



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 TUNING FORK 3.2X1.5
NOMINAL FREQ.	:	32.768KHz
TXC P/N	:	9H03200033
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

**Halogen Free
RoHS Compliant**



PRODUCT SPECIFICATION SHEET

PRODUCT TYPE : SMD TUNING FORK 3.2X1.5

NOMINAL FREQ. : 32.768KHz

TXC P/N : 9H03200033

REVISION : S1

RD	QA	MFG
王敏和		
8-Aug-12		

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

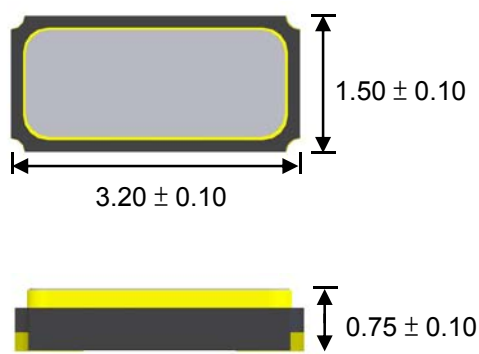
**Halogen Free
RoHS Compliant**

ELECTRICAL SPECIFICATIONS

	Parameters	Sym.	Electrical Spec.				Notes
			Min	Typical	Max	Unit	
1	Nominal Frequency	F0	32.768			KHz	-
2	Frequency Tolerance	$\Delta f/f_0$	± 20			ppm	at 25 °C $\pm 3^\circ\text{C}$
3	Load Capacitance	CL	9.0			pF	-
4	Driver Level	DL	-	0.1	1	μW	-
5	Equivalent Series Resistance	ESR	-	-	70	K Ω	at 25 °C $\pm 3^\circ\text{C}$
6	Turnover Temperature	Tp	20	25	30	$^\circ\text{C}$	at 25 °C $\pm 5^\circ\text{C}$
7	Parabolic Curvature Constant	K	-	-	-0.04	ppm/ $^\circ\text{C}^2$	-
8	Operating Temperature	-	-40	~	85	$^\circ\text{C}$	-
9	Storage Temperature	-	-55	~	125	$^\circ\text{C}$	-
10	Insulation Resistance	IR	500	-	-	M Ω	at DC 100V $\pm 15\text{V}$
11	Shunt Capacitance	C0	-	1.0	-	pF	-
12	Motional Capacitance	C1	-	3.4	-	fF	-
13	Aging	$\Delta f/f$	± 3			ppm	1st Year

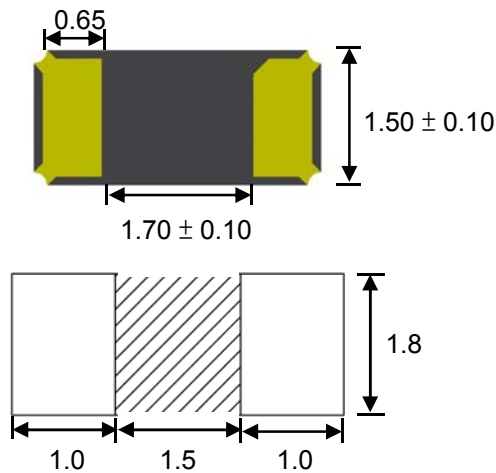
DIMENSIONS

(UNIT:mm)



RECOMMENDED SOLDER PAD

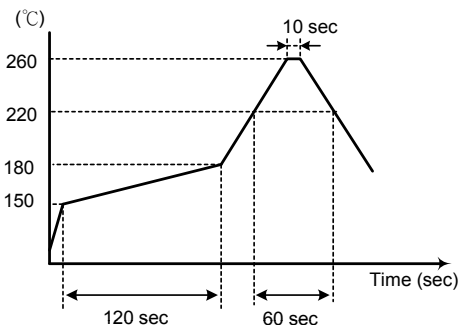
(UNIT:mm)



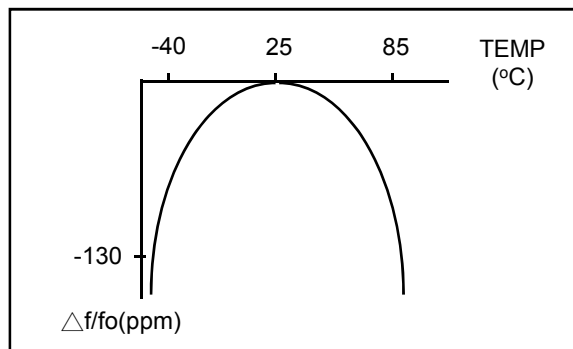
SUGGESTED REFLOW PROFILE

Total time : 200 sec. Max.

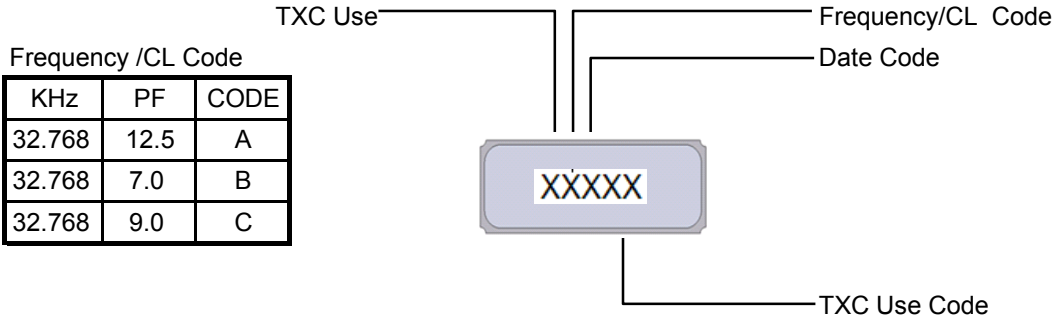
Solder melting point :220°C



TEMPERATURE V.S FREQUENCY CURVE



MARKING

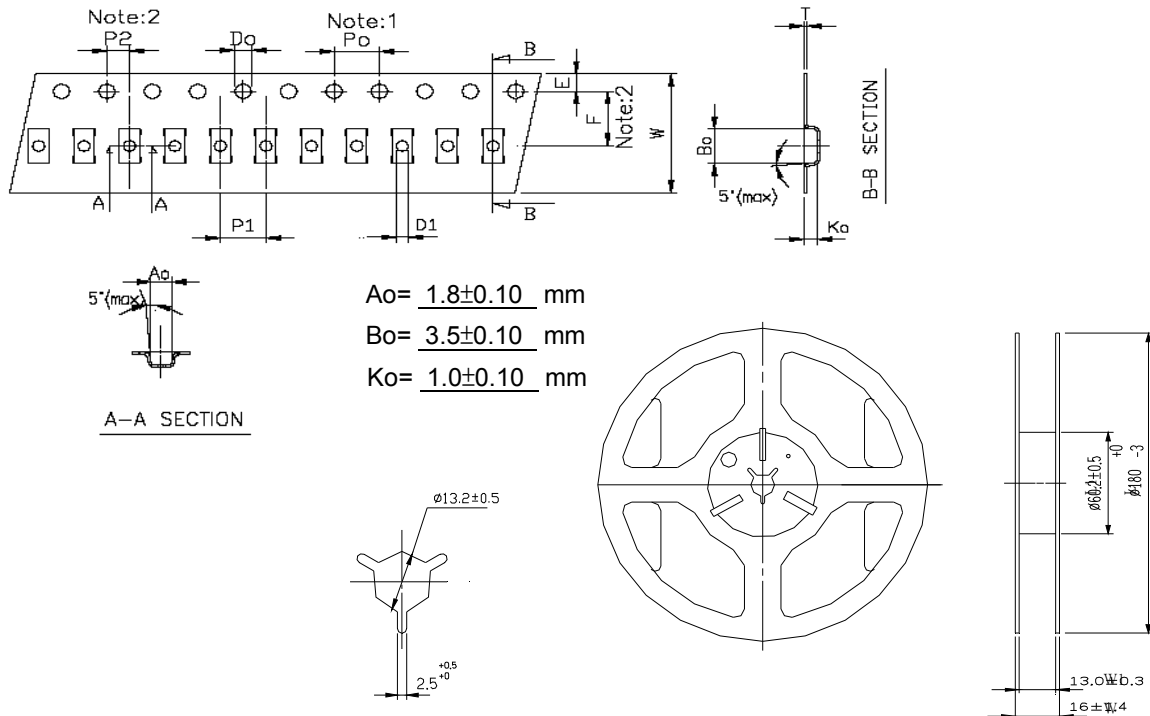


Date Code

					MONTH											
YEAR					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

PACKING



CARRIER TAPE DIMENSIONS	K1	P0	P1	P2	D0	D1	E	F	10P0	W	T	pcs / Reel
	-	4	4	2	1.55	1.1	1.75	5.5	40	12	0.25	3K

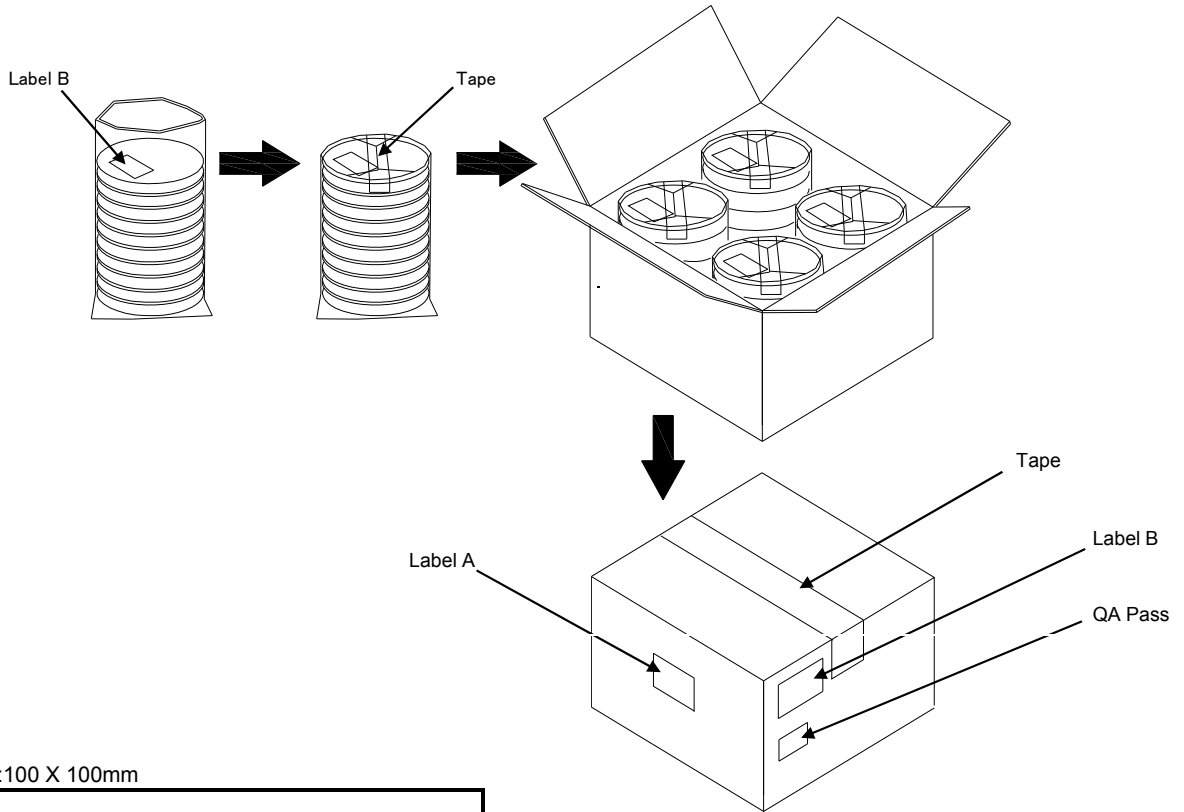
REEL DIMENSIONS	W	W1	L	L1
	16 ± 1.4	13 ± 0.3	$180 + 0 / -3$	60.2 ± 0.5

- REMARK :
- 230 mm (9.05) minimum leader which consist of carrier and/or tape followed by a minimum of 160 mm (6.3) of empty carrier tape sealed with cover tape.
 - 160 mm (6.3) minimum trailer of empty carrier tape sealed with cover tape.

PACKING

- Reel Quantity :
1. Reel X 5 (5 Reels x1)
 2. Reel X 10 (10 Reels x1)
 3. Reel X 20 (10 Reels x2)
 4. Reel X 40 (10 Reels x4)

- Box Size:
1. L200 X W200 X H140mm
 2. L200 X W200 X H250mm
 3. L400 X W200 X H250mm
 4. L400 X W400 X H280mm



(Label A) Size:100 X 100mm

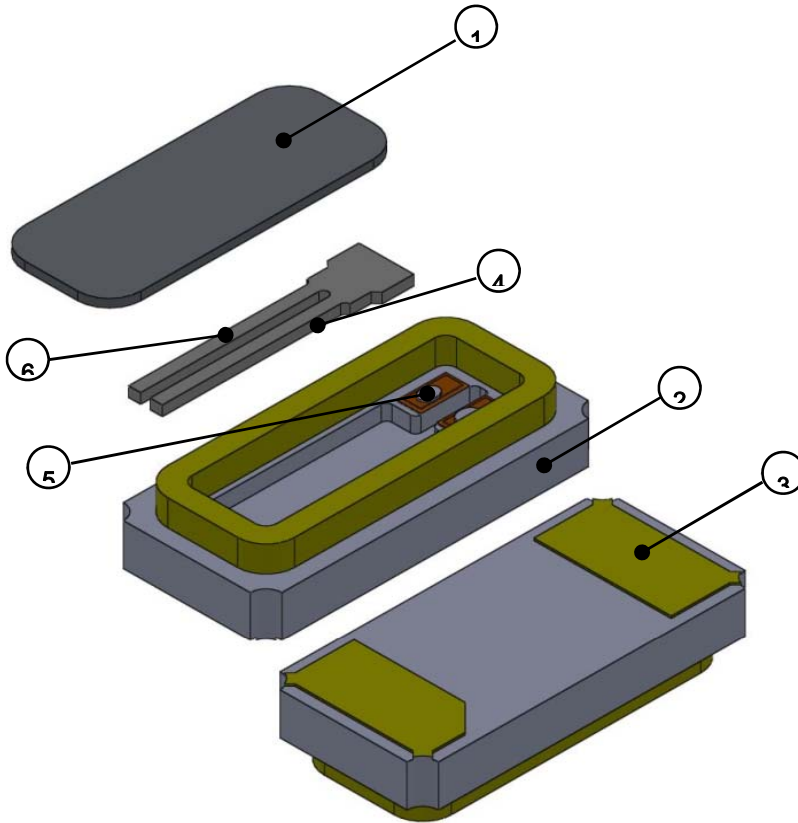
TXC
Inv No: 00096815
Po No: 21106326- 24- 1
Part No: □□□□□□□□
Qty: 40000 PCS
C/No: 157- 44

(Label B) Size:80 X 40mm

TXC CORPORATION		QA PASS
DATE CODE:	QTY:	2011/09/02
□□□□□□□□		1000
LOT NO:	RoHS	
□□□□□□□□		
PART NO:	HF	
□□□□□□□□		
FREQ: □□□□□□□□		

[STORAGE]

- 1.The storage time to be 1 year maximum.
- 2.Don't be caught in the rain.
- 3.The storage environment shall be 5°C ~40°C temperature and 30% ~ 75%RH humidity and free from the sun shine.
- 4.If customers have special requirements, we can paste labels according to it.

■ STRUCTURE ILLUSTRATION


NO	COMPONENTS	MATERIALS	FINISH/SPECIFICATIONS
1	Lid	Kovar(Fe+Co+Ni) Alloy	-
2	Base(Package)	Ceramic(Al_2O_3)	Alumina Ceramics
3	PAD	Au	Tungsten metalize + Ni plating + Au plating
4	Crystal chip	SiO_2	-
5	Conductive adhesive	Ag	Silicon resin
6	Electrode	Au+Cr	-

■ UNIT WEIGHT:

0.01197g/pcs



■ **SUGGESTED MANUAL SOLDER CONDITION**

Temperature: 350 ± 10 °C

Time: 3 sec.

Re-solder times: twice

■ **FACTORY LOCATION**

TXC (NINGBO) CORPORATION

NO.189 Huang Shan West Road, Beilun District,

Ningbo Zhejiang China

Mouser Electronics

Authorized Distributor

Click to View Pricing, Inventory, Delivery & Lifecycle Information:

[TXC Corporation:](#)

[9H03200033](#)