

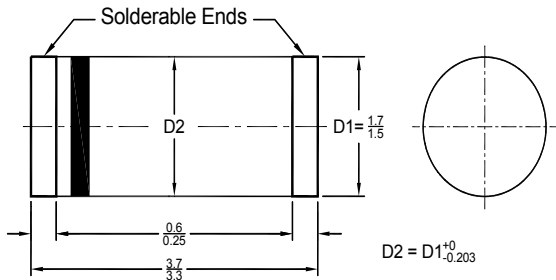


SM5817 THRU SM5819

SURFACE MOUNT SCHOTTKY BARRIER RECTIFIERS

VOLTAGE RANGE: 20 --- 40 V CURRENT: 1.0 A

DO-213AA



Dimensions in millimeters

FEATURES

- ◇ Metal-Semiconductor junction with guard ring
- ◇ Epitaxial construction
- ◇ Low forward voltage drop, low switching losses
- ◇ High surge capability
- ◇ For use in low voltage, high frequency inverters free wheeling, and polarity protection applications
- ◇ The plastic material carries U/L recognition 94V-0

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

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25°C ambient temperature unless otherwise specified.

Single phase, half wave, 60 Hz, resistive or inductive load. For capacitive load, derate by 20%.

MDD Catalog Number		LM5817	LM5818	LM5819	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 @ $T_A = 90^\circ\text{C}$	$I_{F(AV)}$	1.0			A
Peak forward surge current 8.3ms single half-sine-wave superimposed on rated load	I_{FSM}	25			A
Maximum instantaneous forward voltage @ 1.0A (Note 1) @ 3.0A	V_F	0.45 0.75	0.55 0.875	0.60 0.90	V
Maximum reverse current @ $T_A = 25^\circ\text{C}$ at rated DC blocking voltage @ $T_A = 100^\circ\text{C}$	I_R	0.5 10.0			mA
Typical junction capacitance (Note2)	C_J	110			pF
Typical thermal resistance (Note3)	$R_{\theta JA}$	75			$^\circ\text{C/W}$
Operating junction temperature range	T_J	- 55 ---- + 125			$^\circ\text{C}$
Storage temperature range	T_{STG}	- 55 ---- + 150			$^\circ\text{C}$

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

2. Measured at 1.0MHz and applied reverse voltage of 4.0V DC.

3. Thermal resistance junction to ambient, vertical PC board mounting, 0.5" (12.7mm) lead length.

MDD ELECTRONIC

RATINGS AND CHARACTERISTIC CURVES LM5817 THRU LM5819

FIG.1-FORWARD CURRENT DERATING CURVE

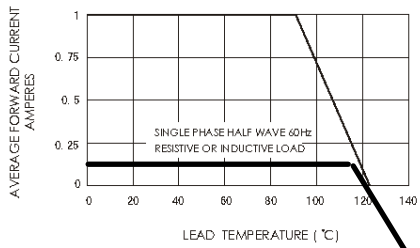


FIG.2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

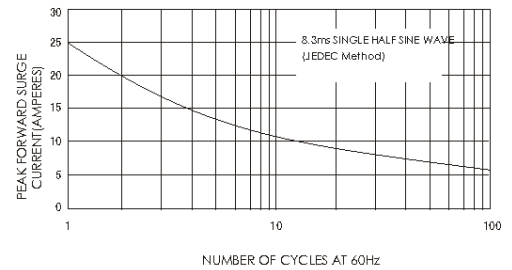


FIG.3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

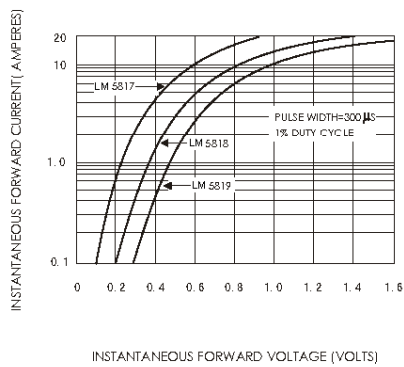


FIG.4-TYPICAL REVERSE CHARACTERISTICS

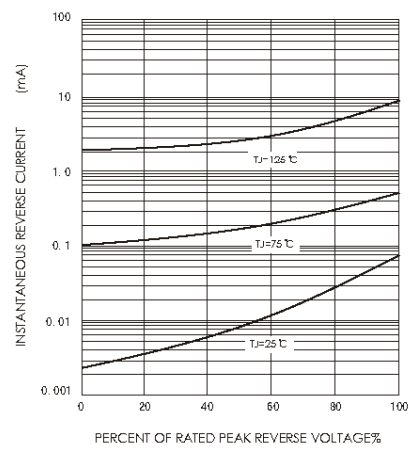


FIG.5-TYPICAL JUNCTION CAPACITANCE

