

# HIGH STABILITY MINIATURE OCXO MV333

## Features:

- **Small package:** 25.8x25.8x12.7 mm
- **Low phase noise options:** up to -173 dBc/Hz at 10 kHz offset
- **Long term stability:** up to  $\pm 2 \times 10^{-8}$ /year
- **RoHS compliant**
- **Standard frequency:** 10.0 MHz

## ORDERING GUIDE: MV333 – C 5 F – 10MHz – 3

Availability of certain stability vs. operating temperature range		$\pm 5 \times 10^{-9}$	$\pm 3 \times 10^{-9}$	$\pm 2 \times 10^{-9}$
		5	3	2
A	0...+55°C	A	A	A
B	-10...+60°C	A	A	A
C	-20...+70°C	A	A	A
D	-40...+70°C	A	A	C

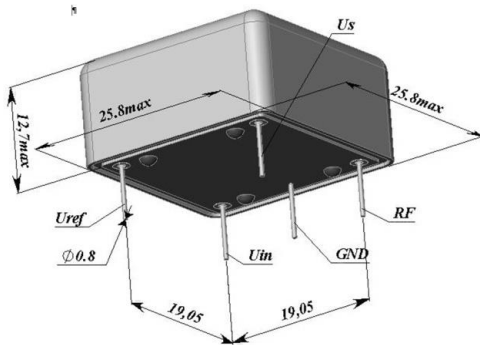
Availability of certain aging values for certain frequencies		Standard frequencies
		10.0 MHz
G	$\pm 1 \times 10^{-7}$ /year	A
F	$\pm 5 \times 10^{-8}$ /year	A
E	$\pm 3 \times 10^{-8}$ /year	A
D	$\pm 2 \times 10^{-8}$ /year	A

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

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

Phase noise, dBc/Hz, for 10MHz, SIN	1	2	3	4
1 Hz	<-95	<-100	<-90	≤-95
10 Hz	<-125	<-130	<-125	<-130
100 Hz	<-155	<-158	<-158	<-158
1000 Hz	<-165	<-165	<-168	<-168
10000 Hz	<-170	<-170	<-173	<-173

## Package drawing:



<b>Vibrations:</b>	
<b>Frequency range</b>	10-500 Hz
<b>Acceleration</b>	5 g
<b>Shock:</b>	
<b>Acceleration</b>	75g
<b>Duration</b>	3±1 ms
<b>Humidity @ +25 °C</b>	98%
<b>Storage temperature range, °C</b>	-55...+70°C

<b>Short term stability (Allan deviation) per 1 sec, for 10 MHz</b>	$< 5 \times 10^{-12}$
<b>Frequency stability vs. load changes (±5%)</b>	$< \pm 5 \times 10^{-10}$
<b>Frequency stability vs. power supply changes (±5%)</b>	$< \pm 5 \times 10^{-10}$
<b>Warm-up time within accuracy of <math>&lt; \pm 2 \times 10^{-8}</math> @ 25 °C</b>	< 5 min
<b>Power supply (Us)</b>	12V±5%
<b>Steady state current consumption @ 25°C</b>	< 170 mA
<b>Peak current consumption during warm-up</b>	< 500 mA
<b>Frequency pulling range</b>	$> \pm 4.0 \times 10^{-7}$
<b>Control voltage range (Uin)</b>	0...5 V
<b>Reference voltage (Uref)</b>	+5 V
<b>Output</b>	SIN
<b>Level</b>	> 600 mV
<b>Load</b>	50 Ohm±5%
<b>Harmonics</b>	> 30 dBc

## Additional notes:

- Please consult factory for daily aging values. Normally typical correspondence of daily to aging per year is as following:  $\pm 1 \times 10^{-7}$ /year –  $\pm 1 \times 10^{-9}$ /day;  $\pm 5 \times 10^{-8}$ /year –  $\pm 5 \times 10^{-10}$ /day;  $\pm 3 \times 10^{-8}$ /year –  $\pm 3 \times 10^{-10}$ /day
- 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

