CMPD7005
CMPD7005A
CMPD7005C
CMPD7005S

SURFACE MOUNT
VERY HIGH VOLTAGE
SILICON SWITCHING DIODE

Central™
Semiconductor Corp.

SOT-23 CASE

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   **MARKING CODE: C7005**
CMPD7005A DUAL, COMMON ANODE   **MARKING CODE: C705A**
CMPD7005C DUAL, COMMON CATHODE   **MARKING CODE: C705C**
CMPD7005S DUAL, IN SERIES   **MARKING CODE: C705S**

MAXIMUM RATINGS PER DIODE: (T_A=25°C)

	SYMBOL		UNITS
Continuous Reverse Voltage	V_R	500	V
Peak Repetitive Reverse Voltage	V_{RRM}	500	V
Continous Forward Current	I_F	100	mA
Peak Repetitive Forward Current	I_{FRM}	300	mA
Forward Surge Current, tp=1.0 µs	I_{FSM}	4.0	A
Forward Surge Current, tp=1.0 s	I_{FSM}	1.0	A
Power Dissipation	P_D	350	mW
Operating and Storage Junction Temperature	T_J, T_{stg}	-65 to +150	°C
Thermal Resistance	Θ_{JA}	357	°C/W

ELECTRICAL CHARACTERISTICS PER DIODE: (T_A=25°C unless otherwise noted)

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

R1 (8-February 2005)

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SOT-23 CASE - MECHANICAL OUTLINE

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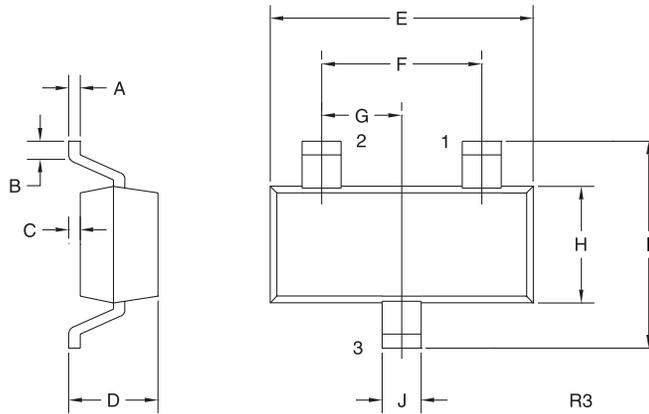
DIMENSIONS				
	INCHES		MILLIMETERS	
SYMBOL	MIN	MAX	MIN	MAX
A	0.003	0.007	0.08	0.18
B	0.006	-	0.15	-
C	-	0.005	-	0.13
D	0.035	0.043	0.89	1.09
E	0.110	0.120	2.80	3.05
F	0.075		1.90	
G	0.037		0.95	
H	0.047	0.055	1.19	1.40
I	0.083	0.098	2.10	2.49
J	0.014	0.020	0.35	0.50

SOT-23 (REV: R3)
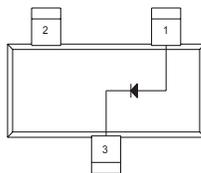
LEAD CODE:
CMPD7005
1) Anode
2) No Connection
3) Cathode
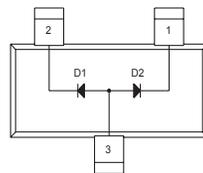
LEAD CODE:
CMPD7005A
1) Cathode D2
2) Cathode D1
3) Anode D1, Anode D2
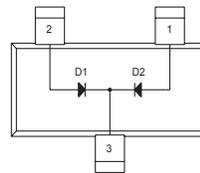
LEAD CODE:
CMPD7005C
1) Anode D2
2) Anode D1
3) Cathode D1, Cathode D2
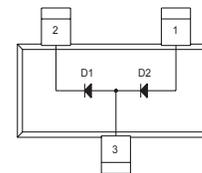
LEAD CODE:
CMPD7005S
1) Anode D2
2) Cathode D1
3) Anode D1, Cathode D2

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