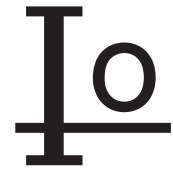


# SM4933A THRU SM4937A



1.0 AMP SURFACE MOUNT FAST RECOVERY RECTIFIERS



## FEATURES

- \* Ideal for surface mount applications
- \* Easy pick and place
- \* Built-in strain relief
- \* Fast switching speed

## MECHANICAL DATA

- \* Case: Molded plastic
- \* Epoxy: UL 94V-0 rate flame retardant
- \* Metallurgically bonded construction
- \* Polarity: Color band denotes cathode end
- \* Mounting position: Any
- \* Weight: 0.063 grams

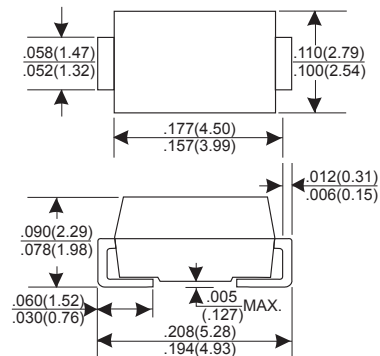
## VOLTAGE RANGE

50 to 600 Volts

## CURRENT

1.0 Ampere

### DO-214AC(SMA)



Dimensions in inches and (millimeters)

## MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Rating 25°C ambient temperature unless otherwise specified.  
Single phase half wave, 60Hz, resistive or inductive load.  
For capacitive load, derate current by 20%.

TYPE NUMBER	SM4933A	SM4934A	SM4935A	SM4936A	SM4937A	UNITS
Maximum Recurrent Peak Reverse Voltage	50	100	200	400	600	V
Maximum RMS Voltage	35	70	140	280	420	V
Maximum DC Blocking Voltage	50	100	200	400	600	V
Maximum Average Forward Rectified Current						
See Fig. 2	1.0					A
Peak Forward Surge Current, 8.3 ms single half sine-wave superimposed on rated load (JEDEC method)	30					A
Maximum Instantaneous Forward Voltage at 1.0A	1.3					V
Maximum DC Reverse Current Ta=25°C	5.0					μA
at Rated DC Blocking Voltage Ta=100°C	100					μA
Maximum Reverse Recovery Time (Note 1)	200					nS
Typical Junction Capacitance (Note 2)	15					pF
Operating and Storage Temperature Range T <sub>J</sub> , T <sub>STG</sub>	-65 — +175					°C

### NOTES:

- Reverse Recovery Time test condition: I<sub>F</sub>=1.0A, V<sub>R</sub>=30V.
- Measured at 1MHz and applied reverse voltage of 4.0V D.C.

# RATING AND CHARACTERISTIC CURVES (SM4933A THRU SM4937A)

FIG.1-TYPICAL FORWARD CHARACTERISTICS

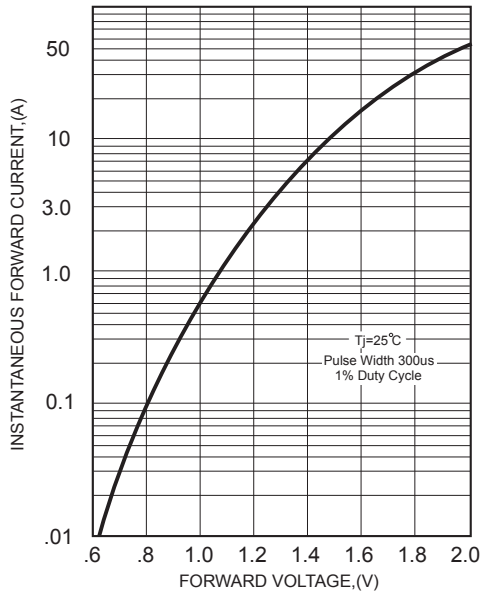


FIG.2-TYPICAL FORWARD CURRENT DERATING CURVE

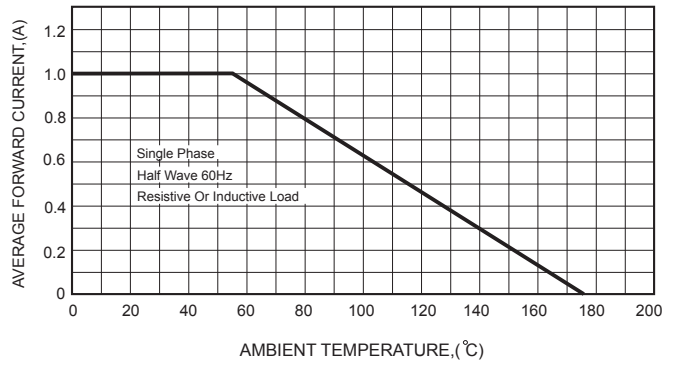


FIG.4-MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

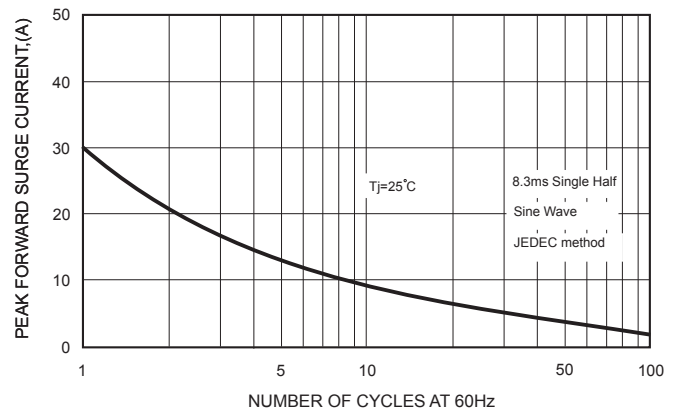
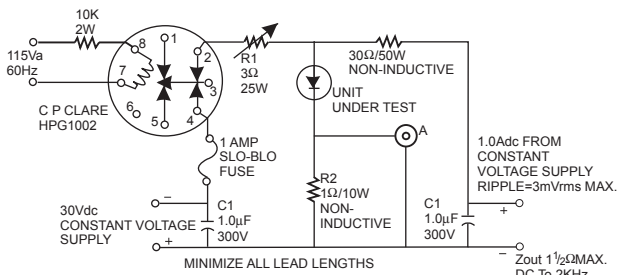


FIG.3- TEST CIRCUIT DIAGRAM AND REVERSE RECOVERY TIME CHARACTERISTICS



A- TEKTRONIX 545A, K PLUG IN PRE AMP P6000 PROBE OR EQUIVALENT  
R1- ADJUSTED FOR 14 BETWEEN POINT 2 OF RELAY AND RECTIFIER INDUCTIVE=3.8 $\mu\text{H}$   
R2- TEN 1W 10 $\Omega$  1% CARBON CORE IN PARALLEL  
 $T_A = 25 \pm 10^\circ\text{C}$  FOR RECTIFIER

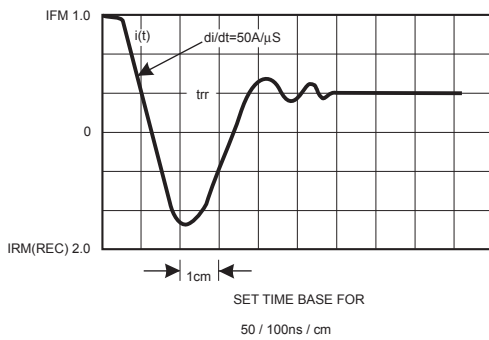


FIG.5-TYPICAL JUNCTION CAPACITANCE

