ULTRA MINIATURE PRECISION OCXO MV199

Features:

- ***Ultra miniature package 20.35x20.35x12.7 mm***
- ***High stability vs. temperature: up to ±1x10^{-9}***
- ***Long term stability up to±3x10^{-8}/year***
- ***Available as RoHS***
- ***Frequency range: 8.192 – 20.0 MHz***

Power supply	Output
12V	SIN
5V	HCMOS

ORDERING GUIDE: MV199 – C 3 F – 12V – SIN – 10.0 MHz – LN

Availability of certain stability vs. operating temperature range		± 5x10^{-9}	± 3x10^{-9}	± 2x10^{-9}	± 1x10^{-9}
		5	3	2	1
A	0…+55 °C	A	A	A	C
B	- 10…+60 °C	A	A	C	C
C	- 20…+70 °C	A	A	C	C
D	- 40…+70 °C	A	A	C	C
EX	- 40…+85 °C	A	C	C	NA

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

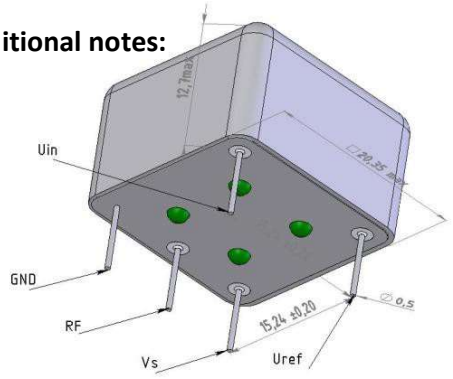
For other temperature ranges see designation at the end of Data Sheet.

Availability of certain aging values for certain frequencies		Standard frequencies, MHz				
		10.0	12.8	13.0	16.384	20.0
H	±3x10^{-8}/year	NA	NA	NA	A	A
G	±3x10^{-8}/year	A	A	A	A	C
F	±3x10^{-8}/year	A	A	A	C	NA
E	±3x10^{-8}/year	A	A	C	NA	NA

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

Phase noise, dBc/Hz, for 10MHz, SIN	-	LN For 12V, SIN
1 Hz	<-95	<-100
10 Hz	<-125	<-130
100 Hz	<-145	<-150
1000 Hz	<-150	<-155
10000 Hz	<-155	<-160

Package drawing:



Additional notes:

Short term stability (Allan deviation) per 1 sec, for 10 MHz	<5x10^{-12} <2x10^{-12}
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 Optional*, within accuracy of <□1x10^{-7} @25 °C	<3 min <1 min

Power supply (Us)	12V±5%	5V±5%	3.3V ±5%
Steady state current consumption @ 25°C	<100 mA	<250 mA	<450 mA
Peak current consumption during warm-up (for "D" temp. range)	<400 mA	<650 mA	<1000 mA
Frequency pulling range (for 10 MHz)	>±4.0x10^{-7}		> ±3.0x10^{-7}
Control voltage range (Uin)	0…5 V	0…4.5V	0…2.8 V
Reference voltage (Uref)	+5 V	+4.5 V	+2.8 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
	"1"	>4.0V	
Load	10kOhm/30pF		50 Ohm±5%
Rise/Fall time	<6 ns (<3 ns optional)		-
Harmonics	-		>30 dBc

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 whileplacing 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

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