

CMUD7000

SURFACE MOUNT  
ULTRAmi™  
DUAL SILICON DIODE  
SERIES CONNECTION

ULTRAmi™



SOT-523 CASE

**Central**™  
**Semiconductor Corp.**

**DESCRIPTION:**

The CENTRAL SEMICONDUCTOR CMUD7000 type is an ultra-high speed silicon switching diode manufactured by the epitaxial planar process, in an epoxy molded ULTRAmi™ surface mount package, connected in a series configuration, designed for high speed switching applications.

**MARKING CODE: CC5**

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

	<b>SYMBOL</b>		<b>UNITS</b>
Peak Repetitive Reverse Voltage	$V_{RRM}$	100	V
Average Forward Current	$I_O$	200	mA
Peak Forward Current, $t_p=1.0$ s	$I_{FM}$	500	mA
Power Dissipation	$P_D$	250	mW
Operating and Storage Junction Temperature	$T_J, T_{stg}$	-65 to +150	$^\circ\text{C}$
Thermal Resistance	$\Theta_{JA}$	500	$^\circ\text{C/W}$

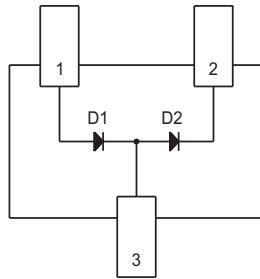
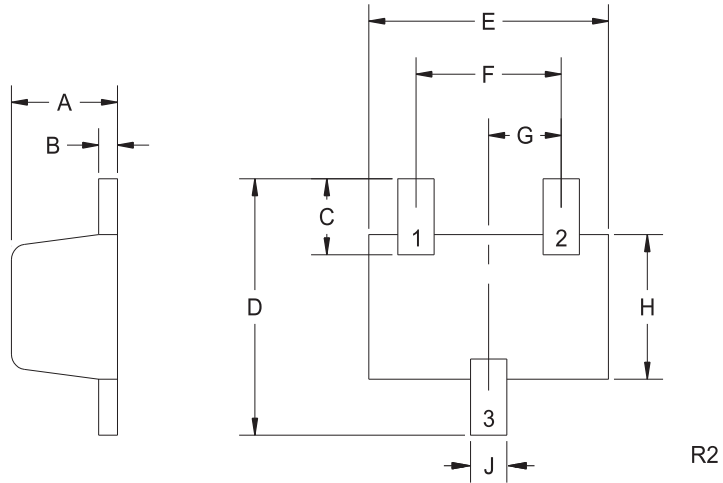
**ELECTRICAL CHARACTERISTICS PER DIODE:** ( $T_A=25^\circ\text{C}$  unless otherwise noted)

<b>SYMBOL</b>	<b>TEST CONDITIONS</b>	<b>MIN</b>	<b>TYP</b>	<b>MAX</b>	<b>UNITS</b>
$I_R$	$V_R=50\text{V}$			300	nA
$I_R$	$V_R=50\text{V}, T_A=125^\circ\text{C}$			100	$\mu\text{A}$
$I_R$	$V_R=100\text{V}$			500	nA
$BV_R$	$I_R=100\mu\text{A}$	100			V
$V_F$	$I_F=1.0\text{mA}$	0.55		0.70	V
$V_F$	$I_F=10\text{mA}$	0.67		0.82	V
$V_F$	$I_F=100\text{mA}$	0.75		1.10	V
$C_T$	$V_R=0, f=1\text{ MHz}$		1.5	2.6	pF
$t_{rr}$	$I_R=I_F=10\text{mA}, R_L=100\Omega, \text{Rec. to } 1.0\text{mA}$		2.0	4.0	ns

R3 (21-March 2007)

**SOT-523 CASE - MECHANICAL OUTLINE**

**BOTTOM VIEW**



DIMENSIONS				
SYMBOL	INCHES		MILLIMETERS	
	MIN	MAX	MIN	MAX
A	0.023	0.031	0.58	0.78
B	0.002	0.008	0.04	0.20
C	0.013	0.021	0.34	0.54
D	0.059	0.067	1.50	1.70
E	0.059	0.067	1.50	1.70
F	0.035	0.043	0.90	1.10
G	0.020		0.50	
H	0.031	0.039	0.78	0.98
J	0.010	0.014	0.25	0.35

SOT-523 (REV: R2)

**LEAD CODE:**

- 1) ANODE D1
- 2) CATHODE D2
- 3) CATHODE D1, ANODE D2

**MARKING CODE: CC5**

R3 (21-March 2007)