

TOSHIBA Diode Silicon Epitaxial Schottky Barrier Type

# 1SS385FV

## High-Speed Switching Applications

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

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

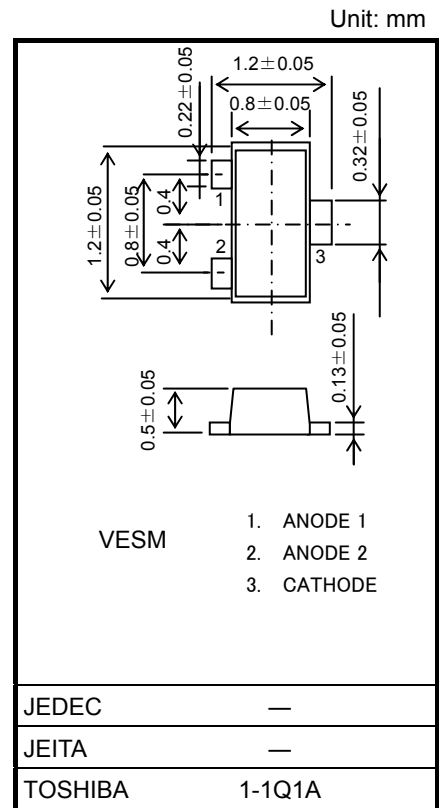
Characteristic	Symbol	Rating	Unit
Maximum (peak) reverse voltage	$V_{RM}$	15	V
Reverse voltage	$V_R$	10	V
Maximum (peak) forward current	$I_{FM}$	200 *	mA
Average forward current	$I_O$	100 *	mA
Surge current (10 ms)	$I_{FSM}$	1 *	A
Power dissipation	P	150**	mW
Junction temperature	$T_j$	125	°C
Storage temperature range	$T_{stg}$	-55 to 125	°C
Operating temperature range	$T_{opr}$	-40 to 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

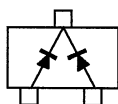
\*\* : Mounted on an FR4 board (25.4 mm × 25.4 mm × 1.6 mm)



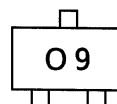
## Electrical Characteristics (Ta = 25°C)

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	0.30	V
	$V_F (3)$	—	$I_F = 100\text{ mA}$	—	0.35	0.50	V
Reverse current	$I_R$	—	$V_R = 10\text{ V}$	—	—	20	μA
Total capacitance	$C_T$	—	$V_R = 0, f = 1\text{ MHz}$	—	20	—	pF

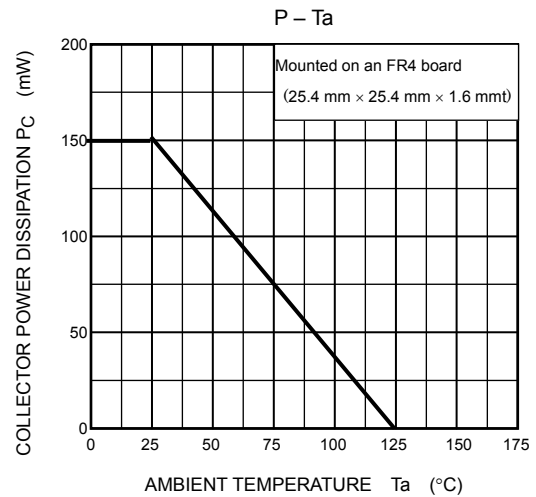
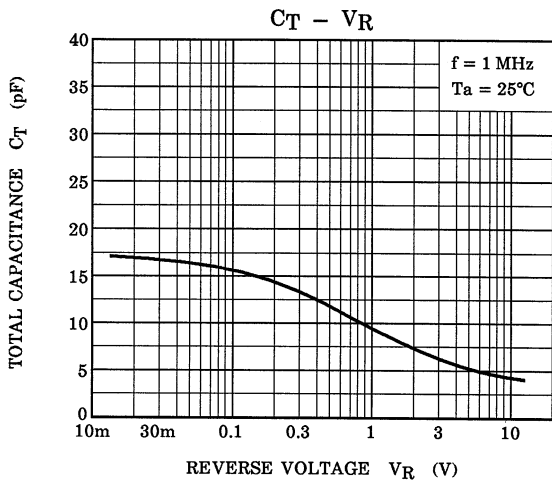
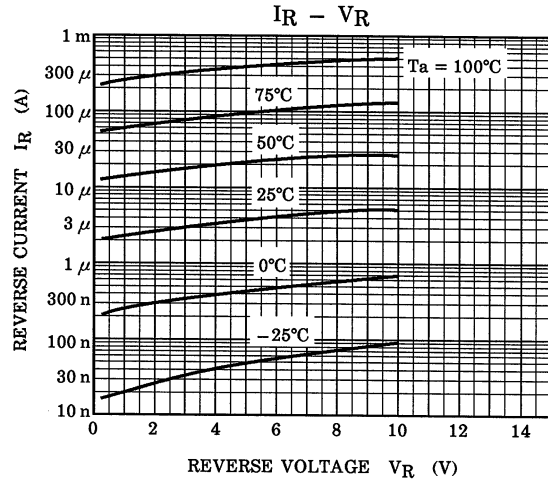
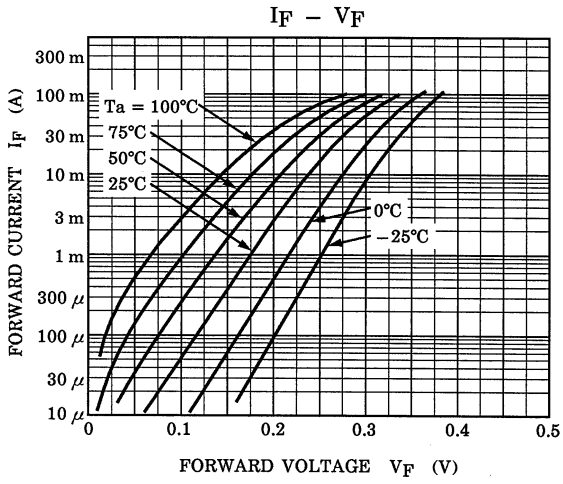
## Equivalent Circuit (Top View)



## Marking



Start of commercial production  
2005-02



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