

**SURFACE MOUNT SCHOTTKY BARRIER RECTIFIER**

**VOLTAGE RANGE 20 to 60 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 FM1XX series that meets to the same fit and function parameters and share the same solder pad layout. The FM1XX series is preferred for error-free vacuum pick-up and PCB assembly."

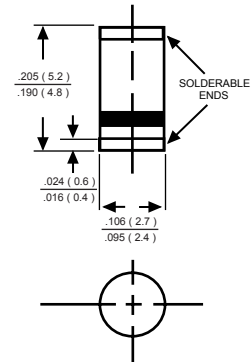
**MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS**

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	SM120	SM130	SM140	SM150	SM160	UNITS
Maximum Recurrent Peak Reverse Voltage	$V_{RRM}$	20	30	40	50	60	Volts
Maximum RMS Voltage	$V_{RMS}$	14	21	28	35	42	Volts
Maximum DC Blocking Voltage	$V_{DC}$	20	30	40	50	60	Volts
Maximum Average Forward Rectified Current at Derating Case Temperature	$I_O$	1.0					Amps
Peak Forward Surge Current 8.3 ms single half sine-wave superimposed on rated load (JEDEC method)	$I_{FSM}$	40					Amps
Typical Junction Capacitance (Note 2)	$C_J$	110					pF
Operating Temperature Range	$T_J$	150					°C
Storage Temperature Range	$T_{STG}$	-55 to + 150					°C

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

CHARACTERISTICS		SYMBOL	SM120	SM130	SM140	SM150	SM160	UNITS
Maximum Instantaneous Forward Voltage at 1.0A DC		V <sub>F</sub>	.55			.70		Volts
Maximum Average Reverse Current at Rated DC Blocking Voltage	@T <sub>A</sub> = 25°C	I <sub>R</sub>	0.2					mA
	@T <sub>A</sub> = 100°C		2					mA

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 ( SM120 THRU SM160 )

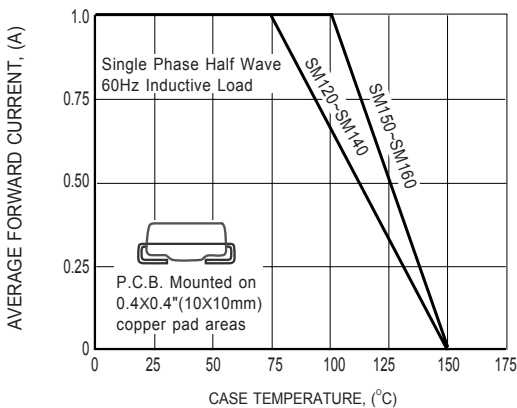


FIG.1 TYPICAL FORWARD CURRENT DERATING CURVE

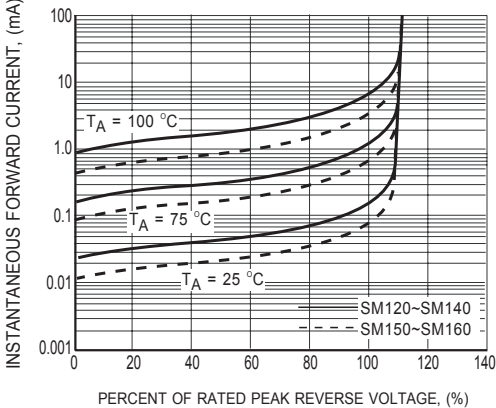


FIG.2 TYPICAL REVERSE CHARACTERISTICS

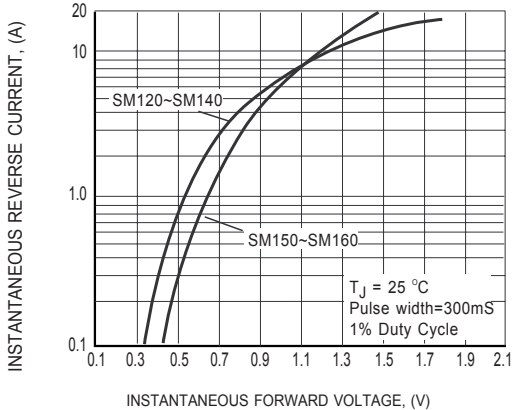


FIG.3 TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

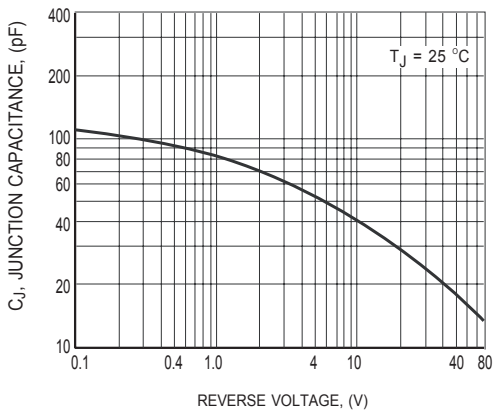


FIG.4 TYPICAL JUNCTION CAPACITANCE

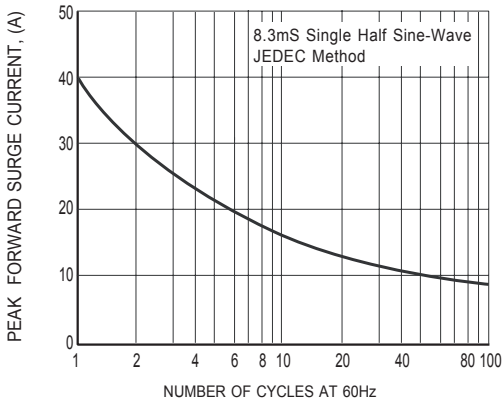
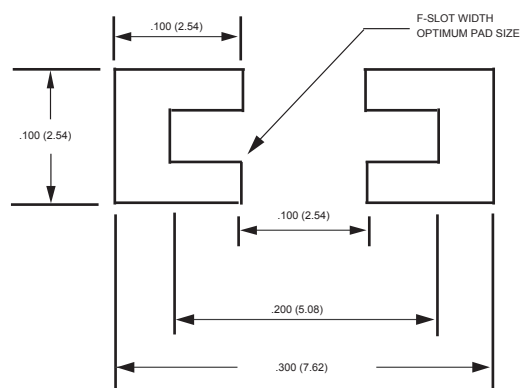


FIG.5 MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

## Mounting Pad Layout



Dimensions in inches and (millimeters)

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