Product Features

1. Output Frequency：10 ~ 52MHz
2. Supply Voltage ：2.8 , 3.3V (Typ.)
3. Frequency Stability ：
   ±0.1 ppm @ (-20 ~ +70℃)
   ±0.14 ppm @ (-40 ~ +85℃)
   ±0.28 ppm @ (-40 ~ +105℃)
4. Output Type ：Clipped Sinewave / CMOS
5. Voltage Control Function Available
6. Output Enable / Disable Function Available
7. RoHS and REACH Compliant , Pb-free , Halogen-free
8. Industry Standard Package：
      5.0 x 3.2 x 1.8 mm (6/10 Pad)

Application：
- Small Cell
- Base Station
- Networking Infrastructure (Sever, Switch, Router, etc.)
- Advanced Equipment

Test Condition
Ambient Temperature：25 ±5℃
Relative Humidity： 40% ~ 70%

- Table 1 . Electrical Specifications

Parameters	Symbol	Min.	Typ.	Max.	Units	Notes
Output Type Frequency Range and Stability						
Nominal Frequency	F		10 ~ 52		MHz	Fundamental
Frequency Tolerance	-		±2.0		ppm	After 2 Times Reflow , Note 1
Frequency Stability	vs. Temp.		±0.1		ppm	-20 ~ +70℃ , Note 2
			±0.14			-40 ~ +85℃ , Note 2
			±0.28			-40 ~ +105℃ , Note 2
	vs. Load		±0.05			vs. Load (±5%)
	vs. VCC		±0.05			vs. Supply Voltage (±5%)
Operating Temperature Range						
Operating Temperature	Topr	-40	+25	+105	℃	
Supply Voltage and Current Consumption						
Supply Voltage	Vdd	2.5 ~ 3.3 (±5%)			V	
Current Consumption	Icc	-	-	5	mA	Clipped Sinewave
		-	-	10	mA	CMOS
Output Type Signal Characteristics						
Output Load	RL // CL		10		kΩ	Clipped Sinewave
			10		pF	
	CL		15		pF	CMOS
Output Level	Vp-p	0.8	-	-	V	Clipped Sinewave
	VoH	90%VCC	-	-	V	CMOS
	VoL	-	-	10%VCC	V	
Rise Time	Tr	-	-	6	ns	10% → 90% VCC Level (CMOS)
Fall Time	Tf	-	-	6	ns	90% → 10% VCC Level (CMOS)

● Table 1 . Electrical Specifications (continued)

Parameters	Symbol	Min.	Typ.	Max.	Units	Notes
Frequency Slope						
Slope over Temperature	(ΔF/ΔT)	-	-	±50	ppb/℃	-40 ~ +85 ℃
		-	-	±100		-40 ~ +105 ℃
Symmetry and Start-up time						
Symmetry (Duty Ratio)	TH/T	40	~	60	%	
Start-up Time	Tosc	-	-	5	ms	To 90% of Final Amplitude
AFC pin and Input Characteristics						
Auto-Frequency-Control Range(Ref : VC= 1.5 V) (Option)	AFC	+5	-	+12	ppm	VC = 2.5 V
		-12	-	-5	ppm	VC = 0.5 V
Tri-state Control						
Input High Level	OE	0.8*VCC	-	-	V	Output Enable , Note 3
Input Low Level		-	-	0.2*VCC	V	Output Disable
Aging Performance						
Aging	Aging	±1			ppm	1st Year , Note 4
Holdover Performance						
24 hrs Holdover Stability (Option)	-	-	-	-	±0.32	ppm	24 hours at Operation Temperature after 48 hours Operation
Free-run Accuracy Performance						
Free-run Accuracy	-	-	-	±4.6	ppm	20 Years , Note 5

Note 1 : Operation after reflow 2 hrs , refer to nominal frequency.
Note 2 : Refer to (Fmax+Fmin) / 2 , at VC = Center (Option).
Note 3 : Tri-state floating is output enable as same as input high level.
Note 4 : After 30 days and continuous operation at fix temperature, power supply and load.
Note 5 : Inclusive of calibration tolerance 25°C , frequency vs. change in temperature, change in supply
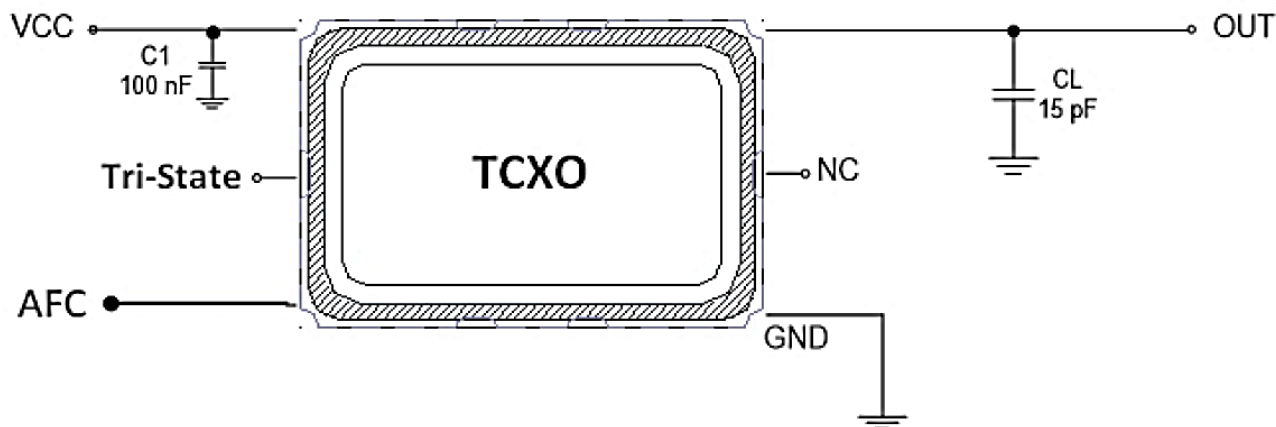   voltage (±5%), load change (±5%) , reflow soldering process and 20 years aging.

- **Test Diagram**

  ■ **Output Type：Clipped Sinewave**
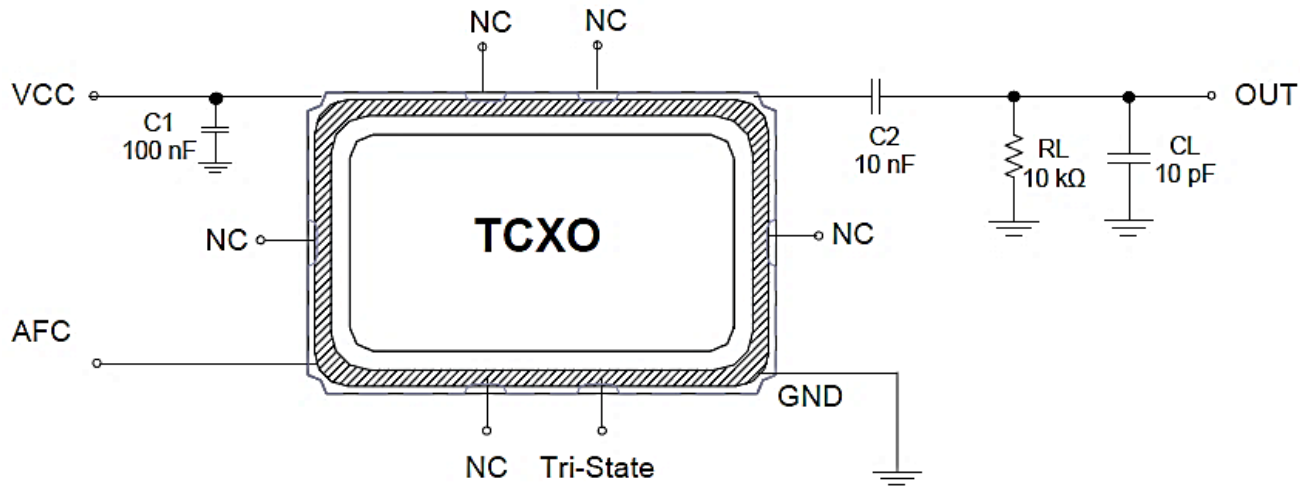
> Note: (1) By pass capacitor (C1) should be placed.
> (2) AFC is optional function.
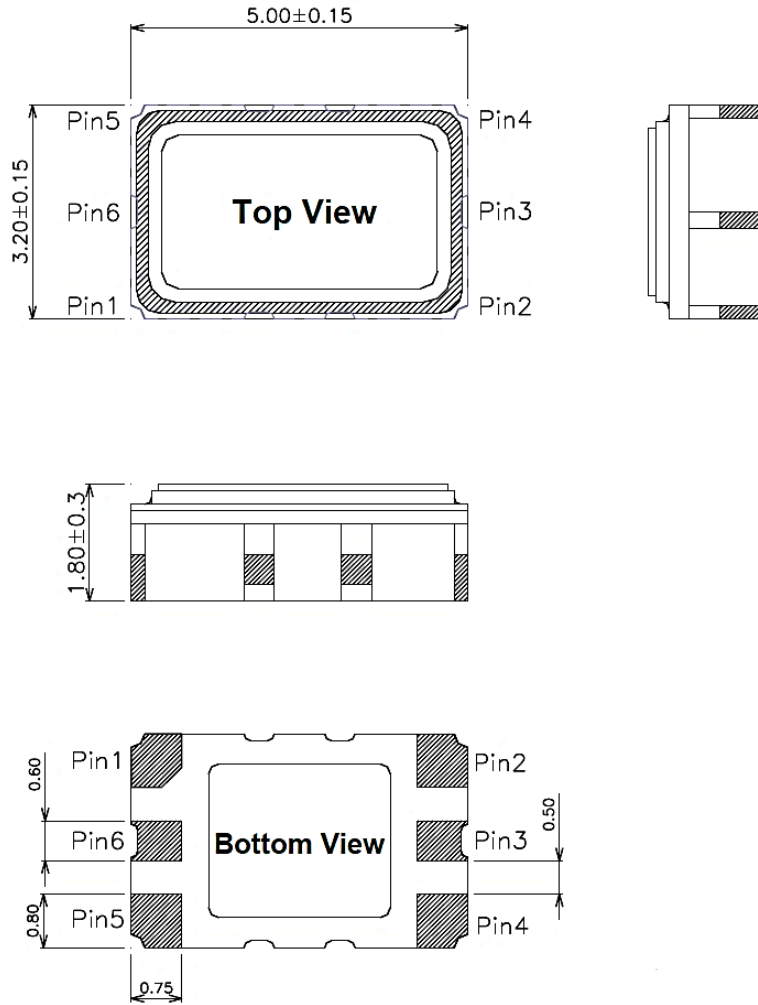> (3) Example of 10 Pad Option.

  ■ **Output Type：CMOS**

> Note: (1) By pass capacitor (C1) should be placed.
> (2) AFC is optional function.
> (3) TXC sets CL to 15pF for simulation IC load. No need to layout it in reality circuit.
> (4) Example of 6 Pad Option.
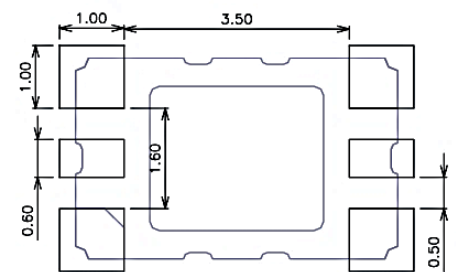
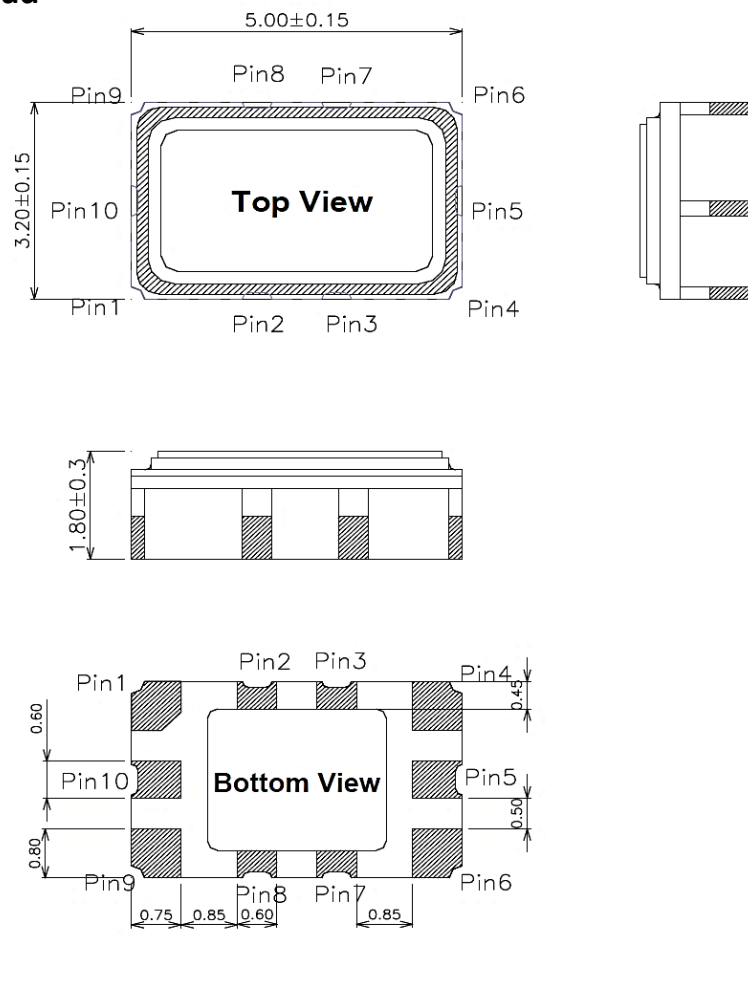● **Dimensions & Footprint (Recommended)**

Unit：mm

7P Series , 6 Pad

Pin Connection

Name	Function
Pin 1	AFC
Pin 2	GND
Pin 3	Do not connection
Pin 4	Output
Pin 5	VCC
Pin 6	Tri-State

Recommended Land Pattern

7P Series , 10 Pad

Pin Connection

Name	Function
Pin 1	AFC
Pin 2	Do not connection
Pin 3	Tri-State
Pin 4	GND
Pin 5	Do not connection
Pin 6	Output
Pin 7	Do not connection
Pin 8	Do not connection
Pin 9	VCC
Pin 10	Do not connection

Recommended Land Pattern