

TOSHIBA Diode Silicon Epitaxial Schottky Barrier Type

1SS420CT

High-Speed Switching Applications

- Low reverse current: $I_R = 5 \mu\text{A}$ (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.

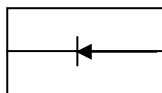
Note: Using continuously under heavy loads (e.g. the application of high temperature/current/voltage and the significant change in temperature, etc.) may cause this product to decrease in the reliability significantly even if the operating conditions (i.e. operating temperature/current/voltage, etc.)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

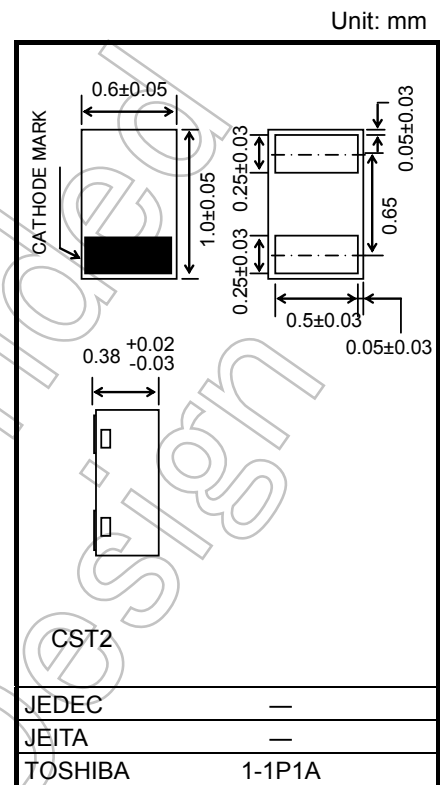
Equivalent Circuit (top view)



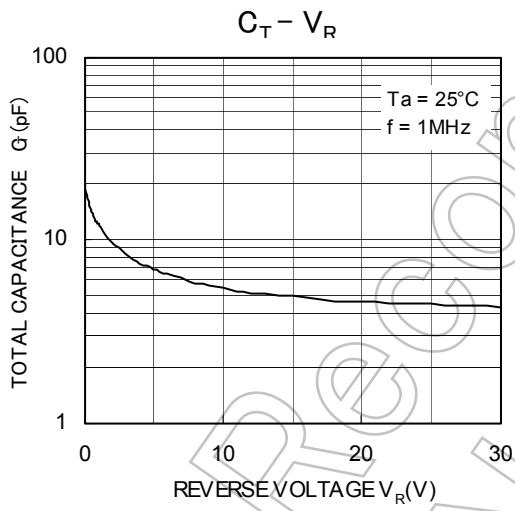
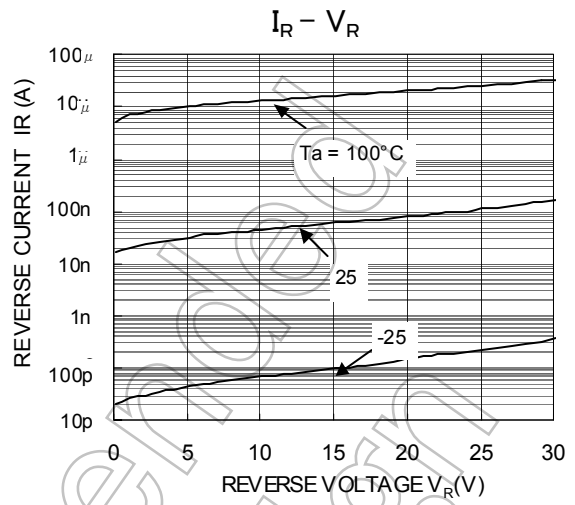
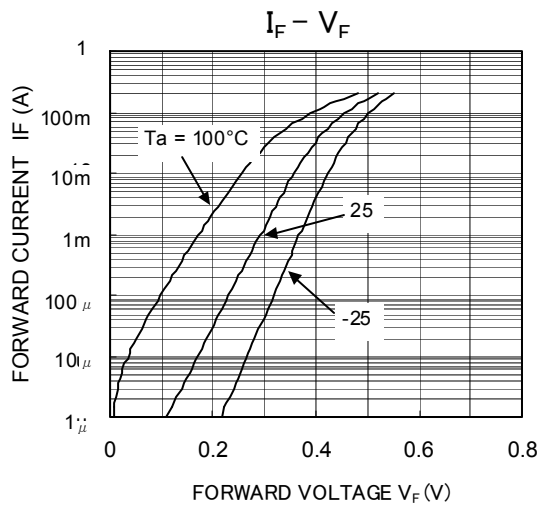
Marking



Start of commercial production
2005-03



Weight: 0.7 mg (typ.)



Not Recommended for New Design

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