

1.5A SURFACE MOUNT GLASS PASSIVATED BRIDGE RECTIFIER

Features and Benefits

- Glass Passivated Die Construction
- Low Forward Voltage Drop, High Current Capability
- Surge Overload Rating to 50A Peak
- Designed for Surface Mount Applications
- UL Listed Under Recognized Component Index, File Number E94661
- **Lead Free Finish, RoHS Compliant (Date Code 0532+)** (Note 1)

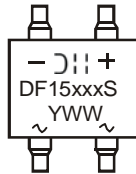
Mechanical Data

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

Ordering Information (Note 2)

| Device | Packaging | Shipping |
|------------|-----------|------------------|
| DF15xxxS-T | DF-S | 1500/Tape & Reel |
| DF15xxxS | DF-S | 50 per Tube |

Marking Information



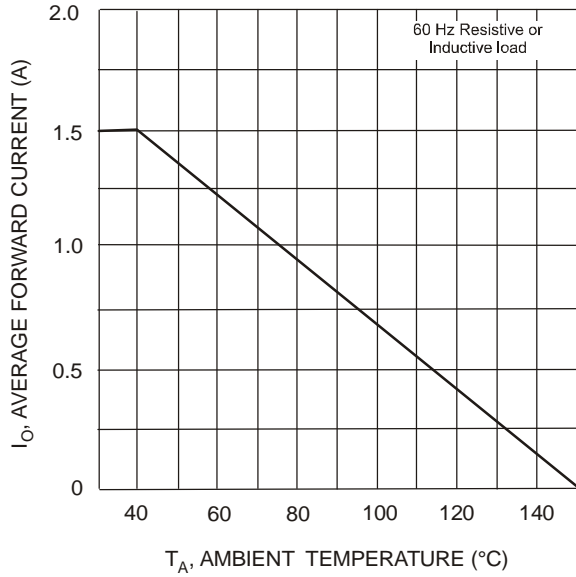
☺☺☺ = Manufacturers' code marking
 DF15xxxS = Product type marking code
 ex: DF1510S
 YWW = Date code marking
 Y = Last digit of year (ex: 2 for 2002)
 WW = Week code (01 to 53)

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

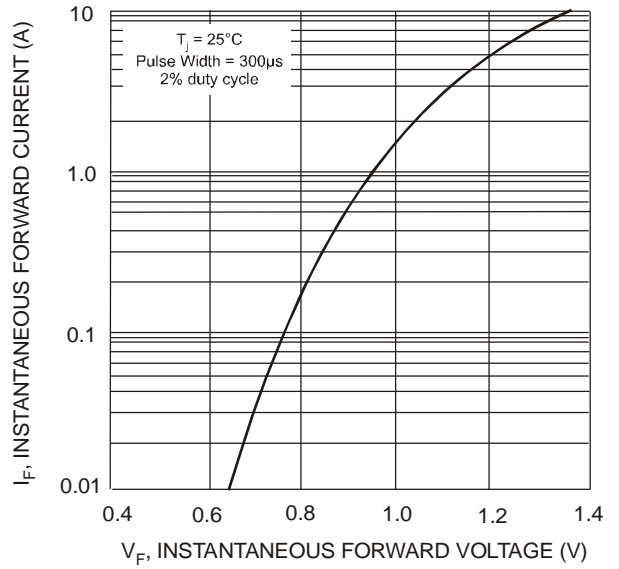
Single phase, half wave, 60Hz, resistive or inductive load.
 For capacitive load, derate current by 20%.

| Characteristic | Symbol | DF 15005S | DF 1501S | DF 1502S | DF 1504S | DF 1506S | DF 1508S | DF 1510S | Unit |
|--|-----------------------------------|-------------|----------|----------|----------|----------|----------|----------|------------------|
| Peak Repetitive Reverse Voltage | V _{RRM} | | | | | | | | |
| Working Peak Reverse Voltage | V _{RWM} | 50 | 100 | 200 | 400 | 600 | 800 | 1000 | V |
| DC Blocking Voltage | V _R | | | | | | | | |
| RMS Reverse Voltage | V _{R(RMS)} | 35 | 70 | 140 | 280 | 420 | 580 | 700 | V |
| Average Forward Rectified Current @ T _A = 40°C | I _O | 1.5 | | | | | | | A |
| Non-Repetitive Peak Forward Surge Current, 8.3 ms | I _{FSM} | 50 | | | | | | | A |
| Single Half Sine-Wave Superimposed on Rated Load | | | | | | | | | |
| Forward Voltage (per element) @ I _F = 1.5A | V _{FM} | 1.1 | | | | | | | V |
| Peak Reverse Current at Rated @ T _A = 25°C | I _{RM} | 10 | | | | | | | μA |
| DC Blocking Voltage (per element) @ T _A = 125°C | | 500 | | | | | | | |
| I ² t Rating for Fusing (t<8.3ms) | I ² t | 10.4 | | | | | | | A ² s |
| Typical Total Capacitance per element (Note 3) | C _T | 25 | | | | | | | pF |
| Typical Thermal Resistance, Junction to Ambient (Note 4) | R _{θJA} | 40 | | | | | | | °C/W |
| Operating and Storage Temperature Range | T _J , T _{STG} | -65 to +150 | | | | | | | °C |

Notes: 1. EU Directive 2002/95/EC (RoHS) & 2011/65/EU (RoHS 2). All applicable RoHS exemptions applied
 2. For packaging details, visit our website at <http://www.diodes.com>.
 3. Measured at 1.0 MHz and applied reverse voltage of 4.0V DC.
 4. Thermal resistance, junction to ambient, measured on PC board with 5.0mm² (0.03mm thick) land areas.



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



V_F , INSTANTANEOUS FORWARD VOLTAGE (V)
Fig. 2 Typical Forward Characteristics (per element)

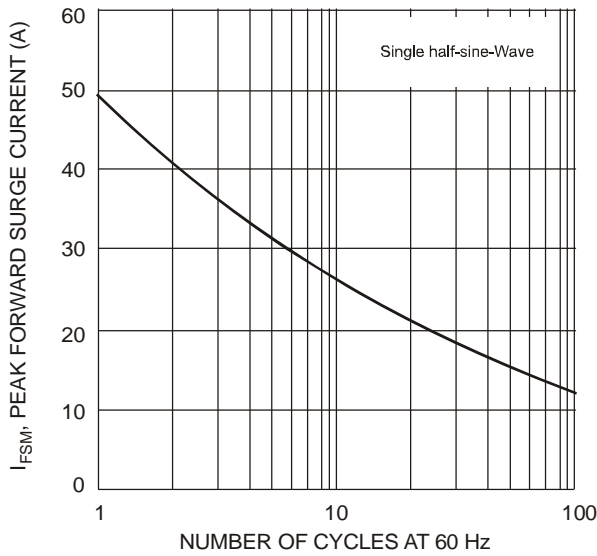


Fig. 3 Max Non-Repetitive Peak Forward Surge Current

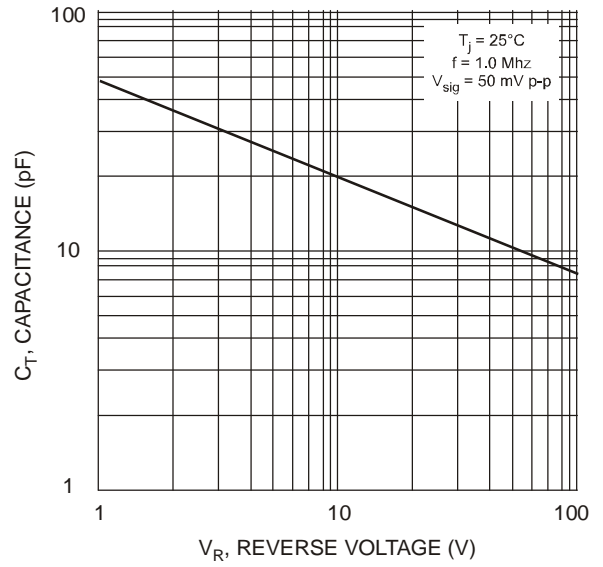


Fig. 4 Typical Total Capacitance (per element)

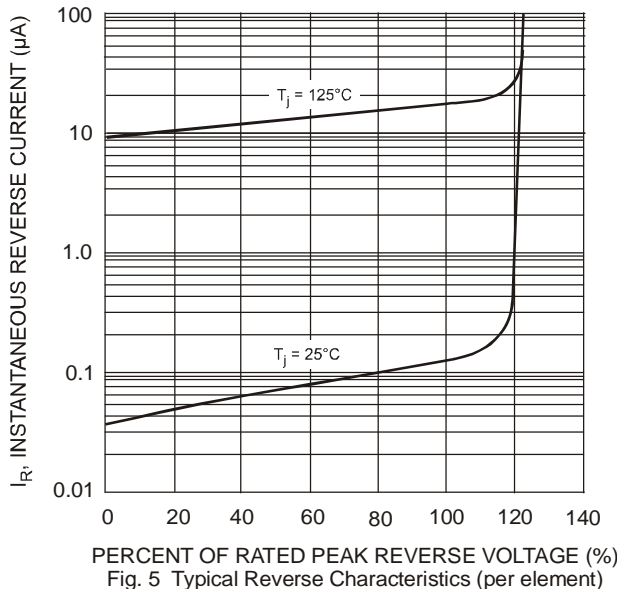
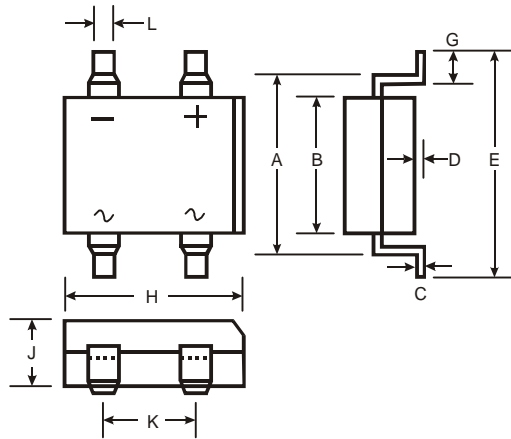


Fig. 5 Typical Reverse Characteristics (per element)

Package Outline Dimensions



| 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 | | |

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