

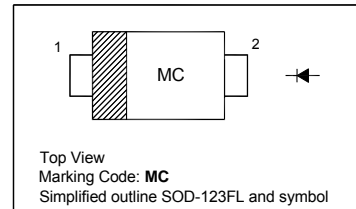
MBR130W-HAF

Surface Mount Schottky Barrier Diode

Features

- Low Forward Voltage
- Halogen and Antimony Free(HAF), RoHS compliant

| PIN | DESCRIPTION |
|-----|-------------|
| 1 | Cathode |
| 2 | Anode |



Absolute Maximum Ratings ($T_a = 25^\circ\text{C}$)

| Parameter | Symbol | Value | Unit |
|---|-----------------|-------------------|--------------------|
| Peak Repetitive Reverse Voltage | V_{RRM} | 30 | V |
| Working Peak Reverse Voltage | V_{RWM} | 30 | V |
| DC Blocking Voltage | V_R | 30 | V |
| Average Rectified Forward Current (Rated V_R) $T_L = 65^\circ\text{C}$ | $I_{F(AV)}$ | 1 | A |
| Non-repetitive Peak Surge Forward Current ($t \leq 8.3$ ms) | I_{FSM} | 25 | A |
| Thermal Resistance, Junction to Ambient | $R_{\theta JA}$ | 230 ¹⁾ | $^\circ\text{C/W}$ |
| Thermal Resistance, Junction to Lead | $R_{\theta JL}$ | 108 ¹⁾ | $^\circ\text{C/W}$ |
| Operating Junction Temperature | T_j | - 65 to + 125 | $^\circ\text{C}$ |
| Storage Temperature Range | T_{stg} | - 65 to + 125 | $^\circ\text{C}$ |

¹⁾ FR-4 or FR-5 = 3.5 x 1.5 inches using a 1 inch Cu pad.

Characteristics at $T_a = 25^\circ\text{C}$

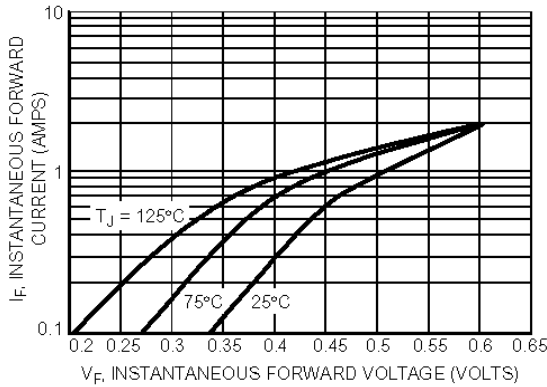
| Parameter | Symbol | Min. | Max. | Unit |
|---|-------------|--------|-------------|---------------|
| Forward Voltage at $I_F = 0.1$ A at $I_F = 0.7$ A | V_F | - - | 0.35 0.5 | V |
| Reverse Breakdown Voltage at $I_R = 1$ mA | $V_{(BR)R}$ | 30 | - | V |
| Reverse Current at $V_R = 30$ V at $V_R = 5$ V | I_R | - - | 200 50 | μA |

TOP DYNAMIC

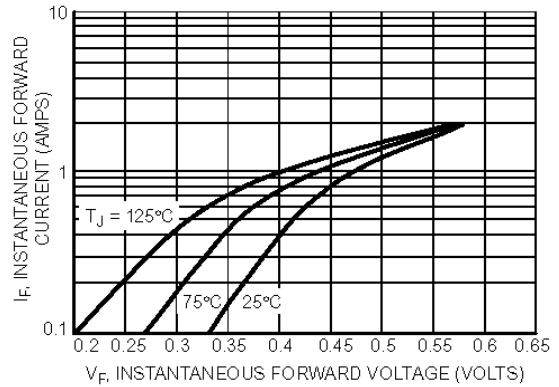


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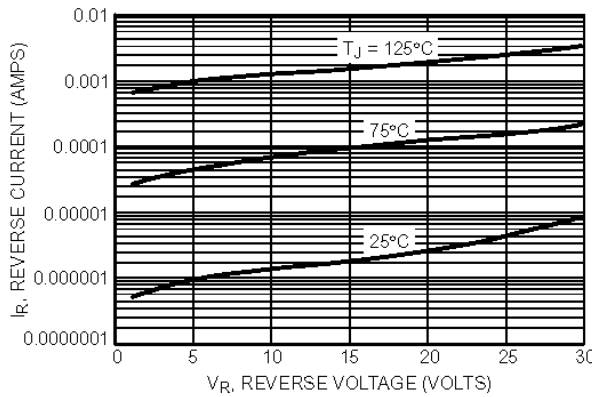
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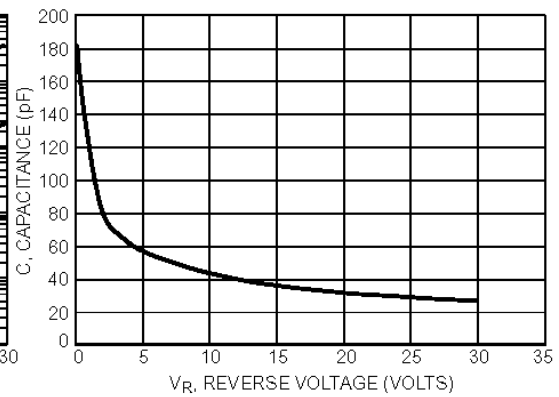
Maximum Forward Voltage



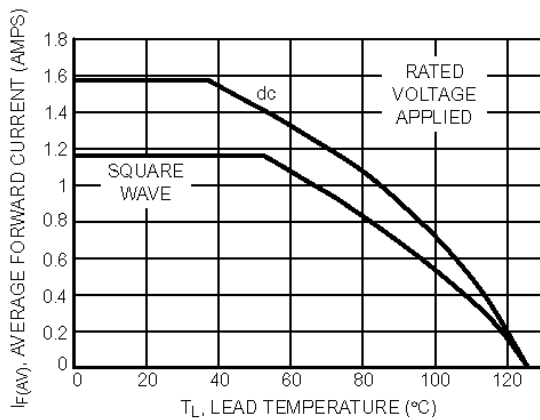
Typical Forward Voltage



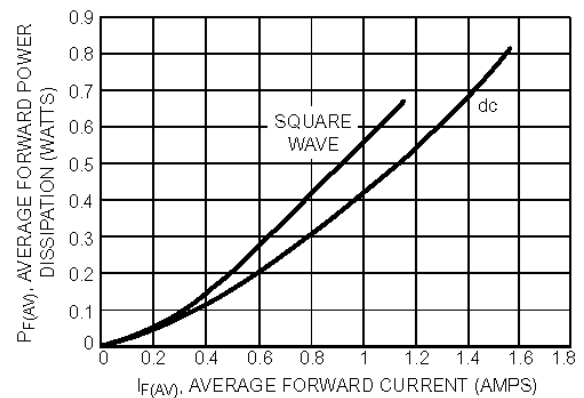
Typical Reverse Current



Typical Capacitance



Current Derating, Lead, $R_{\theta JL} = 108^\circ\text{C/W}$



Forward Power Dissipation

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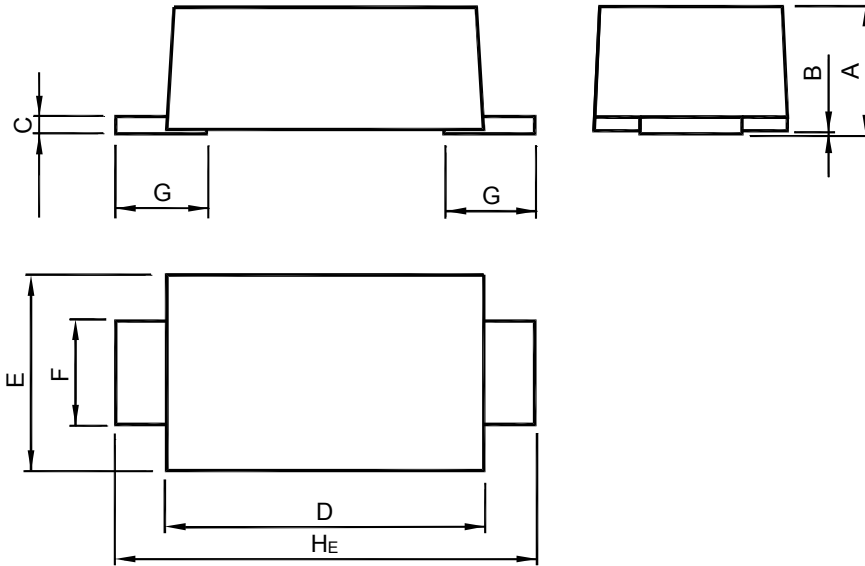
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PACKAGE OUTLINE

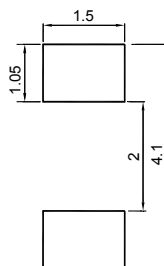
Plastic surface mounted package; 2 leads

SOD-123FL



| UNIT | A | B | C | D | E | F | G | H _E |
|------|------|-----|-----|-----|-----|-----|-----|----------------|
| mm | 1.08 | 0.1 | 0.2 | 2.9 | 1.9 | 1.1 | 0.9 | 3.9 |
| | 0.88 | 0 | 0.1 | 2.6 | 1.7 | 0.8 | 0.7 | 3.5 |

Recommended Soldering Footprint



Packing information

| Package | Tape Width (mm) | Pitch | | Reel Size | | Per Reel Packing Quantity |
|-----------|-----------------|---------|---------------|-----------|------|---------------------------|
| | | mm | inch | mm | inch | |
| SOD-123FL | 8 | 4 ± 0.1 | 0.157 ± 0.004 | 178 | 7 | 3,000 |

TOP DYNAMIC



ISO 14001 : 2004
Certificate No. 121505007

ISO 9001 : 2008
Certificate No. 5014012

OHSAS 18001 : 2007
Certificate No. 05131508006

IECQ QC 080000
Certificate No. EQ2100011402

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