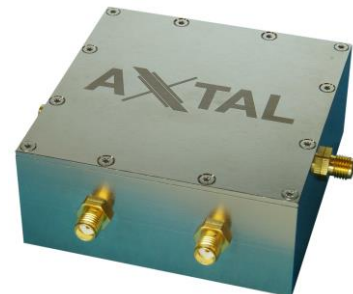


Specification	AXIOM2700	Rev.: 1	Date: 2021-01-26
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Oscillator type: Fully customizable UHF/SHF frequency source
Ultra-Low Phase Noise OCXO with multiple outputs

Features:

- Fully customizable frequency source
- Multiple phase coherent outputs with 1 direct OCXO output and up to 3 user-definable multiplied outputs
- Internal Ultra-Low Phase Noise Reference OCXO
- Supreme OCXO with -180 dBc/Hz noise floor
- For optional external reference see our PLL model AXPLO2700 series



Parameter	min.	typ.	max.	Unit	Condition
OCXO output frequency range	50		160	MHz	
Multiplied output frequency range	100		7000	MHz	Customizable (Note 2, 3)
Frequency stability all outputs					
frequency tolerance		±100		ppb	
over operating temperature range		±100		ppb	
Long term (aging) per year		±100		ppb	after 30 days operation
Frequency adjustment range					
Electronic Frequency Control (EFC)	On Request				
OCXO RF output					
Signal waveform	Sine wave				
Load R_L	50			Ω	±5%
Output level		+10		dBm	
Harmonics		-40		dBc	
Spurious			-90	dBc	
Phase noise	Consult factory Best close-in phase noise available Noise floor -180 dBc/Hz				
Short-term stability (Allan deviation)		$5 \cdot 10^{-12}$			@ $\tau = 1$ sec
Multiplied RF outputs					
Customizable outputs	3			Phase coherent to OCXO	
Signal waveform	Sine wave				
Load R_L	50			Ω	±5%
Output level		+13		dBm	
Harmonics		-50		dBc	
Sub-harmonics (multiples of RF1)		-50		dBc	
Spurious			-90	dBc	
Phase noise	Consult factory				
Warm-up time @ +25°C			5	min	$\Delta f_{final}/f_0 < \pm 0.1$ ppm
Supply voltage V_S	10		15	V	
Operating temperature range	-10		+60	°C	Other range on request

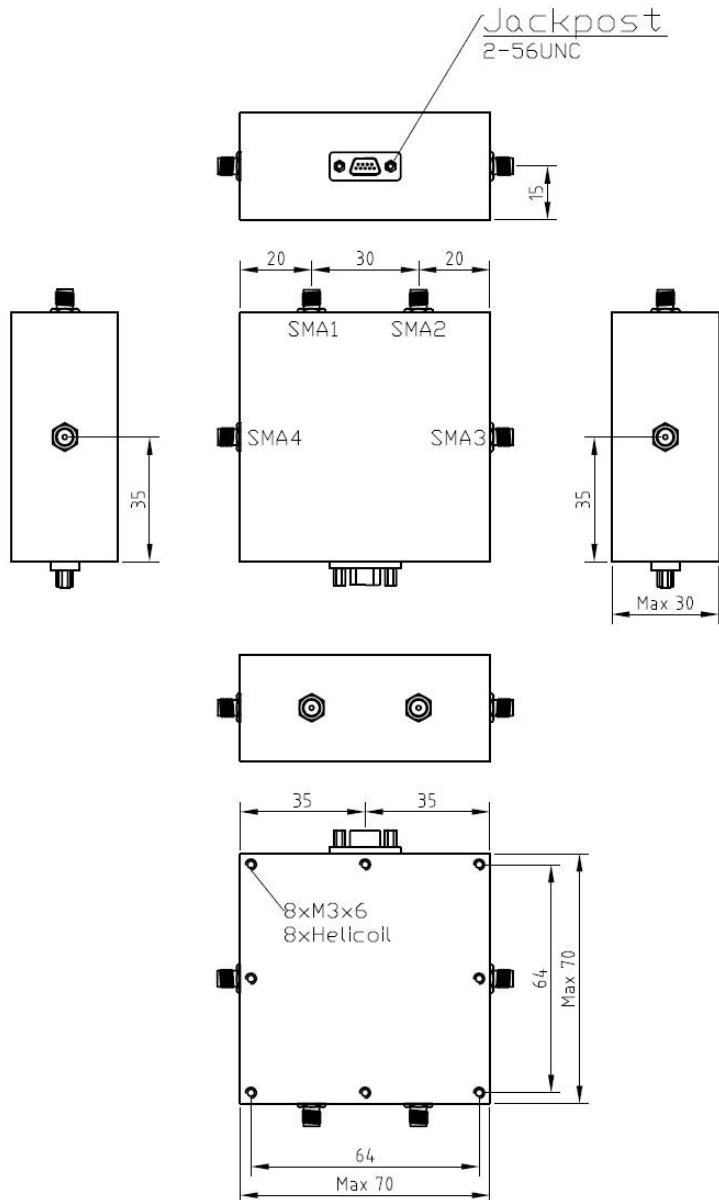
- See Performance Examples below -

Parameter	min.	typ.	max.	Unit	Condition
Enclosure (see drawing) (LxWxH)	70x70x30 max.			mm	
Weight			200	g	

Notes:

1. Terminology and test conditions are according to IEC60679-1 and MIL-PRF-55310, unless otherwise stated
2. Multiplied frequencies must be an integer multiple of OCXO frequency
3. Fully customizable to your requirements. Please consult factory for performance levels.

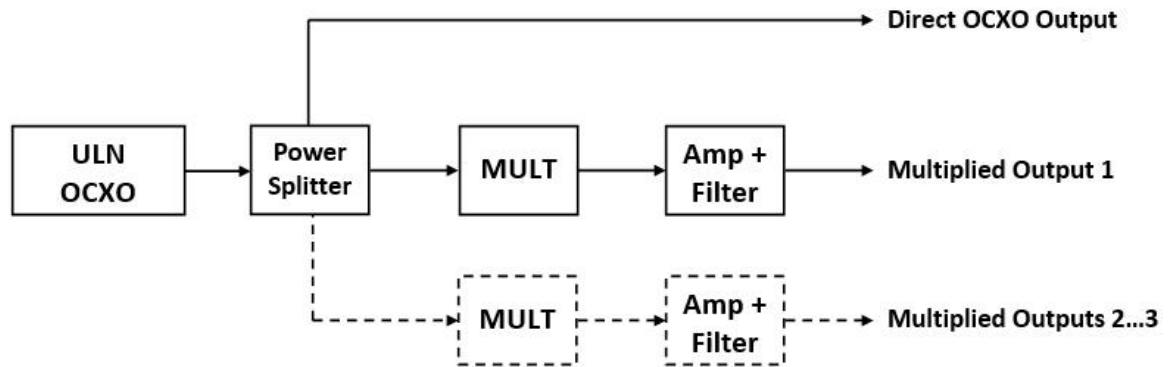
Enclosure drawing



Micro-D Connector: M83513/03 with jack posts M83513/05-07 (2-56 UNC)

Feedthrough connectors on request – Unused outputs will be blind screwed

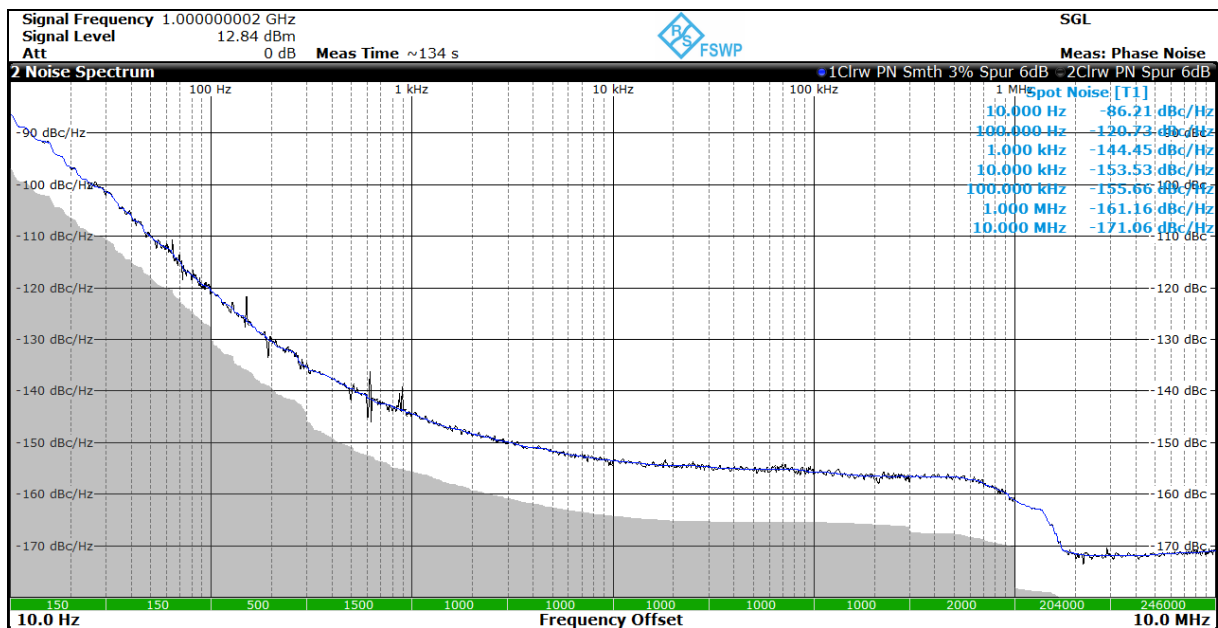
General block diagram



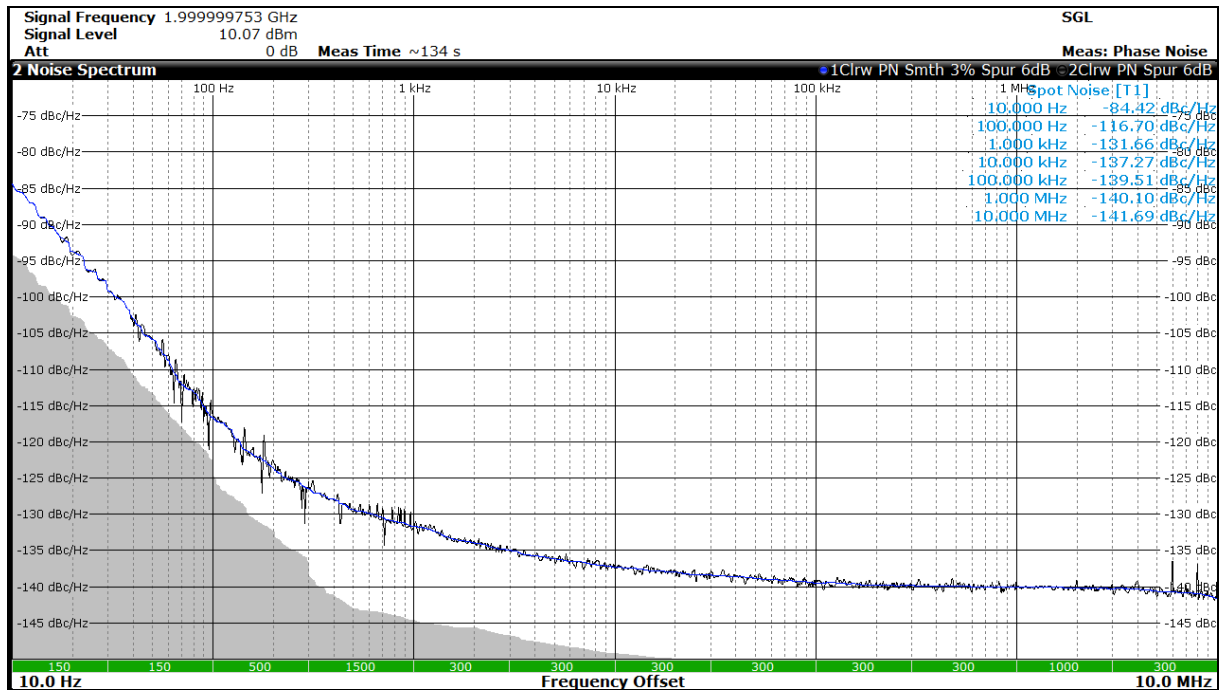
* For improved noise floor and very low sub-harmonic content SAW filters can be used.

Performance Examples

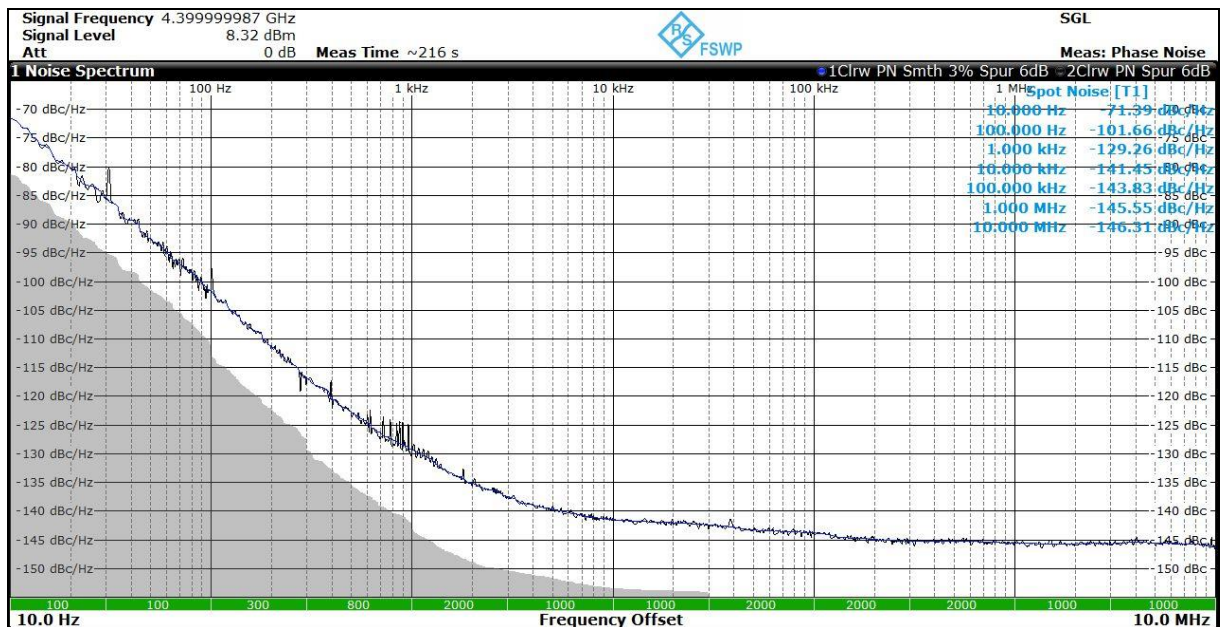
(1) 1 GHz Output (Multiplication x10 including SAW Filter)



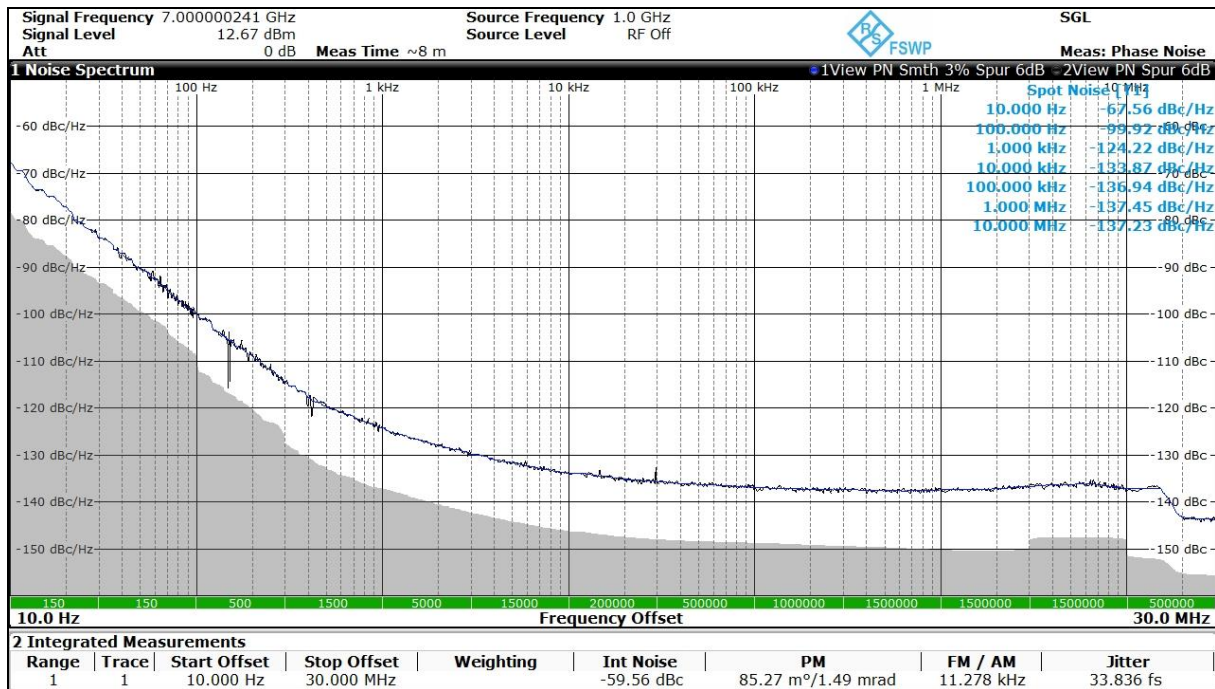
(2) 2 GHz Output (Multiplication x25)



(3) 4.4 GHz Output (Multiplication x40)



(4) 7 GHz Output (Multiplication x70)



Revision History

Rev.	Drawing	Date [dd.mm.yyyy]	Remarks	Author	Checked
1	D0	30.10.2018	First issue	HH	ME
1	D1	26.01.2021	Drawing updated, performance examples added	HH	HH