



# BLUES30NV

TECHNICAL ANNEX  
VOLUME 2



## 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 BLUES30NV. L'appendice è composta dalle seguenti sezioni:

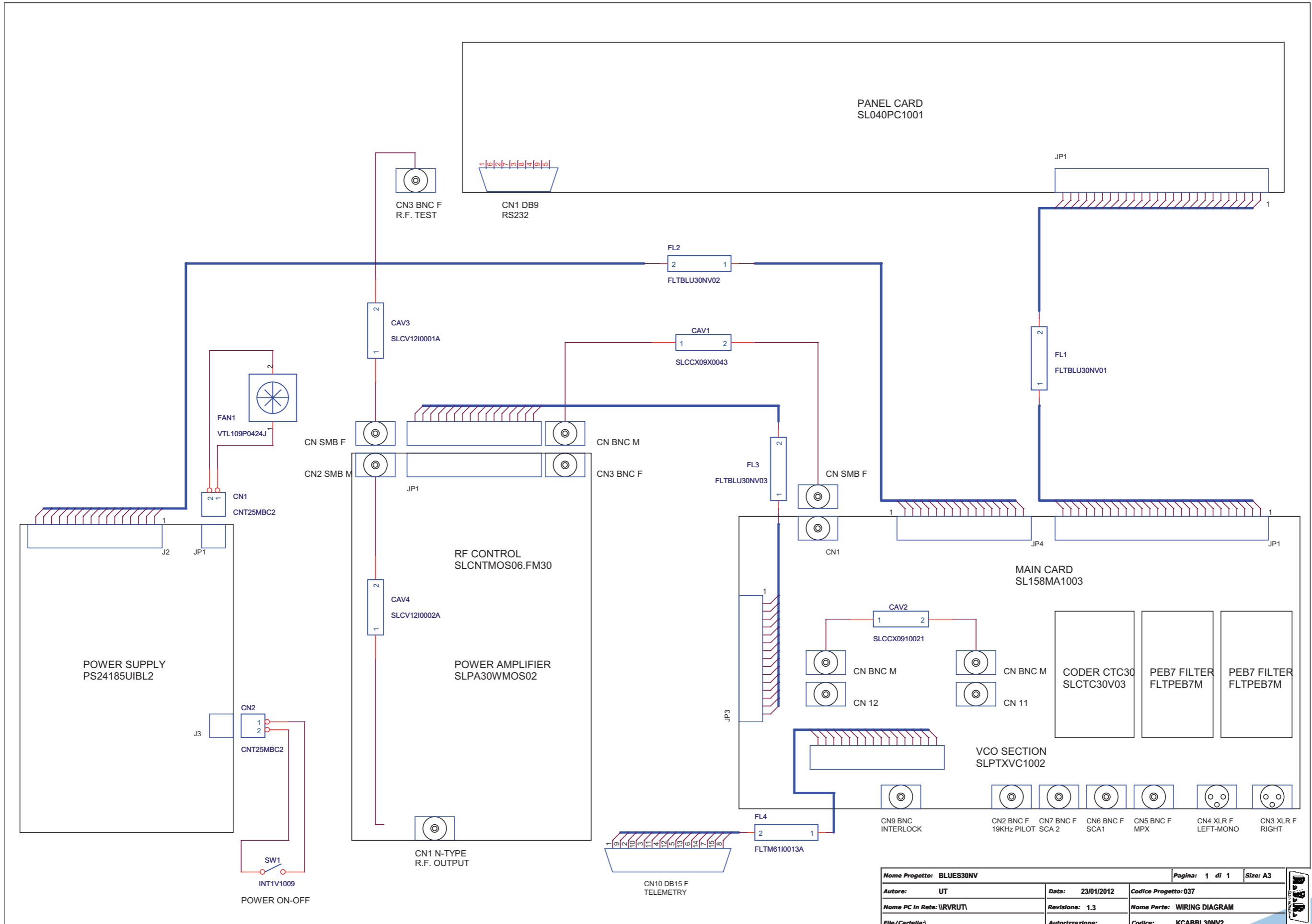
*This part of the manual contains the technical details about the different boards of the BLUES30NV. This appendix is composed of the following sections:*

| Description       | RVR Code        | Vers. | Page |
|-------------------|-----------------|-------|------|
| Wiring Diagrams   | KCABB130NV2     | 1.3   | 1    |
| Main Board        | SL158MA1003     | 1.0   | 2    |
| Stereo Coder Card | SLCTC30V03      | 1.1   | 10   |
| Control Card      | SLCNTMOS06.FM30 | 1.0   | 13   |
| Power Amplifier   | SLPA30WMOS02    | 1.1   | 15   |
| VCO Section       | SLVC0030R03V01  | 1.0   | 19   |
| Panel Card        | SL040PC1001     | 1.0   | 21   |
| Power Supply      | PS24185UIBL2    | 2.0   | 24   |

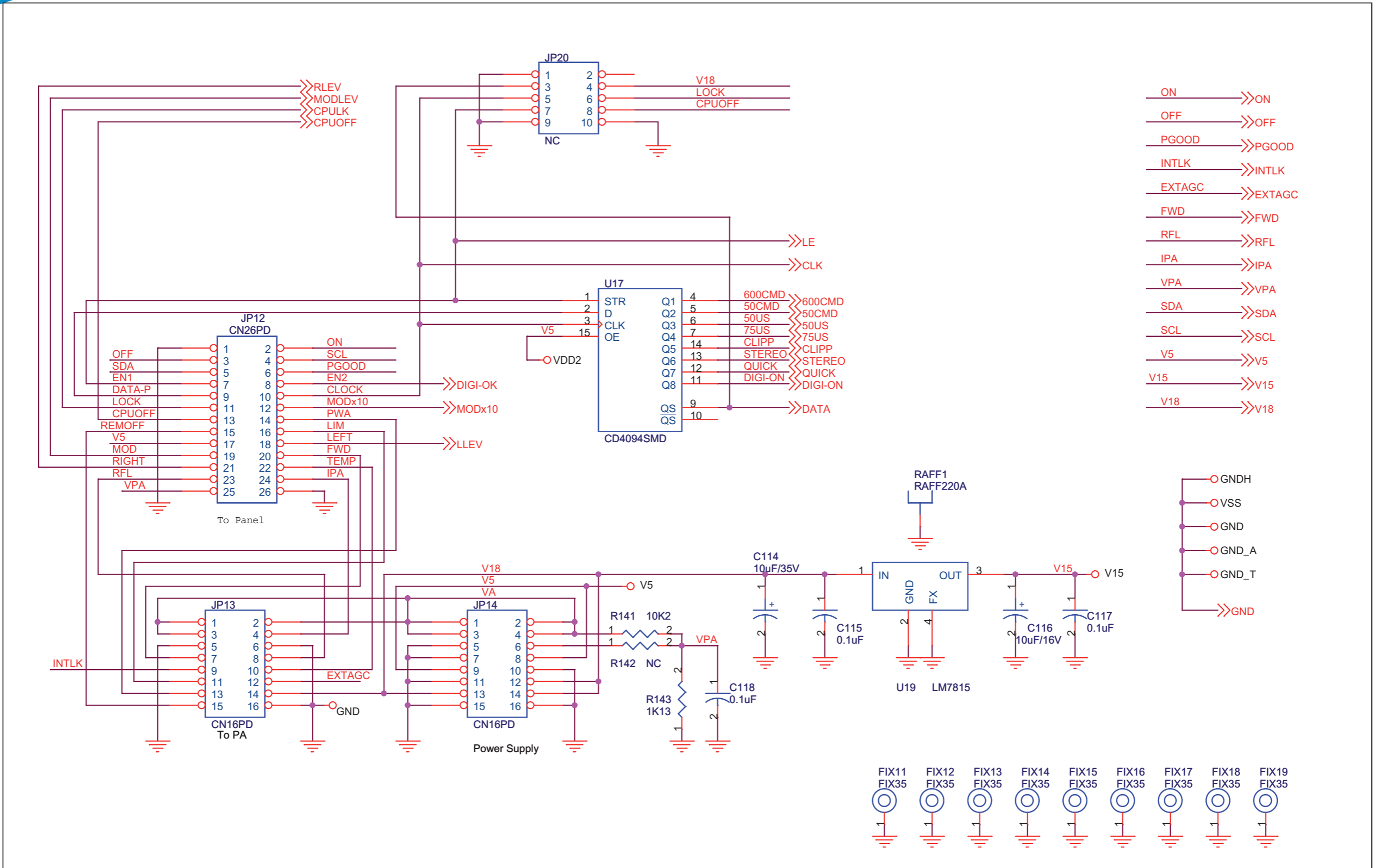
### Document History

| Date       | Version | Reason                    | Code | Editor     |
|------------|---------|---------------------------|------|------------|
| 08/10/2010 | 1.0     | First Release (Version 2) | /    | J.H. Berti |
| 27/05/2014 | 1.1     | Minor Upgrades            | /    | J.H. Berti |

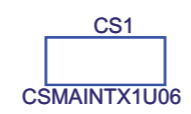
**KCABBL30NV2**

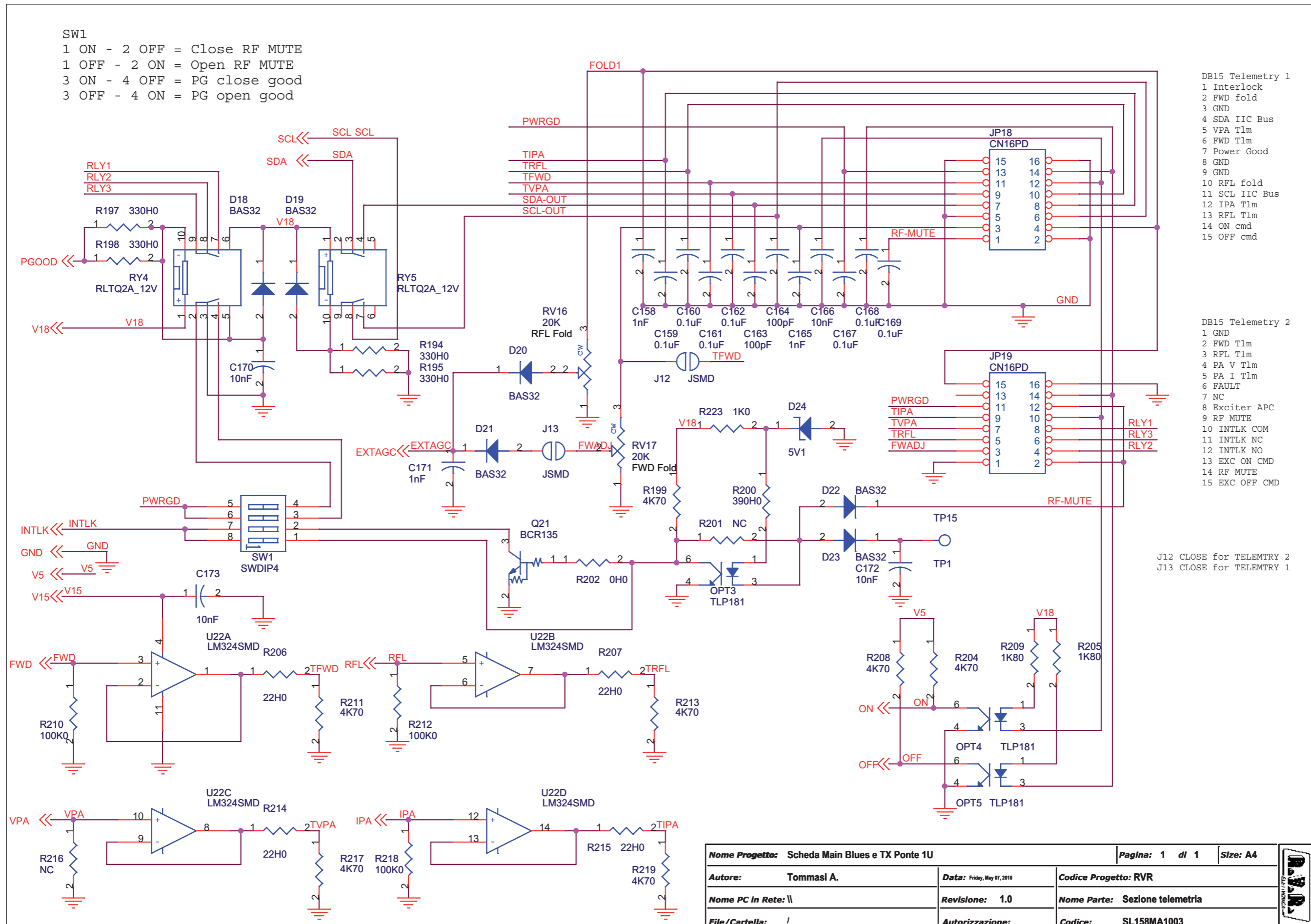


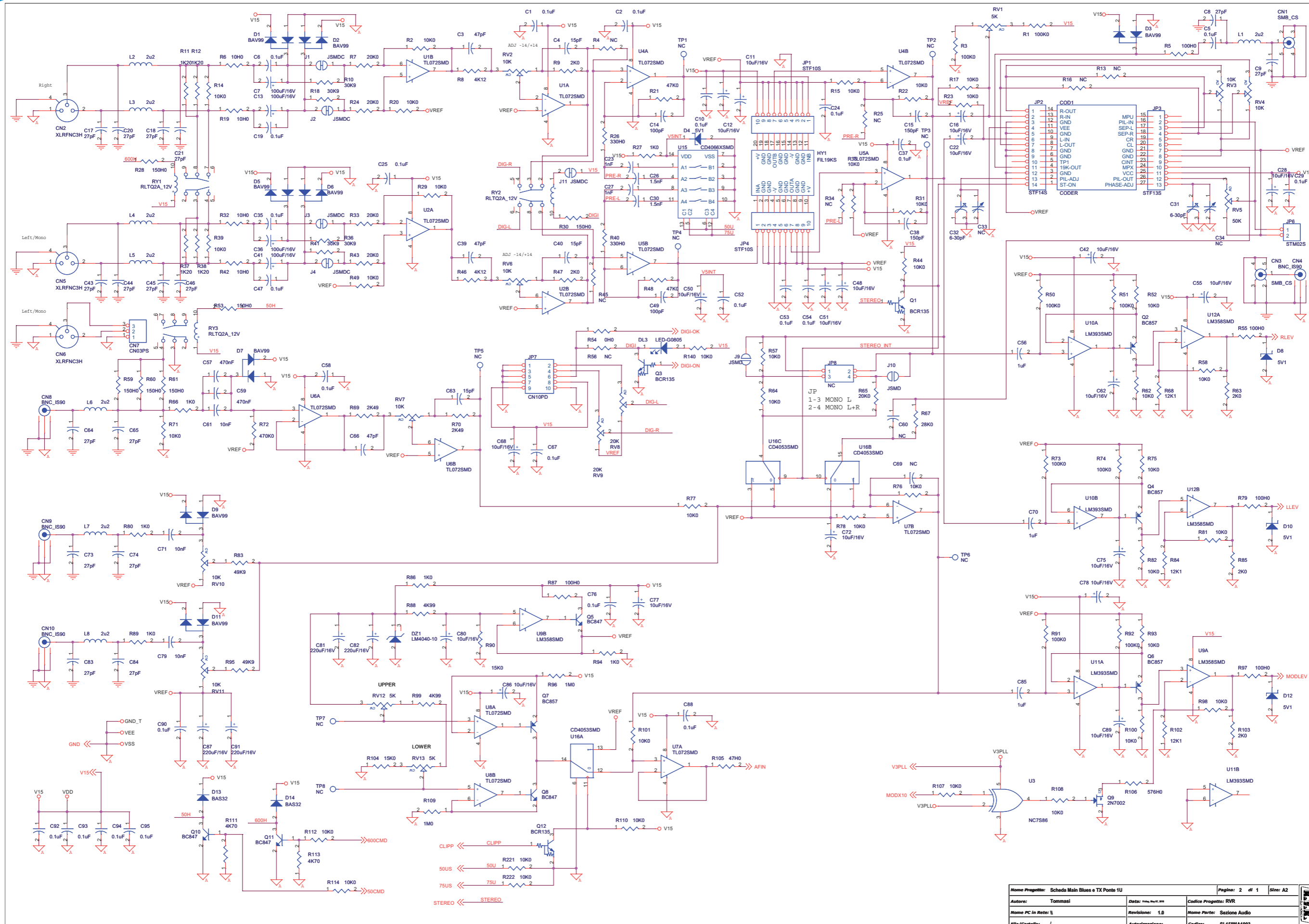
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|----------------------------|------------------|----------------------------|--|----------|
| Nome Progetto: BLUES30NV   |                  | Pagina: 1 di 1             |  | Size: A3 |
| Autore: UT                 | Data: 23/01/2012 | Codice Progetto: 037       |  |          |
| Nome PC in Rete: \\RVR\UT\ | Revisione: 1.3   | Nome Parte: WIRING DIAGRAM |  |          |
| File/ Cartella:            | Autorizzazione:  | Codice: KCABBL30NV2        |  |          |



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|--|----------------------------|-------------------------|----------|
| Nome Progetto: Scheda Main Blues e TX Ponte 1U |                            | Pagina: 1 di 1          | Size: A4 |
| Autore: Tommasi                                | Data: Friday, May 07, 2010 | Codice Progetto: RVR    |          |
| Nome PC in Rete: \                             | Revisione: 1.0             | Nome Parte: Scheda Main |          |
| File/Cartella: /                               | Autorizzazione:            | Codice: SL158MA1003     |          |

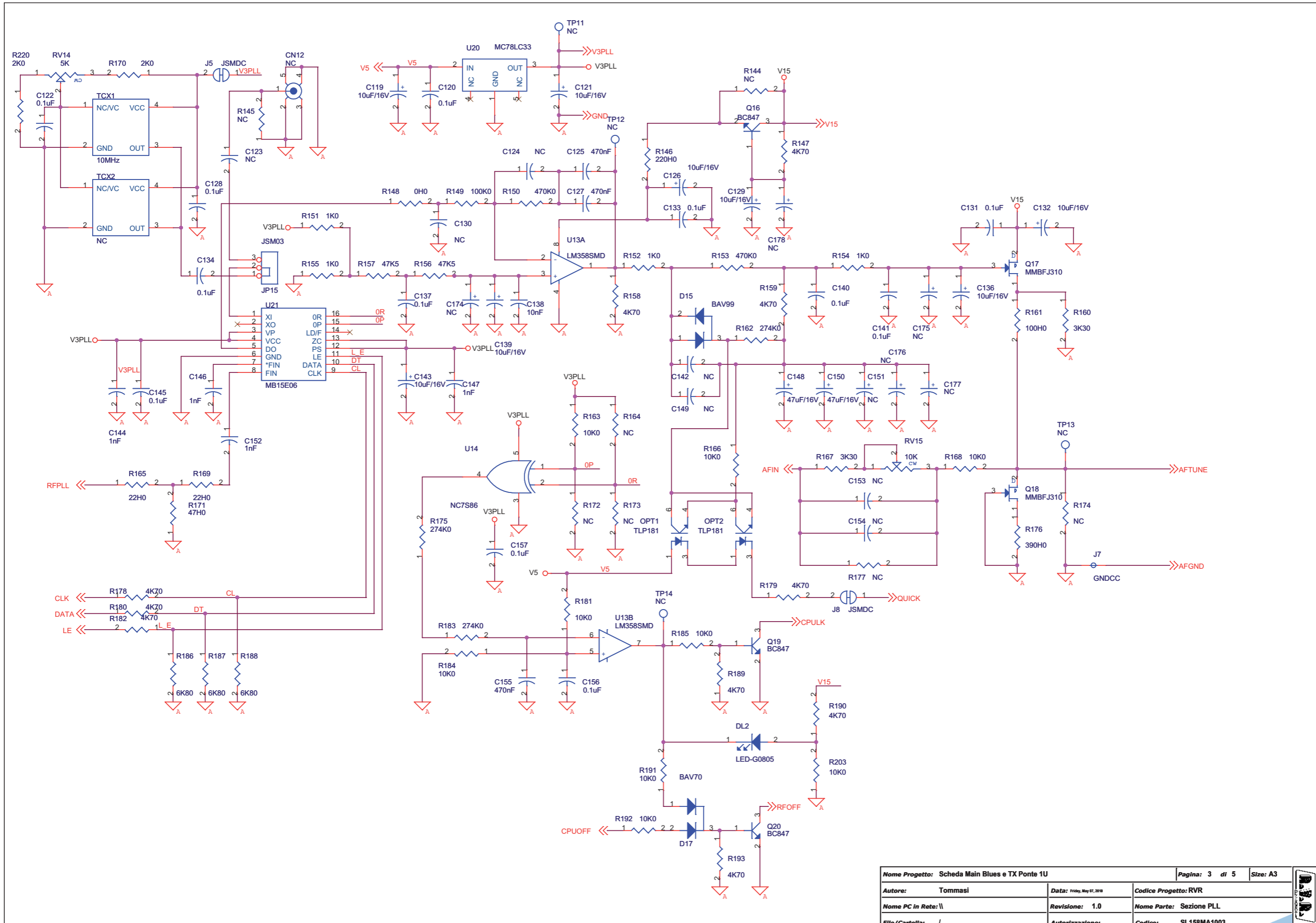




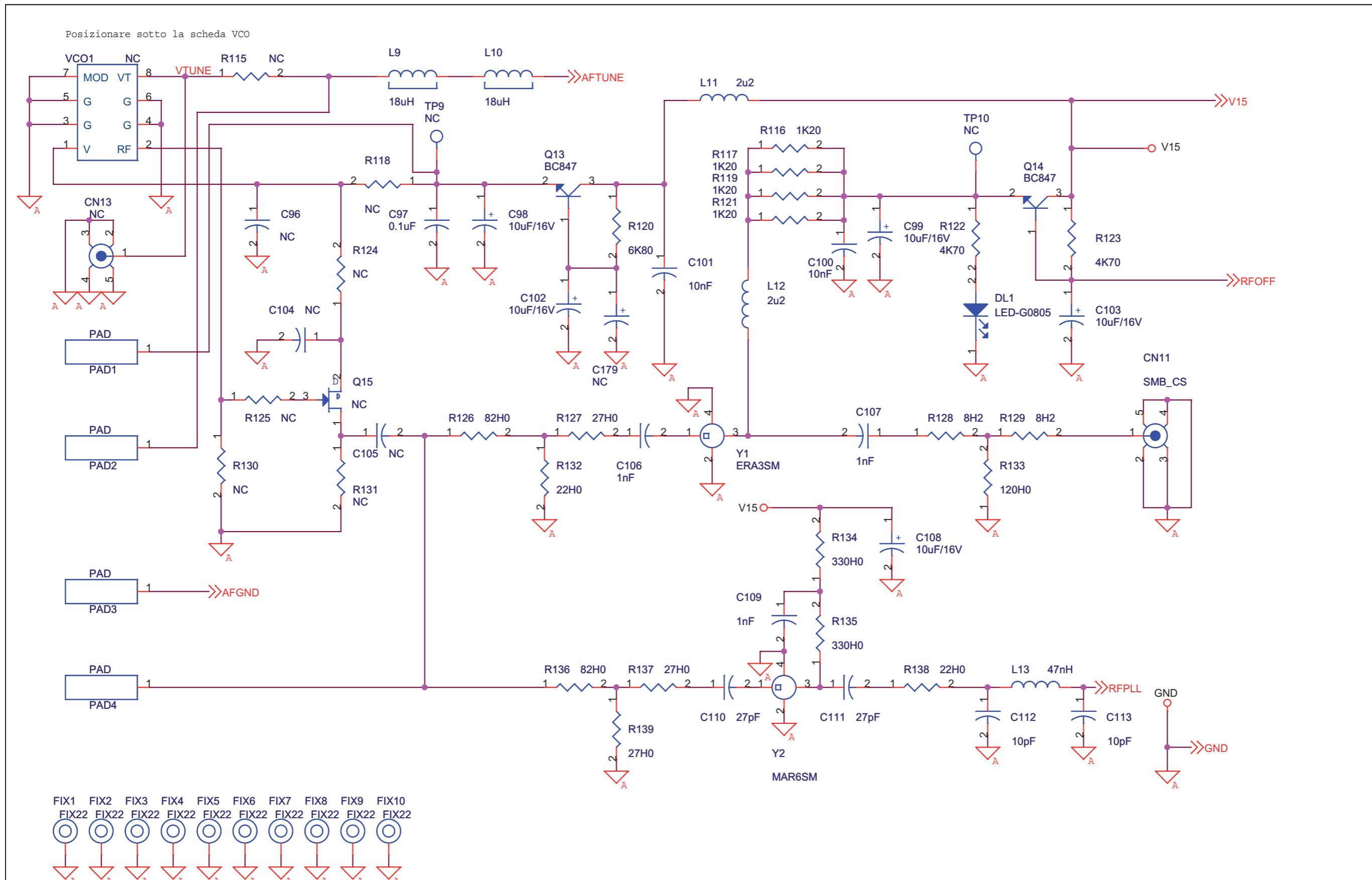


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| Nome Progetto:   | Scheda Main Blues a TX Ponte 1U | Pagina:         | 2 di 1        | Size:            | A2            |
| Autore:          | Tommasi                         | Data:           | 1999.05.14.09 | Codice Progetto: | RVR           |
| Nome PC in Rete: | l                               | Revisione:      | 1.0           | Nome Parte:      | Sezione Audio |
| File/Cartella:   | l                               | Autorizzazione: |               | Codice:          | SL158MA1003   |

SL158MA1003

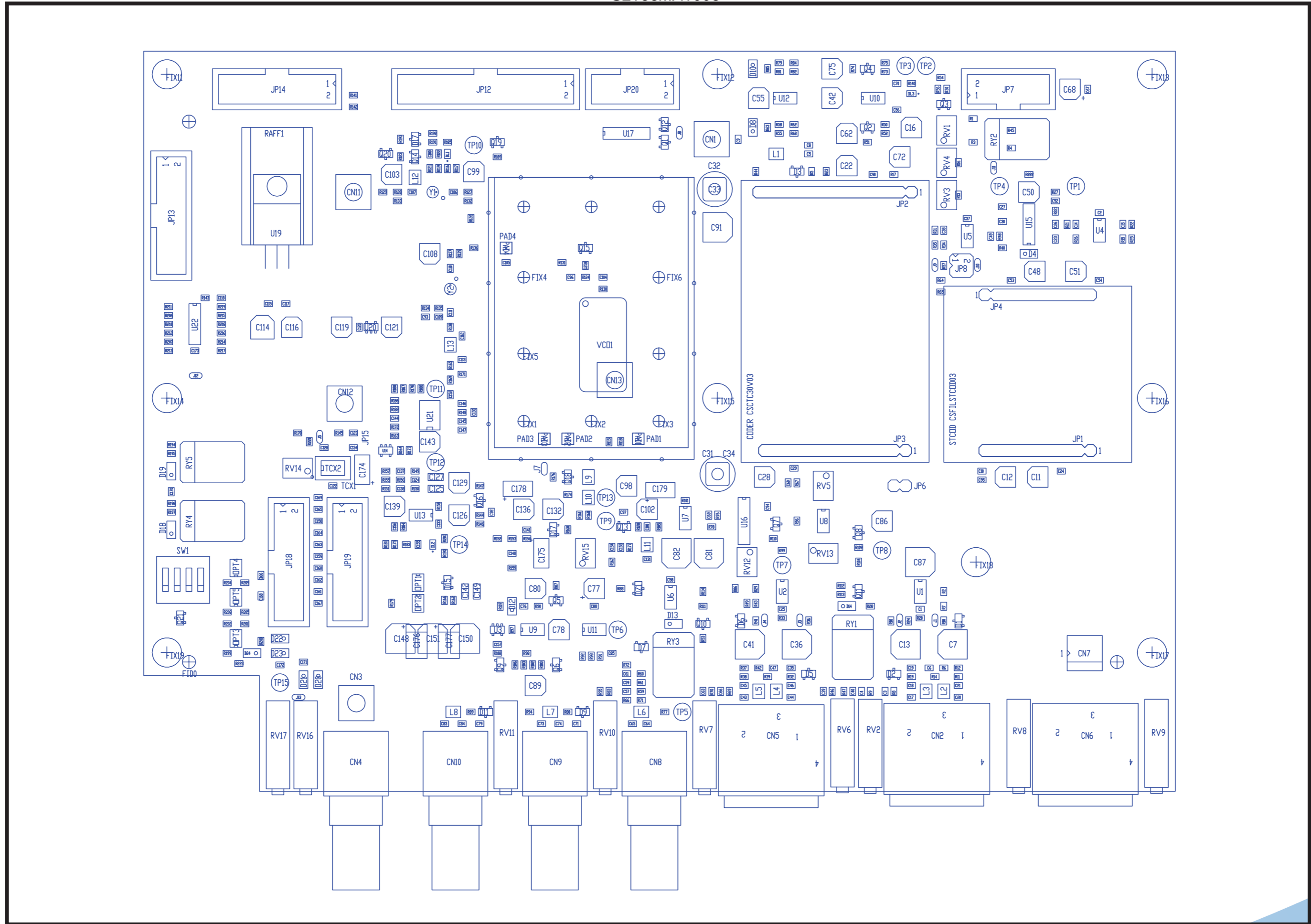


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|--|----------------------------|-------------------------|----------|
| Nome Progetto: Scheda Main Blues e TX Ponte 1U |                            | Pagina: 3 di 5          | Size: A3 |
| Autore: Tommasi                                | Data: Friday, May 07, 2010 | Codice Progetto: RVR    |          |
| Nome PC in Rete: \\                            | Revisione: 1.0             | Nome Parte: Sezione PLL |          |
| File/Cartella: /                               | Autorizzazione:            | Codice: SL158MA1003     |          |



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|--|----------------------------|--------------------------------|----------|
| Nome Progetto: Scheda Main Blues e TX Ponte 1U |                            | Pagina: 5 di 5                 | Size: A4 |
| Autore: Tommasi                                | Data: Friday, May 07, 2010 | Codice Progetto: RVR           |          |
| Nome PC in Rete: \\                            | Revisione: 1.0             | Nome Parte: Sezione Vco-Driver |          |
| File/Cartella: /                               | Autorizzazione:            | Codice: SL158MA1003            |          |





SL158MA1003

Scheda Main Revised: Friday, May 07, 2010  
 SL158MA1003 Revision: 1.0  
 A. Tommasi  
 Scheda Main Blues e TX Ponte 1U

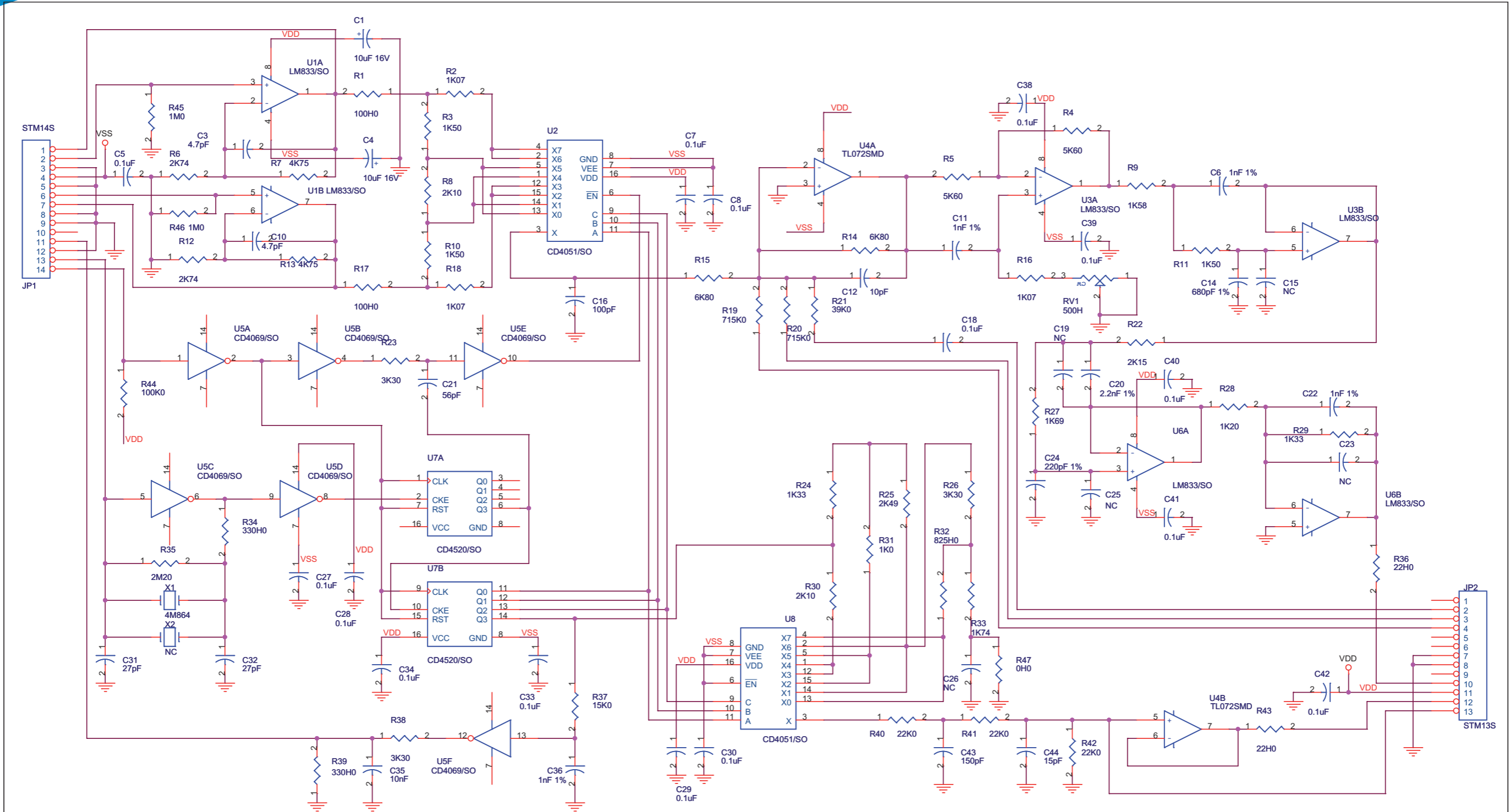
| Item | Quantity | Reference   | Part         | Description                     | Code         |
|------|----------|---|--------------|---------------------------------|--------------|
| 1    | 3        | CN1,CN3,CN11  | SMB_CS       | Connettore SMB cs               | CNTSMBMCS    |
| 2    | 3        | CN2,CN5,CN6   | XLRFNC3H     | Connettore XLR NC3 femm. cs 90° | CNTXLRFNC3A  |
| 3    | 4        | CN4,CN8,CN9,CN10  | BNC_IS90     | Connettore BNC metallico 90°    | CNTBNCFCMA   |
| 4    | 1        | CN7   | CN03PS       | Connettore 3 poli Mascon        | CNTMASM3PCS  |
| 5    | 2        | CN12,CN13   | NC           | Connettore SMB cs               |              |
| 6    | 1        | COD1  | CODER        | Coder stereo IRV30CT            | SLCTC30V03   |
| 7    | 1        | CS1   | CSMAINTX1U06 | Circuito stampato               | CSMAINTX1U06 |
| 8    | 47       | C1,C2,C5,C6,C10,C19,C24,C25,C29,C35,C37,C47,C52,C53,C54,C58,C67,C76,C88,C90,C92,C93,C94,C95,C97,C115,C117,C118,C120,C122,C128,C131,C133,C134,C137,C140,C141,C145,C156,C157,C159,C160,C161,C162,C167,C168,C169 | 0.1uF        | Cond. SMD 0805                  | CCC085104KXC |
| 9    | 3        | C3,C39,C66  | 47pF         | Cond. SMD 0805                  | CCC085470JCC |
| 10   | 3        | C4,C40,C63  | 15pF         | Cond. SMD 0805                  | CCC085150JCC |
| 11   | 4        | C7,C13,C36,C41  | 100uF/16V    | Cond. Elett. SMD d. 6.3mm       | CES107C160   |
| 12   | 18       | C8,C9,C17,C18,C20,C21,C43,C44,C45,C46,C64,C65,C73,C74,C83,C84,C110,C111   | 27pF         | Cond. SMD 0805                  | CCC085270JCC |
| 13   | 33       | C11,C12,C16,C22,C28,C42,C48,C50,C51,C55,C62,C68,C72,C75,C77,C78,C80,C86,C89,C98,C99,C102,C103,C108,C116,C119,C121,C126,C129,C132,C136,C139,C143   | 10uF/16V     | Cond. Elett. SMD d. 4mm         | CES106A160   |
| 14   | 4        | C14,C49,C163,C164   | 100pF        | Cond. SMD 0805                  | CCC085101JCC |
| 15   | 2        | C15,C38   | 150pF        | Cond. SMD 0805                  | CCC085151JCC |
| 16   | 2        | C23,C27   | 1nF          | Cond. SMD 0805 COG              | CCC085102GCC |
| 17   | 2        | C26,C30   | 1.5nF        | Cond. SMD 0805 COG              | CCC085152GCC |
| 18   | 2        | C31,C32   | 6-30pF       | Comp. ceramico dia. 7mm         | CVC300D07    |
| 19   | 2        | C33,C34   | NC           | Comp. var. Murata TZB4A         |              |
| 20   | 3        | C56,C70,C85   | 1uF          | Cond. SMD 0805                  | CCC085105KYC |
| 21   | 3        | C57,C59,C155  | 470nF        | Cond. SMD 0805                  | CCC085474KXC |
| 22   | 10       | C60,C69,C96,C104,C105,C123,C124,C130,C153,C154  | NC           | Cond. SMD 0805                  |              |
| 23   | 10       | C61,C71,C79,C100,C101,C138,C166,C170,C172,C173  | 10nF         | Cond. SMD 0805                  | CCC085103KXC |
| 24   | 4        | C81,C82,C87,C91   | 220uF/16V    | Cond. Elett. SMD d. 6.3mm       | CES227E160   |
| 25   | 10       | C106,C107,C109,C144,C146,C147,C152,C158,C165,C171   | 1nF          | Cond. SMD 0805                  | CCC085102JNC |
| 26   | 2        | C112,C113   | 10pF         | Cond. SMD 0805                  | CCC085100JCC |
| 27   | 1        | C114  | 10uF/35V     | Cond. Elett. SMD d. 5mm         | CES106B350   |
| 28   | 2        | C125,C127   | 470nF        | Cond. SMD 1206                  | CCC126474KXC |
| 29   | 2        | C142,C149   | NC           | Cond. SMD 1206                  |              |
| 30   | 2        | C148,C150   | 47uF/16V     | Cond. Elett. SMD d. 6.3mm       | CES476C160   |
| 31   | 1        | C151  | NC           | Cond. Elett. SMD d. 6.3mm       |              |
| 32   | 4        | C174,C175,C178,C179   | NC           | Cond. Elett. SMD tant. size C   |              |
| 33   | 2        | C176,C177   | NC           | Cond. Elett. SMD tant. size D   |              |
| 34   | 3        | DL1,DL2,DL3   | LED-G0805    | LED SMD 0805                    | LEDV0805     |
| 35   | 1        | DZ1   | LM4040-10    | Diodi Zener SMD SOT23           | CILLM4040-10 |
| 36   | 9        | D1,D2,D3,D5,D6,D7,D9,D11,D15  | BAV99        | Doppio Diodo SMD SOT23          | DISBAV99     |
| 37   | 5        | D4,D8,D10,D12,D24   | 5V1          | MINIMELF SMD Zener Diode        | DIZ5V1MINI   |
| 38   | 8        | D13,D14,D18,D19,D20,D21,D22,D23   | BAS32        | MINIMELF SMD Diode              | DISBAS32MINI |
| 39   | 1        | D17   | BAV70        | Doppio Diodo SMD SOT23          | DISBAV70     |
| 40   | 10       | FIX1,FIX2,FIX3,FIX4,FIX5,FIX6,FIX7,FIX8,FIX9,   | FIX22        | Foro fissaggio 2.2mm            |              |

|    |    |   |            |                                       |              |
|----|----|---|------------|---------------------------------------|--------------|
| 41 | 9  | FIX10, FIX11, FIX12, FIX13, FIX14, FIX15, FIX16, FIX17, FIX18, FIX19  | FIX35      | Foro fissaggio 3.5mm                  |              |
| 42 | 1  | HY1   | FIL19KS    |                                       | FLTPEB7 x 2  |
| 43 | 2  | JP1,JP4   | STF10S     | Strip femmina 10 pin                  | CNTSTF10SDA  |
| 44 | 1  | JP2   | STF14S     | Strip femmina 14 pin                  | CNTSTF14SDB  |
| 45 | 1  | JP3   | STF13S     | Strip femmina 13 pin                  | CNTSTF13SDB  |
| 46 | 1  | JP6   | STM02S     | Strip maschio 2 pin                   | STRIP        |
| 47 | 1  | JP7   | CN10PD     | Connettore 10 poli Flat cs            | CNTMCS10A    |
| 48 | 1  | JP8   | NC         | Strip maschio 2+2 pin                 |              |
| 49 | 1  | JP12  | CN26PD     | Connettore 26 poli Flat cs            | CNTMCS26A    |
| 50 | 4  | JP13,JP14,JP18,JP19   | CN16PD     | Conn.M.C.S.Dritto 16P alette          | CNTMCS16A    |
| 51 | 1  | JP15  | JSM03      | Pad SMD a saldare a 2 pos.            |              |
| 52 | 1  | JP20  | NC         | Connettore 10 poli Flat cs con alette |              |
| 53 | 7  | J1,J2,J3,J4,J5,J8,J11   | JSMDC      | Pad SMD a saldare chiuso              |              |
| 54 | 1  | J7  | GNDC       | Non e' un componente                  |              |
| 55 | 4  | J9,J10,J12,J13  | JSMDC      | Pad SMD a saldare                     |              |
| 56 | 10 | L1,L2,L3,L4,L5,L6,L7,L8,L11,L12   | 2u2        | Induttanza SMD 3225 (1210)            | IMP2U2S120   |
| 57 | 2  | L9,L10  | 18uH       | Induttanza SMD 3225 (1210) Schermata  | IMP18US126S  |
| 58 | 1  | L13   | 47nH       | Induttanza SMD 3225 (1210)            | IMP47NS120   |
| 59 | 5  | OPT1,OPT2,OPT3,OPT4,OPT5  | TLP181     | Optoisolatore SMD SO6                 | LEDTLP181    |
| 60 | 4  | PAD1,PAD2,PAD3,PAD4   | PAD        | Pad a saldare 2.5x2.5 mm              |              |
| 61 | 4  | Q1,Q3,Q12,Q21   | BCR135     | Trans./Res. NPN SOT23                 | TRNBCR135    |
| 62 | 4  | Q2,Q4,Q6,Q7   | BC857      | Trans. PNP SOT23                      | TRNBC857     |
| 63 | 9  | Q5,Q8,Q10,Q11,Q13,Q14,Q16,Q19,Q20   | BC847      | Trans. NPN SOT23                      | TRNBC847     |
| 64 | 1  | Q9  | 2N7002     | Trans. FET SOT23                      | TRN2N7002SMD |
| 65 | 1  | Q15   | NC         | Trans. FET SOT23                      |              |
| 66 | 2  | Q17,Q18   | MMBFJ310   | Trans. FET SOT23                      | TRNMMBFJ310  |
| 67 | 1  | RAFF1   | RAFF220A   | Dissipatore TO220 25x15 scasso        | DSCTO220C25  |
| 68 | 4  | RV1,RV12,RV13,RV14  | 5K         | Trimmer Rg V 3269W SMD                | RVT3269WK005 |
| 69 | 5  | RV2,RV6,RV7,RV10,RV11   | 10K        | Trimmer Rg H 3006                     | RVT3006PK010 |
| 70 | 3  | RV3,RV4,RV15  | 10K        | Trimmer Rg V 3269W SMD                | RVT3269WK010 |
| 71 | 1  | RV5   | 50K        | Trimmer Rg V 3269W SMD                | RVT3269WK050 |
| 72 | 4  | RV8,RV9,RV16,RV17   | 20K        | Trimmer Rg H 3006                     | RVT3006PK020 |
| 73 | 5  | RY1,RY2,RY3,RY4,RY5   | RLTQ2A_12V | Rele' TQ2                             | RLD2V12V05AM |
| 74 | 12 | R1,R3,R50,R51,R73,R74,R91,R92,R149,R210,R212,R218   | 100K0      | Res. SMD 0805                         | RCH085F0100K |
| 75 | 46 | R2,R14,R15,R17,R20,R22,R23,R29,R31,R35,R39,R44,R49,R52,R57,R58,R62,R64,R71,R75,R76,R77,R78,R81,R82,R93,R98,R100,R101,R107,R108,R110,R112,R114,R140,R163,R166,R168,R181,R184,R185,R191,R192,R203,R221,R222 | 10K0       | Res. SMD 0805                         | RCH085F0010K |
| 76 | 23 | R4,R13,R16,R25,R34,R45,R56,R115,R118,R124,R125,R130,R131,R142,R144,R145,R164,R172,R173,R174,R177,R201,R216  | NC         | Res. SMD 0805                         |              |
| 77 | 6  | R5,R55,R79,R87,R97,R161   | 100H0      | Res. SMD 0805                         | RCH085F0100H |
| 78 | 4  | R6,R19,R32,R42  | 10H0       | Res. SMD 0805                         | RCH085F0010H |
| 79 | 5  | R7,R24,R33,R43,R65  | 20K0       | Res. SMD 0805                         | RCH085F0020K |
| 80 | 2  | R8,R46  | 4K12       | Res. SMD 0805                         | RCH085F04K12 |
| 81 | 7  | R9,R47,R63,R85,R103,R170,R220   | 2K0        | Res. SMD 0805                         | RCH085F0002K |
| 82 | 4  | R10,R18,R36,R41   | 30K9       | Res. SMD 0805                         | RCH085F030K9 |
| 83 | 8  | R11,R12,R37,R38,R116,R117,R119,R121   | 1K20       | Res. SMD 0805                         | RCH085F001K2 |
| 84 | 2  | R21,R48   | 47K0       | Res. SMD 0805                         | RCH085F0047K |
| 85 | 8  | R26,R40,R134,R135,R194,R195,R197,R198   | 330H0      | Res. SMD 0805                         | RCH085F0330H |
| 86 | 11 | R27,R66,R80,R86,R89,R94,  | 1K0        | Res. SMD 0805                         | RCH085F0001K |

SL158MA1003

|     |   |            |                        |              |
|-----|---|------------|------------------------|--------------|
| 87  | R151,R152,R154,R155,R223  |            |                        |              |
| 88  | 6 R28,R30,R53,R59,R60,R61   | 150H0      | Res. SMD 0805          | RCH085F0150H |
| 89  | 3 R54,R148,R202   | 0H0        | Res. SMD 0805          | RCH085F0000H |
| 90  | 1 R67   | 28K0       | Res. SMD 0805          | RCH085F0028K |
| 91  | 3 R68,R84,R102  | 12K1       | Res. SMD 0805          | RCH085F012K1 |
| 92  | 2 R69,R70   | 2K49       | Res. SMD 0805          | RCH085F02K49 |
| 93  | 3 R72,R150,R153   | 470K0      | Res. SMD 0805          | RCH085F0470K |
| 94  | 2 R83,R95   | 49K9       | Res. SMD 0805          | RCH085F049K9 |
| 95  | 2 R88,R99   | 4K99       | Res. SMD 0805          | RCH085F04K99 |
| 96  | 2 R90,R104  | 15K0       | Res. SMD 0805          | RCH085F0015K |
| 97  | 2 R96,R109  | 1M0        | Res. SMD 0805          | RCH085F0001M |
| 98  | 2 R105,R171   | 47H0       | Res. SMD 0805          | RCH085F0047H |
| 99  | 1 R106  | 576H0      | Res. SMD 0805          | RCH085F0576H |
|     | 21 R111,R113,R122,R123,R147,<br>R158,R159,R178,R179,R180,<br>R182,R189,R190,R193,R199,<br>R204,R208,R211,R213,R217,<br>R219 | 4K70       | Res. SMD 0805          | RCH085F004K7 |
| 100 | 4 R120,R186,R187,R188   | 6K80       | Res. SMD 0805          | RCH085F006K8 |
| 101 | 2 R126,R136   | 82H0       | Res. SMD 0805          | RCH085F0082H |
| 102 | 3 R127,R137,R139  | 27H0       | Res. SMD 0805          | RCH085F0027H |
| 103 | 2 R128,R129   | 8H2        | Res. SMD 0805          | RCH085F008H2 |
| 104 | 8 R132,R138,R165,R169,R206,<br>R207,R214,R215   | 22H0       | Res. SMD 0805          | RCH085F0022H |
| 105 | 1 R133  | 120H0      | Res. SMD 0805          | RCH085F0120H |
| 106 | 1 R141  | 10K2       | Res. SMD 0805          | RCH085F010K2 |
| 107 | 1 R143  | 1K13       | Res. SMD 0805          | RCH085F01K13 |
| 108 | 1 R146  | 220H0      | Res. SMD 0805          | RCH085F0220H |
| 109 | 2 R156,R157   | 47K5       | Res. SMD 0805          | RCH085F047K5 |
| 110 | 2 R160,R167   | 3K30       | Res. SMD 0805          | RCH085F003K3 |
| 111 | 3 R162,R175,R183  | 274K0      | Res. SMD 0805          | RCH085F0274K |
| 112 | 2 R176,R200   | 390H0      | Res. SMD 0805          | RCH085F0390H |
| 113 | 2 R205,R209   | 1K80       | Res. SMD 0805          | RCH085F001K8 |
| 114 | 1 SW1   | SWDIP4     | Dip switch 4 vie       | DSW4V0       |
| 115 | 1 TCX1  | 10MHz      | TCXO SMD 5x3.2mm       | QRZ000010MMV |
| 116 | 1 TCX2  | NC         | TCXO SMD 7x5.2mm       |              |
| 117 | 14 TP1,TP2,TP3,TP4,TP5,TP6,<br>TP7,TP8,TP9,TP10,TP11,<br>TP12,TP13,TP14   | NC         | Test point             |              |
| 118 | 1 TP15  | TP1        | Test point             |              |
| 119 | 7 U1,U2,U4,U5,U6,U7,U8  | TL072SMD   | Dual Op. SMD SO8       | CILTL072SMD  |
| 120 | 2 U3,U14  | NC7S86     | XOR Port               | CIDNC7S86M5X |
| 121 | 3 U9,U12,U13  | LM358SMD   | Dual Op. SMD SO8       | CILLM358SMD  |
| 122 | 2 U10,U11   | LM393SMD   | Dual Comp. SMD SO8     | CILLM393SMD  |
| 123 | 1 U15   | CD4066XSMD | Analog Switch SMD SO14 | CIDCD4066S   |
| 124 | 1 U16   | CD4053SMD  | Analog Switch SMD SO16 | CIDCD4053S   |
| 125 | 1 U17   | CD4094SMD  | Shift Reg. SMD SO16    | CIDCD4094S   |
| 126 | 1 U19   | LM7815     | Stabilizzatore TO220   | CIL7815P     |
| 127 | 1 U20   | MC78LC33   | Stab. SMD SOT23-5      | CIL78LC33    |
| 128 | 1 U21   | MB15E06    | Integrated PLL         | CIDMB15E06   |
| 129 | 1 U22   | LM324SMD   | Quad Op. SMD SO14      | CILLM324SMD  |
| 130 | 1 VCO1  | NC         | VCO SKY 8 pin FVC7MD   |              |
| 131 | 1 Y1  | ERA3SM     | Ibrido MAR/ERA         | MIBERA3-SM   |
| 132 | 1 Y2  | MAR6SM     | Ibrido MAR/ERA         | MIBMAR6SMD   |

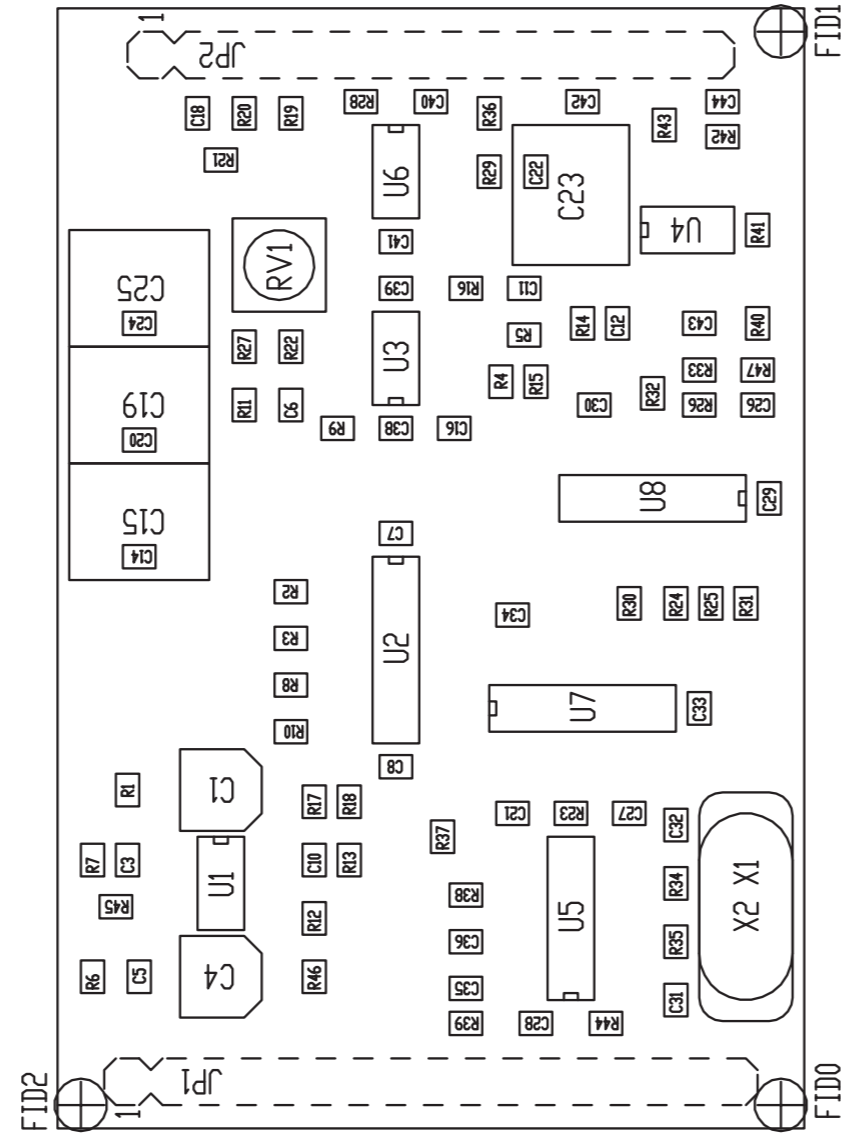
SLCTC30V03




CS1  
CSCTC30V03

|                          |                  |                        |  |          |
|--------------------------|------------------|------------------------|--|----------|
| Nome Progetto: PTX-LCD   |                  | Pagina: 1 di 1         |  | Size: A3 |
| Autore: A. Tommasi       | Data: 15/09/2005 | Codice Progetto: 011   |  |          |
| Nome PC in Rete: \RVRUT\ | Revisione: 1.1   | Nome Parte: Coder Card |  |          |
| File/Cartella:           | Autorizzazione:  | Codice: SLCTC30V03     |  |          |

SLCTC30V03



|   |                            |                        |
|---|----------------------------|------------------------|
|  | NOME PROGETTO: PTX-LCD     | NOME PARTE: CODER CARD |
| ARCHIVIAZIONE ELETTRONICA: \\VRUT\  | AUTORE: A. TOMMASI         | DATA: 08/04/2004       |
| MATERIALE:  | CODICE PROGETTO: 011       | REVISIONE: 1.0         |
| TRATTAMENTO:  | CODICE DISEGNO: SLCTC30V03 | SCALA: 2:1             |
| STATO: ESECUTIVO  | PROFILO:                   | SIZE: A4               |
|   |                            | PAGINA: 1 DI 1         |

SLCTC30V03

Coder Card Revised: Thursday, September 15, 2005  
 SLCTC30V03 Revision: 1.1

PTX-LCD

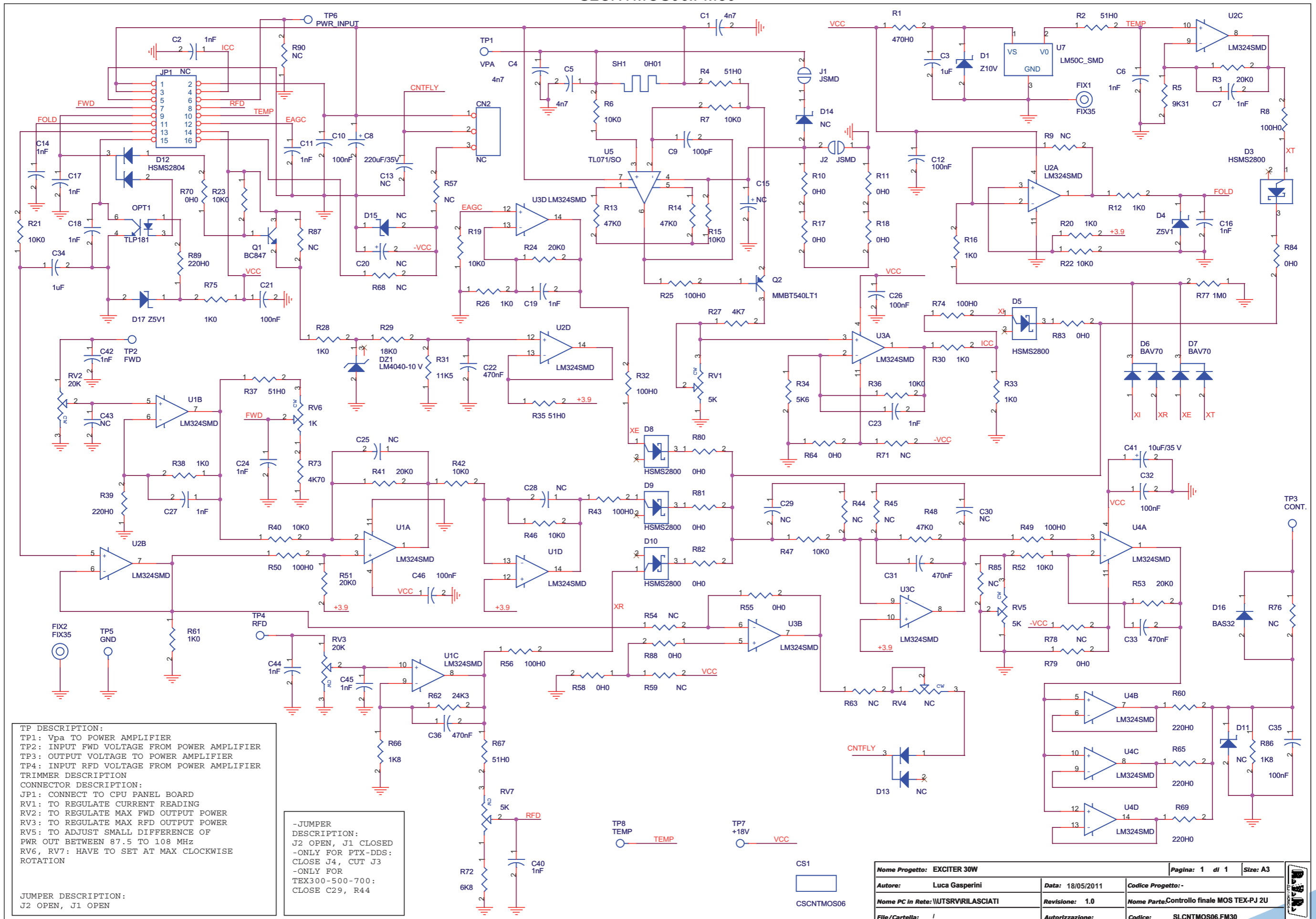
011

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             | Nota 1 |
| 6    | 1    | C12  | 10pF       | Cond. SMD 0805                 |        |
| 7    | 1    | C14  | 680pF 1%   | Cond. SMD 0805 COG             | Nota 1 |
| 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             | Nota 1 |
| 11   | 1    | C21  | 56pF       | Cond. SMD 0805                 |        |
| 12   | 1    | C24  | 220pF 1%   | Cond. SMD 0805 COG             | Nota 1 |
| 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  | 15pF       | 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            | Nota 2 |
| 54   | 1    | X1   | 4M864      | Quarzo SMD HC49SMD             |        |
| 55   | 1    | X2   | NC         | Quarzo HC18                    |        |

|               |  |
|---------------|--|
| <b>Nota 1</b> | Attenzione COG vanno bene anche al 2%                        |
| <b>Nota 2</b> | Non montare PHILIPS  |
|               | Tutte le resistenze vanno al 1%                              |
|               | Tutti i condensatori dove il valore lo consente vogliono NP0 |

SLCNTMOS06.FM30



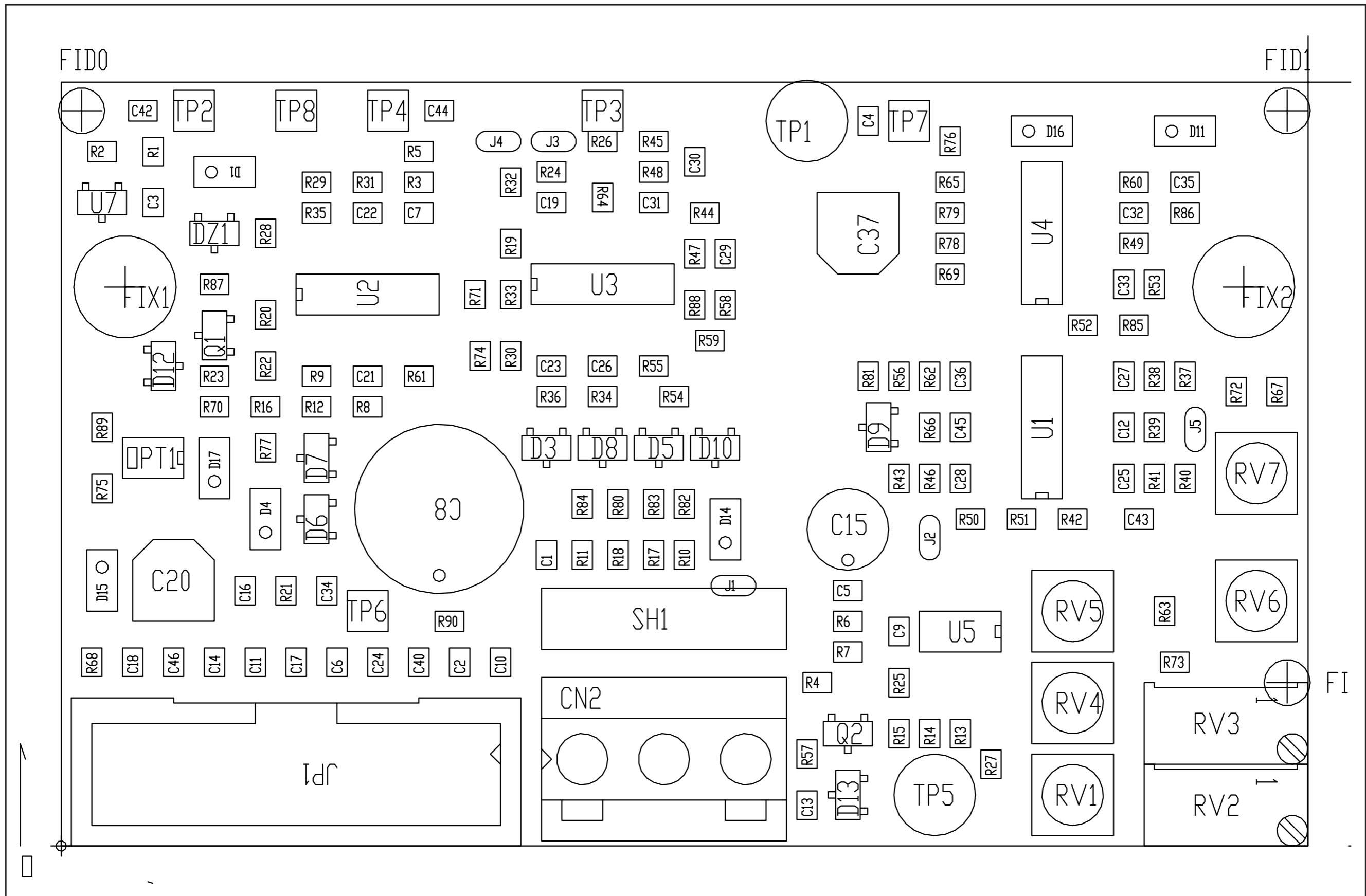
TP DESCRIPTION:  
 TP1: Vpa TO POWER AMPLIFIER  
 TP2: INPUT FWD VOLTAGE FROM POWER AMPLIFIER  
 TP3: OUTPUT VOLTAGE TO POWER AMPLIFIER  
 TP4: INPUT RFD VOLTAGE FROM POWER AMPLIFIER

CONNECTOR DESCRIPTION:  
 JP1: CONNECT TO CPU PANEL BOARD  
 RV1: TO REGULATE CURRENT READING  
 RV2: TO REGULATE MAX FWD OUTPUT POWER  
 RV3: TO REGULATE MAX RFD OUTPUT POWER  
 RV5: TO ADJUST SMALL DIFFERENCE OF PWR OUT BETWEEN 87.5 TO 108 MHz

JUMPER DESCRIPTION:  
 J2 OPEN, J1 OPEN

-JUMPER DESCRIPTION:  
 J2 OPEN, J1 CLOSED  
 -ONLY FOR PTX-DDS:  
 CLOSE J4, CUT J3  
 -ONLY FOR  
 TEX300-500-700:  
 CLOSE C29, R44

|                                    |                  |  |
|------------------------------------|------------------|--|
| Nome Progetto: EXCITER 30W         | Pagina: 1 di 1   | Size: A3                                   |
| Autore: Luca Gasperini             | Data: 18/05/2011 | Codice Progetto: -                         |
| Nome PC in Rete: \UTSRV\RILASCIATI | Revisione: 1.0   | Nome Parte, Controllo finale MOS TEX-PJ 2U |
| File/Cartella: /                   | Autorizzazione:  | Codice: SLCNTMOS06.FM30                    |



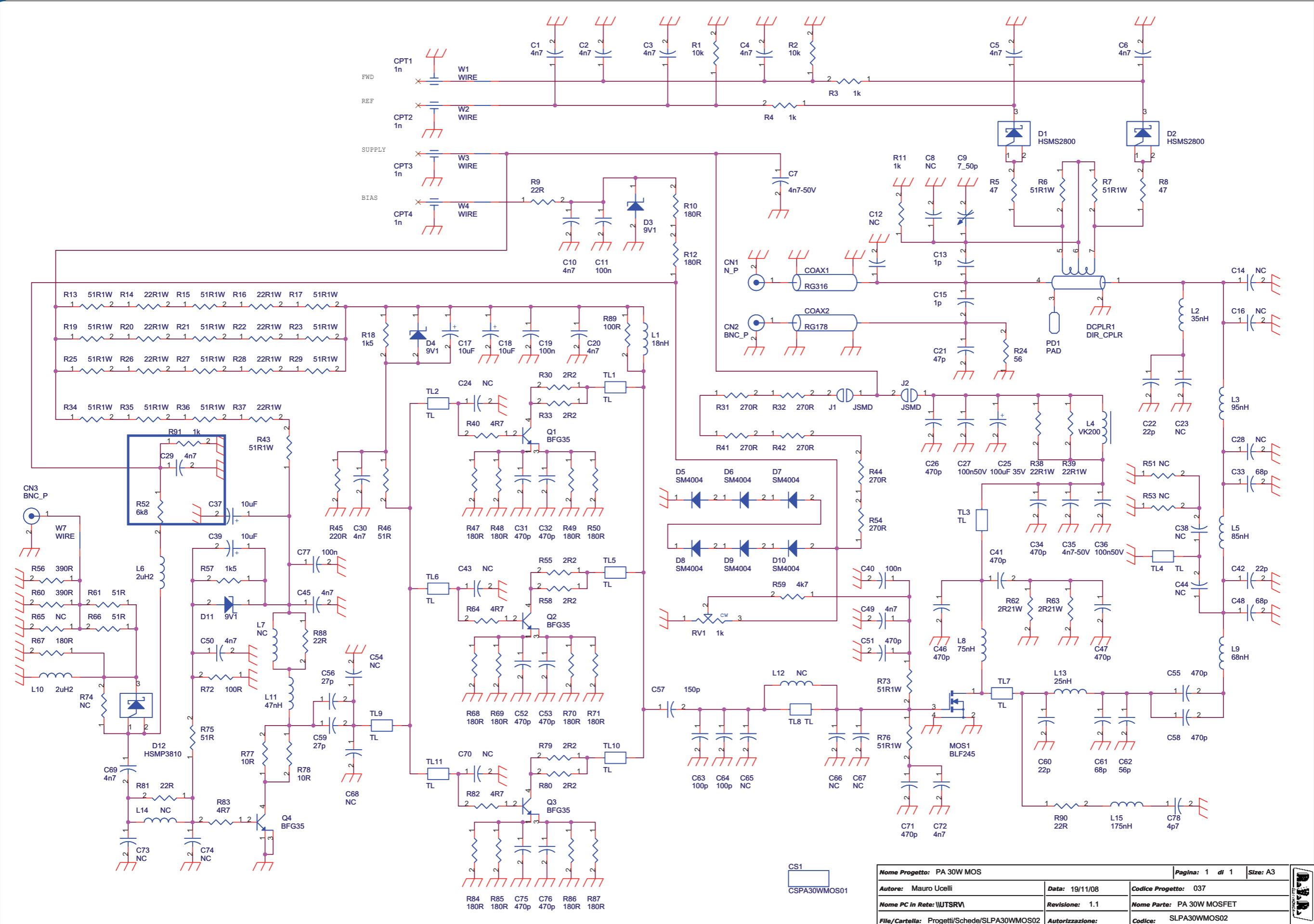


SLCNTMOS06.FM30

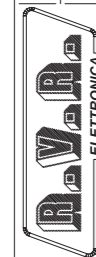
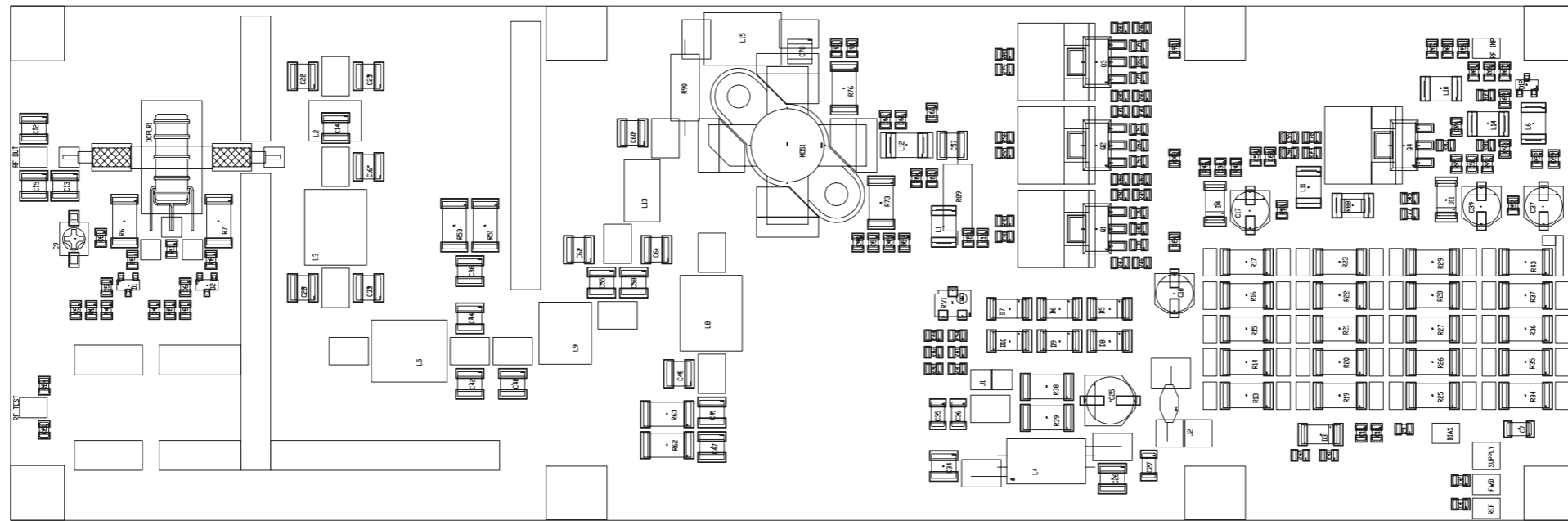
Controllo finale MOS TEX-PJ 2U Revised: Wednesday, May 18, 2011  
 SLCNTMOS06.FM30 Revision: 1.0  
 EXCITER 30W  
 Luca Gasperini

| Item | Quantity | Reference   | Part        | Description                 |
|------|----------|---|-------------|-----------------------------|
| 1    | 1        | CN2   | NC          | Conn. tipo KRA a 3 poli     |
| 2    | 1        | CS1   | CSCNTMOS06  | Circuito stampato           |
| 3    | 3        | C1, C4, C5  | 4n7         | Cond. SMD 0805              |
| 4    | 16       | C2, C6, C7, C11, C14, C16, C17, C18, C19, C23, C24, C27, C40, C42, C44, C45 | 1nF         | Cond. SMD 0805              |
| 5    | 2        | C3, C34   | 1uF         | Cond. SMD 0805              |
| 6    | 1        | C8  | 220uF/35V   | Cond. Elettr. Dia 10 P5.08  |
| 7    | 1        | C9  | 100pF       | Cond. SMD 0805              |
| 8    | 7        | C10, C12, C21, C26, C32, C35, C46   | 100nF       | Cond. SMD 0805              |
| 9    | 6        | C13, C25, C28, C29, C30, C43  | NC          | Cond. SMD 0805              |
| 10   | 1        | C15   | NC          | Cond. Elettr. Dia 5 P2.54   |
| 11   | 1        | C20   | NC          | Cond. Elettr. SMD d. 4mm    |
| 12   | 4        | C22, C31, C33, C36  | 470nF       | Cond. SMD 0805              |
| 13   | 1        | C41   | 10uF/35 V   | Cond. Elettr. SMD d. 4mm    |
| 14   | 1        | DZ1   | LM4040-10 V | Diodi Zener SMD SOT23       |
| 15   | 1        | D1  | Z10V        | MINIMELF SMD Zener Diode    |
| 16   | 5        | D3, D5, D8, D9, D10   | HSMS2800    | Diodo Schottky SOT23        |
| 17   | 2        | D4, D17   | Z5V1        | MINIMELF SMD Zener Diode    |
| 18   | 2        | D6, D7  | BAV70       | Doppio Diodo SMD SOT23      |
| 19   | 3        | D11, D14, D15   | NC          | MINIMELF SMD Zener Diode    |
| 20   | 1        | D12   | HSMS2804    | Doppio Diodo SMD SOT23      |
| 21   | 1        | D13   | NC          | Doppio Diodo SMD SOT23      |
| 22   | 1        | D16   | BAS32       | MINIMELF SMD Diode          |
| 23   | 2        | FIX1, FIX2  | FIX35       | Foro fissaggio 3.5mm        |
| 24   | 1        | JP1   | NC          | Connettore 16 poli Flat cs  |
| 25   | 2        | J1, J2  | JSMD        | Pad SMD a saldare           |
| 26   | 1        | OPT1  | TLP181      | Optoisolatore SMD SO6       |
| 27   | 1        | Q1  | BC847       | Trans. NPN SOT23            |
| 28   | 1        | Q2  | MMBT540LT1  | Trans. PNP SOT23            |
| 29   | 3        | RV1, RV5, RV7   | 5K          | Trimmer SMD                 |
| 30   | 2        | RV2, RV3  | 20K         | Trimmer Rg V 3296W          |
| 31   | 1        | RV4   | NC          | Trimmer SMD                 |
| 32   | 1        | RV6   | 1K          | Trimmer SMD                 |
| 33   | 1        | R1  | 470H0       | Res. SMD 0805               |
| 34   | 5        | R2, R4, R35, R37, R67   | 51H0        | Res. SMD 0805               |
| 35   | 5        | R3, R24, R41, R51, R53  | 20K0        | Res. SMD 0805               |
| 36   | 1        | R5  | 9K31        | Res. SMD 0805               |
| 37   | 13       | R6, R7, R15, R19, R21, R22, R23, R36, R40, R42, R46, R47, R52               | 10K0        | Res. SMD 0805               |
| 38   | 8        | R8, R25, R32, R43, R49, R50, R56, R74                                       | 100H0       | Res. SMD 0805               |
| 39   | 14       | R9, R44, R45, R54, R57, R59, R63, R68, R71, R76, R78, R85, R87, R90         | NC          | Res. SMD 0805               |
| 40   | 15       | R10, R11, R17, R18, R55, R58, R64, R70, R79, R80, R81, R82, R83, R84, R88   | 0H0         | Res. SMD 0805               |
| 41   | 10       | R12, R16, R20, R26, R28, R30, R33, R38, R61, R75                            | 1K0         | Res. SMD 0805               |
| 42   | 3        | R13, R14, R48   | 47K0        | Res. SMD 0805               |
| 43   | 2        | R27, R73  | 4K70        | Res. SMD 0805               |
| 44   | 1        | R29   | 18K0        | Res. SMD 0805               |
| 45   | 1        | R31   | 11K5        | Res. SMD 0805               |
| 46   | 1        | R34   | 5K6         | Res. SMD 0805               |
| 47   | 5        | R39, R60, R65, R69, R89   | 220H0       | Res. SMD 0805               |
| 48   | 1        | R62   | 24K3        | Res. SMD 0805               |
| 49   | 2        | R66, R86  | 1K8         | Res. SMD 0805               |
| 50   | 1        | R72   | 6K8         | Res. SMD 0805               |
| 51   | 1        | R77   | 1M0         | Res. SMD 0805               |
| 52   | 1        | SH1   | 0H01        | Shunt passo 15.2mm fori 2mm |
| 53   | 1        | TP1   | VPA         | Foro dia. 2mm               |
| 54   | 1        | TP2   | FWD         | Foro dia. 1mm               |
| 55   | 1        | TP3   | CONT.       | Foro dia. 1mm               |
| 56   | 1        | TP4   | RFD         | Foro dia. 1mm               |
| 57   | 1        | TP5   | GND         | Foro dia. 2mm               |
| 58   | 1        | TP6   | PWR_INPUT   | Foro dia. 1mm               |
| 59   | 1        | TP7   | +18V        | Foro dia. 1mm               |
| 60   | 1        | TP8   | TEMP        | Foro dia. 1mm               |
| 61   | 4        | U1, U2, U3, U4  | LM324SMD    | Quad Op. SMD SO14           |
| 62   | 1        | U5  | TL071/SO    | Dual Op. SMD SO8            |
| 63   | 1        | U7  | LM50C_SMD   | Temperature sensor          |

SLPA30WMOS02



|   |                 |                           |  |          |
|---|-----------------|---------------------------|--|----------|
| Nome Progetto: PA 30W MOS                   |                 | Pagina: 1 di 1            |  | Size: A3 |
| Autore: Mauro Ucelli                        | Data: 19/11/08  | Codice Progetto: 037      |  |          |
| Nome PC in Rete: \NUTSRV\                   | Revisione: 1.1  | Nome Parte: PA 30W MOSFET |  |          |
| File/Cartella: Progetti\Schede\SLPA30WMOS02 | Autorizzazione: | Codice: SLPA30WMOS02      |  |          |



NOME PROGETTO: PA 30W MOS

AUTORE: MAURO UCELLI

ARCHIVIAZIONE ELETTRONICA: "CARTELLA PROGETTI" SU "UT\_SRV"

MATERIALE: <>

NOME PARTE: PA 30W MOSFET

DATA: 04/11/2005 | REVISIONE: 1.0 | SCALA: 1:1 | SIZE: A4 | PAGINA: 1 DI 1

CODICE PROGETTO: 037 | CODICE DISEGNO: SLPA30WMOS02

TRATTAMENTO: <>

PROFILO: <>

STATO: ESECUTIVO

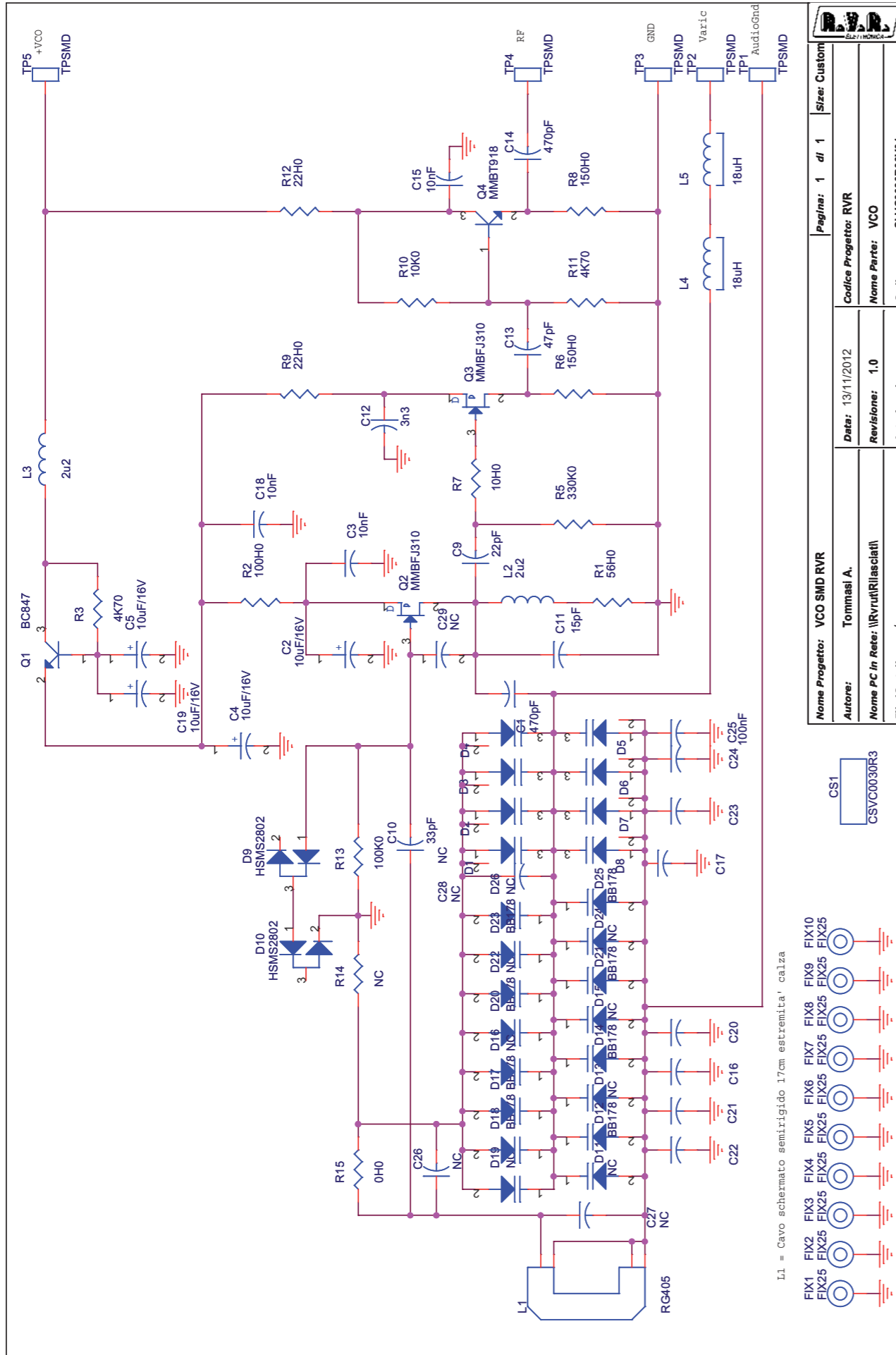
SLPA30WMOS02

PA 30W MOSFET  
SLPA30WMOS02  
Revision: 1.1  
PA 30W MOS  
Cod: 037  
Mauro Ucelli  
19/11/2008

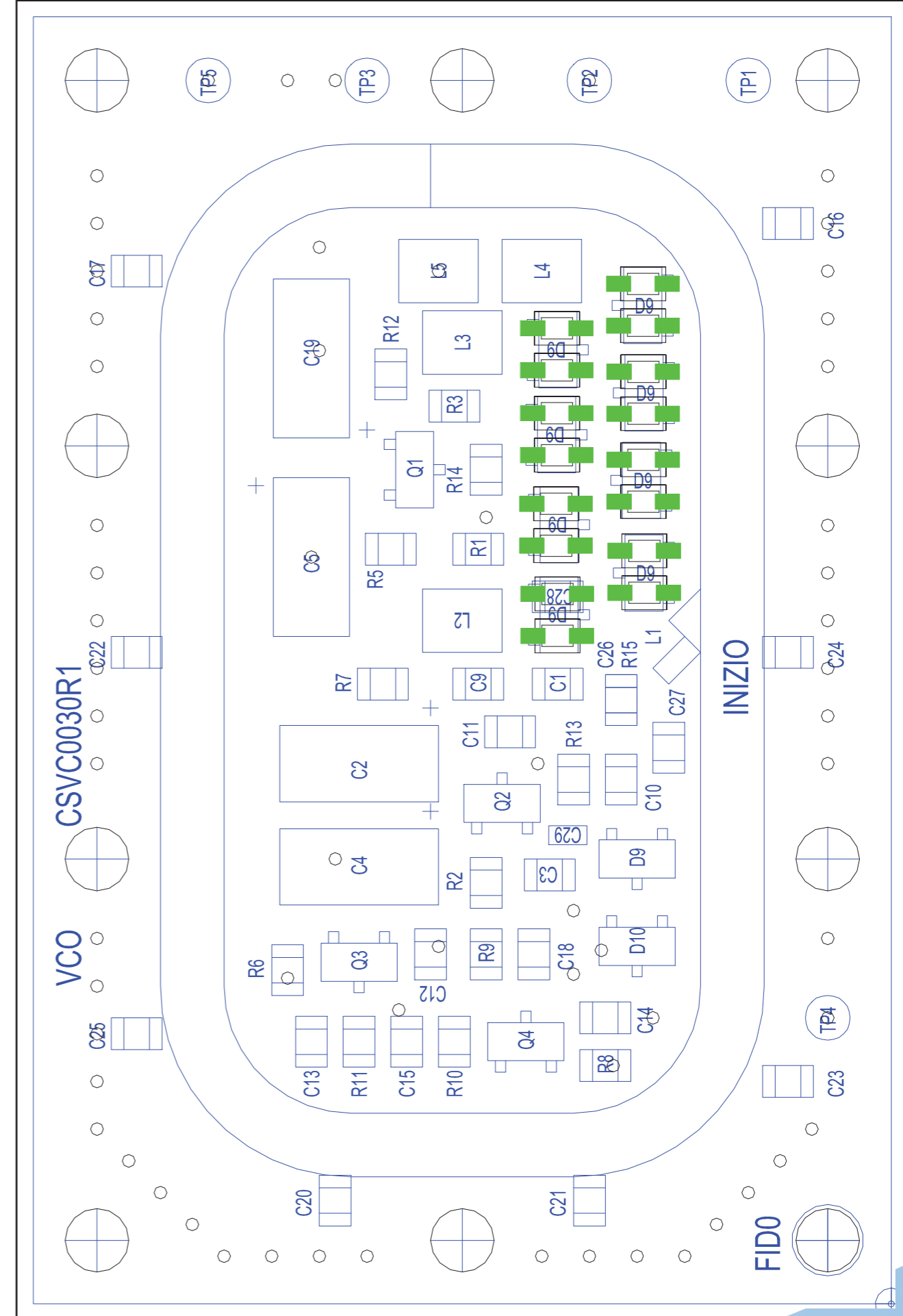
| Item | Quantity | Reference   | Part         | Description                 |
|------|----------|---|--------------|-----------------------------|
| 1    | 1        | CN1   | N_P          | Conn. N da pannello         |
| 2    | 2        | CN3,CN2   | BNC_P        | Conn. BNC da pannello       |
| 3    | 1        | COAX1   | RG316        | Cavo coax                   |
| 4    | 1        | COAX2   | RG178        | Cavo coax                   |
| 5    | 4        | CPT1,CPT2,CPT3,CPT4   | 1n           | Cond. passante              |
| 6    | 1        | CS1   | CSPA30WMOS01 | Circuito stampato           |
| 7    | 15       | C1,C2,C3,C4,C5,C6,C10,<br>C20,C29,C30,C45,C49,C50,<br>C69,C72 | 4n7          | Cond. SMD 0805              |
| 8    | 2        | C35,C7  | 4n7-50V      | Cond. SMD 1206              |
| 9    | 8        | C8,C54,C65,C66,C67,C68,<br>C73,C74                            | NC           | Cond. SMD 0805 COG          |
| 10   | 1        | C9  | 7_50p        | Comp. var. Murata TZB4      |
| 11   | 4        | C11,C19,C40,C77   | 100n         | Cond. SMD 0805              |
| 12   | 10       | C12,C14,C16,C23,C24,C28,<br>C38,C43,C44,C70                   | NC           | Cond. SMD 1212 HQ           |
| 13   | 2        | C15,C13   | 1p           | Cond. SMD 1212 HQ           |
| 14   | 4        | C17,C18,C37,C39   | 10uF         | Cond. Elett. SMD d. 5mm     |
| 15   | 1        | C21   | 47p          | Cond. SMD 0805 COG          |
| 16   | 2        | C42,C22   | 22p          | Cond. SMD 1212 HQ           |
| 17   | 1        | C25   | 100uF 35V    | Cond. Elett. SMD d. 6.3mm   |
| 18   | 7        | C26,C34,C41,C46,C47,C55,<br>C58                               | 470p         | Cond. SMD 1212 HQ           |
| 19   | 2        | C36,C27   | 100n50V      | Cond. SMD 1206              |
| 20   | 8        | C31,C32,C51,C52,C53,C71,<br>C75,C76                           | 470p         | Cond. SMD 0805 COG          |
| 21   | 3        | C33,C48,C61   | 68p          | Cond. SMD 1212 HQ           |
| 22   | 2        | C56,C59   | 27p          | Cond. SMD 0805              |
| 23   | 1        | C57   | 150p         | Cond. SMD 1212 HQ           |
| 24   | 1        | C60   | 22p          | Cond. SMD 1212 HQ           |
| 25   | 1        | C62   | 56p          | Cond. SMD 1212 HQ           |
| 26   | 2        | C63,C64   | 100p         | Cond. SMD 0805 COG          |
| 27   | 1        | C78   | 4p7          | Cond. SMD 1212 HQ           |
| 28   | 1        | DCPLR1  | DIR_CPLR     | Accopp. direz.              |
| 29   | 2        | D2,D1   | HSMS2800     |                             |
| 30   | 3        | D3,D4,D11   | 9V1          | MELF SMD Zener Diode        |
| 31   | 6        | D5,D6,D7,D8,D9,D10  | SM4004       | MELF SMD Diode              |
| 32   | 1        | D12   | HSMP3810     | Diodo Shottky SOT23         |
| 33   | 2        | J1,J2   | JSMD         | Pad SMD a saldare           |
| 34   | 1        | L1  | 18nH         | Induttanza cilindrica       |
| 35   | 1        | L2  | 35nH         | Induttanza cilindrica       |
| 36   | 1        | L3  | 95nH         | Induttanza cilindrica       |
| 37   | 1        | L4  | VK200        | Induttanza cilindrica VK200 |
| 38   | 1        | L5  | 85nH         | Induttanza cilindrica       |
| 39   | 2        | L6,L10  | 2uH2         | Induttanza SMD 3225 (1812)  |
| 40   | 3        | L7,L12,L14  | NC           | Induttanza SMD 3225 (1210)  |
| 41   | 1        | L8  | 75nH         | Induttanza cilindrica       |
| 42   | 1        | L9  | 68nH         | Induttanza cilindrica       |
| 43   | 1        | L11   | 47nH         | Induttanza SMD 3225 (1210)  |
| 44   | 1        | L13   | 25nH         | Induttanza cilindrica       |
| 45   | 1        | L15   | 175nH        | Induttanza cilindrica       |
| 46   | 1        | MOS1  | BLF245       | Power mosfet RF             |

|    |    |   |       |                              |
|----|----|---|-------|------------------------------|
| 47 | 1  | PD1   | PAD   |                              |
| 48 | 4  | Q1,Q2,Q3,Q4   | BFG35 | Trans. NPN SOT223            |
| 49 | 1  | RV1   | 1k    | Trimm. multi SMD PVG5 Murata |
| 50 | 2  | R1,R2   | 10k   | Res. SMD 0805                |
| 51 | 4  | R3,R4,R11,R91   | 1k    | Res. SMD 0805                |
| 52 | 2  | R5,R8   |       | 47 Res. SMD 0805             |
| 53 | 17 | R6,R7,R13,R15,R17,R19,<br>R21,R23,R25,R27,R29,R34,<br>R35,R36,R43,R73,R76 | 51R1W | Res. SMD 2512                |
| 54 | 2  | R9,R81  | 22R   | Res. SMD 0805                |
| 55 | 15 | R10,R12,R47,R48,R49,R50,<br>R67,R68,R69,R70,R71,R84,<br>R85,R86,R87       | 180R  | Res. SMD 0805                |
| 56 | 9  | R14,R16,R20,R22,R26,R28,<br>R37,R38,R39                                   | 22R1W | Res. SMD 2512                |
| 57 | 2  | R57,R18   | 1k5   | Res. SMD 0805                |
| 58 | 1  | R24   |       | 56 Res. SMD 0805             |
| 59 | 6  | R30,R33,R55,R58,R79,R80   | 2R2   | Res. SMD 0805                |
| 60 | 6  | R31,R32,R41,R42,R44,R54   | 270R  | Res. SMD 0805                |
| 61 | 4  | R40,R64,R82,R83   | 4R7   | Res. SMD 0805                |
| 62 | 1  | R45   | 220R  | Res. SMD 0805                |
| 63 | 4  | R46,R61,R66,R75   | 51R   | Res. SMD 0805                |
| 64 | 2  | R51,R53   | NC    | Res. SMD 2512                |
| 65 | 1  | R52   | 6k8   | Res. SMD 0805                |
| 66 | 2  | R60,R56   | 390R  | Res. SMD 0805                |
| 67 | 1  | R59   | 4k7   | Res. SMD 0805                |
| 68 | 2  | R63,R62   | 2R21W | Res. SMD 2512                |
| 69 | 2  | R65,R74   | NC    | Res. SMD 0805                |
| 70 | 1  | R72   | 100R  | Res. SMD 0805                |
| 71 | 2  | R78,R77   | 10R   | Res. SMD 0805                |
| 72 | 1  | R88   | 22R   | Res. SMD 2010                |
| 73 | 1  | R89   | 100R  | Res. 2W tradizionale         |
| 74 | 1  | R90   | 22R   | Res. 2W tradizionale         |
| 75 | 11 | TL1,TL2,TL3,TL4,TL5,TL6,<br>TL7,TL8,TL9,TL10,TL11                         | TL    | Linea strip CS               |
| 75 | 5  | W1,W2,W3,W4,W7  | WIRE  | Filo a saldare               |

SLVC0030R03V01



|                                     |  |                  |  |                        |  |
|-------------------------------------|--|------------------|--|------------------------|--|
| Nome Progetto: VCO SMD RVR          |  | Pagina: 1 di 1   |  | Size: Custom           |  |
| Autore: Tommasi A.                  |  | Data: 13/11/2012 |  | Codice Progetto: RVR   |  |
| Nome PC in Rete: \RVR\ut\l\asciati\ |  | Revisione: 1.0   |  | Nome Parte: VCO        |  |
| File/Cartella: /                    |  | Autorizzazione:  |  | Codice: SLVC0030R03V01 |  |



SLVC0030R03V01

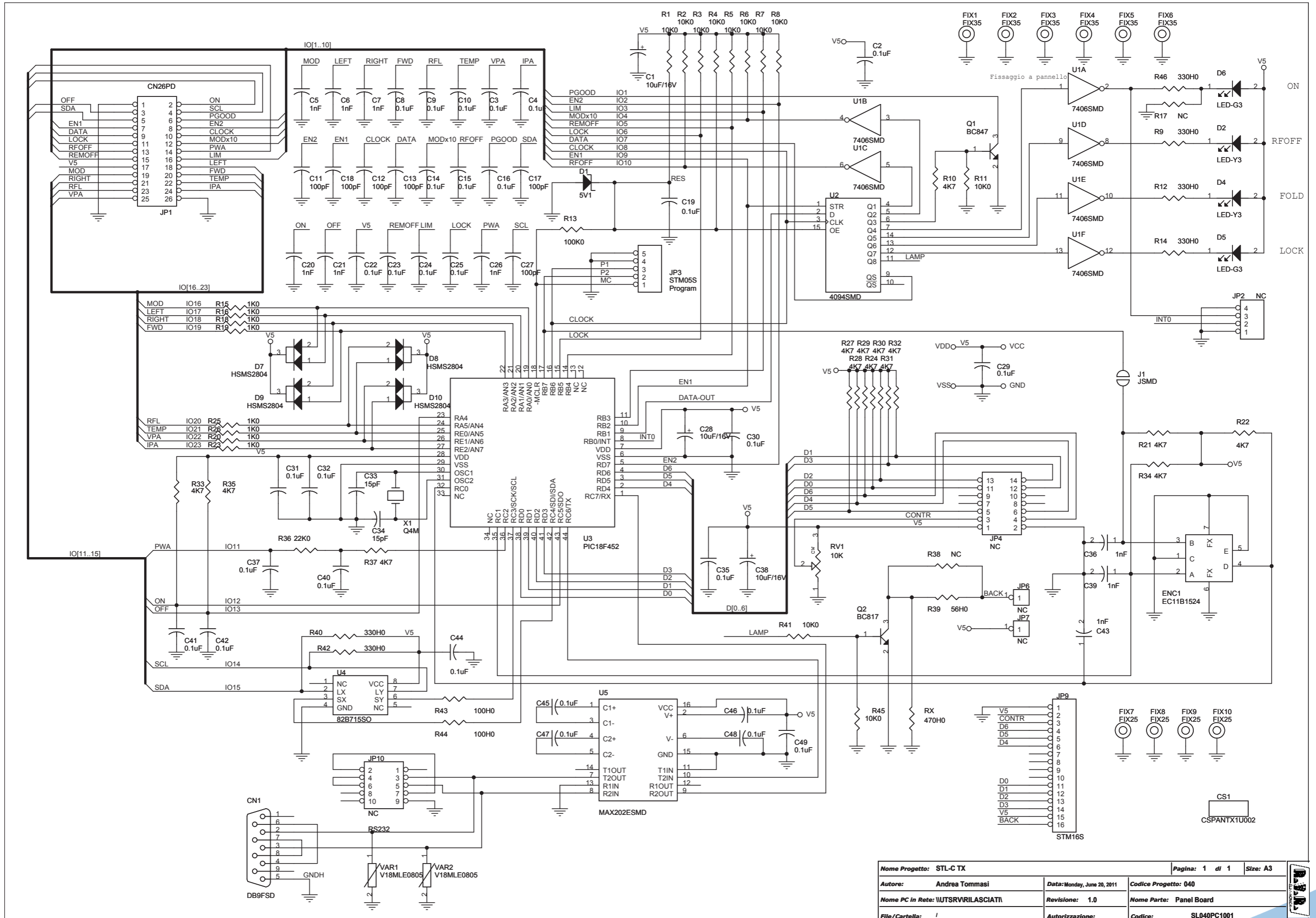
VCO Revised: Tuesday, November 13, 2012  
SLVC0030R03V01 Revision: 1.0

A. Tommasi  
VCO SMD RVR  
RVR

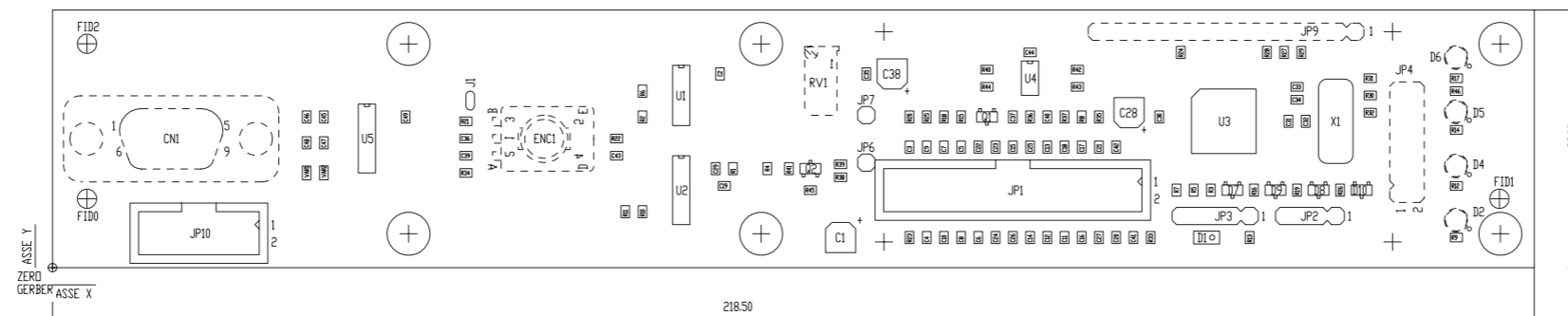
Tommasi A.

| Item | Quantity | Reference  | Part       | Description                          | Code         |
|------|----------|--|------------|--------------------------------------|--------------|
| 1    | 1        | CS1  | CSVC0030R3 | Circuito stampato                    | CSVC0030R3   |
| 2    | 2        | C1,C14   | 470pF      | Cond. SMD 0805                       | CCC085471JCC |
| 3    | 4        | C2,C4,C5,C19   | 10uF/16V   | Cond. Elett. SMD tant. size C        | CET106C160SM |
| 4    | 3        | C3,C15,C18   | 10nF       | Cond. SMD 0805                       | CCC085103KXC |
| 5    | 1        | C9   | 22pF       | Cond. SMD 0805                       | CCC085220JCC |
| 6    | 1        | C10  | 33pF       | Cond. SMD 0805                       | CCC085330JCC |
| 7    | 1        | C11  | 15pF       | Cond. SMD 0805                       | CCC085150JCC |
| 8    | 1        | C12  | 3n3        | Cond. SMD 0805                       | CCC085332KXC |
| 9    | 1        | C13  | 47pF       | Cond. SMD 0805                       | CCC085470JCC |
| 10   | 8        | C16,C17,C20,C21,C22,C23,<br>C24,C25                        | 100nF      | Cond. SMD 0805                       | CCC063104KXC |
| 11   | 3        | C26,C27,C28  | NC         | Cond. SMD 0805                       |              |
| 12   | 1        | C29  | NC         | Cond. SMD 0603                       |              |
| 13   | 8        | D1,D2,D3,D4,D5,D6,D7,D8                                    | NC         | Diodo Varicap SMD SOT23              |              |
| 14   | 2        | D9,D10   | HSMS2802   | Doppio Diodo SMD SOT23               | DISHSMS2802  |
| 15   | 8        | D11,D13,D15,D16,D19,D22,<br>D24,D26                        | NC         | Diodo varicap SOD323                 |              |
| 16   | 8        | D12,D14,D17,D18,D20,D21,<br>D23,D25                        | BB178      | Diodo varicap SOD323                 | DIVBB178     |
| 17   | 10       | FIX1,FIX2,FIX3,FIX4,FIX5,<br>FIX6,FIX7,FIX8,FIX9,<br>FIX10 | FIX25      | Foro fissaggio 2.5mm                 |              |
| 18   | 1        | L1   | RG405      | Induttanza a cavo RG                 | CAVRG405     |
| 19   | 2        | L2,L3  | 2u2        | Induttanza SMD 3225 (1210)           | IMP2U2S126S  |
| 20   | 2        | L4,L5  | 18uH       | Induttanza SMD 3225 (1210) Schermata | IMP18US126S  |
| 21   | 1        | Q1   | BC847      | Trans. NPN SOT23                     | TRNBC847     |
| 22   | 2        | Q2,Q3  | MMBFJ310   | Trans. FET SOT23                     | TRNMMBFJ310  |
| 23   | 1        | Q4   | MMBT918    | Trans. NPN SOT23                     | TRNMMBT918   |
| 24   | 1        | R1   | 56H0       | Res. SMD 0805 1%                     | RCH085F0056H |
| 25   | 1        | R2   | 100H0      | Res. SMD 0805 1%                     | RCH085F0100H |
| 26   | 2        | R3,R11   | 4K70       | Res. SMD 0805 1%                     | RCH085F004K7 |
| 27   | 1        | R5   | 330K0      | Res. SMD 0805 1%                     | RCH085F0330K |
| 28   | 2        | R6,R8  | 150H0      | Res. SMD 0805 1%                     | RCH085F0150H |
| 29   | 1        | R7   | 10H0       | Res. SMD 0805 1%                     | RCH085F0010H |
| 30   | 2        | R9,R12   | 22H0       | Res. SMD 0805 1%                     | RCH085F0022H |
| 31   | 1        | R10  | 10K0       | Res. SMD 0805 1%                     | RCH085F0010K |
| 32   | 1        | R13  | 100K0      | Res. SMD 0805 1%                     | RCH085F0100K |
| 33   | 1        | R14  | NC         | Res. SMD 0805 1%                     |              |
| 34   | 1        | R15  | OH0        | Res. SMD 0805 1%                     | RCH085F0000H |
| 35   | 5        | TP1,TP2,TP3,TP4,TP5  | TPSMD      | Piazzola SMD                         |              |

SL040PC1001



|                                    |                             |                         |  |          |
|------------------------------------|-----------------------------|-------------------------|--|----------|
| Nome Progetto: STL-C TX            |                             | Pagina: 1 di 1          |  | Size: A3 |
| Autore: Andrea Tommasi             | Data: Monday, June 20, 2011 | Codice Progetto: 040    |  |          |
| Nome PC in Rete: IUTSRVIRILASCIATI | Revisione: 1.0              | Nome Parte: Panel Board |  |          |
| File/Cartella: /                   | Autorizzazione:             | Codice: SL040PC1001     |  |          |



|                              |                                  |                        |                         |
|------------------------------|----------------------------------|------------------------|-------------------------|
| RILASCIO: 22/11/04           |                                  |                        | DIS. S.POL.             |
| REV:                         |                                  |                        | CTR. A2                 |
|                              |                                  |                        | LATO PIANO DI MONTAGGIO |
|                              |                                  |                        | VISTA LATO COMPONENTI   |
| DIM.SCHEDA: VEDI QUOTE       | DENOMINAZIONE SCHEDA PANEL BOARD |                        |                         |
| TRATT.: STANDARD COSTRUTTORE |                                  |                        |                         |
| MAT.: FR4-74 1.6mm Cu35um    | CODICE CSPANTX1U002              | RVR ELETTRONICA S.P.A. | SCALA 1:1               |
| VISTA POSITIVA               |                                  |                        |                         |



SL040PC1001

Panel Board - SL040PC1001  
06/03/2006 Revision: 1.0  
STL-C TX  
40

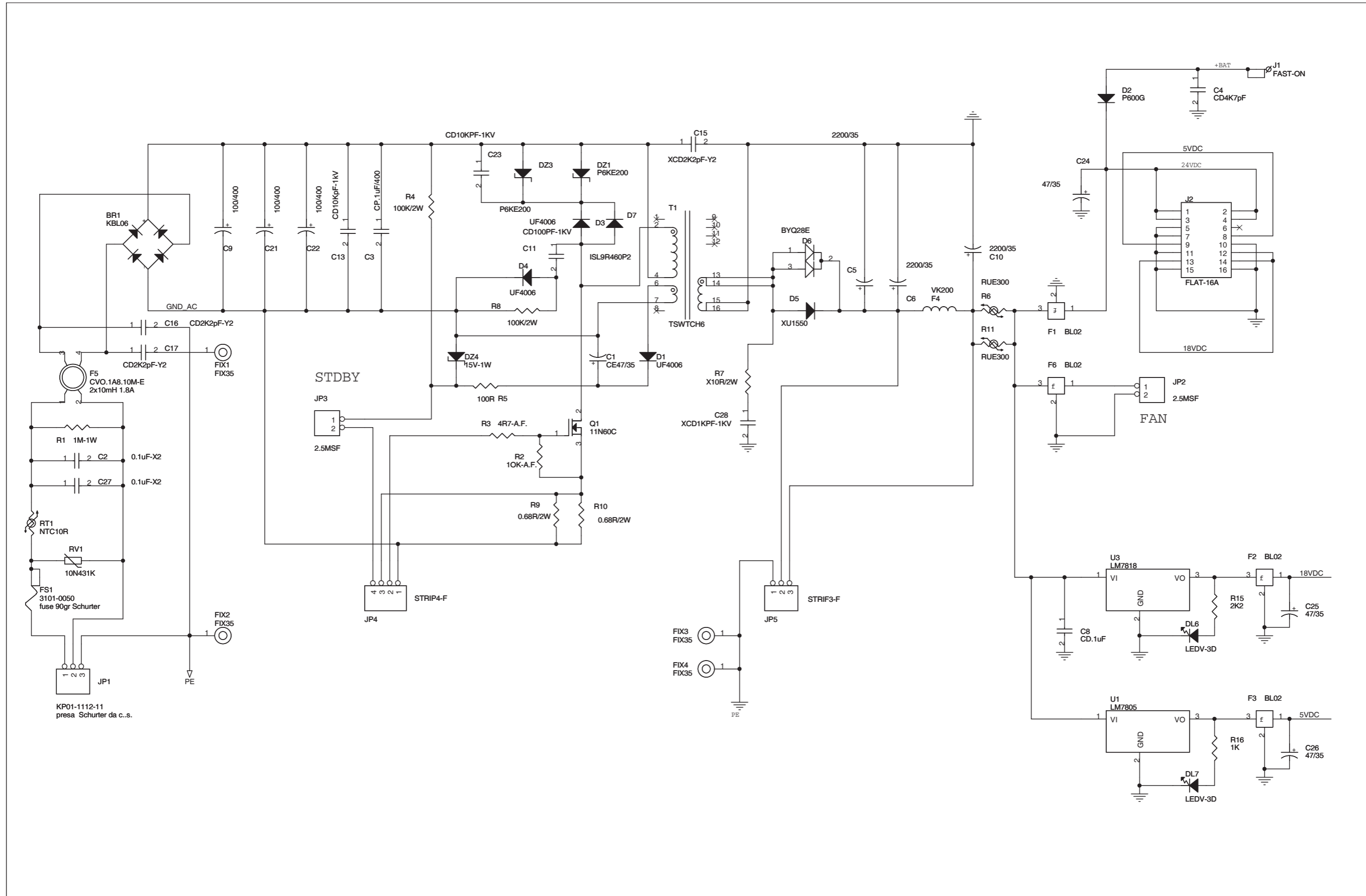
Andrea Tommasi

| Item | Quantity | Reference  | Part                     | Description                      | Code         |
|------|----------|--|--------------------------|----------------------------------|--------------|
| 1    | 1        | CN1  | DB9FSD                   | Connettore DB9 femm. cs          | CNTDB9FCSD1  |
| 2    | 1        | CS1  | CSPANTX1U002             | Circuito stampato                | CSPANTX1U002 |
| 3    | 3        | C1, C28, C38   | 10uF/16V                 | Cond. Elett. SMD d. 4mm          | CES106A160   |
| 4    | 29       | C2, C3, C4, C8, C9, C10, C14, C15, C16, C19, C22, C23, C24, C25, C29, C30, C31, C32, C35, C37, C40, C41, C42, C44, C45, C46, C47, C48, C49 | 0.1uF                    | Cond. SMD 0805                   | CCC085104KXC |
| 5    | 9        | C5, C6, C7, C20, C21, C26, C36, C39, C43   | 1nF                      | Cond. SMD 0805                   | CCC085102JNC |
| 6    | 6        | C11, C12, C13, C17, C18, C27   | 100pF                    | Cond. SMD 0805                   | CCC085101JCC |
| 7    | 2        | C33, C34   | 15pF                     | Cond. SMD 0805                   | CCC085150JCC |
| 8    | 1        | D1   | MINIMELF SMD Zener Diode | 5V1                              | DIZ5V1MINI   |
| 9    | 2        | D2, D4   | LED-Y3                   | LED dia. 3mm                     | LEDG03       |
| 10   | 2        | D5, D6   | LED-G3                   | LED dia. 3mm                     | LEDV03       |
| 11   | 4        | D7, D8, D9, D10  | HSMS2804                 | Doppio Diode SMD SOT23           | DISHSMS2804  |
| 12   | 1        | ENC1   | EC11B1524                | Incremental encoder ALPS EC11    | CMMRALPS     |
| 13   | 6        | FIX1, FIX2, FIX3, FIX4, FIX5, FIX6   | FIX35                    | Foro fissaggio                   |              |
| 14   | 4        | FIX7, FIX8, FIX9, FIX10  | FIX25                    | Foro fissaggio 2.5mm             | NOTA 2       |
| 15   | 1        | JP1  | CN26PD                   | Connettore 26 poli Flat cs       | CNTMCS26A    |
| 16   | 1        | JP2  | NC                       | Strip maschio 4 pin              |              |
| 17   | 1        | JP3  | STM05S                   | Strip maschio 5 pin              | NOTA 1       |
| 18   | 1        | JP4  | NC                       | Strip maschio 14 pin doppia fila |              |
| 19   | 2        | JP6, JP7   | NC                       | Strip femmina 1 pin              |              |
| 20   | 1        | JP9  | STM16S                   | Strip maschio 16 pin             | NOTA 1       |
| 21   | 1        | JP10   | NC                       | Connettore 10 poli Flat cs       |              |
| 22   | 1        | J1   | J5MD                     | Pad SMD a saldare                |              |
| 23   | 1        | Q1   | BC847                    | Trans. NPN SOT23                 | TRNBC847     |
| 24   | 1        | Q2   | BC817                    | Trans. NPN SOT23                 | TRNBC817     |
| 25   | 1        | RV1  | 10K                      | Trimmer Rg V 3296W               | RVT3296WK010 |
| 26   | 1        | RX <b>NOTA3</b>  | 470H0                    | Res. SMD 0805                    | RCH085F0470H |
| 27   | 11       | R1, R2, R3, R4, R5, R6, R7, R8, R11, R41, R45  | 10K0                     | Res. SMD 0805                    | RCH085F0010K |
| 28   | 1        | R13  | 100K0                    | Res. SMD 0805                    | RCH085F0100K |
| 29   | 6        | R9, R12, R14, R40, R42, R46  | 330H0                    | Res. SMD 0805                    | RCH085F0330H |
| 30   | 14       | R10, R21, R22, R24, R27, R28, R29, R30, R31, R32, R33, R34, R35, R37   | 4K7                      | Res. SMD 0805                    | RCH085F004K7 |
| 31   | 8        | R15, R16, R18, R19, R20, R23, R25, R26   | 1K0                      | Res. SMD 0805                    | RCH085F0001K |
| 32   | 2        | R17, R38   | NC                       | Res. SMD 0805                    |              |
| 33   | 1        | R36  | 22K0                     | Res. SMD 0805                    | RCH085F0022K |
| 34   | 1        | R39  | 56H0                     | Res. SMD 0805                    | RCH085F0056H |
| 35   | 2        | R43, R44   | 100H0                    | Res. SMD 0805                    | RCH085F0100H |
| 36   | 1        | U1   | 7406SMD                  | Hex inv OC SMD SO14              | CID7406S     |
| 37   | 1        | U2   | 4094SMD                  | Shift Reg. SMD SO16              | CIDCD4094S   |
| 38   | 1        | U3   | PIC18F452                | TQFP44 SMD Microprocessor        | CIDPIC18F452 |
| 39   | 1        | U4   | 82B715SO                 | IIC Bus driver SMD SO8           | CID82B715S   |
| 40   | 1        | U5   | MAX202ESMD               | RS232 Driver SMD SO16            | CIDMX202ESDS |
| 41   | 2        | VAR1, VAR2   | V18MLE0805               | ESD SMD protector                | MOV018V085   |
| 42   | 1        | X1   | Q4M                      | Quarzo SMD HC49SMD               | QRZ000004MC  |

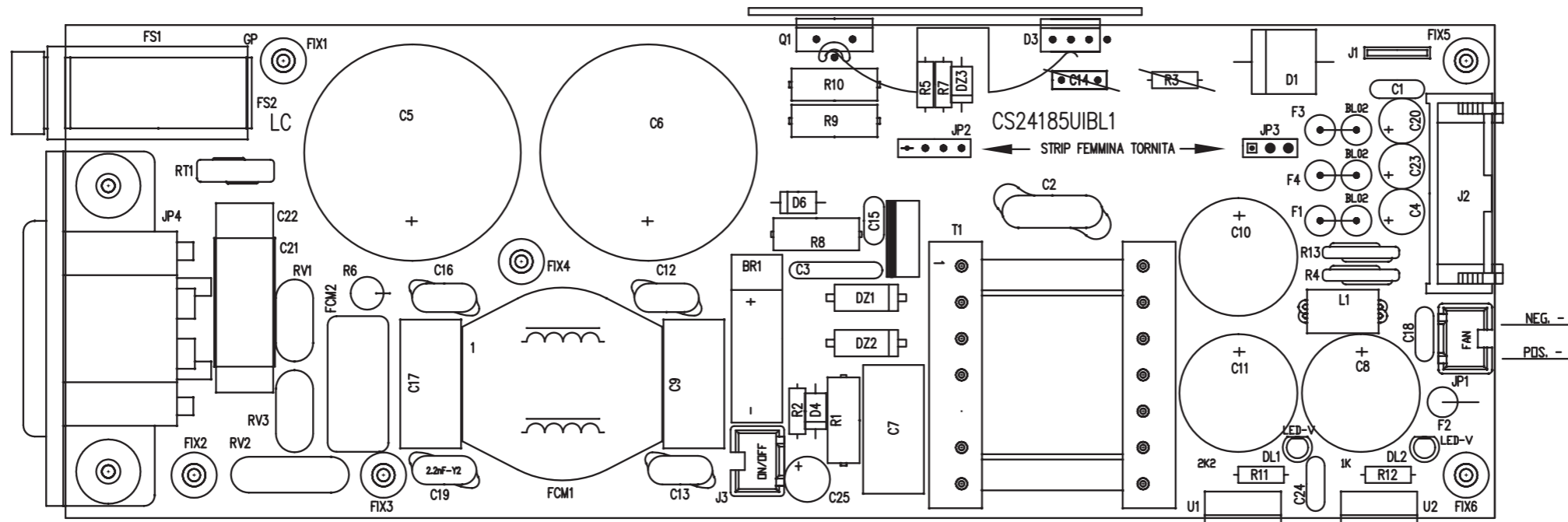
**NOTA 1** Spezzoni strip maschio, la 16 pin per collegare il display

**NOTA 2** Fissare il display con 2 torrette isolate DSTPH6X2.9 montate dalla parte opposta della strip  
Il display dovrebbe essere quello BLU APEX RC162051BNHDWB-V1 oppure SDEC (Mectronic) SSC2P16DLNW-E

**NOTA 3** Montata a mano sotto il CS vedi foto "Modifica02"



|                  |                      |                 |            |                  |                             |
|------------------|----------------------|-----------------|------------|------------------|-----------------------------|
| Nome Progetto:   | BLUES30NV            | Pagina:1        | di 2       | Size: A3         |                             |
| Autore:          | GRIPTECH             | Data:           | 10/01/2005 | Codice Progetto: | FLY100 3842                 |
| Nome PC in Rete: | progetti su "UT_SRV" | Revisione:      | 2.0        | Nome Parte:      | POWER SUPPLY 5-18-24VC 100W |
| File/Cartella:   | PS24185UIBL2         | Autorizzazione: |            | Codice:          | PS24185UIBL2                |



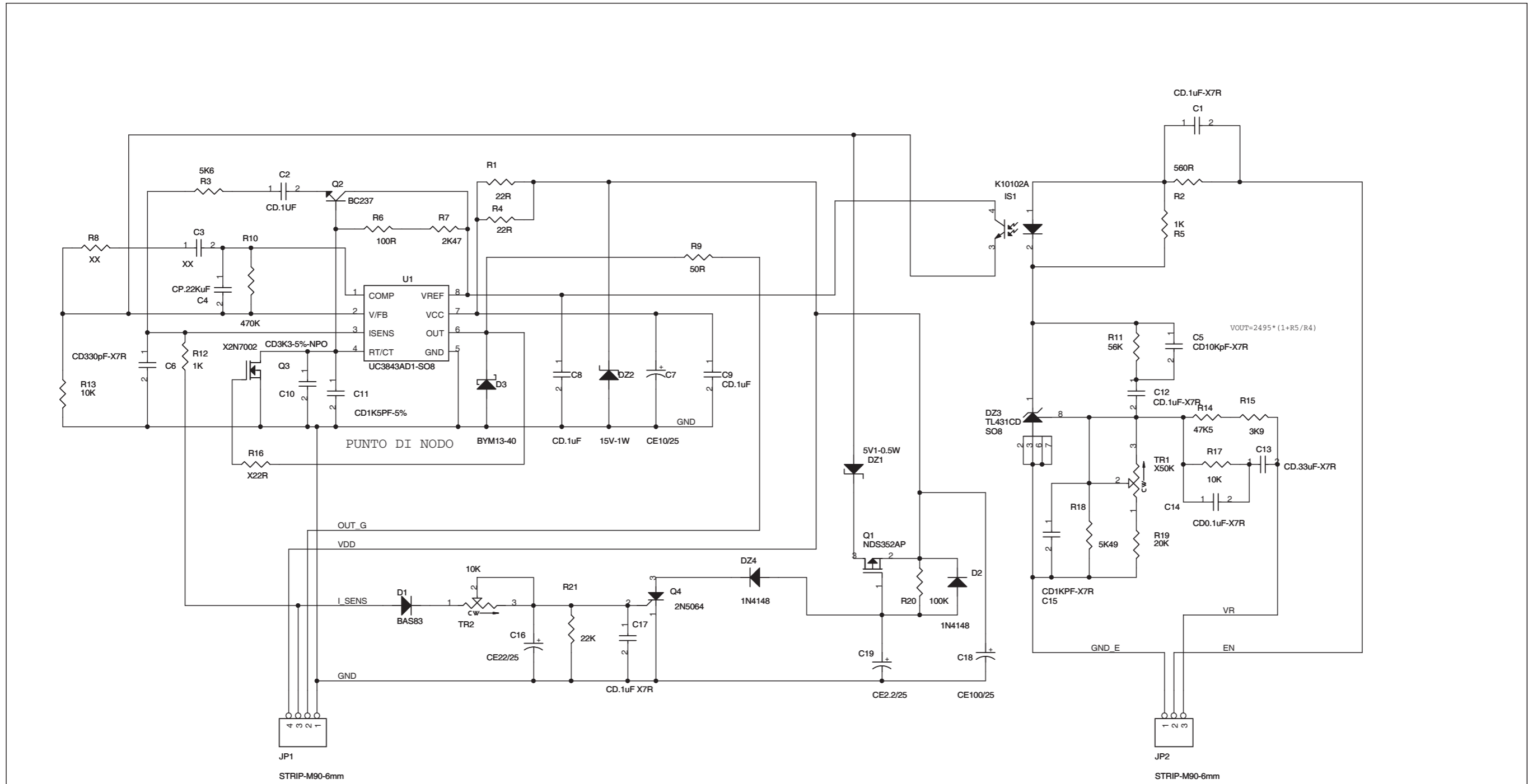
|  |                                 |
|--|---------------------------------|
| NOME PROGETTO: BLUES30NV                                   | NOME PARTE: Power Supply Layout |
| AUTORE: Griptech   | DATA: 16/03/2005                |
| ARCHIVIAZIONE ELETTRONICA: "CARTELLA PROGETTI" SU "UT_SRV" | REVISIONE: 1.0                  |
| MATERIALE: /   | SCALA: 1:1                      |
| TRATTAMENTO: /   | SIZE: A4                        |
| PROFILO: /   | PAGINA: 1 DI 2                  |
| STATO: /   | CODICE DISEGNO: PS24185UIBL2    |

PS24185UIBL2

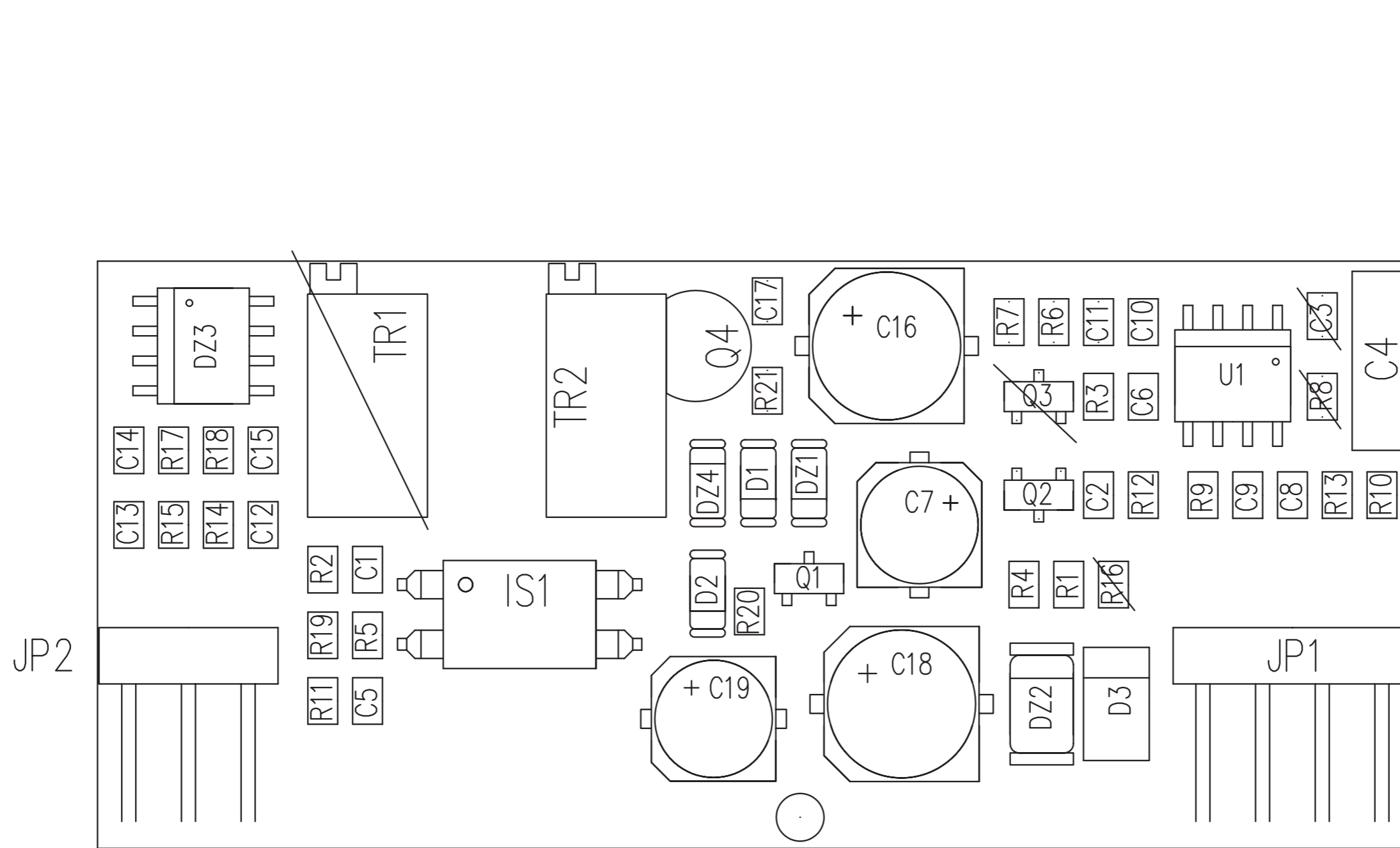
Revised: Wednesday, March 16, 2005

Revision:

| Item | Quantity | Reference      | Part          |
|------|----------|----------------|---------------|
| 1    | 1        | BR1            | KBL06         |
| 2    | 2        | C2, C27        | 0.1uF-X2      |
| 3    | 1        | C3             | CP.1uF/400    |
| 4    | 1        | C4             | CD4K7pF       |
| 5    | 3        | C5, C6, C10    | 2200/35       |
| 6    | 1        | C8             | CD.1uF        |
| 7    | 3        | C9, C21, C22   | 100/400       |
| 8    | 1        | C11            | CD100PF-1KV   |
| 9    | 2        | C13, C23       | CD10KPF-1KV   |
| 10   | 1        | C15            | XCD2K2pF-Y2   |
| 11   | 2        | C16, C17       | CD2K2pF-Y2    |
| 12   | 3        | C24, C25, C26  | 47/35         |
| 13   | 1        | C28            | XCD1KPF-1KV   |
| 14   | 2        | DL6, DL7       | LEDV-3D       |
| 15   | 2        | DZ1, DZ3       | P6KE200       |
| 16   | 1        | DZ4            | 15V-1W        |
| 17   | 3        | D1, D3, D4     | UF4006        |
| 18   | 1        | D2             | P600G         |
| 19   | 1        | D5             | XU1550        |
| 20   | 1        | D6             | BYQ28E        |
| 21   | 1        | D7             | ISL9R460P2    |
| 22   | 1        | FS1            | 3101-0050     |
| 23   | 4        | F1, F2, F3, F6 | BL02          |
| 24   | 1        | F5             | CVO.1A8.10M-E |
| 25   | 1        | JP1            | KP01-1112-11  |
| 26   | 2        | JP2, JP3       | 2.5MSF        |
| 27   | 1        | J1             | FAST-ON       |
| 28   | 1        | J2             | FLAT-16A      |
| 29   | 1        | RT1            | NTC10R        |
| 30   | 1        | RV1            | 10N431K       |
| 31   | 1        | R1             | 1M-1W         |
| 32   | 1        | R2             | 10K-A.F.      |
| 33   | 1        | R3             | 4R7-A.F.      |
| 34   | 2        | R4, R8         | 100K/2W       |
| 35   | 1        | R5             | 100R          |
| 36   | 1        | R7             | X10R/2W       |
| 37   | 2        | R9, R10        | 0.68R/2W      |
| 38   | 1        | R15            | 2K2           |
| 39   | 1        | R16            | 1K            |
| 40   | 1        | T1             | TSWTCH6       |
| 41   | 1        | U1             | LM7805        |
| 42   | 1        | U3             | LM7818        |



|                  |                      |                 |            |                  |                |
|------------------|----------------------|-----------------|------------|------------------|----------------|
| Nome Progetto:   | BLUES30NV            | Pagina:         | 2 di 2     | Size:            | A3             |
| Autore:          | GRIPTECH             | Data:           | 23/02/2005 | Codice Progetto: | CSFLYCNT01     |
| Nome PC in Rete: | progetti su "UT_SRV" | Revisione:      | 1.0        | Nome Parte:      | UC3843 CONTROL |
| File/Cartella:   | PS24185UIBL2         | Autorizzazione: |            | Codice:          | PS24185UIBL2   |



|  |                              |                            |
|--|------------------------------|----------------------------|
|  | NOME PROGETTO: BLUES30NV     | NOME PARTE: UC3843 CONTROL |
| AUTORE: Griptech   | DATA: 16/03/2005             | REVISIONE: 1.0             |
| ARCHIVIAZIONE ELETTRONICA: "CARTELLA PROGETTI" SU "UT_SRV" | SCALE: 1:1                   | SIZE: A4                   |
| MATERIALE: /   | CODICE PROGETTO: CSFLYCNTO1  | PAGINA: 2 DI 2             |
| TRATTAMENTO: /   | CODICE DISEGNO: PS24185UIBL2 | STATO: /                   |
|  | PROFILO: /                   |                            |

PS24185UIBL2

Revised: Wednesday, March 16, 2005  
Revision:

| Item | Quantity | Reference     | Part          |
|------|----------|---------------|---------------|
| 1    | 2        | C1, C12       | CD.1uF-X7R    |
| 2    | 3        | C2, C8, C9    | CD.1uF        |
| 3    | 2        | C3, R8        | XX            |
| 4    | 1        | C4            | CP.22KuF      |
| 5    | 1        | C5            | CD10KpF-X7R   |
| 6    | 1        | C6            | CD330pF-X7R   |
| 7    | 1        | C7            | CE10/25       |
| 8    | 1        | C10           | CD3K3-5%-NPO  |
| 9    | 1        | C11           | CD1K5PF-5%    |
| 10   | 1        | C13           | CD.33uF-X7R   |
| 11   | 1        | C14           | CD0.1uF-X7R   |
| 12   | 1        | C15           | CD1KPF-X7R    |
| 13   | 1        | C16           | CE22/25       |
| 14   | 1        | C17           | CD.1uF X7R    |
| 15   | 1        | C18           | CE100/25      |
| 16   | 1        | C19           | CE2.2/25      |
| 17   | 1        | DZ1           | 5V1-0.5W      |
| 18   | 1        | DZ2           | 15V-1W        |
| 19   | 1        | DZ3           | TL431CD       |
| 20   | 2        | D2, DZ4       | 1N4148        |
| 21   | 1        | D1            | BAS83         |
| 22   | 1        | D3            | BYM13-40      |
| 23   | 1        | IS1           | K10102A       |
| 24   | 2        | JP1, JP2      | STRIP-M90-6mm |
| 25   | 1        | Q1            | NDS352AP      |
| 26   | 1        | Q2            | BC237         |
| 27   | 1        | Q3            | X2N7002       |
| 28   | 1        | Q4            | 2N5064        |
| 29   | 2        | R1, R4        | 22R           |
| 30   | 1        | R2            | 560R          |
| 31   | 1        | R3            | 5K6           |
| 32   | 2        | R5, R12       | 1K            |
| 33   | 1        | R6            | 100R          |
| 34   | 1        | R7            | 2K47          |
| 35   | 1        | R9            | 50R           |
| 36   | 1        | R10           | 470K          |
| 37   | 1        | R11           | 56K           |
| 38   | 3        | TR2, R13, R17 | 10K           |
| 39   | 1        | R14           | 47K5          |
| 40   | 1        | R15           | 3K9           |
| 41   | 1        | R16           | X22R          |
| 42   | 1        | R18           | 5K49          |
| 43   | 1        | R19           | 20K           |
| 44   | 1        | R20           | 100K          |
| 45   | 1        | R21           | 22K           |
| 46   | 1        | TR1           | X50K          |
| 47   | 1        | U1            | UC3843AD1-SO8 |