



# Frontier Electronics Corp.

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## 5A GENERAL PURPOSE PLASTIC RECTIFIER

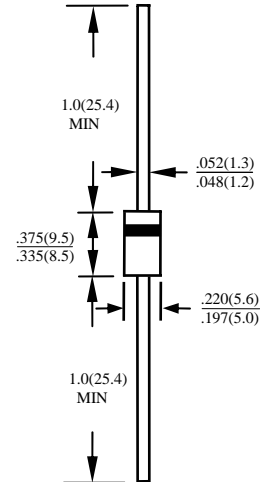
### GP50-005 THRU GP50-10

#### FEATURES

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

#### MECHANICAL DATA

- CASE: TRANSFER MOLDED, DO201AD, DIMENSIONS IN INCHES AND (MILLIMETERS)
- LEADS: SOLDERABLE PER MIL-STD-202, METHOD 208
- POLARITY: CATHODE INDICATED BY COLOR BAND
- WEIGHT: 1.2 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	GP50	GP50	GP50	GP50	GP50	GP50	GP50	UNITS
		-005	-01	-02	-04	-06	-08	-10	
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 $T_A = 55^\circ\text{C}$	$I_O$	5.0							A
PEAK FORWARD SURGE CURRENT, 8.3ms SINGLE HALF SINE-WAVE SUPERIMPOSED ON RATED LOAD	$I_{FSM}$	200							A
TYPICAL JUNCTION CAPACITANCE (NOTE 1)	$C_J$	30							PF
TYPICAL THERMAL RESISTANCE (NOTE 2)	$R_{\theta ja}$	20							$^\circ\text{C}/\text{W}$
OPERATING TEMPERATURE RANGE	$T_{OP}$	-55 TO + 175							$^\circ\text{C}$

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

CHARACTERISTICS	SYMBOL	GP50	GP50	GP50	GP50	GP50	GP50	GP50	UNITS
		-005	-01	-02	-04	-06	-08	-10	
MAXIMUM FORWARD VOLTAGE AT $I_O$ DC	$V_F$	1.1							V
MAXIMUM REVERSE CURRENT AT 25°C	$I_R$	5							$\mu\text{A}$
MAXIMUM REVERSE CURRENT AT 100°C	$I_R$	100							$\mu\text{A}$

- NOTE: 1. MEASURED AT 1MHZ 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

# RATINGS AND CHARACTERISTIC CURVE GP50-005 THRU GP50-10

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

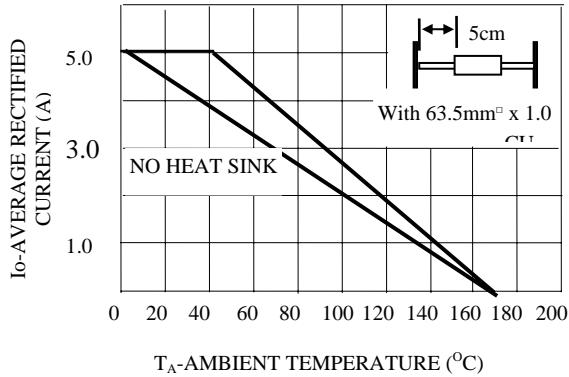


Fig. 2-MAXIMUM FORWARD SURGE  
NUMBER OF CYCLES

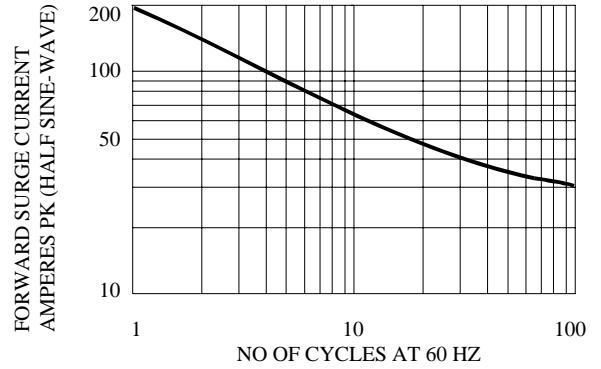


Fig. 3-MAXIMUM CURRENT RATING  
EFFECT OF COPPER AREA.  
RESISTIVE/INDUCTIVE LOAD.

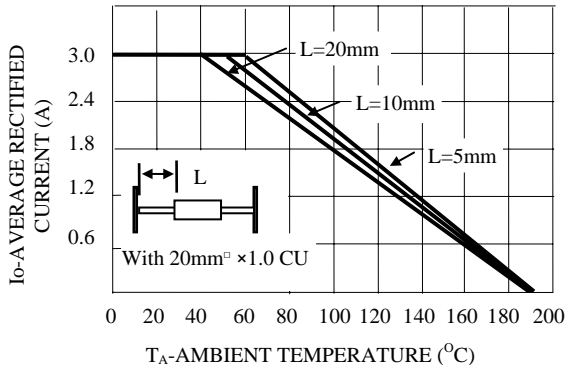


Fig. 4-TYPICAL JUNCTION CAPACITANCE

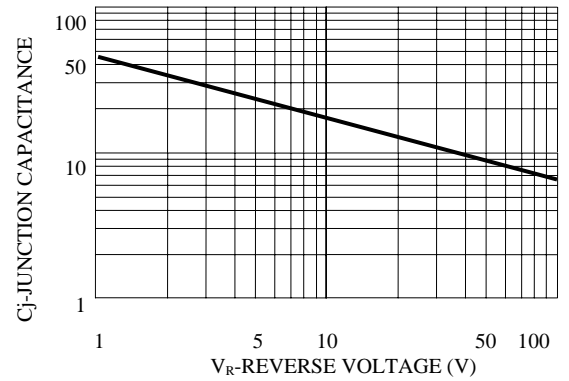


Fig. 5-TYPICAL FORWARD CHARACTERISTICS

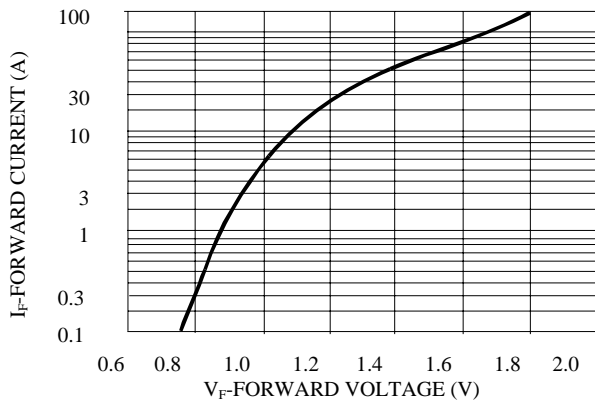


Fig. 6-FORWARD PULSE CURRENT, PULSE

