Noisecom JV9000

Adjustable Vcc Noise and Spur Generator

Today's computers, communication devices and other electronic equipment use a wide combination of active devices including digital and analog ICs. Increased data/clock rates and densely packed active components creates an ideal environment for both electromagnetic interference (EMI) and other undesirable effects such as ground bounce and Vcc droop jitter. Circuit designers are well aware of the effect of noise and jitter on clock and data lines and how these distortions threaten the data integrity and proper functionality of their systems. Only after the magnitude and impact of such unwanted noise are identified during the design and evaluation phases can their harmful effects be minimized. A complete analysis of such phenomena is not always feasible or possible during the design stage.

While Vcc specifications of integrated circuits define the operational range, high frequency noise can disturb their functionality, even operating within the specified Vcc limits. Designers and manufacturers of integrated circuits and small dense PCBs need to ensure that their products offer sufficient immunity against Vcc noise and other jitter. Placing a blocking capacitor adjacent to the VCC pin may no longer be sufficient. This problem has been greatly exasperated by ever dropping rail voltages (sometimes even below 1V). Noise on the rail or in the circuit that was once negligible now has become intolerable in modern devices.
Noisecom's JV9000 is a generator specifically designed to inject noise and deterministic jitter (DJ) signals into Vcc lines. The system is very easy to set up and requires only two connections: Vcc bias input to the JV9000, and its output (with the injected noise) connected to the Vcc path of the DUT test board. The built-in noise generator offers a broadband noise power of 0 dBm or more up to 2 GHz with a 127 dB attenuation range, adjustable in 1 or 0.1 dB steps. All controls are through an intuitive touch screen interface.

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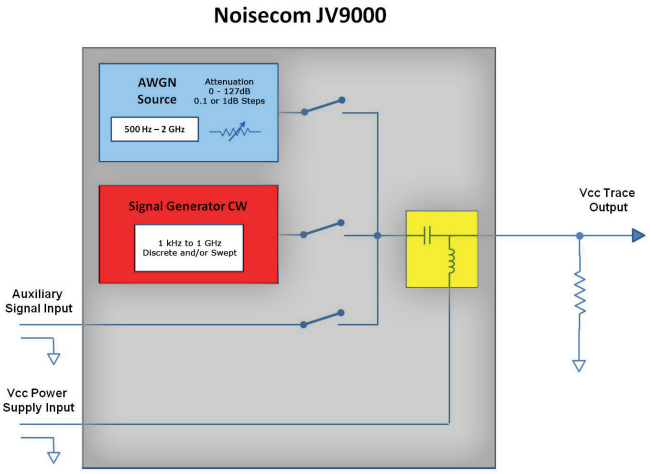
The JV9000 has also a range of optional spur generators that deliver various discrete and programmable frequencies with programmable output levels in combination with the broadband noise. Multiples of such generators are also possible in one unit. Noisecom's JV9000 generator can be optionally equipped with one or more auxiliary inputs that allow external custom signals onto the Vcc line.

JV9000 replaces racks full of equipment typically used to make such tests. The convenient integration in one instrument saves days of set up and also provides repeatability and consistency. This is an essential piece of test equipment for anyone involved in developing or qualifying telecommunication related ICs and modules. The JV9000 will aid in identifying noise immunity and other problems early in the design cycle, and will reduce the number of expensive design iterations.



Noisecom Vcc Noise and CW Generator

Specifications

Input	
Maximum Voltage	5V
Maximum Current	500 mA (higher optional)
Connector	SMA (F)

Noise Source (white Gaussian noise)	
Impedence	50 Ohms (typ.)
Frequency Range	1 kHz to 500 MHz (500 Hz - 2 GHz operational)
Output Power	0 dBm Min. (at the output of bias-T), adjustable 127 dB, 1dB step, into 50 Ohms

CW/Spur Generator	
Impedance	50 Ohms (typ.)
Frequency Range Options	- 70 MHz to 470 MHz, programmable to 100 KHz resolution (1 Hz option) - 20 MHz to 120 MHz - 1 kHz to 10 MHz - Discrete combination of up to 13 tones 1 KHz to 1 GHz
Output Power	0 dBm Min. (at the output of bias-T), adjustable, 127 dB, 1 dB step, into 50 Ohms, harmonics 20 dBc or less (40 dBc for discrete tones optional)

General Specifications	
Dimensions (W/H/D)	17in x 5.25in x 13in / 432mm x 133mm x 330mm
Line Power	120V, 60Hz / 1.6A Slow-blow fused
Operating Temperature	-10°C to 60°C / 14°F to 140°F Ambient

JV9000 Series

Model	
JV9031	No PC controller, broadband noise generator, front panel control of amplitude only
JV9072	500 MHz broadband noise generator, PC and control interface built in
JV9075	With CW generator, 70-470 MHz
JV9080	1 GHz broadband noise generator

Options	
JV9opt01	BNC (F) in/out connectors
JV9opt02	Higher current, 1A DC, 500 MHz only
JV9opt03	Higher frequency resolution, 1 Hz
JV9opt08	19" Rack Mount Kit
JV9opt09	Custom frequency, Power or flatness (consult factory)
JV9opt10	20-120 MHz generator option
JV9opt11	1 kHz-10 MHz generator option
JV9opt12	Multiple discrete tones, 1 KHz to 1 GHz
JV9opt16	GPIB/IEEE-488 Remote control
JV9opt17	Removable Hard Drive plus one additional HD with system. **Strongly suggested for Military and those involved in classified projects**

Please contact factory for other options or modifications

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