

**Specifications**

**Sonoma Instrument® 310 Broadband Amplifier**

Bandwidth	9 kHz - 1 GHz	- 3 dB
Gain	32 ± 1.5 dB 40 V / V	at 100 MHz non-inverting, 50 Ω load
Gain Flatness	± 0.5 dB max.	25 kHz - 800 MHz
Noise Figure	1.8 dB typ. 2.5 dB max. 2.5 dB typ.	5 - 500 MHz 5 - 500 MHz at 1 GHz
Equivalent Input Noise Voltage *	0.55 nV / √ Hz 0.59 nV / √ Hz	5 - 500 MHz * Incl. 0.45 nV / √ Hz at 1 GHz from a 50 Ω source
Output at 1dB Gain Compression	+10 dBm	± 1 V, 20 kHz - 500 MHz
Maximum Input for Linear Operation	approx. ± 25 mV	- 22 dBm
Harmonic Distortion	- 39 dB typ.	0 dBm output, 200 MHz
Third Order Intercept Point	+ 23 dBm typ.	at 300 MHz
Impedance	50 Ω	a.c. coupled
Input Return Loss	8 dB	20 kHz - 1 GHz
Output Return Loss	10 dB	20 kHz - 1 GHz
Reverse Isolation	35 dB	20 kHz - 1 GHz
Transition Time	350 psec	
Group Delay Variation	± 75 psec	45 MHz - 1 GHz

Input Damage Level: - 22 dBm  
± 25 mV a.c.  
± 2 V d.c.

Connectors: Type N (f)

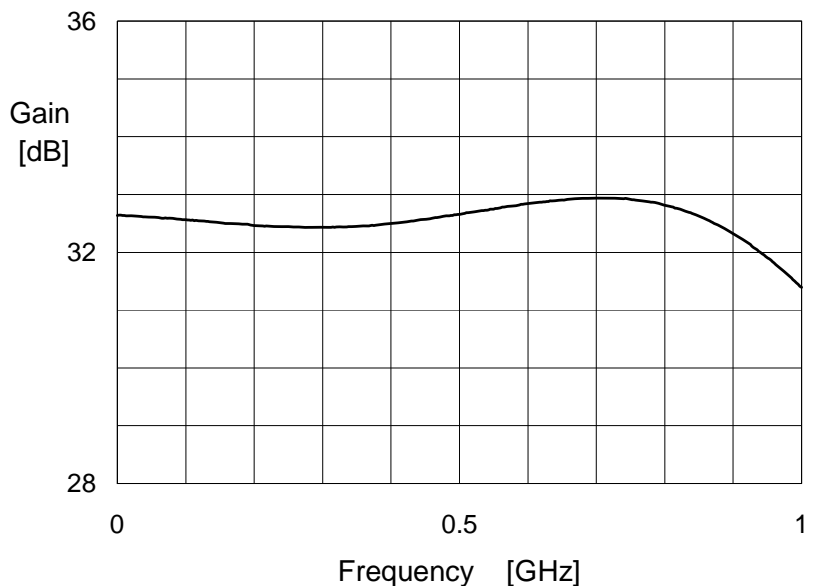
Temperature Range:  
Operating: 0 to + 55 °C  
Storage: - 25 to + 75 °C

Power Requirements:  
100, 120, 220, or 240V a.c.  
50 - 60 Hz, 20 VA

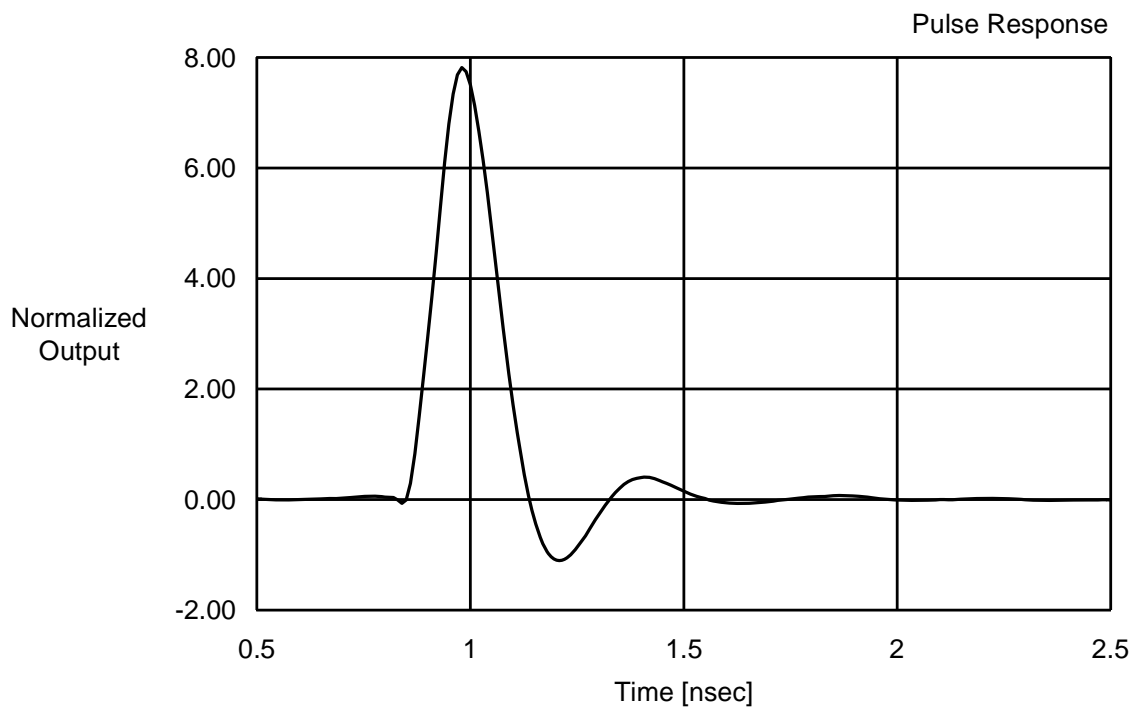
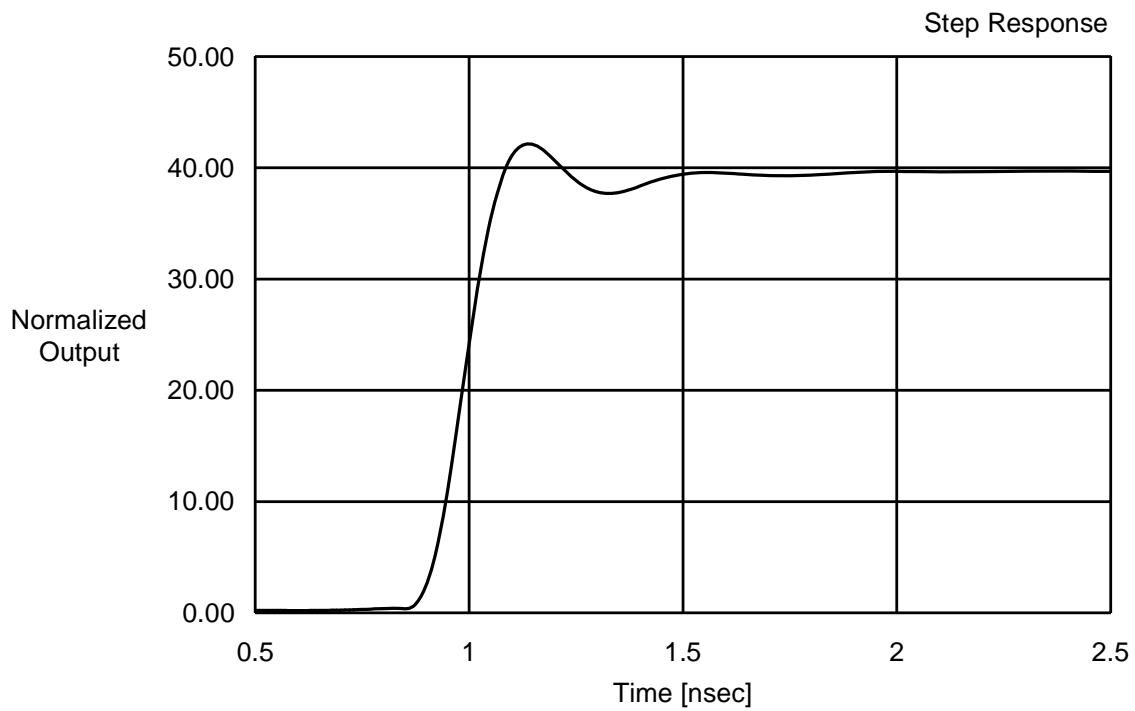
Size: 3.6 × 4.3 × 7.2" (H × W × D)  
91 × 109 × 183 mm

Net Weight: 3.3 lb / 1.5 kg

**Frequency Response (Typical)**



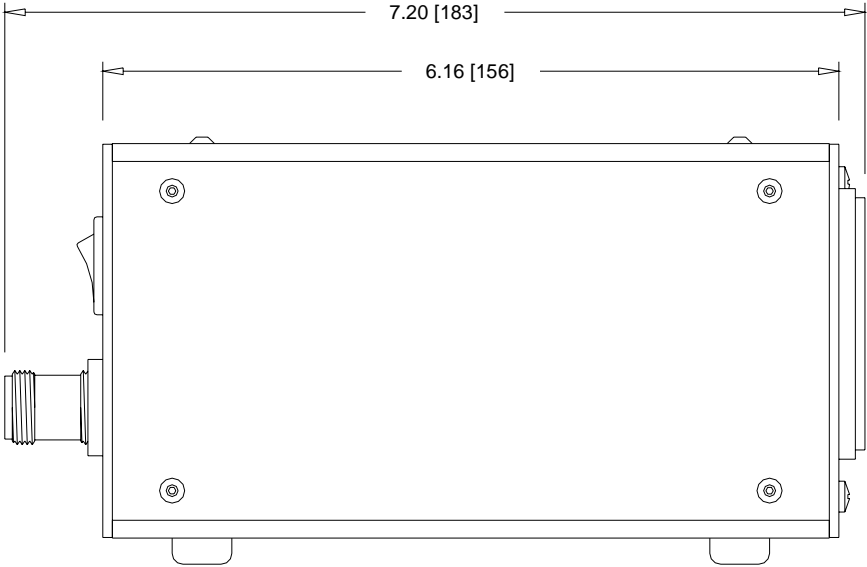
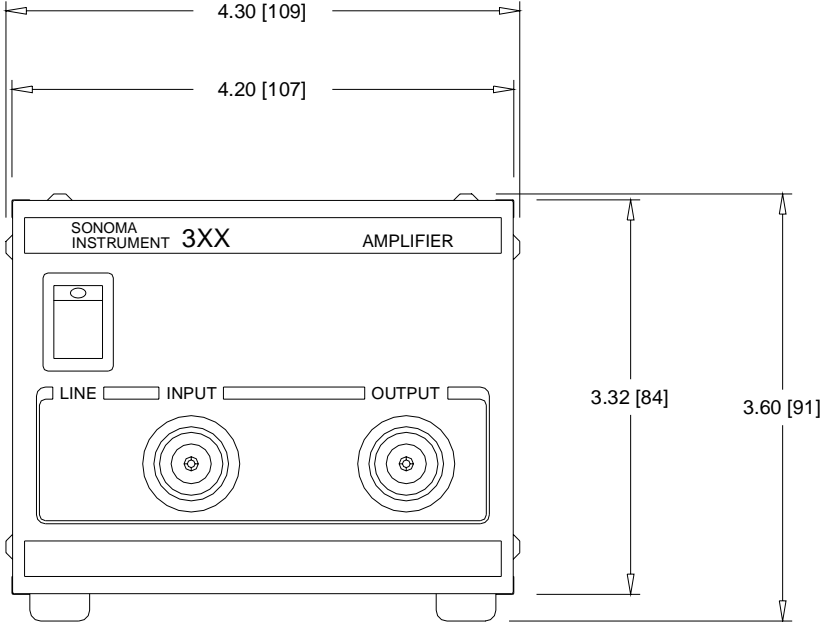
DATA SUBJECT TO CHANGE



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Outline Drawing

inch [mm]



DATA SUBJECT TO CHANGE

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