

MINIATURE HIGH FREQUENCY PRECISION LOW PHASE NOISE OCXO MV317

Features:

- **Low G – sensitivity:** $<1E-9/G$ (typical), options to $<2E-10/G$
- **Frequency range:** 48 – 125 MHz
- **Standard frequencies:** 60 MHz; 80 MHz; 100 MHz; 120 MHz; 122.76 MHz
- **Small package size of 25x25x10.3 mm**
- **Ultra low phase noise:** $<-140dBc/Hz$ @ 100 Hz; $<-180 dBc/Hz$ @ 100 kHz
- **High stability vs. temperature:** up to $\pm 5 \times 10^{-8}$
- **Power supply:** 5V or 12V

G-sensitivity
Not specified (-)
$< 8 E-10/G$
$< 5 E-10/G$
$< 3E-10/G$
$< 2E-10/G^*$

* - consult factory

Power supply
5 V
12 V

ORDERING GUIDE: MV317-B 300 J-12V-3-100M-5E-10/G

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	A
C	-20...+70°C	A	A	A	A	A
D	-40...+70°C	A	A	A	A	C
EX	-40...+85°C	A	A	A	C	NA

A – available; NA – not available; C – consult factory.

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

Upper temperature $>+75^\circ C$ available for $U_s=5V$.

Aging	
$\pm 5 \times 10^{-7}/\text{year}$	J
$\pm 3 \times 10^{-7}/\text{year}$	I
$\pm 2 \times 10^{-7}/\text{year}$	H
$\pm 1 \times 10^{-7}/\text{year}$	G

Phase noise, dBc/Hz, for 100.0 MHz						
Option	2	3	4	5	6	7**
For power supply 12 V						
10 Hz	<-95	<-98	<-100	<-102	<-98	<-107
100 Hz	<-127	<-132	<-135	<-137	<-132	$<-140^*$
1000 Hz	<-156	<-157	<-160	<-164	<-162	<-165
10000 Hz	<-172	<-174	<-174	<-176	<-176	<-176
100000 Hz	<-176	<-177	<-176	<-178	<-180	<-178
For power supply 5 V						
10 Hz	<-95	<-98	<-100	<-102	<-98	-
100 Hz	<-127	<-132	<-133	<-135	<-132	-
1000 Hz	<-156	<-157	<-160	<-164	<-162	-
10000 Hz	<-172	<-172	<-172	<-174	<-178	-
100000 Hz	<-174	<-174	<-175	<-176	$<-183^*$	-

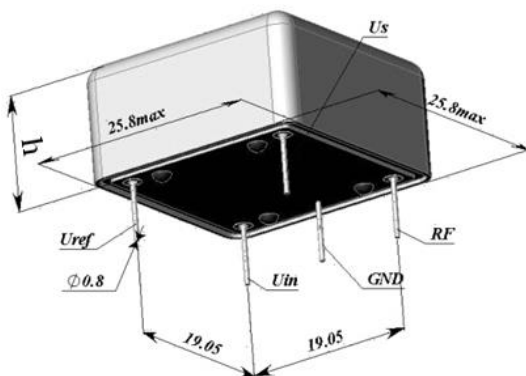
* consult factory

** - within $\pm 1,5$ ppm from nominal frequency at the moment of shipment and delivery

Frequency stability vs. load changes	$<\pm 2 \times 10^{-8}$	
Frequency stability vs. power supply changes	$<\pm 5 \times 10^{-8}$	
Warm-up time within accuracy of $<\pm 2 \times 10^{-7}$ @ 25°C	<2 min.	
Power supply (U_s)	12V $\pm 5\%$	5V $\pm 5\%$
Steady state current consumption @ 25°C	< 120 mA	< 250 mA
Peak current consumption during warm-up @ 25°C	< 300 mA	< 600 mA
Reference voltage output (U_{ref})	+10...11 V	4.5...4.8 V
with external control voltage range (U_{in})	0...10 V	0...4.5 V
Frequency pulling range***	$>\pm 2 \times 10^{-6}$	

*** - sufficient to compensate aging during life time

Package drawing:



h= 10.3 mm

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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Due to continuous development and improvement Morion reserves the right to modify design or specifications of its products without prior notice

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