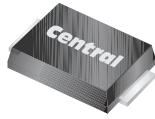


CMR1U-02FL
 CMR1U-04FL
 CMR1U-06FL

**SURFACE MOUNT ULTRA FAST
 RECOVERY SILICON RECTIFIER
 1 AMP, 200 THRU 600 VOLTS**



SMBFL CASE



www.centrasemi.com

DESCRIPTION:

The CENTRAL SEMICONDUCTOR CMR1U-02FL series devices are 1.0 amp, surface mount, ultra fast recovery silicon rectifiers packaged in the low profile SMBFL case. The SMBFL fits on existing industry standard SMB mounting pad layouts.

MARKING CODE: SEE MARKING CODE TABLE ON FOLLOWING PAGE

APPLICATIONS:

- DC-DC converters
- Flyback diode
- Freewheeling diode

FEATURES:

- Ultra fast recovery time
- Low capacitance

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

| | SYMBOL | CMR1U -02FL | CMR1U -04FL | CMR1U -06FL | UNITS |
|---|----------------|----------------|----------------|----------------|--------------------|
| Peak Repetitive Reverse Voltage | V_{RRM} | 200 | 400 | 600 | V |
| DC Blocking Voltage | V_R | 200 | 400 | 600 | V |
| RMS Reverse Voltage | $V_{R(RMS)}$ | 140 | 280 | 420 | 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} | | -55 to +150 | | $^\circ\text{C}$ |
| Thermal Resistance | θ_{JA} | | 62.5 | | $^\circ\text{C/W}$ |
| Thermal Resistance | θ_{JL} | | 20 | | $^\circ\text{C/W}$ |

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

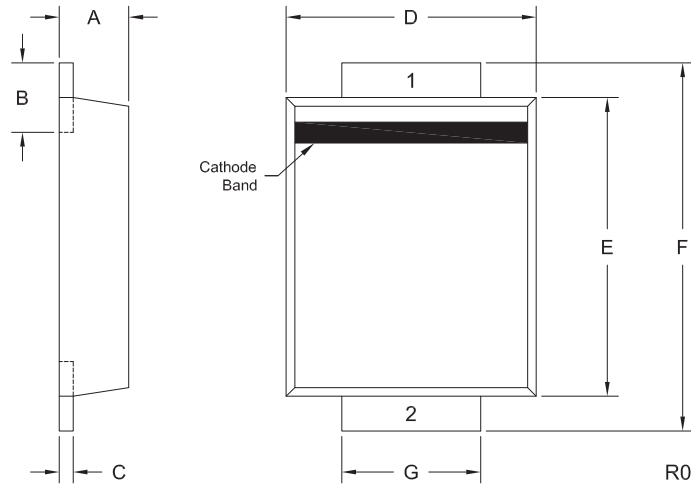
| SYMBOL | TEST CONDITIONS | TYP | MAX | UNITS |
|----------|--|------|-----|---------------|
| I_R | $V_R=\text{Rated } V_{RRM}$ | 0.01 | 1.0 | μA |
| V_F | $I_F=1.0\text{A}$, (CMR1U-02FL) | | 1.0 | V |
| V_F | $I_F=1.0\text{A}$, (CMR1U-04FL) | | 1.3 | V |
| V_F | $I_F=1.0\text{A}$, (CMR1U-06FL) | | 1.7 | V |
| C_J | $V_R=4.0\text{V}$, $f=1.0\text{MHz}$ (CMR1U-02FL) | 18 | | pF |
| C_J | $V_R=4.0\text{V}$, $f=1.0\text{MHz}$ (CMR1U-04FL) | 10 | | pF |
| C_J | $V_R=4.0\text{V}$, $f=1.0\text{MHz}$ (CMR1U-06FL) | 8.0 | | pF |
| t_{rr} | $I_F=0.5\text{A}$, $I_R=1.0\text{A}$, $I_{rr}=0.25\text{A}$ (CMR1U-02FL, 04FL) | | 50 | ns |
| t_{rr} | $I_F=0.5\text{A}$, $I_R=1.0\text{A}$, $I_{rr}=0.25\text{A}$ (CMR1U-06FL) | | 100 | ns |

CMR1U-02FL
 CMR1U-04FL
 CMR1U-06FL

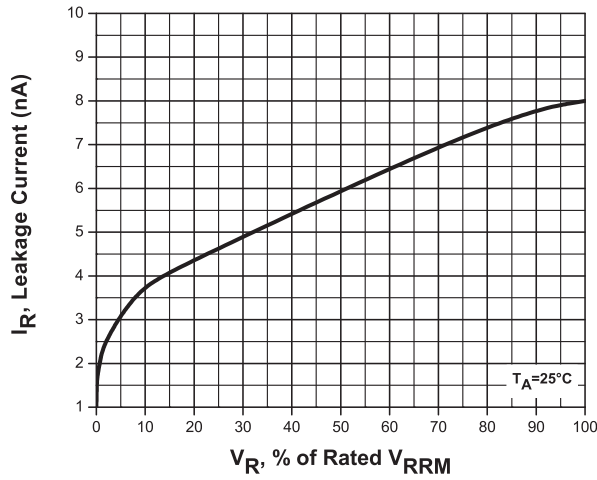
**SURFACE MOUNT ULTRA FAST
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 1 AMP, 200 THRU 600 VOLTS**



SMBFL CASE - MECHANICAL OUTLINE



Typical Reverse Leakage Characteristics



| SYMBOL | INCHES | | MILLIMETERS | |
|--------|--------|-------|-------------|------|
| | MIN | MAX | MIN | MAX |
| A | 0.035 | 0.044 | 0.90 | 1.10 |
| B | 0.031 | 0.048 | 0.80 | 1.20 |
| C | 0.006 | 0.010 | 0.15 | 0.25 |
| D | 0.137 | 0.146 | 3.50 | 3.70 |
| E | 0.161 | 0.178 | 4.10 | 4.50 |
| F | 0.200 | 0.217 | 5.10 | 5.50 |
| G | 0.074 | 0.083 | 1.90 | 2.10 |

SMBFL (REV: R0)

LEAD CODE:

- 1) Cathode
- 2) Anode

| DEVICE | MARKING CODE |
|------------|--------------|
| CMR1U-02FL | CU02FL |
| CMR1U-04FL | CU04FL |
| CMR1U-06FL | CU06FL |

R2 (2-November 2012)