BAS21SLT1

Preferred Device

Dual Series High Voltage Switching Diode

Features

• Moisture Sensitivity Level: 1

• ESD Rating – Human Body Model: Class 1

- Machine Model: Class B

• Pb-Free Package is Available

MAXIMUM RATINGS

Rating	Symbol	Value	Unit
Continuous Reverse Voltage	V_R	250	Vdc
Repetitive Peak Reverse Voltage	V_{RRM}	250	Vdc
Peak Forward Current	IF	225	mAdc
Peak Forward Surge Current	I _{FM(surge)}	625	mAdc

THERMAL CHARACTERISTICS

Characteristic	Symbol	Max	Unit
Total Device Dissipation FR-5 Board (Note 1) $T_{\Delta} = 25^{\circ}C$	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 Substrate, (Note 2) T _A = 25°C	P _D	300	mW
Derate above 25°C		2.4	mW/°C
Thermal Resistance, Junction to Ambient	$R_{\theta JA}$	417	°C/W
Junction and Storage Temperature Range	T _J , T _{stg}	-55 to +150	°C

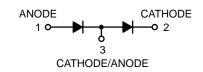
- 1. FR-5 = $1.0 \times 0.75 \times 0.062$ in.
- 2. Alumina = $0.4 \times 0.3 \times 0.024$ in. 99.5% alumina.

Maximum ratings are those values beyond which device damage can occur. Maximum ratings applied to the device are individual stress limit values (not normal operating conditions) and are not valid simultaneously. If these limits are exceeded, device functional operation is not implied, damage may occur and reliability may be affected.



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MARKING DIAGRAM



SOT-23 CASE 318 STYLE 11 JT = Device Code M = Date Code

BAS21SLT1/D

ORDERING INFORMATION

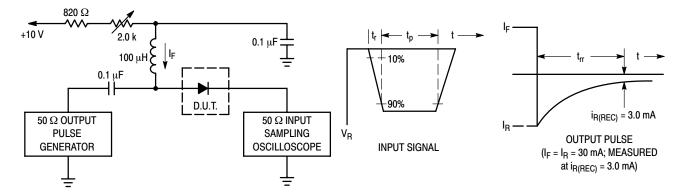
Device	Package	Shipping [†]
BAS21SLT1	SOT-23	3000/Tape & Reel
BAS21SLT1G	SOT-23 (Pb-Free)	3000/Tape & Reel

†For information on tape and reel specifications, including part orientation and tape sizes, please refer to our Tape and Reel Packaging Specifications Brochure, BRD8011/D.

Preferred devices are recommended choices for future use and best overall value.

ELECTRICAL CHARACTERISTICS (T_A = 25°C unless otherwise noted)

Characteristic	Symbol	Min	Max	Unit
OFF CHARACTERISTICS				
Reverse Voltage Leakage Current ($V_R = 200 \text{ Vdc}$) ($V_R = 200 \text{ Vdc}$, $T_J = 150^{\circ}\text{C}$)	I _R	_ _	0.1 100	μAdc
Reverse Breakdown Voltage (I _{BR} = 100 μAdc)	V _(BR)	250	-	Vdc
Forward Voltage (I _F = 100 mAdc) (I _F = 200 mAdc)	V _F	_ _	1000 1250	mV
Diode Capacitance (V _R = 0, f = 1.0 MHz)	C _D	-	5.0	pF
Reverse Recovery Time (I _F = I _R = 30 mAdc, R _L = 100 Ω)	t _{rr}	-	50	ns



Notes: 1. A 2.0 k Ω variable resistor adjusted for a Forward Current (I_F) of 30 mA.

- 2. Input pulse is adjusted so I_{R(peak)} is equal to 30 mA.
- 3. t_p » t_{rr}

Figure 1. Recovery Time Equivalent Test Circuit

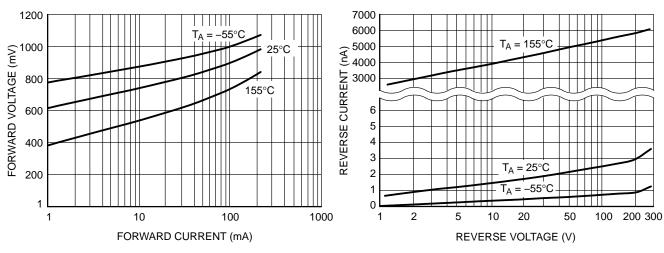


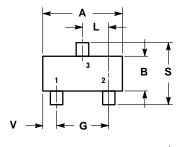
Figure 2. Forward Voltage

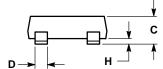
Figure 3. Reverse Leakage

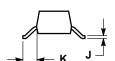
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PACKAGE DIMENSIONS

SOT-23 (TO-236) CASE 318-09 **ISSUE AH**







NOTES:

- NOTES:

 1. DIMENSIONING AND TOLERANCING PER ANSI Y14.5M, 1982.

 2. CONTROLLING DIMENSION: INCH.

 3. MAXIMUMU ILEAD THICKNESS INCLUDES LEAD FINISH THICKNESS MINIMUM LEAD THICKNESS IS THE MINIMUM THICKNESS OF BASE MATERIAL.
- 4. 318-01, -02, AND -06 OBSOLETE, NEW STANDARD 318-09.

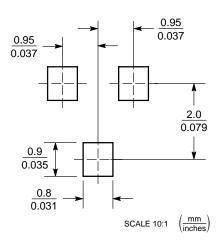
	INCHES		MILLIN	IETERS
DIM	MIN	MAX	MIN	MAX
Α	0.1102	0.1197	2.80	3.04
В	0.0472	0.0551	1.20	1.40
С	0.0385	0.0498	0.99	1.26
D	0.0140	0.0200	0.36	0.50
G	0.0670	0.0826	1.70	2.10
Н	0.0040	0.0098	0.10	0.25
7	0.0034	0.0070	0.085	0.177
K	0.0180	0.0236	0.45	0.60
L	0.0350	0.0401	0.89	1.02
S	0.0830	0.0984	2.10	2.50
٧	0.0177	0.0236	0.45	0.60

STYLE 11:

PIN 1. ANODE 2. CATHODE 3. CATHODE-

CATHODE-ANODE

SOLDERING FOOTPRINT*



^{*}For additional information on our Pb–Free strategy and soldering details, please download the ON Semiconductor Soldering and Mounting Techniques Reference Manual, SOLDERRM/D.

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