

SuperDiode – 6nS, 225mW, 200mA SOT-23 Plastic-Encapsulate Switching Diode

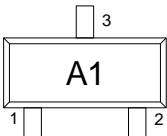
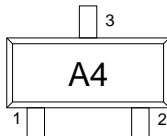
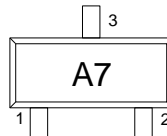
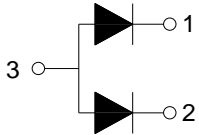
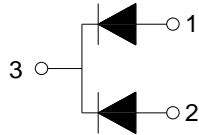
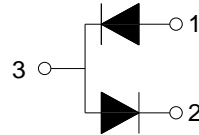
1. Features

- Fast switching device ($T_{rr} < 6ns$)
- Power dissipation of 225mW
- High stability and high reliability
- Low reverse leakage

2. Mechanical Data

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

3. Marking and Circuit

BAW56	BAV70	BAV99
		
		

4. Specification

Absolute Maximum Rating & Thermal Characteristics

Ratings at 25 °C ambient temperature unless otherwise specified.

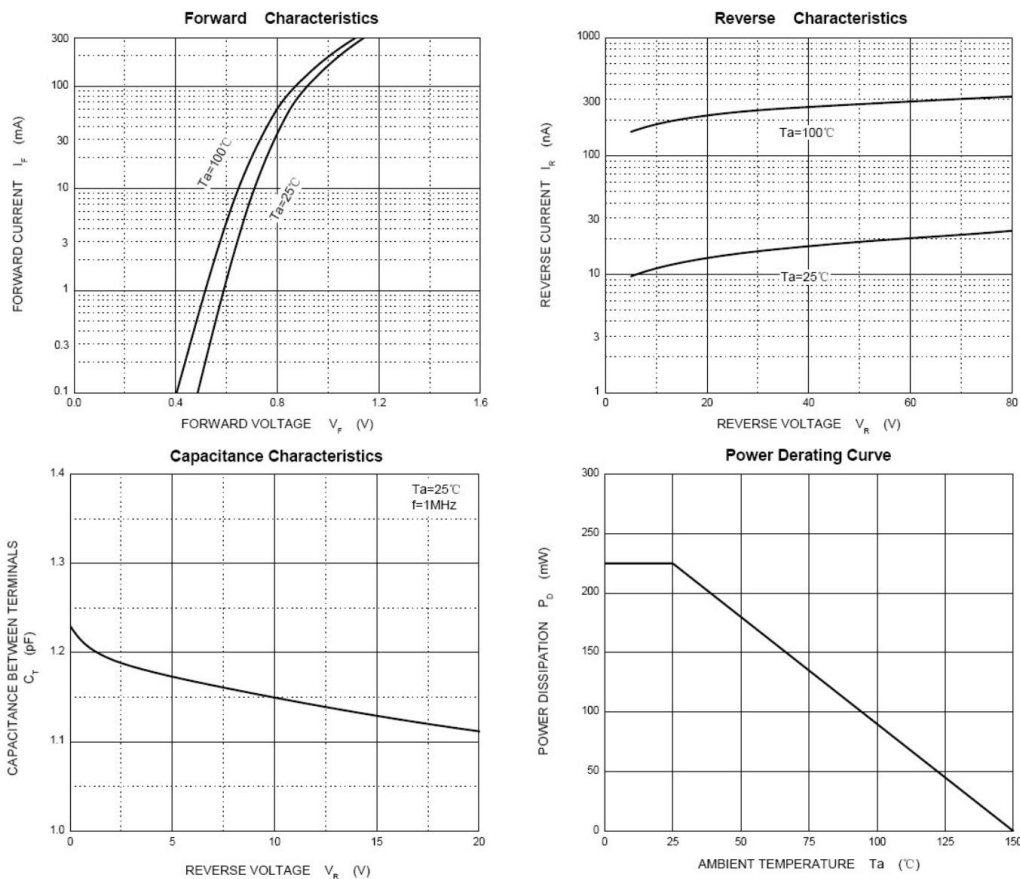
Parameters	Symbol	Limit	Unit
Reverse voltage	VR	70	V
Power Dissipation	PD	225	mW
Operating junction temperature	Tj	150	°C
Storage temperature range	Ts	-65~150	°C
Average rectified current	IO	200	mA
Non-repetitive peak forward current	IFM	400	mA
Peak forward surge current @tp=1ms; TA=25°C	IFSM	2.0	A
Typical thermal resistance	RθJA	500	°C/W

Electrical Characteristics

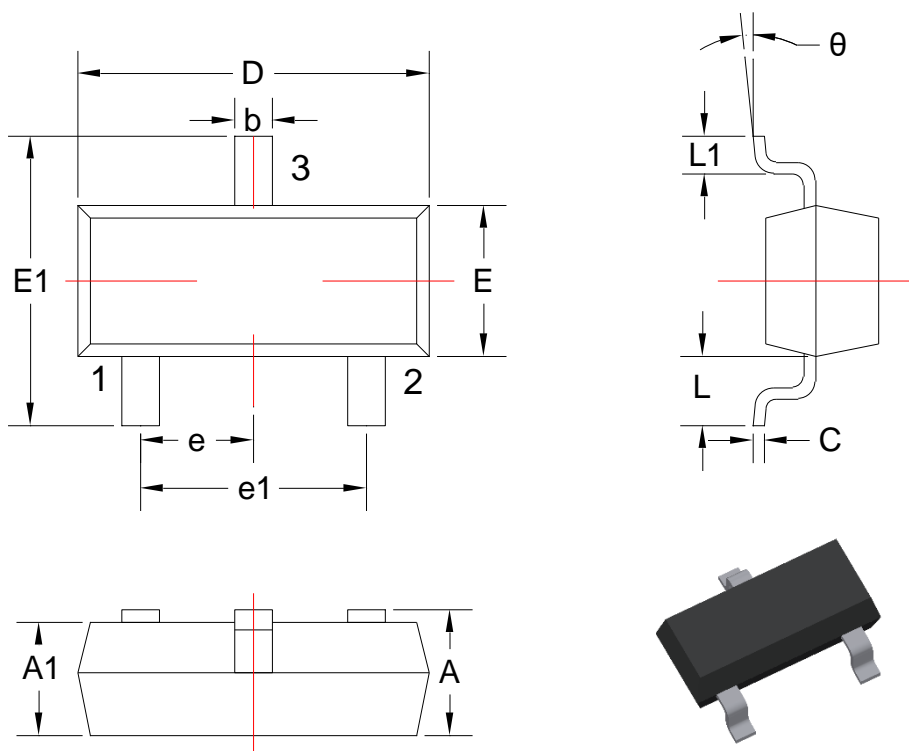
At TA = 25°C unless otherwise specified

Parameter	Symbol	Conditions	Min.	Typ.	Max.	Units
Maximum forward voltage	V _F	IF=1mA			0.715	V
		IF=10mA			0.855	
		IF=50mA			1.00	
		IF=150mA			1.25	
Maximum reverse breakdown voltage	V _{RB}	IR=100uA	70			V
Maximum reverse leakage current	I _R	VR=70V			2.5	uA
Type junction capacitance	C _j	VR=1.0V, f=1MHz			1.5	pF
Reverse recovery time	T _{RR}	IF=IR=10mA Irr=0.1 x IR, RL=100Ω			6	nS

5. Typical Characteristic

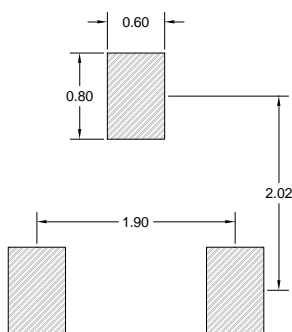


6. Dimension and Patterns (SOT-23)



Units: mm

Symbol	Dimensions		Symbol	Dimensions	
	Min.	Max.		Min.	Max.
A	0.900	1.150	E1	2.250	2.550
A1	0.900	1.050	e	0.950TYP	
b	0.300	0.500	e1	1.800	2.000
c	0.080	0.150	L	0.550REF	
D	2.800	3.00	L1	0.300	0.500
E	1.200	1.400	θ	0°	8°



Note:

1. Controlling dimension: in millimeters
2. General tolerance: ±0.05mm
3. The pad layout is for reference only
4. Unit: mm

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