

TOSHIBA Diode Silicon Epitaxial Schottky Barrier Type

# 1SS421

## High-Speed Switching Application

Low forward voltage:  $V_F(3) = 0.50V$  (max)

### Absolute Maximum Ratings ( $T_a = 25^\circ C$ )

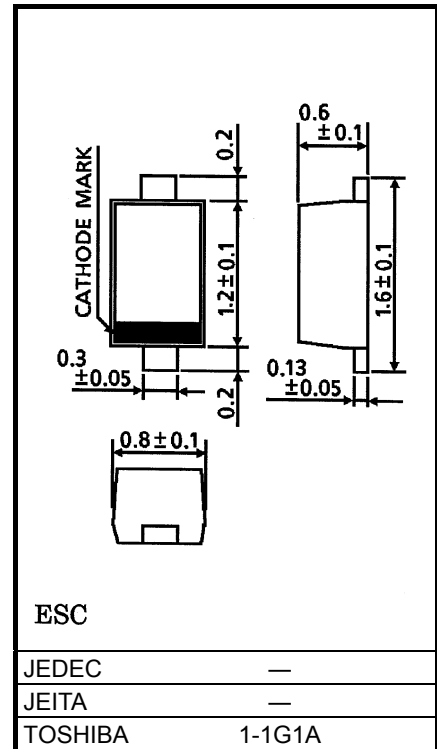
Characteristics	Symbol	Rating	Unit
Reverse voltage	$V_R$	30	V
Maximum (peak) forward current	$I_{FM}$	300	mA
Average forward current	$I_O$	200	mA
Surge current (10ms)	$I_{FSM}$	1	A
Power dissipation	$P^*$	150	mW
Junction temperature	$T_j$	125	$^\circ C$
Storage temperature range	$T_{stg}$	-55 to 125	$^\circ C$
Operating temperature range	$T_{opr}$	-40 to 100	$^\circ C$

\*: 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.

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).

Unit: mm

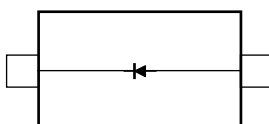


Weight: 1.4 mg (typ.)

### Electrical Characteristics ( $T_a = 25^\circ C$ )

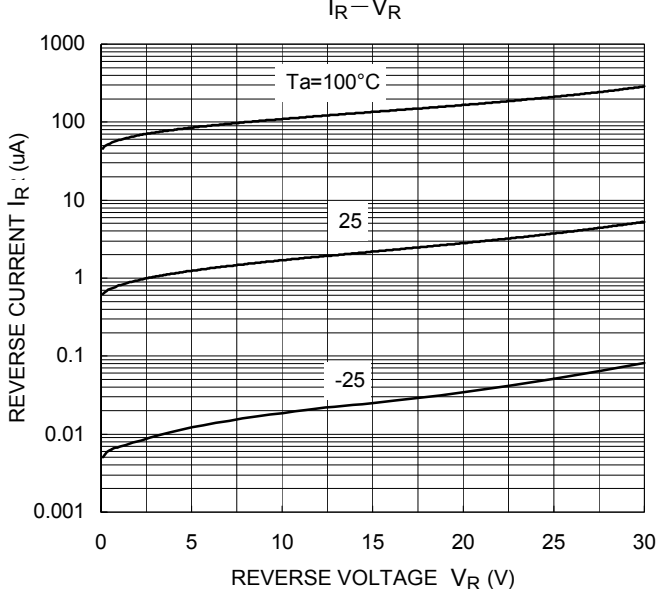
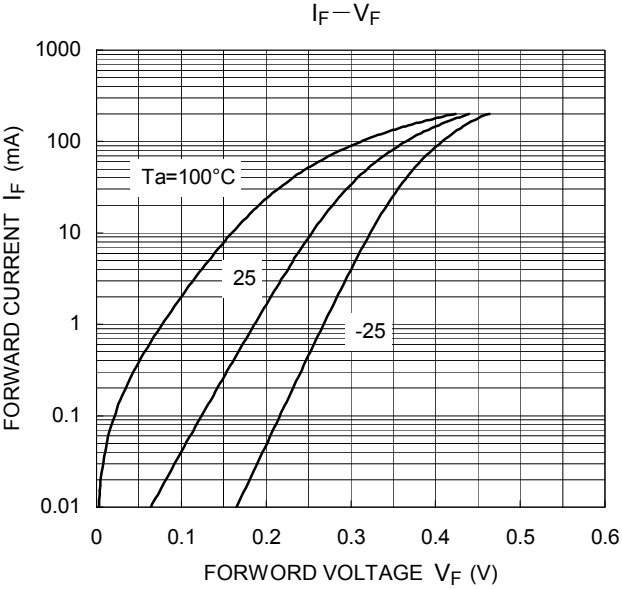
Characteristics	Symbol	Test Circuit	Test Condition	Min	Typ.	Max	Unit
Forward voltage	$V_F(1)$	—	$I_F = 1\text{ mA}$	—	0.18	—	V
	$V_F(2)$	—	$I_F = 5\text{ mA}$	—	0.22	—	
	$V_F(3)$	—	$I_F = 200\text{ mA}$	—	0.44	0.5	
Reverse current	$I_R(1)$	—	$V_R = 10\text{ V}$	—	—	20	$\mu A$
	$I_R(2)$	—	$V_R = 30\text{ V}$	—	—	30	
Total capacitance	$C_T$	—	$V_R = 0, f = 1\text{ MHz}$	—	19	—	pF

### Equivalent Circuit (top view)



### Marking





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