

# BAW56/BAV70/BAV99

## BAW56/BAV70/BAV99 Plastic-Encapsulate Switching Diode

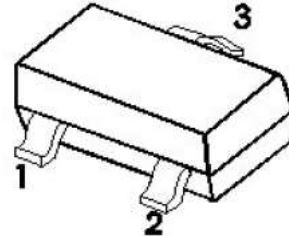
### General description

SOT-23 Plastic-Encapsulate Switching Diode

SOT-23

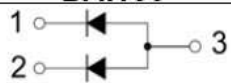
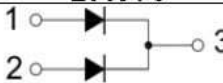
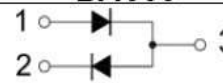
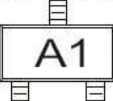
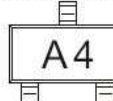

### Features

- Fast Switching Device (TRR <6nS)
- Power Dissipation of 225mW
- High Stability and High Reliability
- Low reverse leakage



### Mechanical Data

- SOT-23 Small Outline Plastic Package
- Epoxy UL: 94V-0
- Mounting Position: Any

BAW56	BAV70	BAV99
		
MARKING:A1	MARKING:A4	MARKING:A7
		

### Maximum Ratings & Thermal Characteristics (Ratings at 25°C ambient temperature unless otherwise specified.)

Parameters	Symbol	Value	Unit
Reverse Voltage	VR	70	V
Power Dissipation	Pd	225	mW
Operating junction temperature	Tj	150	°C
Storage temperature range	Ts	-65-+150	°C
Average Rectified Current	IO	200	mA
Non-repetitive Peak Forward Current	IFM	400	mA
Peak Forward Surge Current @tp=1ms; TA=25°C	IFSM	2.0	A
Typical thermal resistance	RθJA	500	°C/W

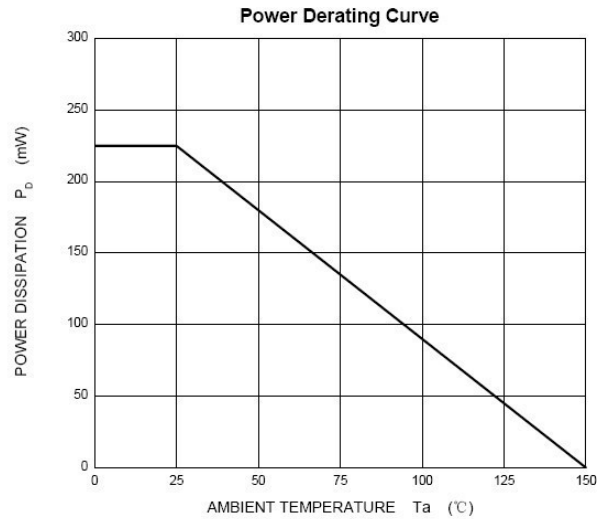
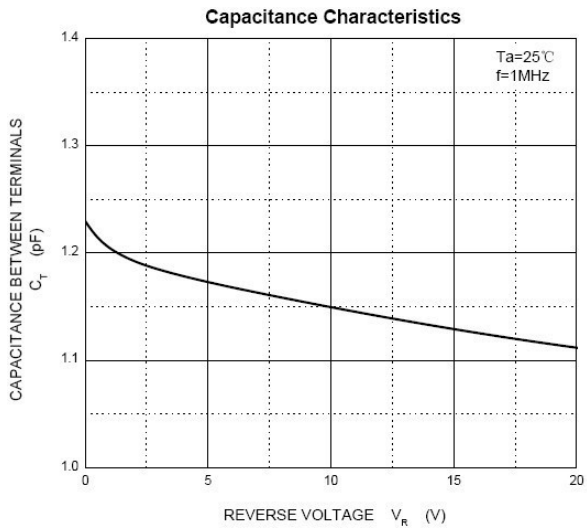
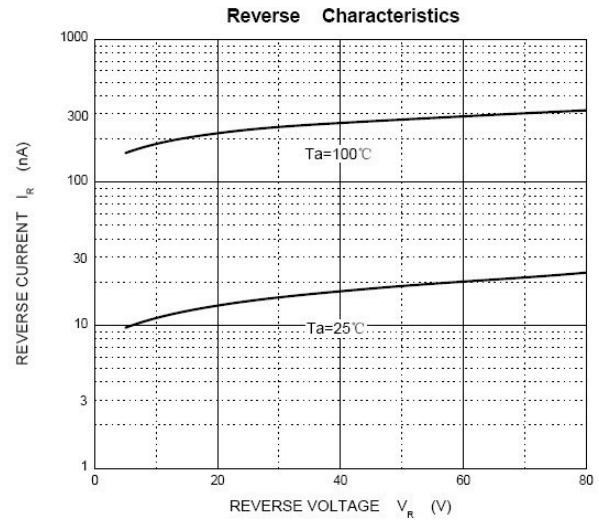
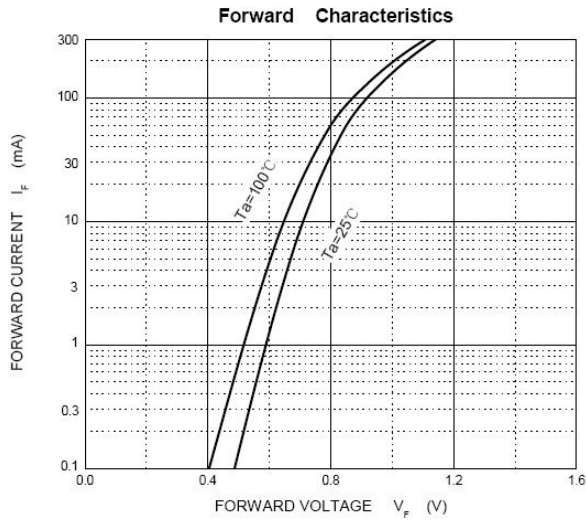
Valid provided that electrodes are kept at ambient temperature.

### Electrical Characteristics (TA = 25°C unless otherwise noted)

Symbols	Parameter	Test Condition	Limits		Unit
			Min	Max	
VRB	Reverse Voltage	IB=100uA	70	---	V
IR	Reverse Leakage Current	VR=70V	---	2.5	uA
VF	Forward Voltage	IF=1mA	---	0.715	V
		IF=10mA	---	0.855	
		IF=50mA	---	1.00	
		IF=150mA	---	1.25	
TRR	Reverse Recovery Time	IF= IR=10mA,RL=100Ω IRR=0.1xIR	---	6	nS
CT	Capacitance	VR=0V, f=1MHZ	---	1.5	pF

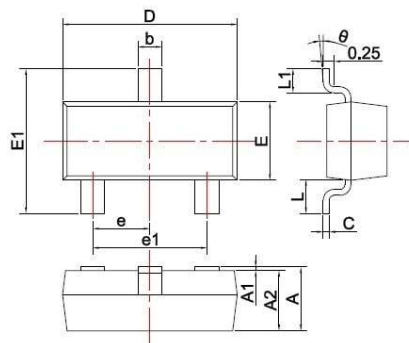
# BAW56/BAV70/BAV99

## Typical Characteristics



## SOT-23 PACKAGE OUTLINE

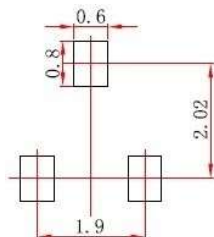
Plastic surface mounted package



SYMBOL	DIMENSIONS	
	MIN	MAX
A	0.900	1.150
A1	0.000	0.100
A2	0.900	1.050
b	0.300	0.500
c	0.080	0.150
D	2.800	3.000
E	1.200	1.400
E1	2.250	2.550
e	0.950TYP	
e1	1.800	2.000
L	0.550REF	
L1	0.300	0.500
θ	0°	8°

Unit: mm

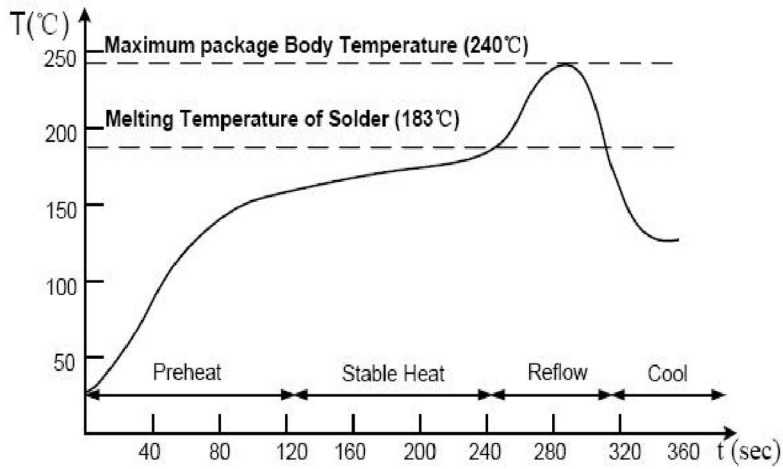
PCB Design(Recommended land dimensions for SOT-23 diode. Electrode patterns for PCBs)



- Note:
1. Controlling dimension: In millimeters.
  2. General tolerance:  $\pm 0.05\text{mm}$ .
  3. The pad layout is for reference purposes only.

# BAW56/BAV70/BAV99

## Suggested Soldering Temperature Profile

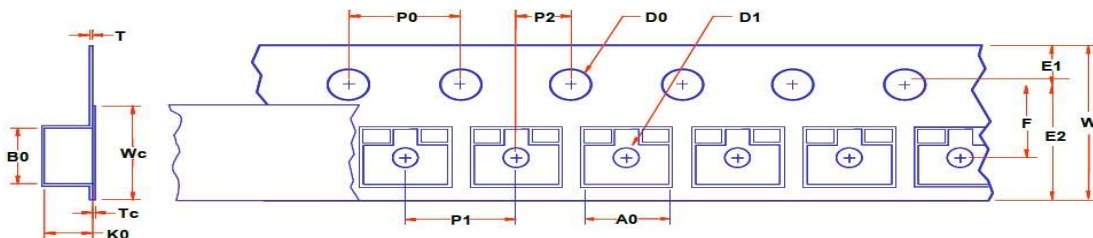


### Note

- Recommended reflow methods: IR, vapor phase oven, hot air oven, wave solder.
- The device can be exposed to a maximum temperature of 265°C for 10 seconds.
- Devices can be cleaned using standard industry methods and solvents.
- If reflow temperatures exceed the recommended profile, devices may not meet the performance requirements.

## Package Information

### Carrier Dimension(mm)



Dimensions are in millimeter														
Pkg type	A0	B0	W	D0	D1	E1	E2	F	P1	P0	K0	T	Wc	Tc
SOT23 (8 mm)	3.40 +/-0.10	2.84 +/-0.10	7.95 +/-0.2	1.47 +/-0.05	1.0 +/-0.1	1.75 +/-0.10	6.25 min	3.50 +/-0.05	4.0 +/-0.1	3.99 +/-0.1	1.27 +/-0.10	0.25 +/-0.05	5.3 +/-0.1	0.05 +/-0.02

## Package Specifications

Package	Reel Size	Reel DIA. (mm)	Q'TY/Reel (Kpcs)	Box Size (mm)	QTY/Box (Kpcs)	Carton Size (mm)	Q'TY/Carton (Kpcs)
SOT-23	7'	178	3	180*118*185	30	380*375*210	180

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