

CMPD2005S
CMPD2005SG*

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



SOT-23 CASE

* Device is **Halogen Free** by design



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
 V_{RRM}
 I_O
 I_F
 I_{FRM}
 I_{FSM}
 I_{FSM}
 P_D
 T_J, T_{stg}
 θ_{JA}

300
350
200
225
625
4.0
1.0
350
-65 to +150
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)

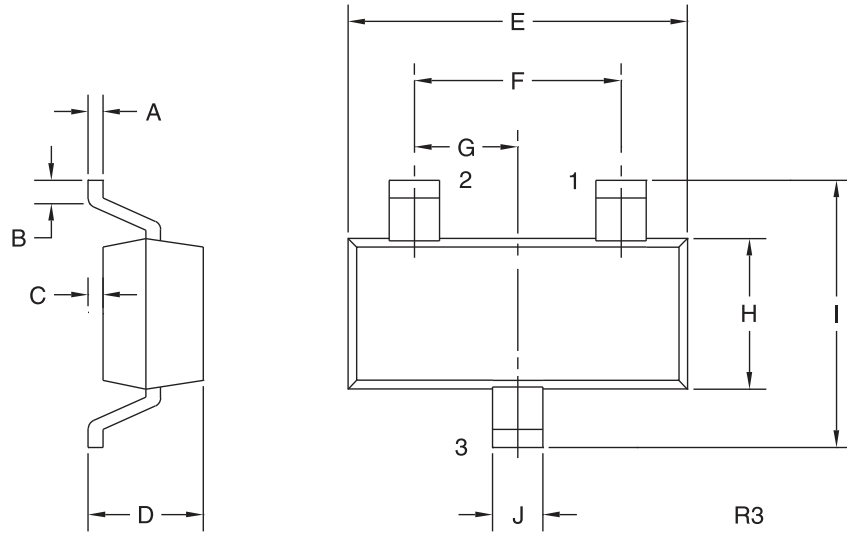
SYMBOL	TEST CONDITIONS	MIN	MAX	UNITS
I_R	$V_R=280\text{V}$		100	nA
I_R	$V_R=280\text{V}, T_A=150^\circ\text{C}$		100	μA
BV_R	$I_R=100\mu\text{A}$	350		V
V_F	$I_F=20\text{mA}$		0.87	V
V_F	$I_F=100\text{mA}$		1.0	V
V_F	$I_F=200\text{mA}$		1.25	V
C_T	$V_R=0, f=1.0\text{MHz}$		5.0	pF
t_{rr}	$I_R=I_F=30\text{mA},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

CMPD2005S
CMPD2005SG*

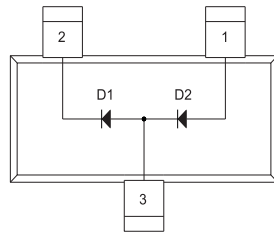
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SOT-23 CASE - MECHANICAL OUTLINE



PIN CONFIGURATION



LEAD CODE:

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

MARKING CODES:

CMPD2005S: DB5
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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



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 (2nd 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).

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