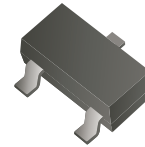


BAS19-P2-HF

RoHS Device
Halogen Free



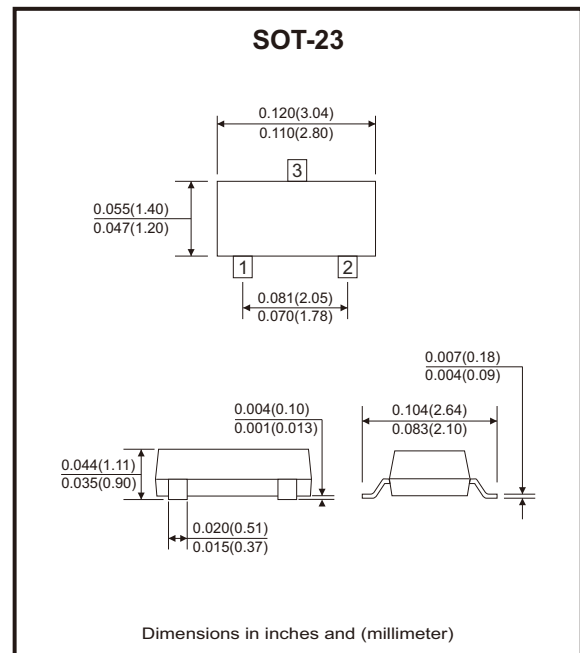
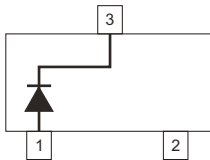
Features

- Fast switching speed.
- For general purpose switching applications.
- High conductance.
- Low current leakage.
- Small outline surface mount package.

Mechanical data

- Case: SOT-23, molded plastic.
- Terminals: Solderable per MIL-STD-750, method 2026.
- Mounting position: Any.

Circuit Diagram



Maximum Ratings (at TA=25°C unless otherwise noted)

Parameter	Symbol	Value	Unit
Working peak reverse voltage	V_{RWM}	100	V
Peak repetitive peak reverse voltage	V_{RRM}	120	V
Average rectified current	I_O	200	mA
Power dissipation	P_D	250	mW
Non-repetitive peak forward surge current @ t = 8.3ms	I_{FSM}	2.5	A
Forward DC current	I_F	200	mA
Repetitive peak forward current	I_{FRM}	450	mA
Thermal resistance	$R_{\theta JA}$	500	°C/W
Junction temperature	T_J	150	°C
Storage temperature range	T_{STG}	-55 to +150	°C

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

Parameter	Conditions	Symbol	Min	Typ	Max	Unit
Forward voltage	$I_F = 100\text{mA}$	V_F			1	V
	$I_F = 200\text{mA}$	V_F			1.25	
Reverse breakdown voltage	$I_R = 100\mu\text{A}$	V_{BR}	120			V
Reverse voltage leakage current	$V_R = 100\text{V}$	I_R			100	nA
Diodes capacitance	$V_R = 0\text{V}$, $f = 1\text{MHz}$	C_J			5	pF
Reverse recovery time	$I_F = 30\text{mA}$, $I_R = 30\text{mA}$, $I_{rr} = 3\text{mA}$, $R_L = 100\Omega$	t_{rr}			50	nS

Typical Rating and Characteristic Curves (BAS19-P2-HF)

Fig.1 - Forward Characteristics

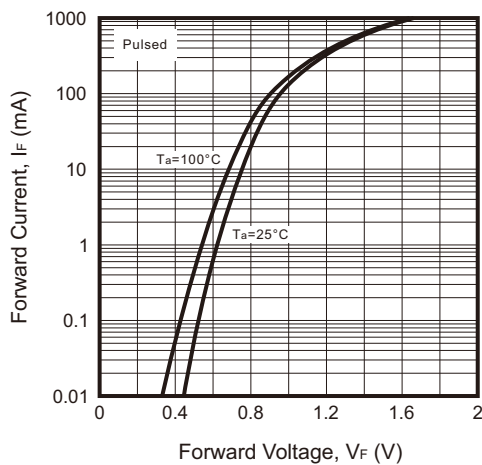


Fig.2 - Reverse Characteristics

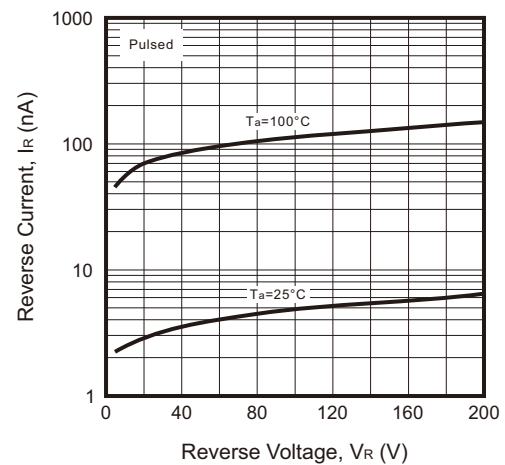


Fig.3 - Capacitance Characteristics

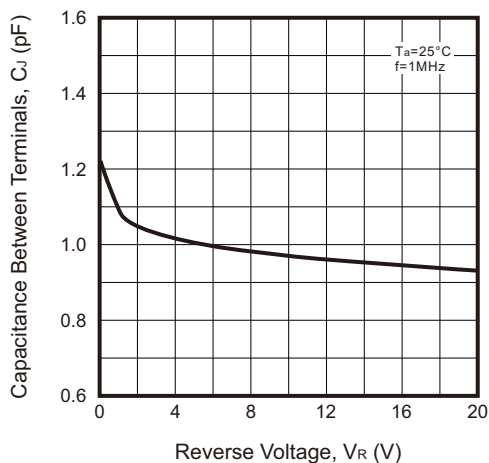
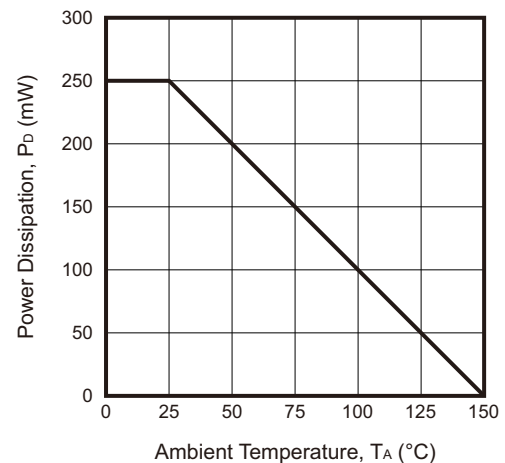
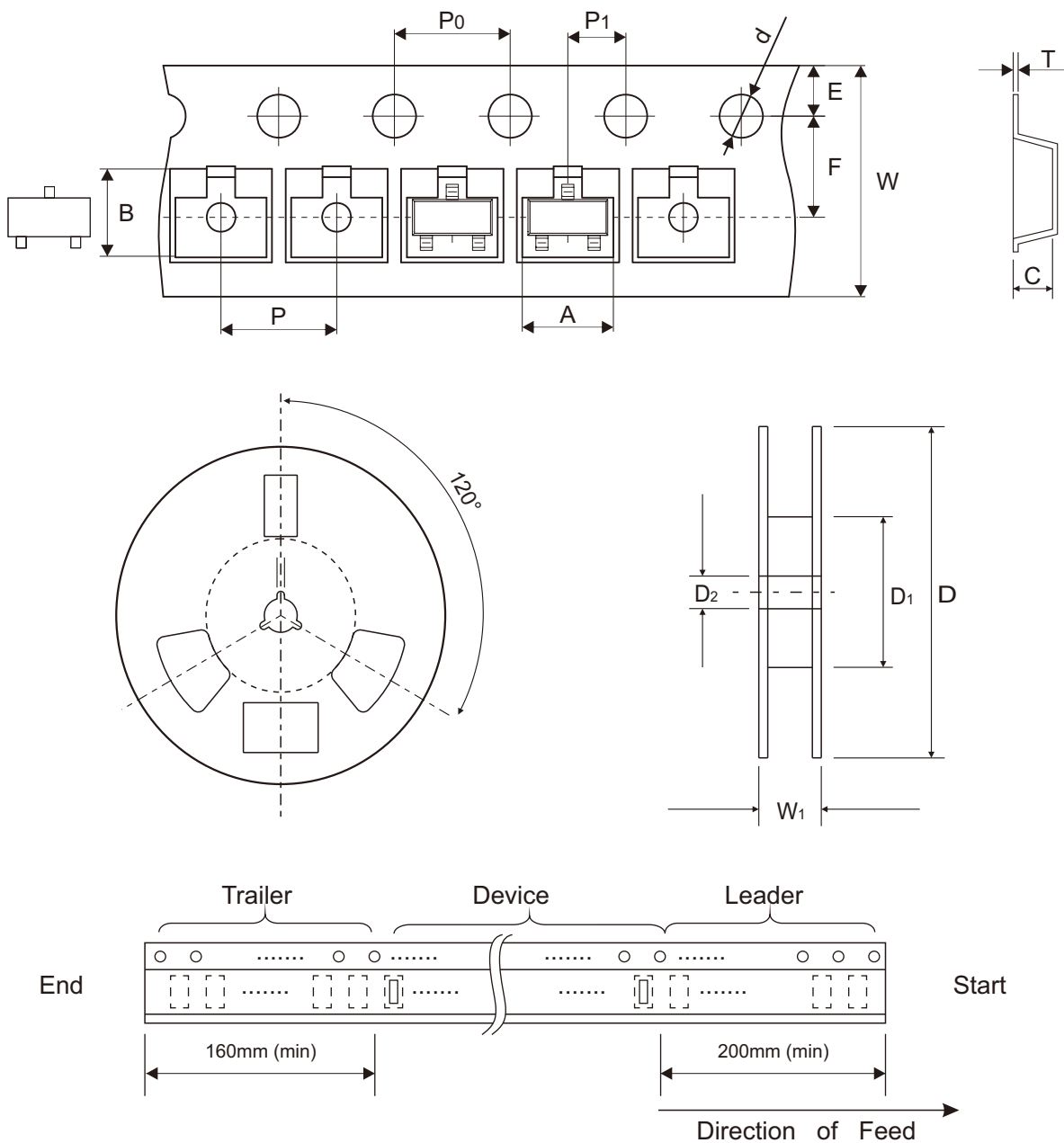


Fig.4 - Power Derating Curve



Reel Taping Specification

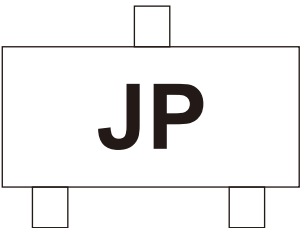


SOT-23	SYMBOL	A	B	C	d	D	D1	D2
	(mm)	3.15 ± 0.10	2.77 ± 0.10	$1.22 + 0.08 - 0.10$	$1.50 + 0.10 - 0.00$	178.00 ± 2.00	50.00 ± 0.50	13.00 ± 0.25
	(inch)	0.124 ± 0.004	0.109 ± 0.004	$0.048 + 0.003 - 0.004$	$0.059 + 0.004 - 0.000$	7.008 ± 0.079	1.969 ± 0.020	0.512 ± 0.010

SOT-23	SYMBOL	E	F	P	P0	P1	T	W	W1
	(mm)	1.75 ± 0.10	3.50 ± 0.10	4.00 ± 0.10	4.00 ± 0.10	2.00 ± 0.05	0.20 ± 0.02	$8.00 + 0.30 - 0.10$	9.50 ± 0.50
	(inch)	0.069 ± 0.004	0.138 ± 0.004	0.157 ± 0.004	0.157 ± 0.004	0.079 ± 0.002	0.008 ± 0.001	$0.315 + 0.012 - 0.004$	0.374 ± 0.020

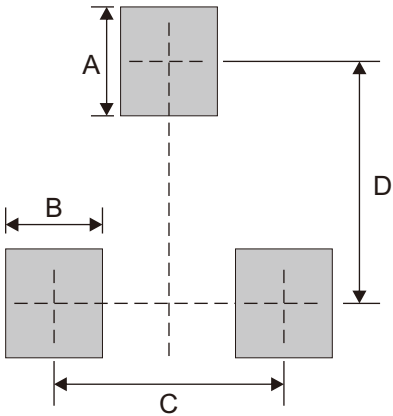
Marking Code

Part Number	Marking Code
BAS19-P2-HF	JP



Suggested P.C.B. PAD Layout

SIZE	SOT-23	
	(mm)	(inch)
A	0.90	0.035
B	0.80	0.031
C	1.90	0.075
D	2.00	0.079



Standard Packaging

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