

CMR1U-01    CMR1U-06  
 CMR1U-02    CMR1U-08  
 CMR1U-04    CMR1U-10

**SURFACE MOUNT SILICON  
 ULTRA FAST RECOVERY RECTIFIERS  
 1 AMP, 100 THRU 1000 VOLTS**



**SMB CASE**



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

**DESCRIPTION:**

The CENTRAL SEMICONDUCTOR CMR1U-01 series 1 Amp silicon Ultra Fast Recovery rectifier is a high quality, well constructed, highly reliable component designed for use in all types of commercial, industrial, entertainment, computer and automotive applications. To order devices on 12mm Tape and Reel (3000/ 13" Reel), add TR13 suffix to part number.

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

**FEATURES:**

- Special selections available
- High reliability
- Superior lot to lot consistency
- Glass passivated chip
- "C" bend construction provides strain relief when mounted on pc board

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

|  | SYMBOL         | -01 | -02 | CMR1U |             | -08 | -10  | UNITS              |
|--|----------------|-----|-----|-------|-------------|-----|------|--------------------|
|  |                | 100 | 200 | -04   | -06         | 800 | 1000 | V                  |
| Peak Repetitive Reverse Voltage                    | $V_{RRM}$      | 100 | 200 | 400   | 600         | 800 | 1000 | V                  |
| DC Blocking Voltage                                | $V_R$          | 100 | 200 | 400   | 600         | 800 | 1000 | V                  |
| RMS Reverse Voltage                                | $V_{R(RMS)}$   | 70  | 140 | 280   | 420         | 560 | 700  | V                  |
| Average Forward Current ( $T_A=75^\circ\text{C}$ ) | $I_O$          |     |     |       | 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 +175 |     |      | $^\circ\text{C}$   |
| Thermal Resistance                                 | $\Theta_{JL}$  |     |     |       | 20          |     |      | $^\circ\text{C/W}$ |

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

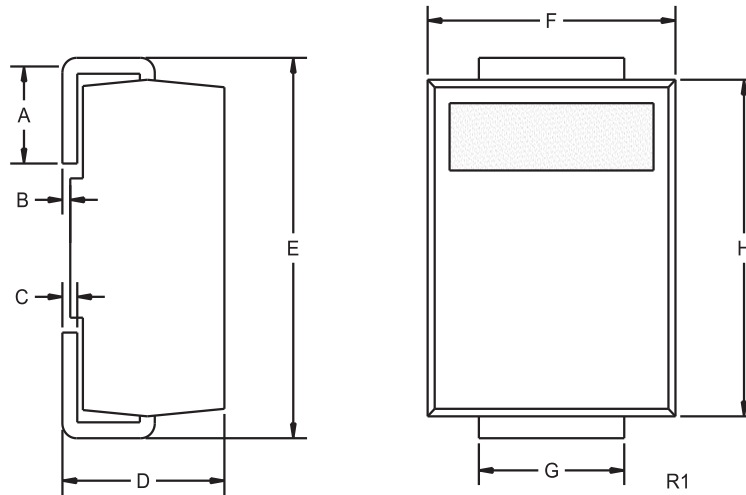
| SYMBOL   | TEST CONDITIONS   | MAX  | UNITS         |
|----------|---|------|---------------|
| $I_R$    | $V_R=\text{Rated } V_{RRM}$   | 5.0  | $\mu\text{A}$ |
| $I_R$    | $V_R=\text{Rated } V_{RRM}, T_A=125^\circ\text{C}$                                  | 100  | $\mu\text{A}$ |
| $V_F$    | $I_F=1.0\text{A}, (\text{CMR1U-01, CMR1U-02})$                                      | 1.0  | V             |
| $V_F$    | $I_F=1.0\text{A}, (\text{CMR1U-04})$  | 1.25 | V             |
| $V_F$    | $I_F=1.0\text{A}, (\text{CMR1U-06})$  | 1.40 | V             |
| $V_F$    | $I_F=1.0\text{A}, (\text{CMR1U-08, CMR1U-10})$                                      | 1.70 | V             |
| $t_{rr}$ | $I_F=0.5\text{A}, I_R=1.0\text{A}, I_{rr}=0.25\text{A} (\text{CMR1U-01, -02, -04})$ | 50   | ns            |
| $t_{rr}$ | $I_F=0.5\text{A}, I_R=1.0\text{A}, I_{rr}=0.25\text{A} (\text{CMR1U-06, -08, -10})$ | 100  | ns            |

|          |          |
|----------|----------|
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**SMB CASE - MECHANICAL OUTLINE**



| DEVICE   | MARKING CODE |
|----------|--------------|
| CMR1U-01 | CU01         |
| CMR1U-02 | CU02         |
| CMR1U-04 | CU04         |
| CMR1U-06 | CU06         |
| CMR1U-08 | CU08         |
| CMR1U-10 | CU10         |

| SYMBOL | DIMENSIONS |       |             |      |
|--------|------------|-------|-------------|------|
|        | 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      | 0.086      | 0.096 | 2.18        | 2.44 |
| E      | 0.200      | 0.220 | 5.08        | 5.59 |
| F      | 0.130      | 0.150 | 3.30        | 3.81 |
| G      | 0.077      | 0.083 | 1.96        | 2.11 |
| H      | 0.160      | 0.180 | 4.06        | 4.57 |

SMB (REV: R1)

R5 (21-January 2013)