

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 ($T_a = 25^\circ\text{C}$)

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	$^\circ\text{C}$
Storage temperature range	T_{stg}	-55 to 125	$^\circ\text{C}$
Operating temperature range	T_{opr}	-40 to 100	$^\circ\text{C}$

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

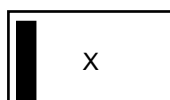
Note: Using continuously under heavy loads (e.g. the application of high temperature/current/voltage and the significant change in temperature, etc.) may cause this product to decrease in the reliability significantly even if the operating conditions (i.e. operating temperature/current/voltage, etc.)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

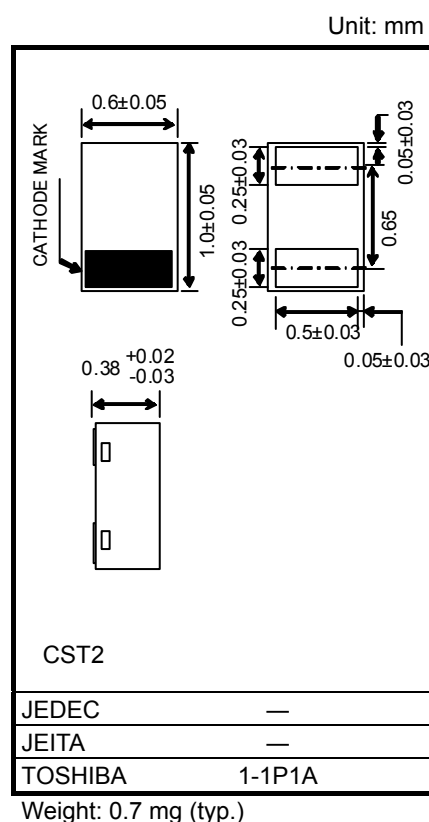
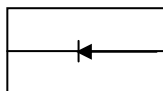
Electrical Characteristics ($T_a = 25^\circ\text{C}$)

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	μA
Total capacitance	C_T	—	$V_R = 0 \text{ V, } f = 1 \text{ MHz}$	—	15	—	pF

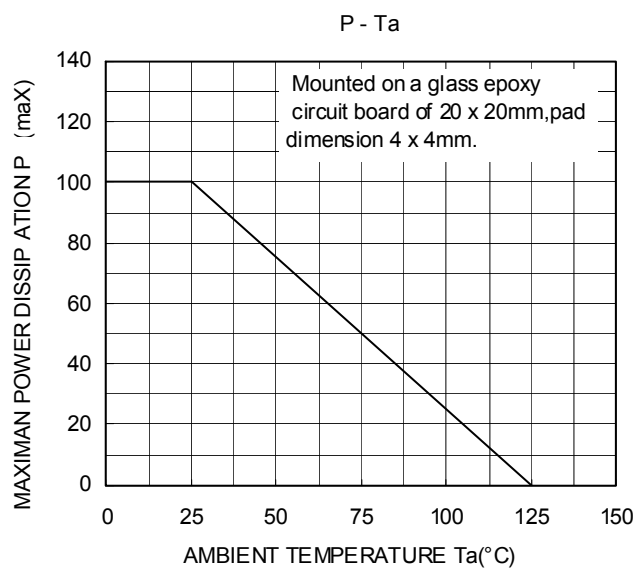
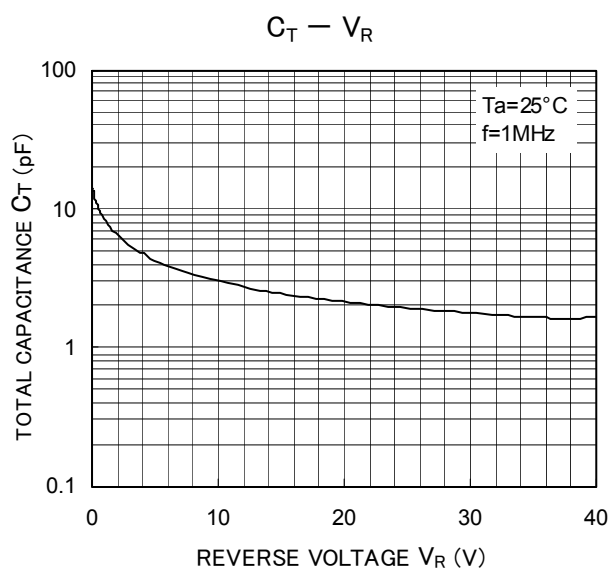
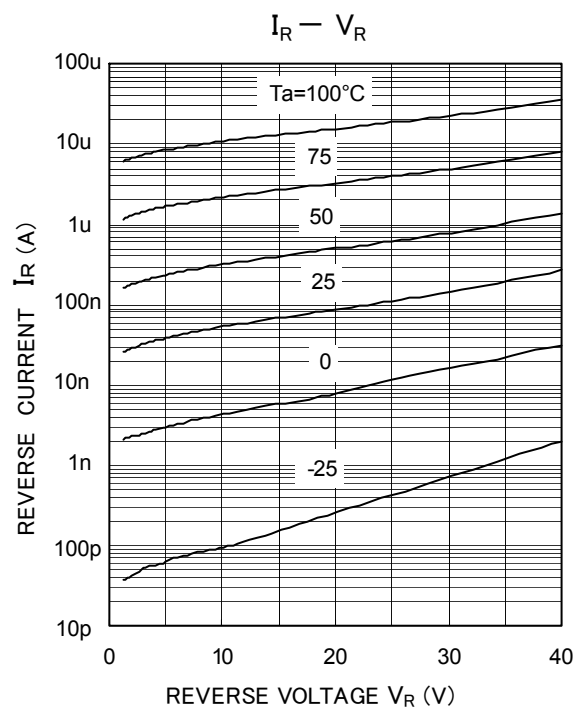
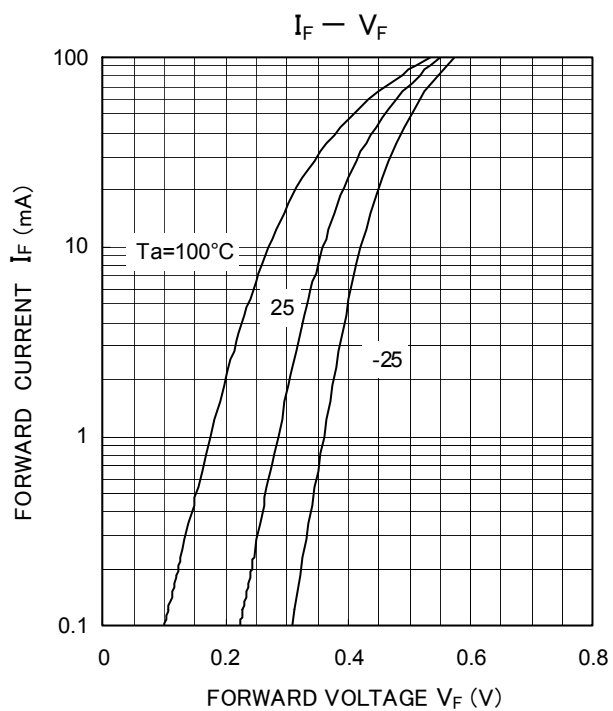
Marking



Equivalent Circuit (Top View)



Start of commercial production
2004-08



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