

# APG1780DA

## DIGITALLY ADJUSTABLE PICOSECOND PULSE GENERATOR



The Sigtrona APG1780DA-SMA is a digitally adjustable electronic pulse generator capable of producing output pulses ranging from 17 to 80 ps. The pulse trigger input features a configurable trigger level and hysteresis, enabling reliable triggering on any high-speed logic signal within a  $\pm 3$  V range. An alternative variant, the APG1780DA-DIFF, provides a differential trigger input leveraging lower jitter and higher noise immunity of differential signals and eliminating the need to adjust a trigger level. The APG1780DA can be either used as a standalone device operated via its front panel or remotely controlled over a USB interface.

### FEATURES

- Digitally adjustable pulse width: 17–80 ps, adjustable in 3 ps steps
- Trigger rate: >2 GHz
- Adjustable trigger level:  $\pm 3$  V
- Control options: Standalone via front panel or remote via USB
- USB powered operation, external power optional, draws only 3.2 W
- Trigger input options: Single-ended or differential, with adjustable hysteresis
- Two complementary 2.4 mm outputs
- DC coupled input and outputs
- Internal trigger generator: 1 Hz to 72 MHz
- Typical pulse amplitudes into 50  $\Omega$ : 450 mV at 25 ps, 300 mV at 20 ps
- Optional: EOM driver amplifier available on request
- Compact size: 60 x 50 mm

### APPLICATIONS

- ▶ Optical pulse modulation via electro-optic modulation (EOM)
- ▶ Response function characterization of high bandwidth analog systems
- ▶ Automated test equipment (ATE)

### CONTACT US

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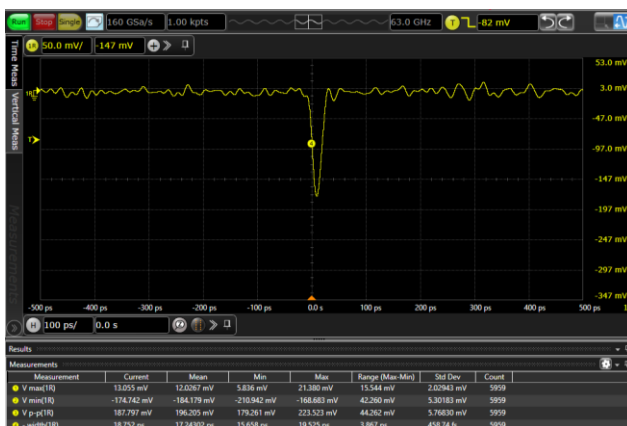
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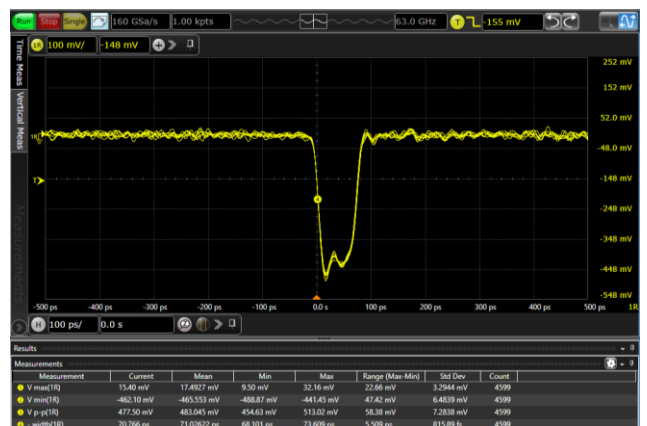
The image above shows a negative pulse with a width of 25.5 ps and an amplitude close to 400 mV.



Reducing the pulse width below 25 ps also reduces the amplitude: 19 ps with close to 300 mV.



Even shorter pulse: 17 ps with 175 mV amplitude.



Longer pulses have a "flat top": 71 ps pulse width, amplitude > 400 mV

## THE APG1780DA VARIANTS:

- **APG1780DA-SMA:** Single-ended trigger input via an SMA female connector. The input is DC coupled and internally terminated with 50  $\Omega$ .
- **APG1780DA-DIFF:** Differential trigger input via a SATA connector, using pins A+, A-. The input is DC coupled and internally terminated with 100  $\Omega_{diff}$ .



APG1780DA-DIFF variant

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