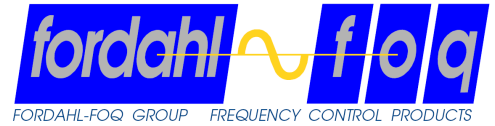


Oscillator specification: PTOC32255.002
Custom designation: OCXO 10 MHz



Supervision by:

Date , Sign. : 07.07.09 E. Ries

TYP: OCXO with 10,000000 MHz

1. Electrical Parameters

Supply / Power:

Supply Voltage:	12 V \pm 5 %
Max. Current Consumption @ 25 °C:	200 mA
Max. Current Consumption @ 25 °C:	200 mA
Max. Current Consumption during warm up:	425 mA
Max. Power Consumption @ 25 °C:	2400 mW

Nominal Frequency (f0):

	10,000000 MHz
@ Reference Temperature:	25 °C \pm 3 °C
@ Reference Control Voltage:	2,5 V

Temperature Range:

Operating temperature range:	-10 °C ... 70 °C
Operable Temperature Range:	-40 °C ... 75 °C
Storage Temperature Range:	-55 °C ... 85 °C

Frequency Tolerance:

Nominal Frequency Tolerance ($\Delta f/f_0$):	$\leq \pm 0,1$ ppm @ $V_c = 2,5$ V
Tolerance vs Temperature Range ($\Delta f/f$):	$\leq \pm 0,003$ ppm
Tol. vs Supply Voltage ($\Delta f/f$) @ 5% Supply Change:	$\leq \pm 0,0003$ ppm
Tolerance vs Load ($\Delta f/f$) @ 10% Load Change:	$\leq \pm 0,0003$ ppm

Aging:

After 30 Days of Continuous Operation:	
Aging Tolerance per day ($\Delta f/f$):	$\leq \pm 0,0003$ ppm
Aging Tolerance 1. Year ($\Delta f/f$):	$\leq \pm 0,05$ ppm
Aging Tolerance after 10 Years ($\Delta f/f$):	$\leq \pm 0,4$ ppm

Short Term Stability:

Allan Variance $1\sigma^2(\tau)$:	$\leq \pm 1E-11 / 1$ s
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Tuning range:

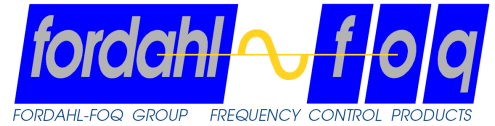
Method:	External Control Voltage
Control Voltage = 0 V ($\Delta f/f$):	-0,7 ppm ... -0,5 ppm
Control Voltage = 2,5 V ($\Delta f/f_0$):	-0,1 ppm ... +0,1 ppm
Control Voltage = 5 V ($\Delta f/f$):	0,5 ppm ... 0,7 ppm
Linearity:	$\leq \pm 10$ %
Input Impedance:	> 100k

Output:

Output signal:	LVTTL
Load:	15 pF
Output level:	low $\leq 0,4$ V high $\geq 2,4$ V

Specification accepted by Customer

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Frequency spectrum:

Attenuation of Subharmonics: ≥ -70 dB
Attenuation of Spurious Freq.: ≥ -70 dB

Phase noise (typical)

at 1 Hz ≤ -95 dBc/Hz
at 10 Hz ≤ -125 dBc/Hz
at 100 Hz ≤ -145 dBc/Hz
at 1 kHz ≤ -150 dBc/Hz
at 10 kHz ≤ -155 dBc/Hz
at 100 kHz ≤ -155 dBc/Hz

Others:

warm up time @25°C still air within $\pm 0,05$ ppm of final frequency after 1 hour On ≤ 8 min

Retrace after 24h off and 60 min power on @ 25°C: $\geq \pm 5$ ppb, referred to frequency before turn off

2. Mechanical Data

Case: CO-08_13
Pin Connections: 1: VC; 2: NC; 3: VS; 4: RF; 5: GND

3. Marking:

FOQ Piezo Technik
PTOC32255
<FREQUENZ> MHz
SN<SN> <DC>LF

Specification accepted by Customer