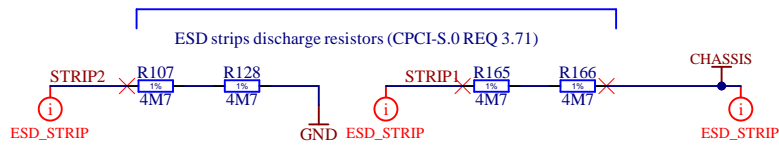
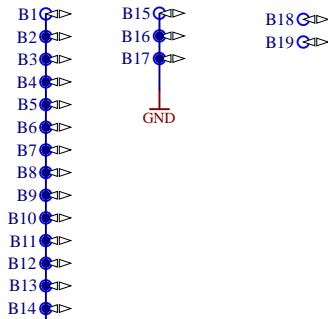


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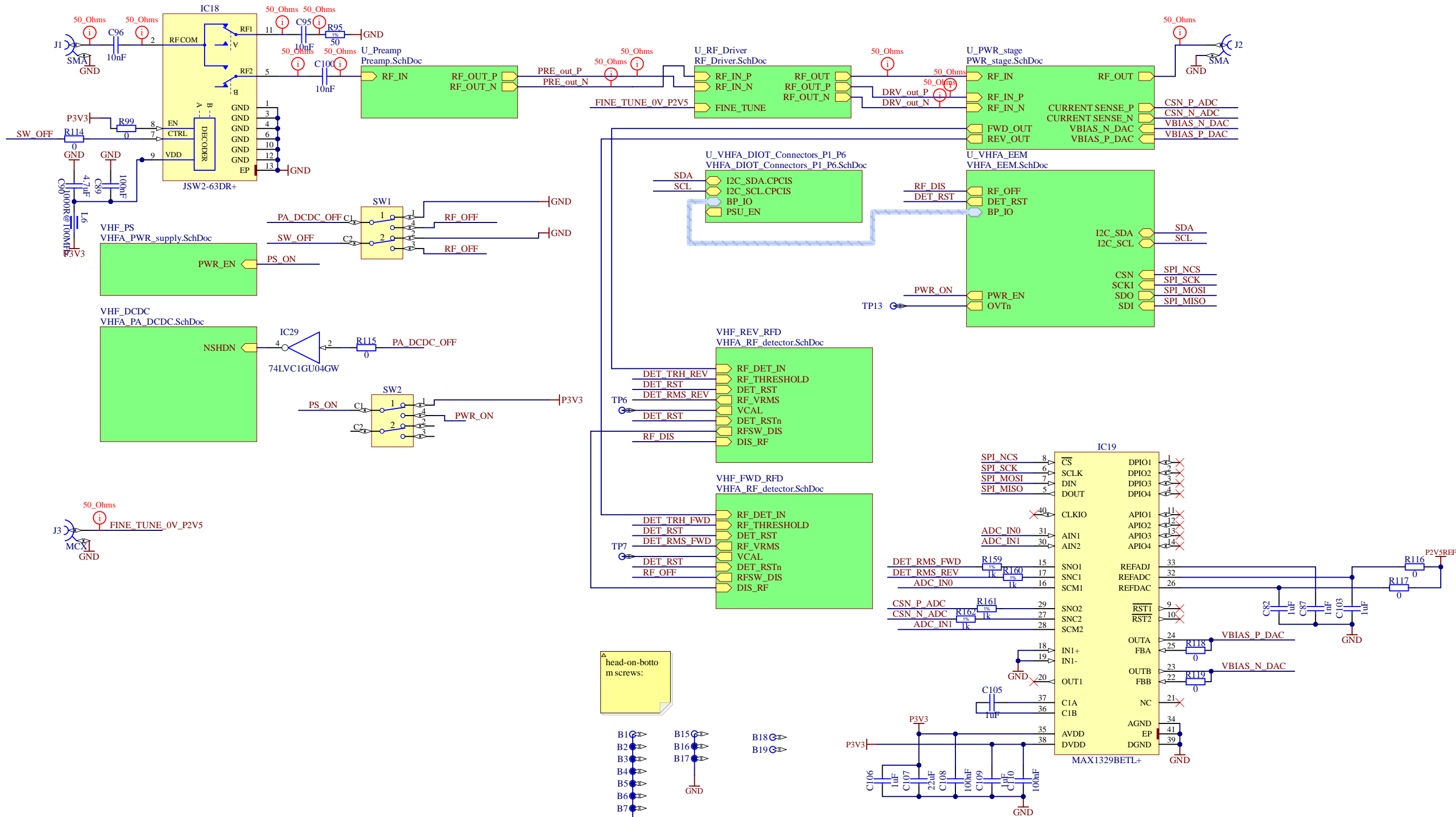
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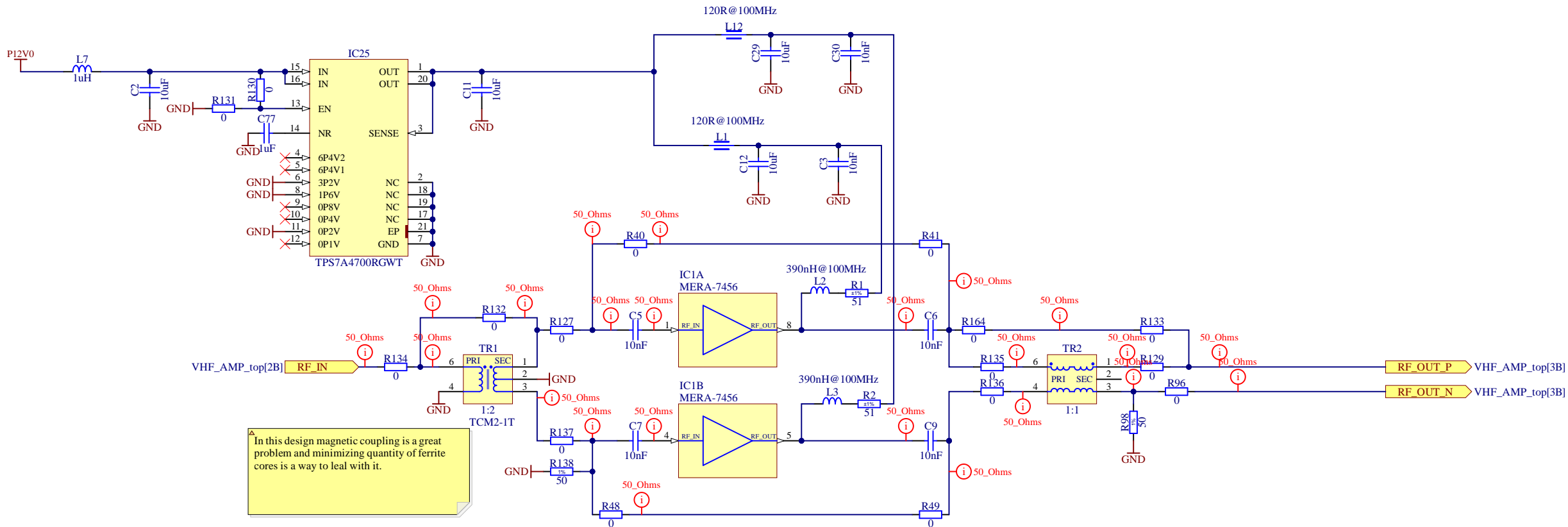


head-on-bottom screws:



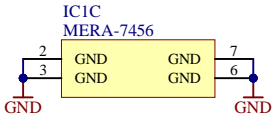
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Document		Designer	shanasz
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		Print Date	24.03.2024 23:15:45
		Sheet	1 of 9
*	ISE	ARTIQ	
*		Size	A3
		Rev	*





In this design magnetic coupling is a great problem and minimizing quantity of ferrite cores is a way to deal with it.

R BIAS	
Vcc	"1%" Res. Values (ohms) for Optimum Biasing
7	28.7
8	41.2
9	53.6
10	66.5
11	78.7
12	90.9
13	102
14	115
15	127

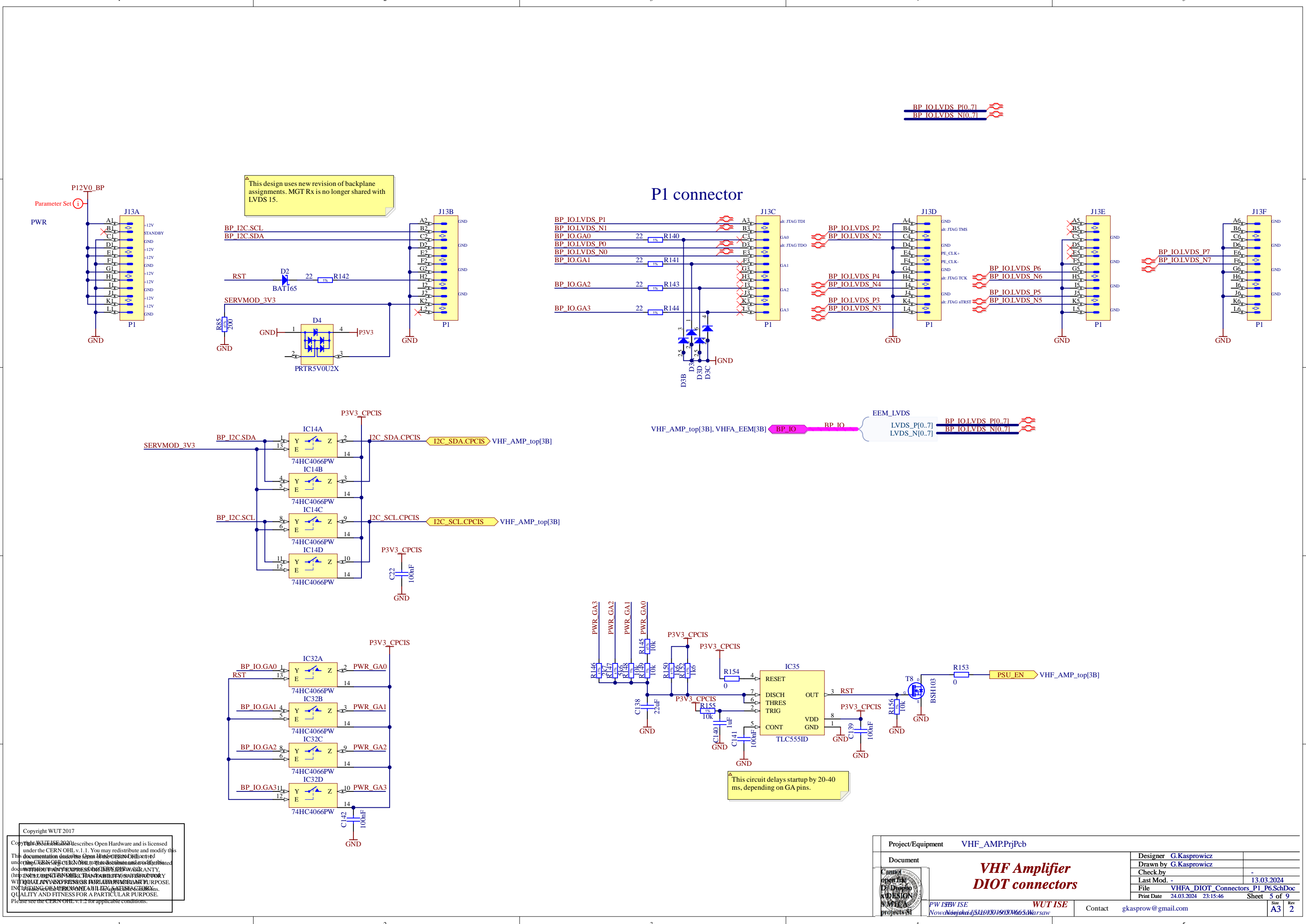


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Project/Equipment		ARTIQ/SINARA		
Document		Designer	shanasz	
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		ARTIQ		
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		Rev	*	







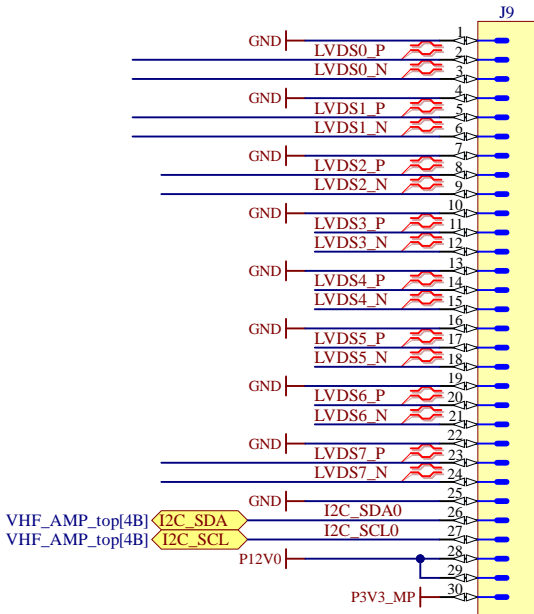
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Project/Equipment		VHF_AMP.PrjPcb	
Document		Designer	G.Kasprowicz
		Drawn by	G.Kasprowicz
		Check by	-
		Last Mod.	13.03.2024
		File	VHFA_DIOT_Connectors_P1_P6.SchDoc
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		Sheet	5 of 9
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		Rev	2
		Contact	gkaspro@poczta.onet.pl

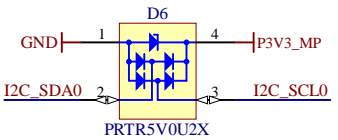
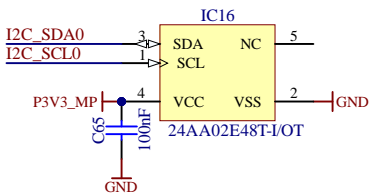
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A



EEM connector: IO are LVDS, I2C is 3V3 LVC MOS, P3V3\_MP up to 20mA, P12V up to 1A

EEM connector: IO are LVDS, I2C is 3V3 LVCMOS, P3V3\_MP up to 20mA, P12V up to 1A



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Project/Equipment ARTIQ/SINARA

Document

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**VHF Amplifier**  
**EEM connectors**

*PW ISE*

*Nowowiejska 15/19 00-665 Warsaw*

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**WUT ISE**

Designer	G.Kasprowicz	
Drawn by	G.Kasprowicz	
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File	VHFA_EEM.SchDoc	
Print Date	24.03.2024 23:15:46	Sheet 6 of 9

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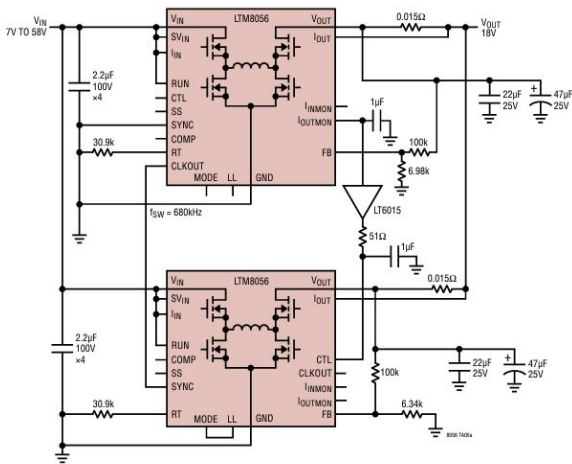
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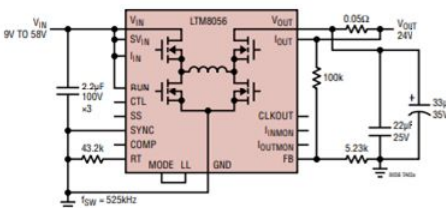
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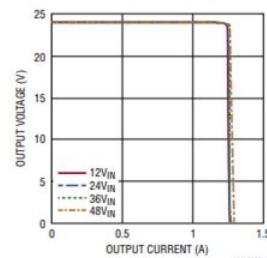
Two LTM8056s Paralleled to Get More Output Current. The Two  $\mu$ Modules Are Synchronized and Switching 180° Out Of Phase



24V<sub>OUT</sub> from 9V<sub>IN</sub> to 58V<sub>IN</sub> with 1.1A Accurate Current Limit



Output Voltage vs Output Current



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Switching freq: 500kHz  
MODE: forced continous mode (low EMI)

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Document		Designer G.Kasprowicz	
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## VHF Amplifier Power Stage Supply

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ARTIQ

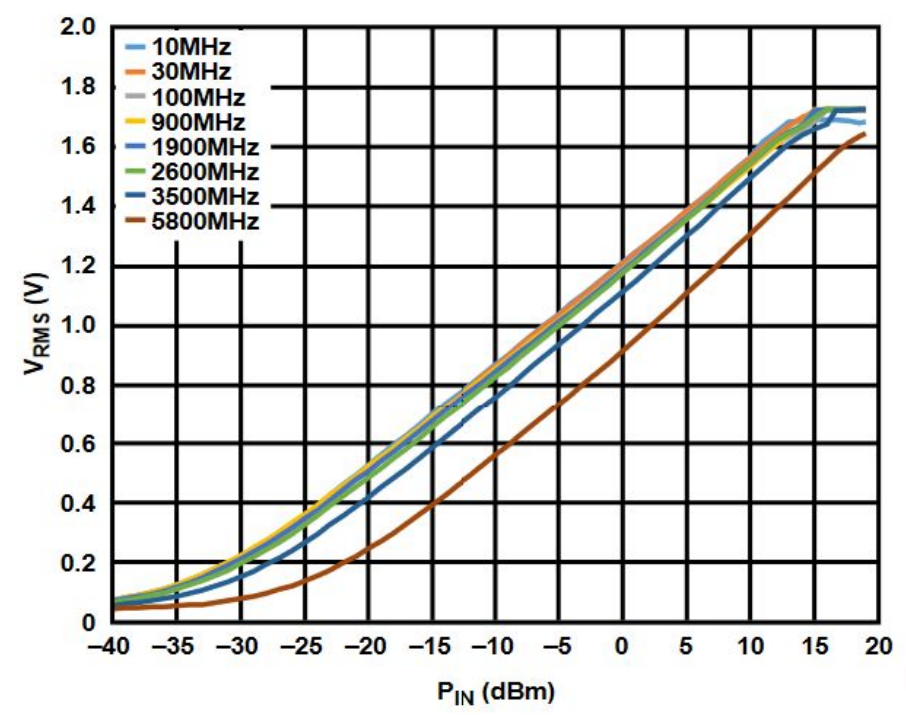
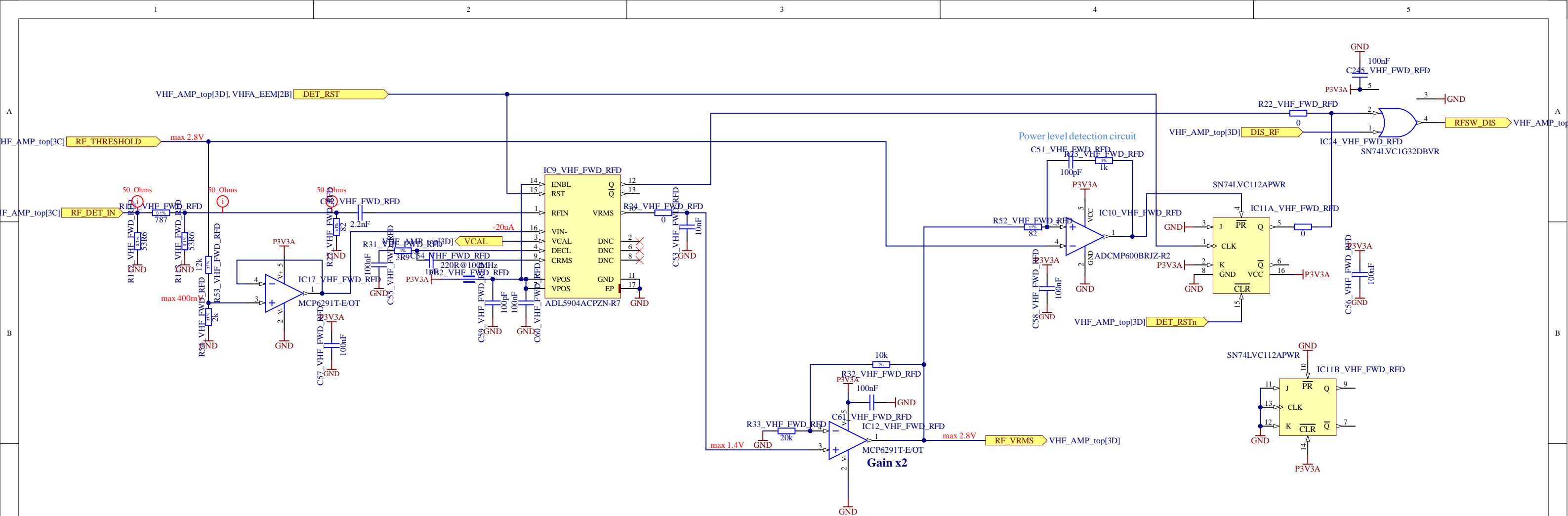


Figure 3.  $V_{RMS}$  vs. Input Level ( $P_{IN}$ ) for Various Frequencies (30 MHz to 6 GHz) at 25°C

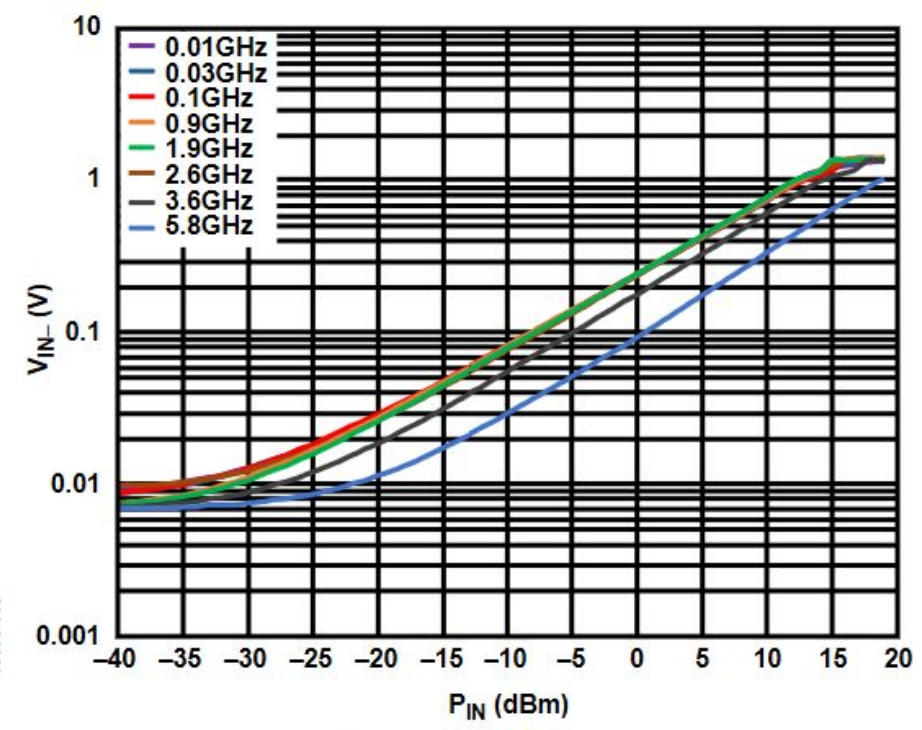


Figure 39.  $V_{IN-}$  vs.  $P_{IN}$  at Various Frequencies

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Project/Equipment		Sampler	
Document		Designer G.Kasprowicz	
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**VHF Amplifier**  
**Power detector & protection**

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ARTIQ



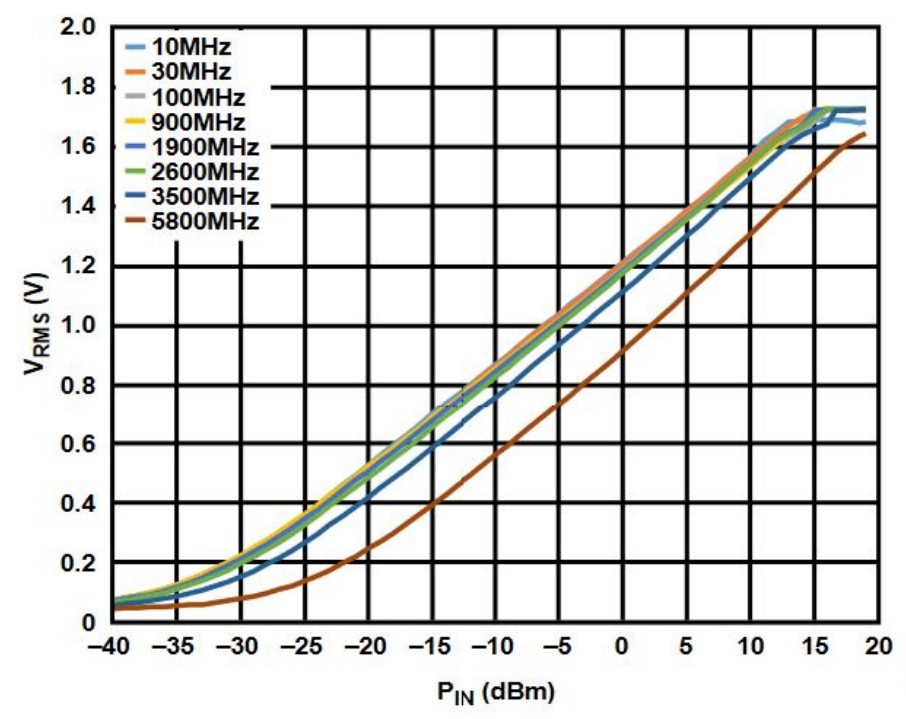
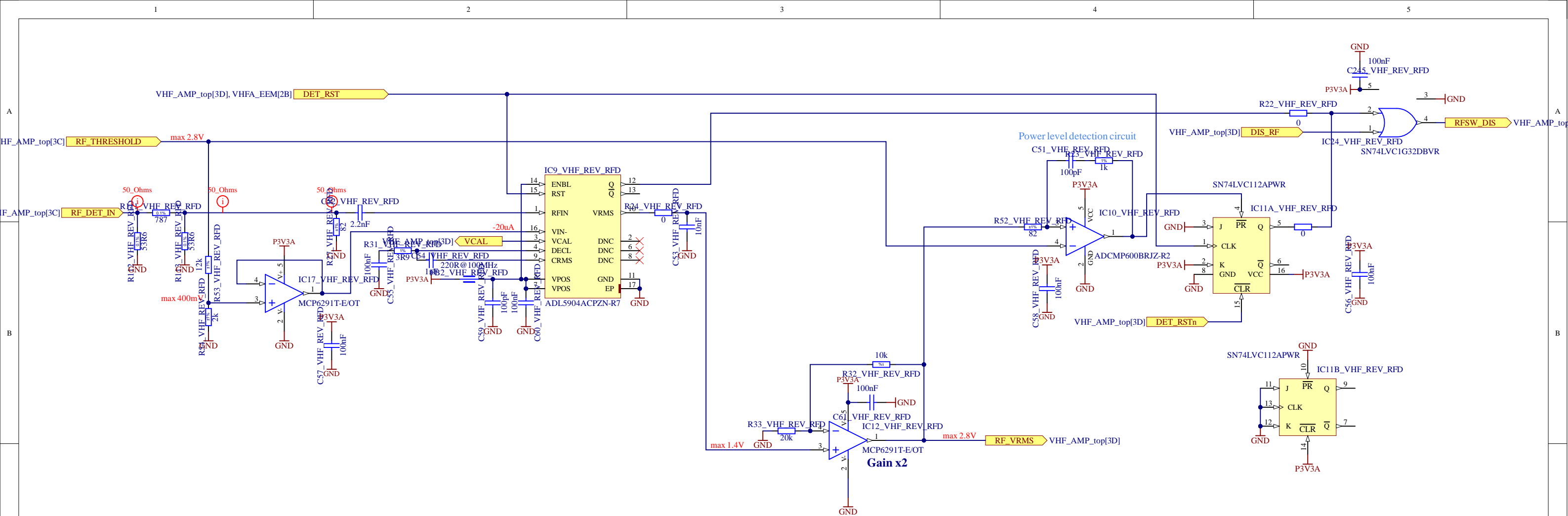


Figure 3.  $V_{RMS}$  vs. Input Level ( $P_{IN}$ ) for Various Frequencies (30 MHz to 6 GHz) at 25°C

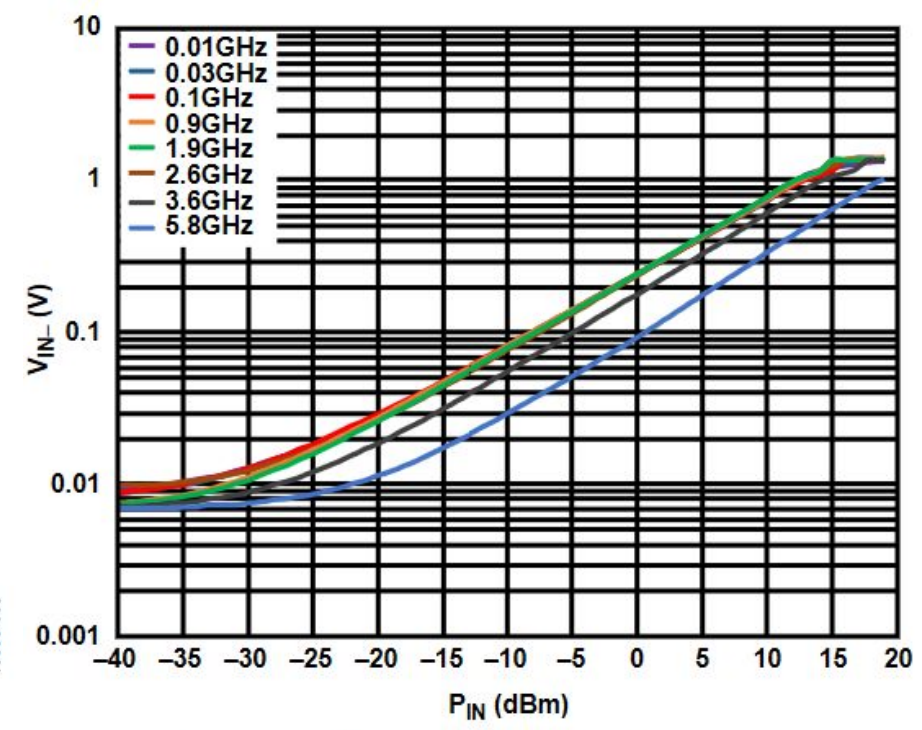


Figure 39.  $V_{IN-}$  vs.  $P_{IN}$  at Various Frequencies

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		Size A3	
		Rev 2	

**VHF Amplifier**  
**Power detector & protection**

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Nowowiejska 15/19 00-665 Warsaw

ARTIQ

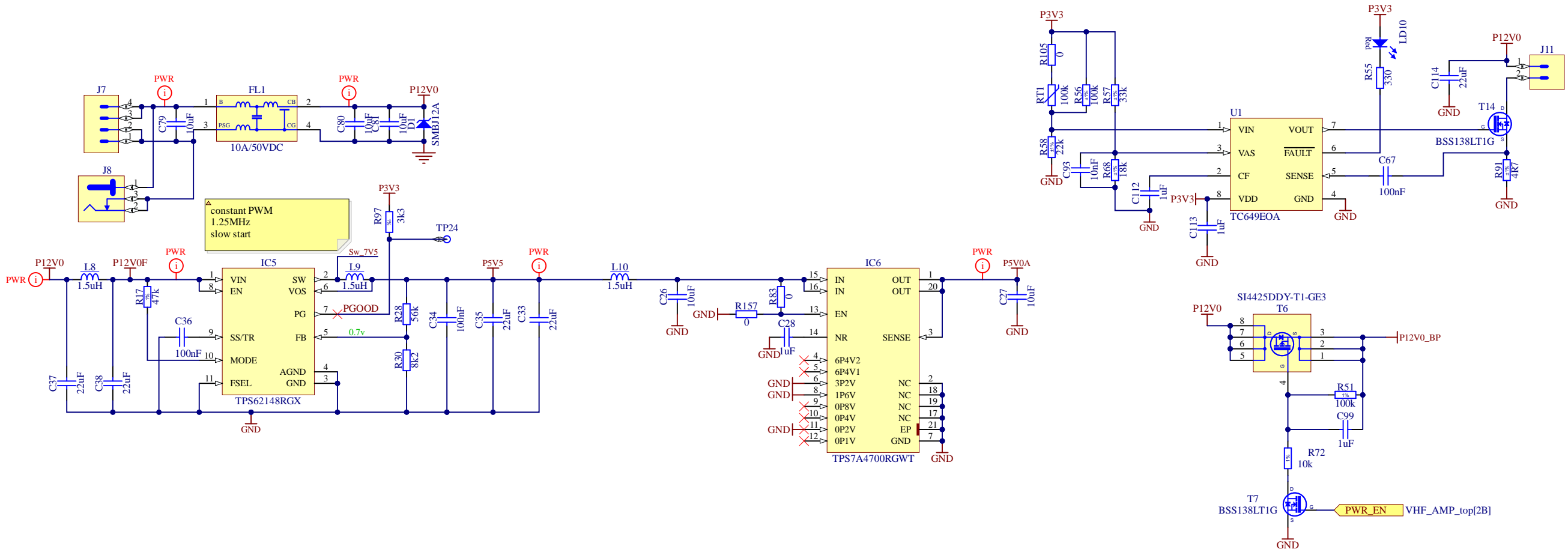
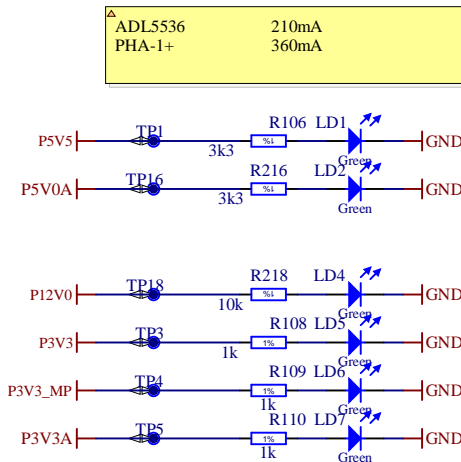
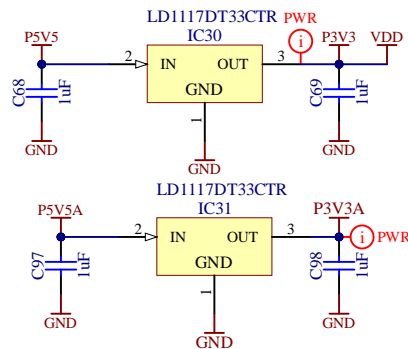
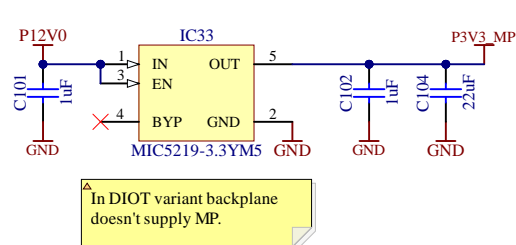
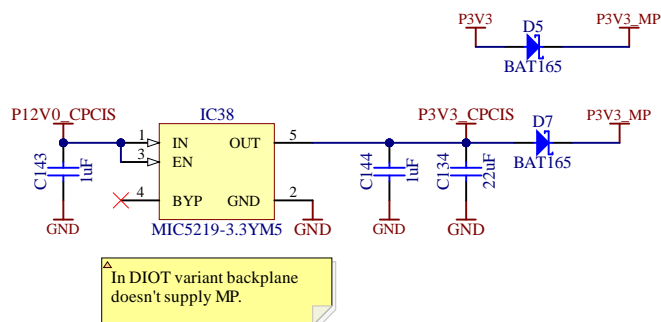


TABLE 6-1:  $R_{SENSE}$  VS. FAN CURRENT

Nominal Fan Current (mA)	$R_{SENSE}$ (Ω)
50	9.1
100	4.7
150	3.0
200	2.4
250	2.0
300	1.8
350	1.6
400	1.3
450	1.2
500	1.0



TP22  
TP23



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Project/Equipment	ARTIQ/SINARA	
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Drawn by	G.Kasprowicz	
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Size	A3	Rev 2