

CMSD2005S

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



SOT-323 CASE

CentralTM

Semiconductor Corp.

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 ($T_A=25^\circ\text{C}$)

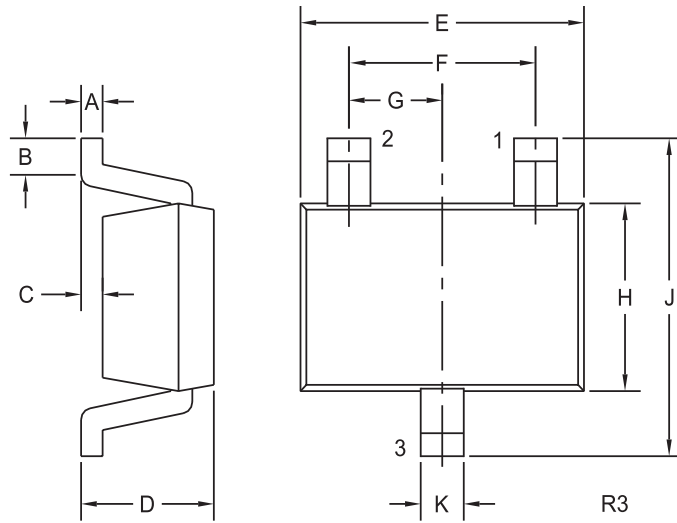
	SYMBOL		UNITS
Continuous Reverse Voltage	V_R	300	V
Peak Repetitive Reverse Voltage	V_{RRM}	350	V
Peak Repetitive Reverse Current	I_O	200	mA
Continuous Forward Current	I_F	225	mA
Peak Repetitive Forward Current	I_{FRM}	625	mA
Forward Surge Current, $t_p=1\mu\text{s}$	I_{FSM}	4.0	A
Forward Surge Current, $t_p=1\text{s}$	I_{FSM}	1.0	A
Power Dissipation	P_D	275	mW
Operating and Storage Junction Temperature	T_J, T_{stg}	-65 to +150	$^\circ\text{C}$
Thermal Resistance	θ_{JA}	455	$^\circ\text{C/W}$

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

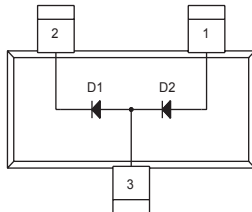
SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNITS
I_R	$V_R=280\text{V}$			100	nA
I_R	$V_R=280\text{V}, T_A=150^\circ\text{C}$			100	μA
BV_R	$I_R=100\mu\text{A}$	350			V
V_F	$I_F=20\text{mA}$			0.87	V
V_F	$I_F=100\text{mA}$			1.0	V
V_F	$I_F=200\text{mA}$			1.25	V
C_T	$V_R=0, f=1.0\text{ MHz}$			5.0	pF
t_{rr}	$I_R=I_F=30\text{mA},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

R0 (17-August 2004)

SOT-323 CASE - MECHANICAL OUTLINE



MARKING CODE: B5D



LEAD CODE:

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

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)