

RoHS Compliant Standard

VT Type Voltage Controlled Crystal Oscillator

Actual Size



FEATURE

1. Typical 7.0 × 5.0 × 1.6 mm 6 Pads 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 Logic and Symmetry	Oscillator Mode	Appearance	Lead Free	Dash	Freq. (MHz)
	7×5	C : 5 E : 3.3	U : Input to Pin 2 R : Input to Pin 5	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.XXXXX

V	T										
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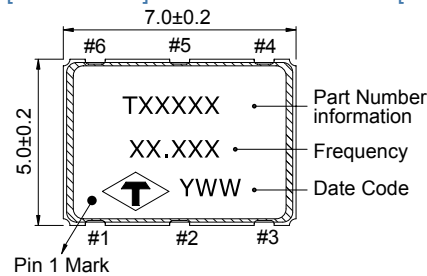
Example VTCUPCJANF-14.318180

VCXO T-TYPE; V_{DD}: 5V; Fixed-Freq. with Tri-State input to Pin2; 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.

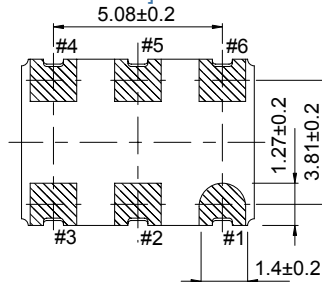
* Not all combinations of options are available.

OUTLINE DRAWING

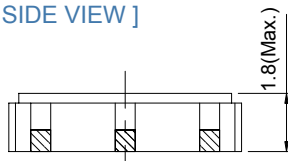
[TOP VIEW]



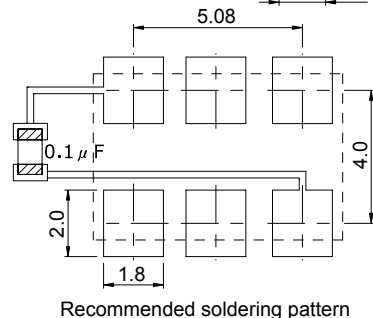
[BOTTOM VIEW]



[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	NC/Tri-State
#3	GND
#4	Output
#5	NC/Tri-State
#6	V _{DD}

**ELECTRICAL SPECIFICATION**

Parameter	Min.		Max.		Unit
	5.0	3.3	5.0	3.3	V
Supply Voltage Variation(V_{DD}) 10%	4.5	2.97	5.5	3.63	V
Frequency Range	1.5		50	200	MHz
Operating Temp. Range	Refer to Ordering Information				°C
Frequency Stability *	Refer to Ordering Information				ppm
Pulling Range	±100		-		ppm
Control Voltage Range	0.5	0.3	4.5	3.0	V
Supply Current					
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	
Output Level (CMOS)					
Output High (Logic "1")	90% V _{DD}		-		V
Output Low (Logic "0")	-		10% V _{DD}		
Transition Time:Rise/Fall Time⁺					
1.5MHz ≤ Fo < 20MHz	-		8	10	nSec
20MHz ≤ Fo < 50MHz	-		5	6	
50MHz ≤ Fo ≤ 80MHz	-		5	5	
80MHz < Fo ≤ 200MHz	-		-	5	
Start Time	-		10		mSec
Tri-State (Input to Pin 2 or Pin 5)					
Output Active	4.0	2.0	-		V
Output in High Impedance State	-		0.8	0.5	
Jitter	-		40		pSec
Linearity	-		10		%
Modulation Bandwidth (BW)					
1.5MHz ≤ Fo < 50MHz	20		-		KHz
50MHz ≤ Fo ≤ 80MHz	30		-		
80MHz < Fo ≤ 200MHz	45		-		
Input Impedance					
1.5MHz ≤ Fo < 50MHz	50		-		KΩ
50MHz ≤ Fo ≤ 80MHz	50		-		
80MHz < Fo ≤ 200MHz	50		-		
Storage Temp. Range	-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_{DD}, with an output load of 15pF.

