

CMPD2003  
 CMPD2003C  
 CMPD2003S  
 CMPD2004  
 CMPD2004C  
 CMPD2004S

**SURFACE MOUNT  
 HIGH VOLTAGE SWITCHING DIODE**



# Central<sup>TM</sup> Semiconductor Corp.

## DESCRIPTION

The CENTRAL SEMICONDUCTOR CMPD2003, CMPD2003C, CMPD2003S, CMPD2004, CMPD2004C, and CMPD2004S types are silicon switching diodes manufactured by the epitaxial planar process, designed for applications requiring high voltage capability.

The following configurations are available:

CMPD2003	SINGLE	<b>MARKING CODE: A82</b>
CMPD2003C	DUAL, COMMON CATHODE	<b>MARKING CODE: C3C</b>
CMPD2003S	DUAL, IN SERIES	<b>MARKING CODE: C3S</b>
CMPD2004	SINGLE	<b>MARKING CODE: D53</b>
CMPD2004C	DUAL, COMMON CATHODE	<b>MARKING CODE: DB7</b>
CMPD2004S	DUAL, IN SERIES	<b>MARKING CODE: DB6</b>

## MAXIMUM RATINGS (T<sub>A</sub>=25°C)

	<u>SYMBOL</u>	<u>CMPD2003 CMPD2003C CMPD2003S</u>	<u>CMPD2004 CMPD2004C CMPD2004S</u>	<u>UNITS</u>
Continuous Reverse Voltage	V <sub>R</sub>	200	240	V
Peak Repetitive Reverse Voltage	V <sub>RRM</sub>	250	300	V
Peak Repetitive Reverse Current	I <sub>O</sub>	200	200	mA
Continuous Forward Current	I <sub>F</sub>	250	225	mA
Peak Repetitive Forward Current	I <sub>FRM</sub>	625	625	mA
Forward Surge Current, tp=1 ms	I <sub>FSM</sub>	4000	4000	mA
Forward Surge Current, tp=1 s	I <sub>FSM</sub>	1000	1000	mA
Power Dissipation	P <sub>D</sub>		350	mW
Operating and Storage				
Junction Temperature	T <sub>J</sub> , T <sub>stg</sub>	-65 to +150		°C
Thermal Resistance	θ <sub>JA</sub>	357		°C/W

## ELECTRICAL CHARACTERISTICS (T<sub>A</sub>=25°C unless otherwise noted)

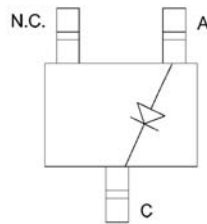
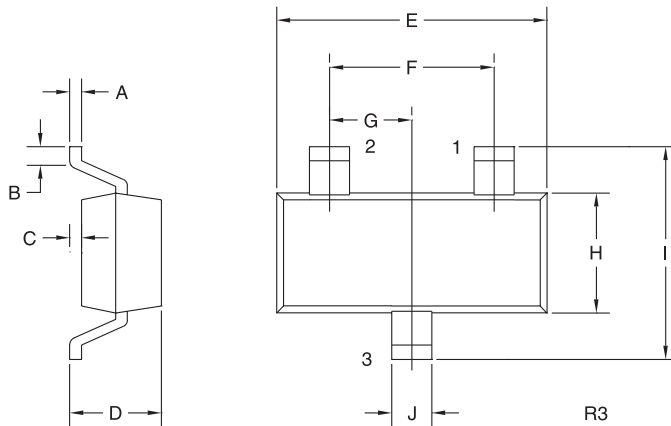
<u>SYMBOL</u>	<u>TEST CONDITIONS</u>	<u>CMPD2003 CMPD2003C CMPD2003S</u>		<u>CMPD2004 CMPD2004C CMPD2004S</u>		<u>UNIT</u>
		<u>MIN</u>	<u>MAX</u>	<u>MIN</u>	<u>MAX</u>	
BV <sub>R</sub>	I <sub>R</sub> =100μA	250		300		V
I <sub>R</sub>	V <sub>R</sub> =200V		100		-	nA

SYMBOL	TEST CONDITIONS	CMPD2003 CMPD2003C CMPD2003S		CMPD2004 CMPD2004C CMPD2004S		UNIT
		MIN	MAX	MIN	MAX	
$I_R$	$V_R=200V, T_A=150^\circ C$		100	-	-	$\mu A$
$I_R$	$V_R=240V$		-	100	-	nA
$I_R$	$V_R=240V, T_A=150^\circ C$		-	100	-	$\mu A$
$V_F$	$I_F=100mA$		1.0	1.0	-	V
$V_F$	$I_F=200mA$		1.25	-	-	V
$C_T$	$V_R=0, f=1\text{ MHz}$		5.0	5.0	-	pF
$t_{rr}$	$I_F=I_R=30mA, \text{Rec. TO } 3.0mA, R_L=100\Omega$		50	50	-	ns

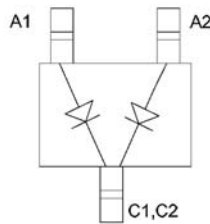
**SOT-23 CASE - MECHANICAL OUTLINE**

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

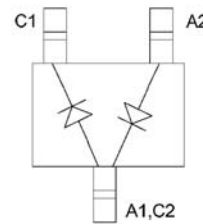
SOT-23 (REV: R3)



**CMPD2003  
CMPD2004**



**CMPD2003C  
CMPD2004C**



**CMPD2003S  
CMPD2004S**