

# DOUBLE OVEN ULTRA PRECISION OCXO MV216

## Features:

- Overall stability up to  $\pm 3 \times 10^{-8}$  / 10 years
- Not sensitive for rapid changes of ambient temperature
- Ultra low aging up to  $\pm 5 \times 10^{-9}$  / year
- Ultra high stability vs. temperature - up to  $\pm 5 \times 10^{-11}$
- Standard frequencies 5 MHz & 10.0 MHz

## Typical Applications:

- 3G Communication systems
- Test & Measurement
- Telecom synchronization modules
- GPS/GLONASS Timing & Navigation equipment
- Rubidium replacement

## ORDERING GUIDE: MV216 – B 01 C – 10.0 MHz

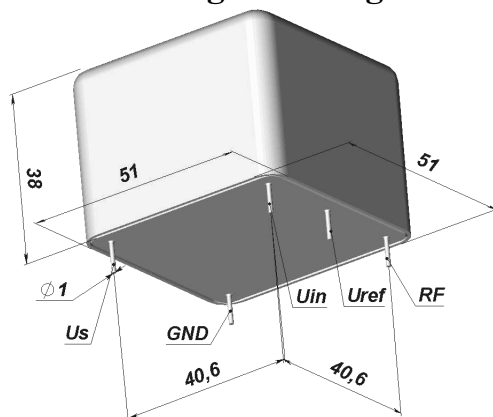
Availability of certain stability vs. operating temperature range		$\pm 2 \times 10^{-10}$	$\pm 1 \times 10^{-10}$	$\pm 5 \times 10^{-11}$
		02	01	005
A	0...+55 °C	A	A	A
B	- 10...+60 °C	A	A	A
C	- 20...+70 °C	A	A	C
D	-40...+70 °C	A	A	C

	Overall stability for 10 years of operation	Overall stability for 1 year of operation
D	$\pm 1 \times 10^{-7}$	$\pm 1.5 \times 10^{-8}$
C	$\pm 5 \times 10^{-8}$	$\pm 1 \times 10^{-8}$
B	$\pm 3 \times 10^{-8}$	$\pm 5 \times 10^{-9}$

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

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

## Package drawing:



## Mechanical characteristics:

<b>Vibrations:</b>	
Frequency range	1-200 Hz
Acceleration	5g
<b>Shock:</b>	
Acceleration	150 g
Duration	3±1 ms
Storage temperature range	-55...+80 °C

Short term stability (Allan deviation) per 1 sec	$< 2 \times 10^{-12}$
Frequency stability vs. load changes	$< \pm 5 \times 10^{-11}$
Frequency stability vs. power supply changes	$< \pm 5 \times 10^{-11}$
Warm-up time within accuracy of $< \pm 5 \times 10^{-8}$	$< 15$ min
Power supply (Us)	12V±5%
Steady state current consumption @ 25°C (still air)	$< 350$ mA
Peak current consumption during warm-up	$< 1.5$ A
Option for - 10...+60 °C	$< 1.0$ A
Frequency pulling range	$> \pm 2.5 \times 10^{-7}$
with external control voltage range (Uin)	0...+5 V
Reference voltage (Uref)	+5V

<b>Output</b>	<b>SIN</b>
Level	+7 ±2 dBm
Load	50 Ohm±5%
Subharmonics (for 10.0 MHz)	$< -40$ dBc
Harmonic suppression	$> 30$ dBc
Phase noise (for 5 MHz)	
1 Hz	$< -105$ dBc/Hz
10 Hz	$< -130$ dBc/Hz
100 Hz	$< -145$ dBc/Hz
1000 Hz	$< -150$ dBc/Hz
10000 Hz	$< -155$ dBc/Hz

## ADDITIONAL NOTES:

- Showed values of frequency stability vs. temperature usually are tested in Still Air test conditions. Please inform factory about different conditions in operation to provide appropriate tests.
- 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):

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