

ULTRA PRECISION ULTRA SHORT-TERM STABILITY AND LOW PHASE NOISE OCXO MV336

Preliminary Information

Features:

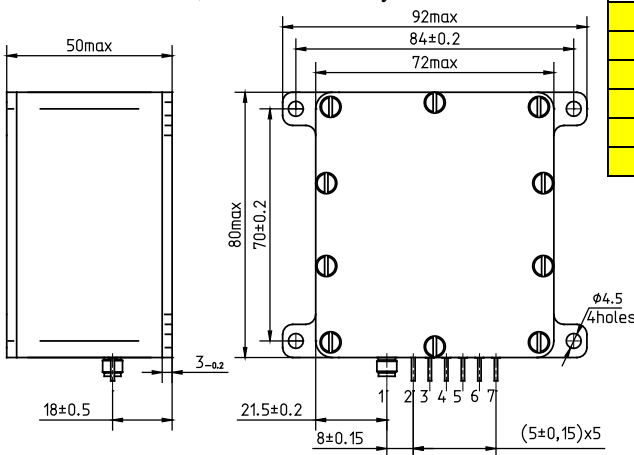
- Standard frequency: 10.0 MHz
- Short term stability (Allan deviation): up to 1×10^{-13}
- Stability vs. temperature: up to $\pm 2 \times 10^{-11}$
- High long-term stability: up to $\pm 1 \times 10^{-8}$ /year
- Ultra low phase noise level close to the carrier
- Power supply: 12 V
- Available as RoHS

ORDERING GUIDE: MV336-A 003 D-10.0MHz-LN-1S/2E-13-10S/3E-13-100S/3E-13

Availability of certain stability vs. operating temperature range		$\pm 1 \times 10^{-10}$	$\pm 5 \times 10^{-11}$	$\pm 3 \times 10^{-11}$	$\pm 2 \times 10^{-11}$
		01	005	003	002
A	0...+55°C	A	A	A	A
B	-10...+60°C	A	A	A	A
C	-20...+70°C	C	C	C	C

Upon request: up to $< 1 \times 10^{-11}$ at any 20°C window inside operating temperature ranges A, B, C

A – available, C – consult factory



Availability of certain aging values for certain frequencies		10 MHz
F	$\pm 5 \times 10^{-8}$ /year	A
E	$\pm 3 \times 10^{-8}$ /year	A
D	$\pm 2 \times 10^{-8}$ /year	A
C	$\pm 1 \times 10^{-8}$ /year	A

Phase noise, dBc/Hz:	-	LN	ULN
0.1 Hz	<-80	<-85	<-92
1 Hz	<-113	<-116	≤-120
10 Hz	<-143	≤-144	≤-145
100 Hz	<-154	<-156	<-157
1000 Hz	<-160	<-160	<-160
10000 Hz	<-160	<-160	<-160

Short term stability (Allan deviation)		
Per 1 sec	Per 10 sec	Per 100 sec
< 5×10^{-13} (5E-13)	< 4×10^{-13} (4E-13)	< 5×10^{-13} (5E-13)
< 4×10^{-13} (4E-13)	< 3×10^{-13} (3E-13)	< 4×10^{-13} (4E-13)
< 3×10^{-13} (3E-13)	< 2×10^{-13} (2E-13)	< 3×10^{-13} (3E-13)
< 2×10^{-13} (2E-13)	< 1.5×10^{-13} (1.5E-13)	< 3×10^{-13} (3E-13)
< 1×10^{-13} (1E-13)		

Pin	Function
1	Output signal (SMA)
2	GND (case)
3	Low Power mode On/Off
4	Not used
5	Not used
6	Not used
7	Power supply

Frequency stability vs. load changes ($\pm 5\%$)	< $\pm 2 \times 10^{-11}$
Frequency stability vs. power supply changes ($\pm 1\%$)	< $\pm 2 \times 10^{-11}$
Warm-up time within accuracy of $\leq 5 \times 10^{-8}$ @ 25°C	<14 min.
Power supply (Us)	12 V $\pm 1\%$
Steady state current consumption @ +25°C ("still air")	<400 mA*
Peak current consumption during warm-up	<1300 mA

*consult factory

Vibrations:	
Frequency range	10-200 Hz
Acceleration	5 g
Shock:	75 g/ 3±1 ms
Humidity @ 25	98%
Storage temperature range	-55...+85°C

Output	SIN
Level	≥+4 dBm
Load	50 Ohm $\pm 5\%$
Harmonics	≤-30 dBc

Option with electrical frequency control (EFC) is planned for Q2, 2017

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