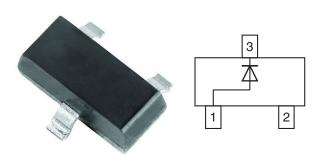


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Small Signal Switching Diodes, High Voltage



DESIGN SUPPORT TOOLS click logo to get started



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

FEATURES

- Silicon epitaxial planar diode
- Fast switching diode in case SOT-23, especially suited for automatic insertion
- · General purpose switching applications
- High conductance
- AEC-Q101 qualified available (part number on request)
- Base P/N-G3 green, commercial grade
- Material categorization: for definitions of compliance please see www.vishay.com/doc?99912





ROHS
COMPLIANT
HALOGEN
FREE

GREEN (5-2008)

PARTS TABLE						
PART	TYPE DIFFERENTIATION	ORDERING CODE	TYPE MARKING	CIRCUIT CONFIGURATION	REMARKS	
BAS19-G	V _R = 100 V	BAS19-G3-08 or BAS19-G3-18	A8G	Single	Tape and reel	
BAS20-G	V _R = 150 V	BAS20-G3-08 or BAS20-G3-18	A9G	Single	Tape and reel	
BAS21-G	V _R = 200 V	BAS21-G3-08 or BAS21-G3-18	AAG	Single	Tape and reel	

ABSOLUTE MAXIMUM RATINGS (T _{amb} = 25 °C, unless otherwise specified)						
PARAMETER	TEST CONDITION	PART	SYMBOL	VALUE	UNIT	
		BAS19-G	V _R	100	V	
Continuous reverse voltage		BAS20-G	V_R	150	V	
		BAS21-G	V_R	200	V	
		BAS19-G	V_{RRM}	120	V	
Repetitive peak reverse voltage		BAS20-G	V_{RRM}	200	V	
		BAS21-G	V_{RRM}	250	V	
Non-repetitive peak forward current	t = 1 μs			2.5	А	
Non-repetitive peak forward surge current	t = 1 s		IFSM	0.5		
Maximum average forward rectified current (1)	(av. over any 20 ms period)		I _{F(AV)}	200	mA	
DC forward current (2)			I _F	200	mA	
Repetitive peak forward current			I _{FRM}	625	mA	
Power dissipation (2)			P _{tot}	250	mW	

Notes

 $^{^{(1)}}$ Measured under pulse conditions; pulse time = $t_p \leq 0.3 \ \text{ms}$

⁽²⁾ Device on fiberglass substrate, see layout on next page



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

Note

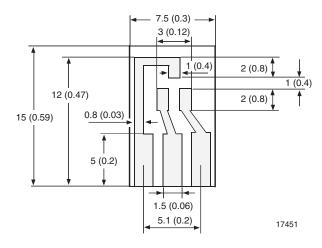
⁽¹⁾ Device on fiberglass substrate, see layout drawing below

ELECTRICAL CHARACTERISTICS (T _{amb} = 25 °C, unless otherwise specified)							
PARAMETER	TEST CONDITION	PART	SYMBOL	MIN.	TYP.	MAX.	UNIT
F	I _F = 100 mA		V _F			1.0	V
Forward voltage	I _F = 200 mA		V _F			1.25	V
	V _R = 100 V	BAS19-G	I _R			100	nA
Lookaga ayymant	V _R = 150 V	BAS20-G	I _R			100	nA
Leakage current	V _R = 200 V	BAS21-G	I _R			100	nA
	V _R = V _{Rmax.} , T _J = 150 °C		I _R			100	μΑ
Dynamic forward resistance	I _F = 10 mA		r _f		5		Ω
Diode capacitance	V _R = 0, f = 1 MHz		C _D			5	pF
Reverse recovery time	$I_F = I_R = 30 \text{ mA}, R_L = 100 \Omega,$ $i_R = 3 \text{ mA}$		t _{rr}			50	ns

LAYOUT FOR RthJA TEST

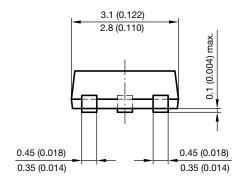
Thickness:

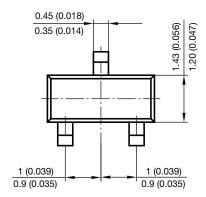
Fiberglass 1.5 mm (0.059 in.) Copper leads 0.3 mm (0.012 in.)



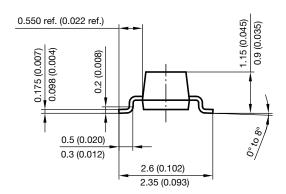
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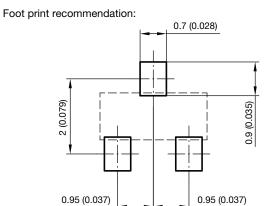
PACKAGE DIMENSIONS in millimeters (inches): SOT-23





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