

# MINIATURE HIGH FREQUENCY PRECISION LOW PHASE NOISE OCXO MV317

## Features:

- Small package size of 25x25x10.3 mm
- Ultra low phase noise – <-177 dBc/Hz @ 100 kHz offset
- Wide temperature range
- Very short warm-up time – less than 2 minutes
- High stability vs. temperature – up to  $\pm 5 \times 10^{-8}$

**Frequency range: 48.0-125.0 MHz**

**Standard Frequency: 50.0; 84.0;  
98.304; 100.0 MHz**

## ORDERING GUIDE: MV317-B 300 J-3-100.0 MHz

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	NA	NA
EX	-40...+85 °C	A	C	C	NA	NA

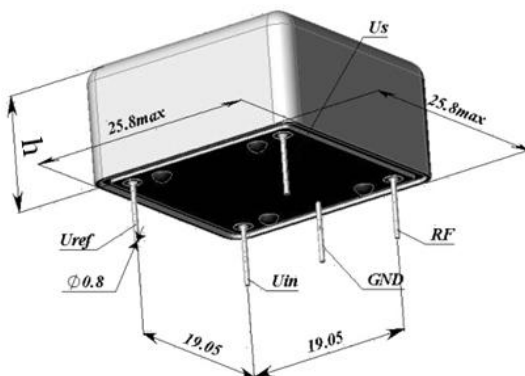
A – available, NA – not available, C – consult factory  
For other temperature ranges see designation at the end of Data Sheet.

Phase noise, dBc/Hz, for 100.0 MHz				
Option	1	2	3	4
10 Hz	<-95	<-97	<-97	<-100
100 Hz	<-126	<-128	<-128	<-135
1000 Hz	<-152	<-154	<-156	<-160
10000 Hz	<-170	<-172	<-174	<-170
100000 Hz	<-174	<-176	<-177	<-174

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

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 (Us)	12V $\pm 10\%$
Steady state current consumption @ 25°C	< 150 mA
Peak current consumption during warm-up @ 25°C	< 370 mA
Reference voltage output (Uref)	9 $\pm 0,5$ V
with external control voltage range (Uin)	0...9 V
Frequency pulling range	> $\pm 2 \times 10^{-6}$
<b>Output</b>	<b>SIN</b>
Level	>600 mV RMS
Load	50 Ohm $\pm 10\%$
Harmonics	<-25 dBc
Vibrations	10-500 Hz, 5g
Storage temperature range	-55...+80 °C

## 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