INTERQUIP ELECTRONICS CO., LIMITED

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Crystal Oscillator Specification and Approval Sheet

Customer:

Project Name: N/A
Applications: N/A
Contact Person: N/A
Customer Part Number: N/A

1. **Scope:**
   1.1 This specification applies to the 40.000000MHz crystal oscillator used in electronic equipment.

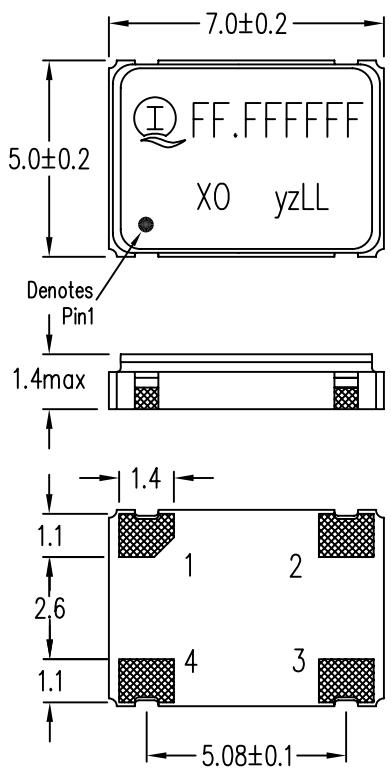
2. **Construction:**
   2.1 Type of Holder: 149 Series
   2.2 Enclosure Seal: Seam Weld (RoHS Compliant)

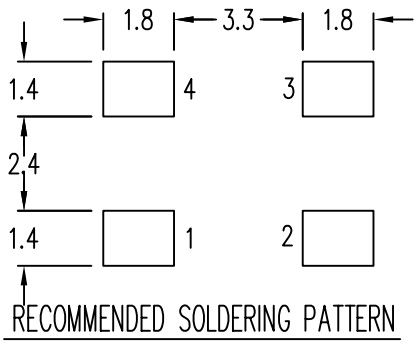
3. **Characteristics:**

3.1	Nominal Frequency	40.000000MHz
3.2	Frequency Stability	±50 ppm (inclusive of Freq. Tol. @ 25°C, Load Variance, Supply change, TC, and Aging)
3.3	Operating Temperature Range	-40°C to 85°C
3.4	Storage Temperature Range	-55°C to 125°C
3.5	Input Voltage (V_{DD})	+3.3V_{DC} ±10%
	Current (I_{DD})	25mA Max.
3.6	Output State Control	Enable/disable
3.7	Output Symmetry	45% to 55% @ 0.5V_{DD}
3.8	Rise Time	4ns Max
3.9	Fall Time	4ns Max
3.10	Output Voltage V_{OL}	0.1V_{DD} Max.
	V_{OH}	0.9V_{DD} Min.
3.11	Output Drive Current I_{OL}	8mA
	I_{OH}	-8mA
3.12	Start-up Time	10ms Max
3.13	Output Waveform	CMOS
3.14	Output Load	15pF

				TITLE **CRYSTAL OSCILLATOR**		DWG.	**M Zhao**
						DATE	**14-07-02**
				PART NO **1491-40005-BTBQGA**	TOLERANCE	CHKD.	**J Mok**
				MODEL **149 SERIES**	X.± X.X±	DATE	**14-07-02**
				REMARK	X.XX.± ANGULAR±	APPD.	**XM Sun**
						DATE	**14-07-02**
	DATE	MODIFY DESCRIPTION	BY	SALESMAN: Faclo Hung	SHEET **1/2**		REV **0**

EXTERNAL DIMENSIONS





RECOMMENDED SOLDERING PATTERN

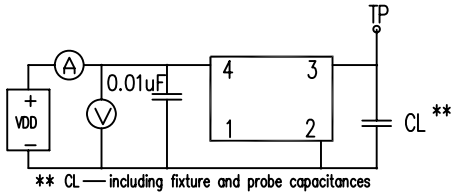
PIN CONNECTION

P/N	1491
1	Enable/Disable*
2	GND
3	Output
4	VDD

* Enable/Disable functional description

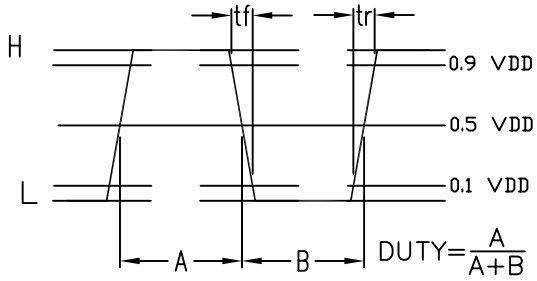
When pin1 goes high (>=0.7VDD) or open ,the Oscillator in normal operation and has output in frequency. When pin1 goes low (<=0.3VDD) ,the oscillator stops and the oscillator output (Pin3) becomes high impedance.

CMOS TEST CIRCUIT



** CL — including fixture and probe capacitances

TYPICAL CMOS WAVE FORM



MARKING SPECIFICATIONS

Ⓘ — Company's logo

FF.FFFFFF — Represent frequency (MHz) after decimal point keep effective digit, but not less than 3 digits.

XO — Represent crystal control oscillator

YZ — Represent Month & Year code respectively

" Y " :

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

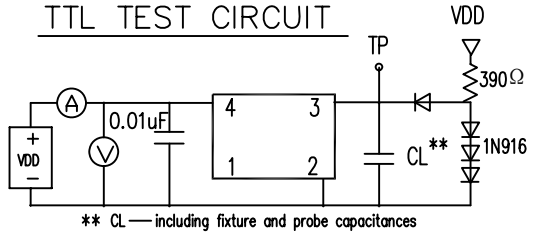
" Z " code is the last number of production year

For instance:

YEAR	2009	2010	2011	2012	2013
MARK	9	0	1	2	3

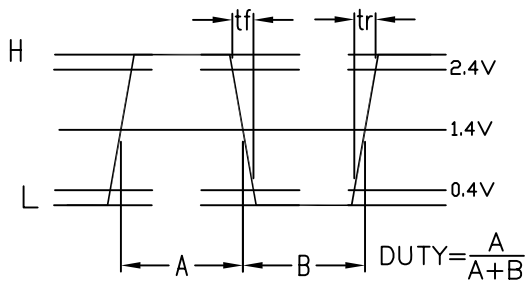
LL — Represent lot code (AA–ZZ)

TTL TEST CIRCUIT



** CL — including fixture and probe capacitances

TYPICAL TTL WAVE FORM



NOTES: 1. ALL DIMENSIONS ARE IN MM

2. DO NOT SCALE DRAWING

				INTERQUIP ELECTRONICS CO., LIMITED			
				TITLE: CRYSTAL CLOCK OSCILLATOR		DWN.	H_Zhang
						DATE	2010.2.4
				PART NO.	TOLERANCE	CHKD	M_Zhao
				MODEL 1491–2G SERIES	X.±0.3 X.X±0.15	DATE	2010.2.4
				REMARK	X.XX±0.05 ANGULAR±	APPD.	Xm_Sun
						DATE	2010.2.4
	DATE	MODIFY DESCRIPTION	BY		DWG.NO. 004–06314–012	REV.	3