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

Features:

- ***Standard frequency: 5.0 MHz or 10.0 MHz***
- ***Short term stability (Allan deviation): up to 1.5x10^{-13} per 1 sec***
- ***Stability vs. temperature: up to ±2x10^{-11}***
- ***High long-term stability: up to ±1x10^{-8}/year***
- ***Ultra low phase noise level close to the carrier***
- ***Power supply: 12 V***
- ***Analog, Digital or no frequency control***
- ***Available as RoHs***

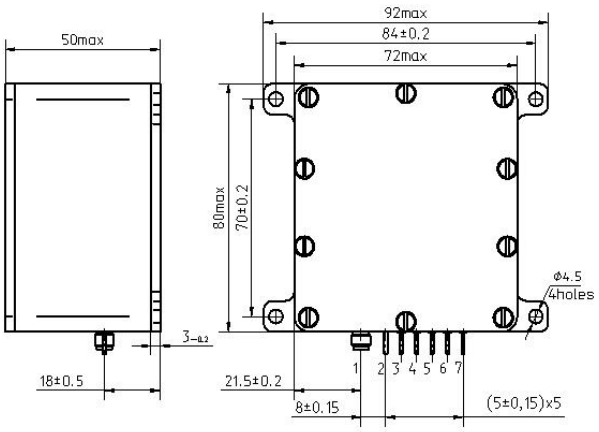
Frequency adjustment type	
A	Analog
D	Digital
-	No frequency control

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

Availability of certain stability vs. operating temperature range		±1x10^{-10}	±5x10^{-11}	±3x10^{-11}	±2x10^{-11}
		01	005	003	002
A	0…+55°C	A	A	A	A
B	-10…+60°C	A	A	A	C
C	-20…+70°C	C	C	C	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



Pin	Analog	Digital	No adjustment
1	Output signal (SMA)	Output signal (SMA)	Output signal (SMA)
2	Ground (case)	Ground (case)	Ground (case)
3	Control voltage Input	*LDAC**	*NC*
4	Ground for control voltage Input	SCLK	NC
5	NC	DIN	NC
6	NC	CS*	NC
7	Power supply	Power supply	Power supply

* Pins pulled up to 5 V through 10 kOhm

Phase Noise. dBc/Hz	Standard Frequency			
	10 MHz			5 MHz
	-	LN	ULN	-
0.1 Hz	<-80	<-85	<-92	<-97
1 Hz	<-113	<-116	≤119…-120	<-125
10 Hz	<-143	≤-144	≤-145	<-138
100 Hz	<-154	<-156	<-157	<-148
1000 Hz	<-160	<-160	<-160	<-154
10000 Hz	<-160	<-160	<-160	<-157

Short term stability (Allan deviation)		
Per 1 sec	Per 10 sec (option)	Per 100 sec * (option)
<5x10^{-13}(5E-13) <4x10^{-13}(4E-13) <3x10^{-13}(3E-13) <2x10^{-13}(2E-13) <1.5x10^{-13}(1.5E-13)*	<5x10^{-13}(5E-13) <4x10^{-13}(4E-13) <3x10^{-13}(3E-13) <2.5x10^{-13}(2.5E-13)*	<5x10^{-13}(5E-13) <4.5x10^{-13}(4.5E-13)

* For 10 MHz only.

Frequency stability vs. load changes (±5%)	<±2x10^{-11}
Frequency stability vs. power supply changes (±1%)	<±2x10^{-11}
Warm-up time within accuracy of <±5x10^{-8}@ 25°C	<14 min.
Power supply (Us)	12 V±1%
Steady state current consumption @ +25°C ("still air")	<650 mA
Peak current consumption during warm-up	<1600 mA

Output	SIN
Level	≥+4 dBm
Load	50 Ohm±5%
Harmonics	≤-30 dBc
Frequency pulling range	≥ +1x10^{-7}
Analog adjustment voltage with external control voltage	0…5 V
Digital frequency adjustment by SPI protocol	
DAC type	MAX5719 (20 bit)

Vibrations:	
Frequency range	10-200 Hz
Acceleration	5 g
Shock:	75 g/ 3±1 ms
Humidity @ 25	98%
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
-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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Due to continuous development and improvement Morion reserves the right to modify design or specifications of its products without prior notice

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