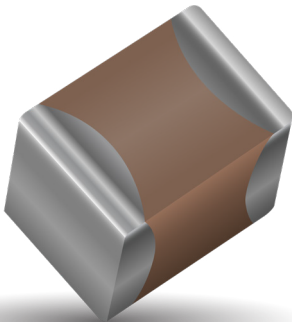


High Voltage MLC Chips

For 600V to 5000V Applications



High value, low leakage and small size are difficult parameters to obtain in capacitors for high voltage systems. AVX special high voltage MLC chip capacitors meet these performance characteristics and are designed for applications such as snubbers in high frequency power converters, resonators in SMPS, and high voltage coupling/dc blocking. These high voltage chip designs exhibit low ESRs at high frequencies.

Larger physical sizes than normally encountered chips are used to make high voltage MLC chip products. Special precautions must be taken in applying these chips in surface mount assemblies. The temperature gradient during heating or cooling cycles should not exceed 4°C per second. The preheat temperature must be within 50°C of the peak temperature reached by the ceramic bodies through the soldering process. Chip sizes 1210 and larger should be reflow soldered only. Capacitors may require protective surface coating to prevent external arcing.

For 1825, 2225 and 3640 sizes, AVX offers leaded version in either thru-hole or SMT configurations (for details see section on high voltage leaded MLC chips)

NEW 630V RANGE

HOW TO ORDER

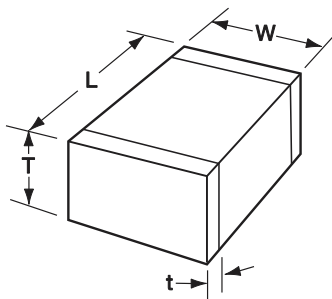
| 1808 | A | A | 271 | M | A | 1 | 2 | A |
|------------------|----------------|--------------------------------|---|---|-----------------------------------|---|---|-------------------------------------|
| AVX Style | Voltage | Temperature Coefficient | Capacitance Code (2 significant digits + no. of zeros) Examples: | Capacitance Tolerance COG: J = ±5% K = ±10% M = ±20% X7R: K = ±10% M = ±20% Z = +80%, -20% | Test Level A = Standard | Termination* 1 = Pd/Ag T = Plated Ni and Sn (RoHS Compliant) | Packaging** 1 or 2 = 7" Reel 3 or 4 = 13" Reel | Special Code A = Standard |
| 0805 | 600V/630V = C | NPO (COG) = A | 10 pF = 100 | | | | | |
| 1206 | 1000V = A | X7R = C | 100 pF = 101 | | | | | |
| 1210 | 1500V = S | | 1,000 pF = 102 | | | | | |
| 1808 | 2000V = G | | 22,000 pF = 223 | | | | | |
| 1812 | 2500V = W | | 220,000 pF = 224 | | | | | |
| 1825 | 3000V = H | | 1 μF = 105 | | | | | |
| 2220 | 4000V = J | | | | | | | |
| 2225 | 5000V = K | | | | | | | |
| 3640 | | | | | | | | |

*Note: Terminations with 5% minimum lead (Pb) is available, see pages 100 and 101 for LD style. Leaded terminations are available, see pages 102-106.

Notes: Capacitors with X7R dielectrics are not intended for applications across AC supply mains or AC line filtering with polarity reversal. Contact plant for recommendations. Contact factory for availability of Termination and Tolerance options for Specific Part Numbers.

**The 3640 Style is not available on 7" Reels.

*** AVX offers nonstandard chip sizes. Contact factory for details.



DIMENSIONS

MILLIMETERS (INCHES)

| SIZE | 0805 | 1206 | 1210* | 1808* | 1812* | 1825* | 2220* | 2225* | 3640* |
|------------------------|--------------------------------|--------------------------------|--------------------------------|--------------------------------|--------------------------------|--------------------------------|--------------------------------|--------------------------------|--------------------------------|
| (L) Length | 2.10 ± 0.20 (0.083 ± 0.008) | 3.30 ± 0.30 (0.130 ± 0.012) | 3.30 ± 0.40 (0.130 ± 0.016) | 4.60 ± 0.50 (0.181 ± 0.020) | 4.60 ± 0.50 (0.181 ± 0.020) | 4.60 ± 0.50 (0.181 ± 0.020) | 5.70 ± 0.50 (0.224 ± 0.020) | 5.72 ± 0.25 (0.225 ± 0.010) | 9.14 ± 0.25 (0.360 ± 0.010) |
| (W) Width | 1.25 ± 0.20 (0.049 ± 0.008) | 1.60 ± 0.20 (0.063 ± 0.008) | 2.50 ± 0.30 (0.098 ± 0.012) | 2.00 ± 0.20 (0.079 ± 0.008) | 3.20 ± 0.30 (0.126 ± 0.012) | 6.30 ± 0.40 (0.248 ± 0.016) | 5.00 ± 0.40 (0.197 ± 0.016) | 6.35 ± 0.25 (0.250 ± 0.010) | 10.2 ± 0.25 (0.400 ± 0.010) |
| (T) Thickness Max. | 1.35 (0.053) | 1.80 (0.071) | 2.80 (0.110) | 2.20 (0.087) | 2.80 (0.110) | 3.40 (0.134) | 3.40 (0.134) | 2.54 (0.100) | 2.54 (0.100) |
| (t) terminal min. max. | 0.50 ± 0.20 (0.020 ± 0.008) | 0.60 ± 0.20 (0.024 ± 0.008) | 0.75 ± 0.35 (0.030 ± 0.014) | 0.75 ± 0.35 (0.030 ± 0.014) | 0.75 ± 0.35 (0.030 ± 0.014) | 0.75 ± 0.35 (0.030 ± 0.014) | 0.85 ± 0.35 (0.033 ± 0.014) | 0.85 ± 0.35 (0.033 ± 0.014) | 0.76 (0.030) 1.52 (0.060) |

*Reflow Soldering Only



The Important Information/Disclaimer is incorporated in these specifications by reference and should be reviewed in full before placing any order.

High Voltage MLC Chips

For 600V to 5000V Applications



NPO (C0G) CAPACITANCE RANGE – PREFERRED SIZES ARE SHADED

| Case Size | 1825 | | | | | | | | 2220 | | | | | | | | 2225 | | | | | | | | 3640 | | | | | | | | | | |
|---------------|--------------------------------|-------|------|------|------|------|------|------|------------------------------|-----|------|------|------|------|------|------|--------------------------------|-----|-----|------|------|------|------|------|--------------------------------|------|-----|-----|------|------|------|------|------|------|------|
| Soldering | Reflow Only | | | | | | | | Reflow Only | | | | | | | | Reflow Only | | | | | | | | Reflow Only | | | | | | | | | | |
| (L) Length | 4.60 ± 0.50 (0.181 ± 0.020) | | | | | | | | 5.70 0.50 (0.224 0.020) | | | | | | | | 5.70 ± 0.50 (0.225 ± 0.010) | | | | | | | | 9.14 ± 0.25 (0.360 ± 0.010) | | | | | | | | | | |
| (W) Width | 6.30 ± 0.40 (0.248 ± 0.016) | | | | | | | | 5.00 0.40 (0.197 0.016) | | | | | | | | 6.30 0.40 (0.250 ± 0.010) | | | | | | | | 10.2 ± 0.25 (0.400 ± 0.010) | | | | | | | | | | |
| (T) Thickness | 3.40 (0.134) | | | | | | | | 3.40 (0.134) | | | | | | | | 3.40 (0.100) | | | | | | | | 2.54 (0.100) | | | | | | | | | | |
| (t) Terminal | 0.75 ± 0.35 (0.030 ± 0.014) | | | | | | | | 0.85 0.35 (0.033 ± 0.014) | | | | | | | | 0.85 ± 0.35 (0.033 ± 0.014) | | | | | | | | 0.76 (0.030) 1.52 (0.060) | | | | | | | | | | |
| Voltage (V) | 600 | 630 | 1000 | 1500 | 2000 | 2500 | 3000 | 4000 | 600 | 630 | 1000 | 1500 | 2000 | 2500 | 3000 | 4000 | 5000 | 600 | 630 | 1000 | 1500 | 2000 | 2500 | 3000 | 4000 | 5000 | 600 | 630 | 1000 | 1500 | 2000 | 2500 | 3000 | 4000 | 5000 |
| Cap (pF) | 1.5 | 1R5 | | | | | | | 1.5 | 1R5 | | | | | | | | 1.5 | 1R5 | | | | | | | | 1.5 | 1R5 | | | | | | | |
| | 1.8 | 1R8 | | | | | | | 1.8 | 1R8 | | | | | | | | 1.8 | 1R8 | | | | | | | | 1.8 | 1R8 | | | | | | | |
| | 2.2 | 2R2 | | | | | | | 2.2 | 2R2 | | | | | | | | 2.2 | 2R2 | | | | | | | | 2.2 | 2R2 | | | | | | | |
| | 2.7 | 2R7 | | | | | | | 2.7 | 2R7 | | | | | | | | 2.7 | 2R7 | | | | | | | | 2.7 | 2R7 | | | | | | | |
| | 3.3 | 3R3 | | | | | | | 3.3 | 3R3 | | | | | | | | 3.3 | 3R3 | | | | | | | | 3.3 | 3R3 | | | | | | | |
| | 3.9 | 3R9 | | | | | | | 3.9 | 3R9 | | | | | | | | 3.9 | 3R9 | | | | | | | | 3.9 | 3R9 | | | | | | | |
| | 4.7 | 4R7 | | | | | | | 4.7 | 4R7 | | | | | | | | 4.7 | 4R7 | | | | | | | | 4.7 | 4R7 | | | | | | | |
| | 5.6 | 5R6 | | | | | | | 5.6 | 5R6 | | | | | | | | 5.6 | 5R6 | | | | | | | | 5.6 | 5R6 | | | | | | | |
| | 6.8 | 6R8 | | | | | | | 6.8 | 6R8 | | | | | | | | 6.8 | 6R8 | | | | | | | | 6.8 | 6R8 | | | | | | | |
| | 8.2 | 8R2 | | | | | | | 8.2 | 8R2 | | | | | | | | 8.2 | 8R2 | | | | | | | | 8.2 | 8R2 | | | | | | | |
| | 10 | 100 | E | E | G | E | F | E | F | F | E | E | E | E | E | E | E | E | E | E | E | E | E | E | E | F | F | | | | | | | | |
| | 12 | 120 | E | E | G | E | F | E | F | F | F | E | E | E | E | E | E | E | E | E | E | E | E | E | E | F | F | | | | | | | | |
| | 15 | 150 | E | E | G | E | F | E | F | F | F | E | E | E | E | E | E | E | E | E | E | E | E | E | E | F | F | | | | | | | | |
| | 18 | 180 | E | E | G | E | F | E | F | F | F | E | E | E | E | E | E | E | E | E | E | E | E | E | E | F | F | | | | | | | | |
| | 22 | 220 | E | E | G | E | F | E | F | F | F | E | E | E | E | E | E | E | E | E | E | E | E | E | E | F | F | | | | | | | | |
| | 27 | 270 | E | E | G | E | F | E | F | F | F | E | E | E | E | E | E | E | E | E | E | E | E | E | E | F | F | | | | | | | | |
| | 33 | 330 | E | E | G | E | F | E | F | F | F | E | E | E | E | E | E | E | E | E | E | E | E | E | E | F | F | | | | | | | | |
| | 39 | 390 | E | E | G | E | F | E | F | F | F | E | E | E | E | E | E | E | E | E | E | E | E | E | E | F | F | | | | | | | | |
| | 47 | 470 | E | E | G | E | F | E | F | F | F | E | E | E | E | E | E | E | E | E | E | E | E | E | E | F | F | | | | | | | | |
| | 56 | 560 | E | E | G | E | F | E | F | F | F | E | E | E | E | E | E | E | E | E | E | E | E | E | E | F | F | | | | | | | | |
| | 68 | 680 | E | E | G | E | F | E | F | F | F | E | E | E | E | E | E | E | E | E | E | E | E | E | E | F | F | | | | | | | | |
| | 82 | 820 | E | E | G | E | F | E | F | F | F | E | E | E | E | E | E | E | E | E | E | E | E | E | E | F | F | | | | | | | | |
| | 100 | 101 | E | E | G | E | F | E | F | F | F | E | E | E | E | E | E | E | E | E | E | E | E | E | G | G | | | | | | | | | |
| | 120 | 121 | E | E | G | E | F | E | F | F | F | E | E | E | E | E | E | E | E | E | E | E | E | E | G | G | | | | | | | | | |
| | 150 | 151 | E | E | G | E | F | E | F | F | F | E | E | E | E | E | E | E | E | E | E | E | E | E | G | G | | | | | | | | | |
| | 180 | 181 | E | E | G | E | F | E | F | F | F | E | E | E | E | E | E | E | E | E | E | E | E | E | G | G | | | | | | | | | |
| | 220 | 221 | E | E | G | E | F | E | F | F | F | E | E | E | E | E | E | E | E | E | E | E | E | E | G | G | | | | | | | | | |
| | 270 | 271 | E | E | G | E | F | E | F | F | F | E | E | E | E | E | E | E | E | E | E | E | E | E | G | G | | | | | | | | | |
| | 330 | 331 | E | E | G | E | F | E | F | F | F | E | E | E | E | E | E | E | E | E | E | E | E | E | G | G | | | | | | | | | |
| | 390 | 391 | E | E | G | E | F | E | F | F | F | E | E | E | E | E | E | E | E | E | E | E | E | E | G | G | | | | | | | | | |
| | 470 | 471 | E | E | G | E | F | E | F | F | F | E | E | E | E | E | E | E | E | E | E | E | E | E | G | G | | | | | | | | | |
| | 560 | 561 | E | E | G | E | F | E | F | F | F | E | E | E | E | E | E | E | E | E | E | E | E | E | G | G | | | | | | | | | |
| | 680 | 681 | E | E | G | E | F | F | G | | | E | E | E | E | E | F | F | | | | | | E | E | | | | | | | | | | |
| | 750 | 751 | E | E | G | E | F | F | G | | | E | E | E | E | E | F | F | | | | | | E | E | | | | | | | | | | |
| | 820 | 821 | E | E | G | E | F | F | G | | | E | E | E | E | E | F | F | | | | | | E | E | | | | | | | | | | |
| | 1000 | 102 | E | E | G | E | F | F | G | | | E | E | E | E | E | F | F | | | | | | E | E | | | | | | | | | | |
| | 1200 | 122 | E | E | G | E | F | G | G | | | E | E | E | E | E | G | G | | | | | | E | E | | | | | | | | | | |
| | 1500 | 152 | E | E | G | F | G | G | G | | | E | E | E | E | E | F | G | G | | | | | E | E | | | | | | | | | | |
| | 1800 | 182 | E | E | G | F | G | G | G | | | E | E | E | F | F | G | G | | | | | | E | E | | | | | | | | | | |
| | 2200 | 222 | E | E | G | G | G | | | | | E | E | E | E | E | | | | | | | | E | E | | | | | | | | | | |
| | 2700 | 272 | E | E | G | G | | | | | | E | E | E | E | G | | | | | | | | E | E | | | | | | | | | | |
| | 3300 | 332 | E | E | G | G | | | | | | E | E | E | E | G | | | | | | | | E | E | | | | | | | | | | |
| | 3900 | 392 | E | E | G | G | | | | | | E | E | E | E | G | | | | | | | | E | E | | | | | | | | | | |
| | 4700 | 472 | E | E | G | G | | | | | | E | E | E | E | G | | | | | | | | E | E | | | | | | | | | | |
| | 5600 | 562 | F | F | G | G | | | | | | F | F | F | G | G | | | | | | | | E | E | | | | | | | | | | |
| | 6800 | 682 | F | F | G | | | | | | | F | F | F | G | G | | | | | | | | E | E | | | | | | | | | | |
| | 8200 | 822 | G | G | G | | | | | | | G | G | G | | | | | | | | | | E | E | | | | | | | | | | |
| | Cap (µF) | 0.010 | 103 | F | E | G | | | | | | 7 | 7 | 7 | | | | | | | | | | G | G | | | | | | | | | | |
| | | 0.012 | 123 | E | G | | | | | | | | | | | | | | | | | | | G | G | | | | | | | | | | |
| | | 0.015 | 153 | E | | | | | | | | | | | | | | | | | | | | G | G | | | | | | | | | | |
| | | 0.018 | 183 | E | | | | | | | | | | | | | | | | | | | | G | G | | | | | | | | | | |
| | | 0.022 | 223 | E | | | | | | | | | | | | | | | | | | | | G | G | | | | | | | | | | |
| | | 0.027 | 273 | F | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 0.033 | 333 | F | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 0.039 | 393 | G | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 0.047 | 473 | G | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 0.056 | 563 | G | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 0.068 | 683 | G | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 0.100 | 104 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Voltage (V) | 600 | 630 | 1000 | 1500 | 2000 | 2500 | 3000 | 4000 | 600 | 630 | 1000 | 1500 | 2000 | 2500 | 3000 | 4000 | 5000 | 600 | 630 | 1000 | 1500 | 2000 | 2500 | 3000 | 4000 | 5000 | 600 | 630 | 1000 | 1500 | 2000 | 2500 | 3000 | 4000 | 5000 |
| Case Size | 1825 | | | | | | | | 2220 | | | | | | | | 2225 | | | | | | | | 3640 | | | | | | | | | | |

NOTE: Contact factory for non-specified capacitance values

| Letter | A | C | E | F | G | X | 7 |
|----------------|------------------|------------------|-------------------|-------------------|------------------|------------------|-----------------|
| Max. Thickness | 0.813 (0.032) | 1.448 (0.057) | 1.8034 (0.071) | 2.2098 (0.087) | 2.794 (0.110) | 0.940 (0.037) | 3.30 (0.130) |

High Voltage MLC Chips

For 600V to 5000V Applications



X7R Dielectric

Performance Characteristics

| | |
|--|--|
| Capacitance Range | 10 pF to 0.82 μF (25°C, 1.0 ±0.2 Vrms at 1kHz) |
| Capacitance Tolerances | ±10%; ±20%; +80%, -20% |
| Dissipation Factor | 2.5% max. (+25°C, 1.0 ±0.2 Vrms, 1kHz) |
| Operating Temperature Range | -55°C to +125°C |
| Temperature Characteristic | ±15% (0 VDC) |
| Voltage Ratings | 600, 630, 1000, 1500, 2000, 2500, 3000, 4000 & 5000 VDC (+125°C) |
| Insulation Resistance (+25°C, at 500 VDC) | 100K MΩ min. or 1000 MΩ - μF min., whichever is less |
| Insulation Resistance (+125°C, at 500 VDC) | 10K MΩ min. or 100 MΩ - μF min., whichever is less |
| Dielectric Strength | Minimum 120% rated voltage for 5 seconds at 50 mA max. current |

X7R CAPACITANCE RANGE – PREFERRED SIZES ARE SHADED

| Case Size | 0805 | | | 1206 | | | | | 1210 | | | | | 1808 | | | | | | | | 1812 | | | | | | | | |
|------------------|------------------------------|-----|------|---|-----|------|------|------|------------------------------|-----|------|------|------|------------------------------|-----|------|------|------|------|------|------|------------------------------|-----|------|------|------|------|------|------|---|
| | Reflow/Wave | | | Reflow/Wave | | | | | Reflow Only | | | | | Reflow Only | | | | | | | | Reflow Only | | | | | | | | |
| (L) Length | 2.10 ±0.20 (0.085 ±0.008) | | | 3.30 ±0.30 (0.130 ±0.012) | | | | | 3.30 ±0.40 (0.130 ±0.016) | | | | | 4.60 ±0.50 (0.181 ±0.020) | | | | | | | | 4.60 ±0.50 (0.177 ±0.012) | | | | | | | | |
| (W) Width | 1.25 ±0.20 (0.049 ±0.008) | | | 1.60 ±0.30/-0.10 (0.063 ±0.012/-0.004) | | | | | 2.50 ±0.30 (0.098 ±0.012) | | | | | 2.00 ±0.20 (0.079 ±0.008) | | | | | | | | 3.20 ±0.30 (0.126 ±0.008) | | | | | | | | |
| (T) Thickness | 1.35 (0.053) | | | 1.80 (0.071) | | | | | 2.80 (0.110) | | | | | 2.20 (0.087) | | | | | | | | 2.80 (0.100) | | | | | | | | |
| (t) Terminal max | 0.50 ±0.20 (0.020 ±0.008) | | | 0.60 ±0.20 (0.024 ±0.008) | | | | | 0.75 ±0.35 (0.030 ±0.014) | | | | | 0.75 ±0.35 (0.030 ±0.014) | | | | | | | | 0.75 ±0.35 (0.030 ±0.014) | | | | | | | | |
| Voltage (V) | 600 | 630 | 1000 | 600 | 630 | 1000 | 1500 | 2000 | 600 | 630 | 1000 | 1500 | 2000 | 600 | 630 | 1000 | 1500 | 2000 | 2500 | 3000 | 4000 | 600 | 630 | 1000 | 1500 | 2000 | 2500 | 3000 | 4000 | |
| Cap (pF) | 100 | 101 | | X | X | C | C | C | E | E | E | E | E | E | E | E | E | E | E | E | E | E | E | E | E | E | E | E | E | E |
| | 120 | 121 | | X | X | C | C | C | E | E | E | E | E | E | E | E | E | E | E | E | E | E | E | E | E | E | E | E | E | E |
| | 150 | 151 | | X | X | C | C | C | E | E | E | E | E | E | E | E | E | E | E | E | E | E | E | E | E | E | E | E | E | E |
| | 180 | 181 | | X | X | C | C | C | E | E | E | E | E | E | E | E | E | E | E | E | E | E | E | E | E | E | E | E | E | E |
| | 220 | 221 | | X | X | C | C | C | E | E | E | E | E | E | E | E | E | E | E | E | E | E | E | E | E | E | E | E | E | E |
| | 270 | 271 | | X | X | C | C | C | E | E | E | E | E | E | E | E | E | E | E | E | E | E | E | E | E | E | E | E | E | E |
| | 330 | 331 | | X | X | C | C | C | E | E | E | E | E | E | E | E | E | E | E | E | E | E | E | E | F | F | E | E | E | E |
| | 390 | 391 | | X | X | C | C | C | E | E | E | E | E | E | E | E | E | E | E | E | E | E | E | E | F | F | E | E | E | E |
| | 470 | 471 | | X | X | C | C | C | E | E | E | E | E | E | E | E | E | E | E | E | E | E | E | F | F | E | E | E | E | |
| | 560 | 561 | | X | X | C | C | C | E | E | E | E | E | E | E | E | E | E | E | E | E | E | F | F | F | E | E | E | E | |
| | 680 | 681 | | X | X | C | C | C | E | E | E | E | E | E | E | E | E | E | E | E | E | E | F | F | F | E | E | E | E | |
| | 750 | 751 | | X | X | C | C | C | E | E | E | E | E | E | E | E | E | E | E | E | E | E | F | F | F | E | E | E | E | |
| | 820 | 821 | | X | X | C | C | C | E | E | E | E | E | E | E | E | E | E | E | E | E | E | F | F | F | E | E | E | E | |
| | 1000 | 102 | | X | X | X | C | C | E | E | E | E | E | E | E | E | E | E | E | E | E | E | F | F | F | E | E | E | E | |
| | 1200 | 122 | | X | X | X | C | C | E | E | E | E | E | E | E | E | E | E | E | E | E | E | F | F | F | E | E | E | E | |
| | 1500 | 152 | | X | X | X | C | C | E | E | E | E | E | E | E | E | E | E | E | E | E | E | F | F | F | E | E | E | E | |
| | 1800 | 182 | | X | X | X | C | C | E | E | E | E | E | E | E | E | E | E | E | E | E | E | F | F | F | E | E | E | E | |
| | 2200 | 222 | | X | X | X | C | C | E | E | E | E | E | E | E | E | F | F | F | F | F | F | F | F | F | E | E | E | E | |
| | 2700 | 272 | | C | C | | C | C | E | E | E | E | E | E | E | E | F | F | F | F | F | F | F | F | F | E | E | E | E | |
| | 3300 | 332 | | C | C | | C | C | E | E | E | E | E | E | E | E | F | F | F | F | F | F | F | F | F | E | E | E | E | |
| | 3900 | 392 | | C | C | | C | C | E | E | E | E | E | E | E | E | F | F | F | F | F | F | F | F | F | E | E | E | E | |
| | 4700 | 472 | | C | C | | C | C | E | E | E | E | E | E | E | E | F | F | F | F | F | F | F | F | F | E | E | E | E | |
| | 5600 | 562 | | C | C | | C | C | E | E | E | E | E | E | E | E | F | F | F | F | F | F | F | F | F | E | E | E | E | |
| | 6800 | 682 | | C | C | | C | C | E | E | E | E | E | E | E | E | F | F | F | F | F | F | F | F | F | E | E | E | E | |
| | 8200 | 822 | | C | C | | C | C | E | E | E | E | E | E | E | E | F | F | F | F | F | F | F | F | F | E | E | E | E | |
| Cap (μF) | 0.010 | 103 | | C | C | | C | C | E | E | E | E | E | E | E | E | E | E | E | E | E | E | E | E | E | E | E | E | E | |
| | 0.015 | 153 | | C | C | | E | E | E | E | E | E | E | E | E | E | F | F | F | F | F | F | F | F | F | E | E | F | G | |
| | 0.018 | 183 | | C | C | | E | E | E | E | E | E | E | E | E | E | F | F | F | F | F | F | F | F | F | E | E | G | | |
| | 0.022 | 223 | | C | C | | E | E | E | E | E | E | E | E | E | F | F | F | F | F | F | F | F | F | F | E | E | G | | |
| | 0.027 | 273 | | C | C | | E | E | E | E | E | E | E | E | E | F | F | F | F | F | F | F | F | F | F | E | E | G | | |
| | 0.033 | 333 | | | | | E | E | E | E | E | E | E | E | E | F | F | F | F | F | F | F | F | F | F | E | E | G | | |
| | 0.039 | 393 | | | | | | | E | E | E | E | E | E | E | F | F | F | F | F | F | F | F | F | F | E | E | G | | |
| | 0.047 | 473 | | | | | | | E | E | E | E | E | E | E | F | F | F | F | F | F | F | F | F | F | E | E | G | | |
| | 0.056 | 563 | | | | | | | F | F | F | F | F | F | F | F | F | F | F | F | F | F | F | F | F | F | F | | | |
| | 0.068 | 683 | | | | | | | F | F | F | F | F | F | F | F | F | F | F | F | F | F | F | F | F | F | F | | | |
| | 0.082 | 823 | | | | | | | F | F | F | F | F | F | F | F | F | F | F | F | F | F | F | F | F | F | F | | | |
| | 0.100 | 104 | | | | | | | F | F | F | F | F | F | F | F | F | F | F | F | F | F | F | F | F | F | F | | | |
| | 0.150 | 154 | | | | | | | | | | | | | | | | | | | | | | | | G | G | | | |
| | 0.220 | 224 | | | | | | | | | | | | | | | | | | | | | | | | G | G | | | |
| | 0.270 | 274 | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | 0.330 | 334 | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | 0.390 | 394 | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | 0.470 | 474 | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | 0.560 | 564 | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | 0.680 | 684 | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | 0.820 | 824 | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | 1.000 | 105 | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Voltage (V) | 600 | 630 | 1000 | 600 | 630 | 1000 | 1500 | 2000 | 600 | 630 | 1000 | 1500 | 2000 | 600 | 630 | 1000 | 1500 | 2000 | 2500 | 3000 | 4000 | 600 | 630 | 1000 | 1500 | 2000 | 2500 | 3000 | 4000 | |
| Case Size | 0805 | | | 1206 | | | | | 1210 | | | | | 1808 | | | | | | | | 1812 | | | | | | | | |

NOTE: Contact factory for non-specified capacitance values

| Letter | A | C | E | F | G | X | 7 |
|----------------|------------------|------------------|-------------------|-------------------|------------------|------------------|-----------------|
| Max. Thickness | 0.813 (0.032) | 1.448 (0.057) | 1.8034 (0.071) | 2.2098 (0.087) | 2.794 (0.110) | 0.940 (0.037) | 3.30 (0.130) |



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[CGA2B2C0G1H040C](#) [CGA2B2C0G1H050C](#) [CGA2B2C0G1H060D](#) [CGA2B2C0G1H070D](#) [CGA2B2C0G1H151J](#) [CGA2B2C0G1H1R5C](#)
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