Features

- Lead Free Finish/RoHS Compliant (Note1) ("P" suffix designates Compliant. See ordering information)
- High Surge Capability
- Super Fast Switching Speed For High Efficiency
- Case Material: Molded Plastic. UL Flammability Classification Rating 94V-0 and MSL rating 1
- Marking: Cathode band and type number

Maximum Ratings

- Operating Temperature: -55°C to +150°C
- Storage Temperature: -55°C to +150°C

<table>
<thead>
<tr>
<th>MCC Part Number</th>
<th>Maximum Recurrent Peak Reverse Voltage</th>
<th>Maximum RMS Voltage</th>
<th>Maximum DC Blocking Voltage</th>
</tr>
</thead>
<tbody>
<tr>
<td>ER10A</td>
<td>50V</td>
<td>35V</td>
<td>50V</td>
</tr>
<tr>
<td>ER10B</td>
<td>100V</td>
<td>70V</td>
<td>100V</td>
</tr>
<tr>
<td>ER10D</td>
<td>200V</td>
<td>140V</td>
<td>200V</td>
</tr>
<tr>
<td>ER10G</td>
<td>400V</td>
<td>280V</td>
<td>400V</td>
</tr>
</tbody>
</table>

Electrical Characteristics @ 25°C Unless Otherwise Specified

- Average Forward Current: \( I_{F(AV)} = 10 \text{ A} \) at \( T_A = 55°C \)
- Peak Forward Surge Current: \( I_{FSM} = 200 \text{ A} \) for 8.3ms, half sine
- Maximum Instantaneous Forward Voltage: \( V_F = 1.2V \)
- \( I_{SM} = 10.0A; \quad T_A = 25°C^* \)
- Maximum DC Reverse Current At Rated DC Blocking Voltage: \( I_R = 10.0\mu\text{A} \) at \( T_A = 25°C \)
- Maximum Reverse Recovery Time: \( T_{rr} \)
  - ER10A-ER10D: 35ns
  - ER10G: 60ns

*Pulse Test: Pulse Width 300μsec, Duty Cycle 1%

ER10A thru ER10G

Figure 1
Typical Forward Characteristics

Instantaneous Forward Current - Amperes versus
Instantaneous Forward Voltage - Volts

Figure 2
Forward Derating Curve

Single Phase, Half Wave
60Hz Resistive or Inductive Load

Figure 3
Junction Capacitance

Junction Capacitance - pF versus
Reverse Voltage - Volts
ER10A thru ER10G

Figure 4
Peak Forward Surge Current

Peak Forward Surge Current - Amperes versus
Number Of Cycles At 60Hz - Cycles

Figure 5
Reverse Recovery Time Characteristic And Test Circuit Diagram

Notes:
1. Rise Time = 7ns max.
   Input impedance = 1 megohm, 22pF
2. Rise Time = 10ns max.
   Source impedance = 50 ohms
3. Resistors are non-inductive

50Ω
10Ω
25Vdc
1Ω

Oscilloscope
Note 1

Pulse Generator
Note 2

Set Time Base for 20/100ns/cm
### Ordering Information

<table>
<thead>
<tr>
<th>Device</th>
<th>Packing</th>
</tr>
</thead>
<tbody>
<tr>
<td>(Part Number)-TP</td>
<td>Tape&amp;Reel; 1.5Kpcs/Reel</td>
</tr>
</tbody>
</table>

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