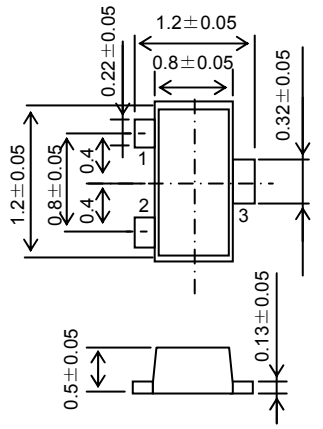
TOSHIBA Diode Silicon Epitaxial Schottky Barrier Type

1SS385FV

High-Speed Switching Applications

- Low forward voltage: V_F = 0.23 V (typ.) @I_F = 5 mA
- Ultra-small package

Unit: mm



VESM

1. ANODE 1
2. ANODE 2
3. CATHODE

JEDEC	—
JEITA	—
TOSHIBA	1-1Q1A

Absolute Maximum Ratings (Ta = 25°C)

Characteristic	Symbol	Rating	Unit
Maximum (peak) reverse voltage	V_{RM}	15	V
Reverse voltage	V_R	10	V
Maximum (peak) forward current	I_{FM}	200 *	mA
Average forward current	I_O	100 *	mA
Surge current (10 ms)	I_{FSM}	1 *	A
Power dissipation	P	150**	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).

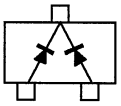
*: Unit rating. Total rating = unit rating × 1.5

** : Mounted on an FR4 board (25.4 mm × 25.4 mm × 1.6 mmt)

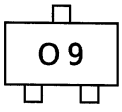
Electrical Characteristics (Ta = 25°C)

Characteristic	Symbol	Test Circuit	Test Condition	Min	Typ.	Max	Unit
Forward voltage	$V_{F\ (1)}$	—	I_F = 1 mA	—	0.18	—	V
	$V_{F\ (2)}$	—	I_F = 5 mA	—	0.23	0.30	V
	$V_{F\ (3)}$	—	I_F = 100 mA	—	0.35	0.50	V
Reverse current	I_R	—	V_R = 10 V	—	—	20	μA
Total capacitance	C_T	—	V_R = 0, f = 1 MH_Z	—	20	—	pF

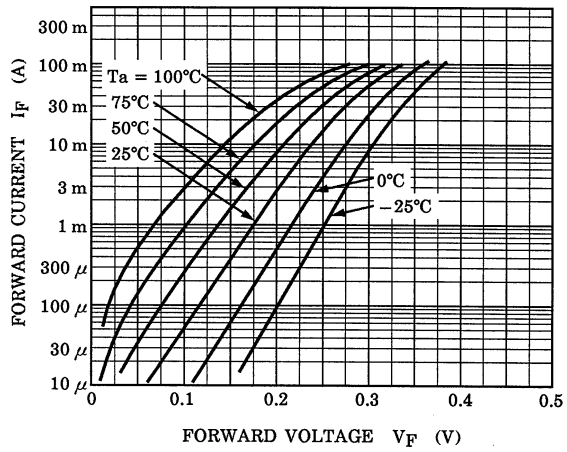
Equivalent Circuit (Top View)



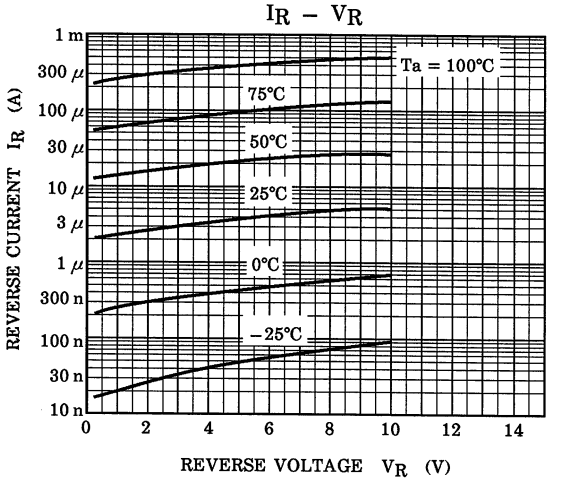
Marking



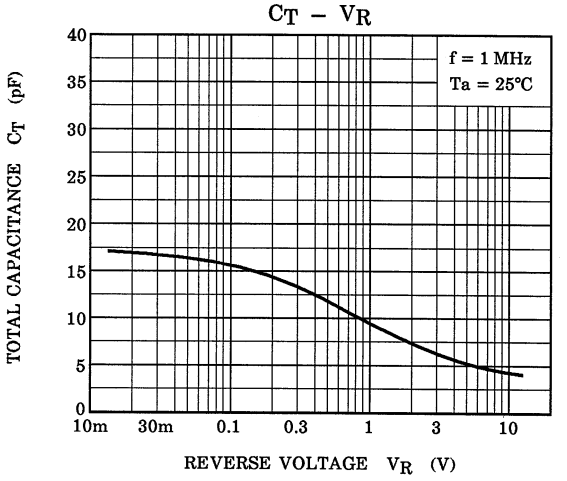
$I_F - V_F$



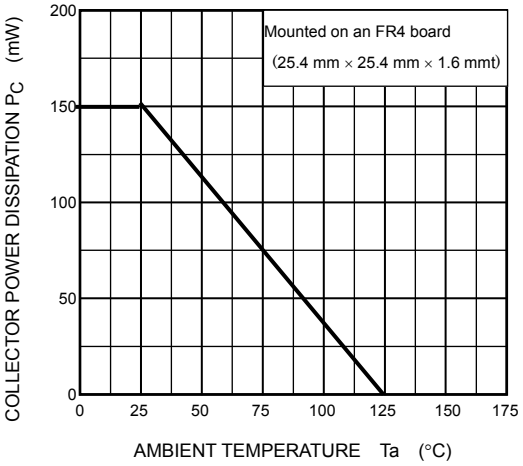
$I_R - V_R$



$C_T - V_R$



P – Ta



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20070701-EN GENERAL

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