Unit: mm



TOSHIBA Diode Silicon Epitaxial Planar Type

1SS382

Ultra High Speed Switching Application

• Small package

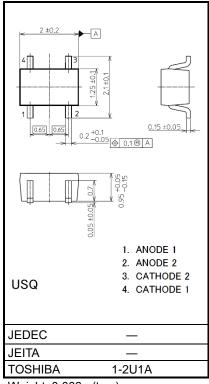
• Composed of 2 independent diodes.

• Low forward voltage $V_F(3) = 0.92 \text{ V (typ.)}$

• Fast reverse recovery time: $t_{rr} = 1.6$ ns (typ.)

Absolute Maximum Ratings (Ta = 25°C)

Characteristic	Symbol	Rating	Unit	
Maximum (peak) reverse voltage	VRM	85	V	
Reverse voltage	VR	80	V	
Maximum (peak) forward current	lғм	300 *	mA	
Average forward current	lo	100 *	mA	
Surge current (10ms)	IFSM	2 *	Α	
Power dissipation	P _D (Note 1, 3)	125	mW	
	P _D (Note 2, 3)	100		
Junction temperature	T _j (Note 1)	150	°C	
	Tj (Note 2)	125		
Storage temperature	T _{stg} (Note 1)	-55 to 150	°C	
	T _{stg} (Note 2)	−55 to 125	C	



Weight: 0.006g (typ.)

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, etc).

Note 1: For devices with the ordering part number ending in LF(T.

Note 2: For devices with the ordering part number in other than LF(T.

Note 3: Total rating.

*: Unit rating. Total rating = Unit rating \times 1.5.

Start of commercial production 1994-09



Electrical Characteristics (Ta = 25°C)

Characteristic	Symbol	Test Condition	Min	Тур.	Max	Unit
Forward voltage	VF (1)	I _F = 1 mA	_	0.61	_	V
	VF (2)	IF = 10 mA	_	0.74	_	
	V _{F (3)}	I _F = 100 mA	_	0.92	1.20	
Reverse current	I _{R (1)}	V _R = 30 V	_	_	0.1	μA
	IR (2)	V _R = 80 V	_	_	0.5	
Total capacitance	Ст	V _R = 0 V, f = 1 MHz	_	0.9	2.0	pF
Reverse recovery time	t _{rr}	I _F = 10 mA, Fig.1	_	1.6	4.0	ns

Pin Assignment (Top View)



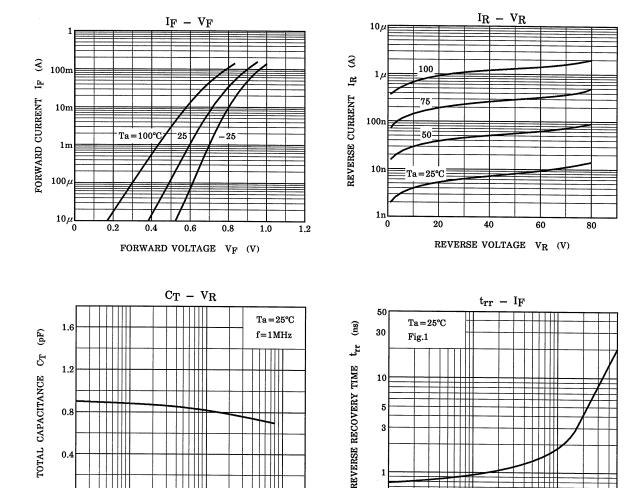
Marking





Characteristics Curves

0.3



The above characteristics curves are presented for reference only and not guaranteed by production test, unless otherwise noted.

100

REVERSE VOLTAGE V_R (V)

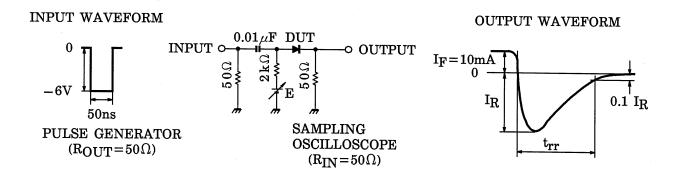


Fig.1 Reverse Recovery Time (t_{rr}) Test Circuit

30 50

FORWARD CURRENT IF (mA)



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