

# HIGH STABILITY FAST WARM-UP LOW POWER CONSUMPTION OCXO MV80

## Features:

- Short warm-up time – less than 60 seconds
- Frequency stability vs. temperature – up to  $\pm 2 \times 10^{-8}$
- Option with 5 V power supply
- Very low power consumption – up to 0.2 W
- Low phase noise

Frequency range: 9.5-10.5 MHz
Standard frequency: 10.0 MHz

**ORDERING GUIDE: MV80-C 30 H-60 - SIN - 12V-10.0 MHz**

Availability of certain stability vs. operating temperature range		$\pm 1 \times 10^{-7}$	$\pm 5 \times 10^{-8}$	$\pm 3 \times 10^{-8}$	$\pm 2 \times 10^{-8}$
		100	50	30	20
A	0...+55 °C	A	A	A	A
B	-10...+60 °C	A	A	A	A
C	-20...+70 °C	A	A	A	C
D	-40...+70 °C	A	A	C	C

A – available, NA – not available, C – consult factory  
For other temperature ranges see designation at the end of Data Sheet

Warm-up time within $\pm 5 \times 10^{-7}$ @ 25°C	
60	60 seconds
90	90 seconds

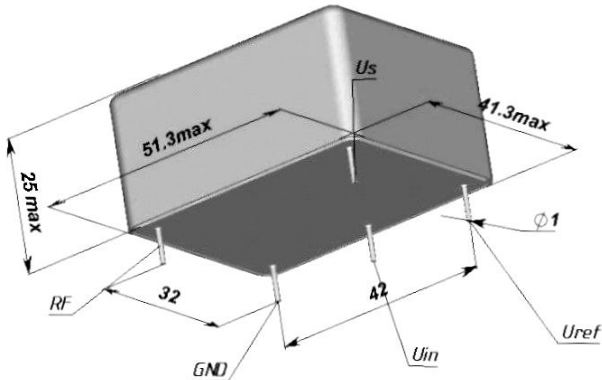
Power Supply
12 V
5 V

Aging	
I	$\pm 3 \times 10^{-7}$ /year
H	$\pm 2 \times 10^{-7}$ /year
G	$\pm 1 \times 10^{-7}$ /year

Output type
SIN
HCMOS

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

## Package drawing:



Short term stability (Allan deviation) per 1 sec, typical	$< 3 \times 10^{-11}$			
Frequency stability vs. load changes	$< \pm 3 \times 10^{-9}$			
Frequency stability vs. power supply changes	$< \pm 3 \times 10^{-9}$			
Power supply (Us)	5 V		12 V	
Output	SIN	HCMOS	SIN	HCMOS
Steady state current consumption, mA @ 25°C	40	50	35	40
- at low operating temperature, mA	65	75	45	50
Peak current consumption during warm-up	250 mA		150 mA	
Frequency pulling range	$> \pm 7.5 \times 10^{-7}$			
with external voltage range (Uin)	0...+4.5 V		0...+5 V	
with external potentiometer	20 kOhm			
Reference voltage output (Uref)	+4.5 V		+5 V	
Slope	Positive			
Vibrations	10-200 Hz, 8g			
Shock	100g, 3 ms			

Output	SIN	HCMOS
Level	$> 225$ mV (0dBm)	5 V/ 40...60%
Load	50 Ohm $\pm 5\%$	10 kOhm/15 pF
Harmonic suppression	$> 30$ dB	-
Phase noise, typical (for 10 MHz) @ 1 Hz	-90 dBc/Hz	-90 dBc/Hz
10 Hz	-125 dBc/Hz	-120 dBc/Hz
100 Hz	-140 dBc/Hz	-135 dBc/Hz
1000 Hz	-150 dBc/Hz	-145 dBc/Hz
10000 Hz	-155 dBc/Hz	-150 dBc/Hz

## Additional notes:

- Please consult factory for daily aging values. Normally typical correspondence of daily aging per day to aging per year is as following:  $\pm 5 \times 10^{-7}$ /year -  $\pm 5 \times 10^{-9}$ /day;  $\pm 3 \times 10^{-7}$ /year -  $\pm 3 \times 10^{-9}$ /day;  $\pm 2 \times 10^{-7}$ /year -  $\pm 2 \times 10^{-9}$ /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