

# 1 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

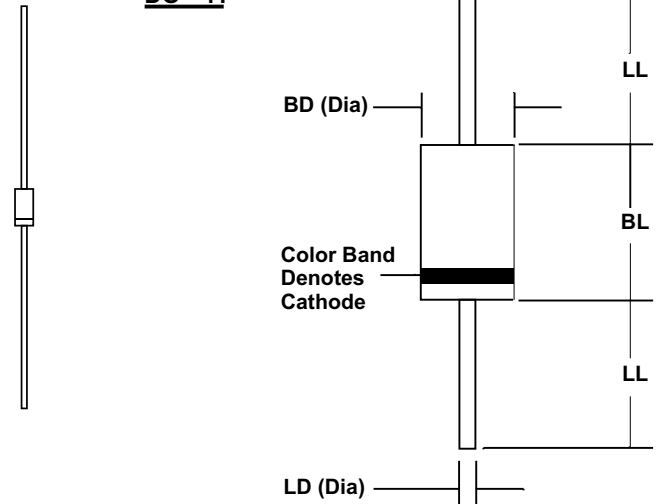
- Case: JEDEC DO-41, molded epoxy (UL Flammability Rating 94V-0)
- Terminals: Plated axial leads
- Soldering: Per MIL-STD 202 Method 208 guaranteed
- Polarity: Color band denotes cathode
- Mounting Position: Any
- Weight: 0.012 Ounces (0.34 Grams)

## MECHANICAL SPECIFICATION

ACTUAL SIZE OF  
DO-41 PACKAGE

**SERIES RP100 - RP110**

**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

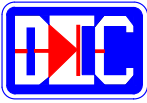
## MAXIMUM RATINGS & ELECTRICAL CHARACTERISTICS

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
		RP100	RP101	RP102	RP104	RP106	RP108	RP110	
Series Number									
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>	30							
Maximum Forward Voltage at 1 Amp 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 At Rated DC Blocking Voltage	I <sub>RM</sub>	5 50							μA
Typical Thermal Resistance, Junction to Ambient (Note 1)	R <sub>θJA</sub>	50							°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) Thermal resistance junction to ambient with diode mounted on PC Board and lead lengths = 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 RP100 - RP110

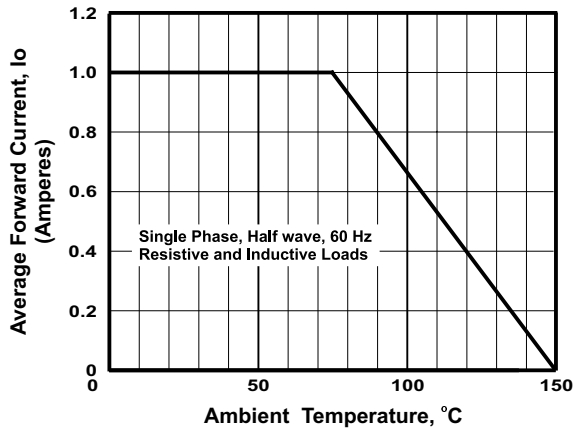


FIGURE 1. FORWARD CURRENT DERATING CURVE

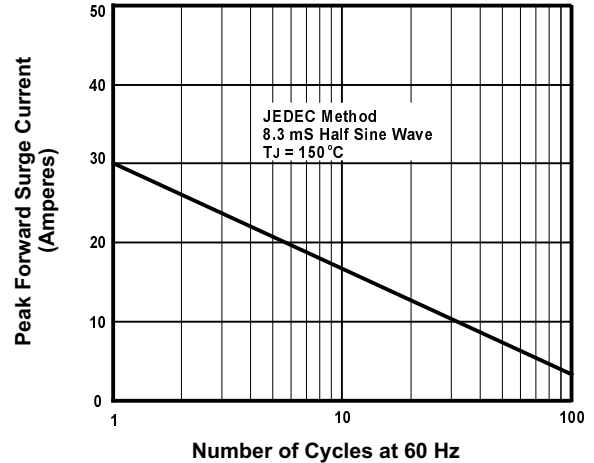


FIGURE 2. MAXIMUM NON-REPETITIVE SURGE CURRENT

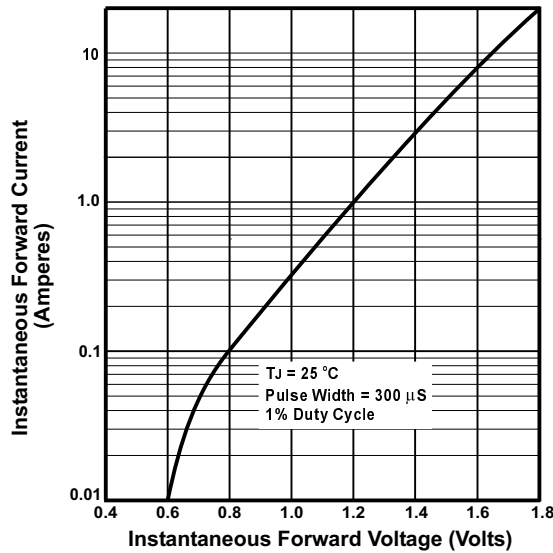


FIGURE 3. TYPICAL FORWARD CHARACTERISTIC

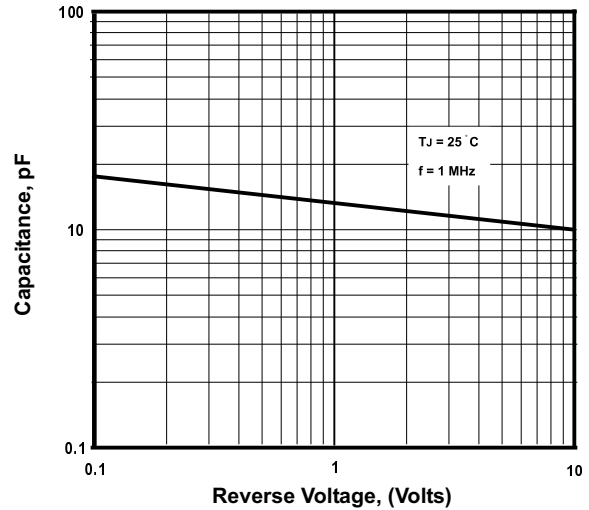


FIGURE 4. TYPICAL JUNCTION CAPACITANCE

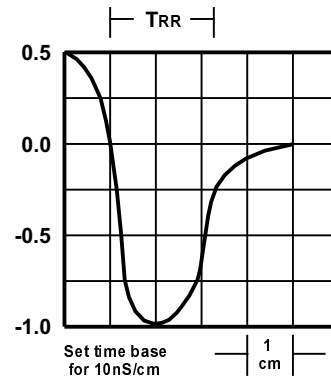
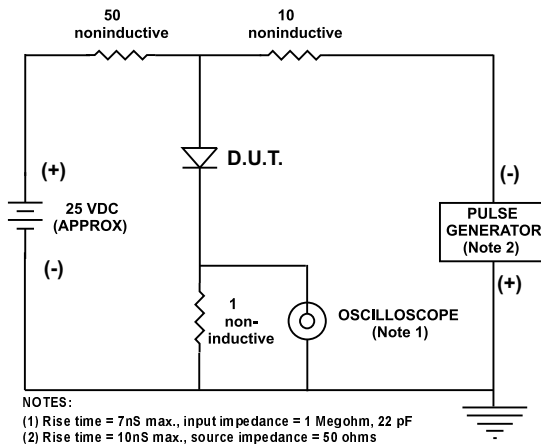


FIGURE 5. REVERSE RECOVERY TEST SETUP AND TIME CHARACTERISTIC