

CMSD2005S

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

SUPERmini™



SOT-323 CASE

Central™
Semiconductor

www.centrasemi.com

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°C)

Continuous Reverse Voltage
Peak Repetitive Reverse Voltage
Peak Repetitive Reverse Current
Continuous Forward Current
Peak Repetitive Forward Current
Peak Forward Surge Current, tp=1.0µs
Peak Forward Surge Current, tp=1.0s
Power Dissipation
Operating and Storage Junction Temperature
Thermal Resistance

SYMBOL

V_R 300
V_RRRM 350
I_RRRM 200
I_F 225
I_FFRM 625
I_FFSM 4.0
I_FFSM 1.0
P_D 275
T_J, T_{stg} -65 to +150
Θ_{JA} 455

UNITS

V
V
mA
mA
mA
A
A
mW
°C
°C/W

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

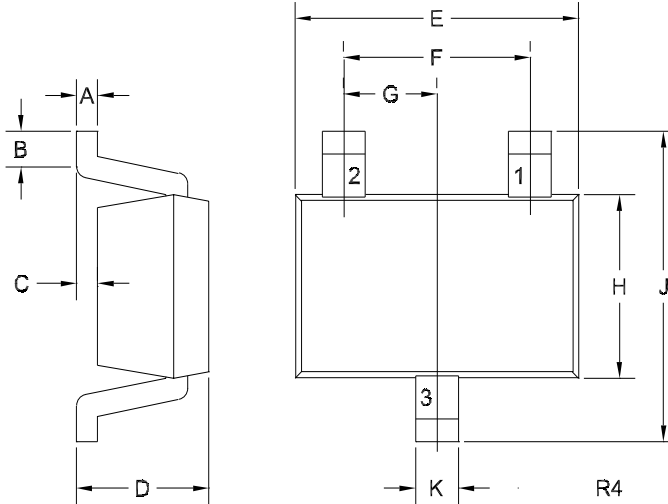
| SYMBOL | TEST CONDITIONS | MIN | MAX | UNITS |
|-----------------|--|-----|------|-------|
| I _R | V _R =280V | | 100 | nA |
| I _R | V _R =280V, T _A =150°C | | 100 | µA |
| BV _R | I _R =100µA | 350 | | V |
| V _F | I _F =20mA | | 0.87 | V |
| V _F | I _F =100mA | | 1.0 | V |
| V _F | I _F =200mA | | 1.25 | V |
| C _T | V _R =0, f=1.0MHz | | 5.0 | pF |
| t _{rr} | I _R =I _F =30mA, I _{rr} =3.0mA, R _L =100Ω | | 50 | ns |

CMSD2005S

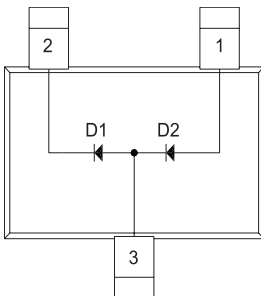
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SOT-323 CASE - MECHANICAL OUTLINE



PIN CONFIGURATION



LEAD CODE:

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

MARKING CODE: B5D

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 | 0.094 | 2.00 | 2.40 |
| K | 0.008 | 0.016 | 0.20 | 0.40 |

SOT-323 (REV: R4)

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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