



DC COMPONENTS CO., LTD.

RECTIFIER SPECIALISTS

SM4933
THRU
SM4937

TECHNICAL SPECIFICATIONS OF FAST RECOVERY RECTIFIER

VOLTAGE RANGE - 50 to 600 Volts

CURRENT - 1.0 Ampere

FEATURES

- * Ideal for surface mounted applications
- * Low leakage current
- * Fast Switching for high efficiency
- * Glass passivated junction

MECHANICAL DATA

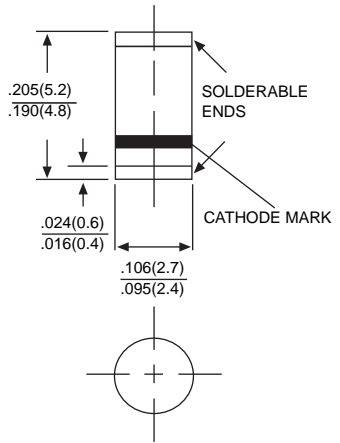
- * Case: Molded plastic
- * Epoxy: UL 94V-0 rated flame retardant
- * Lead: MIL-STD-202E, Method 208 guaranteed
- * Polarity: Color band denotes cathode end
- * Mounting position: Any
- * Weight: 0.12 gram approx.

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Rating 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%.



SM-1(DO-213AB)



Dimensions in inches and (millimeters)

	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 TA = 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
Maximum Instantaneous Forward Voltage at 1.0A DC	V _F	1.3					Volts
Maximum DC Reverse Current at Rated DC Blocking Voltage	@TA=25°C	5.0					μAmps
	@TA=125°C	100					
Maximum Reverse Recovery Time (Note 3)	t _{rr}	150				250	nSec
Maximum Thermal Resistance (Note 2)	R _{θJL}	30					°C/W
Typical Junction Capacitance (Note 1)	C _J	15					pF
Operating and Storage Temperature Range	T _J , T _{STG}	-55 to +150					°C

- NOTES : 1. Measured at 1.0 MHz and applied reverse voltage of 4.0VDC
 2. Thermal Resistance (Junction to Ambient), .24in² (6.0mm²) copper pads to each terminal.
 3. Test Conditions: IF = 0.5A, IR = 1.0A, IRR = 0.25A

RATING AND CHARACTERISTIC CURVES (SM4933 THRU SM4937)

FIG. 1 - TYPICAL FORWARD CURRENT DERATING CURVE

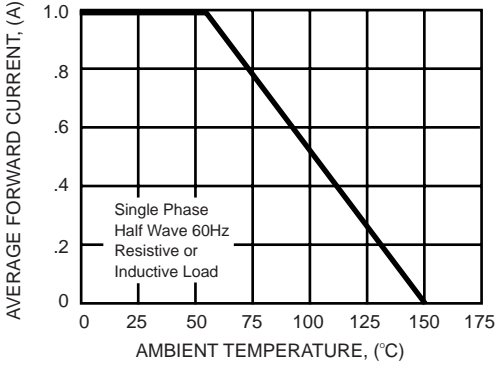


FIG. 2 - MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

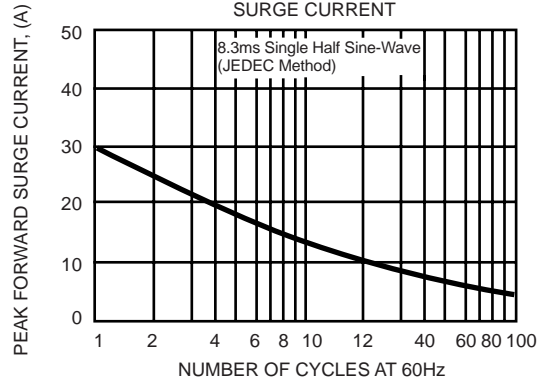


FIG. 3 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

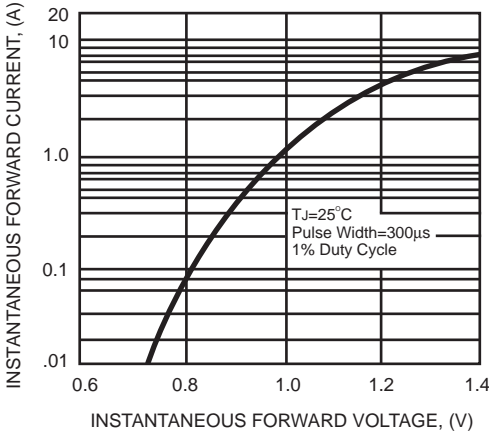


FIG. 4 - TYPICAL REVERSE CHARACTERISTICS

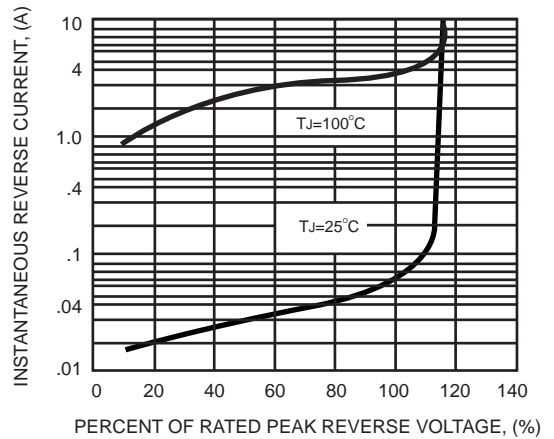


FIG. 5 - TYPICAL JUNCTION CAPACITANCE

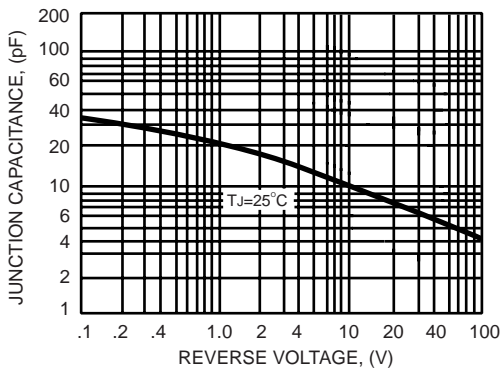
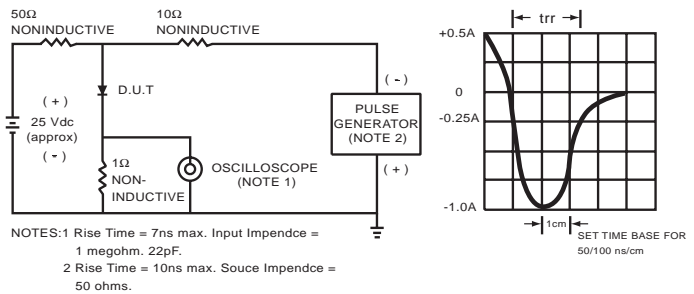


FIG. 6 - TEST CIRCUIT DIAGRAM AND REVERSE RECOVERY TIME CHARACTERISTIC



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