

## **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 Analyzer Calibration
- Filter Testing
- EMI Testing



## Options

### Option number Description

R7opt07	Combiner for input signal (6 dB loss in noise and signal paths)
R7opt09	Custom frequency, power, or flatness requirement <sup>2</sup>
R7opt11	External RS-232 Adapter
R7opt13	0 to 127.9 dB signal attenuator in 0.1 dB steps <sup>1 3</sup>
R7opt16	External GPIB IEEE-488 Adapter

<sup>1</sup> Requires opt7, signal combiner

<sup>2</sup> Consult factory for pricing and availability

<sup>3</sup> 0 to 79.9 for RFX7124B, RFX7126B, RFX7128B, RFX7226B "N/A" for RFX7240B

## Specifications

### RFX7000B Series

### Output Characteristics

Model	Frequency Band	Power	dBm / Hz (dBm)	Flatness (dB)	uV / root (Hz)
RFX7107B	100 Hz - 100 MHz	+13	-67	±0.75	100
RFX7108B	100 Hz - 500 MHz	+10	-77	±1.0	31.6
RFX7109B	100 Hz - 1 GHz	+10	-80	±1.5	22.4
RFX7110B	100 Hz - 1.5 GHz	+10	-82	±1.5	18.2
RFX7111B	1 GHz - 2GHz	+10	-80	±1.5	22.4
RFX7112B	1 MHz - 2 GHz	0	-93	±2.0	5.01
RFX7113B	10 MHz - 3 GHz	0	-95	±2.5	5.01
RFX7114B	10MHz - 4 GHz	-7	-103	±2.5	1.58
RFX7116B	10 MHz - 6 GHz	-12	-110	±3.0	0.71
RFX7128B	10 MHz - 10 GHz	-17	-117	±3.5	0.3251
RFX7218B	2 GHz - 18 GHz	-20	-122	±2.0	0.18
RFX7226B	2 GHz - 26.5 GHz	-18	-122	±3.0	0.18
RFX7240B	2 GHz - 40 GHz	-20	-126	±4.0	0.11

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