

CMPD2003	CMPD2004
CMPD2003A	CMPD2004A
CMPD2003C	CMPD2004C
CMPD2003S	CMPD2004S

**SURFACE MOUNT  
HIGH VOLTAGE  
SILICON SWITCHING DIODE**



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**DESCRIPTION:**

The CENTRAL SEMICONDUCTOR CMPD2003, CMPD2003A, CMPD2003C, CMPD2003S, CMPD2004, CMPD2004A, CMPD2004C and CMPD2004S types are silicon switching diodes manufactured by the epitaxial planar process, designed for applications requiring high voltage capability.



**SOT-23 CASE**

The following configurations are available:

<b>CMPD2003</b>	SINGLE
<b>CMPD2003A</b>	DUAL, COMMON ANODE
<b>CMPD2003C</b>	DUAL, COMMON CATHODE
<b>CMPD2003S</b>	DUAL, IN SERIES
<b>CMPD2004</b>	SINGLE
<b>CMPD2004A</b>	DUAL, COMMON ANODE
<b>CMPD2004C</b>	DUAL, COMMON CATHODE
<b>CMPD2004S</b>	DUAL, IN SERIES

<b>MARKING CODE: A82</b>
<b>MARKING CODE: 8A2</b>
<b>MARKING CODE: C3C</b>
<b>MARKING CODE: C3S</b>
<b>MARKING CODE: D53</b>
<b>MARKING CODE: DB8</b>
<b>MARKING CODE: DB7</b>
<b>MARKING CODE: DB6</b>

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

Continuous Reverse Voltage
Peak Repetitive Reverse Voltage
Average Forward Current
Continuous Forward Current
Peak Repetitive Forward Current
Peak Forward Surge Current, tp=1.0µs
Peak Forward Surge Current, tp=1.0s
Power Dissipation
Operating and Storage Junction Temperature
Thermal Resistance

SYMBOL	CMPD2003	CMPD2004	UNITS
	CMPD2003A	CMPD2004A	
	CMPD2003C	CMPD2004C	
	CMPD2003S	CMPD2004S	
V <sub>R</sub>	200	240	V
V <sub>RRM</sub>	250	300	V
I <sub>O</sub>	200	200	mA
I <sub>F</sub>	250	225	mA
I <sub>FRM</sub>		625	mA
I <sub>FSM</sub>		4.0	A
I <sub>FSM</sub>		1.0	A
P <sub>D</sub>		350	mW
T <sub>J</sub> , T <sub>stg</sub>		-65 to +150	°C
θ <sub>JA</sub>		357	°C/W

CMPD2003    CMPD2004  
 CMPD2003A    CMPD2004A  
 CMPD2003C    CMPD2004C  
 CMPD2003S    CMPD2004S

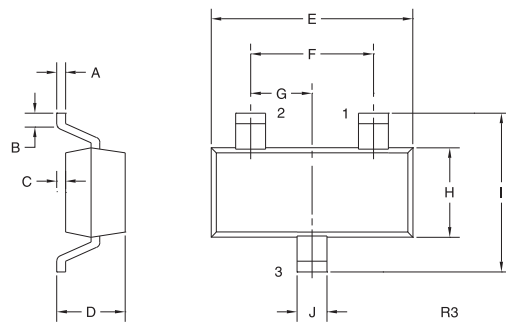


**SURFACE MOUNT  
 HIGH VOLTAGE  
 SILICON SWITCHING DIODE**

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

SYMBOL	TEST CONDITIONS	CMPD2003		CMPD2004		UNITS
		MIN	MAX	MIN	MAX	
$I_R$	$V_R=200\text{V}$	-	100	-	-	nA
$I_R$	$V_R=200\text{V}, T_A=150^\circ\text{C}$	-	100	-	-	$\mu\text{A}$
$I_R$	$V_R=240\text{V}$	-	-	-	100	nA
$I_R$	$V_R=240\text{V}, T_A=150^\circ\text{C}$	-	-	-	100	$\mu\text{A}$
$BV_R$	$I_R=100\mu\text{A}$	250	-	300	-	V
$V_F$	$I_F=100\text{mA}$	-	1.0	-	1.0	V
$V_F$	$I_F=200\text{mA}$	-	1.25	-	-	V
$C_T$	$V_R=0, f=1.0\text{MHz}$	-	5.0	-	5.0	pF
$t_{rr}$	$I_R=I_F=30\text{mA}, R_L=100\Omega, \text{Rec. to } 3.0\text{mA}$	-	50	-	50	ns

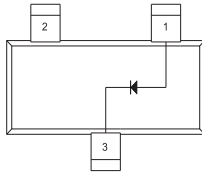
**SOT-23 CASE - MECHANICAL OUTLINE**



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)

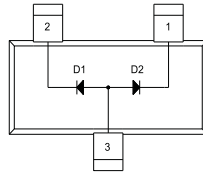
**PIN CONFIGURATIONS**



**CMPD2003  
 CMPD2004**

**LEAD CODE:**

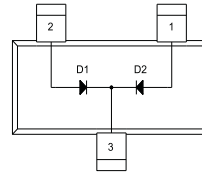
- 1) Anode
- 2) No Connection
- 3) Cathode



**CMPD2003A  
 CMPD2004A**

**LEAD CODE:**

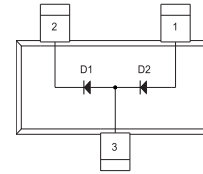
- 1) Cathode D2
- 2) Cathode D1
- 3) Anode D1, D2



**CMPD2003C  
 CMPD2004C**

**LEAD CODE:**

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



**CMPD2003S  
 CMPD2004S**

**LEAD CODE:**

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

**MARKING CODE: SEE PREVIOUS PAGE**

R9 (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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