FEATURES
Made in USA
Weldable screw terminals
Highest power available
RoHS compliant
Long life
Wide temperature operating range
2.85V Operation

APPLICATIONS
High power
High rate cycling
High cycle life (>1,000,000 cycles)
System prototyping/testing with available integration kit (iKIT60MM2V7A2S)

MARKETS
Automotive subsystem
Engine starting
Regen energy capture
Backup power
Grid/power correction
UPS/ride through power

MARKINGS
Products are marked with the following: Rated capacitance, rated voltage, product number, name of manufacturer, positive and negative terminal marking, maximum energy content.

MOUNTING RECOMMENDATION

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## PRODUCT SPECIFICATIONS

### ELECTRICAL/PART NUMBER

<table>
<thead>
<tr>
<th>Capacitance (F) [Min/Nom]</th>
<th>iRD1200K270CT</th>
<th>iRD2000K270CT</th>
<th>iRD3000K270CT</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1152/1200</td>
<td>1920/2000</td>
<td>2880/3000</td>
</tr>
<tr>
<td>Voltage (Rated/Surge) [V/R]</td>
<td>2.85/3.0</td>
<td>2.85/3.0</td>
<td>2.85/3.0</td>
</tr>
<tr>
<td>DC ESR 10ms (mΩ) [Nom/Max]</td>
<td>0.27/0.32</td>
<td>0.22/0.30</td>
<td>0.20/0.28</td>
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<tr>
<td>IEC DC ESR (mΩ) [Nom/Max]</td>
<td>0.42/0.51</td>
<td>0.29/0.35</td>
<td>0.25/0.31</td>
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<tr>
<td>AC ESR (mΩ 1kHz) [Nom/Max]</td>
<td>0.26/0.32</td>
<td>0.22/0.28</td>
<td>0.20/0.26</td>
</tr>
</tbody>
</table>

### CYCLING (Calculated from nominal values)

- Current, Peak [1s] (A): 1300, 2000, 2700
- Continuous Current (A) [20° rise]: 112, 122, 134
- Current, Short Circuit (A): 10,500, 12,900, 14,200

### THERMAL (Reference)

- Operational / Storage Range (°C): -40 to 65°C / -40 to 70°C
- Resistance, Thermal (°C/W) [R<sub>TH</sub>]: 5, 4.5, 4

### ENERGY/POWER (Reference / Calculated using nominal values)

<table>
<thead>
<tr>
<th>E&lt;sub&gt;MAX&lt;/sub&gt; (Whr) [Min/Nom]</th>
<th>iRD1200K270CT</th>
<th>iRD2000K270CT</th>
<th>iRD3000K270CT</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1.30/1.35</td>
<td>2.17/2.26</td>
<td>3.25/3.38</td>
</tr>
<tr>
<td>E&lt;sub&gt;MAX&lt;/sub&gt; (Whr/kg)</td>
<td>4.6</td>
<td>5.8</td>
<td>6.6</td>
</tr>
<tr>
<td>E&lt;sub&gt;MAX&lt;/sub&gt; (Whr/L)</td>
<td>5.9</td>
<td>7.3</td>
<td>8.3</td>
</tr>
<tr>
<td>P&lt;sub&gt;MAX&lt;/sub&gt; Impedance Matched Power (kW/kg)</td>
<td>26</td>
<td>24</td>
<td>20</td>
</tr>
<tr>
<td>P&lt;sub&gt;MAX&lt;/sub&gt; Impedance Matched Power (kW/L)</td>
<td>34</td>
<td>30</td>
<td>25</td>
</tr>
<tr>
<td>Usable P&lt;sub&gt;U&lt;/sub&gt; (kW/kg)</td>
<td>12</td>
<td>11.4</td>
<td>9.6</td>
</tr>
</tbody>
</table>

### PHYSICAL (Nominal Values)

- D1 (mm) (+/- 0.3): 60.2
- D2 (mm) (+/- 0.7): 60.7
- L (mm) (+/- 0.5): 80, 108.1, 144
- Mass (kg): 0.295, 0.390, 0.510
- Volume (L) (CALCULATED): 0.228, 0.308, 0.410
- Terminal Fastener Size / Max Torque: M6X1 / 5Nm (44in/lbs)

### LIFE (EOL Criteria) [Capacitance/IEC DC ESR] *Life is a provisional value

- DC (10 Yr, 25°C, @V<sub>R</sub>) [F/mΩ]: >920/<1.0, >1530/<0.70, >2300/<0.62
- Endurance (2000hr, 65°C, @2.85V) [F/mΩ]: >920/<1.0, >1530/<0.70, >2300/<0.62
- Storage (4 yr, 25°C, @ 0V) [F/mΩ]: >1030/<0.77, >1720/<0.53, >2590/<0.47
- Cycle (1M Cyc, 25°C, @ V<sub>R</sub>-V<sub>R</sub>/2) [F/mΩ]: >920/<1.0, >1530/<0.70, >2300/<0.62

### STANDARDS COMPLIANCE (UNDERLINED ITEMS ARE PENDING)

- Safety/Environmental: RoHS, UL810a, Chinese RoHS, IEC 60068-2-14, SAE J2464
- IEC 60068-2-27
- Shock: SAE J2380, ISO 16750-3 (Table 14), IEC 60068-2-6

### ADDITIONAL TECHNICAL INFORMATION

Product specification test and calculation methods are available in Ioxus Notes on Datasheet Specifications