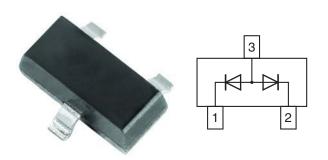


## Vishay Semiconductors

# **Small Signal Switching Diode, Dual**



#### **FEATURES**

- · Silicon epitaxial planar diode
- · Fast switching dual diode with common anode
- AEC-Q101 qualified
- Base P/N-G3 green, commercial grade
- Material categorization:
   For definitions of compliance please se <u>www.vishay.com/doc?99912</u>





COMPLIANT
HALOGEN

GREEN (5-2008)

#### **MECHANICAL DATA**

Case: SOT-23

Weight: approx. 8.1 mg
Packaging codes/options:

18/10K per 13" reel (8 mm tape), 10K(/box 08/3K per 7" reel (8 mm tape), 15K/box

PARTS TABLE				
PART	ORDERING CODE	INTERNAL CONSTRUCTION	TYPE MARKING	REMARKS
BAW56-G	BAW56-G3-08 or BAW56-G3-18	Dual diodes common anode	JDG	Tape and reel

<b>ABSOLUTE MAXIMUM RATINGS</b> (T <sub>amb</sub> = 25 °C, unless otherwise specified)					
PARAMETER	TEST CONDITION	SYMBOL	VALUE	UNIT	
Repetitive peak reverse voltage = working peak reverse voltage = DC blocking voltage		$V_R = V_{RRM}$	70	V	
Forward continuous current		I <sub>F</sub>	250	mA	
	t <sub>p</sub> = 1 μs	I <sub>FSM</sub>	2	Α	
Non repetitive peak forward current	t <sub>p</sub> = 1 ms	I <sub>FSM</sub>	1	Α	
	t <sub>p</sub> = 1 s	I <sub>FSM</sub>	0.5	Α	
Power dissipation (1)		P <sub>tot</sub>	350	mW	

<b>THERMAL CHARACTERISTICS</b> (T <sub>amb</sub> = 25 °C, unless otherwise specified)					
PARAMETER	TEST CONDITION	SYMBOL	VALUE	UNIT	
Thermal resistance junction to ambient air		R <sub>thJA</sub> <sup>(1)</sup>	430	K/W	
Junction temperature		Tj	150	°C	
Storage temperature range		T <sub>stg</sub>	- 65 to + 150	°C	
Operating temperature range		T <sub>op</sub>	- 55 to + 150	°C	

#### Note

(1) Device on fiberglass substrate



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<b>ELECTRICAL CHARACTERISTICS</b> (T <sub>amb</sub> = 25 °C, unless otherwise specified)						
PARAMETER	TEST CONDITION	SYMBOL	MIN.	TYP.	MAX.	UNIT
	I <sub>F</sub> = 1 mA	V <sub>F</sub>			0.715	V
Forward voltage	I <sub>F</sub> = 10 mA	V <sub>F</sub>			0.855	V
Forward voltage	I <sub>F</sub> = 50 mA	V <sub>F</sub>			1	V
	I <sub>F</sub> = 150 mA	V <sub>F</sub>			1.25	V
	V <sub>R</sub> = 70 V	I <sub>R</sub>			2500	nA
Reverse current	V <sub>R</sub> = 70 V, T <sub>j</sub> = 150 °C	I <sub>R</sub>			100	μΑ
	V <sub>R</sub> = 25 V, T <sub>j</sub> = 150 °C	I <sub>R</sub>			30	μΑ
Diode capacitance	$V_F = V_R = 0$ , $f = 1$ MHz	C <sub>D</sub>			2	pF
Reverse recovery time	$I_F$ =10 mA to $I_R$ =1 mA, $V_R$ = 6 V, $R_L$ = 100 $\Omega$	t <sub>rr</sub>			6	ns

### TYPICAL CHARACTERISTICS (T<sub>amb</sub> = 25 °C, unless otherwise specified)

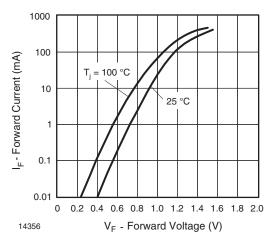


Fig. 1 - Forward Current vs. Forward Voltage

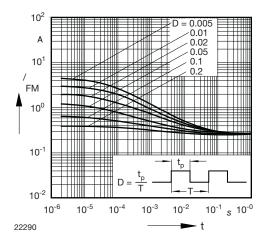
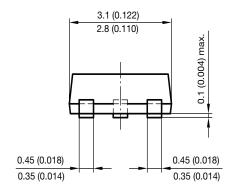


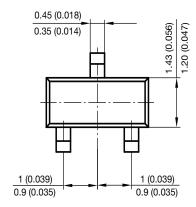
Fig. 2 - Peak forward current  $f_{fm} = f(t_p)$ 



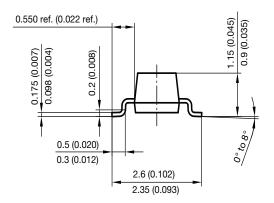
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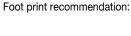
### PACKAGE DIMENSIONS in millimeters (inches): SOT-23

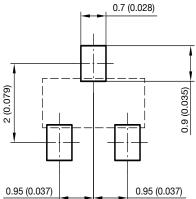




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