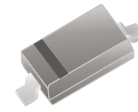


BAT42W-P2-HF

RoHS Device
Halogen Free



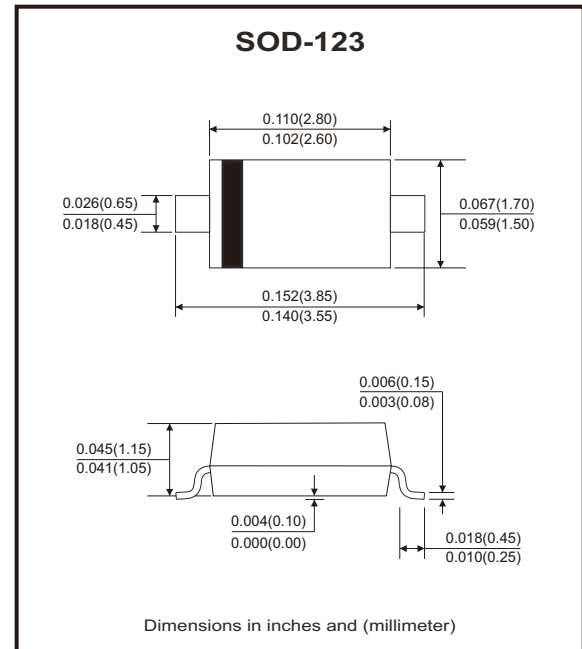
Features

- Low forward voltage schottky rectifier.

Mechanical data

- Case: SOD-123, molded plastic.
- Terminals: Solderable per MIL-STD-750, method 2026.
- Polarity: Indicated by cathode band.
- Mounting position: Any.

Circuit Diagram



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

Parameter	Symbol	Limits	Unit
Peak repetitive peak reverse voltage working	V_{RRM}	30	V
Peak reverse voltage	V_{RM}	30	V
DC blocking voltage	V_R	30	V
RMS reverse voltage	V_{RMS}	21	V
Forward continuous current	I_o	200	mA
Repetitive peak forward current @t < 1s	I_{FRM}	500	mA
Non-repetitive peak forward surge current @8.3ms single half sine-wave	I_{FSM}	4	A
Power dissipation	P_D	200	mW
Thermal resistance from junction to ambient	$R_{\theta JA}$	625	mW/°C
Operating junction temperature range	T_J	-55 to +125	°C
Storage temperature range	T_{STG}	-55 to +125	°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}	30			V
Forward voltage	$I_F = 200mA$	V_F			1	V
	$I_F = 10mA$	V_F			0.4	
	$I_F = 50mA$	V_F			0.65	
Reverse current	$V_R = 25V$	I_R			0.5	μA
	$V_R = 25V, T_J = 100^\circ C$	I_R			100	
Capacitance	$V_R = 1V, f = 1MHz$	C_J			10	pF
Reverse recovery time	$I_F = I_R = 10mA, I_{rr} = 0.1 \times I_R, R_L = 100\Omega$	t_{rr}			5	nS

Typical Rating and Characteristic Curves (BAT42W-P2-HF)

Fig.1 - Forward Characteristics

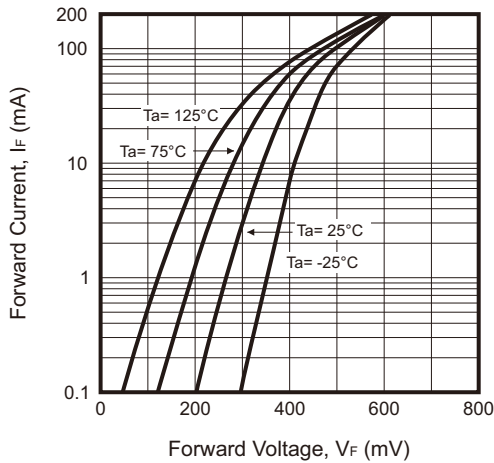


Fig.2 - Reverse Characteristics

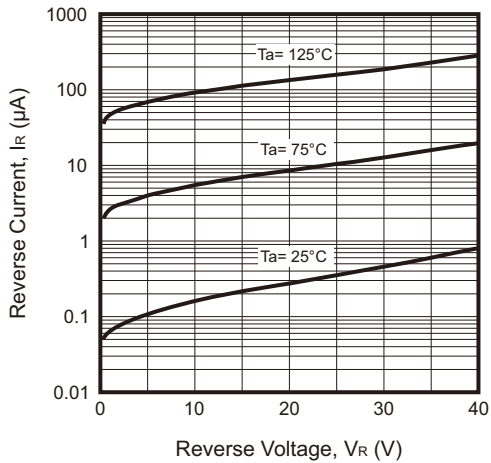


Fig.3 - Capacitance Characteristics

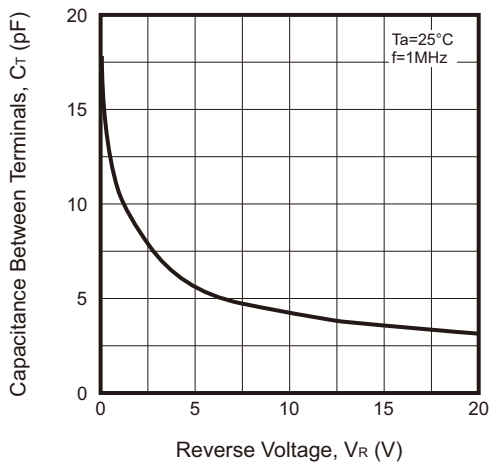
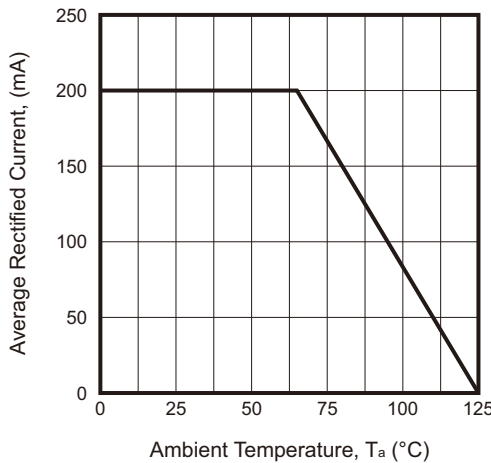
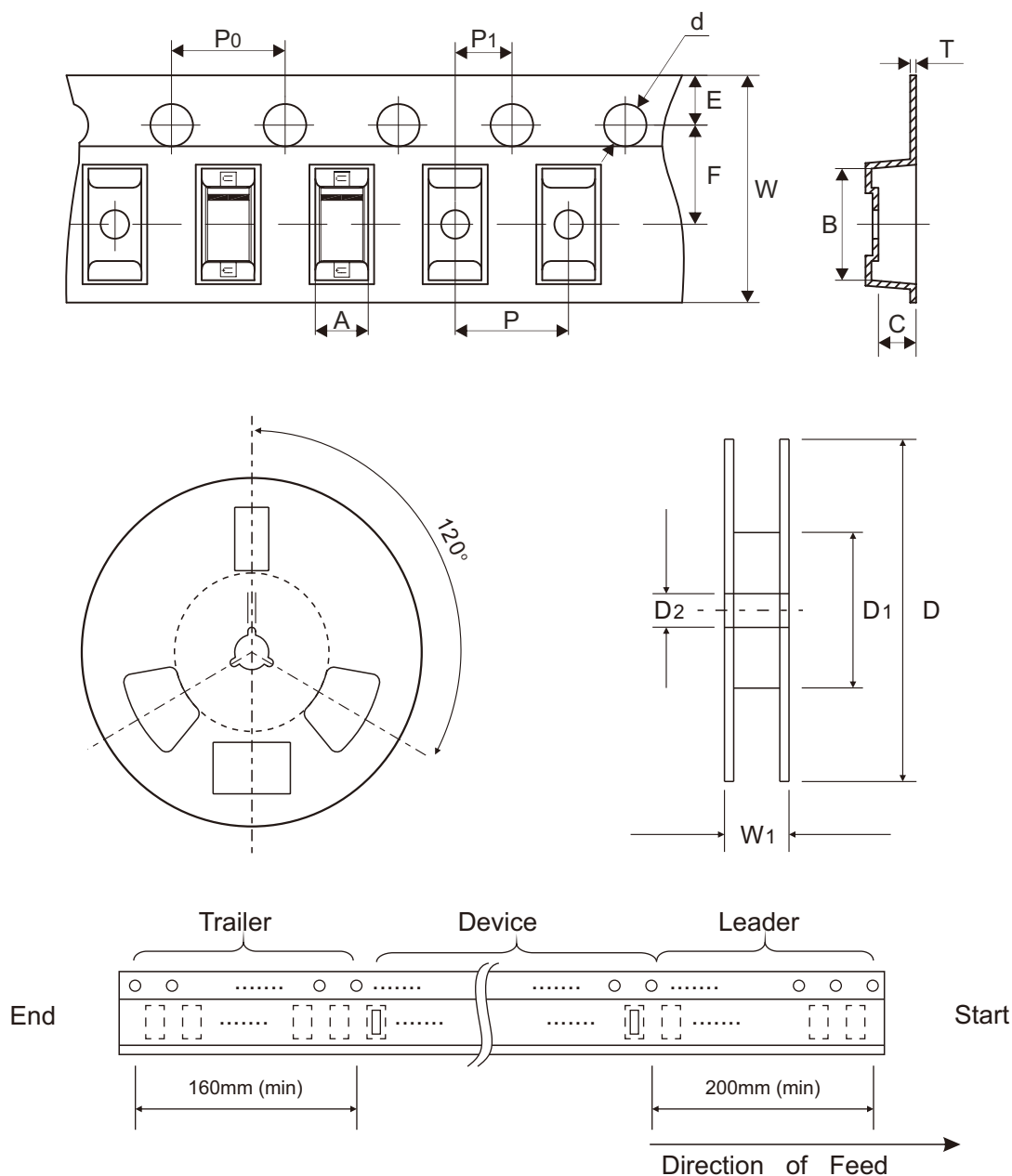


Fig.4 - Forward Current Derating Curve



Reel Taping Specification



SOD-123	SYMBOL	A	B	C	d	D	D1	D2
	(mm)	1.85 ± 0.10	3.94 ± 0.10	1.57 ± 0.10	1.55 ± 0.05	178.00 ± 2.00	50.00 ± 0.50	13.00 ± 0.25
	(inch)	0.073 ± 0.004	0.155 ± 0.004	0.062 ± 0.004	0.061 ± 0.002	7.008 ± 0.079	1.969 ± 0.020	0.512 ± 0.010

SOD-123	SYMBOL	E	F	P	P1	P0	T	W	W1
	(mm)	1.75 ± 0.10	3.50 ± 0.10	4.00 ± 0.10	2.00 ± 0.05	4.00 ± 0.10	0.20 ± 0.02	$8.00 + 0.30 - 0.10$	11.50 ± 1.50
	(inch)	0.069 ± 0.004	0.138 ± 0.004	0.157 ± 0.004	0.079 ± 0.002	0.157 ± 0.004	0.008 ± 0.001	$0.315 + 0.012 - 0.004$	0.453 ± 0.059

Marking Code

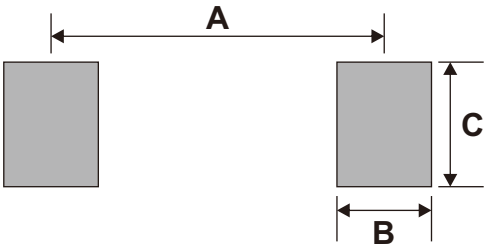
Part Number	Marking Code
BAT42W-P2-HF	S7



 = Cathode band

Suggested P.C.B. PAD Layout

SIZE	SOD-123	
	(mm)	(inch)
A	3.24	0.128
B	0.80	0.031
C	1.00	0.039



Standard Packaging

Case Type	REEL PACK	
	REEL (pcs)	Reel Size (inch)
SOD-123	3,000	7