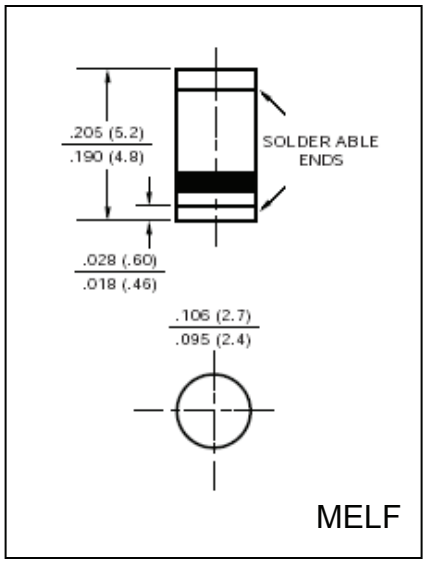
FAST RECOVERY RECTIFIER

SM4933 THRU SM4937

VOLTAGE RANGE 50 to 600 Volts
CURRENT 1.0 Ampere

FEATURES

- Fast Switching for high efficiency
- Low reverse leakage
- High forward surge current capability
- High Temperature soldering guaranteed: 260 ^{O}C / 10 second at terminal



MECHANICAL DATA

- Case: Transfer molded plastic
- Epoxy: UL94V-0 rate flame retardant
- Lead: Plated, solderable per MIL-STD-202E method 208C
- Polarity: Color band denotes cathode end
- Mounting Position: any
- Weight: 0.0046 ounce, 0.116 gram

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

- Ratings at 25^{O}C ambient temperature unless otherwise specified
- Single Phase, half wave, 60Hz, resistive or inductive load
- For capacitive load derate current by 20%

	SYMBOLS	SM4933	SM4934	SM4935	SM4936	SM4937	UNIT
Polarity bands		50	100	200	400	600	
Maximum Repetitive Peak Reverse Voltage	V_{RRM}	50	100	200	400	600	Volts
Maximum RMS Voltage	V_{RMS}	35	70	140	280	420	Volts
Maximum DC Blocking Voltage	V_{DC}	50	100	200	400	600	Volts
Maximum Average Forward Rectified Current, 0.375" (9.5mm) lead length At T_C = 75^{O}C	$I_{(AV)}$	1.0					Amps
Peak Forward Surge Current 8.3mS single half sine wave superimposed on rated load (JEDEC method)	I_{FSM}	30					Amps
Maximum Instantaneous Forward Voltage @ 1.0A	V_F	1.3					Volts
Maximum DC Reverse Current at Rated T_A = 25 ^{O}C	I_R	5.0					µA
DC Blocking Voltage per element T_A = 100 ^{O}C		250					
Maximum Reverse Recovery Time I_R = 1.0A, V_R =30V, di/dt = 50A/µS, I_{RR} = 10% I_{RM}	t_{rr}	200					nS
Typical Junction Capacitance (Measured at 1.0MHz and applied reverse voltage of 4.0V)	C_J	15					pF
Typical Thermal Resistance (Note 1)	$R_{\theta JA}$	80					^{O}C/W
Operating Junction Temperature Range	T_J	(-55 to +125)					^{O}C
Storage Temperature Range	T_{STG}	(-55 to +125)					^{O}C

Notes:

1. Thermal resistance from Junction to ambient mounted on PCB

Typical Characteristics *(Tambient = 25°C unless otherwise specified)*

Fig. 1 Forward Derating Curve

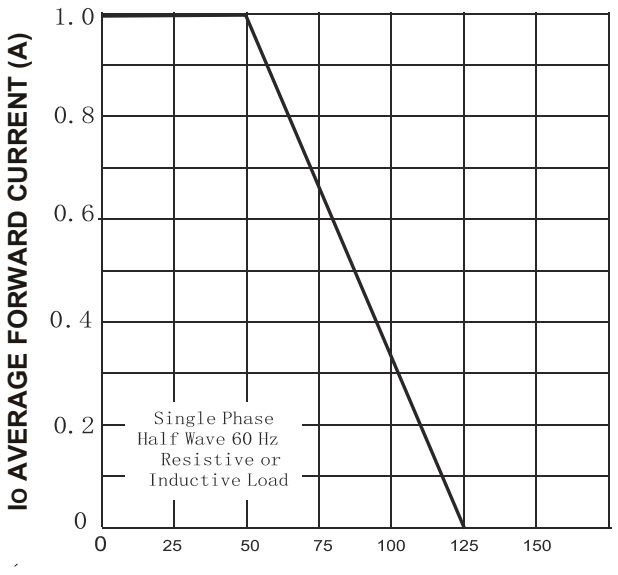


Fig. 2 Junction Capacitance vs Reverse Voltage

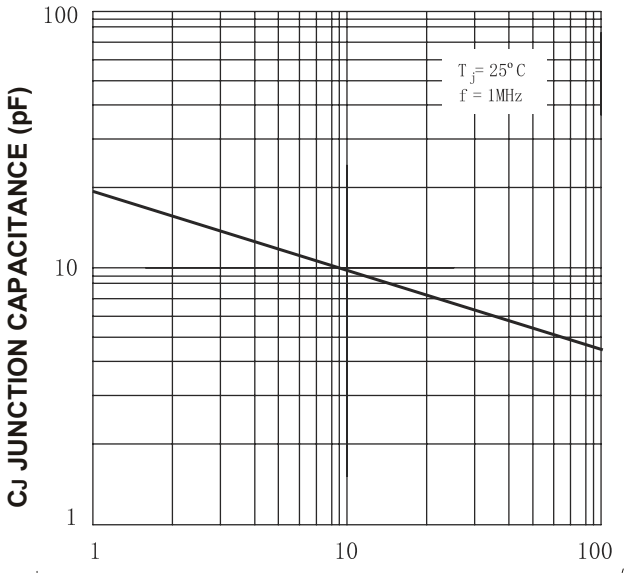


Fig. 3 Peak Fwd Surge Current

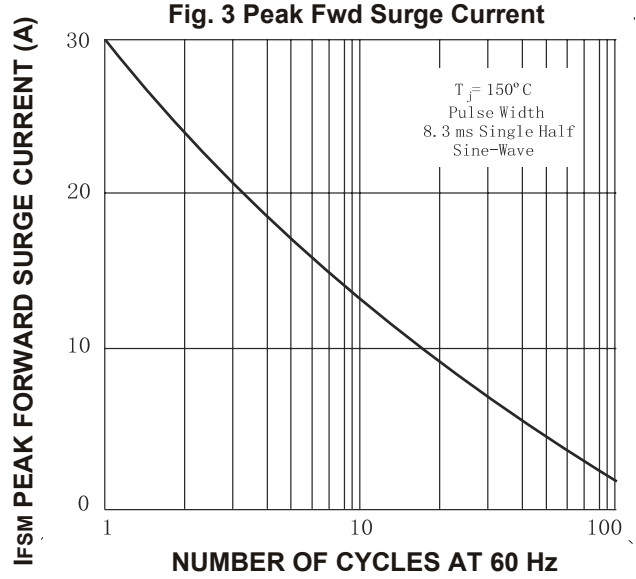


Fig. 4 Peak Forward Surge Current