



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 FAST RECOVERY PLASTIC RECTIFIER

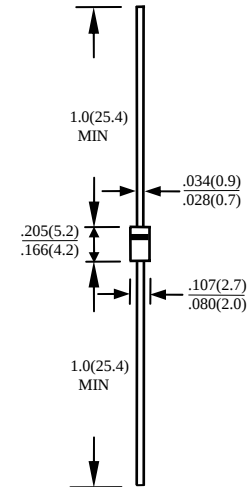
1N4933-LFR THRU 1N4937-LFR

FEATURES

- LOW COST
- PLASTIC PACKAGE HAS UNDERWRITERS LABORATORY FLAMMABILITY CLASSIFICATION 94V-0
- 1 AMPERE OPERATION AT TA=55°C WITH NO THERMAL RUNAWAY
- FAST SWITCHING FOR HIGH EFFICIENCY
- EXCEEDS ENVIRONMENTAL STANDARDS OF MIL-STD-19500
- HIGH TEMPERATURE SOLDERING GUARANTEED: 250°C / 10S/0.375" (9.5mm) LEAD LENGTH / 5 LBS (2.3KG) TENSION
- ROHS

MECHANICAL DATA

- CASE: JEDEC DO-41, MOLDED CASE, DIMENSIONS IN INCHES AND (MILLIMETERS)
- TERMINAL: AXIAL LEADS, SOLDERABLE PER MIL-STD-202, METHOD 208
- POLARITY: COLOR BAND DENOTES CATHODE
- MOUNTING POSITION: ANY
- WEIGHT: 0.34 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	1N4933-LF R	1N4934-LF R	1N4935-LF R	1N4936-LF R	1N4937-LF R	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 0.375"(9.5mm) LEAD LENGTH AT TA=55°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
TYPICAL THERMAL RESISTANCE (NOTE 2)	$R_{\theta ja}$	50					°C/W
STORAGE TEMPERATURE RANGE	T_{STG}	- 55 TO + 150					°C
OPERATING TEMPERATURE RANGE	T_{OP}	- 55 TO + 150					°C

ELECTRICAL CHARACTERISTICS (AT TA=25°C UNLESS OTHERWISE NOTED)

CHARACTERISTICS	SYMBOL	1N4933-LF R	1N4934-LF R	1N4935-LF R	1N4936-LF R	1N4937-LF R	UNITS
MAXIMUM FORWARD VOLTAGE AT I_O DC	V_F	1.2					V
MAXIMUM REVERSE CURRENT AT 25°C	I_R	5					μA
MAXIMUM REVERSE CURRENT AT 100°C	I_R	50					μA
MAXIMUM REVERSE RECOVERY TIME (NOTE 2)	T_{RR}	120					nS

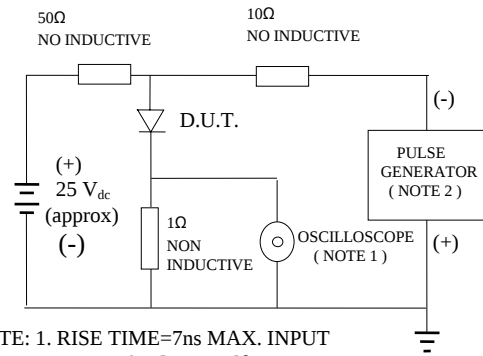
NOTE: 1. MEASURED AT 1 MHZ AND APPLIED REVERSE VOLTAGE OF 4.0 VOLTS

2. BOTH LEADS ATTACHED TO HEAT SINK 20x20x1t(mm) COPPER PLATE AT LEAD LENGTH 5mm

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

RATINGS AND CHARACTERISTIC CURVE 1N4933-LFR THRU 1N4937-LFR

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



NOTE: 1. RISE TIME=7ns MAX. INPUT IMPEDANCE=1 MOhms 22PF
2. RISE TIME =10ns MAX. SOURCE IMPEDANCE=50 OHMS

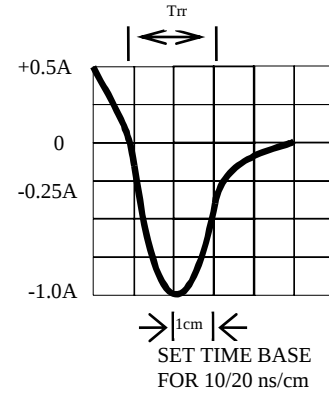


Fig. 2-MAXIMUM CURRENT DERATING CURVE

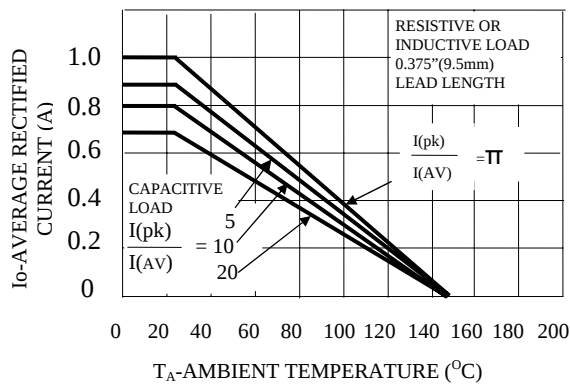


Fig. 5-MAXIMUM FORWARD SURGE NUMBER OF CYCLES

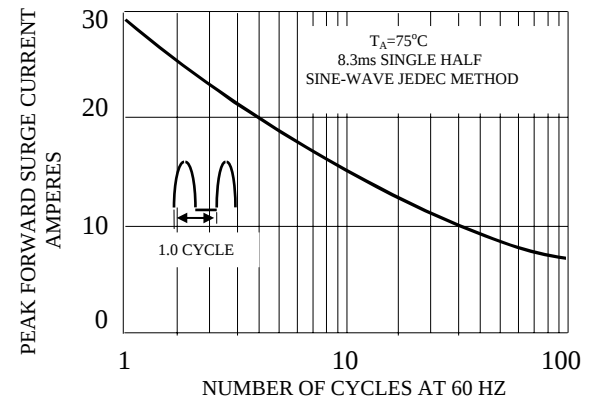


FIG. 3-TYPICAL JUNCTION CAPACITANCE

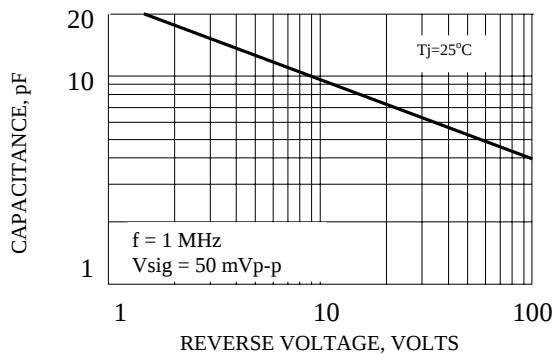


FIG. 4-TYPICAL REVERSE CHARACTERISTICS

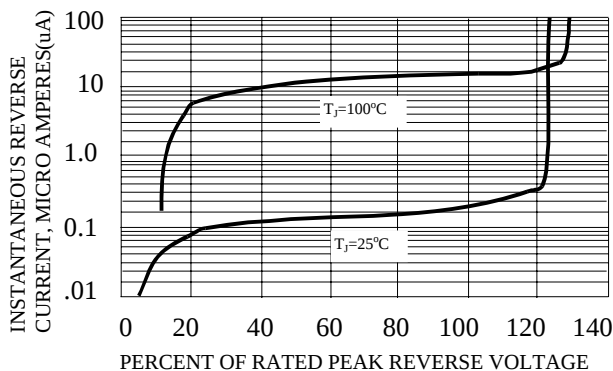


FIG. 6-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

