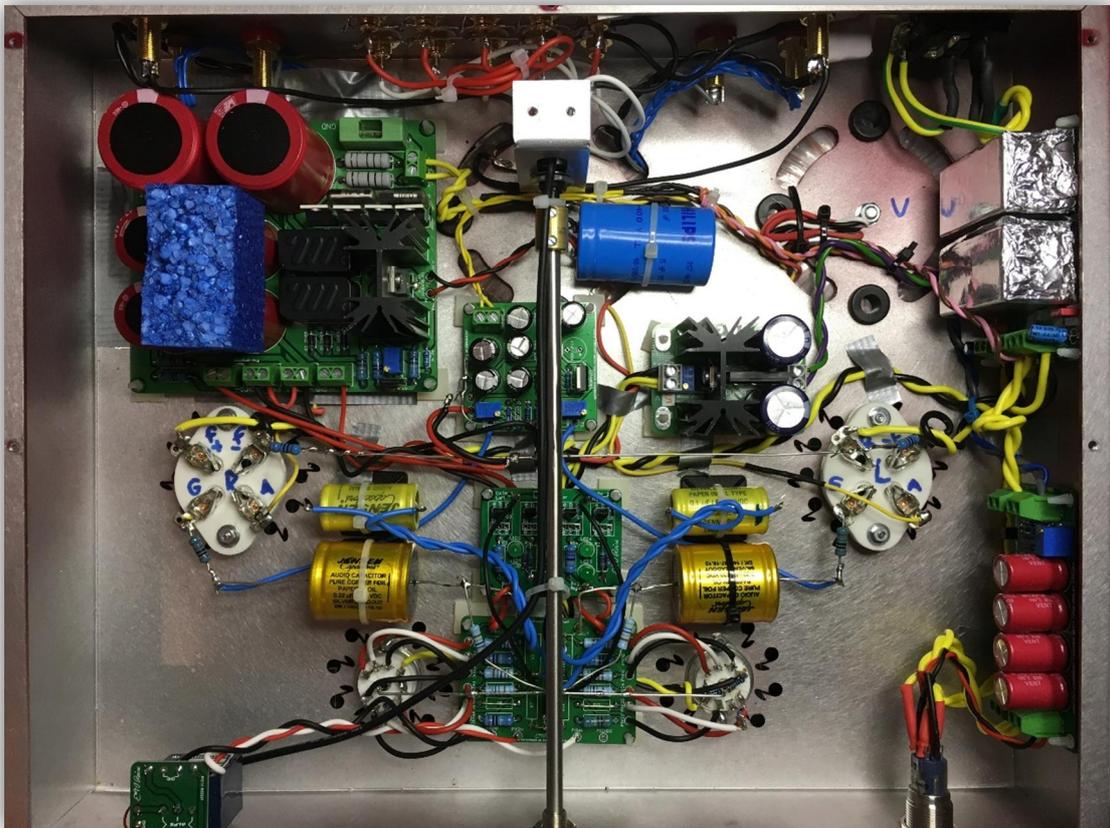


# 300B SINGLE-ENDED TUBE AMPLIFIER

Tubesociety project 2016-2017



## Specifications

$I_o$ per tube	90	mA
$Z_{out}$ (1 kHz)	2.17	$\Omega$
DF ( $8\Omega$ )	3.6	
Freq. Range, -3dB	16Hz→28kHz	Hz-kHz
$P_{max}$ , 1 kHz, ( $8\Omega$ )	7 Watt (per channel)	Watt

## Explanation

**This single-ended tube amplifier 300B is a straightforward amplifier. The driver stage has a  $\mu$  follower circuit and it consists of 2 ECC81 tubes. The only special feature is that a constant current source is placed on the cathode of the lower tube half. This is created after having experimented with the output of the tube. That produced more output from the driver tube and less distortion. This amplifier uses no negative feedback.**

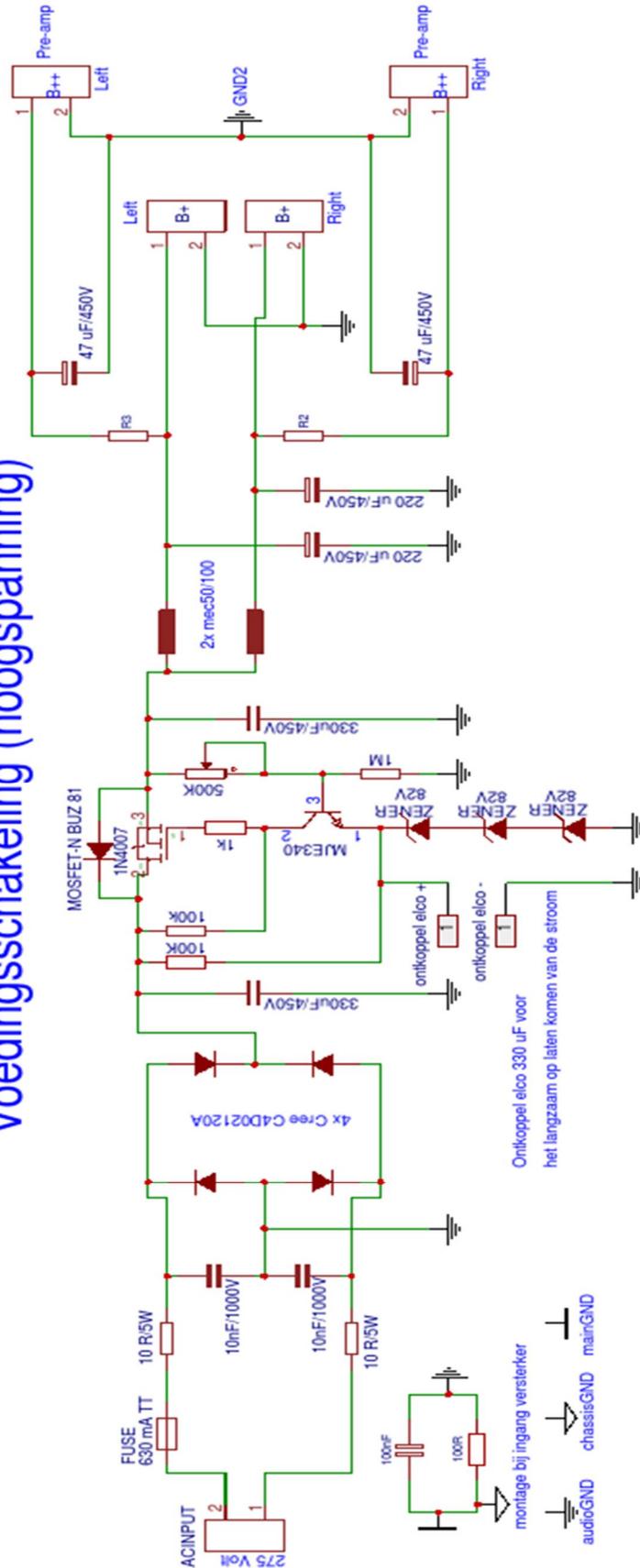
**The output tubes have a quiescent bias current of about 90 mA and a quiescent anode voltage of about 320V. Fixed bias has been chosen because in combination with the adjustable high voltage power supply, the ideal quiescent current can be found. The filament voltage of 5 volts is provided by two switching power supplies of the Meanwell brand.**

**The whole is preceded by a relay switched inrush current limiter, which is powered by a 6.3 Volt tap of the power supply transformer. The 6.3 volts is rectified and transferred to 12 Volt by means of a voltage doubler in order to drive the coil of the relay and the LED lamp of the power switch.**

**All electronic circuits are set to PCB.**

# Power supply circuit (high voltage)

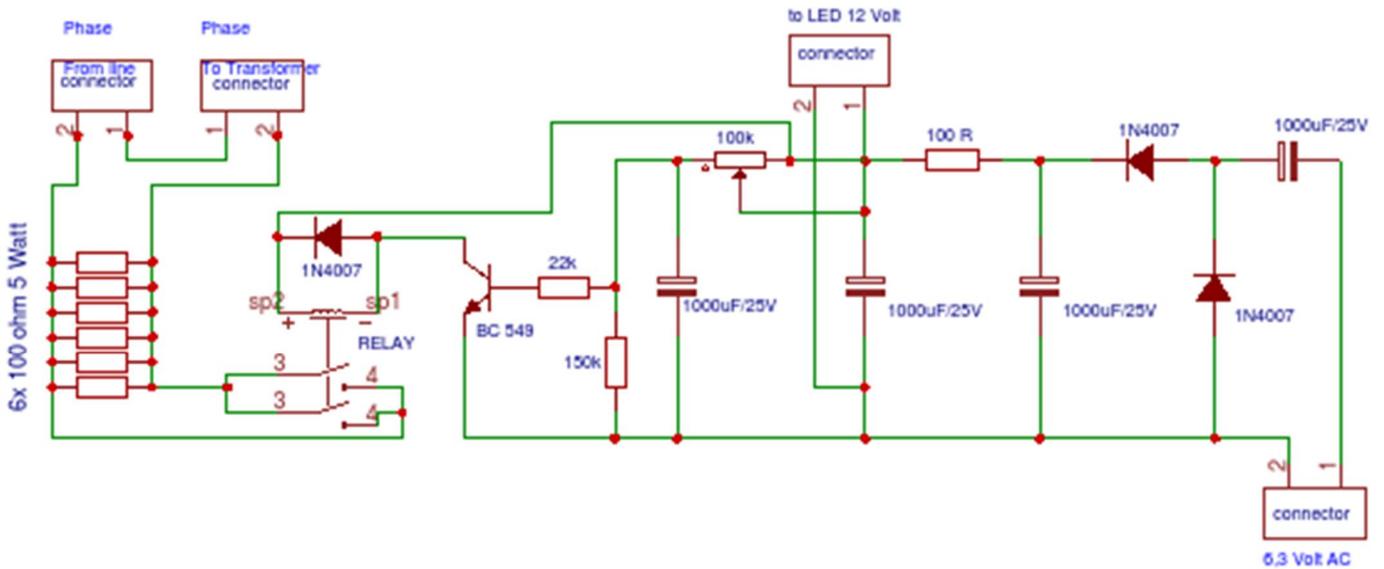
## Voedingsschakeling (hoogspanning)





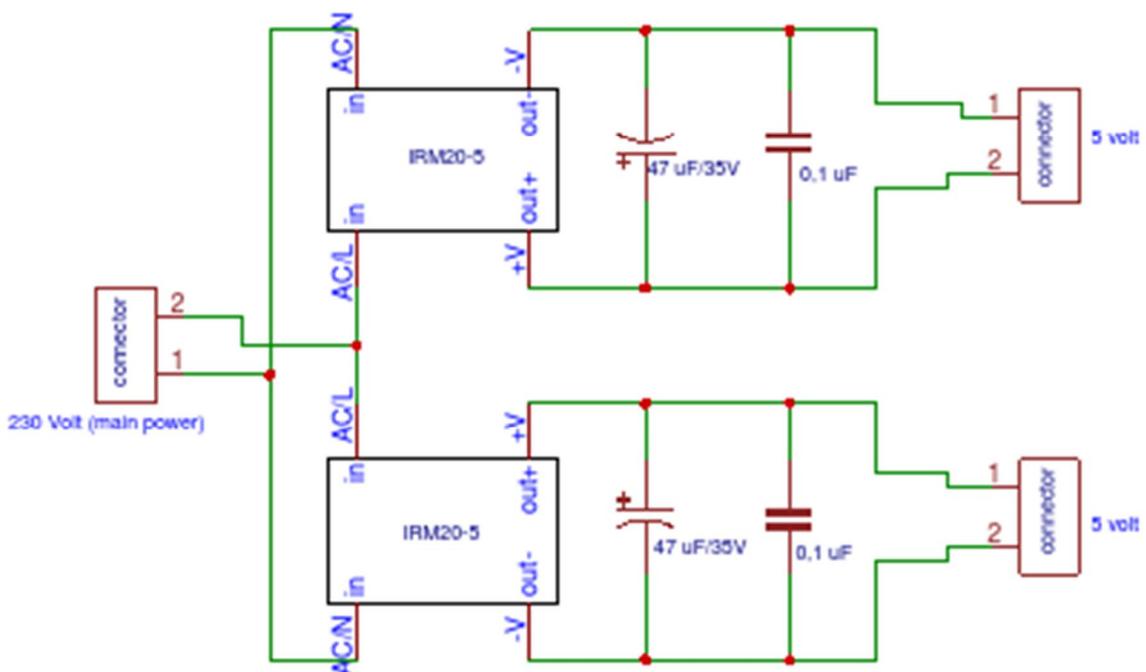
## Inrush current limiter

# Inschakelstroom begrenzer



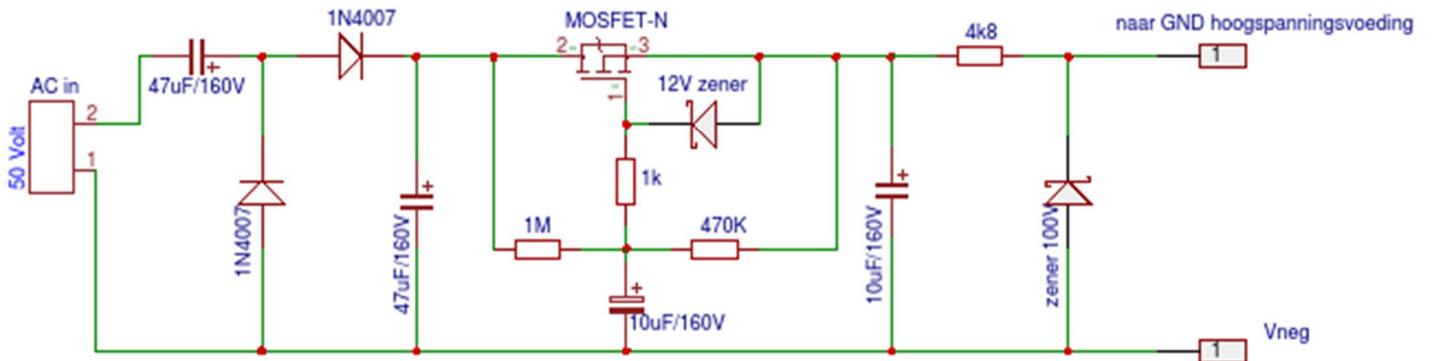
## Meanwell filament supply 300B

# Meanwell Gloeischakeling 300B



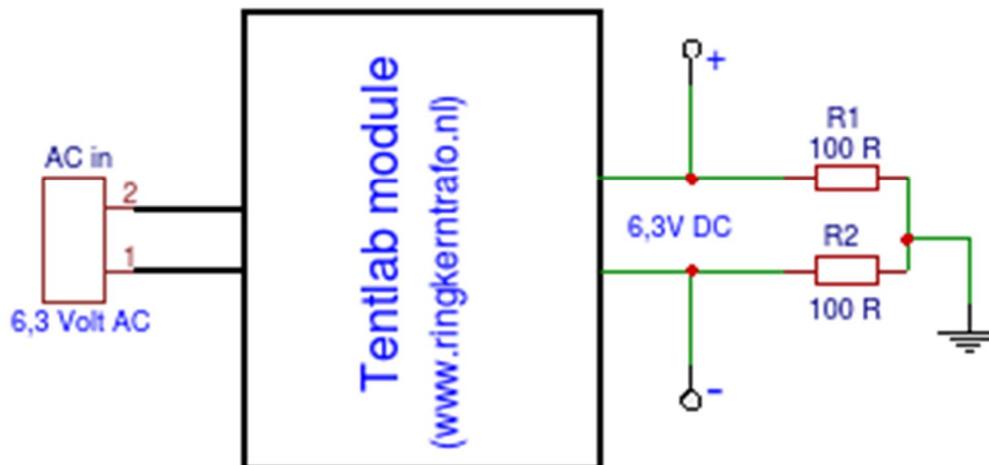
## 300B Vneg supply

### Voedingsschakeling (Vneg)



## Filament supply ECC81

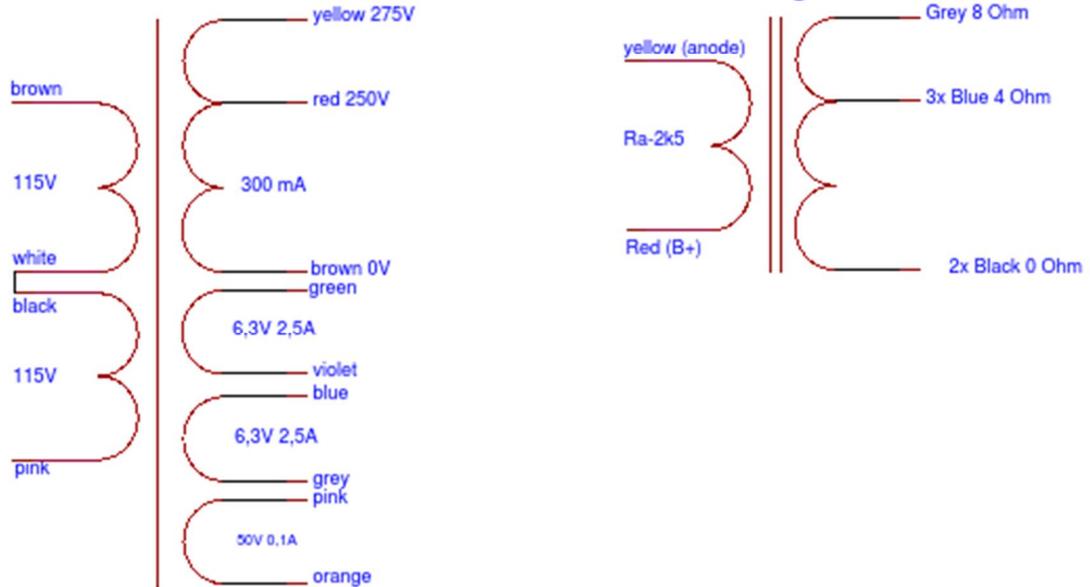
### Gloeischakeling ECC81



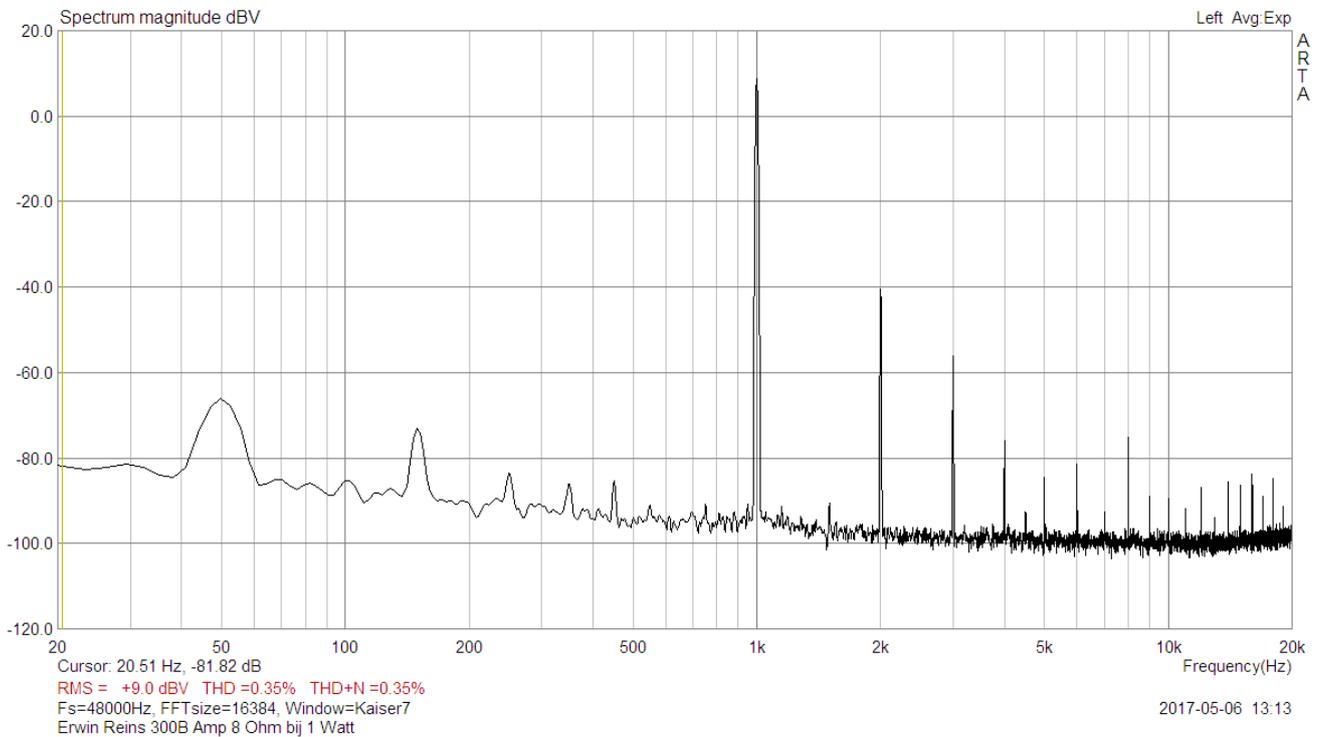
# Toroidol Transformers

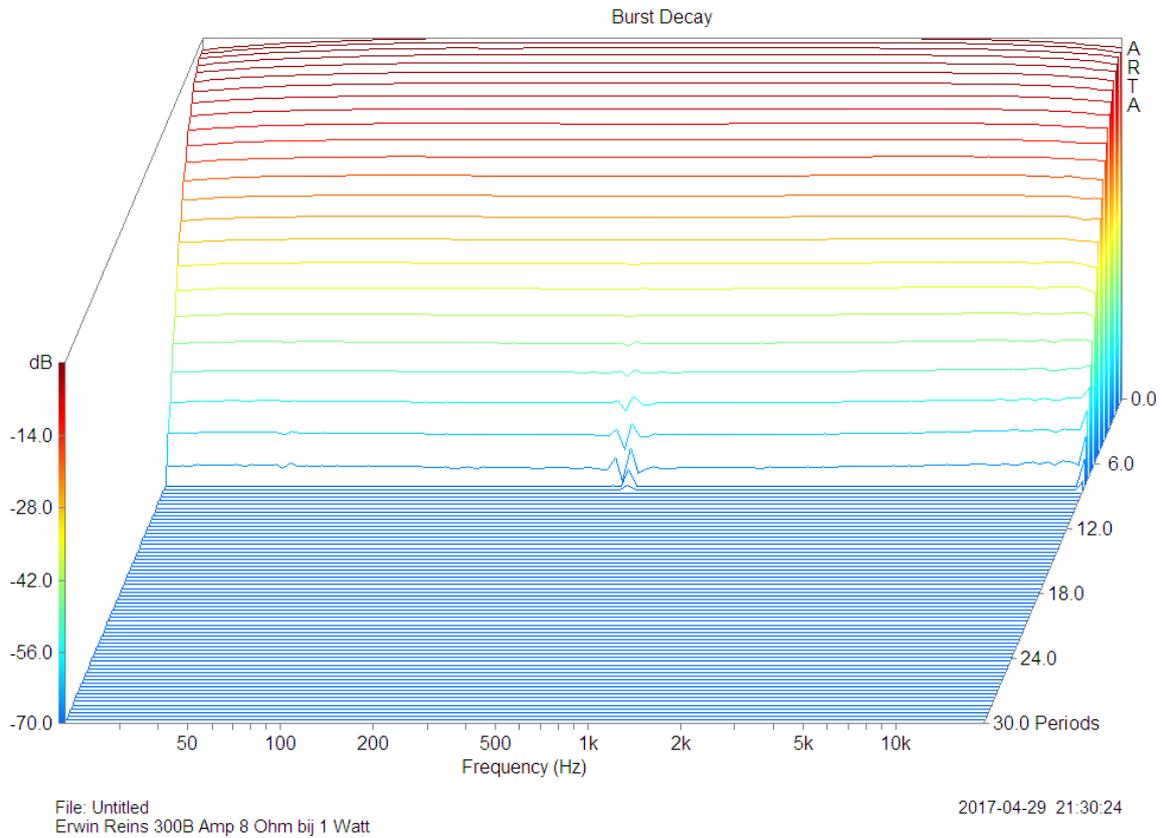
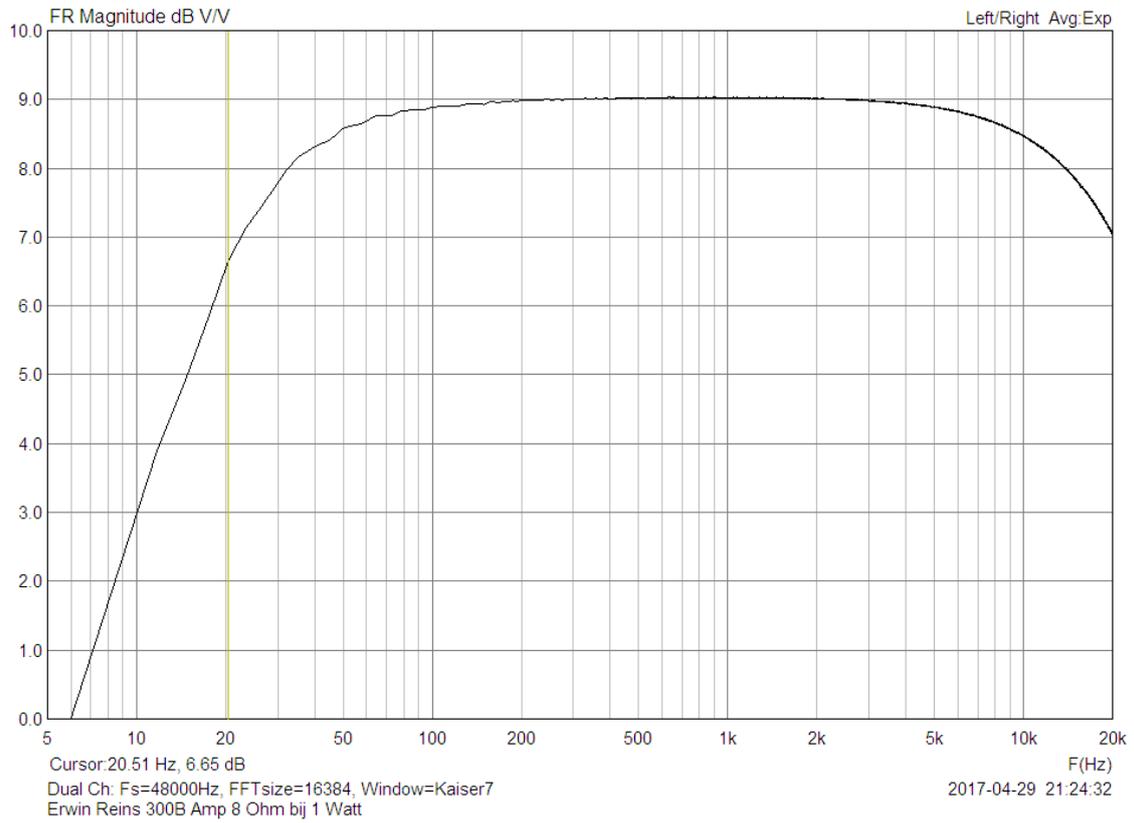
([www.ringkertrafo.nl](http://www.ringkertrafo.nl))

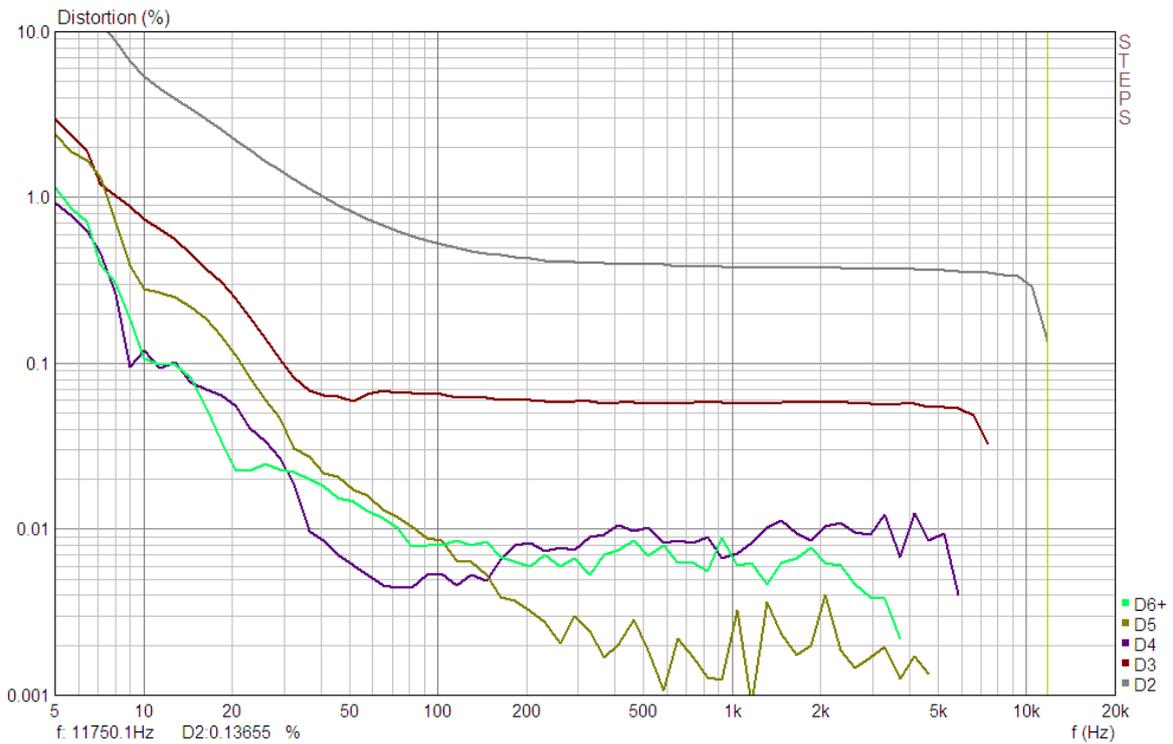
## Power Transformer 4N1885 VDV2512-SEE Single-Ended UGT



## Measurements

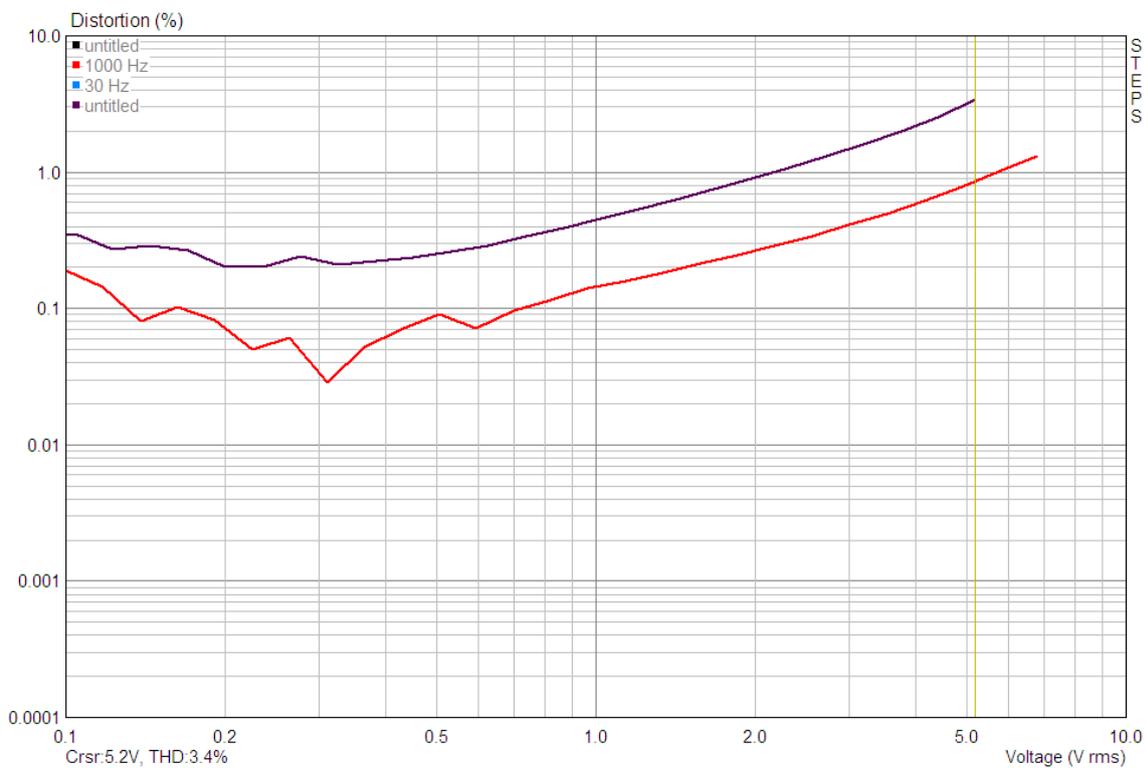






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Erwin Reins 300B Amp 8 Ohm bij 1 Watt

2017-04-29 21:37:21



File: untitle.vsd  
Erwin Reins 300B Amp 8 Ohm bij volle uitsturing

2017-04-29 22:31:19

