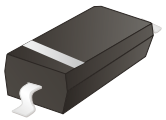
ABAV3004W-HF

RoHS Device
Halogen Free



Features

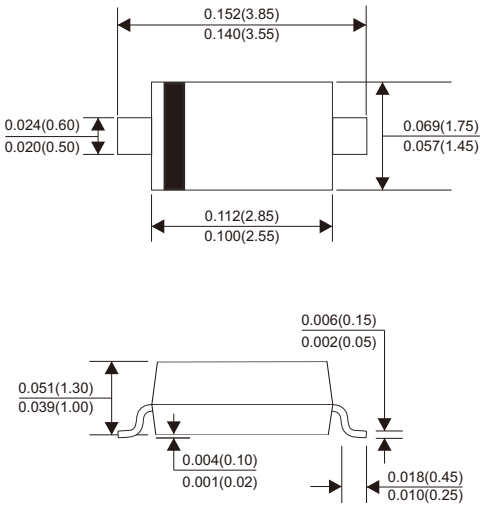
- Fast switching speed.
- High reverse breakdown voltage.
- Low leakage current.
- AEC-Q101 Qualified.

Mechanical data

- Case: SOD-123, molded plastic.
- Terminals: Matte tin-plated leads, solderability per MIL-STD-202, method 208.
- Polarity: Cathode line denotes the cathode end.
- Mounting position: Any

Circuit Diagram

SOD-123



Dimensions in inches and (millimeter)

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

Parameter	Symbol	Value	Unit
Peak repetitive peak reverse voltage	V_{RRM}	350	V
Working peak reverse voltage	V_{RWM}	300	V
DC blocking voltage	V_R	300	V
RMS reverse voltage	V_{RMS}	212	V
Forward continuous current	I_O	225	mA
Repetitive peak forward current	I_{FRM}	625	mA
Non-repetitive peak forward surge current @ t = 8.3ms	I_{FSM}	2	A
Power dissipation	P_D	400	mW
Thermal resistance junction to air (Note 1)	$R_{\theta JA}$	270	°C/W
Thermal resistance junction to case (Note 1)	$R_{\theta JC}$	170	°C/W
Thermal resistance junction to lead (Note 1)	$R_{\theta JL}$	190	°C/W
Operating junction temperature range	T_J	-65 to +150	°C
Storage temperature range	T_{STG}	-65 to +150	°C

Notes: 1. The data tested by surface mounted on a 1 inch² FR-4 board with 2OZ copper.

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

Parameter	Conditions	Symbol	Min.	Typ.	Max.	Unit
Reverse breakdown voltage	I_R = 150μA	V_{BR}	350			V
Forward voltage	I_F = 20mA	V_F		0.78	0.87	V
	I_F = 100mA	V_F		0.93	1.00	
	I_F = 200mA	V_F		1.03	1.25	
Maximum peak reverse current	V_R = 240V, T_J = 25°C	I_R		30	100	nA
	V_R = 240V, T_J = 150°C	I_R		35	100	μA
Junction capacitance	V_R = 0V, f = 1MHz	C_J		1	5	pF
Reverse recovery time	I_F = I_R = 30mA, I_{rr} = 0.1 x I_R, R_L = 100Ω	t_{rr}			50	nS

Typical Rating and Characteristic Curves (ABAV3004W-HF)

Fig.1 - Typical Reverse Characteristics

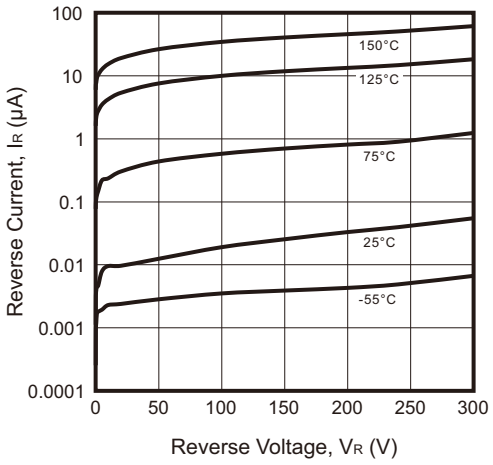


Fig.2 - Typical Forward Characteristics

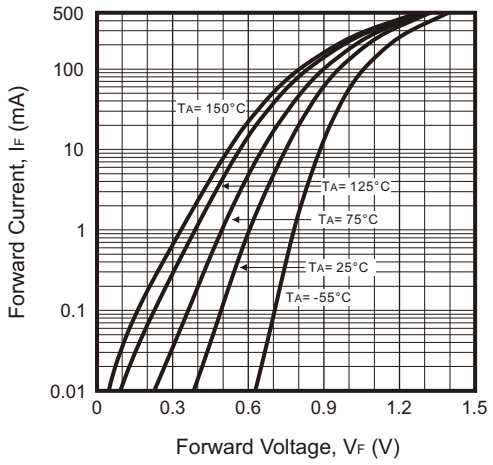


Fig.3 - Capacitance vs. Reverse Voltage

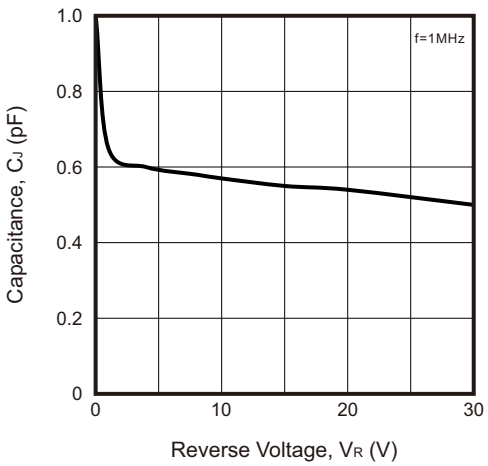
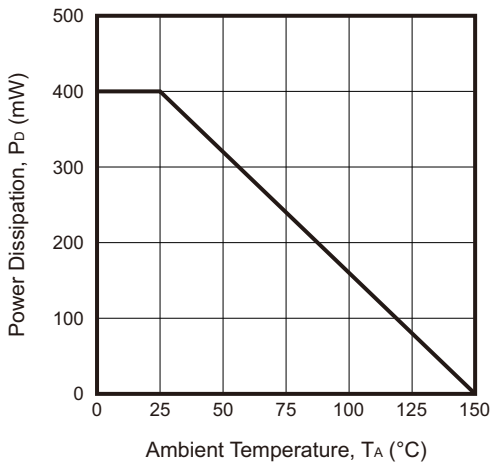
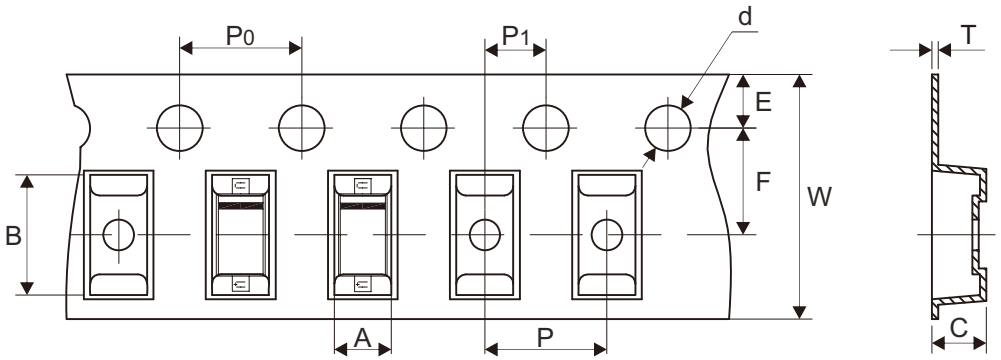
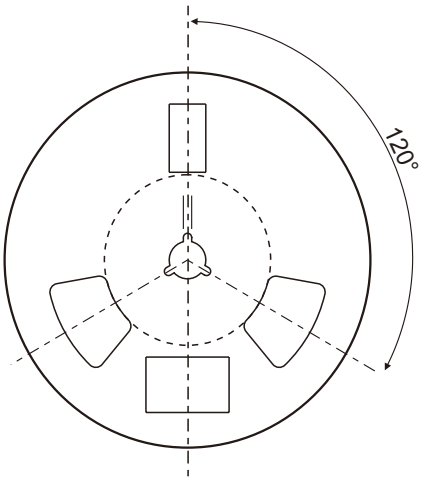


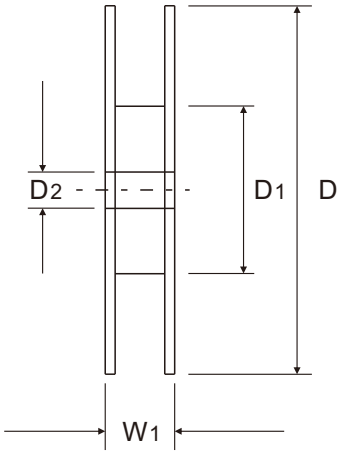
Fig.4 - Power Derating Curve

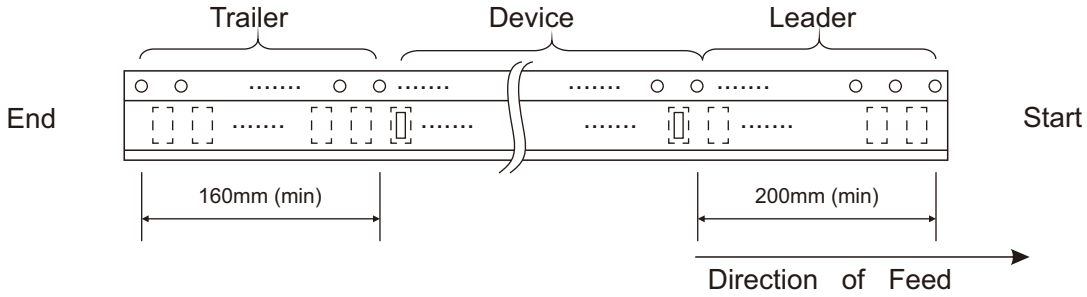


Reel Taping Specification









	SYMBOL	A	B	C	d	D	D1	D2
SOD-123	(mm)	1.85 ± 0.10	3.94 ± 0.10	1.57 ± 0.10	1.55 ± 0.05	178.00 ± 1.00	54.00 ± 0.50	13.00 ± 0.50
	(inch)	0.073 ± 0.004	0.155 ± 0.004	0.062 ± 0.004	0.061 ± 0.002	7.008 ± 0.039	2.126 ± 0.020	0.512 ± 0.020

	SYMBOL	E	F	P	P0	P1	T	W	W1
SOD-123	(mm)	1.75 ± 0.10	3.50 ± 0.05	4.00 ± 0.10	4.00 ± 0.10	2.00 ± 0.05	0.203 ± 0.013	8.00 + 0.30 − 0.10	12.50 ± 1.00
	(inch)	0.069 ± 0.004	0.138 ± 0.002	0.157 ± 0.004	0.157 ± 0.004	0.079 ± 0.002	0.008 ± 0.001	0.315 + 0.012 − 0.004	0.492 ± 0.039

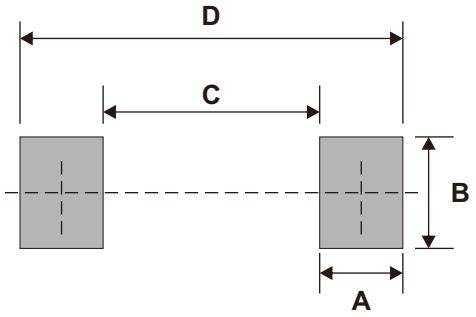
Marking Code

Part Number	Marking Code
ABAV3004W-HF	4P

= Cathode band

Suggested P.C.B. PAD Layout

SIZE	SOD-123	
	(mm)	(inch)
A	0.91	0.036
B	1.22	0.048
C	2.36	0.093
D	4.19	0.165



Standard Packaging

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