

1SS311

High Voltage,High Speed Switching Applications

Unit: mm

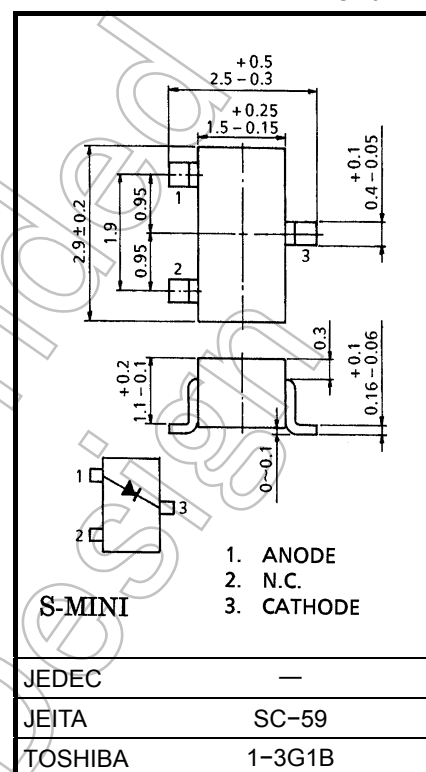
- Low forward voltage : $V_F = 0.94V$ (typ.)
- High voltage : $V_R = 400V$ (min)
- Fast reverse recovery time: $t_{rr} = 1.5\mu s$ (typ.)
- Small total capacitance : $C_T = 3.2pF$ (typ.)
- Small package : SC-59

Absolute Maximum Ratings ($T_a = 25^\circ C$)

Characteristic	Symbol	Rating	Unit
Maximum (peak) reverse voltage	V_{RM}	420	V
Reverse voltage	V_R	400	V
Maximum (peak) forward current	I_{FM}	300	mA
Average forward current	I_O	100	mA
Surge current (10ms)	I_{FSM}	2	A
Power dissipation	P	150	mW
Junction temperature	T_j	125	$^\circ C$
Storage temperature	T_{stg}	-55 to 125	$^\circ C$

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).

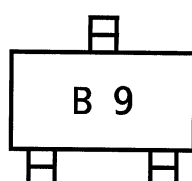


Weight: 0.012g (typ.)

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

Characteristic	Symbol	Test Circuit	Test Condition	Min	Typ.	Max	Unit
Forward voltage	V_F (1)	—	$I_F = 10mA$	—	0.80	—	V
	V_F (2)	—	$I_F = 100mA$	—	0.94	1.20	
Reverse current	I_R (1)	—	$V_R = 300V$	—	—	0.1	μA
	I_R (2)	—	$V_R = 400V$	—	—	1.0	
Total capacitance	C_T	—	$V_R = 0, f = 1MHz$	—	3.2	5.0	pF
Reverse recovery time	t_{rr}	—	$I_F = 10mA$	—	1.5	—	μs

Marking



Start of commercial production
1986-12

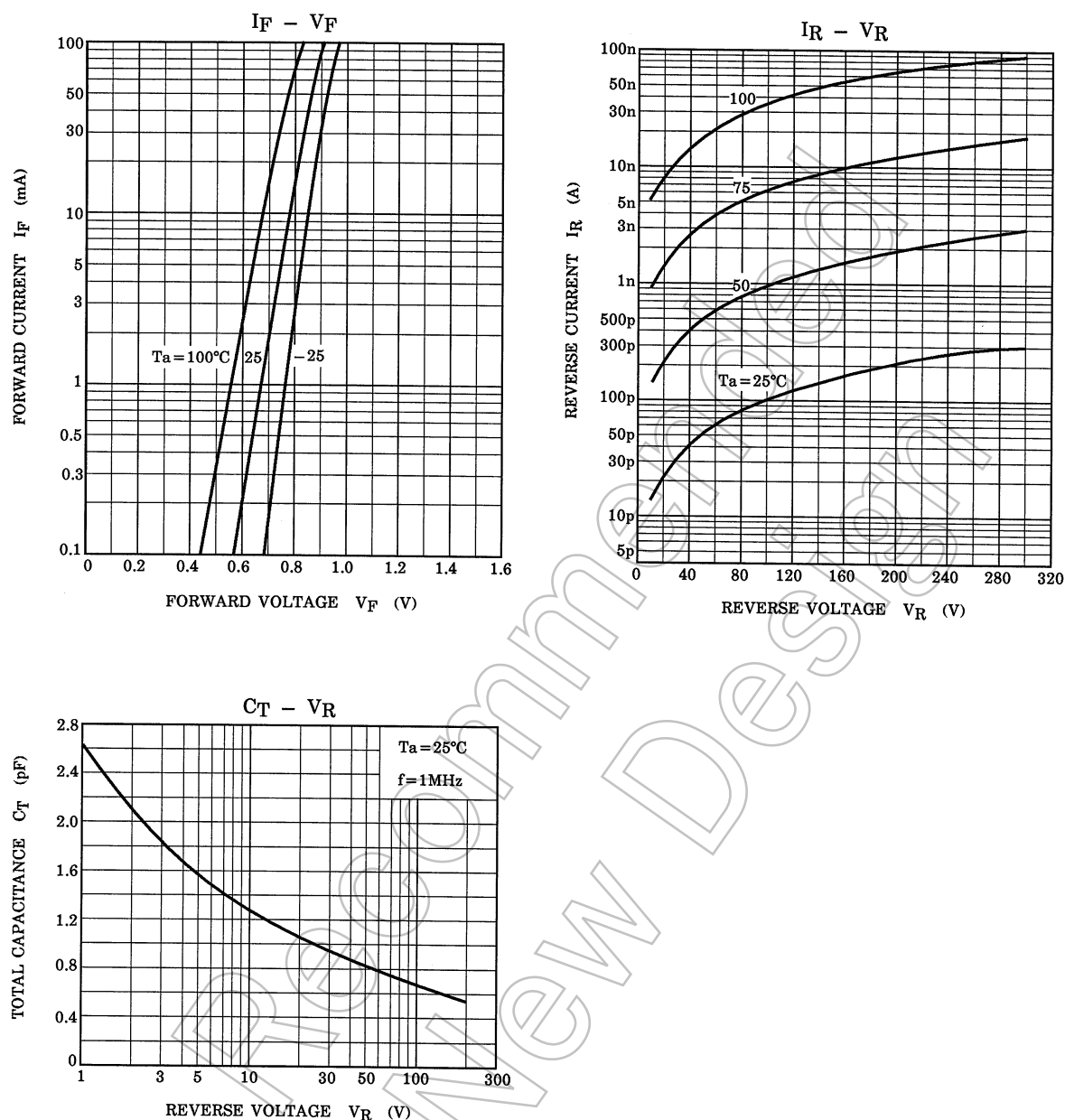
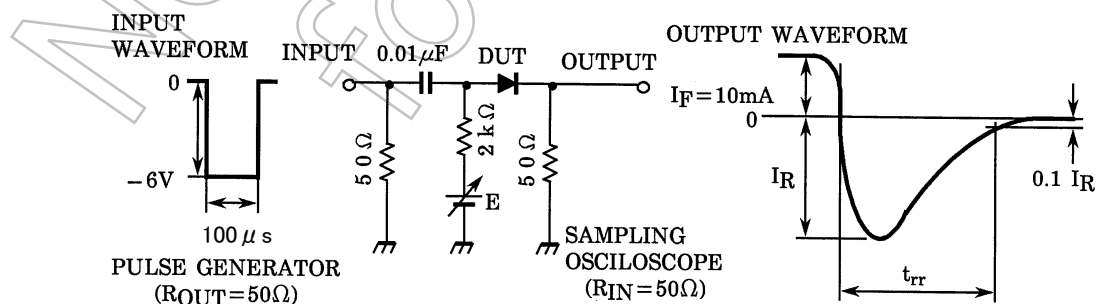


Fig.1 Reverse Recovery Time (t_{rr}) Test Circuit



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