Quartzlock A1000A

Rubidium Atomic Master Audio Clock

- Very low phase noise -116dBc/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 -158dBc/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

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Specification	A1000A		
Type	**Rb Rack**		
Output			
Frequency	10MHz		
Level	+7dBm ±2dBm 50 or 75 Ohms		
Number	1 to 12		
Connector	BNC		
Accurracy at Shipment	5.00E-11		
Frequency Stability			
1s	2.00E-12		
10s	5.00E-12		
100s	8.00E-12		
1 Hour	6.00E-12		
Aging			
1 Day	3.00E-12		
1 Month	4.00E-11		
1 Year	5.00E-10		
Phase Noise dBc/Hz in 1Hz BW	Option 1	Option 2	Option 3
1Hz	-110dBc/Hz	-113dBc/Hz	-116dBc/Hz
10Hz	-134dBc/Hz	-138dBc/Hz	-140dBc/Hz
100Hz	-150dBc/Hz	-152dBc/Hz	-152dBc/Hz
1kHz	-155dBc/Hz	-155dBc/Hz	-155dBc/Hz
10KHz	-158dBc/Hz	-158dBc/Hz	-158dBc/Hz
Harmonics	<-30dBc		
Spurious	<-80dBc		
Start Up (Warm) Time	5 Minutes		
Retrace	3.00E-11		
Frequency Adjustment (optional)			
Mechanical or Electrical Tuning	±2.5E-09	Total 5ppb	
Control Voltage	0 - 5Vdc		
Power Supply			
AC	90 - 240Vac		
DC	External Input Option		
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 Stability over operating temperature range	1.00E-10		
Magnetic Field			
Sensitivity (Guass)	2.00E-11		
Atmospheric Pressure (mbar)	1.00E-13		
Approx MTBF Stationary	100000 hours		
Mechanical			
Dimension	44 x 483 x 245mm	92 x 56 x	
Weight	3kg	40mm 300g	