Unit: mm

TOSHIBA Diode Silicon Epitaxial Schottky Barrier Type

# **1SS421**

## **High-Speed Switching Application**

Low forward voltage:  $V_{F(3)} = 0.50V$  (max)

## **Abusolute Maximum Ratings (Ta = 25°C)**

Characteristics	Symbol	Rating	Unit
Reverse voltage	$V_{R}$	30	V
Maximum (peak) forward current	I <sub>FM</sub>	300	mA
Average forward current	IO	200	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

<sup>\*:</sup> Mounted on a glass epoxy circuit board of 20 mm × 20 mm, Cu pad dimension 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.

ESC

JEDEC —

JEITA —

TOSHIBA 1-1G1A

Weight: 1.4 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)**

Characteristics	Symbol	Test Circuit	Test Condition	Min	Тур.	Max	Unit
Forward voltage	V <sub>F (1)</sub>	_	I <sub>F</sub> = 1 mA	-	0.18	_	
	V <sub>F (2)</sub>	_	I <sub>F</sub> = 5 mA	_	0.22	-	V
	V <sub>F (3)</sub>	_	I <sub>F</sub> = 200 mA	_	0.44	0.5	
Reverse current	I <sub>R (1)</sub>	_	V <sub>R</sub> = 10 V	_	_	20	μА
	I <sub>R (2)</sub>	_	V <sub>R</sub> = 30 V	_	_	30	
Total capacitance	C <sub>T</sub>	_	V <sub>R</sub> = 0, f = 1 MHz	_	19	_	pF

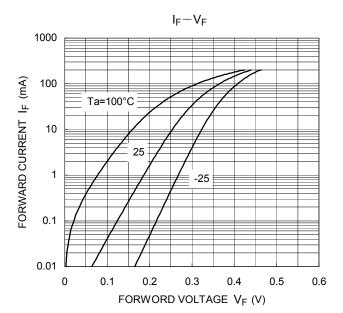
# **Equivalent Circuit (top view)**

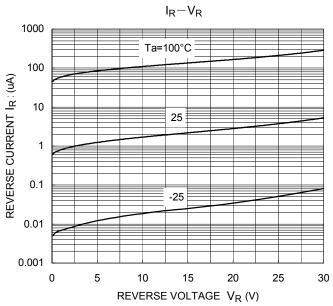


### Marking



Start of commercial production 2006-01





2 2014-03-01

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