



**FRONTIER  
ELECTRONICS CO., LTD.**

**GP20-005R  
THRU  
GP20-10R**

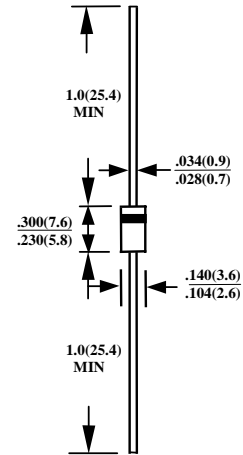
**2A GENERAL PURPOSE PLASTIC RECTIFIER**

**FEATURES**

- LOW FORWARD VOLTAGE
- HIGH CURRENT CAPABILITY
- LOW LEAKAGE CURRENT
- HIGH SURGE CAPABILITY
- BEVEL ROUND CHIP, AVALANCHE OPERATION

**MECHANICAL DATA**

- CASE : MOLDED PLASTIC USE UL 94V-0 RECOGNIZED FLAME RETARDANT EPOXY
- TERMINAL : AXIAL LEADS, SOLDERABLE PER MIL-STD-202 METHOD 208
- POLARITY : COLOR BAND DENOTES CATHODE
- MOUNTING POSITION : ANY
- WEIGHT : 0.4 GRAMS



CASE : DO15  
DIMENSIONS IN INCHES AND (MILLIMETERS)

**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	GP20-005R	GP20-01R	GP20-02R	GP20-04R	GP20-06R	GP20-08R	GP20-10R	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 .375" (9.5mm) LEAD LENGTH AT $T_A=55^\circ\text{C}$	$I_O$	2.0							A
PEAK FORWARD SURGE CURRENT, 8.3ms SINGLE HALF SINE-WAVE SUPERIMPOSED ON RATED LOAD	$I_{FSM}$	70							A
TYPICAL JUNCTION CAPACITANCE (NOTE 1)	$C_J$	20							PF
TYPICAL THERMAL RESISTANCE (NOTE 2)	$R_{\theta ja}$	25							$^\circ\text{C}/\text{W}$
OPERATING TEMPERATURE RANGE	$T_{OP}$	-55 TO + 175							$^\circ\text{C}$

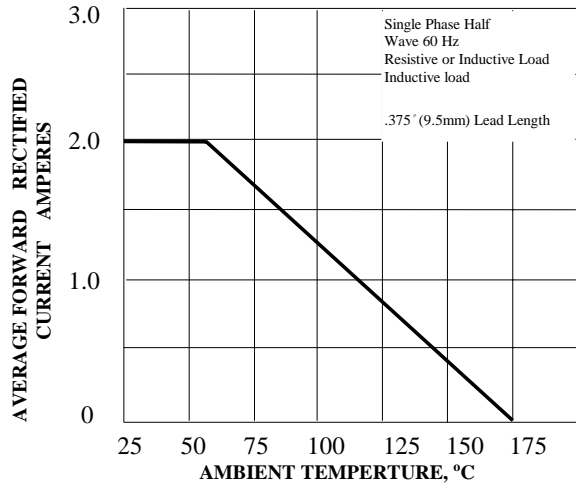
**ELECTRICAL CHARACTERISTICS (At  $T_A=25^\circ\text{C}$  UNLESS OTHERWISE NOTED)**

CHARACTERISTICS	SYMBOL	GP20-005R	GP20-01R	GP20-02R	GP20-04R	GP20-06R	GP20-08R	GP20-10R	UNITS
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	$I_R$	50							$\mu\text{A}$

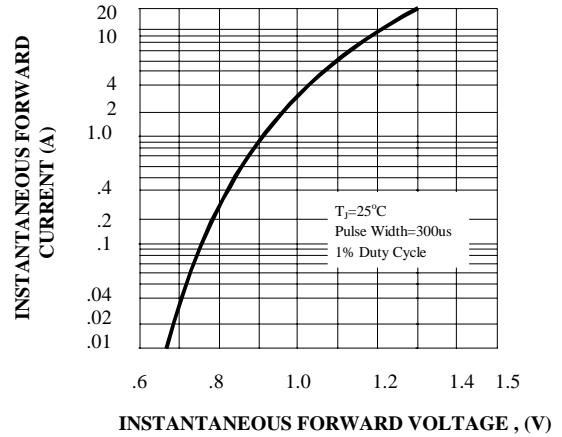
- NOTE : 1. MEASURED AT 1MHZ AND APPLIED REVERSE VOLTAGE OF 4.0 VOLTS  
2. BOTH LEADS ATTACHED TO HEATSINK 35×35×1t(mm) COPPER PLATE AT LEAD LENGTH 5mm

# RATINGS AND CHARACTERISTIC CURVE GP20-005R THRU GP20-10R

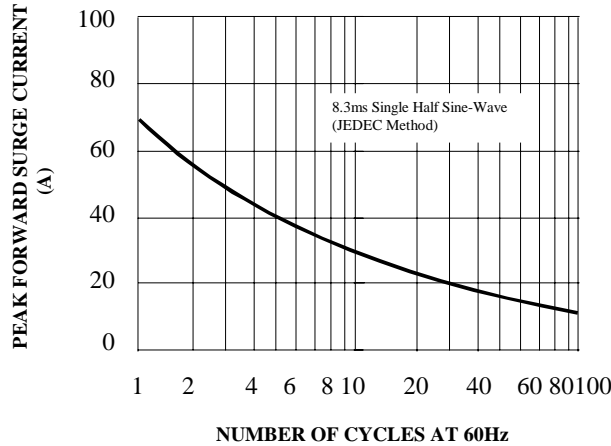
**FIG. 1- FORWARD CURRENT DERATING CURVE**



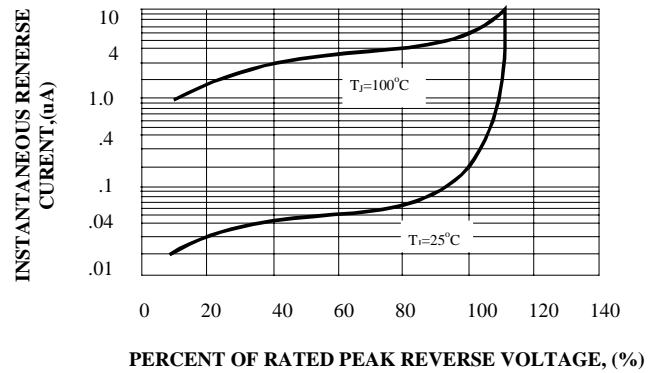
**FIG. 2 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS**



**FIG. 3 - PEAK FORWARD SURGE CURRENT**



**FIG. 4 - TYPICAL REVERSE CHARACTERISTICS**



**FIG. 5 - TYPICAL JUNCTION CAPACITANCE**

