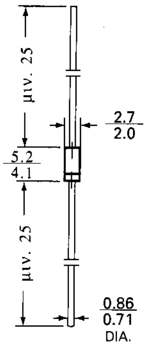
1N 5817 ...1N 5819
SCHOTTKY BARRIER DIODE

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 °C/10 seconds, 0.375" (9.5mm) lead length, 5 lbs. (2.3 Kg) tension



Dimensions in mm

Weight Approx. 0.34g

Maximum Ratings and Electrical Characteristics

Ratings at 25 °C ambient temperature unless otherwise specified.

Characteristic	Symbols	1N5817	1N5818	1N5819	Units
* Maximum repetitive peak reverse voltage	V_{RRM}	20	30	40	Volts
Maximum RMS voltage	V_{RMS}	14	21	28	Volts
* Maximum DC blocking voltage	V_{DC}	20	30	40	Volts
* Maximum non-repetitive peak reverse voltage	V_{RSM}	24	36	48	Volts
* Maximum average forward rectified current 0.375" (9.5mm) lead length at T_L=90 °C	$I_{(AV)}$	1.0			Amp
* Peak forward surge current, 8.3ms single half sine-wave superimposed on rated load (JEDEC Method) at T_L=70 °C	I_{FSM}	25.0			Amp
* Maximum instantaneous forward voltage at 1.0A (NOTE 1)	V_F	0.450	0.550	0.600	Volts
* Maximum instantaneous forward voltage at 3.1A (NOTE 1)	V_F	0.750	0.875	0.900	Volts
* Maximum instantaneous reverse current at rated DC reverse voltage T_A=25 °C (NOTE 1)	I_R	1.0			mA
T_A=100 °C		10.0			
Typical thermal resistance (NOTE 2)	R_{qJA}	50.0			°C/W
	R_{qJL}	15.0			
Typical junction capacitance (NOTE 3)	C_J	110.0			pF
* Storage and operating junction temperature range	T_J, T_{STG}	-65 to + 125			°C

FIG. 1-FORWARD CURRENT DERATING CURVE

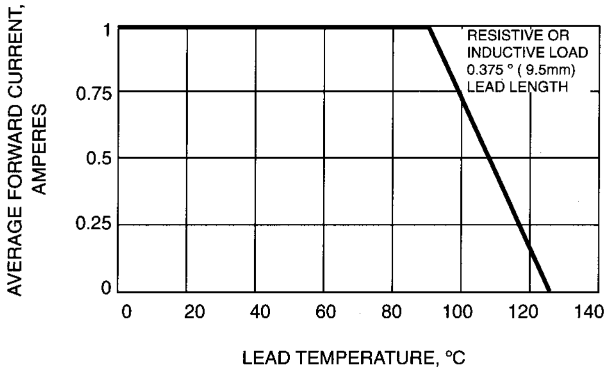


FIG. 2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

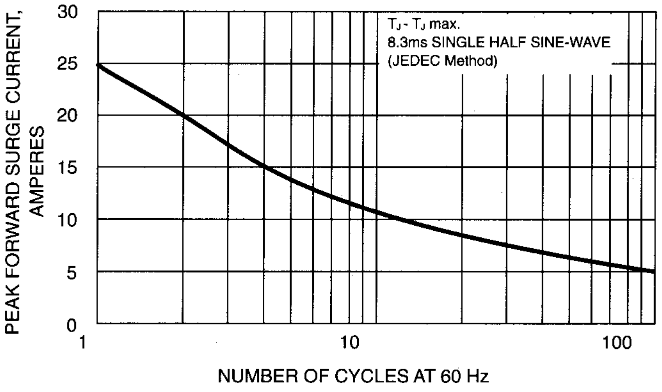


FIG. 3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

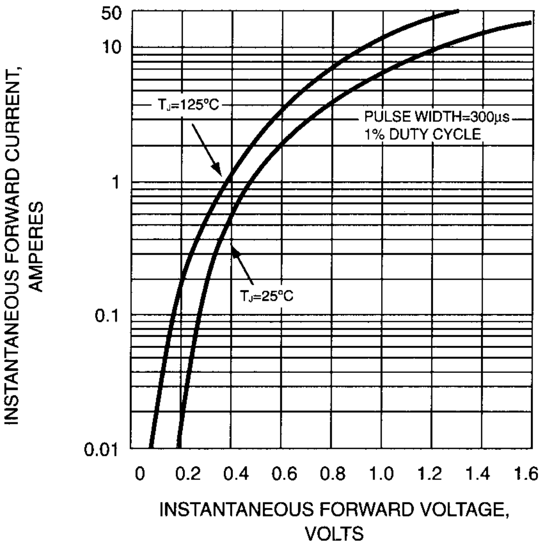


FIG. 4-TYPICAL REVERSE CHARACTERISTICS

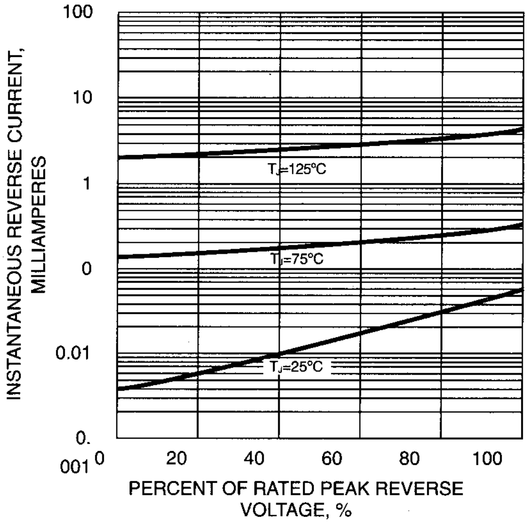


FIG. 5-TYPICAL JUNCTION CAPACITANCE

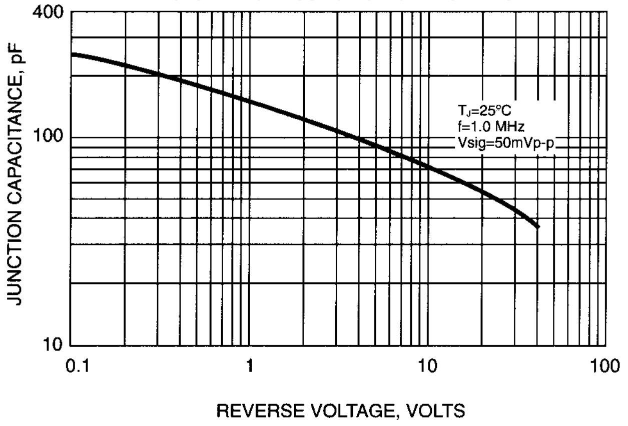


FIG. 6-TYPICAL TRANSIENT THERMAL IMPEDANCE