



**THE DATASHEET OF  
SA105E224MAC**



# AXIAL LEADS

## SpinGuard®/SA Series

### GENERAL INFORMATION

#### 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

<b>SA10</b>	<b>5</b>	<b>E</b>	<b>104</b>	<b>Z</b>	<b>A</b>	<b>R</b>
<b>Conformal Axial Size</b>	<b>Voltage</b>	<b>Dielectric</b>	<b>Capacitance</b>	<b>Capacitance Tolerance</b>	<b>Failure Rate</b>	<b>Leads</b>
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 A = Standard Solderable (Also RoHS Compliant)

**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® - SA Series - COG (NP0) Dielectric

### SIZE AND CAPACITANCE SPECIFICATIONS

Dimensions: Millimeters (Inches)

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")												
Lead Length		25.4 (1.00")												
Cap. in. pF	Typical 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													
<b>100</b>	<b>SA102A101JAR</b>													
120	SA102A121JAR													
150	SA101A151JAR													
180	SA101A181JAR													
220	SA101A221JAR													
270	SA101A271JAR													
330	SA101A331JAR													
390	SA101A391JAR													
470	SA101A471JAR													
560	SA101A561JAR													
680	SA101A681JAR													
820	SA101A821JAR													
<b>1000</b>	<b>SA105A102JAR</b>													
1200	SA201A122JAR													
1500	SA201A152JAR													
1800	SA205A182JAR													
<b>2200</b>	<b>SA301A222JAR</b>													
2700	SA301A272JAR													
3300	SA301A332JAR													
3900	SA301A392JAR													
<b>4700</b>	<b>SA305A472JAR</b>													
5600	SA401A562JAR													
6800	SA401A682JAR													
<b>8200</b>	<b>SA405A822JAR</b>													
<b>10,000</b>	<b>SA405A103JAR</b>													
12,000	SA405A123JAR													

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

= Industry preferred values

\*\*C&D" Tolerance Only

# AXIAL LEADS/

## SpinGuard® - SA Series - X7R Dielectric

### SIZE AND CAPACITANCE SPECIFICATIONS

Dimensions: Millimeters (Inches)



Style	SA05	SA10			SA11		SA20		SA30		SA40	
		Length (L)	Diameter (D)	Lead Diameter	Lead Length	Length (L)	Diameter (D)	Lead Diameter	Lead Length	Length (L)	Diameter (D)	Lead Diameter
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											
<b>10,000</b>	<b>SA105C103KAR</b>											
12,000	SA105C123KAR											
15,000	SA105C153KAR											
18,000	SA105C183KAR											
22,000	SA105C223KAR											
27,000	SA105C273KAR											
33,000	SA105C333KAR											
39,000	SA105C393KAR											
<b>47,000</b>	<b>SA105C473KAR</b>											
56,000	SA115C563KAR											
68,000	SA115C683KAR											
82,000	SA115C823KAR											
<b>100,000</b>	<b>SA115C104KAR</b>											
120,000	SA305C124KAR											
150,000	SA305C154KAR											
180,000	SA305C184KAR											
<b>220,000</b>	<b>SA305C224KAR</b>											
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  
 Style

 = Industry preferred values

# AXIAL LEADS/SPINGUARD®

## SpinGuard® - SA Series - Z5U Dielectric



### SIZE AND CAPACITANCE SPECIFICATIONS

Dimensions: Millimeters (Inches)

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

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

= Industry preferred values

\*Preferred Industry Decoupling Capacitor — Insertable on .300" centers.  
**SA105E104ZAA**

## Looking for pricing, stock, or lifecycle information?

Click below to explore more details on WIN SOURCE:

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## Optimize Your Supply Chain with WIN SOURCE Solutions

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- ✓ Obsolete Management
- ✓ Cost Control Management
- ✓ Shortage Management
- ✓ Alternative Solution
- ✓ Excess Inventory Management