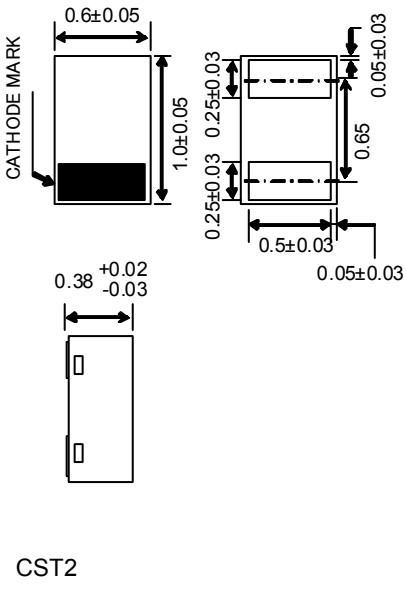
TOSHIBA Diode Silicon Epitaxial Schottky Barrier Type

1SS417CT

High Speed Switching Application

- Small package
- Low forward voltage: $V_{F\ (3)}$ = 0.56 V (typ.)
- Low reverse current: I_R = 5 μA (max)

Unit: mm



CST2

JEDEC	—
JEITA	—
TOSHIBA	1-1P1A

Weight: 0.7 mg (typ.)

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 (10ms)	I_{FSM}	1	A
Power dissipation	P *	100	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

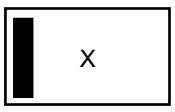
* Mounted on a glass epoxy circuit board of 20 mm× 20 mm, pad dimension of 4 mm× 4 mm.

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).

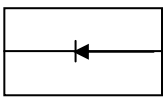
Electrical Characteristics (Ta = 25°C)

Characteristic	Symbol	Test Circuit	Test Condition	Min	Typ.	Max	Unit
Forward voltage	$V_{F\ (1)}$	—	I_F = 1 mA	—	0.28	—	V
	$V_{F\ (2)}$	—	I_F = 10 mA	—	0.36	—	
	$V_{F\ (3)}$	—	I_F = 100 mA	—	0.56	0.62	
Reverse current	I_R	—	V_R = 40 V	—	—	5	μA
Total capacitance	C_T	—	V_R = 0 V, f = 1 MHz	—	15	—	pF

Marking

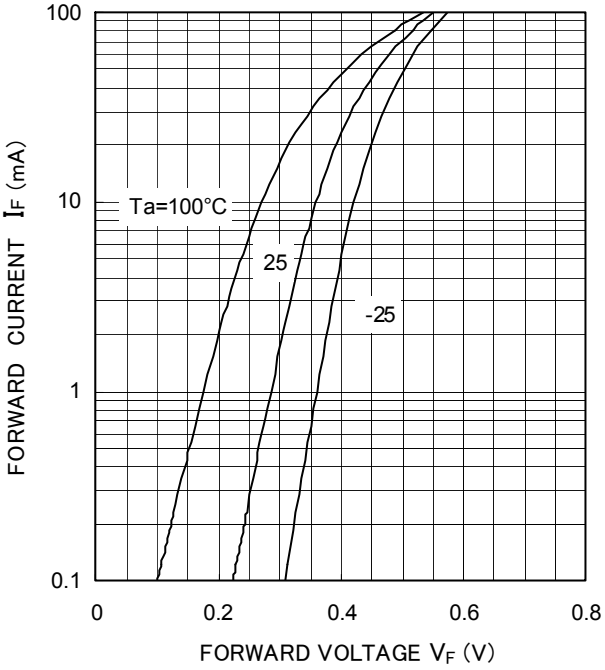


Equivalent Circuit (Top View)

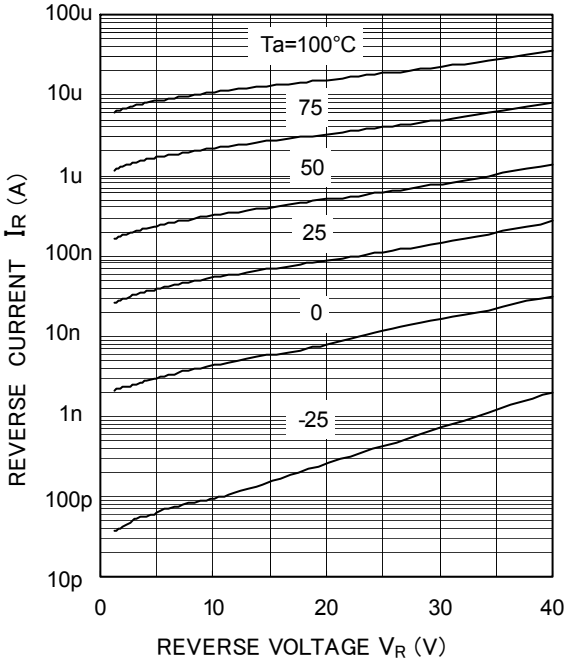


Start of commercial production
2004-08

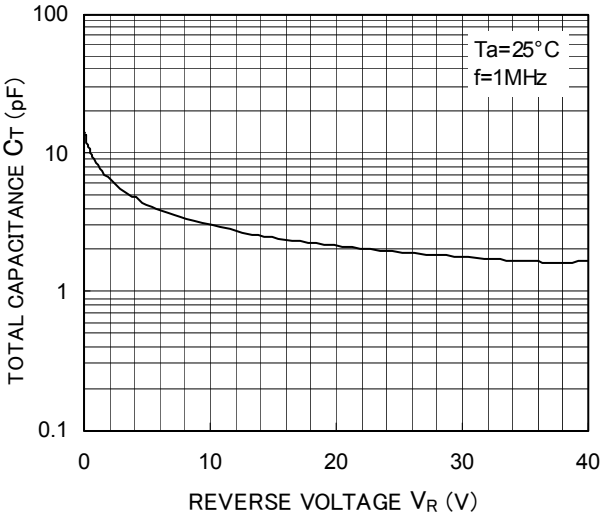
$I_F - V_F$



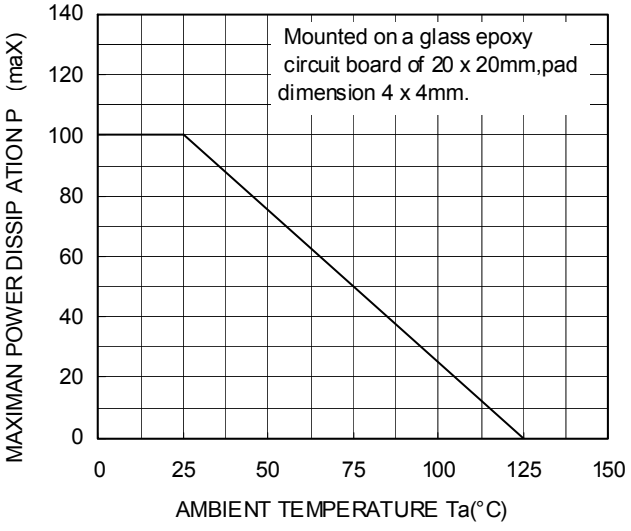
$I_R - V_R$



$C_T - V_R$



P - Ta



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