GREENTEST® TECHNOLOGIES

Datasheet

RFX7000B
Programmable Noise Generator

The Noisecom RFX7000B broadband AWGN noise generator has a powerful single board computer with flexible architecture used to create complex custom noise signals for advanced test systems. This versatile platform allows the user to meet their most challenging test requirements. Precision components provide high output power with superior flatness, and the flexible computer architecture allows control of multiple attenuators and switches. The 1U enclosure makes this idea for integrated rack applications.

The RF configuration includes a broadband noise source, noise path attenuator (with a maximum attenuation range of 127.9 dB in 0.1 dB steps) and a switch. RF connection for the signal input and noise output can be located on either the front or rear panels of the instrument. An optional signal combiner, and signal attenuator allow independent control of the noise & signal paths to vary SNR while BER testing.

The RFX7000B is primarily designed for automated and remote control applications typically found in a rackmount test system. Rear panel ethernet is standard, GPIB and RS-232 connectivity is available through optional adaptors. Additionally, the instrument can be manually controlled through use of a mouse and display connected to the rear panel.

Noisecom programmable noise generators are highly customizable and can be configured to meet the needs of the most complex testing challenges.

General Specifications

- Output White Gaussian noise
- 127 dB of attenuation; 0.1 dB step size
- Units > 2 GHz have total attenuation of 79.9 dB
- Low distortion signal path
- Noise attenuator accuracy:
  ±0.2 dB or 0.5% at 1 – 500 MHz
  ±0.2 dB or 1% at 0.5 – 1.0 GHz
  ±0.3 dB or 2% at 1 – 2 GHz
- Standard connectors SMA female
- Power 115 VAC, 60 Hz; 110 VAC, 220 VAC
- Operating Temperature: -10° to +65°C

Applications

- Eb/No, C/N, SNR
- Disk Drive Testing
- BER Testing
- Military Jamming
- GPS Receiver Testing
- CATV Testing
- Spectrum AnalyzerCalibration
- Filter Testing
- EMI Testing

Options

Signal and Noise Combining Options		RFX7108B	RFX7110B	RFX7111B	RFX7112B	RFX7113B	RFX7116B	RFX7128B	RFX7218B	RFX7226B	RFX7240B
R7opt07	Signal & Noise Combiner (6 dB loss in Noise & Signal Paths)	X	X	X	X	X	X	X	X	X	
R7opt07UH	Signal & Noise Combiner (6 dB loss in Noise & Signal Paths)										X
Signal Attenuation Options (Requires Singal Combiner R7opt07 or R7opt07UH)											
R7opt13	0 to 127.9 dB signal attenuation in 0.1 dB steps	X	X	X	X						
R7opt13X	0 to 127.9 dB signal attenuation in 0.1dB steps					X					
R7opt13EX	0 to 79.9 dB signal attenuation in 0.1 dB steps						X	X	X	X	
R7opt13U	0 to 79.0 db signal attenuation with 1 dB steps										X
Remote Control Options											
R7opt11	External RS-232 Adapter	X	X	X	X	X	X	X	X	X	X
R7opt16	External GPIB IEEE-488 Adapter	X	X	X	X	X	X	X	X	X	X
Customization Options											
R7opt09	Custom frequency, power and flatness	X	X	X	X	X	X	X	X	X	X

Specifications

Model	Frequency Range	Output Power	dBm / Hz	Flatness	µV / root Hz	Noise Attenuation
RFX7108B	100 Hz - 500 MHz	+10 dBm	-77 dBm	±1.0 dBm	31.6	0 - 127.9 dB, 0.1 dB steps
RFX7110B	100 Hz - 1.5 GHz	+10 dBm	-82 dBm	±1.5 dBm	18.2	0 - 127.9 dB, 0.1 dB steps
RFX7111B	1 GHz - 2 GHz	+10 dBm	-80 dBm	±1.5 dBm	22.4	0 - 127.9 dB, 0.1 dB steps
RFX7112B	1 MHz - 2 GHz	0 dBm	-93 dBm	±2.0 dBm	5.01	0 - 127.9 dB, 0.1 dB steps
RFX7113B	10 MHz - 3 GHz	0 dBm	-95 dBm	±2.5 dBm	5.01	0 - 127.9 dB, 0.1 dB steps
RFX7116B	10 MHz - 6 GHz	-12 dBm	-110 dBm	±3.0 dBm	0.071	0 - 127.9 dB, 0.1 dB steps
RFX7128B	10 MHz - 10 GHz	-17 dBm	-117 dBm	±3.5 dBm	0.3251	0 - 79.9 dB, 0.1 dB steps
RFX7218B	2 GHz - 18 GHz	-20 dBm	-122 dBm	±2.0 dBm	0.18	0 - 79.9 dB, 0.1 dB steps
RFX7226B	2 GHz - 26.5 GHz	-18 dBm	-122 dBm	±3.0 dBm	0.18	0 - 79.9 dB, 0.1 dB steps
RFX7240B	2 GHz - 40 GHz	-20 dBm	-126 dBm	±4.0 dBm	0.11	0 - 79.9 dB, 0.1 dB steps

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