

# 1 AMP MINIATURE BRIDGE RECTIFIERS

## FEATURES

- PRV Ratings from 50 to 1000 Volts
- Surge overload rating to 50 Amps peak
- Reliable low cost molded plastic construction
- Ideal for printed circuit board applications

**UL RECOGNIZED - FILE #E124962**

**RoHS COMPLIANT**

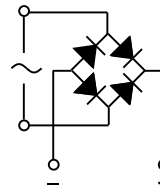
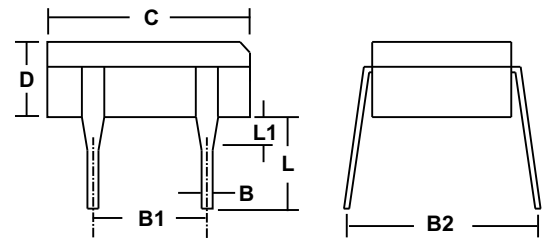
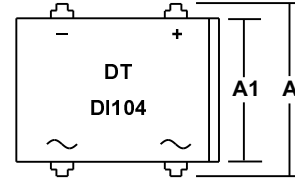
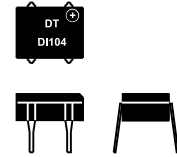
## MECHANICAL DATA

- Case: Molded Epoxy (UL Flammability Rating 94V-0)
- Terminals: Rectangular pins
- Soldering: Per MIL-STD 202 Method 208 guaranteed
- Polarity: Marked on case
- Mounting Position: Any
- Weight: 0.05 Ounces (1.3 Grams)

## MECHANICAL SPECIFICATION

ACTUAL SIZE OF THE DI PACKAGE

SERIES DI100 - DI110



Sym	Minimum		Maximum	
	in	mm	in	mm
A	0.290	7.4	0.310	7.9
A1	0.245	6.2	0.255	6.5
B	0.016	0.41	0.020	0.51
B1	0.195	5.0	0.205	5.2
B2	0.300	7.6	0.350	8.9
C	0.355	9.3	0.365	9.3
D	0.125	3.2	0.135	3.4
L	0.155	3.9	0.165	4.3
L1	0.060*	1.5*		

\* This dimension is "Typical".

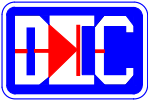
## MAXIMUM RATINGS & ELECTRICAL CHARACTERISTICS

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
		DI100	DI101	DI102	DI104	DI106	DI108	DI110	
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> = 40° C	I <sub>O</sub>	1							AMPS
Peak Forward Surge Current. Single 60Hz Half-Sine Wave Superimposed on Rated Load (JEDEC Method).	I <sub>FSM</sub>	50							
Maximum Forward Voltage (Per Diode) at 1 Amp DC	V <sub>FM</sub>	1.1							VOLTS
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>	5.0 0.5							μA mA
Typical Thermal Resistance Junction to Ambient (Note 1) Junction to Lead (Note 1)	R <sub>θJA</sub> R <sub>θJL</sub>	40 15							°C/W
Minimum Insulation Breakdown Voltage (Circuit to Case)	V <sub>ISO</sub>	2400							VOLTS
Operating and Storage Temperature Range	T <sub>J</sub> , T <sub>STG</sub>	-55 to +150							°C

NOTES: (1) Bridge mounted on PC Board with 0.5" sq. (13 mm sq.) copper pads

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## RATING & CHARACTERISTIC CURVES FOR SERIES DI100 - DI110

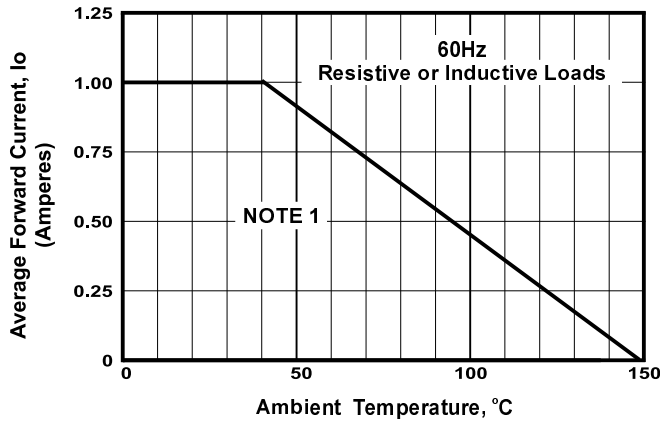


FIGURE 1. FORWARD CURRENT DERATING CURVE

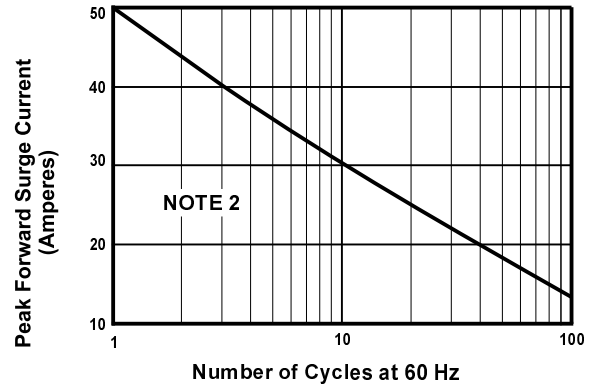


FIGURE 2. MAXIMUM NON-REPETITIVE SURGE CURRENT

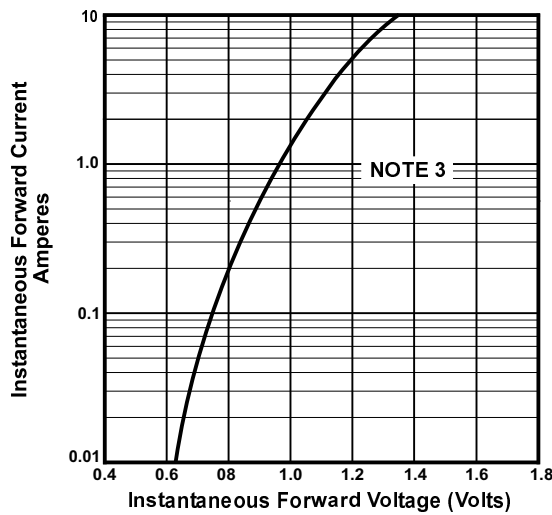


FIGURE 3. TYPICAL FORWARD CHARACTERISTIC PER DIODE

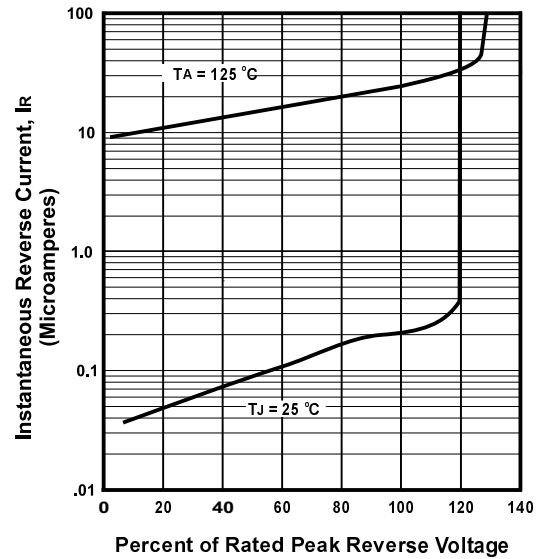


FIGURE 4. TYPICAL REVERSE CHARACTERISTICS

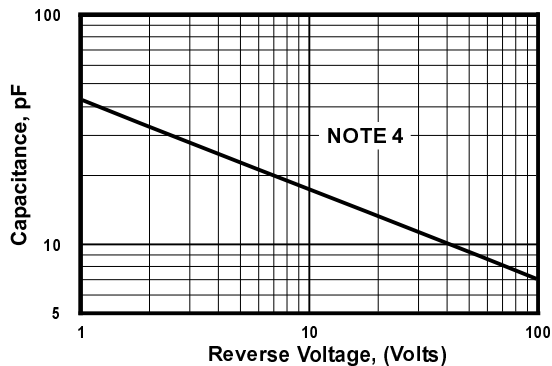


FIGURE 5. TYPICAL JUNCTION CAPACITANCE PER DIODE

### NOTES

- (1) Mounted on PC Board With 0.5" Sq. (13 mm Sq.) Copper Pads And Bridge Lead Length of 0.06" (1.5 mm)
- (2)  $T_J = 150^\circ\text{C}$
- (3)  $T_J = 25^\circ\text{C}$ ; Pulse Width = 300  $\mu\text{Sec}$ , 1% Duty Cycle
- (4)  $T_J = 25^\circ\text{C}$ ;  $f = 1\text{ MHz}$ ;  $V_{\text{sig}} = 50\text{mVp-p}$