

Mechanics & Electronics Inc.

Tropo Preamplifiers

ALN-70 70cm tropo Preamplifier



ALN-70 Preamp. inside photo.

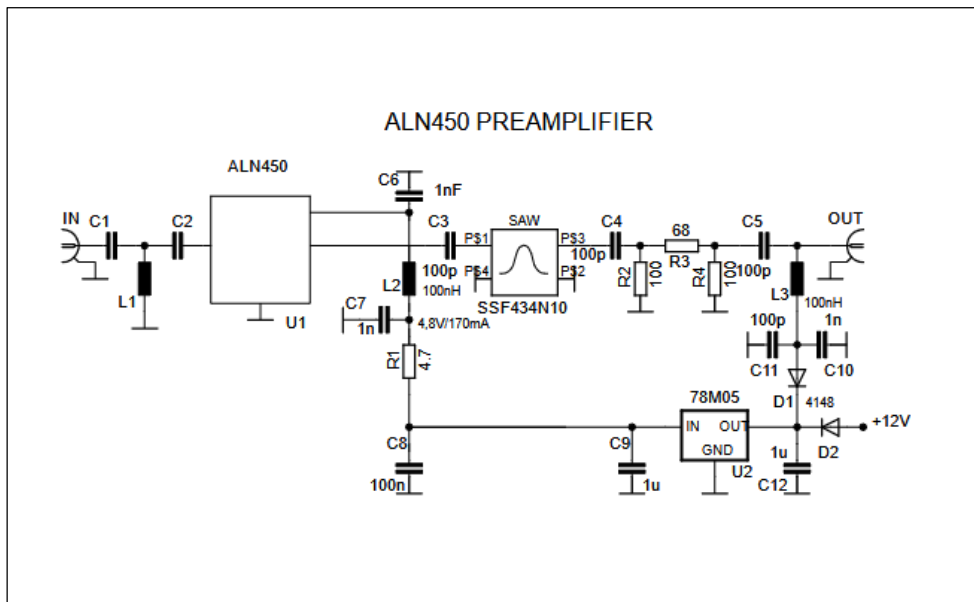
Introduction

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 preamplifier built in a stable ALU box furnished 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

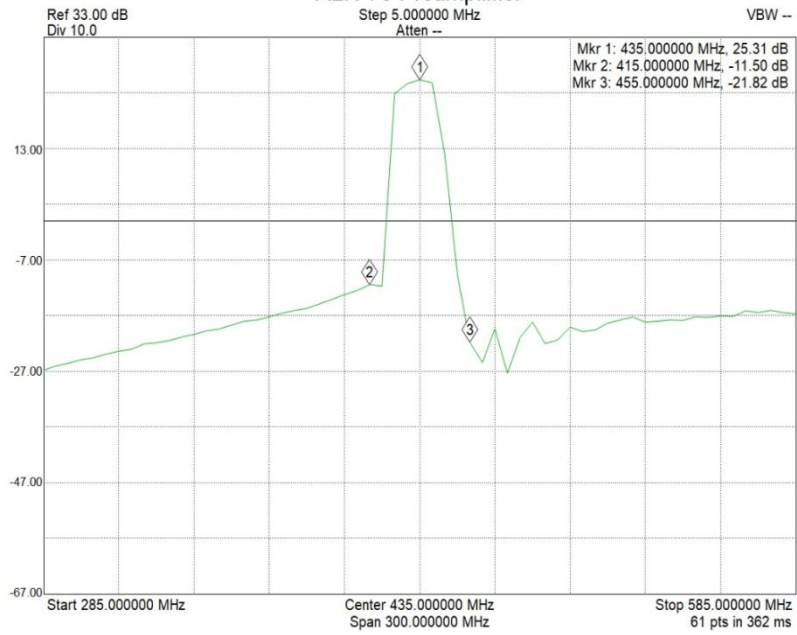


ALN-70 Preamp.

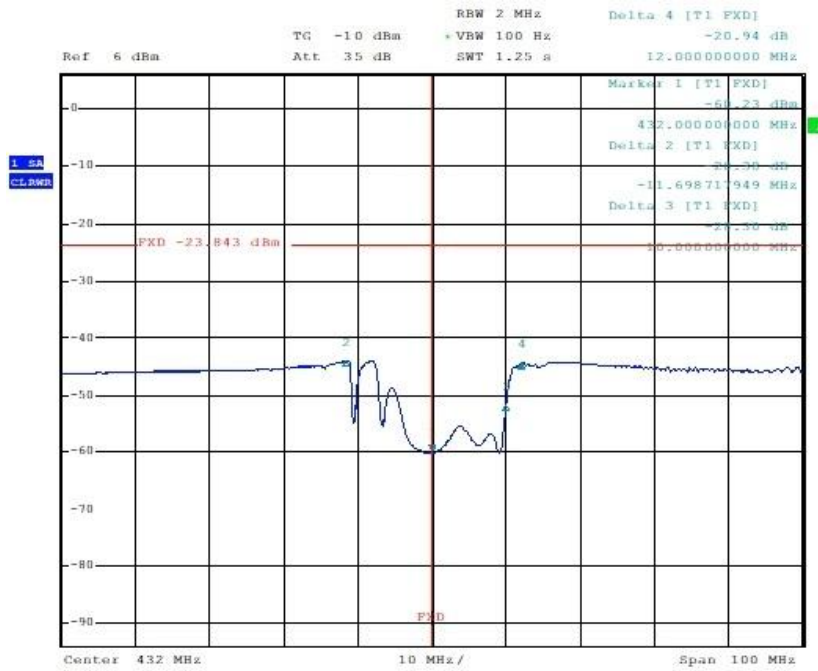
NOISE & GAIN					CALIBRATED	
Direct	RBW:	1 MHz	RF Atten.:	0 dB	2nd Stage Corr.:	On
	Average:	1	Auto Ref Level:	On	Image Rejection:	...
Current Value						
	RF:	437 MHz	ENR:	6.2 dB	NF:	0.23 dB
	LO:	...	Loss In:	0 dB	Noise Temp.:	15.66 K
	IF:	...	Loss Out:	0 dB	Gain:	25.11 dB
Frequency List Results			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

ALN-70 Preamplifier



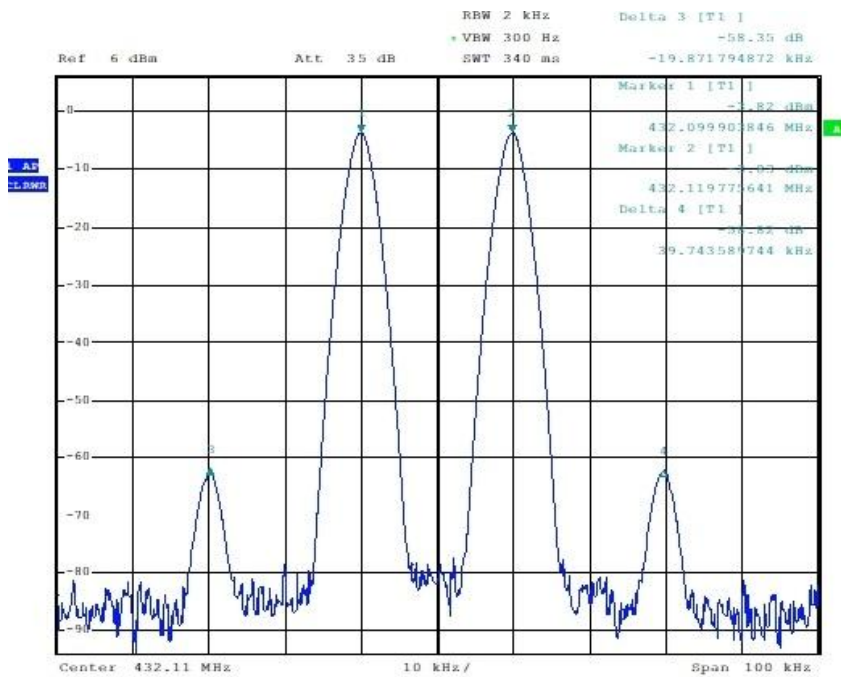
300MHz BW



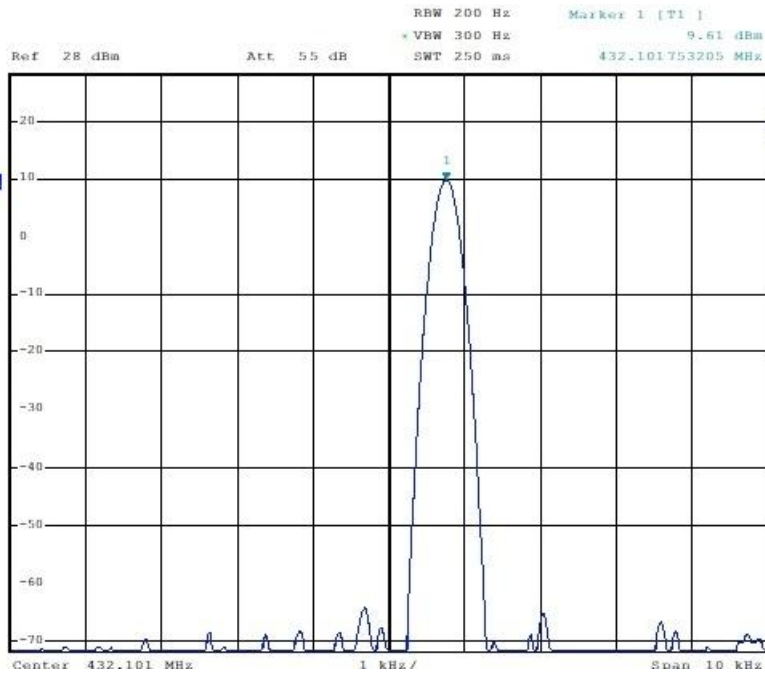
Input Return Loss



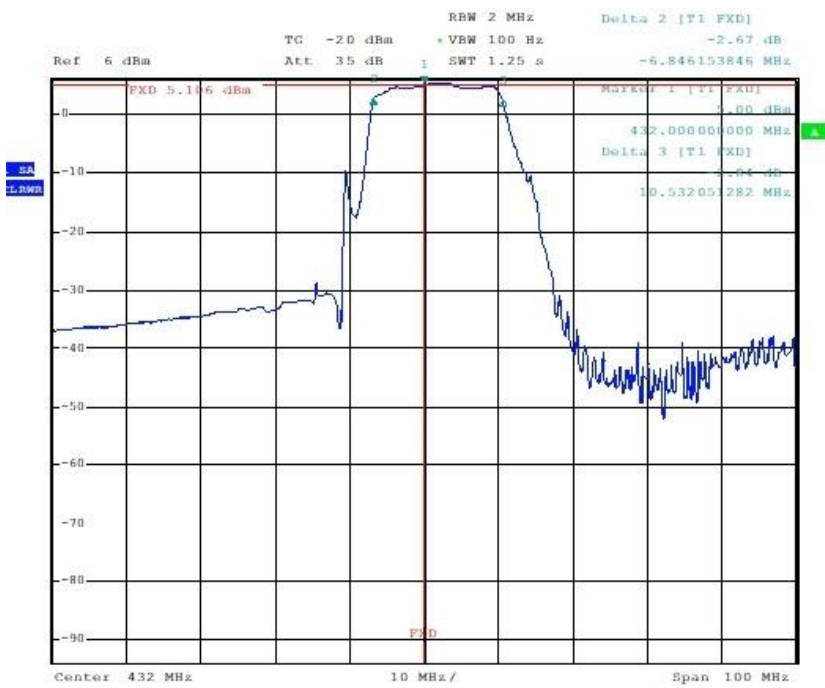
Output Return Loss



OIP3 +26dBm



1dB Compression Point



BW /3dB