

# Mechanics & Electronics Inc.

## EME Preamplifiers

### ME-13 13cm EME Preamplifier



## Introduction

The ME-13, a 2-stage 13 cm EME Preamplifier, is a high-dynamics, selective, and low-noise preamplifier for 2300–2335 MHz.

We offer it for EME operation. The built-in SAW filter provides a clean signal and excellent selectivity.

The preamplifier is built into a stable ALU box furnished with SMA female connectors. Its small dimensions make it optimal for use near your antennas in a separate box.

Technical data	ME-13
Frequency range:	2300-2335MHz
Noise figure @ 22°C	Typ < 0.85 dB
Noise figure @ -18C	Typ < 0.65 dB
Gain S21, typ.:	25 dB
Input return loss	>12.8 dB
Output return loss	>11.7 dB
OIP3:	>+37 dBm
IIP3:	typ. +12 dBm
Device:	AHL5218T8+PGA103
Max. Input level:	25dBm
Operating voltage:	+10...+15V
Power consumption:	140mA
Dimensions:	85x50x20mm (w.conn)
Weight:	75g

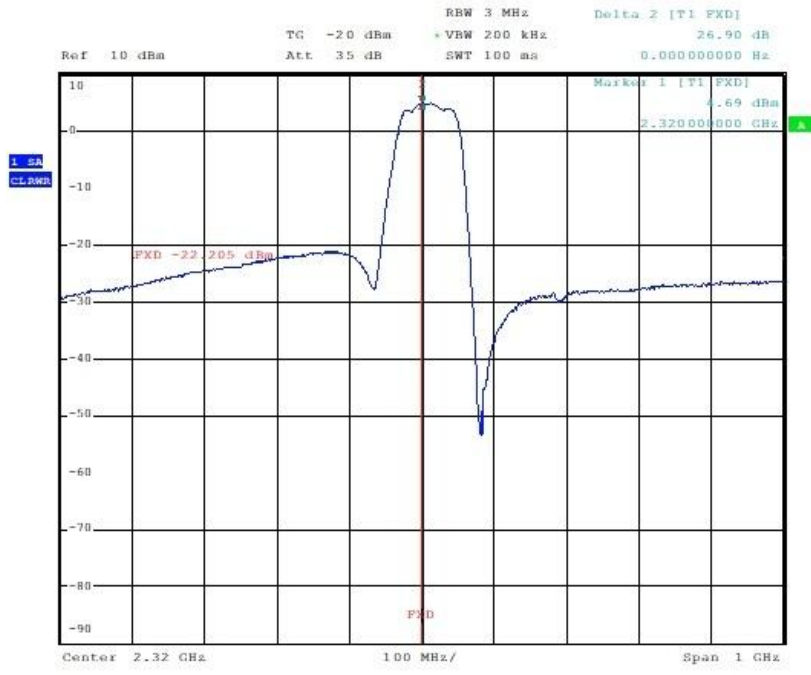
RF connectors:	2x SMA female
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### ME-13 Noise Figure measurements

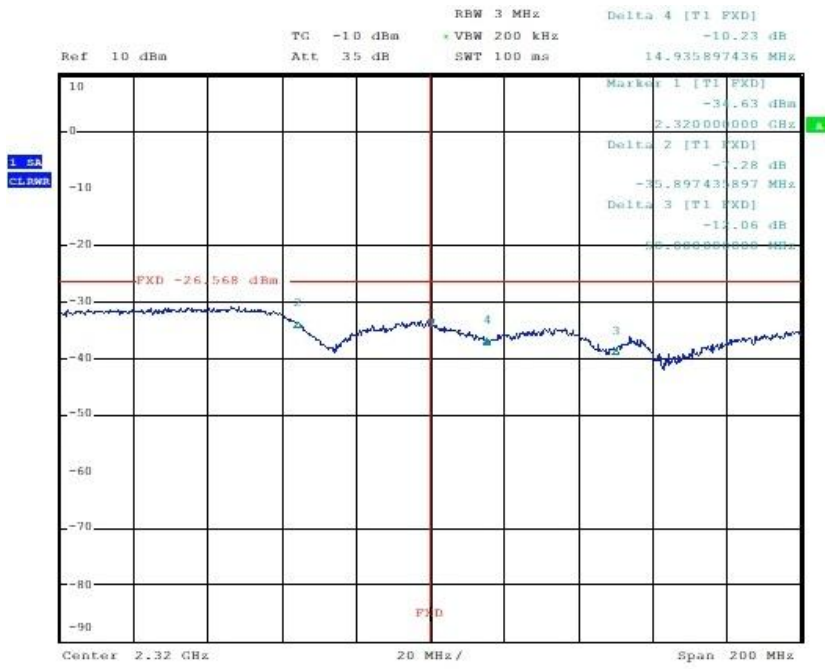
Direct		NOISE & GAIN			CALIBRATED
RBW:	1 MHz	RF Atten.	0 dB	2nd Stage Corr.	On
Average:	1	Auto Ref Level	On	Image Rejection	...
Current Value					
RF:	2.38 GHz	ENR	6.2 dB	NF.	1.98 dB
LO:	...	Loss In	0 dB	Noise Temp.	167.37 K
IF:	...	Loss Out	0 dB	Gain	13.9 dB

Frequency List Results				
RF	NF	Noise Temp	Gain	
2.30 GHz	0.80 dB	58.95 K	25.50 dB	
2.31 GHz	0.78 dB	57.31 K	26.05 dB	
2.32 GHz	0.81 dB	59.49 K	25.96 dB	
2.33 GHz	0.82 dB	60.25 K	26.52 dB	
2.34 GHz	0.79 dB	57.96 K	26.29 dB	
2.35 GHz	0.81 dB	59.50 K	25.86 dB	
2.36 GHz	0.88 dB	65.21 K	25.53 dB	
2.37 GHz	0.95 dB	71.12 K	23.27 dB	
2.38 GHz	1.98 dB	167.37 K	13.90 dB	
2.39 GHz	12.69 dB	5095.34 K	-3.72 dB	
2.40 GHz	** Not Valid **	** Not Valid **	** Not Valid **	

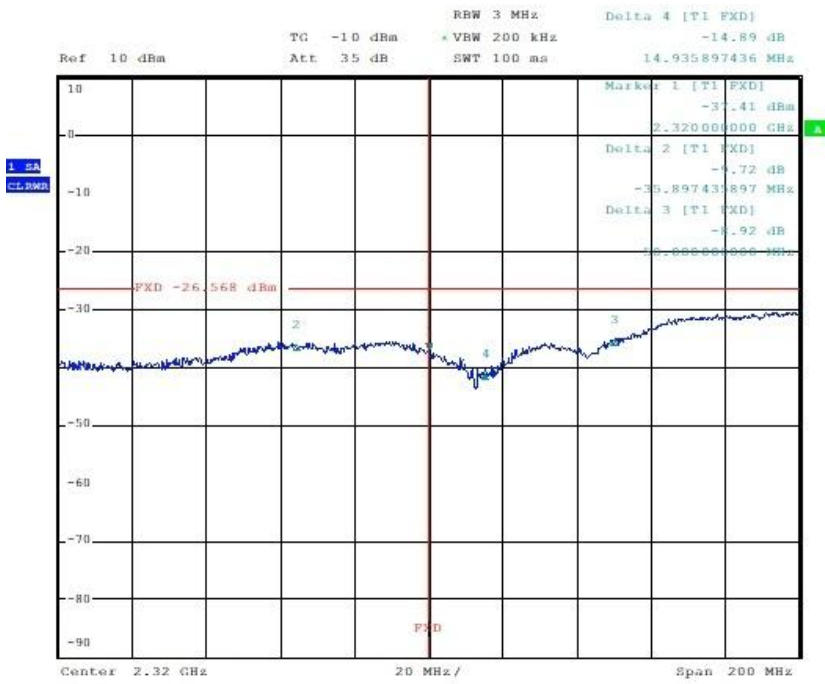
ME-13 NF Measurements.



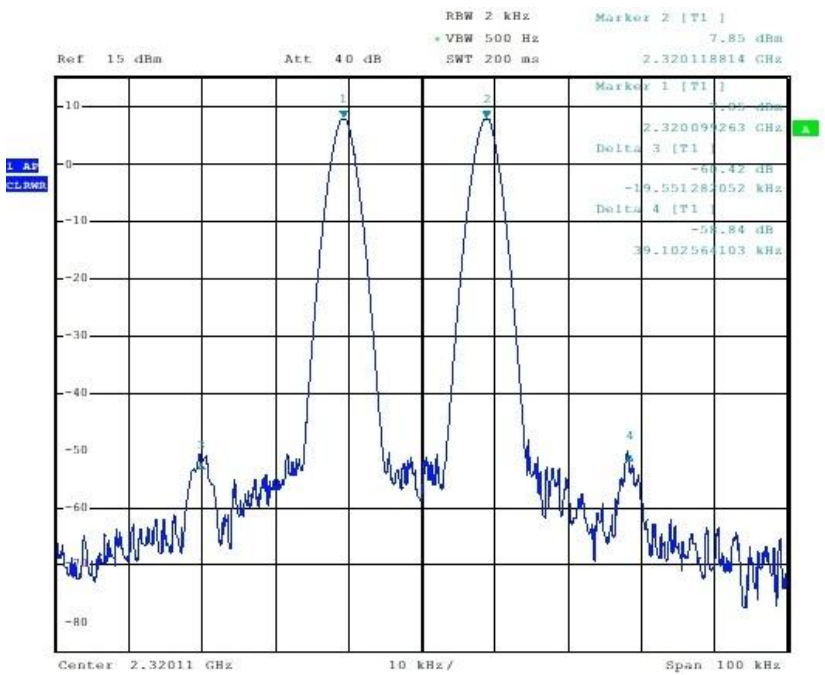
ME-13 +/-50MHz BW



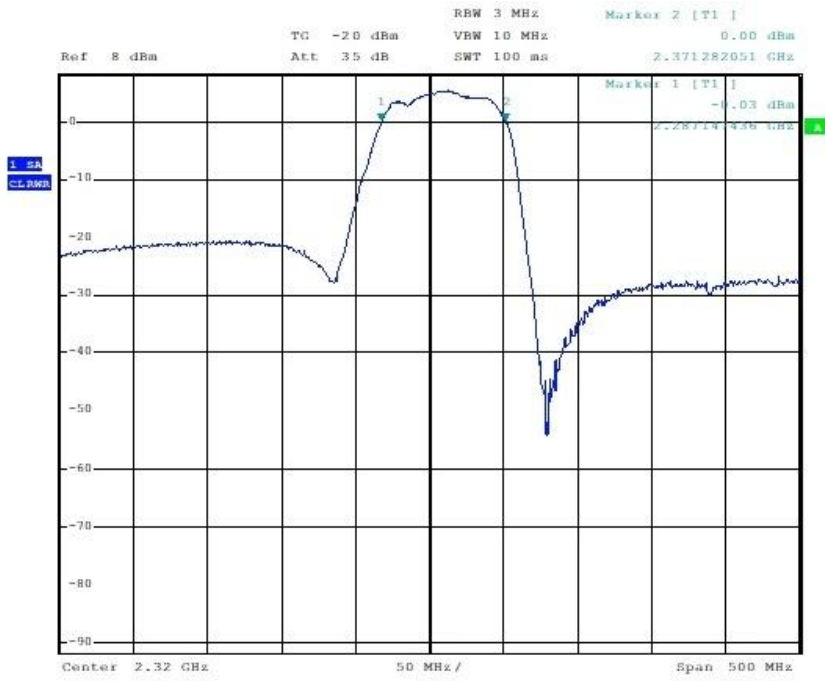
Input Return Loss.



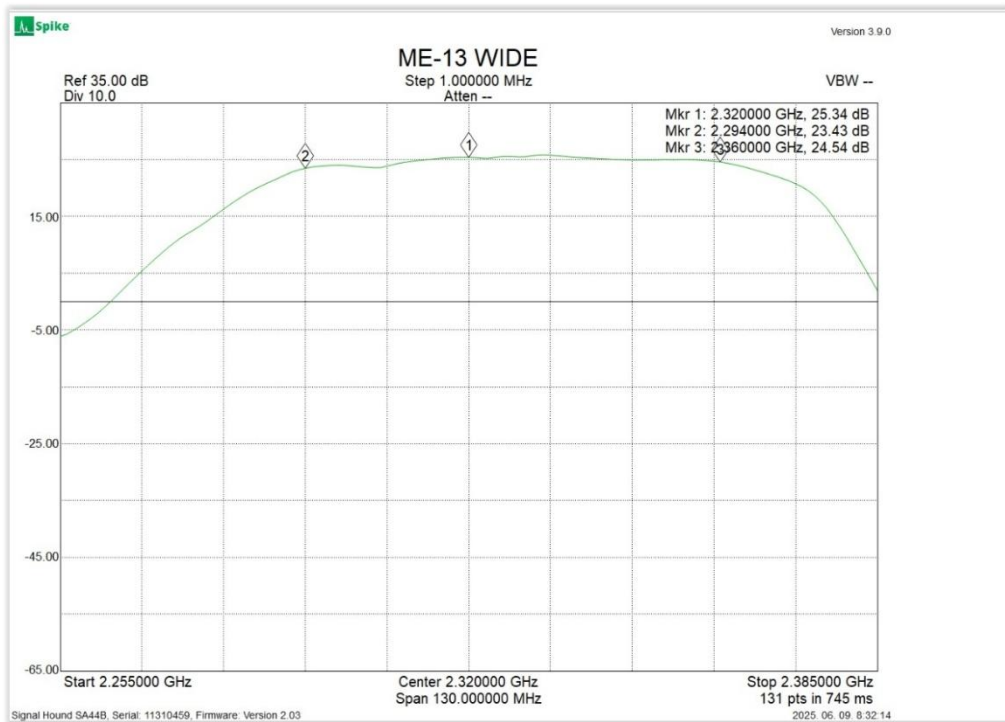
Output Return Loss



OIP3 +37.2dBm



ME-13 BW/3dB



ME-13 Wide