

# OC Type Multiplier Crystal Oscillator

Actual Size



## FEATURE

1. Typical 7.5 × 5.0 × 1.65 mm ceramic SMD package.
2. Output frequency up to 200MHz.
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)
	7.5×5	E: 3.3	M: Multiplier Frequency with Tri-State	C: ± 20 D: ± 25 G: ± 50 H: ± 100	I: -10~+60 C: -20~+70 L: -40~+85	50±5% CMOS 15pF J CMOS 50pF F	-A: AT Fundamental -T: AT 3 <sup>rd</sup> Overtone NOT SELECTABLE BY CUSTOMER	N: Normal	F: RoHS Compliant		XX.XXXXXX

**O C**

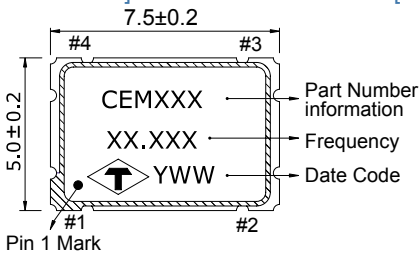
Example OCEMDCJANF-157.000000

XO C-TYPE V<sub>DD</sub>: 3.3V; Multiplier-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. 157.000000MHz.

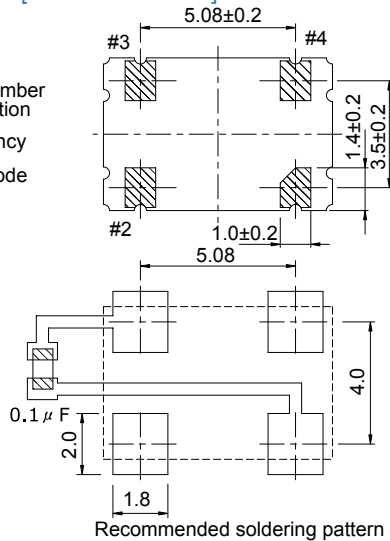
\* Not all combinations of options are available.

## OUTLINE DRAWING

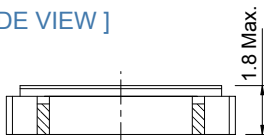
[ TOP VIEW ]



[ 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
	3.3		V
Supply Voltage Variation(V <sub>DD</sub> ) 10%	2.97	3.63	V
Frequency Range	100	200	MHz
Operating Temp. Range	Refer to Ordering Information		°C
Frequency Stability *	Refer to Ordering Information		ppm
Supply Current			
100MHz ≤ Fo < 160MHz	–	40	mA
160MHz ≤ Fo < 200MHz	–	50	
Output Level (CMOS)			
Output High (Logic "1")	V <sub>DD</sub> -0.4	–	V
Output Low (Logic "0")	–	0.4	
Transition Time:Rise/Fall Time +			
100MHz ≤ Fo ≤ 200MHz	–	5	nSec
Start Time	–	8	mSec
Tri-State (Input to Pin 1)			
Output Active	2	–	V
Output in High Impedance State	–	0.5	
Absolute Clock Period Jitter	–	150	pSec
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<sub>DD</sub>, with an output load of 15pF.