

MINIATURE HIGH FREQUENCY PRECISION LOW PHASE NOISE OCXO MV218

Features:

- Small package size of 26x26x10.3 mm
- Low Phase Noise: floor of <-167 dBc/Hz
- Wide temperature range
- Very short warm-up time – less than 60 seconds

Frequency range: 48.0-1228.8 MHz

(with internal multiplication for frequencies > 160.0 MHz)

Standard Frequency: 50.0; 84.0; 98.304; 100.0; 120.0; 122.88; 160.0; 200.0; 400.0; 500.0; 644.0; 700.0; 800.0; 844.0; 900.0; 1000.0; 1228.8 MHz;

Power Supply

5 V

12 V*

Package type (max)

25.8x25.8x10.3 mm A10**

25.8x25.8x12.7 mm
(with SMA connector)

N

ORDERING GUIDE: MV218-B 300 J-12V-3-100.0 MHz-A10

Availability of certain stability vs. operating temperature range		$\pm 5 \times 10^{-7}$	$\pm 3 \times 10^{-7}$	$\pm 1 \times 10^{-7}$	$\pm 7.5 \times 10^{-8}$	$\pm 5 \times 10^{-8}$
		500	300	100	75	50
A	0...+55°C	A	A	A	A	A
B	-10...+60°C	A	A	A	A	C
C	-20...+70°C	A	A	A	C	NA
D	-40...+70°C	A	A	C	C	NA
EX	-40...+85°C	A	C	C	NA	NA

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

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

Aging

L	$\pm 1.5 \times 10^{-6}$ /year
K	$\pm 1 \times 10^{-6}$ /year
J	$\pm 5 \times 10^{-7}$ /year
I	$\pm 3 \times 10^{-7}$ /year
H	$\pm 2 \times 10^{-7}$ /year
G	$\pm 1 \times 10^{-7}$ /year

Phase noise, dBc/Hz (for 100.0 MHz)

Option	Phase noise, dBc/Hz (for 100.0 MHz)							
	5 V		12 V		5 V		12 V	
	1	2	3	4	5	6	7	8
10 Hz	-85	-85	-90	-90	-95	-95	-97	-97
100 Hz	-115	-115	-120	-120	-125	-125	-127	-127
1000 Hz	-140	-140	-145	-145	-147	-150	-150	-152
10000 Hz	-152	-160	-155	-162	-157	-165	-160	-167
100000 Hz	-160	-160	-160	-162	-162	-165	-165	-167

Phase noise, dBc/Hz (Frequency multiplication, 5V only)

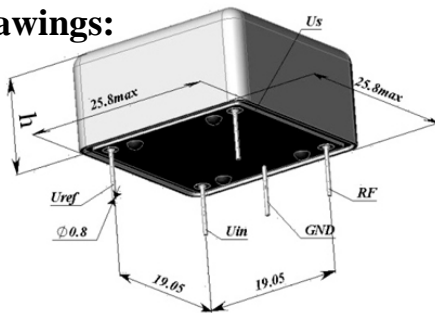
Option	500.0 MHz			1000.0 MHz		
	1	2	3	1	2	3
10 Hz	-75	-80	-85	-70	-80	-85
100 Hz	-95	-100	-115	-100	-105	-110
1000 Hz	-125	-130	-135	-120	-125	-130
10000 Hz	-140	-140	-145	-135	-137	-140
100000 Hz	-145	-147	-150	-140	-145	-147

(*) – for options without internal multiplication;

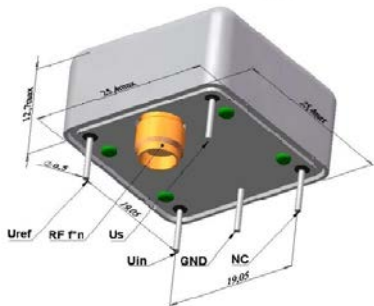
(**) – for frequency range 48.0-500.0 MHz;

Package drawings:

A10



N:



Frequency stability vs. load changes	$< \pm 2 \times 10^{-8}$
Frequency stability vs. power supply changes	$< \pm 1 \times 10^{-7}$
Warm-up time within accuracy of $< \pm 2 \times 10^{-7}$ @ 25°C	<60 sec
Power supply (Us)	12 V $\pm 10\%$ 5 V $\pm 10\%$
Steady state current consumption @ 25°C	< 115 mA <250 mA
Peak current consumption during warm-up @ 25°C	< 370 mA < 800 mA
Reference voltage output (Uref)	+10 V +4 V
with external control voltage range (Uin)	0...+10 V 0...+4 V
Frequency pulling range	$> \pm 3 \times 10^{-6}$

Output	SIN
Level	>400 mV RMS
Load	50 Ohm $\pm 10\%$
Harmonics	<-25 dBc
Sub-harmonics (for options with internal multiplication)	<-45...55 dBc
Vibrations	10-500 Hz, 5g
Storage temperature range	-55...+70 °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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