

### Features and Benefits

- Glass Passivated Die Construction
- High Current Capability and Low Forward Voltage Drop
- Surge Overload Rating to 30A Peak
- **Lead Free Finish, RoHS Compliant (Note 1)**

### Mechanical Data

- Case: T1
- Case Material: Molded Plastic. UL Flammability
- Classification Rating 94V-0
- Moisture Sensitivity: Level 1 per J-STD-020
- Polarity: Cathode Band
- Terminals: Finish – Tin. Solderable per MIL-STD-202, Method 208 (E3)
- Marking: Type Number
- Weight: 0.13 grams (approximate)

### Ordering Information (Note 2)

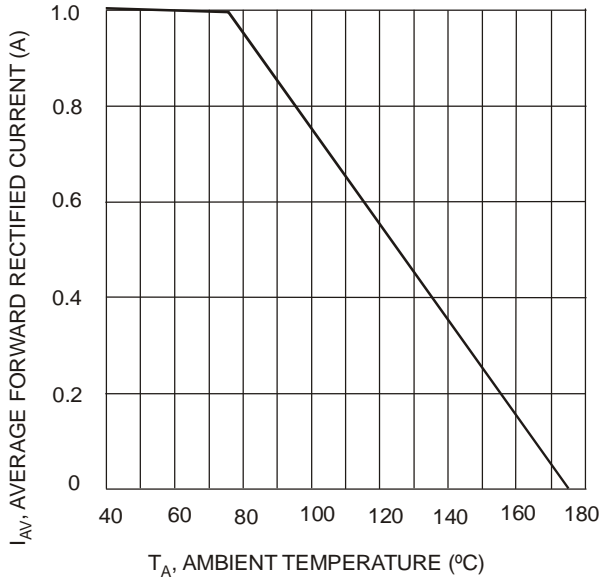
| Device | Packaging | Shipping                |
|--------|-----------|-------------------------|
| D1G-T  | T-1       | 5K/Tape & Reel, 13-inch |
| D2G-T  | T-1       | 5K/Tape & Reel, 13-inch |
| D3G-T  | T-1       | 5K/Tape & Reel, 13-inch |
| D4G-T  | T-1       | 5K/Tape & Reel, 13-inch |
| D5G-T  | T-1       | 5K/Tape & Reel, 13-inch |
| D6G-T  | T-1       | 5K/Tape & Reel, 13-inch |
| D7G-T  | T-1       | 5K/Tape & Reel, 13-inch |

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

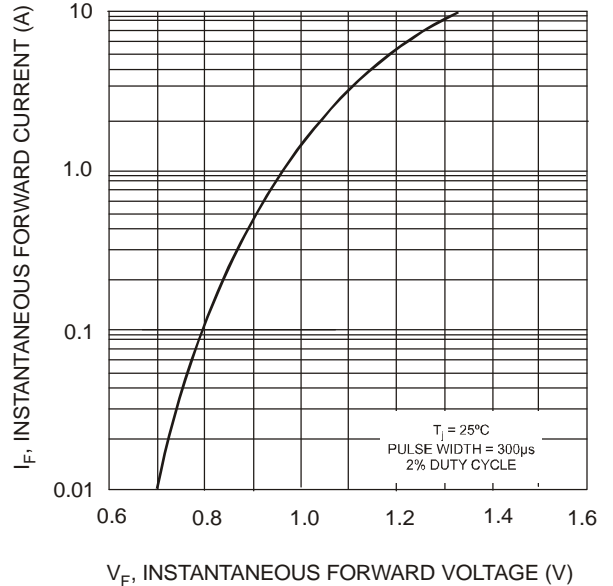
Single phase, half wave, 60Hz, resistive or inductive load.  
For capacitive load, derate current by 20%.

| Characteristic  | Symbol                            | D1G         | D2G | D3G | D4G | D5G | D6G | D7G  | 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 | 560 | 700  | V    |
| Average Rectified Output Current (Note 3)   | I <sub>O</sub>                    | 1.0         |     |     |     |     |     |      | A    |
| Non-Repetitive Peak Forward Surge Current<br>8.3ms Single half sine-wave superimposed on rated load | I <sub>FSM</sub>                  | 30          |     |     |     |     |     |      | A    |
| Forward Voltage   | V <sub>FM</sub>                   | 1.0         |     |     |     |     |     |      | V    |
| Peak Reverse Current  | I <sub>RM</sub>                   | 5.0         |     |     |     |     |     |      | μA   |
| at Rated DC Blocking Voltage  |                                   | 50          |     |     |     |     |     |      |      |
| Typical Reverse Recovery Time (Note 4)  | t <sub>rr</sub>                   | 2.0         |     |     |     |     |     |      | μs   |
| Typical Total Capacitance (Note 5)  | C <sub>T</sub>                    | 8.0         |     |     |     |     |     |      | pF   |
| Typical Thermal Resistance Junction to Ambient  | R <sub>θJA</sub>                  | 100         |     |     |     |     |     |      | °C/W |
| Operating and Storage Temperature Range   | T <sub>J</sub> , T <sub>STG</sub> | -65 to +150 |     |     |     |     |     |      | °C   |

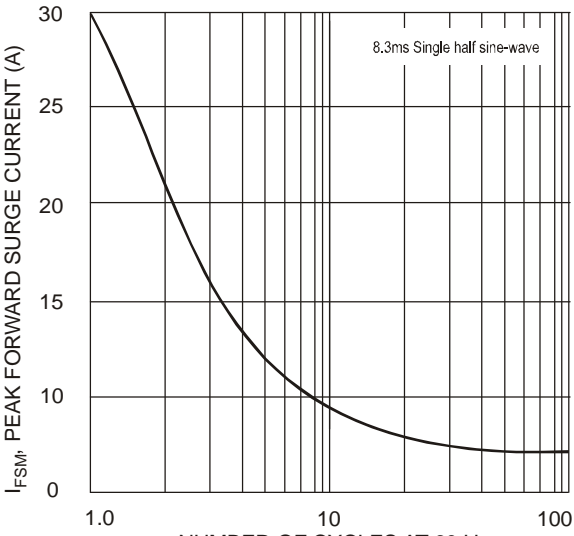
- Notes:
1. EU Directive 2002/95/EC (RoHS). All applicable RoHS exemptions applied, see EU Directive 2002/95/EC Annex Notes
  2. For packaging details, visit our website at <http://www.diodes.com>.
  3. Valid provided that leads are maintained at ambient temperature at a distance of 9.5mm from the case.
  4. Measured with I<sub>F</sub> = 0.5A, I<sub>R</sub> = 1A, I<sub>rr</sub> = 0.25A.
  5. Measured at 1.0MHz and applied reverse voltage of 4.0V DC.



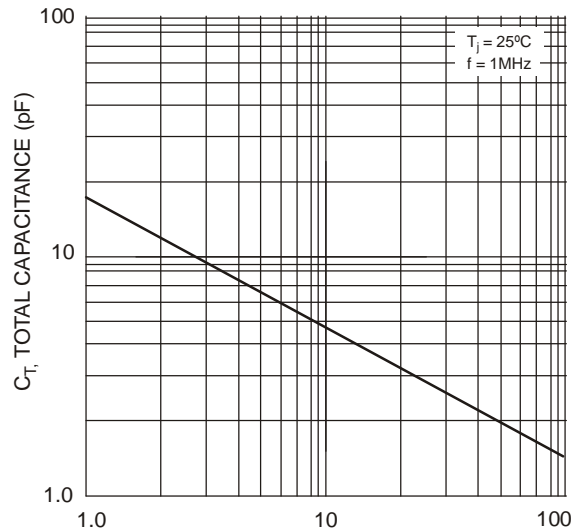
$T_A$ , AMBIENT TEMPERATURE (°C)  
Fig. 1 Forward Current Derating Curve



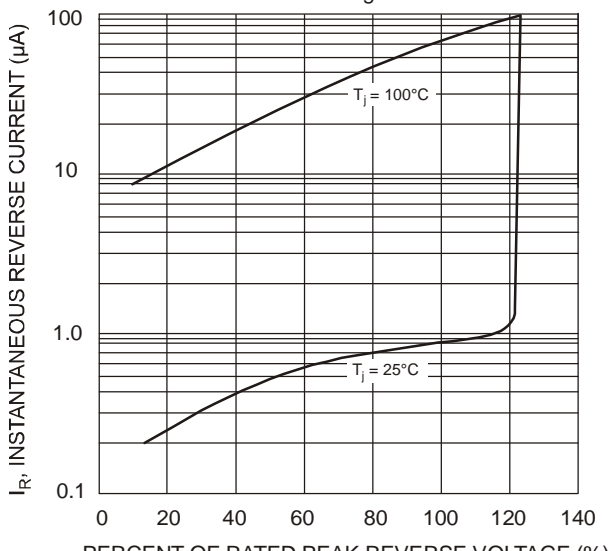
$V_F$ , INSTANTANEOUS FORWARD VOLTAGE (V)  
Fig. 2 Typical Forward Characteristics



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

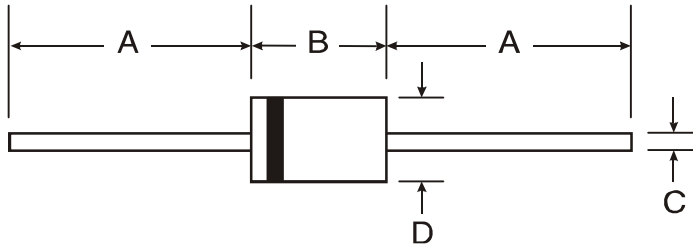


$V_R$ , REVERSE VOLTAGE (V)  
Fig. 4 Typical Total Capacitance



PERCENT OF RATED PEAK REVERSE VOLTAGE (%)  
Fig. 5 Typical Reverse Characteristics

## Package Outline Dimensions



| T-1                  |       |      |
|----------------------|-------|------|
| Dim                  | Min   | Max  |
| A                    | 25.40 | —    |
| B                    | 2.60  | 3.20 |
| C                    | 0.53  | 0.64 |
| D                    | 2.20  | 2.60 |
| All Dimensions in mm |       |      |

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