TOSHIBA Diode Silicon Epitaxial Schottky Barrier Type

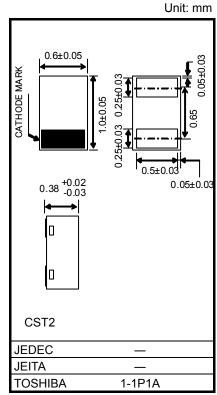
# 1SS416CT

#### High Speed Switching Application

- Small package
- Low forward voltage: V<sub>F</sub> = 0.23 V (typ.) @I<sub>F</sub> = 5 mA

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

Characteristics	Symbol	Rating	Unit	
Maximum (peak) reverse Voltage	V <sub>RM</sub>	35	V	
Reverse voltage	V <sub>R</sub>	30	V	
Maximum (peak) forward current	I <sub>FM</sub>	200	mA	
Average forward current	Ι <sub>Ο</sub>	100	mA	
Surge current (10ms)	I <sub>FSM</sub>	1	А	
Power dissipation	P *	100	mW	
Junction temperature	Тј	125	°C	
Storage temperature range	T <sub>stg</sub>	-55 to 125	°C	
Operating temperature range	T <sub>opr</sub>	-40 to 100	°C	



Weight: 0.7 mg (typ.)

\*: 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)

Characteristics	Symbol	Test Circuit	Test Condition	Min	Тур.	Max	Unit
Forward voltage	V <sub>F (1)</sub>	_	I <sub>F</sub> = 1 mA	_	0.18	_	V
	V <sub>F (2)</sub>	_	I <sub>F</sub> = 5 mA	_	0.23	_	
	V <sub>F (3)</sub>	_	I <sub>F</sub> = 100 mA	_	0.38	0.50	
Reverse current	I <sub>R(1)</sub>	_	V <sub>R</sub> = 10 V	_	_	20	μA
	I <sub>R(2)</sub>	_	V <sub>R</sub> = 30 V	_	_	50	
Total capacitance	CT	—	V <sub>R</sub> = 0 V, f = 1 MHz	_	15		pF

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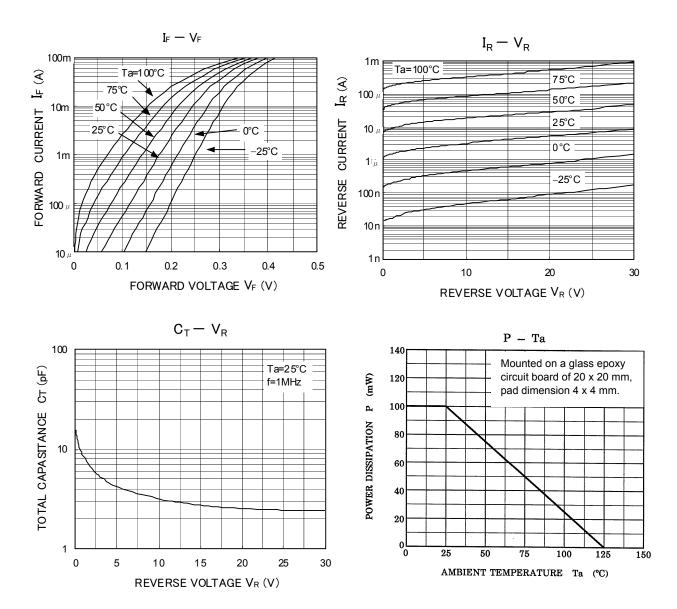
### Marking

### Equivalent Circuit (top view)



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