江苏长晶科技有限公司
JIANGSU CHANGJING ELECTRONICS TECHNOLOGY CO., LTD.

产 品 规 格 书

SPECIFICATIONS FOR PRODUCT

产品类型 TYPE: **Crystal Oscillator**

产品规格 SPEC: **25MHz/3225/1.8V**

产品型号 P/N : **CJO05-250001820B30**

日 期 DATE: **2019/11/19**

核准及签名 R&D APPR. SIGNATURED			部门 DEPT.
拟制 ISSUE	审核 CHECK	批准 APPROVAL	频率器件事业部
王嘉诚 2019/11/19	许秋菊 2019/11/19	杨立新 2019/11/19	

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SMD3.2 * 2.5 Crystal Oscillator

CJO05-250001820B30

1. Scope:

1.1 This specification applies to the RoHS crystal oscillator with a frequency of 25MHz which will be used in electronic equipment.

2. Construction:

2.1 Oscillators series: SMD 3.2×2.5 XO

2.2 Package: SMD 3.2×2.5

3. Electrical Characteristics

3.1	Nominal Frequency:	25.000MHz
3.2	Frequency Stability: (incl. 25°C tolerance)	±20ppm
3.3	Aging:	±3ppm/year
3.4	Operating Temperature Range:	-40℃ to +85℃
3.5	Storage Temperature Range:	-55℃ to +125℃
3.6	Input Voltage (V_{DD}):	+1.8 Vdc±10%
3.7	Input Current (I_{DD}):	10mA max
3.8	Output Waveform:	CMOS
3.9	Output Symmetry:	50±10%
3.10	Rise/Fall Time:	5ns 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:	5ms max
3.15	Standby current:	10μA max
3.16	Phase Jitter (rms):	1ps rms max 12kHz to 20MHz max
3.17	Oscillation mode:	A1
3.18	Others:	Not recommended for safety applications

4. Reliability Specifications

This is the quality control and quality assurance and relaibility tests performance data for the RoHS 25MHz SMD 3.2×2.5 XO

related to the specification and approval sheet provided by JSCJ .

Standard test condition (TEMP.: 20±15℃. Relative humidity: 65±20%)

For any discripancy in GO/NG, test will be done at TEMP.25±2℃. R.H. 65±5%.

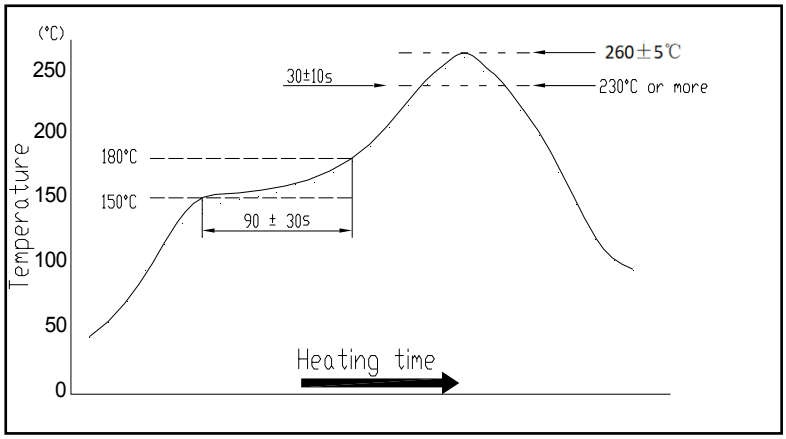
NO.	ITEM	SPECIFICATION	TEST METHOD
4.1	Temperature Cycle (GB/T 2423.22-2002, Method Nb)	Frequency change after test≤± 5ppm.	10 cycles from -55°C to 125°C. Measurement taken after DUT being left at room temperature for 24±2 hours.
4.2	Low Temperature Storage (GB/T 2423.1-2001, Method Aa)	Frequency change after test≤± 5ppm.	Spending 72 hrs at -55°C±3°C constant temperature. Measurement taken after DUT being left at room temperature for 24±2 hours.
4.3	High Temperature Storage (GB/T 2423.2-2001, Method Ba)	Frequency change after test≤± 5ppm.	Spending 72 hrs at 125°C±3°C constant temperature. Measurement taken after DUT being left at room temperature for 24±2 hours.
4.4	Humidity (GB/T 2423.3-2006, Method Cab)	Frequency change after test≤± 5ppm.	Spending 96 hrs at 40 °C ± 3 °C, with 90± 3% R.H. Measurement taken after DUT being left at room temperature for 24±2 hours.
4.5	Vibration (GB/T 2423.10-1995, Method Fc)	Frequency change after test≤± 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≤± 5ppm. No visible damages.	Peak 1000m/s2, 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≤± 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 then 95% with solder.	In 245 ± 5℃ solder bath for 2 ± 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≤± 5ppm.	Passed through the re-flow oven under the following condition. Preheat to 150°C±5°C for 60 to 120sec,and peak 265°C±5°C for 10s±3sec.Measurement taken after DUT being left at room temperature for at 24±2 hours.
4.11	OTHERS		

5. Recommended Reflow soldering condition (SMD)

■ Solder profile

Peak: 260±5℃ Soldering zone: 230℃ or more, 30±10s.

Pre-heating zone 1: 150～180℃, 90±30s



Temperature profile for reflow soldering

6. Soldering iron method

Bit temperature: 350±10℃ Application time of soldering iron:3+1 s

For other procedures, refer to IEC 60068-2-20.

PIN CONNECTION

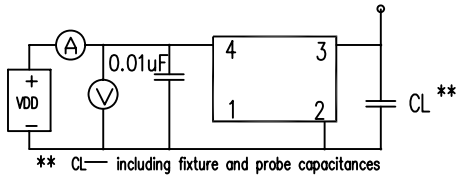
P/N	CJO05
1	Enable/Disable*
2	GND
3	Output
4	VDD

Enable/Disable functional description

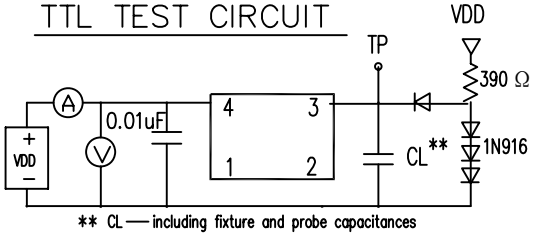
When pin1 goes high (>=0.7VDD) or open ,the Oscillator in normal operation and has output in frequency. When pin1 goes low (<=0.3VDD) ,the oscillator stops and the oscillator output (Pin3) becomes high impedance.

*

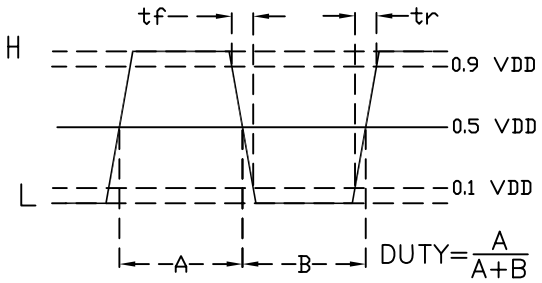
CMOS TEST CIRCUIT



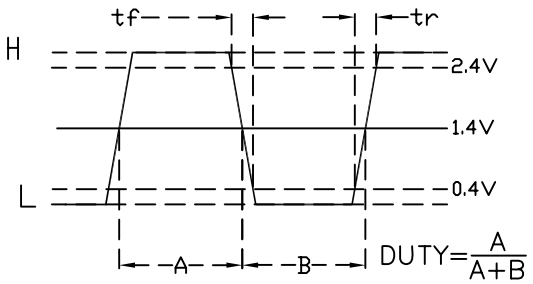
TTL TEST CIRCUIT



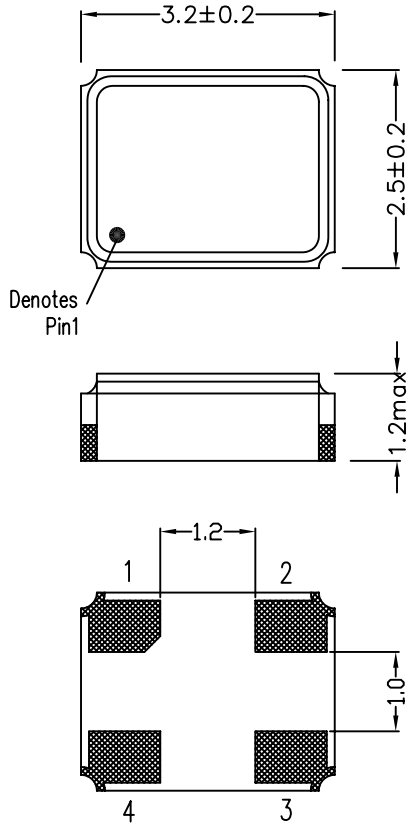
TYPICAL CMOS WAVE FORM



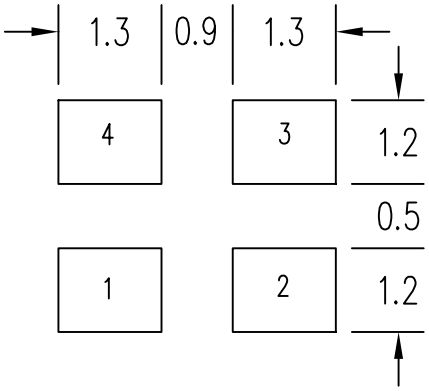
TYPICAL TTL WAVE FORM



Package Outline Dimensions



Suggested Pad Layout



NOTICE

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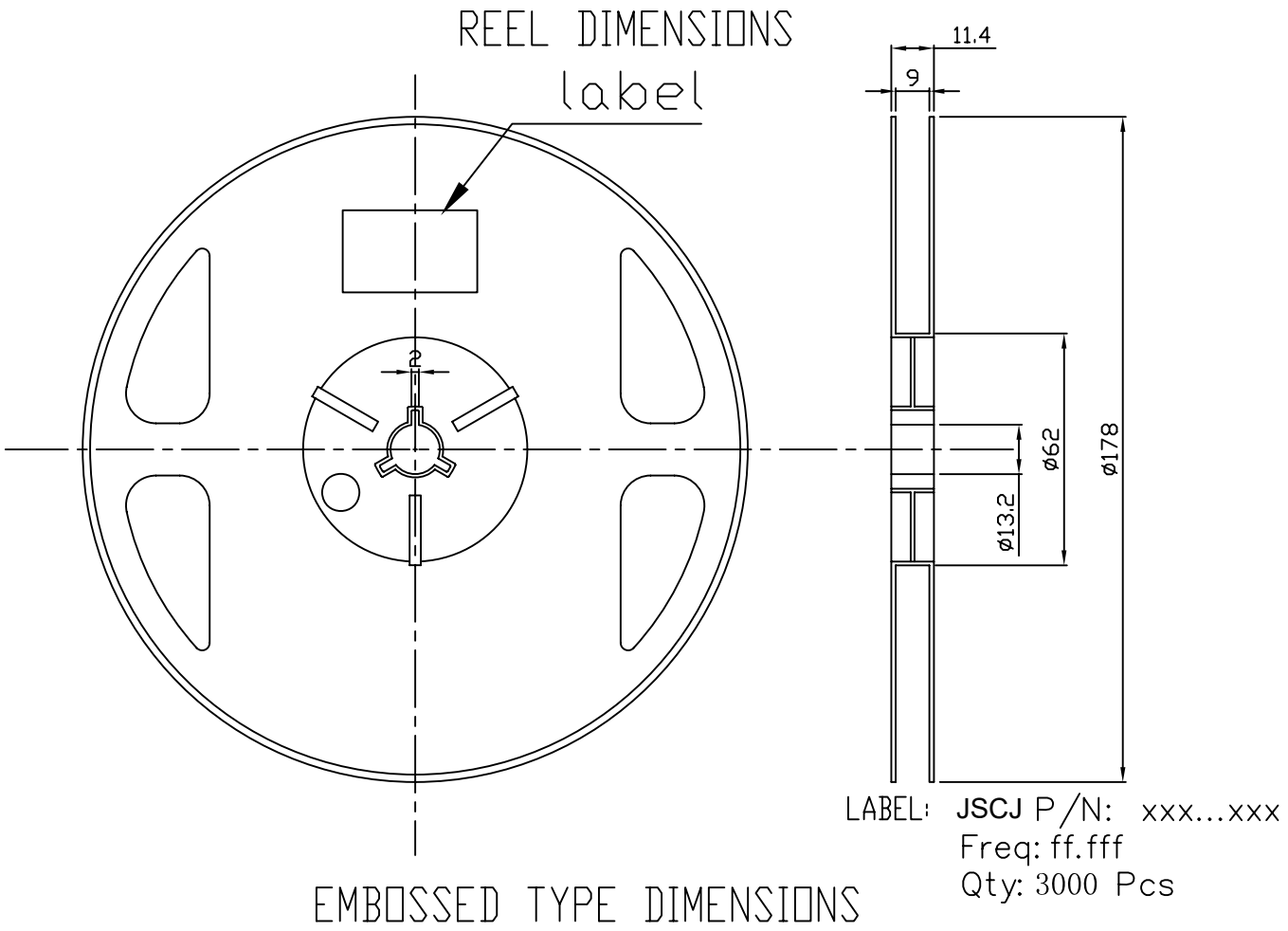
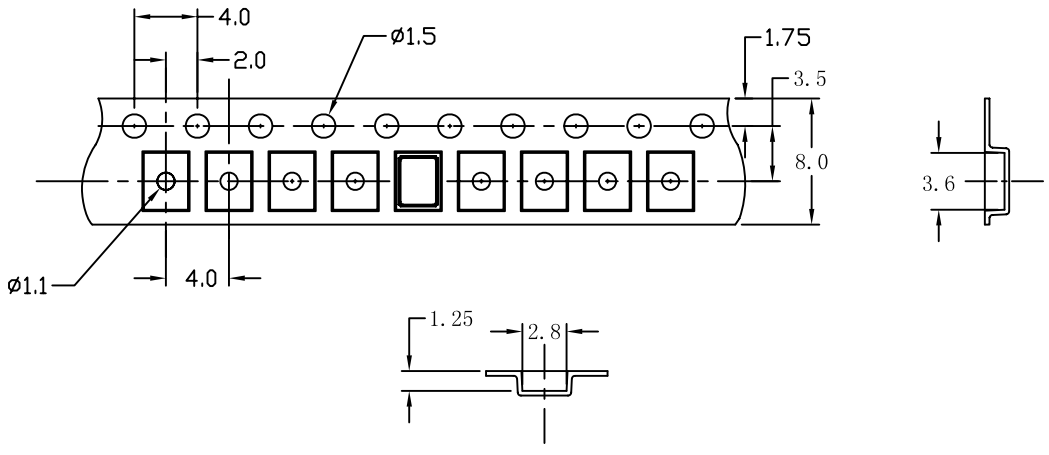

REEL DIMENSIONS
label
11.4
9
ø178
ø62
ø13.2
2
LABEL: JSCJ P/N: xxx...xxx
Freq: ff.fff
Qty: 3000 Pcs


EMBOSSED TYPE DIMENSIONS
4.0
2.0
ø1.5
1.75
3.5
8.0
3.6
ø1.1
4.0
1.25
2.8
USER FEED DIRECTION