

CMMR1S-02

**SURFACE MOUNT  
SUPER FAST RECOVERY  
SILICON RECTIFIER  
1.0 AMP, 200 VOLTS**



**SOD-123F CASE**

**MARKING CODE:** CSF02F

**Central**<sup>TM</sup>  
**Semiconductor Corp.**

**DESCRIPTION:**

The CENTRAL SEMICONDUCTOR CMMR1S-02 is a 1.0 Amp Silicon Super Fast Recovery Rectifier in the SOD-123F surface mount package. This high quality, well constructed, highly reliable device is designed for use in all types of commercial, industrial, entertainment, computer and automotive applications.

**FEATURES:**

- Small size (58% smaller than the SMA package)
- 67% lower profile than SMA
- Greatly improved power dissipation per board area compared to the SMA
- Low Forward Voltage
- High Current
- Thermally efficient Flat Lead package design

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

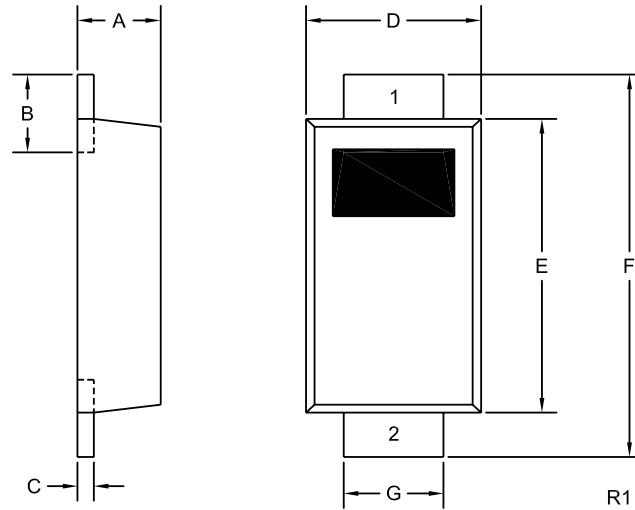
|   | <b>SYMBOL</b>  |             | <b>UNITS</b>       |
|---|----------------|-------------|--------------------|
| Peak Repetitive Reverse Voltage                     | $V_{RRM}$      | 200         | V                  |
| DC Blocking Voltage                                 | $V_R$          | 200         | V                  |
| RMS Reverse Voltage                                 | $V_{R(RMS)}$   | 140         | V                  |
| Average Forward Current ( $T_L=110^\circ\text{C}$ ) | $I_O$          | 1.0         | A                  |
| Peak Forward Surge Current (8.3ms)                  | $I_{FSM}$      | 30          | A                  |
| Operating and Storage<br>Junction Temperature       | $T_J, T_{stg}$ | -65 to +150 | $^\circ\text{C}$   |
| Thermal Resistance                                  | $\theta_{JA}$  | 180         | $^\circ\text{C/W}$ |

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

| <b>SYMBOL</b> | <b>TEST CONDITIONS</b>  | <b>TYP</b> | <b>MAX</b> | <b>UNITS</b>  |
|---------------|---|------------|------------|---------------|
| $I_R$         | $V_R=200\text{V}$   |            | 10         | $\mu\text{A}$ |
| $I_R$         | $V_R=200\text{V}, T_A=100^\circ\text{C}$                            |            | 50         | $\mu\text{A}$ |
| $V_F$         | $I_F=1.0\text{A}$   |            | 0.95       | V             |
| $t_{rr}$      | $I_F=0.5\text{A}, I_R=1.0\text{A}, \text{Recover to } 0.25\text{A}$ |            | 35         | ns            |
| $C_J$         | $V_R=4.0\text{V}, f=1.0\text{MHz}$                                  | 4.0        |            | pF            |

R1 (25-October 2005)

**SOD-123F CASE - MECHANICAL OUTLINE**



| DIMENSIONS |        |       |             |      |
|------------|--------|-------|-------------|------|
| SYMBOL     | INCHES |       | MILLIMETERS |      |
|            | MIN    | MAX   | MIN         | MAX  |
| A          | 0.035  | 0.043 | 0.88        | 1.08 |
| B          | 0.020  | 0.031 | 0.50        | 0.80 |
| C          | 0.004  | 0.008 | 0.10        | 0.20 |
| D          | 0.065  | 0.077 | 1.65        | 1.95 |
| E          | 0.104  | 0.116 | 2.65        | 2.95 |
| F          | 0.140  | 0.156 | 3.55        | 3.95 |
| G          | 0.030  | 0.041 | 0.75        | 1.05 |

SOD-123F (REV:R1)

**LEAD CODE:**

- 1) CATHODE
- 2) ANODE

**MARKING CODE:** CSF02F