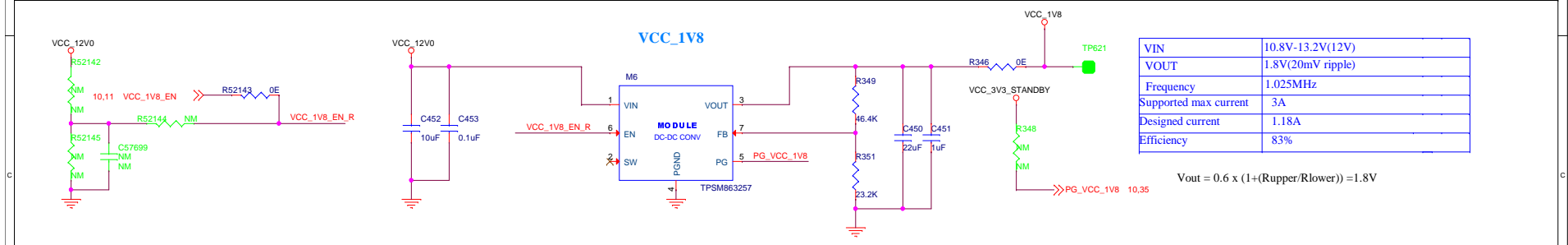


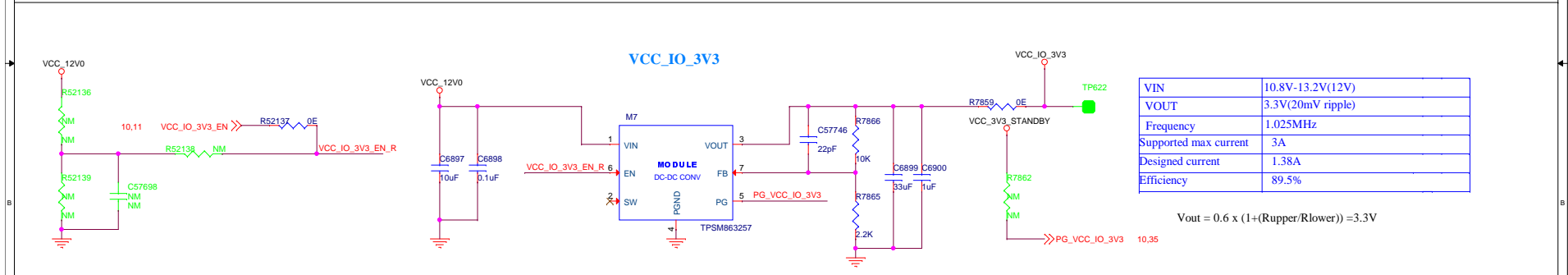
VIN	10.8V-13.2V(12V)
VOUT	3.6V(20mV ripple)
Frequency	1.63MHz
Supported max current	3A
Designed current	1.62A
Efficiency	91.9%

$V_{out} = 0.6 \times (1 + (R_{upper}/R_{lower})) = 3.6V$



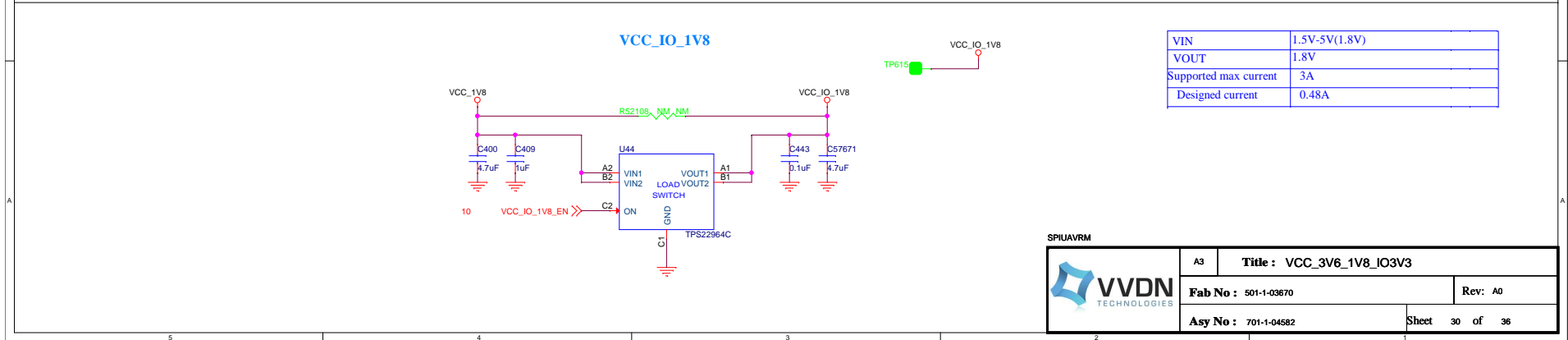
VIN	10.8V-13.2V(12V)
VOUT	1.8V(20mV ripple)
Frequency	1.025MHz
Supported max current	3A
Designed current	1.18A
Efficiency	83%

$V_{out} = 0.6 \times (1 + (R_{upper}/R_{lower})) = 1.8V$



VIN	10.8V-13.2V(12V)
VOUT	3.3V(20mV ripple)
Frequency	1.025MHz
Supported max current	3A
Designed current	1.38A
Efficiency	89.5%

$V_{out} = 0.6 \times (1 + (R_{upper}/R_{lower})) = 3.3V$

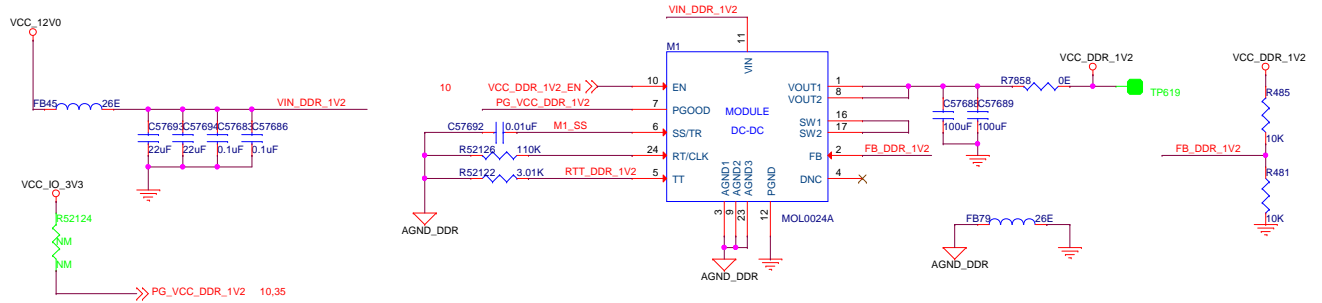


VIN	1.5V-5V(1.8V)
VOUT	1.8V
Supported max current	3A
Designed current	0.48A

SPIUAVRM

A3	Title : VCC_3V6_1V8_IO3V3	Rev: A0
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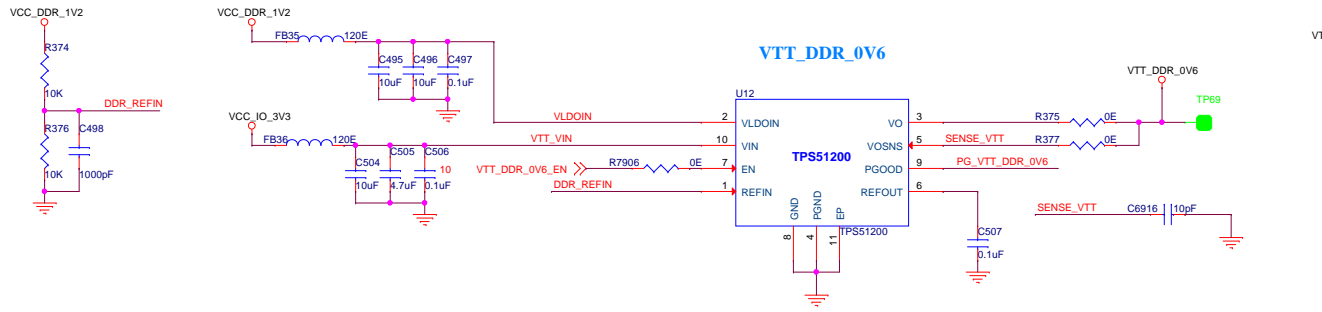
### VCC\_DDR\_1V2




VIN	4.5V-17V(12V)
VOUT	1.2V(5mV ripple)
Frequency	450kHz
Supported max current	6A
Designed current	2.97A
Efficiency	83.8%

$V_{out} = 0.6 \times (1 + (R_{upper}/R_{lower})) = 1.2V$


### VTT\_DDR\_0V6

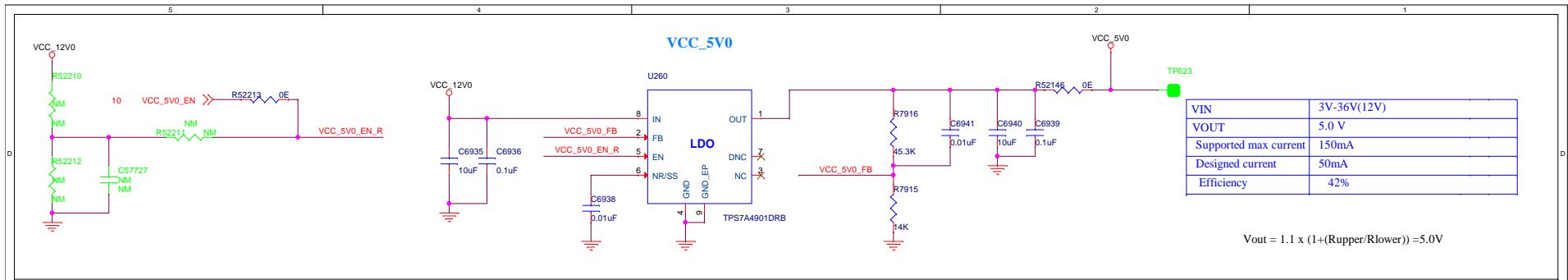


VIN	2.5-3.3V(3.3V)
VLDOIN	1.1-3.5V(1.2V)
VOUT	0.6V
Supported max current	3A
Designed current	1A
Efficiency	50%

 Sense pin should be routed from VTT island

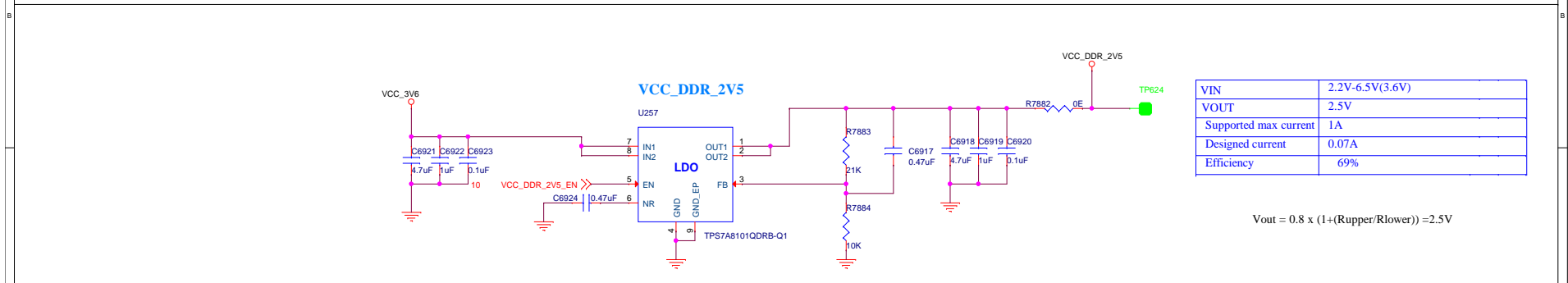
SPIUAVRM

	A3	Title : DDR_1V2_PS_DDR4_VTT	
	Fab No : 501-1-03670		Rev: A0
	Asy No : 701-1-04582		Sheet 32 of 36



VIN	3V-36V(12V)
VOUT	5.0 V
Supported max current	150mA
Designed current	50mA
Efficiency	42%

$V_{out} = 1.1 \times (1 + (R_{upper}/R_{lower})) = 5.0V$



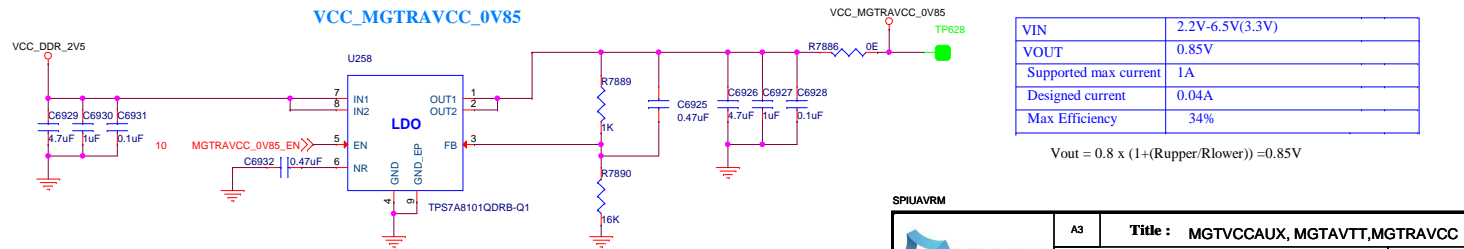
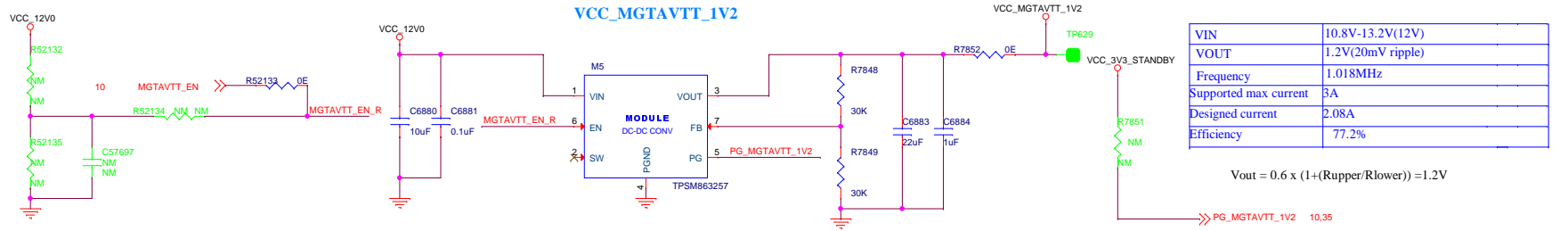
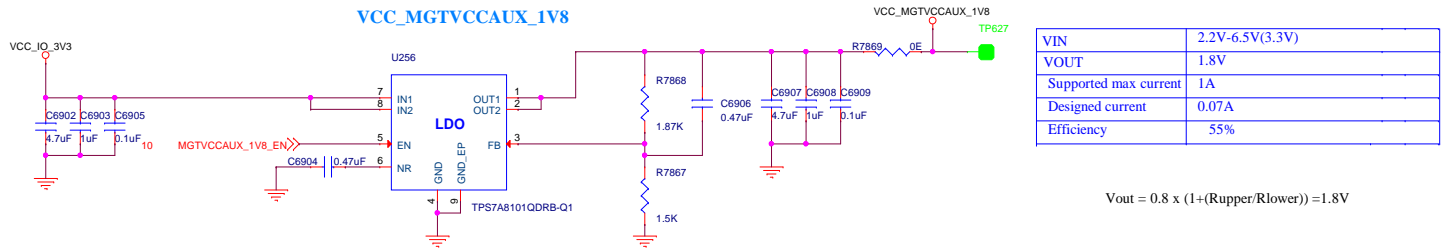
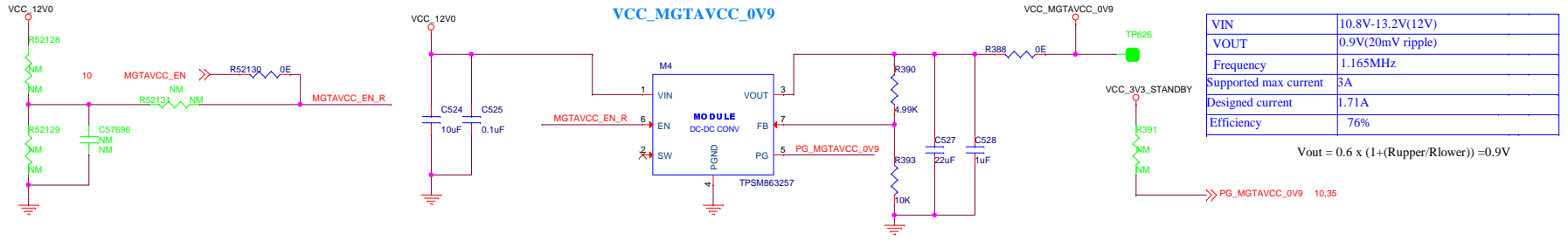
VIN	2.2V-6.5V(3.6V)
VOUT	2.5V
Supported max current	1A
Designed current	0.07A
Efficiency	69%

$V_{out} = 0.8 \times (1 + (R_{upper}/R_{lower})) = 2.5V$

**SP1UAVRM**

A3	Title : CLOCK_3V3_VCC_5V0_DDR_2V5	Rev: A0
Fab No : 501-1-03870		Sheet 33 of 36
Asy No : 701-1-04582		

# ZU FPGA - MGTVCCAUX, VCC\_MGTAVCC, MGTAVTT, VCC\_MGTRAVCC



SPIUAVRM

	A3	<b>Title :</b> MGTVCCAUX, MGTAVTT, MGTRAVCC	Rev: A0
	<b>Fab No :</b> 501-1-03870		Sheet 34 of 36
	<b>Asy No :</b> 701-1-04582		