

CMOD2005
SURFACE MOUNT
HIGH VOLTAGE
SILICON SWITCHING DIODE



www.centrasemi.com

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.

ULTRAmiTM



SOD-523 CASE

MARKING CODE: 25

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

| | SYMBOL | | UNITS |
|---|----------------|-------------|--------------------|
| Continuous Reverse Voltage | V_R | 300 | V |
| Peak Repetitive Reverse Voltage | V_{RRM} | 350 | V |
| Average Forward Current | I_O | 200 | mA |
| Continuous Forward Current ($T_L=90^\circ\text{C}$) | I_F | 250 | mA |
| Peak Repetitive Forward Current, $t_p=1.0\text{ms}$ | I_{FRM} | 1.0 | A |
| Peak Forward Surge Current, $t_p=1.0\mu\text{s}$ | I_{FSM} | 4.5 | A |
| Power Dissipation | P_D | 250 | mW |
| Power Dissipation ($T_L=90^\circ\text{C}$) | P_D | 500 | mW |
| Operating and Storage Junction Temperature | T_J, T_{stg} | -65 to +150 | $^\circ\text{C}$ |
| Thermal Resistance | θ_{JA} | 500 | $^\circ\text{C/W}$ |
| Thermal Resistance | θ_{JL} | 120 | $^\circ\text{C/W}$ |

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

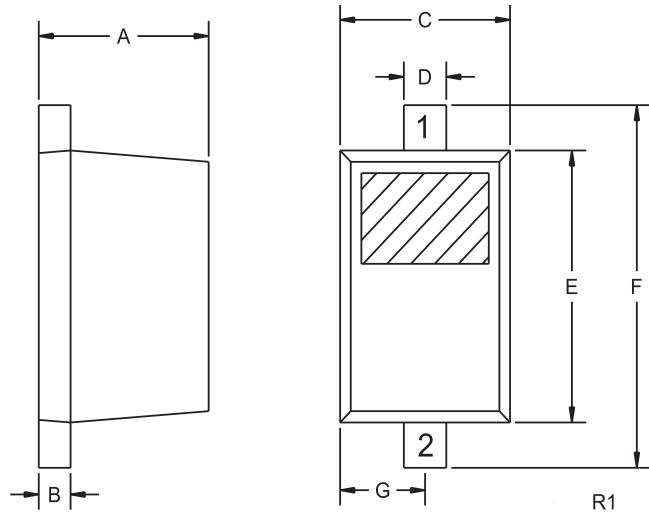
| SYMBOL | TEST CONDITIONS | MIN | MAX | UNITS |
|----------|---|-----|------|---------------|
| I_R | $V_R=280\text{V}$ | | 100 | nA |
| I_R | $V_R=280\text{V}, T_A=150^\circ\text{C}$ | | 100 | μA |
| BV_R | $I_R=100\mu\text{A}$ | 350 | | V |
| V_F | $I_F=20\text{mA}$ | | 0.87 | V |
| V_F | $I_F=100\text{mA}$ | | 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 |

R1 (24-June 2010)

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SOD-523 CASE - MECHANICAL OUTLINE



LEAD CODE:

- 1) Cathode
- 2) Anode

MARKING CODE: 25

| DIMENSIONS | | | | |
|-------------------|--------|-------|-------------|------|
| SYMBOL | INCHES | | MILLIMETERS | |
| | MIN | MAX | MIN | MAX |
| A | 0.020 | 0.031 | 0.50 | 0.80 |
| B | 0.004 | 0.008 | 0.10 | 0.20 |
| C | 0.028 | 0.035 | 0.70 | 0.90 |
| D | 0.008 | 0.011 | 0.20 | 0.28 |
| E | 0.039 | 0.055 | 1.00 | 1.40 |
| F | 0.055 | 0.071 | 1.40 | 1.80 |
| G | 0.016 | | 0.40 | |

SOD-523 (REV: R1)

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