TANCERAM® CHIP CAPACITORS WAS



TANCERAM® chip capacitors can replace tantalum capacitors in many applications and offer several key advantages over traditional tantalums. Because TANCERAM® capacitors exhibit extremely low ESR, equivalent circuit performance can often be achieved using considerably lower capacitance values. Low DC leakage reduces current drain, extending the battery life of portable products. TANCERAM® high DC breakdown voltage ratings offer improved reliability and eliminate large voltage de-rating common when designing with tantalums.

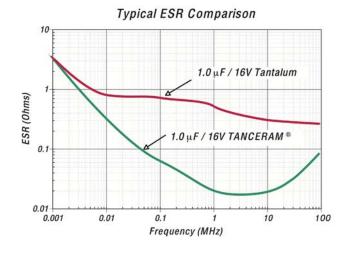
ADVANTAGES

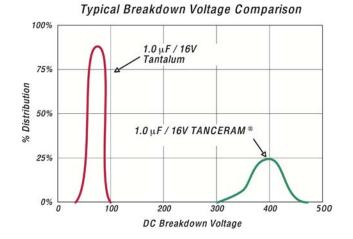
Low ESR

- Low DC Leakage
- Higher Surge Voltage
- Non-polarized Devices
- Reduced CHIP Size
- Improved Reliability
- Higher Insulation Resistance
 Higher Ripple Current

APPLICATIONS

- Switching Power Supply Smoothing (Input/Output)
- DC/DC Converter Smoothing (Input/Output)
- · Backlighting Inverters
- · General Digital Circuits





How to Order TANCERAM®

100 VOLTAGE

6R3 = 6.3 V 100 = 10 V 160 = 16 V 250 = 25 V

500 = 50 V

101 = 100 V

R15

SIZE See Chart X

DIELECTRIC W = X7RX = X5R

1st two digits are significant; third digit denotes number of

zeros. 105 = 1.00 µF $476 = 47.0 \,\mu\text{F}$ $107 = 100 \,\mu\text{F}$

106

CAPACITANCE

M

TOLERANCE $K = \pm 10\%$

 $M = \pm 20\%$

٧ **TERMINATION**

V = Nickel Barrier with 100% Tin Plating (Matte)

 $T = SnPb^*$ (*available on select parts)

4

Part number written: 100R15X106MV4E

MARKING

4 = Unmarked

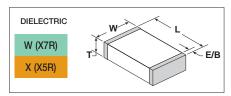
Code Type Reel Plastic Paper Tape specifications conform to EIA RS481

Ε

PACKING



TANCERAM® CHIP CAPACITORS ROHS



CASE SIZE

CAPACITANCE SELECTION

	EIA / JDI		INCHES	(mm)	VDC	1.0	μF	2.2	μF	3.3	μF	4.7	μF	10	μF	22	μF	47	μF	100	μF
-	0402 R07	L W T EB	.040 ±.004 .020 ±.004 .025 Max. .008 ±.004	(1.02 ±.10) (0.51 ±.10) (0.64) (0.20±.10)	16 10 6.3																
	0603 R14	L W T EB	.063 ±.008 .032 ±.008 .035 Max. .010±.005	(1.60 ±.20) (0.81 ±.20) (0.89) (.25±.13)	25 16 10 6.3																
	0805 R15	L W T EB	.080 ±.010 .050 ±.010 .060 Max. .020±.010	(2.03 ±.25) (1.27 ±.25) (1.52) (0.51±.25)	50 25 16 10 6.3																
	1206 R18	L W T EB	.125 ±.013 .062 ±.010 .070 Max. .020 +.015-0.01	(3.17 ±.35) (1.57 ±.25) (1.78) (0.51+.3825)	100 50 35 25 16 10 6.3																
	1210 S41	L W T EB	.126 ±.016 .098 ±.012 .110 Max. .020 +.015010	(3.20 ±.40) (2.50 ±.30) (2.8) (0.51+.3825)	100 50 35 25 16 10 6.3																
	1812 S43	L W T EB	.177 ±.016 .126 ±.015 .140 Max. .035 ±.020	(4.50 ±.40) (3.20 ±.38) (3.55) (0.89 ±0.51)	100 50 25 16 10 6.3																
						W	Χ	W	Χ	W	Х	W	Χ	W	Χ	W	Χ	W	Χ	W	Χ

ELECTRICAL CHARACTERISTICS

DIELECTRIC:	X7R	X5R						
TEMPERATURE COEFFICIENT:	±15% (-55 to +125°C)	±15% (-55 to +85°C)						
DISSIPATION FACTOR:	For \geq 50 VDC: 5% max. For \leq 35 VDC: 10% max.	For ≥ 50 VDC: 5% max. For ≤ 35 VDC: 10% max.						
INSULATION RESISTANCE (MIN. @ 25°C, WVDC)	100 ΩF or 10 $G\Omega$, whichever is less							
DIELECTRIC STRENGTH:	2.5 X WVDC, 25°C, 50mA max.							
TEST CONDITIONS:	Capacitance values \leq 10 μ F: 1.0kHz±50Hz @ 1.0±0.2 Vrms Capacitance values $>$ 10 μ F: 120Hz±10Hz @ 0.5V±0.1 Vrms							
OTHER:	See page 70 for additional dielectric specifications.							