Mechanics & Electronics Inc.

Tropo Preamplifiers

ALN-70 70cm tropo Preamplifier

ALN-70 Preapmp. inside photo.

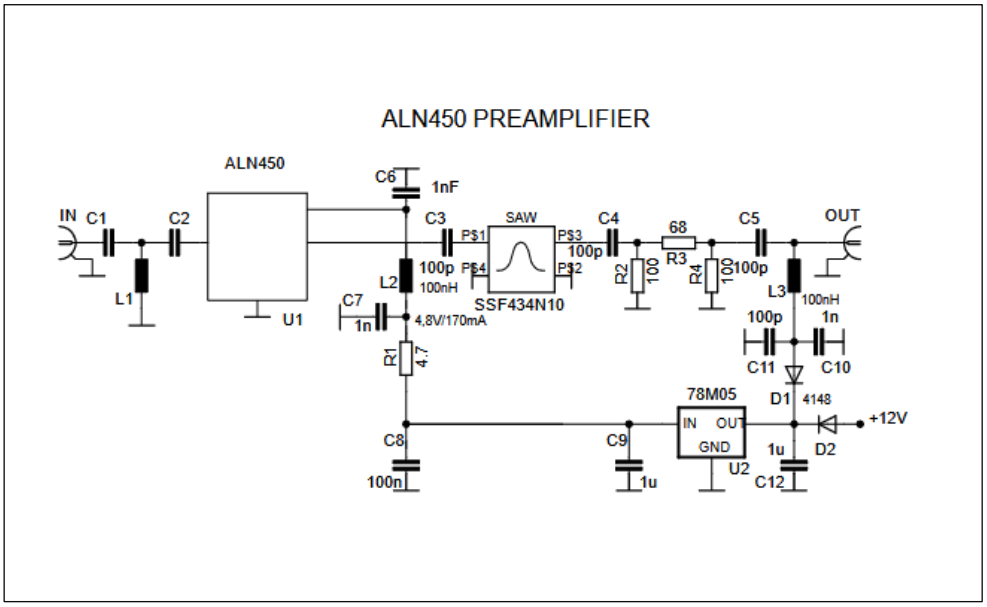
Introduction

The ALN-70 70cm Preamplifier a high dynamics, selective and low-noise preamplifier for 430-440MHz, built by ASB ALN450 amplifier module.

We offer it for tropo and terrestrial operation. The built in SAW filter gives clean signal and selectivity.

The preampllifier built in a stable ALU box furnised with SMA female connectors. The small dimension is optimal to use it near of your antennas in separate box.

Technical data	**ALN-70**
Frequency range:	430-440MHz
Noise figure @ 22°C	Typ < 0.5dB
Noise figure @ -18C	Typ < 0.3dB
Gain S21, typ.:	> +25dB
Input return loss (S22)	> +18.5dB
Output return loss(S11)	> +20 dB
OIP3:	> +25 dBm
IIP3:	typ. + 0dBm
Device:	ASB ALN450
Max. Input level:	22dBm
Operating voltage:	+10…+15V
Power consumption:	170mA
Dimensions:	85x50x20mm (w.conn)
Weight:	75g
RF connectors:	2x SMA female



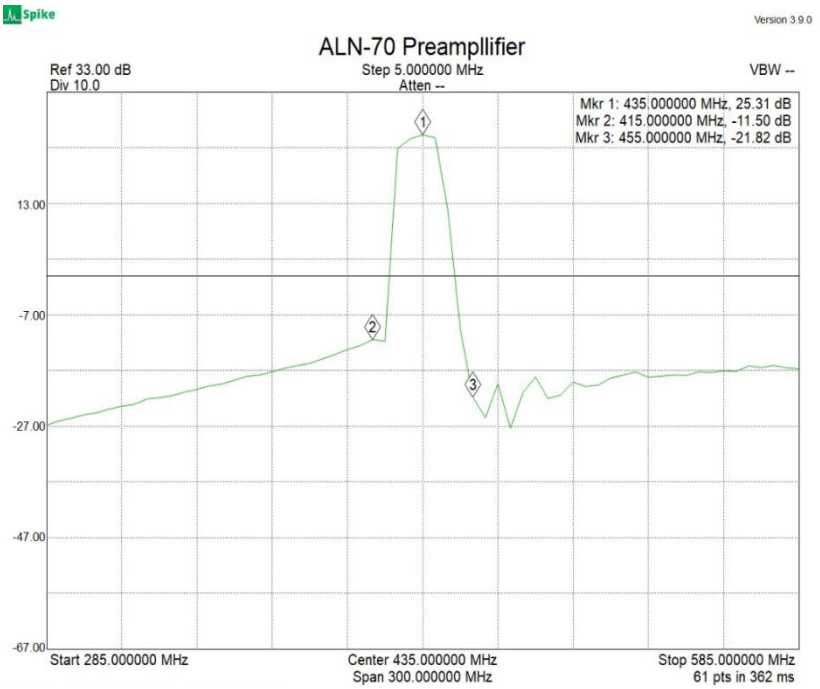
ALN-70 Preapmp.

Direct		NOISE & GAIN			CALIBRATED
RBW:	1 MHz	RF Atten.	0 dB	2nd Stage Corr.	On
Average:	1	Auto Ref Level	On	Image Rejection	...
		Current Value			
RF:	437 MHz	ENR	6.2 dB	NF.	0.23 dB
LO:	...	Loss In	0 dB	Noise Temp.	15.66 K
IF:	...	Loss Out	0 dB	Gain	25.11 dB

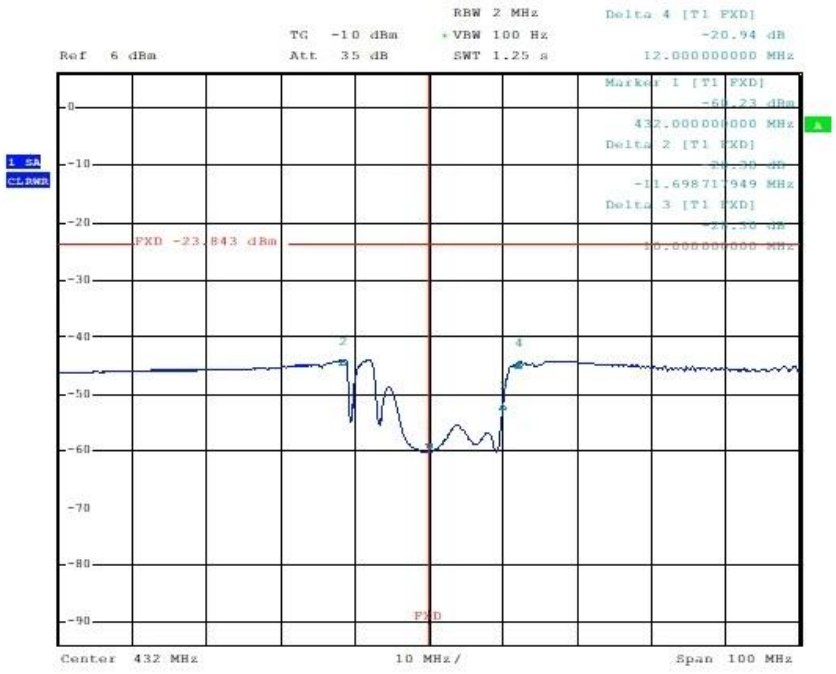
Frequency List Results

RF	NF	Noise Temp	Gain
430.00 MHz	0.26 dB	18.08 K	25.15 dB
431.00 MHz	0.23 dB	15.71 K	25.65 dB
432.00 MHz	0.25 dB	16.87 K	25.84 dB
433.00 MHz	0.25 dB	17.16 K	25.59 dB
434.00 MHz	0.24 dB	16.33 K	25.94 dB
435.00 MHz	0.21 dB	14.43 K	25.76 dB
436.00 MHz	0.25 dB	17.50 K	25.29 dB
437.00 MHz	0.23 dB	15.66 K	25.11 dB
438.00 MHz	0.26 dB	18.24 K	25.00 dB
439.00 MHz	0.22 dB	15.04 K	25.06 dB
440.00 MHz	0.22 dB	15.23 K	25.24 dB

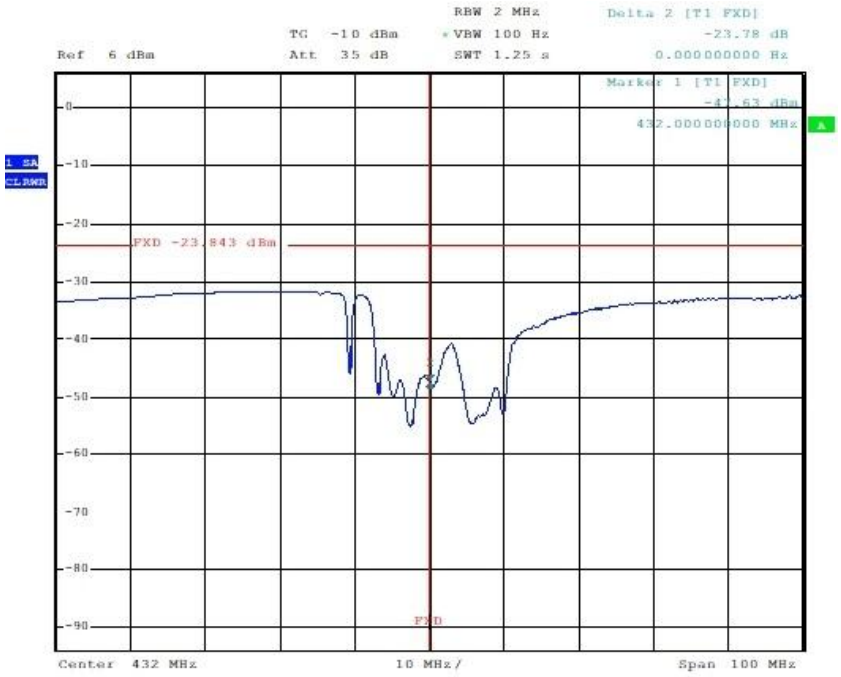
NF Measurement @ 22°C



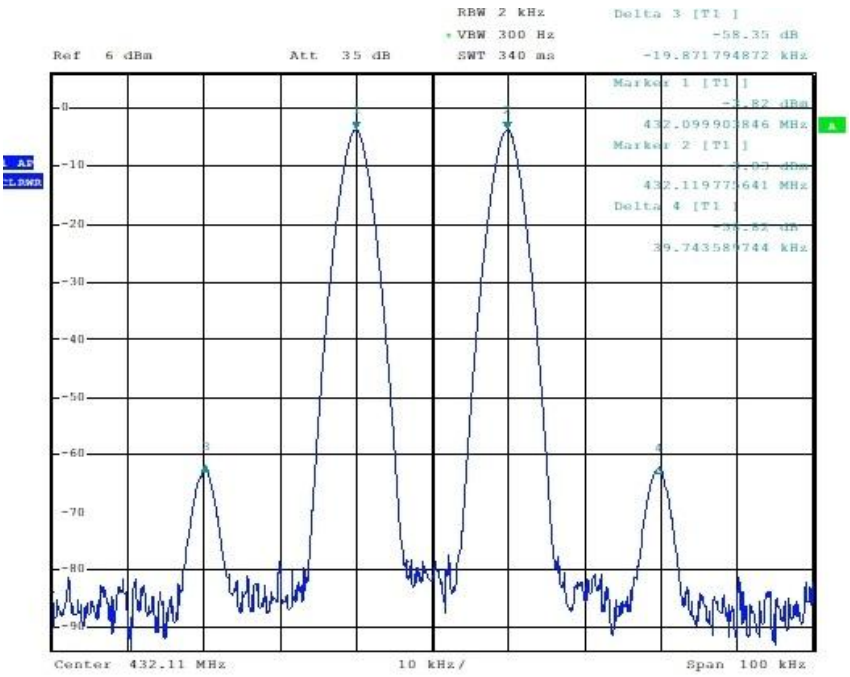
300MHz BW



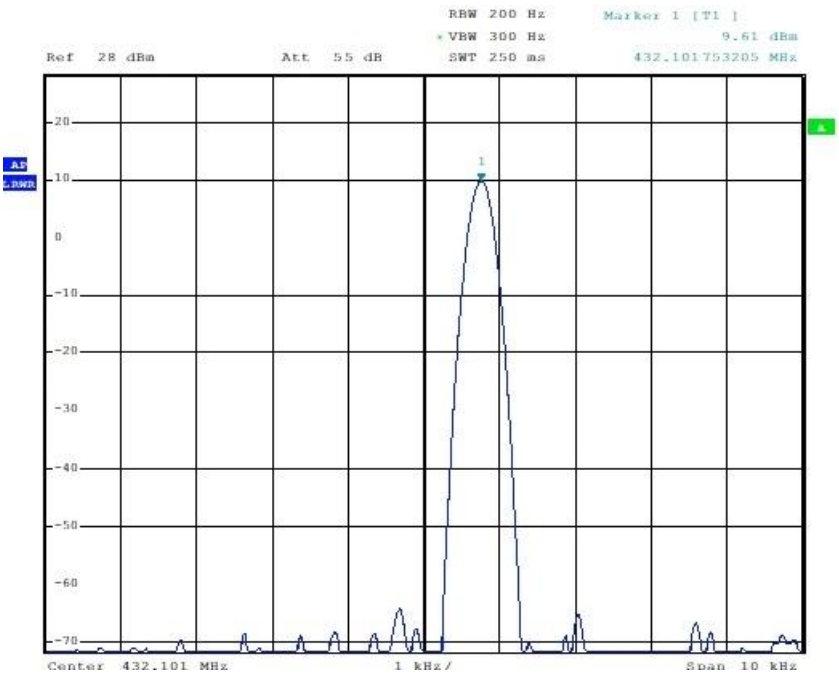
Input Return Loss



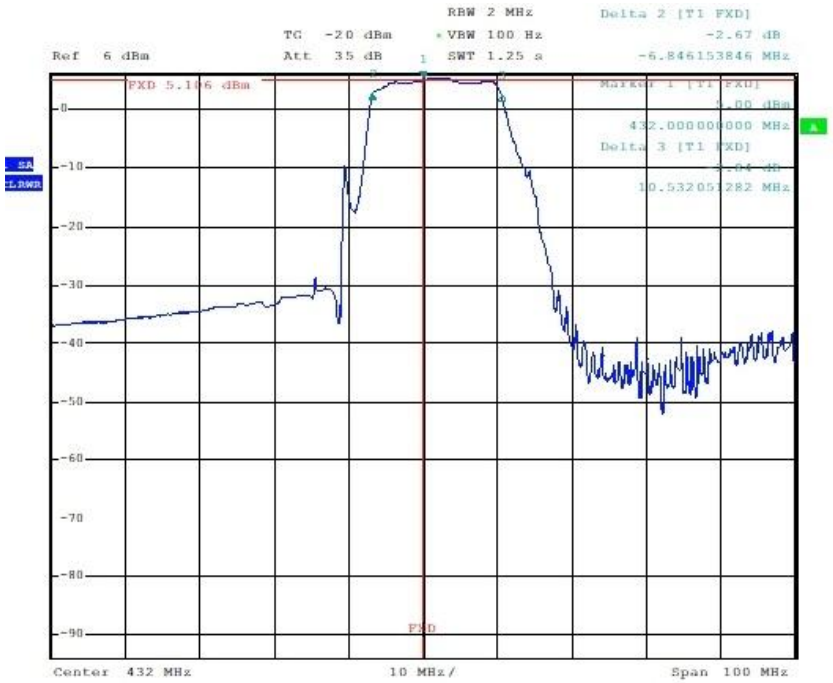
Output Return Loss



OIP3 +26dBm



1dB Compression Point



BW /3Db

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