Noisecom

Data Sheet

UFX7000A

Programmable AWGN Noise Generator

Count on the noise leader

UFX 7000A Programmable AWGN Noise Generator Series

The Noisecom UFX7000A 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 design requirements. Precision components provide high output power with superior flatness, and the flexible computer architecture allows control of multiple attenuators, switches, and filter banks.

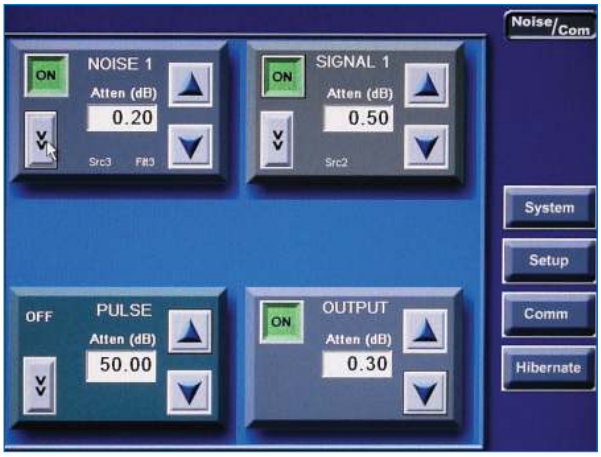
The standard RF configuration includes a broadband noise source and noise path attenuator with a maximum attenuation range of 127 dB in 1 dB steps. Additional attenuation ranges, and step sizes are available. Optional filters can be specified in any combination of low pass, high pass, band pass, or band reject. Combined with advanced switching circuitry, the designer can create many different path combinations. The signal output connectors can be located on the front, or rear panel to provide convenient customer access on the bench, or in a rack system. An optional signal combiner, and signal attenuator allow independent control of the noise & signal paths to vary SNR while BER testing.

The unit has a touch-screen TFT display, mouse, and keyboard for manual control, or standard Ethernet for ATE remote control. Optional IEEE 488.2 GPIB and RS232 remote interfaces are also available. If there are additional requirements for your noise application, please contact the factory for more information about custom designs.

General Specifications

- Output White Gaussian noise
- Output power up to +30 dBm
- 127 dB of attenuation; 1 dB step size
- Optional 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
- 6.25″ color VGA, TFT touch screen
- Dimensions: 17.25 in. wide x 6.50 in. including feet, high x 19.50 in. deep
- Fold-down feet for bench top use
- Power 115 VAC, 60 Hz
- Operating Temperature: -10° to +65°C

Custom filter control menu



Intuitive standard control menu

Specifications

UFX7000A Series			Output Characteristics		
Model	Frequency Band	Power	dBm / Hz (dBm)	Flatness (dB)	uV / root (Hz)
UFX7101A	10 Hz - 20 kHz	+13	-30	±0.5	7071
UFX7103A	10 Hz - 500 kHz	+13	-44	±0.5	1414
UFX7105A	10 Hz - 10 MHz	+13	-57	±0.5	316
UFX7107A	100 Hz - 100 MHz	+13	-67	±0.75	100
UFX7108A	100 Hz - 500 MHz	+10	-77	±1.0	31.6
UFX7109A	100 Hz - 1 GHz	+10	-80	±1.5	22.4
UFX7110A	100 Hz - 1.5 GHz	+10	-82	±1.5	18.2
UFX7111A	1 GHz - 2GHz	+10	-80	±1.5	22.4
UFX7112A	1 MHz - 2 GHz	0	-93	±2.0	5.01
UFX7113A	10 MHz - 3 GHz	0	-95	±2.5	5.01
UFX7114A	10MHz to 4 GHz	-7	-103	±2.5	1.58
UFX7124A	2 GHz - 4 GHz	-10	-103	±2.0	1.58
UFX7116A	10 MHz - 6 GHz	-12	-110	±3.0	0.71
UFX7126A	2 GHz - 6 GHz	-14	-110	±2.5	0.71
UFX7128A	10 MHz - 10 GHz	-17	-117	±3.5	0.3251
UFX7218A	2 GHz - 18 GHz	-20	-122	±2.0	0.18
UFX7240A	2 GHz - 40 GHz	-20	-126	±4.0	0.11

UFX7900A Series (1 Watt output)			Output Characteristics	
Model	Frequency Band	Power	dBm/Hz	Flatness (dB)
UFX7903A	500 Hz - 500 kHz	+30	-27	±2
UFX7905A	500 Hz - 10 MHz	+30	-40	±2
UFX7907A	250 kHz - 100 MHz	+30	-50	±2
UFX7908A	1 MHz - 200 MHz	+30	-53	±2
UFX7909A	1 MHz - 300 MHz	+30	-55	±2
UFX7910A	2 MHz - 500 MHz	+30	-57	±2
UFX7911A	5 MHz - 1 GHz	+30	-60	±3

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
U7opt01	N female output connector
U7opt02	BNC female output connector
U7opt03	0 to 127.9 dB noise attenuator in 0.1 dB steps instead of 127 dB in 1 dB steps [1]
U7opt04	Switch elements, 2 X SP6T for 4 filter paths, 1 thru-path, 1 termination (filters optional)
U7opt06	75 Ohm output impedance (6 dB loss in the noise path and 12 dB loss in the signal path)
U7opt07	Combiner for input signal (6 dB loss in noise and signal paths)
U7opt08	Double output terminals (switched)
U7opt09	Custom frequency, power, or flatness requirement [3]
U7opt10	Line power 230 VAC, 50 Hz
U7opt11	RS-232 interface
U7opt12	0 to 127 dB signal attenuator in 1 dB steps [2]
U7opt12x	0 to 127 dB signal attenuator in 1 dB steps [4]
U7opt13	0 to 127.9 dB signal attenuator in 0.1 dB steps [2 7]
U7opt13x	0 to 127 dB signal attenuator in 0.1 dB steps [4]
U7opt15	Optional 19" rack mount brackets
U7opt16	GPIB IEEE-488
U7opt17	Removable storage media security option[5]
U7opt18	3U High Enclosure[6]
U7opt19	Pulsed Noise Generator

[1] 0 to 79.9 for UFX7124A, UFX7126A, UFX7128A & UFX7240A
NOTE: For UFX7240A, this option reduces output power by 2dB, flatness of ±6 dB, Power -136 dBm/Hz (-30 dBm)

[2] Requires opt7, signal combiner

[3] Consult factory for pricing and availability

[4] UFX7113A only

[5] Highly recommended for military

[6] Must be included at the time of original order

[7] 0 to 79.9 for UFX7124A, UFX7126A, UFX7128A
"N/A" for UFX7240A

Removable drive - U7opt17

3U High - U7opt18

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Note: Specifications, terms and conditions are subject to change without prior notice.