

## SCHOTTKY BARRIER RECTIFIER

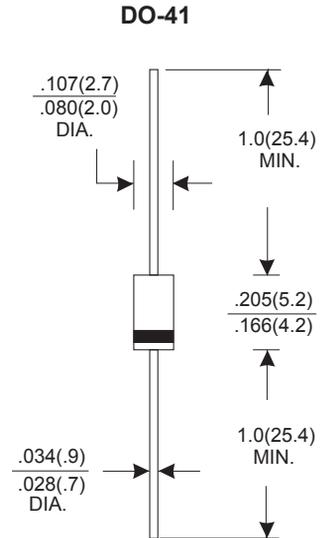
VOLTAGE RANGE: 20--- 40 V    CURRENT: 1.0 A

### 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 at terminals  
Component in accordance to RoHS 2002/95/EC and WEEE 2002/96/EC

### MECHANICAL DATA

- Case: DO-41 molded plastic body
- Terminals: Lead solderable per MIL-STD-750, method 2026
- Polarity: Color band denotes cathode end
- Mounting Position: Any



Dimensions in inches and (millimeters)

## MAXIMUM RATINGS AND CHARACTERISTICS

@ 25°C Ambient Temperature (unless otherwise noted) Single phase, half wave, 60 Hz, resistive or inductive load.

For capacitive load, derate by 20%.

TYPE NUMBER	SYMBOL	1N5817	1N5818	1N5819	UNITS
Maximum Recurrent Peak Reverse Voltage	$V_{RRM}$	20	30	40	V
Maximum RMS Voltage	$V_{RMS}$	14	21	28	V
Maximum DC Blocking Voltage	$V_{bc}$	20	30	40	V
Maximum Average Forward Rectified Current .375"(9.5mm) Lead Length at $T_a=90^\circ\text{C}$	$I_{(AV)}$	1.0			A
Peak Forward Surge Current, 8.3 ms single half sine-wave superimposed on rated load (JEDEC method)	$I_{FSM}$	25			A
Maximum Instantaneous Forward Voltage at 1.0A	$V_F$	0.45	0.55	0.60	V
Maximum DC Reverse Current at Rated DC Blocking Voltage	$I_R$		0.5 10		mA
					$T_a=25^\circ\text{C}$ $T_a=100^\circ\text{C}$
Typical Junction Capacitance (Note 1)	$C_J$	110			pF
Typical Thermal Resistance $R_{\theta JA}$ (Note 2)	$R_{\theta JC}$	80			$^\circ\text{C/W}$
Operating Temperature Range	$T_J$	-65 — +125			$^\circ\text{C}$
Storage Temperature Range	$T_S$	-65 — +150			$^\circ\text{C}$

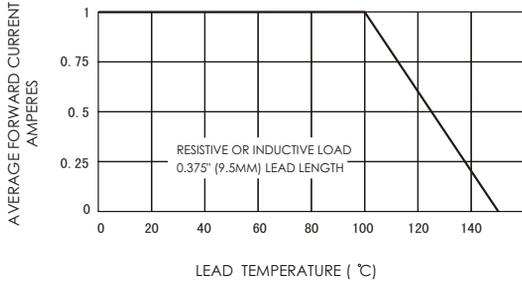
#### NOTES:

1. Measured at 1MHz and applied reverse voltage of 4.0V D.C.
2. Thermal Resistance Junction to Ambient Vertical PC Board Mounting 0.5"(12.7mm) Lead Length.

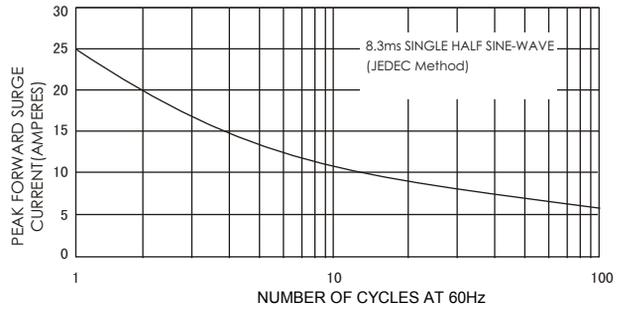


# RATINGS AND CHARACTERISTIC CURVES

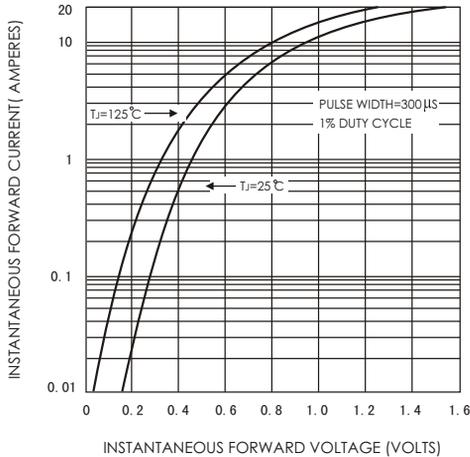
**FIG.1-FORWARD CURRENT DERATING CURVE**



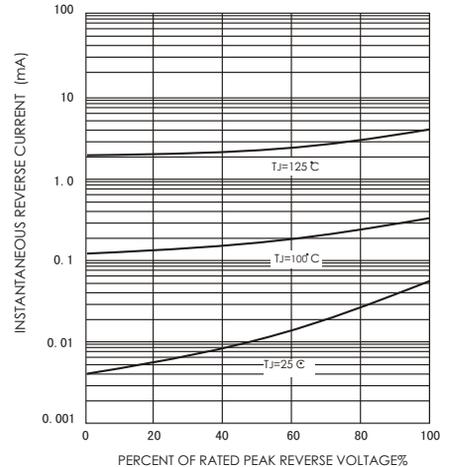
**FIG.2-MAXIMUM NON-REPETITIVE SURGE**



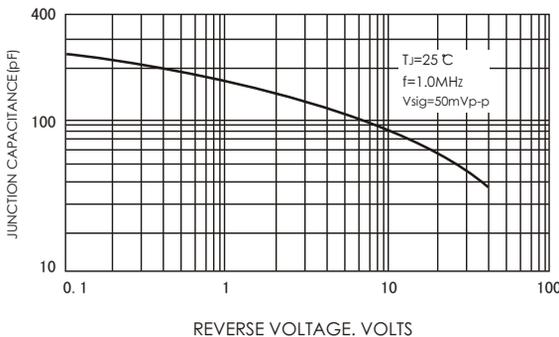
**FIG.3-TYPICAL REVERSE CHARACTERISTICS**



**FIG.4-TYPICAL FORWARD CHARACTERISTICS**



**FIG.5-TYPICAL JUNCTION CAPACITANCE INSTANTANEOUS**



**FIG.6-TYPICAL TRANSIENT THERMAL IMPEDANCE**

