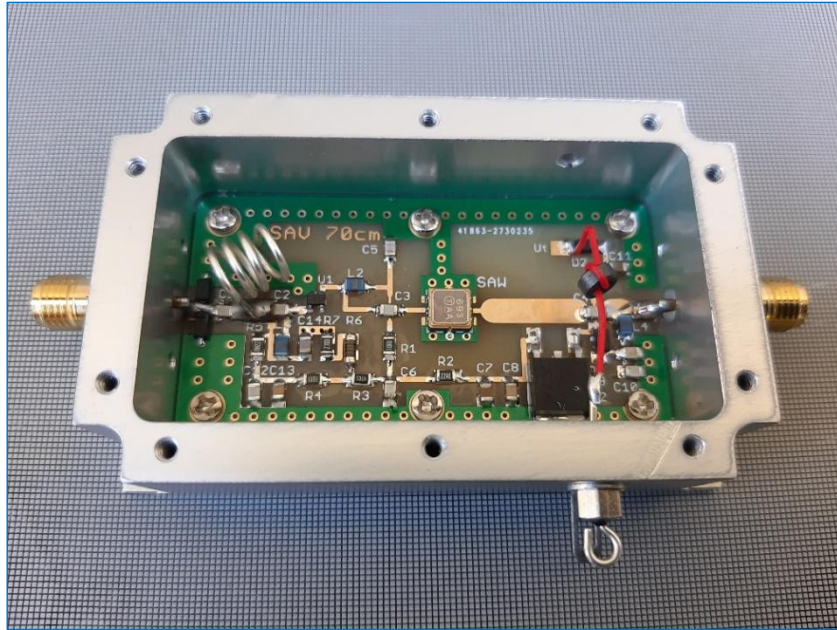


Mechanics & Electronics Inc.

EME Preamplifiers

ME-70 70cm EME Preamplifier



Introduction

The ME-70 70 cm EME Preamplifier is a high-dynamics, selective, and very low-noise preamplifier for 432 MHz.

We offer it for EME 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.

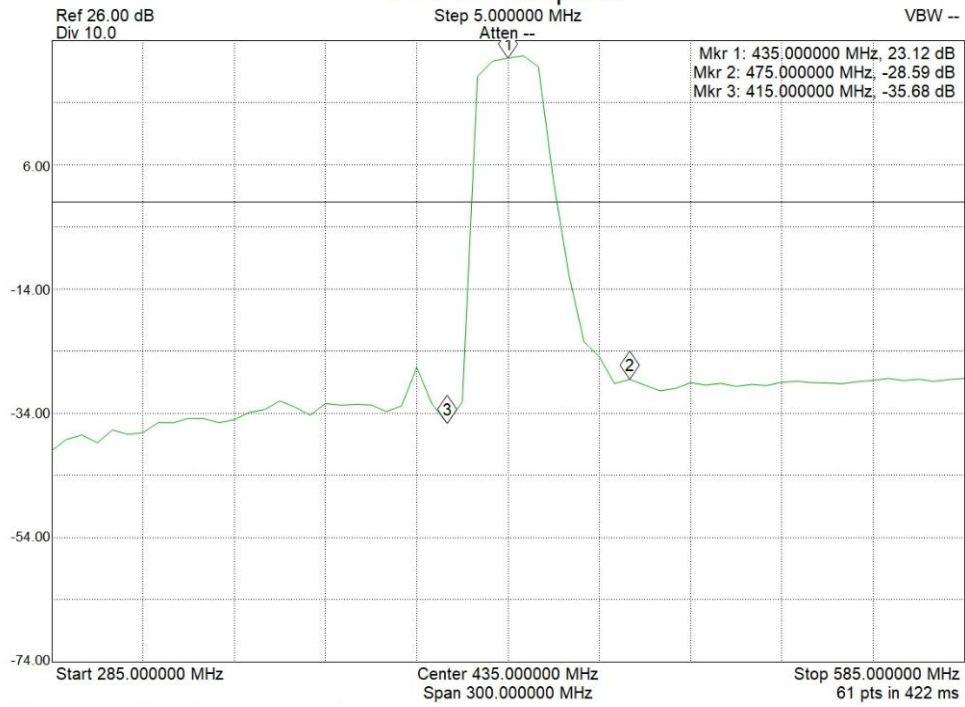
Technical data	ME-70
Frequency range:	430-440MHz
Noise figure @ 22°C	Typ < 0.18 dB
Noise figure @ -18C	Typ < 0.1 dB
Gain S21, typ.:	23 dB
Input return loss	>+5.31 dB
Output return loss	>+7.8 dB
OIP3:	>+31dBm
IIP3:	typ. + 8dBm
Device:	SAV-541
Max. Input level:	+19dBm
Operating voltage:	+10...+15V
Power consumption:	70mA
Dimensions:	85x50x20mm (w.conn)
Weight:	75g
RF connectors:	2x SMA female

ME-70 Noise Figure measurements

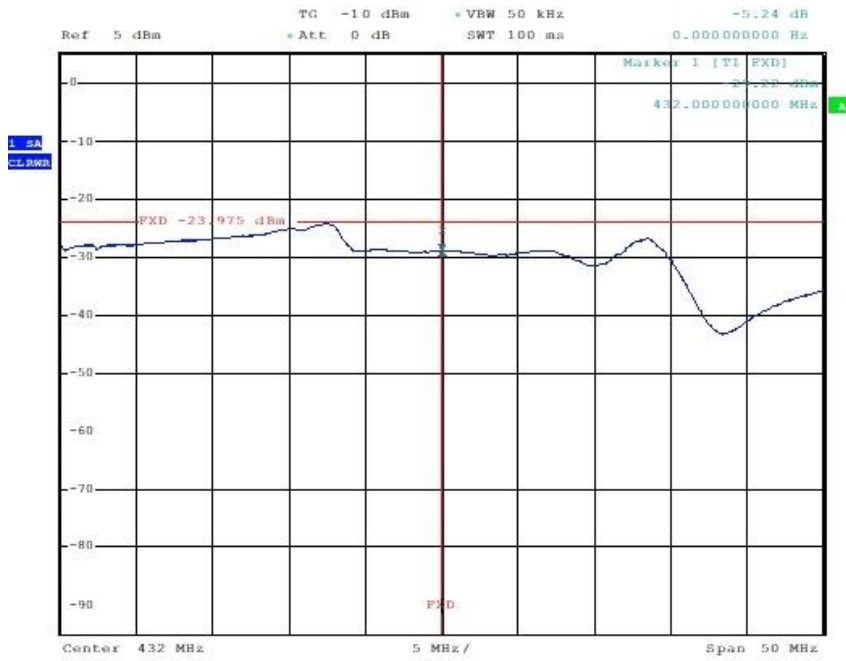
Direct		NOISE & GAIN			CALIBRATED
RBW:	1 MHz	RF Atten.	0 dB	2nd Stage Corr.	On
Average:	1	Auto Ref Level	On	Image Rejection	...
Current Value					
RF:	432 MHz	ENR	6.2 dB	NF:	0.12 dB
LO:	...	Loss In	0 dB	Noise Temp.	8.44 K
IF:	...	Loss Out	0 dB	Gain	22.81 dB
Frequency List Results					
RF	NF	Noise Temp	Gain		
430.00 MHz	0.14 dB	9.33 K	23.02 dB		
431.00 MHz	0.12 dB	8.33 K	22.97 dB		
432.00 MHz	0.12 dB	8.44 K	22.81 dB		
433.00 MHz	0.11 dB	7.15 K	22.90 dB		
434.00 MHz	0.15 dB	10.22 K	22.58 dB		
435.00 MHz	0.14 dB	9.80 K	22.98 dB		
436.00 MHz	0.15 dB	10.00 K	23.10 dB		
437.00 MHz	0.14 dB	9.31 K	23.55 dB		
438.00 MHz	0.12 dB	8.17 K	23.79 dB		
439.00 MHz	0.13 dB	8.63 K	23.29 dB		
440.00 MHz	0.10 dB	7.08 K	24.25 dB		

ME-70 NF Measurements @ 22°C

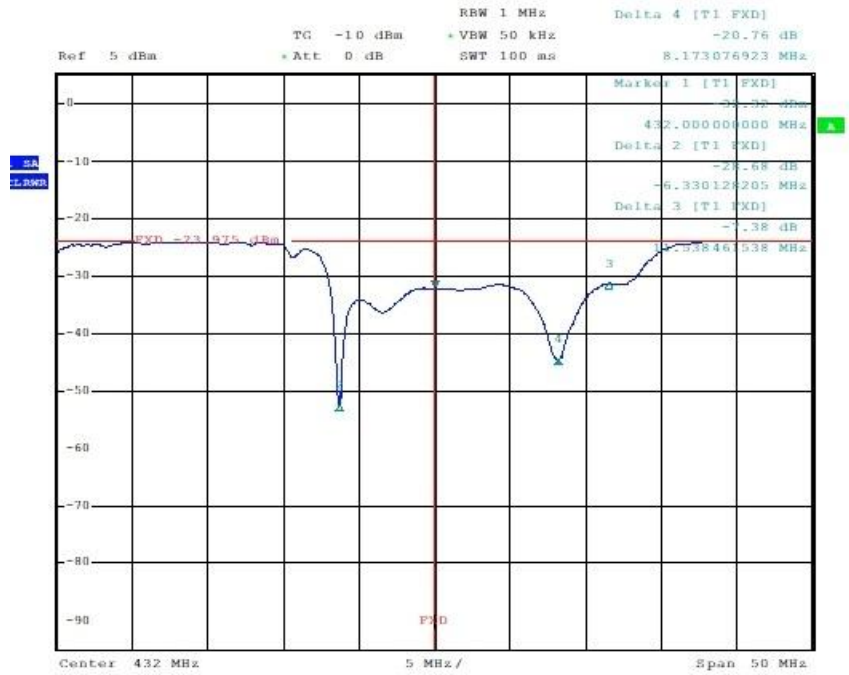
ME-70 Preamplifier



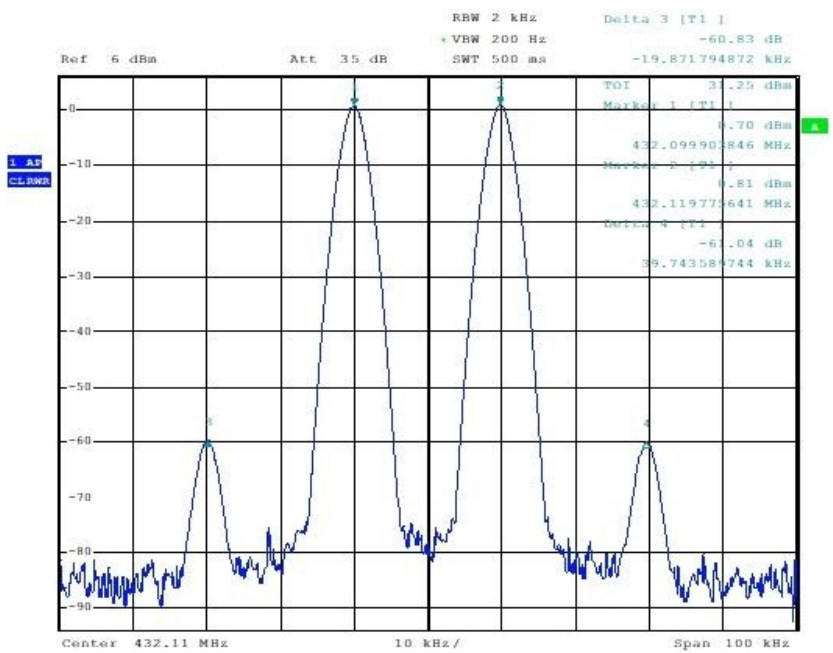
ME-70 Measured BW



ME-70 Input Return Loss.



ME-70 Output Return Loss.



OIP3 +30.1dBm

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:	439 MHz	ENR	6.2 dB	NF:		0.02 dB
LO:	...	Loss In	0 dB	Noise Temp.		1.45 K
IF:	...	Loss Out	0 dB	Gain		24.07 dB

Frequency List Results				
RF	NF	Noise Temp	Gain	
430.00 MHz	0.01 dB	0.70 K	23.35 dB	
431.00 MHz	0.03 dB	2.20 K	23.25 dB	
432.00 MHz	0.02 dB	1.26 K	23.68 dB	
433.00 MHz	0.04 dB	2.92 K	23.37 dB	
434.00 MHz	0.06 dB	4.20 K	23.19 dB	
435.00 MHz	0.03 dB	2.11 K	23.17 dB	
436.00 MHz	0.03 dB	1.99 K	23.56 dB	
437.00 MHz	0.03 dB	2.10 K	23.18 dB	
438.00 MHz	0.05 dB	3.32 K	24.12 dB	
439.00 MHz	0.02 dB	1.45 K	24.07 dB	
440.00 MHz	0.01 dB	0.37 K	24.35 dB	

NF measurements at -18°C