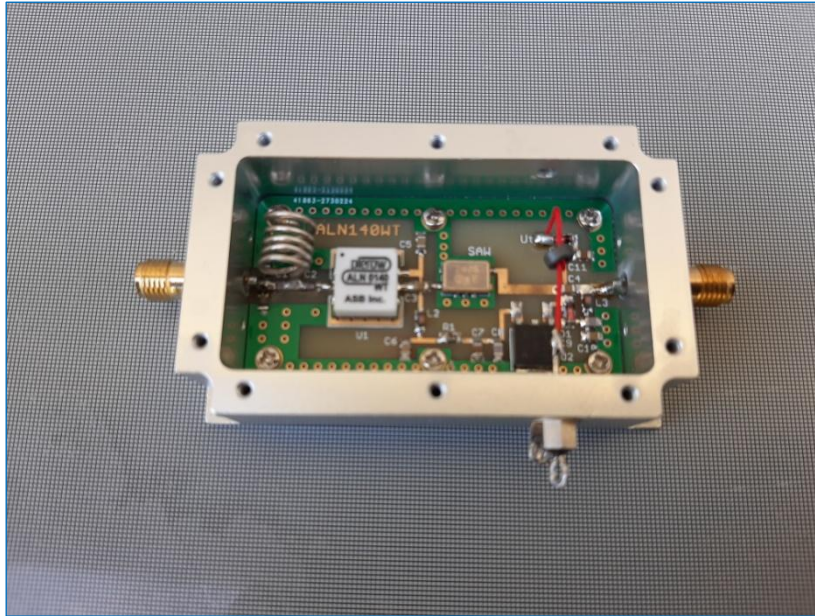


Mechanics & Electronics Inc.

Tropo Preamplifiers

ALN-2 2m tropo Preamplifier



Introduction

The ALN-2 2 m Preamplifier is a high-dynamics, selective, and low-noise preamplifier for 144–148 MHz, built using the ASB ALN0140WT amplifier module.

We offer it for tropo and terrestrial operation. The built-in SAW filter provides a clean signal and good selectivity. The preamplifier is built into a stable ALU box furnished with SMA female connectors. The small dimensions are optimal for use near your antennas in a separate box.

Technical data	ALN-2
Frequency range:	144-148MHz
Noise figure @ 22°C	Typ < 0.6dB
Noise figure @ -18C	Typ < 0.3dB
Gain S21, typ.:	>+22 dB
Input return loss	>+9 dB
Output return loss	>23 dB
OIP3:	>+32.3dBm
IIP3:	>+ 10dBm
Device:	ASB ALN0140WT
Max. Input level:	22dBm
Operating voltage:	+10...+15V
Power consumption:	70mA
Dimensions:	85x50x20mm (w.conn)
Weight:	75g

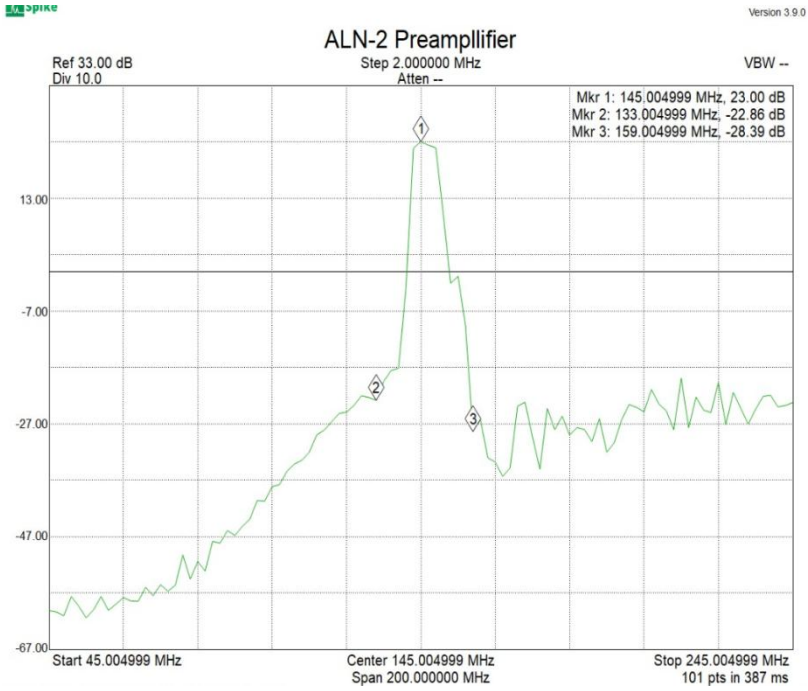
RF connectors:	2x SMA female
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ALN-2 Noise Figure measurements

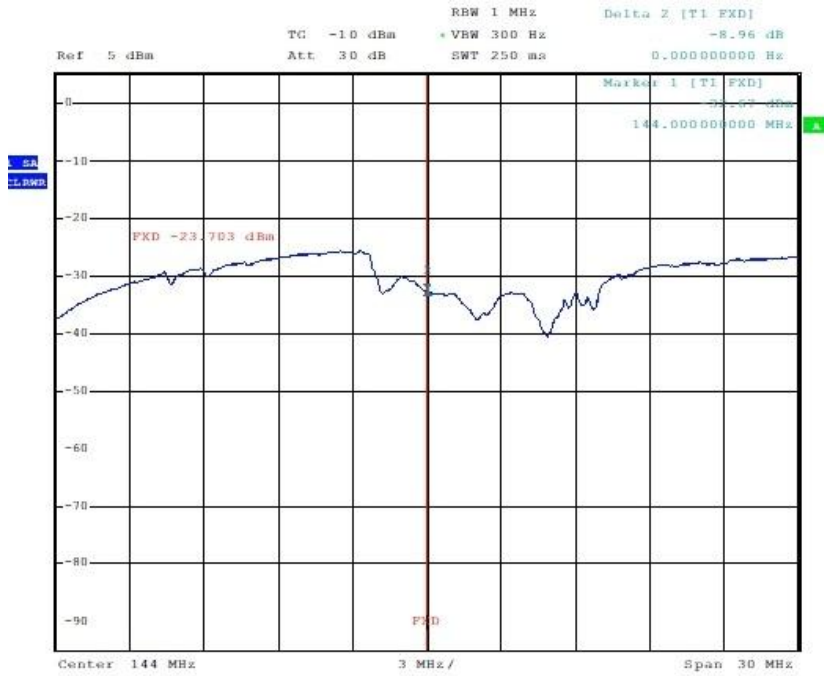
NOISE & GAIN				
Direct				CALIBRATED
RBW:	1 MHz	RF Atten:	0 dB	2nd Stage Corr. On
Average:	1	Auto Ref Level	On	Image Rejection ...
Current Value				
RF:	145.9 MHz	ENR	6.4 dB	NF: 0.63 dB
LO:	...	Loss In	0 dB	Noise Temp. 45.53 K
IF:	...	Loss Out	0 dB	Gain 23.17 dB

Frequency List Results				
RF	NF	Noise Temp	Gain	
144.00 MHz	0.59 dB	42.58 K	22.90 dB	
144.10 MHz	0.63 dB	45.01 K	23.01 dB	
144.20 MHz	0.65 dB	46.59 K	22.83 dB	
144.30 MHz	0.59 dB	42.55 K	23.00 dB	
144.40 MHz	0.60 dB	43.21 K	23.23 dB	
144.50 MHz	0.61 dB	43.60 K	23.33 dB	
144.60 MHz	0.61 dB	43.48 K	23.11 dB	
144.70 MHz	0.62 dB	44.86 K	22.99 dB	
144.80 MHz	0.57 dB	40.84 K	23.15 dB	
144.90 MHz	0.62 dB	44.34 K	23.10 dB	
145.00 MHz	0.62 dB	44.82 K	23.03 dB	
145.10 MHz	0.58 dB	41.11 K	23.38 dB	
145.20 MHz	0.60 dB	42.66 K	23.10 dB	
145.30 MHz	0.61 dB	44.03 K	23.38 dB	

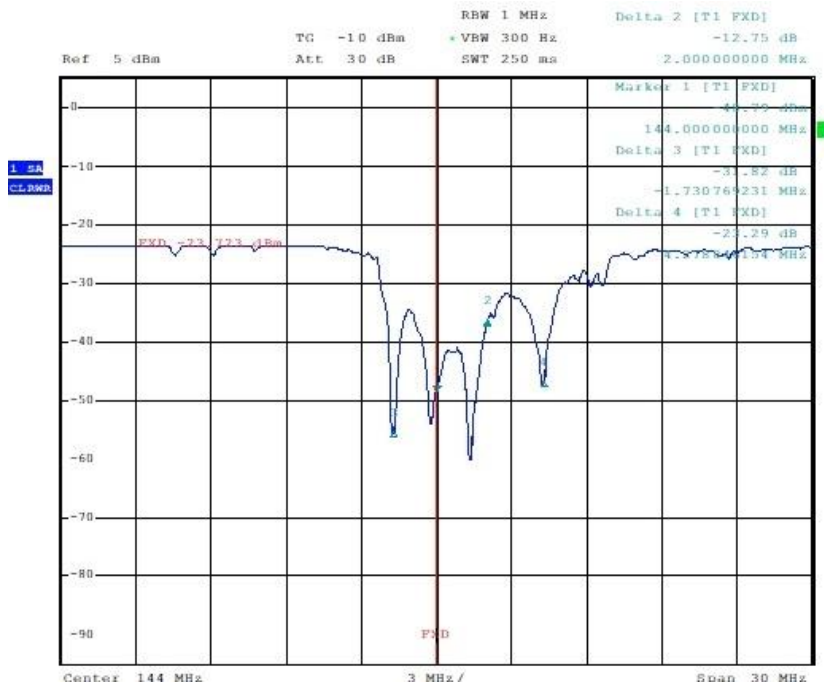
ALN-2 NF measurements



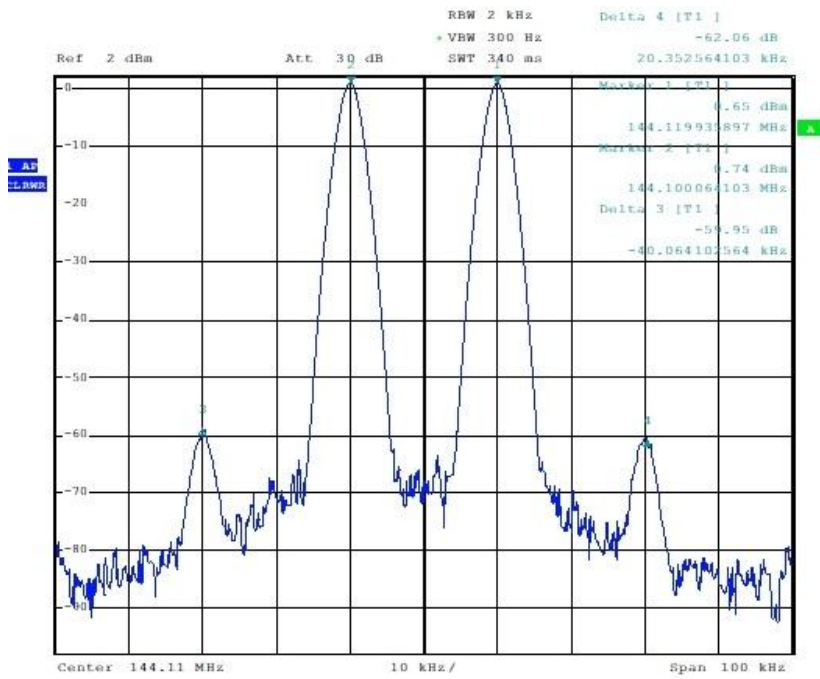
ALN-2 200MHz BW



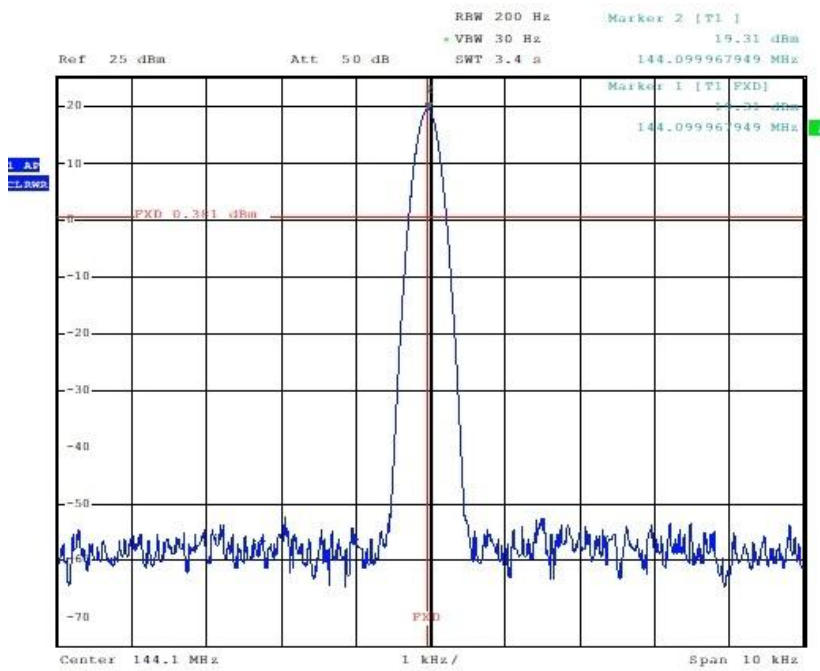
Input Return Loss



Output Return Loss.



OIP3 +32.4dBm



1dB Compression Point.

