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With the principle of "Quality Parts,Customers Priority,Honest Operation,and Considerate Service",our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

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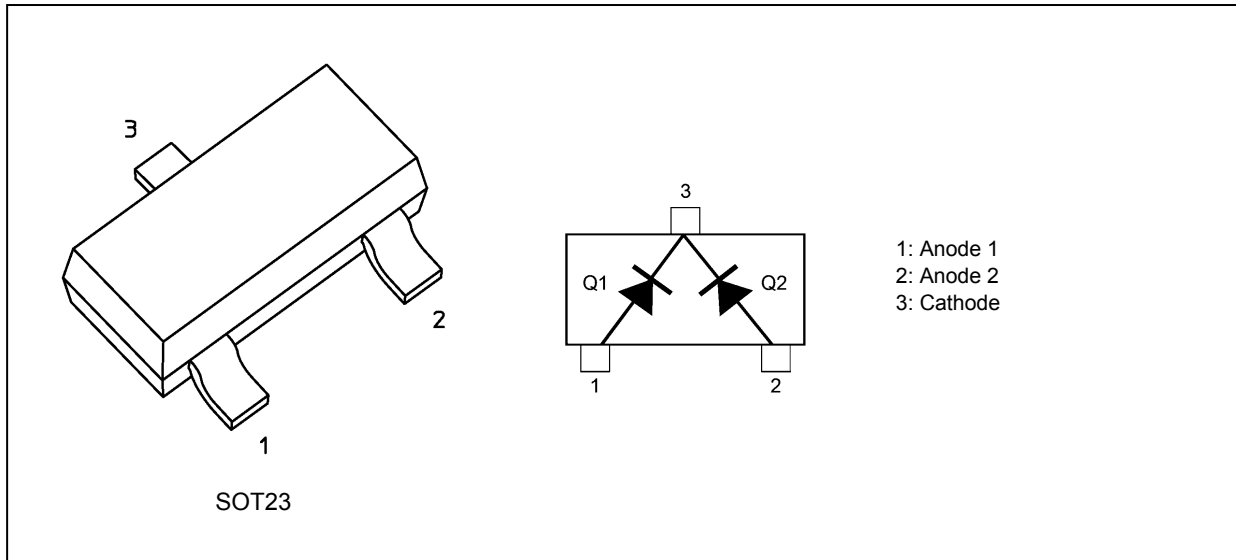


BAV70

1. Applications

- Ultra-High-Speed Switching

2. Packaging and Internal Circuit



3. Absolute Maximum Ratings (Note) (Unless otherwise specified, $T_a = 25\text{ }^\circ\text{C}$)

Characteristics	Symbol	Note	Rating	Unit
Peak reverse voltage	V_{RM}		100	V
Reverse voltage	V_R		100	
Average rectified current	I_O	(Note 1)	215	mA
Peak forward current	I_{FM}	(Note 1)	500	
Non-repetitive peak forward surge current	I_{FSM}	(Note 1), (Note 2)	2	A
Power dissipation	P_D		150	mW
		(Note 3)	320	
Junction temperature	T_j		150	$^\circ\text{C}$
Storage temperature	T_{stg}		-55 to 150	

Note: Using continuously under heavy loads (e.g. the application of high temperature/current/voltage and the significant change in temperature, etc.) may cause this product to decrease in the reliability significantly even if the operating conditions (i.e. operating temperature/current/voltage, etc.) are within the absolute maximum ratings.

Please design the appropriate reliability upon reviewing the Toshiba Semiconductor Reliability Handbook ("Handling Precautions"/"Derating Concept and Methods") and individual reliability data (i.e. reliability test report and estimated failure rate, etc).

Note 1: Unit rating. Total rating = Unit rating \times 1.5

Note 2: Measured with a 10 ms pulse.

Note 3: Mounted on an FR4 board (25.4 mm \times 25.4 mm \times 1.6 mm, Cu pad: 0.42 mm² \times 3)

Start of commercial production

2016-08

4. Electrical Characteristics (Unless otherwise specified, $T_a = 25\text{ }^\circ\text{C}$)

Characteristics	Symbol	Test Condition	Min	Typ.	Max	Unit
Forward voltage	V_F (1)	$I_F = 1\text{ mA}$	—	—	0.715	V
	V_F (2)	$I_F = 10\text{ mA}$	—	—	0.855	
	V_F (3)	$I_F = 50\text{ mA}$	—	—	1.0	
	V_F (4)	$I_F = 150\text{ mA}$	—	—	1.25	
Reverse current	I_R (1)	$V_R = 25\text{ V}$	—	—	30	nA
	I_R (2)	$V_R = 80\text{ V}$	—	—	200	
Total capacitance	C_t	$V_R = 0\text{ V}, f = 1\text{ MHz}$	—	0.9	—	pF
Reverse recovery time	t_{rr}	$I_F = 10\text{ mA}$, See Fig. 4.1.	—	—	4.0	ns

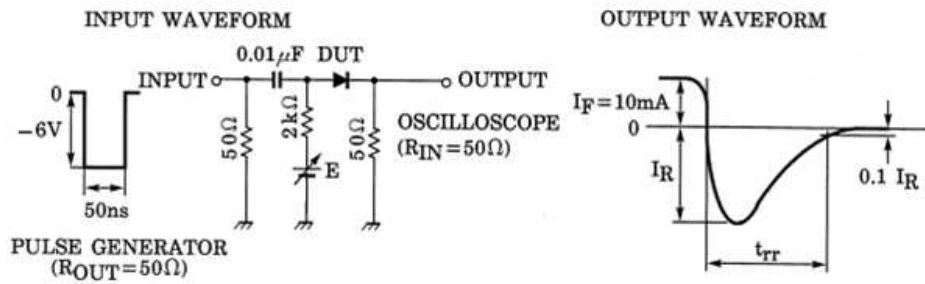
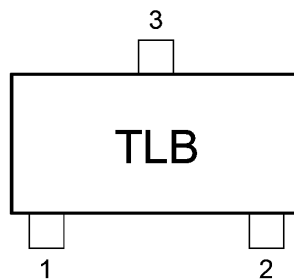
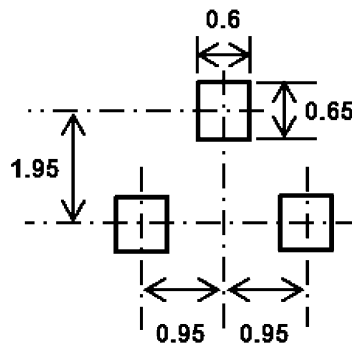


Fig. 4.1 Reverse recovery time (t_{rr}) Test circuit

5. Marking



6. Land Pattern Dimensions (for reference only)



SOT23 (Unit: mm)

7. Characteristics Curves (Note)

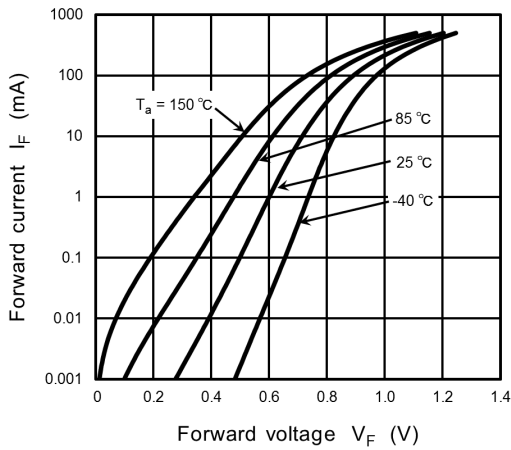


Fig. 7.1 $I_F - V_F$

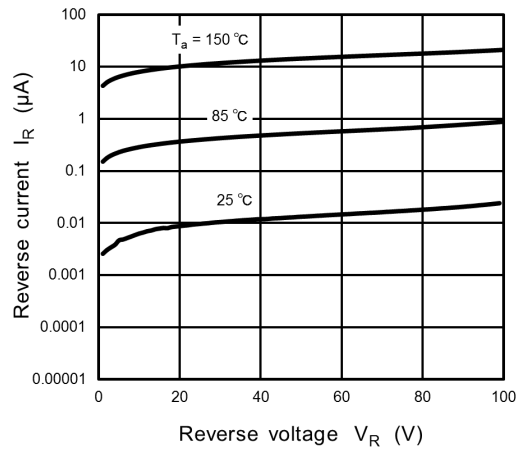


Fig. 7.2 $I_R - V_R$

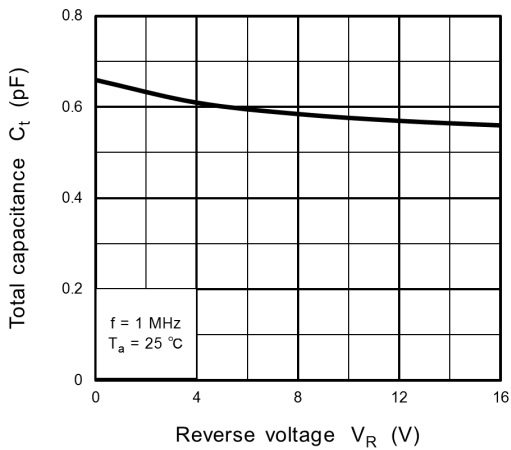


Fig. 7.3 $C_t - V_R$

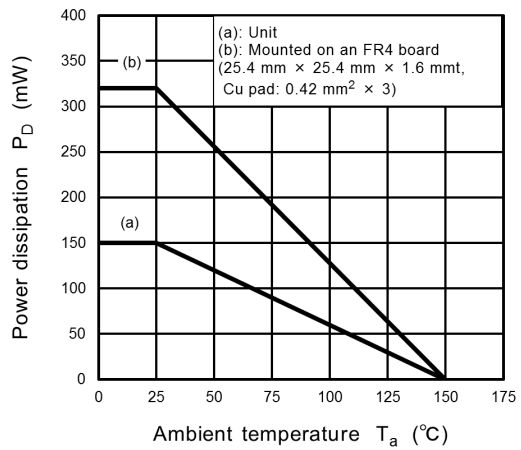
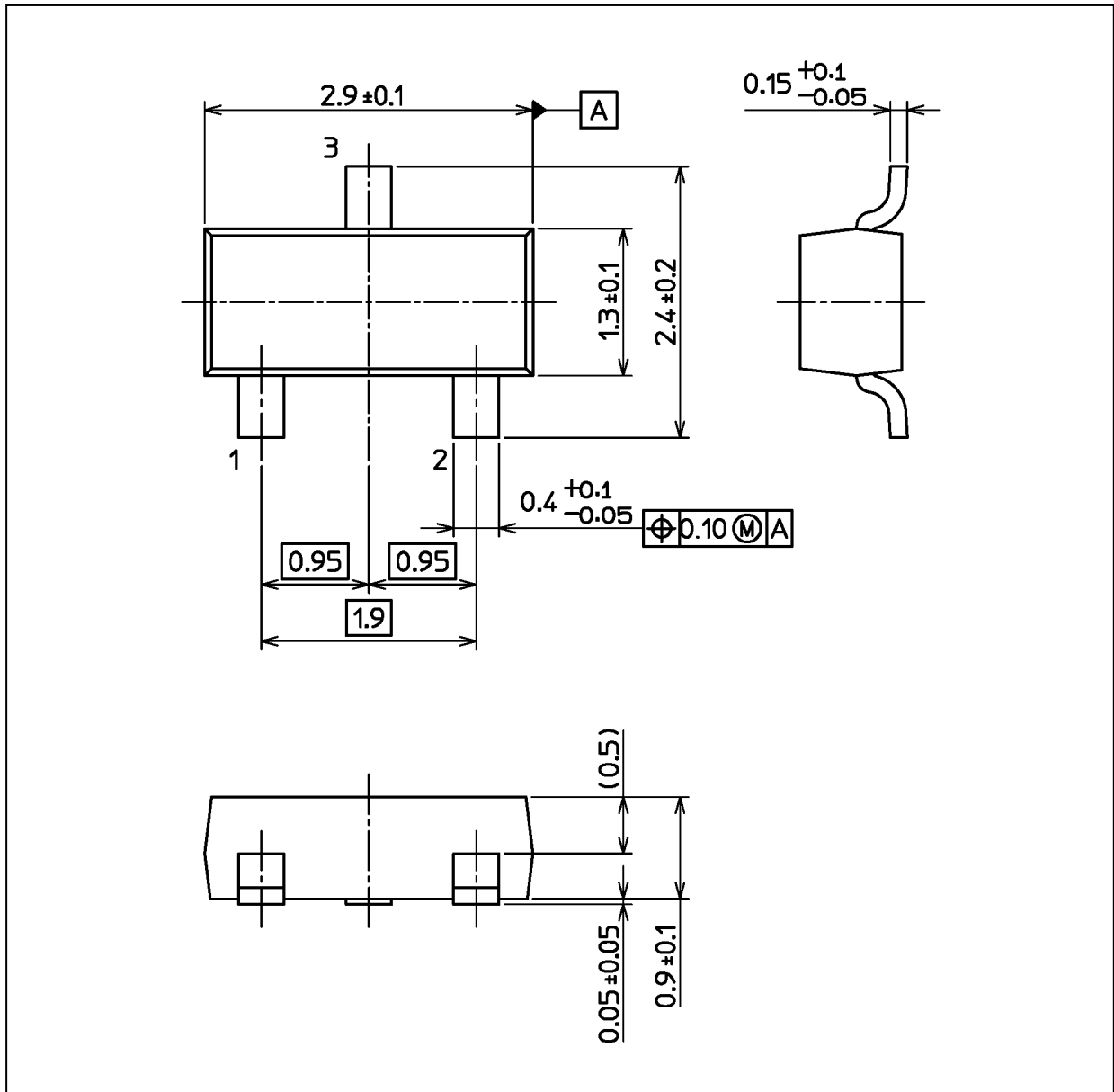


Fig. 7.4 $P_D - T_a$

Note: The above characteristics curves are presented for reference only and not guaranteed by production test, unless otherwise noted.

Package Dimensions

Unit: mm



Weight: 0.009 g (typ.)

Package Name(s)
JEDEC: SOT-23
Nickname: SOT23

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