Unit: mm

TOSHIBA Diode Silicon Epitaxial Schottky Barrier Type

# **1SS389**

#### **High Speed Switching Application**

- Small package
- Low forward voltage:  $V_F = 0.23V$  (typ.) @ $I_F = 5mA$

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

Characteristic	Symbol	Rating	Unit
Maximum (peak) reverse Voltage	$V_{RM}$	15	V
Reverse voltage	V <sub>R</sub>	10	V
Maximum (peak) forward current	I <sub>FM</sub>	200	mA
Average forward current	IO	100	mA
Surge current (10ms)	I <sub>FSM</sub>	1	Α
Power dissipation	P*	150	mW
Junction temperature	Tj	125	°C
Storage temperature range	T <sub>stg</sub>	-55 to 125	°C
Operating temperature range	T <sub>opr</sub>	-40 to 100	°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

ESC

JEDEC —

JEITA —

TOSHIBA 1-1G1A

Weight: 1.4mg (typ.)

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).

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

### **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> = 1mA	_	0.18	_	
	V <sub>F (2)</sub>	_	I <sub>F</sub> = 5mA	_	0.23	0.30	V
	V <sub>F (3)</sub>	_	I <sub>F</sub> = 100mA	_	0.35	0.50	
Reverse current	I <sub>R</sub>	_	V <sub>R</sub> = 10V	_	_	20	μΑ
Total capacitance	СТ	_	VR = 0, f = 1MHz	_	20	40	pF

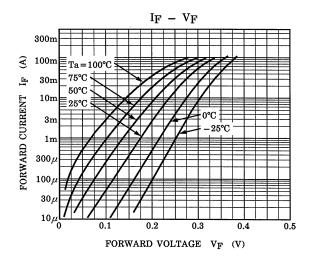
### **Equivalent Circuit (Top View)**

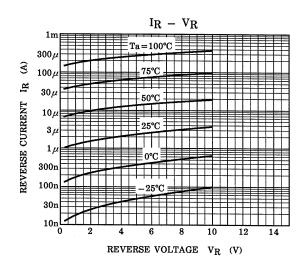


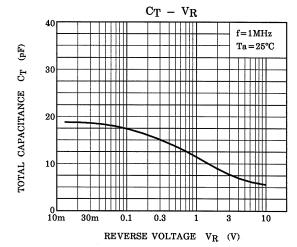
Marking

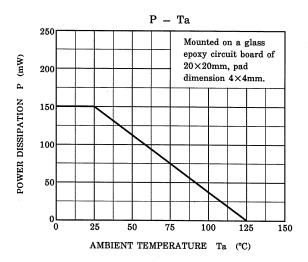


Start of commercial production 1994-11









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