

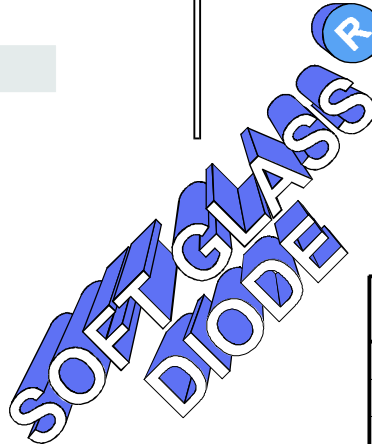
## 1 AMP HIGH RELIABILITY FAST RECOVERY DIODES

### FEATURES

- Proprietary "Soft Glass®" P/N junction passivation
- Void-free chip soldering
- Extremely low leakage at high temperatures
- Ideal for continuous high temperature applications
- High surge current capability
- Low forward voltage drop
- 1A at  $T_A = 75^\circ\text{C}$  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 202E Method 208 guaranteed
- Polarity: Color band denotes cathode
- Mounting Position: Any
- Weight: 0.012 Ounces (0.34 Grams)

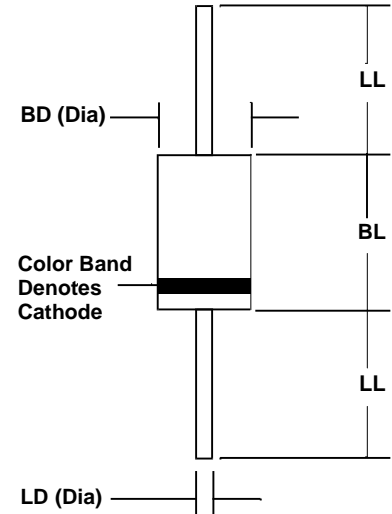


### MECHANICAL SPECIFICATION

ACTUAL SIZE OF  
DO-41 PACKAGE

**SERIES RGP100 - RGP110**

**DO - 41**



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

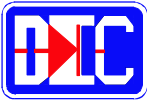
### MAXIMUM RATINGS & ELECTRICAL CHARACTERISTICS

Ratings at  $25^\circ\text{C}$  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 <sub>RM</sub>	50	100	200	400	600	800	1000	VOLTS	
Maximum RMS Voltage	V <sub>RMS</sub>	35	70	140	280	420	560	700		
Maximum Peak Recurrent Reverse Voltage	V <sub>RRM</sub>	50	100	200	400	600	800	1000		
Average Forward Rectified Current @ T <sub>A</sub> = 75 °C, Lead length = 0.375 in. (9.5 mm)	I <sub>o</sub>	1								AMPS
Peak Forward Surge Current ( 8.3 mSec single half sine wave superimposed on rated load)	I <sub>FSM</sub>	50								
Maximum Forward Voltage at 1 Amp DC	V <sub>FM</sub>	1.2								VOLTS
Maximum Reverse Recovery Time (I <sub>F</sub> =0.5A, I <sub>R</sub> =1A, I <sub>RR</sub> =0.25A)	T <sub>RR</sub>	150					250	500 (Note 3)		nS
Maximum Average DC Reverse Current @ T <sub>A</sub> = 25° C At Rated DC Blocking Voltage @ T <sub>A</sub> = 100° C	I <sub>RM</sub>	0.5 25								μA
Typical Thermal Resistance, Junction to Ambient (Note 1)	R <sub>θJA</sub>	55								°C/W
Typical Junction Capacitance (Note 2)	C <sub>J</sub>	15								pF
Operating and Storage Temperature Range	T <sub>J</sub> , T <sub>STG</sub>	-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

4.97f5pd100



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### RATING & CHARACTERISTIC CURVES FOR SERIES RGP100 - RGP110

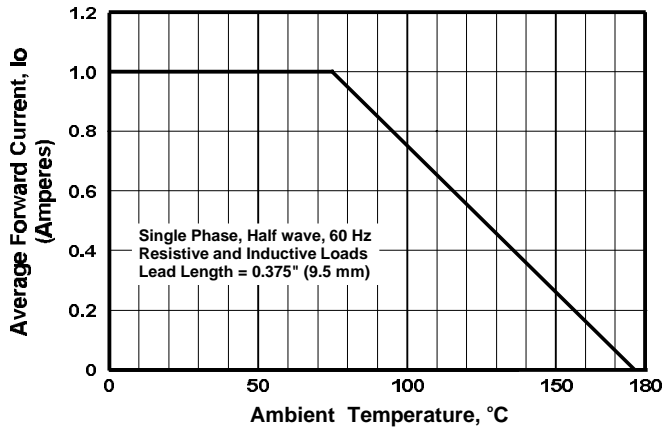


FIGURE 1. FORWARD CURRENT DERATING CURVE

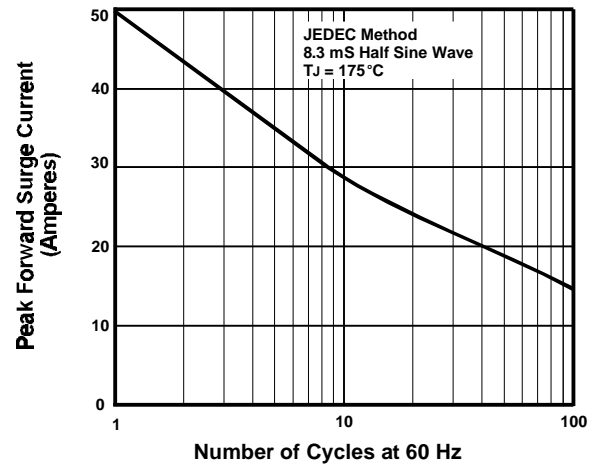


FIGURE 2. MAXIMUM NON-REPETITIVE SURGE CURRENT

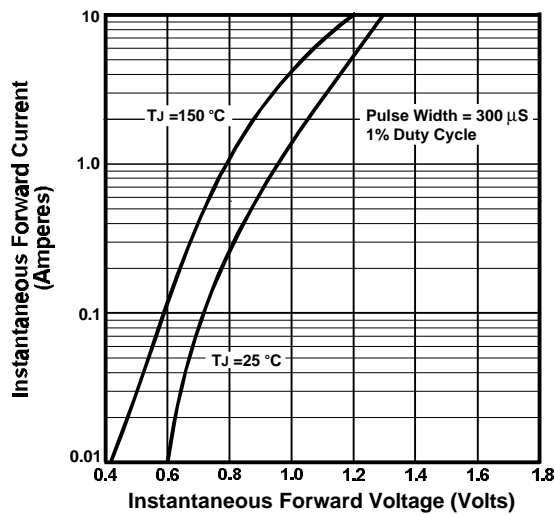


FIGURE 3. TYPICAL FORWARD CHARACTERISTIC

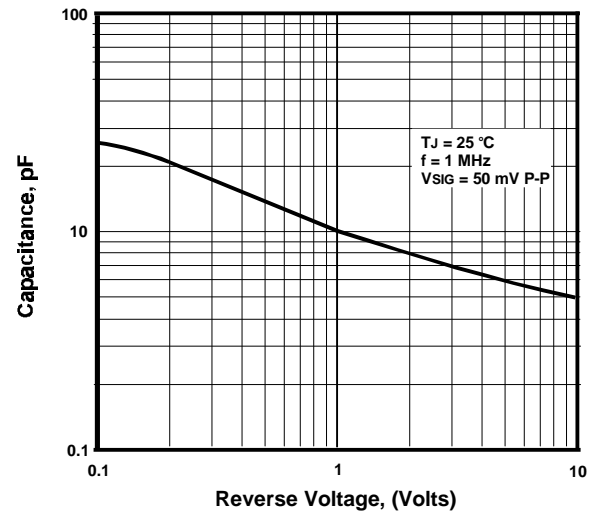


FIGURE 4. TYPICAL JUNCTION CAPACITANCE

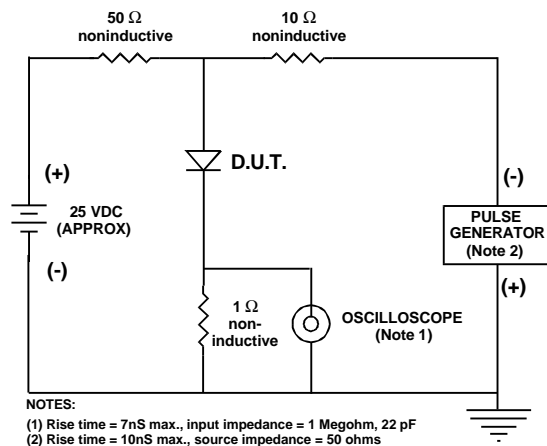


FIGURE 5. REVERSE RECOVERY TEST SETUP AND TIME CHARACTERISTIC