

# SOLID TANTALUM CHIP CAPACITORS

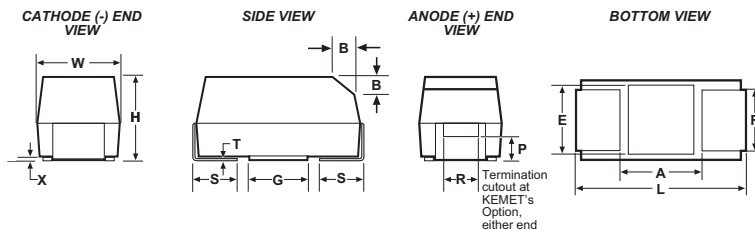
## T491 SERIES - Precision Molded Chip



### FEATURES

- Meets or Exceeds EIA Standard 535BAAC
- Taped and Reeled per EIA 481-1
- Symmetrical, Compliant Terminations
- Optional Gold-plated Terminations
- Laser-marked Case
- 100% Surge current test on C, D, E, U, V, X sizes
- Halogen Free Epoxy
- Capacitance: 0.1  $\mu$ F to 1000  $\mu$ F
- Tolerance:  $\pm 10\%$ ,  $\pm 20\%$
- Voltage: 2.5-50 VDC
- Extended Range Values
- Low Profile Case Sizes
- RoHS Compliance & Lead Free Terminations (See www.kemet.com for transition information)
- Operating Temperature: -55°C to +125°C

### CAPACITOR OUTLINE DRAWING



### STANDARD T491 DIMENSIONS

#### Millimeters (inches)

Case Size		Component												
KEMET	EIA	L*	W*	H*	F* $\pm 0.1 \pm (.004)$	S* $\pm 0.3 \pm (.012)$	B $\pm 0.15$ (Ref) $\pm .006$	X (Ref)	P (Ref)	R (Ref)	T (Ref)	A (Min)	G (Ref)	E (Ref)
A	3216-18	3.2 $\pm 0.2$ (.126 $\pm .008$ )	1.6 $\pm 0.2$ (.063 $\pm .008$ )	1.6 $\pm 0.2$ (.063 $\pm .008$ )	1.2 (.047)	0.8 (.031)	0.4 (.016)	0.10 $\pm 0.10$ (.004 $\pm .004$ )	0.4 (.016)	0.4 (.016)	0.13 (.005)	1.4 (.055)	1.1 (.043)	1.3 (.051)
B	3528-21	3.5 $\pm 0.2$ (.138 $\pm .008$ )	2.8 $\pm 0.2$ (.110 $\pm .008$ )	1.9 $\pm 0.2$ (.075 $\pm .008$ )	2.2 (.087)	0.8 (.031)	0.4 (.016)	0.10 $\pm 0.10$ (.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 $\pm 0.3$ (.236 $\pm .012$ )	3.2 $\pm 0.3$ (.126 $\pm .012$ )	2.5 $\pm 0.3$ (.098 $\pm .012$ )	2.2 (.087)	1.3 (.051)	0.5 (.020)	0.10 $\pm 0.10$ (.004 $\pm .004$ )	0.9 (.035)	1.0 (.039)	0.13 (.005)	3.1 (.122)	2.8 (.110)	2.4 (.094)
D	7343-31	7.3 $\pm 0.3$ (.287 $\pm .012$ )	4.3 $\pm 0.3$ (.169 $\pm .012$ )	2.8 $\pm 0.3$ (.110 $\pm .012$ )	2.4 (.094)	1.3 (.051)	0.5 (.020)	0.10 $\pm 0.10$ (.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 $\pm 0.3$ (.287 $\pm .012$ )	4.3 $\pm 0.3$ (.169 $\pm .012$ )	4.0 $\pm 0.3$ (.157 $\pm .012$ )	2.4 (.094)	1.3 (.051)	0.5 (.020)	0.10 $\pm 0.10$ (.004 $\pm .004$ )	1.7 (.067)	1.0 (.039)	0.13 (.005)	3.8 (.150)	3.5 (.138)	3.5 (.138)
E	7260-38	7.3 $\pm 0.3$ (.287 $\pm .012$ )	6.0 $\pm 0.3$ (.236 $\pm .012$ )	3.6 $\pm 0.2$ (.142 $\pm .008$ )	4.1 (.161)	1.3 (.051)	0.5 (.020)	0.10 $\pm 0.10$ (.004 $\pm .004$ )	0.9 (.035)	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  
 \* Mil-PRF-55365/8 Specified Dimensions

### LOW PROFILE T491 DIMENSIONS

#### Millimeters (inches)

Case Size		Component										
KEMET	EIA	L*	W*	H max	F* $\pm 0.1 \pm (.004)$	S* $\pm 0.3 \pm (.012)$	X (Ref)	T (Ref)	A (Min)	G (Ref)	E (Ref)	
R	2012-12	2.0 $\pm 0.2$ (.079 $\pm .008$ )	1.3 $\pm 0.2$ (.051 $\pm .008$ )	1.2 (.047)	0.9 (.035)	0.5 (.020)	0.05 (.002)	0.13 (.005)	0.8 (.031)	0.5 (.020)	0.8 (.031)	
S	3216-12	3.2 $\pm 0.2$ (.126 $\pm .008$ )	1.6 $\pm 0.2$ (.063 $\pm .008$ )	1.2 (.047)	1.2 (.047)	0.8 (.031)	0.05 (.002)	0.13 (.005)	1.4 (.055)	1.1 (.043)	1.3 (.051)	
T	3528-12	3.5 $\pm 0.2$ (.138 $\pm .008$ )	2.8 $\pm 0.2$ (.110 $\pm .008$ )	1.2 (.047)	2.2 (.087)	0.8 (.031)	0.05 (.002)	0.13 (.005)	1.1 (.043)	1.8 (.071)	2.2 (.087)	
U	6032-15	6.0 $\pm 0.3$ (.236 $\pm .012$ )	3.2 $\pm 0.3$ (.126 $\pm .012$ )	1.5 (.059)	2.2 (.087)	1.3 (.051)	0.05 (.002)	0.13 (.005)	3.1 (.122)	2.8 (.110)	2.4 (.094)	
V	7343-20	7.3 $\pm 0.3$ (.287 $\pm .012$ )	4.3 $\pm 0.3$ (.169 $\pm .012$ )	2.0 (.079)	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.

### T491 ORDERING INFORMATION

**T 491 S 685 K 004 A I**

Tantalum \_\_\_\_\_  
 Series \_\_\_\_\_  
 491 – Industrial  
 Case Size \_\_\_\_\_  
 A,B,C,D,E,R,S,T,U,V,X  
 Capacitance Picofarad Code \_\_\_\_\_  
 First two digits represent significant figures. Third digit specifies number of zeros.

\_\_\_\_\_ Lead Material  
 T = 100% Matte Tin (Sn) Plated\*  
 H = Standard Solder Coated (SnPb 5% Pb minimum)  
 G = Gold Plated (A,B,C,D,X only)

\_\_\_\_\_ Failure Rate  
 A = Not Applicable

\_\_\_\_\_ Voltage  
 As Shown

\_\_\_\_\_ Capacitance Tolerance  
 M =  $\pm 20\%$   
 K =  $\pm 10\%$

\*Part number example: T491B105M035AT (14 digits - no spaces). See www.kemet.com for Pb Free transition.  
 \*\* "S" Termination codes are converting from 90Sn/10 Pb to 100% tin finishes. Orders including "S" suffix termination codes do not guarantee Pb-free product.

Solid Tantalum Surface Mount



# SOLID TANTALUM CHIP CAPACITORS

T491 SERIES—Precision Molded Chip

## T491 TANTALUM CHIP CAPACITANCE VALUES Case Size by Capacitance and Voltage

Capacitance		Rated Voltage @ +85°C									
μF	Code	2.5	3	4	6	10	16	20	25	35	50
0.10	104									A	A
0.15	154									A	A/B
0.22	224									A	B
0.33	334								A	A	B
0.47	474								A	A/B	B/C
0.68	684							A	A	A/B	B/C
1.0	105						A	R/S/A	A/B	A/B	V/B/C
1.5	155					A	A	S/A	R/A/B	B/C	C/D
2.2	225				R/A	A/B	R/S/A	R/A/B	B/C	B/C	C/D
3.3	335			A	A	R/S/A	A/B	T/A/B	B/C	B/C	D
4.7	475			A	S/A	A/B R/S	A/B/T	A/B/C	A/B/C	B/C/D	D
6.8	685			S/A	R/S A/B	S/T A/B	A/B/C	U/A/B/C	B/C	C/D	D/X
10.0	106			R/S A/B	R/S/T A/B	S/T/A B/C	B/C/U T/A	U/B/C	B/C/D	V/C/D	D/X
15.0	156			S/T A/B	S/T A/B/C	T/U A/B/C	U/A/B/C	C/D	C/D	C/D/X	X
22.0	226			S/T A/B/C	U/T A/B/C	T/U A/B/C	U/B C/D	V/C/D	V/C/D	D/X	
33.0	336		A	T/U A/B/C	T/U A/B/C	U/V/A T/B/C/D	U/C/D	V/C/D	D/X	X	
47.0	476			T/U A/B/C	T/U/A B/C/D	U/V B/C/D	V/C/D	D	D/X	X/E	
68.0	686			U/A B/C/D	U/B C/D	U/V B/C/D	V/C/D	D/X	D/X		
100.0	107	T		T/U/A B/C/D	U/V B/C/D	V/C/D	V/D/X	D/X/E			
150.0	157			V/B C/D	V/C/D	V/C D/X	D/X				
220.0	227			V/B	V/C D/X	V/D/X	X				
330.0	337			V/C/D	D/X	D/X/E					
470.0	477			D/X	D/X/E	X/E					
680.0	687			D/X	E						
1000.0	108			X/E							

# SOLID TANTALUM CHIP CAPACITORS

T491 SERIES - Precision Molded Chip



## T491 RATINGS & PART NUMBER REFERENCE

Solid Tantalum Surface Mount

Capacitance µF	Case Size	KEMET Part Number	DC Leakage µA @ 25°C Max	DF % @ +25°C 120 Hz Max	ESR Ω @ +25°C 100 kHz Max
<b>2.5 Volt Rating at +85°C (1.7 Volt Rating at +125°C)</b>					
100.0	T	T491T107(1)2R5A(2)	2.5	24.0	3.9
220.0	D	T491D227(1)2R5A(2)	5.5	8.0	0.3
<b>3 Volt Rating at +85°C (2 Volt Rating at +125°C)</b>					
#33.0	A	T491S685(1)003A(2)	1.0	6.0	4.0
<b>4 Volt Rating at +85°C (2.7 Volt Rating at +125°C)</b>					
3.3	A	T491A335(1)004A(2)	0.5	6.0	8.0
4.7	A	T491A475(1)004A(2)	0.5	6.0	8.0
6.8	A	T491A685(1)004A(2)	0.5	6.0	6.0
6.8	S	T491S685(1)004A(2)	0.5	6.0	15.0
10.0	B	T491B106(1)004A(2)	0.5	6.0	3.5
10.0	A	T491A106(1)004A(2)	0.5	6.0	6.0
#10.0	S	T491S106(1)004A(2)	0.5	6.0	15.0
#10.0	R	T491R106(1)004A(2)	0.5	8.0	10.0
15.0	B	T491B156(1)004A(2)	0.6	6.0	3.5
15.0	A	T491A156(1)004A(2)	0.6	6.0	4.0
15.0	T	T491T156(1)004A(2)	0.6	6.0	5.0
#15.0	S	T491S156(1)004A(2)	0.6	10.0	15.0
22.0	C	T491C226(1)004A(2)	0.9	6.0	1.8
22.0	B	T491B226(1)004A(2)	0.9	6.0	3.5
#22.0	A	T491A226(1)004A(2)	0.9	6.0	4.0
#22.0	T	T491T226(1)004A(2)	0.9	6.0	5.0
22.0	S	T491S226(1)004A(2)	0.9	10.0	10.0
33.0	C	T491C336(1)004A(2)	1.3	6.0	1.8
33.0	U	T491U336(1)004A(2)	1.3	6.0	1.8
33.0	B	T491B336(1)004A(2)	1.3	6.0	3.5
#33.0	A	T491A336(1)004A(2)	1.3	6.0	4.0
#33.0	T	T491T336(1)004A(2)	1.3	8.0	5.0
47.0	C	T491C476(1)004A(2)	1.9	6.0	1.8
47.0	U	T491U476(1)004A(2)	1.9	6.0	1.8
#47.0	B	T491B476(1)004A(2)	1.9	6.0	3.0
#47.0	A	T491A476M004A(2)	1.9	12.0	2.5
#47.0	T	T491T476M004A(2)	1.9	12.0	6.0
68.0	D	T491D686(1)004A(2)	2.7	6.0	0.8
68.0	C	T491C686(1)004A(2)	2.7	6.0	1.6
#68.0	U	T491U686(1)004A(2)	2.7	6.0	1.8
#68.0	B	T491B686(1)004A(2)	2.7	6.0	3.5
#68.0	A	T491A686(1)004A(2)	2.8	30.0	4.0
100.0	D	T491D107(1)004A(2)	4.0	8.0	0.8
#100.0	C	T491C107(1)004A(2)	4.0	8.0	1.2
#100.0	U	T491U107(1)004A(2)	4.0	10.0	1.8
#100.0	B	T491B107M004A(2)	4.0	8.0	0.9
†100.0	A	T491A107M004A(2)	4.0	30.0	4.0
†100.0	T	T491T107M004A(2)	4.0	30.0	5.0
150.0	D	T491D157(1)004A(2)	6.0	8.0	0.8
150.0	V	T491V157(1)004A(2)	6.0	8.0	0.7
#150.0	C	T491C157(1)004A(2)	6.0	8.0	1.2
†150.0	B	T491B157M004A(2)	6.0	12.0	2.0
#220.0	V	T491V227(1)004A(2)	8.8	8.0	0.7
#220.0	B	T491B227M004A(2)	8.8	18.0	0.5
330.0	D	T491D337(1)004A(2)	13.2	8.0	0.7
†330.0	V	T491V337(1)004A(2)	13.2	12.0	0.7
#330.0	C	T491C337(1)004A(2)	13.2	10.0	0.9
#470.0	X	T491X477(1)004A(2)	18.8	8.0	0.5
#470.0	D	T491D477(1)004A(2)	18.8	8.0	0.8
#680.0	X	T491X687(1)004A(2)	27.2	12.0	0.5
#680.0	D	T491D687(1)004A(2)	27.2	12.0	0.5
#1000.0	X	T491X108(1)004A(2)	40.0	12.0	0.5
#1000.0	E	T491E108M004A(2)	40.0	15.0	0.2
<b>**6.3 Volt Rating at +85°C (4 Volt Rating at +125°C)</b>					
2.2	R	T491R225(1)006A(2)	0.5	6.0	25.0
2.2	A	T491A225(1)006A(2)	0.5	6.0	8.0
3.3	A	T491A335(1)006A(2)	0.5	6.0	8.0
4.7	A	T491A475(1)006A(2)	0.5	6.0	6.0
4.7	S	T491S475(1)006A(2)	0.5	6.0	15.0
6.8	B	T491B685(1)006A(2)	0.5	6.0	3.5
6.8	A	T491A685(1)006A(2)	0.5	6.0	6.0
#6.8	S	T491S685(1)006A(2)	0.5	6.0	15.0
#6.8	R	T491R685(1)006A(2)	0.5	8.0	15.0
10.0	B	T491B106(1)006A(2)	0.6	6.0	3.5
10.0	A	T491A106(1)006A(2)	0.6	6.0	4.0
10.0	T	T491T106(1)006A(2)	0.6	6.0	5.0
#10.0	S	T491S106(1)006A(2)	0.6	10.0	15.0
#10.0	R	T491R106(1)006A(2)	0.6	8.0	10.0

Capacitance µF	Case Size	KEMET Part Number	DC Leakage µA @ 25°C Max	DF % @ +25°C 120 Hz Max	ESR Ω @ +25°C 100 kHz Max
<b>**6 Volt Rating at +85°C (4 Volt Rating at +125°C)</b>					
15.0	C	T491C156(1)006A(2)	0.9	6.0	1.8
15.0	B	T491B156(1)006A(2)	0.9	6.0	3.5
#15.0	A	T491A156(1)006A(2)	0.9	6.0	3.5
#15.0	T	T491T156(1)006A(2)	0.9	6.0	5.0
#15.0	S	T491S156(1)006A(2)	0.9	15.0	10.0
22.0	C	T491C226(1)006A(2)	1.4	6.0	1.8
22.0	U	T491U226(1)006A(2)	1.4	6.0	1.8
22.0	B	T491B226(1)006A(2)	1.4	6.0	3.5
#22.0	A	T491A226(1)006A(2)	1.4	6.0	4.0
#22.0	T	T491T226(1)006A(2)	1.4	8.0	5.0
33.0	C	T491C336(1)006A(2)	2.0	6.0	1.8
33.0	U	T491U336(1)006A(2)	2.0	6.0	1.8
#33.0	B	T491B336(1)006A(2)	2.0	6.0	3.0
#33.0	A	T491A336(1)006A(2)	2.0	12.0	2.5
#33.0	T	T491T336(1)006A(2)	2.0	12.0	6.0
47.0	D	T491D476(1)006A(2)	2.9	6.0	0.8
47.0	C	T491C476(1)006A(2)	2.9	6.0	1.6
#47.0	U	T491U476(1)006A(2)	2.9	6.0	1.8
#47.0	B	T491B476(1)006A(2)	2.9	6.0	2.0
†47.0	A	T491A476M006A(2)	3.0	12.0	3.5
#47.0	T	T491T476(1)006A(2)	3.0	24.0	4.4
68.0	D	T491D686(1)006A(2)	4.1	6.0	0.8
#68.0	C	T491C686(1)006A(2)	4.1	6.0	1.2
#68.0	U	T491U686(1)006A(2)	4.1	10.0	1.8
#68.0	B	T491B686(1)006A(2)	4.1	8.0	0.9
#68.0	A	T491A686(1)006A(2)	5.0	30.0	4.0
100.0	D	T491D107(1)006A(2)	6.0	8.0	0.8
100.0	V	T491V107(1)006A(2)	6.0	8.0	0.7
#100.0	C	T491C107(1)006A(2)	6.0	8.0	0.9
#100.0	U	T491U107(1)006A(2)	6.0	10.0	1.8
#100.0	B	T491B107(1)006A(2)	6.3	15.0	3.0
150.0	D	T491D157(1)006A(2)	9.0	8.0	0.7
#150.0	C	T491C157(1)006A(2)	9.0	8.0	1.2
#150.0	V	T491V157(1)006A(2)	9.0	8.0	0.7
220.0	X	T491X227(1)006A(2)	13.2	8.0	0.7
#220.0	D	T491D227(1)006A(2)	13.2	8.0	0.7
#220.0	C	T491C227M006A(2)	13.2	10.0	1.2
#220.0	V	T491V227(1)006A(2)	13.2	12.0	0.7
330.0	X	T491X337(1)006A(2)	19.8	8.0	0.4
330.0	D	T491D337(1)006A(2)	19.8	8.0	0.4
330.0	E	T491E337(1)006A(2)	20.8	8.0	0.5
470.0	X	T491X477(1)006A(2)	28.2	10.0	0.4
470.0	D	T491D477M006A(2)	28.2	12.0	0.4
470.0	E	T491E477(1)006A(2)	29.6	10.0	0.4
680.0	E	T491E687M006A(2)	40.8	12.0	0.5
<b>10 Volt Rating at +85°C (7 Volt Rating at +125°C)</b>					
1.5	A	T491A155(1)010A(2)	0.5	6.0	8.0
2.2	B	T491B225(1)010A(2)	0.5	6.0	3.5
2.2	A	T491A225(1)010A(2)	0.5	6.0	8.0
3.3	A	T491A335(1)010A(2)	0.5	6.0	6.0
3.3	S	T491S335(1)010A(2)	0.5	6.0	15.0
#3.3	R	T491R335(1)010A(2)	0.3	8.0	15.0
4.7	B	T491B475(1)010A(2)	0.5	6.0	3.5
4.7	A	T491A475(1)010A(2)	0.5	6.0	5.0
#4.7	S	T491S475(1)010A(2)	0.5	6.0	15.0
#4.7	R	T491R475(1)010A(2)	0.5	8.0	10.0
6.8	B	T491B685(1)010A(2)	0.7	6.0	3.5
6.8	A	T491A685(1)010A(2)	0.7	6.0	4.0
6.8	T	T491T685(1)010A(2)	0.7	6.0	5.0
#6.8	S	T491S685(1)010A(2)	0.7	10.0	15.0
10.0	C	T491C106(1)010A(2)	1.0	6.0	1.8
10.0	B	T491B106(1)010A(2)	1.0	6.0	3.5
#10.0	A	T491A106(1)010A(2)	1.0	6.0	4.0
#10.0	T	T491T106(1)010A(2)	1.0	6.0	5.0
#10.0	S	T491S106(1)010A(2)	1.0	10.0	15.0
#10.0	R	T491R106(1)010A(2)	1.0	24.0	30.0
15.0	C	T491C156(1)010A(2)	1.5	6.0	1.8
15.0	U	T491U156(1)010A(2)	1.5	6.0	1.8
15.0	B	T491B156(1)010A(2)	1.5	6.0	2.8
#15.0	A	T491A156(1)010A(2)	1.5	8.0	6.0
#15.0	T	T491T156(1)010A(2)	1.5	8.0	5.0

(1) To complete KEMET Part Number, insert M for ±20% tolerance or K for ±10% tolerance.  
(2) To complete KEMET Part Number, insert T, H, G lead material designation as shown on page 15.  
\*Extended Values

\*\*6 Volt product equivalent to 6.3 volt product.  
#Maximum Capacitance Change @ 125°C=+15%.  
†Maximum Capacitance Change @ 125°C=+20%.

Higher voltage ratings and tighter 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

## T491 SERIES—Precision Molded Chip

### T491 RATINGS & PART NUMBER REFERENCE

Capacitance µF	Case Size	KEMET Part Number	DC Leakage µA @ 25°C Max	DF % @ +25°C 120 Hz Max	ESR Ω @ +25°C 100 kHz Max
10 Volt Rating at +85°C (7 Volt Rating at +125°C)					
22.0	C	T491C226(1)010A(2)	2.2	6.0	1.8
22.0	U	T491U226(1)010A(2)	2.2	6.0	1.8
#22.0	B	T491B226(1)010A(2)	2.2	6.0	2.4
#22.0	A	T491A226M010A(2)	2.2	10.0	6.0
#22.0	T	T491T226(1)010A(2)	2.2	12.0	8.0
33.0	D	T491D336(1)010A(2)	3.3	6.0	0.8
33.0	V	T491V336(1)010A(2)	3.3	6.0	0.7
33.0	C	T491C336(1)010A(2)	3.3	6.0	1.6
#33.0	U	T491U336(1)010A(2)	3.3	6.0	1.8
#33.0	B	T491B336(1)010A(2)	3.3	6.0	1.8
#33.0	T	T491T336(1)010A(2)	3.3	24.0	5.0
#33.0	A	T491A336(1)010A(2)	3.3	15.0	6.0
47.0	D	T491D476(1)010A(2)	4.7	6.0	0.8
47.0	V	T491V476(1)010A(2)	4.7	6.0	0.7
#47.0	C	T491C476(1)010A(2)	4.7	6.0	1.2
#47.0	U	T491U476(1)010A(2)	4.7	10.0	2.2
#47.0	B	T491B476(1)010A(2)	4.7	8.0	1.0
68.0	D	T491D686(1)010A(2)	6.8	6.0	0.8
68.0	V	T491V686(1)010A(2)	6.8	6.0	0.7
#68.0	C	T491C686(1)010A(2)	6.8	6.0	1.2
#68.0	U	T491U686(1)010A(2)	6.8	10.0	1.8
#68.0	B	T491B686M010A(2)	6.8	10.0	3.0
100.0	D	T491D107(1)010A(2)	10.0	8.0	0.7
#100.0	C	T491C107(1)010A(2)	10.0	8.0	1.2
#100.0	V	T491V107(1)010A(2)	10.0	8.0	0.7
150.0	X	T491X157(1)010A(2)	15.0	8.0	0.7
#150.0	D	T491D157(1)010A(2)	15.0	8.0	0.7
#150.0	C	T491C157(1)010A(2)	15.0	10.0	0.9
#150.0	V	T491V157(1)010A(2)	15.0	8.0	0.7
#220.0	X	T491X227(1)010A(2)	22.0	8.0	0.5
#220.0	D	T491D227(1)010A(2)	22.0	8.0	0.5
#220.0	V	T491V227(1)010A(2)	22.0	12.0	0.7
#330.0	D	T491D337M010A(2)	33.0	10.0	0.5
#330.0	X	T491X337(1)010A(2)	33.0	10.0	0.5
#330.0	E	T491E337(1)010A(2)	33.0	10.0	0.5
#470.0	X	T491X477M010A(2)	47.0	10.0	0.2
#470.0	E	T491E477M010A(2)	47.0	12.0	0.5
16 Volt Rating at +85°C (10 Volt Rating at +125°C)					
1.0	A	T491A105(1)020A(2)	0.5	4.0	10.0
1.5	A	T491A155(1)020A(2)	0.5	6.0	8.0
2.2	A	T491A225(1)020A(2)	0.5	6.0	6.0
2.2	S	T491S225(1)020A(2)	0.5	6.0	15.0
#2.2	R	T491R225(1)020A(2)	0.5	8.0	25.0
3.3	B	T491B335(1)020A(2)	0.5	6.0	3.5
3.3	A	T491A335(1)020A(2)	0.5	6.0	5.0
4.7	C	T491C475(1)020A(2)	0.75	6.0	2.4
4.7	B	T491B475(1)020A(2)	0.8	6.0	3.5
4.7	A	T491A475(1)020A(2)	0.8	6.0	4.0
4.7	T	T491T475(1)020A(2)	0.8	6.0	5.0
6.8	C	T491C685(1)020A(2)	1.1	6.0	1.9
6.8	B	T491B685(1)020A(2)	1.1	6.0	2.5
#6.8	A	T491A685(1)020A(2)	1.1	6.0	3.5
10.0	C	T491C106(1)020A(2)	1.6	6.0	1.8
10.0	U	T491U106(1)020A(2)	1.6	6.0	1.8
10.0	B	T491B106(1)020A(2)	1.6	6.0	2.8
#10.0	A	T491A106(1)020A(2)	1.6	8.0	7.0
#10.0	T	T491T106(1)020A(2)	1.6	8.0	8.0
15.0	C	T491C156(1)020A(2)	2.4	6.0	1.8
15.0	U	T491U156(1)020A(2)	2.4	6.0	1.8
15.0	B	T491B156(1)020A(2)	2.4	6.0	2.5
#15.0	A	T491A156(1)020A(2)	2.4	8.0	3.5
22.0	D	T491D226(1)020A(2)	3.6	6.0	0.8
22.0	C	T491C226(1)020A(2)	3.6	6.0	1.6
#22.0	U	T491U226(1)020A(2)	3.6	10.0	3.0
#22.0	B	T491B226(1)020A(2)	3.6	6.0	2.2
33.0	D	T491D336(1)020A(2)	5.3	6.0	0.8
#33.0	C	T491C336(1)020A(2)	5.3	6.0	1.2
#33.0	U	T491U336(1)020A(2)	5.3	12.0	3.0
47.0	D	T491D476(1)020A(2)	7.5	6.0	0.8
47.0	V	T491V476(1)020A(2)	7.5	6.0	0.7
#47.0	C	T491C476(1)020A(2)	7.5	6.0	1.2
68.0	V	T491V686(1)020A(2)	10.9	6.0	0.7
68.0	D	T491D686(1)020A(2)	10.9	6.0	0.7
68.0	C	T491C686(1)020A(2)	10.9	12.0	1.2

Capacitance µF	Case Size	KEMET Part Number	DC Leakage µA @ 25°C Max	DF % @ +25°C 120 Hz Max	ESR Ω @ +25°C 100 kHz Max
16 Volt Rating at +85°C (10 Volt Rating at +125°C)					
100.0	X	T491X107(1)016A(2)	16.0	8.0	0.7
+100.0	V	T491V107(1)016A(2)	16.0	12.0	0.7
#100.0	D	T491D107(1)016A(2)	16.0	8.0	0.7
#150.0	X	T491X157(1)016A(2)	24.0	8.0	0.5
#150.0	D	T491D157(1)016A(2)	24.0	12.0	0.7
#220.0	X	T491X227(1)016A(2)	35.2	10.0	0.5
#220.0	E	T491E227(1)016A(2)	35.2	7.2	0.9
20 Volt Rating at +85°C (13 Volt Rating at +125°C)					
0.47	R	T491R474(1)020A(2)	0.1	4.0	35.0
0.68	A	T491A684(1)020A(2)	0.5	4.0	12.0
1.0	A	T491A105(1)020A(2)	0.5	4.0	9.0
1.0	S	T491S105(1)020A(2)	0.5	6.0	18.0
#1.0	R	T491R105(1)020A(2)	0.5	6.0	20.0
1.5	A	T491A155(1)020A(2)	0.5	6.0	6.5
1.5	S	T491S155(1)020A(2)	0.5	6.0	15.0
2.2	B	T491B225(1)020A(2)	0.5	6.0	3.5
2.2	A	T491A225(1)020A(2)	0.5	0.6	7.0
2.2	R	T491R225(1)020A(2)	0.4	8.0	8.0
3.3	B	T491B335(1)020A(2)	0.7	6.0	3.0
#3.3	A	T491A335(1)020A(2)	0.7	6.0	4.5
3.3	T	T491T335(1)020A(2)	0.7	6.0	5.0
4.7	C	T491C475(1)020A(2)	1.0	6.0	2.4
4.7	B	T491B475(1)020A(2)	1.0	6.0	3.0
#4.7	A	T491A475(1)020A(2)	1.0	6.0	4.0
6.8	C	T491C685(1)020A(2)	1.4	6.0	1.9
6.8	U	T491U685(1)020A(2)	1.4	6.0	1.9
#6.8	B	T491B685(1)020A(2)	1.4	6.0	2.5
#6.8	A	T491A685M020A(2)	1.4	8.0	6.0
10.0	C	T491C106(1)020A(2)	2.0	6.0	1.8
10.0	U	T491U106(1)020A(2)	2.0	6.0	1.8
#10.0	B	T491B106(1)020A(2)	2.0	6.0	2.1
#10.0	A	T491A106M020A(2)	2.0	10.0	5.0
15.0	D	T491D156(1)020A(2)	3.0	6.0	1.0
15.0	C	T491C156(1)020A(2)	3.0	6.0	1.7
22.0	D	T491D226(1)020A(2)	4.4	6.0	0.8
22.0	V	T491V226(1)020A(2)	4.4	6.0	0.7
#22.0	C	T491C226(1)020A(2)	4.4	6.0	1.2
#22.0	B	T491B226(1)020A(2)	4.4	8.0	4.0
33.0	D	T491D336(1)020A(2)	6.6	6.0	0.8
#33.0	C	T491C336M020A(2)	6.6	6.0	1.2
+33.0	V	T491V336(1)020A(2)	6.6	8.0	0.7
47.0	C	T491C476M020A(2)	9.4	10.0	0.9
47.0	D	T491D476(1)020A(2)	9.4	6.0	0.7
68.0	X	T491X686(1)020A(2)	13.6	6.0	0.7
#68.0	D	T491D686(1)020A(2)	13.6	8.0	0.7
#100.0	X	T491X107(1)020A(2)	20.0	8.0	0.5
#100.0	E	T491E107(1)020A(2)	20.0	8.0	0.5
#150.0	X	T491X157(1)020A(2)	30.0	10.0	0.5
25 Volt Rating at +85°C (17 Volt Rating at +125°C)					
0.33	A	T491A334(1)025A(2)	0.5	4.0	15.0
0.47	A	T491A474(1)025A(2)	0.5	4.0	14.0
0.68	A	T491A684(1)025A(2)	0.5	4.0	10.0
1.0	B	T491B105(1)025A(2)	0.5	4.0	5.0
1.0	A	T491A105(1)025A(2)	0.5	4.0	8.0
1.0	S	T491S105(1)025A(2)	0.25	6.0	18.0
1.5	B	T491B155(1)025A(2)	0.5	6.0	5.0
1.5	A	T491A155(1)025A(2)	0.5	6.0	7.5
1.5	R	T491R155(1)025A(2)	0.4	8.0	8.0
2.2	C	T491C225(1)025A(2)	0.6	6.0	3.5
2.2	B	T491B225(1)025A(2)	0.6	6.0	4.5
3.3	C	T491C335(1)025A(2)	0.9	6.0	2.5
3.3	B	T491B335(1)025A(2)	0.9	6.0	3.5
4.7	C	T491C475(1)025A(2)	1.2	6.0	2.4
#4.7	B	T491B475(1)025A(2)	1.2	6.0	1.5
#4.7	A	T491A475M025A(2)	1.2	8.0	6.0
6.8	C	T491C685(1)025A(2)	1.7	6.0	1.9
6.8	B	T491B685(1)025A(2)	1.7	8.0	2.8
10.0	D	T491D106(1)025A(2)	2.5	6.0	1.0
10.0	C	T491C106(1)025A(2)	2.5	6.0	1.5
10.0	B	T491B106(1)025A(2)	2.5	8.0	3.0
15.0	D	T491D156(1)025A(2)	3.8	6.0	1.0
#15.0	C	T491C156(1)025A(2)	3.8	6.0	1.5
#15.0	B	T491B156(1)025A(2)	3.8	8.0	4.0
22.0	D	T491D226(1)025A(2)	5.5	6.0	0.8
22.0	C	T491C226(1)025A(2)	5.5	6.0	1.4
22.0	V	T491V226(1)025A(2)	5.5	6.0	0.7
33.0	X	T491X336(1)025A(2)	8.3	6.0	0.7
#33.0	D	T491D336(1)025A(2)	8.3	6.0	0.7
#33.0	C	T491C336(1)025A(2)	8.3	10.0	1.2
#47.0	X	T491X476(1)025A(2)	11.8	6.0	0.7
+47.0	D	T491D476(1)025A(2)	11.8	10.0	0.7
#68.0	X	T491X686M025A(2)	17.0	8.0	0.7
#68.0	D	T491D686M025A(2)	17.0	10.0	0.7
100.0	X	T491X107(1)025A(2)	25.0	8.0	0.3

(1) To complete KEMET Part Number, insert M for ±20% tolerance or K for ±10% tolerance.

(2) To complete KEMET Part Number, insert T, H, G lead material designation as shown on page 15.

\*Extended Values

\*\*6 Volt product equivalent to 6.3 volt product.

#Maximum Capacitance Change @ 125°C=+15%.

†Maximum Capacitance Change @ 125°C=+20%.

Higher voltage ratings and tighter 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

## T491 SERIES—Precision Molded Chip

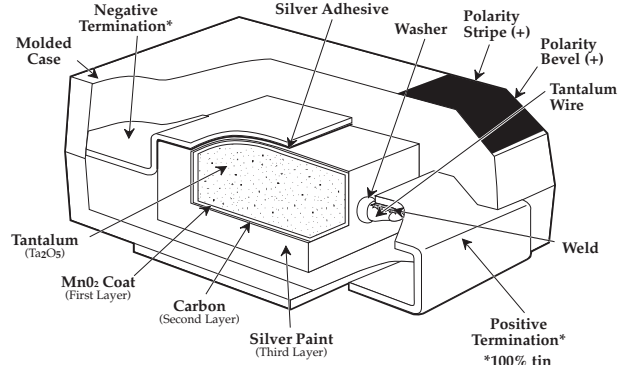


Solid Tantalum Surface Mount

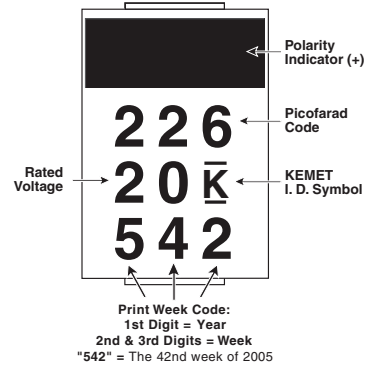
### T491 RATINGS & PART NUMBER REFERENCE

Capacitance μF	Case Size	KEMET Part Number	DC Leakage μA @ 25°C Max	DF % @ +25°C 120 Hz Max	ESR Ω @ +25°C 100 kHz Max
<b>35 Volt Rating at +85°C (23 Volt Rating at +125°C)</b>					
0.10	A	T491A104(1)035A(2)	0.5	4.0	20.0
0.15	A	T491A154(1)035A(2)	0.5	4.0	19.0
0.22	A	T491A224(1)035A(2)	0.5	4.0	18.0
0.33	A	T491A334(1)035A(2)	0.5	4.0	15.0
0.47	B	T491B474(1)035A(2)	0.5	4.0	8.0
0.47	A	T491A474(1)035A(2)	0.5	4.0	12.0
0.68	B	T491B684(1)035A(2)	0.5	4.0	6.5
0.68	A	T491A684(1)035A(2)	0.5	4.0	8.0
1.0	B	T491B105(1)035A(2)	0.5	4.0	5.0
1.0	A	T491A105(1)035A(2)	0.5	4.0	7.5
1.5	C	T491C155(1)035A(2)	0.5	6.0	4.5
1.5	B	T491B155(1)035A(2)	0.5	6.0	5.0
2.2	C	T491C225(1)035A(2)	0.8	6.0	3.5
2.2	B	T491B225(1)035A(2)	0.8	6.0	4.0
3.3	C	T491C335(1)035A(2)	1.2	6.0	2.5
3.3	B	T491B335(1)035A(2)	1.2	6.0	3.5
4.7	D	T491D475(1)035A(2)	1.7	6.0	1.5
4.7	C	T491C475(1)035A(2)	1.7	6.0	2.2
6.8	D	T491D685(1)035A(2)	2.4	6.0	1.3
6.8	C	T491C685(1)035A(2)	2.4	6.0	1.8
10.0	D	T491D106(1)035A(2)	3.5	6.0	1.0
#10.0	C	T491C106M035A(2)	3.5	6.0	1.6
#10.0	V	T491V106(1)035A(2)	3.5	6.0	2.0
15.0	X	T491X156(1)035A(2)	5.3	6.0	0.9
15.0	D	T491D156(1)035A(2)	5.3	6.0	0.8
22.0	X	T491X226(1)035A(2)	7.7	6.0	0.7
#22.0	D	T491D226(1)035A(2)	7.7	6.0	0.7
#33.0	X	T491X336(1)035A(2)	11.6	6.0	0.6
†47.0	X	T491X476(1)035A(2)	16.5	8.0	0.6
#47.0	E	T491E476(1)035A(2)	16.5	10.0	0.5
<b>50 Volt Rating at +85°C (33 Volt Rating at +125°C)</b>					
0.10	A	T491A104(1)050A(2)	0.5	4.0	20.0
0.15	B	T491B154(1)050A(2)	0.5	4.0	16.0
0.15	A	T491A154(1)050A(2)	0.5	4.0	15.0
0.22	B	T491B224(1)050A(2)	0.5	4.0	14.0
0.33	B	T491B334(1)050A(2)	0.5	4.0	10.0
0.47	C	T491C474(1)050A(2)	0.5	4.0	8.0
0.47	B	T491B474(1)050A(2)	0.5	4.0	9.0
0.68	C	T491C684(1)050A(2)	0.5	4.0	7.0
0.68	B	T491B684(1)050A(2)	0.5	4.0	8.0
1.0	C	T491C105(1)050A(2)	0.5	4.0	5.5
1.0	B	T491B105(1)050A(2)	0.5	6.0	6.0
1.0	V	T491V105(1)050A(2)	0.5	4.0	6.0
1.5	D	T491D155(1)050A(2)	0.8	6.0	3.5
1.5	C	T491C155(1)050A(2)	0.8	6.0	4.5
2.2	D	T491D225(1)050A(2)	1.1	6.0	2.5
2.2	C	T491C225(1)050A(2)	1.1	6.0	3.0
3.3	D	T491D335(1)050A(2)	1.7	6.0	2.0
4.7	D	T491D475(1)050A(2)	2.4	6.0	1.4
6.8	X	T491X685(1)050A(2)	3.5	6.0	1.0
#6.8	D	T491D685(1)050A(2)	3.4	6.0	1.0
#10.0	X	T491X106M050A(2)	5.0	6.0	0.7
#10.0	D	T491D106(1)050A(2)	5.0	6.0	0.8
†15.0	X	T491X156(1)050A(2)	7.5	8.0	0.7
22.0	X	T491X226(1)050A(2)	11.0	10.0	0.6

### CONSTRUCTION



### CAPACITOR MARKINGS

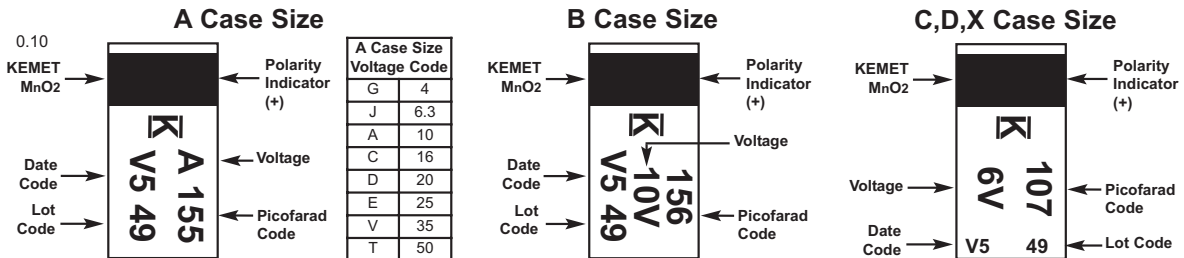


(1) To complete KEMET Part Number, insert M for ±20% tolerance or K for ±10% tolerance.  
 (2) To complete KEMET Part Number, insert T, H, G lead material designation as shown on page 15.  
 \*Extended Values

\*\*6 Volt product equivalent to 6.3 volt product.  
 #Maximum Capacitance Change @ 125°C=+15%.  
 †Maximum Capacitance Change @ 125°C=+20%.

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

### CAPACITOR ALTERNATE MARKINGS



Date Code - Year		Date Code - Month			
S = 2004	V = 2007	1 = January	4 = April	7 = July	10 = October
T = 2005	W = 2008	2 = February	5 = May	8 = August	11 = November
U = 2006	X = 2009	3 = March	6 = June	9 = September	12 = December