

阅读申明

- 1.本站收集的数据手册和产品资料都来自互联网，版权归原作者所有。如读者和版权方有任何异议请及时告之，我们将妥善解决。
- 2.本站提供的中文数据手册是英文数据手册的中文翻译，其目的是协助用户阅读，该译文无法自动跟随原稿更新，同时也可能存在翻译上的不当。建议读者以英文原稿为参考以便获得更精准的信息。
- 3.本站提供的产品资料，来自厂商的技术支持或者使用者的心得体会等，其内容可能存在描述上的差异，建议读者做出适当判断。
- 4.如需与我们联系，请发邮件到marketing@iczoom.com，主题请标有“数据手册”字样。

Read Statement

1. The datasheets and other product information on the site are all from network reference or other public materials, and the copyright belongs to the original author and original published source. If readers and copyright owners have any objections, please contact us and we will deal with it in a timely manner.
2. The Chinese datasheets provided on the website is a Chinese translation of the English datasheets. Its purpose is for reader's learning exchange only and do not involve commercial purposes. The translation cannot be automatically updated with the original manuscript, and there may also be improper translations. Readers are advised to use the English manuscript as a reference for more accurate information.
3. All product information provided on the website refer to solutions from manufacturers' technical support or users the contents may have differences in description, and readers are advised to take the original article as the standard.
4. If you have any questions, please contact us at marketing@iczoom.com and mark the subject with "Datasheets" .

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 | K | A | 1 | 1 | 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 = 7" Reel** 3 = 13" Reel 9 = Bulk | Special Code A = Standard |
| 0805 | 600V/630V = C | C0G = 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 89 and 90 for LD style. Leaded terminations are available, see pages 93 and 94.

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 | 2.01 ± 0.20 (0.079 ± 0.008) | 3.20 ± 0.20 (0.126 ± 0.008) | 3.20 ± 0.20 (0.126 ± 0.008) | 4.57 ± 0.25 (0.180 ± 0.010) | 4.50 ± 0.30 (0.177 ± 0.012) | 4.50 ± 0.30 (0.177 ± 0.012) | 5.70 ± 0.40 (0.224 ± 0.016) | 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 ± 0.20 (0.098 ± 0.008) | 2.03 ± 0.25 (0.080 ± 0.010) | 3.20 ± 0.20 (0.126 ± 0.008) | 6.40 ± 0.30 (0.252 ± 0.012) | 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. | 1.30 (0.051) | 1.52 (0.060) | 1.70 (0.067) | 2.03 (0.080) | 2.54 (0.100) | 2.54 (0.100) | 3.30 (0.130) | 2.54 (0.100) | 2.54 (0.100) |
| (t) terminal min. max. | 0.50 ± 0.25 (0.020 ± 0.010) | 0.25 (0.010) 0.75 (0.030) | 0.25 (0.010) 0.75 (0.030) | 0.25 (0.010) 1.02 (0.040) | 0.25 (0.010) 1.02 (0.040) | 0.25 (0.010) 1.02 (0.040) | 0.25 (0.010) 1.02 (0.040) | 0.25 (0.010) 1.02 (0.040) | 0.76 (0.030) 1.52 (0.060) |

*Reflow Soldering Only



High Voltage MLC Chips



For 600V to 5000V Applications

C0G Dielectric

Performance Characteristics

| | |
|---|--|
| Capacitance Range | 10 pF to 0.047 μ F (25°C, 1.0 \pm 0.2 Vrms at 1kHz, for \leq 1000 pF use 1 MHz) |
| Capacitance Tolerances | \pm 5%, \pm 10%, \pm 20% |
| Dissipation Factor | 0.1% max. (+25°C, 1.0 \pm 0.2 Vrms, 1kHz, for \leq 1000 pF use 1 MHz) |
| Operating Temperature Range | -55°C to +125°C |
| Temperature Characteristic | 0 \pm 30 ppm/°C (0 VDC) |
| Voltage Ratings | 600, 630, 1000, 1500, 2000, 2500, 3000, 4000 & 5000 VDC (+125°C) |
| Insulation Resistance (+25°C, at 500 VDC) | 100K M Ω min. or 1000 M Ω - μ F min., whichever is less |
| Insulation Resistance (+125°C, at 500 VDC) | 10K M Ω min. or 100 M Ω - μ F min., whichever is less |
| Dielectric Strength | Minimum 120% rated voltage for 5 seconds at 50 mA max. current |

HIGH VOLTAGE C0G CAPACITANCE VALUES

| VOLTAGE | 0805 | 1206 | 1210 | 1808 | 1812 | 1825 | 2220 | 2225 | 3640 | |
|---------|------|-------|---------|---------|---------|---------|---------------|---------------|---------------|---------------|
| 600/630 | min. | 10pF | 10 pF | 100 pF | 100 pF | 100 pF | 1000 pF | 1000 pF | 1000 pF | 1000 pF |
| | max. | 330pF | 1200 pF | 2700 pF | 3300 pF | 5600 pF | 0.012 μ F | 0.012 μ F | 0.018 μ F | 0.047 μ F |
| 1000 | min. | 10pF | 10 pF | 10 pF | 100 pF | 100 pF | 100 pF | 1000 pF | 1000 pF | 1000 pF |
| | max. | 180pF | 560 pF | 1500 pF | 2200 pF | 3300 pF | 8200 pF | 0.010 μ F | 0.010 μ F | 0.022 μ F |
| 1500 | min. | — | 10 pF | 10 pF | 10 pF | 10 pF | 100 pF | 100 pF | 100 pF | 100 pF |
| | max. | — | 270 pF | 680 pF | 820 pF | 1800 pF | 4700 pF | 4700 pF | 5600 pF | 0.010 μ F |
| 2000 | min. | — | 10 pF | 10 pF | 10 pF | 10 pF | 100 pF | 100 pF | 100 pF | 100 pF |
| | max. | — | 120 pF | 270 pF | 330 pF | 1000 pF | 1800 pF | 2200 pF | 2700 pF | 6800 pF |
| 2500 | min. | — | — | — | 10 pF | 10 pF | 10 pF | 100 pF | 100 pF | 100 pF |
| | max. | — | — | — | 180 pF | 470 pF | 1200 pF | 1500 pF | 1800 pF | 3900 pF |
| 3000 | min. | — | — | — | 10 pF | 10 pF | 10 pF | 10 pF | 10 pF | 100 pF |
| | max. | — | — | — | 120 pF | 330 pF | 820 pF | 1000 pF | 1200 pF | 2700 pF |
| 4000 | min. | — | — | — | 10 pF | 10 pF | 10 pF | 10 pF | 10 pF | 100 pF |
| | max. | — | — | — | 47 pF | 150 pF | 330 pF | 470 pF | 560 pF | 1200 pF |
| 5000 | min. | — | — | — | — | — | — | 10 pF | 10 pF | 10 pF |
| | max. | — | — | — | — | — | — | 220 pF | 270 pF | 820 pF |

X7R Dielectric

Performance Characteristics

| | |
|---|---|
| Capacitance Range | 10 pF to 0.56 μ F (25°C, 1.0 \pm 0.2 Vrms at 1kHz) |
| Capacitance Tolerances | \pm 10%; \pm 20%; +80%, -20% |
| Dissipation Factor | 2.5% max. (+25°C, 1.0 \pm 0.2 Vrms, 1kHz) |
| Operating Temperature Range | -55°C to +125°C |
| Temperature Characteristic | \pm 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 M Ω min. or 1000 M Ω - μ F min., whichever is less |
| Insulation Resistance (+125°C, at 500 VDC) | 10K M Ω min. or 100 M Ω - μ F min., whichever is less |
| Dielectric Strength | Minimum 120% rated voltage for 5 seconds at 50 mA max. current |

HIGH VOLTAGE X7R MAXIMUM CAPACITANCE VALUES

| VOLTAGE | 0805 | 1206 | 1210 | 1808 | 1812 | 1825 | 2220 | 2225 | 3640 | |
|---------|------|--------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|
| 600/630 | min. | 100pF | 1000 pF | 1000 pF | 1000 pF | 1000 pF | 0.010 μ F | 0.010 μ F | 0.010 μ F | 0.010 μ F |
| | max. | 6800pF | 0.022 μ F | 0.056 μ F | 0.068 μ F | 0.120 μ F | 0.270 μ F | 0.270 μ F | 0.330 μ F | 0.560 μ F |
| 1000 | min. | 100pF | 100 pF | 1000 pF | 1000 pF | 1000 pF | 1000 pF | 1000 pF | 1000 pF | 1000 pF |
| | max. | 1500pF | 6800 pF | 0.015 μ F | 0.018 μ F | 0.039 μ F | 0.100 μ F | 0.120 μ F | 0.150 μ F | 0.220 μ F |
| 1500 | min. | — | 100 pF | 100 pF | 100 pF | 100 pF | 1000 pF | 1000 pF | 1000 pF | 1000 pF |
| | max. | — | 2700 pF | 5600 pF | 6800 pF | 0.015 μ F | 0.056 μ F | 0.056 μ F | 0.068 μ F | 0.100 μ F |
| 2000 | min. | — | 10 pF | 100 pF | 100 pF | 100 pF | 100 pF | 1000 pF | 1000 pF | 1000 pF |
| | max. | — | 1500 pF | 3300 pF | 3300 pF | 8200 pF | 0.022 μ F | 0.027 μ F | 0.033 μ F | 0.027 μ F |
| 2500 | min. | — | — | — | 10 pF | 10 pF | 100 pF | 100 pF | 100 pF | 1000 pF |
| | max. | — | — | — | 2200 pF | 5600 pF | 0.015 μ F | 0.018 μ F | 0.022 μ F | 0.022 μ F |
| 3000 | min. | — | — | — | 10 pF | 10 pF | 100 pF | 100 pF | 100 pF | 1000 pF |
| | max. | — | — | — | 1800 pF | 3900 pF | 0.010 μ F | 0.012 μ F | 0.015 μ F | 0.018 μ F |
| 4000 | min. | — | — | — | — | — | — | — | — | 100 pF |
| | max. | — | — | — | — | — | — | — | — | 6800 pF |
| 5000 | min. | — | — | — | — | — | — | — | — | 100 pF |
| | max. | — | — | — | — | — | — | — | — | 3300 pF |