

Ultra High Speed Switching Application

Unit: mm

- Small package
- Low forward voltage :  $V_F(3) = 0.97$  V (typ.)
- Fast reverse recovery time:  $t_{rr} = 1.6$  ns (typ.)
- Small total capacitance :  $C_T = 0.5$  pF (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	$I_{FM}$	240 *	mA
Average forward current	$I_O$	80 *	mA
Surge current (10ms)	$I_{FSM}$	1 *	A
Power dissipation	$P_D$ (Note 1, 3)	120	mW
	$P_D$ (Note 2)	100	
Junction temperature	$T_j$ (Note 1)	150	°C
	$T_j$ (Note 2)	125	
Storage temperature	$T_{stg}$ (Note 1)	-55 to 150	°C
	$T_{stg}$ (Note 2)	-55 to 125	

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.

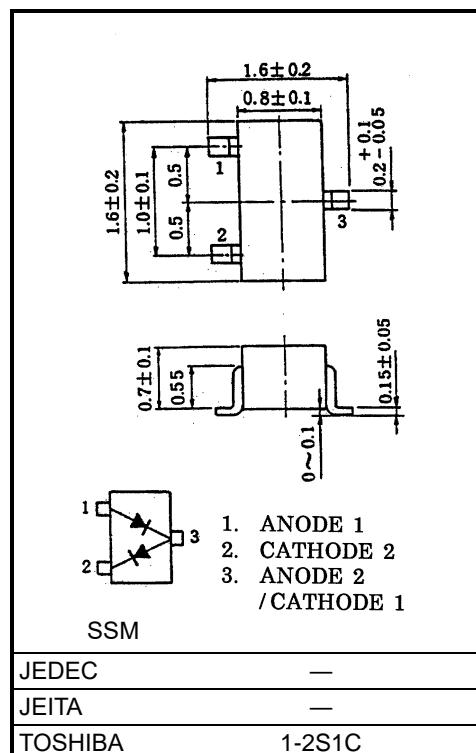
Please design the appropriate reliability upon reviewing the Toshiba Semiconductor Reliability Handbook ("Handling Precautions"/"Derating Concept and Methods") and individual reliability data (i.e. reliability test report and estimated failure rate, etc.).

Note 1: For devices with the ordering part number ending in LF(T).

Note 2: For devices with the ordering part number in other than LF(T).

Note 3: Mounted on a FR4 board. (25.4 mm × 25.4 mm × 1.6 mm, Cu pad: 0.36 mm<sup>2</sup> × 3)

\*: Unit rating. Total rating = Unit rating × 1.5.



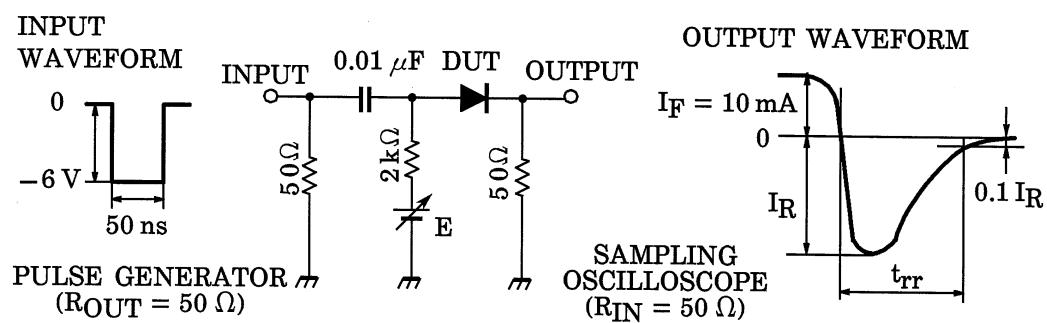
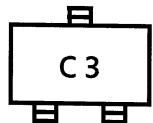
Weight: 2.4 mg (typ.)

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

Characteristic	Symbol	Test Condition	Min	Typ.	Max	Unit
Forward voltage	$V_F$ (1)	$I_F = 1$ mA	—	0.63	—	V
	$V_F$ (2)	$I_F = 10$ mA	—	0.75	—	
	$V_F$ (3)	$I_F = 100$ mA	—	0.97	1.20	
Reverse current	$I_R$ (1)	$V_R = 30$ V	—	—	0.1	$\mu$ A
	$I_R$ (2)	$V_R = 80$ V	—	—	0.5	
Total capacitance	$C_T$	$V_R = 0$ V, $f = 1$ MHz	—	0.5	3.0	pF
Reverse recovery time	$t_{rr}$	$I_F = 10$ mA, Fig.1	—	1.6	4.0	ns

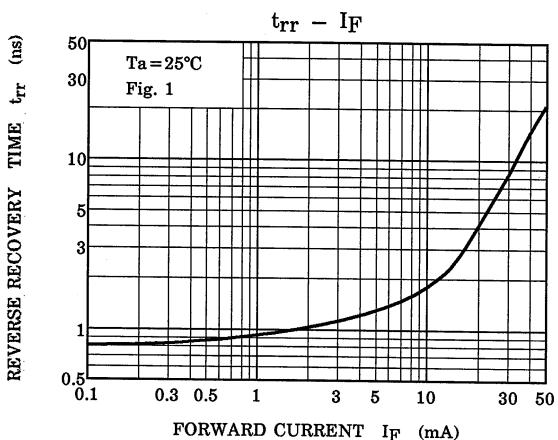
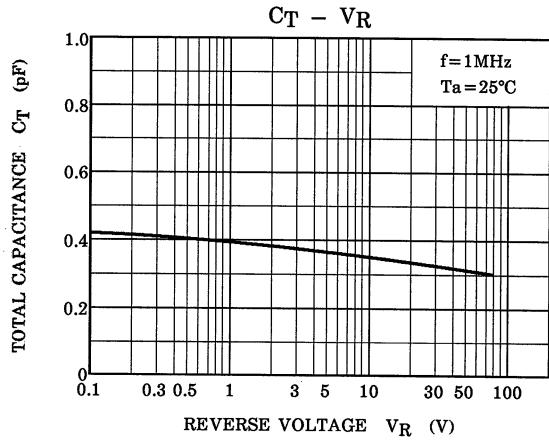
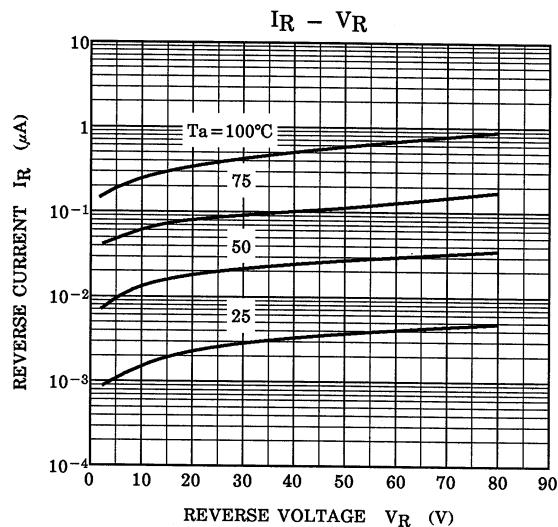
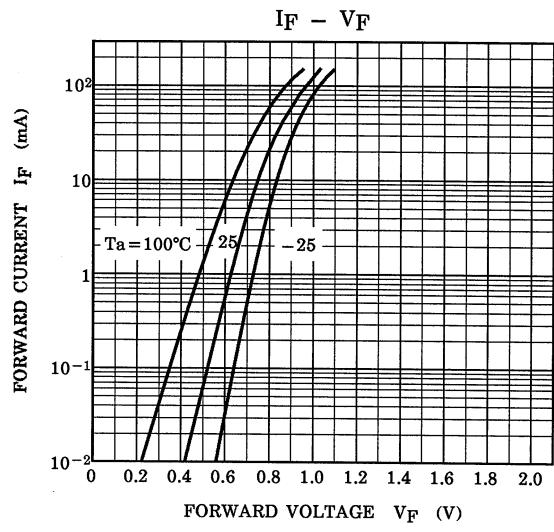
Start of commercial production  
1990-10

**Marking**



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

Characteristics Curves



The above characteristics curves are presented for reference only and not guaranteed by production test, unless otherwise noted.