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	:	CXO3225/24.576M/3.3V/±30PPM
P/N	:	83024576301
VER	:	A/2

R&D APPR.SIGNATURED			DEPT.
ISSUE	CHECK	APPROVAL	
吴佳斌	翟晓晴	王秋贞	

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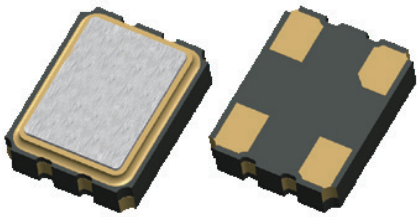
Specification Revision Record Sheet

Rev.	Revise page	Revise Contents	Date	Ref. No.	Reviser
A/0	N/A	Initial released	2018/3/30	N/A	吴佳斌
A/1	N/A	P/N revision	2020/1/1	N/A	吴佳斌
A/2	4	package and pad layout change	2022/2/8	N/A	吴佳斌

83024576301

1. Scope:

1.1 This specification applies to the RoHS crystal oscillator with a frequency of 24.576MHz which will be used in electronic equipment.



2. Construction:

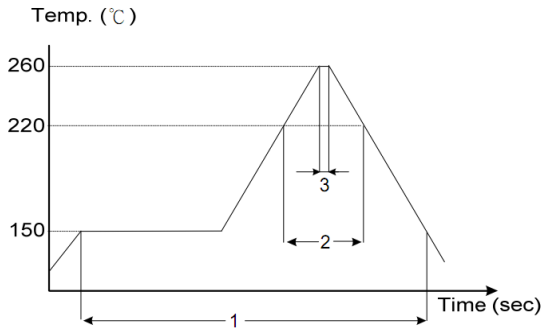
2.1 Oscillators series: 83 series CXO3225

2.2 Package: SMD3.2×2.5

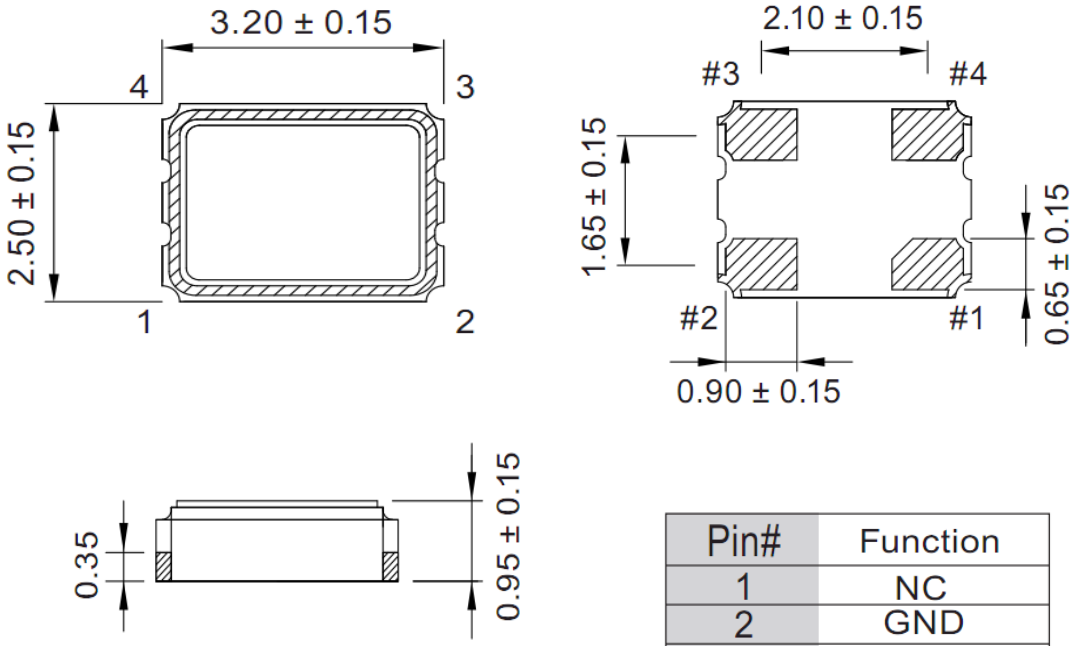
3. Electrical Characteristics

3.1	Nominal Frequency:	24.576MHz
3.2	Frequency Stability: (incl. 25°C tolerance, tolerance over operating temperature range, input voltage change, load change, 1 year aging)	±30ppm
3.3	Aging:	±3ppm/year
3.4	Operating Temperature Range:	-40 to + 85°C
3.5	Storage Temperature Range:	-55 to + 125°C
3.6	Input Voltage (V_{DD}):	+3.3Vdc±10%
3.7	Input Current (I_{DD}):	20mA max
3.8	Output Waveform:	CMOS
3.9	Output Symmetry:	50±10%
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

	Item	Condition	Standard
1.	Drop characteristics	Free drop from 75cm height on a hard wooden board for 3 times. (Board is thickness more than 30 mm.)	Frequency change:≤±5ppm Rr as specification
2	Mechanical shock	Device are shocked to half sine wave (1000g) three mutually perpendicular axes each 3 times	Frequency change:≤±5ppm Rr as specification
3.	Shake characteristics	Shake frequency 10~55Hz, cyc1~2 minutes, swing 1.5mm, direction x/y/z, all 30 minutes, test after 1 hours.	Frequency change:≤±5ppm Rr as specification
4.	Humidity characteristics	+40±2℃ & 90%~95% R.H. 250 hours	Frequency change:≤±5ppm Rr as specification
5.	Low temperature characteristics	-40±2℃, 250 hours, put in room temperature, test after 1 hours.	Frequency change:≤±5ppm Rr as specification
6.	High temperature characteristics	+85±2℃, 250 hours, put in room temperature, test after 1 hours.	Frequency change:≤±5ppm Rr as specification
7.	Temperature cycling	-40±2℃/30±3 min~+85±2℃/30±3min, 5 cycles	Frequency change:≤±5ppm Rr as specification
8.	Refluence examination	 1. Max 200 sec 2. Max 80 sec 3. Max 10 sec	Frequency change:≤±5ppm Rr as specification

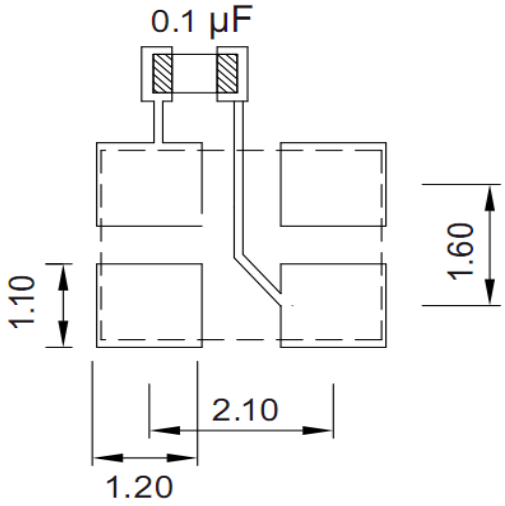
Package Outline Dimensions



Pin#	Function
1	NC
2	GND
3	Output
4	VDD

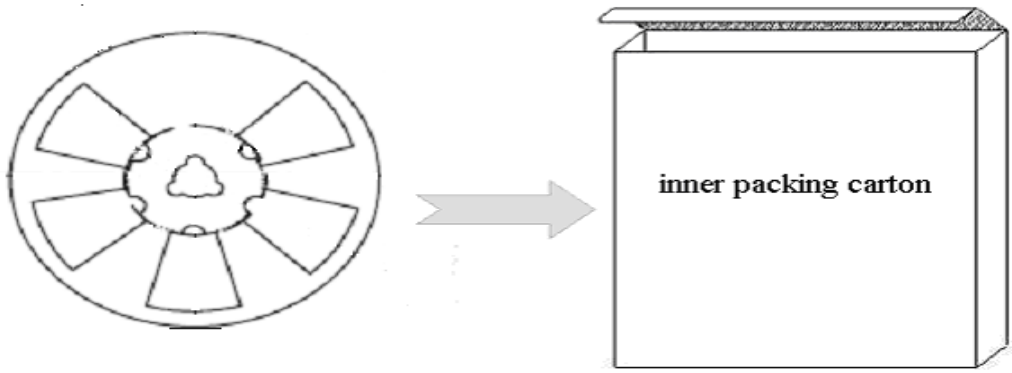
Units:mm

Suggested Pad Layout



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

Packing Specification



Qty:3000Pcs