

Q74A

## Service Manual



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# Q74A

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## PRECAUTIONS

Warning : The following information will help you avoid the risk of electric shock, serious injury, and death.

- Plug the power cord into a properly grounded outlet.  
There is the risk of electric shock.
- If you hear a noise or smell smoke from the computer or adaptor, unplug the power cord immediately, and call the service center.  
There is the risk of electric shock or fire.
- Do not overload an electrical outlet with too many devices.  
There is the risk of fire.
- Do not unplug from the outlet by pulling the power cord or when your hands are wet.  
There is the risk of electric shock or fire.
- Do not bend the power cord excessively or place heavy objects on it. Keep children and pets away from the power cord as they may damage the power cord. There is the risk of electric shock or fire.
- Do not use a damaged power cord or plug. Make sure the plug fits snugly into the outlet.  
There is the risk of electric shock or fire.
- Do not expose the monitor to the direct sun light.
- Do not block the fan louvers.  
There is the risk of fire or damage to the monitor.
- Do not attempt to disassemble, fix, or modify the monitor.  
There is the risk of electric shock or fire.
- Keep the monitor away from high temperature, humidity, and dust.  
Operating environment = 0 ~ 40 Degrees Celsius  
Operating environment = 30 ~ 80 Relative Humidity
- Do not allow any object or liquid to enter inside the monitor.  
There is the risk of electric shock, fire, or damage to the monitor.

Caution : The following information will help you avoid the risk of minor or moderate injury, or damage to the monitor.

- Use a proper voltage/current level indicated.
- Do not clean the LCD with abrasive chemicals.  
There is the risk of damage to the LCD.
- Do not scratch and damage the LCD with sharp objects.
- Keep the monitor away from objects and electrical appliances that may generate electromagnetic fields.
- Place the monitor on a flat, stable surface.  
The monitor may fall and there is the risk of damage or injury.
- Unplug the power cord when the monitor is not in use for a prolonged period of time.






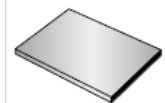


### **Instruction for Cleaning the Monitor**

- Make sure the power cord is unplugged.
- Do not spill or pour liquid on the monitor.
  
- Cleaning the LCD panel
  1. Use a clean, soft cloth to wipe off dust from the LCD.
  2. If still not clean, wipe the LCD with a clean soft cloth with a small amount of glass cleaner without alcohol or ammonia.

- Caution

Do not use alcohol or ammonia based cleaning products. Abrasive chemicals, such as alcohol or ammonia, may damage the monitor. The company is not responsible for the damages to the monitor caused by the use of alcohol or ammonia based cleaning products.

**ITEMS**











|                      |  |
|----------------------|--|
| ◆ LCD Monitor        |                                       |
| ◆ Stand              |                                       |
|                      |  <p>※ Push the hook until hanging</p> |
| ◆ Power Cord         |                                     |
| ◆ 15pin D-Sub Cable  |                                     |
| ◆ User Manual        |                                     |
| ◆ 24pin DVI Cable *1 |                                     |
| ◆ Audio Cable *2     |                                     |

\*1 : For DVI Model Only. \*2 : For Audio Model Only.

|               |  |
|---------------|--|
| <b>Notice</b> | Please make sure the following items are included with your monitor.<br>If any items are missing, contact your dealer. . |
|---------------|--|

## HOW TO CONNECT THE SEVERAL CABLES TO THE LCD MONITOR

### ▶ Setting up the LCD monitor

|   |   |   |   |   |     |         |                           |
|---|---|---|---|---|-----|---------|---------------------------|
|  |  |  |  |  | No. | Name    | Cable connections         |
|  |  |  |  |  | 1   | Power   | Power Cord                |
|   |   |   |   |   | 2   | PC      | 15-pin D-Sub Signal Cable |
|   |   |   |   |   | 3   | DVI     | DVI-D Cable *1            |
|   |   |   |   |   | 4   | SPK IN  | Audio Cable *2            |
|   |   |   |   |   | 5   | SPK OUT | External Speaker Cable *2 |

\*1 : For DVI Model Only






\*2 : For Audio Model Only

## ADJUSTING THE MONITOR

### The Function Control Buttons



### How to use the Function Key

|   |  |
|---|--|
|    | <p>Menu Key:</p> <ol style="list-style-type: none"> <li>1. First click : The OSD main menu appears.</li> <li>2. Second click : The OSD main menu disappears.</li> </ol>  |
|    | <p>Select Key : Select a command function.</p>   |
|  | <p>Down Key :</p> <ol style="list-style-type: none"> <li>1. Move the on-screen highlighted comand item to the next one.</li> <li>2. Decrease the current option value.</li> </ol> <p>Mute Key : *2<br/>Sound MUTE ON/OFF Button.</p>                         |
|  | <p>Up Key :</p> <ol style="list-style-type: none"> <li>1. Move the on-screen highlighted comand item to the previous one.</li> <li>2. Increase the current option value.</li> </ol> <p>Auto Key : *1<br/>This will optimize image quality automatically.</p> |
|  | <p>MWE Key : You can manually adjust the screen to your environment on the computer.<br/>ex.) Internet, Games, Movies ...</p>  |

\*1 : For Analog Mode Only , \*2 : For Audio Model Only.



## Q74A SPECIFICATIONS

### ► Q74A Specifications

| MODE                        |               | Analog   | Digital        |
|-----------------------------|---------------|--|----------------|
| Panel                       | Type          | TFT active matrix                              |                |
|                             | Size          | 17 inch  |                |
|                             | Pixel Pitch   | 337.92 X 270.336 (mm)                          |                |
|                             | Display Color | 8-bit (16,777,216 colors)                      |                |
| Display Resolution          | Basic         | 1280x1024@60Hz                                 |                |
|                             | Maximum       | 1280x1024@75Hz                                 | 1280x1024@60Hz |
| Frequency                   | Horizontal    | 31.5 ~ 80KHz                                   | 31 ~ 64KHz     |
|                             | vertical      | 56 ~ 75Hz                                      | 59 ~ 61Hz      |
| Connectors                  |               | 15 pin D-Sub                                   | 24pin DVI-D    |
|                             |               | Speaker Input/Headphone Output(Audio Cable) *1 |                |
| Tilting Degree (U/D)        |               | -5° ~ 20° Degree                               |                |
| Plug&Play                   |               | VESA DDC 1/2B                                  |                |
| Power                       | Input         | Internal type : 100~240V AC,50/60Hz, 0.5A      |                |
|                             | Consumption   | Under 40W (Speaker Max 4W *1)                  |                |
|                             | Standby mode  | 1W less  |                |
| Power Management            |               | PowerSaver                                     |                |
| Environmental Consideration | Temperature   | 0~25℃ (32°F~77°F)                              |                |
|                             | Humidity      | 90% less                                       |                |
| Dimensions                  | Outside       | 387mm * 185mm * 396mm (W*D*H)                  |                |
| Weight                      |               | 3.9kg  |                |

\*1 : For Audio Model Only

|        |  |
|--------|--|
| Notice | <p>This monitor can be installed on any Plug &amp; Play compatible system. Interaction of the monitor and computer systems will provide the best operating conditions and monitor settings. In most cases, monitor installation will proceed automatically, unless the user wishes to select alternate settings.</p> |
|--------|--|

### DISPLAY MODES

| Mode | Resolution  | Horizontal Frequency(KHz) | Vertical Frequency(Hz) | Pixel Clock (MHz) | Sync Polarity(H/V) |
|------|-------------|---------------------------|------------------------|-------------------|--------------------|
| VGA  | 720 X 400   | 31.468                    | 70.087                 | 28.322            | -/+                |
|      | 640 X 480   | 31.468                    | 59.940                 | 25.175            | -/-                |
|      |             | 35.000                    | 66.670                 | 30.240            | -/-                |
|      |             | 37.500                    | 75.000                 | 31.500            | -/-                |
| SVGA | 800 X 600   | 37.879                    | 60.300                 | 40.000            | + /+               |
|      |             | 48.077                    | 72.188                 | 50.000            | + /+               |
|      |             | 46.875                    | 75.000                 | 49.500            | + /+               |
| XGA  | 1024 X 768  | 48.363                    | 60.004                 | 65.000            | -/-                |
|      |             | 56.476                    | 70.000                 | 75.000            | -/-                |
|      |             | 60.023                    | 75.029                 | 78.750            | + /+               |
| SXGA | 1280 X 1024 | 63.981                    | 60.020                 | 108.000           | + , -/+ , -        |
|      |             | 79.976 *1                 | 75.025 *1              | 135.000 *1        | + /+ *1            |

\*1 : For Analog Mode Only.

### PowerSaver

| State | Power Consumption | Recovery Time | LED Color |
|-------|-------------------|---------------|-----------|
| ON    | Under 40W         | -             | Green     |
| OFF   | Less than 1W      | Within 2 Sec  | Amber     |

## OSD MENU

### ► Menu Tree

| Main Menu    | Sub Menu     | Function Description                         |                    |
|--------------|--------------|--|--------------------|
| PICTURE      | BRIGHTNESS   | Control of brightness                        |                    |
|              | CONTRAST     | Control of contrast                          |                    |
|              | H POSITION   | Control of horizontal position               |                    |
|              | V POSITION   | Control of vertical position                 |                    |
|              | PHASE        | Control of phase                             |                    |
|              | CLOCK        | Control of horizontal clock                  |                    |
|              | AUTO ADJUST  | Automatic adjust position                    |                    |
| COLOR        | BLUISH       | Color Temperature 9300k<br>(some blue color) |                    |
|              | REDISH       | Color Temperature 6500k<br>(some red color)  |                    |
|              | USER         | RED  | : 0 ~ 100          |
|              |              | GREEN  | : 0 ~ 100          |
|              |              | BLUE   | : 0 ~ 100          |
|              | AUTO COLOR   | Automatic adjust color                       |                    |
|              | OSD          | OSD H POSI                                   | Moves the OSD Menu |
| OSD V POSI   |              | Moves the OSD Menu                           |                    |
| OSD TIMER    |              | OSD display time                             |                    |
| TRANSPARENCY |              | OSD Transparency                             |                    |
| MISC         | LANGUAGE     | Select OSD language                          |                    |
|              | RECALL       | Factory default values                       |                    |
|              | INPUT SELECT | DVI, ANALOG Mode Change                      |                    |
|              | AUDIO        | Sound Mute On/Off function. *1               |                    |
|              | VOLUME       | You can adjust the volume. *1                |                    |

\*1 : For Audio Model Only

## **FACTORY SET**

OSD Menu => Misc => Recall => Yes. Every value changes factory setting value.

After factory set executes, power OFF → power ON automatically.

You must push the “AUTO” button because of optimum image quality automatically.

When user want factory setting value, you must execute this function.

## **BURN-IN MODE**

If you push the down button more than 5 seconds in disconnected signal cable status, you can see changed color.

Burn-In mode displays chaged color continually. (white, red, blue, green etc.)

We can check normal operating status of the monitor under mass production.

If you want to finish Burn-In mode, you can turn off the power by only push the power button.

## INVERTER & POWER

### ► Inverter & POWER(Q74A)

- L.I.P.S : LCD INVERTER POWER SYSTEM(FLF1742-20A)

### ► Specification

- Operate 4 CCFL Lamps.
- Current Feedback Control
- Input Voltage : DC 12V.
- When any lamp doesn't operate, the panel is under protection status.  
Protection status means that circuit protect the other lamp.
- PWM Control.
- Remote Power On/Off control
- High Efficiency

### ► Electrical Characteristics

| Description      | Min                  | Typ  | Max  | Sign  | Remark               |
|------------------|----------------------|------|------|-------|----------------------|
| Input Voltage    | 11.0                 | 12.0 | 13.0 | Vin   |                      |
| Input Current    | 1.5                  | 1.7  | 1.9  | A     | 12Vdc                |
| Output Current   | 5.0                  | 6.0  | 7.0  | mArms | 1ccfl current        |
| Lamp Frequency   | 40                   | 47   | 55   | kHz   |                      |
| ON/OFF Control   | Normal Operation     |      |      | ON    | Vin=12V<br>ON/OFF=5V |
|                  | Shunt-down(Lamp off) |      |      | OFF   | Vin=12V<br>ON/OFF=0V |
| Kick-Off Voltage | MORE THAN 1100       |      |      | Vrms  | Kick-Off             |

## ► Pin Connection

---

### - INPUT CONNECTOR CON1

| Pin NO. | Symbol | Description         |
|---------|--------|---------------------|
| 1,2     | VIN 1  | Input Voltage : 12V |
| 3,4,7   | GND    | GND                 |
| 5,6     | VIN 2  | Inopt Voltage : 5V  |
| 8       | ON/OFF | Power System Return |
| 9       | NC     | NC                  |

### - OUTPUT CONNECTOR CN1,2,3,4

| Pin NO. | Symbol    | Description          |
|---------|-----------|----------------------|
| 1       | HV1,2,3,4 | HI VOLTAGE TERMINAL  |
| 2       | LV1,2,3,4 | LOV VOLTAGE TERMINAL |

**TROUBLESHOOTING****► No operating at all**

| What you see  | Suggested Actions   |
|---|---|
| Is the power inserted correctly?  | Insert the plug correctly referring to the User Manual.   |
| Does the Power Adapter operate correctly?   | Check the Power Adapter.<br>The green LED is OK.  |
| The Power Adapter operates correctly, but the LCD Monitor does not operate correctly.       | Check the harness of the FUNC. B/D.   |
| Does The Power On/Off and the LED Operate correctly?  | If the program of the MICOM is error, then exchange the MICOM.<br>If the AD B/D is error, then exchange the AD B/D.   |
| The Power On/Off and the LED operate correctly, but the OSD menu doesn't display on screen. | First, operate the FACTORY SET.<br>Second, check the Panel Harness that is connected to the AD B/D.<br>Check the LAMP Harness of the Panel.<br>Lastly, exchange the LIPS. |
| The OSD menu operates correctly but the image doesn't display on screen.                    | Insert the SIGNAL Cable correctly referring to the User Manual.<br>Check the LAMP Harness of Panel and Inverter.<br>Lastly, Check the LAMP of Panel.                      |
| The Power On/Off operates correctly, but the screen is 'ALL WHITE'.                         | The LAMP is OK.<br>Check the Panel Harness that is connected to the AD B/D.   |
| The Power On/Off operates correctly, but the screen is 'ALL BLACK'.                         | Check the LAMP Cable.<br>Check or exchange the LIPS.<br>Check the Panel Cable.  |

► **Doesn't display on LCD**

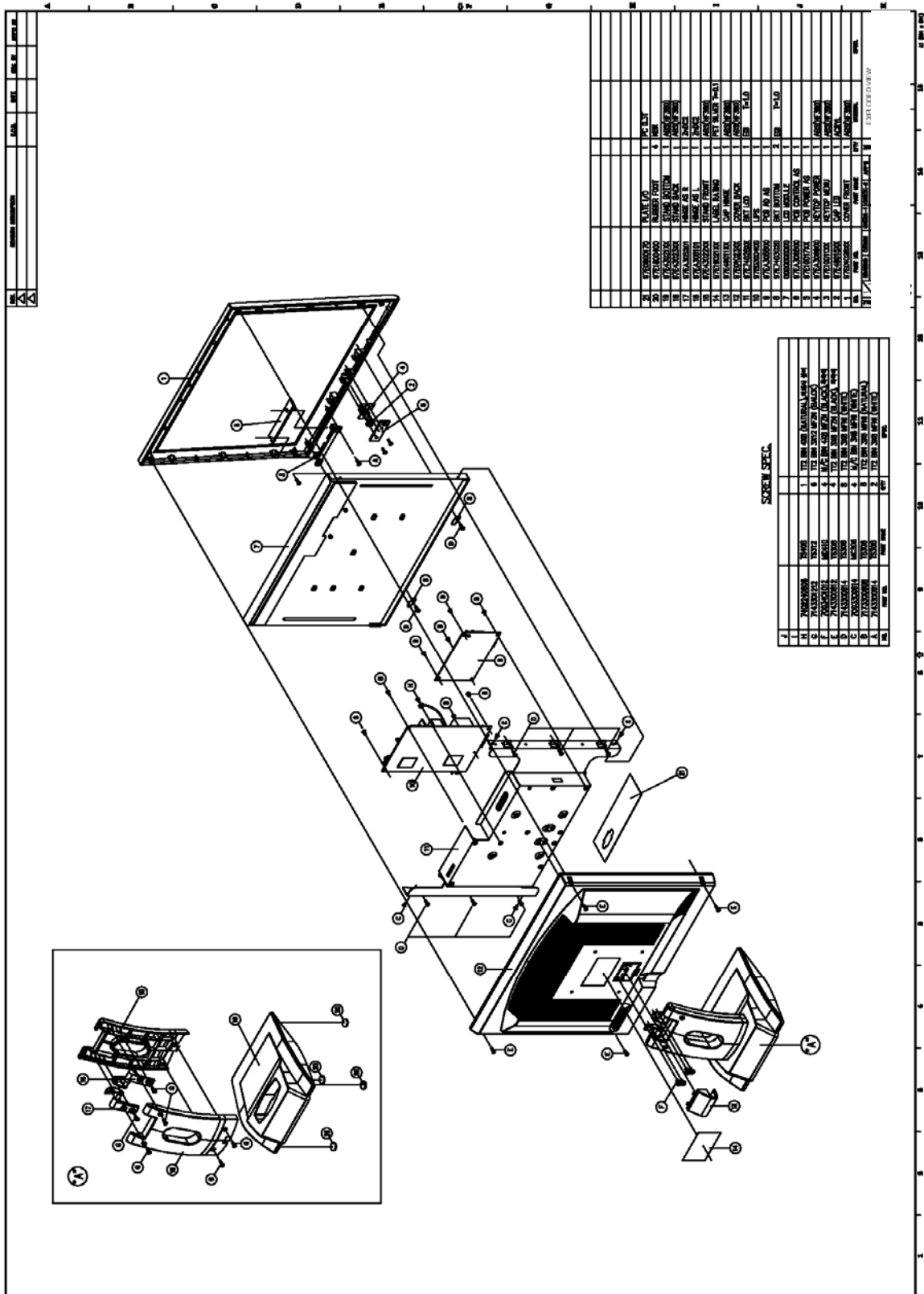
|  |  |
|--|--|
| <p>“VIDEO MODE NOT SUPPORTED” message</p>  | <p>[Windows]<br/>           Reboot safe mode. (press the F8 key during booting).<br/>           Remove GraphicCard Driver.<br/>           Reboot normal mode.<br/>           Reinstall GraphicCard Driver.</p> |
| <p>“No signal” message</p>   | <p>Check the signal cable.<br/>           Check DPMS mode in PC.<br/>           Check pins of the signal cable.</p>  |
| <p>If PC keeps DPMS status Continually<br/>           (No signal Input, LED color amber)</p> | <p>Check the signal cable.<br/>           Check pins of the signal cable.<br/>           Check HS_VGA and VS_VGA in schematics.</p>  |
| <p>Doesn't display on screen<br/>           Correctly include OSD menu</p>                   | <p>Check scaler output signal.<br/>           Check panel harness between panel and AD B/D.<br/>           Check solder status of the scaler.</p>  |
| <p>Doesn't display on screen<br/>           Correctly except OSD menu</p>                    | <p>Check the signal cable.<br/>           Check scaler input signal (RGB,H-SYNC,V-SYNC)</p>  |
| <p>Noise in vertical pattern.</p>  | <p>Execute Auto Adjust.<br/>           According to graphic card.<br/>           Check 60Hz vertical frequency in display properties.</p>  |
| <p>Display position error</p>  | <p>Execute Auto Adjust<br/>           Display position error occurred on dark or moving picture.(like game)<br/>           In this case, you must execute Auto Config in windows screen.</p>                   |



|  |   |
|--|---|
| Color error include OSD menu                         | Check the panel harness.<br>Check scaler output signal.   |
| Color error except OSD ment.                         | Check the signal cable.<br>Check pins of the signal cable.<br>Check input/output signal of the signal cable |
| Key button error                                     | Check the function(key) harness.<br>Check the function ass'y (mechanical).                                  |
| Brightness differ between upper and lower on screen. | Because of viewing angle.   |

**EXPLODE VIEW**

▶ Q74A



**PART LIST****▶ Q74A Mechanical Part List**SCREW SPEC.

| NO. | PART NO.   | PART NAME | Q'TY | SPEC.                         |
|-----|------------|-----------|------|-------------------------------|
| H   | 7402240808 | TS408     | 1    | TT2 BIN 4X8 (NATURAL), 치와샤 불이 |
| G   | 7143301212 | TS312     | 6    | TT2 BIN 3X12 MFZN (BALCK)     |
| F   | 7003401012 | MC410     | 4    | M/C BIN 4X8 MFZN (BLACK), 흑착색 |
| E   | 7143300812 | TS308     | 4    | TT2 BIN 3X8 MFZN (BLACK), 흑착색 |
| D   | 7143300814 | TS308     | 8    | TT2 BIN 3X8 MFNI (WHITE)      |
| C   | 7003300614 | MC306     | 4    | M/C BIN 3X6 MFNI (WHITE)      |
| B   | 7173300608 | TS306     | 8    | TT2 BIN 3X6 MFNI (NATURAL)    |
| A   | 7143300814 | TS308     | 2    | TT2 BIN 3X8 MFNI (WHITE)      |

| NO. | PART NO.   | PART NAME      | Q'TY | MATERIAL         | SPEC. |
|-----|------------|----------------|------|------------------|-------|
| 21  | 97E0600170 | PLATE I/O      | 1    | PC 0.3T          |       |
| 20  | 97E1800400 | RUBBER FOOT    | 4    | NBR              |       |
| 19  | 97E43021XX | STAND BOTTOM   | 1    | ABS(HF380)       |       |
| 18  | 97E43023XX | STAND BACK     | 1    | ABS(HF380)       |       |
| 17  | 97EA305201 | HINGE AS R     | 1    | ZnDC2            |       |
| 16  | 97EA305101 | HINGE AS L     | 1    | ZnDC2            |       |
| 15  | 97E43022XX | STAND FRONT    | 1    | ABS(HF380)       |       |
| 14  | 97E19021XX | LABEL RATING   | 1    | PET SILVER T=0.1 |       |
| 13  | 97E46011XX | CAP HINGE      | 1    | ABS(HF380)       |       |
| 12  | 97E01023XX | COVER BACK     | 1    | ABS(HF380)       |       |
| 11  | 97E74028XX | BKT LCD        | 1    | EGI T=1.0        |       |
| 10  | 97E0300400 | LIPS           | 1    |                  |       |
| 9   | 97EA305500 | PCB AD AS      | 1    |                  |       |
| 8   | 97E7403020 | BKT BOTTOM     | 2    | EGI T=1.0        |       |
| 7   | 0000000000 | LCD MODULE     | 1    |                  |       |
| 6   | 97EA306500 | PCB CONTROL AS | 1    |                  |       |
| 5   | 97E10017XX | PCB POWER AS   | 1    |                  |       |
| 4   | 97EA306600 | KEYTOP POWER   | 1    | ABS(HF380)       |       |
| 3   | 97E10011XX | KEYTOP MENU    | 1    | ABS(HF380)       |       |
| 2   | 97E46015XX | CAP LED        | 1    | ACRYL            |       |
| 1   | 97E01028XX | COVER FRONT    | 1    | ABS(HF380)       |       |

► Q74A AD B/D Part List

| Location   | Parts Code | Parts Name  | Parts Spec.                       | Remark |
|--|------------|-------------|-----------------------------------|--------|
| CE16   | CEXF1C471A | C ELECTRO   | 16V 470uF 20% 10x12.5 TAP         |        |
| CE5,CE6,CE12,<br>CE13,CE14,<br>CE15  | CEXF1C101A | C ELECTRO   | 16V 100uF 20% 6.3X11 TAP          |        |
| CE7, CE8, CE9, CE10,<br>CE11   | CEXF1C100A | C ELECTRO   | 16V 10uF 20% 5x11 TAP             |        |
| CON1   | 97E6200710 | CONN WAFER  | 12507WR-30000 (30P LVDS)          |        |
| C6, C7, C8, C10, C11,<br>C12, C18,C19,<br>C20, C21, C22, C23,<br>C24, C25, C26,<br>C27, C28, C29, C30,<br>C31, C34, C37,<br>C38, C39, C40, C41,<br>C42, C43, C44,<br>C45, C46, C47, C48, C49 | HCCK104ZBA | C CHIP CERA | 50V 100nF Z 1608                  |        |
| C9   | HCCH103KBA | C CHIP CERA | 25V 10nF K 1608                   |        |
| C13, C14, C15  | HCCK200JBA | C CHIP CERA | 50V 20pF J 1608                   |        |
|  | HCCK330JBA | C CHIP CERA | 50V 33pF J 1608                   |        |
| C17  | HCCK221JBA | C CHIP CERA | 50V 220pF J 1608                  |        |
| C35, C36   | HCCK101JBA | C CHIP CERA | 50V 100pF J 1608                  |        |
| C32, C33   | HCCK220JBA | C CHIP CERA | 50V 22pF J 1608                   |        |
| DZ1, DZ2, DZ3 ,DZ4,<br>DZ5, DZ6  | DUDZS5.6B- | ZENOR DIODE | UDZS 5.6B(SOD-323), ROHS 적용품      |        |
| DZ7  | DZMM55C5V6 | ZENER DIODE | ZMM55C5V6                         |        |
| D2, D3, D4, D5,<br>D6, D7, D8,<br>D9, D10,D11, D12, D13,<br>D14,D15, D16   | DBAV99---- | CHIP DIODE  | BAV99 (SOT-23)                    |        |
| FB4, FB5, FB7  | HFA1608121 | BEAD CHIP   | CIM10J121NC(BEAD_120<br>ohm_1608) |        |
| FB3, FB6, R60  | HRFS000JBA | R CHIP      | 1/16W 0 ohm J 1608                |        |

|  |            |                 |  |  |  |
|--|------------|-----------------|--|--|--|
| FB8  | HFA3216121 | BEAD CHIP       | CIM31J121NE (BEAD_120ohm_3216)                 |  |  |
| J4   | 97E6200110 | 15-PIN D-SUB    | HDR10-15F-RL                                   |  |  |
| J5   | 97E6200734 | CONN WAFER      | IBP-07R-20T(GIL-S-7P-S2L2-EF) :<br>Right angle |  |  |
| J6   | 97E6200790 | DVI_29PIN       | 361R02-0                                       |  |  |
| J7   | 99E6203095 | CONN WAFER      | IBP-09S-20T(GIL-S-9P-S2T2-EF) :                |  |  |
| Q4, Q5   | TSBT3904-B | TR CHIP         | SBT3904  |  |  |
| Q2, Q3   | TSBT3906-B | TR CHIP         | SBT3906  |  |  |
| R21, R24, R26, R41, R42,<br>R43, R52, R53, R64, R65                          | HRFS103JBA | R CHIP          | 1/16W 10K J 1608                               |  |  |
| R20  | HRFS222JBA | R CHIP          | 1/16W 2.2K J 1608                              |  |  |
| R27, R28, R45, R46, R50,<br>R54, R55, R57, R58, R59,<br>R61, R66, R100, R101 | HRFS472JBA | R CHIP          | 1/16W 4.7K J 1608                              |  |  |
| R7, R8, R9, R10, R11,<br>R12, R13, R14<br>R15, R16, R22, R51                 | HRFS101JBA | R CHIP          | 1/16W 100 ohm J 1608                           |  |  |
| R17, R18, R19  | HRFS750JBA | R CHIP          | 1/16W 75 ohm J 1608                            |  |  |
| R23, R25   | HRFS201JBA | R CHIP          | 1/16W 200 ohm J 1608                           |  |  |
| R29, R30, R31, R33, R35,<br>R36, R37R38, R39, R40                            | HRFS100JBA | R CHIP          | 1/16W 10 ohm J 1608                            |  |  |
| R32, R34   | HRFS220JBA | R CHIP          | 1/16W 22 ohm J 1608                            |  |  |
| R44  | HRFS821JBA | R CHIP          | 1/16W 820 ohm J 1608                           |  |  |
| R47, R48, R67, R68   | HRFS330JBA | R CHIP          | 1/16W 33 ohm J 1608                            |  |  |
| R49  | HRFS391JBA | R CHIP          | 1/16W 390 ohm J 1608                           |  |  |
| R56  | HRFS223JBA | R CHIP          | 1/16W 22K J 1608                               |  |  |
| R62  | HRFS104JBA | R CHIP          | 1/16W 100K J 1608                              |  |  |
| R63  | HRFS122JBA | R CHIP          | 1/16W 1.2K J 1608                              |  |  |
| U2   | 1A111733DC | IC REGULATOR    | APL1117-33UC-TR(TO-252)                        |  |  |
| U3   | 1AP1117E18 | IC REGULATOR    | AP1117E18A, SOT223-3L                          |  |  |
| U4   | 1TSUM56AL- | IC SCALER       | TSUM56AL-LF ( MSTAR )                          |  |  |
| U5   | 1AT24C02N- | IC EEPROM       | AT24C02N-10SU-2.7 , LEAD FREE                  |  |  |
| U6   | 1FDC6329L- | IC LOADSWITCH   | FDC6329L SUPERSOT TM-6 , ROHS                  |  |  |
| U7   | 1PS25LV512 | IC FLASH MEMORY | PS25LV512 ( MSTAR ) , 512KBIT ,                |  |  |

|          |             |                      |   |  |  |
|----------|-------------|----------------------|---|--|--|
| U8       | 1AT24C16--- | IC EEPROM<br>(ATMEL) | AT24C16N-10SU-2.7(SOIC 8P),<br>ROHS 적용품 |  |  |
| X1       | 5XJ14R318E  | CRYSTAL QUARTZ       | 14.3181MHz XTAL2 20pF DIP               |  |  |
|          |             |                      |   |  |  |
| CE1, CE4 | CEXF1C471A  | C ELECTRO            | 16V 470uF 20% 10x12.5 TAP               |  |  |
| CE2, CE3 | CEXF1C102A  | C ELECTRO            | 16V 1000uF 20% 10x16 TAP                |  |  |
| C1, C2   | HCCK104ZBA  | C CHIP CERA          | 50V 100nF Z 1608                        |  |  |
| C5       | HCCK105ZBA  | C CHIP CERA          | 50V 1uF Z 1608                          |  |  |
| C3, C4   | HCCF474MBA  | C CHIP CERA          | 16V 470nF M 1608                        |  |  |
| C3, C4   | HCCF474KBA  | C CHIP CERA          | 16V 470nF K 1608                        |  |  |
| D1       | DZN4002---  | DIODE                | 1N4002 100V 1A T-26                     |  |  |
| FB1, FB2 | HFA1608121  | BEAD CHIP            | CIM10J121NC(BEAD_120<br>ohm_1608)       |  |  |
| J1       | 97E6200600  | CONN WAFER           | 53014-0410                              |  |  |
| J2, J3   | 97E6300220  | STEREO JACK          | ST-320 (5P 3.5pi)                       |  |  |
| Q1       | TSBT3904-B  | TR CHIP              | SBT3904                                 |  |  |
| R4       | HRFS472JBA  | R CHIP               | 1/16W 4.7K J 1608                       |  |  |
| R2, R3   | HRFS103JBA  | R CHIP               | 1/16W 10K J 1608                        |  |  |
| R5, R6   | HRFS303JBA  | R CHIP               | 1/16W 30K J 1608                        |  |  |
| R1       | HRFS304JBA  | R CHIP               | 1/16W 300K J 1608                       |  |  |
| U1       | 1TDA7496L-  | IC AUDIO             | TDA7496L(ST)                            |  |  |
|          |             |                      |   |  |  |
|          |             |                      |   |  |  |

**-Red Calor : DVI Part**

**-Blue Calor : AUDIO Part**

► **Q74A FUNCTION KEY B/D Part List**

| Location             | Parts Code    | Parts Name   | Parts Spec.                   | A/J | Remark |
|----------------------|---------------|--------------|-------------------------------|-----|--------|
| PCB                  | 97E6500843-00 | FUNCTION_PCB | 1 LAYER(102.5*15mm) HL711S/D  |     |        |
| J1                   | 99E6203075    | CONN WAFER   | IBP-07S-20T(GIL-S-7P-S2L2-EF) |     |        |
| J2                   | 99E6203045    | CONN WAFER   | IBP-04S-20T(GIL-S-4P-S2T2-EF) |     |        |
| R1,R2                | HRFS152JBA    | R CHIP       | 1/6W 1.5K J 1608              |     |        |
| R3                   | HRFS302JBA    | R CHIP       | 1/6W 3K J 1608                |     |        |
| SW1,SW2,<br>SW3,SW4, | 5S51280A6-    | TACT SWITCH  | 1280A6 (KNOB-5mm)             |     |        |

► **Q74A FUNCTION LED B/D Part List**

| Location | Parts Code    | Parts Name       | Parts Spec.                   | A/J | Remark |
|----------|---------------|------------------|-------------------------------|-----|--------|
| PCB      | 97E6500844-00 | LED FUNCTION_PCB | 2 LAYER(41.5*15mm) HL711S/D   |     |        |
| J1       | 99E6203045    | CONN WAFER       | IBP-04S-20T(GIL-S-4P-S2T2-EF) |     |        |
| LED      | DLSAM3270-    | LED              | LED 3pai 3PIN(2.54-PITCH)     |     |        |
| SW5      | 5S51280A6-    | TACT SWITCH      | 1280A6 (KNOB-5mm)             |     |        |

## ▶ Inverter &amp; POWER BD Part List(FLF1742-20A)

| NO. | Ref.           | PART TYPE                | 1st. Vendor    | 2nd. Vendor | Q,ty |
|-----|----------------|--------------------------|----------------|-------------|------|
| 1   | LF101          | LFL002A                  | 동흥             | GET         | 1    |
| 2   | PC101          | LTV-817B-M,TCET1103      | LITON          | Vishay      | 1    |
| 3   | BD101          | KBP206G                  | TSC            |             | 1    |
| 4   | D104,105       | SB560                    | VISHAY-GS      | DIODES      | 2    |
| 5   | D103           | MBR10H150CT              | VISHAY-GS      |             | 1    |
| 6   | C105           | CE82u400V85SD,SHL,GS     | 삼영,삼화,만유       |             | 1    |
| 7   | C103,104       | KNB1560MKP-334K          | ISKRA          | PILCO,선일    | 2    |
| 8   | VS1            | VARISTOR 7D471           | ILJIN(AMOTECH) | CNR         | 1    |
| 9   | C101,102       | DG102Y1                  | 두산, 동일         |             | 2    |
| 10  | C106           | DG222Y1                  | 두산, 동일         |             | 1    |
| 11  | C2             | CE220U25V105LXZ,WL,RT    | 삼영,삼화,만유       |             | 1    |
| 12  | CN100          | SC-8R-F152P32R-GB        | SUPERCOM       |             | 1    |
| 13  | CN101          | GIL-S-9P-S2T2-EF         | LG전선           |             | 1    |
| 14  | IC101          | FSDM0565R                | FAIRCHILD      |             | 1    |
| 15  | CN1,2,3,4      | 35002WR-02, JE207-B1T-02 | 연호             | JAEEUN      | 4    |
| 16  | T101           | TRSL014A                 | 동흥             | GET         | 1    |
| 17  | T3             | TRS1801U - DIP           | 경인,링보          | 다폰          | 1    |
| 18  | U1,2           | AP4511GD-DIP             | APEC           |             | 2    |
| 19  | U3             | BIT3105 - DIP            | BITEK          |             | 1    |
| 20  | D101           | RS1J, UF4007             | TSC            | SHS         | 1    |
| 21  | ZD104          | ZY160                    | SHS            |             | 1    |
| 22  | D2,4           | DAN217,BAV99             | Rohm           | DIODES      | 2    |
| 23  | D5             | DAP202U                  | Rohm           |             | 1    |
| 24  | ZD1,2,3        | UDZS5.6B,BZT52C5V6S-7    | Rohm           | DIODES      | 3    |
| 25  | ZD102          | UDZS10B,BZT52C10V0S      | Rohm           | DIODES      | 1    |
| 26  | ZD101,103      | UDZS20B,BZT52C20V0S      | Rohm           | DIODES      | 2    |
| 27  | Q1             | 2N3904,MMBT3904          | Rohm           | DIODES      | 1    |
| 28  | C1,17          | CC106Z10V3216            | 삼성,TDK         | 태양유전        | 2    |
| 29  | C8             | CC473K50V2012            | 삼성,TDK         | 태양유전        | 1    |
| 30  | C13            | CC271K50V2012            | 삼성,TDK         | 태양유전        | 1    |
| 31  | C6,7,9,12,20   | CC103K50V2012            | 삼성,TDK         | 태양유전        | 5    |
| 32  | C11,22,24,122  | CC104K50V2012            | 삼성,TDK         | 태양유전        | 4    |
| 33  | C3,4,14,19,119 | CC105Z16V2012            | 삼성,TDK         | 태양유전        | 5    |
| 34  | R116,117       | CR2012J200               | 삼성             | Rohm        | 2    |
| 35  | R114,115       | CR2012J181               | 삼성             | Rohm        | 2    |
| 36  | R28,29         | CR2012J221               | 삼성             | Rohm        | 2    |
| 37  | R121           | CR2012J122               | 삼성             | Rohm        | 1    |
| 38  | R119,122       | CR2012J332               | 삼성             | Rohm        | 2    |
| 39  | R1,16,20,22,24 | CR2012J103               | 삼성             | Rohm        | 5    |
| 40  | R2,3,10        | CR2012J183               | 삼성             | Rohm        | 3    |

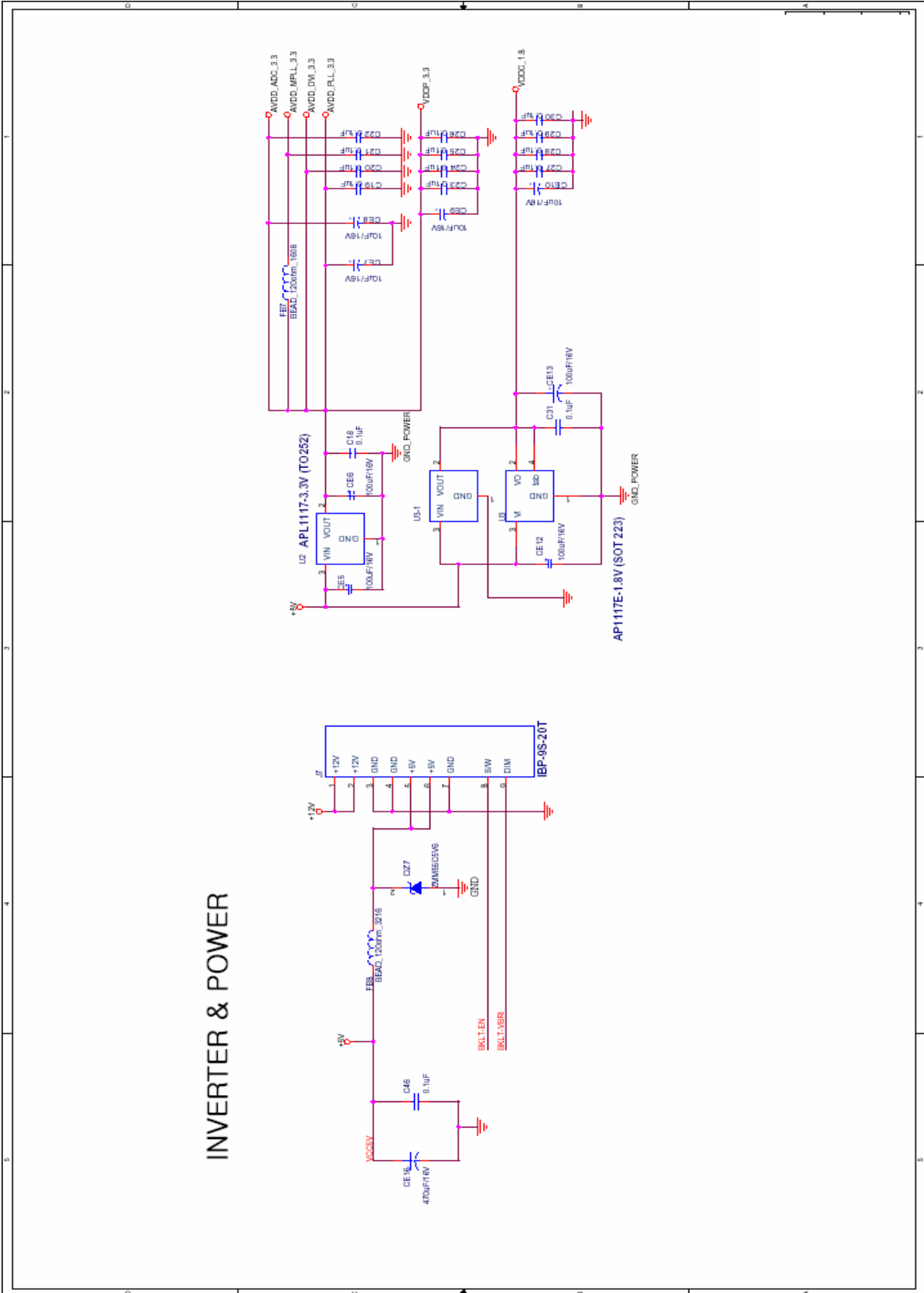


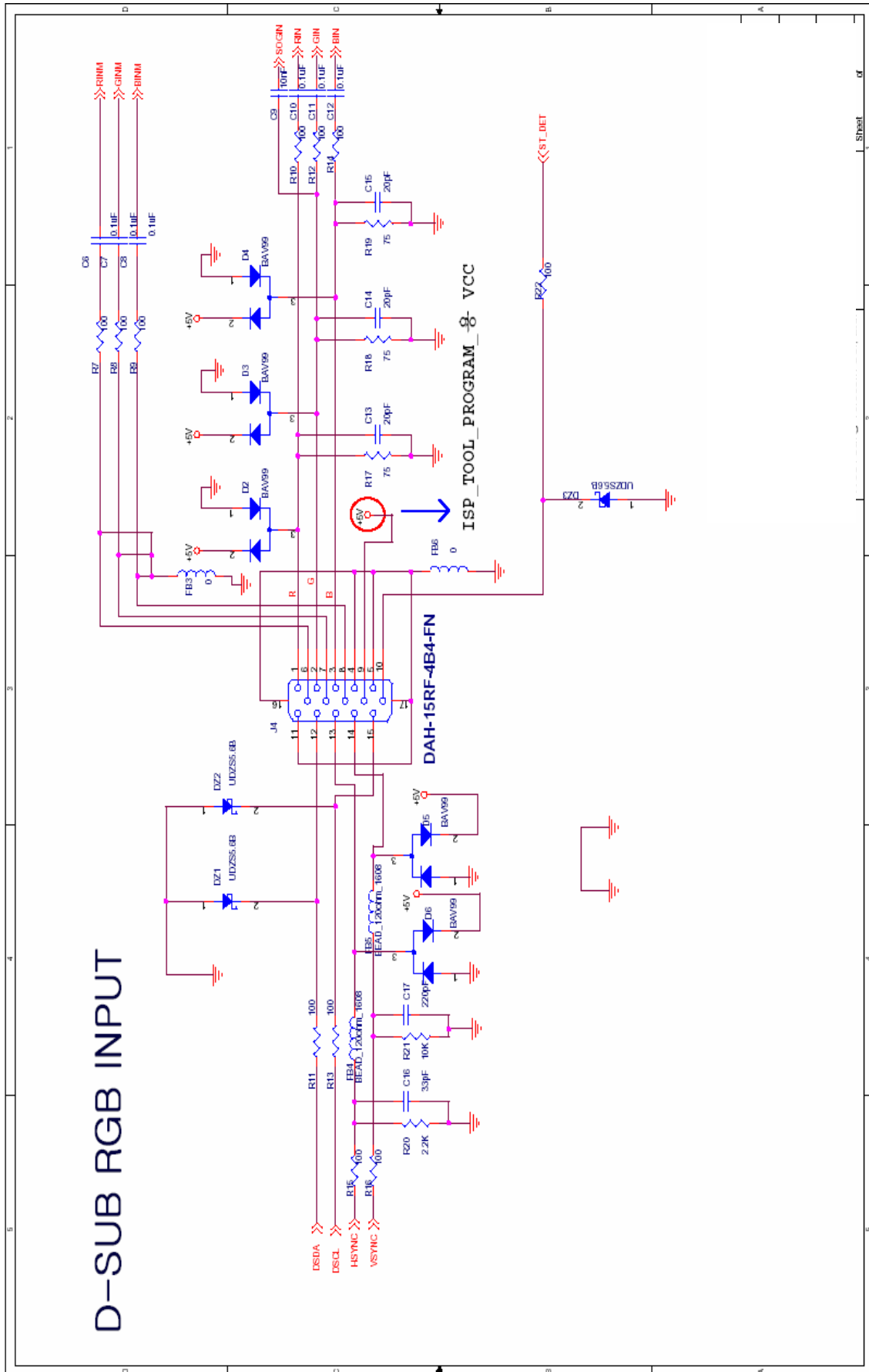
## ▶ Inverter &amp; POWER BD Part List(FLF1742-20A)

| NO. | Ref.         | PART TYPE                | 1st. Vendor | 2nd. Vendor | Q,ty |
|-----|--------------|--------------------------|-------------|-------------|------|
| 41  | R12          | CR2012J433               | 삼성          | Rohm        | 1    |
| 42  | R26          | CR2012J753               | 삼성          | Rohm        | 1    |
| 43  | R11          | CR2012J134               | 삼성          | Rohm        | 1    |
| 44  | R5           | CR2012J154               | 삼성          | Rohm        | 1    |
| 45  | R8,25        | CR2012J224               | 삼성          | Rohm        | 2    |
| 46  | R9           | CR2012J824               | 삼성          | Rohm        | 1    |
| 47  | R27          | CR2012J105               | 삼성          | Rohm        | 1    |
| 48  | R15,19       | CR2012F3600              | 삼성          | Rohm        | 2    |
| 49  | R126         | CR2012F1431              | 삼성          | Rohm        | 1    |
| 50  | R123         | CR2012F1801              | 삼성          | Rohm        | 1    |
| 51  | R124         | CR2012F2702              | 삼성          | Rohm        | 1    |
| 52  | R101,102,103 | CR3216J334               | 삼성          | Rohm        | 3    |
| 53  | R111         | RD 1/4W J 3.9 OHM        | 제일전자        | 스마트전자       | 1    |
| 54  | R105,106     | RD 1/4W J 33K OHM        | 제일전자        | 스마트전자       | 2    |
| 55  | C112         | 221K 1KV                 | 동일          | 두산          | 1    |
| 56  | C113         | 222K 1KV                 | 동일          | 두산          | 1    |
| 57  | C115         | CE680u25V105RD,KM        | 삼영,삼화,만유    |             | 1    |
| 58  | C117,118     | CE1000u10V105RD,KM       | 삼영,삼화,만유    |             | 2    |
| 59  | C110         | CE47U50V 85/CE47U50V 105 | 삼영,삼화,만유    |             | 1    |
| 60  | IC102        | TL431A                   | Fair Child  | 우석          | 1    |
| 61  | BC102        | EBFL001A                 | 동흥전자        | GET         | 1    |
| 62  | C5,10        | CL100K3K                 | 두산전자        | 동일          | 2    |
| 63  | D102         | PR1003, FR104            | Diodes      | 성호반도체       | 1    |
| 64  | TH101        | SCK08053MS,NTC 5D-9      | Thinking    | 삼경쎬라믹       | 1    |
| 65  | F101         | SR-5 3.15A               | 세이브퓨즈       |             | 1    |
| 66  | P.W.B FR-1   | PL1742C20                | 다산          | 동명          | 1    |

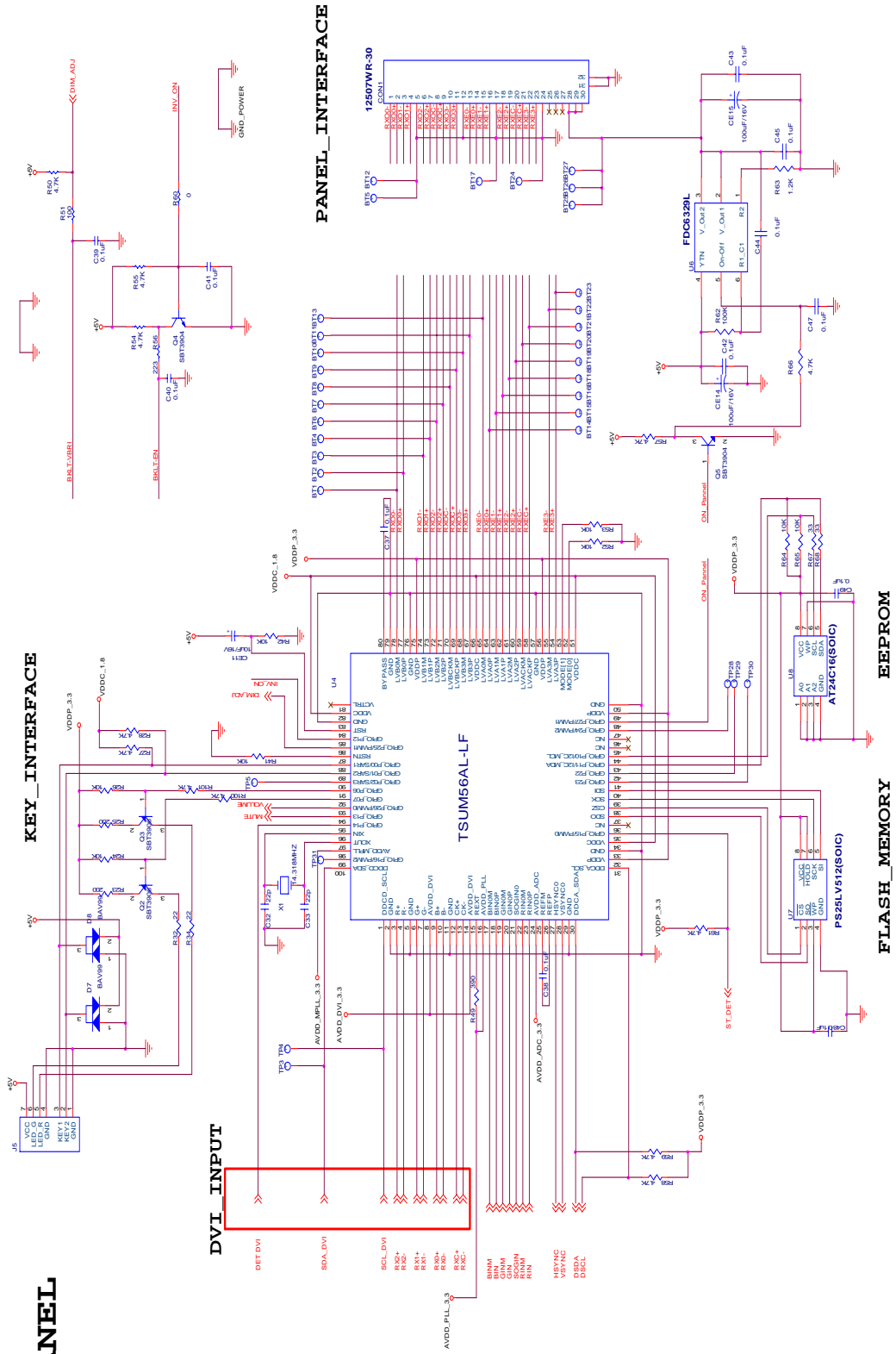
CIRCUIT DIAGRAM

► AD B/D(Q74A)

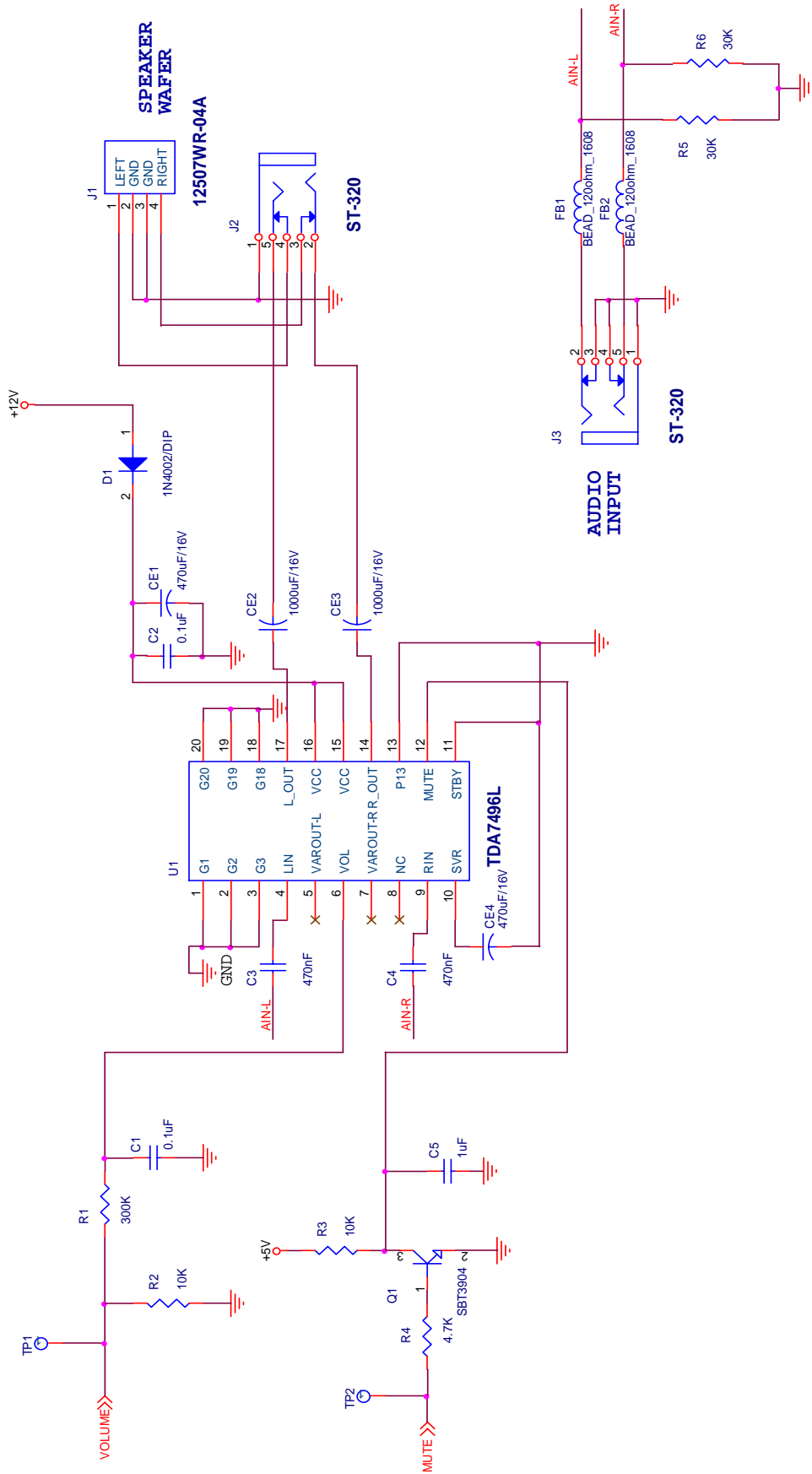




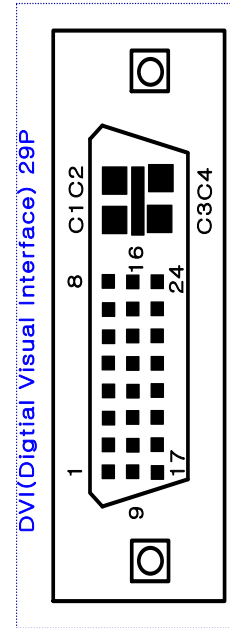
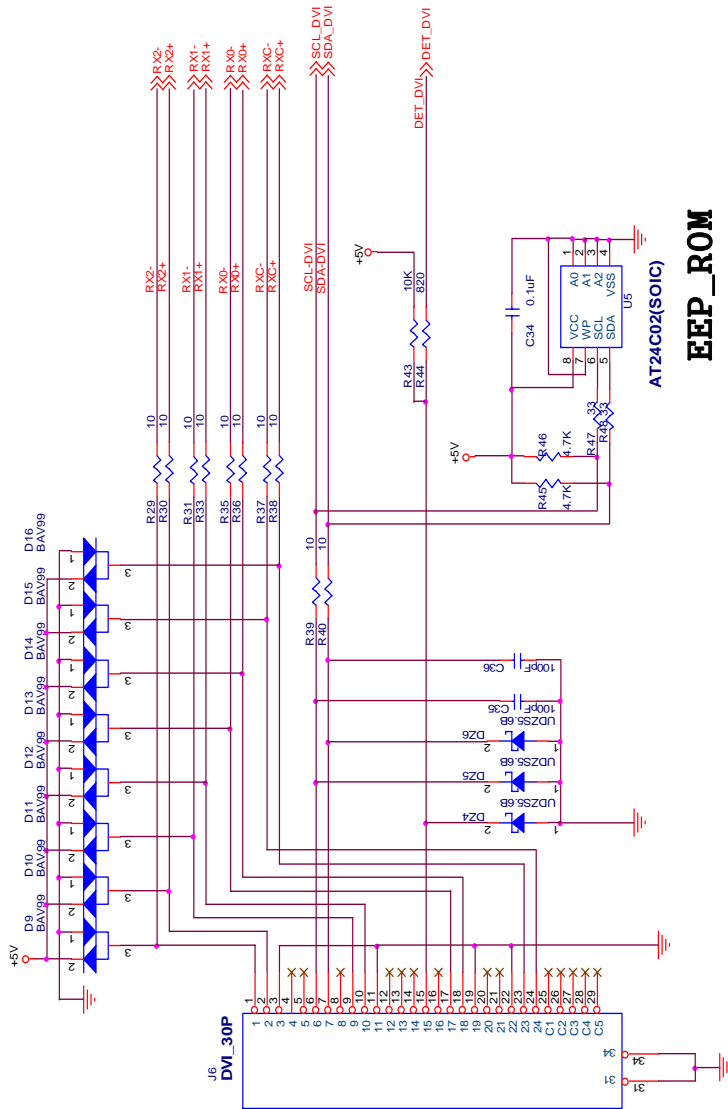
SCALER  
&  
PANEL



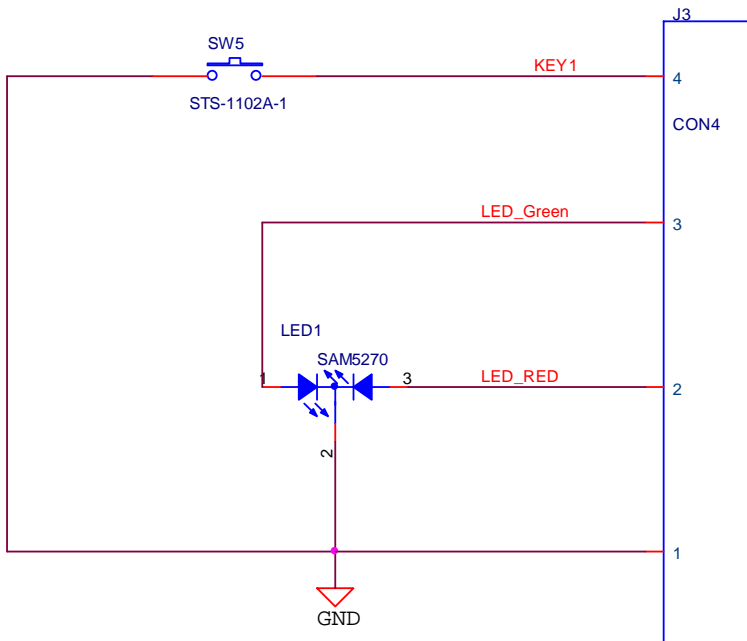
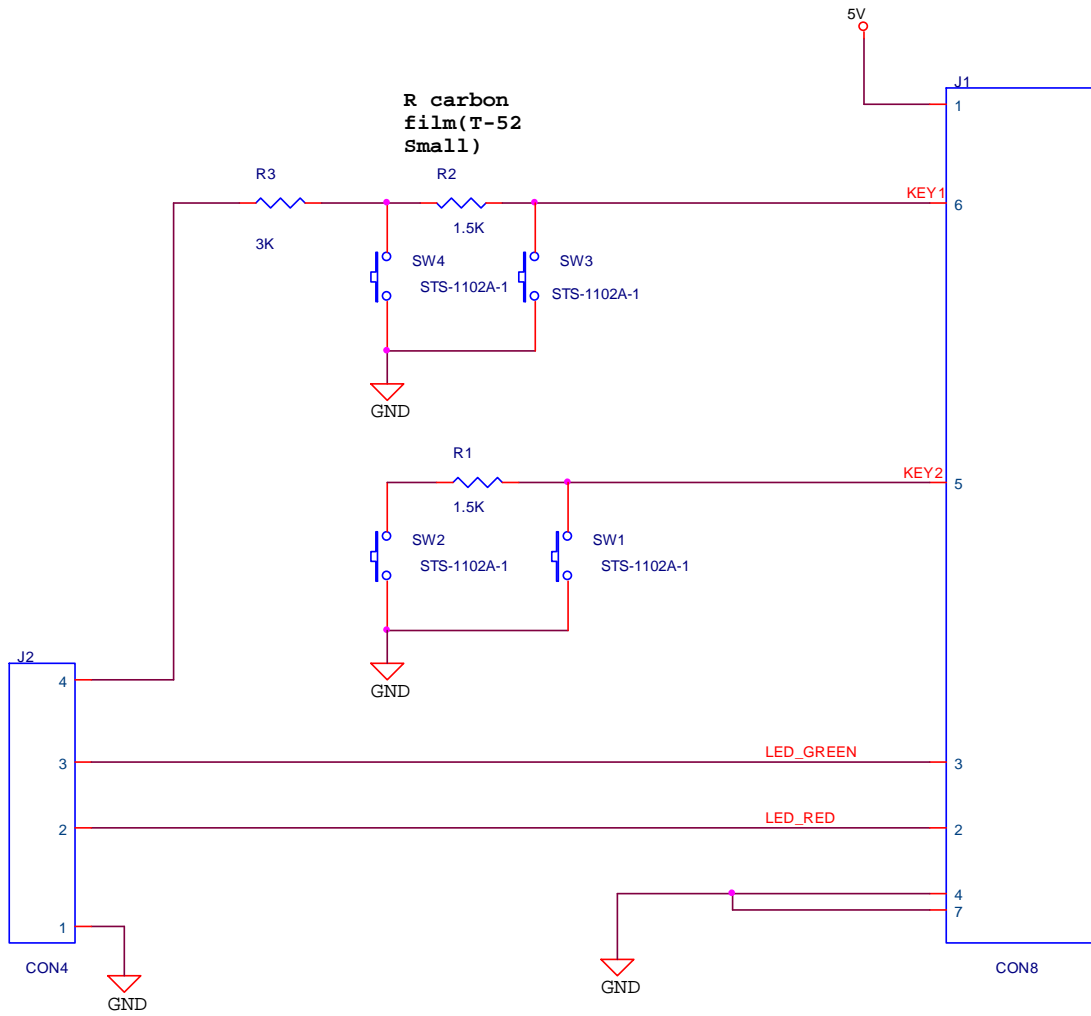
# AUDIO\_PART



# DVI\_INPUT

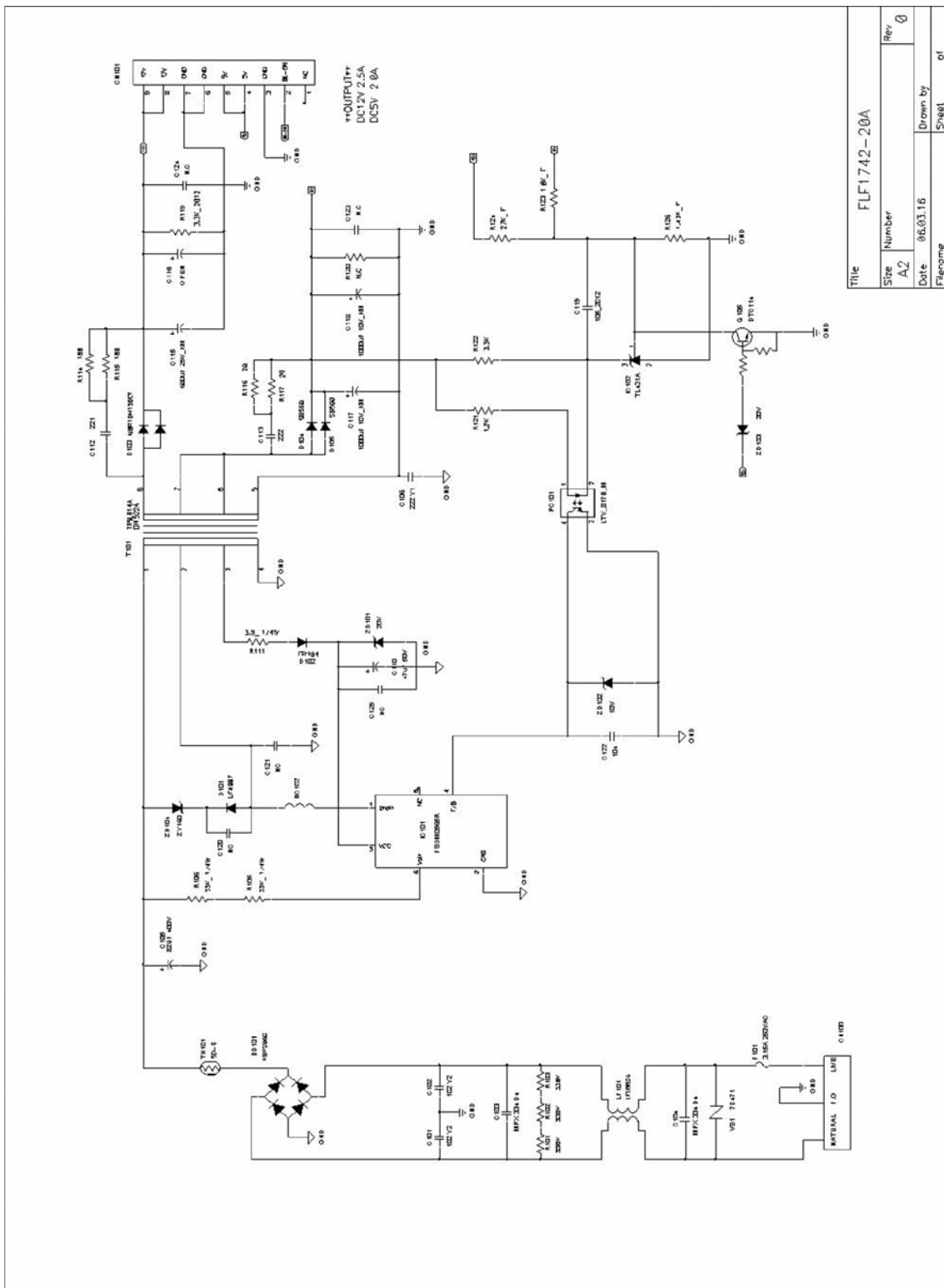


# EEP\_ROM



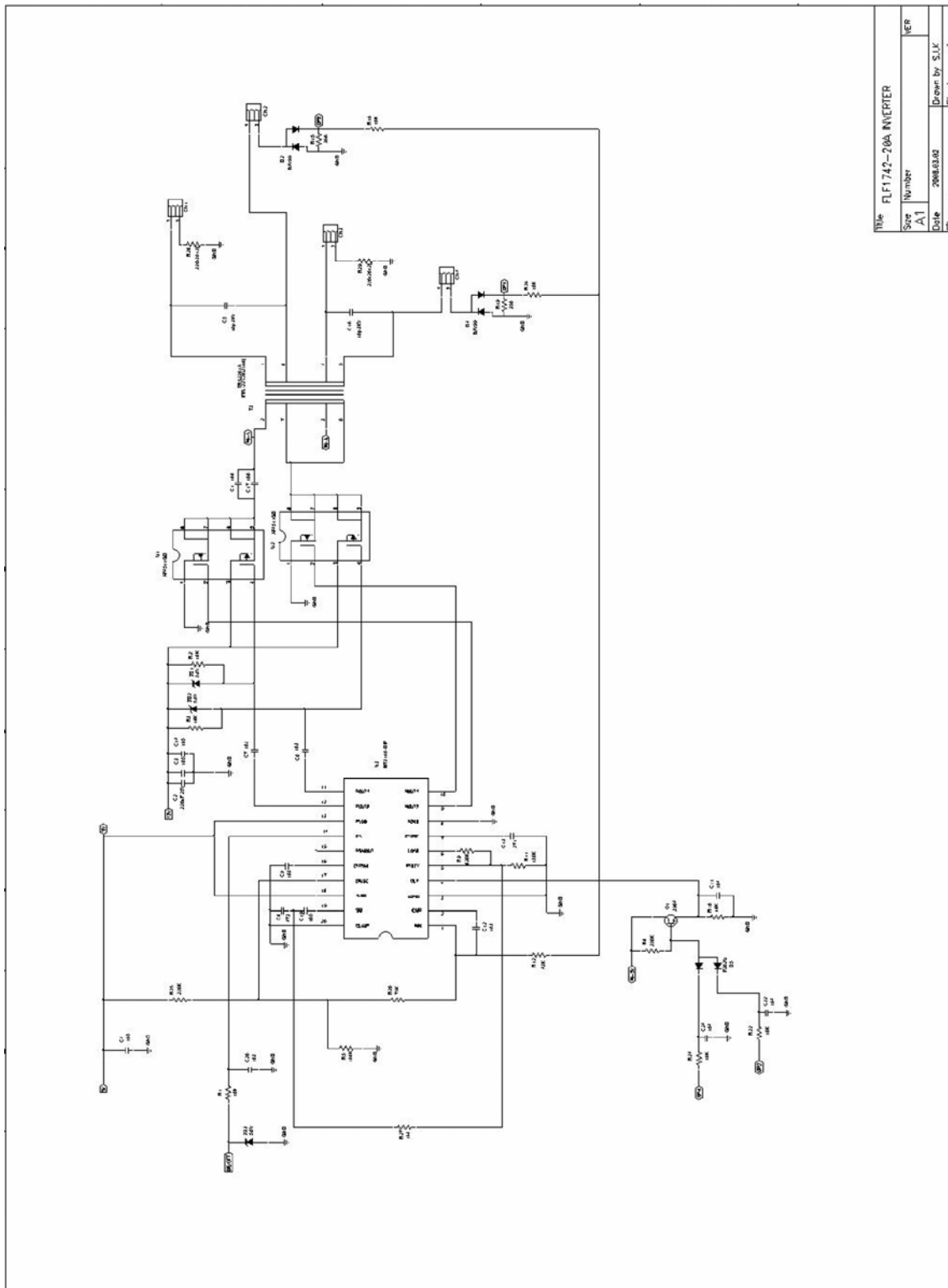
► Inverter & POWER B/D(FLF1742-20A)

- Adapter Cutcuit





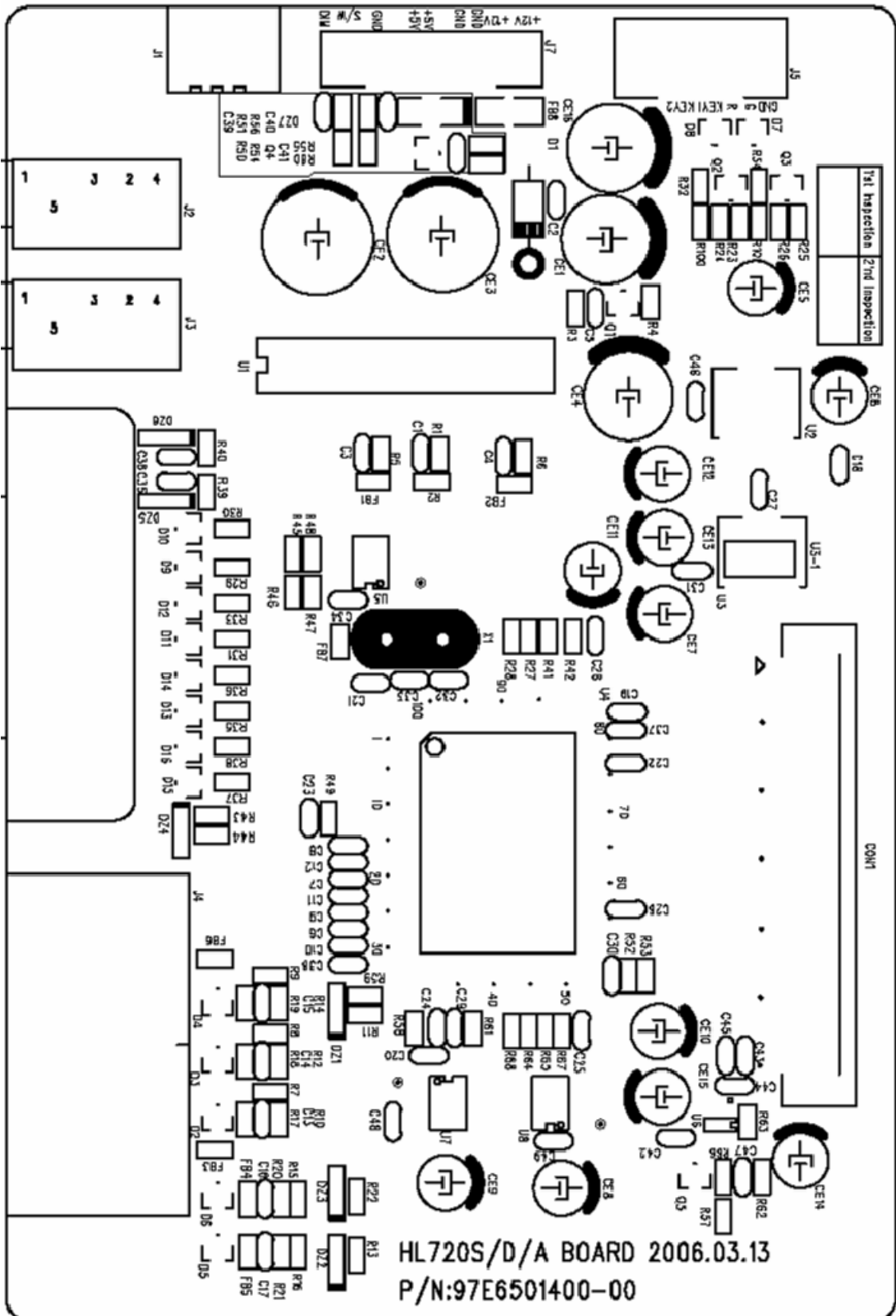
-Inverter Circuit



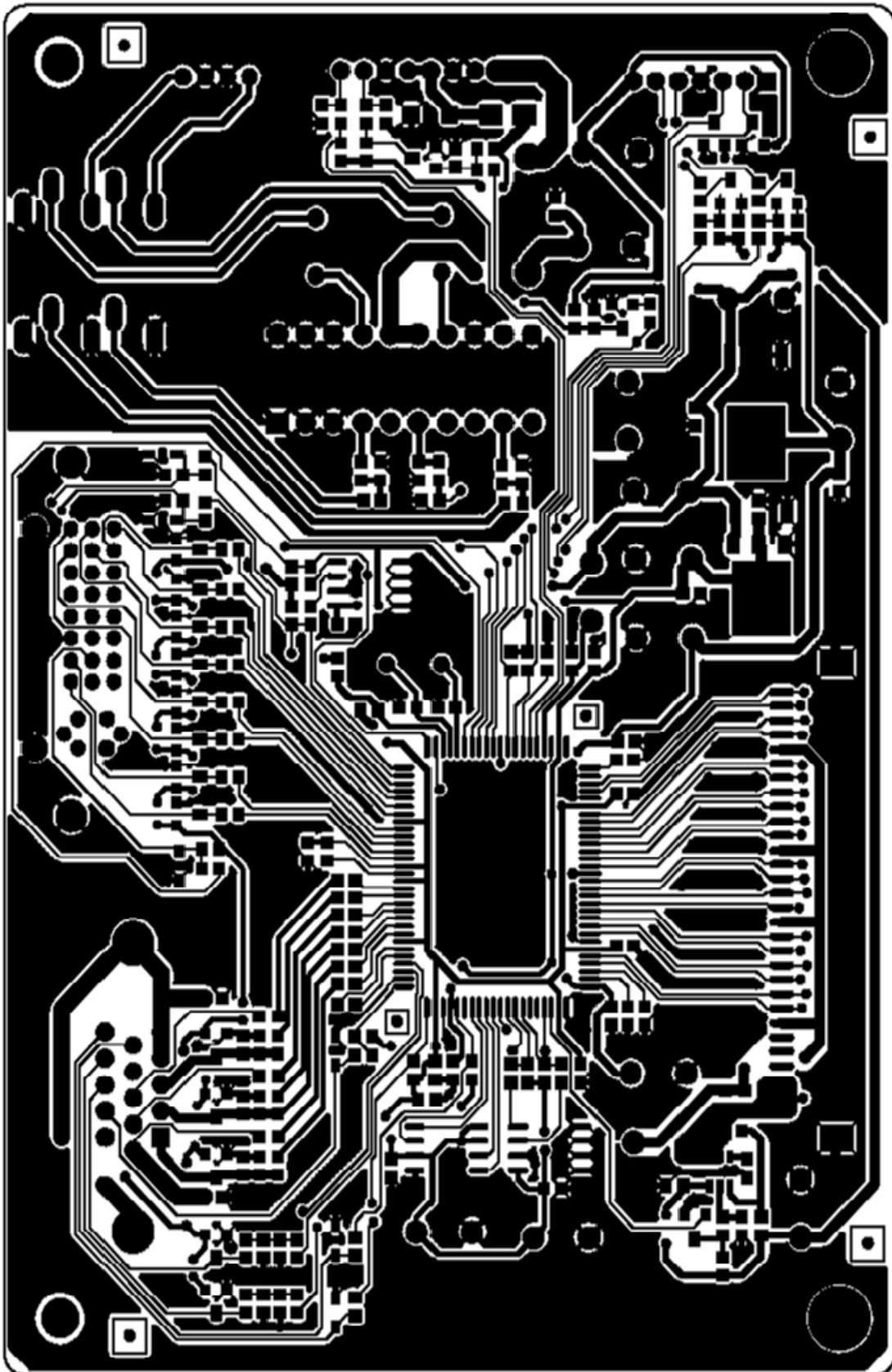
|          |                     |          |       |
|----------|---------------------|----------|-------|
| Title    | FL1742-20A INVERTER |          |       |
| Size     | Number              | REV      |       |
| A1       |                     |          |       |
| Date     | 2008.03.08          | Drawn By | S.L.K |
| Filename |                     | Sheet    | of    |

PCB Layout

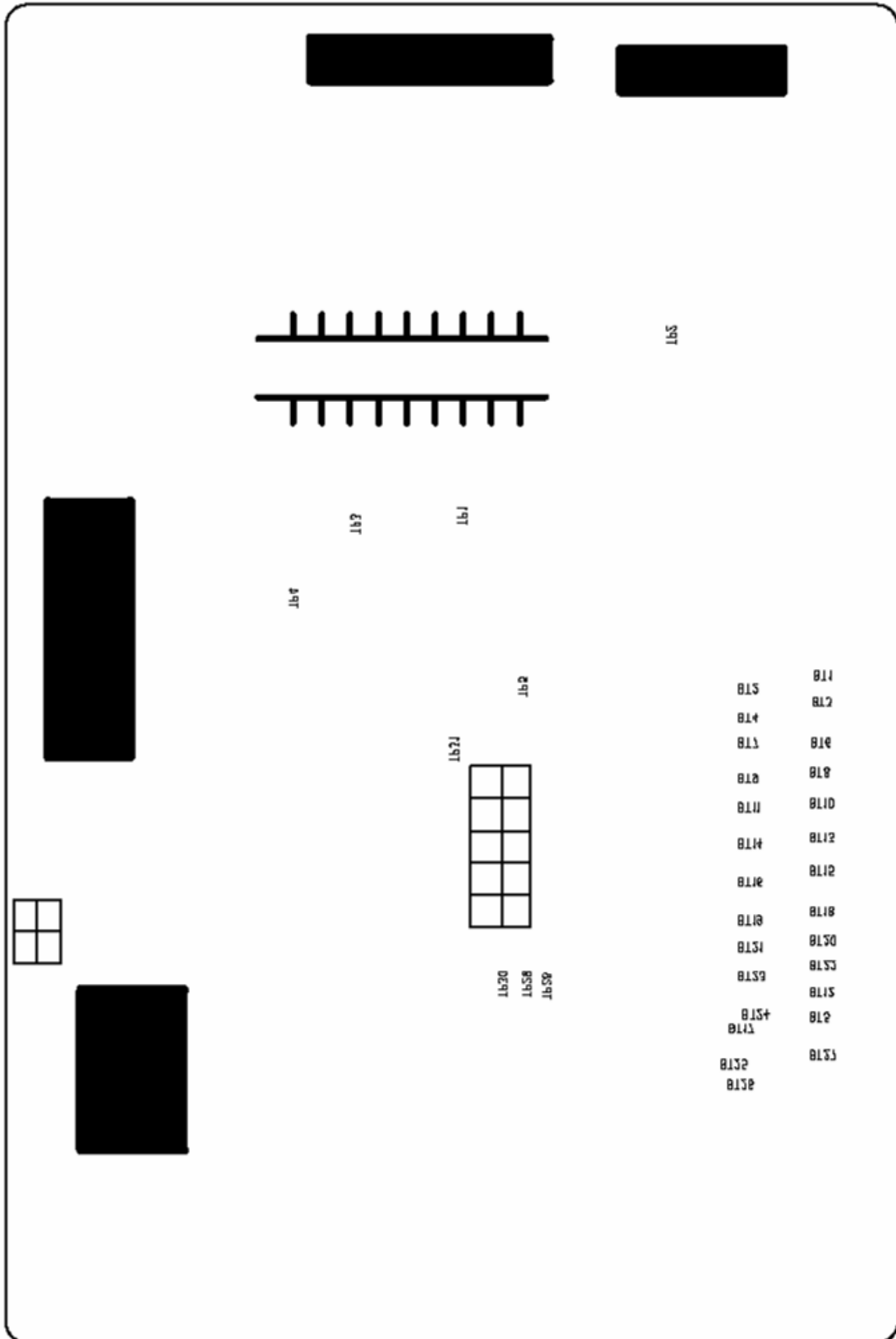
▶ AD B/D TOP SILK (Q74A)



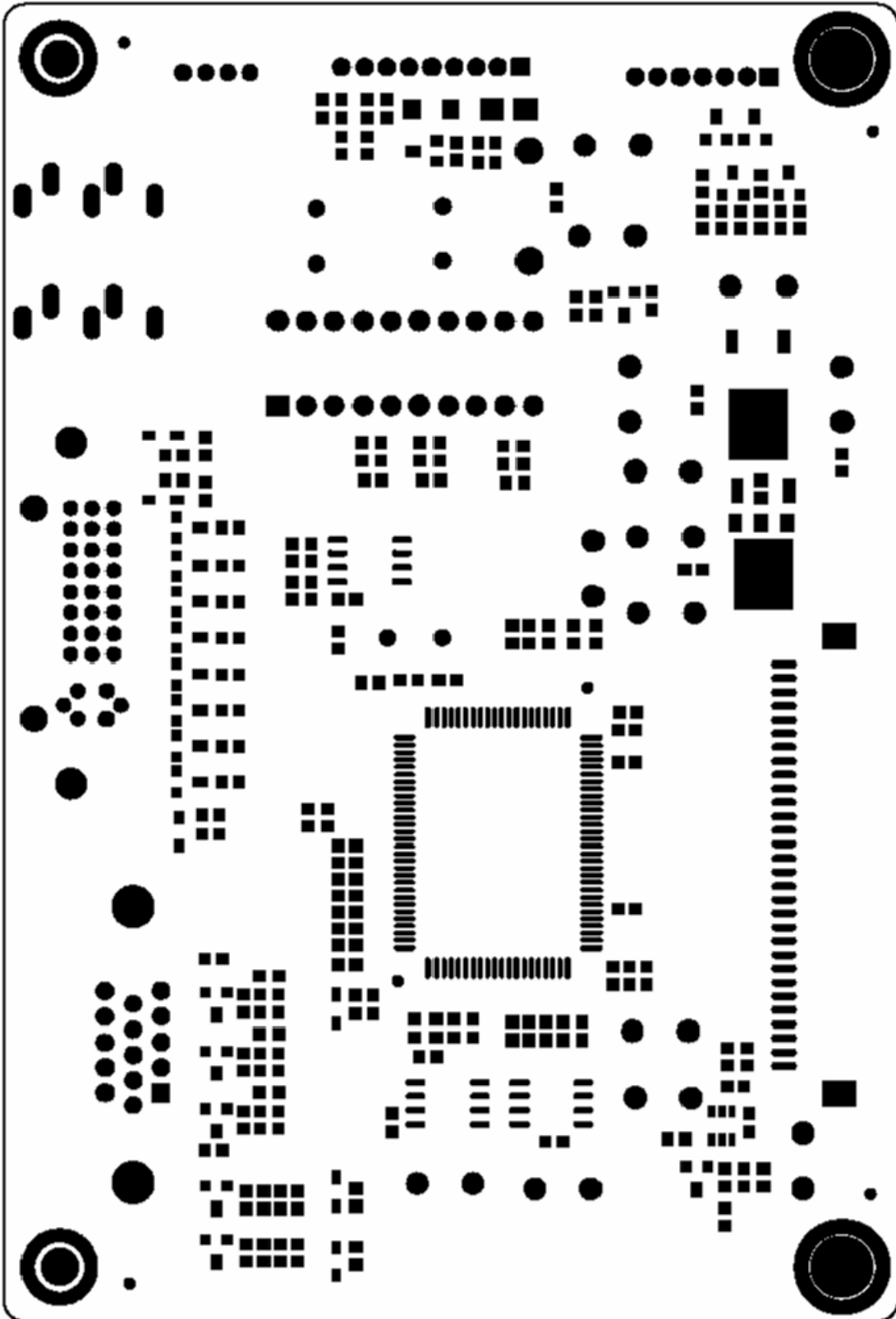
▶ AD B/D TOP PATTERN (Q74A)



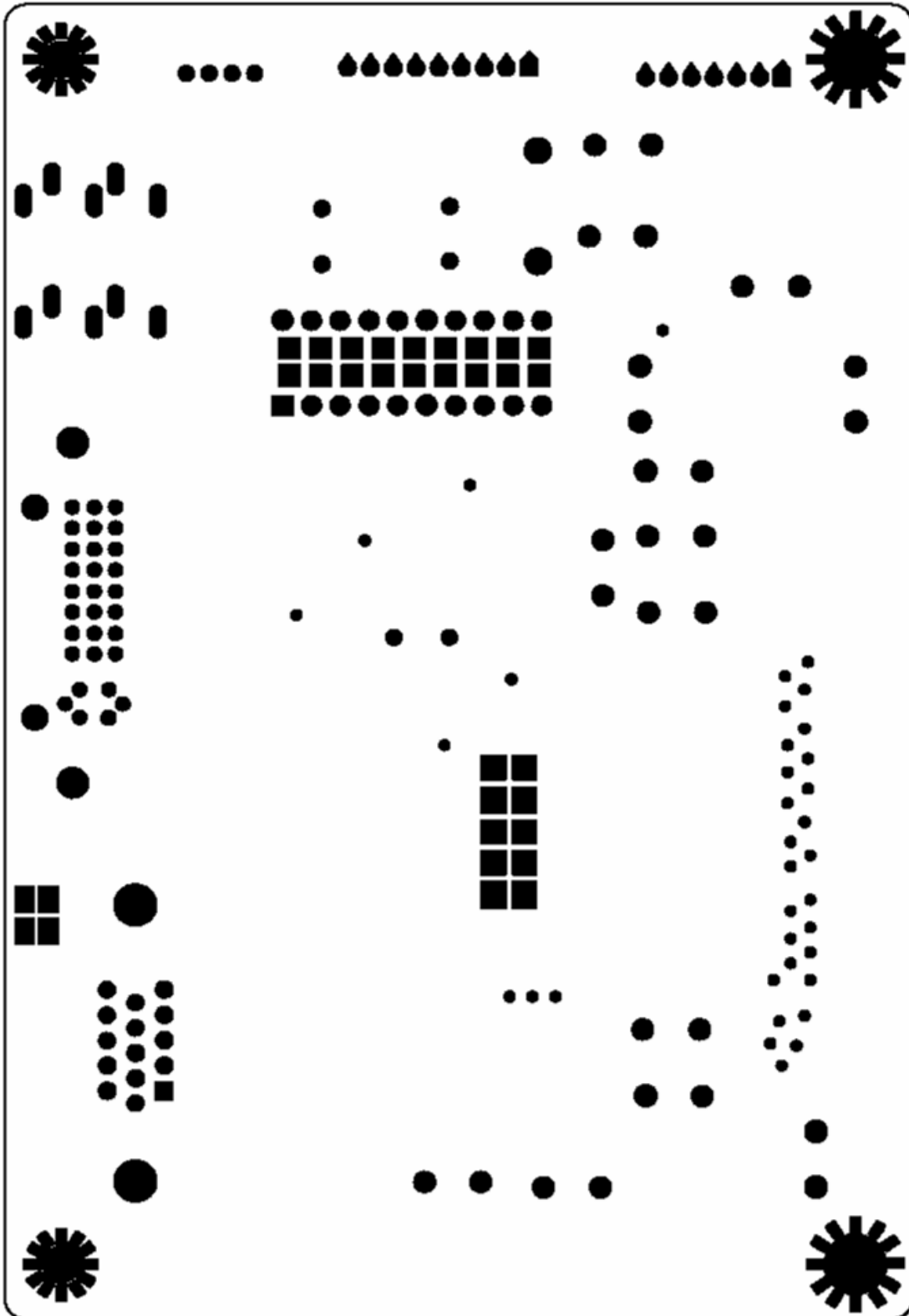
► AD B/D BOTTOM SILK (Q74A)



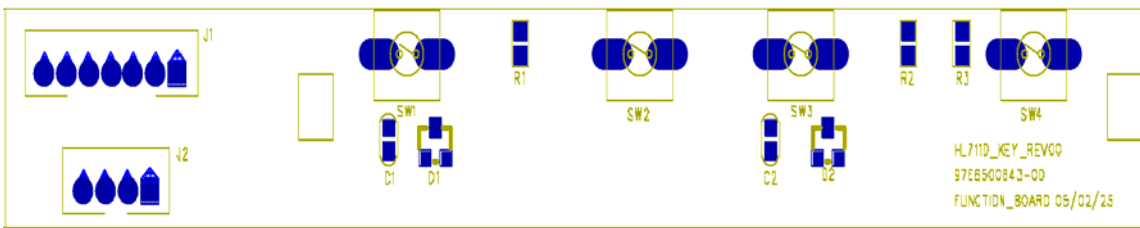
▶ AD B/D MASK TOP (Q74A)



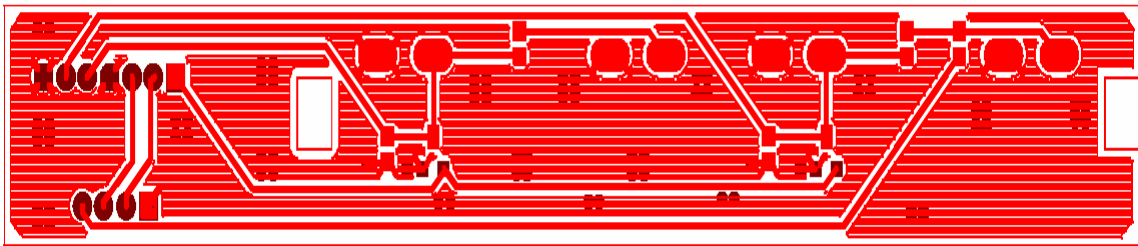
▶ AD B/D MASK BOTTOM (Q74A)



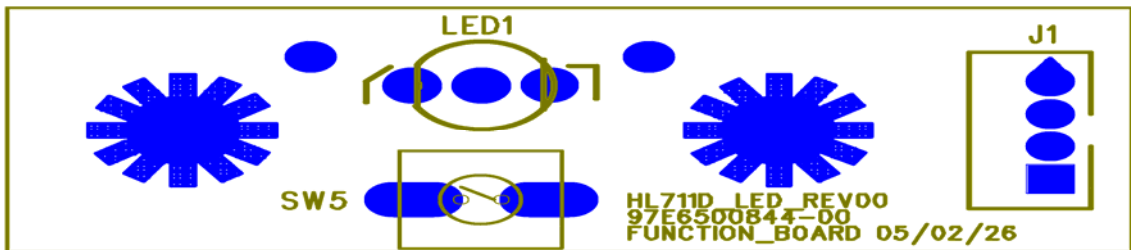
▶ FUNC B/D TOP SILK (Q74A)



▶ FUNC KEY B/D BOTTOM PATTERN (Q74A)



▶ FUNC LED B/D TOP SILK (Q74A)



▶ FUNC LED B/D BOTTOM PATTERN (Q74A)

