

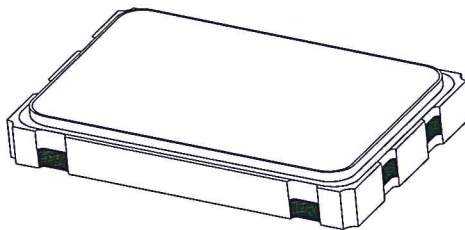
PRODUCT SPECIFICATION SHEET

PRODUCT TYPE : SMD SEAM SEALING CXO 5.0 × 3.2

NOMINAL FREQ. : 25.000000MHz

TXC P/N : 7C25002008

REVISION : A1



PE/RD	QA	MFG
<i>Mike Chiu</i> Mike Chiu	<i>Alex Huang</i> Alex Huang	<i>Leye Tang</i> Leye Tang
<i>9/10/13</i>	<i>9/12/13</i>	<i>9/10/13</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

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 CXO 5.0 × 3.2

NOMINAL FREQ. : 25.000000MHZ

TXC P/N : 7C25002008

REVISION : A1

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(s):

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

RoHS Compliant



TXC CORPORATION

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

ELECTRICAL SPECIFICATIONS

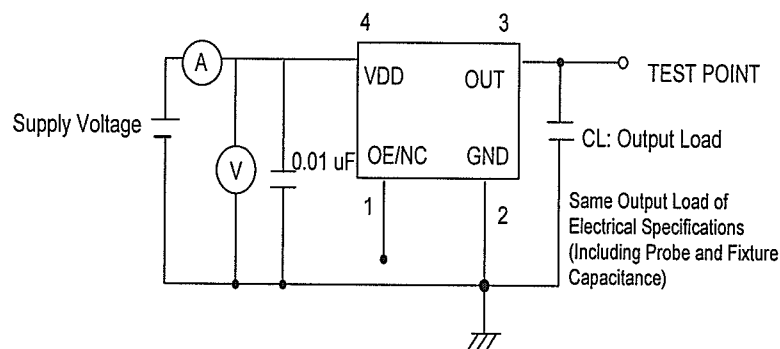
	Parameters	Condition	Electrical Specifications			
			MIN	TYP	MAX	UNITS
1	Nominal Frequency		25.000000			MHz
2	Oscillation Mode		Fundamental			
3	Operating Temperature		-40	~	85	°C
4	Storage Temperature		-55	~	125	°C
5	Frequency Stability	Operating Temp.-40°C~85°C	-	-	±30	ppm
		Operating Temp.-10°C~60°C	-	-	±20	ppm
6	Supply Voltage		2.97	3.3	3.63	V
7	Current Consumption		-	-	15	mA
8	Standby Function		YES			
9	Output Type		CMOS			
10	Output Load		15			pF
11	Output Voltage High +25 °C		90%VDD	-	-	V
12	Output Voltage Low +25 °C		-	-	10%VDD	V
13	Rise Time	10%~90% Output Swing	-	-	10	nS
14	Fall Time	90%~10% Output Swing	-	-	10	nS
15	Symmetry or Duty Cycle		45	50	55	%
16	Start-up Time	To 90% of Final Amplitude	-	-	10	mS
17	Enable Voltage High (Logic 1)	Note 2	70%VDD	-	-	V
18	Enable Voltage Low (Logic 0)	Note 2	-	-	30%VDD	V
19	Output Enable Delay Time		-	-	150	uS
20	Output Disable Delay Time		-	-	150	uS
21	Aging	1st. Year at 25°C	-	-	±5	ppm

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



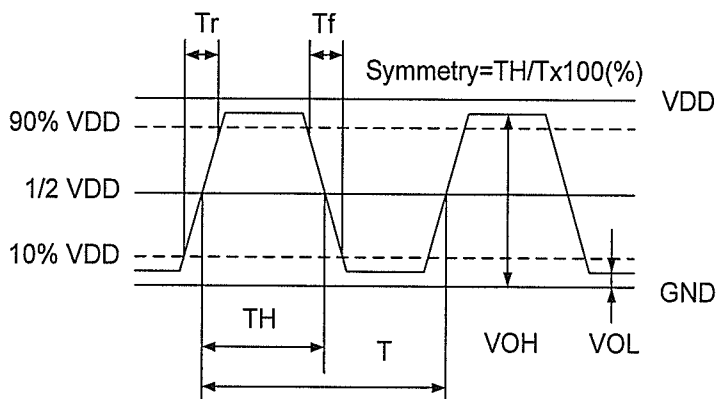
Testing Circuit Note:

- (1) Above testing circuits cover all the specifications except temperature test & Jitter measurement.
- (2) All the testing equipments are 50Ohm terminal.
- (3) OE/NC terminal is open connection except OE function test.



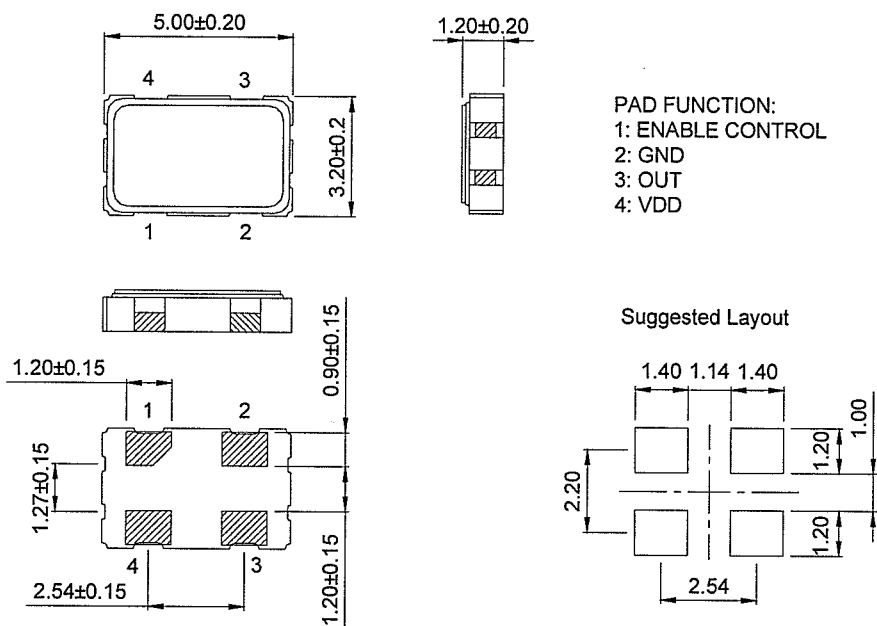
WAVEFORM CONDITIONS

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



DIMENSIONS

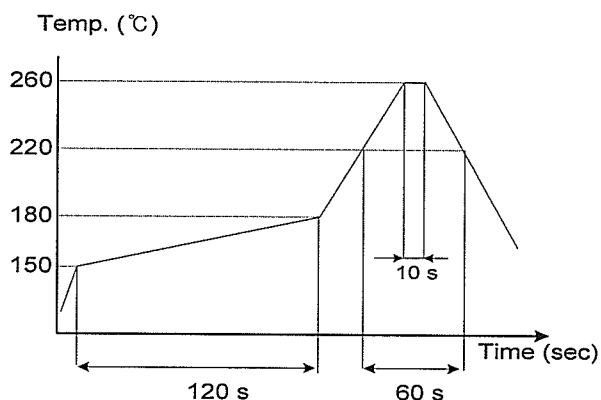
(Unit:mm)



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

SUGGESTED REFLOW PROFILE

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

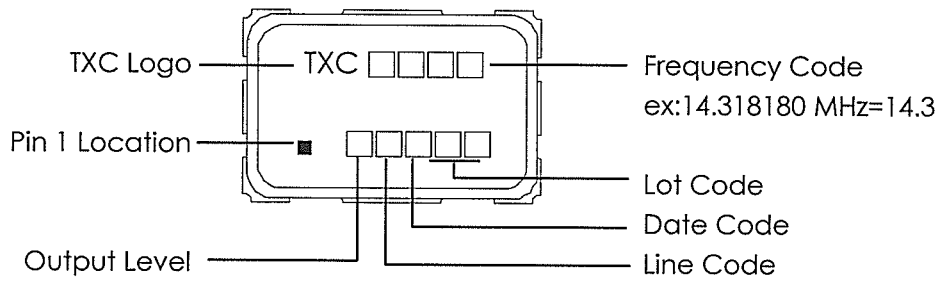




TXC CORPORATION

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

MARKING



Output Level:

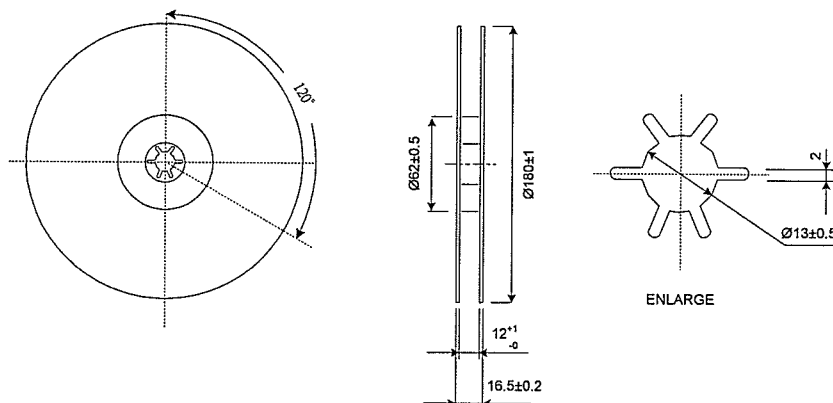
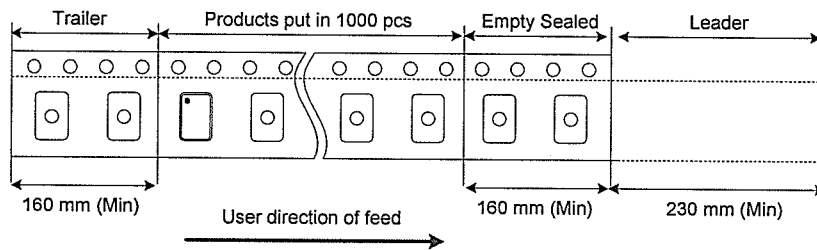
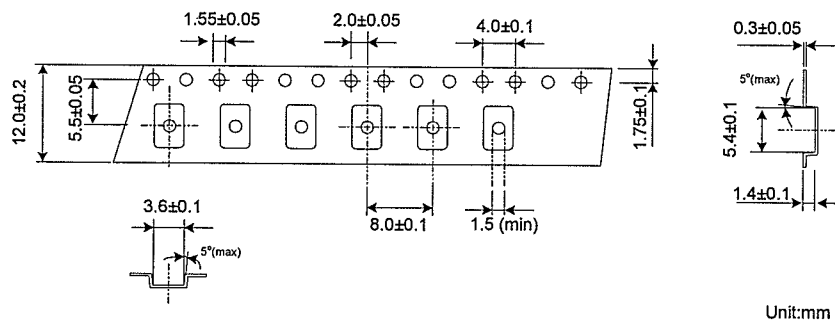
V _{DD} (V)	5.00	3.30	2.80	2.50	1.80	2.90	3.00	2.85	2.60	2.55	2.00	1.50	2.70	3.40	1.90	1.20	1.00
CODE	A	B	C	D	E	F	G	H	J	K	L	M	N	P	Q	R	S

Date Code:

YEAR				MONTH													
				JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC		
2005	2009	2013	2017	A	B	C	D	E	F	G	H	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	j	k	l	m		
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





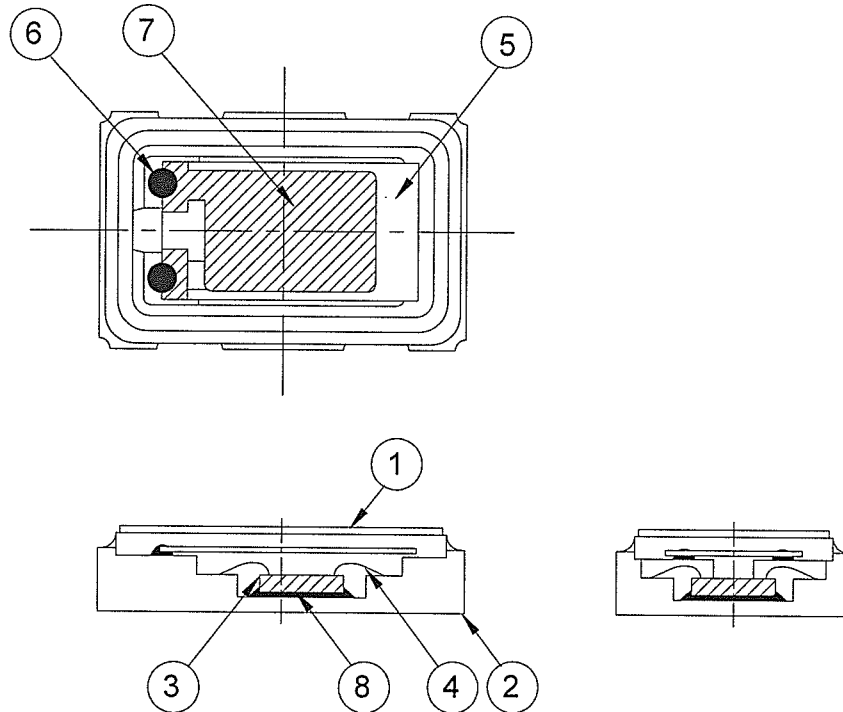
TXC CORPORATION

PRODUCT TYPE : SMD SEAM SEALING CXO 5.0 × 3.2

P/N : 7C25002008

REVISION : A1

■ 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)+Pad (Au)	-
3	IC chip	-	-
4	Bonding wire	Au	Pad 1 options : NC is 5 wires , EN is 6 wires.
5	Crystal blank	SiO ₂	-
6	Conductive adhesive	Ag	Silicon resin
7	Electrode	Noble Metal	-
8	Die attached	Conductive (Ag)	Epoxy resin

■ WEIGHT:

0.058±0.001 g/pcs

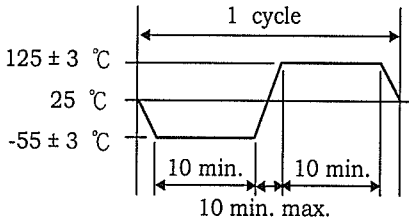


■ RELIABILITY SPECIFICATIONS

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 ²	MIL-STD-883
2	Fine Leak	Pre-condition - Helium Bombing 4.5 Kgf / cm ² for 2 hrs Tested by mass-spectrometer	
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	
2	Thermal Shock (Air to Air)	Total 100 cycles of the following temperature 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