

GENERAL DESCRIPTION

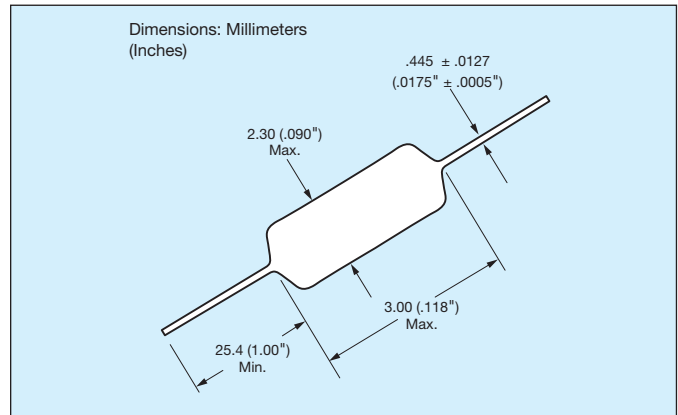
AVX SA Series

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

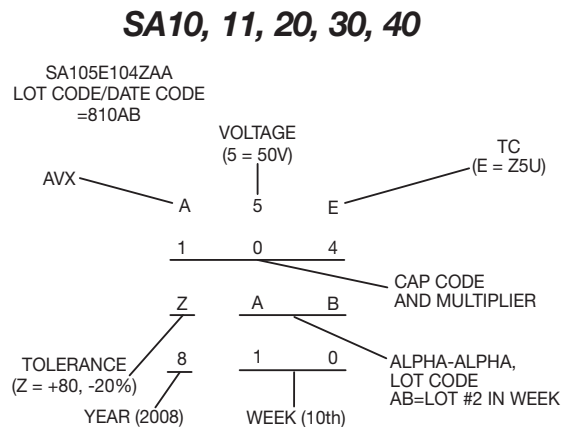
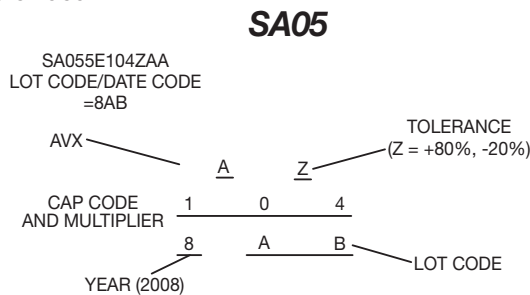


HOW TO ORDER

| | | | | | | |
|--|--|--|---|---|---------------------|---|
| 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% | A = Not Applicable | Standard (Solderable) R = RoHS Compliant A = Standard Solderable |

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 48)
- B = 1000 piece reels (distributors only, tight tolerance only)
- C = Ammo Pack (see Page 48)
- D thru J = See Special Lead Configurations (Page 41)
- M = 26mm tape and reel
- N = 26mm ammo pack
- R = RoHS, Standard reels (See page 48)

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 | | 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 | | | | | | | | | | | | | | |

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)



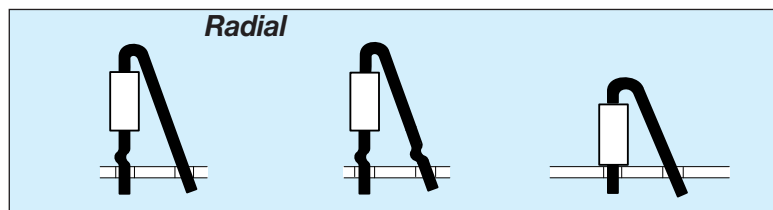
| AVX Style | | SA10 |
|-----------------|-----------------------|------------------|
| Length (L) | | 4.32 (.170") |
| Diameter (D) | | 2.54 (.100") |
| Lead Diameter | | .445 (.0175") |
| Lead Length | | 25.4 (1.00") |
| Cap. in μ F | Typical AVX Part Nos. | WVDC 10 |
| 1.8 | SA10ZD185KAR | |
| 2.7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

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

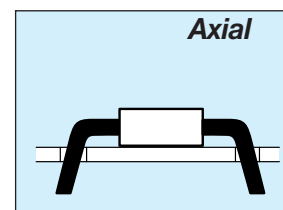
= Industry preferred values

SPECIAL LEAD CONFIGURATIONS

Dimensions — Body dimensions Per Standard SpinGuard Configurations.
 Formed dimensions as shown for types D, E, F, G, H, I, & J configurations.



D Single Crimp E Dual Crimp F No Crimp



G = .300" L.S. I = .500" L.S.
 H = .400" L.S. J = .600" L.S.

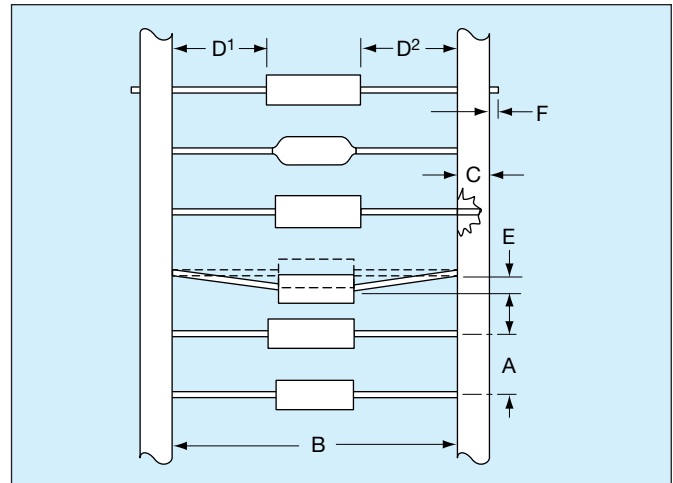
Formed Dimensions:

| | LEAD SPACING* | SEATED HEIGHT (Max.) | | |
|------|---------------|----------------------|-------|-------------|
| | Nom. | D & E | F | G, H, I & J |
| SA10 | .2" | .525" | .300" | .100" |
| SA20 | .2" | .570" | .375" | .100" |
| SA30 | .2" | .580" | .425" | .150" |
| SA40 | .2" | .650" | .460" | .150" |

*Lead spacing can be varied by user to cover .1"- .3" spacing requirements for F, D, and E styles.

TAPE AND REEL

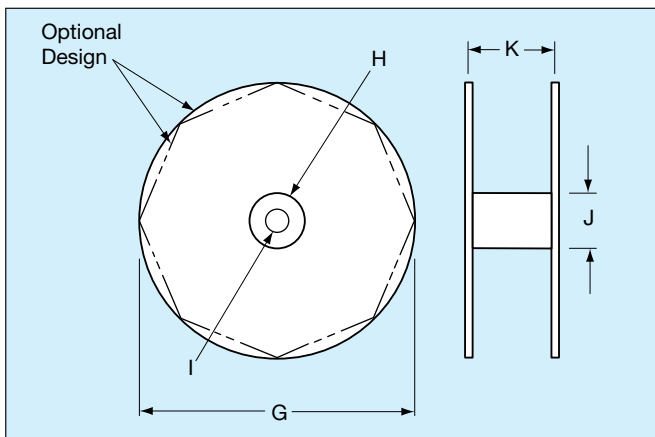
| CLASS I / RS-296 | |
|----------------------------------|-------------------------------------|
| A. | 5mm ± 0.5mm (.200" ± 0.020") |
| B* | 52.4mm ± 1.5mm (2.063" ± 0.059") |
| C. | 6.35mm ± 0.4mm (0.250" ± 0.016") |
| D ¹ -D ² . | 1.4mm (0.055" MAX.) |
| E. | 1.2mm (0.047" MAX.) |
| F. | 1.6mm (0.063" 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) |

Данный компонент на территории Российской Федерации

Вы можете приобрести в компании MosChip.

Для оперативного оформления запроса Вам необходимо перейти по данной ссылке:

<http://moschip.ru/get-element>

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Нашей специализацией является поставка электронной компонентной базы двойного назначения, продукции таких производителей как XILINX, Intel (ex.ALTERA), Vicor, Microchip, Texas Instruments, Analog Devices, Mini-Circuits, Amphenol, Glenair.

Сотрудничество с глобальными дистрибьюторами электронных компонентов, предоставляет возможность заказывать и получать с международных складов практически любой перечень компонентов в оптимальные для Вас сроки.

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