Description:
The CENTRAL SEMICONDUCTOR CTLHR10-06 is a HyperFast power rectifier designed for high voltage, high frequency applications such as PFC that require a low profile, high power density package.

Marking code: CHR1006

Applications:
- Power Factor Correction (PFC)
- Motor control
- Power management
- DC-DC output rectification

Maximum Ratings: (TA=25°C)
- Peak Repetitive Reverse Voltage: VRRM 600 V
- DC Blocking Voltage: VR 600 V
- RMS Reverse Voltage: VR(RMS) 420 V
- Average Forward Current (TL=90°C): IO 10 A
- Peak Forward Surge Current, tp=8.3ms: IFSM 150 A
- Operating and Storage Junction Temperature: TJ, Tstg -65 to +175 °C
- Thermal Resistance (Note 1): ΘJL 10 °C/W
- Thermal Resistance (Note 1): ΘJA 23 °C/W

Electrical Characteristics: (TA=25°C unless otherwise noted)

<table>
<thead>
<tr>
<th>SYMBOL</th>
<th>TEST CONDITIONS</th>
<th>MIN</th>
<th>TYP</th>
<th>MAX</th>
<th>UNITS</th>
</tr>
</thead>
<tbody>
<tr>
<td>IR</td>
<td>VR=600V</td>
<td>1.2</td>
<td>10</td>
<td>µA</td>
<td></td>
</tr>
<tr>
<td>IR</td>
<td>VR=600V, TA=150°C</td>
<td></td>
<td></td>
<td>500</td>
<td>µA</td>
</tr>
<tr>
<td>BVFR</td>
<td>IR=0.5mA</td>
<td></td>
<td></td>
<td>600</td>
<td>V</td>
</tr>
<tr>
<td>VF</td>
<td>IF=10A</td>
<td>1.6</td>
<td>1.7</td>
<td>V</td>
<td></td>
</tr>
<tr>
<td>VF</td>
<td>IF=10A, TA=125°C</td>
<td>1.15</td>
<td></td>
<td>V</td>
<td></td>
</tr>
<tr>
<td>VF</td>
<td>IF=10A, TA=40°C</td>
<td>1.8</td>
<td></td>
<td>V</td>
<td></td>
</tr>
<tr>
<td>CJ</td>
<td>VR=4.0V, f=1.0MHz</td>
<td>42</td>
<td></td>
<td>pF</td>
<td></td>
</tr>
<tr>
<td>TR</td>
<td>IF=10A, VR=400V, di/dt=200A/µs</td>
<td>22</td>
<td>25</td>
<td>ns</td>
<td></td>
</tr>
</tbody>
</table>

Notes: (1) FR-4 epoxy PCB with 25cm² copper pad area.
TLM364 CASE - MECHANICAL OUTLINE

LEAD CODE:
1) Anode
2) Anode
3) Cathode

MARKING CODE: CHR1006

DIMENSIONS

<table>
<thead>
<tr>
<th>SYMBOL</th>
<th>INCHES</th>
<th>MILLIMETERS</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>MIN</td>
<td>MAX</td>
</tr>
<tr>
<td>B</td>
<td></td>
<td></td>
</tr>
<tr>
<td>C</td>
<td>0.039</td>
<td>0.048</td>
</tr>
<tr>
<td>D</td>
<td>0.009</td>
<td>0.014</td>
</tr>
<tr>
<td>E</td>
<td>0.250</td>
<td>0.262</td>
</tr>
<tr>
<td>F</td>
<td>0.128</td>
<td>0.136</td>
</tr>
<tr>
<td>G</td>
<td>0.076</td>
<td>0.085</td>
</tr>
<tr>
<td>H</td>
<td>0.044</td>
<td>0.052</td>
</tr>
<tr>
<td>J</td>
<td>0.083</td>
<td>2.10</td>
</tr>
<tr>
<td>K</td>
<td>0.035</td>
<td>0.044</td>
</tr>
<tr>
<td>L</td>
<td>0.171</td>
<td>0.183</td>
</tr>
</tbody>
</table>

SUGGESTED MOUNTING PADS

(Dimensions in mm)

www.centralsemi.com

R1 (27-February 2014)
TYPICAL ELECTRICAL CHARACTERISTICS

Leakage Current

Forward Voltage

Capacitance

Current Derating

www.centralsemi.com

R1 (27-February 2014)
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)
• Inventory bonding
• Consolidated shipping options

• Custom bar coding for shipments
• Custom product packing

DESIGNER SUPPORT/SERVICES
Central’s applications engineering team is ready to discuss your design challenges. Just ask.
• Free quick ship samples (2nd day air)
• Online technical data and parametric search
• SPICE models
• Custom electrical curves
• Environmental regulation compliance
• Customer specific screening
• Up-screening capabilities

• Special wafer diffusions
• PbSn plating options
• Package details
• Application notes
• Application and design sample kits
• Custom product and package development

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).

CONTACT US

Corporate Headquarters & Customer Support Team

Central Semiconductor Corp.
145 Adams Avenue
Hauppauge, NY 11788 USA
Main Tel: (631) 435-1110
Main Fax: (631) 435-1824
Support Team Fax: (631) 435-3388
www.centralsemi.com

Worldwide Field Representatives:
www.centralsemi/wwreps

Worldwide Distributors:
www.centralsemi/wwdistributors

www.centralsemi.com