

HIGH STABILITY MINIATURE OCXO MV333

Features:

- **Small package:** 25.8x25.8x12.7 mm
- **Low phase noise options:** up to -173 dBc/Hz
- **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		5	3	2
		$\pm 5 \times 10^{-9}$	$\pm 3 \times 10^{-9}$	$\pm 2 \times 10^{-9}$
A	0...+55°C	A	A	A
B	-10...+60°C	A	A	A
C	-20...+70°C	A	A	A
ES	-40...+65°C	A	A	C
D*	-40...+70°C	A	A	C

A – available, C – consult factory

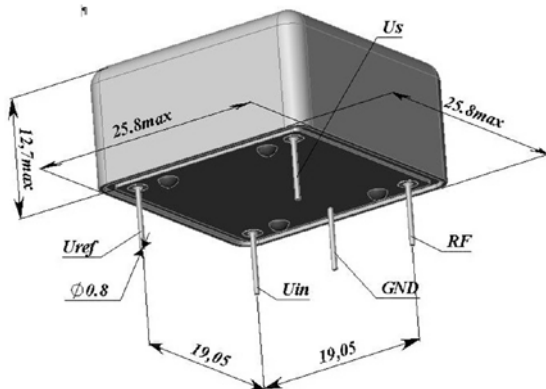
* only for 1 – 4 phase noise options.

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

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

Phase noise, dBc/Hz, for 10MHz, SIN	1	2	3	4	5
1 Hz	<-95	<-100	<-90	<-95	<-118...-120
10 Hz	<-125	<-130	<-125	<-130	<-140
100 Hz	<-155	<-158	<-158	<-158	<-155
1000 Hz	<-165	<-165	<-168	<-168	<-160
10000 Hz	<-170	<-170	<-173	<-173	<-165

Package drawing:



Vibrations:	
Frequency range	10-500 Hz
Acceleration	5 g

Shock:	
Acceleration	75 g
Duration	3±1 ms

Humidity @ 25 °C	98%
Storage temperature range	-55...+70°C

Short term stability (Allan deviation) per 1 sec, for 10 MHz	
for 1 – 4 phase noise options	< 5×10^{-12}
for 5 phase noise option	< 5×10^{-13}
optional, only for 5 phase noise option	< 4×10^{-13}
Frequency stability vs. load changes (±5%)	< $\pm 5 \times 10^{-10}$
Frequency stability vs. power supply changes (±5%)	< $\pm 5 \times 10^{-10}$
Warm-up time within accuracy of $\pm 2 \times 10^{-8}$ @ 25 °C	< 5 min
Power supply (Us)	12V±5%
Steady state current consumption @ 25°C	< 170 mA
Peak current consumption during warm-up	< 500 mA
Frequency pulling range (for 10 MHz)	for 1-4 phase noise options > $\pm 4.0 \times 10^{-7}$ for 5 phase noise option > $\pm 3.0 \times 10^{-7}$
Control voltage range (Uin)	0...5 V
Reference voltage (Uref)	+5 V
Output	SIN
Level	for 1-4 phase noise options > 600 mV for 5 phase noise option > 300 mV
Load	50 Ohm±5%
Harmonics	> 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