



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 50.000000MHz crystal oscillator used in electronic equipment.

2. Construction:

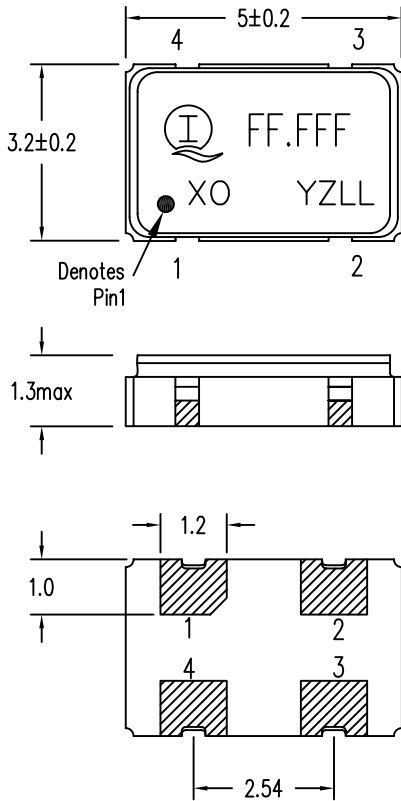
2.1 Type of Holder: 160 SERIES (RoHS Compliant)
2.2 Enclosure Seal: Resistance weld

3. Characteristics:

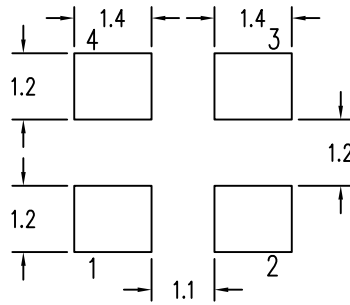
| | |
|---|--|
| 3.1 Nominal Frequency | 50.000000MHz |
| 3.2 Frequency Stability | ±25ppm <small>(inclusive of Freq. Tol. @ 25°C, Load Variance, Supply change, TC, and Aging)</small> |
| 3.3 Operating Temperature Range | -40°C to 85°C |
| 3.4 Storage Temperature Range | -55°C to 125°C |
| 3.5 Input Voltage (V _{DD}) | 3.3V _{DC} ±10% |
| Current (I _{DD}) | 30mA Max |
| 3.6 Output State Control | Enable/Disable |
| 3.7 Output Symmetry | 40% to 60% @ 0.5V _{DD} |
| 3.8 Rise Time | 6.0ns Max |
| 3.9 Fall Time | 6.0ns 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 Max. |
| I _{OH} | -8mA Max. |
| 3.12 Start-up Time | <10ms |
| 3.13 Output Waveform | CMOS |
| 3.14 Output Load | 15pF |

| | | | | | | | | | |
|------|--------------------|----|---------------------|---------------------------------|-------------------|----------------|----------|----------|----------|
| | | | | TITLE CRYSTAL OSCILLATOR | | DWG. | M Zhao | | |
| | | | | | | DATE | 09-08-19 | | |
| | | | | PART NO | 1601-5000C-BTBQYA | TOLERANCE | CHKD. | J Mok | |
| | | | | MODEL | 160 SERIES | | X.± X.X± | DATE | 09-08-19 |
| | | | | REMARK | | X.XX± ANGULAR± | APPD. | XM Sun | |
| | | | | | | | DATE | 09-08-19 | |
| DATE | MODIFY DESCRIPTION | BY | SALESMAN: Gary Chan | | | SHEET | 1/2 | REV | 0 |

EXTERNAL DIMENSIONS



RECOMMENDED SOLDERING PATTERN

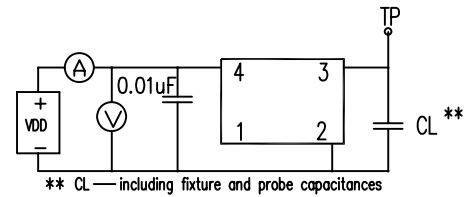


PIN CONNECTION

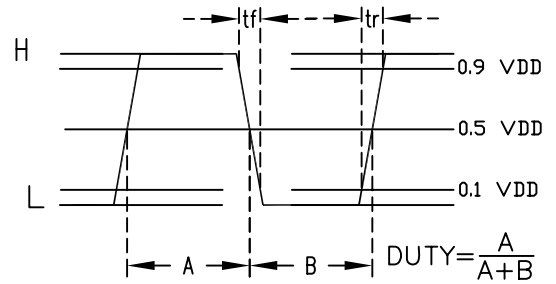
| P/N | 1601 |
|-----|-----------------|
| 1 | Enable/Disable* |
| 2 | GND |
| 3 | Output |
| 4 | VDD |

* Enable/Disable functional description
When pin1 goes high ($\geq 0.7V_{DD}$) or open, the Oscillator in normal operation and has output in frequency. When pin1 goes low ($\leq 0.3V_{DD}$), the oscillator stops and the oscillator output (Pin3) becomes high impedance.

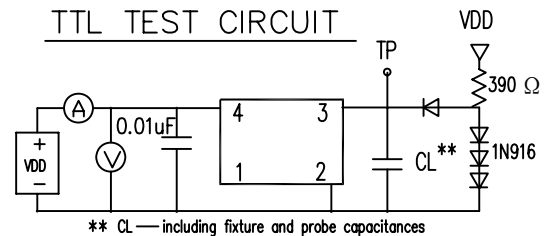
CMOS TEST CIRCUIT



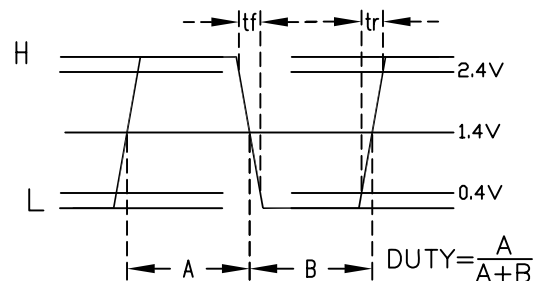
TYPICAL CMOS WAVE FORM



TTL TEST CIRCUIT



TYPICAL TTL WAVE FORM



MARKING SPECIFICATIONS

— Company's logo

FF.FFFFFFFF — 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 | 2008 | 2009 | 2010 | 2011 | 2012 |
|------|------|------|------|------|------|
| MARK | 8 | 9 | 0 | 1 | 2 |

LL — Represent lot code (AA-ZZ)

2. DO NOT SCALE DRAWING
NOTES: 1. ALL DIMENSIONS ARE IN MM

INTERQUIP ELECTRONICS CO., LIMITED

TITLE CRYSTAL CLOCK OSCILLATOR

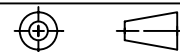
PART NO.

MODEL 1601 SERIES

REMARK

TOLERANCE

X.±0.3 X.X±0.15
X.XX±0.05 ANGULAR±



| | |
|-------|-------------|
| DWN. | M.Zhao |
| DATE | 2009.1.12 |
| CHKD | Johnson Mok |
| DATE | 2009.1.12 |
| APPD. | XM Sun |
| DATE | 2009.1.12 |

DATE MODIFY DESCRIPTION BY

DWG.NO. 004-06315-004 REV. 3