

SPECIFICATION FOR APPROVAL

CUSTOMER : _____

PRODUCT TYPE : SMD GLASS SEALING XTAL 3.2 × 2.5

NOMINAL FREQ. : 24.000000MHz

TXC P/N : 7V24000013

REVISION : S1

CUSTOMER P/N : _____

PM / SALES : _____

DATE : _____

CUSTOMER SIGNATURE & Date

- (1) TXC requires one copy returned with signature and title of authorized individual that signifies acceptance of the attached specifications.
- (2) Orders received and accepted by TXC after return of signed copy of specification will be produced per these specifications.
- (3) Any changes to these specifications must be agreed upon by both parties and new revision of the Product Specification Sheet will be issued.
- (4) Any issuance of purchase order prior to consigning back the Approval page of "Specification Sheets" from customers will be regarded as the agreement on the contents of these specifications.

MSL:Level 1
RoHS Compliant

Pb used in sealing glass material is exempt from EU directive

PRODUCT SPECIFICATION SHEET

PRODUCT TYPE : SMD GLASS SEALING XTAL 3.2 × 2.5

NOMINAL FREQ. : 24.000000MHz

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REVISION : S1

PE/RD	QA	MFG
		
23-Apr-10		

NOTE:

- (1)Lead Free Products are "Directive 2002/95/EC of The European Parliament of 27 January 2003 on the restriction of the use of certain hazardous substances (RoHS) in electrical and electronic equipment" Compliant (Attachment: SGS Test Report).
- (2)Revision "Sx" is for engineering samples only. PE/RD's approval required.
- (3)Revision "Ax" is production ready. PE, QA and MFG's approval required

**MSL:Level 1
RoHS Compliant**

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[illegible]

Spec Sheet Contents

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■ ELECTRICAL SPECIFICATIONS

Standard atmospheric conditions

Unless otherwise specified, the standard range of atmospheric conditions for making measurement and tests are as follow:

Ambient temperature : 25±5
Relative humidity : 40%~70%

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

Ambient temperature : 25±3
Relative humidity : 40%~70%

Measure equipment

Electrical characteristics measured by S&A250B or equivalent.

Crystal cutting type

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

Unit Weight:

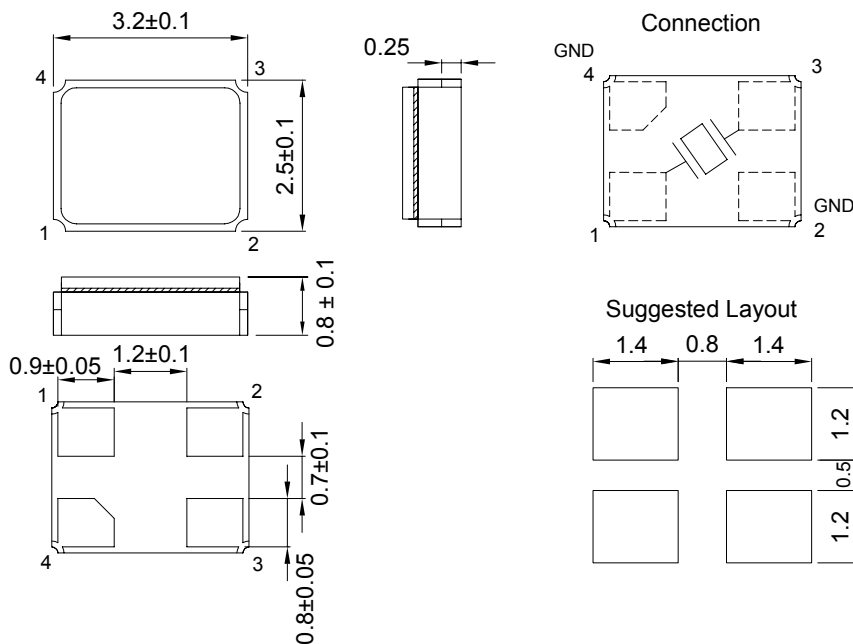
0.018±0.001 g/pcs

	Parameters	SYM.	Electrical Spec.				Notes
			MIN	TYP	MAX	UNITS	
1	Nominal Frequency	FL	24.000000			MHz	-
2	Oscillation Mode	-	Fundamental			-	-
3	Load Capacitance	CL	18			pF	-
4	Frequency Tolerance	-	±10			ppm	at 25 ± 3 °C
5	Frequency Stability	-	±25			ppm	Over Operating Temp. Range (Reference 25 °C)
6	Operating Temperature	-	-40	~	85	°C	-
7	Aging	-	±3			ppm	1st Year
8	Drive Level	DL	-	10	-	uW	-
9	Equivalent Resistance Rr	Rr	-	-	60	Ω	-
10	Shunt Capacitance C0	C0	-	-	2	pF	-
11	Insulation Resistance	-	500	-	-	MΩ	at DC 100V
12	Storage Temperature Range	-	-40	~	85	°C	-

■ FACTORY LOCATION

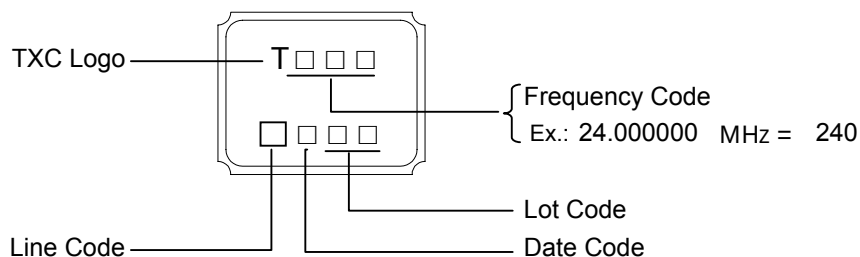
TXC (NINGBO) CORPORATION
NO.189 Huang Shan West Road, Beilun District,
Ningbo Zhejiang China

DIMENSIONS (Unit:mm)



*Coplanarity of solderable areas Camber 0.10 mm Max

MARKING



Date Code:

YEAR				MONTH											
				JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
2005	2009	2013	2017	A	B	C	D	E	F	G	H	J	K	L	M
2006	2010	2014	2018	N	P	Q	R	S	T	U	V	W	X	Y	Z
2007	2011	2015	2019	a	b	c	d	e	f	g	h	j	k	l	m
2008	2012	2016	2020	n	p	q	r	s	t	u	v	w	x	y	z

*This date code will be cycled every four years

SUGGESTED REFLOW PROFILE

Solder melting point :220±10 °C, 60 sec. Min.

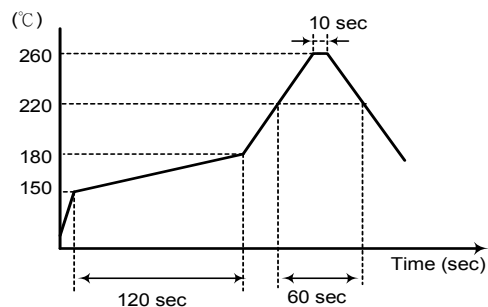
Peak Temperature: 260 ± 5 °C, 10 sec. Max.

SUGGESTED MANUAL SOLDER CONDITION

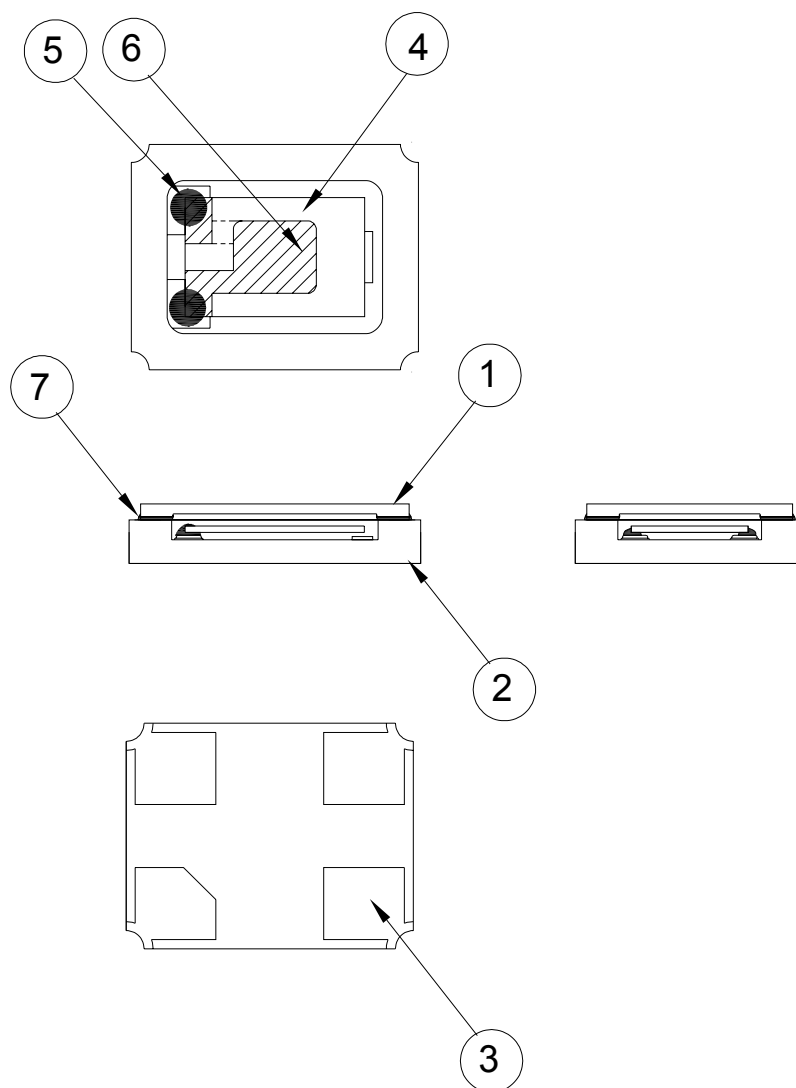
Temperature: 350 ± 10 °C

Time: 3 sec.

Re-solder times: twice

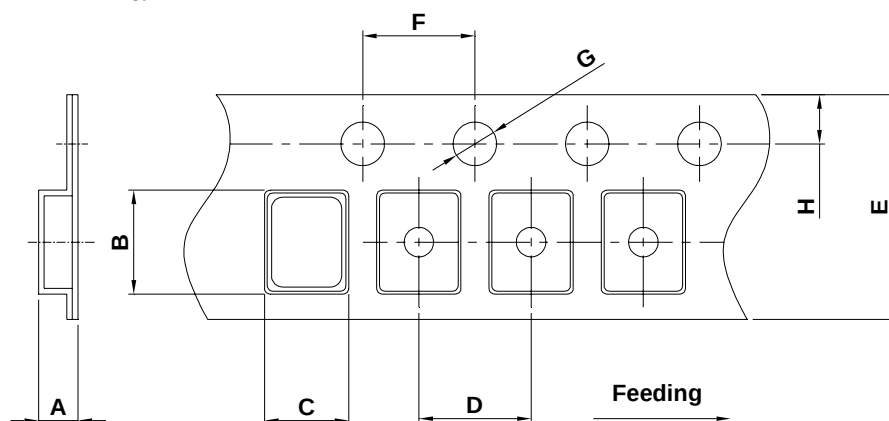


■ STRUCTURE ILLUSTRATION



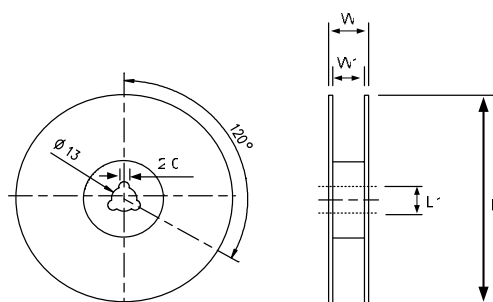
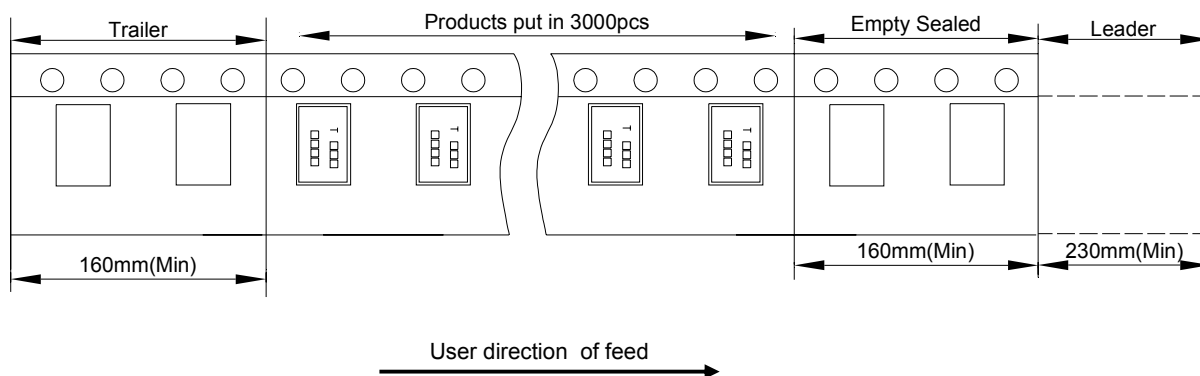
NO	COMPONENTS	MATERIALS	FINISH/SPECIFICATIONS
1	Cap	Ceramic (Al ₂ O ₃)	-
2	Package	Ceramic (Al ₂ O ₃)	-
3	PAD	Au	Tungsten metalize + Ni plating + Au plating
4	Crystal blank	SiO ₂	-
5	Conductive adhesive	Resin+Ag	-
6	Electrode	Ag	-
7	Sealing Glass	Glass(PbO)	-

EMBOSS CARRIER TAPE & REEL



DIMENSIONS	A	B	C	D	E	F	G	H	
	1.65±0.10	3.40±0.10	2.70±0.10	4.00±0.10	8.00±0.20	4.00±0.10	1.55±0.10	1.75±0.10	(UNIT : mm)

REMARK :



DIMENSIONS	L	L1	W	W1	
	178±1.00	13±0.50	11.5±0.20	8±0.10	(UNIT : mm)