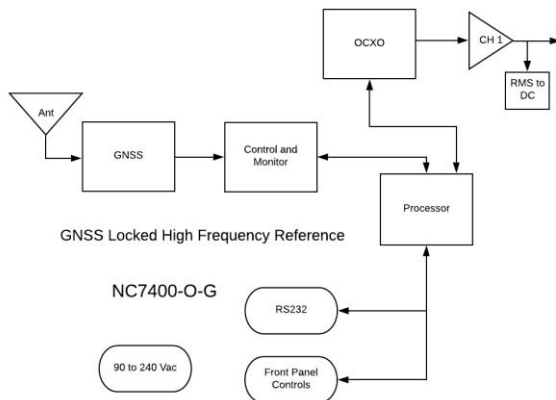


Company Datasheet #	NC-7400-OG
Revision #:	B
Date:	05132020

NC7400-O/G-50MHz- Frequency Multiplier



KEY FEATURES



High Frequency Reference

By using the NC7400 with a GPS locked or Atomic reference you can build a 20, 30 or 50 MHz reference.

Low Phase Noise

Using the NC7400 with a low noise Rubidium source at 50 MHz- the following phase noise was measured:

Frequency	Phase Noise
1	- 85
10	-125
100	-140
1000	-150

The NC7400 is a low phase noise high frequency reference locked to the GNSS. The Core design starts with a 10 MHz reference that is multiplied to 50 MHz. The result is a very low phase noise reference that affords a considerable reduction in phase noise in a high frequency applications such as satellite up-links.

In the special case of our Rubidium products, the Rubidium source can be integrated into the NC7400 directly resulting in a 20, 30 or 50 MHz frequency reference.

The unit may also be driven by an external 10 MHz reference instead of an embedded GNSS receiver.

Built-in level detector warns of signal levels not optimal for low noise frequency conversion.

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Technical Specifications

Output Level	7 dBm
Max output frequency	50 MHz
First Year Freq Stability	± 50 ppb (unlocked)
Temperature Stability	± 10ppb unlocked
Daily Aging OCXO	± 5 ppb/day unlocked
Yearly Aging	± 50 ppb unlocked
Remote interface & control	
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
GNSS receiver	
	GPS L1 C/A, GLONASS L1OF, QZSS L1 C/A, SBAS L1 C/A (Ready): Galileo E1B/E1C, QZSS L1S
Channels	26 channels (GPS, GLONASS, QZSS, SBAS)
Sensitivity	
GPS	Tracking: -161 dBm
	Hot Start: -161 dBm
	Warm Start: -147 dBm
	Cold Start: -147 dBm
	Reacquisition: -161 dBm
GLONASS	
	Tracking: -157 dBm
	Hot Start: -157 dBm
	Warm Start: -143 dBm
	Cold Start: -143 dBm
	Reacquisition: -157 dBm
	With Novus recommended antenna
Antenna with LNA	
Antenna power	3.5 Vdc, < 35 ma (on center conductor) (factory configurable to 5 Vdc)

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Frequency	1574-1607 MHz
Nominal Gain	2 dBic
Amplifier gain	26 dB
Noise Figure	< 2.0 dB
Out of Band rejection	Fo±50MHz=60 dBc, Fo±60 MHz
DC current	<25 ma@3.5 Vdc
AC input	90 to 250 Vac, 50/60hz, IEC 320-C14
Alert	20Vdc, 0.5 amp relay contacts- relay closed for normal condition, BNC

Environmental and Mechanical

Operating temperature	0 to 50C non-condensing
Storage temperature	-40 to 70C
Height	1RU (~1.73)
Width	19 inches
Depth	12 inches
AC input	90 to 250 Vac, 50/60hz, less than 10 watts
Weight	≈ 6.0 lbs

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