

CMPD2005S  
CMPD2005SG\*

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



**SOT-23 CASE**

\* Device is **Halogen Free** by design



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

**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.

**MARKING CODES:**

**CMPD2005S: DB5**  
**CMPD2005SG\*: 5SG**

**MAXIMUM RATINGS:** ( $T_A=25^\circ\text{C}$ )

Continuous Reverse Voltage  
Peak Repetitive Reverse Voltage  
Average Forward 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**

$V_R$  300  
 $V_{RRM}$  350  
 $I_O$  200  
 $I_F$  225  
 $I_{FRM}$  625  
 $I_{FSM}$  4.0  
 $I_{FSM}$  1.0  
 $P_D$  350  
 $T_J, T_{stg}$  -65 to +150  
 $\theta_{JA}$  357

**UNITS**

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)

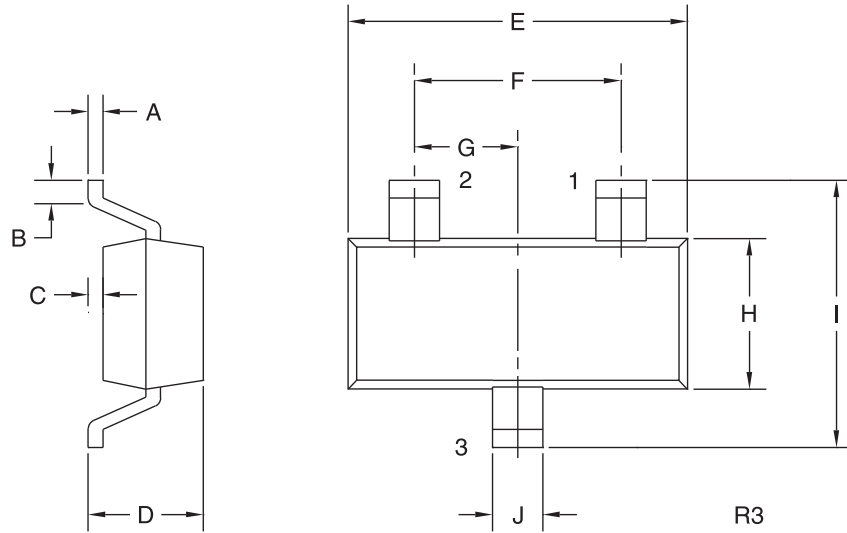
SYMBOL	TEST CONDITIONS	MIN	MAX	UNITS
$I_R$	$V_R=280\text{V}$		100	nA
$I_R$	$V_R=280\text{V}, T_A=150^\circ\text{C}$		100	$\mu\text{A}$
$BV_R$	$I_R=100\mu\text{A}$	350		V
$V_F$	$I_F=20\text{mA}$		0.87	V
$V_F$	$I_F=100\text{mA}$		1.0	V
$V_F$	$I_F=200\text{mA}$		1.25	V
$C_T$	$V_R=0, f=1.0\text{MHz}$		5.0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

CMPD2005S  
 CMPD2005SG\*

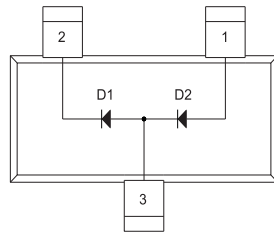
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**SOT-23 CASE - MECHANICAL OUTLINE**



**PIN CONFIGURATION**



**LEAD CODE:**

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

**MARKING CODES:**

**CMPD2005S: DB5**  
**CMPD2005SG\*: 5SG**

\* Device is *Halogen Free* by design

**DIMENSIONS**

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)

R3 (25-January 2010)

## OUTSTANDING SUPPORT AND SUPERIOR SERVICES



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### 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

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### 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

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### 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).

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### CONTACT US

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