



RFM Integrated Device, Inc.

PRODUCT SPECIFICATION

Part Number: XTC4022

TCXO, 32.768KHz +/-1.5ppm
@ 25C +/-3C

Features:

- Miniature SMD Package
- Moisture Sensitivity Level (MSL) : Level-2



Description and Applications:

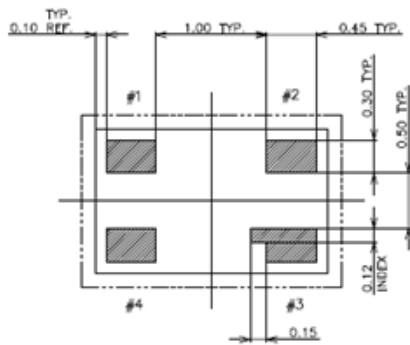
Surface mount 2.1mmx1.3mm TCXO

Electrical Specifications:

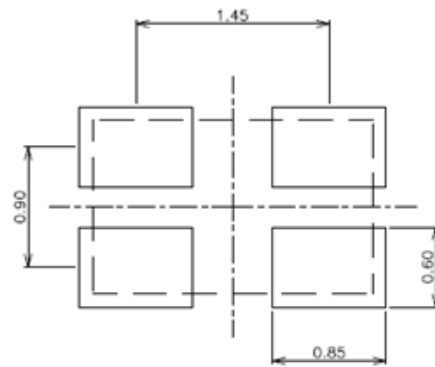
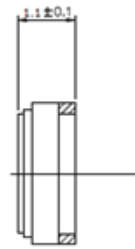
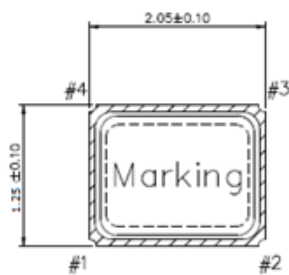
XTC4022	Specifications
Nominal Frequency, Fo	32.768 KHz
Storage Temperature Range	-55°C to +85°C
Operating Temperature Range	-40°C to +85°C
Power Supply Voltage, Vdd	3.3V +/- 5%
Output Waveform	CMOS Square Wave
Output Load	15pF
“0” Level “1” Level	0.4V max IOL=0.1mA Vdd-0.4V min IOH=-0.1mA
Power Supply Current, Icc	1uA typical 2uA max without load
Initial Frequency Tolerance	+/- 1.5 ppm max @ 25°C +/- 3°C
Duty Cycle	40% ~ 60% Typical
Rise Time (20% -> 80% of final RF level in Vp-p) Fall Time (80% -> 20% of final RF level in Vp-p)	100 nsec max. 100 nsec max.
Frequency Stability a. Vs. Temperature (-40~85°C) b. Vs. Load varied 15pF +/-10% c. Vs. Supply Voltage Delta Freq/V	+/- 5 ppm reference to 25°C +/- 0.2 ppm +/- 1 ppm/V
Timing error over time	+/-0.432 sec/day max per day +/-12.960 sec/month max per month +/-2.628 min/year max per year
Reflow	+/-1 ppm max
Start –Up Time	1 s max @ 25°C, 3 s max over-40°C to +85°C

Aging	+/-3 ppm per years
Tri-State Enable Voltage (High) Disable Voltage (Low) output Tri-state Open	80% Vdd min 20% Vdd max Forbidden

Mechanical Dimensions (mm):

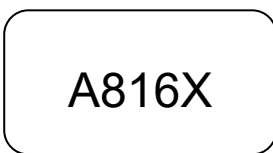


Pin 1	Output Enable
Pin 2	Ground
Pin 3	Frequency out
Pin 4	Supply Voltage



Recommended Land Pattern

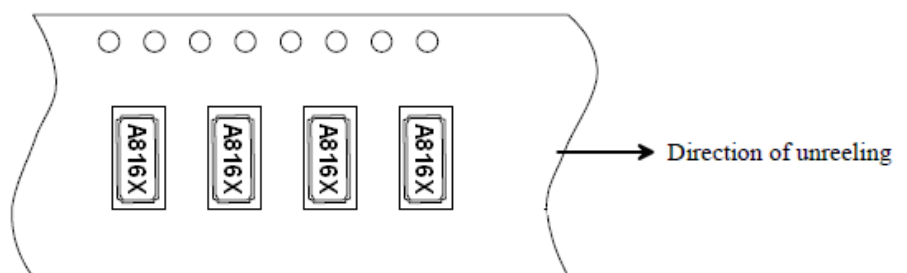
Marking:

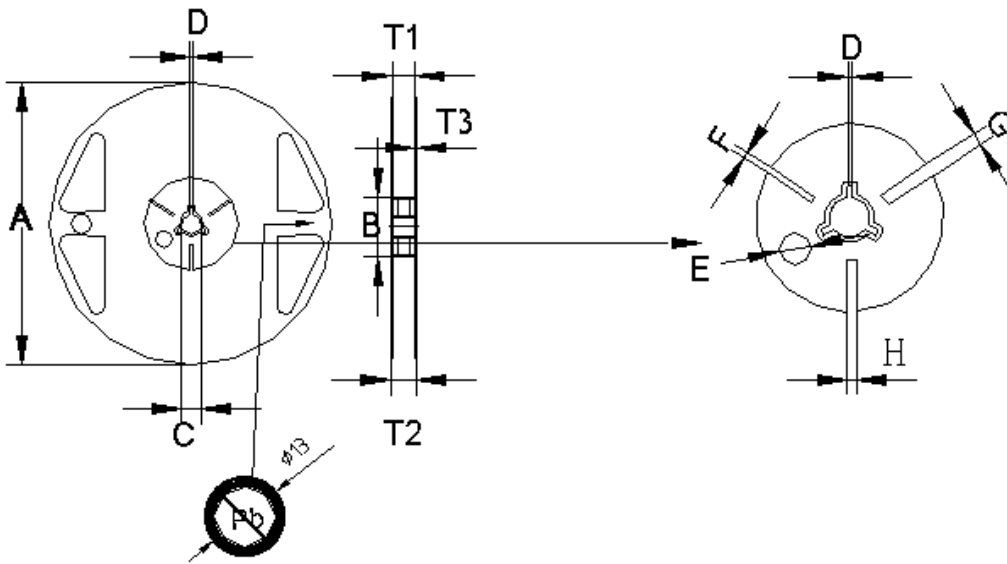


A : Nominal Frequency 32.768KHz

8 : Year code : 8 for 2018

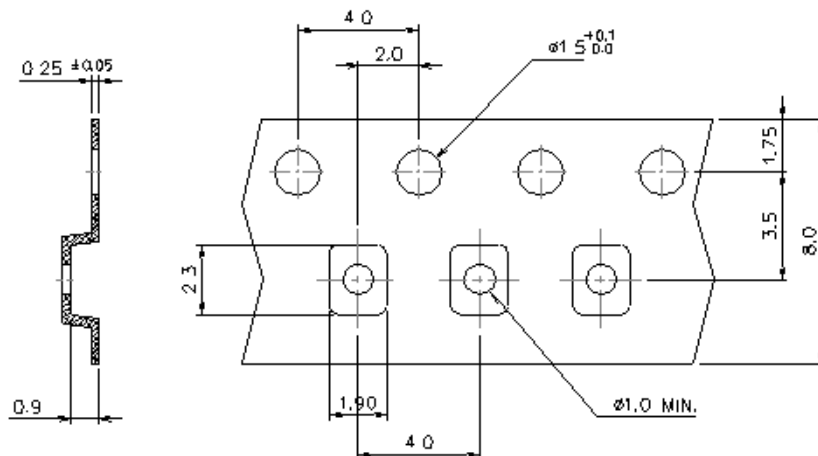
16X : Traceability code



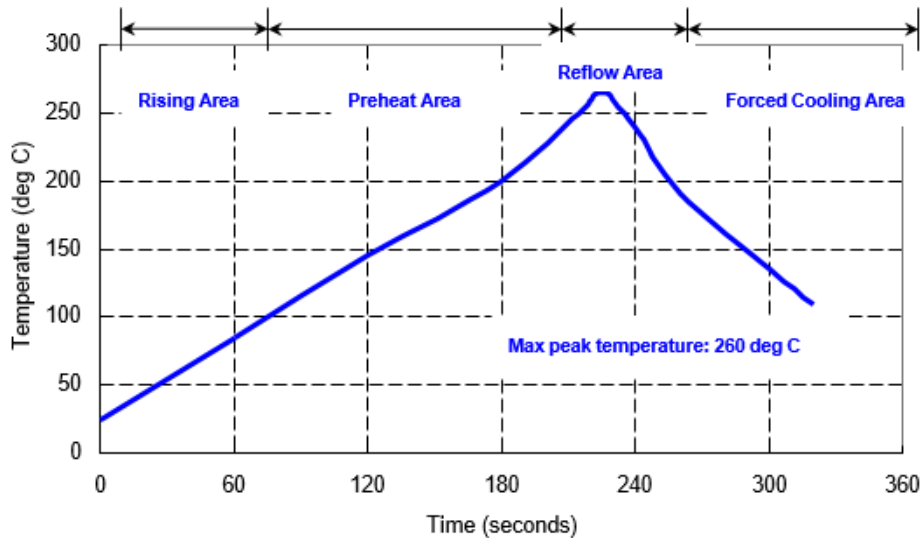


	A	B	C	D	E	F	H	G	T2	T1	T3
Dimensions	180	60	13.0	2.0	9.1	2.9	3.9	4.9	11.4	9.0	1.2
Tolerance	± 1.0	$+1.0$	± 0.2	± 0.5	± 0.5	± 0.5	± 0.5	± 0.5	± 1.0	± 0.3	± 0.1

2. Tape Dimension



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.

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 VCTCXO in the storage process.