




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 |
|-------------|-------------|------------|

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 |

■ = 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”.