

# COLOR MONITOR SERVICE MANUAL

**CHASSIS NO.:** 

MODEL: FLATRON L1718S

(L1718S-SNQ/L1718S-BNQ.Axx\*EP)

xx\* means sales region and module type (AxxKEP : INL 8ms, AxxBEP : CPT 8ms, AxxJEP : INI

#### CAUTION

BEFORE SERVICING THE UNIT,
READ THE **SAFETY PRECAUTIONS** IN THIS MANUAL.



\*To apply the MSTAR Chip.

#### CONTENTS

| SPECIFICATIONS2                | SERVICE OSD            | 14             |
|--------------------------------|------------------------|----------------|
| PRECAUTIONS 3                  | TROUBLESHOOTING GUIDE  | 15             |
| TIMING CHART 7                 | WIRING DIAGRAM         | 22             |
| DISASSEMBLY8                   |                        |                |
| BLOCK DIAGRAM10                | EXPLODED VIEW          | 24             |
| DISCRIPTION OF BLOCK DIAGRAM11 | REPLACEMENT PARTS LIST | 25             |
| ADJUSTMENT 13                  | SCHEMATIC DIAGRAM      | <del>1</del> 8 |

#### **SPECIFICATIONS**

#### 1. LCD CHARACTERISTICS

Type : TFT Color LCD Module

Active Display Area : 17 inch

Pixel Pitch : 0.264 (H) x 0.264 (V) Color Depth : 16.2M colors

: 358.5 (H) x 296.5 (V) x 17.5(D) Size

Electrical Interface : LVDS

Surface Treatment : Hard-coating(3H), Haze=25% Anti-Glare treatment : Normally White, Transmissive mode Operating Mode Backlight Unit : Top/Bottom edge side 4-CCFL

(Cold Cathode Fluorescent Lamp)

#### 2. OPTICAL CHARACTERISTICS

2-1. Viewing Angle by Contrast Ratio ≥ 10

(a) For InnoLux MT170EN01 V.7(8ms), V9(5ms) panel 75°(85°)/Right75°(85°);Top 75°(85°) /Bottom60°(70°) at type CR≥10 (CR≥5)

(b) For CLAA170EA07QG(8ms), CLAA170EA07P(5ms)

panel: Left 70°(85°)/Right70°(85°);Top

63°(85°)/Bottom67°(85°) at type CR≥10(CR≥5)

2-2. Luminance

2-2. Luminance
(a) For InnoLux MT170EN01 V,7 & V.9 panel: 300cd/m² (Typ.) 250cd/m² (Min.) (6500k); 200 cd/m² (Min.) (9300k)

(b) For CLAA170EA07QG & 07P panel: 280cd/m² (Typ.) 250cd/m² (Min.) (6500k);200 cd/m² (Min.)(9300k) 2-3. Contrast Ratio

(a) For InnoLux MT170EN01 V.7 & V.9 700:1 Typical

(b) For CLAA170EA07QG panel: 500:1 Typical For CLAA170EA07P panel: 700:1 Typical

#### 3. SIGNAL (Refer to the Timing Chart)

3-1. Sync Signal Type

Separate Sync, Composite, SOG (Sync On Green)

3-2. Video Input Signal

1) Type : R, G, B Analog 2) Voltage Level : 0~0.71 V a) Color 0, 0 : 0 Vp-p b) Color 7, 0 : 0.467 Vp-p c) Color 15, 0 : 0.714 Vp-p 3) Input Impedance :75 $\Omega$ 

3-3. Operating Frequency

Horizontal 30 ~ 83kHz Vertical : 56 ~ 775Hz

#### 4. Max. Resolution

D-sub Analog : 1280 x 1024@75Hz

#### 5. POWER SUPPLY

5-1. Power: AC 90~264V, 47.5~63Hz, <0.8A

5-2. Power Consumption

| MODE            | H/V SYNC | VIDEO  | POWER CONSUMPTION | LED COLOR |
|-----------------|----------|--------|-------------------|-----------|
| OWER ON (NORAM) | ON/OFF   | ACTIVE | 31W Typ. 35W Max. | GREEN     |
| STAND-BY        | OFF/ON   | OFF    | Less than 1W      | AMBER     |
| SUSPEND         | ON/OFF   | OFF    | Less than 1W      | AMBER     |
| DPMS OFF        | OFF/ON   | OFF    | Less than 1W      | AMBER     |
| POWER S/W Off   |          | OFF    | Less than 1W      | OFF       |

#### 6. ENVIRONMENT

6-1. Operating Temperature : 10°C~35°C (50°F~95°F)

(Ambient)

: 10%~80% 6-2. Relative Humidity

(Non-condensing) : 50,000 HRS with 90% Confidence 6-3. MTBF

: 50,000 Hours(Min) Lamp Life

#### 7. DIMENSIONS (with TILT/SWIVEL)

Width : 308.4 mm : 180.1 mm Depth Height : 380.7 mm

#### 8. WEIGHT (with TILT/SWIVEL)

Net. Weight : 3.7 +/- 0.3 kg Gross Weight : 4.8 +/-0.4 kg

#### **PRECAUTION**

#### WARNING FOR THE SAFETY-RELATED COMPONENT.

- There are some special components used in LCD monitor that are important for safety. These parts are marked 

   \( \text{\text{marked}} \) on the schematic diagram and the replacement parts list. It is essential that these critical parts should be replaced with the manufacturer's specified parts to prevent electric shock, fire or other hazard.
- Do not modify original design without obtaining written permission from manufacturer or you will void the original parts and labor guarantee.

## TAKE CARE DURING HANDLING THE LCD MODULE WITH BACKLIGHT UNIT.

- Must mount the module using mounting holes arranged in four corners.
- Do not press on the panel, edge of the frame strongly or electric shock as this will result in damage to the screen.

- Do not scratch or press on the panel with any sharp objects, such as pencil or pen as this may result in damage to the panel.
- Protect the module from the ESD as it may damage the electronic circuit (C-MOS).
- Make certain that treatment person's body are grounded through wrist band.
- Do not leave the module in high temperature and in areas of high humidity for a long time.
- The module not be exposed to the direct sunlight.
- Avoid contact with water as it may a short circuit within the module.
- If the surface of panel become dirty, please wipe it off with a softmaterial. (Cleaning with a dirty or rough cloth may damage the panel.)

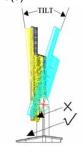
#### **⚠** CAUTION

Please use only a plastic screwdriver to protect yourself from shock hazard during service operation.

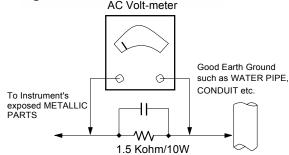
#### **↑** WARNING

#### BE CAREFUL ELECTRIC SHOCK!

- If you want to replace with the new backlight (CCFL) or inverter circuit, must disconnect the AC adapter because high voltage appears at inverter circuit about 650Vrms.
- Handle with care wires or connectors of the inverter circuit. If the wires are pressed cause short and may burn or take fire.
- Be careful while tilting and rotating the monitor to avoid pinching hand(s)



#### Leakage Current Hot Check Circuit



#### **SERVICING PRECAUTIONS**

**CAUTION:** Before servicing receivers covered by this service manual and its supplements and addenda, read and follow the **SAFETY PRECAUTIONS** on page 3 of this publication.

**NOTE:** If unforeseen circumstances create conflict between the following servicing precautions and any of the safety precautions on page 3 of this publication, always follow the safety precautions. Remember: Safety First.

#### **General Servicing Precautions**

- Always unplug the receiver AC power cord from the AC power source before;
  - a. Removing or reinstalling any component, circuit board module or any other receiver assembly.
  - b. Disconnecting or reconnecting any receiver electrical plug or other electrical connection.
  - c. Connecting a test substitute in parallel with an electrolytic capacitor in the receiver.
    - **CAUTION:** A wrong part substitution or incorrect polarity installation of electrolytic capacitors may result in an explosion hazard.
  - d. Discharging the picture tube anode.
- Test high voltage only by measuring it with an appropriate high voltage meter or other voltage measuring device (DVM, FETVOM, etc) equipped with a suitable high voltage probe.
  - Do not test high voltage by "drawing an arc".
- 3. Discharge the picture tube anode only by (a) first connecting one end of an insulated clip lead to the degaussing or kine aquadag grounding system shield at the point where the picture tube socket ground lead is connected, and then (b) touch the other end of the insulated clip lead to the picture tube anode button, using an insulating handle to avoid personal contact with high voltage.
- Do not spray chemicals on or near this receiver or any of its assemblies.
- 5. Unless specified otherwise in this service manual, clean electrical contacts only by applying the following mixture to the contacts with a pipe cleaner, cotton-tipped stick or comparable non-abrasive applicator; 10% (by volume) Acetone and 90% (by volume) isopropyl alcohol (90%-99% strength)

**CAUTION:** This is a flammable mixture.

Unless specified otherwise in this service manual, lubrication of contacts in not required.

- Do not defeat any plug/socket B+ voltage interlocks with which receivers covered by this service manual might be equipped.
- 7. Do not apply AC power to this instrument and/or any of its electrical assemblies unless all solid-state device heat sinks are correctly installed.
- Always connect the test receiver ground lead to the receiver chassis ground before connecting the test receiver positive lead.
  - Always remove the test receiver ground lead last.

Use with this receiver only the test fixtures specified in this service manual.

**CAUTION:** Do not connect the test fixture ground strap to any heat sink in this receiver.

#### **Electrostatically Sensitive (ES) Devices**

Some semiconductor (solid-state) devices can be damaged easily by static electricity. Such components commonly are called Electrostatically Sensitive (ES) Devices. Examples of typical ES devices are integrated circuits and some field-effect transistors and semiconductor "chip" components. The following techniques should be used to help reduce the incidence of component damage caused by static by static electricity.

- Immediately before handling any semiconductor component or semiconductor-equipped assembly, drain off any electrostatic charge on your body by touching a known earth ground. Alternatively, obtain and wear a commercially available discharging wrist strap device, which should be removed to prevent potential shock reasons prior to applying power to the unit under test.
- After removing an electrical assembly equipped with ES devices, place the assembly on a conductive surface such as aluminum foil, to prevent electrostatic charge buildup or exposure of the assembly.
- Use only a grounded-tip soldering iron to solder or unsolder ES devices.
- Use only an anti-static type solder removal device. Some solder removal devices not classified as "antistatic" can generate electrical charges sufficient to damage ES devices.
- Do not use freon-propelled chemicals. These can generate electrical charges sufficient to damage ES devices.
- 6. Do not remove a replacement ES device from its protective package until immediately before you are ready to install it. (Most replacement ES devices are packaged with leads electrically shorted together by conductive foam, aluminum foil or comparable conductive material).
- Immediately before removing the protective material from the leads of a replacement ES device, touch the protective material to the chassis or circuit assembly into which the device will be installed.

**CAUTION:** Be sure no power is applied to the chassis or circuit, and observe all other safety precautions.

 Minimize bodily motions when handling unpackaged replacement ES devices. (Otherwise harmless motion such as the brushing together of your clothes fabric or the lifting of your foot from a carpeted floor can generate static electricity sufficient to damage an ES device.)

#### **General Soldering Guidelines**

- 1. Use a grounded-tip, low-wattage soldering iron and appropriate tip size and shape that will maintain tip temperature within the range or 500F to 600F.
- 2. Use an appropriate gauge of RMA resin-core solder composed of 60 parts tin/40 parts lead.
- 3. Keep the soldering iron tip clean and well tinned.
- Thoroughly clean the surfaces to be soldered. Use a mall wire-bristle (0.5 inch, or 1.25cm) brush with a metal handle.
  - Do not use freon-propelled spray-on cleaners.
- 5. Use the following unsoldering technique
  - Allow the soldering iron tip to reach normal temperature.
    - (500F to 600F)
  - b. Heat the component lead until the solder melts.
  - Quickly draw the melted solder with an anti-static, suction-type solder removal device or with solder braid.
    - **CAUTION:** Work quickly to avoid overheating the circuitboard printed foil.
- 6. Use the following soldering technique.
  - a. Allow the soldering iron tip to reach a normal temperature (500F to 600F)
  - b. First, hold the soldering iron tip and solder the strand against the component lead until the solder melts.
  - c. Quickly move the soldering iron tip to the junction of the component lead and the printed circuit foil, and hold it there only until the solder flows onto and around both the component lead and the foil.
    - **CAUTION:** Work quickly to avoid overheating the circuit board printed foil.
  - d. Closely inspect the solder area and remove any excess or splashed solder with a small wire-bristle brush.

#### IC Remove/Replacement

Some chassis circuit boards have slotted holes (oblong) through which the IC leads are inserted and then bent flat against the circuit foil. When holes are the slotted type, the following technique should be used to remove and replace the IC. When working with boards using the familiar round hole, use the standard technique as outlined in paragraphs 5 and 6 above.

#### Removal

- Desolder and straighten each IC lead in one operation by gently prying up on the lead with the soldering iron tip as the solder melts.
- Draw away the melted solder with an anti-static suction-type solder removal device (or with solder braid) before removing the IC.

#### Replacement

- 1. Carefully insert the replacement IC in the circuit board.
- Carefully bend each IC lead against the circuit foil pad and solder it.
- Clean the soldered areas with a small wire-bristle brush. (It is not necessary to reapply acrylic coating to the areas).

## "Small-Signal" Discrete Transistor Removal/Replacement

- 1. Remove the defective transistor by clipping its leads as close as possible to the component body.
- Bend into a "U" shape the end of each of three leads remaining on the circuit board.
- 3. Bend into a "U" shape the replacement transistor leads.
- 4. Connect the replacement transistor leads to the corresponding leads extending from the circuit board and crimp the "U" with long nose pliers to insure metal to metal contact then solder each connection.

## Power Output, Transistor Device Removal/Replacement

- Heat and remove all solder from around the transistor leads
- 2. Remove the heat sink mounting screw (if so equipped).
- Carefully remove the transistor from the heat sink of the circuit board.
- Insert new transistor in the circuit board.
- 5. Solder each transistor lead, and clip off excess lead.
- 6. Replace heat sink.

#### **Diode Removal/Replacement**

- Remove defective diode by clipping its leads as close as possible to diode body.
- Bend the two remaining leads perpendicular y to the circuit board.
- Observing diode polarity, wrap each lead of the new diode around the corresponding lead on the circuit hoard
- 4. Securely crimp each connection and solder it.
- Inspect (on the circuit board copper side) the solder joints of the two "original" leads. If they are not shiny, reheat them and if necessary, apply additional solder.

## Fuse and Conventional Resistor Removal/Replacement

- Clip each fuse or resistor lead at top of the circuit board hollow stake.
- 2. Securely crimp the leads of replacement component around notch at stake top.
- 3. Solder the connections.
  - **CAUTION:** Maintain original spacing between the replaced component and adjacent components and the circuit board to prevent excessive componenttemperatures.

#### Circuit Board Foil Repair

Excessive heat applied to the copper foil of any printed circuit board will weaken the adhesive that bonds the foil to the circuit board causing the foil to separate from or "lift-off" the board. The following guidelines and procedures should be followed whenever this condition is encountered.

#### At IC Connections

To repair a defective copper pattern at IC connections use the following procedure to install a jumper wire on the copper pattern side of the circuit board. (Use this technique only on IC connections).

- Carefully remove the damaged copper pattern with a sharp knife. (Remove only as much copper as absolutely necessary).
- carefully scratch away the solder resist and acrylic coating (if used) from the end of the remaining copper pattern.
- Bend a small "U" in one end of a small gauge jumper wire and carefully crimp it around the IC pin. Solder the IC connection.
- 4. Route the jumper wire along the path of the out-away copper pattern and let it overlap the previously scraped end of the good copper pattern. Solder the overlapped area and clip off any excess jumper wire.

#### At Other Connections

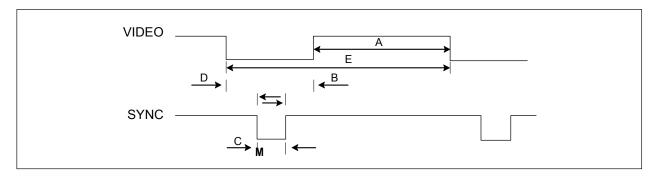
Use the following technique to repair the defective copper pattern at connections other than IC Pins. This technique involves the installation of a jumper wire on the component side of the circuit board.

- Remove the defective copper pattern with a sharp knife
  - Remove at least 1/4 inch of copper, to ensure that a hazardous condition will not exist if the jumper wire opens.
- Trace along the copper pattern from both sides of the pattern break and locate the nearest component that is directly connected to the affected copper pattern.
- Connect insulated 20-gauge jumper wire from the lead of the nearest component on one side of the pattern break to the lead of the nearest component on the other side.

Carefully crimp and solder the connections.

**CAUTION:** Be sure the insulated jumper wire is dressed so the it does not touch components or sharp edges.

## **TIMING CHART**



|    | distingis<br>hment | Polo<br>rity | DOT<br>CLOCK<br>[MHz] | Frequency<br>[kHz]/ [Hz] | Total period (E) | Display<br>(A) | Front Porch (D) | Sync. (C) | Back<br>Porch<br>(B) | Resolutio<br>n |
|----|--------------------|--------------|-----------------------|--------------------------|------------------|----------------|-----------------|-----------|----------------------|----------------|
| 1  | H(Pixels)          | +            | 25.175                | 31.469                   | 800              | 640            | 16              | 96        | 48                   | 640 x 350      |
|    | V(Lines)           | -            |                       | 70.08                    | 449              | 350            | 37              | 2         | 60                   |                |
| 2  | H(Pixels)          | -            | 28.321                | 31.468                   | 900              | 720            | 18              | 108       | 54                   | 720 X 400      |
| 2  | V(Lines)           | +            |                       | 70.09                    | 449              | 400            | 12              | 2         | 35                   | 720 X 400      |
| 3  | H(Pixels)          | -            | 25.175                | 31.469                   | 800              | 640            | 16              | 96        | 48                   | 640 x 480      |
|    | V(Lines)           | -            |                       | 59.94                    | 525              | 480            | 10              | 2         | 33                   | 040 X 400      |
| 4  | H(Pixels)          | -            | 31.5                  | 37.5                     | 840              | 640            | 16              | 64        | 120                  | 640 x 480      |
| 4  | V(Lines)           | -            |                       | 75                       | 500              | 480            | 1               | 3         | 16                   | 040 X 460      |
| 5  | H(Pixels)          | +            | 40.0                  | 37.879                   | 1056             | 800            | 40              | 128       | 88                   | 800 x 600      |
| 3  | V(Lines)           | +            |                       | 60.317                   | 628              | 600            | 1               | 4         | 23                   | 300 x 000      |
| 6  | H(Pixels)          | +            | 49.5                  | 46.875                   | 1056             | 800            | 16              | 80        | 160                  | 800 x 600      |
| 0  | V(Lines)           | +            |                       | 75.0                     | 625              | 600            | 1               | 3         | 21                   | 300 X 000      |
| 7  | H(Pixels)          | +/-          | 57.283                | 49.725                   | 1152             | 832            | 32              | 64        | 224                  | 832 x 624      |
|    | V(Lines)           | +/-          |                       | 74.55                    | 667              | 624            | 1               | 3         | 39                   | 032 X 024      |
| 8  | H(Pixels)          | -            | 65.0                  | 48.363                   | 1344             | 1024           | 24              | 136       | 160                  | 1024 x 768     |
| 0  | V(Lines)           | -            |                       | 60.0                     | 806              | 768            | 3               | 6         | 29                   | 1024 X 700     |
| 9  | H(Pixels)          | -            | 78.75                 | 60.123                   | 1312             | 1024           | 16              | 96        | 176                  | 1024 x 768     |
|    | V(Lines)           | -            |                       | 75.029                   | 800              | 768            | 1               | 3         | 28                   | 1024 X 700     |
| 10 | H(Pixels)          | +/-          | 100.0                 | 68.681                   | 1456             | 1152           | 32              | 128       | 144                  | 1152 x 870     |
| 10 | V(Lines)           | +/-          |                       | 75.062                   | 915              | 870            | 3               | 3         | 39                   | 1132 x 070     |
| 11 | H(Pixels)          | +/-          | 92.978                | 61.805                   | 1504             | 1152           | 18              | 134       | 200                  | 1152 x 900     |
| 11 | V(Lines)           | +/-          |                       | 65.96                    | 937              | 900            | 2               | 4         | 31                   | 1132 x 900     |
| 12 | H(Pixels)          | +            | 108.0                 | 63.981                   | 1688             | 1280           | 48              | 112       | 248                  | 1280 x 1024    |
| 12 | V(Lines)           | +            |                       | 60.02                    | 1066             | 1024           | 1               | 3         | 38                   | 1200 X 1024    |
| 13 | H(Pixels)          | +            | 135.0                 | 79.976                   | 1688             | 1280           | 16              | 144       | 248                  | 1280 x 1024    |
| 13 | V(Lines)           | +            |                       | 75.035                   | 1066             | 1024           | 1               | 3         | 38                   | 1200 x 1024    |

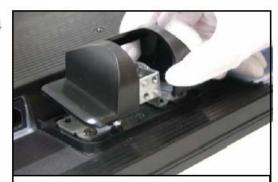
#### **DISASSEMBLY**

#1



Put a soft cushion on the floor and lay the stand on its side so that the base is accessble.

#4



Put the hing-cover upward and remove it.

#2



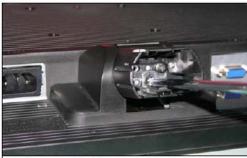
Hold the set while folding the lacth and take out the stand base.

#5



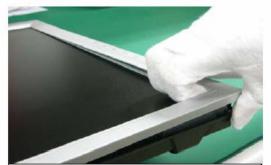
5-1. Unsrew the 4 srews on the hinge. 5-2. Put the hing upward and remove it.

#3

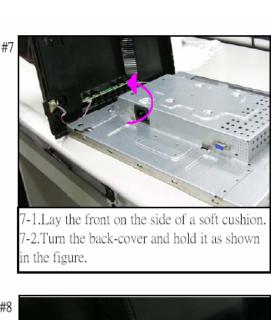


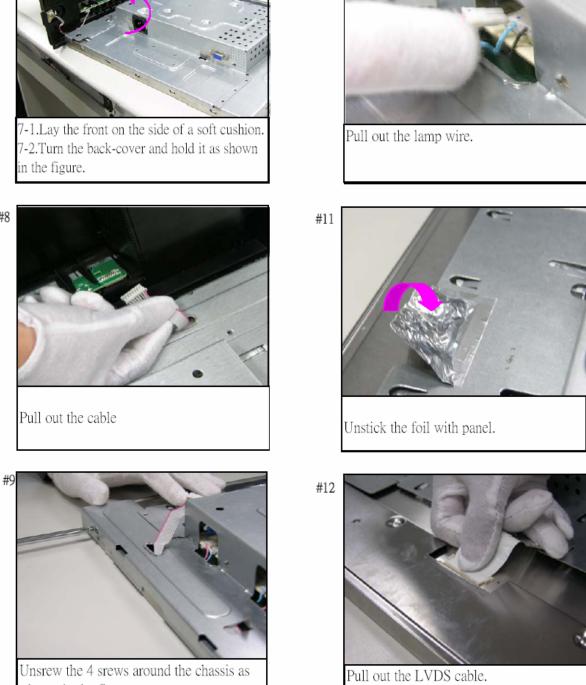
3-1.Unsrew the 3 screws on the neck. 3-2.Put the neck upward and remove it.

#6

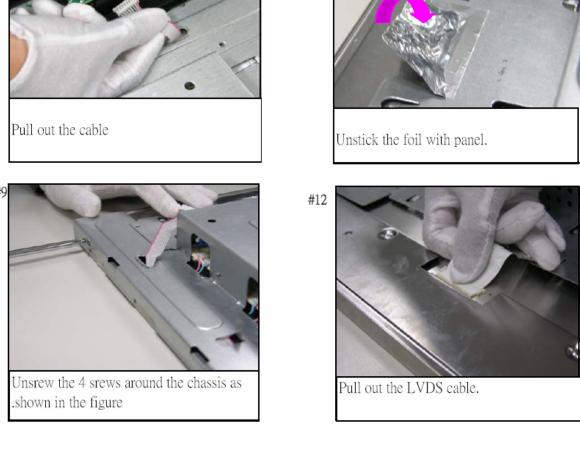


Pull up the cabinet corner and disasemble the front-bezel.

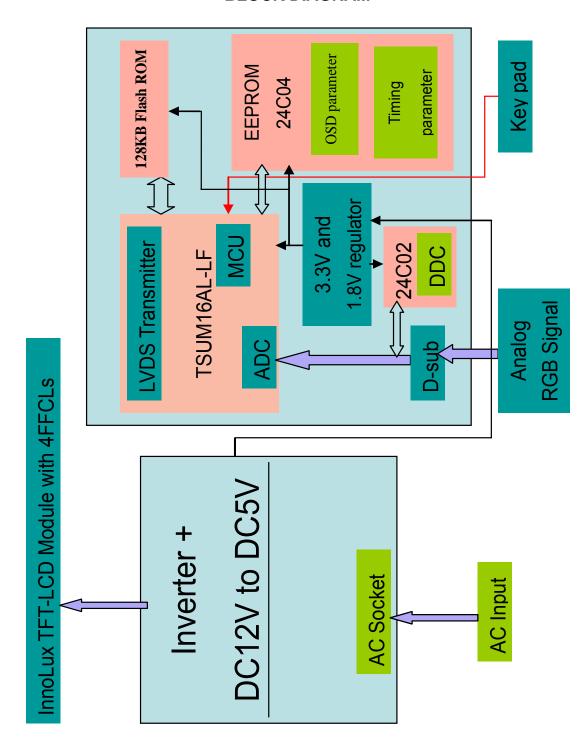




#10



## **BLOCK DIAGRAM**



#### **DESCRIPTION OF BLOCK DIAGRAM**

#### 1. Video Controller Part.

This part amplifies the level of video signal for the digital conversion and converts from the analog video signal to the digital video signal using a pixel clock.

The pixel clock for each mode is generated by the PLL.

The range of the pixel clock is from 25MHz to 135MHz.

This part consists of the Scaler, ADC convertor and LVDS transmitter.

The Scaler gets the video signal converted analog to digital, interpolates input to 1280 X 1024 resolution signal and outputs 8-bit R, G, B signal to transmitter.

#### 2. Power Part.

This part consists of the one 3.3V, and one 1.8V regulators to convert power which is provided 5V in Power board.

12V is provided for inverter, 12V is provided for LCD panel and 5V for micom.

Also, 5V is converted 3.3V and 1.8V by regulator. Converted power is provided for IC in the main board.

The inverter converts from DC12V to AC 700Vrms and operates back-light lamps of module.

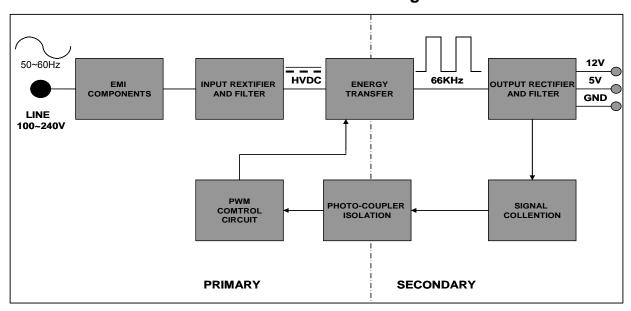
#### 3. MICOM Part.

This part is include video controller part. And this part consists of EEPROM IC which stores control data, and the Micom which imbedded in scaler IC.

The Micom distinguishes polarity and frequency of the H/V sync are supplied from signal cable.

The controlled data of each modes is stored in EEPROM.

#### **LIPS Board Block Diagram**



#### Operation description LIPS

#### 1. EMI components.

This part contains of EMI components to comply with global marketing EMI standards like FCC, VCCI CISPR, the circuit included a line-filter, across line capacitor and of course the primary protection fuse.

#### 2. Input rectifier and filter.

This part function is for transfer the input AC voltage to a DC voltage through a bridge rectifier and a bulk capacitor.

#### 3. Energy Transfer.

This part function is transfer the primary energy to secondary through a power transformer.

#### 4. Output rectifier and filter.

This part function is to make a pulse width modulation control and to provide the driver signal to power switch, to adjust the duty cycle during different AC input and output loading condition to achive the dc output stablize, and also the over power protection is also monitor by this part.

#### 5. Photo-Coupler isolation.

This part function is to feed back the dc output changing status through a photo transistor to primary controller to achieve the stabilized dc output voltage.

#### 6. Signal collection.

This part function is to collect the any change from the dc output and feed back to the primary through photo transistor.

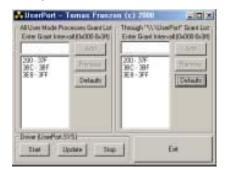
#### **ADJUSTMENT**

Windows EDID V1.0 User Manual

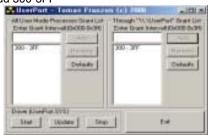
Operating System: MS Windows 98, 2000, XP Port Setup: Windows 98 => Don't need setup Windows 2000, XP => Need to Port Setup.

This program is available to LCD Monitor only.

- 1. Port Setup
  - a) Copy "UserPort.sys" file to "c:\WINNT\system32\drivers" folder b) Run Userport.exe



c) Remove all default number d) Add 300-3FF



e) Click Start button. f) Click Exit button.

- 2. EDID Read & Write
  - 1) Run WinEDID.exe



- 2) Edit Week of Manufacture, Year of Manufacture, Serial Number
  - a) Input User Info Data
  - b) Click "Update" button
  - c) Click "Write" button



#### **SERVICE OSD**

- 1) Turn off the power switch at the front side of the display.
- 2) Wait for about 5 seconds and press MENU, POWER switch with 1 second interval.
- 3) The SVC OSD menu contains additional menus that the User OSD menu as described below.
- a) Auto Color: W/B balance and Automatically sets the gain and offset value.
- b) NVRAM INIT: EEPROM initialize.(24C04)
- c) CLEAR ETI: To initialize using time.
- d) AGING: Select Aging mode(on/off).
- e) R/G/B-9300K : Allows you to set the R/G/B-9300K value manually.
- f) R/G/B-6500K : Allows you to set the R/G/B-6500K value manually.
- g) R/G/B-Offset : Allows you to set the R/G/B-Offset value manually.(Analog Only)
- h) R/G/B-Gain : Allows you to set the R/G/B-Gain value manually.(Analog Only)
- i) MODULE : Show Current module Type
- j)RS232: Enable/Disable Debug Mode(on/off)

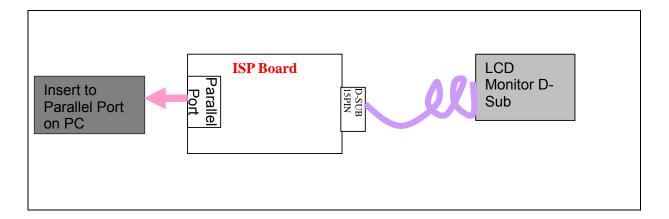
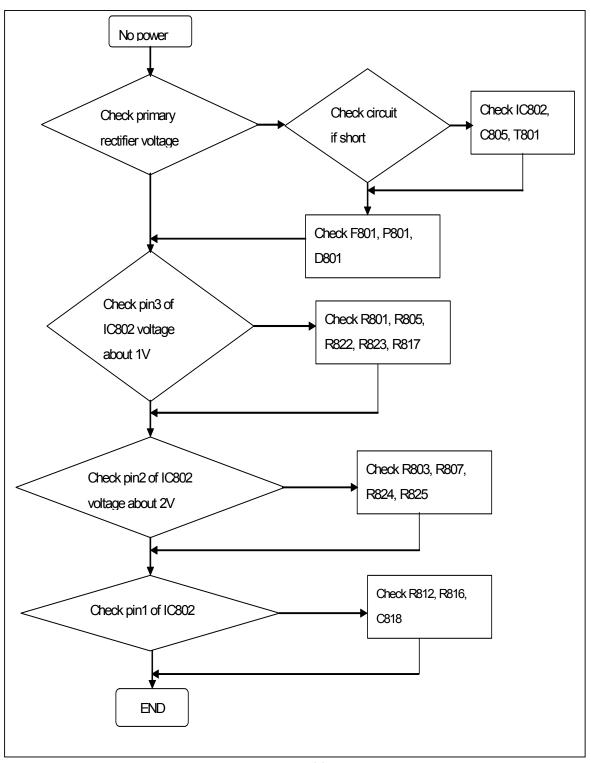


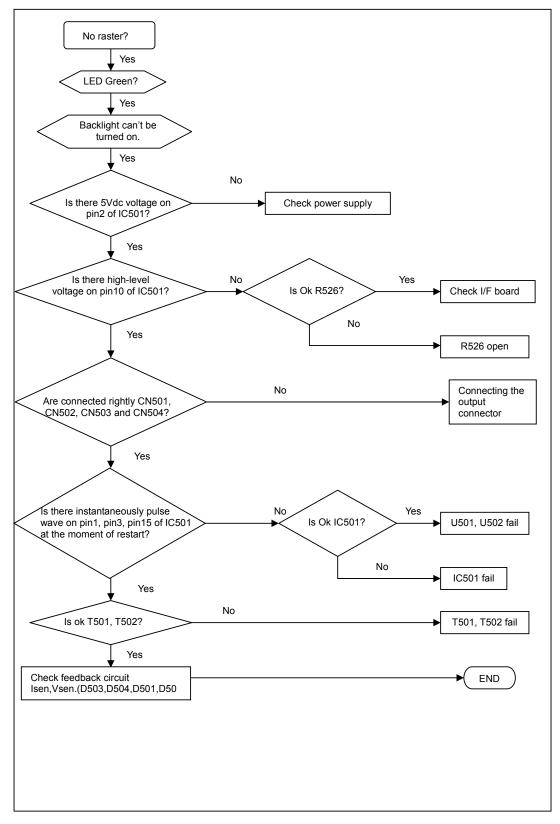
Figure 1.Cable Connection For ISP

#### TROUBLESHOOTING GUIDE

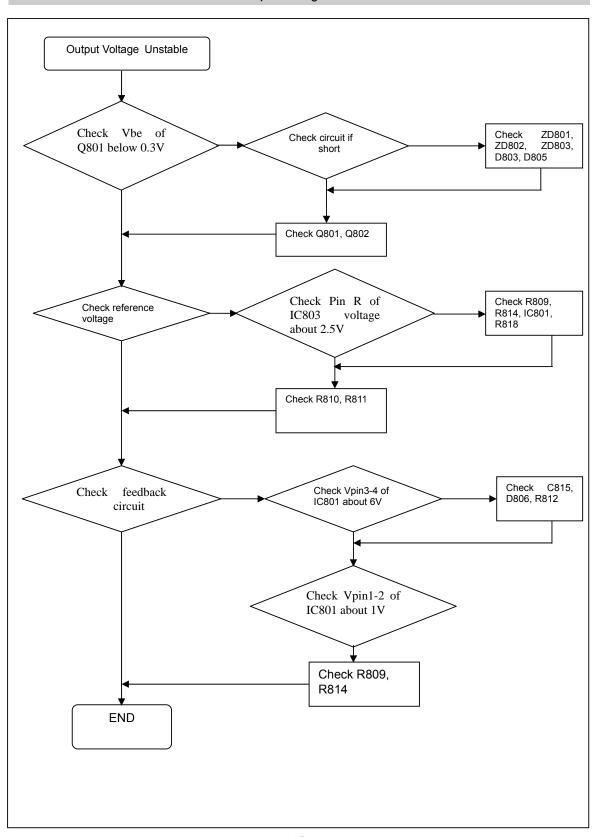
#### 1. No Power & Power LED Off



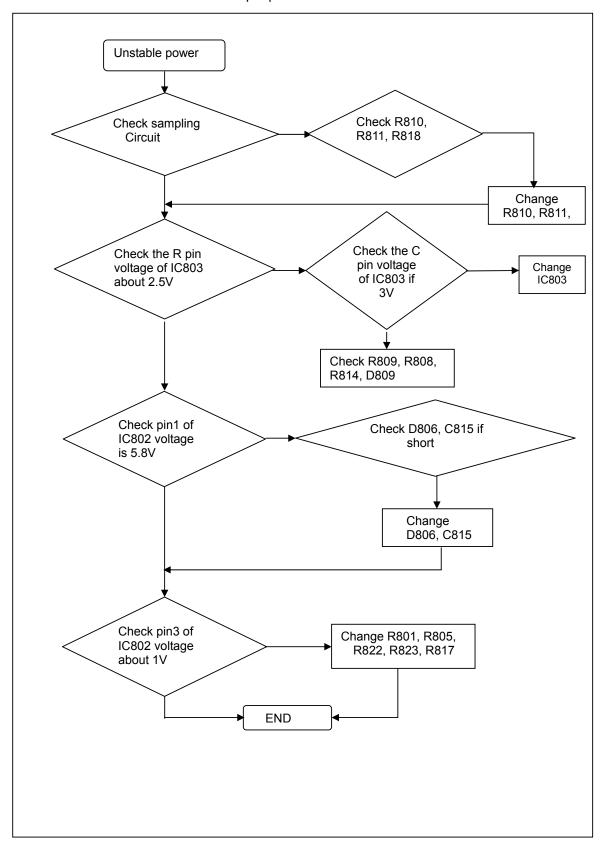
- 15 - **2.** Backlight can't be turned on



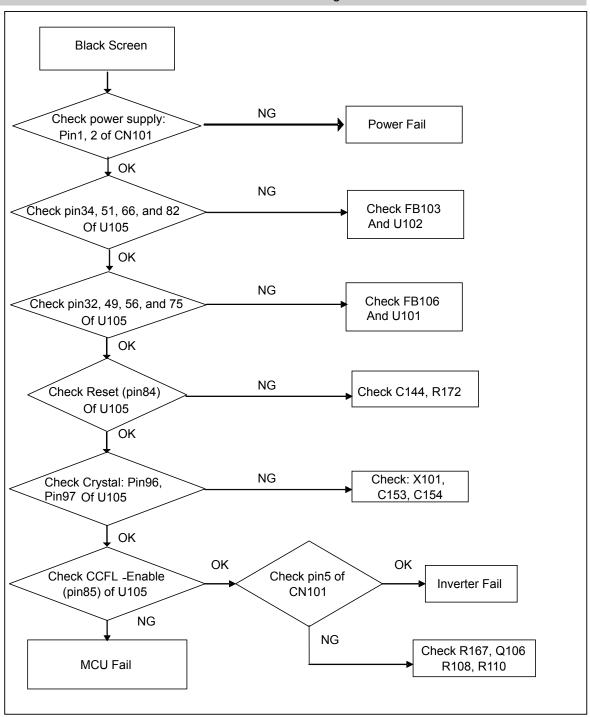
#### 3. DC output voltage is unstable



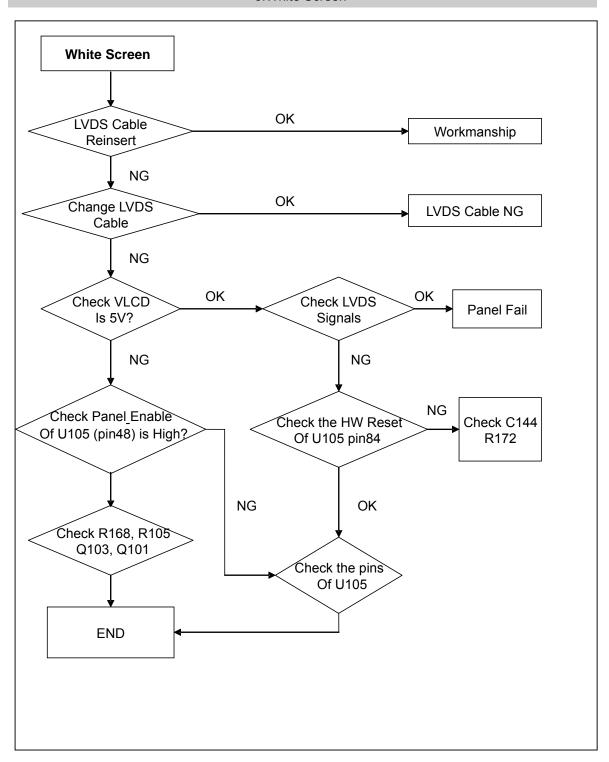
#### 4. Output power is unstable



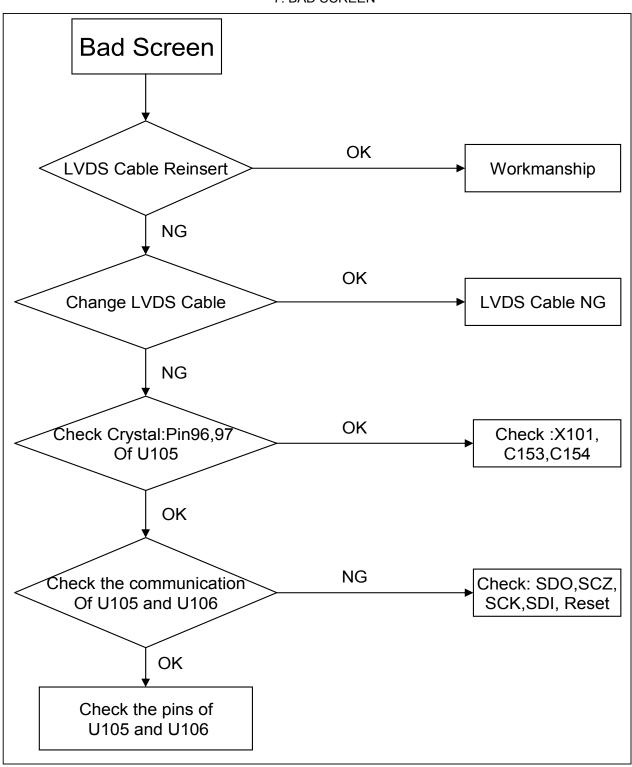
#### 5.Black Screen and backlight turn on



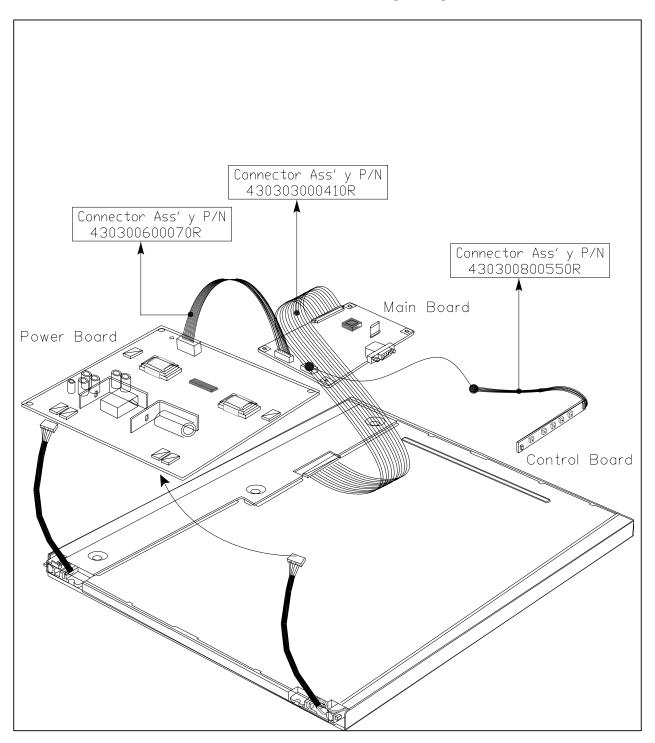
#### 6.White Screen



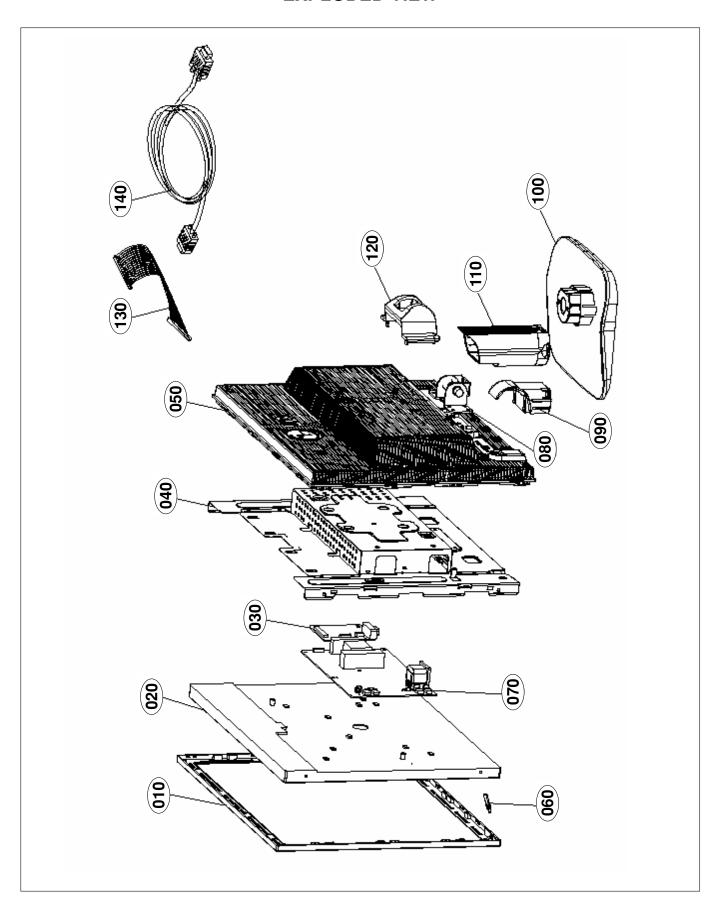
#### 7. BAD SCREEN



#### **WIRING DIAGRAM**



## **EXPLODED VIEW**



## **EXPLODED VIEW PARTS LIST**

Related to Models: L1718S-SNQ/BNQ.AxxJEP for 5ms InnoLux module and L1718S-SNQ/BNQ.AxxAEP for 5ms CPT Module

| Ref.No. | LGE Part No. | INL Part No.  | Description   |
|---------|--------------|---------------|---|
| 010     | MCK30281901  | 501010205300R | BEZEL,FRONT(Black),LE1730                             |
|         | MCK30284501  | 501010205310R | BEZEL,FRONT(Silver),LE1730                            |
| 020     | EBU38047801  | 631102072411R | LCD Panel 17" MT170EN01-V9(INNOLUX)                   |
|         | EBU38048701  | 631102072384R | LCD Panel 17" CLAA170EA07P-040(CPT) RoHS              |
| 030     | EBU38048201  | 790621300610R | PCBA,I/F BOARD(MT170EN01-V9),LE1730-6E0 ROHS          |
|         | EBU38049101  | 790621300010R | PCBA,IF BOARD,for CPT CLAA170EA07P-040 LE1730-0E0     |
| 040     | AGU30210301  | 701000001300R | ASSY,CHASSIS, Metal frame(for InnoLux 5ms/8ms),LE1730 |
|         | AGU30211601  | 701000001310R | ASSY,CHASSIS, Metal frame (for CPT 5ms/8ms)           |
| 050     | ACQ30210201  | 714050005200R | BACK COVER ,ASSEMBLY,LE1730                           |
| 060     | MFB30282101  | 501120103100R | LENS,LE1730   |
| 070     | EBU30459001  | 790621400600R | PCBA,PWR&INV./B,LE1730-6E0                            |
| 080     | AGU30210601  | 502060002000R | HINGE,ASSEMBLY,LE1730                                 |
| 090     | MCK30283101  | 501260202000R | STAND,NECK,LE1730                                     |
| 100     | ACQ30211201  | 714020005200R | BASE,ASSEMBLY,LE1730                                  |
| 110     | ACQ30211001  | 714010005200R | STAND, ASSEMBLY,LE1730                                |
| 120     | MCK30282901  | 501020207300R | COVER,HINGE,LE1730                                    |
| 130     | EBU30458901  | 430303000410R | HRN LVDS,FFC 30P 281MM ROHS                           |
| 140     | EBU30459301  | 453010100210R | CABLE,D-SUB,15P MALE 1850MM BLACK/BLUE,R              |

# Related to Models: L1718S-SNQ/BNQ.AxxKEP for 8ms Innolux module and L1718S-SNQ/BNQ.AxxBEP for 8ms CPT module

| Ref.No. | LGE Part No. | INL Part No.  | Description   |
|---------|--------------|---------------|---|
| 010     | MCK30281901  | 501010205300R | BEZEL,FRONT(Black),LE1730                             |
|         | MCK30284501  | 501010205310R | BEZEL,FRONT(Silver),LE1730                            |
| 020     | EBU30459201  | 631102071430R | LCD PANEL 17" MT170EN01-V7(INNOLUX)                   |
|         | EBU30460301  | 631102072020R | LCD PANEL 17" CPT CLAA170EA07QG                       |
| 030     | EBU30458301  | 790621300600R | PCBA,IF BOARD for MT170EN01-V7(INL), LE1730-6E0       |
|         | EBU30460201  | 790621300000R | PCBA,IF BOARD, for CPT CLAA170EA07QG LE1730-0E0       |
| 040     | AGU30210301  | 701000001300R | ASSY,CHASSIS, Metal frame(for InnoLux 5ms/8ms),LE1730 |
|         | AGU30211601  | 701000001310R | ASSY,CHASSIS, Metal frame (for CPT 5ms/8ms)           |
| 050     | ACQ30210201  | 714050005200R | BACK COVER ,ASSEMBLY,LE1730                           |
| 060     | MFB30282101  | 501120103100R | LENS,LE1730   |
| 070     | EBU30459001  | 790621400600R | PCBA,PWR&INV./B,LE1730-6E0                            |
| 080     | AGU30210601  | 502060002000R | HINGE,ASSEMBLY,LE1730                                 |
| 090     | MCK30283101  | 501260202000R | STAND,NECK,LE1730                                     |
| 100     | ACQ30211201  | 714020005200R | BASE,ASSEMBLY,LE1730                                  |
| 110     | ACQ30211001  | 714010005200R | STAND, ASSEMBLY,LE1730                                |
| 120     | MCK30282901  | 501020207300R | COVER,HINGE,LE1730                                    |
| 130     | EBU30458901  | 430303000410R | HRN LVDS,FFC 30P 281MM ROHS                           |
| 140     | EBU30459301  | 453010100210R | CABLE,D-SUB,15P MALE 1850MM BLACK/BLUE,R              |

#### REPLACEMENT PARTS LIST

CAUTION: BEFORE REPLACING ANY OF THESE COMPONENTS, READ CAREFULLY THE SAFETY PRECAUTIONS IN THIS MANUAL.

\* NOTE : S SAFETY Mark A AL ALTERNATIVE PARTS

Related to Models: L1718S-SNQ/BNQ.AxxJEP for 5ms InnoLux module and L1718S-SNQ/BNQ.AxxAEP for 5ms CPT Module

#### IF BOARD 1. FOR INL

| ITEM | Location                      | P/N           | Description                              |
|------|-------------------------------|---------------|--|
|      |                               | 790621300610R | PCBA,I/F BOARD(V9),LE1730-6E0 ROHS       |
| 10   |                               | 790621320600R | PCBA,IF BOARD,OTHRS,LE1730-6E0           |
| 20   |                               | 790621340600R | PCBA,IF BOARD,SMD, LE1730-6E0            |
| 30   |                               | 629030006501R | PROGRAM(V9),LE1730-6E0 ROHS              |
| 50   |                               | 511130001201R | SOLDER BAR,Sn96.5/Ag3.0/Cu0.5(SAC305 VAC |
| 50   |                               | 511130001200R | SOLDER BAR,Sn96.5/Ag3.0/Cu0.5/Ni0.06/Ge0 |
| 70   |                               | 506440003800R | LABEL,BLANK,YELLOW,10x4mm                |
|      |                               |               |  |
| ITEM | Location                      | P/N           | Description                              |
|      |                               | 790621320600R | PCBA,IF BOARD,OTHRS,LE1730-6E0           |
| 10   | C111,C144,                    | 420431000260R | CAP EC 10uF 25V M,105°C ST 5x11 RoHS     |
|      | C101,C102,                    | 420431010461R | CAP EC 100uF 16V M,105°C ST 5x11(SK) RoH |
| 30   | C130,C133,C142,C145,<br>C105, | 420432200460R | CAP EC 22uF 16V M,105°C ST, 5x11,RoHS    |
| 40   | C108,                         | 420432210460R | CAP EC 220uF 16V M,105°C ST 6.3x11 RoHS  |
| 50   | CN101,                        | 430631060020R | WAFER 2.0mm 6P 180°,RoHS                 |
| 60   | CN105,                        | 430631080130R | WAFER 2x4P 2.0mm,200PHD-2*4ST RoHS       |
| 70   | X101,                         | 432008010370R | XTAL 14.31818MHz 16pF HC-49US 30PPM,DIP, |
| 80   | CN103,                        | 440819015030R | CON D-SUB FEM.15P RA W/O SCREW DZ11AA1-H |
|      |                               |               |  |
| ITEM | Location                      | P/N           | Description                              |
|      |                               | 790621340600R | PCBA,IF BOARD,SMD, LE1730-6E0            |
| 10   | Q103,Q106,                    | 410500045210R | XSTR PMBT3904 NPN 200MA,40V SOT23(PHILIP |
| 10   |                               | 410500045130R | XSTR MMBT3904 NPN SOT-23(INFIN EON)RoHS  |
| 10   |                               | 410500045140R | XSTR MMBT3904LT1G NPN 200MA 40V SOT23(ON |
| 20   | Q102,Q105,                    | 410500046210R | XSTR PMBT3906 PNP 200MA,40V SOT23(PHILIP |
| 20   |                               | 410500046130R | XSTR MMBT3906 PNP SOT-23(INFIN EON)RoHS  |
| 20   |                               | 410500046180R | XSTR MMBT3906LT1G PNP 200mA 40V SOT23(ON |

| 30  | Q101,   | 410500068290R | XSTR AP2305GN P-CH SOT23(APEC) RoHS      |
|-----|---|---------------|--|
| 30  |   | 410500044270R | XSTR AO3401L P-CH(ALPHA-OMEGA) SOT23 RoH |
| 30  |   | 410500075270R | XSTR AO3415 P-CH,SOT23(AOS) RoHS         |
| 40  | Q107,   | 410500050210R | XSTR 2N7002,N-CH FET SOT-23 (PHILIPS)RoH |
| 40  |   | 410500050130R | XSTR SN7002N N-CH SOT-23(INFINEON),RoHS  |
| 40  |   | 410500050090R | XSTR 2N7002 N-CH SOT-23(PANJIT)RoHS      |
| 50  | TVS101,TVS102,TVS1<br>03,TVS104,  | 411020026210R | DIO BAV99 350mW 70V SOT-23(PHI RoHS      |
| 50  |   | 411020026020R | DIO BAV99-LF 350mW 70V SOT-23 (FEC)RoHS  |
| 50  |   | 411020026390R | DIO BAV99,SOT-23(INFINEON)RoHS           |
| 50  |   | 411020026090R | DIO BAV99 350mW 75V SOT-23(PEC RoHS      |
| 60  | D103,   | 411020047210R | DIO BAV70 85V SOT23 (PHILIPS) RoHS       |
| 60  |   | 411020047020R | DIO BAV70-LF, 70V SOT-23(FEC) ROHS       |
| 70  | ZD101,ZD105,ZD106,Z<br>D107,ZD108,  | 411100656951R | ZENER 5.6V ZMM5232B-LF DO213AA (FRONTIER |
| 70  |   | 411101156950R | ZENER BZV55-C5V6 SOD80C(PHILIP S) RoHS   |
| 70  |   | 411150356950R | ZENER 5.6V MTZS05-5.6-G,SOD-12 3(MMC)RoH |
| 80  | U108,   | 412000279480R | IC AT24C04N-10SU-2.7 SOP8 4K(A TMEL)RoHS |
| 80  |   | 412000279280R | IC M24C04-WMN6TP4K SOP8 (ST) RoHS        |
| 80  |   | 412000479990R | IC CAT24C04WI-TE13 SOIC-8(CATALYST)RoHS  |
| 90  | U102,   | 412000330830R | IC AS1117L-1.8/TR-LF,SOT223(A1 SEMI)RoHS |
| 90  |   | 412000330020R | IC LD1117AL-1.8V-A SOT223(UTC) RoHS      |
| 100 | U101,   | 412000372830R | IC AS1117L-3.3TR-LF,SOT223(A1S EMI)RoHS  |
| 100 |   | 412000372020R | IC LD1117AL-3.3V-A SOT-223(UTC RoHS      |
| 110 | U103,   | 412000435480R | IC AT24C02BN-10SU-1.8 SOIC8 2K (ATMEL)Ro |
| 110 |   | 412000480990R | IC CAT24C02WI-TE13 SOIC-8(CATALYST)RoHS  |
| 110 |   | 412000480280R | IC M24C02-RMN6TP SO8(ST)RoHS             |
| 120 | U105,   | 412000436190R | IC TSUM16AL-LF PQFP100(MSTAR)R oHS       |
| 130 | U106,   | 412000373190R | IC SST25VF010A-33-4C-SAE,SOIC- 8(SST)RoH |
| 130 |   | 412000486310R | IC PM25LV010A-100SCE SOIC8(PMC)RoHS      |
| 130 |   | 412000486190R | IC PS25LV010A-100SCE SOIC8(MSTAR)RoHS    |
| 140 | R190,R170,R171,R103,  | 414916000050R | RES SMD (0603) 0Ω J,RT RoHS              |
| 150 | R186,R187,  | 414916010050R | RES SMD (0603) 10Ω J,RT RoHS             |
| 160 | R130,R129,R114,R117,<br>R120,R124,R125,R127,<br>R131,R132,R101,R167,<br>R168,R178,R179, | 414916010150R | RES SMD (0603) 100Ω J,RT RoHS REV:A      |
| 170 | R157,R158,R159,R160,<br>R161,R162,R163,   | 414916010250R | RES SMD (0603) 1KΩ J,RT RoHS REV:A       |

| 180 | R106,R172,R180,R181,  | 414916010350R | RES SMD (0603) 10KΩ J,RT RoHS               |
|-----|---|---------------|---|
| 190 | R102,   | 414916010450R | RES SMD (0603) 100KΩ J,RT REV:A RoHS        |
| 200 | R105,   | 414916020350R | RES SMD (0603) 20KΩ J,RT RoHS REV:A         |
| 210 | R136,R137,  | 414916022250R | RES SMD (0603) 2.2KΩ J,RT RoHS              |
| 220 | R121,   | 414916047150R | RES SMD (0603) 470Ω J,RT RoHS REV:A         |
| 230 | R108,R110,R122,R149,<br>R150,R154,R155,R173,<br>R174,R166,R182,R183,<br>R184,R185,R109,   | 414916047250R | RES SMD (0603) 4.7KΩ J,RT RoHS              |
| 240 | R169,   | 414916390010R | RES SMD (0603) 390Ω F,RT RoHS               |
| 250 | R133,R134,R135,   | 414916750910R | RES SMD (0603) 75Ω F,RT RoHS REV:A          |
| 260 | RP102,  | 415751035080R | RP(0612)10KΩx4 1/16W J 8P4R RoHS            |
| 270 | C158,C159,C160,C161,<br>C162,C163,C164,   | 419301010560R | C SMD(0603) NPO 100PF/50V J RoHS            |
| 280 | C153,C154,  | 419302200560R | C SMD(0603) NPO 22PF/50V J RoHS             |
| 290 | C126,   | 419302210560R | C SMD(0603) NPO 220PF/50V J RoHS            |
| 300 | C125,   | 419303300560R | C SMD(0603) NPO 33PF/50V J RoHS             |
| 310 | C103,C104,C106,C107,<br>C109,C129,C156,C131,<br>C132,C134,C135,C136,<br>C137,C139,C141,C143,<br>C147,C148,C149,C150,<br>C151,C152,C166, | 419311040060R | C SMD(0603) X7R 0.1uF/50V K RoHS            |
| 320 | C140,   | 419311054070R | C SMD(0805) X7R 1uF/16V K RoHS REV:A        |
| 330 | C112,C113,C114,C115,<br>C116,C117,C118,   | 419314730060R | C SMD (0603) X7R 0.047uF 50V,K RoHS         |
| 340 | FB101,  | 432002312111R | BEAD CORE SMD(0805)120Ω 300mA RoHS          |
| 350 | FB102,FB103,FB105,F<br>B106,  | 432002360012R | BEAD CORE SMD(0805)60Ω 800mA GBK201209T     |
| 360 | CN104,  | 444099030030R | CON, SMD 1.0mm 30PIN RoHS AL2309-A0G1Z      |
| 370 |   | 506140005700R | LABEL,BARCODE,BLANK,33x7mm, ROHS,FOR<br>PCB |
| 380 |   | 490621300100R | PCB,INTERFACE, LE1730-XE0                   |
| 390 | R107,   | 414916022150R | RES SMD (0603) 220Ω J,RT RoHS REV:A         |
| 400 | R113,R116,R119,   | 414916560910R | RES SMD (0603) 56Ω F,RT RoHS REV:A          |
| 410 | FB107,FB108,FB109,  | 432002360140R | BEAD CORE SMD(0603)60Ω 600mA, GBK160808     |
| 420 |   | 511130002203R | SOLDER PASTE,Sn96.5/Ag3.0/Cu0.5(SAC305 O    |
| 420 |   | 511130002200R | SOLDER PASTE,Sn96.5-Ag3.0-Cu0.5 ROHS        |
| 420 |   | 511130002201R | SOLDER PASTE,Sn96.5%Ag3.0%Cu0.5%            |
|     |   | •             | •   |

## 2.For CPT

| 2.1 01 | 01 1                             |               |  |
|--------|----------------------------------|---------------|--|
| ITEM   | Location                         | P/N           | Description                              |
|        |                                  | 790621300010R | PCBA,I/F BOARD(040),LE1730-0E0 ROHS      |
| 10     |                                  | 790621320600R | PCBA,IF BOARD,OTHRS,LE1730-6E0           |
| 20     |                                  | 790621340600R | PCBA,IF BOARD,SMD, LE1730-6E0            |
| 30     |                                  | 629030006521R | PROGRAM(040),LE1730-0E0 ROHS             |
| 50     |                                  | 511130001201R | SOLDER BAR,Sn96.5/Ag3.0/Cu0.5(SAC305 VAC |
| 50     |                                  | 511130001200R | SOLDER BAR,Sn96.5/Ag3.0/Cu0.5/Ni0.06/Ge0 |
| 70     |                                  | 506440003800R | LABEL,BLANK,YELLOW,10x4mm                |
|        |                                  |               |  |
| ITEM   | Location                         | P/N           | Description                              |
|        |                                  | 790621320600R | PCBA,IF BOARD,OTHRS,LE1730-6E0           |
| 10     | C111,C144,                       | 420431000260R | CAP EC 10uF 25V M,105°C ST 5x11 RoHS     |
| 20     | C101,C102,                       | 420431010461R | CAP EC 100uF 16V M,105°C ST 5x11(SK) RoH |
| 30     | C130,C133,C142,C<br>145,C105,    | 420432200460R | CAP EC 22uF 16V M,105°C ST, 5x11,RoHS    |
| 40     | C108,                            | 420432210460R | CAP EC 220uF 16V M,105°C ST 6.3x11 RoHS  |
| 50     | CN101,                           | 430631060020R | WAFER 2.0mm 6P 180°,RoHS                 |
| 60     | CN105,                           | 430631080130R | WAFER 2x4P 2.0mm,200PHD-2*4ST RoHS       |
| 70     | X101,                            | 432008010370R | XTAL 14.31818MHz 16pF HC-49US 30PPM,DIP, |
| 80     | CN103,                           | 440819015030R | CON D-SUB FEM.15P RA W/O SCREW DZ11AA1-H |
|        |                                  |               |  |
| ITEM   | Location                         | P/N           | Description                              |
|        |                                  | 790621340600R | PCBA,IF BOARD,SMD, LE1730-6E0            |
| 10     | Q103,Q106,                       | 410500045210R | XSTR PMBT3904 NPN 200MA,40V SOT23(PHILIP |
| 10     |                                  | 410500045130R | XSTR MMBT3904 NPN SOT-23(INFIN EON)RoHS  |
| 10     |                                  | 410500045140R | XSTR MMBT3904LT1G NPN 200MA 40V SOT23(ON |
| 20     | Q102,Q105,                       | 410500046210R | XSTR PMBT3906 PNP 200MA,40V SOT23(PHILIP |
| 20     |                                  | 410500046130R | XSTR MMBT3906 PNP SOT-23(INFIN EON)RoHS  |
| 20     |                                  | 410500046180R | XSTR MMBT3906LT1G PNP 200mA 40V SOT23(ON |
| 30     | Q101,                            | 410500068290R | XSTR AP2305GN P-CH SOT23(APEC) RoHS      |
| 30     |                                  | 410500044270R | XSTR AO3401L P-CH(ALPHA-OMEGA) SOT23 RoH |
| 30     |                                  | 410500075270R | XSTR AO3415 P-CH,SOT23(AOS) RoHS         |
| 40     | Q107,                            | 410500050210R | XSTR 2N7002,N-CH FET SOT-23 (PHILIPS)RoH |
| 40     |                                  | 410500050130R | XSTR SN7002N N-CH SOT-23(INFINEON),RoHS  |
| 40     |                                  | 410500050090R | XSTR 2N7002 N-CH SOT-23(PANJIT)RoHS      |
| 50     | TVS101,TVS102,TV<br>S103,TVS104, | 411020026210R | DIO BAV99 350mW 70V SOT-23(PHI RoHS      |

| 50  |   | 411020026020R | DIO BAV99-LF 350mW 70V SOT-23 (FEC)RoHS  |
|-----|---|---------------|--|
| 50  |   | 411020026390R | DIO BAV99,SOT-23(INFINEON)RoHS           |
| 50  |   | 411020026090R | DIO BAV99 350mW 75V SOT-23(PEC RoHS      |
| 60  | D103,   | 411020047210R | DIO BAV70 85V SOT23 (PHILIPS) RoHS       |
| 60  |   | 411020047020R | DIO BAV70-LF, 70V SOT-23(FEC) ROHS       |
| 70  | ZD101,ZD105,ZD10<br>6,ZD107,ZD108,  | 411100656951R | ZENER 5.6V ZMM5232B-LF DO213AA (FRONTIER |
| 70  |   | 411101156950R | ZENER BZV55-C5V6 SOD80C(PHILIP S) RoHS   |
| 70  |   | 411150356950R | ZENER 5.6V MTZS05-5.6-G,SOD-12 3(MMC)RoH |
| 80  | U108,   | 412000279480R | IC AT24C04N-10SU-2.7 SOP8 4K(A TMEL)RoHS |
| 80  |   | 412000279280R | IC M24C04-WMN6TP4K SOP8 (ST) RoHS        |
| 80  |   | 412000479990R | IC CAT24C04WI-TE13 SOIC-8(CATALYST)RoHS  |
| 90  | U102,   | 412000330830R | IC AS1117L-1.8/TR-LF,SOT223(A1 SEMI)RoHS |
| 90  |   | 412000330020R | IC LD1117AL-1.8V-A SOT223(UTC) RoHS      |
| 100 | U101,   | 412000372830R | IC AS1117L-3.3TR-LF,SOT223(A1S EMI)RoHS  |
| 100 |   | 412000372020R | IC LD1117AL-3.3V-A SOT-223(UTC RoHS      |
| 110 | U103,   | 412000435480R | IC AT24C02BN-10SU-1.8 SOIC8 2K (ATMEL)Ro |
| 110 |   | 412000480990R | IC CAT24C02WI-TE13 SOIC-8(CATALYST)RoHS  |
| 110 |   | 412000480280R | IC M24C02-RMN6TP SO8(ST)RoHS             |
| 120 | U105,   | 412000436190R | IC TSUM16AL-LF PQFP100(MSTAR)R oHS       |
| 130 | U106,   | 412000373190R | IC SST25VF010A-33-4C-SAE,SOIC- 8(SST)RoH |
| 130 |   | 412000486310R | IC PM25LV010A-100SCE SOIC8(PMC)RoHS      |
| 130 |   | 412000486190R | IC PS25LV010A-100SCE SOIC8(MSTAR)RoHS    |
| 140 | R190,R170,R171,R<br>103,  | 414916000050R | RES SMD (0603) 0Ω J,RT RoHS              |
| 150 | R186,R187,  | 414916010050R | RES SMD (0603) 10Ω J,RT RoHS             |
| 160 | R130,R129,R114,R<br>117,R120,R124,R12<br>5,R127,R131,R132,<br>R101,R167,R168,R<br>178,R179, |               | RES SMD (0603) 100Ω J,RT RoHS REV:A      |
| 170 | R157,R158,R159,R<br>160,R161,R162,R16<br>3,   | 414916010250R | RES SMD (0603) 1KΩ J,RT RoHS REV:A       |
| 180 | R106,R172,R180,R<br>181,  | 414916010350R | RES SMD (0603) 10KΩ J,RT RoHS            |
| 190 | R102,   | 414916010450R | RES SMD (0603) 100KΩ J,RT REV:A RoHS     |
| 200 | R105,   | 414916020350R | RES SMD (0603) 20KΩ J,RT RoHS REV:A      |
| 210 | R136,R137,  | 414916022250R | RES SMD (0603) 2.2KΩ J,RT RoHS           |
| 220 | R121,   | 414916047150R | RES SMD (0603) 470Ω J,RT RoHS REV:A      |

| 230 | R108,R110,R122,R<br>149,R150,R154,R15<br>5,R173,R174,R166,<br>R182,R183,R184,R<br>185,R109,   | 414916047250R | RES SMD (0603) 4.7KΩ J,RT RoHS           |
|-----|---|---------------|--|
| 240 | R169,   | 414916390010R | RES SMD (0603) 390Ω F,RT RoHS            |
| 250 | R133,R134,R135,   | 414916750910R | RES SMD (0603) 75Ω F,RT RoHS REV:A       |
| 260 | RP102,  | 415751035080R | RP(0612)10KΩx4 1/16W J 8P4R RoHS         |
| 270 | C158,C159,C160,C<br>161,C162,C163,C16<br>4,   | 419301010560R | C SMD(0603) NPO 100PF/50V J RoHS         |
| 280 | C153,C154,  | 419302200560R | C SMD(0603) NPO 22PF/50V J RoHS          |
| 290 | C126,   | 419302210560R | C SMD(0603) NPO 220PF/50V J RoHS         |
| 300 | C125,   | 419303300560R | C SMD(0603) NPO 33PF/50V J RoHS          |
|     | C103,C104,C106,C<br>107,C109,C129,C15<br>6,C131,C132,C134,<br>C135,C136,C137,C<br>139,C141,C143,C14<br>7,C148,C149,C150,<br>C151,C152,C166, | 419311040060R | C SMD(0603) X7R 0.1uF/50V K RoHS         |
| 320 | C140,   | 419311054070R | C SMD(0805) X7R 1uF/16V K RoHS REV:A     |
|     | C112,C113,C114,C<br>115,C116,C117,C11<br>8,   | 419314730060R | C SMD (0603) X7R 0.047uF 50V,K RoHS      |
| 340 | FB101,  | 432002312111R | BEAD CORE SMD(0805)120Ω 300mA RoHS       |
| 350 | FB102,FB103,FB10<br>5,FB106,  | 432002360012R | BEAD CORE SMD(0805)60Ω 800mA GBK201209T  |
| 360 | CN104,  | 444099030030R | CON, SMD 1.0mm 30PIN RoHS AL2309-A0G1Z   |
| 370 |   | 506140005700R | LABEL,BARCODE,BLANK,33x7mm, ROHS,FOR PCB |
| 380 |   | 490621300100R | PCB,INTERFACE, LE1730-XE0                |
| 390 | R107,   | 414916022150R | RES SMD (0603) 220Ω J,RT RoHS REV:A      |
| 400 | R113,R116,R119,   | 414916560910R | RES SMD (0603) 56Ω F,RT RoHS REV:A       |
| 410 | FB107,FB108,FB10<br>9,  | 432002360140R | BEAD CORE SMD(0603)60Ω 600mA, GBK160808  |
| 420 |   | 511130002203R | SOLDER PASTE,Sn96.5/Ag3.0/Cu0.5(SAC305 O |
| 420 |   | 511130002200R | SOLDER PASTE,Sn96.5-Ag3.0-Cu0.5 ROHS     |
| 420 |   | 511130002201R | SOLDER PASTE,Sn96.5%Ag3.0%Cu0.5%         |

## **Power and Inverter Board**

|      | ei aliu ilivertei 60a   |               | T  |
|------|-------------------------|---------------|--|
| ITEM | Location                | P/N           | Description                              |
|      |                         | 790621400600R | PCBA,PWR&INV./B, LE1730-6E0              |
| 10   | IC801,                  | 412140002380R | IC LTV817M-PR VDE (LITE-ON) P=10mm RoHS  |
| 10   |                         | 412140001390R | IC EL817M-B(EVERLIGHT)RoHS               |
| 20   | D801,                   | 411050005020R | DIO BRDG BL4-06-BF52-LF 600V/4A(FRONTIER |
| 20   |                         | 411050007010R | DIO BRDG KBL405G 600V/4A(TSC) RoHS       |
| 20   |                         | 411050005090R | DIO BRDG FL406 600V/4A(PEC)RoH S         |
| 30   | C804,                   | 416194743011R | CAP MEX 0.47uF 275V K X2,F15 RoHS        |
| 40   | C820,C801,C806,         | 416202224610R | CAP MEY 2200pF 400V M Y,F10mm RoHS       |
| 60   | C812,C809,              | 420421020110R | CAP SD 1000uF/10V M,105°C F,10x16,RoHS   |
| 70   | C808,                   | 420421020211R | CAP SD 1000uF 25V M,105°C F 13x20 RoHS   |
| 80   | C805,                   | 420431014582R | CAP SEK 100uF/450V M,105°C CF,18x35,RoHS |
| 90   | C824,                   | 416204724610R | CAP MEY 4700pF 400V M Y,F10mm RoHS       |
| 100  | L802,L803,              | 425000010530R | COIL CHK 5uH 7.8X10 CHK-053 0 181085R0L  |
| 110  | L801,                   | 426000050070R | CHOKE L-FILTER 12mH LIN-007 ET-20,RoHS   |
| 120  | T801,                   | 426000090470R | XFMR 750u@1K,+-8%,3m,113m,SPW- 047,DIP-1 |
| 130  | RT801,                  | 432009400701R | NTC 5Ω 4A 10ψ P=5mm, F RoHS              |
| 140  | F801,                   | 430613125210R | FUSE SLOW 2.5A/250V,U/C/V,AT,3.6x10,RoHS |
| 150  | P801,                   | 440149000220R | SKT AC 10A/250V U/C/V,G/Y=45mm TU-301-SP |
| 160  | CN801,                  | 430300600120R | HRN ASS'Y 6P 110mm UL1007#24,RoHS        |
| 180  | C803,                   | 418247233020R | CAP CD X7R 4700pF 1KV K,W/O FO RMING,RoH |
| 190  | CN501,CN502,CN503,CN504 | 430637020030R | WFR. 2P P=3.5mm 90°W/LOCK,RoHS           |
| 200  | T501,T502,              | 426000090670R | XFMR SW,105uH EEL19M DIP SPW-067,RoHS    |
| 210  | C525,C527,              | 418105058010R | CAP CD SL 5pF 3KV K,F7.5 RoHS            |
| 220  | C524,C526,              | 418110058510R | CAP CD SL 10pF 3KV J,F7.5 RoHS CC45SL3FD |
| 230  | U501,U502,              | 410500071290R | XSTR AP9971GD,N-CH,PDIP-8(APEC RoHS      |
| 230  |                         | 410050062330R | XSTR AF4971NN N-CH PDIP8(ANACH IP)RoHS   |
| 240  |                         | 735100007400R | ASSY,H/S,UFF80-005CT/UFF80-015CT,LE1730  |
| 250  |                         | 735100005100R | ASSY,H/S TOP245Y, LE1704/05 ROHS         |
| 260  |                         | 790621440600R | PCBA,PWR&INV./B,SMD,LE1730-6E0           |
| 270  | H501,                   | 502040604500R | SHIELD EMI LE1915 ROHS                   |
| 280  |                         | 511130001201R | SOLDER BAR,Sn96.5/Ag3.0/Cu0.5(SAC305 VAC |
| 280  |                         | 511130001200R | SOLDER BAR,Sn96.5/Ag3.0/Cu0.5/Ni0.06/Ge0 |
| 300  |                         | 511110000101R | HOT-MELT ADHESIVES (#526)                |
| 320  |                         | 511110000501R | SILICONE RTV RUBBER,UB-511(EURO)         |
|      | 1                       | ı             | <u> </u>                                 |

| EM  | Location             | P/N           | Description                              |
|-----|----------------------|---------------|--|
|     |                      | 735100005100R | ASSY,H/S TOP245Y, LE1704/05 ROHS         |
| 10  | IC802,               | 412000342270R | IC TOP245YN,TO-220-7C,RoHS (POWER INTEGR |
| 20  |                      | 507200003700R | HEATSINK,46x20xt10mm LE1704/05           |
| 30  |                      | 509112306100R | SCREW,P,CROSS,T.T-3*6,ZnROHS             |
| ГЕМ | Location             | P/N           | Description                              |
|     |                      | 735100007400R | ASSY,H/S,UFF80-005CT/UFF80-015CT,LE1730  |
| 10  | D805,                | 411090015020R | SCHTKY SRF5-04CT-LF ITO-220AB (FEC) RoHS |
| 10  |                      | 411090024040R | SCHTKY SRF1040CM 40V/10A ITO22 OAB(MOSPE |
| 10  |                      | 411090025040R | SCHTKY SRF1045CM 45V/10A ITO22 OAB(MOSPE |
| 20  | D803,                | 411020065020R | DIO UFF80-015CT-LF 150V/8A, ITO-220AC(FR |
| 20  |                      | 411030058040R | DIO URF1020 200V/10A ITO220(MO SPEC)RoHS |
| 30  |                      | 507200003800R | HEATSINK,56x20xt10mm LE1904/05           |
| 40  |                      | 509112306100R | SCREW,P,CROSS,T.T-3*6,ZnROHS             |
|     |                      |               |  |
| EM  | Location             | P/N           | Description                              |
|     |                      | 790621440600R | PCBA,PWR&INV./B,SMD,LE1730-6E0           |
| 10  | Q801,                | 410500045210R | XSTR PMBT3904 NPN 200MA,40V SOT23(PHILIP |
| 10  |                      | 410500045140R | XSTR MMBT3904LT1G NPN 200MA 40V SOT23(OI |
| 10  |                      | 410500045130R | XSTR MMBT3904 NPN SOT-23(INFIN EON)RoHS  |
| 20  | ZD803,               | 411150356950R | ZENER 5.6V MTZS05-5.6-G,SOD-12 3(MMC)RoH |
| 20  |                      | 411100956920R | ZENER 5.6V MMSZ5232A SOD123(PE C)RoHS    |
| 20  |                      | 411131556920R | ZENER 5.6V 0.5W DDZ5V6B-F,SOD1 23(DIODES |
| 30  | ZD801,               | 411150375950R | ZENER 7.5V MTZS05-7.5-G, SOD-123(MMC)RoH |
| 30  |                      | 411100975920R | ZENER 7.5V MMSZ5236A SOD123(PE C)RoHS    |
| 30  |                      | 411131575952R | ZENER 7.5V 0.5W DDZ7V5C-F,SOD1 23(DIODES |
| 40  | ZD804,               | 411100915020R | ZENER 15V MMSZ5245A SOD123(PEC RoHS      |
| 40  |                      | 411150315050R | ZENER 15V MTZS05-15-G,SOD-123 (MMC) RoHS |
| 40  |                      | 411131515052R | ZENER 15V 0.5W DDZ15-F,SOD123(DIODES)RoH |
| 50  | R809,                | 414904100010R | RES SMD (1206) 100Ω F,RT RoHS            |
| 60  | R808,R819,R827,      | 414908010350R | RES SMD (0805) 10KΩ J,RT RoHS REV:A      |
| 70  | R801,R805,R822,R823, | 414908024550R | RES SMD (0805) 2.4MΩ J,RT RoHS           |
| 80  | R813,R814,R815,      | 414908010250R | RES SMD (0805) 1KΩ J,RT RoHS REV:A       |
| 90  | R825,                | 414908047450R | RES SMD (0805) 470KΩ J,RT RoHS           |

| 100 | R510,R511,                | 414916000050R | RES SMD (0603) 0Ω J,RT RoHS              |  |
|-----|---------------------------|---------------|--|--|
| 110 | R803,R807,R824,           | 414908051450R | RES SMD (0805) 510KΩ J,RT RoHS           |  |
| 120 | R818,R502,R504,R517,R520, | 414908330110R | RES SMD (0805) 3.3KΩ F,RT RoHS REV:A     |  |
| 130 | R816,                     | 414908068950R | RES SMD (0805) 6.8Ω J RT RoHS            |  |
| 140 | R811,                     | 414908430210R | RES SMD (0805) 43KΩ F,RT,RoHS            |  |
| 150 | R817,                     | 414908820110R | RES SMD (0805) 8.2KΩ F,RT RoHS           |  |
| 160 | R802,R806,                | 414904010050R | RES SMD (1206) 10Ω J,RT RoHS             |  |
| 170 | R829,                     | 414908020150R | RES SMD (0805) 200Ω J,RT RoHS            |  |
| 180 | R810,                     | 414908510110R | RES SMD (0805) 5.1KΩ F,RT RoHS           |  |
| 190 | R522,                     | 414916390210R | RES SMD (0603) 39KΩ F,RT RoHS            |  |
| 200 | R518,R519,                | 414908100310R | RES SMD (0805) 100KΩ F,RT,RoHS           |  |
| 210 | R514,                     | 414916010450R | RES SMD (0603) 100KΩ J,RT REV:A RoHS     |  |
| 220 | R527,                     | 414916330410R | RES SMD (0603) 3.3M F RT RoHS            |  |
| 240 | R512,R526,                | 414916010350R | RES SMD (0603) 10KΩ J,RT RoHS            |  |
| 250 | R538,                     | 414916604310R | RES SMD (0603) 604KΩ F,RT RoHS           |  |
| 260 | R513,R529,R530,           | 414916010550R | RES SMD (0603) 1MΩ J,RT RoHS REV:A       |  |
| 270 | R523,                     | 414916330210R | RES SMD (0603) 33KΩ F,RT RoHS            |  |
| 290 | R524,                     | 414916220210R | RES SMD (0603) 22KΩ F,RT RoHS            |  |
| 300 | R515,R516,                | 414908220210R | RES SMD (0805) 22KΩ F,RT,RoHS            |  |
| 310 | C507,C511,                | 419342254670R | C SMD(0805) Y5V 2.2uF/16V Z RoHS         |  |
| 320 | C821,                     | 419311040060R | C SMD(0603) X7R 0.1uF/50V K RoHS         |  |
| 330 | C510,                     | 419316830060R | C SMD (0603) X7R 0.068uF 50V,K RoHS      |  |
| 340 | C523,C530,                | 419316810070R | C SMD(0805) X7R 680PF/50V K,RoHS         |  |
| 350 | C529,                     | 419304710560R | C SMD(0603) NPO 470PF/50V,J,RoHS         |  |
| 360 | C504,                     | 419311020060R | C SMD(0603) X7R 1000PF/50V K RoHS        |  |
| 370 | C506,                     | 419314720060R | C SMD(0603) X7R 4700PF/50V K RoHS        |  |
| 380 | C501,C502,C513,C514,      | 419312220060R | C SMD(0603) X7R 2200PF/50V K RoHS        |  |
| 390 | C505,                     | 419311030060R | C SMD(0603) X7R 0.01uF/50V K RoHS        |  |
|     | D506,                     | 411023004021R | DIO SN4148-LF 75V/0.15A SMD 1206 (FEC)Ro |  |
| 400 |                           | 411020046090R | DIO 1N4148W 75V/0.15A(PEC)RoHS SOD-123   |  |
| 410 | D501,D502,                | 411020026210R | DIO BAV99 350mW 70V SOT-23(PHI RoHS      |  |
| 410 |                           | 411020026020R | DIO BAV99-LF 350mW 70V SOT-23 (FEC)RoHS  |  |
| 410 |                           | 411020026390R | DIO BAV99,SOT-23(INFINEON)RoHS           |  |
| 410 |                           | 411020026090R | DIO BAV99 350mW 75V SOT-23(PEC RoHS      |  |

| 420  | D503,D504,          | 411020047210R | DIO BAV70 85V SOT23 (PHILIPS) RoHS       |  |
|------|---------------------|---------------|--|--|
| 420  |                     | 411020047020R | DIO BAV70-LF, 70V SOT-23(FEC) ROHS       |  |
| 430  | D505, 411020068210R |               | DIO BAW56 85V SOT-23(PHILIPS)RoHS        |  |
| 430  |                     | 411020068020R | DIO BAW56 70V SOT-23(FRONTIER)RoHS       |  |
| 430  |                     | 411020068090R | DIO BAW56 75V SOT-23(PANJIT)RoHS         |  |
| 440  | IC501,              | 412000455630R | IC OZ9938GN SOIC16(O2 MICRO)RoHS         |  |
| 450  | C516,C512,          | 419313330060R | C SMD(0603) X7R 0.033uF/50V K ROHS       |  |
| 460  |                     | 790621410600R | PCBA,PWR&INV./B,AI,LE1730-6E0            |  |
| 470  | R509,               | 414916200010R | RES SMD (0603) 200Ω F,RT RoHS            |  |
| 480  | R534,               | 414916100210R | RES SMD (0603) 10KΩ F,RT RoHS            |  |
| 500  | C508,               | 419312230060R | C SMD(0603) X7R 0.022uF/50V K RoHS       |  |
| 510  |                     | 506140005700R | LABEL,BARCODE,BLANK,33x7mm, ROHS,FOR PCB |  |
| 520  | ZD805,              | 411100991920R | ZENER 9.1V MMSZ5239A SOD123(PE C)RoHS    |  |
| 520  |                     | 411131591952R | ZENER 9.1V 0.5W DDZ9V1C-F,SOD1 23(DIODES |  |
| 520  |                     | 411150391950R | ZENER 9.1V MTZS05-9.1-G SOD-123 (MITSUBI |  |
|      |                     | •             |  |  |
| ITEM | Location            | P/N           | Description                              |  |
|      |                     | 790621410600R | PCBA,PWR&INV./B,AI,LE1730-6E0            |  |
| 10   |                     | 790621450600R | PCBA,PWR&INV./B,AI/A, LE1730-6E0         |  |
| 30   |                     | 790621460600R | PCBA,PWR&INV./B,AI/R, LE1730-6E0         |  |
|      |                     |               |  |  |
| ITEM | Location            | P/N           | Description                              |  |
|      |                     | 790621450600R | PCBA,PWR&INV./B,AI/A, LE1730-6E0         |  |
| 10   | R804,               | 415130680540R | RES CF 1/2W 68Ω J,AT RoHS REV:A          |  |
| 20   | R828,               | 415340101540R | RES MOF 1W 100Ω J,AT MINI RoHS           |  |
| 30   | D806,               | 411020052020R | DIO A02-LF 200V/1A R1(FEC)RoHS           |  |
| 30   |                     | 411030003040R | DIO FR103 200V/1A DO-41(MOSPEC RoHS      |  |
| 40   | D809,               | 411022003210R | DIO 1N4148 75V/0.2A AT (PHIL) RoHS       |  |
| 40   |                     | 411022003020R | DIO 1N4148-LF 75V/0.15A AT (FEC)RoHS     |  |
| 40   |                     | 411020048090R | DIO 1N4148-35 75V/0.15A,DO35(P EC)RoHS   |  |
| 50   | D804,               | 411020053090R | DIO PS1010R 1000V/1A DO-41(PAN JIT)RoHS  |  |
| 50   |                     | 411032006020R | DIO FR10-10-LF 1000V/1A AT(FRO NTIER)RoH |  |
| 60   | ZD802,              | 411020050090R | DIO P6KE150A,DO-15,AT(PANJIT)RoHS        |  |
| 60   |                     | 411020050020R | DIO P6KE150A-LF AT(FRONTIER) RoHS        |  |
| 60   |                     | 411020050010R | DIO P6KE150A,DO-15AT,(TSC)RoHS           |  |
| 70   | B801,               | 432002200160R | BEAD CORE BF30TA-3.5x9x0.8 AT            |  |
| 80   | R820,R821,          | 415030105540R | RES CF 1/2W 1MΩ J,AT MINI RoHS           |  |

| 90   | R506,R508,R532,R533,                    | 414030330540R                                     | RES FSM 1/2W 33Ω J,AT MINI,RoHS          |  |
|------|---|---|--|--|
| 100  | R501,R503,                              | 414870305540R                                     | RES MG HV 1/2Ws 3MΩ 3KV J,AT RoHS        |  |
| 110  | J502,J507,J510,J516,J804,J8<br>05,J809, | 430405000000R                                     | JMPR ROLL/KG D=0.6mm,AT,RoHS 7.5mm       |  |
| 110  |   | 430405000000R                                     | JMPR ROLL/KG D=0.6mm,AT,RoHS 7.5mm       |  |
| 120  | J503,J505,J514,J801,J803,J8<br>08,      | 430405000000R                                     | JMPR ROLL/KG D=0.6mm,AT,RoHS 10mm        |  |
| 120  |   | 430405000000R                                     | JMPR ROLL/KG D=0.6mm,AT,RoHS 10mm        |  |
| 130  | J508,J513,J515,J810,                    | 430405000000R                                     | JMPR ROLL/KG D=0.6mm,AT,RoHS 12.5mm      |  |
| 130  |   | 430405000000R                                     | JMPR ROLL/KG D=0.6mm,AT,RoHS 12.5mm      |  |
| 140  | J501,J512,J802,J511,                    | 312,J802,J511, 430405000000R JMPR ROLL/KG D=0.6mm |  |  |
| 140  |   | 430405000000R                                     | JMPR ROLL/KG D=0.6mm,AT,RoHS 15mm        |  |
| 150  | J506,J509,                              | 430405000000R                                     | JMPR ROLL/KG D=0.6mm,AT,RoHS 17.5mm      |  |
| 150  |   | 430405000000R                                     | JMPR ROLL/KG D=0.6mm,AT,RoHS 17.5mm      |  |
| 160  |   | 70000000100R                                      | ASSY,PCB&RIVENT,LE1730                   |  |
| 170  | R521,                                   | 415020330540R                                     | RES CF 1/4W 33Ω J,AT MINI RoHS           |  |
| 180  | R812,                                   | 414020689540R                                     | RES FSM 1/4W 6.8Ω J AT MINI,RoHS         |  |
|      |   |   |  |  |
| ITEM | Location                                | P/N   | Description                              |  |
|      |   | 790621460600R                                     | PCBA,PWR&INV./B,AI/R, LE1730-6E0         |  |
| 10   | C813,                                   | 418147038530R                                     | CAP CD NPO 47pF 1KV J,VT RoHS            |  |
| 20   | C802,C811,                              | 418210227030R                                     | CAP CD X7R 1000pF 500V K VT RoHS         |  |
| 30   | C817,C822,                              | 419111040030R                                     | CAP MTL X7R 0.1uF 50V K,VT, RoHS         |  |
| 40   | C814,C815,C818,C819,                    | 420264700230R                                     | CAP SH 47uF 25V M,125°C,VT, 6.3x11,RoHS  |  |
| 50   | 50 Q802, 410072013210R XSTR 2PC1815GR*  |   | XSTR 2PC1815GR*I VT (PHILIPS) RoHS REV:  |  |
| 50   |   |   | XSTR 2SC1815-GR (T2SPF.T) VT (TOSHIBA)Ro |  |
| 50   |   |   | XSTR UTC2SC1815L-GR NPN TO92 (UTC)RoHS   |  |
| 60   | IC803,                                  | 412022002840R IC TL431ACLPG TO-92 1%,VT(ON)RoHS   |  |  |
| 60   |   | 412022002240R                                     | IC KA431AZ 1%,VT (FAIRCHILD) RoHS        |  |
| 60   |   | 412022002300R                                     | . ,                                      |  |
| 60   |   | 412022002830R   IC AS431 TO-92 VT(A1SEMI)RoHS     |  |  |
| 70   |   |   | CAP MEB 0.1uF 100V J,(RSB),VT RSBEC3100D |  |
| 70   | 70 416141041531R                        |   | CAP MKT 0.1uF 100V J,VT(ARCO) RoHS,R82EC |  |

| 80   | C810,              | 420424710260R                                    | CAP SD 470uF/25V M 105°C ST 10x16,RoHS |  |  |
|------|--------------------|--|--|--|--|
| 90   | C509,C522,         | 420421510330R                                    | CAP SD 150uF 35V M,105°C VT 8x12 RoHS  |  |  |
|      |                    |  |  |  |  |
| ITEM | Location           | P/N  | Description                            |  |  |
|      |                    | 70000000100R                                     | ASSY,PCB&RIVENT,LE1730                 |  |  |
| 10   |                    | 490621400100R                                    | PCB,PWR&INV./B, LE1730-XE0             |  |  |
| 20   | M3,M4,M5,M6,M7,M8, | 15,M6,M7,M8, 512006000500R RIVET,Ф3.0хФ1.6х3.0mm |  |  |  |
| 30   | M1,M2,             | 512006000600R                                    | RIVET,Φ4.1xΦ2.2x3.0mm                  |  |  |

Related to Models: L1718S-SNQ/BNQ.AxxKEP for 8ms Innolux module and L1718S-SNQ/BNQ.AxxBEP for 8ms CPT module

## **IF Board**

# 1. For INL

| ITEM | Location                          | P/N           | Description                              |
|------|-----------------------------------|---------------|--|
|      |                                   | 790621300600R | PCBA,IF BOARD, LE1730-6E0                |
| 10   |                                   | 790621320600R | PCBA,IF BOARD,OTHRS,LE1730-6E0           |
| 20   |                                   | 790621340600R | PCBA,IF BOARD,SMD, LE1730-6E0            |
| 30   |                                   | 629030006500R | PROGRAM, LE1730-6E0                      |
| 50   |                                   | 511130001201R | SOLDER BAR,Sn96.5/Ag3.0/Cu0.5(SAC305 VAC |
| 50   |                                   | 511130001200R | SOLDER BAR,Sn96.5/Ag3.0/Cu0.5/Ni0.06/Ge0 |
| 70   |                                   | 506440003800R | LABEL,BLANK,YELLOW,10x4mm                |
|      |                                   |               |  |
| ITEM | Location                          | P/N           | Description                              |
|      |                                   | 790621320600R | PCBA,IF BOARD,OTHRS,LE1730-6E0           |
| 10   | C111,C144,                        | 420431000260R | CAP EC 10uF 25V M,105°C ST 5x11 RoHS     |
| 20   | C101,C102,                        | 420431010461R | CAP EC 100uF 16V M,105°C ST 5x11(SK) RoH |
| 30   | C130,C133,<br>C142,C145,<br>C105, | 420432200460R | CAP EC 22uF 16V M,105°C ST, 5x11,RoHS    |
| 40   | C108,                             | 420432210460R | CAP EC 220uF 16V M,105°C ST 6.3x11 RoHS  |
| 50   | CN101,                            | 430631060020R | WAFER 2.0mm 6P 180°,RoHS                 |
| 60   | CN105,                            | 430631080130R | WAFER 2x4P 2.0mm,200PHD-2*4ST RoHS       |
| 70   | X101,                             | 432008010370R | XTAL 14.31818MHz 16pF HC-49US 30PPM,DIP, |
| 80   | CN103,                            | 440819015030R | CON D-SUB FEM.15P RA W/O SCREW DZ11AA1-H |
|      |                                   |               |  |
| ITEM | Location                          | P/N           | Description                              |
|      |                                   | 790621340600R | PCBA,IF BOARD,SMD, LE1730-6E0            |
| 10   | Q103,Q106,                        | 410500045210R | XSTR PMBT3904 NPN 200MA,40V SOT23(PHILIP |
| 10   |                                   | 410500045130R | XSTR MMBT3904 NPN SOT-23(INFIN EON)RoHS  |

| 10  |  | 410500045140R | XSTR MMBT3904LT1G NPN 200MA 40V SOT23(ON |
|-----|--|---------------|--|
| 20  | Q102,Q105,                             | 410500046210R | XSTR PMBT3906 PNP 200MA,40V SOT23(PHILIP |
| 20  |  | 410500046130R | XSTR MMBT3906 PNP SOT-23(INFIN EON)RoHS  |
| 20  |  | 410500046180R | XSTR MMBT3906LT1G PNP 200mA 40V SOT23(ON |
| 30  | Q101,                                  | 410500068290R | XSTR AP2305GN P-CH SOT23(APEC) RoHS      |
| 30  |  | 410500044270R | XSTR AO3401L P-CH(ALPHA-OMEGA) SOT23 RoH |
| 30  |  | 410500075270R | XSTR AO3415 P-CH,SOT23(AOS) RoHS         |
| 40  | Q107,                                  | 410500050210R | XSTR 2N7002,N-CH FET SOT-23 (PHILIPS)RoH |
| 40  |  | 410500050130R | XSTR SN7002N N-CH SOT-23(INFINEON),RoHS  |
| 40  |  | 410500050090R | XSTR 2N7002 N-CH SOT-23(PANJIT)RoHS      |
|     | TVS101,TVS<br>102,TVS103,<br>TVS104,   | 411020026210R | DIO BAV99 350mW 70V SOT-23(PHI RoHS      |
| 50  |  | 411020026020R | DIO BAV99-LF 350mW 70V SOT-23 (FEC)RoHS  |
| 50  |  | 411020026390R | DIO BAV99,SOT-23(INFINEON)RoHS           |
| 50  |  | 411020026090R | DIO BAV99 350mW 75V SOT-23(PEC RoHS      |
| 60  | D103,                                  | 411020047210R | DIO BAV70 85V SOT23 (PHILIPS) RoHS       |
| 60  |  | 411020047020R | DIO BAV70-LF, 70V SOT-23(FEC) ROHS       |
| 70  | ZD101,ZD10<br>5,ZD106,ZD<br>107,ZD108, | 411100656951R | ZENER 5.6V ZMM5232B-LF DO213AA (FRONTIER |
| 70  |  | 411101156950R | ZENER BZV55-C5V6 SOD80C(PHILIP S) RoHS   |
| 70  |  | 411150356950R | ZENER 5.6V MTZS05-5.6-G,SOD-12 3(MMC)RoH |
| 80  | U108,                                  | 412000279480R | IC AT24C04N-10SU-2.7 SOP8 4K(A TMEL)RoHS |
| 80  |  | 412000279280R | IC M24C04-WMN6TP4K SOP8 (ST) RoHS        |
| 80  |  | 412000479990R | IC CAT24C04WI-TE13 SOIC-8(CATALYST)RoHS  |
| 90  | U102,                                  | 412000330830R | IC AS1117L-1.8/TR-LF,SOT223(A1 SEMI)RoHS |
| 90  |  | 412000330020R | IC LD1117AL-1.8V-A SOT223(UTC) RoHS      |
| 100 | U101,                                  | 412000372830R | IC AS1117L-3.3TR-LF,SOT223(A1S EMI)RoHS  |
| 100 |  | 412000372020R | IC LD1117AL-3.3V-A SOT-223(UTC RoHS      |
| 110 | U103,                                  | 412000435480R | IC AT24C02BN-10SU-1.8 SOIC8 2K (ATMEL)Ro |
| 110 |  | 412000480990R | IC CAT24C02WI-TE13 SOIC-8(CATALYST)RoHS  |
| 110 |  | 412000480280R | IC M24C02-RMN6TP SO8(ST)RoHS             |
| 120 | U105,                                  | 412000436190R | IC TSUM16AL-LF PQFP100(MSTAR)R oHS       |
| 130 | U106,                                  | 412000373190R | IC SST25VF010A-33-4C-SAE,SOIC- 8(SST)RoH |
| 130 |  | 412000486310R | IC PM25LV010A-100SCE SOIC8(PMC)RoHS      |
| 130 |  | 412000486190R | IC PS25LV010A-100SCE SOIC8(MSTAR)RoHS    |
| 140 | R190,R170,<br>R171,R103,               | 414916000050R | RES SMD (0603) 0Ω J,RT RoHS              |
| 150 | R186,R187,                             | 414916010050R | RES SMD (0603) 10Ω J,RT RoHS             |

| 160 | R130,R129,<br>R114,R117,<br>R120,R124,<br>R125,R127,<br>R131,R132,<br>R101,R167,<br>R168,R178,<br>R179,   | 414916010150R | RES SMD (0603) 100Ω J,RT RoHS REV:A  |
|-----|---|---------------|--------------------------------------|
| 170 | R157,R158,<br>R159,R160,<br>R161,R162,<br>R163,   | 414916010250R | RES SMD (0603) 1KΩ J,RT RoHS REV:A   |
| 180 | R106,R172,<br>R180,R181,  | 414916010350R | RES SMD (0603) 10KΩ J,RT RoHS        |
| 190 | R102,   | 414916010450R | RES SMD (0603) 100KΩ J,RT REV:A RoHS |
| 200 | R105,   | 414916020350R | RES SMD (0603) 20KΩ J,RT RoHS REV:A  |
| 210 | R136,R137,  | 414916022250R | RES SMD (0603) 2.2KΩ J,RT RoHS       |
| 220 | R121,   | 414916047150R | RES SMD (0603) 470Ω J,RT RoHS REV:A  |
| 230 | R108,R110,<br>R122,R149,<br>R150,R154,<br>R155,R173,<br>R174,R166,<br>R182,R183,<br>R184,R185,<br>R109,   | 414916047250R | RES SMD (0603) 4.7KΩ J,RT RoHS       |
| 240 | R169,   | 414916390010R | RES SMD (0603) 390Ω F,RT RoHS        |
| 250 | R133,R134,<br>R135,   | 414916750910R | RES SMD (0603) 75Ω F,RT RoHS REV:A   |
| 260 | RP102,  | 415751035080R | RP(0612)10KΩx4 1/16W J 8P4R RoHS     |
| 270 | C158,C159,<br>C160,C161,<br>C162,C163,<br>C164,   | 419301010560R | C SMD(0603) NPO 100PF/50V J RoHS     |
| 280 | C153,C154,  | 419302200560R | C SMD(0603) NPO 22PF/50V J RoHS      |
| 290 | C126,   | 419302210560R | C SMD(0603) NPO 220PF/50V J RoHS     |
| 300 | C125,   | 419303300560R | C SMD(0603) NPO 33PF/50V J RoHS      |
| 310 | C103,C104,<br>C106,C107,<br>C109,C129,<br>C156,C131,<br>C132,C134,<br>C135,C136,<br>C137,C139,<br>C141,C143,<br>C147,C148,<br>C149,C150,<br>C151,C152,<br>C166, | 419311040060R | C SMD(0603) X7R 0.1uF/50V K RoHS     |
| 320 | C140,   | 419311054070R | C SMD(0805) X7R 1uF/16V K RoHS REV:A |
| 330 | C112,C113,<br>C114,C115,<br>C116,C117,<br>C118,   | 419314730060R | C SMD (0603) X7R 0.047uF 50V,K RoHS  |
| 340 | FB101,  | 432002312111R | BEAD CORE SMD(0805)120Ω 300mA RoHS   |

|     | FB102,FB10<br>3,FB105,FB1<br>06, | 432002360012R | BEAD CORE SMD(0805)60Ω 800mA GBK201209T  |
|-----|----------------------------------|---------------|--|
| 360 | CN104,                           | 444099030030R | CON, SMD 1.0mm 30PIN RoHS AL2309-A0G1Z   |
| 370 |                                  | 506140005700R | LABEL,BARCODE,BLANK,33x7mm, ROHS,FOR PCB |
| 380 |                                  | 490621300100R | PCB,INTERFACE, LE1730-XE0                |
| 390 | R107,                            | 414916022150R | RES SMD (0603) 220Ω J,RT RoHS REV:A      |
|     | R113,R116,<br>R119,              |               | RES SMD (0603) 56Ω F,RT RoHS REV:A       |
| 410 | FB107,FB10<br>8,FB109,           | 432002360140R | BEAD CORE SMD(0603)60Ω 600mA, GBK160808  |
| 420 |                                  | 511130002203R | SOLDER PASTE,Sn96.5/Ag3.0/Cu0.5(SAC305 O |
| 420 |                                  | 511130002200R | SOLDER PASTE,Sn96.5-Ag3.0-Cu0.5 ROHS     |
| 420 |                                  | 511130002201R | SOLDER PASTE,Sn96.5%Ag3.0%Cu0.5%         |

# 2. For CPT

|      | <del></del>                           | _             |  |  |
|------|---------------------------------------|---------------|--|--|
| ITEM | Location                              | P/N           | Description                              |  |
|      |                                       | 790621300000R | PCBA,IF BOARD, LE1730-0E0                |  |
| 10   |                                       | 790621320600R | PCBA,IF BOARD,OTHRS,LE1730-6E0           |  |
| 20   |                                       | 790621340600R | PCBA,IF BOARD,SMD, LE1730-6E0            |  |
| 30   |                                       | 629030006520R | PROGRAM, LE1730-0E0                      |  |
| 50   |                                       | 511130001201R | SOLDER BAR,Sn96.5/Ag3.0/Cu0.5(SAC305 VAC |  |
| 50   |                                       | 511130001200R | SOLDER BAR,Sn96.5/Ag3.0/Cu0.5/Ni0.06/Ge0 |  |
| 70   |                                       | 506440003800R | LABEL,BLANK,YELLOW,10x4mm                |  |
|      |                                       |               |  |  |
| ITEM | Location                              | P/N           | Description                              |  |
|      |                                       |               | PCBA,IF BOARD,OTHRS,LE1730-6E0           |  |
| 10   | C111,C1<br>44,                        | 420431000260R | CAP EC 10uF 25V M,105°C ST 5x11 RoHS     |  |
| 20   | 02,                                   | 420431010461R | CAP EC 100uF 16V M,105°C ST 5x11(SK) RoH |  |
| 30   | C130,C1<br>33,C142<br>,C145,C<br>105, | 420432200460R | CAP EC 22uF 16V M,105°C ST, 5x11,RoHS    |  |
| 40   | C108,                                 | 420432210460R | CAP EC 220uF 16V M,105°C ST 6.3x11 RoHS  |  |
| 50   | CN101,                                | 430631060020R | WAFER 2.0mm 6P 180°,RoHS                 |  |
| 60   | CN105,                                | 430631080130R | WAFER 2x4P 2.0mm,200PHD-2*4ST RoHS       |  |
| 70   | X101,                                 | 432008010370R | XTAL 14.31818MHz 16pF HC-49US 30PPM,DIP, |  |
| 80   | CN103,                                | 440819015030R | CON D-SUB FEM.15P RA W/O SCREW DZ11AA1-H |  |
|      |                                       |               |  |  |
| ITEM | Location                              | P/N           | Description                              |  |
|      |                                       | 790621340600R | PCBA,IF BOARD,SMD, LE1730-6E0            |  |
| 10   | Q103,Q1<br>06,                        | 410500045210R | XSTR PMBT3904 NPN 200MA,40V SOT23(PHILIP |  |
|      |                                       |               |  |  |

| 10  |  | 410500045130R | XSTR MMBT3904 NPN SOT-23(INFIN EON)RoHS  |  |
|-----|--|---------------|--|--|
| 10  |  | 410500045140R | XSTR MMBT3904LT1G NPN 200MA 40V SOT23(ON |  |
| 20  | Q102,Q1<br>05,                             | 410500046210R | XSTR PMBT3906 PNP 200MA,40V SOT23(PHILIP |  |
| 20  |  | 410500046130R | XSTR MMBT3906 PNP SOT-23(INFIN EON)RoHS  |  |
| 20  |  | 410500046180R | XSTR MMBT3906LT1G PNP 200mA 40V SOT23(ON |  |
| 30  | Q101,                                      | 410500068290R | XSTR AP2305GN P-CH SOT23(APEC) RoHS      |  |
| 30  |  | 410500044270R | XSTR AO3401L P-CH(ALPHA-OMEGA) SOT23 RoH |  |
| 30  |  | 410500075270R | XSTR AO3415 P-CH,SOT23(AOS) RoHS         |  |
| 40  | Q107,                                      | 410500050210R | XSTR 2N7002,N-CH FET SOT-23 (PHILIPS)RoH |  |
| 40  |  | 410500050130R | XSTR SN7002N N-CH SOT-23(INFINEON),RoHS  |  |
| 40  |  | 410500050090R | XSTR 2N7002 N-CH SOT-23(PANJIT)RoHS      |  |
| 50  | TVS101,<br>TVS102,<br>TVS103,<br>TVS104,   | 411020026210R | DIO BAV99 350mW 70V SOT-23(PHI RoHS      |  |
| 50  |  | 411020026020R | DIO BAV99-LF 350mW 70V SOT-23 (FEC)RoHS  |  |
| 50  |  | 411020026390R | DIO BAV99,SOT-23(INFINEON)RoHS           |  |
| 50  |  | 411020026090R | DIO BAV99 350mW 75V SOT-23(PEC RoHS      |  |
| 60  | D103,                                      | 411020047210R | DIO BAV70 85V SOT23 (PHILIPS) RoHS       |  |
| 60  |  | 411020047020R | DIO BAV70-LF, 70V SOT-23(FEC) ROHS       |  |
| 70  | ZD101,Z<br>D105,ZD<br>106,ZD10<br>7,ZD108, | 411100656951R | ZENER 5.6V ZMM5232B-LF DO213AA (FRONTIER |  |
| 70  |  | 411101156950R | ZENER BZV55-C5V6 SOD80C(PHILIP S) RoHS   |  |
| 70  |  | 411150356950R | ZENER 5.6V MTZS05-5.6-G,SOD-12 3(MMC)RoH |  |
| 80  | U108,                                      | 412000279480R | IC AT24C04N-10SU-2.7 SOP8 4K(A TMEL)RoHS |  |
| 80  |  | 412000279280R | IC M24C04-WMN6TP4K SOP8 (ST) RoHS        |  |
| 80  |  | 412000479990R | IC CAT24C04WI-TE13 SOIC-8(CATALYST)RoHS  |  |
| 90  | U102,                                      | 412000330830R | IC AS1117L-1.8/TR-LF,SOT223(A1 SEMI)RoHS |  |
| 90  |  | 412000330020R | IC LD1117AL-1.8V-A SOT223(UTC) RoHS      |  |
| 100 | U101,                                      | 412000372830R | IC AS1117L-3.3TR-LF,SOT223(A1S EMI)RoHS  |  |
| 100 |  | 412000372020R | IC LD1117AL-3.3V-A SOT-223(UTC RoHS      |  |
| 110 | U103,                                      | 412000435480R | IC AT24C02BN-10SU-1.8 SOIC8 2K (ATMEL)Ro |  |
| 110 |  | 412000480990R | IC CAT24C02WI-TE13 SOIC-8(CATALYST)RoHS  |  |
| 110 |  | 412000480280R | IC M24C02-RMN6TP SO8(ST)RoHS             |  |
| 120 | U105,                                      | 412000436190R | IC TSUM16AL-LF PQFP100(MSTAR)R oHS       |  |
| 130 | U106,                                      | 412000373190R | IC SST25VF010A-33-4C-SAE,SOIC- 8(SST)RoH |  |
| 130 |  | 412000486310R | IC PM25LV010A-100SCE SOIC8(PMC)RoHS      |  |
| 130 |  | 412000486190R | IC PS25LV010A-100SCE SOIC8(MSTAR)RoHS    |  |
| 140 | R190,R1<br>70,R171,                        | 414916000050R | RES SMD (0603) 0Ω J,RT RoHS              |  |

|     | R103,   |               |                                      |  |
|-----|---|---------------|--------------------------------------|--|
|     | R186,R1<br>87,  | 414916010050R | RES SMD (0603) 10Ω J,RT RoHS         |  |
| 160 | R130,R1<br>29,R114,<br>R117,R1<br>20,R124,<br>R125,R1<br>27,R131,<br>R132,R1<br>01,R167,<br>R168,R1<br>78,R179, | 414916010150R | RES SMD (0603) 100Ω J,RT RoHS REV:A  |  |
|     | R157,R1<br>58,R159,<br>R160,R1<br>61,R162,<br>R163,   | 414916010250R | RES SMD (0603) 1KΩ J,RT RoHS REV:A   |  |
| 180 | R106,R1<br>72,R180,<br>R181,  | 414916010350R | RES SMD (0603) 10KΩ J,RT RoHS        |  |
| 190 | R102,   | 414916010450R | RES SMD (0603) 100KΩ J,RT REV:A RoHS |  |
| 200 | R105,   | 414916020350R | RES SMD (0603) 20KΩ J,RT RoHS REV:A  |  |
| 210 | R136,R1<br>37,  | 414916022250R | RES SMD (0603) 2.2KΩ J,RT RoHS       |  |
| 220 | R121,   | 414916047150R | RES SMD (0603) 470Ω J,RT RoHS REV:A  |  |
| 230 | R108,R1<br>10,R122,<br>R149,R1<br>50,R154,<br>R155,R1<br>73,R174,<br>R166,R1<br>82,R183,<br>R184,R1<br>85,R109, | 414916047250R | RES SMD (0603) 4.7KΩ J,RT RoHS       |  |
| 240 | R169,   | 414916390010R | RES SMD (0603) 390Ω F,RT RoHS        |  |
| 250 | R133,R1<br>34,R135,   | 414916750910R | RES SMD (0603) 75Ω F,RT RoHS REV:A   |  |
| 260 | RP102,  | 415751035080R | RP(0612)10KΩx4 1/16W J 8P4R RoHS     |  |
| 270 | C158,C1<br>59,C160,<br>C161,C1<br>62,C163,<br>C164,   | 419301010560R | C SMD(0603) NPO 100PF/50V J RoHS     |  |
| 280 | C153,C1<br>54,  | 419302200560R | C SMD(0603) NPO 22PF/50V J RoHS      |  |
| 290 | C126,   | 419302210560R | C SMD(0603) NPO 220PF/50V J RoHS     |  |
| 300 | C125,   | 419303300560R | C SMD(0603) NPO 33PF/50V J RoHS      |  |

| 310 | C103,C1<br>04,C106,<br>C107,C1<br>09,C129,<br>C156,C1<br>31,C132,<br>C134,C1<br>35,C136,<br>C137,C1<br>39,C141,<br>C143,C1<br>47,C148,<br>C149,C1<br>50,C151,<br>C152,C1<br>66, | 419311040060R | C SMD(0603) X7R 0.1uF/50V K RoHS         |
|-----|---|---------------|--|
| 320 | C140,   | 419311054070R | C SMD(0805) X7R 1uF/16V K RoHS REV:A     |
| 330 | C112,C1<br>13,C114,<br>C115,C1<br>16,C117,<br>C118,   | 419314730060R | C SMD (0603) X7R 0.047uF 50V,K RoHS      |
| 340 | FB101,  | 432002312111R | BEAD CORE SMD(0805)120Ω 300mA RoHS       |
| 350 | FB102,F<br>B103,FB<br>105,FB10<br>6,  | 432002360012R | BEAD CORE SMD(0805)60Ω 800mA GBK201209T  |
| 360 | CN104,  | 444099030030R | CON, SMD 1.0mm 30PIN RoHS AL2309-A0G1Z   |
| 370 |   | 506140005700R | LABEL,BARCODE,BLANK,33x7mm, ROHS,FOR PCB |
| 380 |   | 490621300100R | PCB,INTERFACE, LE1730-XE0                |
| 390 | R107,   | 414916022150R | RES SMD (0603) 220Ω J,RT RoHS REV:A      |
| 400 | R113,R1<br>16,R119,   | 414916560910R | RES SMD (0603) 56Ω F,RT RoHS REV:A       |
| 410 | FB107,F<br>B108,FB<br>109,  | 432002360140R | BEAD CORE SMD(0603)60Ω 600mA, GBK160808  |
| 420 |   | 511130002203R | SOLDER PASTE,Sn96.5/Ag3.0/Cu0.5(SAC305 O |
| 420 |   | 511130002200R | SOLDER PASTE,Sn96.5-Ag3.0-Cu0.5 ROHS     |
| 420 |   | 511130002201R | SOLDER PASTE,Sn96.5%Ag3.0%Cu0.5%         |

# **Power and Inverter Board**

| ITEM | Location | P/N           | Description                              |
|------|----------|---------------|--|
|      |          | 790621400600R | PCBA,PWR&INV./B, LE1730-6E0              |
| 10   | IC801,   | 412140002380R | IC LTV817M-PR VDE (LITE-ON) P=10mm RoHS  |
| 10   |          | 412140001390R | IC EL817M-B(EVERLIGHT)RoHS               |
| 20   | D801,    | 411050005020R | DIO BRDG BL4-06-BF52-LF 600V/4A(FRONTIER |
| 20   |          | 411050007010R | DIO BRDG KBL405G 600V/4A(TSC) RoHS       |
| 20   |          | 411050005090R | DIO BRDG FL406 600V/4A(PEC)RoH S         |
| 30   | C804,    | 416194743011R | CAP MEX 0.47uF 275V K X2,F15 RoHS        |

| 40   | C820,C8<br>01,C806, | 416202224610R | CAP MEY 2200pF 400V M Y,F10mm RoHS       |  |
|------|---------------------|---------------|--|--|
| 60   | C812,C8<br>09,      | 420421020110R | CAP SD 1000uF/10V M,105°C F,10x16,RoHS   |  |
| 70   | C808,               | 420421020211R | CAP SD 1000uF 25V M,105°C F 13x20 RoHS   |  |
| 80   | C805,               | 420431014582R | CAP SEK 100uF/450V M,105°C CF,18x35,RoHS |  |
|      | C824,               | 416204724610R | CAP MEY 4700pF 400V M Y,F10mm RoHS       |  |
| 100  | L802,L8<br>03,      | 425000010530R | COIL CHK 5uH 7.8X10 CHK-053 0 181085R0L  |  |
| 110  | L801,               | 426000050070R | CHOKE L-FILTER 12mH LIN-007 ET-20,RoHS   |  |
| 120  | T801,               | 426000090470R | XFMR 750u@1K,+-8%,3m,113m,SPW- 047,DIP-1 |  |
| 130  | RT801,              | 432009400701R | NTC 5Ω 4A 10ψ P=5mm, F RoHS              |  |
| 140  | F801,               | 430613125210R | FUSE SLOW 2.5A/250V,U/C/V,AT,3.6x10,RoHS |  |
| 150  | P801,               | 440149000220R | SKT AC 10A/250V U/C/V,G/Y=45mm TU-301-SP |  |
| 160  | CN801,              | 430300600120R | HRN ASS'Y 6P 110mm UL1007#24,RoHS        |  |
| 180  | C803,               | 418247233020R | CAP CD X7R 4700pF 1KV K,W/O FO RMING,RoH |  |
| 190  | 503,CN5<br>04,      | 430637020030P | WFR. 2P P=3.5mm 90°W/LOCK,RoHS           |  |
| 200  | 02,                 | 426000090670R | XFMR SW,105uH EEL19M DIP SPW-067,RoHS    |  |
| 210  | 27,                 | 418105058010R | CAP CD SL 5pF 3KV K,F7.5 RoHS            |  |
| 220  | 26,                 | 418110058510R | CAP CD SL 10pF 3KV J,F7.5 RoHS CC45SL3FD |  |
| 230  | U501,U5<br>02,      | 410500071290R | XSTR AP9971GD,N-CH,PDIP-8(APEC RoHS      |  |
| 230  |                     | 410050062330R | XSTR AF4971NN N-CH PDIP8(ANACH IP)RoHS   |  |
| 240  |                     | 735100007400R | ASSY,H/S,UFF80-005CT/UFF80-015CT,LE1730  |  |
| 250  |                     | 735100005100R | ASSY,H/S TOP245Y, LE1704/05 ROHS         |  |
| 260  |                     | 790621440600R | PCBA,PWR&INV./B,SMD,LE1730-6E0           |  |
| 270  | H501,               | 502040604500R | SHIELD EMI LE1915 ROHS                   |  |
| 280  |                     | 511130001201R | SOLDER BAR,Sn96.5/Ag3.0/Cu0.5(SAC305 VAC |  |
| 280  |                     | 511130001200R | SOLDER BAR,Sn96.5/Ag3.0/Cu0.5/Ni0.06/Ge0 |  |
| 300  |                     | 511110000101R | HOT-MELT ADHESIVES (#526)                |  |
| 320  |                     | 511110000501R | SILICONE RTV RUBBER,UB-511(EURO)         |  |
|      |                     |               |  |  |
| ITEM | Location            | P/N           | Description                              |  |
|      |                     | 735100005100R | ASSY,H/S TOP245Y, LE1704/05 ROHS         |  |
| 10   | IC802,              | 412000342270R | IC TOP245YN,TO-220-7C,RoHS (POWER INTEGR |  |
| 20   |                     | 507200003700R | HEATSINK,46x20xt10mm LE1704/05           |  |
| 30   |                     | 509112306100R | SCREW,P,CROSS,T.T-3*6,ZnROHS             |  |
| - 50 |                     |               | 00.12.17,1 ,01.1000,1.11 0 0,2.111.0110  |  |

| ITEM | Location                              | P/N           | Description                              |
|------|---------------------------------------|---------------|--|
|      |                                       | 735100007400R | ASSY,H/S,UFF80-005CT/UFF80-015CT,LE1730  |
| 10   | D805,                                 | 411090015020R | SCHTKY SRF5-04CT-LF ITO-220AB (FEC) RoHS |
| 10   |                                       | 411090024040R | SCHTKY SRF1040CM 40V/10A ITO22 OAB(MOSPE |
| 10   |                                       | 411090025040R | SCHTKY SRF1045CM 45V/10A ITO22 OAB(MOSPE |
| 20   | D803,                                 | 411020065020R | DIO UFF80-015CT-LF 150V/8A, ITO-220AC(FR |
| 20   |                                       | 411030058040R | DIO URF1020 200V/10A ITO220(MO SPEC)RoHS |
| 30   |                                       | 507200003800R | HEATSINK,56x20xt10mm LE1904/05           |
| 40   |                                       | 509112306100R | SCREW,P,CROSS,T.T-3*6,ZnROHS             |
|      | •                                     |               |  |
| ITEM | Location                              | P/N           | Description                              |
|      |                                       | 790621440600R | PCBA,PWR&INV./B,SMD,LE1730-6E0           |
| 10   | Q801,                                 | 410500045210R | XSTR PMBT3904 NPN 200MA,40V SOT23(PHILIP |
| 10   |                                       | 410500045140R | XSTR MMBT3904LT1G NPN 200MA 40V SOT23(ON |
| 10   |                                       | 410500045130R | XSTR MMBT3904 NPN SOT-23(INFIN EON)RoHS  |
| 20   | ZD803,                                | 411150356950R | ZENER 5.6V MTZS05-5.6-G,SOD-12 3(MMC)RoH |
| 20   |                                       | 411100956920R | ZENER 5.6V MMSZ5232A SOD123(PE C)RoHS    |
| 20   |                                       | 411131556920R | ZENER 5.6V 0.5W DDZ5V6B-F,SOD1 23(DIODES |
| 30   | ZD801,                                | 411150375950R | ZENER 7.5V MTZS05-7.5-G, SOD-123(MMC)RoH |
| 30   |                                       | 411100975920R | ZENER 7.5V MMSZ5236A SOD123(PE C)RoHS    |
| 30   |                                       | 411131575952R | ZENER 7.5V 0.5W DDZ7V5C-F,SOD1 23(DIODES |
| 40   | ZD804,                                | 411100915020R | ZENER 15V MMSZ5245A SOD123(PEC RoHS      |
| 40   |                                       | 411150315050R | ZENER 15V MTZS05-15-G,SOD-123 (MMC) RoHS |
| 40   |                                       | 411131515052R | ZENER 15V 0.5W DDZ15-F,SOD123(DIODES)RoH |
| 50   | R809,                                 | 414904100010R | RES SMD (1206) 100Ω F,RT RoHS            |
| 60   | R808,R8<br>19,R827,                   | 414908010350R | RES SMD (0805) 10KΩ J,RT RoHS REV:A      |
| 70   | R801,R8<br>05,R822,<br>R823,          | 414908024550R | RES SMD (0805) 2.4MΩ J,RT RoHS           |
| 80   | R813,R8<br>14,R815,                   | 414908010250R | RES SMD (0805) 1KΩ J,RT RoHS REV:A       |
| 90   | R825,                                 | 414908047450R | RES SMD (0805) 470KΩ J,RT RoHS           |
| 100  | R510,R5<br>11,                        | 414916000050R | RES SMD (0603) 0Ω J,RT RoHS              |
| 110  | R803,R8<br>07,R824,                   | 414908051450R | RES SMD (0805) 510KΩ J,RT RoHS           |
| 120  | R818,R5<br>02,R504,<br>R517,R5<br>20, | 414908330110R | RES SMD (0805) 3.3KΩ F,RT RoHS REV:A     |
| 130  | R816,                                 | 414908068950R | RES SMD (0805) 6.8Ω J RT RoHS            |

| 140 | R811,                        | 414908430210R | RES SMD (0805) 43KΩ F,RT,RoHS            |
|-----|------------------------------|---------------|--|
| 150 | R817,                        | 414908820110R | RES SMD (0805) 8.2KΩ F,RT RoHS           |
| 160 | R802,R8<br>06,               | 414904010050R | RES SMD (1206) 10Ω J,RT RoHS             |
| 170 | R829,                        | 414908020150R | RES SMD (0805) 200Ω J,RT RoHS            |
| 180 | R810,                        | 414908510110R | RES SMD (0805) 5.1KΩ F,RT RoHS           |
| 190 | R522,                        | 414916390210R | RES SMD (0603) 39KΩ F,RT RoHS            |
| 200 | R518,R5<br>19,               | 414908100310R | RES SMD (0805) 100KΩ F,RT,RoHS           |
| 210 | R514,                        | 414916010450R | RES SMD (0603) 100KΩ J,RT REV:A RoHS     |
|     | ′                            | 414916330410R | RES SMD (0603) 3.3M F RT RoHS            |
| 240 | R512,R5<br>26,               | 414916010350R | RES SMD (0603) 10KΩ J,RT RoHS            |
| 250 | R538,                        | 414916604310R | RES SMD (0603) 604KΩ F,RT RoHS           |
| 260 | R513,R5<br>29,R530,          | 414916010550R | RES SMD (0603) 1MΩ J,RT RoHS REV:A       |
| 270 | R523,                        | 414916330210R | RES SMD (0603) 33KΩ F,RT RoHS            |
|     |                              | 414916220210R | RES SMD (0603) 22KΩ F,RT RoHS            |
|     | In.                          | 414908220210R | RES SMD (0805) 22KΩ F,RT,RoHS            |
| 310 | C507,C5<br>11,               | 419342254670R | C SMD(0805) Y5V 2.2uF/16V Z RoHS         |
| 320 | C821,                        | 419311040060R | C SMD(0603) X7R 0.1uF/50V K RoHS         |
|     |                              | 419316830060R | C SMD (0603) X7R 0.068uF 50V,K RoHS      |
| 340 | C523,C5<br>30,               | 419316810070R | C SMD(0805) X7R 680PF/50V K,RoHS         |
| 350 | C529,                        | 419304710560R | C SMD(0603) NPO 470PF/50V,J,RoHS         |
| 360 | C504,                        | 419311020060R | C SMD(0603) X7R 1000PF/50V K RoHS        |
| 370 | C506,                        | 419314720060R | C SMD(0603) X7R 4700PF/50V K RoHS        |
| 380 | C501,C5<br>02,C513,<br>C514, | 419312220060R | C SMD(0603) X7R 2200PF/50V K RoHS        |
| 390 | C505,                        | 419311030060R | C SMD(0603) X7R 0.01uF/50V K RoHS        |
| 400 | D506,                        | 411023004021R | DIO SN4148-LF 75V/0.15A SMD 1206 (FEC)Ro |
| 400 |                              | 411020046090R | DIO 1N4148W 75V/0.15A(PEC)RoHS SOD-123   |
| 410 | D501,D5<br>02,               | 411020026210R | DIO BAV99 350mW 70V SOT-23(PHI RoHS      |
| 410 |                              | 411020026020R | DIO BAV99-LF 350mW 70V SOT-23 (FEC)RoHS  |
| 410 |                              | 411020026390R | DIO BAV99,SOT-23(INFINEON)RoHS           |
| 410 |                              | 411020026090R | DIO BAV99 350mW 75V SOT-23(PEC RoHS      |
| 420 | D503,D5<br>04,               | 411020047210R | DIO BAV70 85V SOT23 (PHILIPS) RoHS       |
| 420 |                              | 411020047020R | DIO BAV70-LF, 70V SOT-23(FEC) ROHS       |
| 430 | D505,                        | 411020068210R | DIO BAW56 85V SOT-23(PHILIPS)RoHS        |
| 430 |                              | 411020068020R | DIO BAW56 70V SOT-23(FRONTIER)RoHS       |
| 430 |                              | 411020068090R | DIO BAW56 75V SOT-23(PANJIT)RoHS         |

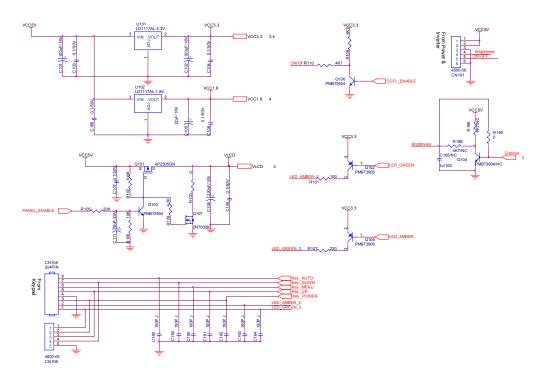
| 440  | IC501,                       | 412000455630R | IC OZ9938GN SOIC16(O2 MICRO)RoHS         |
|------|------------------------------|---------------|--|
| 450  | C516,C5<br>12,               | 419313330060R | C SMD(0603) X7R 0.033uF/50V K ROHS       |
| 460  | ,                            | 790621410600R | PCBA,PWR&INV./B,AI,LE1730-6E0            |
| 470  | R509,                        | 414916200010R | RES SMD (0603) 200Ω F,RT RoHS            |
| 480  | R534,                        | 414916100210R | RES SMD (0603) 10KΩ F,RT RoHS            |
| 500  | C508,                        | 419312230060R | C SMD(0603) X7R 0.022uF/50V K RoHS       |
| 510  |                              | 506140005700R | LABEL,BARCODE,BLANK,33x7mm, ROHS,FOR PCB |
| 520  | ZD805,                       | 411100991920R | ZENER 9.1V MMSZ5239A SOD123(PE C)RoHS    |
| 520  |                              | 411131591952R | ZENER 9.1V 0.5W DDZ9V1C-F,SOD1 23(DIODES |
| 520  |                              | 411150391950R | ZENER 9.1V MTZS05-9.1-G SOD-123 (MITSUBI |
|      |                              |               |  |
| ITEM | Location                     | P/N           | Description                              |
|      |                              | 790621410600R | PCBA,PWR&INV./B,AI,LE1730-6E0            |
| 10   |                              | 790621450600R | PCBA,PWR&INV./B,AI/A, LE1730-6E0         |
| 30   |                              | 790621460600R | PCBA,PWR&INV./B,AI/R, LE1730-6E0         |
|      |                              |               |  |
| ITEM | Location                     | P/N           | Description                              |
|      |                              | 790621450600R | PCBA,PWR&INV./B,AI/A, LE1730-6E0         |
| 10   | R804,                        | 415130680540R | RES CF 1/2W 68Ω J,AT RoHS REV:A          |
| 20   | R828,                        | 415340101540R | RES MOF 1W 100Ω J,AT MINI RoHS           |
| 30   | D806,                        | 411020052020R | DIO A02-LF 200V/1A R1(FEC)RoHS           |
| 30   |                              | 411030003040R | DIO FR103 200V/1A DO-41(MOSPEC RoHS      |
| 40   | D809,                        | 411022003210R | DIO 1N4148 75V/0.2A AT (PHIL) RoHS       |
| 40   |                              | 411022003020R | DIO 1N4148-LF 75V/0.15A AT (FEC)RoHS     |
| 40   |                              | 411020048090R | DIO 1N4148-35 75V/0.15A,DO35(P EC)RoHS   |
| 50   | D804,                        | 411020053090R | DIO PS1010R 1000V/1A DO-41(PAN JIT)RoHS  |
| 50   |                              | 411032006020R | DIO FR10-10-LF 1000V/1A AT(FRO NTIER)RoH |
| 60   | ZD802,                       | 411020050090R | DIO P6KE150A,DO-15,AT(PANJIT)RoHS        |
| 60   |                              | 411020050020R | DIO P6KE150A-LF AT(FRONTIER) RoHS        |
| 60   |                              | 411020050010R | DIO P6KE150A,DO-15AT,(TSC)RoHS           |
| 70   | B801,                        | 432002200160R | BEAD CORE BF30TA-3.5x9x0.8 AT            |
| 80   | R820,R8<br>21,               | 415030105540R | RES CF 1/2W 1MΩ J,AT MINI RoHS           |
| 90   | R506,R5<br>08,R532,<br>R533, | 414030330540R | RES FSM 1/2W 33Ω J,AT MINI,RoHS          |
| 100  | D501 D5                      | 414870305540R | RES MG HV 1/2Ws 3MΩ 3KV J,AT RoHS        |
| 110  | J502,J50<br>7,J510,J         | 430405000000R | JMPR ROLL/KG D=0.6mm,AT,RoHS 7.5mm       |

|     |  | 70000000100R                   | ASSY,PCB&RIVENT,LE1730   |
|-----|--|--------------------------------|--|
| TEM | Location                                   | P/N                            | Description  |
| 30  | 22,  | 1257210100011                  | 0/1 0D 10001 00 WI, 100 0 WI 0X12 NOTO   |
| 00  | C509,C5                                    |                                | CAP SD 470uF/25V M 105 C ST 10x16,R0HS  CAP SD 150uF 35V M,105°C VT 8x12 RoHS    |
|     | C810,                                      | 416141041531R<br>420424710260R | CAP MKT 0.1uF 100V J,VT(ARCO) RoHS,R82EC  CAP SD 470uF/25V M 105°C ST 10x16,RoHS |
| 70  | C816,                                      | 416231041530R                  | CAP MKT 0.14F 100V J.(RSB),VT RSBEC3100D   |
| 60  | C016                                       | 412022002830R                  | IC AS431 TO-92 VT(A1SEMI)RoHS  |
| 60  |  | 412022002300R                  | IC AP431VL TO-92 1% VT (ATC) RoHS  |
| 60  |  | 412022002240R                  | IC KA431AZ 1%,VT (FAIRCHILD) RoHS  |
|     | IC803,                                     | 412022002840R                  | IC TL431ACLPG TO-92 1%,VT(ON)RoHS  |
| 50  | 10000                                      | 410072013150R                  | XSTR UTC2SC1815L-GR NPN TO92 (UTC)RoHS   |
| 50  |  | 410072013370R                  | XSTR 2SC1815-GR (T2SPF.T) VT (TOSHIBA)Ro   |
|     | Q802,                                      | 410072013210R                  | XSTR 2PC1815GR*I VT (PHILIPS) RoHS REV:  |
|     | C819,                                      | 420264700230R                  | CAP SH 47uF 25V M,125°C,VT, 6.3x11,RoHS  |
| 30  | C817,C8<br>22,                             | 419111040030R                  | CAP MTL X7R 0.1uF 50V K,VT, RoHS   |
| 20  | 11,  | 418210227030R                  | CAP CD X7R 1000pF 500V K VT RoHS   |
| 10  | C813,                                      | 418147038530R                  | CAP CD NPO 47pF 1KV J,VT RoHS  |
|     |  | 790621460600R                  | PCBA,PWR&INV./B,AI/R, LE1730-6E0   |
| ГЕМ | Location                                   | P/N                            | Description  |
|     | <u> </u>                                   | <u> </u>                       | , , ,  |
|     | R812,                                      | 414020689540R                  | RES FSM 1/4W 6.8Ω J AT MINI,RoHS   |
|     | R521,                                      | 415020330540R                  | RES CF 1/4W 33Ω J.AT MINI RoHS   |
| 160 |  | 700000000100R                  | ASSY,PCB&RIVENT,LE1730   |
| 150 | J,   | 430405000000R                  | JMPR ROLL/KG D=0.6mm,AT,RoHS 17.5mm  |
| 150 | J506,J50<br>9.                             | 430405000000R                  | JMPR ROLL/KG D=0.6mm,AT,RoHS 17.5mm  |
| 140 | <del></del>                                | 430405000000R                  | JMPR ROLL/KG D=0.6mm,AT,RoHS 15mm  |
|     | J501,J51<br>2,J802,J<br>511,               | 430405000000R                  | JMPR ROLL/KG D=0.6mm,AT,RoHS 15mm  |
| 130 | - ,  | 430405000000R                  | JMPR ROLL/KG D=0.6mm,AT,RoHS 12.5mm  |
|     | J508,J51<br>3,J515,J<br>810,               | 430405000000R                  | JMPR ROLL/KG D=0.6mm,AT,RoHS 12.5mm  |
| 120 |  | 430405000000R                  | JMPR ROLL/KG D=0.6mm,AT,RoHS 10mm  |
| 120 | J503,J50<br>5,J514,J<br>801,J803<br>,J808, | 430405000000R                  | JMPR ROLL/KG D=0.6mm,AT,RoHS 10mm  |
| 110 |  | 430405000000R                  | JMPR ROLL/KG D=0.6mm,AT,RoHS 7.5mm   |

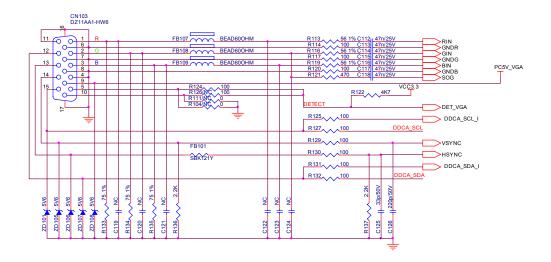
|   | 10 |                            | 490621400100R | PCB,PWR&INV./B, LE1730-XE0 |
|---|----|----------------------------|---------------|----------------------------|
| - | 20 | M3,M4,<br>M5,M6,<br>M7,M8, | 512006000500R | RIVET,Ф3.0xФ1.6x3.0mm      |
|   | 30 | M1,M2,                     | 512006000600R | RIVET,Φ4.1xΦ2.2x3.0mm      |

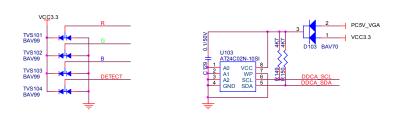
# SCHEMATIC DIAGRAM

# 1. DC to DC

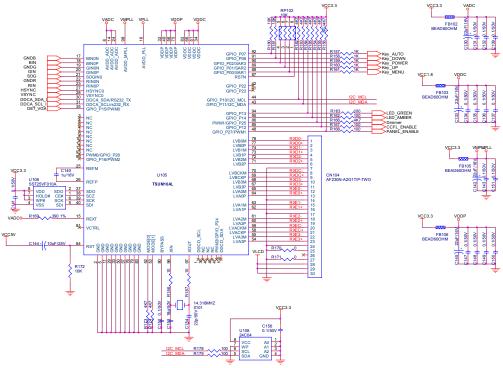


# 2. Input

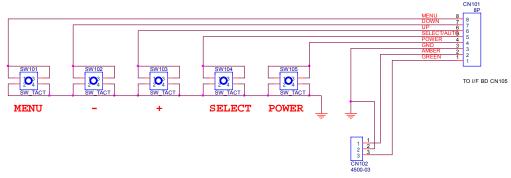




#### 3. Scaler\_TSUM16AL



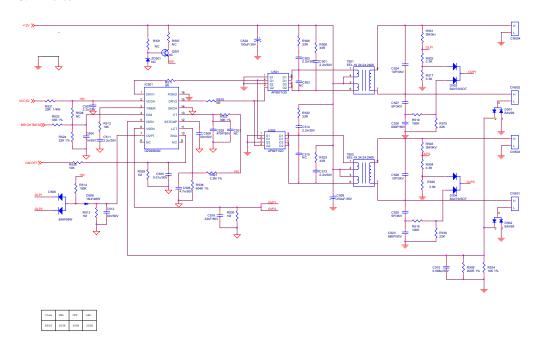
### 4. Key



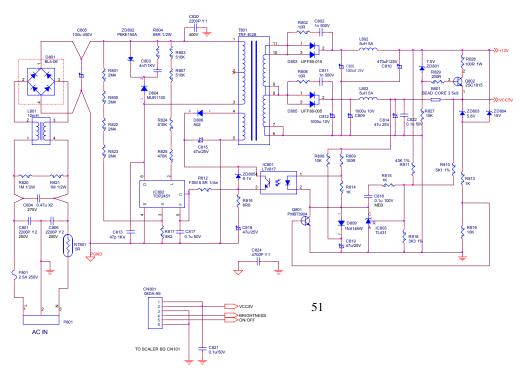
### 5. LED



### 6. Inverter



### 7. Power





Mar. 2007 P/NO : **MFL38456725** Printed in Korea