MINIATURE HIGH FREQUENCY PRECISION LOW PHASE NOISE OCXO MV317

Features:

- ***Frequency range: 48 – 1250.0 MHz***
- ***Standard frequencies: 48-125 MHz, 160; 168; 200; 240; 245,76; 400; 480; 500; 840; 1000; 1100; 1200 MHz***
- ***Small package size of 25x25x10.3 mm***
- ***Ultra low phase noise***
- ***High stability vs. temperature: up to ±5x10^{-8}***
- ***Power supply: 5V or 12V***
- ***Low G – sensitivity: <1E-9/G (typical), options to <2E-10/G***

Power supply
5 V
12 V

Frequency	Package
48,0-240,0	A10*
48,0-125,0	B12,7
> 48,0	V, N

* if not specified

ORDERING GUIDE: MV317–B 300 J–12V–3–100.0MHz–5E-10/G–V

Availability of certain stability vs. operating temperature range		±5x10^{-7}	±3x10^{-7}	±1x10^{-7}	±7.5x10^{-8}	±5x10^{-8}
		500	300	100	75	50
A	0…+55ºC	A	A	A	A	A
B	-10…+60ºC	A	A	A	A	A
C	-20…+70ºC	A	A	A	A	A
D	-40…+70ºC	A	A	A	A	C
EX	-40…+85ºC	A	A	C	C	NA

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

For frequencies >125 MHz upper temperature:

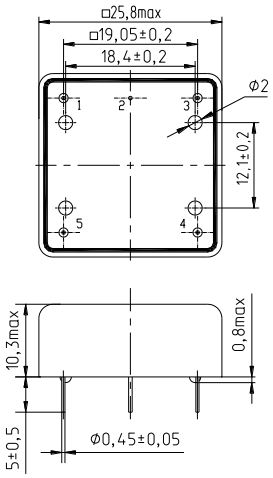
>+70ºC available for Us=5V, +60^{0}C - for 12V.

Aging	
±5x10^{-7}/year	J
±3x10^{-7}/year	I
±2x10^{-7}/year	H
±1x10^{-7}/year	G

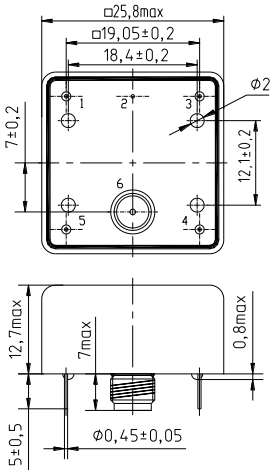
G-sensitivity
Not specified (-)
< 8 E-10/G
< 5 E-10/G
< 3E-10/G
< 2E-10/G*

* - consult factory

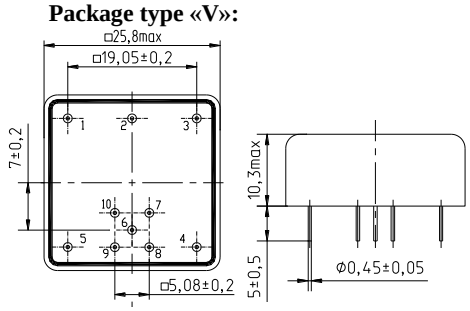
Package type «A10»:



Package type «N» with SMA-connector:



Package type «V»:



Pin designation for package types:

Designation	A10	N	V
Not connected	-	1	1
GND	2	2	2, 7-10
Control voltage input (Uin)	3	3	3
Reference voltage output (Uref)	4	4	4
Power supply (Us)	5	5	5
RF output	1	6	6

Phase noise, dBc/Hz, for 100.0 MHz							
Option	1	2	3	4	5	6	7*
For power supply 12 V							
10 Hz	-92	-95	-98	-100	-102	-98	-107
100 Hz	-125	-127	-132	-135	-137	-132	-140
1000 Hz	-154	-156	-157	-160	-164	-162	-165
10000 Hz	-170	-172	-174	-174	-176	-176	-176
100000 Hz	-174	-176	-177	-176	-178	-180	-178
For power supply 5 V							
10 Hz	-92	-95	-98	-100	-102	-98	-
100 Hz	-125	-127	-132	-133	-135	-132	-
1000 Hz	-154	-156	-157	-160	-164	-162	-
10000 Hz	-170	-172	-172	-172	-174	-178	-
100000 Hz	-172	-174	-174	-175	-178	-180	-

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

	for 200 MHz			for 500 MHz			for 1000 MHz		
Option	1	2	3	1	2	3	1	2	3
10 Hz	-89	-91	-94	-80	-82	-85	-75	-77	-80
100 Hz	-119	-124	-127	-110	-115	-120	-105	-110	-113
1000 Hz	-148	-152	-154	-139	-143	-145	-134	-138	-140
10000 Hz	-159	-161	-161	-150	-152	-154	-145	-147	-147
100000 Hz	-162	-164	-166	-153	-155	-157	-148	-150	-152

Frequency stability vs. load changes	<±2x10^{-8}	
Frequency stability vs. power supply changes	<±5x10^{-8}	
Warm-up time within accuracy of <±2x10^{-7} @ 25ºC	<2 min.	
Power supply (U$_s$)	12V±5%	5V±5%
Steady state current consumption @ 25ºC	< 120 mA	< 250 mA
Peak current consumption during warm-up @ 25ºC	< 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***	>±2.5x10^{-6}	
Output	SIN	
Level	>400 mV (>500 mV for >80…≤125 MHz, 12V)	
Load	50 Ohm±10%	

*** - sufficient to compensate aging during life time

Harmonics	>25 dBc
Sub harmonics	>45 dBc (for A10) >50 (55*) dBc (for V, N)
Vibrations	10-500 Hz, 5g
Storage temperature range	-55…+70ºC

* consult factory

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

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