

GENERAL DESCRIPTION

AVX SA Series

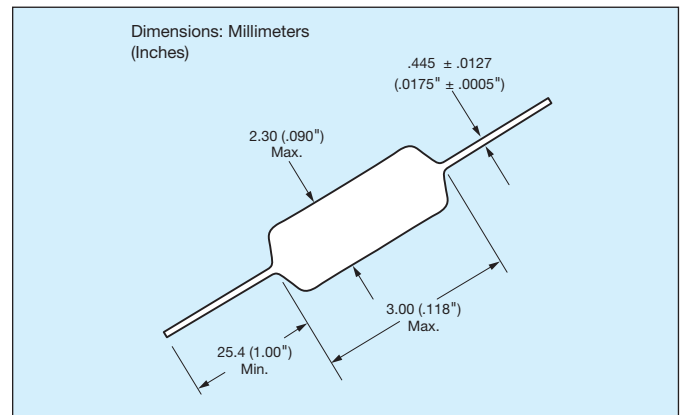
Conformally Coated Axial Leaded MLC

Temperature Coefficients: C0G (NP0), X7R, X5R, Z5U

10, 50, 100, 200 Volts

Case Material: Epoxy (Flame Retardant to UL Bulletin 492, Par. 280)

Lead Material: Solderable



HOW TO ORDER

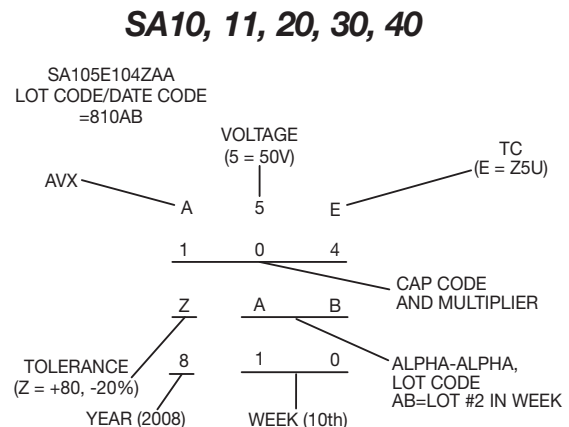
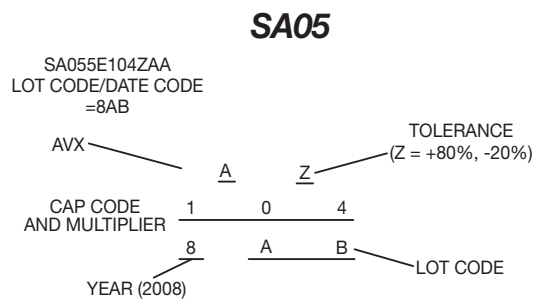
SA10	5	E	104	Z	A	R
Conformal Axial Size	Voltage	Dielectric	Capacitance	Capacitance Tolerance	Failure Rate	Leads
SA05 SA10 SA11 SA20 SA30 SA40	Z = 10V 5 = 50V 1 = 100V 2 = 200V	A = C0G (NP0) C = X7R D = X5R E = Z5U	First two digits are the significant figures of capacitance. Third digit indicates the additional number of zeros. For example, order 100,000 pF as 104. (For values below 10pF use "R" in place of decimal point, e.g., 1R4 = 1.4pF.)	C0G (NP0): C = ±.25pF D = ±.5pF F = ±1% G = ±2% J = ±5% K = ±10%	X7R: J = ±5% K = ±10% M = ±20% X5R: K = ±10% M = ±20% Z5U: M = ±20% Z = +80% -20%	Standard (Solderable) R = RoHS Compliant A = Standard Solderable



Please select correct termination style.

MARKING (EXAMPLE)

SpinGuard marking includes full date code/lot code identification. A first in the industry, this format provides complete traceability to all manufacturing processes involving the basic chip and final assembly. Total Shipment traceability is also provided.



PACKAGING REQUIREMENTS

- A = Standard Reels (see Page 49)
- B = 1000 piece reels (distributors only, tight tolerance only)
- C = Ammo Pack (see Page 49)
- D thru J = See Special Lead Configurations (Page 41)
- M = 26mm tape and reel
- N = 26mm ammo pack
- R = RoHS, Standard reels (See page 49)

SIZE AND CAPACITANCE SPECIFICATIONS

Dimensions: Millimeters (Inches)

AVX Style		SA05		SA10			SA11		SA20		SA30		SA40	
Length (L)		3.00 (.118")		4.32 (.170")			4.32 (.170")		6.60 (.260")		7.37 (.290")		10.16 (.400")	
Diameter (D)		2.30 (.090")		2.54 (.100")			3.05 (.120")		2.54 (.100")		3.81 (.150")		3.81 (.150")	
Lead Diameter		.445 (.0175")		.445 (.0175")			.445 (.0175")		.445 (.0175")		.445 (.0175")		.445 (.0175")	
Lead Length		25.4 (1.00")		25.4 (1.00")			25.4 (1.00")		25.4 (1.00")		25.4 (1.00")		25.4 (1.00")	
Cap. in pF	Typical AVX Part Nos.	WVDC		WVDC			WVDC		WVDC		WVDC		WVDC	
		200	100	200	100	50	100	50	100	50	100	50	100	50
1.0* ↓ 9.1*	SA102A1R0DAR ↓ SA102A9R1DAR													
10 12 15	SA102A100JAR SA102A120JAR SA102A150JAR													
18 22 27	SA102A180JAR SA102A220JAR SA102A270JAR													
33 39 47	SA102A330JAR SA102A390JAR SA102A470JAR													
56 68 82	SA102A560JAR SA102A680JAR SA102A820JAR													
100 120 150	SA102A101JAR SA102A121JAR SA101A151JAR													
180 220 270	SA101A181JAR SA101A221JAR SA101A271JAR													
330 390 470	SA101A331JAR SA101A391JAR SA101A471JAR													
560 680 820	SA101A561JAR SA101A681JAR SA101A821JAR													
1000 1200 1500	SA105A102JAR SA201A122JAR SA201A152JAR													
1800 2200 2700	SA205A182JAR SA301A222JAR SA301A272JAR													
3300 3900 4700	SA301A332JAR SA301A392JAR SA305A472JAR													
5600 6800 8200	SA401A562JAR SA401A682JAR SA405A822JAR													
10,000 12,000	SA405A103JAR SA405A123JAR													

For other tolerances see Part No. Codes
For other voltages see Part No. Codes
AVX Style

= Industry preferred values

*"C&D" Tolerance Only

SIZE AND CAPACITANCE SPECIFICATIONS

Dimensions: Millimeters (Inches)

AVX Style		SA05			SA10			SA11		SA20		SA30		SA40	
Length (L)		3.00 (.118")			4.32 (.170")			4.32 (.170")		6.60 (.260")		7.37 (.290")		10.16 (.400")	
Diameter (D)		2.30 (.090")			2.54 (.100")			3.05 (.120")		2.54 (.100")		3.81 (.150")		3.81 (.150")	
Lead Diameter		.445 (.0175")			.445 (.0175")			.445 (.0175")		.445 (.0175")		.445 (.0175")		.445 (.0175")	
Lead Length		25.4 (1.00")			25.4 (1.00")			25.4 (1.00")		25.4 (1.00")		25.4 (1.00")		25.4 (1.00")	
Cap. in pF	Typical AVX Part Nos.	WVDC			WVDC			WVDC		WVDC		WVDC		WVDC	
		200	100	50	200	100	50	100	50	100	50	100	50	100	50
220	SA102C221KAR														
270	SA102C271KAR														
330	SA102C331KAR														
390	SA102C391KAR														
470	SA102C471KAR														
560	SA101C561KAR														
680	SA101C681KAR														
820	SA101C821KAR														
1000	SA101C102KAR														
1200	SA101C122KAR														
1500	SA101C152KAR														
1800	SA101C182KAR														
2200	SA101C222KAR														
2700	SA101C272KAR														
3300	SA101C332KAR														
3900	SA101C392KAR														
4700	SA101C472KAR														
5600	SA101C562KAR														
6800	SA101C682KAR														
8200	SA105C822KAR														
10,000	SA105C103KAR														
12,000	SA105C123KAR														
15,000	SA105C153KAR														
18,000	SA105C183KAR														
22,000	SA105C223KAR														
27,000	SA105C273KAR														
33,000	SA105C333KAR														
39,000	SA105C393KAR														
47,000	SA105C473KAR														
56,000	SA115C563KAR														
68,000	SA115C683KAR														
82,000	SA115C823KAR														
100,000	SA115C104KAR														
120,000	SA305C124KAR														
150,000	SA305C154KAR														
180,000	SA305C184KAR														
220,000	SA305C224KAR														
270,000	SA305C274KAR														
330,000	SA305C334KAR														
470,000	SA405C474KAR														
1,000,000	SA305C105KAR														

For other tolerances see Part No. Codes
 For other voltages see Part No. Codes
 AVX Style

= Industry preferred values

Axial Leads/SpinGuard®



Z5U Dielectric

SIZE AND CAPACITANCE SPECIFICATIONS

Dimensions: Millimeters (Inches)

AVX Style	SA05	SA10	SA11	SA20	SA30	SA40
Length (L)	3.00 (.118")	4.32 (.170")	4.32 (.170")	6.60 (.260")	7.37 (.290")	10.16 (.400")
Diameter (D)	2.30 (.090")	2.54 (.100")	3.05 (.120")	2.54 (.100")	3.81 (.150")	3.81 (.150")
Lead Diameter	.445 (.0175")	.445 (.0175")	.445 (.0175")	.445 (.0175")	.445 (.0175")	.445 (.0175")
Lead Length	25.4 (1.00")	25.4 (1.00")	25.4 (1.00")	25.4 (1.00")	25.4 (1.00")	25.4 (1.00")
Cap. in pF	Typical AVX Part Nos.	WVDC 50	WVDC 100 50	WVDC 100 50	WVDC 100 50	WVDC 100 50
10,000 15,000 22,000	SA105E103ZAR SA105E153ZAR SA105E223ZAR					
33,000 47,000 68,000	SA105E333ZAR SA105E473ZAR SA105E683ZAR					
*100,000 150,000 220,000	SA105E104ZAR SA105E154ZAR SA105E224ZAR					
330,000 470,000 680,000	SA115E334ZAR SA305E474ZAR SA305E684ZAR					
820,000 1,000,000	SA305E824ZAR SA305E105ZAR					

For other tolerances see Part No. Codes
For other voltages see Part No. Codes
AVX Style

 = Industry preferred values

*Preferred Industry Decoupling Capacitor — Insertable on .300" centers.

SA105E104ZAA

Axial Leads/SpinGuard®



X5R Dielectric

SIZE AND CAPACITANCE SPECIFICATIONS

Dimensions: Millimeters (Inches)



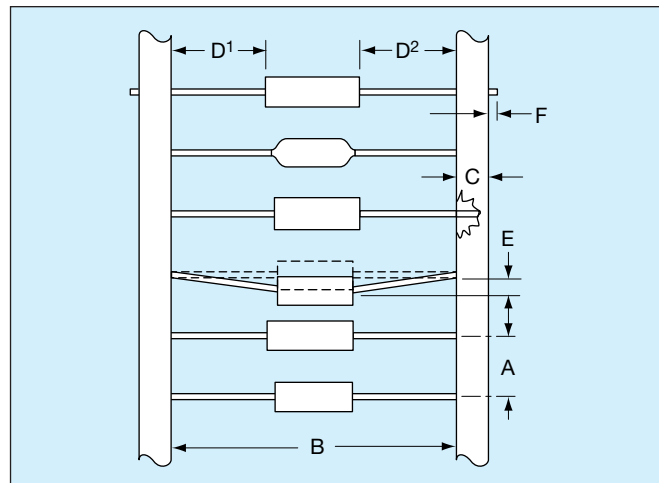
AVX Style		SA10
Length (L)		4.32 (.170")
Diameter (D)		2.54 (.100")
Lead Diameter		.445 (.0175")
Lead Length		25.4 (1.00")
Cap. in μ F	Typical AVX Part Nos.	WVDC 10
1.8	SA10ZD185KAR	
2.7	SA10ZD275KAR	
3.3	SA10ZD335KAR	
4.7	SA10ZD475KAR	

For other tolerances see Part No. Codes
For other voltages see Part No. Codes
AVX Style

 = Industry preferred values

TAPE AND REEL

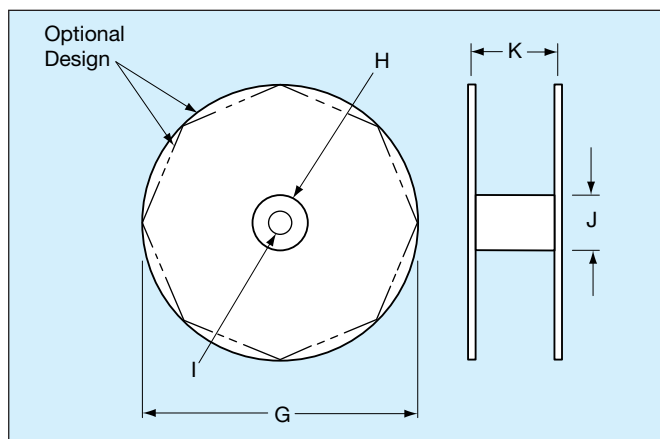
CLASS I / RS-296	
A.	5mm ± 0.5mm (.200" ± 0.020")
B*.	52.4mm ± 1.5mm (2.063" ± 0.059")
C.	6.35mm ± 0.4mm (0.250" ± 0.016")
D ¹ -D ² .	1.4mm (0.055" MAX.)
E.	1.2mm (0.047" MAX.)
F.	1.6mm (0.063" MAX.)
G.	356mm (14.00")
H.	76mm (3.000")
I.	25.4mm (1.000")
J.	84mm (3.300")
K.	70mm (2.750")



Leader Tape: 300mm min. (12")

Splicing: Tape Only

Missing Parts: 0.25% of component count max.-
No consecutive missing parts



REEL QUANTITIES (MAX.) ‡

SA05	7,500 pcs.	MA10	5,000 pcs.
SA10	7,500 pcs.	MA20	5,000 pcs.
SA11	5,000 pcs.	MA30	3,000 pcs.
SA20	5,000 pcs.	MA40	3,000 pcs.
SA30	5,000 pcs.	MA50	950 pcs.
SA40	5,000 pcs.	MA60	650 pcs.

‡ 1000 pc. reels available for distribution pack only in ±1% and ±2% tolerance.

* Standard Tape Spacing Shown. Also available in 26.0mm ± 1.5mm, - 0mm, (1.023 in. + .059 in. - 0 in.) for SpinGuards only. EIA Class I, II and III tape spacings are available for molded axials. Tape spacing for Class II is 63.5mm ± 1.5mm (2.50 in ± .059 in), and for Class III 73mm ± 1.5mm (2.87 in ± .059 in)

ADDITIONAL PACKAGING AVAILABLE

AMMO PACK

Tape Spacing	SA05, SA10 SA20	SA11 SA30	SA40	BOX SIZES (Nominal)		
				L	W	H
52.4mm ± 1.5mm (2.062" ± .059")	4,000 pcs.	2000	2,000 pcs.	255mm (10.039")	73mm (2.874")	93mm (3.661")
26.0mm ± 1.5mm - 0mm (1.023" + .059" - 0")	4,000 pcs.*	2000	2,000 pcs.*	255mm (10.039")	48mm (1.889")	113mm (4.448")

*SpinGuard only

BULK PACK (MOLDED AXIALS ONLY)

MA10 MA20 MA30 MA40	100 pcs. (bag)
MA50 MA60	50 pcs. (bag)

Mouser Electronics

Authorized Distributor

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

AVX:

SA102A300JAA	SA111A152JAA	SA301C683KAA	SA101A221JAA	SA305C105KAA	SA301A222JAA
SA111C223KAA	SA205A202FAA	SA101A471KAA	SA102A330KAA	SA102A330JAA	SA101C223KAA
SA102A150JAA	SA205A222FAA	SA101C222MAA	SA102A680JAA	SA101C272KAA	SA205C333KAA
SA102A220KAA	SA102A220JAA	SA105E104MAA	SA105E104ZAA	SA101C222KAA	SA105E333MAA
SA405C474KAC	SA115E334MAA	SA301E104ZAA	SA102C471KAA	SA105E104MAA-B	SA101E103MAA
SA305E105MAA	SA105E103MAA	SA101C103MAA	SA405A822JAA	SA102A270JAA	SA102A390JAA
SA102A470KAA	SA101A151FAA	SA102A121JAA	SA101A151KAA	SA101A471FAA	SA102A120JAA
SA051C681KAA	SA102A820JAA	SA102C472KAA	SA105E154MAA	SA305C224KAA	SA105E104MAR
SA101A101JAA	SA101A181KAA	SA101A391FAA	SA101A821GAA	SA101C182KAA	SA101C392KAA
SA101E103ZAA	SA101E223MAA	SA102A101JAR	SA102A121KAA	SA102A680KAA	SA102A6R8DAA
SA102C682JAA	SA105C103JAR	SA105C104KAR	SA105C333MAA	SA105E103MAR	SA111A152GAA
SA115C104KAC	SA115C104KAR	SA115C473MAA	SA115C563KAA	SA115E334ZAA	SA201A152JAA
SA201C473MAA	SA201E473MAA	SA205E104ZAA	SA301A392JAA	SA305C224KAR	SA305C334MAA
SA305E105ZAA	SA305E224MAA	SA405A103FAA	SA405C224KAA	SA115C683KAR	SA105C333KAR
SA102A220KAR	SA101A151JAR	SA101C682JAR	SA102C471MAR	SA102A180JAR	SA101C222KAR
SA101A151FAR	SA105E223MAR	SA102A470KAR	SA101C222MAR	SA102A121JAR	SA111C223KAR
SA102A330KAR	SA205A222FAR	SA102C471KAR	SA101A471KAR		