PRECISION MINIATURE OCXO IN SMD PACKAGE MV410

Features:

- ***Small package of 25.4x22.1x12.2 mm SMD package***
- ***High stability vs. temperature: up to ±1x10^{-8}***
- ***Frequency range: 10.0 – 40.0 MHz***
- ***Supply voltage: 3.3V or 5V***
- ***Available as RoHS***
- ***Output type: CMOS or SIN***

Power Supply
5 V
3.3 V

Output type
CMOS
SIN

ORDERING GUIDE: MV410–B20G–3.3V–SIN–10.0MHz–LN

Availability of certain stability vs. operating temperature range		±5x10^{-8}	±2x10^{-8}	±1x10^{-8}	±5x10^{-9}
		50	20	10	5
A	0…+55ºC	A	A	A	A
B	-10…+60ºC	A	A	A	A
C	-20…+70ºC	A	A	A	C
D	-40…+70ºC	A	A	A	C
EX	-40…+85ºC	A	A	C	C

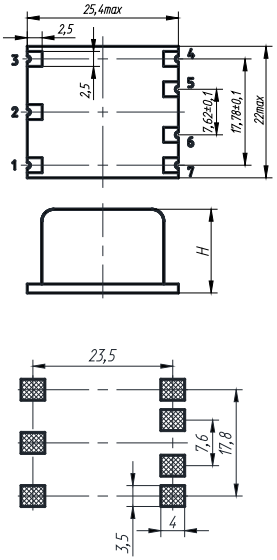
A – available, C – consult factory

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

Availability of certain aging values for certain frequencies		Standard frequencies, MHz				
		10.0	12.8	13.0	16.384	20.0
H	±2. 0x10^{-7}/year	A	A	A	A	A
G	±1.0x10^{-7}/year	A	A	A	A	C
F	±5.0x10^{-8}/year	A	A	A	C	NA
E	±3.0x10^{-8}/year	A	C	C	NA	NA

A – available, NA – not available, C – consult factory

Package drawing:



Outputs designations

1	Control voltage input
2	Reference voltage output
3	Power supply
4	Rf output
5	Not connected
6	Not connected
7	GND

Short term stability (Allan deviation) per 1 sec	<5x10^{-11} <1x10^{-11}*	
Frequency stability vs. load changes	<±5x10^{-9}	
Frequency stability vs. power supply changes	<±5x10^{-9}	
Power supply (Us)	5V±5%	3.3V±5%
Current consumption at steady state @ 25ºC	< 200 mA	< 300 mA
Peak current consumption during warm-up @ 25ºC	< 450 mA	< 700 mA
Warm-up time within <±1x10^{-7} @ 25 ºC	<3 min	
Frequency pulling range	>±5x10^{-7}	
with external voltage range (Uin)	0…+4.5 V	0…+3.0 V
reference voltage output (Uref)	+ 4.5 V	+3.0 V
Pulling slope	Positive	

* consult factory

Output	CMOS		SIN
Level	For 5V: 4.0 / 0.3 V	For 3.3V: 2.7 / 0.3 V	>450 mV
Load	10 kOhm/15 pF		50 Ohm±10%
Harmonic suppression	-		>40 dBc

Phase noise, dB/Hz (10.0 MHz)	-	LN
1 Hz	<-90	<-100
10 Hz	<-120	<-130
100 Hz	<-140	<-150
1000 Hz	<-150	<-158
10000 Hz	<-155	<-160
100000 Hz	<-160	<-165

Vibrations: Frequency range Acceleration	 10-500 Hz 5 g
Shock: Acceleration Duration	 75 g 3±1 ms
Storage temperature range	-55…+85 ºC

Additional notes:

- **Showed values of frequency stability vs. temperature usually are tested in Still Air test conditions. Please inform factory about different conditions in operation to provide appropriate tests.**
- **Please consult factory for daily aging values. Normally typical correspondence of daily aging per day to aging per year is as following: ±2x10^{-7}/year - ±2x10^{-9}/day; ±1x10^{-7}/year - ±1x10^{-9}/day; ±5x10^{-8}/year - ±5x10^{-10}/day.**
- **Please mention RoHS requirement (if any) while requesting for quote or while placing PO.**
- **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:**

E	F	G	H	J	K	L	M	N	P	Q	R	S	T	U	W	X
-40	-30	-20	-10	0	+10	+30	+40	+45	+50	+55	+60	+65	+70	+75	+80	+85

MORION, Inc.

13a, KIMa Ave., St.Petersburg, 199155, RUSSIA. http://www.morion.com.ru

Tel.:+7-812-350-9243; 332-5032. Fax:+7-812-350-7290. e-mail: sale@morion.com.ru

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