

ULTRA LOW NOISE SYNTHESIZERS SNP SERIES, 6 TO 24 GHz

FEATURES

Ultra Low Phase Noise
Operating Bands to 4 GHz (Wider Optional)
125 kHz step size (>1 Hz Optional)
Compact Size
Single Supply Voltage
Internal Reference (Ext. Optional)

APPLICATIONS

ATE
Up & Down Converters
Telecom
Frequency Converters

DESCRIPTION

The SNP 520 Series synthesizers are ultra low noise phase noise, low spurious and a wide tuning range in a compact size suitable for applications where system space is confined. The phase noise performance achieved by this series equals that found in high-end T&M rack mounted synthesizers. An additional feature is the use of a single +15 V power supply.

Parameters	Model # SNP -	0608-520-01	0810-520-01	1012-520-01	1216-520-01	1620-520-01	2024-520-01
Nominal Frequency Range	GHz	6.0 - 8.0	8.0 - 10.0	10.0 -12.0	12.0 -16.0	16.0 -20.0	20.0-24.0
SSB Phase Noise	100 Hz	dBc/Hz, typ.	-78	-76	-74	-72	-68
	1 kHz	dBc/Hz, typ.	-104	-102	-100	-98	-94
	10 kHz	dBc/Hz, typ.	-110	-109	-107	-104	-101
	100 kHz	dBc/Hz, typ.	-125	-124	-122	-119	-116
	1 MHz	dBc/Hz, typ.	-144	-143	-141	-138	-135
Sub-harmonic Level (0.5 & 1.5 Fo)		dBc, max	N/A	N/A	N/A	-30	-30

Common, all models

Output Characteristics

Tuning Step Size (Resolution)	Hz	125 kHz
Power Level	dBm, min.	17
Power Variation (Freq & Temp.)	dB, max	+/- 2.0
Harmonic Level	dBc, max.	-25
Spurious Level (> 100kHz from Carrier)	dBc, max	-70
Switching Speed	mSec, nom	25
Output Impedance	Ohms	50

Internal Frequency Reference

Temperature Stability	+/- PPM	0.5
Aging	PPM/year	1

Digital Interface

Tuning Format		Serial TTL/CMOS
Serial Bits		ASCII, 3 Wire
Phase Lock Indicator	TTL	High=Lock

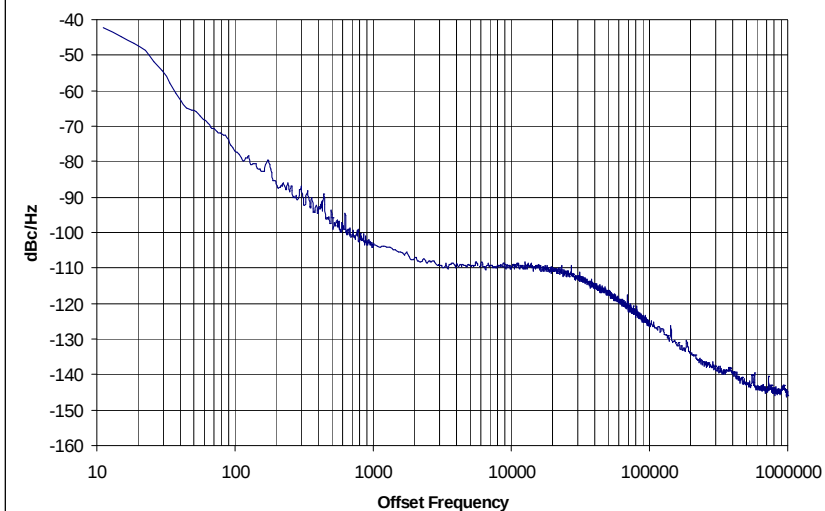
DC Power

Volts = +15.00	Amps, typ	1.5
Warm-Up Surge Current	Amps, max	0.35

Packageing & Environmental

Operational Case Temperature	Degrees C	0 TO +60
Humidity	% RH, max	95
Altitude	Feet ASL	10,000
Weight	Oz., typ	16
Size (See attached figure)	Inches	5.50 x 5.00 x 1.60

Advanced Synthesizer Phase Noise at 10 GHz
Typical



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Envelope Drawing

