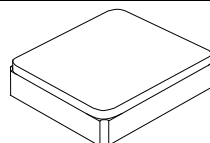


XTC7042-1

**26.0 MHz
TCXO**



SM2016-4

Features:

- Ultra Miniature SMD Package
- Good Frequency Stability
- Good Phase Noise Response
- Moisture Sensitivity Level (MSL) : Level-1
- AEC-Q200 (IC: AEC-Q100) compliant

Description and Applications:

Surface mount 2.0mmx1.6mm TCXO for use in wireless communications devices

Electrical Specifications:

XTC7042-1	Specifications
Nominal Frequency, Fo	26.0 MHz
Storage Temperature Range	-40°C to +105°C
Operating Temperature Range	-40°C to +105°C
Power Supply Voltage, Vcc	1.8~3.3 V
Output Voltage with Load 10pF//10KΩ, Vout	0.8 Vp-p min
Power Supply Current, Icc	1.5 mA max
Frequency Tolerance as Received Ref. to Nominal Freq	+/- 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 (-30~85°C) b. Vs. Temperature (-40~-30°C) c. Vs. Temperature (85~-105°C) d. Vs. Load varied 10pF//10KΩ+/-10% e. Vs. Supply Voltage varied Vcc+/-5%	+/- 0.5 ppm reference to the middle point between minimum and maximum frequency value +/- 2.5 ppm +/- 10 ppm +/- 0.2 ppm +/- 0.1 ppm
Frequency slope (Minimum of one measurement every 2°C)	+/-0.1 ppm/°C@-30°C~+85°C +/-0.5 ppm/°C@-40°C~+30°C
Start Up Time (90% of final RF level in Vp-p)	2.0 msec max.
Aging	+/-1.0 ppm/year @25°C
Harmonics	-8.0 dBc max

SSB Phase Noise(@1Hz Carrier Offset) (@10Hz Carrier Offset) (@100Hz Carrier Offset) (@1KHz Carrier Offset) (@10KHz Carrier Offset)	-57 dBc/Hz max -88 dBc/Hz max -112 dBc/Hz max -130 dBc/Hz max -140 dBc/Hz max
Marking	Laser marking

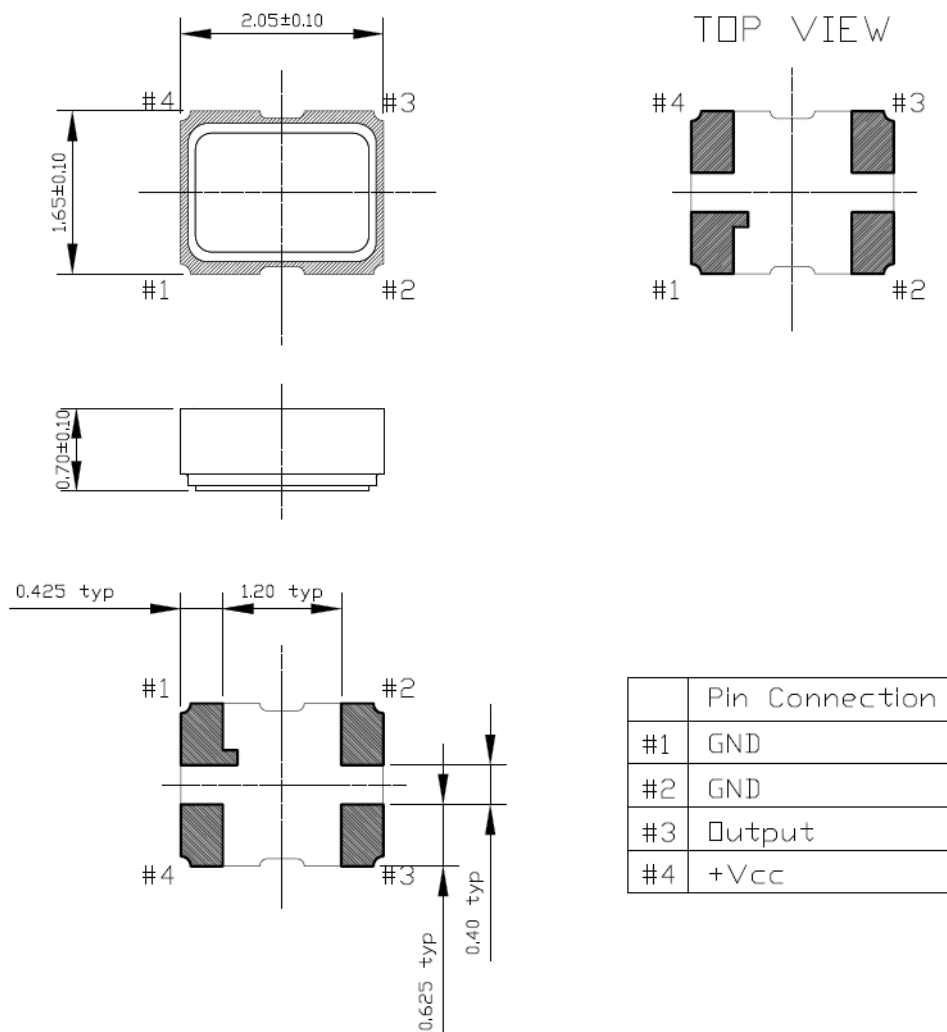


CAUTION: Electrostatic Sensitive Device. Observe precautions for handling.

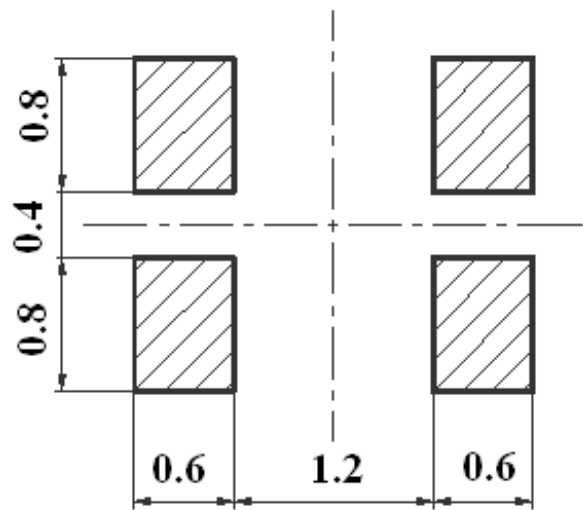
NOTES:

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

Mechanical Dimensions (mm):



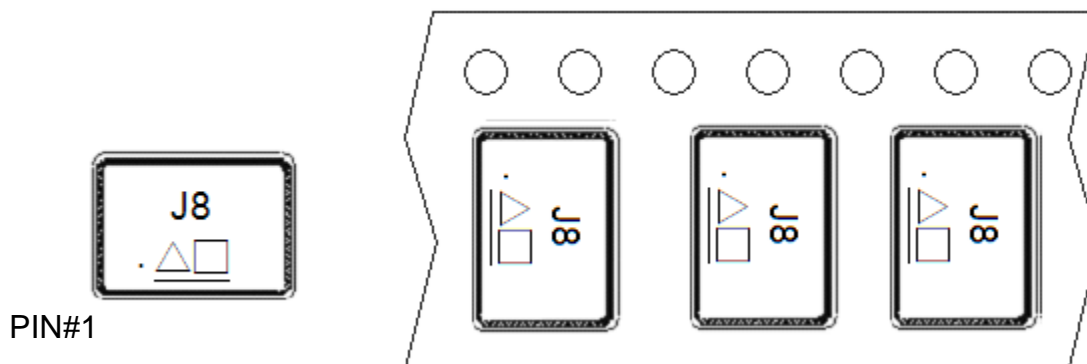
Recommended Land Pattern: (unit: mm)



Marking:

Line 1: Letter (J8)

Line 2: Symbol (.) + Year Code (\triangle) + Week Code (\square)



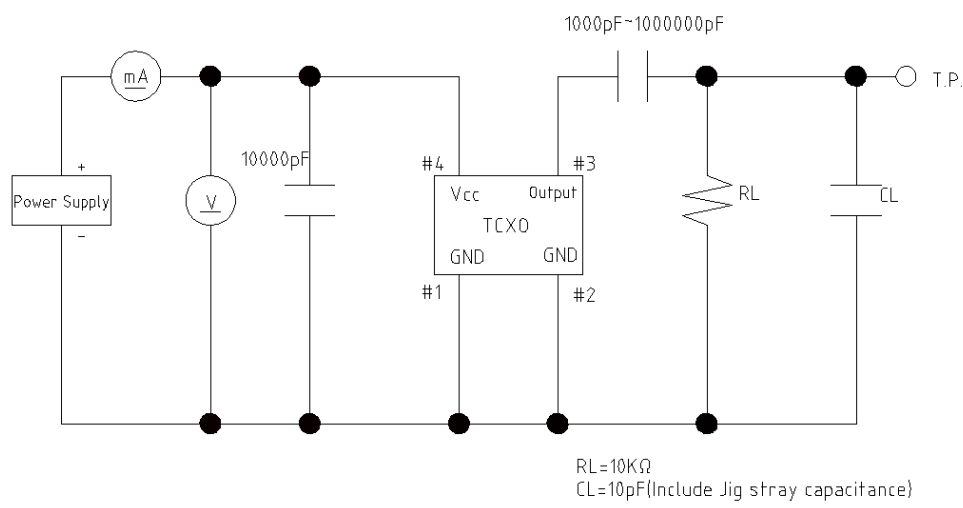
Year Code (\triangle) :

Year	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029
Code	0	1	2	3	4	5	6	7	8	9

Week Code (\square) :

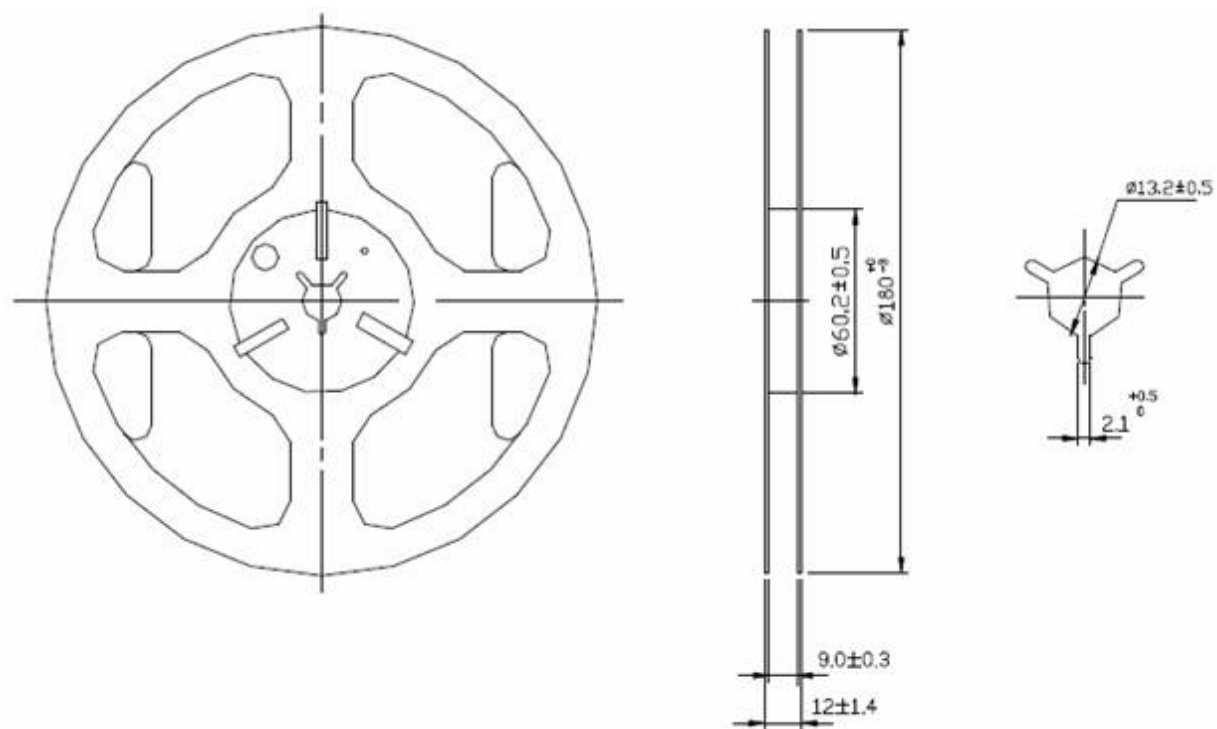
WK01	WK02	WK03	WK04	WK05	WK06	WK07	WK08	WK09	WK10	WK11	WK12	WK13
A	B	C	D	E	F	G	H	I	J	K	L	M
WK14	WK15	WK16	WK17	WK18	WK19	WK20	WK21	WK22	WK23	WK24	WK25	WK26
N	O	P	Q	R	S	T	U	V	W	X	Y	Z
WK27	WK28	WK29	WK30	WK31	WK32	WK33	WK34	WK35	WK36	WK37	WK38	WK39
a	b	c	d	e	f	g	h	i	j	k	l	m
WK40	WK41	WK42	WK43	WK44	WK45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

Recommended Circuit

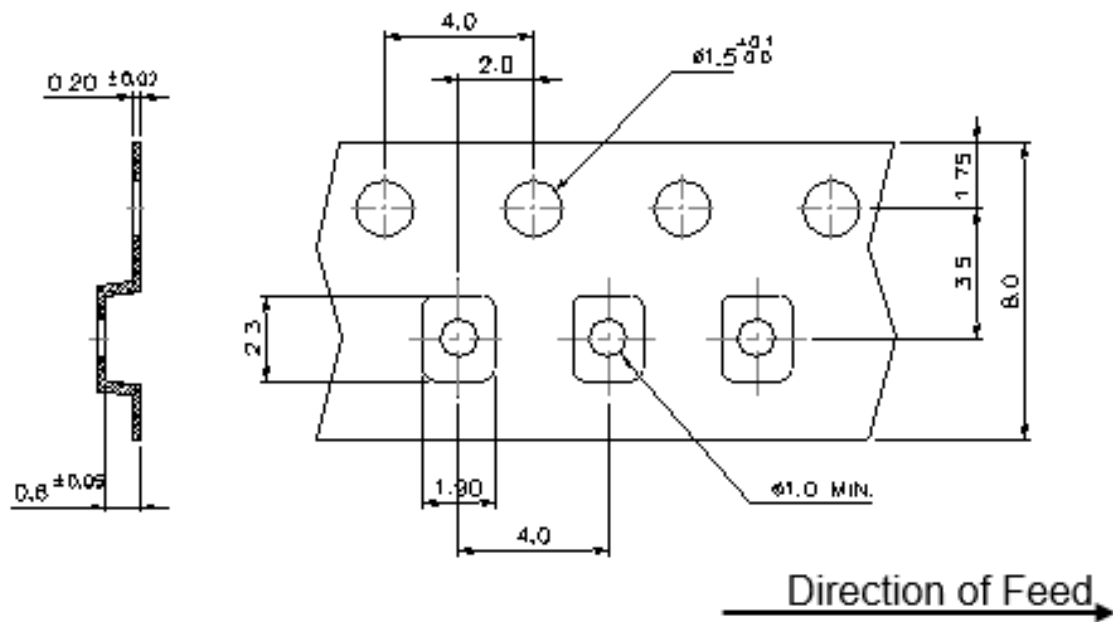


Reel Dimension

7" reel = 3000



Tape Dimensions (mm):

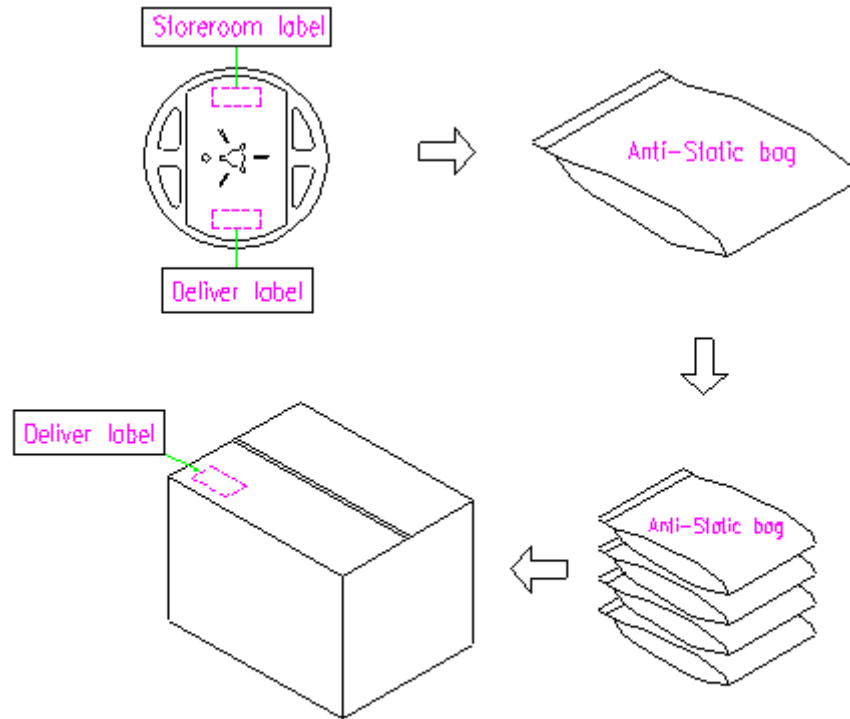


[NOTE]:

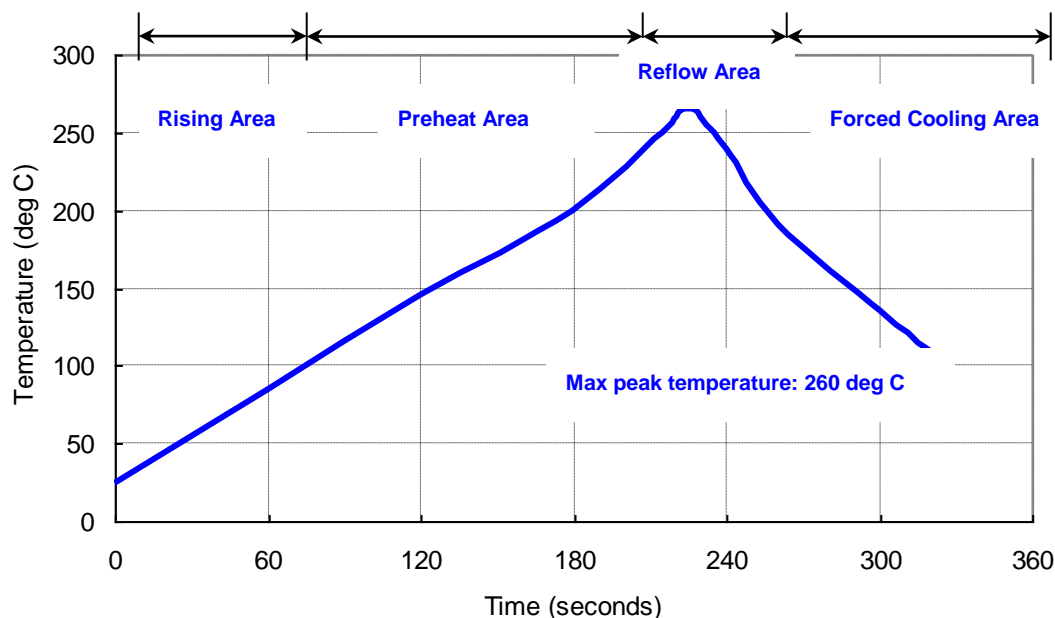
1. Unless otherwise specified tolerance on dimension +/-0.1 mm.
2. Material: conductive polystyrene with color black.
3. 10 pitch cumulative tolerance +/-0.2 mm.

Packing Quantity/Packing:

3K pcs maximum per reel



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 (AEC-Q200)

Test name	Test process / method	Reference standard
Mechanical characteristics		
resistance to Soldering heat (IR reflow)	Temp./ Duration : 265°C /10sec x2 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	MIL-STD 202G method 204
Mechanical Shock	directions : 3 impacts per axis Acceleration : 6000g'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 -55 °C (30min) ↔ 125 °C (30min) * ycle time : 1000 times	MIL-STD 883G method 1010.8
Humidity test	Temperature : 85 ± 2 °C Relative humidity : 85% Duration : 1000 hours	MIL-STD 202G method 103
Dry heat (Aging test)	Temperature : 125 ± 2 °C Duration : 1000 hours	MIL-STD 202G method 108A
Cold resistance (Low Temp Storage)	Temperature : -40 ± 3 °C Duration : 1000 hours	IEC 60068-2-1