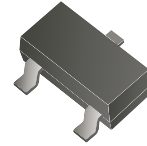


BAS16-HF

RoHS Device

Halogen Free



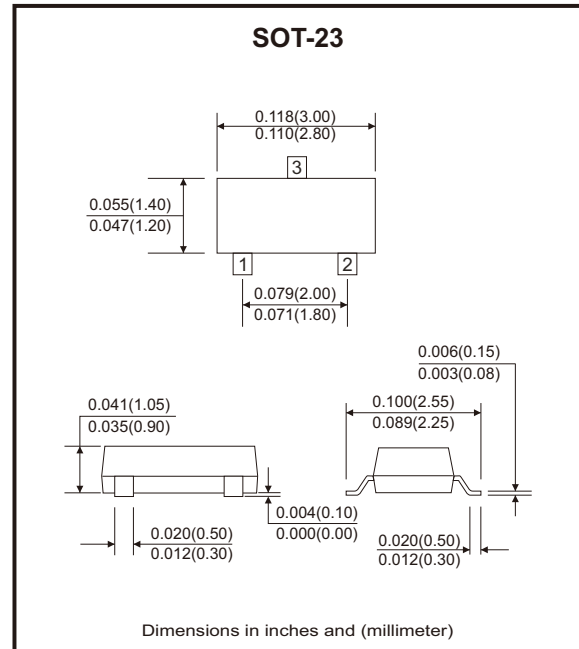
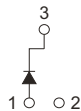
Features

- Fast switching device ($T_{rr} < 6.0\text{nS}$).
- 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 Rating (at $T_a=25^\circ\text{C}$ unless otherwise noted)

Parameter	Symbol	Value	Unit
Reverse voltage	V_R	75	V
Peak repetitive reverse voltage	V_{RRM}	100	V
Power dissipation	P_D	225	mW
Average rectified current	I_o	150	mA
Peak forward surge current @ $t_p=1\mu\text{s}$, $T_A=25^\circ\text{C}$	I_{FSM}	2	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	$R_{\theta JA}$	556	$^\circ\text{C/W}$

Note: Valid provided that electrodes are kept at ambient temperature.

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

Parameter	Conditions	Symbol	Min	Typ	Max	Unit
Reverse voltage	$I_R = 100\mu A$	$V_{(BR)}$	75			V
Reverse leakage current	$V_R = 75V$	I_R			1	μA
Forward voltage	$I_F = 1mA$ $I_F = 10mA$ $I_F = 50mA$ $I_F = 150mA$	V_F			0.715 0.855 1.00 1.25	V
Reverse recovery time	$I_F = I_R = 10mA$, $R_L = 100\Omega$ $t_{rr} = 0.1 \times I_R$	T_{RR}			6	nS
Capacitance	$V_R = 0V$, $f = 1MHz$	C_T			2	pF

Rating and Characteristic Curves (BAS16-HF)

Fig.1 - Forward Characteristics

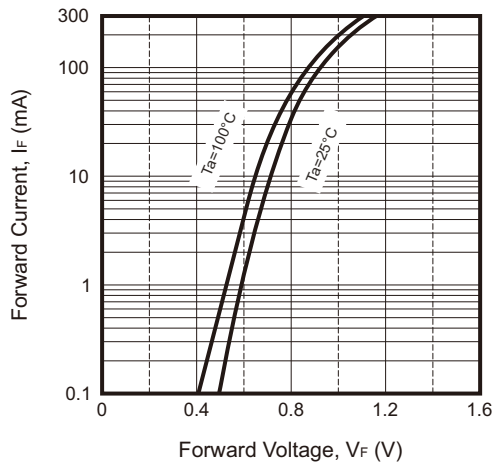


Fig.2 - Reverse Characteristics

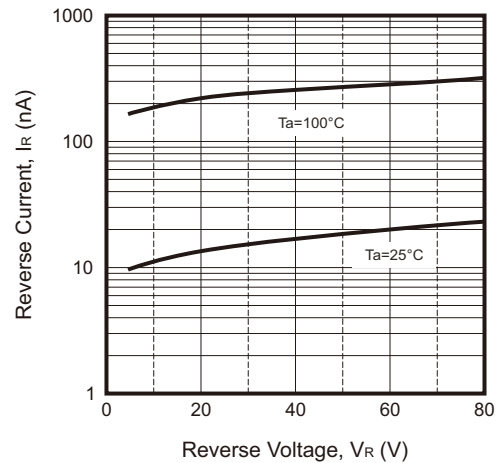


Fig.3 - Capacitance Characteristics

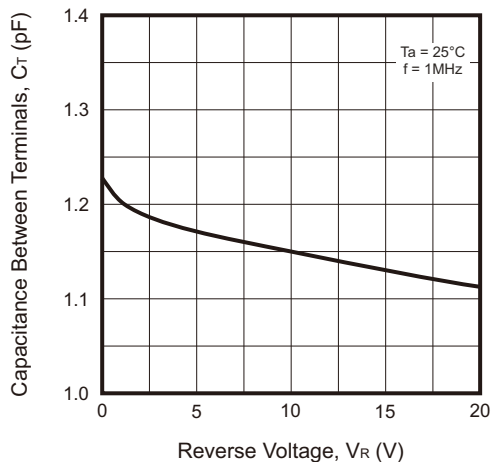
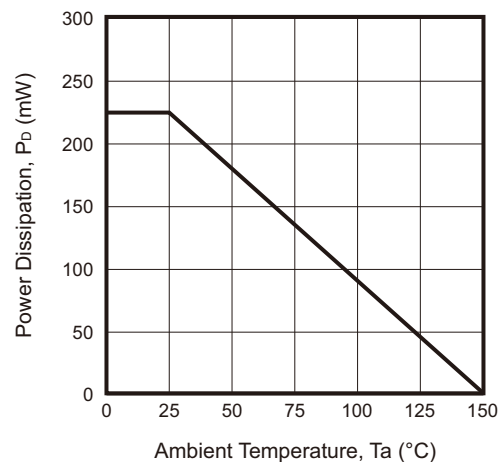
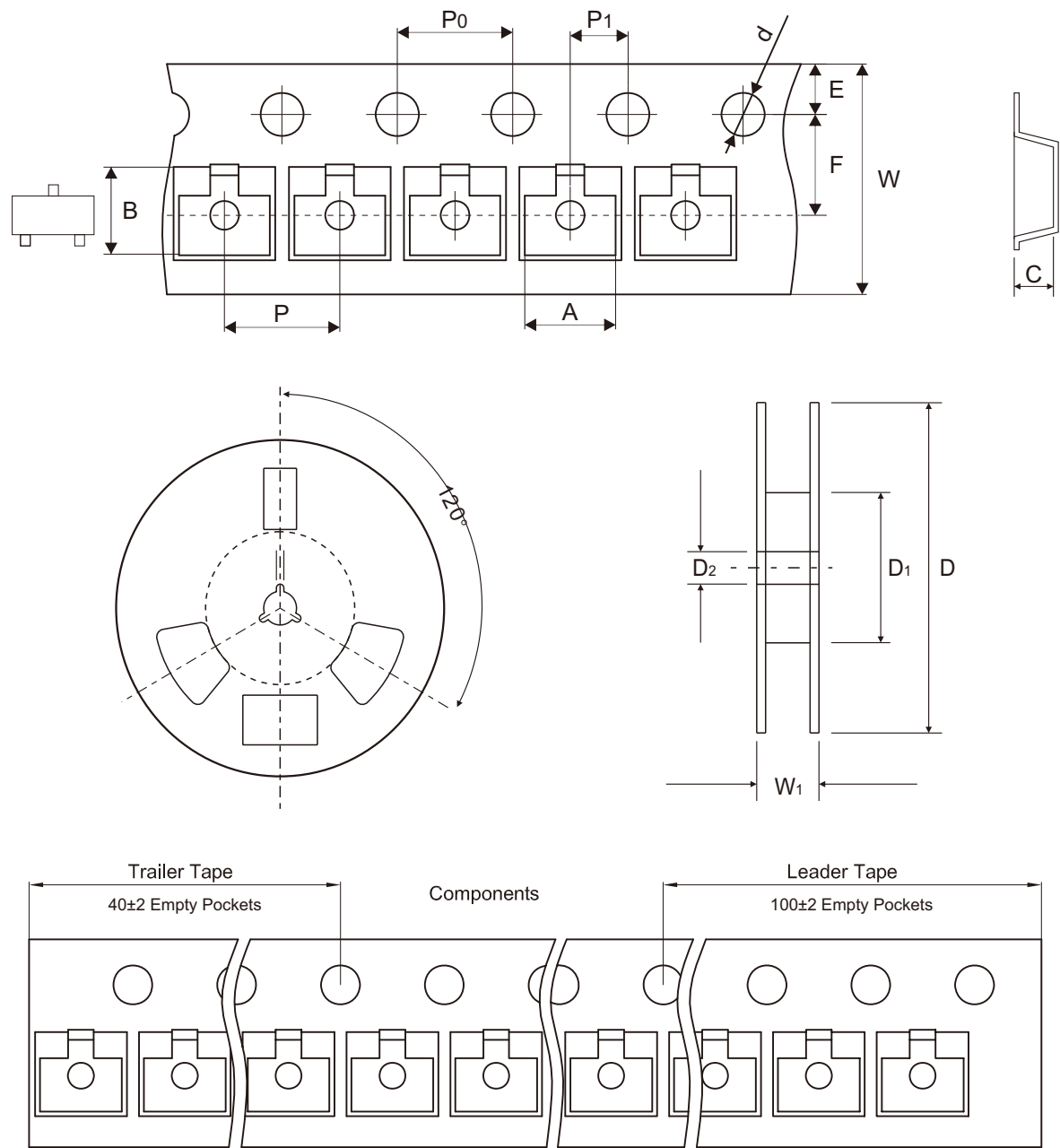


Fig.4 - Power Derating Curve



Reel Taping Specification

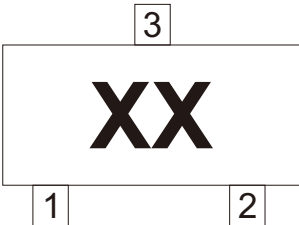


SOT-23	SYMBOL	A	B	C	d	D	D1	D2
	(mm)	3.15 ± 0.10	2.77 ± 0.10	1.22 ± 0.10	1.50 ± 0.10	178.00 ± 2.00	54.40 ± 1.00	13.00 ± 1.00
	(inch)	0.124 ± 0.004	0.109 ± 0.004	0.048 ± 0.004	0.059 ± 0.004	7.008 ± 0.079	2.142 ± 0.039	0.512 ± 0.039

SOT-23	SYMBOL	E	F	P	P0	P1	W	W1
	(mm)	1.75 ± 0.10	3.50 ± 0.10	4.00 ± 0.10	4.00 ± 0.10	2.00 ± 0.10	8.00 ± 0.10	12.30 ± 1.00
	(inch)	0.069 ± 0.004	0.138 ± 0.004	0.157 ± 0.004	0.157 ± 0.004	0.079 ± 0.004	0.315 ± 0.004	0.484 ± 0.039

Marking Code

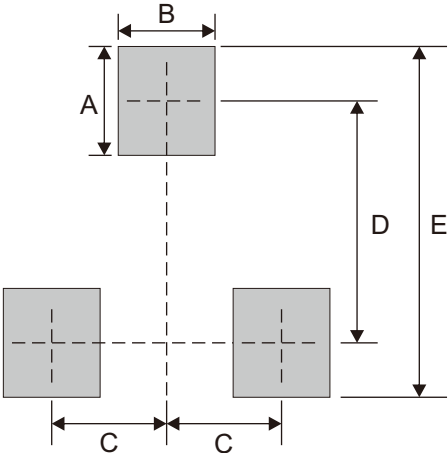
Part Number	Marking Code
BAS16-HF	A6



xx = 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