

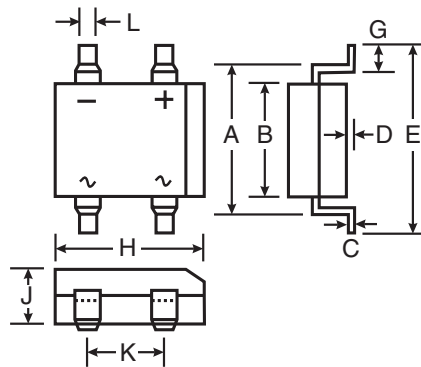
1.0A SURFACE MOUNT GLASS PASSIVATED BRIDGE RECTIFIER

Features

- Glass Passivated Die Construction
- Low Forward Voltage Drop, High Current Capability
- Surge Overload Rating to 50A Peak
- Designed for Surface Mount Application
- UL Listed Under Recognized Component Index, File Number E94661
- **Lead Free Finish, RoHS Compliant (Date Code 0532+)** (Note 3)

Mechanical Data

- Case: DF-S
- Case Material: Molded Plastic. UL Flammability Classification Rating 94V-0
- Moisture Sensitivity: Level 1 per J-STD-020C
- Terminals: Finish - Tin. Solderable per MIL-STD-202, Method 208 (e3)
- Polarity: As marked on Case
- Marking: Type Number, See Page 3
- Weight: 0.38 grams (approximate)



| DF-S | | |
|----------------------|-------|-------|
| Dim | Min | Max |
| A | 7.40 | 7.90 |
| B | 6.20 | 6.50 |
| C | 0.22 | 0.30 |
| D | 0.076 | 0.33 |
| E | — | 10.40 |
| G | 1.02 | 1.53 |
| H | 8.13 | 8.51 |
| J | 2.40 | 2.60 |
| K | 5.00 | 5.20 |
| L | 1.00 | 1.20 |
| All Dimensions in mm | | |

Maximum Ratings and Electrical Characteristics @ T_A = 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 | I _O | 1.0 | | | | | | | A |
| Non-Repetitive Peak Forward Surge Current, 8.3 ms single half-sine-wave superimposed on rated load | I _{FSM} | 50 | | | | | | | A |
| Forward Voltage (per element) @ I _F = 1.0A | V _{FM} | 1.1 | | | | | | | V |
| Peak Reverse Current at Rated DC Blocking Voltage (per element) @ T _A = 25°C @ T _A = 125°C | I _{RM} | 10 500 | | | | | | | μA |
| I ² t Rating for Fusing (t<8.3ms) | I ² t | 10.4 | | | | | | | A ² s |
| Typical Total Capacitance (per element) (Note 1) | C _T | 25 | | | | | | | pF |
| Typical Thermal Resistance, Junction to Ambient (Note 2) | R _{θJA} | 40 | | | | | | | °C/W |
| Operating and Storage Temperature Range | T _j , T _{STG} | -65 to +150 | | | | | | | °C |

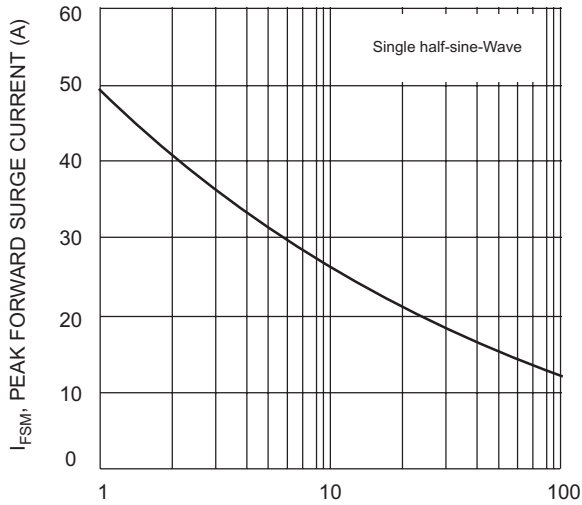
- Notes: 1. Measured at 1.0 MHz and Applied Reverse Voltage of 4.0V DC.
2. Thermal resistance, junction to ambient, measured on PC board with 5.0mm² (0.03mm thick) land areas.
3. RoHS revision 13.2.2003. Glass and High Temperature Solder Exemptions Applied, see EU Directive Annex Notes 5 and 7.



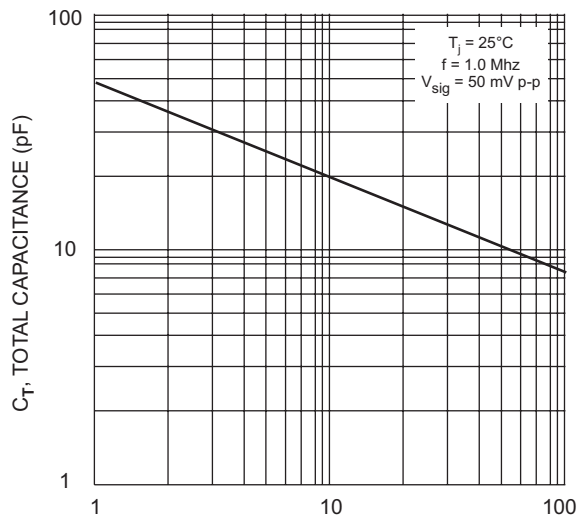
T_A : AMBIENT TEMPERATURE ($^{\circ}C$)
Fig. 1 Output Current Derating Curve



V_F : INSTANTANEOUS FORWARD VOLTAGE (V)
Fig. 2 Typ Forward Characteristics (per element)



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



V_R : REVERSE VOLTAGE (V)
Fig. 4 Typical Total Capacitance (per element)



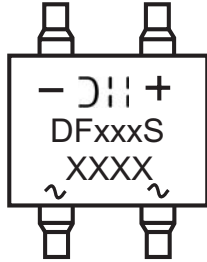
PERCENT OF RATED PEAK REVERSE VOLTAGE (%)
Fig. 5 Typ Reverse Characteristics (per element)

Ordering Information (Note 4)

| Device* | Packaging | Shipping |
|----------------|--------------|--|
| DFxS DFxS-T | DF-S DF-S | 50 Per Tube 1500/Tape & Reel, 13-inch |

* x = Device type, e.g. DF005S or DF10S, etc.

Notes: 4. For Packaging Details, go to our website at <http://www.diodes.com/datasheets/ap02007.pdf>.

Marking Information

D|| = Manufacturers' code marking
DFxxxS = Product type marking code, ex: DF10S
YWW = Date code marking
Y = Last digit of year ex: 2 for 2002
WW = Week code 01 to 52

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