

BAV99S

Fast Switching Diode

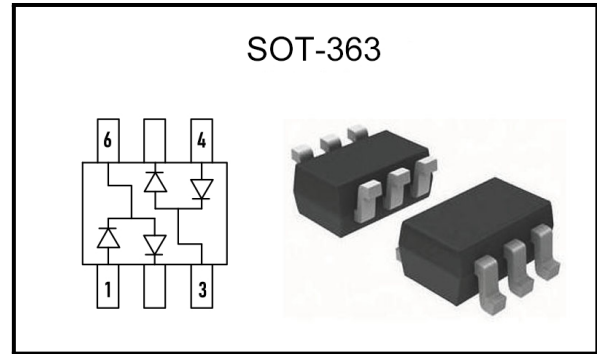
Features

- Fast Switching Device
- High Conductance.
- For General Purpose Switching Applications.
- Surface Mount Package Ideally Suited for Automatic Insertion.

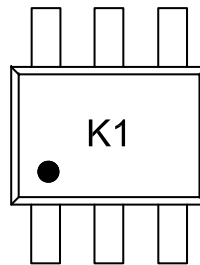
Description

- SOT-363 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
BAV99S	SOT-363	K1	3K	Tape and reel

Maximum Ratings @ $T_A=25^{\circ}\text{C}$ unless otherwise noted

Symbol	Parameter	Value	Unit
V_R	Reverse Voltage	75	V
V_{RRM}	Peak Repetitive Peak Reverse Voltage	85	V
I_F	Forward Current	150	mA
I_{FRM}	Repetitive Peak Forward Current	0.45	A
I_{FSM}	Non-repetitive Peak Forward Surge Current@8.3mS	2.5	A
P_d	Power Dissipation	200	mW
$R_{\theta JA}$	Thermal Resistance From Junction To Ambient	625	$^{\circ}\text{C}/\text{W}$
T_J	Operating junction temperature range	-40 to +150	$^{\circ}\text{C}$
T_{STG}	Storage temperature range	-55 to +150	$^{\circ}\text{C}$



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Electrical Characteristics @ $T_A=25^{\circ}\text{C}$ unless otherwise noted

Symbol	Parameter	Test Conditions	Limits		Unit
			Min.	Max.	
V_{BR}	Reverse breakdown voltage	$I_R=100\mu\text{A}$	70	–	V
I_R	Reverse Leakage Current	$V_R=75\text{V}$	–	1	μA
V_F	Forward Voltage	$I_F=1\text{mA}$	–	0.715	V
		$I_F=10\text{mA}$	–	0.855	
		$I_F=50\text{mA}$	–	1	
		$I_F=150\text{mA}$	–	1.25	
C_T	Capacitance Between Terminals	$V_R=0\text{V}$, $f=1\text{MHZ}$	–	1.5	pF
T_{RR}	Reverse Recovery Time	$I_F=I_R=10\text{mA}$, $I_{rr}=0.1I_R$, $R_L=100\Omega$	–	6	nS





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Typical Performance Characteristics ($T_J = 25^\circ\text{C}$, unless otherwise noted)

Figure 1: Forward Characteristics

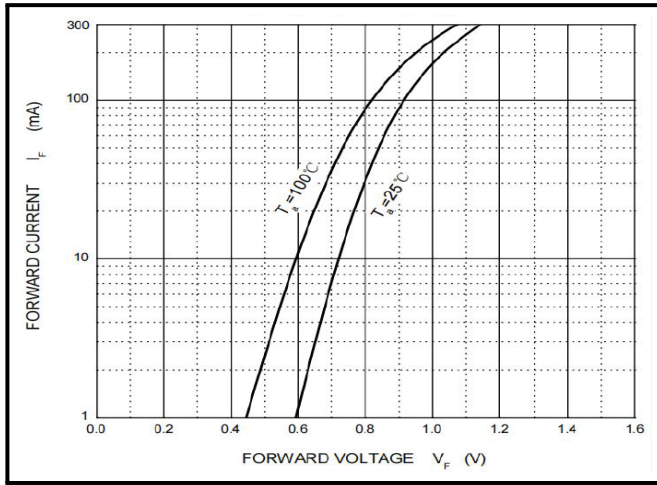


Figure 2: Reverse Characteristics

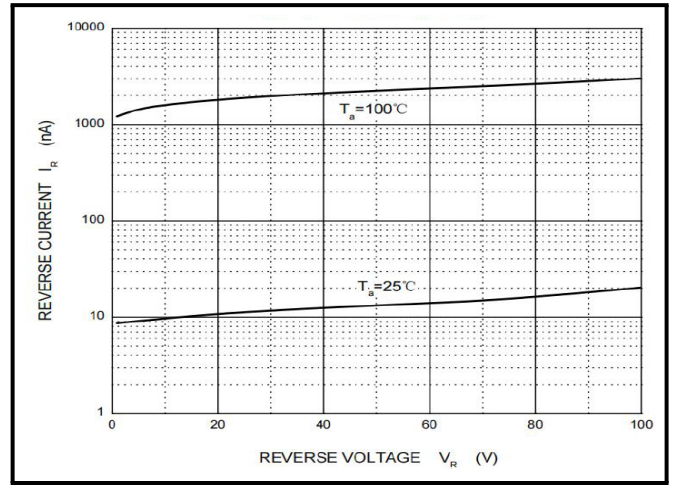


Figure 3: Capacitance Characteristics

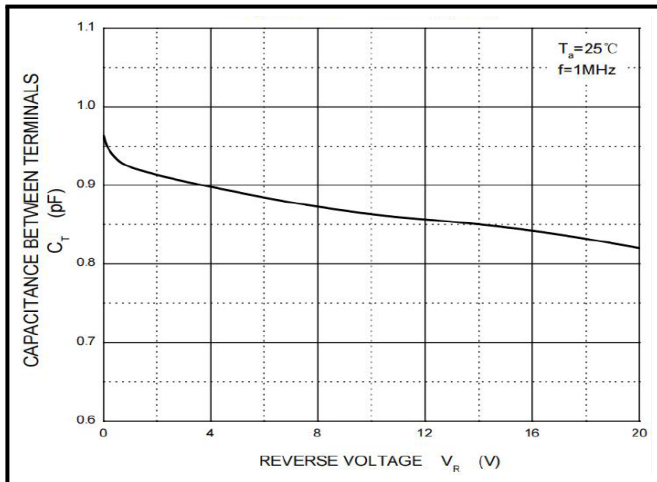
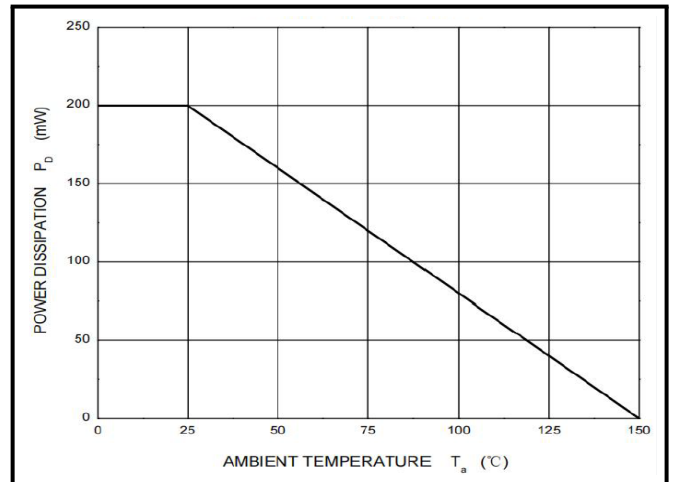


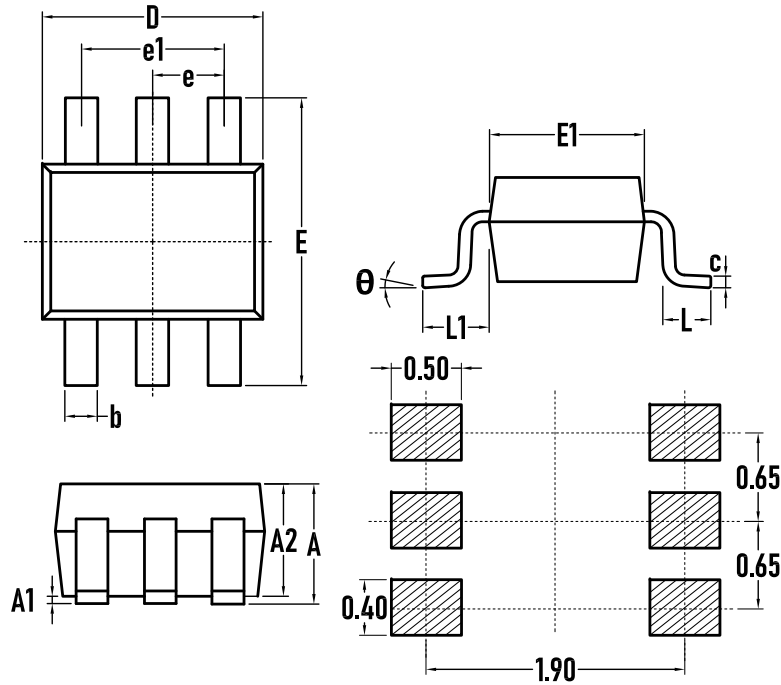
Figure 4: Power Derating Curve



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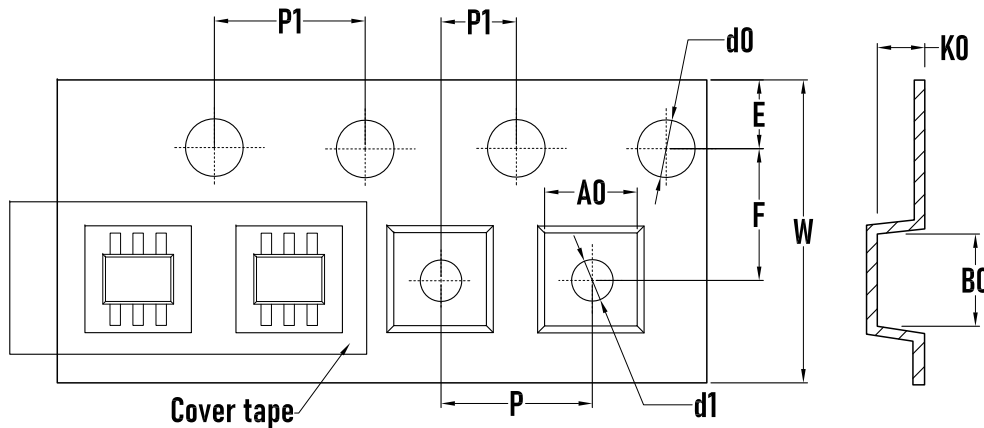
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Outline Drawing - SOT-363



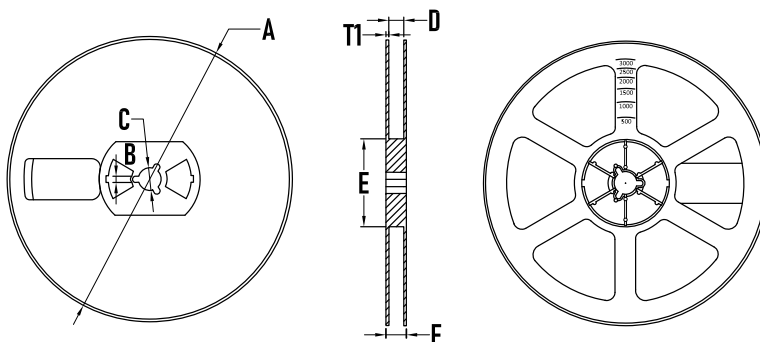
SYMBOL	MILLIMETER		
	MIN.	TYP.	MAX.
A	0.90	1.00	1.10
A1	0.00	0.50	0.100
A2	0.90	0.95	1.00
b	0.15	0.25	0.35
C	0.08	0.12	0.15
D	2.00	2.10	2.20
E	2.15	2.30	2.45
E1	1.15	1.25	1.35
e	0.65(TYP)		
e1	1.20	1.30	1.40
L	0.26	0.36	0.46
L1	0.525(REF)		
theta	0°	4°	8°

Packaging Tape - SOT-363



SYMBOL	MILLIMETER
A0	2.25±0.1
B0	2.55±0.1
E	1.75±0.1
F	3.50±0.1
K0	1.20±0.1
P	4.00±0.1
P0	4.00±0.1
P1	2.00±0.1
W	8.00±0.2

Packaging Reel



SYMBOL	MILLIMETER
A	177.8±0.2
B	2.7±0.2
C	13.5±0.2
D	9.6±0.3
E	54.5±0.2
F	12.3±0.3
T1	1.0±0.2
Quantity	3000PCS

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Revision: 2022-Jan-1-A



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