



SYNSEMI SEMICONDUCTOR

# BA157G thru BA159G

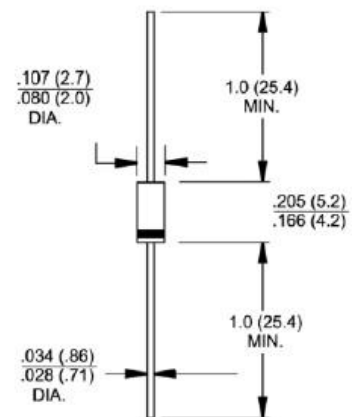
1.0 Amp. Glass Passivated Fast Recovery Rectifiers  
Voltage Range 400 to 1000 Volts Forward Current 1.0 Ampere

## Features

- ◆ Plastic package has Underwriters Laboratories Flammability Classification 94V-0
- ◆ High temperature metallurgically bonded construction
- ◆ For use in high frequency rectifier circuits
- ◆ Fast switching for high efficiency
- ◆ Glass passivated cavity-free junction
- ◆ Capable of meeting environmental standards of MIL-S-19500
- ◆ 1.0 Ampere operation at  $T_A=55^\circ\text{C}$  with no thermal runaway
- ◆ Typical  $I_R$  less than 0.1uA
- ◆ High temperature soldering guaranteed:  
350°C/10 seconds, 0.375" (9.5mm) lead length,  
5 lbs. (2.3kg) tension



DO-204AL (DO-41)



Dimensions in inches and (millimeters)

## Mechanical Data

- ◆ Case: JEDEC DO-204AL (DO-41), molded plastic over glass body
- ◆ Terminals: Plated axial leads, solderable per MIL-STD-750, Method 2028
- ◆ Polarity: Color band denotes cathode end
- ◆ Mounting Position: Any
- ◆ Weight: 0.012 ounce, 0.33 gram

## Maximum Ratings and Electrical Characteristics

Ratings at 25°C ambient temperature unless otherwise specified.

Parameter	Symbols	BA157G	BA158G	BA159DG	BA159G	Units
Maximum repetitive peak reverse voltage	$V_{RRM}$	400	600	800	1000	Volts
Maximum RMS voltage	$V_{RMS}$	280	420	560	700	Volts
Maximum DC blocking voltage	$V_{DC}$	400	600	800	1000	Volts
Maximum average forward rectified current 0.375" (9.5mm) lead length at $T_A=55^\circ\text{C}$	$I_{F(AV)}$	1.0				Amp
Peak forward surge current 10ms single half sine-wave superimposed on rated load at $T_A=25^\circ\text{C}$	$I_{FSM}$	20.0				Amps
Maximum instantaneous forward voltage at 1.0A	$V_F$	1.3				Volts
Maximum DC reverse current at rated DC blocking voltage $T_A=25^\circ\text{C}$	$I_R$	5.0				uA
Maximum reverse recovery time (Note 1)	$t_r$	150	250	500		nS
Typical junction capacitance (Note 2)	$C_j$	15				pF
Typical thermal resistance (Note 3)	$R_{\theta JA}$	55.0				$^\circ\text{C/W}$
Operating junction and storage temperature range	$T_J, T_{STG}$	-65 to +175				$^\circ\text{C}$

- Notes:**
1. Reverse recovery test conditions:  $I_F=0.5A, I_R=1.0A, I_T=0.25A$
  2. Measured at 1.0 MHz and applied reverse voltage of 4.0 Volts
  3. Thermal resistance from junction to ambient at 0.375" (9.5mm) lead length, P.C.B. mounted

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## RATINGS AND CHARACTERISTIC CURVES

( $T_A = 25^\circ\text{C}$  unless otherwise noted)

