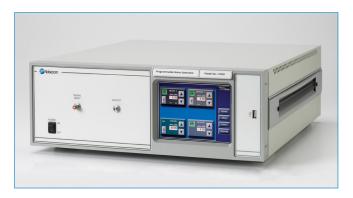# J7000 Series
Jitter Noise Generators

Count on the noise leader

J7000 Series Jitter Noise Generators

The J7000A Series instruments from Noisecom generate white Gaussian noise (AWGN) with a large crest factor to model "real world" random jitter. This random jitter is commonly referred to as Rj in the Stochastic Total Jitter model. Today's high-speed digital circuit designers are challenged with small timing/jitter budgets to deliver high data rates that have a low Bit Error Rate (BER). These instruments are used by serial-data-designers, and production test engineers for their jitter test requirements. The J7000A series allows the user to add Rj directly to a data stream via an internal combiner, or by connecting to the delay line input of a Parallel, or Serial BERT. The combined signal output can then be measured using an oscilloscope, BERT, or Time Interval Analyzer (TIA). By adding precise amounts of white noise, the reduction in Signal to Noise Ratio (SNR) can be measured to evaluate the receiver's performance. This allows the total timing budget, including margins, to be minimized for maximum data rates. The J7000A noise instrument is capable of outputting this random noise (Rj).

The J7000A series has 6 standard models, but custom frequencies, power, and flatness specifications can be provided by consulting the factory. This instrument has up to five optional band-limiting filters that can be added for specific serial data applications. These are applications in which the jitter frequency range has been limited by specific test methodologies.

This instrument features a large 6.25" color TFT touch-screen display for more specific soft menus. The noise level, noise on/off switching, signal on/off switching, and noise source selection can be controlled manually by the touch screen, or remotely via Ethernet, as well as through the optional IEEE-488 bus. The J7000A instruments can be easily integrated into an Automated Test Station (ATE) under software control to reduce production test time.

General Specifications

- Output White Gaussian noise

- Minimum 18 dB Crest factor

- Output noise power -3 dBm (+/- 0.5 dBm)

- Noise attenuation 0 to 63 dB in 0.1 dB steps up to 2 GHz

- Noise attenuator ±0.2 dB or 0.5%

- Signal path gain 0 ±1 dB

- Ultra-low distortion signal path

- Standard connectors SMA female

- 6.25" color VGA, TFT touch screen

- Dimensions: 17.22 in. wide x 6.30 in. including feet, high x 19.5 in. deep

- Fold-down feet for bench top use

- Power 115 VAC, 60 Hz

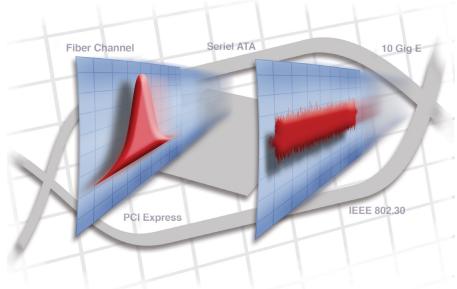- Operating Temperature: -10° to +65°C

Specifications

Applications

- Rj Random Jitter Source

- Serial Data Testing

- BER, Jitter Testing

- Disk Drive Channel Testing

- PCI Express, 10 Gig E, SATA

J7000A Series

Output Characteristics

Model	Frequency Band	Power (dBm)	Vrms	dBm/Hz	Flatness (dB)
J7105A	1 MHz - 10 MHz	-3	0.16	-73	±0.25 / 40 MHZ
J7107A	10 MHz - 100 MHz	-3	0.16	-83	±0.25 / 40 MHZ
J7108A	10 MHz - 500 MHz	-3	0.16	-90	±0.25 / 40 MHZ
J7109A	10 MHz - 1 GHz	-3	0.16	-93	±0.25 / 40 MHZ
J7112A	10 MHz - 2 GHz	-3	0.16	-96	±0.25 / 40 MHZ
J7115A	10MHz - 5 GHz	-3	0.16	-100	±2.5 dB

The J7000 Series – Your Source For Random Jitter.

Option Number	Description
Jopt01	BNC Female input and output
Jopt02	75 ohms input and output impedence
Jopt03	230 VAC, 50 Hz
Jopt04	Switch up to 5 filter inputs
Jopt05	127 dB signal attenuator in 1 dB steps
Jopt06	DC coupled signal path (6 dB RF Loss)
Jopt07	IEEE-488 interface remote control
Jopt08	Optional 19'' rack mount brackets
Jopt09	Custom frequency, power or flatness requirement*
Jopt10	Differential Outputs*
Jopt11	Serial data filter options* -PCI Express GEN & GENII -Serial ATA GENI

*consult factory for specifications and pricing

N/J7000/0815/EN
Note: Specifications, terms and conditions
are subject to change without prior notice.

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