



# 1N5817 THRU 1N5819

## SCHOTTKY BARRIER RECTIFIER

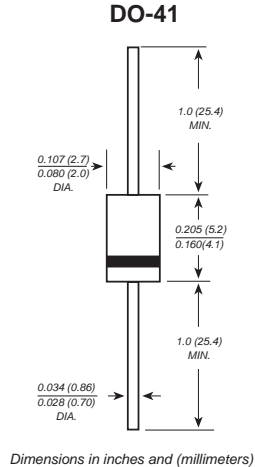
Reverse Voltage - 20 to 40Volts Forward Current - 1.0 Ampere

### 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:  
 260°C/10 seconds, 0.375" (9.5mm) lead length, 5 lbs. (2.3kg) tension

### MECHANICAL DATA

**Case:** JEDEC 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 grams



### MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25°C ambient temperature unless otherwise specified.  
 Single phase half-wave 60Hz, resistive or inductive load, for current capacitive load derate by 20%.

	SYMBOLS	1N5817	1N5818	1N5819	UNITS
Maximum repetitive peak reverse voltage	$V_{RRM}$	20	30	40	V
Maximum RMS voltage	$V_{RMS}$	14	21	28	V
Maximum DC blocking voltage	$V_{DC}$	20	30	40	V
Maximum average forward rectified current 0.375" (9.5mm) lead length at $T_L=90^\circ\text{C}$	$I_{(AV)}$	1.0			A
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method)	$I_{FSM}$	25.0			A
Maximum instantaneous forward voltage at 1.0A	$V_F$	0.450	0.550	0.600	V
Maximum DC reverse current at rated DC blocking voltage $T_A=25^\circ\text{C}$ $T_A=100^\circ\text{C}$	$I_R$	0.5 10.0			mA
Typical junction capacitance (NOTE 1)	$C_J$	110.0			pF
Typical thermal resistance (NOTE 2)	$R_{\theta JA}$	50.0			$^\circ\text{C/W}$
Operating junction and storage temperature range	$T_J, T_{STG}$	-55 to +125			$^\circ\text{C}$

**Note:** 1. Measured at 1MHz and applied reverse voltage of 4.0V D.C.  
 2. Thermal resistance from junction to ambient at 0.375" (9.5mm) lead length, P.C.B. mounted



# RATINGS AND CHARACTERISTIC CURVES 1N5817 THRU 1N5819

FIG. 1- FORWARD CURRENT DERATING CURVE

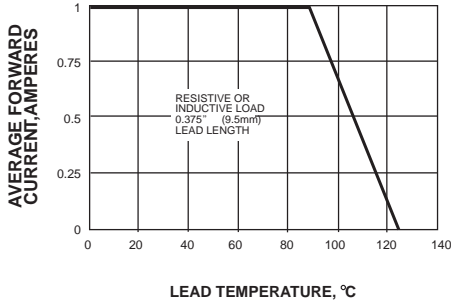


FIG. 2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

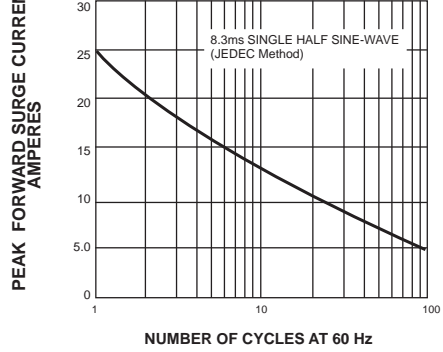


FIG. 3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

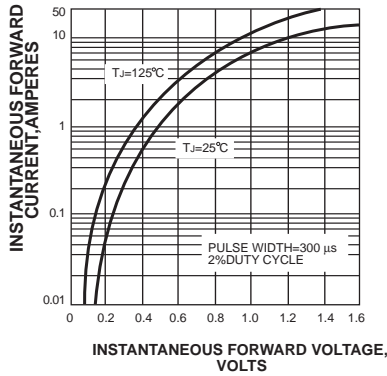


FIG. 4-TYPICAL REVERSE CHARACTERISTICS

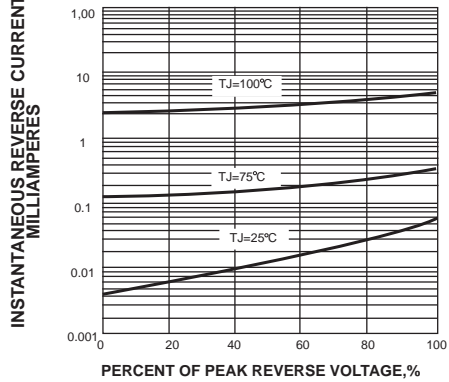


FIG. 5-TYPICAL JUNCTION CAPACITANCE

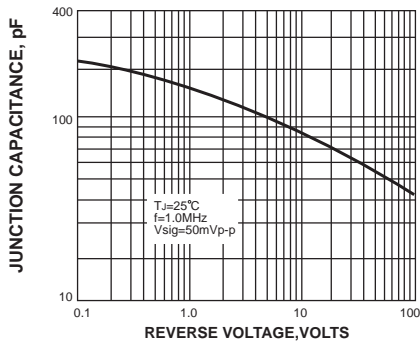


FIG. 6-TYPICAL TRANSIENT THERMAL IMPEDANCE

