

**DF005M - DF10M Bridge Rectifiers** 

特力材料886-3-5753170 胜特力电子(上海) 86-21-34970699 胜特力电子(深圳) 86-755-83298787 Http://www.100y.com.tw

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## DIP

## **Features**

- Surge overload rating: 50 amperes peak.
- Glass passivated junction.
- Low leakage.
- UL certified, UL #E111753 and E326243.

# **Absolute Maximum Ratings \*** T<sub>A</sub> = 25°C unless otherwise noted

| ·                  | Parameter   | Value                                    |       |       |          |      |        | 11     |       |
|--------------------|---|--|-------|-------|----------|------|--------|--------|-------|
| Symbol             |   | 005M                                     | 01M   | 02M   | 04M      | 06M  | 08M    | 10M    | Units |
| $V_{RRM}$          | Maximum Repetitive Reverse Voltage  |  | 100   | 200   | 400      | 600  | 800    | 1000   | V     |
| V <sub>RMS</sub>   | Maximum RMS Bridge Input Voltage  | 35                                       | 70    | 140   | 280      | 420  | 560    | 700    | V     |
| $V_{R}$            | DC Reverse Voltage (Rated V <sub>R</sub> )                                | 50                                       | 100   | 200   | 400      | 600  | 800    | 1000   | V     |
| I <sub>F(AV)</sub> | Average Rectified Forward Current,<br>@ T <sub>A</sub> = 40°C             | N.CO                                     | M.T   | N     | 1.5      | WW.L | 100X.C | COM:   | A     |
| I <sub>FSM</sub>   | Non-repetitive Peak Forward Surge Current<br>8.3 ms Single Half-Sine-Wave | 50 50 50 50 50 50 50 50 50 50 50 50 50 5 |       | I.CON | Α        |      |        |        |       |
| T <sub>STG</sub>   | Storage Temperature Range   | -55 to +150                              |       | N.CO  | °C       |      |        |        |       |
| TJ                 | Operating Junction Temperature  | 100 -                                    | 1 CON | -5    | 55 to +1 | 50   | Min    | AST CO | °C    |

<sup>\*</sup> These ratings are limiting values above which the serviceability of any semiconductor device may be impaired.

## Thermal Characteristics

| Symbol          | Parameter  | Value | Unit |
|-----------------|--|-------|------|
| P <sub>D</sub>  | Power Dissipation                                  | 3.1   | W    |
| $R_{\theta JA}$ | Thermal Resistance, Junction to Ambient, * per leg | 40    | °C/V |

<sup>\*</sup> Device mounted on PCB with  $0.5 \times 0.5$ " (13 × 13mm).

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| Symbol         | Parameter   | Value      | Units            |
|----------------|---|------------|------------------|
| V <sub>F</sub> | Forward Voltage, per element @ 1.0A   | 1.11.1.V   | V.               |
| I <sub>R</sub> | Reverse Current, per element @ rated $V_R$<br>$T_A = 25$ °C<br>$T_A = 125$ °C | 5.0<br>500 | μA<br>μA         |
|                | I <sup>2</sup> t Rating for Fusing t < 8.35ms                                 | 10 OM      | A <sup>2</sup> s |
| Ст             | Total Capacitance, per leg $V_R = 4.0V$ , $f = 1.0MHz$                        | 100 25     | pF               |

## **Typical Performance Characteristics**

Figure 1. Non-Repetitive Surge Current

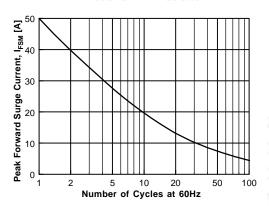
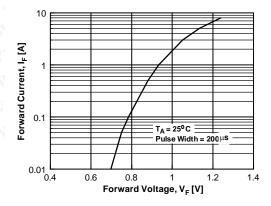


Figure 3. Forward Voltage Characteristics



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Figure 2. Forward Current Derating Curve

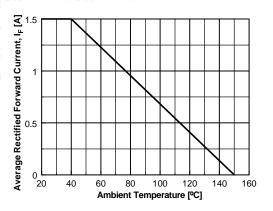
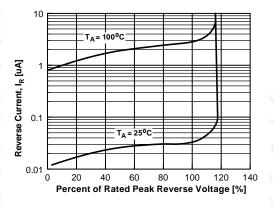


Figure 4. Reverse Current vs Reverse Voltage



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