



**CMPD2005S  
CMPD2005SG**

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



**SOT-23 CASE**

# Central<sup>TM</sup> Semiconductor Corp.

**Description:**

The CENTRAL SEMICONDUCTOR CMPD2005S and CMPD2005SG each contain two (2) High Voltage Silicon Switching Diodes, manufactured by the epitaxial planar process, epoxy molded in a SOT-23 surface mount package, designed for applications requiring high voltage capability.

- The CMPD2005SG is **Halogen Free** by design.

**MARKING CODES:**

**CMPDM2005S: DB5**

**CMPDM2005SG: 5SG**

**MAXIMUM RATINGS: (T<sub>A</sub>=25°C)**

Continuous Reverse Voltage
Peak Repetitive Reverse Voltage
Peak Repetitive Reverse Current
Continuous Forward Current
Peak Repetitive Forward Current
Forward Surge Current, tp=1µs
Forward Surge Current, tp=1s
Power Dissipation
Operating and Storage Junction Temperature
Thermal Resistance

**SYMBOL**

V <sub>R</sub>	300
V <sub>R</sub> RM	350
I <sub>O</sub>	200
I <sub>F</sub>	225
I <sub>FRM</sub>	625
I <sub>FSM</sub>	4.0
I <sub>FSM</sub>	1.0
P <sub>D</sub>	350
T <sub>J</sub> , T <sub>stg</sub>	-65 to +150
θ <sub>JA</sub>	357

**UNITS**

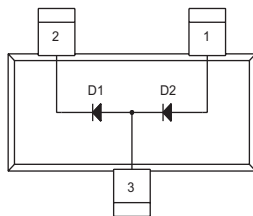
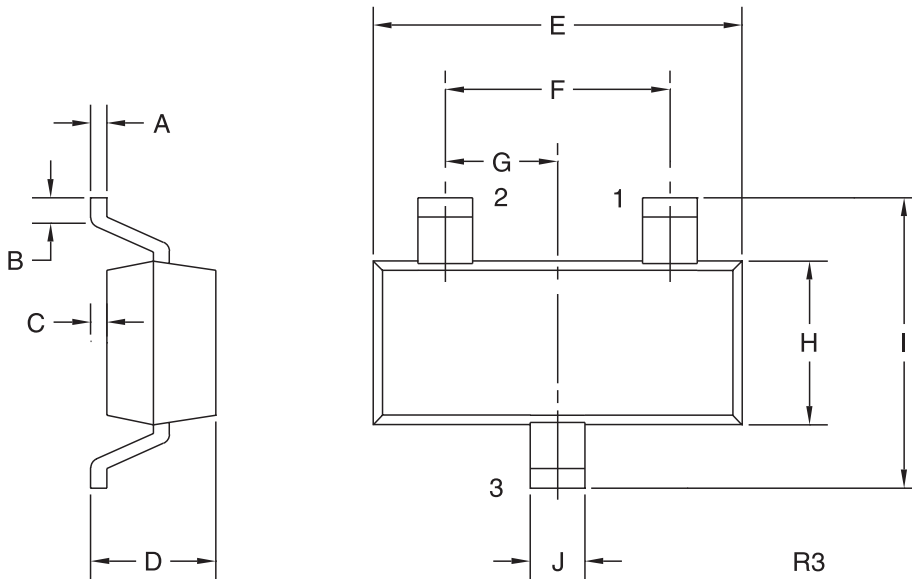
V
V
mA
mA
mA
A
A
mW
°C
°C/W

**ELECTRICAL CHARACTERISTICS PER DIODE: (T<sub>A</sub>=25°C unless otherwise noted)**

SYMBOL	TEST CONDITIONS	MIN	MAX	UNITS
I <sub>R</sub>	V <sub>R</sub> =280V		100	nA
I <sub>R</sub>	V <sub>R</sub> =280V, T <sub>A</sub> =150°C		100	µA
BV <sub>R</sub>	I <sub>R</sub> =100µA	350		V
V <sub>F</sub>	I <sub>F</sub> =20mA		0.87	V
V <sub>F</sub>	I <sub>F</sub> =100mA		1.0	V
V <sub>F</sub>	I <sub>F</sub> =200mA		1.25	V
C <sub>T</sub>	V <sub>R</sub> =0, f=1.0 MHz		5.0	pF
t <sub>rr</sub>	I <sub>R</sub> =I <sub>F</sub> =30mA, Rec. to 3.0mA, R <sub>L</sub> =100Ω		50	ns

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**SOT-23 CASE - MECHANICAL OUTLINE**



**LEAD CODE:**  
1) ANODE D2  
2) CATHODE D1  
3) ANODE D1, CATHODE D2

SYMBOL	INCHES		MILLIMETERS	
	MIN	MAX	MIN	MAX
A	0.003	0.007	0.08	0.18
B	0.006	-	0.15	-
C	-	0.005	-	0.13
D	0.035	0.043	0.89	1.09
E	0.110	0.120	2.80	3.05
F	0.075		1.90	
G	0.037		0.95	
H	0.047	0.055	1.19	1.40
I	0.083	0.098	2.10	2.49
J	0.014	0.020	0.35	0.50

SOT-23 (REV: R3)

**MARKING CODES:**  
CMPDM2005S: DB5  
CMPDM2005SG: 5SG

R2 (17-July 2008)