

CMMSH2-40**SURFACE MOUNT SILICON
SCHOTTKY RECTIFIER
2.0 AMP, 40 VOLT****SOD-123F CASE**www.centrasemi.com**DESCRIPTION:**

The CENTRAL SEMICONDUCTOR CMMSH2-40 is a 2.0A, silicon Schottky rectifier. This high efficiency, Schottky features high current capacity packaged in a small, thermally efficient, SOD-123F surface mount package. When compared to similar devices in the larger SMA package, this device is 58% smaller, with a 67% lower profile, making it ideally suited for applications where performance and size are critical.

MARKING CODE: CS240F**APPLICATIONS:**

- DC-DC Converters
- Voltage Clamping
- Protection Circuits
- Battery powered applications including Cell Phones, Digital Cameras, Pagers, PDA's, Laptop Computers, etc.

FEATURES:

- High Current (2.0A Max), 40V Device
- V_F 0.5V Max
- High Surge Current 50A
- Thermally efficient SOD-123F Flat Lead package design

MAXIMUM RATINGS: ($T_J=25^\circ\text{C}$)

| |
|---------------------------------|
| Peak Repetitive Reverse Voltage |
| DC Blocking Voltage |
| Average Forward Current |
| Peak Forward Surge Current |
| Power Dissipation (Note 1) |
| Operating Junction Temperature |
| Storage Temperature |
| Thermal Resistance |

SYMBOL

| SYMBOL | | UNITS |
|---------------|--------------|---------------------------|
| V_{RRM} | 40 | V |
| V_R | 40 | V |
| I_O | 2.0 | A |
| I_{FSM} | 50 | A |
| P_D | 550 | mW |
| T_J | -55 to + 125 | $^\circ\text{C}$ |
| T_{stg} | -55 to + 150 | $^\circ\text{C}$ |
| θ_{JA} | 181 | $^\circ\text{C}/\text{W}$ |

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

| SYMBOL | TEST CONDITIONS | MIN | TYP | MAX | UNITS |
|--------|--|-----|------|------|---------------|
| I_R | $V_R=20\text{V}$ | | 3.0 | 150 | μA |
| I_R | $V_R=40\text{V}$ | | 23 | 500 | μA |
| I_R | $V_R=40\text{V}, T_J=85^\circ\text{C}$ | | | 25 | mA |
| BV_R | $I_R=0.5\text{mA}$ | 40 | | | V |
| V_F | $I_F=2.0\text{A}$ | | 0.45 | 0.50 | V |
| C_J | $V_R=10\text{V}, f=1.0\text{MHz}$ | | | 150 | pF |
| C_J | $V_R=0, f=1.0\text{MHz}$ | | 292 | | pF |

Note 1: FR-5 board (1.0 x 0.75 x 0.062in) with copper mounting pad area of 2.9mm²

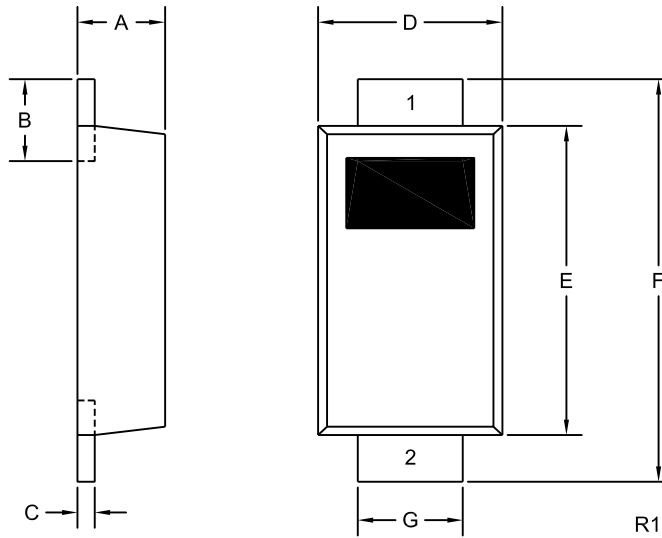
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SOD-123F CASE - MECHANICAL OUTLINE



LEAD CODE:

- 1) Cathode
- 2) Anode

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| SYMBOL | INCHES | | MILLIMETERS | |
|--------|--------|-------|-------------|------|
| | MIN | MAX | MIN | MAX |
| A | 0.035 | 0.043 | 0.88 | 1.08 |
| B | 0.020 | 0.031 | 0.50 | 0.80 |
| C | 0.004 | 0.008 | 0.10 | 0.20 |
| D | 0.065 | 0.077 | 1.65 | 1.95 |
| E | 0.104 | 0.116 | 2.65 | 2.95 |
| F | 0.140 | 0.156 | 3.55 | 3.95 |
| G | 0.030 | 0.041 | 0.75 | 1.05 |

SOD-123F (REV:R1)

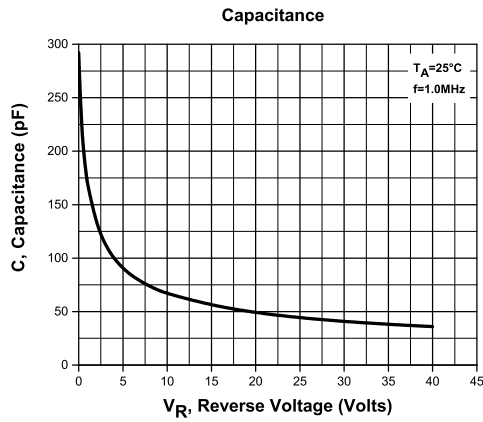
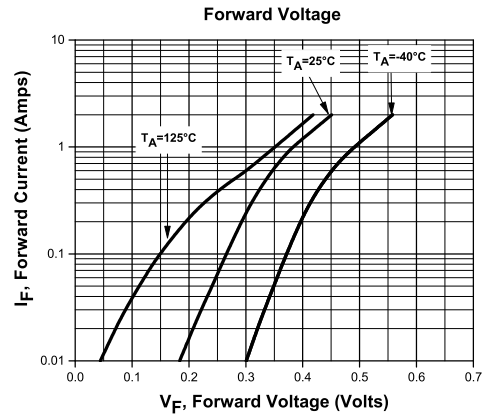
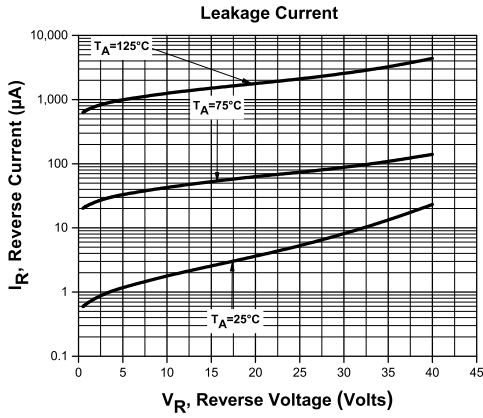
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TYPICAL ELECTRICAL CHARACTERISTICS

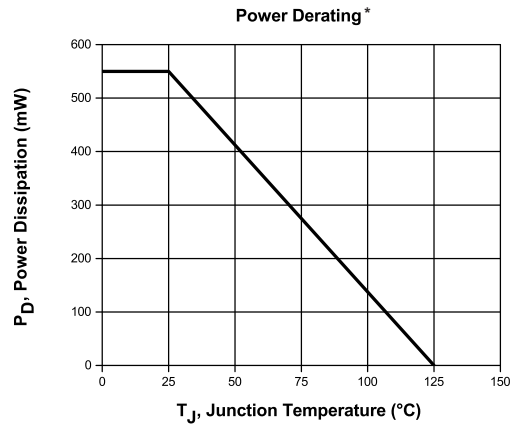
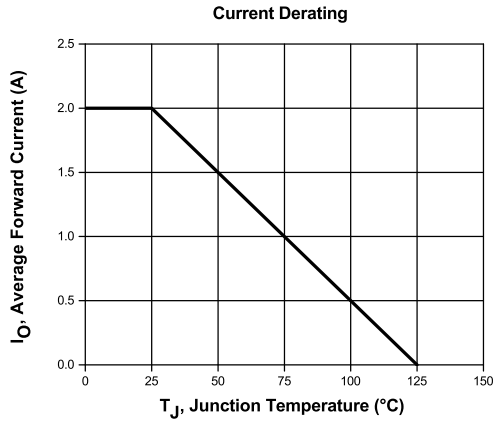


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TYPICAL ELECTRICAL CHARACTERISTICS



*FR-5 board (1.0 x 0.75 x 0.062in) with copper mounting pad area of 2.9mm²

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- Special wafer diffusions
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- Package details
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- Application and design sample kits
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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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