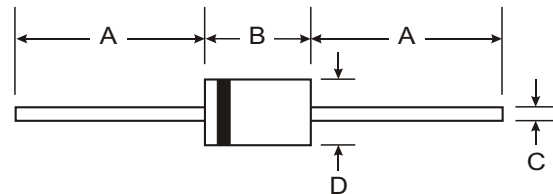



### Features

- Glass Passivated Die Construction
- High Current Capability and Low Forward Voltage Drop
- Surge Overload Rating to 30A Peak
- Lead Free Finish, RoHS Compliant (Note 4)



### Mechanical Data

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

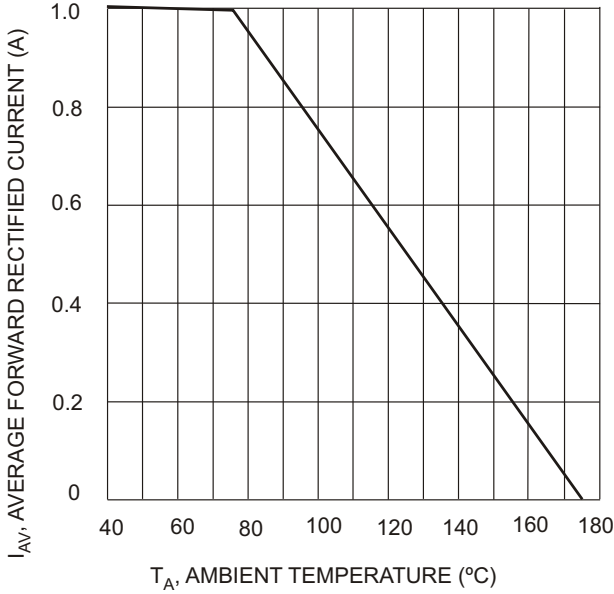
T-1		
Dim	Min	Max
A	25.40	
B	2.60	3.20
C	0.53	0.64
D	2.20	2.60
All Dimensions in mm		

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

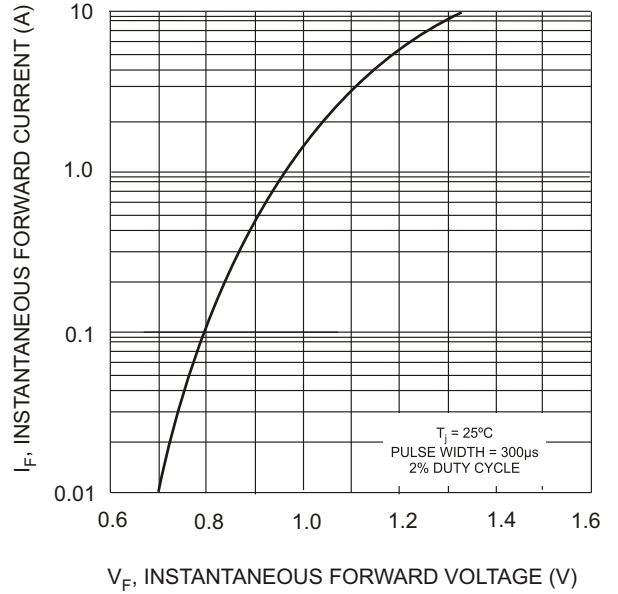
Single phase, half wave, 60Hz, resistive or inductive load.  
For capacitive load, derate current by 20%.

Characteristic	Symbol	D1G	D2G	D3G	D4G	D5G	D6G	D7G	Unit
Peak Repetitive Reverse Voltage Working Peak Reverse Voltage DC Blocking Voltage	V <sub>RRM</sub> V <sub>RWM</sub> 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	560	700	V
Average Rectified Output Current (Note 1) @ T <sub>A</sub> = 75 C	I <sub>O</sub>	1.0							A
Non-Repetitive Peak Forward Surge Current 8.3ms Single half sine-wave superimposed on rated load	I <sub>FSM</sub>	30							A
Forward Voltage @ I <sub>F</sub> = 1.0A	V <sub>FM</sub>	1.0							V
Peak Reverse Current @ T <sub>A</sub> = 25 C at Rated DC Blocking Voltage @ T <sub>A</sub> = 100 C	I <sub>RM</sub>	5.0 50							A
Reverse Recovery Time (Note 3)	t <sub>rr</sub>	2.0							s
Typical Total Capacitance (Note 2)	C <sub>T</sub>	8.0							pF
Typical Thermal Resistance Junction to Ambient	R <sub>JA</sub>	100							C/W
Operating and Storage Temperature Range	T <sub>j</sub> , T <sub>STG</sub>	-65 to +150							C

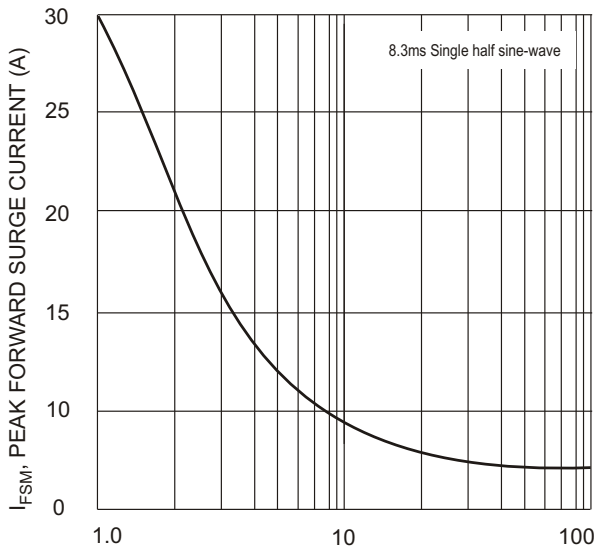
- Notes:
- Valid provided that leads are maintained at ambient temperature at a distance of 9.5mm from the case.
  - Measured at 1.0MHz and applied reverse voltage of 4.0V DC.
  - Measured with I<sub>F</sub> = 0.5A, I<sub>R</sub> = 1A, I<sub>rr</sub> = 0.25A.
  - RoHS revision 13.2.2003. Glass and High Temperature Solder Exemptions Applied, see *EU Directive Annex Notes 5 and 7*.



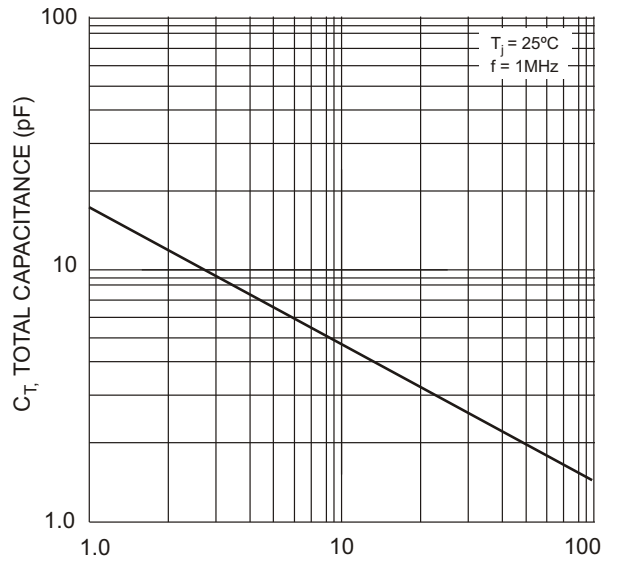
$T_A$ , AMBIENT TEMPERATURE (°C)  
Fig. 1 Forward Current Derating Curve



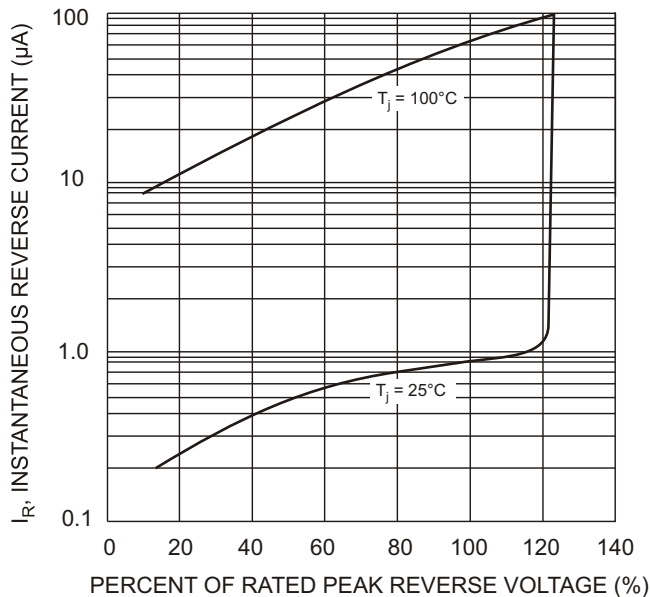
$V_F$ , INSTANTANEOUS FORWARD VOLTAGE (V)  
Fig. 2 Typical Forward Characteristics



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



## Ordering Information (Note 5)

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

Notes: 5. For packaging details, visit our website at <http://www.diodes.com/datasheets/ap02008.pdf>.

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