

3 AMP SCHOTTKY BARRIER RECTIFIERS

FEATURES

- Metal semiconductor junction with guard ring
- Epitaxial Construction
- Low forward voltage drop
- High current capacity
- For use in low voltage, high frequency inverters, free wheeling, and polarity protection applications
- **RoHS COMPLIANT**

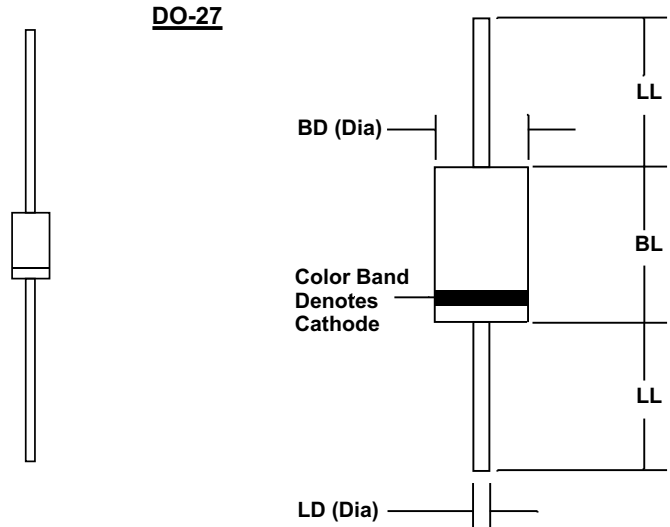
MECHANICAL DATA

- Case: JEDEC DO-27, 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: 0.04 Ounces (1.12 Grams)

MECHANICAL SPECIFICATION

ACTUAL SIZE OF
DO-27 PACKAGE

SERIES 1N5820 - 1N5822



Sym	Minimum		Maximum	
	In	mm	In	mm
BL			0.365	9.28
BD			0.205	5.2
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
		1N5820	1N5821	1N5822	
Series Number		1N5820	1N5821	1N5822	
Maximum DC Blocking Voltage	V _{RM}	20	30	40	VOLTS
Maximum RMS Voltage	V _{RMS}	14	21	28	
Maximum Peak Recurrent Reverse Voltage	V _{RRM}	20	30	40	
Average Forward Rectified Current @ T _L = 90 °C (T _L measured on cathode lead, 1/32 in, from case)	I _O	3			AMPS
Peak Forward Surge Current (8.3 mSec single half sine wave superimposed on rated load)	I _{FSM}	80			
Maximum Forward Voltage at 3 Amps DC	V _{FM}	0.475	0.5	0.525	VOLTS
Maximum Forward Voltage at 9.4 Amps DC	V _{FM}	0.85	0.9	0.95	
Maximum Average DC Reverse Current @ T _A = 25°C At Rated DC Blocking Voltage (Note 1) @ T _A = 100°C	I _{RM}	2 20			mA
Typical Thermal Resistance, Junction to Ambient	R _{θJA}	28			°C/W
Typical Junction Capacitance (Note 2)	C _J	110			pF
Junction Operating Temperature Range	T _J	-65 to +125			°C
Storage Temperature Range	T _{STG}	-65 to +150			

NOTES: (1) Measured at pulse width 300 μSec & 2.0% duty cycle.
 (2) Measured at 1MHz & applied reverse voltage of 4 volts.

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RATING & CHARACTERISTIC CURVES FOR SERIES 1N5820 - 1N5822

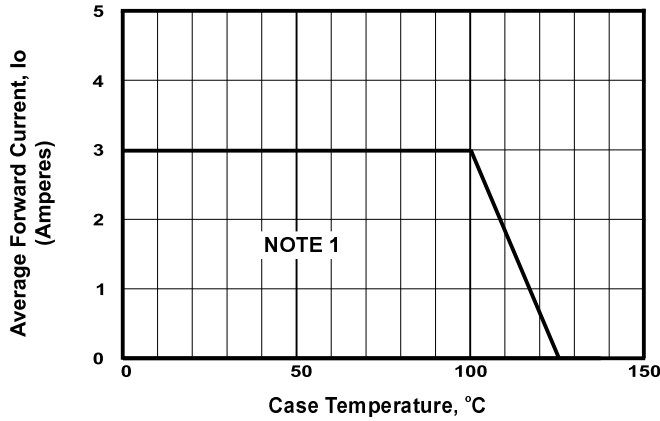


FIGURE 1. FORWARD CURRENT DERATING CURVE

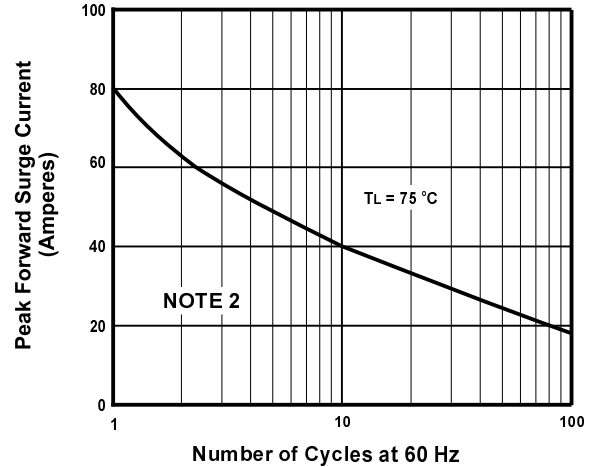


FIGURE 2. MAXIMUM NON-REPETITIVE SURGE CURRENT

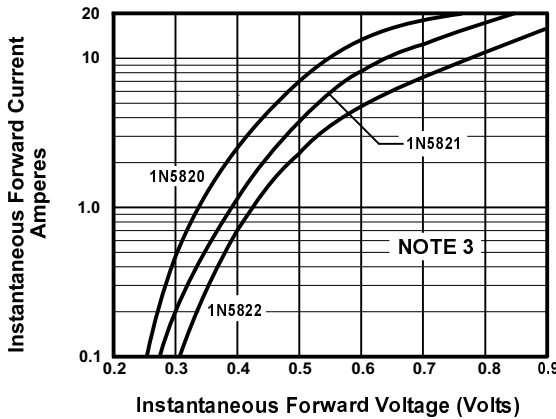


FIGURE 3. TYPICAL FORWARD CHARACTERISTICS

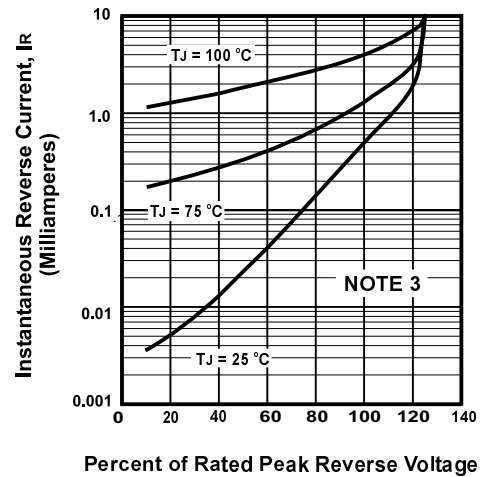


FIGURE 4. TYPICAL REVERSE CHARACTERISTICS

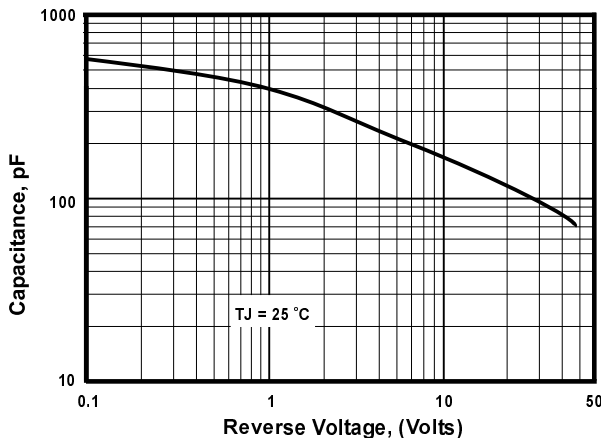


FIGURE 5. TYPICAL JUNCTION CAPACITANCE

NOTES

- (1) Single Phase, Half Wave, 60 Hz, Resistive or Inductive Load, 0.375" (9mm) Lead Length
- (2) JEDEC Method, 8.3 mSec. Single Half Sine Wave
- (3) $T_J = 25^\circ\text{C}$, Pulse Width = 300 μSec , 2.0% Duty Cycle