

TOSHIBA DIODE SILICON EPITAXIAL PLANAR TYPE

1SS382

ULTRA HIGH SPEED SWITCHING APPLICATION

Unit in mm

- Small Package
- Composed of 2 independent diodes.
- Low Forward Voltage : $V_F(3) = 0.92V$ (TYP.)
- Fast Reverse Recovery Time : $t_{rr} = 1.6ns$ (TYP.)

MAXIMUM RATINGS (Ta = 25°C)

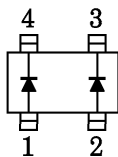
CHARACTERISTIC	SYMBOL	RATING	UNIT
Maximum (Peak) Reverse Voltage	V_{RM}	85	V
Reverse Voltage	V_R	80	V
Maximum (Peak) Forward Current	I_{FM}	300 ※	mA
Average Forward Current	I_O	100 ※	mA
Surge Current (10ms)	I_{FSM}	2	A
Power Dissipation	P	100 ※	mW
Junction Temperature	T_j	125	°C
Storage Temperature Range	T_{stg}	-55~125	°C

※ Unit Rating. Total Rating=Unit Rating×1.5

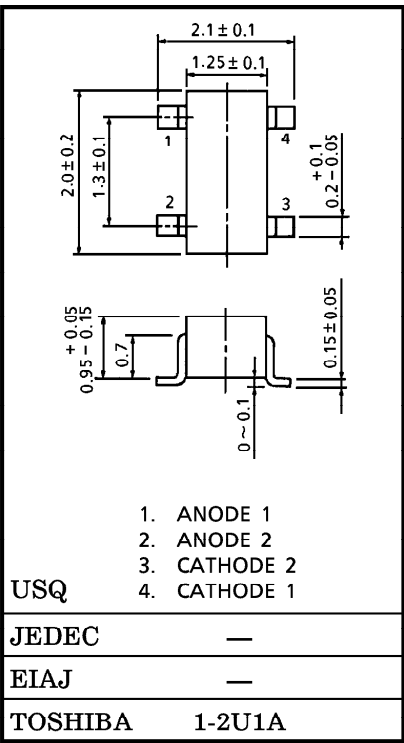
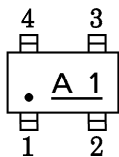
ELECTRICAL CHARACTERISTICS (Ta = 25°C)

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
	$V_F(3)$	$I_F = 100mA$	—	0.92	1.20	V
Reverse Current	$I_R(1)$	$V_R = 30V$	—	—	0.1	μA
	$I_R(2)$	$V_R = 80V$	—	—	0.5	μA
Total Capacitance	C_T	$V_R = 0, f = 1MHz$	—	0.9	2.0	pF
Reverse Recovery Time	t_{rr}	$I_F = 10mA, Fig.1$	—	1.6	4.0	ns

PIN ASSIGNMENT (TOP VIEW)

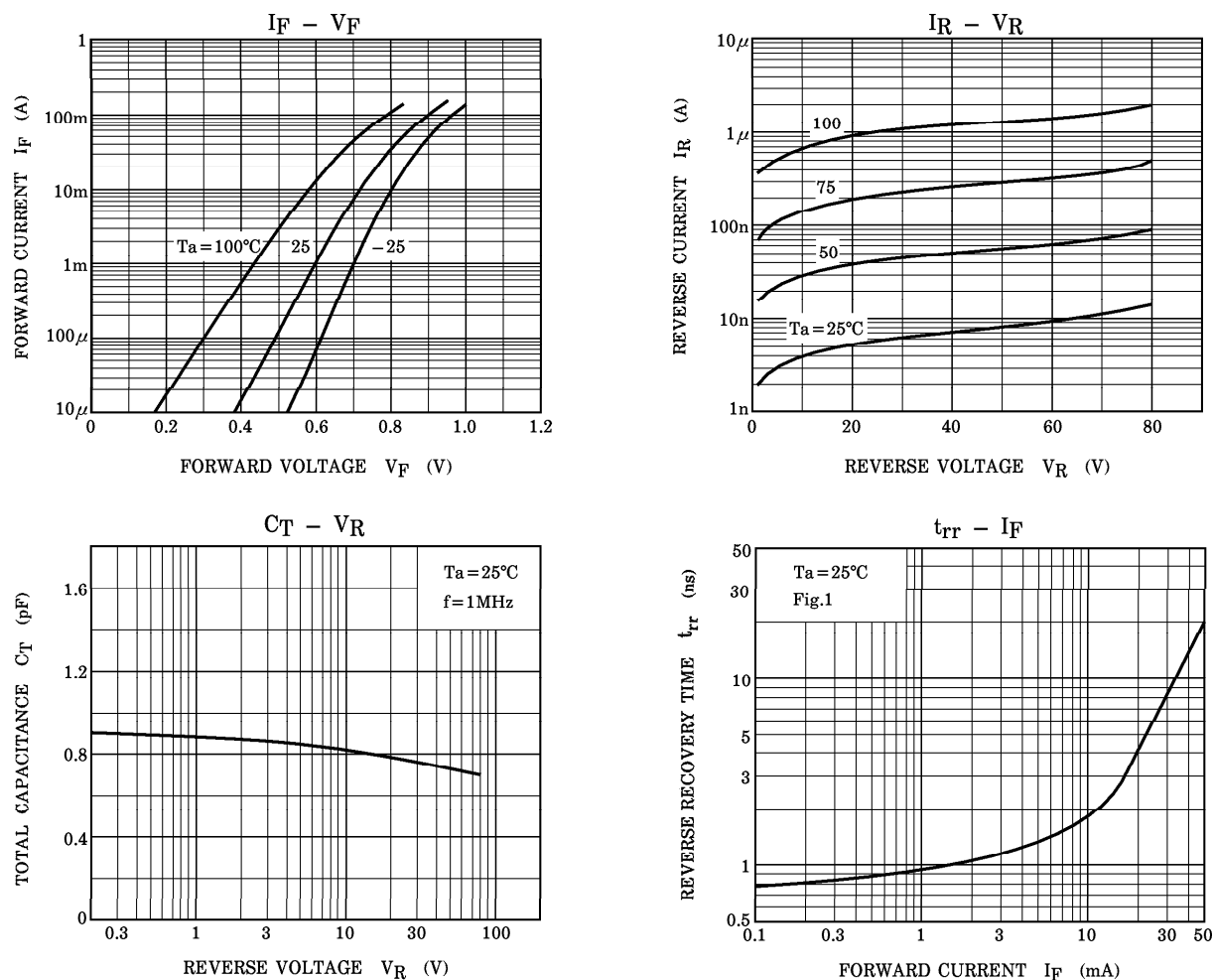


MARKING

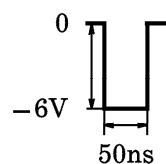


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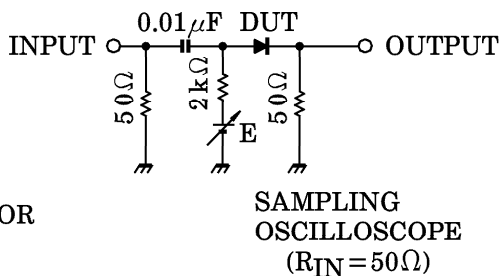
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Fig.1 REVERSE RECOVERY TIME (t_{rr}) TEST CIRCUIT

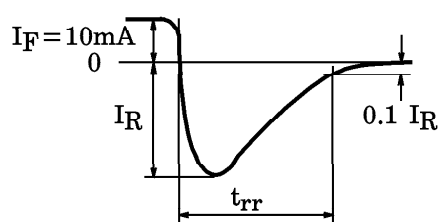
INPUT WAVEFORM



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



OUTPUT WAVEFORM



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