



10 MHz LOW Phasenoise OCXO

DESCRIPTION:

O.40.806306 is a high performance Oven Controlled Crystal Oscillator **OCXO** offering exceptional combination of ULTRA Low Phase Noise (**ULPN**) (close-in) Low G-Sensitivity (**LGS**) and tight frequency stability.

The RoHS-compliant part (**LF**) comes in a small sized hermetically sealed metal can package what makes it suitable for humid climate environment.

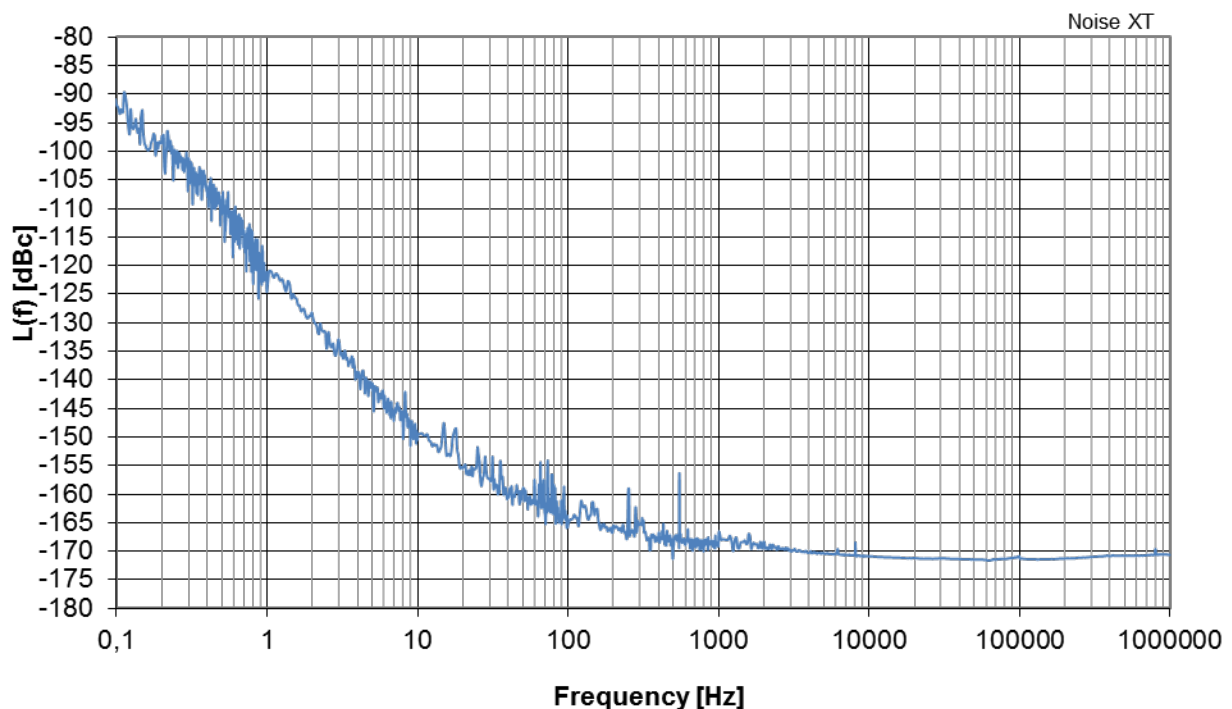


FEATURES:

- Ultra low Phase Noise:
 - 120 dBc / Hz @ 10 Hz
 - 148 dBc / Hz @ 100 Hz
- Low G-Sensitivity
 - ≤ 1 ppb/g
- Frequency Tuning Input

APPLICATIONS:

- Instrument Reference
- Microwave Communication
- Clock Reference for Microwave Signal Source
- Synthesizer Reference Clock
- Test & Measurement
- Telecom Systems



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ROHS-Compliant Product

O.40.806306-LF



1. Specification	
Test conditions: $V_S = +12\text{ V}$, $V_C = +5.0\text{ V}$; $T_A = +25\text{ °C}$ except when stated otherwise	
Nominal Frequency F_N :	10.000 MHz
Initial factory frequency adjustment tolerance: (after 30 min power ON)	$\leq \pm 0.1\text{ ppm}$
Frequency stability vs. temperature range -20 °C to +70 °C:	$\pm 10\text{ ppb}$
Frequency stability vs. supply voltage changes $V_S \pm 5\%$: vs. load changes 50 Ohm $\pm 5\%$:	$\leq \pm 1.0\text{ ppb}$ $\leq \pm 1.0\text{ ppb}$
Aging (after 30 days of continuous operation): per day: 1st year: 10 years:	$\leq \pm 0.5\text{ ppb}$ $\leq \pm 50\text{ ppb}$ $\leq \pm 0.3\text{ ppm}$
Frequency control range (referred to F_N):	$\pm 0.4\text{ ppm}$
Frequency control voltage range V_C : Control Voltage Input Impedance:	+0.5 V ... +9.5 V $\geq 100\text{ kOhm}$
Tuning slope dF/dV_C / Linearity:	Positive / 10%
Supply voltage V_S :	+12.0 V $\pm 5\%$
Supply current I_S : steady state @ $T_A = +25\text{ °C}$: during warm-up:	$\leq 150\text{ mA}$ $\leq 400\text{ mA}$
Warm up time @ $T_A = +25\text{ °C}$ to $dF/F < \pm 5 \times 10^{-8}$ referred to final frequency after 1 hour:	$\leq 5\text{ min}$
Output voltage : level: load :	sine wave $\geq +8\text{ dBm}$ 50 Ohm
Harmonics: Spurious (10 Hz to 1 MHz from carrier):	$\leq -30\text{ dBc}$ $\leq -80\text{ dBc}$
Short term stability (Allan Deviation) @ $\tau = 1\text{ sec}$:	$\leq 1 \times 10^{-12}$ (typical)
G-Sensitivity (each axis):	$\leq 1\text{ ppb/g}$ (typical)

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1		16.05.2016	Balzer	
ED	Description	Date	Name	



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Phase noise max. values at offset frequency:	1 Hz: -120 dBc/Hz 10 Hz: -148 dBc/Hz 100 Hz: -160 dBc/Hz 1 kHz: -168 dBc/Hz 10 kHz: -168 dBc/Hz 100 kHz: -168 dBc/Hz 1 MHz: -168 dBc/Hz
Temperature ranges Operable: Storage:	-45 °C ... +90 °C -50 °C ... +95 °C

2. Environmental conditions

According to KVG Product Qualification Procedure AA-QM-202

3. Marking

Manufacturer's name, date code (week/year); Specification; Nominal frequency

5. Case

Case style: BF171-14

Pin configuration

1. RF output
2. Ground, case
3. Control voltage V_C
4. N.C.
5. Supply voltage V_S

Moisture Sensitivity Level: 1

Termination finish:
Sn95.5 Ag3.8 Cu

Solderability:
DIN IEC 68-2-20 (TA)

RoHS-6 compliant

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