

DESCRIPTION

The BAS21 is available in SOT-23 package

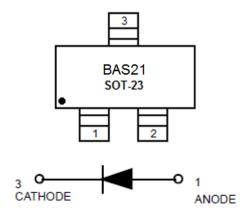
FEATURES

- RoHS Compliant
- Available in SOT-23 package

ORDERING INFORMATION

Package Type	Part Number		
SOT-23	BAS21		
Note	3,000pcs/Reel		
AiT provides all RoHS Compliant Products			

PIN DESCRIPTION



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ABSOLUTE MAXIMUM RATINGS

V _R , Continuous Reverse Voltage	250Vdc
I _F , Peak Forward Current	200mAdc
I _{FM(SURGE)} , Peak Forward Surge Current	625mAdc

Stresses above may cause permanent damage to the device. These are stress ratings only and functional operation of the device at these or any other conditions beyond those indicated in the Electrical Characteristics are not implied. Exposure to absolute maximum rating conditions for extended periods may affect device reliability.

THERMAL CHARACTERISTICS

Parameter	Symbol	Max.	Unit
Total Device Dissipation FR- 5 BoardNOTE1			
T _A =25°C	P _D	225	mW
Derate above 25°C		1.8	mW/°C
Thermal Resistance, Junction to Ambient	$R_{\theta JA}$	556	°C/W
Total Device Dissipation Alumina SubstrateNOTE2			
T _A =25°C	P _D	300	mW
Derate above 25°C		2.4	mW/°C
Thermal Resistance, Junction to Ambient	R ₀ JA	417	°C/W
Junction and Storage Temperature	T _J , T _{STG}	-55 to +150	°C

NOTE1: FR-5 = $1.0 \times 0.75 \times 0.062$ in.

NOTE2: Alumina = $0.4 \times 0.3 \times 0.024$ in. 99.5% alumina.

ELECTRICAL CHARACTERISTICS

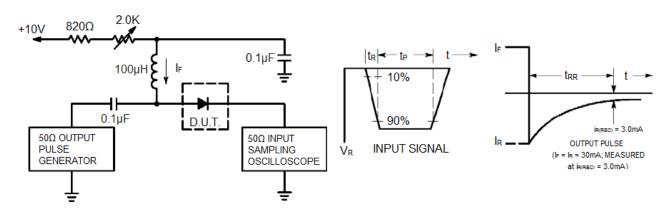
T_A=25°C. unless otherwise noted

Parameter	Symbol	Conditions	Min.	Тур.	Max.	Unit	
OFF CHARACTERISTICS							
Reverse Voltage Leakage Current	I _R	V _R =200Vdc			0.1	۸ -۱ -	
		V _R =200Vdc, T _J =150°C			100	μAdc	
Reverse Breakdown Voltage	V _(BR)	I _{BR} =100μAdc	250			Vdc	
Forward Voltage	V _F	I _F =100mAdc			1000	mV	
		I _F =200mAdc			1250		
Diode Capacitance	C _D	V _R =0, f=1.0MHz			5.0	pF	
Reverse Recovery Time	t _{RR}	$I_F=I_R=30$ mAdc, $R=100\Omega$			50	ns	

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TEST CIRCUIT

Figure 1. Recovery Time Equivalent Test Circuit



Note1: A 2.0kΩ variable resistor adjusted for a Forward Current (I_F) of 30mA.

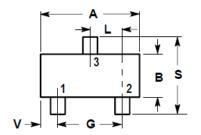
Note2: Input pulse is adjusted so IR(PEAK) is equal to 30mA.

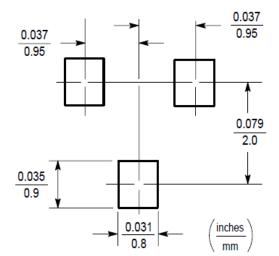
Note3: tp» tRR

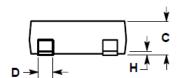
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PACKAGE INFORMATION

Dimension in SOT-23 Package (Unit: mm)









DIM	MILLIMETERS		INCHES		
	MIN	MAX	MIN	MAX	
А	2.800	3.040	0.1102	0.1197	
В	1.200	1.400	0.0472	0.0551	
С	0.890	1.110	0.0350	0.0440	
D	0.370	0.500	0.0150	0.0200	
G	1.780	2.040	0.0701	0.0807	
Н	0.013	0.100	0.0005	0.0040	
J	0.085	0.177	0.0034	0.0070	
К	0.350	0.690	0.0140	0.0285	
L	0.890	1.020	0.0350	0.0401	
S	2.100	2.640	0.0830	0.1039	
V	0.450	0.600	0.0177	0.0236	

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