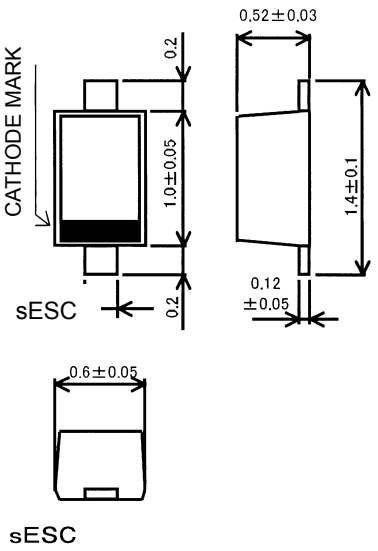
TOSHIBA Diode Silicon Epitaxial Schottky Barrier Type

1SS418

High Speed Switching Application

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

Unit: mm



JEDEC	—
JEITA	—
TOSHIBA	1-1K1A

Weight: 0.0011g(Typ.)

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

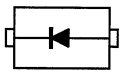
Note: Using continuously under heavy loads (e.g. the application of high temperature/current/voltage and the significant change in temperature, etc.) may cause this product to decrease in the reliability significantly even if the operating conditions (i.e. operating temperature/current/voltage, etc.) 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.

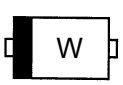
Electrical Characteristics (Ta = 25°C)

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

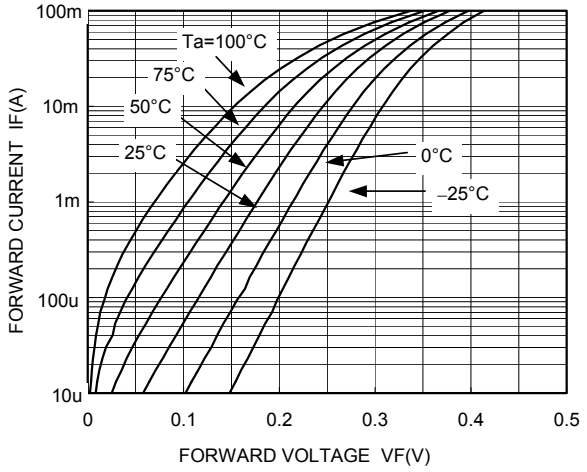
Equivalent Circuit (Top View)



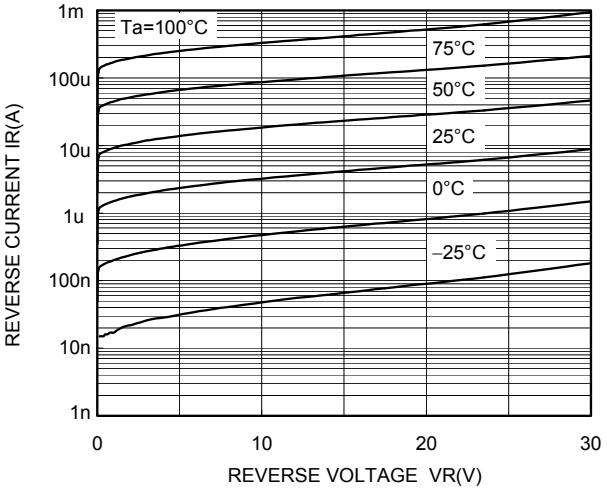
Marking



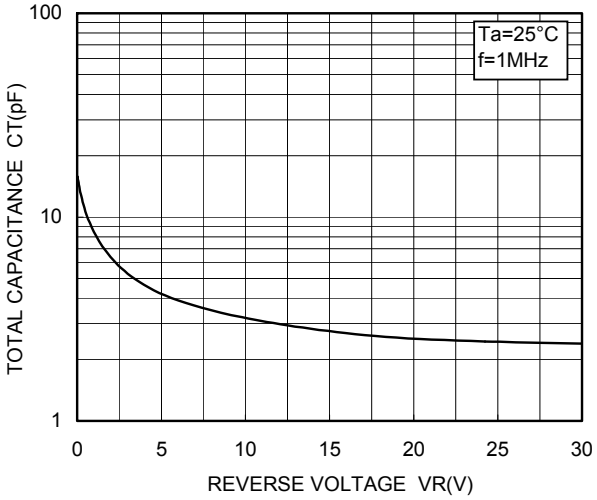
IF - VF



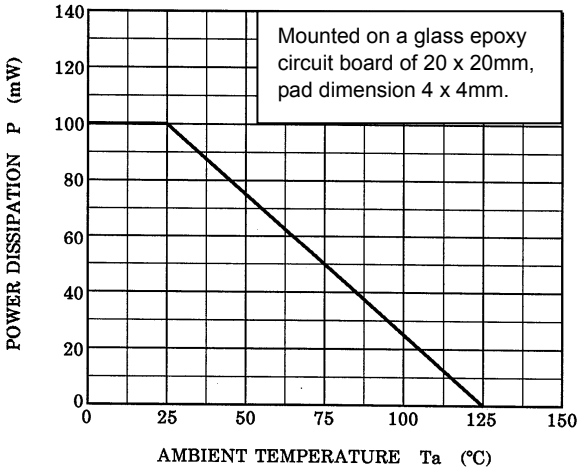
IR - VR



CT - VR



P – Ta



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20070701-EN GENERAL

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