Quartzlock A1000A E10-LNA

Rubidium Atomic Master Audio Clock

- Very low phase noise -110dBc/Hz @ 1Hz
- Atomic referenced stability and accuracy
- Aging ±0.5ppb

A1000A


E10-LNA

The A1000A is based on the E10-LNA Very Low Noise Rubidium Oscillator Module which is a sub miniature atomic clock with Quartzlock's 'active noise filter' technology built in. This rubidium oscillator has 100 x less drift than OCXO's. With short term stability of 0.002ppb/s @ 100s this rubidium oscillator provides significant improvements in performance over other rubidium components.

Features

- Ultra high performance reference
- Multiple output options
- Noise floor -157dBc/Hz

Benefits

- Stability to 0.002ppb
- Ultra low jitter
- 100 x less drift than OCXOs

Applications

- High performance audio systems
- Compatible with any system that excepts an external 10MHz input
- High stability low phase noise and low jitter systems
- Compatible with Antelope™ and dCS™ systems

Specification	A1000A		E10-LNA	
Type	**Rb Rack**		**Rb OEM**	
Output				
Frequency	10MHz			
Level	+7dBm ±2dBm50Ohms			
Number	1 to 12		1	
Connector	BNC		SMA	
Accurracy at Shipment	0.05ppb	5.00E-11	0.05ppb	5.00E-11
Frequency Stability				
1s	0.002ppb	2.00E-12	0.002ppb	2.00E-12
10s	0.005ppb	5.00E-12	0.005ppb	5.00E-12
100s	0.002ppb	2.00E-12	0.002ppb	2.00E-12
1 Hour	0.006ppb	6.00E-12	0.006ppb	6.00E-12
Aging				
1 Day	0.003ppb	3.00E-12	0.005ppb	5.00E-12
1 Month	0.04ppb	4.00E-11	0.05ppb	5.00E-11
1 Year	0.5ppb	5.00E-10	0.5ppb	5.00E-10
Phase Noise dBc/Hz in 1Hz BW				
1Hz	-110dBc/Hz			
10Hz	-140dBc/Hz			
100Hz	-145dBc/Hz			
1kHz	-155dBc/Hz			
10KHz	-157dBc/Hz			
Harmonics	<-30dBc			
Spurious	<80dBc			
Start Up (Warm) Time	5 Minutes			
Retrace	0.03ppb	3.00E-11	0.03ppb	3.00E-11
Adjustment				
Mechanical	2ppb	2.00E-09	-	
Electrical	2ppb	2.00E-09	5ppb	5.00E-09
Control Voltage	0 - 5Vdc			
Factory Setting	0.05ppb	5.00E-11	0.05ppb	5.00E-11
Power Supply				
AC	90 - 240Vac		-	
DC	External Input Option		15Vdc	
Power Consumption @ 25°C				
Warm Up	18W			
Stabilized	6W			
Temperature				
Operating	-20°C to +50°C			
Storage	-40°C to +70°C		-40°C to +85°C	
Humidity	90% (Non Condensing)			
Frequency Offset over operating temperature range	0.3ppb	3.00E-10	0.5ppb	5.00E-10
Magnetic Field				
Sensitivity (Guass)	0.02ppb	2.00E-11	0.02ppb	2.00E-11
Atmospheric Pressure (mbar)	0.0001ppb	1.00E-13	0.0001ppb	1.00E-13
Approx MTBF Stationary	100000 hours			
Mechanical				
Colour	Aluminium		Nickel Silver	
Dimension	44 x 483 x 240mm		92 x 56 x 40mm	
Weight	3kg		300g	

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