DESCRIPTION:
The CENTRAL SEMICONDUCTOR CMPSH-3E series devices are enhanced versions of the CMPSH-3 series of silicon Schottky diodes in an SOT-23 surface mount package.

FEATURED ENHANCED SPECIFICATIONS:
♦ $I_F$ from 100mA MAX to 200mA MAX
♦ $BVR$ from 30V MIN to 40V MIN
♦ $V_F$ from 1.0V MAX to 0.8V MAX

MARKING CODE: D95E
MARKING CODE: DB1E
MARKING CODE: DB2E
MARKING CODE: DA5E

MAXIMUM RATINGS: ($T_A=25^\circ$C)

- Peak Repetitive Reverse Voltage
- Continuous Forward Current
- Peak Repetitive Forward Voltage
- Forward Surge Current, $t_p=10$ms
- Power Dissipation
- Operating and Storage Junction Temperature
- Thermal Resistance

<table>
<thead>
<tr>
<th>SYMBOL</th>
<th>UNITS</th>
</tr>
</thead>
<tbody>
<tr>
<td>$V_{RRM}$</td>
<td>40 V</td>
</tr>
<tr>
<td>$I_F$</td>
<td>200 mA</td>
</tr>
<tr>
<td>$I_{FRM}$</td>
<td>350 mA</td>
</tr>
<tr>
<td>$I_{FSM}$</td>
<td>750 mA</td>
</tr>
<tr>
<td>$P_D$</td>
<td>350 mW</td>
</tr>
<tr>
<td>$T_J$, $T_{stg}$</td>
<td>-65 to +150 °C</td>
</tr>
<tr>
<td>$\Theta_JA$</td>
<td>357 °C/W</td>
</tr>
</tbody>
</table>

ELECTRICAL CHARACTERISTICS PER DIODE: ($T_A=25^\circ$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>$I_R$</td>
<td>$V_R=25V$</td>
<td>90 nA</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>$I_R$</td>
<td>$V_R=25V$, $T_A=100^\circ$C</td>
<td>25 nA</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>$BVR$</td>
<td>$I_R=100\mu A$</td>
<td>40 V</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>$V_F$</td>
<td>$I_F=2.0mA$</td>
<td>0.29 V</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>$V_F$</td>
<td>$I_F=15mA$</td>
<td>0.37 V</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>$V_F$</td>
<td>$I_F=100mA$</td>
<td>0.51 V</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>$V_F$</td>
<td>$I_F=200mA$</td>
<td>0.65 V</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>$C_J$</td>
<td>$V_R=1.0V$, $f=1.0MHz$</td>
<td>7.0 pF</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>$t_{rr}$</td>
<td>$I_F=I_R=10mA$, $R_L=100\Omega$</td>
<td>5.0 ns</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

* Enhanced specification.
** Additional Enhanced specification.

R4 (16-February 2016)
CMPSH-3E
CMPSH-3AE
CMPSH-3CE
CMPSH-3SE

ENHANCED SPECIFICATION
SURFACE MOUNT SILICON
SCHOTTKY DIODES

SOT-23 CASE - MECHANICAL OUTLINE

DIMENSIONS

<table>
<thead>
<tr>
<th>SYMBOL</th>
<th>MIN</th>
<th>MAX</th>
<th>MIN</th>
<th>MAX</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>0.003</td>
<td>0.007</td>
<td>0.08</td>
<td>0.18</td>
</tr>
<tr>
<td>B</td>
<td>0.006</td>
<td>-</td>
<td>0.15</td>
<td>-</td>
</tr>
<tr>
<td>C</td>
<td>-</td>
<td>0.005</td>
<td>-</td>
<td>0.13</td>
</tr>
<tr>
<td>D</td>
<td>0.035</td>
<td>0.043</td>
<td>0.89</td>
<td>1.09</td>
</tr>
<tr>
<td>E</td>
<td>0.110</td>
<td>0.120</td>
<td>2.80</td>
<td>3.05</td>
</tr>
<tr>
<td>F</td>
<td>0.075</td>
<td>1.90</td>
<td></td>
<td></td>
</tr>
<tr>
<td>G</td>
<td>0.037</td>
<td>-</td>
<td>0.95</td>
<td>-</td>
</tr>
<tr>
<td>H</td>
<td>0.047</td>
<td>0.055</td>
<td>1.19</td>
<td>1.40</td>
</tr>
<tr>
<td>I</td>
<td>0.083</td>
<td>0.098</td>
<td>2.10</td>
<td>2.49</td>
</tr>
<tr>
<td>J</td>
<td>0.014</td>
<td>0.020</td>
<td>0.35</td>
<td>0.50</td>
</tr>
</tbody>
</table>

PIN CONFIGURATIONS

CMPSH-3E
LEAD CODE:
1) Anode
2) No Connection
3) Cathode
MARKING CODE: D95E

CMPSH-3AE
LEAD CODE:
1) Cathode D2
2) Cathode D1
3) Anode D1, D2
MARKING CODE: DB1E

CMPSH-3CE
LEAD CODE:
1) Anode D2
2) Anode D1
3) Cathode D1, D2
MARKING CODE: DB2E

CMPSH-3SE
LEAD CODE:
1) Anode D2
2) Cathode D1
3) Anode D1, Cathode D2
MARKING CODE: DA5E

SOT-23 (REV: R3)

R4 (16-February 2016)

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TYPICAL ELECTRICAL CHARACTERISTICS

Transient Peak Power and Peak Current Capacity

Current Derating

Power Derating

Central Semiconductor Corp.

CMPSH-3E
CMPSH-3AE
CMPSH-3CE
CMPSH-3SE

ENHANCED SPECIFICATION
SURFACE MOUNT SILICON SCHOTTKY DIODES
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
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