



# Frontier Electronics Corp.

667 E. COCHRAN STREET, SIMI VALLEY, CA 93065

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

E-mail: [frontiersales@frontierusa.com](mailto:frontiersales@frontierusa.com)

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

## A GENERAL PURPOSE GLASS PASSIVATED RECTIFIER

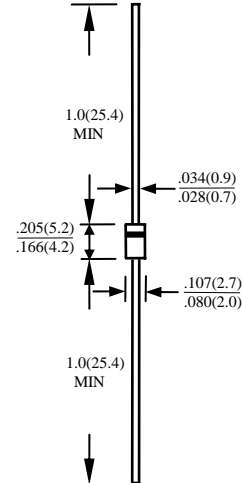
### 1N4001G-LFR THRU 1N4007G-LFR

#### FEATURES

- UL 94V0 FLAME RETARDANT EPOXY MOLDING COMPOUND
- GLASS PASSIVATED CHIP JUNCTION
- LOW COST
- HIGH SURGE CURRENT CAPABILITY
- ROHS

#### MECHANICAL DATA

- CASE: TRANSFER MOLDED, DO41, DIMENSIONS IN INCHES AND (MILLIMETERS)
- LEADS: SOLDERABLE PER MIL-STD-202, METHOD 208
- POLARITY CATHODE INDICATED BY COLOR BAND
- 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	1N4001G -LFR	1N4002G -LFR	1N4003G -LFR	1N4004G -LFR	1N4005G -LFR	1N4006G -LFR	1N4007G -LFR	UNITS
MAXIMUM RECURRENT PEAK REVERSE VOLTAGE	$V_{RRM}$	50	100	200	400	600	800	1000	V
MAXIMUM RMS VOLTAGE	$V_{RMS}$	35	70	140	280	420	560	700	V
MAXIMUM DC BLOCKING VOLTAGE	$V_{DC}$	50	100	200	400	600	800	1000	V
MAXIMUM AVERAGE FORWARD RECTIFIED CURRENT 0.375" (9.5mm) LEAD LENGTH AT $T_A=55^\circ\text{C}$	$I_O$	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
TYPICAL THERMAL RESISTANCE (NOTE 2)	$R_{\theta ja}$	50							°C/W
STORAGE TEMPERATURE RANGE	$T_{STG}$	-55 TO + 175							°C
OPERATING TEMPERATURE RANGE	$T_{OP}$	-55 TO + 175							°C

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

CHARACTERISTICS	SYMBOL	1N4001G -LFR	1N4002G -LFR	1N4003G -LFR	1N4004G -LFR	1N4005G -LFR	1N4006G -LFR	1N4007G -LFR	UNITS
MAXIMUM FORWARD VOLTAGE AT $I_O$ DC	$V_F$	1.1							V
MAXIMUM REVERSE CURRENT AT 25 °C	$I_R$	5							μA
MAXIMUM REVERSE CURRENT AT 100 °C	$I_R$	50							μA

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

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

FIG. 1 - TYPICAL FORWARD CURRENT DERATING CURVE

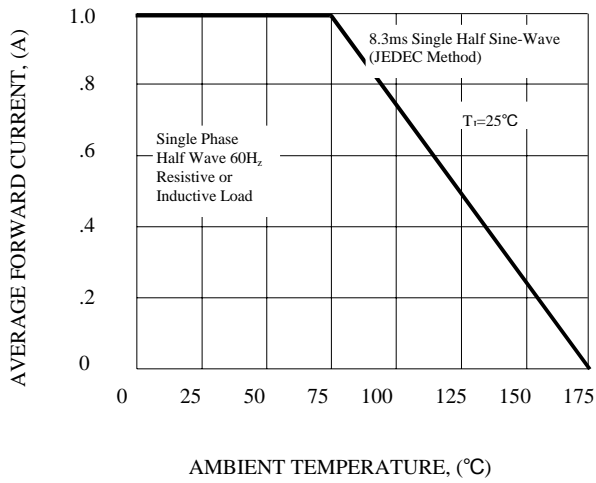


FIG. 2 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

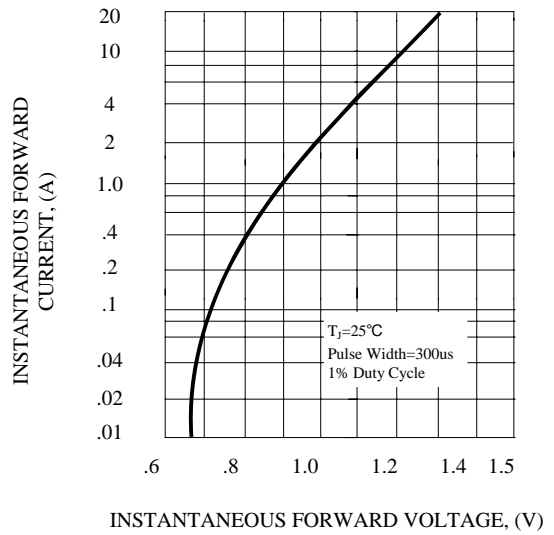


FIG. 3 - MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

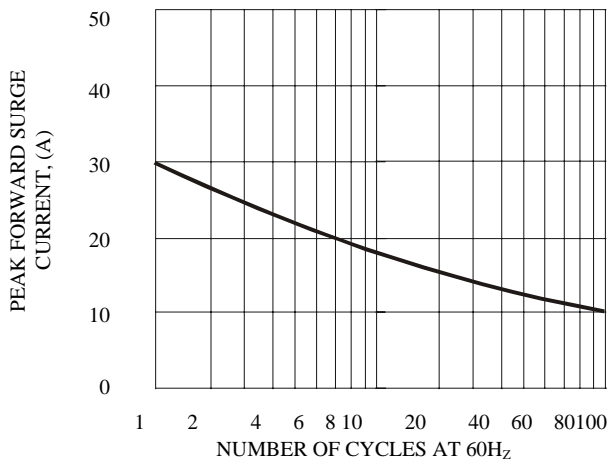


FIG. 4 - TYPICAL REVERSE CHARACTERISTICS

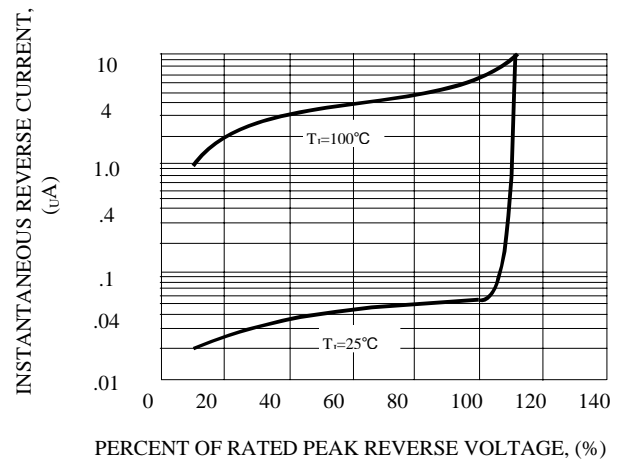


FIG. 5 - TYPICAL JUNCTION CAPACITANCE

