

Transistor/Diode Kits — continued

Digital Transistor Kit



A unique, 40 piece kit including:-

- 33 single and 5 dual digital transistor types
- 10 pieces of each type
- Product CD-ROM, with datasheets, package outlines, and footprints
- Application CD-ROM with application notes, Spice models and S-parameters
- Power dissipation up to 1W
- Transistor arrays, 50Ω Silicon MMIC's and active bias controller
- Refills available separately

Mfrs. List No. HLSK020

Contents:

V_{CE0} V	$V_{(on)}$ V	I_c mA	P_{tot} mW	R1 kW	R2 kW	h_{FE} @ $I_c = 5mA$ $V_{ce} = 5V$	$V_{(on) min.}$ @ $I_c = 2mA$ V	Package	Device marking	Mfrs. List No.
Single NPN, SOT-23										
50	10	500	330	1	1	20	1.0	SOT-23	XVs	BCR521
50	12	500	330	2.2	2.2	40	1.0	SOT-23	XAs	BCR503
50	12	500	330	2.2	10	70	0.5	SOT-23	XWs	BCR505
50	12	500	330	1	10	70	0.4	SOT-23	XGs	BCR523
50	15	100	250	4.7	47	70	0.5	SOT-323	WGs	BCR116
50	30	500	330	4.7	47	60	1.0	SOT-23	XFes	BCR512
50	50	70	250	47	22	50	1.5	SOT-323	WLs	BCR146
Single NPN, SOT-323										
50	10	100	250	2.2	47	70	0.5	SOT-323	WHs	BCR108W
50	20	100	250	10	10	30	1.0	SOT-323	WCs	BCR133W
50	20	100	250	10	47	70	0.5	SOT-323	WJs	BCR135W
50	30	100	250	22	22	50	1.0	SOT-323	WDs	BCR141W
50	30	100	250	22	47	70	1.5	SOT-323	WZs	BCR142W
50	50	70	250	47	47	70	1.0	SOT-323	WEs	BCR148W
Single NPN, SOT-363										
50	10	100	200	2.2	47	70	0.5	SOT-363	WHs	BCR108S
50	15	100	200	4.7	—	120	0.5	SOT-363	WKs	BCR119S
50	20	100	200	10	10	30	1.0	SOT-363	WCs	BCR133S
50	20	100	200	10	47	70	0.5	SOT-363	WJs	BCR135S
50	20	100	250	10	10	30	1.0	SOT-363	WMs	BCR183S
50	30	100	200	22	22	50	1.0	SOT-363	WDs	BCR141S
50	50	100	200	47	47	70	1.0	SOT-363	WEs	BCR148S
Single PNP, SOT-23										
50	10	100	250	2.2	47	70	0.5	SOT-323	WIs	BCR158
50	12	500	330	2.2	2.2	40	1.0	SOT-23	XBs	BCR553
50	12	500	330	2.2	10	70	0.5	SOT-23	XDs	BCR555
50	12	500	330	1	10	70	0.7	SOT-23	XHs	BCR573
50	15	100	250	4.7	47	70	0.5	SOT-323	WTs	BCR166
50	30	500	330	4.7	4.7	60	1.0	SOT-23	XUs	BCR562
50	40	500	330	10	10	70	1.1	SOT-23	XMs	BCR583
Single PNP, SOT-323										
50	20	100	250	10	47	70	0.5	SOT-323	WNs	BCR185W
50	50	70	250	47	47	70	1.0	SOT-323	WRs	BCR198W
Dual PNP, SOT-363										
50	15	100	200	4.7	—	120	0.5	SOT-363	WSs	BCR169S
50	20	100	200	10	47	70	1.0	SOT-363	WNs	BCR185S
50	30	100	200	22	22	50	1.0	SOT-363	WOs	BCR191S
50	50	100	200	47	47	70	1.0	SOT-363	WRs	BCR198S
Dual NPN/PNP										
50	10	100	250	2.2	47	70	0.5	SOT-363	WFs	BCR08PN
50	25	100	250	10	10	30	1.0	SOT-363	WIs	BCR10PN
50	30	100	250	22	22	50	1.0	SOT-363	WPs	BCR22PN
50	20	100	250	10	47	70	0.5	SOT-363	WUs	BCR35PN
50	50/10	100	250	2.2/47	47/47	70	1.0	SOT-363	WTs	BCR48PN

V_{ce0} V	I_c mA	P_{tot} W	f_T MHz	I_{cbo} nA	V_{ce0} V	$V_{ce(sat)}$ @ $I_c = 2A$ V	Package	Device Marking	Mfrs. List No.
PNP AF Power Transistor									
15	6	1.7	100	100	15	0.15	SCT-595	PAs	BCP72M

DC Characteristics with stabilised NPN transistors

V_{cc} V	Relative Change of DIC/I_C vs. h_{FE}	vs. V_s	vs. T (amb)	Package	Device Marking	Mfrs. List No.
Active Bias Controller						
50	0.08	0.15	2%/K	SOT-343	W4s	BCR400W SD124 / SD124A

Order Multiple=1	Price Each				
Mfrs. List No.	1+	5+	10+	100+	3K+
Digital Transistor Kit					
HLSK020	300-9403				
Order Multiple=10					
BCP72M	300-8307				
BCR08PN	300-8149				
BCR108S	300-8198				
BCR108W	300-7911				
BCR10PN	300-8150				
BCR116	300-7923				
BCR119S	300-8204				
BCR133S	300-8216				
BCR133W	300-7935				
BCR135S	300-8228				
BCR135W	300-7947				

continued

Order Multiple=10

Mfrs. List No.	Order Code	10+	100+	250+	1K+	3K+
BCR141S	300-8230					
BCR141W	300-7959					
BCR142W	300-7960					
BCR146	300-7972					
BCR148S	300-8241					
BCR148W	300-7984					
BCR158	300-7996					
BCR166	300-8009					
BCR169S	300-8253					
BCR183S	300-8265					
BCR185S	300-8277					
BCR185W	300-8010					
BCR191S	300-8289					
BCR198S	300-8290					
BCR198W	300-8022					
BCR22PN	300-8162					
BCR35PN	300-8174					
BCR400W	300-8319					
BCR48PN	300-8186					
BCR503	300-8034					
BCR505	300-8046					
BCR512	300-8058					
BCR521	300-8060					
BCR523	300-8071					
BCR553	300-8095					
BCR555	300-8101					
BCR562	300-8113					
BCR573	300-8125					
BCR583	300-8137					

Unijunction Transistors

TO-18, TO-92 Unijunction

Package and Pin Out	Intrinsic Standoff Ratio	Interbase Resistance $k\Omega$	Max Point Emitter Current μA	Emitter Reverse Current @ V (be) μA	Minimum Valley Current 4mA	Mfrs. List No.
TO-18	0.56-0.75	4.7 to 9.1	5 μA	12 μA @ 30V		2N2646

Maximum interbase voltage 35V (all types)

Programmable Unijunction Transistors

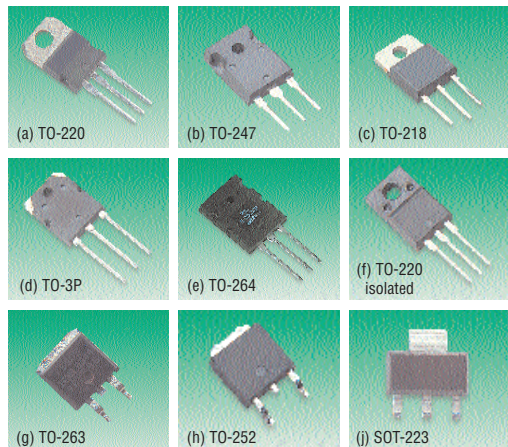
Package and Pin Out	Max point Current @ $R_G = 10k\Omega$	Min valley Current @ $R_G = 10k\Omega$	Pulsed Output Voltage V_0	Max dc Anode Current	Mfrs. List No.
TO-92	5 μA	70 μA	6V min	150mA	2N6027
TO-92	1 μA	25 μA	6V min	150mA	2N6028

Mfrs. List No.	Order Code	1+	25+	100+	1K+
2N2646	.290-282				
2N6027	.438-789				
2N6028	.290-300				

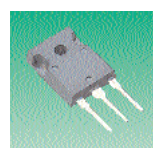
Insulated Gate Bipolar Transistors (IGBTs)

IGBT's combine the simple gate drive characteristics of MOSFETs with the high current and low saturation voltage capability of bipolar transistors.

IGBT Package Types



SMPS Series IGBT's



- Replacement for industry standard IRFP450, IRFP460
- Optimised for high frequency SMPS applications >100kHz
- 600V switching SOA capability
- Low conduction losses
- Increased reliability – cooler operating temperatures
- Integral anti-parallel Hyperfast[®] diode
- Reduced component count

