



TXC CORPORATION

5F, 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	:	INTEL
PRODUCT TYPE	:	SMD TA TYPE
NOMINAL FREQ.	:	32.768KHz
TXC P/N	:	9H03200584
REVISION	:	A1
CUSTOMER P/N	:	
PM / SALES	:	
DATE	:	06/26/2006
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



TXC CORPORATION

5F, 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

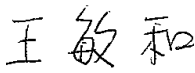


PRODUCT SPECIFICATION SHEET

PRODUCT TYPE : SMD TA TYPE

NOMINAL FREQ. : 32.768KHz

TXC P/N : 9H03200584

REVISION : A1

PE/RD	QA	MFG
		
28-Apr-06	28-Apr-06	2-May-06

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



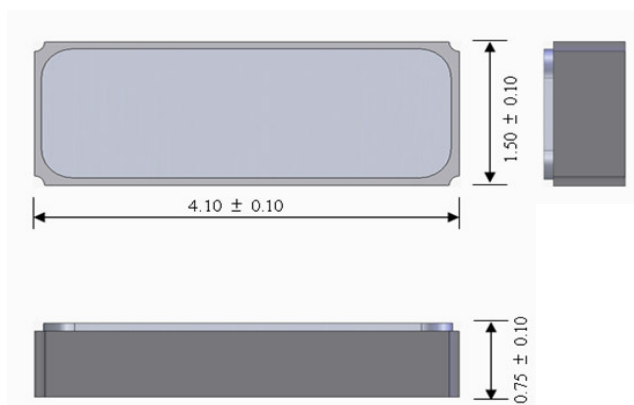
<u>Rev</u>	<u>Revise page</u>	<u>Revise contents</u>	<u>Date</u>	<u>Ref.No.</u>	<u>Reviser</u>
A1	N/A	Initial released	19-Apr-06	N/A	Alan Cheng

ELECTRICAL SPECIFICATIONS

	Parameters	SYM.	Electrical Spec.				Notes
			MIN	TYPE	MAX	UNITS	
1	Nominal Frequency	F0	32.768				KHz
2	Frequency Tolerance	-	± 20				ppm
3	Driver Level	DL	-	0.1	0.5	uW	-
4	Load Capacitance	CL	12.5				pF
5	Series Resistance	-	-	-	65	KΩ	-
6	Peak Temperature (Frequency)	-	20	25	30	°C	at 25 °C ±5°C
7	Frequency-Temperature coefficient	-	-	-	-4.0*10 ⁻⁸	°C ⁻²	-
8	Storage Temperature	-	-55	~	125	°C	-
9	Operating Temperature	-	-40	~	85	°C	-
10	Shunt Capacitance	C0	-	1.1	-	pF	-
11	Motional Capacitance	C1	-	2.3	-	fF	-
12	Insulation Resistance	-	500	-	-	MΩ	at DC 100V±15V
13	Aging	-	±3				ppm
							1st Year

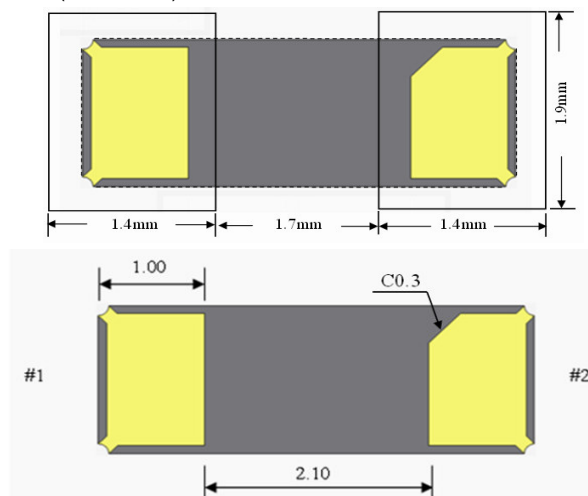
DIMENSIONS

(UNIT:mm)



Recommended Solder Pad

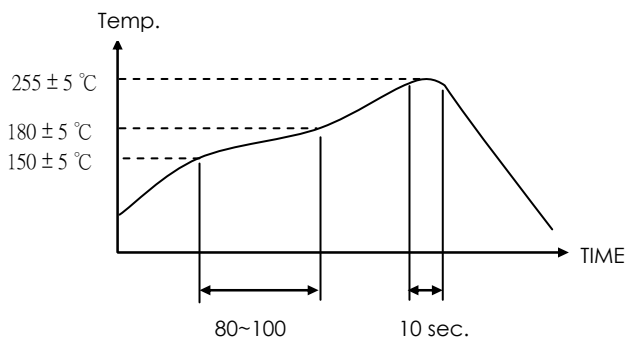
(UNIT:mm)



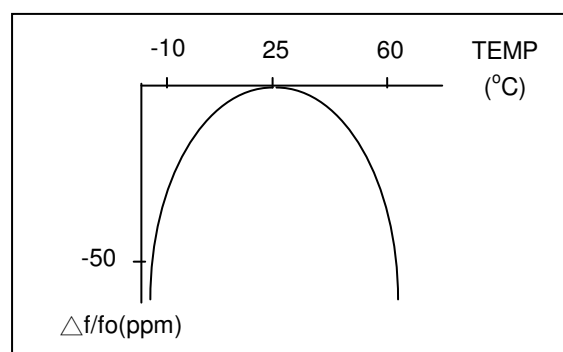
SUGGESTED REFLOW PROFILE

Total time : 200 sec. Max.

Solder melting point :185°C



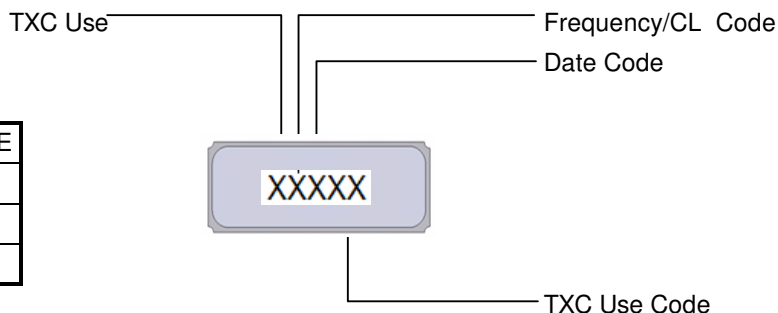
TEMPERATURE V.S FREQUENCY CURVE



■ MARKING

Frequency /CL Code

KHz	PF	CODE
32.768	12.5	A
32.768	9	B
32.768	6	C

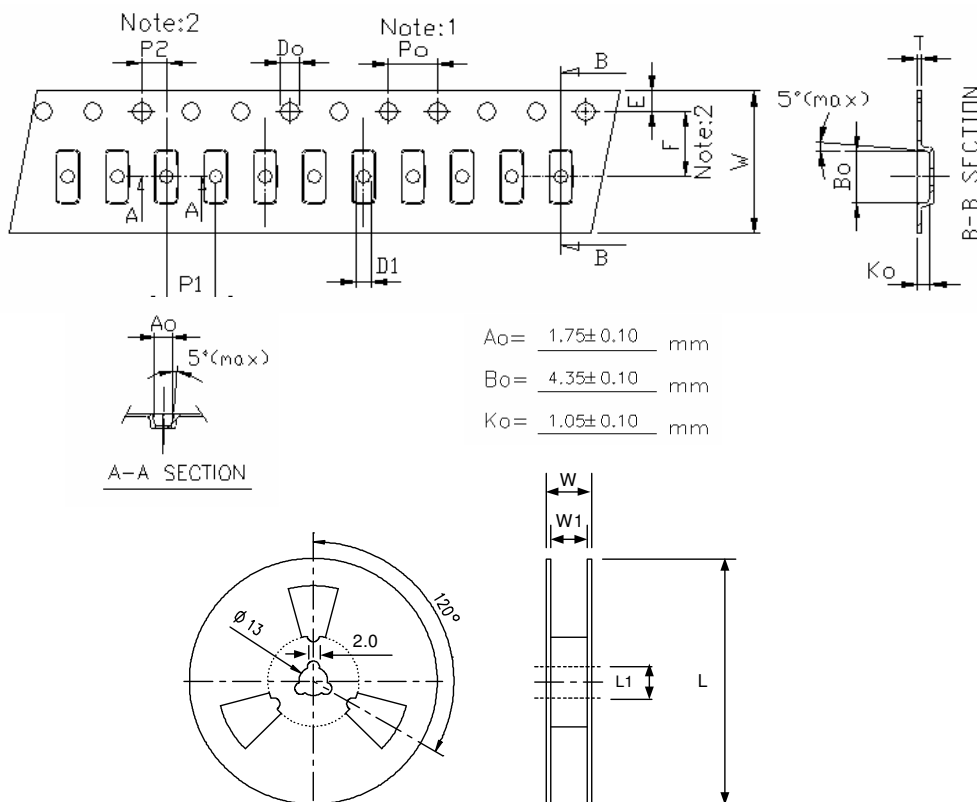


Date Code

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

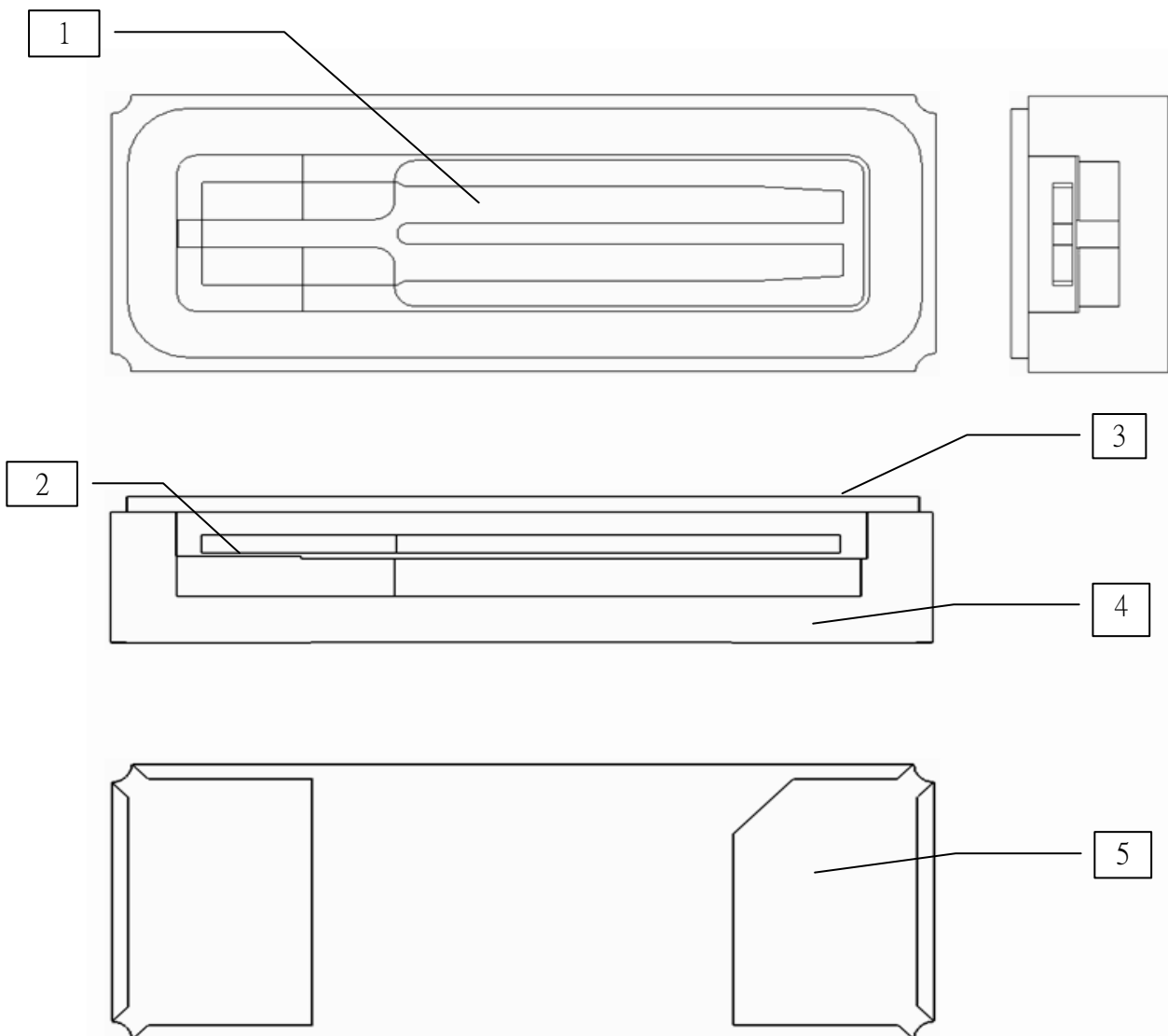
■ PACKING :



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	0.3	3K

- 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.

CONSTRUCTION



NO	PART	MATERIALS. Finish / Specifications
1	Crystal Element	Tuning Fork Blank
2	Electrode Conductive	Ag + Silicon Resin
3	Lid	Metal (Fe)
4	Package	Ceramic / Color Black
5	PAD	Tungsten Metalize + Ni plating + Au Plating

■ RELIABILITY SPECIFICATIONS

1.Mechanical Endurance

No.	Test Item	Test Methods	REF. DOC
1	Drop Test	150 cm height, fall freely onto concrete floor 3 times.	JIS C6701
1	Mechanical Shock	Device are shocked to half sine wave (1000 G) three mutually perpendicular axes each 3 times. 0.5m sec. duration time	MIL-STD-202F
1	Vibration	Frequency range 10 ~ 2000 Hz Amplitude 1.52 mm,20G Sweep time 20 minute Perpendicular axes each test time 4 hours (Total test time 12 hours)	MIL-STD-883E
1	Solderability	Temperature 260 °C ± 5°C Immersing depth 0.5 mm minimum Immersion time 5 ± 1 seconds Flux Rosin resin methyl alcohol solvent (1 : 4)	MIL-STD-883E

2.Environmental Endurance

No.	Test Item	Test Methods	REF. DOC
2	Resistance To Soldering Heat	Pre-heat temperature 125 °C Pre-heat time 60 ~ 120 sec. Test temperature 260 ± 5 °C Test time 10 ± 1 sec.	MIL-STD-202F
2	High Temp. Storage	+ 125 °C ± 3 °C for 1000 ± 12 hours	MIL-STD-883E
2	Low Temp. Storage	- 40 °C ± 3 °C for 1000 ± 12 hours	
2	Thermal Shock	Total 100 cycles of the following temperature cycle 	MIL-STD-883E
3	Pressure Cooker Storage	121 ± 3°C, RH100%, 2 bar, for 240 hours	JIS C6701
3	High Temp & Humidity	85°C ± 3°C, RH 85% , 1000Hrs	JIS C5023