

NovaSource G6™ RF Signal Source Detailed Specifications

Parameter	Performance			Units
	Min.	Typical	Max.	
Frequency Reference Port		SMA jack; selectable as internal reference output or external reference input		
Internal Reference Frequency		10.00000		MHz
Initial internal reference initial frequency accuracy (@ +23 +/- 2 deg. C)	-1.0		+1.0	ppm
Initial internal reference temperature stability, over operating temperature range	-1.0		+1.0	ppm
Internal reference frequency aging		Less than +/- 1.0		ppm/yr.
Internal reference output level	+1.5		+2.0	dBm, 50Ω load Vpk-pk, 1MΩ load
External reference frequency (dependent on PLL configuration)		Up to 20		MHz
External reference input level	0.6		5.0	Vpp
External reference input impedance		600 Ω in parallel with 25 pF		n/a
RF Output				
RF output power (highest step)	+5.0	+8.0	+13.0	dBm
RF output power adjustment Number of steps Total Range	25	Software Controlled approximately 1 dB steps	31	dB dB
Non-harmonic spurious		< -60		dBc
Harmonics		< -35		dBc
RF output modes		Continuous, Momentary, and Toggle (on/off)		
RF OFF output level (RF Standby not enabled)		VCO powered off – no output		
Lock time (RF Standby <i>not enabled</i>): Ext. trigger falling edge RF within 30 degrees of final phase		< 35 (most models < 15)		msec
RF OFF output level (RF Standby enabled)	-45	-65	-70	dBm

Lock time (RF Standby <i>enabled</i>): Ext. trigger falling edge to RF within 30 degrees of final phase		< 6.0 (most models < 2.0)		Msec
External Trigger				
Input Range	0		+5.0	VDC
Polarity		Active Low		
Modulation				
FM		Internal 1 kHz rate, or external < 100 kHz		
Peak Deviation	-1.25		+1.25	MHz using 10 MHz reference
External Input Range	-2.5		+2.5	VDC
Power Supply				
DC supply input voltage	+8.0	+9.0	+12.0	VDC
DC supply current		< 350		mA
Environmental / Mechanical				
Temperature range, operating	0		+50	deg. C
Temperature range, storage	-20		+70	deg. C
Control Interface		RS-232 serial		
Control Software		PC – Windows 95/98/2000/XP compatible		
Status Indicator LEDs		RF Output ON Phase Lock DC Power applied		
Size (W x L x H)		2.75" x 4.0" x 0.75 70 mm x 102 mm x 19 mm		Inches mm
Weight (not including cables or power supply)		6 170		oz. g.
RF Output connector		SMA female		
Reference connector		SMA female		
Trigger / Modulation connector		SMA female		
Power connector		1.3 mm center-positive DC power jack		
Data connector		DB-9S female		
Enclosure		Extruded aluminum, plastic end-caps		
Finish		Epoxy-based paint, white		

Additional specifications by model number:

NovaSource G6 Model Number	Frequency Range (MHz) (min-max)	Step Size (kHz)	SSB Phase Noise (dBc/Hz) (all typical)
NS3-0065102	65-95	1 kHz	-67 @ 1 kHz -92.5 @ 10 kHz -115 @ 100 kHz
NS3-0120102	120-160	1 kHz	-90.0 @ 1 kHz -96 @ 10 kHz -116 @ 100 kHz
NS3-0160102	160-220	1 kHz	-90 @ 1kHz -94 @ 10kHz -117 @ 100kHz
NS3-0220102	220-350	1 kHz	-86 @ 1 kHz -90 @ 10 kHz -119 @ 100 kHz
NS3-0350102	350-620	1 kHz	-73 @ 1 kHz -84 @ 10kHz -108 @ 100kHz
NS3-0500102	500-800	1 kHz	-74 @ 1 kHz -80 @ 10 kHz -106.5 @ 100 kHz
NS3-0800102	800-1200	1 kHz	-77.0 @ 1 kHz -80.0 @ 10 kHz -106 @ 100 kHz
NS3-1200102	1200-2000	1 kHz	-73.0 @ 1 kHz -82.0 @ 10 kHz -105 @ 100 kHz
NS3-1750102	1750-2500	1 kHz	-72.0 @ 1 kHz -82.0 @ 10 kHz -108 @ 100 kHz
NS3-2000102	2000-3000	1 kHz	-73 @ 1 kHz -79 @ 10 kHz -101.5 @ 100 kHz
NS3-2401102	2400-3400	1 kHz	-72.0 @ 1 kHz -78.0 @ 10 kHz -102 @ 100 kHz
NS3-3400102	3400-3700	1 kHz	-70.0 @ 1 kHz -78.0 @ 10 kHz -109 @ 100 kHz

NS3-3700102	3700-4200	1 kHz	-67.0 @ 1 kHz -75.0 @ 10 kHz -103 @ 100 kHz
NS3-5150102	5150-5350	1 kHz	-67.0 @ 1 kHz -75.0 @ 10 kHz -103 @ 100 kHz
NS3-5470102	5470-5875	1 kHz	-61.0 @ 1 kHz -71.0 @ 10 kHz -96 @ 100 kHz

This material is in the public domain and may be reprinted without permission; citation of this source is appreciated. Cleared for Public Release by Office of Security Review (OSR), dated 05-24-07, reference number 07-S-1331. Copyright ©2007 L-3 Nova Engineering, Inc.