

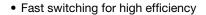
Vishay General Semiconductor

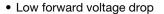
Fast Switching Plastic Rectifier



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.	125 °C					

FEATURES





Low leakage current

· High forward surge capability

• Solder dip 275 °C max. 10 s, per JESD 22-B106

 Compliant to RoHS directive 2002/95/EC and in accordance to WEEE 2002/96/EC

TYPICAL APPLICATIONS

For use in fast switching rectification of power supply, inverters, converters and freewheeling diodes for consumer and telecommunication.

Note

• These devices are not AEC-Q101 qualified.

MECHANICAL DATA

Case: DO-204AL, molded epoxy body

Molding compound meets UL 94 V-0 flammability rating Base P/N-E3 - RoHS compliant, commercial grade

Terminals: Matte tin plated leads, solderable per

J-STD-002 and JESD 22-B102

E3 suffix meets JESD 201 class 1A whisker test **Polarity:** Color band denotes cathode end

MAXIMUM RATINGS (T _A = 25 °C unless otherwise noted)						
PARAMETER	SYMBOL	BA157	BA158	BA159D	BA159	UNIT
Maximum repetitive peak reverse voltage	V _{RRM}	400	600	800	1000	V
Maximum RMS voltage	V _{RMS}	280	420	560	700	V
Maximum DC blocking voltage	V _{DC}	400	600	800	1000	V
Maximum average forward rectified current 0.375" (9.5 mm) lead length at $T_A = 55$ °C	I _{F(AV)}	1.0				
Peak forward surge current 10 ms single half sine-wave superimposed on rated load	I _{FSM}	20				А
Maximum operation junction temperature	TJ	- 65 to + 125				°C
Maximum storage temperature	T _{STG}	- 65 to + 150				°C

Vishay General Semiconductor



ELECTRICAL CHARACTERISTICS (T _A = 25 °C unless otherwise noted)								
PARAMETER	TEST CONDITIONS		SYMBOL	BA157	BA158	BA159D	BA159	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	50	00	ns
Typical junction capacitance	4.0 V, 1 MHz		CJ	12			pF	

ORDERING INFORMATION (Example)							
PREFERRED P/N	UNIT WEIGHT (g)	PREFERRED PACKAGE CODE	BASE QUANTITY	DELIVERY MODE			
BA158-E3/54	0.33	54	5500	13" diameter paper tape and reel			
BA158-E3/73	0.33	73	3000	Ammo pack packaging			

RATINGS AND CHARACTERISTICS CURVES

(T_A = 25 °C unless otherwise noted)

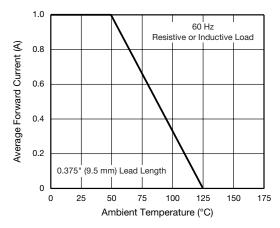


Fig. 1 - Forward Current Derating Curve

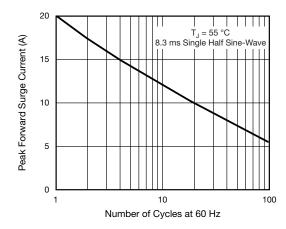


Fig. 2 - Maximum Non-repetitive Peak Forward Surge Current

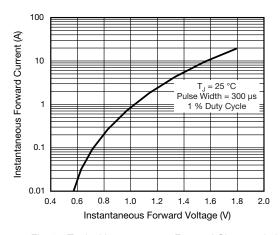


Fig. 3 - Typical Instantaneous Forward Characteristics

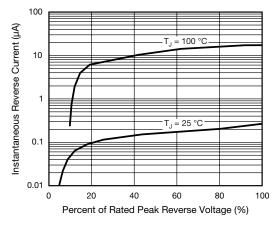


Fig. 4 - Typical Reverse Characteristics



Vishay General Semiconductor

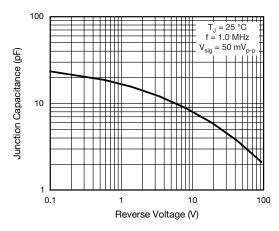


Fig. 5 - Typical Junction Capacitance

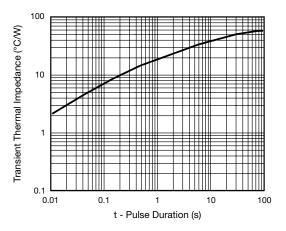
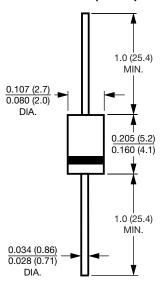


Fig. 6 - Typical Transient Thermal Impedance

PACKAGE OUTLINE DIMENSIONS in inches (millimeters)

DO-204AL (DO-41)





Vishay

Disclaimer

All product specifications and data are subject to change without notice.

Vishay Intertechnology, Inc., its affiliates, agents, and employees, and all persons acting on its or their behalf (collectively, "Vishay"), disclaim any and all liability for any errors, inaccuracies or incompleteness contained herein or in any other disclosure relating to any product.

Vishay disclaims any and all liability arising out of the use or application of any product described herein or of any information provided herein to the maximum extent permitted by law. The product specifications do not expand or otherwise modify Vishay's terms and conditions of purchase, including but not limited to the warranty expressed therein, which apply to these products.

No license, express or implied, by estoppel or otherwise, to any intellectual property rights is granted by this document or by any conduct of Vishay.

The products shown herein are not designed for use in medical, life-saving, or life-sustaining applications unless otherwise expressly indicated. Customers using or selling Vishay products not expressly indicated for use in such applications do so entirely at their own risk and agree to fully indemnify Vishay for any damages arising or resulting from such use or sale. Please contact authorized Vishay personnel to obtain written terms and conditions regarding products designed for such applications.

Product names and markings noted herein may be trademarks of their respective owners.

Document Number: 91000 Revision: 18-Jul-08