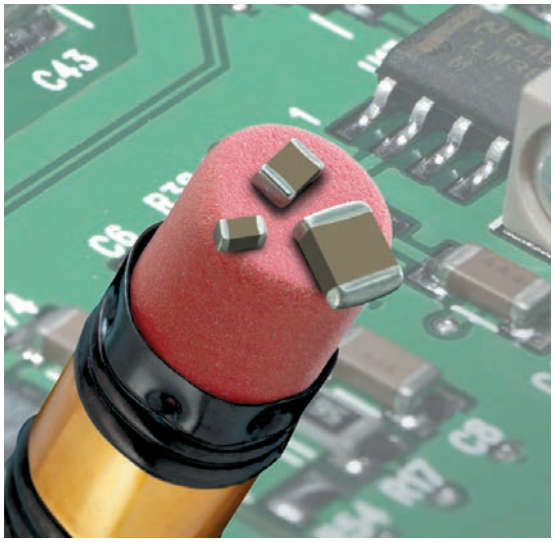
TANCERAM® CHIP CAPACITORS



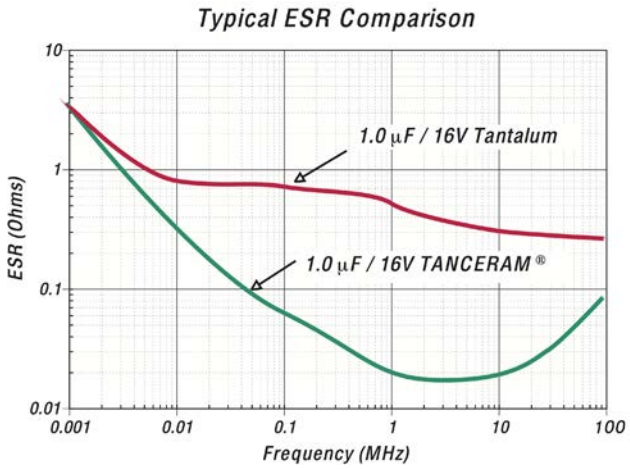
TANCERAM® chip capacitors can replace tantalum capacitors in many applications and offer several key advantages over traditional tantalums. Because TANCERAM® capacitors exhibit extremely low ESR, equivalent circuit performance can often be achieved using considerably lower capacitance values. Low DC 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.

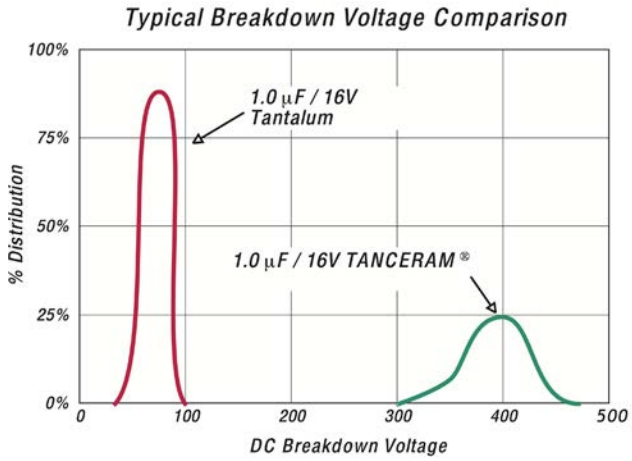
ADVANTAGES

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

APPLICATIONS

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





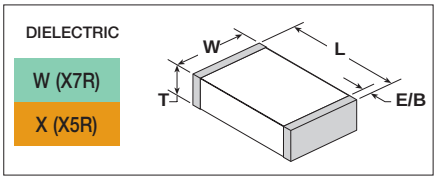
HOW TO ORDER TANCERAM®

Part number written: 100R15X106MV4E

100	R15	X	106	M	V	4	E
VOLTAGE	SIZE	DIELECTRIC	CAPACITANCE	TOLERANCE	TERMINATION	MARKING	PACKING
6R3 = 6.3 V 100 = 10 V 160 = 16 V 250 = 25 V 500 = 50 V 101 = 100 V	See Chart	W = X7R X = X5R	1st two digits are significant; third digit denotes number of zeros. 105 = 1.00 µF 476 = 47.0 µF 107 = 100 µF	K = ±10% M = ±20%	V = Nickel Barrier with 100% Tin Plating (Matte) T = SnPb* (*available on select parts)	4 = Unmarked	Code Type Reel E Plastic 7” T Paper 7” Tape specifications conform to EIA RS481

TANCERAM® CHIP CAPACITORS

RoHS



CASE SIZE

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

CAPACITANCE SELECTION

VDC	1.0 µF	2.2 µF	3.3 µF	4.7 µF	10 µF	22 µF	47 µF	100 µF
	105	225	335	475	106	226	476	107
16								
10								
6.3								
25								
16								
10								
6.3								
50								
25								
16								
10								
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35								
25								
16								
10								
6.3								
100								
50								
25								
	W X	W X	W X	W X	W X	W X	W X	W X
	"K" OR "M" TOLERANCE					ONLY "M" TOLERANCE		

ELECTRICAL CHARACTERISTICS

DIELECTRIC:	X7R	X5R
TEMPERATURE COEFFICIENT:	±15% (-55 to +125°C)	±15% (-55 to +85°C)
DISSIPATION FACTOR:	For ≥ 50 VDC: 5% max. For ≤ 35 VDC: 10% max.	For ≥ 50 VDC: 5% max. For ≤ 35 VDC: 10% max.
INSULATION RESISTANCE (MIN. @ 25°C, WVDC)	100 ΩF or 10 GΩ, whichever is less	
DIELECTRIC STRENGTH:	2.5 X WVDC, 25°C, 50mA max.	
TEST CONDITIONS:	Capacitance values ≤ 10 µF: 1.0kHz±50Hz @ 1.0±0.2 Vrms Capacitance values > 10 µF: 120Hz±10Hz @ 0.5V±0.1 Vrms	
OTHER:	See page 79 for additional dielectric specifications.	