Noisecom JV9000 Series

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 0.1 dB steps. All controls are through an intuitive touch screen interface.

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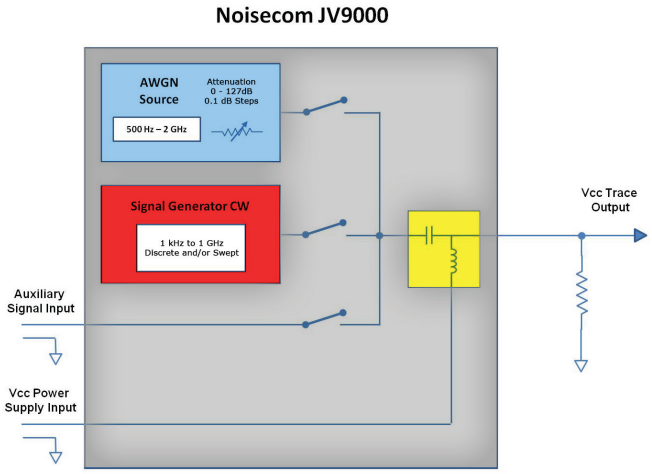
The JV9000 has also a range of optional spur generators that deliver various discrete and programmable frequencies with programmable output levels in combination with the broadband noise. Multiples of such generators are also possible in one unit. Noisecom's JV9000 generator can be optionally equipped 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 for Standard Model JV9075

Input	
Maximum Voltage	5V
Maximum Current	500 mA, higher options available (opt23 and opt24)
Connector	BNC (F)

Noise Source (white Gaussian noise)	
Impedence	50 Ohms SMA, optional BNC (F) - (opt01)
Frequency Range	10 kHz to 2 GHz (500 Hz - 2 GHz operational), custom frequency (opt09)
Output Power	0 dBm min. (at the output of bias-T), adjustable 60 dB, 0.1dB step into 50 Ohms
	Higher power (+10 dBm - opt05)

CW Fixed Tones	
Impedance	50 Ohm (typ.)
Frequencies	1KHz, 3KHz, 10KHz, 30KHz, 100KHz, 300kHz, 1MHz, 3MHz, 10MHz, 100MHz, 300MHz, 1GHz
Output Power	0 dBm min (at the output of bias-T), adjustable, 60dB in 0.1dB steps

CW/Spur Generator (optional)	
Impedance	50 Ohms (typ.)
Frequency Range Options	1 kHz to 25 MHz (opt21), programmable, 100 Hz resolution or 1 Hz resolution (opt06) 25 MHz to 3 GHz (opt22), programmable, 100 kHz resolution or 1 kHz resolution (opt07)
Output Power	0 dBm min. (at the output of bias-T), adjustable, 127 dB, 0.1 dB step, into 50 Ohms, harmonics 20 dBc or less (40 dBc for discrete tones optional) Higher power (+10 dBm - opt05)

Auxiliary Input (opt08-x)	
Input Frequency Range	1 KHz - 1.5 GHz
Maximum Input Power	+10 dBm
Auxiliary Input Connector	50 Ohm SMA, optional BNC (opt01)
Level Control	adjustable, 127 dB, 0.1 dB step

NOTE: Standard model comes with one auxiliary input. x can be 2 to 3 inputs.

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

Ordering Information	
Model	JV9075

Options	
JV9opt01	BNC (F) in/out connectors
JV9opt05	+10 dBm, high power noise/CW option
JV9opt06	1 Hz frequency resolution for option 21
JV9opt07	1 kHz frequency resolution for option 22
JV9opt08-x	Auxiliary input, consult factory for multiple inputs, x: number of inputs
JV9opt09	Custom frequency, Power or flatness (consult factory)
JV9opt10	Line power 230VAC, 50 Hz
JV9opt15	19 inch Rack Mount Kit
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**
JV9opt21	1 kHz - 25 MHz CW synthesizer
JV9opt22	25 MHz - 3 GHz CW synthesizer
JV9opt23	Higher current, 2A DC, 50 kHz to 3 GHz
JV9opt24	Higher current, 5A, 10 MHz to 3 GHz

Please contact factory for other options or modifications

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