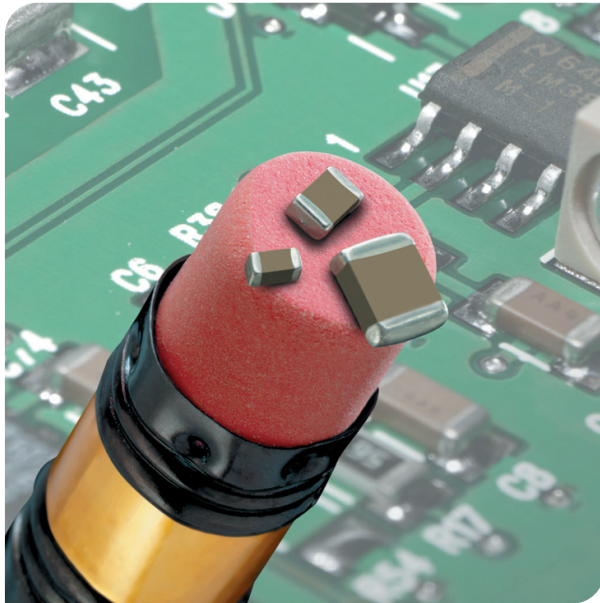


Capacitors
Tanceram®



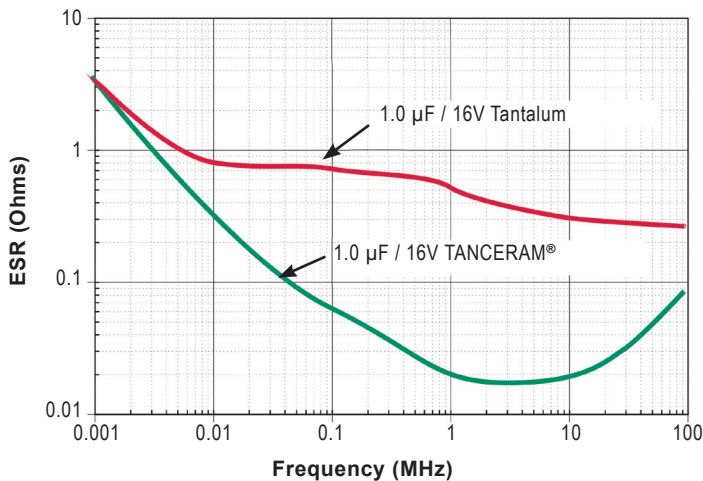
Features:

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

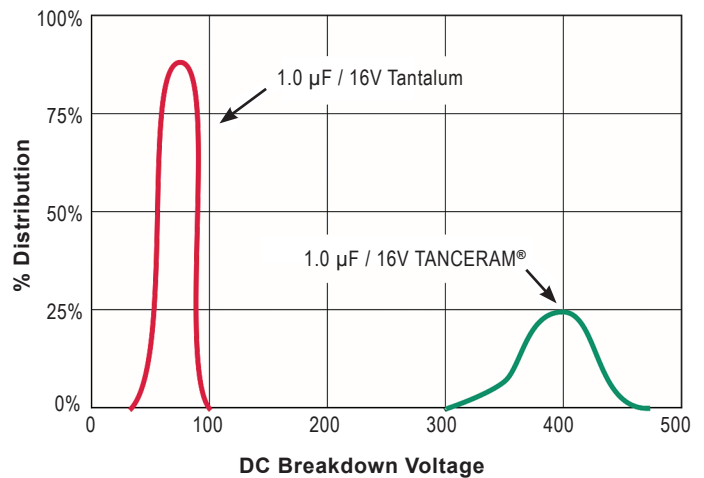
Common Applications:

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

Typical ESR Comparison



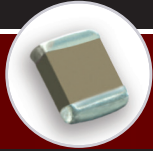
Typical Breakdown Voltage Comparison



HOW TO ORDER

TC	CT	500	W	105	K	1	GV	001	E
Subfamily	Size	Voltage	DTC	Capacitance	Tol	Mark	Termination	Special Code	Pack
TC = Tanceram® Hi-Cap	See chart	6R3 = 6.3 V 100 = 10 V 160 = 16 V 250 = 25 V 500 = 50 V 101 = 100 V	G = NP0/C0G W = X7R	1st two digits are significant; 3rd digit denotes number of zeros. 105 = 1.00 µF 476 = 47.0 µF 107 = 100 µ	K = ±10% M = ±20%	1 = No mark	GV = Ni/Sn (RoHS) NT = Ni/SnPb *avail on selected parts	001 = Default catalog item	E = 7" Reel Emb Tape T = 7" Reel Paper Tape

Example: TCCT500W105K1GV001E Capacitors Tanceram, Hi-Cap, 0805, X7R, 50.0V, 1.000µF±10%, Ni/Sn (RoHS), 7" Reel Embossed Tape



Capacitors - Tanceram®

Capacitance Selection & Electrical Characteristics

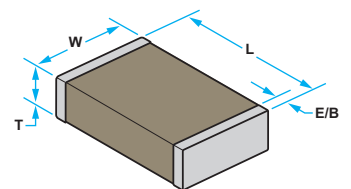
EIA		Inches	(mm)	VDC	1.0 μF		1.5 μF		2.2 μF		3.3 μF		4.7 μF		10 μF		22 μF		47 μF		100 μF	220 μF
					W	X	W	X	W	X	W	X	W	X	W	X	W	X	W	X	X	X
0201	L	.024 ±.001	(0.60 ±.03)	Dielectric																		
	W	.011 ±.001	(0.28 ±.03)	10																		
	T	.013 Max.	(0.33 Max.)	6.3																		
	EB	.004 Min.	(0.10 Min.)	4																		
0402	L	.039 ±.002	(0.99 ±.05)	35																		
	W	.020 ±.002	(0.51 ±.05)	25																		
	T	.022 Max.	(0.55 Max.)	16																		
	EB	.002 Min.	(0.05 Min.)	10																		
0603	L	.063 ±.004	(1.60 ±.10)	50																		
	W	.031 ±.004	(0.79 ±.10)	35																		
	T	.037 Max.	(0.93 Max.)	25																		
	EB	.006 Min.	(0.15 Min.)	16																		
0805	L	.079 ±.012	(2.01 ±.30)	50																		
	W	.049 ±.008	(1.24 ±.20)	35																		
	T	.057 Max.	(1.44 Max.)	25																		
	EB	.008 Min.	(0.20 Min.)	16																		
1206	L	.126 ±.012	(3.20 ±.30)	50																		
	W	.063 ±.008	(1.60 ±.20)	35																		
	T	.071 Max.	(1.80)	25																		
	EB	.010 Min.	(0.25 Min.)	16																		
1210	L	.126 ±.012	(3.20 ±.30)	50																		
	W	.098 ±.012	(2.49 ±.30)	35																		
	T	.106 Max.	(2.69 Max.)	25																		
	EB	.012 Min.	(0.30 Min.)	16																		
1812	L	.177 ±.016	(4.50 ±.41)	50																		
	W	.126 ±.012	(3.20 ±.30)	35																		
	T	.118 Max.	(2.99 Max.)	25																		
	EB	.012 Min.	(0.30 Min.)	16																		
2220	L	.220 ±.016	(5.59 ±.41)	50																		
	W	.197 ±.016	(3.20 ±.30)	35																		
	T	.118 Max.	(2.99 Max.)	25																		
	EB	.012 Min.	(0.30 Min.)	16																		

"K" or "M" Tolerance, 0201 Only Available in M

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 ≥ 50 VDC: 5% max.
	For ≤ 35 VDC: 10% 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 81 for additional dielectric specifications.	



DIELECTRIC:
W (X7R) X (X5R)