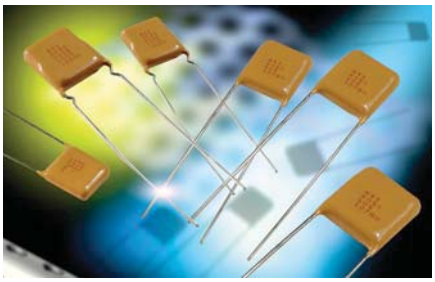
SMPS Capacitors (SK Style)

Commercial Radial Range

PRODUCT OFFERING – C0G, X7R AND Z5U

AVX SK styles are conformally coated MLC capacitors for input or output filtering in switch mode power supplies. They are specially processed to handle high currents and are low enough in cost for commercial SMPS application.



ELECTRICAL SPECIFICATIONS

Temperature Coefficient
C0G: A Temperature Coefficient - 0 ±30 ppm/°C, -55° to +125°C
X7R: C Temperature Coefficient - ±15%, -55° to +125°C
Z5U: E Temperature Coefficient - +22, -56%, +10° to +85°C
Capacitance Test (MIL-STD-202 Method 305)
C0G: 25°C, 1.0±0.2 Vrms (open circuit voltage) at 1KHz
X7R: 25°C, 1.0±0.2 Vrms (open circuit voltage) at 1KHz
Z5U: 25°C, 0.5 Vrms max (open circuit voltage) at 1KHz
Dissipation Factor 25°C
C0G: 0.15% Max @ 25°C, 1.0±0.2 Vrms (open circuit voltage) at 1KHz
X7R: 2.5% Max @ 25°C, 1.0±0.2 Vrms (open circuit voltage) at 1KHz
Z5U: 3.0% Max @ 25°C, 0.5 Vrms max (open circuit voltage) at 1KHz
Insulation Resistance 25°C (MIL-STD-202 Method 302)
C0G and X7R: 100K MΩ or 1000 MΩ-µF, whichever is less.
Z5U: 10K MΩ or 1000 MΩ-µF, whichever is less.
Insulation Resistance 125°C (MIL-STD-202 Method 302)
C0G and X7R: 10K MΩ or 100 MΩ-µF, whichever is less.
Z5U: 1K MΩ or 100 MΩ-µF, whichever is less.
Dielectric Withstanding Voltage 25°C (Flash Test)
C0G and X7R: 250% rated voltage for 5 seconds with 50 mA max charging current. (500 Volt units @ 750 VDC)
Z5U: 200% rated voltage for 5 seconds with 50 mA max charging current.
Life Test (1000 hrs)
C0G and X7R: 200% rated voltage at +125°C. (500 Volt units @ 600 VDC)
Z5U: 150% rated voltage at +85°C
Moisture Resistance (MIL-STD-202 Method 106)
C0G, X7R, Z5U: 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

SK	01	3	E	125	Z	A	A	*
Style	**Size** See chart below	**Voltage** 25V = 3 50V = 5 100V = 1 200V = 2 500V = 7	**Temperature Coefficient** Z5U = E X7R = C C0G = A	**Capacitance Code** (2 significant digits + no. of zeros) 22 nF = 223 220 nF = 224 1 µF = 105 100 µF = 107	**Capacitance Tolerance** C0G: J = ±5% K = ±10% M = ±20% X7R: K = ±10% M = ±20% Z = +80, -20% Z5U: M = ±20% Z = +80, -20% P = GMV (+100, -0%)	**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. SK01, SK*3, SK*4, SK*5, SK*6, SK*9 & SK*0 are available taped and reel per EIA-468. Use suffix "TR1" if tape & reel is required.

Note: Capacitors with X7R and Z5U dielectrics are not intended for applications across AC supply mains or AC line filtering with polarity reversal. Contact plant for recommendations.

*Hi-Rel screening for C0G and X7R only. Screening consists of 100% Group A (B Level), Subgroup 1 per MIL-PRF-49470.
**RoHS Compliant parts are not available in the Z5U dielectric.

TAPE & REEL QUANTITY	
Part	**Pieces**
SK01	2000
SK03/SK53	1000
SK04/SK54	1000
SK05/SK55	500
SK06/SK56	500
SK07	N/A
SK08	N/A
SK09/SK59	500
SK10/SK60	400

RoHS	
Part	**Available**
SK01	Yes
SK03/SK53	Yes
SK04/SK54	Yes
SK05/SK55	Yes
SK06/SK56	Yes
SK07	Yes
SK08	Yes
SK09/SK59	Yes
SK10/SK60	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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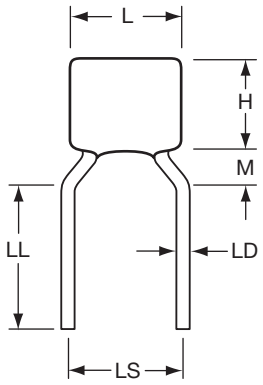
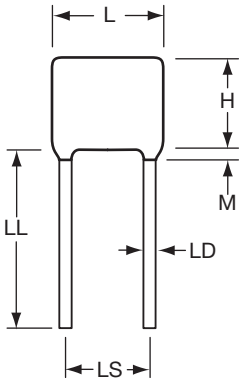
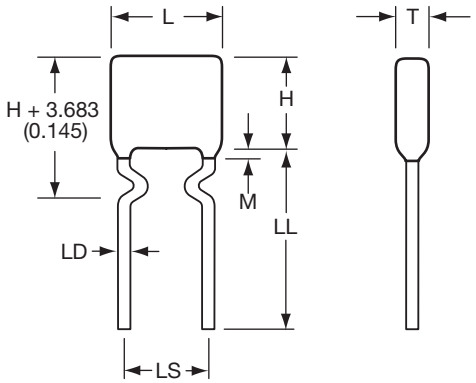


SK01



SK03 – SK10



SK53 - SK56 and SK59 – SK60

C0G Capacitance Range (µF)

Style	25 WVDC min./max.	50 WVDC min./max.	100 WVDC min./max.	200 WVDC min./max.	500 WVDC min./max.
SK01	.001/0.015	.001/0.012	.001/0.010	.0010/0.0056	.0010/0.0018
SK03/SK53	.01/0.056	.01/0.047	.01/0.039	.001/0.022	.001/0.0068
SK04/SK54	.01/0.12	.01/0.10	.01/0.082	.01/0.047	.001/0.015
SK05/SK55	.01/0.18	.01/0.15	.01/0.12	.01/0.068	.001/0.022
SK06/SK56	.10/0.56	.01/0.47	.01/0.39	.01/0.22	.01/0.068
SK07	.10/0.68	.01/0.56	.01/0.47	.01/0.27	.01/0.082
SK08	.82/1.20	.68/1.10	.56/0.82	.33/0.47	.10/0.15
SK09/SK59	.10/0.27	.01/0.22	.01/0.18	.01/0.10	.001/0.039
SK10/SK60	.10/0.68	.01/0.56	.01/0.47	.01/0.27	.01/0.082

X7R Capacitance Range (µF)

Style	25 WVDC min./max.	50 WVDC min./max.	100 WVDC min./max.	200 WVDC min./max.	500 WVDC min./max.
SK01	.01/0.39	.01/0.33	.01/0.27	.01/0.12	.001/0.047
SK03/SK53	.10/2.2	.10/1.8	.01/1.5	.01/0.68	.01/0.27
SK04/SK54	.10/4.7	.10/3.3	.10/2.7	.01/1.0	.01/0.47
SK05/SK55	.10/6.8	.10/6.8	.10/3.9	.10/1.8	.01/0.68
SK06/SK56	1.0/15	1.0/10	.10/5.6	.10/3.9	.10/1.5
SK07	1.0/18	1.0/14	1.0/8.2	.10/4.7	.10/2.2
SK08	22/33	15/22	10/15	5.6/8.2	2.2/3.9
SK09/SK59	.10/8.2	.10/5.6	.10/3.3	.10/2.2	.10/1.2
SK10/SK60	1.0/18	1.0/12	.10/6.8	.10/4.7	.10/2.2

Z5U Capacitance Range (µF)

Style	25 WVDC min./max.	50 WVDC min./max.	100 WVDC min./max.	200 WVDC min./max.
SK01	.10/1.2	.10/0.82	.10/0.47	.10/0.33
SK03/SK53	.10/5.6	.10/3.30	.10/2.20	.10/1.50
SK04/SK54	1.0/10.0	1.0/8.20	.10/4.70	.10/3.30
SK05/SK55	1.0/18.0	1.0/10.00	1.0/6.80	.10/4.70
SK06/SK56	1.0/47.0	1.0/39.00	1.0/22.00	1.0/15.00
SK07	1.0/68.0	1.0/47.00	1.0/27.00	1.0/18.00
SK08	82/120.0	56/100.00	33/47.00	22/33.00
SK09/SK59	1.0/27.0	1.0/18.00	1.0/10.00	1.0/6.80
SK10/SK60	1.0/56.0	1.0/39.00	1.0/22.00	1.0/18.00

DIMENSIONS

millimeters (inches)

Style	L (max.)	H (max.)	T (max.)	LS (nom.)	LD (nom.)
SK01	5.08 (0.200)	5.08 (0.200)	5.08 (0.200)	5.08 (0.200)	0.508 (0.020)
SK03/SK53	7.62 (0.300)	7.62 (0.300)	5.08 (0.200)	5.08 (0.200)	0.508 (0.020)
SK04/SK54	10.2 (0.400)	10.2 (0.400)	5.08 (0.200)	5.08 (0.200)	0.508 (0.020)
SK05/SK55	12.7 (0.500)	12.7 (0.500)	5.08 (0.200)	10.2 (0.400)	0.635 (0.025)
SK06/SK56	22.1 (0.870)	15.2 (0.600)	5.08 (0.200)	20.1 (0.790)	0.813 (0.032)
SK07	27.9 (1.100)	15.2 (0.600)	5.08 (0.200)	24.9 (0.980)	0.813 (0.032)
SK08	27.9 (1.100)	15.2 (0.600)	8.89 (0.350)	24.9 (0.980)	0.813 (0.032)
SK09/SK59	17.0 (0.670)	13.7 (0.540)	5.08 (0.200)	14.6 (0.575)	0.635 (0.025)
SK10/SK60	23.6 (0.930)	18.3 (0.720)	6.35 (0.250)	20.3 (0.800)	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)

Общество с ограниченной ответственностью «МосЧип» ИНН 7719860671 / КПП 771901001
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Данный компонент на территории Российской Федерации

Вы можете приобрести в компании MosChip.

Для оперативного оформления запроса Вам необходимо перейти по данной ссылке:

http://moschip.ru/get-element

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В нашем ассортименте представлены ведущие мировые производители активных и пассивных электронных компонентов.

Нашей специализацией является поставка электронной компонентной базы двойного назначения, продукции таких производителей как XILINX, Intel (ex.ALTERA), Vicor, Microchip, Texas Instruments, Analog Devices, Mini-Circuits, Amphenol, Glenair.

Сотрудничество с глобальными дистрибьюторами электронных компонентов, предоставляет возможность заказывать и получать с международных складов практически любой перечень компонентов в оптимальные для Вас сроки.

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