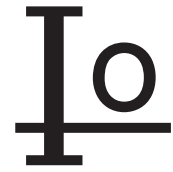


SM4933A THRU SM4937A



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

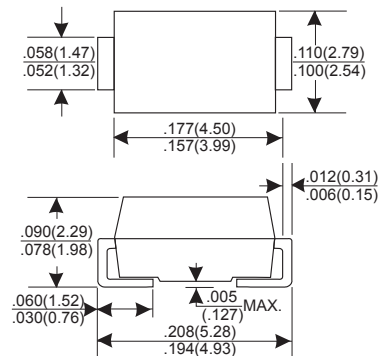
VOLTAGE RANGE

50 to 600 Volts

CURRENT

1.0 Ampere

DO-214AC(SMA)



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 _J , T _{STG} | -65 — +175 | | | | | °C |

NOTES:

- Reverse Recovery Time test condition: I_F=1.0A, V_R=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

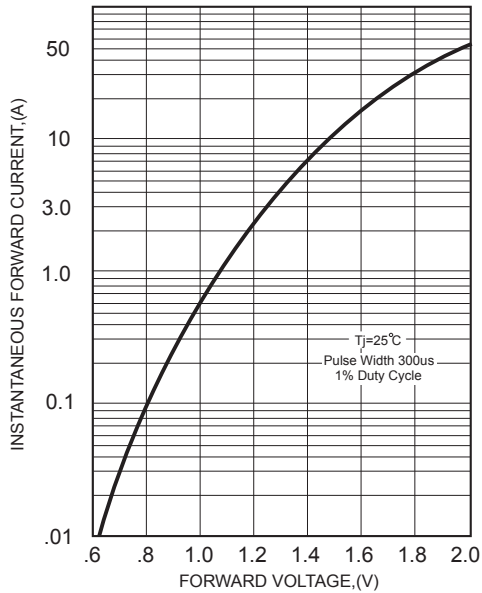


FIG.2-TYPICAL FORWARD CURRENT DERATING CURVE

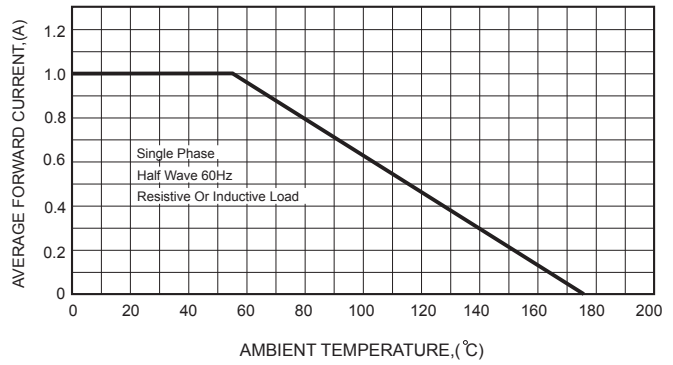


FIG.4-MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

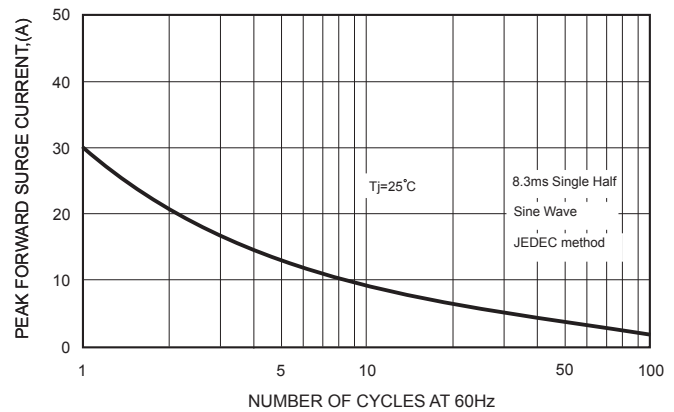
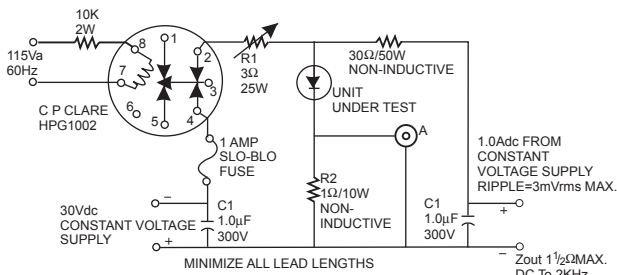


FIG.3- TEST CIRCUIT DIAGRAM AND REVERSE RECOVERY TIME CHARACTERISTICS



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 μH
R2- TEN 1W 10 Ω 1% CARBON CORE IN PARALLEL
 $T_A = 25 \pm 10^\circ\text{C}$ FOR RECTIFIER

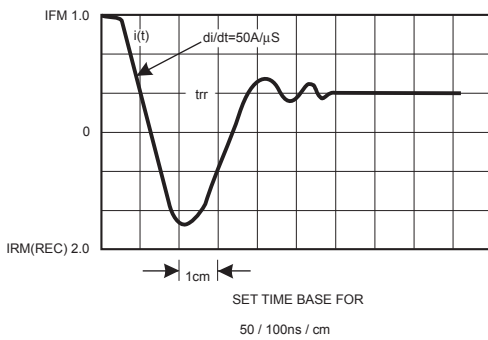


FIG.5-TYPICAL JUNCTION CAPACITANCE

