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

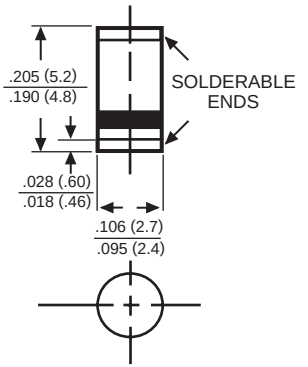
* Fast switching
* Glass passivated device
* Ideal for surface mounted applications
* Low leakage current
* Metallurgically bonded construction
* Mounting position: Any
* Weight: 0.015 gram

MECHANICAL DATA

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



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 (At T_A = 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 T_A = 55°C	I_O	1.0					Amps
Peak Forward Surge Current I_{FM} (surge): 8.3 ms single half sine-wave superimposed on rated load (JEDEC method)	I_{FSM}	30					Amps
Maximum Thermal Resistance	(Note 2) $R\theta_{JL}$	30					°C/W
	(Note 3) $R\theta_{JA}$	75					°C/W
Typical Junction Capacitance (Note 1)	C_J	15					pF
Operating and Storage Temperature Range	T_J, T_{STG}	-65 to + 175					°C

ELECTRICAL CHARACTERISTICS (At T_A = 25°C unless otherwise noted)

CHARACTERISTICS		SYMBOL	SM4933	SM4934	SM4935	SM4936	SM4937	UNITS
Maximum Forward Voltage at 1.0A DC		V_F	1.2					Volts
Maximum Full Load Reverse Current,Full cycle Average at T_A = 55°C		I_R	50					uAmps
Maximum Average Reverse Current at Rated DC Blocking Voltage	@T_A = 25°C		5.0					uAmps
	@T_A = 125°C		100					uAmps
Maximum Reverse Recovery Time (Note 4)		trr	200					nSec

NOTES : 1. Measured at 1.0 MHz and applied average voltage of 4.0VDC
2. Thermal resistance junction to terminal 6.0mm² copper pads to each terminal.
3. Thermal resistance junction to ambient, 6.0mm² copper pads to each terminal.
4. Test Conditions: I_F = 1.0A, V_R = 30V.

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RATING AND CHARACTERISTIC CURVES (SM4933 THRU SM4937)

FIG. 1 - TYPICAL FORWARD CURRENT DERATING CURVE

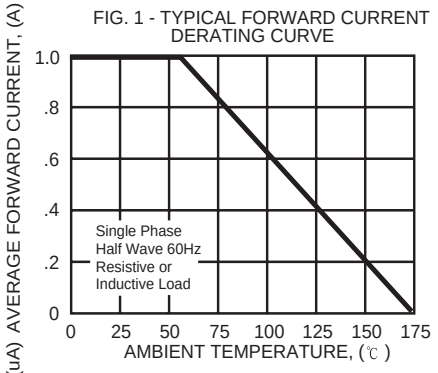


FIG. 2 - MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

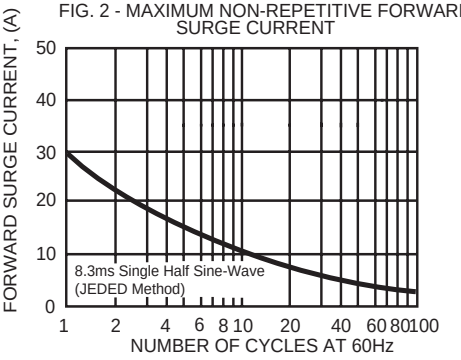


FIG. 3 - TYPICAL REVERSE CHARACTERISTICS

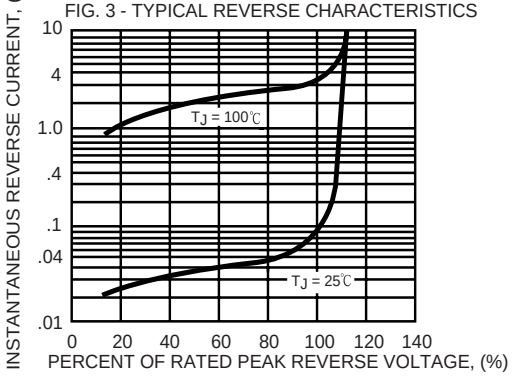


FIG. 4 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

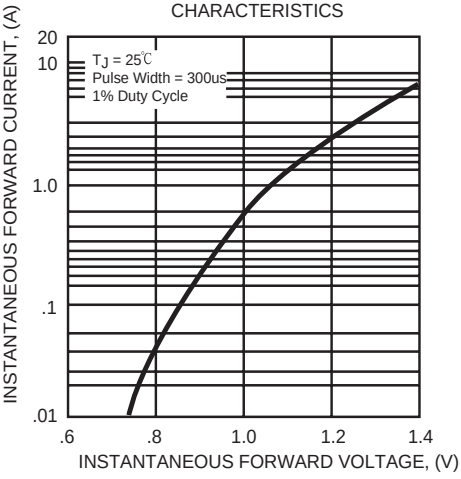


FIG. 5 - TEST CIRCUIT DIAGRAM AND REVERSE RECOVERY TIME CHARACTERISTIC

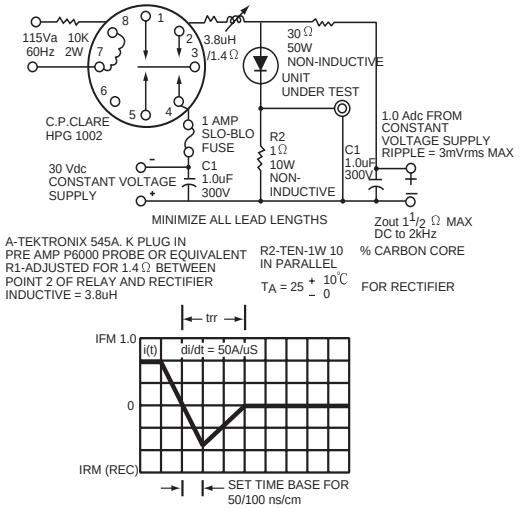


FIG. 6 - TYPICAL JUNCTION CAPACITANCE

