

# HIGH FREQUENCY LOW PHASE NOISE OCXO MV87

## Features:

- Frequency range: 48.0-120.0 MHz without internal multiplication
- Low phase noise – floor of <math>-173\text{ dBc/Hz}</math>
- High stability vs. temperature – up to  $\pm 5 \times 10^{-8}$
- Low harmonics and sub-harmonics (optional)
- SMA output (optional)
- Low profile – just 12.7 mm height
- Ideal for PLL, VSAT, Frequency synthesizers

Frequency range: 48.0- 700.0 MHz
Standard Frequency: 48.0; 56.0; 60.0; 80.0; 100.0; 400.0; 500.0 MHz

Package type	
50.8x50.8x12.7 mm	
F	48.0 ... 120.0 MHz
G	100 ... 700.0 MHz

**ORDERING GUIDE: MV87-B 300 J - 3 - 100.0 MHz - F**

Availability of certain stability vs. operating temperature range		$\pm 5 \times 10^{-7}$	$\pm 3 \times 10^{-7}$	$\pm 1 \times 10^{-7}$	$\pm 7.5 \times 10^{-8}$	$\pm 5 \times 10^{-8}$
		500	300	100	75	50
A	0...+50 °C	A	A	A	A	A
B	- 10...+60 °C	A	A	A	A	C
C	- 20...+70 °C	A	A	A	C	NA
D	- 40...+70 °C	A	A	A	C	NA

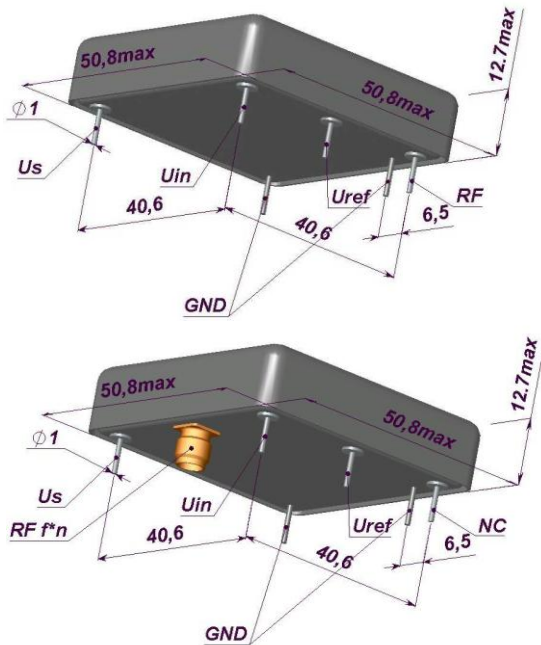
A – available, NA – not available, C – consult factory

+75°, +80°, +85°C upper temperature limits may be available on a separate request. For other temperature ranges see designation at the end of Data Sheet

Phase noise, dBc/Hz (for 100.0 & 500.0 MHz)							
Option	1	2	3	4	5	6	7
Freq.	100	500	100	500	100	500	100
10 Hz	-85	-70	-90	-75	-95	-80	-98
100 Hz	-115	-100	-120	-105	-125	-110	-128
1000 Hz	-140	-125	-145	-130	-150	-135	-152
10000 Hz	-160	-140	-162	-142	-165	-145	-165

Aging	
K	$\pm 1 \times 10^{-6}$ /year
J	$\pm 5 \times 10^{-7}$ /year
I	$\pm 3 \times 10^{-7}$ /year

## Package drawings:



## 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

Frequency stability vs. load changes	$< \pm 5 \times 10^{-8}$
Frequency stability vs. power supply changes	$< \pm 5 \times 10^{-8}$
Warm-up time with accuracy of $< \pm 2 \times 10^{-7}$ at +25 °C	$< 3$ min
Power supply (Us)	12V $\pm 10\%$
Steady state current consumption @ 25°C (still air)	$< 150$ mA
Peak current consumption during warm-up	$< 450$ mA
Frequency pulling range	$> \pm 3 \times 10^{-6}$
with external control voltage range (Uin)	0...+8 V
Reference voltage (Uref)	+8 V

Output	SIN
Level	$> 400$ mV
Load	50 Ohm $\pm 10\%$
Harmonics & subharmonics	$< -25$ dBc ( $< -40$ dBc optional and available for Package Type G)
Vibrations	10-500 Hz, 5g
Storage temperature range	-55...+80 °C