

CMPD5001  
CMPD5001S

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



**SOT-23 CASE**



[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.

The following configurations are available:

CMPD5001      SINGLE  
CMPD5001S      DUAL, IN SERIES

**MARKING CODE: DA2**

**MARKING CODE: D49**

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

Continuous Reverse Voltage  
Continuous Forward Current  
Peak Repetitive Forward Current  
Peak Repetitive Reverse 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**

|                |             |
|----------------|-------------|
| $V_R$          | 120         |
| $I_F$          | 400         |
| $I_{FRM}$      | 800         |
| $I_{RRM}$      | 600         |
| $I_{FSM}$      | 6.0         |
| $I_{FSM}$      | 1.5         |
| $P_D$          | 350         |
| $T_J, T_{stg}$ | -65 to +150 |
| $\theta_{JA}$  | 357         |

**UNITS**

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         |
|----------|-----------------------------------------------------------|-----|------|---------------|
| $I_R$    | $V_R=90\text{V}$                                          |     | 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            |

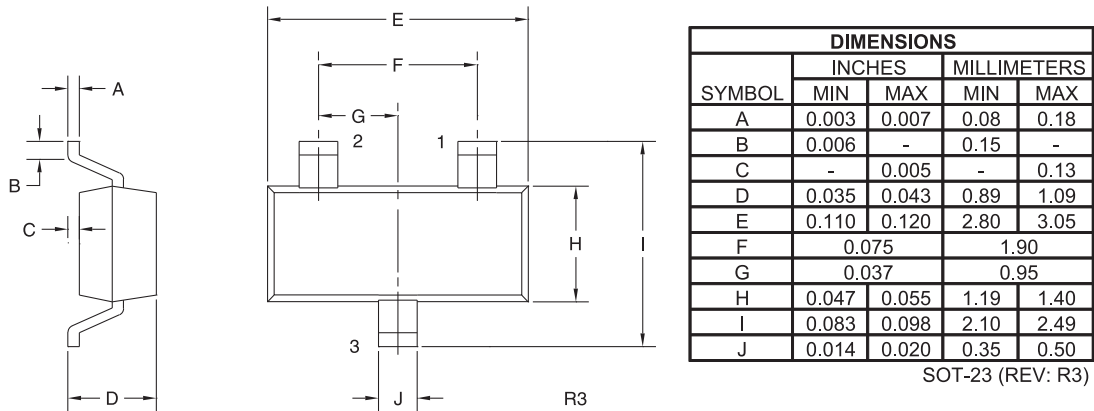
R4 (25-January 2010)

CMPD5001  
CMPD5001S

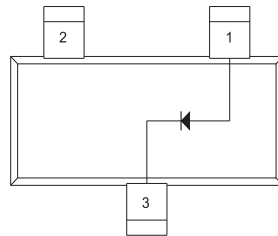
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#### SOT-23 CASE - MECHANICAL OUTLINE



#### PIN CONFIGURATIONS

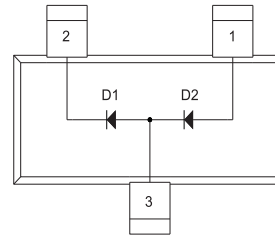


##### CMPD5001

###### 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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### 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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