

TOSHIBA Diode Silicon Epitaxial Schottky Barrier Type

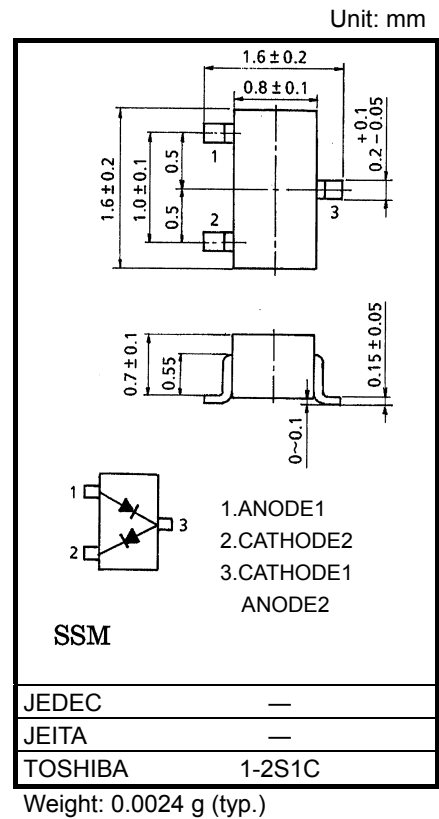
# 1SS423

## Ultra-High-Speed Switching Applications

- Small package
- Low forward voltage:  $V_F(3) = 0.56 \text{ V (typ.)}$
- Low reverse current:  $I_R = 5 \mu\text{A (max)}$

## Absolute Maximum Ratings (Ta = 25°C)

Characteristic	Symbol	Rating	Unit
Maximum (peak) reverse voltage	$V_{RM}$	45	V
Reverse voltage	$V_R$	40	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	°C
Storage temperature range	$T_{stg}$	-55~125	°C
Operating temperature range	$T_{opr}$	-40~100	°C



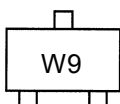
Note: Using continuously under heavy loads (e.g. the application of high temperature/current/voltage and the significant change in temperature, etc.) may cause this product to decrease in the reliability significantly even if the operating conditions (i.e. operating temperature/current/voltage, etc.) 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).

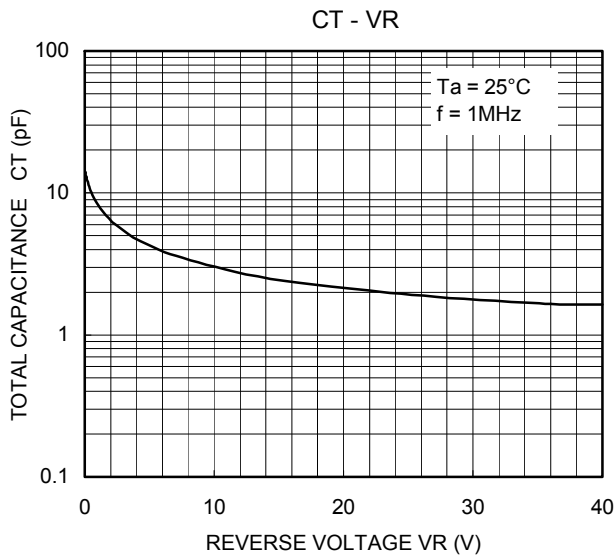
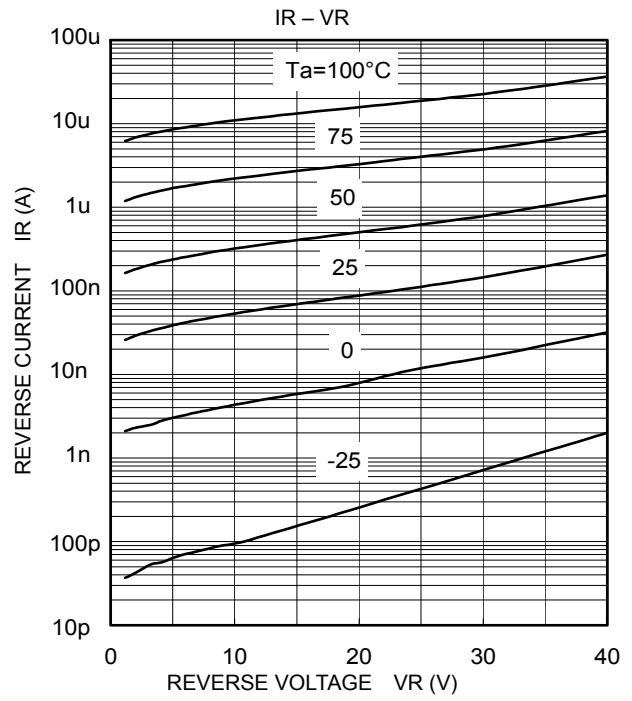
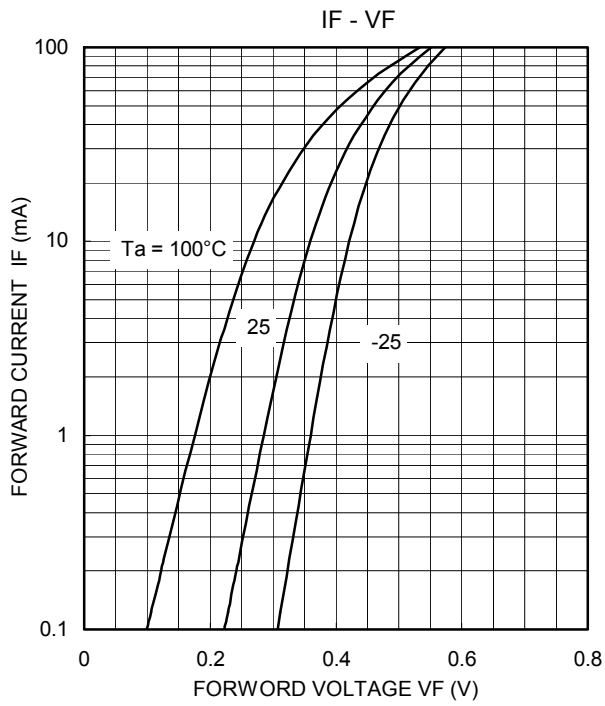
\*: This is the absolute maximum rating for a single diode . Where two diodes are used, the absolute maximum rating per diode is 75% that for the single diode.

## Electrical Characteristics (Ta = 25°C)

Characteristic	Symbol	Test Condition	Min	Typ.	Max	Unit
Forward voltage	$V_F(1)$	$I_F = 1 \text{ mA}$	—	0.28	—	V
	$V_F(2)$	$I_F = 10 \text{ mA}$	—	0.36	—	
	$V_F(3)$	$I_F = 100 \text{ mA}$	—	0.56	0.62	
Reverse current	$I_R$	$V_R = 40 \text{ V}$	—	—	5	$\mu\text{A}$
Total capacitance (between cathode and anode)	$C_T$	$V_R = 0, f = 1 \text{ MHz}$	—	15	—	pF

## Marking





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20070701-EN GENERAL

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