

CMSD2005S
SURFACE MOUNT
DUAL, IN SERIES
HIGH VOLTAGE
SILICON SWITCHING DIODES



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DESCRIPTION:

The CENTRAL SEMICONDUCTOR CMSD2005S contains two (2) High Voltage Silicon Switching Diodes, manufactured by the epitaxial planar process, epoxy molded in a SOT-323 surface mount package, designed for applications requiring high voltage capability.

MARKING CODE: B5D

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} 350
 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
 Θ_{JA} 455

UNITS

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

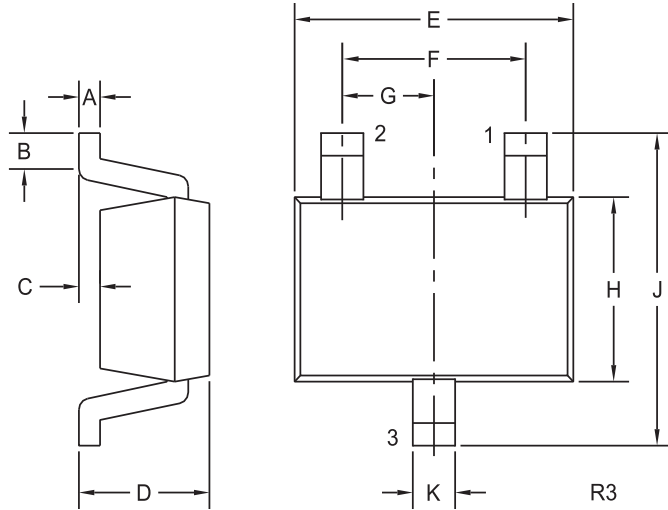
ELECTRICAL CHARACTERISTICS PER DIODE: ($T_A=25^\circ\text{C}$ unless otherwise noted)

| SYMBOL | TEST CONDITIONS | MIN | MAX | UNITS |
|----------|---|-----|------|---------------|
| I_R | $V_R=280\text{V}$ | | 100 | nA |
| I_R | $V_R=280\text{V}, T_A=150^\circ\text{C}$ | | 100 | μA |
| BV_R | $I_R=100\mu\text{A}$ | 350 | | V |
| V_F | $I_F=20\text{mA}$ | | 0.87 | V |
| V_F | $I_F=100\text{mA}$ | | 1.0 | V |
| V_F | $I_F=200\text{mA}$ | | 1.25 | V |
| C_T | $V_R=0, f=1.0\text{MHz}$ | | 5.0 | pF |
| t_{rr} | $I_R=I_F=30\text{mA}, I_{rr}=3.0\text{mA}, R_L=100\Omega$ | | 50 | ns |

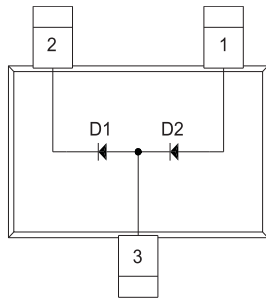
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SOT-323 CASE - MECHANICAL OUTLINE



PIN CONFIGURATION



LEAD CODE:

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

MARKING CODE: B5D

| 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)

R1 (8-February 2010)

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

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