FAIRCHILD
SEMICONDUCTOR TM

1N5817 - 1N5819

Features

- 1.0 ampere operation at T_A = 90°C with no thermal runaway.
- For use in low voltage, high frequency inverters free wheeling, and polarity protection applications.



DO-41
COLOR BAND DENOTES CATHODE

1.0 Ampere Schottky Barrier Rectifiers

Absolute Maximum Ratings*

T_A = 25°C unless otherwise noted

Symbol	Parameter	Value	Units
$I_{F(AV)}$	Average Rectified Current .375 " lead length @ T_A = 90°C	1.0	A
I_{FSM}	Non-repetitive Peak Forward Surge Current 8.3 ms single half-sine-wave Superimposed on rated load (JEDEC method)	25	A
P_D	Total Device Dissipation Derate above 25°C	1.25 12.5	W mW/°C
$R_{\theta JA}$	Thermal Resistance, Junction to Ambient	80	°C/W
T_{stg}	Storage Temperature Range	-65 to +125	°C
T_J	Operating Junction Temperature	-65 to +125	°C

*These ratings are limiting values above which the serviceability of any semiconductor device may be impaired.

Electrical Characteristics

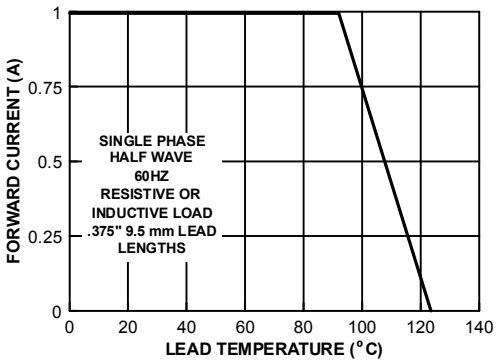
T_A = 25°C unless otherwise noted

Symbol	Parameter		Device			Units
			1N5817	1N5818	1N5819	
V_{RRM}	Maximum Peak Repetitive Reverse Voltage		20	30	40	V
V_{RMS}	Maximum RMS Voltage		14	21	28	V
V_R	DC Reverse Voltage (Rated V_R)		20	30	40	V
I_{RM}	Maximum Instantaneous Reverse Current @ rated V_R	T_A = 25°C T_A = 100°C	0.5 10			mA mA
V_{FM}	Maximum Instantaneous Forward Voltage @ 3.0 A	@ 1.0 A	450 750	550 875	600 900	mV mV
C	Typical Junction Capacitance V_R = 4.0 V, f = 1.0 MHz		110			pF

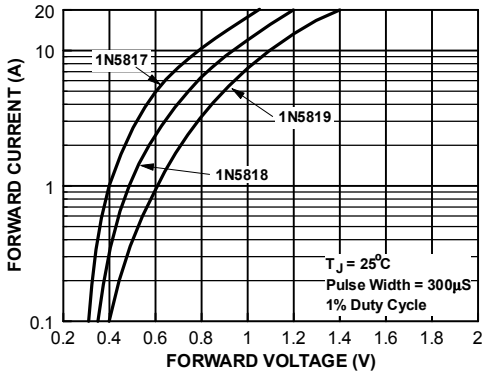
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Typical Characteristics

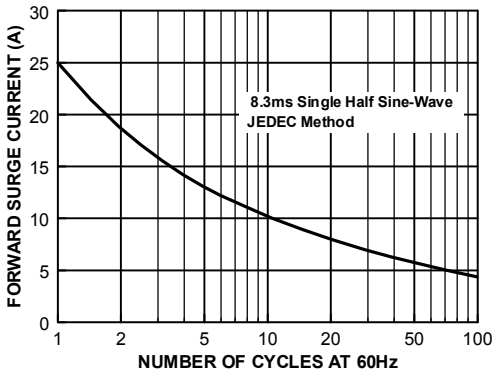
Forward Current Derating Curve



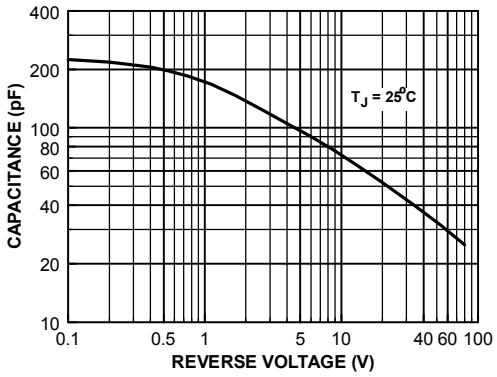
Forward Characteristics



Non-Repetitive Surge Current



Junction Capacitance



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