

1SS423

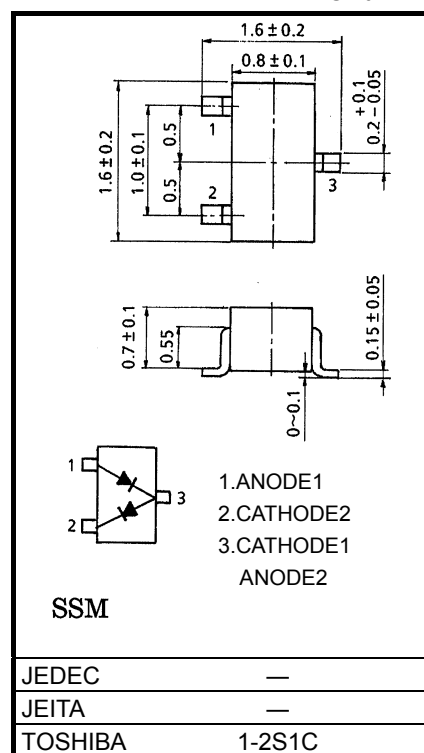
Ultra-High-Speed Switching Applications

Unit: mm

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

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



Weight: 0.0024 g (typ.)

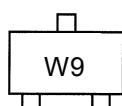
Note: Using continuously under heavy loads (e.g. the application of high temperature/current/voltage and the significant change in temperature, etc.) may cause this product to decrease in the reliability significantly even if the operating conditions (i.e. operating temperature/current/voltage, etc.)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

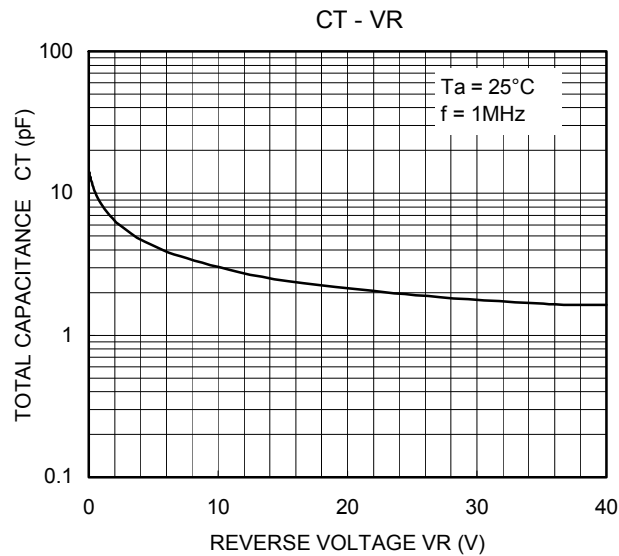
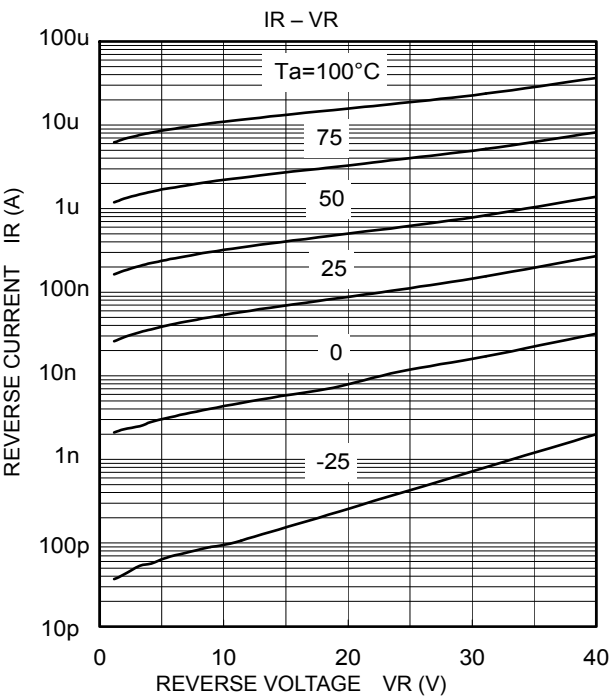
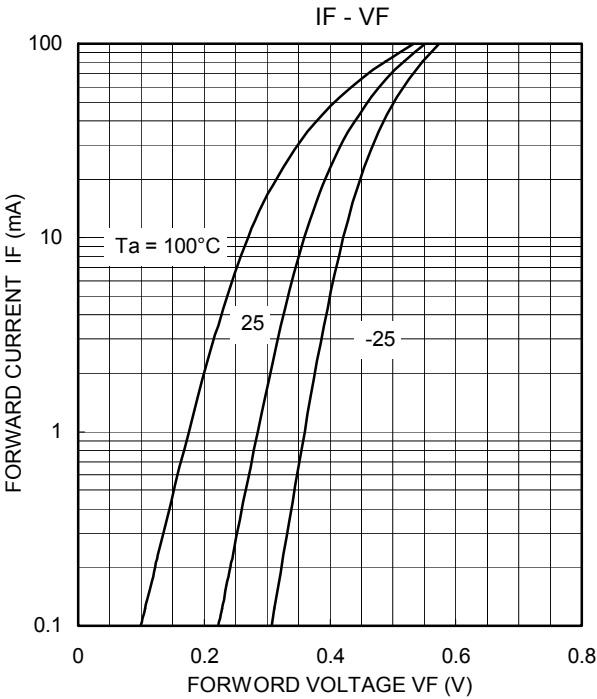
Electrical Characteristics ($T_a = 25^\circ\text{C}$)

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	μA
Total capacitance (between cathode and anode)	C_T	$V_R = 0, f = 1 \text{ MHz}$	—	15	—	pF

Marking



Start of commercial production
2004-07



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