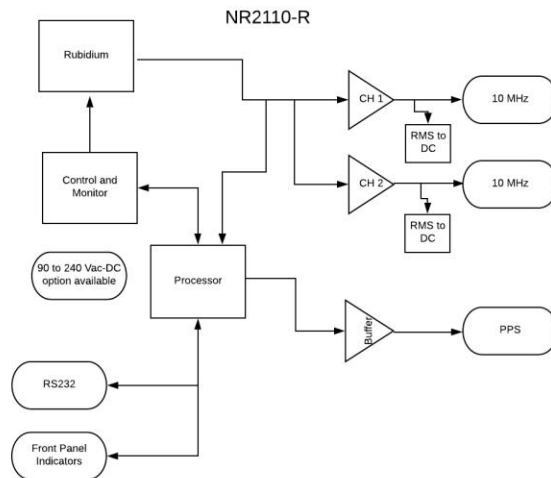


Company Datasheet #	NR2110R
Revision #:	A
Date:	111020

# NR2110-R

## 10MHz, Dual Channel, Rubidium



Dual Channel 10 MHz Rubidium Reference

High Performance Rubidium 10 MHz Frequency reference. Dual channels fault and transient protected. Simulated PPS

### Rubidium Stability

1 ppb/year

### Phase Noise

Offset Frequency (Hz)	Typical (dBc / Hz)
10	-85
100	-115
1K	-135
10k	-140

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## Technical Specifications

<b>Output 10 MHz Sine</b>	10 MHz, 0.5 Vrms $\pm$ 0.1, into 50 Ohms, 2 channels, Sine
Harmonic Distortion	< -30 dBc
Yearly Aging	< $\pm$ 1 ppb
Connectors	BNC
<b>Output Simulated PPS</b>	200 ms Pulse width, 50 ohm load, 3.3 or 5 Volt CMOS
<b>Remote interface &amp; control</b>	
Protocol	RS232 NMEA-0183
Connector	DB-9
Location	Rear panel
Protocol	Bit plus stop
Standard Baud Rates	Selectable 4800, 9600, 19200, 38400, 57600 or 115200 bps
<b>Rubidium Atomic</b>	
Accuracy at shipment	+/-5.0E-11
Warm-up time	<15 minutes
Time of lock	<5 min -130 dBm
Time to achieve accuracy	< $\pm$ 1E-9 <20 minutes
Aging - monthly	< $\pm$ 5E-11
Aging - yearly	< $\pm$ 1.0E-9
Stability: Allan Deviation	
1s	<3E-10
10s	<1E-10
100s	<3E-11
SSB Phase noise for 10Mhz	Standard
10Hz	<-85dBc
100Hz	<115dBc
1000Hz	<-135dBc
10000Hz	<-140dBc

## *Environmental and Mechanical*

Operating temperature	0 to 50C non-condensing	
Storage temperature	-40 to 70C	
Height	1RU (~1.73)	
<b>Width</b>	19 inch	
Depth	12 inch	
AC input	90 to 250 VAC, 50/60hz, less than 10 watts (DC power options available)	
<b>Weight</b>	≈5.5lbs	

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