



# TEX30LCD/S

TECHNICAL ANNEX  
VOLUME 2



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Member of CISQ Federation



CERTIFIED MANAGEMENT SYSTEM  
ISO 9001



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Manufactured by R.V.R. ELETTRONICA Italy



## Appendix A Piani di montaggio, schemi elettrici, liste componenti / *Component layouts, schematics, bills of material*

Questa parte del manuale contiene i dettagli tecnici riguardanti la costruzione delle singole schede componenti il TEX30LCD/S. L'appendice è composta dalle seguenti sezioni:

*This part of the manual contains the technical details about the different boards of the TEX30LCD/S. This appendix is composed of the following sections:*

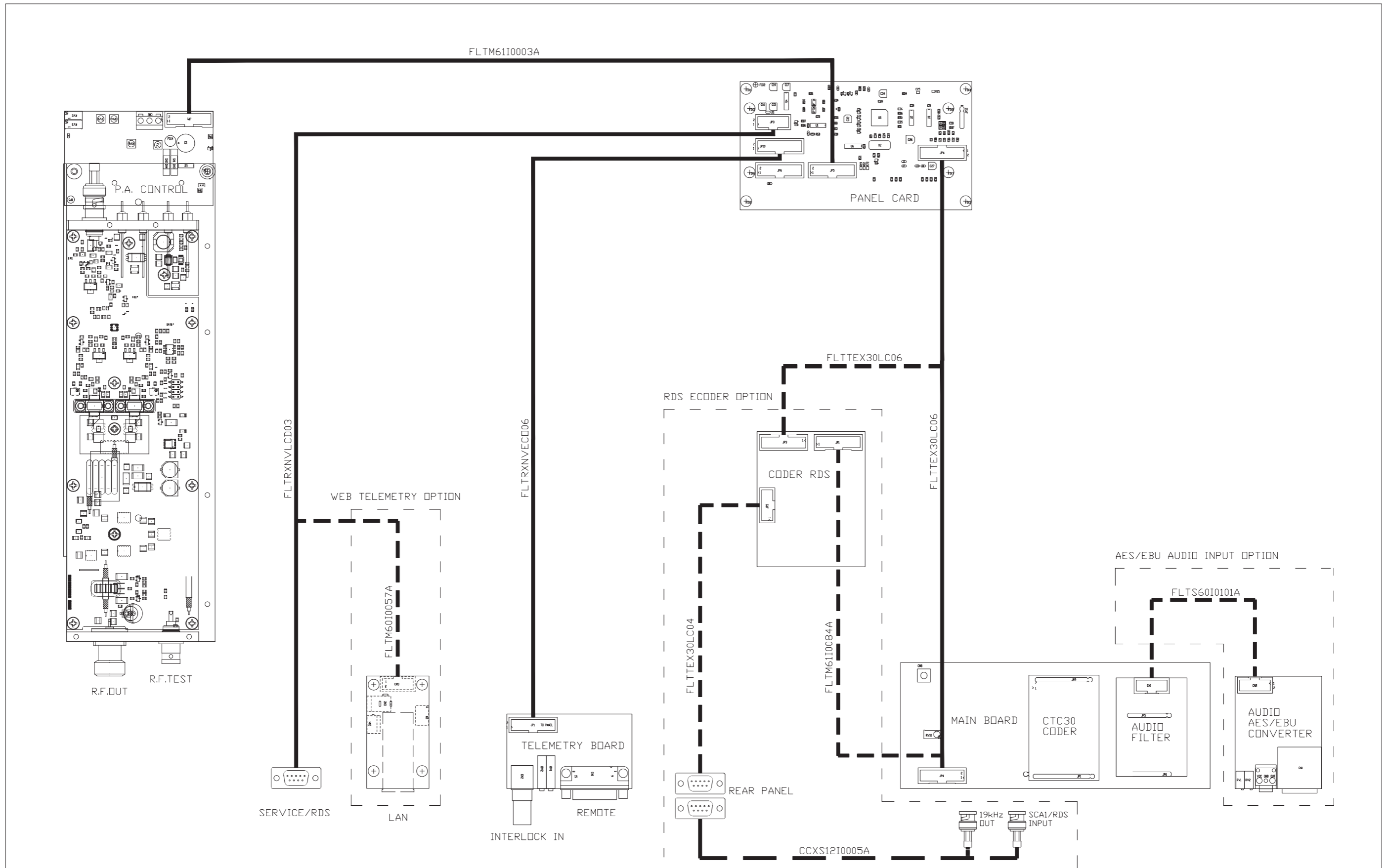
Description	RVR Code	Vers.	Pages
Wiring Diagrams	KCABTEX30LCD	4.3	1
Main Board	SLMA0383R01V01	1.8	3
Stereo Coder Card	SLCTC30V03	1.2	9
Control Card	SLCNTMOS07.50	1.1	12
PA RF Power Supply	SLPS0468R01V01	1.0	15
Power Amplifier	SLRF0408R03V01	1.3	17
Panel Card	SLPC0436R01V01	1.1	20
Power Supply	KPSL2804V01B	1.0	23
Telemetry Card	SLTLMTXLCD03	2.2	26

Description	Spare Parts
Switching power supply	KPSL2804V01B + SP-SRG085A
RF final control card	SP-BIA085A
RF final section	SP-FIN085A
Main audio card + PLL + VCO	SP-MBD175A
CPU panel & Display	SP-PAN175A
Fan	VTL0824UB

### Document History

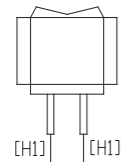
Date	Version	Reason	Code	Editor
02/09/2018	2.0	First Release (Version 2)	/	J.H. Berti
26/06/2019	2.1	SLMA0383R01V01, SLRF0408R03V01 & SLCNTMOS07.50 upgrade	/	J.H. Berti

KCABTEX30LCD



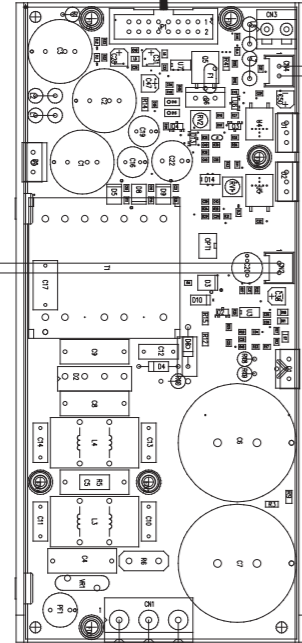
PRODUCT NAME :	TEX30LCD-TEX50LCD	PART NAME :	WIRING DIAGRAM TEX30LCD, TEX50LCD
DESIGNER :	D.MILADINOVIC	DATE :	14-01-20
ARCHIVING :	"RVRUT" SERVER, "RILASCIATI" FOLDER	REVISION :	4.3
PROJECT CODE :	085	SCALE :	0.54
DOCUMENT CODE :	KCABTEX30LCD	SIZE :	A3
		PAGE :	1 DI 2

FRONTAL SWITCH



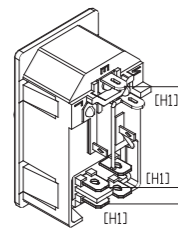
FLTTEX30LC02

POWER SUPPLY



MBC

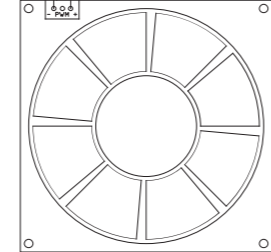
MBC



-WIRE 5- GREEN (15) x 80  
-WIRE 6- BLUE (15) x 80  
-WIRE 7- BLACK (15) x 80

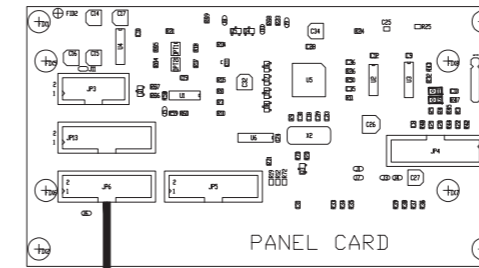
-WIRE 2- BLACK (15) x 350  
-WIRE 1- RED (15) x 350

[H1] [H1]

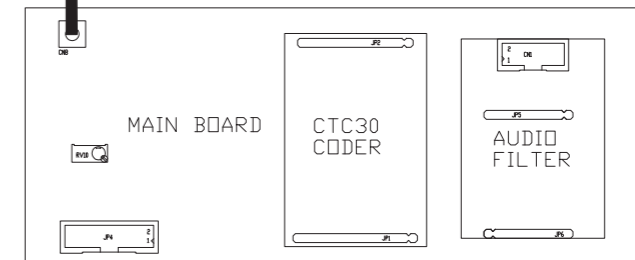


FAN

CAB12I0084A



PANEL CARD

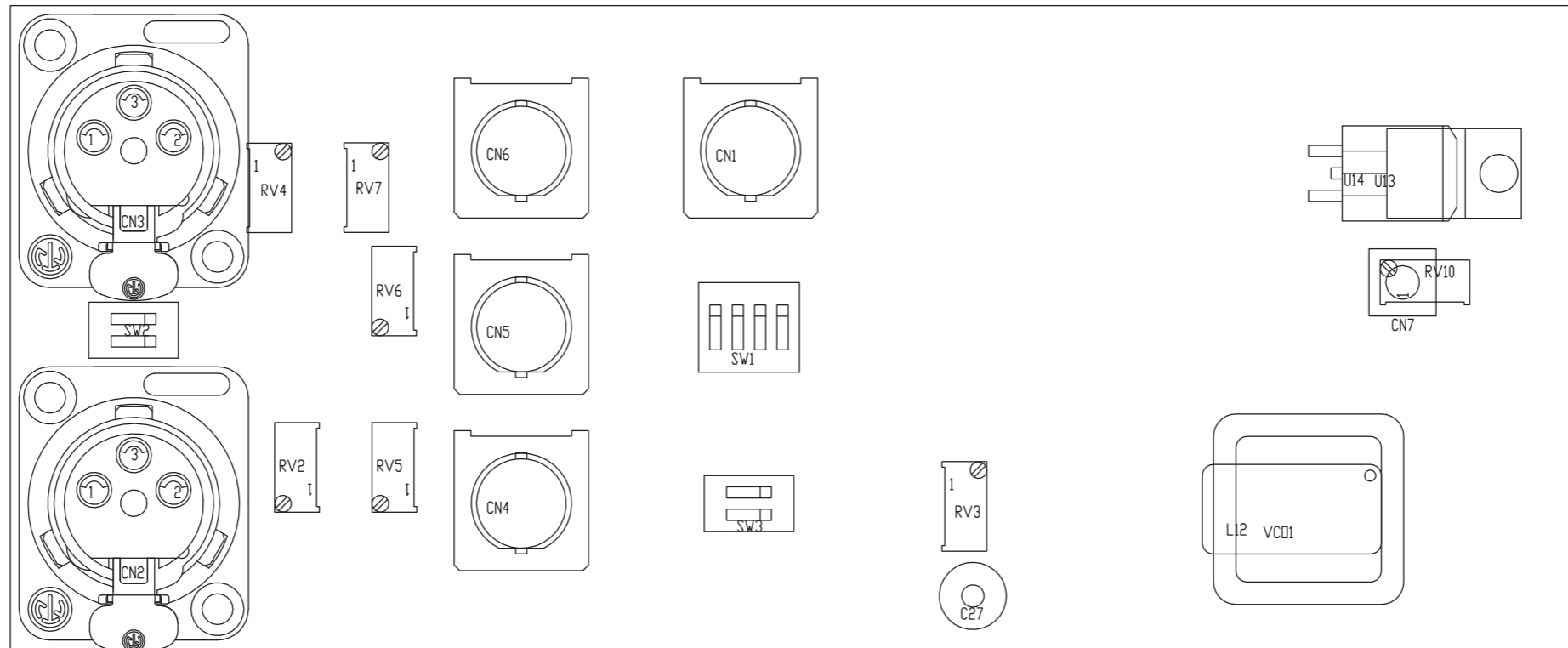
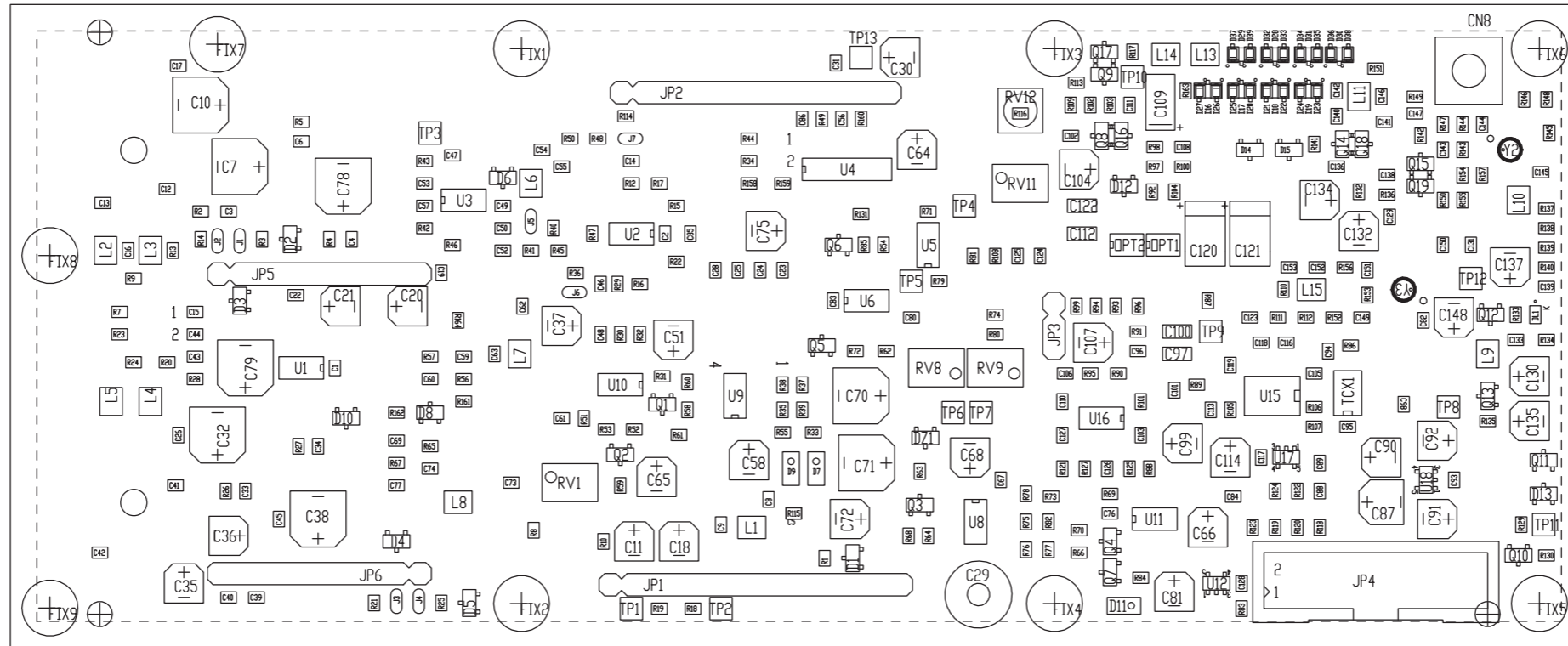


WIRES INFO	
-WIRE-	WIRE IDENTIFICATION # (OPTIONAL)
[WHITE]	PLASTIC INSULATOR COLOUR
(15)	CONDUCTOR SECTION AREA IN mm <sup>2</sup>
x1400	LENGTH IN mm SEE EXAMPLES BELOW :
IDENTIF.	TERMINAL TYPOLOGY
[A0]	BOOTLACE FERRULES (SINGLE WIRE) 
[H1]	WIRE UNSHEATHED 

	PRODUCT NAME : TEX30LCD-TEX50LCD	PART NAME : WIRING DIAGRAM TEX30LCD			
	DESIGNER : D.MILADINOVIC	DATE : 14-01-20	REVISION : 4.3	SCALE : 0.54	SIZE : A3
ARCHIVING : "RVRUT" SERVER, "RILASCIATI" FOLDER	PROJECT CODE : 085	DOCUMENT CODE : KCABTEX30LCD			

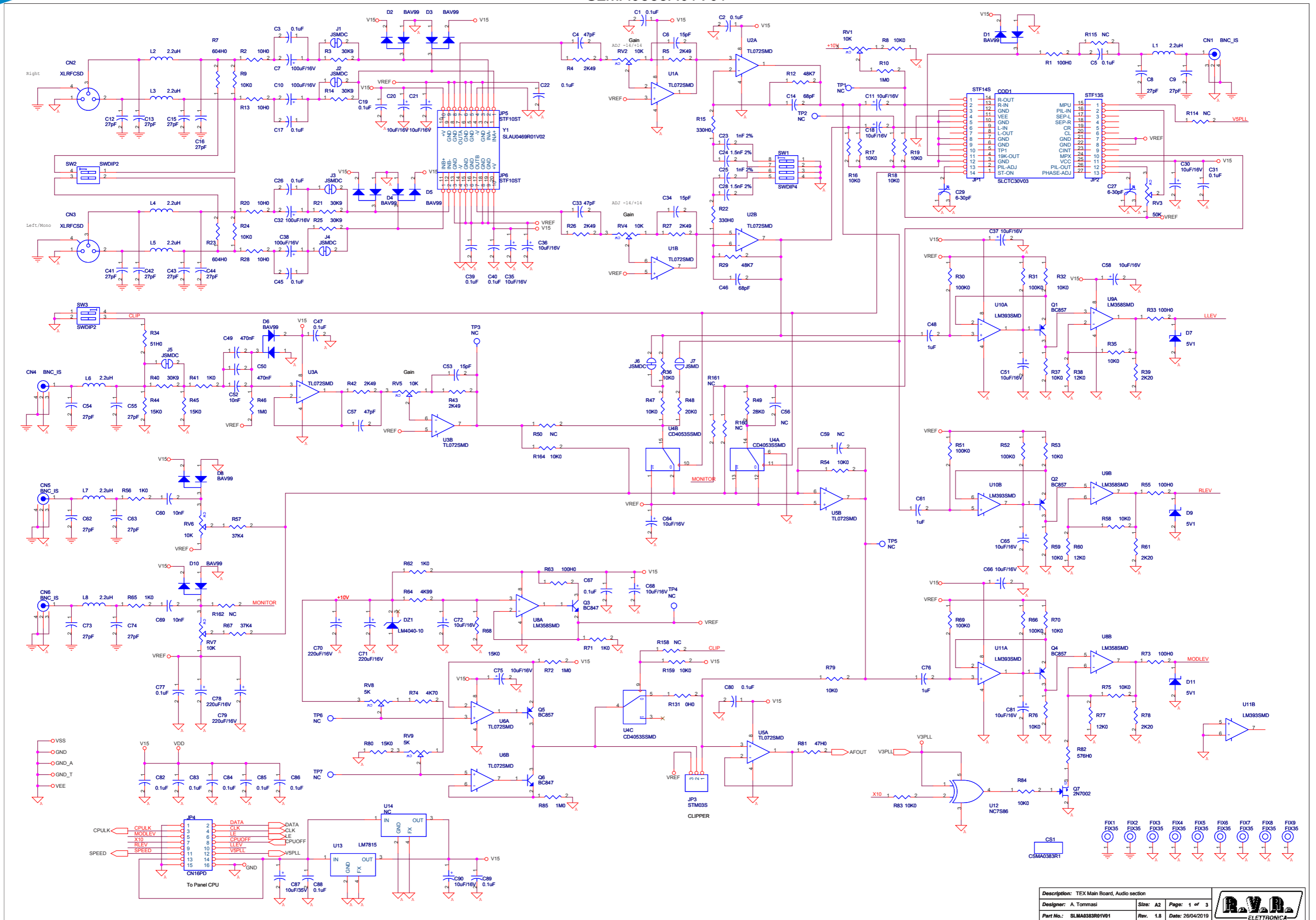


SLMA0383R01V01



PRODUCT NAME : TEX-LCD	PART NAME : MAIN CARD
DESIGNER : A. TOMMASI	DATE : 07/09/15
ARCHIVING : "RVRUT" SERVER, "RILASCIATI" FOLDER	REVISION : 1.0
PROJECT CODE : <	SCALE : 1:1
DOCUMENT CODE : SLMA0383R01V01	SIZE : A4
	PAGE : 1
	DI : 1

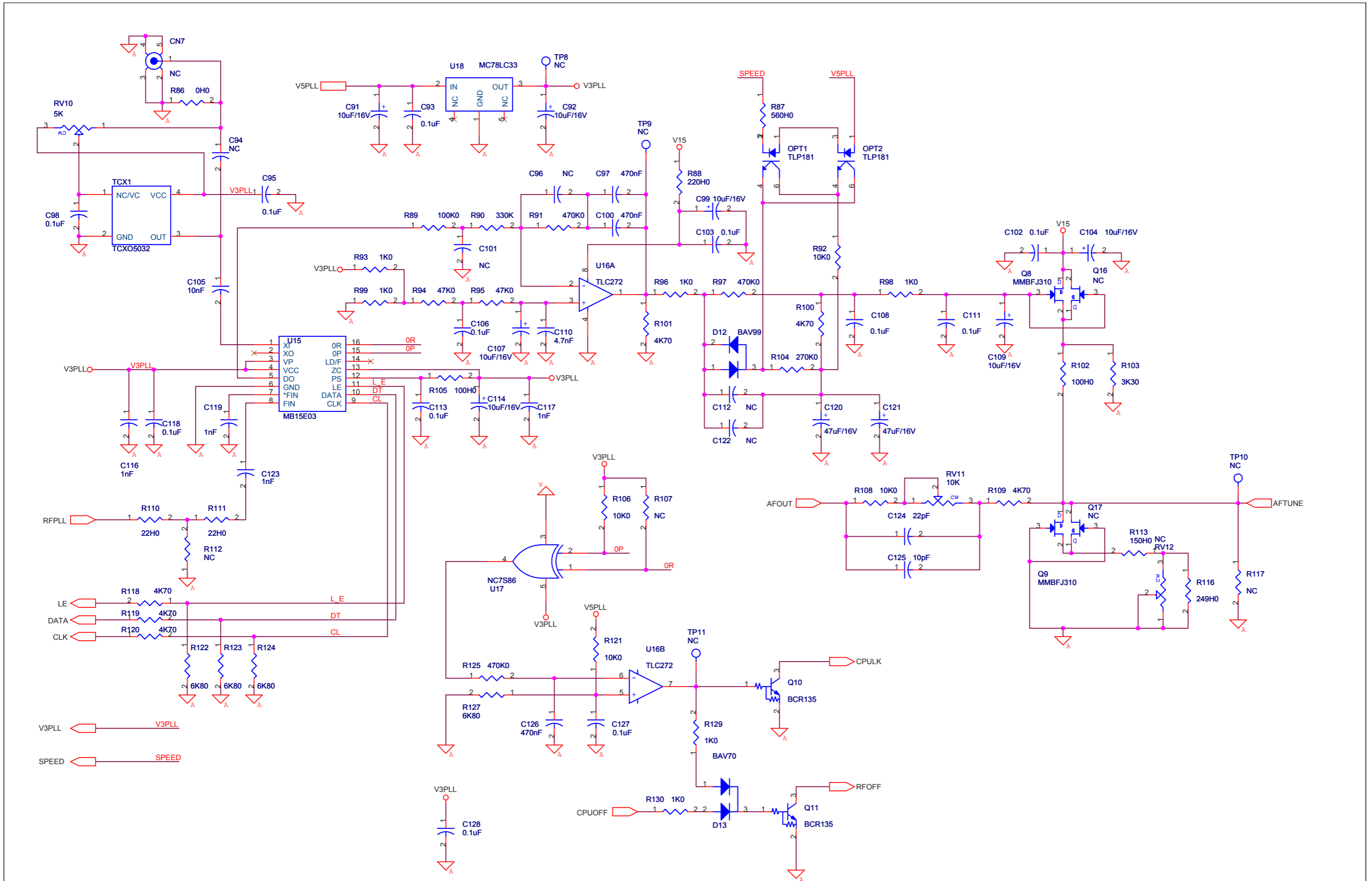
SLMA0383R01V01



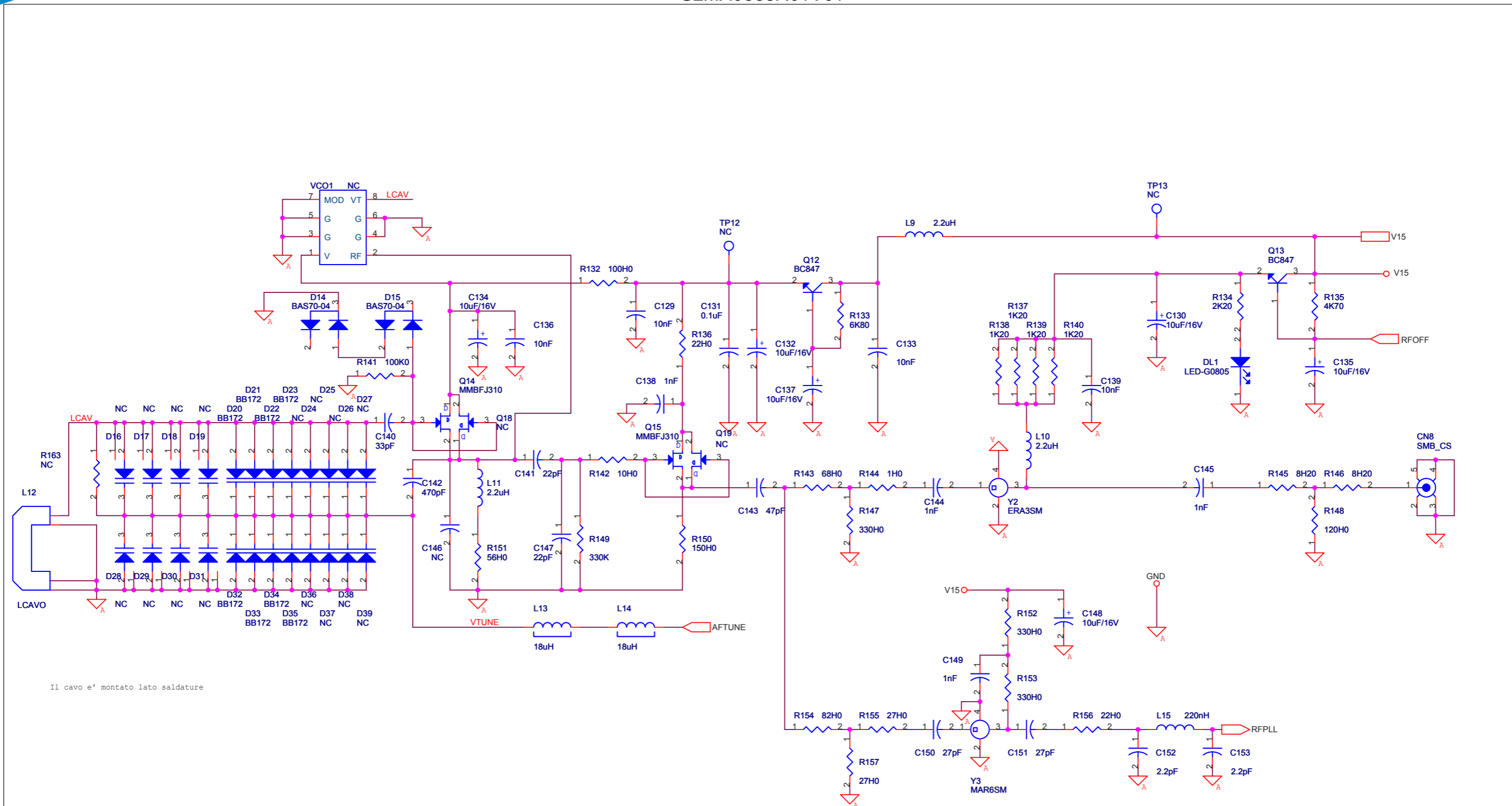
Description: TEX Main Board, Audio section		
Designer: A. Tommasi	Size: A2	Page: 1 of 3
Part No.: SLMA0383R01V01	Rev: 1.8	Date: 26/04/2019



SLMA0383R01V01



Description: TEX Main Board, PLL section			
Designer: A. Tommasi	Size: A3	Page: 2 of 3	
Part No.: SLMA0383R01V01	Rev. 1.8	Date: 26/04/2019	



Il cavo e' montato lato saldature

Description: TEX Main Board, VCO section		
Designer: A. Tommasi	Size: A3	Page: 3 of 3
Part No.: SLMA0383R01V01	Rev. 1.8	Date: 26/04/2019





SLMA0383R01V01

TEX Main Board Revised: 26/04/2019  
 SLMA0383R01V01 Revision: 1.8  
 A. Tommasi; G. De Donno

Item	Quantity	Reference	Part
1	4	CN1,CN4,CN5,CN6	BNC_IS
2	2	CN2,CN3	XLRFCSD
3	1	CN7	NC
4	1	CN8	SMB_CS
5	1	COD1	SLCTC30V03
6	1	CS1	CSMA0383R1
7	36	C1,C2,C3,C5,C17,C19,C22, C26,C31,C39,C40,C45,C47, C67,C77,C80,C82,C83,C84, C85,C86,C88,C89,C93,C95, C98,C102,C103,C106,C108, C111,C113,C118,C127,C128, C131	0.1uF
8	4	C4,C33,C57,C143	47pF
9	3	C6,C34,C53	15pF
10	4	C7,C10,C32,C38	100uF/16V
11	18	C8,C9,C12,C13,C15,C16, C41,C42,C43,C44,C54,C55, C62,C63,C73,C74,C150, C151	27pF
12	30	C11,C18,C20,C21,C30,C35, C36,C37,C51,C58,C64,C65, C66,C68,C72,C75,C81,C90, C91,C92,C99,C104,C107, C114,C130,C132,C134,C135, C137,C148	10uF/16V
13	2	C14,C46	68pF
14	2	C23,C25	1nF 2%
15	2	C24,C28	1.5nF 2%
16	2	C27,C29	6-30pF
17	3	C48,C61,C76	1uF
18	3	C49,C50,C126	470nF
19	8	C52,C60,C69,C105,C129, C133,C136,C139	10nF
20	6	C56,C59,C94,C96,C101, C146	NC
21	4	C70,C71,C78,C79	220uF/16V
22	1	C87	10uF/35V
23	2	C97,C100	470nF
24	1	C109	10uF/16V
25	1	C110	4.7nF
26	2	C112,C122	NC
27	8	C116,C117,C119,C123,C138, C144,C145,C149	1nF
28	2	C120,C121	47uF/16V
29	3	C124,C141,C147	22pF

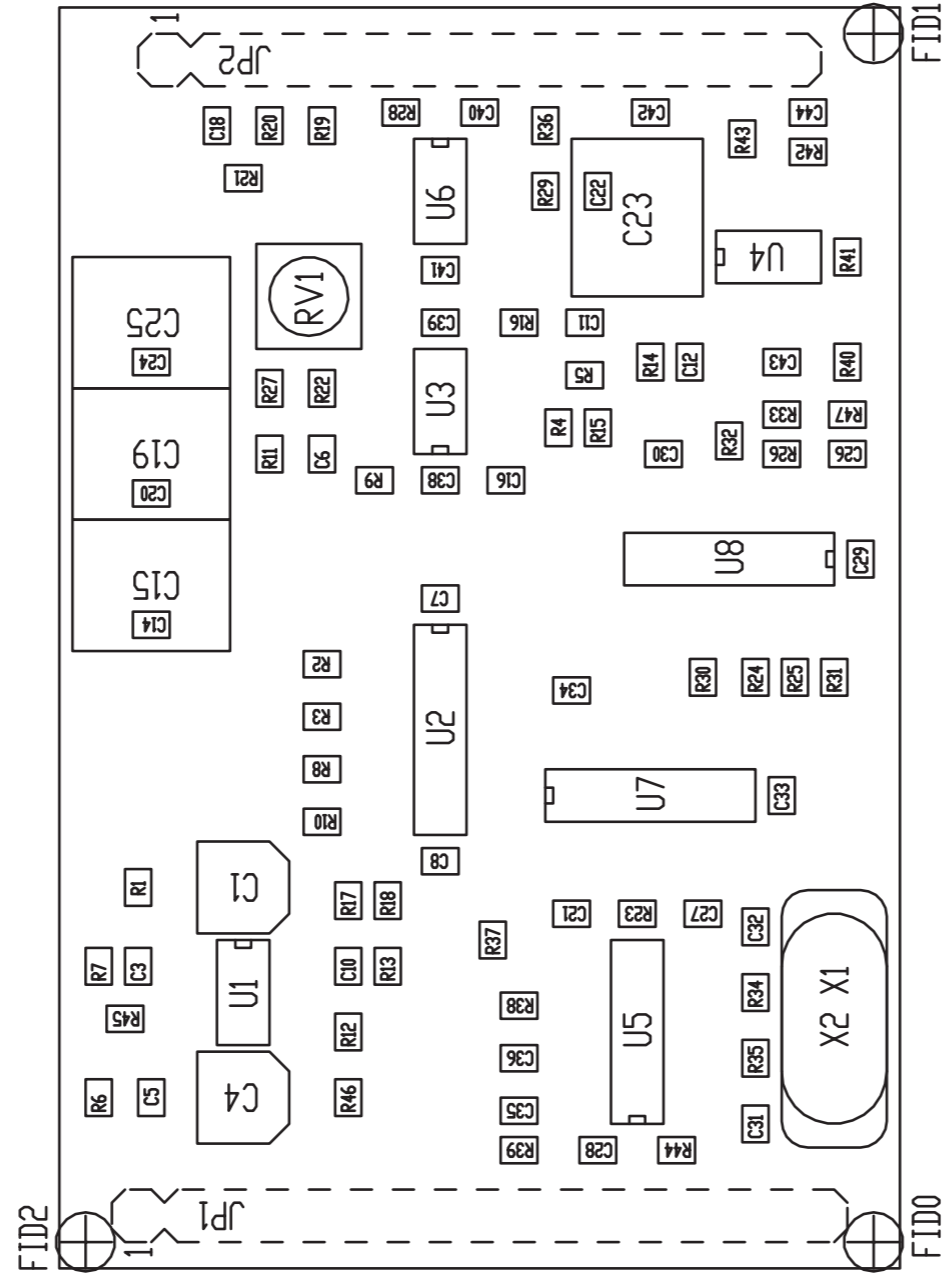
30	1	C125	10pF
31	1	C140	33pF
32	1	C142	470pF
33	2	C152,C153	2.2pF
34	1	DL1	LED-G0805
35	1	DZ1	LM4040-10
36	9	D1,D2,D3,D4,D5,D6,D8,D10, D12	BAV99
37	3	D7,D9,D11	5V1
38	1	D13	BAV70
39	2	D14,D15	BAS70-04
40	8	D16,D17,D18,D19,D28,D29, D30,D31	NC
41	8	D20,D21,D22,D23,D32,D33, D34,D35	BB172
42	8	D24,D25,D26,D27,D36,D37, D38,D39	NC
43	9	FIX1,FIX2,FIX3,FIX4,FIX5, FIX6,FIX7,FIX8,FIX9	FIX35
44	1	JP1	STF14S
45	1	JP2	STF13S
46	1	JP3	STM03S
47	1	JP4	CN16PD
48	2	JP5,JP6	STF10ST
49	6	J1,J2,J3,J4,J5,J6	JSMDC
50	1	J7	JSMD
51	11	L1,L2,L3,L4,L5,L6,L7,L8, L9,L10,L11	2.2uH
52	1	L12	LCAVO
53	2	L13,L14	18uH
54	1	L15	220nH
55	2	OPT1,OPT2	TLP181
56	4	Q1,Q2,Q4,Q5	BC857
57	4	Q3,Q6,Q12,Q13	BC847
58	1	Q7	2N7002
59	4	Q8,Q9,Q14,Q15	MMBFJ310
60	2	Q10,Q11	BCR135
61	4	Q16,Q17,Q18,Q19	NC
62	2	RV1,RV11	10K
63	5	RV2,RV4,RV5,RV6,RV7	10K
64	1	RV3	50K
65	2	RV8,RV9	5K
66	1	RV10	5K
67	1	RV12	NC
68	8	R1,R33,R55,R63,R73,R102, R105,R132	100H0
69	5	R2,R13,R20,R28,R142	10H0
70	5	R3,R14,R21,R25,R40	30K9
71	6	R4,R5,R26,R27,R42,R43	2K49
72	2	R7,R23	604H0
73	28	R8,R9,R16,R17,R18,R19, R24,R32,R35,R36,R37,R47,	10K0

SLMA0383R01V01

	R53,R54,R58,R59,R70,R75, R76,R79,R83,R84,R92,R106, R108,R121,R159,R164	
74	4 R10,R46,R72,R85	1M0
75	2 R12,R29	48K7
76	5 R15,R22,R147,R152,R153	330H0
77	8 R30,R31,R51,R52,R66,R69, R89,R141	100K0
78	1 R34	51H0
79	3 R38,R60,R77	12K0
80	4 R39,R61,R78,R134	2K20
81	11 R41,R56,R62,R65,R71,R93, R96,R98,R99,R129,R130	1K0
82	4 R44,R45,R68,R80	15K0
83	1 R48	20K0
84	1 R49	28K0
85	12 R50,R107,R114,R115,R116, R117,R158,R160,R161,R162, R163,R112	NC
86	2 R57,R67	37K4
87	1 R64	4K99
88	8 R74,R100,R101,R109, R118,R119,R120,R135	4K70
89	1 R81	47H0
90	1 R82	576H0
91	2 R86,R131	0H0
92	1 R87	560H0
93	1 R88	220H0
94	2 R90,R149	330K
95	3 R91,R97,R125	470K0
96	2 R94,R95	47K0
97	1 R103	3K30
98	1 R104	270K0
99	4 R110,R111,R136,R156	22H0
100	2 R113,R150	150H0
101	1 R116	249H0
102	5 R122,R123,R124,R127,R133	6K80
103	4 R137,R138,R139,R140	1K20
104	1 R143	68H0
105	1 R144	1H0
106	2 R145,R146	8H20
107	1 R148	120H0
108	1 R151	56H0
109	1 R154	82H0
110	2 R155,R157	27H0
111	1 SW1	SWDIP4
112	2 SW2,SW3	SWDIP2
113	1 TCX1	TCXO5032
114	13 TP1,TP2,TP3,TP4,TP5,TP6, TP7,TP8,TP9,TP10,TP11, TP12,TP13	NC
115	5 U1,U2,U3,U5,U6	TL072SMD

116	1 U4	CD4053SSMD
117	2 U8,U9	LM358SMD
118	2 U10,U11	LM393SMD
119	2 U12,U17	NC7S86
120	1 U13	LM7815
121	1 U14	NC
122	1 U15	MB15E03
123	1 U16	TLC272
124	1 U18	MC78LC33
125	1 VCO1	NC
126	1 Y1	SLAU0469R01V02
127	1 Y2	ERA3SM
128	1 Y3	MAR6SM

SLCTC30V03



NOME PROGETTO: PTX-LCD

NOME PARTE: CODER CARD

AUTORE: A. TOMMASI

PAGINA: 1 DI 1

ARCHIVIAZIONE ELETTRONICA: \\VRUT1

REVISIONE: 1.0

SCALE: 2:1

SIZE: A4

MATERIALE:

TRATTAMENTO:

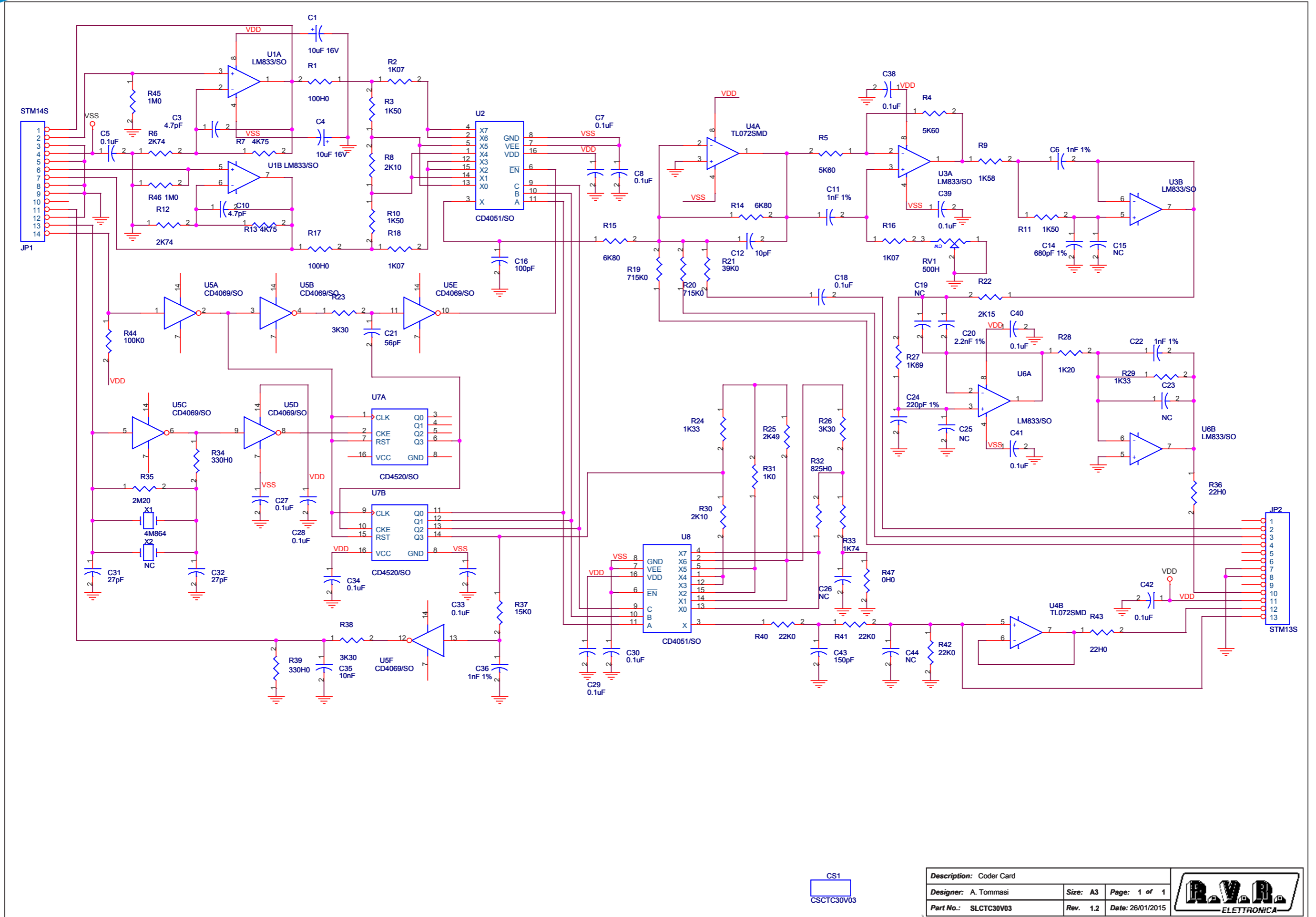
CODICE PROGETTO: 011

CODICE DISEGNO: SLCTC30V03

PROFILO:

STATO: ESECUTIVO

SLCTC30V03



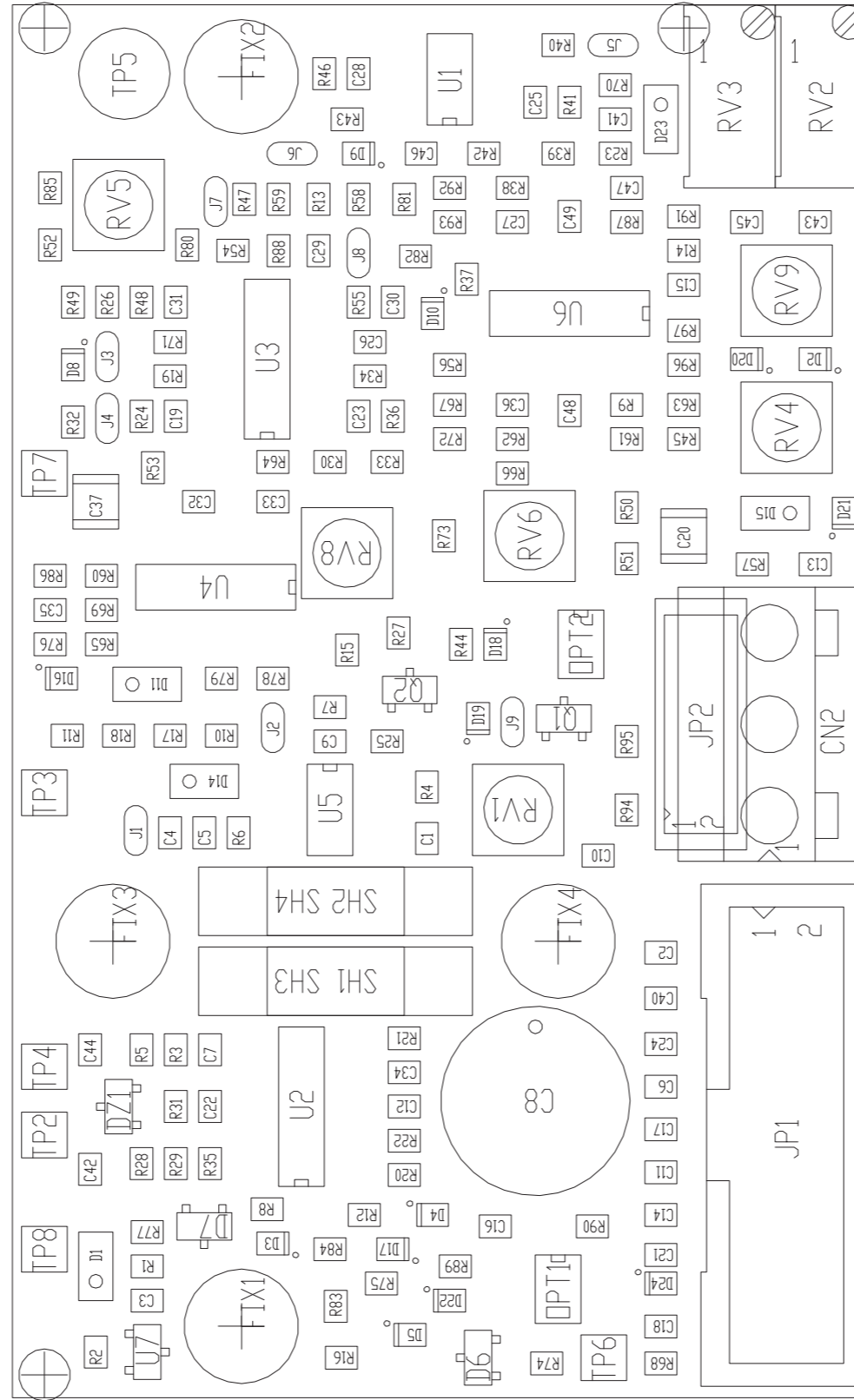
Description: Coder Card			
Designer: A. Tommasi	Size: A3	Page: 1 of 1	
Part No.: SLCTC30V03	Rev. 1.2	Date: 26/01/2015	



SLCTC30V03

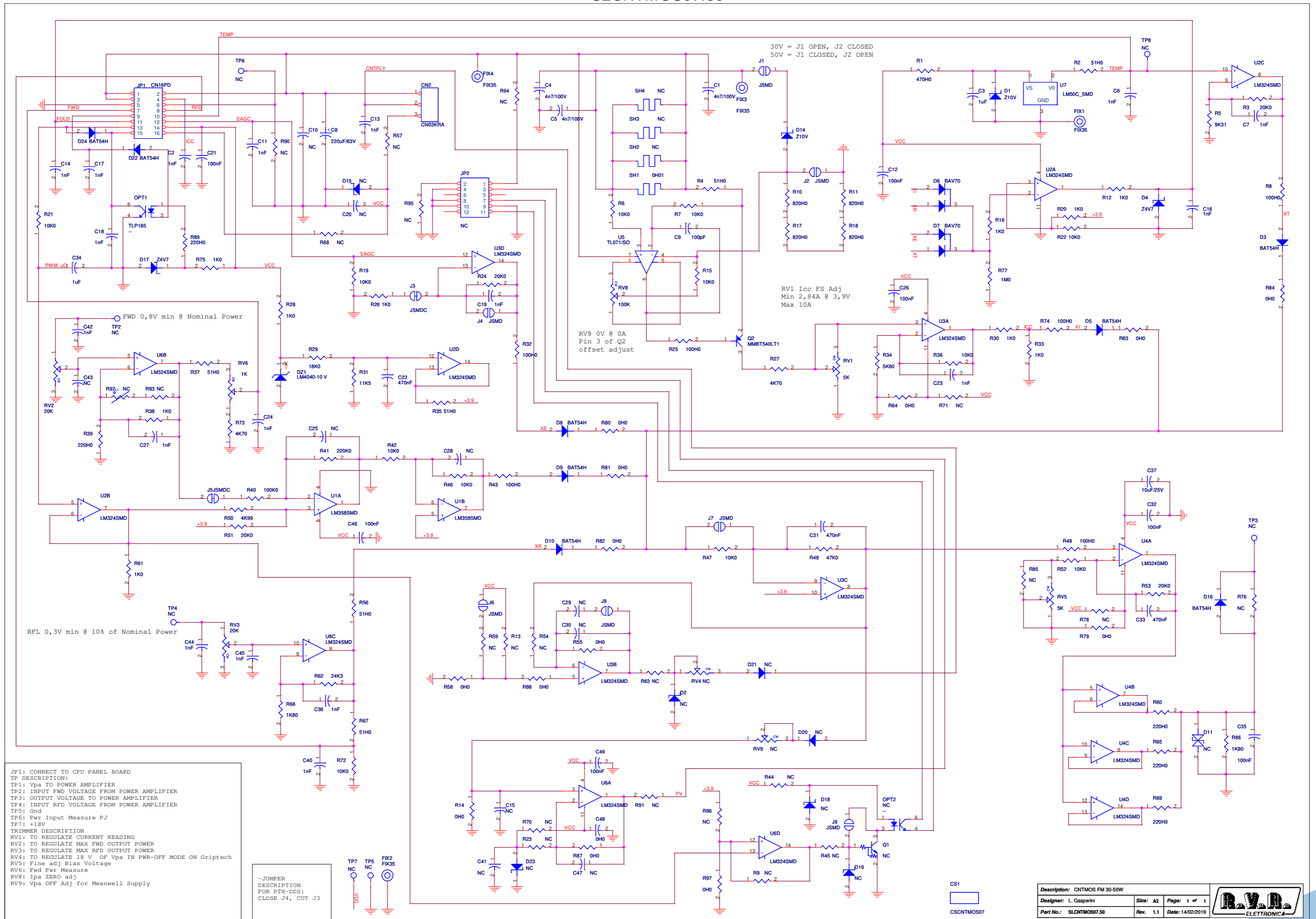
Coder Card Revised: 26/01/2015  
 SLCTC30V03 Revision: 1.2  
 A. Tommasi

Item	Q.ty	Reference	Part	Description
1	1	CS1	CSCTC30V03	Circuito stampato
2	2	C1, C4	10uF 16V	Cond. Elett. SMD d. 4mm
3	2	C3, C10	4.7pF	Cond. SMD 0805
4	15	C5, C7, C8, C18, C27, C28, C29, C30, C33, C34, C38, C39, C40, C41, C42	0.1uF	Cond. SMD 0805
5	4	C6, C11, C22, C36	1nF 1%	Cond. SMD 0805 COG
6	1	C12	10pF	Cond. SMD 0805
7	1	C14	680pF 1%	Cond. SMD 0805 COG
8	4	C15, C19, C23, C25	NC	Cond. Poliestere p 5mm (5*7mm)
9	1	C16	100pF	Cond. SMD 0805
10	1	C20	2.2nF 1%	Cond. SMD 0805 COG
11	1	C21	56pF	Cond. SMD 0805
12	1	C24	220pF 1%	Cond. SMD 0805 COG
13	1	C26	NC	Cond. SMD 0805
14	2	C31, C32	27pF	Cond. SMD 0805
15	1	C35	10nF	Cond. SMD 0805
16	1	C43	150pF	Cond. SMD 0805
17	1	C44	NC	Cond. SMD 0805
18	1	JP1	STM14S	Strip maschio 14 pin
19	1	JP2	STM13S	Strip maschio 13 pin
20	1	RV1	500H	Trimmer SMD
21	2	R1, R17	100H0	Res. SMD 0805
22	3	R2, R16, R18	1K07	Res. SMD 0805
23	3	R3, R10, R11	1K50	Res. SMD 0805
24	2	R4, R5	5K60	Res. SMD 0805
25	2	R6, R12	2K74	Res. SMD 0805
26	2	R7, R13	4K75	Res. SMD 0805
27	2	R8, R30	2K10	Res. SMD 0805
28	1	R9	1K58	Res. SMD 0805
29	2	R14, R15	6K80	Res. SMD 0805
30	2	R19, R20	715K0	Res. SMD 0805
31	1	R21	39K0	Res. SMD 0805
32	1	R22	2K15	Res. SMD 0805
33	3	R23, R26, R38	3K30	Res. SMD 0805
34	2	R24, R29	1K33	Res. SMD 0805
35	1	R25	2K49	Res. SMD 0805
36	1	R27	1K69	Res. SMD 0805
37	1	R28	1K20	Res. SMD 0805
38	1	R31	1K0	Res. SMD 0805
39	1	R32	825H0	Res. SMD 0805
40	1	R33	1K74	Res. SMD 0805
41	2	R34, R39	330H0	Res. SMD 0805
42	1	R35	2M20	Res. SMD 0805
43	2	R36, R43	22H0	Res. SMD 0805
44	1	R37	15K0	Res. SMD 0805
45	3	R40, R41, R42	22K0	Res. SMD 0805
46	1	R44	100K0	Res. SMD 0805
47	2	R45, R46	1M0	Res. SMD 0805
48	1	R47	0H0	Res. SMD 0805
49	3	U1, U3, U6	LM833/SO	Dual Op. SMD SO8
50	2	U2, U8	CD4051/SO	Analog Switch SMD SO16
51	1	U4	TL072SMD	Dual Op. SMD SO8
52	1	U5	CD4069/SO	Hex inverter SO14
53	1	U7	CD4520/SO	Dual binary counter
54	1	X1	4M864	Quarzo SMD HC49SMD
55	1	X2	NC	Quarzo HC18



PRODUCT NAME : <>	PART NAME : CNTMOS PA RF R.07
DESIGNER : L. GASPERINI	DATE : 18/05/16
ARCHIVING : "RVRUT" SERVER, "RILASCIATI" FOLDER	REVISION : 1.0
PROJECT CODE : <>	SCALE : 1:1
DOCUMENT CODE : SLCNTMOS07	SIZE : A4
	PAGE : 1
	DI : 1

SLCNTMOS07.50



JP1: CONNECT TO CPU PANEL BOARD  
 TP DESCRIPTION:  
 TP1: V<sub>pa</sub> TO POWER AMPLIFIER  
 TP2: INPUT FWD VOLTAGE FROM POWER AMPLIFIER  
 TP3: OUTPUT VOLTAGE TO POWER AMPLIFIER  
 TP4: INPUT RFD VOLTAGE FROM POWER AMPLIFIER  
 TP5: Gnd  
 TP6: Pwr Input Measure PJ  
 TP7: +18V  
 TRIMMER DESCRIPTION  
 RV1: TO REGULATE CURRENT READING  
 RV2: TO REGULATE MAX FWD OUTPUT POWER  
 RV3: TO REGULATE MAX RFD OUTPUT POWER  
 RV4: TO REGULATE 18 V<sub>OFF</sub> OF V<sub>pa</sub> IN FWR-OFF MODE ON Griptech  
 RV5: Fine adj Bias Voltage  
 RV6: Fwd Pwr Measure  
 RV8: I<sub>pa</sub> ZERO adj  
 RV9: V<sub>pa</sub> OFF Adj for Meanwell Supply

-JUMPER DESCRIPTION FOR PTX-DDS:  
 CLOSE J4, CUT J3

Description: CNTMOS FM 30-50W		
Designer: L. Gasparini	Size: A2	Page: 1 of 1
Part No.: SLCNTMOS07.50	Rev: 1.1	Date: 14/02/2019



SLCNTMOS07.50

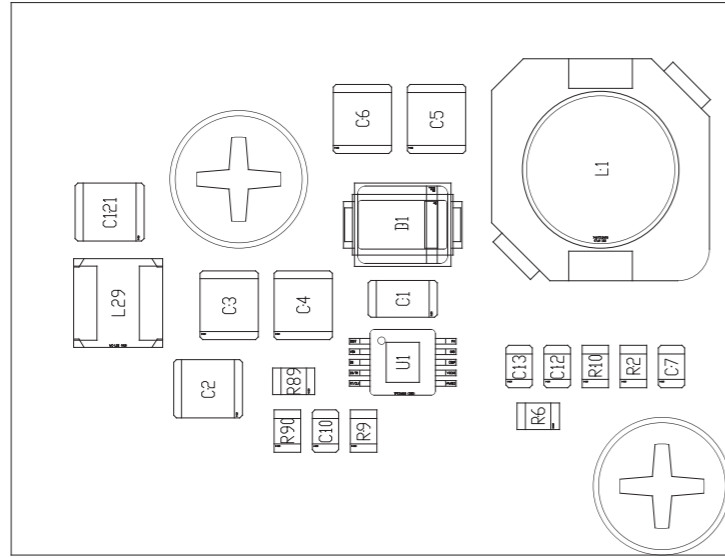
CNTMOS FM 30-50W Revised: 14/02/2019  
 SLCNTMOS07.50 Revision: 1.1  
 Luca Gasperini

Item	Quantity	Reference	Part	Description
1	1	CN2	CN03KRA	Conn. tipo KRA a 3 poli
2	1	CS1	CSCNTMOS07	Circuito stampato
3	3	C1, C4, C5	4n7/100V	Cond. SMD 0805
4	18	C2, C6, C7, C11, C13, C14, C16, C17, C18, C19, C23, C24, C27, C36, C40, C42, C44, C45	1nF	Cond. SMD 0805
5	2	C3, C34	1uF	Cond. SMD 0805
6	1	C8	220uF/63V	Cond. Elettr. Dia 10 P5.08
7	1	C9	100pF	Cond. SMD 0805
8	9	C10, C15, C25, C28, C29, C30, C41, C43, C47	NC	Cond. SMD 0805
9	7	C12, C21, C26, C32, C35, C46, C49	100nF	Cond. SMD 0805
10	1	C20	NC	Cond. SMD 1210
11	3	C22, C31, C33	470nF	Cond. SMD 0805
12	1	C37	10uF/25V	Cond. SMD 1210
13	1	C48	0H0	Cond. SMD 0805
14	1	D21	LM4040-10 V	Diodi Zener SMD SOT23
15	2	D1, D14	Z10V	MINIMELF SMD Zener Diode
16	3	D2, D18, D19	NC	SOD323 Zener Diode
17	8	D3, D5, D8, D9, D10, D16, D22, D24	BAT54H	SOD323 SMD Diode
18	2	D4, D17	Z4V7	SOD323 Zener Diode
19	2	D6, D7	BAV70	Doppio Diode SMD SOT23
20	1	D11	NC	Transzorib SMA
21	2	D15, D23	NC	MINIMELF SMD Zener Diode
22	2	D20, D21	NC	SOD323 SMD Diode
23	4	FIX1, FIX2, FIX3, FIX4	FIX35	Foro fissaggio 3.5mm
24	1	JP1	CN16PD	Conn.M.C.S.Dritto 16P alette.
25	1	JP2	NC	Conn. 12 poli DF11 12pin p. 2mm
26	7	J1, J2, J4, J6, J7, J8, J9	JSMDC	Pad SMD a saldare
27	2	J3, J5	JSMDC	Pad SMD a saldare chiuso
28	1	OPT1	TLP185	Optocoupler SMD SO6
29	1	OPT2	NC	Optocoupler SMD SO6
30	1	Q1	NC	Trans./Res. NPN SOT23
31	1	Q2	MMBT540LT1	Trans. PNP SOT23
32	2	RV1, RV5	5K	Trimmer SMD
33	2	RV2, RV3	20K	Trimmer Rg V 3296W
34	2	RV4, RV9	NC	Trimmer SMD
35	1	RV6	1K	Trimmer SMD
36	1	RV8	100K	Trimmer SMD
37	1	R1	470H0	Res. SMD 0805 1%
38	6	R2, R4, R35, R37, R56, R67	51H0	Res. SMD 0805 1%
39	4	R3, R24, R51, R53	20K0	Res. SMD 0805 1%
40	1	R5	9K31	Res. SMD 0805 1%
41	12	R6, R7, R15, R19, R21, R22, R36, R42, R46, R47, R52, R72	10K0	Res. SMD 0805 1%
42	6	R8, R25, R32, R43, R49, R74	100H0	Res. SMD 0805 1%
43	21	R9, R13, R23, R44, R45, R54, R57, R59, R63, R68, R70, R71, R76, R78, R85, R90, R91, R93, R94, R95, R96	NC	Res. SMD 0805 1%
44	4	R10, R11, R17, R18	820H0	Res. SMD 0805 1%
45	10	R12, R16, R20, R26, R28, R30, R33, R38, R61, R75	1K0	Res. SMD 0805 1%
46	13	R14, R55, R58, R64, R79, R80, R81, R82, R83, R84, R87, R88, R97	0H0	Res. SMD 0805 1%
47	2	R27, R73	4K70	Res. SMD 0805 1%
48	1	R29	18K0	Res. SMD 0805 1%
49	1	R31	11K5	Res. SMD 0805 1%
50	1	R34	5K60	Res. SMD 0805 1%
51	5	R39, R60, R65, R69, R89	220H0	Res. SMD 0805 1%
52	1	R40	100K0	Res. SMD 0805 1%
53	1	R41	220K0	Res. SMD 0805 1%
54	1	R48	47K0	Res. SMD 0805 1%
55	1	R50	4K99	Res. SMD 0805 1%
56	1	R62	24K3	Res. SMD 0805 1%
57	2	R66, R86	1K80	Res. SMD 0805 1%
58	1	R77	1M0	Res. SMD 0805 1%
59	1	R92	NC	Res. NTC SMD 0805
60	1	SH2	NC	Shunt passo 15.2mm fori 2mm

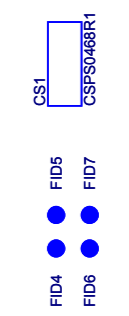
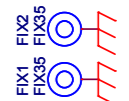
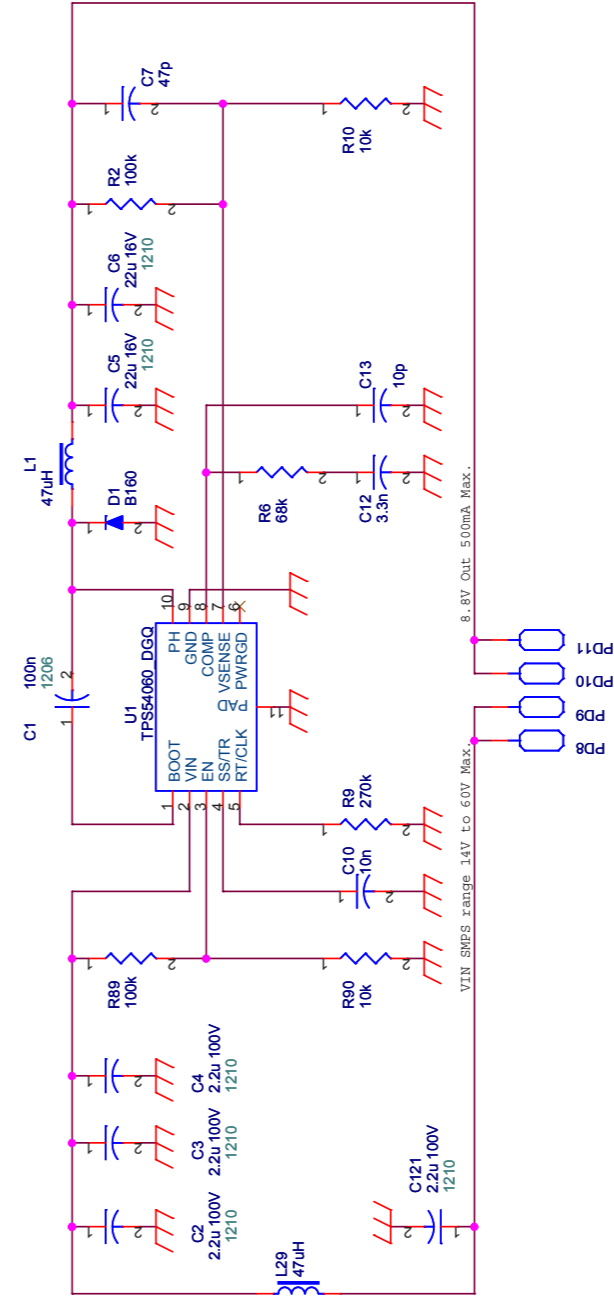
Item	Quantity	Reference	Part	Description
61	1	SH1	0H01	Shunt passo 15.2mm fori 2mm
62	2	SH3, SH4	NC	Shunt SMD 2512
63	6	TP2, TP3, TP4, TP6, TP7, TP8	NC	Foro dia. 1mm
64	1	TP5	NC	Foro dia. 2mm
65	1	U1	LM358SMD	Dual Op. SMD SO8
66	4	U2, U3, U4, U6	LM324SMD	Quad Op. SMD SO14
67	1	U5	TL071/SO	Single Op. SMD SO8
68	1	U7	LM50C_SMD	Temperature sensor



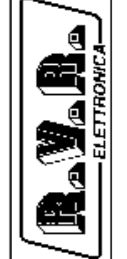
SLPS0468R01V01



DESCRIPTION : POWER SUPPLY PA RF 50W 50V	PART CODE : SLPS0468R01V01
DESIGNER : M. UCELLI	DATE: 19/04/2017
	REVISION: 1.0
	SCALE: 3:1
	SIZE: A4
	PAGINA: 1 DI 1



Description: POWER SUPPLY PA RF 50W 50V	Page: 1 of 1
Designer: Mauro Ucelli	Size: A4
Part No.: SLPS0468R01V01	Rev. 1.0
	Date: 19/04/2017

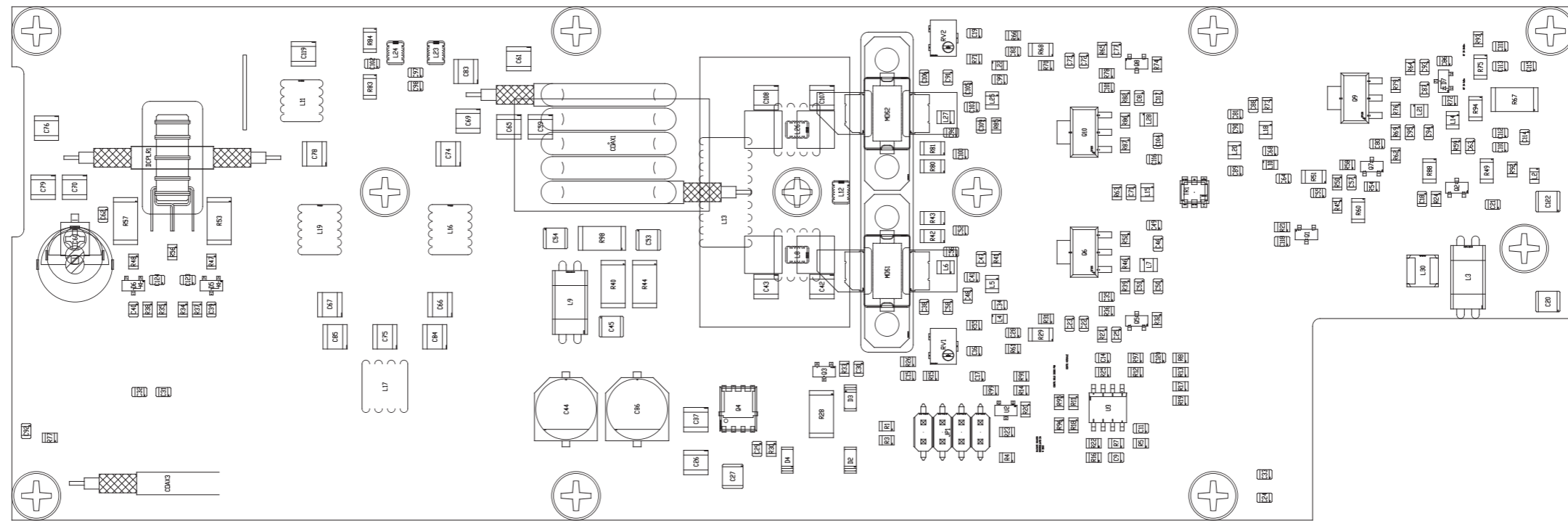


SLPS0468R01V01

POWER SUPPLY PA RF 50W 50V  
 SLPS0468R01V01  
 Revision: 1.0  
 Mauro Ucelli  
 19/04/2017

Item	Quantity	Reference	Part	Description
3	1	CS1	CSPS0468R1	Circuito stampato PA
5	1	C1	100n	Cond. SMD 1206
6	4	C2,C3,C4,C121	2.2u 100V	Capacitor SMD 1210 MLCC X7R 100V
7	2	C5,C6	22u 16V	Capacitor SMD 1210 MLCC X7R 16V
8	1	C7	47p	Cond. SMD 0805 COG
9	1	C10	10n	SMD 0805 MLCC X7R
11	1	C12	3.3n	SMD 0805 MLCC X7R
12	1	C13	10p	Cond. SMD 0805 COG
45	1	D1	B160	SMA Size SCHOTTKY Diode
51	4	FID4,FID5,FID6,FID7	FID	Fiducial CS
52	2	FIX1,FIX2	FIX35	
57	1	L1	47uH	PWR Ind Wurth E 7447713470
73	1	L29	47uH	PWR Ind WE 74404042470
75	4	PD8,PD9,PD10,PD11	PAD	Pad for connection
84	2	R2,R89	100k	Res. SMD 0805
88	1	R6	68k	Res. SMD 0805
91	1	R9	270k	Res. SMD 0805
92	2	R10,R90	10k	Res. SMD 0805
130	1	U1	TPS54060_DGQ	Step-Down DC2DC Converter

SLRF0408R03V01



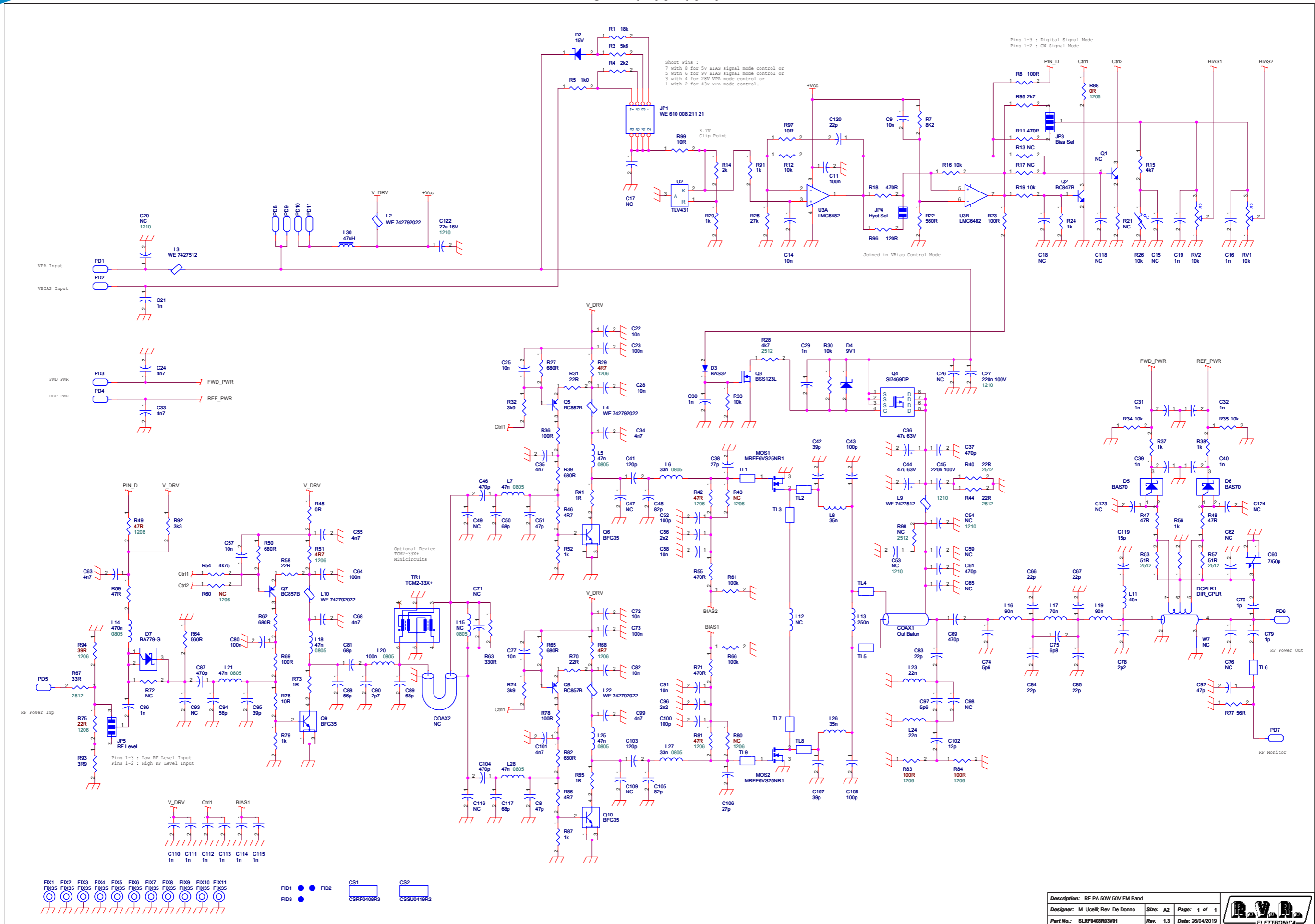
DESCRIPTION : RF PA 50W 50V FM BAND

PART CODE : SLRF0408R03V01

DESIGNER : M. UCELLI

DATE: 19/04/2017 | REVISION: 1.0 | SCALE: 1:1 | SIZE: A4 | PAGINA: 1 DI 1

SLRF0408R03V01

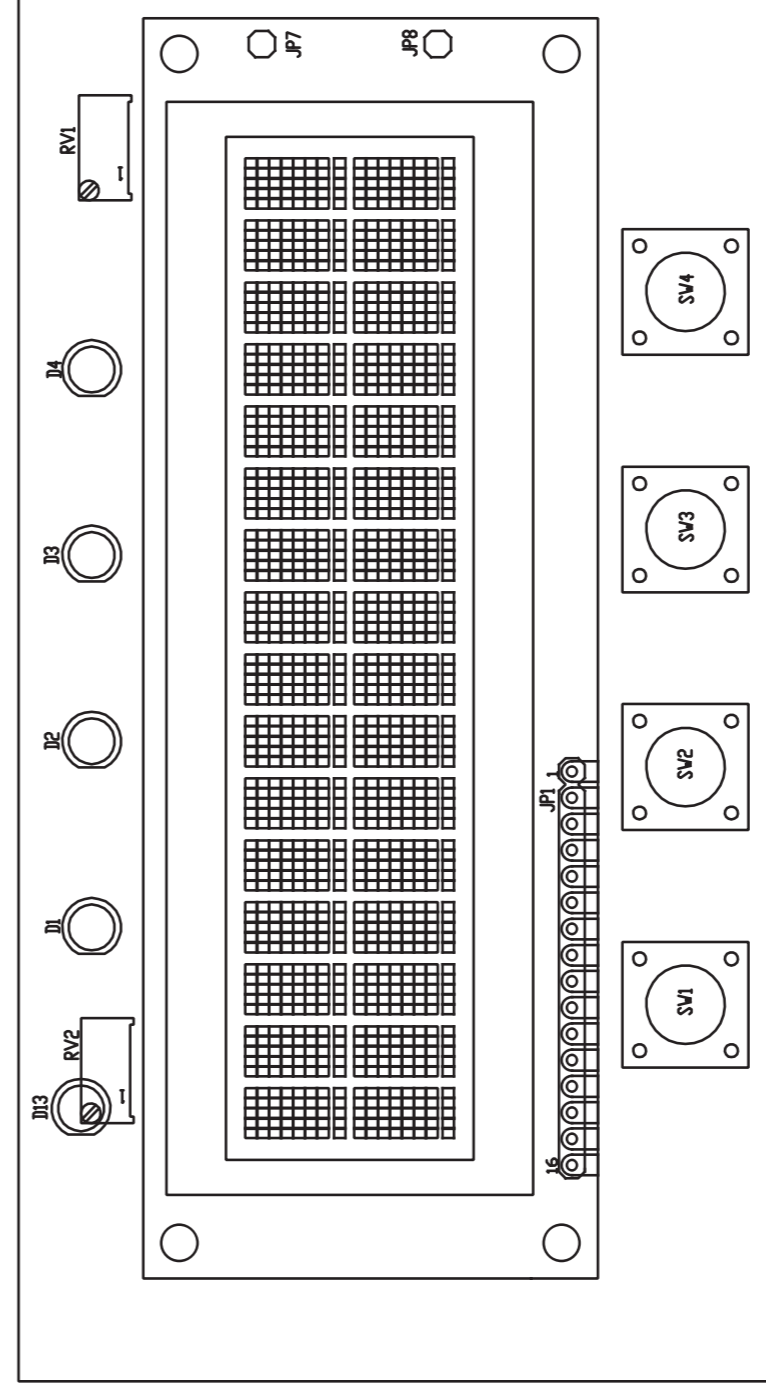
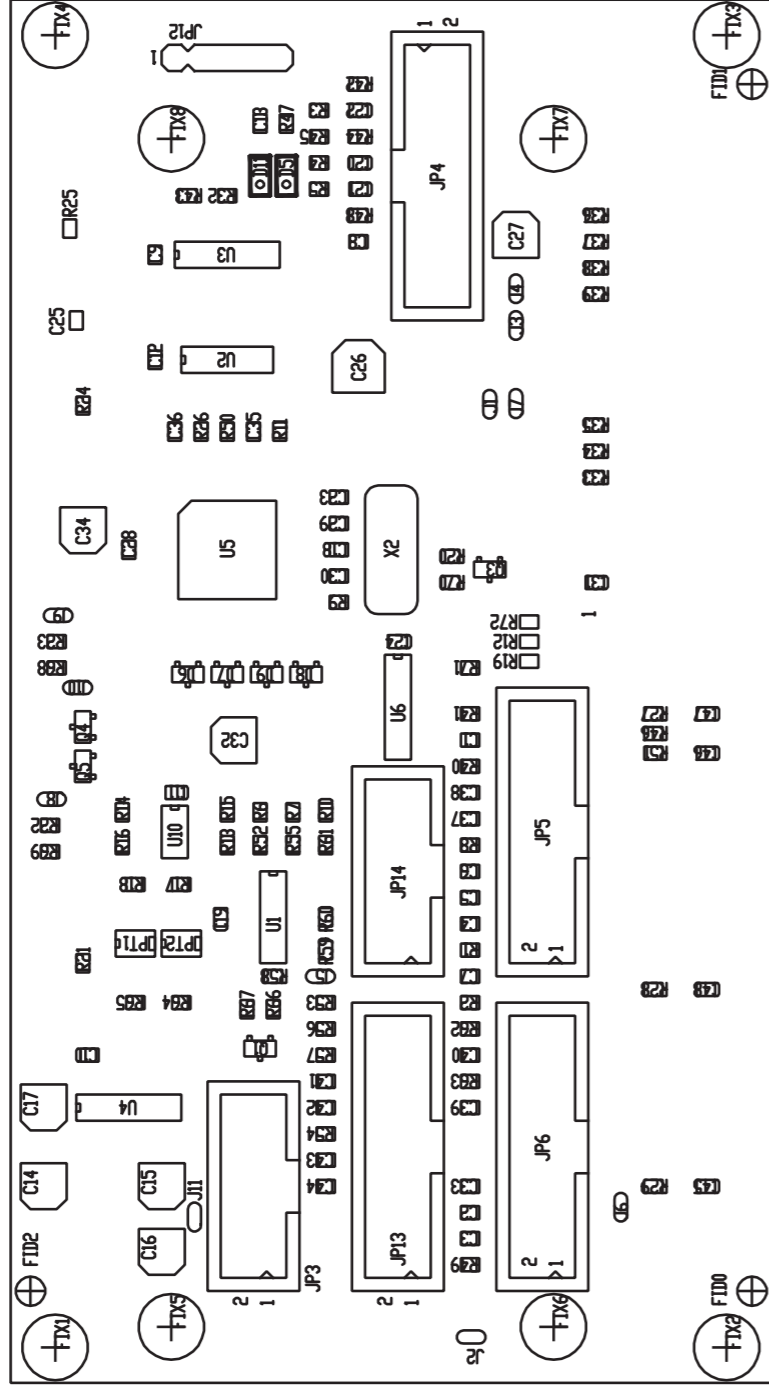


SLRF0408R03V01

RF PA 50W 50V FM Band  
SLRF0408R03V01  
Revision: 1.3  
M. Ucelli; rev. De Donno  
26/04/2019

Item	Quantity	Reference	Part
1	1	COAX1	Out Balun
2	1	COAX2	NC
3	1	CS1	CSRF0408R3
4	1	CS2	CSSU0419R2
7	1	C122	22u 16V
8	3	C8,C51,C92	47p
9	11	C9,C14,C22,C25,C28,C57,C58,C72,C77,C82,C91	10n
10	5	C11,C23,C64,C73,C80	100n
13	13	C15,C17,C18,C47,C49,C62,C71,C93,C109,C116,C118,C123,C124	NC
14	16	C16,C19,C21,C29,C30,C31,C32,C39,C40,C86,C110,C111,C112,C113,C114,C115	1n
15	2	C27,C45	220n 100V
16	9	C24,C33,C34,C35,C55,C63,C68,C99,C101	4n7
17	4	C26,C59,C65,C76	NC
18	2	C36,C44	47u 63V
19	3	C37,C61,C69	470p
20	2	C38,C106	27p
21	2	C41,C103	120p
22	2	C42,C107	39p
23	2	C43,C108	100p
24	3	C46,C87,C104	470p
25	2	C48,C105	82p
26	4	C50,C81,C89,C117	68p
27	2	C52,C100	100p
28	3	C20,C53,C54	NC
29	2	C56,C96	2n2
30	1	C60	7/50p
31	5	C66,C67,C83,C84,C85	22p
32	2	C70,C79	1p
33	1	C74	5p6
34	1	C75	6p8
35	1	C78	2p2
36	2	C88,C94	56p
37	1	C90	2p7
38	1	C95	39p
39	1	C97	5p6
40	1	C98	NC
41	1	C102	12p
42	1	C119	15p
43	1	C120	22p
44	1	DCPLR1	DIR_CPLR
46	1	D2	15V
47	1	D3	BAS32
48	1	D4	9V1
49	2	D5,D6	BAS70
50	1	D7	BA779-G
51	3	FID1,FID2,FID3	FID
52	11	FIX1,FIX2,FIX3,FIX4,FIX5,FIX6,FIX7,FIX8,FIX9,FIX10,FIX11	FIX35
53	1	JP1	WE 610 008 211
54	1	JP3	Bias Sel
55	1	JP4	Hyst Sel
56	1	JP5	RF Level
58	4	L2,L4,L10,L22	WE 742792022
59	2	L3,L9	WE 7427512
60	6	L5,L7,L21,L25,L28,L18	47n
61	2	L6,L27	33n
62	2	L8,L26	35n
63	1	L11	40n
64	1	L12	NC
65	1	L13	250n
66	1	L14	470n

67	1	L15	NC
68	2	L16,L19	90n
69	1	L17	70n
71	1	L20	100n
72	2	L23,L24	22n
73	1	L30	47uH
74	2	MOS1,MOS2	MRFE6VS25NR
75	11	PD1,PD2,PD3,PD4,PD5,PD6,PD7,PD8,PD9,PD10,PD11	PAD
76	1	Q1	NC
77	1	Q2	BC847B
78	1	Q3	BSS123L
79	1	Q4	SI7469DP
80	3	Q5,Q7,Q8	BC857B
81	3	Q6,Q9,Q10	BFG35
82	2	RV1,RV2	10k
83	1	R1	18k
84	2	R61,R66	100k
85	1	R3	5k6
86	1	R4	2k2
87	1	R5	1k0
89	1	R7	8K2
90	5	R8,R23,R36,R69,R78	100R
92	7	R12,R16,R19,R30,R33,R34,R35	10k
93	4	R11,R18,R55,R71	470R
94	4	R13,R17,R21,R72	NC
95	1	R14	2k
96	1	R15	4k7
97	9	R20,R24,R37,R38,R52,R56,R79,R87,R91	1k
98	2	R22,R64	560R
99	1	R25	27k
100	1	R26	10k
101	6	R27,R39,R50,R62,R65,R82	680R
102	1	R28	4k7
103	3	R29,R51,R68	4R7
104	3	R31,R58,R70	22R
105	2	R32,R74	3k9
106	2	R40,R44	22R
107	3	R41,R73,R85	1R
108	3	R42,R49,R81	47R
109	3	R43,R60,R80	NC
110	1	R45	0R
111	2	R46,R86	4R7
112	3	R47,R48,R59	47R
113	2	R53,R57	51R
114	1	R54	4k75
115	1	R63	330R
116	1	R67	33R
117	1	R75	22R
118	3	R76,R97,R99	10R
119	1	R77	56R
120	2	R83,R84	100R
121	1	R88	0R
122	1	R92	3k3
123	1	R93	3R9
124	1	R94	39R
125	1	R95	2k7
126	1	R96	120R
127	1	R98	NC
128	9	TL1,TL2,TL3,TL4,TL5,TL6,TL7,TL8,TL9	TLINE_S
129	1	TR1	TCM2-33X+
131	1	U2	TLV431
132	1	U3	LMC6482
133	1	W7	NC



PRODUCT NAME : TEX-LCD, PJ-LCD, LINK, URP      PART NAME : SEM.SCH.PANEL CARD PIC18F452

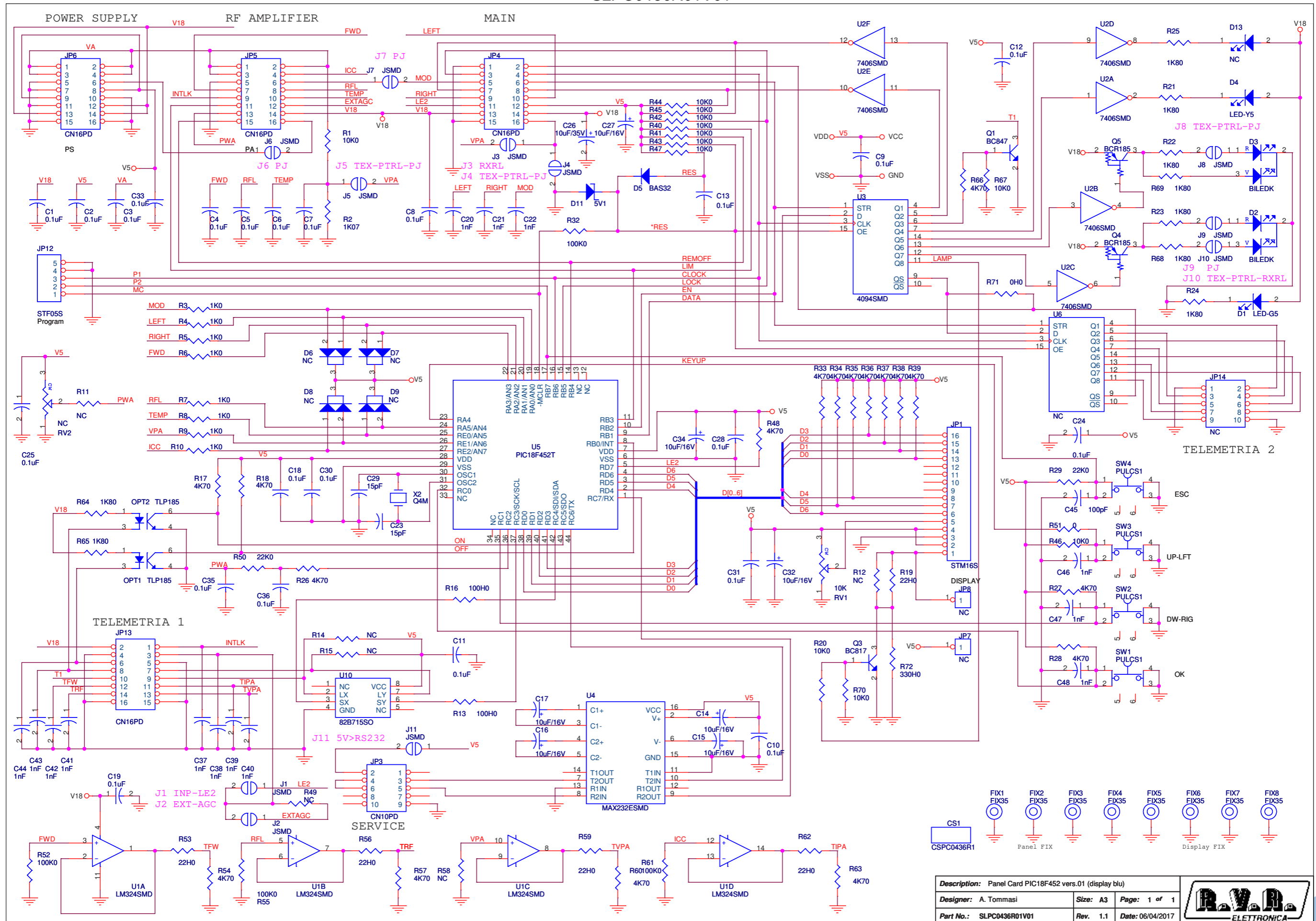
DESIGNER : A. TOMMASI

DATE : 03/09/15      REVISION : 1.0      SCALE : 1:1      SIZE : A4      PAGE : 1 DI 1

ARCHIVING : 'RVRUT' SERVER, 'RILASCIATI' FOLDER      PROJECT CODE : <>      DOCUMENT CODE : SLPC0436R01V01



SLPC0436R01V01



Description: Panel Card PIC18F452 vers.01 (display blu)		
Designer: A. Tommasi	Size: A3	Page: 1 of 1
Part No.: SLPC0436R01V01	Rev. 1.1	Date: 06/04/2017

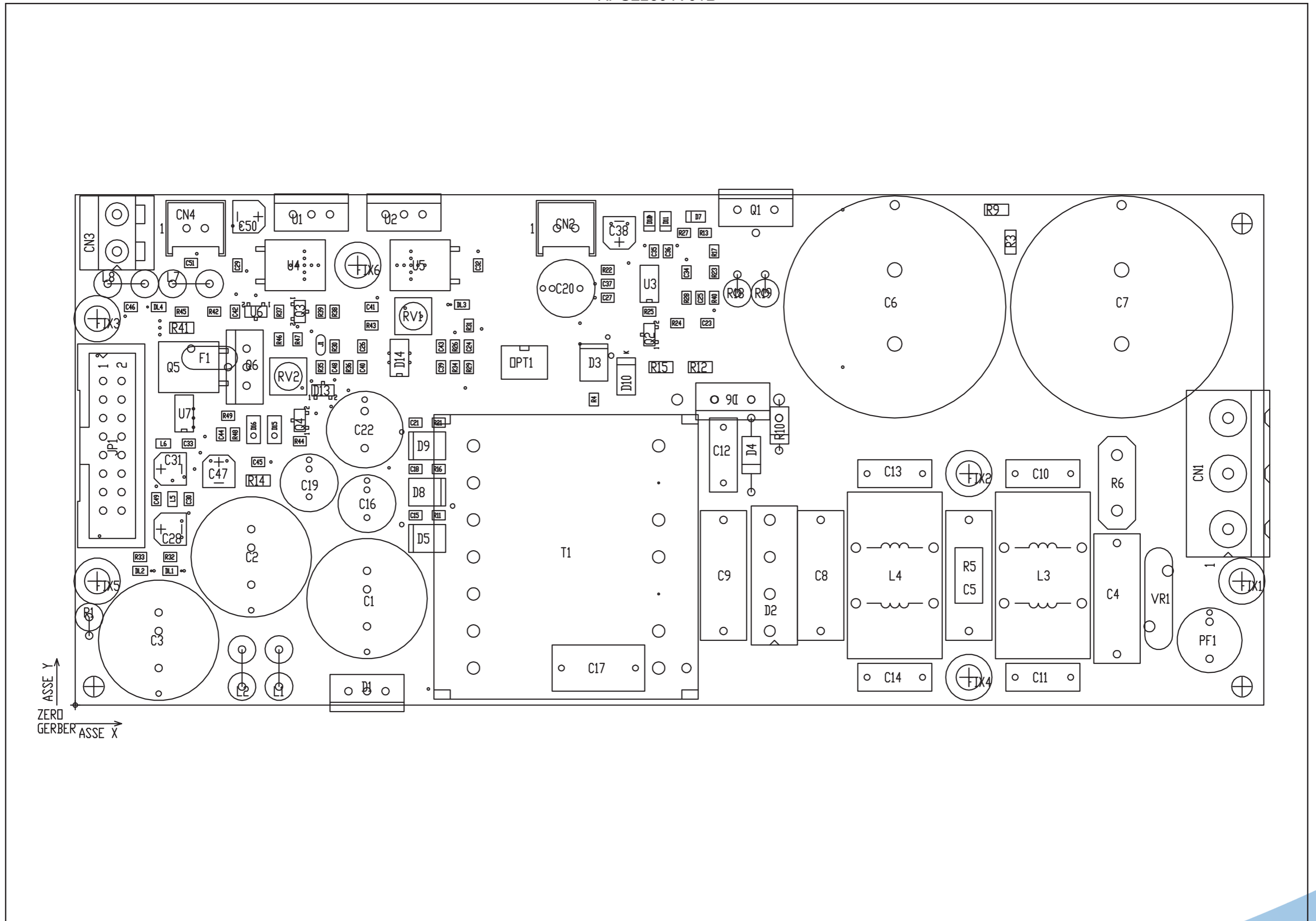


## SLPC0436R01V01

Panel Card PIC18F452 vers.01 (display blu)  
 SLPC0436R01V01 Revision: 1.1  
 06/04/2017  
 A. Tommasi

Item	Quantity	Reference	Part	Description
1	1	CS1	CSPC0436R1	Circuito stampato
2	23	C1,C2,C3,C4,C5,C6,C7,C8, C9,C10,C11,C12,C13,C18, C19,C24,C25,C28,C30,C31, C33,C35,C36	0.1uF	Cond. SMD 0805
3	7	C14,C15,C16,C17,C27,C32, C34	10uF/16V	Cond. Elett. SMD d. 4mm
4	14	C20,C21,C22,C37,C38,C39, C40,C41,C42,C43,C44,C46, C47,C48	1nF	Cond. SMD 0805
5	2	C23,C29	15pF	Cond. SMD 0805
6	1	C26	10uF/35V	Cond. Elett. SMD d. 5mm
7	1	C45	100pF	Cond. SMD 0805
8	1	D1	LED-G5	LED Verde dia. 5mm
9	2	D2,D3	BILEDK	Doppio led V-R 5mm Catodo com.
10	1	D4	LED-Y5	LED Giallo dia. 5mm
11	1	D5	BAS32	MINIMELF SMD Diode
12	4	D6,D7,D8,D9	NC	Doppio Diodo SMD SOT23
13	1	D11	5V1	MINIMELF SMD Zener Diode
14	1	D13	NC	LED Giallo dia. 5mm
15	8	FIX1,FIX2,FIX3,FIX4,FIX5, FIX6,FIX7,FIX8	FIX35	Foro fissaggio 3.5mm
16	1	JP1	STM16S	Strip femmina 16 pin
17	1	JP3	CN10PD	Connettore 10 poli Flat cs
18	4	JP4,JP5,JP6,JP13	CN16PD	Connettore 16 poli Flat cs
19	2	JP7,JP8	NC	Strip femmina 1 pin
20	1	JP12	STF05S	Strip femmina o 5 pin
21	1	JP14	NC	Connettore 10 poli Flat cs
22	11	J1,J2,J3,J4,J5,J6,J7,J8, J9,J10,J11	JSMD	Pad SMD a saldare
23	2	OPT1,OPT2	TLP185	Optoisolatore SMD SO6
24	1	Q1	BC847	Trans. NPN SOT23
25	1	Q3	BC817	Trans. NPN SOT23
26	2	Q4,Q5	BCR185	Trans./Res. PNP SOT23
27	1	RV1	10K	Trimmer Rg O 3386X
28	1	RV2	NC	Trimmer Rg V 3296W
29	12	R1,R20,R40,R41,R42,R43, R44,R45,R46,R47,R67,R70	10K0	Res. SMD 0805 1%
30	1	R2	1K07	Res. SMD 0805 1%
31	8	R3,R4,R5,R6,R7,R8,R9,R10	1K0	Res. SMD 0805 1%
32	6	R11,R12,R14,R15,R49,R58	NC	Res. SMD 0805 1%
33	2	R13,R16	100H0	Res. SMD 0805 1%
34	18	R17,R18,R26,R27,R28,R33, R34,R35,R36,R37,R38,R39, R48,R54,R57,R60,R63,R66	4K70	Res. SMD 0805 1%
35	5	R19,R53,R56,R59,R62	22H0	Res. SMD 0805 1%
36	9	R21,R22,R23,R24,R25,R64, R65,R68,R69	1K80	Res. SMD 0805 1%
37	2	R29,R50	22K0	Res. SMD 0805 1%
38	4	R32,R52,R55,R61	100K0	Res. SMD 0805 1%
39	2	R51,R71	0H0	Res. SMD 0805 1%
40	1	R72	330H0	Res. SMD 0805 1%
41	4	SW1,SW2,SW3,SW4	PULCS1	Pulsante cs
42	1	U1	LM324SMD	Quad Op. SMD SO14
43	1	U2	7406SMD	Hex inv OC SMD SO14
44	1	U3	4094SMD	Shift Reg. SMD SO16
45	1	U4	MAX232ESMD	RS232 Driver SMD SO16
46	1	U5	PIC18F452T	TQFP44 SMD Microprocessor
47	1	U6	NC	Shift Reg. SMD SO16
48	1	U10	82B715SO	IIC Bus driver SMD SO8
49	1	X2	Q4M	Quarzo SMD HC49SMD

KPSL2804V01B



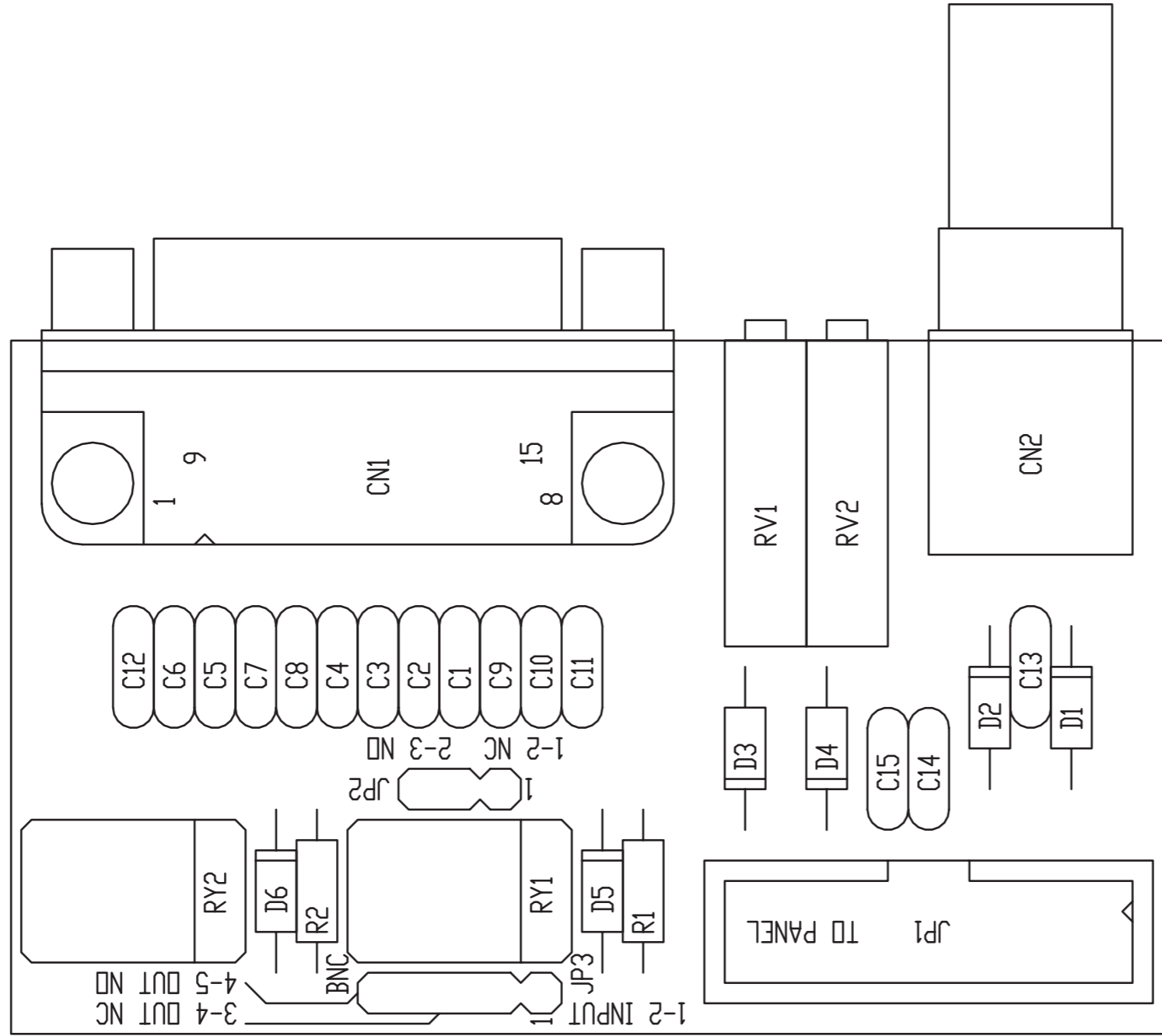


KPSL2804V01B

POWER SUPPLY 28.5V 4A 145W  
PSL2804  
12/04/2016 REV.1.0

Item	Quantity	Reference	Part	(description)
1	1	CN1	CN03KRA P7,62	Conn. tipo KRA a 3 poli
2	2	CN2, CN4	CN02MSF	Connettore 2 poli Lumberq MSF p 2.5mm
3	1	CN3	CN02KRA	Conn. tipo KRA a 2 poli
4	1	CS1	CSPS43-120W0200	Circuito stampato
5	3	C1, C2, C3	1800uF/35V 105°	Cond. Elettr. Dia 16 105°C
6	3	C4, C5, C8	100nF	Cond. Poliestere p 15mm
7	2	C7, C6	150uF/400V	Cond. Elettr. Dia 30 P10
8	1	C9	100nF/400V	Cond. Poliestere p 15mm
9	2	C11, C10	4,7nF/Y2	Cond. ceramico p 7mm Y2
10	1	C12	10nF	Cond. ceramico p 7mm Y2
11	3	C13, C14, C17	2,2nF/Y2	Cond. ceramico p 7mm Y2
12	7	C15, C18, C21, C41, C42, C53, C54	NC	Cond. SMD 0805
13	1	C16	220uF/16V 105°	Cond. Elettr. Dia 8 P3
14	1	C19	100uF/35V 105°	Cond. Elettr. Dia 8 P3
15	1	C20	47uF/63V 105°	Cond. Elettr. Dia 8 P3
16	1	C22	470uF/35V 105°	Cond. Elettr. Dia 10 P5.08
17	17	C23, C24, C27, C29, C30, C32, C33, C37, C40, C43, C44, C45, C46, C48, C49, C51, C52	100nF	Cond. SMD 0805
18	1	C25	220nF	Cond. SMD 0805
19	1	C26	330nF	Cond. SMD 0805
20	5	C28, C31, C38, C50, C47	10uF/35V	Cond. Elett. SMD d. 4mm
21	1	C34	330pF	Cond. SMD 0805
22	1	C35	1nF	Cond. SMD 0805
23	1	C36	1.5nF	Cond. SMD 0805
24	1	C39	4,7nF	Cond. SMD 0805
25	3	DL1, DL2, DL3	VERDE	LED Verde SMD 0805
26	1	DL4	ROSSO	LED Verde SMD 0805
27	1	D1	BYQ28	Doppio diodo TO220
28	1	D2	KBU08-J	Ponte diodi KBL/KBU
29	1	D3	ES1J	Diodo SMD cont. SMA
30	2	D11, D4	P6KE200	1W Zener Diode
31	3	D5, D8, D9	ES2D/ES2G	Diodo SMD cont. SMB
32	1	D6	ISL9R460P2	Diodo TO220
33	1	D12	BAS16H	Diodo SMD SOD123F
34	1	D10	1SMB5929BT3G	Diodo SMD cont. SMB
35	4	U6, Q6, U8, D13	NC	
36	1	D14	TL431SMD	SO8 Reference
37	2	D15, D16	NC	MINIMELF SMD Zener Diode
38	2	D17, D18	NC	Diodo SMD SOD123F
39	1	D19	MURS360	Diodo SMD cont. SMC
40	6	FIX1, FIX2, FIX3, FIX4, FIX5, FIX6	FIX35	Foro fissaggio 3.5mm
41	2	F2, F1	RXE300	Fusibile autoripristinante
42	1	JP1	CN16PD	Conn.M.C.S.Dritto 16P alette.
43	1	JP2	FASTON_CS	
44	1	J1	J5MD	Pad SMD a saldare
45	4	J2, J3, J4, J5	J5MD	Pad SMD a saldare
46	3	L1, L2, L7	BL02	Induttanza cilindrica
47	1	L3	TVO.4A0.0M2-A	Ind. toroidale modo comune
48	1	L4	TVO.1A0.10M-A	Ind. toroidale modo comune
49	2	L6, L5	742792022	Induttanza SMD 2012 (0805)
50	1	OPT1	K10104X	Optoisolatore SMD SO6
51	1	PF1	REOFORO	Fusibile Bussmann LET
52	1	Q1	11N60	Trans. FET N TO220
53	1	Q3	NC	Trans. PNP SOT23
54	1	Q7	BC846/847	Trans. NPN SOT23
55	1	RV1	NC	Trimmer SMD
56	1	RV2	50K	Trimmer SMD
57	1	R1	680H	Res. strato 2W
58	6	R2, R3, R7, R9, R12, R15	15K0	Res. SMD 1206
59	1	R4	22H0	Res. SMD 0805
60	1	R5	1M	Res. SMD 2512 1%
61	1	R6	NTC10H	Res. 1/4W 1%
62	15	R8, R11, R16, R20, R21, R37, R38, R39, R42, R43, R44, R48, R49, R50, R51	NC	Res. SMD 0805
63	1	R10	NC	Res. strato 2W
64	1	R13	22H0	Res. SMD 1206
65	1	R14	250mA	Fus. SMD 1206
66	3	R17, R36, R40	10K0	Res. SMD 0805
67	2	R18, R19	0H56	Res. strato 2W
68	2	R22, R23	10H0	Res. SMD 0805
69	1	R24	5K60	Res. SMD 0805
70	1	R25	2K70	Res. SMD 0805
71	2	R33, R26	560H0	Res. SMD 0805
72	1	R28	470K0	Res. SMD 0805
73	1	R29	1K0	Res. SMD 0805
74	1	R30	39K0	Res. SMD 0805
75	2	R31, R45	6K80	Res. SMD 0805
76	1	R32	3K3	Res. SMD 0805
77	1	R34	56K0	Res. SMD 0805
78	1	R35	47K5	Res. SMD 0805
79	1	R41	NC	Res. SMD 1206
80	1	R46	20K0	Res. SMD 0805
81	1	R47	5K49	Res. SMD 0805
82	1	T1	TSWPS26-120W	Trasformatore
83	1	U1	7818	Stabilizzatore TO220
84	1	U2	NC	Stabilizzatore TO220

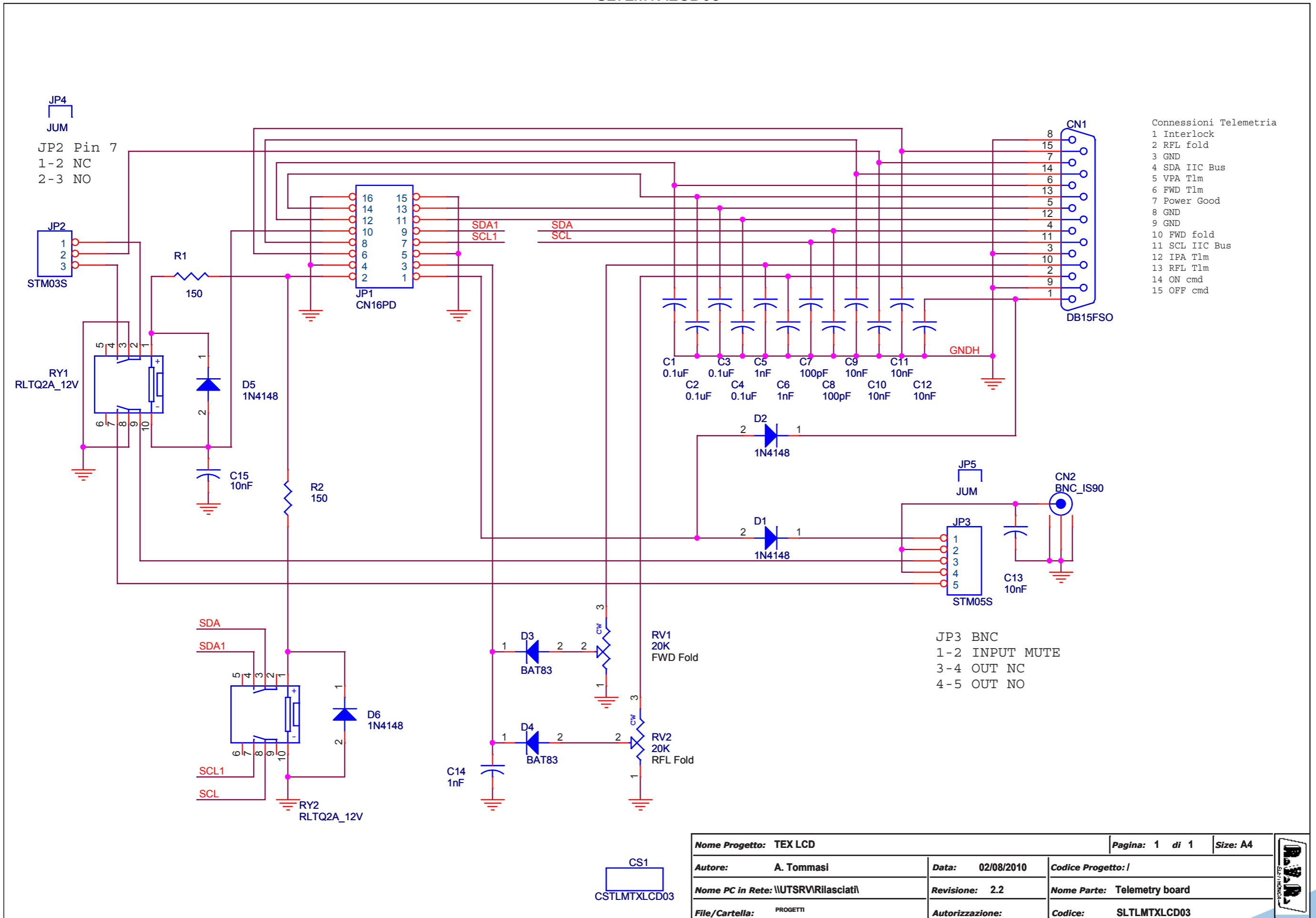
Item	Quantity	Reference	Part	(description)
85	1	U3	UC2843	Reg. switching
86	1	U5	LF50CDT	Stabilizzatore SMD DPAK
87	1	VR1	275VAC	Varistor dia. 7mm
88	1	D7	BAS16H	Diodo SMD SOD323



NOME PROGETTO: TEX LCD	NOME PARTE: SCHEDA TELEMETRY BOARD		
AUTORE: S.POLUZZI	DATA: 11/11/04	REVISIONE: 3.0	SCALA: 2:1
ARCHIVIAZIONE ELETTRONICA: "CARTELLA PROGETTI" SU "UT_SRV"	CODICE PROGETTO: /	CODICE DISEGNO: CSTLMTXLCD03	SIZE: A4
MATERIALE: FR4-74 1.6mm	TRATTAMENTO: Cu 35um	PROFILO: /	PAGINA: 1 DI 1
			STATO: PROGETTUALE



SLTLMTXLCD03



<b>Nome Progetto:</b> TEX LCD		<b>Pagina:</b> 1 di 1	<b>Size:</b> A4
<b>Autore:</b> A. Tommasi	<b>Data:</b> 02/08/2010	<b>Codice Progetto:</b> /	
<b>Nome PC in Rete:</b> \\UTSRVRI\asciatil	<b>Revisione:</b> 2.2	<b>Nome Parte:</b> Telemetry board	
<b>File/Cartella:</b> PROGETTI	<b>Autorizzazione:</b>	<b>Codice:</b> SLTLMTXLCD03	

SLTLMTXLCD03

Telemetry board Revised: 02/08/10  
 SLTLMTXLCD03 Revision: 2.2  
 TEX-LCD/RXRL-LCD/PTRL-LCD  
 Andrea Tommasi

Item	Quantity	Reference	Part	Description
1	1	CN1	DB15FSO	Connettore DB15 femm. cs 90°
2	1	CN2	BNC_IS90	Connettore BNC metallico 90°
3	1	CS1	CSTLMTXLCD03	Circuito stampato
4	4	C1, C2, C3, C4	0.1uF	Cond. ceramico p 5mm
5	3	C5, C6, C14	1nF	Cond. ceramico p 5mm
6	2	C7, C8	100pF	Cond. ceramico p 5mm
7	6	C9, C10, C11, C12, C13, C15	10nF	Cond. ceramico p 5mm
8	4	D1, D2, D5, D6	1N4148	Diode in vetro DO35
9	2	D3, D4	BAT83	Diode Hot carrier DO35
10	1	JP1	CN16PD	Connettore 16 poli Flat cs
11	1	JP2	STM03S	Strip maschio 3 pin
12	1	JP3	STM05S	Strip maschio 5 pin
13	2	JP4, JP5	JUM	Ponticello Jumper <span style="float: right;">Nota 1</span>
14	2	RV1, RV2	20K	Trimmer Rg H 3006
15	2	RY2, RY1	RLTQ2A_12V	Rele' TQ2
15	2	R1, R2	150	Res. 1/4W

**Nota 1** Inserire i jumper in posizione:  
 2-3 in JP2  
 1-2 in JP3