DIOTEC ELECTRONICS CORP.
18020 Hobart Blvd., Unit B
Gardena, CA 90248 U.S.A
Tel.: (310) 767-1052 Fax: (310) 767-7958

Data Sheet No. GPDG-101-1B

1 AMP HIGH RELIABILITY SILICON DIODES

FEATURES

- **PROPRIETARY *SOFT GLASS*® JUNCTION PASSIVATION FOR SUPERIOR RELIABILITY AND PERFORMANCE**
- **VOID FREE VACUUM DIE SOLDERING FOR MAXIMUM MECHANICAL STRENGTH AND HEAT DISSIPATION (Solder Voids: Typical ≤ 2%, Max. ≤ 10% of Die Area)**
- **EXTREMELY LOW LEAKAGE AT HIGH TEMPERATURES**
- **LOW FORWARD VOLTAGE DROP**
- **1A at T_A = 75 °C WITH NO THERMAL RUNAWAY**

MECHANICAL DATA

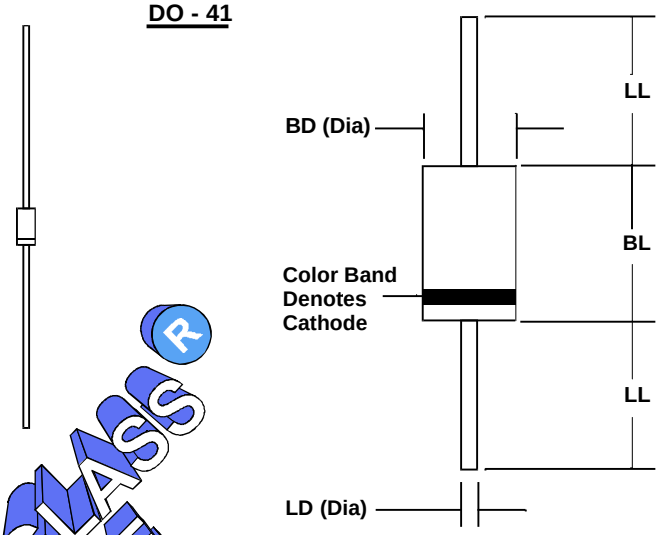
- **Case: JEDEC DO-41, molded silica glass (U/L Flammability Rating 94V-0)**
- **Terminals: Plated axial leads**
- **Soldering: Per MIL-STD 202 Method 208 guaranteed**
- **Polarity: Color band denotes cathode**
- **Mounting Position: Any**
- **Weight: 0.012 Ounces (0.34 Grams)**

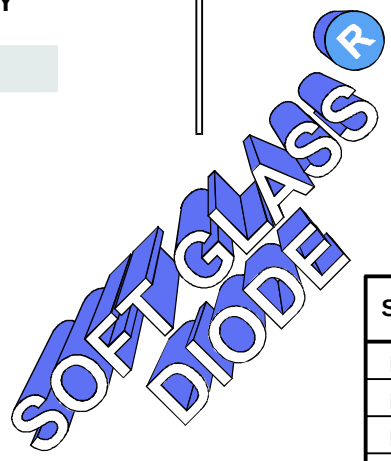
MECHANICAL SPECIFICATION

ACTUAL SIZE OF DO-41 PACKAGE

SERIES GP100 - GP110

DO - 41





Sym	Minimum		Maximum	
	In	mm	In	mm
BL	0.160	4.1	0.205	5.2
BD	0.103	2.6	0.107	2.7
LL	1.00	25.4		
LD	0.028	0.71	0.034	0.86

MAXIMUM RATINGS & ELECTRICAL CHARACTERISTICS

Ratings at 25 °C ambient temperature unless otherwise specified.
Single phase, half wave, 60Hz, resistive or inductive load.
For capacitive loads, derate current by 20%.

PARAMETER (TEST CONDITIONS)	SYMBOL	RATINGS							UNITS
Series Number		GP100	GP101	GP102	GP104	GP106	GP108	GP110	
Maximum DC Blocking Voltage	V_{RM}	50	100	200	400	600	800	1000	VOLTS
Maximum RMS Voltage	V_{RMS}	35	70	140	280	420	560	700	
Maximum Peak Recurrent Reverse Voltage	V_{RRM}	50	100	200	400	600	800	1000	
Average Forward Rectified Current @ T_A = 75 °C, Lead length = 0.375 in. (9.5 mm)	I_O	1							AMPS
Peak Forward Surge Current (8.3 mSec single half sine wave superimposed on rated load)	I_{FSM}	50							
Maximum Forward Voltage at 1 Amp DC	V_{FM}	1							VOLTS
Maximum Full Cycle Reverse Current @ T_L = 75 °C (Note 1)	$I_{RM(AV)}$	5							µA
Maximum Average DC Reverse Current @ T_A = 25°C At Rated DC Blocking Voltage @ T_A = 125°C	I_{RM}	0.5 30.0							
Typical Thermal Resistance, Junction to Ambient (Note 1)	$R_{\theta JA}$	30							°C/W
Typical Junction Capacitance (Note 2)	C_J	10							pF
Operating and Storage Temperature Range	T_J, T_{STG}	-65 to +175							°C

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NOTES: (1) Lead length = 0.375 in. (9.5 mm)
(2) Measured at 1MHz & applied reverse voltage of 4 volts

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RATING & CHARACTERISTIC CURVES FOR SERIES GP100 - GP110

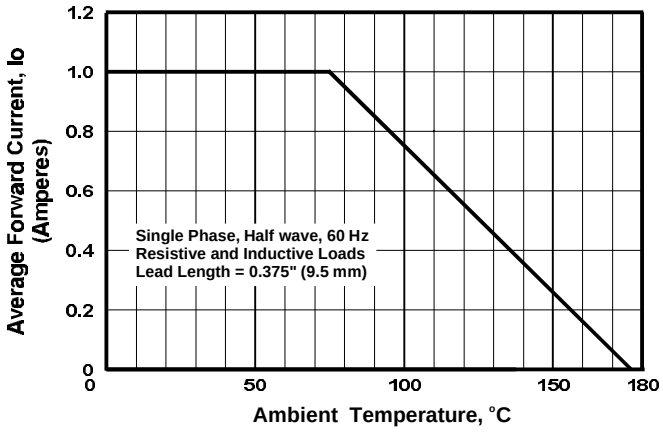

FIGURE 1. FORWARD CURRENT DERATING CURVE

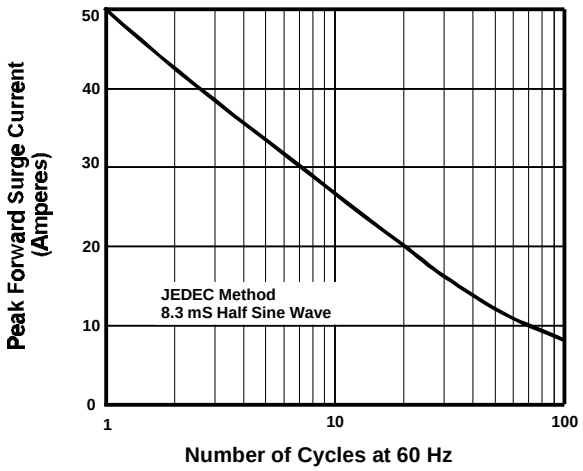

FIGURE 2. MAXIMUM NON-REPETITIVE SURGE CURRENT

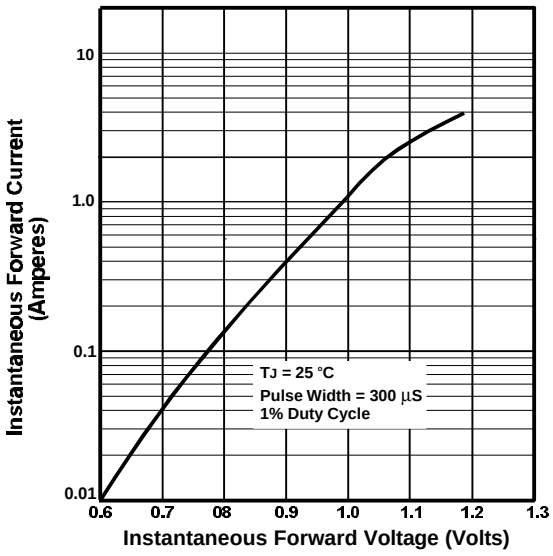

FIGURE 3. TYPICAL FORWARD CHARACTERISTIC PER DIODE

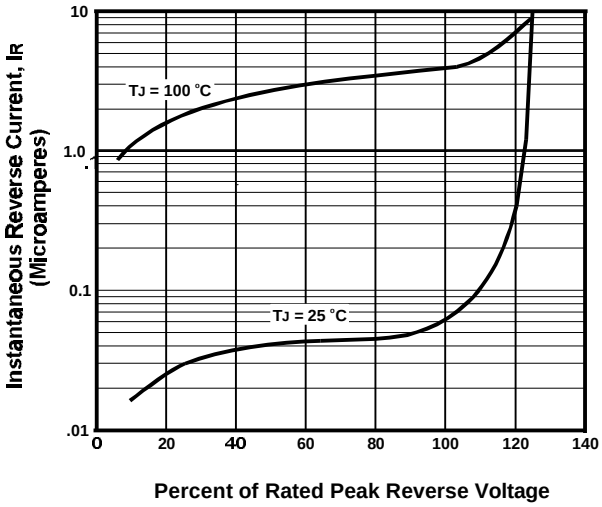

FIGURE 4. TYPICAL REVERSE CHARACTERISTICS

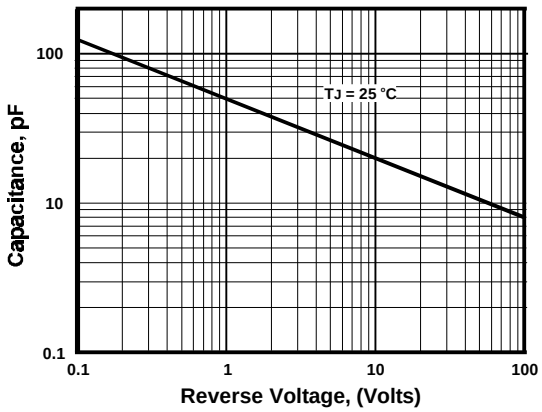

FIGURE 5. TYPICAL JUNCTION CAPACITANCE PER DIODE

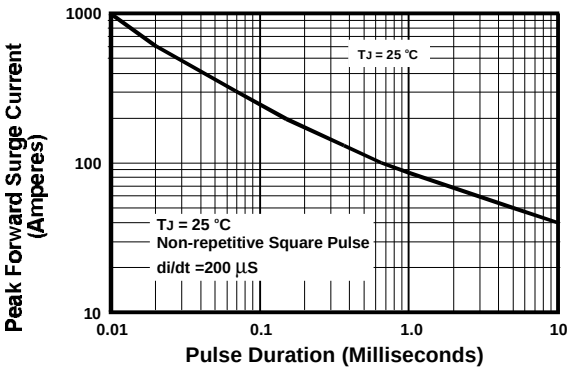

FIGURE 6. PEAK FORWARD SURGE CURRENT

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