FAST RECOVERY RECTIFIER

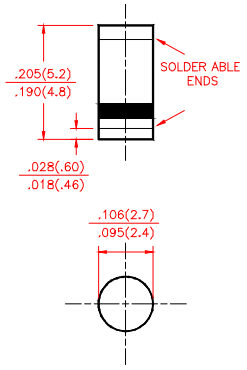
SM4933 THRU SM4937

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℃/10 second at terminals

DO-213AB(MELF)



Dimensions in inches and (millimeters)

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, 0.116gram

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

- Ratings at 25℃ 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
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_T=100℃	$I_{(AV)}$	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 at 1.0A	V_F	1.3					Volts
Maximum DC Reverse Current at rated DC Blocking Voltage per element T_A = 25℃	I_R	5.0					μA
Maximum DC Reverse Current at rated DC Blocking Voltage per element T_A = 125℃	I_R	100					μA
Typical reverse recovery time (NOTE 1)	T_{rr}	200					nS
Typical Junction Capacitance (Measured at 1.0MHz and applied reverse voltage of 4.0V)	CJ	8.0					PF
Typical Thermal Resistance (NOTE 2)	$R_{\theta JT}$	40					℃/W
Operating Junction Temperature Range	T_J	(-55 to +150)					℃
Storage Temperature Range	T_{STG}	(-55 to +150)					℃

Notes:

1. Reverse Recovery Test Conditions: I_R=1.0A, V_R=30V, di/di=50A/μS, I_{RR}=10%I_{RM}
2. Thermal resistance from Junction to ambient at 0.375″ (9.5mm) lead length mounted on PCB

FAST RECOVERY RECTIFIER

SM4933 THRU SM4937	VOLTAGE RANGE	50 to 600 Volts
	CURRENT	1.0 Ampere

RATING AND CHRACTERISTIC CURVES SM4933 THRU SM4937

FIG.1-TYPICAL FORWARD CURRENT DERATING CURVE

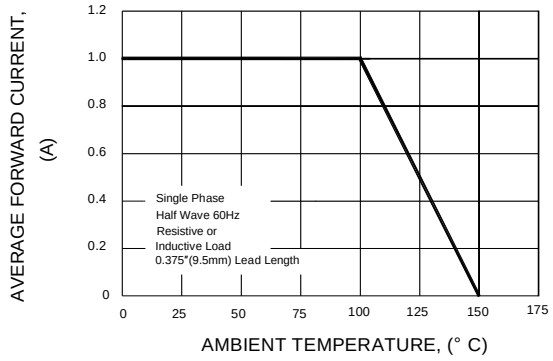


FIG.2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

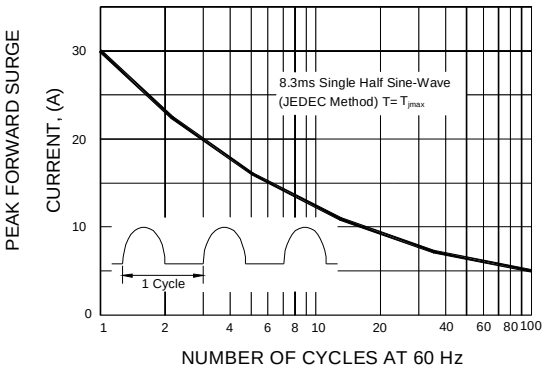


FIG.3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS PER LEG

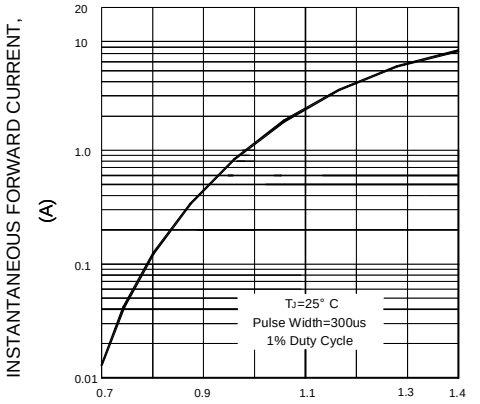


FIG.4-TYPICAL REVERSE CHARACTERISTICS

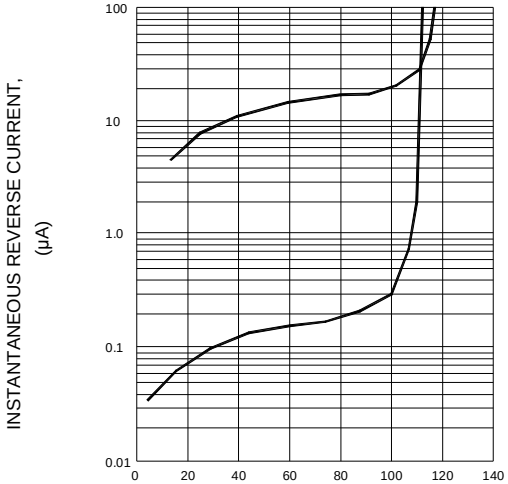


FIG.5-TYPICAL JUNCTION CAPACITANCE

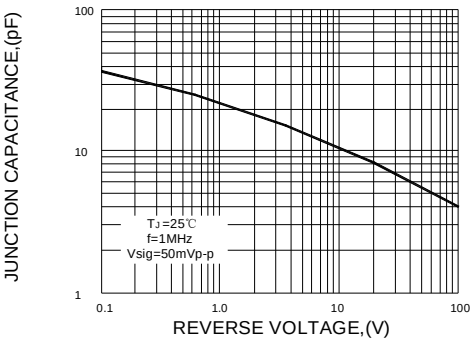


FIG.6-TEST CIRCUIT DIAGRAM AND REVERSE RECOVERY TIME CHARACTERISTIC