

II. Schottky Rectifier

1.0A Surface Mount Schottky Rectifier SM5817~SM5819

(Package: MELF (DO-213AB))

<p>FEATURES</p> <ul style="list-style-type: none"> • Low power loss, high efficiency • For surface mounted applications • High surge current capability • Low forward voltage drop • For use in low voltage, high frequency inverters, free wheeling applications • Metal silicon junction, majority carrier conduction <p>MECHANICAL DATA</p> <ul style="list-style-type: none"> • Case : MELF(DO-213AB) molded plastic body • Terminals : Solder plated • Polarity : Color band denotes cathode end • Mounting Position : Any • Weight : 0.12 grams 	<p>Case: MELF Dimensions in inches and (millimeters)</p>
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Ratings & Electrical Characteristics

Ratings at 25 °C ambient temperature unless otherwise specified.

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

Characteristics	Symbol	SM5817	SM5818	SM5819	Units
Maximum recurrent peak reverse voltage	V_{RRM}	20	30	40	Volts
Maximum RMS voltage	V_{RMS}	14	21	28	Volts
Maximum DC blocking voltage	V_{DC}	20	30	40	Volts
Maximum average forward rectified current at $T_L=90$	I_o	1.0			Amp
Peak forward surge current 8.3ms single half sine wave superimposed on rated load (JEDEC method)	I_{FSM}	25.0			Amps
Maximum instantaneous forward voltage at 1.0A	V_F	0.450	0.550	0.600	Volts
Maximum instantaneous forward voltage at 3.0A	V_F	0.750	0.875	0.900	Volts
Maximum DC reverse current at rated DC blocking voltage	$T_a=25$	I_R	1.0		mA
	$T_a=100$		10.0		
Typical thermal resistance (Note 2)	R_{th-JA}	80.0			/W
Typical junction capacitance (Note 1)	C_j	110			PF
Operating and storage temperature range	T_j	-65 to +125			
	T_{stg}	-65 to +150			

Notes:

1. Measured at 1MHz and applied reverse voltage of 4.0V DC.
2. Thermal resistance from junction to ambient.

Ratings and Characteristic Curves of SM5817~SM5819

FIG. 1 - MAXIMUM FORWARD CURRENT DERATING CURVE

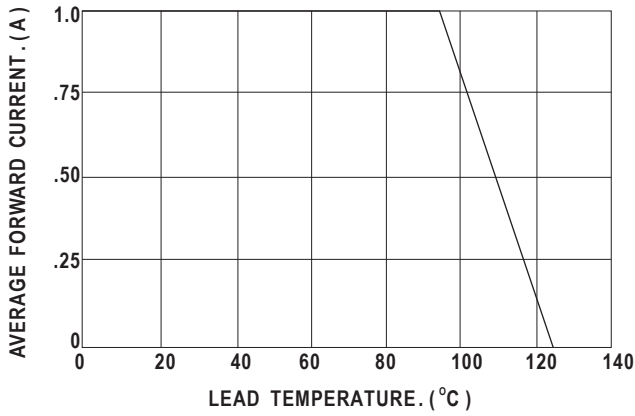


FIG. 2 - TYPICAL JUNCTION CAPACITANCE

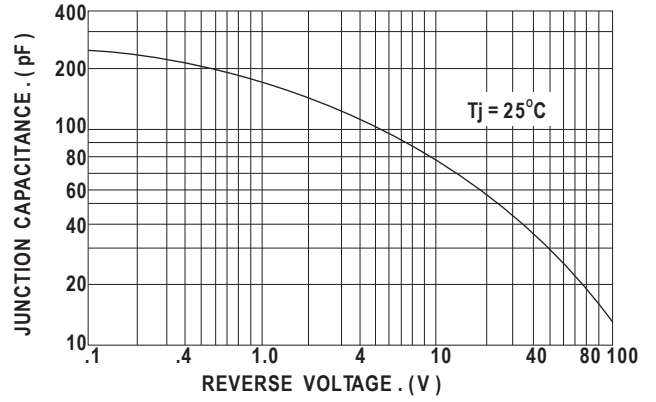


FIG. 3 - TYPICAL FORWARD CHARACTERISTICS

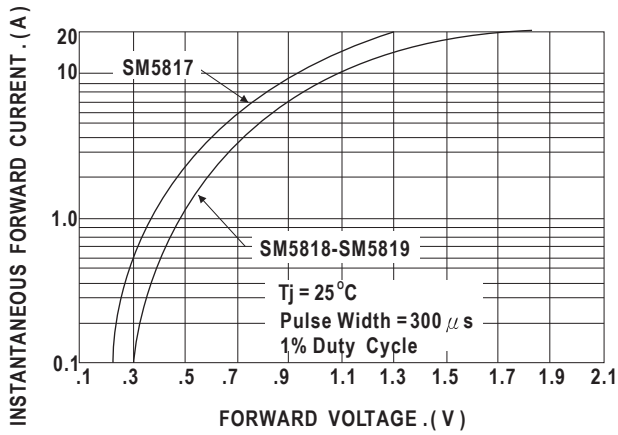


FIG. 4 - MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

