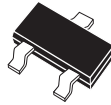


PRELIMINARY

CMPD7005  
 CMPD7005A  
 CMPD7005C  
 CMPD7005S

**SURFACE MOUNT  
 VERY HIGH VOLTAGE  
 SILICON SWITCHING DIODE**



**SOT-23 CASE**

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

**DESCRIPTION:**

The Central Semiconductor CMPD7005, CMPD7005A, CMPD7005C and CMPD7005S are silicon switching diodes with various diode configurations, manufactured by the epitaxial planar process and packaged in an epoxy molded SOT-23 surface mount case. These devices are designed for applications requiring high voltage switching diodes.

The following configurations are available:

<b>CMPD7005</b>	SINGLE	<b>MARKING CODE: C7005</b>
<b>CMPD7005A</b>	DUAL, COMMON ANODE	<b>MARKING CODE: C705A</b>
<b>CMPD7005C</b>	DUAL, COMMON CATHODE	<b>MARKING CODE: C705C</b>
<b>CMPD7005S</b>	DUAL, IN SERIES	<b>MARKING CODE: C705S</b>

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

	SYMBOL		UNITS
Continuous Reverse Voltage	V <sub>R</sub>	500	V
Peak Repetitive Reverse Voltage	V <sub>RRM</sub>	500	V
Continuous Forward Current	I <sub>F</sub>	100	mA
Peak Repetitive Forward Current	I <sub>FRM</sub>	300	mA
Forward Surge Current, t <sub>p</sub> =1.0 μs	I <sub>FSM</sub>	4.0	A
Forward Surge Current, t <sub>p</sub> =1.0 s	I <sub>FSM</sub>	1.0	A
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

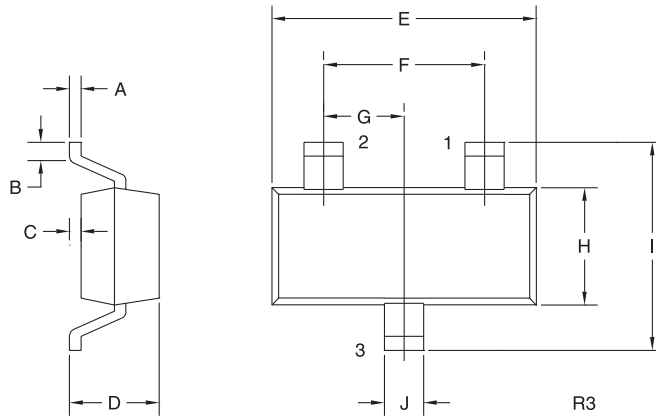
**ELECTRICAL CHARACTERISTICS PER DIODE:** (T<sub>A</sub>=25°C unless otherwise noted)

SYMBOL	TEST CONDITIONS	MIN	MAX	UNITS
I <sub>R</sub>	V <sub>R</sub> =400V		100	nA
I <sub>R</sub>	V <sub>R</sub> =400V, T <sub>A</sub> =150°C		100	μA
BV <sub>R</sub>	I <sub>R</sub> =1.0μA	500		V
V <sub>F</sub>	I <sub>F</sub> =10mA		1.0	V
V <sub>F</sub>	I <sub>F</sub> =50mA		1.2	V
V <sub>F</sub>	I <sub>F</sub> =100mA		1.4	V
C <sub>T</sub>	V <sub>R</sub> =0V, f=1.0 MHz		5.0	pF
t <sub>rr</sub>	I <sub>R</sub> =I <sub>F</sub> =10mA, R <sub>L</sub> =100Ω, Rec. to 1.0mA		500	ns

R1 (8-February 2005)

**SURFACE MOUNT  
VERY HIGH VOLTAGE  
SILICON SWITCHING DIODE**

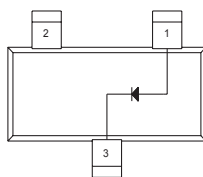
**SOT-23 CASE - MECHANICAL OUTLINE**



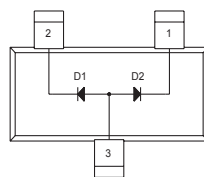
SYMBOL	INCHES		MILLIMETERS	
	MIN	MAX	MIN	MAX
A	0.003	0.007	0.08	0.18
B	0.006	-	0.15	-
C	-	0.005	-	0.13
D	0.035	0.043	0.89	1.09
E	0.110	0.120	2.80	3.05
F	0.075		1.90	
G	0.037		0.95	
H	0.047	0.055	1.19	1.40
I	0.083	0.098	2.10	2.49
J	0.014	0.020	0.35	0.50

**MARKING CODE:  
SEE PREVIOUS PAGE**

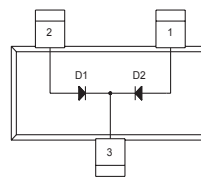
SOT-23 (REV: R3)



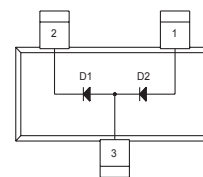
**LEAD CODE:  
CMPD7005**  
1) Anode  
2) No Connection  
3) Cathode



**LEAD CODE:  
CMPD7005A**  
1) Cathode D2  
2) Cathode D1  
3) Anode D1, Anode D2



**LEAD CODE:  
CMPD7005C**  
1) Anode D2  
2) Anode D1  
3) Cathode D1, Cathode D2



**LEAD CODE:  
CMPD7005S**  
1) Anode D2  
2) Cathode D1  
3) Anode D1, Cathode D2