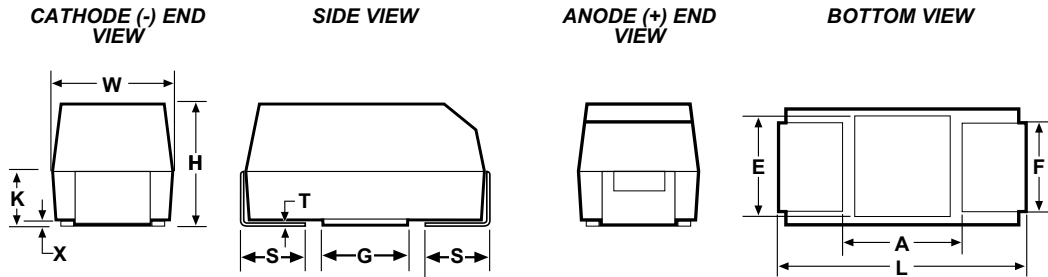


### FEATURES

- 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  $\leq 10$  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 $\mu$ 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](http://www.kemet.com) for lead transition)

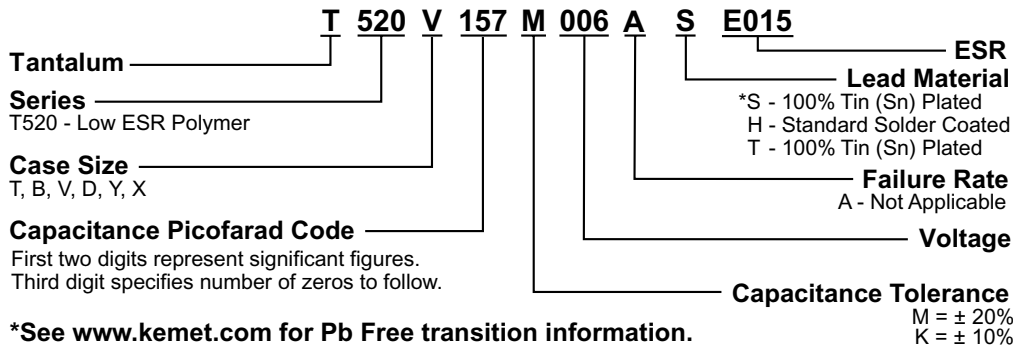
### OUTLINE DRAWING



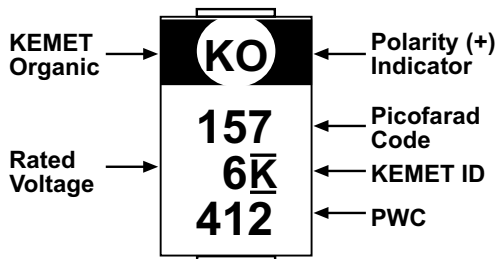
### DIMENSIONS - MILLIMETERS

Case Size		L	W	H	K $\pm 0.20$	F $\pm 0.1$	S $\pm 0.3$	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

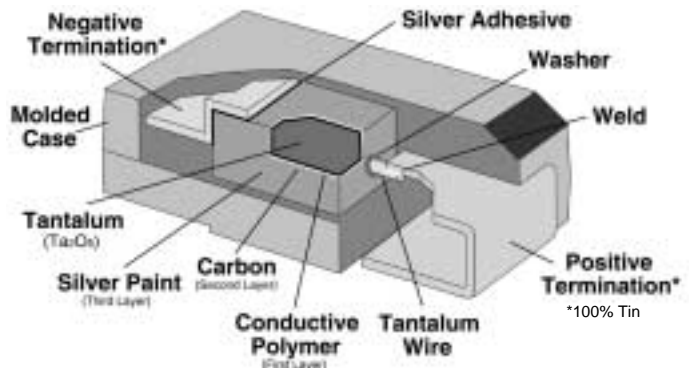


### COMPONENT MARKING



412 = 12th week of 2004

### T520 SERIES CONSTRUCTION



# POLYMER TANTALUM CHIP CAPACITORS

## T520 Series - KO Cap



### T520 RATINGS & PART NUMBER REFERENCE

Capacitance $\mu$ F	Case Size	KEMET Part Number	DC Leakage $\mu$ 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
<b>2 Volt Rating @ 105°C</b>							
470.0	V	T520V477M002A(1)E040	94	10	40	1.8	0.6
<b>2.5 Volt Rating @ 105°C</b>							
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
<b>3 Volt Rating @ 105°C</b>							
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
<b>4 Volt Rating @ 105°C</b>							
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 $\mu$ F	Case Size	KEMET Part Number	DC Leakage $\mu$ 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
<b>6.3 Volt Rating @ 105°C</b>							
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
<b>8 Volt Rating @ 105°C</b>							
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
<b>10 Volt Rating @ 105°C</b>							
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
<b>16 Volt Rating @ 105°C</b>							
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
<b>20 Volt Rating @ 105°C</b>							
22.0	V	T520V226M020A(1)E090	44	10	90	1.2	0.4
<b>25 Volt Rating @ 105°C</b>							
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.