TECHNICAL DESCRIPTION

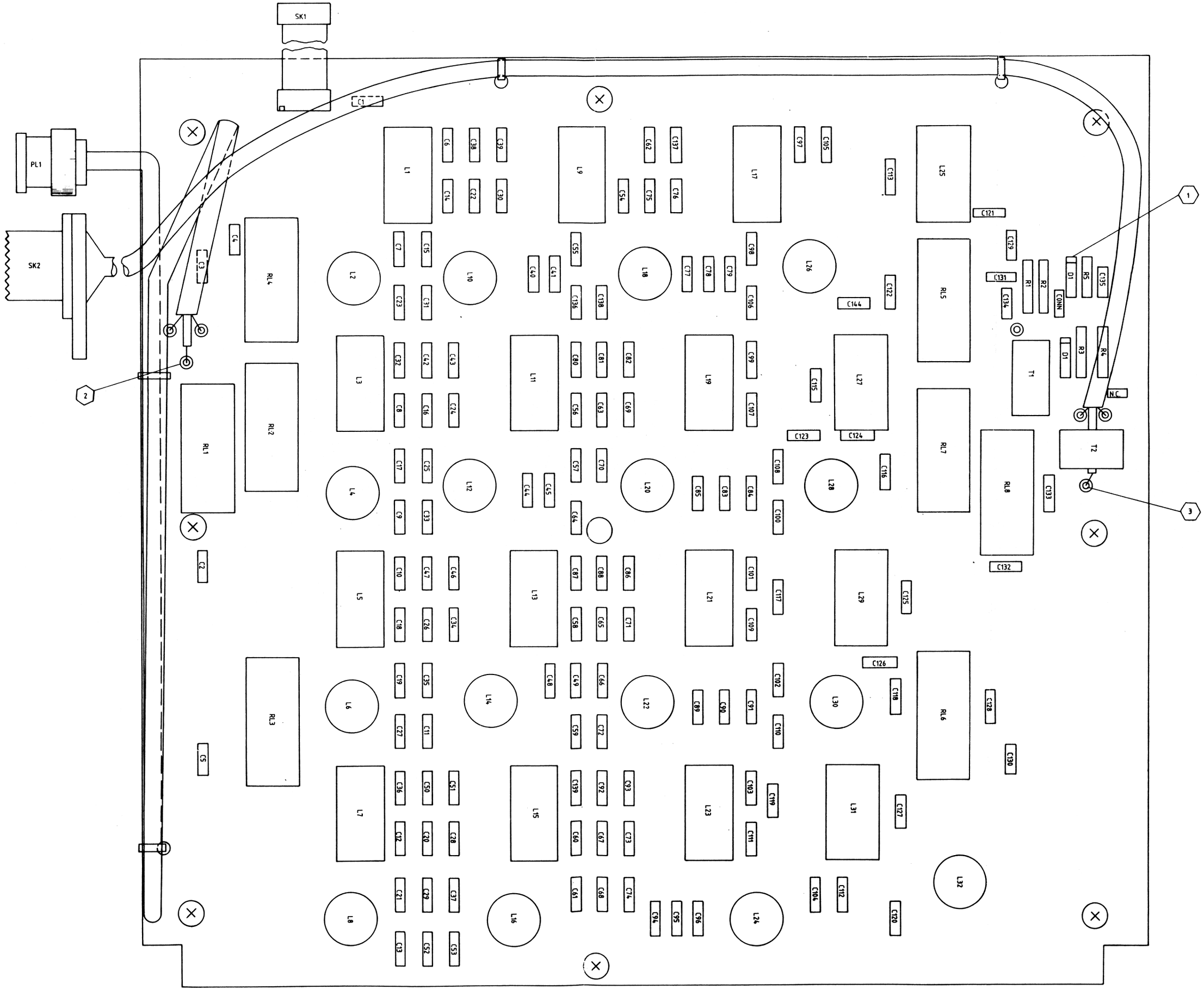
PCB [629] P.A. FILTERS, Continuous Coverage

The filter bank contains 8 lowpass filters covering the frequency range 1.6-30.0 MHz, as shown in the table below.

| Filter no. | Passband MHz | Stopband MHz | Relays A B C D |
|---|---|---|---|
| 1 | 1.60- 2.31 | 3.19 | 0 1 0 0 |
| 2 | 2.31- 3.33 | 4.61 | 1 1 1 0 |
| 3 | 3.33- 4.80 | 6.64 | 1 0 0 1 |
| 4 | 4.80- 6.93 | 9.58 | 1 0 0 0 |
| 5 | 6.93-10.00 | 13.85 | 1 1 0 0 |
| 6 | 10.00-14.42 | 19.95 | 0 1 1 0 |
| 7 | 14.42-20.80 | 28.80 | 0 0 0 1 |
| 8 | 20.80-30.00 | 41.00 | 0 0 0 0 |

0 = off
1 = on

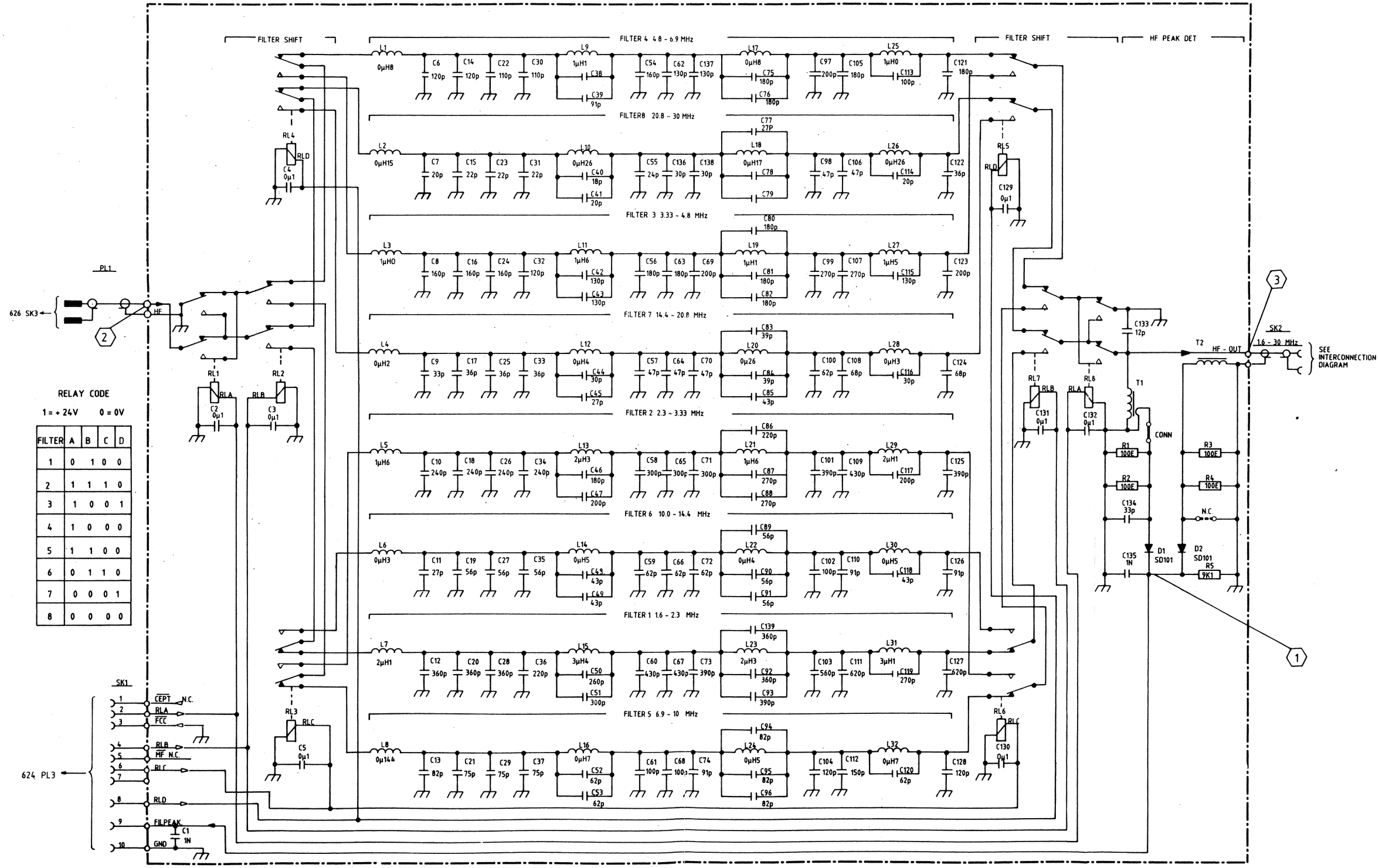
All filters are 7th order elliptic LP-filters (cauer-filters) with a series coil giving an inductive input impedance on the harmonics. When loaded with 50 ohms the input SWR is less than 1:1.12 and the insertion loss less than 0.25 dB in the passbands. In the stopbands the attenuation is better than 47 dB. The filters are inserted by a system of dual pole dual throw relays controlled from the Transceiver Control Board [624] as shown in the table. Type-code information is given via 4 lines of the connector cable. The DC voltage from the output peak-detector, which monitors voltage and current in the load, is connected to the ALC-circuit on the Transceiver Control Board [624]. This voltage is used for automatic adjustment of output power and should be 9.0 V for an output of 250 W into 50 ohms.




993 562 9X COMP
993 563 7X COMP

PCB 629 637 P.A. FILTERS BOARD CONTINUOUS COVERAGE
VIEWED FROM COMPONENT SIDE

HC.23.2.89




PCB 629 637 P.A. FILTERS BOARD CONTINUOUS COVERAGE
VERSION 1A MAIN DIAGRAM

993 562 9X MAIN
993 563 7X MAIN

# TEST POINTS FOR PCB [629] P.A. FILTERS.

| Self test # | ⬡1 | ⬡2 | ⬡3 |
|---|---|---|---|
| 33 | 9VDC | ~320Vpp | ~320Vpp |
| 34 | — | — | — |
| 35 | — | — | — |
| 36 | — | — | — |
| 37 | — | — | — |
| 38 | — | — | — |
| 39 | — | — | — |

PARTS LIST FOR P.A.FILTER CONTINUOUS COVERAGE. BOARD 629 VERSION 1A

| | | | | | |
|---|---|---|---|---|---|
| Printed Circuit Board Complete 629 | | | | | 107 562 91 |
| D1,2 | SD101C | | | | 830 010 10 |
| RL1-8 | | | | | 780 000 32 |
| R1-4 | 100 ohm | 1% | | MF | 512 210 00 |
| R5 | 9.09kohm | 1% | | MF | 511 390 90 |
| C1,135 | 1 nF | 10% | 63V | Cer. | 602 310 02 |
| C2-5,129-132 | 0.1 uF | 10% | 63V | Polyes. | 622 510 00 |
| C6,14,32 104,128 | 120 pF | 2% | 500V | Mi | 645 212 00 |
| C7,41,114 | 20 pF | +-1/2pF | 500V | Mi | 645 120 00 |
| C8,16,24,54 | 160 pF | 2% | 500V | Mi | 645 216 01 |
| C9 | 33 pF | 2% | 500V | Mi | 645 133 00 |
| C10,18,26,34 | 240 pF | 2% | 500V | Mi | 645 224 02 |
| C11,45,77-79 | 27 pF | 2% | 500V | Mi | 645 127 00 |
| C12,20,28,92,139 | 360 pF | 2% | 500V | Mi | 645 236 01 |
| C13,94-96, | 82 pF | 2% | 500V | Mi | 645 182 00 |
| C15,23,31 | 22 pF | +-1/2pF | 500V | Mi | 645 122 00 |
| C17,25,33,122 | 36 pF | 2% | 500V | Mi | 645 136 00 |
| C19,27,35,89-91 | 56 pF | 2% | 500V | Mi | 645 156 01 |
| C21,29,37 | 75 pF | 2% | 500V | Mi | 645 175 00 |
| C22,30 | 110 pF | 2% | 500V | Mi | 645 211 01 |
| C36,86 | 220 pF | 2% | 500V | Mi | 645 222 02 |
| C38,61,68,113,102 | 100 pF | 2% | 500V | Mi | 645 210 01 |
| C39,74,110,126 | 91 pF | 2% | 500V | Mi | 645 191 00 |
| C40, | 18 pF | +-1/2pF | 500V | Mi | 645 118 00 |
| C42,43,115,62,137 | 130 pF | 2% | 500V | Mi | 645 213 01 |
| C44,116,136,138 | 30 pF | 2% | 500V | Mi | 645 130 00 |
| C46,56,63,75,76, 80-82,105,121 | 180 pF | 2% | 500V | Mi | 645 218 02 |
| C47,69,97,117,123 | 200 pF | 2% | 500V | Mi | 645 220 01 |
| C48,49,85,118 | 43 pF | 2% | 500V | Mi | 645 143 00 |
| C50 | 260 pF | 2% | 500V | Mi | 645 226 00 |
| C51,58,65,71 | 300 pF | 2% | 500V | Mi | 645 230 01 |
| C52,53,59,66,72 100,120 | 62 pF | 2% | 500V | Mi | 645 162 00 |
| C55 | 24 pF | +-1/2pF | 500V | Mi | 645 124 00 |
| C57,64,70,98,106 | 47 pF | 2% | 500V | Mi | 645 147 00 |
| C60,67,109 | 430 pF | 2% | 500V | Mi | 645 243 00 |
| C73,93,101,125 | 390 pF | 2% | 500V | Mi | 645 239 01 |
| C83,84 | 39 pF | 2% | 500V | Mi | 645 139 00 |
| C87,88,99,107,119 | 270 pF | 2% | 500V | Mi | 645 227 02 |
| C103 | 560 pF | 2% | 300V | Mi | 644 256 01 |
| C108,124 | 68 pF | 2% | 500V | Mi | 645 168 00 |

PARTS LIST FOR P.A.FILTER CONTINUOUS COVERAGE. BOARD 629 VERSION 1A

| | | | | | |
|---|---|---|---|---|---|
| C111,127 | 620 pF | 2% | 300V | Mi | 644 262 01 |
| C112 | 150 pF | 2% | 500V | Mi | 645 215 00 |
| C134 | 33 pF | 2% | 63V | Cer. | 602 133 02 |
| C133 | 12 pF | +-1/2pF | 500V | Mi | 645 112 00 |
| L1,17 | 0.8 uH | | | | 373 572 0X |
| L2 | 0.15 uH | | | | 103 575 31 |
| L3,25 | 1.0 uH | | | | 373 572 1X |
| L4 | 0.2 uH | | | | 103 575 41 |
| L5,21 | 1.6 uH | | | | 373 572 7X |
| L6 | 0.3 uH | | | | 103 575 81 |
| L7,29 | 2.1 uH | | | | 373 573 0X |
| L8,12,22 | 0.4 uH | | | | 103 576 01 |
| L9 | 1.1 uH | | | | 373 572 3X |
| L10,20,26 | 0.26 uH | | | | 103 575 71 |
| L11 | 1.6 uH | | | | 373 572 8X |
| L13 | 2.3 uH | | | | 373 573 1X |
| L14,24,30 | 0.5 uH | | | | 103 576 11 |
| L15 | 3.4 uH | | | | 373 573 4X |
| L16,32 | 0.7 uH | | | | 103 576 31 |
| L18 | 0.18 uH | | | | 103 575 61 |
| L19 | 1.1 uH | | | | 373 572 4X |
| L23 | 2.3 uH | | | | 373 573 2X |
| L27 | 1.5 uH | | | | 373 572 5X |
| L28 | 0.3 uH | | | | 103 575 91 |
| L31 | 3.1 uH | | | | 373 573 3X |
| T1 | | | | | 103 576 51 |
| T2 | | | | | 103 576 61 |
| PL1 | COAXCABLE | | | | 373 613 4X |
| SK1 | RIBBON CABLE 10 POL. | | | | 373 602 71 |
| SK2 | SO239 | | | | 750 000 29 |