

CMSD2004S

**SURFACE MOUNT  
DUAL, IN SERIES  
SILICON SWITCHING DIODES**



[www.centrasemi.com](http://www.centrasemi.com)

**DESCRIPTION:**

The CENTRAL SEMICONDUCTOR CMSD2004S type is a dual, in series silicon switching diode manufactured by the epitaxial planar process, designed for applications requiring high voltage capability.

**MARKING CODE: B6D**

**SUPERmini™**



**SOT-323 CASE**

**MAXIMUM RATINGS:** ( $T_A=25^\circ\text{C}$ )

Continuous Reverse Voltage  
Peak Repetitive Reverse Voltage  
Peak Repetitive Reverse Current  
Continuous Forward Current  
Peak Repetitive Forward Current  
Peak Forward Surge Current,  $t_p=1.0\mu\text{s}$   
Peak Forward Surge Current,  $t_p=1.0\text{s}$   
Power Dissipation  
Operating and Storage Junction Temperature  
Thermal Resistance

**SYMBOL**

$V_R$  300  
 $V_{RRM}$  300  
 $I_{RRM}$  200  
 $I_F$  225  
 $I_{FRM}$  625  
 $I_{FSM}$  4.0  
 $I_{FSM}$  1.0  
 $P_D$  275  
 $T_J, T_{stg}$  -65 to +150  
 $\Theta_{JA}$  455

**UNITS**

V  
V  
mA  
mA  
mA  
A  
A  
mW  
 $^\circ\text{C}$   
 $^\circ\text{C/W}$

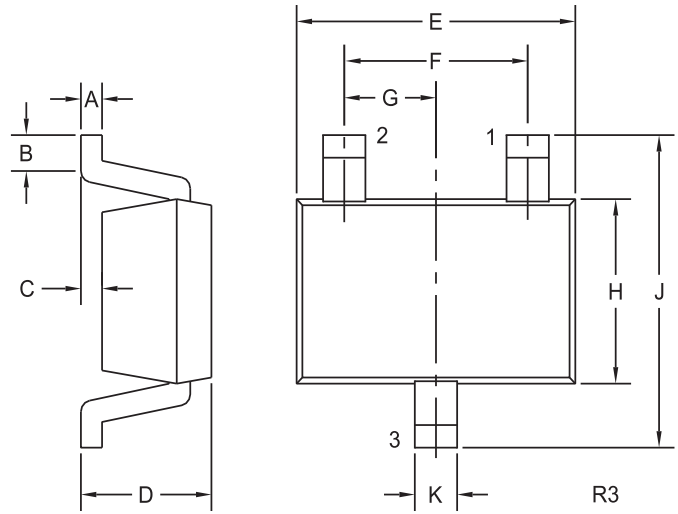
**ELECTRICAL CHARACTERISTICS PER DIODE:** ( $T_A=25^\circ\text{C}$  unless otherwise noted)

| SYMBOL   | TEST CONDITIONS   | MIN | MAX | UNITS         |
|----------|---|-----|-----|---------------|
| $I_R$    | $V_R=240\text{V}$   |     | 100 | nA            |
| $I_R$    | $V_R=240\text{V}, T_A=150^\circ\text{C}$                  |     | 100 | $\mu\text{A}$ |
| $BV_R$   | $I_R=100\mu\text{A}$                                      | 300 |     | V             |
| $V_F$    | $I_F=100\text{mA}$  |     | 1.0 | V             |
| $C_T$    | $V_R=0, f=1.0\text{MHz}$                                  |     | 5.0 | pF            |
| $t_{rr}$ | $I_F=I_R=30\text{mA}, I_{rr}=3.0\text{mA}, R_L=100\Omega$ |     | 50  | ns            |

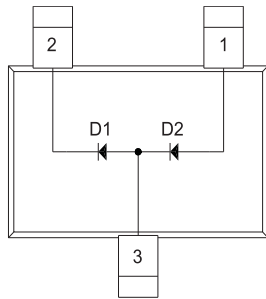
**CMSD2004S**  
**SURFACE MOUNT**  
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**SOT-323 CASE - MECHANICAL OUTLINE**



**PIN CONFIGURATION**



**LEAD CODE:**

- 1) Anode D2
- 2) Cathode D1
- 3) Anode D1, Cathode D2

**MARKING CODE: B6D**

**DIMENSIONS**

| SYMBOL | INCHES |       | MILLIMETERS |      |
|--------|--------|-------|-------------|------|
|        | MIN    | MAX   | MIN         | MAX  |
| A      | 0.002  | 0.008 | 0.05        | 0.20 |
| B      | 0.004  | -     | 0.10        | -    |
| C      | -      | 0.004 | -           | 0.10 |
| D      | 0.031  | 0.043 | 0.80        | 1.10 |
| E      | 0.071  | 0.087 | 1.80        | 2.20 |
| F      | 0.051  |       | 1.30        |      |
| G      | 0.026  |       | 0.65        |      |
| H      | 0.045  | 0.053 | 1.15        | 1.35 |
| J      | 0.079  | 0.087 | 2.00        | 2.20 |
| K      | 0.008  | 0.016 | 0.20        | 0.40 |

SOT-323 (REV: R3)

R6 (8-February 2010)

## OUTSTANDING SUPPORT AND SUPERIOR SERVICES



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### 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

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### DESIGNER SUPPORT/SERVICES

Central's applications engineering team is ready to discuss your design challenges. Just ask.

- Free quick ship samples (2<sup>nd</sup> 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

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### CONTACT US

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