LI DE HENG ELECTRONICS SM4933 thru SM4937

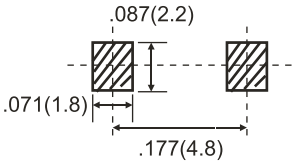
1.0 A Surface Mount Fast Recovery Rectifier

Rectifier Reverse Voltage 50 to 600V

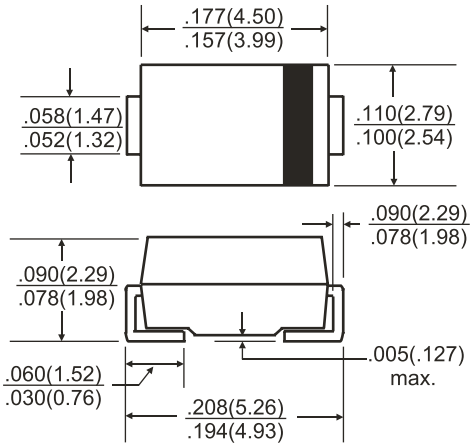
SMA / DO-214AC

Features

- Ideal for surface mounted applications
- Fast switching for high efficiency
- High current capability and low Forward Voltage Drop
- Surge overload rating to 30A peak
- Low reverse leakage current
- Plastic material has UL flammability classification 94V-0



Soldering Pad



All dimensions inches and (millimeters)

Mechanical Data

Case: Molded plastic
Terminals: Solder plated solderable per MIL-STD-202, Method 208
Polarity: Cathode indicated with color band
Weight: 0.063 grams (approx)

Maximum Ratings & Thermal Characteristics

Rating at 25°C ambient temperature unless otherwise specified, Resistive or Inductive load, 60 Hz.
For Capacitive load derate current by 20%.

Parameter	Symbol	SM4933	SM4934	SM4935	SM4936	SM4937	unit
Maximum repetitive peak reverse voltage	V_{RRM}	50	100	200	400	600	V
Maximum RMS bridge input voltage	V_{RMS}	35	70	140	280	420	V
Maximum DC blocking voltage	V_{DC}	50	100	200	400	600	V
Maximum average forward rectified output current at T_A=75°C	$I_{F(AV)}$	1.0					A
Peak forward surge current single sine-wave superimposed on rated load (JEDEC Method)	I_{FSM}	30.0					A
Maximum reverse recovery time T_J=25°C	Trr	150					nS
Typical thermal resistance per element	$R_{\theta JA}$	50					°C/W
Typical junction capacitance per element	Cj	15					pF
Operating junction and storage temperature range	T_J, T_{STG}	-55 to + 150					°C

Electrical Characteristics

Rating at 25°C ambient temperature unless otherwise specified. Resistive or Inductive load, 60Hz.
For Capacitive load derate by 20 %.

Parameter	Symbol	SM4933	SM4934	SM4935	SM4936	SM4937	Unit
Maximum instantaneous forward voltage drop per leg at 1.0A	V_F	1.3					V
Maximum DC reverse current at rated T_A =25°C DC blocking voltage per element	I_R	5.0					μA

Rating and Characteristic Curves (TA = 25°C Unless otherwise noted)
SM4933 thru SM4937

Fig. 1 Reverse Recovery Time and Test Circuit Diagram

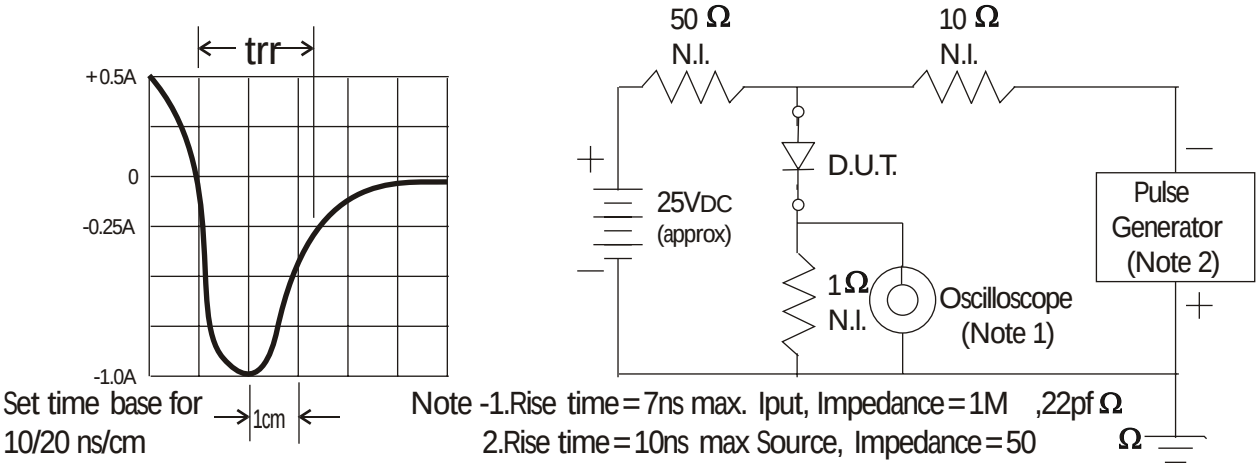


Fig. 2 Derating Curve for Output Rectified Current

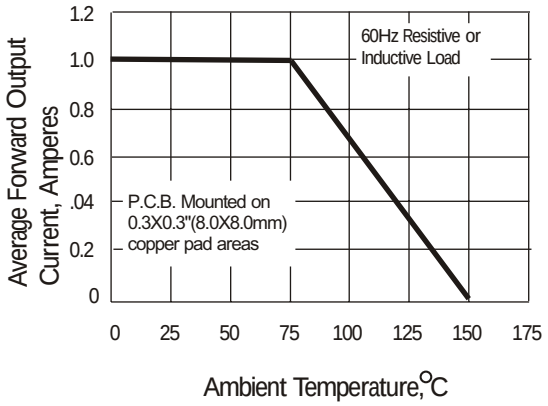


Fig. 3 Peak Forward Surge Current

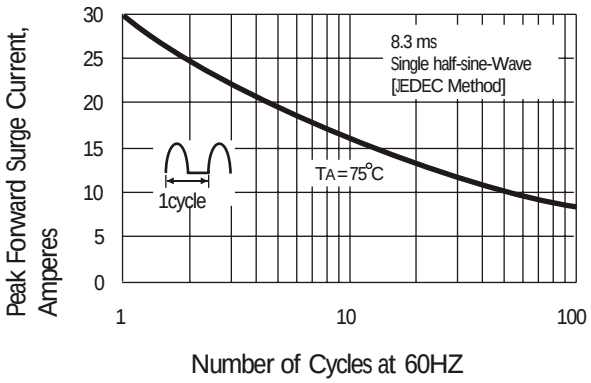


Fig. 4 Typical Instantaneous Forward Characteristics

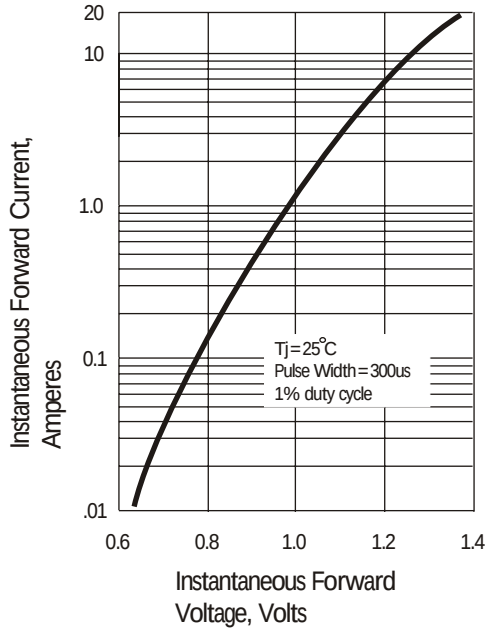


Fig. 5 Typical Junction Capacitance