



Frontier Electronics Corp.

667 E. COCHRAN STREET, SIMI VALLEY, CA 93065

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

E-mail: frontiersales@frontierusa.com

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

1A FAST RECOVERY PLASTIC RECTIFIER

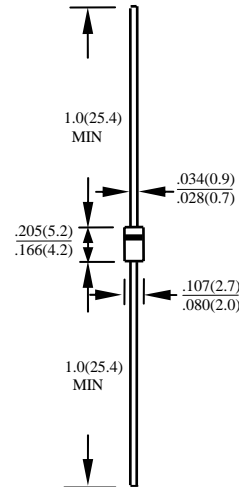
BA157G THRU BA159G

FEATURES

- FOR USE IN HIGH FREQUENCY RECTIFIER CIRCUITS
- PLASTIC PACKAGE HAS UNDERWRITERS LABORATORY FLAMMABILITY CLASSIFICATION 94 V-0
- FAST SWITCHING FOR HIGH EFFICIENCY
- GLASS PASSIVATED CHIP JUNCTION

MECHANICAL DATA

- CASE: MOLDED PLASTIC CASE, DO41, DIMENSIONS IN INCHES AND (MILLIMETERS)
- TERMINAL: AXIAL LEADS, SOLDERABLE PER MIL-STD-202, METHOD 208
- POLARITY: COLOR BAND DENOTES CATHODE
- MOUNTING POSITION: ANY
- WEIGHT: 0.34 GRAM



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	BA157G	BA158G	BA159G	UNITS
MAXIMUM RECURRENT PEAK REVERSE VOLTAGE	V_{RRM}	400	600	1000	V
MAXIMUM RMS VOLTAGE	V_{RMS}	280	420	700	V
MAXIMUM DC BLOCKING VOLTAGE	V_{DC}	400	600	1000	V
MAXIMUM AVERAGE FORWARD RECTIFIED CURRENT 0.375" (9.5mm) LEAD LENGTH AT $T_A=55^{\circ}C$	I_O	1.0			A
PEAK FORWARD SURGE CURRENT, 8.3ms SINGLE HALF SINE-WAVE SUPERIMPOSED ON RATED LOAD	I_{FSM}	35			A
TYPICAL JUNCTION CAPACITANCE (NOTE 1)	C_j	15			PF
TYPICAL THERMAL RESISTANCE (NOTE 2)	$R_{\theta ja}$	50			$^{\circ}C/W$
STORAGE TEMPERATURE RANGE	T_{STG}	- 55 TO + 150			$^{\circ}C$
OPERATING TEMPERATURE RANGE	T_{OP}	- 55 TO + 150			$^{\circ}C$

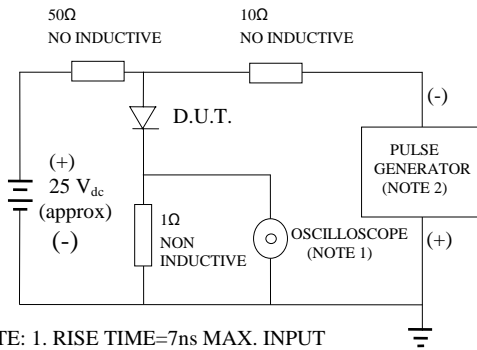
ELECTRICAL CHARACTERISTICS ($A_T T_A = 25^{\circ}C$ UNLESS OTHERWISE NOTED)

CHARACTERISTICS	SYMBOL	BA157G	BA158G	BA159G	UNITS
MAXIMUM FORWARD VOLTAGE AT I_O DC	V_F	1.3			V
MAXIMUM REVERSE CURRENT AT 25°C	I_R	5			μA
MAXIMUM REVERSE CURRENT AT 100°C	I_R	50			μA
MAXIMUM REVERSE RECOVERY TIME (NOTE 3)	T_{RR}	150		250	nS

- NOTE: 1. MEASURED AT 1 MHZ AND APPLIED REVERSE VOLTAGE OF 4.0 VOLTS
 2. BOTH LEADS ATTACHED TO HEAT SINK 20x20x1t(mm) COPPER PLATE AT LEAD LENGTH 5mm
 3. REVERSE RECOVERY TEST CONDITIONS: $I_F=0.5A$, $I_R=1.0A$, $I_{RR}=0.25A$

RATINGS AND CHARACTERISTICS CURVES BA157 THRU BA159

FIG. 1-TEST CIRCUIT DIAGRAM AND REVERSE RECOVERY TIME CHARACTERISTIC



NOTE: 1. RISE TIME=7ns MAX. INPUT IMPEDANCE=1 MOhms 22PF
 2. RISE TIME=10ns MAX. SOURCE IMPEDANCE=50OHMS

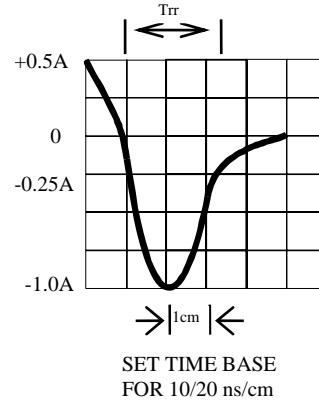


Fig. 2-MAXIMUM CURRENT DERATING CURVE

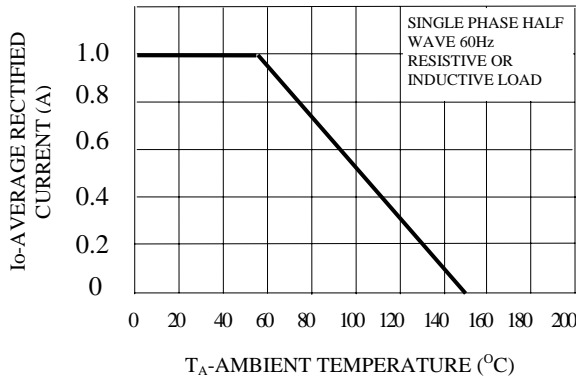


Fig. 3-MAXIMUM FORWARD SURGE NUMBER OF CYCLES

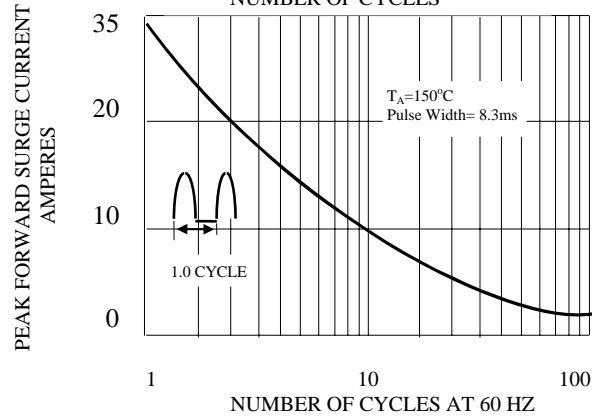


FIG. 4-TYPICAL REVERSE CHARACTERISTICS

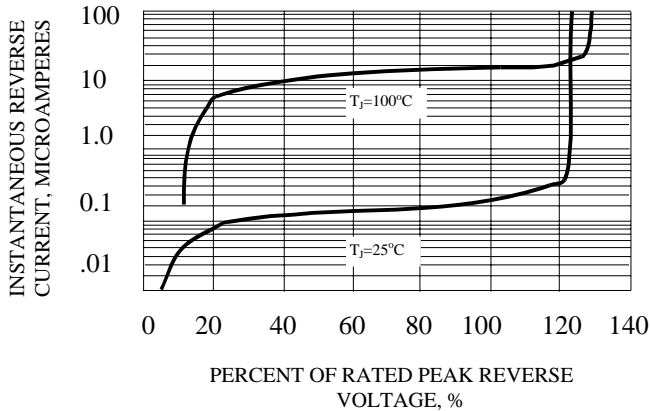


FIG. 5-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

