

GENERAL DESCRIPTION

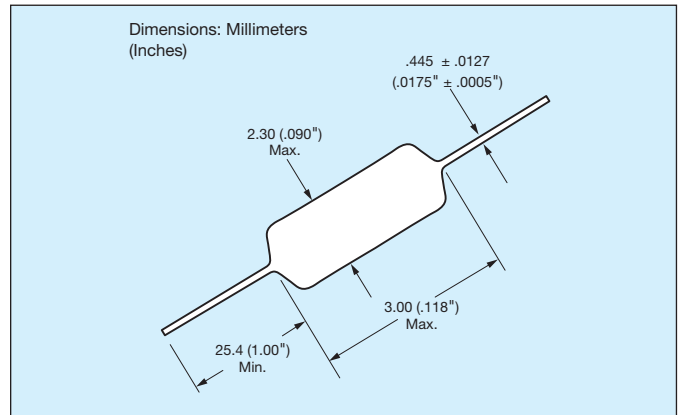
AVX SA Series

Conformally Coated Axial Leaded MLC

Temperature Coefficients: COG (NP0), X7R, X5R, Z5U
10, 50, 100, 200 Volts

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

Lead Material: Solderable



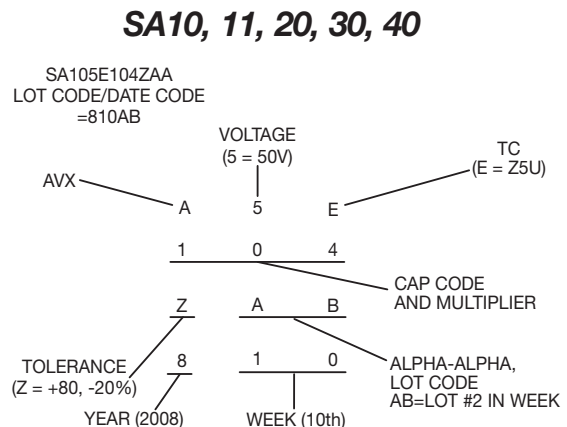
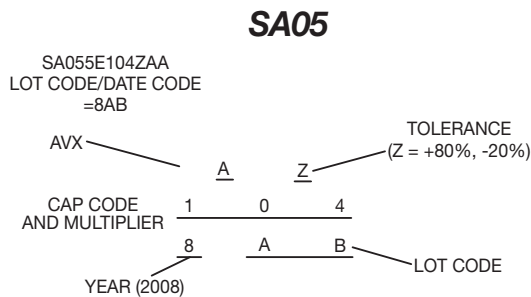
HOW TO ORDER

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 = COG (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.)	COG (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%	A = Not Applicable	Standard (Solderable) R = RoHS Compliant Solderable (Also RoHS Compliant) A = Standard Solderable (Also RoHS Compliant)

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)

Axial Leads/SpinGuard®



C0G (NP0) Dielectric

SIZE AND CAPACITANCE SPECIFICATIONS



Dimensions: Millimeters (Inches)

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

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

= Industry preferred values

**"C&D" Tolerance Only



Axial Leads/SpinGuard®



X7R 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			WVDC		WVDC		WVDC		WVDC	
		200	100	50	200	100	50	100	50	100	50	100
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	SA105E103ZAR					
15,000	SA105E153ZAR					
22,000	SA105E223ZAR					
33,000	SA105E333ZAR					
47,000	SA105E473ZAR					
68,000	SA105E683ZAR					
*100,000	SA105E104ZAR					
150,000	SA105E154ZAR					
220,000	SA105E224ZAR					
330,000	SA115E334ZAR					
470,000	SA305E474ZAR					
680,000	SA305E684ZAR					
820,000	SA305E824ZAR					
1,000,000	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®



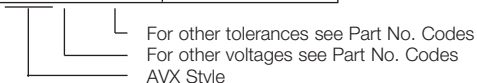
X5R Dielectric

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 μF	Typical AVX Part Nos.	WVDC 10
1.8	SA10ZD185KAR	
2.7	SA10ZD275KAR	
3.3	SA10ZD335KAR	
4.7	SA10ZD475KAR	



 = Industry preferred values



Axial Leads/SpinGuard®/AA Series



Automotive

GENERAL DESCRIPTION

AVX AA Series

Electrical Characteristics: AA101C103K4R

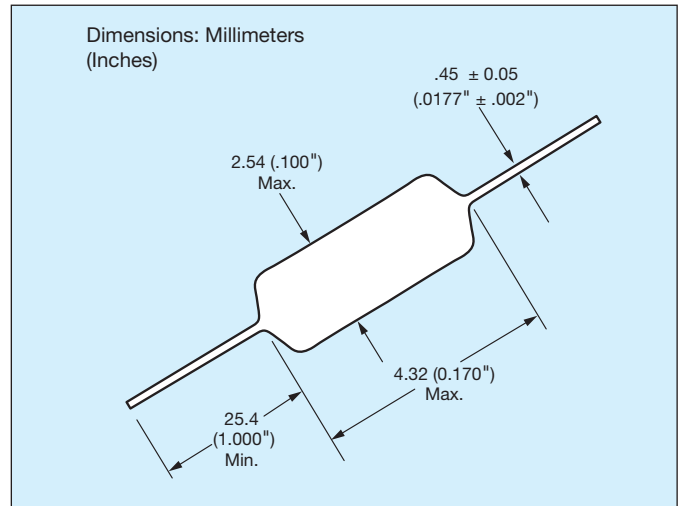
Capacitance @ 25°C, 1kHz, 1Vrms	0.0100µF
Capacitance Tolerance	±10 %
Dissipation Factor @ 25°C	2.5% Max
Rated Voltage	100Vdc
Dielectric Withstand Voltage	250Vdc
Insulation Resistance @ 25°C @ Rated Voltage	100000 Mohms

Temperature Characteristics:

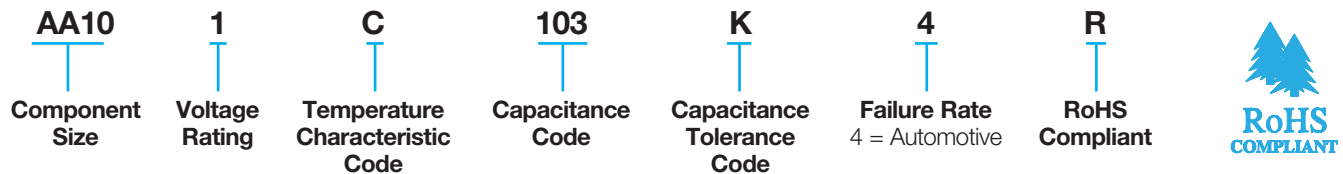
X7R (-55 to + 125°C ± 15% @ 0Vdc)

Lead Material:

RoHS Compliant 100% Tin

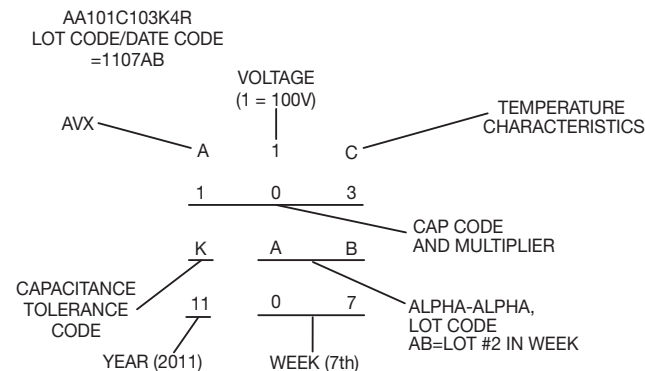


HOW TO ORDER



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

Tape and Reel Ø 14": 7500 pieces

Axial Leads/SpinGuard®/AA Series



Automotive – C0G (NP0) Dielectric

SIZE AND CAPACITANCE SPECIFICATIONS



Dimensions: Millimeters (Inches)

AVX Style		AA10			AA30	
Length (L)		4.32 (.170")			7.37 (.290")	
Diameter (D)		2.54 (.100")			3.81 (.150")	
Lead Diameter		.445 (.0175")			.445 (.0175")	
Lead Length		25.4 (1.00")			25.4 (1.00")	
Cap. in * pF	Typical AVX Part Nos.	WVDC			WVDC	
		200	100	50	100	50
100	AA__A101K4R					
120	AA__A121K4R					
150	AA__A151K4R					
180	AA__A181K4R					
220	AA__A221K4R					
270	AA__A271K4R					
330	AA__A331K4R					
390	AA__A391K4R					
470	AA__A471K4R					
560	AA__A561K4R					
680	AA__A681K4R					
820	AA__A821K4R					
1,000	AA__A102K4R					
1,200	AA__A122K4R					
1,500	AA__A152K4R					
1,800	AA__A182K4R					
2,200	AA__A222K4R					
2,700	AA__A272K4R					
3,300	AA__A332K4R					
3,900	AA__A392K4R					
4,700	AA__A472K4R					
5,600	AA__A562K4R					
6,800	AA__A682K4R					
8,200	AA__A822K4R					
10,000	AA__A103K4R					

For other voltage and tolerances contact factory.

*Other capacitance values available upon special request.



Axial Leads/SpinGuard®/AA Series



Automotive – X7R Dielectric

SIZE AND CAPACITANCE SPECIFICATIONS



Dimensions: Millimeters (Inches)

AVX Style		AA10		AA30	
Length (L)		4.32 (.170")		7.37 (.290")	
Diameter (D)		2.54 (.100")		3.81 (.150")	
Lead Diameter		.445 (.0175")		.445 (.0175")	
Lead Length		25.4 (1.00")		25.4 (1.00")	
Cap. in * pF	Typical AVX Part Nos.	WVDC		WVDC	
		100	50	100	50
220	AA_C221KAR				
270	AA_C271KAR				
330	AA_C331KAR				
390	AA_C391KAR				
470	AA_C471KAR				
560	AA_C561KAR				
680	AA_C681KAR				
820	AA_C821KAR				
1,000	AA_C102KAR				
1,200	AA_C122KAR				
1,500	AA_C152KAR				
1,800	AA_C182KAR				
2,200	AA_C222KAR				
2,700	AA_C272KAR				
3,300	AA_C332KAR				
3,900	AA_C392KAR				
4,700	AA_C472KAR				
5,600	AA_C562KAR				
6,800	AA_C682KAR				
8,200	AA_C822KAR				
10,000	AA_C103KAR				
12,000	AA_C123KAR				
15,000	AA_C153KAR				
18,000	AA_C183KAR				
22,000	AA_C223KAR				
27,000	AA_C273KAR				
33,000	AA_C333KAR				
39,000	AA_C393KAR				
47,000	AA_C473KAR				
56,000	AA_C563KAR				
68,000	AA_C683KAR				
82,000	AA_C823KAR				
100,000	AA_C104KAR				

For other voltage and tolerances contact factory.

*Other capacitance values available upon special request.

GENERAL DESCRIPTION

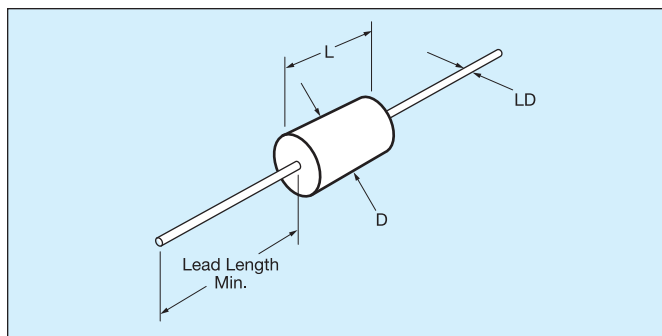
AVX MA Series

Molded Axial Leaded MLC

Temperature Coefficient: COG (NP0), X7R, Z5U
50V, 100V and 200V

Case Material: Molded Epoxy

Lead Material: Solderable



HOW TO ORDER

MA10

Molded Axial Size

MA10
MA20
MA30
MA40
MA50
MA60

5

Voltage

5 = 50V
1 = 100V
2 = 200V

E

Dielectric

A = COG (NP0)
C = X7R
E = Z5U

104

Capacitance

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.)

Z

Capacitance Tolerance

COG (NP0):
F = ±1%
J = ±5%
K = ±10%
M = ±20%
D = ±0.5pF
<10pF only

X7R:
J = ±5%
K = ±10%
M = ±20%

Z5U:
M = ±20%
Z = +80%
-20%

A

Failure Rate
A = Not Applicable

A

Leads
A = Standard

Not RoHS Compliant

‡ C tolerance available COG (NP0) from 1.0 to 9.1 pF only. Minimum tolerance for values 10 pF - 100 pF is D or F whichever is greater.

MARKING (EXAMPLE)

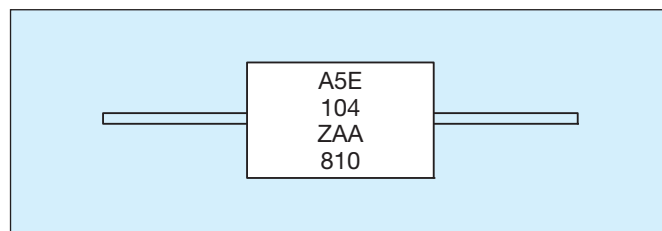
Line 1, A (for AVX), 5 = 50 Volts (V is optional),
E = TC Line 2, 104Z = Capacitance Code

Line 3, Tolerance, 2 digit Lot Code

Date Code: 8 = 2008

10 = Week

Four Digit Date Code Optional



MILITARY CROSS REFERENCE AND DIMENSIONS GUIDE

AVX Style	Per MIL-Spec			Case Size		
	MIL-C-11015	MIL-PRF-39014	MIL-PRF-20	Length (L)	Diameter (D)	Lead Diameter (LD)
MA10	CK12	CKR11	CCR75/CC75	4.07 ± .25 (.160" ± .010")	2.29 ± .25 (.090" ± .010")	.48 ± .05 (.019" ± .002")
MA20	CK13	CKR12	CCR76/CC76	6.35 ± .25 (.250" ± .010")	2.29 ± .25 (.090" ± .010")	.48 ± .05 (.019" ± .002")
MA40	CK14	CKR14	CCR77/CC77	9.91 ± .25 (.390" ± .010")	3.56 ± .25 (.140" ± .010")	.63 ± .05 (.025" ± .002")
MA50	CK15	CKR15	CCR78/CC78	12.7 ± .51 (.500" ± .020")	6.35 ± .38 (.250" ± .015")	.63 ± .05 (.025" ± .002")
MA60	CK16	CKR16	CCR79/CC79	17.53 ± .51 (.690" ± .020")	8.89 ± .51 (.350" ± .015")	.63 ± .05 (.025" ± .002")

For Military/Established Reliability Molded/Axial Lead see MIL-C-11015, MIL-PRF-39014, MIL-PRF-20 Section.

Dimensions: Millimeters (Inches)

Axial Leads/Ceralam®



C0G (NP0) Dielectric

SIZE AND CAPACITANCE SPECIFICATIONS



Dimensions: Millimeters (Inches)

AVX Style		MA10			MA20			MA30			MA40			MA50			MA60		
Length		4.07 ± .25 (.160" ± .010")			6.35 ± .25 (.250" ± .010")			6.09 ± .25 (.240" ± .010")			9.91 ± .25 (.390" ± .010")			12.7 ± .51 (.500" ± .020")			17.53 ± .51 (.690" ± .020")		
Diameter		2.29 ± .25 (.090" ± .010")			2.29 ± .25 (.090" ± .010")			3.30 ± .25 (.130" ± .010")			3.56 ± .25 (.140" ± .010")			6.35 ± .38 (.250" ± .015")			8.89 ± .51 (.350" ± .015")		
Lead Diameter		.48 ± .05 (.019" ± .002")			.48 ± .05 (.019" ± .002")			.48 ± .05 (.019" ± .002")			.63 ± .05 (.025" ± .002")			.63 ± .05 (.025" ± .002")			.63 ± .05 (.025" ± .002")		
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	200	100	50	200	100	50	200	100	50	200	100	50
1.0 to 9.1	MA.....5A1R0DAA MA.....5A9R1DAA																		
10 to 15	MA.....5A100KAA MA.....5A120KAA MA.....5A150KAA																		
18 to 27	MA.....5A180KAA MA.....5A220KAA MA.....5A270KAA																		
33 to 47	MA.....5A330KAA MA.....5A390KAA MA.....5A470KAA																		
56 to 82	MA.....5A560KAA MA.....5A680KAA MA.....5A820KAA																		
100 to 150	MA.....5A101KAA MA.....5A121KAA MA.....5A151KAA																		
180 to 270	MA.....5A181KAA MA.....5A221KAA MA.....5A271KAA																		
330 to 470	MA.....5A331KAA MA.....5A391KAA MA.....5A471KAA																		
560 to 820	MA.....5A561KAA MA.....5A681KAA MA.....5A821KAA																		
1000 to 1500	MA.....5A102KAA MA.....5A122KAA MA.....5A152KAA																		
1800 to 2700	MA.....5A182KAA MA.....5A222KAA MA.....5A272KAA																		
3300 to 4700	MA.....5A332KAA MA.....5A392KAA MA.....5A472KAA																		
5600 to 8200	MA.....5A562KAA MA.....5A682KAA MA.....5A822KAA																		
10,000 to 15,000	MA.....5A103KAA MA.....5A123KAA MA.....5A153KAA																		
18,000 to 27,000	MA.....5A183KAA MA.....5A223KAA MA.....5A273KAA																		
33,000 to 47,000	MA.....5A333KAA MA.....5A393KAA MA.....5A473KAA																		
56,000 to 82,000	MA.....5A563KAA MA.....5A683KAA MA.....5A823KAA																		
100,000 to 150,000	MA.....5A104KAA MA.....5A124KAA MA.....5A154KAA																		

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



X7R Dielectric

SIZE AND CAPACITANCE SPECIFICATIONS



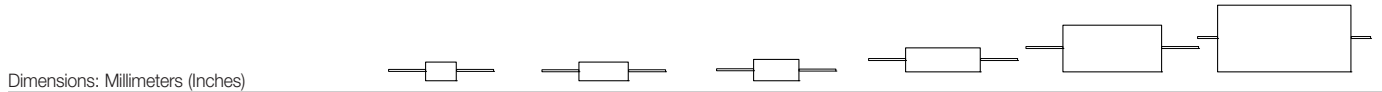
Dimensions: Millimeters (Inches)

AVX Style		MA10			MA20			MA30			MA40			MA50			MA60		
Length		4.07 ± .25 (.160" ± .010")			6.35 ± .25 (.250" ± .010")			6.09 ± .25 (.240" ± .010")			9.91 ± .25 (.390" ± .010")			12.7 ± .51 (.500" ± .020")			17.53 ± .51 (.690" ± .020")		
Diameter		2.29 ± .25 (.090" ± .010")			2.29 ± .25 (.090" ± .010")			3.30 ± .25 (.130" ± .010")			3.56 ± .25 (.140" ± .010")			6.35 ± .38 (.250" ± .015")			8.89 ± .51 (.350" ± .015")		
Lead Diameter		.48 ± .05 (.019" ± .002")			.48 ± .05 (.019" ± .002")			.48 ± .05 (.019" ± .002")			.63 ± .05 (.025" ± .002")			.63 ± .05 (.025" ± .002")			.63 ± .05 (.025" ± .002")		
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	200	100	50	200	100	50	200	100	50	200	100	50
220	MA.....5C221KAA																		
270	MA.....5C271KAA																		
330	MA.....5C331KAA																		
390	MA.....5C391KAA																		
470	MA.....5C471KAA																		
560	MA.....5C561KAA																		
680	MA.....5C681KAA																		
820	MA.....5C821KAA																		
1000	MA.....5C102KAA																		
1200	MA.....5C122KAA																		
1500	MA.....5C152KAA																		
1800	MA.....5C182KAA																		
2200	MA.....5C222KAA																		
2700	MA.....5C272KAA																		
3300	MA.....5C332KAA																		
3900	MA.....5C392KAA																		
4700	MA.....5C472KAA																		
5600	MA.....5C562KAA																		
6800	MA.....5C682KAA																		
8200	MA.....5C822KAA																		
10,000	MA.....5C103KAA																		
12,000	MA.....5C123KAA																		
15,000	MA.....5C153KAA																		
18,000	MA.....5C183KAA																		
22,000	MA.....5C223KAA																		
27,000	MA.....5C273KAA																		
33,000	MA.....5C333KAA																		
39,000	MA.....5C393KAA																		
47,000	MA.....5C473KAA																		
56,000	MA.....5C563KAA																		
68,000	MA.....5C683KAA																		
82,000	MA.....5C823KAA																		
100,000	MA.....5C104KAA																		
120,000	MA.....5C124KAA																		
150,000	MA.....5C154KAA																		
180,000	MA.....5C184KAA																		
220,000	MA.....5C224KAA																		
270,000	MA.....5C274KAA																		
330,000	MA.....5C334KAA																		
390,000	MA.....5C394KAA																		
470,000	MA.....5C474KAA																		
560,000	MA.....5C564KAA																		
680,000	MA.....5C684KAA																		
820,000	MA.....5C824KAA																		
1.0 µF	MA.....5C105KAA																		
1.2 µF	MA.....5C125KAA																		
1.5 µF	MA.....5C155KAA																		
1.8 µF	MA.....5C185KAA																		
2.2 µF	MA.....5C225KAA																		
2.7 µF	MA.....5C275KAA																		
3.3 µF	MA.....5C335KAA																		
3.9 µF	MA.....5C395KAA																		

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

Z5U Dielectric

SIZE AND CAPACITANCE SPECIFICATIONS



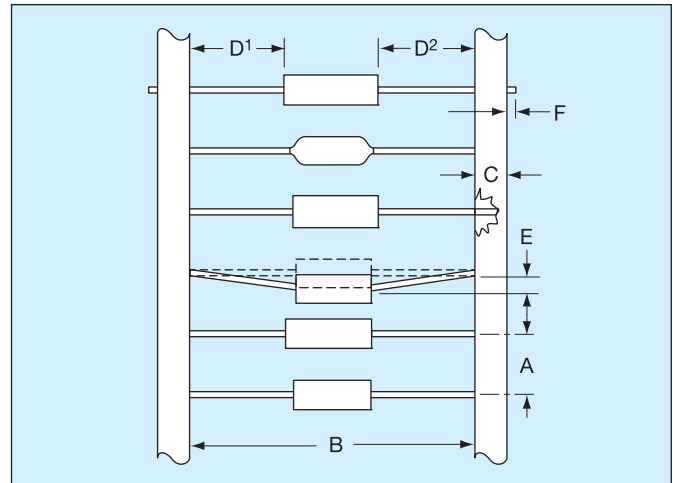
Dimensions: Millimeters (Inches)

AVX Style		MA10	MA20	MA30	MA40	MA50	MA60									
Length		4.07 ± .25 (.160" ± .010")	6.35 ± .25 (.250" ± .010")	6.09 ± .25 (.240" ± .010")	9.91 ± .25 (.390" ± .010")	12.7 ± .51 (.500" ± .020")	17.53 ± .51 (.690" ± .020")									
Diameter		2.29 ± .25 (.090" ± .010")	2.29 ± .25 (.090" ± .010")	3.30 ± .25 (.130" ± .010")	3.56 ± .25 (.140" ± .010")	6.35 ± .38 (.250" ± .015")	8.89 ± .51 (.350" ± .015")									
Lead Diameter		.48 ± .05 (.019" ± .002")	.48 ± .05 (.019" ± .002")	.48 ± .05 (.019" ± .002")	.63 ± .05 (.025" ± .002")	.63 ± .05 (.025" ± .002")	.63 ± .05 (.025" ± .002")									
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		
		200	100	50	200	100	50	200	100	50	200	100	50	200	100	50
1000	MA...5E102ZAA															
1200	MA...5E122ZAA															
1500	MA...5E152ZAA															
1800	MA...5E182ZAA															
2200	MA...5E222ZAA															
2700	MA...5E272ZAA															
3300	MA...5E332ZAA															
3900	MA...5E392ZAA															
4700	MA...5E472ZAA															
5600	MA...5E562ZAA															
6800	MA...5E682ZAA															
8200	MA...5E822ZAA															
10,000	MA...5E103ZAA															
12,000	MA...5E123ZAA															
15,000	MA...5E153ZAA															
18,000	MA...5E183ZAA															
22,000	MA...5E223ZAA															
27,000	MA...5E273ZAA															
33,000	MA...5E333ZAA															
39,000	MA...5E393ZAA															
47,000	MA...5E473ZAA															
56,000	MA...5E563ZAA															
68,000	MA...5E683ZAA															
82,000	MA...5E823ZAA															
100,000	MA...5E104ZAA															
120,000	MA...5E124ZAA															
150,000	MA...5E154ZAA															
180,000	MA...5E184ZAA															
220,000	MA...5E224ZAA															
270,000	MA...5E274ZAA															
330,000	MA...5E334ZAA															
390,000	MA...5E394ZAA															
470,000	MA...5E474ZAA															
560,000	MA...5E564ZAA															
680,000	MA...5E684ZAA															
820,000	MA...5E824ZAA															
1.0 µF	MA...5E105ZAA															
1.2 µF	MA...5E125ZAA															
1.5 µF	MA...5E155ZAA															
1.8 µF	MA...5E185ZAA															
2.2 µF	MA...5E225ZAA															
2.7 µF	MA...5E275ZAA															
3.3 µF	MA...5E335ZAA															
3.9 µF	MA...5E395ZAA															
4.7 µF	MA...5E475ZAA															
5.6 µF	MA...5E565ZAA															
6.8 µF	MA...5E685ZAA															
8.2 µF	MA...5E825ZAA															

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

TAPE AND REEL

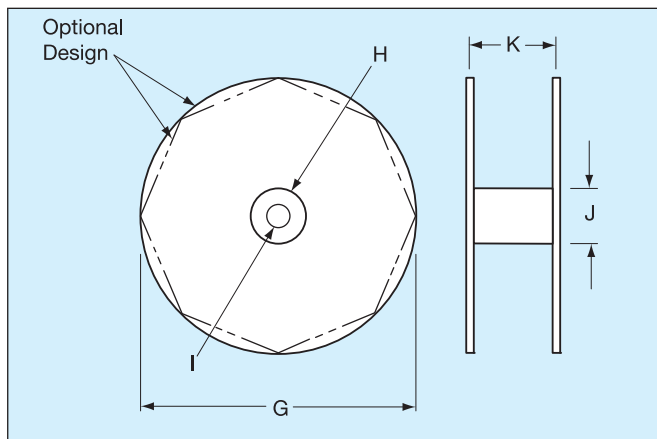
CLASS I / RS-296	
A.	5mm ± 0.5mm (.200" ± 0.020")
B*	52.4mm ± 1.5mm (2.063" ± 0.059")
C.	6.35mm ± 0.4mm (0.250" ± 0.016")
D ¹ -D ² .	1.4mm (0.055" MAX.)
E.	1.2mm (0.047" MAX.)
F.	1.6mm (0.063" MAX.)
G.	356mm (14.00")
H.	76mm (3.000")
I.	25.4mm (1.000")
J.	84mm (3.300")
K.	70mm (2.750")



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)