

# HIGH FREQUENCY ULTRA PRECISION LOW PHASE NOISE OCXO MV137

## Features:

- Standard frequency – 100 MHz
- Low Phase Noise – floor of <-165 dBc/Hz
- High stability vs. temperature – up to  $\pm 1 \times 10^{-9}$
- Excellent aging – up to  $\pm 3 \times 10^{-8}$ /year
- Ideal for VSAT, Frequency synthesizers

**ORDERING GUIDE:** MV137 – B 3 F – 1 – F16 – 100.0 MHz

Package type	
F16	51x51x16 mm
F19	51x51x19 mm

Availability of certain stability vs. operating temperature range		$\pm 5 \times 10^{-9}$	$\pm 3 \times 10^{-9}$	$\pm 2 \times 10^{-9}$	$\pm 1 \times 10^{-9}$
		5	3	2	1
A	0...+50 °C	A	A	A	A
B	- 10...+60 °C	A	A	A	C
C	- 20...+70 °C	A	A	C	NA
D	-40...+70 °C	A	A	C	NA
E	-55...+70 °C	A	A	C	NA

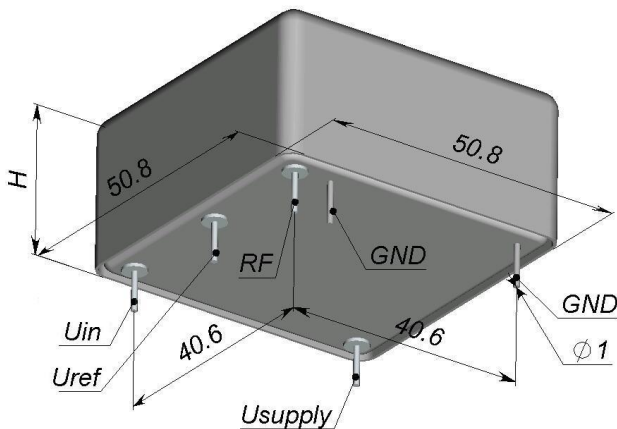
A – available, NA – not available,  
C – consult factory (for H = 19mm)

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

Phase noise, dBc/Hz				
	1	2	3	4
10 Hz	<-95	<-100	<-105	<-105
100 Hz	<-110	<-115	<-120	<-125
1000 Hz	<-140	<-145	<-150	<-150
10000 Hz	<-160	<-162	<-165	<-165

Aging	
G	$\pm 1 \times 10^{-7}$ /year
F	$\pm 5 \times 10^{-8}$ /year
E	$\pm 3 \times 10^{-8}$ /year

## Package drawing:



H=16 mm for F16 package;  
H=19 mm for F19 package.

## 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	< $\pm 1 \times 10^{-10}$
Frequency stability vs. power supply changes	< $\pm 1 \times 10^{-9}$
Warm-up time within accuracy of $\pm 1 \times 10^{-8}$ @ 25 °C	<10 min
Power supply (U <sub>supply</sub> )	12V $\pm 10\%$
Steady state current consumption @ 25 °C	< 300 mA
Peak current consumption during warm-up	<800 mA
Frequency pulling range	> $\pm 5 \times 10^{-7}$
with external control voltage range (U <sub>in</sub> )	0...+5 V
Reference voltage output (U <sub>ref</sub> )	+5 V

Output	SIN
Level	>400 mV
Load	50 Ohm $\pm 10\%$
Harmonics	<-30 dBc
Spurious & subharmonics	<-60 dBc (standard)
Optional subharmonics	<-100 dBc (optional)
Vibrations	10-300 Hz, 5g
Storage temperature range	-55...+85 °C