

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.

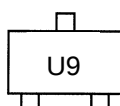
Please design the appropriate reliability upon reviewing the Toshiba Semiconductor Reliability Handbook ("Handling Precautions"/"Derating Concept and Methods") and individual reliability data (i.e. reliability test report and estimated failure rate, etc).

*: 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.

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

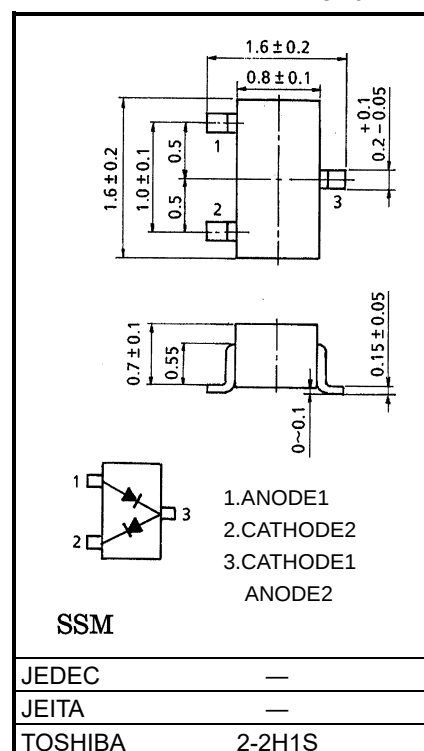
Characteristics	Symbol	Test Condition	Min	Typ.	Max	Unit
Forward voltage	$V_F(1)$	$I_F = 1 \text{ mA}$	—	0.18	—	V
	$V_F(2)$	$I_F = 5 \text{ mA}$	—	0.23	—	
	$V_F(3)$	$I_F = 100 \text{ mA}$	—	0.38	0.50	
Reverse current	$I_R(1)$	$V_R = 10 \text{ V}$	—	—	20	μA
	$I_R(2)$	$V_R = 30 \text{ V}$	—	—	50	
Total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

Marking



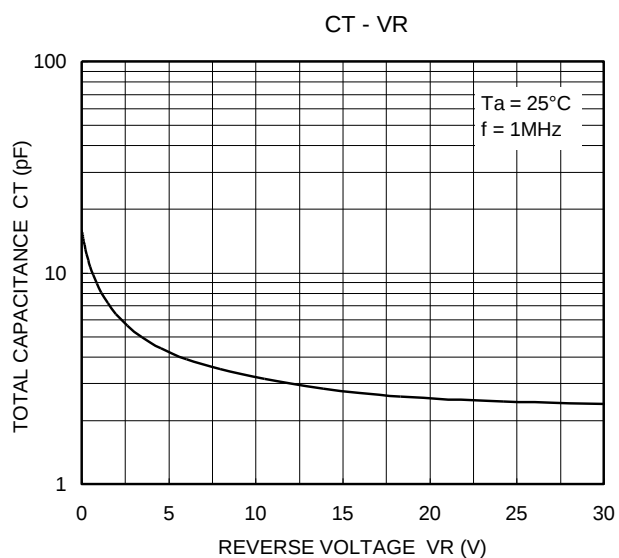
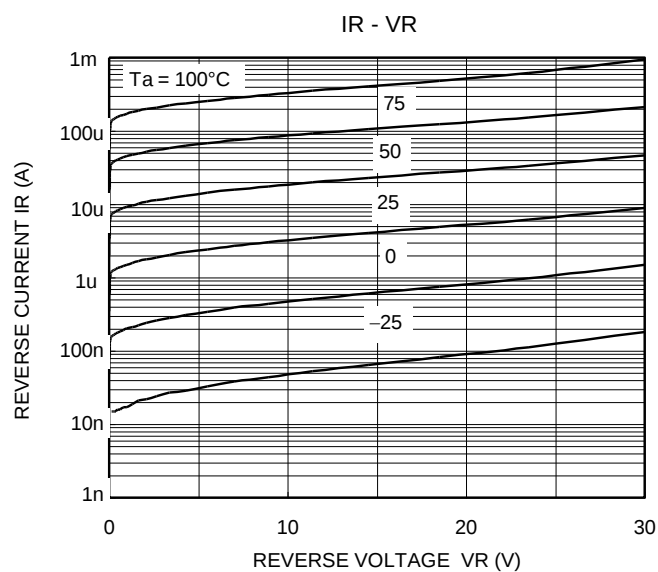
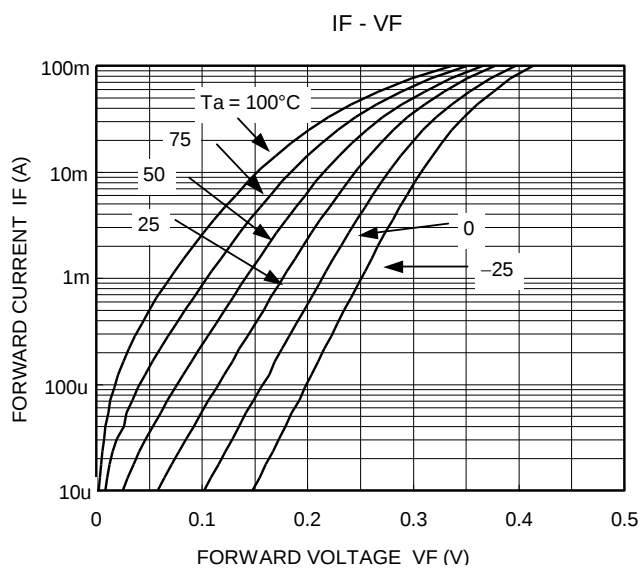
Start of commercial production
2004-04

Unit: mm



Weight: 2.4 mg (typ.)

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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