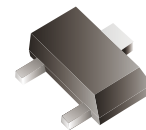


ABAT54M-HF

RoHS Device
Halogen Free



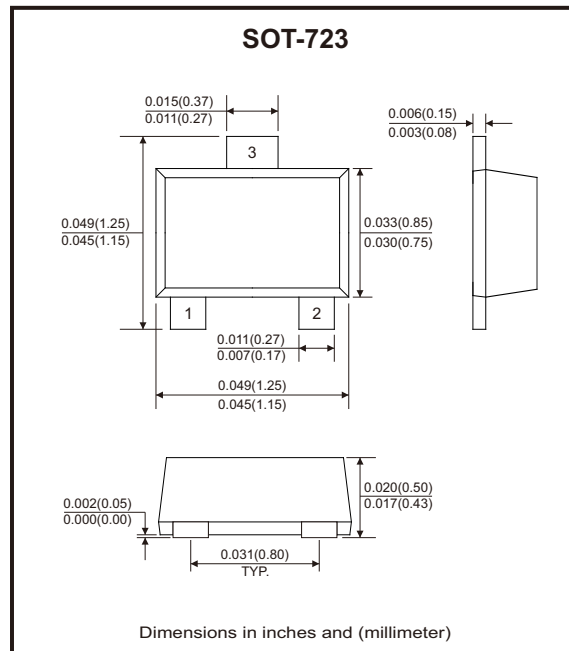
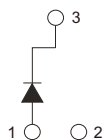
Features

- High conductance.
- Low current leakage.
- Small outline surface mount package.
- AEC-Q101 Qualified.

Mechanical data

- Case: SOT-723, molded plastic.
- Mounting position: Any.

Circuit Diagram



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

Parameter	Conditions	Symbol	Limits	Unit
Peak repetitive reverse voltage		V_{RRM}	30	V
Working peak reverse voltage		V_{RWM}	30	V
RMS reverse voltage		V_{RMS}	21	V
Average forward current		I_o	200	mA
Non-repetitive peak forward surge current	@t = 8.3ms	I_{FSM}	600	mA
Repetitive peak forward current	@t ≤ 1s, δ ≤ 0.5	I_{FRM}	300	mA
Power dissipation		P_D	150	mW
Thermal resistance from junction to ambient		$R_{\theta JA}$	667	°C/W
Junction temperature		T_j	125	°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
Reverse voltage	$I_R = 100\mu A$	$V_{(BR)}$	30			V
Reverse current	$V_R = 25V$	I_R			2	μA
Forward voltage	$I_F = 0.1mA$	V_{F1}			0.24	V
	$I_F = 1mA$	V_{F2}			0.32	
	$I_F = 10mA$	V_{F3}			0.4	
	$I_F = 30mA$	V_{F4}			0.5	
	$I_F = 100mA$	V_{F5}			1	
Total capacitance	$V_R = 1V, f = 1MHz$	C_{tot}			10	pF
Reverse recovery time	$I_F = I_R = 10mA, I_{R(REC)} = 1mA$	t_{rr}			5	nS

Typical Rating and Characteristic Curves (ABAT54M-HF)

Fig.1 - Forward Characteristics

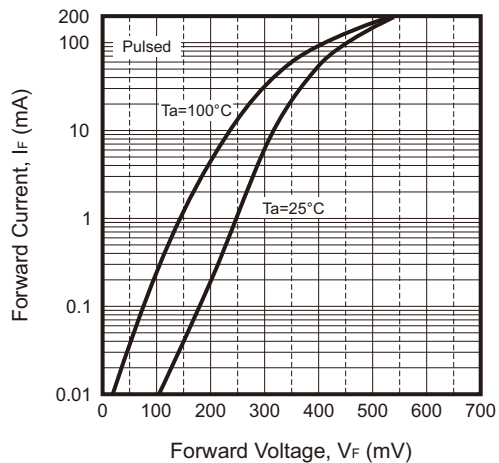


Fig.2 - Reverse Characteristics

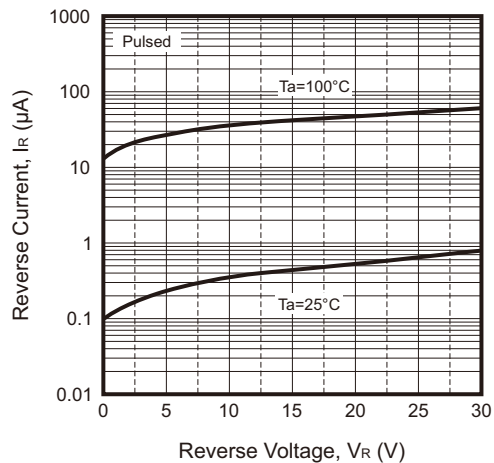


Fig.3 - Capacitance Characteristics

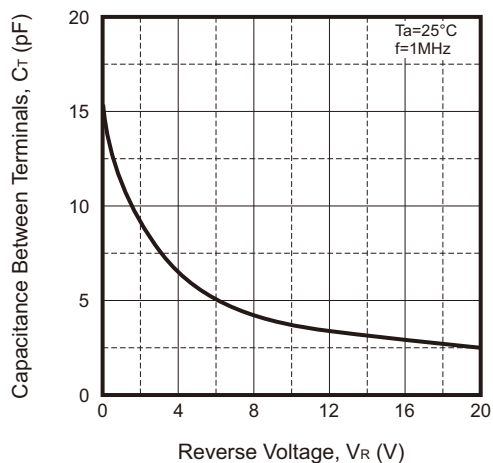
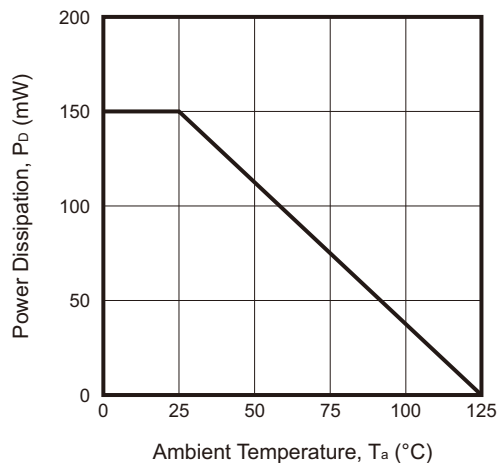
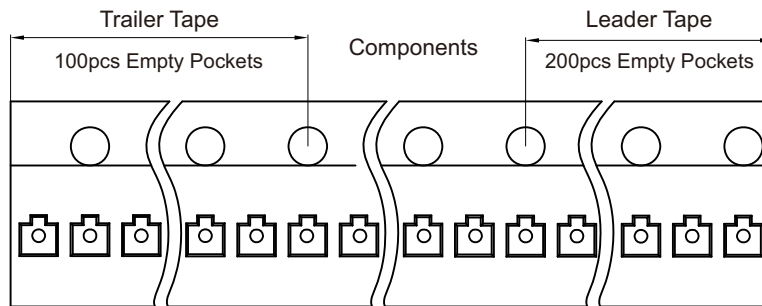
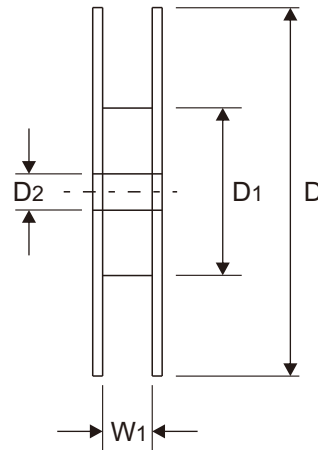
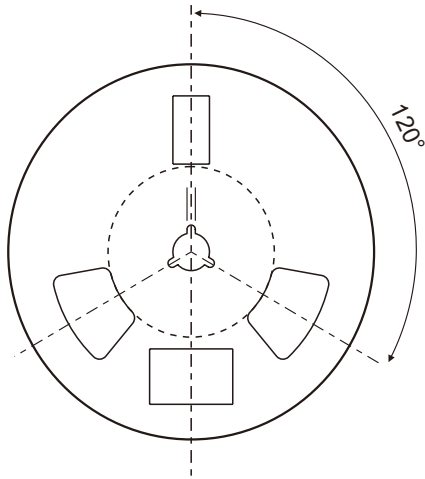
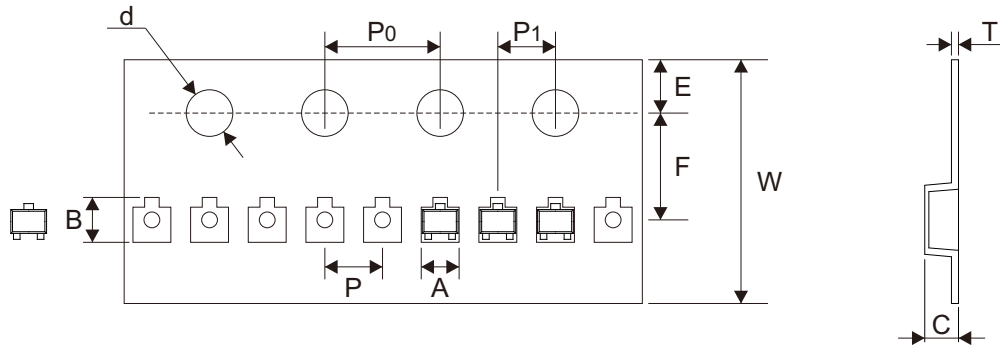


Fig.4 - Power Derating Curve



Reel Taping Specification

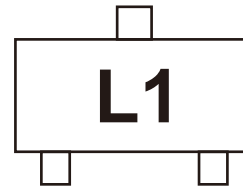


SOT-723	SYMBOL	A	B	C	d	D	D1	D2
	(mm)	1.31 ± 0.05	1.45 ± 0.05	0.61 ± 0.05	1.50 ± 0.10	178.00 ± 2.00	50.00 ± 0.50	13.00 ± 0.25
	(inch)	0.052 ± 0.002	0.057 ± 0.002	0.024 ± 0.002	0.059 ± 0.004	7.008 ± 0.079	1.969 ± 0.020	0.512 ± 0.010

SOT-723	SYMBOL	E	F	P	P0	P1	T	W	W1
	(mm)	1.75 ± 0.10	3.50 ± 0.05	2.00 ± 0.05	4.00 ± 0.10	2.00 ± 0.05	0.20 ± 0.02	8.00 + 0.30 - 0.10	9.50 ± 1.50
	(inch)	0.069 ± 0.004	0.138 ± 0.002	0.079 ± 0.002	0.157 ± 0.004	0.079 ± 0.002	0.008 ± 0.001	0.315 + 0.012 - 0.004	0.374 ± 0.059

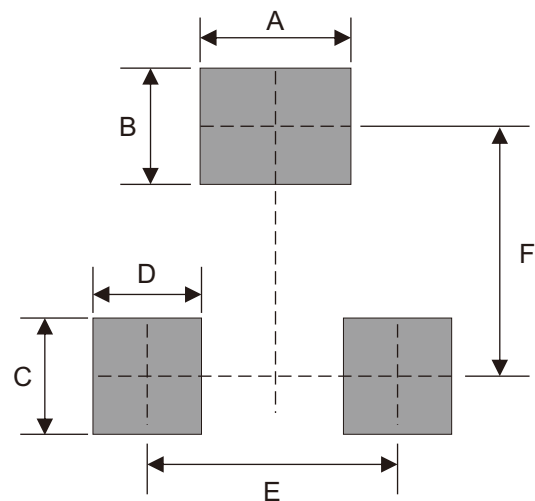
Marking Code

Part Number	Marking Code
ABAT54M-HF	L1



Suggested P.C.B. PAD Layout

SIZE	SOT-723	
	(mm)	(inch)
A	0.42	0.017
B	0.30	0.012
C	0.30	0.012
D	0.32	0.013
E	0.80	0.031
F	1.00	0.039



Standard Packaging

Case Type	REEL PACK	
	REEL (pcs)	Reel Size (inch)
SOT-723	8,000	7