

Surface Mount Switching Diode



SOD-323



Features

- Small plastic SMD package
- Continuous reverse voltage: max. 75 V
- High-speed switching in hybrid thick and thin-film circuits
- We declare that the material of product compliance with RoHS requirements
- Moisture Sensitivity Level 1
- Polarity: Color band denotes cathode end
- Marking : A6,T6,T4

Ordering Information

Part No.	Remark	Package	Packing
BAS16H	General	SOD-323	3000 / Tape & Reel
BAS16H-H	Halogen Free		
BAS16H-Q	AEC-Q101 qualified		

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

Parameter	Symbol	Value	Unit
Continuous Reverse Voltage	V_R	75	V
Peak Forward Current	I_F	200	mA
Average Rectified Output Current	I_O	150	
Peak Forward Surge Current	I_{FSM}	0.5	A

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

Parameter	Symbol	Value	Unit
Total Device Dissipation FR-5 Board,* $T_A = 25^{\circ}\text{C}$	P_D	200	mW
Derate above 25°C		1.57	mW/ $^{\circ}\text{C}$
Thermal Resistance Junction to Ambient	$R_{\theta JA}$	635	$^{\circ}\text{C/W}$
Junction Temperature Range	T_J	125	$^{\circ}\text{C}$
Storage Temperature Range	T_{STG}	-55~+150	$^{\circ}\text{C}$

**FR-4 Minimum Pad

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Electrical Characteristics ($T_A=25^{\circ}\text{C}$ unless otherwise noted)						
Parameter	Conditions	Symbol	Min.	Typ.	Max.	Unit
Reverse Breakdown Voltage	$I_R = 100\mu\text{A}$	V_R	75	—	—	V
Reverse Voltage Leakage Current	$V_R = 75\text{V}$	I_R	—	—	1	μA
	$V_R = 75\text{V}, T_J = 150^{\circ}\text{C}$		—	—	50	
Forward Voltage	$I_F = 1\text{mA}$	V_F	—	—	715	mV
	$I_F = 10\text{mA}$		—	—	855	
	$I_F = 50\text{mA}$		—	—	1000	
	$I_F = 150\text{mA}$		—	—	1250	
Diode Capacitance	$V_R = 0, f = 1\text{MHz}$	C_D	—	—	2	pF
Forward Recovery Voltage	$I_F = 10\text{mA}, t_r = 20\text{ns}$	V_{FR}	—	—	1.75	V
Reverse Recovery Time	$I_F = I_R = 10\text{mA}, R_L = 50\Omega$	t_{rr}	—	—	4	ns
Stored Charge	$I_F = 10\text{mA}$ to $V_R = 5\text{V}, R_L = 500\Omega$	Q_S	—	—	45	pC

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Rating and Characteristics Curves

Fig 1 Forward Voltage

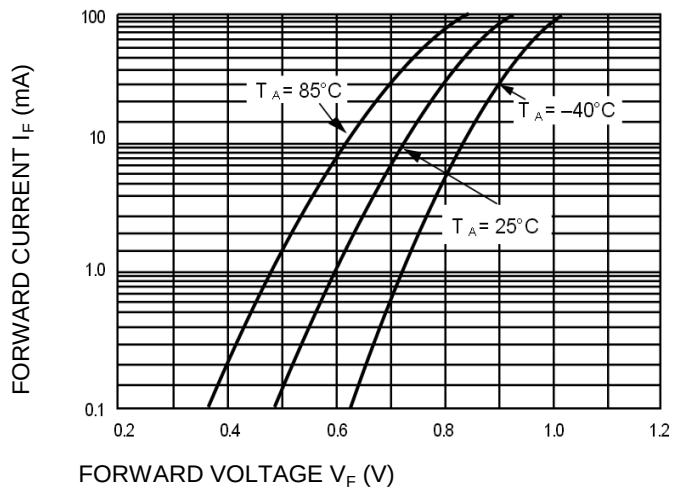


Fig 2 Leakage Current

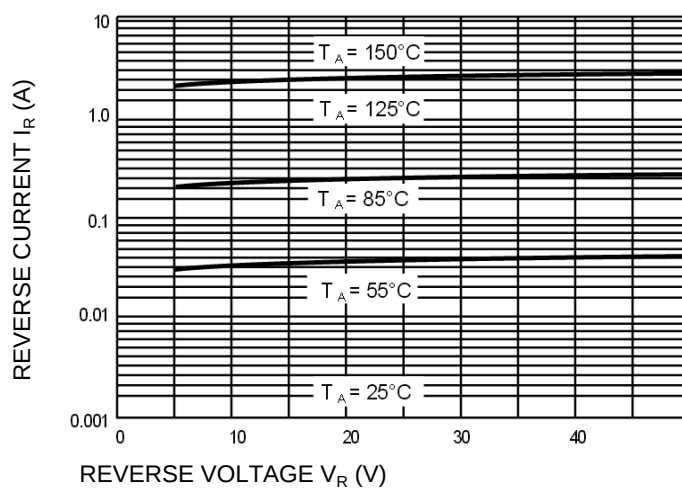
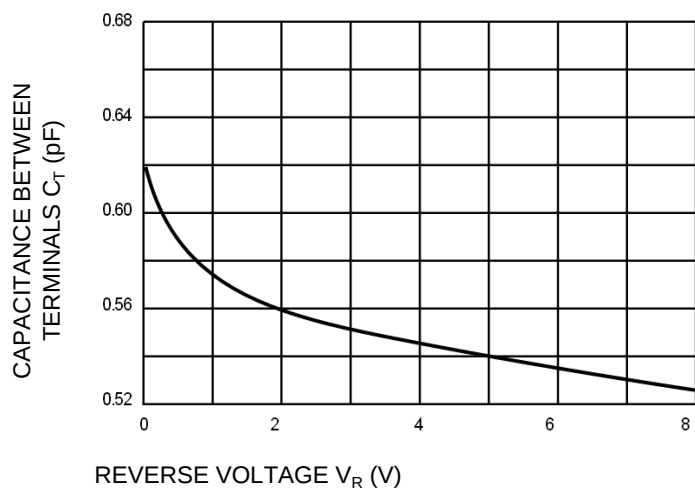
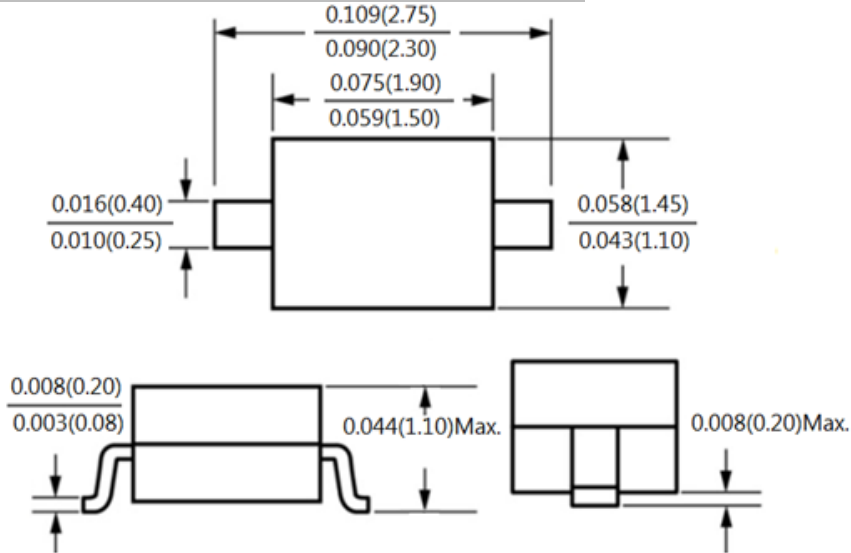


Fig 3 Capacitance Characteristics



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Package Outline Dimensions

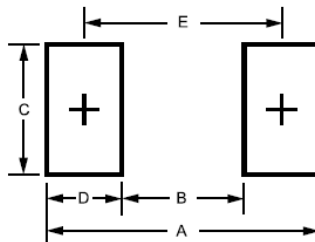


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Dimensions in inches and (millimeters)

Suggested Pad Layout

Outline Symbol	SOD-323 millimeters
A	3.75
C	1.05
D	0.90
E	0.80
F	2.40



Tape & Reel Specification

Item	Symbol	Dimension millimeters
Carrier width	A	1.4 ±0.1
Carrier length	B	2.8 ±0.1
Carrier depth	C	1.4 ±0.1
Sprocket hole	d	1.55 ±0.05
Reel outside diameter	D	180 +0/-3
Reel inner diameter	D1	60 +1/-0
Feed hole width	D2	13.0 ±0.2
Sprocket hole position	E	1.75 ±0.1
Punch hole position	F	3.5 ±0.05
Punch hole pitch	P	4.0 ±0.1
Sprocket hole pitch	P0	4.0 ±0.1
Embossment center	P1	2.0 ±0.05
Tape width	W	8.0 ±0.2
Reel width	W1	9.0 ±0.3

