

- For amplifying fast analog signals from photomultipliers, electron multipliers, photodiodes, micro-channel plates, and silicon charged-particle detectors
- ≤ 1 ns rise time
- Gain: 200
- Output drives -5 V into 50Ω
- Eight separate and identical amplifiers in a single-width NIM
- $\leq 20 \mu\text{V}$ rms equivalent input noise

The FTA820A Amplifier is a high-performance, wide-bandwidth amplifier designed for boosting very fast linear signals from photomultipliers, electron multipliers, silicon charged-particle detectors, and other detectors used in fast timing applications. The rise time is < 1 ns with a 5-V output, enabling excellent timing resolution.

The FTA820A provides eight separate and identical amplifiers in a single-width NIM module. Each FTA820A amplifier section has a gain of 200, noninverting. LEMO type 00C50 connectors are used for all signal connections.

Specifications

PERFORMANCE

GAIN FOR EACH CHANNEL (10% gain tolerance) 200, noninverting.

NUMBER OF CHANNELS 8.

RISE TIME ≤ 1 ns.

NOISE $\leq 20 \mu\text{V}$ rms equivalent input noise.

BANDWIDTH 10 to 350 MHz.

PROPAGATION DELAY ≤ 30 -ps variation between channels.

OUTPUT RANGE 0 to -5 V with $50\text{-}\Omega$ load.

INPUTS One for each channel. LEMO connector; input impedance 50Ω .

OUTPUTS One for each channel. LEMO connector; 0 to -5 V output with a $50\text{-}\Omega$ load. Output impedance $\leq 1 \Omega$.

ELECTRICAL AND MECHANICAL

POWER REQUIRED $+12$ V, 400 mA.

DIMENSIONS Standard single-width NIM module 3.43 X 22.13 cm (1.35 X 8.714 in.) per DOE/ER-0457T.

WEIGHT

Net 1 kg (2.2 lb).

Shipping 2.7 kg (5.9 lb).

Ordering Information

To order, specify:

Model	Description
FTA820A	Octal Fast Timing Amplifier (200 gain, noninverting)



Specifications subject to change
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