

GENERAL INFORMATION

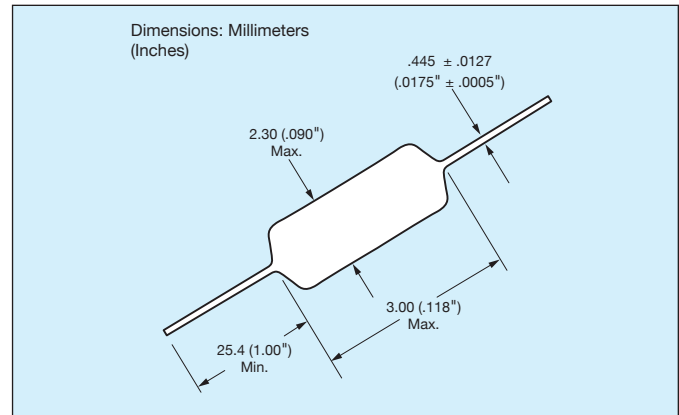
AVX SA Series

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

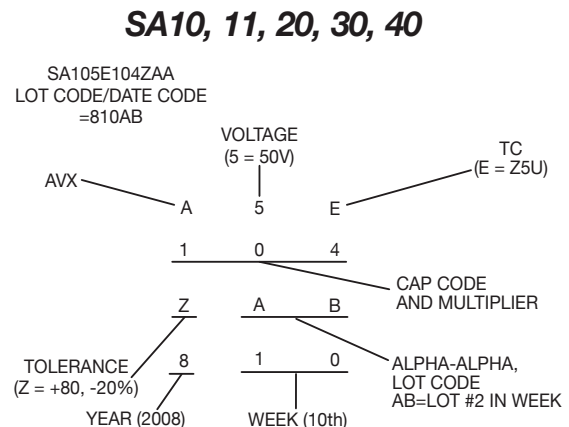
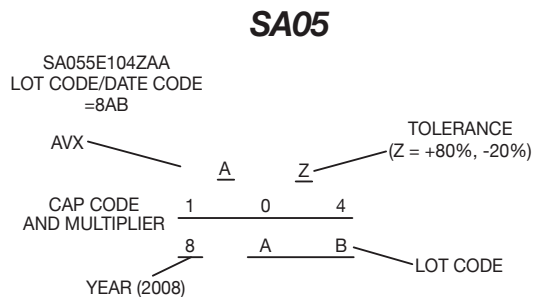
SA10	5	E	104	Z	A	R
Conformal Axial Size	Voltage	Dielectric	Capacitance	Capacitance Tolerance	Failure Rate	Leads
SA05 SA10 SA11 SA20 SA30 SA40	Z = 10V 5 = 50V 1 = 100V 2 = 200V	A = C0G (NP0) C = X7R D = X5R E = Z5U	First two digits are the significant figures of capacitance. Third digit indicates the 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%	A = Not Applicable	Standard (Solderable) R = 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)		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	
		100	50	200	100	50	100	50	100	50	100	50	100	50
1.0*	SA102A1R0DAR													
9.1*	SA102A9R1DAR													
10	SA102A100JAR													
12	SA102A120JAR													
15	SA102A150JAR													
18	SA102A180JAR													
22	SA102A220JAR													
27	SA102A270JAR													
33	SA102A330JAR													
39	SA102A390JAR													
47	SA102A470JAR													
56	SA102A560JAR													
68	SA102A680JAR													
82	SA102A820JAR													
100	SA102A101JAR													
120	SA102A121JAR													
150	SA101A151JAR													
180	SA101A181JAR													
220	SA101A221JAR													
270	SA101A271JAR													
330	SA101A331JAR													
390	SA101A391JAR													
470	SA101A471JAR													
560	SA101A561JAR													
680	SA101A681JAR													
820	SA101A821JAR													
1000	SA105A102JAR													
1200	SA201A122JAR													
1500	SA201A152JAR													
1800	SA205A182JAR													
2200	SA301A222JAR													
2700	SA301A272JAR													
3300	SA301A332JAR													
3900	SA301A392JAR													
4700	SA305A472JAR													
5600	SA401A562JAR													
6800	SA401A682JAR													
8200	SA405A822JAR													
10,000	SA405A103JAR													
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

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		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	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

X7R 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	

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

 = Industry preferred values

Axial Leads/SpinGuard®/AA Series



Automotive

GENERAL INFORMATION

AVX AA Series

Electrical Characteristics: AA101C103K4R

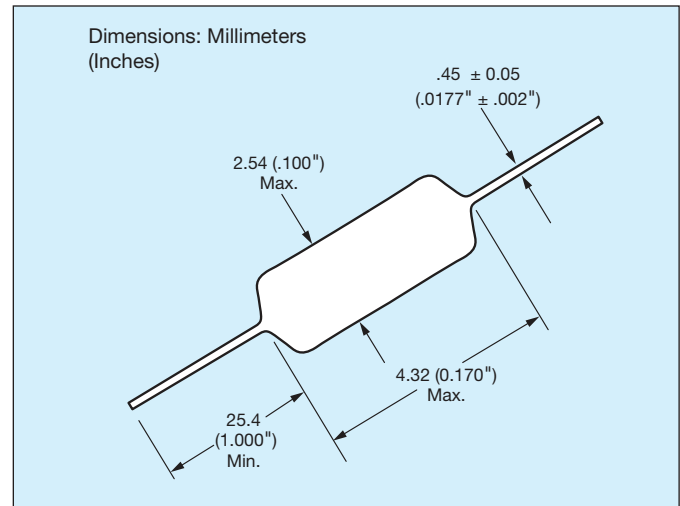
Capacitance @ 25°C, 1kHz, 1Vrms	0.0100μF
Capacitance Tolerance	±10 %
Dissipation Factor @ 25°C	2.5% Max
Rated Voltage	100Vdc
Dielectric Withstand Voltage	250Vdc
Insulation Resistance @ 25°C @ Rated Voltage	100000 Mohms

Temperature Characteristics:

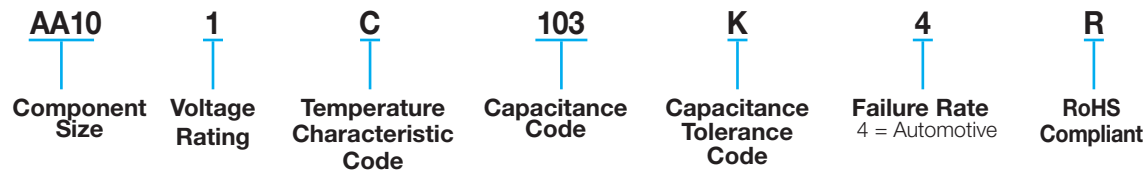
X7R (-55 to + 125°C ± 15% @ 0Vdc)

Lead Material:

RoHS Compliant 100% Tin

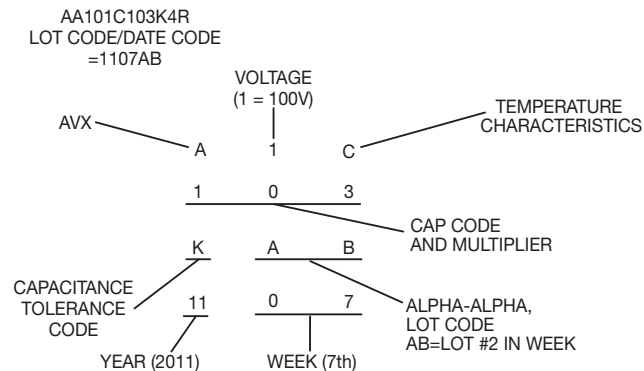


HOW TO ORDER



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 INFORMATION

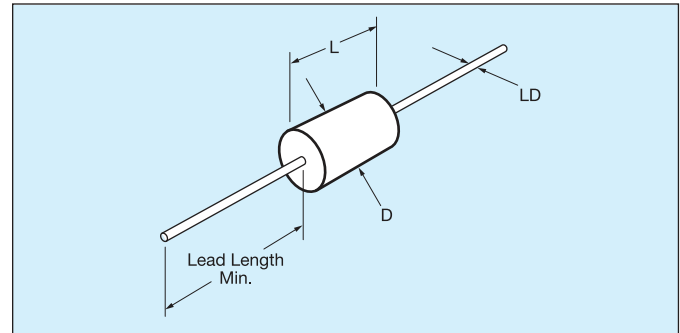
AVX SA Series

Molded Axial Leaded MLC

Temperature Coefficients: C0G (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 = C0G (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

C0G (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

R

Leads

A = Standard

Not RoHS Compliant

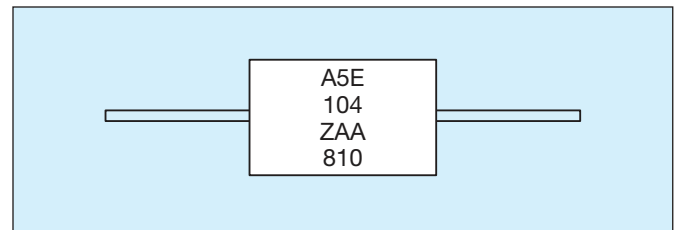
‡ C tolerance available C0G (NP0) from 1.0 to 9.1 pF only. Minimum tolerance for values 10 pF - 100 pF is D or F whichever is greater.

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)

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

SIZE AND CAPACITANCE SPECIFICATIONS

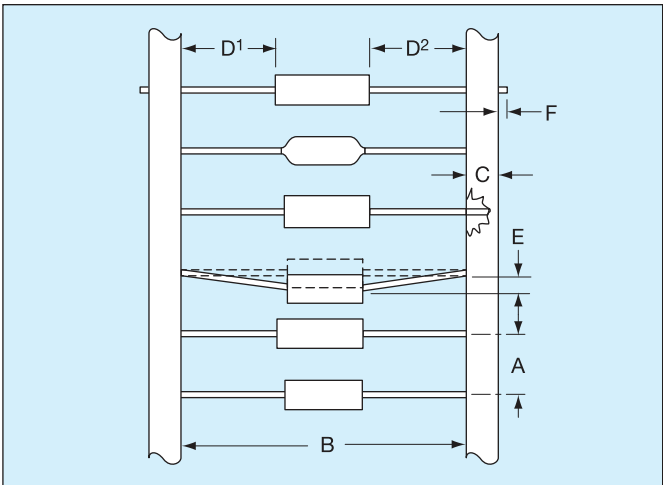
Dimensions: Millimeters (Inches)

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
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																		
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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

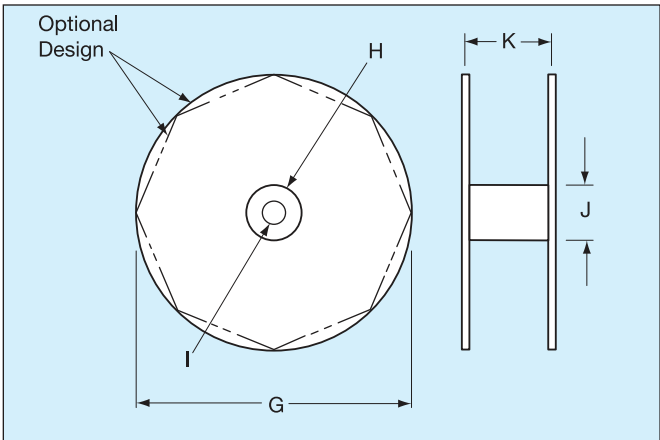
CLASS I / RS-296	
A.	5mm ± 0.5mm (.200" ± 0.020")
B*.	52.4mm ± 1.5mm (2.063" ± 0.059")
C.	6.35mm ± 0.4mm (0.250" ± 0.016")
D1-D2.	1.4mm (0.055" MAX.)
E.	1.2mm (0.047" MAX.)
F.	1.6mm (0.063" MAX.)
G.	356mm (14.00")
H.	76mm (3.000")
I.	25.4mm (1.000")
J.	84mm (3.300")
K.	70mm (2.750")



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:

[Kyocera AVX:](#)

[SA101C471KAA](#) [SA101A201JAR](#) [SA052A180JAR](#) [SA102A3R9DAR](#) [SA102A1R5DAR](#) [SA055C104KAR](#)