

# High Voltage MLC Radials (SV Style)

## Application Information on High Voltage MLC Capacitors



High value, low leakage and small size are difficult parameters to obtain in capacitors for high voltage systems. AVX special high voltage MLC radial leaded capacitors meet these performance characteristics. The added advantage of these capacitors lies in special internal design minimizing the electric field stresses within the MLC. These special design criteria result in significant reduction of partial discharge activity within the dielectric and having, therefore, a major impact on long-term reliability of the product. The SV high voltage radial capacitors are conformally coated with high insulation resistance, high dielectric strength epoxy eliminating the possibility of arc flashover.

The SV high voltage radial MLC designs exhibit low ESRs at high frequency. The same criteria governing the high voltage design carries the added benefits of extremely low ESR in relatively low capacitance and small packages. These capacitors are designed and are ideally suited for applications such as snubbers in high frequency power converters, resonators in SMPS, and high voltage coupling/DC blocking.

### COG Dielectric General Specifications

#### Capacitance Range

10 pF to 0.15  $\mu$ F  
(+25°C, 1.0  $\pm$ 0.2 Vrms at 1kHz,  
for  $\leq$ 100 pF use 1 MHz)

#### Capacitance Tolerances

$\pm$ 5%;  $\pm$ 10%;  $\pm$ 20%

#### Operating Temperature Range

-55°C to +125°C

#### Temperature Characteristic

0  $\pm$  30 ppm/°C

#### Voltage Ratings

600 VDC thru 5000 VDC (+125°C)

#### Dissipation Factor

0.15% max.  
(+25°C, 1.0  $\pm$ 0.2 Vrms at 1kHz,  
for  $\leq$ 100 pF use 1 MHz)

#### Insulation Resistance (+25°C, at 500V)

100K M $\Omega$  min. or 1000 M $\Omega$ - $\mu$ F min.,  
whichever is less

#### Insulation Resistance (+125°C, at 500V)

10K M $\Omega$  min., or 100 M $\Omega$ - $\mu$ F min.,  
whichever is less

#### Dielectric Strength

120% rated voltage, 5 seconds

#### Life Test

100% rated and +125°C

### N1500 General Specifications

#### Capacitance Range

100 pF to 0.47  $\mu$ F  
(+25°C, 1.0  $\pm$ 0.2 Vrms (open circuit  
voltage) at 1kHz)

#### Capacitance Tolerances

$\pm$ 5%;  $\pm$ 10%; 20%

#### Operating Temperature Range

-55°C to +125°C

#### Temperature Characteristic

-1500  $\pm$ 250 ppm/°C

#### Voltage Ratings

600 VDC thru 5000 VDC (+125°C)

#### Dissipation Factor

0.15% max.  
(+25°C, 1.0  $\pm$ 0.2 Vrms (open circuit  
voltage) at 1kHz)

#### Insulation Resistance (+25°C, at 500V)

100K M $\Omega$  min., or 1000 M $\Omega$ - $\mu$ F min.,  
whichever is less

#### Insulation Resistance (+125°C, at 500V)

10K M $\Omega$  min., or 100 M $\Omega$ - $\mu$ F min.,  
whichever is less

#### Dielectric Strength

120% rated voltage, 5 seconds

#### Life Test

100% rated and +125°C

### X7R Dielectric General Specifications

#### Capacitance Range

100 pF to 2.2  $\mu$ F  
(+25°C, 1.0  $\pm$ 0.2 Vrms at 1kHz)

#### Capacitance Tolerances

$\pm$ 10%;  $\pm$ 20%; +80%, -20%

#### Operating Temperature Range

-55°C to +125°C

#### Temperature Characteristic

$\pm$ 15% (0 VDC)

#### Voltage Ratings

600 VDC thru 5000 VDC (+125°C)

#### Dissipation Factor

2.5% max.  
(+25°C, 1.0  $\pm$ 0.2 Vrms at 1kHz)

#### Insulation Resistance (+25°C, at 500V)

100K M $\Omega$  min., or 1000 M $\Omega$ - $\mu$ F min.,  
whichever is less

#### Insulation Resistance (+125°C, at 500V)

10K M $\Omega$  min., or 100 M $\Omega$ - $\mu$ F min.,  
whichever is less

#### Dielectric Strength

120% rated voltage, 5 seconds

#### Life Test

100% rated and +125°C



Performance of SMPS capacitors can be simulated by downloading SpiCalci software program -  
<http://www.avx.com/download/software/SpiCalci-AVX.zip>  
Custom values, ratings and configurations are also available.



# High Voltage MLC Radials (SV Style)



SV01 thru SV17

SV52 thru SV59 and SV63 thru SV67

**Not RoHS Compliant**



For RoHS compliant products, please select correct termination style.

## HIGH VOLTAGE RADIAL LEAD HOW TO ORDER

### AVX Styles: SV01 THRU SV67

|                                                                                                          |                                 |                                |                                                                                                                                                                                     |                                                                                                                   |                                                  |                                                    |                                                                                                                                                                        |
|----------------------------------------------------------------------------------------------------------|---------------------------------|--------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------|--------------------------------------------------|----------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>SV01</b>                                                                                              | <b>A</b>                        | <b>A</b>                       | <b>102</b>                                                                                                                                                                          | <b>K</b>                                                                                                          | <b>A</b>                                         | <b>A</b>                                           | <b>*</b>                                                                                                                                                               |
| <b>AVX Style</b>                                                                                         | <b>Voltage</b>                  | <b>Temperature Coefficient</b> | <b>Capacitance Code</b><br>(2 significant digits + no. of zeros)<br>Examples:<br>10 pF = 100<br>100 pF = 101<br>1,000 pF = 102<br>22,000 pF = 223<br>220,000 pF = 224<br>1 μF = 105 | <b>Capacitance Tolerance</b><br>C0G: J = ±5%<br>K = ±10%<br>M = ±20%<br>X7R: K = ±10%<br>M = ±20%<br>Z = +80 -20% | <b>Test Level</b><br>A = Standard<br>B = Hi-Rel* | <b>Leads</b><br>A = Tin/Lead<br>R = RoHS Compliant | <b>Packaging</b><br>(See Note 1)                                                                                                                                       |
| 600V/630V = C<br>1000V = A<br>1500V = S<br>2000V = G<br>2500V = W<br>3000V = H<br>4000V = J<br>5000V = K | C0G = A<br>X7R = C<br>N1500 = 4 |                                |                                                                                                                                                                                     |                                                                                                                   |                                                  |                                                    | <b>Note 1:</b> No suffix signifies bulk packaging which is AVX standard packaging. Use suffix "TR1" if tape and reel is required. Parts are reel packaged per EIA-468. |

Note: Capacitors with X7R dielectrics are not intended for applications across AC supply mains or AC line filtering with polarity reversal. Contact plant for recommendations. \*Hi-Rel screening consists of 100% Group A, Subgroup 1 per MIL-PRF-49467. (Except partial discharge testing is not performed and DWV is at 120% rated voltage).

## DIMENSIONS

millimeters (inches)

| AVX Style | Length (L) max | Height (H) max | Thickness (T) max | Lead Spacing ±.762 (.030) (S) | LD (Nom)     |
|-----------|----------------|----------------|-------------------|-------------------------------|--------------|
| SV01      | 6.35 (0.250)   | 5.59 (0.220)   | 5.08 (0.200)      | 4.32 (0.170)                  | 0.64 (0.025) |
| SV02/SV52 | 8.13 (0.320)   | 7.11 (0.280)   | 5.08 (0.200)      | 5.59 (0.220)                  | 0.64 (0.025) |
| SV03/SV53 | 9.40 (0.370)   | 7.62 (0.300)   | 5.08 (0.200)      | 6.99 (0.275)                  | 0.64 (0.025) |
| SV04/SV54 | 11.4 (0.450)   | 5.59 (0.220)   | 5.08 (0.200)      | 7.62 (0.300)                  | 0.64 (0.025) |
| SV05/SV55 | 11.9 (0.470)   | 10.2 (0.400)   | 5.08 (0.200)      | 9.52 (0.375)                  | 0.64 (0.025) |
| SV06/SV56 | 14.0 (0.550)   | 7.11 (0.280)   | 5.08 (0.200)      | 10.16 (0.400)                 | 0.64 (0.025) |
| SV07/SV57 | 14.5 (0.570)   | 12.7 (0.500)   | 5.08 (0.200)      | 12.1 (0.475)                  | 0.64 (0.025) |
| SV08/SV58 | 17.0 (0.670)   | 15.2 (0.600)   | 5.08 (0.200)      | 14.6 (0.575)                  | 0.64 (0.025) |
| SV09/SV59 | 19.6 (0.770)   | 18.3 (0.720)   | 5.08 (0.200)      | 17.1 (0.675)                  | 0.64 (0.025) |
| SV10      | 26.7 (1.050)   | 12.7 (0.500)   | 5.08 (0.200)      | 22.9 (0.900)                  | 0.64 (0.025) |
| SV11      | 31.8 (1.250)   | 15.2 (0.600)   | 5.08 (0.200)      | 27.9 (1.100)                  | 0.64 (0.025) |
| SV12      | 36.8 (1.450)   | 18.3 (0.720)   | 5.08 (0.200)      | 33.0 (1.300)                  | 0.64 (0.025) |
| SV13/SV63 | 7.62 (0.300)   | 9.14 (0.360)   | 5.08 (0.200)      | 5.08 (0.200)                  | 0.51 (0.020) |
| SV14/SV64 | 10.2 (0.400)   | 11.7 (0.460)   | 5.08 (0.200)      | 5.08 (0.200)                  | 0.51 (0.020) |
| SV15/SV65 | 12.7 (0.500)   | 14.2 (0.560)   | 5.08 (0.200)      | 10.2 (0.400)                  | 0.64 (0.025) |
| SV16/SV66 | 22.1 (0.870)   | 16.8 (0.660)   | 5.08 (0.200)      | 20.1 (0.790)                  | 0.81 (0.032) |
| SV17/SV67 | 23.6 (0.930)   | 19.8 (0.780)   | 6.35 (0.250)      | 20.3 (0.800)                  | 0.81 (0.032) |

| TAPE & REEL QUANTITY |        |
|----------------------|--------|
| Part                 | Pieces |
| SV01                 | 1000   |
| SV02/SV52            | 1000   |
| SV03/SV53            | 1000   |
| SV04/SV54            | 1000   |
| SV05/SV55            | 1000   |
| SV06/SV56            | 500    |
| SV07/SV57            | 500    |
| SV08/SV58            | 500    |
| SV09/SV59            | 500    |
| SV10                 | N/A    |
| SV11                 | N/A    |
| SV12                 | N/A    |
| SV13/SV63            | 1000   |
| SV14/SV64            | 1000   |
| SV15/SV65            | 500    |
| SV16/SV66            | 500    |
| SV17/SV67            | 400    |

| RoHS      |           |
|-----------|-----------|
| Part      | Available |
| SV01      | Yes       |
| SV02/SV52 | Yes       |
| SV03/SV53 | Yes       |
| SV04/SV54 | Yes       |
| SV05/SV55 | Yes       |
| SV06/SV56 | Yes       |
| SV07/SV57 | Yes       |
| SV08/SV58 | Yes       |
| SV09/SV59 | Yes       |
| SV10      | Yes       |
| SV11      | Yes       |
| SV12      | Yes       |
| SV13/SV63 | Yes       |
| SV14/SV64 | Yes       |
| SV15/SV65 | Yes       |
| SV16/SV66 | Yes       |
| SV17/SV67 | Yes       |

# High Voltage MLC Radials (SV Style)

## CAPACITANCE VALUE

| COG       |                       |                     |                     |                     |                     |                     |                     |                    |
|-----------|-----------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|--------------------|
| Style     | 600/630V<br>min./max. | 1000V<br>min./max.  | 1500V<br>min./max.  | 2000V<br>min./max.  | 2500V<br>min./max.  | 3000V<br>min./max.  | 4000V<br>min./max.  | 5000V<br>min./max. |
| SV01      | 100 pF / 1500 pF      | 100 pF / 1000 pF    | 10 pF / 330 pF      | 10 pF / 220 pF      | 10 pF / 120 pF      | 10 pF / 82 pF       | —                   | —                  |
| SV02/SV52 | 100 pF / 6800 pF      | 100 pF / 4700 pF    | 100 pF / 1500 pF    | 10 pF / 1000 pF     | 10 pF / 680 pF      | 10 pF / 560 pF      | 10 pF / 150 pF      | 10 pF / 100 pF     |
| SV03/SV53 | 100 pF / 0.012 μF     | 100 pF / 8200 pF    | 100 pF / 2700 pF    | 100 pF / 1800 pF    | 10 pF / 1000 pF     | 10 pF / 680 pF      | 10 pF / 390 pF      | 10 pF / 220 pF     |
| SV04/SV54 | 100 pF / 3900 pF      | 100 pF / 2700 pF    | 10 pF / 820 pF      | 10 pF / 560 pF      | 10 pF / 270 pF      | 10 pF / 180 pF      | 10 pF / 100 pF      | 10 pF / 68 pF      |
| SV05/SV55 | 1000 pF / 0.027 μF    | 1000 pF / 0.018 μF  | 100 pF / 6800 pF    | 100 pF / 4700 pF    | 100 pF / 2700 pF    | 100 pF / 1500 pF    | 10 pF / 1000 pF     | 10 pF / 560 pF     |
| SV06/SV56 | 100 pF / 0.012 μF     | 100 pF / 0.010 μF   | 100 pF / 3300 pF    | 100 pF / 2200 pF    | 10 pF / 1200 pF     | 10 pF / 820 pF      | 10 pF / 470 pF      | 10 pF / 390 pF     |
| SV07/SV57 | 1000 pF / 0.056 μF    | 1000 pF / 0.033 μF  | 1000 pF / 0.015 μF  | 100 pF / 0.010 μF   | 100 pF / 5600 pF    | 100 pF / 3900 pF    | 100 pF / 2200 pF    | 10 pF / 1200 pF    |
| SV08/SV58 | 1000 pF / 0.082 μF    | 1000 pF / 0.047 μF  | 1000 pF / 0.022 μF  | 1000 pF / 0.015 μF  | 100 pF / 0.010 μF   | 100 pF / 6800 pF    | 100 pF / 3300 pF    | 100 pF / 2200 pF   |
| SV09/SV59 | 1000 pF / 0.150 μF    | 1000 pF / 0.082 μF  | 1000 pF / 0.039 μF  | 1000 pF / 0.022 μF  | 1000 pF / 0.015 μF  | 100 pF / 8200 pF    | 100 pF / 4700 pF    | 100 pF / 3300 pF   |
| SV10      | 1000 pF / 0.100 μF    | 1000 pF / 0.056 μF  | 1000 pF / 0.022 μF  | 1000 pF / 0.012 μF  | 100 pF / 8200 pF    | 100 pF / 5600 pF    | 100 pF / 3300 pF    | 100 pF / 2200 pF   |
| SV11      | 1000 pF / 0.150 μF    | 1000 pF / 0.082 μF  | 1000 pF / 0.039 μF  | 1000 pF / 0.022 μF  | 1000 pF / 0.015 μF  | 100 pF / 8200 pF    | 100 pF / 4700 pF    | 100 pF / 3300 pF   |
| SV12      | 0.01 μF / 0.220 μF    | 0.01 μF / 0.15 μF   | 1000 pF / 0.056 μF  | 1000 pF / 0.033 μF  | 1000 pF / 0.022 μF  | 1000 pF / 0.015 μF  | 100 pF / 8200 pF    | 100 pF / 5600 pF   |
| SV13/SV63 | 100 pF / 0.018 μF     | 100 pF / 0.012 μF   | 100 pF / 4700 pF    | 100 pF / 2700 pF    | 100 pF / 1800 pF    | 100 pF / 1000 pF    | 10 pF / 470 pF      | 10 pF / 390 pF     |
| SV14/SV64 | 1000 pF / 0.039 μF    | 1000 pF / 0.022 μF  | 100 pF / 8200 pF    | 100 pF / 5600 pF    | 100 pF / 3300 pF    | 100 pF / 1800 pF    | 10 pF / 820 pF      | 10 pF / 680 pF     |
| SV15/SV65 | 1000 pF / 0.056 μF    | 1000 pF / 0.033 μF  | 1000 pF / 0.015 μF  | 100 pF / 0.01 μF    | 100 pF / 5600 pF    | 100 pF / 2700 pF    | 100 pF / 1800 pF    | 100 pF / 1200 pF   |
| SV16/SV66 | 1000 pF / 0.120 μF    | 1000 pF / 0.082 μF  | 1000 pF / 0.039 μF  | 1000 pF / 0.027 μF  | 1000 pF / 0.015 μF  | 100 pF / 8200 pF    | 100 pF / 4700 pF    | 100 pF / 3300 pF   |
| SV17/SV67 | 1000 pF / 0.150 μF    | 1000 pF / 0.10 μF   | 1000 pF / 0.056 μF  | 1000 pF / 0.039 μF  | 1000 pF / 0.022 μF  | 1000 pF / 0.012 μF  | 100 pF / 6800 pF    | 100 pF / 4700 pF   |
| N1500     |                       |                     |                     |                     |                     |                     |                     |                    |
| SV01      | 1000 pF / 2700 pF     | 1000 pF / 1800 pF   | 100 pF / 680 pF     | 100 pF / 470 pF     | 100 pF / 220 pF     | 100 pF / 150 pF     | —                   | —                  |
| SV02/SV52 | 1000 pF / 0.012 μF    | 1000 pF / 8200 pF   | 1000 pF / 2700 pF   | 1000 pF / 1800 pF   | 100 pF / 1000 pF    | 100 pF / 680 pF     | 100 pF / 270 pF     | 100 pF / 150 pF    |
| SV03/SV53 | 0.010 pF / 0.027 μF   | 0.010 pF / 0.018 μF | 1000 pF / 5600 pF   | 1000 pF / 3900 pF   | 1000 pF / 2200 pF   | 1000 pF / 1500 pF   | 100 pF / 680 pF     | 100 pF / 470 pF    |
| SV04/SV54 | 1000 pF / 8200 pF     | 1000 pF / 5600 pF   | 1000 pF / 1800 pF   | 100 pF / 1200 pF    | 100 pF / 560 pF     | 100 pF / 330 pF     | 100 pF / 220 pF     | 100 pF / 120 pF    |
| SV05/SV55 | 0.010 μF / 0.068 μF   | 0.010 μF / 0.047 μF | 0.010 μF / 0.015 μF | 1000 pF / 0.010 μF  | 1000 pF / 5600 pF   | 1000 pF / 3300 pF   | 1000 pF / 2200 pF   | 1000 pF / 1200 pF  |
| SV06/SV56 | 0.010 μF / 0.027 μF   | 0.010 μF / 0.018 μF | 1000 pF / 5600 pF   | 1000 pF / 3900 pF   | 1000 pF / 2200 pF   | 1000 pF / 1500 pF   | 100 pF / 680 pF     | 100 pF / 470 pF    |
| SV07/SV57 | 0.010 μF / 0.12 μF    | 0.010 μF / 0.10 μF  | 0.010 μF / 0.027 μF | 0.010 μF / 0.018 μF | 1000 pF / 0.012 μF  | 1000 pF / 5600 pF   | 1000 pF / 3900 pF   | 1000 pF / 2200 pF  |
| SV08/SV58 | 0.010 μF / 0.15 μF    | 0.010 μF / 0.12 μF  | 0.010 μF / 0.047 μF | 0.010 pF / 0.033 μF | 0.010 μF / 0.018 μF | 1000 pF / 0.010 μF  | 1000 pF / 6800 pF   | 1000 pF / 3900 pF  |
| SV09/SV59 | 0.10 μF / 0.220 μF    | 0.10 μF / 0.18 μF   | 0.010 μF / 0.082 μF | 0.010 μF / 0.047 μF | 0.010 pF / 0.033 μF | 0.010 μF / 0.015 μF | 1000 pF / 8200 pF   | 1000 pF / 6800 pF  |
| SV10      | 0.10 μF / 0.18 μF     | 0.10 μF / 0.15 μF   | 0.010 μF / 0.047 μF | 0.010 μF / 0.027 μF | 0.010 μF / 0.018 μF | 1000 pF / 0.010 μF  | 1000 pF / 5600 pF   | 1000 pF / 3900 pF  |
| SV11      | 0.10 μF / 0.33 μF     | 0.10 μF / 0.22 μF   | 0.010 μF / 0.082 μF | 0.010 μF / 0.039 μF | 0.010 μF / 0.027 μF | 0.010 μF / 0.018 μF | 1000 pF / 0.010 μF  | 1000 pF / 6800 pF  |
| SV12      | 0.10 μF / 0.47 μF     | 0.10 μF / 0.33 μF   | 0.10 μF / 0.12 μF   | 0.010 μF / 0.068 μF | 0.010 μF / 0.047 μF | 0.010 μF / 0.027 μF | 0.010 μF / 0.015 μF | 1000 pF / 0.010 μF |
| SV13/SV63 | 0.010 μF / 0.039 μF   | 0.010 μF / 0.027 μF | 1000 pF / 8200 pF   | 1000 pF / 5600 pF   | 1000 pF / 3300 pF   | 1000 pF / 1800 pF   | 100 pF / 820 pF     | 100 pF / 680 pF    |
| SV14/SV64 | 0.010 μF / 0.082 μF   | 0.010 μF / 0.056 μF | 0.010 pF / 0.018 μF | 1000 pF / 0.012 μF  | 1000 pF / 6800 pF   | 1000 pF / 3900 pF   | 1000 pF / 1800 pF   | 1000 pF / 1500 pF  |
| SV15/SV65 | 0.010 μF / 0.10 μF    | 0.010 μF / 0.082 μF | 0.010 μF / 0.027 μF | 0.010 pF / 0.018 μF | 1000 pF / 0.012 μF  | 1000 pF / 5600 pF   | 1000 pF / 3300 pF   | 1000 pF / 2700 pF  |
| SV16/SV66 | 0.10 μF / 0.22 μF     | 0.10 μF / 0.18 μF   | 0.010 μF / 0.082 μF | 0.010 μF / 0.039 μF | 0.010 μF / 0.027 μF | 0.010 μF / 0.015 μF | 1000 pF / 8200 pF   | 1000 pF / 6800 pF  |
| SV17/SV67 | 0.10 μF / 0.33 μF     | 0.10 μF / 0.22 μF   | 0.010 μF / 0.10 μF  | 0.010 μF / 0.056 μF | 0.010 μF / 0.033 μF | 0.010 μF / 0.022 μF | 1000 pF / 0.012 μF  | 1000 pF / 0.010 μF |
| X7R       |                       |                     |                     |                     |                     |                     |                     |                    |
| SV01      | 1000 pF / 0.018 μF    | 1000 pF / 0.012 μF  | 100 pF / 5600 pF    | 100 pF / 3900 pF    | —                   | —                   | —                   | —                  |
| SV02/SV52 | 1000 pF / 0.082 μF    | 1000 pF / 0.047 μF  | 1000 pF / 0.015 μF  | 100 pF / 6800 pF    | 100 pF / 3900 pF    | 100 pF / 2700 pF    | —                   | —                  |
| SV03/SV53 | 1000 pF / 0.180 μF    | 1000 pF / 0.082 μF  | 1000 pF / 0.018 μF  | 1000 pF / 0.01 μF   | 100 pF / 6800 pF    | 100 pF / 4700 pF    | 100 pF / 1800 pF    | —                  |
| SV04/SV54 | 1000 pF / 0.056 μF    | 1000 pF / 0.033 μF  | 100 pF / 6800 pF    | 100 pF / 3900 pF    | 100 pF / 2200 pF    | 100 pF / 1800 pF    | 100 pF / 820 pF     | —                  |
| SV05/SV55 | 0.01 μF / 0.470 μF    | 0.01 μF / 0.22 μF   | 1000 pF / 0.056 μF  | 1000 pF / 0.027 μF  | 1000 pF / 0.018 μF  | 1000 pF / 0.012 μF  | 100 pF / 4700 pF    | —                  |
| SV06/SV56 | 0.01 μF / 0.180 μF    | 0.01 μF / 0.10 μF   | 1000 pF / 0.033 μF  | 1000 pF / 0.012 μF  | 100 pF / 8200 pF    | 100 pF / 6800 pF    | 100 pF / 2700 pF    | 100 pF / 1200 pF   |
| SV07/SV57 | 0.01 μF / 0.820 μF    | 0.01 μF / 0.39 μF   | 0.01 μF / 0.10 μF   | 1000 pF / 0.047 μF  | 1000 pF / 0.033 μF  | 1000 pF / 0.027 μF  | 1000 pF / 0.01 μF   | 100 pF / 6800 pF   |
| SV08/SV58 | 0.01 μF / 1.20 μF     | 0.01 μF / 0.68 μF   | 0.01 μF / 0.18 μF   | 1000 pF / 0.082 μF  | 1000 pF / 0.068 μF  | 1000 pF / 0.047 μF  | 1000 pF / 0.018 μF  | 1000 pF / 0.012 μF |
| SV09/SV59 | 0.10 μF / 1.80 μF     | 0.10 μF / 1.00 μF   | 0.01 μF / 0.27 μF   | 0.01 μF / 0.12 μF   | 1000 pF / 0.10 μF   | 1000 pF / 0.068 μF  | 1000 pF / 0.027 μF  | 1000 pF / 0.018 μF |
| SV10      | 0.01 μF / 1.50 μF     | 0.01 μF / 0.82 μF   | 0.01 μF / 0.22 μF   | 0.01 μF / 0.10 μF   | 1000 pF / 0.082 μF  | 1000 pF / 0.056 μF  | 1000 pF / 0.022 μF  | 1000 pF / 0.022 μF |
| SV11      | 0.10 μF / 2.20 μF     | 0.10 μF / 1.2 μF    | 0.01 μF / 0.39 μF   | 0.01 μF / 0.18 μF   | 0.01 μF / 0.15 μF   | 0.01 μF / 0.10 μF   | 1000 pF / 0.039 μF  | 1000 pF / 0.027 μF |
| SV12      | 0.10 μF / 3.90 μF     | 0.10 μF / 2.20 μF   | 0.01 μF / 0.56 μF   | 0.01 μF / 0.27 μF   | 0.01 μF / 0.22 μF   | 0.01 μF / 0.15 μF   | 1000 pF / 0.056 μF  | 1000 pF / 0.033 μF |
| SV13/SV63 | 0.01 μF / 0.270 μF    | 0.01 μF / 0.10 μF   | 1000 pF / 0.033 μF  | 1000 pF / 0.012 μF  | 1000 pF / 0.01 μF   | 100 pF / 6800 pF    | 100 pF / 2700 pF    | —                  |
| SV14/SV64 | 0.01 μF / 0.470 μF    | 0.01 μF / 0.18 μF   | 1000 pF / 0.068 μF  | 1000 pF / 0.022 μF  | 1000 pF / 0.018 μF  | 1000 pF / 0.015 μF  | 100 pF / 5600 pF    | —                  |
| SV15/SV65 | 0.01 μF / 0.680 μF    | 0.01 μF / 0.33 μF   | 0.01 μF / 0.10 μF   | 1000 pF / 0.033 μF  | 1000 pF / 0.027 μF  | 1000 pF / 0.022 μF  | 1000 pF / 8200 pF   | 100 pF / 4700 pF   |
| SV16/SV66 | 0.01 μF / 1.80 μF     | 0.01 μF / 1.0 μF    | 0.01 μF / 0.27 μF   | 0.01 μF / 0.12 μF   | 0.01 μF / 0.10 μF   | 1000 pF / 0.068 μF  | 1000 pF / 0.027 μF  | 1000 pF / 0.018 μF |
| SV17/SV67 | 0.01 μF / 2.20 μF     | 0.01 μF / 1.2 μF    | 0.01 μF / 0.39 μF   | 0.01 μF / 0.15 μF   | 0.01 μF / 0.12 μF   | 1000 pF / 0.082 μF  | 1000 pF / 0.039 μF  | 1000 pF / 0.027 μF |

Note: Contact factory for other voltage ratings or values.

# High Voltage DSCC Radials

## AVX IS QUALIFIED TO THE FOLLOWING DSCC DRAWINGS

| Specification # | Description  | Capacitance Range |
|-----------------|--------------|-------------------|
| 87046           | C0G-1000 VDC | 10 pF - 0.025 μF  |
| 87043           | X7R-1000 VDC | 100 pF - 0.47 μF  |
| 87040           | X7R-2000 VDC | 100 pF - 0.22 μF  |
| 87114           | C0G-3000 VDC | 10 pF - 8200 pF   |
| 87047           | X7R-3000 VDC | 100 pF - 0.1 μF   |
| 87076           | C0G-4000 VDC | 10 pF - 6800 pF   |
| 89044           | X7R-4000 VDC | 100 pF - 0.056 μF |
| 87077           | C0G-5000 VDC | 10 pF - 5600 pF   |
| 87070           | X7R-5000 VDC | 100 pF - 0.033 μF |

### Group A inspection

| Inspection                                                                                                                                                                         | Requirement paragraph of MIL-PRF-49467      | Test method paragraph of MIL-PRF-49467 | Sampling procedure       |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------|----------------------------------------|--------------------------|
| <b>Subgroup 1</b><br>Thermal Shock<br>Voltage Conditioning                                                                                                                         | 3.6<br>3.6                                  | 4.8.2.1<br>4.8.2.2                     | 100% Inspection          |
| <b>Subgroup 3</b><br>Visual and mechanical examination:<br>Material<br>Physical dimensions<br>Interface requirements<br>(other than physical dimensions)<br>Marking<br>Workmanship | 3.4 and 3.4.1<br>3.1<br>3.5<br>3.25<br>3.27 | 4.8.1                                  | 13 samples<br>0 failures |
| <b>Subgroup 4</b><br>Solderability                                                                                                                                                 | 3.13                                        | 4.8.9                                  | 5 samples<br>0 failures  |

### Group B inspection\*

| Inspection                                                                                         | Requirement paragraph of MIL-PRF-49467 | Test method paragraph of MIL-PRF-49467 | Number of sample units to be inspected | Number of defectives permitted |   |
|----------------------------------------------------------------------------------------------------|----------------------------------------|----------------------------------------|----------------------------------------|--------------------------------|---|
| <b>Subgroup 1</b><br>Terminal strength<br>Resistance to soldering heat<br>Moisture resistance      | 3.18<br>3.11<br>3.19                   | 4.8.14<br>4.8.7<br>4.8.15              | 12                                     | 1                              | 1 |
| <b>Subgroup 2</b><br>Voltage-temperature limits**<br>Low temperature storage<br>Marking legibility | 3.14<br>3.23<br>3.25.1                 | 4.8.10<br>4.8.19<br>4.8.1.1            | 6                                      | 1                              |   |
| <b>Subgroup 3</b><br>Resistance to solvents                                                        | 3.21                                   | 4.8.17                                 | 4                                      | 1                              |   |
| <b>Subgroup 4</b><br>Life (at elevated ambient temperature)                                        | 3.22                                   | 4.8.18                                 | 10                                     | 1                              |   |

\*Customers may accept at their discretion, a certificate of compliance with group B requirements in lieu of performing group B tests.

\*\*For Steps E, F & G in Table VII of MIL-PRF-49467, 500 Vdc shall be applied.