

DSO321SR TYPE SPXO SPECIFICATION

1. Device Name SPXO
2. Type DSO321SR
3. Frequency 12.288MHz
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

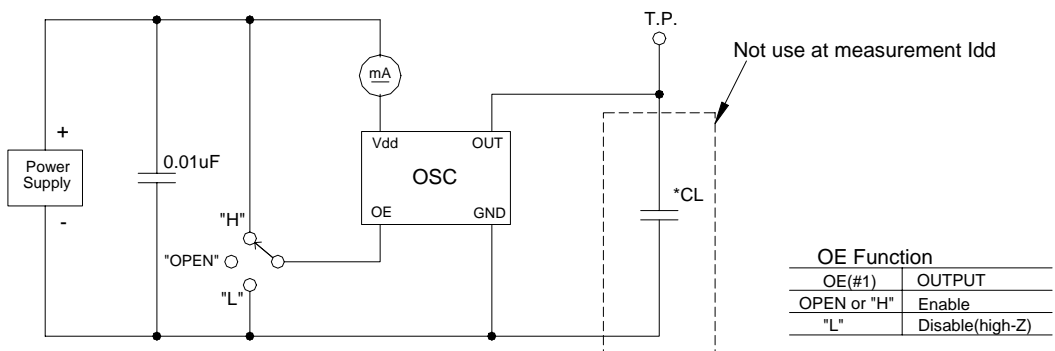
	Item	Symbol	min.	typ.	max.	Unit
1	Supply Voltage	V_{dd}	+3.0	+3.3	+3.6	V
2	Operating Temperature Range	T_{opr}	-40	-	+85	deg.C
3	Output Load	-	-	-	15	pF

6. Electrical Characteristics

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

	Item	Symbol	Test Conditions	Limits			Unit
				min.	typ.	max.	
1	Frequency Stability	f_{tol}	$V_{dd}=+3.3\text{V} \pm 0.3\text{V}$ $T_a=-40$ 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}		-	-	$V_{dd} \cdot 0.1$	V
	3-5.High Level	V_{OH}		$V_{dd} \cdot 0.9$	-	-	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}		$V_{dd} \cdot 0.8$	-	-	V
4-4.Disable input	V_{IL}		-	-	$V_{dd} \cdot 0.2$	V	

* Fig1. Measurement Circuits

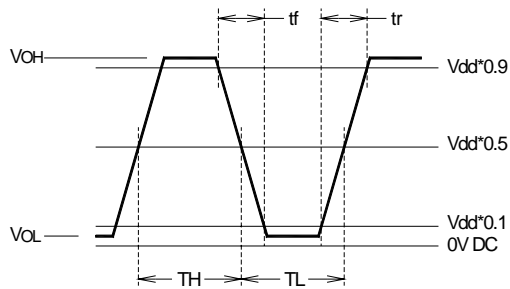


*CL: Total Fixture and Probe Capacitance

Date	Spec.NO	Rev.	Remark	Page.
2013/09/08		-	-	1/2

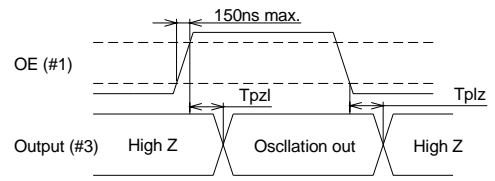
DSO321SR TYPE SPXO SPECIFICATION

* Fig2. Output Waveform

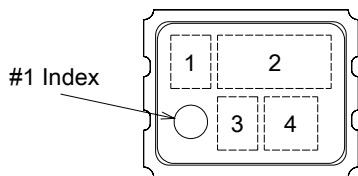
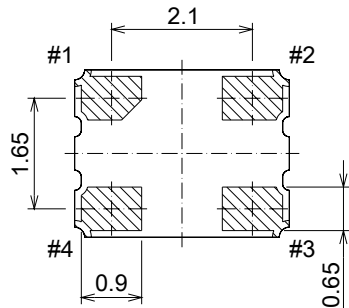
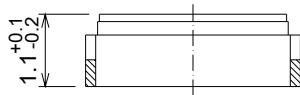
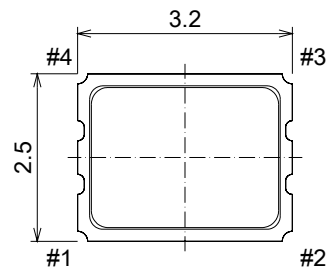


$$SYM = \frac{T_H}{T_L + T_H} * 100 (\%)$$

* Fig3. Input output condition



7. Outline, Pin Connections



Pin Connections

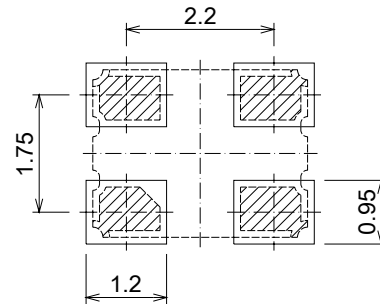
Pin No.	Connection
#1	OE(Output Enable)
#2	GND
#3	Output
#4	Vdd

Tolerance: ± 0.15

unit: mm

(Land Pattern (Reference))

<Top View>



- 1.Type : R
- 2.Nominal Frequency : 12.2
- 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

Date	Spec.NO	Rev.	Remark	Page.
2013/09/08		-	-	2/2