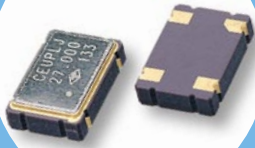


RoHS Compliant Standard

OC Type Crystal Oscillator

Actual Size



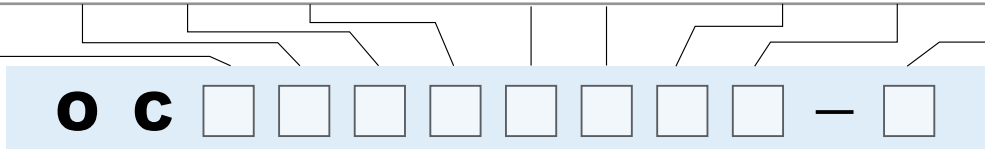
FEATURE

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



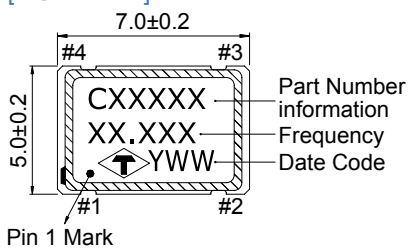
Example OCCTDCJANF-14.318180

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.

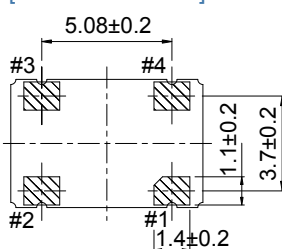
* Not all combinations of options are available.

OUTLINE DRAWING

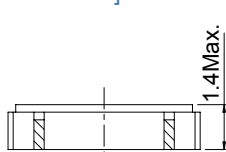
[TOP VIEW]



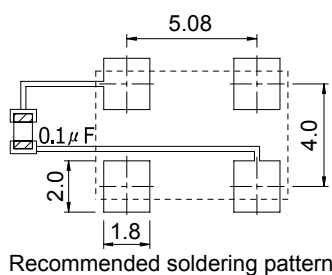
[BOTTOM VIEW]



[SIDE VIEW]



UNIT:mm



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	VDD

**ELECTRICAL SPECIFICATION**

Parameter	Min.				Max.				Unit
	5.0	3.3	2.5	1.8	5.0	3.3	2.5	1.8	
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	-				8	10	10	10	
20MHz ≤ Fo < 50MHz	-				5	6	6	6	
50MHz ≤ Fo < 70MHz	-				2	3	3	3	
70MHz ≤ Fo < 125MHz	-				2	3	3	3	
125MHz ≤ Fo ≤ 133MHz	-				-	3	3	-	
Start Time	-				8				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.

