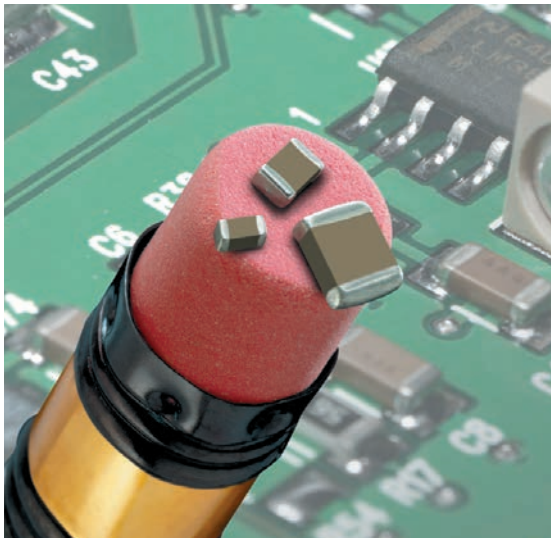
TANCERAM® CHIP CAPACITORS



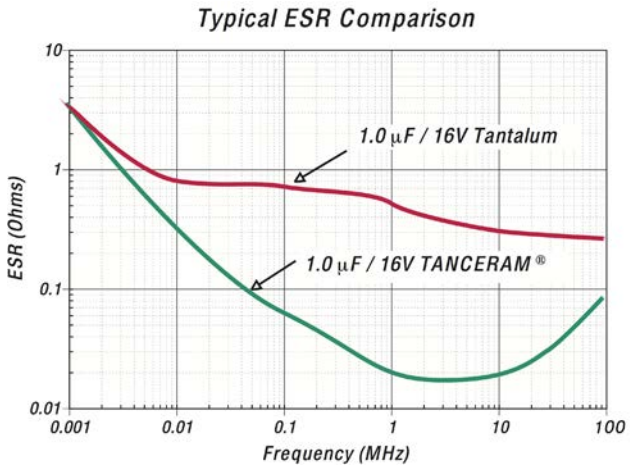
TANCERAM® chip capacitors can replace tantalum capacitors in many applications and offer several key advantages over traditional tantalums. Because TANCERAM® capacitors exhibit extremely low ESR, equivalent circuit performance can often be achieved using considerably lower capacitance values. Low DC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

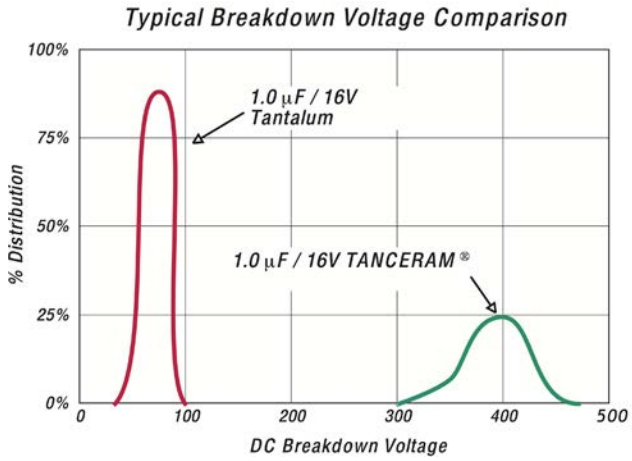
ADVANTAGES

- 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



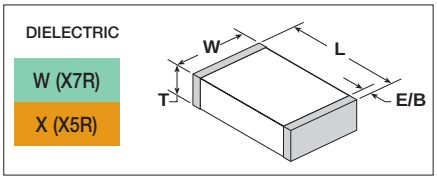


HOW TO ORDER TANCERAM®

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



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 .040 ±.004 W .020 ±.004 T .025 Max. EB .008 ±.004	(1.02 ±.10) (0.51 ±.10) (0.64) (0.20±.10)																	
			16		W														
			10		W														
			6.3		W		X				W		X						
0603 R14	L .063 ±.008 W .032 ±.008 T .035 Max. EB .010±.005	(1.60 ±.20) (0.81 ±.20) (0.89) (.25±.13)	25		W						W								
			16		W		X				W								
			10		W		X				W								
			6.3		W		X		X		W		X						
0805 R15	L .080 ±.010 W .050 ±.010 T .060 Max. EB .020±.010	(2.03 ±.25) (1.27 ±.25) (1.52) (0.51±.25)	50																
			25		W		X				W		X						
			16		W		X				W		X						
			10		W		X		X		W		X		X				
			6.3		W		X		X		W		X		X		X		
1206 R18	L .125 ±.013 W .062 ±.010 T .070 Max. EB .020 +.015-0.01	(3.17 ±.35) (1.57 ±.25) (1.78) (0.51+.38-.25)	100		W														
			50		W		X												
			35		W		X												
			25		W		X		X		W		X		X				
			16		W		X		X		W		X		X		X		
			10		W		X		X		W		X		X		X		
			6.3		W		X		X		W		X		X		X		X
1210 S41	L .126 ±.016 W .098 ±.012 T .110 Max. EB .020 +.015-.010	(3.20 ±.40) (2.50 ±.30) (2.8) (0.51+.38-.25)	100		W														
			50		W						W								
			35		W						W		X						
			25		W		X		X		W		X		X				
			16		W		X		X		W		X		X		X		
			10						X		W		X		X		X		X
			6.3						X						X		X		X
1812 S43	L .177 ±.016 W .126 ±.015 T .140 Max. EB .035 ±.020	(4.50 ±.40) (3.20 ±.38) (3.55) (0.89 ±0.51)	100		W														
			50		W				W										
			25		W								W						
			16														X		
			10														X		
			6.3														X		X
				W	X	W	X	W	X	W	X	W	X	W	X	W	X	W	X

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 70 for additional dielectric specifications.	

Mouser Electronics

Authorized Distributor

Click to View Pricing, Inventory, Delivery & Lifecycle Information:

Johanson:

160R14W104KV4T 501S43W153KF4E 501R18W103KV4E 250R14X474KV4T 160R15X106KV4E
202S43W102KV4E 101R14W103KV4T 102S41W103KV4E 102S43W473KV4E 302R29W102KV4E
202S43W472KV4E 202R18W102MV4E 101R14W102KV4T 101R14W681KV4T 250R14X105KV4T
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500R07W103KV4T 250R14W104KV4T 500S41W105KV4E 6R3R14W225KV4T 100X14X474MV4T
500R15W102KV4T 202S43W682KV4E 101R14W471KV4T 102S43W473MV4E 101R18W104MV4E
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102R15W102KV4E 501S41W333KV4E 202S43W332KV4E 160S41X226KV4E 631R18W472KV4E
160R07W223KV4T 102S41W103MV4E 100R14X225KV4T 102R29W102KV4E 500R07W222KV4T
202S43W103KV4E 251R18W333KV4E 202S41W272KV4E 501R18W102KV4E 100R07X104KV4T
102R18W101KV4E 6R3R15X226KV4E 100R15X106KV4E 500R07W472KV4T 202R29W102KV4E
102R18W222MV4E 250R14W104MV4T 100X14X334MV4T 302S43W102KV4E 500R07W151KV4T
501R15W102KV4E 250R18W105KV4E 501R18W471KV4E 202S49W682KV4E 500R07W122ZV4T
500R15W103KV4T 500R15W331MV4T 500R18W183MV4T 250R14W823ZV4T 250R07W473KV4T
250R14W273KV4T 500R15W333KV4T 500R15X474KV4E 250R14W154MV4T 250R15W154KV4T
500R14W561KV4T 500R07W392KV4T 6R3R05X473MV4T 500R15W471KV4T 6R3R05X123MV4T