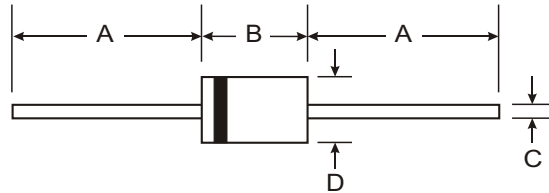


# 1N5817 - 1N5819

## 1.0A SCHOTTKY BARRIER RECTIFIER

### Features

- Schottky Barrier Chip
- Guard Ring Die Construction for Transient Protection
- Low Power Loss, High Efficiency
- High Surge Capability
- High Current Capability and Low Forward Voltage Drop
- For Use in Low Voltage, High Frequency Inverters, Free Wheeling, and Polarity Protection Application
- Plastic Material: UL Flammability Classification Rating 94V-0



DO-41 Plastic		
Dim	Min	Max
A	25.40	—
B	4.06	5.21
C	0.71	0.864
D	2.00	2.72
All Dimensions in mm		

### Mechanical Data

- Case: Molded Plastic
- Terminals: Plated Leads Solderable per MIL-STD-202, Method 208
- Polarity: Cathode Band
- Weight: 0.3 grams (approx)
- Mounting Position: Any
- Marking: Type Number

### Maximum Ratings and Electrical Characteristics @ T<sub>A</sub> = 25°C unless otherwise specified

Single phase, half wave, 60Hz, resistive or inductive load.  
For capacitive load, derate current by 20%.

Characteristic	Symbol	1N5817	1N5818	1N5819	Unit
Peak Repetitive Reverse Voltage	V <sub>RRM</sub>				V
Working Peak Reverse Voltage	V <sub>RWM</sub>	20	30	40	V
DC Blocking Voltage	V <sub>R</sub>				V
RMS Reverse Voltage	V <sub>R(RMS)</sub>	14	21	28	V
Average Rectified Output Current (Note 1) @ T <sub>L</sub> = 90°C	I <sub>O</sub>		1.0		A
Non-Repetitive Peak Forward Surge Current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method)	I <sub>FSM</sub>		25		A
Forward Voltage (Note 2) @ I <sub>F</sub> = 1.0A @ I <sub>F</sub> = 3.0A	V <sub>FM</sub>	0.450 0.750	0.550 0.875	0.60 0.90	V
Peak Reverse Leakage Current at Rated DC Blocking Voltage (Note 2) @ T <sub>A</sub> = 25°C @ T <sub>A</sub> = 100°C	I <sub>RM</sub>		1.0 10		mA
Typical Total Capacitance (Note 3)	C <sub>T</sub>		110		pF
Typical Thermal Resistance Junction to Lead (Note 4)	R <sub>θJL</sub>		15		°C/W
Typical Thermal Resistance Junction to Ambient	R <sub>θJA</sub>		50		°C/W
Operating and Storage Temperature Range	T <sub>j</sub> , T <sub>STG</sub>		-65 to +125		°C

- Notes:
1. Measured at ambient temperature at a distance of 9.5mm from the case.
  2. Short duration test pulse used to minimize self-heating effect.
  3. Measured at 1.0MHz and applied reverse voltage of 4.0V DC.
  4. Thermal resistance from junction to lead vertical P.C.B. mounted, 0.375" (9.5mm) lead length with 1.5 x 1.5" (38 x 38mm) copper pads.

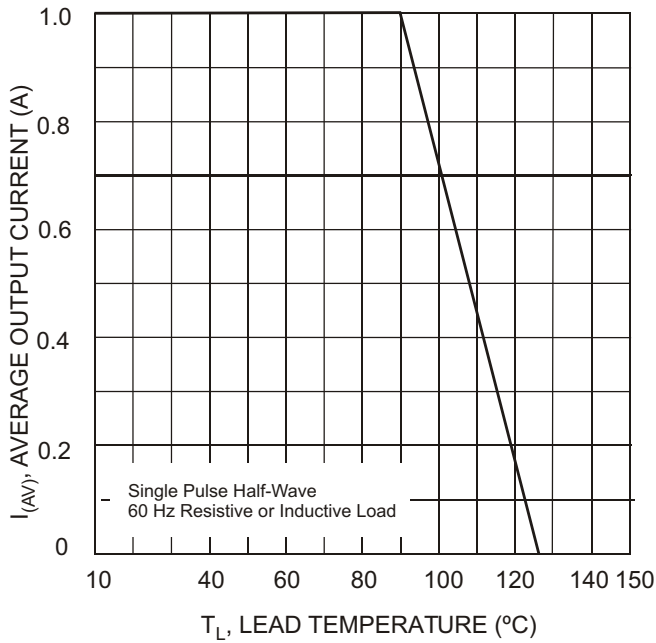


Fig. 1 Forward Current Derating Curve

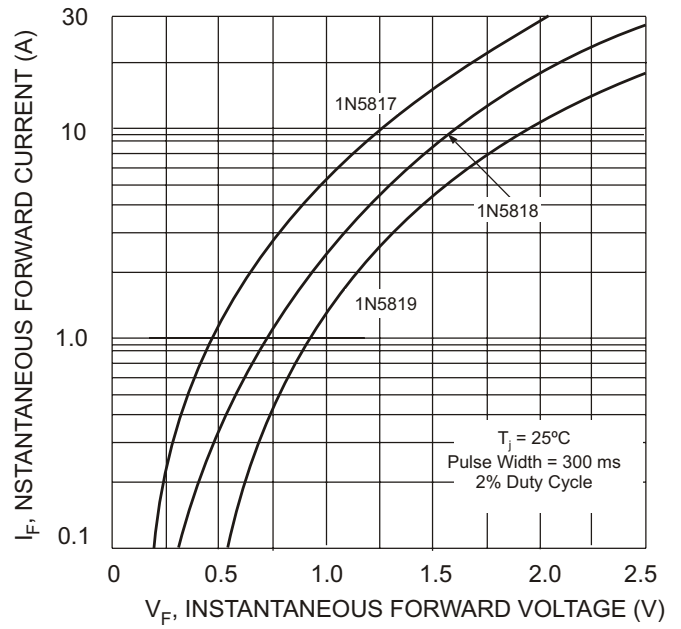


Fig. 2 Typical Forward Characteristics

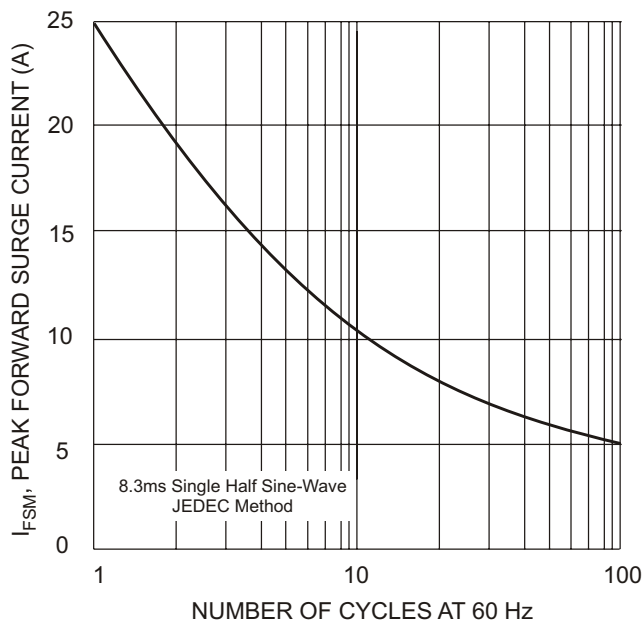


Fig. 3 Maximum Non-Repetitive Peak Fwd Surge Current

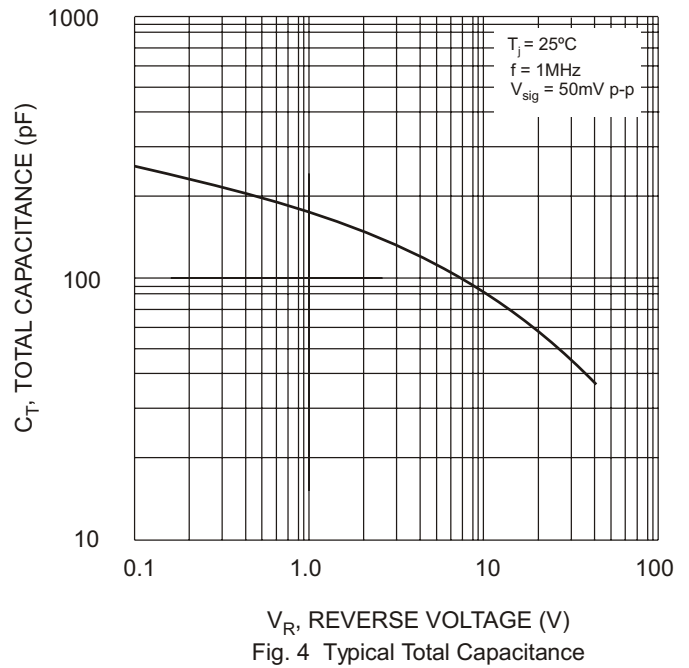


Fig. 4 Typical Total Capacitance