

CMOD2005

**SURFACE MOUNT  
HIGH VOLTAGE  
SILICON SWITCHING DIODE**



[www.centrasemi.com](http://www.centrasemi.com)

**ULTRAmi<sup>TM</sup>**



**SOD-523 CASE**

**DESCRIPTION:**

The CENTRAL SEMICONDUCTOR CMOD2005 is a Silicon Switching Diode, manufactured by the epitaxial planar process, epoxy molded in a SOD-523 surface mount package, designed for applications requiring high voltage capability.

**MARKING CODE: 25**

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

Continuous Reverse Voltage  
Peak Repetitive Reverse Voltage  
Average Forward Current  
Continuous Forward Current ( $T_L=90^\circ\text{C}$ )  
Peak Repetitive Forward Current,  $t_p=1.0\text{ms}$   
Peak Forward Surge Current,  $t_p=1.0\mu\text{s}$   
Power Dissipation  
Power Dissipation ( $T_L=90^\circ\text{C}$ )  
Operating and Storage Junction Temperature  
Thermal Resistance  
Thermal Resistance

**SYMBOL**

$V_R$  300  
 $V_{RRM}$  350  
 $I_O$  200  
 $I_F$  250  
 $I_{FRM}$  1.0  
 $I_{FSM}$  4.5  
 $P_D$  250  
 $P_D$  500  
 $T_J, T_{stg}$  -65 to +150  
 $\theta_{JA}$  500  
 $\theta_{JL}$  120

**UNITS**

V  
V  
mA  
mA  
A  
A  
mW  
mW  
 $^\circ\text{C}$   
 $^\circ\text{C/W}$   
 $^\circ\text{C/W}$

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

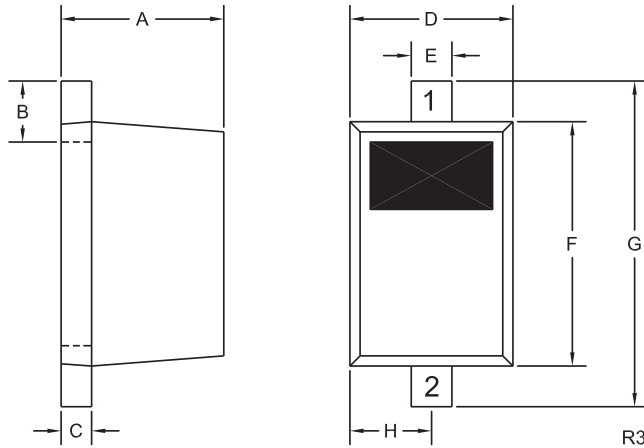
| SYMBOL   | TEST CONDITIONS   | MIN | MAX  | UNITS         |
|----------|---|-----|------|---------------|
| $I_R$    | $V_R=280\text{V}$   |     | 100  | nA            |
| $I_R$    | $V_R=280\text{V}, T_A=150^\circ\text{C}$                  |     | 100  | $\mu\text{A}$ |
| $BV_R$   | $I_R=100\mu\text{A}$                                      | 350 |      | V             |
| $V_F$    | $I_F=20\text{mA}$   |     | 0.87 | V             |
| $V_F$    | $I_F=100\text{mA}$  |     | 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  | pF            |
| $t_{rr}$ | $I_R=I_F=30\text{mA}, I_{rr}=3.0\text{mA}, R_L=100\Omega$ |     | 50   | ns            |

R3 (11-April 2011)

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**SOD-523 CASE - MECHANICAL OUTLINE**



**LEAD CODE:**

- 1) Cathode
- 2) Anode

**MARKING CODE: 25**

| SYMBOL | DIMENSIONS |       |             |      |
|--------|------------|-------|-------------|------|
|        | INCHES     |       | MILLIMETERS |      |
|        | MIN        | MAX   | MIN         | MAX  |
| A      | 0.020      | 0.031 | 0.50        | 0.80 |
| B      | 0.008      | 0.016 | 0.20        | 0.40 |
| C      | 0.002      | 0.008 | 0.05        | 0.20 |
| D      | 0.028      | 0.035 | 0.70        | 0.90 |
| E      | 0.008      | 0.014 | 0.20        | 0.35 |
| F      | 0.039      | 0.055 | 1.00        | 1.40 |
| G      | 0.055      | 0.071 | 1.40        | 1.80 |
| H      | 0.016      |       | 0.40        |      |

SOD-523 (REV: R3)

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