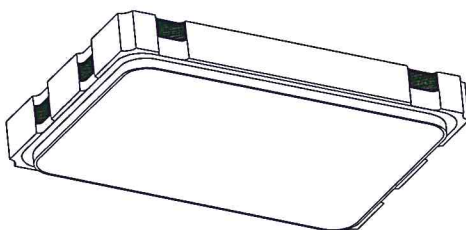


# RoHS Compliant

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.

PE/RD	QA	MFG
Mike Chiu <i>Mike Chiu</i>	Alex Huang <i>Alex Huang</i>	Leve Tang <i>Leve Tang</i>
9/01/13	9/13	9/13



PRODUCT TYPE	:	SMD SEAM SEALING CXO 5.0 x 3.2
NOMINAL FREQ.	:	25.000000MHZ
TXC P/N	:	7C25002008
REVISION	:	A1

# PRODUCT SPECIFICATION SHEET

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

# RoHS Compliant

- 1. Product Specification Sheet
- 2. Testing Report(Electrical & Temperature)
- 3. Reliability Report

Attachment(s):

- (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.

CUSTOMER	:	_____
PRODUCT TYPE	:	SMD SEAM SEALING CXO 5.0 x 3.2
NOMINAL FREQ.	:	25.000000MHZ
TXC P/N	:	7C25002008
REVISION	:	A1
CUSTOMER P/N	:	_____
PM / SALES	:	_____
DATE	:	_____
CUSTOMER SIGNATURE & Date	:	_____

# SPECIFICATION FOR APPROVAL

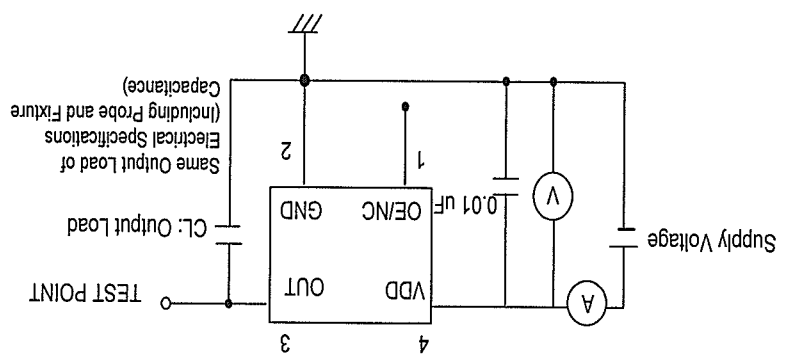


**ELECTRICAL SPECIFICATIONS**

Parameters	Condition	Electrical Specifications		
		MIN	TYP	MAX
1	Nominal Frequency	25.000000		
2	Oscillation Mode	Fundamental		
3	Operating Temperature	-40	~	85
4	Storage Temperature	-55	~	125
5	Frequency Stability	Operating Temp.-40°C~85°C Operating Temp.-10°C~60°C		
6	Supply Voltage	2.97	3.3	3.63
7	Current Consumption	-	-	15
8	Standby Function	YES		
9	Output Type	CMOS		
10	Output Load	15 pF		
11	Output Voltage High +25 °C	90%VDD	-	-
12	Output Voltage Low +25 °C	-	-	10%VDD
13	Rise Time	-	-	10 ns
14	Fall Time	-	-	10 ns
15	Symmetry or Duty Cycle	45	50	55
16	Start-up Time	To 90% of Final Amplitude		
17	Enable Voltage High (Logic 1)	70%VDD	-	-
18	Enable Voltage Low (Logic 0)	Note 2	-	-
19	Output Enable Delay Time	-	-	150 ns
20	Output Disable Delay Time	-	-	150 ns
21	Aging	1st. Year at 25°C		

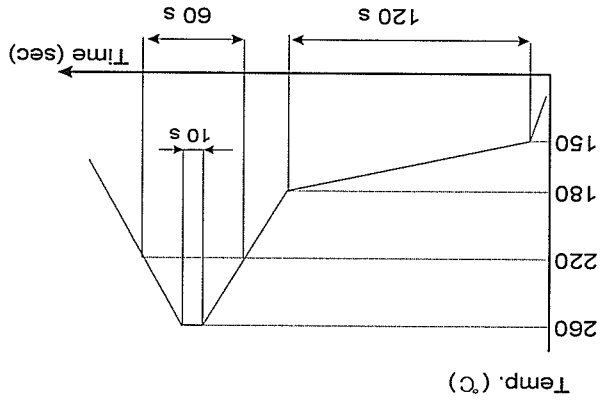
Note 1: Inclusive of frequency tolerance at 25°C, variation over temperature, supply voltage variation, aging and vibration  
 Note 2: Output will be enable if OE is Logic 1 or open ; Output will be disable if OE is Logic 0.  
 Note 3: The standard testing environment except temperature test is 25±5°C, 40%~70% relative humidity.

**TESTING CIRCUIT**

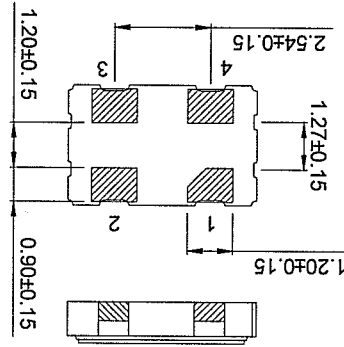
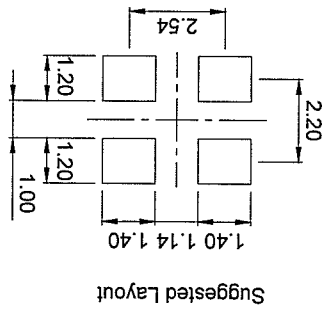


Testing Circuit Note:  
 (1) Above testing circuits cover all the specifications except temperature test & jitter measurement.  
 (2) All the testing equipments are 50Ωhm terminal.  
 (3) OE/NC terminal is open connection except OE function test.

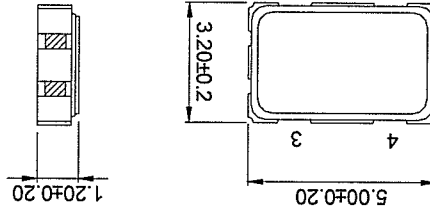
■ SUGGESTED REFLOW PROFILE



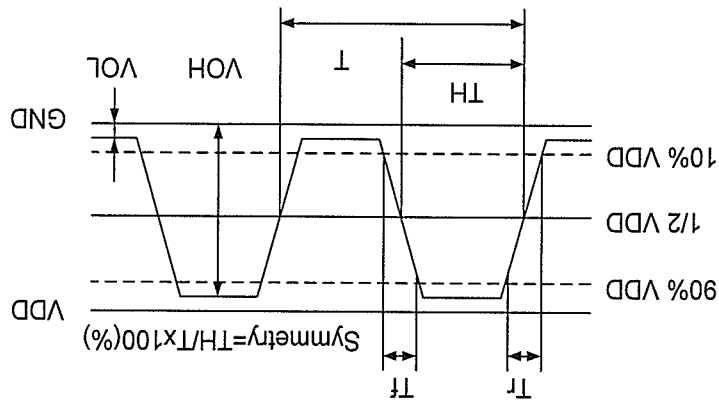
Total time : 200 sec. Max.  
Solder melting point : 220 °C



PAD FUNCTION:  
1: ENABLE CONTROL  
2: GND  
3: OUT  
4: VDD

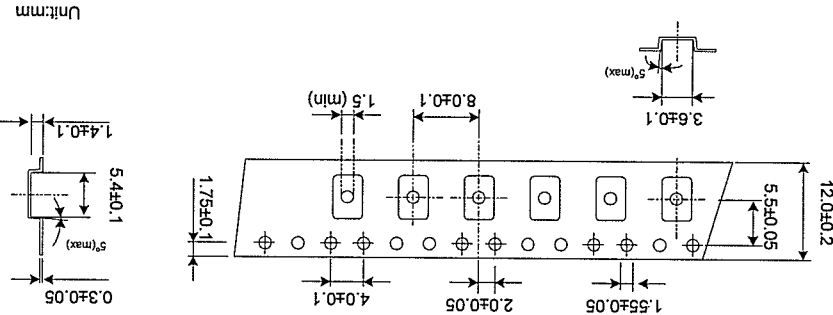
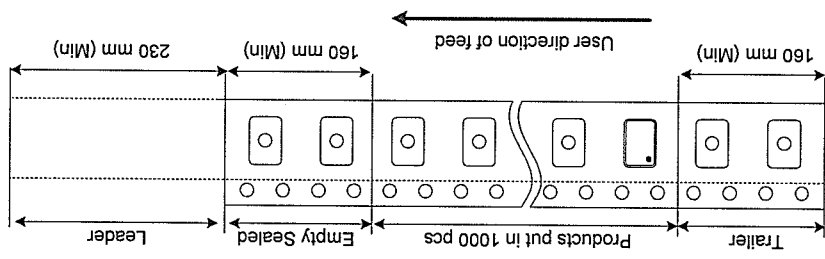
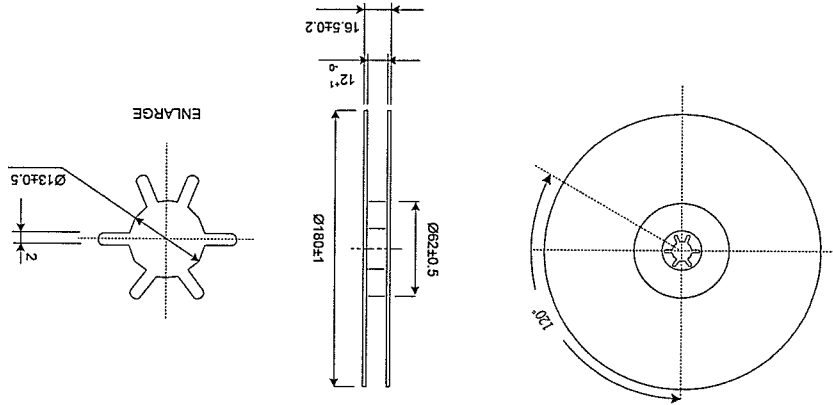


■ DIMENSIONS (Unit:mm)



■ WAVEFORM CONDITIONS

Waveform measurement system should have a min. bandwidth of 5 times the frequency being tested.



Unit:mm

PACKING

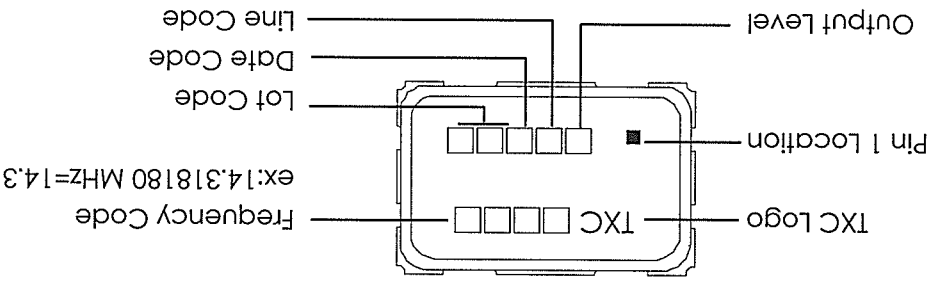
\*This date code will be cycled every four years

YEAR		MONTH														
2005	2009	2013	2017	A	B	C	D	E	F	G	H	I	J	K	L	M
2006	2010	2014	2018	N	P	Q	R	S	T	U	V	W	X	Y	Z	
2007	2011	2015	2019	a	b	c	d	e	f	g	h	i	j	k	l	m
2008	2012	2016	2020	n	p	q	r	s	t	u	v	w	x	y	z	

Date Code:

CODE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	P	Q	R	S
V <sub>DP</sub> (V)	5.00	3.30	2.80	2.50	1.80	2.90	3.00	2.85	2.60	2.55	2.00	1.50	2.70	3.40	1.90	1.20	1.00	

Output Level:

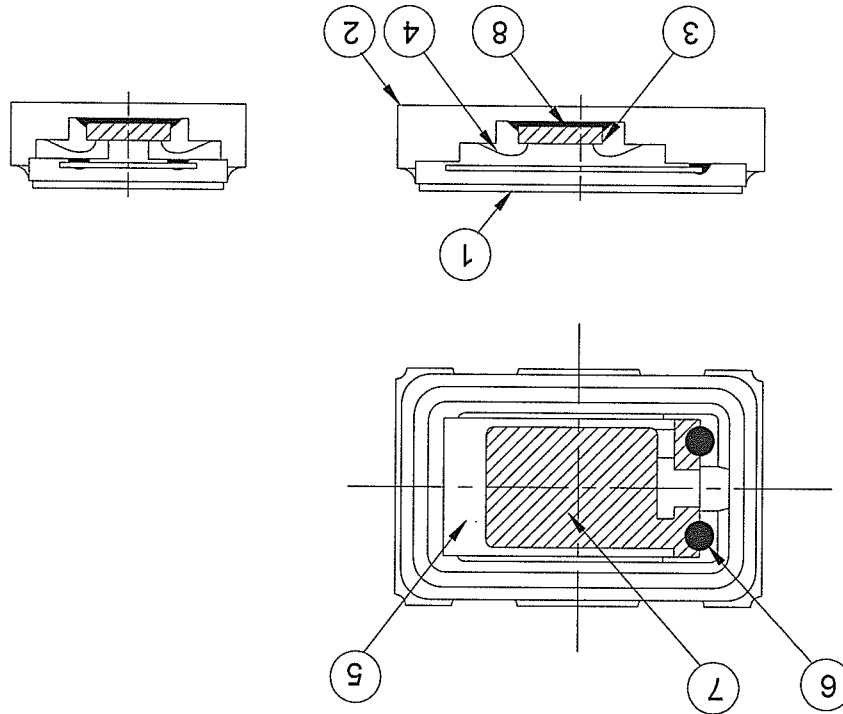


MARKING



WEIGHT: 0.058±0.001 g/pcs

NO	COMPONENTS	MATERIALS	FINISH/SPECIFICATIONS
1	Lid	Kovar (Fe/Co/Ni)	-
2	Base (Package)	Ceramic (Al <sub>2</sub> O <sub>3</sub> ) + Kovar (Fe/Co/Ni)+Pad (Au)	-
3	IC chip	-	-
4	Bonding wire	Au	Pad 1 options : NC is 5 wires , EN is 6 wires.
5	Crystal blank	SiO <sub>2</sub>	-
6	Conductive adhesive	Ag	Silicon resin
7	Electrode	Noble Metal	-
8	Die attached	Conductive (Ag)	Epoxy resin



STRUCTURE ILLUSTRATION

PRODUCT TYPE : SMD SEAM SEALING CXO 5.0 x 3.2 P/N : 7C25002008 REVISION : A1

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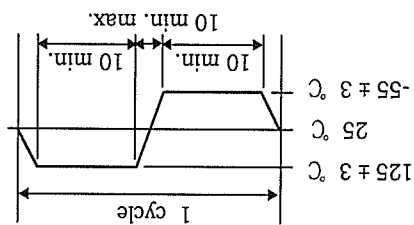
PRODUCT TYPE : SMD SEAM SEALING CXO 5.0 x 3.2 P/N : 7C25002008 REVISION : A1

■ RELIABILITY SPECIFICATIONS

1. Mechanical Endurance

No.	Test Item	Test Methods	REF. DOC
1	Drop Test	75 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-202
1	Vibration	Frequency range 10 ~ 2000 Hz Amplitude 1.52 mm Sweep time 20 minutes Perpendicular axes each test time 4 Hrs (Total test time 12 Hrs)	MIL-STD-883
1	Gross Leak	Standard Sample For Automatic Gross Leak Detector, Test Pressure: 2kg / cm <sup>2</sup>	MIL-STD-883
2	Fine Leak	Pre-condition - Helium Bombing 4.5 Kgfl / cm <sup>2</sup> for 2 hrs Tested by mass-spectrometer	MIL-STD-883
2	Solderability	Temperature 245 °C ± 5°C Immersing depth 0.5 mm minimum Immersion time 5 ± 1 seconds Flux Rosin resin methyl alcohol solvent ( 1 : 4 )	MIL-STD-883

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-202
2	High Temp. Storage	+ 125 °C ± 3 °C for 1000 Hrs	MIL-STD-883
2	Low Temp. Storage	- 40 °C ± 3 °C for 1000 Hrs	MIL-STD-883
2	Thermal Shock (Air to Air)	Total 100 cycles of the following temperature cycle  125 ± 3 °C 25 °C -55 ± 3 °C 10 min. 10 min. max. 10 min. 1 cycle	MIL-STD-883
3	Pressure Cooker Test	120 ± 3°C , RH100% , 2 bar ,for 240 Hrs	EIA-JESD22
3	High Temp & Humidity	85°C ± 3°C, RH 85% , 1000 Hrs	EIA-JESD22
3	Aging	85°C ± 3°C , Voltage input by specification, 1000 Hrs	EIA-JESD22



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[FL2000085](#) [9B-15.360MBBK-B](#) [9C-7.680MBBK-T](#) [ASH7K-32.768KHZ](#) [AT-41.600MAGQ-T](#) [BTD1062E05A-513](#) [LFX TAL066198Cutt](#)  
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