MINIATURE PRECISION OCXO MV197

Features:

- ***Package height from 16 mm, down to 10 mm***
- ***High stability vs. temperature: up to ±3x10^{-10}***
- ***Long term stability up to±2x10^{-8}/year***
- ***Low phase noise options***
- ***Fast warm-up time up to 1 min***
- ***Available as RoHS***
- ***Available SPI interface manufacturing on factory request***
- ***Frequency range: 8.192 – 20.0 MHz***

Power supply
12 V
5 V

Output
SIN
HCMOS
LVCMOS

Package type	
36x27x16 mm	B16
36x27x12.7 mm	B12.7
36x27x10 mm	B10

ORDERING GUIDE: MV197–C 1 F–12V–SIN–B12.7–LN–10.0 MHz–5E-13

Availability of certain stability vs. operating temperature range (for 10 MHz)		± 5x10^{-9}	± 3x10^{-9}	± 2x10^{-9}	± 1x10^{-9}	± 7,5x10^{-10}	± 5x10^{-10}	± 3x10^{-10}
		5	3	2	1	075*	05*	03*
A	0…+55°C	A	A	A	A	A	A	A
B	-10…+60°C	A	A	A	A	A	A	C
C	-20…+70°C	A	A	A	A	A	A	NA
D*	-40…+70°C	A	A	A	A	A	A	NA
EX*	-40…+85°C	A	A	A	A	A	A	NA

*- for oscillators with package ≥12,7 mm and standard, LN and ULNF phase noise options

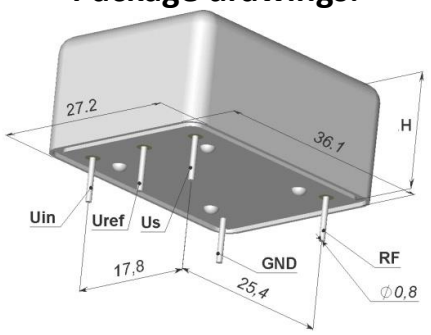
A – available, NA – not available, C – consult factory

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	±2x10^{-7}/year	A	A	A	A	A
G	±1x10^{-7}/year	A	A	A	A	A
F	±5x10^{-8}/year	A	A	A	C	A
E	±3x10^{-8}/year	A	A	C	NA	NA
D	±2x10^{-8}/year	A	C	C	NA	NA

Phase noise, dBc/Hz, for 10MHz, SIN	-	LN	ULNF	ULN	IULN	EULN
			For 12V only			
1 Hz	<-95	<-100	<-100	<-103	<-110	-117
10 Hz	<-125	<-130	<-130	<-133	<-138	-140
100 Hz	<-145	<-153	<-155	<-155	<-155	-155
1000 Hz	<-150	<-158	<-160	<-160	<-160	-160
10000 Hz	<-155	<-160	<-165	<-161	<-161	-161

Package drawings:



For "H" definition please see package type

Short term stability (Allan deviation) per 1 sec, for 10 MHz , 5 V or 12 V	<5x10^{-12} / 5E-12
	<1x10^{-12} / 1E-12
Short term stability (Allan deviation) per 1 sec, for 10 MHz, *12 V Only	<5x10^{-13} / 5E-13*
	<3x10^{-13} / 3E-13*
Frequency stability vs. load changes (±5%)	<±5x10^{-10}
Frequency stability vs. power supply changes (±5%)	<±5x10^{-10}
Warm-up time -within accuracy of <±2x10^{-8}@ 25 °C -within accuracy of <±1x10^{-7}@ 25 °C	<3 min <1 min (option)

Power supply (Us)	12V±5%	5V±5%
Steady state current consumption @ + 25 °C	<150 mA	<400 mA
Peak current consumption during warm-up (with t<- 20°C "Still air")	<400 mA	<1000 mA
Frequency pulling range (for 10 MHz)	>±4.0x10^{-7}	
Control voltage range (Uin)	0…5 V	0…4.5 V
Reference voltage (Uref)	+5 V	+4.5 V

Vibrations:	
Frequency range	10-500 Hz
Acceleration	5 g

Shock:	
Acceleration	75 g
Duration	3±1 ms

Humidity @ 25 °C	98%
Storage temperature range	-55…+85 °C

Output	HCMOS		SIN
Level	"0"	<0.5V	>300 mV RMS (to 9±1 dBm - optional for 12V power supply)
	"1"	>4.0V	
Load	10kOhm/30pF		50 Ohm±5%
Rise/Fall time	<6 ns (<3 ns option)		-
Harmonics	-		>30 dBc

Additional notes:

- **Start-up time < 100 mSec – optional.**
- **Option with digital frequency control will be available soon.**
- **Please consult factory for daily aging values. Normally typical correspondence of daily to aging per year is as following: ±1x10^{-7}/year – ±1x10^{-9}/day; ±5x10^{-8}/year – ±5x10^{-10}/day; ±3x10^{-8}/year – ±3x10^{-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), °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	

1750 Meridian Ave. #5128, San Jose, CA 95150
Tel: 408-329-8108, Email: sales@morion-us.com

Revision 12. May 2018