RECTRON SEMICONDUCTOR
TECHNICAL SPECIFICATION

SM4933 THRU SM4937

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

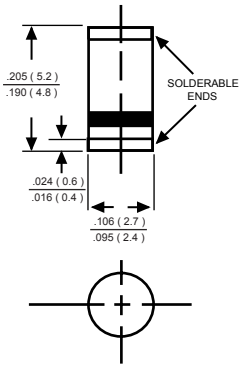
MECHANICAL DATA

* 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."

MELF



Dimensions in inches and (millimeters)

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_{RRM}	50	100	200	400	600	Volts
Maximum RMS Voltage	V_{RMS}	35	70	140	280	420	Volts
Maximum DC Blocking Voltage	V_{DC}	50	100	200	400	600	Volts
Maximum Average Forward Rectified Current at T_A = 55°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}	30					Amps
Typical Junction Capacitance (Note 2)	C_J	15					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	SM4933	SM4934	SM4935	SM4936	SM4937	UNITS
Maximum Instantaneous Forward Voltage at 1.0A DC		V_F	1.2					Volts
Maximum Full Load Reverse Current, Full cycle Average T_A =55°C		I_R	50					mA
Maximum Average Reverse Current	@T_A = 25°C		2					uA
at Rated DC Blocking Voltage	@T_A = 100°C		100					uA
Maximum Reverse Recovery Time (Note 4)		trr	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_F= 0.5A, I_R= -1.0A, I_{RR}= -0.25A.

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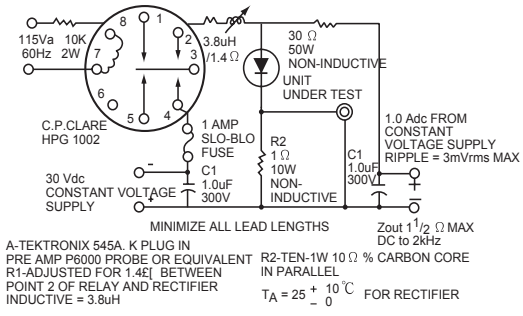
RATING AND CHARACTERISTICS CURVES (SM4933 THRU SM4937)



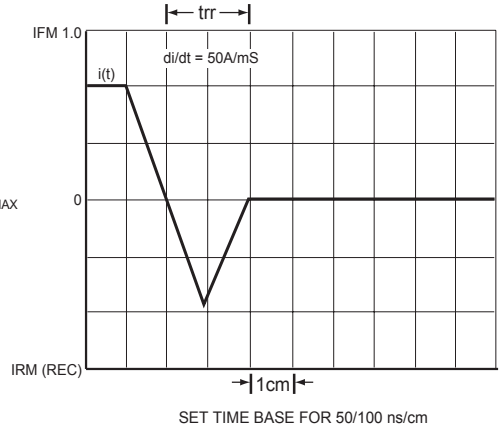


FIG.1 TEST CIRCUIT DIAGRAM AND REVERSE RECOVERY TIME CHARACTERISTIC

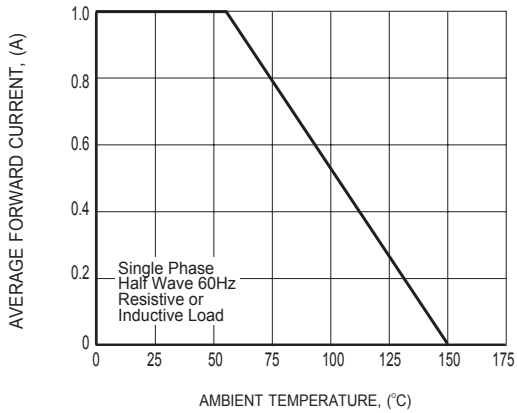


FIG.2 TYPICAL FORWARD CURRENT DERATING CURVE

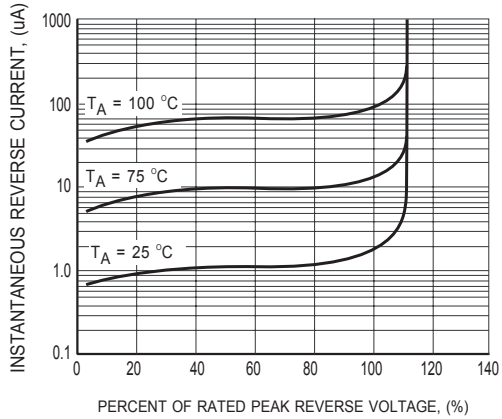


FIG.3 TYPICAL REVERSE CHARACTERISTICS

RATING AND CHARACTERISTICS CURVES (SM4933 THRU SM4937)

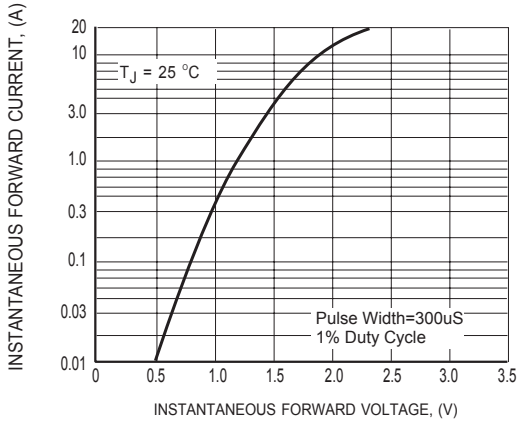


FIG.4 TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

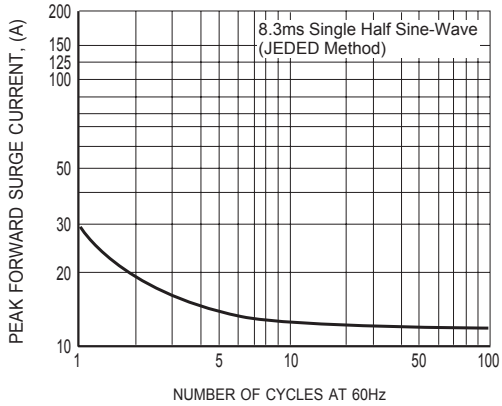


FIG.5 MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

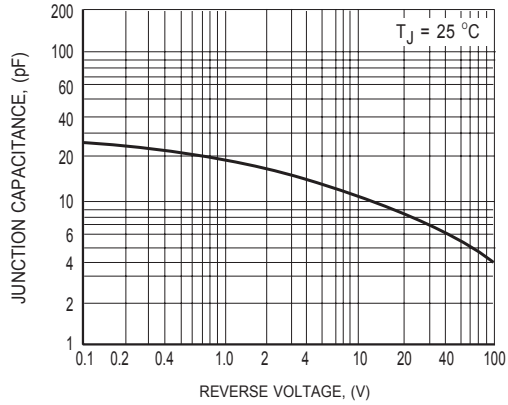
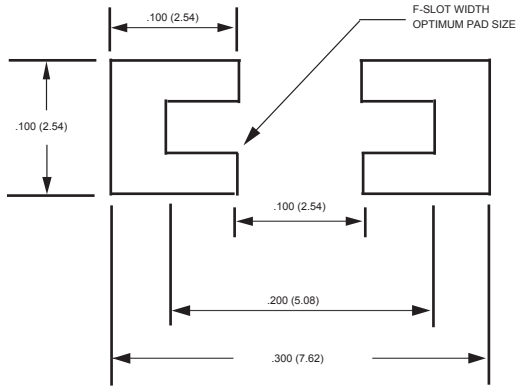


FIG.6 TYPICAL JUNCTION CAPACITANCE

Mounting Pad Layout



Dimensions in inches and (millimeters)

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