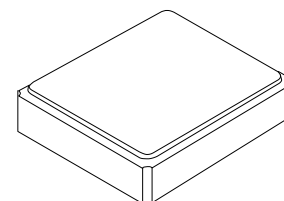


XTC7074G

**14.7456 MHz
TCXO**



SM2520-4

Features:

- Ultra Miniature SMD Package
- Good Frequency Stability
- Good Phase Noise Response
- Moisture Sensitivity Level (MSL) : Level-1

Description and Applications:

Surface mount 2.5mm x 2.0mm TCXO for use in wireless communications devices

Electrical Specifications:

| XTC7074G | Specifications |
|---|--------------------------------|
| Nominal Frequency, Fo | 14.745600 MHz |
| Storage Temperature Range | -40°C to +85°C |
| Operating Temperature Range | -10°C to +60°C |
| Power Supply Voltage, Vcc | 3.0~3.3 V (Nominal to 3.15V) |
| Output Voltage with Load 10pF//10KΩ, Vout | 0.8 Vp-p min |
| Output Waveform | Clipped Sinewave |
| Output Load | 10pF//10KΩ |
| Power Supply Current, Icc | 2.0 mA max |
| Frequency Tolerance as Received Ref. to Nominal Frequency | +/- 1.0 ppm max @ 25°C +/- 3°C |
| Frequency Deviation after 2 x Reflow Ref. to pre-reflow Freq. | +/- 1.0 ppm max @ 25°C +/- 3°C |
| Frequency Stability | |
| a. Vs. Temperature (-10~60°C) | +/- 1.0 ppm reference to 25°C |
| b. Vs. Load varied 10pF//10KΩ+/-5% | +/- 0.2 ppm |
| c. Vs. Supply Voltage varied Vcc+/-5% | +/- 0.2 ppm |
| Start Up Time (90% of final RF level in Vp-p) | 3.0 msec max. |
| Aging | +/-1.0 ppm/year @25°C |
| Harmonics | -5.0 dBc max |
| SSB Phase Noise (@1KHz Carrier Offset) | -132 dBc/Hz max |

Enable/Disable Function (OE function)

Pin 1: 0.8 Vcc min, Pin 3:Enable
 Pin 1: 0~0.2 Vcc, Pin 3 :Disable
 Pin 1: Do not use in open condition

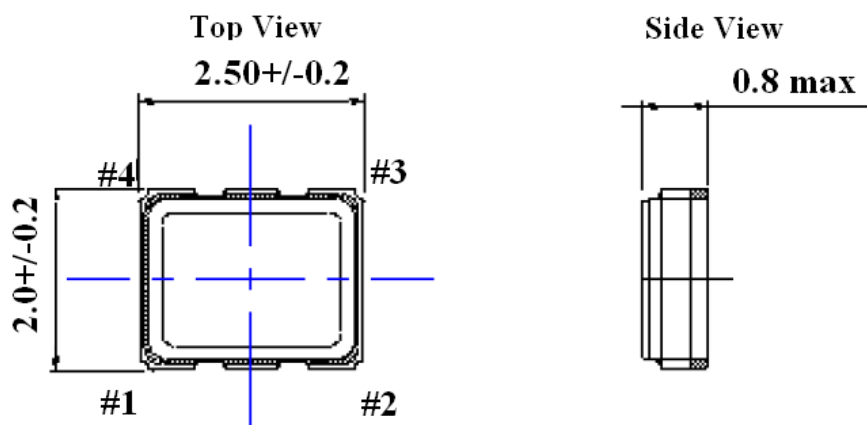


CAUTION: Electrostatic Sensitive Device. Observe precautions for handling.

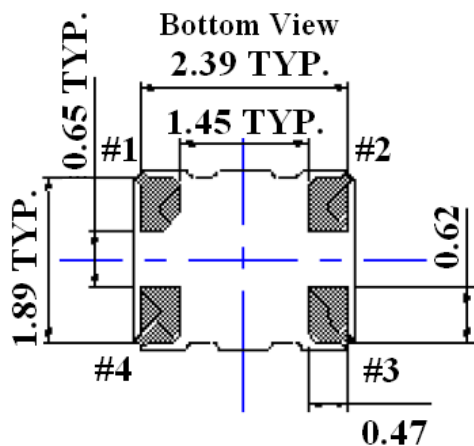
NOTES:

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.

Mechanical Dimensions (mm):



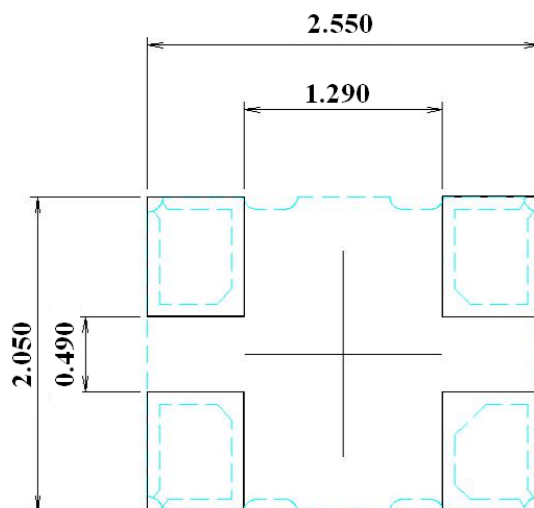
Unit:mm



| Pin Out For TCXO | |
|------------------|--------------------|
| Pin# | Pin Connection |
| 1 | Ground Recommended |
| 2 | GND |
| 3 | Output |
| 4 | Vcc |

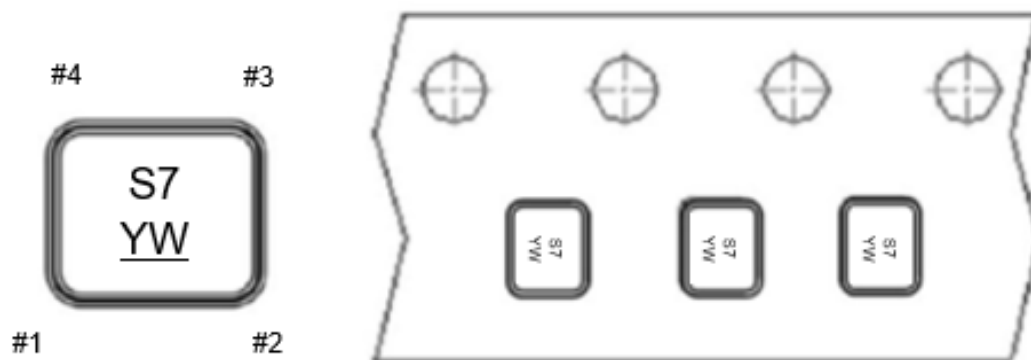
Recommended Land Pattern: (unit: mm)

Reference Land Pattern

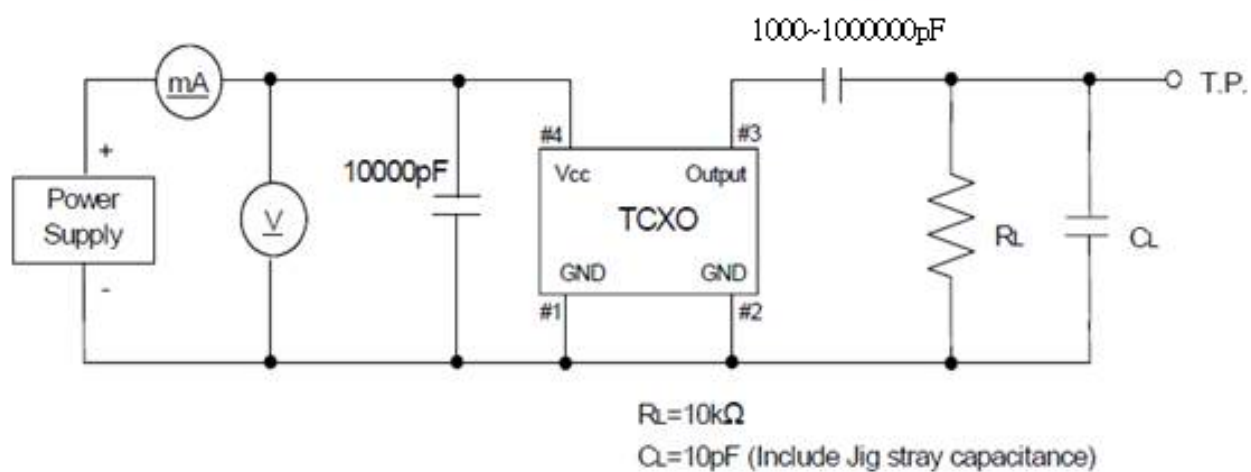


Marking:

Y = Year, W = Week

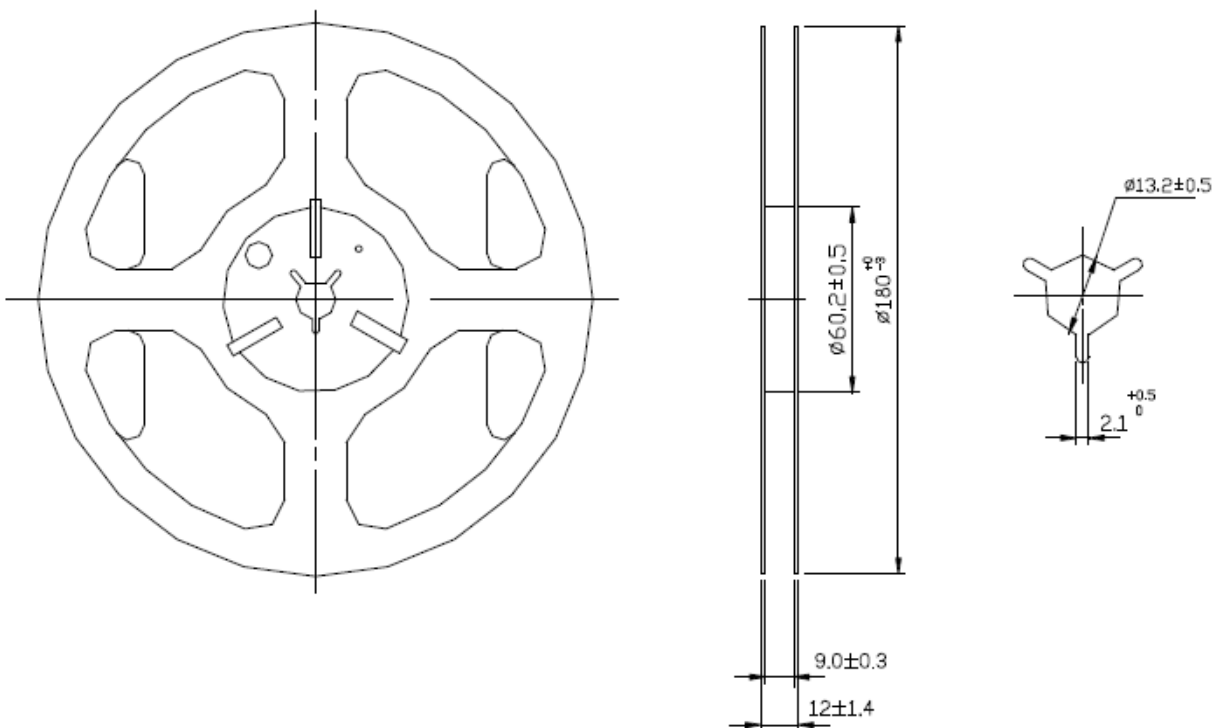


Recommended Circuit

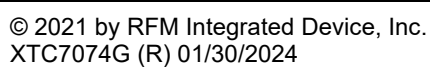


Reel Dimension

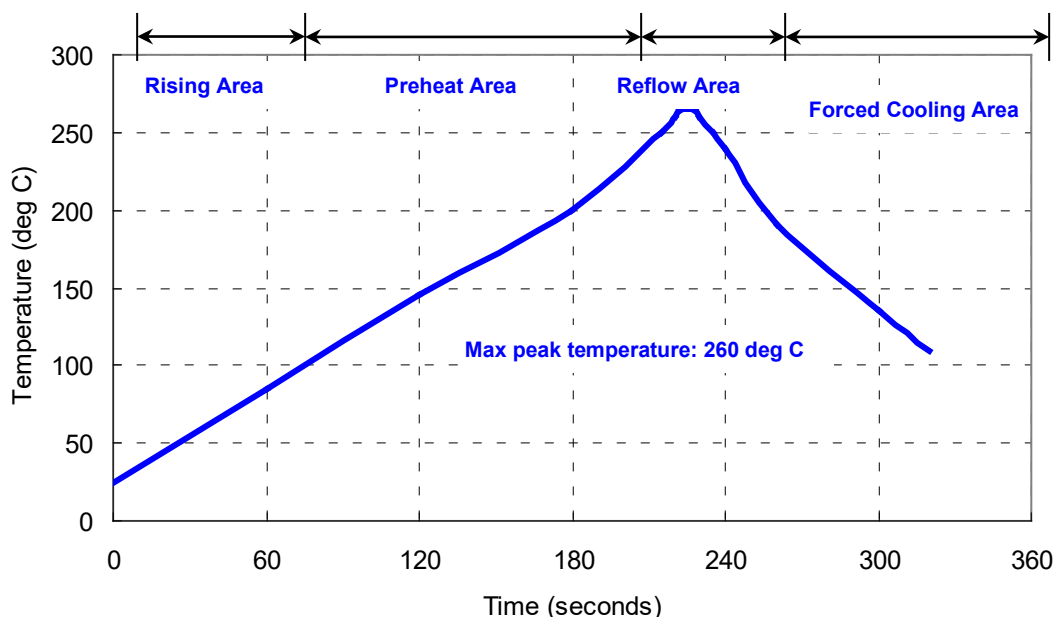
7" REEL COUNT = 3000



Packing Quantity/Packing:



Reflow Profile:



Notes of the Usage:

1. Touch the solder iron at 260 ± 5 deg C onto the leads for 10 ± 2 sec max or touch the solder at 350 ± 5 deg C onto the leads for 3 ± 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.
4. Ultrasonic cleaning should be avoided to prevent damage to the TCXO.
5. Do Not Use Ultrasonic-Wave Soldering or Wave Solder with Package Immersed in Solder.

Notes of the Storage:

1. To keep products under the condition at the room temperature (-5~35 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.
8. 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.)

Reliability Specifications

| Test name | Test process / method | Reference standard |
|--|--|-------------------------------|
| Mechanical characteristics | | |
| resistance to Soldering heat (IR reflow) | Temp./ Duration : 265°C /10sec ×2 times Total time : 4min.(IR-reflow) | EIAJED-4701 -300(301)M(II) |
| Vibration | Total peak amplitude : 1.5mm Vibration frequency : 10 to 2000 Hz Sweep period : 20 minute Vibration directions : 3 mutually perpendicular Duration : 2 hr / direc. | MIL-STD 202G method 204 |
| Mechanical Shock | directions : 3 impacts per axis Acceleration : 3000g's, +20/-0 % Duration : 0.3 ms (total 18 shocks) Waveform : Half-sine | MIL-STD 202G method 213 |
| Solderability | Solder Temperature:265±5°C Duration time: 5±0.5 seconds. | J-STD-002 |
| Environmental characteristics | | |
| Thermal Shock | Heat cycle conditions -40 °C (30min) ↔ 85 °C (30min) * cycle time : 10 times | MIL-STD 883G method 1010.8 |
| Humidity test | Temperature : 85 ± 2 °C Relative humidity : 85% Duration : 96 hours | MIL-STD 202G method 103 |
| Dry heat (Aging test) | Temperature : 125 ± 2 °C Duration : 168 hours | MIL-STD 202G method 108A |
| Cold resistance (Low Temp Storage) | Temperature : -40 ± 2 °C Duration : 96 hours | IEC 60068-2-1 |