

# 1 AMP MINIATURE BRIDGE RECTIFIERS

## FEATURES

- Glass Passivated for high reliability/temperature performance
- PRV Ratings from 50 to 1000 Volts
- Surge overload rating to 30 Amps peak
- Reliable low cost molded plastic construction
- Ideal for printed circuit board applications

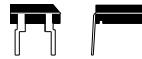
## RoHS COMPLIANT

## 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

## MECHANICAL SPECIFICATION

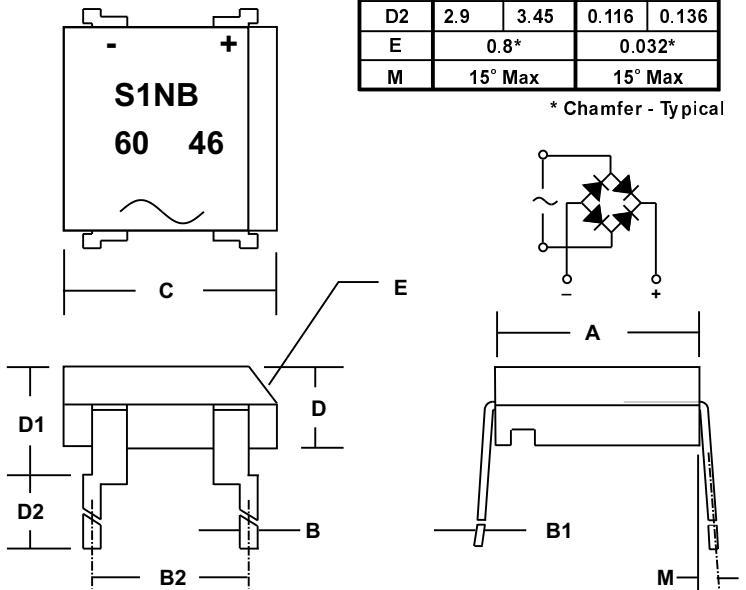
ACTUAL SIZE OF  
MDI PACKAGE



## SERIES S1NB05 - S1NB100

SYM	MILLIMETERS		INCHES	
	MIN	MAX	MIN	MAX
A	6.25	6.767	0.246	0.266
B	0.43	0.69	0.017	0.027
B1	0.127	0.381	0.005	0.015
B2	4.75	5.26	0.187	0.207
C	6.55	7.06	0.258	0.278
D	2.27	2.8	0.09	0.11
D1		3.7		0.146
D2	2.9	3.45	0.116	0.136
E	0.8*		0.032*	
M	15° Max		15° Max	

\* Chamfer - Typical



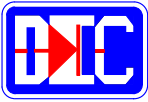
## MAXIMUM RATINGS & ELECTRICAL CHARACTERISTICS

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
		S1NB 05	S1NB 10	S1NB 20	S1NB 40	S1NB 60	S1NB 80	S1NB 100		
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>	1.05								VOLTS
Maximum Average DC Reverse Current @ T <sub>A</sub> = 25 °C @ T <sub>A</sub> = 125 °C	I <sub>RM</sub>	5.0 0.5								A 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. (13mm sq.) copper pads

3.0105100



# 1 AMP MINIATURE BRIDGE RECTIFIERS

## RATING & CHARACTERISTIC CURVES FOR SERIES S1NB05 - S1NB100

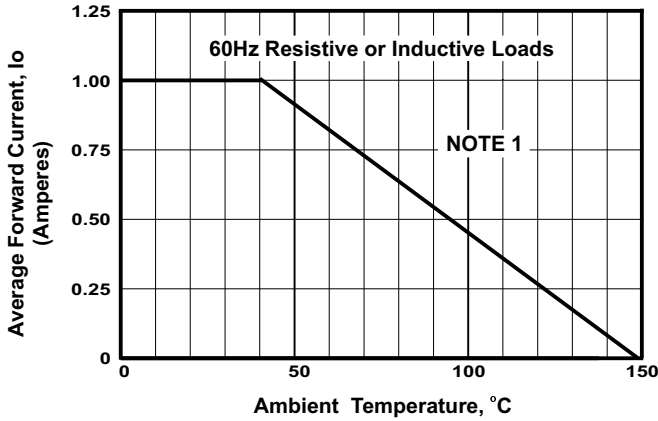


FIGURE 1. FORWARD CURRENT DERATING CURVE

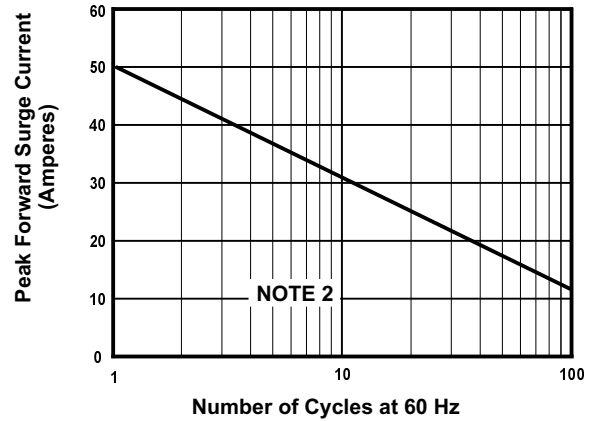


FIGURE 2. MAXIMUM NON-REPETITIVE SURGE CURRENT

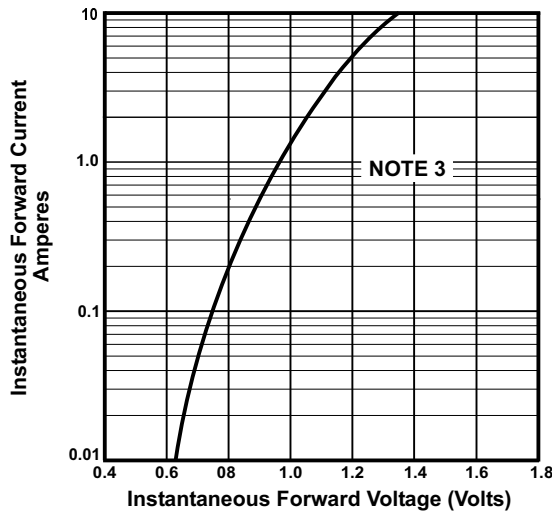


FIGURE 3. TYPICAL FORWARD CHARACTERISTIC PER DIODE

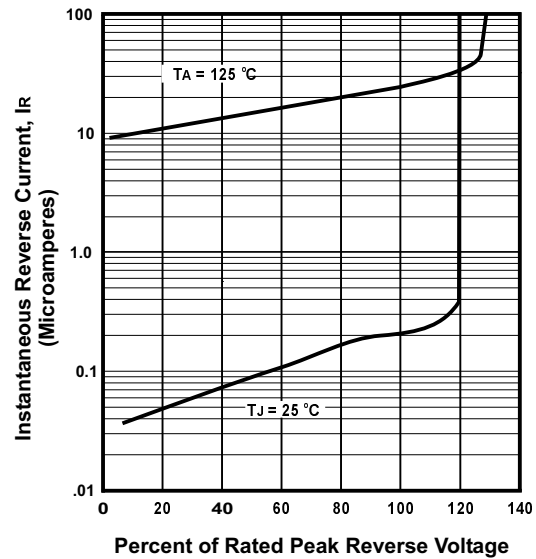


FIGURE 4. TYPICAL REVERSE CHARACTERISTICS

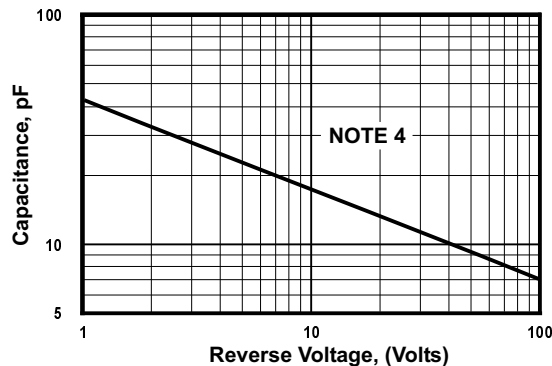


FIGURE 5. TYPICAL JUNCTION CAPACITANCE PER DIODE

### NOTES

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