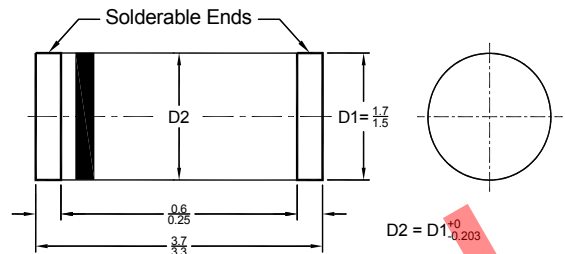


# LM5817 THRU LM5819

## SURFACE MOUNT SCHOTTKY BARRIER RECTIFIER

### Features

- Metal silicon junction, majority carrier conduction
- Low power loss, high efficiency
- Guard ring for overvoltage protection
- High current capability, low forward voltage drop
- High surge capability
- For use in low voltage, high frequency inverters, free wheeling, and polarity protection applications



Dimensions in millimeters  
MiniMELF (DO-213AA)

### Mechanical Data

- Case: MiniMELF (DO-213AA), molded plastic body
- Terminals: Solder plated, solderable per MIL-STD-750, method 2026
- Polarity: Color band denotes cathode end
- Mounting Position: Any

### Absolute Maximum Ratings and Characteristics

Ratings at 25 °C ambient temperature unless otherwise specified, single phase, half wave, resistive or inductive load. For capacitive load, derate by 20%

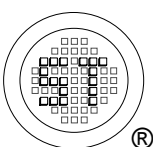
Parameter	Symbols	LM5817	LM5818	LM5819	Units
Maximum Repetitive Peak Reverse Voltage	$V_{RRM}$	20	30	40	V
Maximum RMS Voltage	$V_{RMS}$	14	21	28	V
Maximum DC Blocking Voltage	$V_{DC}$	20	30	40	V
Maximum Average Forward Rectified Current	$I_{F(AV)}$	1			A
Peak Forward Surge Current 8.3 ms Single Half Sine Wave Superimposed on Rated Load (JEDEC method)	$I_{FSM}$	25			A
Maximum Instantaneous Forward Voltage	$V_F$	0.45 0.75	0.55 0.875	0.6 0.9	V
Maximum Instantaneous Reverse Current at Rated DC Blocking Voltage <sup>1)</sup>	$I_R$	0.5 10			mA
Typical Junction Capacitance <sup>2)</sup>	$C_J$	110			pF
Typical Thermal Resistance, Junction to Ambient <sup>3)</sup>	$R_{\theta JA}$	75			°C/W
Typical Thermal Resistance, Junction to Terminal <sup>4)</sup>	$R_{\theta JL}$	30			°C/W
Operating Junction Temperature Range	$T_j$	- 55 to + 125			°C
Storage Temperature Range	$T_{stg}$	- 55 to + 150			°C

<sup>1)</sup> Pulse test: 300 μs pulse width, 1% duty cycle

<sup>2)</sup> Measured at 1 MHz and reverse voltage of 4 V

<sup>3)</sup> Thermal resistance junction to ambient 0.24" X 0.24" (6 X 6 mm) copper pads to each terminals

<sup>4)</sup> Thermal resistance junction to terminal 0.24" X 0.24" (6 X 6 mm) copper pads to each terminals



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# LM5817 THRU LM5819

FIG.1-FORWARD CURRENT DERATING CURVE

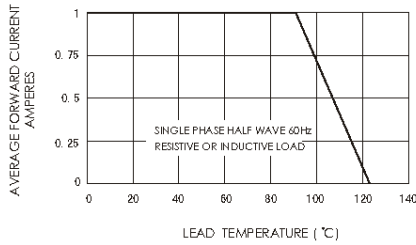


FIG.2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

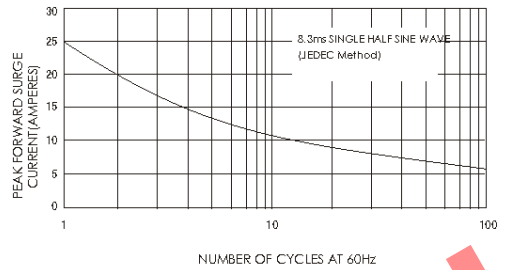


FIG.3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

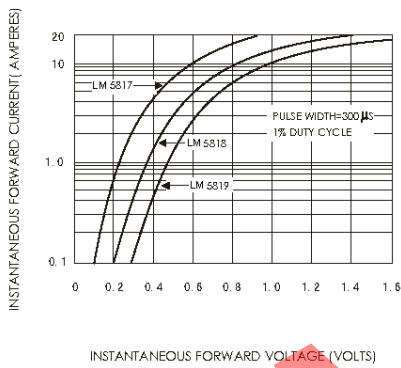


FIG.4-TYPICAL REVERSE CHARACTERISTICS

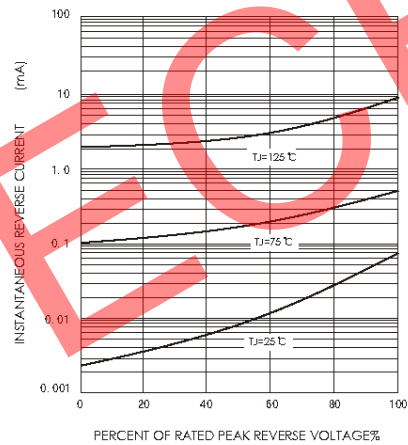
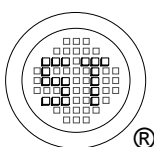
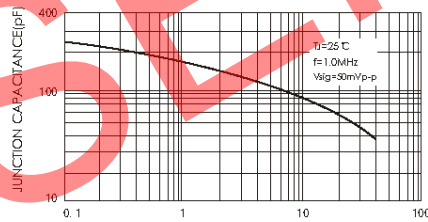


FIG.5-TYPICAL JUNCTION CAPACITANCE



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