

DF005S - DF10S

1.0A SURFACE MOUNT GLASS PASSIVATED BRIDGE RECTIFIER

Features

- Glass Passivated Die Construction
- Diffused Junction
- Low Forward Voltage Drop, High Current Capability
- Surge Overload Rating to 50A Peak
- Designed for Surface Mount Application
- Plastic Material UL Flammability Classification 94V-0
- UL Listed Under Recognized Component Index, File Number E94661

G - + A B + D E - H - C

| DF-S | | | | | | | |
|----------------------|-------|-------|--|--|--|--|--|
| Dim | Min | Max | | | | | |
| Α | 7.40 | 7.90 | | | | | |
| В | 6.20 | 6.50 | | | | | |
| С | 0.22 | 0.30 | | | | | |
| D | 0.076 | 0.33 | | | | | |
| E | _ | 10.40 | | | | | |
| G | 1.02 | 1.53 | | | | | |
| Н | 8.13 | 8.51 | | | | | |
| J | 2.40 | 2.60 | | | | | |
| K | 5.00 | 5.20 | | | | | |
| L | 1.00 | 1.20 | | | | | |
| All Dimensions in mm | | | | | | | |

Mechanical Data

Case: Molded Plastic

 Terminals: Solder Plated Leads, Solderable per MIL-STD-202, Method 208

Polarity: As marked on CaseApprox. Weight: 0.38 grams

Mounting Position: AnyMarking: Type Number

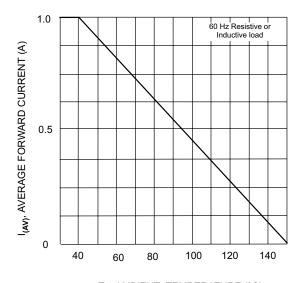
Maximum Ratings and Electrical Characteristics @ TA = 25°C unless otherwise specified

Single phase, 60Hz, resistive or inductive load. For capacitive load, derate current by 20%.

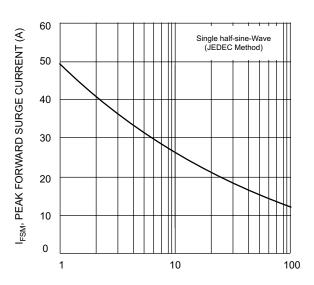
| Characteristic | Symbol | DF 005S | DF 01S | DF 02S | DF 04S | DF 06S | DF 08S | DF 10S | Unit |
|---|--|-------------|-----------|-----------|-----------|-----------|-----------|------------------|------|
| Peak Repetitive Reverse Voltage Working Peak Reverse Voltage DC Blocking Voltage | V _{RMM} V _{RWM} V _R | 50 | 100 | 200 | 400 | 600 | 800 | 1000 | V |
| RMS Reverse Voltage | V _{RMS} | 35 | 70 | 140 | 280 | 420 | 560 | 700 | V |
| Average Forward Rectified Current @ T _A = 40°C | lo | 1.0 | | | | | | Α | |
| Non-Repetitive Peak Forward Surge Current, 8.3 ms single half-sine-wave superimposed on rated load (JEDEC method) | | 50 | | | | | | Α | |
| Forward Voltage (per element) @ I _F = 1.0A | V _{FM} | 1.1 | | | | | | V | |
| Peak Reverse Current at Rated @ T _A = 25°C DC Blocking Voltage (per element) @ T _A = 125°C | | 10 500 | | | | | | μA | |
| I ² t Rating for Fusing (t<8.3ms) | | 10.4 | | | | | | A ² s | |
| Typical Junction Capacitance (per element) (Note 1) | | 25 | | | | | | pF | |
| Typical Thermal Resistance, Junction to Ambient (Note 2) | | 40 | | | | | | °C/W | |
| Operating and Storage Temperature Range | | -65 to +150 | | | | | | °C | |

Notes: 1. Measured at 1.0 MHz and Applied Reverse Voltage of 4.0V DC.

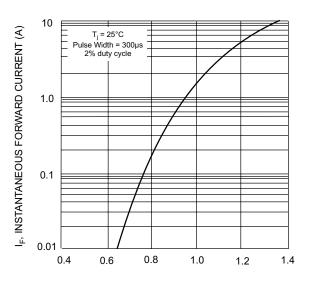
2. Thermal resistance, junction to ambient, measured on PC board with 5.0mm (0.03mm thick) land areas.



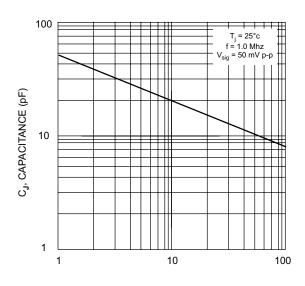
T_A, AMBIENT TEMPERATURE (°C) Fig. 1 Output Current Derating Curve



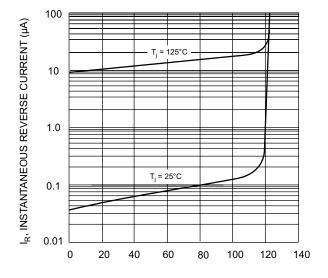
NUMBER OF CYCLES AT 60 Hz Fig. 3 Max Non-Repetitive Peak Forward Surge Current



 V_{F} , INSTANTANEOUS FORWARD VOLTAGE (V) Fig. 2 Typ Forward Characteristics (per element)



 $\label{eq:VR} {\rm V_{R},\,REVERSE\,\,VOLTAGE\,\,(V)}$ Fig. 4 Typ Junction Capacitance (per element)



PERCENT OF RATED PEAK REVERSE VOLTAGE (%) Fig. 5 Typ Reverse Characteristics (per element)