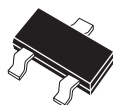


PRELIMINARY

CMPD7005
CMPD7005A
CMPD7005C
CMPD7005S

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



SOT-23 CASE

CentralTM
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:

CMPD7005 SINGLE
CMPD7005A DUAL, COMMON ANODE
CMPD7005C DUAL, COMMON CATHODE
CMPD7005S DUAL, IN SERIES

MARKING CODE: C7005
MARKING CODE: C705A
MARKING CODE: C705C
MARKING CODE: C705S

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

	SYMBOL		UNITS
Continuous Reverse Voltage	V_R	500	V
Peak Repetitive Reverse Voltage	V_{RRM}	500	V
Continuous Forward Current	I_F	100	mA
Peak Repetitive Forward Current	I_{FRM}	300	mA
Forward Surge Current, $t_p=1.0\ \mu\text{s}$	I_{FSM}	4.0	A
Forward Surge Current, $t_p=1.0\ \text{s}$	I_{FSM}	1.0	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	$^\circ\text{C/W}$

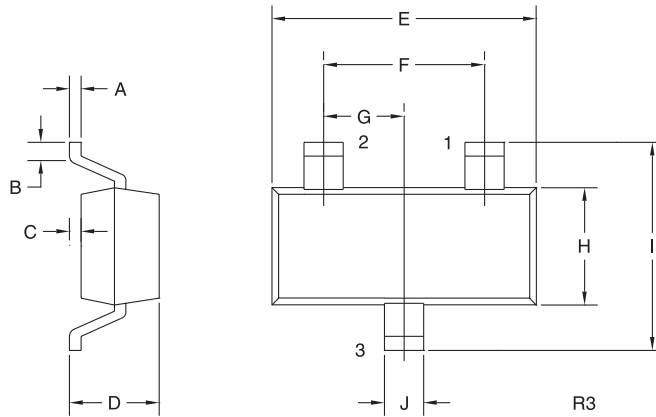
ELECTRICAL CHARACTERISTICS PER DIODE: ($T_A=25^\circ\text{C}$ unless otherwise noted)

SYMBOL	TEST CONDITIONS	MIN	MAX	UNITS
I_R	$V_R=400\text{V}$		100	nA
I_R	$V_R=400\text{V}, T_A=150^\circ\text{C}$		100	μA
BV_R	$I_R=1.0\ \mu\text{A}$	500		V
V_F	$I_F=10\text{mA}$		1.0	V
V_F	$I_F=50\text{mA}$		1.2	V
V_F	$I_F=100\text{mA}$		1.4	V
C_T	$V_R=0\text{V}, f=1.0\ \text{MHz}$		5.0	pF
t_{rr}	$I_R=I_F=10\text{mA}, R_L=100\Omega, \text{Rec. to } 1.0\text{mA}$		500	ns

R1 (8-February 2005)

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

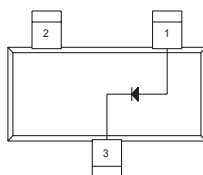
SOT-23 CASE - MECHANICAL OUTLINE



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

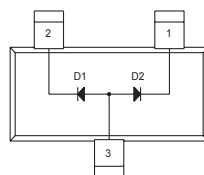
SOT-23 (REV: R3)

**MARKING CODE:
SEE PREVIOUS PAGE**



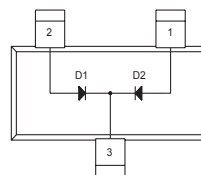
**LEAD CODE:
CMPD7005**

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



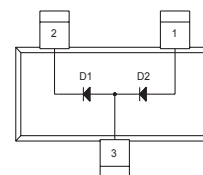
**LEAD CODE:
CMPD7005A**

- 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