

TREK 2100HF

High-frequency, high-speed, and high voltage power amplifier with an all-solid-state design for high slew rate and low-noise operation for high power applications.



The Trek® 2100 HF is a high-frequency, high-speed, wide bandwidth amplifier for high power applications. It incorporates an all-solid-state design for highly reliable low-noise operation, thus achieving accurate output response and high slew rates, even in highly capacitive loads. Full power frequency response of the amplifier is essentially flat up to 2 MHz. No overshoot or instability of the waveform occurs due to the amplifier's unique dual feedback feature.

PRODUCT HIGHLIGHTS

- Incorporates all-solid state design for highly reliable low noise operation
- Achieves accurate output rates and high slew rates even in highly capacitive loads
- Full power frequency response is essentially flat up to 2 MHz
- Dual feed-back feature ensures “no overshoot” or instability of waveform
- RoHS compliant
- NIST-traceable Certificate of Compliance provided with each unit shipped

TYPICAL APPLICATIONS

- Dielectric material characterization
- Electro-optic modulation
- Ion beam control
- MEMS
- Piezoelectric driving and control
- Ultrasonics

AT A GLANCE

Output Voltage Range

0 to ± 150 VDC or peak AC

Output Current Range

0 to ± 300 mADC

Slew Rate

2 kV/ μ s, typical

Large Signal Bandwidth (-3 dB)

DC to greater than 2.6 MHz

Small Signal Bandwidth (-3 dB)

DC to greater than 3 MHz

DC Voltage Gain

50 V/V

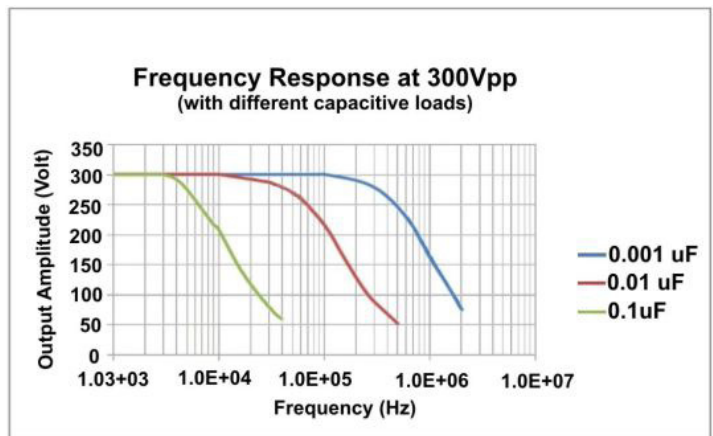
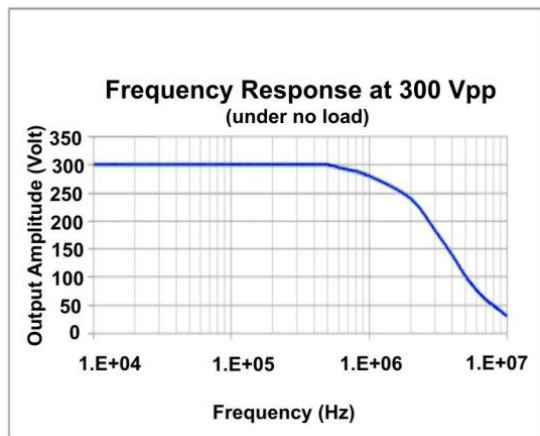
TECHNICAL DATA

Performance Specifications		
Output Voltage Range	0 to ±150 VDC or peak AC	
Output Current Range	0 to ±300 mA DC	
Input Voltage Range	0 to ±3 VDC or peak AC	
Input Impedance	50 kΩ, nominal	
DC Voltage Gain	50 V/V	
Offset Voltage	Less than ±100 mV	
Output Noise	Less than 50 mV p-p	
Slew Rate	Greater than 2000 V/μs (10 to 90%)	
Small Signal Bandwidth	DC to greater 3 MHz (-3dB)	
Large Signal Bandwidth	DC to greater than 2.6 MHz (-3dB)	
Stability	Delay Time: Less than 6 mV/minute, noncumulative	Drift with Temp: Less than 150 ns (input to output)

Mechanical Specifications	
Dimensions (H x W x D)	141 x 213 x 336 mm (5.57 x 8.38 x 13.22 in)
Weight	6.8 kg (15 lb)
HV Connector	BNC Connector

Electrical Specifications	
Input Power	90 to 127 VAC, at 48 to 63 Hz or 180 to 250 VAC, at 48 to 63 Hz

FREQUENCY RESPONSE



REFERENCE NUMBERS

Included Accessories

PN	Description
23435	Operator's Manual
47508	HV Output Cable (3 m)
Varies	Line Cord, Spare Fuses (selected per geographic destination)