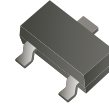


BAS16T-HF

RoHS Device
Halogen Free



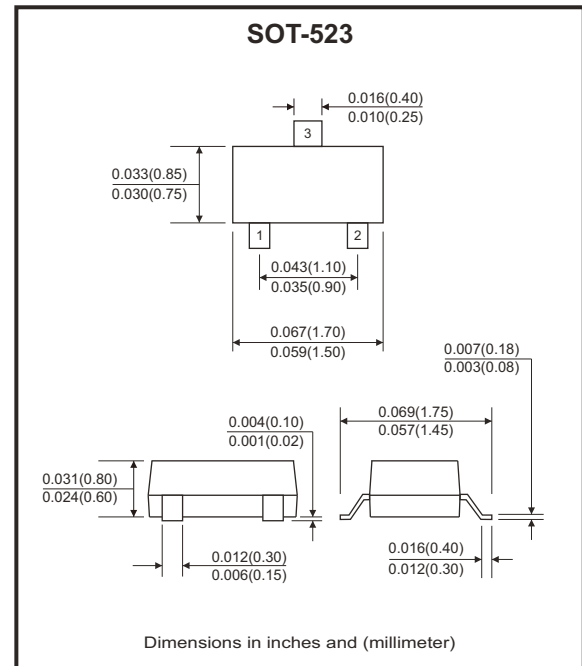
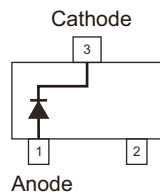
Features

- Ultra-small surface mount package.
- Fast speed switching.
- For general purpose switching.
- High conductance.

Mechanical data

- Case: SOT-523, molded plastic.
- Mounting position: Any.

Circuit Diagram



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

Parameter	Symbol	Value	Unit
Peak repetitive reverse voltage	V_{RRM}	85	V
Working peak reverse voltage	V_{RWM}	85	V
DC blocking voltage	V_R	85	V
RMS reverse voltage	V_{RMS}	60	V
Forward continuous voltage	I_F	155	mA
single diode			
double diode		75	
Repetitive peak forward current	I_{FRM}	500	mA
Non-repetitive peak forward surge current @ t = 8.3ms	I_{FSM}	2	A
Power dissipation	P_D	150	mW
Thermal resistance junction to ambient	$R_{\theta JA}$	833	°C/W
Junction and storage temperature range	T_J, T_{STG}	-65 to +150	°C

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

Parameter	Conditions	Symbol	Min.	Typ.	Max.	Unit
Reverse breakdown voltage	$I_R = 100\mu A$	$V_{(BR)}$	85			V
Leakage current	$V_R = 75V$	I_R			2	μA
	$V_R = 75V, T_J = 150^\circ C$				100	
	$V_R = 25V, T_J = 150^\circ C$				60	nA
	$V_R = 25V$				30	
Forward voltage	$I_F = 1mA$	V_F			0.715	V
	$I_F = 10mA$				0.855	
	$I_F = 50mA$				1.00	
	$I_F = 150mA$				1.25	
Transition frequency	$V_{CE} = 5V, I_C = 10mA, f = 100KHz$	f_T	100			MHz
Typical total capacitance	$V_R = 0V, f = 1MHz$	C_T			1.5	pF
Reverse recovery time	$I_F = I_R = 10mA, I_{rr} = 0.1 \times I_R, R_L = 100\Omega$	t_{rr}			4	nS

Typical Rating and Characteristic Curves (BAS16T-HF)

Fig.1 - Current Derating Curve

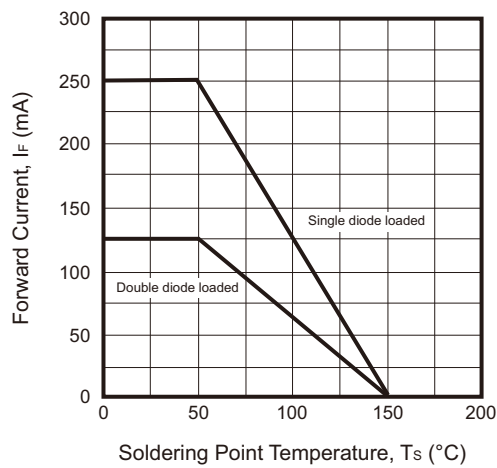
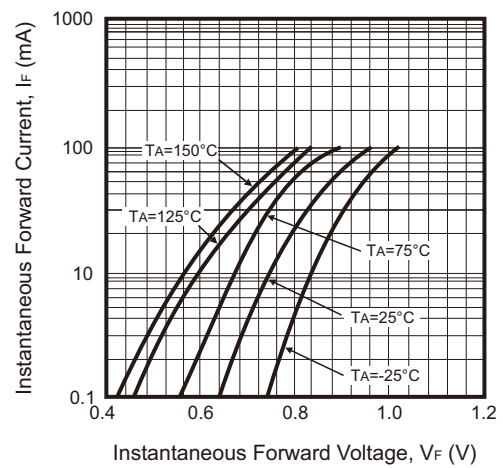
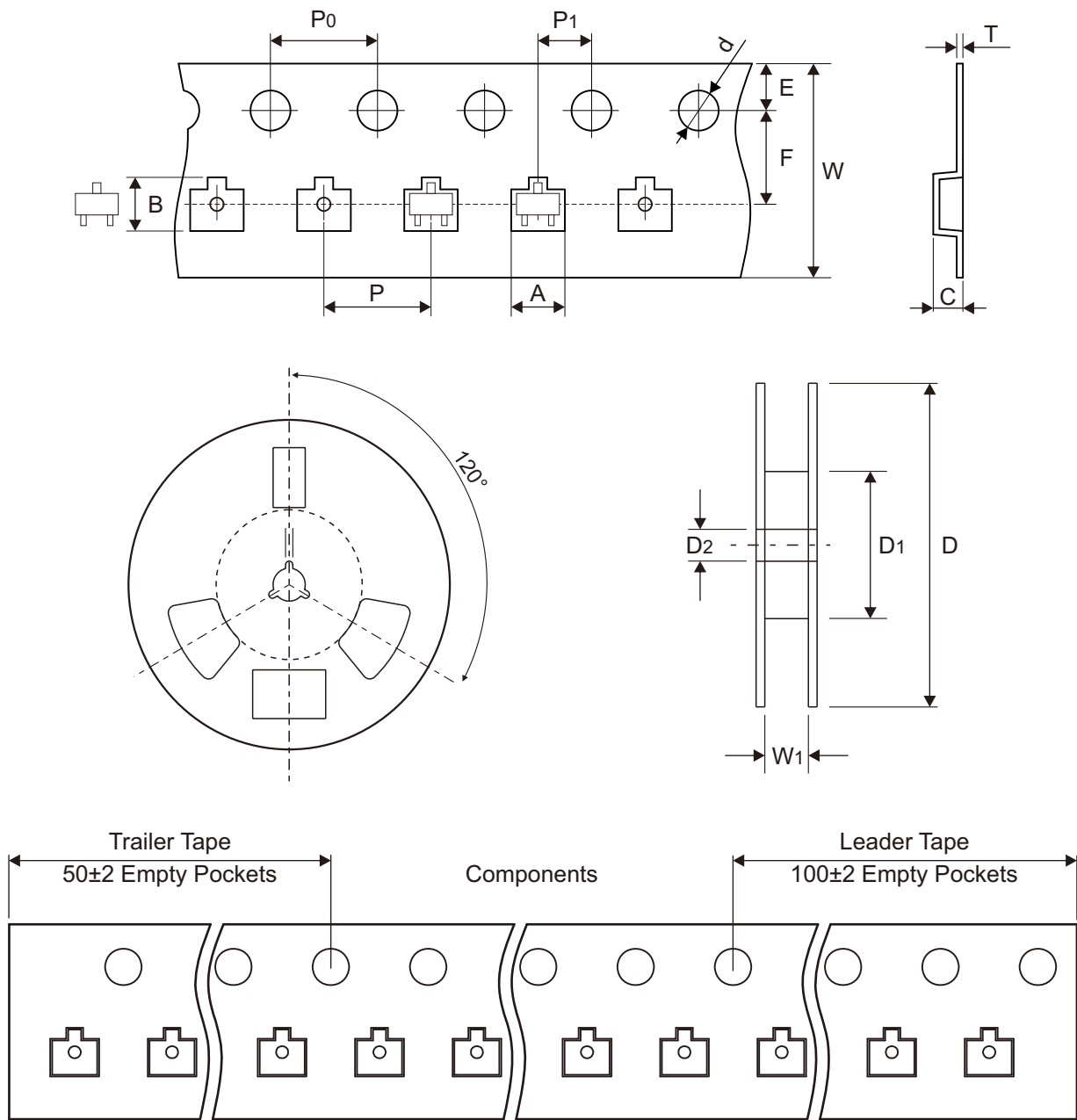


Fig.2 - Typical Forward Characteristics



Reel Taping Specification

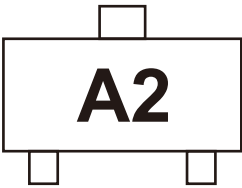


	SYMBOL	A	B	C	d	D	D1	D2
SOT-523	(mm)	1.85 ± 0.05	1.85 ± 0.05	0.875 ± 0.05	1.50 ± 0.10	178.00 ± 1.00	54.00 ± 0.50	13.00 ± 0.50
	(inch)	0.073 ± 0.002	0.073 ± 0.002	0.034 ± 0.002	0.059 ± 0.004	7.008 ± 0.039	2.126 ± 0.020	0.512 ± 0.020

	SYMBOL	E	F	P	P0	P1	T	W	W1
SOT-523	(mm)	1.75 ± 0.10	3.50 ± 0.05	4.00 ± 0.10	4.00 ± 0.10	2.00 ± 0.05	0.229 ± 0.02	8.00 + 0.30 - 0.10	9.50 ± 1.00
	(inch)	0.069 ± 0.004	0.138 ± 0.002	0.157 ± 0.004	0.157 ± 0.004	0.079 ± 0.002	0.009 ± 0.001	0.315 + 0.012 - 0.004	0.374 ± 0.039

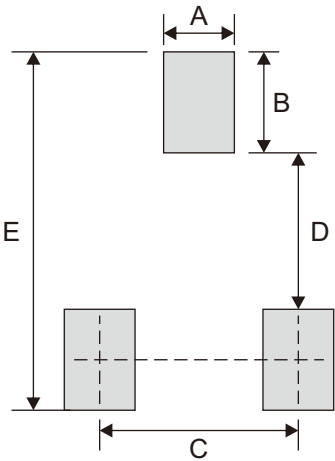
Marking Code

Part Number	Marking Code
BAS16T-HF	A2



Suggested P.C.B. PAD Layout

SIZE	SOT-523	
	(mm)	(inch)
A	0.356	0.014
B	0.508	0.020
C	1.00	0.039
D	0.787	0.031
E	1.803	0.071



Standard Packaging

Case Type	REEL PACK	
	REEL (pcs)	Reel Size (inch)
SOT-523	3,000	7