

TOSHIBA Diode Silicon Epitaxial Schottky Barrier Type

DSF521CT

High Speed Switching Application

Low forward voltage : $V_F(3) = 0.5V$ (max)

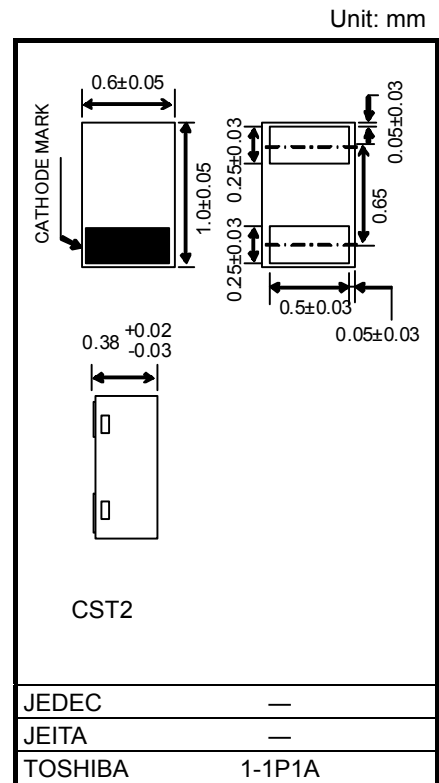
Absolute Maximum Ratings (Ta = 25°C)

Characteristic	Symbol	Rating	Unit
Reverse voltage	V_R	30	V
Maximum (peak) forward current	I_{FM}	300	mA
Average forward current	I_O	200	mA
Surge current (10ms)	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 dimension 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).

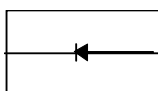


Weight: 0.7 mg (typ.)

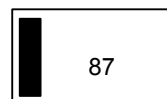
Electrical Characteristics (Ta = 25°C)

Characteristic	Symbol	Test Circuit	Test Condition	Min	Typ.	Max	Unit
Forward voltage	$V_F(1)$	—	$I_F = 1mA$	—	0.2	—	V
	$V_F(2)$	—	$I_F = 5mA$	—	0.24	—	
	$V_F(3)$	—	$I_F = 200mA$	—	0.45	0.5	
Reverse current	$I_R(1)$	—	$V_R = 10V$	—	—	20	μA
	$I_R(2)$	—	$V_R = 30V$	—	—	30	
Total capacitance	C_T	—	$V_R = 0, f = 1 MHz$	—	34	—	pF

Equivalent Circuit (top view)

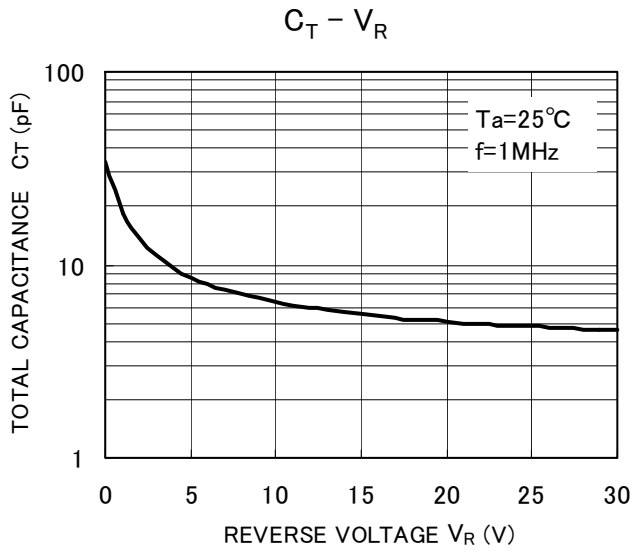
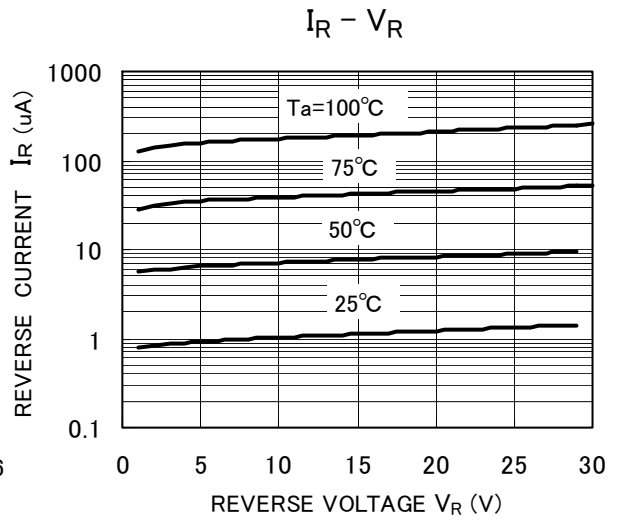
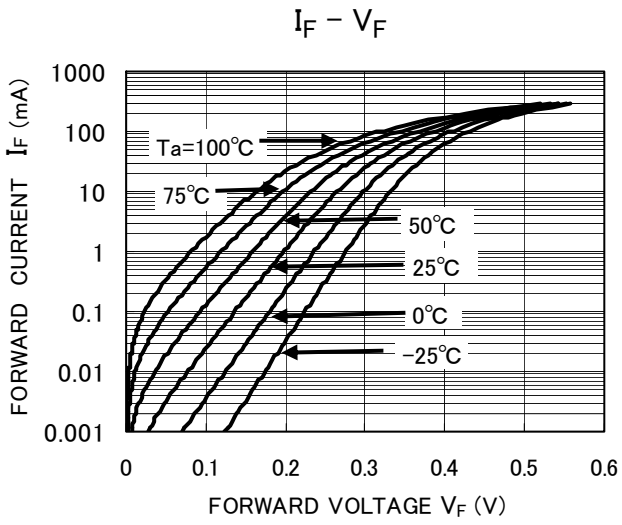


Marking



Handling Precaution

Schottky barrier diodes have reverse current characteristic compared to the other diodes.
There is a possibility SBD may cause thermal runaway when it is used under high temperature or high voltage.
Please take forward and reverse loss into consideration during design.



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