

LOW PROFILE PRECISION OCXO FE200A

Features:

- 10 mm, 12.7 mm or 16 mm package height
- 5V or 12V power supply
- High stability vs. temperature - up to $\pm 5 \times 10^{-10}$
- Frequency range 10.0 – 40.0 MHz
- Available as RoHS

Power supply	Output	Package type	
5V	SIN	50.8x50.8x16 mm	Z16
12V	HCMOS	50.8x50.8x12.7 mm	Z12.7
		50.8x50.8x10 mm	Z10

ORDERING GUIDE: FE200 – C 2 F – 12V – SIN – Z16 – 10.0 MHz – LN

Availability of certain stability vs. operating temperature range (for height of 12.7mm and 16 mm)		$\pm 5 \times 10^{-9}$	$\pm 3 \times 10^{-9}$	$\pm 2 \times 10^{-9}$	$\pm 1 \times 10^{-9}$	$\pm 5 \times 10^{-10}$
		5	3	2	1	05
A	0...+55 °C	A*	A*	A*	A	A
B	-10...+60 °C	A*	A*	A	A	A
C	-20...+70 °C	A*	A	A	A	C
D	-40...+70 °C	A	A	A	C	C

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

* For 10 mm height

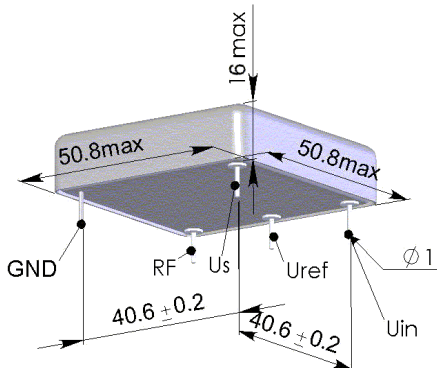
+75°, +80°, +85°C upper temperature limits may be available on a separate request. For other temperature ranges see designation at the end of Data Sheet.

Availability of certain aging values for certain frequencies	Standard frequencies			
	10.0 MHz (10.0 x k) MHz	12.8 MHz (12.8 x k) MHz	13.0 MHz (13.0 x k) MHz	16.384 MHz (16.384 x k) MHz
G	$\pm 1 \times 10^{-7}$ /year	A	A	A
F	$\pm 5 \times 10^{-8}$ /year	A	A	C
E	$\pm 3 \times 10^{-8}$ /year	A	C	NA

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

Phase noise, dBc/Hz, for 10 MHz, SIN	-	LN
1 Hz	<-95	<-100
10 Hz	<-125	<-130
100 Hz	<-145	<-150
1000 Hz	<-150	<-158
10000 Hz	<-155	<-160

Package drawings:



Vibrations:	
Frequency range	10-200 Hz
Acceleration	5g
Shock:	
Acceleration	75 g
Duration	3±1 ms
Storage temperature range	-55...+85 °C

Short term stability (Allan deviation) per 1 sec (for 10MHz)	< $\pm 5 \times 10^{-12}$; opt. < $\pm 2 \times 10^{-12}$	
Frequency stability vs. load changes	< $\pm 5 \times 10^{-10}$; opt. < $\pm 2 \times 10^{-10}$	
Frequency stability vs. power supply changes	< $\pm 5 \times 10^{-10}$; opt. < $\pm 2 \times 10^{-10}$	
Warm-up time within accuracy of < $\pm 2 \times 10^{-8}$ @ 25°C	<3 min	
Power supply	12V±5%	5V±5%
Steady state current consumption @ 25°C	<200mA	<500mA
Peak current consumption during warm-up (for "D" temp. range)	<500mA	<1200mA
For 12.7 mm	<600mA	<1500mA
Frequency pulling range	> $\pm 4 \times 10^{-7}$	
with external voltage range	0...5V	0...4.5V
with external potentiometer	20 kOhm	
Reference voltage	+4.5V (+5V - optional)	
Output	HCMOS	SIN
Level	<0.5V... >4.0V	>300 mV (up to 9±0.5dBm - optional for 12V power supply)
Load	10kOhm/30pF	50 Ohm±5%
Rise/Fall time	<6 ns (<3 ns optional)	-
Harmonic suppression	-	>30dBc (>50dBc optional)

Additional notes:

- Please consult factory for daily aging values. Normally typical correspondence of daily aging per day 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.
- Please mention RoHS requirement (if any) while requesting for quote or while placing PO.
- 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