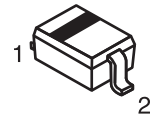


Surface Mount Switching Diode

Features:

- *High Speed $\leq 6\text{ns}$
- *Low Rever Leakage Current
- *Small Outline Surface Mount SOD-323 Package

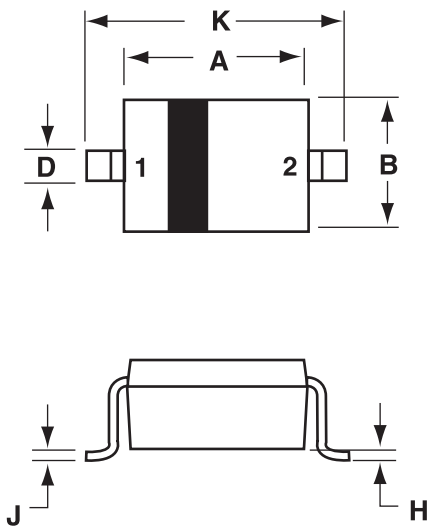
SWITCHING DIODE
200mAMPERS
100VOLTS



SOD-323

SOD -323 Outline Dimensions

Unit:mm



Dim	MILLMETERS	
	Min	Max
A	1.60	1.80
B	1.15	1.35
C	0.80	1.00
D	0.25	0.40
E	0.15REF	
H	0.00	0.10
J	0.089	0.377
K	2.30	2.70

PIN 1.CATHODE
2.ANODE

Maximum Ratings

Characteristic	Symbol	BAS16H	Unit
Reverse Voltage	V_R	75	Volts
Forward Current	I_F	200	mAdc
Peak Forward Surge Current	I_{FM}	500	mAdc

Thermal Characteristics

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

*1 ER-5=1.0x0.75x0.062 in

*2 Alumina=0.4x0.3x0.024 in 99.5% Alumina

Electrical Characteristics ($T_A=25^\circ\text{C}$ Unless Otherwise Note)

Characteristic	Symbol	Min	Max	Unit
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Off Characteristics

Reverse Breakdown Voltage ($I_{BR}=100\mu\text{Adc}$)	V_{BR}	75		Vdc
Reverse Voltage Leakage Current $V_R=75\text{V}$ $V_R=75\text{V}, T_J=150^\circ\text{C}$ $V_R=25\text{V}, T_J=150^\circ\text{C}$	I_R		1.0 30.0 50.0	μAdc

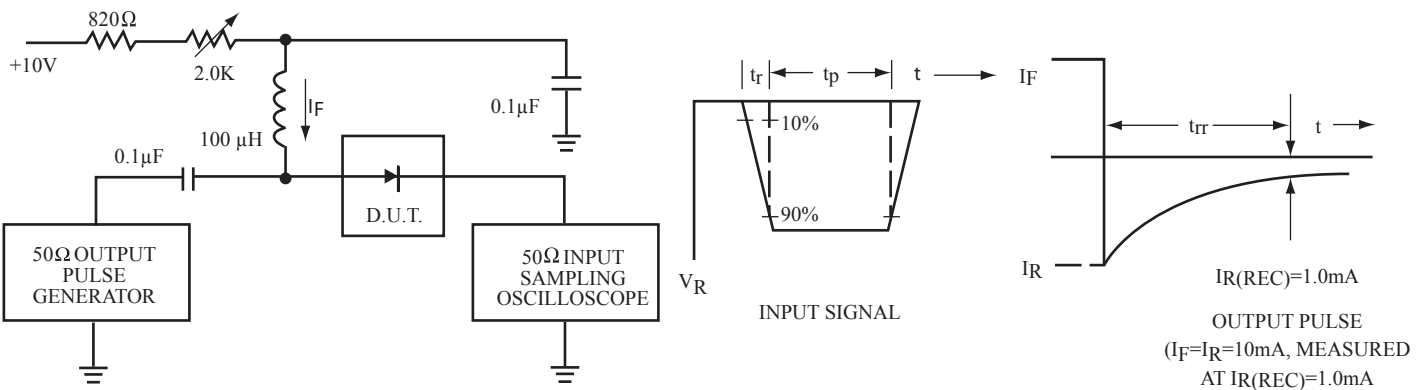
Off Characteristic

Characteristic	Symbol	Min	Max	Unit
Diode Capacitance ($V_R=0, f=1.0\text{MHz}$)	C_D		2.0	PF
Forward Voltage ($I_F=1.0\text{ mAdc}$) ($I_F=10\text{ mAdc}$) ($I_F=50\text{ mAdc}$) ($I_F=150\text{ mAdc}$)	V_F		715 855 1000 1250	mVdc
Reverse Recovery Time (Figure 1.) $I_F=I_R=10\text{ mAdc}, V_R=5.0\text{Vdc}$ $I_R(\text{REC})=1.0\text{ mAdc}, R_L=100\frac{1}{2}$	t_{rr}		6.0	nS

Device Marking

Item	Marking	Equivalent Circuit diagram
BAS16H	A6	1 \leftarrow \rightarrow 2

Figure 1. Recovery Time Equivalent Test Circuit



Notes: 1. A 2.0 kΩ variable resistor for a Forward Current (I_F) of 10 mA

2. Input pulses is adjusted so $I_R(\text{peak})$ is equal to 10 mA

3. $t_p \gg t_{rr}$

FIGURE 2. FORWARD VOLTAGE

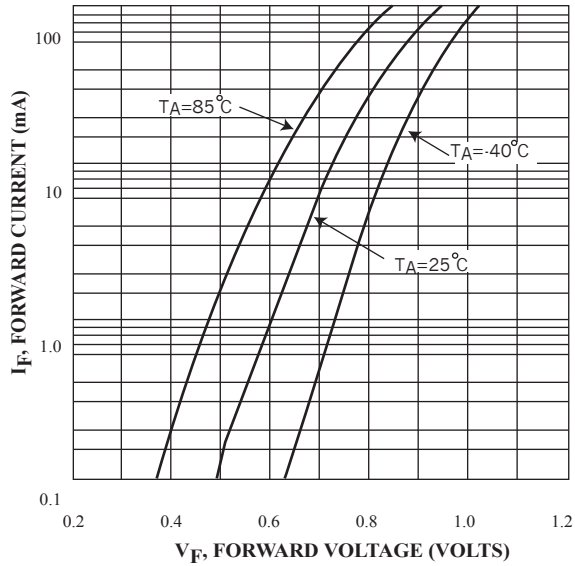


FIGURE 3. LEAKAGE CURRENT

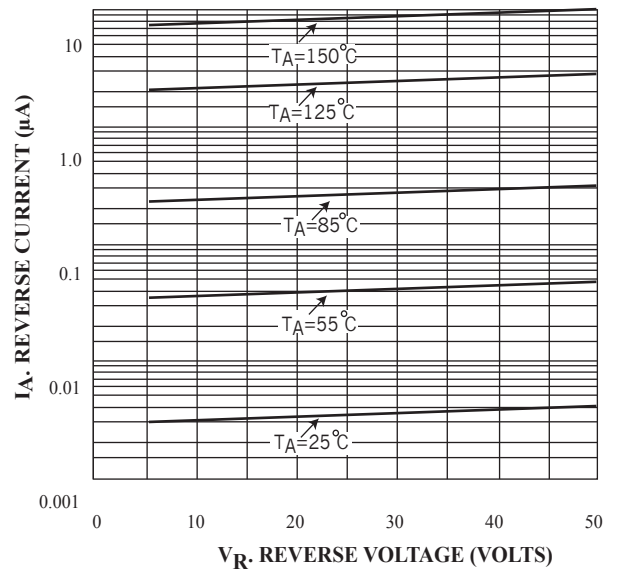


FIGURE 4. CAPACITANCE

