

# ULTRA PRECISION ULTRA LOW PHASE NOISE AND ADEV REFERENCE DOCXO MV336R

## Features:

- Specially designed as a reference OCXO for precision phase noise and ADEV measurements
- Initial frequency accuracy at time of shipment: 10.0 MHz±300 ppm
- Allan deviation: up to  $7...8 \times 10^{-14}$  per 1 sec (measured value)
- Low sensitivity to change of ambient temperature: up to  $\pm 2 \times 10^{-11}$  vs. 0...+55°C
- High long-term stability: up to  $\pm 1 \times 10^{-8}$ /year
- Ultra low phase noise level close to the carrier
- Power supply: 12 V
- Available as RoHS
- No frequency control available

## ORDERING GUIDE: MV336R-B 003 D-10.0MHz-LN-1S/9E-14-10S/2.5E-13-100S/4.5E-13

Availability of certain stability vs. operating temperature range		$\pm 5 \times 10^{-11}$	$\pm 3 \times 10^{-11}$	$\pm 2 \times 10^{-11}$
		005	003	002
A	0...+55 °C	A	A	A
B	-10...+60 °C	A	A	C
C	-20...+70 °C	C	C	C

A – available, C – consult factory

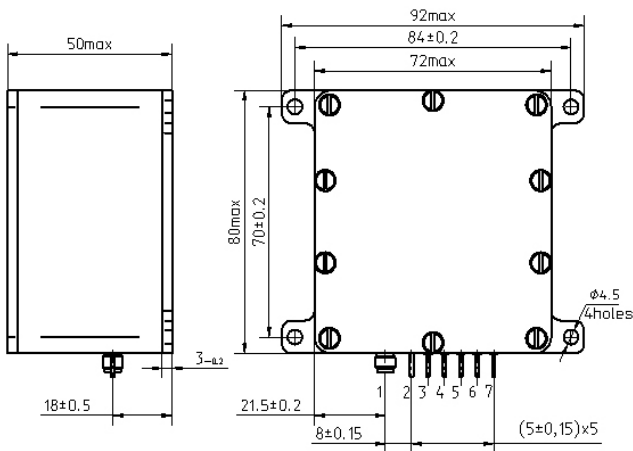
Availability of certain aging values	
E	$\pm 3 \times 10^{-8}$ /year
D	$\pm 2 \times 10^{-8}$ /year
C	$\pm 1 \times 10^{-8}$ /year

Phase noise, dBc/Hz, at offset:		
Option	-	LN
0.1 Hz	< -94	< -94
1 Hz	< -120	< -124*
10 Hz	< -145	< -145
100 Hz	< -157	< -157
1000 Hz	< -161	< -161
10000 Hz	< -162	< -162

\* measured value

Short term stability (Allan deviation)		
Per 1 sec (measured values)	Per 10 sec (option)	Per 100 sec (option)
< $1 \times 10^{-13}$ (1E-13)	< $5 \times 10^{-13}$ (5E-13)	< $8 \times 10^{-13}$ (8E-13)
< $9 \times 10^{-14}$ (9E-14)*	< $2.5 \times 10^{-13}$ (2.5E-13)	< $4.5 \times 10^{-13}$ (4.5E-13)
< $8 \times 10^{-14}$ (8E-14)*		
< $7 \times 10^{-14}$ (7E-14)*		

\* consult factory



Pin	Function
1	Output signal SMA
2	Ground (case)
3	NC
4	NC
5	NC
6	NC
7	Power supply

Frequency stability vs. load changes ( $\pm 5\%$ )	< $\pm 2 \times 10^{-11}$
Frequency stability vs. power supply changes ( $\pm 1\%$ )	< $\pm 2 \times 10^{-11}$
Warm-up time within accuracy of $< \pm 5 \times 10^{-8}$ @ 25°C	< 14 min
Power supply ( $U_s$ )	12 V $\pm 1\%$
Steady state current consumption @ +25°C ("still air")	< 650 mA
Peak current consumption during warm-up	< 1600 mA

Output waveform	SIN
Level	$\geq 350$ mV
Load	50 Ohm $\pm 5\%$
Harmonics	$\leq -30$ dBc

Vibrations:	
Frequency range	10-200 Hz
Acceleration	5 g
Shock:	75 g/3±1 ms
Humidity @ 25°C	98%
Storage temperature range	-55...+85°C

## Additional notes:

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, Inc. reserves the right to modify design or specifications of its products without prior notice

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