TOSHIBA Diode Silicon Epitaxial Schottky Barrier Type

# DSR01S30SC

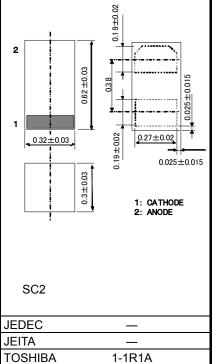
○ High-Speed Switching Application

#### Absolute Maximum Ratings (Ta = 25°C)

Characteristic	Symbol	Rating	Unit
Reverse voltage	V <sub>R</sub>	30	V
Average forward current	Ι <sub>Ο</sub>	100 *	mA
Surge current (10ms)	I <sub>FSM</sub>	2	А
Junction temperature	Tj	125	°C
Storage temperature range	T <sub>stg</sub>	-55 to 125	°C

\*: Mounted on a glass-epoxy circuit board of 20 mm× 20 mm, pad dimensions of 4 mm× 4 mm.

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.



Weight: 0.17 mg (typ.)

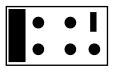
Please design the appropriate reliability upon reviewing the Toshiba Semiconductor Reliability Handbook ("Handling

Precautions"/"Derating Concept and Methods") and individual reliability data (i.e. reliability test report and estimated failure rate, etc).

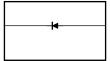
#### Electrical Characteristics (Ta = 25°C)

Characteristic	Symbol	Test Circuit	Test Condition	Min	Тур.	Max	Unit
Forward voltage	V <sub>F (1)</sub>	-	I <sub>F</sub> = 10 mA	_	0.37	0.5	V
Forward voltage	V <sub>F (2)</sub>	_	I <sub>F</sub> = 100 mA	-	0.51	0.62	V
Reverse current	I <sub>R (1)</sub>	_	V <sub>R</sub> = 10 V	_	_	0.35	μA
Reverse current	I <sub>R (2)</sub>	_	V <sub>R</sub> = 30 V	_	_	0.7	μA
Total capacitance	CT	_	V <sub>R</sub> = 0, f = 1 MHz	_	8.2	_	pF

#### Marking



#### Equivalent Circuit (Top View)

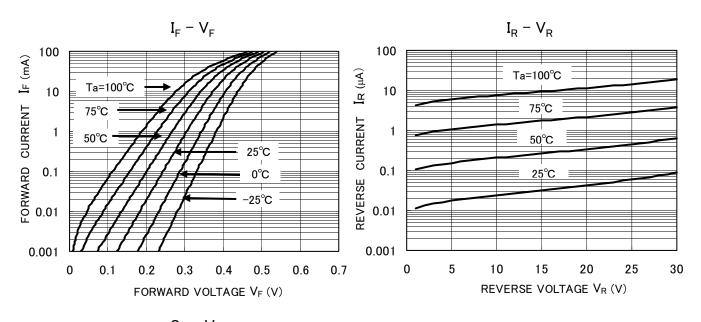


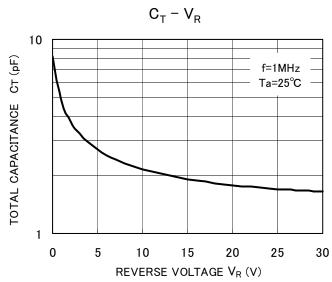
Unit: mm

### **Handling Precaution**

Schottky barrier diodes have reverse current characteristic compared to the other diodes. There is a possibility SBD may cause thermal runaway when it is used under high temperature or high voltage. Please take forward and reverse loss into consideration during design.

## **TOSHIBA**





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