isol Tab |
| NTE933      | TO3          | IC-Vltg Reg, Pos 12V, 5A            |
| NTE1912     | TO3          | IC-Vltg Reg, Pos, 12V, 3A           |
| NTE1914     | TO3          | IC-Vltg Reg, Pos, 12V, 1.5A         |
| NTE1936     | TO3P         | IC-Vltg Reg, Pos, 12V, 2A           |
| NTE950      | TO92         | IC-Vltg Reg, Pos, 12V, 100mA        |
| NTE966      | TO220        | IC-Vltg Reg, Pos, 12V, 1A           |

Positive, 3 terminal, arranged by output voltage  
(cont.)

| Part Number | Case Style   | Description                         |
|-------------|--------------|-------------------------------------|
| NTE1970     | TO220 (Isol) | IC-Vltg Reg, Pos, 12V, 1A, Isol Tab |
| NTE951      | TO92         | IC-Vltg Reg, Pos, 15V, 100mA        |
| NTE968      | TO220        | IC-Vltg Reg, Pos, 15V, 1A           |
| NTE1972     | TO220 (Isol) | IC-Vltg Reg, Pos, 15V, 1A, Isol Tab |
| NTE1938     | TO3P         | IC-Vltg Reg, Pos, 15V, 2A           |
| NTE1920     | TO3          | IC-Vltg Reg, Pos, 18V, 3A           |
| NTE958      | TO220        | IC-Vltg Reg, Pos, 18V, 1A           |
| NTE1974     | TO220 (Isol) | IC-Vltg Reg, Pos, 18V, 1A, Isol Tab |
| NTE1906     | TO92         | IC-Vltg Reg, Pos, 18V, 100mA        |
| NTE1924     | TO3          | IC-Vltg Reg, Pos, 24V, 1.5A         |
| NTE972      | TO220        | IC-Vltg Reg, Pos, 24V, 1A           |
| NTE1976     | TO220 (Isol) | IC-Vltg Reg, Pos, 24V, 1A, Isol Tab |
| NTE1908     | TO92         | IC-Vltg, Pos, 24V, 100mA            |
| NTE1940     | TO3P         | IC-Vltg, Pos, 24V, 2A               |

Negative, 3 terminal, arranged by output voltage

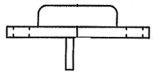
| Part Number | Case Style   | Description                         |
|-------------|--------------|-------------------------------------|
| NTE1961     | TO220 (Isol) | IC-Vltg Reg, Neg, -5V, 1A, Isol Tab |
| NTE1913     | TO3          | IC-Vltg Reg, Neg, -5V, 1.5A         |
| NTE1917     | TO92         | IC-Vltg Reg, Neg, -5V, 100mA        |
| NTE963      | TO220        | IC-Vltg Reg, Neg, -6V, 1A           |
| NTE1963     | TO220 (Isol) | IC-Vltg Reg, Neg, -6V, 1A, Isol Tab |
| NTE965      | TO220        | IC-Vltg Reg, Neg, -8V, 1A           |
| NTE961      | TO220        | IC-Vltg Reg, Neg, -5V, 1A           |



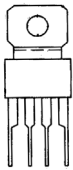
# Semiconductors



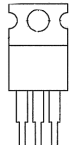
## Voltage Regulators (cont.)



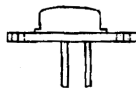
TO3



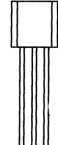
4-Lead Power



TO220



4-Lead TO3



TO92



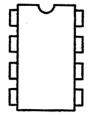
10-Lead Metal Can



8-Lead Metal Can



14-Lead Dip



8-Lead Dip



Axial

Negative, 3 terminal, arranged by output voltage  
(cont.)

| Part Number | Case Style   | Description                          |
|-------------|--------------|--------------------------------------|
| NTE1965     | TO220 (Isol) | IC-Vltg Reg, Neg, -8V, 1A, Isol Tab  |
| NTE1967     | TO220 (Isol) | IC-Vltg Reg, Neg, -9V, 1A, Isol Tab  |
| NTE967      | TO220        | IC-Vltg Reg, Neg, -12V, 1A           |
| NTE1971     | TO220 (Isol) | IC-Vltg Reg, Neg, -12V, 1A, Isol Tab |
| NTE1903     | TO92         | IC-Vltg Reg, Neg, -12V, 100mA        |
| NTE1915     | TO3          | IC-Vltg Reg, Neg, -12V, 1.5A         |
| NTE969      | TO220        | IC-Vltg Reg, Neg, -15V, 1A           |
| NTE1973     | TO220 (Isol) | IC-Vltg Reg, Neg, -15V, 1A, Isol Tab |
| NTE1905     | TO92         | IC-Vltg Reg, Neg, -15V, 100mA        |
| NTE1919     | TO3          | IC-Vltg Reg, Neg, -15V, 1.5A         |
| NTE959      | TO220        | IC-Vltg Reg, Neg, -18V, 1A           |
| NTE1975     | TO220 (Isol) | IC-Vltg Reg, Neg, -18V, 1A, Isol Tab |
| NTE1907     | TO92         | IC-Vltg Reg, Neg, -18V, 100mA        |
| NTE1923     | TO3          | IC-Vltg Reg, Neg, -18V, 100mA        |
| NTE971      | TO220        | IC-Vltg Reg, Neg, -24V, 1A           |
| NTE1977     | TO220 (Isol) | IC-Vltg Reg, Neg, -24V, 1A, Isol Tab |
| NTE1909     | TO92         | IC-Vltg Reg, Neg, -24V, 100mA        |
| NTE1925     | TO3          | IC-Vltg Reg, Neg, -24V, 1.5A         |

Positive, low dropout voltage, arranged by output voltage

| Part Number | Case Style | Description                            |
|-------------|------------|--|
| NTE1951     | TO220      | IC-Vltg Reg, Pos, 5V, 1A, Low Dropout  |
| NTE1952     | TO220      | IC-Vltg Reg, Pos, 8V, 1A, Low Dropout  |
| NTE1953     | TO220      | IC-Vltg Reg, Pos, 10V, 1A, Low Dropout |
| NTE1954     | TO220      | IC-Vltg Reg, Pos, 12V, 1A, Low Dropout |
| NTE1955     | TO220      | IC-Vltg Reg, Pos, 15V, 1A, Low Dropout |

Positive adjustable, arranged by output voltage

| Part Number | Case Style       | Description  |
|-------------|------------------|--|
| NTE935      | TO3              | IC-Vltg Reg, Pos Adj., 1.2V to 32V, 5A             |
| NTE970      | TO3              | IC-Vltg Reg, Pos Adj., 1.2V to 33V, 3A             |
| NTE956      | TO220            | IC-Vltg Reg, Pos Adj., 1.2V to 37V, 1.5A           |
| NTE1900     | TO92             | IC-Vltg Reg, Pos Adj., 1.2V to 37V, 100mA          |
| NTE1942     | TO220            | IC-Vltg Reg, Pos Adj., 2.85V to 36V, 2A            |
| NTE1928     | 8-Lead Metal Can | IC-Vltg Reg, Pos Adj., 4.5 V to 40 V, 45mA         |
| NTE953      | 4-Lead Power Tab | IC-Vltg Reg, Pos Adj., 4-Terminal, 7.5V to 40V, 1A |







## Voltage Regulators (cont.)

Negative adjustable, arranged by output voltage

| Part Number | Case Style | Description                                  |
|-------------|------------|--|
| NTE1927     | 4-Lead TO3 | IC-Vltg Reg, Neg Adj., -2.2V to -30V, 1A     |
| NTE957      | TO220      | IC-Vltg Reg, Neg Adj., - 1.2V to - 37V, 1.5A |
| NTE1901     | TO92       | IC-Vltg Reg, Neg Adj., -1.2V to -37V, 100mA  |
| NTE1911     | TO3        | IC-Vltg Reg, Neg, Adj., -1.2V to -37V, 1.5A  |

## Precision Voltage Regulators

0.01% line and load regulation, Positive or negative supply.

| Part Number | Case Style        | Description                            |
|-------------|-------------------|--|
| NTE923      | 10-Lead Metal Can | IC-Linear, Precision Voltage Regulator |
| NTE923D     | 14-Lead DIP       | IC-Linear, Precision Voltage Regulator |

## Reference Voltage Regulators

For electronic tuner.

| Part Number | Case Style | Description                                      |
|-------------|------------|--|
| NTE615      | Axial      | Reference Voltage Regulator for Electronic Tuner |
| NTE615P     | TO92       | Reference Voltage Regulator for Electronic Tuner |

## Optoisolators Phototransistor Outputs

| Part Number | Output Configuration         | Viso | Pt  | Ctr           | If | Vf  | Vr | Bvcb0 | Bvceo      | Ic   |
|-------------|------------------------------|------|-----|---------------|----|-----|----|-------|------------|------|
| NTE3040     | NPN Transistor               | 7500 | 250 | 20            | 80 | 1.5 | 3  | 70    | 30         | 100  |
| NTE3041     | NPN Transistor               | 7500 | 300 | 100           | 60 | 1.5 | 6  | 70    | 30         | 50   |
| NTE3042     | NPN Transistor               | 7500 | 250 | 20            | 60 | 1.5 | 3  | 70    | 30         | 50   |
| NTE3043     | NPN Transistor               | 3550 | 260 | 70            | 60 | 1.5 | 3  | 70    | 80         | 50   |
| NTE3044     | NPN Darlington               | 7500 | 250 | 300           | 80 | 2.0 | 3  | -     | 80         | 1000 |
| NTE3045     | NPN Darlington               | 7500 | 250 | 500           | 80 | 2.0 | 3  | -     | 80         | 1000 |
| NTE3081     | NPN Transistor               | 6000 | 250 | 20            | 60 | 1.7 | 4  | -     | 30         | 100  |
| NTE3082     | NPN Darlington               | 6000 | 250 | 400           | 60 | 1.7 | 4  | -     | 30         | 100  |
| NTE3083     | NPN Darlington               | 7500 | 250 | 200           | 60 | 1.5 | 3  | -     | 30         | 100  |
| NTE3084     | NPN Darlington               | 7500 | 250 | 100           | 60 | 1.5 | 3  | -     | 55         | 100  |
| NTE3086     | Dual NPN Transistor          | 7500 | 400 | 50            | 60 | 1.5 | 3  | -     | 30         | 100  |
| NTE3088     | HV NPN Transistor            | 7500 | 300 | 20            | 60 | 1.5 | 6  | 300   | 300 (Vcer) | 100  |
| NTE3089     | AC Input NPN Transistor      | 7500 | 250 | 20            | 60 | 1.5 | -  | 70    | 30         | 100  |
| NTE3096     | Low LED Drive NPN Transistor | 7500 | 300 | 50 @ If = 1mA | 60 | 1.4 | 6  | 70    | 30         | 25   |
| NTE3098     | NPN Transistor               | 5000 | 200 | 100           | 50 | 1.3 | 5  | -     | 55         | 100  |
| NTE3220     | Dual NPN Transistor          | 5000 | 200 | 50 @ If = 5mA | 50 | 1.2 | 6  | -     | 35         | 50   |
| NTE3221     | Quad NPN Transistor          | 5000 | 200 | 50 @ If = 5mA | 50 | 1.2 | 6  | -     | 35         | 50   |



# Semiconductors



ELECTRONICS, INC.

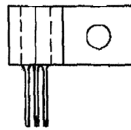
## Optoisolators Phototransistor Outputs (cont.)

| Part Number | Output Configuration | Viso | Pt | Ctr | If | Vf  | Vr  | Bvcbo | Bvceo | Ic |
|-------------|----------------------|------|----|-----|----|-----|-----|-------|-------|----|
| NTE3100     | NPN Transistor       | 6    | 60 | 1.7 | 55 | 100 | 100 | 250   | 8     | 50 |
| NTE3101     | NPN Darlington       | 6    | 60 | 1.7 | 55 | 100 | 100 | 250   | 7     | 45 |
| NTE3102     | NPN Transistor       | 6    | 60 | 1.7 | 55 | 100 | 100 | 250   | 8     | 50 |
| NTE3103     | NPN Darlington       | 6    | 60 | 1.7 | 55 | 100 | 100 | 250   | 7     | 45 |
| NTE3105     | NPN Transistor       | 3    | 50 | 1.3 | 30 | 20  | 200 | 75    | 20    | 20 |

## Silicone Transistor Selector Guide



TO92



TO92HS



Giant TO92

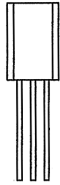
| NTE Type Number |      | Application                              | Maximum Breakdown Voltage (Volts) |                   | Maximum Collector Current (Amps) | Max. Collector Diss. (Watts) | Typical Forward Current Gain | Typical Freq (MHz) | Package Style/Diagram Number |
|-----------------|------|--|-----------------------------------|-------------------|----------------------------------|------------------------------|------------------------------|--------------------|------------------------------|
| NPN             | PNP  |  | BV <sub>CBO</sub>                 | BV <sub>CEO</sub> | I <sub>C</sub>                   | P <sub>D</sub>               | h <sub>FE</sub>              | f <sub>T</sub>     |                              |
| 123AP           | 159  | Amp, Gen Purpose                         | 75/80                             | 40/80             | 0.6/1                            | 0.625                        | 200/180                      | 300 Min/200        | TO92                         |
| 46              | -    | Darlington, Gen Purp Amp, Preamp, Driver | 100                               | 100               | 0.5                              | 0.625                        | 10000 Min                    | 200                | TO92                         |
| 289A            | 290A | Audio Pwr Amp                            | 100                               | 80                | 0.5                              | 0.6                          | 100 Min                      | 120                | TO92                         |
| 194             | -    | Audio Pwr Amp                            | 180                               | 160               | 0.6                              | 0.31                         | 100                          | 100 Min            | TO92                         |
| 287             | 288  | High Vltg, Gen Purp Amp                  | 300                               | 300               | 0.5                              | 0.625                        | 40 Min                       | 50 Min             | TO92                         |
| 192             | 193  | Audio Pwr Amp, Gen Purp                  | 70                                | 70 (CES)          | 1                                | 1*                           | 150                          | 120 Min            | TO92HS                       |
| 192A            | 193A | Audio Pwr Output                         | 70                                | 70 (CES)          | 0.5                              | 0.6                          | 120 Min                      | 120                | TO92HS                       |
| 48              | -    | Darlington, High Current, Gen Purp Amp   | 60                                | 50 (CES)          | 1                                | 2.5*                         | 25000 Min                    | 100 Min            | Giant TO92                   |
| 293             | 294  | Audio Amp & Driver                       | 60                                | 50                | 1                                | 1                            | 120 Min                      | 200                | Giant TO92                   |
| 297             | 298  | Audio Amp Driver                         | 80                                | 80                | 0.5                              | 0.75                         | 130 Min                      | 120                | Giant TO92                   |
| 90              | 91   | Amp, High Vltg, High Gain                | 120                               | 120               | 0.05                             | 0.75/150                     | 400 Min                      | 350/20             | Giant TO92                   |

\*T<sub>c</sub>=25°C





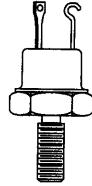
## Silicone Transistor Selector Guide (cont.)



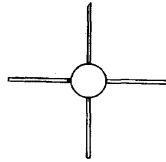
Giant TO92



TO106



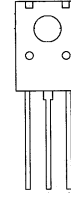
TO111



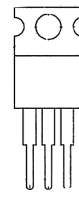
TO117



TO126



TO126ML



TO220

| NTE Type Number |      | Application                            | Maximum Breakdown Voltage (Volts) |           | Max. Collector Current (Amps) | Max. Collector Diss. (Watts) | Typical Forward Current Gain | Typical Freq (MHz) | Package Style/Diagram Number |
|-----------------|------|--|-----------------------------------|-----------|-------------------------------|------------------------------|------------------------------|--------------------|------------------------------|
| NPN             | PNP  |  | $V_{CBO}$                         | $V_{CEO}$ | $I_C$                         | $P_D$                        | $h_{FE}$                     | $f_T$              |                              |
| 31              | 32   | Sound/Vert Output                      | 160                               | 160       | 1                             | 0.9                          | 100 Min                      | 20 Min/15 Min      | Giant TO92                   |
| 399             | -    | High Vltg Video Amp                    | 300                               | 300       | 0.1                           | 0.9                          | 100 Min                      | 50 Min             | Giant TO92                   |
| 108-1           | -    | Amp, RF/IF Video                       | 30                                | 15        | 0.05                          | 0.625                        | 20 Min                       | 800                | TO106                        |
| 75              | -    | High Pwr Amp, Switch                   | 100                               | 80        | 5                             | 50                           | 40 Min                       | 50 Min             | TO111                        |
| 95              | -    | High Vltg, Switch Isolated Stud        | 250                               | 250       | 3                             | 40                           | 90 Min                       | 40                 | TO111                        |
| 76              | -    | Amp, Broad Band, CATV                  | 50                                | 30        | 0.4                           | 5                            | 30 Min                       | 1500               | TO117                        |
| 2338            | -    | Darlington Power Amp w/Internal Damper | 60±10                             | 60±10     | 1.5                           | 10                           | 2000 Min                     | -                  | TO126                        |
| 184             | 185  | Amp, High Speed Switch                 | 80                                | 80        | 4                             | 40                           | 25 Min                       | 2 Min              | TO126                        |
| 253             | 254  | Darlington Pwr Amp                     | 80                                | 80        | 4                             | 40                           | 2,500                        | -                  | TO126                        |
| 295             | -    | RF Power Output/Driver                 | 80                                | 40        | 1.5                           | 5                            | 20 Min                       | 150 Min            | TO126                        |
| -               | 374  | Audio Amp, Gen Purp                    | 180                               | 160       | 1.5                           | 20                           | 190                          | 140                | TO126                        |
| 157             | 39   | High Vltg Amp, Gen Purp                | 325/300                           | 300       | 0.5                           | 20                           | 90/92                        | 10 Min             | TO126                        |
| 2327            | -    | High Vltg, High Speed Sw               | 1000 (CES)                        | 450       | 0.5                           | 20                           | 50                           | 20                 | TO126                        |
| 2501            | 2502 | HV for Video Output                    | 300                               | 300       | 0.1                           | 1.5                          | 100 Min                      | 70                 | TO126ML                      |
| 78              | -    | RF Pwr Output                          | 36                                | 18        | 0.6                           | 5                            | 5 Min                        | -                  | TO220                        |
| 152             | 153  | Amp, Gen Purp                          | 60                                | 60        | 5                             | 50                           | 60                           | 10                 | TO220                        |
| 236             | -    | Final RF Pwr Amp                       | 60                                | 25        | 6                             | 1.5                          | 15                           | -                  | B26                          |

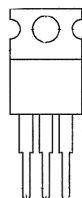
\* $T_c=25^\circ\text{C}$



# Semiconductors



## Silicone Transistor Selector Guide (cont.)



TO220

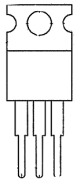
| NTE Type Number |      | Application                                       | Maximum Breakdown Voltage (Volts) |           | Max. Collector Current (Amps) |     | Max. Collector Diss. (Watts) | Typical Forward Current Gain | Typical Freq (MHz) |
|-----------------|------|---|-----------------------------------|-----------|-------------------------------|-----|------------------------------|------------------------------|--------------------|
| NPN             | PNP  |   | $V_{CBO}$                         | $V_{CEO}$ | $I_C$                         |     |                              |                              |                    |
| 2332            | -    | Darlington w/Internal Damper & Zener Diode        | 60±10                             | 60±10     | 2                             | 20  | 4000                         | -                            | TO220              |
| 2334            | -    | Darlington Driver w/Internal Damper & Zener Diode | 60±10                             | 60±10     | 5                             | 40  | 4000                         | 20                           | TO220              |
| 235             | -    | Final RF Pwr Amp                                  | 65                                | 65(CER)   | 3 Pulse                       | 12  | 80                           | 300                          | TO220              |
| 241             | 242  | Amp Gen Purp                                      | 80                                | 80        | 4                             | 60  | 25 Min                       | 25 Min                       | TO220              |
| 377             | 378  | Pwr Amp, Pwr Driver, Switch                       | 80                                | 80        | 10                            | 50  | 60 Min                       | 50                           | TO220              |
| 196             | 197  | Amp Gen Purp                                      | 90                                | 80 (CER)  | 7                             | 50* | 20 Min                       | 4                            | TO220              |
| 56              | -    | High Gain Switch                                  | 100                               | 80        | 3                             | 30  | 500 Min                      | 15                           | TO220              |
| 261             | 262  | Darlington Pwr Amp                                | 100                               | 100       | 8                             | 65  | 1000 Min                     | -                            | TO220              |
| 263             | 264  | Darlington Pwr Amp                                | 100                               | 100       | 10                            | 65  | 1000 Min                     | -                            | TO220              |
| 331             | 332  | Audio Amp, Switch                                 | 100                               | 100       | 15                            | 90  | 40 Min                       | 3 Min                        | TO220              |
| 2343            | 2344 | Darlington Audio Amp, Dr                          | 100                               | 100       | 12                            | 80* | 1000 Min                     | -                            | TO220              |
| 291             | 292  | Amp, Gen Purp                                     | 130                               | 120       | 4                             | 40  | 70                           | 4 Min/5 Min                  | TO220              |
| 54              | 55   | High Freq Audio Driver                            | 150                               | 150       | 8                             | 50  | 100/120                      | 30 Min                       | TO220              |
| 375             | 398  | Vert Deflection Amp                               | 200                               | 150       | 3/2                           | 25  | 150/100                      | 8/5                          | TO220              |
| 376             | -    | TV Pwr Supply Driver                              | 300                               | 300       | 0.2                           | 15* | 100                          | 70                           | TO220              |
| 2315            | -    | Fast Switch Pwr Darlington                        | 400                               | 200       | 8                             | 60  | 125                          | -                            | TO220              |
| 198             | -    | High Vltg Audio Output                            | 500                               | 500 (CES) | 1                             | 40* | 80                           | 10 Min                       | TO220              |
| 51              | -    | High Vltg, High Speed Sw                          | 700                               | 400       | 4                             | 75  | 30                           | 4 Min                        | TO220              |
| 379             | -    | High Vltg Switch                                  | 700                               | 400       | 12                            | 100 | 12                           | 4 Min                        | TO220              |

\*T<sub>c</sub>=25°C

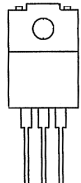




## Silicone Transistor Selector Guide (cont.)



TO220



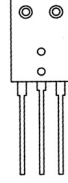
TO220 Isol Tab



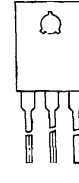
TO237



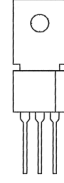
"N" Pack



TO126LP



TO127



TO202

| NTE Type Number |      | Application                                       | Maximum Breakdown Voltage (Volts) |           | Max. Collector Current (Amps) | Max. Collector Diss. (Watts) | Typical Forward Current Gain | Typical Freq (MHz) | Package Style/Diagram Number |
|-----------------|------|---|-----------------------------------|-----------|-------------------------------|------------------------------|------------------------------|--------------------|------------------------------|
| NPN             | PNP  |   | $V_{CE0}$                         | $V_{CE0}$ |                               |                              |                              |                    |                              |
| 2312            | -    | HV High Speed Switch                              | 700 CEV                           | 400 (SUS) | 8                             | 80                           | 60 Max                       | 4 Min              | TO220                        |
| 2325            | -    | High Voltage Switch                               | 900                               | 800       | 3                             | 50                           | 8 Min                        | 15                 | TO220                        |
| 2313            | -    | High Speed Switch                                 | 1000 (CES)                        | 450       | 2                             | 40                           | 50                           | 20                 | TO220                        |
| 2333            | -    | High Vltg, High Speed Sw                          | 1000 (CES)                        | 450       | 8                             | 100*                         | 4 Min                        | 10                 | TO220                        |
| 2303            | -    | High Vltg Horiz Output                            | 1500                              | 750       | 2.5                           | 65                           | 4.5                          | 4                  | TO220                        |
| 2336            | -    | Darlington Switch w/Internal Damper & Zener Diode | 60±10                             | 60±10     | 8                             | 45                           | 2000 Min                     | -                  | TO220 Isol Tab               |
| 2337            | -    | High Vltg, High Speed Sw                          | 900                               | 500       | 7                             | 2/45*                        | 15 Min                       | 20                 | TO220 Isol Tab               |
| 2339            | -    | High Vltg, High Speed Sw                          | 1100                              | 800       | 3                             | 30                           | 20 Min                       | 15                 | TO220 Isol Tab               |
| 216             | -    | High Speed Switch                                 | 80                                | 50        | 1                             | 1.5                          | 60 Min                       | -                  | TO237                        |
| 128P            | 129P | General Purp Amp                                  | 100                               | 80        | 1                             | 1/2                          | 100 Min                      | 150/125            | TO237                        |
| 24              | 25   | General Purp Amp, Switch                          | 100                               | 80        | 1                             | 2*                           | 50 Min/40Min                 | 150/125            | TO237                        |
| 227             | -    | HV Amp Video Output                               | 300                               | 300       | 0.01                          | 2*                           | 40 Min                       | 50 Min             | TO237                        |
| 255             | -    | Horiz Dr, Amp                                     | 325                               | 300       | 0.5                           | 2*                           | 110                          | 60                 | TO237                        |
| 2340            | -    | Darlington Sw w/Internal Damper Diode             | 60±10                             | 60±10     | 8                             | 45                           | 2000                         | -                  | "N" Pack                     |
| 2351            | 2352 | Darlington Pwr Amp, Sw                            | 100                               | 80        | 4                             | 1                            | 1000 Min                     | -                  | "N" Pack                     |
| 2504            | -    | High Gain Audio Amp                               | 30                                | 25        | 2                             | 1.2                          | 1500                         | 260                | TO126LP                      |
| 182             | 183  | High Speed Amp, Switch                            | 70                                | 60        | 10                            | 90                           | 20 min.                      | 2                  | TO127                        |
| 267             | -    | Darlington Pwr Amp Switch                         | 30                                | 30        | 0.5                           | 6.25                         | 90000 min                    | -                  | TO202                        |
| 265             | -    | Darlington Pwr Amp Sw                             | 50                                | 50        | 0.5                           | 6.25                         | 10000 min                    | -                  | TO202                        |
| 266             | -    | Darlington Pwr Amp Switch                         | 50                                | 50        | 0.5                           | 6.25                         | 40000 min                    | -                  | TO202                        |
| -               | 269  | Darlington Pwr Amp                                | 50                                | 50        | 2                             | 10                           | 1000 min                     | -                  | TO202                        |
| 300             | 307  | Audio Pwr Amp                                     | 50                                | 40        | 1.5                           | 7                            | 90 min                       | 65                 | TO202                        |
| 186             | 187  | Audio Driver, Output                              | 70                                | 60        | 3                             | 12.5                         | 100 min                      | 50                 | TO202                        |
| 299             | -    | RF Pwr Amp Driver                                 | 75                                | 35        | 1                             | 4                            | 70 min                       | -                  | TO202                        |

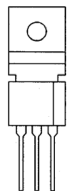
\* $T_c=25^\circ\text{C}$



# Semiconductors



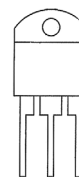
## Silicone Transistor Selector Guide (cont.)



TO202M



TO202N



TO218

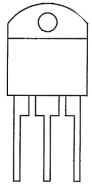
| NTE Type Number |      | Application                              | Maximum Breakdown Voltage (Volts) |           | Max. Collector Current (Amps) | Max. Collector Diss. (Watts) | Typical Forward Current Gain | Typical Freq (MHz) | Package Style/Dia. Number |
|-----------------|------|--|-----------------------------------|-----------|-------------------------------|------------------------------|------------------------------|--------------------|---------------------------|
| NPN             | PNP  |  | $V_{CBO}$                         | $V_{CEO}$ | $I_C$                         | $P_D$                        | $h_{FE}$                     | $f_T$              |                           |
| 210             | 211  | Gen Purp Output Driver                   | 90                                | 75        | 1                             | 6.25                         | 120 min                      | 200/150 min        | TO202                     |
| 49              | 50   | High Vltg Amp, Driver                    | 120                               | 100       | 2                             | 10                           | 100                          | 150                | TO202                     |
| 171             | -    | Audio, Video Amp                         | 300                               | 300       | 0.5                           | 6.25                         | 30 min                       | 75                 | TO202                     |
| 78              | -    | RF Pwr Output                            | 36                                | 18        | 0.6                           | 5                            | 5 min                        | -                  | TO202M                    |
| 79              | -    | RF Pwr Output                            | 36                                | 18        | 2                             | 15                           | 5 min                        | -                  | TO202M                    |
| 186A            | 187A | Med Audio Amp                            | 40/50                             | 50/40     | 3                             | 10                           | 120                          | 150                | TO202M                    |
| 228A            | -    | HV Amp Video Output                      | 450                               | 350       | 0.5                           | 2-10*                        | 25 Min                       | 45 Min             | TO202M                    |
| 272             | 273  | Darlington Pwr Amp, Switch               | 50                                | 40        | 2                             | 10*                          | 25000 Min                    | -                  | TO202N                    |
| 322             | -    | RF Pwr Output                            | 65                                | 65 (CES)  | 0.5                           | 10                           | 10 Min                       | 100                | TO202N                    |
| 188             | 189  | High Vltg Amp                            | 80                                | 80        | 2                             | 10                           | 60 Min                       | 100                | TO202N                    |
| 190             | -    | High Vltg Amp                            | 180                               | 180       | 1                             | 10                           | 40 Min                       | 100                | TO202N                    |
| 191             | 240  | High Vltg Amp                            | 300                               | 300       | 0.5                           | 10                           | 45 min/70                    | 40 min/60 min      | TO202N                    |
| 270             | 271  | Darlington Pwr Amp Switch                | 100                               | 100       | 10                            | 125                          | 1000 min                     | -                  | TO218                     |
| 390             | 391  | Pwr Amp, Switch                          | 100                               | 100       | 10                            | 80                           | 40 min                       | 3                  | TO218                     |
| 392             | 393  | Pwr Amp, Switch                          | 100                               | 100       | 25                            | 125                          | 25 min                       | 3                  | TO218                     |
| 2305            | 2306 | High Pwr Audio Amp                       | 160                               | 160       | 16                            | 125                          | 35                           | 1 min              | TO218                     |
| 2316            | -    | HV Pwr Darlington                        | 500                               | 450       | 10                            | 120                          | 130                          | -                  | TO218                     |
| 394             | -    | Pwr Amp, High Speed Sw                   | 500                               | 400       | 3                             | 100                          | 30 min                       | -                  | TO218                     |
| 2317            | -    | High Vltg. Fast Switch, Power Darlington | 500 (CES)                         | 450       | 15                            | 150                          | 300 min                      | -                  | TO218                     |
| 256             | -    | Darlington with Damper Diode             | 600                               | 400       | 28                            | 150                          | 30 min                       | -                  | TO218                     |
| 2310            | -    | High Vltg                                | 1000                              | 450       | 8                             | 125                          | 10                           | -                  | TO218                     |
| 2311            | -    | High Vltg/Speed Sw                       | 1000                              | 450       | 15                            | 150                          | 10                           | -                  | TO218                     |
| 2300            | -    | High Vltg, Horiz Output                  | 1500                              | 700       | 8                             | 125                          | 6                            | -                  | TO218                     |

\* $T_c=25^\circ\text{C}$

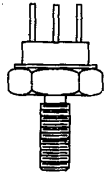




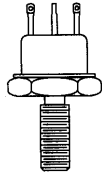
## Silicone Transistor Selector Guide (cont.)



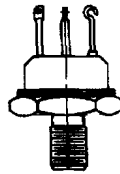
TO218



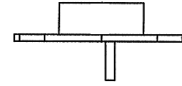
TO60



TO61



TO63



TO66



TO92

| NTE Type Number |     | Application                      | Maximum Breakdown Voltage (Volts) |                   | Max. Collector Current (Amps) | Max. Collector Diss. (Watts) | Typical Forward Current Gain | Typical Freq (MHz) | Package Style/Dia. Number |
|-----------------|-----|----------------------------------|-----------------------------------|-------------------|-------------------------------|------------------------------|------------------------------|--------------------|---------------------------|
| NPN             | PNP |                                  | BV <sub>CBO</sub>                 | BV <sub>CEO</sub> | I <sub>C</sub>                | P <sub>D</sub>               | h <sub>FE</sub>              | f <sub>T</sub>     |                           |
| 2301            | -   | High Vltg Horiz Output           | 1500                              | 750               | 5                             | 100                          | 5                            | 4                  | TO218                     |
| 2318            | -   | HV Sw with Internal Damper Diode | 1500(CES)                         | 700               | 8                             | 125                          | 5                            | 0.5                | TO218                     |
| 16002           | -   | RF Power, Dr                     | 65                                | 40                | 3                             | 23*                          | 5 min                        | 400                | TO60                      |
| 16003           | -   | RF Power, Dr                     | 65                                | 40                | 1.5                           | 11.6*                        | 10 min                       | 500                | TO60                      |
| 72              | -   | High Current, Fast Switch        | 120                               | 100               | 10                            | 115                          | 30 min                       | 30                 | TO61                      |
| 73              | -   | High Vltg Switch                 | 220                               | 200               | 10                            | 85                           | 15 min                       | 40                 | TO61                      |
| 71              | -   | High Current, Fast Switch        | 150                               | 90                | 20                            | 200                          | 20 min                       | 20                 | TO63                      |
| 70              | -   | Pwr Amp, High Vltg, Switch       | 180                               | 150               | 50                            | 250                          | 30 min                       | -                  | TO63                      |
| 274             | 275 | Darlington Pwr Amp Switch        | 80                                | 80                | 4                             | 50                           | 3000                         | -                  | TO66                      |
| -               | 218 | Audio Power Output               | 90                                | 80                | 4                             | 25                           | 30 min                       | 4 min              | TO66                      |
| 124             | -   | High Vltg, Gen Purpose           | 300                               | 300               | 0.15                          | 20                           | 100                          | 10                 | TO66                      |
| 384             | -   | High Vltg Pwr Amp/Switch         | 375                               | 350               | 7                             | 45                           | 28                           | 1 min              | TO66                      |
| 175             | 38  | Pwr Amp, Gen Purpose             | 500/400                           | 300 (CER)/350     | 3/2                           | 40/35                        | 60/50                        | 15/20              | TO66                      |
| 369             | -   | Vert Deflection, Switch          | 800                               | 400               | 3 Peak                        | 40                           | 30 min                       | 7                  | TO66                      |
| 319             | -   | VHF Amp with AGC                 | 20                                | 20                | 0.05                          | 0.26                         | 80                           | 300 min            | TO92                      |
| -               | 395 | Wide Band Amp                    | 30                                | 25                | 0.05                          | 0.36                         | 80                           | 2.3Ghz             | TO92                      |
| 316             | -   | High Gain, Lo Noise UHF Amp      | 30                                | 15                | 0.05                          | 0.2                          | 25 min                       | 1400               | TO92                      |
| 161             | -   | VHF-UHF Amp, Mixer/OSC           | 45                                | 45 (CES)          | 0.05                          | 0.2                          | 60                           | 800                | TO92                      |
| 81              | -   | Amp, Dual VHF, Switch            | 75/60                             | 40/60             | 0.5/0.6                       | 0.6/each 2 total             | 100                          | 250/320            | TO92                      |
| 10              | -   | UHF Low noise Amp                | 25                                | 12                | 0.07                          | 0.4                          | 40 min                       | 4.5GHz             | TO92                      |
| 23              | -   | Ultra High Freq Amp              | 30                                | 14                | 0.05                          | 0.25                         | 80                           | 2GHz               | TO92                      |
| 107             | -   | UHF OSC                          | 30                                | 15                | 0.05                          | 0.2                          | 75                           | 1000               | TO92                      |
| 108             | -   | RF-IF Amp                        | 30                                | 15                | 0.05                          | 0.625                        | 20 min.                      | 800                | TO92                      |

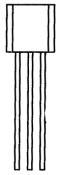
\*T<sub>c</sub>=25°C



# Semiconductors



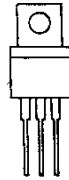
## Silicone Transistor Selector Guide (cont.)



TO92



ATR



B2



FTR



R245

| NTE Type Number |     | Application  | Maximum Breakdown Voltage (Volts) |           | Max. Collector Current (Amps) | Max. Collector Diss. (Watts) | Typical Forward Current Gain | Typical Freq (MHz) | Package Style/Diagram Number |
|-----------------|-----|--|-----------------------------------|-----------|-------------------------------|------------------------------|------------------------------|--------------------|------------------------------|
| NPN             | PNP |  | $V_{CB0}$                         | $V_{CEO}$ |                               |                              |                              |                    |                              |
| 233             | -   | Video IF OSC   | 30                                | 30        | 0.1                           | 0.625                        | 45                           | 300 min            | TO92                         |
| -               | 232 | Gen Purp Darlington Amp                              | 30                                | 30        | 0.3                           | 0.625                        | 50000 min                    | 175                | TO92                         |
| 69              | -   | UHF/VHF Amplifier                                    | 35                                | 25        | 0.05                          | 1                            | 60                           | 1100               | TO92                         |
| 289             | 290 | Audio Amp, Switch                                    | 35                                | 30        | 0.8                           | 0.6                          | 120 min                      | 100/120            | TO92                         |
| 11              | 12  | High Current Am                                      | 40/27                             | 20/18     | 5                             | 0.75                         | 230 min/180 min              | 150/120            | TO92                         |
| 319P            | -   | VHF Amp with AGC Control                             | 40                                | 30        | 0.05                          | 0.5                          | 80                           | 300 min            | TO92                         |
| 172A            | -   | Darlington Pre-Amp                                   | 40                                | 40        | 0.3                           | 0.4                          | 7000 min                     | 60 min             | TO92                         |
| 229             | -   | VHF OSC, Mixer                                       | 40                                | 40        | 0.05                          | 0.425                        | 30 min                       | 500 min            | TO92                         |
| 47              | -   | High Gain, Low Noise Amp                             | 45                                | 45        | 0.2                           | 0.625                        | 1150                         | 160                | TO92                         |
| 199             | 234 | Amp, Gen Purpose                                     | 70/120                            | 50/120    | 0.1                           | 0.36/0.3                     | 400 min/350 min              | 90 min/100         | TO92                         |
| 85              | -   | Amp, Gen Purp Switch                                 | 70                                | 70 (CES)  | 0.4                           | 0.625                        | 120 min                      | 200 min            | TO92                         |
| 20              | 21  | AF PO, Dr, Series Pass                               | 40                                | 32        | 2                             | 1                            | 120 min                      | 100                | ATR                          |
| 16              | 17  | Gen Purp Sm Sig Amp, Low Noise                       | 50                                | 40        | 0.1                           | 0.3                          | 270 min                      | 180/140            | ATR                          |
| 18              | 19  | High Breakdown Voltage Large Current Capacity Driver | 80                                | 80        | 0.7                           | 1                            | 120 min                      | 120/100            | ATR                          |
| 22              | -   | AF PO, Dr, Gen Purp Amp                              | 100                               | 80        | 1                             | 0.9                          | 120 min                      | 100                | ATR                          |
| 302             | -   | CB, Driver Switch                                    | 100                               | 50        | 1.5 Peak                      | 7.9                          | 199 min                      | 70                 | B2                           |
| 306             | -   | CB, Driver, Switch                                   | 100                               | 50        | 1.5 Peak                      | 7.9*                         | 199 min                      | 70                 | B2                           |
| 15              | -   | VHF Amp, Mixer, OSC, UHF OSC                         | 30                                | 19        | 50                            | 0.3                          | 39 min                       | 1100               | FTR                          |
| -               | 14  | Low Freq, Driver                                     | 80                                | 80        | 0.7                           | 0.75                         | 120 min                      | 100                | FTR                          |
| 315             | -   | Medium Pwr Audio Amp                                 | 100                               | 50        | 1                             | 0.75                         | 199 min                      | -                  | R245                         |

\* $T_c=25^\circ\text{C}$



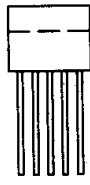




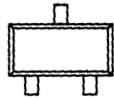
**Silicone Transistor Selector Guide**  
(cont.)



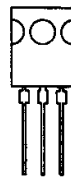
R245



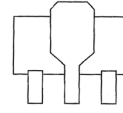
SIP-5



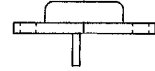
SOT-23



SOT-82



SOT-89



TO3

| NTE Type Number |      | Application  | Maximum Breakdown Voltage (Volts) |                   | Max. Collector Current (Amps) | Max. Collector Diss. (Watts) | Typical Forward Current Gain | Typical Freq (MHz) | Package Style/Dia. Number |
|-----------------|------|--|-----------------------------------|-------------------|-------------------------------|------------------------------|------------------------------|--------------------|---------------------------|
| NPN             | PNP  |  | BV <sub>CBO</sub>                 | BV <sub>CEO</sub> |                               |                              |                              |                    |                           |
| 382             | 383  | Audio Freq Driver  | 120                               | 100               | 1                             | 0.9                          | 200                          | 140                | R245                      |
| 42              | 43   | Dual, Differential Amp, High Gain<br>Low Noise, Common Emitter | 50                                | 50                | 0.1                           | 0.2/unit 0.4 total           | 400 min                      | 100 min            | SIP-5                     |
| -               | 41   | Dual, Differential Amp, High Gain<br>Low Noise, Common Emitter | 100                               | 100               | 0.05                          | 0.2/unit 0.4 total           | 400 min                      | 100 min            | SIP-5                     |
| 44              | 45   | Dual, High Gain, Low Noise, Bias<br>Amp, Common Base           | 100                               | 100               | 0.1                           | 0.2/unit 0.4 total           | 400 min                      | 100 min            | SIP-5                     |
| 2402            | 2403 | Low Noise, UHF/VHF amp   | 20                                | 15                | 0.025                         | 0.2                          | 90/50                        | 5GHz               | SOT-23                    |
| -               | 2401 | RF Stages in FM Front-Ends                                     | 30                                | 30                | 0.025                         | 0.3                          | -                            | 450                | SOT-23                    |
| 2404            | 2405 | Darlington   | 40                                | 30                | 0.3                           | 0.35                         | 4000 min                     | 220                | SOT-23                    |
| 2414            | 2415 | Digital with 2 Built-in Bias 10k<br>Resistors                  | 50                                | 50                | 0.1                           | 0.2                          | 50 min                       | 250                | SOT-23                    |
| 2416            | 2417 | Digital with 2 Built-in Bias 22k<br>Resistors                  | 50                                | 50                | 0.1                           | 0.2                          | 50 min                       | 250                | SOT-23                    |
| 2418            | 2419 | Digital with 2 Built-in Bias 47k<br>Resistors                  | 50                                | 50                | 0.1                           | 0.2                          | 50 min                       | 250                | SOT-23                    |
| 2406            | 2407 | General Purpose Amp  | 75/60                             | 40/60             | 0.6                           | 0.35                         | 100 min                      | 300 min/200 min    | SOT-23                    |
| 2408            | 2409 | Low Noise, Driver, Output                                      | 80                                | 65                | 0.1                           | 0.2                          | 125 min/220 min              | 300/150            | SOT-23                    |
| 2410            | 2411 | HV Amp/Dr  | 160                               | 140/150           | 0.6/0.5                       | 0.3/0.35                     | 80 min/60 min                | 100 min            | SOT-23                    |
| 2412            | 2413 | General Purpose HV Amp   | 300                               | 300 (CER)         | 0.05                          | 0.31                         | 50 min                       | 60 min             | SOT-23                    |
| 2345            | 2346 | Darlington Power Amp   | 120                               | 120               | 3                             | 30                           | 750 min                      | -                  | SOT-82                    |
| 2426            | 2427 | Darlington Switch  | 90                                | 80 (CER)          | 0.5                           | 1                            | 2000 min                     | -                  | SOT-89                    |
| 2428            | 2429 | General Purpose Amp, SW  | 90                                | 80                | 1                             | 1                            | 100 min                      | 100 min            | SOT-89                    |
| 2430            | 2431 | HV Amp/Sw  | 400/350                           | 350/300           | 1                             | 1                            | 30 min                       | 15 min             | SOT-89                    |
| 29              | 30   | High Current Switch  | 80                                | 80                | 50                            | 300                          | 25                           | 2                  | TO3                       |

\*T<sub>c</sub>=25°C



# Semiconductors



## Silicone Transistor Selector Guide (cont.)



TO3

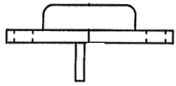
| NTE Type Number |      | Application                    | Maximum Breakdown Voltage (Volts) |           | Max. Collector Current (Amps) | Max. Collector Diss. (Watts) | Typical Forward Current Gain | Typical Freq (MHz) | Package Style/Dia. Number |
|-----------------|------|--------------------------------|-----------------------------------|-----------|-------------------------------|------------------------------|------------------------------|--------------------|---------------------------|
| NPN             | PNP  |                                | $V_{CB0}$                         | $V_{CEO}$ |                               |                              |                              |                    |                           |
| 243             | 244  | Darlington Power Amp           | 80                                | 80        | 8                             | 150                          | 2500                         | -                  | TO3                       |
| 245             | 246  | Darlington Power Amp           | 80                                | 80        | 10                            | 150                          | 4000                         | -                  | TO3                       |
| 247             | 248  | Darlington Power Amp           | 100                               | 100       | 12                            | 150                          | 3000                         | -                  | TO3                       |
| 249             | 250  | Darlington Power Amp           | 100                               | 100       | 16                            | 150                          | 4000                         | -                  | TO3                       |
| 251             | 252  | Darlington Power Amp           | 100                               | 100       | 20                            | 160                          | 2500                         | -                  | TO3                       |
| 130             | 219  | Power Amp, Gen Purpose         | 100                               | 70 (CER)  | 15                            | 115                          | 20 min                       | 2.5 min            | TO3                       |
| 181             | 180  | High Power Audio Amp           | 100                               | 100 (CER) | 30                            | 200                          | 25 min                       | 2 min              | TO3                       |
| 2349            | 2350 | High Current Darlington        | 120                               | 120       | 50                            | 300                          | 2000 min                     | -                  | TO3                       |
| 60              | 61   | High Power Audio Amp           | 140                               | 140       | 20                            | 250                          | 150 max                      | 2 min              | TO3                       |
| 280             | 281  | Audio Power Amp                | 150                               | 150       | 12                            | 100                          | 70                           | 5/6                | TO3                       |
| 328             | -    | Power Amp, Switch              | 150                               | 130 (CER) | 15                            | 140                          | 12 min                       | 60 min             | TO3                       |
| 284             | 285  | Audio Amp Output               | 180                               | 180       | 16                            | 150                          | 70                           | 6                  | TO3                       |
| 327             | -    | Power Amp, Switch              | 180                               | 150       | 25                            | 200                          | 30 min                       | 40 min             | TO3                       |
| 387             | -    | Power Amp, Switch              | 180                               | 150       | 50                            | 250                          | 80                           | 30 min             | TO3                       |
| 87              | 88   | High Power AF, Switch          | 250                               | 250 (CEX) | 10                            | 200                          | 20 min.                      | -                  | TO3                       |
| 94              | -    | High Voltage Switch            | 300                               | 300       | 5                             | 100                          | 40                           | 2.5 min            | TO3                       |
| 388             | 68   | Power Amp, Gen Purpose         | 400                               | 250       | 16                            | 250                          | 30/35                        | 4 min              | TO3                       |
| 162             | -    | TV Vert Deflection             | 500                               | 300       | 10 Peak                       | 100                          | 20 min.                      | -                  | TO3                       |
| 97              | -    | HV Darlington Pwr Amp, Fast Sw | 500                               | 400       | 10                            | 150                          | 40 min                       | -                  | TO3                       |
| 385             | -    | Audio Power Amp, Switch        | 550                               | 350       | 10                            | 150                          | 17                           | -                  | TO3                       |
| 99              | -    | HV Darlington Pwr Amp, Fast Sw | 600                               | 400       | 50                            | 250                          | 25 min                       | -                  | TO3                       |
| 98              | -    | HV Darlington Pwr Amp, Fast Sw | 700                               | 500       | 20                            | 175                          | 40 min                       | -                  | TO3                       |
| 163A            | -    | TV Horiz Deflection            | 700                               | 700 (CEV) | 6                             | 100                          | 10 min                       | -                  | TO3                       |

\* $T_c=25^\circ\text{C}$

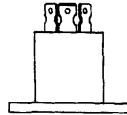




## Silicone Transistor Selector Guide (cont.)



TO3



TO3P

| NTE Type Number | Application |   | Maximum Breakdown Voltage (Volts) |            | Max. Collector Current (Amps) | Max. Collector Diss. (Watts) | Typical Forward Current Gain | Typical Freq (MHz) | Package Style/Dia. Number |
|-----------------|-------------|---|-----------------------------------|------------|-------------------------------|------------------------------|------------------------------|--------------------|---------------------------|
|                 | NPN         | PNP   | $BV_{CBO}$                        | $BV_{CEO}$ | $I_C$                         | $P_D$                        | $h_{FE}$                     | $f_T$              |                           |
| 52              | -           | High Vltg, High Speed Sw                                  | 750                               | 450        | 5                             | 125                          | 17                           | -                  | TO3                       |
| 386             | -           | Audio Power Amp, Switch                                   | 800                               | 500        | 20                            | 175                          | 20                           | -                  | TO3                       |
| 283             | -           | Horiz Output, Switch                                      | 800                               | 325        | 10                            | 100                          | 10 min                       | 6                  | TO3                       |
| 53              | -           | High Vltg, High Speed, Sw                                 | 850                               | 400        | 15                            | 175                          | 25                           | 6 min              | TO3                       |
| 2319            | -           | High Vltg, High Speed, Sw                                 | 850 (CES)                         | 450        | 15 Cont                       | 175                          | 5 min                        | -                  | TO3                       |
| 89              | -           | Horiz Output with Internal Damper Diode                   | 1500                              | 600        | 7                             | 50                           | 8 min                        | -                  | TO3                       |
| 164             | -           | TV Vertical Output  | 1500                              | 700 (CER)  | 1                             | 50                           | 30 min                       | 3                  | TO3                       |
| 389             | -           | Horizontal Output   | 1500                              | 1500 (CER) | 4                             | 100                          | 10 min                       | 4 min              | TO3                       |
| 165             | -           | TV Horizontal Output                                      | 1500                              | 1400 (CES) | 6                             | 50                           | 8 min                        | 3                  | TO3                       |
| 238             | -           | TV Horizontal Output                                      | 1500                              | 1500 (CEX) | 8                             | 100                          | 8                            | -                  | TO3                       |
| 62              | -           | Very High Vltg Horiz Output                               | 2500                              | 900        | 3                             | 50                           | 7                            | -                  | TO3                       |
| 2330            | -           | High Gain Amp, with Internal Zener Diode                  | 55+15-10                          | 55+15-10   | 4                             | 80                           | 1000                         | -                  | TO3P                      |
| 2335            | -           | Darlington with Internal Zener Diode for Line Operated TV | 60±15                             | 60±15      | 5                             | 80                           | 2000 min                     | -                  | TO3P                      |
| 2304            | 2314        | High Current, Speed Switch                                | 60                                | 50         | 15                            | 90                           | 100 Min/ 70 Min              | 20                 | TO3P                      |
| 214             | -           | Darlington Driver   | 70                                | 60         | 10                            | 60*                          | 5000                         | 20                 | TO3P                      |
| 215             | -           | Darlington Driver   | 110                               | 100        | 8                             | 60*                          | 4000                         | 20                 | TO3P                      |
| 36              | 37          | Audio Power Amp   | 160                               | 140        | 12                            | 100                          | 100                          | 15                 | TO3P                      |

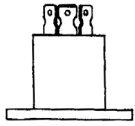
\* $T_c=25^\circ\text{C}$



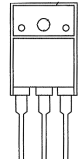
# Semiconductors



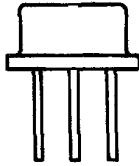
## Silicone Transistor Selector Guide (cont.)



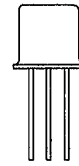
TO3P



TO3PML



TO8



TO18

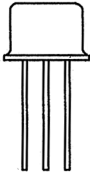
| NTE Type Number |      | Application                                     | Maximum Breakdown Voltage (Volts) |           | Max. Collector Current (Amps) | Max. Collector Diss. (Watts) | Typical Forward Current Gain | Typical Freq (MHz) | Package Style/Diagram Number |
|-----------------|------|---|-----------------------------------|-----------|-------------------------------|------------------------------|------------------------------|--------------------|------------------------------|
| NPN             | PNP  |   | $V_{CB}$                          | $V_{CEO}$ | $I_C$                         | $P_D$                        | $h_{FE}$                     | $f_T$              |                              |
| 2307            | -    | High Gain, Power Amp                            | 200                               | 180       | 5                             | 80                           | 500 Min                      | -                  | TO3P                         |
| 2308            | -    | High Voltage/Current Switch                     | 500                               | 400       | 12                            | 100*                         | 15 Min                       | 20                 | TO3P                         |
| 2309            | -    | High Voltage/Speed Switch                       | 900                               | 800       | 6                             | 100                          | 10 min                       | 15                 | TO3P                         |
| 2348            | -    | High Voltage/Speed Switch                       | 1100                              | 800       | 12                            | 150                          | 10 min                       | 15                 | TO3P                         |
| 2302            | -    | High Voltage Output with Internal Damper diode  | 1500                              | 800       | 5                             | 120                          | 8 min                        | 3                  | TO3P                         |
| 2354            | -    | High Vltg, Horiz Output for High Definition CRT | 1500                              | 800       | 10                            | 150*                         | 8 min                        | -                  | TO3P                         |
| 2353            | -    | Color TV Horiz Deflection with Damper Diode     | 1500                              | 800       | 10                            | 70*                          | 5 min                        | -                  | TO3PML                       |
| 2324            | -    | High Voltage Switch                             | 1500                              | 800       | 8                             | 70*                          | 8 min                        | -                  | TO3PML                       |
| 2331            | -    | TV Horiz Deflection with Damper Diode           | 1500                              | 800       | 6                             | 60                           | 8 min                        | -                  | TO3PML                       |
| 16007           | -    | Med Power Gen Purp                              | 100                               | 100 (CEV) | 3                             | 25                           | 35 min                       | 1.25               | TO8                          |
| -               | 106  | Amp, OSC, FM Mixer                              | 35                                | 15        | 0.05                          | 0.35                         | 50 min                       | 650 min            | TO18                         |
| 123A            | 159M | General Purpose Amp                             | 75/60                             | 40/60     | 0.8/0.6                       | 0.4                          | 200/100 min                  | 300/200 min        | TO18                         |
| 278             | -    | RF Amp, Broad Band                              | 40                                | 20        | 0.4                           | 3.5                          | 40 min                       | 1400               | TO39                         |
| 346             | -    | RF Driver, Predriver                            | 40                                | 20        | 0.4                           | 1                            | 10 min                       | 500 min            | TO39                         |
| 77              | -    | Broad Band, CATV                                | 50                                | 30        | 0.4                           | 3.5                          | 30 min                       | 1500               | TO39                         |
| 311             | -    | Driver, VHF/UHF OSC                             | 55                                | 30        | 0.4                           | 5                            | 25 min                       | 800 min            | TO39                         |
| 329             | -    | RF Power Amp                                    | -                                 | 30        | 1.5 Peak                      | 5                            | -                            | -                  | TO39                         |
| 195A            | -    | RF Pwr Amp, Driver                              | 70                                | 70 (CER)  | 1.5                           | 8                            | 30 min                       | 150                | TO39                         |
| 123             | -    | Amp, Gen Purpose                                | 75                                | 40        | 0.8                           | 0.8                          | 200                          | 300 min            | TO39                         |

\* $T_c=25^\circ\text{C}$

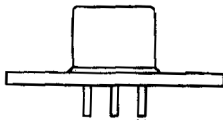




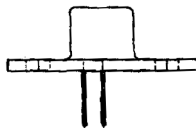
## Silicone Transistor Selector Guide (cont.)



TO39



TO39 w/Flange



TO39HS



TO59



14-Lead Dip

| NTE Type Number |       | Application                     | Maximum Breakdown Voltage (Volts) |            | Max. Collector Current (Amps) | Max. Collector Diss. (Watts) | Typical Forward Current Gain | Typical Freq (MHz) | Package Style/Diagram Number |
|-----------------|-------|---------------------------------|-----------------------------------|------------|-------------------------------|------------------------------|------------------------------|--------------------|------------------------------|
| NPN             | PNP   |                                 | $V_{CB}$                          | $V_{CE}$   | $I_C$                         | $P_D$                        | $h_{FE}$                     | $f_T$              |                              |
| 282             | -     | Final RF Powr Amp, Sw           | 100                               | 60         | 4                             | 10*                          | 100                          | 140                | TO39                         |
| 16005           | 16004 | High Current Gen Purpose        | 100                               | 75         | 2                             | 10                           | 30 min                       | -                  | TO39                         |
| 128             | 129   | Amp, Gen Purpose                | 120/90                            | 80         | 1                             | 1                            | 90 min                       | 100/150 min        | TO39                         |
| 2347            | -     | Med Power Gen Purp              | 120                               | 80         | 5                             | 4                            | 40 min                       | -                  | TO39                         |
| 324             | 323   | Amp, Gen Purpose                | 120                               | 100        | 1.5                           | 0.8                          | 90/80                        | 20 min             | TO39                         |
| 154             | -     | High Vltg Video Output          | 300                               | 300        | 0.2                           | 1                            | 100                          | 80                 | TO39                         |
| 396             | 397   | Pwr Amp, High Vltg              | 450<br>350                        | 350<br>300 | 1                             | 10                           | 40 min/30 min                | 15 min             | TO39                         |
| 224             | -     | Final RF Pwer Output            | 60                                | 60 (CEV)   | 2                             | 10                           | 60                           | 200                | TO39 with Flange             |
| 225             | -     | High Speed Sw Linear Amp        | 450                               | 350        | 1                             | 10                           | 40 min                       | 15                 | TO39 with Flange             |
| 237             | -     | Final RF Pwr Out                | 80                                | 40         | 3 Pulse                       | 10                           | 50                           | 250                | TO39HS                       |
| 74              | -     | Amp, Gen Purpose, Switch        | 100                               | 100        | 7                             | 60                           | 60 min                       | 30                 | TO59                         |
| 96              | -     | Switching Power Transistor      | 100                               | 100        | 7                             | 60                           | 60 min                       | 30 min             | TO59                         |
| 95              | -     | High Vltg, Switch Isolated Stud | 250                               | 250        | 3                             | 40                           | 90 min                       | 40                 | TO59                         |
| 2320            | 2320  | Quad Gen Purp Sw Amp            | 60                                | 30         | 0.5                           | 0.65/Unit 1.25 total         | 100 min                      | 350                | 14-Lead DIP                  |
| 2321            | -     | Quad Gen Purpose                | 60                                | 40         | 0.5                           | 0.65/Unit 1.25 total         | 100 min                      | 350                | 14-Lead DIP                  |
| -               | 2322  | Quad Gen Purpose                | 60                                | 40         | 0.6                           | 0.65/Unit 1.25 total         | 100 min                      | 350                | 14-Lead DIP                  |
| 2323            | -     | Quad High Vltg Gen Purpose Amp  | 200                               | 200        | 0.5                           | 0.75/Unit 1.7 total          | 80                           | 80                 | 14-Lead DIP                  |

\* $T_c=25^\circ\text{C}$



# Semiconductors



ELECTRONICS, INC.

## Silicone Transistor Selector Guide

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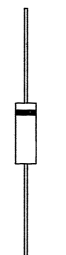
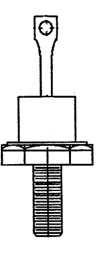

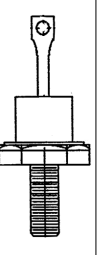
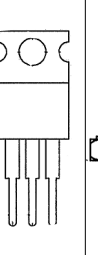
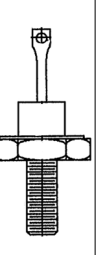
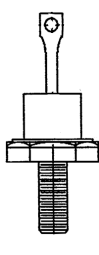
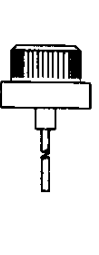
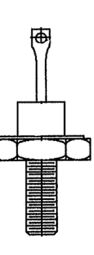
| NTE Type Number |      | Application                                       | Maximum Breakdown Voltage (Volts) |                  | Max. Collector Current (Amps) | Max. Collector Diss. (Watts) | Typical Forward Current Gain | Typical Freq (MHz) | Package Type |
|-----------------|------|---|-----------------------------------|------------------|-------------------------------|------------------------------|------------------------------|--------------------|--------------|
| NPN             | PNP  |   | BV <sub>CB</sub>                  | BV <sub>CE</sub> | I <sub>C</sub>                | P <sub>D</sub>               | h <sub>FE</sub>              | f <sub>T</sub>     |              |
| 58              | 59   | High Pwr Audio Output                             | 200                               | 200              | 17                            | 200                          | 30 min                       | 20                 |              |
| 92              | 93   | Hi-Fi Pwr Amp, Audio Output                       | 200                               | 200              | 15                            | 150                          | 120                          | 20                 |              |
| 63              | -    | High gain, Low Noise, Wide Band, Small Signal Amp | 20                                | 12               | 0.04                          | 0.4                          | 40                           | 5GHz               |              |
| 64              | -    | UHF/Microwave Amp/Hi Speed Sw                     | 25                                | 15               | 0.03                          | 0.375                        | 80                           | 4.5GHz             |              |
| 313             | -    | VHF Mixer and UHF/RF Amp, High Gain Low Noise     | 30                                | 30               | 0.02                          | 0.15                         | 60                           | 530                |              |
| 2363            | 2364 | High Current Gen Purp Amp                         | 60                                | 50               | 2                             | 1                            | 200 min                      | 150                |              |
| 315             | -    | Medium Power Audio Amp                            | 100                               | 50               | 1                             | 0.75                         | 199 min                      | -                  |              |
| 344             | -    | RF Power Output                                   | 35                                | 17               | 7                             | 50                           | 50                           | -                  |              |
| 65              | -    | High Vltg, Low Noise for CATV, MATV               | 20                                | 15               | 0.025                         | 0.18                         | 70                           | 6GHz               |              |
| 26              | -    | Low Noise Audio Amp                               | 120                               | 120              | 0.1                           | 0.2                          | 350 min                      | 100                |              |
| 2355            | 2356 | Digital with 2 Built-in Bias 10k Resistors        | 50                                | 50               | 0.1                           | 0.3                          | 50 min                       | 250                |              |
| 2357            | 2358 | Digital with 2 Built-in Bias 22k Resistors        | 50                                | 50               | 0.1                           | 0.3                          | 50 min                       | 250                |              |
| 2359            | 2360 | Digital with 2 Built-in Bias 47k Resistors        | 50                                | 50               | 0.1                           | 0.3                          | 50 min                       | 250                |              |
| 2367            | 2368 | Digital with 2 Built-in Bias 4.7k Resistors       | 50                                | 50               | 0.1                           | 0.3/0.2                      | 30 min                       | 250/200            |              |
| 2369            | 2370 | Digital with 2 Built-in Bias 4.7k/47k Resistors   | 50                                | 50               | 0.1                           | 0.3/0.2                      | 80 min                       | 250/200            |              |
| 2361            | 2362 | High Speed Switch                                 | 60                                | 50               | 0.5                           | 0.3                          | 200 min                      | 300/200            |              |
| 13              | -    | Low Vlt Output Amp                                | 25                                | 20               | 0.5                           | 0.6                          | 400 min                      | 200                |              |
| 16006           | -    | AF Amp  | 20                                | 20               | 0.7                           | 1                            | 1000 min                     | -                  |              |
| 16001           | -    | Video IF Amp                                      | 45                                | 35               | 0.05                          | 0.6                          | 50                           | 500                |              |

\*T<sub>c</sub>=25°C





## Industrial Rectifiers

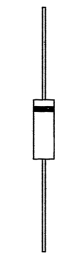
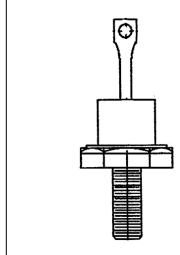
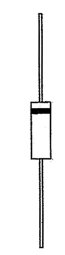
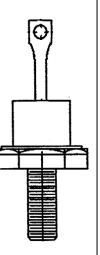
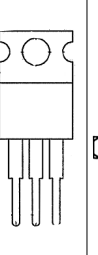
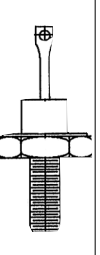
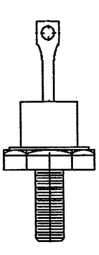
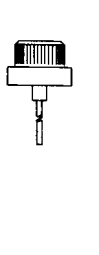
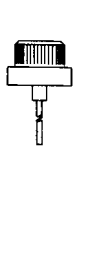
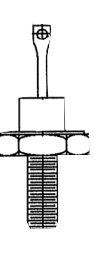
| P <sub>RV</sub><br>Volts             | Maximum Average Rectified Forward Current I <sub>F</sub> in Amperes                 |   |   |   |   |  |   |   |   |                    |                    |
|--------------------------------------|---|---|---|---|---|--|---|---|---|--------------------|--------------------|
|                                      | 3A  |   | 6A  |   | 12A   | 12.7A  | 15A   | 16A   | 20A   | 25A                | 40A                |
| 50                                   | 5800  | 5830  | 5850  | -   | 5870  | -  | 5940  | 5892  | 5912  | -                  | 5980               |
| 50                                   | -   | 5831*   | 5851*   | -   | 5871*   | -  | 5941*   | 5893*   | 5913*   | -                  | 5981*              |
| 100                                  | 5801  | 5832  | 5852  | 5812  | 5872  | -  | 5942  | 5894  | 5914  | -                  | 5982               |
| 100                                  | -   | 5833*   | 5853*   | -   | 5873*   | -  | 5943*   | 5895*   | 5915*   | -                  | 5893*              |
| 200                                  | 5802  | 5834  | 5854  | -   | 5874  | -  | 5944  | 5896  | 5916  | -                  | 5986               |
| 200                                  | -   | 5835*   | 5855*   | -   | 5875*   | -  | 5945*   | 5897*   | 5917*   | -                  | 5987*              |
| 300                                  | 5803  | 5836  | 5856  | -   | 5876  | -  | 5946  | 5898  | 5918  | -                  | 5988               |
| 300                                  | -   | 5837*   | 5857*   | -   | 5877*   | -  | 5947*   | 5899*   | 5919*   | -                  | 5989*              |
| 400                                  | 5804  | 5838  | 5858  | 5814  | 5878  | -  | 5948  | 5900  | 5920  | 5962               | 5990               |
| 400                                  | -   | 5839*   | 5859*   | -   | 5879*   | -  | 5949*   | 5901*   | 5921*   | 5963*              | 5991*              |
| 500                                  | 5805  | 5840  | 5860  | -   | 5880  | -  | 5950  | 5902  | 5922  | -                  | 5992               |
| 500                                  | -   | 5841*   | 5861*   | -   | 5881*   | -  | 5951*   | 5903*   | 5923*   | -                  | 5993*              |
| 600                                  | 5806  | 5842  | 5862  | 5815  | 5882  | 6013   | 5952  | 5904  | 5924  | -                  | 5994               |
| 600                                  | -   | 5843*   | 5863*   | -   | 5883*   | -  | 5953*   | 5905*   | 5925*   | -                  | 5995*              |
| FSM                                  | 200A  | 40A   | 150A  | 400A  | 250A  | 300A   | 250A  | 300A  | 400A  | 300A               | 500A               |
| V <sub>F</sub> @ I <sub>F</sub>      | 1.2V max<br>0.9V Typ  | 1.1V Max<br>0.9V Typ  | 1.1V Max<br>0.9V Typ  | 0.9V Max<br>0.8V Typ  | 1.2V Max<br>1V Typ  | 1.6V Max<br>1V Typ   | 1.5V Max<br>1.1V Typ  | 1.2V Max<br>0.9V Typ  | 1.5V Max<br>1.1V Typ  | 107V Max<br>1V Typ | 1.2V Max<br>1V Typ |
| T <sub>c</sub> @ I <sub>F</sub> (°C) | +105 (T <sub>L</sub> )  | +150  | +150  | +60   | +150  | -  | +150  | +150  | +150  | +100               | +150               |
| Mtg Torque<br>in●lb (m●N)            | -   | 20 (2.22)   | 20 (2.22)   | -   | 20 92.22)   | -  | 30 (3.33)   | 20 (2.22)   | 20 (2.22)   | -                  | 30 (3.33)          |
| Thread Size                          | -   | 10-32<br>NF-2A  | 10-32<br>NF-2A  | -   | 10-34<br>NF-2A  | -  | 1/4-28<br>UNF-2A  | 10-32<br>NF-2A  | 10-32<br>NF-2A  | -                  | 1/4-28<br>UNF-2A   |
| Package<br>Type                      |  |  |  |  |  |  |  |  |  |                    |                    |
| Case Style                           | DO27  | DO4   | Axial Lead  | DO4   | TO220   | DO5  | DO4   | Press Fit   | DO5   |                    |                    |



# Semiconductors



## Industrial Rectifiers (cont.)

| P <sub>RV</sub><br>Volts             | Maximum Average Rectified Forward Current I <sub>F</sub> in Amperes                |  |  |  |  |   |  |  |  |  |                    |
|--------------------------------------|--|--|--|--|--|---|--|--|--|--|--------------------|
|                                      | 3A   |  | 6A   |  | 12A  | 12.7A   | 15A  | 16A  | 20A  | 25A  | 40A                |
| 800                                  | 5808   | 5846   | 5866   | -  | 5886   | -   | -  | 5908   | 5928   | 5966   | 5998               |
| 800                                  | -  | 5847*  | 5867*  | -  | 5887*  | -   | -  | 5909*  | 5929*  | 5967*  | 5999*              |
| 1000                                 | 5809   | 5848   | 5868   | 5817   | 5890   | -   | -  | 5910   | 5932   | -  | 6002               |
| 1000                                 | -  | 5849*  | 5869*  | -  | 5891*  | -   | -  | 5911*  | 5933*  | -  | 6003*              |
| IFSM                                 | 200A   | 40A  | 150A   | 400A   | 250A   | 300A  | 250A   | 300A   | 400A   | 300A   | 500A               |
| V <sub>F</sub> @ I <sub>F</sub>      | 1.2V max<br>0.9V Typ   | 1.1V Max<br>0.9V Typ   | 1.1V Max<br>0.9V Typ   | 0.9V Max<br>0.8V Typ   | 1.2V Max<br>1V Typ   | 1.6V Max<br>1V Typ  | 1.5V Max<br>1.1V Typ   | 1.2V Max<br>0.9V Typ   | 1.5V Max<br>1.1V Typ   | 107V Max<br>1V Typ   | 1.2V Max<br>1V Typ |
| T <sub>c</sub> @ I <sub>F</sub> (°C) | +105 (T <sub>L</sub> )   | +150   | +150   | +60  | +150   | -   | +150   | +150   | +150   | +100   | +150               |
| Mtg Torque<br>in ●lb (m●N)           | -  | 20 (2.22)  | 20 (2.22)  | -  | 20 (2.22)  | -   | 30 (3.33)  | 20 (2.22)  | 20 (2.22)  | -  | 30 (3.33)          |
| Thread Size                          | -  | 10-32<br>NF-2A   | 10-32<br>NF-2A   | -  | 10-34<br>NF-2A   | -   | 1/4-28<br>UNF-2A   | 10-32<br>NF-2A   | 10-32<br>NF-2A   | -  | 1/4-28<br>UNF-2A   |
| Package<br>Type                      |  |  |  |  |  |  |  |  |  |  |                    |
| Case Style                           | DO27   | DO4  | Axial Lead   | DO4  | TO220  | DO5   | DO4  | DO4  | Press Fit  | DO5  |                    |

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## Single Phase Bridge Rectifiers

| PRV<br>Volts                                 | I <sub>F</sub> Averaged Rectified Forward Current<br>Maximum Average Rectified Current @ Half - Wave Resistive Load 60Hz |         |         |         |         |         |           |              |            |            |             |
|--|--|---------|---------|---------|---------|---------|-----------|--------------|------------|------------|-------------|
|  | 1A   | 1.5A    | 2A      | 4A      | 4A      | 6A      | 8A        | 25A          | 40A        | 80A        | 100A        |
| 100  | -  | -       | NTE166  | -       | -       | -       | NTE5312   | -            | -          | -          | -           |
| 200  | -  | -       | NTE167  | NTE5309 | NTE5318 | NTE5329 | NTE5313   | NTE5322      | NTE5340    | -          | -           |
| 400  | -  | NTE5304 | NTE168  | -       | -       | -       | NTE5314   | NTE5324      | -          | -          | -           |
| 600  | NTE5332  | NTE5305 | NTE169  | NTE5310 | NTE5319 | NTE5330 | NTE5315   | NTE5326      | NTE5342    | NTE5346    | NTE5348     |
| 800  | -  | NTE5306 | -       | -       | -       | -       | NTE5316   | NTE5327      | -          | -          | -           |
| 1000   | NTE5334  | NTE5307 | NTE170  | NTE5311 | NTE5320 | NTE5331 | NTE5317   | NTE5328      | NTE5344    | -          | -           |
| IFSM<br>(AMP)                                | 25   | 50      | 60      | 20      | 200     | 200     | 200       | 300          | 300        | 1000       | 1000        |
| V <sub>F</sub> @ I <sub>F</sub>              | 1.2V @ 1A  | 1V @ 1A | 1V @ 1A | 1V @ 3A | 1V @ 3A | 1V @ 3A | 1.1V @ 4A | 1.2V @ 12.5A | 1.2V @ 20A | 1.3V @ 80A | 1.3V @ 100A |
| Max<br>T <sub>A</sub> @ I <sub>F</sub><br>°C | +40  | +30     | +55     | +50     | +50     | +50     | +50       | +55          | +55        | +150       | +150        |
| Package<br>Type                              |  |         |         |         |         |         |           |              |            |            |             |

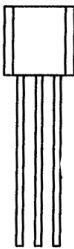
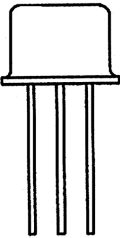

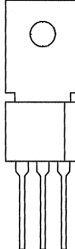
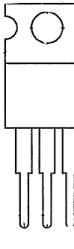

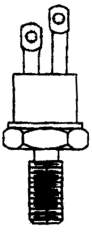
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# Semiconductors



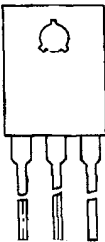
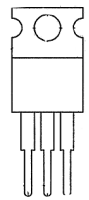
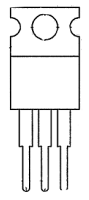
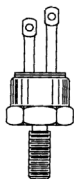
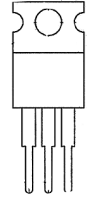
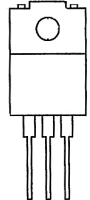
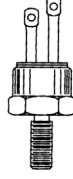
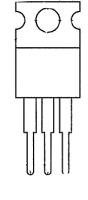
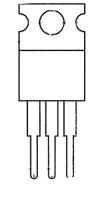
## Triacs

| $V_{RRM}$<br>Dc or Pk<br>Volts | $I_T$ RMS Maximum Forward Current   |   |   |   |   |   |   |           |
|--------------------------------|---|---|---|---|---|---|---|-----------|
|                                | 0.8A  | 2.5A  |   | 4A  |   | 8A  |   | 10A       |
| 25                             | -   | -   | -   | NTE5600   | -   | -   | -   | -         |
| 50                             | -   | -   | -   | NTE5601   | -   | -   | -   | NTE5661   |
| 100                            | -   | NTE5640   | NTE560  | NTE5602   | -   | -   | -   | -         |
| 200                            | NTE5655   | NTE5641   | NTE5651   | NTE5603   | -   | -   | -   | -         |
| 300                            | -   | -   | -   | NTE5604   | -   | -   | -   | -         |
| 400                            | NTE5656   | NTE5642   | NTE5652   | NTE5605   | NTE5629   | NTE5608   | NTE5638   | -         |
| 500                            | -   | -   | -   | NTE5606   | -   | -   | -   | -         |
| 600                            | NTE5657   | NTE5643   | NTE5653   | NTE5607   | -   | NTE5609   | -   | -         |
| 800                            | -   | -   | -   | -   | -   | NTE5610   | NTE5620   | -         |
| $I_{GT}$ (mA)                  | 5 Max   | 25/40 Max   | 3 Max   | 30 Max  | 3 Max   | 10 Max  | 10 Max  | 50/75 Max |
| $V_{GT}$ (V)                   | 2 Max   | 2.2 Max   | 2.2 Max   | 2.5 Max   | 2 Max   | 2.5 Max   | 2 Max   | 2 Max     |
| $V_{FDN}$ (V)                  | 1.5 Max   | 1.8 Max   | 2.2 Max   | 2 Max   | 1.6 Max   | 1.5 Max   | 1.6 Max   | 2 Max     |
| $I_{SURGE}$ (A)                | 8 Max   | 25 Max  | 25 Max  | 30 Max  | 40 Max  | 80 Max  | 80 Max  | 100 Max   |
| $I_{HOLD}$ (Ma)                | 20 Max  | 35 Max  | 5 Max   | 30 Max  | 5 Max   | 15 Max  | 15 Max  | 50 Max    |
| Firing Quads                   | ALL   | ALL   | ALL   | ALL   | ALL   | ALL   | ALL   | ALL       |
| Package Type                   |  |  |  |  |  |  |  |           |
| Package                        | TO92  | TO5   | TO126   | TO202   | TO220   | TO220 Full Pack   | TO64**  |           |





**Triacs**  
(cont.)

| $V_{RRM}$<br>Dc or Pk<br>Volts | $I_T$ RMS Maximum Forward Current   |   |   |   |   |  |   |   |   |            |
|--------------------------------|---|---|---|---|---|--|---|---|---|------------|
|                                | 10A   |   |   |   | 15A   |  | 20A   | 25A   |   |            |
| 25                             | NTE5611   | NTE5621   | -   | -   | -   | -  | -   | NTE5680   | -   | -          |
| 50                             | NTE5612   | NTE5622   | NTE5631   | -   | -   | -  | -   | NTE5681   | -   | -          |
| 100                            | NTE5613   | NTE5623   | NTE5632   | -   | -   | -  | -   | NTE5682   | -   | -          |
| 200                            | -   | -   | NTE5633   | -   | NTE5673   | NTE56004   | -   | NTE5683   | NTE56019  | NTE56015   |
| 300                            | NTE5615   | -   | NTE5634   | -   | -   | -  | -   | NTE5684   | -   | -          |
| 400                            | -   | -   | NTE5635   | -   | NTE5675   | NTE56006   | -   | NTE5685   | NTE56020  | NTE56016   |
| 500                            | -   | -   | NTE5636   | -   | NTE5676   | -  | -   | NTE5686   | -   | -          |
| 600                            | NTE5618   | -   | NTE5637   | NTE5645   | NTE5677   | NTE56008   | -   | NTE5687   | -   | NTE56017   |
| 800                            | -   | -   | -   | -   | -   | NTE56010   | NTE5671   | -   | -   | NTE56018   |
| $I_{GT}$ (mA)                  | 50/75 Max   | 50 Max  | 50 Max  | 25/50 Max   | 50/80 Max   | 40/75 Max  | 50/75 Max   | 75/100 Max  | 80 Max  | 50/100 Max |
| $V_{GT}$ (V)                   | 2.5 Max   | 2 Max   | 2.5 Max   | 2.5 Max   | 2.5 Max   | 2.5 Max  | 2.5 Max   | 2.5 Max   | 2.5 Max   | 2.5 Max    |
| $V_{FON}$ (V)                  | 1.8 Max   | 1.8 Max   | 1.65 Max  | 1.6 Max   | 2.2 Max   | 1.6 Max  | 1.7 Max   | 1.8 Max   | 1.8 Max   | 1.8 Max    |
| $I_{SURGE}$ (A)                | 100 Max   | 100 Max   | 100 Max   | 110 Max   | 150 Max   | 150 Max  | 150 Max   | 250 Max   | 250 Max   | 180 Max    |
| $I_{HOLD}$ (Ma)                | 50 Max  | 50 Max  | 50 Max  | 50 Max  | 60 Max  | 40 Max   | 40 Max  | 80 Max  | 100 Max   | 50 Max     |
| Firing Quads                   | ALL   | I, II   | I, II, III  | ALL   | ALL   | ALL  | ALL   | ALL   | I, II, III  | ALL        |
| Package Type                   |  |  |  |  |  |  |  |  |  |            |
| Package                        | TO127   | TO220   | TO220<br>Isolated   | TO48**<br>1/4-28<br>UNF-2A  | TO220   | TO220<br>Full Pack   | TO48**<br>1/4-28<br>UNF-2A  | TO220<br>Isolated   | TO220   |            |



# Semiconductors



ELECTRONICS, INC.

## Silicon Controlled Rectifiers

| Dc or Pk<br>Volts<br>$V_{DRM}$ | $I_T$ RMS Maximum Forward Current (All Conducting Angles) |                         |                         |         |         |         |         |                         |         |         |                 |         |
|--------------------------------|---|-------------------------|-------------------------|---------|---------|---------|---------|-------------------------|---------|---------|-----------------|---------|
|                                | 0.8A<br>Sensitive<br>Gate                                 | 3A<br>Sensitive<br>Gate | 4A<br>Sensitive<br>Gate |         | 5A      |         | 7A      | 8A<br>Sensitive<br>Gate | 8A      |         | 10A             |         |
| 25                             |   |                         |                         |         |         |         |         |                         |         | NTE5480 |                 |         |
| 30                             | NTE5400   |                         | NTE5411                 | NTE5452 |         |         |         |                         |         |         |                 |         |
| 50                             |   |                         |                         | NTE5453 | NTE5470 |         |         |                         | NTE5442 | NTE5481 |                 | NTE5461 |
| 60                             | NTE5401   |                         | NTE5412                 |         |         |         |         |                         |         |         |                 |         |
| 100                            | NTE5402   |                         | NTE5413                 | NTE5454 | NTE5471 |         |         |                         |         | NTE5482 |                 | NTE5462 |
| 150                            | NTE5403   |                         |                         |         |         |         |         |                         |         |         |                 |         |
| 200                            | NTE5404   | NTE5408                 | NTE5414                 | NTE5455 | NTE5472 | NTE5511 | NTE5427 |                         |         | NTE5483 |                 | NTE5463 |
| 250                            |   |                         |                         |         |         |         |         |                         |         |         |                 |         |
| 300                            |   |                         |                         | NTE5456 | NTE5473 |         |         |                         |         | NTE5484 |                 |         |
| 400                            | NTE5405   | NTE5409                 | NTE5415                 | NTE5457 | NTE5474 | NTE5512 | NTE5428 | NTE5437                 |         | NTE5485 |                 | NTE5465 |
| 500                            |   |                         |                         |         | NTE5475 |         |         |                         |         | NTE5486 |                 |         |
| 600                            | NTE5406   | NTE5410                 | NTE5416                 | NTE5458 | NTE5476 | NTE5413 | NTE5429 | NTE5438                 | NTE5448 | NTE5487 |                 | NTE5466 |
| 700                            |   |                         |                         |         |         |         |         |                         |         |         |                 |         |
| 800                            |   |                         |                         |         |         |         |         |                         |         |         | NTE5440         | NTE5468 |
| 1200                           |   |                         |                         |         |         |         |         |                         |         |         |                 |         |
| $I_{GT}$ MAX                   | 200 NA#   | 1mA#                    | 200 NA#                 | 200 NA# | 10mA    | 15mA    | 25mA    | 200 NA#                 | 30mA    | 30mA    | 15mA            | 15mA    |
| $V_{GT}$ MAX (V)               | 0.8   | 1.0                     | 1.0                     | 1.5     | 1.5     | 2.0     | 1.5     | 0.08                    | 1.5     | 1.5     | 1.5             | 1.5     |
| $I_{HOLD}$ MAX(ma)             | 5   | 10                      | 5                       | 3       | 25      | 20      | 50      | 3                       | 40      | 30      | 20              | 20      |
| $V_F(ON)(V)$                   | 1.7   | 1.2                     | 2.0                     | 2.2     | 2.0     | 2.8     | 2.6     | 1.6                     | 1.5     | 2.0     | 1.75            | 2.0     |
| Package Type                   |   |                         |                         |         |         |         |         |                         |         |         |                 |         |
| Case Style                     | TO92  | TO5                     | TO126                   | TO202   | TO64    | TO66    | TO5     | TO220                   | TO127   | TO64    | TO220 Full Pack | TO220   |





## Silicon Controlled Rectifiers (cont.)

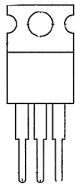
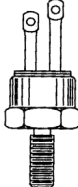
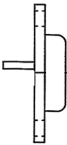
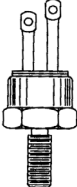
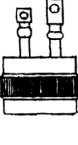
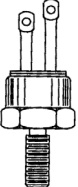
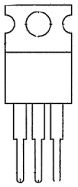
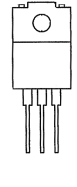
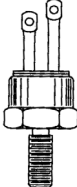
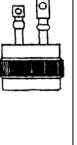
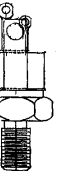
| Dc or Pk Volts+<br>V <sub>DRM</sub> | I <sub>T</sub> RMS Maximum Forward Current (All Conducting Angles) |                    |               |        |                |         |               |                 |      |                |                |                |
|-------------------------------------|--|--------------------|---------------|--------|----------------|---------|---------------|-----------------|------|----------------|----------------|----------------|
|                                     | 10A  | 10A Sensitive Gate | 10A           | 12.5A  | 16A            | 20A     | 25A           |                 |      | 35A            |                | 35A            |
| 25                                  | -  | -                  | -             | -      | NTE5500        | -       | NTE5520       | -               | -    | -              | -              | -              |
| 30                                  | -  | -                  | -             | -      | -              | -       | -             | -               | -    | -              | -              | -              |
| 50                                  | -  | -                  | -             | -      | NTE5501        | -       | NTE5521       | NTE5550         | -    | NTE5541        | -              | -              |
| 100                                 | -  | -                  | NTE5491       | -      | NTE5502        | -       | NTE5522       | -               | -    | NTE5542        | -              | -              |
| 150                                 | -  | -                  | -             | -      | NTE5503        | -       | NTE5523       | -               | -    | -              | -              | -              |
| 200                                 | NTE5417  | -                  | NTE5492       | -      | NTE5504        | NTE5514 | NTE5524       | NTE5552         | -    | NTE5543        | NTE5517        | NTE5562        |
| 250                                 | -  | -                  | -             | -      | NTE5505        | -       | NTE5525       | -               | -    | -              | -              | -              |
| 300                                 | -  | -                  | -             | -      | NTE5506        | -       | NTE5526       | -               | -    | NTE5544        | -              | -              |
| 400                                 | NTE5418  | NTE5426            | NTE5494       | NTE314 | NTE5507        | NTE5515 | NTE5527       | NTE5554         | -    | NTE5545        | NTE5518        | NTE5564        |
| I <sub>GT</sub> MAX                 | 15mA   | 200NA              | 15mA          | 40mA   | 30mA           | 15mA    | 40mA          | 30mA            | 40mA | 30mA           | 30mA           | 30mA           |
| V <sub>GT</sub> MAX                 | 1.5  | 0.8                | 2             | 2      | 1.5            | 2       | 3             | 1.5             | 1.5  | 2              | 2              | 2              |
| I <sub>HOLD</sub> MAX               | 30   | 3                  | 20            | 50     | 40             | 20      | 50            | 40              | 40   | 50             | 50             | 50             |
| V <sub>F(ON)</sub>                  | 1.6  | 1.6                | 2.5           | 1.8    | 1.6            | 2.4     | 2             | 1.6             | 1.8  | 1.6            | 1.6            | 1.6            |
| I <sub>SURGE</sub> (A)              | 100  | 100                | 100           | 200    | 150            | 200     | 150           | 300             | 300  | 300            | 300            | 300            |
| V <sub>GFIM</sub> (V)               | -  | -                  | 10            | -      | 10             | 10      | 10            | -               | -    | 10             | 10             | 10             |
| GRM(V)                              | -  | -                  | 10            | -      | 5              | 5       | 5             | -               | -    | 10             | 10             | 10             |
| Mtg Torque                          | -  | -                  | 30(3.33)      | -      | 30(3.33)       | -       | 30(3.33)      | -               | -    | 30(3.33)       | -              | 30(3.3-3)      |
| Thread Size                         | -  | -                  | 1/4-28 UNF-2A | -      | 1/4-28 UNF-2A  | -       | 1/4-28 UNF-2A | -               | -    | 1/4-28 UNF-2A  | -              | 1/4-28 UNF-2-A |
| Package Type                        |  |                    |               |        |                |         |               |                 |      |                |                |                |
| Case Style                          | TO220 Isolated   | TO48               | TO3           | TO48   | 1/2" Press Fit | TO48    | TO220         | TO220 Full Pack | TO48 | 1/2" Press Fit | TO48 Isol Stud | TO48 Isol Stud |



# Semiconductors



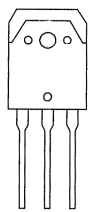
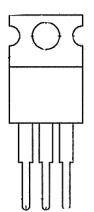
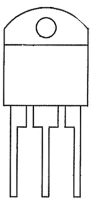
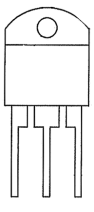
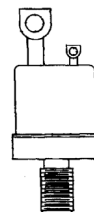
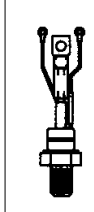
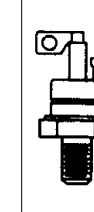
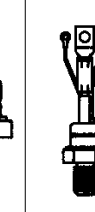

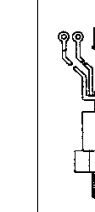
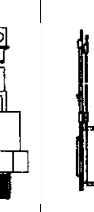

## Silicon Controlled Rectifiers (cont.)

| Dc or Pk<br>Volts+<br>V <sub>DRM</sub> | I <sub>T</sub> RMS Maximum Forward Current (All Conducting Angles)                  |   |   |   |   |   |  |   |   |   |   |                  |
|--|---|---|---|---|---|---|--|---|---|---|---|------------------|
|  | 10A   | 10A<br>Sensitive<br>Gate  | 10A   | 12.5A   | 16A   | 20A   | 25A  |   |   | 35A   |   | 35A              |
| 500                                    | -   | -   | -   | -   | NTE5508   | -   | NTE5528  | -   | -   | NTE5546   | -   | -                |
| 600                                    | NTE5419   |   | NTE5496   | -   | NTE5509   | NTE5516   | NTE5529  | NTE5556   | -   | NTE5547   | NTE5-519  | NTE5566          |
| 700                                    | -   | -   | -   | -   | -   | -   | NTE5530  | -   | -   | -   | -   | -                |
| 800                                    | -   | -   | -   | -   | -   | -   | NTE5531  | NTE5558   | NTE5460   | NTE5548   | -   | -                |
| 1200                                   | -   | -   | -   | -   | -   | -   | -  | -   | -   | -   | -   | -                |
| I <sub>GT</sub> MAX                    | 15mA  | 200A  | 15mA  | 40mA  | 30mA  | 15mA  | 40mA   | 30mA  | 40mA  | 30mA  | 30mA  | 30mA             |
| V <sub>GT</sub> MAX                    | 1.5   | 0.8   | 2   | 2   | 1.5   | 2   | 3  | 1.5   | 1.5   | 2   | 2   | 2                |
| I <sub>HOLD</sub> MAX                  | 30  | 3   | 20  | 50  | 40  | 20  | 50   | 40  | 40  | 50  | 50  | 50               |
| V <sub>F(ON)</sub>                     | 1.6   | 1.6   | 2.5   | 1.8   | 1.6   | 2.4   | .2   | 1.6   | 1.8   | 1.6   | 1.6   | 1.6              |
| I <sub>SURGE</sub> (A)                 | 100   | 100   | 100   | 200   | 150   | 200   | 150  | 300   | 300   | 300   | 300   | 300              |
| V <sub>GFM</sub> (V)                   | -   | -   | 10  | -   | 10  | 10  | 10   | -   | -   | 10  | 10  | 10               |
| GRM(V)                                 | -   | -   | 10  | -   | 50  | 5   | 5  | -   | -   | 10  | 10  | 10               |
| Mtg Torque                             | -   | -   | 30(3.33)  | -   | 30 (3.33)   | -   | 30 (3.33)  | -   | -   | 30 93.33)   | -   | 30 (3.33)        |
| Thread Size                            | -   | -   | 1/4-28<br>UNF-2A  | -   | 1/4-28<br>UNF-28  | -   | 1/4-28<br>UNF-28   | -   | -   | 1/4-28<br>UNF-28  | -   | 1/4-28<br>UNF-28 |
| Package Type                           |  |  |  |  |  |  |  |  |  |  |  |                  |
| Case Style                             | TO220<br>Isolated   | TO48  | TO3   | TO48  | 1/2"<br>Press Fit   | TO48  | TO220  | TO220<br>Full Pack  | TO48  | 1/2"<br>Press Fit   | TO48<br>Isol Stud   |                  |





## Silicon Controlled Rectifiers (For Phase Control Applications)

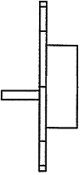
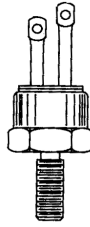


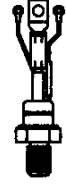

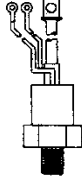

| DC or Pk<br>Volts<br>$V_{DRM}$ | $I_T$ RMS Maximum Forward Current Amps (All Conducting Angles)                      |   |   |   |   |   |   |  |   |   |   |   |
|--------------------------------|---|---|---|---|---|---|---|--|---|---|---|---|
|                                | 40A   |   | 50A   | 55A   | 80A   | 125A  |   | 275A   | 470A  | 550A  | 850A  | 1800A   |
| 200                            | -   | -   | -   | -   | NTE5567   | NTE5570   | NTE5575   | NTE5580  | NTE5590   | -   | NTE5594   | -   |
| 250                            | -   | -   | -   | -   | -   | -   | -   | -  | -   | -   | -   | -   |
| 300                            | -   | -   | -   | -   | -   | -   | -   | -  | -   | -   | -   | -   |
| 400                            | -   | -   | -   | NTE5539   | -   | -   | -   | -  | -   | -   | -   | -   |
| 500                            | -   | -   | -   | -   | -   | -   | -   | -  | -   | -   | -   | -   |
| 600                            | NTE5534A  | -   | -   | -   | NTE5568   | NTE5572   | NTE5577   | NTE5582  | NTE5591   | NTE5587   | NTE5595   | NTE5598   |
| 700                            | -   | -   | -   | -   | -   | -   | -   | -  | -   | -   | -   | -   |
| 800                            | -   | NTE5536   | NTE5538   | NTE5540   | -   | -   | -   | -  | -   | -   | -   | -   |
| 1200                           | -   | -   | -   | -   | NTE5569   | NTE5574   | NTE5579   | NTE5584  | NTE5592   | NTE5589   | NTE5596   | NTE5599   |
| $I_{GT}$ Max                   | 80mA  | 50mA  | 80mA  | 40mA  | 100mA   | 150mA   | 150mA   | 150mA  | 150mA   | 150mA   | 150mA   | 200mA   |
| $V_{GT}$ Max                   | 1.5   | 1.5   | 3   | 1.5   | 2.5   | 3   | 3   | 3  | 3   | 3   | 3   | 3   |
| $I_{HOLD}$ Max                 | 150   | 60  | 150   | 60  | 200   | -   | -   | -  | -   | -   | -   | -   |
| $V_F(ON)$                      | 2.0   | 1.6   | 2   | 1.8   | 1.6   | 1.95  | 2.2   | 1.5  | 1.55  | 1.4   | 1.4   | 1.35  |
| $I_{SURGE}$ (A)                | 525   | 400   | 525   | 650   | 1255  | 1800  | 1600  | 5500   | 5500  | 10,000  | 10,000  | 27,000  |
| $V_{GFM}$ (V)                  | -   | -   | 15  | -   | 20  | 4   | -   | 4  | 5   | 5   | 5   | 5   |
| $V_{GRM}$ (V)                  | -   | -   | 5   | -   | 5   | 5   | 5   | 5  | 5   | 5   | 5   | 5   |
| Mtg Torque                     | -   | -   | -   | -   | 30 (3.33)   | 130 (14.46)   | 130 (14.46)   | 360 (40.06)  | 1400 Lbs (6.2 KN)   | 360 (40.06)   | 2400 LBS (10.7KN)   | 5500 Lbs (24.5KN)   |
| Thread Size                    | -   | -   | -   | -   | 1/4-28  | 1/2-20  | 1/2-20  | 3/4-16   | -   | 3/4-16  | -   | -   |
| Package Type                   |  |  |  |  |  |  |  |  |  |  |  |  |
| Case Style                     | TO3 Isolated Flange   | TO220   | TO218 Isolated  | TO218   | TO65  | TO94  | TO83  | TO93   | Hockey Puck 1.65" Dia   | TO118   | Hockey Puck 2.3" Dia  | Hockey Puck 2.9" Dia  |



# Semiconductors



## Silicon Controlled Rectifiers (For High Speed Switching)

| DC or Pk Volts<br>$V_{DRM}$          | $I_T$ RMS Maximum Forward Current Amps (All Conducting Angles)                      |   |   |   |   |   |   |   |
|--------------------------------------|---|---|---|---|---|---|---|---|
|                                      | 5A  | 35A   | 125A  |   | 275A  | 400A  | 475A  | 700A  |
| 600                                  | 5351  | 5360  | 5368  | 5371  | 5374  | 5380  | 5377  | 5386  |
| 1200                                 |   |   | 5369  | 5372  | 5375  | 5381  | 5378  | 5387  |
| $I_{GT}$ Max                         | 50mA  | 180mA   | 150mA   | 150mA   | 150mA   | 150mA   | 150mA   | 150mA   |
| $V_{GT}$ Max (V)                     | 2   | 3   | 3   | 3   | 3   | 3   | 3   | 3   |
| $I_{HOLD}$ Max (mA)                  | 100   | 150   | -   | -   | -   | -   | -   | -   |
| $V_{F(on)}$ Max (V)                  | 2.06  | 2.05  | 3.2   | 3.3   | 1.85  | 1.85  | 1.45  | 1.45  |
| $I_{SURGE}$ (A)                      | 90  | 180   | 1400  | 1400  | 4500  | 4500  | 8000  | 8000  |
| "Repetitive di/dt Amps/ $\mu$ s Max" | -   | -   | 150   | 150   | 300   | 300   | 400   | 400   |
| "Non-Repetitive di/dt Amps/ns Max"   | 500   | 400   | 800   | 800   | 800   | 800   | 500   | 800   |
| dv/dt Volts/ $\mu$ s Max             | 400 (Typ)   | 200   | 200   | 200   | 300   | 300   | 300   | 300   |
| Turn-Off tq/ $\mu$ s Max             | 2.9 (Typ)   | 10  | 10  | 10  | 10  | 15  | 25  | 25  |
| "Mounting Torque in.lb (m.N)"        | -   | 30 (3.33)   | 130 (14.46)   | 130 (14.46)   | 360 (40.06)   | 1400 lbs (6.2 kN)   | 360 (40.06)   | 2400 lbs (10.7 kN)  |
| Thread Size                          | -   | 1/4-28 UNF-2A   | 1/2-20 UNF-2A   | 1/2-20 UNF-2A   | 3/4-16 UNF-2A   | -   | 3/4-16 UNF-2A   | -   |
| Package Type                         |  |  |  |  |  |  |  |  |
| Case Style                           | TO66  | TO48  | TO83  | TO94  | TO93  | Hockey Puck 1.65" Dia   | TO118   | Hockey Puck 2.3" Dia  |

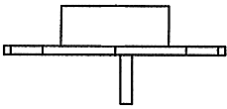
Cross Reference NTE Semiconductors at:  
<http://nte01.nteinc.com/nte/NTERefSemiProd.nsf/??Search?OpenForm>



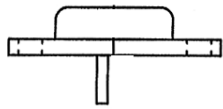




## Silicon Controlled Rectifiers (For High Speed Switching Applications)



TO66



TO3

| NTE Type Number | Description and Application | Repetitive Peak Forward Off-State Voltage (V) | RMS On-State Current (Amps) | Peak Forward Surge Current (Amps) | Maximum Ratings              |                           |                    |                      | Typical Reverse Recovery Time (μs) | Package Style/Diag. Number |
|-----------------|-----------------------------|---|-----------------------------|-----------------------------------|------------------------------|---------------------------|--------------------|----------------------|------------------------------------|----------------------------|
|                 |                             |   |                             |                                   | Gate Trigger Voltage (Volts) | Gate Trigger Current (mA) | Turn-Off Time (μs) | Holding Current (mA) |                                    |                            |
|                 |                             |   |                             |                                   | V <sub>DRM</sub>             | I <sub>T(RMS)</sub>       | I <sub>TSM</sub>   | V <sub>GT</sub>      |                                    |                            |
| 230             | Deflection Circuit of TV    | 700   | 8                           | 90                                | 2                            | 50                        | 1.8                | 100                  | -                                  | TO66                       |
| 231             | Deflection Circuit of TV    | 600   | 8                           | 90                                | 2                            | 50                        | 3.8                | 100                  | -                                  | TO66                       |
| 314             | Power Regulating Switch     | 400   | 12.5                        | 200                               | 2                            | 40                        | 20 Typ             | 50                   | 5                                  | TO3                        |

## Metal Oxide Varistor

| NTE Type Number | Case Diameter | Maximum Ratings (T <sub>A</sub> =25°C) |                     |                             |                              | Characteristics                               |  |                                    |
|-----------------|---------------|--|---------------------|-----------------------------|------------------------------|---|--|------------------------------------|
|                 |               | Continuous                             |                     | Transient                   |                              | Nom. Varistor Volt. @1 mA DC Test Current (V) | Max. Clamping Volt., V <sub>C</sub> @ Test Current (8/20μs)(V) | Transient Pwr. Dissipation (Watts) |
|                 |               | RMS Voltage (Volts)                    | DC Voltage (Volts)  | Energy (10/1000μs) (Joules) | Peak Current (8/20μs) (Amps) |   |  |                                    |
|                 |               | V <sub>m</sub> (AC)                    | V <sub>m</sub> (DC) | W <sub>TM</sub>             | I <sub>TM</sub>              |   |  |                                    |
| 1V010           | 8.5mm         | 10                                     | 12                  | 0.8                         | 250                          | 18  | 45   | 0.25                               |
| 2V010           | 16mm          | 10                                     | 12                  | 3.5                         | 1000                         | 18  | 45   | 0.60                               |
| 1V014           | 8.5mm         | 14                                     | 18                  | 1.2                         | 250                          | 22  | 55   | 0.25                               |
| 2V014           | 16mm          | 14                                     | 18                  | 4.0                         | 1000                         | 22  | 55   | 0.60                               |
| 1V015           | 8.5mm         | 15                                     | 20                  | 1.0                         | 250                          | 24  | 52   | 0.25                               |
| 2V015           | 16mm          | 15                                     | 20                  | 4.5                         | 1000                         | 24  | 48   | 0.60                               |
| 1V017           | 8.5mm         | 17                                     | 22                  | 1.3                         | 250                          | 27  | 60   | 0.25                               |
| 2V017           | 16mm          | 17                                     | 22                  | 5.0                         | 1000                         | 27  | 60   | 0.60                               |
| 1V020           | 8.5mm         | 20                                     | 26                  | 1.5                         | 250                          | 33  | 70   | 0.25                               |
| 2V020           | 16mm          | 20                                     | 26                  | 6.0                         | 1000                         | 33  | 70   | 0.60                               |
| 1V025           | 8.5mm         | 25                                     | 31                  | 1.7                         | 250                          | 39  | 80   | 0.25                               |
| 2V025           | 16mm          | 25                                     | 31                  | 7.0                         | 1000                         | 39  | 80   | 0.60                               |
| 1V030           | 8.5mm         | 30                                     | 38                  | 2.3                         | 250                          | 47  | 95   | 0.25                               |



# Semiconductors



## Metal Oxide Varistor (cont.)

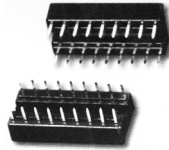
| NTE Type Number     | Case Diameter       | Maximum Ratings (T <sub>A</sub> =25°C) |                    |                             |                              | Characteristics                              |   |                                    |
|---------------------|---------------------|--|--------------------|-----------------------------|------------------------------|--|---|------------------------------------|
|                     |                     | Continuous                             |                    | Transient                   |                              | Nom. Varistor Volt.@1 mA DC Test Current (V) | Max. Clamping Volt., V <sub>C</sub> @Test Current (8/20µs)(V) | Transient Pwr. Dissipation (Watts) |
|                     |                     | RMS Voltage (Volts)                    | DC Voltage (Volts) | Energy (10/1000µs) (Joules) | Peak Current (8/20µs) (Amps) |  |   |                                    |
| V <sub>m</sub> (AC) | V <sub>m</sub> (DC) | W <sub>TM</sub>                        | I <sub>TM</sub>    |                             |                              |  |   |                                    |
| 2V030               | 16mm                | 30                                     | 38                 | 8.5                         | 1000                         | 47   | 95  | 0.60                               |
| 1V035               | 8.5mm               | 35                                     | 45                 | 2.7                         | 250                          | 56   | 110   | 0.25                               |
| 2V035               | 16mm                | 35                                     | 45                 | 10.0                        | 1000                         | 56   | 110   | 0.60                               |
| 1V040               | 8.5mm               | 43                                     | 55                 | 3.2                         | 250                          | 68   | 135   | 0.25                               |
| 2V040               | 16mm                | 43                                     | 55                 | 13.0                        | 1000                         | 68   | 135   | 0.60                               |
| 1V050               | 8.5mm               | 52                                     | 6                  | 4.0                         | 250                          | 82   | 150   | 0.25                               |
| 2V050               | 16mm                | 52                                     | 66                 | 14.0                        | 1000                         | 82   | 150   | 0.60                               |
| 1V060               | 8.5mm               | 63                                     | 80                 | 6.0                         | 1200                         | 100  | 175   | 0.25                               |
| 2V060               | 16mm                | 63                                     | 80                 | 18.0                        | 4500                         | 100  | 175   | 0.60                               |
| 1V075               | 8.5mm               | 75                                     | 95                 | 5.0                         | 1200                         | 120  | 205   | 0.25                               |
| 2V075               | 16mm                | 75                                     | 95                 | 21.0                        | 4500                         | 120  | 205   | 0.60                               |
| 1V095               | 8.5mm               | 95                                     | 125                | 7.0                         | 1200                         | 150  | 250   | 0.25                               |
| 2V095               | 16mm                | 95                                     | 125                | 29.0                        | 4500                         | 150  | 250   | 0.60                               |
| 1V115               | 8.5mm               | 115                                    | 150                | 10.0                        | 1200                         | 171  | 295   | 0.25                               |
| 2V115               | 16mm                | 115                                    | 150                | 35.0                        | 4500                         | 171  | 300   | 0.60                               |
| 1V130               | 8.5mm               | 135                                    | 180                | 10.0                        | 1200                         | 216  | 355   | 0.25                               |
| 524V13              | 23mm                | 135                                    | 180                | 72.0                        | 6500                         | 216  | 355   | 1.00                               |
| 1V150               | 8.5mm               | 160                                    | 210                | 10.0                        | 1200                         | 240  | 410   | 0.25                               |
| 2V150               | 16mm                | 160                                    | 210                | 40.0                        | 4500                         | 240  | 410   | 0.60                               |
| 524V15              | 23mm                | 160                                    | 210                | 80.0                        | 6500                         | 240  | 410   | 1.00                               |
| 1V175               | 8.5mm               | 170                                    | 225                | 12.0                        | 1200                         | 270  | 450   | 0.25                               |
| 524V17              | 23mm                | 170                                    | 225                | 90.0                        | 6500                         | 270  | 450   | 1.00                               |
| 1V250               | 8.5mm               | 240                                    | 320                | 20.0                        | 1200                         | 390  | 630   | 0.25                               |
| 2V250               | 16mm                | 240                                    | 320                | 70.0                        | 4500                         | 390  | 630   | 0.60                               |
| 524V25              | 23mm                | 240                                    | 320                | 129.0                       | 6500                         | 390  | 630   | 1.00                               |
| 1V275               | 8.5mm               | 260                                    | 330                | 20.0                        | 1200                         | 430  | 685   | 0.25                               |
| 2V275               | 16mm                | 260                                    | 330                | 72.0                        | 4500                         | 430  | 685   | 0.60                               |
| 524V27              | 23mm                | 260                                    | 330                | 135.0                       | 6500                         | 430  | 685   | 1.00                               |





### IC Sockets (Stamp Pins)

Tin plated, stamped contacts. Pin spacing 0.1" (2.54mm). Two different row widths. Narrow: A= 7.62mm (0.3"). Wide: A= 15.20mm (0.6").



**Multi Row Part #:** SCS-38

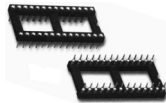
**Narrow (0.3") Part #'s:** SCS-06, SCS-08, SCS-14, SCS-16, SCS-18, SCS-20, SCS-22, SCS-24, SCS-28, SCS-34

**Wide (0.6") Part #'s:** SCL-24, SCL-32, SCL-28, SCL-40

**IC Extractor Part #:** SCS-IC-XTR

### IC Socket (Machined Pins)

Gold plated, 4 finger beryllium copper contacts. Tin plated outer sleeve. Pin spacing is 8-24 = 2.54mm x 7.62mm (0.1" x 0.3") and 24-40 = 2.54mm x 15.24mm (0.1" x 0.6").

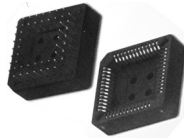


**Regular Part #'s:** SQ-06, SQ-08, SQ-14, SQ-16, SQ-18, SQ-20, SQ-22, SQ-24, SQ-24N, SQ-28, SQ-40

**Wire Wrap Part #'s:** SQA-06, SQA-08, SQA-14, SQA-16, SQA-18, SQA-20, SQA-24, SQA-28, SQA-40

### Chip Carriers

Gold plated contacts and solder post. Plastic leaded chip carrier and surface mount chip carrier.



**Surface Mount Part #'s:** SMT-28 NT, SMT-32 NT, SMT-44 NT, SMT-52 NT, SMT-68 NT, SMT-84 NT

**Thru Holes Part #'s:** PLCC-28, PLCC-32, PLCC-44, PLCC-52, PLCC-68, PLCC-84

**Tin Plated Contacts Part #:** PLCC-28T

### Pin Sockets (Machined Pins)

Gold plated, 4 finger beryllium copper contacts. Tin plated outer sleeve. Pin spacing is 0.10" (2.54mm). Notched sides for cleaner breaking.



**Part #'s:** HQ-1X16, HQ-1X20, HQ-1X30, HQ-1X40, HQ-2X30

**Wire Wrap Pins Part #:** HQA-1X40



### P.C. Board Mount Dip IC Sockets

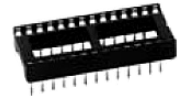
Features: 8, 14, 16, 18, 20, 24, 28 and 40 contact available. Tin plated contact. Industry standard spacing. Specification: Contact resistance: 30m ohm max. at DC 100mA. Insulator resistance: 1000m ohm min. at DC 500V; Current rating: 1 amp dielectric withstanding. Voltage: AC 500V for one minute; Operating temperature: -55°C to 105°C. Contact: Phosphor bronze. Housing: PBT and 30% glass fiber (UL-94V-0).

| Part Number | Position |
|-------------|----------|
| 70-4608     | 8        |
| 70-4614     | 14       |
| 70-4616     | 16       |
| 70-4618     | 18       |
| 70-4620     | 20       |
| 70-4624     | 24       |
| 70-4628     | 28       |
| 70-4640     | 40       |



### Dual Wipe Standard I.C. Sockets

30% glass filled polyester UL94V-0 insulator. Contacts are phosphor bronze with 50 microinches hot tin dip. Bulk.



| Part Number | Pins        |
|-------------|-------------|
| 39-008-0    | 8-position  |
| 39-014-0    | 14-position |
| 39-016-0    | 16-position |
| 39-018-0    | 18-position |
| 39-020-0    | 20-position |
| 39-024-0    | 24-position |
| 39-028-0    | 28-position |
| 39-032-0    | 32-position |
| 39-040-0    | 40-position |

### Machined Contact I.C. Sockets

94V-0 PBT insulator 15 micro inch gold plated contact area.

| Part Number | Type | Pins        |
|-------------|------|-------------|
| 39-108-0    | Bulk | 8-position  |
| 39-114-0    | Bulk | 14-position |
| 39-116-0    | Bulk | 16-position |
| 39-140-0    | Bulk | 40-position |

