

CMPD5001  
CMPD5001S

**SURFACE MOUNT  
HIGH CURRENT  
INDUCTIVE LOAD  
SILICON SWITCHING DIODE**



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

**DESCRIPTION:**

The CENTRAL SEMICONDUCTOR CMPD5001 series types are silicon switching diodes manufactured by the epitaxial planar process, designed for switching applications requiring extremely high current capability.



**SOT-23 CASE**

The following configurations are available:

CMPD5001            SINGLE  
CMPD5001S        DUAL, IN SERIES

**MARKING CODE: DA2**  
**MARKING CODE: D49**

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

	SYMBOL		UNITS
Continuous Reverse Voltage	$V_R$	120	V
Continuous Forward Current	$I_F$	400	mA
Peak Repetitive Forward Current	$I_{FRM}$	800	mA
Peak Repetitive Reverse Current	$I_{RRM}$	600	mA
Peak Forward Surge Current, $t_p=1.0\mu\text{s}$	$I_{FSM}$	6.0	A
Peak Forward Surge Current, $t_p=1.0\text{s}$	$I_{FSM}$	1.5	A
Power Dissipation	$P_D$	350	mW
Operating and Storage Junction Temperature	$T_J, T_{stg}$	-65 to +150	$^\circ\text{C}$
Thermal Resistance	$\theta_{JA}$	357	$^\circ\text{C/W}$

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

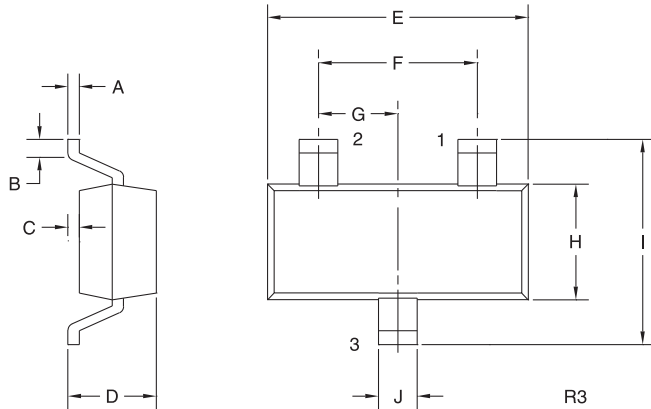
SYMBOL	TEST CONDITIONS	MIN	MAX	UNITS
$I_R$	$V_R=90\text{V}$		100	nA
$I_R$	$V_R=90\text{V}, T_A=150^\circ\text{C}$		100	$\mu\text{A}$
$BV_R$	$I_R=50\mu\text{A}$	120	325	V
$V_F$	$I_F=10\text{mA}$		0.75	V
$V_F$	$I_F=50\text{mA}$		0.84	V
$V_F$	$I_F=100\text{mA}$		0.90	V
$V_F$	$I_F=200\text{mA}$		1.00	V
$V_F$	$I_F=400\text{mA}$		1.25	V
$C_T$	$V_R=0, f=1.0\text{MHz}$		35	pF
$t_{rr}$	$I_R=I_F=30\text{mA}, I_{rr}=3.0\text{mA}, R_L=100\Omega$		60	ns
$t_{rr}$	$I_R=I_F=10\text{mA}, I_{rr}=3.0\text{mA}, R_L=100\Omega$		50	ns

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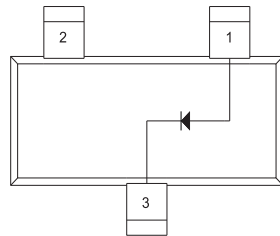
SOT-23 CASE - MECHANICAL OUTLINE



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)

PIN CONFIGURATIONS

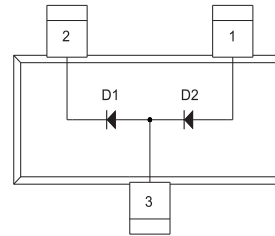


**CMPD5001**

**LEAD CODE:**

- 1) Anode
- 2) No Connection
- 3) Cathode

**MARKING CODE: DA2**



**CMPD5001S**

**LEAD CODE:**

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

**MARKING CODE: D49**

R4 (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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