



High speed high voltage amplifier

- -100V to +100V Output voltage
- DC to 5MHz @ -3dB large signal bandwidth
- 1300V/ μ s Slew rate
- Current: 300mA with current limit
- Stable with all capacitive loads, generates no overshoot
- Short-circuit protected output

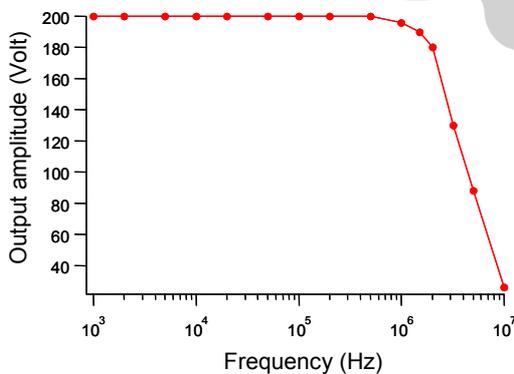


The Falco Systems WMA-320 is a high voltage, high-speed laboratory amplifier for demanding applications. Its wide bandwidth and large voltage range make it an excellent choice for use with MEMS devices, EO-modulators, piezo positioning systems, beam steering components, ultrasonics, and many more.

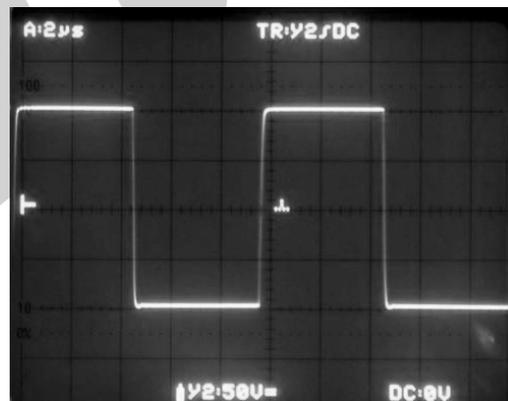
The full-power frequency response of the amplifier is essentially flat up to 2MHz. To ensure proper high frequency operation, the input has an impedance of 50 Ohms.

In other high-speed negative feedback amplifiers, instability under capacitive loading conditions is a common problem. This often results in unwanted overshoot voltages, and - in extreme cases - oscillations. In the WMA-320, this problem has been rigorously solved by a clever dual feedback system. No significant overshoot occurs at any capacitive load.

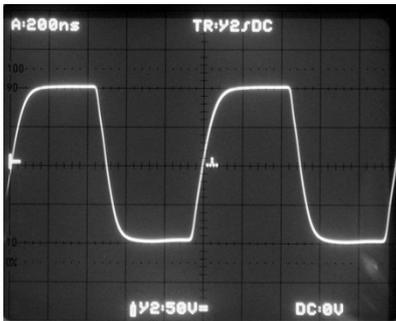
The amplifier can stand output overload and short-circuit conditions, due to the extremely fast output current limiting circuit that has been employed.



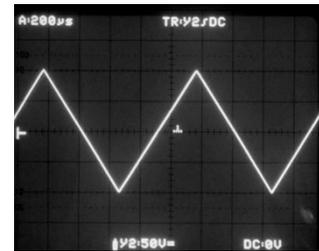
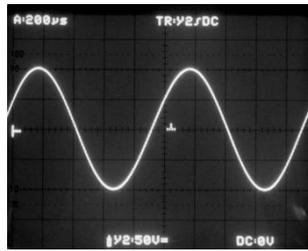
Frequency response at 200V_{pp}



100kHz ull power square wave output signal



Full power 1MHz square wave

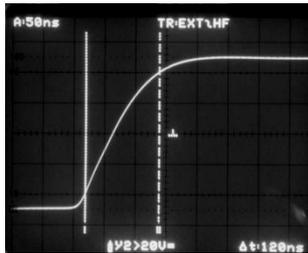


200Vpp sine and triangle waves

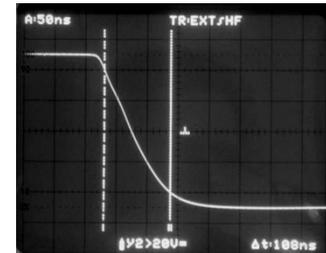
Technical specifications

- Amplification: 50x, fixed
- Output: -100V to +100V, 300mA typical with limiter
- Bandwidth: DC - 5MHz @ -3dB large signal bandwidth
- 12mV rms noise over the full bandwidth typical, 100mV offset typical
- Input impedance: 50Ω
- Output impedance: 50Ω
- Stability: stable with all capacitive and resistive loads, no overshoot > 5%
- Power: 230V 50Hz AC, 120W
- Dimensions: 280 x 280 x 160 mm
- Weight: 6.8kg
- Country of origin: The Netherlands

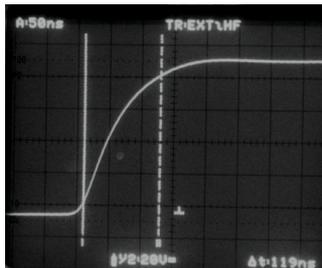
Specifications may be subject to change



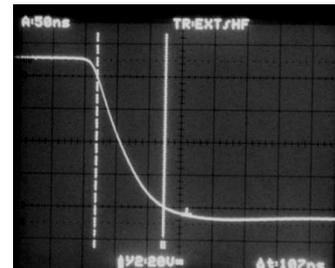
200V step up: 120ns



200V step down: 108ns



0V to 100V: 119ns



100V to 0V: 107ns



Falco Systems (established in 2006) is an innovative company that designs and manufactures technology leading high voltage amplifiers for company R&D departments, research institutes and universities worldwide. These amplifiers are used in e.g. precision engineering, electronics, physics, optics, chemistry, (aero-)space engineering and metrology and control.