

# HIGH FREQUENCY ULTRA PRECISION LOW PHASE NOISE OCXO

## MV137

### Features:

- **Standard frequency: 100.0 MHz**
- **Low Phase Noise: floor of <math>-165\text{ dBc/Hz}</math>**
- **High stability vs. temperature: up to <math>\pm 1 \times 10^{-9}</math>**
- **Excellent aging: up to <math>\pm 3 \times 10^{-8}/\text{year}</math>**
- **Ideal for VSAT, Frequency synthesizers**

Package type	
F16	51x51x16 mm
F19	51x51x19 mm

### ORDERING GUIDE: MV137-B 3 F-1-F16-100.0 MHz

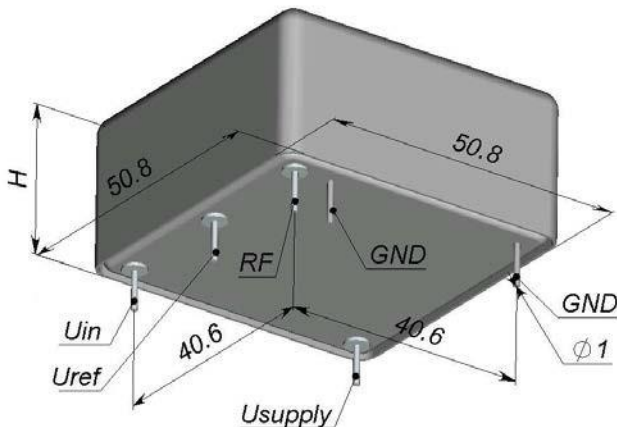
Availability of certain stability vs. operating temperature range		$\pm 5 \times 10^{-9}$	$\pm 3 \times 10^{-9}$	$\pm 2 \times 10^{-9}$	$\pm 1 \times 10^{-9}$
A	0...+50°C	A	A	A	A
B	-10...+60°C	A	A	A	C
C	-20...+70°C	A	A	C	NA
D	-40...+70°C	A	A	C	NA
E	-55...+70°C	A	A	C	NA

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

### Package drawing:



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

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 <math>\pm 1 \times 10^{-8}</math> @ 25 °C	<10 min
Power supply (Usupply)	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 (Uin)	0...+5 V
Reference voltage output (Uref)	+5 V
<b>Output</b>	<b>SIN</b>
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

### 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
										+30	+40	+45	+50	+55	+60	+65	+70	+75	+80	+85



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Due to continuous development and improvement Morion, Inc. reserves the right to modify design or specifications of its products without prior notice

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