

CMR1F-02M    CMR1F-08M  
 CMR1F-04M    CMR1F-10M  
 CMR1F-06M

**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         | -02M | -04M | -06M        | -08M | -10M | UNITS              |
|-----------------------------------------------------|----------------|------|------|-------------|------|------|--------------------|
| Peak Repetitive Reverse Voltage                     | $V_{RRM}$      | 200  | 400  | 600         | 800  | 1000 | V                  |
| DC Blocking Voltage                                 | $V_R$          | 200  | 400  | 600         | 800  | 1000 | V                  |
| RMS Reverse Voltage                                 | $V_{R(RMS)}$   | 140  | 280  | 420         | 560  | 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)

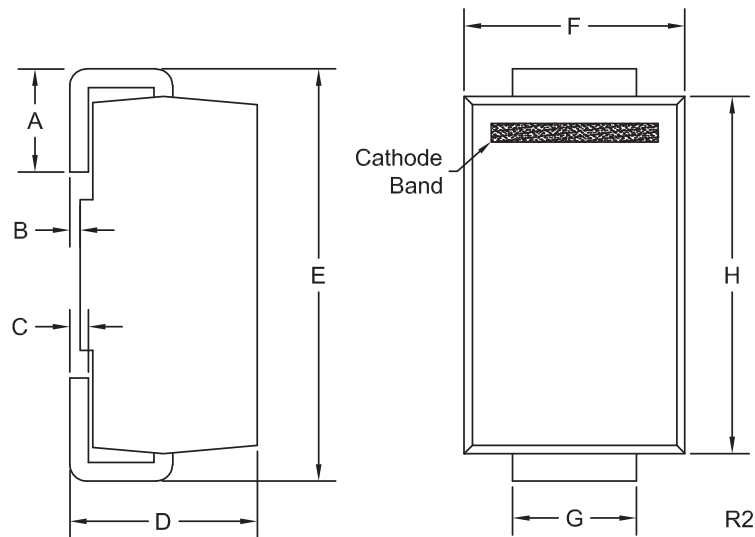
| SYMBOL   | TEST CONDITIONS                                                           | MIN | MAX | UNITS         |
|----------|---------------------------------------------------------------------------|-----|-----|---------------|
| $I_R$    | $V_R=\text{Rated } V_{RRM}$                                               |     | 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             |
| $C_J$    | $V_R=0, f=1.0\text{MHz}$                                                  |     | 35  | 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-08M, -10M) |     | 500 | ns            |

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# **SMA CASE - MECHANICAL OUTLINE**



| DEVICE    | MARKING CODE |
|-----------|--------------|
| CMR1F-02M | CF02M        |
| CMR1F-04M | CF04M        |
| CMR1F-06M | CF06M        |
| CMR1F-08M | CF08M        |
| CMR1F-10M | CF10M        |

| 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)

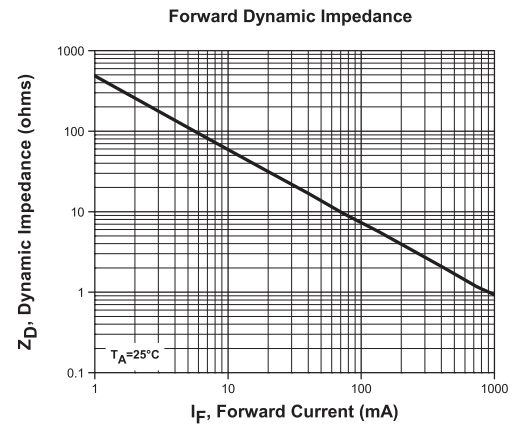
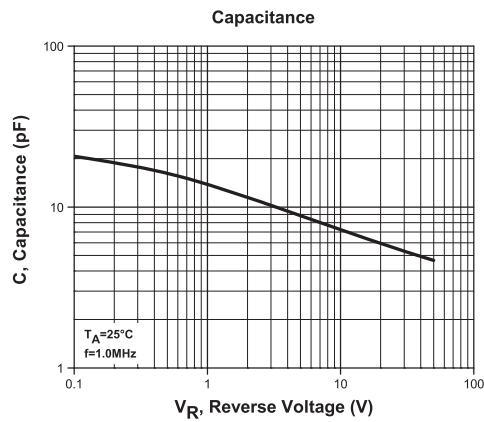
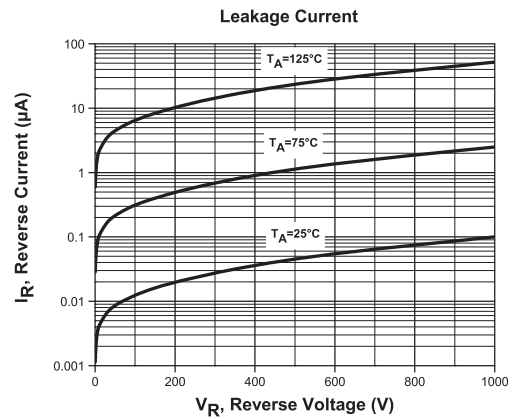
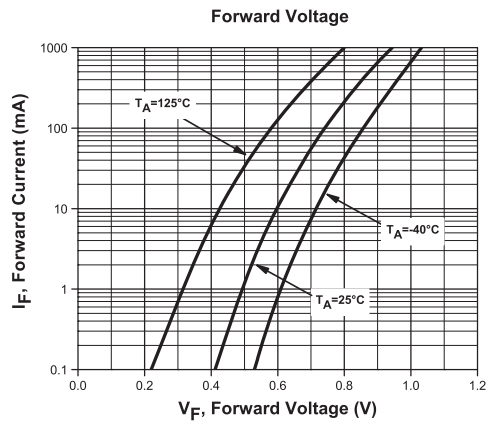
R4 (6-September 2016)

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## TYPICAL ELECTRICAL CHARACTERISTICS



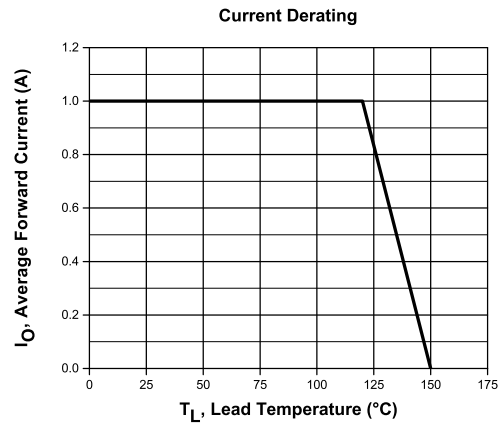
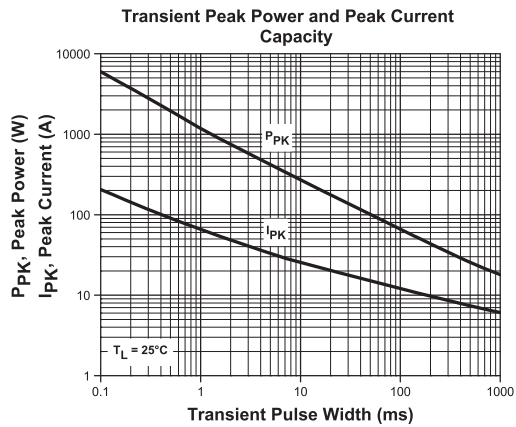
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## TYPICAL ELECTRICAL CHARACTERISTICS



R4 (6-September 2016)

## OUTSTANDING SUPPORT AND SUPERIOR SERVICES



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### PRODUCT SUPPORT

Central's operations team provides the highest level of support to insure product is delivered on-time.

- Supply management (Customer portals)
- Inventory bonding
- Consolidated shipping options
- Custom bar coding for shipments
- Custom product packing

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### DESIGNER SUPPORT/SERVICES

Central's applications engineering team is ready to discuss your design challenges. Just ask.

- Free quick ship samples (2<sup>nd</sup> day air)
- Online technical data and parametric search
- SPICE models
- Custom electrical curves
- Environmental regulation compliance
- Customer specific screening
- Up-screening capabilities
- Special wafer diffusions
- PbSn plating options
- Package details
- Application notes
- Application and design sample kits
- Custom product and package development

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### REQUESTING PRODUCT PLATING

1. If requesting Tin/Lead plated devices, add the suffix " TIN/LEAD" to the part number when ordering (example: 2N2222A TIN/LEAD).
2. If requesting Lead (Pb) Free plated devices, add the suffix " PBFREE" to the part number when ordering (example: 2N2222A PBFREE).

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### CONTACT US

#### Corporate Headquarters & Customer Support Team

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

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