

Agilent N8241A and N6030A Arbitrary Waveform Generators with option 350: Function Generator

Technical Overview



Agilent Technologies

Key Characteristics

- 15-bit vertical resolution
- 80 MHz Sine and Square waves outputs
- Sine, Square, Ramp, and other waveforms
- AM, FM and FSK modulation capability

Standard Waveforms

The Agilent Technologies N8241A and N6030A Arbitrary Waveform Generators with option 350 use direct digital-synthesis techniques to create a stable, accurate output on all waveforms, down to 1 Hz frequency resolution.

Front-panel operation of the 350 option is straightforward and user friendly. The numeric keypad or your keyboard can be used to adjust frequency, amplitude and offset.

Built-in Versatility

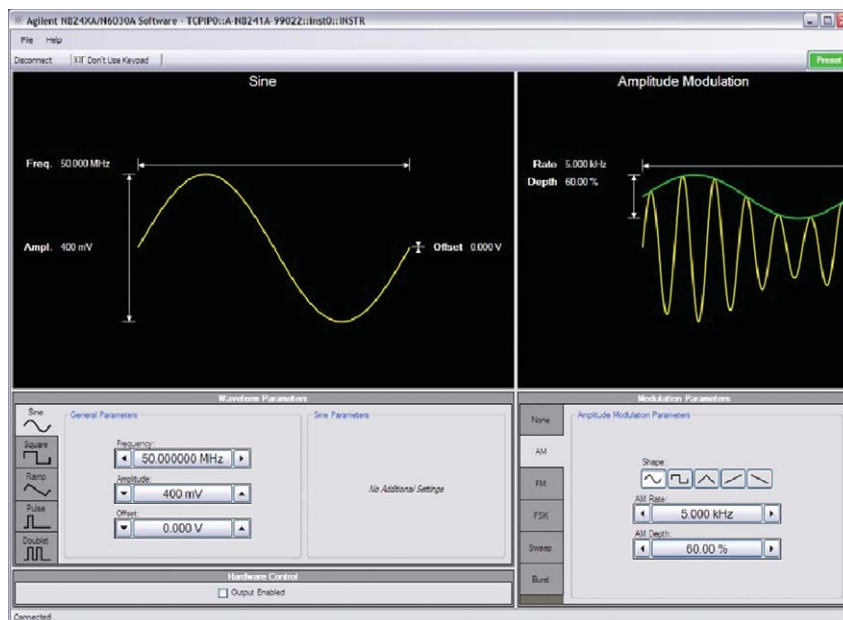
AM, FM and FSK capabilities make it easy to modulate waveforms without a separate source. Linear sweeps can be performed across a programmable frequency range. Programmable burst count allows you to customize your signal.

Intuitive Graphical User Interface

Leveraging the established and powerful front panel of Agilent Technologies 33250 function generator, option 350 for the N8241A and N6030A provides a very intuitive user interface to help you quickly benefit from the outstanding signal generation capabilities of the N8241A and N6030A.

Highest signal quality

Thanks to its 15-bit of vertical resolution, option 350 for the N6030A and N8241A provides the highest signal integrity and measurement fidelity and allows you to generate the most realistic waveforms for all your electronic testing needs.



General Characteristics

Waveforms

Standard	sine, square, ramp, pulse and doublet
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Frequency Characteristics

Sine	1 Hz to 80 MHz
Square	1 Hz to 80 MHz
Pulse	1 Hz to 65 MHz
Doublet	1 Hz to 2 MHz
Ramp	1 Hz to 40 MHz
Resolution	1 Hz
Accuracy	same as 10 MHz clock

Spectral Purity

Non-Harmonic spurious	≤ -75 dBc from DC to 80 MHz
Noise floor	≤ -150 dBc/Hz across the channel bandwidth

Signal Charistics

Square wave	
Rise/Fall time	<500 kHz: 1.5ns >500 kHz: 3.8 ns
Duty cycle	20% to 80%
Pulse	
Period	12.5ns to 1s
Pulse width	8ns to 1000ms
Variable edge time	5ns – 312.5ms
Ramp	
Ramp Fraction	0 to 100 %

Output Characteristics

Number of channels	1
Amplitude (into 50W)	1 to 800 mVpp
Offset (into 50W)	± 0.2 V

Modulation

AM

Carrier waveforms	sine
Mod. Waveforms	sine, square, triangle, positive ramp, negative ramp
Mod. Rate	1 Hz to 20 kHz
Depth	0 – 100%

FM

Carrier waveforms	sine
Mod. Waveforms	sine, square, triangle, positive ramp, negative ramp
Mod. Rate	1 Hz to 20 kHz
Deviation	1 Hz to Carrier Frequency

FSK

Carrier waveforms	sine
Internal rate	1 Hz to 100 kHz
Frequency range	1 Hz to 80 MHz

Burst

Waveforms	sine, square, ramp, pulse, doublet
Burst count	1 to 499999
Start/Stop phase	–360 to 360
Internal period	2us to 500s
Trigger source	Internal, external trigger

Sweep

Waveforms	sine, square, ramp
Type	linear
Direction	Up and down
Start F / Stop F	1 Hz to 80 MHz
Sweep time	1 ms to 500 s
Trigger	Internal, external trigger

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Revised: March 27, 2008

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Printed in USA, June 12, 2008
5989-8734EN



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