DC COMPONENTS CO., LTD.

RECTIFIER SPECIALISTS

SM4933 THRU SM4937

TECHNICAL SPECIFICATIONS OF SURFACE MOUNT FAST RECOVERY RECTIFIER

VOLTAGE RANGE - 50 to 600 Volts *CURRENT -1.0 Ampere*

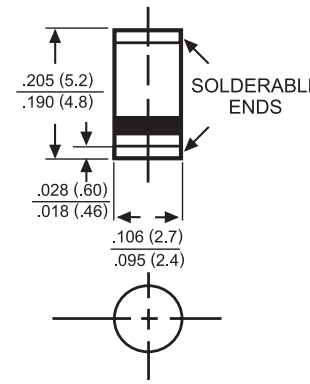
FEATURES

* Ideal for surface mounted applications
* Low leakage current
* Fast switching
* Glass passivated junction

MECHANICAL DATA

* Case: Molded plastic
* Epoxy: UL 94V-0 rate flame retardant
*Terminals: Solder plated solderable per MIL-STD-202E, Method 208 guaranteed
* Polarity: Color band denotes cathode end
* Mounting position: Any
* Weight: 0.12 gram

SM-1(DO-213AB)



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%.

		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 Forward Voltage at 1.0A DC		V_F	1.3					Volts
Maximum DC Reverse Current at	@T_A = 25°C	I_R	5.0					uAmps
Rated DC Blocking Voltage	@T_A = 125°C		100					
Maximum Reverse Recovery Time (Note 3)		trr	150				250	nSec
Maximum Thermal Resistance (Note 2)		$R\theta_{JL}$	30					°C/W
Typical Junction Capacitance (Note 1)		C_J	15					pF
Operating and Storage Temperature Range		T_J, T_{STG}	-65 to + 175					°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: I_F = 0.5A, I_R=1.0A, I_{RR}=0.25A

NEXT BACK EXIT

FIG. 1 - TYPICAL FORWARD CURRENT DERATING CURVE

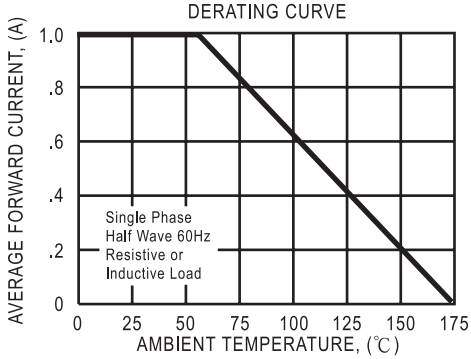


FIG. 2 - MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

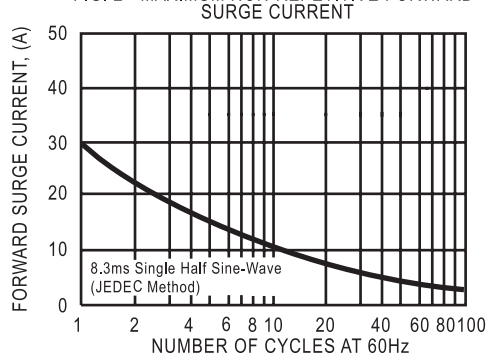


FIG. 3 - TYPICAL REVERSE CHARACTERISTICS

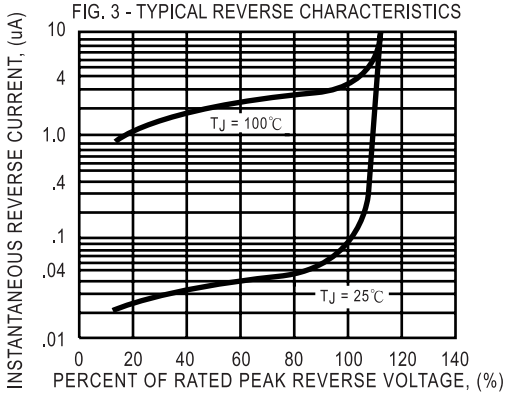


FIG. 4 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

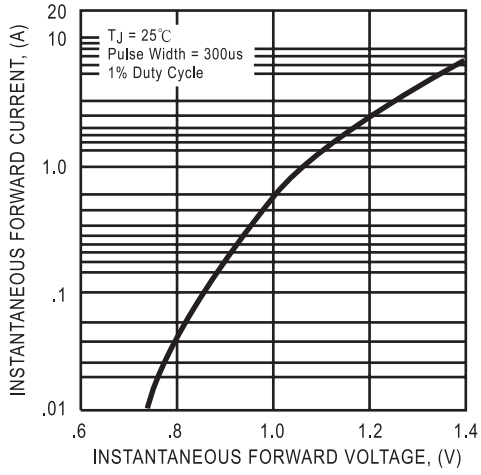
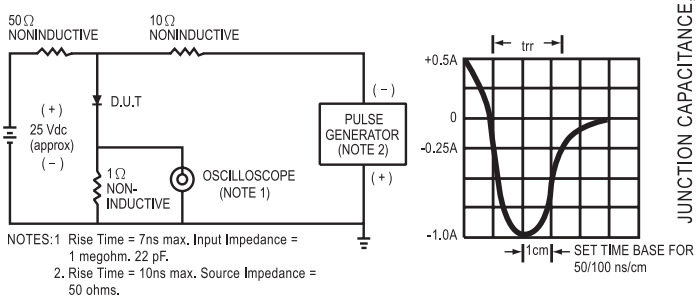


FIG. 5 - TEST CIRCUIT DIAGRAM AND REVERSE RECOVERY TIME CHARACTERISTIC



NOTES:1 Rise Time = 7ns max. Input Impedance = 1 megohm. 22 pF.
2. Rise Time = 10ns max. Source Impedance = 50 ohms.

FIG. 6 - TYPICAL JUNCTION CAPACITANCE