

# BA157G - BA159G

1.0 AMP. Glass Passivated Fast Recovery Rectifiers

**DO-41**

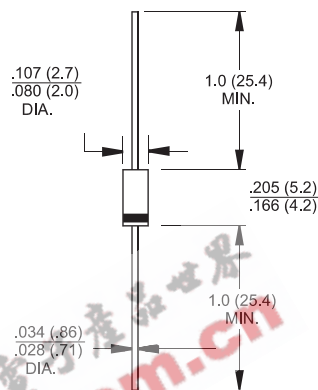


## Features

- ✧ Glass passivated chip junction.
- ✧ High efficiency, Low VF
- ✧ High current capability
- ✧ High reliability
- ✧ High surge current capability
- ✧ Low power loss

## Mechanical Data

- ✧ Cases: DO-41 Molded plastic
- ✧ Epoxy: UL 94V-0 rate flame retardant
- ✧ Lead: Pure tin plated, Lead free., solderable per MIL-STD-202, Method 208 guaranteed
- ✧ Polarity: Color band denotes cathode end
- ✧ High temperature soldering guaranteed: 260 °C /10 seconds/.375", (9.5mm) lead lengths at 5 lbs., (2.3kg) tension
- ✧ Weight: 0.34 gram



## Maximum Ratings and Electrical Characteristics

Rating 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%

Type Number	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 .375"(9.5mm) Lead Length @ $T_A = 45^\circ\text{C}$	$I_{(AV)}$	1.0			A
Peak Forward Surge Current, 8.3 ms Single Half Sine-wave Superimposed on Rated Load (JEDEC method )	$I_{FSM}$	30			A
Maximum Instantaneous Forward Voltage @ 1.0A	$V_F$	1.2			V
Maximum DC Reverse Current @ $T_A=25^\circ\text{C}$ at Rated DC Blocking Voltage @ $T_A=100^\circ\text{C}$	$I_R$	5.0 100			$\mu\text{A}$ $\mu\text{A}$
Maximum Reverse Recovery Time ( Note 1 )	$T_{rr}$	150		250	nS
Typical Junction Capacitance ( Note 2 )	$C_j$	15			pF
Typical thermal Resistance (Note 3)	$R_{\theta JA}$	60			$^\circ\text{C}/\text{W}$
Operating Temperature Range	$T_J$	-65 to +150			$^\circ\text{C}$
Storage Temperature Range	$T_{STG}$	-65 to +150			$^\circ\text{C}$

- Notes:
1. Reverse Recovery Test Conditions:  $I_F=0.5\text{A}$ ,  $I_R=1.0\text{A}$ ,  $I_{RR}=0.25\text{A}$
  2. Measured at 1 MHz and Applied Reverse Voltage of 4.0 Volts D.C.
  3. Mount on Cu-Pad Size 5mm x 5mm on P.C.B.

## RATINGS AND CHARACTERISTIC CURVES (BA157G THRU BA159G)

FIG.1- MAXIMUM FORWARD CURRENT DERATING CURVE

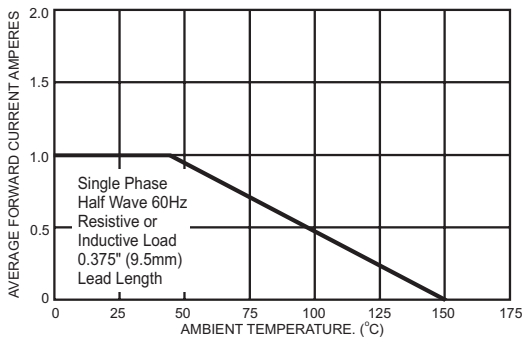


FIG.2- TYPICAL REVERSE CHARACTERISTICS PER LEG

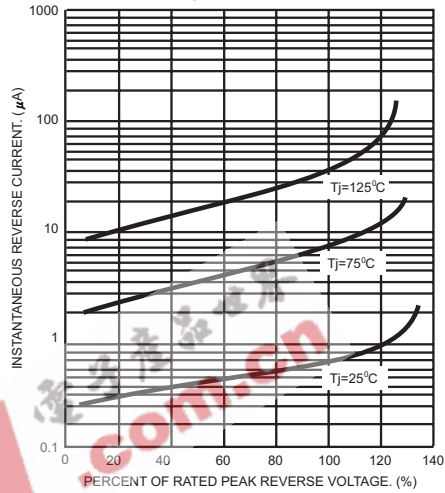


FIG.3- MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

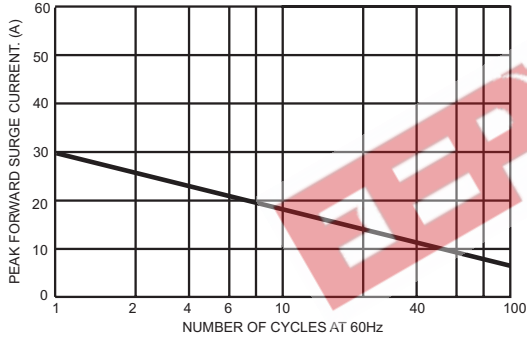


FIG.5- TYPICAL FORWARD CHARACTERISTICS

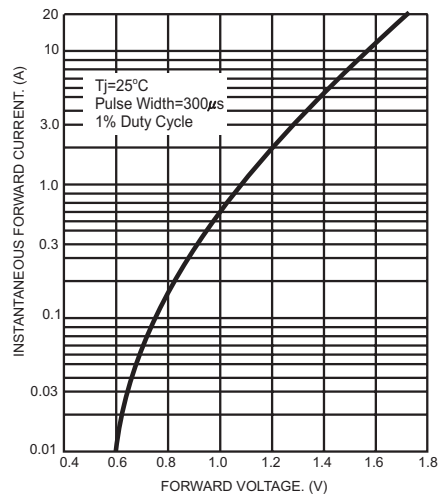


FIG.4- TYPICAL JUNCTION CAPACITANCE

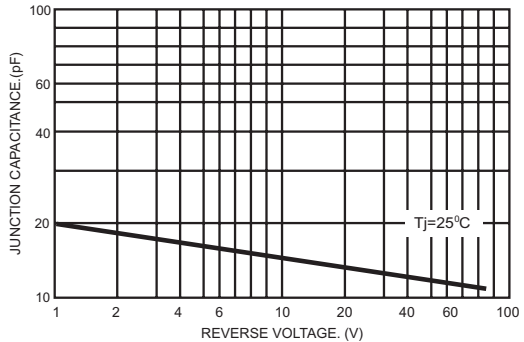


FIG.6- REVERSE RECOVERY TIME CHARACTERISTIC AND TEST CIRCUIT DIAGRAM

