

# FM4933 THRU FM4937

Fast recovery type

## Features

- Plastic package has Underwriters Laboratory Flammability Classification 94V-O Utilizing Flame Retardant Epoxy Molding Compound.
- For surface mounted applications.
- Exceeds environmental standards of MIL-S-19500 / 228
- Low leakage current

## Mechanical data

Case : Molded plastic, JEDEC DO-214AC

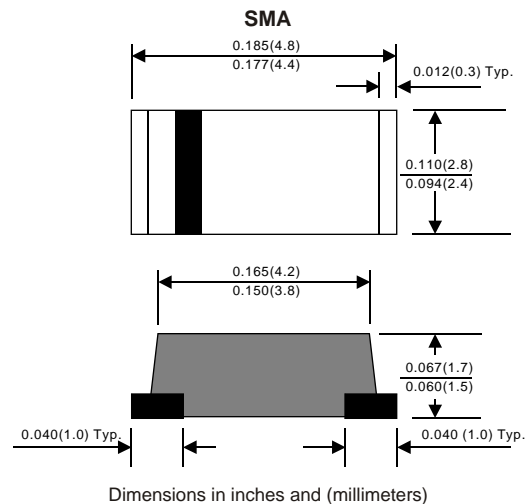
Terminals : Solder plated, solderable per MIL-STD-750, Method 2026

Polarity : Indicated by cathode band

Mounting Position : Any

Weight : 0.0015 ounce, 0.05 gram

### PATENT PUBLICATION NO. 37116



### MAXIMUM RATINGS (AT $T_A=25^{\circ}\text{C}$ unless otherwise noted)

PARAMETER	CONDI TIONS	Symbol	MIN.	TYP.	MAX.	UNI T
Forward rectified current	Ambient temperature = $55^{\circ}\text{C}$	$I_O$			1.0	A
Forward surge current	8.3ms single half sine-wave superimposed on rate load (JEDEC methode)	$I_{FSM}$			30	A
Reverse current	$V_R = V_{RRM}$ $T_A = 25^{\circ}\text{C}$	$I_R$			5.0	$\mu\text{A}$
	$V_R = V_{RRM}$ $T_A = 100^{\circ}\text{C}$				100	$\mu\text{A}$
Thermal resistance	Junction to ambient	$R_{qJA}$		75		$^{\circ}\text{C} / \text{W}$
Diode junction capacitance	$f=1\text{MHz}$ and applied 4vDC reverse voltage	$C_J$		15		pF
Storage temperature		$T_J$	-55		+150	$^{\circ}\text{C}$

SYMBOLS	MARKING CODE	$V_{RRM}^{*1}$ (V)	$V_{RMS}^{*2}$ (V)	$V_R^{*3}$ (V)	$V_F^{*4}$ (V)	$T_{RR}^{*5}$ (nS)	Operating temperature ( $^{\circ}\text{C}$ )
FM4933	F93	50	35	50	1.2	200	-55 to +150
FM4934	F94	100	70	100			
FM4935	F95	200	140	200			
FM4936	F96	400	280	400			
FM4937	F97	600	420	600			

\*1 Repetitive peak reverse voltage

\*2 RMS voltage

\*3 Continuous reverse voltage

\*4 Maximum forward voltage

\*5 Reverse recovery time

Test condition :  $I_F=1.0\text{A}$ ,  $V_R=30\text{V}$

RATING AND CHARACTERISTIC CURVES (FM4933 THRU FM4937)

FIG.1-TYPICAL FORWARD CHARACTERISTICS

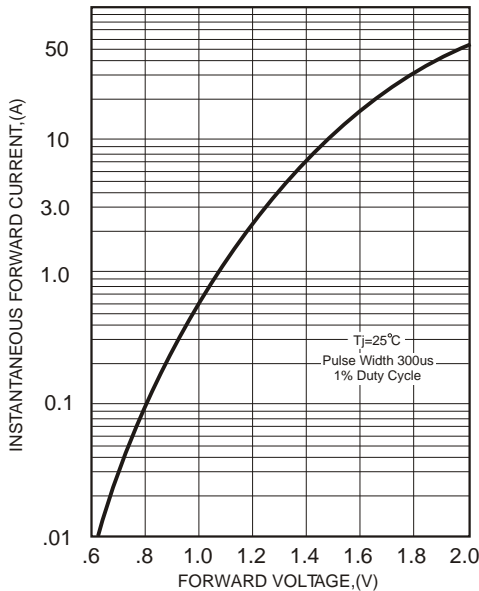


FIG.2-TYPICAL FORWARD CURRENT DERATING CURVE

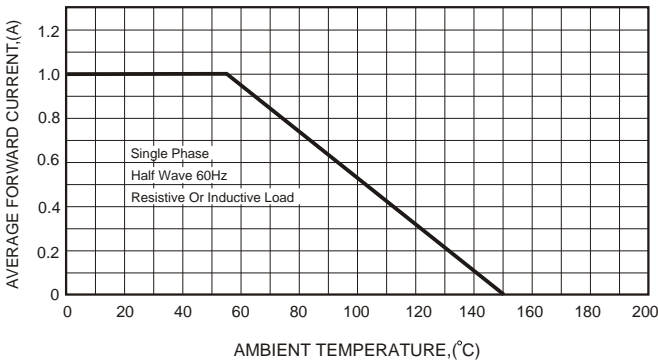
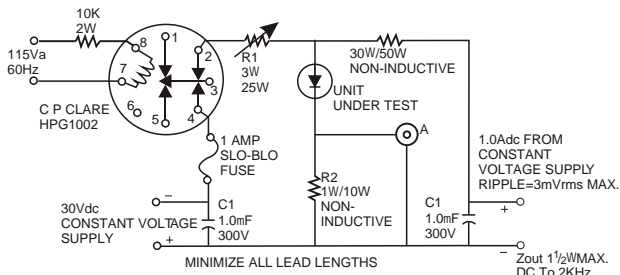


FIG.3- TEST CIRCUIT DIAGRAM AND REVERSE RECOVERY TIME CHARACTERISTICS



A-TEKTRONIX 545A, K PLUG IN  
PRE AMP P6000 PROBE OR EQUIVALENT  
R1- ADJUSTED FOR 14 BETWEEN  
POINT 2 OF RELAY AND RECTIFIER  
INDUCTIVE=3.8mH  
R2- TEN 1W 10W1% CARBON CORE  
IN PARALLEL  
 $T_A = 25 \pm 10^\circ\text{C}$  FOR RECTIFIER

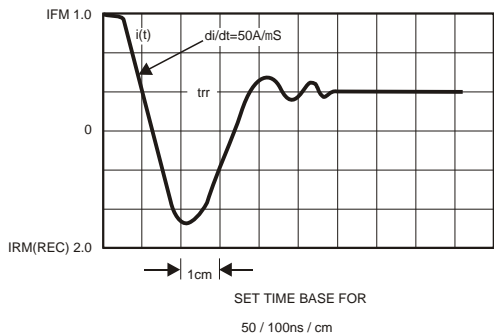


FIG.4-MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

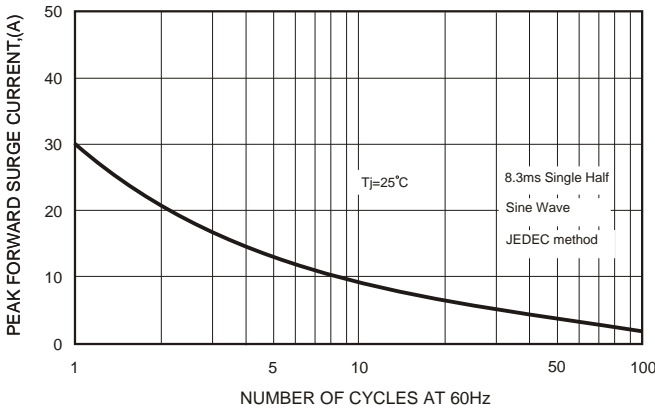


FIG.5-TYPICAL JUNCTION CAPACITANCE

