TOSHIBA Diode Silicon Epitaxial Planar Type

HN1D01FU

Ultra High Speed Switching Application

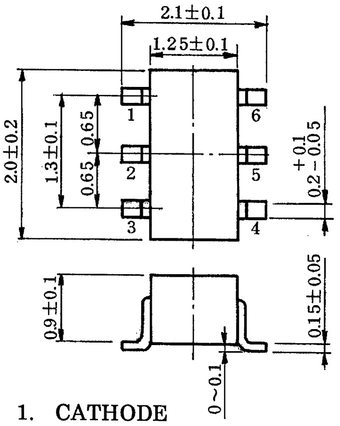
- Small package
- Low forward voltage : $V_{F\,(3)}$ = 0.92V (typ.)
- Fast reverse recovery time: t_{rr} = 1.6ns (typ.)
- Small total capacitance : C_T = 2.2pF (typ.)

Maximum Ratings (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 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.

Unit in mm



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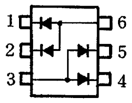

US6

JEDEC	—
EIAJ	—
TOSHIBA	1-2T1B

Weight: 6.8mg

Electrical Characteristics (Q1, Q2, Q3, Q4 Common, Ta = 25°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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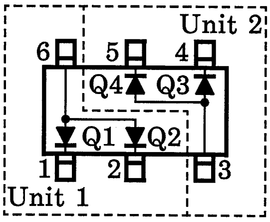
Pin Assignment (Top View)



Marking

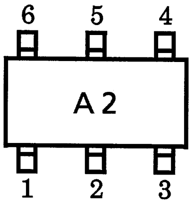
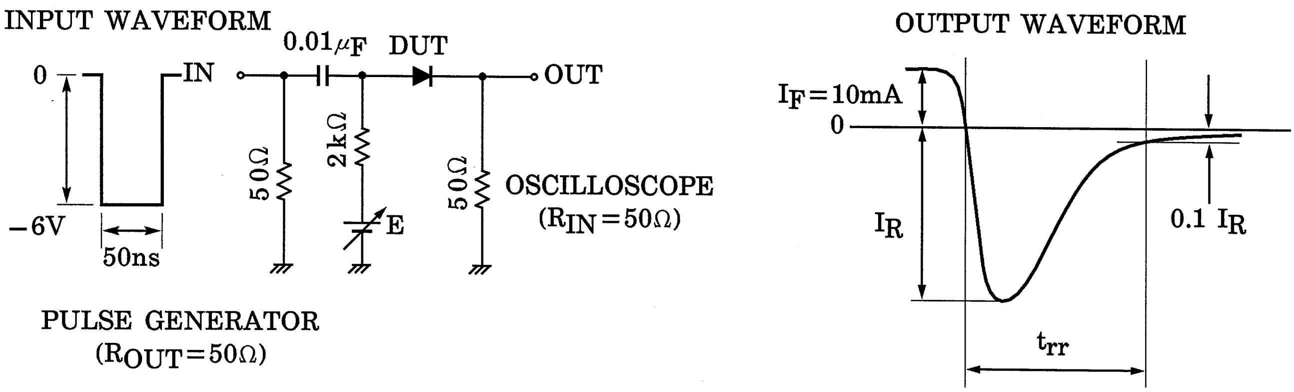
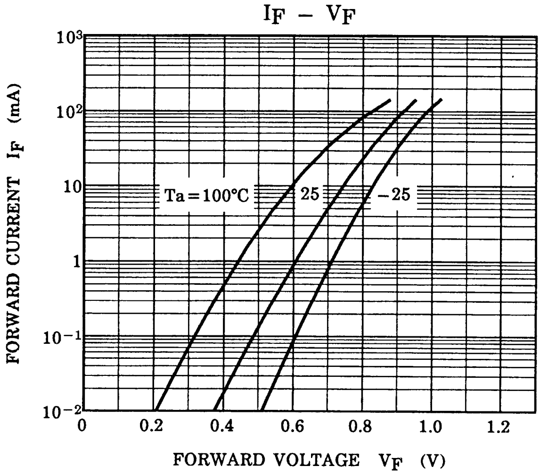


Fig.1 Reverse Recovery Time (t_{rr}) Test Circuit



O1. O.2. O3. O4 Common



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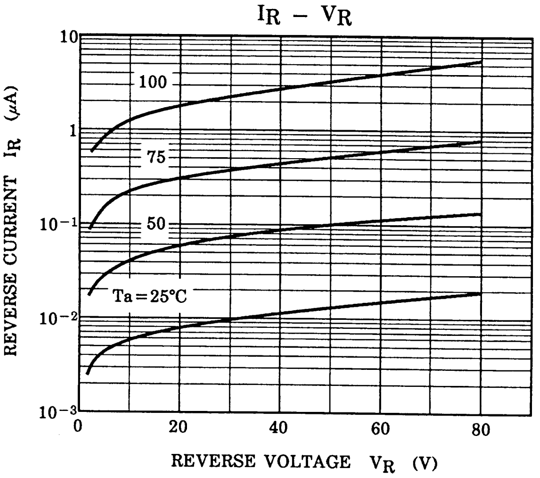
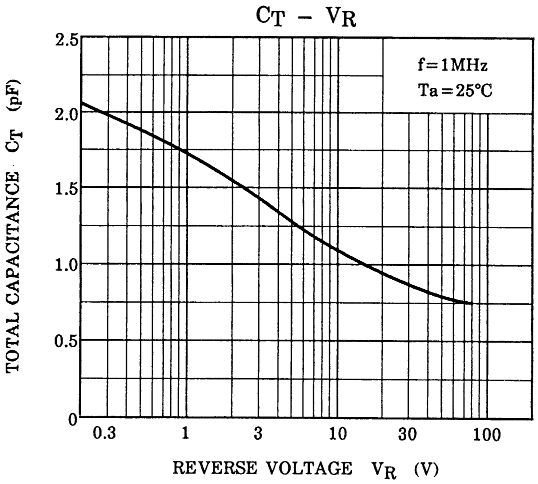


Q1, Q,2, Q3, Q4 Common



Q1, Q,2, Q3, Q4 Common