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 VCXO 7.0*5.0
NOMINAL FREQ.	:	30.720000MHz
TXC P/N	:	6U30702001
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(s):

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

RoHS Compliant

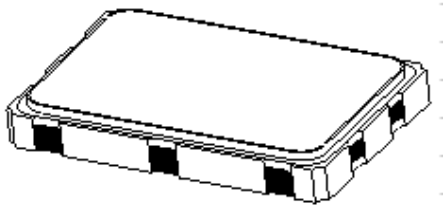
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PRODUCT SPECIFICATION SHEET

PRODUCT TYPE	:	SMD SEAM SEALING VCXO 7.0*5.0
NOMINAL FREQ.	:	30.720000MHz
TXC P/N	:	6U30702001
REVISION	:	S1



PE/RD	QA	MFG
張鏡瑋		
29-Mar-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

TXC CORPORATION

PRODUCT TYPE : SMD SEAM SEALING VCXO 7.0*5.0 P/N： 6U30702001 REVISION： S1

Rev	Revise page	Revise contents	Date	Ref.No.	Reviser
S1	N/A	Initial released	29-Mar-12	N/A	Y. C. Chen

TXC CORPORATION

PRODUCT TYPE : SMD SEAM SEALING VCXO 7.0*5.0 P/N： 6U30702001 REVISION： S1

■ ELECTRICAL SPECIFICATIONS

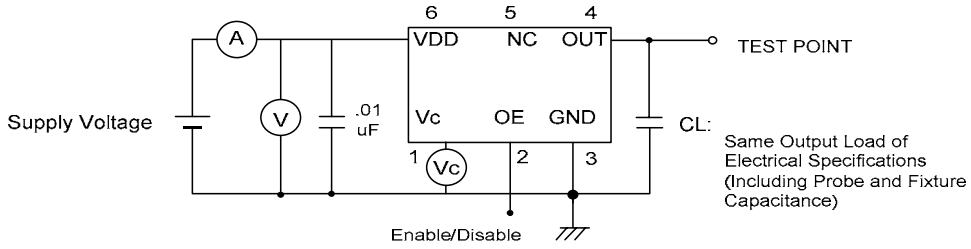
Item	Parameters	Condition	Electrical Specifications			
			Min.	Typ.	Max.	Units
1	Nominal Frequency	-		30.720000		MHz
2	Oscillation Mode	-		Fundamental		
3	Operating Temperature	-	-40	-	85	℃
4	Storage Temperature	-	-55	-	125	℃
5	Frequency Stability	Note 3	-50	-	50	ppm
6	Supply Voltage	-	2.97	3.3	3.63	V
7	Current Consumption	-	-	-	25	mA
8	Output Load	-		15		pF
9	Output Voltage High +25 ℃	-	90%VDD	-	-	V
10	Output Voltage Low +25 ℃	-	-	-	10%VDD	V
11	Rise Time	10%~90% Output Swing	-	-	3	nS
12	Fall Time	90%~10% Output Swing	-	-	3	nS
13	Symmetry or Duty Cycle	-	45	50	55	%
14	Enable Voltage High (Logic 1)	Note 1	70%VDD	-	-	V
15	Enable Voltage Low (Logic 0)	Note 1	-	-	30%VDD	V
16	Control Voltage	-	0.3	1.65	3.0	V
17	Pulling Range		±100	-	-	ppm
18	Output Disable Delay Time	T Off	-	-	100	ns
19	Output Enable Delay Time	T On	-	-	100	ns
20	Monotonic Linearity	-	-	-	10	%
21	Monotonic Bandwidth	Gain -3 dB	15	-	-	KHz
22	Input Impedance	VC to Ground	2	-	-	MΩ
23	Start-up Time	To 90% of Final Amplitude	-	-	10	ms
24	Aging	1st. Year at 25℃	-	-	3	ppm/yr.
25	Phase Noise	Offset 100Hz	-	-110	-	dBc/Hz
		Offset 1KHz	-	-130	-	dBc/Hz
		Offset 10KHz	-	-145	-	dBc/Hz

Note 1: Output will be enable if OE is Logic 1 or open ; Output will be disable if OE is Logic 0.

Note 2: The standard testing environment except temperature test is 25±5°C, 40%~70% relative humidity.

Note 3: Inclusive of frequency tolerance at 25℃, variation over temperature, supply voltage variation, aging and vibration

■ TESTING CIRCUIT



Testing Circuit Note:

(1) Above testing circuits cover all the specfications except temperature test & Jitter measurement.

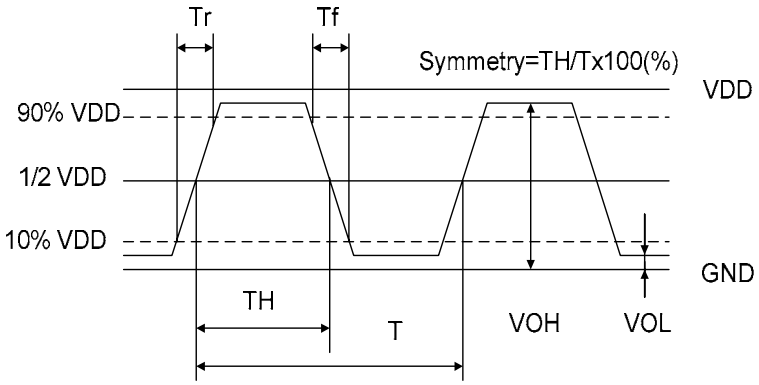
(2) All the testing equipments are 50Ohm terminal.

(3) OE terminal is open connection except OE function test.

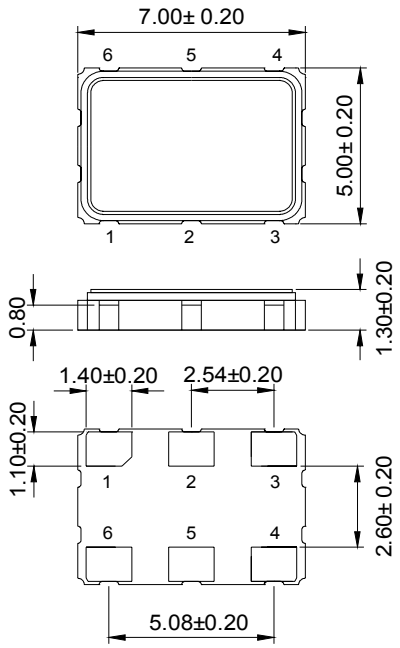
TXC CORPORATION

PRODUCT TYPE : SMD SEAM SEALING VCXO 7.0*5.0 P/N： 6U30702001 REVISION： S1

■ WAVEFORM CONDITIONS

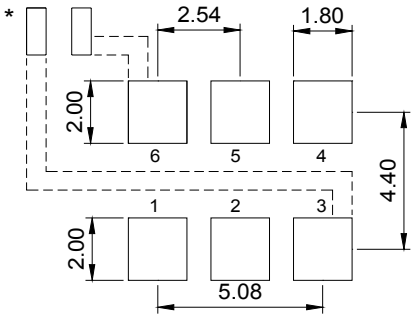


■ DIMENSIONS



PAD FUNCTION:
1: CONTROL VOLTAGE
2: ENABLE CONTROL
3: GND
4: OUT
5: NC
6: VDD

Suggested Layout

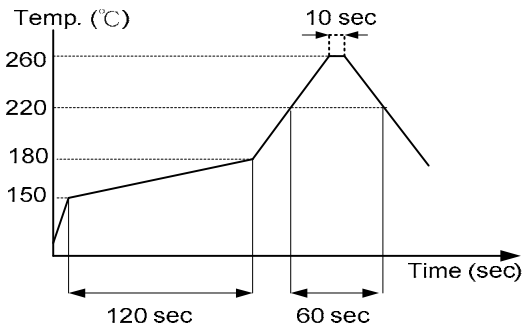


* :Power Supply Decoupling Capacitor is Required.

■ SUGGESTED REFLOW PROFILE

Total time : 200 sec. Max.

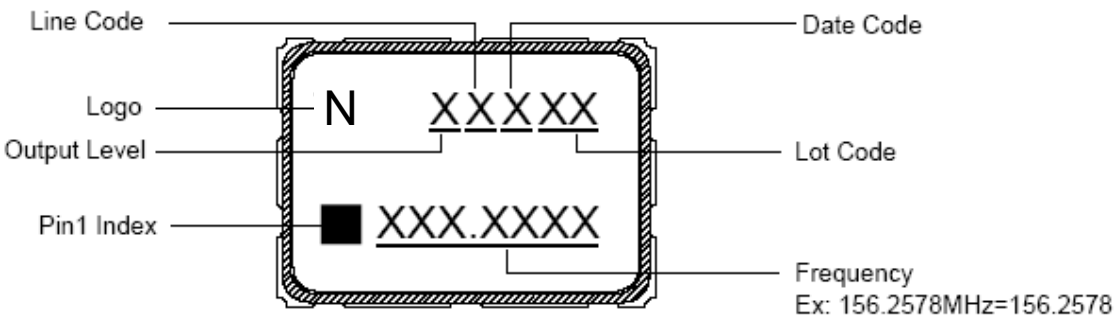
Solder melting point :220 ℃



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PRODUCT TYPE : SMD SEAM SEALING VCXO 7.0*5.0 P/N： 6U30702001 REVISION： S1

■ MARKING



DATE CODE

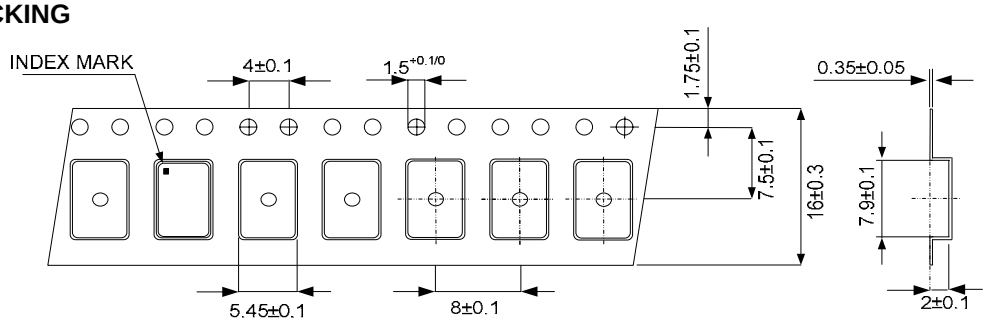
YEAR \ MONTH				JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
2005	2009	2013	2017	A	B	C	D	E	F	G	H	J	K	L	M
2006	2010	2014	2018	N	P	Q	R	S	T	U	V	W	X	Y	Z
2007	2011	2015	2019	a	b	c	d	e	f	g	h	j	k	l	m
2008	2012	2016	2020	n	p	q	r	s	t	u	v	w	x	y	z

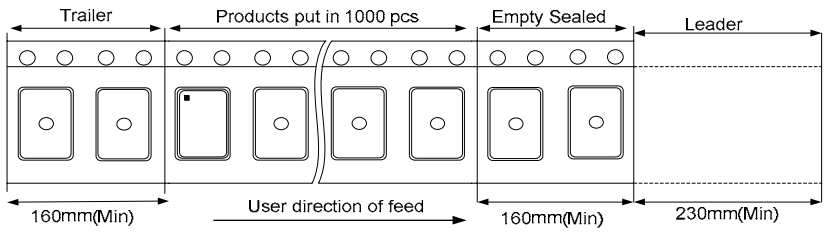
* This date code will be cycled every four years.

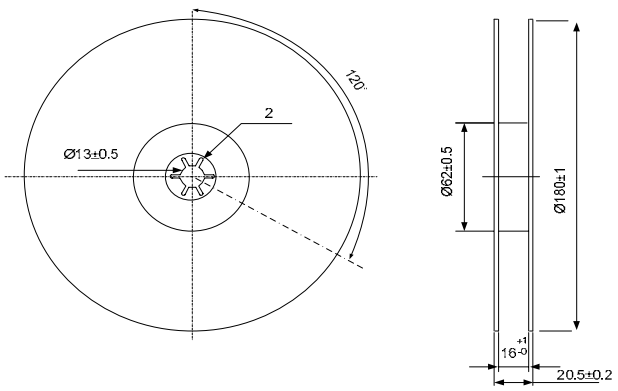
Outpuy Level

VDD	5.0V	3.3V	2.8V	2.5V	1.8V	2.9V	3.0V	2.85V	2.6V
CODE	A	B	C	D	E	F	G	H	J

■ PACKING



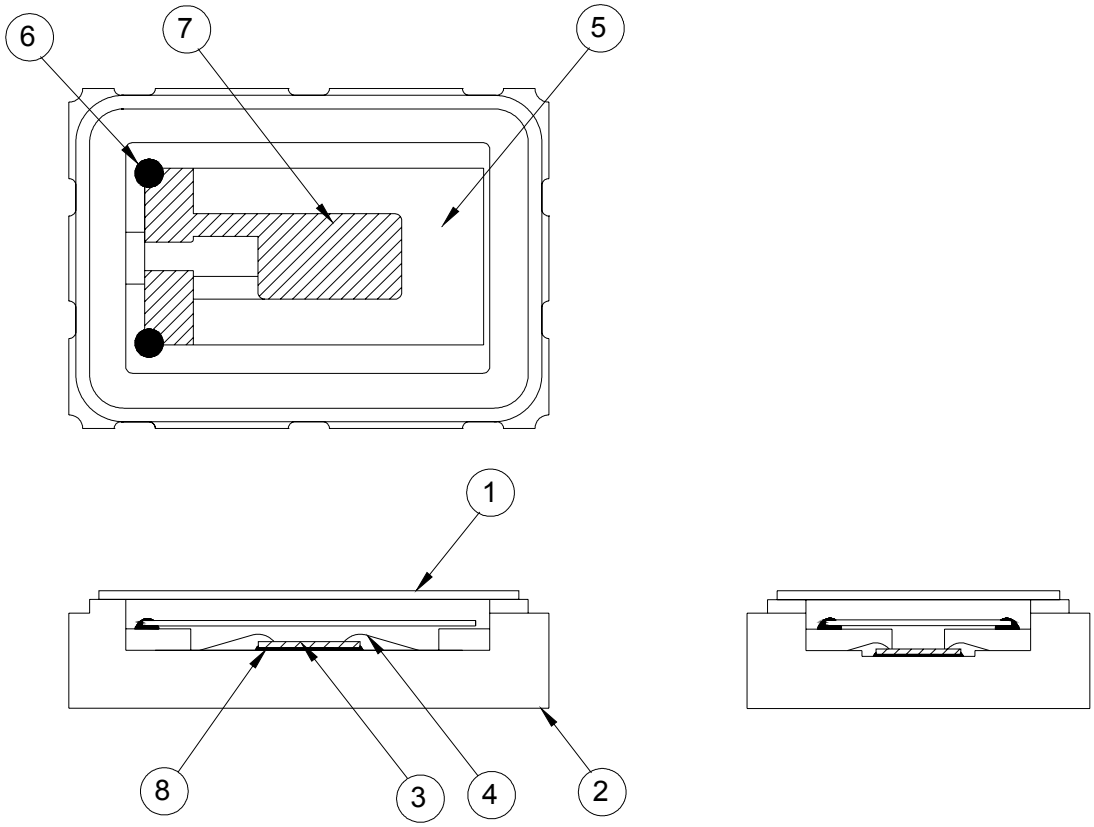




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■ STRUCTURE ILLUSTRATION



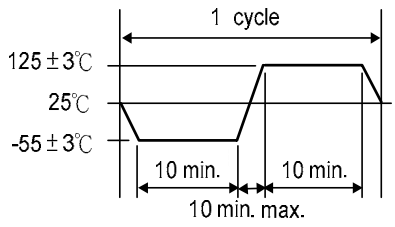
NO	COMPONENTS	MATERIALS	FINISH/SPECIFICATIONS
1	Lid	Kovar (Fe/Co/Ni)	-
2	Base(Package)	Ceramic (Al_2O_3) + Kovar (Fe/Co/Ni)+ Ag/Cu	-
3	IC chip	-	-
4	Bonding wire	Au	Pad 3 options : NC is 6 wires , EN is 7 wires.
5	Crystal blank	SiO_2	-
6	Conductive adhesive	Ag	Silicon resin
7	Electrode	Noble Metal	-
8	Conductive adhesive	Ag	Epoxy resin

■ RELIABILITY SPECIFICATIONS

1.Mechanical Endurance

No.	Test Item	Test Methods	REF. DOC
1.1	Drop Test	75 cm height, fall freely onto concrete floor 3 times.	JIS C6701
1.2	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
1.3	Vibration	Frequency range 10 ~ 2000 Hz Amplitude 1.52 mm Sweep time 20 minute perpendicular axes each test time 4 Hrs (Total test time 12 Hrs)	MIL-STD-883
1.4	Gross Leak	Standard Sample For Automatic Gross Leak Detector, Test Pressure: 2kg / cm^2	MIL-STD-883
1.5	Fine Leak	Pre-condition - Helium Bomging 4.5 Kgf / cm2 for 2 hrs Tested by mass-spectrumeter	
1.6	Solderability	Temperature 245 ℃ ± 5℃ 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
2.1	Resistance To Soldering Heat	Pre-heat temperature 125 ℃ Pre-heat time 60 ~ 120 sec. Test temperature 260 ± 5 ℃ Test time 10 ± 1 sec.	MIL-STD-202
2.2	High Temp. Storage	+ 125 ℃ ± 3 ℃ for 1000 Hrs	MIL-STD-883
2.3	Low Temp. Storage	- 40 ℃ ± 3 ℃ for 1000 Hrs	
2.4	Thermal Shock (Air to Air)	Total 100 cycles of the following temperature cycle 	MIL-STD-883
2.5	Pressure Cooker Test	120 ± 3℃ , RH100% , 2 bar ,for 240 Hrs	EIA-JESD22
2.6	High Temp & Humidity	85℃ ± 3℃, RH 85% , 1000 Hrs	EIA-JESD22
2.7	Aging	85℃ ± 3℃, Voltage input by specification, 1000 Hrs	EIA-JESD22