

MINIATURE DOUBLE OVEN ULTRA PRECISION OCXO MV209

Features:

- Low sensitivity to rapid changes of ambient temperature
- Stability vs. temperature – up to $\pm 2 \times 10^{-10}$
- Short term stability – up to 2×10^{-12} per 1 sec
- Aging – up to $\pm 2 \times 10^{-8}$ /year
- Standard CO-08 package with size of 36x27x19 mm

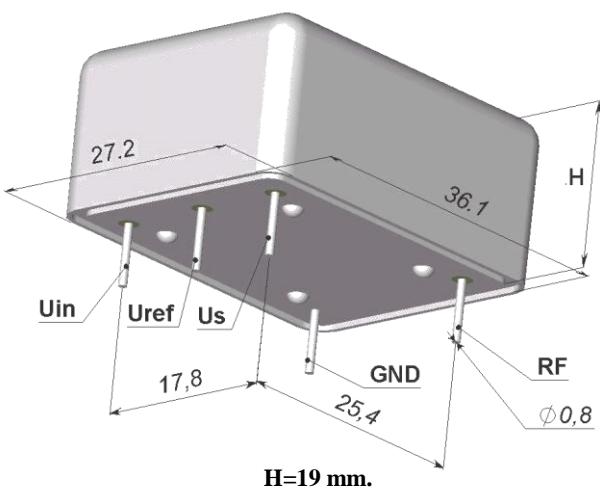
ORDERING GUIDE: MV209 – B 05 E – 10.0 MHz- LN

Availability of certain stability vs. operating temperature		$\pm 5 \times 10^{-10}$	$\pm 3 \times 10^{-10}$	$\pm 2 \times 10^{-10}$	$\pm 1 \times 10^{-10}$	Availability of certain aging values for certain frequencies			Standard frequencies		
		05	03	02	01	F	$\pm 5 \times 10^{-8}$ /year	A	5.0 MHz	8.192 MHz	10.0 MHz
A	0...+55 °C	A	A	A	C	E	$\pm 3 \times 10^{-8}$ /year	A	A	A	
B	-10...+60 °C	A	A	A	C	D	$\pm 2 \times 10^{-8}$ /year	A	A	A	
C	-20...+70 °C	A	A	C	C	C	$\pm 1 \times 10^{-8}$ /year	A	C	C	
D	-40...+70 °C	A	C	C	C						

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

A – available, C – consult factory

Package drawing:



Phase noise, dBc/Hz, for 10MHz	-	LN
1 Hz	<-95	<-100
10 Hz	<-125	<-130
100 Hz	<-143	<-148
1000 Hz	<-152	<-155
10000 Hz	<-158	<-160

Short term stability (Allan deviation) per 1 sec, typical	$<5 \times 10^{-12}$
Optional:	$<2 \times 10^{-12}$
	$<1 \times 10^{-12}$
Frequency stability vs. load changes	$<\pm 1 \times 10^{-10}$
Frequency stability vs. power supply changes	$<\pm 1 \times 10^{-10}$
Warm-up time within accuracy of $<\pm 5 \times 10^{-8}$ @ 25°C	<10 min
Power supply (Us)	12V $\pm 5\%$
Steady state current consumption @ 25°C (still air)	< 150 mA
Peak current consumption during warm-up @ 25°C	<700 mA
Frequency pulling range	$>\pm 4 \times 10^{-7}$
with external control voltage range (Uin)	0...+5 V
Reference voltage (Uref)	+5V

Vibrations:	10-500 Hz
Frequency range	10g
Acceleration	
Shock:	150 g
Acceleration	3±1 ms
Duration	
Storage temperature range	-55...+80 °C

Output	SIN
Level	> 400 mV RMS
Load	50 Ohm $\pm 5\%$
Harmonic suppression	>30dBc

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.
- Please consult factory for daily aging values. Normally typical correspondence of daily aging per day to aging per year is as following: $\pm 5 \times 10^{-8}$ /year - $\pm 5 \times 10^{-10}$ /day; $\pm 3 \times 10^{-8}$ /year - $\pm 3 \times 10^{-10}$ /day; $\pm 2 \times 10^{-8}$ /year - $\pm 2 \times 10^{-10}$ /day.
- 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

