

TOSHIBA Diode Silicon Epitaxial Planar Type

HN1D01FU

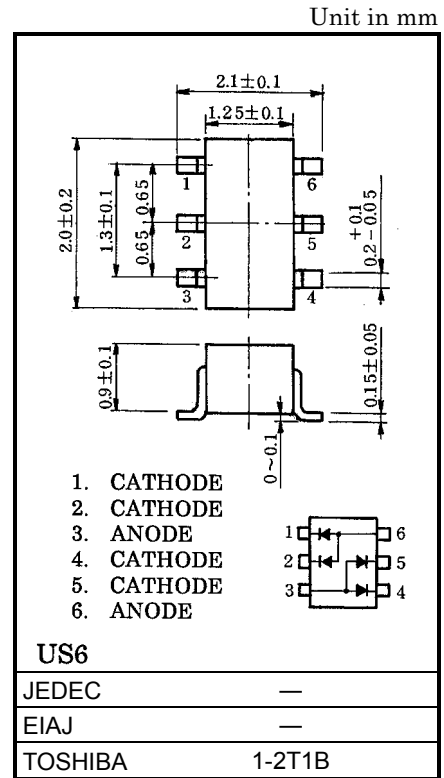
Ultra High Speed Switching Application

- Small package
- Low forward voltage : $V_F(3) = 0.92V$ (typ.)
- Fast reverse recovery time: $t_{rr} = 1.6ns$ (typ.)
- Small total capacitance : $C_T = 2.2pF$ (typ.)

Maximum Ratings ($T_a = 25^\circ C$)

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	$^\circ C$
Storage temperature	T_{stg}	-55~125	$^\circ C$

*: This is the 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.



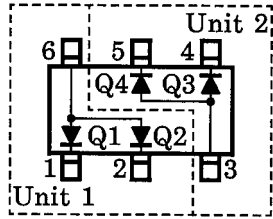
Electrical Characteristics (Q1, Q2, Q3, Q4 Common, $T_a = 25^\circ C$)

Characteristic	Symbol	Test Circuit	Test Condition	Min	Typ.	Max	Unit
Forward voltage	$V_F(1)$	—	$I_F = 1mA$	—	0.61	—	V
	$V_F(2)$	—	$I_F = 10mA$	—	0.74	—	
	$V_F(3)$	—	$I_F = 100mA$	—	0.92	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	—	$V_R = 0, f = 1MHz$	—	2.2	4.0	pF
Reverse recovery time	t_{rr}	—	$I_F = 10mA$ (fig.1)	—	1.6	4.0	ns

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Pin Assignment (Top View)



Marking

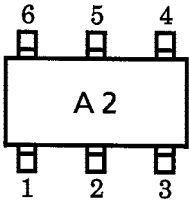
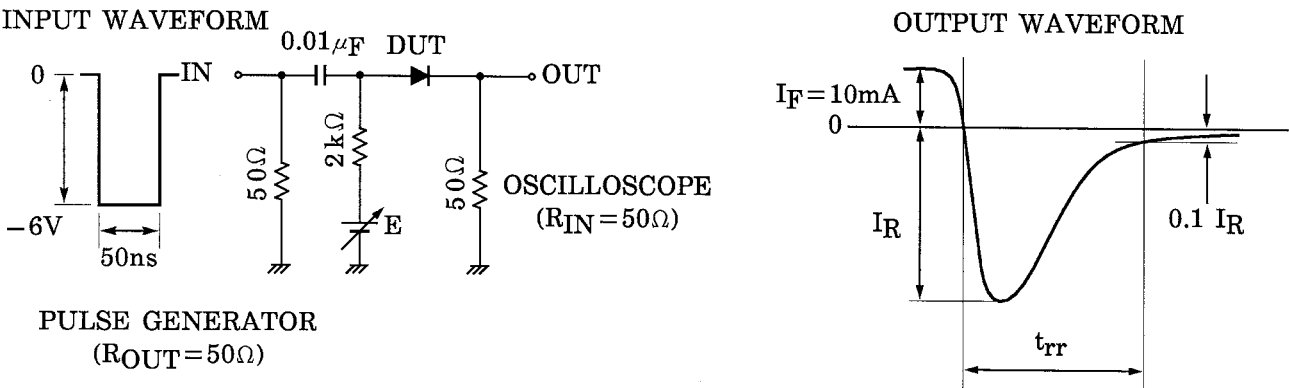
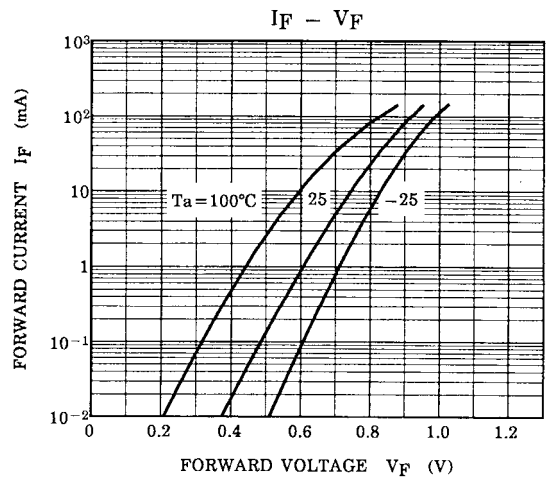


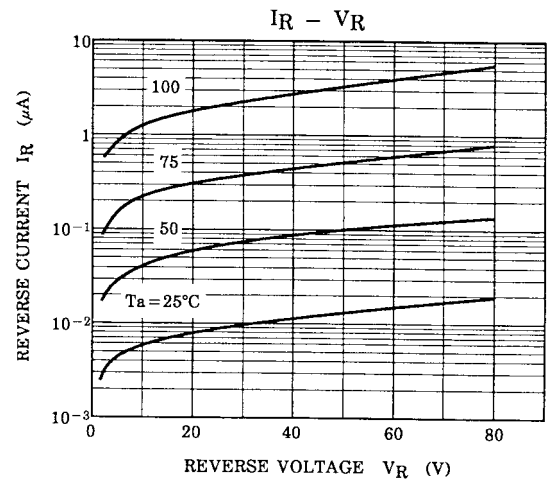
Fig.1 Reverse Recovery Time (t_{rr}) Test Circuit



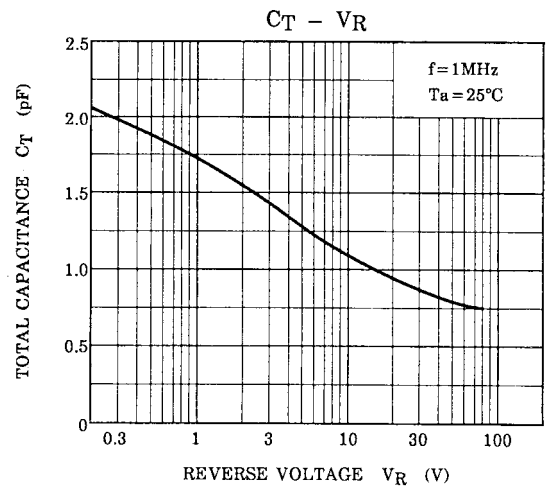
O1. O.2. O3. O4 Common



O1. O.2. O3. O4 Common



Q1, Q,2, Q3, Q4 Common



Q1, Q,2, Q3, Q4 Common

