DSO321SR TYPE SPXO SPECIFICATION

1. Device Name SPXO
2. Type DSO321SR
3. Frequency 12.000MHz
4. Absolute Maximum Value

	Item	Symbol	Rating	Unit
1	Supply Voltage	V_{dd}	-0.5 to +5.0	V
2	Storage Temperature Range	T_{stg}	-40 to +85	deg.C

5. Recommended Operating Conditions

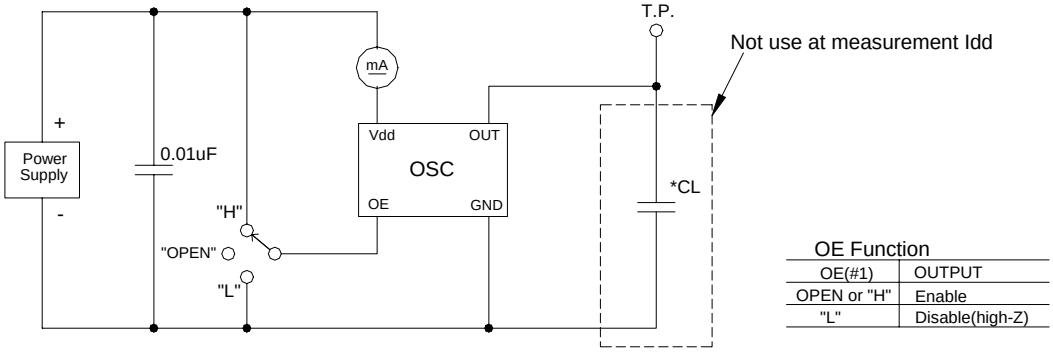
	Item	Symbol	min.	typ.	max.	Unit
1	Supply Voltage	V_{dd}	+3.0	+3.3	+3.6	V
2	Operating Temperature Range	T_{opr}	-40	-	+85	deg.C
3	Output Load	-	-	-	15	pF

6. Electrical Characteristics

(T_a=+25deg.C, V_{dd} =+3.3V unless otherwise noted)

	Item	Symbol	Test Conditions	Limits			Unit
				min.	typ.	max.	
1	Frequency Stability	f_{tol}	V_{dd}=+3.3V +/-0.3V T_a=-40 to +85 deg.C	-50	-	+50	ppm
2	Supply Current	I_{dd}	at No Load,#1pin:"H" or open	-	-	2.5	mA
	Standby Current	I_{-std}	#1pin:"L"	-	-	0.01	mA
3	Output Character		15pF				
	3-1.Symmetry	SYM	0.5V_{dd} level	45	50	55	%
	3-2.Rise Time	t_r	0.1V_{dd} to 0.9V_{dd}	-		5	ns
	3-3.Fall Time	t_f	0.9V_{dd} to 0.1V_{dd}	-		5	ns
	3-4.Low Level	V_{OL}		-	-	V_{dd*}0.1	V
	3-5.High Level	V_{OH}		V_{dd*}0.9	-	-	V
4	Input OE						
	4-1.Output enable time	T_{pzl}				1	ms
	4-2.Output disable time	T_{plz}		-	-	150	ns
	4-3.Enable input	V_{IH}		V_{dd*}0.8	-	-	V
	4-4.Disable input	V_{IL}		-	-	V_{dd*}0.2	V

* Fig1. Measurement Circuits

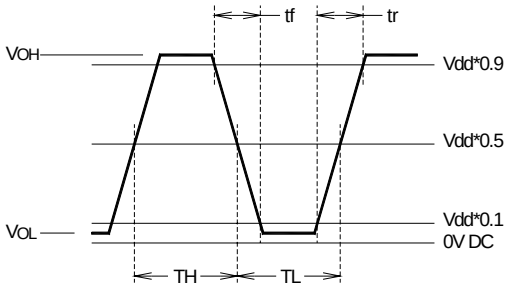


OE Function

OE(#1)	OUTPUT
OPEN or "H"	Enable
"L"	Disable(high-Z)

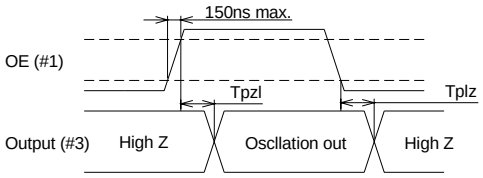
*CL:Total Fixture and Probe Capacitance

* Fig2. Output Waveform

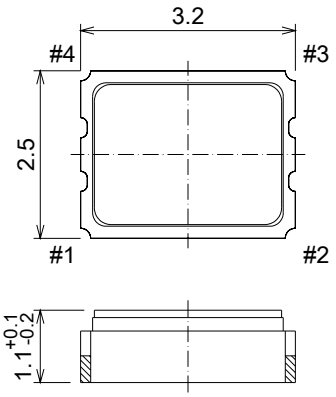


$$SYM = \frac{TH}{TL+TH} * 100\,(\%)$$

* Fig3. Input output condition



7. Outline, Pin Connections



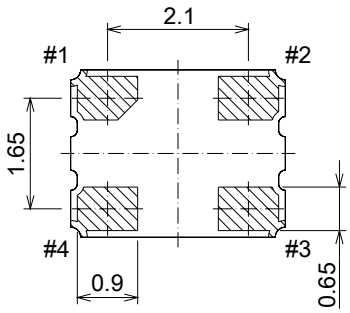
Pin Connections	
Pin No.	Connection
#1	OE(Output Enable)
#2	GND
#3	Output
#4	Vdd

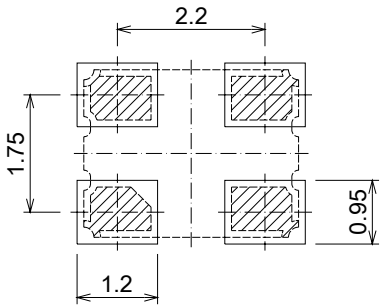
Tolerance: ±0.15

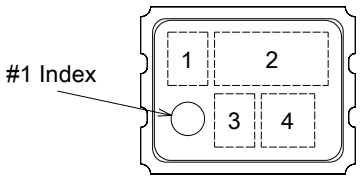
unit: mm

〔Land Pattern (Reference)〕

<Top View>







1.Type : R
2.Nominal Frequency : 12.0
3.KDS LOGO(D)
4.Lot No. refer to 【Lot No.】

【Lot No.】

e.g. May. 2009 : 9E

Year	X1	X2	X3	X4	X5	X6	X7	X8	X9	X0
Symbol	1	2	3	4	5	6	7	8	9	0

Month	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Symbol	A	B	C	D	E	F	G	H	J	K	L	M