



DFL1002J thru DFL1010J

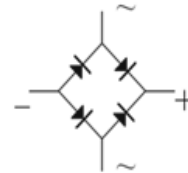
Surface Mount Glass Passivated Single-Phase Bridge Rectifiers
Reverse Voltage 200~1000V Output Current 1.0A

Features

- Glass passivated Bridge Rectifiers
- Ideal for automated placement
- Very low profile - typical body height 1.5 mm
- High surge current capability
- Moisture sensitivity: level 1, per J-STD-020
- High temperature soldering guaranteed: 260°C/10 seconds



DFL J



Mechanical Data

- Case:DFL,Molding compound meets UL 94V-0 flammability rating

Typical Applications

General purpose use in ac-to dc bridge full wave rectification for SMPS,lighting,adapter,charger,home appliances,office equipment,and telecommunication

| Maximum Ratings (TA = 25 °C unless otherwise noted) | | | | | | |
|--|------------------|---------------|----------|----------|----------|------------------|
| Parameter | Symbol | DFL1002J | DFL1006J | DFL1008J | DFL1010J | Unit |
| Maximum repetitive peak reverse voltage | VRRM | 200 | 600 | 800 | 1000 | V |
| Maximum RMS voltage | VRMS | 140 | 420 | 560 | 700 | V |
| Maximum DC blocking voltage | VDC | 200 | 600 | 800 | 1000 | V |
| Maximum average forward rectified output current | Io(AV) | 1.0 | | | | A |
| Peak forward surge current 8.3 ms single half sine-wave superimposed on rated load | IFSM | 40 | | | | A |
| Rating for fusing (t≤8.3ms) | I ² t | 6.7 | | | | A ² s |
| Operating junction and storage temperature range | TJ, TSTG | - 55 to + 150 | | | | °C |

| Electrical Characteristics (TA = 25 °C unless otherwise noted) | | | | | | | |
|---|--|-----------------|----------|----------|----------|----------|-------|
| Parameter | Test Conditions | Symbol | DFL1002J | DFL1006J | DFL1008J | DFL1010J | Unit |
| Maximum instantaneous forward voltage | IF=0.5A, Ta=25°C | VF | 1.0 | | | | Volts |
| | IF=1.0A, Ta=25°C | | 1.1 | | | | |
| Maximum DC reverse current at rated DC blocking voltage | Ta=25°C | IR | 5 | | | | µA |
| | Ta=125°C | | 50 | | | | |
| Typical reverse recovery time | IF=0.5A, IR=1.0A, I _{rr} =0.25A | t _{rr} | 2 | | | | uS |
| Typical junction capacitance | 4.0 V, 1 MHz | C _J | 10.5 | | | | pF |

| Thermal Characteristics (TA=25°C unless otherwise noted) | | | | | | | |
|---|---------------------|------------------|----------|----------|----------|----------|------|
| Parameter | Test Conditions | Symbol | DFL1002J | DFL1006J | DFL1008J | DFL1010J | Unit |
| Typical thermal resistance ¹⁾ | junction to ambient | R _{θJA} | 29 | | | | °C/W |
| | junction to case | R _{θJC} | 9 | | | | |

Note: 1) The thermal resistance from junction to ambient and case, mounted on P.C.B with 13x13mm copper pads, 2 OZ, FR4 PCB



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Ratings and Characteristics Curves

(TA = 25°C unless otherwise noted)

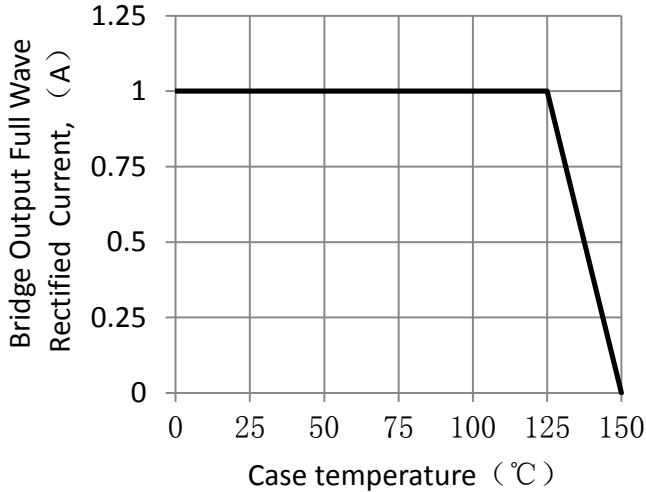


Figure 1. Forward Current Derating Curve

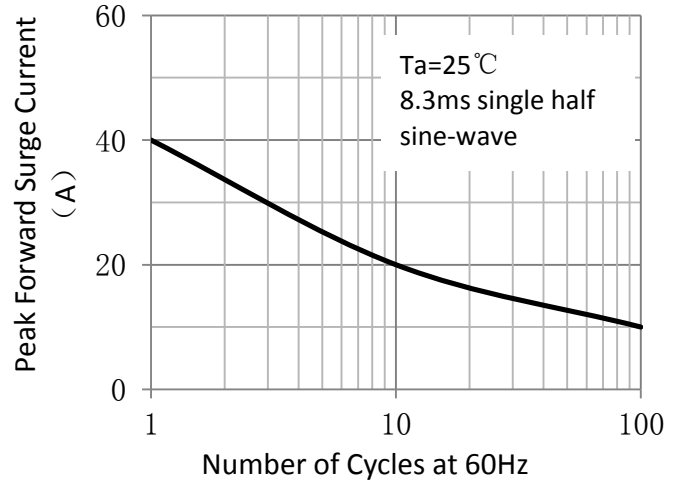


Figure 2. Maximum Non-Repetitive Peak Forward Surge Current

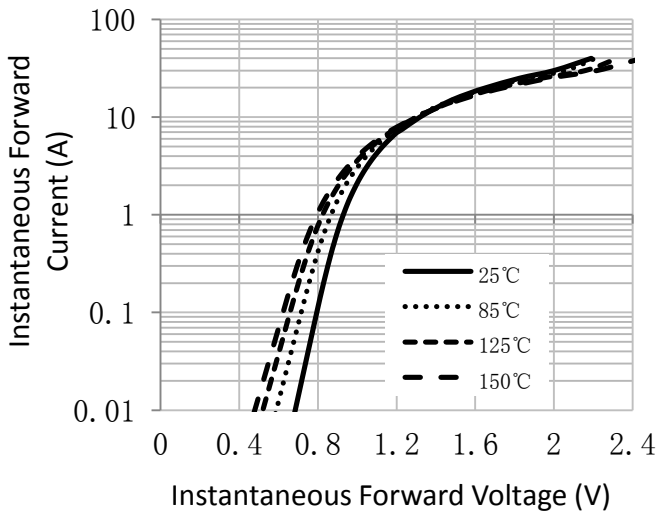


Figure 3. Typical Instantaneous Forward Characteristics

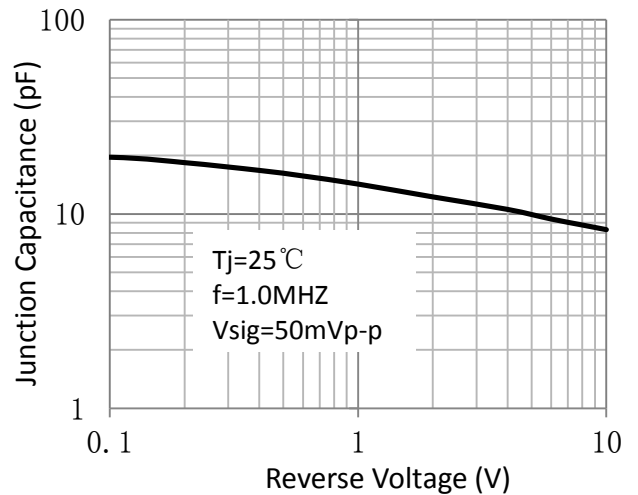


Figure 4. Typical Junction Capacitance

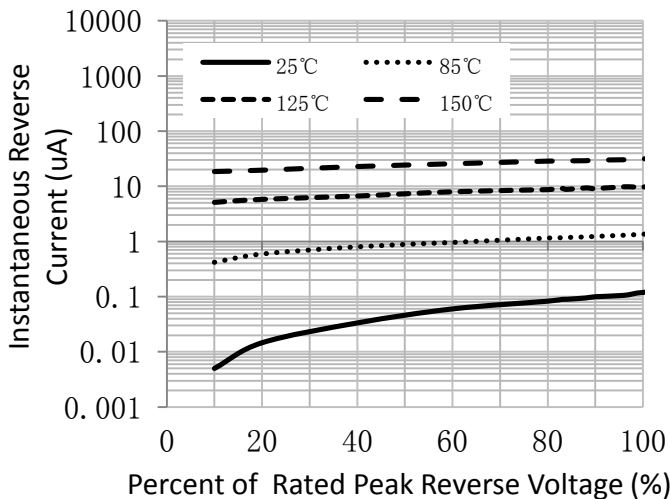
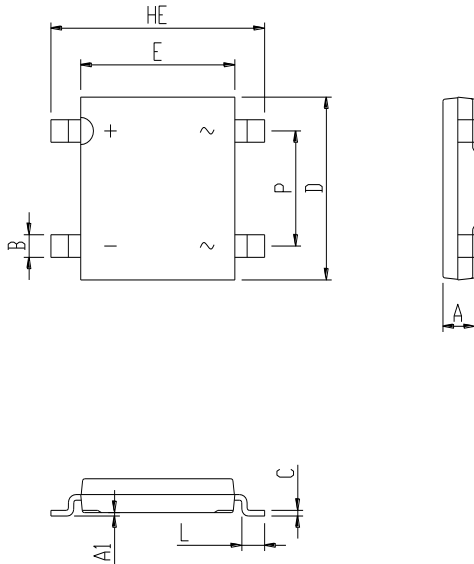


Figure 5. Typical Reverse Characteristics

Package Outline Dimensions

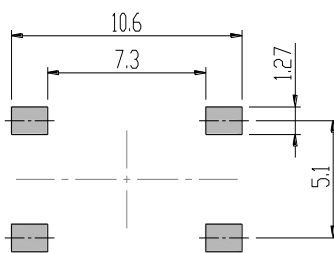
DFLJ



DFL J

| Dim | unit:mm | | Dim | unit:inch | |
|-----|---------|-------|-----|-----------|-------|
| | Min | Max | | Min | Max |
| A | 1.40 | 1.60 | A | 0.055 | 0.063 |
| A1 | 0.05 | 0.20 | A1 | 0.002 | 0.008 |
| B | 1.02 | 1.20 | B | 0.040 | 0.047 |
| C | 0.22 | 0.33 | C | 0.009 | 0.013 |
| D | 8.00 | 8.30 | D | 0.315 | 0.327 |
| E | 7.10 | 7.40 | E | 0.280 | 0.291 |
| HE | 9.70 | 10.20 | HE | 0.382 | 0.402 |
| L | 0.75 | 1.25 | L | 0.030 | 0.049 |
| P | 5.00 | 5.20 | P | 0.197 | 0.205 |

Footprint





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