BORN SEMICONDUCTOR

BAV199

Fast Switching Diode

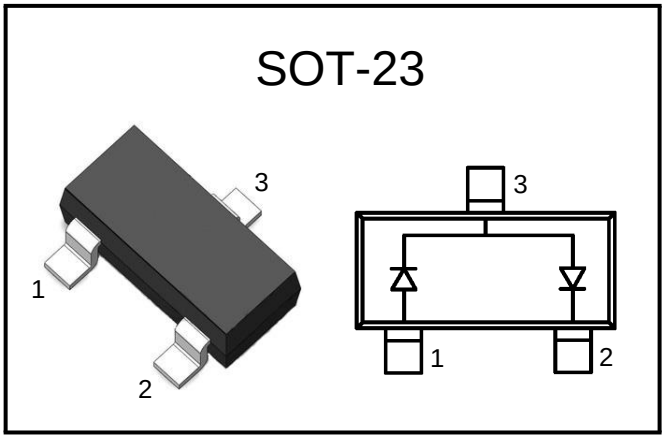
Features

- Fast Switching Speed
- High Conductance
- Low forward voltage
- Fast reverse recovery time

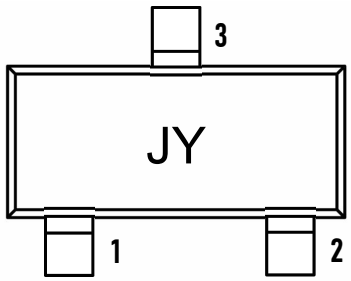
Description

- SOT-23 Small Outline Plastic Package
- Polarity: Color band denotes cathode end
- Mounting Position: Any

Package



Marking



Ordering information

Order code	Package	Marking	Base qty	Delivery mode
BAV199	SOT-23	JY	3K	Tape and reel

Absolute Maximum Ratings @T_A=25°C unless otherwise noted

Symbol	Parameter	Value	Unit
V_{RRM}	Repetitive Peak Reverse Voltage	70	V
V_R	DC blocking voltage		
I_{FM}	Forward continuous current	500	mA
I_O	Average Rectified Output Current	215	mA
I_{FSM}	Non-Repetitive Peak Forward Surge Current @t=8.3ms	1.0	A
P_d	Power Dissipation	200	mW
T_J	Operating Junction Temperature	-55 to +150	°C
T_{STG}	Storage Temperature Range	-55 to +150	

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Electrical Characteristics @T_A=25°C unless otherwise noted

Symbol	Parameter	Test Conditions	Limits		Unit
			Min.	Max.	
V_{BR}	Reverse Breakdown Voltage	I_R=100uA	70	–	V
I_R	Reverse Leakage Current	V_R=70V	–	5	nA
V_F	Forward Voltage	I_F=1mA	–	0.9	V
		I_F=10mA	–	1.0	
		I_F=50mA	–	1.1	
		I_F=150mA	–	1.25	
C_D	Diode capacitance	V_R=0V, f=1MHZ	–	2	pF
T_{RR}	Reverse Recovery Time	I_F=I_R=10mA	–	3	us

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Typical Performance Characteristics(T_J = 25 °C, unless otherwise noted)

Figure 1: Forward Characteristics

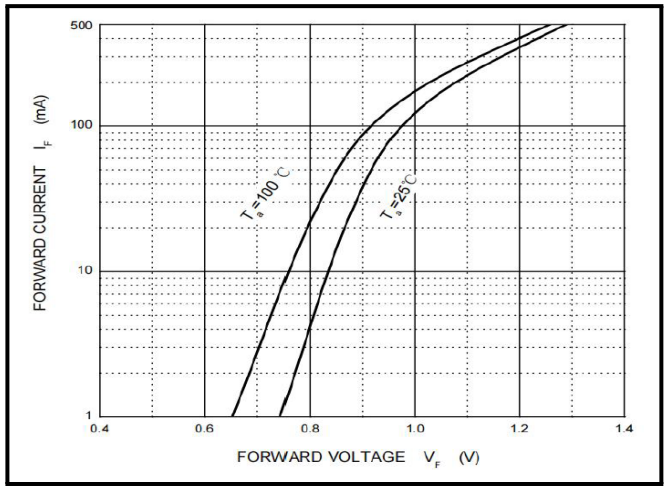


Figure 2: Reverse Characteristics

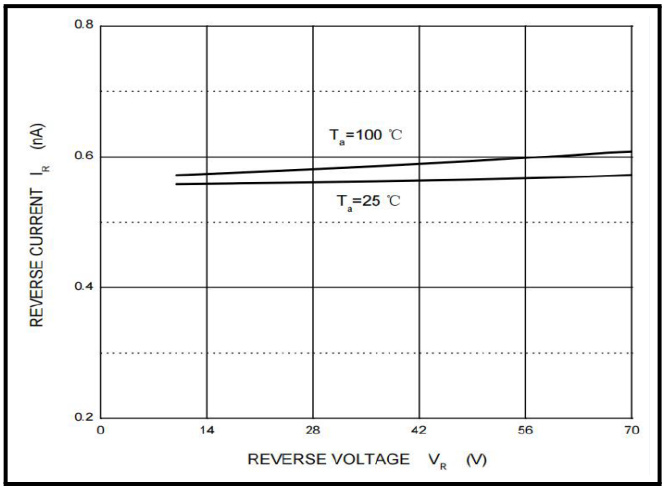


Figure 3: Capacitance Characteristics

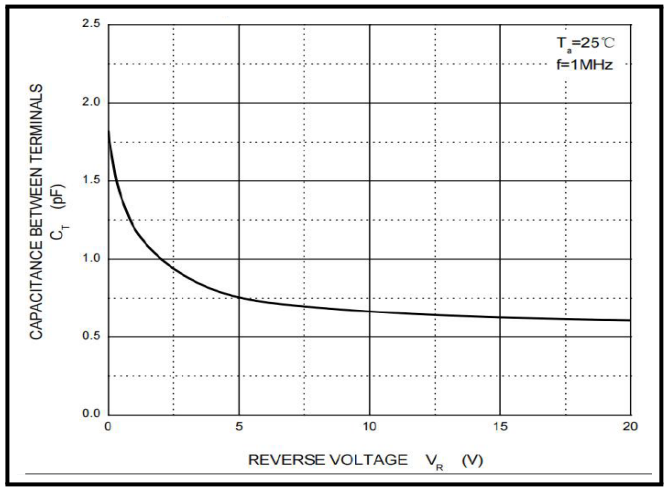
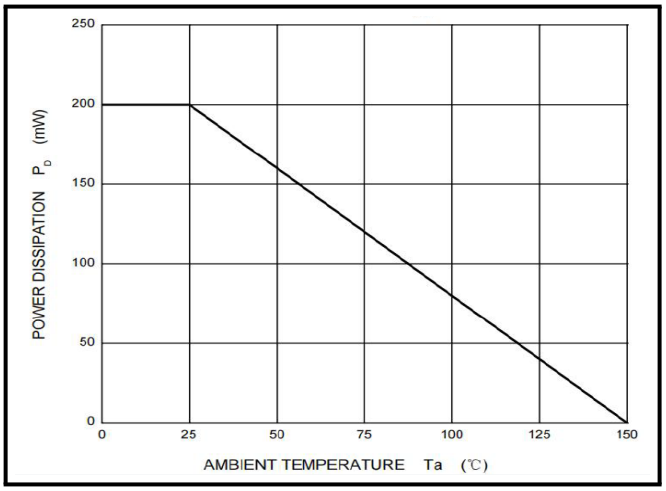


Figure 4: Power Derating Curve



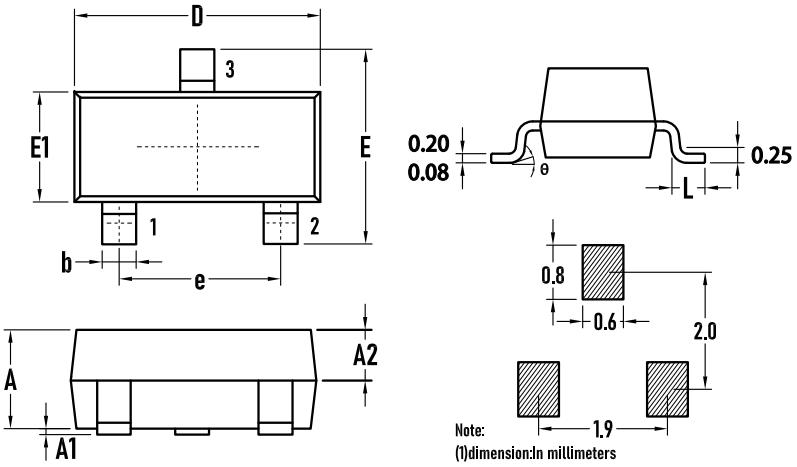
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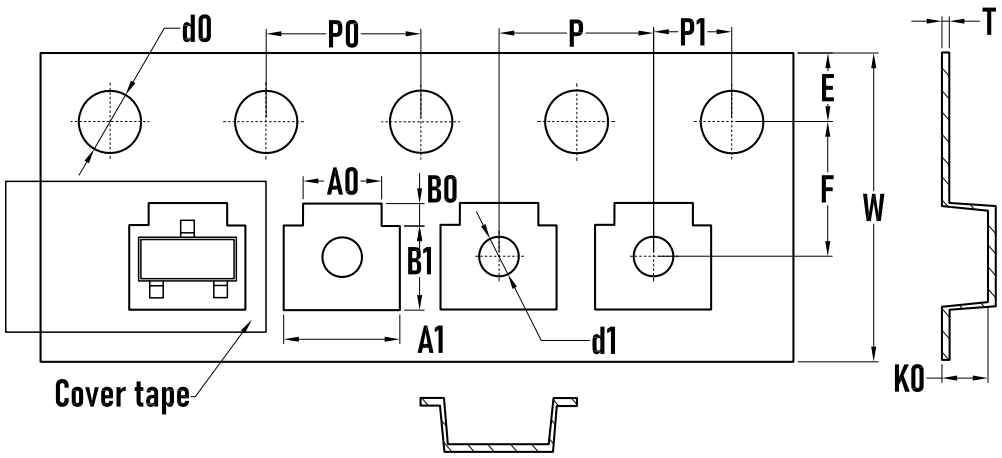
Fast Switching Diode

Outline Drawing - SOT-23



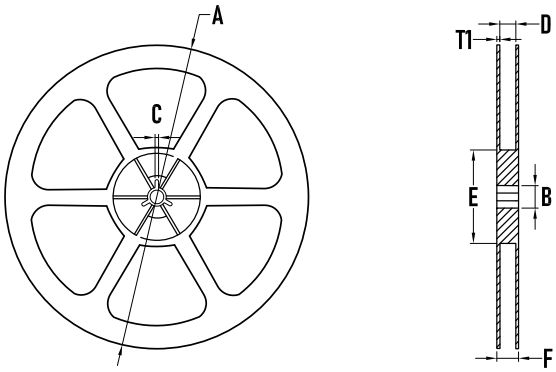
SYMBOL	MILLIMETER		
	MIN.	Typ.	MAX.
A	0.90	1.00	1.10
A1	0.01	–	0.10
A2	0.50	0.60	0.70
D	2.80	2.90	3.00
b	0.25	0.35	0.45
E	2.10	2.30	2.50
E1	1.20	1.30	1.40
e	1.80	1.90	2.00
L	0.25	0.35	0.45
θ	0	–	8°

Packaging Tape - SOT-23



SYMBOL	MILLIMETER
A0	2.10±0.10
A1	3.10±0.10
B0	0.65±0.10
B1	2.75±0.10
d0	1.55±0.10
d1	1.00±0.05
E	1.75±0.10
F	3.50±0.10
K0	1.10±0.10
P	4.00±0.10
P0	4.00±0.10
P1	2.00±0.10
W	8.00±0.30
T	0.20 ±0.05

Packaging Reel



SYMBOL	MILLIMETER
A	177.8±0.2
B	3.1
C	13.50
D	9.6±0.3
E	75±0.2
F	12.3±0.3
T1	1.0±0.2
Quantity	3000PCS

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