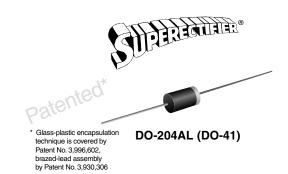


BA157GP thru BA159GP

Vishay General Semiconductor

Glass Passivated Junction Fast Switching Rectifier



PRIMARY CHARACTERISTICS					
I _{F(AV)}	1.0 A				
V _{RRM}	400 V to 1000 V				
I _{FSM}	20 A				
t _{rr}	150 ns, 250 ns, 500 ns				
I _R	5.0 μΑ				
V _F	1.3 V				
T _J max.	175 °C				

FEATURES

- Superectifier structure for high reliability condition
- Cavity-free glass-passivated junction
- Fast switching for high efficiency
- Low leakage current, typical I_R less than $\begin{array}{c} \text{RoHS} \\ \text{COMPLIANT} \end{array}$
- High forward surge capability
- Meets environmental standard MIL-S-19500
- Solder dip 260 °C, 40 s
- Component in accordance to RoHS 2002/95/EC and WEEE 2002/96/EC

TYPICAL APPLICATIONS

For general purpose of medium frequency rectification.

MECHANICAL DATA

Case: DO-204AL, molded epoxy over glass body Epoxy meets UL 94V-0 flammability rating

Terminals: Matte tin plated leads, solderable per J-STD-002 and JESD22-B102

E3 suffix for consumer grade, meets JESD 201 class 1A whisker test, HE3 suffix for high reliability grade (AEC Q101 qualified), meets JESD 201 class 2 whisker test

Polarity: Color band denotes cathode end

MAXIMUM RATINGS (T _A = 25 °C unless otherwise noted)						
PARAMETER	SYMBOL	BA157GP	BA158GP	BA159DGP	BA159GP	UNIT
Maximum repetitive peak reverse voltage	V _{RRM}	400 600 800 1000		1000	V	
Maximum RMS voltage	V _{RMS}	280 420 560 700		700	V	
Maximum DC blocking voltage	V _{DC}	V _{DC} 400 600 800 100		1000	V	
Maximum average forward rectified current 0.375" (9.5 mm) lead length at T_A = 55 $^\circ\text{C}$	I _{F(AV)}	1.0				А
Peak forward surge current 10 ms single half sine-wave superimposed on rated load	I _{FSM}	20			А	
Operating junction and storage temperature range	T _J , T _{STG}	- 65 to + 175				°C

ELECTRICAL CHARACTERISTICS (T _A = 25 °C unless otherwise noted)							
PARAMETER	TEST CONDITIONS	SYMBOL	BA157GP	BA158GP	BA159DGP	BA159GP	UNIT
Maximum instantaneous forward voltage	1.0 A	V _F	1.3			V	
Maximum DC reverse current at rated DC blocking voltage	T _A = 25 °C	I _R	5.0			μΑ	
Maximum reverse recovery time	$I_{F} = 0.5 \text{ A}, I_{R} = 1.0 \text{ A},$ $I_{rr} = 0.25 \text{ A}$	t _{rr}	150 250 500 500		ns		
Typical junction capacitance	4.0 V, 1 MHz	CJ	15			pF	

Document Number: 88537 Revision: 08-Apr-08 For technical questions within your region, please contact one of the following: PDD-Americas@vishay.com, PDD-Asia@vishay.com, PDD-Europe@vishay.com



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THERMAL CHARACTERISTICS (T _A = 25 °C unless otherwise noted)						
PARAMETER	SYMBOL	BA157GP	BA158GP	BA159DGP	BA159GP	UNIT
Typical thermal resistance (1)	$R_{\theta JA}$	55			°C/W	

Note:

(1) Thermal resistance from junction to ambient at 0.375" (9.5 mm) lead length, P.C.B. mounted

ORDERING INFORMATION (Example)							
PREFERRED P/N	UNIT WEIGHT (g)	PREFERRED PACKAGE CODE	BASE QUANTITY	DELIVERY MODE			
BA158GP-E3/54	0.336	54	5500	13" Diameter paper tape and reel			
BA158GP-E3/73	0.336	73	3000	Ammo pack packaging			
BA158GPHE3/54 (1)	0.336	54	5500	13" Diameter paper tape and reel			
BA158GPHE3/73 ⁽¹⁾	0.336	73	3000	Ammo pack packaging			

Note:

(1) Automotive grade AEC Q101 qualified

RATINGS AND CHARACTERISTICS CURVES

(T_A = 25 °C unless otherwise noted)

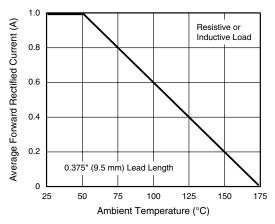


Figure 1. Forward Current Derating Curve

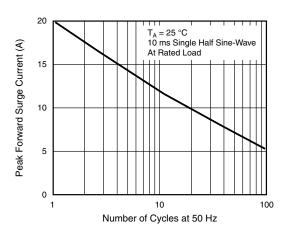


Figure 2. Maximum Non-repetitive Peak Forward Surge Current

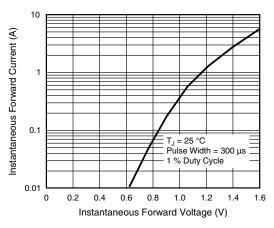


Figure 3. Typical Instantaneous Forward Characteristics

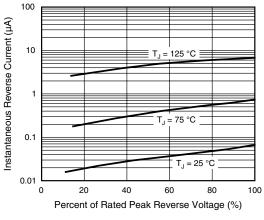


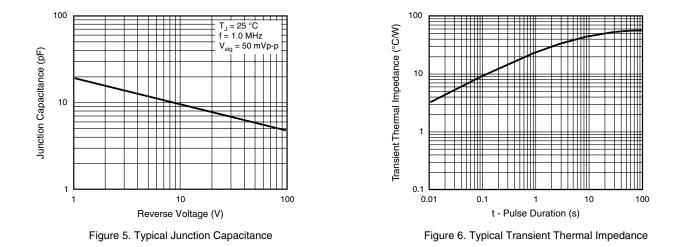
Figure 4. Typical Reverse Characteristics



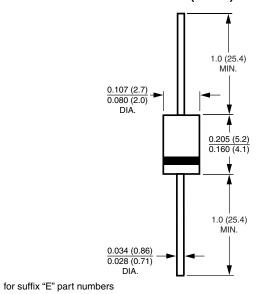
Note: Lead diameter is $\frac{0.026 \ (0.66)}{0.023 \ (0.58)}$

BA157GP thru BA159GP

Vishay General Semiconductor



PACKAGE OUTLINE DIMENSIONS in inches (millimeters)



DO-204AL (DO-41)



Vishay

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