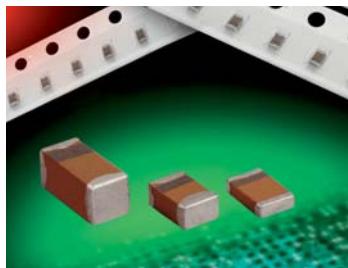
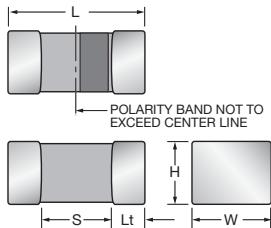


Low Profile



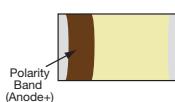
FEATURES

- The world's smallest surface mount tantalum capacitor
- CV range: 1.0-100 μ F / 2-16V
- 5 case sizes available in low profile option
- Industrial and hi-rel medical applications



MARKING

H, J, T, U, V CASE



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 max	Termination Spacing(S)	Minimum Termination Length (Lt)
H	0805	2012-10	2.00 (0.079)	1.35 (0.053)	1.00 (0.039)	0.70 (0.028) min	0.15 (0.006)
J	0603	1608-08	1.60 (0.063)	0.85 (0.033)	0.75 (0.030)	0.55 (0.022) min	0.15 (0.006)
T	1210	3528-12	3.50 ± 0.20 (0.138 ± 0.008)	2.80 ^{+0.20} _{-0.10} (0.110 ^{+0.008} _{-0.004})	1.20 (0.047)	2.00 (0.079) min	0.15 (0.006)
U	0805	2012-06	2.00 (0.079)	1.35 (0.053)	0.60 (0.024)	0.70 (0.028) min	0.15 (0.006)
V	1206	3216-08	3.20 ± 0.20 (0.126 ± 0.008)	1.60 ± 0.20 (0.063 ± 0.008)	0.75 (0.030)	1.80 (0.071) min	0.15 (0.006)

HOW TO ORDER

TAC

Type
TACmicrochip®

U

Case Size
See table
above

475

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

Tolerance
K=±10%
M=±20%

004

Rated DC Voltage
002=2Vdc
003=3Vdc
004=4Vdc
006=6.3Vdc
010=10Vdc
016=16Vdc

R

Packaging
R = 7" Standard Tin
Termination Plastic Tape
X = 4½" Standard Tin
Termination Plastic Tape
A = 7" Gold Termination
Plastic Tape
F = 4½" 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:

0.1 μ F to 100 μ F

Capacitance Tolerance:

±10%; ±20%

Leakage Current DCL:

0.01CV or 0.5 μ A whichever is the greater

Rated Voltage (V_R)

$\leq +85^\circ\text{C}$: 2 3 4 6.3 10 16

Category Voltage (V_C)

$\leq +125^\circ\text{C}$: 1.3 2 2.7 4 7 10

Surge Voltage (V_S)

$\leq +85^\circ\text{C}$: 2.7 3.9 5.2 8 13 20

Surge Voltage (V_S)

$\leq +125^\circ\text{C}$: 1.7 2.6 3.2 5 8 12

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

Low Profile

CAPACITANCE AND RATED VOLTAGE RANGE (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
1.0	105						U
1.5	155					U	
2.2	225						
3.3	335				U		
4.7	475			U			
6.8	685						
10	106	U		J	H	H/V	
15	156				H	V	
22	226						
33	336		H	H		T	
47	476						
68	686				T		
100	107				T		

Released codes

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.

RATINGS & PART NUMBER REFERENCE

AVX Part No.	Case Size	Capacitance (μF)	Rated Voltage (V)	Rated Temperature (°C)	Category Voltage (V)	Category Temperature (°C)	DCL (μA) Max.	DF % Max.	ESR Max. (Ω) @ 100kHz	MSL	100kHz RMS Current (mA)			Product Category
											25°C	85°C	125°C	
2 Volt @ 85°C														
TACU106*002#TA	U	10	2	85	1.3	125	0.5	8	5	1	84	75	33	1
3 Volt @ 85°C														
TACH476*003#TA	H	47	3	85	2	125	1.4	20	5	1	89	80	36	3
4 Volt @ 85°C														
TACU475*004#TA	U	4.7	4	85	2.7	125	0.5	8	5	1	84	75	33	1
TACJ106*004#TA	J	10	4	85	2.7	125	0.5	20	7.5	1	52	46	21	3
TACH336*004#TA	H	33	4	85	2.7	125	1.3	14	5	1	89	80	36	2
6.3 Volt @ 85°C														
TACU335*006#TA	U	3.3	6.3	85	4	125	0.5	8	5	1	84	75	33	1
TACH156*006#TA	H	15	6.3	85	4	125	0.9	8	5	1	89	80	36	3
TACH226*006#TA	H	22	6.3	85	4	125	1.4	10	5	1	89	80	36	2
TACT686*006#TA	T	68	6.3	85	4	125	4.3	15	1	1	200	180	80	2
TACT107*006#TA	T	100	6.3	85	4	125	6.3	12	1	1	200	180	80	2
10 Volt @ 85°C														
TACU225*010#TA	U	2.2	10	85	7	125	0.5	8	5	1	84	75	33	1
TACH106*010#TA	H	10	10	85	7	125	1.0	8	5	1	89	80	36	2
TACV106*010#TA	V	10	10	85	7	125	1.0	10	2	1	132	119	53	2
TACV156*010#TA	V	15	10	85	7	125	1.5	10	2	1	132	119	53	2
TACT476*010#TA	T	47	10	85	7	125	4.7	12	1	1	200	180	80	1
16 Volt @ 85°C														
TACU105*016#TA	U	1	16	85	10	125	0.5	8	5	1	84	75	33	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 214.

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.

Low Profile

QUALIFICATION TABLE – CATEGORY 1

TEST	TAC low profile series (Temperature range -55°C to +125°C)									
	Condition		Characteristics							
Endurance	Determine after application of rated voltage for 2000 +48/-0 hours at 85±2°C and then leaving 1-2 hours at room temperature. Also determine of 125°C temperature, category voltage for 2000 +48/-0 hours and then leaving 1-2 hours at room temperature. Power supply impedance to be ≤0.1Ω/V.			Visual examination	no visible damage					
				DCL	1.25 x initial limit					
				ΔC/C	within ±10% of initial value					
				DF	1.5 x initial limit					
				ESR	1.5 x initial limit					
Humidity	Determine after storage without applied voltage at 40±2°C and 90-95% relative humidity for 1344 +48/-0 hours and then recovery 1-2 hours at room temperature			Visual examination	no visible damage					
				DCL	initial limit					
				ΔC/C	within ±5% of initial value					
				DF	1.2 x initial limit					
				ESR	1.2 x initial limit					
Temperature Stability	Step	Temperature°C	Duration(min)		+20°C	-55°C	+20°C	+85°C	+125°C	+20°C
	1	+20±2	15	DCL	IL*	n/a	IL*	10 x IL*	12.5 x IL*	IL*
	2	-55+0/-3	15	ΔC/C	n/a	+0/-10%	±5%	+10/-0%	+15/-0%	±5%
	3	+20±2	15	DF	IL*	1.5 x IL*	IL*	1.5 x IL*	2 x IL*	IL*
	4	+85+3/-0	15	ESR	IL*	1.25 x IL*	IL*	1.25 x IL*	2 x IL*	IL*
	5	+125+3/-0	15							
	6	+20±2	15							
Surge Voltage	Test temperature: 85°C+3/0°C Test voltage: 1.3 x rated voltage Series protection resistance 1000±100Ω Discharge resistance: 1000Ω Number of cycles: 1000x Cycle duration: 6 min; 30 sec charge, 5 min 30 sec discharge			Visual examination	no visible damage					
				DCL	initial limit					
				ΔC/C	within ±10% of initial value					
				DF	initial limit					
				ESR	initial limit					

*Initial Limit

QUALIFICATION TABLE – CATEGORY 2

TEST	TAC low profile series (Temperature range -55°C to +125°C)									
	Condition		Characteristics							
Endurance	Determine after application of rated voltage for 2000 +48/-0 hours at 85±2°C and then leaving 1-2 hours at room temperature. Also determine of 125°C temperature, category voltage for 2000 +48/-0 hours and then leaving 1-2 hours at room temperature. Power supply impedance to be ≤0.1Ω/V.			Visual examination	no visible damage					
				DCL	1.25 x initial limit					
				ΔC/C	within ±15% of initial value					
				DF	1.5 x initial limit					
				ESR	1.5 x initial limit					
Humidity	Determine after storage without applied voltage at 40±2°C and 90-95% relative humidity for 1344 +48/-0 hours and then recovery 1-2 hours at room temperature			Visual examination	no visible damage					
				DCL	initial limit					
				ΔC/C	within ±10% of initial value					
				DF	1.2 x initial limit					
				ESR	1.2 x initial limit					
Temperature Stability	Step	Temperature°C	Duration(min)		+20°C	-55°C	+20°C	+85°C	+125°C	+20°C
	1	+20±2	15	DCL	IL*	n/a	IL*	10 x IL*	12.5 x IL*	IL*
	2	-55+0/-3	15	ΔC/C	n/a	+0/-15%	±5%	+15/-0%	+20/-0%	±5%
	3	+20±2	15	DF	IL*	1.5 x IL*	IL*	1.5 x IL*	2 x IL*	IL*
	4	+85+3/-0	15	ESR	IL*	1.25 x IL*	IL*	1.25 x IL*	2 x IL*	IL*
	5	+125+3/-0	15							
	6	+20±2	15							
Surge Voltage	Test temperature: 85°C+3/0°C Test voltage: 1.3 x rated voltage Series protection resistance 1000±100Ω Discharge resistance: 1000Ω Number of cycles: 1000x Cycle duration: 6 min; 30 sec charge, 5 min 30 sec discharge			Visual examination	no visible damage					
				DCL	1.5 x initial limit					
				ΔC/C	within ±15% of initial value					
				DF	1.5 x initial limit					
				ESR	1.5 x initial limit					

*Initial Limit

Low Profile

QUALIFICATION TABLE – CATEGORY 3

TEST	TAC low profile series (Temperature range -55°C to +125°C)									
	Condition		Characteristics							
Endurance	Determine after application of rated voltage for 2000 +48/-0 hours at 85±2°C and then leaving 1-2 hours at room temperature. Also determine of 125°C temperature, category voltage for 2000 +48/-0 hours and then leaving 1-2 hours at room temperature. Power supply impedance to be ≤0.1Ω/V.			Visual examination	no visible damage					
				DCL	1.25 x initial limit					
				ΔC/C	within ±30% of initial value					
				DF	1.5 x initial limit					
				ESR	1.5 x initial limit					
Humidity	Determine after storage without applied voltage at 40±2°C and 90-95% relative humidity for 1344 +48/-0 hours and then recovery 1-2 hours at room temperature			Visual examination	no visible damage					
				DCL	2 x initial limit					
				ΔC/C	within ±30% of initial value					
				DF	1.5 x initial limit					
				ESR	1.25 x initial limit					
Temperature Stability	Step	Temperature°C	Duration(min)		+20°C	-55°C	+20°C	+85°C	+125°C	+20°C
	1	+20±2	15	DCL	IL*	n/a	IL*	10 x IL*	12.5 x IL*	IL*
	2	-55+0/-3	15	ΔC/C	n/a	+0/-25%	±5%	+20/-0%	+25/-0%	±20%
	3	+20±2	15	DF	IL*	1.5 x IL*	IL*	1.5 x IL*	2 x IL*	1.5 x IL*
	4	+85+3/-0	15	ESR	IL*	1.25 x IL*	IL*	1.25 x IL*	2 x IL*	1.5 x IL*
	5	+125+3/-0	15							
Surge Voltage	Test temperature: 85°C+3/0°C Test voltage: 1.3 x rated voltage Series protection resistance 1000±100Ω Discharge resistance: 1000Ω Number of cycles: 1000x Cycle duration: 6 min; 30 sec charge, 5 min 30 sec discharge			Visual examination	no visible damage					
				DCL	2 x initial limit					
				ΔC/C	within ±30% of initial value					
				DF	2 x initial limit					
				ESR	2 x initial limit					

*Initial Limit



OCEAN CHIPS

Океан Электроники

Поставка электронных компонентов

Компания «Океан Электроники» предлагает заключение долгосрочных отношений при поставках импортных электронных компонентов на взаимовыгодных условиях!

Наши преимущества:

- Поставка оригинальных импортных электронных компонентов напрямую с производств Америки, Европы и Азии, а так же с крупнейших складов мира;
- Широкая линейка поставок активных и пассивных импортных электронных компонентов (более 30 млн. наименований);
- Поставка сложных, дефицитных, либо снятых с производства позиций;
- Оперативные сроки поставки под заказ (от 5 рабочих дней);
- Экспресс доставка в любую точку России;
- Помощь Конструкторского Отдела и консультации квалифицированных инженеров;
- Техническая поддержка проекта, помощь в подборе аналогов, поставка прототипов;
- Поставка электронных компонентов под контролем ВП;
- Система менеджмента качества сертифицирована по Международному стандарту ISO 9001;
- При необходимости вся продукция военного и аэрокосмического назначения проходит испытания и сертификацию в лаборатории (по согласованию с заказчиком);
- Поставка специализированных компонентов военного и аэрокосмического уровня качества (Xilinx, Altera, Analog Devices, Intersil, Interpoint, Microsemi, Actel, Aeroflex, Peregrine, VPT, Syfer, Eurofarad, Texas Instruments, MS Kennedy, Miteq, Cobham, E2V, MA-COM, Hittite, Mini-Circuits, General Dynamics и др.);

Компания «Океан Электроники» является официальным дистрибутором и эксклюзивным представителем в России одного из крупнейших производителей разъемов военного и аэрокосмического назначения «JONHON», а так же официальным дистрибутором и эксклюзивным представителем в России производителя высокотехнологичных и надежных решений для передачи СВЧ сигналов «FORSTAR».



JONHON

«JONHON» (основан в 1970 г.)

Разъемы специального, военного и аэрокосмического назначения:

(Применяются в военной, авиационной, аэрокосмической, морской, железнодорожной, горно- и нефтедобывающей отраслях промышленности)

«FORSTAR» (основан в 1998 г.)

ВЧ соединители, коаксиальные кабели, кабельные сборки и микроволновые компоненты:

(Применяются в телекоммуникациях гражданского и специального назначения, в средствах связи, РЛС, а так же военной, авиационной и аэрокосмической отраслях промышленности).



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