Unit: mm

TOSHIBA Diode Silicon Epitaxial Schottky Barrier Type

CUS05F30

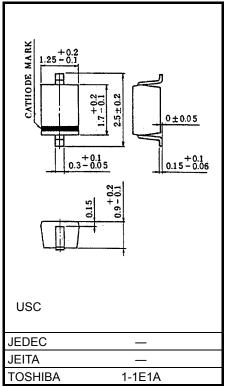
High-Speed Switching Application

Absolute Maximum Ratings (Ta = 25°C)

Characteristic	Symbol	Rating	Unit
Reverse voltage	VR	30	V
Average forward current	Ι _Ο	500 *	mA
Surge current (10ms)	I _{FSM}	5	А
Junction temperature	Тј	125	°C
Storage temperature range	T _{stg}	-55 to 125	°C

*: Mounted on a glass-epoxy circuit board of 20 mm× 20 mm, pad dimensions 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



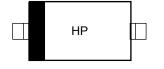
Weight: 4.5 mg (typ.)

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	Тур.	Max	Unit	
Forward voltage	V _{F (1)}	_	I _F = 10mA	_	0.23	_		
	V _{F (2)}	—	I _F = 100mA		0.31	—	V	
	V _{F (3)}	_	I _F = 500mA		0.38	0.45		
Reverse current	I _R	_	V _R = 30V	-	5	50	μA	
Total capacitance	CT	_	V _R = 0 V, f = 1 MHz	_	120	—	pF	

Marking



Equivalent Circuit (Top View)

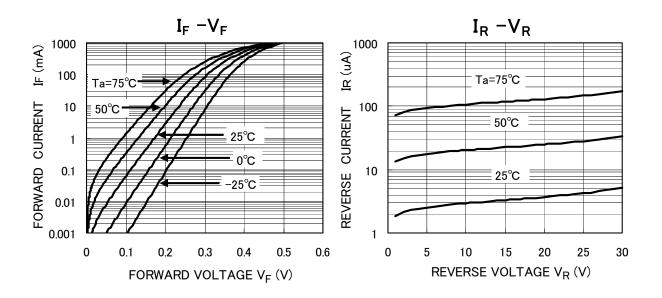


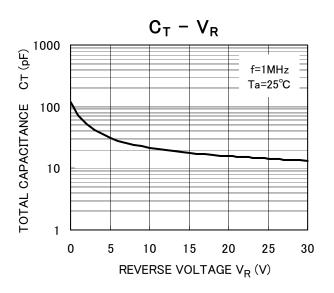
Start of commercial production 2010-12

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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