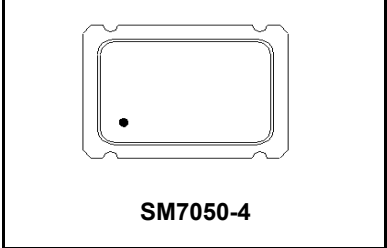


**XTC4002**

**49.152000 MHz  
XO**



## Features:

- Miniature SMD Package
- Good Frequency Stability
- Good Phase Noise Response
- Moisture Sensitivity Level: 1

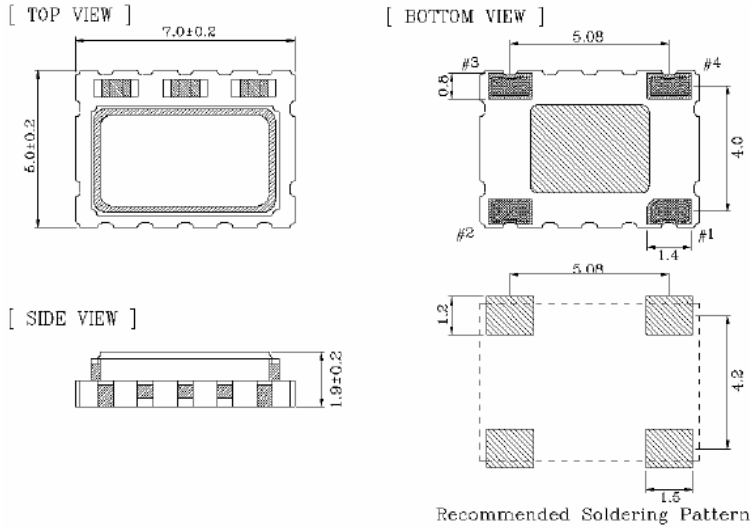
## Description and Applications:

Surface mount 7.0mm x 5.0mm TCXO for wireless communication system.

## Electrical Specifications:

| <b>XTC4002</b>   | <b>Specifications</b>                        |
|--|--|
| Nominal Frequency, Fo  | 49.152000 MHz                                |
| Storage Temperature Range  | -40°C to +85°C                               |
| Operating Temperature Range  | -40°C to +85°C                               |
| Power Supply Voltage, VDD  | 3.3 V +/- 5%                                 |
| Power Supply Current, IDD  | 8.0 mA max                                   |
| Frequency Tolerance as received  | +/- 1.0 ppm max @ 25°C +/- 3°C               |
| Frequency Stability<br>a. Vs. Temperature (-40~85°C)<br>b. Vs. Supply Voltage varied Vcc+/-5%            | +/- 3.0 ppm reference to 25°C<br>+/- 0.2 ppm |
| Output Waveform  | CMOS   |
| Load   | 15pF   |
| Linearity  | 10% max                                      |
| “0” Level<br>“1” Level   | 10% of VDD max<br>90% of VDD min             |
| Duty Cycle   | 45% ~ 55%                                    |
| Start Up Time  | 2.0 msec max.                                |
| Rise Time ( 10% -> 90% of final RF level in Vp-p )<br>Fall Time ( 90% -> 10% of final RF level in Vp-p ) | 8 nsec max.<br>8 nsec max.                   |
| Aging  | +/-1 ppm / year @ 25°C                       |
| SSB Phase Noise<br>(@10KHz Carrier Offset)   | -145 dBc/Hz typ                              |
| Marking  | Laser Marking                                |

# Mechanical Dimensions (mm):

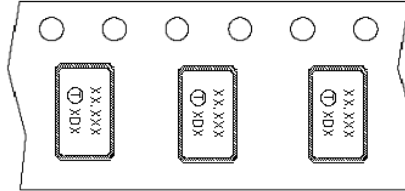


| Pin | Function        |
|-----|-----------------|
| #1  | NC / GND        |
| #2  | GND             |
| #3  | Output          |
| #4  | V <sub>DD</sub> |

## Marking:

Line 1: Frequency (49.152)

Line 2: Product code + Date Code + Traceability Code (XX)



## Product Code Table

| Year         | 2009 | 2010 | 2011 | 2012 |
|--------------|------|------|------|------|
|              | 2013 | 2014 | 2015 | 2016 |
|              | 2017 | 2018 | 2019 | 2020 |
| product code | X    | x    | X    | x    |

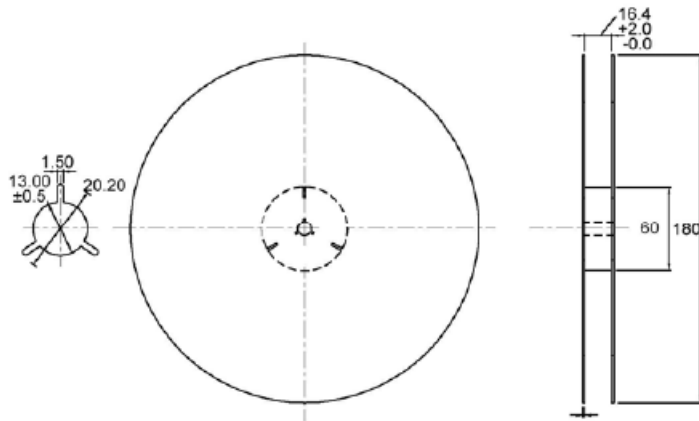
## Date Code Table

| Date Code Table |      |      |      |      |      |      |      |      |      |      |      |      |
|-----------------|------|------|------|------|------|------|------|------|------|------|------|------|
| WK01            | WK02 | WK03 | WK04 | WK05 | WK06 | WK07 | WK08 | WK09 | WK10 | WK11 | WK12 | WK13 |
| A               | B    | C    | D    | E    | F    | G    | H    | I    | J    | K    | L    | M    |
| WK14            | WK15 | WK16 | WK17 | WK18 | WK19 | WK20 | WK21 | WK22 | WK23 | WK24 | WK25 | WK26 |
| N               | O    | P    | Q    | R    | S    | T    | U    | V    | W    | X    | Y    | Z    |
| WK27            | WK28 | WK29 | WK30 | WK31 | WK32 | WK33 | WK34 | WK35 | WK36 | WK37 | WK38 | WK39 |
| a               | b    | c    | d    | e    | f    | g    | h    | i    | j    | k    | l    | m    |
| WK40            | WK41 | WK42 | WK43 | WK44 | WK45 | WK46 | WK47 | WK48 | WK49 | WK50 | WK51 | WK52 |
| n               | o    | p    | q    | r    | s    | t    | u    | v    | w    | x    | y    | z    |

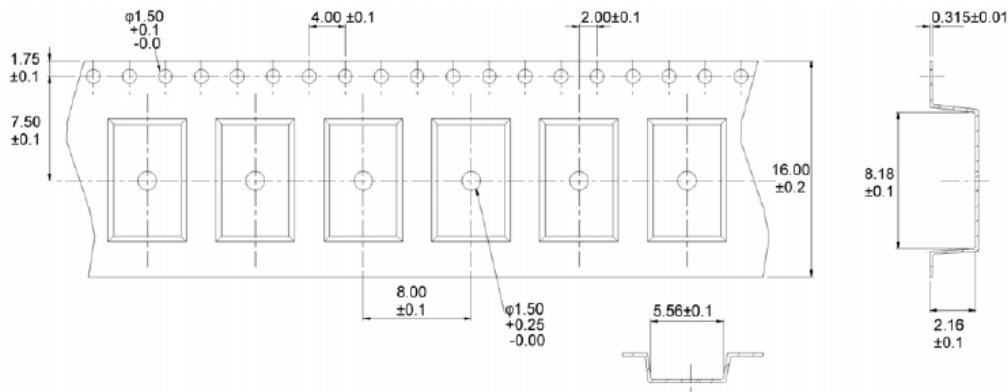
# Packing :

## 1. Reel Dimension

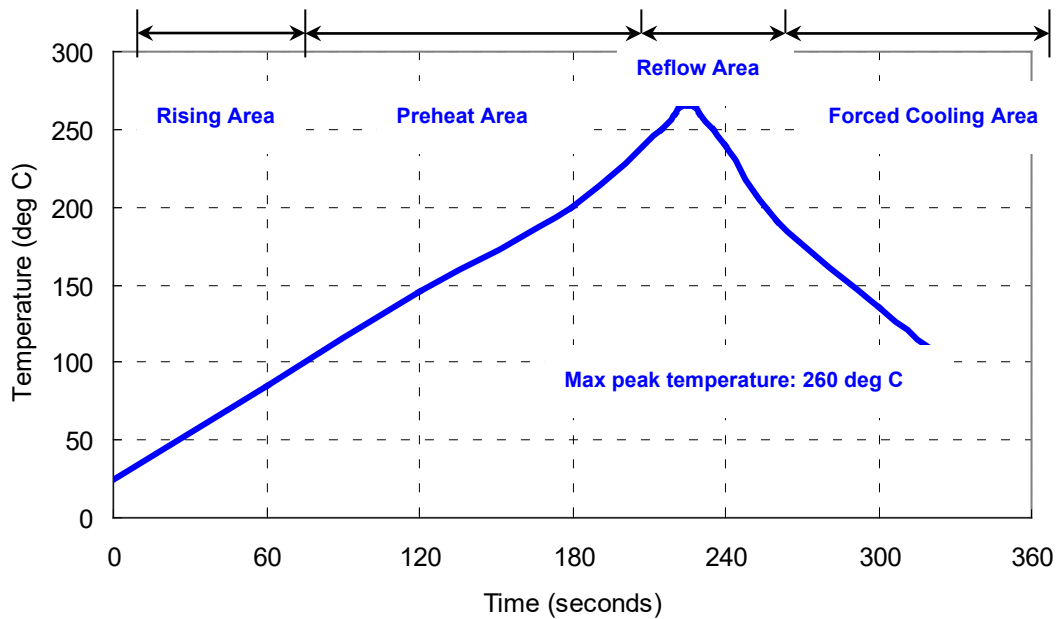
Reel Count:  
7" = 1000



## 2. Tape Dimension



## Reflow Profile:



## Notes of the Usage:

1. Touch the solder iron at  $260 \pm 5$  deg C onto the leads for  $10 \pm 2$  sec max or touch the solder at  $350 \pm 5$  deg C onto the leads at  $3 \pm 0.5$  sec.
2. In the customer's reflow process, if it will remain some mechanical stress at the soldering terminals, also make some cracks on the soldering termination. Some cracks will cause open or short circuit and cause of thermal increasing or smoking. Don't make any excess mechanical stress to soldering points.
3. In case of giving a heavy shock to the products, it may make an open or short circuit and cause of thermal increasing and smoking. To avoid heavy shock impact applying to products is strictly required.

## Notes of the Storage:

1. To keep products under the condition at the room temperature ( $-5 \sim 35$  deg C) with normal humidity (45~75%). Absorption of moisture and dewdrop may make inferiority of characteristics and a short circuit.
2. Oxidization of terminals shall make the solderability more inferior. Dusts and corrosive gas will make a cause of the open or short circuit. Keep it in the clean place where is not in dusty and no corrosive gas.
3. Use the anti-static material to the storage package.
4. Don't put any excess weight to the TCXO in the storage process.
5. Don't move the product from the cold place to the hot place in the short time, otherwise it may make some dew-drop, then a short circuit may happen in case.
6. Storage periods should be maximum 6 months under condition of above item 1 after delivery from the factory.
7. Once open the bag, there is possibility of electrical characteristics deterioration due to absorption of moisture. So, please use parts within 7 days after opening the bag.

If you have to keep parts without using after opening the bag, please put the drying agent in the bag, fold the bag and keep it in the place where temperature and humidity are controlled (nitrogen atmosphere box etc.)



**CAUTION: Electrostatic Sensitive Device. Observe precautions for handling.**

### NOTES:

1. The design, manufacturing process, and specifications of this device are subject to change.
2. US or International patents may apply.
3. RoHS compliant from the first date of manufacture.