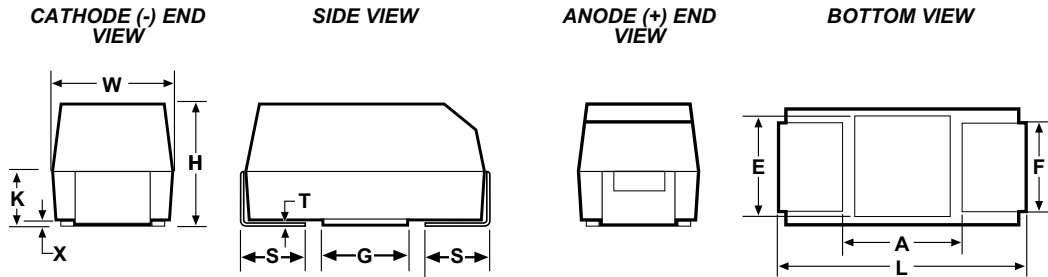


FEATURES

- Polymer Cathode Technology
- Low ESR
- High Frequency Cap Retention
- No-Ignition Failure Mode
- Use Up to 90% of Rated Voltage (10% Derating) for part types ≤ 10 Volts
- Halogen Free Epoxy
- 100% Accelerated Steady State Aging
- Volumetrically Efficient
- Use Up to 80% of Rated Voltage (20% Derating) for part types > 10 Volts
- Capacitance 15 to 1000 μ F ($\pm 20\%$)
- Voltage 2V to 25V
- EIA Standard Case Sizes
- 100% Surge Current Tested
- Operating Temperature -55°C to +105°C
- Self Healing Mechanism
- RoHS Compliant & Leadfree Terminations (see www.kemet.com for lead transition)

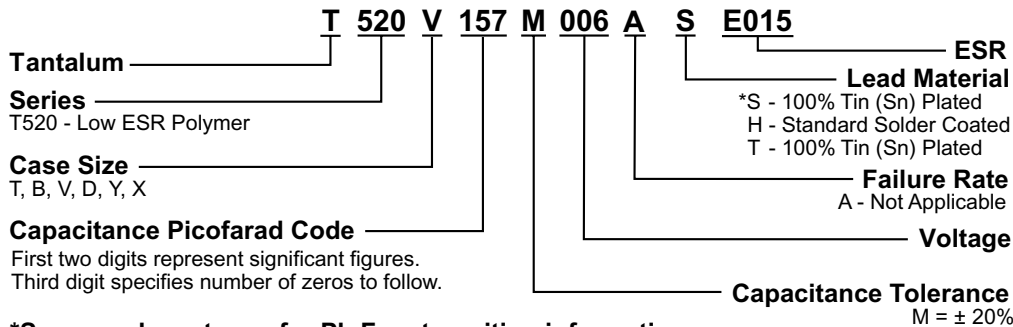
OUTLINE DRAWING



DIMENSIONS - MILLIMETERS

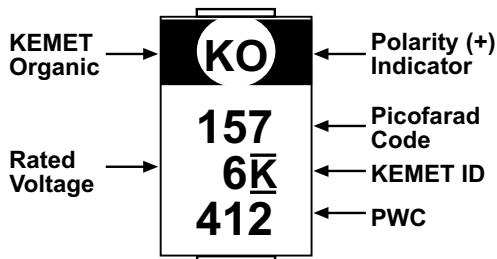
Case Size		L	W	H	K ± 0.20	F ± 0.1	S ± 0.3	X(Ref)	T(Ref)	A(Min)	G(ref)	E(ref)
KEMET	EIA											
T	3528-12	3.5 \pm 0.2	2.8 \pm 0.2	1.2 max	0.3	2.2	0.8	0.05	0.13	1.1	1.8	2.2
B	3528-21	3.5 \pm 0.2	2.8 \pm 0.2	1.9 \pm 0.2	0.9	2.2	0.8	0.10 \pm 0.10	0.13	1.1	1.8	2.2
C	6032-28	6.0 \pm 0.3	3.2 \pm 0.3	2.5 \pm 0.3	1.4	2.2	1.3	0.10 \pm 0.10	0.13	2.5	2.8	2.4
W	7343-15	7.3 \pm 0.3	4.3 \pm 0.3	1.5 max	0.6	2.4	1.3	0.05	0.13	3.8	3.5	3.5
V	7343-20	7.3 \pm 0.3	4.3 \pm 0.3	1.9 max	0.9	2.4	1.3	0.05	0.13	3.8	3.5	3.5
D	7343-31	7.3 \pm 0.3	4.3 \pm 0.3	2.8 \pm 0.3	1.5	2.4	1.3	0.10 \pm 0.10	0.13	3.8	3.5	3.5
Y	7343-40	7.3 \pm 0.3	4.3 \pm 0.3	4.0 max	1.9	2.4	1.3	0.10 \pm 0.10	0.13	3.8	3.5	3.5
X	7343-43	7.3 \pm 0.3	4.3 \pm 0.3	4.0 \pm 0.3	2.3	2.4	1.3	0.10 \pm 0.10	0.13	3.8	3.5	3.5

T520 ORDERING INFORMATION



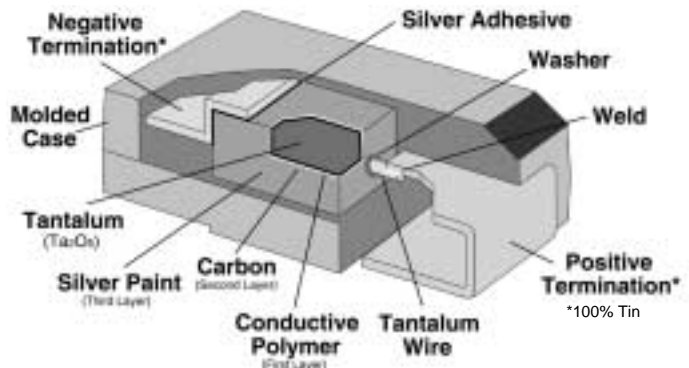
*See www.kemet.com for Pb Free transition information.

COMPONENT MARKING



412 = 12th week of 2004

T520 SERIES CONSTRUCTION



POLYMER TANTALUM CHIP CAPACITORS

T520 Series - KO Cap



T520 RATINGS & PART NUMBER REFERENCE

Capacitance μ F	Case Size	KEMET Part Number	DC Leakage μ A @ 25°C Max	DF% @ 25°C 120 Hz Max	ESR mW @ 25°C 100 kHz Max	Ripple Current Arms @ 100 kHz Max	
						w/Dt=20°C @ -55°C to 85°C	w/Dt= 2°C @ 105°C
2 Volt Rating @ 105°C							
470.0	V	T520V477M002A(1)E040	94	10	40	1.8	0.6
2.5 Volt Rating @ 105°C							
56.0	T	T520T566M2R5A(1)E070	14	8	70	1.0	0.3
68.0	A	T520A686M2R5A(1)E080	17	8	80	1.0	0.3
100.0	T	T520T107M2R5A(1)E070	25	8	70	1.0	0.3
100.0	B	T520B107M2R5A(1)E040	25	8	40	1.5	0.5
100.0	B	T520B107M2R5A(1)E070	25	8	70	1.1	0.3
220.0	B	T520B227M2R5A(1)E035	55	8	35	1.6	0.5
220.0	B	T520B227M2R5A(1)E070	55	8	70	1.1	0.3
220.0	V	T520V227M2R5A(1)E009	55	10	9	3.7	1.2
220.0	V	T520V227M2R5A(1)E012	55	10	12	3.2	1.0
220.0	V	T520V227M2R5A(1)E015	55	10	15	2.9	0.9
220.0	V	T520V227M2R5A(1)E025	55	10	25	2.2	0.7
220.0	V	T520V227M2R5A(1)E045	55	10	45	1.7	0.5
330.0	C	T520C337M2R5A(1)E045	83	8	45	1.6	0.5
330.0	V	T520V337M2R5A(1)E009	83	10	9	3.7	1.2
330.0	V	T520V337M2R5A(1)E015	83	10	15	2.9	0.9
330.0	V	T520V337M2R5A(1)E025	83	10	25	2.2	0.7
470.0	V	T520V477M2R5A(1)E009	118	10	9	3.7	1.2
470.0	V	T520V477M2R5A(1)E012	118	10	12	3.2	1.0
470.0	V	T520V477M2R5A(1)E015	118	10	15	2.9	0.9
470.0	D	T520D477M2R5A(1)E009	118	10	9	4.1	1.3
680.0	D	T520D687M2R5A(1)E010	170	10	10	3.9	1.2
680.0	D	T520D687M2R5A(1)E015	170	10	15	3.2	1.0
680.0	D	T520D687M2R5A(1)E040	170	10	40	1.9	0.6
680.0	Y	T520Y687M2R5A(1)E015	170	10	15	3.3	1.0
680.0	Y	T520Y687M2R5A(1)E025	170	10	25	2.5	0.8
1000.0	Y	T520Y108M2R5A(1)E015	170	10	15	3.3	1.0
1000.0	Y	T520Y108M2R5A(1)E025	250	10	25	2.5	0.8
3 Volt Rating @ 105°C							
100.0	B	T520B107M003A(1)E040	30	8	40	1.5	0.5
100.0	B	T520B107M003A(1)E070	30	8	70	1.1	0.3
150.0	B	T520B157M003A(1)E040	45	8	40	1.5	0.5
150.0	B	T520B157M003A(1)E070	45	8	70	1.1	0.3
330.0	V	T520V337M003A(1)E009	99	10	9	3.7	1.2
330.0	V	T520V337M003A(1)E012	99	10	12	3.2	1.0
330.0	V	T520V337M003A(1)E015	99	10	15	2.9	0.9
330.0	V	T520V337M003A(1)E025	99	10	25	2.2	0.7
680.0	D	T520D687M003A(1)E015	204	10	15	3.2	1.0
680.0	D	T520D687M003A(1)E040	204	10	40	1.9	0.6
1000.0	X	T520X108M003A(1)E015	300	10	15	3.3	1.0
1000.0	X	T520X108M003A(1)E030	300	10	30	2.3	0.7
4 Volt Rating @ 105°C							
15.0	T	T520T156M004A(1)E100	6	8	100	0.8	0.3
33.0	A	T520A336M004A(1)E080	13	8	80	1.0	0.3
47.0	A	T520A476M004A(1)E080	19	8	80	1.0	0.3
47.0	T	T520T476M004A(1)E070	19	8	70	1.0	0.3
68.0	T	T520T686M004A(1)E070	27	8	70	1.0	0.3
68.0	B	T520B686M004A(1)E040	27	8	40	1.5	0.5
68.0	B	T520B686M004A(1)E070	27	8	70	1.1	0.3
100.0	B	T520B107M004A(1)E035	40	8	35	1.6	0.5
100.0	B	T520B107M004A(1)E040	40	8	40	1.5	0.5
100.0	B	T520B107M004A(1)E070	40	8	70	1.1	0.3
150.0	B	T520B157M004A(1)E035	60	8	35	1.6	0.5
150.0	B	T520B157M004A(1)E040	60	8	40	1.5	0.5
150.0	B	T520B157M004A(1)E070	60	8	70	1.1	0.3
150.0	V	T520V157M004A(1)E009	60	10	9	3.7	1.2
150.0	V	T520V157M004A(1)E012	60	10	12	3.2	1.0
150.0	V	T520V157M004A(1)E015	60	10	15	2.9	0.9
150.0	V	T520V157M004A(1)E025	60	10	25	2.2	0.7
220.0	C	T520C227M004A(1)E045	88	8	45	1.6	0.5
220.0	V	T520V227M004A(1)E009	88	10	9	3.7	1.2
220.0	V	T520V227M004A(1)E012	88	10	12	3.2	1.0
220.0	V	T520V227M004A(1)E015	88	10	15	2.9	0.9
220.0	V	T520V227M004A(1)E025	88	10	25	2.2	0.7
220.0	V	T520V227M004A(1)E040	88	10	40	1.8	0.6
220.0	V	T520V227M004A(1)E045	88	10	45	1.7	0.5
220.0	D	T520D227M004A(1)E065	88	10	65	1.5	0.5
330.0	V	T520V337M004A(1)E009	132	10	9	3.7	1.2
330.0	V	T520V337M004A(1)E012	132	10	12	3.2	1.0
330.0	V	T520V337M004A(1)E025	132	10	25	2.2	0.7
330.0	V	T520V337M004A(1)E040	132	10	40	1.8	0.6
330.0	D	T520D337M004A(1)E009	132	10	9	4.1	1.3
330.0	D	T520D337M004A(1)E015	132	10	15	3.2	1.0
330.0	D	T520D337M004A(1)E040	132	10	40	1.9	0.6
330.0	D	T520D337M004A(1)E045	132	10	45	1.8	0.6
470.0	D	T520D477M004A(1)E010	188	10	10	3.9	1.2
470.0	D	T520D477M004A(1)E012	188	10	12	3.5	1.1
470.0	D	T520D477M004A(1)E015	188	10	15	3.2	1.0
470.0	D	T520D477M004A(1)E018	188	10	18	2.9	0.9
470.0	D	T520D477M004A(1)E025	188	10	25	2.4	0.8
470.0	D	T520D477M004A(1)E040	188	10	40	1.9	0.6
680.0	D	T520D687M004A(1)E025	272	10	25	2.4	0.8
680.0	Y	T520Y687M004A(1)E015	272	10	15	3.3	1.0
680.0	Y	T520Y687M004A(1)E025	272	10	25	2.5	0.8
680.0	X	T520X687M004A(1)E015	272	10	15	3.3	1.0
680.0	X	T520X687M004A(1)E035	272	10	35	2.2	0.7

(1) To complete the KEMET part number, insert the lead material designator as shown on page 46.

Polymer Tantalum Surface Mount



POLYMER TANTALUM CHIP CAPACITORS

T520 Series - KO Cap

T520 RATINGS & PART NUMBER REFERENCE

Capacitance μ F	Case Size	KEMET Part Number	DC Leakage μ A @ 25°C Max	DF% @ 25°C 120 Hz Max	ESR mW @ 25°C 100 kHz Max	Ripple Current Arms @ 100 kHz Max	
						w/D T= 20°C @ -55°C to 85°C	w/D T= 2°C @ 105°C
6.3 Volt Rating @ 105°C							
15.0	T	T520T156M006A(1)E100	9.5	8	100	0.8	0.3
22.0	A	T520A226M006A(1)E100	14	8	100	0.9	0.3
33.0	A	T520A336M006A(1)E080	21	8	80	1.0	0.3
33.0	B	T520B336M006A(1)E040	21	8	40	1.5	0.5
33.0	B	T520B336M006A(1)E070	21	8	70	1.1	0.3
47.0	T	T520T476M006A(1)E070	30	8	70	1.0	0.3
47.0	B	T520B476M006A(1)E040	30	8	40	1.5	0.5
47.0	B	T520B476M006A(1)E070	30	8	70	1.1	0.3
68.0	B	T520B686M006A(1)E040	43	8	40	1.5	0.5
68.0	B	T520B686M006A(1)E070	43	8	70	1.1	0.3
100.0	B	T520B107M006A(1)E040	63	8	40	1.5	0.5
100.0	B	T520B107M006A(1)E070	63	8	70	1.1	0.3
100.0	V	T520V107M006A(1)E009	63	10	9	3.7	1.2
100.0	V	T520V107M006A(1)E012	63	10	12	3.2	1.0
150.0	C	T520C157M006A(1)E025	95	8	25	2.1	0.7
150.0	C	T520C157M006A(1)E045	95	8	45	1.6	0.5
150.0	W	T520W157M006A(1)E040	95	10	40	1.7	0.5
150.0	V	T520V157M006A(1)E009	95	10	9	3.7	1.2
150.0	V	T520V157M006A(1)E012	95	10	12	3.2	1.0
150.0	V	T520V157M006A(1)E015	95	10	15	2.9	0.9
150.0	V	T520V157M006A(1)E025	95	10	25	2.2	0.7
150.0	V	T520V157M006A(1)E040	95	10	40	1.8	0.6
150.0	V	T520V157M006A(1)E045	95	10	45	1.7	0.5
150.0	D	T520D157M006A(1)E015	95	10	15	3.2	1.0
150.0	D	T520D157M006A(1)E025	95	10	25	2.4	0.8
150.0	D	T520D157M006A(1)E055	95	10	55	1.7	0.5
220.0	V	T520V227M006A(1)E009	139	10	9	3.7	1.2
220.0	V	T520V227M006A(1)E012	139	10	12	3.2	1.0
220.0	V	T520V227M006A(1)E015	139	10	15	2.9	0.9
220.0	V	T520V227M006A(1)E025	139	10	25	2.2	0.7
220.0	V	T520V227M006A(1)E040	139	10	40	1.8	0.6
220.0	D	T520D227M006A(1)E009	139	10	9	4.1	1.3
220.0	D	T520D227M006A(1)E015	139	10	15	3.2	1.0
220.0	D	T520D227M006A(1)E040	139	10	40	1.9	0.6
220.0	D	T520D227M006A(1)E050	139	10	50	1.7	0.5
330.0	V	T520V337M006A(1)E025	208	10	25	2.2	0.7
330.0	V	T520V337M006A(1)E040	208	10	40	1.8	0.6
330.0	D	T520D337M006A(1)E010	208	10	10	3.9	1.2
330.0	D	T520D337M006A(1)E015	208	10	15	3.2	1.0
330.0	D	T520D337M006A(1)E025	208	10	25	2.4	0.8
330.0	D	T520D337M006A(1)E040	208	10	40	1.9	0.6
330.0	D	T520D337M006A(1)E045	208	10	45	1.8	0.6
330.0	Y	T520Y337M006A(1)E015	208	10	15	3.3	1.0
330.0	Y	T520Y337M006A(1)E025	208	10	25	2.5	0.8
470.0	Y	T520Y477M006A(1)015	296	10	15	3.3	1.0
470.0	Y	T520Y477M006A(1)E018	296	10	18	3.0	0.9
470.0	Y	T520Y477M006A(1)E025	296	10	25	2.5	0.8
470.0	X	T520X477M006A(1)E018	296	10	18	3.0	1.0
470.0	X	T520X477M006A(1)E035	296	10	35	2.2	0.7
470.0	X	T520X477M006A(1)E040	296	10	40	2.0	0.6
8 Volt Rating @ 105°C							
33.0	B	T520B336M008A(1)E040	26	8	40	1.5	0.5
33.0	B	T520B336M008A(1)E070	26	8	70	1.1	0.3
150.0	D	T520D157M008A(1)E025	120	10	25	2.4	0.8
150.0	D	T520D157M008A(1)E040	120	10	40	1.9	0.6
150.0	D	T520D157M008A(1)E055	120	10	55	1.7	0.5
10 Volt Rating @ 105°C							
33.0	B	T520B336M010A(1)E040	33	8	40	1.5	0.5
33.0	B	T520B336M010A(1)E070	33	8	70	1.1	0.3
68.0	V	T520V686M010A(1)E045	68	10	45	1.7	0.5
68.0	V	T520V686M010A(1)E060	68	10	60	1.4	0.5
100.0	V	T520V107M010A(1)E018	100	10	18	2.6	0.8
100.0	V	T520V107M010A(1)E025	100	10	25	2.2	0.7
100.0	V	T520V107M010A(1)E045	100	10	45	1.7	0.5
100.0	V	T520V107M010A(1)E050	100	10	50	1.6	0.5
100.0	D	T520D107M010A(1)E018	100	10	18	2.9	0.9
100.0	D	T520D107M010A(1)E055	100	10	55	1.7	0.5
100.0	D	T520D107M010A(1)E080	100	10	80	1.4	0.4
150.0	D	T520D157M010A(1)E025	150	10	25	2.4	0.8
150.0	D	T520D157M010A(1)E040	150	10	40	1.9	0.6
150.0	D	T520D157M010A(1)E055	150	10	55	1.7	0.5
220.0	D	T520D227M010A(1)E018	220	10	18	2.9	0.9
220.0	D	T520D227M010A(1)E025	220	10	25	2.4	0.8
220.0	D	T520D227M010A(1)E040	220	10	40	1.9	0.6
330.0	Y	T520Y337M010A(1)015	330	10	15	3.3	1.0
330.0	X	T520X337M010A(1)E025	330	10	25	2.6	0.8
330.0	X	T520X337M010A(1)E040	330	10	40	2.0	0.6
16 Volt Rating @ 105°C							
33.0	V	T520V336M016A(1)E060	53	10	60	1.4	0.5
47.0	V	T520V476M016A(1)E070	76	10	70	1.3	0.4
47.0	D	T520D476M016A(1)E035	75	10	35	2.1	0.7
47.0	D	T520D476M016A(1)E070	75	10	70	1.5	0.5
20 Volt Rating @ 105°C							
22.0	V	T520V226M020A(1)E090	44	10	90	1.2	0.4
25 Volt Rating @ 105°C							
15.0	V	T520V156M025A(1)E090	38	10	90	1.2	0.4
15.0	D	T520D156M025A(1)E060	38	10	60	1.6	0.5
15.0	D	T520D156M025A(1)E080	38	10	80	1.4	0.4

(1) To complete the KEMET part number, insert the lead material designator as shown on page 46.