

A

U_POWER
POWER.SchDoc

U_CLOCK_GENERATOR
CLOCK_GENERATOR.SchDoc

B

U_CONNECTIONS
CONNECTIONS.SchDoc

U_FPGA
FPGA.SchDoc

U_STM32
STM32.SchDoc

U_AUDIO_CODEC
AUDIO_CODEC.SchDoc

C

U_DAC
DAC.SchDoc

U_ADC
ADC.SchDoc

A

B

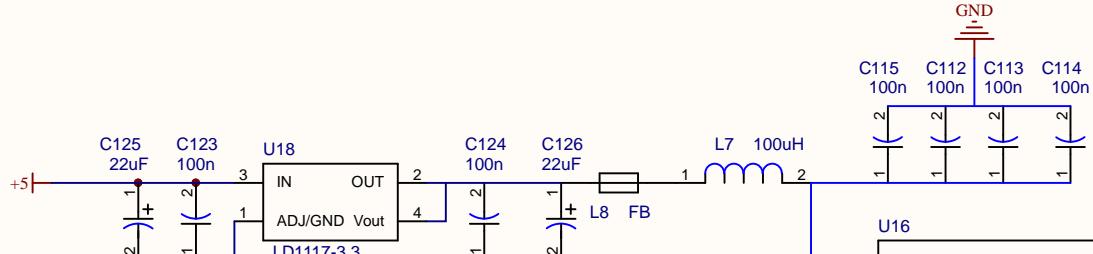
C

D

Title MOTHERBOARD			*
Size: A4	Number:2	Revision:1.9	*
Date: 04.05.2020	Time: 19:52:33	Sheet2 of 18	*
File: D:\Dropbox\Develop\Projects\UA3REO\Scheme\ALTIUM_DESIGNER\MOTHERBOARD\MOTHERBOARD.SCHDOC			*

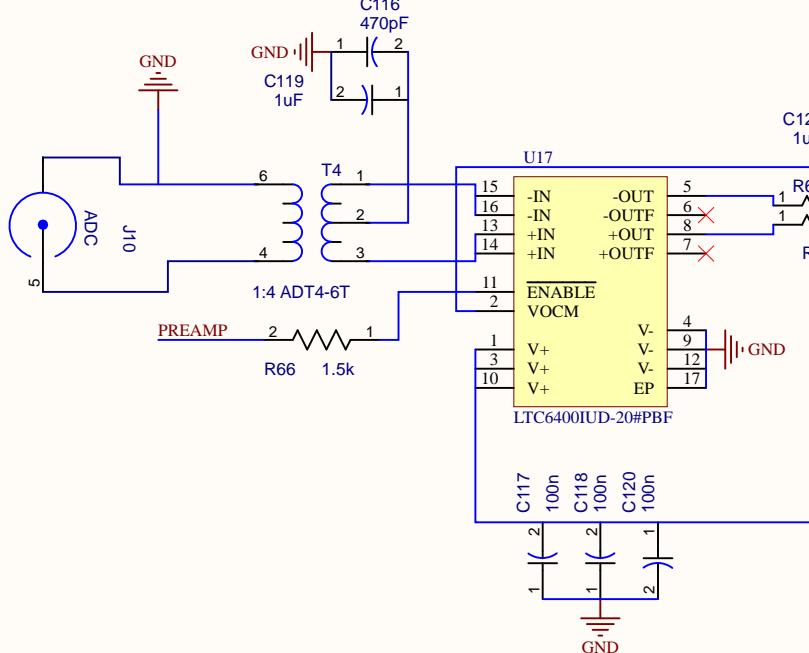
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A



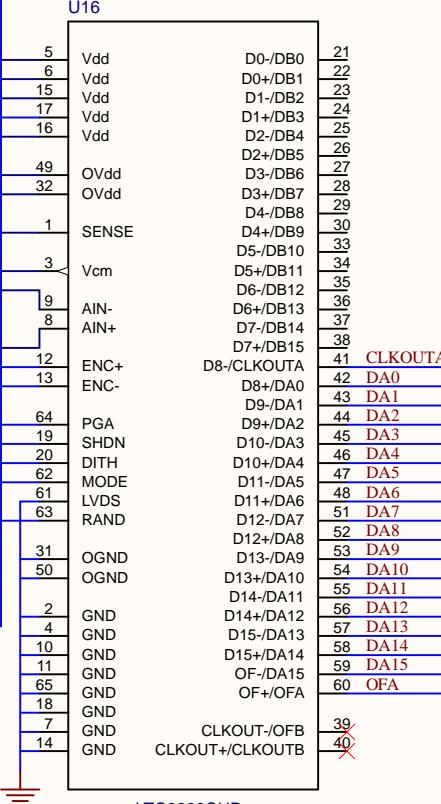
B

B



C

C



TO_FPGA

PREAMP
CLKOUTA
DA0
DA1
DA2
DA3
DA4
DA5
DA6
DA7
DA8
DA9
DA10
DA11
DA12
DA13
DA14
DA15
DITH
SHDN
OFA
RAND
PGA
CLK_122.88M
CLK_N_122.88M

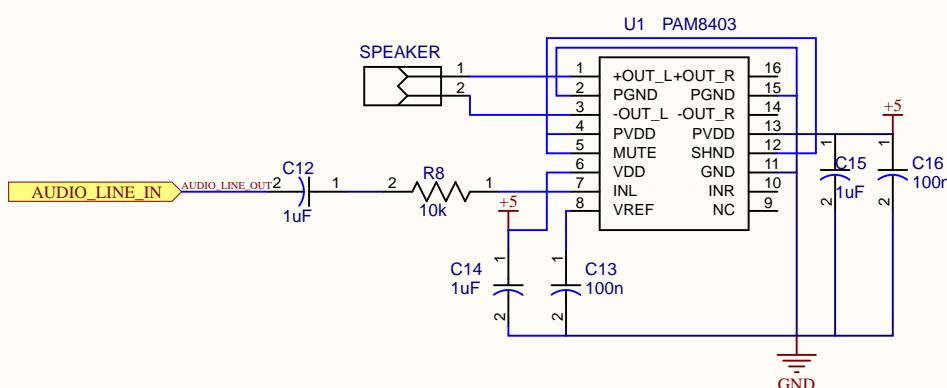
Title **ADC**

Size: A4 Number:3 Revision:1.9

Date: 04.05.2020 Time: 19:52:33 Sheet 3 of 18

File: D:\Dropbox\Develop\Projects\UA3REO\Scheme\ALTIUM_DESIGNER\MOTHERBOARD\ADC.SchDoc

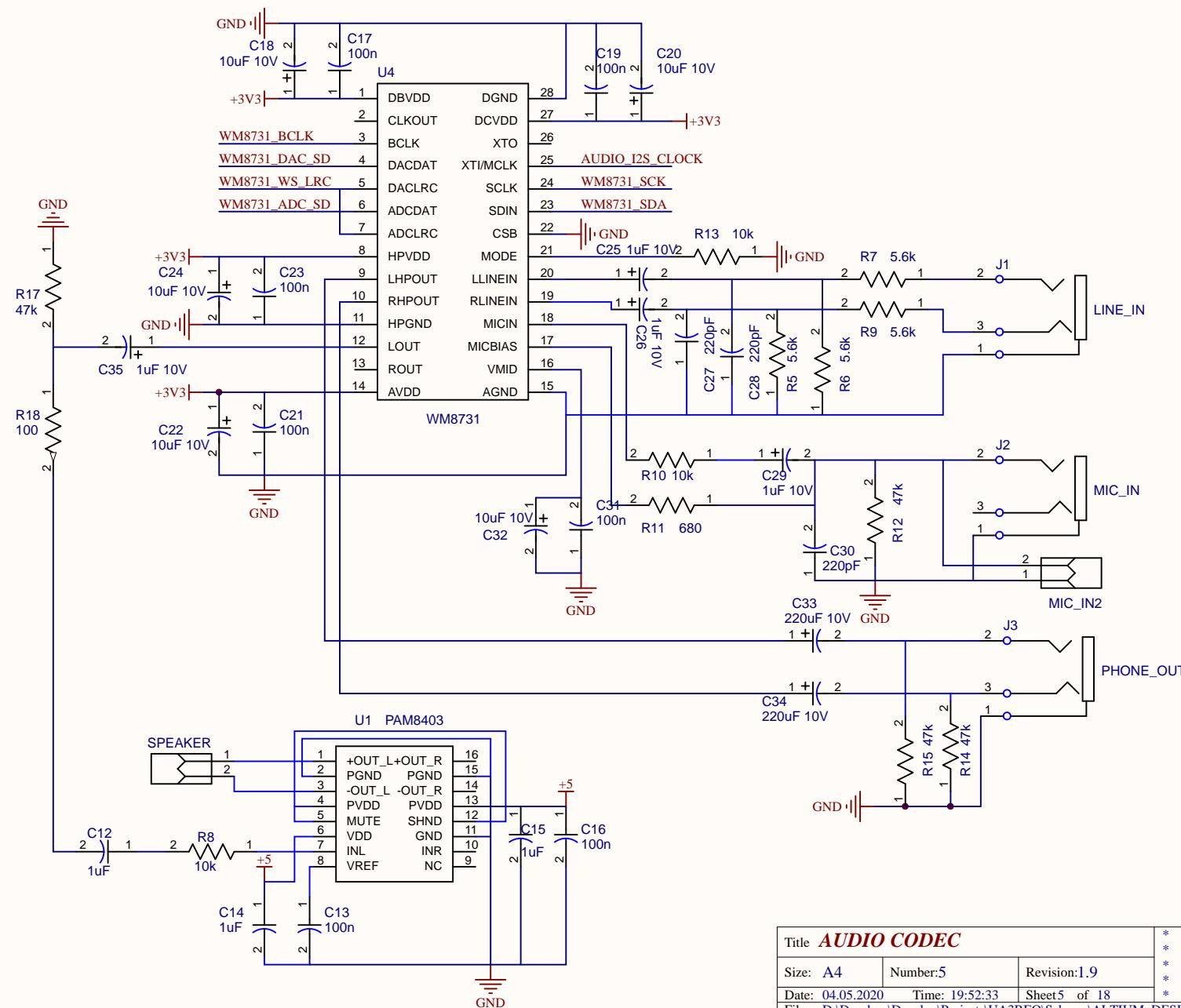
Altium



Title AF AMP			* UA3REO BH8CGJ *
Size: A4	Number:4	Revision:1.9	
Date: 04.05.2020	Time: 19:52:33	Sheet4 of 18	
File: D:\Dropbox\Develop\Projects\UA3REO\Scheme\ALTIUM_DESIGNER\MOTHERBOARD\AF AMP.SchDoc			Altium

A

A

Title **AUDIO CODEC**

Size: A4 Number:5 Revision:1.9

Date: 04.05.2020 Time: 19:52:33 Sheet 5 of 18

File: D:\Dropbox\Develop\Projects\UA3REO\Scheme\ALTIUM_DESIGNER\MOTHERBOARD\AUDIO CODEC.SchDoc

Altium

A

A

B

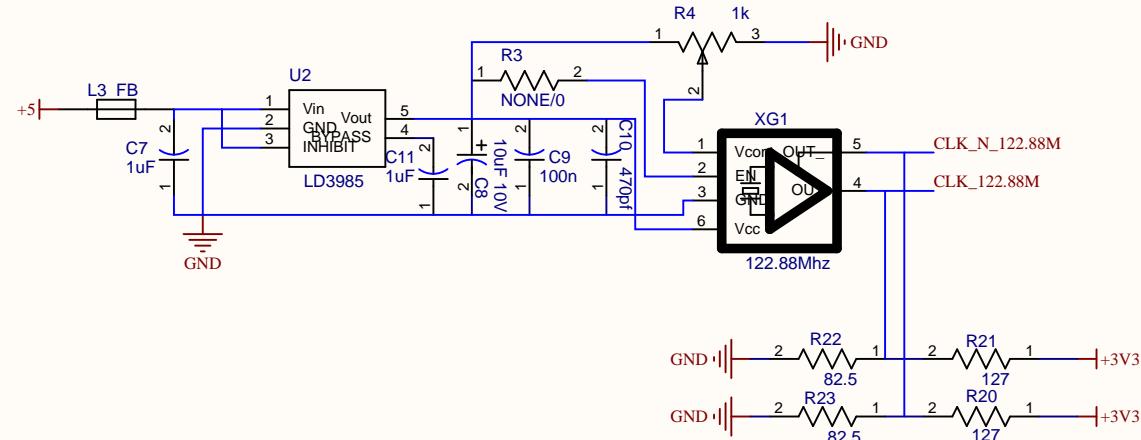
B

C

C

D

D

Title **CLOCK_GENERATOR**

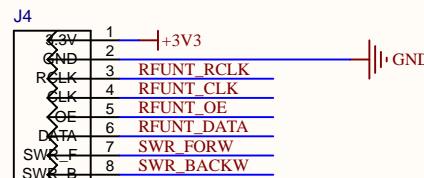
Size: A4 Number:6 Revision:1.9

Date: 04.05.2020 Time: 19:52:33 Sheet 6 of 18

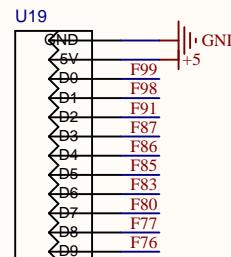
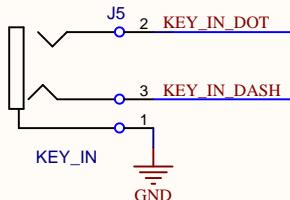
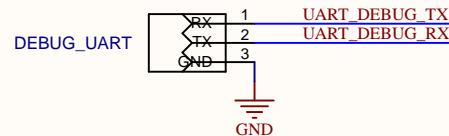
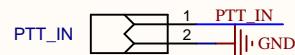
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Altium

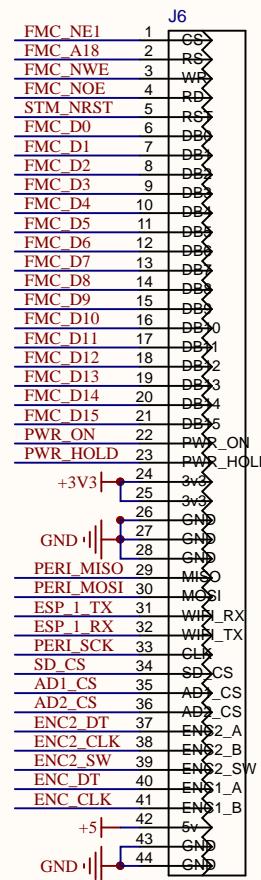
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RF_UNIT



EXT-CONN



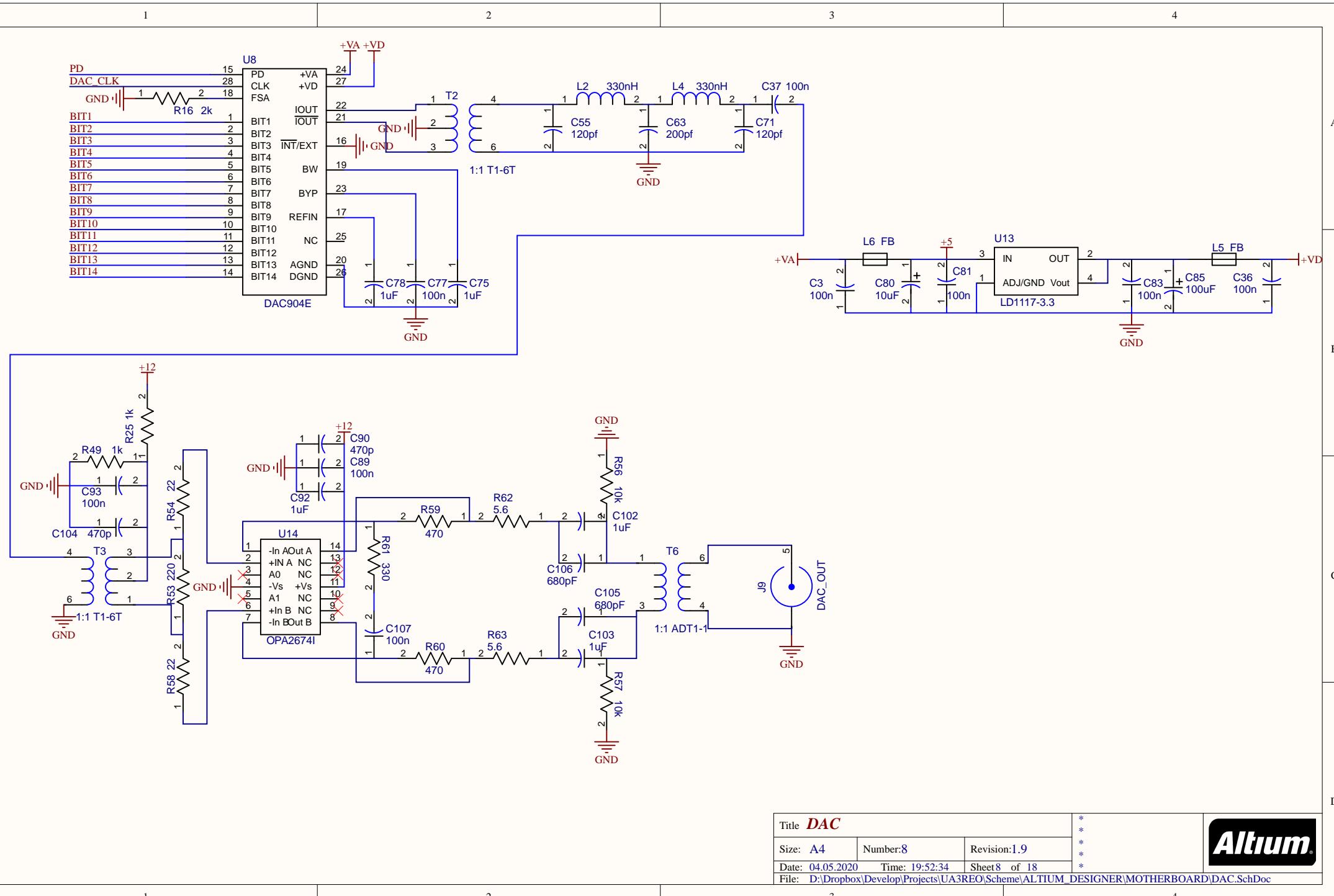
FRONT-UNIT

AltiumTitle **CONNECTIONS**

Size: A4 Number: 7 Revision: 1.9

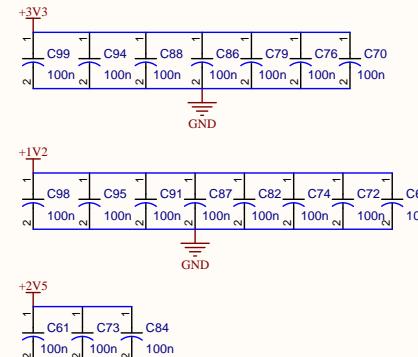
Date: 04.05.2020 Time: 19:52:34 Sheet 7 of 18

File: D:\Dropbox\Develop\Projects\UA3REO\Scheme\ALTIUM_DESIGNER\MOTHERBOARD\CONNECTIONS.SchDoc



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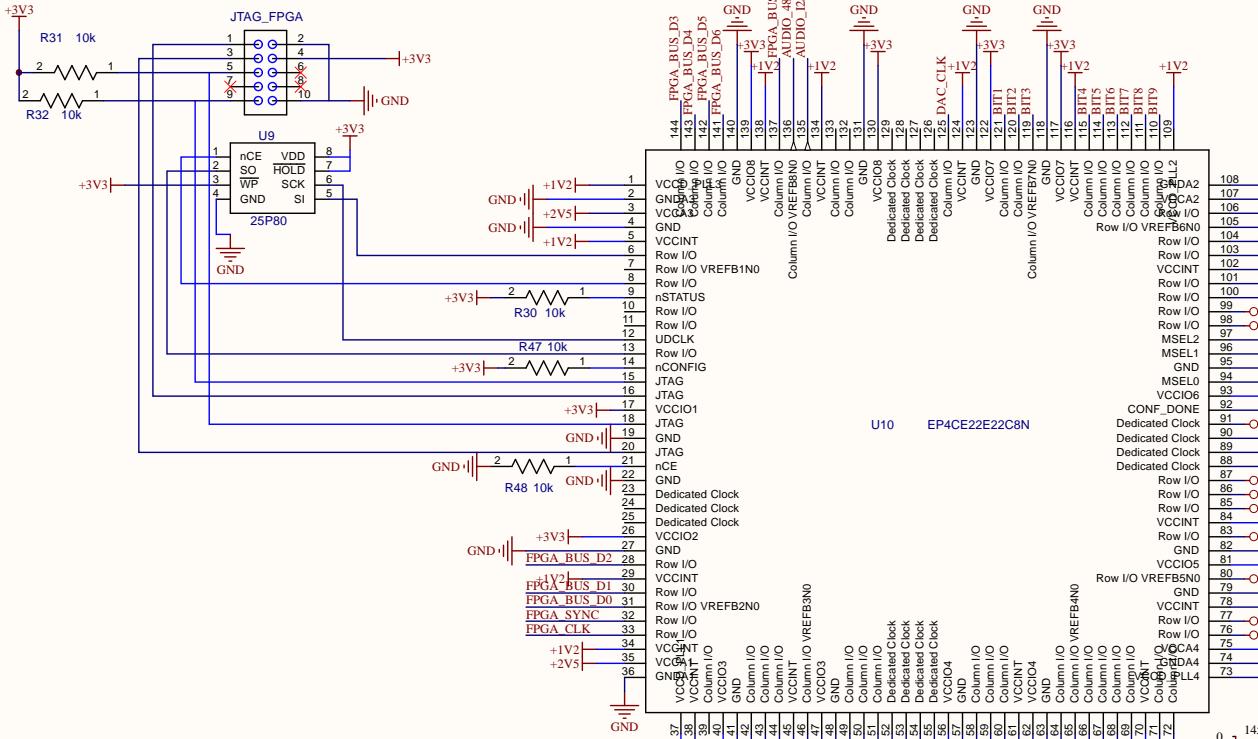
A



F99
F98
F91
F87
F86
F85
F83
F80
F77
F76

B

B



PREAMP
CLKOUTA
DA0
DA1
DA2
DA3
DA4
DA5
DA6
DA7
DA8
DA9
DA10
DA11
DA12
DA13
DA14
DA15
DITH
SHDN
OFA
RAND
PGA
CLK_122.88M
CLK_N_122.88M

DAC_CLK
BIT1
BIT2
BIT3
BIT4
BIT5
BIT6
BIT7
BIT8
BIT9
BIT10
BIT11
BIT12
BIT13
BIT14
PD

FPGA_CLK
FPGA_SYNC
AUDIO_I2S_CLOCK
AUDIO_48K_CLOCK
FPGA_BUS_D7
FPGA_BUS_D6
FPGA_BUS_D5
FPGA_BUS_D4
FPGA_BUS_D3
FPGA_BUS_D2
FPGA_BUS_D1
FPGA_BUS_D0

C

C

0 145 GND

EXT_CONN

TO_ADC

TO_DAC

TO_STM32

Title **FPGA**

Size: A3

Number:9

Revision:1.9

Date: 04.05.2020

Time: 19:52:34

Sheet9 of 18

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1

2

3

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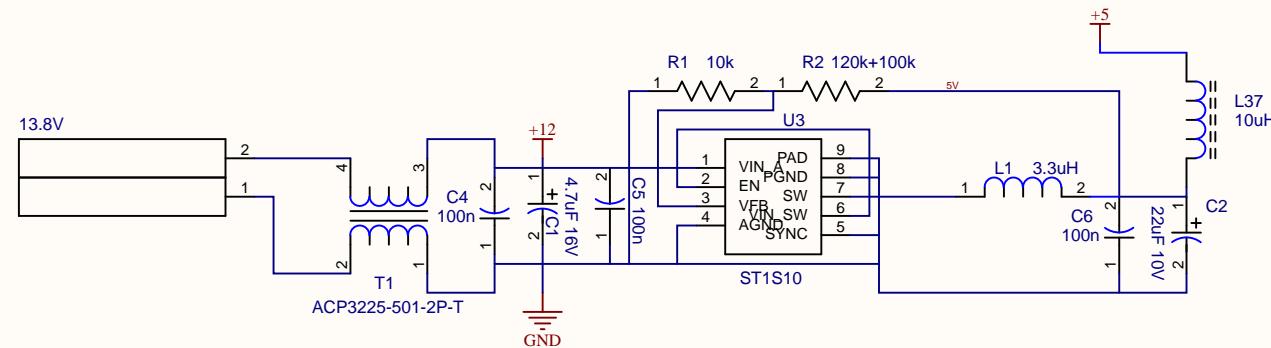
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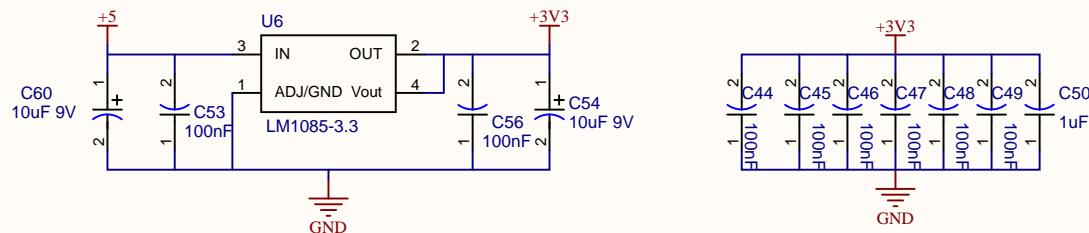
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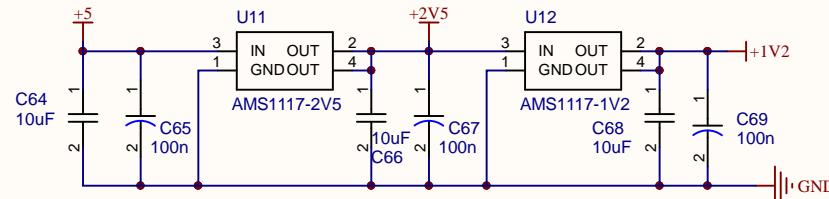
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B



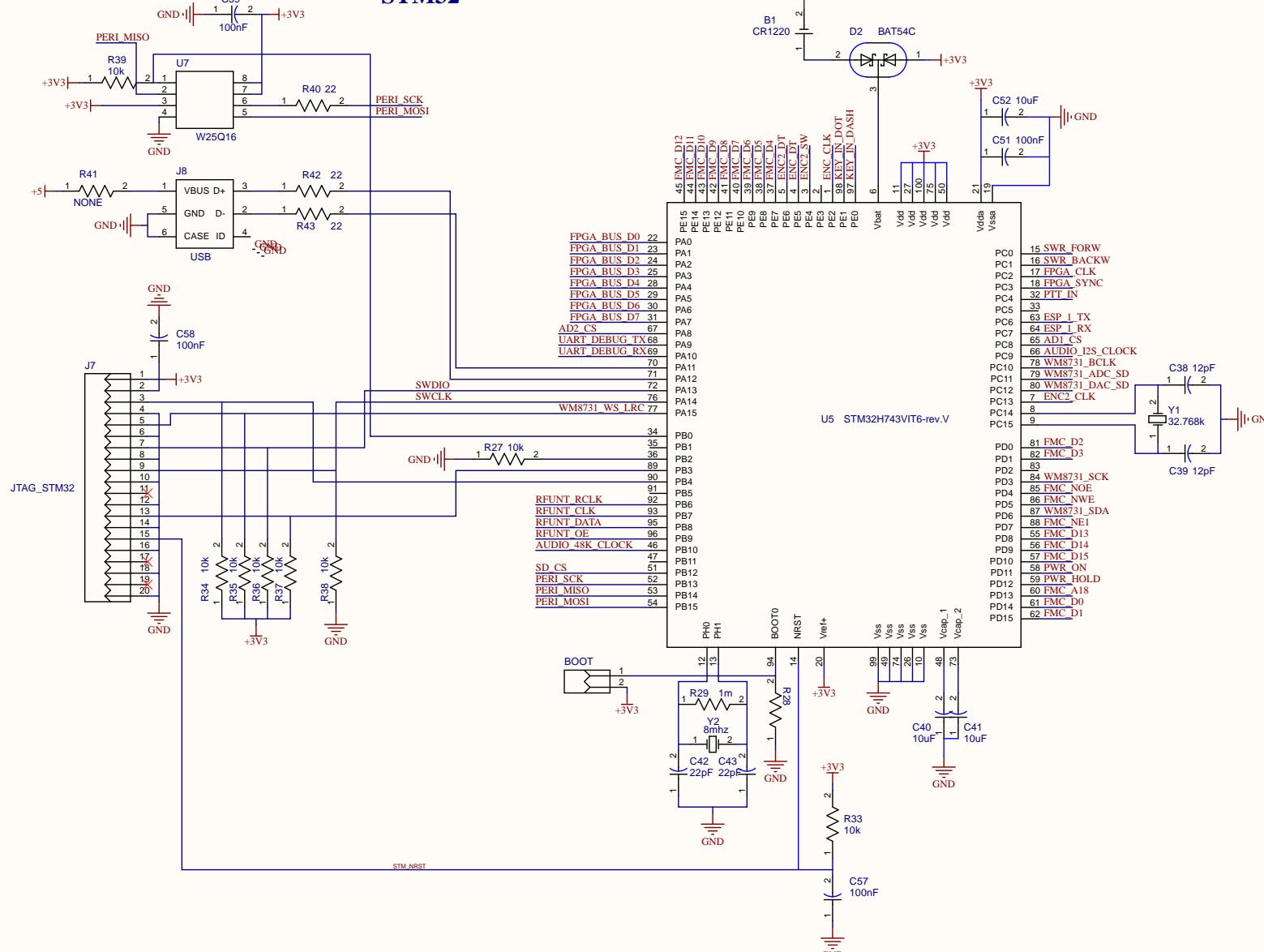
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D

Title POWER			*
Size: A4	Number:10	Revision:1.9	*
Date: 04.05.2020	Time: 19:52:35	Sheet10 of 18	*
File: D:\Dropbox\Develop\Projects\UA3REO\Scheme\ALTIUM_DESIGNER\MOTHERBOARD\POWER.SchDoc			Altium®

STM32



A

A

B

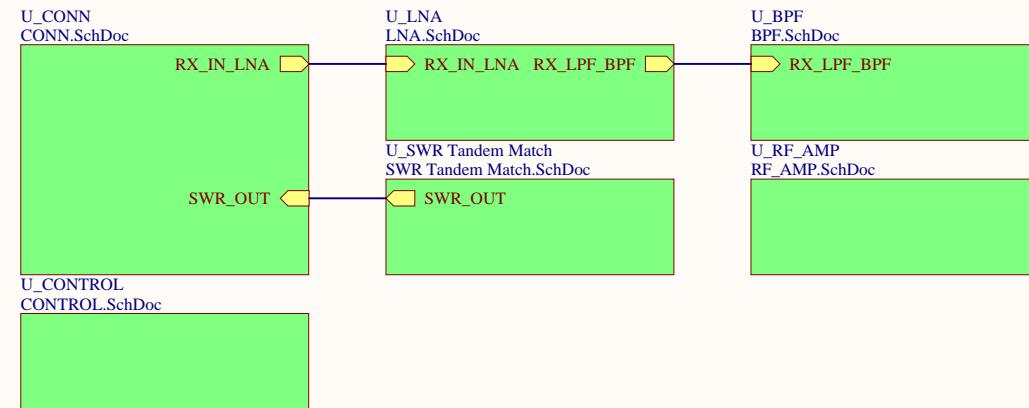
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C

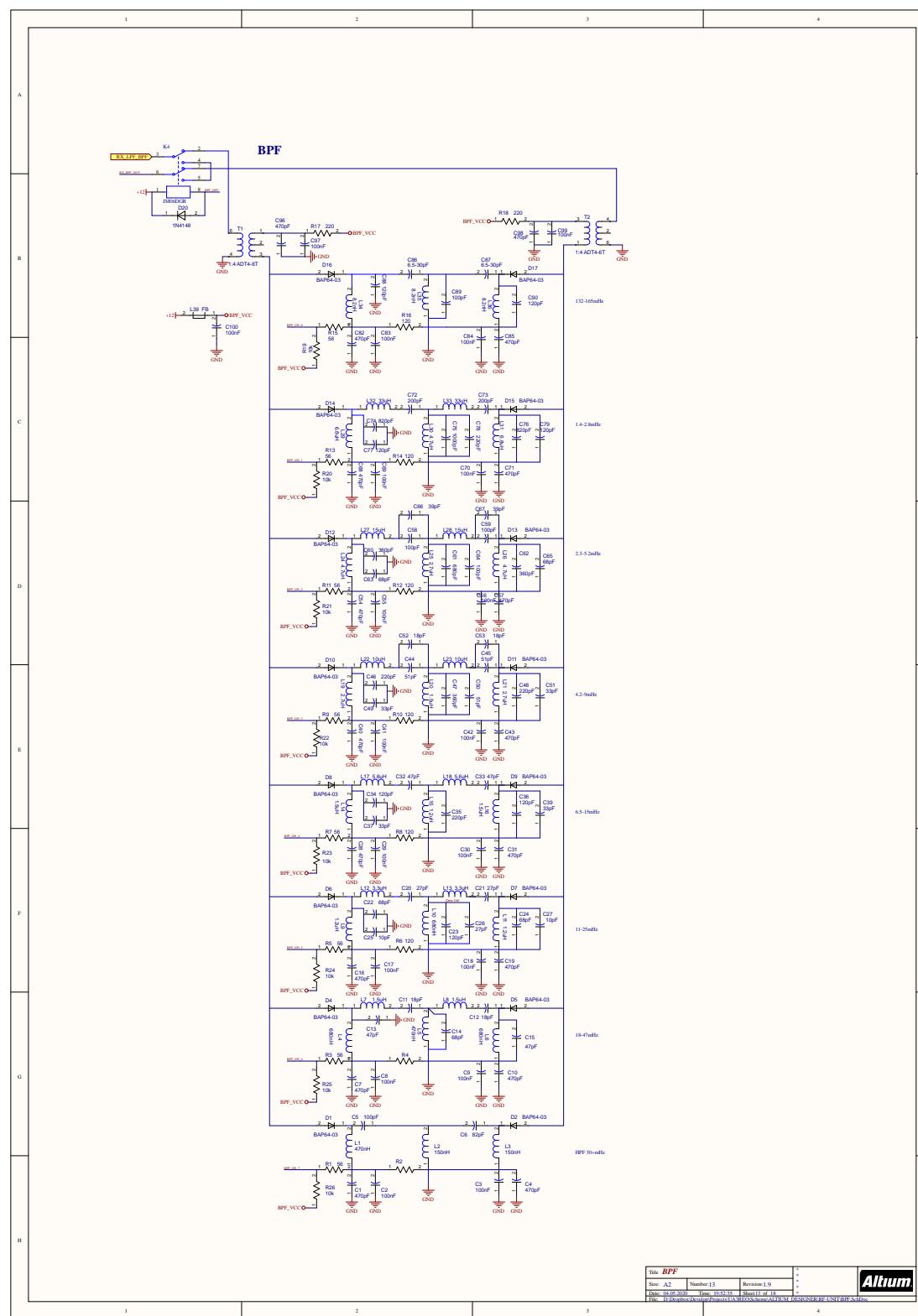
C

D

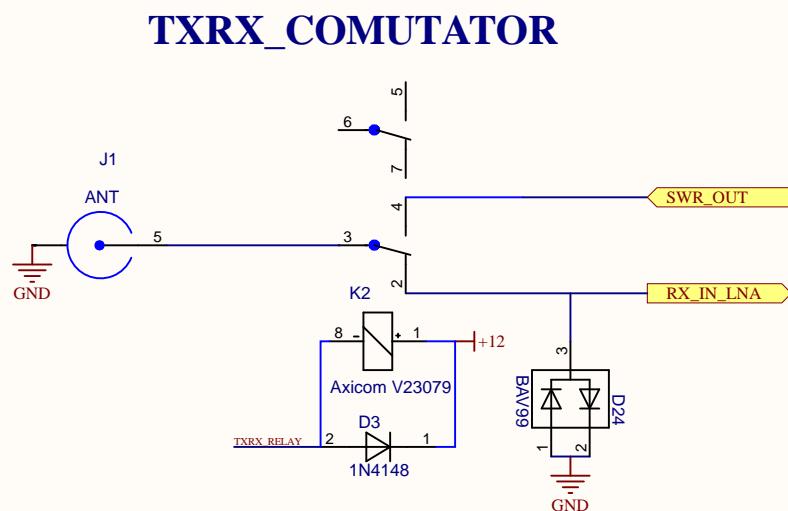
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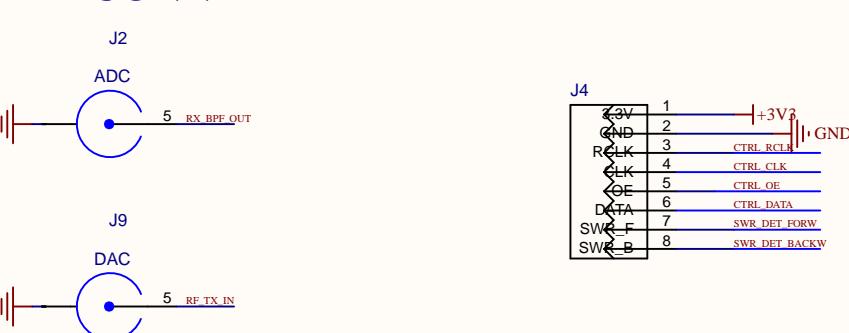
Title RF-UNIT			*
Size: A4	Number:12	Revision:1.9	*
Date: 04.05.2020	Time: 19:52:35	Sheet 12 of 18	*
File: D:\Dropbox\Develop\Projects\UA3REO\Scheme\ALTIUM_DESIGNER\RF-UNIT\RF-UNIT.SCHDOC			Altium®



A



B

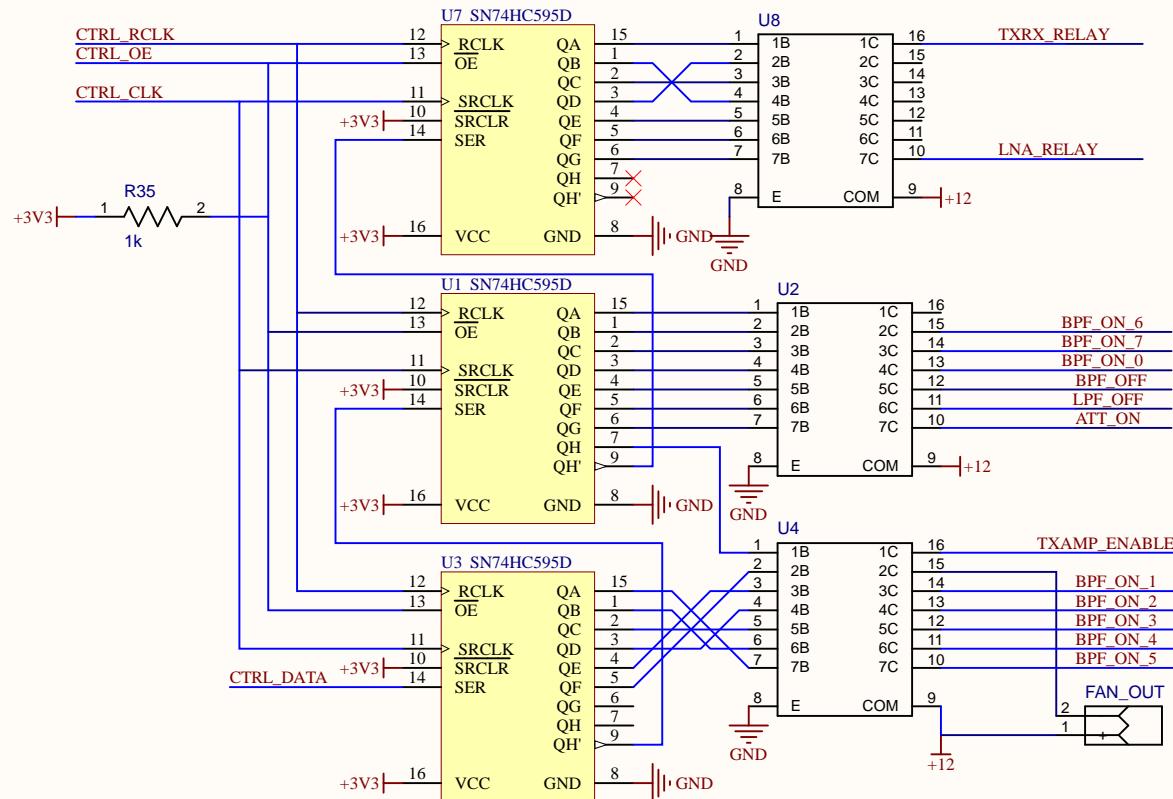


C

Title CONN		
Size: A4	Number:14	Revision:1.9
Date: 04.05.2020	Time: 19:52:36	Sheet 14 of 18
File: D:\Dropbox\Develop\Projects\UA3REO\Scheme\ALTIUM_DESIGNER\RF-UNIT\CONN.SchDoc		

A

A

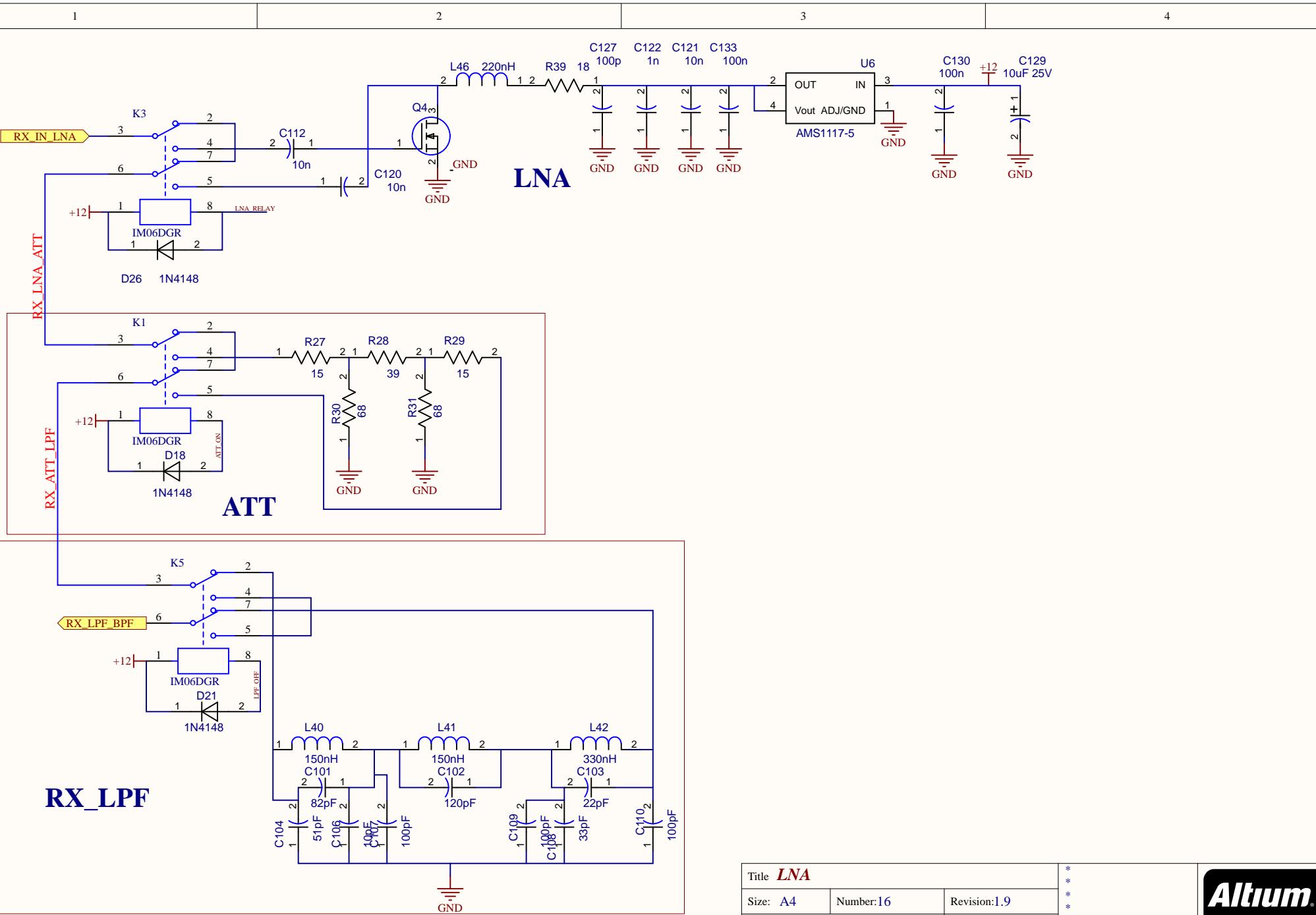
Title **CONTROL**

Size: A4 Number:15 Revision:1.9

Date: 04.05.2020 Time: 19:52:36 Sheet 15 of 18

File: D:\Dropbox\Develop\Projects\UA3REO\Scheme\ALTIUM_DESIGNER\RF-UNIT\CONTROL.SchDoc

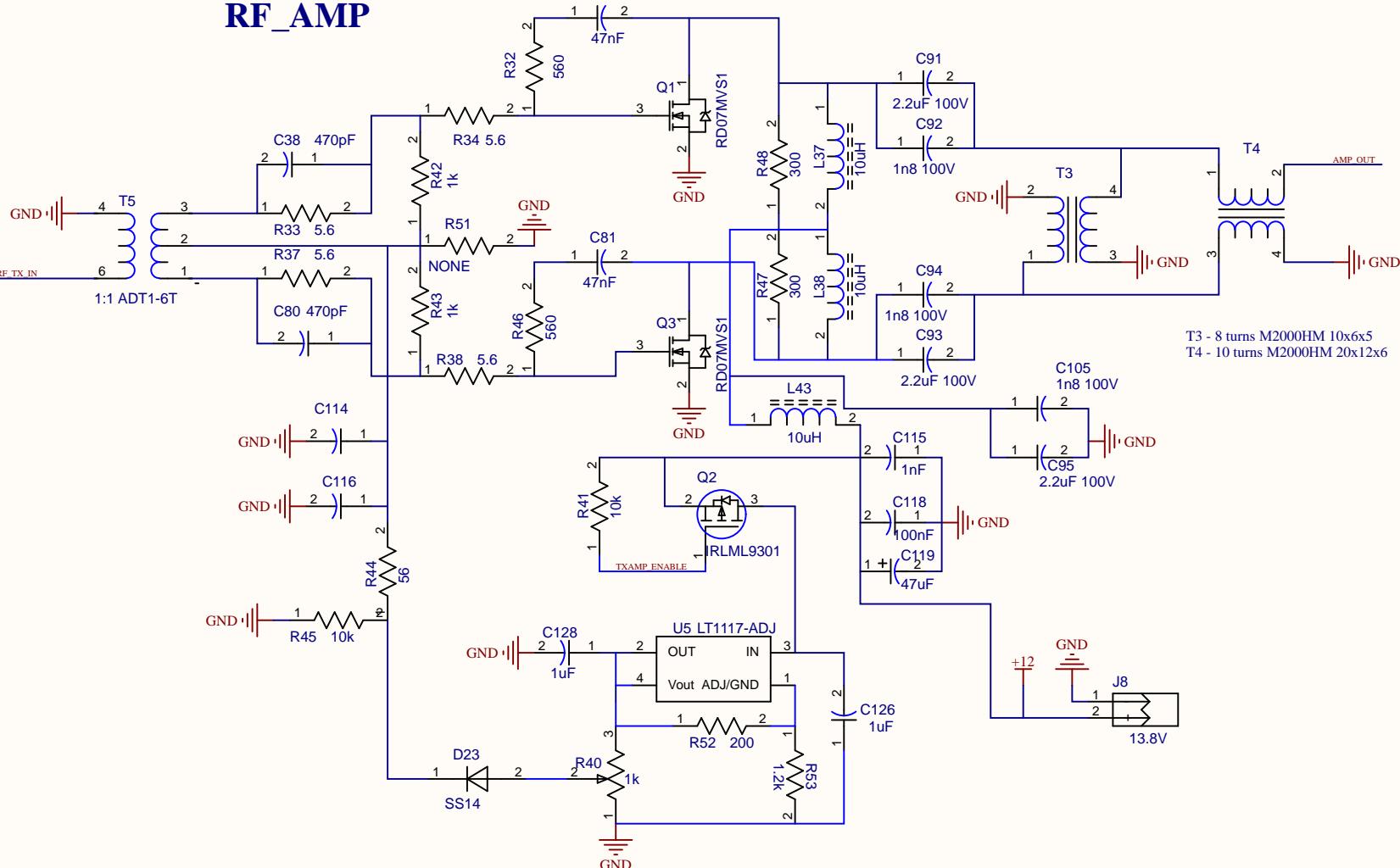
Altium



Title LNA		
Size: A4	Number:16	Revision:1.9
Date: 04.05.2020	Time: 19:52:36	Sheet 16 of 18
File: D:\Dropbox\Develop\Projects\UA3REO\Scheme\ALTIUM_DESIGNER\RF-UNIT\LNA.SchDoc		

Altium

RF_AMP



Title **RF_AMP**

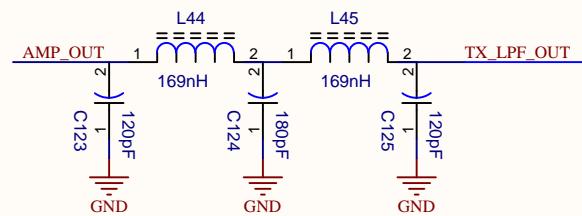
Size: A4 Number: 17 Revision: 1.9

Date: 04.05.2020 Time: 19:52:37 Sheet 17 of 18

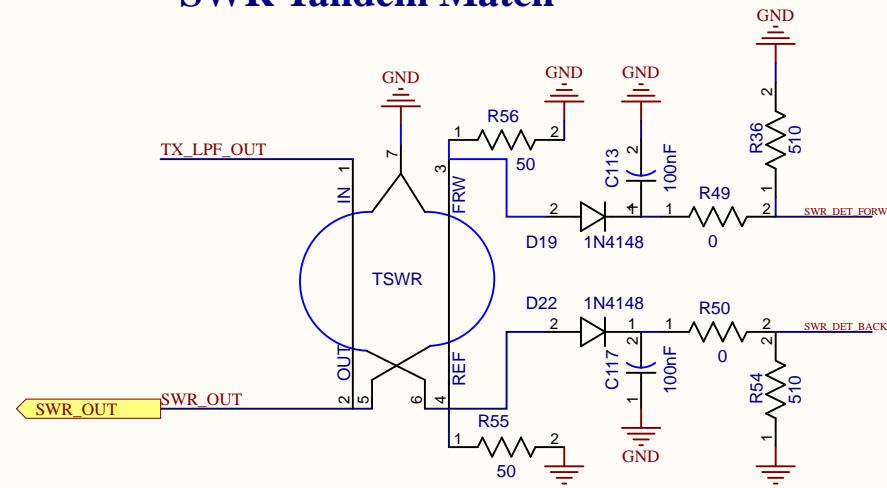
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Altium

TX_LPF



SWR Tandem Match



Title ***SWR Tandem Match***

Size: A4	Number: 18	Revision: 1.9
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Date: 04.05.2020 Time: 19:52:37 Sheet 18 of 18

File: D:\Dropbox\Develop\Projects\UA3REO\Scheme\ALTIUM_DESIGNER\RF-UNIT\SWR Tandem Match.SchDoc



Bill of Materials

Bill of Materials for Project [UA3REO.PrjMbd] (No PCB Document Selected)

Source Data From:	UA3REO.PrjMbd
Project:	UA3REO.PrjMbd
Variant:	None
Creation Date:	04.05.2020 19:52
Print Date:	04-May-20 7:52:52 PM

Footprint	Comment	LibRef	Designator	Description	Quantity
JX2		JX2	13.8V	JX2	1
BR1632A/FA	CR1220	BR1632A/FA	B1	BR1632A/FA	1
51022-0200		51022-0200	IND_100M_102312FA041B	51022-0200	3
CAPA_E_6.0x6.0	4.7uF 16V	CAPAE_4.3x4.3	CAPA_E_6.0x6.0	CAPA_E_6.0x6.0H5.4	1
CAPA_E_4.3x4.3	4.7uF 10V	CAPAE_4.3x4.3	CAPA_E_4.3x4.3	CAPA_E_4.3x4.3H5.4	1
CAP_0805	100n	CAP_0805	CAP_0805	CAP_0805	42
CAP_0805	10uF 10V	CAPAE_4.3x4.3	CAPAE_4.3x4.3	CAP_0805	8
CAP_0805	1uF 10V	CAPAE_4.3x4.3	CAPAE_4.3x4.3	CAPAE_4.3x4.3H5.4	6
CAP_0805	220uF	CAPAE_4.3x4.3	CAPAE_4.3x4.3	CAP_0805	3
CAP_0805	220uF 10V	CAPAE_4.3x4.3	CAPAE_4.3x4.3	CAPAE_4.3x4.3H5.4	4
CAP_0805	12pF	CAPAE_4.3x4.3	CAPAE_4.3x4.3	CAP_0805	2
CAP_0805	10uF	CAPAE_4.3x4.3	CAPAE_4.3x4.3	CAP_0805	4
CAP_0805	22pF	CAPAE_4.3x4.3	CAPAE_4.3x4.3	CAP_0805	2
CAP_0805	100nF	CAPAE_4.3x4.3	CAPAE_4.3x4.3	CAP_0805	12
CAPAE_4.3x4.3	10uF 9V	CAPAE_4.3x4.3	CAPAE_4.3x4.3	CAPA_E_4.3x4.3H5.4	2
CAP_0805	120pF	CAPAE_4.3x4.3	CAPAE_4.3x4.3	CAP_0805	2
CAP_0805	200pF	CAPAE_4.3x4.3	CAPAE_4.3x4.3	CAP_0805	1
C0805		C0805	C04_C06_C08	C0805	3
EEEEEFC_sizeB		EEEEEFC_sizeB	C00	EEEEEFC_sizeB	1
EEEEEFC_sizeB	100uF	EEEEEFC_sizeB	C05	EEEEEFC_sizeB	1
CAP_0805	470p	CAP_0805	C00_C104	CAP_0805	2
CAP_1206	1uF	CAP_1206	C102_C107	CAP_1206	2
CAP_1206	680nF	CAP_1206	C105_C106	CAP_1206	2
CAP_0805	CAP_0805	CAP_0805	C112_C118_C144_C145_C146_C147	CAP_0805	13
TC3528-1411		TC3528-1411	C125	TC3528-1411	1
TC3528-1411	EEEEEFC_sizeB	TC3528-1411	C126	EEEEEFC_sizeB	1
BA7540		BA7540	CA	BA7540	1
BA7540	DE BUG_UART	DE DEBUG_UART	CA	DE DEBUG_UART	1
51022-0300		51022-0300	CA	51022-0300	1
SJ1-3523N	LIN_E_IN	SJ1-3523N	CD	SJ1-3523N	1
SJ1-3523N	MIC_IN	SJ1-3523N	CE	SJ1-3523N	1
SJ1-3523N	PHONE_OUT	SJ1-3523N	CF	SJ1-3523N	1
90131-0124	RF_UNIT	90131-0124	CG	90131-0124	1
SJ1-3523N	KEY_IN	SJ1-3523N	CH	SJ1-3523N	1
90131-0142	FRONT-UNIT	90131-0142	CI	90131-0142	1
90131-0130	JTAG_STM02	90131-0130	CL	90131-0130	1
2-1734035-3	USB	2-1734035-3	CM	2-1734035-3	1
31-5431	DAC_OUT	31-5431	DN	31-5431	1
31-5431	ADC	31-5431	DUAG_RPGA	31-5431	1
IDC10		IDC10	IDC10	IDC10	1
IND_1812	3.3uH	IND_1812	IND_1812	IND_1812	1
IND_0805	330nH	IND_0805	IND_124	IND_0805	2
IND_FERRITE	FR	IND_FERRITE	IND_15_16_18	Ferrite bead on conductor	4
14-1210	IND_1206	IND_1206	IND	IND_1206	1
IND_FERRITE	10uH	IND_FERRITE	IND_37	Inductor	1
51022-0200	PTT_IN	51022-0200	PTT_IN	51022-0200	1
RES_0805	10k	RES_0805	R1	RES_0805	21
RES_0805	120k+100k	RES_0805	R2	RES_0805	1
RES_0805	0NONE	RES_0805	R3	By used crystal	1
EVM1DTSX30B		EVM1DTSX30B	R4	EVM1DTSX30B	1
RES_0805	5.6k	RES_0805	R5	RES_0805	4
RES_0805	680	RES_0805	R11	RES_0805	1
RES_0805	47k	RES_0805	R12_R13_R15_R17	RES_0805	4
RES_0805	2k	RES_0805	R18	RES_0805	1
RES_0805	400	RES_0805	R19	RES_0805	1
RES_0805	127	RES_0805	R20_R21_R22_R23_R24	RES_0805	2
RES_0805	82.5	RES_0805	R22_R23	RES_0805	2
RES_0805	1k	RES_0805	R24_R25	RES_0805	2
RES_0805	1m	RES_0805	R26	RES_0805	1
RES_0805	22	RES_0805	R31_R32_R34_R35_R36	RES_0805	5
RES_0805	NONE	RES_0805	R41	RES_0805	1
RES_0805	220	RES_0805	R53	RES_0805	1
RES_0805	470	RES_0805	R54_R55_R56_R57_R58	RES_0805	2
RES_0805	330	RES_0805	R61	RES_0805	1
RES_1206	5.6	RES_1206	R62_R63	RES_1206	2
RES_0805	RES_0805	RES_0805	R66_R67	RES_0805	2
RES_0603	RES_0603	RES_0603	R68_R69	RES_0603	2
TRANSFORMER	ACP3225-501-2P	TRANSFORMER	T1	Transformer	1
TRANSFORMER	1:1 T1-6T	TRANSFORMER	T2	Transformer	2
TRANSFORMER	1:4 ADT4T6T	TRANSFORMER	T4	Transformer	1
TRANSFORMER	1:1 ADT1T1	TRANSFORMER	T6	Transformer	1
PAMB403	PAMB403	PAMB403	T11	PAMB403	1
LD3985	LD3985	LD3985	T12	LD3985	1
ST1S10	ST1S10	ST1S10	T13	ST1S10	1
WM8731	WM8731	WM8731	T14	WM8731	1
STM32H743VIT6	STM32H743VIT6	STM32H743VIT6	T15	STM32H743VIT6	1
LM1085-3.3	LM1085-3.3	LM1085-3.3	T16	LM1085-3.3	1
W25Q16	W25Q16	W25Q16	T17	W25Q16	1
DAC904E	DAC904E	DAC904E	T18	DAC904E	1
220pF	220pF	220pF	T19	220pF	1
OPF144-20-22E	OPF144-20-22E	OPF144-20-22E	T20	OPF144-20-22E	1
AMS1117	2V5	AMS1117	T21	AMS1117	1
AMS1117	1V2	AMS1117	T22	AMS1117	1
L7117CST-3.3	L7117CST-3.3	L7117CST-3.3	T23	L7117CST-3.3	2
OPA2674I	OPA2674I	OPA2674I	T24	OPA2674I	1
LTC2208CUP	LTC2208CUP	LTC2208CUP	T25	LTC2208CUP	1
LTDUD-16	LTC6400UD-204	CMP-0359-03855	T26	Single Channel, Low Noise, Low Distortion	1
EXT-CONN	EXT-CONN	EXT-CONN	T27	90131-0130	1
NV7050SA	12.288MHz	NV7050SA	X1	NV7050SA	1
R26-32.768	32.768k	R26-32.768	Y1	R26-32.768	1
ECS-200-20	8mhz	ECS-200-20	Y2	ECS-200-20	1

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Approved	Notes