

MINIATURE LOW POWER PRECISION OCXO MV390

Preliminary information

Features:

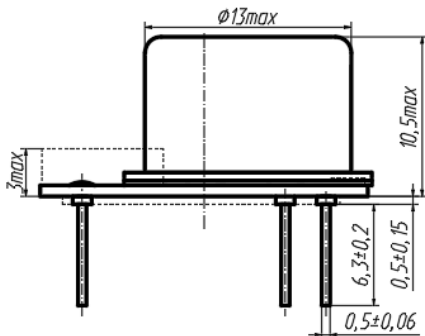
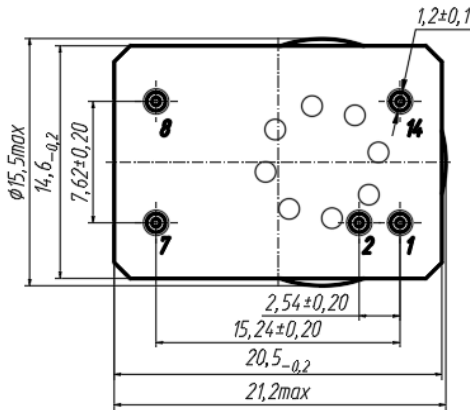
- High stability vs. temperature: up to $\pm 1 \times 10^{-8}$
- Frequency range: 10.0 – 50.0 MHz
- Small package size: 21.2x15.5x10.5 mm
- High long-term stability: up to $\pm 1 \times 10^{-8}$ /year
- Steady state power consumption < 300 mW
- Power supply: 5 V or 3.3 V

Availability of certain stability vs. operating temperature range (for 10 MHz, 5V)		$\pm 5 \times 10^{-8}$	$\pm 3 \times 10^{-8}$	$\pm 2 \times 10^{-8}$	$\pm 1 \times 10^{-8}$
A	0...+50°C	A	A	A	A
B	-10...+60°C	A	A	A	A
C	-20...+70°C	A	A	A	C
EX	-40...+85°C	A	C	C	NA

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

Availability of certain aging values for certain frequencies		Standard frequencies
		10.0 MHz
E	$\pm 3 \times 10^{-8}$ /year	A
D	$\pm 2 \times 10^{-8}$ /year	A
C	$\pm 1 \times 10^{-8}$ /year	C

A – available, C – consult factory



Pin	Designation
1	Uin
2	Uref
7	GND
8	RF
14	Us

Short term stability (Allan deviation) per 1 sec	$< 5 \times 10^{-12}$	
Frequency stability vs. power supply changes	$< \pm 5 \times 10^{-10}$	
Power supply	5 V \pm 5%	3.3 V \pm 5%*
Warm-up time within accuracy of $< \pm 1 \times 10^{-7}$ @ 25 \pm 5 °C	<45 sec	<70 sec
Warm-up time within accuracy of $< \pm 1 \times 10^{-8}$ @ 25 \pm 5 °C	<90 sec	<140 sec
Steady state power consumption @ 25 \pm 5 °C	<300 mW	<320 mW
Power consumption during start-up	<1000 mW	
Frequency pulling range**	$> \pm 4 \times 10^{-7}$	
with external voltage range	0...4.5 V	0...3 V
Reference voltage	+4.5 V	+3.0 V
Output	HCMOS	
Level	<0>	<0.4 V
	<1>	>2.5 V
Load	10 kOhm/15pF	

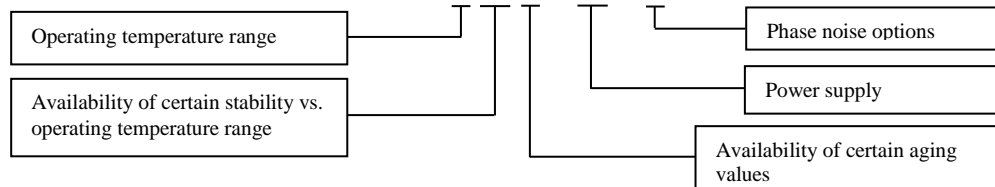
* consult factory

** sufficient to compensate aging during life time

Vibrations:	Frequency range	10-2000 Hz
	Acceleration	30 g
Mechanical shock:	Acceleration	500 g
	Duration	1.5 \pm 0.5 ms
G-sensitivity	$< 1.2 \times 10^{-9}$ /G	
Storage temperature range	-55...+85°C	

Phase noise, dBc/Hz, for 10.0 MHz, 5 V		
Option	1	2
1 Hz	-90	-98
10 Hz	-120	-130
100 Hz	-150	-158
1000 Hz	-160	-165
10000 Hz	-166	-170
100000 Hz	-170	-173

ORDERING GUIDE: MV390 – C 20 D – 5V – 2 – 10.0 MHz



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