

# Specifications

# Sonoma Instrument® 315 Broadband Amplifier

Bandwidth	10 kHz - 1 GHz	- 3 dB
Gain	51 ± 1.5 dB 355 V / V	at 100 MHz inverting, 50 Ω load
Gain Flatness	± 0.5 dB max.	500 kHz - 800 MHz
Noise Figure	1.8 dB typ. 2.5 dB max. 2.5 dB typ.	10 - 500 MHz 10 - 500 MHz at 1 GHz
Equivalent Input Noise Voltage *	0.55 nV / √ Hz 0.59 nV / √ Hz	10 - 500 MHz * Incl. 0.45 nV / √ Hz at 1 GHz from a 50 Ω source
Output at 1dB Gain Compression	+15 dBm	3.5 Vp-p, 100 kHz - 1 GHz
Maximum Input for Linear Operation	-36 dBm	approx. ± 5 mV
Harmonic Distortion	- 55 dB typ.	0 dBm output, 200 MHz
Third Order Intercept Point	+ 28 dBm typ.	at 300 MHz
Impedance	50 Ω	a.c. coupled
Input Return Loss	7 dB	300 kHz - 1 GHz
Output Return Loss	7 dB	300 kHz - 1 GHz
Reverse Isolation	50 dB	20 kHz - 1 GHz
Transition Time	350 psec	
Group Delay Variation	200 psec	10 MHz - 1 GHz

Input Damage Level: -36 dBm  
± 5 mV

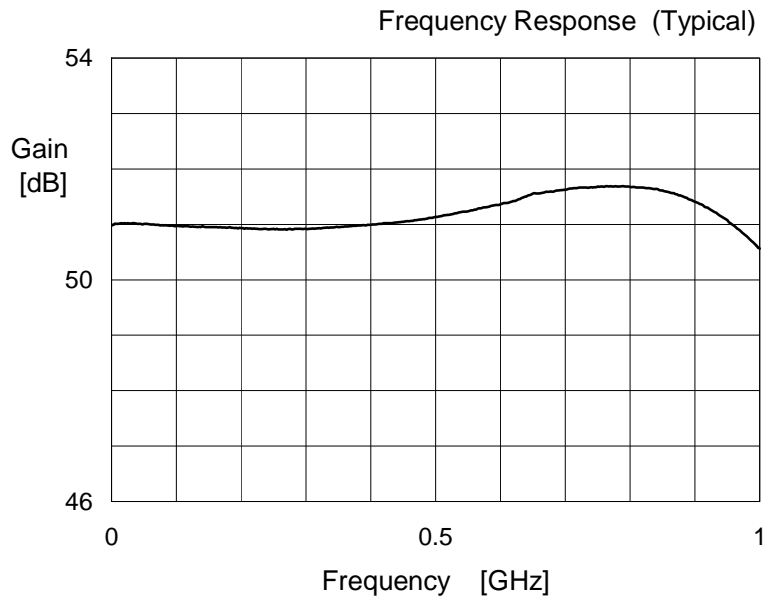
Connectors: Type N (f)

Temperature Range:  
Operating: 0 to + 50 °C  
Storage: - 25 to + 75 °C

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

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

Net Weight: 3.3 lb / 1.5 kg



DATA SUBJECT TO CHANGE

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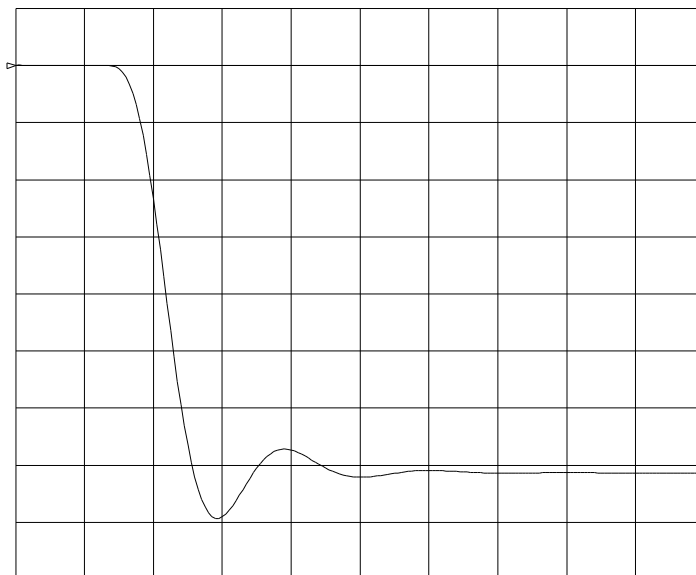


**Ihr Ansprechpartner /  
Your Partner:**

**dataTec AG**  
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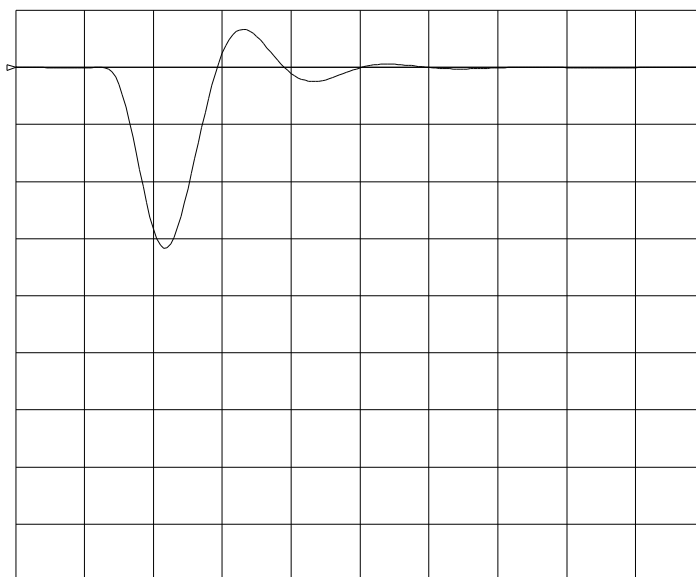
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315 Amplifier  
Time Domain



Horizontal: 500 ps / div  
Vertical: 50 units / div

Step Response



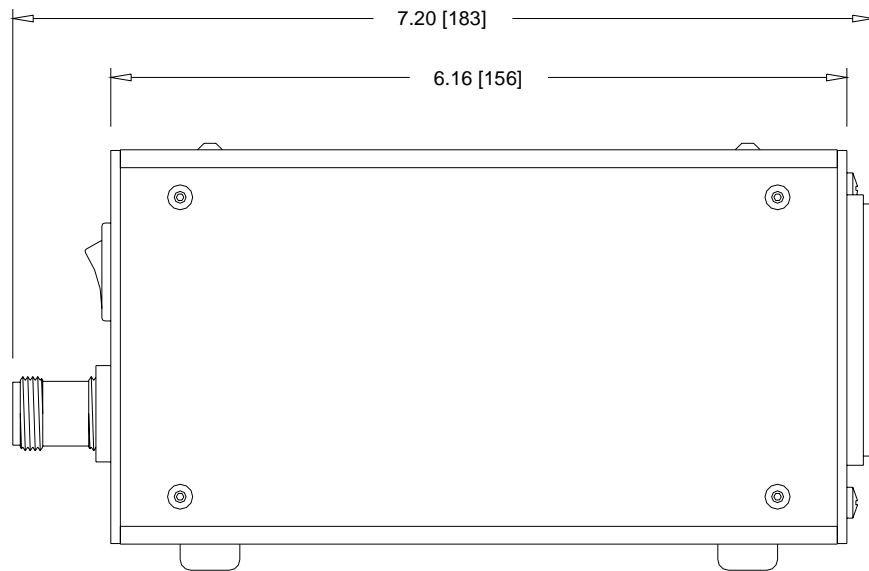
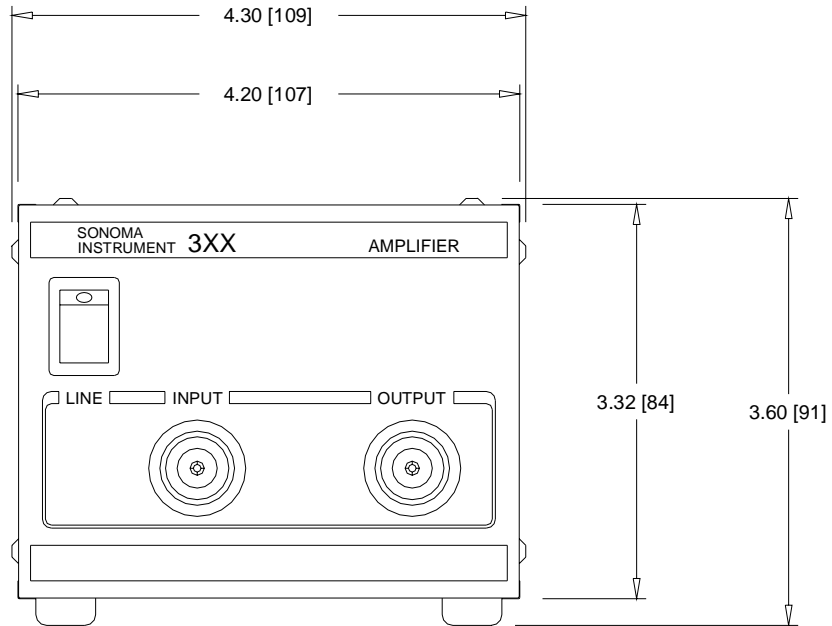
Horizontal: 500 ps / div  
Vertical: 50 units / div

Pulse Response

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# Outline Drawing

inch [mm]



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