

SHOULDER ELECTRONICS LIMITED

SPECIFICATION FOR APPROVAL

D A T E : 2013-01-29

CUSTOMER	
PRODUCT TYPE	3225 TCXO(3.0V -30/85°C ±0.5ppm 1.2Tmax)
NOMINAL FREQ.	26.000000 MHz
CUSTOMER P/N	N/A
SHOULDER P/N	TE005H26003TOC(3225TCXO26.000 0.5PPM 3.0V)

[USER]

CHECK	CHECK	APPROVAL
20	20	20
EXPIRATION DATE	20	

[SHOULDER]

CHECK	CHECK	APPROVAL
LEO	YORK	PERCY
20	20	20

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SCOPE

This specification is for SMD TCXO(Temperature Compensated Crystal Oscillator).

APPLICATION STANDARDS

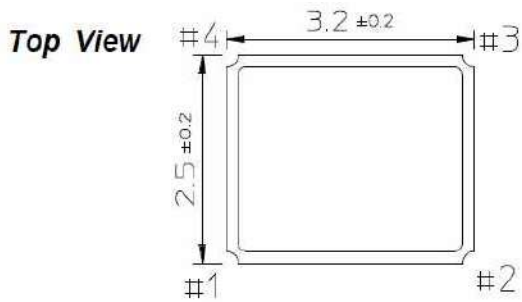
MIL-STD-883.

ELECTRICAL SPECIFICATIONS

Parameters		Electrical Specifications			
		MIN	TYP	MAX	UNITS
Frequency(Fo) ref: 25℃		26.000000			MHz
Frequency Tolerance at 25℃		-2.0		+2.0	ppm
Frequency Stability	Vs. Temperature Range	-0.5		+0.5	ppm
	Vs. Supply Voltage(±5%)	-0.1		+0.1	ppm
	Vs. Load(±5%)	-0.2		+0.2	ppm
	Vs. Aging(at 25℃)	-1.0		+1.0	ppm/year
Operating Temperature Range		-30		85	℃
Storage Temperature Range		-40		85	℃
Supply Voltage			3.0		VDC
Current Consumption				1.5	mA
Output Voltage Level		0.8			Vp-p
Output Waveform		Clipped Sinewave			
Output Load		10kΩ//10pF			
Start-up Time(90% of Vp-p)				3.0	mS
Duty Cycle		40		60	%
Phase Noise	10Hz Carrier Offset		-83		dBc/Hz
	100Hz Carrier Offset		-111		dBc/Hz
	1KHz Carrier Offset		-131		dBc/Hz
	10KHz Carrier Offset		-145		dBc/Hz
Remark					

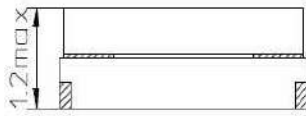
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DIMENSIONS(UNIT: mm)

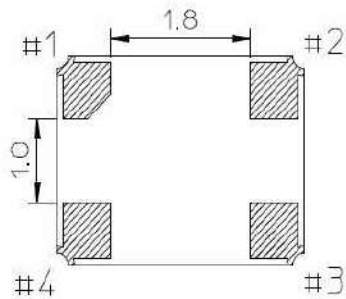


No.	Connection
#1	GND
#2	GND
#3	Output
#4	Vcc

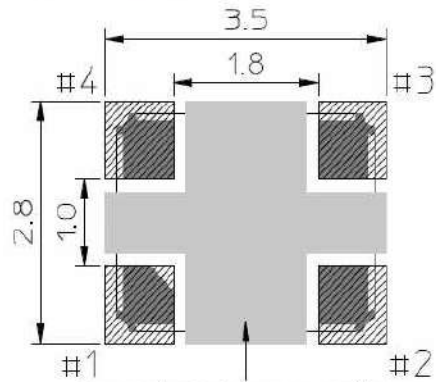
Side View



Bottom View



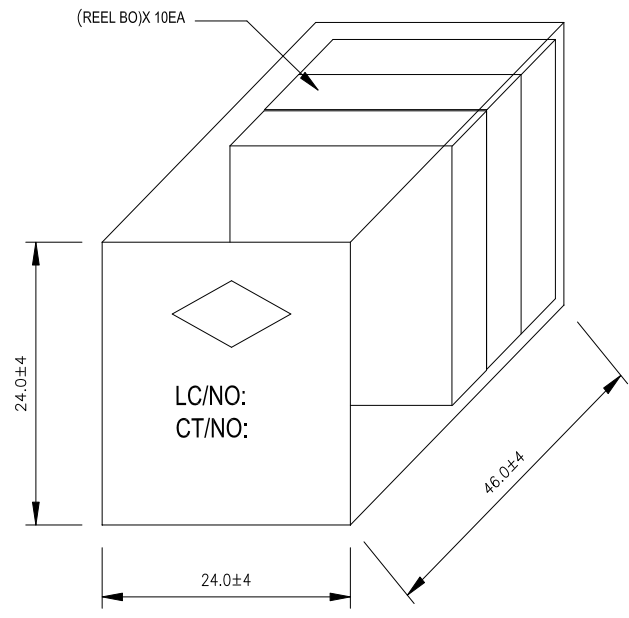
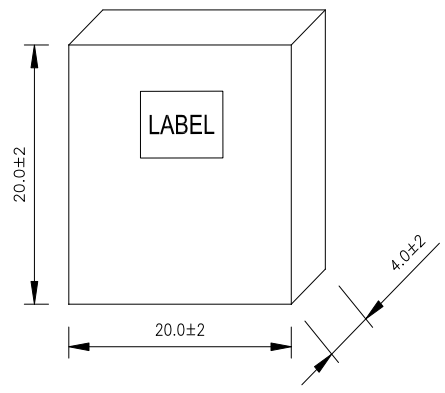
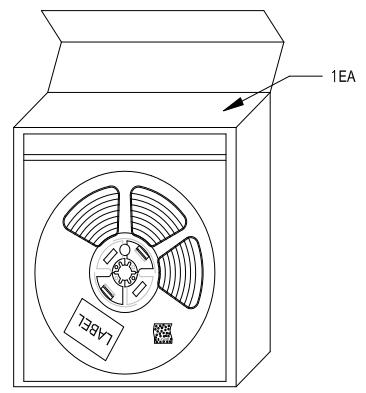
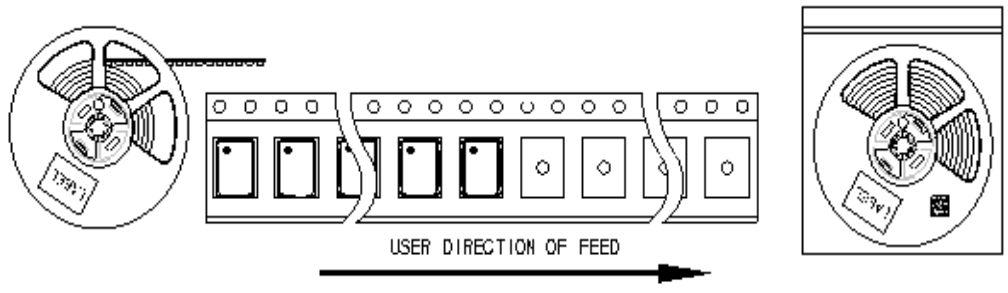
※ Recommended Land Pattern (Top View)



Do not design any patterns except GND in this area

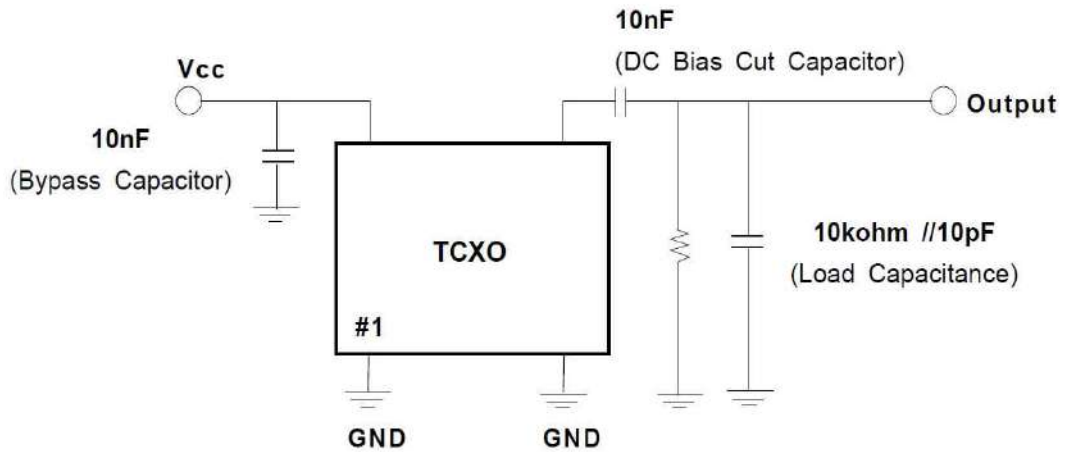
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OUTBOX DIMENSIONS(CM)



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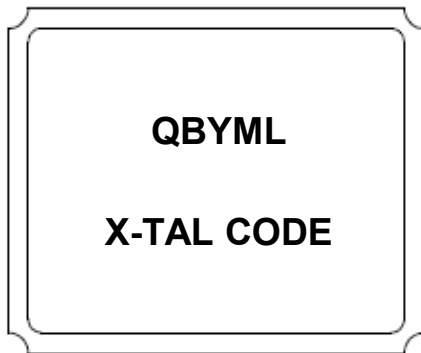
TEST DIAGRAM



※ Note

1. Be cautious of TCXO pin connection.
2. Load Capacitance includes probe and test JIG capacitance.

MARKING



1. Q : Frequency Code
2. B : Control Code
3. Y : Year
4. M : Month
5. L : Date

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RELIABILITY SPECIFICATION

NO	ITEMS	CONDITIONS
1	Solderability	Solder dip at 260°C for 5 seconds
2	Vibration	20 - 2000-20Hz , 1.55mm total amplitude, each directions(X,Y,Z)/3times, 4min
3	Drop	3 times drop onto hard wooden board from 75cm
4	High Temp. High Humidity	+45°C ±2°C , RH=90%±5% 96 hours minimum
5	High Tempe. Storage	+100°C ±5°C , 100 hours minimum
6	Low Tempe. Storage	-55°C ±5°C , 100 hours minimum
7	Thermal Shock	-25°C ±5°C , +85°C ±5°C , 15 minutes each 10 cycles
8	Aging	+125°C ±5°C , 24 hours minimum
9	Reflow	+260°C max, 10sec max

REFLOW SPECIFICATION

