

# LOW PHASE NOISE PRECISION OCXO MV220

## Features:

- Package height from 19 mm down to 10 mm
- 12V power supply
- Ultra low phase noise
- High stability vs. temperature - up to  $\pm 2 \times 10^{-10}$
- Standard frequency 10.0 MHz

Package type	
50.8x50.8x19 mm *	Z19
50.8x50.8x16 mm *	Z16
50.8x50.8x12.7 mm	Z12.7
50.8x50.8x10 mm	Z10 **

\* - package is available by customer's request  
\*\* - consult factory

## ORDERING GUIDE: MV220 – C 2 F – Z12.7 – 10.0 MHz – LN

Availability of certain stability vs. operating temperature range		$\pm 5 \times 10^{-9}$	$\pm 3 \times 10^{-9}$	$\pm 2 \times 10^{-9}$	$\pm 1 \times 10^{-9}$	$\pm 5 \times 10^{-10}$	$\pm 2 \times 10^{-10}$
		5	3	2	1	05	02
A	0...+55 °C	A	A	A	A	A	A
B	- 10...+60 °C	A	A	A	A	A	C
C	- 20...+70 °C	A	A	A	A	A	C
D	- 40...+70 °C	A	A	A	A	C	C
EX	- 40...+85 °C	A	A	A	C	C	NA

A – available, NA – not available, C – consult factory

For 10 mm height - consult factory

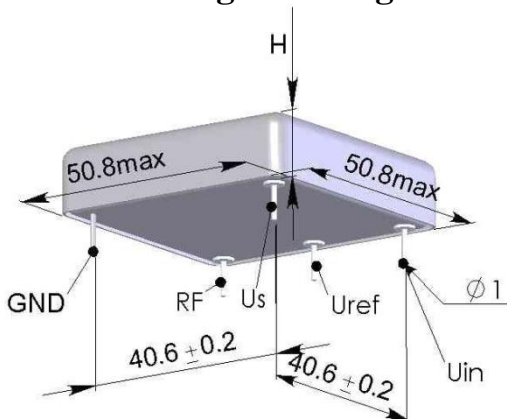
For other temperature ranges see designation at the end of Data Sheet.

Availability of certain aging values for certain frequencies		Standard frequency 10 MHz
G	$\pm 1 \times 10^{-7}$ /year	A
F	$\pm 5 \times 10^{-8}$ /year	A
E	$\pm 3 \times 10^{-8}$ /year	A

A – available, NA – not available, C – consult factory

Phase noise, dBc/Hz, for 10 MHz, SIN	-	LN	ULN
1 Hz	<-90	<-90	<-100
10 Hz	<-120	<-120	<-133
100 Hz	<-153	<-153	<-158
1000 Hz	<-162	<-163	<-163
10000 Hz	<-165	<-168	<-168

## Package drawing:



H=19 mm for Z19; H=16 mm for Z16;  
H=12.7 mm for Z12.7; H=10 mm for Z10.

Short-term stability (Allan deviation) per 1 sec (for 10 MHz)	$< 5 \times 10^{-12}$
Frequency stability vs. load changes	$< \pm 3 \times 10^{-10}$
Frequency stability vs. power supply changes	$< \pm 2 \times 10^{-10}$
Warm-up time within accuracy of $< \pm 2 \times 10^{-8}$ @ 25°C	<3 min
Power supply (Us)	12V $\pm$ 5%
Steady state current consumption @ 25°C	<250mA
Peak current consumption during warm-up (for "D" temp. range)	<550mA
Frequency pulling range	$> \pm 4 \times 10^{-7}$
with external voltage range (Uin)	0...+5V
Reference voltage (Uref)	+5 V

<b>Vibrations:</b>	
Frequency range	10-200 Hz
Acceleration	5g
<b>Shock:</b>	
Acceleration	75 g
Duration	3 $\pm$ 1 ms
Storage temperature range	-55...+85 °C

Output	SIN
Level	>800 mV
Load	50 Ohm $\pm$ 5%
Harmonic suppression	>30dBc

## Additional notes:

- Please consult factory for daily aging values. Normally typical correspondence of daily aging per day to aging per year is as following:  $\pm 1 \times 10^{-7}$ /year -  $\pm 1 \times 10^{-9}$ /day;  $\pm 5 \times 10^{-8}$ /year -  $\pm 5 \times 10^{-10}$ /day;  $\pm 3 \times 10^{-8}$ /year -  $\pm 3 \times 10^{-10}$ /day.
- Please mention RoHS requirement (if any) while requesting for quote or while placing PO.
- For non standard operating temperature ranges please use the following two letters designations (first letter for the lower limit, second letter for the upper limit), °C:

A	B	C	D	E	F	G	H	J	K	L	M	N	P	Q	R	S	T	U	W	X
-60	-55	-50	-45	-40	-30	-20	-10	0	+10	+30	+40	+45	+50	+55	+60	+65	+70	+75	+80	+85