

## 6 AMP FAST RECOVERY SILICON DIODES

### FEATURES

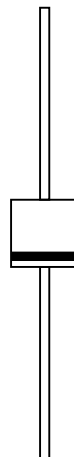
- Low cost
- Low leakage
- Low forward voltage drop
- High current capacity
- Fast switching for high efficiency
- **RoHS COMPLIANT**

### MECHANICAL DATA

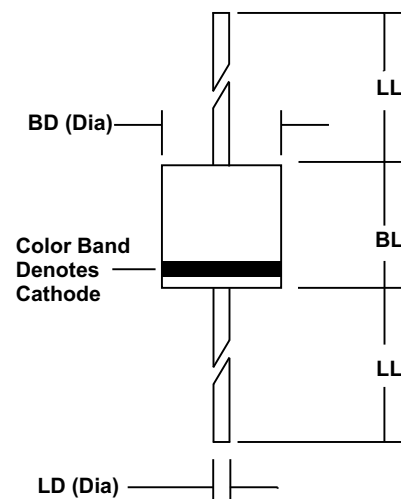
- Case: Molded epoxy (U/L Flammability Rating 94V-0)
- Terminals: Plated axial leads
- Soldering: Per MIL-STD 202 Method 208 guaranteed
- Polarity: Color band denotes cathode
- Mounting Position: Any
- Weight: 0.07 Ounces (2.1 Grams)

### MECHANICAL SPECIFICATION

ACTUAL SIZE OF  
RP600 PACKAGE



SERIES RP600 - RP610



Sym	Minimum		Maximum	
	In	mm	In	mm
BL	0.340	8.6	0.360	9.1
BD	0.340	8.6	0.360	9.1
LL	1.00	25.4		
LD	0.048	1.2	0.052	1.3

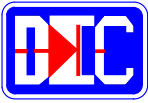
### MAXIMUM RATINGS & ELECTRICAL CHARACTERISTICS

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		RP600	RP601	RP602	RP604	RP606	RP608	RP610	
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> = 60 °C, Lead length = 0.375 in. (9.5 mm)	I <sub>O</sub>	6							AMPS
Peak Forward Surge Current ( 8.3 mSec single half sine wave superimposed on rated load)	I <sub>FSM</sub>	300							
Maximum Forward Voltage at 6 Amps DC	V <sub>FM</sub>	1.3							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>	10 200							μA
Typical Junction Capacitance (Note 2)	C <sub>J</sub>	100							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) 300 nS available - consult with factory

01.00/fsdp601



## 6 AMP FAST RECOVERY DIODES

### RATING & CHARACTERISTIC CURVES FOR SERIES RP600 - RP610

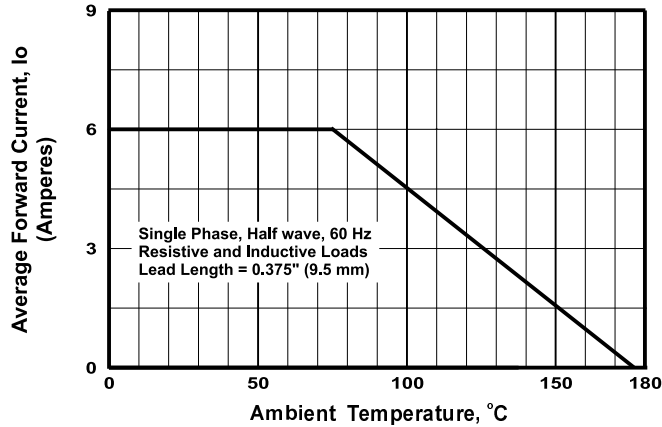


FIGURE 1. FORWARD CURRENT DERATING CURVE

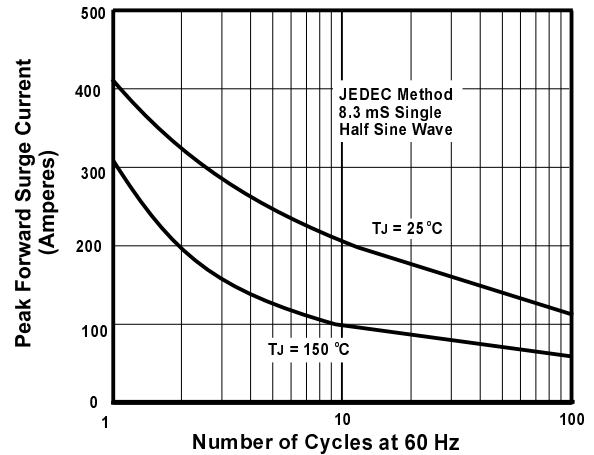


FIGURE 2. MAXIMUM NON-REPETITIVE SURGE CURRENT

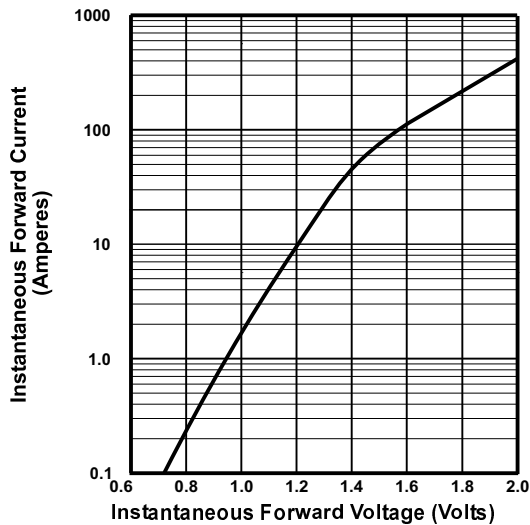


FIGURE 3. TYPICAL FORWARD CHARACTERISTICS

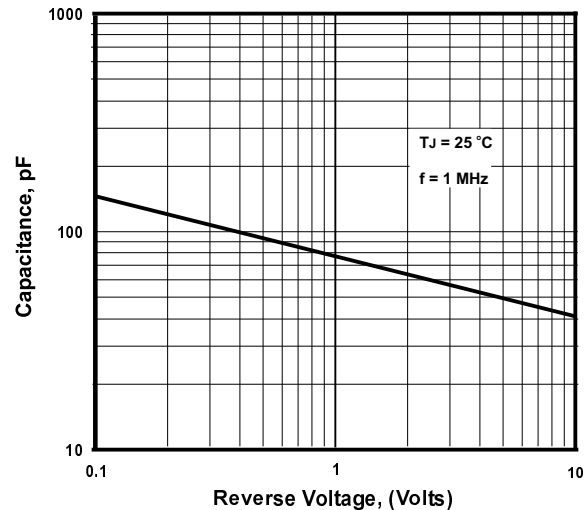


FIGURE 4. TYPICAL JUNCTION CAPACITANCE

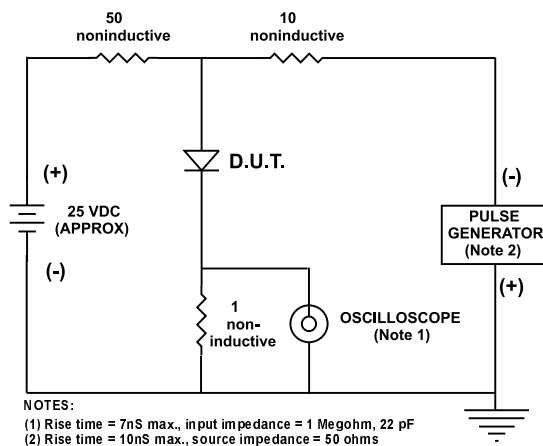


FIGURE 5. REVERSE RECOVERY TEST SETUP AND TIME CHARACTERISTIC