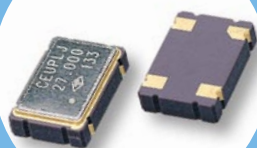


Actual Size



OC Type Crystal Oscillator

FEATURE

1. Typical 7.0 × 5.0 × 1.3 mm ceramic SMD package.
2. Tight symmetry (45 to 55 %) available.
3. Packing: Tape & Reel, 1000/3000 pcs per Reel.

ORDERING INFORMATION

Select option

XO	Package (mm)	Supply Voltage(V)	Tri-State Function	Freq. Stability (ppm)	Temp. Range (°C)	Output Logic and Symmetry	Oscillator Mode	Appearance	Lead Free	Dash	Freq. (MHz)
	7×5	C : 5 E : 2.8 ~3.3 J : 2.5 K : 1.8	T : Fixed-Freq with Tri-State	C : ± 20 D : ± 25 G : ± 50 H : ± 100	I : -10~+60 C : -20~+70 L : -40~+85	50±5% TTL "A" TTL 50pF E CMOS 15pF J CMOS 50pF F	-A: AT Fundamental -T: AT 3 rd Overtone NOT SELECTABLE BY CUSTOMER	N : Normal	F:RoHS Compliant		XX.XXXXXX

O	C									-	
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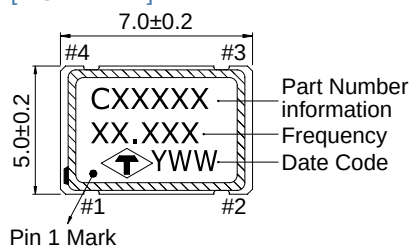
Example OCCTDCJANF-14.318180

XO C-TYPE; V_{DD}: 5V; Fixed-Freq. with Tri-State; Freq. Stability :±25ppm; 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.

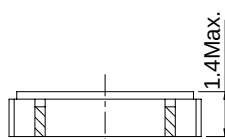
OUTLINE DRAWING

[TOP VIEW]



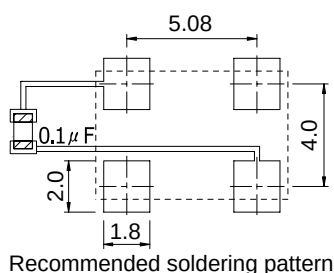
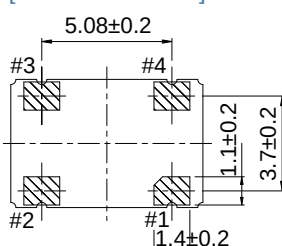
Pin 1 Mark

[SIDE VIEW]



UNIT:mm

[BOTTOM VIEW]



Recommended soldering pattern

FREQ. STABILITY vs. TEMP. RANGE

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

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

Pin	Function
#1	Tri-State
#2	GND
#3	Output
#4	V _{DD}

**ELECTRICAL SPECIFICATION**

Parameter	Min.				Max.				Unit
	5.0	3.3	2.5	1.8	5.0	3.3	2.5	1.8	V
Supply Voltage Variation(V _{DD}) 10%	4.5	2.97	2.25	1.62	5.5	3.63	2.75	1.98	V
Frequency Range	0.012			0.048	110	133	133	125	MHz
Operating Temp. Range	Refer to Ordering Information								°C
Frequency Stability *	Refer to Ordering Information								ppm
Supply Current									
0.012MHz ≤ Fo < 0.048MHz	—				7	5	5	—	mA
0.048MHz ≤ Fo < 1.5MHz	—				7	5	5	5	
1.5MHz ≤ Fo < 20MHz	—				10	7	7	5	
20MHz ≤ Fo < 50MHz	—				30	20	15	15	
50MHz ≤ Fo < 70MHz	—				40	30	20	15	
70MHz ≤ Fo < 125MHz	—				40	30	20	20	
125MHz ≤ Fo ≤ 133MHz	—				—	40	30	—	
Output Level (CMOS)									
Output High (Logic “1”)	90% V _{DD}				—				V
Output Low (Logic “0”)	—				10% V _{DD}				
Transition Time:Rise/Fall Time*									
0.012MHz ≤ Fo < 1.0MHz	—				200	200	200	—	nSec
1.0MHz ≤ Fo < 20MHz	—				5	6	6	6	
20MHz ≤ Fo < 50MHz	—				4	4	5	5	
50MHz ≤ Fo < 70MHz	—				2	3	3	3	
70MHz ≤ Fo < 125MHz	—				2	3	3	3	
125MHz ≤ Fo ≤ 133MHz	—				—	2	2	—	
Start Time	—				4				mSec
Tri-State (Input to Pin 1)									
Output Active	4.0	2.0	1.75	1.26	—				V
Output in High Impedance State	—				0.8	0.5	0.5	0.5	
Absolute Clock Period Jitter	—				40				pSec
Standby Current	—				10				μA
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.