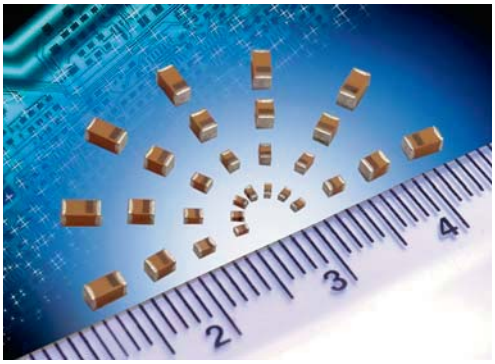
TACmicrochip®

Standard Microchip

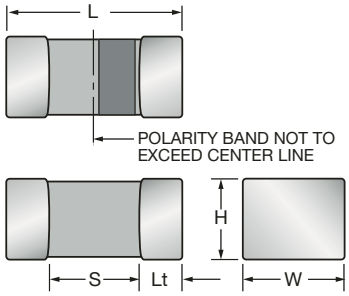


- The world's smallest surface mount tantalum capacitor
- CV range: 0.10-150µF / 2-25V
- 5 case sizes available
- Low profile options available
- Industrial and hi-rel medical applications

LEAD-FREE

LEAD-FREE COMPATIBLE COMPONENT

RoHS COMPLIANT



CASE DIMENSIONS: millimeters (inches)

Code	EIA Code	EIA Metric	L+0.20 (0.008) -0.00 (0.000)	W+0.15 (0.006) -0.00 (0.000)	H+0.15 (0.006) -0.00 (0.000)	Termination Spacing(S)	Minimum Termination Length (Lt)
A	1206	3216-18	3.20 ± 0.20 (0.126 ± 0.008)	1.60 ± 0.20 (0.06 ± 0.008)	1.60 ± 0.20 (0.063 ± 0.008)	1.80 (0.071) min	0.15 (0.006)
B	1210	3528-15	3.50 ± 0.20 (0.138 ± 0.008)	2.80 +0.20 -0.10 (0.110 +0.008 -0.004)	1.50 (0.059) max	2.00 (0.079) min	0.15 (0.006)
K	0402	1005-07	1.00 (0.039)	0.50 +0.20 -0.00 (0.020 +0.008 -0.000)	0.50 +0.20 -0.00 (0.020 +0.008 -0.000)	0.40 (0.016) min	0.10 (0.004)
L	0603	1608-10	1.60 (0.063)	0.85 (0.033)	0.85 (0.033)	0.55 (0.022) min	0.15 (0.006)
R	0805	2012-15	2.00 (0.079)	1.35 (0.053)	1.35 (0.053)	0.70 (0.027) min	0.15 (0.006)

HOW TO ORDER

TAC — **Type**: TACmicrochip®

L — **Case Size**: See table above

226 — **Capacitance Code**: pF code: 1st two digits represent significant figures, 3rd digit represents multiplier (number of zeros to follow)

M — **Tolerance**: K=±10%, M=±20%

004 — **Rated DC Voltage**: 002=2Vdc, 003=3Vdc, 004=4Vdc, 006=6.3Vdc, 010=10Vdc, 016=16Vdc, 020=20Vdc, 025=25Vdc, 035=35Vdc, 050=50Vdc

R — **Packaging**: R, P = 7" Standard Tin Termination Plastic Tape; X, Q = 4¼" Standard Tin Termination Plastic Tape; A = 7" Gold Termination Plastic Tape; F = 4¼" Gold Termination Plastic Tape

TA — **Alternative characters may be used for special requirements**

TECHNICAL SPECIFICATIONS

Technical Data:	All technical data relate to an ambient temperature of +25°C										
Capacitance Range:	0.10 µF to 150 µF										
Capacitance Tolerance:	±10%; ±20%										
Leakage Current DCL:	0.01CV or 0.5µA whichever is the greater										
Rated Voltage (V_R)	≤ +85°C:	2	3	4	6.3	10	16	20	25	35	50
Category Voltage (V_C)	≤ +125°C:	1.3	2	2.7	4	7	10	13	17	23	33
Surge Voltage (V_S)	≤ +85°C:	2.7	3.9	5.2	8	13	20	26	32	46	65
Surge Voltage (V_S)	≤ +125°C:	1.7	2.6	3.2	5	8	12	16	20	28	40
Temperature Range:	-55°C to +125°C										
Reliability:	1% per 1000 hours at 85°C, V_R with 0.1Ω/V series impedance, 60% confidence level										
Termination Finish:	Nickel and Tin Plating (standard), Nickel and Gold Plating option available upon request										

STANDARD COMMERCIAL RANGE (EIA SIZES) (LETTER DENOTES CASE SIZE)

Capacitance		Voltage Rating DC (V_R) at 85°C									
µF	Code	2.0V	3.0V	4.0V	6.3V	10V	16V	20V	25V	35V	50V
0.10 0.15 0.22	104 154 224					 K(M) K(M)	K(M) K(M) K(M)	K* K(M)		L* L*	
0.33 0.47 0.68	334 474 684					K(M) K(M)/L K(M)/L	K(M) L L				
1.0 1.5 2.2	105 155 225		 K(M)/L	 L L	K/L L K(M)/L	K/L L L	L L		R		A*
3.3 4.7 6.8	335 475 685	K(M)/L K(M)/L K(M)/L	K(M)/L K(M)/L L	L L L	L L L/R	L/R L/R L/R	R*	R(M) R(M)	 A*		
10 15 22	106 156 226	K(M)/L R	L R L(M)/R	L/R L(M)/R L(M)/R	L(M)/R L(M)/R R	L/R R R	R				
33 47 68	336 476 686	R R R(M)	R R R(M)	R R A(M)	R A/R(M) A(M)*	A(M)/B*/R(M) B					
100 150 220	107 157 227	 A(M)	A(M)/R(M)	A(M)/R(M)	A(M)						

ESR limits quoted in brackets (Ohms)

Released codes (M tolerance only)

Engineering samples - please contact manufacturer

*Codes under development - subject to change.

Standard Height Profile: A, B, K, L, R Case
Low Profile: H, J, T, U, V Case

Note: Voltage ratings are minimum values. AVX reserves the right to supply higher ratings in the same case size, to the same reliability standards.

TACmicrochip®

Standard Microchip

RATINGS & PART NUMBER REFERENCE

AVX Part No.	EIA Code	EIA Metric	Case Size	Cap (µF)	Rated Voltage (V)	DCL (µA) Max.	DF % Max.	ESR Max. (Ω) @100kHz	MSL
2 Volt @ 85°C (1.3 Volt @ 125°C)									
TACK335M002#TA	0402	1005-07	K	3.3	2	0.5	8	15	1
TACL335*002#TA	0603	1608-10	L	3.3	2	0.5	6	7.5	1
TACK475M002#TA	0402	1005-07	K	4.7	2	0.5	12	15	1
TACL475*002#TA	0603	1608-10	L	4.7	2	0.5	6	7.5	1
TACK685M002#TA	0402	1005-07	K	6.8	2	0.5	20	15	1
TACL685*002#TA	0603	1608-10	L	6.8	2	0.5	6	7.5	1
TACK106M002#TA	0402	1005-07	K	10	2	0.5	15	15	1
TACL106*002#TA	0603	1608-10	L	10	2	0.5	10	7.5	1
TACR226*002#TA	0805	2012-15	R	22	2	0.5	8	5	1
TACR336*002#TA	0805	2012-15	R	33	2	0.7	10	5	1
TACR476*002#TA	0805	2012-15	R	47	2	0.9	10	5	1
TACR686M002#TA	0805	2012-15	R	68	2	1.4	14	5	1
TACA157M002#TA	1206	3216-18	A	150	2	3	20	1	1
3 Volt @ 85°C (2 Volt @ 125°C)									
TACK225M003#TA	0402	1005-07	K	2.2	3	0.5	6	15	1
TACL225*003#TA	0603	1608-10	L	2.2	3	0.5	6	7.5	1
TACK335M003#TA	0402	1005-07	K	3.3	3	0.5	8	15	1
TACL335*003#TA	0603	1608-10	L	3.3	3	0.5	6	7.5	1
TACK475M003#TA	0402	1005-07	K	4.7	3	0.5	12	15	1
TACL475*003#TA	0603	1608-10	L	4.7	3	0.5	6	7.5	1
TACL685*003#TA	0603	1608-10	L	6.8	3	0.5	6	7.5	1
TACL106*003#TA	0603	1608-10	L	10	3	0.5	10	7.5	1
TACR156*003#TA	0805	2012-15	R	15	3	0.5	8	5	1
TACL226M003#TA	0603	1608-10	L	22	3	0.7	20	7.5	1
TACR226*003#TA	0805	2012-15	R	22	3	0.7	8	5	1
TACR336*003#TA	0805	2012-15	R	33	3	1	10	5	1
TACR476*003#TA	0805	2012-15	R	47	3	1.5	10	5	1
TACR686M003#TA	0805	2012-15	R	68	3	2	14	5	1
TACA107M003#TA	1206	3216-18	A	100	3	3	15	1	1
TACR107M003#TA	0805	2012-15	R	100	3	3	30	5	1
4 Volt @ 85°C (2.7 Volt @ 125°C)									
TACL155*004#TA	0603	1608-10	L	1.5	4	0.5	6	7.5	1
TACL225*004#TA	0603	1608-10	L	2.2	4	0.5	6	7.5	1
TACL335*004#TA	0603	1608-10	L	3.3	4	0.5	6	7.5	1
TACL475*004#TA	0603	1608-10	L	4.7	4	0.5	6	7.5	1
TACL685*004#TA	0603	1608-10	L	6.8	4	0.5	8	7.5	1
TACL106*004#TA	0603	1608-10	L	10	4	0.5	10	7.5	1
TACR106*004#TA	0805	2012-15	R	10	4	0.5	8	5	1
TACL156M004#TA	0603	1608-10	L	15	4	0.6	20	7.5	1
TACR156*004#TA	0805	2012-15	R	15	4	0.6	8	5	1
TACL226M004#TA	0603	1608-10	L	22	4	0.9	20	7.5	1
TACR226*004#TA	0805	2012-15	R	22	4	0.9	8	5	1
TACR336*004#TA	0805	2012-15	R	33	4	1.3	10	5	1
TACR476*004#TA	0805	2012-15	R	47	4	1.9	14	5	1
TACA686M004#TA	1206	3216-18	A	68	4	2.7	15	1	1
TACA107M004#TA	1206	3216-18	A	100	4	4	20	1	1
TACR107M004#TA	0805	2012-15	R	100	4	4	30	5	1
6.3 Volt @ 85°C (4 Volt @ 125°C)									
TACK105*006#TA	0402	1005-07	K	1	6.3	0.5	6	15	1
TACL105*006#TA	0603	1608-10	L	1	6.3	0.5	6	7.5	1
TACL155*006#TA	0603	1608-10	L	1.5	6.3	0.5	6	7.5	1
TACK225M006#TA	0402	1005-07	K	2.2	6.3	0.5	8	15	1
TACL225*006#TA	0603	1608-10	L	2.2	6.3	0.5	6	7.5	1
TACL335*006#TA	0603	1608-10	L	3.3	6.3	0.5	6	7.5	1
TACL475*006#TA	0603	1608-10	L	4.7	6.3	0.5	8	7.5	1
TACL685*006#TA	0603	1608-10	L	6.8	6.3	0.5	10	7.5	1
TACR685*006#TA	0805	2012-15	R	6.8	6.3	0.5	8	5	1

AVX Part No.	EIA Code	EIA Metric	Case Size	Cap (µF)	Rated Voltage (V)	DCL (µA) Max.	DF % Max.	ESR Max. (Ω) @100kHz	MSL
TACL106M006#TA	0603	1608-10	L	10	6.3	0.6	10	6	1
TACR106*006#TA	0805	2012-15	R	10	6.3	0.6	8	5	1
TACL156M006#TA	0603	1608-10	L	15	6.3	0.9	20	7.5	1
TACR156*006#TA	0805	2012-15	R	15	6.3	0.9	8	5	1
TACR226*006#TA	0805	2012-15	R	22	6.3	1.4	10	5	1
TACR336*006#TA	0805	2012-15	R	33	6.3	2.1	12	5	1
TACA476*006#TA	1206	3216-18	A	47	6.3	3	15	1	1
TACR476M006#TA	0805	2012-15	R	47	6.3	3	20	5	1
TACA686M006#TA	1206	3216-18	A	68	6.3	4.3	15	1	1
TACA107M006#TA	1206	3216-18	A	100	6.3	6.3	20	1	1
10 Volt @ 85°C (7 Volt @ 125°C)									
TACK154M010#TA	0402	1005-07	K	0.15	10	0.5	6	40	1
TACK224M010#TA	0402	1005-07	K	0.22	10	0.5	6	30	1
TACK334M010#TA	0402	1005-07	K	0.33	10	0.5	6	20	1
TACK474M010#TA	0402	1005-07	K	0.47	10	0.5	6	15	1
TACL474*010#TA	0603	1608-10	L	0.47	10	0.5	6	7.5	1
TACK684M010#TA	0402	1005-07	K	0.68	10	0.5	8	15	1
TACL684*010#TA	0603	1608-10	L	0.68	10	0.5	6	7.5	1
TACK105*010#TA	0402	1005-07	K	1	10	0.5	6	15	1
TACL105*010#TA	0603	1608-10	L	1	10	0.5	6	7.5	1
TACL155*010#TA	0603	1608-10	L	1.5	10	0.5	6	7.5	1
TACL225*010#TA	0603	1608-10	L	2.2	10	0.5	6	7.5	1
TACL335*010#TA	0603	1608-10	L	3.3	10	0.5	8	7.5	1
TACR335*010#TA	0805	2012-15	R	3.3	10	0.5	8	5	1
TACL475*010#TA	0603	1608-10	L	4.7	10	0.5	10	6	1
TACR475*010#TA	0805	2012-15	R	4.7	10	0.5	8	6	1
TACL685*010#TA	0603	1608-10	L	6.8	10	0.7	20	7.5	1
TACR685*010#TA	0805	2012-15	R	6.8	10	0.7	8	5	1
TACL106*010#TA	0603	1608-10	L	10	10	1	20	7.5	1
TACR106*010#TA	0805	2012-15	R	10	10	1	8	5	1
TACR156*010#TA	0805	2012-15	R	15	10	1.5	10	5	1
TACR226*010#TA	0805	2012-15	R	22	10	2.2	14	5	1
TACA336M010#TA	1206	3216-18	A	33	10	3.3	12	1	1
TACB336*010#TA	1210	3528-15	B	33	10	3.3	15	1	1
TACR336M010#TA	0805	2012-15	R	33	10	3.3	20	5	1
TACB476*010#TA	1210	3528-15	B	47	10	4.7	15	1	1
16 Volt @ 85°C (10 Volt @ 125°C)									
TACK104M016#TA	0402	1005-07	K	0.1	16	0.5	6	40	1
TACK154M016#TA	0402	1005-07	K	0.15	16	0.5	6	30	1
TACK224M016#TA	0402	1005-07	K	0.22	16	0.5	6	20	1
TACK334M016#TA	0402	1005-07	K	0.33	16	0.5	6	20	1
TACL474*016#TA	0603	1608-10	L	0.47	16	0.5	6	7.5	1
TACL684*016#TA	0603	1608-10	L	0.68	16	0.5	6	7.5	1
TACL105*016#TA	0603	1608-10	L	1	16	0.5	6	7.5	1
TACL225*016#TA	0603	1608-10	L	2.2	16	0.5	10	7.5	1
TACR335*016#TA	0805	2012-15	R	3.3	16	0.5	8	5	1
TACR106*016#TA	0805	2012-15	R	10	16	1.6	10	5	1
20 Volt @ 85°C (13 Volt @ 125°C)									
TACK104*020#TA	0402	1005-07	K	0.10	20	0.5	6	40	1
TACK224M020#TA	0402	1005-07	K	0.22	20	0.5	6	20	1
TACR335M020#TA	0805	2012-15	R	3.3	20	0.7	8	5	1
TACR475M020#TA	0805	2012-15	R	4.7	20	0.9	8	5	1
25 Volt @ 85°C (17 Volt @ 125°C)									
TACR105*025#TA	0805	2012-15	R	1	25	0.5	8	5	1
TACA475*025#TA	1206	3216-18	A	4.7	25	1.2	8	1	1
50 Volt @ 85°C (33 Volt @ 125°C)									
TACA105*050#TA	1206	3216-18	A	1.0	50	0.5	6	1	1

Moisture Sensitivity Level (MSL) is defined according to J-STD-020.

All technical data relates to an ambient temperature of +25°C. Capacitance and DF are measured at 120Hz, 0.5V RMS with a maximum DC bias of 2.2 volts. DCL is measured at rated voltage after 5 minutes.

For typical weight and composition see page 144.

NOTE: AVX reserves the right to supply a higher voltage rating or tighter tolerance part in the same case size, to the same reliability standards.