

SURFACE MOUNT SCHOTTKY BARRIER RECTIFIER

VOLTAGE RANGE 20 to 40 Volts CURRENT 1.0 Ampere

FEATURES

- * Ideal for surface mounted applications
- * Low leakage current
- * Metallurgically bonded construction
- * Mounting position: Any
- * Weight: 0.015 gram

MECHANICAL DATA

- * Epoxy : Device has UL flammability classification 94V-0

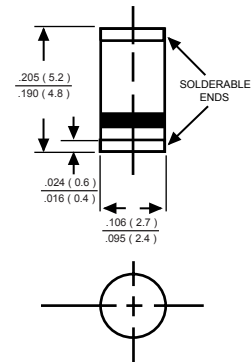
DISCONTINUED-

"This series is replaced by the FM581X series that meets to the same fit and function parameters and share the same solder pad layout. The FM581X series is preferred for error-free vacuum pick-up and PCB assembly."

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 current by 20%.

MELF



Dimensions in inches and (millimeters)

MAXIMUM RATINGS (@ TA=25 °C unless otherwise noted)

RATINGS	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 $T_A = 90^\circ\text{C}$	I_O	1.0			Amps
Peak Forward Surge Current 8.3 ms single half sine-wave superimposed on rated load (JEDEC method)	I_{FSM}	25			Amps
Typical Junction Capacitance (Note 1)	C_J	110			pF
Operating Temperature Range	T_J	150			$^\circ\text{C}$
Storage Temperature Range	T_{STG}	-55 to + 150			$^\circ\text{C}$

ELECTRICAL CHARACTERISTICS (@ TA=25 °C unless otherwise noted)

CHARACTERISTICS	SYMBOL	SM5817	SM5818	SM5819	UNITS
Maximum Instantaneous Forward Voltage at 1.0A DC	V_F	.45	.55	.60	Volts
Maximum Instantaneous Forward Voltage at 3.1A DC	V_F	.75	.875	.90	Volts
Maximum Average Reverse Current	I_R	@ $T_A = 25^\circ\text{C}$			mAmps
at Rated DC Blocking Voltage		@ $T_A = 100^\circ\text{C}$			mAmps

NOTES : 1. Measured at 1 MHz and applied reverse voltage of 4.0 volts.

2. "Fully ROHS compliant", "100% Sn plating (Pb-free)".

2007-5

RATING AND CHARACTERISTICS CURVES (SM5817 THRU SM5819)

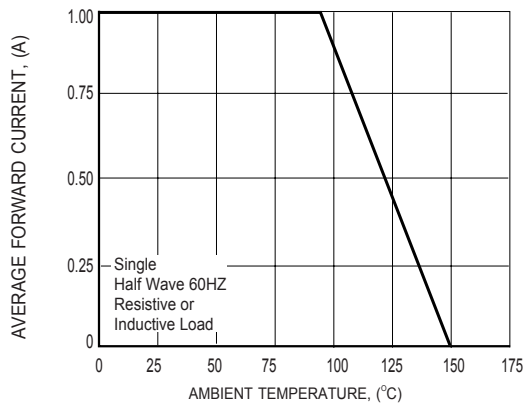


FIG.1 TYPICAL FORWARD CURRENT DERATING CURVE

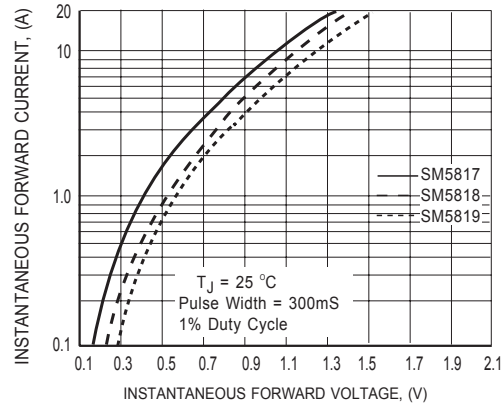


FIG.2 TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

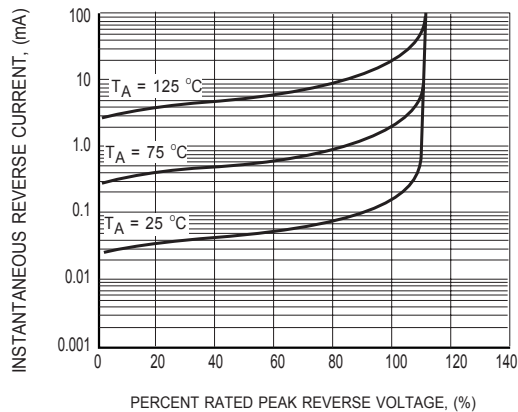


FIG.3 TYPICAL REVERSE CHARACTERISTICS

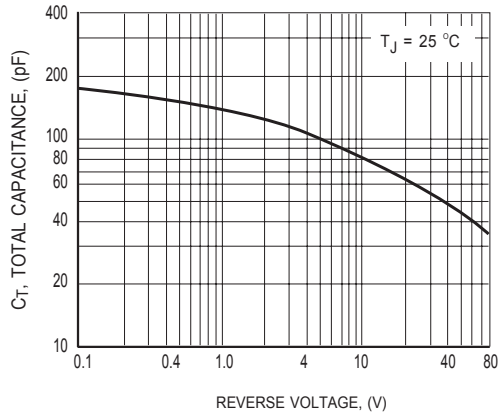


FIG.4 TYPICAL JUNCTION CAPACITANCE

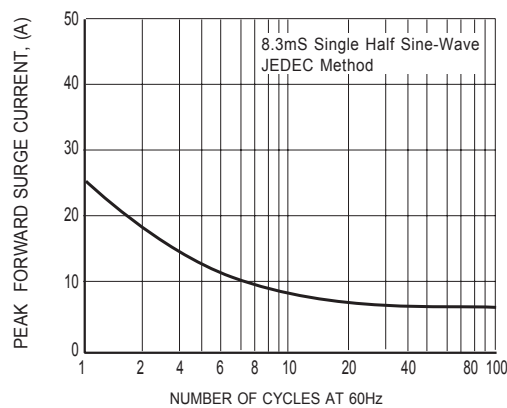
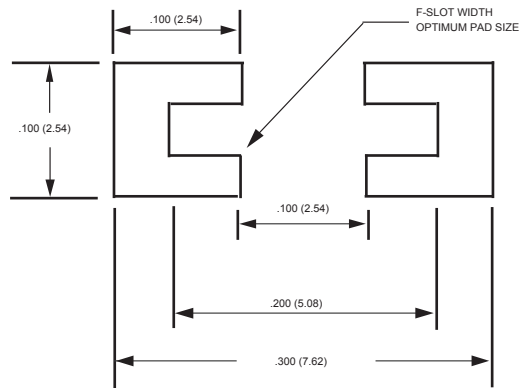


FIG.5 MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT



Mounting Pad Layout



Dimensions in inches and (millimeters)



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