

**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)

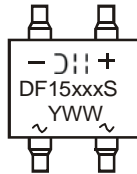
**Mechanical Data**

- 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<sub>A</sub> = 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 <sub>RRM</sub>                  |             |          |          |          |          |          |          |                  |
| Working Peak Reverse Voltage   | V <sub>RWM</sub>                  | 50          | 100      | 200      | 400      | 600      | 800      | 1000     | V                |
| DC Blocking Voltage  | V <sub>R</sub>                    |             |          |          |          |          |          |          |                  |
| RMS Reverse Voltage  | V <sub>R(RMS)</sub>               | 35          | 70       | 140      | 280      | 420      | 580      | 700      | V                |
| Average Forward Rectified Current @ T <sub>A</sub> = 40°C  | I <sub>O</sub>                    | 1.5         |          |          |          |          |          |          | A                |
| Non-Repetitive Peak Forward Surge Current, 8.3 ms Single Half Sine-Wave Superimposed on Rated Load | I <sub>FSM</sub>                  | 50          |          |          |          |          |          |          | A                |
| Forward Voltage (per element) @ I <sub>F</sub> = 1.5A  | V <sub>FM</sub>                   | 1.1         |          |          |          |          |          |          | V                |
| Peak Reverse Current at Rated @ T <sub>A</sub> = 25°C  | I <sub>RM</sub>                   | 10          |          |          |          |          |          |          | μA               |
| DC Blocking Voltage (per element) @ T <sub>A</sub> = 125°C   | I <sub>RM</sub>                   | 500         |          |          |          |          |          |          |                  |
| I <sup>2</sup> t Rating for Fusing (t<8.3ms)   | I <sup>2</sup> t                  | 10.4        |          |          |          |          |          |          | A <sup>2</sup> s |
| Typical Total Capacitance per element (Note 3)   | C <sub>T</sub>                    | 25          |          |          |          |          |          |          | pF               |
| Typical Thermal Resistance, Junction to Ambient (Note 4)   | R <sub>θJA</sub>                  | 40          |          |          |          |          |          |          | °C/W             |
| Operating and Storage Temperature Range  | T <sub>J</sub> , T <sub>STG</sub> | -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 5.0mm<sup>2</sup> (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

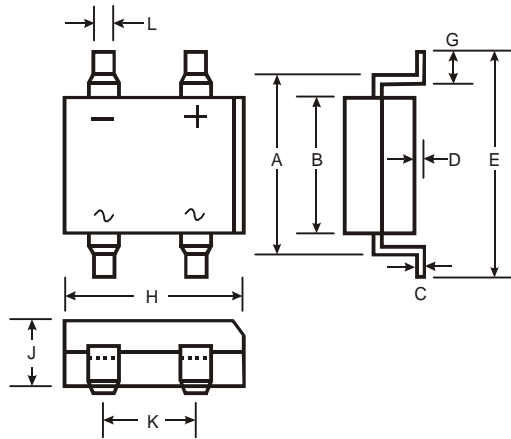


Fig. 4 Typical Total Capacitance (per element)



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  |
| <b>All Dimensions in mm</b> |       |       |

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