

# 1N5817 - 1N5819

# SCHOTTKY BARRIER RECTIFIER DIODES

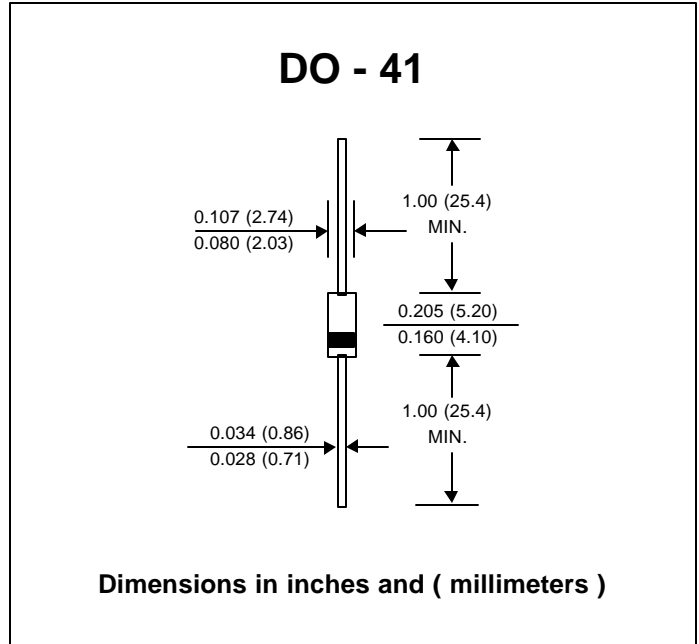
**PRV : 20 - 40 Volts**  
**I<sub>o</sub> : 1.0 Ampere**

### FEATURES :

- \* High current capability
- \* High surge current capability
- \* High reliability
- \* High efficiency
- \* Low power loss
- \* Low cost
- \* Low forward voltage drop

### MECHANICAL DATA :

- \* Case : DO-41 Molded plastic
- \* Epoxy : UL94V-O rate flame retardant
- \* Lead : Axial lead solderable per MIL-STD-202, Method 208 guaranteed
- \* Polarity : Color band denotes cathode end
- \* Mounting position : Any
- \* Weight : 0.339 gram



### MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

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

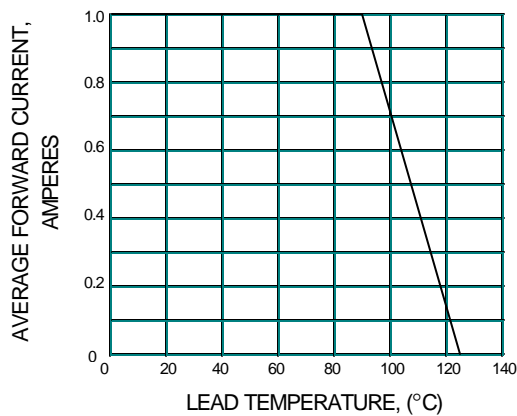
RATING	SYMBOL	1N5817	1N5818	1N5819	UNIT
Maximum Recurrent Peak Reverse Voltage	V <sub>RRM</sub>	20	30	40	Volts
Maximum RMS Voltage	V <sub>RMS</sub>	14	21	28	Volts
Maximum DC Blocking Voltage	V <sub>DC</sub>	20	30	40	Volts
Maximum Average Forward Current 0.375", 9.5mm Lead Length at T <sub>L</sub> = 90 °C	I <sub>F(AV)</sub>	1.0			Amp.
Peak Forward Surge Current, 8.3ms single half sine wave Superimposed on rated load (JEDEC Method) T <sub>L</sub> = 70 °C	I <sub>FSM</sub>	25			Amps.
Maximum Forward Voltage at I <sub>F</sub> = 1.0 Amp.	V <sub>F</sub>	0.45	0.55	0.6	Volt.
Maximum Reverse Current      T <sub>a</sub> = 25 °C at Rated DC Blocking Voltage (Note 1)      T <sub>a</sub> = 100 °C	I <sub>R</sub>	1.0			mA
	I <sub>R(H)</sub>	10			mA
Typical Thermal Resistance (Note 2)	R <sub>θJL</sub>	15			°C/W
Typical Junction Capacitance (Note 3)	C <sub>J</sub>	110			pF
Junction Temperature Range	T <sub>J</sub>	- 65 to + 125			°C
Storage Temperature Range	T <sub>STG</sub>	- 65 to + 125			°C

### Notes :

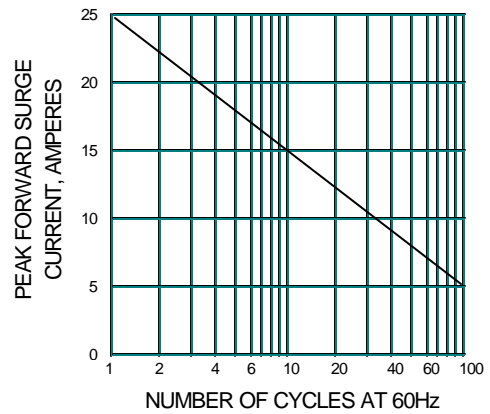
- (1) Pulse Test : Pulse Width = 300 μs, Duty Cycle = 2%.
- (2) Thermal Resistance from junction to lead, PC board Mounting with 0.375" (9.5mm) Lead Lengths and 1.5 in<sup>2</sup> (38.1mm<sup>2</sup>) copper pads.
- (3) Measured at 1 MHz and applied reverse voltage of 4.0 volts.

## RATING AND CHARACTERISTIC CURVES ( 1N5817 - 1N5819 )

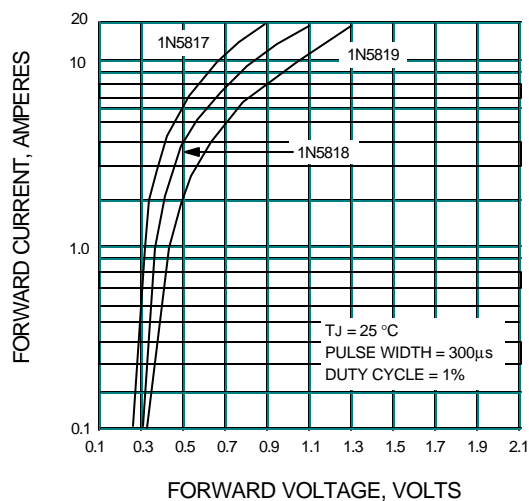
**FIG.1 - FORWARD CURRENT DERATING CURVE**



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



**FIG.3 - TYPICAL FORWARD CHARACTERISTICS**



**FIG.4 - TYPICAL REVERSE CHARACTERISTICS**

