TANCERAM® chip capacitors can replace tantalum capacitors in many applications and offer several key advantages over traditional tantalums. Because TANCERAM® capacitors exhibit extremely low ESR, equivalent circuit performance can often be achieved using considerably lower capacitance values. Low DC leakage reduces current drain, extending the battery life of portable products. TANCERAM® high DC breakdown voltage ratings offer improved reliability and eliminate large voltage de-rating common when designing with tantalums.

**ADVANTAGES**
- Low ESR
- Low DC Leakage
- Higher Surge Voltage
- Non-polarized Devices
- Reduced CHIP Size
- Improved Reliability
- Higher Insulation Resistance
- Higher Ripple Current

**APPLICATIONS**
- Switching Power Supply Smoothing (Input/Output)
- DC/DC Converter Smoothing (Input/Output)
- Backlighting Inverters
- General Digital Circuits

**How to Order TANCERAM®**

<table>
<thead>
<tr>
<th>Code Type</th>
<th>Reel Type</th>
</tr>
</thead>
<tbody>
<tr>
<td>E</td>
<td>Paper 7&quot;</td>
</tr>
<tr>
<td>T</td>
<td>Plastic 7&quot;</td>
</tr>
</tbody>
</table>

Part number written: 100R15X106MV4E
**Case Size**

<table>
<thead>
<tr>
<th>Case Size</th>
<th>Capacitance Selection</th>
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</thead>
<tbody>
<tr>
<td>EIA / JDI</td>
<td>INCHES</td>
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<tr>
<td>-----------</td>
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</tr>
<tr>
<td>- 0402</td>
<td>R07</td>
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<td>- 0603</td>
<td>R14</td>
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<td>- 0805</td>
<td>R15</td>
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<tr>
<td>- 1006</td>
<td>R18</td>
</tr>
<tr>
<td>- 1210</td>
<td>S41</td>
</tr>
<tr>
<td>- 1812</td>
<td>S43</td>
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</tbody>
</table>

**Electrical Characteristics**

**Dielectric:**

- X7R
- X5R

**Temperature Coefficient:**

- ±15% (−55 to +125°C)
- ±15% (−55 to +85°C)

**Dissipation Factor:**

- For ≥ 50 VDC: 5% max.
- For ≤ 35 VDC: 10% max.
- For ≤ 35 VDC: 5% max.
- For ≥ 50 VDC: 10% max.

**Insulation Resistance (Min. @ 25°C, WVDC):**

100 ΩF or 10 GΩ, whichever is less

**Dielectric Strength:**

2.5 X WVDC, 25°C, 50mA max.

**Test Conditions:**

- Capacitance values ≤ 10 µF: 1.0kHz±50Hz @ 1.0±0.2 Vrms
- Capacitance values > 10 µF: 120Hz±10Hz @ 0.5V±0.1 Vrms

**Other:**

See page 79 for additional dielectric specifications.