



SOT-23



Features

- Pb-Free package is available
- Moisture Sensitivity Level 1
- Marking : A6

Ordering Information

Part No.	Remark	Package	Packing
BAS16LT1	General	SOT-23	3000 / Tape & Reel
BAS16LT1-H	Halogen Free		
BAS16LT1-Q	AEC-Q101 qualified		

Maximum Ratings ($T_A=25^{\circ}\text{C}$ unless otherwise specified)

Rating	Symbol	Value	Unit
Continuous Reverse Voltage	V_R	75	V
Peak Forward Current	I_F	200	mA
Peak Forward Surge Current	I_{FSM}	500	mA

Thermal Characteristics ($T_A=25^{\circ}\text{C}$ unless otherwise specified)

Characteristic	Symbol	Max	Unit
Total Device Dissipation	P_D	225	mW
FR-5 Board ⁽¹⁾ $T_A = 25^{\circ}\text{C}$			
Derate above 25°C		1.8	mW/ $^{\circ}\text{C}$
Thermal Resistance from Junction to Ambient	$R_{\theta JA}$	556	$^{\circ}\text{C/W}$
Total Device Dissipation	P_D	300	mW
Alumina Substrate ⁽²⁾ $T_A = 25^{\circ}\text{C}$			
Derate above 25°C		2.4	mW/ $^{\circ}\text{C}$
Thermal Resistance from Junction to Ambient	$R_{\theta JA}$	417	$^{\circ}\text{C/W}$
Operating/ Junction and Storage Temperature Range	T_J, T_{STG}	-55~+150	$^{\circ}\text{C}$

Electrical Characteristics (T _A =25°C unless otherwise specified)				
Characteristic	Symbol	Min.	Max.	Unit
OFF Characteristics				
Reverse Breakdown Voltage (I _(BR) = 100 μAdc)	V _(BR)	75	—	Vdc
Reverse Voltage Leakage Current (V _R = 75 Vdc) (V _R = 75 Vdc, T _J = 150°C) (V _R = 25 Vdc, T _J = 150°C)	I _R	— — —	1 50 30	μAdc
Forward Voltage (I _F = 1.0 mAdc) (I _F = 10 mAdc) (I _F = 50 mAdc) (I _F = 150 mAdc)	V _F	— — — —	715 855 1000 1250	mV
Diode Capacitance (V _R = 0, f = 1.0 MHz)	C _D	—	2	pF
Forward Recovery Voltage (I _F = 10 mAdc, t _r = 20ns)	V _{FR}	—	1.75	Vdc
Reverse Recovery Time (I _F = I _R = 10 mAdc, R _L = 50 Ω)	t _{rr}	—	6	ns
Stored Charge (I _F = 10 mAdc to V _R = 5.0Vdc, R _L = 500 Ω)	Q _S	—	45	pC

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

Rating and Characteristics Curves

Figure 1. Forward Voltage

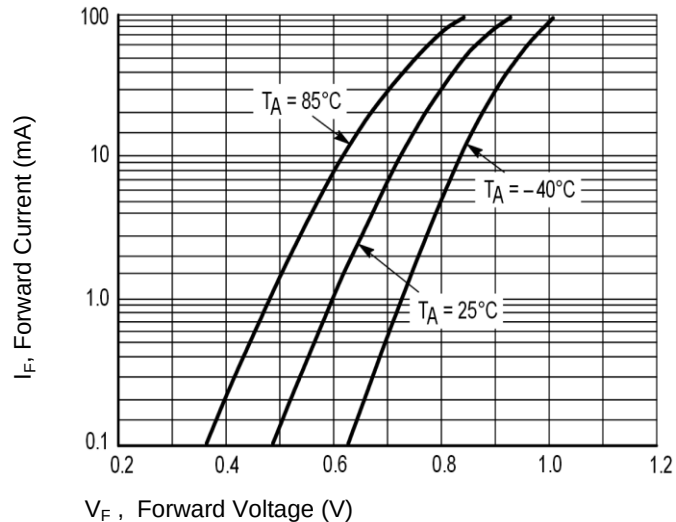


Figure 2. Leakage Current

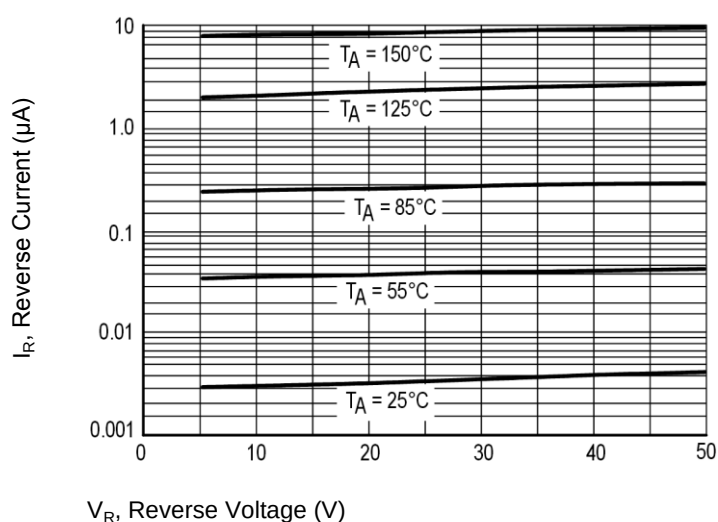
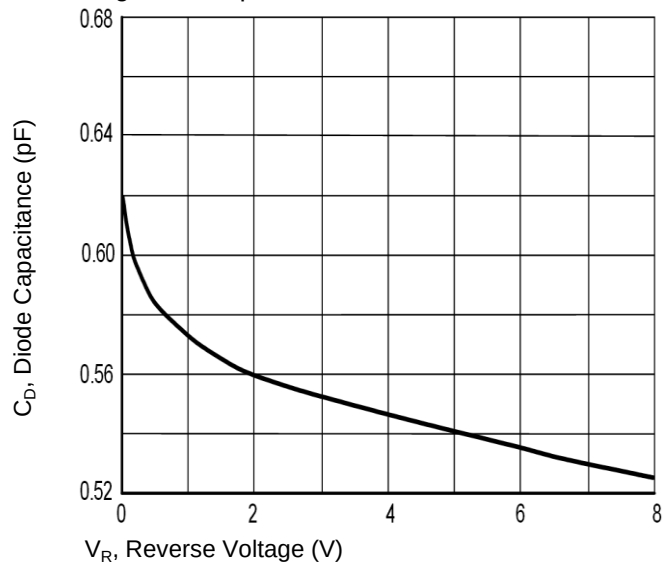
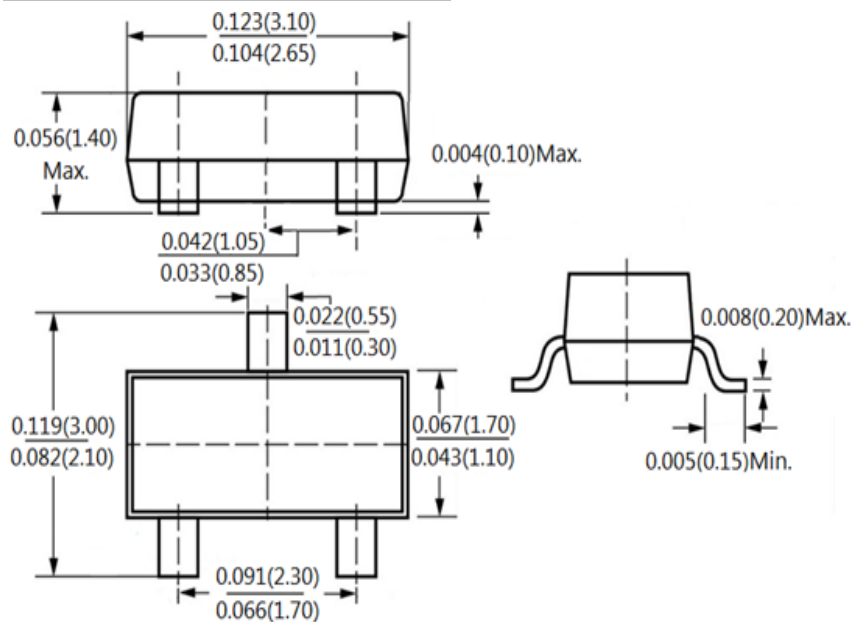


Figure 3. Capacitance



Package Outline Dimensions

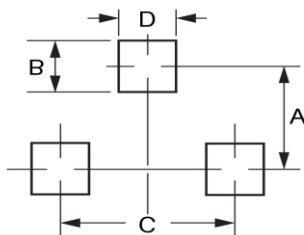


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Dimensions in inches and (millimeters)

Suggested Pad Layout

Outline Symbol	SOT-23 millimeters
A	2.02
B	0.80
C	1.90
D	0.60



Tape & Reel Specification

Item	Symbol	Dimension(mm)
Carrier width	A	3.15 ±0.1
Carrier length	B	2.77 ±0.1
Carrier depth	C	1.22 ±0.1
Sprocket hole	d	1.50 ±0.10
Reel outside diameter	D	178 ±2
Reel inner diameter	D1	54.4 ±1
Feed hole width	D2	13.0 ±1
Sprocket hole position	E	1.75 ±0.1
Punch hole position	F	3.50 ±0.1
Punch hole pitch	P	4.0 ±0.1
Sprocket hole pitch	P0	4.0 ±0.1
Embossment center	P1	2.0 ±0.1
Tape width	W	9.5 ±1
Reel width	W1	12.3 ±1

