

RADIAL LEADS

SkyCap®/SR Series



GENERAL INFORMATION

AVX SR Series

Conformally Coated Radial Ledged MLC

Temperature Coefficients: COG (NP0), X7R, Z5U

200, 100, 50 Volts (300V, 400V & 500V also available)

Case Material: Epoxy

Lead Material: RoHS Compliant, 100% Tin



HOW TO ORDER

| SR21 | 5 | E | 104 | M | A | R | TR1 |
|--|---|-------------------------------------|---|--|---|--------------------------------|---|
| AVX Style | Voltage | Temperature Coefficient | Capacitance | Capacitance Tolerance | Failure Rate | Leads | Packaging |
| SR15 SR20 SR21 SR22 SR27 SR30 SR40 SR50 | 5 = 50V 1 = 100V 2 = 200V 9 = 300V 8 = 400V 7 = 500V | A = COG (NP0) C = X7R 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% (>50pF only) G = ±2% (>25pF only) J = ±5% K = ±10% | X7R: J = ±5% K = ±10% M = ±20% Z5U: M = ±20% Z = +80% -20% | A = Not Applicable R = RoHS | Blank: Bulk Packaging 1.0" minimum of lead length T: Trimmed leads .230" ± .030" Bulk packaging TR1: Tape and Reel Packaging AP1: Ammopack packaging See packaging specification pages 33-34 |



MARKING



PACKAGING REQUIREMENTS

| | Quantity per Bag |
|--------------------------|------------------|
| SR15, 20, 21, 22, 27, 30 | 1000 Pieces |
| SR40, 50 | 500 Pieces |

Note: SR15, SR20, SR21, SR30, and SR40 available on tape and reel per EIA specifications RS-468. See Pages 33 and 34.

RADIAL LEADS

COG (NP0) Dielectric



SIZE AND CAPACITANCE SPECIFICATIONS

EIA Characteristic

Dimensions: Millimeters (Inches)

| AVX Style | SR15 | SR20 | SR21 | SR22 | SR27 | SR30 | SR40 | SR50 | | | | | | | | | | | | |
|-----------------------------|--------------------------------------|-----------------|-----------------|-----------------|-----------------|----------------|-----------------|-----------------|-----|----|------|-----|----|------|-----|------|-----|------|-----|----|
| AVX "Insertable" | SR07 | SR29 | SR59 | N/A | N/A | SR65 | SR75 | N/A | | | | | | | | | | | | |
| Width (W) | 3.81 (.150) | 5.08 (.200) | 5.08 (.200) | 5.08 (.200) | 6.604 (.260) | 7.62 (.300) | 10.16 (.400) | 12.70 (.500) | | | | | | | | | | | | |
| Height (H) | 3.81 (.150) | 5.08 (.200) | 5.08 (.200) | 5.08 (.200) | 6.35 (.250) | 7.62 (.300) | 10.16 (.400) | 12.70 (.500) | | | | | | | | | | | | |
| Thickness (T) | 2.54 (.100) | 3.175 (.125) | 3.175 (.125) | 3.175 (.125) | 4.06 (.160) | 3.81 (.150) | 3.81 (.150) | 5.08 (.200) | | | | | | | | | | | | |
| Lead Spacing (L.S.) | 2.54 (.100) | 2.54 (.100) | 5.08 (.200) | 6.35 (.250) | 7.62 (.300) | 5.08 (.200) | 5.08 (.200) | 10.16 (.400) | | | | | | | | | | | | |
| Lead Diameter (L.D.) | .508 (.020) | .508 (.020) | .508 (.020) | .508 (.020) | .508 (.020) | .508 (.020) | .508 (.020) | .635 (.025) | | | | | | | | | | | | |
| Cap. in.* pF | Industry Preferred Values in Blue | WVDC | | | WVDC | | | WVDC | | | WVDC | | | WVDC | | WVDC | | WVDC | | |
| | | 200 | 100 | 50 | 200 | 100 | 50 | 200 | 100 | 50 | 200 | 100 | 50 | 200 | 100 | 50 | 100 | 50 | 100 | 50 |
| 1.0-9.9 | SR151A1R0DAR | | | | | | | | | | | | | | | | | | | |
| 10 | SR151A100KAR | | | | | | | | | | | | | | | | | | | |
| 15 | SR....A150KAR | | | | | | | | | | | | | | | | | | | |
| 22 | SR....A220KAR | | | | | | | | | | | | | | | | | | | |
| 33 | SR....A330KAR | | | | | | | | | | | | | | | | | | | |
| 39 | SR....A390KAR | | | | | | | | | | | | | | | | | | | |
| 47 | SR....A470KAR | | | | | | | | | | | | | | | | | | | |
| 68 | SR....A680KAR | | | | | | | | | | | | | | | | | | | |
| 100 | SR151A101KAR | | | | | | | | | | | | | | | | | | | |
| 150 | SR....A151KAR | | | | | | | | | | | | | | | | | | | |
| 220 | SR....A221KAR | | | | | | | | | | | | | | | | | | | |
| 330 | SR....A331KAR | | | | | | | | | | | | | | | | | | | |
| 390 | SR....A391KAR | | | | | | | | | | | | | | | | | | | |
| 470 | SR....A471KAR | | | | | | | | | | | | | | | | | | | |
| 680 | SR....A681KAR | | | | | | | | | | | | | | | | | | | |
| 1000 | SR211A102KAR | | | | | | | | | | | | | | | | | | | |
| 1500 | SR....A152KAR | | | | | | | | | | | | | | | | | | | |
| 2200 | SR....A222KAR | | | | | | | | | | | | | | | | | | | |
| 3900 | SR....A392KAR | | | | | | | | | | | | | | | | | | | |
| 4700 | SR....A472KAR | | | | | | | | | | | | | | | | | | | |
| 6800 | SR....A682KAR | | | | | | | | | | | | | | | | | | | |
| 8200 | SR....A822KAR | | | | | | | | | | | | | | | | | | | |
| 10,000 | SR....A103KAR | | | | | | | | | | | | | | | | | | | |
| 15,000 | SR....A153KAR | | | | | | | | | | | | | | | | | | | |
| 22,000 | SR....A223KAR | | | | | | | | | | | | | | | | | | | |
| 33,000 | SR....A333KAR | | | | | | | | | | | | | | | | | | | |
| 39,000 | SR....A393KAR | | | | | | | | | | | | | | | | | | | |
| 47,000 | SR....A473KAR | | | | | | | | | | | | | | | | | | | |
| 68,000 | SR....A683KAR | | | | | | | | | | | | | | | | | | | |
| 100,000 | SR....A104KAR | | | | | | | | | | | | | | | | | | | |

For other styles, voltages, tolerances and lead lengths see Part No. Codes or contact factory.

*Other capacitance values available upon special request.

- = Industry preferred values
- = SR20 only

Capacitance ranges available for SR12 and SR07 same as SR15
 SR62 and SR59 same as SR21
 SR64 and SR65 same as SR30
 SR75 same as SR40
 SR13 same as SR21

NOTE: For others voltages, tolerances, electrical specifications and NPO typical characteristics, see the AVX Multilayer Ceramic Leaded Capacitors Catalog.



The Important Information/Disclaimer is incorporated in the catalog where these specifications came from or available online at www.avx.com/disclaimer/ by reference and should be reviewed in full before placing any order.

RADIAL LEADS

X7R Dielectric



SIZE AND CAPACITANCE SPECIFICATIONS

EIA Characteristic

Dimensions: Millimeters (Inches)

| | AVX Style | SR15 | | | SR20 | | | SR21 | | | SR22 | | | SR27 | | | SR30 | | | SR40 | | | SR50 | | |
|-----------------|--------------------------------------|------------------|-----------------|-----------------|-----------------|-----------------|-----------------|----------------|-----------------|-----------------|------|-----|----|------|-----|----|------|-----|----|------|-----|----|------|-----|----|
| | | AVX "Insertable" | SR07 | SR29 | SR59 | N/A | N/A | SR65 | SR75 | N/A | | | | | | | | | | | | | | | |
| | Width (W) | 3.81 (.150) | 5.08 (.200) | 5.08 (.200) | 5.08 (.200) | 5.08 (.200) | 6.604 (.260) | 7.62 (.300) | 10.16 (.400) | 12.70 (.500) | | | | | | | | | | | | | | | |
| | Height (H) | 3.81 (.150) | 5.08 (.200) | 5.08 (.200) | 5.08 (.200) | 5.08 (.200) | 6.35 (.250) | 7.62 (.300) | 10.16 (.400) | 12.70 (.500) | | | | | | | | | | | | | | | |
| | Thickness (T) | 2.54 (.100) | 3.175 (.125) | 3.175 (.125) | 3.175 (.125) | 3.175 (.125) | 4.06 (.160) | 3.81 (.150) | 3.81 (.150) | 5.08 (.200) | | | | | | | | | | | | | | | |
| | Lead Spacing (L.S.) | 2.54 (.100) | 2.54 (.100) | 5.08 (.200) | 5.08 (.200) | 6.35 (.250) | 7.62 (.300) | 5.08 (.200) | 5.08 (.200) | 10.16 (.400) | | | | | | | | | | | | | | | |
| | Lead Diameter (L.D.) | .508 (.020) | .508 (.020) | .508 (.020) | .508 (.020) | .508 (.020) | .508 (.020) | .508 (.020) | .508 (.020) | .635 (.025) | | | | | | | | | | | | | | | |
| Cap. in.* pF | Industry Preferred Values in Blue | WVDC | | | WVDC | | | WVDC | | | WVDC | | | WVDC | | | WVDC | | | WVDC | | | WVDC | | |
| | | 200 | 100 | 50 | 200 | 100 | 50 | 200 | 100 | 50 | 200 | 100 | 50 | 200 | 100 | 50 | 200 | 100 | 50 | 200 | 100 | 50 | 200 | 100 | 50 |
| 470 | SR...C471KAR | | | | | | | | | | | | | | | | | | | | | | | | |
| 1000 | SR155C102KAR | | | | | | | | | | | | | | | | | | | | | | | | |
| 1500 | SR...C152KAR | | | | | | | | | | | | | | | | | | | | | | | | |
| 2200 | SR...C222KAR | | | | | | | | | | | | | | | | | | | | | | | | |
| 3300 | SR...C332KAR | | | | | | | | | | | | | | | | | | | | | | | | |
| 4700 | SR...C472KAR | | | | | | | | | | | | | | | | | | | | | | | | |
| 6800 | SR...C682KAR | | | | | | | | | | | | | | | | | | | | | | | | |
| 10,000 | SR215C103KAR | | | | | | | | | | | | | | | | | | | | | | | | |
| 15,000 | SR...C153KAR | | | | | | | | | | | | | | | | | | | | | | | | |
| 22,000 | SR...C223KAR | | | | | | | | | | | | | | | | | | | | | | | | |
| 33,000 | SR...C333KAR | | | | | | | | | | | | | | | | | | | | | | | | |
| 47,000 | SR...C473KAR | | | | | | | | | | | | | | | | | | | | | | | | |
| 68,000 | SR...C683KAR | | | | | | | | | | | | | | | | | | | | | | | | |
| 100,000 | SR215C104KAR | | | | | | | | | | | | | | | | | | | | | | | | |
| 150,000 | SR...C154KAR | | | | | | | | | | | | | | | | | | | | | | | | |
| 220,000 | SR215C224KAR | | | | | | | | | | | | | | | | | | | | | | | | |
| 330,000 | SR...C334KAR | | | | | | | | | | | | | | | | | | | | | | | | |
| 390,000 | SR...C394KAR | | | | | | | | | | | | | | | | | | | | | | | | |
| 470,000 | SR305C474KAR | | | | | | | | | | | | | | | | | | | | | | | | |
| 1.0 uF | SR305C105KAR | | | | | | | | | | | | | | | | | | | | | | | | |
| 2.2 uF | SR405C225KAR | | | | | | | | | | | | | | | | | | | | | | | | |
| 2.7 uF | SR505C275KAR | | | | | | | | | | | | | | | | | | | | | | | | |
| 4.7 uF | SR505C475KAR | | | | | | | | | | | | | | | | | | | | | | | | |
| 10.0 uF | SR655C106KAR | | | | | | | | | | | | | | | | | | | | | | | | |

For other styles, voltages, tolerances and lead lengths see Part No. Codes or contact factory.

- = Industry preferred values
- = Extended range
- = Extended range with 0.150" thickness maximum

RADIAL LEADS

Z5U Dielectric



SIZE AND CAPACITANCE SPECIFICATIONS

EIA Characteristic

Dimensions: Millimeters (Inches)

| AVX Style | SR15 | SR20 | SR21 | SR22 | SR27 | SR30 | SR40 | SR50 | | | | | | | |
|-----------------------------|---------------------------|-----------------|-----------------|-----------------|-----------------|----------------|-----------------|-----------------|-----------|-------------|-----------|-------------|-----------|-------------|-----------|
| AVX "Insertable" | SR07 | SR29 | SR59 | N/A | N/A | SR65 | SR75 | N/A | | | | | | | |
| Width (W) | 3.81 (.150) | 5.08 (.200) | 5.08 (.200) | 5.08 (.200) | 6.604 (.260) | 7.62 (.300) | 10.16 (.400) | 12.70 (.500) | | | | | | | |
| Height (H) | 3.81 (.150) | 5.08 (.200) | 5.08 (.200) | 5.08 (.200) | 6.35 (.250) | 7.62 (.300) | 10.16 (.400) | 12.70 (.500) | | | | | | | |
| Thickness (T) | 2.54 (.100) | 3.175 (.125) | 3.175 (.125) | 3.175 (.125) | 4.06 (.160) | 3.81 (.150) | 3.81 (.150) | 5.08 (.200) | | | | | | | |
| Lead Spacing (L.S.) | 2.54 (.100) | 2.54 (.100) | 5.08 (.200) | 6.35 (.250) | 7.62 (.300) | 5.08 (.200) | 5.08 (.200) | 10.16 (.400) | | | | | | | |
| Lead Diameter (L.D.) | .508 (.020) | .508 (.020) | .508 (.020) | .508 (.020) | .508 (.020) | .508 (.020) | .508 (.020) | .635 (.025) | | | | | | | |
| Cap. in.* | Industry Preferred | WVDC | | WVDC | | WVDC | | WVDC | | WVDC | | WVDC | | WVDC | |
| pF | Values in Blue | 100 | 50 | 100 | 50 | 100 | 50 | 100 | 50 | 100 | 50 | 100 | 50 | 100 | 50 |
| 10,000 | SR155E103ZAR | | | | | | | | | | | | | | |
| 47,000 | SR.....E473ZAR | | | | | | | | | | | | | | |
| 100,000 | SR215E104ZAR | | | | | | | | | | | | | | |
| 150,000 | SR.....E154ZAR | | | | | | | | | | | | | | |
| 220,000 | SR215E224ZAR | | | | | | | | | | | | | | |
| 330,000 | SR215E334ZAR | | | | | | | | | | | | | | |
| 470,000 | SR215E474ZAR | | | | | | | | | | | | | | |
| 680,000 | SR.....E684ZAR | | | | | | | | | | | | | | |
| 1.0 µF | SR.....105ZAR | | | | | | | | | | | | | | |
| 1.5 µF | SR30E155ZAR | | | | | | | | | | | | | | |
| 2.2 µF | SR30E225ZAR | | | | | | | | | | | | | | |
| 3.3 µF | SR30E335ZAR | | | | | | | | | | | | | | |
| 4.7 µF | SR30E475ZAR | | | | | | | | | | | | | | |

For other styles, voltages, tolerances and lead lengths see Part No. Codes or contact factory.

*Other capacitance values available upon special request.

- = Industry preferred values
- = SR20 only

Capacitance ranges available for SR12 and SR07 same as SR15
 SR62 and SR59 same as SR21
 SR64 and SR65 same as SR30
 SR75 same as SR40
 SR13 same as SR21

NOTE: For others voltages, tolerances, electrical specifications and NPO typical characteristics, see the AVX Multilayer Ceramic Leaded Capacitors Catalog.

AVX 500 VOLT SKYCAPS**

| STYLE* | MAXIMUM CAPACITANCE VALUE | |
|----------------------|---------------------------|---------|
| | C0G (NPO) | X7R |
| SR29 | 900 pF | .015 µF |
| SR20 | 1800 pF | .033 µF |
| SR28 SR59 | 900 pF | .015 µF |
| SR13 SR21 | 1800 pF | .033 µF |
| SR30 SR61 SR65 | 7200 pF | .12 µF |
| SR40 SR75 | .015 µF | .27 µF |
| SR22 | 1800 pF | .033 µF |
| SR27 | 1800 pF | .033 µF |
| SR76 | .015 µF | .27 µF |

*Consult pages 27 and 28 for style sizes.

**Voltage rating based on DWV of 150% of rated voltage.



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