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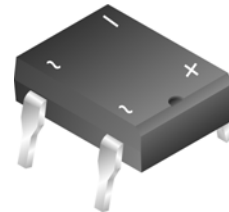


May 2015

DF005M - DF10M Bridge Rectifiers

Features

- Surge Overload Rating: 50 Amperes Peak
- Glass Passivated Junction.
- Low Leakage.
- UL Certified, UL #E258596.



DIP

Ordering Information

| Part Number | Top Mark | Package | Packing Method |
|-------------|----------|---------|----------------|
| DF005M | DF005M | MDIP 4L | Rail |
| DF01M | DF01M | MDIP 4L | Rail |
| DF02M | DF02M | MDIP 4L | Rail |
| DF04M | DF04M | MDIP 4L | Rail |
| DF06M | DF06M | MDIP 4L | Rail |
| DF08M | DF08M | MDIP 4L | Rail |
| DF10M | DF10M | MDIP 4L | Rail |

Absolute Maximum Ratings

Stresses exceeding the absolute maximum ratings may damage the device. The device may not function or be operable above the recommended operating conditions and stressing the parts to these levels is not recommended. In addition, extended exposure to stresses above the recommended operating conditions may affect device reliability. The absolute maximum ratings are stress ratings only. Values are at $T_A = 25^\circ\text{C}$ unless otherwise noted.

| Symbol | Parameter | Value | | | | | | | Unit |
|-------------|---|-------------|-------|-------|-------|-------|-------|-------|------------------|
| | | DF005M | DF01M | DF02M | DF04M | DF06M | DF08M | DF10M | |
| V_{RRM} | Maximum Repetitive Reverse Voltage | 50 | 100 | 200 | 400 | 600 | 800 | 1000 | V |
| V_{RMS} | Maximum RMS Bridge Input Voltage | 35 | 70 | 140 | 280 | 420 | 560 | 700 | V |
| V_{DC} | DC Reverse Voltage at Rated I_R | 50 | 100 | 200 | 400 | 600 | 800 | 1000 | V |
| $I_{F(AV)}$ | Average Rectified Forward Current at $T_A = 40^\circ\text{C}$ | 1.5 | | | | | | | A |
| I_{FSM} | Non-Repetitive Peak Forward Surge Current 8.3 ms Single Half-Sine Wave | 50 | | | | | | | A |
| T_{STG} | Storage Temperature Range | -55 to +150 | | | | | | | $^\circ\text{C}$ |
| T_J | Operating Junction Temperature | -55 to +150 | | | | | | | $^\circ\text{C}$ |

Thermal Characteristics

Values are at $T_A = 25^\circ\text{C}$ unless otherwise noted.

| Symbol | Parameter | Value | Unit |
|-----------------|--|-------|---------------------------|
| P_D | Power Dissipation | 3.1 | W |
| $R_{\theta JA}$ | Thermal Resistance, Junction-to-Ambient ⁽¹⁾ , per Leg | 40 | $^\circ\text{C}/\text{W}$ |

Note:

1. Device mounted on PCB with 0.5 inch \times 0.5 inch (13 mm \times 13 mm).

Electrical Characteristics

Values are at $T_A = 25^\circ\text{C}$ unless otherwise noted.

| Symbol | Parameter | Conditions | Min. | Typ. | Max. | Unit |
|--------|---|--|------|------|------|----------------------|
| V_F | Forward Voltage, per Element | $I_F = 1.0\text{ A}$ | | | 1.1 | V |
| I_R | Reverse Current, per Element at Rated V_R | $T_A = 25^\circ\text{C}$ | | | 5.0 | μA |
| | | $T_A = 125^\circ\text{C}$ | | | 500 | |
| I^2t | Rating for Fusing ($t < 8.35\text{ ms}$) | | | | 10 | A^2s |
| C_J | Typical Capacitance, per Leg | $V_R = 4.0\text{ V}$, $f = 1.0\text{ MHz}$ | | 25 | | pF |

Typical Performance Characteristics



Figure 1. Non-Repetitive Surge Current

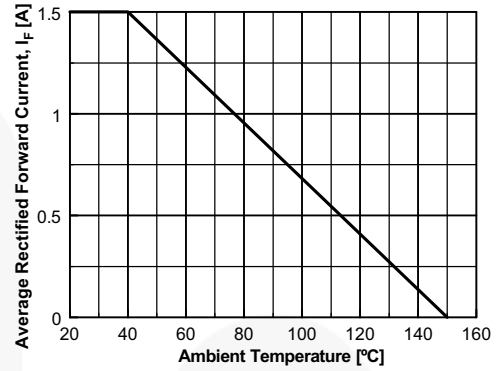


Figure 2. Forward Current Derating Curve

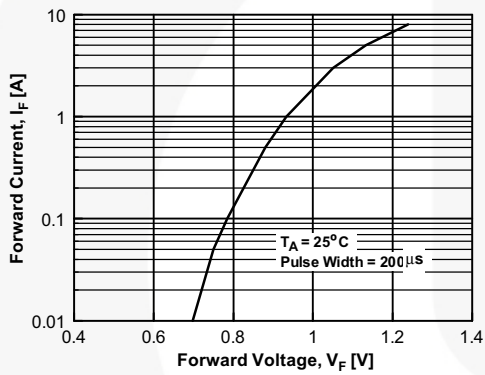


Figure 3. Forward Voltage Characteristics

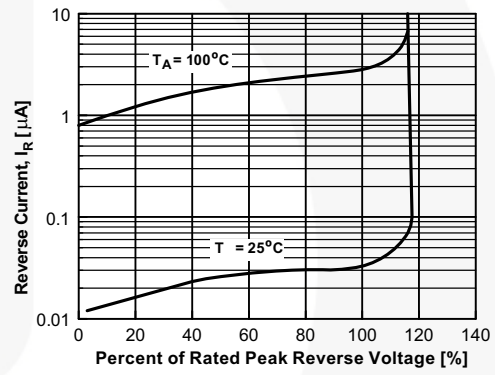
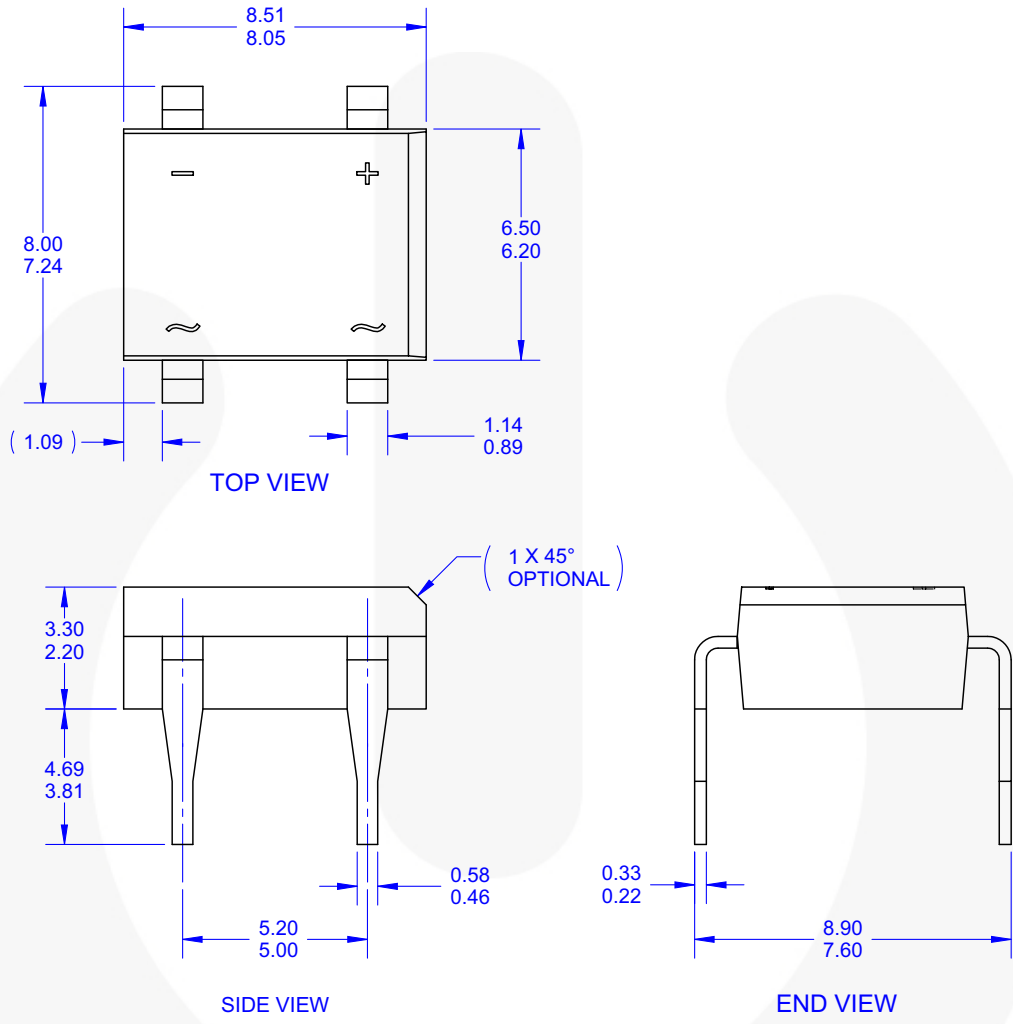


Figure 4. Reverse Current vs. Reverse Voltage



Physical Dimensions



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- G. DRAWING FILE NAME: MKT-N04DREV1

Figure 5. 4-Lead, DIP, 6.5 MM WIDE





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