BA157, BA158, BA159D, BA159

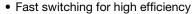
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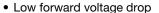
Fast Switching Plastic Rectifier



PRIMARY CHARACTERISTICS					
I _{F(AV)}	1.0 A				
V_{RRM}	400 V, 600 V, 800 V, 1000 V				
I _{FSM}	20 A				
t _{rr}	150 ns, 250 ns, 500 ns				
I _R	5.0 μA				
V _F	1.3 V				
T _J max.	125 °C				
Package	DO-204AL (DO-41)				
Diode variation	Single die				

FEATURES





Low leakage current

• High forward surge capability

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

 Material categorization: For definitions of compliance please see www.vishay.com/doc?99912







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				
Maximum operation junction temperature	T_J	- 65 to + 125				
Maximum storage temperature	T _{STG}	- 65 to + 150				

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				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	



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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)

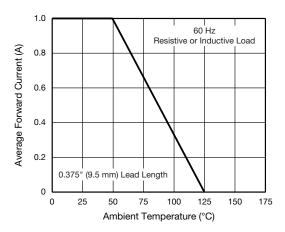


Fig. 1 - Forward Current Derating Curve

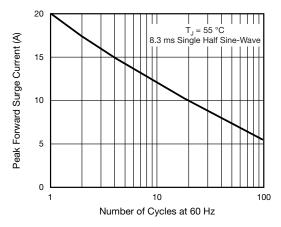


Fig. 2 - Maximum Non-repetitive Peak Forward Surge Current

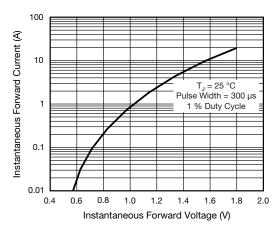


Fig. 3 - Typical Instantaneous Forward Characteristics

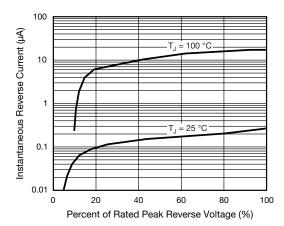


Fig. 4 - Typical Reverse Characteristics



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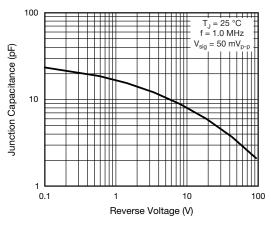


Fig. 5 - Typical Junction Capacitance

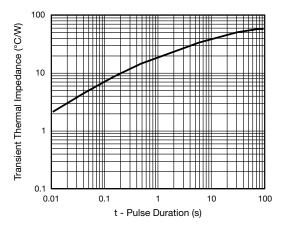
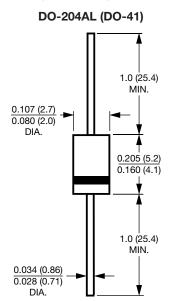


Fig. 6 - Typical Transient Thermal Impedance

PACKAGE OUTLINE DIMENSIONS in inches (millimeters)





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