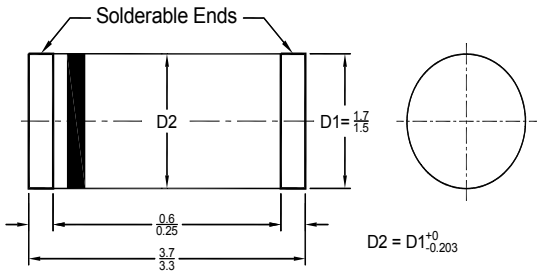
SM5817 THRU SM5819

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℃ ambient temperature unless otherwise specified.
Single phase,half wave,60 Hz,resistive or inductive load. For capacitive load,derate by 20%.

TYPE 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℃	$I_{F(AV)}$	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℃ at rated DC blocking voltage @T_A=100℃	I_R	0.5 10.0			mA
Typical junction capacitance (Note2)	C_J	110			pF
Typical thermal resistance (Note3)	$R_{\theta JA}$	75			℃/W
Operating junction temperature range	T_J	- 55 ---- + 125			℃
Storage temperature range	T_{STG}	- 55 ---- + 150			℃

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

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

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

RATINGS AND CHARACTERISTIC CURVES *LM5817 THRU LM5819*

FIG.1-FORWARD CURRENT DERATING CURVE

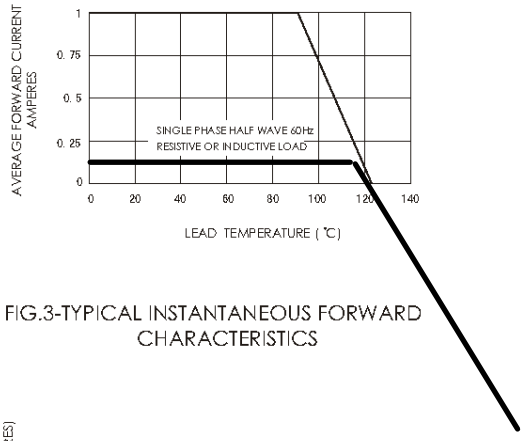


FIG.2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

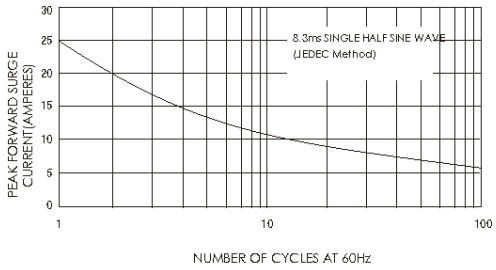


FIG.3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

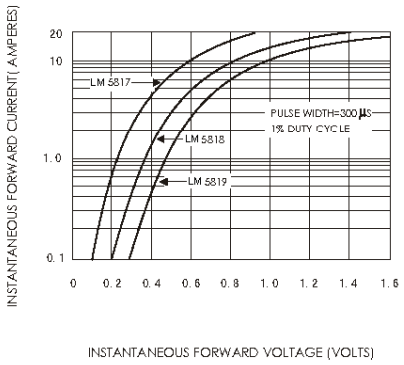


FIG.4-TYPICAL REVERSE CHARACTERISTICS

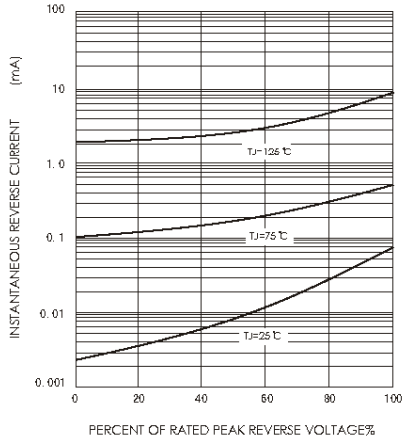


FIG.5-TYPICAL JUNCTION CAPACITANCE