【找晶振料号，上晶振商城】 www.jzsc8.com

TXC CORPORATION

5F, NO. 16, Sec. 2 Chungyang S Rd., Peitou, Taipei, Taiwan, R. O. C..

TEL : 886-2-2894-1202 , 886-2-2895-2201 FAX : 886-2-2894-1206 , 886-2-2895-6207 www.txc.com.tw

SPECIFICATION FOR APPROVAL

CUSTOMER	:	
PRODUCT TYPE	:	SMD SEAM SEALING X'TAL 3.2*2.5
NOMINAL FREQ.	:	12.000000MHz
TXC P/N	:	7M12000057
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.

Attachment: Product Specification Sheet

1
2
3
4
5

RoHS Compliant

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PRODUCT SPECIFICATION SHEET

PRODUCT TYPE	:	SMD SEAM SEALING X'TAL 3.2*2.5
NOMINAL FREQ.	:	12.000000MHz
TXC P/N	:	7M12000057
REVISION	:	S1

PE/RD	QA	MFG
Scott Chen		
16-Sep-05		

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

RoHS Compliant

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Rev	Revise page	Revise contents	Date	Ref.No.	Reviser	Page	Ver.
S1	N/A	Initially revised	15-Sep-05	N/A	Sharon Miao	1	S1
						2	S1
						3	S1
						4	S1
						5	S1
						6	S1

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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 : 22±5℃

Relative humidity : 40%~70%

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

Ambient temperature : 22±1℃

Relative humidity : 40%~70%

Measure equipment

Electrical characteristics measured by HP E5100A 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	TYPE	MAX	UNITS	
1	Nominal Frequency	FL		12.000000		MHz	-
2	Oscillation Mode	-		Fundamental		-	-
3	Load Capacitance	CL		15		pF	-
4	Frequency Tolerance	-		±20		ppm	at 25 ℃ ± 3 ℃
5	Frequency Tolerance	-		±30		ppm	Over Operating Temp. Range (Reference 25℃)
6	Operating Temperature	-	-10	~	60	℃	-
7	Aging	-		±3		ppm	1st Year
8	Drive Level	DL	-	10	-	uW	-
9	Effective Resistance Rr	Rr	-	-	80	Ω	-
10	Shunt Capacitance C0	C0	-	-	2	pF	-
11	Motional Capacitance C1	C1	-	-	NA	fF	-
12	Insulation Resistance	-	500	-	-	MΩ	at DC 100V
13	Storage Temperature Range	-	-40	~	85	℃	-

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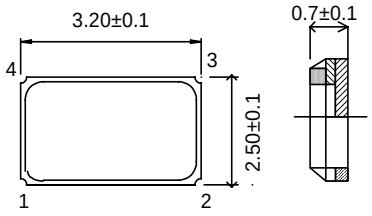
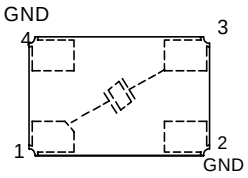
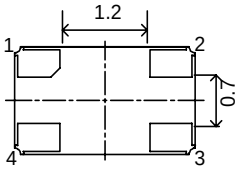
■ DIMENSIONS

1. Crystal enclosure seal : Seam Weld
2. Crystal enclosure medium : Vacuum

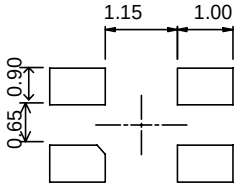




Internal View Connection



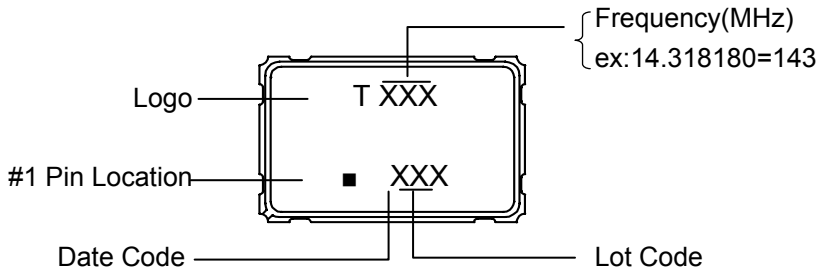
Bottom View



Suggest Layout

Units:mm

■ MARKING



Date Code

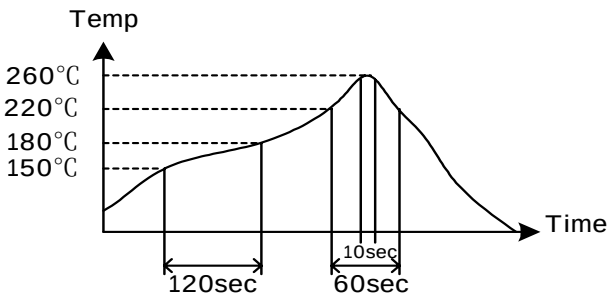
YEAR \ MONTH	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
2001	2005	2009	2013	2017	A	B	C	D	E	F	G	H	J	K	L	M
2002	2006	2010	2014	2018	N	P	Q	R	S	T	U	V	W	X	Y	Z
2003	2007	2011	2015	2019	a	b	c	d	e	f	g	h	j	k	l	m
2004	2008	2012	2016	2020	n	p	q	r	s	t	u	v	w	x	y	z

This date code will be cycled every four years

■ SUGGESTED REFLOW PROFILE

Total time : 200 sec. Max.

Solder melting point :220 ℃



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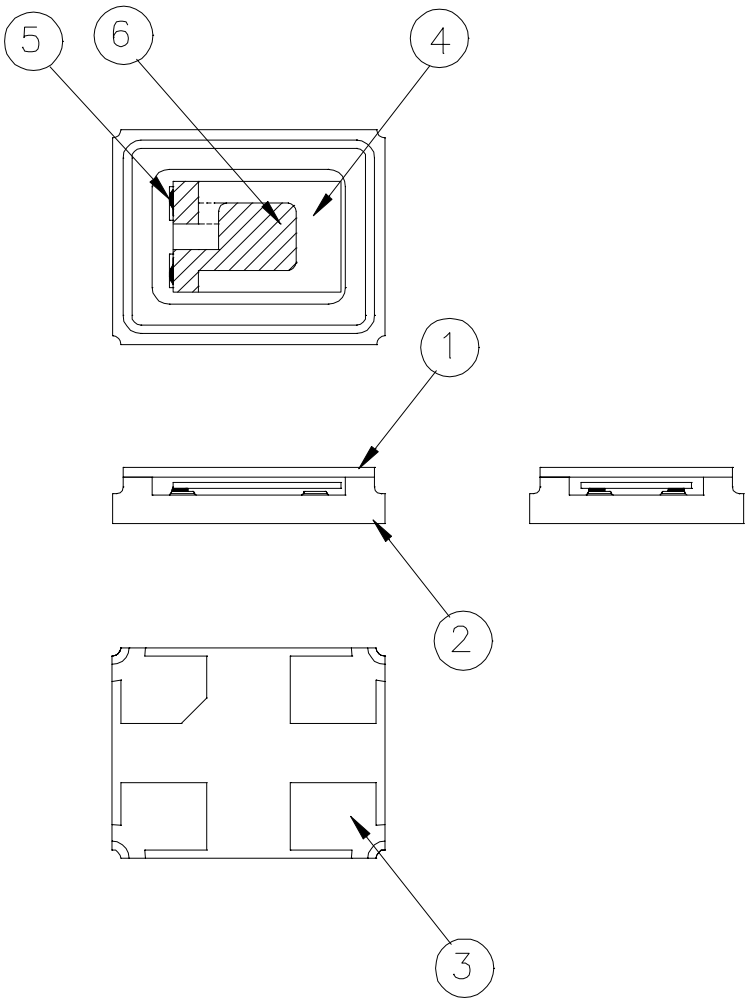
■ STRUCTURE ILLUSTRATION



NO	COMPONENTS	MATERIALS	QTY	FINISH/SPECIFICATIONS
1	Lid	Metal (Fe)	1	-
2	Base(Package)	Ceramic	1	Color black
3	PAD	Au	4	Tungsten metalize + Ni plating + Au plating
4	Crystal blank	SiO2	1	-
5	Conductive adhesive	Ag	4	Epoxy resin
6	Electrode	Au + Cr	2	-

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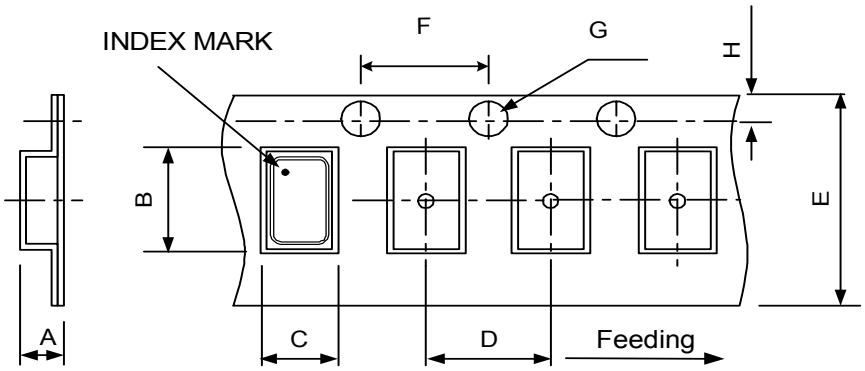
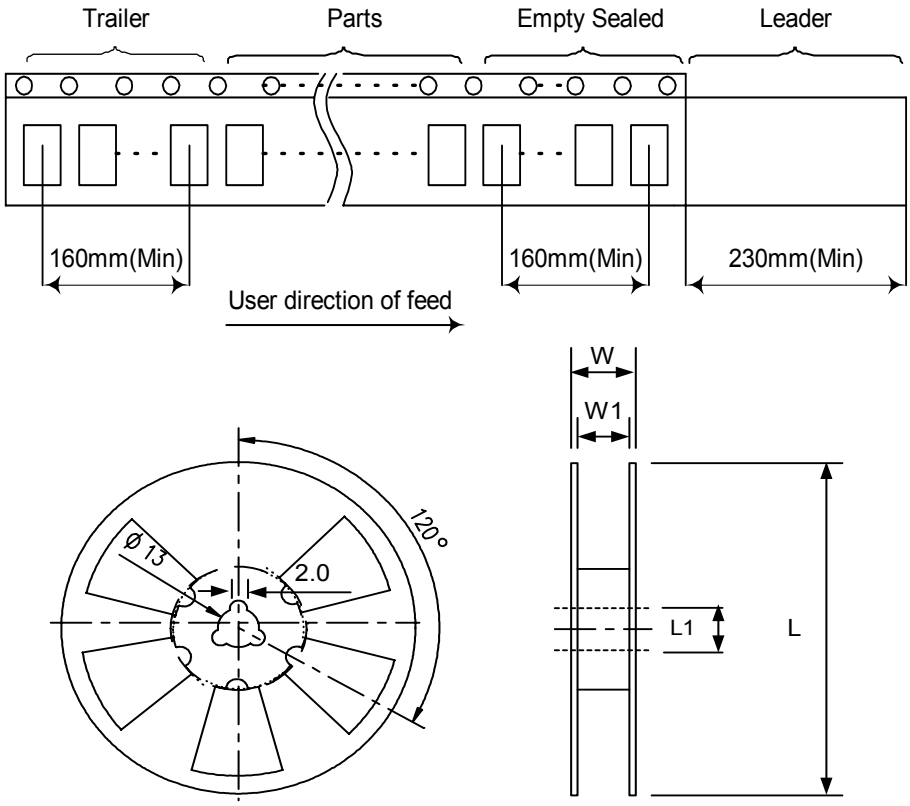
■ PACKING : (EIA-481-2)



DIMENSIONS	A	B	C	D	E	F	G	H	
	1.40	3.40	2.70	4.00	8.00	4.00	1.50	1.75	(UNIT : mm)

REMARK :



DIMENSIONS	L	L1	W	W1	pcs / Reel (UNIT : mm)
	178	13	11.5	8	Standard Reel Quantity is 3,000 pcs per reel

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■ RELIABILITY SPECIFICATIONS

No.	Test Item	Test Methods	REF.DOC
1	Drop Test	150 cm height, fall freely onto stainless plate 3 times.	
2	Mechanical Shock	Device are shocked to half sine wave (1000 G) three mutually pendicular axes each 3 times. 0.5m sec. duration time	
3	Vibration	Frequency range 10 ~ 2000 Hz Amplitude 1.52 mm Sweep time 20 minute Pendicular axes each test time 4 hours (Total test time 12 hours)	MIL-STD-883E
4	Solderability	Temperature 240 ℃ ± 5℃ Immersing depth 0.5 mm minimum Immersion time 5 ± 0.5 seconds Flux Rosin resin methyl alcohol solvent (1 : 4)	MIL-STD-883E
5	Resistance To Soldering Heat	Pre-heat temperature 125 ℃ Pre-heat time 60 ~ 120 sec. Test temperature 260 ± 5 ℃ Test time 10 ± 1 sec.	MIL-STD-202F
6	High Temp. Storage	+ 125 ℃ ± 3 ℃ for 1000 ± 12 hours	JIS C 0021
7	Low Temp. Storage	- 40 ℃ ± 3 ℃ for 1000 ± 12 hours	JIS C 0020
8	Thermal Cycles	Total 100 cycles of the following temperature cycle 