Unit: mm

TOSHIBA Diode Silicon Epitaxial Schottky Barrier Type

1SS418

High Speed Switching Application

• Low forward voltage : $V_{F(3)} = 0.23V \text{ (typ.)} @ I_{F} = 5mA$

Absolute Maximum Ratings (Ta = 25°C)

Characteristic	Symbol	Rating	Unit	
Maximum (peak) reverse voltage	V_{RM}	35	V	
Reverse voltage	V _R	30	V	
Maximum (peak) forward current	I _{FM}	200	mA	
Average forward current	Io	100	mA	
Surge current (10ms)	I _{FSM}	1	Α	
Power dissipation	P*	100	mW	
Junction temperature	Тј	125	°C	
Storage temperature range	T _{stg}	−55 ~ 125	°C	
Operating temperature range	T _{opr}	−40 ~ 100	°C	

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

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Weight: 0.0011g(Typ.)

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).

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

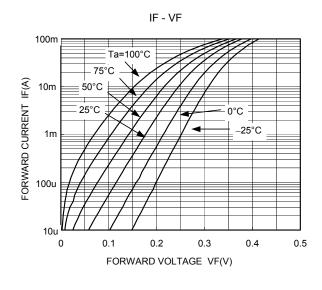
Electrical Characteristics (Ta = 25°C)

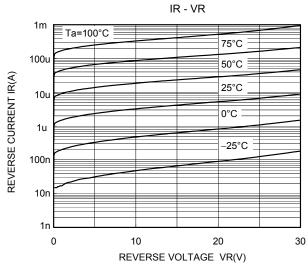
Characteristic	Symbol	Test Circuit	Test Condition	Min	Тур.	Max	Unit
Forward voltage	V _{F (1)}	_	I _F = 1mA	_	0.18	_	
	V _{F (2)}	_	I _F = 5mA	_	0.23	_	V
	V _{F (3)}	_	I _F = 100mA	_	0.38	0.50	
Reverse current	I _R	_	V _R = 10V	_	_	20	μΑ
Reverse current	I _R	_	V _R = 30V	_	_	50	μA
Total capacitance	C _T	_	V _R = 0, f = 1MH _z	1	15	-	pF

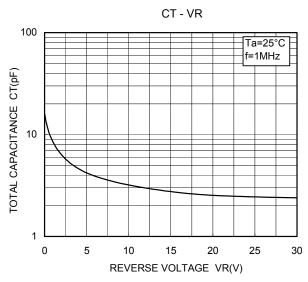
Equivalent Circuit (Top View)

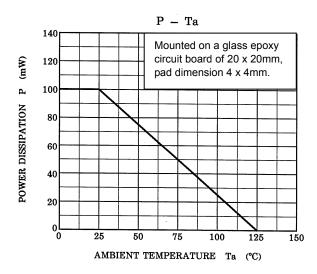












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RESTRICTIONS ON PRODUCT USE

20070701-EN GENERAL

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- TOSHIBA is continually working to improve the quality and reliability of its products. Nevertheless, semiconductor devices in general can malfunction or fail due to their inherent electrical sensitivity and vulnerability to physical stress. It is the responsibility of the buyer, when utilizing TOSHIBA products, to comply with the standards of safety in making a safe design for the entire system, and to avoid situations in which a malfunction or failure of such TOSHIBA products could cause loss of human life, bodily injury or damage to property. In developing your designs, please ensure that TOSHIBA products are used within specified operating ranges as set forth in the most recent TOSHIBA products specifications. Also, please keep in mind the precautions and conditions set forth in the "Handling Guide for Semiconductor Devices," or "TOSHIBA Semiconductor Reliability Handbook" etc.
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