

**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**

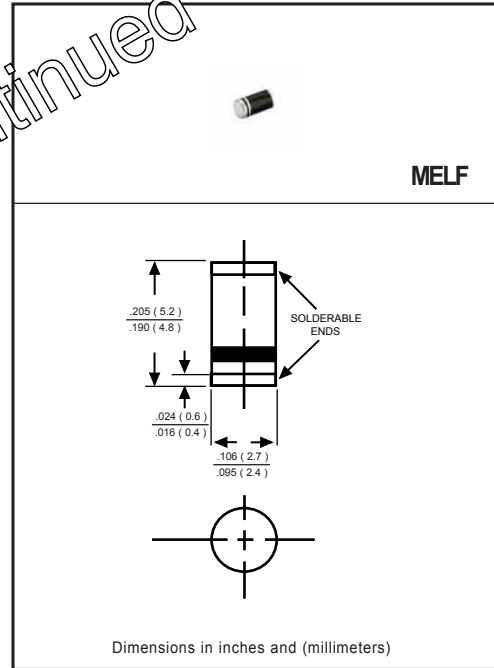
\* Epoxy : Device has UL flammability classification 94V-0

**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%.



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

RATINGS	SYMBOL	SM5817	SM5818	SM5819	UNITS
Maximum Recurrent Peak Reverse Voltage	V <sub>RRM</sub>	20	30	40	Volts
Maximum RMS Voltage	V <sub>RMS</sub>	14	21	28	Volts
Maximum DC Blocking Voltage	V <sub>DC</sub>	20	30	40	Volts
Maximum Average Forward Rectified Current at T <sub>A</sub> = 90°C	I <sub>O</sub>	1.0			Amps
Peak Forward Surge Current 8.3 ms single half sine-wave superimposed on rated load (JEDEC method)	I <sub>FSM</sub>	25			Amps
Typical Junction Capacitance (Note 1)	C <sub>J</sub>	110			pF
Operating Temperature Range	T <sub>J</sub>	150			°C
Storage Temperature Range	T <sub>STG</sub>	-55 to + 150			°C

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

CHARACTERISTICS	SYMBOL	SM5817	SM5818	SM5819	UNITS
Maximum Instantaneous Forward Voltage at 1.0A DC	V <sub>F</sub>	.45	.55	.60	Volts
Maximum Instantaneous Forward Voltage at 3.1A DC	V <sub>F</sub>	.75	.875	.90	Volts
Maximum Average Reverse Current at Rated DC Blocking Voltage	@T <sub>A</sub> = 25°C	0.2			mAmps
	@T <sub>A</sub> = 100°C	10			mAmps

NOTES : 1. Measured at 1 MHz and applied reverse voltage of 4.0 volts.  
2. "Fully ROHS compliant", "100% Sn plating (Pb-free)".

## RATING AND CHARACTERISTICS CURVES ( SM5817 THRU SM5819 )

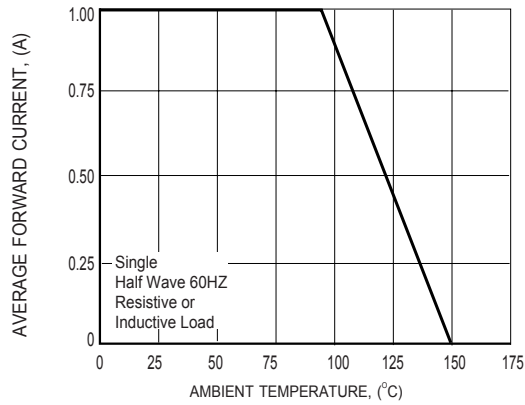


FIG.1 TYPICAL FORWARD CURRENT DERATING CURVE

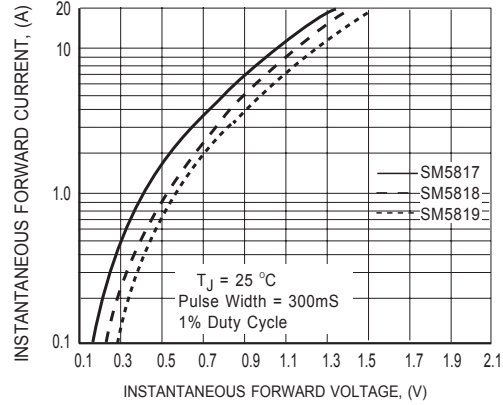


FIG.2 TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

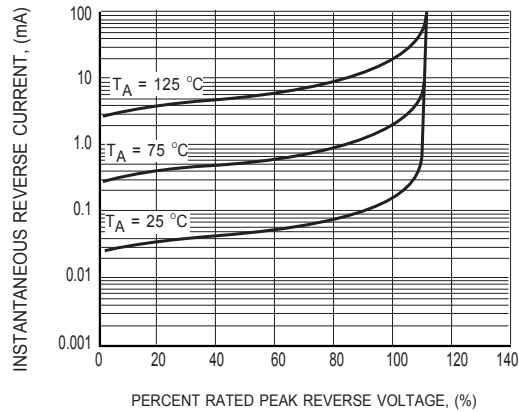


FIG.3 TYPICAL REVERSE CHARACTERISTICS

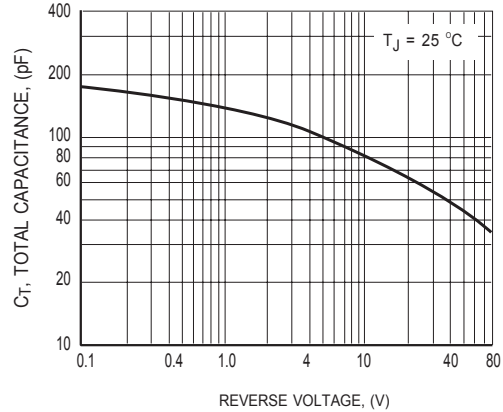


FIG.4 TYPICAL JUNCTION CAPACITANCE

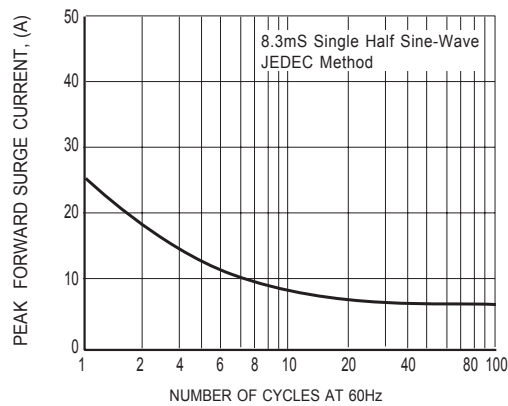
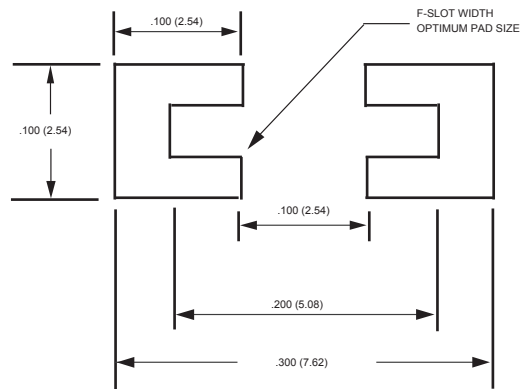


FIG.5 MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

## Mounting Pad Layout



Dimensions in inches and (millimeters)