

1 AMP SCHOTTKY BARRIER RECTIFIERS

FEATURES

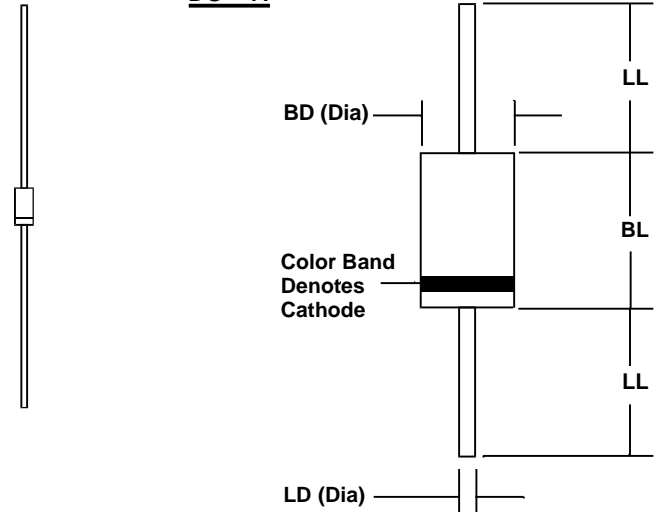
- Metal semiconductor junction with guard ring
- Epitaxial Construction
- Low forward voltage drop
- High current capacity
- For use in low voltage, high frequency inverters, free wheeling, and polarity protection applications

MECHANICAL SPECIFICATION

ACTUAL SIZE OF
DO-41 PACKAGE

SERIES 1N5817 - 1N5819

DO - 41



MECHANICAL DATA

- Case: JEDEC DO-41, molded plastic (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: 0.012 Ounces (0.34 Grams)

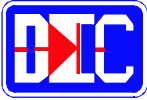
Sym	Minimum		Maximum	
	In	mm	In	mm
BL	0.160	4.1	0.205	5.2
BD	0.103	2.6	0.107	2.7
LL	1.00	25.4		
LD	0.028	0.71	0.034	0.86

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
		1N5817	1N5818	1N5819	
Series Number		1N5817	1N5818	1N5819	
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	1			AMPS
Peak Forward Surge Current (8.3 mSec single half sine wave superimposed on rated load)	I _{FSM}	25			
Maximum Forward Voltage at 1 Amp DC	V _{FM}	0.45	0.55	0.6	VOLTS
Maximum Forward Voltage at 3 Amps DC	V _{FM}	0.75	0.875	0.9	
Maximum Average DC Reverse Current @ T _L = 25 °C At Rated DC Blocking Voltage (Note 1) @ T _L = 100 °C	I _{RM}	1 10			mA
Typical Thermal Resistance, Junction to Ambient	R _{θJA}	80			°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) Lead temperature reference is cathode lead 1/32 in from case.
 (2) Measured at 1MHz & applied reverse voltage of 4 volts



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RATING & CHARACTERISTIC CURVES FOR SERIES 1N5817 - 1N5819

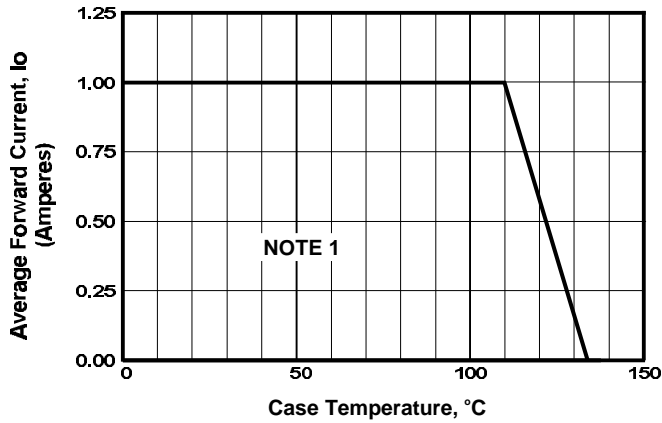


FIGURE 1. FORWARD CURRENT DERATING CURVE

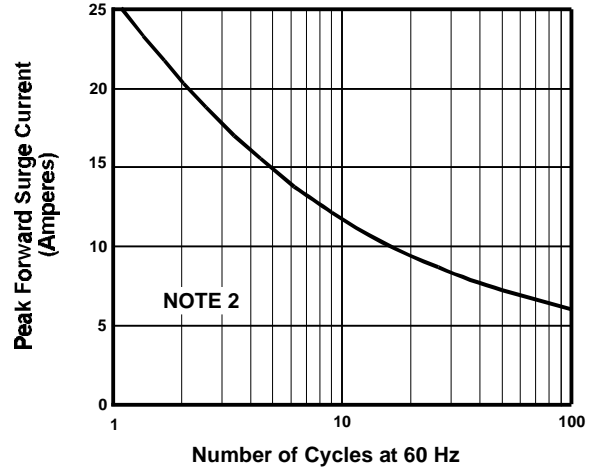


FIGURE 2. MAXIMUM NON-REPETITIVE SURGE CURRENT

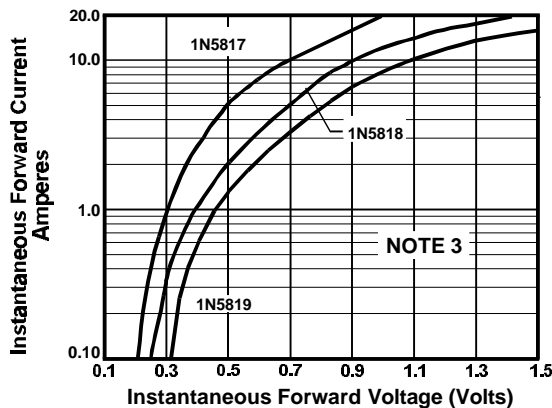


FIGURE 3. TYPICAL FORWARD CHARACTERISTICS

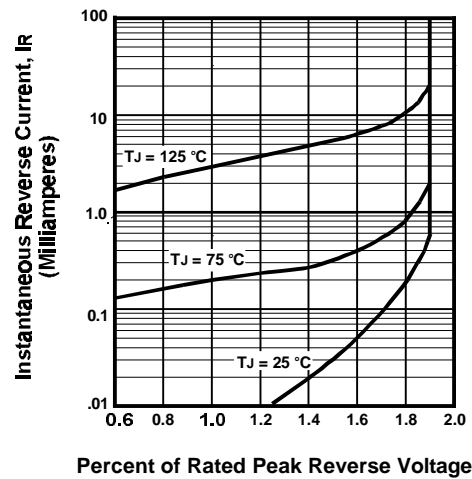


FIGURE 4. TYPICAL REVERSE CHARACTERISTICS

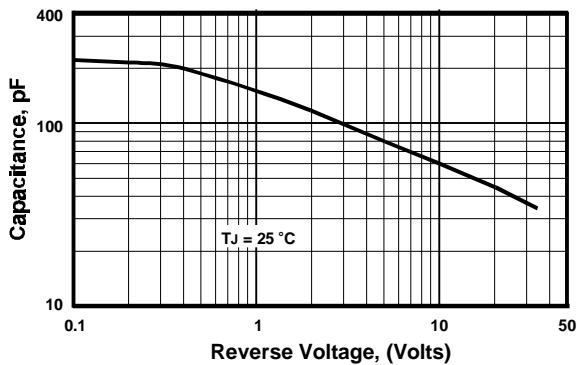


FIGURE 5. TYPICAL JUNCTION CAPACITANCE

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) $T_J = 25\text{ }^\circ\text{C}$, Pulse Width = 300 μSec , 1.0% Duty Cycle