

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

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 |
|--|----------------|-----|-----|-------|-------------|-----|------|--------------------|
| 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 | Θ_{JL} | | | | 20 | | | $^\circ\text{C/W}$ |

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

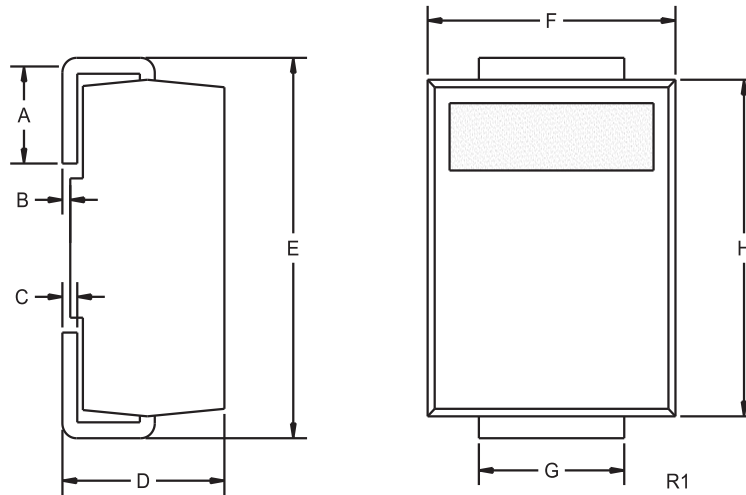
| SYMBOL | TEST CONDITIONS | MAX | UNITS |
|----------|---|------|---------------|
| I_R | $V_R=\text{Rated } V_{RRM}$ | 5.0 | μA |
| I_R | $V_R=\text{Rated } V_{RRM}, T_A=125^\circ\text{C}$ | 100 | μA |
| V_F | $I_F=1.0\text{A}, (\text{CMR1U-01, CMR1U-02})$ | 1.0 | V |
| V_F | $I_F=1.0\text{A}, (\text{CMR1U-04})$ | 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)