

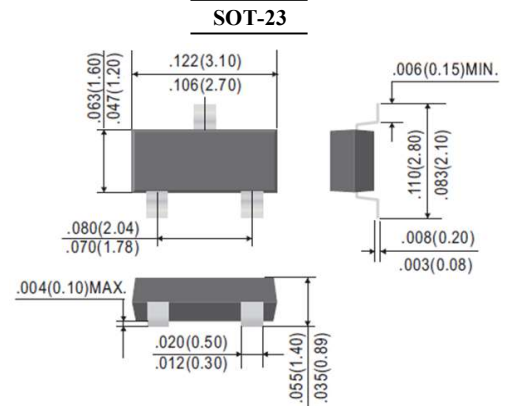
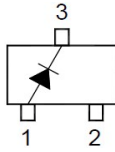


BAS19H / BAS20H / BAS21H

SWITCHING DIODE

FEATURES

- High Voltage Switching Diodes
- Suffix "H" indicates Halogen-free parts, ex. BAS19H.



Dimensions in inch and (millimeter)

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

Parameter	Symbol	Value	Unit
Reverse Voltage	V_R	BAS19H	120
		BAS20H	200
		BAS21H	250
Average Rectified Forward Current	$I_{F(AV)}$	200	mA
Non-repetitive Peak Forward Surge Current	I_{FSM}	at $t = 1\text{ s}$	0.5
		at $t = 1\ \mu\text{s}$	2.5
Total Power Dissipation	P_{tot}	350	mW
Thermal Resistance Junction to Ambient	$R_{\theta JA}$	357	$^\circ\text{C}/\text{W}$
Junction Temperature	T_j	150	$^\circ\text{C}$
Storage Temperature Range	T_{stg}	-55 to +150	$^\circ\text{C}$

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

Parameter	Conditions	Symbol	Min	Max	Unit
Forward Voltage	$I_F = 100\text{mA}$	V_F	-	1.00	V
	$I_F = 200\text{mA}$		-	1.25	
Reverse Breakdown Voltage	$I_R = 100\ \mu\text{A}$	V_{BR}	BAS19H	120	-
			BAS20H	200	-
			BAS21H	250	-
Reverse Current	BAS19H	I_R	$V_R = 100\text{V}$	-	0.1
	BAS20H		$V_R = 150\text{V}$	-	0.1
	BAS21H		$V_R = 200\text{V}$	-	0.1
	BAS19H		$V_R = 100\text{V}, T_j = 150^\circ\text{C}$	-	100
	BAS20H		$V_R = 150\text{V}, T_j = 150^\circ\text{C}$	-	100
	BAS21H		$V_R = 200\text{V}, T_j = 150^\circ\text{C}$	-	100
Diode Capacitance	$V_R = 0\text{V}, f = 1\text{MHz}$	C_{tot}	-	5	pF
Reverse recovery time	$I_F = I_R = 30\text{mA}, I_{R(REC)} = 3\text{mA}, R_L = 100\ \Omega$	t_{rr}	-	50	ns



BAS19H / BAS20H / BAS21H SWITCHING DIODE

RATINGS AND CHARACTERISTIC CURVES

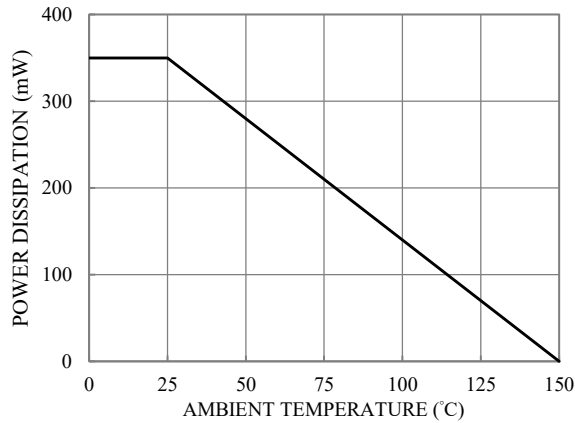


Fig.1-POWER DERATING CURVE

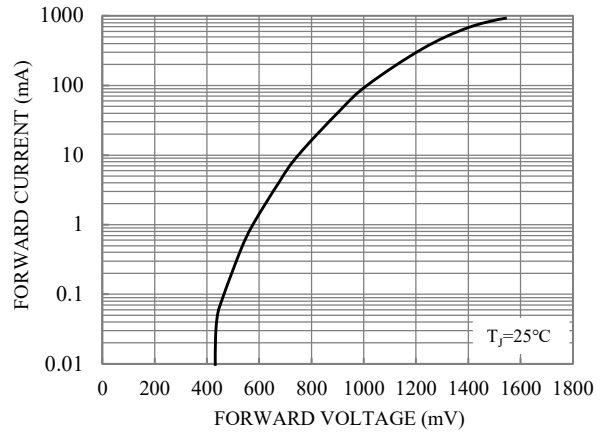


Fig.2-TYPICAL FORWARD CHARACTERISTICS

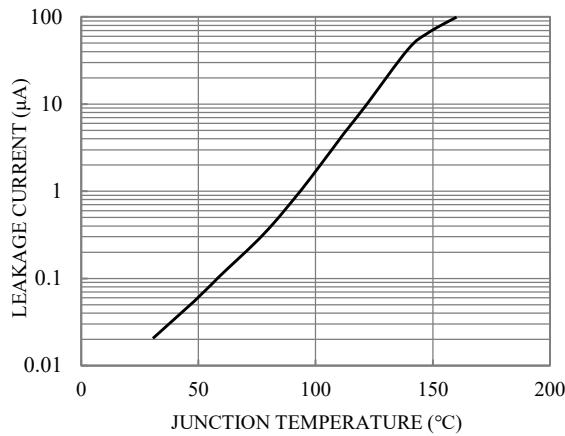
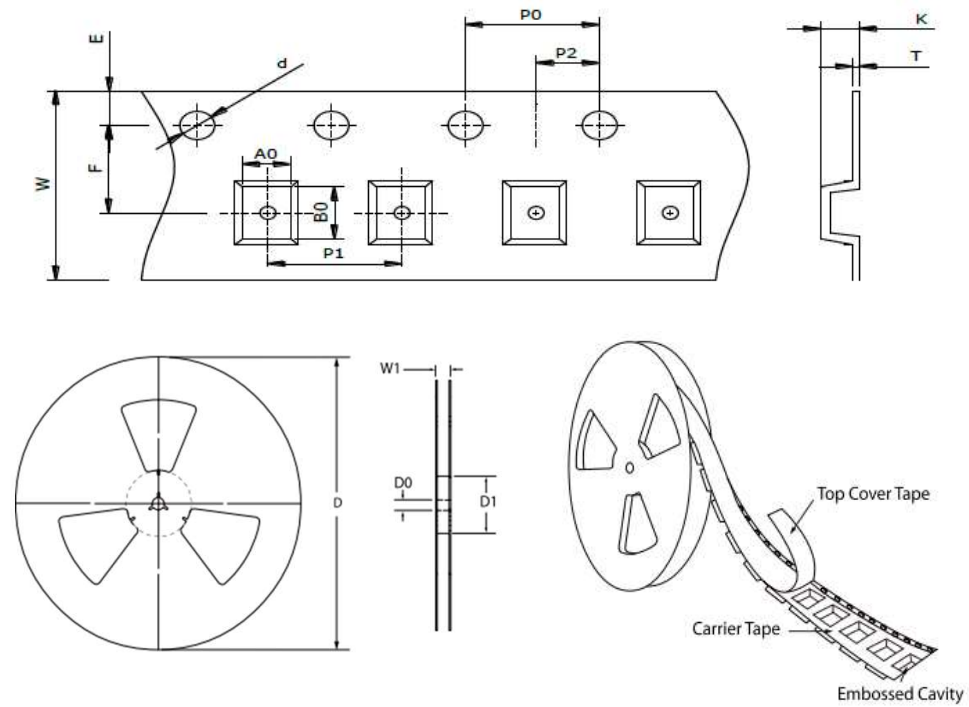


Fig.3-LEAKAGE CURRENT vs. JUNCTION TEMPERATURE



BAS19H / BAS20H / BAS21H SWITCHING DIODE

TAPE & REEL SPECIFICATION



Item	Symbol	SOT-23
Carrier width	A ₀	3.30 ± 0.10
Carrier length	B ₀	3.00 ± 0.10
Carrier depth	K	1.70 ± 0.10
Sprocket hole	d	1.50 ± 0.10
Reel outside diameter	D	178.00 ± 2.00
Feed hole width	D ₀	13.00 ± 0.50
Reel inner diameter	D ₁	MIN. 50.00
Sprocket hole position	E	1.75 ± 0.10
Punch hole position	F	3.50 ± 0.10
Sprocket hole pitch	P ₀	4.00 ± 0.10
Punch hole pitch	P ₁	4.00 ± 0.10
Embossment center	P ₂	2.00 ± 0.10
Overall tape thickness	T	0.20 ± 0.05
Tape width	W	8.00 ± 0.20
Reel width	W1	MAX. 14.50

ORDER INFORMATION

Package	Reel Size	Quantity
SOT-23	7"	3,000

MARKING CODE

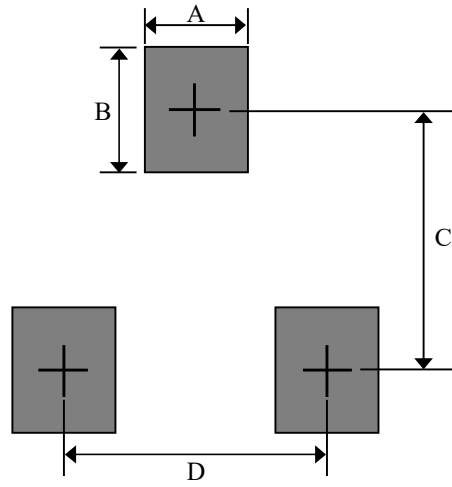
Part Number	Marking Code
BAS19H	HC
BAS20H	
BAS21H	



BAS19H / BAS20H / BAS21H

SWITCHING DIODE

SUGGESTED SOLDER PAD LAYOUT



Unit : mm

PACKAGE	A	B	C	D
SOT-23	0.80	1.00	2.40	1.90