Unit: mm

TOSHIBA Diode Silicon Epitaxial Planar Type

HN4D01JU

Ultra High Speed Switching Applications

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

Absolute Maximum Ratings (Ta = 25°C)

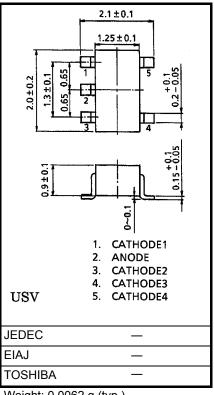
Characteristic	Symbol	Rating	Unit	
Maximum (peak) reverse voltage	V_{RM}	85	V	
Reverse voltage	V _R	80	٧	
Maximum (peak) forward current	I _{FM}	300*	mA	
Average forward current	Io	100*	mA	
Surge current (10ms)	I _{FSM}	2*	Α	
Power dissipation	Р	200**	mW	
Junction temperature	Tj	150	°C	
Storage temperature	T _{stg}	-55 to 150	°C	

Note: Using continuously under heavy loads (e.g. the application of high temperature/current/voltage and the significant change in temperature, etc.) may cause this product to decrease in the reliability significantly even if the operating conditions (i.e. operating temperature/current/voltage, etc.) are within the absolute maximum ratings.

Please design the appropriate reliability upon reviewing the Toshiba Semiconductor Reliability Handbook ("Handling Precautions"/"Derating Concept and Methods") and individual

reliability data (i.e. reliability test report and estimated failure rate,

*: Unit rating. Total rating = unit rating × 1.5
** :Total rating

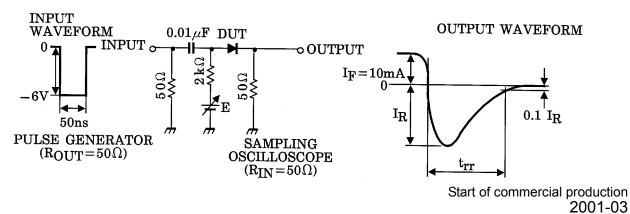


Weight: 0.0062 g (typ.)

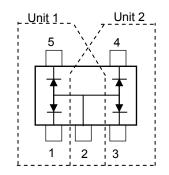
Electrical Characteristics (Ta = 25°C)

Characteristic	Symbol	Test Circuit	Test Condition	Min	Тур.	Max	Unit	
Forward voltage	V _{F (1)}	_	I _F = 1mA		0.61	_	_	
	V _{F (2)}	_	I _F = 10mA	ı	0.74	_	V	
	V _{F (3)}	_	I _F = 100mA	ı	0.92	1.20		
Reverse current	I _{R (1)}	_	V _R = 30V	ı	_	0.1	^	
	I _{R (2)}	_	V _R = 80V	_	_	0.5	μA	
Total capacitance	C _T	_	V _R = 0, f = 1MHz	_	2.2	_	pF	
Reverse recovery time	t _{rr}	_	I _F = 10mA, Fig.1	_	1.6	_	ns	

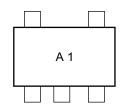
Fig.1 Reverse Recovery Time (t_{rr}) Test Circuit

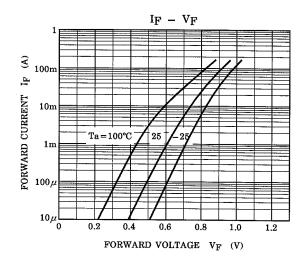


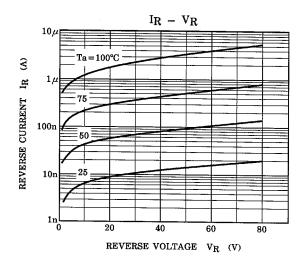
Equivalent Circuit (Top View)

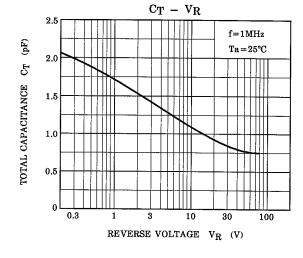


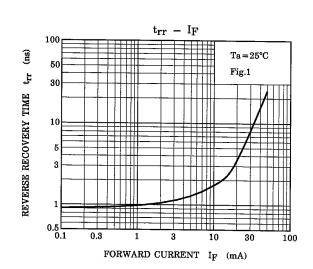
Marking











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