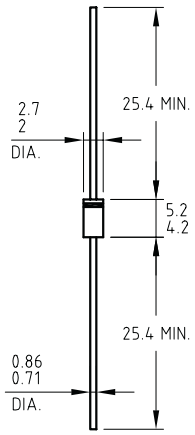
1 Amp. Schottky Barrier Rectifiers

RoHS COMPLIANCE

DO-41 (Plastic)



Dimensions in mm.

Voltage	**Current**
20 V to 40 V	1.0 A

- **Low power loss, high efficiency.**
- High current capability. low VF
- High reliability
- High surge current capability
- Epitaxial construction
- Guard-ring for transient protection
- For use in low voltage, high frequency inventor, free wheeling, and polarity protection application

MECHANICAL DATA

- Cases: DO-41 molded plastic
- Epoxy: UL 94V-0 rate flame retardant
- Lead: Pure tin plated, lead free., solderable per MIL-STD-202, Method 208 guaranteed
- Polarity: Color band denotes cathode
- High temperature soldering guaranteed: 260 °C/10 seconds/9.5 mm lead lengths at 5 lbs., (2.3 Kg) tension
- Weight: 0.33 g.

Maximum Ratings and Electrical Characteristics at 25 ºC

		1N5817	**1N5818**	**1N5819**
V_{RRM}	Maximum Recurrent Peak Reverse Voltage (V)	20	30	40
V_{RMS}	Maximum RMS Voltage (V)	14	21	28
V_{DC}	Maximum DC Blocking Voltage (V)	20	30	40
$I_{F(AV)}$	Maximum Average Forward Rectified Current 9.5mm Lead Lenght @ TL = 90°C (See graphic)	1.0 A		
I_{FSM}	8.3 ms.Peak Forward Surge Current (Jedec Method)	30 A		
C_j	Typical Junction Capacitance (Note 2)	55 pF		
T_j	Operating Temperature Range	-65 to +125 °C		
T_{stg}	Storage Temperature Range	-65 to +150 °C		

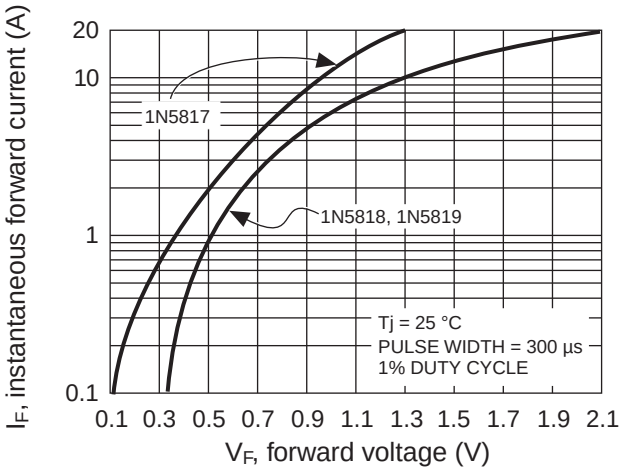
Electrical Characteristics at Tamb = 25 °C

V_F	Maximum Instantaneous Forward Voltage I_F = 1.0 A	0.45 V	0.550 V	0.600 V
V_F	Maximum Instantaneous Forward Voltage I_F = 3.0 A	0.750 V	0.875 V	0.900 V
I_R	Maximum DC Reverse Current Ta = 25 °C	1.0 mA		
	at Rated DC Blocking Voltage Ta =125°C	10 mA		
$R_{th\ (j-a)}$	Typical Thermal Resistance (Note 1)	100 °C/W		
$R_{th\ (j-c)}$		45 °C/W		

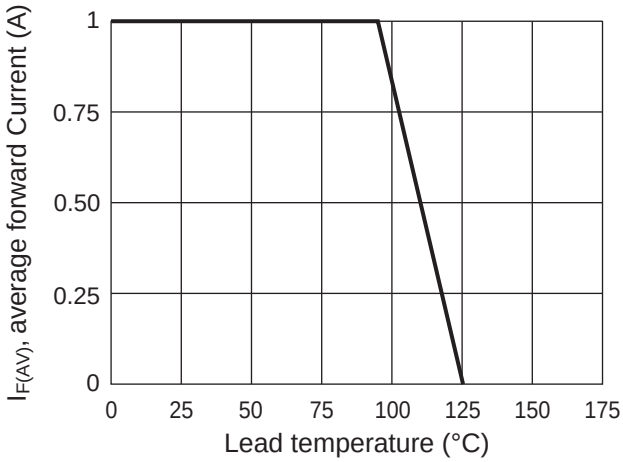
NOTES: 1. Mount on Cu-Pad Size 5mnm x 5mm on P.C.B.
2. Measured at 1 MHz and Applied Reverse Voltage of 4.0 V D.C.

Rating And Charasterictic Curves

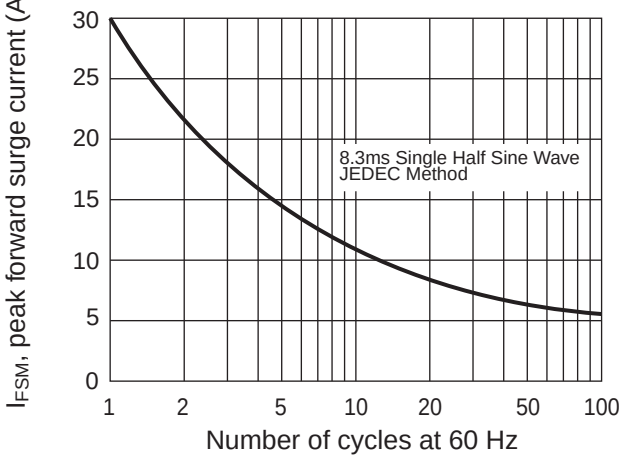
TYPICAL FORWARD CHARACTERISTIC



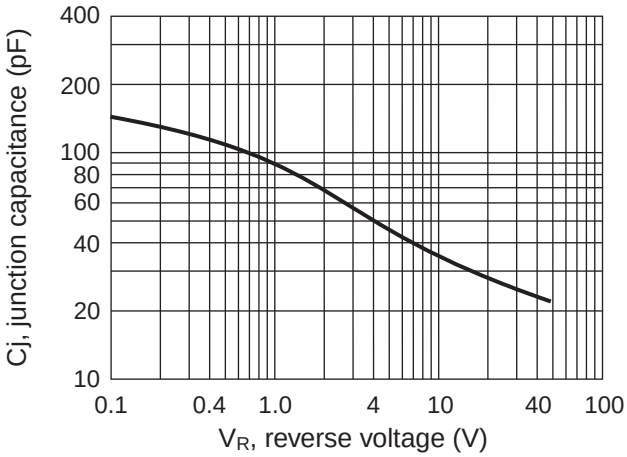
MAXIMUM FORWARD CURRENT DERATING CURVE



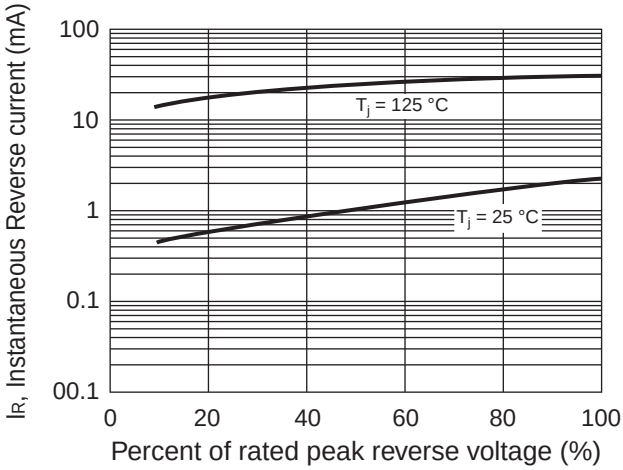
MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT



TYPICAL JUNCTION CAPACITANCE



TYPICAL REVERSE LEAKAGE CHARACTERISTICS PER LEG



TYPICAL TRANSIENT THERMAL CHARACTERISTIC