

# LOW PROFILE OCXO MV331

## Features:

- Low profile package 25x25x10.6 mm
- Low phase noise
- Long-term stability up to  $\pm 3 \times 10^{-8}$ /year
- Frequency range 10.0-20.0 MHz

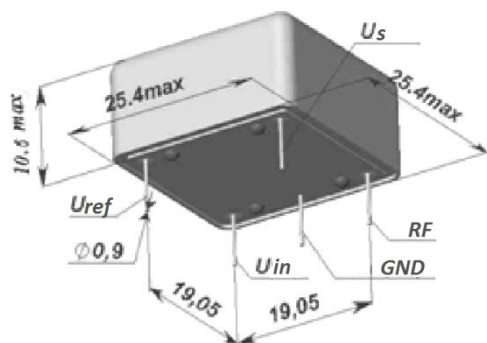
Supply voltage	Output
12 V	SIN
5 V	HCMOS

## ORDERING GUIDE: MV331-C3F-12V-SIN-10.0MHz-LN1

Availability of certain stability vs. operating temperature range		$\pm 1 \times 10^{-8}$ (1E-8)	$\pm 5 \times 10^{-9}$ (5E-9)	$\pm 3 \times 10^{-9}$ (3E-9)
		10	5	3
A	0...+55 °C	A	A	A
B	-10...+60 °C	A	A	A
C	-20...+70 °C	A	A	NA
D	-40...+70 °C	A	A	NA
EX	-40...+85 °C	A	A	NA

A – available; NA – not available

For other temperature ranges see destination at the end of Data Sheet



Availability of certain aging values for certain frequencies		Standard frequency
		10,0 MHz
G	$\pm 1 \times 10^{-7}$ / year	A
F	$\pm 5 \times 10^{-8}$ / year	A
E	$\pm 3 \times 10^{-8}$ / year	A

A – available; NA – not available

Phase noise, dBc/Hz, for 10 MHz, SIN	- (standard)	LN1 (for 12V SIN)	LN2 (for 12V SIN)
1 Hz	-95	-100	-95
10 Hz	-125	-130	-125
100 Hz	-145	-150	-152
1000 Hz	-150	-155	-160
10000 Hz	-155	-160	-165

Short-term stability at 1s (for 10 MHz)	$< 5 \times 10^{-12}$	
Frequency stability vs. load changes $\pm 5\%$	$< \pm 5 \times 10^{-10}$	
Frequency vs. supply voltage changes $\pm 5\%$	$< \pm 5 \times 10^{-10}$	
Warm-up time within accuracy of $\pm 2 \times 10^{-8}$ @ +25°C	$< 3$ min*	
Supply voltage	12V $\pm 5\%$	5V $\pm 5\%$
Steady state current consumption @ +25°C (for working temperature $> -20^\circ\text{C}$ )	$< 130$ mA	$< 400$ mA
Peak current consumption during warm-up	$< 400$ mA	$< 1000$ mA
Frequency pulling range	$> \pm 4.0 \times 10^{-7}$	
with external voltage range (Uin)	0...+5V	0...+4.5 V
Reference voltage output (Uref)	+5 V	+4.5 V
Output type	HCMOS	SIN
Level	“0” $< 0.5\text{V}$ “1” $> 4.0\text{V}$	$> 700$ mV for 12V $> 300$ mV for 5V
Load	10kOhm/30pF	50 Ohm $\pm 5\%$
Harmonics	-	$> 30$ dBc

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