

SURFACE MOUNT SCHOTTKY BARRIER RECTIFIER

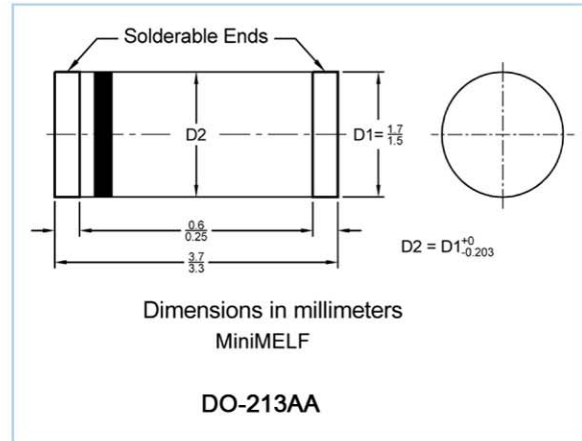
LM5817 THRU LM5819

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

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 methode)	I_{FSM}	25			A
Maximum Instantaneous Forward Voltage at $I_F = 1$ A at $I_F = 3$ A	V_F	0.45 0.75	0.55 0.875	0.6 0.9	V
Maximum Instantaneous Reverse Current at Rated DC Blocking Voltage ¹⁾ $T_A = 25$ °C $T_A = 100$ °C	I_R	0.5 10			mA
Typical Junction Capacitance ²⁾	C_J	110			pF
Typical Thermal Resistance, Junction to Ambient ³⁾ Typical Thermal Resistance, Junction to Terminal ⁴⁾	$R_{\theta JA}$ $R_{\theta JL}$	75 30			°C/W
Operating Junction Temperature Range	T_J	- 55 to + 125			°C
Storage Temperature Range	T_{stg}	- 55 to + 150			°C

¹⁾ Pulse test: 300 μ s pulse width, 1% duty cycle

²⁾ Measured at 1 MHz and reverse voltage of 4 V

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

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

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FIG.1-FORWARD CURRENT DERATING CURVE

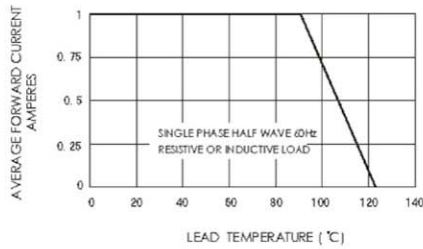


FIG.2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

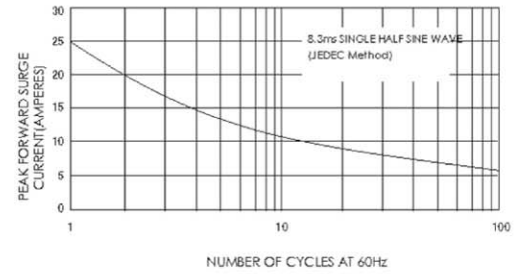


FIG.3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

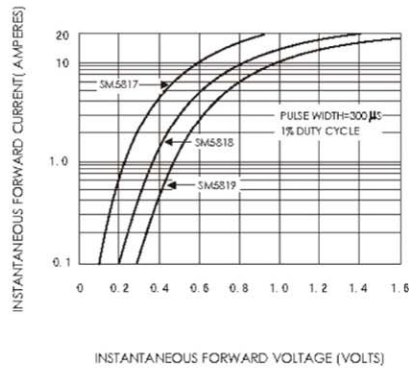


FIG.4-TYPICAL REVERSE CHARACTERISTICS

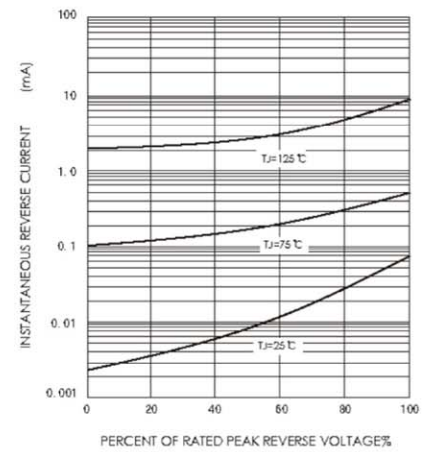


FIG.5-TYPICAL JUNCTION CAPACITANCE

