TAIWAN SEMICONDUCTOR

LL5817 - LL5819

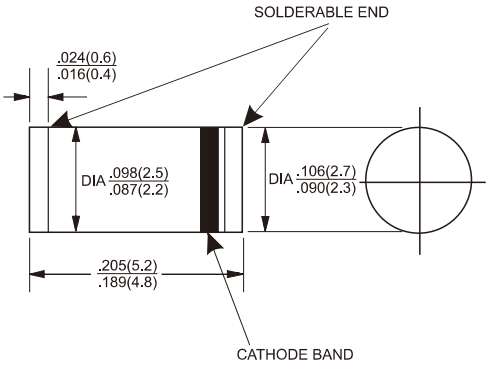
1.0 AMP. Surface Mount Schottky Barrier Rectifiers

MELF

Pb RoHS COMPLIANCE

Features

- ✧ Surge overload ratings to 25 amperes peak
- ✧ Ideal for printed circuit board
- ✧ Reliable low cost construction utilizing molded plastic technique results in inexpensive product
- ✧ High temperature soldering: 260°C/ 10 seconds at terminals
- ✧ Mounting position: Any
- ✧ Weight: 0.12 grams



Dimensions in inches and (millimeters)

Maximum Ratings and Electrical Characteristics

Rating at 25 °C ambient temperature unless otherwise specified.
Single phase, half wave, 60 Hz, resistive or inductive load.
For capacitive load, derate current by 20%

Type Number	Symbol	LL5817	LL5818	LL5819	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_{DC}	20	30	40	V
Maximum Average Forward Rectified Current @T_L = 90 °C	$I_{F(AV)}$	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 @1.0A	V_F	0.450	0.550	0.600	V
Maximum Instantaneous Forward Voltage @3.0A	V_F	0.750	0.875	0.900	V
Maximum DC Reverse Current @ T_A=25 °C at Rated DC Blocking Voltage (Note 1) @ T_A=100 °C	I_R	0.1 5			mA mA
Typical Junction Capacitance (Note 2)	Cj	110			pF
Typical Thermal Resistance (Note 3)	$R_{\theta JA}$	80			°C/W
Operating and Storage Temperature Range	T_J,T_{STG}	- 65 to + 125 / - 65 to + 150			°C

Notes: 1. Pulse Test with PW=300 usec,1% Duty Cycle
2. Measured at 1 MHz and Applied Reverse Voltage of 4.0 Volts D.C.
3. Thermal Resistance Junction to Ambient

RATINGS AND CHARACTERISTIC CURVES (LL5817 THRU LL5819)

FIG.1- MAXIMUM FORWARD CURRENT DERATING CURVE

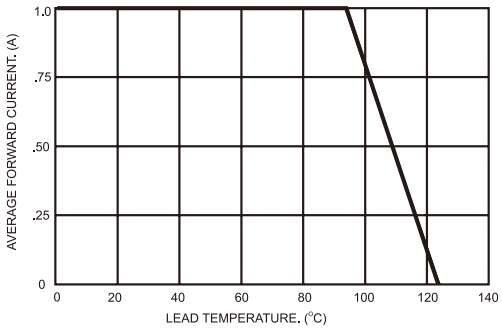


FIG.2- MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

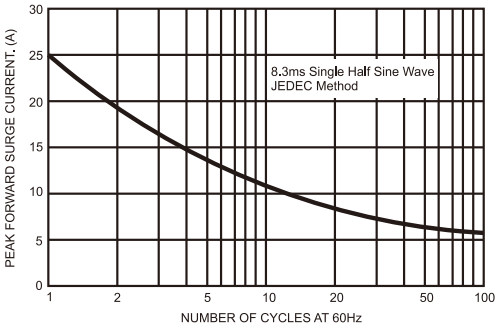


FIG.3- TYPICAL FORWARD CHARACTERISTICS

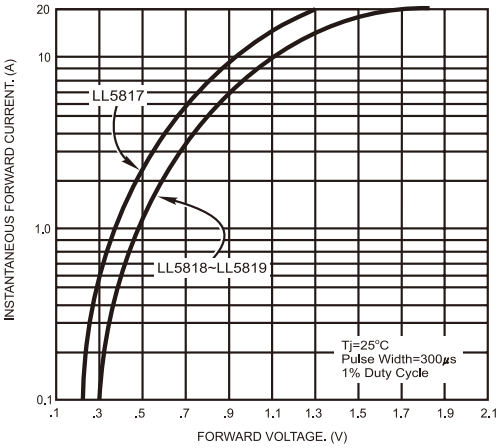


FIG.4-TYPICAL REVERSE CHARACTERISTICS

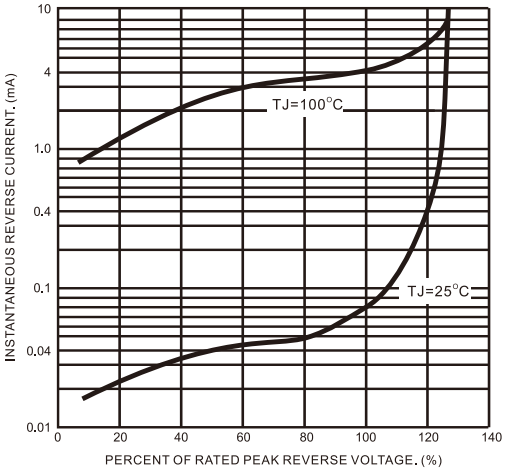


FIG.5- TYPICAL JUNCTION CAPACITANCE

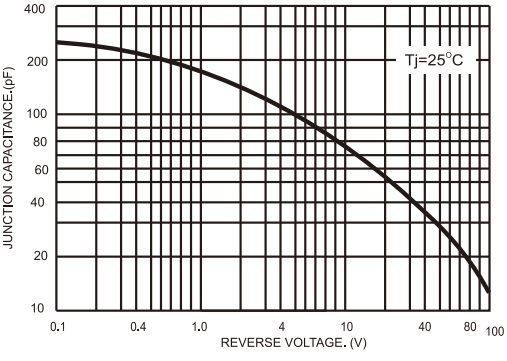


FIG.6- TYPICAL TRANSIENT THERMAL CHARACTERISTICS