

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

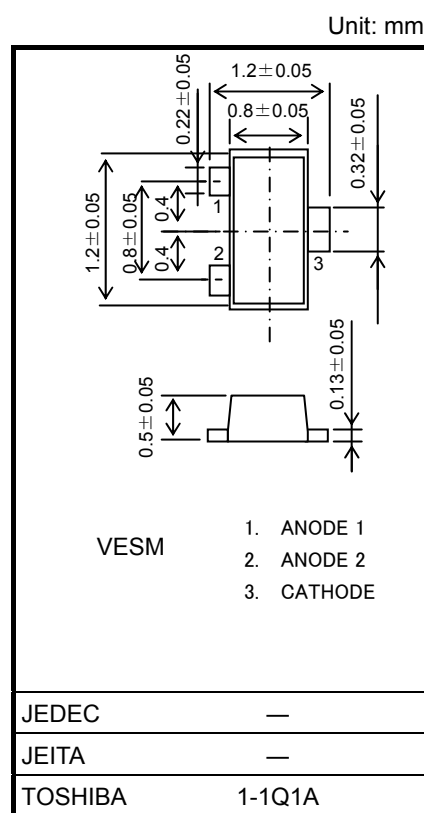
Characteristic	Symbol	Rating	Unit
Maximum (peak) reverse voltage	V_{RM}	15	V
Reverse voltage	V_R	10	V
Maximum (peak) forward current	I_{FM}	200 *	mA
Average forward current	I_O	100 *	mA
Surge current (10 ms)	I_{FSM}	1 *	A
Power dissipation	P	150**	mW
Junction temperature	T_j	125	$^\circ\text{C}$
Storage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

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).

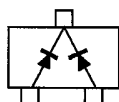
*: Unit rating. Total rating = unit rating $\times$ 1.5

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

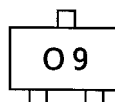
Electrical Characteristics ($T_a = 25^\circ\text{C}$)

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	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

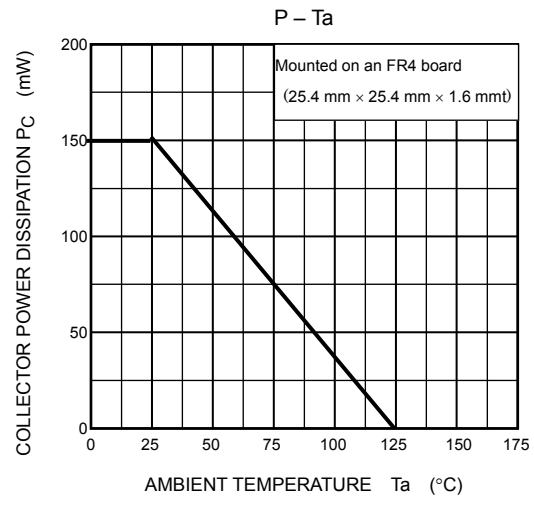
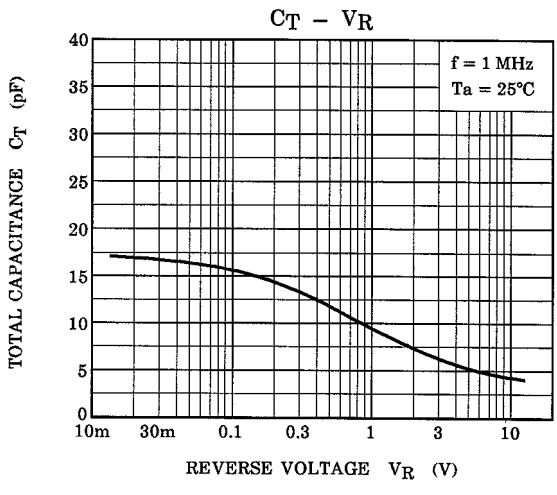
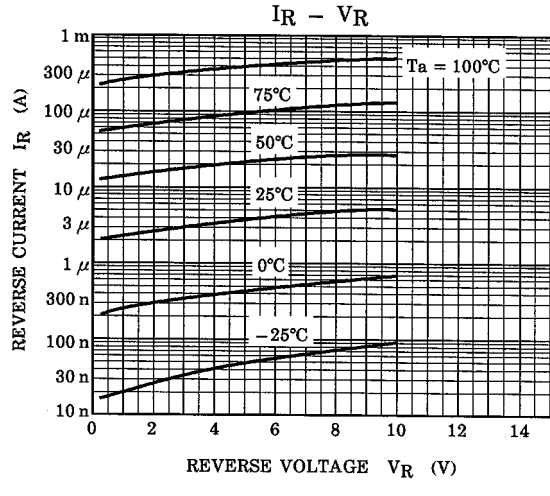
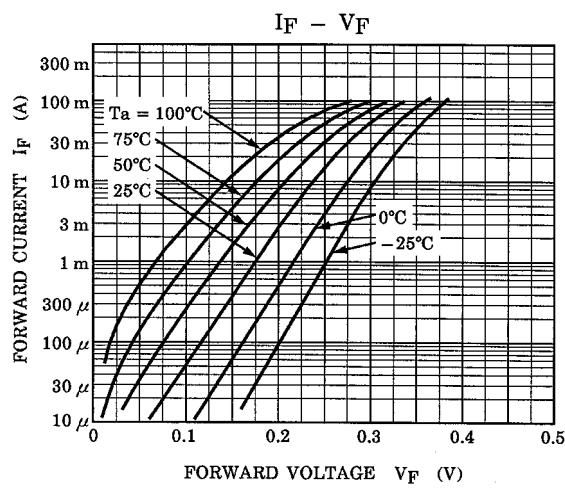
Equivalent Circuit (Top View)



Marking



Start of commercial production
2005-02



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