

LNA iespiedplate

**Andrejs Dzelme
Ventspils Augstskola
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Neliels ieskats

LNA (“low noise amplifier”) – maztrokšņu pastiprinātājs.

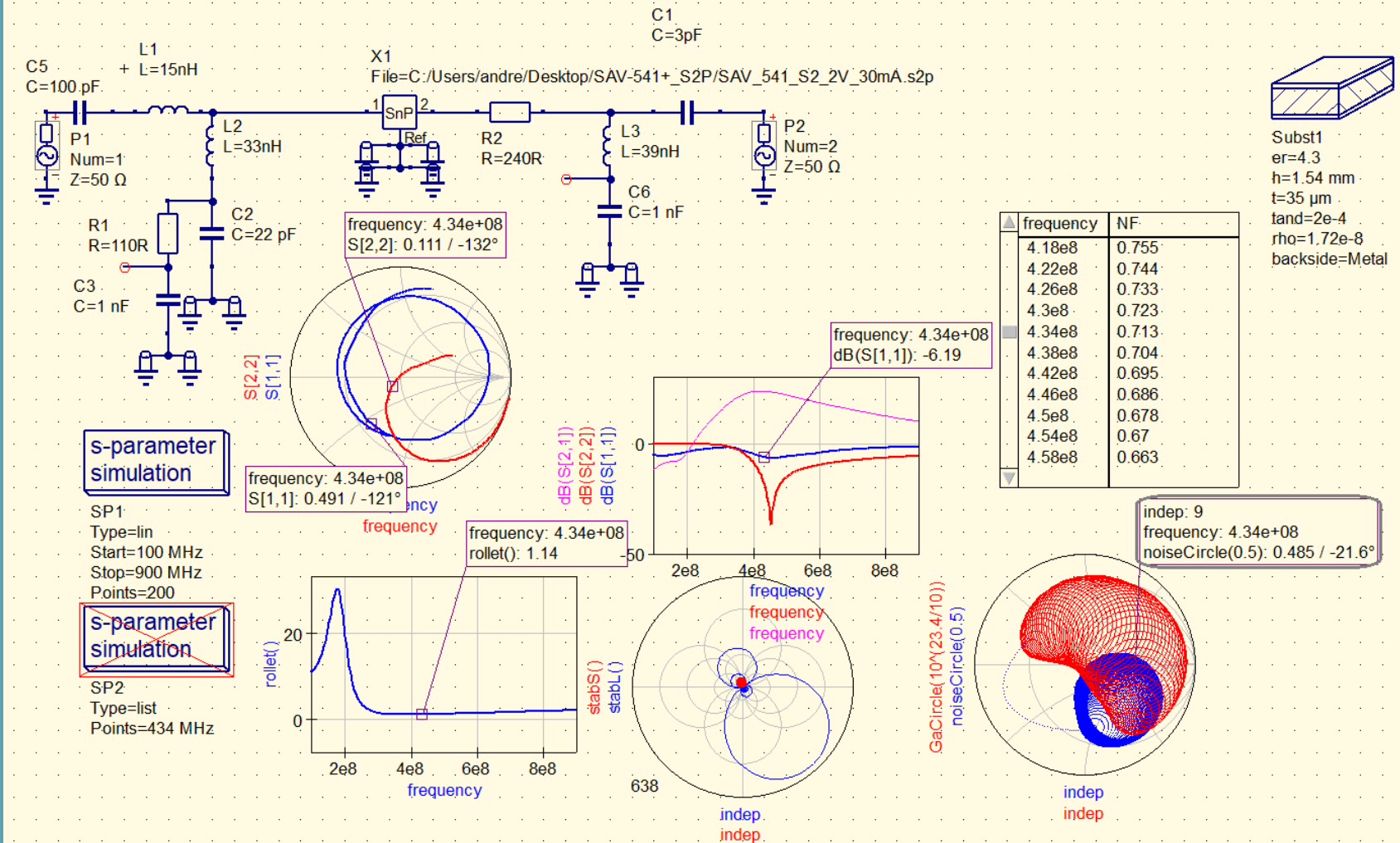
Frekvence – 424 MHz.

Izmantots RF nolūkiem paredzēts tranzistors “SAV-541+”.

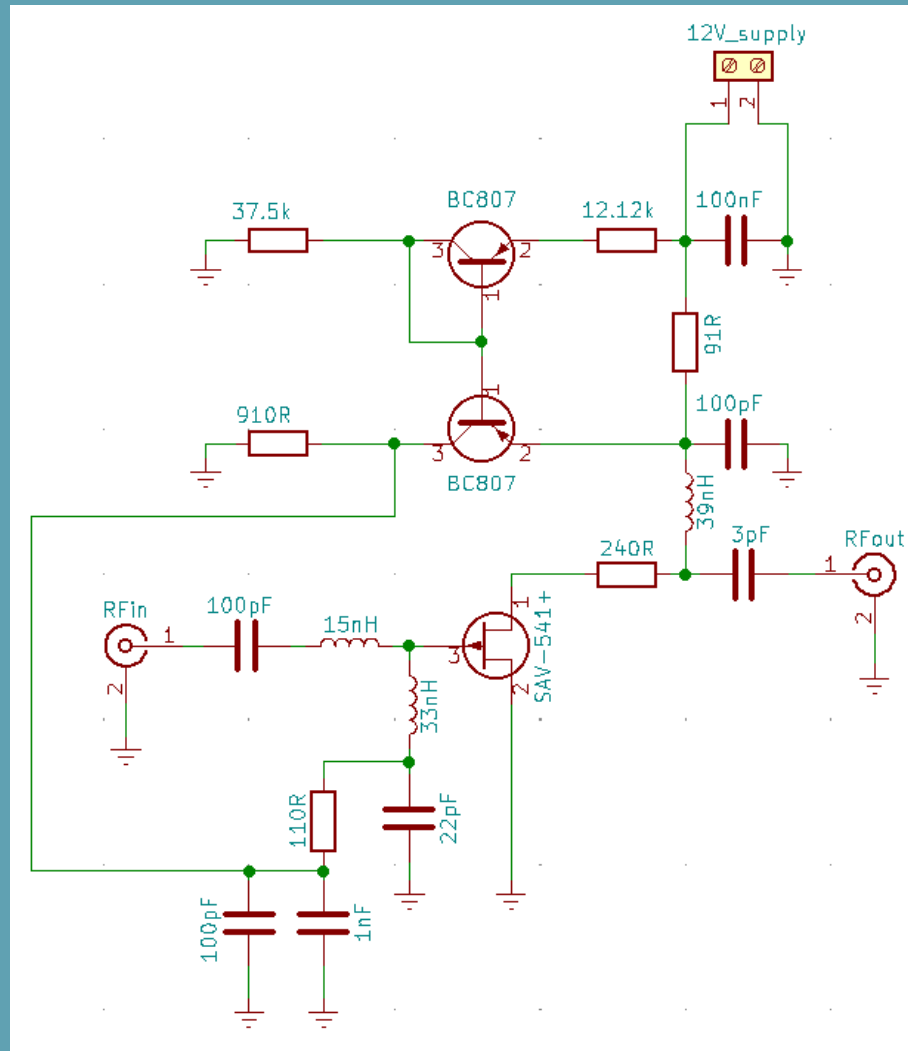
Noteces spriegums – 2 V, noteces-izteces strāva – 30 mA.

Kompromiss starp salāgotību un maztrokšņainību.

QUCS simulācija



Principiālā shēma



PCB daļa – iestatījumi

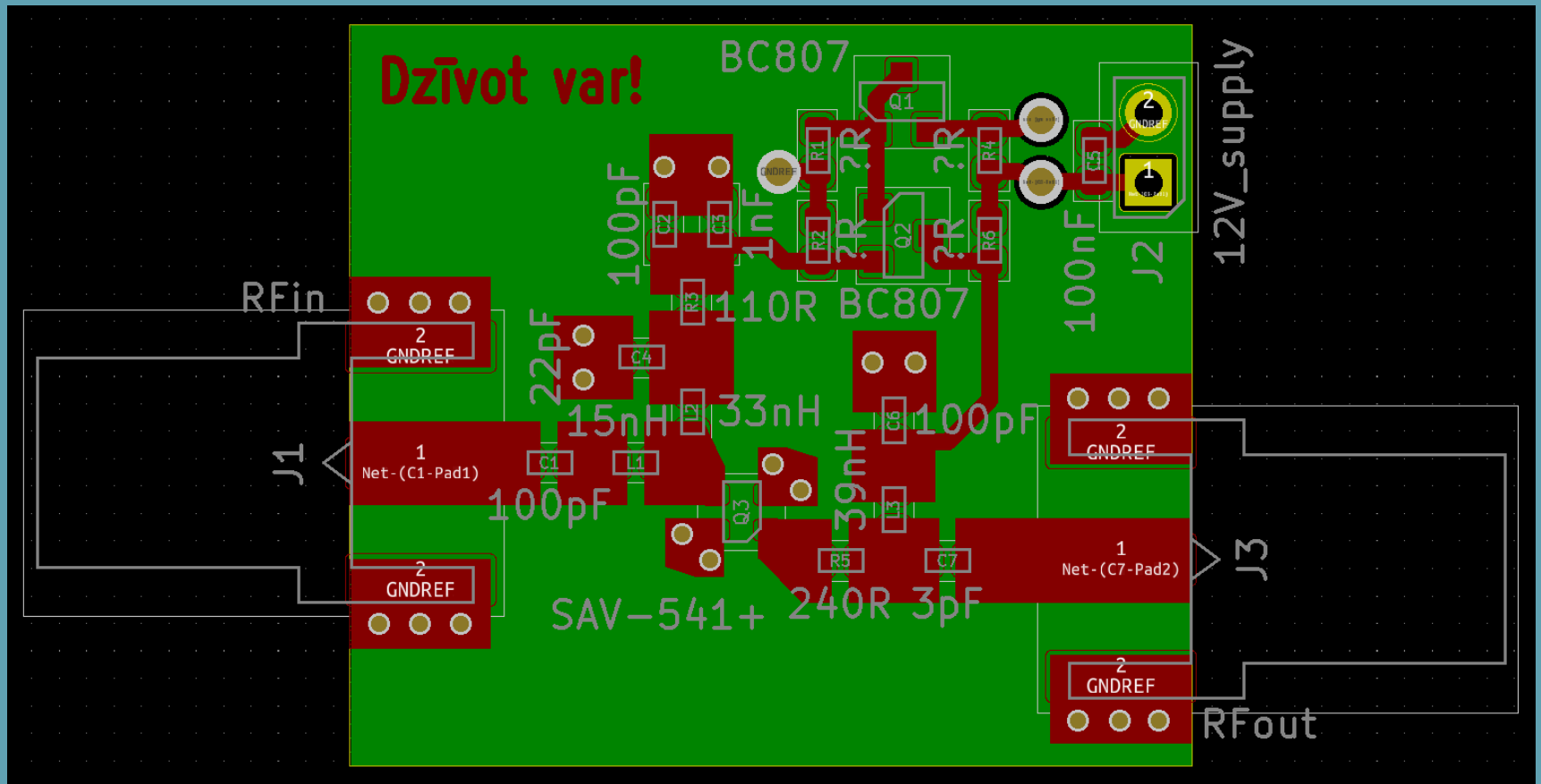
Pre-defined track and via dimensions:

Tracks	Vias											
<table><thead><tr><th>Width</th></tr></thead><tbody><tr><td>0.3 mm</td></tr><tr><td>0.6 mm</td></tr><tr><td>1 mm</td></tr><tr><td>1.5 mm</td></tr></tbody></table>	Width	0.3 mm	0.6 mm	1 mm	1.5 mm	<table><thead><tr><th>Size</th><th>Drill</th></tr></thead><tbody><tr><td>0.8 mm</td><td>0.6 mm</td></tr><tr><td>1.6 mm</td><td>1 mm</td></tr></tbody></table>	Size	Drill	0.8 mm	0.6 mm	1.6 mm	1 mm
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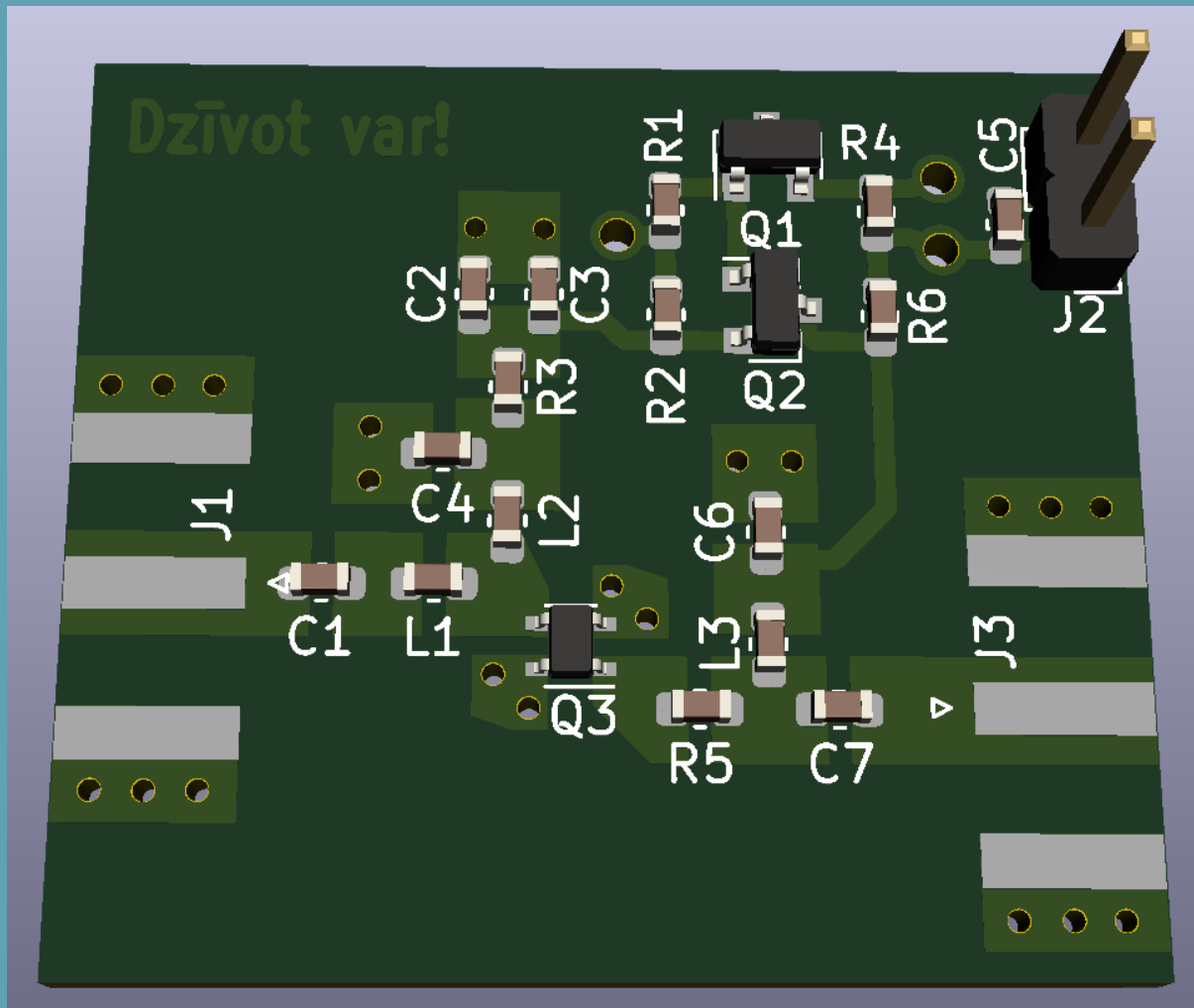
Layers Manager

Layers	Items
<input checked="" type="checkbox"/>	F.Cu
<input checked="" type="checkbox"/>	B.Cu
<input checked="" type="checkbox"/>	Edge.Cuts
<input checked="" type="checkbox"/>	Margin
<input checked="" type="checkbox"/>	F.CrtYd
<input checked="" type="checkbox"/>	B.CrtYd
<input checked="" type="checkbox"/>	F.Fab

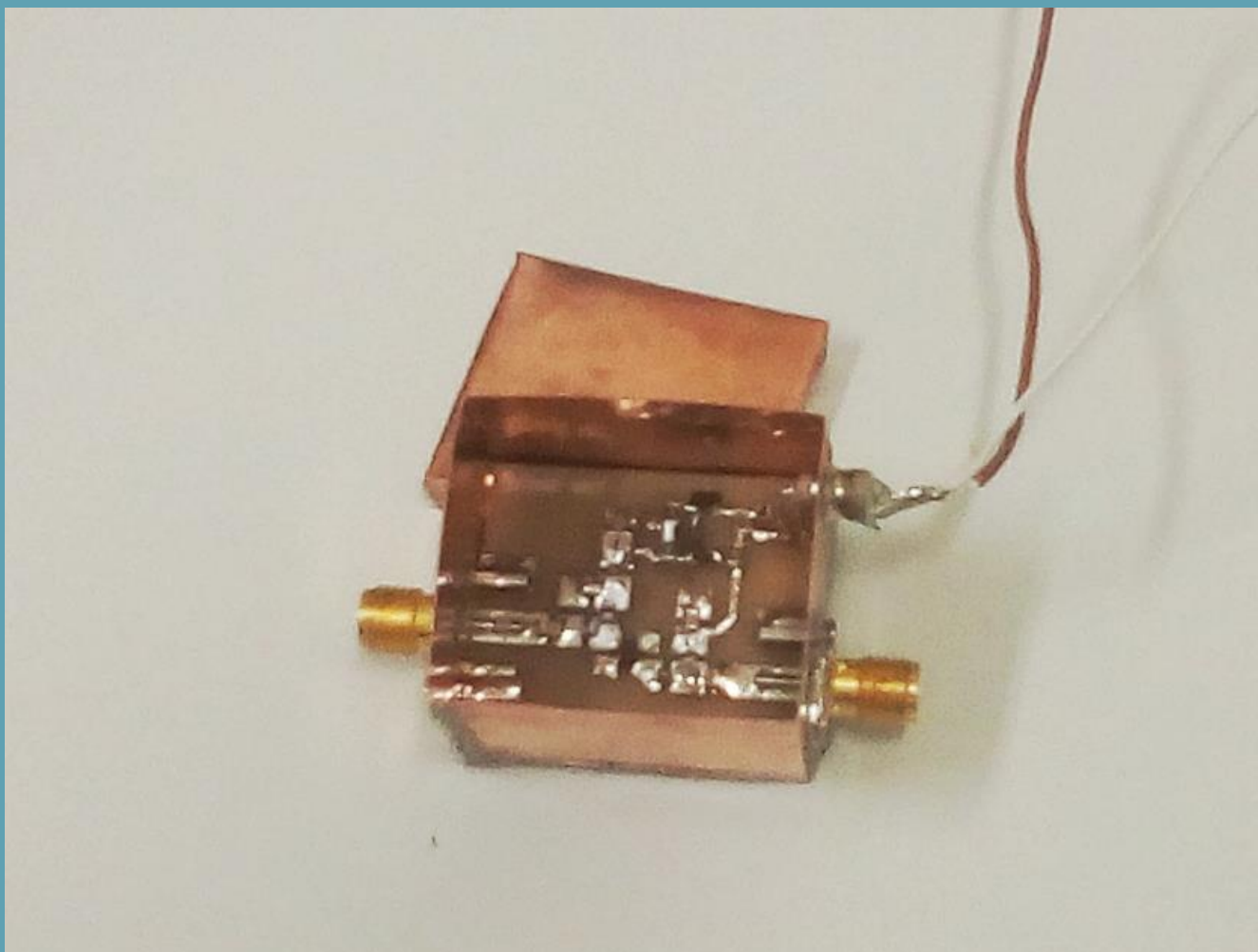
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les piedplates dizains



Iznākums



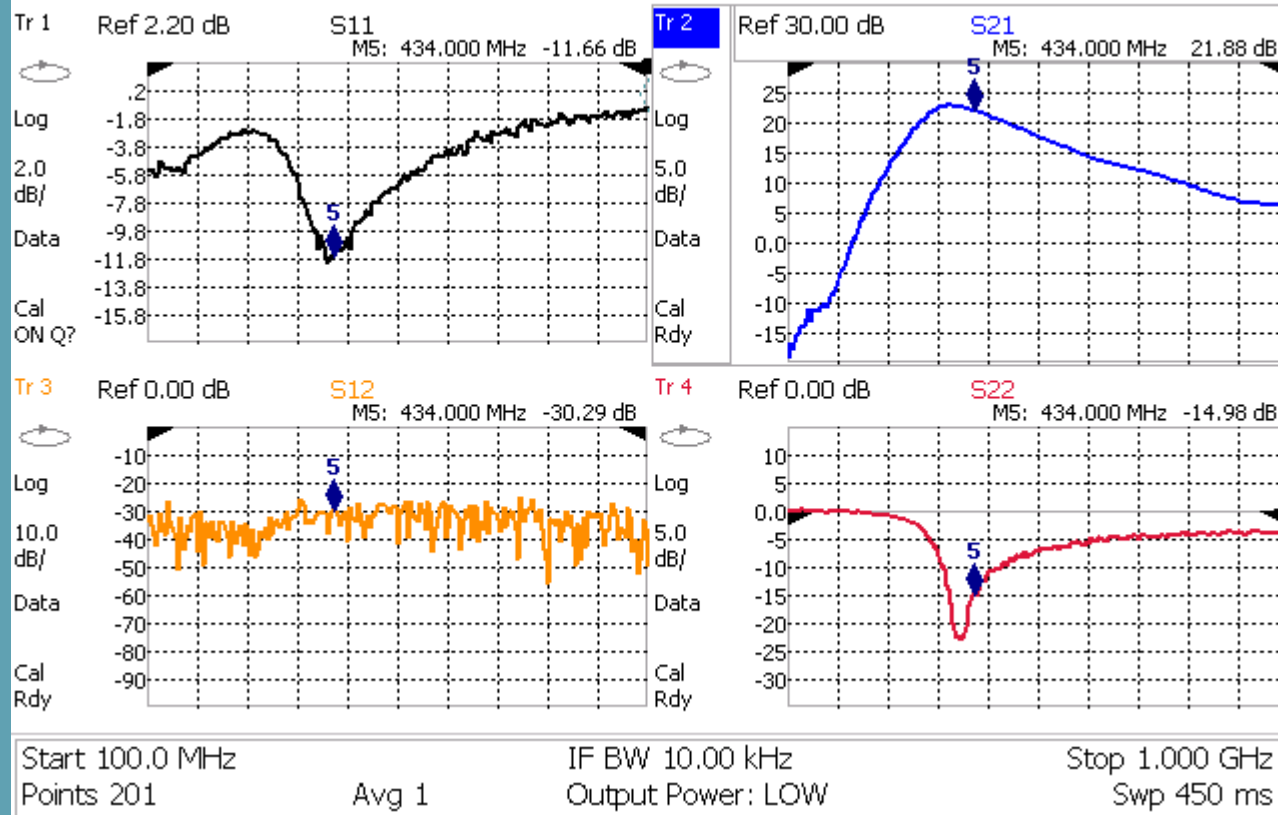
Iznākums



Testēšana, S-parametri

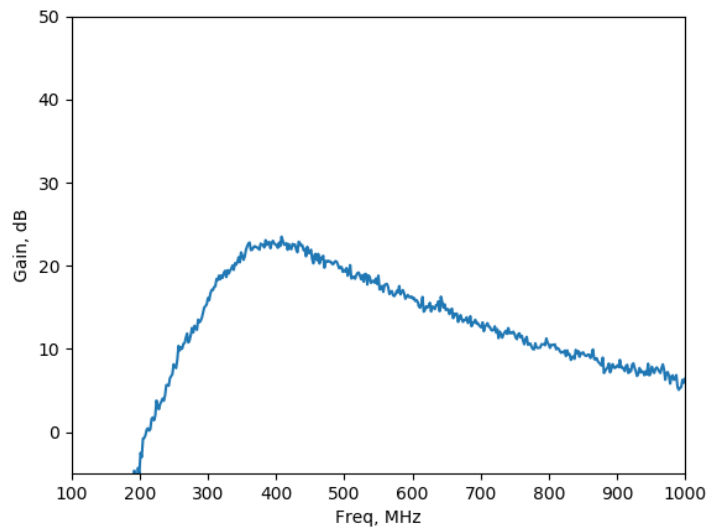
Agilent Technologies: N9923A, SN: MY50371405

Tue, 19 Jan 2021 4:06:59 PM

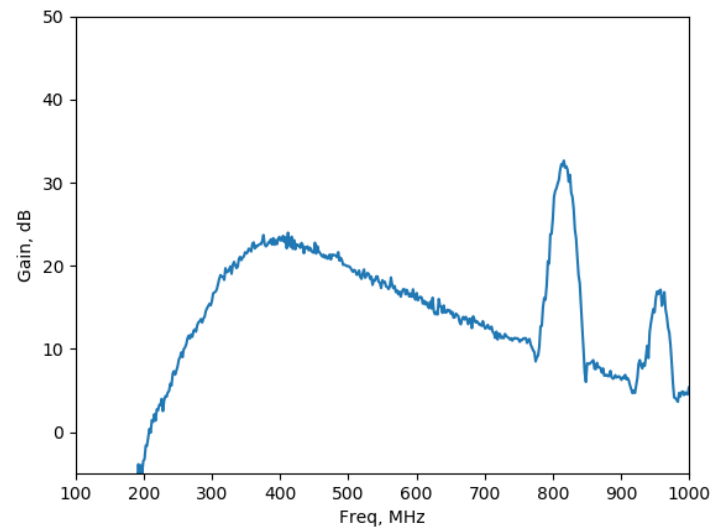


Testēšana, pastiprinājums

Ar ekrānējumu

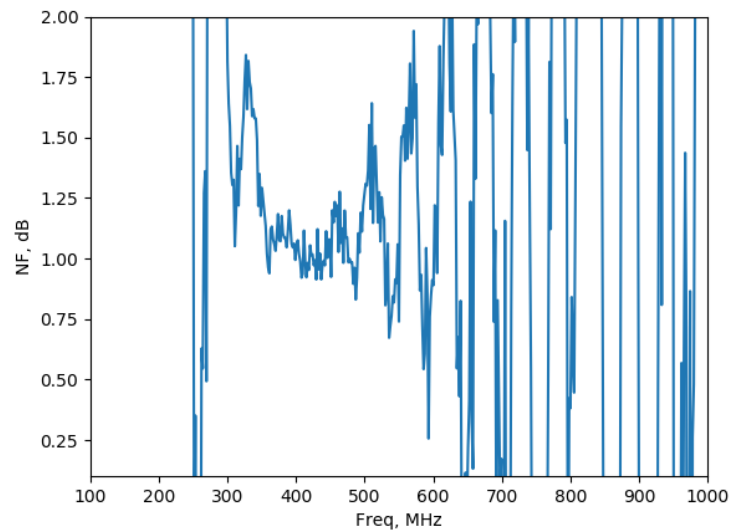


Bez ekrānējuma

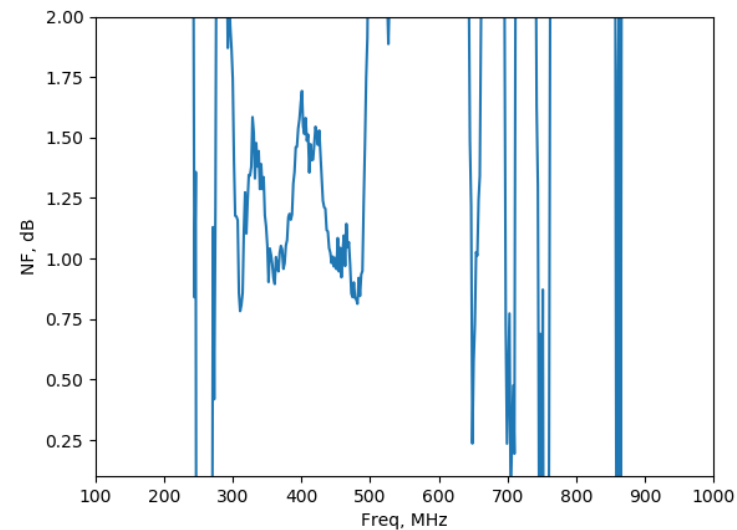


Testēšana, trokšņi

Ar ekrānējumu

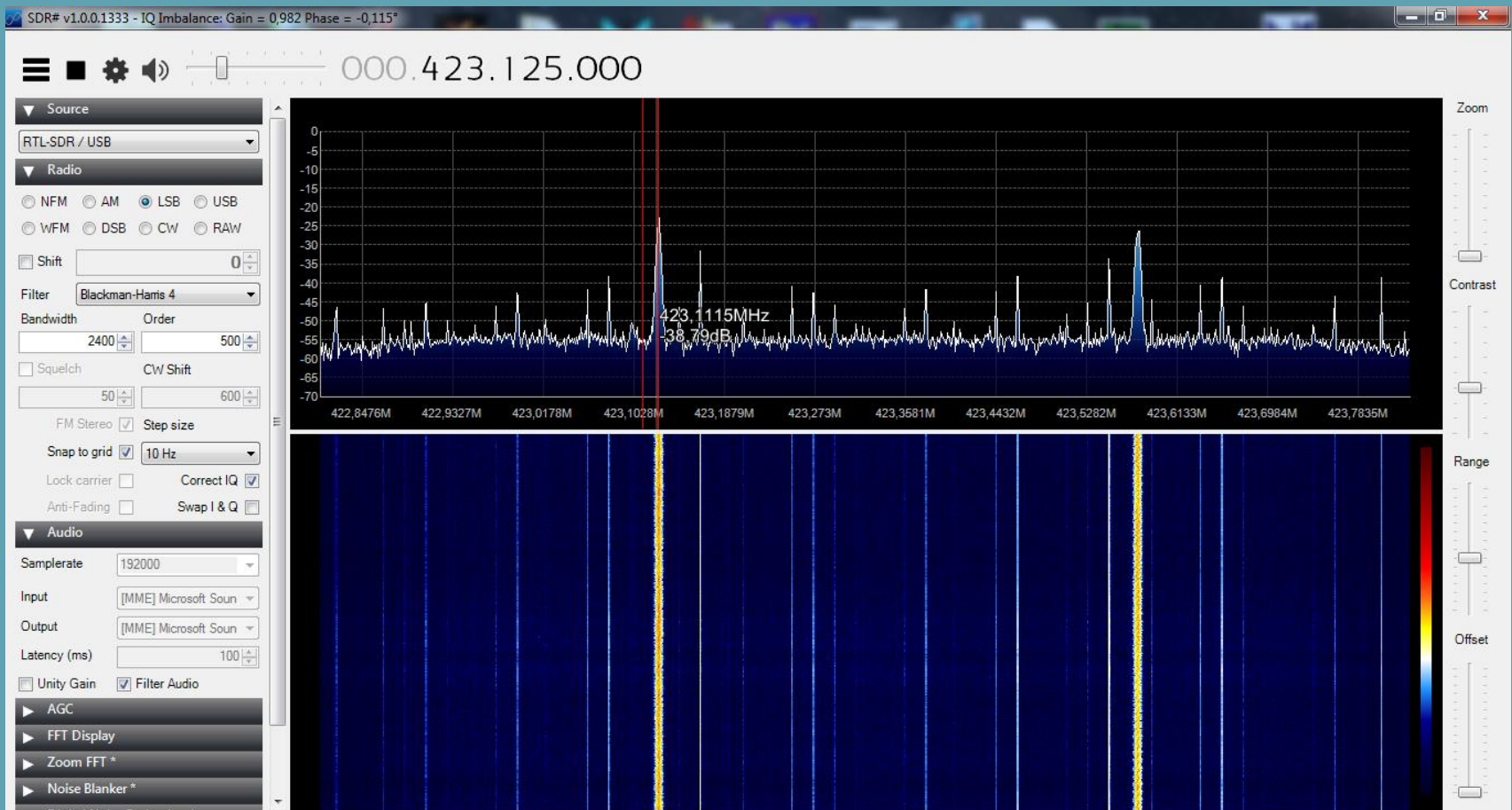


Bez ekrānējuma



Testěšana, SDR

Ar LNA



Testěšana, SDR

Bez LNA

