

TOSHIBA Diode Silicon Epitaxial Schottky Barrier Type

# 1SS417CT

## High Speed Switching Application

- Small package
- Low forward voltage:  $V_F(3) = 0.56 \text{ V (typ.)}$
- Low reverse current:  $I_R = 5 \mu\text{A (max)}$

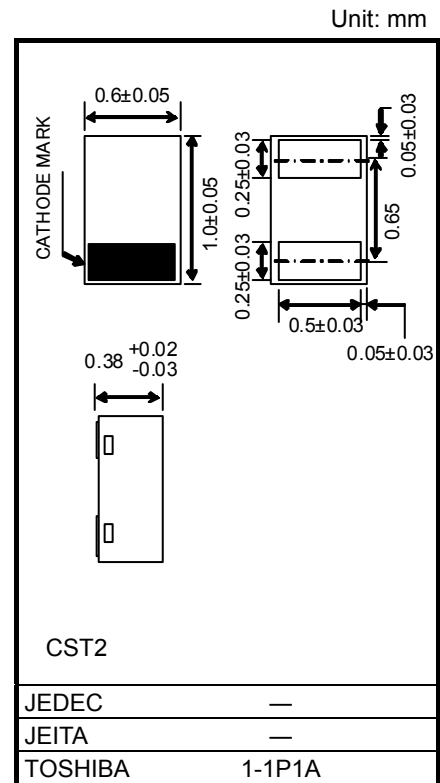
## Absolute Maximum Ratings (Ta = 25°C)

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).

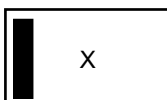


Weight: 0.7 mg (typ.)

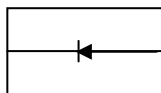
## Electrical Characteristics (Ta = 25°C)

Characteristic	Symbol	Test Circuit	Test Condition	Min	Typ.	Max	Unit
Forward voltage	$V_F(1)$	—	$I_F = 1 \text{ mA}$	—	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	$\mu\text{A}$
Total capacitance	$C_T$	—	$V_R = 0 \text{ V, } f = 1 \text{ MHz}$	—	15	—	pF

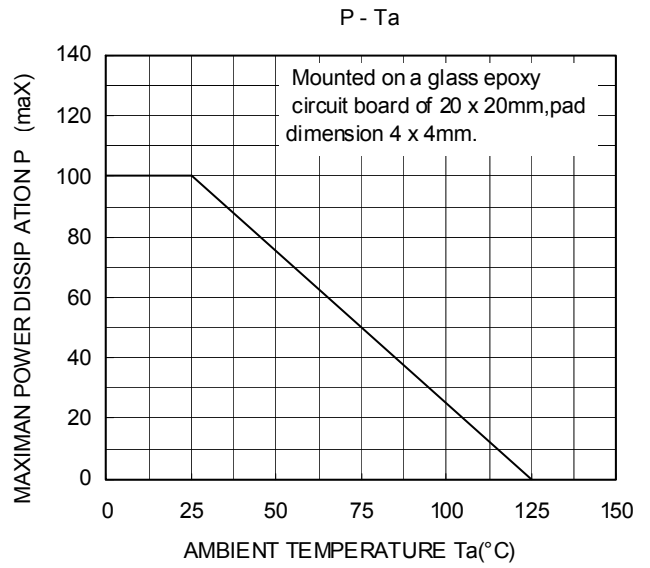
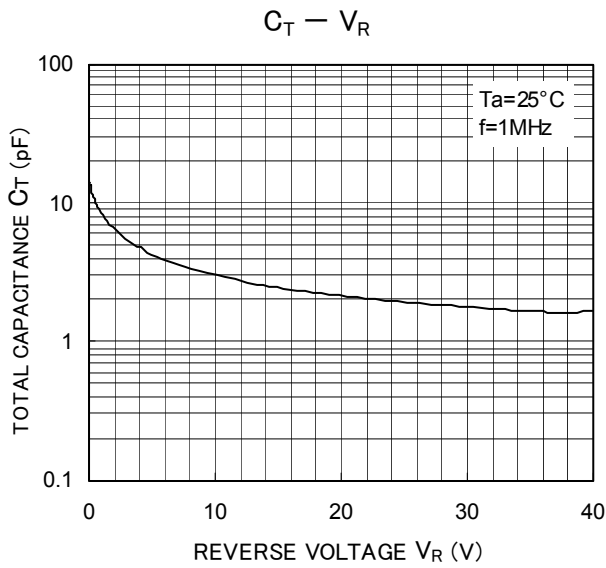
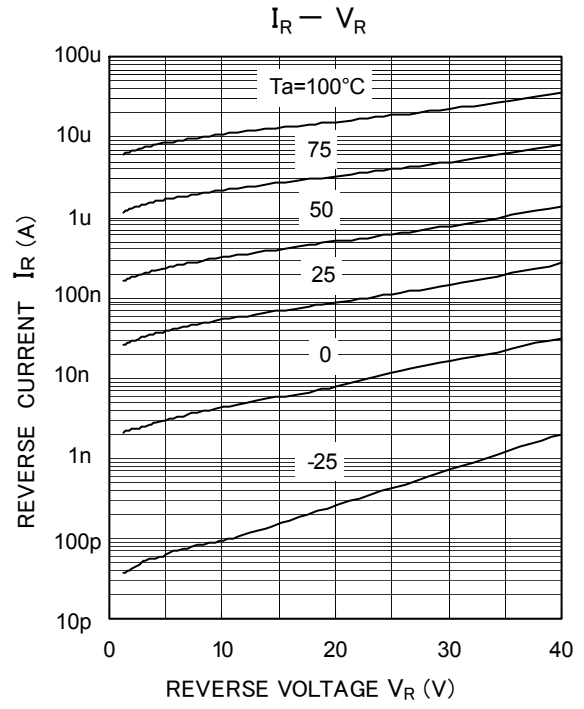
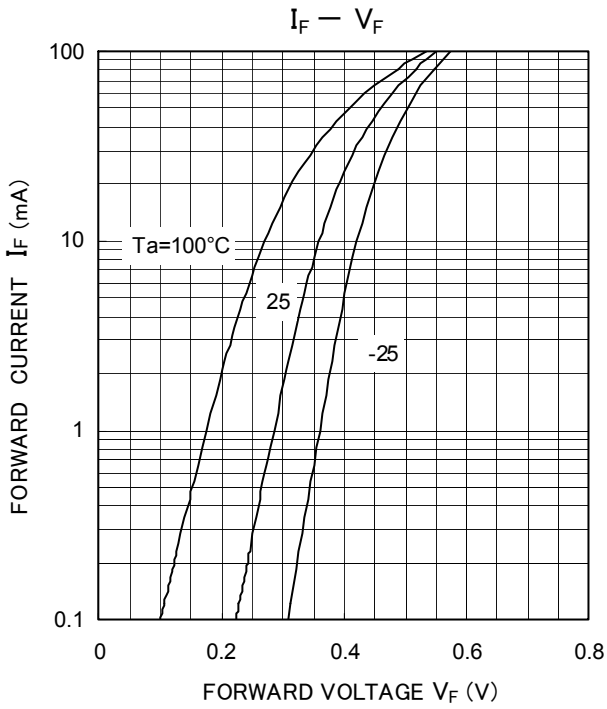
## Marking



## Equivalent Circuit (Top View)



Start of commercial production  
2004-08



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