

CMR1F-02M CMR1F-06M  
CMR1F-04M CMR1F-10M

**SURFACE MOUNT SILICON  
FAST RECOVERY RECTIFIERS  
1.0 AMP, 200 THRU 1000 VOLT**



**SMA CASE**



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

#### DESCRIPTION:

The CENTRAL SEMICONDUCTOR CMR1F-02M series 1.0 Amp surface mount silicon rectifier is a well constructed, highly reliable component designed for use in all types of commercial, industrial, entertainment, computer, and automotive applications where small size is required. The SMA case occupies 30% less board space than the SMB case.

**MARKING CODE: SEE MARKING CODE TABLE ON FOLLOWING PAGE**

#### FEATURES:

- High reliability
- Glass passivated chip
- Special selections available

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

|                                                       | SYMBOL         | CMR1F-02M | CMR1F-04M   | CMR1F-06M | CMR1F-10M | UNITS                |
|-------------------------------------------------------|----------------|-----------|-------------|-----------|-----------|----------------------|
| Peak Repetitive Reverse Voltage                       | $V_{RRM}$      | 200       | 400         | 600       | 1000      | V                    |
| DC Blocking Voltage                                   | $V_R$          | 200       | 400         | 600       | 1000      | V                    |
| RMS Reverse Voltage                                   | $V_{R(RMS)}$   | 140       | 280         | 420       | 700       | V                    |
| Average Forward Current ( $T_L=120^{\circ}\text{C}$ ) | $I_O$          |           |             | 1.0       |           | A                    |
| Peak Forward Surge Current, $t_p=8.3\text{ms}$        | $I_{FSM}$      |           |             | 30        |           | A                    |
| Operating and Storage                                 |                |           |             |           |           |                      |
| Junction Temperature                                  | $T_J, T_{stg}$ |           | -65 to +150 |           |           | $^{\circ}\text{C}$   |
| Thermal Resistance                                    | $\theta_{JL}$  |           | 30          |           |           | $^{\circ}\text{C/W}$ |

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

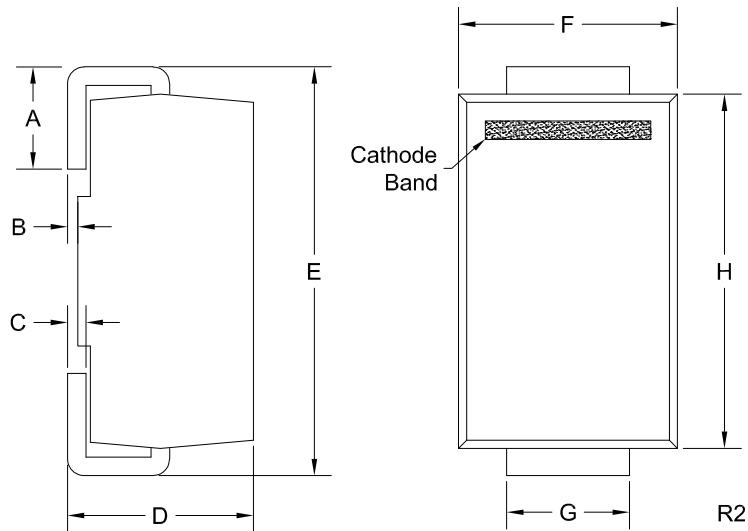
| SYMBOL   | TEST CONDITIONS                                                           | TYP | MAX | UNITS         |
|----------|---------------------------------------------------------------------------|-----|-----|---------------|
| $I_R$    | $V_R=\text{Rated } V_{RRM}$                                               |     | 5.0 | $\mu\text{A}$ |
| $I_R$    | $V_R=\text{Rated } V_{RRM}, T_A=125^{\circ}\text{C}$                      |     | 200 | $\mu\text{A}$ |
| $V_F$    | $I_F=1.0\text{A}$                                                         |     | 1.3 | V             |
| $C_J$    | $V_R=4.0\text{V}, f=1.0\text{MHz}$                                        | 15  |     | pF            |
| $t_{rr}$ | $I_F=0.5\text{A}, I_R=1.0\text{A}, I_{rr}=0.25\text{A}$ (CMR1F-02M, -04M) |     | 150 | ns            |
| $t_{rr}$ | $I_F=0.5\text{A}, I_R=1.0\text{A}, I_{rr}=0.25\text{A}$ (CMR1F-06M)       |     | 250 | ns            |
| $t_{rr}$ | $I_F=0.5\text{A}, I_R=1.0\text{A}, I_{rr}=0.25\text{A}$ (CMR1F-10M)       |     | 500 | ns            |

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# **SMA CASE - MECHANICAL OUTLINE**



| DEVICE    | MARKING CODE |
|-----------|--------------|
| CMR1F-02M | CF02M        |
| CMR1F-04M | CF04M        |
| CMR1F-06M | CF06M        |
| CMR1F-10M | CF10M        |

| DIMENSIONS |        |       |             |      |
|------------|--------|-------|-------------|------|
| SYMBOL     | INCHES |       | MILLIMETERS |      |
|            | MIN    | MAX   | MIN         | MAX  |
| A          | 0.030  | 0.060 | 0.76        | 1.52 |
| B          | 0.004  | 0.008 | 0.10        | 0.20 |
| C          | 0.006  | 0.012 | 0.15        | 0.30 |
| D          | 0.078  | 0.103 | 1.98        | 2.62 |
| E          | 0.188  | 0.220 | 4.78        | 5.59 |
| F          | 0.090  | 0.115 | 2.29        | 2.92 |
| G          | 0.050  | 0.070 | 1.27        | 1.78 |
| H          | 0.157  | 0.181 | 3.99        | 4.60 |

SMA (REV: R2)

R3 (1-May 2015)

CMR1F-02M    CMR1F-06M  
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R3 (1-May 2015)



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