

TOSHIBA Diode Silicon Epitaxial Planar Type

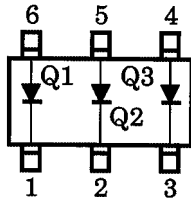
# HN2D01FU

## Ultra High Speed Switching Application

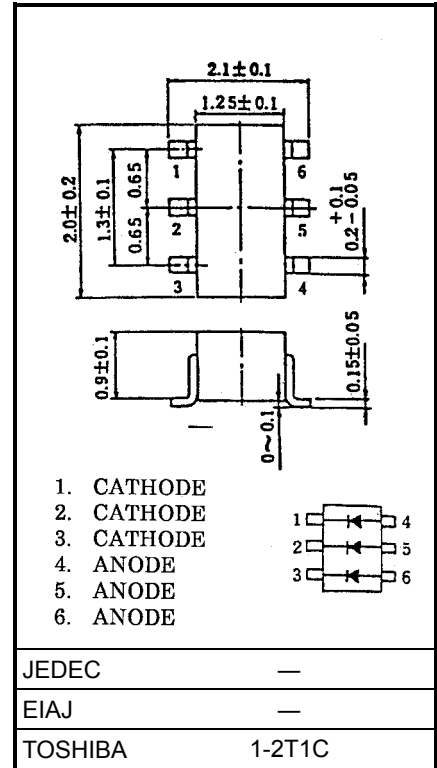
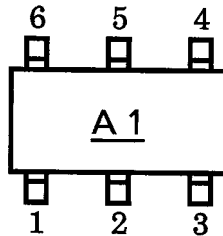
Unit in mm

- HN2D01FU is composed of 3 independent diodes.
- Low forward voltage :  $V_F(3) = 0.98V$  (typ.)
- Fast reverse recovery time:  $t_{rr} = 1.6ns$  (typ.)
- Small total capacitance :  $C_T = 0.5pF$  (typ.)

### Pin Assignment (Top View)



### Marking



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 maximum rating of single diode (Q1 or Q2 or Q3). In the case of using 2 or 3 diodes, the maximum ratings per diodes is 75 % of the single diode one.

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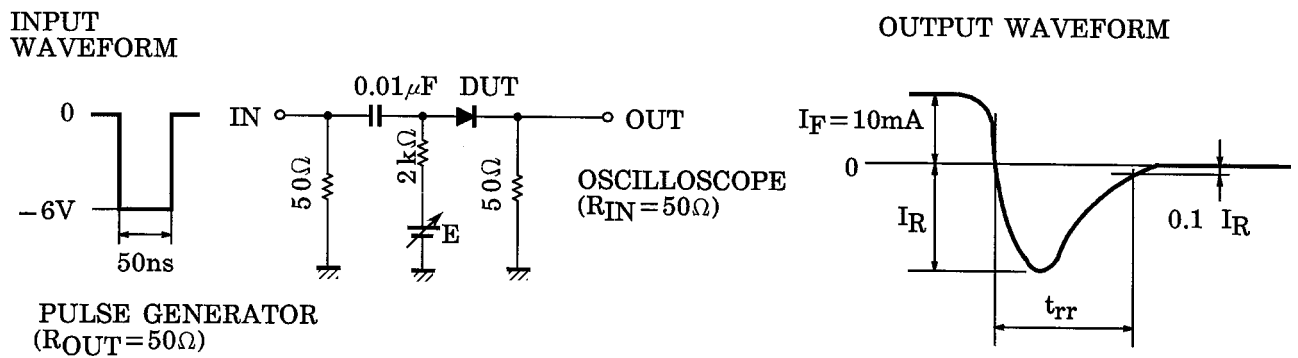
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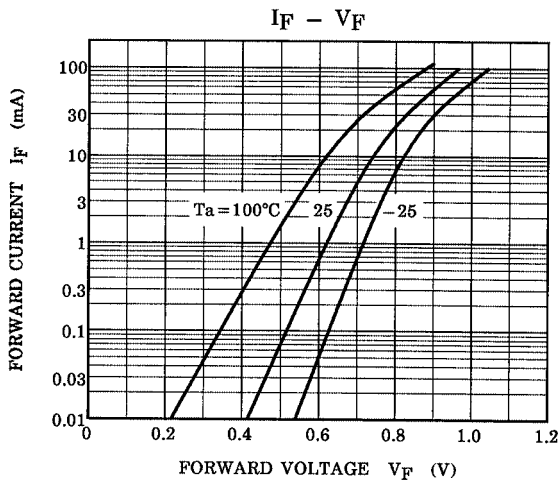
**Electrical Characteristics (Q1 Q2 Q3 Common, Ta = 25°C)**

Characteristic	Symbol	Test Circuit	Test Condition	Min	Typ.	Max	Unit
Forward voltage	$V_F (1)$	—	$I_F = 1\text{mA}$	—	0.62	—	V
	$V_F (2)$	—	$I_F = 10\text{mA}$	—	0.75	—	
	$V_F (3)$	—	$I_F = 100\text{mA}$	—	0.98	1.20	
Reverse current	$I_R (1)$	—	$V_R = 30\text{V}$	—	—	0.1	$\mu\text{A}$
	$I_R (2)$	—	$V_R = 80\text{V}$	—	—	0.5	
Total capacitance	$C_T$	—	$V_R = 0, f = 1\text{MHz}$	—	0.5	3.0	pF
Reverse recovery time	$t_{rr}$	—	$I_F = 10\text{mA}$ (Fig.1)	—	1.6	4.0	ns

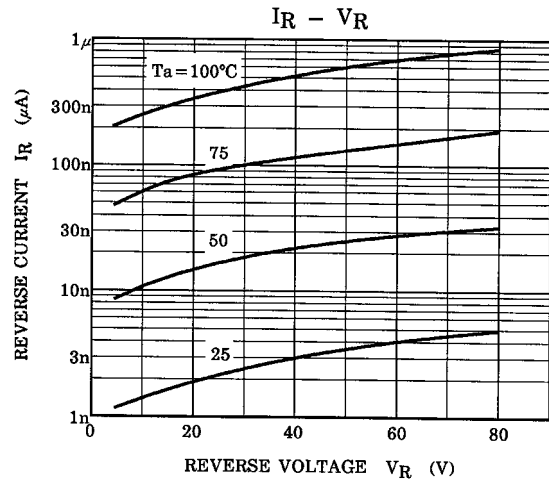
**Fig.1 Reverse Recovery Time ( $t_{rr}$ ) Test Circuit**



**Q1, Q2, Q3 Common**



**Q1, Q2, Q3 Common**



**Q1, Q2, Q3 Common**

