

TOSHIBA Diode Silicon Epitaxial Planar Type

# 1SS336

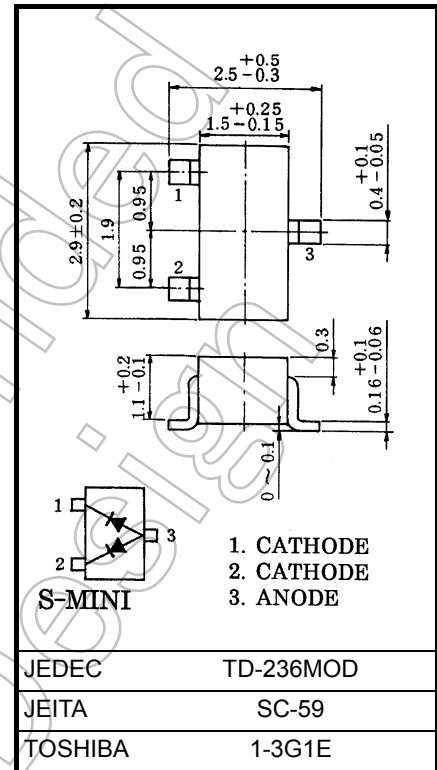
## Ultra High Speed Switching Application

Unit: mm

- Small package : SC-59
- Low forward voltage :  $V_F(3) = 0.84V$  (typ.)
- Fast reverse recovery time:  $t_{rr} = 7ns$  (typ.)
- Small total capacitance :  $C_T = 7pF$  (typ.)

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

Characteristic	Symbol	Rating	Unit
Maximum (peak) reverse voltage	$V_{RM}$	85	V
Reverse voltage	$V_R$	80	V
Maximum (peak) forward current	$I_{FM}$	600 *	mA
Average forward current	$I_O$	200 *	mA
Surge current (10ms)	$I_{FSM}$	6 *	A
Power dissipation	P	150	mW
Junction temperature	$T_j$	150	°C
Storage temperature	$T_{stg}$	-55 to 150	°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

### Electrical Characteristics (Ta = 25°C)

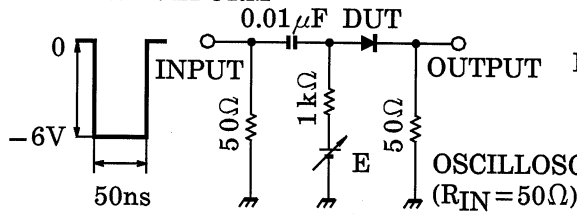
Characteristic	Symbol	Test Circuit	Test Condition	Min	Typ.	Max	Unit
Forward voltage	$V_F(1)$	—	$I_F = 10mA$	—	0.64	—	V
	$V_F(2)$	—	$I_F = 100mA$	—	0.78	—	
	$V_F(3)$	—	$I_F = 200mA$	—	0.84	1.2	
Reverse current	$I_R(1)$	—	$V_R = 30V$	—	—	0.25	μA
	$I_R(2)$	—	$V_R = 80V$	—	—	0.50	
Total capacitance	$C_T$	—	$V_R = 0, f = 1MHz$	—	7	—	pF
Reverse recovery time	$t_{rr}$	—	$I_F = 30mA, Fig.1$	—	7	20	ns

Start of commercial production  
1989-11

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

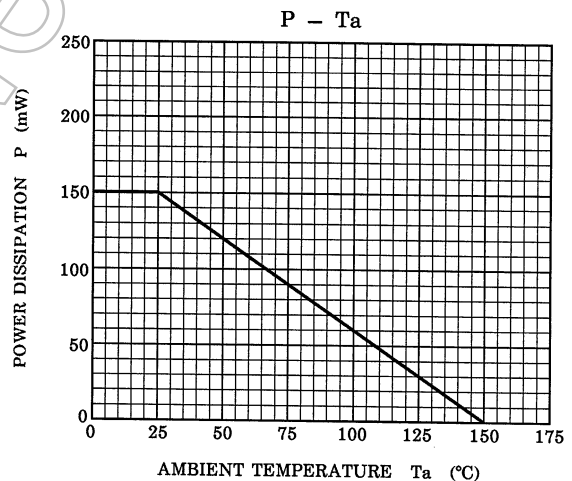
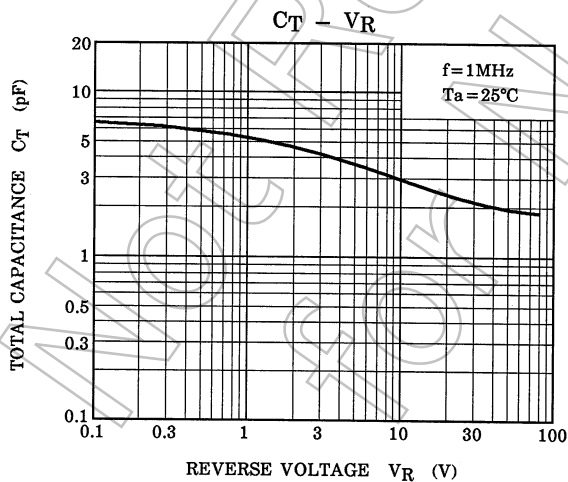
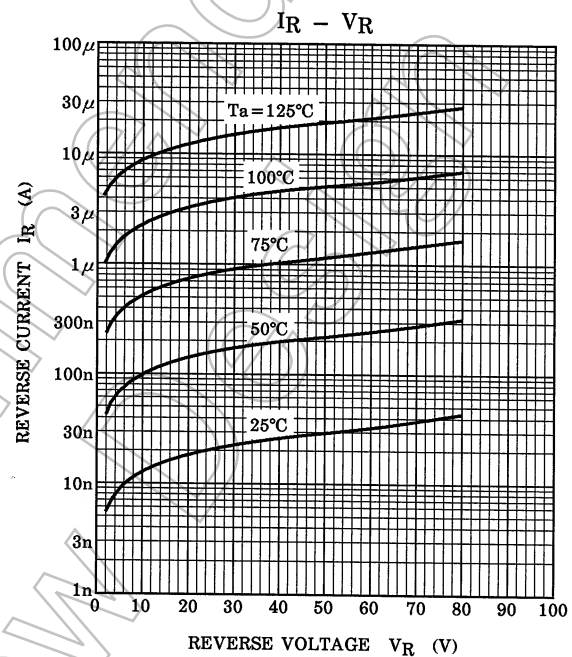
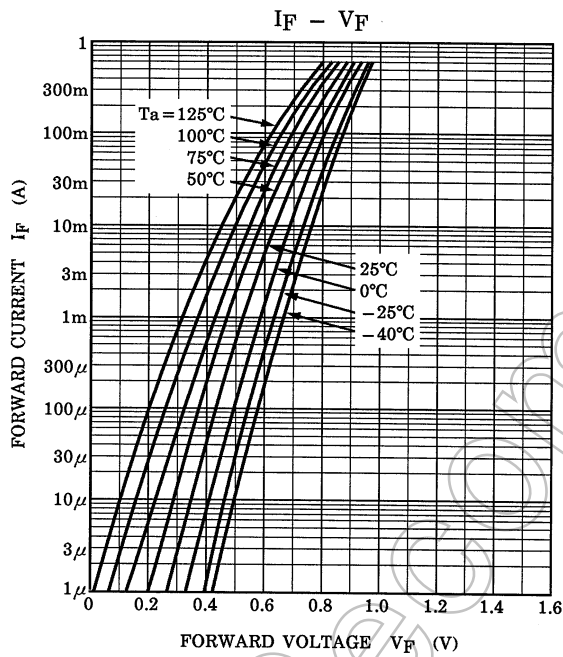
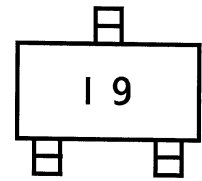
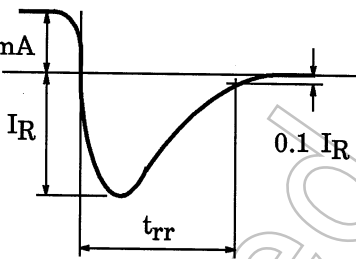
**Marking**

INPUT WAVEFORM



PULSE GENERATOR ( $R_{OUT} = 50\Omega$ )

OUTPUT WAVEFORM



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