



ADVANCED NOISE TECHNOLOGY

LNS714

Noise Floor Calibrator



Output Frequencies:	8 GHz, (F1) (See Note 1) 4 GHz, (F2) 2 GHz, (F3) 1 GHz, (F4) 250 MHz, (F5) 10 MHz, (F6)
Output Level:	+20 dBm (F1, F2, F3) (See Note 2) +10 dBm to +13 dBm (F4)
Output Isolation:	F1-F2, 60 dB min F1-F3, 60 dB min F2-F3, 60 dB min F2-F3, 40 dB min F1, F2, or F3, 60 dB min
Frequency Accuracy:	$\pm 2 \times 10^{-8}$
Aging:	< 1 PPM/Year
Mechanical Freq. Adjustment:	Sufficient to compensate for 10 years aging
Warm-Up Time:	20 Minutes (See Note 4)
Harmonic Rejection:	< -55 dBc
Coherent Spurious:	< -50 dBc
Non-Coherent Spurious:	< -75 dBc
AC Line Spurious:	< -60 dBc
Operating Temperature:	23° C, $\pm 15^\circ$ C
Electrical Frequency Control:	± 1 PPM min, ± 5 VDC (10 MHz internal reference)
Connectors:	RF, SMA (F)
Size:	2 – 5.25” High x 19” Wide x 17” Deep Rack Cabinet (See Note 3)
Power:	115 to 125 VAC, 57-63 Hz

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Typical Phase Noise:	<u>8.0 GHz</u>	<u>2.0 GHz</u>	<u>1.0 GHz</u>
100 Hz	-90 dBc/Hz	-102 dBc/Hz	-108 dBc/Hz
1 KHz	-115	-127	-131
10 KHz	-138	-150	-156
100 KHz	-142	-154	-160

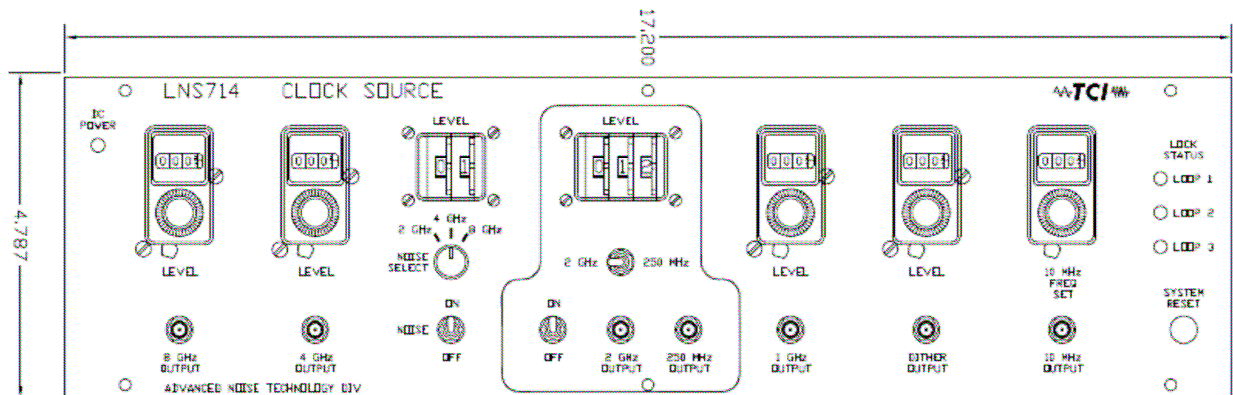
Dither (Noise) Generator:

Frequency Range: 500 MHz to 4 GHz
 Output Level: 0 to 20 dBm PSD, adjustable in 1 dB steps
 Roll Off: 16 dB/decade out of band

Notes:

1. The F1 output also contains a F1 ± 100 KHz/SSB offset Gaussian Noise, which can be turned on and off. The level of the Gaussian noise at the output, relative to the carrier, is adjustable from -109 dBc/Hz to -140 dBc/Hz in 1 dB steps. Gaussian Noise level will be adjustable via a calibrated indicator.
2. The output level of F1 and F3 is adjustable from 20 dBm to 0 dBm via a calibrated indicator. The F2 output is adjustable from 20 dBm to -140 dBm via a calibrated indicator. A calibrated chart for RF power level will be provided for each output frequency according to a counter readout.
3. Two (2) 5.25" High, 19" Wide rack mountable units are used to construct the system. One 5.25" High x 19" Wide x 17" Deep Cabinet is used to house the Carrier Generator section and another for the Power Supply section. Typically the customer selects the options.
4. The unit will operate at turn-on. However the frequency accuracy specification requires 20 minutes of warm-up. Phase Noise measurement is not recommended prior to a 20 minute warm-up or longer.

Outline Drawing



CONSULT THE FACTORY WITH YOUR SPECIAL REQUIREMENTS.

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