TOSHIBA DIODE SILICON EPITAXIAL PLANAR TYPE

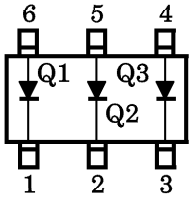
HN2D01FU

ULTRA HIGH SPEED SWITCHING APPLICATION.

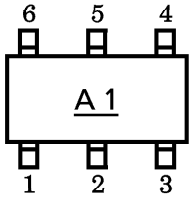
Unit in mm

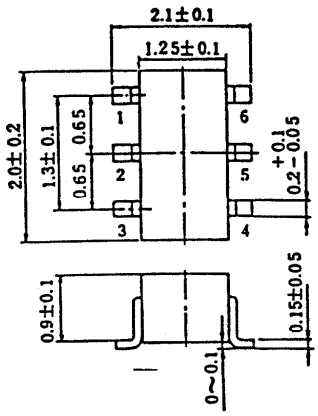
- HN2D01FU is composed of 3 independent diodes.
- Low Forward Voltage : $V_F = 0.98V$ (Typ.)
- Fast Reverse Recovery Time : $t_{rr} = 1.6ns$ (Typ.)
- Small Total Capacitance : $C_T = 0.5pF$ (Typ.)

PIN ASSIGNMENT (TOP VIEW)

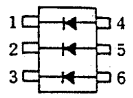


Marking





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



JEDEC	—
EIAJ	—
TOSHIBA	1-2T1C

Weight : 6.2mg

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	200	mW
Junction Temperature	T_j	125	°C
Storage Temperature	T_{stg}	−55~125	°C

* : This is the Maximum Ratings of single diode (Q1 or Q2 or Q3). In the case of using 2 or 3 diodes, the Maximum Ratings per diode is 75% of the single diode one.

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

CHARACTERISTIC	SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Forward Voltage	$V_{F(1)}$	$I_F = 1mA$	—	0.62	—	V
	$V_{F(2)}$	$I_F = 10mA$	—	0.75	—	
	$V_{F(3)}$	$I_F = 100mA$	—	0.98	1.20	
Reverse Currunt	$I_{R(1)}$	$V_R = 30V$	—	—	0.1	μA
	$I_{R(2)}$	$V_R = 80V$	—	—	0.5	
Total Capacitance	C_T	$V_R = 0$, f = 1MHz	—	0.5	3.0	pF
Reverse Recovery Time	t_{rr}	$I_F = 10mA$ (Fig. 1)	—	1.6	4.0	ns

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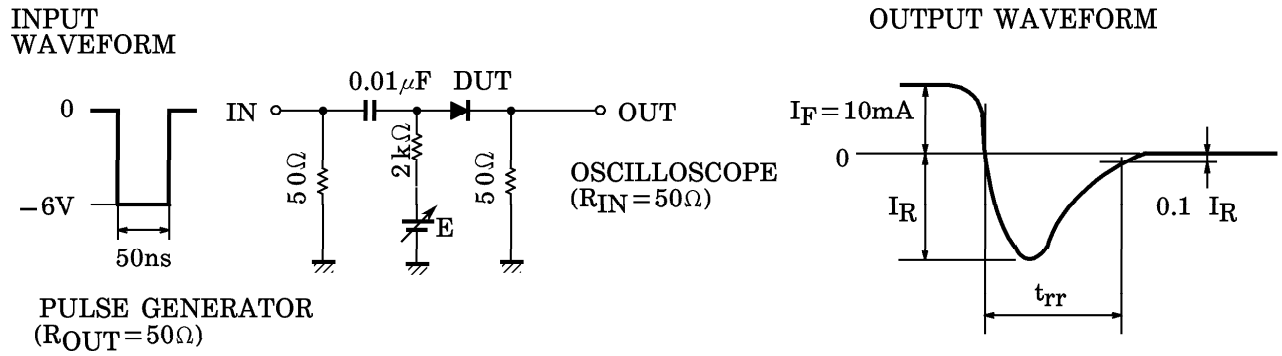
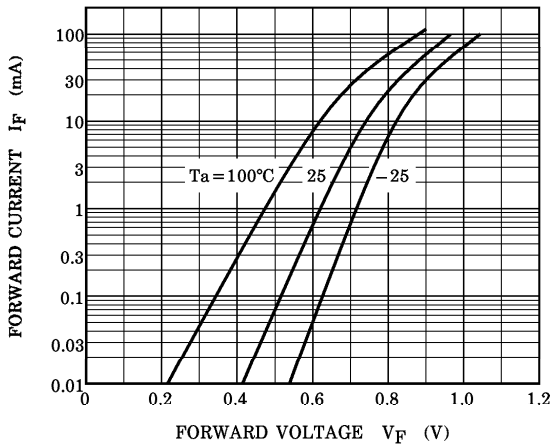
Fig. 1 : REVERSE RECOVERY TIME (t_{rr}) TEST CIRCUIT



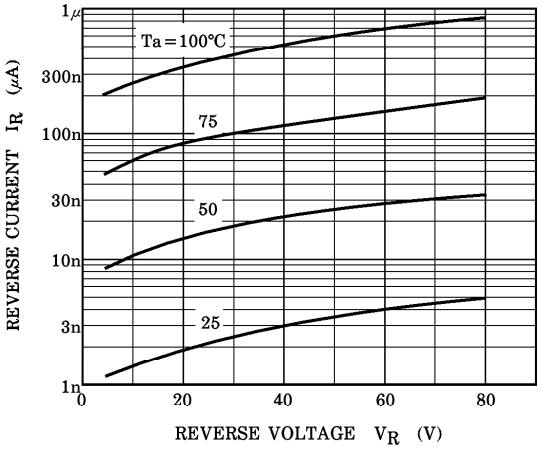
Q1, Q2, Q3 COMMON

$I_F - V_F$



Q1, Q2, Q3 COMMON

$I_R - V_R$



Q1, Q2, Q3 COMMON

$C_T - V_R$