

SOLID TANTALUM CHIP CAPACITORS

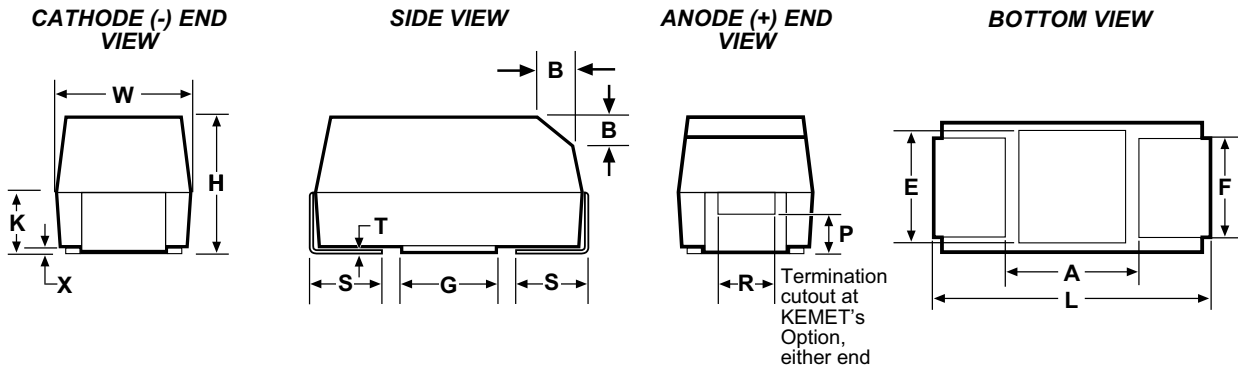
T495 SERIES—Low ESR, Surge Robust



FEATURES

- Designed for very low ESR
- High ripple current capability
- High surge current capability
- 100% accelerated steady-state aging
- 100% Surge Current test
- Meets or Exceeds EIA Standard 535BAAC
- Available tested per DSCC Dwg. 95158
- New Extended Values for Low ESR
- Low Equivalent Series Inductance (<2.5nH ESL)
- Precision-molded, laser-marked case
- Symmetrical, compliant terminations
- Taped and reeled per EIA 481-1
- RoHS Compliant & Leadfree Terminations (see www.kemet.com for lead transition)

OUTLINE DRAWING



STANDARD T495 DIMENSIONS

Millimeters (Inches)

CASE SIZE		COMPONENT													
KEMA	EIA	L	W	H	K ± 0.20 $\pm (.008)$	F ± 0.1 $\pm (.004)$	S ± 0.3 $\pm (.012)$	B ± 0.15 (Ref) $\pm (.006)$	X (Ref)	P (Ref)	R (Ref)	T (Ref)	A (Min)	G (Ref)	E (Ref)
B	3528-21	3.5 ± 0.2 (.138 $\pm .008$)	2.8 ± 0.2 (.110 $\pm .008$)	1.9 ± 0.2 (.075 $\pm .008$)	1.1 (.043)	2.2 (.087)	0.8 (.031)	0.4 (.016)	0.10 ± 0.10 (.004 $\pm .004$)	0.5 (.020)	1.0 (.039)	0.13 (.005)	1.1 (.043)	1.8 (.071)	2.2 (.087)
C	6032-28	6.0 ± 0.3 (.236 $\pm .012$)	3.2 ± 0.3 (.126 $\pm .012$)	2.5 ± 0.3 (.098 $\pm .012$)	1.4 (.055)	2.2 (.087)	1.3 (.051)	0.5 (.020)	0.10 ± 0.10 (.004 $\pm .004$)	0.9 (.035)	1.0 (.039)	0.13 (.005)	2.5 (.098)	2.8 (.110)	2.4 (.094)
D	7343-31	7.3 ± 0.3 (.287 $\pm .012$)	4.3 ± 0.3 (.169 $\pm .012$)	2.8 ± 0.3 (.110 $\pm .012$)	1.5 (.059)	2.4 (.094)	1.3 (.051)	0.5 (.020)	0.10 ± 0.10 (.004 $\pm .004$)	0.9 (.035)	1.0 (.039)	0.13 (.005)	3.8 (.150)	3.5 (.138)	3.5 (.138)
X	7343-43	7.3 ± 0.3 (.287 $\pm .012$)	4.3 ± 0.3 (.169 $\pm .012$)	4.0 ± 0.3 (.157 $\pm .012$)	2.3 (.091)	2.4 (.094)	1.3 (.051)	0.5 (.020)	0.10 ± 0.10 (.004 $\pm .004$)	1.7 (.067)	1.0 (.039)	0.13 (.005)	3.8 (.150)	3.5* (.138)	3.5* (.138)

Notes: 1. Metric dimensions govern.
2. (Ref) - Dimensions provided for reference only.
* Round Glue Pad; 2.9 ± 0.1 mm (0.114" ± 0.004 ") in diameter at KEMET's option.

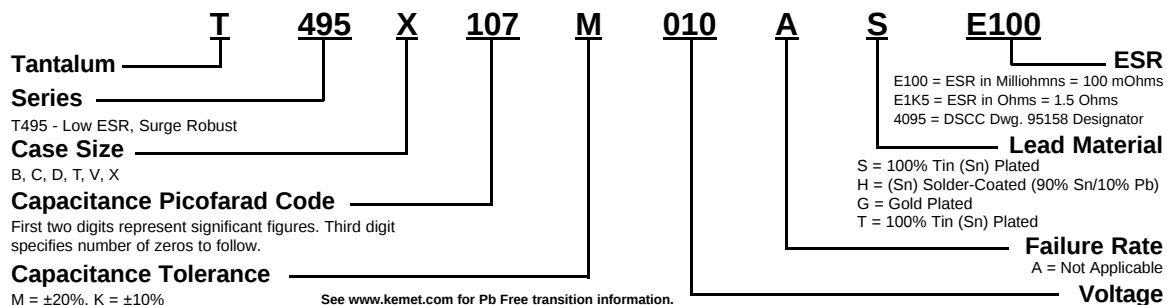
LOW PROFILE T495 DIMENSIONS

Millimeters (Inches)

CASE SIZE		COMPONENT										
KEMET	EIA	L	W	H Max.	K Min.	F ± 0.1	S ± 0.3	X (Ref)	T (Ref)	A (Min)	G (Ref)	E (Ref)
T	3528-12	3.5 ± 0.2 (.138 $\pm .008$)	2.8 ± 0.2 (.110 $\pm .008$)	1.2 (.047)	0.3 (.012)	2.2 (.087)	0.8 (.031)	0.05 (.002)	0.13 (.005)	1.1 (.043)	1.8 (.071)	2.2 (.087)
V	7343-20	7.3 ± 0.3 (.287 $\pm .012$)	4.3 ± 0.3 (.169 $\pm .012$)	2.0 (0.079)	0.9 (.035)	2.4 (.094)	1.3 (.051)	0.05 (.002)	0.13 (.005)	3.8 (.150)	3.5 (.138)	3.5 (.138)

Notes: 1. Metric dimensions govern.
2. (Ref) - Dimensions provided for reference only.
3. No dimensions provided for B, P or R because low profile cases do not have a bevel or a notch.

ORDERING INFORMATION





SOLID TANTALUM CHIP CAPACITORS

T495 SERIES—Low ESR, Surge Robust

T495 RATINGS & PART NUMBER REFERENCE

Capacitance μ F	Case Size	PREVIOUS KEMET Part Number	NEW KEMET Part Number	DSCC Dwg. No. 95158 Part Number	DC Leakage μ A @ 25°C Max	DF% @ 25°C 120 Hz Max	ESR mW @ 25°C 100 kHz Max	Ripple Current mA rms at 25°C, 100 kHz Max		
								25°C	85°C	125°C
4 Volt Rating @ +85°C (2.7 Volt Rating at +125°C)										
150.0	B	T495B157M004AS	T495B157M004A(2) E900		6.0	12.0	900	307	277	123
330.0	*C	T495C337(1)004AS	T495C337(1)004A(2) E700		13.2	12.0	700	396	357	159
1000.0	*X	T495X108(1)004AS	T495X108(1)004A(2) E070		40.0	12.0	70	1535	1381	614
6.3 Volt Rating @ +85°C (4 Volt Rating at +125°C)										
68.0	D	T495D686(1)006AS	T495D686(1)006A(2)E175		3.3	4.0	175	926	833	370
68.0	D	T495D686(1)006AS4095	T495D686(1)006A(2)4095	95158-01(1)(2)	3.3	4.0	175	926	833	370
100.0	*C	T495C107(1)006AS	T495C107(1)006A(2)E150		6.0	8.0	150	856	770	342
100.0	*V	T495V107(1)006AS	T495V107(1)006A(2)E150		6.0	8.0	150	913	822	365
100.0	*B	T495B107M006AS	T495B107M006A(2)E700		6.3	15.0	700	348	313	139
150.0	C	T495C157M006AS	T495C157M006A(2)E200		9.0	8.0	200	742	668	297
150.0	X	T495X157(1)006AS	T495X157(1)006A(2)E100		7.2	6.0	100	1285	1156	514
150.0	*X	T495X157(1)006AS4095	T495X157(1)006A(2)4095	95158-02(1)(2)	7.2	6.0	125	1150	1040	460
220.0	*C	T495C227(1)006AS	T495C227(1)006A(2)E225		13.9	10.0	225	700	600	300
220.0	*D	T495D227(1)006AS	T495D227(1)006A(2)E100		13.2	8.0	100	1225	1102	490
220.0	*D	T495D227(1)006AS4095	T495D227(1)006A(2)4095	95158-25(1)(2)	13.2	8.0	100	1225	1102	490
220.0	*X	T495X227(1)006AS	T495X227(1)006A(2)E100		13.2	8.0	100	1285	1156	514
220.0	*X	T495X227(1)006AS4095	T495X227(1)006A(2)4095	95158-03(1)(2)	13.2	8.0	100	1285	1156	514
330.0	*D	T495D337(1)006AS	T495D337(1)006A(2)E100		20.8	8.0	100	1225	1102	490
330.0	*X	T495X337(1)006AS	T495X337(1)006A(2)E100		19.8	8.0	100	1285	1156	514
330.0	*X	T495X337(1)006AS4823	T495X337(1)006A(2)E065		19.8	8.0	65	1593	1434	637
470.0	*D	T495D477(1)006AS	T495D477(1)006A(2)E125		29.6	12.0	125	1095	986	438
470.0	*X	T495X477(1)006AS	T495X477(1)006A(2)E065		28.2	10.0	65	1593	1434	637
470.0	*X	T495X477(1)006AS4823	T495X477(1)006A(2)E050		28.2	10.0	50	1816	1634	726
10 Volt Rating @ +85°C (7 Volt Rating at +125°C)										
22.0	C	T495C226(1)010AS	T495C226(1)010A(2)E345		2.2	6.0	345	565	508	226
47.0	D	T495D476(1)010AS	T495D476(1)010A(2)E200		3.8	4.0	200	866	780	346
47.0	D	T495D476(1)010AS4823	T495D476(1)010A(2)E080		3.8	4.0	80	1369	1232	548
47.0	D	T495D476(1)010AS4095	T495D476(1)010A(2)4095	95158-04(1)(2)	3.8	4.0	200	866	780	346
68.0	*B	T495B686M010AS	T495B686M010A(2)E900		6.8	10.0	900	307	276	123
68.0	*C	T495C686(1)010AS	T495C686(1)010A(2)E225		6.8	6.0	225	700	630	280
68.0	*V	T495V686(1)010AS	T495V686(1)010A(2)E140		6.8	6.0	140	945	850	378
68.0	D	T495D686(1)010AS	T495D686(1)010A(2)E150		6.8	6.0	150	1000	900	400
68.0	X	T495X686(1)010AS	T495X686(1)010A(2)E150		5.4	4.0	150	1049	944	420
68.0	X	T495X686(1)010AS4095	T495X686(1)010A(2)4095	95158-05(1)(2)	5.4	4.0	150	1049	944	420
100.0	*V	T495V107(1)010AS	T495V107(1)010A(2)E150		10.0	8.0	150	913	822	365
100.0	*D	T495D107(1)010AS	T495D107(1)010A(2)E100		10.0	8.0	100	1220	1100	490
100.0	*D	T495D107(1)010AS4095	T495D107(1)010A(2)4095	95158-06(1)(2)	10.0	8.0	100	1220	1100	490
100.0	*D	T495D107(1)010AS4823	T495D107(1)010A(2)E080		10.0	8.0	80	1369	1232	548
100.0	X	T495X107(1)010AS	T495X107(1)010A(2)E100		8.0	6.0	100	1285	1156	514
100.0	X	T495X107(1)010AS4095	T495X107(1)010A(2)4095	95158-07(1)(2)	8.0	6.0	100	1285	1156	514
150.0	V	T495V157M010AS	T495V157M010A(2)E150		15.0	8.0	150	913	822	365
150.0	*D	T495D157(1)010AS	T495D157(1)010A(2)E100		15.0	8.0	100	1225	1102	490
150.0	*D	T495D157(1)010AS4823	T495D157(1)010A(2)E080		15.0	8.0	80	1369	1232	548
150.0	*D	T495D157(1)010AS4095	T495D157(1)010A(2)4095	95158-26(1)(2)	15.0	8.0	100	1225	1102	490
150.0	*X	T495X157(1)010AS	T495X157(1)010A(2)E100		15.0	8.0	100	1285	1156	514
150.0	*X	T495X157(1)010AS4095	T495X157(1)010A(2)4095	95158-08(1)(2)	15.0	8.0	100	1285	1156	514
150.0	*X	T495X157(1)010AS4823	T495X157(1)010A(2)E085		15.0	8.0	85	1393	1254	557
220.0	*V	T495V227(1)010AS	T495V227(1)010A(2)E150		22.0	12.0	150	913	822	365
220.0	*D	T495D227(1)010AS	T495D227(1)010A(2)E125		22.0	8.0	125	1095	986	438
220.0	*X	T495X227(1)010AS	T495X227(1)010A(2)E100		22.0	8.0	100	1285	1156	514
220.0	*X	T495X227(1)010AS4095	T495X227(1)010A(2)4095	95158-28(1)(2)	15.0	8.0	100	1285	1156	514
220.0	*X	T495X227(1)010AS4823	T495X227(1)010A(2)E070		22.0	8.0	70	1535	1382	614
330.0	*D	T495D337(1)010AS	T495D337(1)010A(2)E125		33.0	10.0	125	1095	986	438
330.0	*X	T495X337(1)010AS	T495X337(1)010A(2)E060		33.0	10.0	60	1658	1492	663
16 Volt Rating @ +85°C (10 Volt Rating at +125°C)										
10.0	*T	T495T106M016AS	T495T106M016A(2)E4K0		1.6	8.0	4000	132	119	53
33.0	*C	T495C336(1)016AS	T495C336(1)016A(2)E275		5.3	6.0	275	632	569	253
33.0	*D	T495D336(1)016AS	T495D336(1)016A(2)E225		4.2	4.0	225	816	735	327
33.0	*D	T495D336(1)016AS4095	T495D336(1)016A(2)4095	95158-09(1)(2)	4.2	4.0	250	770	700	310
47.0	*D	T495D476(1)016AS	T495D476(1)016A(2)E150		7.5	6.0	150	1000	900	400
47.0	*D	T495D476(1)016AS4095	T495D476(1)016A(2)4095	95158-10(1)(2)	7.5	6.0	200	870	780	345
68.0	*V	T495V686(1)016AS	T495V686(1)016A(2)E300		10.9	6.0	300	645	581	258
68.0	*D	T495D686(1)016AS	T495D686(1)016A(2)E150		10.9	6.0	150	1000	900	400
100.0	*D	T495D107(1)016AS	T495D107(1)016A(2)E125		16.0	8.0	125	1095	986	438
100.0	*X	T495X107(1)016AS	T495X107(1)016A(2)E100		16.0	8.0	100	1285	1156	514
100.0	*X	T495X107(1)016AS4095	T495X107(1)016A(2)4095	95158-11(1)(2)	16.0	8.0	125	1149	1034	460
100.0	*X	T495X107(1)016AS4823	T495X107(1)016A(2)E080		16.0	8.0	80	1436	1293	574
150.0	*X	T495X157(1)016AS	T495X157(1)016A(2)E100		24.0	8.0	100	1285	1156	514

- (1) To complete KEMET Part Number, insert M for $\pm 20\%$ or K for $\pm 10\%$ tolerance.
(2) To complete KEMET Part Number, insert "B" for gold plated or "H" for solder plated termination finish. *Extended Values**6 Volt product equivalent to 6.3 volt product.

Note: Refer to T495 Ordering Information on page 31 for lead termination options.

Higher voltage ratings, lower ESR and tighter capacitance tolerance product may be substituted within the same size at KEMET's option. Voltage substitutions will be marked with the higher voltage rating.

SOLID TANTALUM CHIP CAPACITORS

T495 SERIES—Low ESR, Surge Robust



T495 RATINGS & PART NUMBER REFERENCE

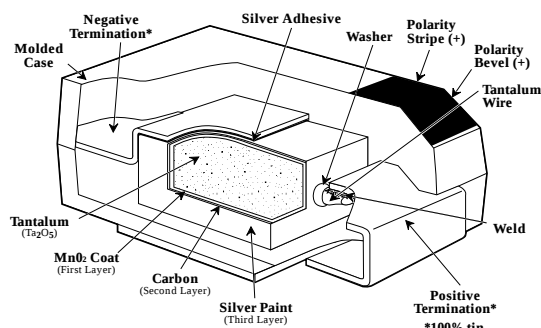
Capaci- tance μ F	Case Size	PREVIOUS KEMET Part Number	NEW KEMET Part Number	DSCC Dwg. No. 95158 Part Number	DC Leakage μ A @ 25°C Max	DF% @ 25°C 120 Hz Max	ESR mW @ 25°C 100 kHz Max	Ripple Current mA rms at 25°C, 100 kHz Max		
								25°C	85°C	125°C
20 Volt Rating @ +85°C (13 Volt Rating at +125°C)										
15.0	D	T495D156(1)020AS	T495D156(1)020A(2)E275	95158-12(1)(2)	2.4	4.0	275	738	665	295
15.0	D	T495D156(1)020AS4095	T495D156(1)020A(2)4095		2.4	4.0	275	738	665	295
22.0	D	T495D226(1)020AS	T495D226(1)020A(2)E225	95158-13(1)(2)	3.5	4.0	225	816	735	326
22.0	D	T495D226(1)020AS4095	T495D226(1)020A(2)4095		3.5	4.0	275	739	665	295
33.0	*D	T495D336(1)020AS	T495D336(1)020A(2)E200	95158-14(1)(2)	6.6	6.0	200	866	780	346
47.0	*D	T495D476(1)020AS	T495D476(1)020A(2)E175		9.4	6.0	175	926	833	370
47.0	X	T495X476(1)020AS	T495X476(1)020A(2)E150		7.5	4.0	150	1049	944	420
47.0	X	T495X476(1)020AS4095	T495X476(1)020A(2)4095		7.5	4.0	150	1049	944	420
68.0	*D	T495D686(1)020AS	T495D686(1)020A(2)E150	95158-15(1)(2)	13.6	8.0	150	1000	900	400
68.0	*X	T495X686(1)020AS	T495X686(1)020A(2)E150		13.6	6.0	150	1049	944	420
68.0	*X	T495X686(1)020AS4095	T495X686(1)020A(2)4095		13.6	6.0	150	1049	944	420
25 Volt Rating @ +85°C (17 Volt Rating at +125°C)										
6.8	C	T495C685(1)025AS	T495C685(1)025A(2)E500		1.7	6.0	500	469	422	188
10.0	*C	T495C106(1)025AS	T495C106(1)025A(2)E450		2.5	6.0	450	494	445	198
15.0	D	T495D156(1)025AS	T495D156(1)025A(2)E275	95158-16(1)(2)	3.8	6.0	275	738	665	295
15.0	D	T495D156(1)025AS4095	T495D156(1)025A(2)4095		3.8	6.0	275	738	665	295
15.0	X	T495X156(1)025AS	T495X156(1)025A(2)E200	95158-17(1)(2)	3.0	4.0	200	908	817	363
15.0	X	T495X156(1)025AS4095	T495X156(1)025A(2)4095		3.0	4.0	200	908	817	363
22.0	*D	T495D226(1)025AS	T495D226(1)025A(2)E200	95158-18(1)(2)	5.5	6.0	200	866	780	346
22.0	X	T495X226(1)025AS	T495X226(1)025A(2)E225		4.4	4.0	225	856	771	343
22.0	X	T495X226(1)025AS4095	T495X226(1)025A(2)4095		4.4	4.0	225	856	771	343
33.0	*D	T495D336(1)025AS	T495D336(1)025A(2)E300		8.3	6.0	300	707	636	283
33.0	X	T495X336(1)025AS	T495X336(1)025A(2)E175	95158-19(1)(2)	6.6	4.0	175	971	874	388
33.0	X	T495X336(1)025AS4095	T495X336(1)025A(2)4095		6.6	4.0	175	971	874	388
47.0	X	T495X476M025AS	T495X476M025A(2)E200		11.8	6.0	200	908	817	363
68.0	*X	T495X686(1)025AS	T495X686(1)025A(2)E200		17.0	8.0	200	908	817	363
35 Volt Rating @ +85°C (23 Volt Rating at +125°C)										
4.7	*C	T495C475(1)035AS	T495C475(1)035A(2)E600	95158-29(1)(2)	1.7	6.0	600	428	385	171
4.7	*C	T495C475(1)035AS4095	T495C475(1)035A(2)4095		1.7	6.0	600	428	385	171
6.8	*D	T495D685(1)035AS	T495D685(1)035A(2)E400	95158-20(1)(2)	2.4	6.0	400	612	551	245
6.8	X	T495X685(1)035AS	T495X685(1)035A(2)E300		1.9	4.0	300	742	667	297
6.8	X	T495X685(1)035AS4095	T495X685(1)035A(2)4095	95158-21(1)(2)	1.9	4.0	300	742	667	297
10.0	D	T495D106(1)035AS	T495D106(1)035A(2)E300		3.5	6.0	300	707	636	283
10.0	D	T495D106(1)035AS	T495D106(1)035A(2)4095	95158-27(1)(2)	3.5	4.0	300	707	636	283
10.0	X	T495X106(1)035AS	T495X106(1)035A(2)E250		2.8	4.0	250	812	731	325
10.0	X	T495X106(1)035AS4095	T495X106(1)035A(2)4095	95158-21(1)(2)	2.8	4.0	250	812	731	325
15.0	*D	T495D156(1)035AS	T495D156(1)035A(2)E300		5.3	6.0	300	707	636	283
15.0	*X	T495X156(1)035AS	T495X156(1)035A(2)E225	95158-22(1)(2)	5.3	6.0	225	856	771	343
15.0	*X	T495X156(1)035AS4095	T495X156(1)035A(2)4095		5.3	6.0	225	856	771	343
22.0	*D	T495D226(1)035AS	T495D226(1)035A(2)E300	95158-23(1)(2)	7.7	6.0	300	707	636	283
22.0	*X	T495X226(1)035AS	T495X226(1)035A(2)E275		7.7	6.0	275	775	697	410
22.0	*X	T495X226(1)035AS4095	T495X226(1)035A(2)4095		7.7	6.0	300	742	667	297
33.0	*X	T495X336(1)035AS	T495X336(1)035A(2)E250		11.6	6.0	250	812	731	325
47.0	*X	T495X476(1)035AS	T495X476(1)035A(2)E300		16.5	8.0	300	742	667	297
47.0	*X	T495X476(1)035AS4823	T495X476(1)035A(2)E200		16.5	8.0	200	908	817	363
50 Volt Rating @ +85°C (33 Volt Rating at +125°C)										
4.7	D	T495D475(1)050AS	T495D475(1)050A(2)E300	95158-24(1)(2)	2.4	6.0	300	707	636	283
4.7	X	T495X475(1)050AS	T495X475(1)050A(2)E300		1.9	4.0	300	742	667	297
4.7	X	T495X475(1)050AS4095	T495X475(1)050A(2)4095		1.9	4.0	300	742	667	297
6.8	*D	T495D685(1)050AS	T495D685(1)050A(2)E300		3.4	8.0	300	700	600	300
10.0	*X	T495X106(1)050AS	T495X106(1)050A(2)E300		5.0	6.0	300	741	667	297
15.0	*X	T495X156(1)050AS	T495X156(1)050A(2)E300		7.5	8.0	300	742	667	297

- (1) To complete KEMET Part Number, insert M for $\pm 20\%$ or K for $\pm 10\%$ tolerance.
 (2) To complete KEMET Part Number, insert "B" for gold plated or "H" for solder plated termination finish. *Extended Values**6 Volt product equivalent to 6.3 volt product.
Note: Refer to T495 Ordering Information on page 31 for lead termination options.

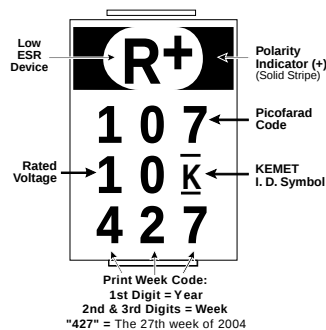
Higher voltage ratings, lower ESR and tighter capacitance tolerance product may be substituted within the same size at KEMET's option. Voltage substitutions will be marked with the higher voltage rating.

* Extended Values ** 6 Volt product equivalent to 6.3 volt product.

CONSTRUCTION



CAPACITOR MARKINGS



T495 TANTALUM CHIP CAPACITANCE VALUES

Case Size and Max. ESR (mΩ) by Capacitance & Voltage

Standard Capacitance Values

Capacitance		Rated Voltage @ +85°C							
μF	Code	4	6	10	16	20	25	35	50
4.7	475							C,600 D,400	X,300
6.8	685						C,500	X,300	
10.0	106							D,300 X,250	
15.0	156					D,275	D,275 X,200		
22.0	226			C,345		D,225 D,275	X,225		
33.0	336				D,250		X,175		
47.0	476			D,80 D,200		X,150			
68.0	686		D,175	D,150 X,150					
100.0	107			X,100					
150.0	157		X,100						
220.0	227								
330.0	337								

Extended Capacitance Values

Capacitance		Rated Voltage @ +85°C							
μF	Code	4	6	10	16	20	25	35	50
4.7	475								D,300
6.8	685							D,400	D,300
10.0	106				T,4000		C,450		X, 300
15.0	156							D,300 X,225	X,300
22.0	226						D,200	D,300 X,275 X,300	
33.0	336				D,225 C,275	D,200	D,300	X,250	
47.0	476				D,150 D,200	D,175	X,200	X,200 X,300	
68.0	686			B, 900 C, 225 V, 140	D,150 V,300	D,150 X,150	X,200		
100.0	107		B, 700 C, V 150	V, 150 D, 100 D, 80	D,125 X, 100 X, 80 X, 125				
150.0	157	B,900	C,200	D,100 X,100 X,85 V,150	X,100				
220.0	227		C, 225 D, 100 X, 100	D,125 X,100 X,70 V,150					
330.0	337	C,700	X, 100 X, 65 D, 100	X,60 D,125					
470.0	477		X, 65 X, 50 D, 125						
1000.0	108	X,70							

Note that standard values are preferred, especially where high surge currents are possible. Extended values are available to increase capacitance and reduce ESR. Note that standard CV values demonstrate inherently lower failure rates than extended CV values, especially in low impedance applications.