

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. FSPD-100-1B

1 AMP HIGH RELIABILITY FAST RECOVERY 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 $\leq 2\%$, Max. $\leq 10\%$ of Die Area)
- **EXTREMELY LOW LEAKAGE AT HIGH TEMPERATURES**
- **LOW FORWARD VOLTAGE DROP**
- **1A at $T_A = 75^\circ\text{C}$ WITH NO THERMAL RUNAWAY**

MECHANICAL DATA

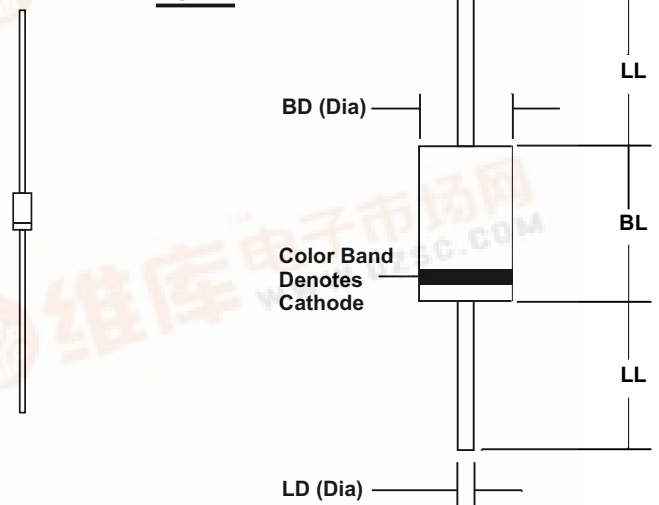
- Case: JEDEC DO-41, molded epoxy (U/L Flammability Rating 94V-0)
- Terminals: Plated axial leads
- Soldering: Per MIL-STD 202E Method 208 guaranteed
- Polarity: Color band denotes cathode
- Mounting Position: Any
- Weight: 0.012 Ounces (0.34 Grams)

MECHANICAL SPECIFICATION

ACTUAL SIZE OF
DO-41 PACKAGE

SERIES RGP100 - RGP110

DO - 41

**RoHS COMPLIANT**

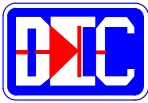
Sym	Minimum		Maximum	
	In	mm	In	mm
BL	0.160	4.1	0.205	5.2
BD	0.103	2.6	0.107	2.7
LL	1.00	25.4		
LD	0.028	0.71	0.034	0.86

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		RGP 100	RGP 101	RGP 102	RGP 104	RGP 106	RGP 108	RGP 110		
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}	1.2								VOLTS
Maximum Reverse Recovery Time (I _F =0.5A, I _R =1A, I _{RR} =0.25A)	T _{RR}	150					250	500 (Note 3)		nS
Maximum Average DC Reverse Current @ T _A = 25°C At Rated DC Blocking Voltage @ T _A = 100°C	I _{RM}	0.5 25								μA
Typical Thermal Resistance, Junction to Ambient (Note 1)	R _{θJA}	55								°C/W
Typical Junction Capacitance (Note 2)	C _J	15								pF
Operating and Storage Temperature Range	T _J , T _{STG}	-65 to +175								°C

NOTES: (1) Lead length = 0.375 in. (9.5 mm)
(2) Measured at 1MHz & applied reverse voltage of 4 volts
(3) 300nS available - consult factory



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RATING & CHARACTERISTIC CURVES FOR SERIES RGP100 - RGP110

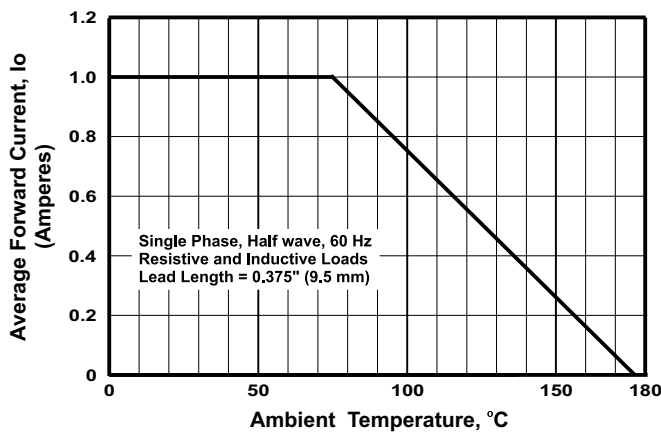


FIGURE 1. FORWARD CURRENT DERATING CURVE

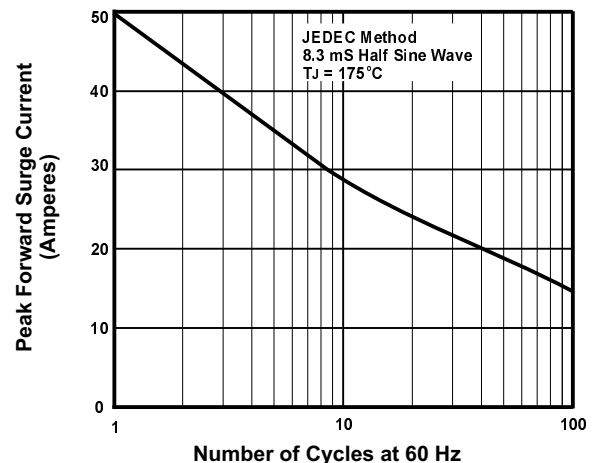


FIGURE 2. MAXIMUM NON-REPETITIVE SURGE CURRENT

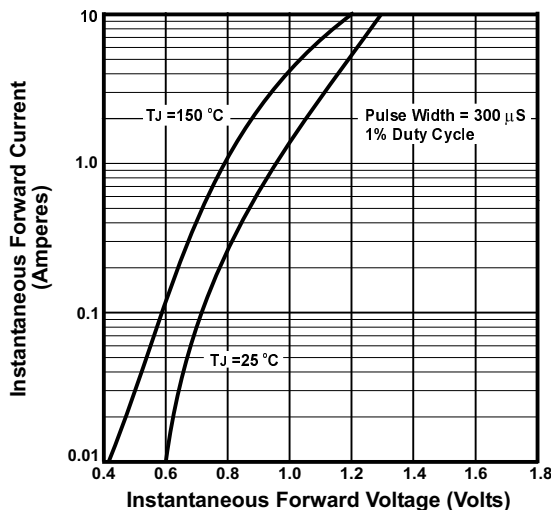


FIGURE 3. TYPICAL FORWARD CHARACTERISTIC

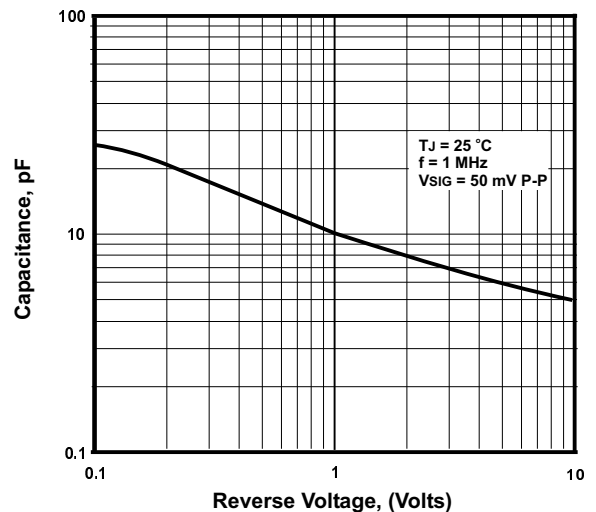


FIGURE 4. TYPICAL JUNCTION CAPACITANCE

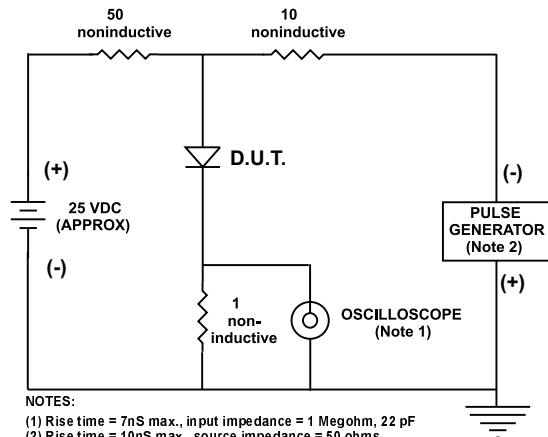


FIGURE 5. REVERSE RECOVERY TEST SETUP AND TIME CHARACTERISTIC