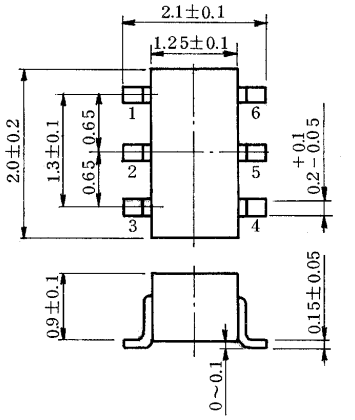
TOSHIBA DIODE SILICON EPITAXIAL PLANAR TYPE

HN1D02FU

ULTRA HIGH SPEED SWITCHING APPLICATION.

- HN1D02FU is composed of 2 unit of cathode common.
- 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.)

Unit in mm



1. ANODE
2. ANODE
3. CATHODE
4. ANODE
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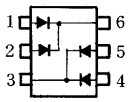
6. CATHODE



JEDEC	—
EIAJ	—
TOSHIBA	1-2T1B

Weight : 6.8mg

MAXIMUM RATINGS (Ta = 25°C)

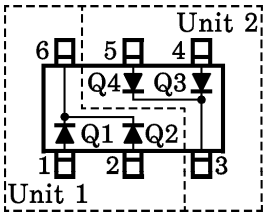
CHARACTERISTIC	SYMBOL	RATING	UNIT
Maximum (Peak) Reverse Voltage	V_{RM}	85	V
Reverse Voltage	V_R	80	V
Maximum (Peak) Forward Current	I_{FM}	300*	mA
Average Forward Current	I_O	100*	mA
Surge Current (10ms)	I_{FSM}	2*	A
Power Dissipation	P	200	mW
Junction Temperature	T_j	125	°C
Storage Temperature	T_{stg}	−55~125	°C

* : This is Maximum Ratings of single diode (Q1 or Q2 or Q3 or Q4).
In the case of using Unit 1 and Unit 2 independently or simultaneously, the Maximum Ratings per diode is 75% of the single diode one.

ELECTRICAL CHARACTERISTICS (Q1, Q2, Q3, Q4 COMMON, Ta = 25°C)

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	μA
	$I_{R(2)}$	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

PIN ASSIGNMENT (TOP VIEW)



Marking

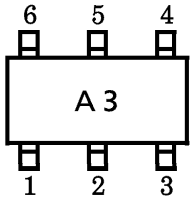


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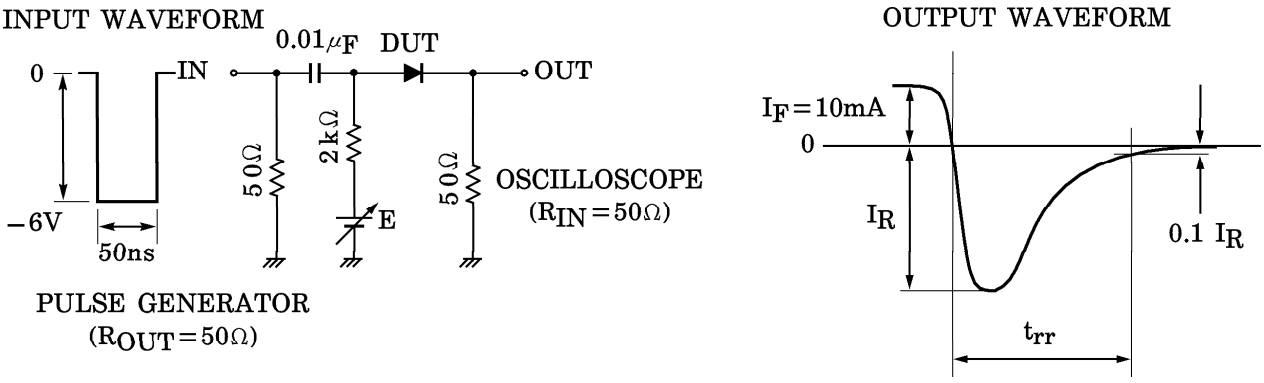
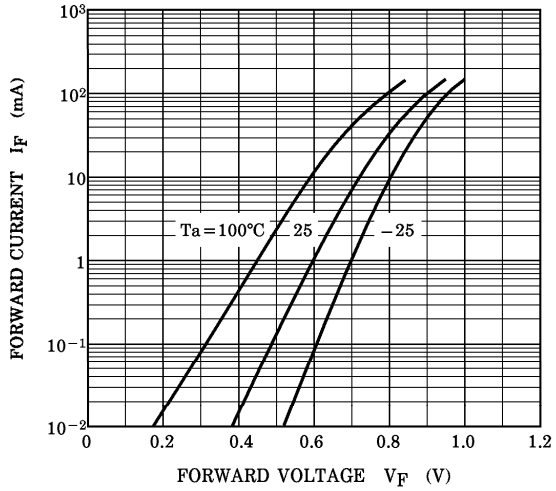
Fig. 1 REVERSE RECOVERY TIME (t_{rr}) TEST CIRCUIT



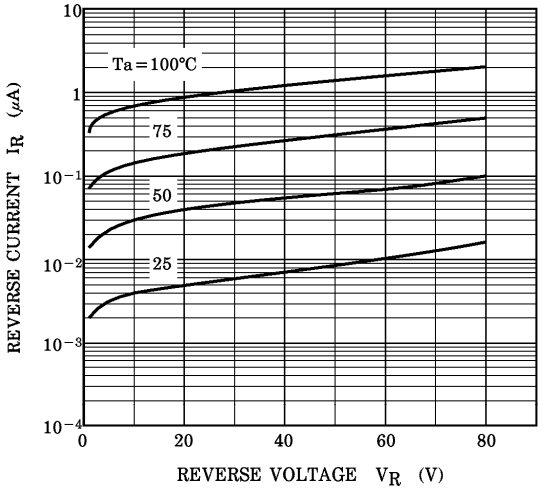
Q1, Q2, Q3, Q4, COMMON

I_F – V_F



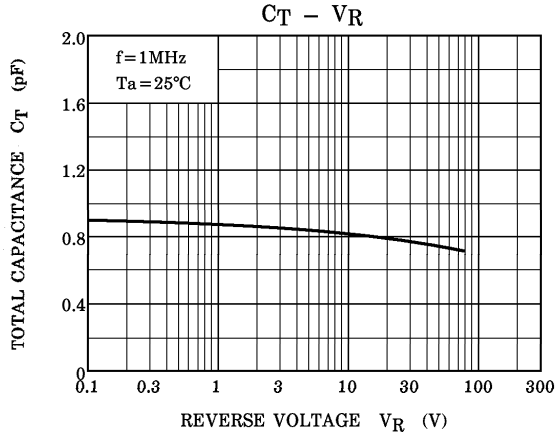
Q1, Q2, Q3, Q4, COMMON

I_R – V_R



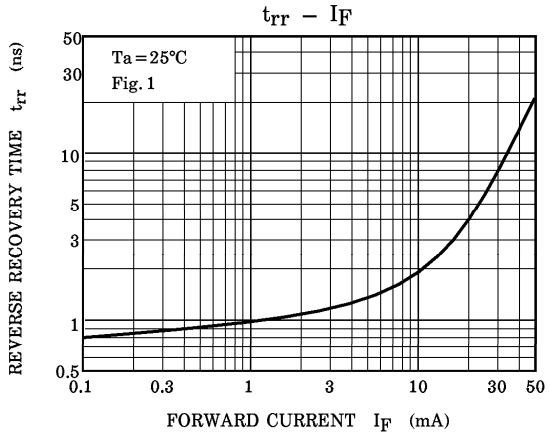
Q1, Q2, Q3, Q4, COMMON

C_T – V_R



Q1, Q2, Q3, Q4, COMMON

t_{rr} – I_F



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