

TOSHIBA DIODE SILICON EPITAXIAL PLANAR TYPE

# 1SS301

ULTRA HIGH SPEED SWITCHING APPLICATIONS.

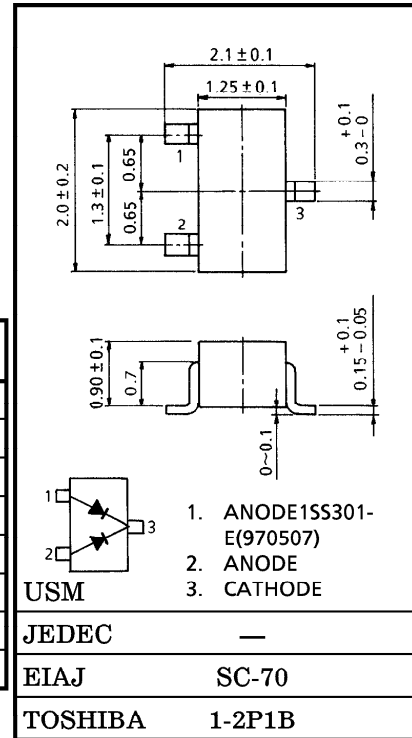
Unit in mm

- Small Package : SC-70
- Low Forward Voltage :  $V_F(3) = 0.90V$  (Typ.)
- Fast Reverse Recovery Time :  $t_{rr} = 1.6ns$  (Typ.)
- Small Total Capacitance :  $C_T = 0.9pF$  (Typ.)

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	$I_{FM}$	300 (*)	mA
Average Forward Current	$I_O$	100 (*)	mA
Surge Current (10ms)	$I_{FSM}$	2 (*)	A
Power Dissipation	P	100	mW
Junction Temperature	$T_j$	125	°C
Storage Temperature Range	$T_{stg}$	-55~125	°C

(\*) Unit Rating. Total Rating = Unit Rating × 1.5

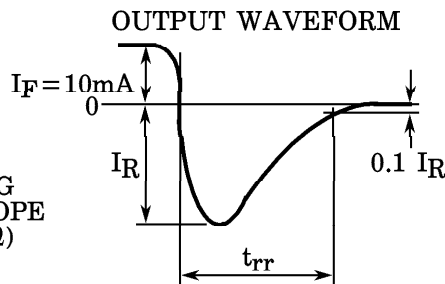
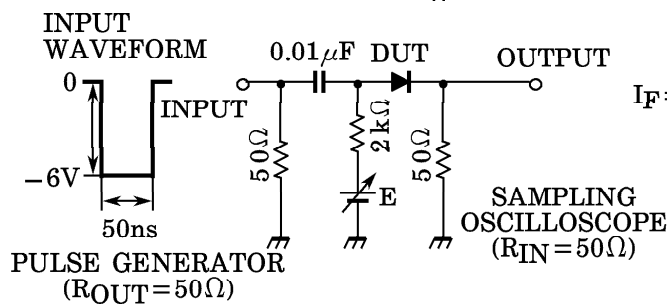


ELECTRICAL CHARACTERISTICS (Ta = 25°C)

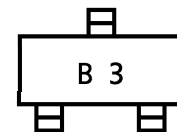
Weight : 0.006g

CHARACTERISTIC	SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Forward Voltage	$V_F(1)$	$I_F = 1mA$	—	0.60	—	V
	$V_F(2)$	$I_F = 10mA$	—	0.72	—	
	$V_F(3)$	$I_F = 100mA$	—	0.90	1.20	
Reverse Current	$I_R(1)$	$V_R = 30V$	—	—	0.1	$\mu A$
	$I_R(2)$	$V_R = 80V$	—	—	0.5	
Total Capacitance	$C_T$	$V_R = 0, f = 1MHz$	—	0.9	3.0	pF
Reverse Recovery Time	$t_{rr}$	$I_F = 10mA, Fig.1$	—	1.6	4.0	ns

Fig.1 REVERSE RECOVERY TIME ( $t_{rr}$ ) TEST CIRCUIT

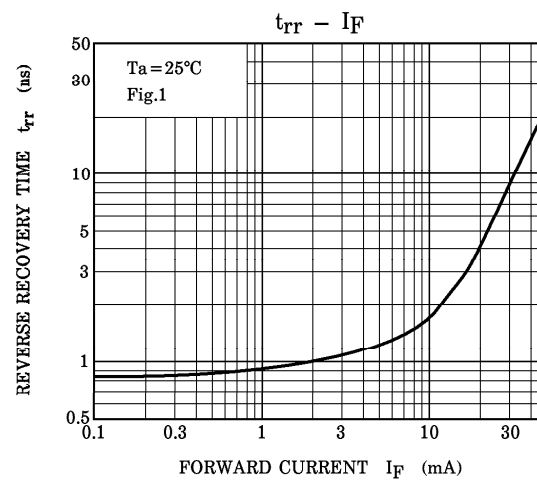
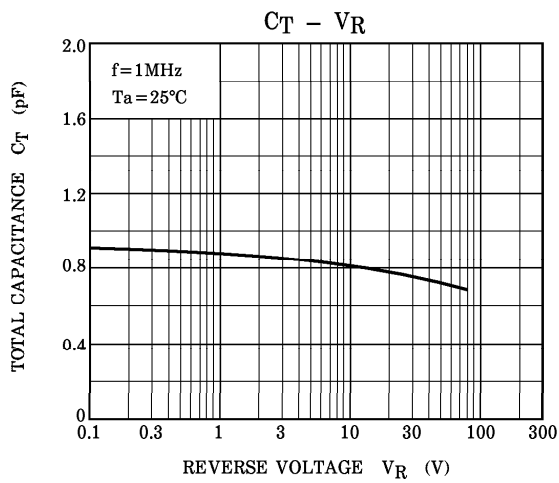
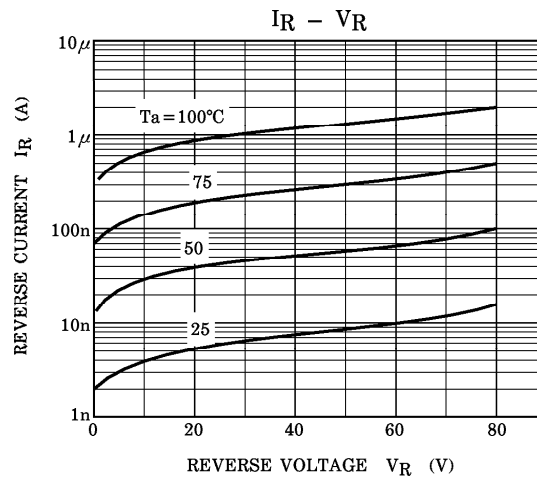
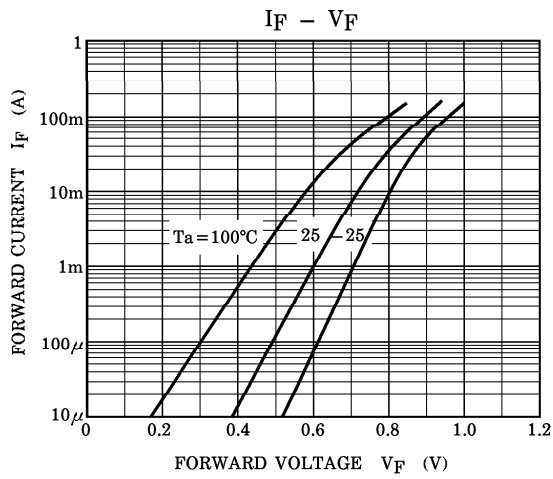


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