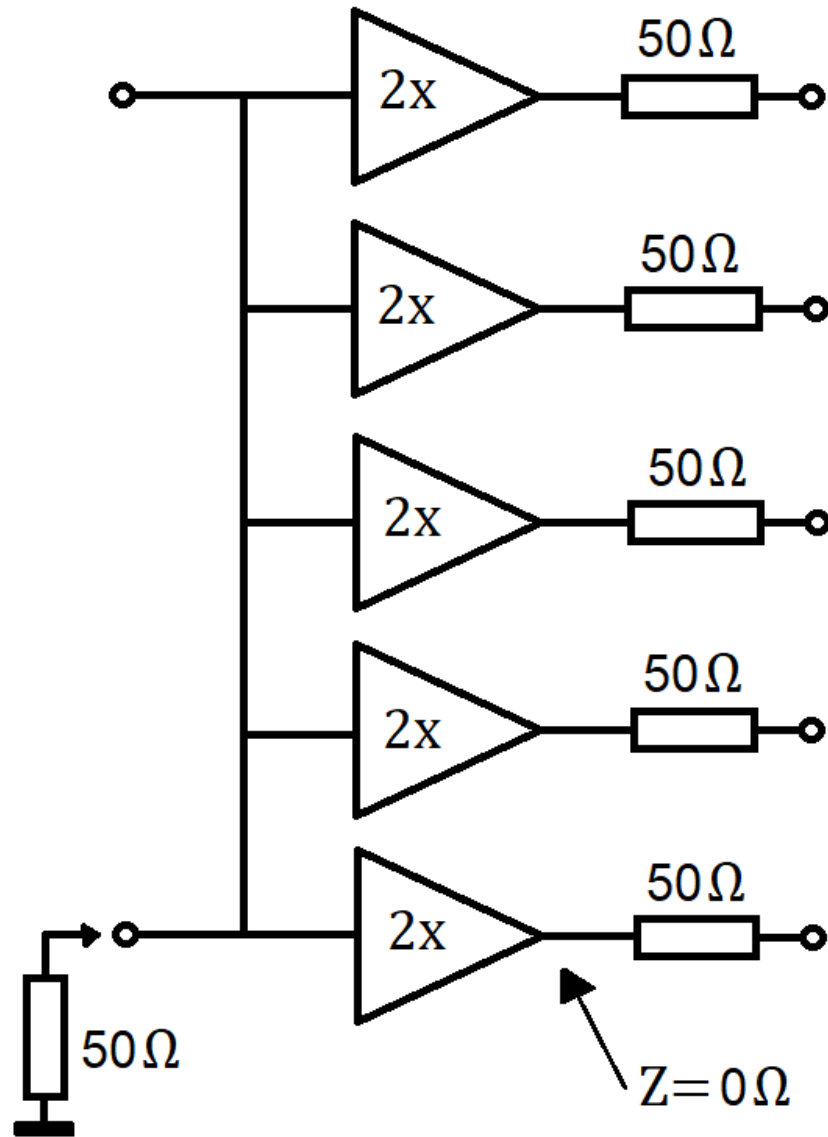


Aanpassen Bufferamp -> v2.0

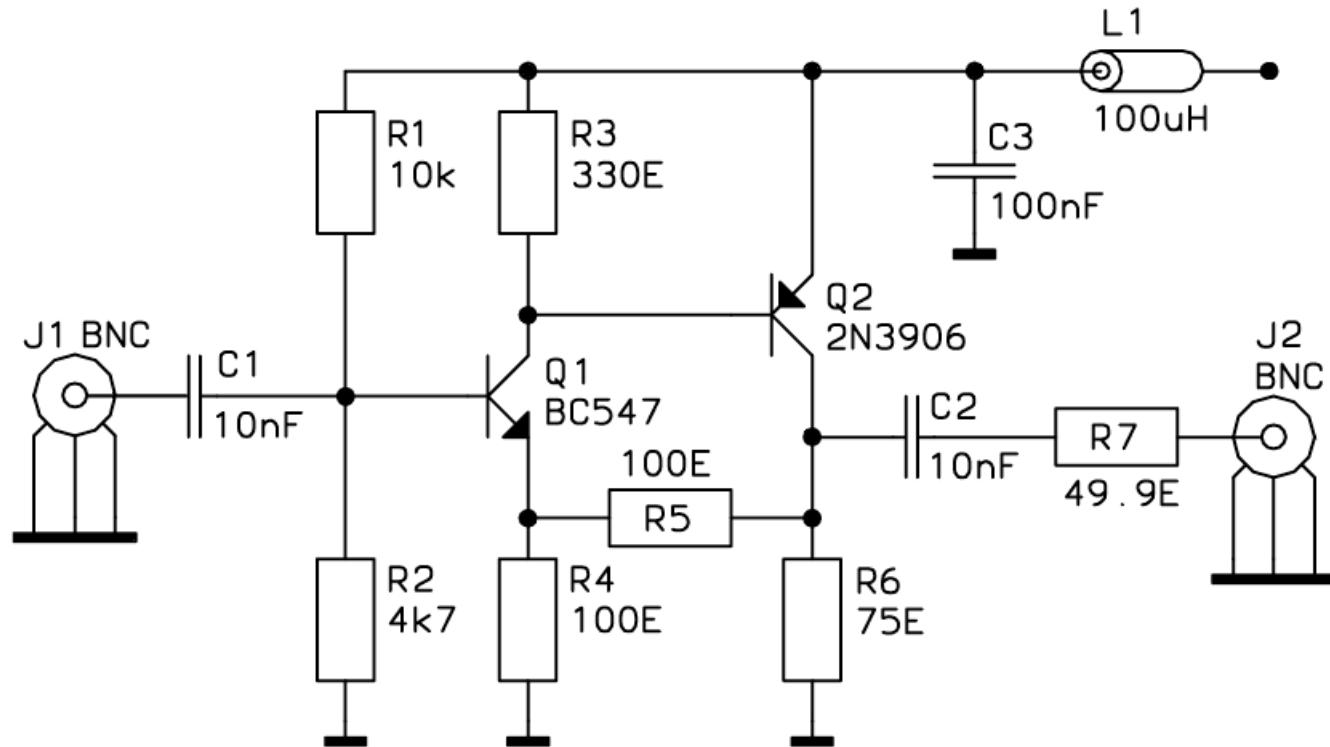
PE1FOD

Basis functie

- Bufferen / splitten van RF signaal
- Isolatie > 60dB
- Gain = 1
- Outputs 5x



V1.0



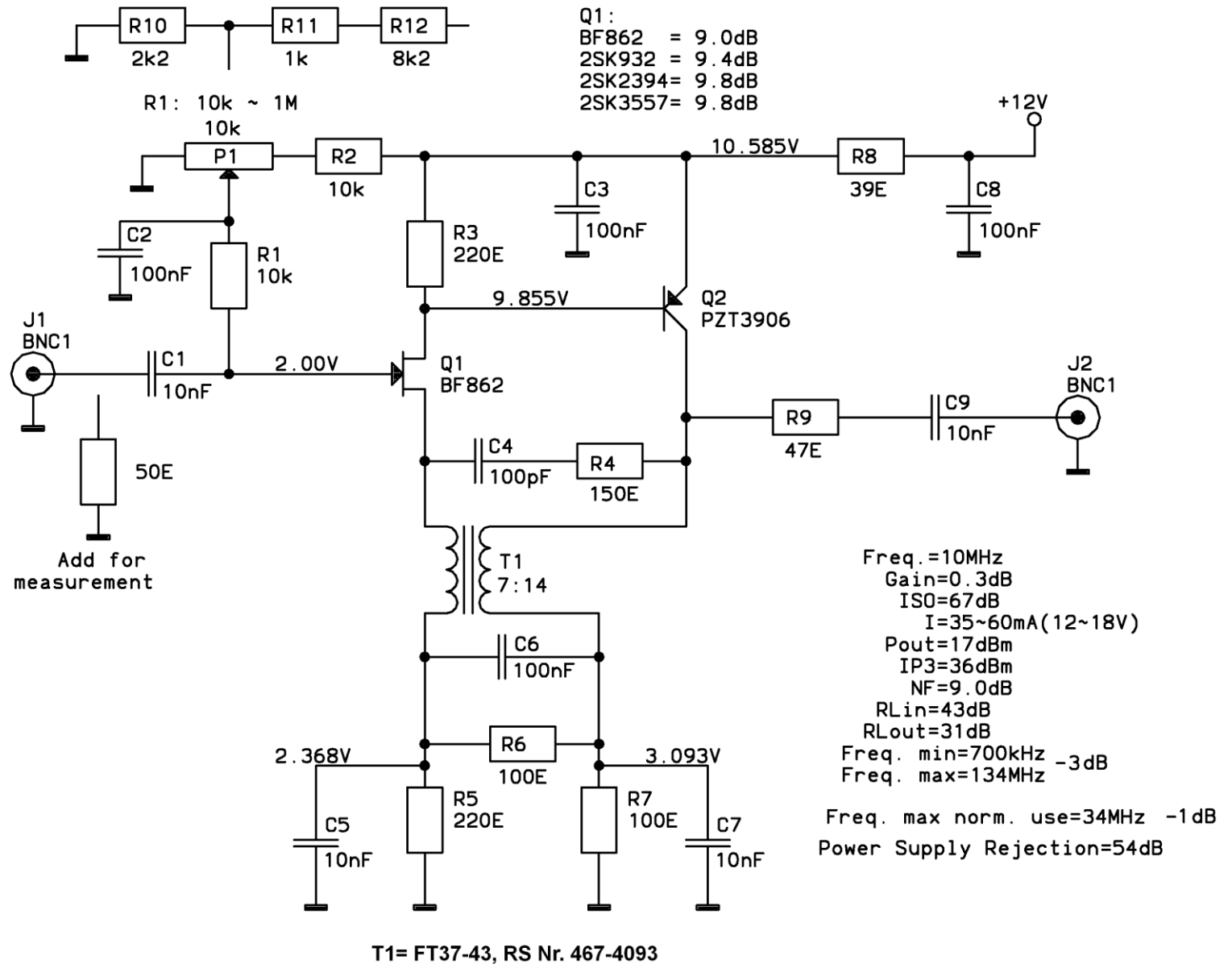
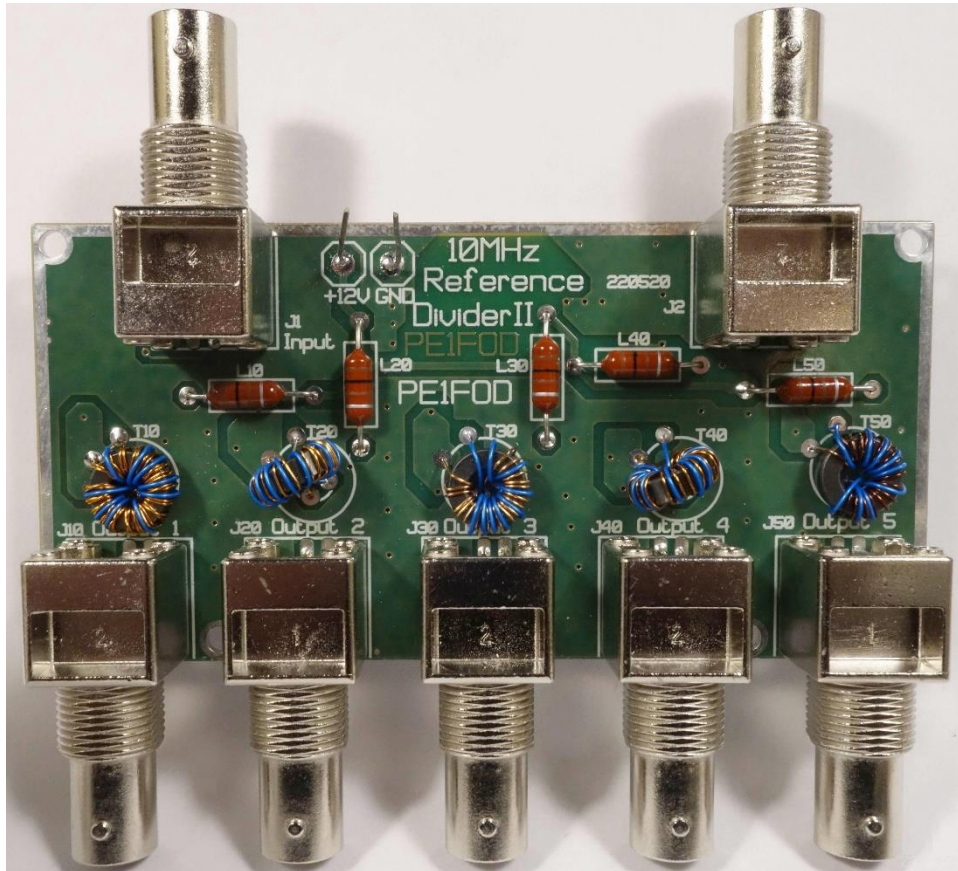
- Output max 2.0Vpp
Video in 75Ω = 9dBm
- Max 5MHz
- Gain 2x
- R7 = -1x
- In 50 Ω: 9dBm @ 10MHz
- = 1.8Vpp
- Gain: $(R5/R4)+1$

Wensen

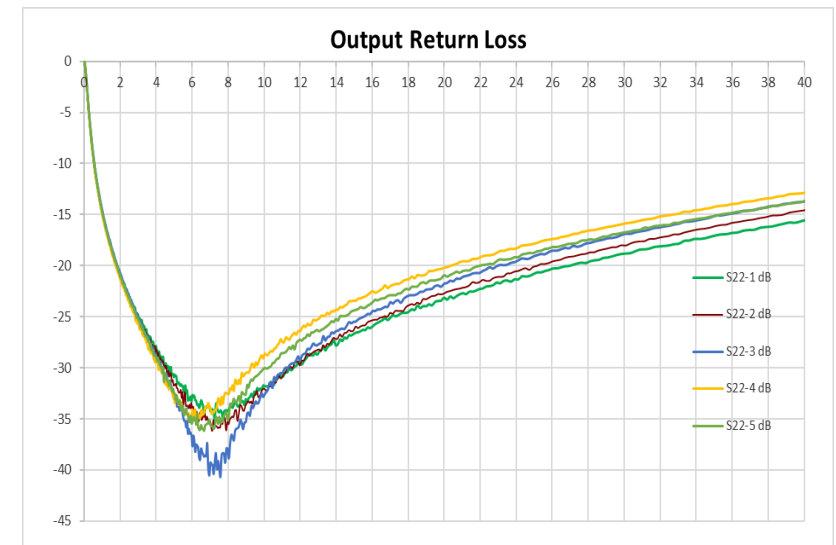
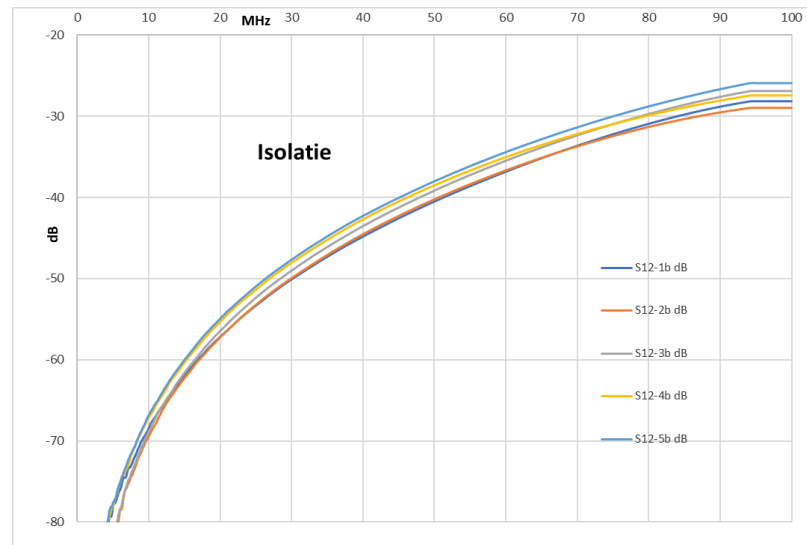
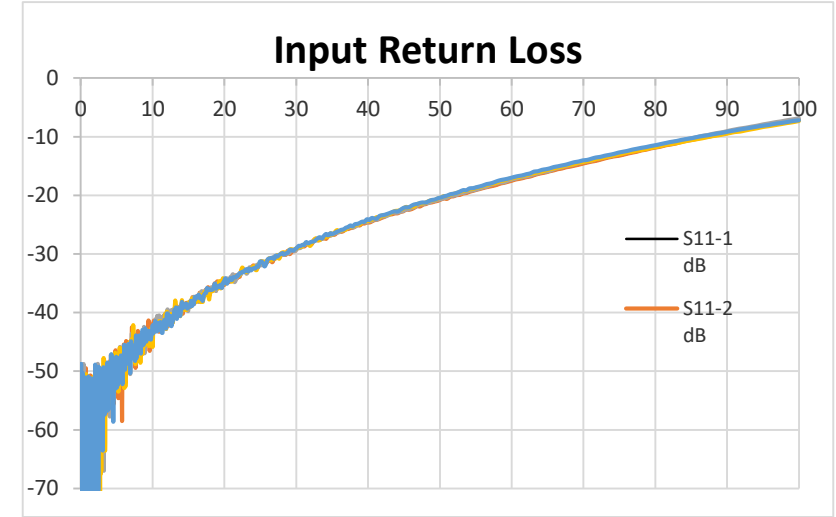
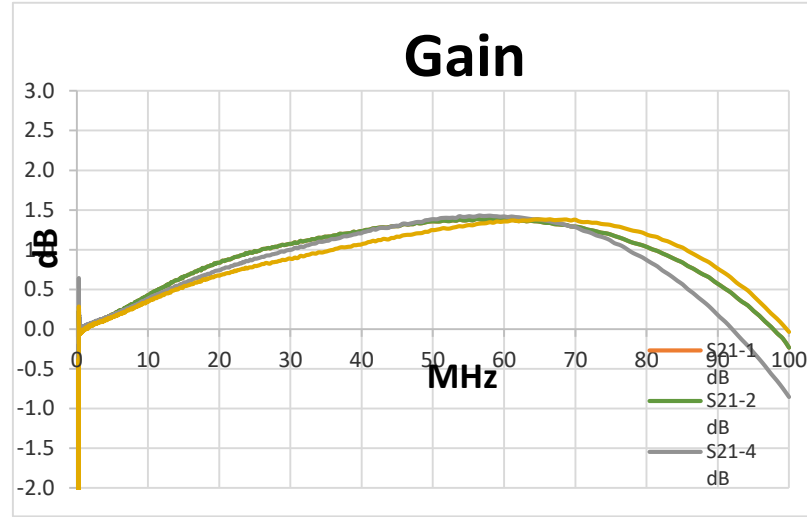
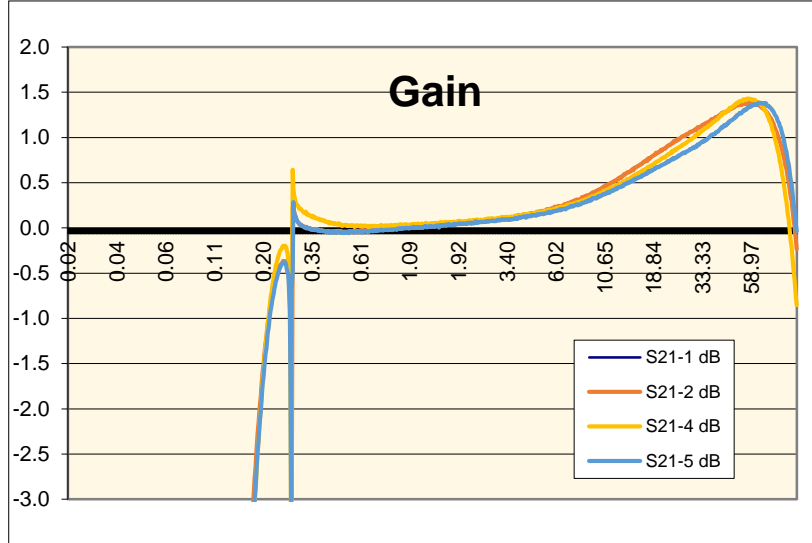
- Meer output level, 8 a 9 dBm is te weinig
- Ruisgetal is ook aan de hoge kant met 17dB
- En wat meer isolatie
- Een extra input om doorlussen mogelijk te maken



Buffer V2.0



Plots



De belangrijkste verbeteringen

- | | Buffer V1 | Fet Buffer V2 |
|--------------|-----------|--------------------|
| • Max uit | 9dBm | 17dBm (18V=+20dBm) |
| • Ruis NF | 16dB | 10dB |
| • Isolatie | 60dB | 67dB |
| • Frequentie | 4-15MHz | 1-90MHz |

Specs

Buffer Amp II 10MHz		Min	Typ	Max	
Frequentiebereik	0dB	0.5	10	90	MHz
Max gain	10MHz	0.3	0.4	0.5	dB
Max gain	60MHz	0.5	1	1.5	dB
Max output level	10MHz	17	19	24*	dBm
Return loss input	10MHz	35	40	45	dB
Return loss input	0.5 - 50MHz	20	35	40	dB
Return loss output	10MHz	25	30	35	dB
Return loss output	2 - 20MHz	20	35	40	dB
Isolatie output → input	10MHz	60	68	70	dB
Isolatie output → output	10MHz	60	68	70	dB
Ruisgetal	10MHz	9.0	10	11	dB
IP3	10MHz	30	34	38	dBm
Phase diff input→output	10MHz	-6.4	-6.9	-7.4	deg
Phase diff output→output	10MHz	-0.5		0.5	deg
Voedings spanning			12	20*	V
Stroom			215	300*	mA

* With new current setting

Obsolete

BF862 replacement Fet's
(The noise is a bit higher)
- 2SK932
- 2SK2394
- 2SK3557

Transistors:	Footprint	IP3
Best: PZT3096	Q21	38dBm
2N3906	Q22	36dBm
PZT2907AT1G	Q21	33dBm
BSP230	Q21	31dBm

Op de print zijn twee footprints aangebracht zo dat er verschillende behuizingen voor de 2N3906 gebruikt kunnen worden (Q21 of Q22).