

TOSHIBA Diode Silicon Epitaxial Schottky Barrier Type

# 1SS418

## High Speed Switching Application

- Low forward voltage :  $V_F(3) = 0.23V$  (typ.) @  $I_F = 5mA$

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

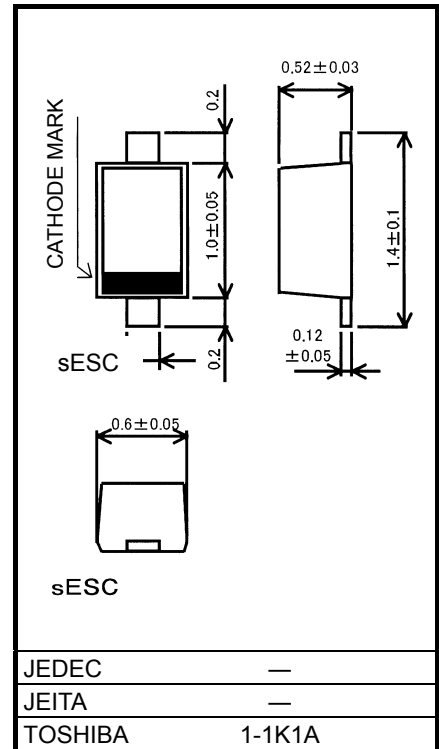
Characteristic	Symbol	Rating	Unit
Maximum (peak) reverse voltage	$V_{RM}$	35	V
Reverse voltage	$V_R$	30	V
Maximum (peak) forward current	$I_{FM}$	200	mA
Average forward current	$I_O$	100	mA
Surge current (10ms)	$I_{FSM}$	1	A
Power dissipation	$P^*$	100	mW
Junction temperature	$T_j$	125	°C
Storage temperature range	$T_{stg}$	-55 ~ 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 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.

Unit: mm

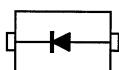


Weight: 0.0011g(Typ.)

## Electrical Characteristics (Ta = 25°C)

Characteristic	Symbol	Test Circuit	Test Condition	Min	Typ.	Max	Unit
Forward voltage	$V_F(1)$	—	$I_F = 1mA$	—	0.18	—	V
	$V_F(2)$	—	$I_F = 5mA$	—	0.23	—	
	$V_F(3)$	—	$I_F = 100mA$	—	0.38	0.50	
Reverse current	$I_R$	—	$V_R = 10V$	—	—	20	μA
Reverse current	$I_R$	—	$V_R = 30V$	—	—	50	μA
Total capacitance	$C_T$	—	$V_R = 0, f = 1MHz$	—	15	—	pF

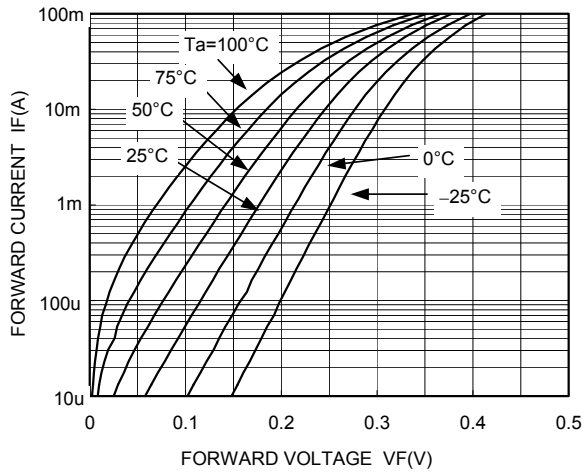
## Equivalent Circuit (Top View)



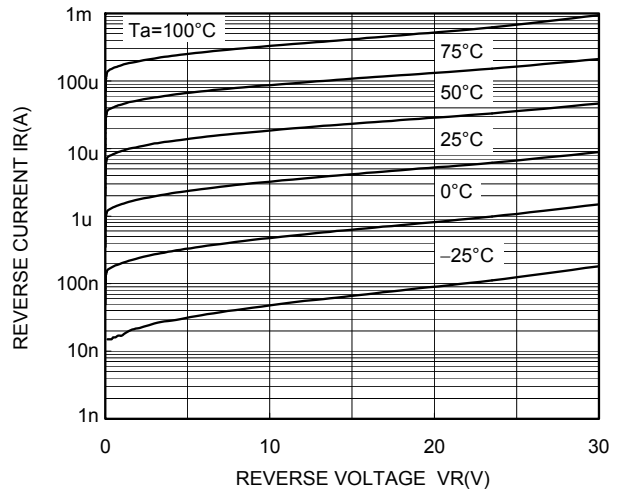
## Marking



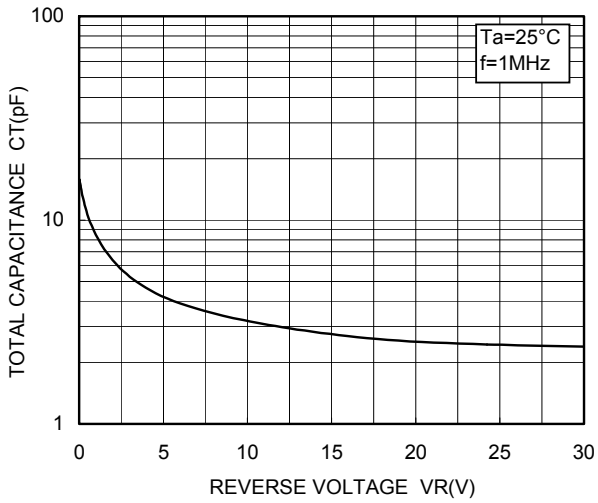
IF - VF



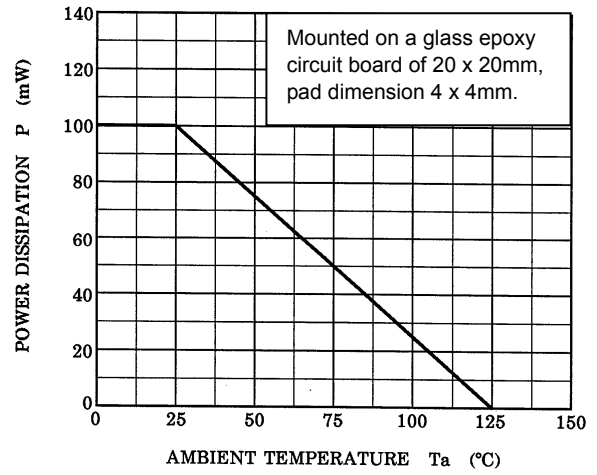
IR - VR



CT - VR



P - Ta



**RESTRICTIONS ON PRODUCT USE**

20070701-EN GENERAL

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