

TOSHIBA Diode Silicon Epitaxial Schottky Barrier Type

## 1SS418

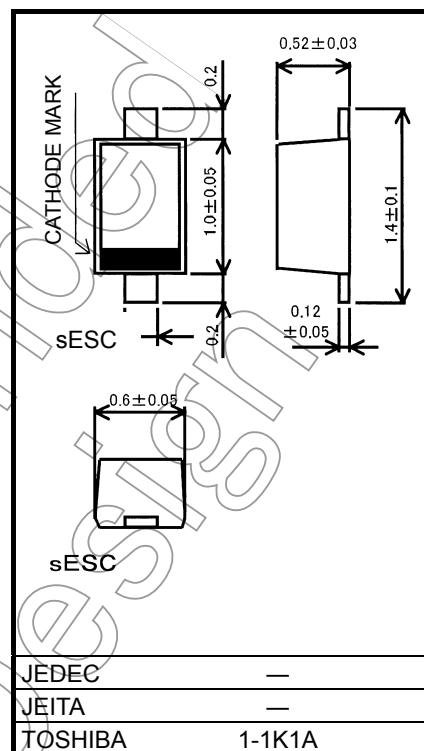
## High Speed Switching Application

Unit: mm

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

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

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



Weight: 0.0011g(Typ.)

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.

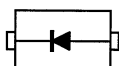
Please design the appropriate reliability upon reviewing the Toshiba Semiconductor Reliability Handbook ("Handling Precautions"/"Derating Concept and Methods") and individual reliability data (i.e. reliability test report and estimated failure rate, etc.).

- \* Mounted on a glass epoxy circuit board of  $20 \times 20\text{mm}$ , pad dimension of  $4 \times 4\text{mm}$ .

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

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

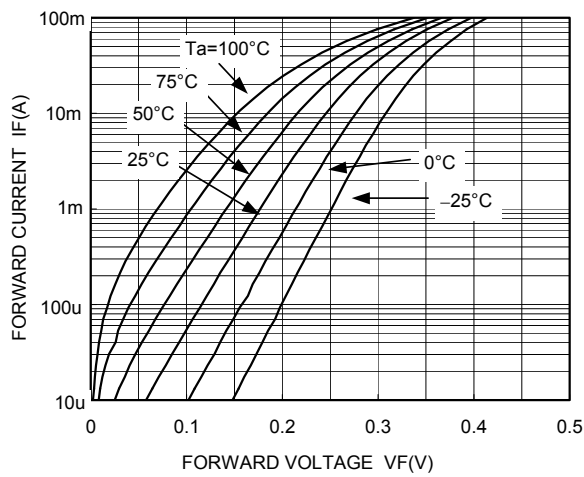
## Equivalent Circuit (Top View)



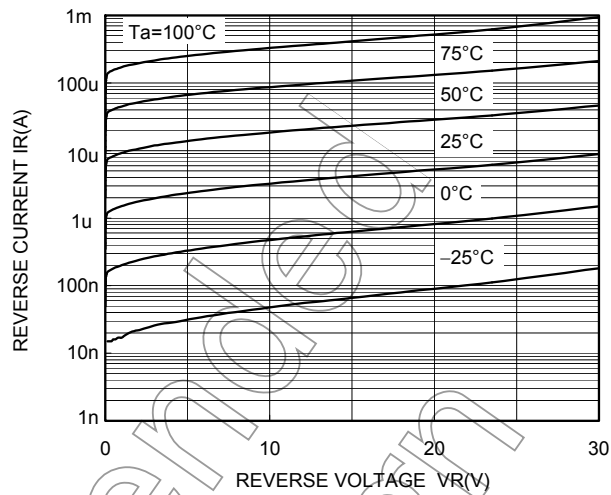
## Marking



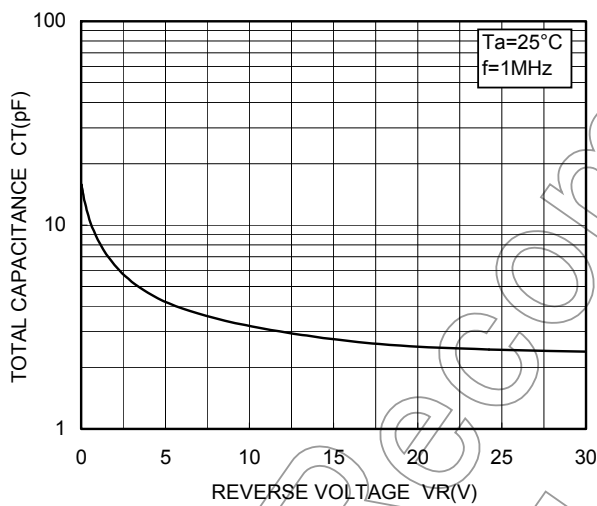
IF - VF



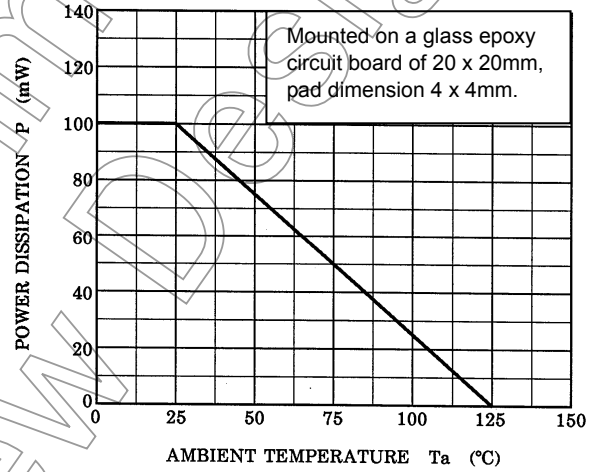
IR - VR



CT - VR



P - Ta



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