## GENERAL INFORMATION

**AVX SL Series**

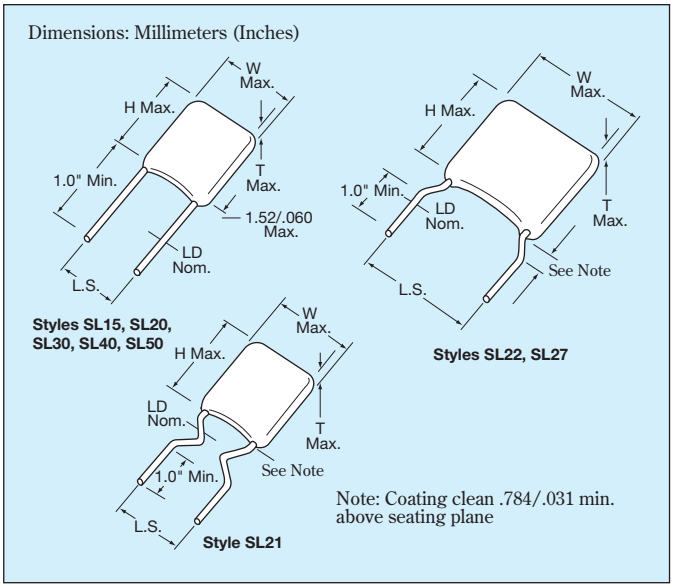
**Conformally Coated Radial Leaded MLC**

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

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

**Case Material:** Epoxy

**Lead Material:** Solderable Sn/Pb



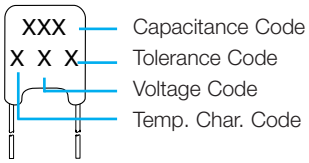

## HOW TO ORDER

| SL21 | 5 | E | 104 | M | A | B | TR1 |
|---|---|---|---|---|---|---|---|
| **AVX Style** | **Voltage** | **Temperature Coefficient** | **Capacitance** | **Capacitance Tolerance** | **Failure Rate** | **Leads** | **Packaging** |
| SL15<br>SL20<br>SL21<br>SL22<br>SL27<br>SL30<br>SL40<br>SL50 | 5 = 50V<br>1 = 100V<br>2 = 200V<br>9 = 300V<br>8 = 400V<br>7 = 500V | A = C0G (NP0)<br>C = X7R<br>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):<br>C = ±.25pF<br>D = ±.5pF<br>F = ±1% (>50pF only)<br>G = ±2% (>25pF only)<br>J = ±5%<br>K = ±10%<br>X7R:<br>J = ±5%<br>K = ±10%<br>M = ±20%<br>Z5U:<br>M = ±20%<br>Z = +80% -20% | A = Not Applicable | B = Leads Sn/Pb (Tin lead product) | Blank = Bulk Packaging<br>T = Trimmed Leads .230"± .030" Bulk packaging<br>TR1 = Tape and Reel Packaging<br>AP1 = Ammopack Packaging<br>See packaging specification page 33-34. |

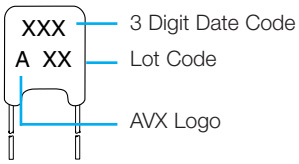
**Not RoHS Compliant**

## MARKING

FRONT




BACK




## PACKAGING REQUIREMENTS

| | Quantity per Bag |
|---|---|
| SL15, 20, 21, 22, 27, 30 | 1000 Pieces |
| SL40, 50 | 500 Pieces |

Note: SL15, SL20, SL21, SL30, and SL40 available on tape and reel per EIA specifications RS-468. See Pages 33 and 34.

# Radial Leads/SkyCap®/SL Series

## C0G (NP0) Dielectric

### SIZE AND CAPACITANCE SPECIFICATIONS

**EIA Characteristic**

Dimensions: Millimeters (Inches)

| AVX Style | SL15 | SL20 | SL21 | SL22 | SL27 | SL30 | SL40 | SL50 |
|---|---|---|---|---|---|---|---|---|
| AVX "Insertable" | SL07 | SL29 | SL59 | N/A | N/A | SL65 | SL75 | 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 | SL15 WVDC 200 | SL15 100 | SL15 50 | SL20 200 | SL20 100 | SL20 50 | SL21 200 | SL21 100 | SL21 50 | SL22 200 | SL22 100 | SL22 50 | SL27 200 | SL27 100 | SL27 50 | SL30 100 | SL30 50 | SL40 100 | SL40 50 | SL50 100 | SL50 50 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1.0-9.9 | SL151A1R0DAB | | | | | | | | | | | | | | | | | | | | | |
| **10** | **SL151A100KAB** | | | | | | | | | | | | | | | | | | | | | |
| 15 | SL-----A150KAB | | | | | | | | | | | | | | | | | | | | | |
| 22 | SL-----A220KAB | | | | | | | | | | | | | | | | | | | | | |
| 33 | SL-----A330KAB | | | | | | | | | | | | | | | | | | | | | |
| 39 | SL-----A390KAB | | | | | | | | | | | | | | | | | | | | | |
| 47 | SL-----A470KAB | | | | | | | | | | | | | | | | | | | | | |
| 68 | SL-----A680KAB | | | | | | | | | | | | | | | | | | | | | |
| **100** | **SL151A101KAB** | | | | | | | | | | | | | | | | | | | | | |
| 150 | SL-----A151KAB | | | | | | | | | | | | | | | | | | | | | |
| 220 | SL-----A221KAB | | | | | | | | | | | | | | | | | | | | | |
| 330 | SL-----A331KAB | | | | | | | | | | | | | | | | | | | | | |
| 390 | SL-----A391KAB | | | | | | | | | | | | | | | | | | | | | |
| 470 | SL-----A471KAB | | | | | | | | | | | | | | | | | | | | | |
| 680 | SL-----A681KAB | | | | | | | | | | | | | | | | | | | | | |
| **1000** | **SL211A102KAB** | | | | | | | | | | | | | | | | | | | | | |
| 1500 | SL-----A152KAB | | | | | | | | | | | | | | | | | | | | | |
| 2200 | SL-----A222KAB | | | | | | | | | | | | | | | | | | | | | |
| 3900 | SL-----A392KAB | | | | | | | | | | | | | | | | | | | | | |
| 4700 | SL-----A472KAB | | | | | | | | | | | | | | | | | | | | | |
| 6800 | SL-----A682KAB | | | | | | | | | | | | | | | | | | | | | |
| 8200 | SL-----A822KAB | | | | | | | | | | | | | | | | | | | | | |
| **10,000** | **SL305A103KAB** | | | | | | | | | | | | | | | | | | | | | |
| 15,000 | SL-----A153KAB | | | | | | | | | | | | | | | | | | | | | |
| 22,000 | SL-----A223KAB | | | | | | | | | | | | | | | | | | | | | |
| 33,000 | SL-----A333KAB | | | | | | | | | | | | | | | | | | | | | |
| 39,000 | SL-----A393KAB | | | | | | | | | | | | | | | | | | | | | |
| 47,000 | SL-----A473KAB | | | | | | | | | | | | | | | | | | | | | |
| 68,000 | SL-----A683KAB | | | | | | | | | | | | | | | | | | | | | |
| 100,000 | SL-----A104KAB | | | | | | | | | | | | | | | | | | | | | |

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**

**= SL20 only**

**NOTE:** Capacitance Ranges available for SL12 same as SL15
SL62 same as SL21
SL64 same as SL30
SL89 same as SL21

# Radial Leads/SkyCap®/SL Series

## X7R Dielectric

### SIZE AND CAPACITANCE SPECIFICATIONS

**EIA Characteristic**

Dimensions: Millimeters (Inches)

| AVX Style | SL15 | SL20 | SL21 | SL22 | SL27 | SL30 | SL40 | SL50 |
|---|---|---|---|---|---|---|---|---|
| AVX "Insertable" | SL07 | SL29 | SL59 | N/A | N/A | SL65 | SL75 | 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 | SL15 WVDC 200 | SL15 WVDC 100 | SL15 WVDC 50 | SL20 WVDC 200 | SL20 WVDC 100 | SL20 WVDC 50 | SL21 WVDC 200 | SL21 WVDC 100 | SL21 WVDC 50 | SL22 WVDC 100 | SL22 WVDC 50 | SL27 WVDC 100 | SL27 WVDC 50 | SL30 WVDC 200 | SL30 WVDC 100 | SL30 WVDC 50 | SL40 WVDC 200 | SL40 WVDC 100 | SL40 WVDC 50 | SL50 WVDC 200 | SL50 WVDC 100 | SL50 WVDC 50 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 470 | SL-----C471KAB | | | | | | | | | | | | | | | | | | | | | | |
| **1000** | **SL155C102KAB** | | | | | | | | | | | | | | | | | | | | | | |
| 1500 | SL-----C152KAB | | | | | | | | | | | | | | | | | | | | | | |
| 2200 | SL-----C222KAB | | | | | | | | | | | | | | | | | | | | | | |
| 3300 | SL-----C332KAB | | | | | | | | | | | | | | | | | | | | | | |
| 4700 | SL-----C472KAB | | | | | | | | | | | | | | | | | | | | | | |
| 6800 | SL-----C682KAB | | | | | | | | | | | | | | | | | | | | | | |
| **10,000** | **SL215C103KAB** | | | | | | | | | | | | | | | | | | | | | | |
| 15,000 | SL-----C153KAB | | | | | | | | | | | | | | | | | | | | | | |
| 22,000 | SL-----C223KAB | | | | | | | | | | | | | | | | | | | | | | |
| 33,000 | SL-----C333KAB | | | | | | | | | | | | | | | | | | | | | | |
| 47,000 | SL-----C473KAB | | | | | | | | | | | | | | | | | | | | | | |
| 68,000 | SL-----C683KAB | | | | | | | | | | | | | | | | | | | | | | |
| **100,000** | **SL215C104KAB** | | | | | | | | | | | | | | | | | | | | | | |
| 150,000 | SL-----C154KAB | | | | | | | | | | | | | | | | | | | | | | |
| **220,000** | **SL215C224KAB** | | | | | | | | | | | | | | | | | | | | | | |
| 330,000 | SL-----C334KAB | | | | | | | | | | | | | | | | | | | | | | |
| 390,000 | SL-----C394KAB | | | | | | | | | | | | | | | | | | | | | | |
| **470,000** | **SL305C474KAB** | | | | | | | | | | | | | | | | | | | | | | |
| **1.0 uF** | **SL305C105KAB** | | | | | | | | | | | | | | | | | | | | | | |
| 2.2 uF | SL405C225KAB | | | | | | | | | | | | | | | | | | | | | | |
| 2.7 uF | SL505C275KAB | | | | | | | | | | | | | | | | | | | | | | |
| 4.7 uF | SL505C475KAB | | | | | | | | | | | | | | | | | | | | | | |
| 10.0 uF | SL655C106KAB | | | | | | | | | | | | | | | | | | | | | | |

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/SkyCap®/SL Series

## Z5U Dielectric

## SIZE AND CAPACITANCE SPECIFICATIONS

**EIA Characteristic**

Dimensions: Millimeters (Inches)

| AVX Style | SL15 | SL20 | SL21 | SL22 | SL27 | SL30 | SL40 | SL50 |
|---|---|---|---|---|---|---|---|---|
| **AVX "Insertable"** | **SL07** | **SL29** | **SL59** | **N/A** | **N/A** | **SL65** | **SL75** | **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 | SL15 WVDC 100 | SL15 WVDC 50 | SL20 WVDC 100 | SL20 WVDC 50 | SL21 WVDC 100 | SL21 WVDC 50 | SL22 WVDC 100 | SL22 WVDC 50 | SL27 WVDC 100 | SL27 WVDC 50 | SL30 WVDC 100 | SL30 WVDC 50 | SL40 WVDC 100 | SL40 WVDC 50 | SL50 WVDC 100 | SL50 WVDC 50 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **10,000** | **SL155E103ZAB** | | | | | | | | | | | | | | | | |
| 47,000 | SL_____E473ZAB | | | | | | | | | | | | | | | | |
| **100,000** | **SL215E104ZAB** | | | | | | | | | | | | | | | | |
| 150,000 | SL_____E154ZAB | | | | | | | | | | | | | | | | |
| **220,000** | **SL215E224ZAB** | | | | | | | | | | | | | | | | |
| **330,000** | **SL215E334ZAB** | | | | | | | | | | | | | | | | |
| **470,000** | **SL215E474ZAB** | | | | | | | | | | | | | | | | |
| 680,000 | SL_____E684ZAB | | | | | | | | | | | | | | | | |
| **1.0 µF** | **SL_____105ZAB** | | | | | | | | | | | | | | | | |
| 1.5 µF | SL30E155ZAB | | | | | | | | | | | | | | | | |
| 2.2 µF | SL30E225ZAB | | | | | | | | | | | | | | | | |
| 3.3 µF | SL30E335ZAB | | | | | | | | | | | | | | | | |
| 4.7 µF | SL30E475ZAB | | | | | | | | | | | | | | | | |

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**

**= SL20 only**

## AVX 500 VOLT SKYCAPS**

| STYLE* | MAXIMUM CAPACITANCE VALUE C0G (NP0) | MAXIMUM CAPACITANCE VALUE X7R |
|---|---|---|
| SL29 | 900 pF | .015 µF |
| SL20 | 1800 pF | .033 µF |
| SL28<br>SL59 | 900 pF | .015 µF |
| SL13<br>SL21 | 1800 pF | .033 µF |
| SL30<br>SL61<br>SL65 | 7200 pF | .12 µF |
| SL40<br>SL75 | .015 µF | .27 µF |
| SL22 | 1800 pF | .033 µF |
| SL27 | 1800 pF | .033 µF |
| SL76 | .015 µF | .27 µF |
| SL50 | .036 µF | .59 µF |

*Consult pages 27 and 28 for style sizes.

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