

OC Type Crystal Oscillator

RoHS Compliant Standard

FEATURE

1. Typical 7.0 x 5.0 x 1.3mm ceramic SMD package.
2. Tight symmetry (45 to 55 %) available.
3. Packing: Tape & Reel, 1000/3000 pcs per Reel, 1~99 pcs per Bulk/Tape.



Actual Size

ORDERING INFORMATION

O	C	C	T	D	C	J	-	N	F	-	?
XO	Package (mm)	Supply Voltage (V)	Tri-State Function	Freq. Stability (ppm)	Temp. Range (°C)	Output Logic and Symmetry	Dash	Appearance	Lead Free	Dash	Freq.(MHz)
	7x5	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 *S: ±32 *J: ±50	I: -10~+60 C: -20~+70 L: -40~+85	50±5% 50±10% TTL "A" B TTL 50pF E R CMOS 15pF J K CMOS 50pF F G		N:Normal	F:RoHS Compliant		xx.xxxxxx

*Including 10 years aging

"Not available, if frequency > 70MHz and V_{DD}=5V

Ordering Example: OCCTDCJ-NF-14.318180 MHz

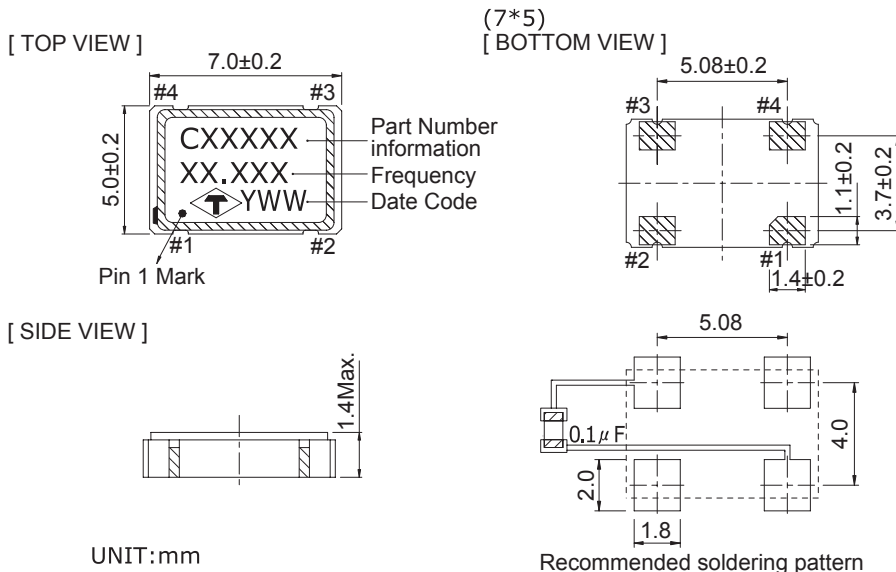
XO C-TYPE; V_{DD}: 5V; Fixed-Freq. with Tri-State; Freq. Stability :±25ppm; Temp. Range: -20°C to+70°C; Load :CMOS 15pF, Symmetry :50±5%; Normal Appearance; RoHS Compliant; Freq. 14.318180MHz.

FREQ. STABILITY vs. TEMP. RANGE

Temp.(°C)	ppm	C: ±20	D: ±25	G: ±50	H: ±100
I -10~ +60		○	○	○	○
C -20~ +70		△	○	○	○
L -40~ +85		x	△	○	○

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

OUTLINE DRAWING



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	
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	156.25	125	70	MHz
Operating Temp. Range	Refer to Ordering Information								°C
Frequency Stability *	Refer to Ordering Information								ppm
Supply Current									
0.012MHz ≤ F _o < 0.048MHz	—				7	5	5	—	mA
0.048MHz ≤ F _o < 1.5MHz	—				7	5	5	5	
1.5MHz ≤ F _o < 20MHz	—				10	7	7	5	
20MHz ≤ F _o < 50MHz	—				30	20	15	15	
50MHz ≤ F _o < 70MHz	—				40	30	20	15	
70MHz < F _o < 110MHz	—				40	30	20	—	
110MHz < F _o ≤ 156.25MHz	—				—	30	20	—	
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 ≤ F _o < 1.0MHz	—				200	200	200	—	nSec
1.0MHz ≤ F _o < 20MHz	—				8	10	10	10	
20MHz ≤ F _o < 50MHz	—				5	6	6	6	
50MHz ≤ F _o < 70MHz	—				2	3	3	3	
70MHz < F _o < 110MHz	—				2	3	3	—	
110MHz < F _o ≤ 156.25MHz	—				—	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

*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.