

# SECTRON ELECTRONICS CO., LTD

# APPROVAL SHEET



**CUSTOMER:** \_\_\_\_\_

**DESCRIPTION:** Half Size Crystal Oscillator

**MANUFACTURER PART NO.:** FXO32.768K3.3H-50D

**CUSTOMER PART NO.:** \_\_\_\_\_

**USED IN MODEL:** \_\_\_\_\_

承 认 APPROVAL		
工程部 TECHNOLOGY DEPT.	品质部 QUALITY DEPT.	采购部 PURCHASING DEPT.

**Date:** November 22, 2022

SECTRON ELECTRONICS CO., LTD

Add: OFFICE NO.3,10/F,WITTY COMMERCIAL BUILDING, 1A-1L TUNG

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# 1. QUARTZ CRYSTAL OSCILLATOR SPECIFICATION

1.1 Frequency:	32.768KHz
1.2 Holder type :	<b>DIP8</b>
1.3 Frequency stability:	±50ppm
1.4 Supply voltage:	3.3V <sub>DC</sub> ±10%
1.5 Input Current :	20mA max
1.6 Operable temperature range:	-40°C To +85°C
1.7 Storage temperature range:	-40°C To +85°C
1.8 Symmetry :	40~60% (at 50% VDC)
1.9 Rise& Fall Time:	5nS max
1.10 Output:	HCMOS/TTL
1.11 Output Load:	15pF Typical, 30pF max
1.12 Output Low Level:	10%V <sub>DD</sub> max
1.13 Output High level:	90%V <sub>DD</sub> min
1.14 Output Wave form:	Square
1.15 Tri-State:	NO
1.16 Start-up time:	10mS max
1.17 Aging:	Less than ±5 ppm/Year
1.18 Insulation resistance:	500MΩ (DC100±10V)min
1.19 Output Waveform	Refer to fig.1
1.20 Test circuit	Refer to fig.2
1.21 Dimensions and marking	Refer to page.4
1.22 Emboss carrier tape & reel	Refer to page.5

## Standard atmospheric conditions

Unless otherwise specified, the standard range of atmospheric conditions for making measurement and tests are as follow:

Ambient temperature : 25±3°C

Relative humidity : 40%~70%

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## 2. Output Waveform

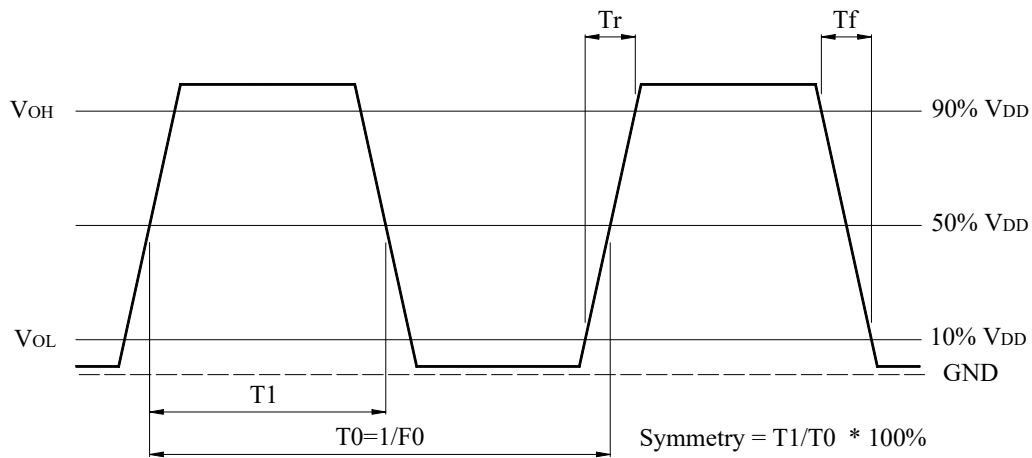
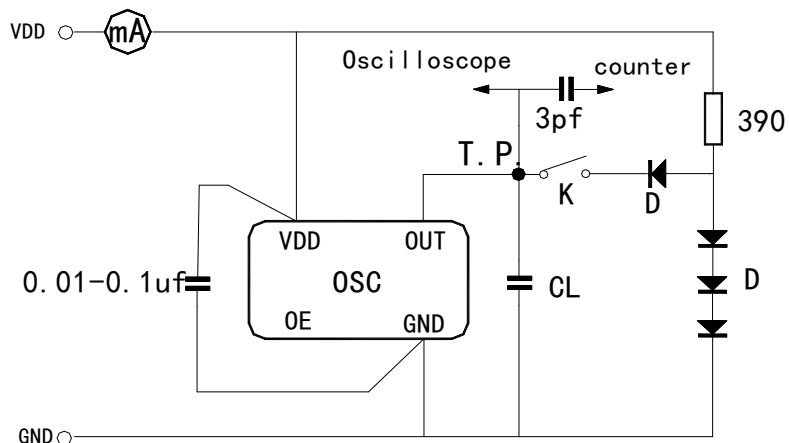


fig.1

## 3. Test circuit



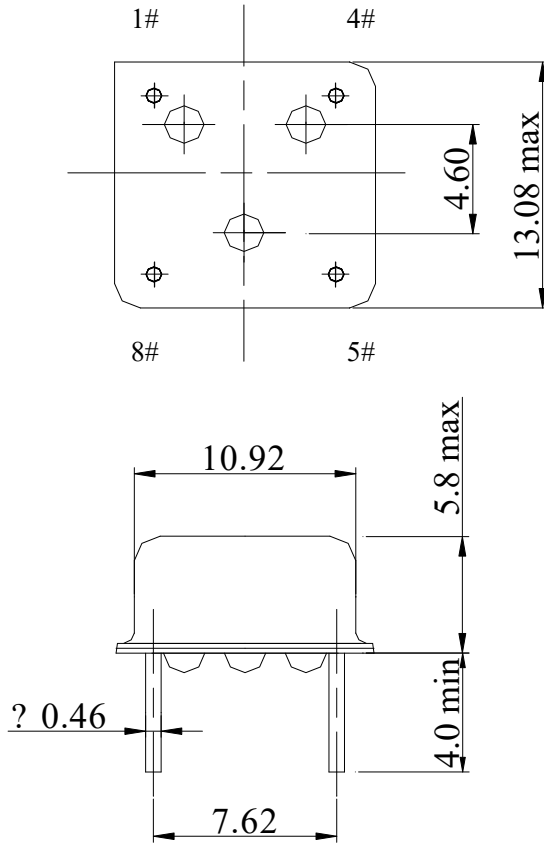
K=ON for TTL load  
 K=OFF for CMOS load  
 D: IN916 & IN4148  
 CL=15, 25, 30, 50pf (including fixture and probe cap.)

fig.2

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## 4. MARKING & DIMENSIONS



Pin	Connection
1#	Tri-state or no connect
4#	GND
5#	Output
8#	V <sub>dd</sub>

\*Marking should be printed as following:

Logo, Nominal Frequency

Logo:

Nominal Frequency: (ex. 8.000 MHz)

Marking: Laser marking

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## 5.MECHANICAL/ENVIRONMENTAL CHARACTERISTICS

NO.	项 目 ITEM	条 件 CONDITIONS	规 格 SPECIFICATIONS
5.1	漏气试验 Leaking Test	完全浸入 90±3℃ 热水中 3 分钟。 Fully immersed into hot water at 90°C±3°C for 3 minutes.	无气泡存在 no air bubble are visible.
5.2		用酒精加压法测试绝缘电阻。 measure insulation resistance under pressure.	IR≥500MΩ
5.3	跌落试验 Drop Test	高度 75cm, 自由落体于 3cm 木板上, 6 次 Dropping 6 times from the height of 75 cm onto hard wooden board of thickness more than 30mm.	No visible damage, measured Values shall meet spec..
5.4	振动试验 Vibration Test	频率 10~55Hz, 振幅 1.5mm, 时间 1.5 分钟循环, 在 XYZ 方向各 2 小时。 Vibration Frequency: 10~55Hz Cycle: 1.5 Min. Amplitude: 1.5mm P-P. Direction: X.Y.Z Time: 2 Hours / Each Direction	No visible damage, measured Values shall meet spec..
5.5	可 焊 性 Solderability Test	从引线末端至距底部 2mm 处放入 230℃±5℃ 焊槽内,时间: 5±0.5 秒。 The terminal lead wire is to be soaked in a 230°C±5°C tin trough for 5±0.5 seconds.	沾锡面≥90%。 Tin over the wire≥90% No visible damage, measured Values shall meet spec..
5.6	耐低温性 Low Temperature Enduring	在-40℃±3℃下放置 96 小时,取出后在常温下恢复 2 小时。 The samples crystal is to be tested after being placed in the environment of -40±3°C for 96 hours, and recovered to room temperature for 2 hours.	No visible damage, measured Values shall meet spec..
5.7	耐高温性 High Temperature Enduring	在+85℃±2℃下放置 96 小时,取出后在常温下恢复 2 小时。 The samples crystal is to be tested after being heated at +85±2°C for 96 hours, and cooled to room temperature for 2 hours.	No visible damage, measured Values shall meet spec..

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5.8	恒定湿热 Humidity	<p>在 <math>40\pm 3^{\circ}\text{C}</math>、RH <math>93\%\pm 2\%</math> 下放置 96 小时,取出后恢复 2 小时。</p> <p>The temperature is at <math>40\pm 3^{\circ}\text{C}</math>, and at <math>93\%\pm 2\%</math> RH after 96 hours, and cooled to room temperature for 2 hours.</p>	No visible damage, measured Values shall meet spec..
5.9	耐焊接热 Resistance to Solder Heat	<p>引线端子应插入 <math>350\pm 5^{\circ}\text{C}</math> 的焊接槽中 <math>3\pm 0.5</math> 秒或 <math>260\pm 5^{\circ}\text{C}</math> 的焊接槽中 <math>10\pm 0.5</math> 秒, 插入深度为从引线末端至距底部 2mm 处, 而后放在自然环境中 1 小时, 再进行测试。</p> <p>Lead terminals are immersed up to 1.5mm from resonator's body in soldering bath of <math>350\pm 5^{\circ}\text{C}</math> for <math>3\pm 0.5</math> sec. And then resonator shall be measured after being placed in room temperature for 1 hour.</p>	No visible damage, measured Values shall meet spec..

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