

Low Noise Rubidium Oscillator Module

- Low phase noise -100dBc/Hz @ 1Hz
- Lower power operation
- Ageing 5×10^{-10} /year



The E10-LN Low Noise Rubidium Oscillator Module is a sub miniature atomic clock combined with 'active noise filter' technology. This rubidium oscillator has 100x less drift than OCXO's. With short term stability of 2×10^{-12} /s @ 100s this rubidium oscillator provides significant improvement in performance over other rubidium components.

Features

- 10MHz output
- 91 x 55 x 30mm form factor
- 100dBc/Hz@1Hz phase noise
- 5×10^{-11} accuracy
- 2×10^{-12} /s@100s

Benefits

- Low noise and higher stability in customers product
- Atomic accuracy
- 100 x less drift than OCXOs
- Lower power consumption

Applications

- Where sizes are restricted this 'breakthrough' low noise rubidium oscillator will enable new applications
- LTE
- Extended holdover for CDMA, WiMAX and LTE base stations
- Higher stability and low phase noise communication and surveillance applications

Specification	E10-LN
Type	Rb OEM
Output	
Frequency	10MHz
Level	+7dBm ±2dBm500hms
Number	1
Connector	SMA
Accuracy at Shipment	5.00E-11
Frequency Stability	
1s	2.00E-12
10s	5.00E-12
100s	2.00E-12
1 Hour	6.00E-12
Aging	
1 Day	5.00E-12
1 Month	5.00E-11
Phase Noise dBc/Hz in 1Hz BW	
1Hz	-100dBc/Hz
10Hz	-130dBc/Hz
100Hz	-145dBc/Hz
1kHz	-152dBc/Hz
10KHz	-155dBc/Hz
Harmonics	<-30dBc
Spurious	<80dBc
Start Up (Warm) Time	5 Minutes
Retrace	3.00E-11
Adjustment	
Electrical	2.00E-09
Control Voltage	0 ~ 5Vdc
Factory Setting	5.00E-11
Power Supply	
AC	-
DC	15Vdc
Power Consumption @ 25°C	
Warm Up	18W
Stabilized	6W
Temperature	
Operating	-20°C to +50°C
Storage	-40°C to +85°C
Humidity	90% (Non Condensing)
Frequency Offset over operating temperature range	3.00E-10
Magnetic Field	
Sensitivity (Guass)	2.00E-11
Atmospheric Pressure (mbar)	1.00E-13
Approx MTBF Stationary	100000 hours
Mechanical	
Colour	
Dimension	91 x 55 x 30mm
Weight	300g