

TOSHIBA Diode Silicon Epitaxial Schottky Barrier Type

1SS421

High-Speed Switching Application

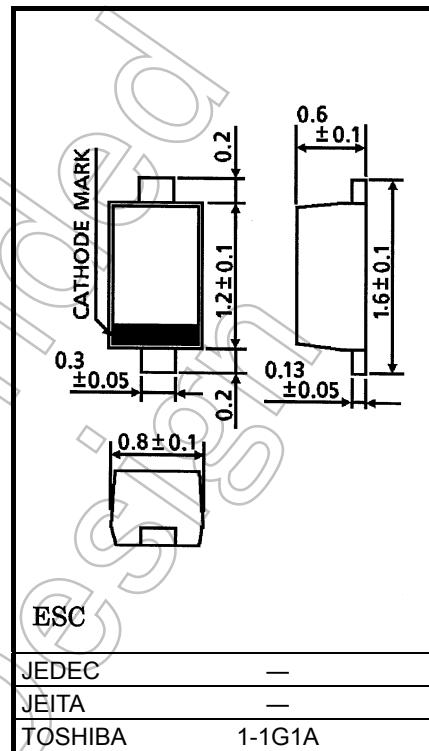
Low forward voltage: V_F (3) = 0.50V (max)Absolute Maximum Ratings ($T_a = 25^\circ\text{C}$)

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	$^\circ\text{C}$
Storage temperature range	T_{stg}	-55 to 125	$^\circ\text{C}$
Operating temperature range	T_{opr}	-40 to 100	$^\circ\text{C}$

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

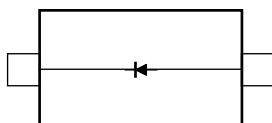


Weight: 1.4 mg (typ.)

Electrical Characteristics ($T_a = 25^\circ\text{C}$)

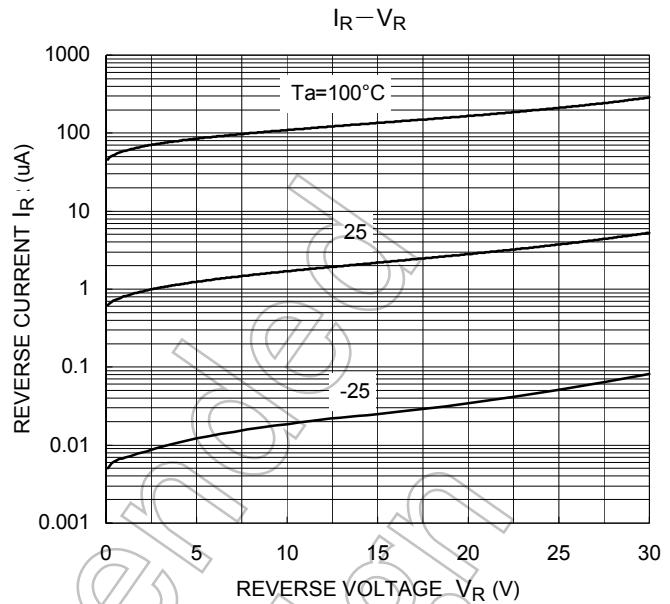
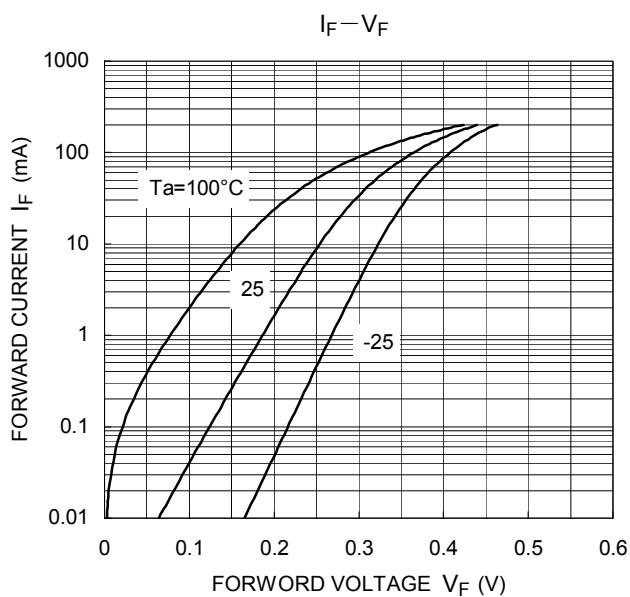
Characteristics	Symbol	Test Circuit	Test Condition	Min	Typ.	Max	Unit
Forward voltage	V_F (1)	—	$I_F = 1 \text{ mA}$	—	0.18	—	V
	V_F (2)	—	$I_F = 5 \text{ mA}$	—	0.22	—	
	V_F (3)	—	$I_F = 200 \text{ mA}$	—	0.44	0.5	
Reverse current	I_R (1)	—	$V_R = 10 \text{ V}$	—	—	20	μA
	I_R (2)	—	$V_R = 30 \text{ V}$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

Equivalent Circuit (top view)



Marking

Start of commercial production
2006-01



Not Recommended
for New Design

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