

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

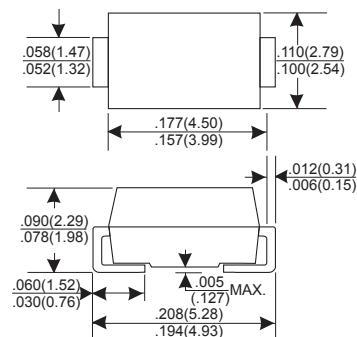
VOLTAGE RANGE

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 Tj, Tstg	-65 — +175					°C

NOTES:

1. Reverse Recovery Time test condition: IF=1.0A, VR=30V.
2. Measured at 1MHz and applied reverse voltage of 4.0V D.C.

RATING AND CHARACTERISTIC CURVES (SM4933A THRU SM4937A)

FIG.1-TYPICAL FORWARD CHARACTERISTICS

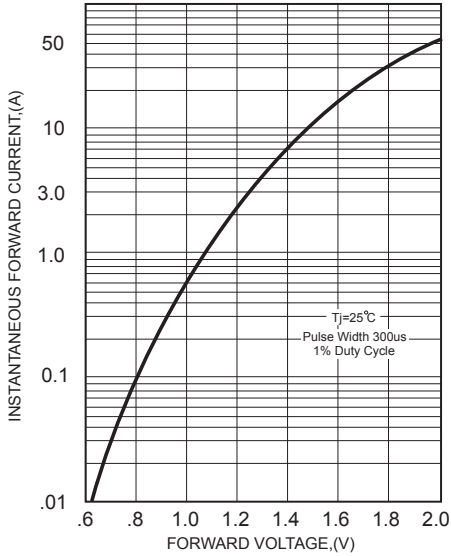


FIG.2-TYPICAL FORWARD CURRENT DERATING CURVE

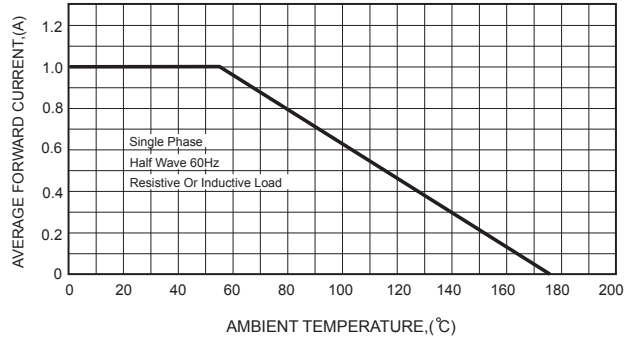
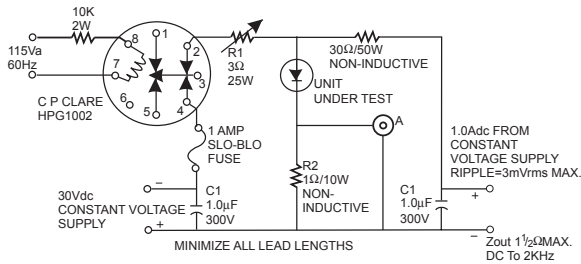


FIG.3- TEST CIRCUIT DIAGRAM AND REVERSE RECOVERY TIME CHARACTERISTICS



A- TEKTRONIX 545A, K PLUG IN
PRE AMP P6000 PROBE OR EQUIVALENT
R1- ADJUSTED FOR 14 BETWEEN
POINT 2 OF RELAY AND RECTIFIER
INDUCTIVE=3.8µH

R2- TEN 1W 10 Ω±% CARBON CORE
IN PARALLEL

$T_A=25 \pm 10^\circ\text{C}$ FOR RECTIFIER

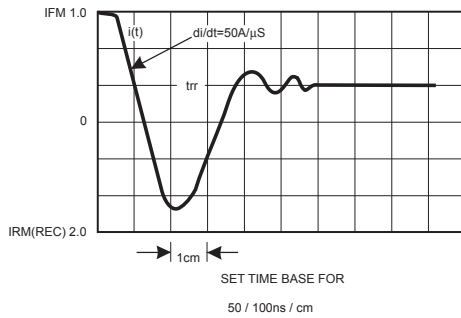


FIG.4-MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

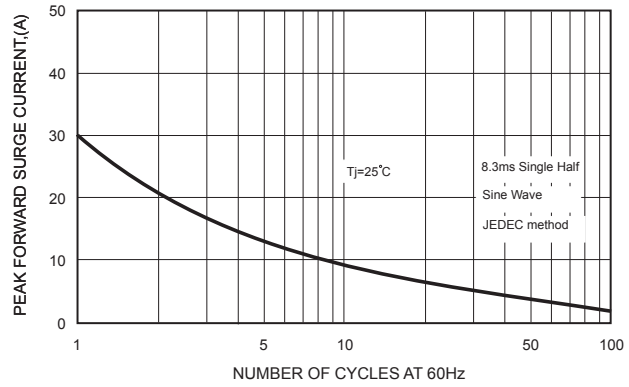


FIG.5-TYPICAL JUNCTION CAPACITANCE

