



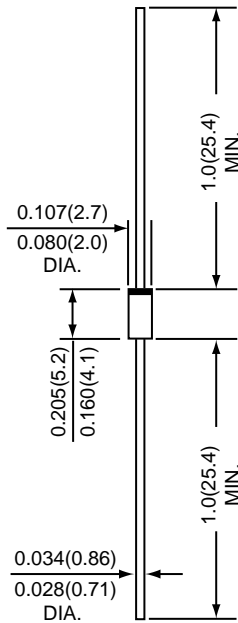
# 1N5817 THRU 1N5819

## SCHOTTKY BARRIER RECTIFIER

Reverse Voltage - 20 to 40 Volts

Forward Current - 1.0 Ampere

DO-204AL



\*Dimensions in inches and (millimeters)



### FEATURES

- \* The plastic package carries 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 : 260°C / 10 seconds, 0.375" (9.5mm) lead length, 5 lbs. (2.3kg) tension

### MECHANICAL DATA

**Case :** JEDEC DO-204AL 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, 0.3 gram

### 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 average forward rectified current 0.375" (9.5mm) lead length at TL=90°C	I(AV)	1.0			Amps
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method)	IFSM	25			Amps
Maximum instantaneous forward voltage at 1.0 A	VF	0.450	0.550	0.600	Volts
Maximum instantaneous forward voltage at 3.1 A	VF	0.750	0.875	0.900	Volts
Maximum instantaneous reverse current at rated DC reverse voltage TA=25°C TA=100°C	IR	1.0 10.0			mA
Typical junction capacitance ( NOTE 1 )	CJ	110			pF
Typical thermal resistance ( NOTE 2 )	RθJA RθJL	50 15			°C / W
Operating junction and storage temperature range	TJ,TSTG	-65 to +125			°C

NOTES : (1) Measured at 1.0 MHz and applied reverse voltage of 4.0 Volts

(2) Thermal resistance from junction to lead, and/or to ambient P.C.B. mounted with 0.375" (9.5mm) length with 1.5 x 1.5" (38 x 38mm) copper pads

# RATINGS AND CHARACTERISTIC CURVES 1N5817 THRU 1N5819

FIG.1 - FORWARD CURRENT DERATING CURVE

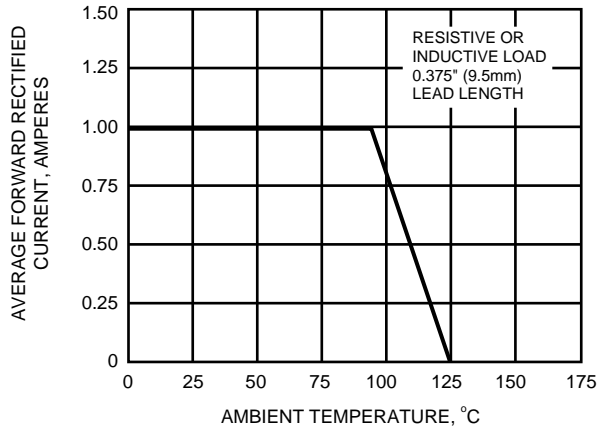


FIG.2 - MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

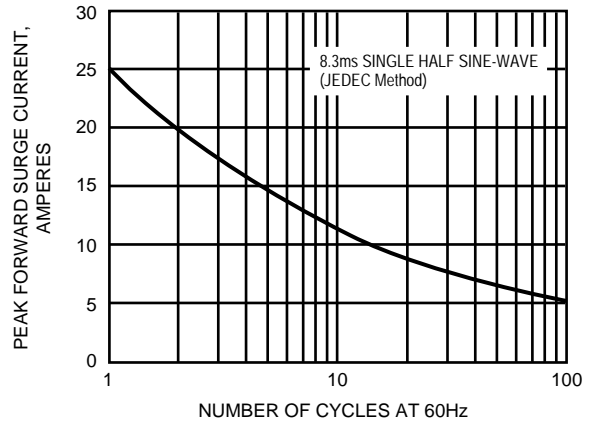


FIG.3 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

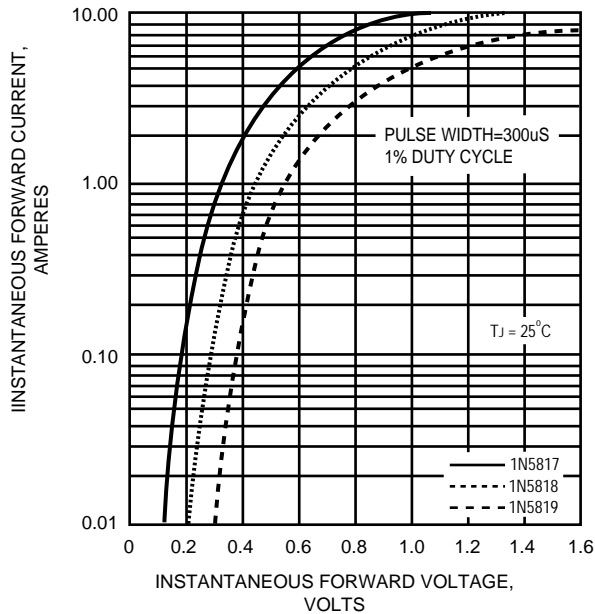


FIG.5 - TYPICAL REVERSE CHARACTERISTICS

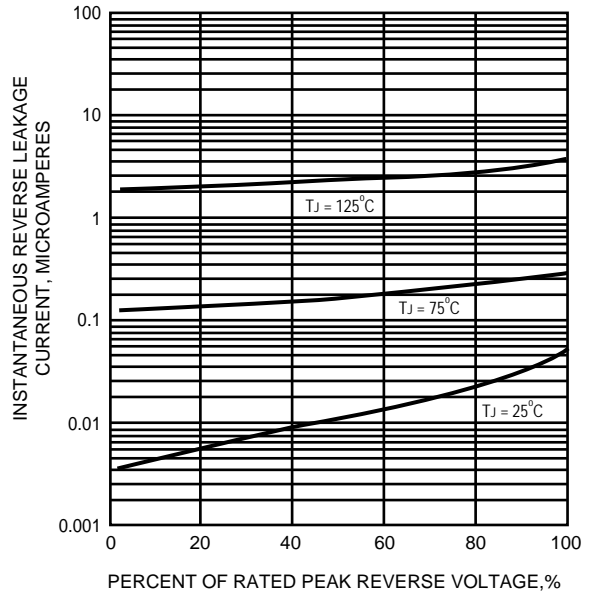


FIG.5 - TYPICAL JUNCTION CAPACITANCE

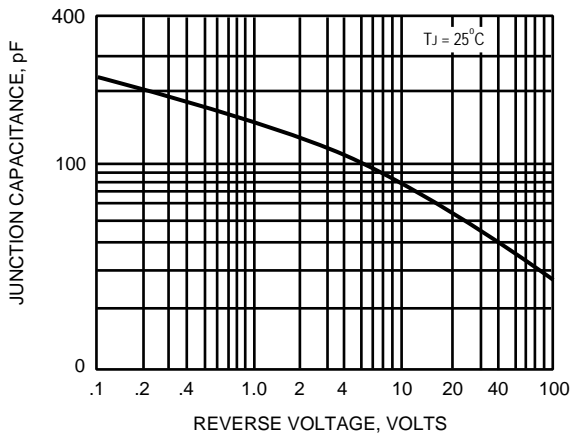


FIG.6 - TYPICAL TRANSIENT THERMAL IMPEDANCE

