

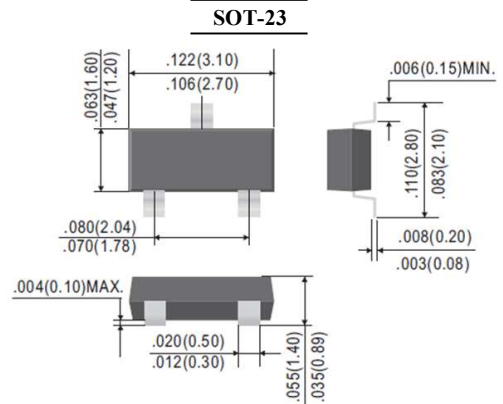
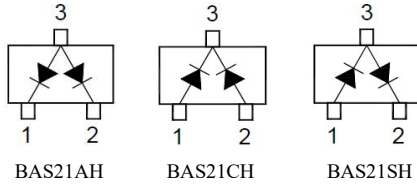


BAS21AH / BAS21CH / BAS21SH

SWITCHING DIODE

FEATURES

- Low forward voltage
- Fast reverse recovery time
- Suffix "H" indicates Halogen-free parts, ex. BAS21AH



Dimensions in inch and (millimeter)

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

Parameter	Symbol	Value	Unit	
Peak Repetitive Reverse Voltage	V_{RRM}	250	V	
Reverse Voltage	V_R	200	V	
Average Forward Current	$I_{F(AV)}$	400	mA	
Non-Repetitive Peak Forward Surge Current	I_{FSM}	$t = 1 \mu\text{s}$	9.0	A
		$t = 100 \mu\text{s}$	3.0	
Total Power Dissipation	P_{tot}	350	mW	
Thermal Resistance from Junction to Ambient Air	$R_{\theta JA}$	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
Reverse BreVoltage	$I_R = 100 \mu\text{A}$	$V_{(BR)R}$	250	-	V
Forward voltage	$I_F = 100 \text{mA}$	V_F	-	1.00	V
	$I_F = 200 \text{mA}$		-	1.25	
Reverse Current	$V_R = 200 \text{V}, T_J = 25^\circ\text{C}$	I_R	-	100	nA
	$V_R = 200 \text{V}, T_J = 150^\circ\text{C}$		-	100	μA
Diode Capacitance	$V_R = 0 \text{V}, f = 1 \text{MHz}$	C_d	-	5	pF
Reveres recovery time	$I_F = I_R = 30 \text{mA}, I_{tr} = 0.1 \times I_R, R_L = 100 \Omega$	t_{rr}	-	50	ns



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SWITCHING DIODE

RATINGS AND CHARACTERISTIC CURVES

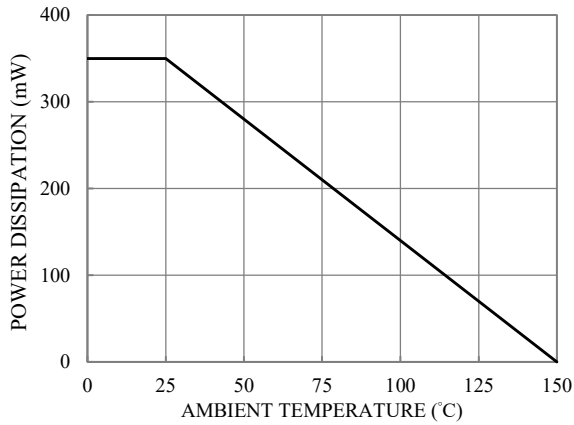


Fig.1-POWER DERATING CURVE

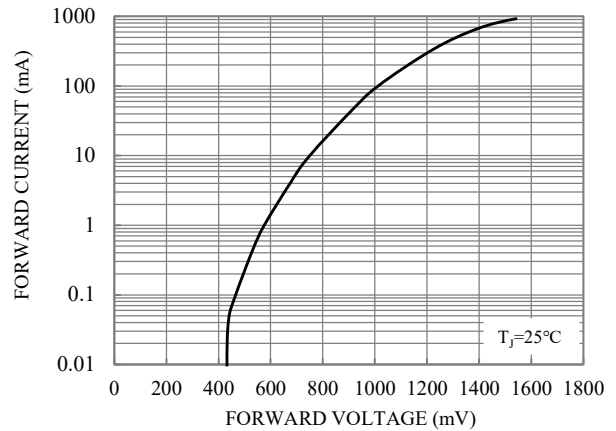


Fig.2-TYPICAL FORWARD CHARACTERISTICS

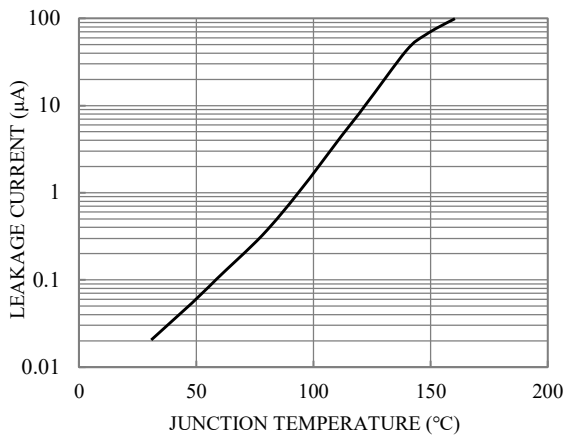


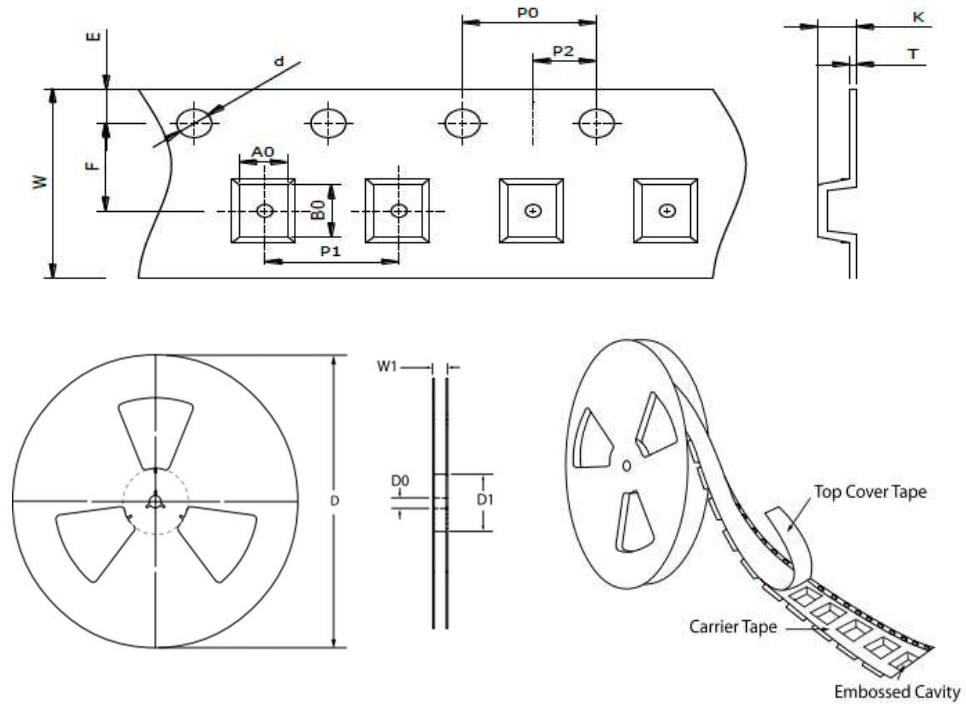
Fig.3-LEAKAGE CURRENT vs. JUNCTION TEMPERATURE



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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	W ₁	MAX. 14.50

ORDER INFORMATION

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

MARKING CODE

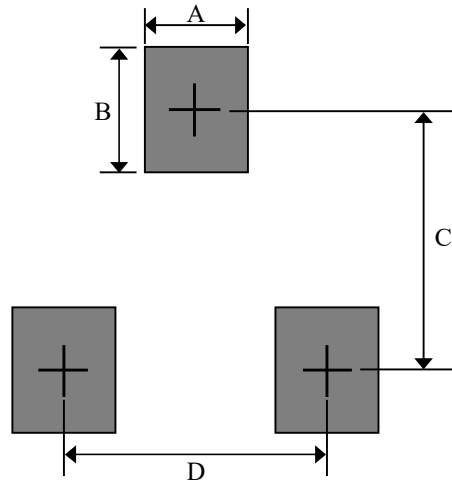
Part Number	Marking Code
BAS21AH	RA
BAS21CH	PZ
BAS21SH	PY



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SWITCHING DIODE

SUGGESTED SOLDER PAD LAYOUT



Unit : mm

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