LITE-ON SEMICONDUCTOR

# DF15005M thru DF1510M

**GLASS PASSIVATED BRIDGE RECTIFIERS**

REVERSE VOLTAGE **- 50** to **1000** Volts
FORWARD CURRENT **- 1.5** Amperes

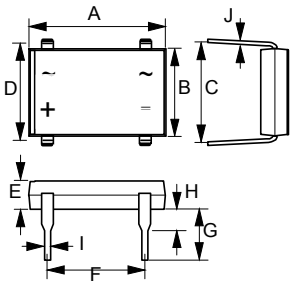
## FEATURES

- Rating to 1000V PRV
- Ideal for printed circuit board
- Low forward voltage drop, high current capability.
- Reliable low cost construction utilizing molded plastic technique results in inexpensive product
- The plastic material has UL flammability classification 94V-0
- UL recognized file # E95060

## MECHANICAL DATA

- Polarity : As marked on Body
- Weight : 0.02 ounces, 0.38 grams
- Mounting position : Any

**DF**




| DF | | |
|---|---|---|
| DIM. | MIN. | MAX. |
| A | 8.20 | 8.50 |
| B | 6.20 | 6.50 |
| C | 7.60 | 8.90 |
| D | 7.40 | 7.60 |
| E | 2.40 | 2.60 |
| F | 5.00 | 5.20 |
| G | 4.10 | 4.60 |
| H | 1.27 | 2.03 |
| I | 0.41 | 0.51 |
| J | 0.22 | 0.30 |
| All Dimensions in millimeter | | |

## MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25℃ ambient temperature unless otherwise specified.

| CHARACTERISTICS | SYMBOL | DF 15005M | DF 1501M | DF 1502M | DF 1504M | DF 1506M | DF 1508M | DF 1510M | UNIT |
|---|---|---|---|---|---|---|---|---|---|
| Maximum Recurrent Peak Reverse Voltage | $V_{RRM}$ | 50 | 100 | 200 | 400 | 600 | 800 | 1000 | V |
| Maximum RMS Voltage | $V_{RMS}$ | 35 | 70 | 140 | 280 | 420 | 560 | 700 | V |
| Maximum DC Blocking Voltage | $V_{DC}$ | 50 | 100 | 200 | 400 | 600 | 800 | 1000 | V |
| Maximum Average Forward Rectified Current @$T_A$=40℃ | $I_{(AV)}$ | 1.5 | | | | | | | A |
| Peak Forward Surge Current 8.3ms single half sine-wave superimposed on rated load (JEDEC METHOD) | $I_{FSM}$ | 50 | | | | | | | A |
| Maximum forward Voltage at 1.5A DC | $V_F$ | 1.1 | | | | | | | V |
| Maximum DC Reverse Current at Rated DC Blocking Voltage @$T_J$ =25℃<br>@$T_J$ =125℃ | $I_R$ | 10<br>500 | | | | | | | uA<br>uA |
| $I^2t$ Rating for fusing (t < 8.3ms) | $I^2t$ | 10.4 | | | | | | | $A^2S$ |
| Typical Junction Capacitance per element (Note 1) | $C_J$ | 25 | | | | | | | pF |
| Typical Thermal Resistance (Note 2) | $R_{\theta JA}$ | 40 | | | | | | | ℃/W |
| Operating Temperature Range | $T_J$ | -55 to +150 | | | | | | | ℃ |
| Storage Temperature Range | $T_{STG}$ | -55 to +150 | | | | | | | ℃ |

NOTES : 1.Measured at 1.0MHz and applied reverse voltage of 4.0V DC.
2.Thermal resistance from junction to ambient mounted on P.C.B with 0.5 x 0.5"(13x13mm) copper pads.

REV. 5, Sep-2010, KBDC02

## RATING AND CHARACTERISTIC CURVES
## DF1500M thru DF1510M

FIG.1 - FORWARD CURRENT DERATING CURVE

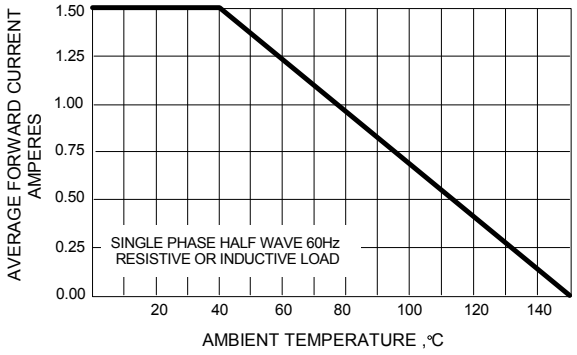



FIG.2 - MAXIMUM NON-REPETITIVE SURGE CURRENT

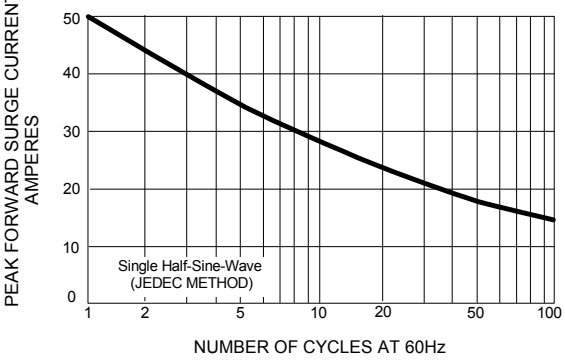



FIG.3 - TYPICAL JUNCTION CAPACITANCE

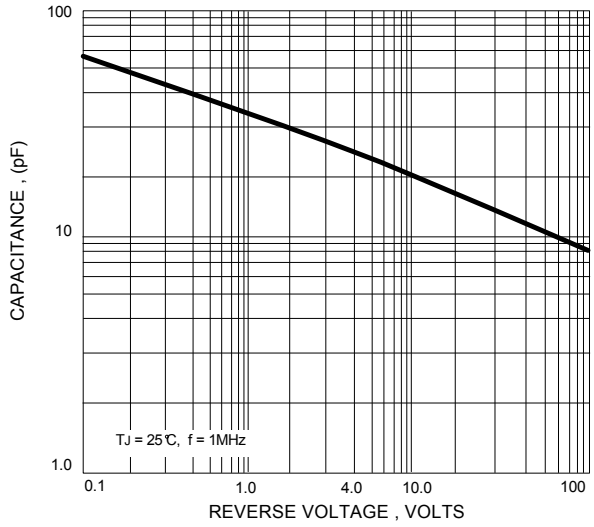



FIG.4 - TYPICAL FORWARD CHARACTERISTICS

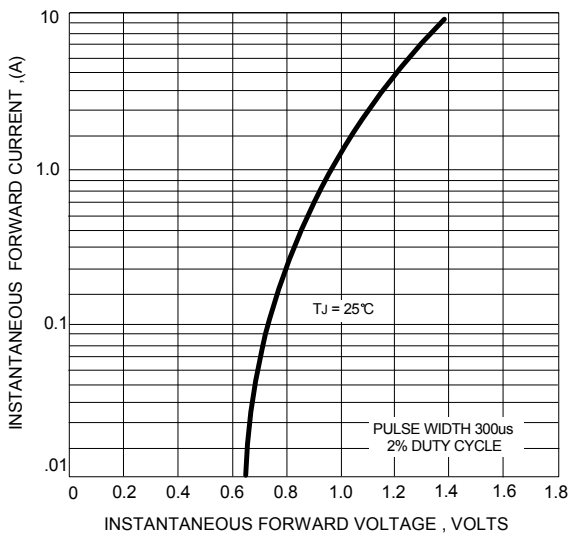
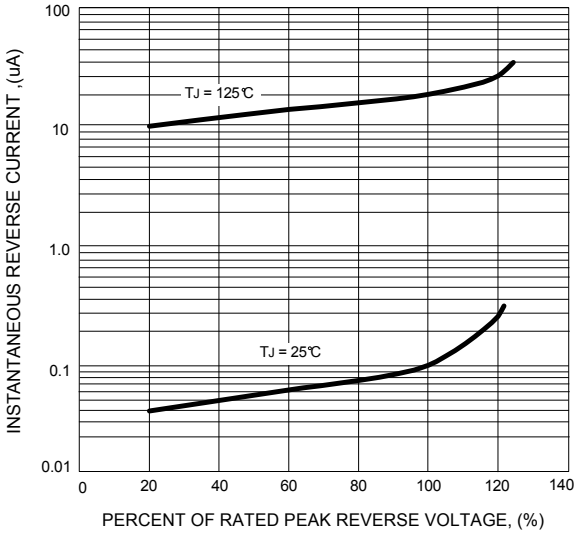



FIG.5 - TYPICAL REVERSE CHARACTERISTICS



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