

TOSHIBA Diode Silicon Epitaxial Schottky Barrier Type

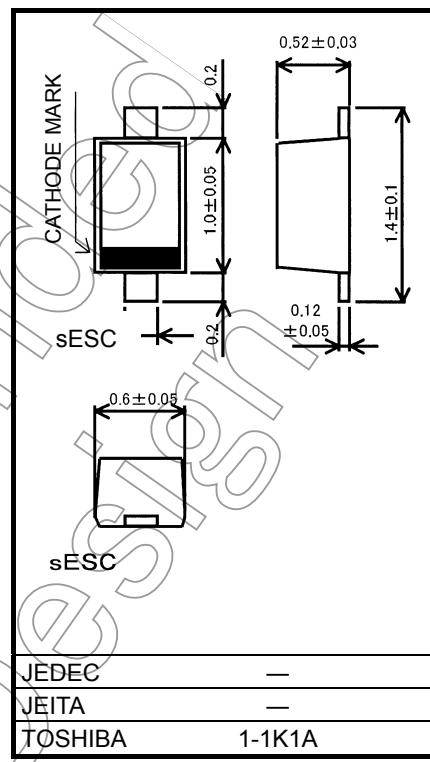
1SS418

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



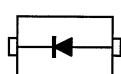
Note: Using continuously under heavy loads (e.g. the application of high temperature/current/voltage and the significant change in temperature, etc.) may cause this product to decrease in the reliability significantly even if the operating conditions (i.e. operating temperature/current/voltage, etc.)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

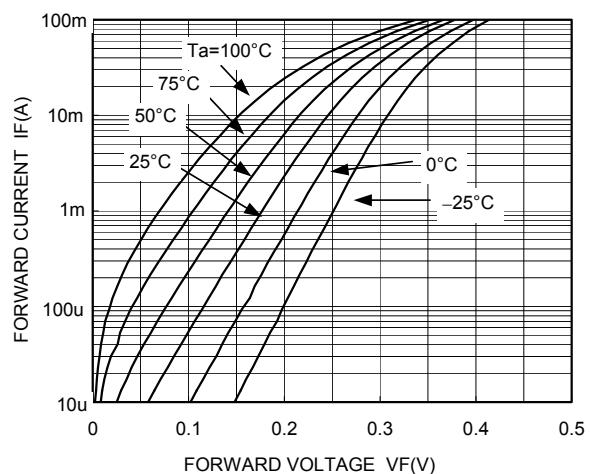
* Mounted on a glass epoxy circuit board of 20 x 20mm, pad dimension of 4 x 4mm.

Electrical Characteristics (Ta = 25°C)

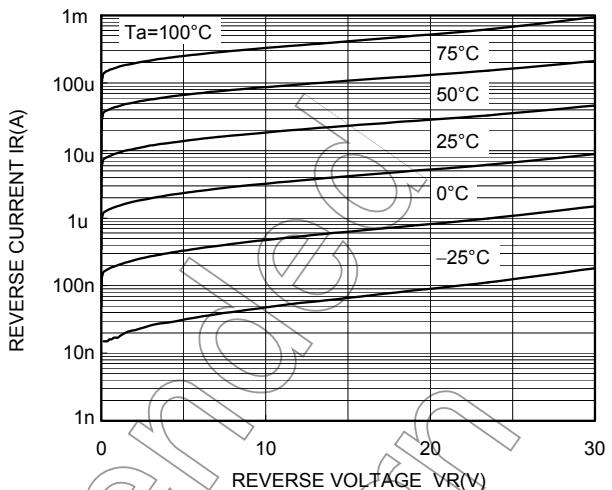
Characteristic	Symbol	Test Circuit	Test Condition	Min	Typ.	Max	Unit
Forward voltage	$V_F(1)$	—	$I_F = 1mA$	—	0.18	—	V
	$V_F(2)$	—	$I_F = 5mA$	—	0.23	—	
	$V_F(3)$	—	$I_F = 100mA$	—	0.38	0.50	
Reverse current	I_R	—	$V_R = 10V$	—	—	20	μA
Reverse current	I_R	—	$V_R = 30V$	—	—	50	μA
Total capacitance	C_T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

Equivalent Circuit (Top View)**Marking**

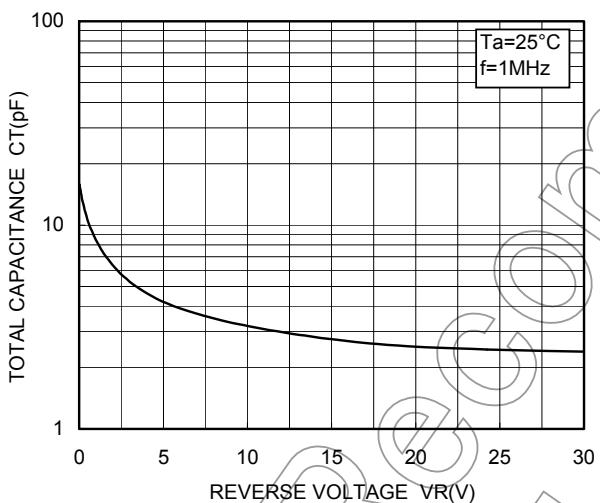
IF - VF



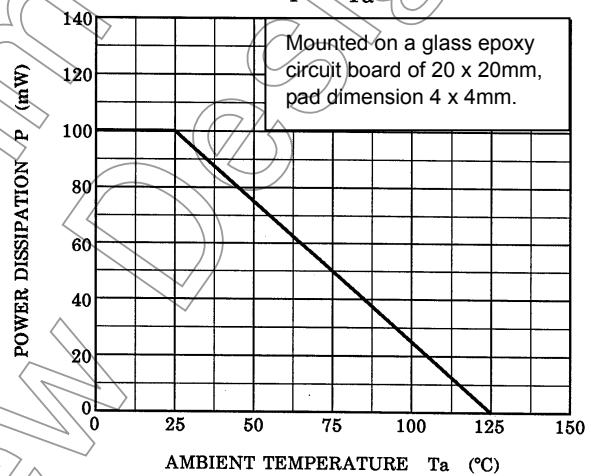
IR - VR



CT - VR



P - Ta



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