



# 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>

## 2A GENERAL PURPOSE PLASTIC RECTIFIER

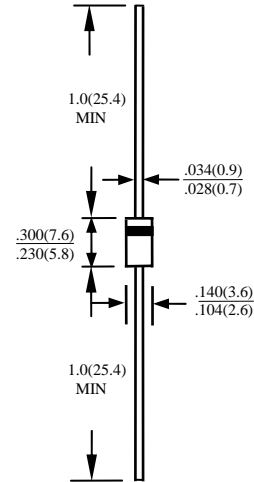
### GP20-005R THRU GP20-10R

#### FEATURES

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

#### MECHANICAL DATA

- CASE: DO15, MOLDED PLASTIC USE UL 94V-0 RECOGNIZED FLAME RETARDANT EPOXY, DIMENSIONS IN INCHES AND (MILLIMETERS)
- TERMINAL: AXIAL LEADS, SOLDERABLE PER MIL-STD-202 METHOD 208
- POLARITY: COLOR BAND DENOTES CATHODE
- MOUNTING POSITION: ANY
- WEIGHT: 0.4 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	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 0.375"(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							$^\circ\text{C/W}$
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	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 HEAT SINK 35x35x1(mm) COPPER PLATE AT LEAD LENGTH 5mm

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

FIG. 1 - FORWARD CURRENT DERATING CURVE

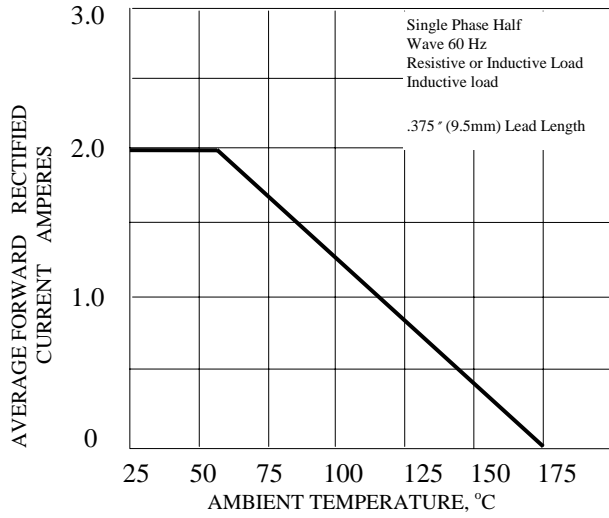


FIG. 2 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

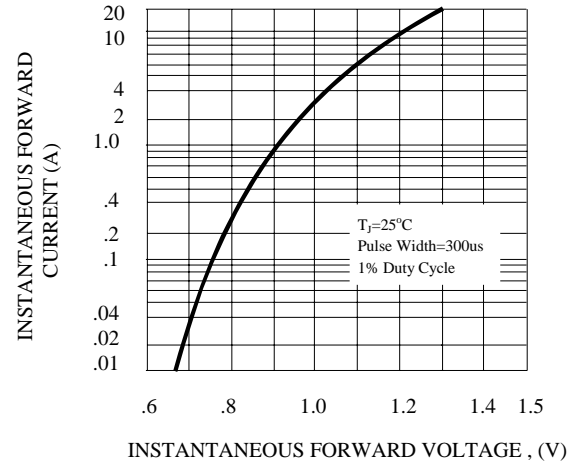


FIG. 3 - PEAK FORWARD SURGE CURRENT

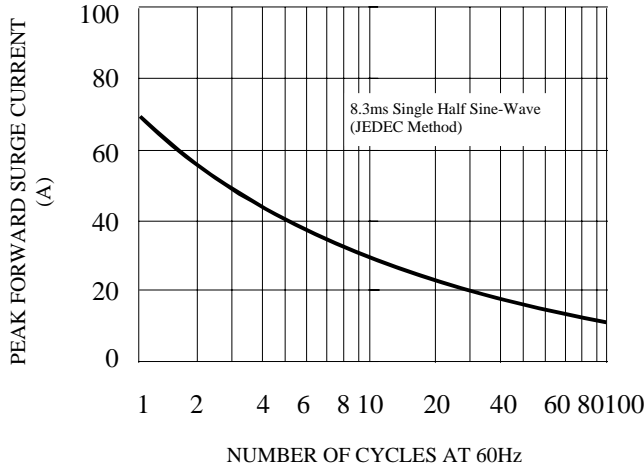


FIG. 4 - TYPICAL REVERSE CHARACTERISTICS

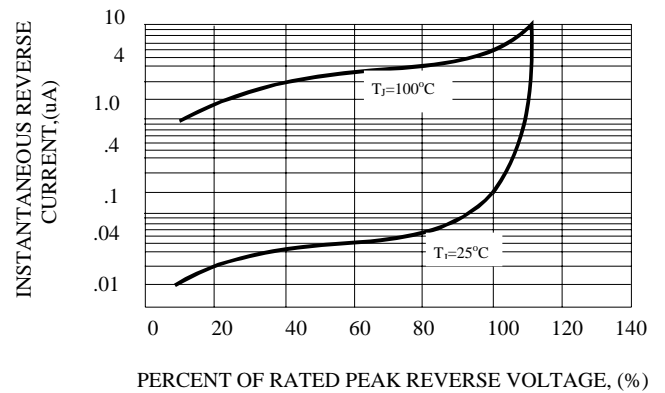


FIG. 5 - TYPICAL JUNCTION CAPACITANCE

