

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

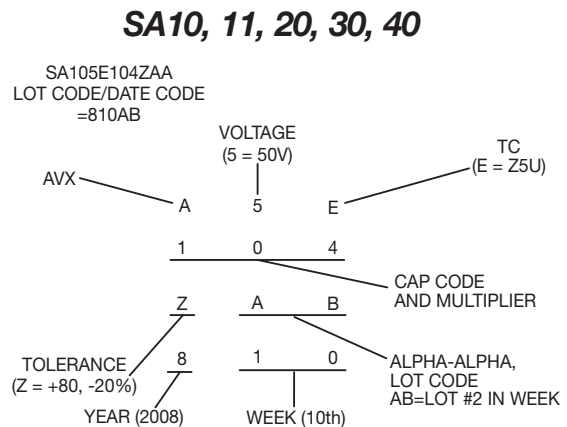
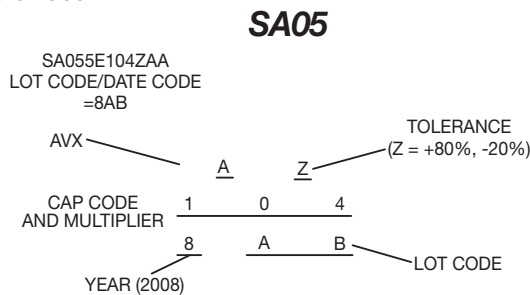


HOW TO ORDER

| | | | | | | |
|--|--|--|---|---|---------------------|---|
| 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®



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 | |
| | | 200 | 100 | 200 | 100 | 50 | 100 |
| | | | | 200 | 100 | 50 | 100 |
| | | | | | 100 | 50 | 100 |
| | | | | | | 100 | 50 |
| | | | | | | | 100 |
| | | | | | | | |
| 1.0* ↓ 9.1* | SA102A1R0DAR ↓ SA102A9R1DAR | | | | | | |
| 10 12 15 | SA102A100JAR SA102A120JAR SA102A150JAR | | | | | | |
| 18 22 27 | SA102A180JAR SA102A220JAR SA102A270JAR | | | | | | |
| 33 39 47 | SA102A330JAR SA102A390JAR SA102A470JAR | | | | | | |
| 56 68 82 | SA102A560JAR SA102A680JAR SA102A820JAR | | | | | | |
| 100 120 150 | SA102A101JAR SA102A121JAR SA101A151JAR | | | | | | |
| 180 220 270 | SA101A181JAR SA101A221JAR SA101A271JAR | | | | | | |
| 330 390 470 | SA101A331JAR SA101A391JAR SA101A471JAR | | | | | | |
| 560 680 820 | SA101A561JAR SA101A681JAR SA101A821JAR | | | | | | |
| 1000 1200 1500 | SA105A102JAR SA201A122JAR SA201A152JAR | | | | | | |
| 1800 2200 2700 | SA205A182JAR SA301A222JAR SA301A272JAR | | | | | | |
| 3300 3900 4700 | SA301A332JAR SA301A392JAR SA305A472JAR | | | | | | |
| 5600 6800 8200 | SA401A562JAR SA401A682JAR SA405A822JAR | | | | | | |
| 10,000 12,000 | SA405A103JAR 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 | | WVDC | | |
| | | 200 | 100 | 50 | 200 | 100 | 50 | 100 | 50 | 100 | 50 | 100 | 50 | 100 | 50 |
| 220 270 330 | SA102C221KAR SA102C271KAR SA102C331KAR | | | | | | | | | | | | | | |
| 390 470 560 | SA102C391KAR SA102C471KAR SA101C561KAR | | | | | | | | | | | | | | |
| 680 820 1000 | SA101C681KAR SA101C821KAR SA101C102KAR | | | | | | | | | | | | | | |
| 1200 1500 1800 | SA101C122KAR SA101C152KAR SA101C182KAR | | | | | | | | | | | | | | |
| 2200 2700 3300 | SA101C222KAR SA101C272KAR SA101C332KAR | | | | | | | | | | | | | | |
| 3900 4700 5600 | SA101C392KAR SA101C472KAR SA101C562KAR | | | | | | | | | | | | | | |
| 6800 8200 10,000 | SA101C682KAR SA105C822KAR SA105C103KAR | | | | | | | | | | | | | | |
| 12,000 15,000 18,000 | SA105C123KAR SA105C153KAR SA105C183KAR | | | | | | | | | | | | | | |
| 22,000 27,000 33,000 | SA105C223KAR SA105C273KAR SA105C333KAR | | | | | | | | | | | | | | |
| 39,000 47,000 56,000 | SA105C393KAR SA105C473KAR SA115C563KAR | | | | | | | | | | | | | | |
| 68,000 82,000 100,000 | SA115C683KAR SA115C823KAR SA115C104KAR | | | | | | | | | | | | | | |
| 120,000 150,000 180,000 | SA305C124KAR SA305C154KAR SA305C184KAR | | | | | | | | | | | | | | |
| 220,000 270,000 330,000 | SA305C224KAR SA305C274KAR 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)



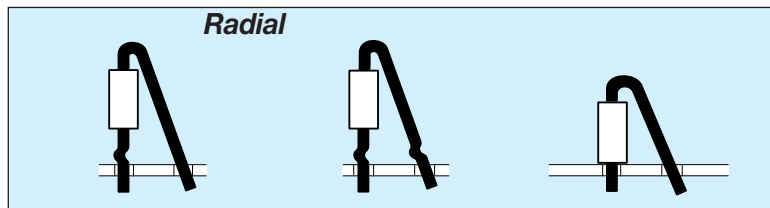
| AVX Style | | SA10 |
|-----------------------|-----------------------|------------------|
| Length (L) | | 4.32 (.170") |
| Diameter (D) | | 2.54 (.100") |
| Lead Diameter | | .445 (.0175") |
| Lead Length | | 25.4 (1.00") |
| Cap. in μF | Typical AVX Part Nos. | WVDC 10 |
| 1.8 | SA10ZD185KAR | |
| 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

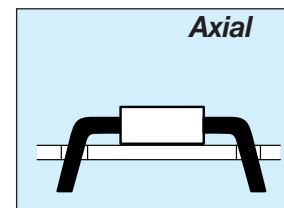
= Industry preferred values

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.

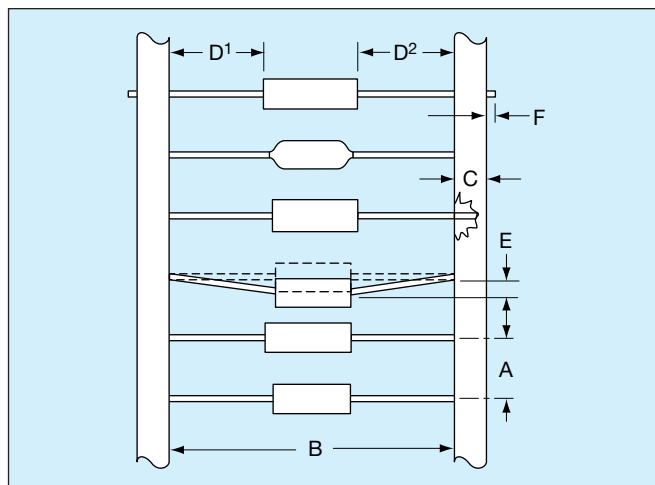
Formed Dimensions:

| | 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

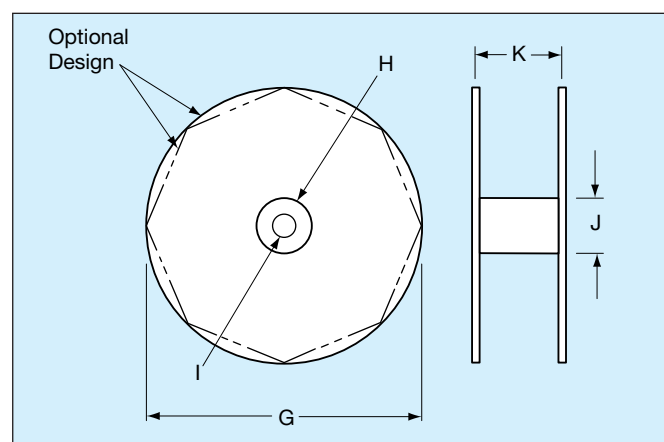
| CLASS I / RS-296 | |
|----------------------------------|-------------------------------------|
| A. | 5mm ± 0.5mm (.200" ± 0.020") |
| B* | 52.4mm ± 1.5mm (2.063" ± 0.059") |
| C. | 6.35mm ± 0.4mm (0.250" ± 0.016") |
| D ¹ -D ² . | 1.4mm (0.055" MAX.) |
| E. | 1.2mm (0.047" MAX.) |
| F. | 1.6mm (0.063"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



Компания «ЭлектроПласт» предлагает заключение долгосрочных отношений при поставках импортных электронных компонентов на взаимовыгодных условиях!

Наши преимущества:

- Оперативные поставки широкого спектра электронных компонентов отечественного и импортного производства напрямую от производителей и с крупнейших мировых складов;
- Поставка более 17-ти миллионов наименований электронных компонентов;
- Поставка сложных, дефицитных, либо снятых с производства позиций;
- Оперативные сроки поставки под заказ (от 5 рабочих дней);
- Экспресс доставка в любую точку России;
- Техническая поддержка проекта, помощь в подборе аналогов, поставка прототипов;
- Система менеджмента качества сертифицирована по Международному стандарту ISO 9001;
- Лицензия ФСБ на осуществление работ с использованием сведений, составляющих государственную тайну;
- Поставка специализированных компонентов (Xilinx, Altera, Analog Devices, Intersil, Interpoint, Microsemi, Aeroflex, Peregrine, Syfer, Eurofarad, Texas Instrument, Miteq, Cobham, E2V, MA-COM, Hittite, Mini-Circuits, General Dynamics и др.);

Помимо этого, одним из направлений компании «ЭлектроПласт» является направление «Источники питания». Мы предлагаем Вам помощь Конструкторского отдела:

- Подбор оптимального решения, техническое обоснование при выборе компонента;
- Подбор аналогов;
- Консультации по применению компонента;
- Поставка образцов и прототипов;
- Техническая поддержка проекта;
- Защита от снятия компонента с производства.



Как с нами связаться

Телефон: 8 (812) 309 58 32 (многоканальный)

Факс: 8 (812) 320-02-42

Электронная почта: org@eplast1.ru

Адрес: 198099, г. Санкт-Петербург, ул. Калинина, дом 2, корпус 4, литера А.