

TOSHIBA Diode Silicon Epitaxial Schottky Barrier Type

1SS420CT

High-Speed Switching Applications

- Low reverse current: $I_R = 5 \mu A$ (max)

Absolute Maximum Ratings (Ta = 25°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}	300	mA
Average forward current	I_O	200	mA
Surge current (10 ms)	I_{FSM}	1	A
Power dissipation	P	150 *	mW
Junction temperature	T_j	125	°C
Storage temperature range	T_{stg}	−55 to 125	°C
Operating temperature range	T_{opr}	−40 to 100	°C

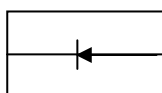
* Mounted on a glass-epoxy circuit board of 20 mm × 20 mm, pad dimensions of 4 mm × 4 mm.

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).

Electrical Characteristics (Ta = 25°C)

Characteristics	Symbol	Test Circuit	Test Condition	Min	Typ.	Max	Unit
Forward voltage	V_F (1)	—	$I_F = 1 \text{ mA}$	—	0.29	—	V
	V_F (2)	—	$I_F = 10 \text{ mA}$	—	0.36	—	
	V_F (3)	—	$I_F = 200 \text{ mA}$	—	0.52	0.6	
Reverse current	I_R	—	$V_R = 30 \text{ V}$	—	—	5	μA
Total capacitance	C_T	—	$V_R = 0 \text{ V}, f = 1 \text{ MHz}$	—	20	—	pF

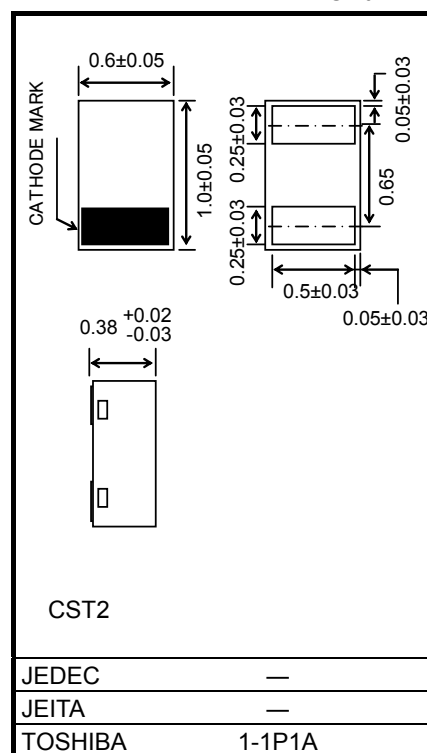
Equivalent Circuit (top view)



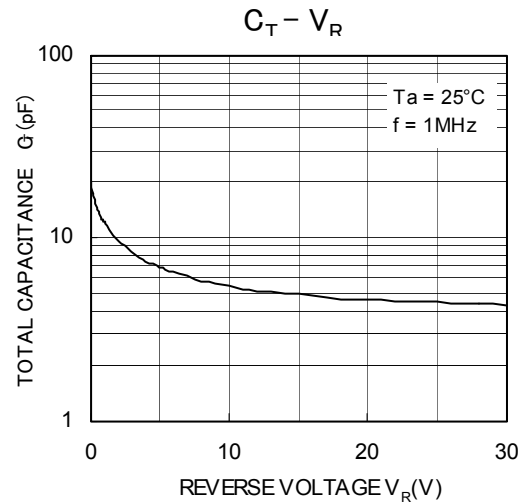
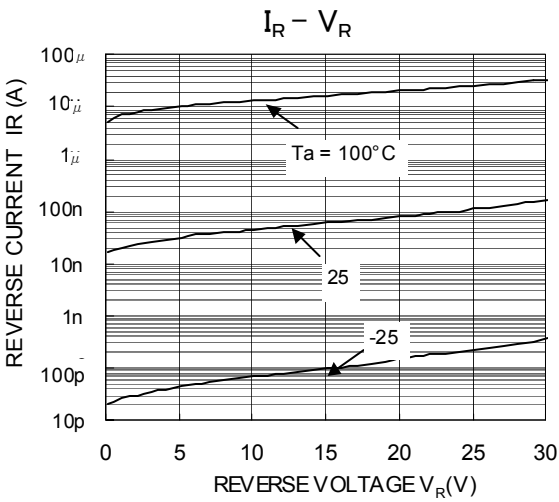
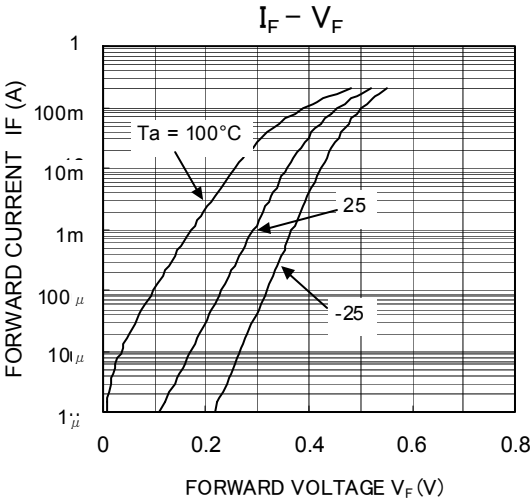
Marking



Unit: mm



Weight: 0.7 mg (typ.)



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