



江苏浩都频率科技有限公司
JIANGSU HD-CRYSTAL TECHNOLOGY CO., LTD

Specifications For Product

TYPE : Quartz Crystal Oscillator
SPEC : CXO7050/11.0592M/3.3V/±50ppm
P/N : 800110593W1
VER : A/1

R&D APPR. SIGNATURED			DEPT. 
ISSUE	CHECK	APPROVAL	
吴佳斌	程永娣	王秋贞	

Jiangsu HD-Crystal technology CO., Ltd

Add: NO 3, Dongxu Road, Lingang City, Jiangyin, Jiangsu Procince

Tel : +86 510 86680199

Fax : +86 510 86680699

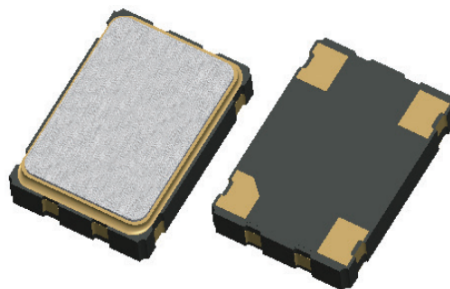
Specification Revision Record Sheet

[illegible]

800110593W1

1. Scope:

- 1.1 This specification applies to the RoHS crystal oscillator with a frequency of 11.0592MHz which will be used in electronic equipment.



2. Construction:

- 2.1 Oscillators series: 80 series CXO7050
2.2 Package: SMD 7.0×5.0

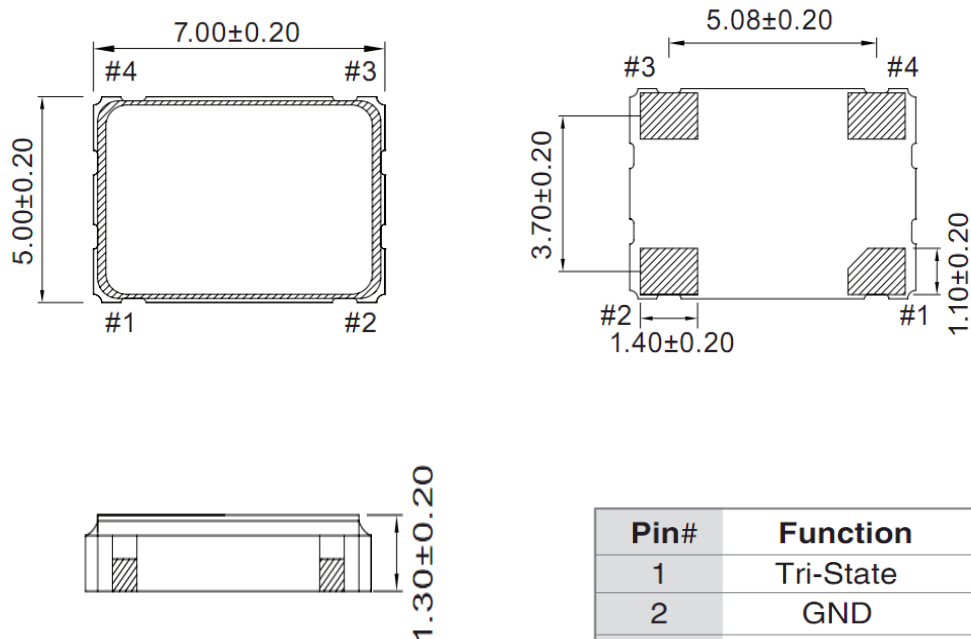
3. Electrical Characteristics

- | | | |
|------|---|---|
| 3.1 | Nominal Frequency: | 11.0592MHz |
| 3.2 | Frequency Stability: | ±50ppm |
| | (incl. 25°C tolerance, tolerance over operating temperature range, input voltage change, load change, 1 year aging) | |
| 3.3 | Aging: | ±3ppm/year Max |
| 3.4 | Operating Temperature Range: | -40 to + 85°C |
| 3.5 | Storage Temperature Range: | -55 to + 125°C |
| 3.6 | Input Voltage (V_{DD}): | +3.3 V ± 10% |
| 3.7 | Input Current (I_{DD}): | 10mA Max |
| 3.8 | Output Waveform: | CMOS |
| 3.9 | Output Symmetry: | 40%~60% |
| 3.10 | Rise/Fall Time: | 8ns Max |
| 3.11 | Output Voltage V_{OL} : | 10%VDD |
| | V_{OH} : | 90%VDD |
| 3.12 | Output Load: | 15pF |
| 3.13 | Output State Control: | Enable/disable |
| 3.14 | Start-up Time: | 10ms max |
| 3.15 | Standby current: | 10µA max |
| 3.16 | Phase Jitter (rms): | 1ps rms max 12kHz to 20MHz max |
| 3.17 | Oscillation mode: | Fundmental |
| 3.18 | Others: | Not recommended for safety applications |

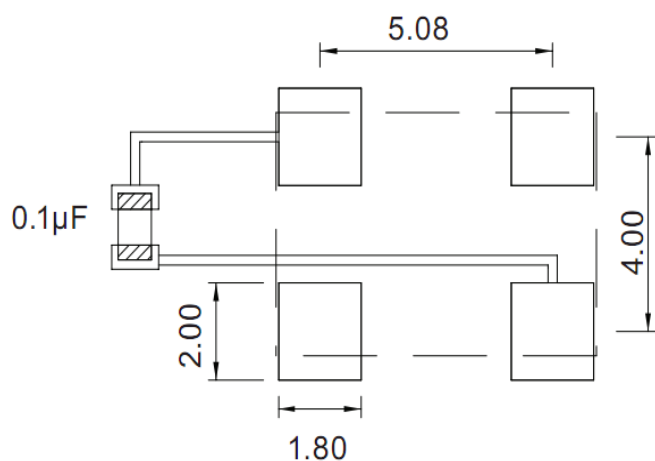
Reliability Specification

NO.	ITEM	SPECIFICATION	TEST METHOD
4.1	Temperature Cycle (GB/T 2423.22-2002, Method Nb)	Frequency change after test $\leq\pm$ 5ppm.	10 cycles from -55°C to 125°C. Measurement taken after DUT being left at room temperature for 24 \pm 2 hours.
4.2	Low Temperature Storage (GB/T 2423.1-2001, Method Aa)	Frequency change after test $\leq\pm$ 5ppm.	Spending 72 hrs at -55°C \pm 3°C constant temperature. Measurement taken after DUT being left at room temperature for 24 \pm 2 hours.
4.3	High Temperature Storage (GB/T 2423.2-2001, Method Ba)	Frequency change after test $\leq\pm$ 5ppm.	Spending 72 hrs at 125°C \pm 3°C constant temperature. Measurement taken after DUT being left at room temperature for 24 \pm 2 hours.
4.4	Humidity (GB/T 2423.3-2006, Method Cab)	Frequency change after test $\leq\pm$ 5ppm.	Spending 96 hrs at 40 °C \pm 3 °C, with 90 \pm 3% R.H. Measurement taken after DUT being left at room temperature for 24 \pm 2 hours.
4.5	Vibration (GB/T 2423.10-1995, Method Fc)	Frequency change after test $\leq\pm$ 5ppm.	Apply 0.75mm vibration at sweep frequency 10~500 Hz, for 2h. 10 cycles in each direction of 3 axis. Measurement taken after 1 hour.
4.6	Shock (GB/T 2423.5-1995, Method Ea)	Frequency change after test $\leq\pm$ 5ppm. No visible damages.	Peak 1000m/s ² , normal width 6ms half sine wave form, 3.7m/s, 3 perpendicular axis of samples, 3 cycles / direction, total 18 cycles. Measurement taken after 1 hour.
4.7	Drop (GB/T 2423.8-1995, Method Ed)	Frequency change after test $\leq\pm$ 5ppm. No visible damages.	Free drop to the wooden plate from 1.0 m heights for 3 times.
4.8	Solderability (GB/T 2423.28-2005, Method Tc)	Terminals shall be covered more than 95% with solder.	In 245 \pm 5°C solder bath for 2 \pm 0.5 seconds. There is no need to do functioned test. 8-12X magnifier.
4.9	Terminal Strength (JIS-C-6429 Method 1 & 2)	No visible damage	Mount on a glass-epoxy board (100x50x1.6mm), then bend to 2mm displacement (velocity 1mm/sec) and keep for 5 seconds. or pulling force 0.5 kg for at least 60 seconds.
4.10	Resistance to Soldering Heat (GB/T 2423.28-2005, Test Tb Method 1B)	Frequency change after test $\leq\pm$ 5ppm.	Passed through the re-flow oven under the following condition. Preheat to 150°C \pm 5°C for 60 to 120sec, and peak 265°C \pm 5°C for 10s \pm 3sec. Measurement taken after DUT being left at room temperature for at 24 \pm 2 hours.
4.11	OTHERS		

Package Outline Dimensions



Suggested Pad Layout



To ensure optimal oscillator performance, place a by-pass capacitor of 0.1µF as close to the part as possible between Vdd and GND pads.

Packing Specification

