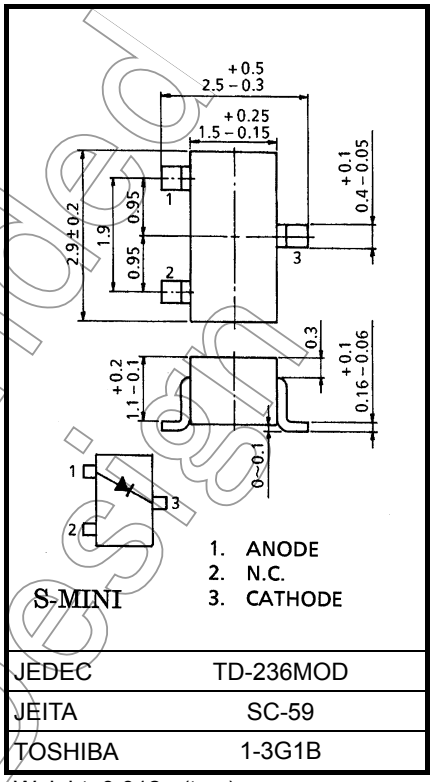
TOSHIBA Diode Silicon Epitaxial Schottky Planar Type

1SS344

Ultra High Speed Switching Application

Unit: mm

- Low forward voltage : $V_{F\ (3)}$ = 0.50V (typ.)
- Fast reverse recovery time : t_{rr} = 20ns (typ.)
- High average forward current : I_O = 0.5A (max)



JEDEC	TD-236MOD
JEITA	SC-59
TOSHIBA	1-3G1B

Weight: 0.012g (typ.)

Absolute Maximum Ratings (Ta = 25°C)

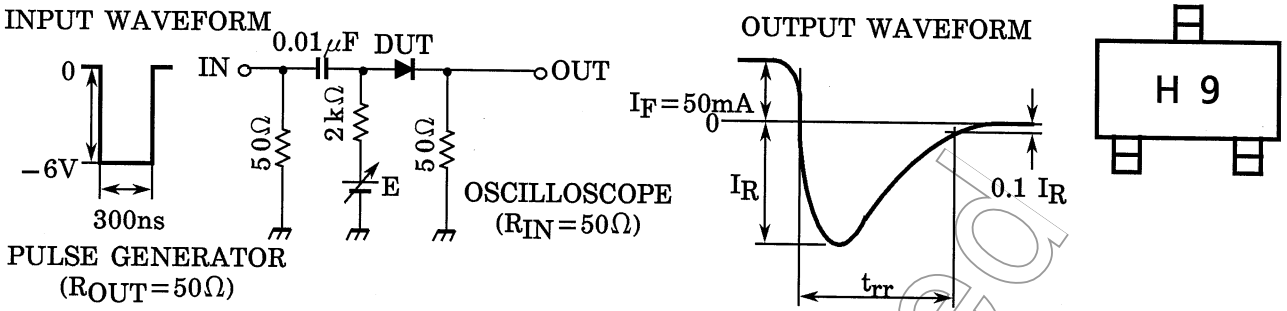
Characteristic	Symbol	Rating	Unit
Maximum (peak) reverse voltage	V_{RM}	25	V
Reverse voltage	V_R	20	V
Maximum (peak) forward current	I_{FM}	1500	mA
Average forward current	I_O	500	mA
Surge current (10ms)	I_{FSM}	5	A
Power dissipation	P	200	mW
Junction temperature	T_j	125	°C
Storage temperature	T_{stg}	−55~125	°C
Operating Temperature	T_{opr}	−40~100	°C

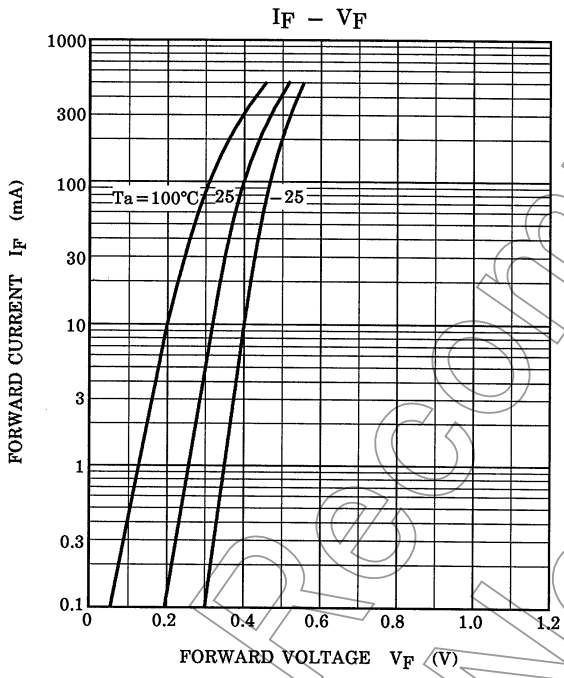
Note: Using continuously under heavy loads (e.g. the application of high temperature/current/voltage and the significant change in temperature, etc.) may cause this product to decrease in the reliability significantly even if the operating conditions (i.e. operating temperature/current/voltage, etc.)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

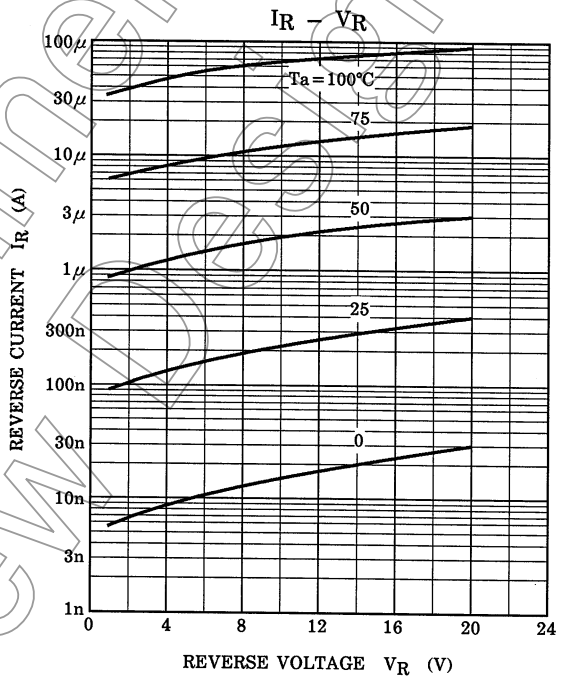
Electrical Characteristics (Ta = 25°C)

Characteristic	Symbol	Test Circuit	Test Condition	Min	Typ.	Max	Unit
Forward voltage	$V_{F\ (1)}$	—	I_F = 10mA	—	0.30	—	V
	$V_{F\ (2)}$	—	I_F = 100mA	—	0.38	—	
	$V_{F\ (3)}$	—	I_F = 500mA	—	0.50	0.55	
Reverse current	$I_{R\ (1)}$	—	V_R = 10V	—	—	20	μA
	$I_{R\ (2)}$	—	V_R = 20V	—	—	100	
Total capacitance	C_T	—	V_R = 0, f = 1MHz	—	120	—	pF
Reverse recovery time	t_{rr}	—	I_F = 50mA, (Fig.1)	—	20	—	ns

Fig.1 Reverse Recovery Time (t_{rr}) **Test Circuit** **Marking**







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