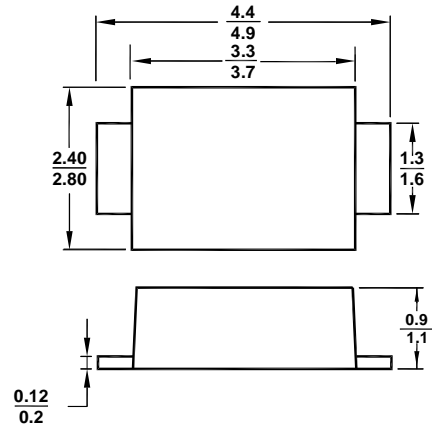


# SM5817F THRU SM5819F

**Surface Mount Schottky Barrier Rectifier**  
**Reverse Voltage - 20 to 40 V**  
**Forward Current - 1 A**

**SMAF**



All Dimensions in mm

## 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	SM5817F	SM5818F	SM5819F	Units
	Marking	SS12	SS13	SS14	-
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 <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
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  $\mu$ s pulse width, 1% duty cycle

<sup>2)</sup> Mearsured 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

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FIG.1-FORWARD CURRENT DERATING CURVE

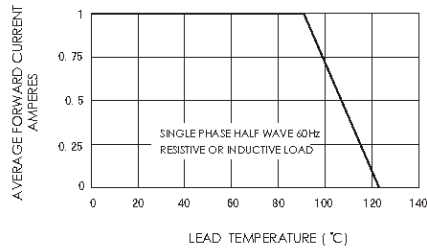


FIG.2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

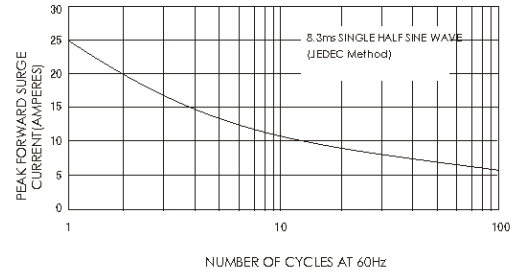


FIG.3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

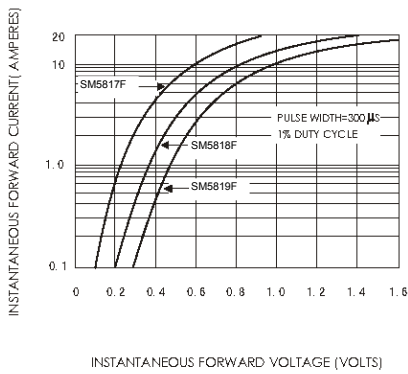


FIG.4-TYPICAL REVERSE CHARACTERISTICS

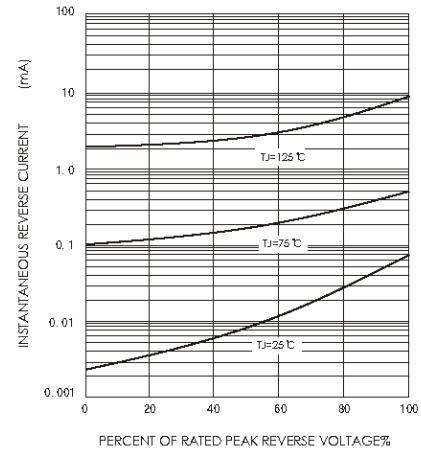


FIG.5-TYPICAL JUNCTION CAPACITANCE

