

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



[www.centrasemi.com](http://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:** ( $T_A=25^\circ\text{C}$ )

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**

$V_R$   
 $V_{RRM}$   
 $I_{RRM}$   
 $I_F$   
 $I_{FRM}$   
 $I_{FSM}$   
 $I_{FSM}$   
 $P_D$   
 $T_J, T_{stg}$   
 $\Theta_{JA}$

**UNITS**

300  
 350  
 200  
 225  
 625  
 4.0  
 1.0  
 275  
 -65 to +150  
 455  
 V  
 V  
 mA  
 mA  
 mA  
 A  
 A  
 mW  
 $^\circ\text{C}$   
 $^\circ\text{C/W}$

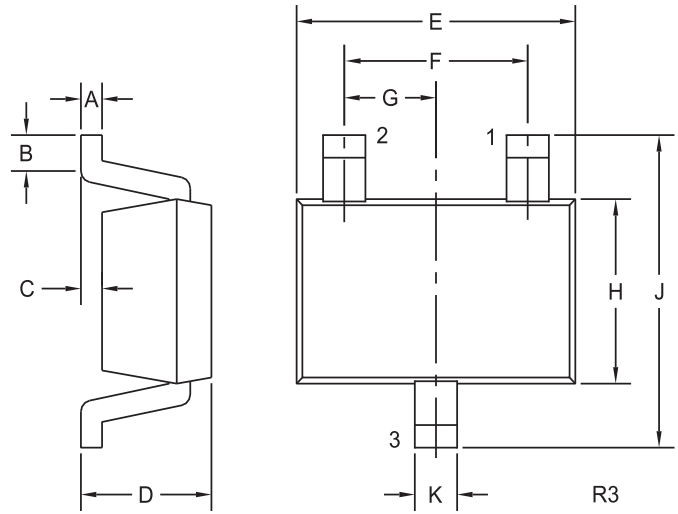
**ELECTRICAL CHARACTERISTICS PER DIODE:** ( $T_A=25^\circ\text{C}$  unless otherwise noted)

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	$\mu\text{A}$
$BV_R$	$I_R=100\mu\text{A}$	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

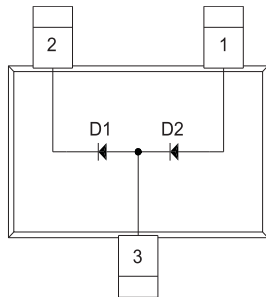
**CMSD2005S**  
**SURFACE MOUNT**  
**DUAL, IN SERIES**  
**HIGH VOLTAGE**  
**SILICON SWITCHING DIODES**



**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 (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

---

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

**Worldwide Field Representatives:**  
[www.centrasemi.com/wwreps](http://www.centrasemi.com/wwreps)

**Worldwide Distributors:**  
[www.centrasemi.com/wwdistributors](http://www.centrasemi.com/wwdistributors)

---

For the latest version of Central Semiconductor's **LIMITATIONS AND DAMAGES DISCLAIMER**, which is part of Central's Standard Terms and Conditions of sale, visit: [www.centrasemi.com/terms](http://www.centrasemi.com/terms)