



TANTALUM CAPACITOR

298D MicroTan®



Solid Tantalum Chip Capacitor MicroTan® Leadframeless Molded

KEY BENEFITS

- Capacitance range: 1 μF to 220 μF
- Voltage rating: 2.5 WVDC to 50 WVDC
- Lead (Pb)-free L-shaped terminations
- Small sizes include 0603 and 0402 footprints
- Best volumetric efficiency
- No piezoelectric noise problem
- Compliant to RoHS directive 2002/95/EC
- Halogen-free according to IEC 61249-2-21 definition

APPLICATIONS

- Mobile phones
- MP3 players
- LCD modules
- Hearing instruments
- Other electronic products with size constraints

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FEATURES

- Small sizes include 0603 and 0402 footprint
- Lead (Pb)-free L-shaped terminations
- 8 mm tape and reel packaging available per EIA-481-1 and reeling per IEC 286-3 7" (178 mm) standard
- Compliant to RoHS directive 2002/95/EC



PERFORMANCE CHARACTERISTICS

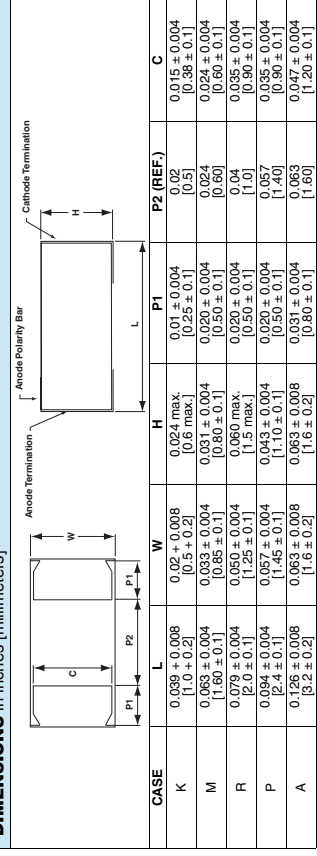
Operating Temperature: - 55 °C to + 85 °C
(to + 125 °C voltage derating)

Capacitance Range: 1 μF to 220 μF
Capacitance Tolerance: ± 20 % standard
Voltage Range: 2.5 WV_{DC} to 50 WV_{DC}

ORDERING INFORMATION		X0		010		M		2		T	
298D MODEL	CAPACITANCE	TOLERANCE	DC VOLTAGE RATING AT + 85 °C	CASE CODE	TERMINATION	REEL SIZE AND PACKAGING					

Note
• We reserve the right to supply higher voltage ratings and lighter capacitance tolerance capacitors in the same case size. Voltage substitutions will be marked with the higher voltage rating

DIMENSIONS in inches [millimeters]



RATINGS AND CASE CODES		2.5 V	4 V	6.3 V	10 V	16 V	20 V	25 V	35 V	50 V
1.0	K			K	K	K/M		M/R		P
1.5	M			M	M	M				
2.2	M			K/M	M					
3.3	M			M	M					
4.7	M			K/M	M		P			
6.8	M			M	M					
10	M			K/M	M	R				
15	M			M	M					
22	M			M	M					
33	M			M	M					
47	M			M	P					
100	P			P/A						
220	P			P						

Note
• Preliminary values, contact factory for availability.
** Please see document "Vishay Material Category Policy", www.vishay.com/doc/2989302

SELECTED RATINGS											
CAPACITANCE (μF)	CASE CODE	PART NUMBER	MAX. DC LEAKAGE AT + 25 °C (μA)	MAX. DF AT + 25 °C (%)	MAX. ESR AT + 25 °C (μΩ)	MAX. RIPPLE 100 KHz (μV)					
4 WV _{DC} AT + 85 °C, ... 2.7 WV _{DC} AT + 125 °C											
4.7	K	298D475X0004K2T	0.5	15.0	20.0	0.027					
10	K	298D106X0004K2T	4.0	50.0	20.0	0.027					
15	K	298D156X0004K2T	10.0	50.0	20.0	0.027					
33	M	298D336X0004M2T	2.6	30.0	4.0	0.080					
47	M	298D476X0004M2T	3.8	40.0	7.5	0.080					
100	P	298D107X0004P2T	4.0	30.0	2.0	0.100					
220	P	298D227X0004P2T (3)	17.6	30.0	3.0	0.122					
6.3 WV _{DC} AT + 85 °C, ... 4 WV _{DC} AT + 125 °C											
1.0	K	298D105X006R3K2T	0.5	6.0	20.0	0.027					
2.2	K	298D225X006R3K2T	0.5	8.0	20.0	0.027					
4.7	K	298D475X006R3K2T (2)	4.0	50.0	20.0	0.027					
10	K	298D106X006R3K2T (2)	10.0	50.0	20.0	0.027					
10	M	298D106X006R3M2T (2)	0.6	8.0	5.0	0.071					
15	M	298D156X006R3M2T (2)	1.0	20.0	7.0	0.060					
22	M	298D226X006R3M2T	2.8	20.0	5.5	0.067					
33	M	298D336X006R3M2T	4.2	30.0	7.5	0.058					
47	P	298D476X006R3P2T	3.0	22.0	3.0	0.122					
100	A	298D107X006R3A2T	6.3	20.0	1.0	0.270					
100	P	298D107X006R3P2T	6.3	20.0	2.0	0.150					
10 WV _{DC} AT + 85 °C, ... 7 WV _{DC} AT + 125 °C											
1.0	K	298D105X0010K2T	0.5	6.0	20.0	0.027					
2.2	K	298D225X0010K2T	0.5	8.0	15.0	0.027					
4.7	M	298D475X0010M2T (2)	0.5	6.0	5.0	0.071					
10	M	298D106X0010M2T	1.0	20.0	7.5	0.058					
15	M	298D156X0010M2T (2)	1.5	30.0	7.5	0.058					
22	M	298D226X0010M2T	22.0	40.0	10.0	0.050					
33	P	298D336X0010P2T (2)	3.3	16.0	2.0	0.150					
47	P	298D476X0010P2T	4.7	22.0	3.0	0.122					
16 WV _{DC} AT + 85 °C, ... 10 WV _{DC} AT + 125 °C											
1.0	K	298D105X0016K2T	3.0	10.0	20.0	0.027					
2.2	M	298D225X0016M2T (2)	0.5	10.0	12.0	0.045					
4.7	M	298D475X0016M2T	0.8	8.0	6.0	0.060					
10	R	298D106X0016R2T	1.6	8.0	8.0	0.075					
4.7	P	298D475X0020P2T (2)	1.0	6.0	4.0	0.106					
20 WV _{DC} AT + 85 °C, ... 13 WV _{DC} AT + 125 °C											
1.0	M	298D105X0020M2T	0.5	6.0	10.0	0.050					
1.0	R	298D105X0025R2T	0.5	6.0	10.0	0.050					
4.7	P	298D475X0025P2T (2)	1.2	6.0	4.0	0.106					
50 WV _{DC} AT + 85 °C, ... 33 WV _{DC} AT + 125 °C											
1.0	P	298D105X0050P2T	0.5	8.0	8.0	0.075					

Notes
 (1) See Performance Characteristics tables
 (2) 100% humidity
 (3) ± 10% capacitance tolerance available

Build Vishay into your Design

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For technical questions, contact tantalum@vishay.com