

RoHS Compliant Standard

# VC Type Voltage Controlled Crystal Oscillator

Actual Size



## FEATURE

1. Typical 7.5 × 5.0 × 1.65 mm ceramic SMD package.
2. Tight symmetry (45 to 55%) available.
3. Packing: Tape & Reel, 1000/3000 pcs per Reel.

## ORDERING INFORMATION

Select option

VCXO	Package (mm)	Supply Voltage(V)	Tri-State Function	Freq. Stability /Pulling Range (ppm)	Temp. Range (°C)	Output LLogic and Symmetry	Oscillator Mode	Appearance	Lead Free	Dash	Freq. (MHz)
	7.5 × 5	C : 5 E : 3.3	U : Enable High	M : ±25 /±100 P : ±50 /±100	I : -10~+60 C : -20~+70 L : -40~+85	50±5% CMOS 15pF J CMOS 50pF F	-A: AT Fundamental * NOT SELECTABLE BY CUSTOMER	N : Normal	F:RoHS Compliant		XX.XXXXXX

V C

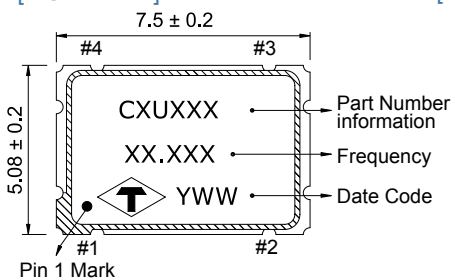
Example VCCUPCJANF-14.318180

VCXO C-TYPE; V<sub>DD</sub>: 5V; Freq. Stability: ±50ppm, Pulling Range: ±100ppm; Temp. Range: -20°C to +70°C ; Load: CMOS 15pF, Symmetry: 50±5%; AT Fundamental; Normal Appearance; RoHS Compliant; Freq. 14.318180MHz.

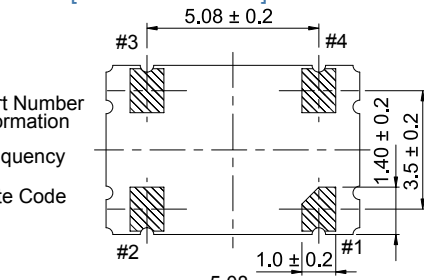
\* Not all combinations of options are available.

## OUTLINE DRAWING

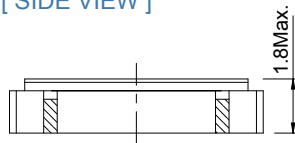
[ TOP VIEW ]



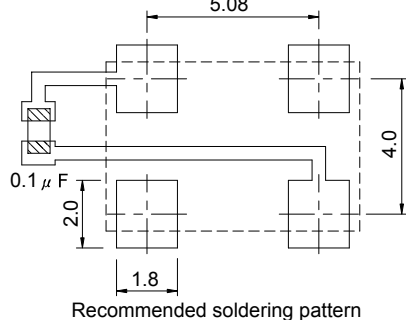
[ BOTTOM VIEW ]



[ SIDE VIEW ]



UNIT : mm



## FREQ. STABILITY vs. TEMP. RANGE

Temp.(°C)	ppm	
	M: ±25	P: ±50
I -10~+60	○	○
C -20~+70	○	○
L -40~+85	△	○

○:Standard △:Available (case by case)  
×:Not available

Pin	Function
#1	VCON
#2	GND
#3	Output
#4	V <sub>DD</sub>

**ELECTRICAL SPECIFICATION**

Parameter	Min.		Max.		Unit
	5.0	3.3	5.0	3.3	V
<b>Supply Voltage Variation(V<sub>DD</sub>) 10%</b>	4.5	2.97	5.5	3.63	
<b>Frequency Range</b>	1.5		50	200	MHz
<b>Operating Temp. Range</b>	Refer to Ordering Information				°C
<b>Frequency Stability *</b>	Refer to Ordering Information				ppm
<b>Pulling Range</b>	±100		-		ppm
<b>Control Voltage Range</b>	0.5	0.3	4.5	3.0	V
<b>Supply Current</b>					
1.5MHz ≤ Fo < 20MHz	-		15	10	mA
20MHz ≤ Fo < 50MHz	-		30	20	
50MHz ≤ Fo ≤ 80MHz	-		35	30	
80MHz < Fo < 160MHz	-		-	40	
160MHz ≤ Fo ≤ 200MHz	-		-	50	
<b>Output Level (CMOS)</b>					
Output High (Logic "1")	90%V <sub>DD</sub>		-		V
Output Low (Logic "0")	-		10%V <sub>DD</sub>		
<b>Transition Time:Rise/Fall Time +</b>					
1.5MHz ≤ Fo < 20MHz	-		8	10	nSec
20MHz ≤ Fo < 50MHz	-		5	6	
50MHz ≤ Fo ≤ 80MHz	-		5	5	
80MHz < Fo ≤ 200MHz	-		-	5	
<b>Start Time</b>	-		10		mSec
<b>Jitter</b>	-		40		pSec
<b>Linearity</b>	-		10		%
<b>Modulation Bandwidth(BW)</b>					
1.5MHz ≤ Fo < 50MHz	20		-		KHz
50MHz ≤ Fo ≤ 80MHz	30		-		
80MHz < Fo ≤ 200MHz	45		-		
<b>Input Impedance</b>					
1.5MHz ≤ Fo < 50MHz	50		-		KΩ
50MHz ≤ Fo ≤ 80MHz	50		-		
80MHz < Fo ≤ 200MHz	50		-		
<b>Storage Temp. Range</b>	-55		125		°C

Standard frequencies are frequencies which the crystal has been designed and does not imply a stock position.

\* Inclusive of calibration @ 25°C, operating temperature range, input voltage variation, load variation, aging, shock, and vibration.

+ Transition times are measured between 10% and 90% of V<sub>DD</sub>, with an output load of 15pF.

