
TOUCH30s



User Manual

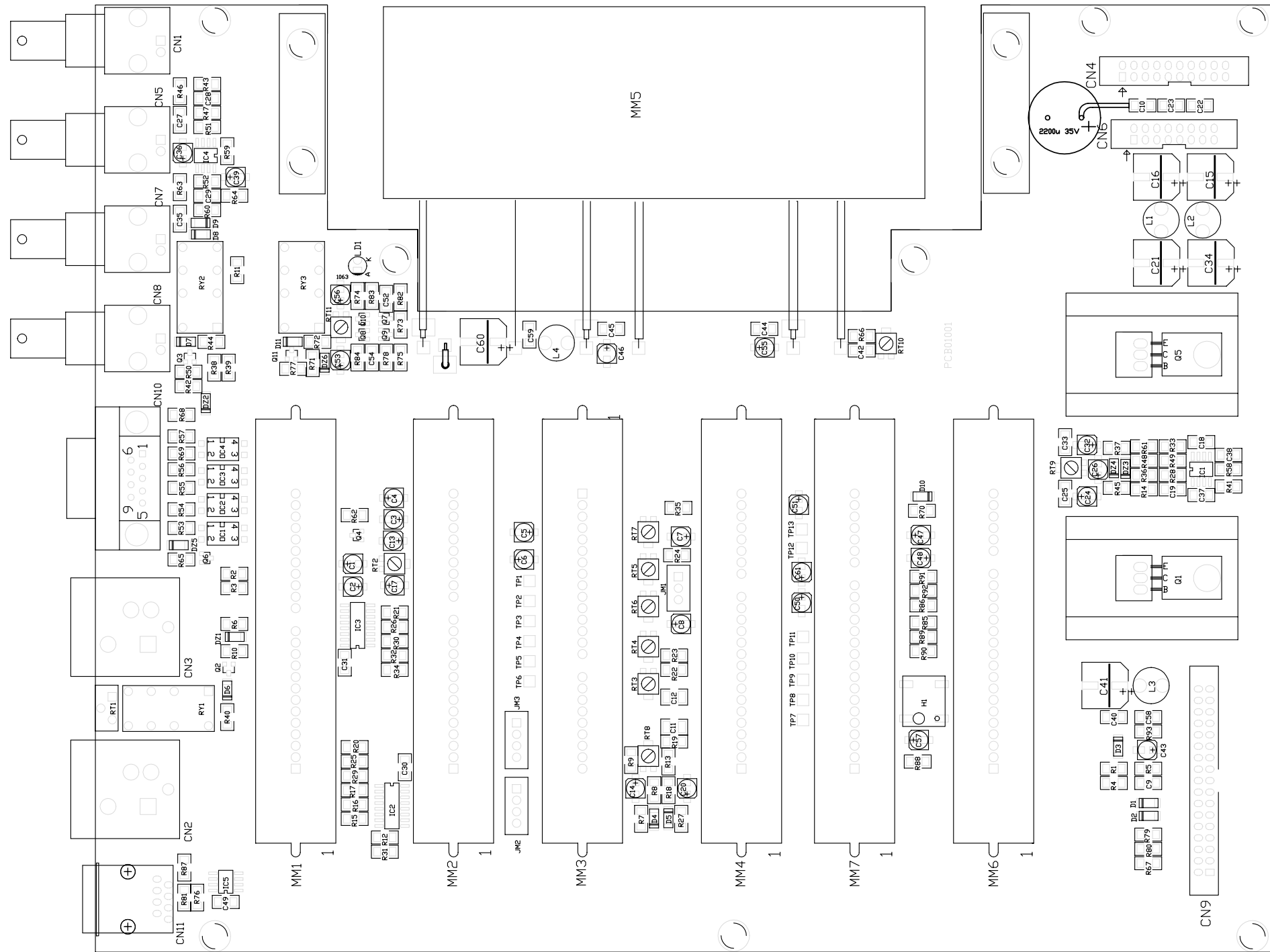
Volume 2: Technical appendix

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

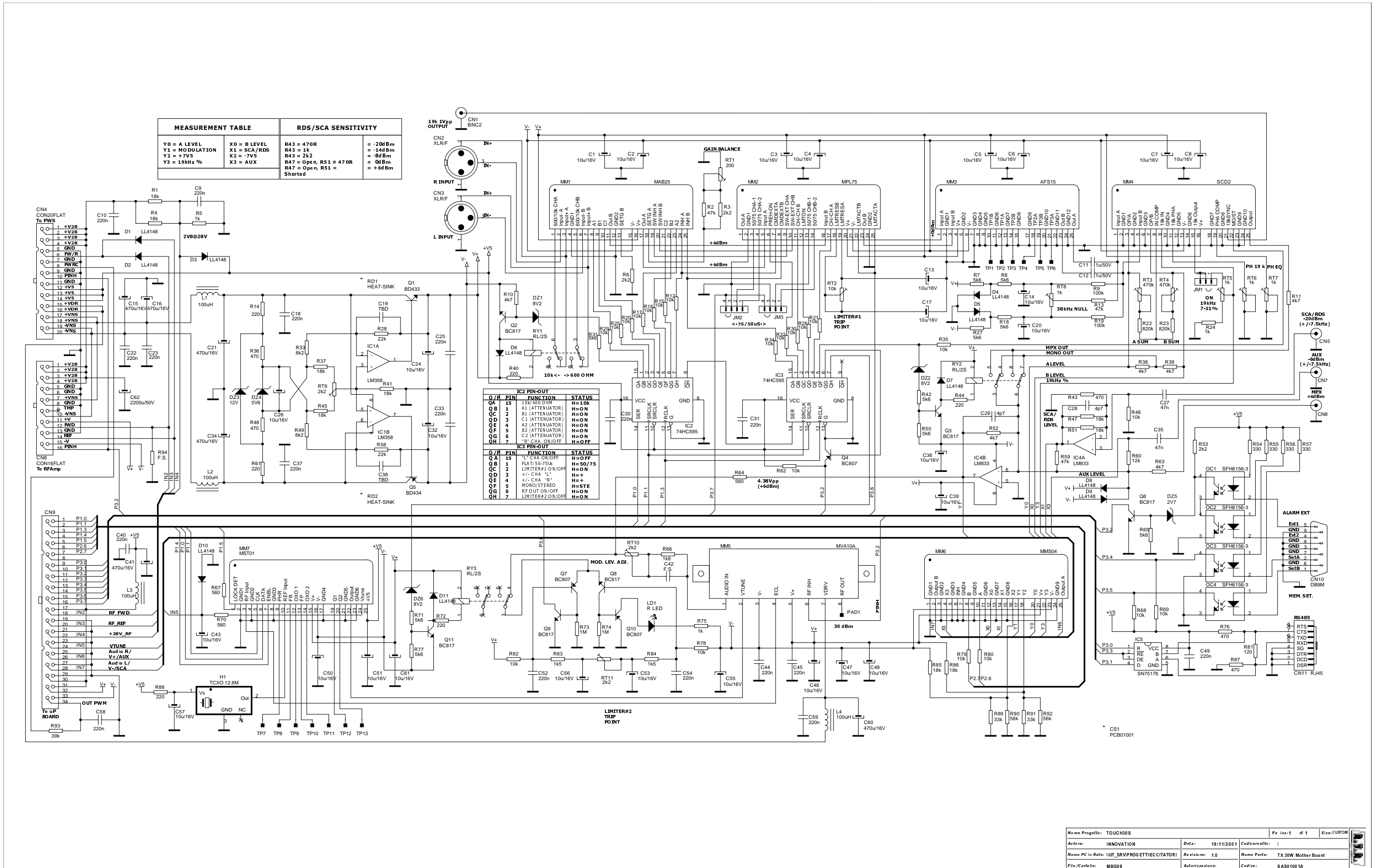
Questa parte del manuale contiene i dettagli tecnici riguardanti la costruzione delle singole schede componenti il TOUCH30S. L'appendice è composta dalle seguenti sezioni:

This part of the manual contains the technical details about the different boards of the TOUCH30S. This appendix is composed of the following sections:

| Description | RVR Code | Vers. Pages | |
|------------------------------------|-----------|-------------|----|
| Mother Board | SAS01001A | 1.0 | 1 |
| VCO and 1W Amplifier | SAS01013A | 1.0 | 5 |
| RF Power Amplifier 30W, L-P Filter | SAS01012A | 1.0 | 7 |
| Directional Coupler | SAS01010A | 1.0 | 9 |
| SMPS Power Supply | SAS01011A | 1.0 | 11 |
| Keyboard | SAS01008A | 1.0 | 14 |
| Logic Board and Display | SAS01008A | 1.0 | 16 |
| RS232 Interface | SAS01015A | 1.0 | 20 |



| | | | | | |
|----------------------------|-------------------------|--|----------------|------------|----------|
| | NOME PROGETTO: TOUCH30S | NOME PARTE: Mother Board MBG08 | | | |
| | AUTORE: INNOVATION | DATA: 17/05/2001 | REVISIONE: 1.0 | SCALA: 1:1 | SIZE: A3 |
| CODICE PROGETTO: SAS01001A | CODICE DISEGNO: <> | ARCHIVIAZIONE ELETTRONICA: \\UT_SRV\PROGETTI\ECCTATORI | | | |
| MATERIALE: <> | TRATTAMENTO: <> | PROFILO: <> | | STATO: <> | |

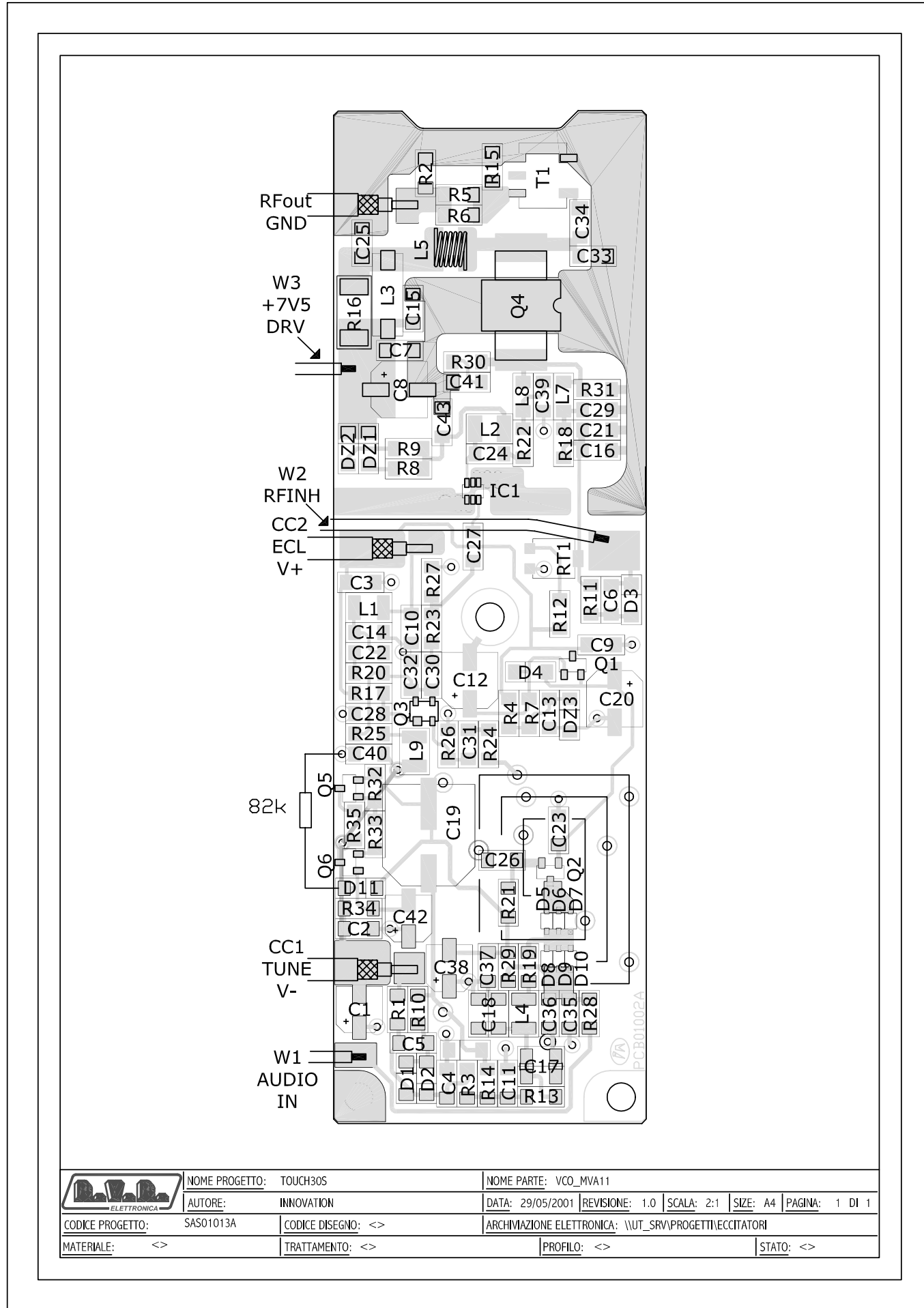


| | | | |
|--|------------------|---------------------------------|--------------|
| Nome Progetto: TOUCH30S | Pa. Ino: 1 | di: 1 | Size: CUSTOM |
| Autore: INNOVATION | Data: 19/11/2001 | Codice: / | |
| Nome PC in Rete: WUT_SRVPROG ETI/EC-CITATORI | Revisione: 1.0 | Nome Parte: TX 30W Mother Board | |
| File /Carta: MBG08 | Autore: / | Codice: SAS0100 1A | |

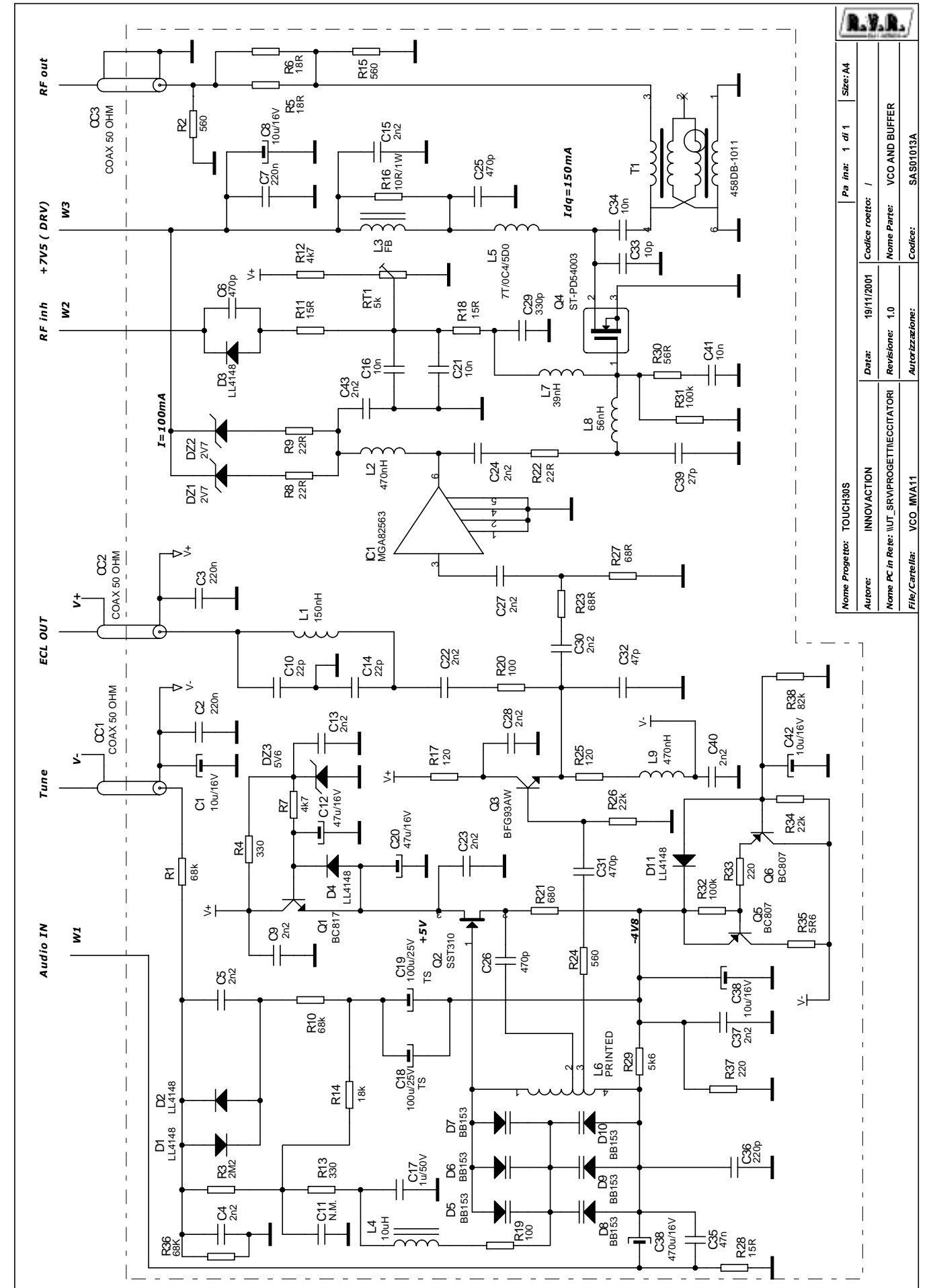
**MOTHER BOARD
SAS01001A Revision: 1.0**

| It | Ref. | Description | Value | Qty | Code | | | | | |
|----|--|------------------------------------|-----------|-----|---------|--|--|--|--|--|
| 1 | C29, C28 | SMD MLCC 1206 50V +/- 0,25 pF NP0 | 4p7 | 2 | MLS009C | | | | | |
| 2 | C27, C35 | SMD MLCC 1206 50V +/-10% X7R | 47n | 2 | MLS040C | | | | | |
| 3 | C9, C10, C18, C22, C23, C25, C30, C31, C33, C37, C40, C44, C45, C49, C52, C54, C58, C59 | SMD MLCC 1206 50V +20/-80% Y5U | 220n | 18 | MLS042C | | | | | |
| 4 | C11, C12 | SMD MLCC 1210 50V 10% X7R | 1u 50V | 2 | | | | | | |
| 5 | C19, C38, C42 | | TBD | 3 | | | | | | |
| 6 | C62 | 105° RADIAL ELECTROLYTIC CAPACITOR | 2200u 25V | 1 | | | | | | |
| 7 | C1, C2, C3, C4, C5, C6, C7, C8, C13, C14, C17, C20, C24, C26, C32, C36, C39, C43, C46, C47, C48, C50, C51, C53, C55, C56, C57, C61 | 105° SMD ELECTROLYTIC CAPACITOR | 10u 16V | 28 | EAD002C | | | | | |
| 8 | C15, C16, C21, C34, C41, C60 | 105° SMD ELECTROLYTIC CAPACITOR | 470u 16V | 6 | EAD007C | | | | | |
| 9 | R81 | SMD CHIP RESISTOR 1206 1/8W 1% | 120 | 1 | RSD026C | | | | | |
| 10 | R14, R40, R44, R61, R72, R88 | SMD CHIP RESISTOR 1206 1/8W 1% | 220 | 6 | RSD029C | | | | | |
| 11 | R54, R55, R56, R57 | SMD CHIP RESISTOR 1206 1/8W 1% | 330 | 4 | RSD031C | | | | | |
| 12 | R36, R43, R48, R76, R87 | SMD CHIP RESISTOR 1206 1/8W 1% | 470 | 5 | RSD033C | | | | | |
| 13 | R64, R67, R70 | SMD CHIP RESISTOR 1206 1/8W 1% | 560 | 3 | RSD034C | | | | | |
| 14 | R9, R19 | SMD CHIP RESISTOR 1206 1/8W 1% | 100k | 2 | RSD061C | | | | | |
| 15 | R12, R15, R16, R17, R20, R21, R25, R26, R29, R30, R32, R34, R35, R46, R62, R68, R69, R79, R80, R83, R84 | SMD CHIP RESISTOR 1206 1/8W 1% | 10k | 21 | RSD049C | | | | | |
| 16 | R60 | SMD CHIP RESISTOR 1206 1/8W 1% | 12k | 1 | RSD050C | | | | | |
| 17 | R1, R4, R28, R37, R41, R45, R47, R51, R58, R85, R86 | SMD CHIP RESISTOR 1206 1/8W 1% | 18k | 11 | RSD052C | | | | | |
| 18 | R5, R24 | SMD CHIP RESISTOR 1206 1/8W 1% | 1k | 2 | RSD037C | | | | | |
| 19 | R66 | SMD CHIP RESISTOR 1206 1/8W 1% | 1k8 | 1 | RSD040C | | | | | |
| 20 | R74, R73 | SMD CHIP RESISTOR 1206 1/8W 1% | 1M | 2 | RSD073C | | | | | |
| 21 | R22, R23 | SMD CHIP RESISTOR 1206 1/8W 1% | 220k | 2 | RSD065C | | | | | |
| 22 | R3, R6, R53, R75, R82, R78 | SMD CHIP RESISTOR 1206 1/8W 1% | 2k2 | 6 | RSD041C | | | | | |
| 23 | R93 | SMD CHIP RESISTOR 1206 1/8W 1% | 39k | 1 | RSD056C | | | | | |
| 24 | R2, R13, R59 | SMD CHIP RESISTOR 1206 1/8W 1% | 47k | 3 | RSD057C | | | | | |
| 25 | R10, R11, R38, R39, R52, R63 | SMD CHIP RESISTOR 1206 1/8W 1% | 4k7 | 6 | RSD045C | | | | | |
| 26 | R7, R8, R18, R27, R31, R42, R50, R65, R71, R77 | SMD CHIP RESISTOR 1206 1/8W 1% | 5k6 | 10 | RSD046C | | | | | |
| 27 | R33, R49 | SMD CHIP RESISTOR 1206 1/8W 1% | 8k2 | 2 | RSD048C | | | | | |
| 28 | R89, R90, R91, R92 | SMD CHIP RESISTOR 1206 1/8W 1% | TBD | 4 | | | | | | |
| 29 | D1, D2, D3, D4, D5, D6, D7, D8, D9, D10, D11 | SMD DIODE | LL4148 | 11 | | | | | | |
| 30 | DZ1, DZ2, DZ6 | SMD ZENER DIODE 0W4 +/-5% SOD80 | 8V2 | 3 | ZMM012C | | | | | |
| 31 | DZ3 | SMD ZENER DIODE 0W4 +/-5% SOD80 | 12V | 1 | ZMM015C | | | | | |
| 32 | DZ4 | SMD ZENER DIODE 0W4 +/-5% SOD80 | 6V2 | 1 | ZMM009C | | | | | |
| 33 | DZ5 | SMD ZENER DIODE 0W4 +/-5% SOD80 | 2V7 | 1 | ZMM002C | | | | | |
| 34 | LD1 | ROUND LED DIODE 3 mm | Red | 1 | | | | | | |
| 35 | IC1 | IC SMD | LM358 | 1 | | | | | | |
| 36 | IC2, IC3 | IC SMD | 74HC595 | 2 | | | | | | |
| 37 | IC4 | IC SMD | LM833 | 1 | | | | | | |
| 38 | IC5 | IC SMD | SN75176 | 1 | | | | | | |
| 39 | OC1, OC2, OC3, OC4 | SMD OPTOCOUPLER | SFH6156-3 | 4 | | | | | | |

| | | | | |
|----------------------------|--|-----------|---|-----------|
| 40 L1, L2, L3, L4 | RADIAL FIXED POWER INDUCTOR | 100uH 1A | 4 | |
| 41 RY1, RY2, RY3 | PBC RELAIS | 12V 2C 1A | 3 | |
| 42 H1 | SMD TCXO | 12.8 MHz | 1 | |
| 43 MM1 | AUDIO INPUT & ATTENUATOR MODULE | MAB25 | 1 | SAS01002A |
| 44 MM2 | PREENFASIS E LIMITER MODULE | MPL75 | 1 | SAS01003A |
| 45 MM3 | AUDIO FILTER MODULE | AFS15 | 1 | SAS01004A |
| 46 MM4 | STEREO CODER MODULE | SCD2 | 1 | SAS01005A |
| 47 MM5 | VCO E BUFFER MODULE | MVA11 | 1 | SAS01013A |
| 48 MM6 | MEASUREMENT MODULE | MMS04 | 1 | SAS01007A |
| 49 MM7 | PLL MODULE | MST01 | 1 | SAS01006A |
| 50 RT2, | SMD TRIMMER RESISTOR +/-20% 0,25W | 10k | 1 | STR006B |
| 51 RT3, RT4 | SMD TRIMMER RESISTOR +/-20% 0,25W | 500k | 2 | STR008B |
| 52 RT5, RT6, RT7, RT8 | SMD TRIMMER RESISTOR +/-20% 0,25W | 1k | 4 | STR003B |
| 53 RT9, RT10, RT11 | SMD TRIMMER RESISTOR +/-20% 0,25W | 2k | 3 | STR004B |
| 54 RT1 | ORIZZONTAL TRIMMER RESISTOR | 200R | 1 | |
| 55 | | | | |
| Q2, Q3, Q6, Q8, Q9, Q11 | TRANSISTOR SOT23 | BC817 | 6 | |
| 56 | | | | |
| Q4, Q7, Q10 | TRANSISTOR SOT23 | BC807 | 3 | |
| 57 Q1 | TRANSISTOR SOT32 | BD433 | 1 | |
| 58 Q5 | TRANSISTOR SOT32 | BD434 | 1 | |
| 59 JM1 | BARSTRIP 3 PIN | | 1 | |
| 60 JM3, JM2 | BARSTRIP 4 PIN | | 2 | |
| 61 JP1, JP2, JP3 | JUMPER | | 3 | |
| 62 CN11 | RJ45 FEMALE CONNECTOR 90° PCB MOUNTING | 8 PIN | 1 | |
| 63 CN1, CN5, CN7, CN8 | BNC FEMALE CONNECTOR 90° PCB MOUNTING | BNC | 4 | |
| 64 CN2, CN3 | XLR FEMALE CONNECTOR 90° PCB MOUNTING | XLR | 2 | |
| 65 CN10 | DB9 MALE CONNECTOR 90° PCB MOUNTING | 9 PIN | 1 | |
| 66 CN4 | IDC SOCKET CONNECTOR, P.2,54 MALE | 20 PIN | 1 | IDC004C |
| 67 CN6 | IDC SOCKET CONNECTOR, P.2,54 MALE | 16 PIN | 1 | IDC003C |
| 68 CN9 | IDC SOCKET CONNECTOR, P.2,54 MALE | 34 PIN | 1 | IDC018C |
| 69 CC1 | PTFE COAX CABLE RG178 B/U 50 OHM | 115 mm | 1 | |
| 70 CC2 | PTFE COAX CABLE RG178 B/U 50 OHM | 320 mm | 1 | |
| 71 CS1 | Mother Board TX "Alien" | PCB01001 | 1 | PCB01001 |



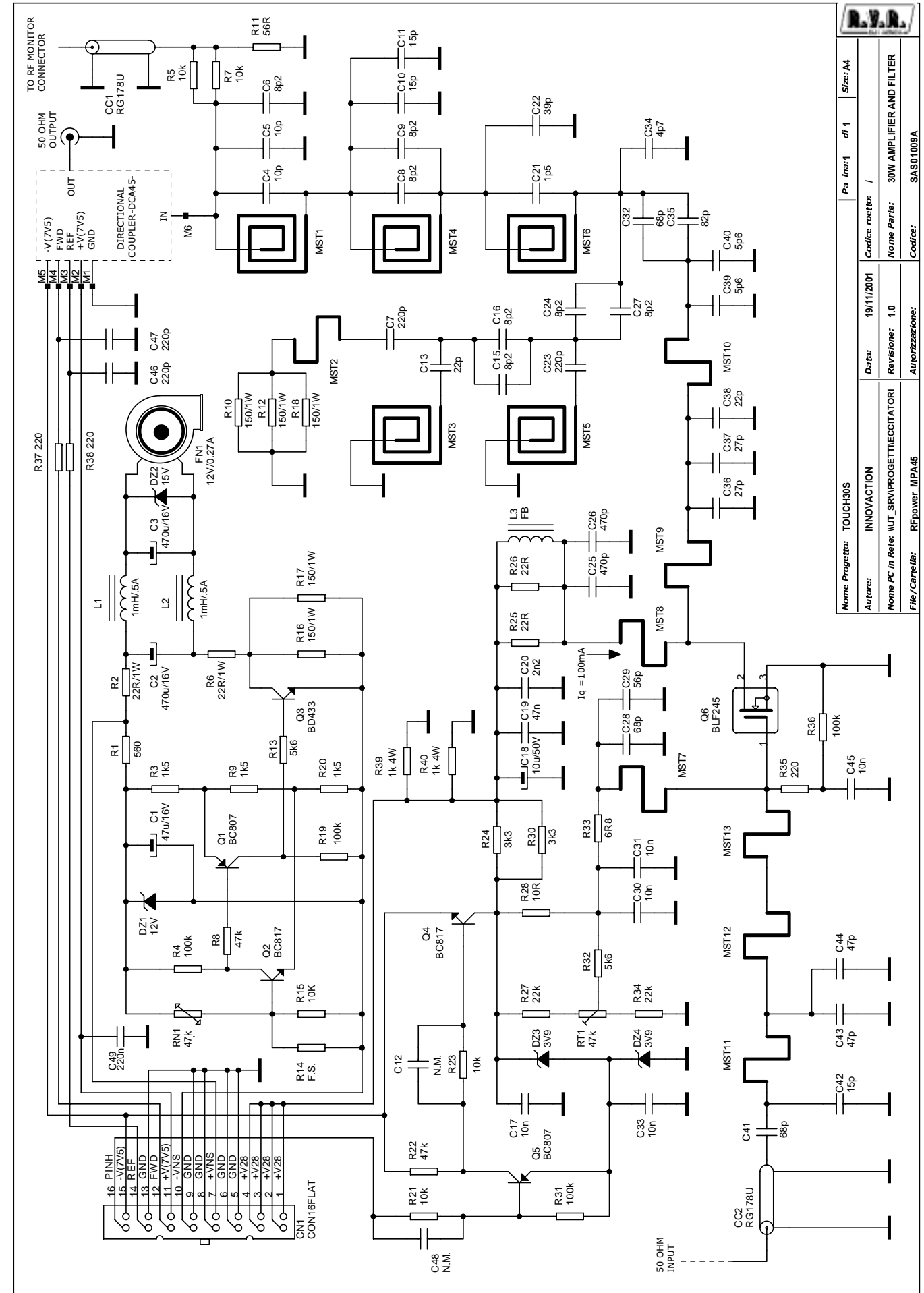
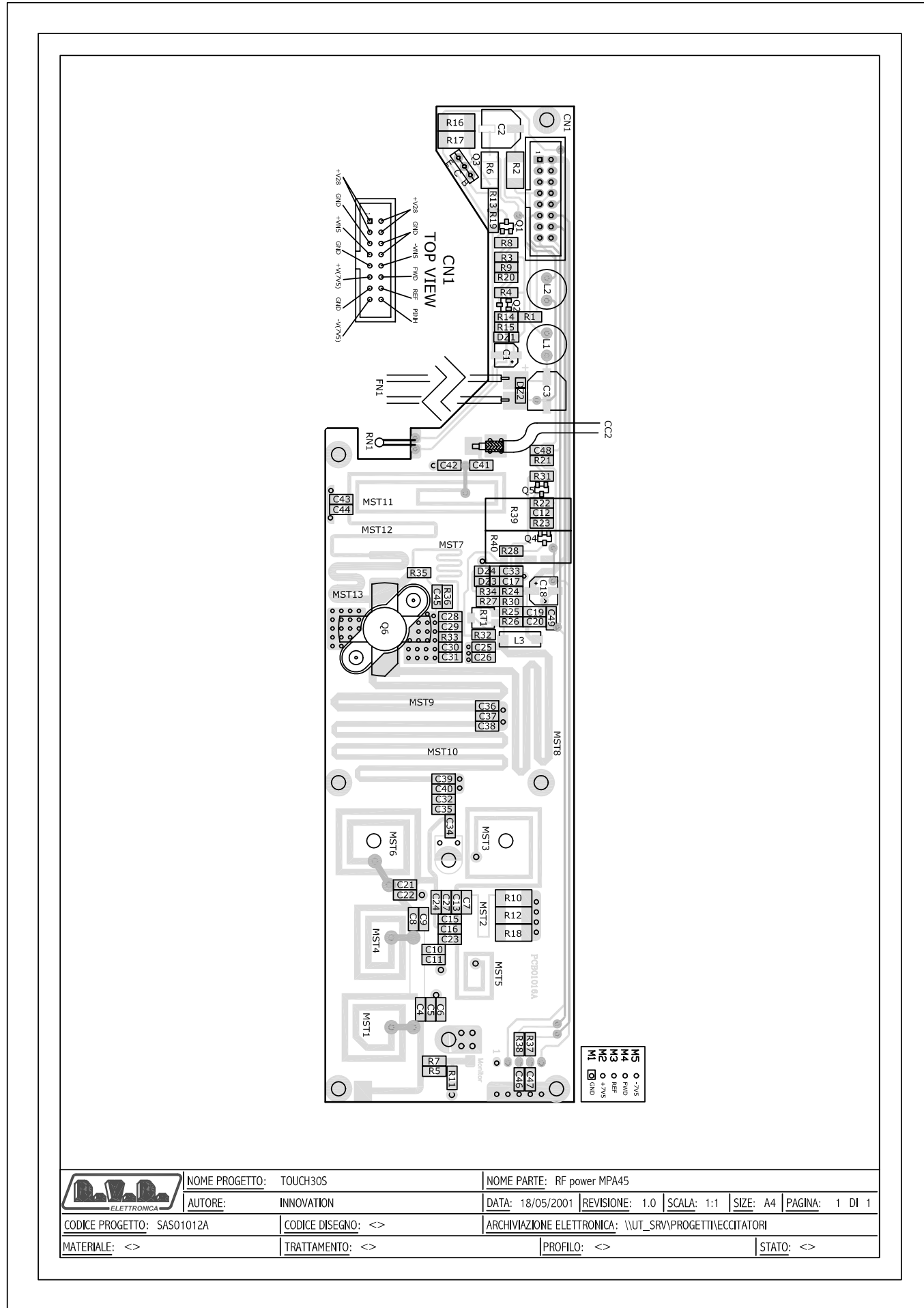
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|----------------------------|--|---|--|--|--|------------------------------------|--|
| | | NOME PROGETTO: TOUCH30S AUTORE: INNOVATION | | NOME PARTE: VCO_MVA11 DATA: 29/05/2001 REVISIONE: 1.0 | | SCALA: 2:1 SIZE: A4 PAGINA: 1 DI 1 | |
| CODICE PROGETTO: SAS01013A | | CODICE DISEGNO: <> | | ARCHIVIAZIONE ELETTRONICA: \\UT_SRA\PROGETTI\ECCITATORI | | | |
| MATERIALE: <> | | TRATTAMENTO: <> | | PROFILO: <> | | STATO: <> | |



| | | | | | | | |
|---|--|-------------------------|--|------------------|--|----------------------------|--|
| | | Nome Progetto: TOUCH30S | | Pa Ina: 1 di 1 | | Size: A4 | |
| Autore: INNOVATION | | Data: 19/11/2001 | | Codice roetto: / | | Nome Parte: VCO AND BUFFER | |
| Nome PC in Rete: \\UT_SRA\PROGETTI\ECCITATORI | | Revisione: 1.0 | | Autorizzazione: | | Codice: SAS01013A | |
| File/Cartella: VCO_MVA11 | | | | | | | |

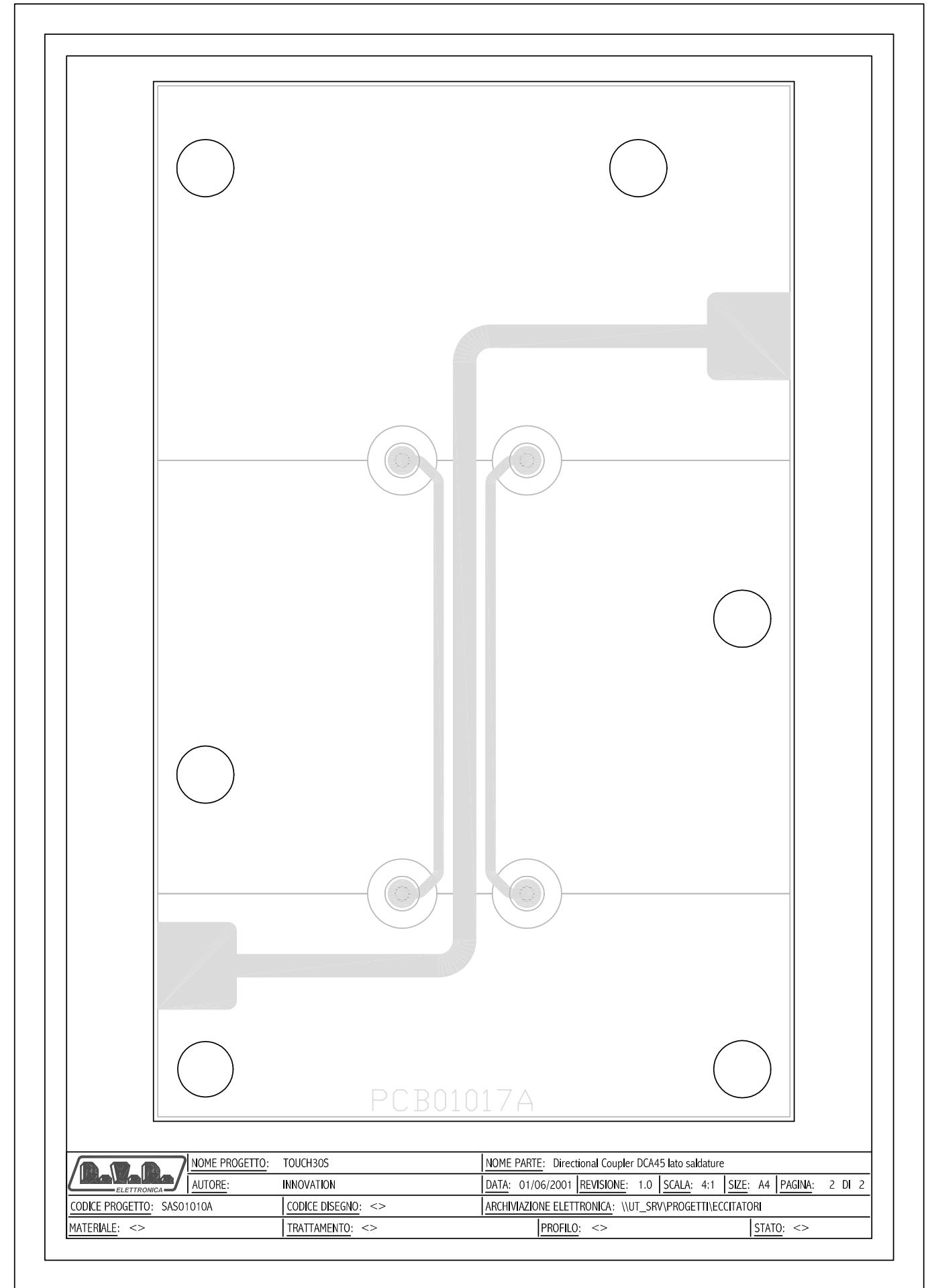
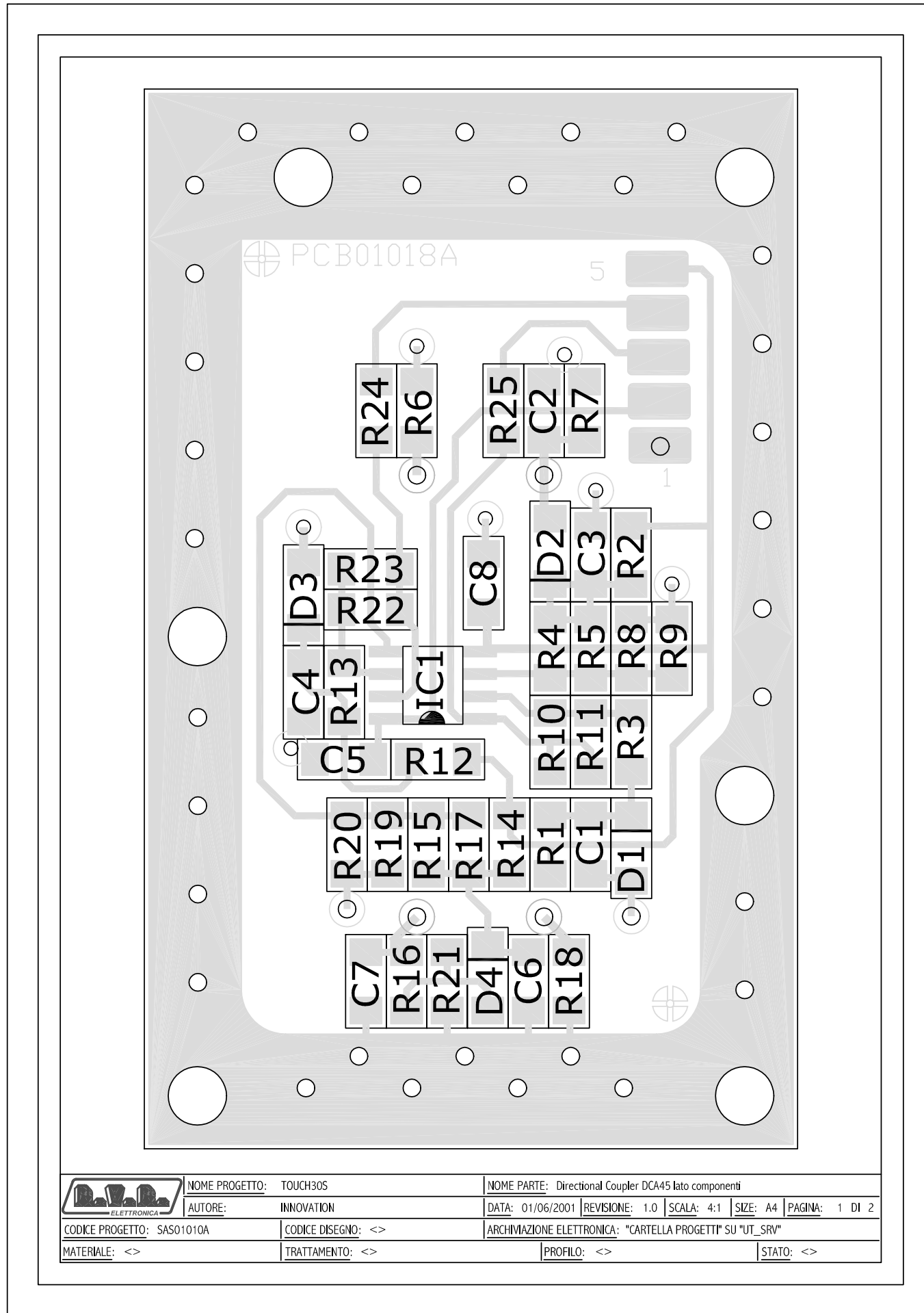
**VCO AND BUFFER
SAS01013A Revision: 1.0**

| It | Ref. | Description | Value | Qty | Code | | | | | | |
|----|---|-------------------------------------|-------------|-----|-------------|--|--|--|--|--|--|
| 1 | R22 | SMD CHIP RESISTOR 1206 1/8W 1% | 10 | 1 | RSD021C | | | | | | |
| 2 | R20, R23, R19 | SMD CHIP RESISTOR 1206 1/8W 1% | 100 | 3 | | | | | | | |
| 3 | R31, R32 | SMD CHIP RESISTOR 1206 1/8W 1% | 100k | 2 | RSD061C | | | | | | |
| 4 | R17, R25 | SMD CHIP RESISTOR 1206 1/8W 1% | 120 | 2 | | | | | | | |
| 5 | R_add1, R11, R18, | SMD CHIP RESISTOR 1206 1/8W 1% | 15R | 3 | RSD015C | | | | | | |
| 6 | R5, R6 | SMD CHIP RESISTOR 1206 1/8W 1% | 18 | 2 | RSD016C | | | | | | |
| 7 | R14 | SMD CHIP RESISTOR 1206 1/8W 1% | 18k | 1 | RSD047C | | | | | | |
| 8 | R9, R8 | SMD CHIP RESISTOR 1206 1/8W 1% | 22 | 2 | RSD017C | | | | | | |
| 9 | R_add3 | SMD CHIP RESISTOR 1206 1/8W 1% | 220 | 1 | | | | | | | |
| 10 | R33 | SMD CHIP RESISTOR 1206 1/8W 1% | 220 | 1 | RSD029C | | | | | | |
| 11 | R34, R26 | SMD CHIP RESISTOR 1206 1/8W 1% | 22k | 2 | RSD053C | | | | | | |
| 12 | R3 | SMD CHIP RESISTOR 1206 1/8W 1% | 2M2 | 1 | RSD071C | | | | | | |
| 13 | R_add2 | SMD CHIP RESISTOR 1206 1/8W 1% | 33 | 1 | | | | | | | |
| 14 | R13, R4 | SMD CHIP RESISTOR 1206 1/8W 1% | 330 | 2 | RSD031C | | | | | | |
| 15 | R29 | SMD CHIP RESISTOR 1206 1/8W 1% | 3K3 | 1 | RSD019C | | | | | | |
| 16 | R7, R12 | SMD CHIP RESISTOR 1206 1/8W 1% | 4k7 | 2 | | | | | | | |
| 17 | R30 | SMD CHIP RESISTOR 1206 1/8W 1% | 56 | 1 | RSD022C | | | | | | |
| 18 | R2, R15, R24 | SMD CHIP RESISTOR 1206 1/8W 1% | 560 | 3 | RSD034C | | | | | | |
| 19 | R35 | SMD CHIP RESISTOR 1206 1/8W 1% | 5R6 | 1 | | | | | | | |
| 20 | R27 | SMD CHIP RESISTOR 1206 1/8W 1% | 68 | 1 | RSD023C | | | | | | |
| 21 | R21 | SMD CHIP RESISTOR 1206 1/8W 1% | 680 | 1 | RSD035C | | | | | | |
| 22 | R_add4 | SMD CHIP RESISTOR 1206 1/8W 1% | 68k | 1 | | | | | | | |
| 23 | R1, R10 | SMD CHIP RESISTOR 1206 1/8W 1% | 68k | 2 | | | | | | | |
| 24 | R16 | SMD CHIP RESISTOR 2512 1W 5% | 10R 1W | 1 | | | | | | | |
| 25 | R_add5 | AXIAL RESISTOR 1/4W 1% | 82k | 1 | | | | | | | |
| 26 | C1, C8, C38 | 105° SMD ELECTROLYTIC CAPACITOR | 10u 16V | 3 | EAD002C | | | | | | |
| 27 | C20, C12, C42 | 105° SMD ELECTROLYTIC CAPACITOR | 47u 16V | 3 | EAD004C | | | | | | |
| 28 | C_add1 | 105° RADIAL ELECTROLYTIC CAPACITOR | 470u 16V | 1 | | | | | | | |
| 29 | C_add2, C19 | AXIAL TANTALUM CAPACITOR | 100u 25V | 2 | | | | | | | |
| 30 | C11, C18 | SMD MLCC 1206 | N.M. | 2 | | | | | | | |
| 31 | C_add3 | SMD MLCC 1206 100V 2% NP0 | 10p | 1 | | | | | | | |
| 32 | C33 | SMD MLCC 1206 100V 5% NP0 | 10p | 1 | MLS013C | | | | | | |
| 33 | C36 | SMD MLCC 1206 100V 5% NP0 | 220p | 1 | MLS024C | | | | | | |
| 34 | C10, C14 | SMD MLCC 1206 100V 5% NP0 | 22p | 2 | MLS0019C | | | | | | |
| 35 | C39 | SMD MLCC 1206 100V 5% NP0 | 27p | 1 | MLS0019C | | | | | | |
| 36 | C29 | SMD MLCC 1206 100V 5% NP0 | 330p | 1 | MLS031C | | | | | | |
| 37 | C6, C25, C26, C31 | SMD MLCC 1206 100V 5% NP0 | 470p | 4 | MLS033C | | | | | | |
| 38 | C32 | SMD MLCC 1206 100V 5% NP0 | 47p | 1 | MLS021C | | | | | | |
| 39 | C35 | SMD MLCC 1206 100V 5% NP0 | TBD | 1 | MLS024C | | | | | | |
| 40 | C2, C3, C4, C7 | SMD MLCC 1206 50V +20/-80% 50V Y5U | 220n | 4 | MLS042C | | | | | | |
| 41 | C16, C21, C34, C41 | SMD MLCC 1206 50V 10% 50V X7R | 10n | 4 | MLS039C | | | | | | |
| 42 | C_add4 (R28) | SMD MLCC 1206 50V 10% 50V X7R | 47n | 1 | | | | | | | |
| 43 | C5, C9, C13, C15, C22, C23, C24, C27, C28, C30, C37, C40, C43 | SMD MLCC 1206 50V 20% X7R | 2n2 | 13 | MLS037C | | | | | | |
| 44 | C18 | SMD MLCC 1210 50V 10% X7R | 1u 50V | 1 | | | | | | | |
| 45 | D1, D2, D3, D4, D11 | SMD DIODE | LL4148 | 5 | | | | | | | |
| 46 | D5, D6, D7, D8, D9, D10 | SMD VARICAP DIODE | BB153 | 6 | | | | | | | |
| 47 | DZ2, DZ1 | SMD ZENER DIODE 0W4 +/-5% | 2V7 | 2 | ZMM002C | | | | | | |
| 48 | DZ3 | SMD ZENER DIODE 0W4 +/-5% | 5V6 | 1 | ZMM008C | | | | | | |
| 49 | IC1 | SMD AMPLIFIER | MGA-82563 | 1 | | | | | | | |
| 50 | L1 | SMD FERRITE INDUCTOR 1210 | 150nH | 1 | IFM002C | | | | | | |
| 51 | L2, L9 | SMD FERRITE INDUCTOR 1210 | 470nH | 2 | IFM004C | | | | | | |
| 52 | L3 | SMD BEAD | FB | 1 | | | | | | | |
| 53 | L4 | SMD FERRITE INDUCTOR 1210 | 10uH | 1 | IFM008C | | | | | | |
| 54 | L5 | AIR WOUND INDUCTOR | 3T5/0C5/4D0 | 1 | | | | | | | |
| 55 | L6 | CHEMICAL ETCHED INDUCTOR | | 1 | FCS01001-01 | | | | | | |
| 56 | L7 | SMD FERRITE INDUCTOR 1210 | 33nH | 1 | | | | | | | |
| 57 | L8 | SMD FERRITE INDUCTOR 1210 | 56nH | 1 | | | | | | | |
| 58 | Q1 | TRANSISTOR SOT23 | BC817 | 1 | | | | | | | |
| 59 | Q2 | TRANSISTOR SOT23 | PMBFJ310 | 1 | | | | | | | |
| 60 | Q3 | TRANSISTOR SOT143 | BFG93AW | 1 | | | | | | | |
| 61 | Q4 | LD MOS RF TRANSISTOR | ST-PD54003 | 1 | | | | | | | |
| 62 | Q5, Q6 | TRANSISTOR SOT23 | BC807 | 2 | | | | | | | |
| 63 | RT1 | SMD TRIMMER RESISTOR +/-20% 0,25W | 5k | 1 | STR004B | | | | | | |
| 64 | T1 | SMD RF TRANSFORMER | 458DB-1011 | 1 | | | | | | | |
| 65 | W1, W2, W3 | SILICONE INSULATED WIRE | mmq 0,35 | 2 | | | | | | | |
| 66 | W4 | SILICONE INSULATED WIRE | mmq 0,35 | 1 | | | | | | | |
| 67 | CC1, CC2, CC3 | PTFE COAX CABLE RG178 B/U 50 OHM | 50R | 3 | | | | | | | |
| 68 | CS1 | MAV11- VCO AND BUFFER CIRCUIT BOARD | | 1 | PCB01002-A | | | | | | |

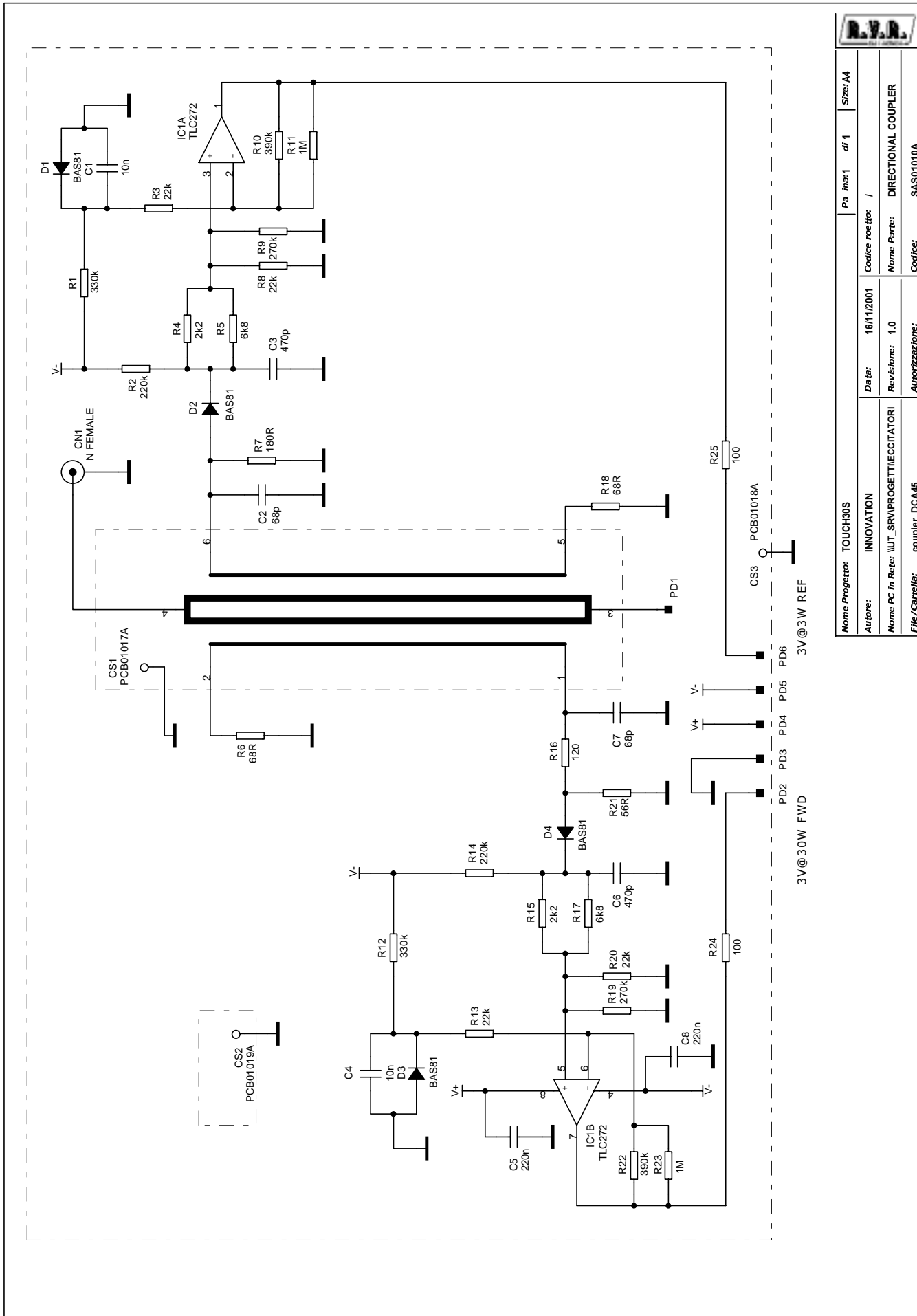


**MPA45 RF 30W AMPLIFIER & LP FILTER
SAS01012A Revision: 1,0**

| It | Ref. | Description | Value | Qty | Code | | | | | |
|----|--------------------------------------|------------------------------------|----------|-----|---------|-------------|-----------------------------------|--------------|---|----------|
| 1 | R39, R40 | METAL OXIDE AXIAL RESISTOR 4W | 1k | 2 | APR001C | 40 C19 | SMD MLCC 1206 50V 10% X7R | 47n | 1 | MLS040C |
| 2 | R1 | SMD CHIP RESISTOR 1206 1/8W 1% | 560 | 1 | RSD034C | 41 DZ1 | SMD ZENER DIODE 0W4 +/-5% SOD80 | 12V | 1 | ZMM015C |
| 3 | R11 | SMD CHIP RESISTOR 1206 1/8W 1% | 56R | 1 | RSD022C | 42 DZ2 | SMD ZENER DIODE 0W4 +/-5% SOD80 | 15V | 1 | ZMM016C |
| 4 | R14 | SMD CHIP RESISTOR 1206 1/8W 1% | F.S. | 1 | | 43 DZ4, DZ3 | SMD ZENER DIODE 0W4 +/-5% SOD80 | 3V9 | 2 | ZMM005C |
| 5 | R26, R25 | SMD CHIP RESISTOR 1206 1/8W 1% | 22R | 2 | RSD017C | 44 Q1, Q5 | TRANSISTOR SOT23 | BC807 | 2 | |
| 6 | R27, R34 | SMD CHIP RESISTOR 1206 1/8W 1% | 22k | 2 | RSD053C | 45 Q3 | TRANSISTOR SOT32 | BD433 | 1 | |
| 7 | R28 | SMD CHIP RESISTOR 1206 1/8W 1% | 10R | 1 | RSD013C | 46 Q4, Q2 | TRANSISTOR SOT23 | BC817 | 2 | |
| 8 | R3, R9, R20 | SMD CHIP RESISTOR 1206 1/8W 1% | 1k5 | 3 | RSD039C | 47 Q6 | RF MOSFET | BLF245 | 1 | |
| 9 | R30, R24 | SMD CHIP RESISTOR 1206 1/8W 1% | 3k3 | 2 | RSD043C | 48 L1, L2 | RADIAL FIXED POWER INDUCTOR | 1000uH 310mA | 2 | |
| 10 | R32, R13 | SMD CHIP RESISTOR 1206 1/8W 1% | 5k6 | 2 | RSD046C | 49 L3 | SMD FERRITE BEAD | FB | 1 | |
| 11 | R33 | SMD CHIP RESISTOR 1206 1/8W 1% | 6R8 | 1 | RSD011C | 50 RN1 | NTC RESISTOR | 47k | 1 | |
| 12 | R35, R37, R38 | SMD CHIP RESISTOR 1206 1/8W 1% | 220 | 3 | RSD029C | 51 RT1 | SMD TRIMMER RESISTOR +/-20% 0,25W | 50k | 1 | STR007B |
| 13 | R4, R19, R31, R36 | SMD CHIP RESISTOR 1206 1/8W 1% | 100k | 4 | RSD061C | 52 FN1 | FAN | 12V/0.20A | 1 | |
| 14 | | | 10k | 5 | RSD049C | 53 CC1 | PTFE COAX CABLE RG178 B/U 50 OHM | 410 mm | 1 | |
| | R5, R7, R21, R23, R15 | SMD CHIP RESISTOR 1206 1/8W 1% | | | | 54 CN1 | IDC SOCKET CONNECTOR, P.2,54 MALE | 16 PIN | 1 | IDC003C |
| 15 | R8, R22 | SMD CHIP RESISTOR 1206 1/8W 1% | 47k | 2 | RSD057C | 55 CS1 | CIRCUIT BOARD | | 1 | PCB01016 |
| 16 | R10, R12, R18, R16, R17 | SMD CHIP RESISTOR 2512 1W 5% | 150 | 5 | RDP009C | | | | | |
| 17 | R2, R6 | SMD CHIP RESISTOR 2512 1W 5% | 22R | 2 | RDP006C | | | | | |
| 18 | C18 | 105° SMD ELECTROLYTIC CAPACITOR | 10u 50V | 1 | EAD003C | | | | | |
| 19 | C2, C3 | 105° SMD ELECTROLYTIC CAPACITOR | 470u 16V | 2 | EAD007C | | | | | |
| 20 | C1 | 105° SMD ELECTROLYTIC CAPACITOR | 47u 16V | 1 | EAD004C | | | | | |
| 21 | C12, C48 | SMD MLCC 1206 | N.M. | 2 | | | | | | |
| 22 | C21 | SMD MLCC 1206 100V +/- 0,25 pF NP0 | 1p5 | 1 | MLS003C | | | | | |
| 23 | C34 | SMD MLCC 1206 100V +/- 0,25 pF NP0 | 4p7 | 1 | MLS009C | | | | | |
| 24 | C39, C40 | SMD MLCC 1206 100V +/- 0,25 pF NP0 | 5p6 | 2 | MLS010C | | | | | |
| 25 | C8, C9, C15, C16, C24, C27, C6 | SMD MLCC 1206 100V +/- 0,25 pF NP0 | 8p2 | 7 | MLS012C | | | | | |
| 26 | C4, C5 | SMD MLCC 1206 100V 2% NP0 | 10p | 2 | MLS013C | | | | | |
| 27 | C11, C10, C42 | SMD MLCC 1206 100V 2% NP0 | 15p | 3 | MLS015C | | | | | |
| 28 | C38, C13 | SMD MLCC 1206 100V 2% NP0 | 22p | 2 | MLS017C | | | | | |
| 29 | C36, C37 | SMD MLCC 1206 100V 2% NP0 | 27p | 2 | MLS018C | | | | | |
| 30 | C22 | SMD MLCC 1206 100V 2% NP0 | 39p | 1 | MLS020C | | | | | |
| 31 | C44, C43 | SMD MLCC 1206 100V 2% NP0 | 47p | 2 | MLS021C | | | | | |
| 32 | C29 | SMD MLCC 1206 100V 2% NP0 | 56p | 1 | MLS022C | | | | | |
| 33 | C28, C32, C41 | SMD MLCC 1206 100V 2% NP0 | 68p | 3 | MLS023C | | | | | |
| 34 | C35 | SMD MLCC 1206 100V 2% NP0 | 82p | 1 | MLS024C | | | | | |
| 35 | C7, C23, C46, C47 | SMD MLCC 1206 100V 5% NP0 | 220p | 4 | MLS029C | | | | | |
| 36 | C25, C26 | SMD MLCC 1206 100V 5% NP0 | 470p | 2 | MLS033C | | | | | |
| 37 | C49 | SMD MLCC 1206 50V +20/-80% Y5V | 220n | 1 | MLS042C | | | | | |
| 38 | C17, C30, C31, C33, C45 | SMD MLCC 1206 50V 10% X7R | 10n | 5 | MLS039C | | | | | |
| 39 | C20 | SMD MLCC 1206 100V 10% X7R | 2n2 | 1 | MLS037C | | | | | |

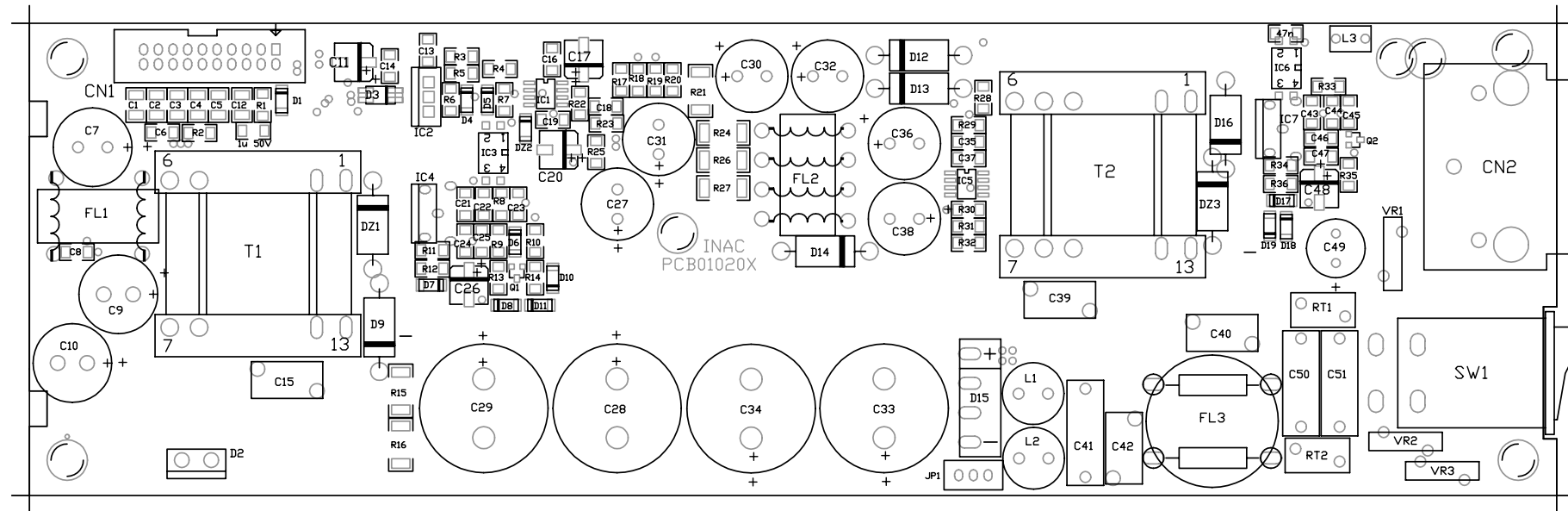


DIRECTIONAL COUPLER SAS01010A Revision: 1,0

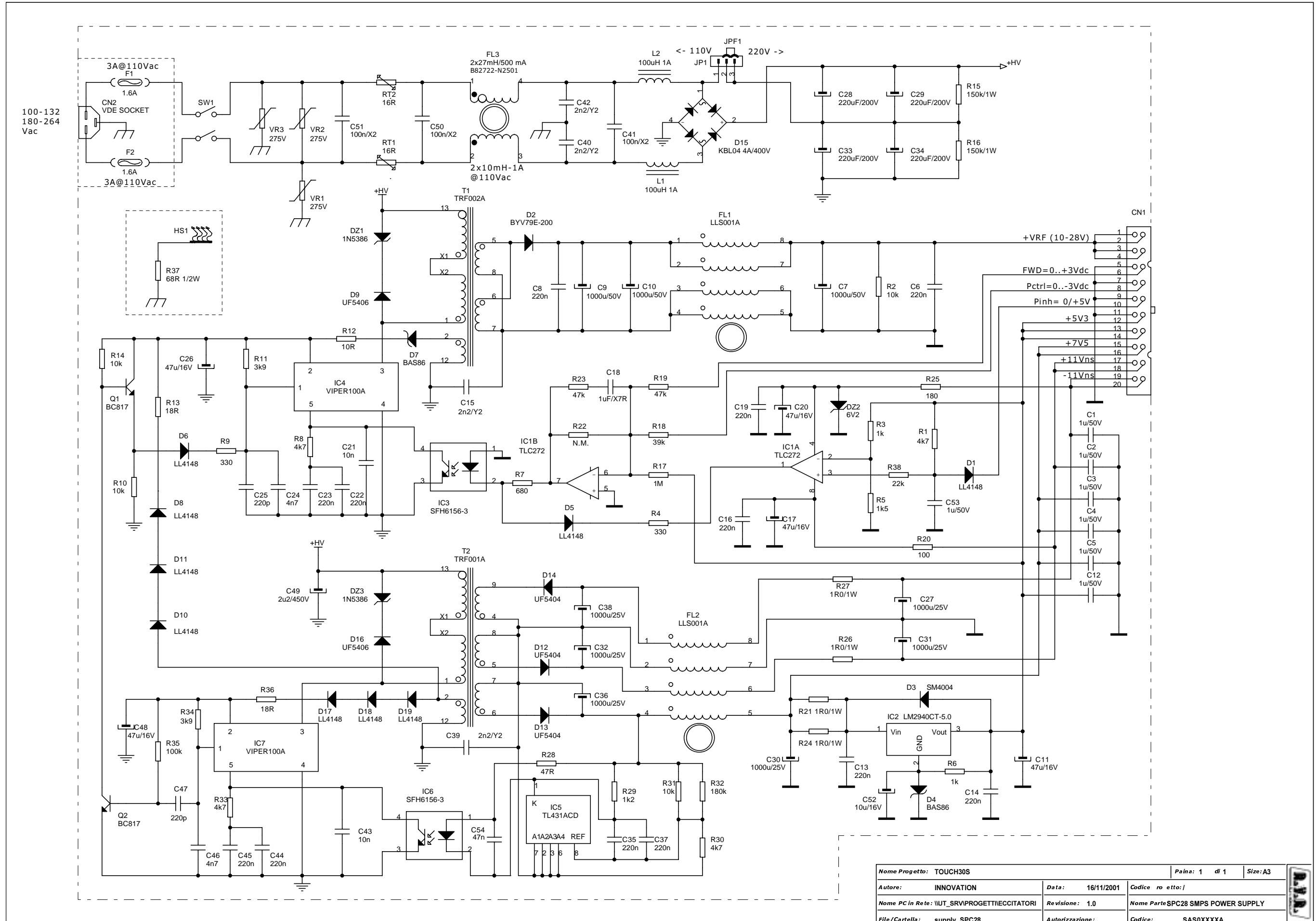


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| Nome Progetto: | TOUCH30S | Pa. Iniz: | df 1 | Size: | A4 |
| Autore: | INNOVATION | Codice progetto: | / | Nome Parte: | DIRECTIONAL COUPLER |
| Nome PC in Rete: | \\UT_SRV\PROGETTECCITATORI | Data: | 16/11/2001 | Revisione: | 1.0 |
| File/Carrello: | coupler_DCA45 | Autore/Revisione: | | Codice: | SAS01010A |

| It | Ref. | Description | Value | Qty | Code |
|----|----------------|--|--------|-----|---------|
| 1 | R1,R2,R12, R14 | SMD CHIP RESISTOR 1206 1/8W 1% | 220k | 4 | RSD065C |
| 2 | R3,R8,R13, R20 | SMD CHIP RESISTOR 1206 1/8W 1% | 22k | 4 | RSD053C |
| 3 | R15,R4 | SMD CHIP RESISTOR 1206 1/8W 1% | 2k2 | 2 | RSD041C |
| 4 | R17,R5 | SMD CHIP RESISTOR 1206 1/8W 1% | 6k8 | 2 | RSD047C |
| 5 | R18,R6 | SMD CHIP RESISTOR 1206 1/8W 1% | 68R | 2 | RSD023C |
| 6 | R7 | SMD CHIP RESISTOR 1206 1/8W 1% | 180R | 1 | RSD028C |
| 7 | R19,R9 | SMD CHIP RESISTOR 1206 1/8W 1% | 270k | 2 | RSD066C |
| 8 | R22,R10 | SMD CHIP RESISTOR 1206 1/8W 1% | 390k | 2 | RSD068C |
| 9 | R23,R11 | SMD CHIP RESISTOR 1206 1/8W 1% | 1M | 2 | RSD073C |
| 10 | R16 | SMD CHIP RESISTOR 1206 1/8W 1% | 120 | 1 | RSD026C |
| 11 | R21 | SMD CHIP RESISTOR 1206 1/8W 1% | 56R | 1 | RSD022C |
| 12 | R25,R24 | SMD CHIP RESISTOR 1206 1/8W 1% | 100 | 2 | RSD025C |
| 13 | C4,C1 | SMD MLCC 1206 50V 10% 50V X7R | 10n | 2 | MLS039C |
| 14 | C7,C2 | SMD MLCC 1206 100V 2% NP0 | 68p | 2 | MLS023C |
| 15 | C3,C6 | SMD MLCC 1206 100V 5% NP0 | 470p | 2 | MLS033C |
| 16 | C8,C5 | SMD MLCC 1206 50V +20/-80% 50V Y5U | 220n | 2 | MLS042C |
| 17 | D1,D2,D3,D4 | SMD SCHOTTKY DIODE SOD80 | BAS81 | 4 | |
| 18 | IC1 | IC SMD | TLC272 | 1 | |
| 19 | | FLAT CABLE 5 WAYS | | 1 | |
| 20 | | DIRECTIONAL COUPLER AMPLIFIER | | | PCB0101 |
| 21 | CS1 | (LINE) | | 1 | 7A |
| 21 | CS2 | REF & FWD DIRECTIONAL COUPLER | | 1 | 8A |
| 22 | CS3 | DIRECTIONAL COUPLER AMPLIFIER (SPACER PLANE) | | 1 | 9A |



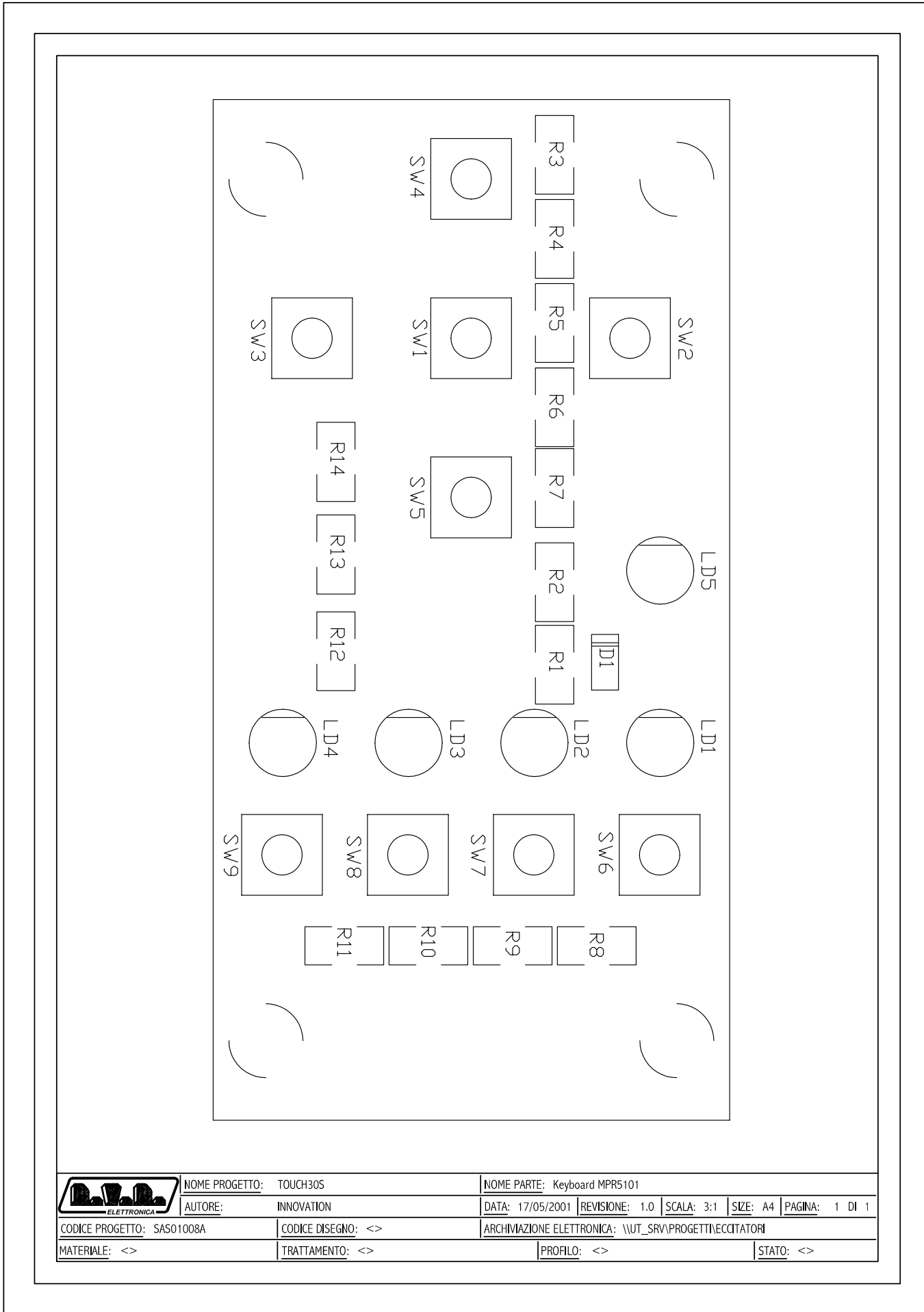
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| | AUTORE: INNOVATION | DATA: 16/07/2001 REVISIONE: 1.0 SCALA: 1:1 SIZE: A3 PAGINA: 1 DI 1 |
| CODICE PROGETTO: SAS01011A | CODICE DISEGNO: <> | ARCHIVIAZIONE ELETTRONICA: \\UT_SRV\PROGETTI\ECCELTATORI |
| MATERIALE: <> | TRATTAMENTO: <> | PROFILO: <> STATO: <> |



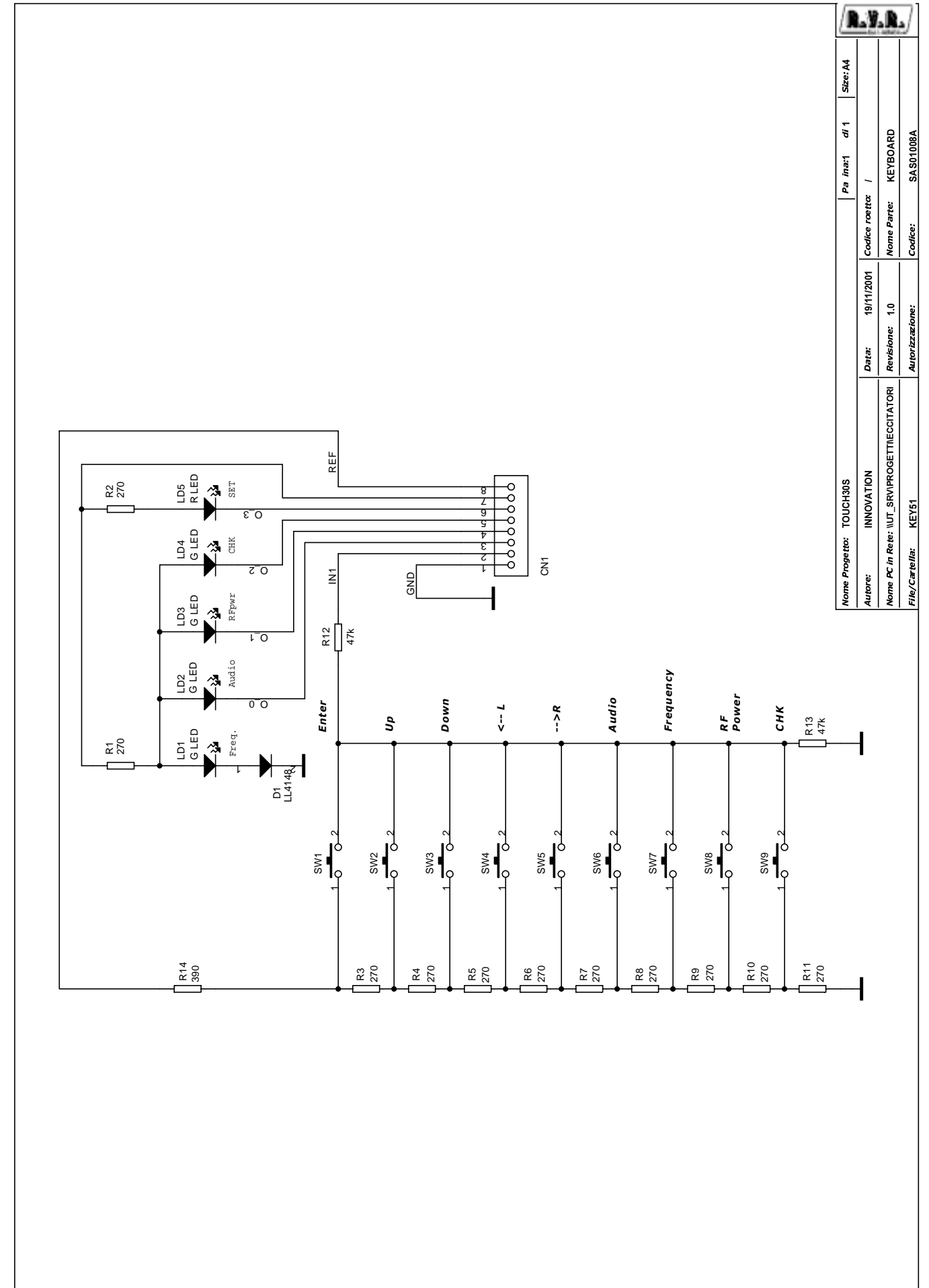
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| Nome Progetto: TOUCH30S | | Pagina: 1 di 1 | | Size: A3 |
| Autore: INNOVATION | Data: 16/11/2001 | Codice no etto: / | | |
| Nome PC in Rete: \UT_SRV\PROGETTI\ECCITATORI | | Revisione: 1.0 | Nome Parte: SPC28 SMPS POWER SUPPLY | |
| File/Cartella: supply_SPC28 | Autorizzazione: | Codice: SAS0XXXXA | | |

**SPC28 - POWER SUPPLY
PCB01020A REVISION: A**

| It | Ref. | DESCRIPTION | Value | Qty | Code | | | | |
|----|---|--------------------------------------|------------|-----|------|---|--|---------------|------------|
| 1 | R20 | SMD CHIP RESISTOR 1206 1/8W 1% | 100 | 1 | | 38 D7, D4 | SCHOTTKY BARRIER DIODE | BAS86 | 2 |
| 2 | R35 | SMD CHIP RESISTOR 1206 1/8W 1% | 100k | 1 | | 39 D3 | SMD SI-RECTIFIER DIODE | SM4004 | 1 |
| 3 | R2, R10, R14, R31 | SMD CHIP RESISTOR 1206 1/8W 1% | 10k | 4 | | 40 D1, D6, D8, D5, D10, D11, D17, D18, D19 | SMD DIODE | LL4148 | 9 |
| 4 | R12 | SMD CHIP RESISTOR 1206 1/8W 1% | 10R | 1 | | 41 DZ2 | SMD ZENER DIODE 0W4 +/-5% SOD80 | 6V2 | 1 |
| 5 | R25 | SMD CHIP RESISTOR 1206 1/8W 1% | 180 | 1 | | 42 D12, D13, D14 | ULTRAFAST SWITCHING SI-RECTIFIER DIODE 400V 3A | UF5404 | 3 |
| 6 | R32 | SMD CHIP RESISTOR 1206 1/8W 1% | 180k | 1 | | 43 D9, D16 | ULTRAFAST SWITCHING SI-RECTIFIER DIODE 600V 3A | UF5406 | 2 |
| 7 | R36, R13 | SMD CHIP RESISTOR 1206 1/8W 1% | 18R | 2 | | 44 DZ1, DZ3 | ZENER DIODE 180V 5W | 1N5386 | 2 |
| 8 | R3, R6 | SMD CHIP RESISTOR 1206 1/8W 1% | 1k | 2 | | 45 FL1 | TOROID R20/7 N30 | | 1 LLS001A |
| 9 | R29 | SMD CHIP RESISTOR 1206 1/8W 1% | 1k2 | 1 | | 46 FL2 | TOROID R20/7 N30 | | 1 LLS001A |
| 10 | R5 | SMD CHIP RESISTOR 1206 1/8W 1% | 1k5 | 1 | | 47 T1 | SMPS 60W TRANSFORMER | TRF002A | 1 |
| 11 | R17 | SMD CHIP RESISTOR 1206 1/8W 1% | 1M | 2 | | 48 T2 | SMPS 30W TRANSFORMER | TRF001A | 1 |
| 12 | R4, R9 | SMD CHIP RESISTOR 1206 1/8W 1% | 330 | 2 | | 49 IC1 | IC SMD | TLC272 | 1 |
| 13 | R18 | SMD CHIP RESISTOR 1206 1/8W 1% | 39k | 1 | | 50 IC2 | VOLTAGE REGULATOR | LM2940CT-5.0 | 1 |
| 14 | R11, R34 | SMD CHIP RESISTOR 1206 1/8W 1% | 3k9 | 2 | | 51 IC4, IC7 | IC VIPER100A | VIPER100A | 2 |
| 15 | R19, R23 | SMD CHIP RESISTOR 1206 1/8W 1% | 47k | 2 | | 52 IC5 | IC SMD | TL1431ACD | 1 |
| 16 | R28 | SMD CHIP RESISTOR 1206 1/8W 1% | 47R | 1 | | 53 IC6, IC3 | SMD OPTOCOUPLER | SFH6156A-3 | 2 |
| 17 | R1, R8, R30, R33 | SMD CHIP RESISTOR 1206 1/8W 1% | 4k7 | 4 | | 54 L1, L2 | RADIAL FIXED POWER INDUCTOR | 100uH 1A | 2 |
| 18 | R7 | SMD CHIP RESISTOR 1206 1/8W 1% | 680 | 1 | | 55 Q2, Q1 | TRANSISTOR SOT23 | BC807 | 2 |
| 19 | R22 | SMD CHIP RESISTOR 1206 1/8W 1% | N.M. | 2 | | 56 JP1 | MALE BAR STRIP | 3 pin | 1 |
| 20 | R16, R15 | SMD CHIP RESISTOR 2512 1W 5% | 150k 1W | 2 | | 57 JPF1 | JUMPER | jumper | 1 |
| 21 | R21, R24, R26, R27 | SMD CHIP RESISTOR 2512 1W 5% | 1R 1W | 4 | | 58 CN1 | IDC SOCKET CONNECTOR, P.2,54 MALE | 20 PIN | 1 |
| 22 | Radd1 | AXIAL RESISTOR 1/8W 5% | 22k | 1 | | 59 CS2 | INSULATOR CIRCUIT | PCB01048 | 1 |
| 23 | Radd2 | AXIAL RESISTOR 1/2W 5% | 68R | 1 | | 60 CS1 | POWER SUPPLY CIRCUIT | PCB01020 | 1 PCB01020 |
| 24 | C27, C30, C31, C32, C36, C38 | 105° ELECTROLYTIC RADIAL CAPACITOR | 1000uF 25V | 6 | | 61 CN2 | VDE 90° PCB MOUNTING POWER ENTRY FUSEHOLDER | | 1 |
| 25 | C49 | 105° ELECTROLYTIC RADIAL CAPACITOR | 2u2 450V | 1 | | 62 F1, F2 | FUSE 5x20 1,6A | 1,6A | 2 |
| 26 | C7, C9, C10 | 105° ELECTROLYTIC RADIAL CAPACITOR | 1000uF 50V | 3 | | 63 FS3 | INSULATION COVER FOR POWER ENTRY | | |
| 27 | Cadd3 | 105° ELECTROLYTIC RADIAL CAPACITOR | 10u 16V | 1 | | 64 VR1, VR2, VR3 | VARISTOR 275V SIOV | 275V | 3 |
| 28 | C28, C29, C33, C34 | 105° ELECTROLYTIC SNAP-IN CAPACITOR | 220uF 200V | 4 | | 65 C41, C50, C51 | X2 FILM CAPACITOR 275V | 100n X2 | 3 |
| 29 | C11, C17, C20, C26, C48 | 105° SMD ELECTROLYTIC CAPACITOR | 47uF 16V | 5 | | 66 C15, C39, C40, C42 | Y1 CERAMIC CAPACITOR | 2n2 Y1 | 4 |
| 30 | C47, C25 | SMD MLCC 1206 100V 5% NP0 | 220p | 2 | | 67 RT1, RT2 | INRUSH CURRENT SOPPRESSION NTC | 16R | 2 |
| 31 | C6, C8, C13, C14, C16, C19, C22, C23, C35, C37, C44, C45 | SMD MLCC 1206 50V +/-20/-80% 50V Y5U | 220n | 12 | | 68 SW1 | 90° PCB MOUNTING BIPOLAR ROCKER SWITCH | | 1 |
| 32 | C21, C43 | SMD MLCC 1206 50V 10% 50V X7R | 10n | 2 | | 69 FL3 | CURRENT COMPENSATED RING CORE DOUBLE CHOKES | 2x27mH 500 mA | 1 |
| 33 | C24, C46 | SMD MLCC 1206 50V 10% 50V X7R | 4n7 | 2 | | | | | |
| 34 | Cadd2 | SMD MLCC 1206 50V 10% 50V X7R | 47n | 1 | | | | | |
| 35 | Cadd1, C1, C2, C3, C4, C5, C12, C18 | SMD MLCC 1210 50V 10% 50V X7R | 1uF 50V | 8 | | | | | |
| 36 | D15 | DIODE BRIDGE KBL04 | 4A 400V | 1 | | | | | |
| 37 | D2 | RECTIFIER, ULTRAFST, RUGGED DIODE | BYV79E-200 | 1 | | | | | |



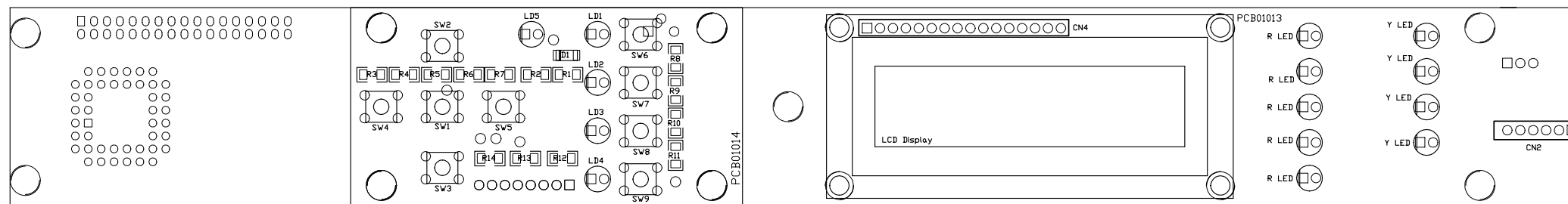
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| | NOME PROGETTO: TOUCH30S | NOME PARTE: Keyboard MPR5101 |
| AUTORE: INNOVATION | DATA: 17/05/2001 | REVISIONE: 1.0 |
| CODICE PROGETTO: SAS01008A | CODICE DISEGNO: <> | ARCHIVIAZIONE ELETTRONICA: \\UT_SRV\PROGETTI\ECCITATORI |
| MATERIALE: <> | TRATTAMENTO: <> | PROFILO: <> |
| | | STATO: <> |



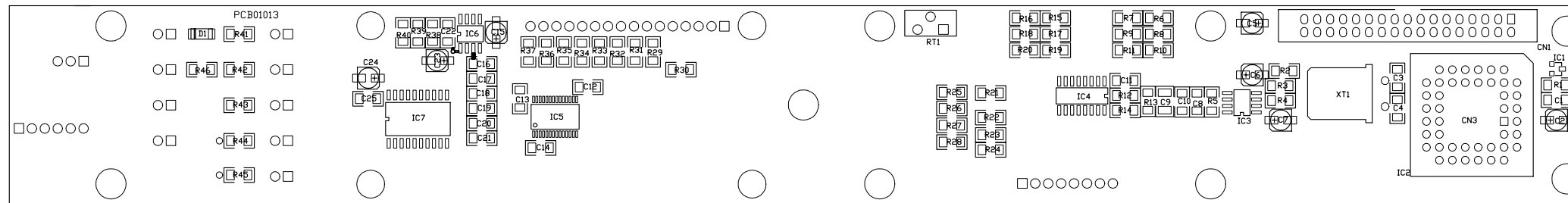
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| Nome Progetto: TOUCH30S | | Pa Ina:1 | di 1 | Size: A4 |
| Autore: INNOVATION | | Data: 19/11/2001 | Codice reo: / | |
| Nome PC In Rete: \\UT_SRV\PROGETTI\ECCITATORI | | Revisione: 1.0 | Nome Parte: KEYBOARD | |
| File/Cartella: KEY51 | | Autore: / | Codice: SAS01008A | |

KEYBOARD
SAS01008A REVISION: 1,0

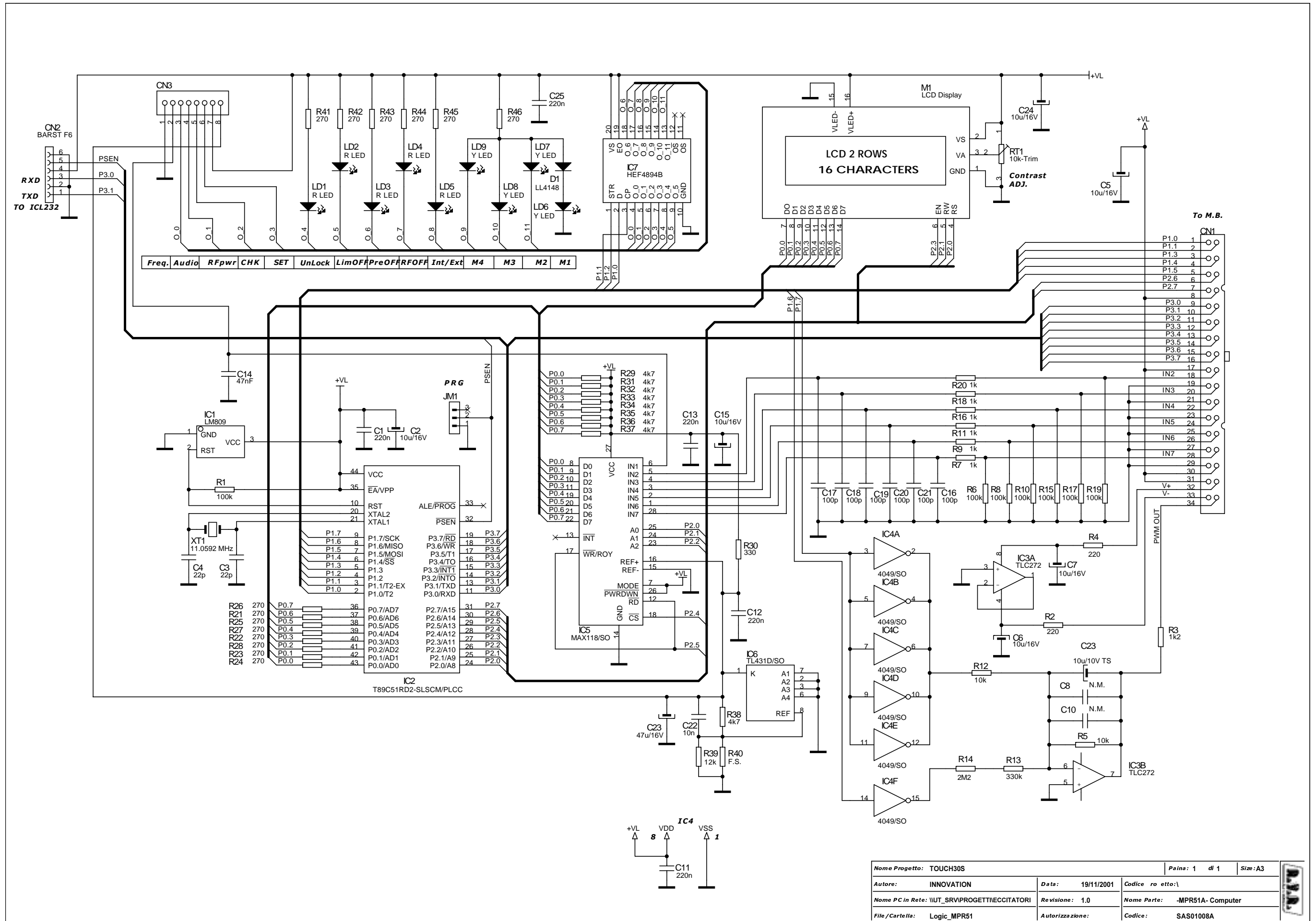
| It | Ref. | Description | Value | Qty | Code |
|----|---|--------------------------------|--------|-----|----------|
| 1 | R1, R2, R3, R4, R5, R6, R7, R8, R9, R10, R11 | SMD CHIP RESISTOR 1206 1/8W 1% | 270 | 11 | RSD030C |
| 2 | R13,R12 | SMD CHIP RESISTOR 1206 1/8W 1% | 47k | 2 | RSD057C |
| 3 | R14 | SMD CHIP RESISTOR 1206 1/8W 1% | 390R | 1 | RSD039C |
| 4 | D1 | SMD DIODE | LL4148 | 1 | |
| 5 | LD1,LD2,L D3,LD4 | ROUND LED DIODE 3 mm | GREEN | 4 | |
| 6 | LD5 | ROUND LED DIODE 3 mm | RED | 1 | |
| 7 | SW1, SW2, SW3, SW4, SW5, SW6, SW7, SW8, SW9 | TACT SWITCH | B 6818 | 9 | |
| 8 | CN1 | MALE BAR STRIP | 8 PIN | 1 | |
| 9 | CS1 | KEYBOARD CIRCUIT | | 1 | PCB01014 |



| | | |
|----------------------------|-------------------------|--|
| | NOME PROGETTO: TOUCH30S | NOME PARTE: Logic Board MPR51- vista frontale |
| | AUTORE: INNOVATION | DATA: 17/05/2001 REVISIONE: 1.0 SCALA: 1:1 SIZE: A3 PAGINA: 1 DI 2 |
| CODICE PROGETTO: SAS01008A | CODICE DISEGNO: <> | ARCHIVIAZIONE ELETTRONICA: \\UT_SRV\PROGETTI\ECCITATORI |
| MATERIALE: <> | TRATTAMENTO: <> | PROFILO: <> STATO: <> |



| | | | | | |
|----------------------------|-------------------------|--|----------------|------------|----------|
| | NOME PROGETTO: TOUCH30S | NOME PARTE: Logic Board MPR51- vista posteriore | | | |
| | AUTORE: INNOVATION | DATA: 17/05/2001 | REVISIONE: 1.0 | SCALA: 1:1 | SIZE: A3 |
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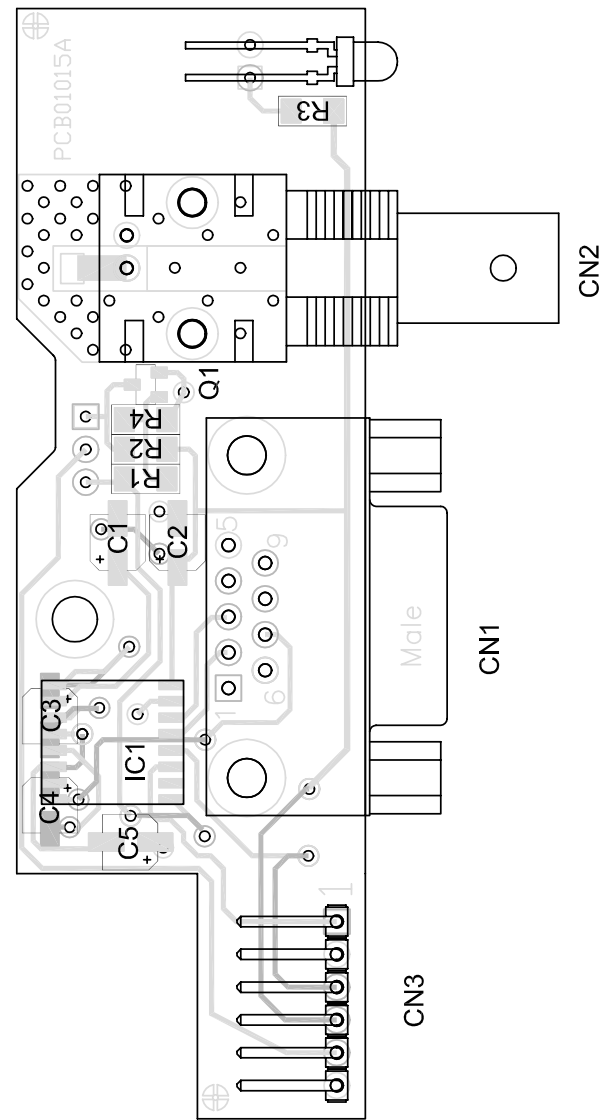


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| Nome Progetto: TOUCH30S | | Pagina: 1 di 1 | | Size: A3 | |
| Autore: INNOVATION | Data: 19/11/2001 | Codice progetto: \ | | | |
| Nome PC in Rete: WUT_SRVPROGETTIECCITATORI | Revisione: 1.0 | Nome Parte: -MPR51A- Computer | | | |
| File/Cartella: Logic_MPR51 | Autorizzazione: | Codice: SAS01008A | | | |

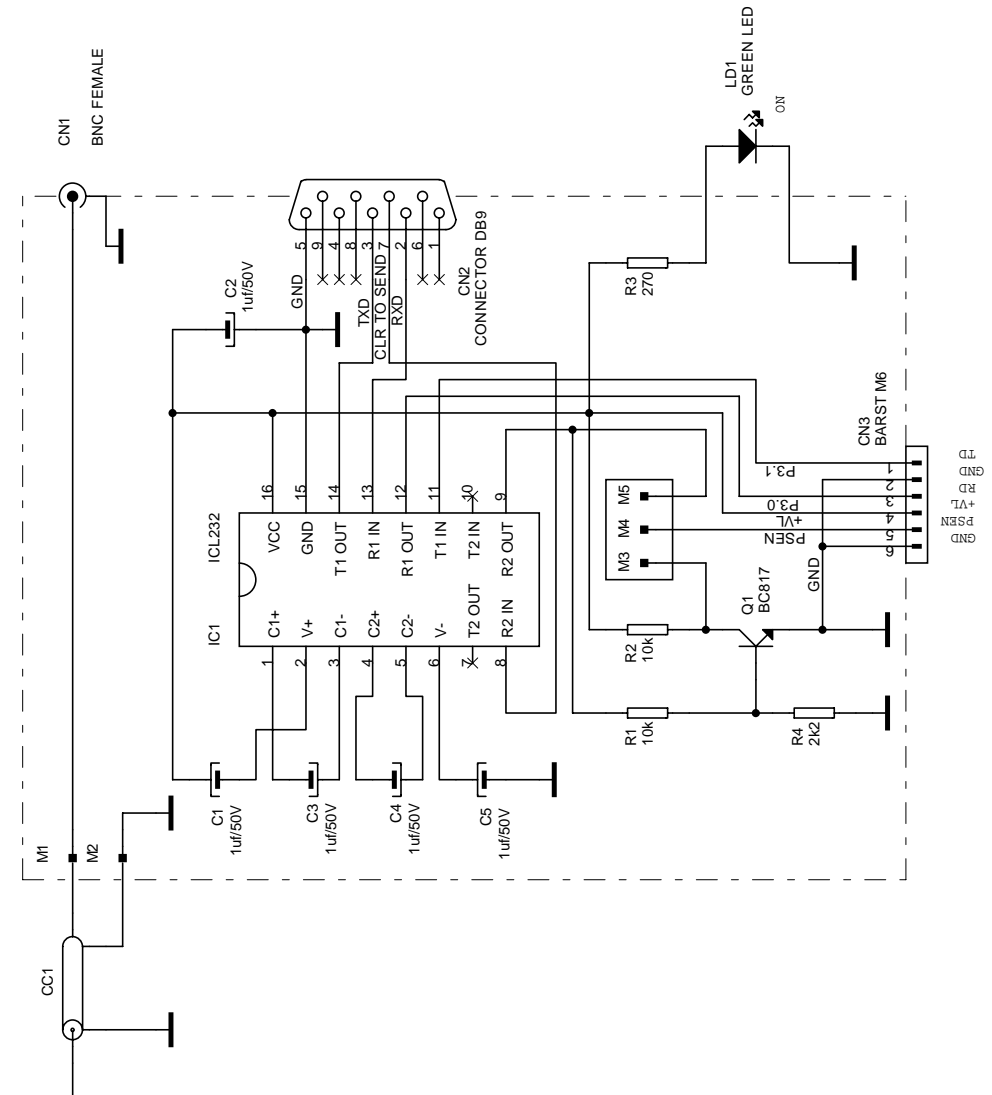
**µPROCESSOR CONTROLLER
SAS01008A Revision: 1,0**

| It | Ref. | Description | Value | Qty | Code |
|----|---|--------------------------------------|---------------------|-----|---------|
| 1 | R2,R4 | SMD CHIP RESISTOR 1206 1/8W 1% | 220 | 2 | RSD029C |
| 2 | R21,R22, R23,R24, R25,R26, R27,R28, R41,R42, R43,R44, R45,R46 | SMD CHIP RESISTOR 1206 1/8W 1% | 270 | 14 | RSD030C |
| 3 | R30 | SMD CHIP RESISTOR 1206 1/8W 1% | 330 | 1 | RSD025C |
| 4 | R1,R6, R8, R10, R15,R17, R19 | SMD CHIP RESISTOR 1206 1/8W 1% | 100k | 7 | RSD061C |
| 5 | R5,R12 | SMD CHIP RESISTOR 1206 1/8W 1% | 10k | 2 | RSD049C |
| 6 | R39 | SMD CHIP RESISTOR 1206 1/8W 1% | 12k | 1 | RSD050C |
| 7 | R7,R9, R11,R16, R18,R20 | SMD CHIP RESISTOR 1206 1/8W 1% | 1k | 6 | RSD037C |
| 8 | R3 | SMD CHIP RESISTOR 1206 1/8W 1% | 1K2 | 1 | RSD033C |
| 9 | R14 | SMD CHIP RESISTOR 1206 1/8W 1% | 2M2 | 1 | RSD063C |
| 10 | R13 | SMD CHIP RESISTOR 1206 1/8W 1% | 330K | 1 | RSD049C |
| 11 | R29,R31, R32,R33, R34,R35, R36,R37, R38 | SMD CHIP RESISTOR 1206 1/8W 1% | 4k7 | 9 | RSD045C |
| 12 | R40 | SMD CHIP RESISTOR 1206 1/8W 1% | N.M. | 1 | |
| 13 | C23 | 105° RADIAL ELECTROLYTIC CAPACITOR | 47u 25V | 1 | |
| 14 | C2,C5, C6,C7, C15,C24 | 105° SMD ELECTROLYTIC CAPACITOR | 10u 16V | 6 | EAD002C |
| 15 | C8,C10 | SMD MLCC 1206 | N.M. | 2 | |
| 16 | C3,C4 | SMD MLCC 1206 100V 2% NP0 | 22p | 2 | MLS017C |
| 17 | C16,C17, C18,C19, C20,C21 | SMD MLCC 1206 100V 5% NP0 | 100p | 6 | MLS025C |
| 18 | C1,C11, C12,C13, C25 | SMD MLCC 1206 50V +20/-80% 50V Y5U | 220n | 5 | MLS042C |
| 19 | C14 | SMD MLCC 1206 50V 10% 50V X7R | 47n | 1 | MLS040C |
| 20 | C22 | SMD MLCC 1206 50V 10% 50V X7R | 10n | 1 | MLS039C |
| 21 | C9 | SMD TANTALUM CAPACITOR CASE B 20% | 10u 10V | 1 | |
| 22 | D1 | SMD DIODE | LL4148 | 1 | |
| 23 | LD1,LD2,L D3,LD4,L D5 | ROUND LED DIODE 3 mm | RED | 5 | |
| 24 | LD6,LD7,L D8,LD9 | ROUND LED DIODE 3 mm | YELLOW | 4 | |
| 25 | IC1 | MICROPROCESSOR RESET CIRCUIT SOT23-3 | LM810M3- 4.38 | 1 | |
| 26 | IC2 | µPROCESSOR | T89C51RD2- SLSCM | 1 | |

| | | | | | |
|----|-----|--|----------------|---|--------------|
| 27 | IC3 | IC SMD | TLC272 | 1 | |
| 28 | IC4 | IC SMD | 4049 | 1 | |
| 29 | IC5 | IC SMD | MAX118CAI | 1 | |
| 30 | IC6 | IC SMD | TL1431ACD | 1 | |
| 31 | IC7 | IC SMD | HEF4894B | 1 | |
| 32 | RT1 | VERTICAL TRIMMER RESISTOR +/-20% 0,25W | 10k | 1 | |
| 33 | XT1 | QUARZ | 11.0592 MHz | 1 | |
| 34 | CN1 | IDC SOCKET CONNECTOR, P.2,54 MALE | 34 PIN | 1 | IDC006C |
| 35 | CN2 | FEMALE BAR STRIP | 6 PIN | 1 | |
| 36 | CN3 | PLCC SOCKET CONNECTOR | 44 PIN | 1 | |
| 37 | CN4 | MALE BAR STRIP | 16 PIN | 1 | |
| 38 | MM1 | LCD MODULE 16 X 2 CHR | LCD Display | 1 | |
| 39 | MM2 | KEYBOARD KEY51 MODULE | | 1 | |
| 40 | CS1 | µP CONTROLLER CIRCUIT BOARD | | 1 | PCB0101 3 |



| | | |
|----------------------------|-------------------------|--|
| | NOME PROGETTO: TOUCH30S | NOME PARTE: RS 232 Interface MIB232 |
| | AUTORE: INNOVATION | DATA: 12/06/2001 REVISIONE: 1.0 SCALA: 2:1 SIZE: A4 PAGINA: 1 DI 1 |
| CODICE PROGETTO: SAS01015A | CODICE DISEGNO: <> | ARCHIVIAZIONE ELETTRONICA: \\UT_SRV\PROGETTI\ECCITATORI |
| MATERIALE: <> | TRATTAMENTO: <> | PROFILO: <> STATO: <> |



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|---|--|------------------|-----------------------------|----------|
| Nome Progetto: TOUCH30S | | Pa Ina:1 | di 1 | Size: A4 |
| Autore: INNOVATION | | Codice roetp: \ | | |
| Nome PC in Rete: \\UT_SRV\PROGETTI\ECCITATORI | | Date: 19/11/2001 | Nome Parte: RS232 INTERFACE | |
| File/Cartella: RS232_MIB232 | | Revisione: 1.0 | Autore: SAS01015A | |

**RS232 INTERFACE & RF MONITOR
SAS01015A REVISION: 1,0**

| It | Ref. | Description | Value | Qty | Code |
|-----------|--------------------|---------------------------------------|--------------|------------|-------------|
| 1 | R1,R2 | SMD CHIP RESISTOR 1206 1/8W 1% | 10K | 2 | RSD049C |
| 2 | R3 | SMD CHIP RESISTOR 1206 1/8W 1% | 270R | 1 | |
| 3 | R4 | SMD CHIP RESISTOR 1206 1/8W 1% | 2K2 | 2 | RSD041C |
| 4 | C1,C2, C3,C4,C5 | 105° SMD ELECTROLYTIC CAPACITOR | 1u 50V | 5 | EAD008C |
| 5 | IC1 | IC SMD | ICL232CBE | 1 | |
| 6 | Q1 | TRANSISTOR SOT23 | BC817 | 1 | |
| 7 | LD1 | ROUND LED DIODE 3 mm | green | 1 | |
| 8 | CN1 | DB9 MALE CONNECTOR 90° PCB MOUNTING | 9 PIN | 1 | |
| 9 | CN2 | BNC FEMALE CONNECTOR 90° PCB MOUNTING | BNC | 1 | |
| 10 | CN3 | 90° MALE BAR STRIP | 6 PIN | 1 | |
| 11 | CS1 | RS 232 Interface & RF Monitor Circuit | PCB01015 | 1 | PCB01015 |