

# PRECISION OCXO MV172

## Features:

- High stability vs. temperature - up to  $\pm 5 \times 10^{-10}$
- Low aging - up to  $\pm 1 \times 10^{-8}$ /year
- Low phase noise
- 5V or 12V power supply
- Available as RoHS
- Frequency range 4.096-20.0 MHz

<b>Output type</b>	
SIN	HCMOS
<b>Power Supply</b>	
12V	5V
<b>Package type</b>	
Z25	50.8x50.8x25 mm
Z19	50.8x50.8x19 mm

## ORDERING GUIDE: MV172 – B 1 E – SIN – 5V – Z25 – 5.0 MHz

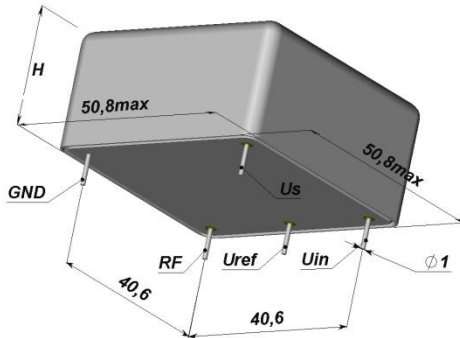
Availability of certain stability vs. operating temperature range		$\pm 1 \times 10^{-8}$	$\pm 5 \times 10^{-9}$	$\pm 2 \times 10^{-9}$	$\pm 1 \times 10^{-9}$	$\pm 5 \times 10^{-10}$
		10	5	2	1	0.5
A	0...+55 °C	A	A	A	A	A
B	- 10...+60 °C	A	A	A	A*	A*
C	- 20...+70 °C	A	A	A*	C*	C
D	- 40...+70 °C	A	A*	C*	C*	C
EX	- 40...+85 °C	A*	C	C	NA	NA

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

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

\* for 25mm height

## Package drawing:



H=25 mm for Z25; H=19 mm for Z19.

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

Availability of certain aging values for certain frequencies	Standard frequencies	
	5.0 MHz (5 x k) MHz	4.096 MHz (4.096 x k) MHz
E	$\pm 3 \times 10^{-8}$ /year	A
D	$\pm 2 \times 10^{-8}$ /year	A
C	$\pm 1 \times 10^{-8}$ /year	A

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

Short term stability per 1 sec (for 5MHz)	$< 3 \times 10^{-12}$	
Frequency stability vs. load changes	$< \pm 5 \times 10^{-10}$	
Frequency stability vs. power supply changes	$< \pm 5 \times 10^{-10}$	
Warm-up time within accuracy of $< \pm 2 \times 10^{-8}$ @ 25°C	$< 8$ min	
Power supply (Us)	5V±5%	12V±5%
Steady state current consumption @ 25°C	$< 500$ mA	$< 200$ mA
Peak current consumption during warm-up (for “C” temp. range)	$< 1.3$ A	$< 0.6$ A
Frequency pulling range	$> \pm 3.0 \times 10^{-7}$	
with external voltage range (Uin)	0...+4.5 V	0...+5 V
with external potentiometer	20 kOhm	
Reference voltage (Uref)	+4.5 V	+5 V
Slope	Negative (positive)	

Output	SIN	HCMOS
Level	$> 300$ mV	$< 0.5V \dots > 4.0V$
Load	50 Ohm±5%	10kOhm/30pF
Rise/Fall time	-	$< 6$ ns ( $< 3$ ns optional)
Harmonic suppression	$> 30$ dBc (standard) ( $> 50$ optional)	-
Phase noise (for 5 MHz) @ 1 Hz	$< -100$ dBc/Hz	
10 Hz	$< -130$ dBc/Hz	
100 Hz	$< -145$ dBc/Hz	
1000 Hz	$< -150$ dBc/Hz	
10000 Hz	$< -155$ dBc/Hz	

## Additional notes:

- Please consult factory for daily aging values. Normally typical correspondence of daily aging (after 30 days of operation) to aging per year is as following:  $\pm 3 \times 10^{-8}$ /year -  $\pm 3 \times 10^{-10}$ /day;  $\pm 2 \times 10^{-8}$ /year -  $\pm 2 \times 10^{-10}$ /day;  $\pm 1 \times 10^{-8}$ /year -  $\pm 1 \times 10^{-10}$ /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