CMR5H-06
SURFACE MOUNT SILICON HYPERFAST RECOVERY RECTIFIER
5.0 AMP, 600 VOLT

DESCRIPTION:
The CENTRAL SEMICONDUCTOR CMR5H-06 is a HyperFast power rectifier manufactured in the epoxy molded SMC case. The extremely fast reverse recovery characteristics make this device an ideal choice for PFC and other fast switching applications.

MARKING CODE: C5H06

APPLICATIONS:
- Power factor correction
- Motor control
- DC-DC output rectification
- Freewheeling diode

FEATURES:
- HyperFast recovery time (20ns TYP)
- High surge capability
- Low leakage current

SMC CASE

MAXIMUM RATINGS: (T_A=25°C unless otherwise noted)

<table>
<thead>
<tr>
<th>SYMBOL</th>
<th>UNITS</th>
</tr>
</thead>
<tbody>
<tr>
<td>V_RRM</td>
<td>600 V</td>
</tr>
<tr>
<td>V_R</td>
<td>600 V</td>
</tr>
<tr>
<td>V_R(RMS)</td>
<td>420 V</td>
</tr>
<tr>
<td>I_O</td>
<td>5.0 A</td>
</tr>
<tr>
<td>I_FSM</td>
<td>100 A</td>
</tr>
<tr>
<td>T_J, T_stg</td>
<td>-65 to +175 °C</td>
</tr>
<tr>
<td>( \Theta_{JL} )</td>
<td>10 °C/W</td>
</tr>
</tbody>
</table>

ELECTRICAL CHARACTERISTICS: (T_A=25°C unless otherwise noted)

<table>
<thead>
<tr>
<th>SYMBOL</th>
<th>TEST CONDITIONS</th>
<th>UNITS</th>
</tr>
</thead>
<tbody>
<tr>
<td>I_R</td>
<td>V_R=600V</td>
<td>0.2</td>
</tr>
<tr>
<td>I_R</td>
<td>V_R=600V, T_A=150°C</td>
<td>1.0</td>
</tr>
<tr>
<td>I_FSM</td>
<td>I_R=100μA</td>
<td>500 μA</td>
</tr>
<tr>
<td>BVR</td>
<td>I_R=100μA</td>
<td>600 V</td>
</tr>
<tr>
<td>V_F</td>
<td>I_F=5.0A</td>
<td>1.55 V</td>
</tr>
<tr>
<td>C_J</td>
<td>V_R=4.0V, f=1.0MHz</td>
<td>2.0 pF</td>
</tr>
<tr>
<td>t_{rr}</td>
<td>I_F=5.0A, V_R=400V, dIdt=200A/μs</td>
<td>17 ns</td>
</tr>
</tbody>
</table>

R1 (27-July 2018)
CMR5H-06
SURFACE MOUNT SILICON
HYPERFAST
RECOVERY RECTIFIER
5.0 AMP, 600 VOLT

SMC CASE - MECHANICAL OUTLINE

MARKING CODE: C5H06

DIMENSIONS

<table>
<thead>
<tr>
<th>SYMBOL</th>
<th>INCHES</th>
<th>MILLIERS</th>
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</thead>
<tbody>
<tr>
<td>A</td>
<td>0.030</td>
<td>0.060</td>
</tr>
<tr>
<td>B</td>
<td>0.002</td>
<td>0.008</td>
</tr>
<tr>
<td>C</td>
<td>0.305</td>
<td>0.320</td>
</tr>
<tr>
<td>D</td>
<td>0.006</td>
<td>0.012</td>
</tr>
<tr>
<td>E</td>
<td>0.079</td>
<td>0.103</td>
</tr>
<tr>
<td>F</td>
<td>0.260</td>
<td>0.280</td>
</tr>
<tr>
<td>G</td>
<td>0.108</td>
<td>0.128</td>
</tr>
<tr>
<td>H</td>
<td>0.220</td>
<td>0.245</td>
</tr>
</tbody>
</table>

SMC (REV: R2)

R1 (27-July 2018)
www.centralsemi.com
TYPICAL ELECTRICAL CHARACTERISTICS

Leakage Current

Forward Voltage

Capacitance

Current Derating

www.centralsemi.com

R1 (27-July 2018)
OUTSTANDING SUPPORT AND SUPERIOR SERVICES

PRODUCT SUPPORT
Central’s operations team provides the highest level of support to insure product is delivered on-time.
• Supply management (Customer portals)       • Custom bar coding for shipments
• Inventory bonding                             • Custom product packing
• Consolidated shipping options

DESIGNER SUPPORT/SERVICES
Central’s applications engineering team is ready to discuss your design challenges. Just ask.
• Free quick ship samples (2nd day air)       • Special wafer diffusions
• Online technical data and parametric search • PbSn plating options
• SPICE models                                 • Package details
• Custom electrical curves                     • Application notes
• Environmental regulation compliance          • Application and design sample kits
• Customer specific screening                  • Custom product and package development
• Up-screening capabilities

REQUESTING PRODUCT PLATING
1. If requesting Tin/Lead plated devices, add the suffix “TIN/LEAD” to the part number when ordering (example: 2N2222A TIN/LEAD).
2. If requesting Lead (Pb) Free plated devices, add the suffix “PBFREE” to the part number when ordering (example: 2N2222A PBFREE).

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