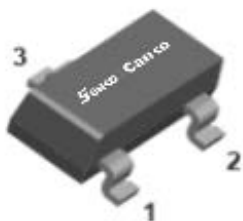
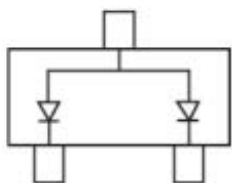


BAV199WT

Small-Signal Fast Switching Diodes



SOT-323

Features

- Moisture sensitivity level 1
- Reverse voltage: 100V
- Average forward current : 160mA

Application

- Signal switching

Mechanical data

- **Package:** SOT-323
- **Terminals:** Tin plated leads, solderable per J-STD-002 and JESD22-B102

■ Maximum Ratings ($T_a=25^{\circ}\text{C}$ Unless otherwise specified)

Parameter	Symbol	Unit	Value
Device marking code			K52
Repetitive peak reverse voltage	V_{RRM}	V	85
Forward current, per leg	I_F	mA	160
Non-repetitive surge peak forward current @ $t=8.3\text{ms}$ half-sine wave	I_{FSM}	A	2
Non-repetitive surge peak forward current @ $t=1\text{ms}$ square wave			2
Power dissipation	P_D	mW	200
Junction temperature	T_J	$^{\circ}\text{C}$	-55 to +150
Storage temperature	T_{STG}	$^{\circ}\text{C}$	-55 to +150

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■ Electrical Characteristics (T_a=25°C Unless otherwise specified)

Parameter	Symbol	Unit	Conditions	Min	Typ	Max
Reverse voltage	V _R	V	I _R =100uA	85		
Forward voltage	V _{F1}	V	I _F =1mA			0.9
	V _{F2}	V	I _F =10mA			1.0
	V _{F3}	V	I _F =50mA			1.1
	V _{F4}	V	I _F =150mA			1.25
Reverse leakage current	I _R	nA	V _R =75V			5
Junction capacitance	C _j	pF	V _R =0V, f=1MHz			4
Reverse recovery time	T _{rr}	us	I _F =I _R =10mA, I _{rr} =0.1*I _R , R _L =100Ω			3

■ Thermal Characteristics

PARAMETER	Symbol	Unit	Value
Thermal resistance, junction-to-ambient	R _{θJ-A} ⁽¹⁾	°C/W	625
Thermal resistance, junction-to-case	R _{θJ-C} ⁽¹⁾	°C/W	500

Note:

(1) Device mounted on PCB, single-sided copper, with standard footprint

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■ Characteristics

Fig 1: P_D - T_a Curve

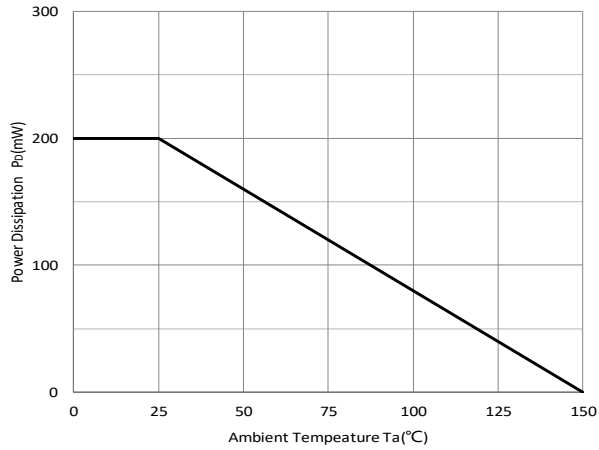


Fig 2: Capacitance Capability

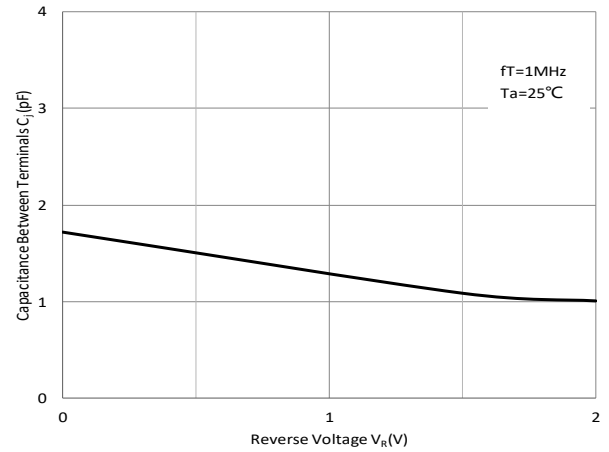


Fig 3: Typical Forward Characteristics

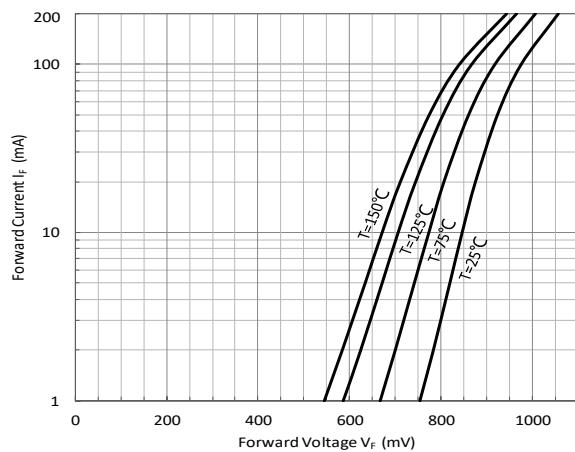
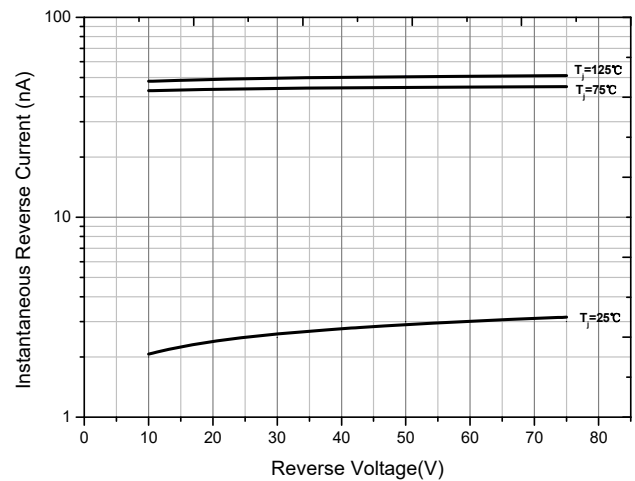


Fig 4: Typical Reverse Characteristics

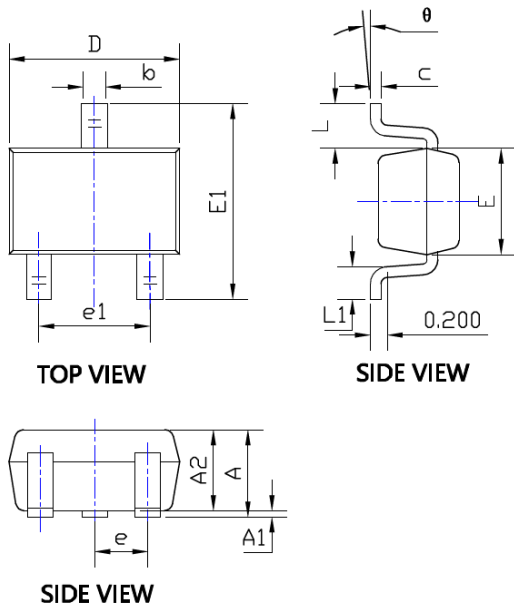


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■ Ordering Information

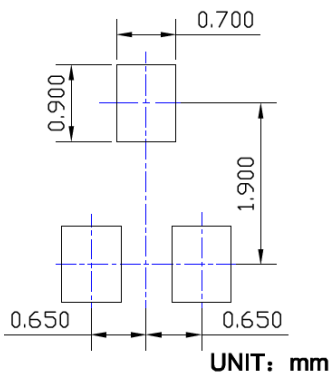
Preferred P/N	Packing code	Unit weight(g)	Minimum package(pcs)	Inner box quantity(pcs)	Outer carton quantity(pcs)	Delivery mode
BAV199WT	F2	Approximate 0.005	3000	30000	120000	7" reel

■ Outline Dimensions



SYMBOL	DIMENSIONS			
	INCHES		Millimeter	
	MIN.	MAX.	MIN.	MAX.
A	0.035	0.043	0.900	1.100
A1	0.000	0.004	0.000	0.100
A2	0.035	0.039	0.900	1.000
b	0.006	0.016	0.150	0.400
C	0.004	0.010	0.100	0.250
D	0.071	0.087	1.800	2.200
E	0.045	0.053	1.150	1.350
E1	0.085	0.096	2.150	2.450
e	0.026TYP		0.650TYP	
e1	0.047	0.055	1.200	1.400
L	0.021REF		0.525REF	
L1	0.010	0.018	0.260	0.460
θ	0°	8°	0°	8°

■ Suggested Pad Layout



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