DACO

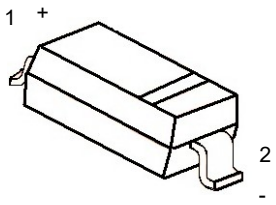
BAV19W/BAV20W/BAV21W

500mW SOD-123 Fast Switching Diode

Features

- Fast Switching Device (TRR <50nS)
- Power Dissipation of 500mW
- High Stability and High Reliability
- Low reverse leakage

SOD-123



Mechanical Data

- SOD-123 Small Outline Plastic Package
- Polarity: Color band denotes cathode end
- Epoxy UL: 94V-0
- Mounting Position: Any

MARKING: BAV19W: A8
BAV20W: T2
BAV21W: T3

Maximum Ratings & Thermal Characteristics (Ratings at 25℃ ambient temperature unless otherwise specified.)

Parameters	Symbol	Value			Unit
		BAV19W	BAV20W	BAV21W	
Reverse Voltage	VR	120	200	250	V
Peak Reverse Voltage	V_{RM}	100	150	250	V
Power Dissipation	Pd	500			mW
Operating junction temperature	Tj	150			℃
Storage temperature range	T_{STG}	-65-+150			℃
Thermal Resistance from Junction to Ambient	$R_{\theta JA}$	250			℃/W
Working Inverse Voltage	WIV	75			V
Average Rectified Current	I_O	200			mA
Non-repetitive Peak Forward Current	I_{FM}	400			mA
Peak Forward Surge Current @tp=1ms; TA=25℃	I_{FSM}	2.5			A

Valid provided that electrodes are kept at ambient temperature.

Electrical Characteristics (Ratings at 25℃ ambient temperature unless otherwise specified.)

Parameters	Symbol	Test Condition	Limits		Unit
			Min	Max	
Reverse Voltage	VRB	IB=100uA BAV19W BAV20W BAV21W	120 200 250	---	V
Reverse Leakage Current	IR	VR=100V BAV19W VR=150V BAV20W VR=200V BAV21W	---	0.1	uA
Forward Voltage	VF	IF=100mA	---	1.00	V
		IF=200mA	---	1.25	
Reverse Recovery Time	TRR	IF= 30mA, IR=30mA RL=100Ω IRR=3mA	---	50	nS
Capacitance	C	VR=0V, f=1MHZ	---	5	pF

Typical Characteristics

Fig.1 Forward Characteristics

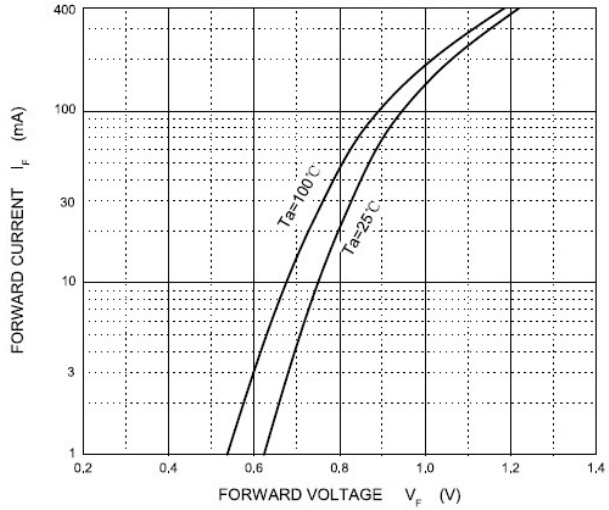


Fig.2 Reverse Characteristics

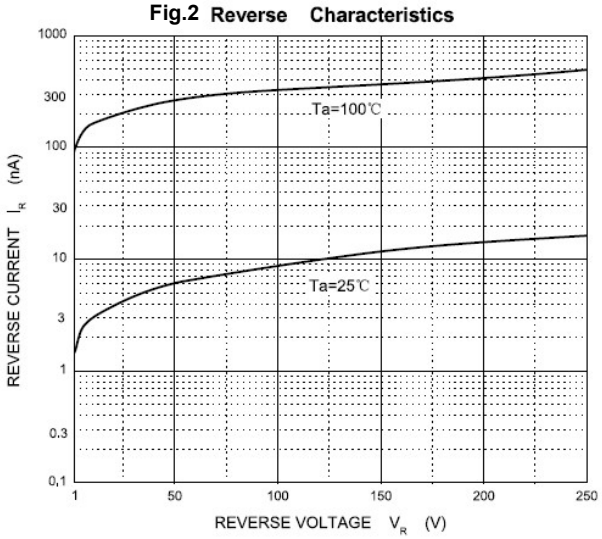


Fig.3 Capacitance Characteristics

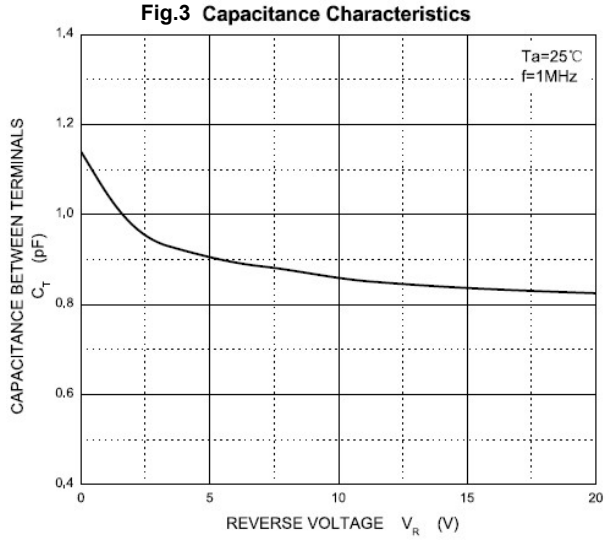
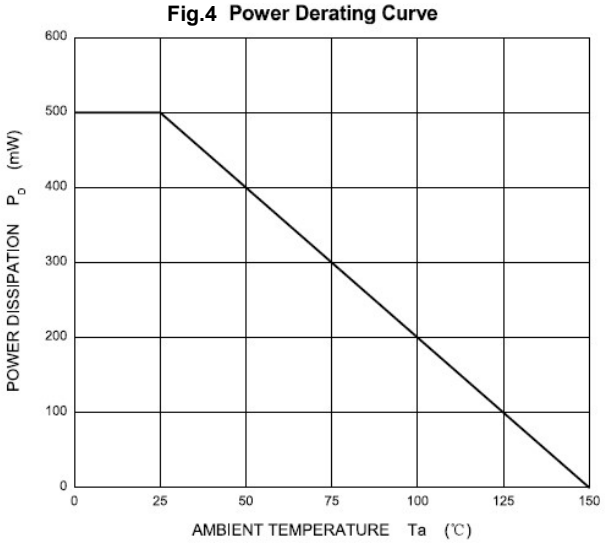
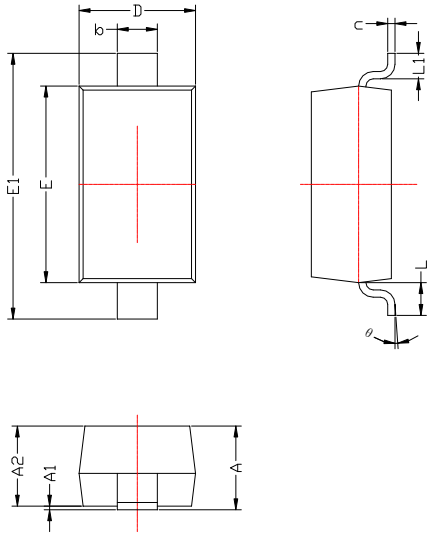


Fig.4 Power Derating Curve



SOD-123 PACKAGE OUTLINE

Plastic surface mounted package

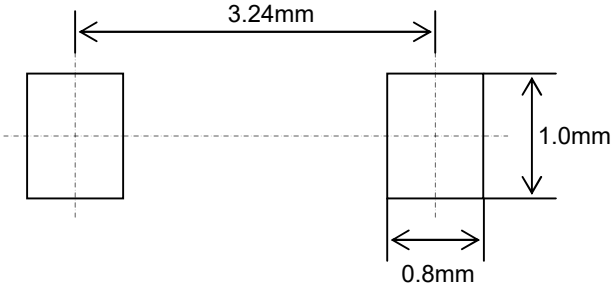


mm

SYMBOL	DIMENSIONS	
	MIN.	MAX.
A	1.050	1.250
A1	0.000	0.100
A2	1.050	1.150
b	0.450	0.650
c	0.080	0.150
D	1.500	1.700
E	2.600	2.800
E1	3.550	3.850
L	0.500REF	
L1	0.250	0.450
θ	0°	8°

Precautions: PCB Design

Recommended land dimensions for SOD-123 diode. Electrode patterns for PCBs



Unspecified dimension tolerance: ±0.5 mm

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