

# LOW PROFILE PRECISION OCXO MV201

## Features:

- High stability vs. temperature: up to  $\pm 3 \times 10^{-10}$
- Package height: from 16 mm down to 12.7 mm
- Power supply: 5V or 12V
- Replacement of MV62 OCXO
- Frequency range: 10.0 – 40.0 MHz

Power supply	Output	Package type	
5V	SIN	51x41x12.7 mm	Y12.7
12V	HCMOS	51x41x16 mm	Y16

## ORDERING GUIDE: MV201-B 1 F-12V- SIN - Y16 - 10.0MHz-LN

Availability of certain stability vs. operating temperature range		$\pm 5 \times 10^{-9}$	$\pm 3 \times 10^{-9}$	$\pm 2 \times 10^{-9}$	$\pm 1 \times 10^{-9}$	$\pm 7.5 \times 10^{-10}$	$\pm 5 \times 10^{-10}$	$\pm 3 \times 10^{-10}$
		5	3	2	1	07	05	3
A	0...+55°C	A	A	A	A			
B	-10...+60°C	A	A	A	A			
C	-20...+70°C	A	A	A	A			
D	-40...+70°C	A	A	A	A			
EX	-40...+85°C	A	A	A	A			

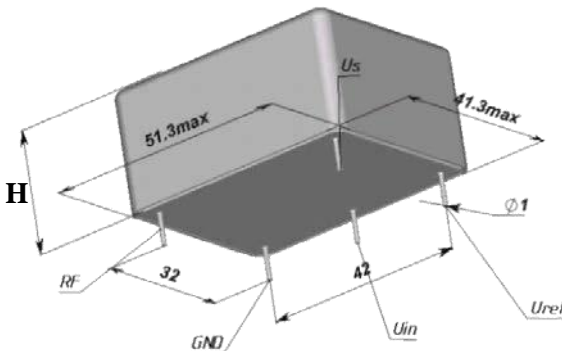
A – available, NA – not available, C – consult factory  
For other temperature ranges see designation at the end of Data Sheet.

Availability of certain aging values for certain frequencies		Standard frequencies					
		8.192 MHz (8.192xk) MHz	10.0 MHz (10.0xk) MHz	12.8 MHz (12.8xk) MHz	13.0 MHz (13.0xk) MHz	16.384 MHz (16.384xk) MHz	20.0 MHz (20.0xk) MHz
H	$\pm 2 \times 10^{-7}$ /year	A	NA	NA	A	A	A
G	$\pm 1 \times 10^{-7}$ /year	A	A	A	A	A	C
F	$\pm 5 \times 10^{-8}$ /year	A	A	A	A	C	NA
E	$\pm 3 \times 10^{-8}$ /year	A	A	A	C	NA	NA
D	$\pm 2 \times 10^{-8}$ /year	A	A	C	NA	NA	NA

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

Phase noise, dBc/Hz, 10 MHz	-	LN	ULN
	For 12 V, SIN		
1 Hz	<-95	<-100	<-105
10 Hz	<-125	<-130	<-135
100 Hz	<-145	<-153	<-155
1000 Hz	<-150	<-158	<-158
10000 Hz	<-155	<-160	<-160

## Package drawing:



H=19 mm for Y19; H=16 mm for Y16;  
H=12.7 mm for Y12.7.

Vibrations:	
Frequency range	10-500 Hz
Acceleration	5g
Shock:	
Acceleration	75 g
Duration	3±1 ms
Storage temperature range	-55...+85 °C

Short term stability (Allan deviation) per 1 sec (for 10MHz)	< $5 \times 10^{-12}$ ; opt. < $2 \times 10^{-12}$	
Frequency stability vs. load changes	< $\pm 5 \times 10^{-10}$ ; opt. < $\pm 2 \times 10^{-10}$	
Frequency stability vs. power supply changes	< $\pm 5 \times 10^{-10}$ ; opt. < $\pm 2 \times 10^{-10}$	
Warm-up time with accuracy of < $2 \times 10^{-8}$ @ 25°C	<3 min	
Power supply (Us)	12V±5%	5V±5%
Steady state current consumption @ 25°C	<200mA	<500mA
Peak current consumption during warm-up (for "D" temp. range)	<500mA	<1200mA
Frequency pulling range (for 10 MHz)	$\geq \pm 4 \times 10^{-7}$	
with external voltage range (Uin)	0...5 V	0...4.5 V
with external potentiometer	20 kOhm	
Reference voltage (Uref)	+5 V	+4.5 V
Output	HCMOS	SIN
Level	<0.5V... >4.0V	>300 mV RMS (9±0.5dBm - optional for 12V power supply)
Load	10kOhm/30pF	50 Ohm±5%
Rise/Fall time	<6 ns (<3 ns optional)	-
Harmonic suppression	-	>30dBc (>50dBc optional)

## 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



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Due to continuous development and improvement Morion reserves the right to modify design or specifications of its products without prior notice.