

**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: 0.057 gram

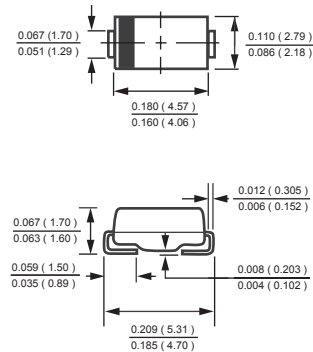
**MECHANICAL DATA**

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

**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%.

**SMAL**



Dimensions in inches and (millimeters)

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

RATINGS	SYMBOL	FM5817L	FM5818L	FM5819L	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 Thermal Resistance (Note 3)	R <sub>θJA</sub>	88			°C/W
	R <sub>θJL</sub>	28			
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	FM5817L	FM5818L	FM5819L	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 @ $T_A = 25^\circ\text{C}$	$I_R$	0.2			mAmps
at Rated DC Blocking Voltage @ $T_A = 100^\circ\text{C}$		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)".  
 3. Thermal Resistance : Mounted on PCB.  
 4. Also available in SMBL.

## RATING AND CHARACTERISTICS CURVES ( FM5817L THRU FM5819L )

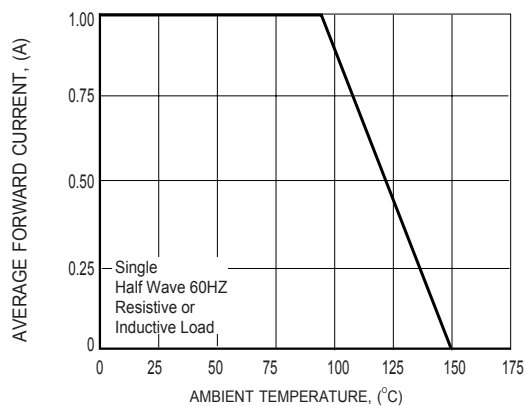


FIG.1 TYPICAL FORWARD CURRENT DERATING CURVE

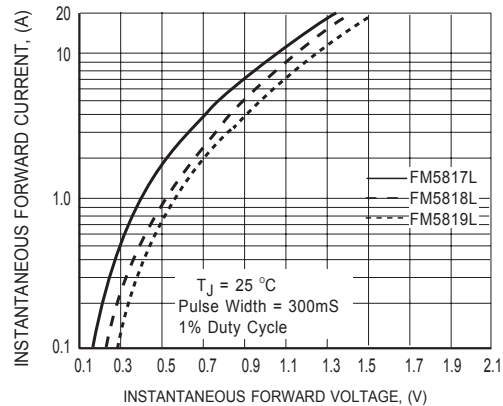


FIG.2 TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

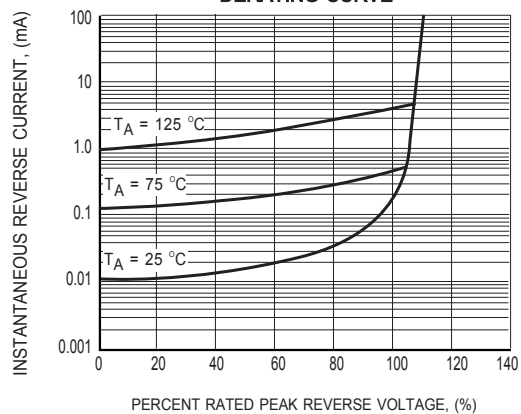


FIG.3 TYPICAL REVERSE CHARACTERISTICS

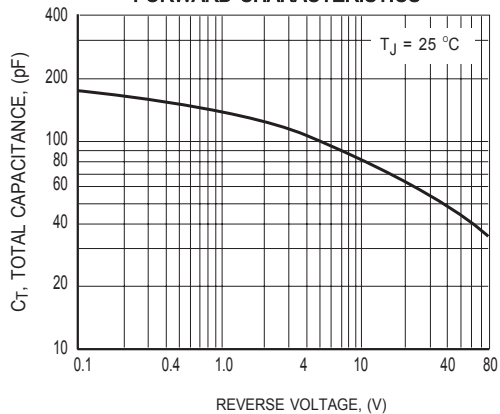


FIG.4 TYPICAL JUNCTION CAPACITANCE

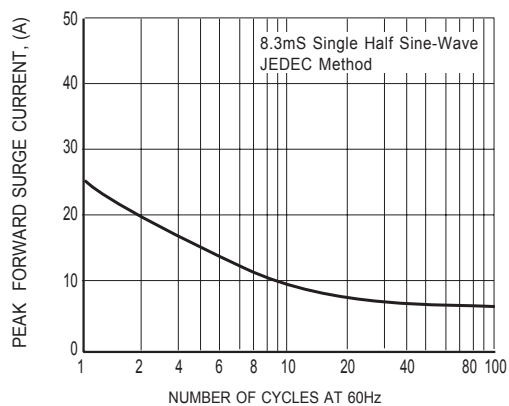
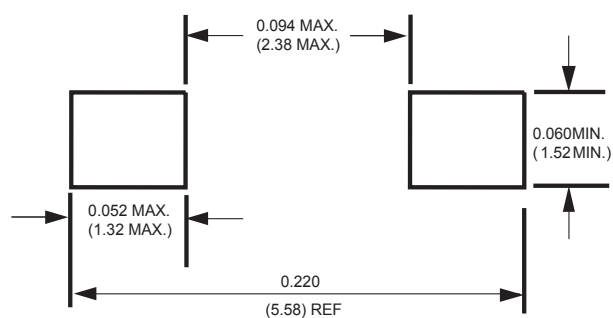


FIG.5 MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

## Mounting Pad Layout



Dimensions in inches and (millimeters)

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