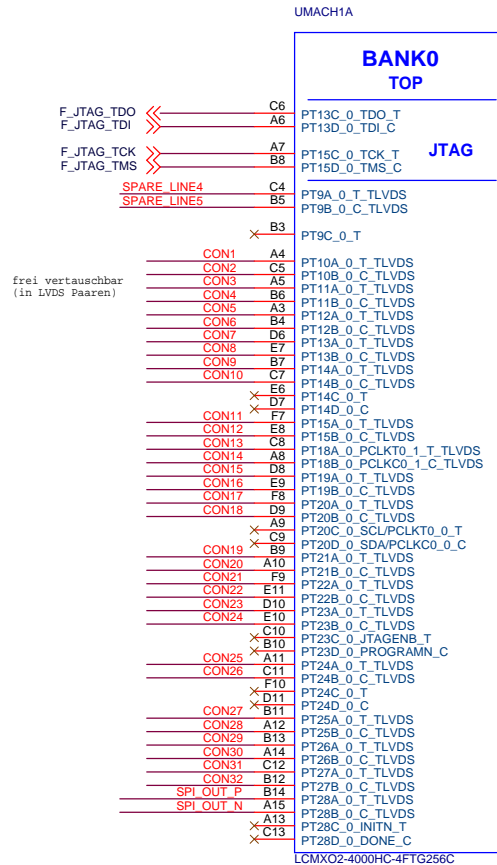
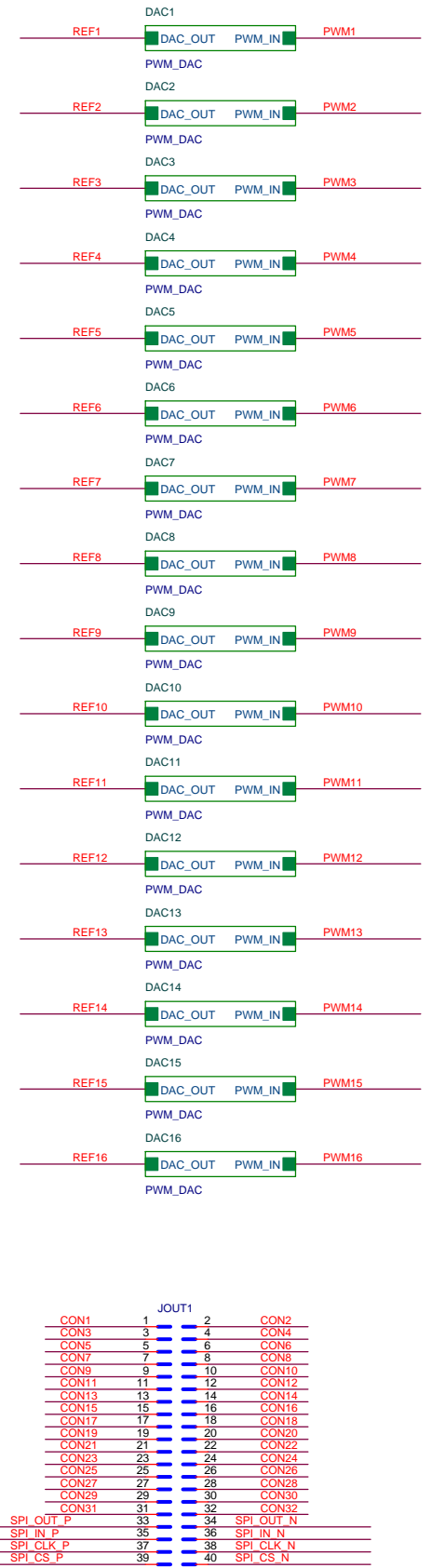
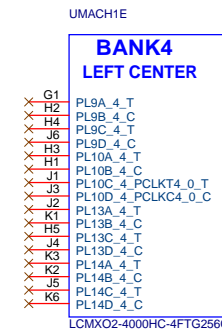
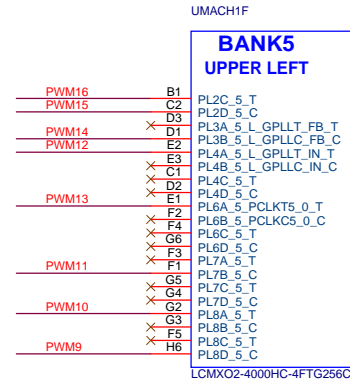
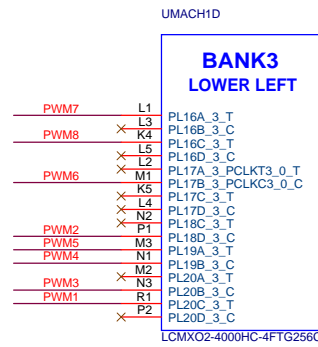


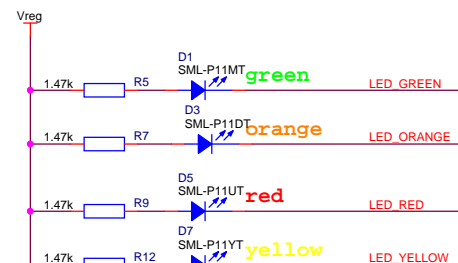
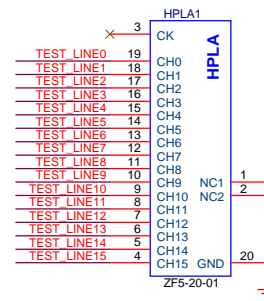
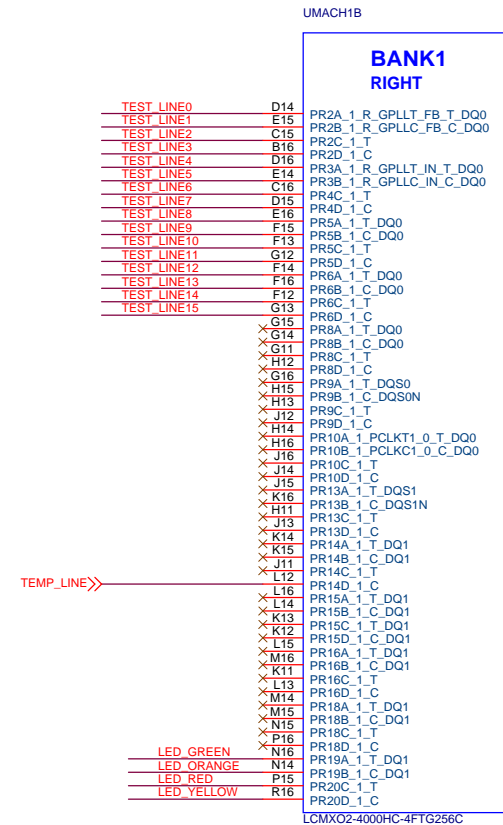
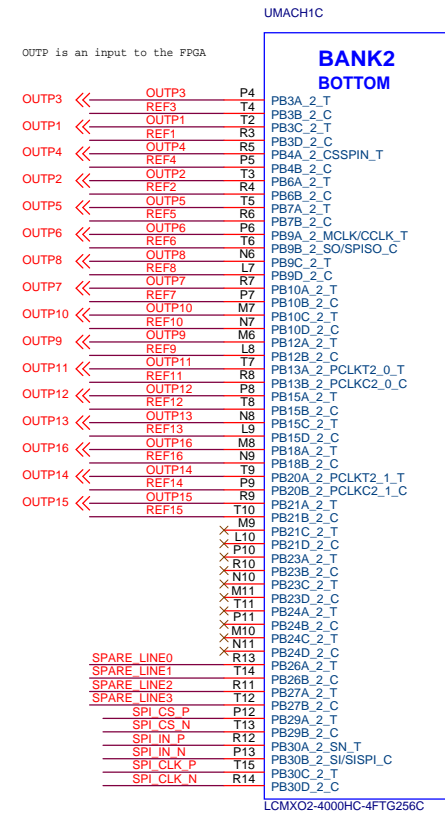
GSI Gesellschaft für Schwerionenforschung mbH
 Planckstrasse 1
 D-64291 Darmstadt
 GERMANY
 www.gsi.de

01_ERNI-Connector

Design: K:\GSIJOB\ICOME AND_KISSPANDA-DIRC-WASA\PANDA-DIRC-WASA\21
 Modified: Wednesday, December 05, 2012 Size: A3 Page: 1 / 35
 Designer: M.Traxler Layouter: S.Voltz



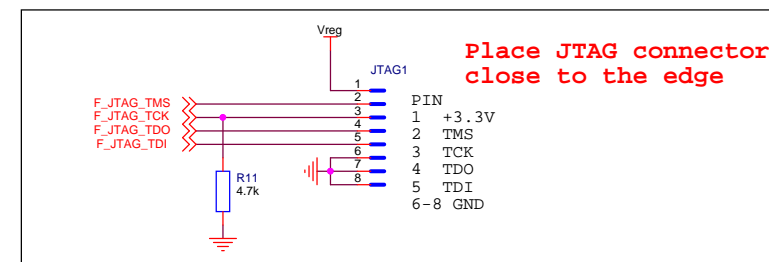
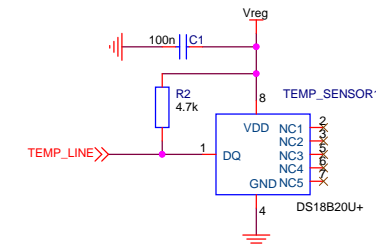
Bottom side: All LVDS receiver can have a termination resistors.



Nur bestücken nach Rücksprache mit Entwickler

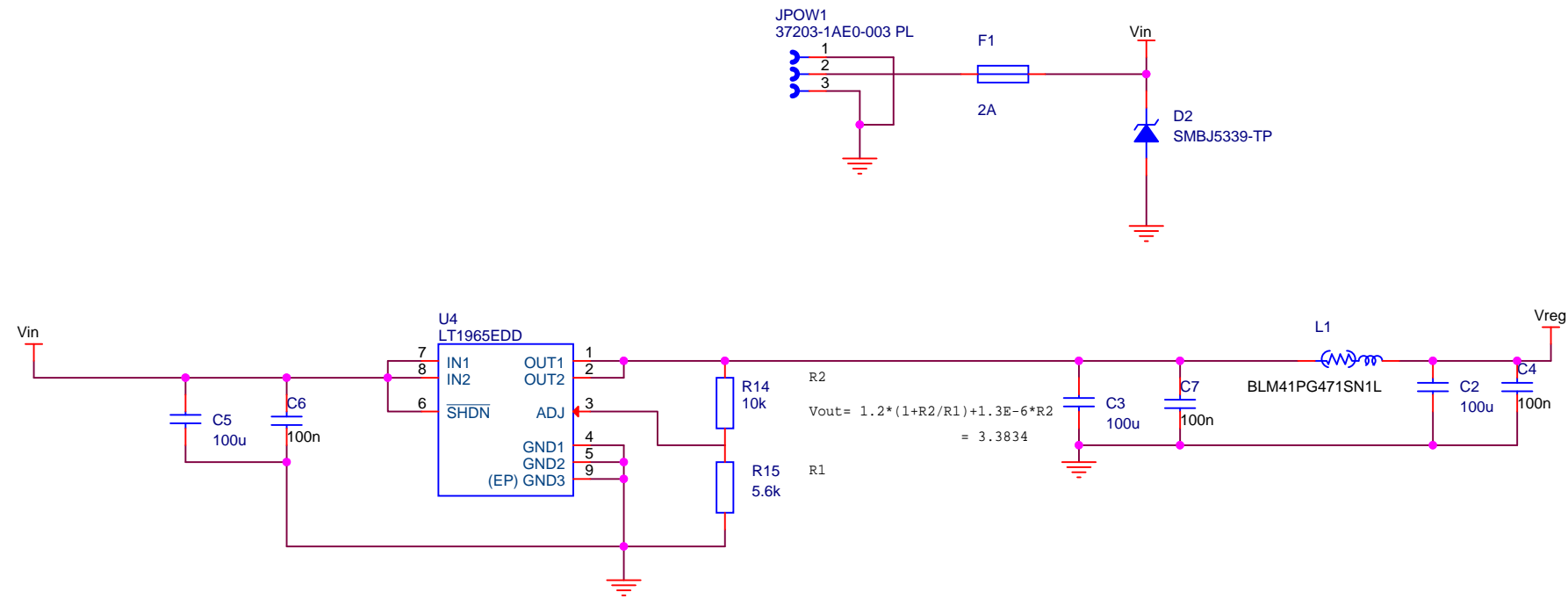
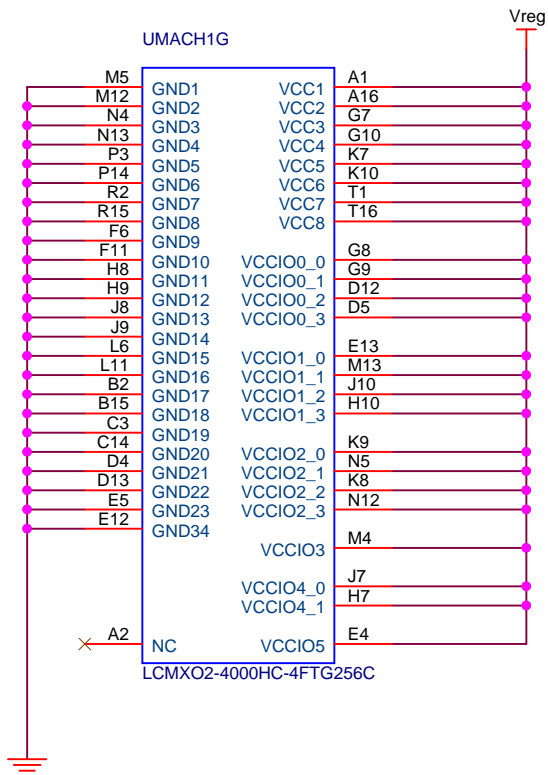
SPARE_LINE0	1	2	SPARE_LINE1
SPARE_LINE2	3	4	SPARE_LINE3
SPARE_LINE4	5	6	SPARE_LINE5

5-826632-0

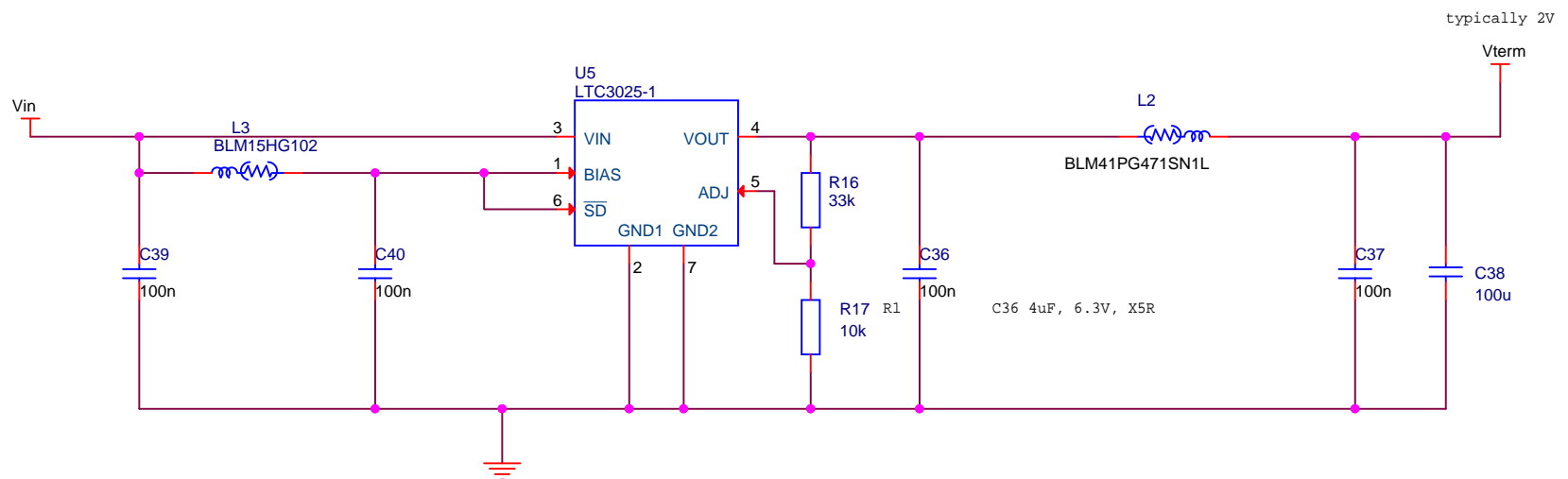


JOUT1

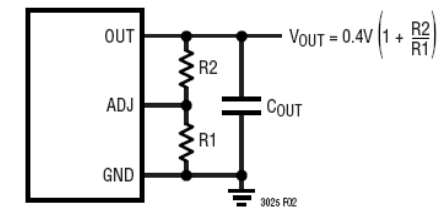
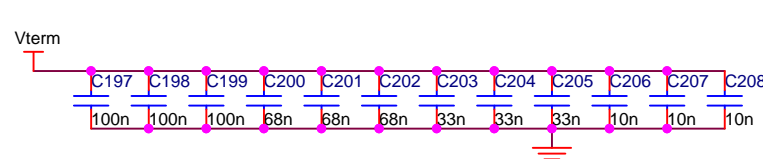
CON1	1	2	CON2
CON3	3	4	CON4
CON5	5	6	CON6
CON7	7	8	CON8
CON9	9	10	CON10
CON11	11	12	CON12
CON13	13	14	CON14
CON15	15	16	CON16
CON17	17	18	CON18
CON19	19	20	CON20
CON21	21	22	CON22
CON23	23	24	CON24
CON25	25	26	CON26
CON27	27	28	CON28
CON29	29	30	CON30
CON31	31	32	CON32
SPI_OUT_P	33	34	SPI_OUT_N
SPI_IN_P	35	36	SPI_IN_N
SPI_CLK_P	37	38	SPI_CLK_N
SPI_CS_P	39	40	SPI_CS_N



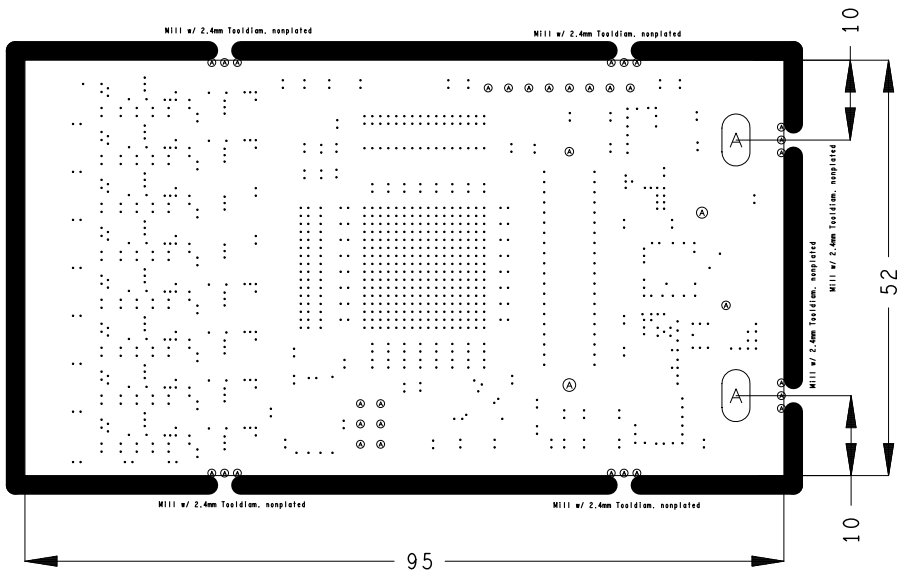
R15 und R16 Werte ändern



LTC3025: 300mA



03_FPGA-Power



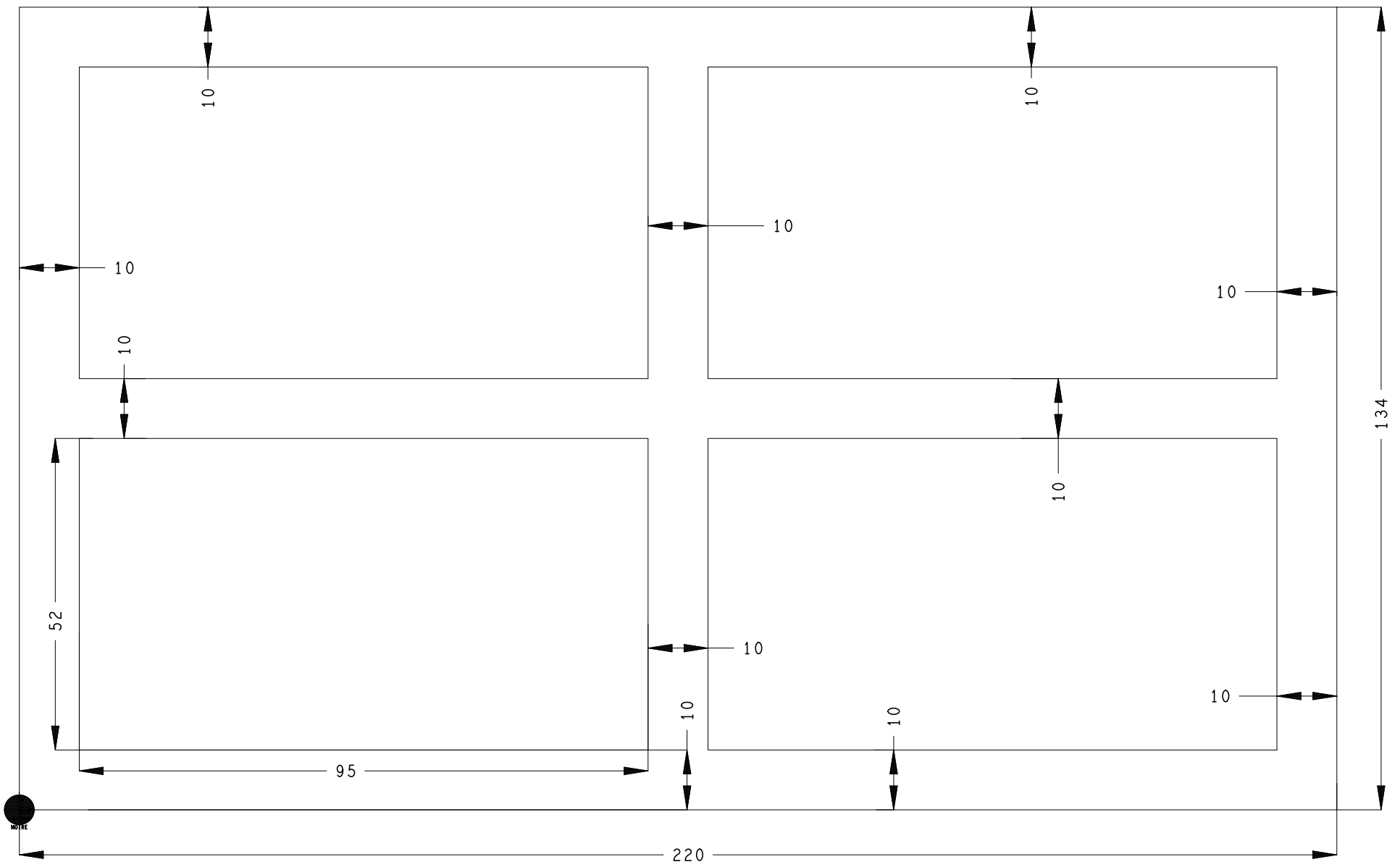
DRILL CHART: TOP to BOTTOM			
ALL UNITS ARE IN MILLIMETERS			
FIGURE	SIZE	PLATED	QTY
.	0.2	PLATED	987
.	0.4	PLATED	1
⊙	1.0	PLATED	14
⊙	1.0	NON-PLATED	18
⊙	1.1	NON-PLATED	2
⊙	1.4	NON-PLATED	1
⊙	1.6	NON-PLATED	1
⊙	2.4	NON-PLATED	12
A	6.5x3.5	NON-PLATED	2

TOTAL HOLES: 1038

Jobname PANDA-DIRC-WASA2 Date 11.2012 Designer M.Traxler Layouter S.Voltz

Layer Nickname

Drd



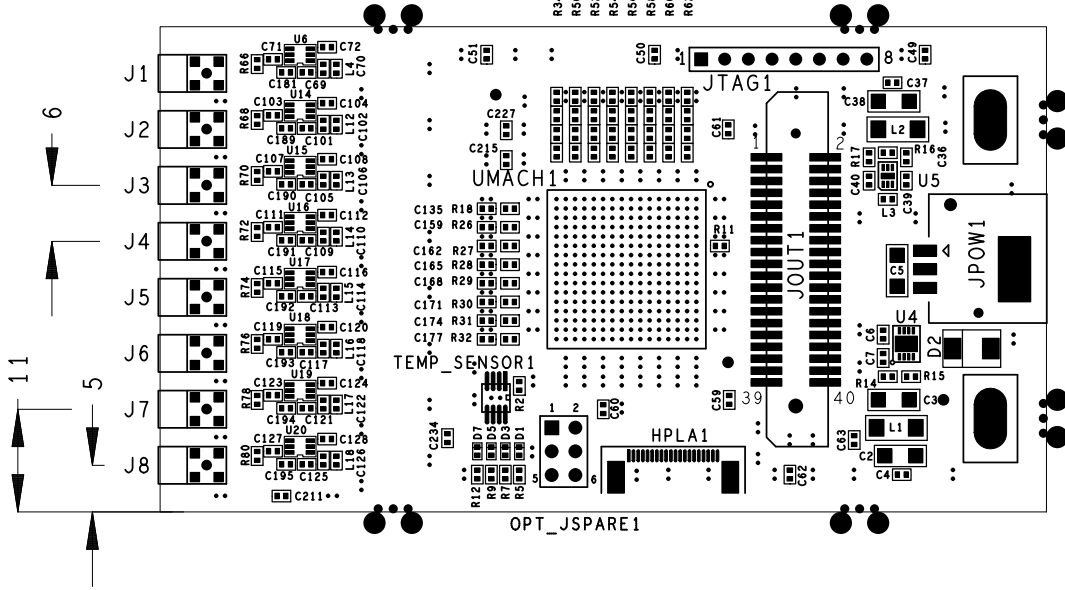
Jobname	Date	Designer	Layouter
PANDA-DIRC-WASA2	11.2012	M.Traxler	S.Voltz

Layer Nickname

Fab

GSI-Da
 PANDA_DIRC_WASA2
 MT/SV/11.2012 AST

R34 C133 R35 C134
 R50 C157 R51 C158
 R52 C160 R53 C161
 R54 C163 R55 C164
 R56 C166 R57 C167
 R58 C169 R59 C170
 R60 C172 R61 C173
 R62 C175 R63 C176

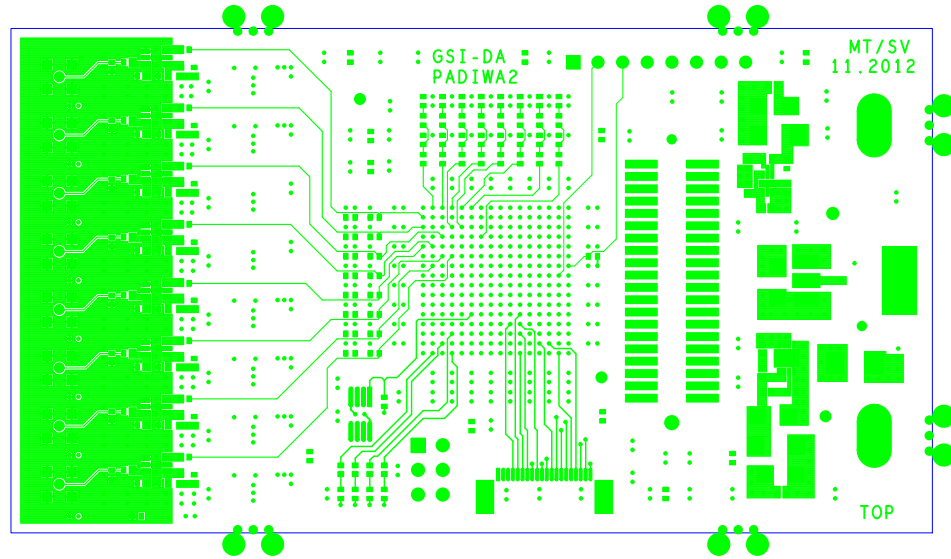


Jobname	Date	Designer	Layouter
PANDA-DIRC-WASA2	11.2012	M.Traxler	S.Voltz

Layer Nickname

As t

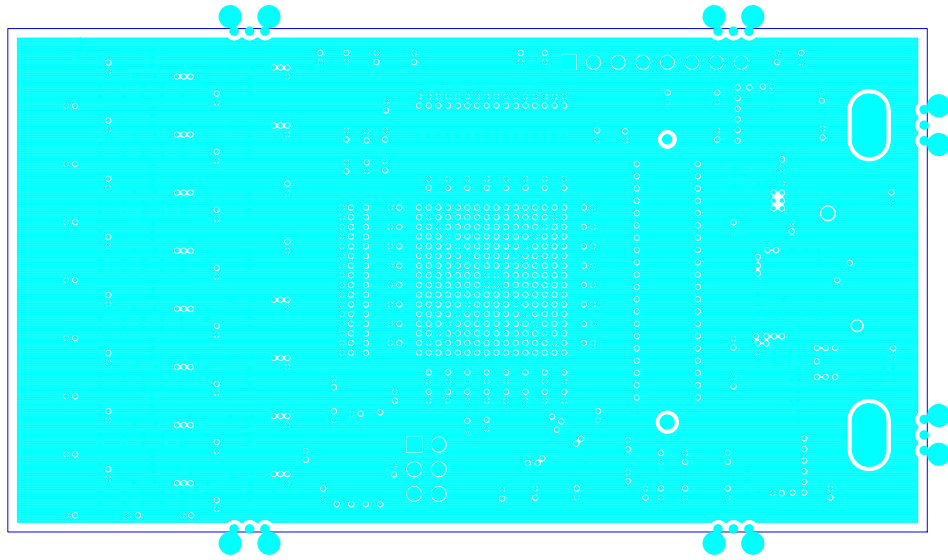
Signals



Jobname	Date	Designer	Layouter
PANDA-DIRC-WASA2	11.2012	M.Traxler	S.Voltz

Layer Nickname
Top

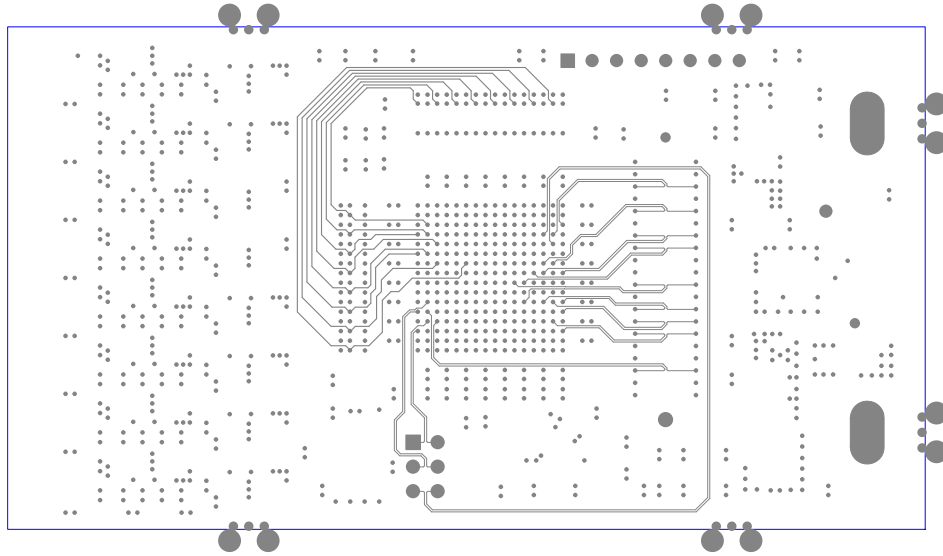
GND-Plane



Jobname	Date	Designer	Layouter
PANDA-DIRC-WASA2	11.2012	M.Traxler	S.Voltz

Layer Nickname
I01

Diff.Pairs

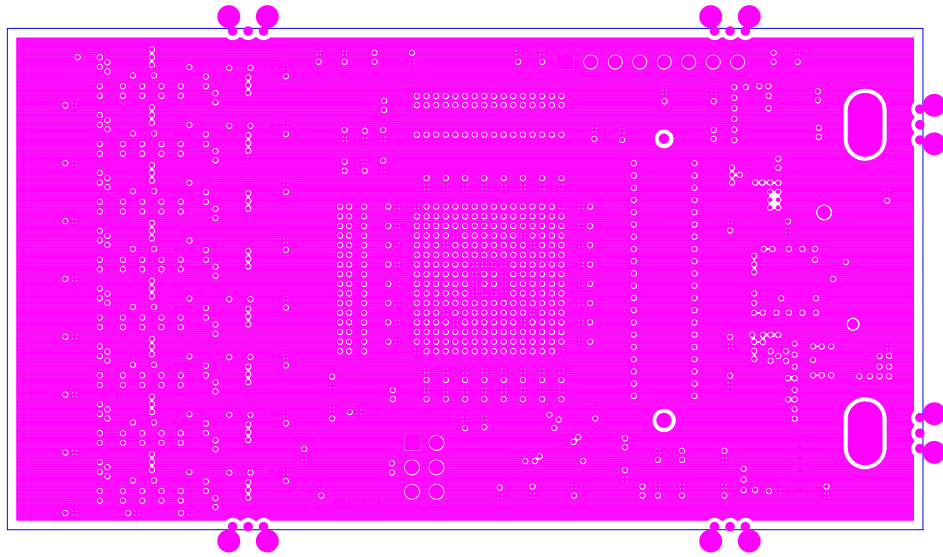


Jobname	Date	Designer	Layouter
PANDA-DIRC-WASA2	11.2012	M.Traxler	S.Voltz

Layer Nickname

I02

VREG-Plane

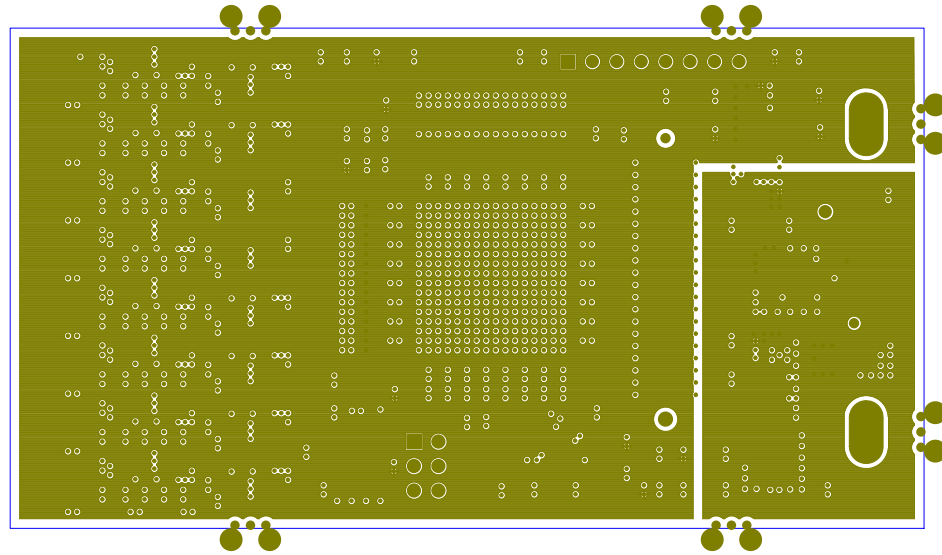


Jobname	Date	Designer	Layouter
PANDA-DIRC-WASA2	11.2012	M.Traxler	S.Voltz

Layer Nickname

I03

VTERM-Plane, VIN-Plane

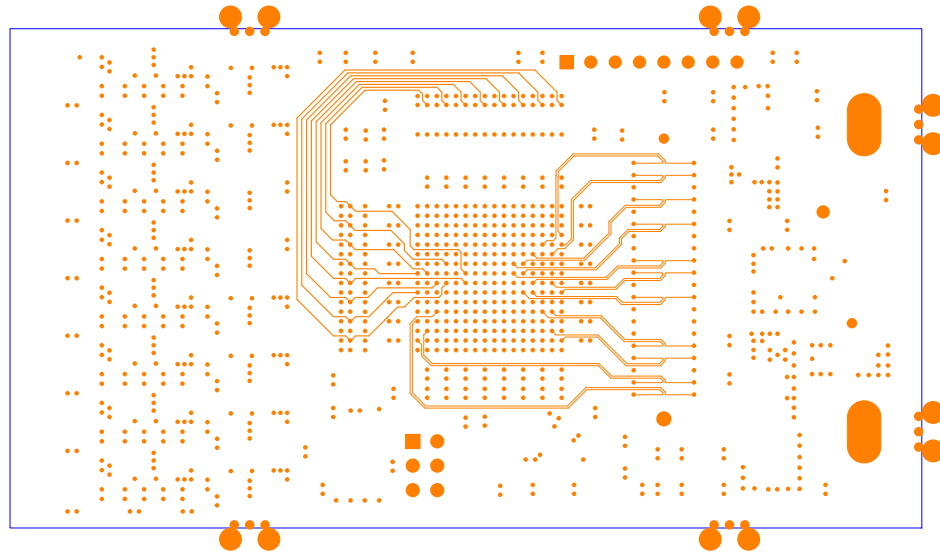


Jobname	Date	Designer	Layouter
PANDA-DIRC-WASA2	11.2012	M.Traxler	S.Voltz

Layer Nickname

I04

Diff.Pairs

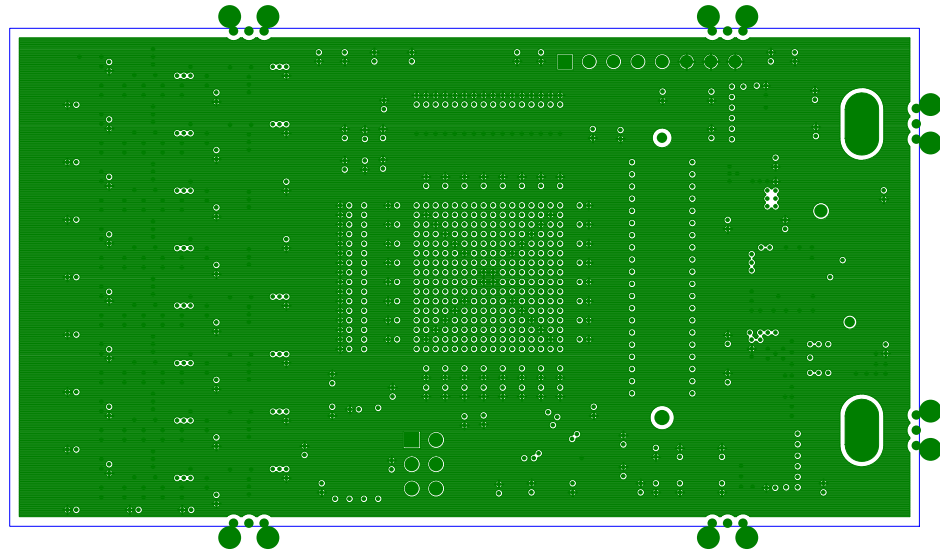


Jobname	Date	Designer	Layouter
PANDA-DIRC-WASA2	11.2012	M.Traxler	S.Voltz

Layer Nickname

I05

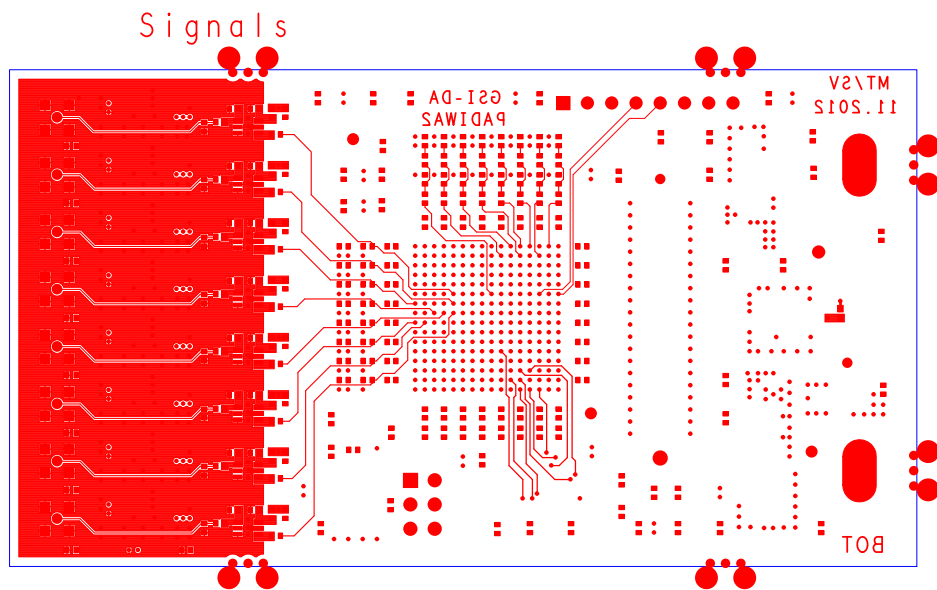
GND-Plane



Jobname	Date	Designer	Layouter
PANDA-DIRC-WASA2	11.2012	M.Traxler	S.Voltz

Layer Nickname

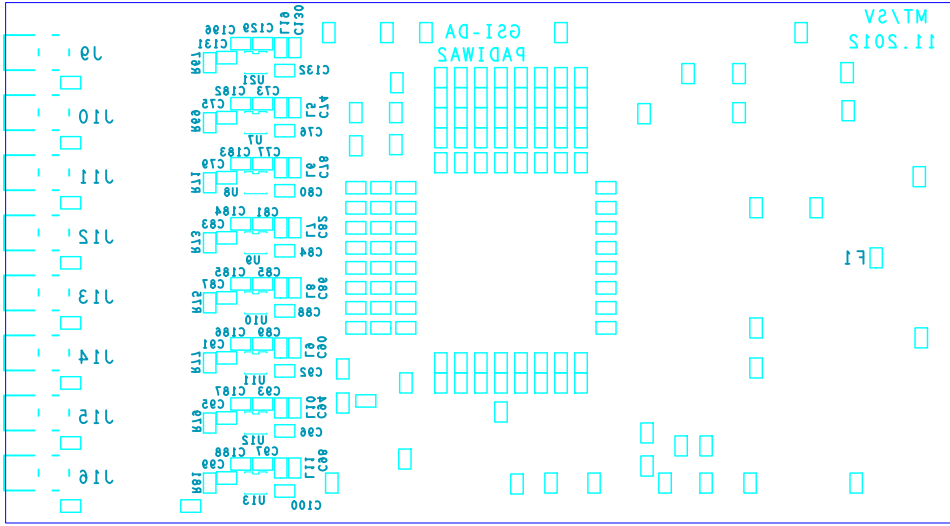
I06



Jobname	Date	Designer	Layouter
PANDA-DIRC-WASA2	11.2012	M.Traxler	S.Voltz

Layer Nickname


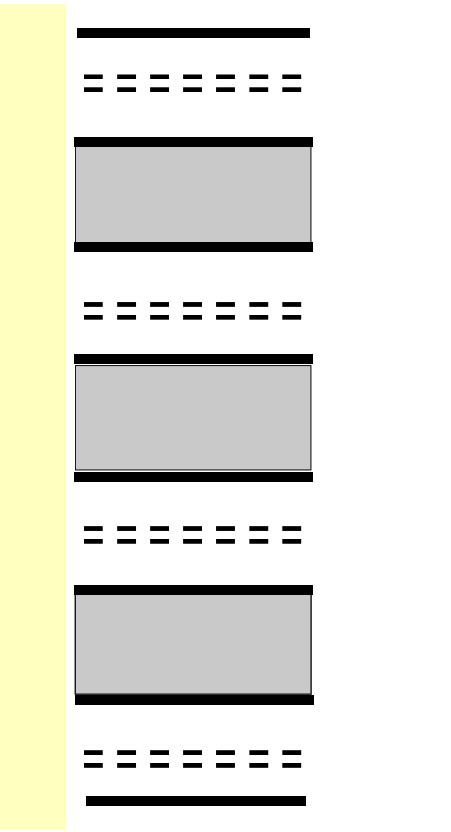
Bot



Jobname	Date	Designer	Layouter
PANDA-DIRC-WASA2	11.2012	M.Traxler	S.Voltz

Layer Nickname

Ssb

LAGENAUFBAU (Impedanz)											
8 - Lagen Kern: mm Cu / µm											
WE-Artikel Nr.:		8 - Lagen									
KUNDE:		GSI PADIWA2									
LAGENBEZEICHNUNG		AUFBAU			BASIS-Material	CU	PREPREG ANZAHL/TYP	ENDDICKE	KUNDEN-FORDERUNG		
KUNDE	WE							[µm]	[µm]		
1	TOP/VS				Folie	9 µm ¹⁾	1x 2113	9			
										94	
2	2						18 µm			18	
							0,15 mm			150	
3	3						18 µm		2x 2116	18	
										214	
4	4						18 µm			18	
							0,51 mm			510	
5	5			18 µm		2x 2116	18				
							214				
6	6			18 µm			18				
				0,15 mm			150				
7	7			18 µm		1x 2113	18				
							94				
8	BOT/RS				Folie	9 µm		9			
	Imp	Imp.-Lage	LBBR	ISO	ISO z. Masse						
	Zdiff	L3/L6 = 100,10 Ohm	100µm	120µm							
	Zdiffcopl	L3/L6 = 100,30 Ohm	100µm	130µm	150µm						
	Zo	VS/RS =49,30 Ohm	150 µm						1) Kupferenddicke Außenlagen nach IPC (35µm Forderung)		
	Zo copl	VS/RS =49,90 Ohm	130µm		150µm						
		Material TG 150 hf									
					Gesamtdicke Material:		1552				
		Anmerkung: Werte für Prepreg sind Mittelwerte (der genaue Wert ist von den Leiterbildstrukturen abhängig)									
MATERIALDICKE:		1,53	+/-	0,16	mm	Index	Datum:	Bearbeiter:			
DICKE über galv. Endoberfläche		1,60	+/-	0,17	mm		05.12.2012	A.Wodke			
DICKE über LSM incl.galv.-Kupfer		1,64	+/-	0,18	mm						
Kundenforderung:			+/-		mm	Messsstelle:					
Erstellt am	von	Geprüft am	von	Freigegeben am	von	Revision					
28.09.2006	M.Kress	24.10.2006	S.Baumann	25.10.2006	R.Taurus	00	Seite:	1+			