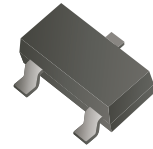


## BAS21/A/C/S-HF

**RoHS Device**  
**Halogen Free**



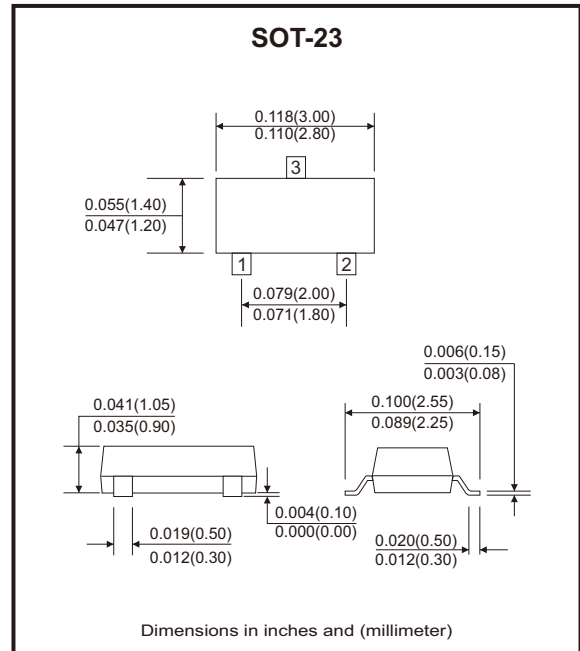
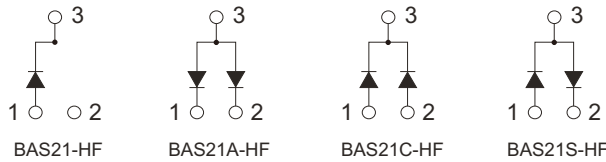
### Features

- Fast switching device ( $T_{rr} < 50 \text{ nS}$ ).
- Power dissipation of 225mW.
- High stability and high reliability.
- Low reverse leakage.

### Mechanical data

- Case: SOT-23, molded plastic.
- Epoxy UL: 94V-0.
- Mounting position: Any.

### Circuit Diagram



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

Parameter	Symbol	Value	Unit
Reverse voltage	$V_R$	250	V
Peak repetitive reverse voltage	$V_{RRM}$	250	V
Power dissipation	$P_D$	225	mW
Forward continuous current	$I_{FM}$	400	mA
Repetitive peak forward surge current	$I_{FRM}$	625	mA
Non-repetitive peak forward surge current @ $t = 8.3\text{ms}$ , $T_A=25^\circ\text{C}$	$I_{FSM}$	2.5	A
Operating junction temperature	$T_J$	150	$^\circ\text{C}$
Storage temperature range	$T_{STG}$	-55 to +150	$^\circ\text{C}$
Thermal resistance from junction to ambient	$R_{\theta JA}$	555	$^\circ\text{C/W}$

## Electrical Characteristics (at Ta=25°C unless otherwise noted)

Parameter	Conditions	Symbol	Min.	Max.	Unit
Reverse voltage	$I_R = 100\mu A$	$V_{(BR)}$	250		V
Reverse leakage current	$V_R = 200V$	$I_R$		0.1	$\mu A$
Forward voltage	$I_F = 100mA$ $I_F = 200mA$	$V_F$		1.00 1.25	V
Reverse recovery time	$I_F = I_R = 30mA$ , $I_{rr} = 0.1 \times I_R$ , $R_L = 100\Omega$	$T_{rr}$		50	nS
Capacitance	$V_R = 0V$ , $f = 1MHz$	$C_T$		5	pF

## Rating and Characteristic Curves (BAS21/A/C/S-HF)

Fig.1 - Forward Characteristics

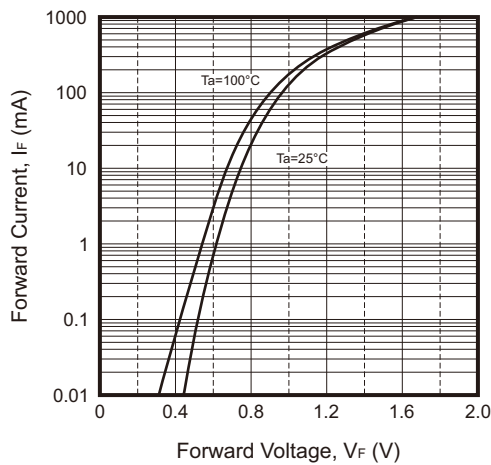


Fig.2 - Reverse Characteristics

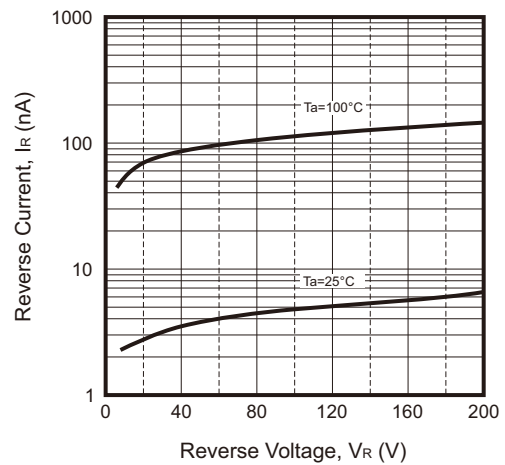


Fig.3 - Capacitance Characteristics

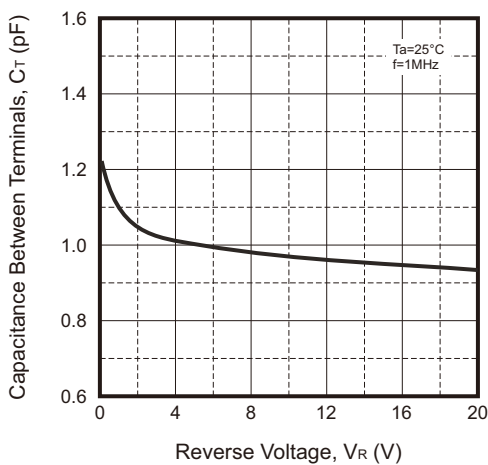
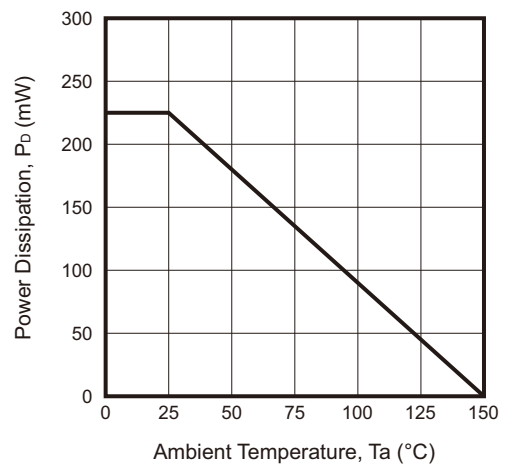


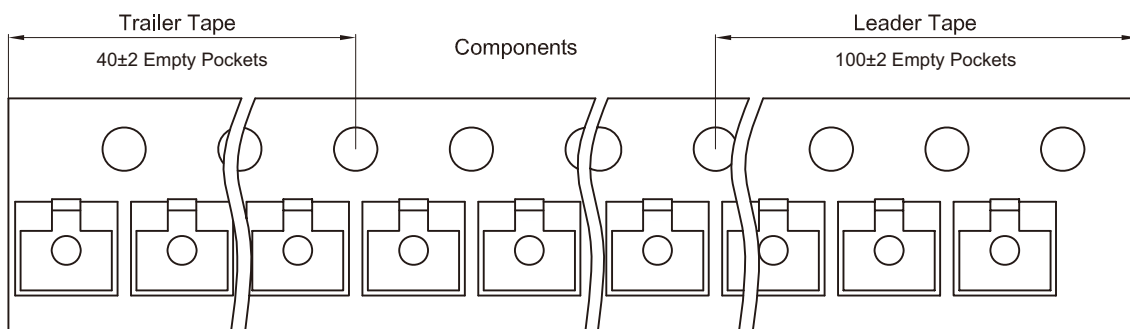
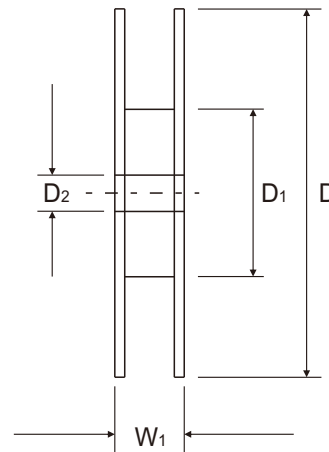
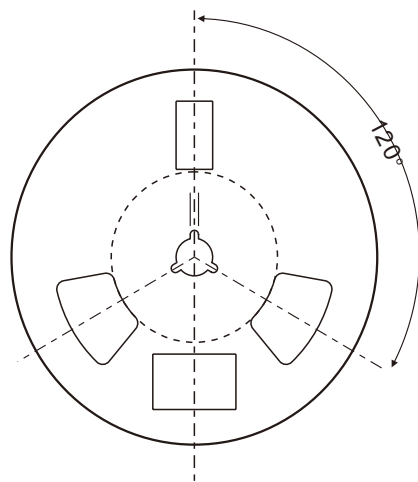
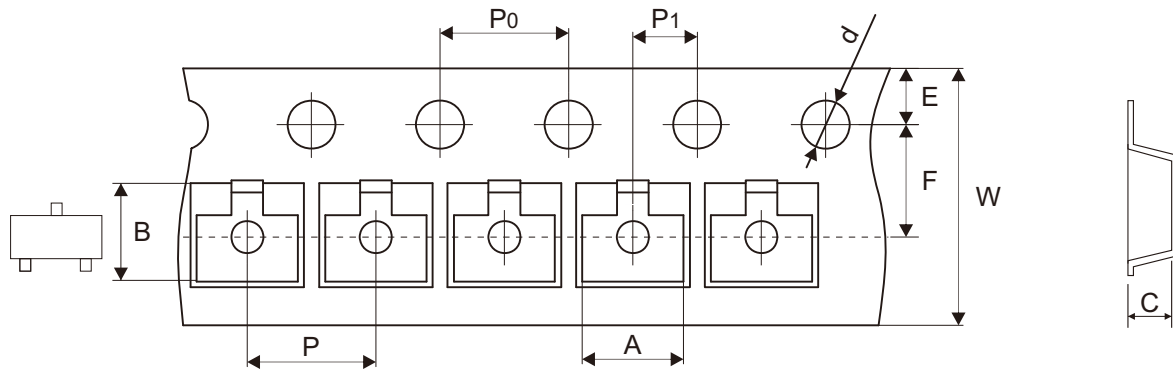
Fig.4 - Power Derating Curve



Company reserves the right to improve product design, functions and reliability without notice.

REV:A

## Reel Taping Specification



SOT-23	SYMBOL	A	B	C	d	D	D1	D2
	(mm)	$3.15 \pm 0.10$	$2.77 \pm 0.10$	$1.22 \pm 0.10$	$1.50 \pm 0.10$	$178.00 \pm 2.00$	$54.40 \pm 1.00$	$13.00 \pm 1.00$
	(inch)	$0.124 \pm 0.004$	$0.109 \pm 0.004$	$0.048 \pm 0.004$	$0.059 \pm 0.004$	$7.008 \pm 0.079$	$2.142 \pm 0.039$	$0.512 \pm 0.039$

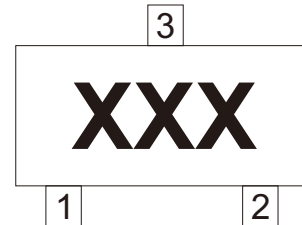
SOT-23	SYMBOL	E	F	P	P0	P1	W	W1
	(mm)	$1.75 \pm 0.10$	$3.50 \pm 0.10$	$4.00 \pm 0.10$	$4.00 \pm 0.10$	$2.00 \pm 0.10$	$8.00 \pm 0.10$	$12.30 \pm 1.00$
	(inch)	$0.069 \pm 0.004$	$0.138 \pm 0.004$	$0.157 \pm 0.004$	$0.157 \pm 0.004$	$0.079 \pm 0.004$	$0.315 \pm 0.004$	$0.472 \pm 0.039$

Company reserves the right to improve product design, functions and reliability without notice.

REV:A

## Marking Code

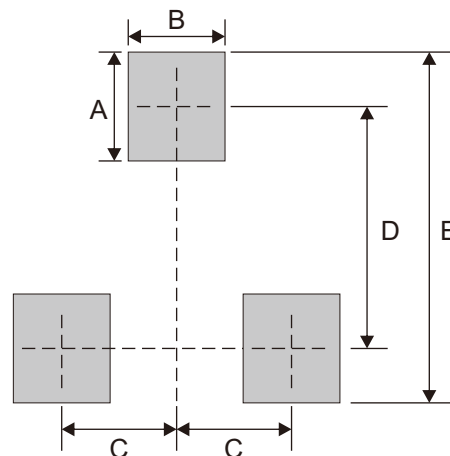
Part Number	Marking Code
BAS21-HF	JS
BAS21A-HF	JS2
BAS21C-HF	JS3
BAS21S-HF	JS4



xx/xxx = Product type marking code

## Suggested PAD Layout

SIZE	SOT-23	
	(mm)	(inch)
A	0.90	0.035
B	0.80	0.031
C	0.95	0.037
D	2.00	0.079
E	2.90	0.114



Note: 1. The pad layout is for reference purposes only.

## Standard Packaging

Case Type	REEL PACK	
	REEL (pcs)	Reel Size (inch)
SOT-23	3,000	7

# Mouser Electronics

Authorized Distributor

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