SM4933 - SM4937

1.0A SURFACE MOUNT FAST RECOVERY RECTIFIER

Features

- Glass Passivated Junction
- Low Leakage
- Low Forward Voltage Drop
- High Current Capability
- For Surface Mounted Application
- Plastic Material UL Flammability Classification Rating 94V-0

MELF		
Dim	**Min**	**Max**
A	4.80	5.20
B	2.40	2.60
C	0.55 Nominal	
All Dimensions in mm		

Mechanical Data

- Case: MELF, Plastic
- Terminals: Solderable per MIL-STD-202, Method 208
- Polarity: Cathode band
- Approx Weight: 0.25 grams
- Mounting Position: Any
- Marking: Cathode Band Only

Maximum Ratings and Electrical Characteristics @ T_A = 25°C unless otherwise specified

Single phase, half wave, 60Hz, resistive or inductive load.
For capacitive load, derate current by 20%.

Characteristic	Symbol	SM4933	SM4934	SM4935	SM4936	SM4937	Units
Peak Repetitive Reverse Voltage Working Peak Reverse Voltage DC Blocking Voltage	V_{RRM} V_{RWM} V_R	50	100	200	400	600	V
RMS Reverse Voltage	$V_{R(RMS)}$	35	70	140	280	420	V
Maximum Average Forward Rectified Current @ T_T=75°C	I_O	1.0					A
Peak Forward Surge Current 8.3 ms half sine-wave superimposed on rated load (JEDEC Method)	I_{FSM}	30					A
Maximum Instantaneous Forward Voltage @ I_F = 1.0A	V_F	1.2					V
Maximum DC Reverse Current at Rated Blocking Voltage	I_R	5.0					μA
Maximum Full Load Reverse Current Full Cycle Average @ T_T = 55°C	I_R	100					μA
Maximum Reverse Recovery Time (Note 1)	t_{rr}	200					ns
Typical Junction Capacitance (Note 2)	C_j	15					pF
Operating and Storage Temperature Range	T_j, T_{STG}	-65 to +150					°C

Notes: 1. Reverse Recovery Test Conditions: I_F =1.0A, V_R =30V, di/dt = 50 A/μs.
2. Measured at 1.0MHz and Applied Reverse Voltage of 4.0V.

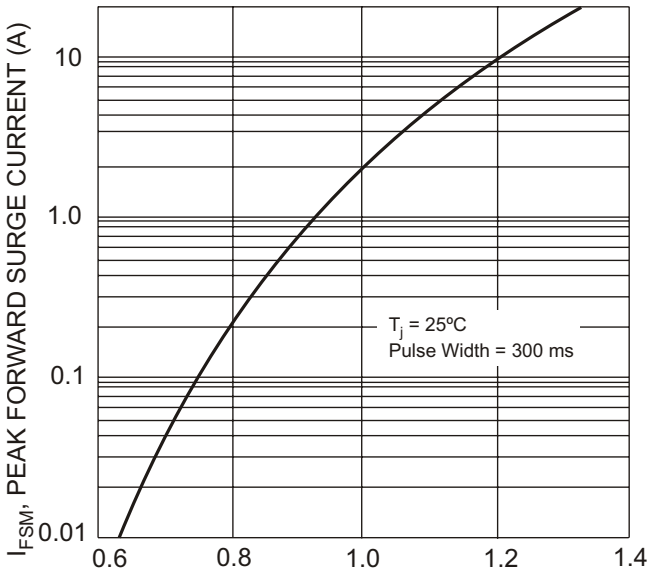

Fig. 1 Peak Forward Surge Current vs Forward Voltage

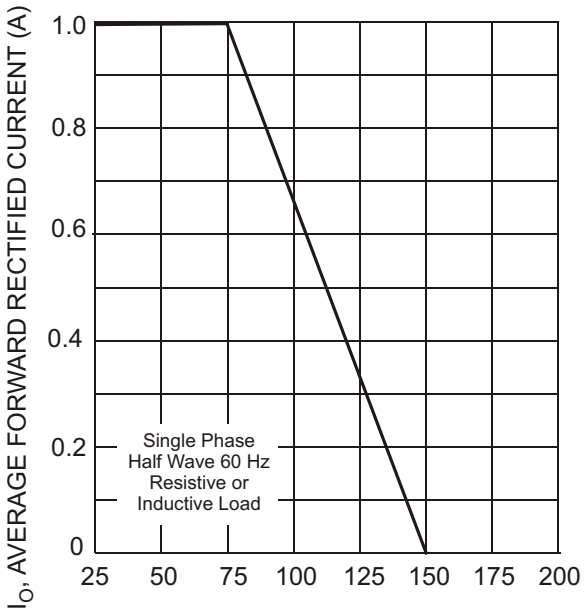

Fig. 2 Forward Derating Curve

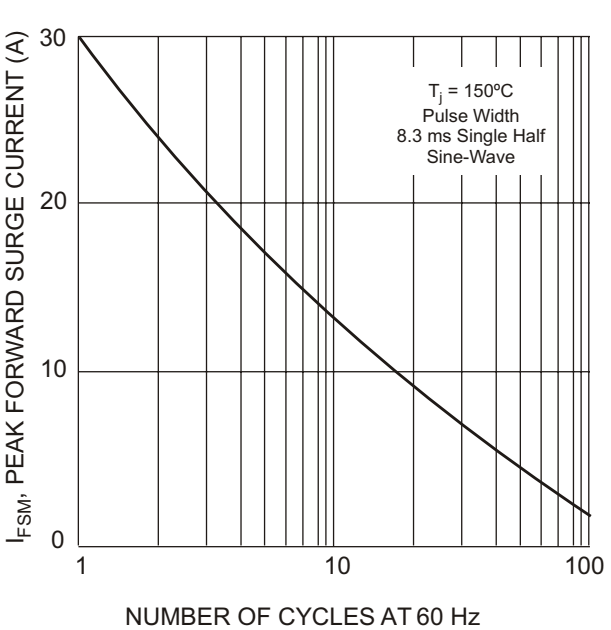

Fig. 3 Peak Fwd Surge Current vs Number of Cycles at 60 Hz

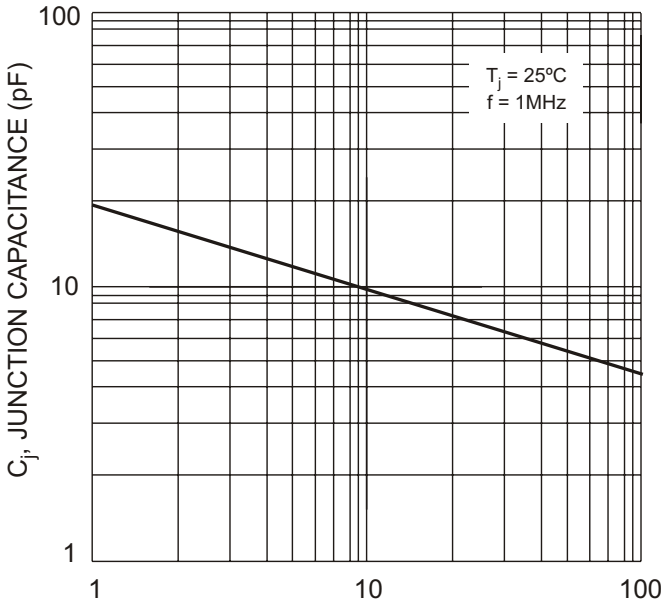

Fig. 4 Junction Capacitance vs Reverse Voltage