



Approved by:
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SPECIFICATION

MODEL: SJK-6T3-32.00-0.5-G

深圳市晶科鑫实业有限公司
SHENZHEN CRYSTAL TECHNOLOGY INDUSTRIAL CO., LTD.

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Specifications of Temperature Control Oscillator

Series6T3, SEAM SEALED CERAMIC 3.2 X 2.5MM Surface Mount Package



FEATURE

- I Device Name TCXO
- I Model Name
- I Nominal Frequency 32.00 MHz
- I Mass 0.026364g max.
- I Absolute Maximum Ratings

ELECTRICAL SPECIFICATIONS

(TA = -30 ~ +80 ° C, Load=10kΩ//10pF, VCC=+3.3V, unless otherwise noted)

	Item	Conditions	Limits			unit	Note
			min	Type	max		
1	Standard Frequency		32.00MHZ				
2	Current Consumption		-	-	2	mA	
3	Output Level		0.8	-	2	Vp-p	1
4	Symmetry	GND level (DC cut)	40/60	-	60/40	%	
5	Frequency Stability 1.Tolerance	Initial Tolerance(TA=+25° C)	-	-	±2.0	ppm	2
		After 2 times reflow(TA=+25° C)	-	-	±2.0	ppm	3.6
	2.vs Temperature	TA=-30 ~ +85 ° C	-	-	±0.5	ppm	4
	3 3.vs Slope		-	-	±0.1	ppm/° C	5
	4.vs Supply Voltage	VCC=+3.3V	-	-	±0.2	ppm	
	5..vs Load Variation	Load=(10kΩ//10pF)±10%	-	-	±0.2	ppm	
	6. Vs Aging	TA=Room ambient	-	-	±1.0	ppm/year	
6	Short term stability	Tau=1s	-	-	1.0	ppb	
7	Start Up	@90% of final Vout level	-	-	2.0	ms	
8	Phase Noise	Relative to F0 level Offset 1Hz	-	-	-57	dBc/Hz	
		Relative to F0 level Offset 10Hz	-	-	-85	dBc/Hz	
		Relative to F0 level Offset 100Hz	-	-	-110	dBc/Hz	
		Relative to F0 level Offset 1kHz	-	-	-130	dBc/Hz	
		Relative to F0 level Offset 10kHz	-	-	-140	dBc/Hz	
9	Operable Temperature Range		-30		70		° C

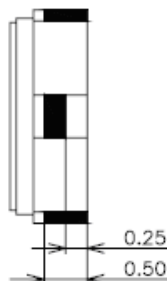
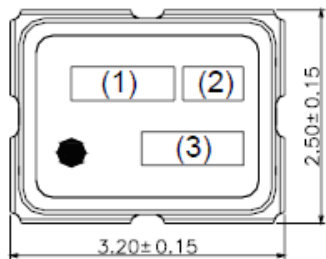
- Notes: 1. Clipped sine wave (DC-coupled)
 2. Ref. to Nominal Frequency.
 3. Please leave after reflow in 2-hour or more at room ambient.
 4. Ref. to Frequency (TA=+25 ° C)
 5. 1 Frequency reading for every 2° C
 6. Ref. to Frequency (Before Reflow)

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MARKING AND DIMENSIONS



Pin Connections

Pin No.	Connection
#1	GND
#2	GND
#3	OUTPUT
#4	Vcc

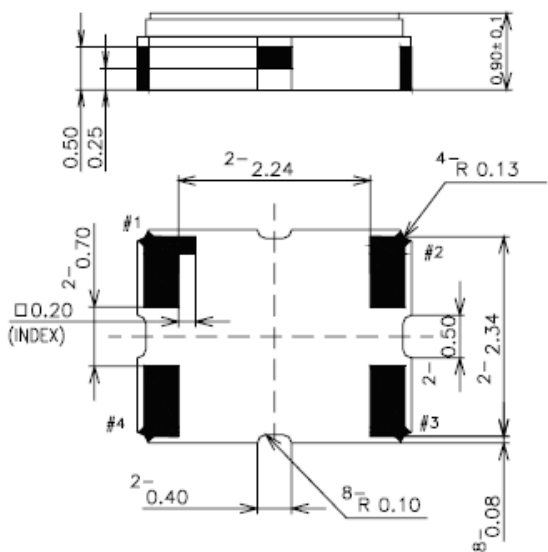
Marking

- (1) Frequency
- (2) Model code
- (3) EIA Date code

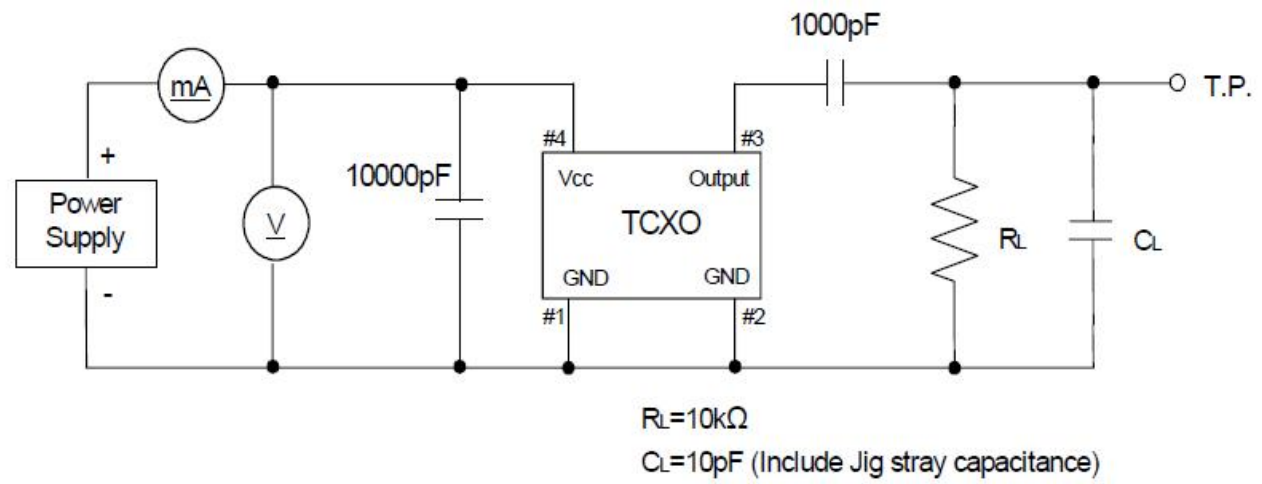
Unit:[mm]

Dimensional Tolerance: ±0.15

(Unless otherwise noted)



Measurement Circuit



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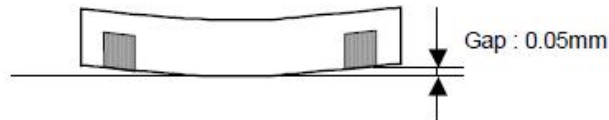
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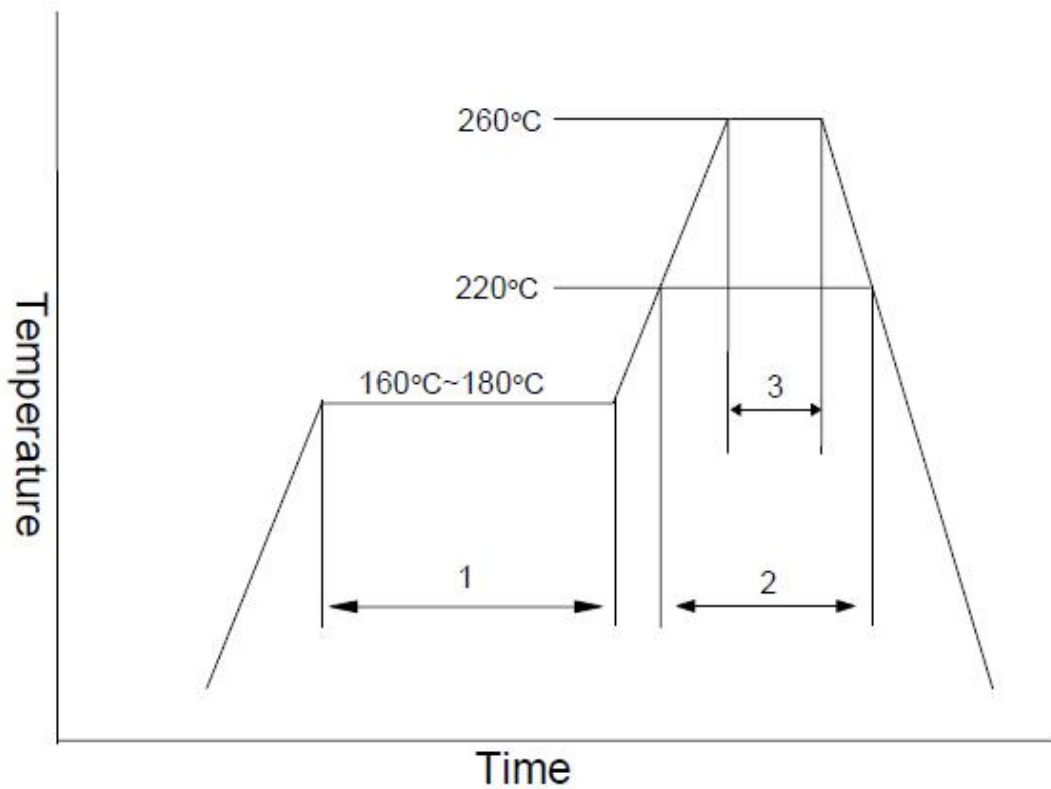


Flatness of Terminal

When the component is placed on the flat surface, the gap from the connecting terminal shall not exceed 0.05 mm.



Reflow Profile



1	Preheat	160~180°C	120s
2	Primary Heat	220°C	60s
3	Peak	260°C	10s max.

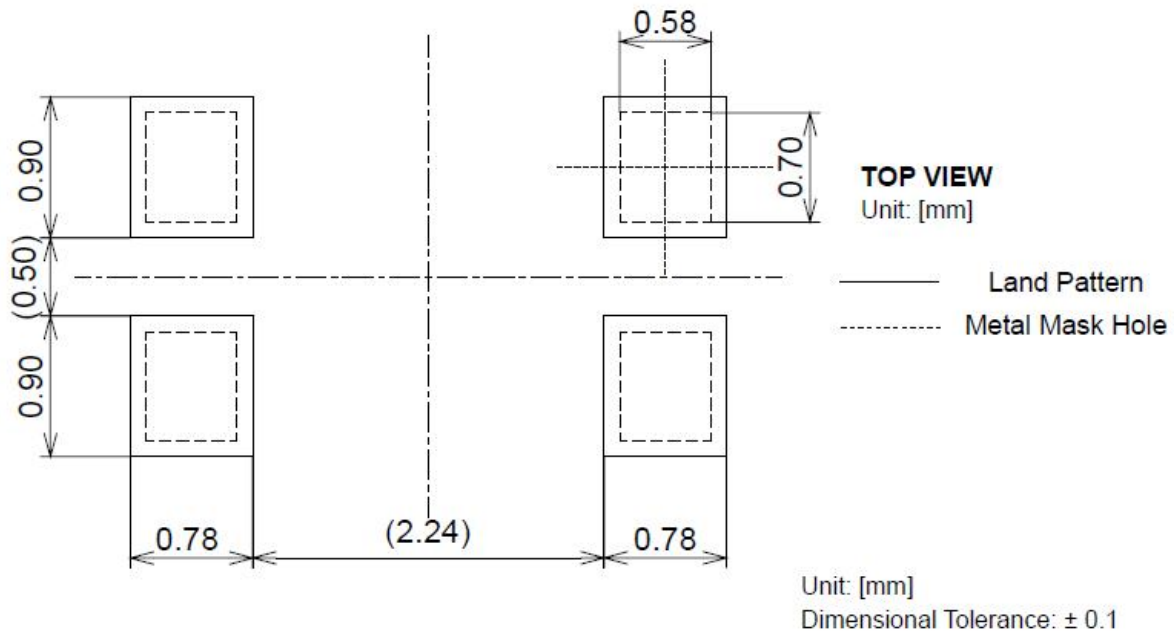
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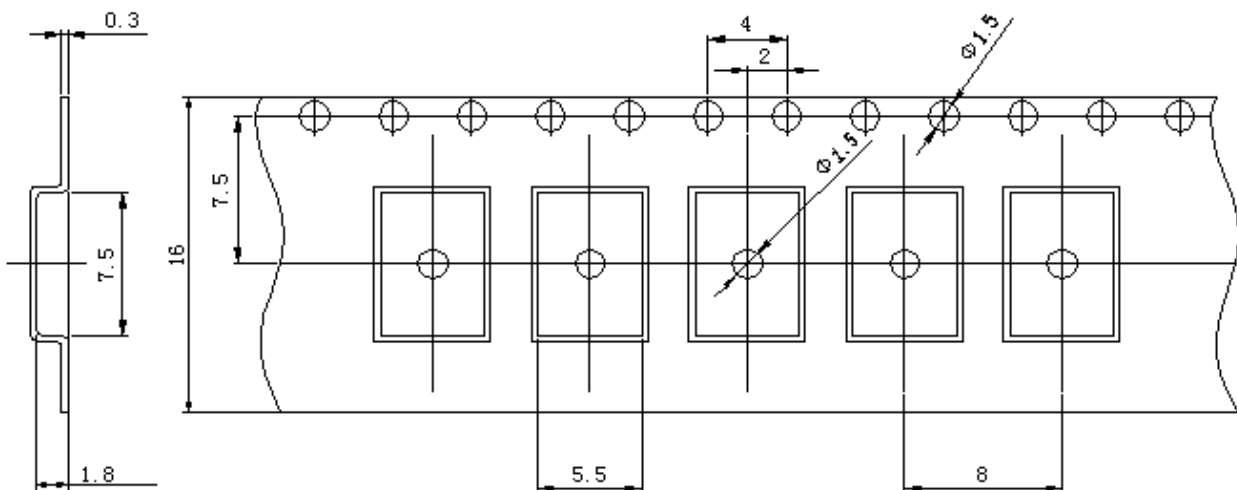
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Land Pattern Layout(Example)



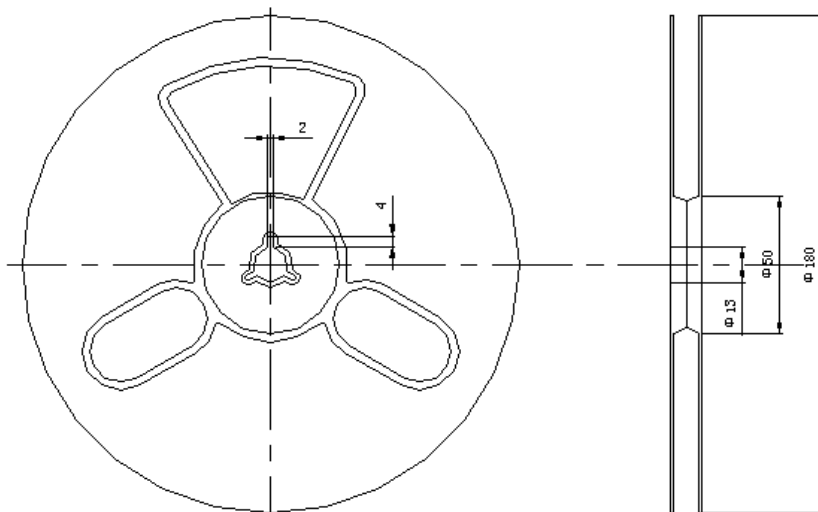
PACKING



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PART NUMBERING

SJK-	6T3	32.00	0.5	G
		Frequency 32.00: 32.00 MHz	Frequency tolerance e.g. 0.5:±0.5ppm	Operating Temperature A:-10-60°C B:-20-70°C C:-40-85°C D: -30-70°C E:-45-85°C F:-30-80°C G: -30-85°C

RELIABILITY TEST SPECIFICATION

Test item	Equipment	Condition	Specification
1. SOLDERABILITY TEST	SJK-REL001、RC-328A	1.solderability:235±5°C, 5±0.5S 2.heat resistance:260±5°C,10±1S restoration of 1 hour	MIL-STD-883E Method 2003.7
2. HERMETICITY TEST	HELIOT-306S	FC-84 FLUOROCARBON, BUBBLE MACHINE	MIL-STD-883E Method 1014.10
3. VIBRATION TEST	HG-V4、 S&A 250B	Enable Crystal (10g) from 0-500Hz, X、Y、Z horizontal, 1 Minute vibration/time, 1time/ 2 hours.	MIL-STD-883E Method 2007.3

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4. MECHANICAL SHOCK	HPC-200、S&A 250B	Enable Crystal 50G(490m/s ²) time=11 ms speed=3.4 m/s half sine wave oscillation	JIS C6701
5. DROP TEST	HARD BOARD. S&A250B	100CM HIGH, 3 TIMES ON HARD BOARD	MIL-STD-202F Method 213B
6. SALT SPRAY	H-SST-60、RC-328A	5% NaCL, 35°C±2°C CHAMBER, 48 hrs. , PH: 6.5~7.2	JIS C6701
7. HIGH&LOW TEMP STORAGE TEST(Static test)	H-PTH-80CK & HM101-3ABN, S&A 350B/250B	High temperature: 125°C±2°C, 96hr; Low temperature: -40°C±3°C, 96hrs	MIL-STD-883C, METHOD 1011.8
8. TEMP & HUM CYCLING TEST	H-PTH-80CK CHAMBE , S&A 350B/250B	Temperature: -10°C±2°C ~ 65°C±2°C, Humidity: 93±3%, 1 cycle need 24 hrs. 5cycles.	MIL-STD-883E Method 1005.8
9. HIGH TEM. & HUM. STORAGE TEST	H-PTH-80CK CHAMBE , S&A350B/250B	temperature: 40°C±2 , Humidity: 85+3, -2%, Store 96 hrs	JIS C6701
10. AGING TEST	H-PTH-80CK CHAMBE , S&A350B/250	temperature: 85°C±2, 720hrs	JIS C5023

Notes on mounting and handling

1. Storage environment

- (1) The temperature and humidity of a storage place, Please give +5 ~ +40°C and 40 ~ 85% as a standard.
- (2) Please use this product within one year from the packing label date of issue.
- (3) Please avoid the place which generates corrosive gas, and the place with much dirt.
- (4) Please keep it in a place with little temperature change.

Dew condensation arises owing to a rapid temperature change and solderability becomes bad.

2. Be cautions to static electricity and high voltage.

3. This product has sufficient durability to fall and vibration. However, conditions may change to the fall after mounting to a PWB, and vibration. When you should drop on a floor the PWB which mounted the product or too

much shock is added. Please use after a performance check.

4. Please check that the curvature of the substrate at the time of substrate cutting does not affect a product. Moreover, especially when a product is near the position of a PWB guide pin, and the position of a PWB break, be careful.

5. The part concerned does not correspond to washing.

6. Please repair at 260°C in 10s with hot air or 350°C in 5s with solder Iron.

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