

CMPD5001
CMPD5001S

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



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 | θ_{JA} | 357 | $^\circ\text{C/W}$ |

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

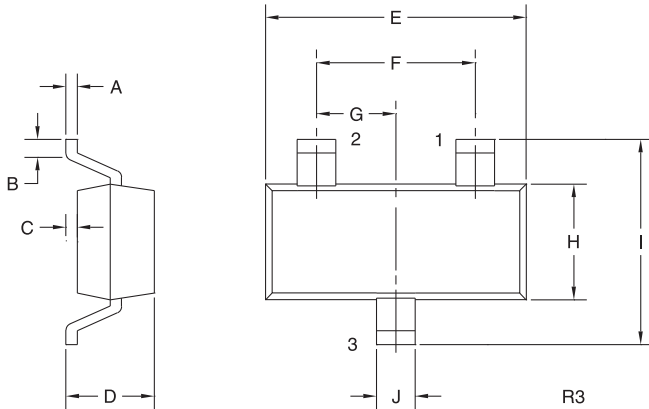
| SYMBOL | TEST CONDITIONS | MIN | MAX | UNITS |
|----------|---|-----|------|---------------|
| I_R | $V_R=90\text{V}$ | | 100 | nA |
| I_R | $V_R=90\text{V}, T_A=150^\circ\text{C}$ | | 100 | μA |
| BV_R | $I_R=50\mu\text{A}$ | 120 | 325 | V |
| V_F | $I_F=10\text{mA}$ | | 0.75 | V |
| V_F | $I_F=50\text{mA}$ | | 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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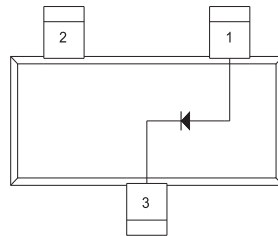
SOT-23 CASE - MECHANICAL OUTLINE



| 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

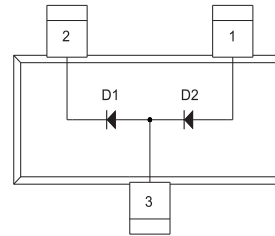


CMPD5001

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)