



深圳建扬技术有限公司

样品承认书

项目名称: TC-33233 JP4000

样品名称: osc3225 3.2*2.5*1.1 贴片晶振

样品规格 12.000 mhz 10ppm

物料编码: 370020018

日期: 2024-6-21

供应商	制定	审核	批准
	刘金	陈艺文	成海萍
建 扬	资材核准	研发核准	品质核准
	倪玲玲	2024-07-23	孙文超 2024-7-3

- 此样品承认书一式三份（含样品），其他情况以通知为准；
- 承认书一经签署即按此承认标准做货，不得更改；



供应商名称 深圳市兆丰晟科技有限公司 电话 TEL 13682688723

地址 深圳市龙华区大浪街道龙胜社区工业路龙胜大厦 502A

厂商资历: ISO9001 ISO14001 其他

送样履历: 首次送样 二次送样 三次送样

ECEC

NO. ECAB1809051

Acknowledgement Book

Customer : 

Production name : SMD SEAM SEALING X'TAL 3.2*2.5

Nominal Freq. : 12.000000 MHz

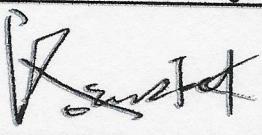
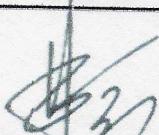
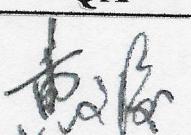
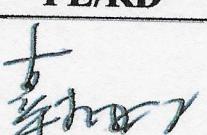
Customer P/N : _____

ECEC P/N : M12000E260

Receiver

Please return one after acknowledgement

JinHua East Crystal Electronic Co.,Ltd.

Approved By	MFG	QA	PE/RD
			
总经理: 骆红利	副总: 林士全	副总: 黄文俊	部长: 娄批林
2018-9-17	2018-9-17	2018-9-17	2018-9-17

公司名称: 东晶电子金华有限公司

Corporation: JinHua East Crystal Electronic Co.,Ltd.

地址: 浙江省金华市宾虹路二段555号

ADD: No 555, Sec 2, Binhong Road Jinhua Zhejiang, P.R.C

电话(TEL): 0086-0579-89186666 0086-579-89186777

FAX: 0086-579-89186677 <http://www.ecec.com.cn>



BOOK OF MODIFICATION

No.	DATE	CONTENT OF MODIFICATION	REASON OF MODIFICATION	PAGE	ITEM	APPROVE
0	2018-9-17	INTIAL RELEASED				
1						
2						
3						
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ECEC

ECEC P/N: M12000E260

No:

ECAB1809051

Date:

2018-9-17

SPECIFICATION OF QUARTZ CRYSTAL UNITS**1. HOLDER TYPE:**

SMD SEAM SEALING X'TAL 3.2*2.5

12.000000 MHz

2. ELECTRICAL SPECIFICATIONS

Standard atmospheric conditions

Unless otherwise specified, the standard range of atmospheric conditions for making measurement

Ambient temperature : 25±3°C

Relative humidity : 40% ~ 70%

If there is any doubt about the results ,measurement shall be made within the following limits .

Ambient temperature : 25±3°C

Relative humidity : 40% ~ 70%

Electriacal characteristics measured by S&A250B or equivalent ,

The crystal is using AT CUT (thinkness shear mode).

3.ELECTRICAL CHARACTERISTICS

	Parameters	SYM	Electrical Spec				Notes
			MIN	TYP	MAX	UNITS	
1	Nominal Frequency	FL	12.000000			MHz	
2	Oscillation mode	-	Fundamental				-
3	Load Capacitance	CL	12				pF
4	Frequency Tolerance	-	±10				ppm at 25±3°C
5	Operating Temperature	-	-20	~	70	°C	
6	Temperature drift (TC)	-	±10				ppm -20°C ~ +70°C
	Temperature drift (TC)	-					ppm
7	Equivalent Resistance Rr	Rr	-	-	80	Ω	
8	Drive Level	DL	-	100	300	uW	
9	Shunt Capacitance C0	C0	-	-	2.00	pF	
10	Insulation Resistance	-	500	-	-	MΩ	at DC 100V
11	Aging	-	±2				ppm Year
12	Storage Temperature Range	-	-55	~	125	°C	

■ FACTORY LOCATION

ECEC CORPOTATION

No 555,Sec 2,Binghong Road Jinhua Zhejiang , P.R.C

ECEC Rakon Crystal (Chengdu) Limited

No. 101, Tian Ying Road, Hi-Tech Zone (West Park), Chengdu, Sichuan Province, China

JinHua East Crystal Electronic Co.,Ltd.

DESIGN

INSPECTION

叶依依

潘春琴

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ECEC P/N: M12000E260

No:

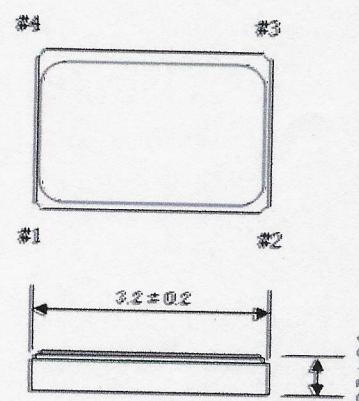
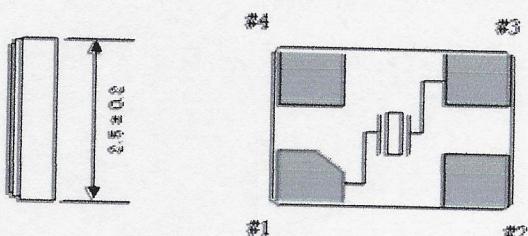
ECAB1809051

Date:

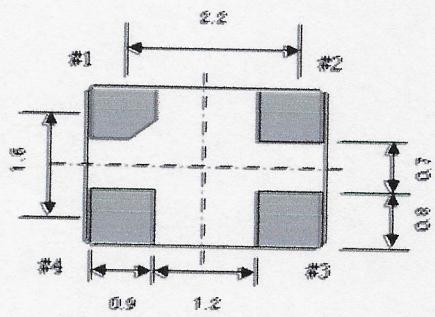
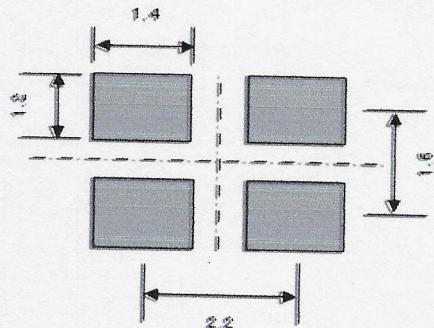
2018-9-17

4.DIMENSIONS AND MARKING**4-1 HOLDER TYPE**

SMD SEAM SEALING X'TAL 3.2*2.5
12.000000 MHz

4-2 DIMENSION (mm)***Internal Connections(Top View)**

#1,#3 connected to quartz element
#2,#4 connected to the cover

***Suggested solder pad layout****JinHua East Crystal Electronic Co.,Ltd.****DESIGN****INSPECTION**

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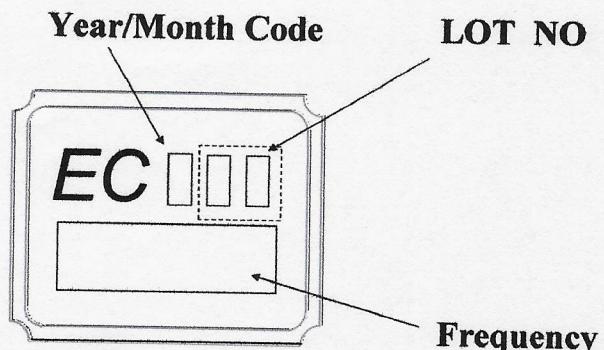
ECEC P/N: M12000E260

No:

ECAB1809051

Date:

2018-9-17

4-3 MARKING**Frequency:as shown in the table****EX)**

Frequency	4.000MHz	16.9344MHz	20.000MHz
Frequency Code	4000	16934	20000

Year/Month code:as shown in the table**EX) December of 2009 shall be marked as "M"**

Year	Month					Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
	2001	2005	2009	2013	2017	A	B	C	D	E	F	G	H	J	K	L	M
2002	2006	2010	2014	2018	N	P	Q	R	S	T	U	V	W	X	Y	Z	
2003	2007	2011	2015	2019	a	b	c	d	e	f	g	h	j	k	l	m	
2004	2008	2012	2016	2020	n	p	q	r	s	t	u	v	w	x	y	z	

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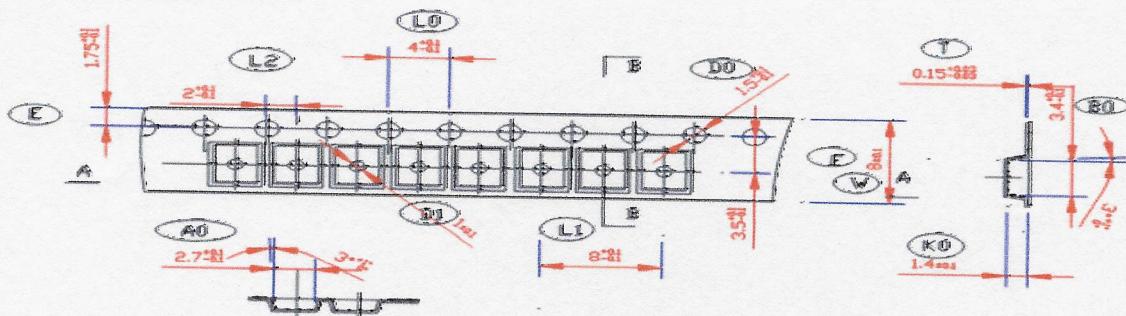
ECEC

ECEC P/N: M12000E260

No:	ECAB1809051
Date:	2018-9-17

4-4 PACKING

4-4-1 Dimensions of the tape

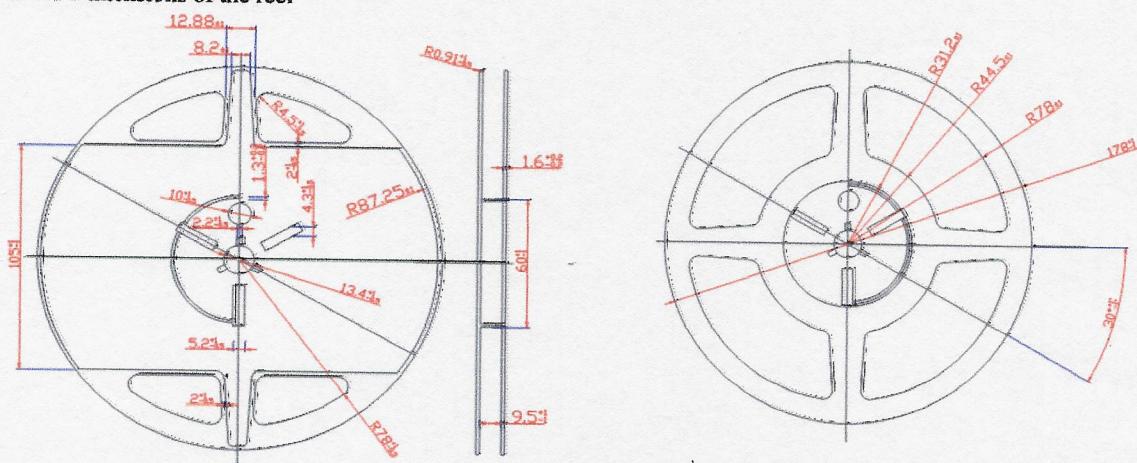


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$$\Delta\theta = 2.7 \pm 0.1$$

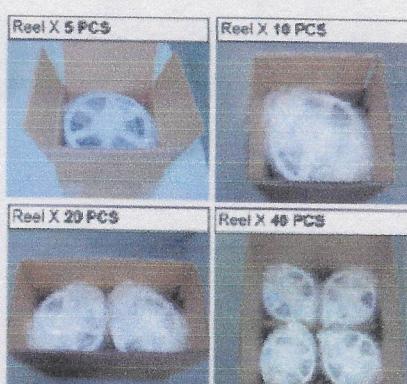
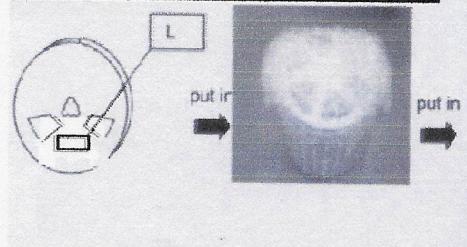
$$BO=3.4 \pm 0.1$$

4-4-2 Dimensions of the reel



4-4-3 Packing and Label

QUARTZ CRYSTAL UNITS	
P/O	
P/N	
HOLD	
FREQ	MHz
Q'TY	Kpc's



1 Reel=3000pcs

Box type(Reel quantity)	Box size(L×W×H) mm
Atype (Reel x 5pcs max)	200×200×140
Btype (Reel x 6~15pcs)	200×200×255
Ctype (Reel x 16~30pcs)	395×200×255
Dtype (Reel x 31~60pcs)	395×400×255

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5.RELIABILITY TEST

Provided that measurement shall be carried out after letting it alone in the room temperature for 1 hour.(Test SPEC as list 1)

5-1.SHOCK

Electrical characteristics shall be satisfied after dropping three times from the height of 75cm onto the board of the 3cm thickness.

5-2.VIBRATION

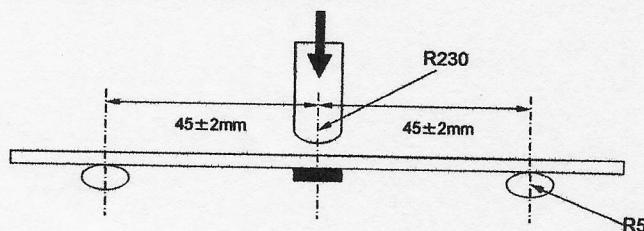
Electrical characteristics shall be satisfied after supplying following vibration.

a).ENTIRE FREQUENCY RANGE	10~55Hz
b).REPEATED PERIOD	1~2min
c).AMPLITUDE	1.5mm
d).DIRECTION	X.Y.Z
e).PERIOD	2hours/Each Direction

5-3.SUBSTRATE BENDING TEST

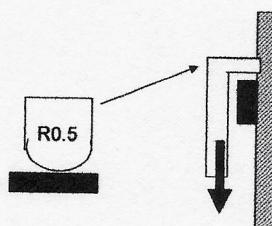
Resonator is soldered into the center of PCB which is laid on the 2 small supporters spaced 90cm. PCB deflected to 3mm below from horizontal level by the pressing force with stick. The force is supplied for 10 second by 0.5mm/s speed.

After above test there is no observation of any visual damages on specimen and the electrical characteristic shall be satisfied.

**5-4.ADHESION TEST**

A static load of 5N using a R0.5 scratch tool shall be applied on the center at long direction side of the component and for 10sec.

After above test a),there is no observation of any visual damages on the specimen.

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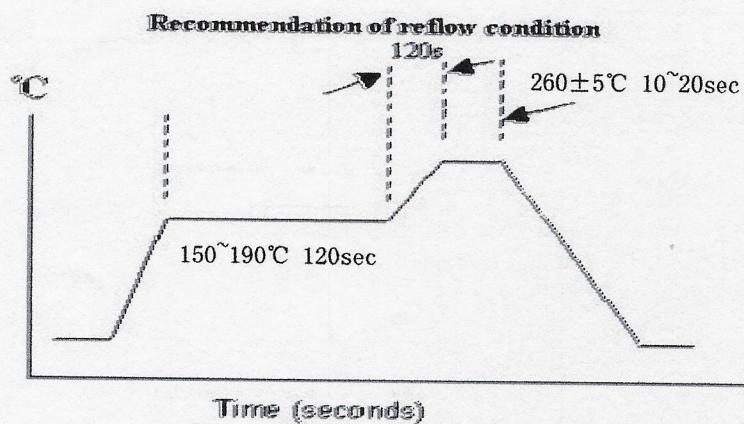
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5-5.REFLOW(WAVE)SOLDERING

Following profile of heat stress is applied to resonator,then being place in the natural condition for 1 hour,resonator shall be measured.



5-6.SOLDERING DIP

Terminals/lead-wires of specimen shall be dipped into solder melter tank at $+260^{\circ}\text{C}\pm 5^{\circ}\text{C}$ for 3 sec.

Dipping depth shall be 2mm from the bottom of specimens body.(After applying ROSIN FLUX) soldering portion shall be covered in over 95% of Terminals/lead-wires dipped.

5-7.HUMIDITY

Electrical characteristics shall be satisfied after letting it alone at $65\pm 2^{\circ}\text{C}$ in humidity of 90~95% for 500 hours.

5-8.STORAGE IN LOW TEMPRATURE

Electrical characteristics shall be satisfied after letting it alone at $-40\pm 2^{\circ}\text{C}$ for 500 hours.

5-9.STORAGE IN HIGH TEMPRATURE

Electrical characteristics shall be satisfied after letting it alone at $85\pm 2^{\circ}\text{C}$ for 500 hours.

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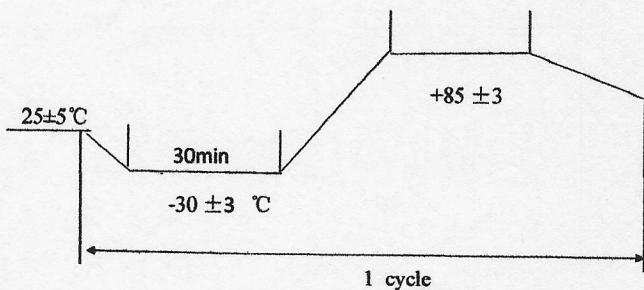
ECEC P/N: M12000E260

No: ECAB1809051

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5-10.TEMPERATURE CYCLE

Electrical characteristics shall be satisfied after supplying the following temperature cycle(30cycle).Temperature shift from low to high, high to low shall be done in 1°C/sec.

**Spec of the reliability test****List 1**

Item	ΔF	ΔCI
5-1		
5-2		
5-5		
5-7	=5PPM MAX	=5Ω or 20% MAX
5-8		
5-9		
5-10		

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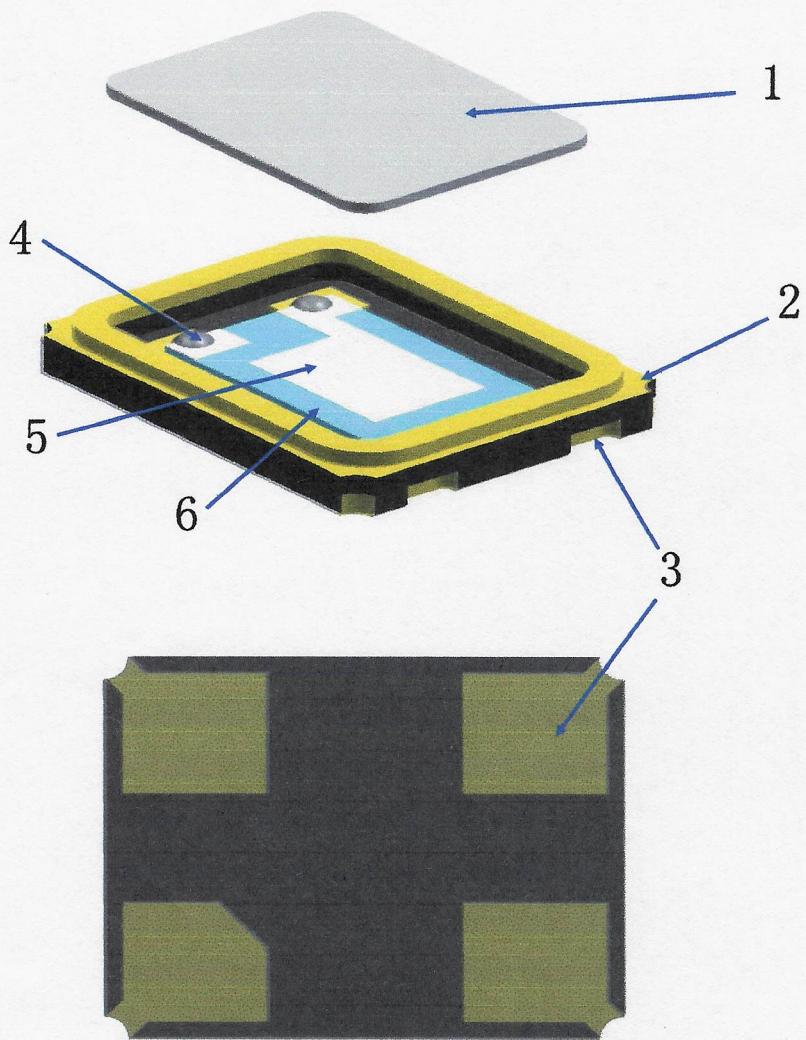
ECEC P/N: M12000E260

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ECAB1809051

Date:

2018-9-17

6. Structure Illustration

No.	Items	Materials
1	LID(Cap)	Fe ALLOY
2	PKG(Base)	CERAMIC+Au PLATING
3	External Electrode	Au PLATING
4	Conductive Adhesive	Ag+Silicon
5	Internal Electrode	Ag
6	Element(Blank)	SiO2

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