

KEYSIGHT TECHNOLOGIES (AGILENT HP)

8130A

The Keysight (formerly Agilent / HP) 8130A is a high-performance 300 MHz pulse generator designed for testing high-speed devices such as BiCMOS, ECL, and ECLips integrated circuits. Offering variable transition times down to 1 ns and a timing resolution of 10 ps, the 8130A is ideally suited for precise characterization of digital cells, rapid bandwidth assessment, and amplifier slew-rate measurements. Optional dual-channel capability enables simultaneous clock and data generation.

SPECIFICATIONS

General

Interfaces	GPIB (HP-IB) as standard
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Timing Characteristics

Frequency Range	10 Hz to 300 MHz
Period Range	3.33 ns to 99.9 ms
Pulse Width Range	1.50 ns to 99.9 ms
Active Edge Configuration	Independent transition time setting for leading or trailing edges

Pulse Output Characteristics

Number of Channels	1 channel standard; expandable to 2 channels with Option 020
Maximum Amplitude	5.00 Vpp into 50 Ω
Minimum Amplitude	100 mVpp into 50 Ω
Offset Range	-4.95 V to +4.95 V (into 50 Ω)
Output Voltage Window	-5.00 V to +5.00 V (sum of amplitude and offset is limited within this window into 50 Ω)
Minimum Transition Time	1.0 ns (measured at 10% to 90% of pulse amplitude)
Overshoot and Ringing	< 5% of pulse amplitude
Source Impedance	50 Ω
Output Coupling	DC-coupled
Complementary Outputs	Standard (Normal and Complement outputs available simultaneously on each channel)
Amplitude Limit Protection	User programmable upper and lower limits to protect sensitive devices under test

Trigger and Operating Modes

Operating Modes	Continuous (NORM), Triggered (TRIG), Gated (GATE), External Burst (E.BURST)
Double Pulse Mode Selection	Available on Channel 1 and Channel 2 (allows generating dual pulses within a single period)
External Input Frequency Range	DC to 300 MHz
External Input Impedance	50 Ω or 10 kΩ selectable
External Trigger Minimum Pulse Width	1.5 ns

Configuration Options

Option 020	Adds second output channel
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Trigger Output

Trigger Output Transition Time	< 1 ns
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APPLICATIONS

High-speed digital design, BiCMOS/ECL/ECLips cell characterization, bandwidth assessment, and amplifier slew-rate testing

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