FAIRCHILD SEMICONDUCTOR®

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

Schottky Rectifiers

Absolute Maximum Ratings*

T_A = 25°C unless otherwise noted

Symbol	Parameter	Value			Units
		1N5817	1N5818	1N5819	
V_{RRM}	Maximum Repetitive Reverse Voltage	20	30	40	V
$I_{F(AV)}$	Average Rectified Forward 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	25			A
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.

Thermal Characteristics

Symbol	Parameter	Value	Units
P_D	Power Dissipation	1.25	W
$R_{\theta JA}$	Thermal Resistance, Junction to Ambient	80	°C/W

Electrical Characteristics

T_A = 25°C unless otherwise noted

Symbol	Parameter		Device			Units
			1N5817	1N5818	1N5819	
V_F	Forward Voltage	@ 1.0 A	450	550	600	mV
		@ 3.0 A	750	875	900	mV
I_R	Reverse Current @ rated V_R	T_A = 25°C		0.5		mA
		T_A = 100°C		10		mA
C_T	Total Capacitance V_R = 4.0 V, f = 1.0 MHz			110		pF

Typical Characteristics

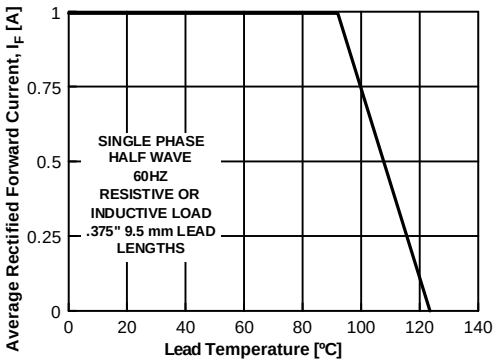

Figure 1. Forward Current Derating Curve

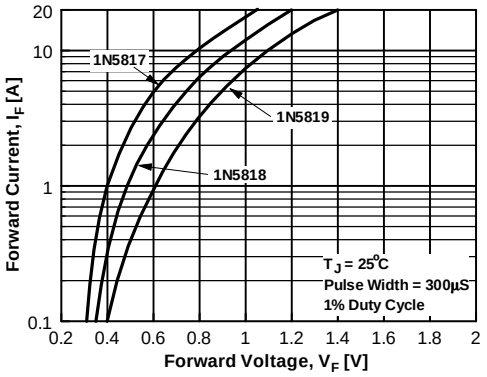

Figure 2. Forward Voltage Characteristics

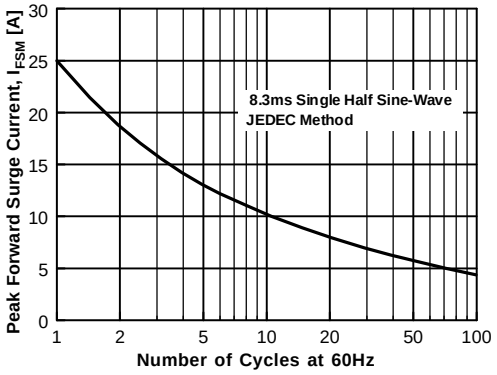

Figure 3. Non-Repetitive Surge Current

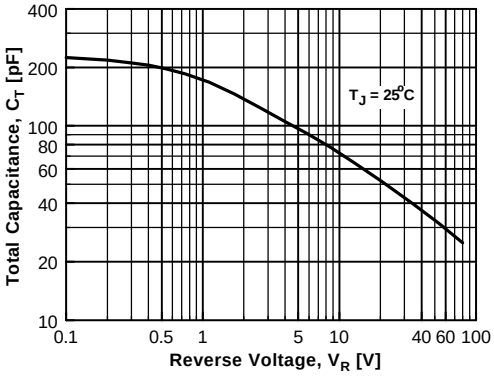

Figure 4. Total Capacitance

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DOME™	HiSeC™	PowerTrench®	SuperSOT™-8	
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