

Ultra Low Phase Noise Multiple Frequency Reference Appliance

Product Data Sheet

**Multiple Microwave Frequency,
Ultra Low Phase Noise Generator
in 19" Rack Mountable Appliance
2U Form Factor**

Features

- Extraordinary Low Phase Noise All outputs
- Internally Locked to Precision 10 MHz OCXO with Excellent Temperature Stability and Aging
- 9 Outputs from 500 MHz to 8.000 GHz
- Optional External reference

Applications

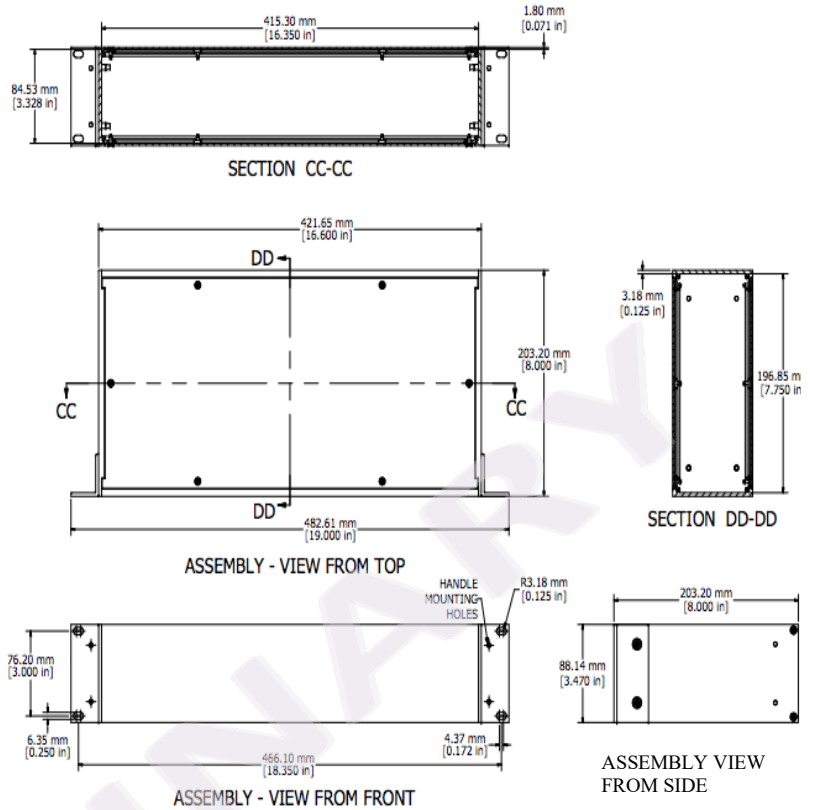
- Advance Computing
- Radar
- Test and measurement
- Instrumentation
- COTS/Dual use

Inputs

External 10 MHz IN SMA
Female REF select –
Feedthrough on the back panel
Power XLR-4-32-F77 Cannon
Connector on the back

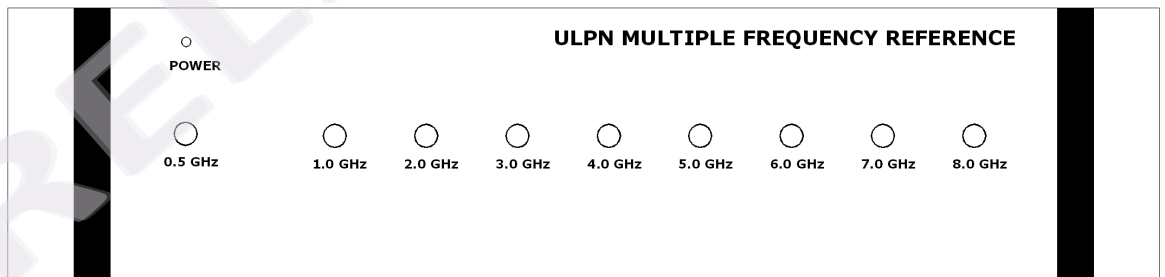
Outputs

RF OUT - SMA Female



Mechanical Dimensions, inches

Front Panel



Extraordinary Low Phase Noise Reference Appliance

Data Sheet 2013A

Parameter	Symb	Condition	Min	Typ	Max	Unit	Note
Absolute Maximum Ratings							
Power Supply	Vp		11.4	12.0	12.6	V DC	XLR-4-32-F77 Cannon Connector on the back
Storage temper.	Ts		0		70	°C	
Operating Temp.	To		10		45	°C	
Electrical (1)							
Frequency	F		0.5		8.0	GHz	
Frequency stability	$\Delta F/F$	vs. Temp.		± 5		ppb	See table below
Aging		per day per first year 10 years		5E-10 5E-8	0.3	ppm	After 30 days of continuous operation
Allan Deviation		.01s to 1s		5E-13			
SSB Phase Noise (achieved after 10 minutes warm-up)	$\xi(\Delta f)$	10 Hz 100 Hz 1 KHz 10 KHz ≥ 100 KHz		-100 -130 -158 -165 -170			500 MHz output
SSB Phase Noise (achieved after 10 minutes warm-up)	$\xi(\Delta f)$		20LogN from values at 500 MHz				1.0 GHz to 8.0 GHz Outputs, N= Fo(GHz)/0.5
Retrace		After 30 minutes		± 10		ppb	
Power consumption	P	steady state, 25°C start-up		20 32	28 41	W	Still air
Spectral Purity		Output power Subharmonics Spurious Harmonics		+17 -35	-70 -80 -30	dBm dBc dBc	All Outputs
Channel Isolation				-80		dBc	
Load		50 Ohm (Internally AC-coupled)					All Outputs
Warm-up time	τ	to 0.1ppm accuracy		5	8	minutes	
Output Waveform		Sine-wave					
Frequency tuning			Mechanical on the back panel				
Pull range		from nominal F	± 0.3			ppm	
External Reference		Sine Wave	+7			dBm	
Reference select		Floating Logic "0"		Internal External			Feedthrough on the back

All parameters for internal reference

Environmental and Mechanic

Operating temp. range	10 to 45°C
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**FREQUENCY
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