SLA-1000 High-dynamic range low-noise preamplifier

Features

- Wide instantaneous bandwidth
- High dynamic range
- Low-noise
- High intercept

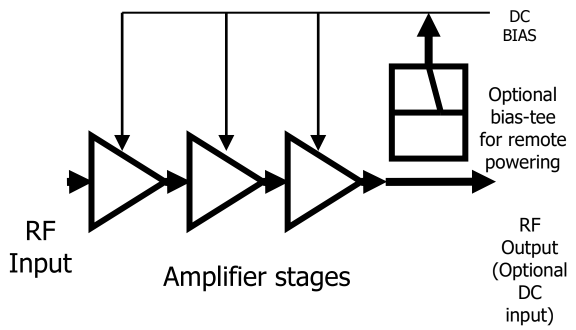
Typical applications

- Wideband signal intelligence systems
- Improving existing receiving systems
- Receiver preamplifier
- Masthead preamplifier
- Laboratory measurement setups

Product description

This low-noise pre-amplifier deliver exceptionally high dynamic range in the receiving and measurements systems. The low noise-figure is coupled with extremely high intermodulation level to reach this goal. The high dynamic range enables to use as a wideband amplifier in a reconnaissance system without overload the input. In this way up to 6-8 dB sensitivity improvement could be reach in the system.

The high-gain version could be used to improve the sensitivity of a spectrum analyzer in the laboratory environment, where signal load can be controlled. The high gain and low noise figure makes it useable to set up a noise figure measurement with ordinary spectrum analyzer.



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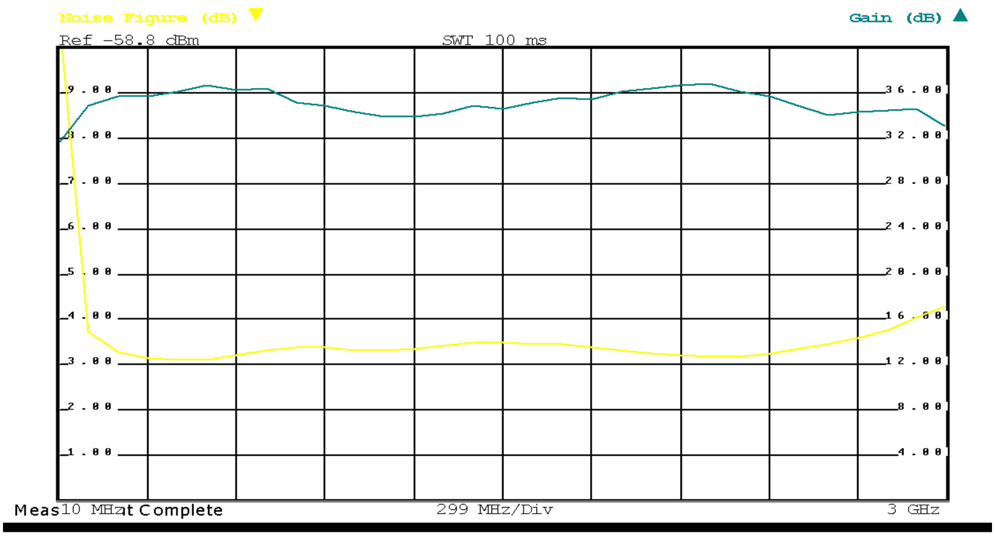
Functional block diagram

Direct		NOISE & GAIN			CALIBRATED
RBW:	1 MHz	RF Atten.	0 dB	2nd Stage Corr.	On
Average:	8	Auto Ref Level	On	Image Rejection	...
		Current Value			
RF:	210 MHz	ENR	15.4 dB	NF.	3.27 dB
LO:	...	Loss In	0 dB	Noise Temp.	326.03 K
IF:	...	Loss Out	0 dB	Gain	35.79 dB



PQRR

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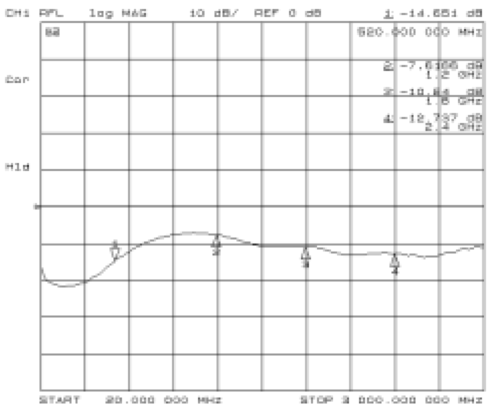
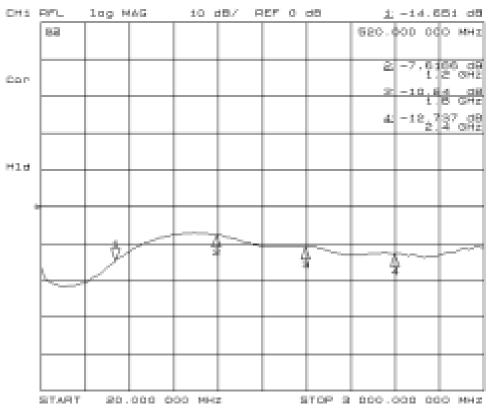
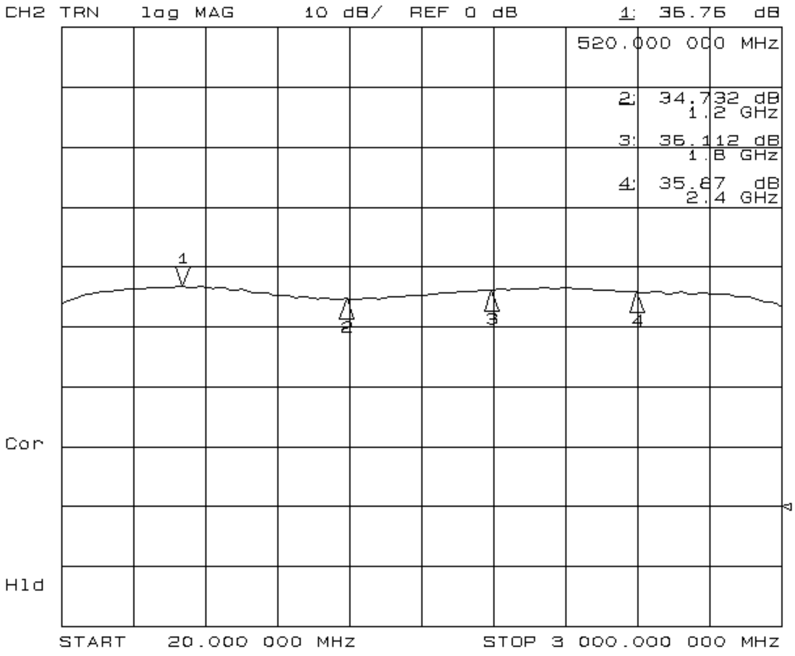


Input return loss

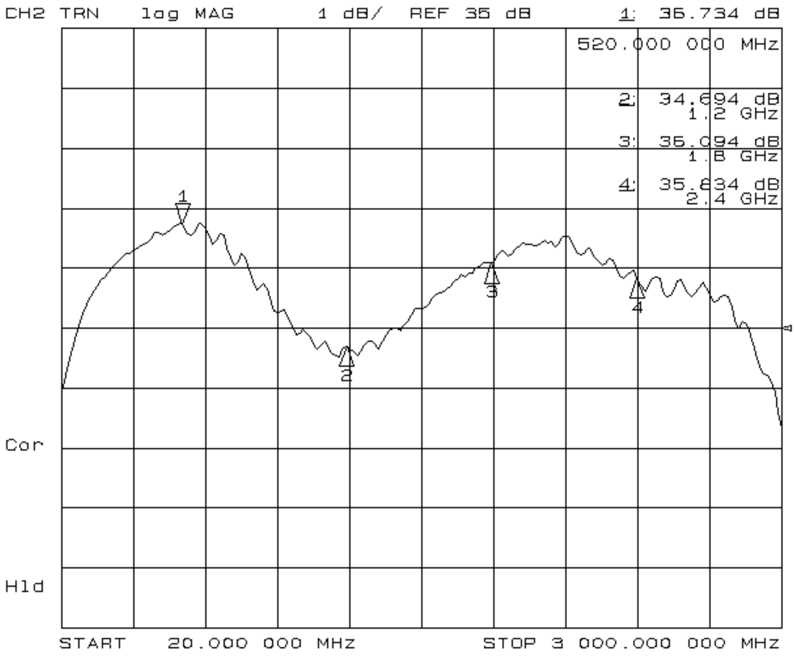


Output return loss

Typical performance



Gain 10dB/



Gain 1dB/

Specification summary

Signal routing data	
Frequency range	20 to 3000 MHz
Gain	
Gain flatness	+/-1 dB typ.
Noise figure	3.2 dB typ.
Output IP3	42 dBm typ.
Output IP2	62 dBm typ.
DC voltage	12V
DC current	190/380/570 mA typ.
Connectors:	
RF	
RF+DC	
Dimensions	
(L×W×H)	90X60X32 mm
Weight	220 gr
Operating temp.	-20 to +55°C