深圳市炬烜科技有限公司
CHIP SUN TECHNOLOGY CO.，LTD

APPROVAL SHEET

RoHS Compliant

CUSTOMER：

DESCRIPTION： Full Size Crystal Oscillator

MANUFACTURER PART NO.： FXO11.059M5F-30BEW

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: March 17, 2023

深圳市炬烜科技有限公司
CHIP SUN TECHNOLOGY CO.，LTD
地址 ADD: 深圳市龙华新区大浪腾龙路淘金地电子商务孵化基地 B 座 206
Rm. 206, Tower B, Taojindi Building, Tenglong Road, Dalang Street,
Longhua New District, Shenzhen, China
电话 TEL: 86-755-83458796　传真 FAX: 86-755-83459818
网址 WEB ADD: http://www.chinachipsun.com
E-MAIL: sales01@chinachipsun.com

1. QUARTZ CRYSTAL OSCILLATOR SPECIFICATION

1.1 Frequency:	11.0592MHz
1.2 Holder type :	**DIP14**
1.3 Frequency stability:	±30ppm Overall Temperature stability is Inclusive of all conditions: Calibration Tolerance at +25℃, frequency stability over the operating temperature range, supply voltage change, output load changes, shock, vibration, and 1st year aging at +25℃.
1.4 Supply voltage:	$5.0V_{DC}$±10%
1.5 Input Current :	30mA max
1.6 Operable temperature range:	-20℃ To +70℃
1.7 Storage temperature range:	-55℃ To +125℃
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/10TTL
1.12 Output Low Level:	$10\%V_{DD}$ max
1.13 Output High level:	$90\%V_{DD}$ 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

Standard atmospheric conditions

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

Ambient temperature : 25±3℃

Relative humidity : 40%~70%

2. Output Waveform

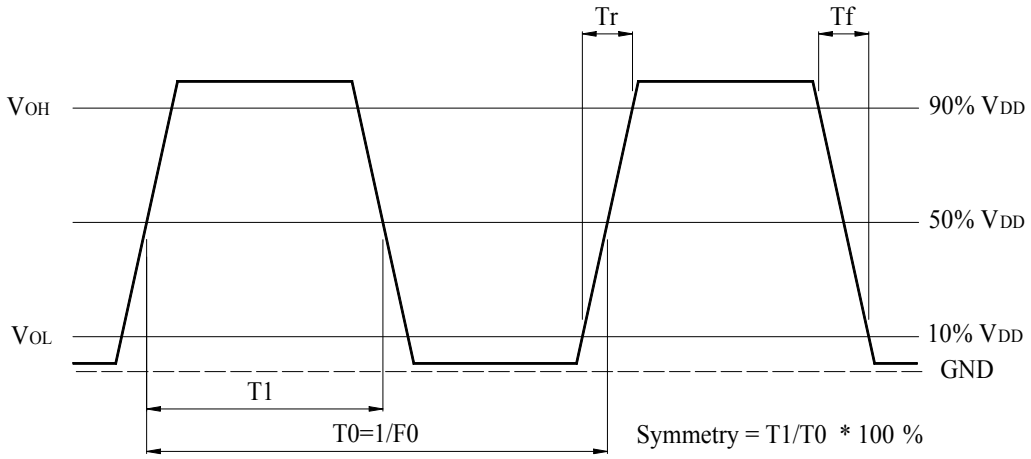
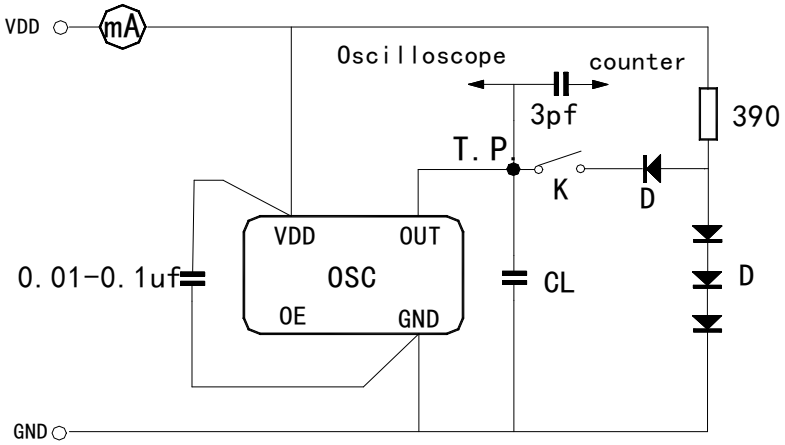


fig.1

3. Test circuit

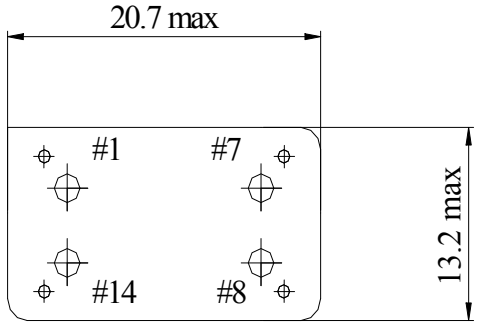


K=ON for TTL load
K=OFF for CMOS load
D:IN916 & IN4148
CL=15,25,30,50pf (including fixture and probe cap.)

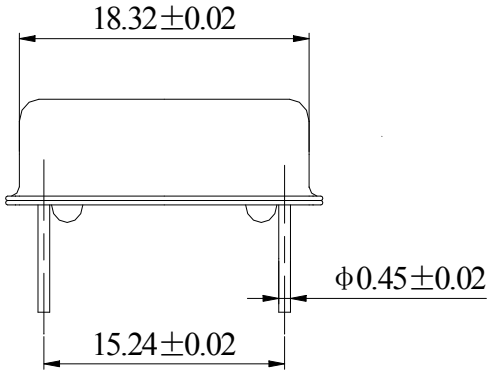
fig.2

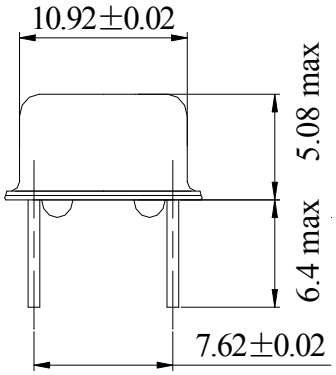
CHIP SUN TECHNOLOGY CO.，LTD		
DESCRIPTION	OSC-DIP14 11.0592MHz ±30ppm 5.0V	Page:
DATE	2023-03-17	**3/6**

4. MARKING & DIMENSIONS



Pin	Connection
1#	no connect
7#	GND
8#	Output
14#	V_{dd}





*Marking should be printed as following:

Logo, Nominal Frequency

Logo：FT

Nominal Frequency：（ex. 8.000 MHz）

Marking: Laser marking

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℃ 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°C±5℃焊槽内,时间：5±0.5 秒。 The terminal lead wire is to be soaked in a 230°C ±5℃ 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°C±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℃ 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°C±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℃ for 96 hours, and cooled to room temperature for 2 hours.	No visible damage, measured Values shall meet spec..

5.8	恒定湿热 Humidity	在 40±3°C、RH 93%±2%下放置 96 小时,取出后恢复 2 小时。 The temperature is at 40±3°C, and at 93% ±2% RH after 96 hours， and cooled to room temperature for 2 hours.	No visible damage, measured Values shall meet spec..
5.9	耐焊接热 Resistance to Solder Heat	引线端子应插入 350±5℃的焊接槽中 3±0.5 秒或 260±5℃的焊接槽中 10±0.5 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。 Lead terminals are immersed up to 1.5mm from resonator's body in soldering bath of 350±5℃ for 3±0.5 sec. And then resonator shall be measured after being placed in room temperature for 1 hour.	No visible damage, measured Values shall meet spec..