

Description

apogeeLAB has created a special TXCO Oscillator, with very low jitter and special frequency accuracy.

Product Features

This specification, are available for this frequency:

- 11.2896 MHz
- 16.9344 MHz
- 18.4320 MHz
- 22.5792 MHz
- 24.5760 MHz
- 33.8688 MHz
- 45.1584 MHz

Performance Characteristics

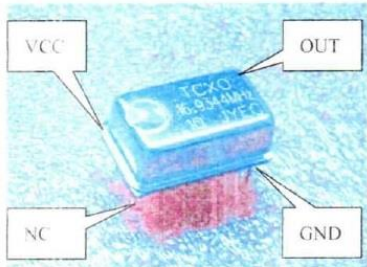
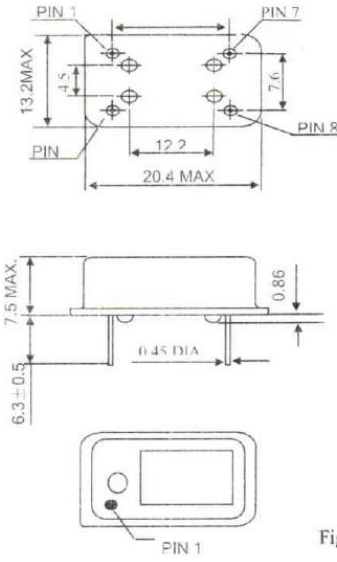
CONTENTS					
Temperature Compensated Crystal Oscillator (TCXO)					
1. Scope					
The specification is available to 24.576MHz TCXO. Which adopts the high precision crystal. It can be used for clock source and frequency source in communications equipment and test instrument.					
2. Specifications					
Frequency	24.576MHz	Power voltage	+5.0Vdc/±3.3Vdc	Power current	25mA (MAX.)
Waveform	TTL/CMOS	Duty cycle	40/60%	Frequency stability Vs. Temp.	±1.0PPM (-10 ~ +60°C)
Phase noise	-130dBc/1KHz@10M	Package	20.4*12.8*7.5mm	Frequency Accuracy	±0.1ppm Max.
Appearance	Cuprum Plate	Aging	±2PPM/year	Storage Temperature Range	-40~+85°C
3. Test Circuits:					
The block diagram of test circuits is shown in Fig. 1.					
4. Environmental Test					
4.1 Aging at high temperature					
High temperature aging at +105°C aging for 72 hours, the oscillator should meet the electrical and mechanical specifications.					
4.2 Shock at high and low temperatures					
Low temperature at -40°C, high temperature at +105°C, continuous shock 10 times. The switchover time between high and low temperature is less than 1 minute. The maintain time is greater than 30m after the high/low temperature keep static. After the shock at high/low temperatures, the oscillator should meet the electrical and mechanical specifications.					
5. Test of Physical Performance					
5.1 Lead strength test					
A force of 9 N is applied along the axial direction of the lead for 30 minutes. Then a force of 4.5N is applied to bend the lead in 90° angle at the point, where it is measured 5mm from the base of the oscillator for two times. The lead should not show any evidence of mechanical damage.					
5.2 Shock test					
The oscillator is dropped from the height of 50 cm in free condition on a 30 mm thick hard wood board for three times. Frequency change should meet the electrical and mechanical specifications.					
6. Processing Technique Test					
6.1 Solder ability test					
Soldering tin pb: SN=37: 63 alloy at 235°C ± 2°C in bath for 5s, 90% of leads covered. Take out, clean in pure alcohol.					
6.2 Peak solder test					
The hottest temp: T=250 ± 5°C longer than 4s. The product should meet the electrical and mechanical specifications.					

图 1. 测试电路

Performance Characteristics

7. Dimension
The sketch diagram of dimension is shown in Fig.2.

8. Marking
The sketch diagram of marking is shown in Fig.3.

PIN	FUNCTION
1	Nc
7	GND
8	OUTPUT
14	VDD




Fig2 Dimension

Sketch diagram of marking

9. Test Date

24.576MHz Data: Frequency liability VS Temp 单位(Hz)(VC=0V)

	-10℃	0℃	25℃	40℃	60℃
1#	24575976.66	24575987.23	24575996.57	24576009.10	24576015.74
	-8.10E-07	-3.80E-07	0.00E+00	5.10E-07	7.80E-07
2#	24575978.13	24575987.96	24575998.53	24576010.08	24576019.67
	-8.30E-07	-4.30E-07	0.00E+00	4.70E-07	8.60E-07
3#	24575980.83	24575988.21	24575999.51	24576007.62	24576020.89
	-7.60E-07	-4.60E-07	0.00E+00	3.30E-07	8.70E-07
1#	24575979.40	24575982.84	24575999.55	24576009.13	24576016.51
	-8.20E-07	-6.80E-07	0.00E+00	3.90E-07	6.90E-07

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