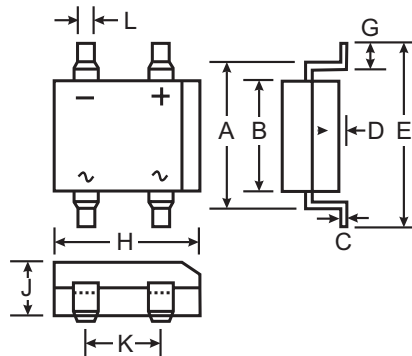


### Features

- 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 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. Solder Plated Leads, 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  | 3.40  |
| K                    | 5.00  | 5.20  |
| L                    | 1.00  | 1.20  |
| All Dimensions in mm |       |       |

### Maximum Ratings and Electrical Characteristics @ T<sub>A</sub> = 25°C unless otherwise specified

Single phase, 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<br>Working Peak Reverse Voltage<br>DC Blocking Voltage                              | V <sub>RRM</sub><br>V <sub>RWM</sub><br>V <sub>R</sub> | 50          | 100      | 200      | 400      | 600      | 800      | 1000     | V                |
| 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 DC blocking voltage (per element) @ T <sub>A</sub> = 25°C<br>@ T <sub>A</sub> = 125°C | I <sub>RM</sub>                                        | 10<br>500   |          |          |          |          |          |          | μA               |
| 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 1)                                                                      | C <sub>T</sub>                                         | 25          |          |          |          |          |          |          | pF               |
| Typical Thermal Resistance, Junction to Ambient (Note 2)                                                            | 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. 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<sup>2</sup> (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.

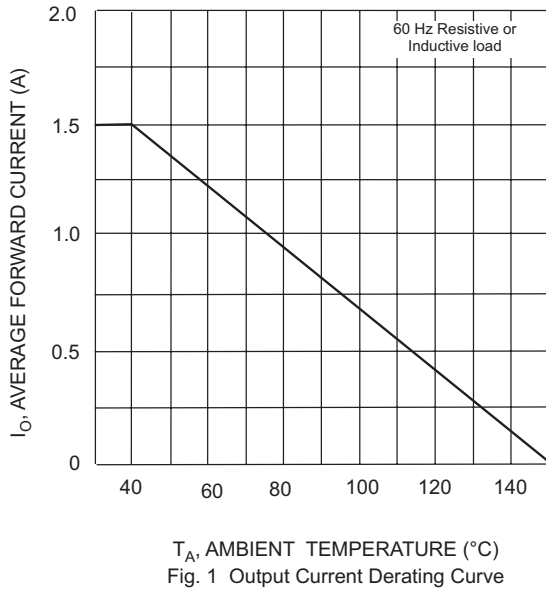


Fig. 1 Output Current Derating Curve

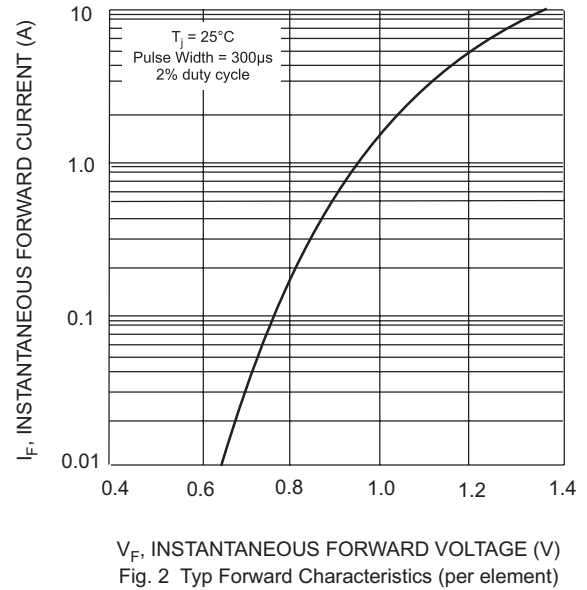


Fig. 2 Typ Forward Characteristics (per element)

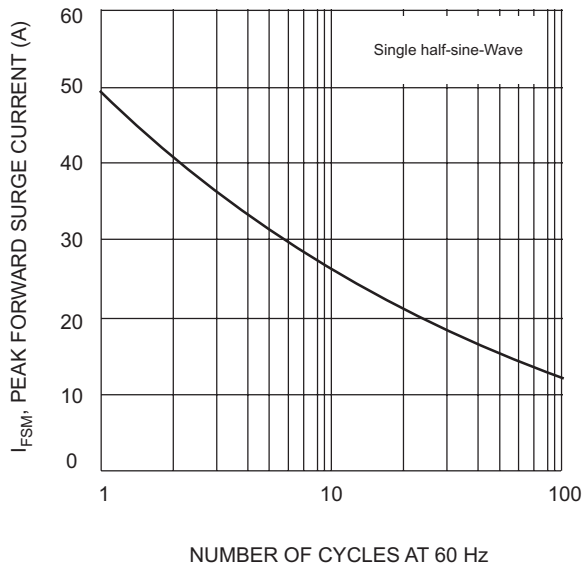


Fig. 3 Max Non-Repetitive Peak Forward Surge Current

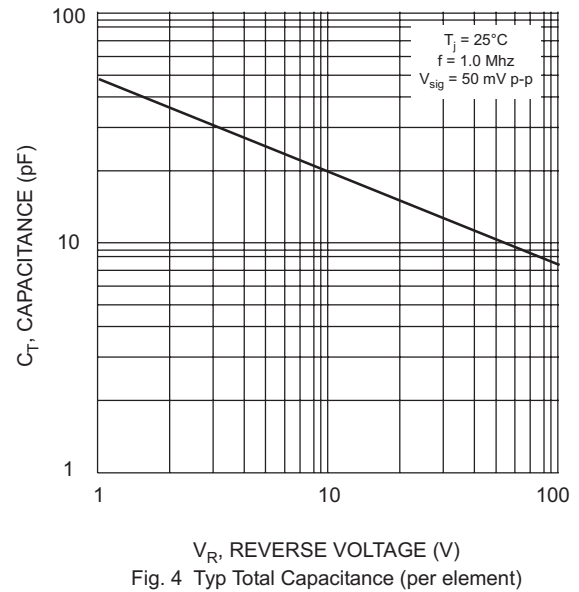


Fig. 4 Typ Total Capacitance (per element)

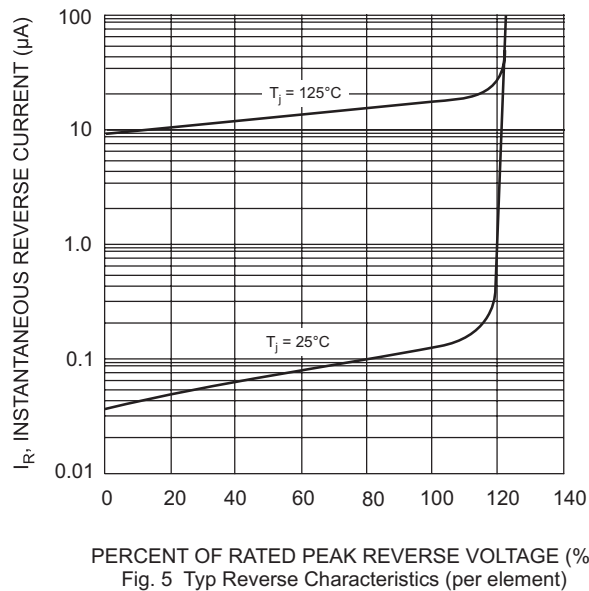


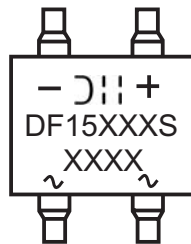
Fig. 5 Typ Reverse Characteristics (per element)

## Ordering Information (Note 4)

| Device     | Packaging | Shipping         |
|------------|-----------|------------------|
| DF15XXXS-T | DF-S      | 1500/Tape & Reel |
| DF15XXXS   | DF-S      | 50 per Tube      |

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

## Marking Information



311 = 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 52

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