

# C427

Digital Media Tuner

# SERVICE MANUAL

# C427

Digital Media Tuner

The NAD logo consists of the letters "NAD" in a white, bold, sans-serif font, centered within a solid black square.

# TABLE OF CONTENTS

| DESCRIPTION                     | PAGE  |
|---------------------------------|-------|
| SPECIFICATIONS.....             | 4     |
| WIRING DIAGRAM.....             | 5     |
| WIRING DIAGRAM PARTS LIST.....  | 6     |
| BLOCK DIAGRAM.....              | 7     |
| CIRCUIT DIAGRAMS.....           | 8-10  |
| PCB LAYOUT.....                 | 11-15 |
| ELECTRICAL VIEW PARTS LIST..... | 16-23 |
| EXPLODED VIEW .....             | 24-24 |
| EXPLODED VIEW PARTS LIST .....  | 24-24 |

# SPECIFICATION

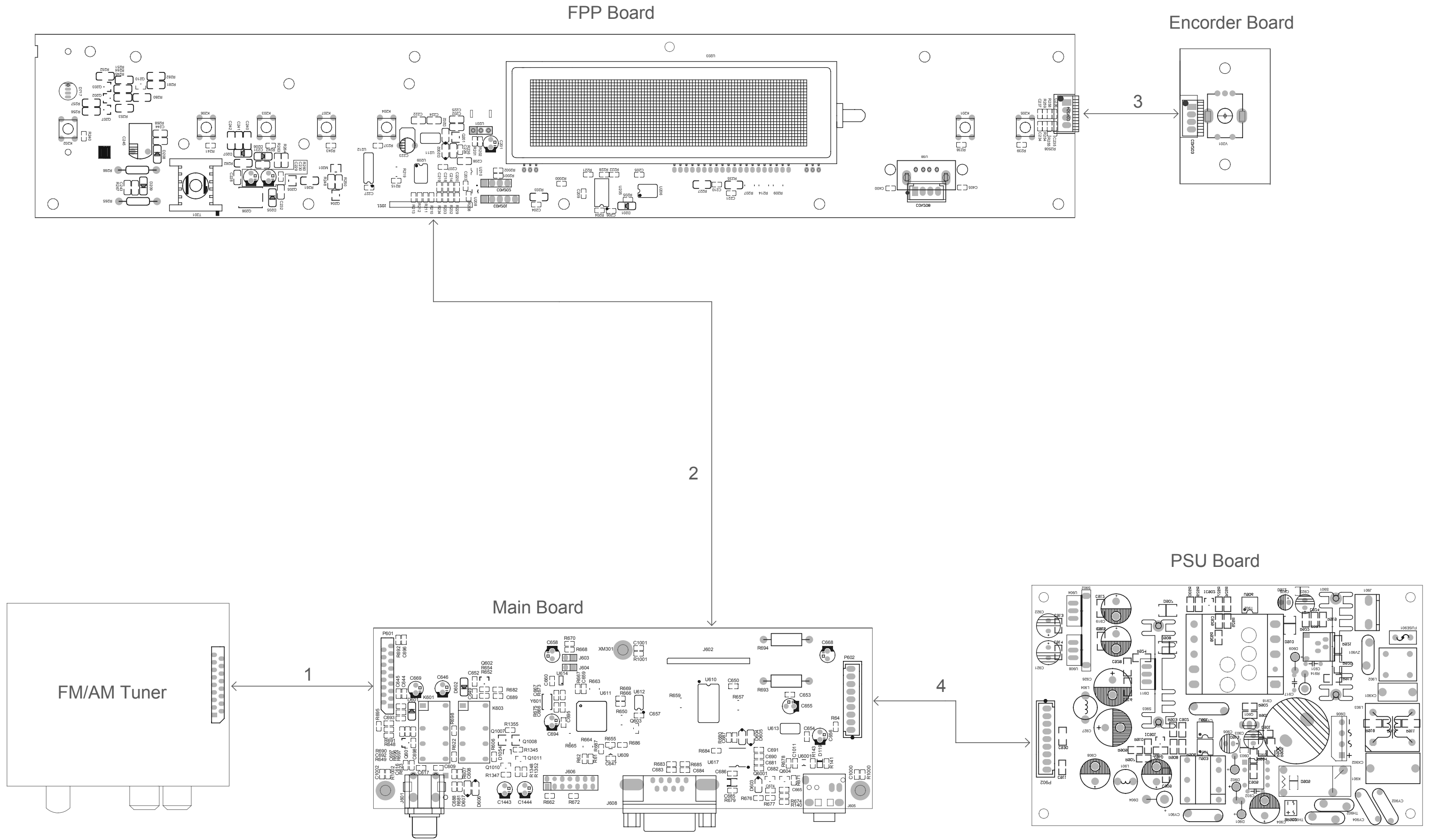
## FM SECTION

|                                   |        |  |
|-----------------------------------|--------|--|
| Usable Sensitivity (98 MHz)       |        | 10 dBu   |
| Signal/Noise Ratio                |        | 65 dB (60 dB_ IHF-WTD Mono)<br>60 dB (60 dB_ IHF-WTD Stereo) |
| Frequency Response                |        | ±1.5 dB (20 Hz - 15 kHz, 60 dB_)                             |
| Channel Separation (60 dBu)       | 30 Hz  | 33 dB  |
|                                   | 1 kHz  | 40 dB  |
|                                   | 10 kHz | 32 dB  |
| Capture Ratio (40 dBu)            |        | 3 dB   |
| AM Suppression                    |        | 50 dB (60 dBu, 100% Mod. FM, 30% Mod. AM)                    |
| Image Rejection (119.4 MHz)       |        | 70 dB  |
| I.F. Rejection (10.7 MHz)         |        | 70 dB  |
| Pilot Suppression (60 dBu)        |        | 60 dB  |
| Total Harmonic Distortion* - Mono |        | 0.4%   |
|                                   | Stereo | 0.8%   |
| Auto Search Sensitivity           |        | 24 dBu   |
| RDS Decode Sensitivity            |        | 26 dBu   |

## AM SECTION

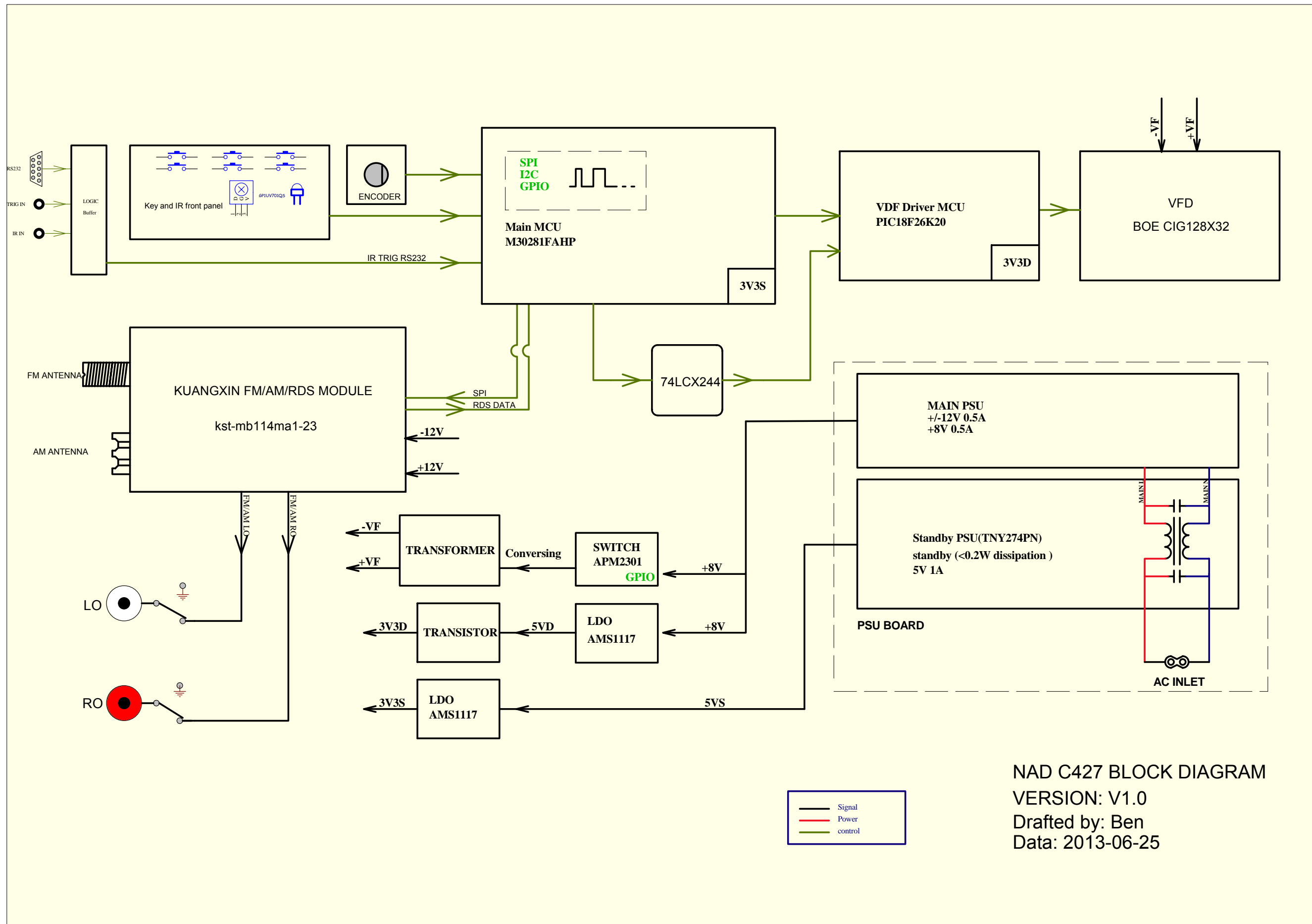
|  |              |        |
|--|--------------|--------|
| Usable Sensitivity (999/1000 Hz)         |              | 55 dB_ |
| Signal/Noise Ratio (5 mV in)             |              | 42 dB  |
| Total Harmonic Distortion (5 mV in)      |              | 1.5%   |
| IF Rejection (450 kHz)                   |              | 40 dB  |
| Image Rejection (F+2xIF)                 |              | 28 dB  |
| Selectivity                              |              | 20 dB  |
| Loop Sensitivity (20dB S/N) -            | 999/1000 Hz  | 66 dB  |
|  | 603/600 Hz   | 66 dB  |
|  | 1404/1400 Hz | 66 dB  |
| Frequency response (100 - 2.3 kHz, 5 mV) |              | ±6 dB  |

# C427 WIRING DIAGRAM



## WIRING DIAGRAM PARTS LIST

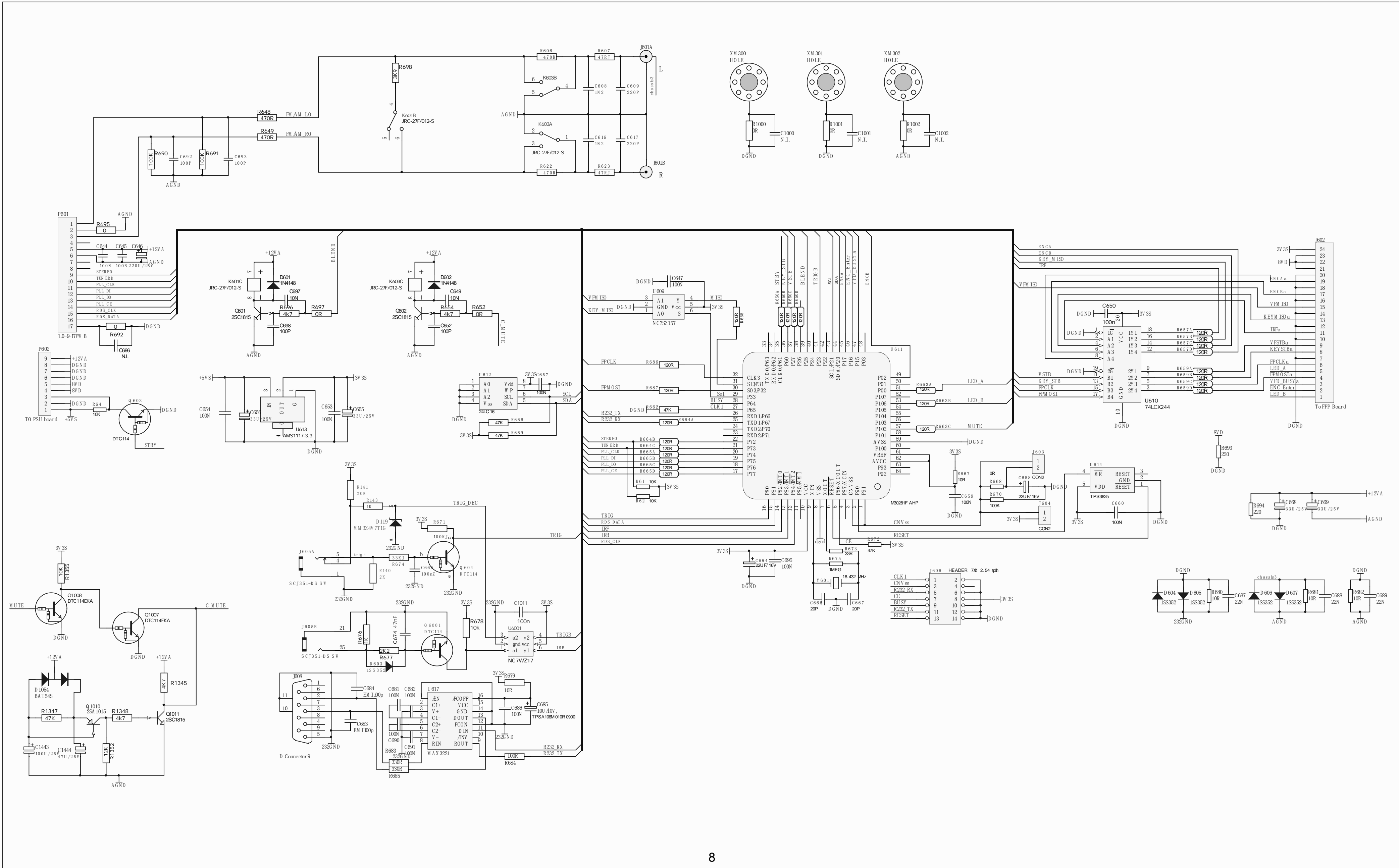
| <b>Item</b> | <b>Part Number</b> | <b>Description</b>                 | <b>Remark</b>              |
|-------------|--------------------|------------------------------------|----------------------------|
| 1           | 14-42717-00        | Cable,1.25mm,17PIN,L=95mm          | Tuner To Main Board        |
| 2           | 14-42724-00        | Cable,1.0mm,24PIN,L=240mm          | Key Board To Main Board    |
| 3           | 14-44604-01        | Cable,UL2468#26AWG,4PIN,L=80mm     | Key Board To Encorde Board |
| 4           | 14-42709-00        | Cable,UL2468#26AWG*9C,9PIN,L=240mm | PSU Board To Main Board    |



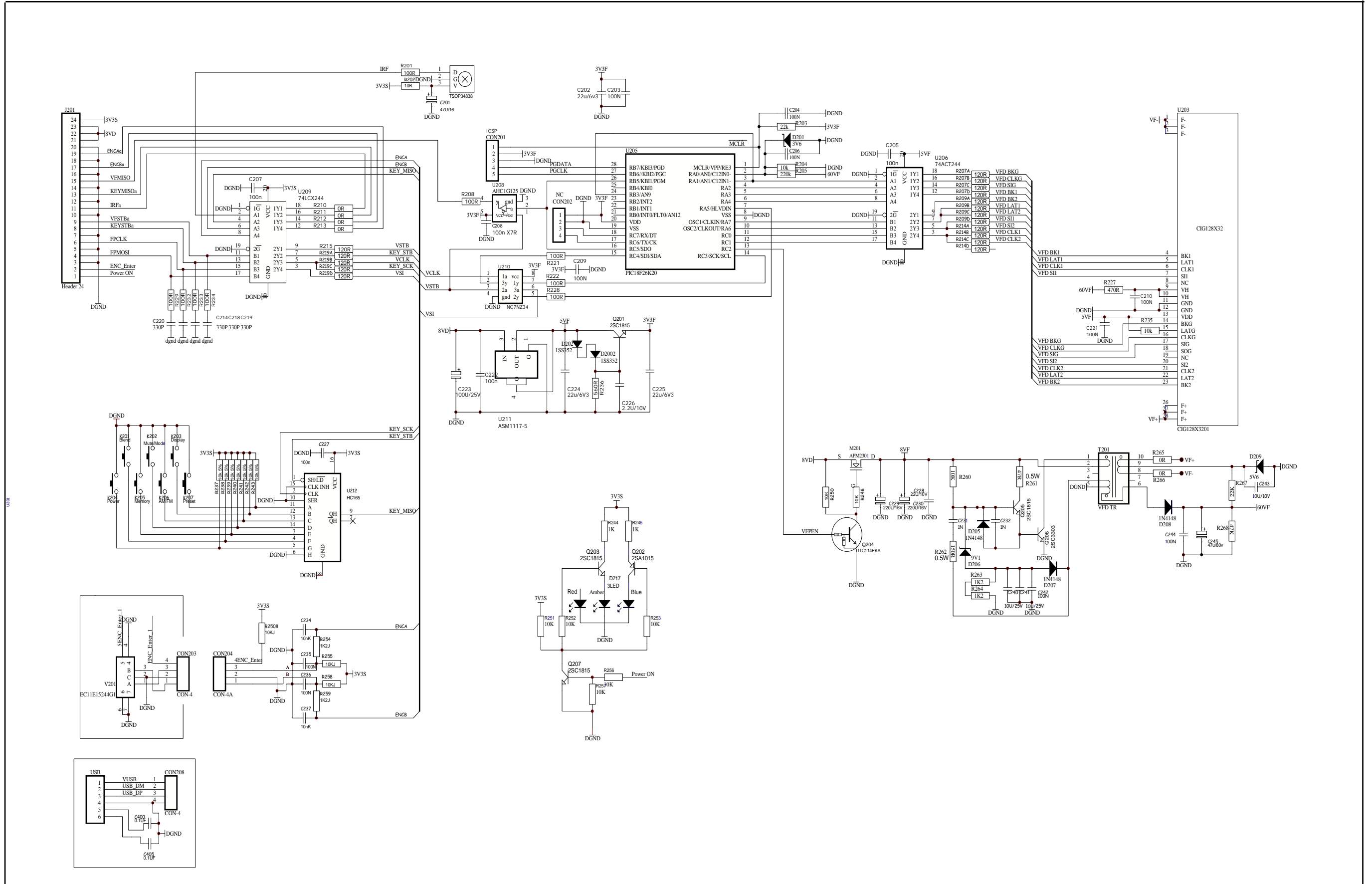
NAD C427 BLOCK DIAGRAM  
 VERSION: V1.0  
 Drafted by: Ben  
 Data: 2013-06-25

# CIRCUIT DIAGRAMS

## 1.MAIN BOARD VM2.0

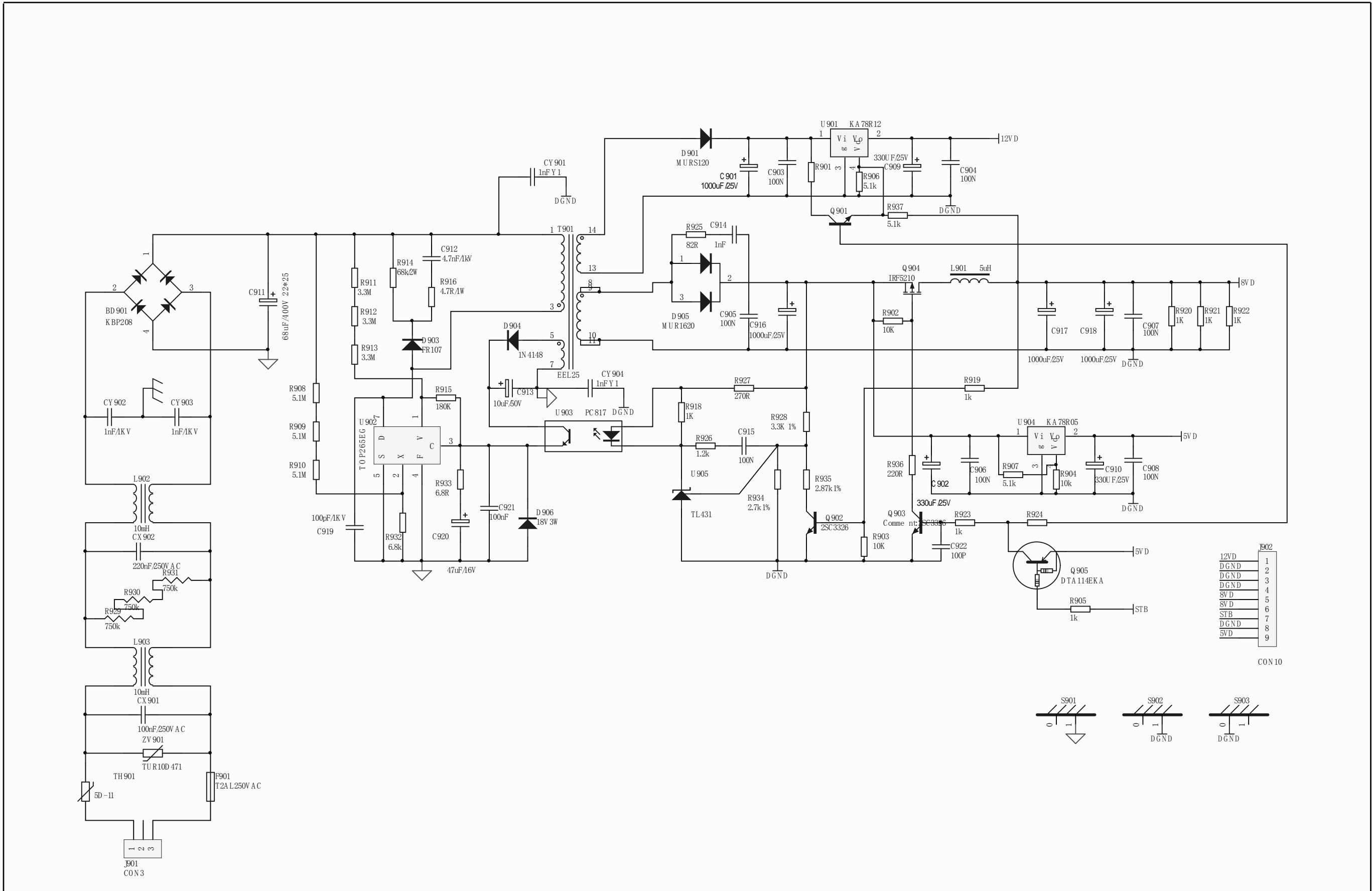


## 2.FPP BOARD VM2.0 AND FPP ENCODE BOARD VM2.0



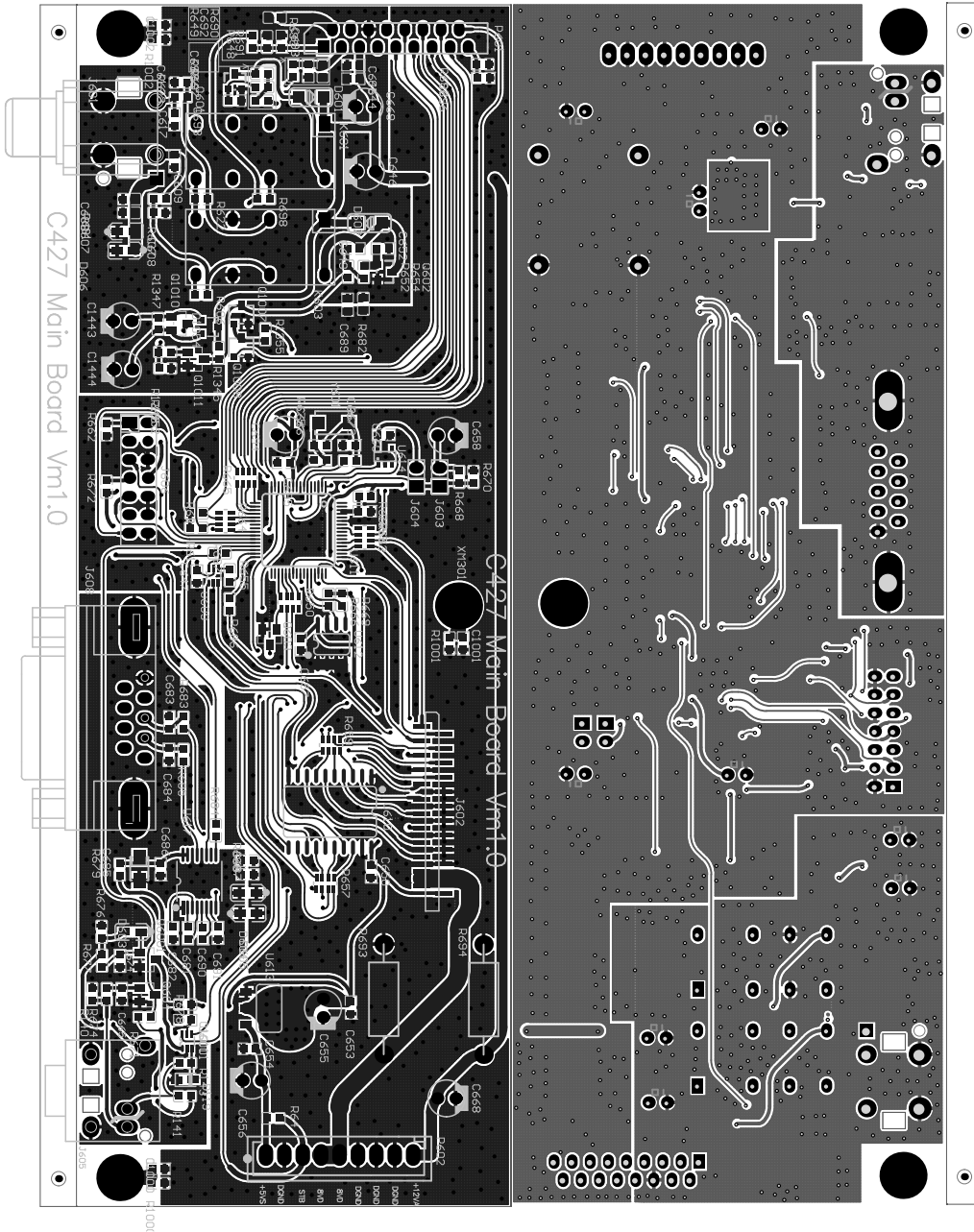


### 3.SMPS BOARD VM2.0



# PCB LAYOUT

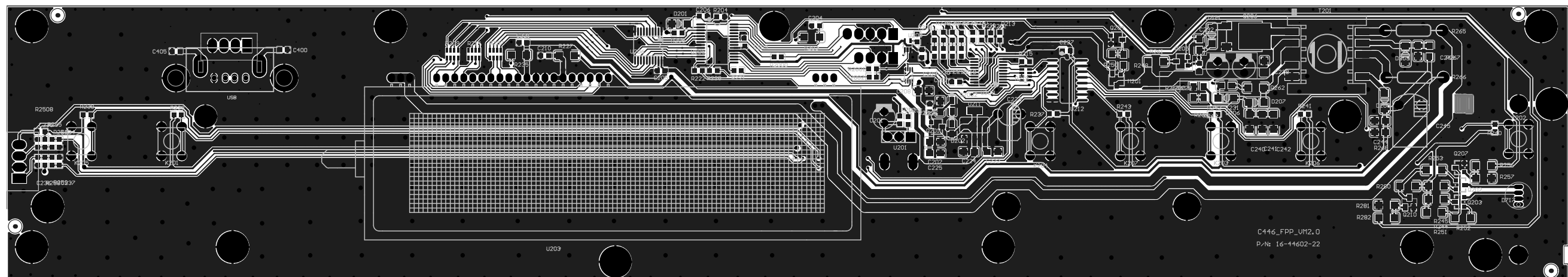
## 1.MAIN BOARD VM2.0



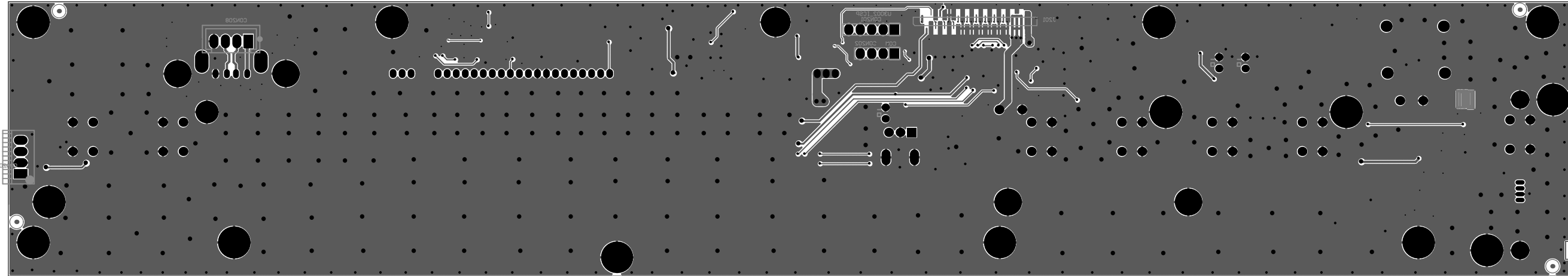
Top Layer

Bottom Layer

## 2. FPP BOARD VM2.0

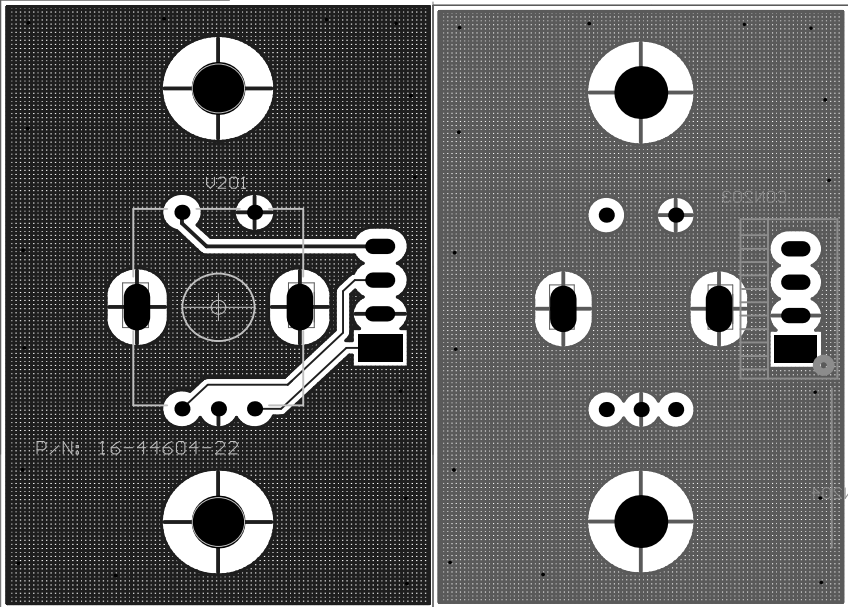


2.FPP BOARD VM2.0



Bottom Layer

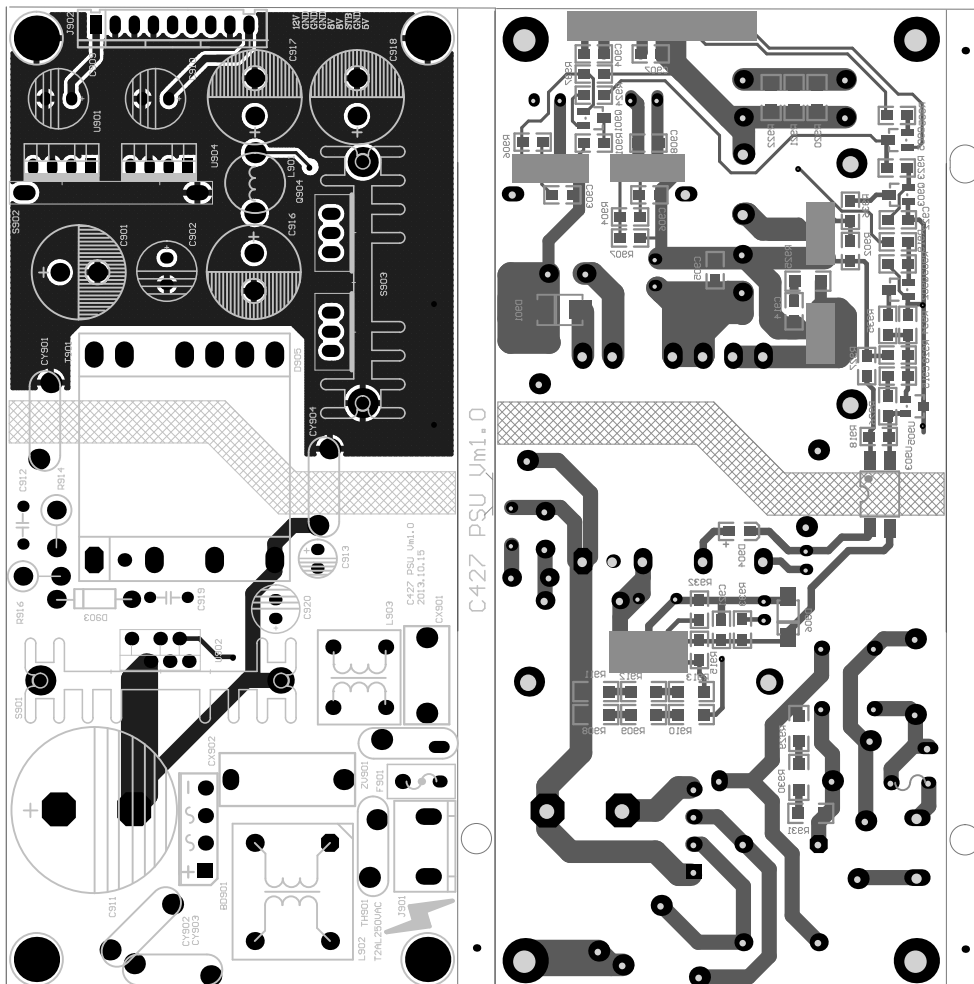
3.FPP ENCODE BOARD VM2.0



Top Layer

Bottom Layer

# 4. SMPS BOARD VM1.0



# ELECTRICAL PARTS LIST

| PCB-1:MAIN BOARD                                     |              |                              |   |
|--|--------------|------------------------------|---|
|  | PART NO.     |                              | DESCRIPTION                             |
| PCB INFO   |              |                              |   |
|  | A16-42701-21 | MAIN PCB                     | VM1.0,FR-4,<br>1.6mm,TG130,166*60mm     |
| DIODE  |              |                              |   |
| D601, D602   | 33-44148-17  | Switch Diode SMD             | 1N4148                                  |
| D603, D604, D605, D606, D607                         | 33-40352-01  | Switch Diode                 | 1SS352                                  |
| D1054  | 33-40054-00  | Schottky Diode               | BAT54S, SOT23                           |
| D119   | 33-14709-07  | Zener Diode                  | MM3Z4V7T1G, 4.7V 0.2W ±<br>5%           |
| TRANSISTOR   |              |                              |   |
| Q603, Q604, Q6001, Q1007,<br>Q1008                   | 31-00114-05  | Transistor                   | DTC114                                  |
| Q601, Q602, Q1011                                    | 31-01815-03  | Transistor                   | 2SC1815                                 |
| Q1010  | 31-01015-03  | Transistor                   | A1015, SOT23                            |
| IC   |              |                              |   |
| U614   | 03-03825-33  | Supervisory Circuit          | TPS3825                                 |
| U611   | 03-30281-03  | MCU                          | M30281FAHP                              |
| U617   | 03-03221-02  | RS232 Interface              | MAX3221                                 |
| U609   | 03-07157-01  | 2:1 Multiplexer              | NC7SZ157                                |
| U6001  | 03-00717-01  | Buffer                       | NC7WZ17                                 |
| U613   | 03-01117-33  | Regulator                    | AMS1117-3.3                             |
| U610   | 03-00244-01  | Octal Buffer                 | 74LCX244                                |
| U612   | 03-02416-02  | EEPROM                       | 24LC16                                  |
| RESISTOR   |              |                              |   |
| R652, R668, R692, R695, R697,<br>R1000, R1001, R1002 | 07-90000-00  | Chip resistor                | 0Ω,0603,1/10W,±5%                       |
| R667, R679, R680, R681, R682                         | 07-91009-00  | Chip resistor                | 10Ω,0603,1/10W,±<br>1%,RC0603FR-0710RL  |
| R673   | 07-93309-00  | Chip resistor                | 33Ω,0603,1/10W,±1%                      |
| R607, R623   | 07-94709-00  | Chip resistor                | 47Ω,0603,1/10W,±1%                      |
| R684   | 07-91000-00  | Chip resistor                | 100Ω,0603,1/10W,±1%                     |
| R655, R686, R687                                     | 07-91200-00  | Chip resistor                | 120Ω,0603,1/10W,±1%                     |
| R683, R685   | 07-93300-00  | Chip resistor                | 330Ω,0603,1/10W,±±1%                    |
| R606, R622, R648, R649                               | 07-94700-00  | Chip resistor                | 470Ω,0603,1/10W,±1%                     |
| R143, R676   | 07-91001-00  | Chip resistor                | 1KΩ,0603,1/10W,±<br>1%,RC0603FR-0711KL  |
| R140   | 07-92001-00  | Chip resistor                | 2KΩ,0603,1/10W,±1%                      |
| R677   | 07-92201-00  | Chip resistor                | 2.2KΩ,0603,1/10W,±1%                    |
| R698   | 07-93901-00  | Chip resistor                | 3.9KΩ,0603,1/10W,±1%                    |
| R654, R696, R1345, R1348                             | 07-94701-00  | Chip resistor                | 4.7KΩ,0603,1/10W,±1%                    |
| R61, R62, R64, R678, R1355                           | 07-91002-00  | Chip resistor                | 10KΩ,0603,1/10W,±1%                     |
| R1352  | 07-91202-00  | Chip resistor                | 12KΩ,0603,1/10W,±1%                     |
| R141   | 07-92002-00  | Chip resistor                | 20KΩ,0603,1/10W,±1%                     |
| R674   | 07-93302-00  | Chip resistor                | 33KΩ,0603,1/10W,±1%                     |
| R662, R666, R669, R672,<br>R1347                     | 07-94702-00  | Chip resistor                | 47KΩ,0603,1/10W,±1%                     |
| R670, R671, R690, R691                               | 07-91003-00  | Chip resistor                | 100KΩ,0603,1/10W,±1%                    |
| R675   | 07-90105-00  | Chip resistor                | 1MΩ,0603,1/10W,±<br>5%,RC0603JR-0711ML  |
| R650, R657, R659, R663, R664,<br>R665                | 07-90121-10  | Chip resistor                | 120Ω, ±5% R0603X4                       |
| R693   | 07-30221-03  | Metal Oxide Film<br>Resistor | RY21,220Ω,2W,±<br>5%,Pitch=15mm,H=3-4mm |
| R694   | 07-30221-06  | Metal Oxide Film<br>Resistor | RY21,220Ω,3W,±5%,<br>Pitch=15mm,H=3-4mm |
| CAPACITOR  |              |                              |   |

|  |                   |                                 |   |
|--|-------------------|---------------------------------|---|
| C666, C667   | 26-20051-00       | Ceramic Chip Capacitor          | 20pJ,50V,0603,NPO                                     |
| C683, C684, C652, C692, C693, C698   | 26-10112-10       | Ceramic Chip Capacitor          | 100pF,100V 0603, NPO                                  |
| C609, C617   | 26-22112-00       | Ceramic Chip Capacitor          | 220pJ, 100V, 5%, NPO,0603,                            |
| C608, C616   | 26-12251-10       | Ceramic Chip Capacitor          | 1n2J,50V,0603,NPO                                     |
| C649, C697   | 26-10351-00       | Ceramic Chip Capacitor          | 10nK,50V,0603,X7R,C2012 X7R1H103KT                    |
| C687, C688, C689   | 26-22351-00       | Ceramic Chip Capacitor          | 22nK,50V,0603,X7R                                     |
| C674   | 26-47351-00       | Ceramic Chip Capacitor          | 47nJ,50V,X7R,0603                                     |
| C644, C645, C647, C653, C654, C657, C659, C660, C681, C682, C686, C690, C691, C650, C665, C695 | 26-10411-00       | Ceramic Chip Capacitor          | 100nF,16V 0603, X7R                                   |
| C1011  | 26-10421-10       | Ceramic Chip Capacitor          | 100nK,25V 0603,X7R                                    |
| C685   | 27-10011-03       | Chip Tan Electrolytic Capacitor | 10uF,10V,±10%,T491A106K010AT                          |
| C658, C694   | 06-22011-10       | Ceramic Chip Capacitor          | CD263,22uF,16V,±20%,F2.5                              |
| C655, C656, C668, C669   | 06-33021-04       | Alu Electrolytic Capacitor      | CD263, 33uF, 25V, ±20%, F2.5                          |
| C1444  | 06-47021-02       | Alu Electrolytic Capacitor      | CD263,47uF,25V,±20%, F2.5                             |
| C1443  | 06-10121-04       | Alu Electrolytic Capacitor      | CD263,100uF,25V,±20%,F2.5                             |
| C646   | 06-22111-12       | Ceramic Chip Capacitor          | CD263,220uF,16V,±20%,F2.5                             |
|  | <b>CAYSTAL</b>    |                                 |   |
| Y601   | 04-11842-01       | CRYSTAL                         | 18.432 MHz  |
|  | <b>CONNECTOR</b>  |                                 |   |
| J602   | 13-21024-07       | FFC Connector                   | 24PIN 1.0mm 1.0-9-24PB                                |
| J605   | 17-02002-07       | Phone Jack                      | SJ-3541-5P  |
| J605   | or17-02002-02     | Phone Jack                      | SCJ351-DS SW  |
| J601   | 17-01002-03       | 2RCA                            | 2 holes RJ-21V01A                                     |
| J608   | 17-08009-00       | RS232 Socket                    | D Connector 9, RS232/F,7906-09FHA                     |
| J603, J604   | 13-12502-18       | Connector                       | 2.54mm,2pin,CNT-M254-1*2-GS-5/3-N                     |
| P602   | 13-22509-00       | Connector Socket                | XHB 2.5A-9A   |
| P601   | 13-21217-00       | FPC Connector                   | 1.25-2-17P  |
| K601, K603   | 12-02101-02       | Signal Relay                    | JRC-27F/012-S   |
| <b>PCB-2:FPP BOARD</b>   |                   |                                 |   |
| <b>CIRCUIT NO.</b>   | <b>PART NO.</b>   |                                 | <b>DESCRIPTION</b>                                    |
|  | <b>PCB INFO</b>   |                                 |   |
|  | A16-44602-22      | FPP PCB                         | VM2.0,FR-4, 1.6mm,TG130,346*61mm                      |
|  | <b>DIODE</b>      |                                 |   |
| D201   | 33-13609-10       | Zener Diode                     | 3.6V, 0.5W LL34                                       |
| D202, D2002  | 33-40352-01       | Switch Diode                    | 1SS352  |
| D205, D207   | 33-44148-17       | Switch Diode                    | 1N4148W-NR,SOD123                                     |
| D208   | 33-40021-11       | Switch Diode                    | BAV21W  |
| D206   | 33-11000-05       | Zener Diode                     | BZT52C10,10V,350mW                                    |
| D209   | 33-17509-04       | Zener Diode                     | BZT52C7V5,7.5V,500mW                                  |
| D717   | 33-50565-12       | LED                             | BL-BB3JCUB2C4V-1-10F<br>Blue wave length<br>462~467nm |
|  | <b>TRANSISTOR</b> |                                 |   |
| M201   | 31-02301-01       | P-CH MOSFET                     | APM2301CAC, SOT23, Tape                               |



|   |                  |                        |                                       |
|---|------------------|------------------------|---------------------------------------|
| Q201, Q205, Q203, Q207, Q210  | 31-01815-03      | Transistor             | 2SC1815 SOT23                         |
| Q202  | 31-01015-03      | Transistor             | 2SA1015 SOT23                         |
| Q204  | 31-00114-05      | Digital transistor     | DTC114EKA                             |
| Q206  | 31-03303-01      | Transistor             | 2SC3303                               |
|   | <b>IC</b>        |                        |                                       |
| U205  | 03-01826-01      | MCU                    | PIC18F26K20                           |
| U206  | 03-00244-08      | Octal Buffer           | SN74HCT244PWR                         |
| U208  | 03-00125-06      | single buffer          | AHC1G125                              |
| U209  | 03-00244-06      | Octal Buffer           | SN74LVC244APWR                        |
| U210  | 03-00734-01      | triple buffer          | NC7NZ34K8X                            |
| U211  | 03-01117-01      | Linear Regulator       | AMS1117-5                             |
| U212  | 03-00165-01      | Shift Register         | HC165                                 |
| U201  | 03-34838-00      | IR                     | TSOP34838                             |
|   | <b>RESISTOR</b>  |                        |                                       |
| R210, R211, R212, R213  | 07-90000-00      | Chip resistor          | 0Ω,0603,1/10W,±5%                     |
| R202  | 07-91009-00      | Chip resistor          | 10Ω,0603,1/10W,±1%,RC0603FR-0710RL    |
| R201, R208, R221, R222, R228, R229, R232, R233, R234, R2000, R2002      | 07-90101-00      | Chip resistor          | 100Ω,0603,1/10W,±5%,RC0603JR-07100RL  |
| R215  | 07-90121-00      | Chip resistor          | 120Ω,0603,1/10W,±5%,RC0603JR-07120RL  |
| R236  | 07-90561-00      | Chip resistor          | 560Ω,0603,1/10W,±5%,RC0603JR-07560RL  |
| R254, R259  | 07-90122-00      | Chip resistor          | 1.2KΩ,0603,1/10W,±5%,RC0603JR-071K2L  |
| R237, R238, R239, R240, R241, R242, R243, R204, R260, R255, R258, R2508 | 07-90103-00      | Chip resistor          | 10KΩ,0603,1/10W,±5%,RC0603JR-0710KL   |
| R205  | 07-90224-00      | Chip resistor          | 220KΩ,0603,1/10W,±5%,RC0603JR-07220KL |
| R263, R264  | 07-90122-01      | Chip resistor          | 1.2KΩ,0805,1/8W,±5%,RC0805JR-071K2L   |
| R248, R250  | 07-90103-01      | Chip resistor          | 10KΩ,0805,1/8W,±5%,RC0805JR-0710KL    |
| R267  | 07-90223-01      | Chip resistor          | 22KΩ,0805,1/8W,±5%,RC0805JR-0722KL    |
| R268  | 07-90473-01      | Chip resistor          | 47KΩ,0805,1/8W,±5%,RC0805JR-0747KL    |
| R261  | 07-90470-02      | Chip resistor          | 47Ω,1206,1/4W,±5%,RC1206JR-0747RL     |
| R245  | 07-90750-02      | Chip resistor          | 75Ω,1206,1/4W,±5%,RC1206JR-0775RL     |
| R262  | 07-90151-02      | Chip resistor          | 150Ω,1206,1/4W,±5%,RC1206JR-07150RL   |
| R227  | 07-90101-02      | Chip resistor          | 100Ω,1206,1/4W,±5%,RC1206JR-07100RL   |
| R244  | 07-90471-02      | Chip resistor          | 470Ω,1206,1/4W,±5%,RC1206JR-07470RL   |
| R235, R251, R252, R253, R256, R257, R280, R281, R282                    | 07-90103-02      | Chip resistor          | 10KΩ,1206,1/4W,±5%,RC1206JR-0710KL    |
| R203  | 07-90223-02      | Chip resistor          | 22KΩ,1206,1/4W,±5%,RC1206JR-0722KL    |
| R207, R209, R214, R219  | 07-90121-10      | Chip resistor          | 120Ω, ±5% R0603X4                     |
| R265, R266  | 07-20000-51      | Metal Film Resistor    | 0Ω,1/4W,±5%                           |
|   | <b>CAPACITOR</b> |                        |                                       |
| C214, C218, C219, C220  | 26-33151-00      | ceramic capacitor      | 330pJ,50V,0603,NPO                    |
| C234, C237  | 26-10351-00      | Multilayer Ceramic CAP | 10nK,50V,0603,X7R,C2012 X7R1H103KT    |
| C203, C204, C205, C206, C207, C209, C210, C221, C227, C235, C236        | 26-10411-00      | ceramic capacitor      | 100nF,16V 0603, X7R                   |

|   |                  |                               |   |
|---|------------------|-------------------------------|---|
| C231, C232                                  | 26-10251-01      | ceramic capacitor             | 1nK,50V,0805,X7R                          |
| C208, C222, C244                            | 26-10411-01      | ceramic capacitor             | 100nK,16V,0805,X7R                        |
| C226  | 26-22521-01      | ceramic capacitor             | 2.2uF,±10%,25V,X5R,0805                   |
| C243  | 26-10611-01      | ceramic capacitor             | 10uF,0805,10V,C0805C106<br>M8PACTU        |
| C202, C224, C225, C228                      | 26-22660-11      | ceramic capacitor             | 22uF, 6.3V, X5R, 0805                     |
| C242  | 26-10422-02      | ceramic capacitor             | 100nK,200V,1206,X7R,C32<br>16X7R2E104KT   |
| C240, C241                                  | 26-10611-02      | ceramic capacitor             | 10uF, 16V, X5R, ±<br>10%,1206,            |
| C201  | 06-47011-03      | ALU Electrolytic CAP          | CD263(X),47uF,16V,±<br>20%,F2.5           |
| C223  | 06-10111-00      | ALU Electrolytic CAP          | CD110(X),100uF,16V,±<br>20%,85°C,F5.0     |
| C229, C230                                  | 06-22111-04      | ALU Electrolytic CAP          | CD263(X),220uF,10V,±<br>20%,F2.5          |
| C245  | 06-47012-00      | ALU Electrolytic CAP          | 47uF,100V,±<br>20%,CD110,F5.0             |
| <b>TRANSISTORS</b>                          |                  |                               |   |
| T201  | 22-00145-01      | Regulator                     | C446TR V2                                 |
| <b>CONNECTOR</b>                            |                  |                               |   |
| J201  | 13-21024-07      | FFC Connector                 | 24PIN 1.0mm 1.0-9-24PB                    |
|   | 66-009011-0      | IR Bracket                    |   |
|   | 65-009011-0      | IR Cover                      | HS4-T562-B009V1-M015                      |
| CON204                                      | 13-22504-00      | Connector Socket              | XHB 2.5A-4A                               |
| CON201                                      | 13-12505-14      | Header                        | 2.54mm, 5Pin, CNT-M254-<br>1*5-GS-5.9/3-N |
| K201, K202, K203, K204, K205,<br>K206, K207 | 11-04101-05      | Tact Switch                   | IT-1102A-1160                             |
| U203  | 23-00128-02      | VFD DISPLAY                   | CIG128X3201A                              |
|   | 66-223002-1      | Bracket                       | SECC-N5 T=1.0mm                           |
|   | 85-223003-0      | Plastic spacer                | HP-12                                     |
|   | 61-023208-2      | Self Tapping Screw            | BTB3.2x8                                  |
| L=80mm                                      | 14-44604-01      | Wire                          | L=80mm                                    |
| <b>PCB-3:FPP ENCODE BOARD</b>               |                  |                               |   |
| <b>CIRCUIT NO.</b>                          | <b>PART NO.</b>  |                               | <b>DESCRIPTION</b>                        |
|   | <b>PCB INFO</b>  |                               |   |
|   | A16-44604-22     | FPP ENCODE PCB                | VM2.0,30*45mm                             |
|   | <b>CONNECTOR</b> |                               |   |
| CON203                                      | 13-22504-00      | Connector Socket              | XHB 2.5A-4A                               |
| V201  | 37-15244-00      | Rotary Encoder                | EC11E15244G1                              |
| <b>PCB-4:SMPS BOARD</b>                     |                  |                               |   |
| <b>CIRCUIT NO.</b>                          | <b>PART NO.</b>  |                               | <b>DESCRIPTION</b>                        |
|   | <b>PCB INFO</b>  |                               |   |
|   | A16-42705-21     | SMPS PCB                      | VM1.0,FR-4,1.6mm,TG130                    |
|   | <b>DIODE</b>     |                               |   |
| D904  | 33-44148-17      | Switch Diode                  | 1N4148W-NR                                |
| D901  | 33-20120-01      | Schottky Rectifier Diode      | MURS120T3G                                |
| D906  | 33-11800-30      | Zener Diode                   | 18V, 3W, ±5%, SMB                         |
| BD901                                       | 33-30282-00      | Rectifier Bridge              | KBP208G,2A/800V                           |
| D903  | 33-20107-00      | Fast-Recovery Rectifier Diode | FR107, DO-41                              |
| D905  | 33-21620-00      | Ultrafast Rectifier           | MUR1620CT, TO220                          |
| D905  | or N33-20150-02  | Schottky Rectifier Diode      | SBR20A150CT, TO220                        |

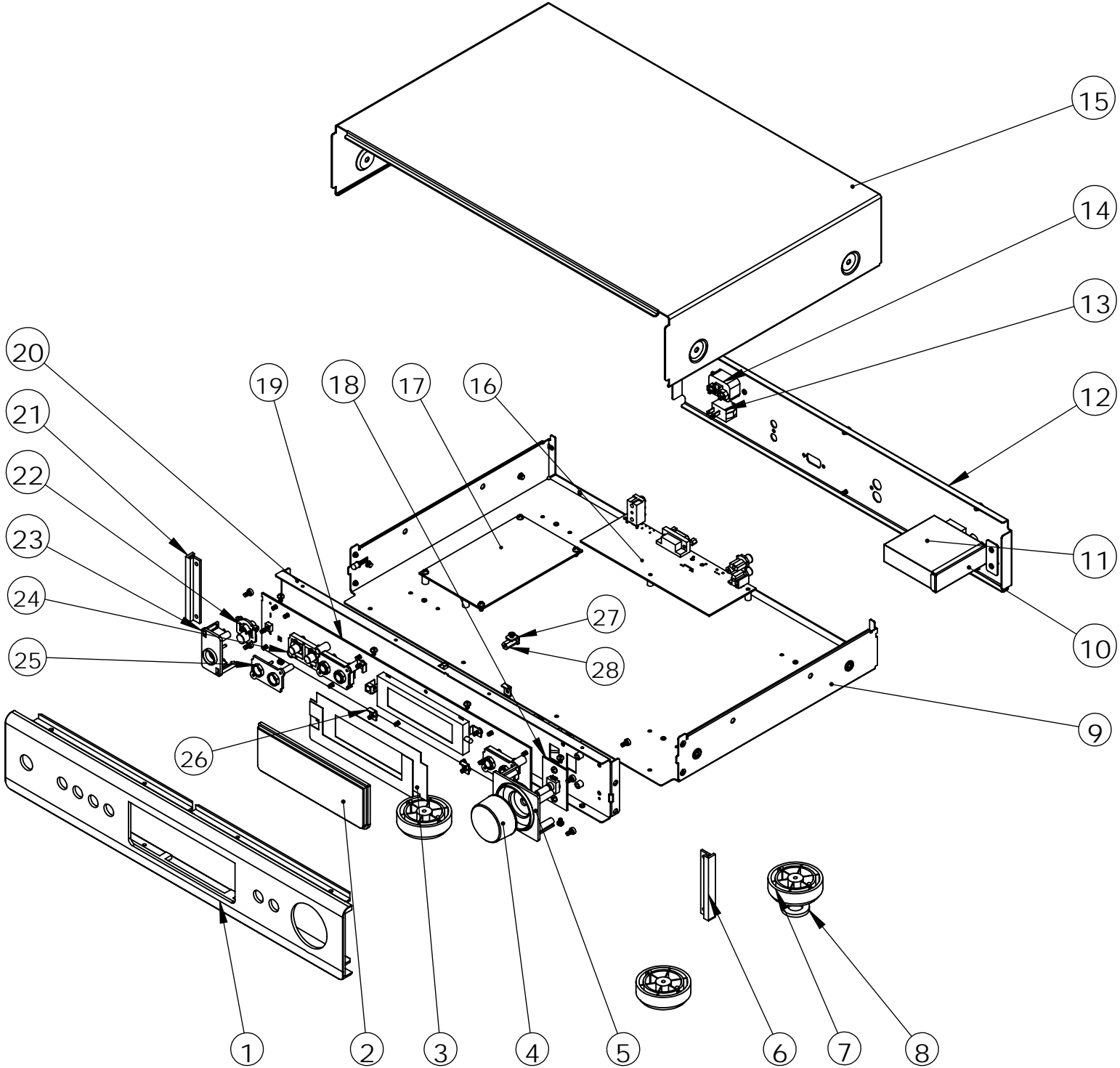
|  | <b>TRANSISTORS</b> |                                 |                                       |
|--|--------------------|---------------------------------|---------------------------------------|
| Q902, Q903                                     | 31-03326-01        | Transistor                      | 2SC3326-A(TE85L,F), SC-59             |
| Q905   | 31-00114-01        | Digital transistor              | DTA114EKA                             |
|  | <b>IC</b>          |                                 |                                       |
| U903   | A03-00817-09       | Photo Coupler                   | EL817S1(B)(TA)-F                      |
| U905   | 03-00431-11        | Voltage Norm                    | TL431BCDBZTG4                         |
| U902   | 03-00265-00        | Power controller IC             | TOP265EG                              |
| U904   | 03-07805-16        | 3-Terminal Regulator            | KA378R05TU                            |
| U901   | 03-07812-13        | 3-Terminal Regulator            | KA278R12CTU                           |
| Q904   | 31-05210-00        | MOSFET                          | IRF5210 TO-220                        |
|  | <b>RESISTOR</b>    |                                 |                                       |
| R933   | 07-90689-01        | SMT Resistor                    | 6.8Ω,0805,1/8W,±5%,RC0805JR-076R8L    |
| R936   | 07-92200-01        | SMT Resistor                    | 220Ω,0805,1/8W,±1%,RC0805FR-07220RL   |
| R927   | 07-92700-01        | SMT Resistor                    | 270Ω,0805,1/8W,±1%,RC0805FR-07270RL   |
| R905, R918, R919, R923                         | 07-91001-01        | SMT Resistor                    | 1KΩ,0805,1/8W,±1%,RC0805FR-071K1L     |
| R926   | 07-91201-01        | SMT Resistor                    | 1.2KΩ,0805,1/8W,±1%,RC0805FR-071K2L   |
| R934   | 07-92701-01        | SMT Resistor                    | 2.7KΩ,0805,1/8W,±1%,RC0805FR-072K7L   |
| R935   | 07-92871-01        | SMT Resistor                    | 2.87KΩ,0805,1/8W,±1%,RC0805FR-072K87L |
| R928   | 07-93301-01        | SMT Resistor                    | 3.3KΩ,0805,1/8W,±1%,RC0805FR-073K3L   |
| R906, R907, R937                               | 07-95101-01        | SMT Resistor                    | 5.1KΩ,0805,1/8W,±1%,RC0805FR-075K1L   |
| R932   | 07-96801-01        | SMT Resistor                    | 6.8KΩ,0805,1/8W,±1%,RC0805FR-076K8L   |
| R902, R903, R904                               | 07-91002-01        | SMT Resistor                    | 10KΩ,0805,1/8W,±1%,RC0805FR-0710K1L   |
| R915   | 07-91803-01        | SMT Resistor                    | 180KΩ,0805,1/8W,±1%,RC0805FR-07180K1L |
| R925   | 07-90820-02        | SMT Resistor                    | 82Ω,1206,1/4W,±5%,RC1206JR-0782RL     |
| R920, R921, R922                               | 07-90102-02        | SMT Resistor                    | 1KΩ,1206,1/4W,±5%,RC1206JR-071K1L     |
| R929, R930, R931                               | 07-90754-02        | SMT Resistor                    | 750KΩ,1206,1/4W,±5%,RC1206JR-07750K1L |
| R911, R912, R913                               | 07-90335-02        | SMT Resistor                    | 3.3MΩ,1206,±5%,RC1206JR-073M3L        |
| R908, R909, R910                               | 07-90515-02        | SMT Resistor                    | 5.1M, 1206, ±5% RC1206JR-075M1L       |
| R916   | 07-30479-04        | Metal Oxide film Resistor       | 4.7Ω, 1W, ±5%                         |
| R914   | 07-30683-04        | Metal Oxide film Resistor       | RY21, 68KΩ, 2W, ±5%,Pitch=5mm         |
| TH901  | 07-70050-02        | NTC                             | 5D-11                                 |
| ZV901  | 07-70471-03        | TVS                             | TUR10D471                             |
|  | <b>CAPACITORS</b>  |                                 |                                       |
| C922   | 26-10151-01        | SMT Capacitor                   | 100pJ,50V,0805,NPO,C2012C0G1H101JT    |
| C914   | 26-10222-01        | SMT Capacitor                   | 1nK, 200V, 0805, X7R                  |
| C903, C904, C905, C906, C907, C908, C915, C921 | 26-10451-11        | SMT Capacitor                   | 100nK,50V,0805,X7R                    |
| C919   | 05-10113-00        | Hign Voltage Cermatic Capacitor | 100pF, 10%, 1KV,CT81-1KV-06c-2B4-101K |

|                        |                    |                                    |  |
|------------------------|--------------------|------------------------------------|--|
| CX901                  | A25-10422-09       | Interfernece<br>Suppression Cap    | MKP62/275VAC, X'RADH, 10<br>0nF, 10%; MKP-<br>104K0275AB1101         |
| CX902                  | A25-22422-09       | Interfernece<br>Suppression Cap    | MPX, 220nF, 275VAC, ±<br>10%, X2, PX224K3D39L27                      |
| CY901                  | A05-10242-00       | Hign Voltage Cermatic<br>Capacitor | 1nF, 400V(X1), 250V(Y1), ±<br>20%<br>CT81-400VAC-08b-2E4-<br>102M-YA |
| CY902 CY903            | A05-10242-00       | Hign Voltage Cermatic<br>Capacitor | CT81-400VAC-08b-2E4-<br>102M-YA                                      |
| C912                   | 05-47213-00        | High Voltage Ceramic<br>Capacitor  | 4.7nF, 1KV, ±10%, CT81-1KV-<br>12b-2B4-472KT5B                       |
| C913                   | 06-10051-02        | Alu Electrolytic Capacitor         | CD263(X), 10uF, 50V, ±<br>20%, 105 °C                                |
| C920                   | 06-47051-06        | Alu Electrolytic Capacitor         | CD263, 47uF, 50V, ±20%, 6.3x<br>11, F2.5                             |
| C902, C909, C910       | 06-33121-06        | Alu Electrolytic Capacitor         | CD289, 330uF, 25V, ±<br>20%, Pitch=3.5mm, 8*16mm                     |
| C902, C909, C910       | or 06-33121-01     | Alu Electrolytic Capacitor         | CD263(X), 330uF, 25V, ±<br>20%, F3.5                                 |
| C911                   | 06-68042-01        | Alu Electrolytic Capacitor         | CD294, 68uF, 400V, ±<br>20%, 105<br>°C, Pitch=10mm, D=22mm           |
| C901, C916, C917, C918 | 06-10221-06        | Alu Electrolytic Capacitor         | 1000uF, 25V, ±20%, 105<br>°C, EEUFC1E102(B)                          |
| C901, C916, C917, C918 | or 06-10221-08     | Alu Electrolytic Capacitor         | 1000uF, 25V, ±20%, 105<br>°C, 108KXM025MSA                           |
|                        | <b>INDUCTOR</b>    |                                    |  |
| L901                   | 08-05050-00        | INDUCTOR                           | 5uH, R0603-5uH   |
| L902                   | 22-00025-02        | INDUCTOR                           | 10mH, HJ-UF10.5-04   |
| L903                   | 22-00098-00        | INDUCTOR                           | HJ-10mH UU9.8  |
|                        | <b>TRANSFORMER</b> |                                    |  |
| T901                   | A22-00025-21       | Transformer                        | Nanjing Infinity EEL25-<br>400uH C427                                |
|                        | <b>CONNECTOR</b>   |                                    |  |
| J901                   | 13-23903-01        | 3芯3.96mm立式插座                       | VH 3.96A-3A  |
| J902                   | 13-22509-00        | 9芯2.54mm插座                         | XHB 2.5A-9A  |
| F901                   | A20-12202-05       | Fuse                               | 5ET T2A 250V, 2A   |
|                        | <b>METAL PARTS</b> |                                    |  |
| S901                   | 70-394001-0        | Heatsink                           | AL6063   |
| S902                   | 70-223002-0        | Power Heatsink                     | AL1050 T5, T=3.0mm   |
| S903                   | 70-394002-0        | Heatsink                           | AL6063   |
| S903                   | 61-023508-0        | Machine Screw                      | MB3x8  |
| S901                   | 61-023510-0        | Machine Screw                      | MB3x10   |
| S901                   | 85-211001-0        | Parts Housing                      | PTB, TC-21   |
| S901                   | 62-010302-0        | Nut                                | GB6170, M3   |
| S903                   | 85-157001-0        | Transistor Washer                  | TW-4   |
| S903                   | 78-013008-0        | Insulated Cushion                  | SQ9418   |
| T901                   | 78-000400-0        | Heat Shrinking Tube                | Φ40, 20mm  |
|                        | <b>MISC</b>        |                                    |  |
|                        | A11-01101-03       | Rocker Switch                      | RF-1003-BB2, 10A 250V,<br>TV-5                                       |
|                        | 14-42709-00        | Wire                               | UL2468#26AWG*9C, L=240<br>mm   |
|                        | 14-42717-00        | Cable                              | 17Pin, 1.25, L=95mm  |
| L=70mm                 | 14-44601-00        | Wire                               | L=70mm   |
|                        | 14-42724-00        | FFC                                | 1.0mm, 24, L=240mm   |

|              |                      |                        |   |
|--------------|----------------------|------------------------|---|
| L=95mm       | 14-44602-00          | Connector              | UL1672#18AWG ,L=95mm                              |
|              | 29-42701-00          | AM Antenna             | DW-QQ001  |
|              | 30-37300-00          | TUNER ANTENNA (FM)     | HAN-001   |
|              | 30-87200-00          | TV Matcher             | IF-11/ZB-6  |
|              | A17-07002-07         | AC Inlet               | SS-7BA-4.0  |
| AC Inlet(2)  | A78-000050-1         | Heat Shrinking Tube    | Φ5  |
|              | 30-14270-00          | Remote Control         | XHY3319F43-3                                      |
|              | 78-394001-0          | Foam                   | GK-17   |
|              | 30-23200-10          | Batteries              |   |
|              | 29-80202-00          | L+R RCA--L+R RCA Cable | 2RCA to<br>2RCA,L=1500mm,WH11C0<br>060            |
|              | <b>METAL PARTS</b>   |                        |   |
|              | 67-394001-0          | Chassis                | SECC-N5 T=1.0mm                                   |
|              | 65-394001-0          | Chassis                | SECC-N5 T=1.0mm                                   |
|              | 67-223002-3          | Subfascia              | SECC-N5 T=1.0mm                                   |
|              | 65-223002-3          | Subfascia              | SECC-N5 T=1.0mm                                   |
|              | 67-394002-0B         | Rear Panel             | SECC-N5,T=1.0mm                                   |
|              | 80-394002-0          | Rear Panel             | SECC-N5,T=1.0mm                                   |
|              | 65-394002-0          | Rear Panel             | SECC-N5,T=1.0mm                                   |
|              | 66-047004-0          | Tuner Bracket          | SECC-N5 T=1.0mm                                   |
|              | 66-223001-0          | Bracket                | SECC-N5 T=1.0mm                                   |
|              | <b>PLASTIC PARTS</b> |                        |   |
|              | 84-001001-1          | Wire Holder            | KL-2 (3M)   |
|              | 76-223001-0          | Display Lens           | PMMA,(OP P/N: 25-008-<br>0405-92)                 |
|              | 87-124001-0          | Foot ASSY              |   |
|              | 75-124001-0          | Foot                   | ABS765B   |
|              | 78-001002-1          | Foot Pad               | MX-48HF, 90°±2<br>°,OD=25.5mm,ID=14.1mm,T<br>=3mm |
|              | <b>FASTENERS</b>     |                        |   |
|              | 61-023506-0          | machine Screw          | MB3x6   |
|              | 61-023208-0          | Self Taping Screw      | BTB3x8  |
|              | 61-023106-0          | Self Taping Screw      | STB3x6  |
|              | 61-063105-0          | Self Taping Screw      | STF3x5  |
| AC INLET(2), | 61-063106-0          | self taping screw      | STF3x6  |
|              | 61-063506-0          | Machine Screw          | MF3x6   |
|              | 61-023206-0          | self taping screw      | BTB3x6  |
|              | 63-110305-0          | Washer                 | φ3xφ7x0.5   |
|              | <b>PACKING LIST</b>  |                        |   |
|              | 88-394001-0A         | Carton Box             | ID=544mmx377mmx162mm                              |
|              | 89-223001-1          | EPE End Cap            | EPE((0.028g/cm3)                                  |
|              | 89-223002-1          | EPE End Cap            | EPE(0.028g/cm3)                                   |
|              | 90-001001-0          | Polybag                | 630X440mm   |
|              | 90-223001-0          | Polybag                | HDPE,550X250mm                                    |
|              | 30-44270-00          | instruction            |   |
|              | 90-001002-0          | Polybag                | 370*220mm HDPE                                    |
|              | 90-001013-0          | AC Cord Polybag        | 105X280mm   |
|              | 90-009002-1          | Non-woven Cloth        | H=80 W=100 L=435                                  |
|              | 94-394001-1          | Series No Label        | 53x10mm   |
|              | 86-000053-0          | Copperplate Label      | 53x10mm   |
|              |                      |                        |   |
|              |                      |                        |   |

|  |                  |                       |   |
|--|------------------|-----------------------|---|
|  | 67-223003-1      | Top Cover             | SECC-N5,<br>T=1.2mm,PPG:PCSC90103<br>S#5                |
|  | 65-223003-1      | Top Cover             | SECC-N5, T=1.2mm  |
|  | 70-394003-0A     | Fascia                | AL 6063 T5,3460-01013                                   |
|  | 70-223003-1      | Left End cap          | AL 6063 T5,3460-01013                                   |
|  | 70-223004-1      | Right End cap         | AL 6063 T5,3460-01013                                   |
|  | J71-223001-0     | Volume Knob           |   |
|  | 74-132001-0      | DUO BUTTON            | ABS 765B  |
|  | 77-223001-0      | 2P Input Button Bezel |   |
|  | 74-123003-1      | Power Button          | ABS   |
|  | 77-124004-0      | Power Button Bezel    | PC,UL94V-0  |
|  | M77-223003-1     | Volume Knob Bezel     | ABS757  |
|  | 61-023106-0      | Self Taping Screws    | STB3X6  |
|  | 61-084108-0      | Self Taping Screws    | STPW4X8   |
|  | J37-01140-23     | TUNER                 | KST-MB114MA0-23   |
|  | JA15-10125-01    | AC Cord(AH Version)   | LP-13W & SVT 18AWGx<br>2,Black 6' & LP-16               |
|  | or A15-10125-00  | AC Cord(AH Version)   | ME302P,SJT 18AWGx<br>2,VAC17S                           |
|  | 94-394002-1      | Version Label(AH)     | 115x85mm,   |
|  | 30-51500-01      | Guarantee Card        | 210X148mm   |
|  |                  |                       |   |
|  |                  |                       |   |
|  | J37-01141-23     | TUNER                 | KST-MB114MA1-23   |
|  | A15-10250-00     | AC Cord(C Version)    | M3204,H05VV-F 2x<br>0.75mm,VAC17S                       |
|  | or JA15-10250-20 | AC Cord(C Version)    | PE-224 & H05VV-F, 2x<br>0.75mm2,2C Black 6' & LS-<br>20 |
|  | 67-223003-1      | Top Cover             | SECC-N5,<br>T=1.2mm,PPG:PCSC90103<br>S#5                |
|  | 65-223003-1      | Top Cover             | SECC-N5, T=1.2mm  |
|  | 70-394003-0A     | Fascia                | AL 6063 T5,3460-01013                                   |
|  | 70-223003-1      | Left End cap          | AL 6063 T5,3460-01013                                   |
|  | 70-223004-1      | Right End cap         | AL 6063 T5,3460-01013                                   |
|  | J71-223001-0     | Volume Knob           |   |
|  | 74-132001-0      | DUO BUTTON            | ABS 765B  |
|  | 77-223001-0      | 2P Input Button Bezel |   |
|  | 74-123003-1      | Power Button          | ABS   |
|  | 77-124004-0      | Power Button Bezel    |   |
|  | M77-223003-1     | Volume Knob Bezel     | ABS765B   |
|  | 61-023106-0      | Self Taping Screws    | STB3X6  |
|  | 61-084108-0      | Self Taping Screws    | STPW4X8   |
|  | 94-394003-1      | Version Label(C)      | 115x85mm  |
|  |                  |                       |   |

# EXPLODED VIEW



| C427 PART LIST |              |                    |     |        |
|----------------|--------------|--------------------|-----|--------|
| ITEM           | PART NO.     | PART NAME          | QTY | REMARK |
| 1              | 70-394003-0A | fascia             | 1   |        |
| 2              | 76-223001-0  | lens               | 1   |        |
| 3              | 78-394001-0  | film               | 1   |        |
| 4              | J71-223001-0 | knob               | 1   |        |
| 5              | 77-223003-0  | knob bezel         | 1   |        |
| 6              | 70-223004-1  | right end cap      | 1   |        |
| 7              | 75-124001-0  | foot               | 4   |        |
| 8              | 78-001002-1  | foot pad           | 4   |        |
| 9              | 67-394001-0  | chassis            | 1   |        |
| 10             | 66-047004-0  | tunner bracket     | 1   |        |
| 11             | J37-01141-23 | tuner              | 1   | C      |
|                | J37-01140-23 |                    |     | AH     |
| 12             | 67-394002-0B | rear panel         | 1   |        |
| 13             | A11-01101-03 | rocker switch      | 1   |        |
| 14             | A17-07002-07 | AC inlet           | 1   |        |
| 15             | 67-223003-1  | top cover          | 1   |        |
| 16             | 01-42701-10  | main board         | 1   | 120V   |
|                | 01-42701-20  |                    |     | 230V   |
| 17             | 01-42705-00  | SMPS board         | 1   |        |
| 18             | 01-44604-00  | encoder board      | 1   |        |
| 19             | 01-42702-00  | FPP board          | 1   |        |
| 20             | 67-223002-3  | subfascia          | 1   |        |
| 21             | 70-223003-1  | left end cap       | 1   |        |
| 22             | 74-123003-1  | power button       | 1   |        |
| 23             | 77-124004-0  | power button bezel | 1   |        |
| 24             | 74-132001-0  | 2P button          | 3   |        |
| 25             | 77-223001-0  | 2P button bezel    | 3   |        |
| 26             | 66-223001-0  | bracket A          | 5   |        |
| 27             | 66-223002-1  | bracket B          | 1   |        |
| 28             | 85-223003-0  | plastic spacer     | 1   |        |