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# SPECIFICATION FOR APPROVAL

• CUSTOMER : LG Electronics inc.

• ITEM : Power Supply Unit.

• P/NO

| Model Name     | Customer    | Supplier   |
|----------------|-------------|------------|
| LGP4247L-12LPB | EAY62608901 | PLDF-L103A |

• DATE : 2013. 11. 15

• Revision

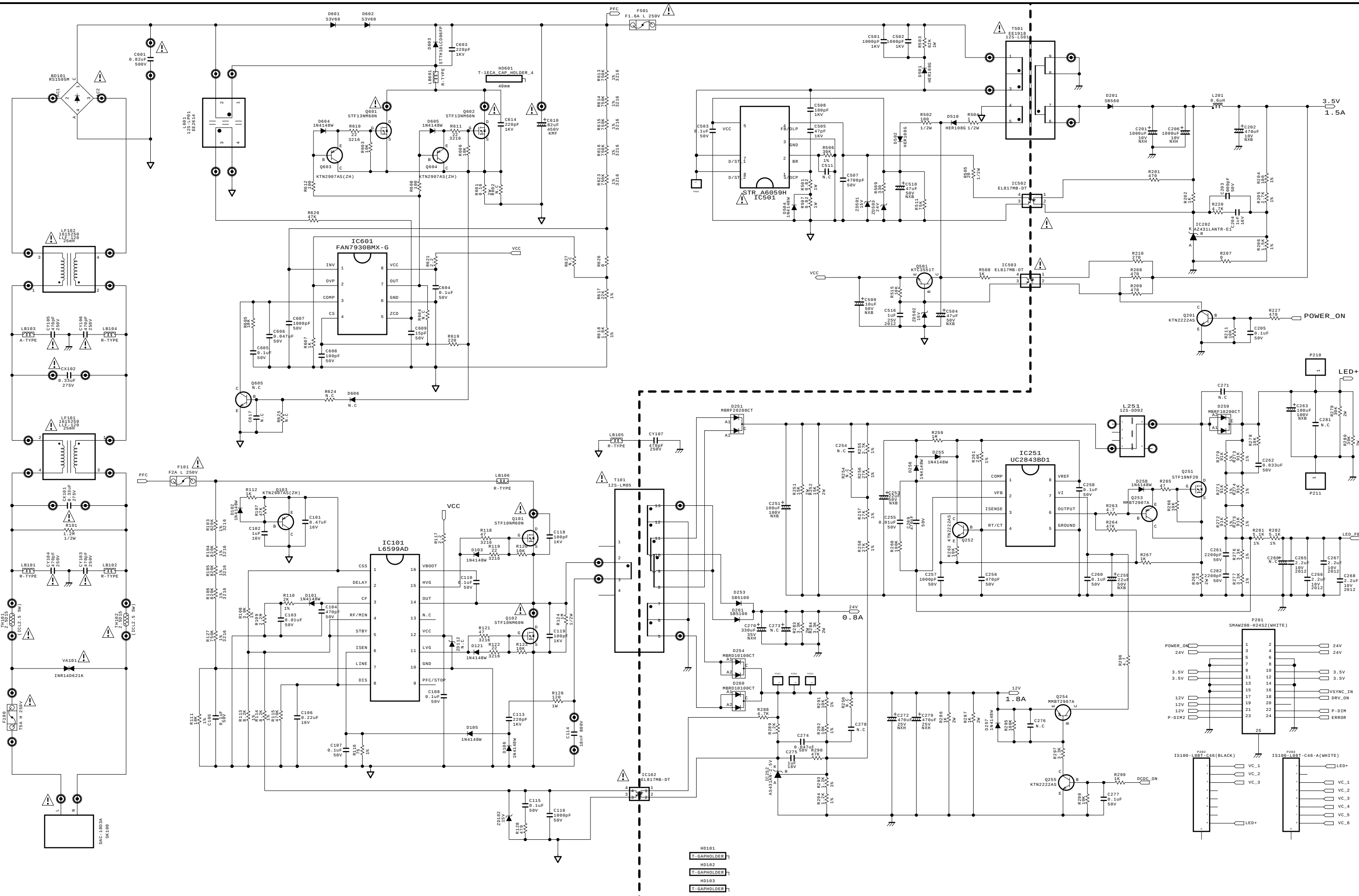
• Remark : MP (PCB REV 2.0)

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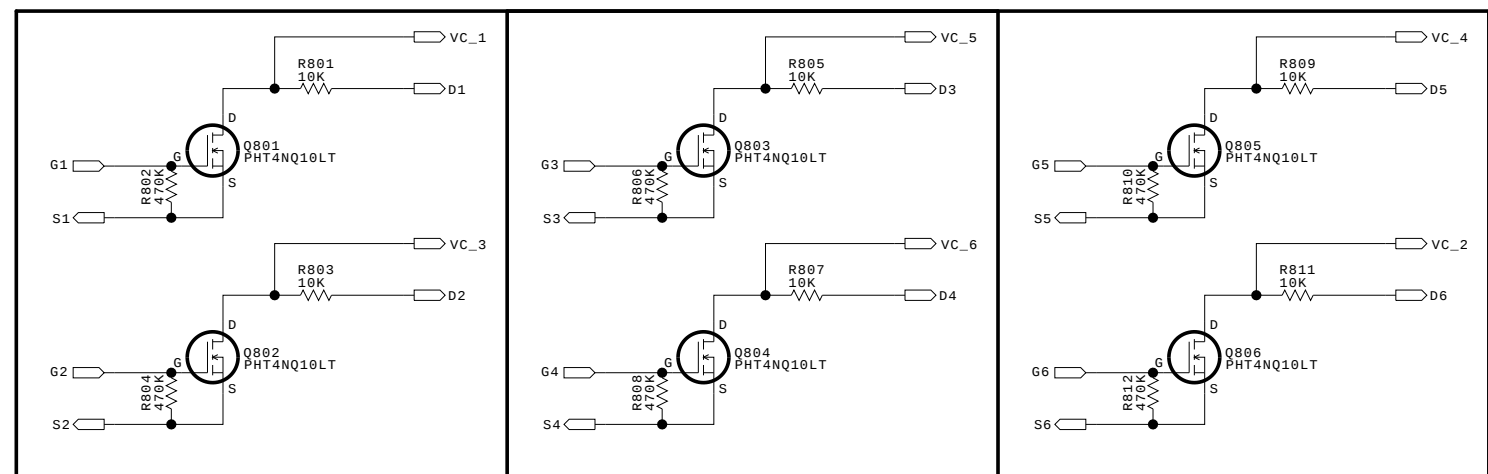
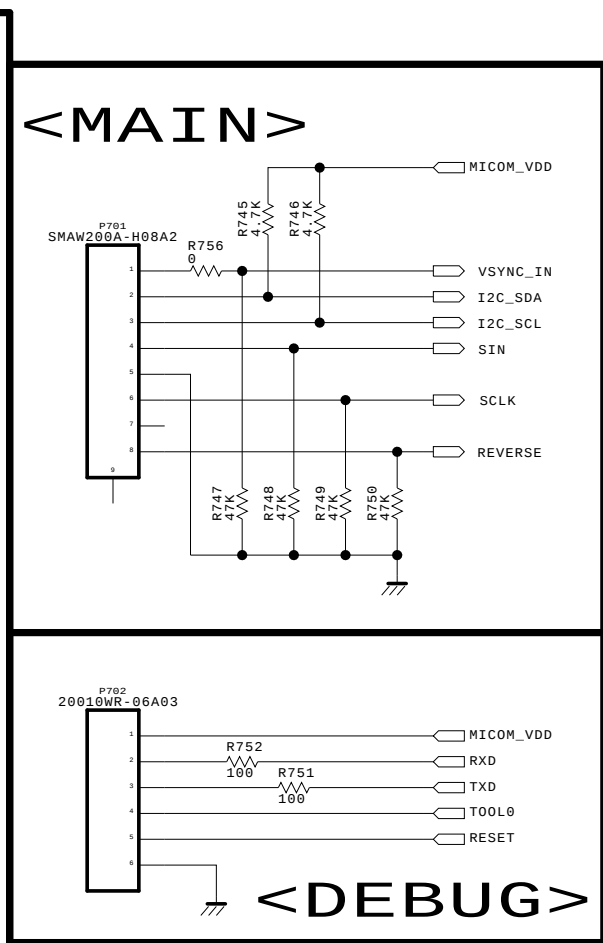
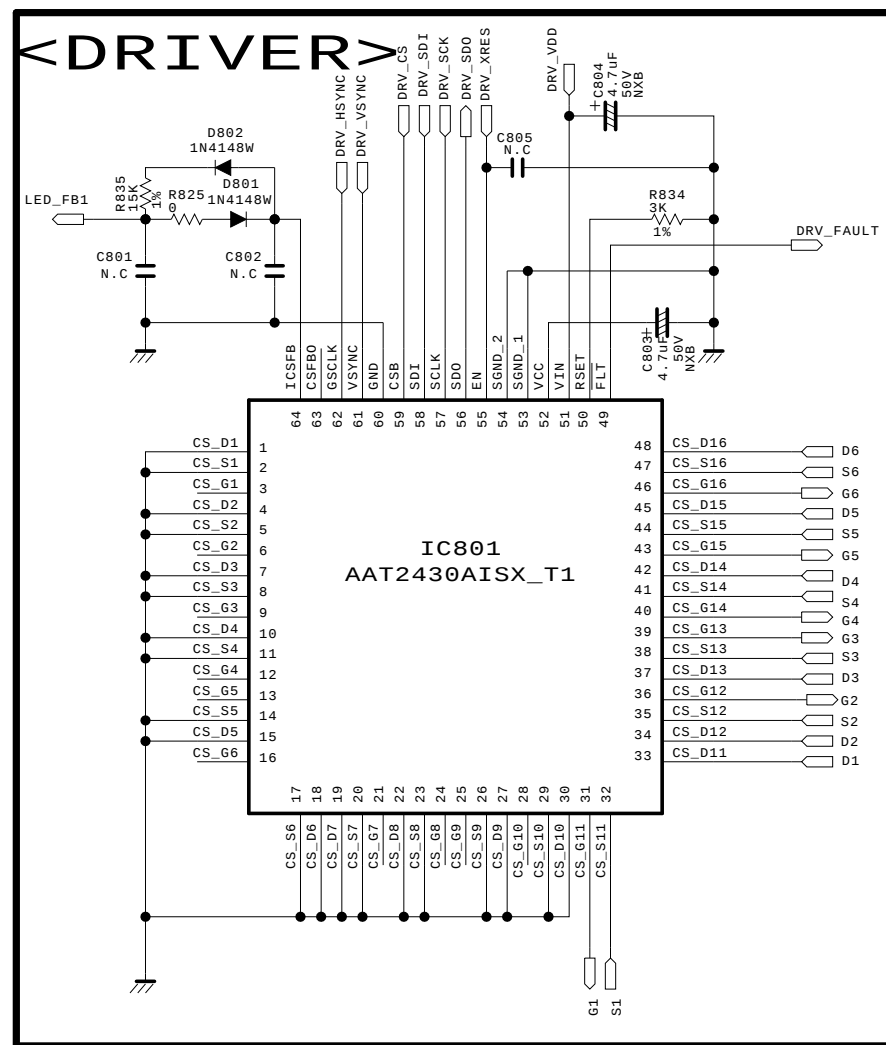
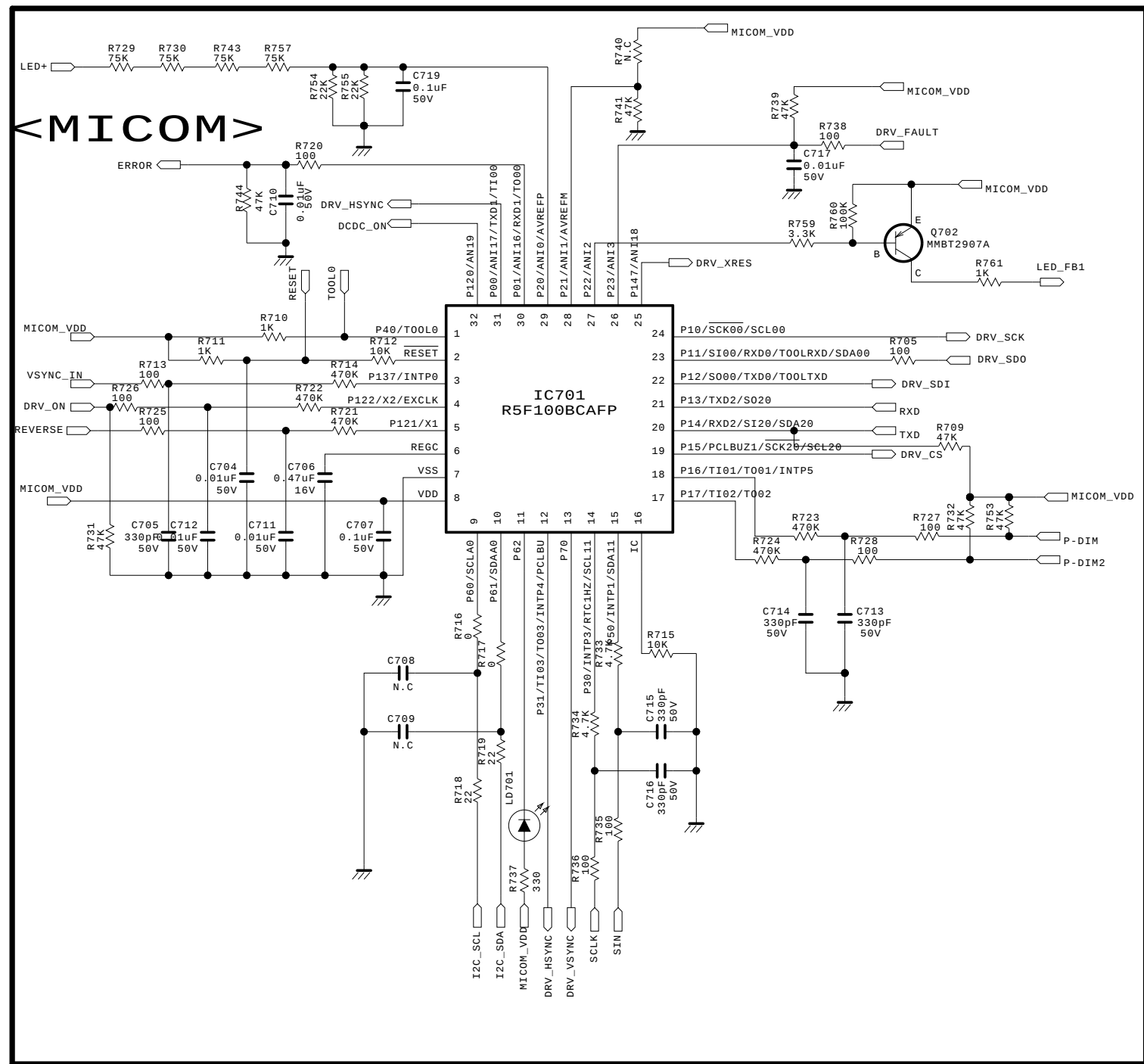
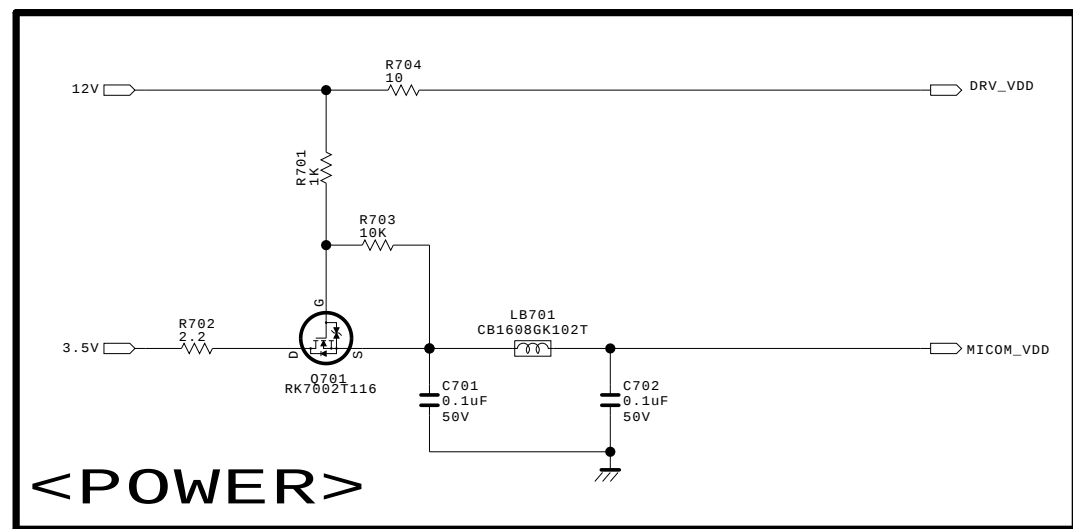


THE SYMBOL MARK OF THIS SCHEMATIC DIAGRAM INCORPORATES SPECIAL FEATURES IMPORTANT FOR PROTECTION FROM X-RADIATION. FILRE AND ELECTRICAL SHOCK HAZARDS, WHEN SERVICING IF IS ESSENTIAL THAT ONLY MANUFACTURES SPECIFIED PARTS BE USED FOR THE CRITICAL COMPONENTS IN THE SYMBOL MARK OF THE SCHEMATIC.



|       |                |       |           |
|-------|----------------|-------|-----------|
| MODEL | LGP4247L-12LPB | DATE  | '12.10.09 |
| BLOCK | PFC\STBY\MULTI | SHEET | 1 / 2     |

REV 2.0



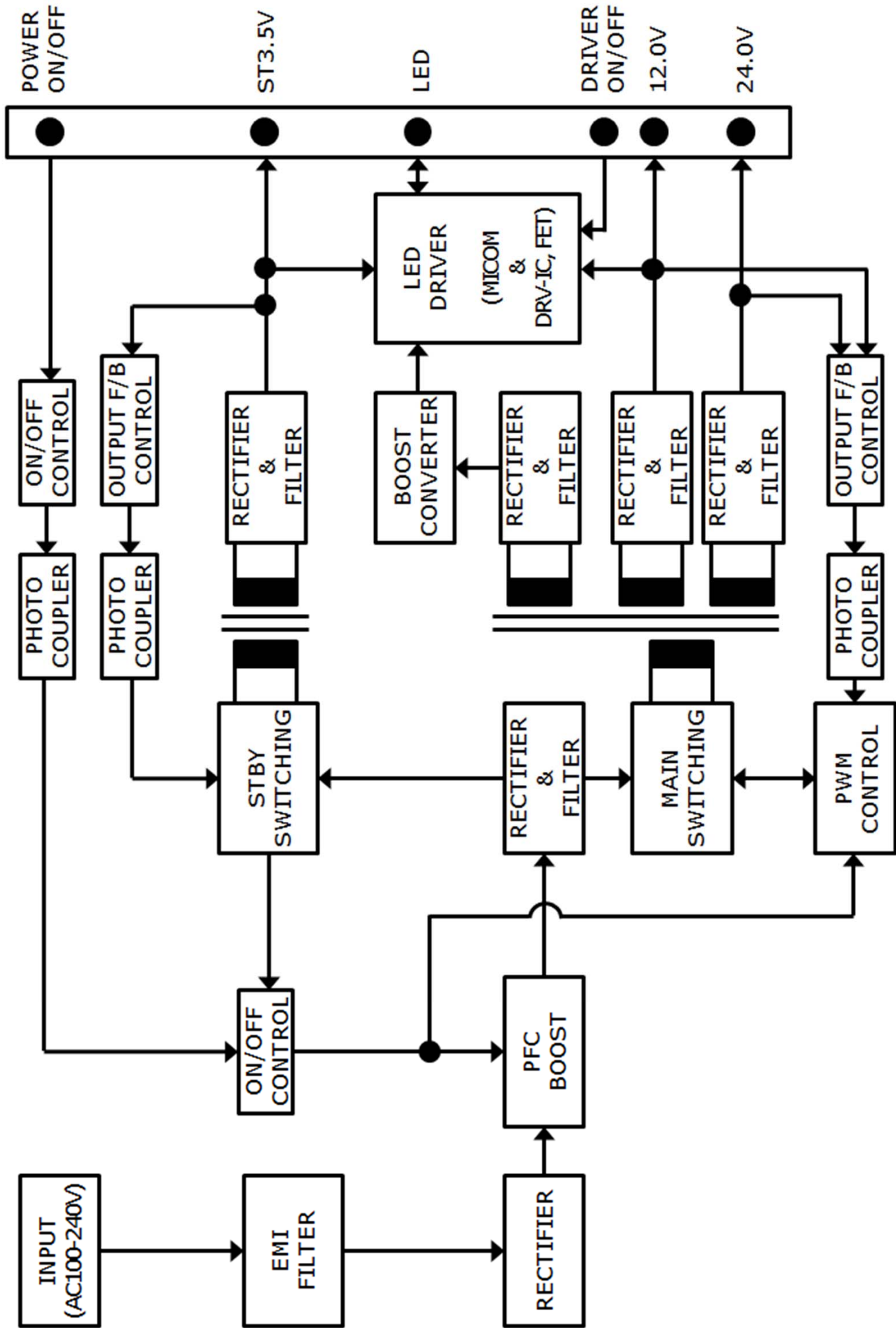
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LG Electronics



|       |                |       |           |
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| MODEL | LGP4247L-12LPB | DATE  | '12.10.09 |
| BLOCK | DRV            | SHEET | 2 / 2     |

REV 2.0



## 1. INTRODUCTION

### 1.1 Scope

This approval is the description related to every electrical and structural specifications and reliability For Power Supply Unit used on 42 inch, 47 inch LGE LED TV.

### 1.2 Customers product related items

Product : Power Supply Unit

Part code : EAY62608901

### 1.3 Product name

Product name : PLDF-L103A

Revision code : 3.3

## 2. SPECIFICATION

### 2.1 Input Requirements

|                           |                                                                                          |
|---------------------------|------------------------------------------------------------------------------------------|
| Nominal Input Voltage     | AC 100V to AC 240V                                                                       |
| Input Voltage Variation   | AC 90V to AC 264V                                                                        |
| Input Current             | Under 1.5Arms . (at 100Vac & Nominal Load)<br>Under 0.8Arms . (at 240Vac & Nominal Load) |
| Nominal Frequency         | 50 / 60 Hz                                                                               |
| Frequency Variation Range | 47 Hz to 63 Hz                                                                           |
| Phase                     | Single                                                                                   |
| Leakage Current           | 0.7mA_peak. (100Vac ~ 240Vac)                                                            |
| Surge Immunity            | $\pm 4\text{kV}$ / 1000ns / 0° to 360°                                                   |
| Hold-up Time              | More than 20ms at 100Vac and maximum output load                                         |
| Lightning Surge           | 2kA Normal, Common Mode                                                                  |
| Inrush Current            | 80A zero-peak max<br>at cold start and any specified line, load, temperature conditions. |

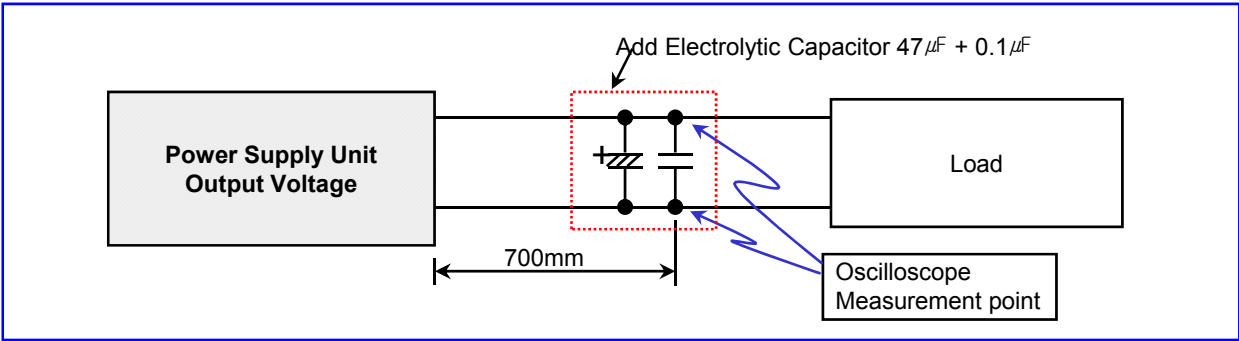
#### 2.1.1 Power Factor

over than 0.9 at 90 – 264Vac & max load condition

2.2 Power Output Characteristics

| Output |                | Voltage<br>Variable range<br>[V] | Rated Current<br>(Min, Max)<br>[Amean] | Voltage<br>Regulation<br>[V] | Ripple<br>Voltage<br>[mVp_p] |
|--------|----------------|----------------------------------|----------------------------------------|------------------------------|------------------------------|
|        | 3.5V<br>(STBY) | 3.3V ~ 3.7V                      | 0.3W Under(15mA)                       | -                            | -                            |
|        |                |                                  | 1.5A(0~1.5A) (ON condition)            | ± 5%                         | 250 mVp_p                    |
|        | 12V            | 11.4V ~ 12.6V                    | 1.8A (0.1~1.8A)                        | ± 5%                         | 350 mVp_p                    |
|        | 24             | 21.6V ~ 26.4V                    | 0.8A (0.1~0.8A)                        | ± 10%                        | 500 mVp_p                    |
|        | LED B+         | 49.3V ~ 75.2V                    | 0.130A(0.1261~0.1339A)<br>× 6Ch        | -                            | -                            |

- \* On Condition : In a moment of Power\_ON Signal activated, the current of 3.5V output should be limited within 40mA(Max) at LCD TV condition for stability.  
Do not turn “Power\_ON” Signal on at the load condition of 3.5V output, more than 40mA.
- \* Total regulation for each output circuit includes the results of input voltage variation, load variation, warm-up drift and temperature change.
- \* The following instruments shall be used for measuring ripple noise.
  1. Probe having impedance ratio of 1:1.
  2. Oscilloscope having frequency characteristic of 100MHz or more.Test Point : power output each pin



※ Ripple and noise are measured at the end of output cable which are added a 0.1uF ceramic capacitor and 47uF electrolytic capacitor. ( connected parallel )

2.2.1 Stand By Power Consumption

|                |                                      |                        |     |
|----------------|--------------------------------------|------------------------|-----|
| Output Voltage | 3.5V (STBY)                          | 12V                    | 24V |
| Load [A]       | 0.015                                | Don't Care (Power-Off) |     |
| Wattage [W]    | Less than 0.3W Under (230Vac / 50Hz) |                        |     |

## 2.6 Interface

| Appellation | Explanation        | Signal Direction | Action                         |
|-------------|--------------------|------------------|--------------------------------|
| POWER ON    | Vcc Circuit ON/OFF | Input            | High : Vcc ON<br>Low : Vcc OFF |

## 2.7 Product Safety



|                                 |                                                                                                            |
|---------------------------------|------------------------------------------------------------------------------------------------------------|
| Safety Standards to be applied  | Design to meet the requirements as follows<br>UL60950, IEC60950, IEC60065 and 60950                        |
| EMI/RFI Standards to be applied | Design to meet the requirements as follows<br>FCC and EN55020, EN55013 Class B<br>with 4dB minimum margin. |

## 2.8 Construction

|                  |                           |
|------------------|---------------------------|
| Weight           | Less than 900g            |
| Unit Size (typ.) | 176(W) X 245(D) X 18.9(H) |

## 2.9 Function of protection

| Protection    | Output Circuit | Trip point |       | Notes         |
|---------------|----------------|------------|-------|---------------|
|               |                | Min        | Max   |               |
| Over Current  | STBY 3.5V      | 2.5A       | 8.0A  | Auto Re-start |
|               | 12V            | 3A         | 20.0A | Latch         |
|               | 24V            | 1.5A       | 12.0A | Latch         |
| Short Circuit | STBY 3.5V      | -          | -     | Auto Re-start |
|               | 12V            | -          | -     | Latch         |
|               | 24V            | -          | -     | Latch         |

- \* This Power Supply has above-mentioned protections.
- \* Short circuit protection between different output terminals is not considered.
- \* Trip point for over voltage indicates the operating point when the output voltage slowly increases.
- \* The conditions of Over Current measurement  
Multi output(3.5V,12V,24V) is nominal load state except an over current measurement.

# Parts List

| No | Level | Q'ty | Unit | Location      | Specification                                                                                                         | Description         | Maker                                                                                                                                    |
|----|-------|------|------|---------------|-----------------------------------------------------------------------------------------------------------------------|---------------------|------------------------------------------------------------------------------------------------------------------------------------------|
| 1  | MI    | 1    | EA   | HS1           | MULTI DIODE ASS'Y                                                                                                     | HEAT SINK ASS'Y     |                                                                                                                                          |
| 2  | MI    | 1    | EA   | HS1           | LPB4247_55_Low HS1 ( 20 X 40 X 8mm)                                                                                   | HEAT SINK           | CHENG CHIA<br>MINGXUE<br>Y A OFENG<br>BAO CHENG<br>INNO D&C<br>YUWON NRT<br>HUA GUANG<br>HUA PENG<br>GUOTAI<br>Ohsung<br>Pampas          |
| 3  | MI    | 1    | EA   | D251          | MBRF20200CT 20A 200V TO-220FP<br>MBRF20U200CT 20A 200V TO-220FP                                                       | DIODE               | SENSITRON<br>KEC                                                                                                                         |
| 4  | MI    | 1    | EA   | Q251          | STF19NF20 200V 15A TO-220FP<br>TK15A20D 200V 15A TO-220FP                                                             | FET                 | STM<br>TOSHIBA                                                                                                                           |
| 5  | MI    | 2    | EA   | FOR D251,Q251 | M/S S/W + Φ3.0 7L SILVER PLATE HEAD                                                                                   | SCREW               | JUNGWOO<br>SEOUL METAL<br>ASIA BOLT<br>SUNG HO METAL<br>KUOFEI<br>HUIYU MACHINERY<br>DELIKANG<br>DONG HAIKANG<br>RUI YOU<br>TANJIN METAL |
| 6  | MI    | 0.5  | GR   | FOR D251,Q251 | HC300<br>OKC-5500<br>G746<br>YG6111<br>DS-323<br>AK100<br>AK100<br>KD-3                                               | SILICON GREASE      | CHANG AMLS<br>OKONG<br>SHINETSU<br>MOMENTIVE<br>DONGYANG SILICON<br>SUNNICO<br>TAIZBOND<br>SHIN WEI                                      |
| 7  | MI    | 1    | EA   | HS2           | PFC FET ASS'Y                                                                                                         | HEAT SINK ASS'Y     |                                                                                                                                          |
| 8  | MI    | 1    | EA   | HS2           | LPB4247_55_Low HS2 (25 X 28 X 5.5mm)                                                                                  | HEAT SINK           | CHENG CHIA<br>MINGXUE<br>Y A OFENG<br>BAO CHENG<br>INNO D&C<br>YUWON NRT<br>HUA GUANG<br>HUA PENG<br>GUOTAI<br>Ohsung<br>Pampas          |
| 9  | MI    | 2    | EA   | Q601,Q602     | IPA60R280E6 650V 13.8A TO-220FP<br>STF13NM60N 650V 11A TO-220FP                                                       | FET                 | INFINEON<br>STM                                                                                                                          |
| 10 | MI    | 2    | EA   | FOR Q601,Q602 | M/S S/W + Φ3.0 7L SILVER PLATE HEAD                                                                                   | SCREW               | JUNGWOO<br>SEOUL METAL<br>ASIA BOLT<br>SUNG HO METAL<br>KUOFEI<br>HUIYU MACHINERY<br>DELIKANG<br>DONG HAIKANG<br>RUI YOU<br>TANJIN METAL |
| 11 | MI    | 0.5  | GR   | FOR Q601,Q602 | HC300<br>OKC-5500<br>G746<br>YG6111<br>DS-323<br>AK100<br>AK100<br>KD-3                                               | SILICON GREASE      | CHANG AMLS<br>OKONG<br>SHINETSU<br>MOMENTIVE<br>DONGYANG SILICON<br>SUNNICO<br>TAIZBOND<br>SHIN WEI                                      |
| 12 | MI    | 1    | EA   |               | LGP4247L-12LPB MI & AI COMPONENTS                                                                                     | MI & AI ASS'Y       |                                                                                                                                          |
| 13 | MI    | 1    | EA   | BD101         | TS15P05G 600V 15A L-FORMING<br>RS1505M 600V 15A L-FORMING<br>GBJ1506 600V 15A L-FORMING<br>D15SB60 600V 15A L-FORMING | BRIDGE-DIODE        | TSC<br>RECTRON<br>LITE-ON<br>DACHANG                                                                                                     |
| 14 | MI    | 1    | EA   | C610          | KMF 82uF 450V M P7.5 Φ18x31.5<br>SK 82uF 450V M P7.5 Φ18x32                                                           | CAPACITOR, ALUMINUM | SAMYOUNG<br>SUSCON                                                                                                                       |
| 15 | MI    | 2    | EA   | C251,C263     | NXB 100uF 100V M RB P5 Φ12.5x20<br>MF 100uF 100V M RB P5 Φ13x21                                                       | CAPACITOR, ALUMINUM | SAMYOUNG<br>SUSCON                                                                                                                       |
| 16 | MI    | 1    | EA   | C601          | MPHB 0.82uF 500V J P15<br>MP 0.82uF 500V J P15<br>PCMP 372/472 0.82uF 500V J P15                                      | CAPACITOR, FILM     | EUROPTRONIC<br>LUMEN<br>PILKOR                                                                                                           |
| 17 | MI    | 1    | EA   | C114          | MPLB 0.018uF 1000V J P15<br>NP 0.018uF 800V J P15<br>PCMP 384 0.018uF 800V J P15                                      | CAPACITOR, FILM     | EUROPTRONIC<br>LUMEN<br>PILKOR                                                                                                           |
| 18 | MI    | 2    | EA   | CX101,CX102   | PCX2 337 0.33uF 275V K P15<br>MPX 0.33uF 275V K P15<br>CTX 0.33uF 275V K P15                                          | CAPACITOR, FILM     | PILKOR<br>EUROPTRONIC<br>CHENG TUNG                                                                                                      |
| 19 | MI    | 2    | EA   | D601,D602     | 1N5408G 1KV 3A P20<br>S3V60 600V 3.5A P20<br>30FDA60 600V 3A P20                                                      | DIODE               | TSC<br>SHINDENGEN<br>NI                                                                                                                  |
| 20 | MI    | 1    | EA   | D603          | STTH10LCD06 600V 10A TO-220FP<br>BYV29FX-600 600V 9A TO-220FP                                                         | DIODE               | STM<br>NXP                                                                                                                               |
| 21 | MI    | 1    | EA   | D259          | MBRF10U200CT 10A 200V TO-220FP<br>MBRF10200CT 10A 200V TO-220FP<br>FMX-22S 10A 200V TO-220FP                          | DIODE               | KEC<br>SENSITRON<br>SANKEN                                                                                                               |

|    |     |   |    |                                    |                                                                                                                                                                |                                               |                                                                                                                        |
|----|-----|---|----|------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------|------------------------------------------------------------------------------------------------------------------------|
| 22 | MI  | 2 | EA | D253,D261                          | SB5100 100V 5A P20<br>SR510-24 100V 5A P20<br>SB5100 100V 5A P20                                                                                               | DIODE                                         | SENSITRON<br>TSC<br>LITE-ON                                                                                            |
| 23 | MI  | 1 | EA | D201                               | SB560 60V 5A P20<br>SR560 60V 5A P20<br>SB560 60V 5A P20                                                                                                       | DIODE                                         | SENSITRON<br>DA CHANG<br>LITE-ON                                                                                       |
| 24 | MI  | 2 | EA | Q101,Q102                          | TK10A60D 600V 10A TO-220FP L-FORMING<br>STF10NM60N 650V 8A TO-220FP L-FORMING<br>KF12N60F 600V 12A TO-220FP L-FORMING<br>SD10N60C3 600V 10A TO-220FP L-FORMING | FET                                           | TOSHIBA<br>STM<br>KEC<br>INFINEON                                                                                      |
| 25 | MI  | 1 | EA | F100                               | T5A H 250V 215 RED(1-LINE)<br>T5A H 250V 50CT RED(1-LINE)<br>T5A H 250V TSC RED(1-LINE)                                                                        | FUSE, TIME LAG                                | LITTELFUSE<br>DAIN<br>WALTER                                                                                           |
| 26 | MI  | 3 | EA | PG1,PG2,PG3                        | JS-12-75-04<br>SPCC 0.4T<br>GND PIN                                                                                                                            | GND REINFORCE                                 | SAMSUNG JS<br>ST TELECOM<br>PINGOOD<br>DIHUA<br>HUAKANG<br>KANG YAUNG                                                  |
| 28 | MI  | 3 | EA | IC102,IC502,IC503                  | EL817M(DT) B<br>LTV817M-BN                                                                                                                                     | IC                                            | EVERLIGHT<br>LITE-ON                                                                                                   |
| 29 | MI  | 1 | EA | IC501                              | STR-A6059H DIP-8                                                                                                                                               | IC                                            | SANKEN                                                                                                                 |
| 30 | MI  | 2 | EA | TH101,TH102                        | ICL-5W 2R50MSMT<br>DSC2.5D15 2.5Ω 8A Φ15<br>MF72-2.5D15 2.5Ω 7A Φ15<br>WTR15D2R5 2.5Ω 8A Φ15                                                                   | ICL<br>THERMISTOR<br>THERMISTOR<br>THERMISTOR | SMART<br>DSC<br>NSE<br>WMEC                                                                                            |
| 31 | MI  | 1 | EA | L201                               | 0.6uH Φ3X10L BAR                                                                                                                                               | INDUCTOR, COIL                                | DONGYANG TELECOM<br>SOOJUNG<br>CLOVER<br>FEELUX<br>LIENCHANG                                                           |
| 32 | MI  | 1 | EA | L251                               | 12S-DD02                                                                                                                                                       | INDUCTOR, COIL                                | SOOJUNG<br>JIANGSU CHANNELON<br>ELECTRONIC GROUP<br>FEELUX<br>DONGYANG TELECOM<br>BUJEON<br>LIENCHANG                  |
| 33 | MI  | 2 | EA | LF101,LF102                        | CS610250S 25mH<br>LT6010250 25mH<br>LLF-120 25mH<br>LLF-120 25mH                                                                                               | LINE FILTER                                   | TNC<br>DONG IL<br>DONGYANG TELECOM<br>FEELUX                                                                           |
| 34 | MI  | 1 | EA | HD601                              | EC40.0CAP-F-12                                                                                                                                                 | MAIN CAP HOLDER                               | TBI                                                                                                                    |
| 35 | MI  | 1 | EA | T101                               | 12S-LM05                                                                                                                                                       | TRANSFORMER                                   | TDK<br>SOOJUNG<br>JIANGSU CHANNELON<br>ELECTRONIC GROUP<br>DONGYANG TELECOM<br>BUJEON<br>LIENCHANG<br>FEELUX<br>LGIT   |
| 36 | MI  | 1 | EA | L601                               | 12S-LP01                                                                                                                                                       | TRANSFORMER                                   | TDK<br>SOOJUNG<br>JIANGSU CHANNELON<br>ELECTRONIC GROUP<br>DONGYANG TELECOM<br>BUJEON<br>LIENCHANG<br>FEELUX<br>LGIT   |
| 37 | MI  | 1 | EA | T501                               | 12S-LS01                                                                                                                                                       | TRANSFORMER                                   | TDK<br>SOOJUNG<br>JIANGSU CHANNELON<br>ELECTRONIC GROUP<br>DONGYANG TELECOM<br>BUJEON<br>LIENCHANG<br>FEELUX<br>CLOVER |
| 38 | MI  | 1 | EA | VA101                              | INR14D621K-CAP 620V Φ14 L-FORMING TUBE<br>SV C621D-14A TM7 620V Φ14 L-FORMING TUBE<br>WMR14D621 620V Φ14 L-FORMING TUBE                                        | VARISTOR                                      | AMOTECH<br>SAMWHA<br>WMEC                                                                                              |
| 39 | MI  | 1 | EA | P702                               | 20010WR-06A03 6PIN WHITE                                                                                                                                       | WAFER                                         | YEONHO                                                                                                                 |
| 40 | MI  | 1 | EA | SK100                              | DAC-18D3A BLACK                                                                                                                                                | WAFER                                         | DONG IL                                                                                                                |
| 41 | MI  | 1 | EA | P202                               | IS100-L08T-C46 8PIN BLACK                                                                                                                                      | WAFER                                         | UUJ ELE                                                                                                                |
| 42 | MI  | 1 | EA | P203                               | IS100-L08T-C46-A 8PIN WHITE                                                                                                                                    | WAFER                                         | UUJ ELE                                                                                                                |
| 43 | MI  | 1 | EA | P701                               | SMAW200A-H08A2 8PIN WHITE                                                                                                                                      | WAFER                                         | YEONHO                                                                                                                 |
| 44 | MI  | 1 | EA | P201                               | SMAW200-H24S2 24PIN WHITE                                                                                                                                      | WAFER                                         | YEONHO                                                                                                                 |
| 45 | SMT | 1 | EA | LGP4247L-12LPB SMT COMPONENTS      |                                                                                                                                                                |                                               |                                                                                                                        |
| 46 | SMT | 1 | EA | LB701                              | CB1608GK102T<br>JCBH160808A 102                                                                                                                                | BEAD                                          | SAMWHA<br>JOINSET                                                                                                      |
| 47 | SMT | 1 | EA | C609                               | 15pF 50V J 1608 COG                                                                                                                                            | CAPACITOR, CHIP                               | MURATA<br>PILKOR<br>SAMWHA<br>TAYOYUDEN<br>TDK<br>YAGEO<br>HEC                                                         |
| 48 | SMT | 1 | EA | C608                               | 100pF 50V J 1608 COG                                                                                                                                           | CAPACITOR, CHIP                               |                                                                                                                        |
| 49 | SMT | 5 | EA | C705,C713,C714,C715,C716           | 330pF 50V J 1608 COG                                                                                                                                           | CAPACITOR, CHIP                               |                                                                                                                        |
| 50 | SMT | 3 | EA | C104,C256,C269                     | 470pF 50V J 1608 COG                                                                                                                                           | CAPACITOR, CHIP                               |                                                                                                                        |
| 51 | SMT | 4 | EA | C116,C203,C257,C607                | 0.001uF 50V K 1608 X7R                                                                                                                                         | CAPACITOR, CHIP                               |                                                                                                                        |
| 52 | SMT | 2 | EA | C261,C282                          | 0.0022uF 50V K 1608 X7R                                                                                                                                        | CAPACITOR, CHIP                               |                                                                                                                        |
| 53 | SMT | 1 | EA | C507                               | 0.0047uF 50V K 1608 X7R                                                                                                                                        | CAPACITOR, CHIP                               |                                                                                                                        |
| 54 | SMT | 7 | EA | C103,C255,C704,C710,C711,C712,C717 | 0.01uF 50V K 1608 X7R                                                                                                                                          | CAPACITOR, CHIP                               |                                                                                                                        |
| 55 | SMT | 1 | EA | C262                               | 0.033uF 50V K 1608 X7R                                                                                                                                         | CAPACITOR, CHIP                               |                                                                                                                        |
| 56 | SMT | 2 | EA | C274,C606                          | 0.047uF 50V K 1608 X7R                                                                                                                                         | CAPACITOR, CHIP                               |                                                                                                                        |

|     |     |    |    |                                                                                                     |                                                                                                                          |                 |                                                           |
|-----|-----|----|----|-----------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------|-----------------|-----------------------------------------------------------|
| 57  | SMT | 16 | EA | C105,C107,C108,C110,C115,C205,C258,C260,C277,C503,C604,C605,C701,C702,C707,C719                     | 0.1uF 50V K 1608 X7R                                                                                                     | CAPACITOR, CHIP | MURATA                                                    |
| 58  | SMT | 1  | EA | C106                                                                                                | 0.22uF 16V K 1608 X7R                                                                                                    | CAPACITOR, CHIP | PILKOR                                                    |
| 59  | SMT | 2  | EA | C101,C706                                                                                           | 0.47uF 16V K 1608 X7R                                                                                                    | CAPACITOR, CHIP | SAMWHA                                                    |
| 60  | SMT | 3  | EA | C102,C204,C275                                                                                      | 1uF 16V K 1608 X7R                                                                                                       | CAPACITOR, CHIP | TAIYOUDEN                                                 |
| 61  | SMT | 1  | EA | C516                                                                                                | 1uF 25V K 2012 X7R<br>or 1uF 50V K 2012 X7R(PILKOR 삭제)                                                                   | CAPACITOR, CHIP | TDK                                                       |
| 62  | SMT | 4  | EA | C265,C266,C267,C268                                                                                 | 2.2uF 10V K 2012 X7R<br>or 2.2uF 16V K 2012 X7R                                                                          | CAPACITOR, CHIP | YAGEO<br>HEC                                              |
| 63  | SMT | 15 | EA | D101,D102,D103,D105,D106,D121,D255,D256,D257,D258,D504,D604,D605,D801,D802                          | 1N4148W 100V 150mA SOD-123<br>1N4148W 100V 150mA SOD-123<br>MMSD4148T1 100V 200mA SOD-123<br>SDS4148G 100V 150mA SOD-123 | DIODE           | RECTRON<br>DIODES<br>ONSEMI<br>AUK                        |
| 64  | SMT | 2  | EA | D254,D260                                                                                           | MBRD10100CT 10A 100V D-PACK<br>MBRD10U100CT 10A 100V D-PACK<br>SPEN-210A 10A 100V D-PACK                                 | DIODE           | SENSITRON<br>KEC<br>SANKEN                                |
| 65  | SMT | 6  | EA | Q801,Q802,Q803,Q804,Q805,Q806                                                                       | PHT4NQ10LT 100V 3.5A SOT-223<br>MDHT4N20Y 200V 0.85A SOT-223                                                             | FET             | NXP<br>MAGNACHIP                                          |
| 66  | SMT | 1  | EA | IC101                                                                                               | L6599AD SO-16N                                                                                                           | IC              | STM                                                       |
| 67  | SMT | 1  | EA | IC202                                                                                               | SJ432BS 1.24V ±0.5% SOT-23<br>TLV431BSN1T1G, 1.24V±0.5%, SOT-23<br>AZ431LANTR-E1, 1.24V±0.5%, SOT-23                     | IC              | AUK<br>ON SEMI<br>BCD                                     |
| 68  | SMT | 1  | EA | IC251                                                                                               | UC2843B SO-8<br>AP3843CM SO-8<br>UC2843B SO-8                                                                            | IC              | ONSEMI<br>BCD<br>STM                                      |
| 69  | SMT | 1  | EA | IC252                                                                                               | SNF431BS 2.5V ±0.5% SOT-23<br>AS431AN, 2.5V±0.5%, SOT-23<br>KA431SLMF2, 2.5V±0.5%, SOT-23                                | IC              | AUK<br>BCD<br>FAIRCHILD                                   |
| 70  | SMT | 1  | EA | IC601                                                                                               | FAN7930BMX_G SOIC-8                                                                                                      | IC              | FAIRCHILD                                                 |
| 71  | SMT | 1  | EA | IC701                                                                                               | R5F100BCAFP                                                                                                              | IC              | Renesas                                                   |
| 72  | SMT | 1  | EA | IC801                                                                                               | AAT2430AISX_T1                                                                                                           | IC              | AATI                                                      |
| 73  | SMT | 20 | EA | J14,J17,J18,J20,J27,J36,J37,J38,J39,J42,J47,J48,J49,J50,J53,J54,J55,J68,J69,J70                     | 0Ω J 3216                                                                                                                | RESISTOR, CHIP  | KAMAYA<br>PILKOR<br>ROHM<br>SAMSUNG<br>YAGEO<br>TZAI YUAN |
| 74  | SMT | 4  | EA | R119,R122,R610,R611                                                                                 | 22Ω J 3216                                                                                                               | RESISTOR, CHIP  |                                                           |
| 75  | SMT | 2  | EA | R118,R121                                                                                           | 47Ω J 3216                                                                                                               | RESISTOR, CHIP  |                                                           |
| 76  | SMT | 6  | EA | R127,R613,R614,R615,R616,R623                                                                       | 750KΩ F 3216                                                                                                             | RESISTOR, CHIP  |                                                           |
| 77  | SMT | 4  | EA | R103,R104,R105,R106                                                                                 | 820KΩ F 3216                                                                                                             | RESISTOR, CHIP  |                                                           |
| 78  | SMT | 6  | EA | R207,R626,R716,R717,R756,R825                                                                       | 0Ω J 1608                                                                                                                | RESISTOR, CHIP  |                                                           |
| 79  | SMT | 1  | EA | R289                                                                                                | 1.2KΩ J 1608                                                                                                             | RESISTOR, CHIP  |                                                           |
| 80  | SMT | 3  | EA | R260,R295,R760                                                                                      | 100KΩ J 1608                                                                                                             | RESISTOR, CHIP  |                                                           |
| 81  | SMT | 14 | EA | R608,R612,R705,R713,R720,R725,R726,R727,R728,R735,R736,R738,R751,R752                               | 100Ω J 1608                                                                                                              | RESISTOR, CHIP  |                                                           |
| 82  | SMT | 20 | EA | R120,R123,R211,R262,R266,R278,R298,R515,R603,R605,R606,R703,R712,R715,R801,R803,R805,R807,R809,R811 | 10KΩ J 1608                                                                                                              | RESISTOR, CHIP  |                                                           |
| 83  | SMT | 1  | EA | R704                                                                                                | 10Ω J 1608                                                                                                               | RESISTOR, CHIP  |                                                           |
| 84  | SMT | 10 | EA | R112,R202,R267,R299,R508,R607,R701,R710,R711,R761                                                   | 1KΩ J 1608                                                                                                               | RESISTOR, CHIP  |                                                           |
| 85  | SMT | 1  | EA | R259                                                                                                | 1MΩ J 1608                                                                                                               | RESISTOR, CHIP  |                                                           |
| 86  | SMT | 1  | EA | R109                                                                                                | 2.2MΩ J 1608                                                                                                             | RESISTOR, CHIP  |                                                           |
| 87  | SMT | 3  | EA | R117,R621,R702                                                                                      | 2.2Ω J 1608                                                                                                              | RESISTOR, CHIP  |                                                           |
| 88  | SMT | 2  | EA | R718,R719                                                                                           | 22Ω J 1608                                                                                                               | RESISTOR, CHIP  |                                                           |
| 89  | SMT | 1  | EA | R619                                                                                                | 220Ω J 1608                                                                                                              | RESISTOR, CHIP  |                                                           |
| 90  | SMT | 2  | EA | R754,R755                                                                                           | 22KΩ J 1608                                                                                                              | RESISTOR, CHIP  |                                                           |
| 91  | SMT | 1  | EA | R210                                                                                                | 270Ω J 1608                                                                                                              | RESISTOR, CHIP  |                                                           |
| 92  | SMT | 2  | EA | R297,R759                                                                                           | 3.3KΩ J 1608                                                                                                             | RESISTOR, CHIP  |                                                           |
| 93  | SMT | 1  | EA | R108                                                                                                | 3.9KΩ F 1608                                                                                                             | RESISTOR, CHIP  |                                                           |
| 94  | SMT | 2  | EA | R509,R737                                                                                           | 330Ω J 1608                                                                                                              | RESISTOR, CHIP  |                                                           |
| 95  | SMT | 6  | EA | R220,R288,R733,R734,R745,R746                                                                       | 4.7KΩ J 1608                                                                                                             | RESISTOR, CHIP  |                                                           |
| 96  | SMT | 2  | EA | R263,R296                                                                                           | 4.7Ω J 1608                                                                                                              | RESISTOR, CHIP  |                                                           |
| 97  | SMT | 12 | EA | R115,R714,R721,R722,R723,R724,R802,R804,R806,R808,R810,R812                                         | 470KΩ J 1608                                                                                                             | RESISTOR, CHIP  |                                                           |
| 98  | SMT | 5  | EA | R128,R201,R208,R209,R227                                                                            | 470Ω J 1608                                                                                                              | RESISTOR, CHIP  |                                                           |
| 99  | SMT | 15 | EA | R107,R264,R290,R620,R709,R731,R732,R739,R741,R744,R747,R748,R749,R750,R753                          | 47KΩ J 1608                                                                                                              | RESISTOR, CHIP  |                                                           |
| 100 | SMT | 1  | EA | R265                                                                                                | 47Ω J 1608                                                                                                               | RESISTOR, CHIP  |                                                           |
| 101 | SMT | 5  | EA | R511,R729,R730,R743,R757                                                                            | 75KΩ J 1608                                                                                                              | RESISTOR, CHIP  |                                                           |
| 102 | SMT | 2  | EA | R293,R294                                                                                           | 1.2KΩ F 1608                                                                                                             | RESISTOR, CHIP  |                                                           |
| 103 | SMT | 1  | EA | R206                                                                                                | 1.5KΩ F 1608                                                                                                             | RESISTOR, CHIP  |                                                           |
| 104 | SMT | 1  | EA | R618                                                                                                | 1.8KΩ F 1608                                                                                                             | RESISTOR, CHIP  |                                                           |
| 105 | SMT | 1  | EA | R204                                                                                                | 100Ω F 1608                                                                                                              | RESISTOR, CHIP  |                                                           |
| 106 | SMT | 2  | EA | R291,R292                                                                                           | 10KΩ F 1608                                                                                                              | RESISTOR, CHIP  |                                                           |
| 107 | SMT | 1  | EA | R835                                                                                                | 15KΩ F 1608                                                                                                              | RESISTOR, CHIP  |                                                           |
| 108 | SMT | 1  | EA | R111                                                                                                | 18KΩ F 1608                                                                                                              | RESISTOR, CHIP  |                                                           |
| 109 | SMT | 2  | EA | R205,R255                                                                                           | 2.7KΩ F 1608                                                                                                             | RESISTOR, CHIP  |                                                           |
| 110 | SMT | 1  | EA | R617                                                                                                | 22KΩ F 1608                                                                                                              | RESISTOR, CHIP  |                                                           |
| 111 | SMT | 1  | EA | R261                                                                                                | 24KΩ F 1608                                                                                                              | RESISTOR, CHIP  |                                                           |
| 112 | SMT | 3  | EA | R256,R257,R258                                                                                      | 27KΩ F 1608                                                                                                              | RESISTOR, CHIP  |                                                           |
| 113 | SMT | 1  | EA | R110                                                                                                | 2KΩ F 1608                                                                                                               | RESISTOR, CHIP  |                                                           |
| 114 | SMT | 2  | EA | R276,R277                                                                                           | 3.3KΩ F 1608                                                                                                             | RESISTOR, CHIP  |                                                           |
| 115 | SMT | 1  | EA | R506                                                                                                | 30KΩ F 1608                                                                                                              | RESISTOR, CHIP  |                                                           |
| 116 | SMT | 1  | EA | R834                                                                                                | 3KΩ F 1608                                                                                                               | RESISTOR, CHIP  |                                                           |
| 117 | SMT | 2  | EA | R281,R282                                                                                           | 5.1KΩ F 1608                                                                                                             | RESISTOR, CHIP  |                                                           |
| 118 | SMT | 1  | EA | R116                                                                                                | 75Ω F 1608                                                                                                               | RESISTOR, CHIP  |                                                           |
| 119 | SMT | 2  | EA | R113,R114                                                                                           | 8.2KΩ F 1608                                                                                                             | RESISTOR, CHIP  |                                                           |
| 120 | SMT | 6  | EA | R270,R271,R272,R273,R274,R275                                                                       | 91KΩ F 1608                                                                                                              | RESISTOR, CHIP  |                                                           |
| 121 | SMT | 3  | EA | HD101,HD102,HD103                                                                                   | 3X2.45X2.5H                                                                                                              | SUPPORTER       | POWER VALLEY                                              |

|     |     |     |    |                                                                                                                                                            |                                                                                                                                            |                     |                                                                                   |
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| 122 | SMT | 1   | EA | Q701                                                                                                                                                       | 2N7002K 60V 300mA SOT-23<br>2N7002K 60V 380mA SOT-23<br>RK7002 60V 115mA SOT-23<br>SSM3K7002F 60V 200mA SOT-23                             | TRANSISTOR          | DIODES<br>ONSEMI<br>ROHM<br>TOSHIBA                                               |
| 123 | SMT | 1   | EA | Q501                                                                                                                                                       | KTC3551T 80V 1A TSM NPN<br>BCW66GLT1 45V 800mA SOT-23 NPN<br>2SC5865 SOT-23 NPN                                                            | TRANSISTOR          | KEC<br>ONSEMI<br>ROHM                                                             |
| 124 | SMT | 3   | EA | Q201,Q252,Q255                                                                                                                                             | MMBT2222A 40V 600mA SOT-23 NPN<br>KTN2222AS 40V 600mA SOT-23 NPN<br>PMBT2222A 40V 600mA SOT-23 NPN<br>SBT2222A 40V 600mA SOT-23 NPN        | TRANSISTOR          | ONSEMI<br>KEC<br>NXP<br>AUK                                                       |
| 125 | SMT | 6   | EA | Q103,Q253,Q254,Q603,Q604,<br>Q702                                                                                                                          | MMBT2907A -60V -600mA SOT-23 PNP<br>KTN2907AS -60V -600mA SOT-23 PNP<br>PMBT2907 -60V -600mA SOT-23 PNP<br>SBT2907A -60V -600mA SOT-23 PNP | TRANSISTOR          | ONSEMI<br>KEC<br>NXP<br>AUK                                                       |
| 126 | SMT | 0.5 | GR |                                                                                                                                                            | HT-130A-106<br>HT-130D-7<br>LOCTITE 3609<br>NEB800T                                                                                        | BOND (SMD)          | HITECH KOREA<br>HITECH KOREA<br>LOCTITE<br>FUJI                                   |
| 127 | AI  | 1   | EA |                                                                                                                                                            | LGP4247L-12LPB AI COMPONENTS                                                                                                               |                     |                                                                                   |
| 128 | AI  | 1   | EA | C509                                                                                                                                                       | NXB 10uF 50V M P5 Φ5X11<br>SG 10uF 50V M P5 Φ5X11                                                                                          | CAPACITOR, ALUMINUM | SAMYOUNG<br>SUSCON                                                                |
| 129 | AI  | 2   | EA | C253,C259                                                                                                                                                  | NXB 22uF 50V M P5 Φ5X11<br>SG 22uF 50V M P5 Φ5X11                                                                                          | CAPACITOR, ALUMINUM | SAMYOUNG<br>SUSCON                                                                |
| 130 | AI  | 2   | EA | C803,C804                                                                                                                                                  | NXB 4.7uF 50V M P5 Φ5X11<br>SG 4.7uF 50V M P5 Φ5X11                                                                                        | CAPACITOR, ALUMINUM | SAMYOUNG<br>SUSCON                                                                |
| 131 | AI  | 1   | EA | C202                                                                                                                                                       | NXB 470uF 10V M P5 Φ8X11.5<br>SG 470uF 10V M P5 Φ8X12                                                                                      | CAPACITOR, ALUMINUM | SAMYOUNG<br>SUSCON                                                                |
| 132 | AI  | 2   | EA | C504,C510                                                                                                                                                  | NXB 47uF 50V M P5 Φ6.3X11<br>SG 47uF 50V M P5 Φ6.3X11                                                                                      | CAPACITOR, ALUMINUM | SAMYOUNG<br>SUSCON                                                                |
| 133 | AI  | 2   | EA | C201,C206                                                                                                                                                  | NXH 1000uF 10V M P5 Φ10X12.5<br>MG 1000uF 10V M P5 Φ10X13                                                                                  | CAPACITOR, ALUMINUM | SAMYOUNG<br>SUSCON                                                                |
| 134 | AI  | 1   | EA | C270                                                                                                                                                       | NXH 330uF 35V M P5 Φ10X12.5<br>MG 330uF 35V M P5 Φ10X13                                                                                    | CAPACITOR, ALUMINUM | SAMYOUNG<br>SUSCON                                                                |
| 135 | AI  | 2   | EA | C272,C279                                                                                                                                                  | NXH 470uF 25V M P5 Φ10X12.5<br>MG 470uF 25V M P5 Φ10X13                                                                                    | CAPACITOR, ALUMINUM | SAMYOUNG<br>SUSCON                                                                |
| 136 | AI  | 3   | EA | C113,C603,C614                                                                                                                                             | DG 220pF 1KV K P5 125℃<br>CK 220pF 1KV K P5 125℃<br>CT81 220pF 1KV K P5 125℃<br>CK45 220pF 1KV K P5 125℃                                   | CAPACITOR, CERAMIC  | APEX INTEC<br>DONGIL ELEC.<br>YINANDON<br>TDK                                     |
| 137 | AI  | 3   | EA | C118,C119,C508                                                                                                                                             | DG 100pF 1KV K P5 125℃<br>CK 100pF 1KV K P5 125℃<br>CT81 100pF 1KV K P5 125℃<br>CK45 100pF 1KV K P5 125℃                                   | CAPACITOR, CERAMIC  | APEX INTEC<br>DONGIL ELEC.<br>YINANDON<br>TDK                                     |
| 138 | AI  | 1   | EA | C505                                                                                                                                                       | DG 47pF 1KV K P5 125℃<br>CC 47pF 1KV K P5 125℃<br>CC81 47pF 1KV K P5 125℃<br>CC45 47pF 1KV K P5 125℃                                       | CAPACITOR, CERAMIC  | APEX INTEC<br>DONGIL ELEC.<br>YINANDON<br>TDK                                     |
| 139 | AI  | 2   | EA | C501,C502                                                                                                                                                  | DG 1000pF 1KV K P5 125℃<br>CK 1000pF 1KV K P5 125℃<br>CT81 1000pF 1KV K P5 125℃<br>CK45 1000pF 1KV K P5 125℃                               | CAPACITOR, CERAMIC  | APEX INTEC<br>DONGIL ELEC.<br>YINANDON<br>TDK                                     |
| 140 | AI  | 5   | EA | CY103,CY104,CY105,CY106,CY107                                                                                                                              | DA 470pF 400V K P10 105℃<br>DA 470pF 400V K P10 105℃<br>CT81 470pF 400V K P10 105℃<br>CD 470pF 400V K P10 105℃                             | CAPACITOR, CERAMIC  | APEX INTEC<br>DONGIL ELEC.<br>YINANDON<br>TDK                                     |
| 141 | AI  | 3   | EA | D501,D502,D510                                                                                                                                             | UF1007 1KV 1A DO-41<br>UF4007 1KV 1A DO-41<br>HER108G 1KV 1A DO-41<br>UF4007 1KV 1A DO-41                                                  | DIODE               | DIODES<br>DACHANG<br>RECTRON<br>TSC                                               |
| 142 | AI  | 3   | EA | ZD102,ZD501,ZD502                                                                                                                                          | 1N5245B 15V DO-35<br>1N5245B 15V DO-35<br>MTZJ15B 15V DO-34                                                                                | DIODE, ZENER        | VISHAY<br>RECTRON<br>ROHM                                                         |
| 143 | AI  | 1   | EA | ZD503                                                                                                                                                      | 1N5252B 24V DO-35<br>1N5252B 24V DO-35<br>MTZJ24B 24V DO-34                                                                                | DIODE, ZENER        | VISHAY<br>RECTRON<br>ROHM                                                         |
| 144 | AI  | 27  | EA | EL3, EL4, EL7, EL8, EL13,<br>EL14,EL21,EL22,EL29,EL30,<br>EL35,EL36,EL37,EL38,EL39,<br>EL43,EL44,EL45,EL46,EL49,<br>EL50,EL51,EL52,EL58,EL59,<br>EL60,EL61 | 1.6X3.0                                                                                                                                    | EYELET              | SAMSUNG JS<br>DOSUNG<br>DAERIN<br>HUA KANG<br>DELIKANG<br>SEJIN<br>LEZHI<br>Avico |
| 145 | AI  | 20  | EA | EL1, EL2, EL9, EL10,EL11,<br>EL12,EL15,EL16,EL17,EL18,<br>EL19,EL20,EL23,EL24,EL25,<br>EL26,EL31,EL32,EL33,EL34,                                           | 2.0X3.0                                                                                                                                    | EYELET              | SAMSUNG JS<br>DOSUNG<br>DAERIN<br>HUA KANG<br>DELIKANG<br>SEJIN<br>LEZHI<br>Avico |
| 146 | AI  | 1   | EA | F501                                                                                                                                                       | F1.6A L 250V 876                                                                                                                           | FUSE, FAST ACTING   | LITTELFUSE                                                                        |

|     |     |        |    |                                                                                                                                                                                                          |                                                                                                      |                                       |                                                                                                                                                                                                                |
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| 149 | AI  | 1      | EA | LB103                                                                                                                                                                                                    | BFS3550A0L SINGLE AXIAL<br>SEB3550050BA SINGLE AXIAL                                                 | INDUCTOR,<br>BEAD FILTER LEAD         | SAMWHA<br>SCC                                                                                                                                                                                                  |
| 150 | AI  | 6      | EA | LB101, LB102, LB104, LB105, LB106,<br>LB601                                                                                                                                                              | BFS3550R2F SINGLE RADIAL<br>SER3550050BA SINGLE RADIAL                                               | INDUCTOR,<br>BEAD FILTER LEAD         | SAMWHA<br>SCC                                                                                                                                                                                                  |
| 151 | AI  | 39     | EA | J1, J3, J4, J5, J6, J7, J8, J9,<br>J10, J11, J12, J13, J15, J16, J19,<br>J21, J22, J23, J24, J25, J28, J29,<br>J30, J31, J32, J33, J34, J35, J40,<br>J41, J43, J44, J45, J46, J51, J59,<br>J65, J66, J67 | Φ0.6                                                                                                 | JUMPER WIRE                           | DIELEC<br>DAPcsL.PcsD<br>TPI<br>TZAI YUAN<br>UNI-OHM<br>ILKWANG<br>DM<br>Seungwon<br>RLC                                                                                                                       |
| 152 | AI  | 1      | EA | LD701                                                                                                                                                                                                    | LTL-1CHY-001A, 5mm Pitch Type (Yellow)<br>204-10UYC-S530, 5mm Pitch Type (Yellow)                    | LED                                   | LITE-ON<br>EVERLIGHT                                                                                                                                                                                           |
| 153 | AI  | 1      | EA | R502                                                                                                                                                                                                     | CRS 100Ω 1/2W J SMALL<br>RDM92 100Ω 1/2W J SMALL<br>SFR25H 100Ω 1/2W J SMALL<br>CF 100Ω 1/2W J SMALL | RESISTOR,<br>CARBON FILM              | ABCO<br>SMART<br>PILKOR<br>TZAI YUAN                                                                                                                                                                           |
| 154 | AI  | 1      | EA | R504                                                                                                                                                                                                     | CRS 1Ω 1/2W J SMALL<br>RDM92 1Ω 1/2W J SMALL<br>SFR25H 1Ω 1/2W J SMALL<br>CF 1Ω 1/2W J SMALL         | RESISTOR,<br>CARBON FILM              | ABCO<br>SMART<br>PILKOR<br>TZAI YUAN                                                                                                                                                                           |
| 155 | AI  | 1      | EA | R505                                                                                                                                                                                                     | CRS 20Ω 1/2W J SMALL<br>RDM92 20Ω 1/2W J SMALL<br>SFR25H 20Ω 1/2W J SMALL<br>CF 20Ω 1/2W J SMALL     | RESISTOR,<br>CARBON FILM              | ABCO<br>SMART<br>PILKOR<br>TZAI YUAN                                                                                                                                                                           |
| 156 | AI  | 1      | EA | R101                                                                                                                                                                                                     | PRC 1.2MΩ 1/2W J SURGE<br>MSR37 1.2MΩ 1/2W J SURGE                                                   | RESISTOR, FIXED<br>CARBON COMPOSITION | SMART<br>PILKOR                                                                                                                                                                                                |
| 157 | AI  | 1      | EA | R124                                                                                                                                                                                                     | PRC 1MΩ 1/2W J SURGE<br>MSR37 1MΩ 1/2W J SURGE                                                       | RESISTOR, FIXED<br>CARBON COMPOSITION | SMART<br>PILKOR                                                                                                                                                                                                |
| 158 | AI  | 2      | EA | R251, R252                                                                                                                                                                                               | MORS 15KΩ 2W J SMALL<br>RSD02 15KΩ 2W J SMALL<br>PR02 15KΩ 2W J SMALL<br>MOF 15KΩ 2W J SMALL         | RESISTOR,<br>METAL OXIDE FILM         | ABCO<br>SMART<br>PILKOR<br>TZAI YUAN                                                                                                                                                                           |
| 159 | AI  | 1      | EA | R126                                                                                                                                                                                                     | MORS 120Ω 1W J SMALL<br>RSD01 120Ω 1W J SMALL<br>PR01 120Ω 1W J SMALL<br>MOF 120Ω 1W J SMALL         | RESISTOR,<br>METAL OXIDE FILM         | ABCO<br>SMART<br>PILKOR<br>TZAI YUAN                                                                                                                                                                           |
| 160 | AI  | 2      | EA | R286, R287                                                                                                                                                                                               | MORS 1KΩ 2W J SMALL<br>RSD02 1KΩ 2W J SMALL<br>PR02 1KΩ 2W J SMALL<br>MOF 1KΩ 2W J SMALL             | RESISTOR,<br>METAL OXIDE FILM         | ABCO<br>SMART<br>PILKOR<br>TZAI YUAN                                                                                                                                                                           |
| 161 | AI  | 2      | EA | R279, R280                                                                                                                                                                                               | MORS 30KΩ 2W J SMALL<br>RSD02 30KΩ 2W J SMALL<br>PR02 30KΩ 2W J SMALL<br>MOF 30KΩ 2W J SMALL         | RESISTOR,<br>METAL OXIDE FILM         | ABCO<br>SMART<br>PILKOR<br>TZAI YUAN                                                                                                                                                                           |
| 162 | AI  | 2      | EA | R283, R284                                                                                                                                                                                               | MORS 3.3KΩ 2W J SMALL<br>RSD02 3.3KΩ 2W J SMALL<br>PR02 3.3KΩ 2W J SMALL<br>MOF 3.3KΩ 2W J SMALL     | RESISTOR,<br>METAL OXIDE FILM         | ABCO<br>SMART<br>PILKOR<br>TZAI YUAN                                                                                                                                                                           |
| 163 | AI  | 1      | EA | R503                                                                                                                                                                                                     | MORS 62KΩ 1W J SMALL<br>RSD01 62KΩ 1W J SMALL<br>PR01 62KΩ 1W J SMALL<br>MOF 62KΩ 1W J SMALL         | RESISTOR,<br>METAL OXIDE FILM         | ABCO<br>SMART<br>PILKOR<br>TZAI YUAN                                                                                                                                                                           |
| 164 | AI  | 2      | EA | R501, R507                                                                                                                                                                                               | WNPS 0.82Ω 1W J SMALL<br>PRN 0.82Ω 1W J SMALL                                                        | RESISTOR, WIRE WOUND                  | ABCO<br>SMART                                                                                                                                                                                                  |
| 165 | AI  | 1      | EA | R601                                                                                                                                                                                                     | WNPS 0.16Ω 2W J SMALL<br>PRN 0.16Ω 2W J SMALL                                                        | RESISTOR, WIRE WOUND                  | ABCO<br>SMART                                                                                                                                                                                                  |
| 166 | AI  | 1      | EA | R268                                                                                                                                                                                                     | WNPS 0.24Ω 2W J SMALL<br>PRN 0.24Ω 2W J SMALL                                                        | RESISTOR, WIRE WOUND                  | ABCO<br>SMART                                                                                                                                                                                                  |
| 167 | AI  | 1      | EA |                                                                                                                                                                                                          | EAX64427101 LGP4247L-12LPB 176 x 245 1.6T FR1<br>KB, DS, L, R-8700 CTI-600                           | PCB                                   | DUCK SUNG<br>HT CIRCUIT(QINGDAO)<br>DONGMYUNG CIR<br>SHANGHAI WANZHENG<br>SHENG KHUANG<br>NEW TRIUNION<br>TIANJIN DEA DUCK<br>HUIHO<br>HSIANG KUO<br>TIAN FENG<br>TIS KOREA<br>Wellbest<br>Cosmotech<br>Kyosha |
| 168 | ETC |        |    |                                                                                                                                                                                                          | SUBSIDIARY MATERIALS                                                                                 |                                       |                                                                                                                                                                                                                |
| 169 | ETC | 0.0625 | EA |                                                                                                                                                                                                          | 509 * 344 * 204 * 8T                                                                                 | BOX CARTON                            | NEWEA IND<br>DAESAN.<br>HANYOUNG<br>JAEIL<br>QXBW<br>TAILI PACKING<br>HUAXING PACK<br>SOONGSAN<br>WUJIANG ZHENLONG<br>SUZHOU JIADELONG<br>KUNSHAN KUNHONG<br>Dongju<br>Yumi                                    |

|     |     |        |    |  |                                                                                                                                                                                      |               |                                                                                                                                                                             |
|-----|-----|--------|----|--|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 170 | ETC | 0.5625 | EA |  | 341 * 180 * 8T (Cross board A)                                                                                                                                                       | BOX PARTITION | NEWEA IND<br>DAESAN.<br>HANYOUNG<br>JAEIL<br>QXBW<br>TAILI PACKING<br>HUAXING PACK<br>SOONGSAN<br>WUJIANG ZHENLONG<br>SUZHOU JIADELONG<br>KUNSHAN KUNHONG<br>Dongju<br>Yumi |
| 171 | ETC | 0.3125 | EA |  | 506 * 180 * 8T (Cross board B)                                                                                                                                                       | BOX PARTITION | NEWEA IND<br>DAESAN.<br>HANYOUNG<br>JAEIL<br>QXBW<br>TAILI PACKING<br>HUAXING PACK<br>SOONGSAN<br>WUJIANG ZHENLONG<br>SUZHOU JIADELONG<br>KUNSHAN KUNHONG<br>Dongju<br>Yumi |
| 172 | ETC | 0.1875 | EA |  | 506 * 341 * 8T                                                                                                                                                                       | PAD           | NEWEA IND<br>DAESAN.<br>HANYOUNG<br>JAEIL<br>QXBW<br>TAILI PACKING<br>HUAXING PACK<br>SOONGSAN<br>WUJIANG ZHENLONG<br>SUZHOU JIADELONG<br>KUNSHAN KUNHONG<br>Dongju<br>Yumi |
| 173 | ETC | 1      | EA |  | Min 460 * 180                                                                                                                                                                        | BUBBLE SHEET  | DUCKJIN S&P<br>JAEIL<br>QXBW<br>CHUMDAN<br>A-TEK<br>KUNSHANKUNHONG<br>LIYUANG<br>SERVEONE                                                                                   |
| 174 | ETC | 1      | EA |  | 42 X 8 NY WHITE 93CODE 19DIGIT                                                                                                                                                       | BAR CODE      | SHUN JIN<br>HANA.<br>AIT<br>SERVEONE<br>WUJIANG SUNGLING<br>GUNGGAOQI<br>ZHI XIN                                                                                            |
| 175 | ETC | 1      | EA |  | 19 X 9 NY WHITE MICOM CHECKSUM                                                                                                                                                       | LABEL         | SHUN JIN<br>HANA.<br>AIT<br>SERVEONE<br>WUJIANG SUNGLING<br>GUNGGAOQI<br>ZHI XIN                                                                                            |
| 176 | ETC | 12.0   | GR |  | EF-9301(g)<br>ILF-714(kg)<br>TF328-2-2(Kg)<br>EC-19S-8<br>CS-9111LF                                                                                                                  | FLUX          | ALPHA<br>ION ELEC<br>TONGFANG<br>동화다무라<br>청솔                                                                                                                                |
| 177 | ETC | 20.0   | GR |  | HSE-11 B20 BAR (SN:99%,AG:0.3%,CU:0.7%)<br>SN:99%, AG:0.3%, CU:0.7%<br>SAO0307 A+ SN:99%, AG:0.3%, CU:0.7%<br>YW9-0307 SN:99%, AG:0.3%, CU:0.7%<br>M35E-BAR SN:99%, AG:0.3%, CU:0.7% | SOLDER BAR    | HEESUNG METAL<br>SEOUL ALLOYMETAL<br>DYFENCO<br>YUNNAN TIN<br>SOLNET                                                                                                        |
| 178 | ETC | 5.0    | GR |  | HSE-11 B20 BAR (SN:99%,AG:0.3%,CU:0.7%)<br>SN:99%, AG:0.3%, CU:0.7%<br>SAO0307 A+ SN:99%, AG:0.3%, CU:0.7%<br>YW9-0307 SN:99%, AG:0.3%, CU:0.7%<br>M35E-BAR SN:99%, AG:0.3%, CU:0.7% | SOLDER WIRE   | HEESUNG METAL<br>SEOUL ALLOYMETAL<br>DYFENCO<br>YUNNAN TIN<br>SOLNET                                                                                                        |
| 179 | ETC | 10.0   | GR |  | H-828W<br>OKE-410<br>QS9112 RTV<br>SS7945W<br>TSE3854DS-W<br>BN707 RTV<br>KE402RTV<br>ES 2044H & 2S2482W<br>UB-5601<br>EA-4100<br>DS-818                                             | BOND (RTV)    | OKONG<br>OKONG<br>KCC<br>KCC<br>MOMENTIVE<br>BONIC<br>SHINETSU<br>CANADA<br>U-BOND<br>DOW CORNING<br>DONGYANG                                                               |