

TurboCap™

High-CV SMPS Capacitors



ELECTRICAL SPECIFICATIONS

Temperature Coefficient

Temperature Coefficient ±15%, -55° to +125°C

Capacitance Test (MIL-STD-202 Method 305)

25°C, 1.0±0.2 Vrms (open circuit voltage) at 1KHz

Dissipation Factor 25°C

2.5% Max @ 25°C, 1.0±0.2 Vrms (open circuit voltage) at 1KHz

Insulation Resistance 25°C (MIL-STD-202 Method 302)

500 MΩ-μF, whichever is less.

Insulation Resistance 125°C (MIL-STD-202 Method 302)

50 MΩ-μF, whichever is less.

Dielectric Withstanding Voltage 25°C (Flash Test)

250% rated voltage for 5 seconds with 50 mA max charging current.

Life Test (1000 hrs)

X7R: 150% rated voltage at +125°C.

Moisture Resistance (MIL-STD-202 Method 106)

Ten cycles with no voltage applied.

Thermal Shock (MIL-STD-202 Method 107, Condition A)

Immersion Cycling (MIL-STD-202 Method 104, Condition B)

Resistance To Solder Heat (MIL-STD-202, Method 210, Condition B, for 20 seconds)



Typical ESR Performance (Ω)

	27μF	47μF	100μF
ESR @ 10KHz	0.007	0.004	0.003
ESR @ 50KHz	0.003	0.002	0.0015
ESR @ 100KHz	0.002	0.0015	0.001

HOW TO ORDER

AVX Styles: ST12 and ST20

ST12	5	C	186	M	A	N	03
AVX Style	Voltage	Temperature Coefficient	Capacitance Code (2 significant digits + no. of zeros)	Capacitance Tolerance	Test Level	Termination	Number of Leads Per Side
ST12	25V = 3 50V = 5 100V = 1	X7R = C	1 μF = 105 10 μF = 106 100 μF = 107	M = ±20%	A = Standard	N = Straight Lead J = Leads formed in L = Leads formed out	03 = 3 05 = 5 10 = 10

CAPACITANCE (μF)

Cap (μF)	ST12		ST20			
	Voltage					
	50V	100V	25V	50V	100V	500V
.82						
1.3						
2.7						
8.2		...03				
12		...05				
14					...03	
18	...03					
22		...10			...05	
27	...05			...03	...10	
47				...05	...10	
50	...10					
68			...03			
100			...05	...10		
220			...10			

Development

Numbers inside shaded areas refer to the number of leads per side (the last two digits of the part number).