



Frontier Electronics Corp.

667 E. COCHRAN STREET, SIMI VALLEY, CA 93065

TEL: (805) 522-9998 FAX: (805) 522-9989

E-mail: frontiersales@frontierusa.com

Web: <http://www.frontierusa.com>

1A SURFACE MOUNT FAST RECOVERY RECTIFIERS

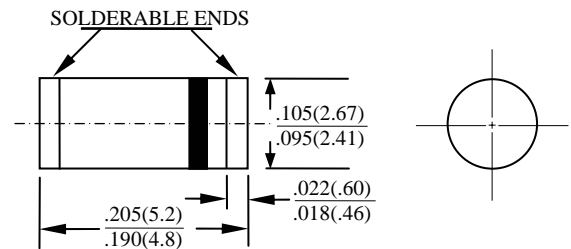
SM4933-LFR THRU SM4937-LFR

FEATURES

- FAST SWITCHING
- GLASS PASSIVATED DEVICE
- IDEAL FOR SURFACE MOUNTED APPLICATIONS
- LOW LEAKAGE CURRENT
- FAST SWITCHING TIME
- ROHS

MECHANICAL DATA

- CASE: TRANSFER MOLDED, MELF, DIMENSIONS IN INCHES AND (MILLIMETERS)
- TERMINALS: SOLDERABLE PER MIL-STD-750, METHOD 2026
- POLARITY: CATHODE INDICATED BY COLOR BAND
- WEIGHT: 0.135 GRAMS



MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS RATINGS AT 25°C AMBIENT TEMPERATURE UNLESS OTHERWISE SPECIFIED SINGLE PHASE, HALF WAVE, 60 HZ, RESISTIVE OR INDUCTIVE LOAD. FOR CAPACITIVE LOAD, DERATE CURRENT BY 20%

RATINGS	SYMBOL	SM4933-LFR	SM4934-LFR	SM4935-LFR	SM4936-LFR	SM4937-LFR	UNITS
MAXIMUM RECURRENT PEAK REVERSE VOLTAGE	V_{RRM}	50	100	200	400	600	V
MAXIMUM RMS 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 CURRENT AT $T_L=75^\circ\text{C}$	I_O	1.0					A
PEAK FORWARD SURGE CURRENT, 8.3ms SINGLE HALF SINE-WAVE SUPERIMPOSED ON RATED LOAD	I_{FSM}	30					A
TYPICAL JUNCTION CAPACITANCE (NOTE 1)	C_J	15					PF
STORAGE TEMPERATURE RANGE	T_{STG}	- 55 TO + 150					°C
OPERATING TEMPERATURE RANGE	T_{OP}	- 55 TO + 150					°C

ELECTRICAL CHARACTERISTICS ($A_T, T_A = 25^\circ\text{C}$ UNLESS OTHERWISE NOTED)

CHARACTERISTICS	SYMBOL	SM4933-LFR	SM4934-LFR	SM4935-LFR	SM4936-LFR	SM4937-LFR	UNITS
MAXIMUM FORWARD VOLTAGE AT I_O DC	V_F	1.3					V
MAXIMUM REVERSE CURRENT AT 55°C	I_R	5.0					μA
MAXIMUM REVERSE RECOVERY TIME (NOTE 2)	T_{RR}	150					nS

NOTE : 1. MEASURED AT 1 MHZ AND APPLIED REVERSE VOLTAGE OF 4.0 VOLTS

2. REVERSE RECOVERY TEST CONDITIONS: $I_F=0.5\text{A}$, $I_R=1.0\text{A}$, $I_{RR}=0.25\text{A}$

RATING AND CHARACTERISTIC CURVES SM4933-LFR THRU SM4937-LFR

FIG. 1 - TEST CIRCUIT DIAGRAM AND REVERSE RECOVERY TIME CHARACTERISTIC

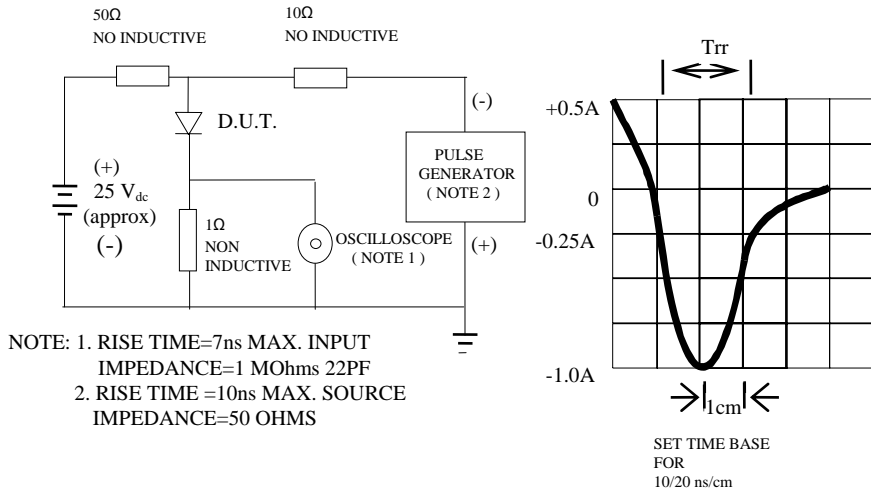


FIG. 2 - TYPICAL FORWARD CURRENT DERATING CURVE

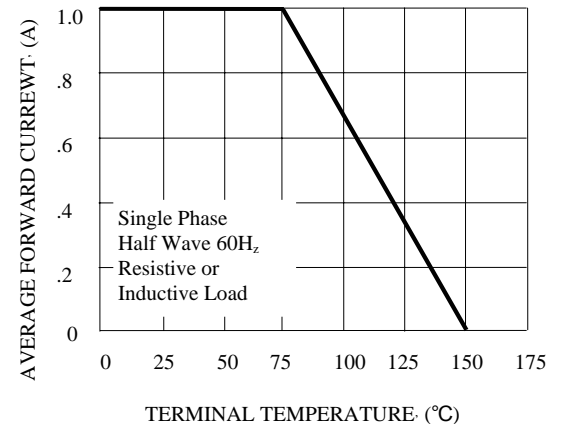


FIG. 3 - TYPICAL REVERSE CHARACTERISTICS

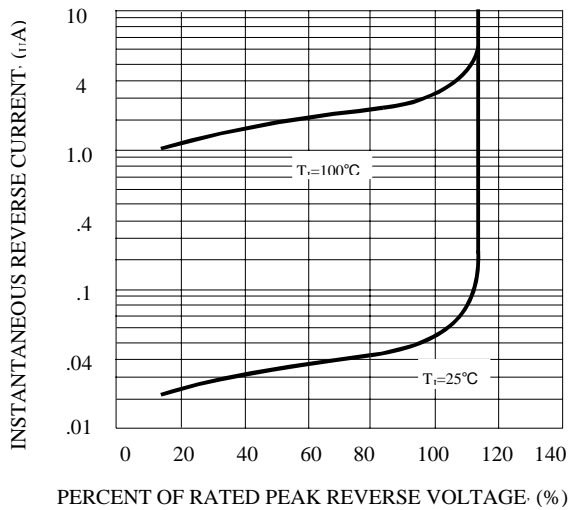


FIG. 4 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

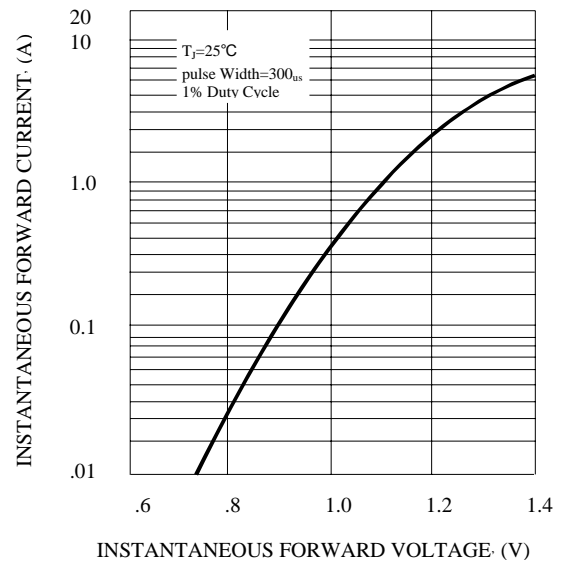


FIG. 5 - MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

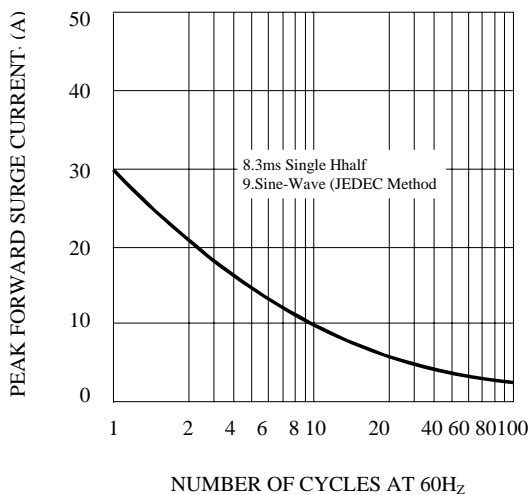


FIG. 6 - TYPICAL JUNCTION CAPACITANCE

