ULTRA PRECISION ULTRA SHORT-TERM STABILITY AND LOW PHASE NOISE DOCXO

MV336M

Preliminary Information

Features:

- *Standard frequency: 10.0 MHz*
- *Short term stability (Allan deviation): up to 1.5x10^{-13}*
- *Stability vs. temperature: up to ±4x10^{-11}*
- *High long-term stability: up to ±1x10^{-8}/year*
- *Ultra low phase noise level close to the carrier*
- *Power supply: 12 V*
- *Analog or Digital frequency control*
- *Available as RoHS*

Type of frequency control	
A	Analog frequency control
D	Digital frequency control with I²C interface

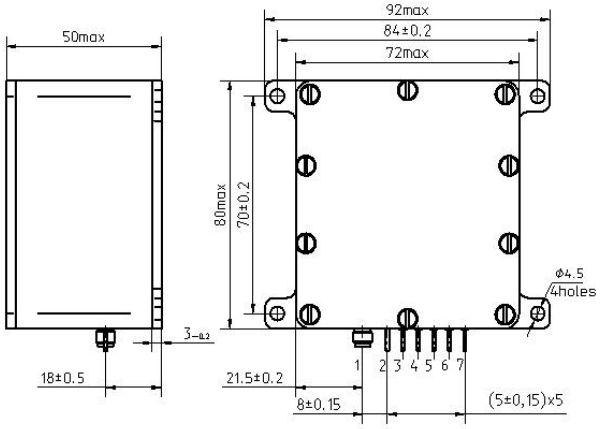
ORDERING GUIDE: MV336M – JR 005 D – 10.0M – LN – D – 2E-13

Availability of certain stability vs. operating temperature range		±5x10^{-11}	±4x10^{-11}
		5E-11	4E-11
A	0…+55ºC	A	A
JR	0…+60ºC	A	C
HT	-10…+70ºC	A	C

A – Available; C – Consult factory.

Availability of certain aging values for certain frequencies	
F	±5x10^{-8}/year
E	±3x10^{-8}/year
D	±2x10^{-8}/year
C	±1x10^{-8}/year

Phase noise, dBc/Hz:	-	LN	ULN
0,1 Hz	<-80	<-85	<-92
1 Hz	<-113	<-116	≤-119…-120
10 Hz	<-143	≤-144	≤-145
100 Hz	<-154	<-156	<-157
1000 Hz	<-160	<-160	<-160
10000 Hz	<-160	<-160	<-160



Frequency stability vs. load changes (±5%)	<±2x10^{-11}	
Short term stability (Allan deviation) per 1 sec.	<3x10^{-13}	3E-13
	<2x10^{-13}	2E-13
	<1.5x10^{-13}	1.5E-13
Frequency pulling range	≥±1.0x10^{-7}	
with external control voltage range (Uin)	0…5 V	
Digital frequency control with I²C interface		
Frequency stability vs. power supply changes (±1%)	<±2x10^{-11}	
Warm-up time within accuracy of <±5x10^{-8}@ 25ºC	<14 min.	
Power supply (Us)	12 V±1%	
Steady state current consumption @ +25ºC ("still air")	<650 mA*	
Peak current consumption during warm-up	<1600 mA	
Output	SIN	
Level	≥+4 dBm	
Load	50	
Harmonics	≥30 dBc	

Pin	Analog	Digital
1	Output signal (SMA)	Output signal (SMA)
2	Ground (case)	Ground (case)
3	Control voltage Input	Not used
4	Ground for control voltage Input	SCLK
5	Not used	DIN
6	Not used	CS
7	Power supply	Power supply

* for 0…55ºC operating temperature range only.

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

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), ºC:

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

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Revision 8. December 2018