

**SURFACE MOUNT GLASS PASSIVATED  
FAST RECOVERY SILICON RECTIFIER**  
VOLTAGE RANGE 50 to 600 Volts CURRENT 1.0 Ampere

**FEATURES**

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

**MECHANICAL DATA**

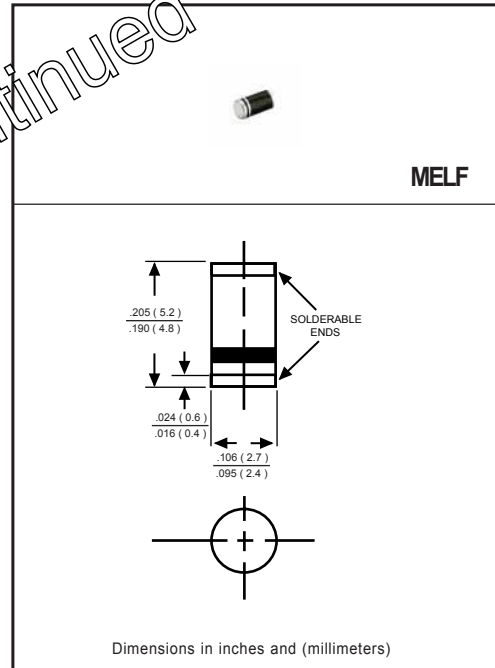
- \* Epoxy : Device has UL flammability classification 94V-0

**DISCONTINUED-**

"This series is replaced by the FM493X series that meets to the same fit and function parameters and share the same solder pad layout. The FM493X 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	SM4933	SM4934	SM4935	SM4936	SM4937	UNITS
Maximum Recurrent Peak Reverse Voltage	V <sub>RRM</sub>	50	100	200	400	600	Volts
Maximum RMS Voltage	V <sub>RMS</sub>	35	70	140	280	420	Volts
Maximum DC Blocking Voltage	V <sub>DC</sub>	50	100	200	400	600	Volts
Maximum Average Forward Rectified Current at T <sub>A</sub> = 55°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>	30					Amps
Typical Junction Capacitance (Note 2)	C <sub>J</sub>	15					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	SM4933	SM4934	SM4935	SM4936	SM4937	UNITS
Maximum Instantaneous Forward Voltage at 1.0A DC	V <sub>F</sub>	1.2					Volts
Maximum Full Load Reverse Current, Full cycle Average T <sub>A</sub> =55°C	I <sub>R</sub>	50					mA
Maximum Average Reverse Current @T <sub>A</sub> = 25°C		2					uA
at Rated DC Blocking Voltage @T <sub>A</sub> = 100°C		100					uA
Maximum Reverse Recovery Time (Note 4)	t <sub>rr</sub>	200					nSec

NOTES : 1. Measured at 1 MHz and applied reverse voltage of 4.0 volts.  
2. "Fully ROHS compliant", "100% Sn plating (Pb-free)".  
3. Test Conditions: I<sub>F</sub>= 0.5A, I<sub>R</sub>= -1.0A, I<sub>RR</sub>= -0.25A.

# RATING AND CHARACTERISTICS CURVES ( SM4933 THRU SM4937 )

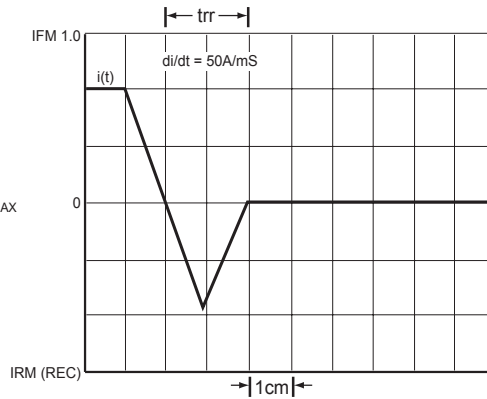
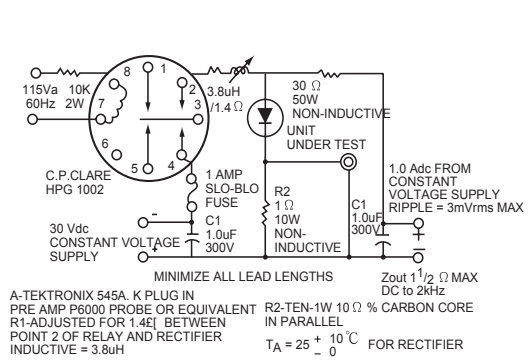


FIG.1 TEST CIRCUIT DIAGRAM AND REVERSE RECOVERY TIME CHARACTERISTIC

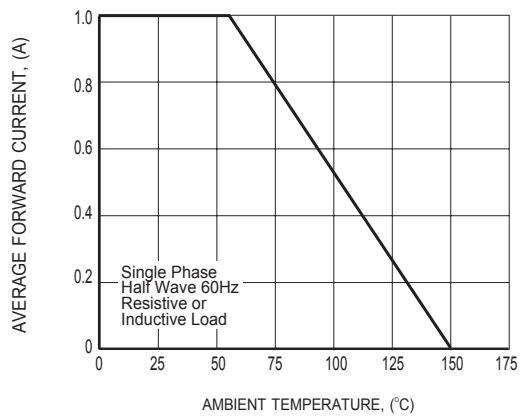


FIG.2 TYPICAL FORWARD CURRENT DERATING CURVE

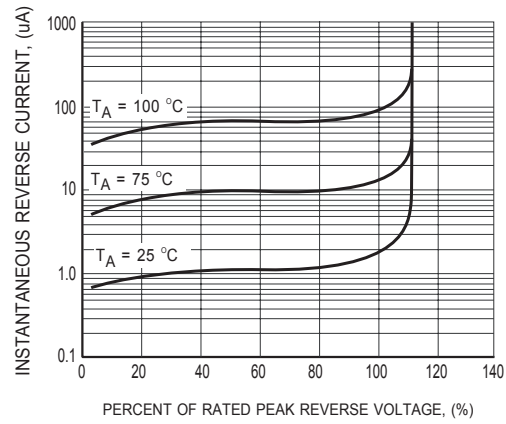
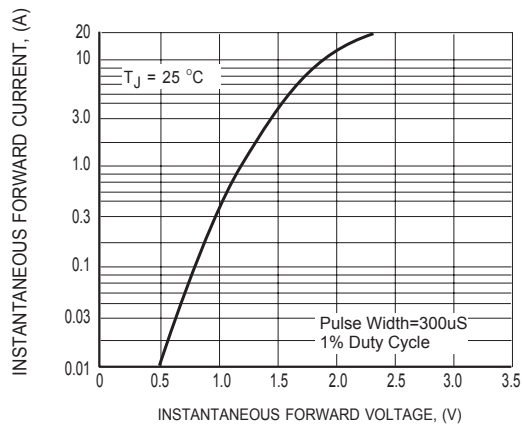
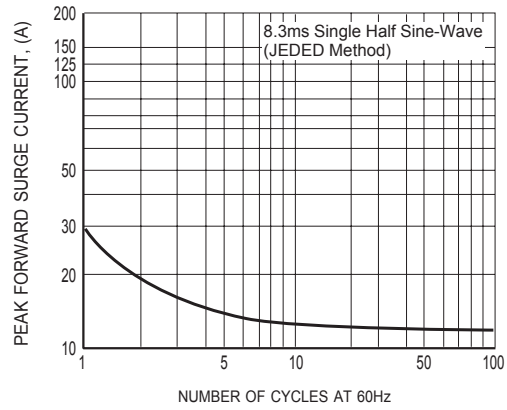


FIG.3 TYPICAL REVERSE CHARACTERISTICS

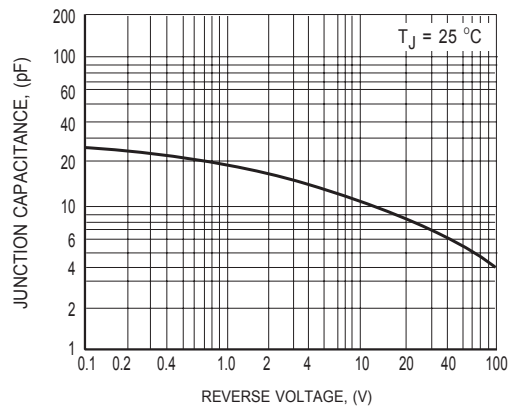
## RATING AND CHARACTERISTICS CURVES ( SM4933 THRU SM4937 )



**FIG.4 TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS**

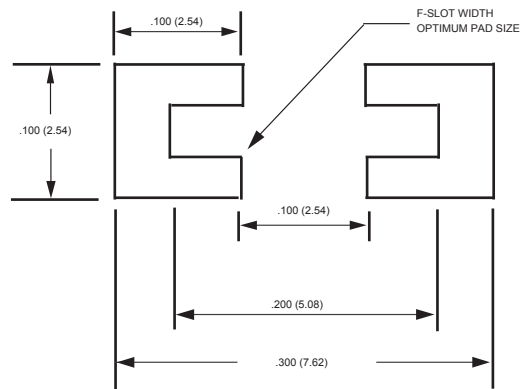


**FIG.5 MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT**



**FIG.6 TYPICAL JUNCTION CAPACITANCE**

## Mounting Pad Layout



Dimensions in inches and (millimeters)

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