DATA SHEET

AUX-0025 / 0040 / 0100 FILTERS

for the Measurement of Switching Amplifiers

APPLICATIONS

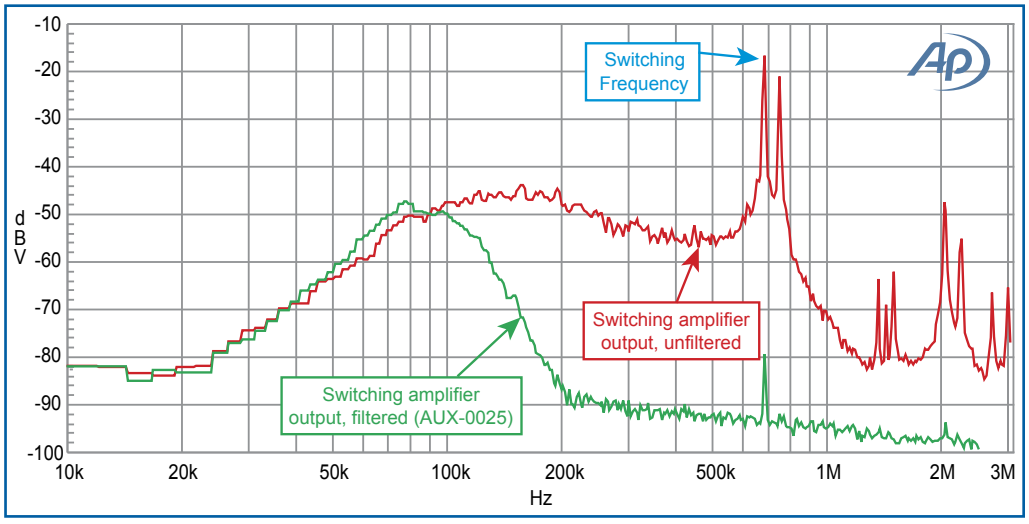
- Measurement of switching amplifiers
- Measurement of analog signals with high amounts of out-of-band noise

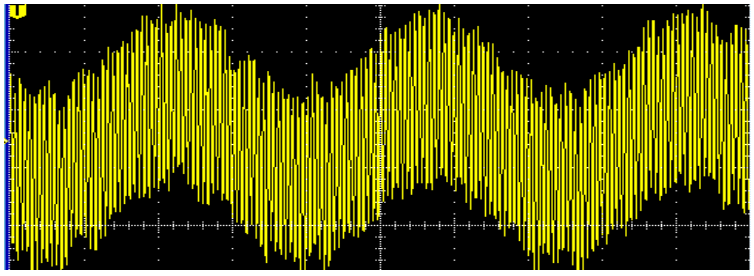
HIGHLIGHTS

- AUX-0025: two channel, 20 Hz to 20 kHz passband
- AUX-0040: two channel, 20 Hz to 40 kHz passband
- AUX-0100: eight channel, 20 Hz to 20 kHz passband
- Passive design for optimal performance
- Custom inductors designed for power handling and minimizing low-frequency distortion
- Flat response
- Small insertion loss
- Compatible with both balanced and unbalanced amplifiers and analyzers
- Filter-to-analyzer cables included
- Rack mount options available

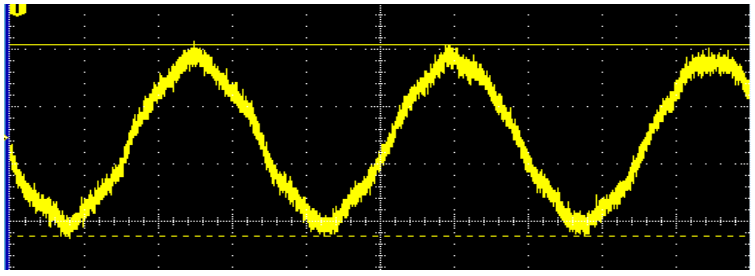
For many years Class A and Class AB linear amplifiers were the norm in almost every audio application. Though inefficient, Class A and Class AB amplifiers have excellent performance with no intrinsic out-of band signal components, and audio analyzers have been designed around these characteristics.

However, these amplifier types have been largely replaced in many applications by much more efficient switching amplifiers (Class D, for example) that modulate a high-frequency high-level signal which switches the output stage on and off; the modulation is typically pulse-width modulation. In most cases, the switching signal appears in the amplifier output at high levels. Unfiltered, such signals can overwhelm any audio analyzer input by dominating range-changing circuits and exceeding the slew-rate limits of the analyzer input amplifiers.





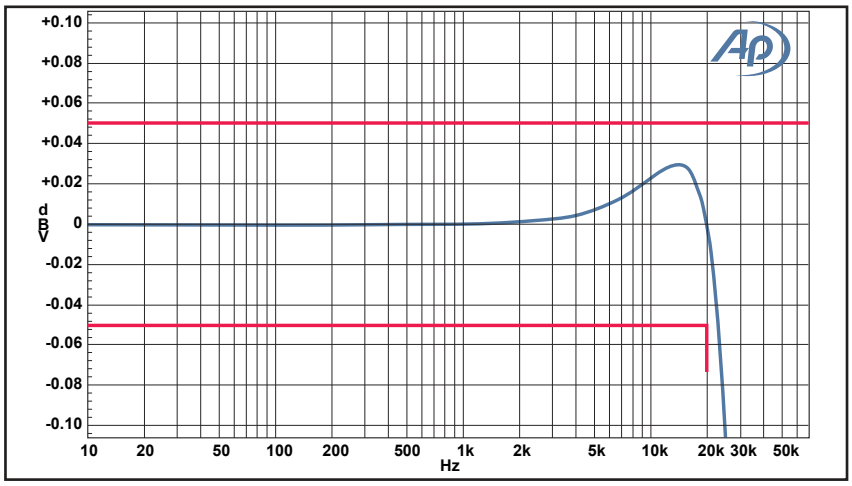
Switching amplifier output, unfiltered.



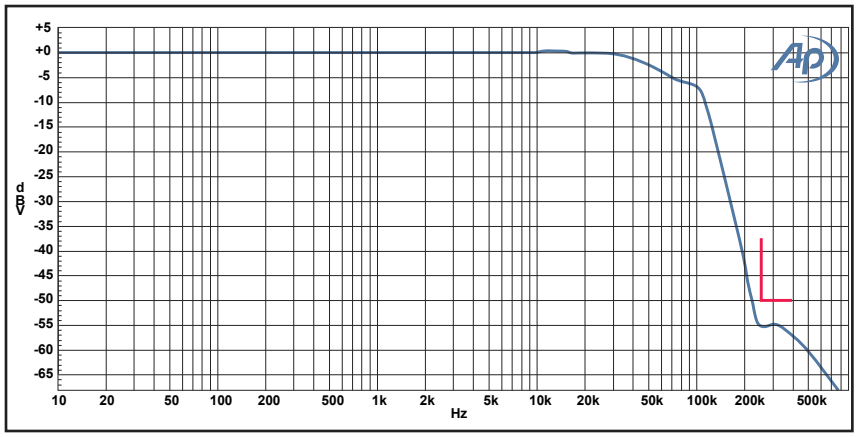
Switching amplifier output, filtered.

AUDIO PRECISION AUX-0025, AUX-0040 and AUX-0100 filters

The Audio Precision AUX-0025 / 0040 / 0100 passive switching amplifier measurement filters are designed to be inserted between the device under test and an analyzer input, to reduce out-of-band switching signal components before measurement.



AUX-0025 / AUX-0100 frequency response specified at ±0.05 dB 20 Hz to 20 kHz.



AUX-0025 / AUX-0100 high frequency rejection typically >50 dB, 250 kHz to 20 MHz.

KEY SPECIFICATIONS

Number of channels	2, AUX-0025 and AUX-0040 8, AUX-0100
AUX-0025 and AUX-0100:	
Frequency response	±0.05 dB, 20 Hz to 20 kHz. (AUX-0025 is dc coupled, AUX-0100 is ac coupled)
High-frequency rejection	Typically >50 dB, 250 kHz to 20 MHz
Maximum rated input	±200 Vpk [140 Vrms], dc to 7.5 kHz, decreasing to 75 Vpk [53 Vrms] from 20 kHz to 2 MHz
AUX-0040:	
Frequency response	±0.08 dB, 20 Hz to 40 kHz, dc coupled
High-frequency rejection	Typically >52 dB, 400 kHz to 20 MHz
Maximum rated input	±200 Vpk [140 Vrms], dc to 15 kHz, decreasing to 75 Vpk [53 Vrms] from 40 kHz to 2 MHz
General:	
Insertion loss	Typically –0.054 dB
THD+N (1 kHz)	–110 dB
DFD IMD	–100 dB
Interchannel crosstalk, AUX-0025 and AUX-0040	90 dB at 20 kHz
Interchannel crosstalk, AUX-0100	82 dB at 20 kHz

CABLES

for AUX-0025 or AUX-0040	2 short, low-capacitance XLR-F-to-XLR-M cables. Included with purchase of filter.
for AUX-0100	1 DB25 to DB25 cable 2' in length, to connect AUX-0100 to APx585 or APx586 analyzer. Included with purchase of filter.

OPTIONAL ACCESSORIES

RAK-212	Rack-mount shelf for AUX-0025 and AUX-0040
RAK-100	Rack-mount shelf for AUX-0100

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