



**THE DATASHEET OF
SA102A220FAR**



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

| | | | | | | |
|--|--|--|--|--|---|---|
| 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 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") | | .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 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
 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) | 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 Part Nos. | WVDC | | | WVDC | | | WVDC | | WVDC | | WVDC | | | |
| | | 200 | 100 | 50 | 200 | 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
 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 | | | | | | |
|----------------------|--------------------------|------------------|------------------|------------------|------------------|------------------|-----|-------------|-----|-------------|-----|----|
| 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 Part Nos. | WVDC | | WVDC | | WVDC | | WVDC | | WVDC | | |
| | | 50 | 100 | 50 | 100 | 50 | 100 | 50 | 100 | 50 | 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
 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:

- ⊖ [View SA102A220FAR](#) on WIN SOURCE
- ⊖ [AVX Corp/Kyocera Corp](#) Information

Optimize Your Supply Chain with WIN SOURCE Solutions

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