

Cylindrical Types, High-Voltage Mica Capacitors

Types 291, 292, 293, 294 — Cylindrical Case, High-Current and High-Voltage Circuits



Designed for frequencies ranging from 100 kHz to 3 MHz, Mica Capacitor Types 291, 292, 293 and 294 are well suited for high-current and high-voltage circuits like radio transmitters. Cast in cylindrical cases, these capacitors are electrically equivalent to MIL-C-5 Styles CM75 through CM93 in capacitance and current ratings but are far superior in environmental capability, temperature range, physical size, mounting configuration, and reliability.

Highlights

- Cast in Cylindrical Cases
- Highly shock resistant
- Convenient mounting
- Excellent for radio transmission

Specifications

| | |
|-------------------------------|----------------------------|
| Capacitance Range: | 47 pF to 0.1 μ F |
| Voltage Range: | 1 to 30 kV _{pk} |
| Capacitance Tolerance: | \pm 2% (G), \pm 5% (J) |
| Temperature Range: | -55 °C to +125 °C |

Type 291 Ratings

| Cap (pF) | Catalog Part Number | Maximum AC Current at 65 °C | | | |
|-------------------------|---------------------|-----------------------------|-----------|-------------|-------------|
| | | 3 MHz (A) | 1 MHz (A) | 300 kHz (A) | 100 kHz (A) |
| 1,000 Peak Volts | | | | | |
| 75000 | 29110B753J00 | 18 | 22 | 22 | 16 |
| 82000 | 29110B823J00 | 18 | 22 | 22 | 16 |
| 91000 | 29110B913J00 | 18 | 22 | 22 | 16 |
| 100000 | 29110B104J00 | 18 | 22 | 22 | 18 |
| 1,500 Peak Volts | | | | | |
| 30000 | 29115B303J00 | 18 | 22 | 18 | 12 |
| 33000 | 29115B333J00 | 18 | 22 | 20 | 13 |
| 36000 | 29115B363J00 | 18 | 22 | 20 | 13 |
| 39000 | 29115B393J00 | 18 | 22 | 20 | 13 |
| 43000 | 29115B433J00 | 18 | 22 | 22 | 13 |
| 47000 | 29115B473J00 | 18 | 22 | 22 | 15 |
| 51000 | 29115B513J00 | 18 | 22 | 22 | 15 |
| 56000 | 29115B563J00 | 18 | 22 | 22 | 15 |
| 62000 | 29115B623J00 | 18 | 22 | 22 | 16 |
| 68000 | 29115B683J00 | 18 | 22 | 22 | 16 |
| 2,000 Peak Volts | | | | | |
| 18000 | 29120B183J00 | 18 | 20 | 16 | 11 |
| 20000 | 29120B203J00 | 18 | 22 | 18 | 11 |
| 22000 | 29120B223J00 | 18 | 22 | 18 | 11 |
| 24000 | 29120B243J00 | 18 | 22 | 18 | 12 |
| 27000 | 29120B273J00 | 18 | 22 | 18 | 12 |

| Cap (pF) | Catalog Part Number | Maximum AC Current at 65 °C | | | |
|-------------------------|---------------------|-----------------------------|-----------|-------------|-------------|
| | | 3 MHz (A) | 1 MHz (A) | 300 kHz (A) | 100 kHz (A) |
| 3,000 Peak Volts | | | | | |
| 12000 | 29130B123J00 | 18 | 20 | 16 | 9.1 |
| 13000 | 29130B133J00 | 18 | 20 | 16 | 10 |
| 15000 | 29130B153J00 | 18 | 20 | 16 | 10 |
| 16000 | 29130B163J00 | 18 | 20 | 16 | 10 |
| 4,000 Peak Volts | | | | | |
| 5100 | 29140B512J00 | 16 | 16 | 12 | 6.2 |
| 5600 | 29140B562J00 | 16 | 18 | 13 | 6.8 |
| 6000 | 29140B602J00 | 16 | 18 | 13 | 7.5 |
| 6200 | 29140B622J00 | 16 | 18 | 13 | 7.5 |
| 6800 | 29140B682J00 | 16 | 18 | 13 | 7.5 |
| 7500 | 29140B752J00 | 18 | 18 | 13 | 7.5 |
| 8200 | 29140B822J00 | 18 | 20 | 15 | 8.2 |
| 9100 | 29140B912J00 | 18 | 20 | 15 | 8.2 |
| 10000 | 29140B103J00 | 18 | 20 | 15 | 9.1 |
| 11000 | 29140B113J00 | 18 | 20 | 15 | 9.1 |
| 6,000 Peak Volts | | | | | |
| 47 | 29160B470J00 | 2 | 1.2 | 0.5 | 0.2 |
| 50 | 29160B500J00 | 2 | 1.3 | 0.6 | 0.2 |
| 51 | 29160B510J00 | 2 | 1.3 | 0.6 | 0.2 |
| 56 | 29160B560J00 | 2.2 | 1.3 | 0.6 | 0.2 |
| 62 | 29160B620J00 | 2.2 | 1.5 | 0.6 | 0.2 |

Cylindrical Types, High-Voltage Mica Capacitors

Types 291 and 292 Ratings

| Cap (pF) | Catalog Part Number | Maximum AC Current at 65 °C | | | | Cap (pF) | Catalog Part Number | Maximum AC Current at 65 °C | | | |
|----------|---------------------|-----------------------------|-----------|-------------|-------------|-------------------------|---------------------|-----------------------------|-----------|-------------|-------------|
| | | 3 MHz (A) | 1 MHz (A) | 300 kHz (A) | 100 kHz (A) | | | 3 MHz (A) | 1 MHz (A) | 300 kHz (A) | 100 kHz (A) |
| 68 | 29160B680J00 | 2.4 | 1.5 | 0.7 | 0.2 | 4000 | 29160B402J00 | 16 | 15 | 11 | 5.6 |
| 75 | 29160B750J00 | 2.4 | 1.6 | 0.7 | 0.2 | 4300 | 29160B432J00 | 16 | 15 | 11 | 5.6 |
| 82 | 29160B820J00 | 2.7 | 1.8 | 0.8 | 0.2 | 4700 | 29160B472J00 | 16 | 16 | 12 | 6.2 |
| 91 | 29160B910J00 | 2.7 | 1.8 | 0.9 | 0.3 | 5000 | 29160B502J00 | 16 | 16 | 12 | 6.2 |
| 100 | 29160B101J00 | 3 | 2 | 0.9 | 0.3 | 1,500 Peak Volts | | | | | |
| 110 | 29160B111J00 | 3 | 2.2 | 1 | 0.3 | 75000 | 29215B753J00 | 20 | 39 | 33 | 20 |
| 120 | 29160B121J00 | 3.3 | 2.2 | 1 | 0.3 | 82000 | 29215B823J00 | 20 | 39 | 33 | 20 |
| 130 | 29160B131J00 | 3.3 | 2.4 | 1.1 | 0.4 | 91000 | 29215B913J00 | 20 | 39 | 33 | 20 |
| 150 | 29160B151J00 | 3.6 | 2.4 | 1.2 | 0.4 | 100000 | 29215B104J00 | 20 | 39 | 36 | 20 |
| 160 | 29160B161J00 | 3.9 | 2.7 | 1.3 | 0.4 | 2,000 Peak Volts | | | | | |
| 180 | 29160B181J00 | 4.3 | 3 | 1.5 | 0.5 | 30000 | 29220B303J00 | 20 | 33 | 24 | 15 |
| 200 | 29160B201J00 | 4.3 | 3 | 1.5 | 0.5 | 33000 | 29220B333J00 | 20 | 33 | 24 | 15 |
| 220 | 29160B221J00 | 4.7 | 3.3 | 1.6 | 0.6 | 36000 | 29220B363J00 | 20 | 33 | 27 | 16 |
| 240 | 29160B241J00 | 4.7 | 3.6 | 1.8 | 0.6 | 39000 | 29220B393J00 | 20 | 36 | 27 | 16 |
| 270 | 29160B271J00 | 5.1 | 3.6 | 2 | 0.6 | 43000 | 29220B433J00 | 20 | 36 | 27 | 16 |
| 300 | 29160B301J00 | 5.1 | 3.9 | 2 | 0.7 | 47000 | 29220B473J00 | 20 | 36 | 27 | 18 |
| 330 | 29160B331J00 | 5.6 | 4.3 | 2.2 | 0.8 | 51000 | 29220B513J00 | 20 | 36 | 30 | 18 |
| 360 | 29160B361J00 | 6.2 | 4.3 | 2.4 | 0.8 | 56000 | 29220B563J00 | 20 | 36 | 30 | 18 |
| 390 | 29160B391J00 | 6.2 | 4.7 | 2.7 | 0.8 | 62000 | 29220B623J00 | 20 | 39 | 30 | 18 |
| 400 | 29160B401J00 | 6.2 | 4.7 | 2.7 | 0.8 | 68000 | 29220B683J00 | 20 | 39 | 33 | 20 |
| 430 | 29160B431J00 | 6.8 | 4.7 | 2.7 | 0.8 | 3,000 Peak Volts | | | | | |
| 470 | 29160B471J00 | 6.8 | 5.1 | 3 | 0.9 | 18000 | 29230B183J00 | 20 | 30 | 20 | 12 |
| 500 | 29160B501J00 | 6.8 | 5.1 | 3 | 1 | 20000 | 29230B203J00 | 20 | 30 | 22 | 13 |
| 510 | 29160B511J00 | 6.8 | 5.1 | 3 | 1 | 22000 | 29230B223J00 | 20 | 30 | 22 | 13 |
| 560 | 29160B561J00 | 7.5 | 5.6 | 3.3 | 1.1 | 24000 | 29230B243J00 | 20 | 33 | 24 | 13 |
| 620 | 29160B621J00 | 8.2 | 6.2 | 3.6 | 1.2 | 27000 | 29230B273J00 | 20 | 33 | 24 | 13 |
| 680 | 29160B681J00 | 8.2 | 6.2 | 3.9 | 1.3 | 4,000 Peak Volts | | | | | |
| 750 | 29160B751J00 | 8.2 | 6.8 | 3.9 | 1.5 | 12000 | 29240B123J00 | 20 | 27 | 18 | 10 |
| 820 | 29160B821J00 | 9.1 | 6.8 | 4.3 | 1.5 | 13000 | 29240B133J00 | 20 | 27 | 20 | 10 |
| 910 | 29160B911J00 | 9.1 | 7.5 | 4.7 | 1.6 | 15000 | 29240B153J00 | 20 | 27 | 20 | 11 |
| 1000 | 29160B102J00 | 10 | 7.5 | 5.1 | 1.8 | 16000 | 29240B163J00 | 20 | 27 | 20 | 11 |
| 1100 | 29160B112J00 | 10 | 8.2 | 5.1 | 2 | 5,000 Peak Volts | | | | | |
| 1200 | 29160B122J00 | 11 | 8.2 | 5.6 | 2.2 | 5600 | 29250B562J00 | 20 | 20 | 13 | 6.8 |
| 1300 | 29160B132J00 | 11 | 9.1 | 6.2 | 2.2 | 6000 | 29250B602J00 | 20 | 22 | 15 | 6.8 |
| 1500 | 29160B152J00 | 12 | 9.1 | 6.2 | 2.4 | 6200 | 29250B622J00 | 20 | 22 | 15 | 6.8 |
| 1600 | 29160B162J00 | 12 | 10 | 6.8 | 2.7 | 6800 | 29250B682J00 | 20 | 22 | 15 | 7.5 |
| 1800 | 29160B182J00 | 13 | 11 | 7.5 | 3.0 | 7500 | 29250B752J00 | 20 | 22 | 15 | 7.5 |
| 2000 | 29160B202J00 | 13 | 11 | 7.5 | 3.3 | 8200 | 29250B822J00 | 20 | 24 | 16 | 8.2 |
| 2200 | 29160B222J00 | 13 | 12 | 8.2 | 3.6 | 9100 | 29250B912J00 | 20 | 24 | 16 | 8.2 |
| 2400 | 29160B242J00 | 15 | 13 | 9.1 | 3.9 | 10000 | 29250B103J00 | 20 | 24 | 18 | 9.1 |
| 2700 | 29160B272J00 | 15 | 13 | 9.1 | 3.9 | 11000 | 29250B113J00 | 20 | 27 | 18 | 9.1 |
| 3000 | 29160B302J00 | 15 | 13 | 9.1 | 4.3 | 6,000 Peak Volts | | | | | |
| 3300 | 29160B332J00 | 15 | 15 | 10 | 4.7 | 4700 | 29260B472J00 | 20 | 20 | 13 | 6.2 |
| 3600 | 29160B362J00 | 16 | 15 | 11 | 5.1 | 5000 | 29260B502J00 | 20 | 20 | 13 | 6.2 |
| 3900 | 29160B392J00 | 16 | 15 | 11 | 5.6 | 5100 | 29260B512J00 | 20 | 20 | 13 | 6.2 |

Cylindrical Types, High-Voltage Mica Capacitors

Types 292 and 293 Ratings

| Cap (pF) | Catalog Part Number | Maximum AC Current at 65 °C | | | |
|--------------------------|---------------------|-----------------------------|-----------|-------------|-------------|
| | | 3 MHz (A) | 1 MHz (A) | 300 kHz (A) | 100 kHz (A) |
| 8,000 Peak Volts | | | | | |
| 2200 | 29280B222J00 | 18 | 13 | 9.1 | 3.9 |
| 2400 | 29280B242J00 | 18 | 15 | 10 | 4.3 |
| 2700 | 29280B272J00 | 18 | 15 | 10 | 4.3 |
| 3000 | 29280B302J00 | 18 | 16 | 10 | 4.7 |
| 3300 | 29280B332J00 | 20 | 16 | 11 | 4.7 |
| 3600 | 29280B362J00 | 20 | 18 | 11 | 5.1 |
| 3900 | 29280B392J00 | 20 | 18 | 12 | 5.6 |
| 4000 | 29280B402J00 | 20 | 18 | 12 | 5.6 |
| 4300 | 29280B432J00 | 20 | 18 | 12 | 5.6 |
| 10,000 Peak Volts | | | | | |
| 47 | 292100B470J00 | 2.7 | 2 | 0.9 | 0.3 |
| 51 | 292100B510J00 | 2.7 | 2 | 1 | 0.3 |
| 56 | 292100B560J00 | 3 | 2.2 | 1 | 0.3 |
| 62 | 292100B620J00 | 3.3 | 2.2 | 1.1 | 0.3 |
| 68 | 292100B680J00 | 3.3 | 2.4 | 1.2 | 0.3 |
| 75 | 292100B750J00 | 3.6 | 2.4 | 1.2 | 0.4 |
| 82 | 292100B820J00 | 3.6 | 2.7 | 1.3 | 0.4 |
| 91 | 292100B910J00 | 3.9 | 2.7 | 1.5 | 0.4 |
| 100 | 292100B101J00 | 4.3 | 3 | 1.5 | 0.5 |
| 110 | 292100B111J00 | 4.3 | 3 | 1.6 | 0.5 |
| 120 | 292100B121J00 | 4.7 | 3.3 | 1.6 | 0.6 |
| 130 | 292100B131J00 | 4.7 | 3.6 | 1.8 | 0.6 |
| 150 | 292100B151J00 | 5.1 | 3.6 | 1.8 | 0.6 |
| 160 | 292100B161J00 | 5.1 | 3.9 | 2 | 0.8 |
| 180 | 292100B181J00 | 5.6 | 4.3 | 2.2 | 0.8 |
| 200 | 292100B201J00 | 6.2 | 4.3 | 2.4 | 0.8 |
| 220 | 292100B221J00 | 6.2 | 4.7 | 2.4 | 0.9 |
| 240 | 292100B241J00 | 6.8 | 5.1 | 2.7 | 1.0 |
| 250 | 292100B251J00 | 6.8 | 5.1 | 2.7 | 1.0 |
| 270 | 292100B271J00 | 6.8 | 5.1 | 2.7 | 1.0 |
| 300 | 292100B301J00 | 7.5 | 5.6 | 3 | 1.1 |
| 330 | 292100B331J00 | 7.5 | 5.6 | 3 | 1.2 |
| 360 | 292100B361J00 | 8.2 | 6.2 | 3.6 | 1.2 |
| 390 | 292100B391J00 | 8.2 | 6.2 | 3.6 | 1.3 |
| 430 | 292100B431J00 | 9.1 | 6.2 | 3.6 | 1.3 |
| 470 | 292100B471J00 | 9.1 | 6.8 | 3.9 | 1.5 |
| 500 | 292100B501J00 | 9.1 | 6.8 | 3.9 | 1.6 |
| 510 | 292100B511J00 | 9.1 | 6.8 | 3.9 | 1.6 |
| 560 | 292100B561J00 | 10 | 7.5 | 4.3 | 1.6 |
| 620 | 292100B621J00 | 11 | 8.2 | 4.7 | 1.8 |
| 680 | 292100B681J00 | 11 | 8.2 | 4.7 | 1.8 |
| 750 | 292100B751J00 | 11 | 8.2 | 5.1 | 2.0 |
| 820 | 292100B821J00 | 12 | 9.1 | 5.1 | 2.2 |
| 910 | 292100B911J00 | 12 | 9.1 | 5.6 | 2.2 |
| 1000 | 292100B102J00 | 12 | 10 | 6.2 | 2.4 |

| Cap (pF) | Catalog Part Number | Maximum AC Current at 65 °C | | | |
|----------|---------------------|-----------------------------|-----------|-------------|-------------|
| | | 3 MHz (A) | 1 MHz (A) | 300 kHz (A) | 100 kHz (A) |
| 1100 | 292100B112J00 | 13 | 10 | 6.2 | 2.7 |
| 1200 | 292100B122J00 | 15 | 11 | 6.8 | 2.7 |
| 1300 | 292100B132J00 | 15 | 11 | 6.8 | 2.7 |
| 1500 | 292100B152J00 | 15 | 12 | 7.5 | 3.0 |
| 1600 | 292100B162J00 | 16 | 12 | 7.5 | 3.3 |
| 1800 | 292100B182J00 | 16 | 13 | 8.2 | 3.6 |
| 2000 | 292100B202J00 | 16 | 13 | 8.2 | 3.6 |

| Cap (pF) | Catalog Part Number | Maximum AC Current at 65 °C | | | | Case Height (in) |
|--------------------------|---------------------|-----------------------------|-----------|-------------|-------------|------------------|
| | | 3 MHz (A) | 1 MHz (A) | 300 kHz (A) | 100 kHz (A) | |
| 75000 | 29320B753J00 | 24 | 51 | 39 | 24 | 2.50 |
| 82000 | 29320B823J00 | 24 | 51 | 39 | 24 | 2.50 |
| 91000 | 29320B913J00 | 24 | 51 | 39 | 24 | 2.75 |
| 100000 | 29320B104J00 | 24 | 51 | 39 | 24 | 2.75 |
| 3,000 Peak Volts | | | | | | |
| 27000 | 29330B273J00 | 24 | 51 | 33 | 18 | 2.50 |
| 30000 | 29330B303J00 | 24 | 51 | 33 | 20 | 2.50 |
| 33000 | 29330B333J00 | 24 | 51 | 33 | 20 | 2.50 |
| 36000 | 29330B363J00 | 24 | 51 | 36 | 22 | 2.50 |
| 39000 | 29330B393J00 | 24 | 51 | 36 | 22 | 2.50 |
| 43000 | 29330B433J00 | 24 | 51 | 36 | 22 | 2.50 |
| 47000 | 29330B473J00 | 24 | 51 | 36 | 22 | 2.50 |
| 51000 | 29330B513J00 | 24 | 51 | 36 | 24 | 2.75 |
| 56000 | 29330B563J00 | 24 | 51 | 36 | 24 | 2.75 |
| 62000 | 29330B623J00 | 24 | 51 | 39 | 24 | 3.00 |
| 68000 | 29330B683J00 | 24 | 51 | 39 | 24 | 3.00 |
| 5,000 Peak Volts | | | | | | |
| 12000 | 29350B123J00 | 24 | 43 | 27 | 13 | 2.50 |
| 13000 | 29350B133J00 | 24 | 43 | 27 | 13 | 2.50 |
| 15000 | 29350B153J00 | 24 | 43 | 27 | 15 | 2.50 |
| 16000 | 29350B163J00 | 24 | 47 | 30 | 15 | 2.50 |
| 18000 | 29350B183J00 | 24 | 47 | 30 | 16 | 2.75 |
| 20000 | 29350B203J00 | 24 | 47 | 30 | 18 | 2.75 |
| 22000 | 29350B223J00 | 24 | 47 | 30 | 18 | 3.00 |
| 24000 | 29350B243J00 | 24 | 51 | 33 | 18 | 3.25 |
| 8,000 Peak Volts | | | | | | |
| 9100 | 29380B912J00 | 24 | 39 | 24 | 12 | 3.25 |
| 10000 | 29380B103J00 | 24 | 39 | 24 | 12 | 3.25 |
| 11000 | 29380B113J00 | 24 | 39 | 27 | 13 | 3.25 |
| 10,000 Peak Volts | | | | | | |
| 4700 | 293100B472J00 | 22 | 27 | 18 | 8.2 | 2.75 |
| 5000 | 293100B502J00 | 24 | 30 | 18 | 9.1 | 2.75 |
| 5100 | 293100B512J00 | 24 | 30 | 18 | 9.1 | 2.75 |
| 5600 | 293100B562J00 | 24 | 33 | 20 | 9.1 | 3.00 |

Cylindrical Types, High-Voltage Mica Capacitors

Types 293 and 294 Ratings

| Cap (pF) | Catalog Part Number | Maximum AC Current at 65 °C | | | | Case Height (in) |
|--------------------------|---------------------|-----------------------------|-----------|-------------|-------------|------------------|
| | | 3 MHz (A) | 1 MHz (A) | 300 kHz (A) | 100 kHz (A) | |
| 6000 | 293100B602J00 | 24 | 33 | 20 | 10 | 3.00 |
| 6200 | 293100B622J00 | 24 | 33 | 20 | 10 | 3.00 |
| 6800 | 293100B682J00 | 24 | 33 | 20 | 10 | 3.00 |
| 7500 | 293100B752J00 | 24 | 36 | 22 | 11 | 3.25 |
| 8000 | 293100B802J00 | 24 | 36 | 22 | 11 | 3.25 |
| 8200 | 293100B822J00 | 24 | 36 | 22 | 11 | 3.25 |
| 12,000 Peak Volts | | | | | | |
| 2200 | 293120B222J00 | 20 | 20 | 12 | 5.6 | 2.50 |
| 2400 | 293120B242J00 | 20 | 22 | 13 | 6.2 | 2.75 |
| 2700 | 293120B272J00 | 20 | 22 | 13 | 6.2 | 2.75 |
| 3000 | 293120B302J00 | 20 | 24 | 15 | 6.8 | 3.00 |
| 3300 | 293120B332J00 | 22 | 24 | 15 | 6.8 | 3.00 |
| 3600 | 293120B362J00 | 22 | 24 | 15 | 7.5 | 3.00 |
| 3900 | 293120B392J00 | 22 | 27 | 16 | 7.5 | 3.00 |
| 4000 | 293120B402J00 | 22 | 27 | 16 | 7.5 | 3.25 |
| 4300 | 293120B432J00 | 22 | 27 | 16 | 8.2 | 3.25 |
| 15,000 Peak Volts | | | | | | |
| 1200 | 293150B122J00 | 16 | 15 | 8.2 | 4.3 | 2.50 |
| 1300 | 293150B132J00 | 16 | 15 | 9.1 | 4.3 | 2.50 |
| 1500 | 293150B152J00 | 16 | 16 | 9.1 | 4.7 | 2.75 |
| 1600 | 293150B162J00 | 18 | 18 | 10 | 4.7 | 2.75 |
| 1800 | 293150B182J00 | 18 | 18 | 11 | 5.1 | 3.00 |
| 2000 | 293150B202J00 | 18 | 20 | 11 | 5.6 | 3.00 |
| 20,000 Peak Volts | | | | | | |
| 47 | 293200B470J00 | 5.1 | 2.2 | 0.5 | 0.1 | 2.50 |
| 50 | 293200B500J00 | 5.1 | 2.4 | 0.5 | 0.2 | 2.50 |
| 51 | 293200B510J00 | 5.1 | 2.4 | 0.5 | 0.2 | 2.50 |
| 56 | 293200B560J00 | 5.6 | 2.4 | 0.6 | 0.2 | 2.50 |
| 62 | 293200B620J00 | 5.6 | 2.7 | 0.7 | 0.2 | 2.50 |
| 68 | 293200B680J00 | 5.6 | 2.7 | 0.8 | 0.2 | 2.50 |
| 75 | 293200B750J00 | 6.2 | 3 | 0.9 | 0.3 | 2.50 |
| 82 | 293200B820J00 | 6.2 | 3 | 1 | 0.3 | 2.50 |
| 91 | 293200B910J00 | 6.8 | 3.3 | 1.1 | 0.4 | 2.50 |
| 100 | 293200B101J00 | 6.8 | 3.6 | 1.3 | 0.5 | 2.50 |
| 110 | 293200B111J00 | 7.5 | 3.9 | 1.5 | 0.5 | 2.50 |
| 120 | 293200B121J00 | 7.5 | 4.3 | 1.6 | 0.6 | 2.50 |
| 130 | 293200B131J00 | 7.5 | 4.3 | 1.8 | 0.7 | 2.50 |
| 150 | 293200B151J00 | 8.2 | 4.7 | 2 | 0.8 | 2.50 |
| 160 | 293200B161J00 | 8.2 | 5.1 | 2.2 | 0.9 | 2.50 |
| 180 | 293200B181J00 | 9.1 | 5.1 | 2.4 | 1 | 2.50 |
| 200 | 293200B201J00 | 9.1 | 5.6 | 2.7 | 1.1 | 2.50 |
| 220 | 293200B221J00 | 9.1 | 6.2 | 3 | 1.2 | 2.50 |
| 240 | 293200B241J00 | 10 | 6.2 | 3.6 | 1.3 | 2.50 |
| 250 | 293200B251J00 | 10 | 6.2 | 6.8 | 1.3 | 2.50 |
| 270 | 293200B271J00 | 10 | 6.8 | 3.6 | 1.5 | 2.50 |
| 300 | 293200B301J00 | 10 | 6.8 | 3.9 | 1.6 | 2.50 |
| 330 | 293200B331J00 | 11 | 7.5 | 3.9 | 1.6 | 2.50 |

| Cap (pF) | Catalog Part Number | Maximum AC Current at 65 °C | | | | Case Height (in) |
|--------------------------|---------------------|-----------------------------|-----------|-------------|-------------|------------------|
| | | 3 MHz (A) | 1 MHz (A) | 300 kHz (A) | 100 kHz (A) | |
| 360 | 293200B361J00 | 11 | 7.5 | 3.9 | 1.8 | 2.50 |
| 390 | 293200B391J00 | 11 | 8.2 | 4.3 | 2 | 2.50 |
| 430 | 293200B431J00 | 12 | 8.2 | 4.7 | 2.2 | 2.50 |
| 470 | 293200B471J00 | 12 | 9.1 | 4.7 | 2.2 | 2.50 |
| 500 | 293200B501J00 | 12 | 9.1 | 5.1 | 2.4 | 2.50 |
| 510 | 293200B511J00 | 12 | 9.1 | 5.1 | 2.4 | 2.50 |
| 560 | 293200B561J00 | 13 | 10 | 5.6 | 2.7 | 2.50 |
| 620 | 293200B621J00 | 13 | 11 | 6.2 | 2.7 | 2.50 |
| 680 | 293200B681J00 | 13 | 11 | 6.2 | 2.7 | 2.75 |
| 750 | 293200B751J00 | 13 | 12 | 6.8 | 3 | 2.75 |
| 800 | 293200B801J00 | 15 | 12 | 6.8 | 3.3 | 2.75 |
| 820 | 293200B821J00 | 15 | 12 | 6.8 | 3.3 | 2.75 |
| 910 | 293200B911J00 | 15 | 13 | 7.5 | 3.6 | 2.75 |
| 1000 | 293200B102J00 | 15 | 13 | 7.5 | 3.6 | 2.75 |
| 1100 | 293200B112J00 | 16 | 15 | 8.2 | 3.9 | 2.75 |
| 3,000 Peak Volts | | | | | | |
| 82000 | 29430B823J00 | 30 | 62 | 43 | 39 | 5.00 |
| 91000 | 29430B913J00 | 30 | 62 | 43 | 39 | 5.00 |
| 100000 | 29430B104J00 | 30 | 62 | 43 | 39 | 5.00 |
| 4,000 Peak Volts | | | | | | |
| 68000 | 29440B683J00 | 30 | 56 | 39 | 36 | 5.00 |
| 75000 | 29440B753J00 | 30 | 62 | 43 | 36 | 5.00 |
| 5,000 Peak Volts | | | | | | |
| 33000 | 29450B333J00 | 30 | 56 | 39 | 27 | 4.50 |
| 36000 | 29450B363J00 | 30 | 56 | 39 | 30 | 4.50 |
| 39000 | 29450B393J00 | 30 | 56 | 39 | 30 | 5.00 |
| 40000 | 29450B403J00 | 30 | 56 | 39 | 30 | 5.00 |
| 43000 | 29450B433J00 | 30 | 56 | 39 | 30 | 5.00 |
| 47000 | 29450B473J00 | 30 | 56 | 39 | 30 | 5.00 |
| 51000 | 29450B513J00 | 30 | 56 | 39 | 33 | 5.00 |
| 56000 | 29450B563J00 | 30 | 56 | 39 | 33 | 5.00 |
| 62000 | 29450B623J00 | 30 | 56 | 39 | 33 | 5.00 |
| 6,000 Peak Volts | | | | | | |
| 18000 | 29460B183J00 | 30 | 51 | 36 | 22 | 4.00 |
| 20000 | 29460B203J00 | 30 | 51 | 36 | 24 | 4.00 |
| 22000 | 29460B223J00 | 30 | 51 | 36 | 24 | 4.00 |
| 24000 | 29460B243J00 | 30 | 56 | 39 | 27 | 4.50 |
| 27000 | 29460B273J00 | 30 | 56 | 39 | 27 | 4.50 |
| 30000 | 29460B303J00 | 30 | 56 | 39 | 27 | 5.00 |
| 8,000 Peak Volts | | | | | | |
| 12000 | 29480B123J00 | 30 | 43 | 30 | 20 | 4.50 |
| 13000 | 29480B133J00 | 30 | 47 | 30 | 20 | 4.50 |
| 15000 | 29480B153J00 | 30 | 47 | 33 | 20 | 5.00 |
| 16000 | 29480B163J00 | 30 | 47 | 33 | 22 | 5.00 |
| 10,000 Peak Volts | | | | | | |
| 10000 | 294100B103J00 | 30 | 43 | 30 | 18 | 5.00 |

Cylindrical Types, High-Voltage Mica Capacitors

Type 294 Ratings

| Cap (pF) | Catalog Part Number | Maximum AC Current at 65 °C | | | | Case Height (in) |
|--------------------------|------------------------|-----------------------------|--------------|----------------|----------------|------------------------|
| | | 3 MHz (A) | 1 MHz (A) | 300 kHz (A) | 100 kHz (A) | |
| 11000 | 294100B113J00 | 30 | 43 | 30 | 18 | 5.00 |
| 12,000 Peak Volts | | | | | | |
| 8000 | 294120B802J00 | 30 | 39 | 27 | 16 | 5.00 |
| 8200 | 294120B822J00 | 30 | 39 | 27 | 16 | 5.00 |
| 9100 | 294120B912J00 | 30 | 39 | 27 | 16 | 5.00 |
| 15,000 Peak Volts | | | | | | |
| 4300 | 294150B432J00 | 27 | 30 | 20 | 11 | 4.50 |
| 4700 | 294150B472J00 | 27 | 30 | 22 | 12 | 4.50 |
| 5000 | 294150B502J00 | 27 | 33 | 22 | 12 | 4.50 |
| 5100 | 294150B512J00 | 27 | 33 | 22 | 12 | 4.50 |
| 5600 | 294150B562J00 | 27 | 36 | 22 | 13 | 5.00 |
| 6000 | 294150B602J00 | 27 | 36 | 24 | 15 | 5.00 |
| 6200 | 294150B622J00 | 27 | 36 | 24 | 15 | 5.00 |
| 6800 | 294150B682J00 | 27 | 36 | 24 | 15 | 5.00 |
| 7500 | 294150B752J00 | 30 | 36 | 27 | 16 | 5.00 |
| 20,000 Peak Volts | | | | | | |
| 2000 | 294200B202J00 | 22 | 22 | 15 | 7.5 | 4.50 |
| 2200 | 294200B222J00 | 22 | 24 | 15 | 8.2 | 4.50 |
| 2400 | 294200B242J00 | 22 | 24 | 16 | 8.2 | 4.50 |
| 2700 | 294200B272J00 | 22 | 24 | 16 | 9.1 | 5.00 |
| 3000 | 294200B302J00 | 24 | 27 | 18 | 9.1 | 5.00 |
| 3300 | 294200B332J00 | 24 | 27 | 18 | 10 | 5.00 |
| 3600 | 294200B362J00 | 24 | 27 | 18 | 10 | 5.00 |
| 3900 | 294200B392J00 | 24 | 30 | 20 | 11 | 5.00 |
| 4000 | 294200B402J00 | 24 | 30 | 20 | 11 | 5.00 |
| 25,000 Peak Volts | | | | | | |
| 1100 | 294250B112J00 | 18 | 18 | 11 | 5.6 | 4.50 |
| 1200 | 294250B122J00 | 18 | 18 | 11 | 5.6 | 4.50 |
| 1300 | 294250B132J00 | 18 | 18 | 12 | 6.2 | 4.50 |
| 1500 | 294250B152J00 | 20 | 20 | 12 | 6.2 | 5.00 |

| Cap (pF) | Catalog Part Number | Maximum AC Current at 65 °C | | | | Case Height (in) |
|--------------------------|------------------------|-----------------------------|--------------|----------------|----------------|------------------------|
| | | 3 MHz (A) | 1 MHz (A) | 300 kHz (A) | 100 kHz (A) | |
| 1600 | 294250B162J00 | 20 | 20 | 13 | 6.8 | 5.00 |
| 1800 | 294250B182J00 | 20 | 22 | 13 | 7.5 | 5.00 |
| 30,000 Peak Volts | | | | | | |
| 100 | 294300B101J00 | 7.5 | 5.1 | 2 | 0.7 | 4.00 |
| 110 | 294300B111J00 | 8.2 | 5.1 | 2.2 | 0.8 | 4.00 |
| 120 | 294300B121J00 | 8.2 | 5.6 | 2.4 | 1 | 4.00 |
| 130 | 294300B131J00 | 9.1 | 6.2 | 2.7 | 1.1 | 4.00 |
| 150 | 294300B151J00 | 9.1 | 6.2 | 3 | 1.3 | 4.00 |
| 160 | 294300B161J00 | 9.1 | 6.8 | 3.3 | 1.5 | 4.00 |
| 180 | 294300B181J00 | 10 | 6.8 | 3.6 | 1.6 | 4.00 |
| 200 | 294300B201J00 | 10 | 7.5 | 3.9 | 1.8 | 4.00 |
| 220 | 294300B221J00 | 11 | 7.5 | 3.9 | 2 | 4.00 |
| 240 | 294300B241J00 | 11 | 8.2 | 4.3 | 2 | 4.00 |
| 250 | 294300B251J00 | 11 | 8.2 | 4.3 | 2 | 4.00 |
| 270 | 294300B271J00 | 11 | 9.1 | 4.7 | 2.2 | 4.00 |
| 300 | 294300B301J00 | 12 | 9.1 | 5.1 | 2.4 | 4.00 |
| 330 | 294300B331J00 | 12 | 9.1 | 5.1 | 2.4 | 4.00 |
| 360 | 294300B361J00 | 12 | 10 | 5.6 | 2.7 | 4.00 |
| 390 | 294300B391J00 | 13 | 11 | 6.2 | 3 | 4.00 |
| 430 | 294300B431J00 | 13 | 11 | 6.2 | 3 | 4.00 |
| 470 | 294300B471J00 | 13 | 11 | 6.8 | 3.3 | 4.00 |
| 500 | 294300B501J00 | 13 | 12 | 6.8 | 3.3 | 4.00 |
| 510 | 294300B511J00 | 13 | 12 | 6.8 | 3.3 | 4.00 |
| 560 | 294300B561J00 | 15 | 13 | 7.5 | 3.6 | 4.00 |
| 620 | 294300B621J00 | 15 | 13 | 8.2 | 3.9 | 4.00 |
| 680 | 294300B681J00 | 15 | 13 | 8.2 | 4.3 | 4.50 |
| 750 | 294300B751J00 | 16 | 15 | 8.2 | 4.3 | 4.50 |
| 800 | 294300B801J00 | 16 | 15 | 9.1 | 4.7 | 4.50 |
| 820 | 294300B821J00 | 16 | 15 | 9.1 | 4.7 | 4.50 |
| 910 | 294300B911J00 | 16 | 15 | 10 | 5.1 | 4.50 |
| 1000 | 294300B102J00 | 18 | 16 | 10 | 5.1 | 4.50 |

Cylindrical Types, High-Voltage Mica Capacitors

Ordering Information

Ordering Information: Order by complete part number, as below. For other options, write your requirements on your quote request or purchase order.

Cast-Case Part Numbering System

| | | | | | | |
|-----------------|---------------------------------------|---|--|----------------------------------|------------------------------|--|
| 291 | 30 | B | 470 | J | O | 0 |
| CDE Type | Rated Peak Voltage | | Capacitance | Capacitance Tolerance | Temperature Range | Mounting Style |
| | 10 = 1000 30 = 3000 250 = 25000 | | 470 = 47 pF 361 = 360 pF 122 = 1200 pF | G = ±2% J = ±5% | O = -55 °C to +125 °C | 0 = No mounting plate 1 = Mounting plate on bottom only 2 = Mounting plates on top and bottom |

Characteristic

| | Temp. Coeff. ppm/°C | Capacitance Drift | Standard Cap. Range |
|----------|------------------------|-------------------|---------------------|
| B | Not specified | Not specified | |
| C | -200 to +200 | ±(0.5% +0.1pF) | 1-18 pF |
| D | -100 to +100 | ±(0.3% +0.1pF) | |
| E | -20 to +100 | ±(0.1% +0.1pF) | 20-82 pF |

Potted Case Styles

Transmitting mica capacitor type 272 is available in potted case package Type F2. To order this potted style use the part numbering below and contact us.

| | | | | | |
|-----------------|-------------------------------------|---|--|--|-----------------------------|
| F2 | 30 | B | 470 | J | M |
| CDE Type | Rated Peak Voltage | | Capacitance | Capacitance Tolerance | Temperature Range |
| | (in hundreds of peak working volts) | | 470 = 47 pF 361 = 360 pF 122 = 1200 pF | G = ±2% J = ±5% (standard) | M = -55 °C to +70 °C |

Characteristic

Military Style Numbers

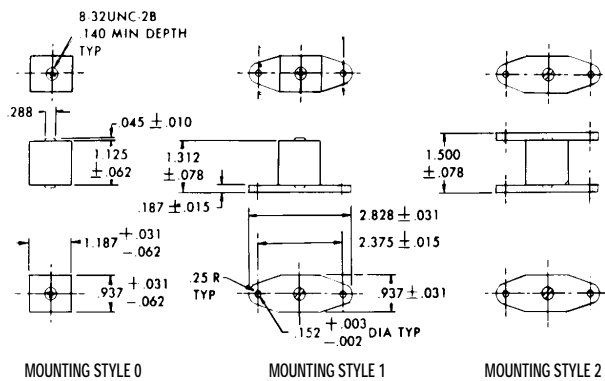
For the commercial equivalent to military style numbers CM66 through CM93 see the tables below.

| Military Style No. | Equivalent CDE Type |
|--------------------|-----------------------|
| CM66 | 271, Mounting Style 0 |
| CM67 | 271, Mounting Style 1 |
| CM68 | 271, Mounting Style 2 |
| CM70 | F2 |
| CM71 | 272, Mounting Style 0 |
| CM72 | 272, Mounting Style 1 |
| CM73 | 272, Mounting Style 2 |
| CM76 | 291, Mounting Style 0 |
| CM77 | 291, Mounting Style 1 |
| CM78 | 291, Mounting Style 2 |

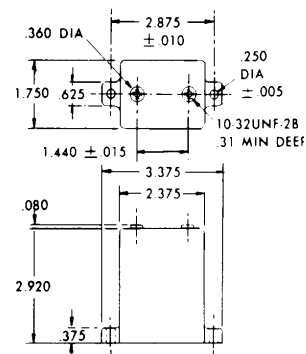
| Military Style No. | Equivalent CDE Type |
|--------------------|-----------------------|
| CM81 | 292, Mounting Style 0 |
| CM82 | 292, Mounting Style 1 |
| CM83 | 292, Mounting Style 2 |
| CM86 | 293, Mounting Style 0 |
| CM87 | 293, Mounting Style 1 |
| CM88 | 293, Mounting Style 2 |
| CM91 | 294, Mounting Style 0 |
| CM92 | 294, Mounting Style 1 |
| CM93 | 294, Mounting Style 2 |

Cylindrical Types, High-Voltage Mica Capacitors

Type 271

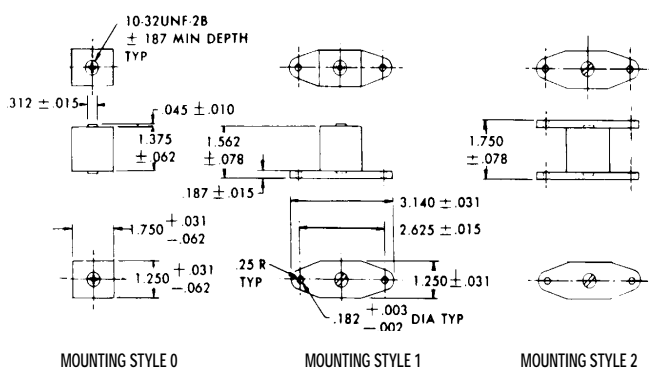


Type 273



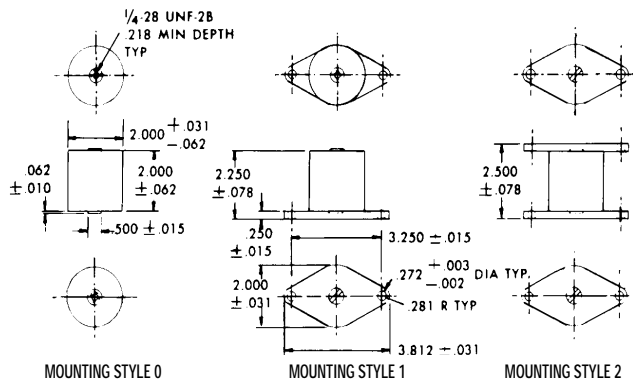
TOLERANCES UNLESS
OTHERWISE SPECIFIED: ±031

Type 272

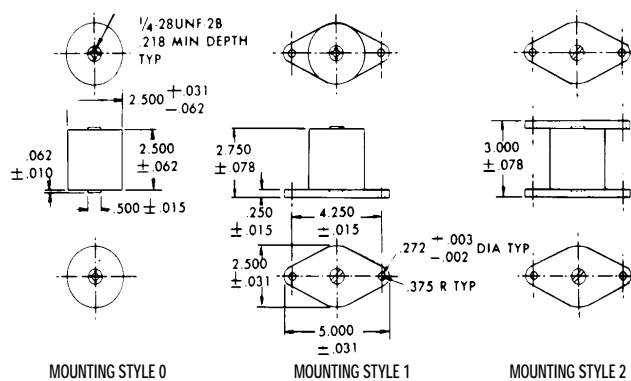


Cast-Case Styles

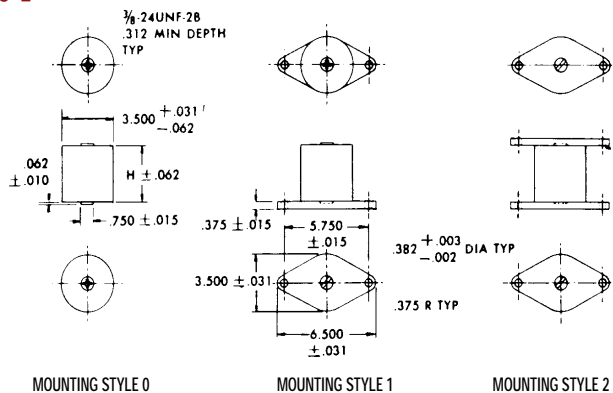
Type 291



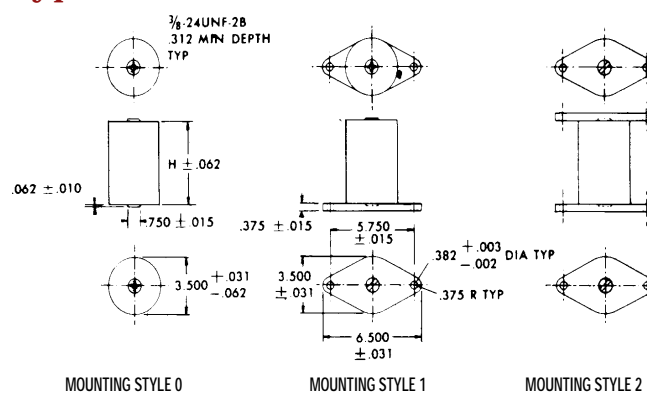
Type 292



Type 293

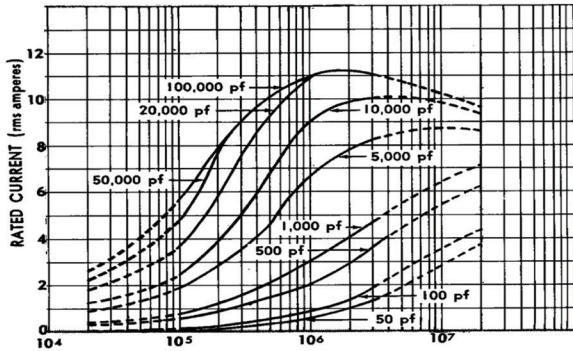


Type 294

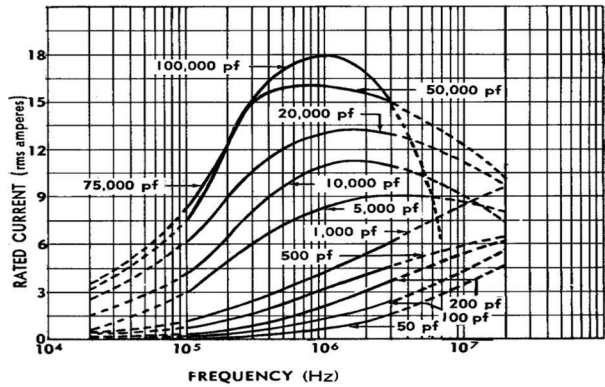


Cylindrical Types, High-Voltage Mica Capacitors

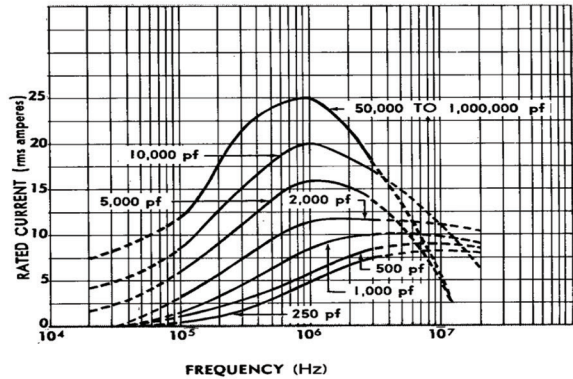
Type 271 (CM 66)
Rated Current Versus Frequency



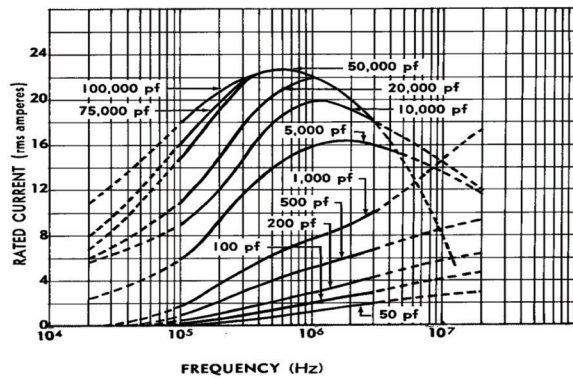
Type 272 (CM 71)
Rated Current Versus Frequency



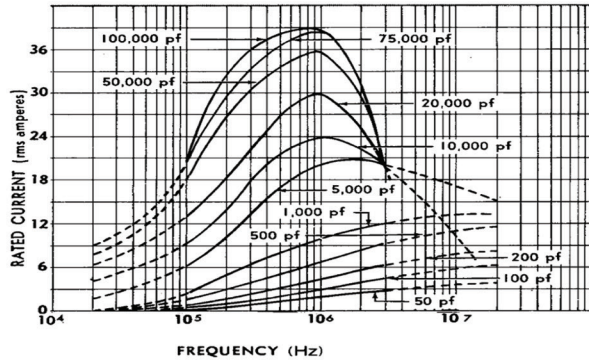
Type 273
Rated Current Versus Frequency



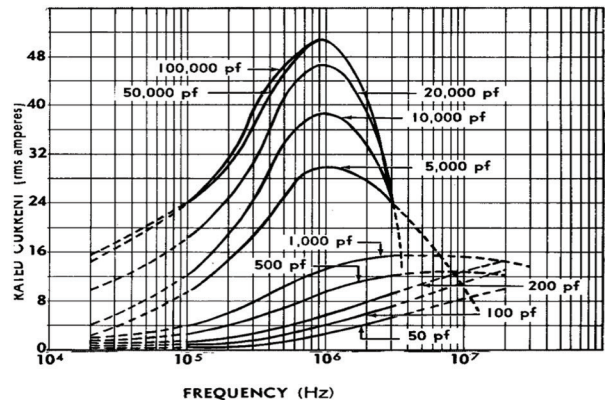
Type 291 (CM 76)
Rated Current Versus Frequency



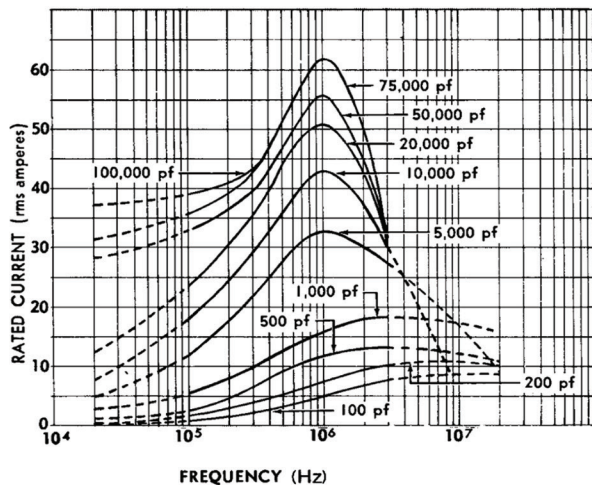
Type 292 (CM 81)
Rated Current Versus Frequency



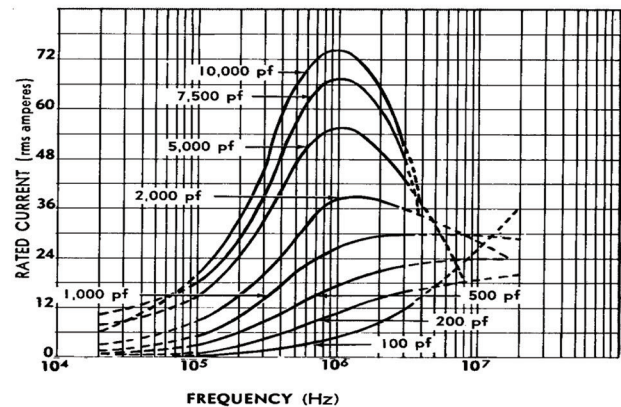
Type 293 (CM 86)
Rated Current Versus Frequency



Type 294 (CM 91)
Rated Current Versus Frequency



Type G5 (CM 95)
Rated Current Versus Frequency



Cylindrical Types, High-Voltage Mica Capacitors

Specifications

Capacitance is within tolerance when measured at these frequencies:

1–1000 pF @ 1 MHz

> 1000 pF @ 1 kHz

Dissipation Factor is typically less than 0.05% when measured as above. Dissipation factor (DF) equals $2\pi fRC$, where f is the test frequency, R is the equivalent series resistance (Ω), and C is nominal capacitance (F). Q is the reciprocal of the dissipation factor.

Operating Temperature Range is $-55\text{ }^{\circ}\text{C}$ to $+125\text{ }^{\circ}\text{C}$. Insulation Resistance is no less than 7500 M Ω when measured at 100 Vdc.

Temperature Coefficient and Capacitance Drift: Measure the capacitors' capacitance at $25\text{ }^{\circ}\text{C}$, $55\text{ }^{\circ}\text{C}$, $25\text{ }^{\circ}\text{C}$, $125\text{ }^{\circ}\text{C}$, and at $25\text{ }^{\circ}\text{C}$ after stabilizing at each temperature. The capacitance will meet the limits of the Characteristic table shown in Ordering Information.

Rated Peak Voltage is not to be exceeded in actual use. Voltage ratings are in the listings and apply under the following conditions:

Temperature: Within the specified operating temperature range.

Altitude: Up to 50,000 feet or 3.4 inches of mercury.

Relative Humidity: Up to 80%.

Frequency: As specified.

Where pulse conditions are encountered, contact us.

Withstanding Voltage: Capacitors will withstand application of an ac potential between terminals having an rms value equal to the rated peak voltage at a frequency of 100 Hz or less without damage, arcing or breakdown. Apply the potential by raising the voltage from zero to the specified value. Apply the full potential for a minimum of 5 seconds.

Case Insulation: Capacitor cases will withstand, without damage, arcing or breakdown, a 60-Hz peak ac potential equal to twice the rated peak voltage applied between the terminals connected together and a metal electrode touching the case. Apply this potential for 1 to 5 seconds.

Current Ratings at various frequencies are in the listings and apply under the following conditions:

Temperature: $65\text{ }^{\circ}\text{C}$ maximum

Derating Factor: None

Vibration: Capacitors will withstand vibrational forces occurring at rates of from 10 to 55 Hz for $4\frac{1}{2}$ hours. The total excursion during vibration is 0.06 inches. At the end of this period, make the following inspections and tests:

Visual and Mechanical Inspection: No perceptible deterioration. Withstanding Voltage: As specified under Withstanding Voltage.

Insulation Resistance: No less than 7500 M Ω .

Capacitance Change: Not to exceed 3% of the nominal value or one picofarad, whichever is greater.

Temperature and Immersion Cycling: Capacitors will withstand the temperature and immersion cycles indicated in the tables below. Follow three temperature cycles by two immersion cycles. Make the measurements listed below no more than 30 minutes following the final immersion cycle:

Withstanding Voltage: As specified under Withstanding Voltage.

Insulation Resistance: No less than 7500 M Ω .

Capacitance: Change not to exceed 4% of the nominal value or one picofarad, whichever is greater.

Temperature Cycling Test Conditions

| Steps | Temp (°C) | Interval (Minutes) |
|-------|-------------------|--------------------|
| 1 | $-55 + 0$ -3 | 30 |
| 2 | $25 + 10$ -5 | 10 to 15 |
| 3 | $125 + 3$ -0 | 30 |
| 4 | $25 + 10$ -5 | 10 to 15 |

Immersion Test Conditions

•Number of cycles: 2

•Duration of each immersion: 15 minutes

•Immersion bath: Saturated solution of sodium chloride and water

•Temp. of hot bath: $65 - 0 + 5\text{ }^{\circ}\text{C}$

•Temp. of cold bath: $25 - 0 + 10\text{ }^{\circ}\text{C}$

Life Test: Subject all capacitors to a temperature of $55\text{ }^{\circ}\text{C}$ for 48 hours. Then subject units cast in rectangular cases (Types 271, 272, and 273) to a 60-Hz rms voltage equal to the rated peak voltage for 250 hours. Subject units cast in cylindrical cases (Types 291, 292, 293, and 294) to a 60-Hz rms voltage equal to 90% of the rated peak voltage for 250 hours. In both tests, maintain the temperature at $125\text{ }^{\circ}\text{C}$. After test, the capacitors will meet these requirements:

Withstanding Voltage: As specified under Withstanding Voltage.

Insulation Resistance: No less than 7500 M Ω .

Capacitance Change: Within the limits given in the table below or one picofarad, whichever is greater.

Characteristic Maximum Cap.

| | |
|----------|-----------|
| B | $\pm 8\%$ |
| C | $\pm 3\%$ |
| D | $\pm 3\%$ |
| E | $\pm 3\%$ |

In addition, the capacitor must show no visual damage and the markings must be legible

Cylindrical Types, High-Voltage Mica Capacitors

Notice and Disclaimer: All product drawings, descriptions, specifications, statements, information and data (collectively, the "Information") in this datasheet or other publication are subject to change. The customer is responsible for checking, confirming and verifying the extent to which the Information contained in this datasheet or other publication is applicable to an order at the time the order is placed. All Information given herein is believed to be accurate and reliable, but it is presented without any guarantee, warranty, representation or responsibility of any kind, expressed or implied. Statements of suitability for certain applications are based on the knowledge that the Cornell Dubilier company providing such statements ("Cornell Dubilier") has of operating conditions that such Cornell Dubilier company regards as typical for such applications, but are not intended to constitute any guarantee, warranty or representation regarding any such matter – and Cornell Dubilier specifically and expressly disclaims any guarantee, warranty or representation concerning the suitability for a specific customer application, use, storage, transportation, or operating environment. The Information is intended for use only by customers who have the requisite experience and capability to determine the correct products for their application. Any technical advice inferred from this Information or otherwise provided by Cornell Dubilier with reference to the use of any Cornell Dubilier products is given gratis (unless otherwise specified by Cornell Dubilier), and Cornell Dubilier assumes no obligation or liability for the advice given or results obtained. Although Cornell Dubilier strives to apply the most stringent quality and safety standards regarding the design and manufacturing of its products, in light of the current state of the art, isolated component failures may still occur. Accordingly, customer applications which require a high degree of reliability or safety should employ suitable designs or other safeguards (such as installation of protective circuitry or redundancies or other appropriate protective measures) in order to ensure that the failure of an electrical component does not result in a risk of personal injury or property damage. Although all product-related warnings, cautions and notes must be observed, the customer should not assume that all safety measures are indicated in such warnings, cautions and notes, or that other safety measures may not be required.

Mouser Electronics

Authorized Distributor

Click to View Pricing, Inventory, Delivery & Lifecycle Information:

Cornell Dubilier:

[293150B122JO0](#) [293150B122JO1](#) [292100B152JO0](#) [29280B222JO0](#) [29280B272JO0](#) [29380B103JO0](#)
[29240B123JO0](#) [29280B362JO0](#) [293100B682JO0](#) [29280B302JO0](#) [29250B562JO0](#) [29160B470JO0](#) [29450B393JO0](#)
[29220B303JO0](#) [294250B122JO0](#) [29140B103JO0](#) [29250B752JO0](#) [29250B103JO0](#) [293100B472JO0](#) [29160B472JO0](#)
[29150B103JO0](#)