

**CMPD5001
CMPD5001S**

**HIGH CURRENT
INDUCTIVE LOAD
SWITCHING DIODE**



SOT-23 CASE

The following configurations are available:

CMPD5001 SINGLE
CMPD5001S DUAL, IN SERIES

CentralTM
Semiconductor Corp.

DESCRIPTION:

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

MARKING CODE: DA2
MARKING CODE: D49

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

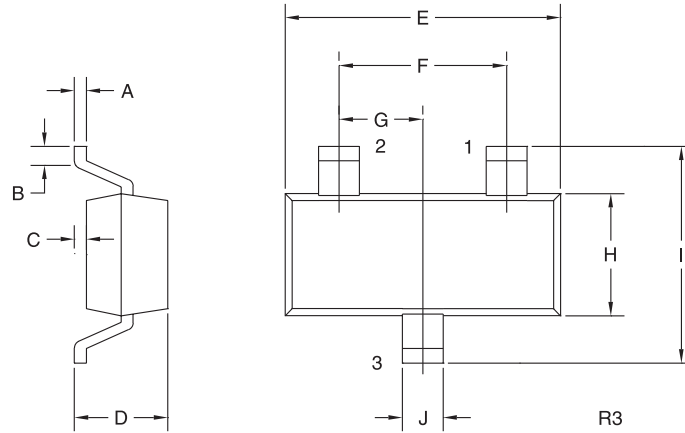
	SYMBOL		UNITS
Continuous Reverse Voltage	V_R	120	V
Continuous Forward Current	I_F	400	mA
Peak Repetitive Forward Current	I_{FRM}	800	mA
Peak Repetitive Reverse Current	I_{RRM}	600	mA
Forward Surge Current, $t_p=1\ \mu\text{s}$	I_{FSM}	6000	mA
Forward Surge Current, $t_p=1\ \text{s}$	I_{FSM}	1500	mA
Power 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 ($T_A=25^{\circ}\text{C}$ unless otherwise noted)

SYMBOL	TEST CONDITIONS	MIN	MAX	UNITS
B_{VR}	$I_R=1.0\text{mA}$	120	175	V
I_R	$V_R=90\text{V}$		100	nA
I_R	$V_R=90\text{V}, T_A=150^{\circ}\text{C}$		100	μA
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

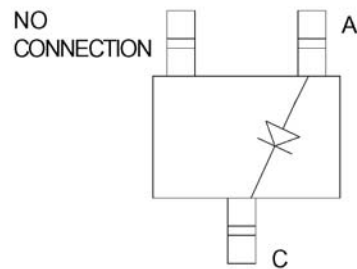
SYMBOL	TEST CONDITIONS	MIN	MAX	UNITS
V_F	$I_F=400\text{mA}$		1.25	V
C_T	$V_R=0$, $f=1\text{ MHz}$		35	pF
t_{rr}	$I_F=I_R=30\text{mA}$, RECOV. TO 1.0mA , $R_L=100\Omega$		60	ns
t_{rr}	$I_F=I_R=10\text{mA}$, RECOV. TO 1.0mA , $R_L=100\Omega$		50	ns

SOT-23 CASE - MECHANICAL OUTLINE

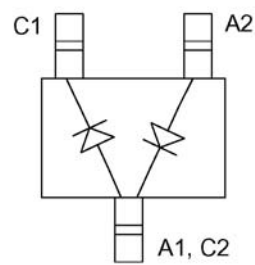


SYMBOL	DIMENSIONS			
	INCHES		MILLIMETERS	
	MIN	MAX	MIN	MAX
A	0.003	0.007	0.08	0.18
B	0.006	-	0.15	-
C	-	0.005	-	0.13
D	0.035	0.043	0.89	1.09
E	0.110	0.120	2.80	3.05
F	0.075		1.90	
G	0.037		0.95	
H	0.047	0.055	1.19	1.40
I	0.083	0.098	2.10	2.49
J	0.014	0.020	0.35	0.50

SOT-23 (REV: R3)



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