



DATA SHEET

SEMICONDUCTOR

1N5817~1N5819

SCHOTTKY BARRIER RECTIFIER



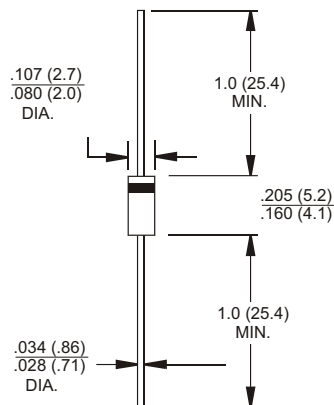
Reverse Voltage - 20 to 40 Volts

Forward Current - 1.0 Ampere

DO-41 Unit:inch(mm)

FEATURES

- Plastic package has Underwriters Laboratory
- Flammability Classification 94V-0
- Metal silicon junction, majority carrier conduction
- Guardring for overvoltage protection
- Low power loss, high efficiency
- High current capability, low forward voltage drop
- High surge capability
- For use in low voltage, high frequency inverters, free wheeling, and polarity protection applications
- High temperature soldering guaranteed:
250 /10 seconds, 0.375. (9.5mm) lead length,
5 lbs. (2.3Kg) tension
- High temperature soldering : 260°C / 10 seconds at terminals
- Pb free product at available : 99% Sn above meet RoHS environment substance directive request



MECHANICAL DATA

- Case: DO-41 molded plastic body
- Terminals: Plated axial leads, solderable per MIL-STD-750, method 2026
- Polarity: Color band denotes cathode end
- Mounting Position: Any
- Weight: 0.012 ounce, 0.33 gram

DIMENSIONS					
DIM	inches		mm		Note
	Min.	Max.	Min.	Max.	
A	0.165	0.205	4.2	5.2	
B	0.079	0.106	2.0	2.7	
C	0.028	0.034	0.71	0.86	
D	1.000	-	25.40	-	

Maximum Ratings and Electrical Characteristics

Ratings at 25°C ambient temperature unless otherwise specified.

	Symbols	1N5817	1N5818	1N5819	Units
Maximum repetitive peak reverse voltage	VRRM	20	30	40	Volts
Maximum RMS voltage	VRMS	14	21	28	Volts
Maximum DC blocking voltage	VDC	20	30	40	Volts
Maximum non-repetitive peak reverse voltage	VRSM	24	36	48	Volts
Maximum average forward rectified current 0.375" (9.5mm) lead length at TL=90	I(AV)	1.0			Amp
Peak forward surge current, 8.3mS single half sine-wave superimposed on rated load (MIL-STD-750D 4066 method) at TL=70	IFSM	25.0			Amps
Maximum instantaneous forward voltage at 1.0A (Note 1)	VF	0.450	0.550	0.600	Volts
Maximum instantaneous forward voltage at 3.1A (Note 1)		0.750	0.875	0.900	Volts
Maximum instantaneous reverse current TA=25 (Note1) at rated DC blocking voltage TA=100	IR	1.0 10.0			mA
Typical junction capacitance (Note 3)	CJ	110.0			F
Typical thermal resistance (Note 2)	R JA R JL	50.0 15.0			/W
Operating junction and storage temperature range	TJ, TSTG	-55 to +150			

Notes:

- (1) Pulse test: 300uS pulse width, 1% duty cycle
- (2) Thermal resistance from junction to lead, and/or to ambient P.C.B. mounted with 0.375. (9.5mm) lead length with 1.5X1.5. (38X38mm) copper pads
- (3) Measured at 1.0MHz and applied reverse voltage of 4.0 volts

DEVICE CHARACTERISTICS

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Fig.1-FORWARD CURRENT DERATING CURVE

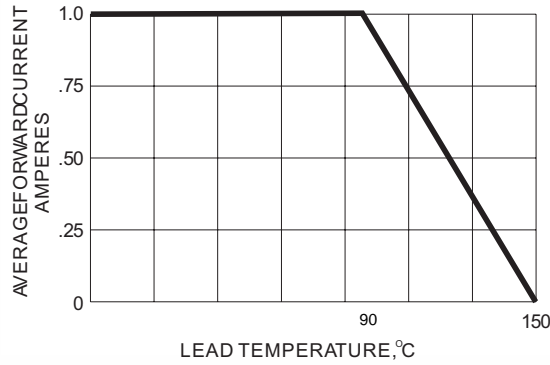


FIG. 2 - MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

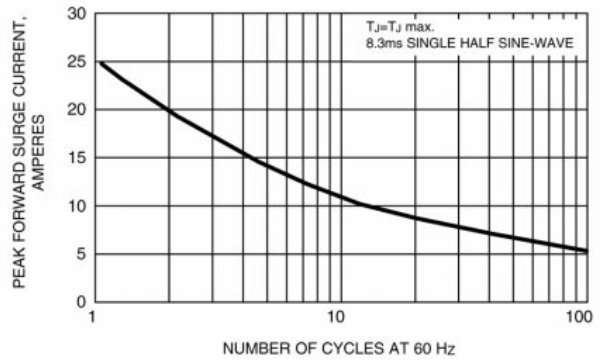


FIG. 3 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

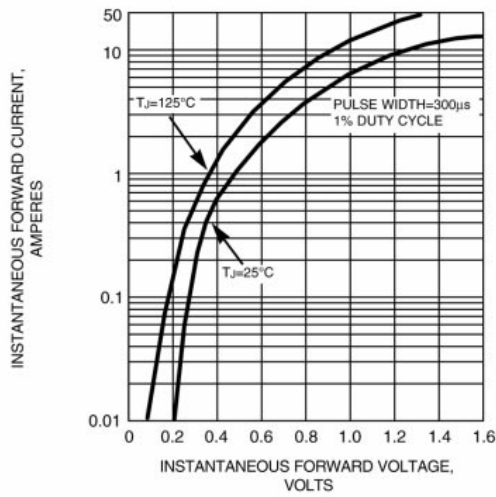


FIG. 4 - TYPICAL REVERSE CHARACTERISTICS

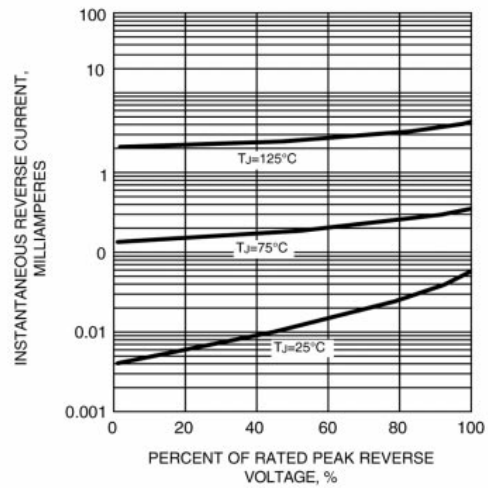


FIG. 5 - TYPICAL JUNCTION CAPACITANCE

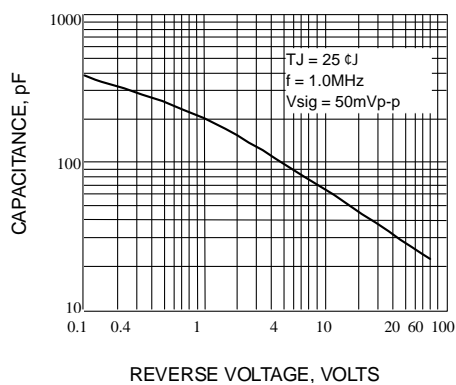


FIG. 6 - TYPICAL TRANSIENT THERMAL IMPEDANCE

