



# Frontier Electronics Corp.

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## 1A GLASS PASSIVATED ULTRA FAST RECOVERY RECTIFIER

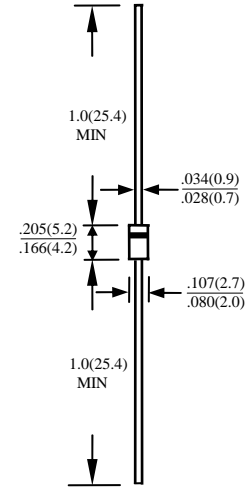
### UF4001G-LFR THRU UF4007G-LFR

#### FEATURES

- PLASTIC PACKAGE HAS UNDERWRITERS LABORATORY FLAMMABILITY CLASSIFICATION 94V-0
- GLASS PASSIVATED CHIP JUNCTION
- 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. (2.3KG) TENSION
- ROHS

#### MECHANICAL DATA

- CASE: MOLDED PLASTIC, DO41, 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: 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	UF	UF	UF	UF	UF	UF	UF	UNITS
		4001G-LFR	4002G-LFR	4003G-LFR	4004G-LFR	4005G-LFR	4006G-LFR	4007G-LFR	
MAXIMUM RECURRENT PEAK REVERSE VOLTAGE	V <sub>RRM</sub>	50	100	200	400	600	800	1000	V
MAXIMUM RMS VOLTAGE	V <sub>RMS</sub>	35	70	140	280	420	560	700	V
MAXIMUM DC BLOCKING VOLTAGE	V <sub>DC</sub>	50	100	200	400	600	800	1000	V
MAXIMUM AVERAGE FORWARD RECTIFIED CURRENT 0.375" (9.5mm) LEAD LENGTH AT TA=55°C	I <sub>O</sub>	1.0							A
PEAK FORWARD SURGE CURRENT, 8.3ms SINGLE HALF SINE-WAVE SUPERIMPOSED ON RATED LOAD	I <sub>FSM</sub>	30							A
TYPICAL JUNCTION CAPACITANCE (NOTE 1)	C <sub>J</sub>	20			15				PF
TYPICAL THERMAL RESISTANCE (NOTE 2)	R <sub>θjc</sub>	50							°C/W
STORAGE TEMPERATURE RANGE	T <sub>STG</sub>	- 55 TO + 150							°C
OPERATING TEMPERATURE RANGE	T <sub>OP</sub>	- 55 TO + 150							°C

#### ELECTRICAL CHARACTERISTICS (A<sub>T</sub> T<sub>A</sub> =25°C UNLESS OTHERWISE NOTED)

CHARACTERISTICS	SYMBOL	UF	UF	UF	UF	UF	UF	UF	UNITS
		4001G-LFR	4002G-LFR	4003G-LFR	4004G-LFR	4005G-LFR	4006G-LFR	4007G-LFR	
MAXIMUM FORWARD VOLTAGE AT I <sub>O</sub> DC	V <sub>F</sub>	1.3			1.7				V
MAXIMUM DC REVERSE CURRENT AT TA=25°C	I <sub>R</sub>	1							μA
MAXIMUM DC REVERSE CURRENT AT TA=100°C	I <sub>R</sub>	10							μA
MAXIMUM REVERSE RECOVERY TIME (NOTE3)	T <sub>RR</sub>	50			75				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<sub>F</sub>=0.5A, I<sub>R</sub>=1.0A, I<sub>RR</sub>=0.25A

# RATINGS AND CHARACTERISTIC CURVE UF4001G-LFR THRU UF4007G-LFR

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

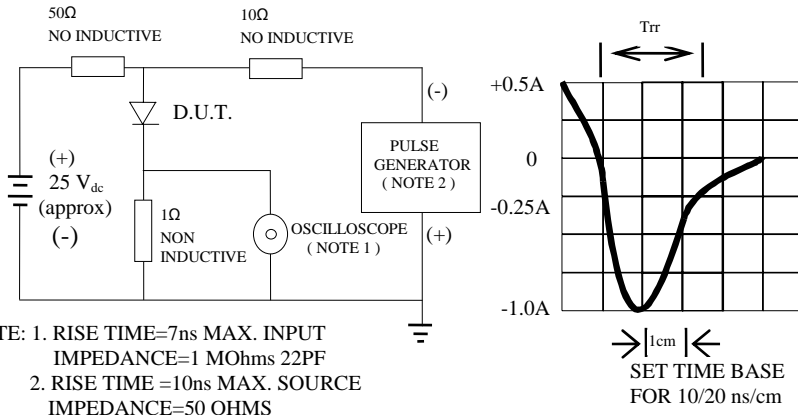


FIG. 2-TYPICAL FORWARD CURRENT DERATING CURVE

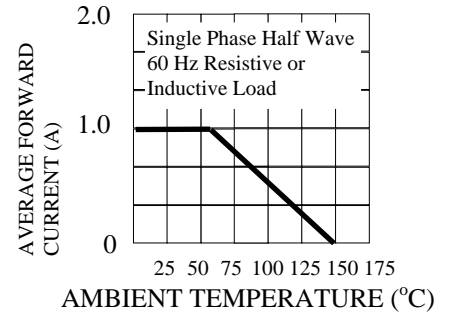


FIG. 3-TYPICAL REVERSE CHARACTERISTICS

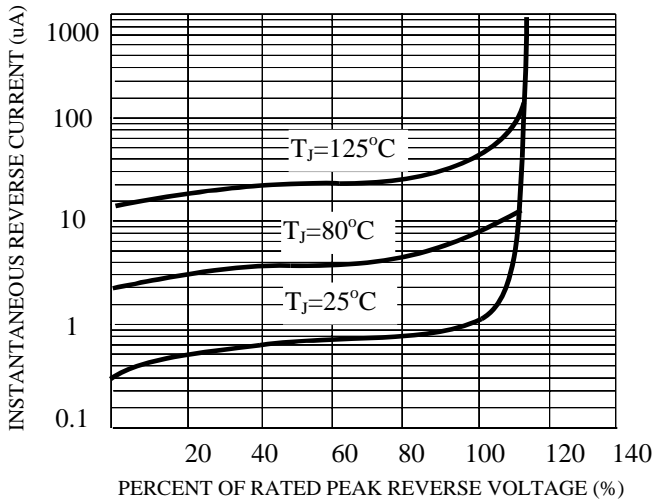


FIG. 4-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

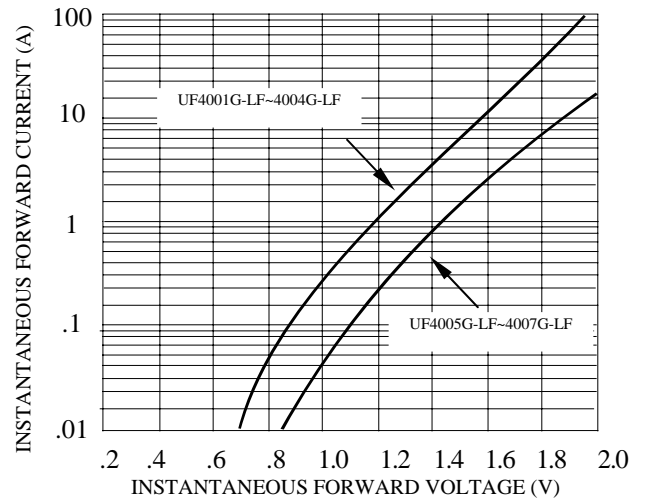


FIG. 5-MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

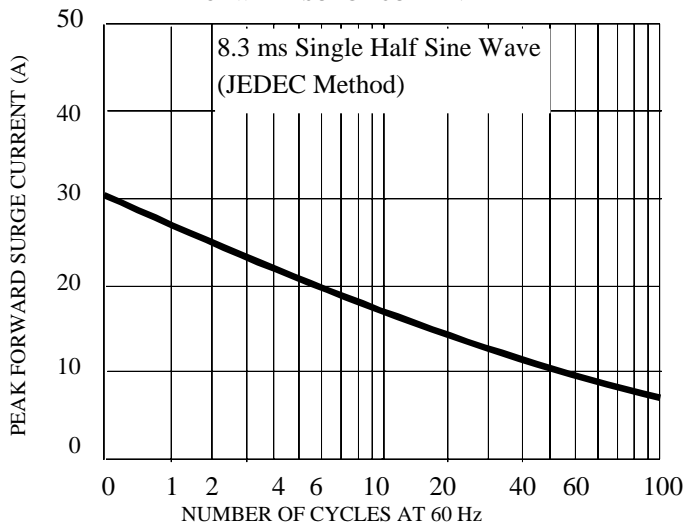


FIG. 6-TYPICAL JUNCTION CAPACITANCE

