Applications

• Wireless charging
• Resonant LLC converters
• Power conversion
• Pulse circuits
• Critical timing
• Tuning
• Decoupling and bypass
• DC blocking
• Transient voltage suppression

For more information, samples and engineering kits, please visit us at www.kemet.com or call 1.877.myKEMET.

Features & Benefits

• AEC-Q200 automotive qualified
• Operating temperature range of -55°C to +125°C
• Lead-free (Pb-free), RoHS and REACH compliant
• Retains over 99% of nominal capacitance at full rated voltage
• DC voltages up to 50 V
• Up to 120% higher capacitance than C0G
• Low ESR and ESL
• Low noise solution similar to C0G (low distortion)
• Low dissipation factor DF < 0.1%
• High thermal stability
• High ripple current capability
• High frequency capability
• Small predictable and linear capacitance change with respect to temperature
• Non-polar devices, minimizing installation concerns
• Flexible termination options available

Product Checklist

• Does the application require the stability of a Class 1 dielectric?
• Is there a requirement of a low noise solution?
• Are ESL and ESR a concern?
• Is there a requirement of a predictable change in capacitance with respect to temperature?
• Is there a requirement for a non-polarized solution?
• What is the end application?

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Why Choose KEMET

KEMET Electronics Corporation is a leading global supplier of electronic components. We offer our customers the broadest selection of capacitor technologies in the industry, along with an expanding range of electromechanical devices, electromagnetic compatibility solutions and supercapacitors. Our vision is to be the preferred supplier of electronic component solutions for customers demanding the highest standards of quality, delivery and service.

Electrical/Physical Characteristics

<table>
<thead>
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<tbody>
<tr>
<td>-55°C to +125°C</td>
<td>-750 ±120 ppm/°C</td>
<td>0.1%</td>
<td>250% of rated voltage (5 ±1 seconds and charge/discharge not exceeding 50 mA)</td>
<td>0.1%</td>
<td>1,000 MQ µF or 100 GΩ (Rated voltage applied for 120 ±5 seconds at 25°C)</td>
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Ordering Information

<table>
<thead>
<tr>
<th>C</th>
<th>1206</th>
<th>104</th>
<th>J</th>
<th>8</th>
<th>4</th>
<th>J</th>
<th>A</th>
<th>C</th>
<th>TU</th>
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<tr>
<td></td>
<td>Ceramic</td>
<td>Specification/ Series</td>
<td>Capacitance Code (pF)</td>
<td>Capacitance Tolerance</td>
<td>Rated Voltage (VDC)</td>
<td>Dielectric</td>
<td>Failure Rate</td>
<td>Termination Finish</td>
<td>Packaging (C-Spec)</td>
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<td>0402</td>
<td>Standard</td>
<td>F = ±1%</td>
<td>G = ±2%</td>
<td>J = ±5%</td>
<td>K = ±10%</td>
<td>M = ±20%</td>
<td>8 = 10</td>
<td>4 = 16</td>
<td>3 = 25</td>
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<td>0603</td>
<td>Flexible termination</td>
<td>First two digits represent significant figures. Third digit specifies number of zeros</td>
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</table>

*Flexible termination not available for 0402 case size

Packaging C-Spec Ordering Options Table

<table>
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<tr>
<th>Packaging Type</th>
<th>Packaging / Grade Ordering Code (C-Spec)</th>
<th>Automotive C-Specs</th>
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<tr>
<td>Bulk Bag</td>
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</tr>
<tr>
<td>7” Reel</td>
<td>TU</td>
<td>AUTO</td>
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<td>13” Reel / Punched paper</td>
<td>7411</td>
<td>AUTO7411</td>
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<tr>
<td>13” Reel / Embossed plastic</td>
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<td>AUTO7210</td>
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</table>

* For 0603 case size 2mm pitch option available
Available Capacitance Range Comparison: U2J vs C0G

Typical Electrical Performance

- Typical U2J Ripple Current vs X7R
- TCC U2J Dielectric
- DC Bias Effect U2J Dielectric
- AC Bias Effect U2J Dielectric