



# Frontier Electronics Corp.

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## 1A GENERAL PURPOSE PLASTIC RECTIFIER

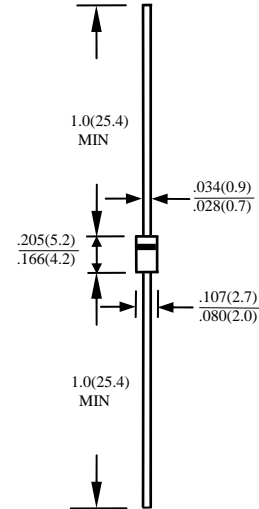
### 1N4001 THRU 1N4007

#### FEATURES

- UL 94V0 FLAME RETARDANT EPOXY MOLDING COMPOUND
- DIFFUSED JUNCTION
- LOW COST
- HIGH SURGE CURRENT CAPABILITY

#### 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	1N4001	1N4002	1N4003	1N4004	1N4005	1N4006	1N4007	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
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	1N4001	1N4002	1N4003	1N4004	1N4005	1N4006	1N4007	UNITS
MAXIMUM FORWARD VOLTAGE AT $I_O$ DC	$V_F$	1.1							V
MAXIMUM REVERSE CURRENT AT 25°C	$I_R$	5							μA

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

Fig. 1-MAXIMUM CURRENT RATING  
EFFECT OF COPPER AREA.  
RESISTIVE/INDUCTIVE

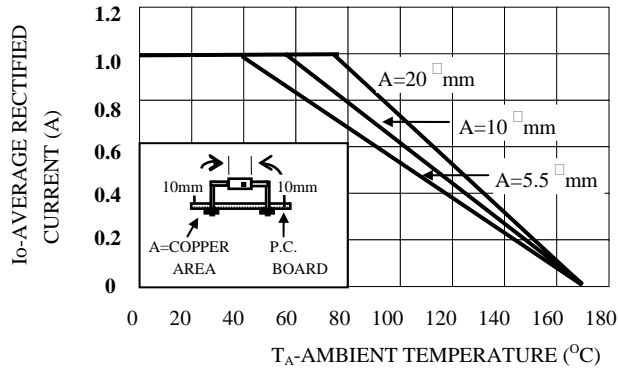


Fig. 2-MAXIMUM CURRENT RATING  
CAPACITIVE LOAD, 10 mm LEAD LENGTHS

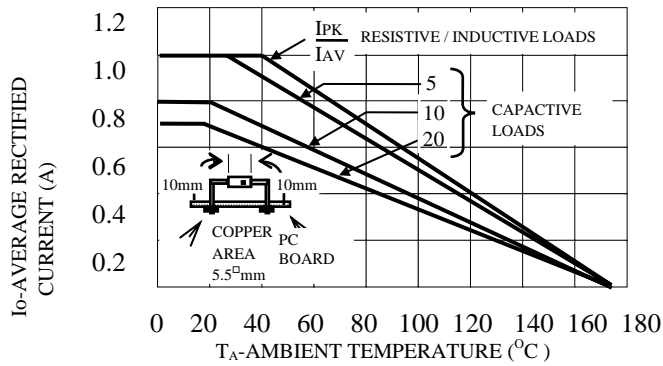


Fig. 3 MAXIMUM CURRENT RATING  
EFFECT OF LEAD LENGTHS  
RESISTIVE / INDUCTIVE LOAD

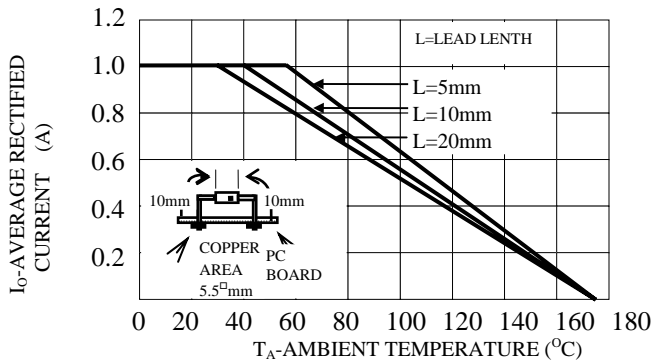


Fig. 4-TYPICAL FORWARD CHARACTERISTICS

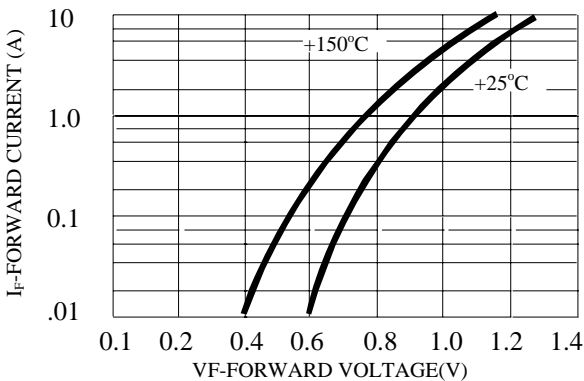


Fig. 5-MAXIMUM FORWARD SURGE  
VS NUMBER OF CYCLES

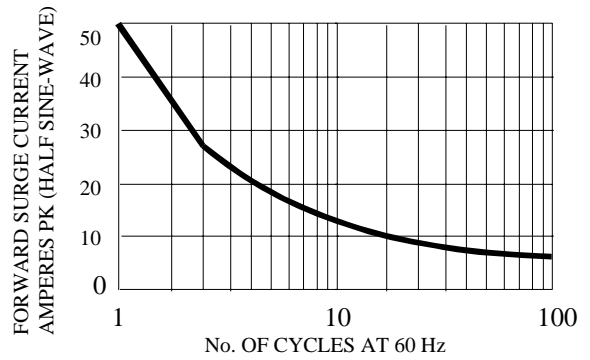


Fig. 6-TYPICAL REVERSE  
CHARACTERISTIC

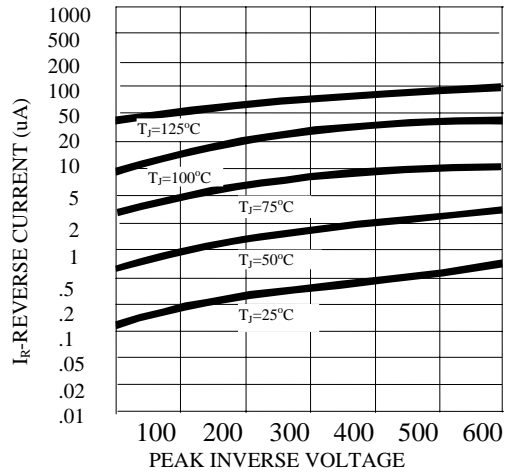


Fig. 7-TYPICAL JUNCTION CAPACITANCE

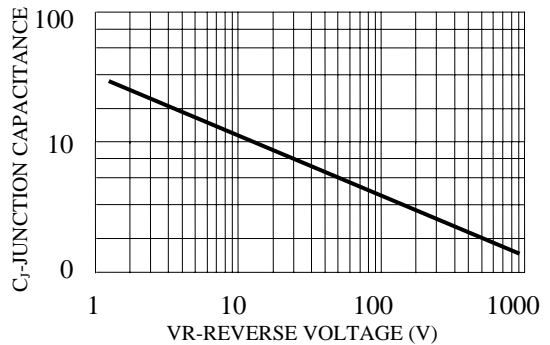


Fig. 8-FORWARD PULSE CURRENT  
VS PULSE DURATION

