TXC TXC CORPORATION

4F, NO. 16, Sec. 2 Chung Yang S Rd., Peitou, Taipei, Taiwan.

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

SPECIFICATION FOR APPROVAL

CUSTOMER	•					
PRODUCT TYPE	•	SMD SEAM SEALING X'TAL 3.2×2.5				
NOMINAL FREQ.	:	37.400000MHz				
TXC P/N	:	7M37470001				
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. : 37.400000MHz

TXC P/N : 7M37470001

REVISION : S1

PE/RD	QA	MFG
好程		
<i>12-May-10</i>		

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



TXC CORPORATION TXC P/N: 7M37470001 REVISION: S1 PAGE: 1

Rev	Revise page	Revise contents	<u>Date</u>	Ref.No.	Reviser
S1	N/A	Initial released	12-May-10	N/A	Yachuan Miao

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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 HP E5100A or equivalent.

Crystal cutting type

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

Unit Weight:

0.018±0.001 g/pcs

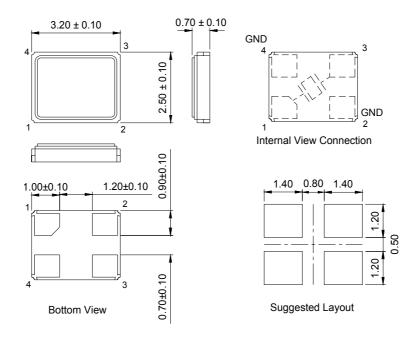
	Parameters	Cumbal		Electric	al Spec.		Notes		
	Parameters	Symbol	Min.	Тур.	Max.	Units	Notes		
1	Nominal Frequency	FL	;	37.40000)	MHz	-		
2	Oscillation Mode	-	F	undamen	tal	-	-		
3	Load Capacitance	CL		18		pF	-		
4	Frequency Tolerance	-		±10		ppm	at 25 ± 3		
5	Frequency Stability	-	±10			ppm	Over Operating Temp. Range (Reference 25)		
6	Operating Temperature	-	-20	~	75		-		
7	Aging	-		±3		ppm	1st Year		
8	Drive Level	DL	-	-	200	uW	-		
9	Equivalent Series Resistance	ESR	-	-	50	Ω	-		
10	Shunt Capacitance C0	C0	-	-	5	pF	-		
11	Insulation Resistance	-	500	-	-	МΩ	at DC 100V		
12	Storage Temperature Range	-	-40	~	85		-		



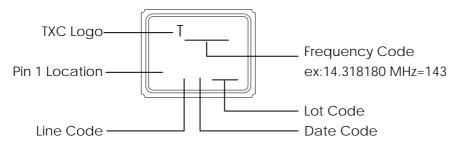
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DIMENSIONS

(Unit:mm)



MARKING



Date Code:

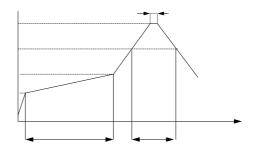
	MONTH			IAN	EER	MAR	۸DD	MAV	II INI	==	VIIC	٥ED	ОСТ	NOV	DEC
YEA	\R			JAN	LD	IVIAIX	AFIX	IVIAI	JUIN	JUL	AUG	SLI	001	NOV	DLC
2005	2009	2013	2017	Α	В	С	D	Ε	F	G	Н	J	K	L	М
2006	2010	2014	2018	Ν	Р	Q	R	S	Т	U	٧	W	Χ	Υ	Ζ
2007	2011	2015	2019	а	b	С	d	е	f	g	h	j	k	_	m
2008	2012	2016	2020	n	р	q	r	s	t	u	٧	W	Х	у	Z

^{*}This date code will be cycled every four years

Production location: Taiwan

SUGGESTED REFLOW PROFILE

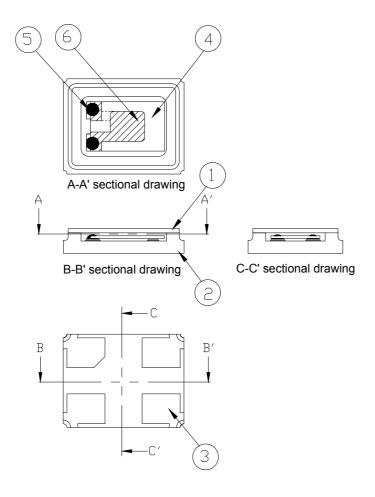
Total time: 200 sec. Max. Solder melting point: 220





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STRUCTURE ILLUSTRATION



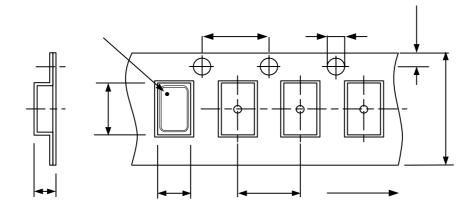
NO	COMPONENTS	MATERIALS	FINISH/SPECIFICATIONS
1	Lid	Kovar (Fe/Co/Ni)	-
2	Base(Package)	Ceramic (Al ₂ O ₃) + Kovar (Fe/Co/Ni)+ Ag/Cu	Color black
3	PAD	Au	Tungsten metalize
			+ Ni plating
			+ Au plating
4	Crystal blank	SiO ₂	-
5	Conductive adhesive	Ag	Silicon resin
6	Electrode	Noble Metal	-



REVISION: S1

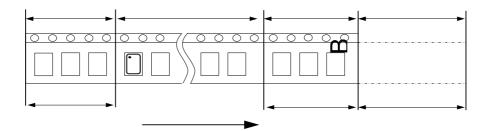
PAGE: 5

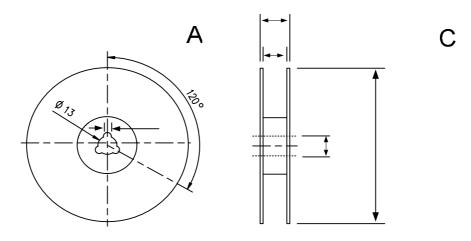
PACKING



DIMENSIONS	Α	В	С	D	Е	F	ND		IARK
DIMENSIONS	1.65	3.4	2.7	4	8	4	1.55	1.75	(UNIT : mm)

REMARK:





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

FMT-DOC024 Issue Date: 12.15'08 VER.E F

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RELIABILITY SPECIFICATIONS

1.Mechanical Endurance

No.	Test Item	Test Me	thods	REF.DOC		
1.1	Drop Test	150 cm height, 3 times on concrete	150 cm height, 3 times on concrete floor.			
1 2	Mechanical Shock	Device are shocked to half sine way	/e (1000 G) three mutually	MIL-STD-202		
1.2	INIECHANICAI SHOCK	perpendicular axes each 3 times. 0.	5m sec. duration time	WIIL-31D-202		
		Frequency range	10 ~ 2000 Hz			
		Amplitude	1.52 mm/20G			
1.3	Vibration	Sweep time	20 minutes	MIL-STD-883		
		Perpendicular axes each test time	4 Hrs			
			(Total test time 12 Hrs)			
1.4	Gross Leak	Standard Sample For Automatic Gross Leak I	Detector, Test Pressure: 2kg / cm ²	MIL-STD-883		
1.5	Fine Leak	Helium Bombing 4.5 kg/ cm ² for 2	Hrs	WIIL-31D-003		
		Temperature	245 ± 5			
		Immersing depth	0.5 mm minimum			
1.6	Solder ability	Immersion time	5 ± 1 seconds	MIL-STD-883		
		Flux	Rosin resin methyl alcohol			
			solvent (1:4)			

2. Environmental Endurance

No.	Test Item	Test Methods	REF. DOC
	Resistance To Soldering Heat High Temp. Storage	Pre-heat temperature 125 Pre-heat time 60 ~ 120 sec. Test temperature 260 \pm 5 Test time 10 \pm 1 sec. + 125 \pm 3 for 500 \pm 12 Hrs	MIL-STD-202
	Low Temp. Storage	- 40 ± 3 for 500 ± 12 Hrs	MIL-STD-883
2.4	Thermal Shock	Total 100 cycles of the following temperature cycle	MIL-STD-883
2.5	High Temp & Humidity	85 ± 3 , RH 85% , 500 Hrs	JIS C5023
2.6	Pressure Cooker Storage	121 ± 3 , RH100% , 2 bar , 240 Hrs	JIS C6701