

TOSHIBA Diode Silicon Epitaxial Schottky Barrier Type

# 1SS422

## High-Speed Switching Applications

- Low forward voltage  $V_F(2) = 0.23 \text{ V (typ.) @ } I_F = 5 \text{ mA}$
- Small package suitable for mounting on a small space

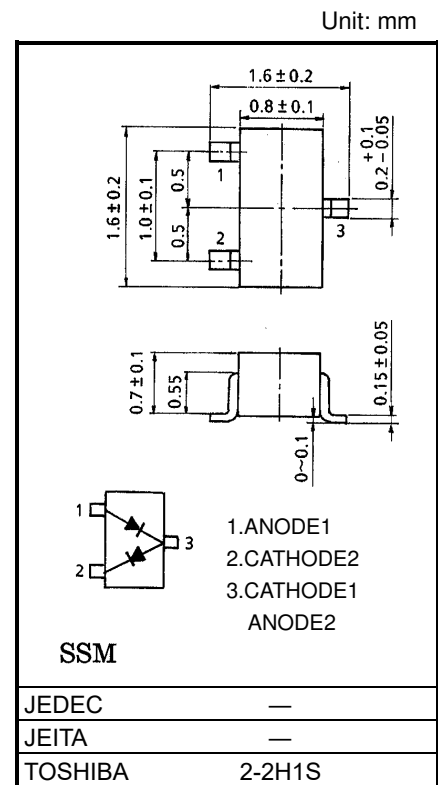
## Absolute Maximum Ratings ( $T_a = 25^\circ\text{C}$ )

Characteristics	Symbol	Rating	Unit
Maximum (peak) reverse voltage	$V_{RM}$	35	V
Reverse voltage	$V_R$	30	V
Maximum (peak) forward current	$I_{FM}$	200*	mA
Average forward current	$I_O$	100*	mA
Surge current (10 ms)	$I_{FSM}$	1*	A
Power dissipation	$P$	100	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	$^\circ\text{C}$

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).

\*: This is the absolute maximum rating for a single diode. Where two diodes are used, the absolute maximum rating per diode is 75% that for the single diode.

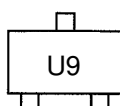


Weight: 2.4 mg (typ.)

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

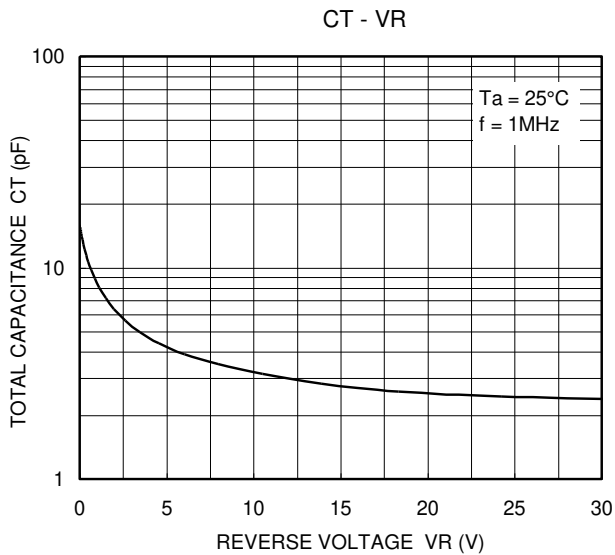
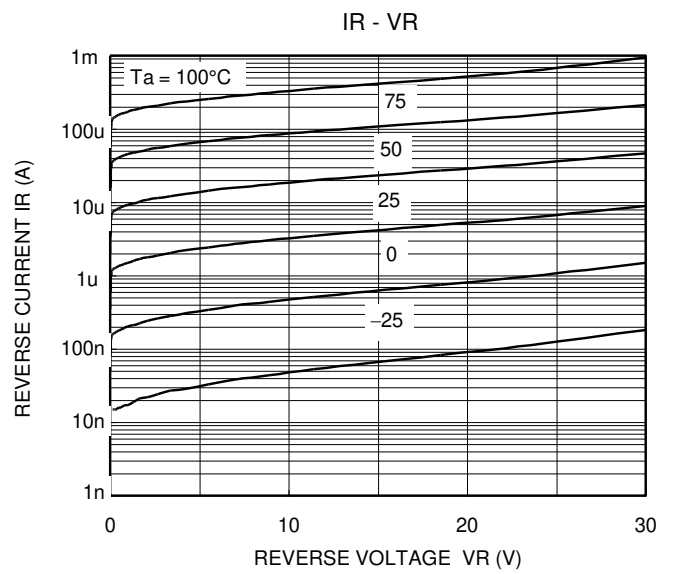
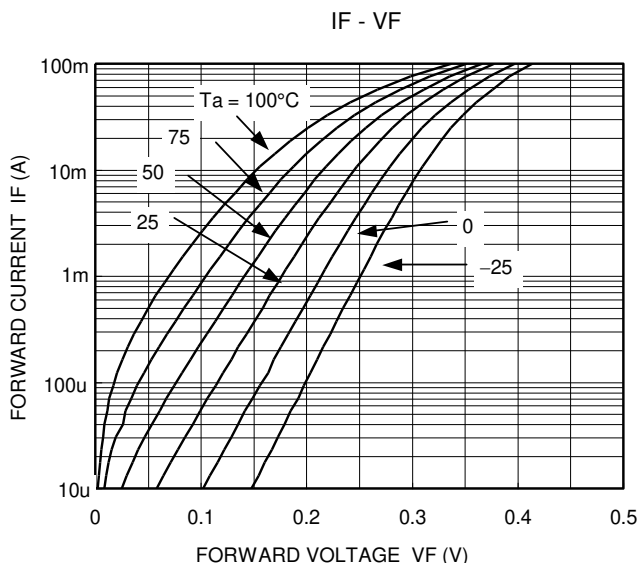
Characteristics	Symbol	Test Condition	Min	Typ.	Max	Unit
Forward voltage	$V_F(1)$	$I_F = 1 \text{ mA}$	—	0.18	—	V
	$V_F(2)$	$I_F = 5 \text{ mA}$	—	0.23	—	
	$V_F(3)$	$I_F = 100 \text{ mA}$	—	0.38	0.50	
Reverse current	$I_R(1)$	$V_R = 10 \text{ V}$	—	—	20	$\mu\text{A}$
	$I_R(2)$	$V_R = 30 \text{ V}$	—	—	50	
Total capacitance (between Cathode and Anode)	$C_T$	$V_R = 0 \text{ V}, f = 1 \text{ MHz}$	—	15	—	pF

## Marking



Start of commercial production  
2004-04

## Electrical Characteristics (Ta = 25°C)



The above characteristics curves are presented for reference only and not guaranteed by production test, unless otherwise noted.

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