

LOW PHASE NOISE MINIATURE OCXO WITH LOW G-SENSITIVITY MV389

Features:

- **Small package:** 25.8x25.8x12.7 mm
- **Low phase noise:** up to -173 dBc/Hz
- **Long term stability:** up to $\pm 3 \times 10^{-8}$ /year
- **G-sensitivity** $< 3 \times 10^{-10}$ /g
- **Standard frequency:** 5 & 10.0 MHz

Supply Voltage
5V
12V

ORDERING GUIDE: MV389 - C 5 F - 12V - 10MHz - 1 - 4E-10/g

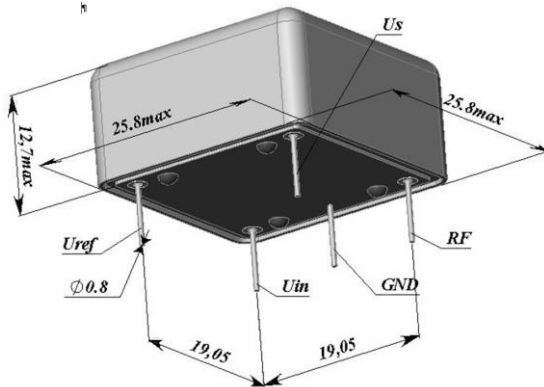
Availability of certain stability vs. operating temperature range		30	20	10	5
		$\pm 2 \times 10^{-8}$	$\pm 2 \times 10^{-8}$	$\pm 1 \times 10^{-8}$	$\pm 5 \times 10^{-9}$
A	0...+55°C	A	A	A	A
B	-10...+60°C	A	A	A	C
C	-20...+70°C	A	A	A	NA
D	-40...+70°C	A	A	C	NA
EX*	-40...+85°C	A	A	C	NA

Availability of certain aging values for certain frequencies		Standard frequencies
		10.0 MHz
G	$\pm 1 \times 10^{-7}$ /year	A
F	$\pm 5 \times 10^{-8}$ /year	A
E	$\pm 3 \times 10^{-8}$ /year	C

- Only for 5 V power supply
 - A – available, C – consult factory, NA – not available
- For other temperature ranges see designation at the end of Data Sheet.

Phase noise, dBc/Hz, for 10MHz, SIN	1 (12V only)	2	3
1 Hz	<-95	<-100	<-105
10 Hz	<-125	<-130	<-135
100 Hz	<-158	<-155	<-155
1000 Hz	<-168	<-160	<-160
10000 Hz	<-173	<-165	>-165

Package drawing:



Short term stability (Allan deviation) per 1 sec, for 10 MHz	$< 5 \times 10^{-12}$
Option (for Option 3 of phase noise)	$< 2 \times 10^{-12}$
G-sensitivity	$< 1 \times 10^{-9}$ /g
Option	$< 5 \times 10^{-10}$ /g
Option	$< 4 \times 10^{-10}$ /g
Option (contact factory)	$< 3 \times 10^{-10}$ /g
Frequency stability vs. load changes ($\pm 5\%$)	$< \pm 1.5 \times 10^{-9}$
Frequency stability vs. power supply changes ($\pm 5\%$)	$< \pm 1.5 \times 10^{-9}$
Warm-up time within accuracy of $< \pm 2 \times 10^{-8}$ @ 25 °C	< 5 min
Power supply (Us)	12V $\pm 5\%$
Steady state current consumption @ 25°C	< 170 mA
Peak current consumption during warm-up	< 550 mA
Frequency pulling range	$> \pm 4.0 \times 10^{-7}$
Control voltage range (Uin)	0...5 V
Reference voltage (Uref)	+5 V
Output	SIN
Level	> 600 mV
Load	50 Ohm $\pm 5\%$
Harmonics	> 30 dBc

Vibrations:	
Frequency range	10-500 Hz
Acceleration	5 g
Shock:	
Acceleration	75 g
Duration	3 ± 1 ms
Humidity @ 25 °C	98%
Storage temperature range	-55...+70°C

Additional notes:

- Please consult factory for daily aging values. Normally typical correspondence of daily to aging per year is as following: $\pm 1 \times 10^{-7}$ /year – $\pm 1 \times 10^{-9}$ /day; $\pm 5 \times 10^{-8}$ /year – $\pm 5 \times 10^{-10}$ /day; $\pm 3 \times 10^{-8}$ /year – $\pm 3 \times 10^{-10}$ /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

