

Excellent Integrated System Limited

Stocking Distributor

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[Vishay Semiconductor/Diodes Division](#)
[GI856-E3/73](#)

For any questions, you can email us directly:

sales@integrated-circuit.com


DO-201AD
FEATURES

- Fast switching for high efficiency
- Low forward voltage drop
- 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


RoHS
COMPLIANT

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-201AD, 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

PRIMARY CHARACTERISTICS	
I _{F(AV)}	3.0 A
V _{RRM}	50 V, 100 V, 200 V, 400 V, 600 V, 800 V
I _{FSM}	100 A
t _{rr}	200 ns
I _R	10 µA
V _F	1.25 V
T _J max.	150 °C
Package	DO-201AD
Diode variation	Single die

MAXIMUM RATINGS (T _A = 25 °C unless otherwise noted)								
PARAMETER	SYMBOL	GI850	GI851	GI852	GI854	GI856	GI858	UNIT
Maximum repetitive peak reverse voltage	V _{RRM}	50	100	200	400	600	800	V
Maximum RMS voltage	V _{RMS}	35	70	140	280	420	560	V
Maximum DC blocking voltage	V _{DC}	50	100	200	400	600	800	V
Maximum non-repetitive peak reverse voltage	V _{RSM}	75	150	250	450	650	880	V
Maximum average forward rectified current 0.375" (9.5 mm) lead length at T _A = 90 °C	I _{F(AV)}	3.0					A	
Peak forward surge current 8.3 ms single half sine-wave superimposed on rated load	I _{FSM}	100					A	
Operating junction and storage temperature range	T _J , T _{STG}	-50 to +150					°C	

ELECTRICAL CHARACTERISTICS ($T_A = 25^\circ\text{C}$ unless otherwise noted)											
PARAMETER	TEST CONDITIONS		SYMBOL	GI850	GI851	GI852	GI854	GI856	GI858	UNIT	
Maximum instantaneous forward voltage	3.0 A	$T_A = 25^\circ\text{C}$	V_F	1.25				1.10			
	9.4 A	$T_J = 175^\circ\text{C}$		1.10						V	
Maximum DC reverse current at rated DC blocking voltage		$T_A = 25^\circ\text{C}$	I_R	10				μA			
		$T_A = 100^\circ\text{C}$		150	150	200	250	300	500		
Maximum reverse recovery time	$I_F = 1.0 \text{ A}, V_R = 30 \text{ V},$ $dI/dt = 50 \text{ A}/\mu\text{s}, I_{rr} = 10\% I_{RM}$		t_{rr}	200				ns			
Maximum reverse recovery current	$I_F = 1.0 \text{ A}, V_R = 30 \text{ V},$ $dI/dt = 50 \text{ A}/\mu\text{s}, I_{rr} = 10\% I_{RM}$		$I_{RM(REC)}$	2.0				A			
Typical junction capacitance	4.0 V, 1 MHz		C_J	28				pF			

THERMAL CHARACTERISTICS ($T_A = 25^\circ\text{C}$ unless otherwise noted)								
PARAMETER	SYMBOL	GI850	GI851	GI852	GI854	GI856	GI858	UNIT
Typical thermal resistance	$R_{\theta JA}^{(1)}$	22				$^\circ\text{C}/\text{W}$		
	$R_{\theta JL}^{(1)}$	8.0						

Note

⁽¹⁾ Thermal resistance from junction to ambient and from junction to lead at 0.375" (9.5 mm) lead length, with both leads equally heat sink

ORDERING INFORMATION (Example)				
PREFERRED P/N	UNIT WEIGHT (g)	PREFERRED PACKAGE CODE	BASE QUANTITY	DELIVERY MODE
GI856-E3/54	1.1	54	1400	13" diameter paper tape and reel
GI856-E3/73	1.1	73	1000	Ammo pack packaging

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

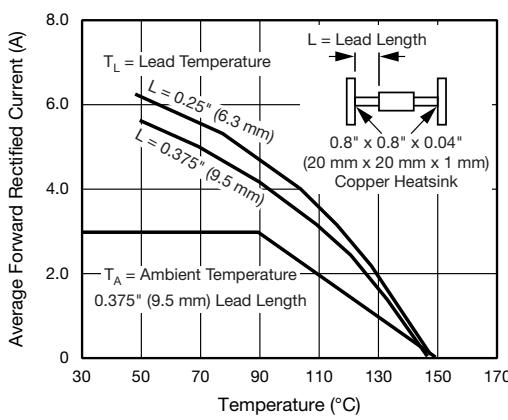


Fig. 1 - Forward Current Derating Curves

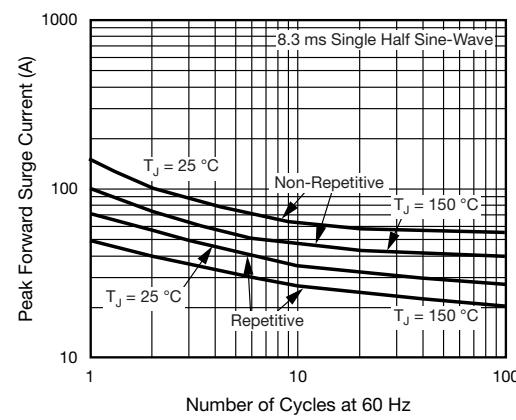


Fig. 2 - Maximum Peak Forward Surge Current

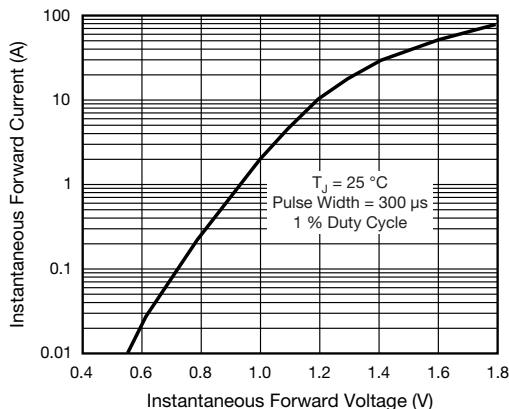


Fig. 3 - Typical Instantaneous Forward Characteristics

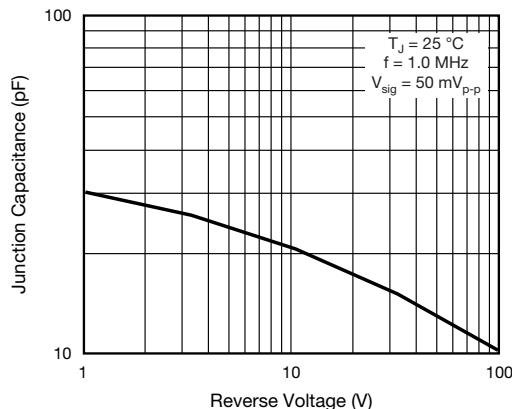


Fig. 5 - Typical Junction Capacitance

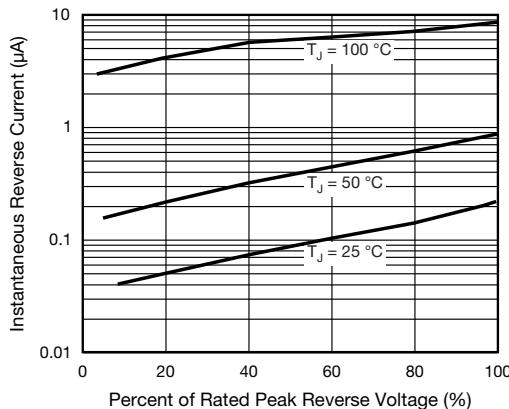
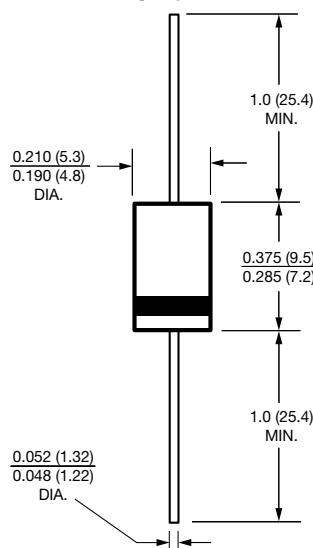


Fig. 4 - Typical Reverse Characteristics

PACKAGE OUTLINE DIMENSIONS in inches (millimeters)

DO-201AD



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