

RADIAL LEADS

SkyCap®/SR Series



GENERAL INFORMATION

AVX SR Series

Conformally Coated Radial Leaded MLC

Temperature Coefficients: C0G (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

SR15  
SR20  
SR21  
SR22  
SR27  
SR30  
SR40  
SR50

Voltage

5 = 50V  
1 = 100V  
2 = 200V  
9 = 300V  
8 = 400V  
7 = 500V

Temperature Coefficient

A = C0G (NP0)  
C = X7R  
E = Z5U

Capacitance

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.)

Capacitance Tolerance

C0G (NP0):  
C =  $\pm 0.25\text{pF}$   
D =  $\pm 0.5\text{pF}$   
F =  $\pm 1\%$  ( $>50\text{pF}$  only)  
G =  $\pm 2\%$  ( $>25\text{pF}$  only)  
J =  $\pm 5\%$   
K =  $\pm 10\%$   
X7R:  
J =  $\pm 5\%$   
K =  $\pm 10\%$   
M =  $\pm 20\%$   
Z5U:  
M =  $\pm 20\%$   
Z =  $+80\%$  -20%

Failure Rate

A = Not Applicable

Leads

R = RoHS

Packaging

Blank: Bulk Packaging 1.0" minimum of lead length  
T: Trimmed leads .230"  $\pm$  .030"  
Bulk packaging  
TR1: Tape and Reel Packaging  
AP1: Ammopack packaging

See packaging specification pages 33-34



MARKING

FRONT



BACK



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

## C0G (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<br>(.150)                       | 5.08<br>(.200)  | 5.08<br>(.200)  | 5.08<br>(.200)  | 6.604<br>(.260) | 7.62<br>(.300) | 10.16<br>(.400) | 12.70<br>(.500) |     |    |      |     |    |      |     |    |      |    |     |      |     |    |
| Height (H)           | 3.81<br>(.150)                       | 5.08<br>(.200)  | 5.08<br>(.200)  | 5.08<br>(.200)  | 6.35<br>(.250)  | 7.62<br>(.300) | 10.16<br>(.400) | 12.70<br>(.500) |     |    |      |     |    |      |     |    |      |    |     |      |     |    |
| Thickness (T)        | 2.54<br>(.100)                       | 3.175<br>(.125) | 3.175<br>(.125) | 3.175<br>(.125) | 4.06<br>(.160)  | 3.81<br>(.150) | 3.81<br>(.150)  | 5.08<br>(.200)  |     |    |      |     |    |      |     |    |      |    |     |      |     |    |
| Lead Spacing (L.S.)  | 2.54<br>(.100)                       | 2.54<br>(.100)  | 5.08<br>(.200)  | 6.35<br>(.250)  | 7.62<br>(.300)  | 5.08<br>(.200) | 5.08<br>(.200)  | 10.16<br>(.400) |     |    |      |     |    |      |     |    |      |    |     |      |     |    |
| Lead Diameter (L.D.) | .508<br>(.020)                       | .508<br>(.020)  | .508<br>(.020)  | .508<br>(.020)  | .508<br>(.020)  | .508<br>(.020) | .508<br>(.020)  | .635<br>(.025)  |     |    |      |     |    |      |     |    |      |    |     |      |     |    |
| Cap. in.*<br>pF      | Industry Preferred<br>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   | 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.

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<br>(.150) | 5.08<br>(.200)  | 5.08<br>(.200)  | 5.08<br>(.200)  | 6.604<br>(.260) | 7.62<br>(.300) | 10.16<br>(.400) | 12.70<br>(.500) |
|                 | Height (H)                           | 3.81<br>(.150) | 5.08<br>(.200)  | 5.08<br>(.200)  | 5.08<br>(.200)  | 6.35<br>(.250)  | 7.62<br>(.300) | 10.16<br>(.400) | 12.70<br>(.500) |
|                 | Thickness (T)                        | 2.54<br>(.100) | 3.175<br>(.125) | 3.175<br>(.125) | 3.175<br>(.125) | 4.06<br>(.160)  | 3.81<br>(.150) | 3.81<br>(.150)  | 5.08<br>(.200)  |
|                 | Lead Spacing (L.S.)                  | 2.54<br>(.100) | 2.54<br>(.100)  | 5.08<br>(.200)  | 6.35<br>(.250)  | 7.62<br>(.300)  | 5.08<br>(.200) | 5.08<br>(.200)  | 10.16<br>(.400) |
|                 | Lead Diameter (L.D.)                 | .508<br>(.020) | .508<br>(.020)  | .508<br>(.020)  | .508<br>(.020)  | .508<br>(.020)  | .508<br>(.020) | .508<br>(.020)  | .635<br>(.025)  |
| Cap. in.*<br>pF | Industry Preferred<br>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<br>(W)            | 3.81<br>(.150)                       | 5.08<br>(.200)  | 5.08<br>(.200)  | 5.08<br>(.200)  | 6.604<br>(.260) | 7.62<br>(.300) | 10.16<br>(.400) | 12.70<br>(.500) |    |      |    |      |    |      |    |      |    |
| Height<br>(H)           | 3.81<br>(.150)                       | 5.08<br>(.200)  | 5.08<br>(.200)  | 5.08<br>(.200)  | 6.35<br>(.250)  | 7.62<br>(.300) | 10.16<br>(.400) | 12.70<br>(.500) |    |      |    |      |    |      |    |      |    |
| Thickness<br>(T)        | 2.54<br>(.100)                       | 3.175<br>(.125) | 3.175<br>(.125) | 3.175<br>(.125) | 4.06<br>(.160)  | 3.81<br>(.150) | 3.81<br>(.150)  | 5.08<br>(.200)  |    |      |    |      |    |      |    |      |    |
| Lead Spacing<br>(L.S.)  | 2.54<br>(.100)                       | 2.54<br>(.100)  | 5.08<br>(.200)  | 6.35<br>(.250)  | 7.62<br>(.300)  | 5.08<br>(.200) | 5.08<br>(.200)  | 10.16<br>(.400) |    |      |    |      |    |      |    |      |    |
| Lead Diameter<br>(L.D.) | .508<br>(.020)                       | .508<br>(.020)  | .508<br>(.020)  | .508<br>(.020)  | .508<br>(.020)  | .508<br>(.020) | .508<br>(.020)  | .635<br>(.025)  |    |      |    |      |    |      |    |      |    |
| Cap. in.*<br>pF         | Industry Preferred<br>Values in Blue | WVDC            |                 | WVDC            |                 | WVDC           |                 | WVDC            |    | WVDC |    | WVDC |    | WVDC |    | WVDC |    |
|                         |                                      | 100             | 50              | 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<br>SR59         | 900 pF                    | .015 µF |
| SR13<br>SR21         | 1800 pF                   | .033 µF |
| SR30<br>SR61<br>SR65 | 7200 pF                   | .12 µF  |
| SR40<br>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.

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

Наши преимущества:

- Поставка оригинальных импортных электронных компонентов напрямую с производств Америки, Европы и Азии, а так же с крупнейших складов мира;
- Широкая линейка поставок активных и пассивных импортных электронных компонентов (более 30 млн. наименований);
- Поставка сложных, дефицитных, либо снятых с производства позиций;
- Оперативные сроки поставки под заказ (от 5 рабочих дней);
- Экспресс доставка в любую точку России;
- Помощь Конструкторского Отдела и консультации квалифицированных инженеров;
- Техническая поддержка проекта, помощь в подборе аналогов, поставка прототипов;
- Поставка электронных компонентов под контролем ВП;
- Система менеджмента качества сертифицирована по Международному стандарту ISO 9001;
- При необходимости вся продукция военного и аэрокосмического назначения проходит испытания и сертификацию в лаборатории (по согласованию с заказчиком);
- Поставка специализированных компонентов военного и аэрокосмического уровня качества (Xilinx, Altera, Analog Devices, Intersil, Interpoint, Microsemi, Actel, Aeroflex, Peregrine, VPT, Syfer, Eurofarad, Texas Instruments, MS Kennedy, Miteq, Cobham, E2V, MA-COM, Hittite, Mini-Circuits, General Dynamics и др.);

Компания «Океан Электроники» является официальным дистрибьютором и эксклюзивным представителем в России одного из крупнейших производителей разъемов военного и аэрокосмического назначения «JONHON», а так же официальным дистрибьютором и эксклюзивным представителем в России производителя высокотехнологичных и надежных решений для передачи СВЧ сигналов «FORSTAR».



## JONHON

«JONHON» (основан в 1970 г.)

Разъемы специального, военного и аэрокосмического назначения:

(Применяются в военной, авиационной, аэрокосмической, морской, железнодорожной, горно- и нефтедобывающей отраслях промышленности)

«FORSTAR» (основан в 1998 г.)

ВЧ соединители, коаксиальные кабели,  
кабельные сборки и микроволновые компоненты:

(Применяются в телекоммуникациях гражданского и специального назначения, в средствах связи, РЛС, а так же военной, авиационной и аэрокосмической отраслях промышленности).



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