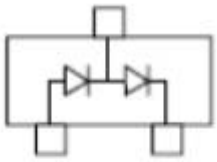
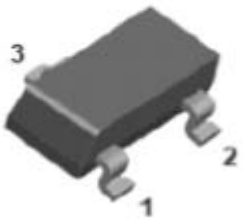
Small-Signal Fast Switching Diodes





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℃ 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=8.3ms half-sine wave	I_{FSM}	A	2
Non-repetitive surge peak forward current @ t=1ms square wave			2
Power dissipation	P_D	mW	200
Junction temperature	T_J	℃	-55 to +150
Storage temperature	T_{STG}	℃	-55 to +150

■ Electrical Characteristics (Ta=25℃ 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	Cj	pF	V_R=0V,f=1MHz			4
Reverse recovery time	Trr	us	I_F=I_R=10mA, Irr=0.1*IR, R_L=100Ω			3

■ Thermal Characteristics

PARAMETER	Symbol	Unit	Value
Thermal resistance, junction-to-ambient	$R_{\theta J-A}$(1)	℃/W	625
Thermal resistance, junction-to-case	$R_{\theta J-C}$(1)	℃/W	500

Note:

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

■Characteristics

Fig 1：P_D-Ta Curve

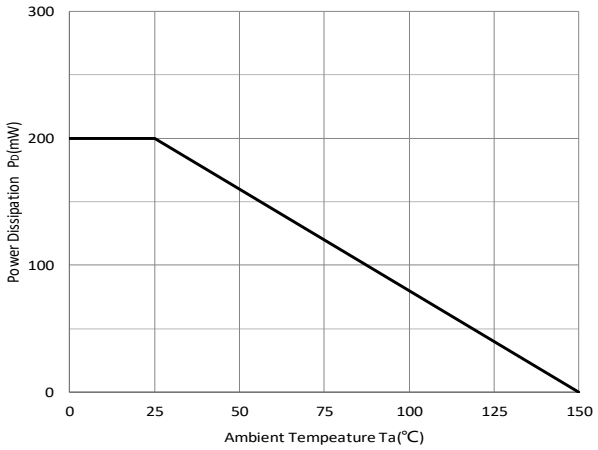


Fig 2：Capacitance Capability

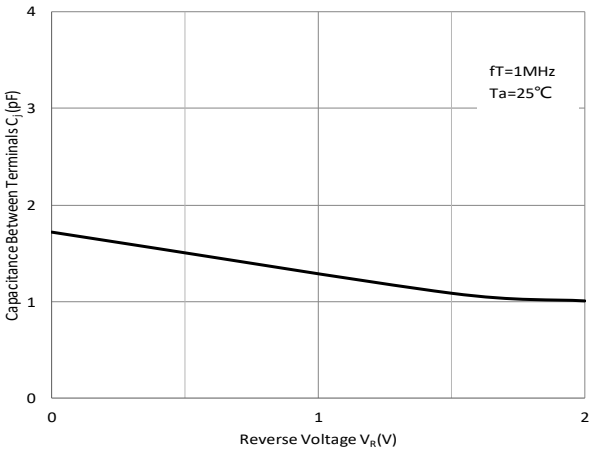


Fig 3：Typical Forward Characteristics

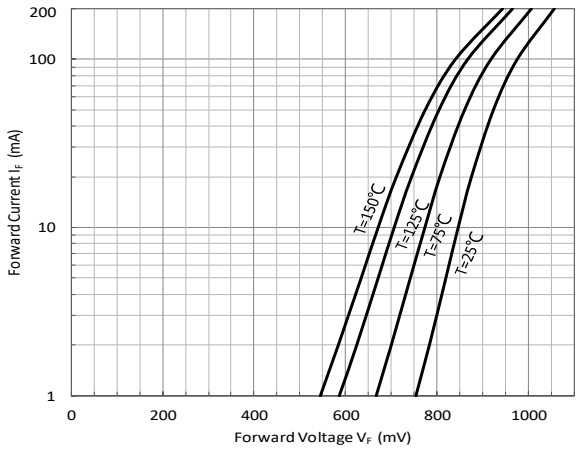
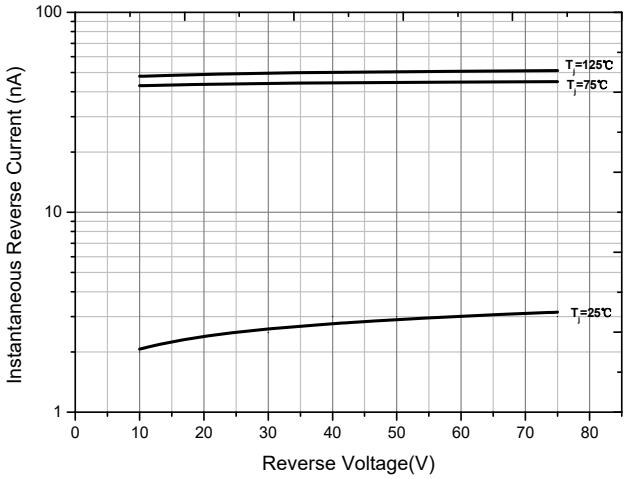


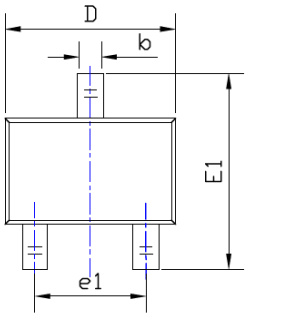
Fig 4：Typical Reverse Characteristics



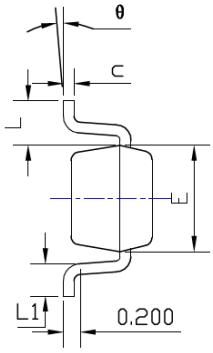
■Ordering Information

Prefered 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

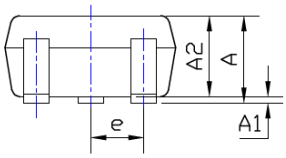
■ Outline Dimensions



TOP VIEW



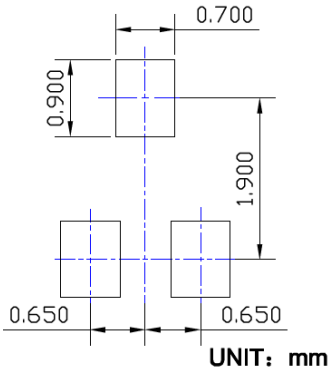
SIDE VIEW



SIDE VIEW

DIMENSIONS				
SYMBOL	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



UNIT：mm

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