

MINIATURE PRECISION OCXO MV205

Features:

- **Package height:** from 12.7 mm, down to 10 mm
- **High stability vs. temperature:** up to $\pm 1 \times 10^{-9}$
- **Long term stability:** up to $\pm 2 \times 10^{-8}$ /year
- **Fast warm-up time:** up to 1 min.
- **Available as RoHS**
- **Frequency range:** 16.384 ... 32.0 MHz

Power supply	Output	Package type	
12 V	SIN	36x27x12.7 mm	B12.7
5 V	CMOS	36x27x10.0 mm	B10
3.3 V			

ORDERING GUIDE: MV205-C 3 G-12V-SIN-B12.7-LN-20.0MHz

Availability of certain stability vs. operating temperature range for 20 MHz		$\pm 5 \times 10^{-9}$	$\pm 3 \times 10^{-9}$	$\pm 2 \times 10^{-9}$	$\pm 1 \times 10^{-9}$
A	0...+55°C	A	A	A	A
B	-10...+60°C	A	A	A	A
C	-20...+70°C	A	A	A	A
D	-40...+70°C	A	A	A	C
EX	-40...+85°C	A	A	A	C

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

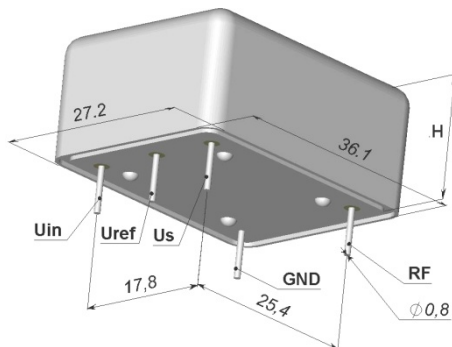
For other temperature ranges see designation at the end of Data Sheet.

Availability of certain aging values for certain frequencies		Standard frequencies						
		16.384MHz (8.192x2)	20.0MHz (10.0x2)	24.576MHz (12.288x2)	22.5792MHz (11.2896x2)	25.6MHz (12.8x2)	26.0MHz (13.0x2)	32.768MHz (16.384x2)
H	$\pm 2 \times 10^{-7}$ / year	A	A	A	A	A	A	A
G	$\pm 1 \times 10^{-7}$ / year	A	A	A	A	A	A	C
F	$\pm 5 \times 10^{-8}$ / year	A	A	A	A	A	C	NA
E	$\pm 3 \times 10^{-8}$ / year	A	A	A	A	C	NA	NA
D	$\pm 2 \times 10^{-8}$ / year	A	A	A	A	NA	NA	NA

Phase noise*, dBc/Hz, for 20MHz (10MHz x 2)	Consult factory	
	LN	ILN
1 Hz	<-90	<-95
10 Hz	<-120	<-125
100 Hz	<-135	<-140
1000 Hz	<-145	<-150
10000 Hz	<-150	<-153
100000 Hz	<-150	<-153

*for 3.3V – please consult factory

Package drawing:



For “H” definition, please see package type

Short term stability (Allan deviation) per 1 sec, for 20 MHz (10MHz x 2)	< 5×10^{-12}
Optional	< 2×10^{-12}
Frequency stability vs. load changes ($\pm 5\%$)	< 5×10^{-10}
Frequency stability vs. power supply changes ($\pm 5\%$)	< 5×10^{-10}
Warm-up time within accuracy of $\pm 2 \times 10^{-8}$ @ 25°C	<3 min

Vibrations:	
Frequency range	10-200 Hz
Acceleration	5 g
Shock:	
Acceleration	75 g
Duration	3±1 ms
Humidity @ 25 °C	98%
Storage temperature range	-55...+85 °C

Power supply (Us)	12V±5%	5V±5%	3.3V±5%
Steady state current consumption @ +25°C	<150 mA	<400 mA	<650 mA
Peak current consumption during warm-up (for “D” temp. range)	<400 mA	<1000 mA	<1500 mA
Frequency pulling range	$\pm 4.0 \times 10^{-7}$		
Control voltage range (Uin)	0...5V	0...4.5V	0...3V
Reference voltage (Uref)	+5 V	+4.5 V	+3 V

Output	CMOS		SIN
	Level	“0” <0.5V “1” >4.0V	>500 mV RMS
Load	10kOhm/30pF	50 Ohm±5%	
Harmonics & *sub harmonics	<-55 dBc*	<-50 dBc <-55 dBc*	
Jitter p-p, for 20 MHz	<100 ps	-	

Additional notes:

- Please consult factory for daily aging values. Normally typical correspondence of daily to aging per year is as following: $\pm 1 \times 10^{-7}$ /year – $\pm 1 \times 10^{-9}$ /day; $\pm 5 \times 10^{-8}$ /year – $\pm 5 \times 10^{-10}$ /day; $\pm 3 \times 10^{-8}$ /year – $\pm 3 \times 10^{-10}$ /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