



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 : HC-49/S SMD

NOMINAL FREQ. : 8.000000MHz

TXC P/N : AT08000010

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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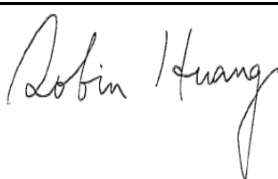
PRODUCT SPECIFICATION SHEET

PRODUCT TYPE : HC-49/S SMD

NOMINAL FREQ. : 8.000000MHz

TXC P/N : AT08000010

REVISION : S1

PE/RD	QA	MFG
		
18-Apr-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

RoHS Compliant

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°C
 Relative humidity : 40%~70%

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

Ambient temperature : 25+/-1°C
 Relative humidity : 40%~70%

Measure equipment

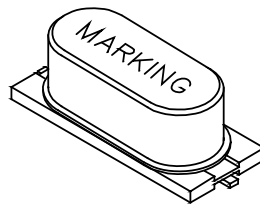
SAUNDERS 250A/250B CRYSTAL IMPEDANCE METER.

Crystal cutting type

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

Unit Weight:

0.58±0.050 g/pcs



please refer to marking code page

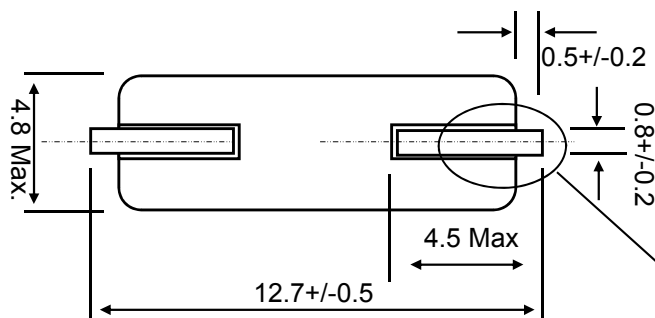
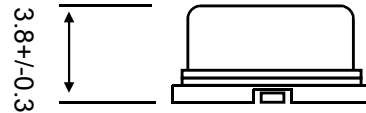
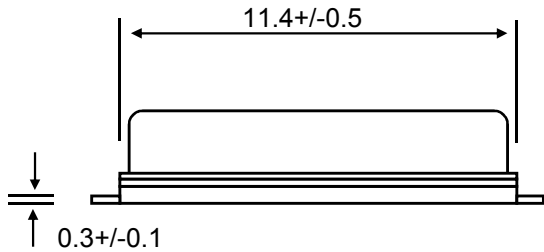
	Parameters	SYM.	Electrical Spec.				Notes
			MIN	TYPE	MAX	UNITS	
1	Nominal Frequency	FL	8.000000			MHz	-
2	Oscillation Mode	-	Fundamental			-	-
3	Load Capacitance	CL	20			pF	-
4	Frequency Tolerance	-	±30			ppm	at 25 °C ± 3 °C
5	Frequency Tolerance	-	±30			ppm	Over Operating Temp. Range (Reference 25°C)
6	Operating Temperature	-	-40	~	85	°C	-
7	Aging	-	±3			ppm	1st Year
8	Drive Level	DL	-	100	100	uW	-
9	Effective Resistance R _r	R _r	-	-	50	Ω	-
10	Shunt Capacitance C ₀	C ₀	-	-	7	pF	-
11	Insulation Resistance	-	500	-	-	MΩ	at DC 100V
12	Storage Temperature Range	-	-40	~	105	°C	-

■ FACTORY LOCATION

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

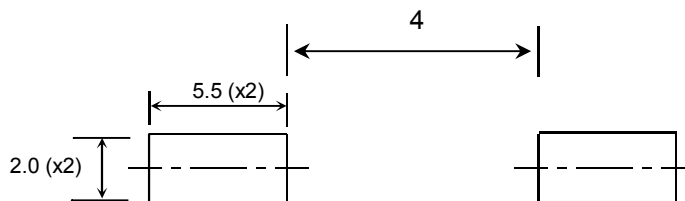
DIMENSIONS

UNIT:mm



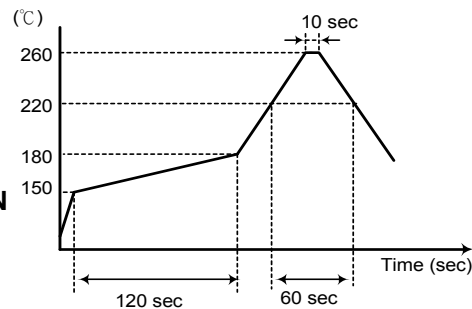
Solder Coating
 (Sn-Ag-Cu Pb Free Coating)

Suggested Layout



SUGGESTED REFLOW PROFILE

Solder melting point : $220 \pm 10 \text{ }^\circ\text{C}$, 60 sec. Min.
 Peak Temperature: $260 \pm 5 \text{ }^\circ\text{C}$, 10 sec. Max.

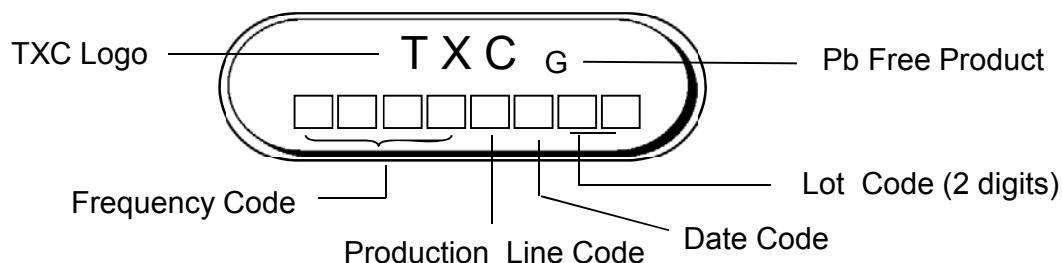


SUGGESTED MANUAL SOLDER CONDITION

Temperature: $350 \pm 10 \text{ }^\circ\text{C}$
 Time: 3 sec.
 Re-solder times: twice

MARKING

Marking For Pb Free Parts :

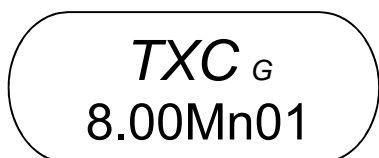


Date Code:

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

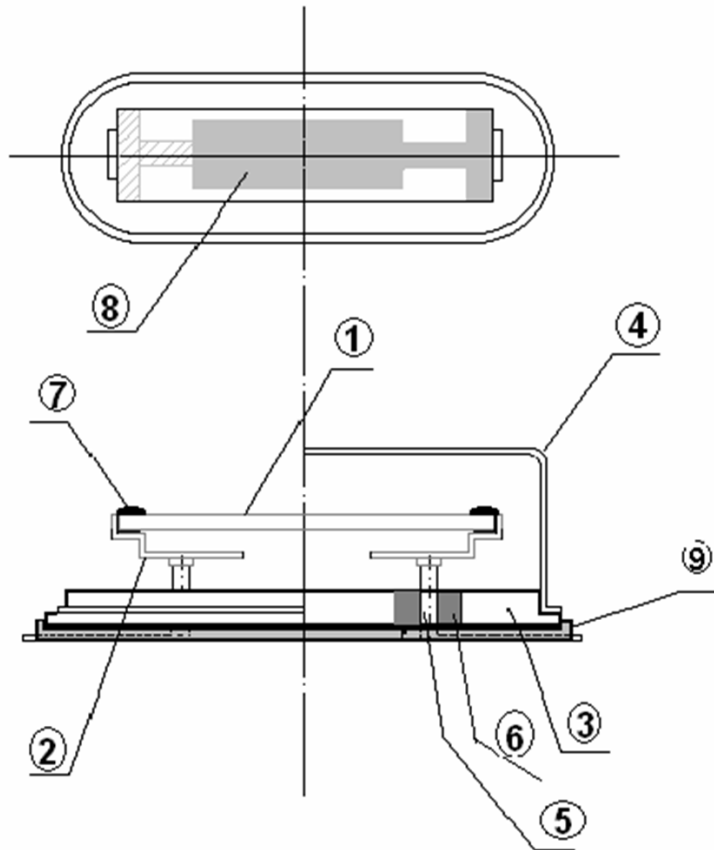
*This date code will be cycled every four years.

For example : Marking



→
Introduction : Pb Free Product
49S/SMD 8.000000 MHz
Made in NGB 2008/JAN 01Lot

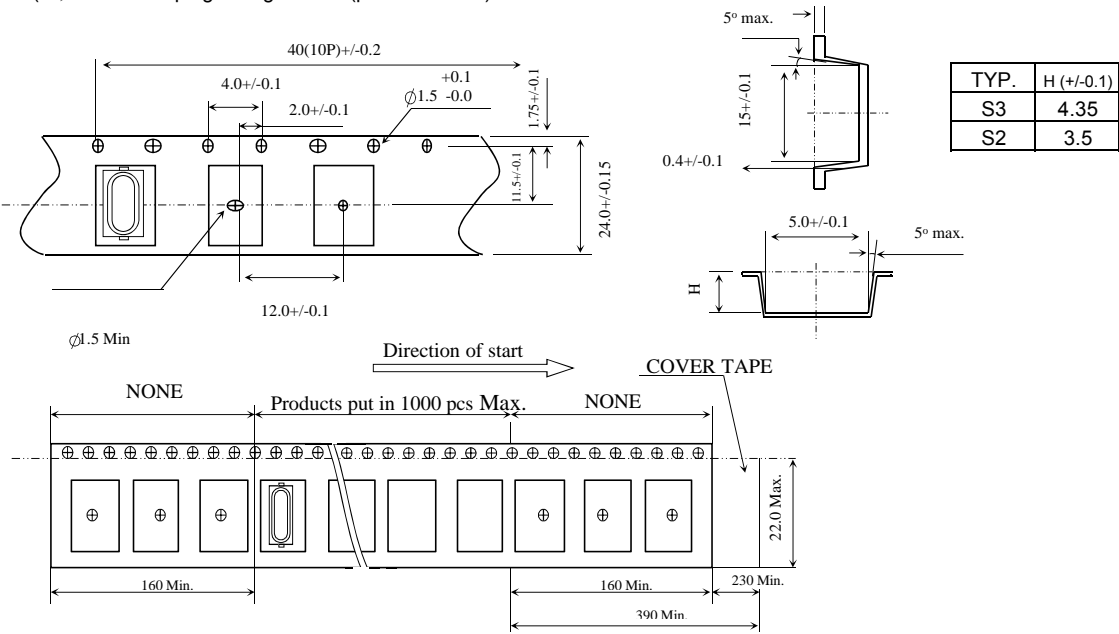
■ **STRUCTURE ILLUSTRATION**



NO	COMPONENTS	MATERIALS	FINISH/SPECIFICATIONS
1	CRYSTAL BLANK	SiO ₂	-
2	SUPPORTER	Nickel Silver(Cu/Zn/Ni)	-
3	BASE	Fe	Ni Plated
4	CAN	Nickel Silver(Cu/Zn/Ni)	-
5	LEAD	Kovar (Fe/Co/Ni)	NI Plated+Solder(Sn/Ag/Cu) Dipped
6	GLASS	GLASS	-
7	CONDUCTIVE ADHESIVE	Resin + Ag	-
8	ELECTRODE	Ag	-
9	INSULATION PAD	PPS	-

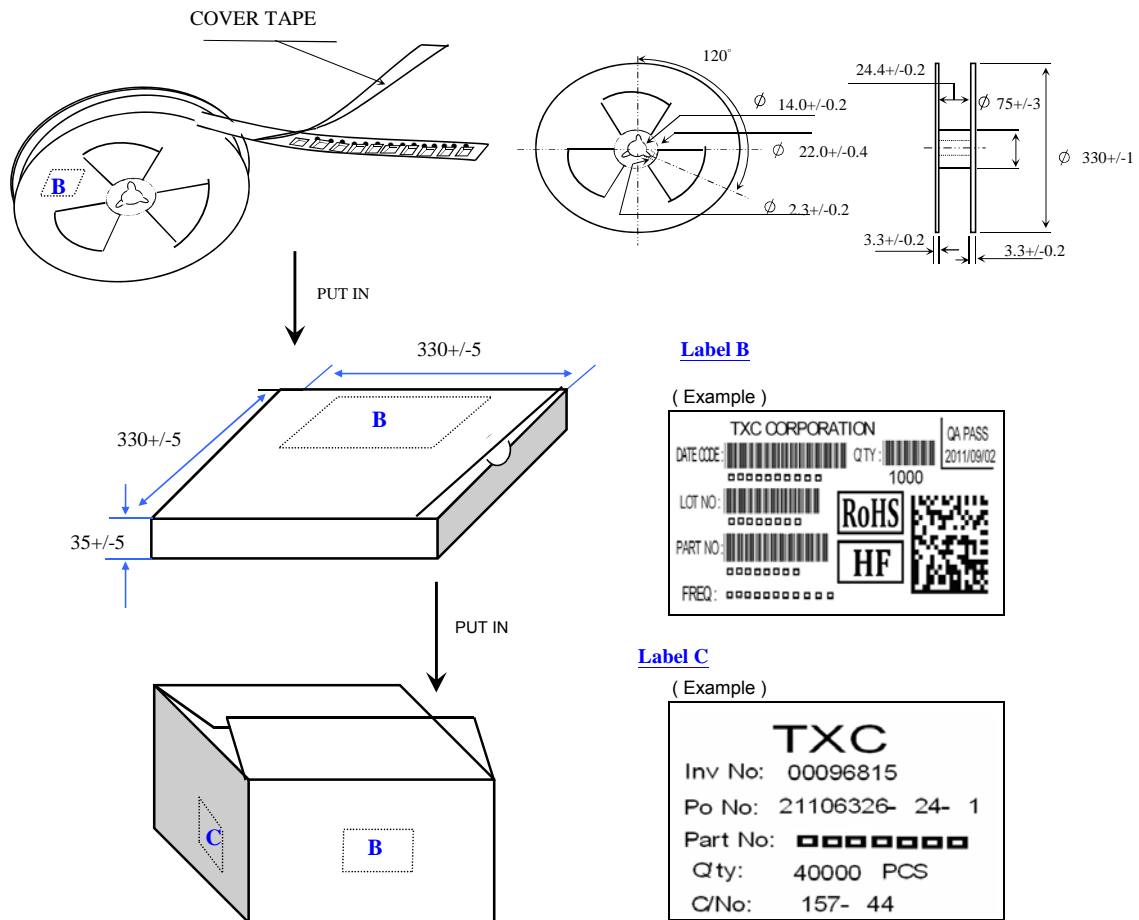
(A) Tape and reel configuration:(Unit : mm)

(a) Emboss taping configuration. (per EIA-481-2)



(b) Reel configuration.

(B) Packing & Label :(Unit : mm)



[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.

- # (1) Put in stuff between space.
- (2) Tie Up the Carton with 4 Packthreads.

■ RELIABILITY SPECIFICATIONS
1.Mechanical Endurance

No.	Test Item	Test Methods	Test Criteria
1.1	Mechanical Shock	1000 G , 0.5 m Sec. , 3 times for all 3 directions.	B C
1.2	Vibration	Frequency range 10 ~ 2000 Hz Acceleration 5G Sweep time 20 minute Pencilular axes each test time 4 hours (Total test time 12 hours)	B C
1.3	Terminal Strength	17.7N force for 60sec +/-1sec.	F
1.4	Board Flex	Duration time:60 Sec Minimum,Deviation:3mm	B C

2.Environmental Endurance

No.	Test Item	Test Methods	SPEC
2.1	Solderability	Pb free :Temperature 235±5°C,Immersion time:5±1sec Pb :Temperature 215±5°C,Immersion time:5±1sec	E
2.2	Resistance To Soldering Heat	Test temperature 260 +/- 5 °C Test time 10 +/- 1 sec. Emersion Rate 25 ± 6 mm/s Immersed of specimen 1.5mm	ACD
2.3	High Temp. Storage	+ 85°C ± 3 °C for 1000 ± 12 Hrs	ACD
2.4	Low Temp. Storage	- 40 °C ± 3 °C for 1000 ± 12 Hrs	ACD
2.5	Thermal Shock	-40°C~85°C,for 1000 cycles. 	ACD
2.6	Operational Life	1000 hrs @ 85± 3°C. Rated VDD applied with 1 MΩ.	ACD
2.7	High Temp & Humidity	85°C ± 3°C , RH 85% , 1000 Hrs	ACD

RELIABILITY SPECIFICATIONS

Specifications	
A	Frequency change: Within ± 20 ppm or in customer's specification.
B	Frequency change: Within ± 10 ppm or in customer's specification.
C	Equivalent series resistance(E.S.R) change: Within $\pm 15\%$ or 10Ω (larger value).
D	After conditioning , quartz crystal units shall be subjected to standard atmospheric conditions for 24 hour, and measured.
E	Minimum 95% of immersed terminal shall be covered with new uniform solder.
F	No damage on specimen

Measurement condition

Measurements are carried out with Network-analyzer(S&A 250B or equivalent).

单击下面可查看定价，库存，交付和生命周期等信息

[>>TXC\(台湾晶技\)](#)