SERIES NO: VER C

SPECIFICATION FOR APPROVAL

CUSTOMER	
PRODUCT TYPE	SMD SEAM SEALING CXO 5.0*3.2
NOMINAL FREQ.	48.000000 MHz
TXC P/N	7C48000023
CUSTOMER P/N	
ISSUE DATE	10/28/2008

CUSTOMER'S APPROVAL

(Please return one copy with approval)

APPROVED	QA
Robert Chen	Steve Yeh

TXC CORPORATION

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SMD CRYSTAL CLOCK OSCILLATOR

(7C SERIES) SMD SEAM SEALING PACKAGE

PREPARED	APPROVED	QA
DENNIS	MICHAEL	LOUIS

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ATTACHMENT(S) (optional)

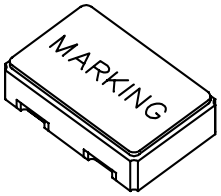
TESTING DATA

- ELECTRICAL CHARACTERISTICS TEST A ☐ YES ☑ NO
- TEMPERATURE CHARACTERISTICS TEST B ☐ YES ☑ NO

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* The detail marking spec. please refer to marking code page

ELECTRICAL SPECIFICATIONS

Parameters	SYM.	Electrical Spec.				Notes
		MIN	TYPE	MAX	UNITS	
Nominal Frequency			48.000000		MHz	
Frequency Tolerance@25°C			+/-15		ppm	
Frequency Stability *			+/-25		ppm	
Operating Temperature	Topr	-10	25	70	°C	
Storage Temperature	Tstg	-55		125	°C	
Supply Voltage	VDD		3.3 +/-10%		V	
Input Current	Icc			40	mA	
Stand by function			Yes			($\overline{ST}$ or $\overline{INH}$) Tri-state
Input Current (at Disable)	Iccst			10	uA	
Output Load : CMOS	CL		15		pF	
Output Voltage High	VoH	2.97			V	
Output Voltage Low	VoL			0.33	V	
Rise Time	Tr			10	ns	10%→90%VDD Level
Fall Time	Tf			10	ns	90%→10%VDD Level
Symmetry	TH/T	45	~	55	%	
Start-up Time	Tosc			10	ms	
Enable Voltage High	Vhi	2.4		VDD	V	
Enable Voltage Low	Vlo	GND		0.8	V	
Aging	fa			3	ppm/yr.	1st. Year at 25℃
Output Disable Delay Time				100	ns	
Output Enable Delay Time				100	ns	

* Frequency Stability is inclusive of 25 °C tolerance , operating temperature range , input voltage change, load change , first year of aging , shock and vibration .

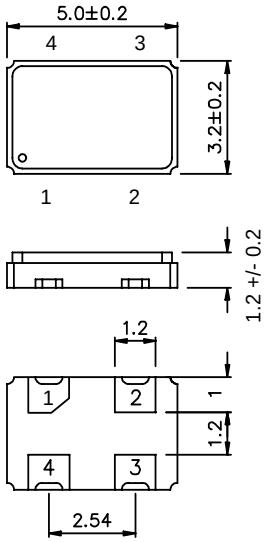
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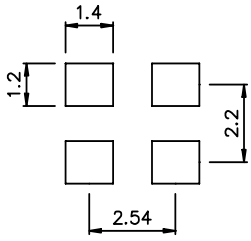
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DIMENSIONS

UNIT:mm

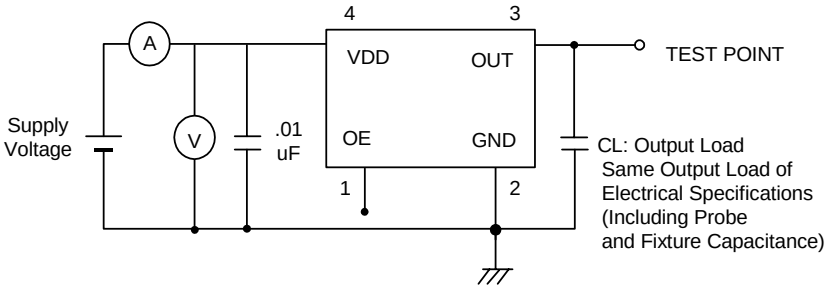


Pin Functions:
1. STAND BY
2. GND
3. OUT PUT
4. VDD



Suggested Layout

TEST DIAGRAM



Pad 1 options:

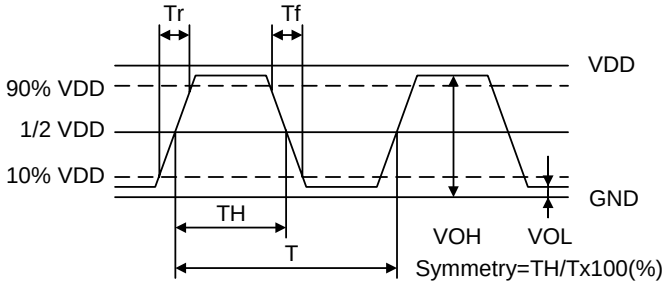
a. N/C

b. Control input (output enable/disable)

Logic 1 or open on pad 1: Oscillator output

Logic 0 on pad 1 : Disable output to high impedance

WAVEFORM CONDITIONS



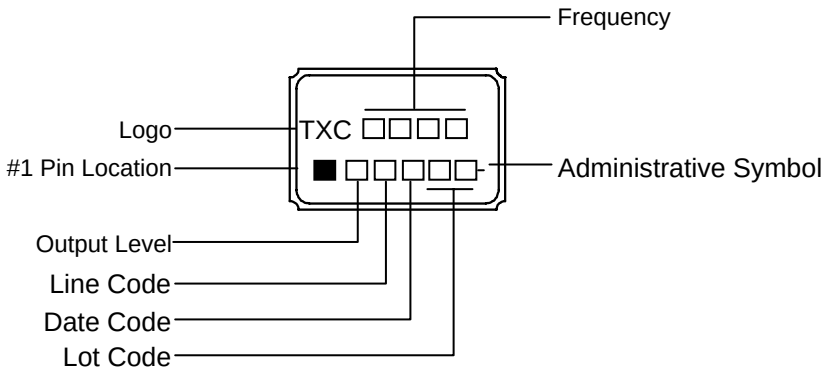
Waveform measurement system should have a min. bandwidth of 5 times the frequency being tested.

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MARKING



Output Level

VDD	5.0V	3.3V	2.8V	2.5V	1.8V
CODE	A	B	C	D	E

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

Example:

TXC 14.3
■ AAN01

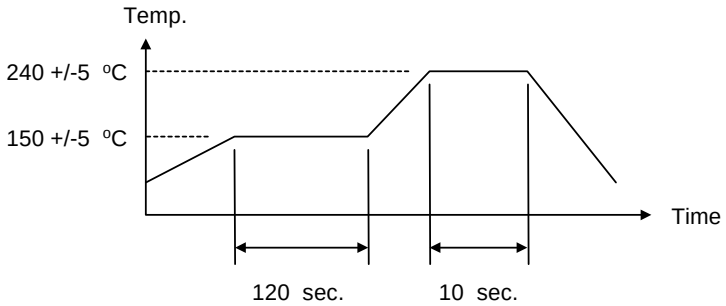
14.3181818MHz : 14.3

5.0V, A LINE, 2002 YEAR JAN, 01 LOT : AAN01

SUGGESTED REFLOW PROFILE

Total time : 200 sec. Max.

Solder melting point :185 ^{o}C

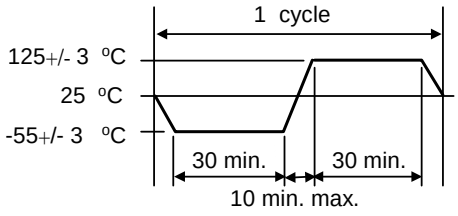


SMD CRYSTAL CLOCK OSCILLATOR

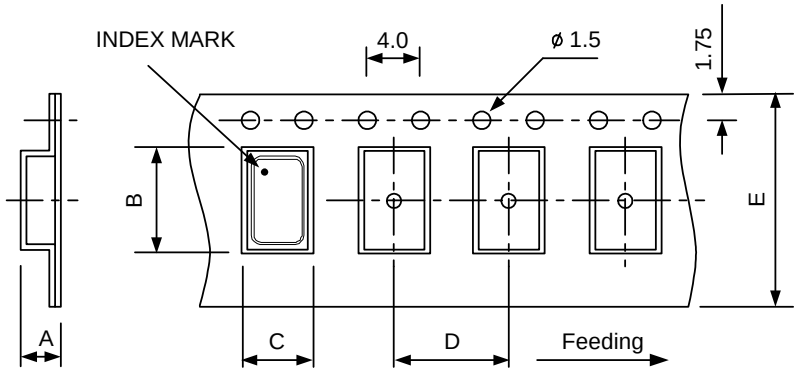
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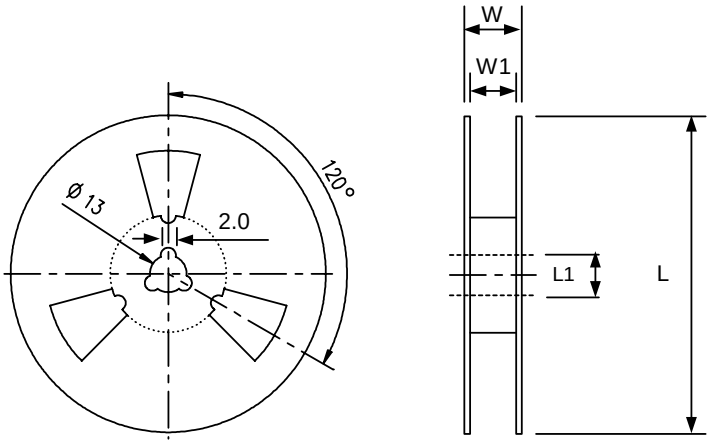
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RELIABILITY SPECIFICATIONS

No.	Test Item	Test Methods	
1	Drop Test	75 cm height, fall freely onto stainless plate 3 times.	JIS C6701
2	Mechanical Shock	Device are shocked to half sine wave (1000 G) three mutually pendicular axes each 3 times. 0.5m sec. duration time	MIL-STD-202F
3	Vibration	Frequency range 10 ~ 2000 Hz Amplitude 1.52 mm Sweep time 20 minute Pendicular axes each test time 4 hours (Total test time 12 hours)	MIL-STD-883E
4	Solderability	Temperature 215 °C +/- 5 °C Immersing depth 0.5 mm minimum Immersion time 10 +/- 0.5 seconds Flux Rosin resin methyl alcohol solvent (1 : 4)	MIL-STD-883E
5	Resistance To Soldering Heat	Pre-heat temperature 125 °C Pre-heat time 60 ~ 120 sec. Test temperature 260 +/- 5 °C Test time 5 +/- 1 sec.	MIL-STD-202F
6	High Temp. Storage	+ 125 °C +/- 2 °C for 1000 +/- 12 hours	MIL-STD-883E
7	Low Temp. Storage	- 40 °C +/- 2 °C for 1000 +/- 12 hours	
8	Thermal Shock	Total 10 cycles of the following temperature cycle 	MIL-STD-883E
9	High Temp. Operation	+ 85°C, VCC, for 1000 hours	MIL-STD-883E
10	Low Temp. Operation	- 40°C, VCC, for 1000 hours	MIL-STD-883E
11	Pressure Cooker Storage	120 +/- 3°C, RH100%, 2 bar, for 240 hours	

PACKING : (EIA-481-2)





UNIT : mm

DIMENSIONS	A	B	C	D	E	L	L1	W	W1	pcs / Reel
	1.46	5.5	3.6	8.0	12	180	13	15.4	13	1K

" Standard Reel Quantity is 1,000 pcs per reel "

REMARK :

1. 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.

2. 160 mm (6.3) minimum trailer of empty carrier tape sealed with cover tape.



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