




Comparison Guide

50 MHz Pulse Generators

Compared to the Agilent model 81101A pulse generator, B&K Precision models 4033 and 4034 offer similar or better performance delivered in a very compact and lightweight package. B&K Precision provides a single channel pulse generator at almost half the price of the Agilent 81101A along with a dual channel version.

Comparison Chart

MODEL	B&K Precision 4033	B&K Precision 4034	Agilent 81101A
			
US price	\$5,250	\$7,950	\$10,119
SPECIFICATIONS			
Channels	1	2	1
Frequency	0.1 Hz - 50 MHz		0.001 Hz - 50 MHz
Timing Characteristics			
Period	Range (single pulse)	20 ns to 10 s (50 MHz to 0.1 Hz rep. rate)	20 ns to 999.5 s
	Resolution	Up to 6 digits, limited to 100 ps	3.5 digits
	Accuracy	+ 0.01%	+ 0.01 % (+5%)
Width	Range (single pulse)	10 ns to (Period – 10 ns off time)	10 ns to 9.995 s
	Resolution	Up to 6 digits, limited to 100 ps	3.5 digits
	Accuracy	+(0.5% of setting + 500 ps)	+5% +250 ps
Delay	Range	0 ns to (Period – Width – 10 ns off time)	20 ns to 999.5 s
	Resolution	Up to 6 digits, limited to 100 ps	3.5 digits
	Accuracy	+(0.5% of setting + 500 ps)	+5% +250 ps
Duty Cycle	Range	1% to 99%	0.1% to 95% (99.9% with overprogramming)
Output Characteristics			
Amplitude	-10 V to +10 V into 50Ω load (-20 V to +20 V into open circuit)		-10 V to +10 V into 50Ω load (-20 V to +20 V into open circuit)
Resolution (into 50 Ω)	3 digits limited to 10 mV		3 digits limited to 10 mV
Output Impedance	50 Ω		50 Ω or 1 kΩ
Operating Modes			
Continuous	Yes		Yes
Triggered	Yes		Yes
Gated	Yes		Yes
Burst	Yes		Yes
External Width	Yes		Yes

Pulse Functions

Single	One pulse at each selected period up to 50MHz repetition rate	One pulse at each selected period up to 50MHz repetition rate
Double	One pair of pulses at each period up to 25MHz repetition rate. Both pulses have the same selected width; the position of the second pulse set by the delay control.	Double pulse and delay are mutually exclusive.

Burst

Burst Count	2 to 999999	2 to 65536
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Transition Time

Range	<6 ns to 100 ms variable. Leading and trailing edges settable separately and limited to 20:1 ratio between settings into one of the following ranges: 5 ns-100 ns; 50 ns-1.0 us; 500 ns-10 us; 5.0 us-100 us; 50 us-1.0 ms; 500 us-10 ms, 5 ms – 100 ms	5 ns to 200 ms variable. These can be Entered as leading/ trailing edge or % of width. Leading and trailing edges are independent within one of the following overlapping segments (1:20 ratio): 5 ns - 20 ns, 10 ns - 200 ns, 100 ns - 2 μs, 1μs - 20 μs, 10 μs - 200 μs, 100 μs - 2 ms, 1 ms - 20 ms, 10 ms - 200 ms.
Accuracy	±(5% of setting +2 ns)	±10% ±200 ps

General

Dimensions HxWxD approx.	3.5 x 8.4 x 11.8 inch (88 x 213 x 300 mm)	3.5 x 16.8 x 20.5 inch (89 x 426 x 521 mm)
Weight approx.	6.6 lbs. (3 kg.)	20.28 lbs. (9.2 kg.)
Programming	GPIB, RS232	GPIB
Standard Memory	99 settings and power down state	9 user settings and one fixed default setting
Standard Warranty	3 years	1 year

Yellow background = Better performance or feature

Product specifications and descriptions are subject to change without notice

Comparison data retrieved from Agilent website on June 8, 2011, based on “Agilent 81100 Family of Pulse Pattern Generators Data Sheet - Version 1.3” and “Agilent 81101A 50 MHz Pulse Generator, Reference Guide, Edition E0300”.