



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>

3A ULTRA FAST RECOVERY RECTIFIER

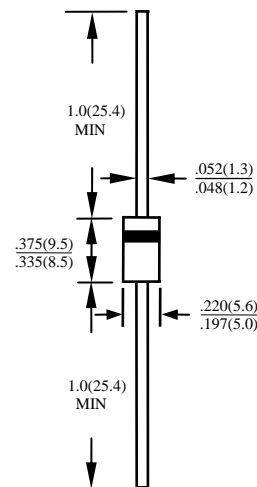
HER301-LFR THRU HER308-LFR

FEATURES

- PLASTIC PACKAGE HAS UNDERWRITERS LABORATORY FLAMMABILITY CLASSIFICATION 94V-0
- ULTRA FAST RECOVERY TIMES FOR HIGH EFFICIENCY
- LOW FORWARD VOLTAGE, HIGH CURRENT CAPABILITY
- LOW LEAKAGE
- HIGH SURGE CAPABILITY
- HIGH TEMPERATURE SOLDERING GUARANTEED:
260°C 0.375" (9.5mm) LEAD LENGTHS FOR 10 SECONDS AT 5 LBS. (2.3 KG) TENSION.
- ROHS

MECHANICAL DATA

- CASE: JEDEC DO-201AD, MOLDED PLASTIC, DIMENSIONS IN INCHES AND (MILLIMETERS)
- TERMINALS: AXIAL LEADS SOLDERABLE PER MIL-STD-202, METHOD 208
- POLARITY: COLOR BAND DENOTES CATHODE END
- MOUNTING POSITION: ANY
- WEIGHT: 1.2 GRAM



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	HER301 -LFR	HER302 -LFR	HER303 -LFR	HER304 -LFR	HER305 -LFR	HER306 -LFR	HER307 -LFR	HER308 -LFR	UNITS
MAXIMUM RECURRENT PEAK REVERSE VOLTAGE	V_{RRM}	50	100	200	300	400	600	800	1000	V
MAXIMUM RMS VOLTAGE	V_{RMS}	35	70	140	210	280	420	560	700	V
MAXIMUM DC BLOCKING VOLTAGE	V_{DC}	50	100	200	300	400	600	800	1000	V
MAXIMUM AVERAGE FORWARD RECTIFIED CURRENT 0.375" (9.5mm) LEAD LENGTH AT $T_A=50^\circ\text{C}$	I_O	3.0								A
PEAK FORWARD SURGE CURRENT 8.3ms SINGLE HALF SINE-WAVE SUPERIMPOSED ON RATED LOAD	I_{FSM}	150								A
TYPICAL JUNCTION CAPACITANCE (NOTE 1)	C_J	75				50				PF
TYPICAL THERMAL RESISTANCE (NOTE 2)	$R_{\theta ja}$	20								°C/W
STORAGE TEMPERATURE RANGE	T_{STG}	-55 TO + 150								°C
OPERATING TEMPERATURE RANGE	T_{OP}	-55 TO + 150								°C

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

CHARACTERISTICS	SYMBOL	HER301 -LFR	HER302 -LFR	HER303 -LFR	HER304 -LFR	HER305 -LFR	HER306 -LFR	HER307 -LFR	HER308 -LFR	UNIT
MAXIMUM FORWARD VOLTAGE AT I_O DC	V_F	1.3				1.85				V
MAXIMUM REVERSE CURRENT AT $T_A=25^\circ$	I_R	10								μA
MAXIMUM REVERSE CURRENT AT $T_A=100^\circ$	I_{RR}	100								μA
MAXIMUM REVERSE RECOVERY TIME (NOTE 3)	T_{RR}	50				75				nS

- NOTE:
1. MEASURED AT 1 MHZ AND APPLIED REVERSE VOLTAGE OF 4.0 VOLTS
 2. BOTH LEADS ATTACHED TO HEAT SINK 63.5×63.5×1t(mm) COPPER PLATE AT LEAD LENGTH 5mm
 3. REVERSE RECOVERY TEST CONDITIONS: $I_F=0.5\text{A}, I_R=1.0\text{A}, I_{RR}=0.25\text{A}$

RATINGS AND CHARACTERISTIC CURVE HER301-LFR THRU HER308-LFR

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

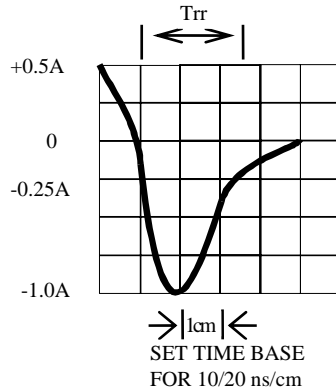
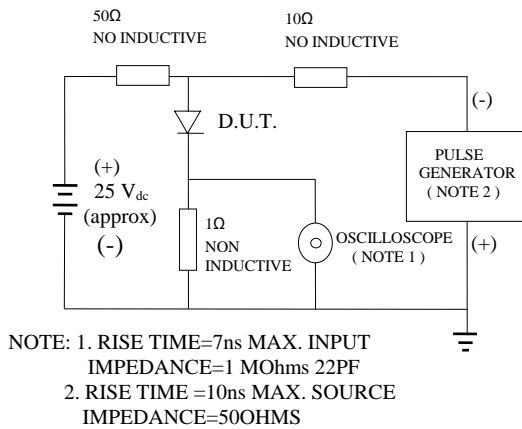


FIG. 2 -TYPICAL FORWARD CURRENT DERATING CURVE

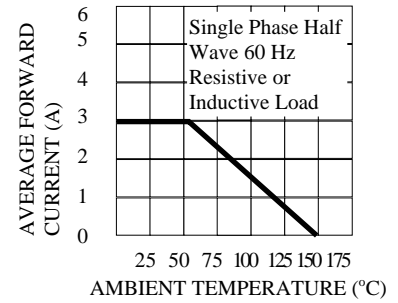


FIG. 3 -TYPICAL REVERSE CHARACTERISTICS

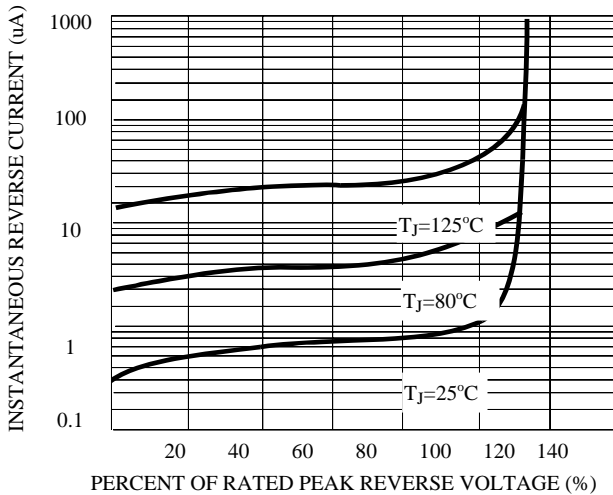


FIG. 4 -TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

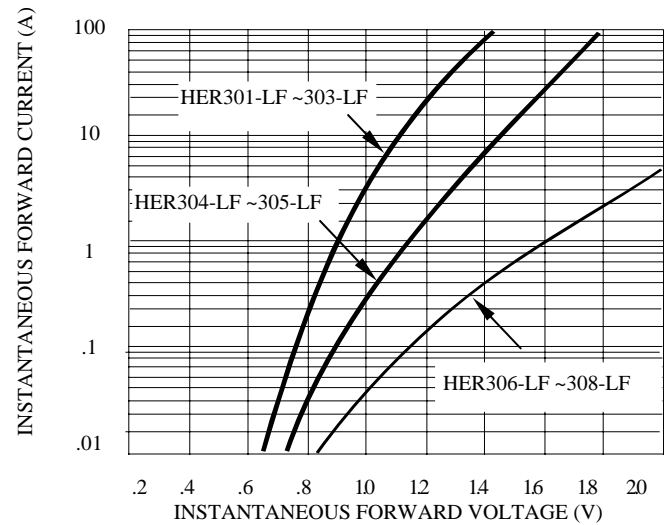


FIG. 5 -MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

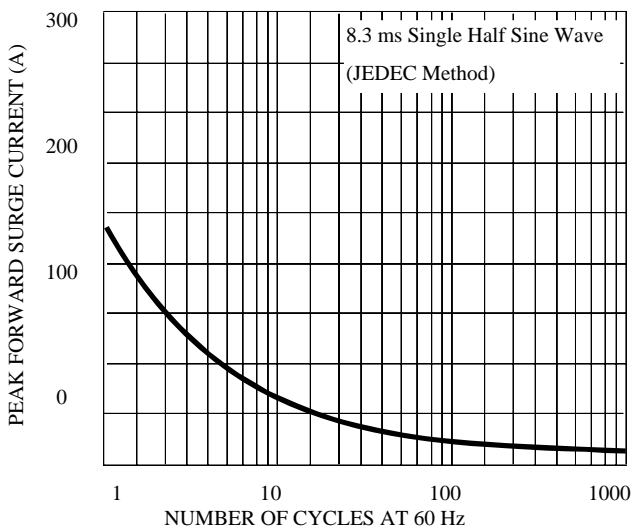


FIG. 6 -TYPICAL JUNCTION CAPACITANCE

