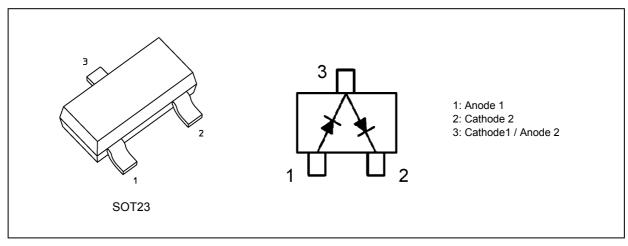
Switching Diodes Silicon Epitaxial Planar

TBAV99

1. Applications

• Ultra-High-Speed Switching

2. Packaging and Internal Circuit



3. Absolute Maximum Ratings (Note) (Unless otherwise specified, T_a = 25 °C)

Characteristics	Symbol	Note	Rating	Unit
Peak reverse voltage	V _{RM}		85	V
Reverse voltage	V _R		80	
Peak forward current	I _{FM}	(Note 1)	300	mA
Average rectified current	Ι _Ο	(Note 1)	100	
Power dissipation	PD		150	mW
Power dissipation	PD	(Note 2)	320	mW
Non-repetitive peak forward surge current	I _{FSM}	(Note 1), (Note 3)	2	A
Junction temperature	Tj		125	°C
Storage temperature	T _{stg}		-55 to 125	°C

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 70 %

Note 2: Device mounted on a 25.4 mm \times 25.4 mm \times 1.6 mm FR-4 glass epoxy board (Cu pad: 0.42 mm² \times 3)

Note 3: Measured with a 10 ms pulse.

4. Electrical Characteristics (Unless otherwise specified, $T_a = 25$ °C)

Characteristics	Symbol	Test Condition	Min	Тур.	Max	Unit
Forward voltage	V _{F(1)}	I _F = 1 mA	_	_	0.715	V
	V _{F(2)}	I _F = 10 mA	_	_	0.855	
	V _{F(3)}	I _F = 50 mA	_	_	1.0	
	V _{F(4)}	I _F = 150 mA	_	_	1.25	
Reverse current	I _{R(1)}	V _R = 25 V	_	_	30	nA
	I _{R(2)}	V _R = 80 V	_	_	0.5	μA
Total capacitance	Ct	V _R = 0 V, f = 1 MHz	_	_	1.5	pF
Reverse recovery time	t _{rr}	I _F = 10 mA See Fig. 4.1.	-	_	4.0	ns

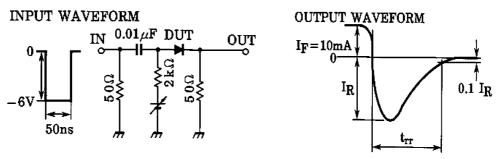
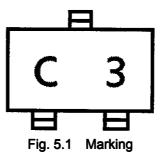
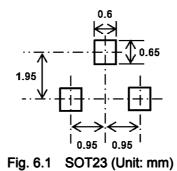


Fig. 4.1 Reverse recovery time (t_{rr}) Test circuit

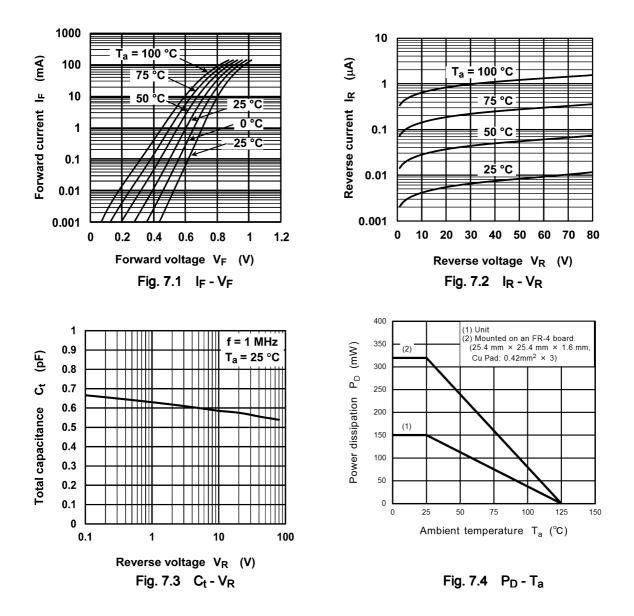
5. Marking



6. Land Pattern Dimensions (for reference only)



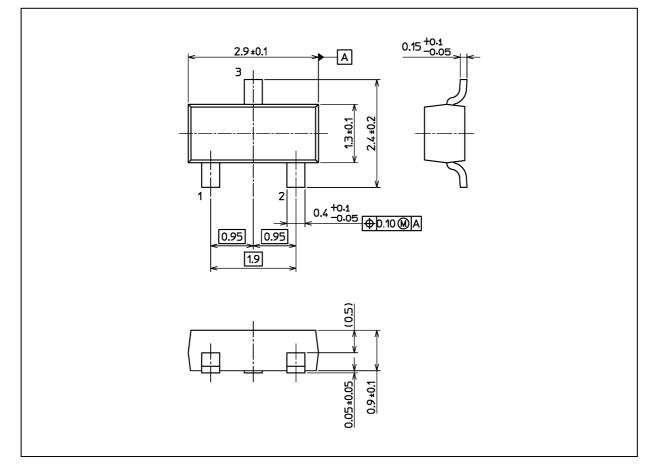
7. Characteristics Curves (Note)



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

Package Dimensions

Unit: mm



Weight: 0.0125 g (typ.)

Package Name(s)				
TOSHIBA: 2-3AB1A				
Nickname: SOT23				

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