## GENERAL INFORMATION

**AVX SR Series**

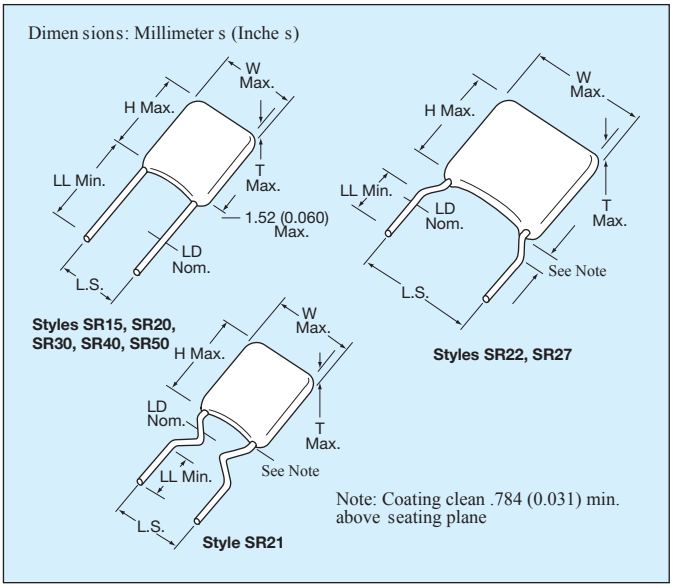
**Conformally Coated Radial Leaded MLC**

**Temperature Coefficients:** C0G (NP0), X7R, Z5U

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

**Case Material:** Epoxy

**Lead Material:** RoHS Compliant, 100% Tin




Drawings are for illustrative purposes only.
Actual lead form shape could vary within stated tolerances based on body size.

## HOW TO ORDER

| SR21 | 5 | E | 104 | M | A | R | TR1 |
|---|---|---|---|---|---|---|---|
| AVX Style | Voltage | Temperature Coefficient | Capacitance | Capacitance Tolerance | Failure Rate | Leads | Packaging |

**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 = ±.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%

**Failure Rate**
A = Not Applicable

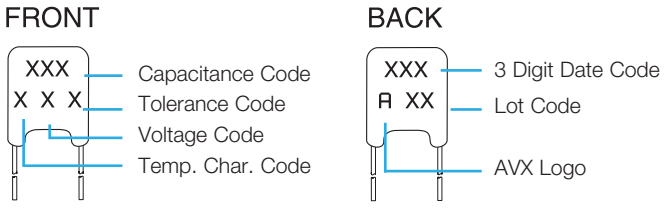
**Leads**
R = RoHS

**Packaging**
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

RoHS COMPLIANT

## 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.



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.

## 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 | | 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.

## 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 | | | WVDC | | |
| pF | Values in Blue | 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**



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.

## 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 100 | 50 | WVDC 100 | 50 | WVDC 100 | 50 | WVDC 100 | 50 | WVDC 100 | 50 | WVDC 100 | 50 | WVDC 100 | 50 | WVDC 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 (NP0) | 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.