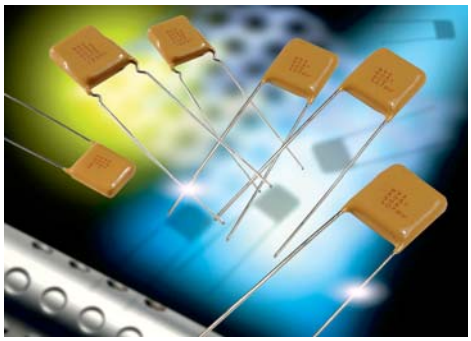
SMPS Capacitors (SE Style)

Extended Commercial Radial Range

PRODUCT OFFERING – X7R

AVX SE styles offer capacitance extension to popular SK ranges. The CV product for SE-series, X7R capacitors (TCC: ±15% over -55 to +125°C) compares favorably to high CV ranges offered by other suppliers in much less stable Y5U dielectric (TCC: +22/-56% over -30 to +85°C). SE style capacitors are conformally coated and are designed for input and output filtering applications in switch mode power supplies.



ELECTRICAL SPECIFICATIONS

Temperature Coefficient
X7R: Temperature Coefficient ±15%, -55° to +125°C
Capacitance Test (MIL-STD-202 Method 305)
X7R: 25°C, 1.0±0.2 Vrms (open circuit voltage) at 1KHz
Dissipation Factor 25°C
X7R: 2.5% Max @ 25°C, 1.0±0.2 Vrms (open circuit voltage) at 1KHz
Insulation Resistance 25°C (MIL-STD-202 Method 302)
X7R: 100K MΩ or 1000 MΩ-µF, whichever is less.
Insulation Resistance 125°C (MIL-STD-202 Method 302)
X7R: 10K MΩ or 100 MΩ-µF, whichever is less.

Dielectric Withstanding Voltage 25°C (Flash Test)
X7R: 250% rated voltage for 5 seconds with 50 mA max charging current.
Life Test (1000 hrs)
X7R: 200% rated voltage at +125°C
Moisture Resistance (MIL-STD-202 Method 106)
X7R: 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)

HOW TO ORDER

SE	01	3	C	125	M	A	A	*
Style	**Size** See chart below	**Voltage** 25V = 3 50V = 5 100V = 1	**Temperature Coefficient** X7R = C	**Capacitance Code** (2 significant digits + no. of zeros) 22 nF = 223 220 nF = 224 1 µF = 105 100 µF = 107	**Capacitance Tolerance** X7R: K = ±10% M = ±20% Z = +80, -20%	**Test Level** A = Standard B = Hi-Rel*	**Leads** A = Tin/Lead R = RoHS Compliant	**Packaging** (See Note 1)

Note 1: No suffix signifies bulk packaging, which is AVX standard packaging. Parts available tape and reel per EIA-468. Use suffix "TR1" if tape & reel is required.

Note: Capacitors with X7R dielectrics are not intended for applications across AC supply mains or AC line filtering with polarity reversal. Contact plant for recommendations.

*Hi-Rel screening consists of 100% Group A, Subgroup 1 per MIL-PRF-39014.

TAPE & REEL QUANTITY	
Part	**Pieces**
SE01	2000
SE03/SE53	1000
SE04/SE54	1000
SE05/SE55	500
SE06/SE56	500

RoHS	
Part	**Available**
SE01	Yes
SE03/SE53	Yes
SE04/SE54	Yes
SE05/SE55	Yes
SE06/SE56	Yes

Not RoHS Compliant

RoHS COMPLIANT

For RoHS compliant products, please select correct termination style.

Performance of SMPS capacitors can be simulated by downloading SpiCalci software program - http://www.avx.com/SpiApps/default.asp#spicalci
Custom values, ratings and configurations are also available.

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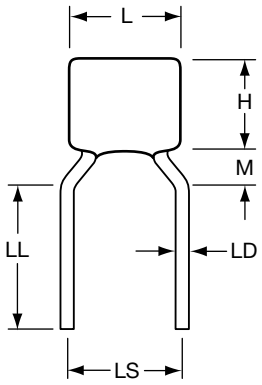
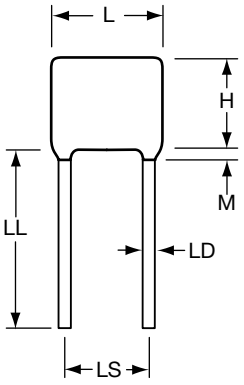
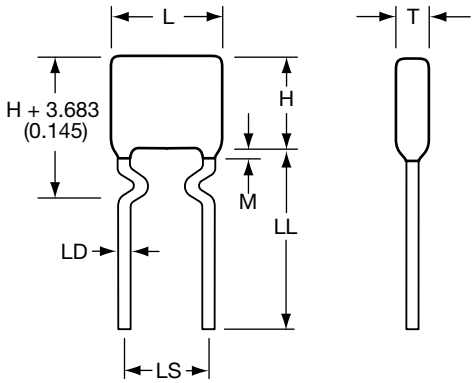
Product Offering – X7R



SE01



SE03 – SE06



SE53 – SE56

X7R Capacitance Range (µF)

Style	25 WVDC min./max.	50 WVDC min./max.	100 WVDC min./max.
SE01	0.47/1.5	0.39/1.0	0.33/0.68
SE03/SE53	2.7/6.8	2.2/4.7	1.8/3.3
SE04/SE54	5.6/12	3.9/10	3.3/6.8
SE05/SE55	8.2/18	6.8/12	4.7/10.0
SE06/SE56	18/39	12/27	6.8/15

DIMENSIONS

millimeters (inches)

Style	L (max.)	H (max.)	T (max.)	LS (nom.)	LD (nom.)
SE01	5.08 (0.200)	5.08 (0.200)	5.08 (0.200)	5.08 (0.200)	0.508 (0.020)
SE03/SE53	7.62 (0.300)	7.62 (0.300)	5.08 (0.200)	5.08 (0.200)	0.508 (0.020)
SE04/SE54	10.2 (0.400)	10.2 (0.400)	5.08 (0.200)	5.08 (0.200)	0.508 (0.020)
SE05/SE55	12.7 (0.500)	12.7 (0.500)	5.08 (0.200)	10.2 (0.400)	0.635 (0.025)
SE06/SE56	22.1 (0.870)	15.2 (0.600)	5.08 (0.200)	20.1 (0.790)	0.813 (0.032)

L = Length
H = Height
T = Thickness
M = Meniscus 1.52 (0.060) max.
LS = Lead Spacing Nominal ±.787 (0.031)
LL = Lead Length 50.8 (2.000) max./25.4 (1.000 min.)
LD = Lead Diameter Nominal ±.050 (0.002)