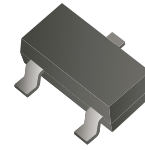


BAT54/A/C/S-P2-HF

RoHS Device
Halogen Free



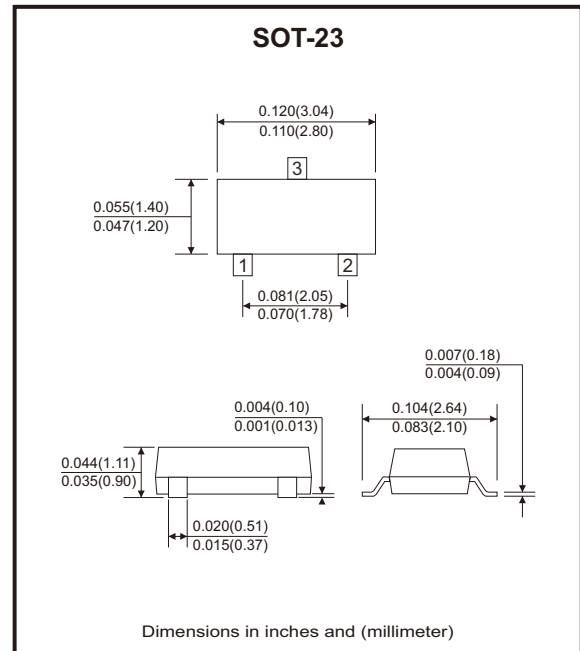
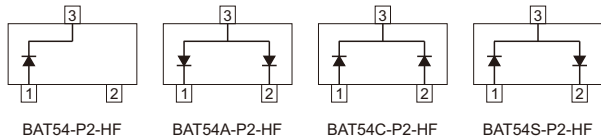
Features

- 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
Repetitive peak reverse voltage	V_{RRM}	30	V
Reverse voltage	V_R	30	V
Forward continuous current	I_o	200	mA
Power dissipation	P_D	200	mW
Non-repetitive peak forward surge current @8.3ms single half sine-wave	I_{FSM}	600	mA
Thermal resistance junction to ambient	$R_{\theta JA}$	500	°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	Symbol	Conditions	Min	Typ	Max	Unit
Forward voltage	V_F	$I_F = 0.1\text{mA}$			0.24	V
	V_F	$I_F = 1\text{mA}$			0.32	
	V_F	$I_F = 10\text{mA}$			0.4	
	V_F	$I_F = 30\text{mA}$			0.5	
	V_F	$I_F = 100\text{mA}$			1	
Reverse breakdown voltage	V_R	$I_R = 100\mu\text{A}$	30			V
Reverse voltage leakage current	I_R	$V_R = 25\text{V}$			2	μA
Junction capacitance	C_J	$V_R = 1\text{V}, f = 1\text{MHz}$		10		pF
Reverse recovery time	t_{rr}	$I_F = I_R = 10\text{mA}, I_{rr} = 0.1 \times I_R, R_L = 100\Omega$			5	ns

Typical Rating and Characteristic Curves (BAT54-P2-HF Series)

Fig.1 - Forward Characteristics

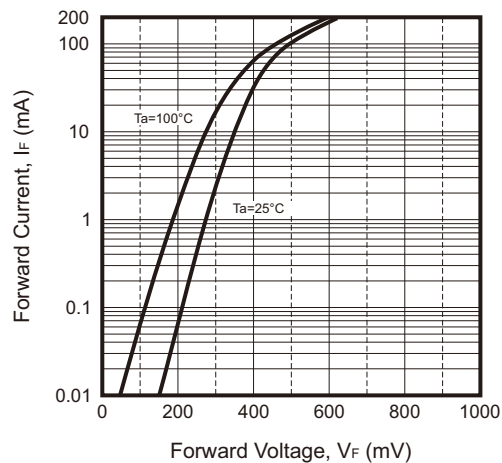


Fig.2 - Reverse Characteristics

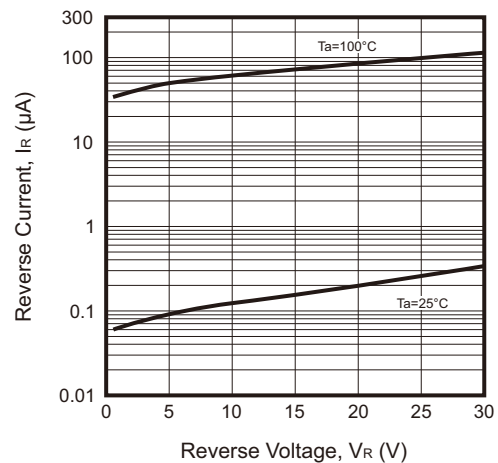


Fig.3 - Capacitance Characteristics

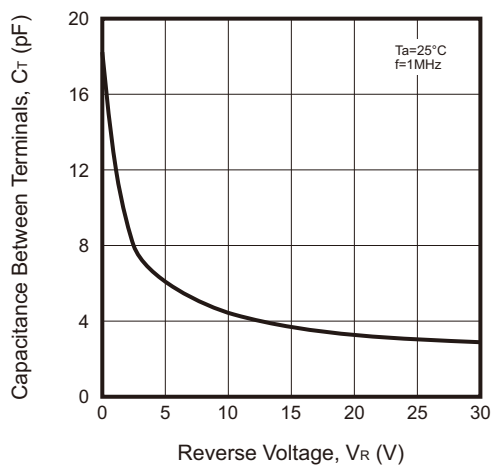
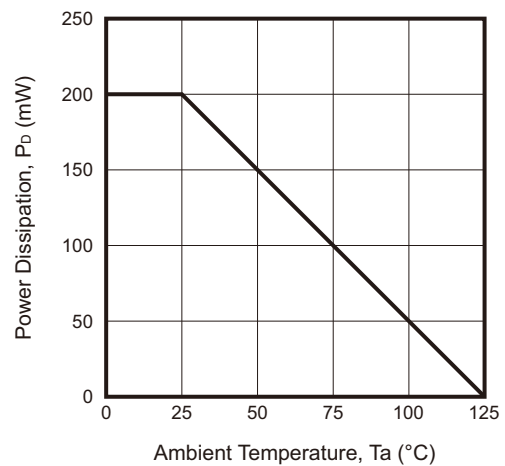
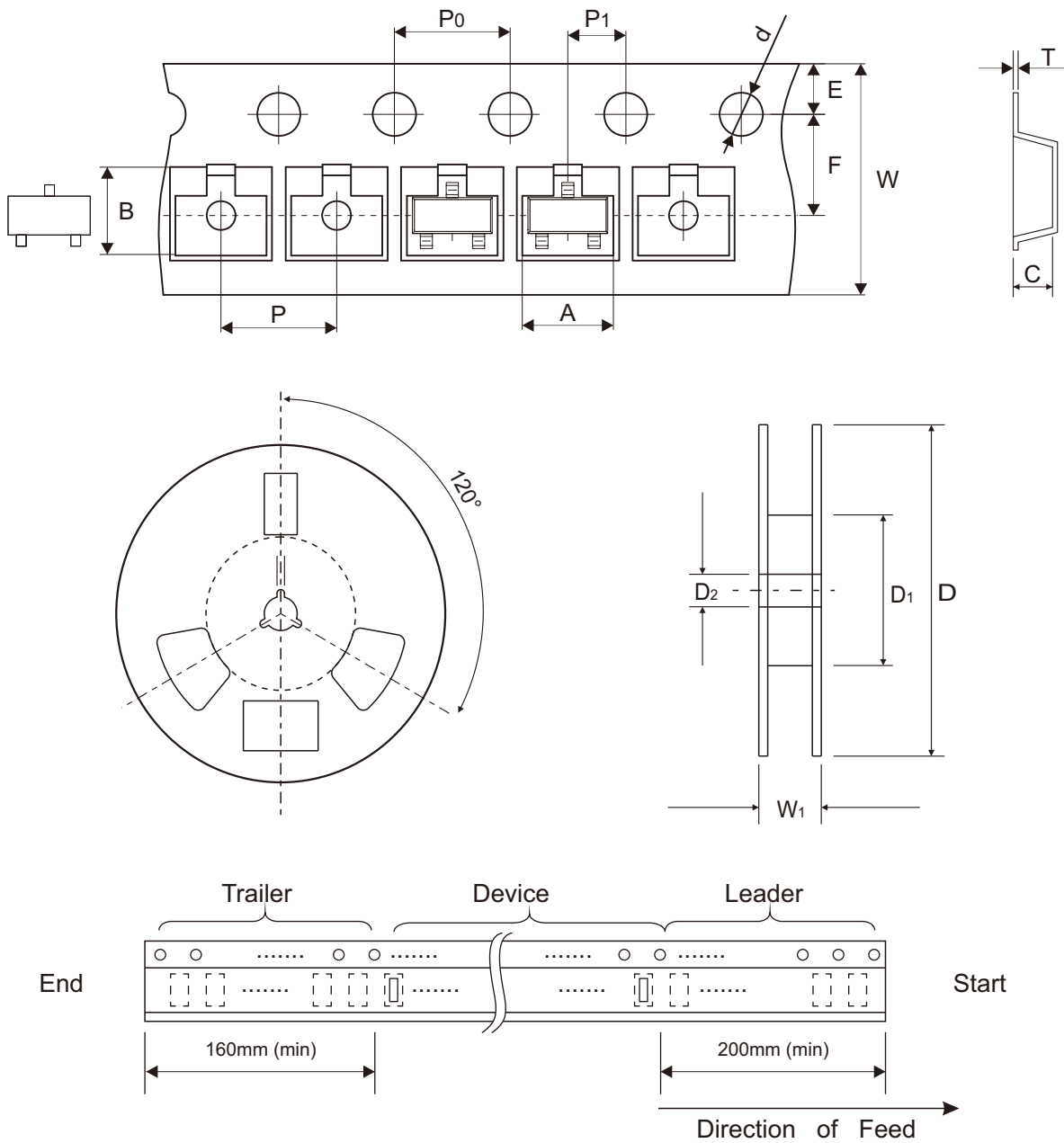


Fig.4 - Power Derating Curve



Reel Taping Specification

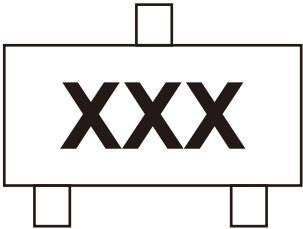


SOT-23	SYMBOL	A	B	C	d	D	D1	D2
	(mm)	3.15 ± 0.10	2.77 ± 0.10	1.22 + 0.08 - 0.10	1.50 + 0.10 - 0.00	178.00 ± 2.00	50.00 ± 0.50	13.00 ± 0.25
	(inch)	0.124 ± 0.004	0.109 ± 0.004	0.048 + 0.003 - 0.004	0.059 + 0.004 - 0.000	7.008 ± 0.079	1.969 ± 0.020	0.512 ± 0.010

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

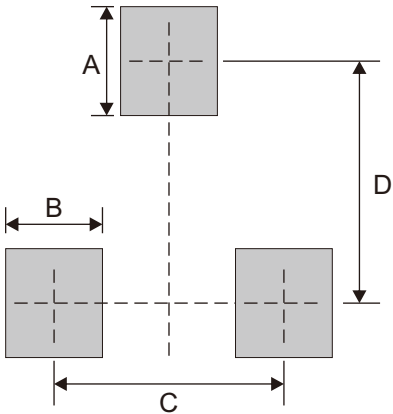
Part Number	Marking Code
BAT54-P2-HF	KL1, L4, L4P
BAT54A-P2-HF	KL2, L42
BAT54C-P2-HF	KL3, L43
BAT54S-P2-HF	KL4, L44



xx/xxx = Product type marking code

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