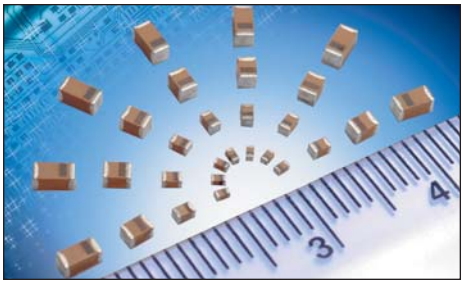
TLC Series

Tantalum Solid Electrolytic Chip Capacitors
Consumer Series

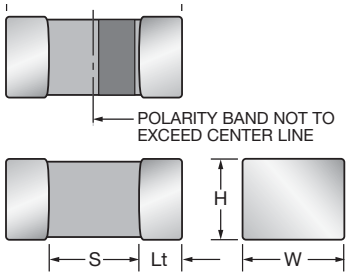


The consumer TLC series of tantalum capacitors offers high capacitance vs. voltage ratio based on stable MnO_2 electrode capacitors. The TLC series complies with RoHS requirements and it is an environmentally friendly component ready for lead-free assembly systems. The TLC series is suitable for wide range of consumer electronic applications such as the latest portable handheld electronics, cellular phones, PDAs or other digital equipment and cameras.

LEAD-FREE
LEAD-FREE COMPATIBLE COMPONENT

HALOGEN-FREE COMPOUNDS
ENVIRONMENTAL FRIENDLY COMPONENT

- Super High Volumetric Efficiency
- Environmentally Friendly Component
- Small & Low Profile Case Sizes
- Leadfree Assembly Systems
- Consumer Applications



CASE DIMENSIONS: millimeters (inches)

Code	EIA Code	EIA Metric	Length (L)	Width (W)	Height (H)	Termination Spacing(S)	Minimum Termination Length (Lt)	Average Mass
J	0603	1608-08	1.00 +0.20 -0.00 (0.039 +0.008 -0.000)	1.60 +0.15 -0.00 (0.064 +0.006 -0.000)	0.75 max (0.030 max)	0.55 min. (0.022 min)	0.15 (0.006)	5.8mg
K	0402	1005-07	1.00 +0.20 -0.00 (0.039 +0.008 -0.000)	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 min. (0.016 min)	0.10 (0.004)	2.0mg
L	0603	1608-10	1.60 +0.20 -0.00 (0.063 +0.008 -0.000)	0.85 +0.15 -0.00 (0.033 +0.006 -0.000)	0.85 +0.15 -0.00 (0.033 +0.006 -0.000)	0.55 min. (0.022 min)	0.15 (0.006)	8.6mg
R	0805	2012-15	2.50 +0.20 -0.00 (0.098 +0.008 -0.000)	1.35 +0.15 -0.00 +0.006 (0.053 -0.000)	1.35 +0.15 -0.00 (0.053 +0.006 -0.000)	0.70 min. (0.028 min)	0.15 (0.006)	29.9mg
T	3528	3528-12	3.50 +0.20 -0.00 (0.138 +0.008 -0.000)	2.80 +0.15 -0.00 (0.117 +0.006 -0.000)	1.20 max (0.047 max)	2.00 min. (0.079 min)	0.15 (0.006)	65mg
V	1206	3528-08	3.20±0.20 (0.128±0.008)	1.60 +0.20 -0.10 (0.064 +0.008 -0.004)	0.75 max (0.030 max)	1.80 min. (0.071 min)	0.15 (0.006)	19.1mg

Packaging Suffix/Quantity

Case Size	Standard Tin Termination		Gold Termination		Tape Type/Width
	4¼ inch Reel	7 inch Reel	4¼ inch Reel	7 inch Reel	
K	QTA / 1,000	PTA / 10,000	—	—	Paper / 8mm
L	XTA / 500	RTA / 3,500	FTA / 500	ATA / 3,500	Plastic / 8mm
R	XTA / 500	RTA / 2,500	FTA / 500	ATA / 2,500	Plastic / 8mm
T	XTA / 500	RTA / 2,500	—	—	Plastic / 8mm

HOW TO ORDER

TLC	L	226	M	006	RTA
Type	**Case Size** See table above	**Capacitance Code** pF code: 1st two digits represent significant figures, 3rd digit represents multiplier (number of zeros to follow)	**Tolerance** M=±20%	**Rated DC Voltage** 003=3Vdc 004=4Vdc 006=6.3Vdc 010=10Vdc	**Packaging** See table above

TECHNICAL SPECIFICATIONS

Technical Data:		All technical data relate to an ambient temperature of +25°C							
Capacitance Range:		4.7 µF to 220 µF							
Capacitance Tolerance:		±20%							
Rated Voltage (V_R)	-55°C ≤ +40°C:	3	4	6.3	10	16	20	25	35
Category Voltage (V_C)	at 85°C:	1.5	2	3.2	5.0	8.0	10.0	12.5	17.5
Category Voltage (V_C)	at 125°C:	0.6	0.8	1.3	2.0	3.2	4.0	5.0	7.0
Temperature Range:		-55°C to +125°C with category voltage							
Reliability:		0.2% per 1000 hours at 85°C, 0.5xV_R, with 0.1Ω/V series impedance with 60% confidence level							

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COMMERCIAL RANGE (LETTER DENOTES CASE SIZE)

Capacitance		Voltage Rating DC (V_R) to 40°C							
µF	Code	3.0V	4.0V	6.3V	10V	16V	20V	25V	35V
1.0	105							H/L	
1.5	155						H	H	R
2.2	225						L/H	R	
4.7	475		K	K		L			
6.8	685								
10	106	K	J/K	J		H/V	R		
15	156				L/H				
22	226			L		R			
33	336		L			S/T			
47	476	L/H		R	R/A/S				
68	686		R						
100	107	R	R/S	R	T				
150	157								
220	227	A	T						

Developmental Ratings - subject to change

RATINGS & PART NUMBER REFERENCE

AVX Part No.	EIA	Case Size	Capacitance (µF)	Rated Voltage (V)	DCL (µA) Max.	ESR max @100kHz (Ω)
TLCK106M003#	0402	K	10	3.0	0.5	15
TLCL476M003#	0603	L	47	3.0	1.4	7.5
TLCK475M004#	0402	K	4.7	4.0	0.5	15
TLCJ106M004#	0603	J	10	4.0	0.5	7.5
TLCL336M004#	0603	L	33	4.0	1.3	7.5
TLCR686M004#	0805	R	68	4.0	2.7	5
TLCR107M004#	0805	R	100	4.0	4	5
TLCT227M004#	3528-12	T	220	4.0	8.8	1
TLCL226M006#	0603	L	22	6.3	1.4	7.5
TLCR476M006#	0805	R	47	6.3	3.0	5
TLCH156M010#	0805	H	15	10	1.5	5
TLCL156M010#	0603	L	15	10	1.5	7.5
TLCR476M010#	0805	R	47	10	4.7	5
TLCT107M010#	B footprint	T	100	10	10	1
TLCV106M016#	1206	V	10	16	1.6	2
TLCL105M025#	0603	L	1	25	0.5	7.5
TLCR225M025#	0805	R	2.2	25	0.6	5

Refer to packaging suffix table for options.

All technical data relates to an ambient temperature of +25°C. Capacitance and DF are measured at 120Hz, 0.5 RMS with DC bias of 1.5V. DCL is measured at rated voltage after 5 minutes.

ESR allowed to move up to 1.25 times catalog limit post mounting.

DCL allowed to move up to 2.00 times catalog limit post mounting.

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