### **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 <sub>A</sub> =25 °C)	SYMBOL		UNITS
Continuous Reverse Voltage	$V_{R}$	300	V
Peak Repetitive Reverse Voltage	$V_{RRM}$	350	V
Peak Repetitive Reverse Current	I <sub>RRM</sub>	200	mA
Continuous Forward Current	ΙF	225	mA
Peak Repetitive Forward Current	IFRM	625	mA
Peak Forward Surge Current, tp=1.0µs	IFSM	4.0	Α
Peak Forward Surge Current, tp=1.0s	IFSM	1.0	Α
Power Dissipation	$P_{D}$	275	mW
Operating and Storage Junction Temperature	T <sub>J</sub> , T <sub>stg</sub>	-65 to +150	°C
Thermal Resistance	$\Theta_{\sf JA}$	455	°C/W

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

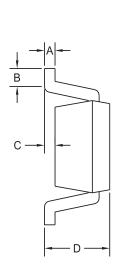
SYMBOL	TEST CONDITIONS	MIN	MAX	UNITS
$I_{R}$	V <sub>R</sub> =280V		100	nA
$I_{R}$	V <sub>R</sub> =280V, T <sub>A</sub> =150°C		100	μΑ
$BV_R$	I <sub>R</sub> =100μA	350		V
VF	I <sub>F</sub> =20mA		0.87	V
VF	I <sub>F</sub> =100mA		1.0	V
VF	I <sub>F</sub> =200mA		1.25	V
C <sub>T</sub>	$V_R=0$ , f=1.0MHz		5.0	pF
t <sub>rr</sub>	$I_R=I_F=30$ mA, $I_{rr}=3.0$ mA, $R_L=100$ $\Omega$		50	ns

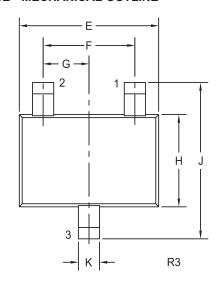
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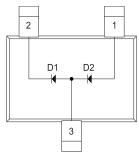


## **SOT-323 CASE - MECHANICAL OUTLINE**





## **PIN CONFIGURATION**



### LEAD CODE:

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

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DIMENSIONS							
	INCHES		MILLIMETERS				
SYMBOL	MIN	MAX	MIN	MAX			
Α	0.002	0.008	0.05	0.20			
В	0.004	-	0.10	-			
С	-	0.004	-	0.10			
D	0.031	0.043	0.80	1.10			
Е	0.071	0.087	1.80	2.20			
F	0.051		1.30				
G	0.026		0.65				
Н	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)

#### **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 guick 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.centralsemi.com

Worldwide Field Representatives: <a href="https://www.centralsemi.com/wwreps">www.centralsemi.com/wwreps</a>

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