

TOSHIBA DIODE SILICON EPITAXIAL PLANAR TYPE

# HN1D01FU

ULTRA HIGH SPEED SWITCHING APPLICATION.

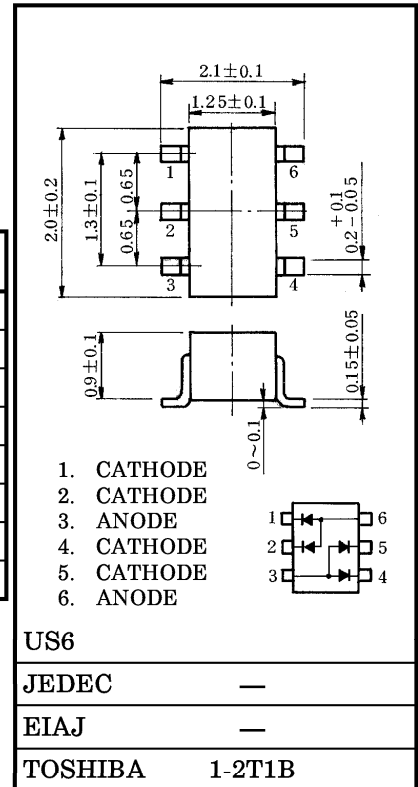
- Small Package
- Low Forward Voltage :  $V_F(3) = 0.92V$  (Typ.)
- Fast Reverse Recovery Time :  $t_{rr} = 1.6ns$  (Typ.)
- Small Total Capacitance :  $C_T = 2.2pF$  (Typ.)

Unit in mm

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.

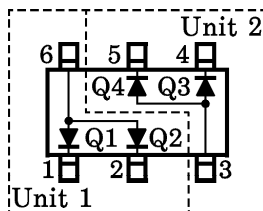


Weight : 6.8mg

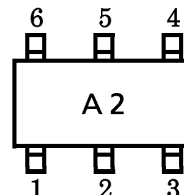
ELECTRICAL CHARACTERISTICS (Q1, Q2, Q3, Q4 COMMON,  $T_a = 25^\circ C$ )

CHARACTERISTIC	SYMBOL	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	$\mu A$
	$I_R(2)$	$V_R = 80V$	—	—	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

PIN ASSIGNMENT (TOP VIEW)



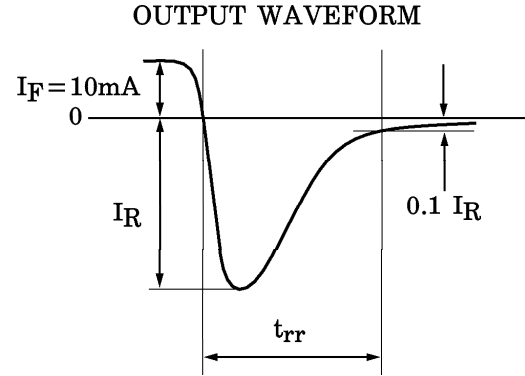
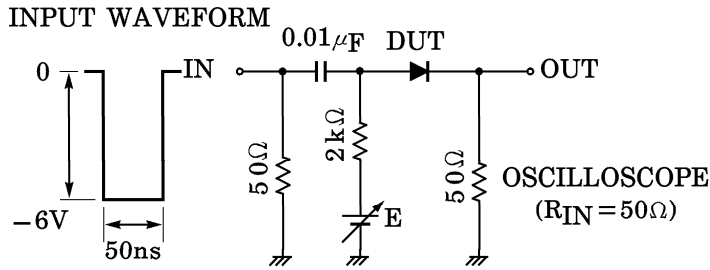
Marking



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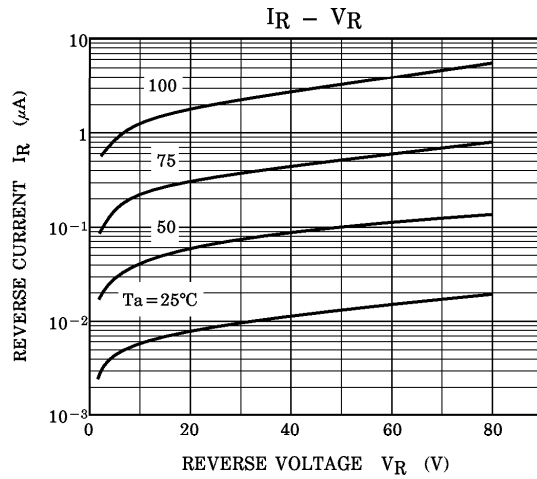
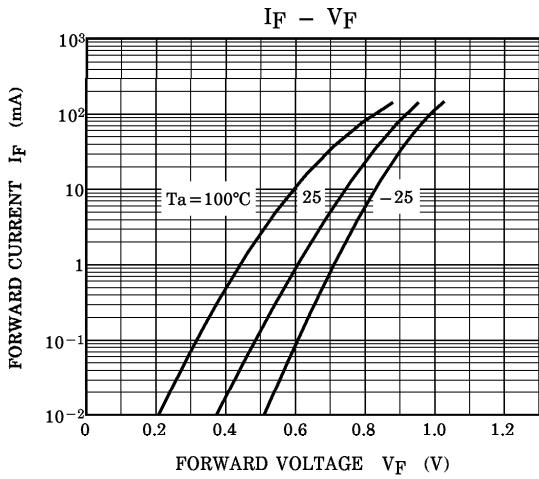
Fig. 1 REVERSE RECOVERY TIME ( $t_{rr}$ ) TEST CIRCUIT



PULSE GENERATOR  
( $R_{OUT} = 50\Omega$ )

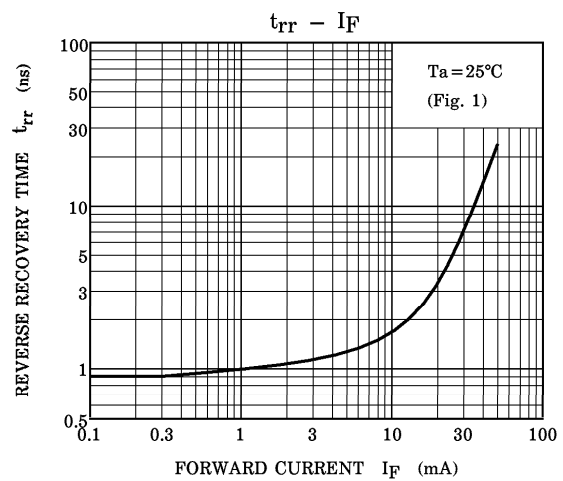
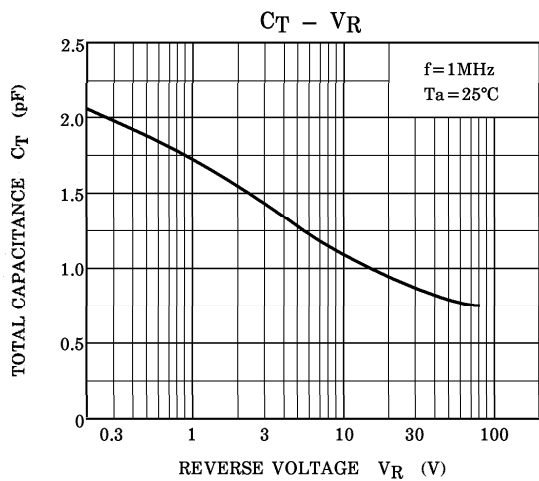
Q1, Q2, Q3, Q4 COMMON

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