

# DENON

For U.S.A. & Canada model

**Ver. 2**

Please refer to the  
MODIFICATION NOTICE.

## SERVICE MANUAL

# MODEL DRA-397 DRA-297 DRA-37

### AM-FM STEREO RECEIVER

#### 注 意

サービスをおこなう前に、このサービスマニュアルを必ずお読みください。本機は、火災、感電、けがなどに対する安全性を確保するために、さまざまな配慮をおこなっており、また法的には「電気用品安全法」にもとづき、所定の許可を得て製造されております。従ってサービスをおこなう際は、これらの安全性が維持されるよう、このサービスマニュアルに記載されている注意事項を必ずお守りください。

● For purposes of improvement, specifications and design are subject to change without notice.

● 本機の仕様は性能改良のため、予告なく変更することがあります。  
● 補修用性能部品の保有期間は、製造打切後8年です。

● Please use this service manual with referring to the operating instructions without fail.

● 修理の際は、必ず取扱説明書を参照の上、作業を行ってください。

● Some illustrations using in this service manual are slightly different from the actual set.

● 本文中に使用しているイラストは、説明の都合上現物と多少異なる場合があります。

## DENON

TOKYO, JAPAN  
Denon Brand Company, D&M Holdings Inc.

## SAFETY PRECAUTIONS

The following check should be performed for the continued protection of the customer and service technician.

### LEAKAGE CURRENT CHECK

Before returning the unit to the customer, make sure you make either (1) a leakage current check or (2) a line to chassis resistance check. If the leakage current exceeds 0.5 milliamps, or if the resistance from chassis to either side of the power cord is less than 460 kohms, the unit is defective.

**CAUTION** Please heed the points listed below during servicing and inspection.

#### ◎ Heed the cautions!

Spots requiring particular attention when servicing, such as the cabinet, parts, chassis, etc., have cautions indicated on labels or seals. Be sure to heed these cautions and the cautions indicated in the handling instructions.

#### ◎ Caution concerning electric shock!

- (1) An AC voltage is impressed on this set, so touching internal metal parts when the set is energized could cause electric shock. Take care to avoid electric shock, by for example using an isolating transformer and gloves when servicing while the set is energized, unplugging the power cord when replacing parts, etc.
- (2) There are high voltage parts inside. Handle with extra care when the set is energized.

#### ◎ Caution concerning disassembly and assembly!

Though great care is taken when manufacturing parts from sheet metal, there may in some rare cases be burrs on the edges of parts which could cause injury if fingers are moved across them. Use gloves to protect your hands.

#### ◎ Only use designated parts!

The set's parts have specific safety properties (fire resistance, voltage resistance, etc.). For replacement parts, be sure to use parts which have the same properties. In particular, for the important safety parts that are marked  on wiring diagrams and parts lists, be sure to use the designated parts.

#### ◎ Be sure to mount parts and arrange the wires as they were originally!

For safety reasons, some parts use tape, tubes or other insulating materials, and some parts are mounted away from the surface of printed circuit boards. Care is also taken with the positions of the wires inside and clamps are used to keep wires away from heating and high voltage parts, so be sure to set everything back as it was originally.

#### ◎ Inspect for safety after servicing!

Check that all screws, parts and wires removed or disconnected for servicing have been put back in their original positions, inspect that no parts around the area that has been serviced have been negatively affected, conduct an insulation check on the external metal connectors and between the blades of the power plug, and otherwise check that safety is ensured.

(Insulation check procedure)

Unplug the power cord from the power outlet, disconnect the antenna, plugs, etc., and turn the power switch on. Using a 500V insulation resistance tester, check that the insulation resistance between the terminals of the power plug and the externally exposed metal parts (antenna terminal, headphones terminal, microphone terminal, input terminal, etc.) is 1MΩ or greater. If it is less, the set must be inspected and repaired.

**CAUTION** Concerning important safety parts

Many of the electric and structural parts used in the set have special safety properties. In most cases these properties are difficult to distinguish by sight, and using replacement parts with higher ratings (rated power and withstand voltage) does not necessarily guarantee that safety performance will be preserved. Parts with safety properties are indicated as shown below on the wiring diagrams and parts lists is this service manual. Be sure to replace them with parts with the designated part number.

- (1) Schematic diagrams ... Indicated by the  mark.
- (2) Parts lists ... Indicated by the  mark.

Using parts other than the designated parts could result in electric shock, fires or other dangerous situations.

**注意** サービス、点検時にはつぎのことにご注意願います。

#### ◎ 注意事項をお守りください！

サービスのとき特に注意を必要とする個所についてはキャビネット、部品、シャーシなどにラベルや捺印で注意事項を表示しています。これらの注意書きおよび取扱説明書などの注意事項を必ずお守りください。

#### ◎ 感電に注意！

- (1) このセットは、交流電圧が印加されていますので通電時に内部金属部に触れると感電することがあります。従って通電サービス時には、絶縁トランスの使用や手袋の着用、部品交換には、電源プラグを抜くなどして感電にご注意ください。
- (2) 内部には高電圧の部分がありますので、通電時の取扱には十分ご注意ください。

#### ◎ 分解、組み立て作業時のご注意！

板金部品の端面の『バリ』は、部品製造時に充分管理をしておりますが、板金端面は鋭利となっている箇所がありますので、部品端面に触れたまま指を動かすとまれに怪我をする場合がありますので十分注意して作業して下さい。手の保護のために手袋を着用してください。

#### ◎ 指定部品の使用！

セットの部品は難燃性や耐電圧など安全上の特性を持ったものとなっています。従って交換部品は、使用されていたものと同じ特性の部品を使用してください。特に配線図、部品表に  印で指定されている安全上重要な部品は必ず指定のものをご使用ください。

#### ◎ 部品の取付けや配線の引きまわしは、元どおりに！

安全上、テープやチューブなどの絶縁材料を使用したり、プリント基板から浮かして取付けた部品があります。また内部配線は引きまわしやクランプによって発熱部品や高圧部品に接近しないように配慮されていますので、これらは必ず元どおりにしてください。

#### ◎ サービス後は安全点検を！

サービスのために取り外したねじ、部品、配線などが元どおりになっているか、またサービスした個所の周辺を劣化させてしまったところがないかなどを点検し、外部金属端子部と、電源プラグの刃の間の絶縁チェックをおこなうなど、安全性が確保されていることを確認してください。

(絶縁チェックの方法)

電源コンセントから電源プラグを抜き、アンテナやプラグなどを外し、電源スイッチを入れます。500V 絶縁抵抗計を用いて、電源プラグのそれぞれの端子と外部露出金属部〔アンテナ端子、ヘッドホン端子マイク端子、入力端子など〕との間で、絶縁抵抗値が 1 MΩ 以上であること、この値以下のときはセットの点検修理が必要です。

**注意** 安全上重要な部品について

本機に使用している多くの電気部品、および機構部品は安全上、特別な特性を持っています。この特性はほとんどの場合、外観では判別つきにくく、またもとの部品より高い定格（定格電力、耐圧）を持ったものを使用しても安全性が維持されるとは、限りません。安全上の特性を持った部品は、このサービスマニュアルの配線図、部品表につぎのように表示していますので必ず指定されている部品番号のものを使用願います。

- (1) 配線図…マークで表示しています。
- (2) 部品表…マークで表示しています。

指定された部品と異なるものを使用した場合には、感電、火災などの危険を生じる恐れがあります。

## ADJUSTMENT

### Idling Current

Required measurement equipment: DC Voltmeter

#### 1. Preparation

- (1) Avoid direct blow from an air conditioner or an electric fan, and adjust the unit at normal room temperature 15 °C ~ 30 °C (59 °F ~ 86 °F).
- (2) Presetting
  - POWER (Power source switch) OFF
  - SPEAKER (Speaker terminal) No load  
(Do not connect speaker, dummy resistor, etc.)

#### 2. Adjustment

- (1) Remove top cover and set VR501FL, VR501FR on MAIN Unit at fully counterclockwise (  ) position.
- (2) Connect DC Voltmeter to test points (FRONT-Lch: TP501, FRONT-Rch: TP502).
- (3) Connect power cord to AC Line, and turn power switch "ON".
- (4) Presetting.  
 MASTER VOLUME: "----" counterclockwise (  min.)  
 MODE : TONE DEFEAT  
 FUNCTION : CD
- (5) Within 2 minutes after the power on, turn VR501FL clockwise (  ) to adjust the TEST POINT voltage to 1.5 mV  $\pm$  0.5 mV DC.
- (6) After 10 minutes from the preset above, turn VR501FL to set the voltage to 2.0 mV  $\pm$  0.5 mV DC.
- (7) Adjust the Variable Resistors of other channels in the same way.

## 調整

### アイドリング電流の調整

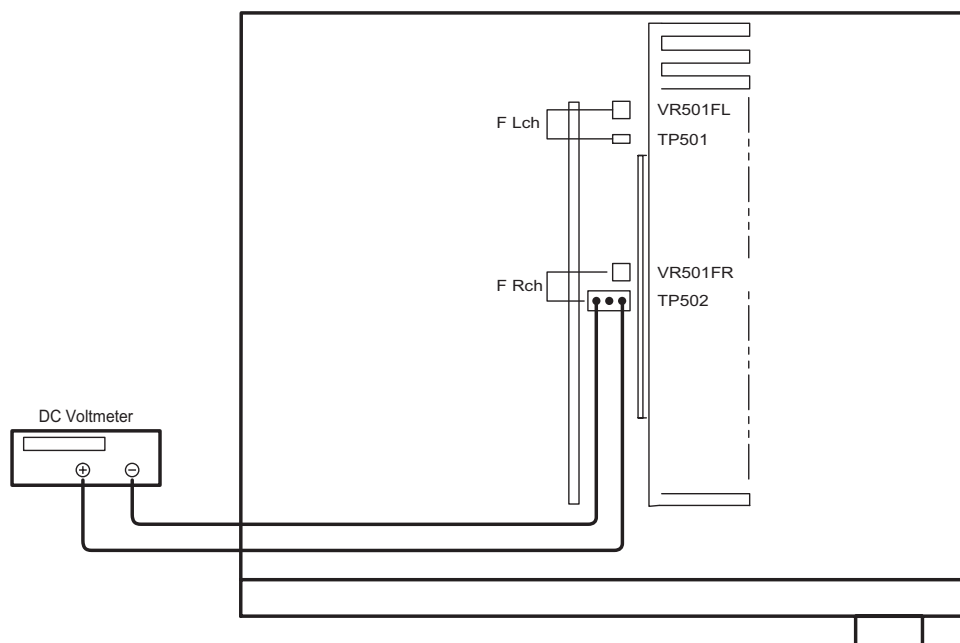
調整に必要な測定器： DC Voltmeter

#### 1. 準備

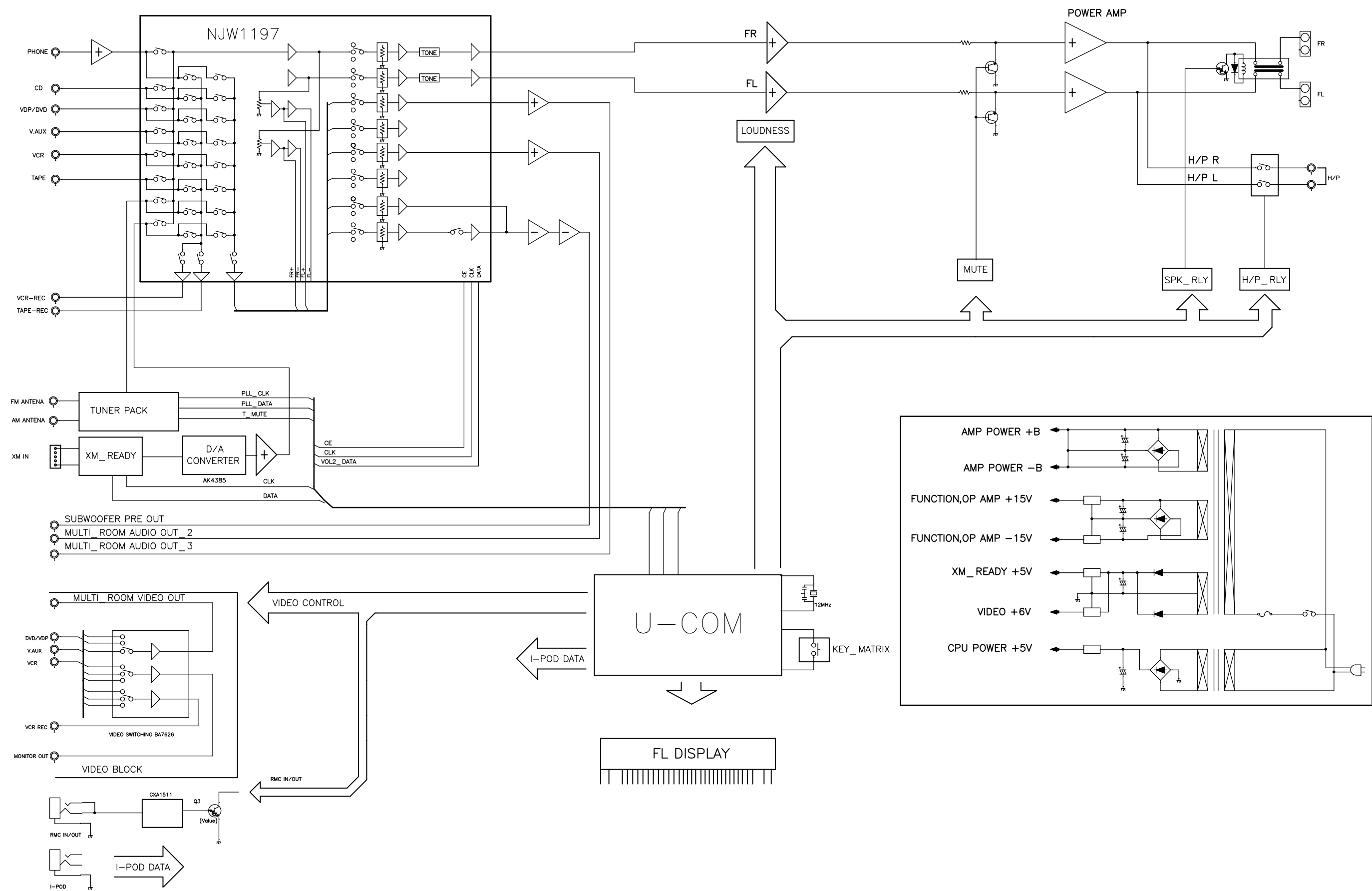
- (1) セットをクーラ、扇風機のそばなど風通しの良い場所を避け、通常の使用状態に置きます。セットの周囲温度は 15 ~ 30 °C、湿度は常湿とします。
- (2) プリセット
  - 電源スイッチ OFF
  - スピーカ端子 無負荷  
(スピーカ・ダミー抵抗器などを接続しない。)

#### 2. 調整

- (1) 上カバーをはずし、メイン基板の VR501FL, VR501FR を反時計方向 (  ) に回し切った状態にセットします。
- (2) テストポイント (FRONT-Lch: TP501, FRONT-Rch: TP502) に DC Voltmeter を接続します。
- (3) 電源コードを AC100V (95 ~ 105V の範囲でも可) に接続し、電源スイッチを "ON" にします。
- (4) ON 後、次のようにセットします。
  - MASTER VOLUME (音量調節つまみ) → 反時計方向 (  ) に回す、最小の状態にする。
  - SPEAKER (スピーカ端子) → 無負荷 (スピーカ、ダミー抵抗器などを接続しない。)
 MODE : TONE DEFEAT  
 FUNCTION : CD
- (5) 2 分以内に VR501FL を時計方向 (  ) に回しテストポイントの電圧を次のように調整します。  
 1.5mV  $\pm$  0.5mV DC
- (6) 予備調整から 10 分後 VR501FL を回し、次のように電圧を設定します。  
 2.0mV  $\pm$  0.5mV DC
- (7) 同じ方法で各チャンネルの可変抵抗を調整します。

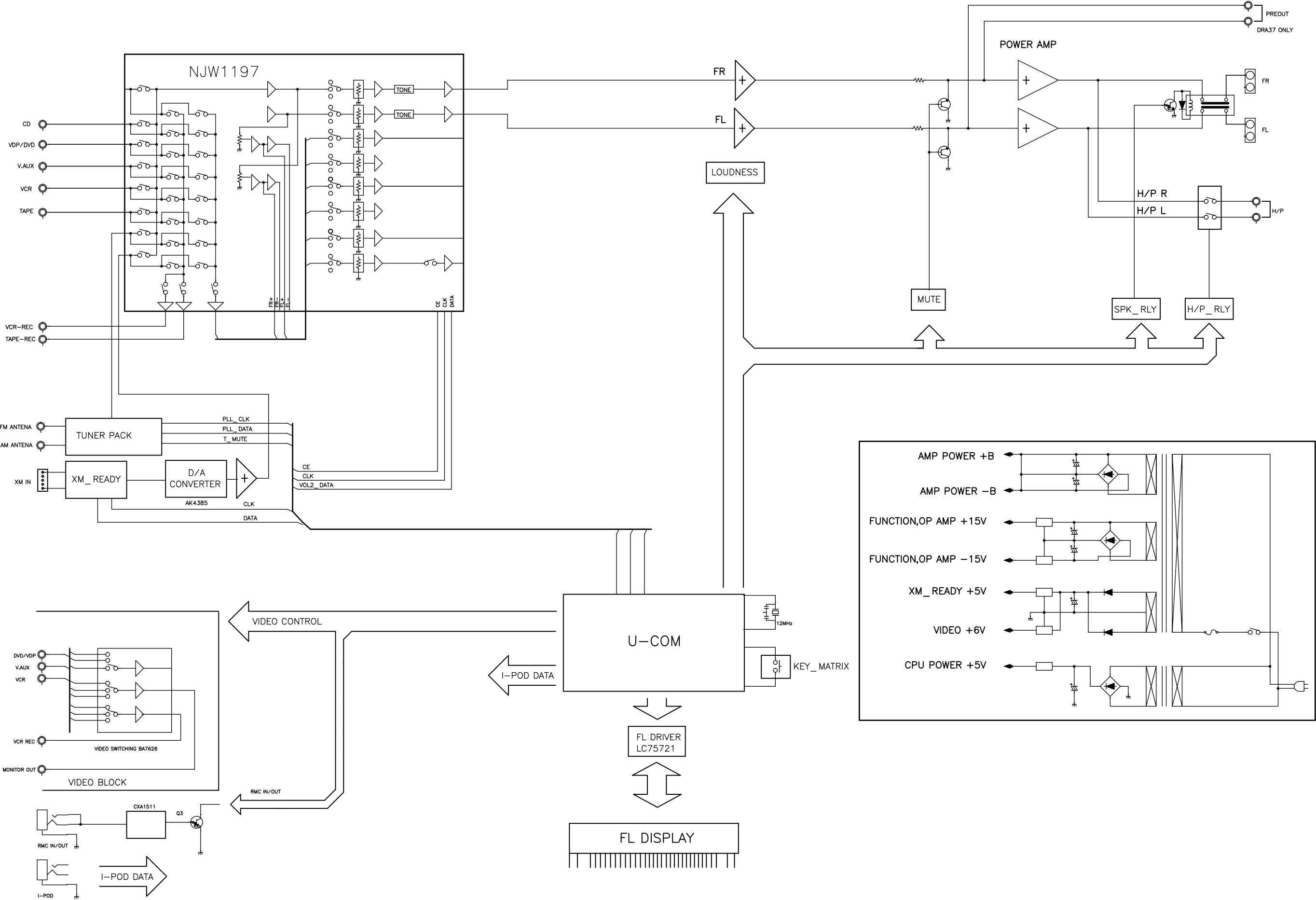


BLOCK DIAGRAM  
DRA-397 model

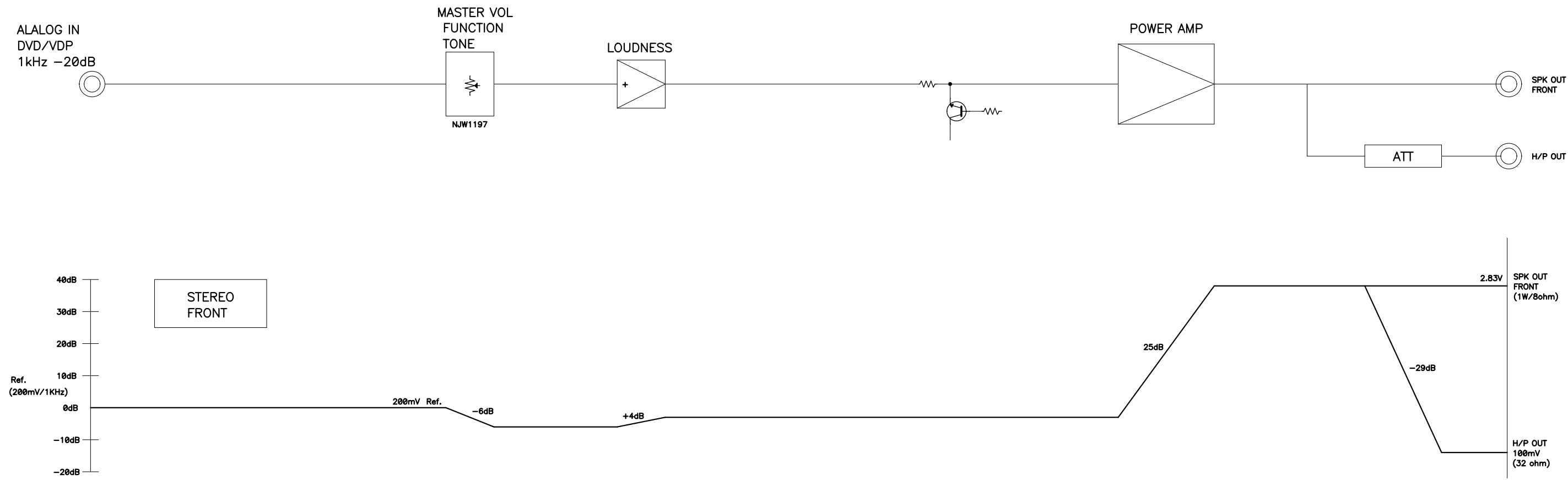




DRA-297/37 model



LEVEL DIAGRAM



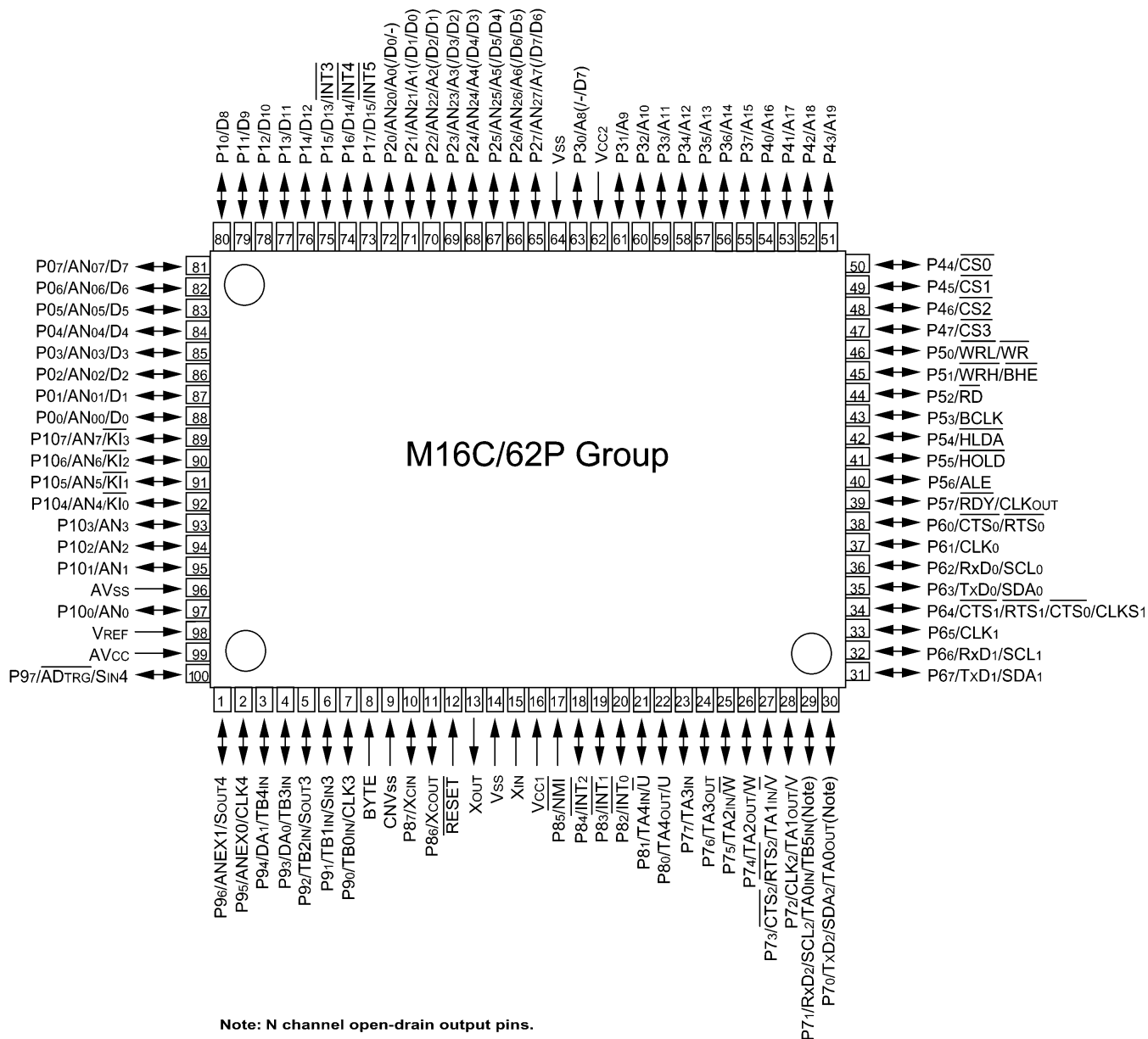
# SEMICONDUCTORS

Only major semiconductors are shown, general semiconductors etc. are omitted to list.

主な半導体を記載しています。汎用の半導体は記載を省略しています。

## 1. IC's

### M30624FGPFG (IC401) FRONT P.W.B.



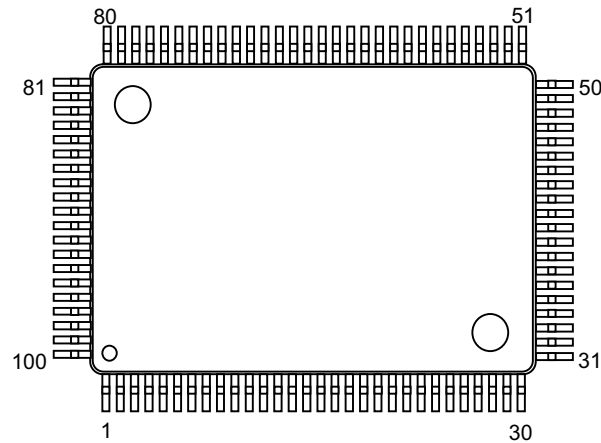
## M30624FGPFG Terminal Function

| PIN No. | Port Function   | Port Name          | I/O  |         | Function                               |
|---------|-----------------|--------------------|------|---------|----------------------------------------|
|         |                 |                    | P-ON | Standby |                                        |
| 1       | P96             | SIRIUS_TX          | O    | O/L     | SIRIUS data transmission               |
| 2       | P95             | SIRIUS MUTE        | O    | O/L     | SIRIUS MUTE control                    |
| 3       | P94             | (HD CE)            | O    | O/L     | HD Radio enable output                 |
| 4       | P93             | MULT3 SW           | O    | O/L     | ZONE3 output, HPF control              |
| 5       | P92             | HD Radio TX/(SDA)  | O    | O/L     | HD Radio data transmission             |
| 6       | P91             | HD Radio RX/(SCL)  | I    | I       | HD Radio Data reception                |
| 7       | P90             | (HD CLK)           | O    | O/L     | HD Radio clock output                  |
| 8       | BYTE            |                    | I    | -       | Ext. data bus bit width switching      |
| 9       | CNVSS           |                    | I    | -       | Processor mode switching               |
| 10      | P87, XCIN       | (HD RESET)         | O    | O/L     | HD Radio reset output                  |
| 11      | P86, XCOUT      | FLT_RESET          | O    | O/L     | FLT reset output                       |
| 12      | /RESET          |                    | I    | -       | Hard reset                             |
| 13      | XOUT            |                    | O    | -       | Oscillator connection                  |
| 14      | VSS             |                    | I    | -       | GND                                    |
| 15      | XIN             |                    | I    | -       | Oscillator connection                  |
| 16      | VCC1            |                    | I    | -       | 5V                                     |
| 17      | P85             | NMI                | I    | -       | NMI interruption input                 |
| 18      | P84, /INT2      | RS232C_TX          | I    | I       | RS232C signal detection                |
| 19      | P83, /INT1      | REMOCON            | I    | I       | Remote control input                   |
| 20      | P82, /INT0      | PROTECTION         | I    | I       | Unusual operation detection            |
| 21      | P81             | FLT_CLK            | O    | O/L     | FLT clock output                       |
| 22      | P80             | FLT_DATA           | O    | O/L     | FLT data output                        |
| 23      | P77             | FLT_CE1            | O    | O/L     | FLT chip select output                 |
| 24      | P76             | SPK_RLY_A          | O    | O/L     | Speaker A Relay control                |
| 25      | P75             | CPU_5V_SW          | O    | O/L     | CPU 5V control                         |
| 26      | P74             | SPK_RLY_B          | O    | O/L     | Speaker B Relay control                |
| 27      | P73             | (NC)               |      | O/L     |                                        |
| 28      | P72, CLK2       | iPod_DET           | I    | I       | iPod connection detection              |
| 29      | P71, RXD2/SCL2  | iPod_RX            | I    | I       | iPod data reception                    |
| 30      | P70, TXD2/SDA2  | iPod_TX            | O    | O/L     | iPod data transmission                 |
| 31      | P67, TXD1/SDA1  | RS232C_TX          | O    | O/L     | RS232C data reception                  |
| 32      | P66, RXD1/SCL1  | RS232C_RX          | I    | I       | RS232C data reception                  |
| 33      | P65, CLK1       | PLL_DI             | I    | I       | PLL data input                         |
| 34      | P64             | PLL_DO/XM-DAC_DO   | O    | O/L     | PLL/XM-DAC data output                 |
| 35      | P63, Tx/D0/SDA0 | XM_TX              | O    | O/L     | XM data transmission                   |
| 36      | P62, RX/D0/SCL0 | XM_RX              | I    | I       | XM data reception                      |
| 37      | P61, CLK0       | PLL_CLK/XM-DAC_CLK | O    | O/L     | PLL/XM-DAC clock output                |
| 38      | P60             | PLL_CE             | O    | O/L     | PLL enable output                      |
| 39      | P57             | /TUNED             | I    | I       | TUNED detection                        |
| 40      | P56             | /STEREO            | I    | I       | STEREO broadcast detection             |
| 41      | P55             | RS232C_UPDATE_EPM  |      |         |                                        |
| 42      | P54             | VOL_UP             | I    | I       | Volume encoder input                   |
| 43      | P53             | VOL_DOWN           | I    | I       | Volume encoder input                   |
| 44      | P52             | SELECT_DOWN        | I    | I       | Select encoder input                   |
| 45      | P51             | SELECT_UP          | I    | I       | Select encoder input                   |
| 46      | P50             | RS232C_UPDATE_CE   | O    | O/L     |                                        |
| 47      | P47             | DC TRIGGER_2ON     | O    | O/L     | Trigger Out2 ON/OFF control            |
| 48      | P46             | FUNCTION_UP        | I    | I       | Function encoder input                 |
| 49      | P45             | TUNER MUTE         | O    | O/L     | TUNER MUTE control                     |
| 50      | P44             | E2PROM_SCL         | O    | O/L     | E2P Clock output                       |
| 51      | P43             | E2PROM_SDA         | I/O  | O/L     | E2PROM data transmission and reception |
| 52      | P42             | ZONE3_MUTE         | O    | O/L     | ZONE3 MUTE control                     |
| 53      | P41             | ZONE2_MUTE         | O    | O/L     | ZONE2 MUTE control                     |
| 54      | P40             | STBY LED_RED       | O    | O/L     | Standby LED(R) control                 |

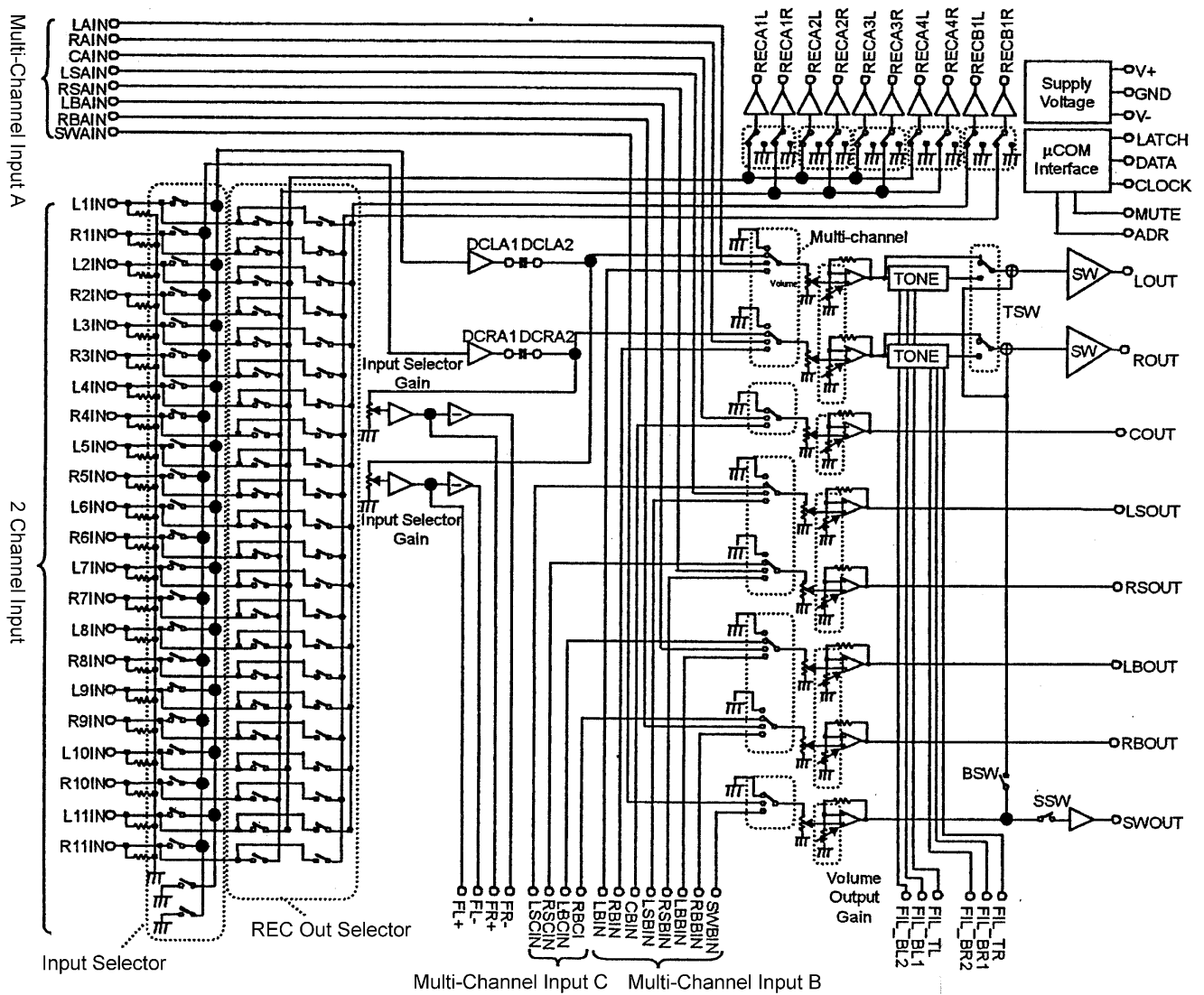
| PIN No. | Port Function        | Port Name        | I/O  |         | Function                      |
|---------|----------------------|------------------|------|---------|-------------------------------|
|         |                      |                  | P-ON | Standby |                               |
| 55      | P37                  | HD Radio MUTE    | O    | O/L     | HD Radio MUTE control         |
| 56      | P36                  | DC TRIGGER 1     | O    | O/L     | Trigger Out1 ON/OFF control   |
| 57      | P35                  | H/P RELAY        | O    | O/L     | H/P Relay control             |
| 58      | P34                  | SW_MUTE          | O    | O/L     | SW MUTE control               |
| 59      | P33                  | VIDEO OFF        | O    | O/L     | VIDEO Reg control             |
| 60      | P32                  | HD Radio DET     | I    | I       | HD Radio Installing detection |
| 61      | P31                  | HD Radio P/E     | O    | O/L     | HD Radio power supply control |
| 62      | VCC2                 |                  | I    | -       | 5V                            |
| 63      | P30                  | (NC)             |      |         |                               |
| 64      | VSS                  |                  | I    | -       | GND                           |
| 65      | P27                  | XM_DBPOWER       | O    | O/L     | XM Reg control                |
| 66      | P26                  | XM_DIC_RESET     | O    | O/L     | XM DIC reset output           |
| 67      | P25                  | XM_DAC_PDN       | O    | O/L     | XM DAC reset reset output     |
| 68      | P24                  | XM_COMMAND       | O    | O/L     | XM DIC CBM output             |
| 69      | P23                  | XM_REQ           | I    | I       | XM DIC Interrupt request      |
| 70      | P22                  | H/P DET          | I    | I       | H/P connection detection      |
| 71      | P21                  | POWER RELAY      | O    | O/L     | POWER RELAY control           |
| 72      | P20                  | FUNCTION_DOWN    | I    | I       | Function encoder input        |
| 73      | P17, /INT5           | POWER DOWN       | I    | I       | CPU 5.6V detection            |
| 74      | P16, /INT4           | LOUDNESS ON      | O    | O/L     | LOUDNESS ON/OFF control       |
| 75      | P15, /INT3           | POWER            | I    | I       | POWER Key input detection     |
| 76      | P14                  | MULT2 SW         | O    | O/L     | ZONE3 output, HPF control     |
| 77      | P13                  | STBY_LED_GREEN   | O    | O/L     | Standby LED(G) control        |
| 78      | P12                  | NJW1197W_LATCH   | O    | O/L     | NJW1197 latch output          |
| 79      | P11                  | NJW1197W_CLK     | O    | O/L     | NJW1197 Clock output          |
| 80      | P10                  | NJW1197W_DATA    | O    | O/L     | NJW1197 data output           |
| 81      | P07                  | MAIN_MUTE        | O    | O/L     | MAIN MUTE control             |
| 82      | P06                  | VIDEO_A          | O    | O/L     | VIDEO output control          |
| 83      | P05                  | VIDEO_B          | O    | O/L     | VIDEO output control          |
| 84      | P04                  | VIDEO_C          | O    | O/L     | VIDEO output control          |
| 85      | P03                  | VIDEO_D          | O    | O/L     | VIDEO output control          |
| 86      | P02                  | VIDEO_E          | O    | O/L     | VIDEO output control          |
| 87      | P01                  | ZONE2_VIDEO_MUTE | O    | O/L     | ZONE2 VIDEO MUTE control      |
| 88      | P00                  | ZONE3_VIDEO_MUTE | O    | O/L     | ZONE3 VIDEO MUTE control      |
| 89      | P107                 | (NC)             |      |         |                               |
| 90      | P106, AN6            | KEY_IN1          | I    | I       | Key input                     |
| 91      | P105, AN5            | KEY_IN2          | I    | I       | Key input                     |
| 92      | P104, AN4            | KEY_IN3          | I    | I       | Key input                     |
| 93      | P103                 | (NC)             |      |         |                               |
| 94      | P102                 | SIRIUS P/E       | O    | O/L     | SIRIUS enable output          |
| 95      | P101                 | XM MUTE          | O    | O/L     | XM MUTE control               |
| 96      | AVSS                 |                  | I    | -       | GND                           |
| 97      | P100                 | XM_DACNS         | O    | O/L     | XM DAC chip select input      |
| 98      | VREF                 |                  | I    | -       | standard voltage input        |
| 99      | AVCC                 |                  | I    | -       | 5V                            |
| 100     | P97, RXD4/SCL4/STXD4 | SIRIUS_RX        | I    | I       | SIRIUS data reception         |

### NJW1197 (IC101) INPUT P.W.B.

## PIN FUNCTION



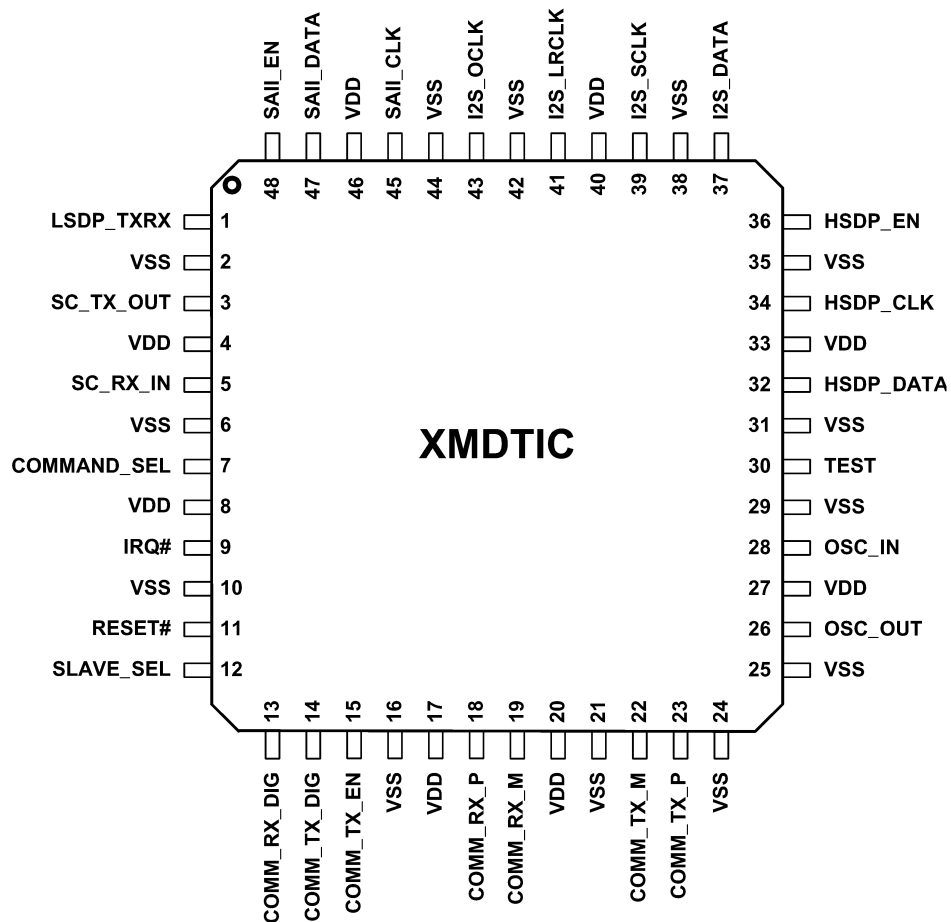
### BLOCK DIAGRAM



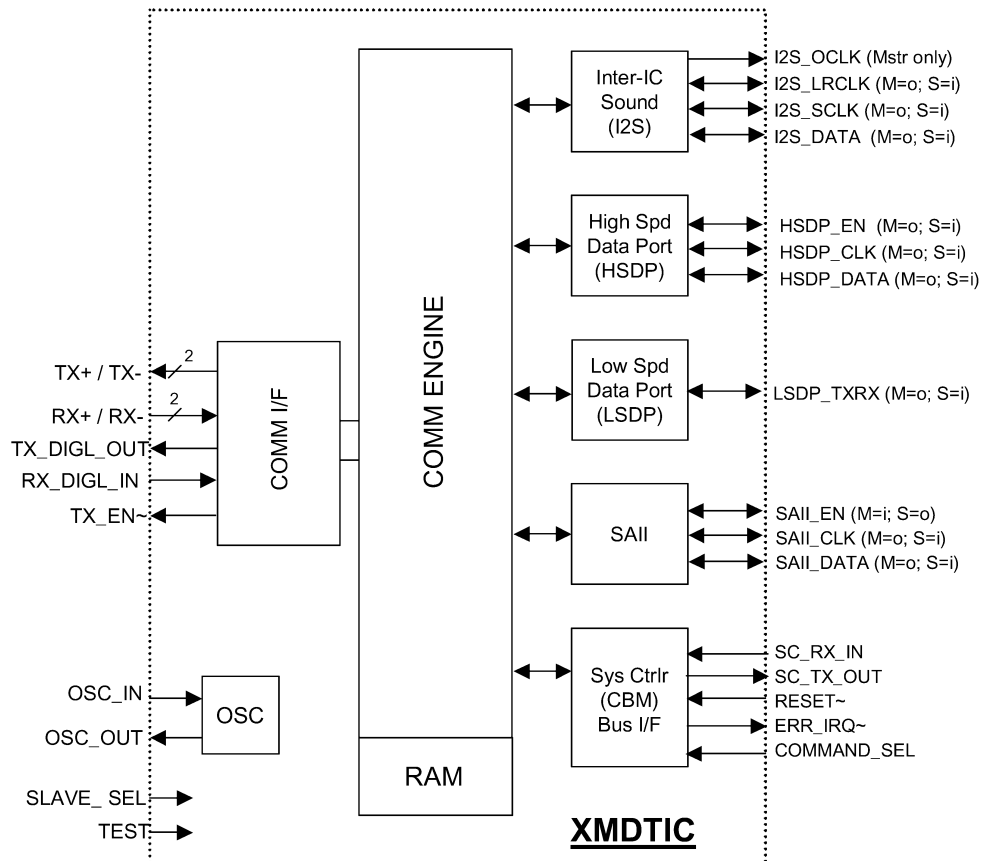
## NJW1197 Terminal Function

| No. | SYMBOL   | FUNCTION                            | No. | SYMBOL  | FUNCTION                                           |
|-----|----------|-------------------------------------|-----|---------|----------------------------------------------------|
| 1   | ROUT     | Rch output                          | 51  | DCR_IN  | Multi-channel selector Rch input                   |
| 2   | COUT     | Cch output                          | 52  | DCR_OUT | Input selector Rch output                          |
| 3   | LSOUT    | LSch output                         | 53  | GND     | Ground                                             |
| 4   | RSOUT    | RSch output                         | 54  | DCL_IN  | Multi-channel selector Lch input                   |
| 5   | LBOUT    | LBch output                         | 55  | DCL_OUT | Input selector Lch output                          |
| 6   | RBOUT    | RBch output                         | 56  | GND     | Ground                                             |
| 7   | SWOUT    | SWch output                         | 57  | REC_B1R | Input selector Rch REC output B1                   |
| 8   | GND      | Ground                              | 58  | REC_B1L | Input selector Lch REC output B1                   |
| 9   | FIL_BL2  | Lch Bass filter terminal 2          | 59  | REC_A4R | Input selector Rch REC output A4                   |
| 10  | FIL_BL1  | Lch Bass filter terminal 1          | 60  | REC_A4L | Input selector Lch REC output A4                   |
| 11  | FIL_TL   | Lch Treble filter terminal          | 61  | REC_A3R | Input selector Rch REC output A3                   |
| 12  | TCAP     | Switching noise rejection capacitor | 62  | REC_A3L | Input selector Lch REC output A3                   |
| 13  | FIL_BR2  | Rch Bass filter terminal 2          | 63  | REC_A2R | Input selector Rch REC output A2                   |
| 14  | FIL_BR1  | Rch Bass filter terminal 1          | 64  | REC_A2L | Input selector Lch REC output A2                   |
| 15  | FIL_TR   | Rch Treble filter terminal          | 65  | REC_A1R | Input selector Rch REC output A1                   |
| 16  | V+       | + Power supply voltage input        | 66  | REC_A1L | Input selector Lch REC output A1                   |
| 17  | ADR      | Chip address select input           | 67  | VDDOUT  | Internal Digital +Power Supply Output              |
| 18  | V-       | - Power supply voltage input        | 68  | DATA    | Control data signal input                          |
| 19  | L1IN     | Input selector Lch input 1          | 69  | CLOCK   | Clock signal input                                 |
| 20  | DCCAP_SW | Switching noise rejection capacitor | 70  | LATCH   | Latch signal input                                 |
| 21  | R1IN     | Input selector Rch input 1          | 71  | MUTE    | External Mute control                              |
| 22  | DCCAP_RB | Switching noise rejection capacitor | 72  | FL+     | Input selector gain control Lch no-inverted output |
| 23  | L2IN     | Input selector Lch input 2          | 73  | FL-     | Input selector gain control Lch inverted output    |
| 24  | DCCAP_LB | Switching noise rejection capacitor | 74  | FR+     | Input selector gain control Rch no-inverted output |
| 25  | R2IN     | Input selector Rch input 2          | 75  | FR-     | Input selector gain control Rch inverted output    |
| 26  | DCCAP_RS | Switching noise rejection capacitor | 76  | GND     | Ground                                             |
| 27  | L3IN     | Input selector Lch input 3          | 77  | LSCIN   | Multi-channel LSch input C                         |
| 28  | DCCAP_LS | Switching noise rejection capacitor | 78  | RSCIN   | Multi-channel RSch input C                         |
| 29  | R3IN     | Input selector Rch input 3          | 79  | LBCIN   | Multi-channel LBch input C                         |
| 30  | DCCAP_C  | Switching noise rejection capacitor | 80  | RBCIN   | Multi-channel RBch input C                         |
| 31  | L4IN     | Input selector Lch input 4          | 81  | GND     | Ground                                             |
| 32  | DCCAP_R  | Switching noise rejection capacitor | 82  | LAIN    | Multi-channel Lch input A                          |
| 33  | R4IN     | Input selector Rch input 4          | 83  | RAIN    | Multi-channel Rch input A                          |
| 34  | DCCAP_L  | Switching noise rejection capacitor | 84  | CAIN    | Multi-channel Cch input A                          |
| 35  | L5IN     | Input selector Lch input 5          | 85  | LSAIN   | Multi-channel LSch input A                         |
| 36  | GND      | Ground                              | 86  | RSAIN   | Multi-channel RSch input A                         |
| 37  | R5IN     | Input selector Rch input 5          | 87  | LBAIN   | Multi-channel LBch input A                         |
| 38  | GND      | Ground                              | 88  | RBAIN   | Multi-channel RBch input A                         |
| 39  | L6IN     | Input selector Lch input 6          | 89  | SWAIN   | Multi-channel SWch input A                         |
| 40  | L9IN     | Input selector Lch input 9          | 90  | GND     | Ground                                             |
| 41  | R6IN     | Input selector Rch input 6          | 91  | LBIN    | Multi-channel Lch input B                          |
| 42  | R9IN     | Input selector Rch input 9          | 92  | RBIN    | Multi-channel Rch input B                          |
| 43  | L7IN     | Input selector Lch input 7          | 93  | CBIN    | Multi-channel Cch input B                          |
| 44  | L10IN    | Input selector Lch input 10         | 94  | LSBIN   | Multi-channel LSch input B                         |
| 45  | R7IN     | Input selector Rch input 7          | 95  | RSBIN   | Multi-channel RSch input B                         |
| 46  | R10IN    | Input selector Rch input 10         | 96  | LBBIN   | Multi-channel LBch input B                         |
| 47  | L8IN     | Input selector Lch input 8          | 97  | RBBIN   | Multi-channel RBch input B                         |
| 48  | L11IN    | Input selector Lch input 11         | 98  | SWBIN   | Multi-channel SWch input B                         |
| 49  | R8IN     | Input selector Rch input 8          | 99  | GND     | Ground                                             |
| 50  | R11IN    | Input selector Rch input 11         | 100 | LOUT    | Lch output                                         |

## F2602-1 XMDTIC (IC203) XM-READY P.W.B.



## Functionnal Description





**F2602-1 XMDTIC Pin Descriptions**

| Pin # | Pin Name    | Type           | Function in Slave Mode                                                    | Function in Master Mode                                                   | Notes                         |
|-------|-------------|----------------|---------------------------------------------------------------------------|---------------------------------------------------------------------------|-------------------------------|
| 1     | LSDP_TXRX   | S=In<br>M=Out  | Low Speed Data Port Output                                                | Low Speed Data Port Input                                                 | LVTTL S/T                     |
| 3     | SC_TX_OUT   | S=Out<br>M=Out | System Controller Bus (CBM) Transmit Data Out                             | System Controller Bus (CBM) Transmit Data Out                             | 4mA, SLC                      |
| 5     | SC_RX_IN    | S=In<br>M=In   | System Controller Bus (CBM) Receive Data In                               | System Controller Bus (CBM) Receive Data In                               | LVTTL S/T                     |
| 7     | COMMAND_SEL | S=In<br>M=In   | Command Mode Select In<br>(1= Command Mode,<br>0=Normal Mode)             | Command Mode Select In<br>(1= Command Mode,<br>0=Normal Mode)             | LVTTL S/T                     |
| 9     | IRQ#        | S=Out<br>M=Out | Interrupt Request Out<br>(Active Low)                                     | Interrupt Request Out<br>(Active Low)                                     | 4mA Open Drain                |
| 11    | RESET#      | S=In<br>M=In   | Asynchronous Reset In,<br>(Active Low)                                    | Asynchronous Reset In,<br>(Active Low)                                    | LVTTL S/T                     |
| 12    | SLAVE_SEL   | S=In<br>M=In   | M/S Mode Select In<br>(High = Slave Mode)                                 | M/S Mode Select In<br>(Low = Master Mode)                                 | LVTTL S/T                     |
| 13    | COMM_RX_DIG | S=In<br>M=In   | DT Comm Bus External Transceiver Receive Data In                          | DT Comm Bus External Transceiver Receive Data In                          | LVTTL S/T                     |
| 14    | COMM_TX_DIG | Output         | DT Comm Bus External Transceiver Transmit Data Out                        | DT Comm Bus External Transceiver Transmit Data Out                        | LVTTL S/T                     |
| 15    | COMM_TX_EN  | Output         | DT Comm Bus External Transceiver Direction Out<br>(1=Transmit, 0=Receive) | DT Comm Bus External Transceiver Direction Out<br>(1=Transmit, 0=Receive) | LVTTL S/T                     |
| 18    | COMM_RX_P   | S=In<br>M=In   | DT Comm Bus Internal Receiver Differential Positive In                    | DT Comm Bus Internal Receiver Differential Positive In                    | LVDS in+                      |
| 19    | COMM_RX_M   | S=In<br>M=In   | DT Comm Bus Internal Receiver Differential Negative In                    | DT Comm Bus Internal Receiver Differential Negative In                    | LVDS in-                      |
| 22    | COMM_TX_M   | Output         | DT Comm Bus Internal Transmitter Differential Negative Out                | DT Comm Bus Internal Transmitter Differential Negative Out                | LVDS out-                     |
| 23    | COMM_TX_P   | Output         | DT Comm Bus Internal Transmitter Differential Positive Out                | DT Comm Bus Internal Transmitter Differential Positive Out                | LVDS out+                     |
| 26    | OSC_OUT     | Output         | Crystal Output                                                            | Crystal Output                                                            | Crystal Buffer                |
| 28    | OSC_IN      | S=In<br>M=In   | Crystal Input                                                             | Crystal Input                                                             | Crystal Buffer                |
| 30    | TEST        | S=In<br>M=In   | Factory Test Mode Select<br>(1=Test, 0= Normal Oper.)                     | Factory Test Mode Select<br>(1=Test, 0= Normal Oper.)                     | LVTTL S/T                     |
| 32    | HSDP_DATA   | S=In<br>M=Out  | High Speed Data Port Data Input                                           | High Speed Data Port Data Output                                          | Out= 4mA, SLC<br>In=LVTTL S/T |
| 34    | HSDP_CLK    | S=In<br>M=Out  | High Speed Data Port Clock Input                                          | High Speed Data Port Clock Output                                         | Out= 4mA, SLC<br>In=LVTTL S/T |
| 36    | HSDP_EN     | S=Out<br>M=In  | High Speed Data Port Enable Output                                        | High Speed Data Port Enable Input                                         | Out= 4mA, SLC<br>In=LVTTL S/T |
| 37    | I2S_DATA    | S=In<br>M=Out  | I2S Digital Port Data In                                                  | I2S Digital Audio Port Data Out                                           | Out= 4mA, SLC<br>In=LVTTL S/T |

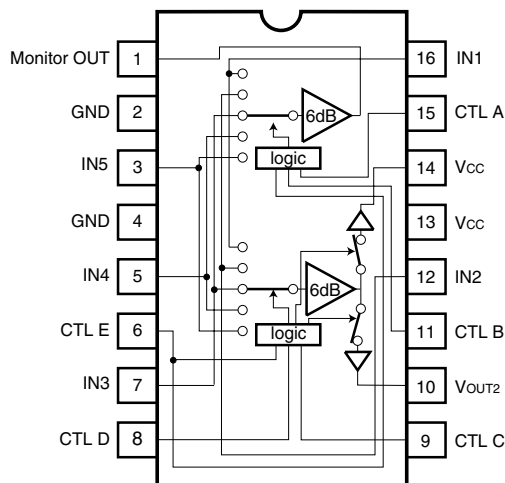
| Pin # | Pin Name  | Type          | Function in Slave Mode                                                 | Function in Master Mode                     | Notes                         |
|-------|-----------|---------------|------------------------------------------------------------------------|---------------------------------------------|-------------------------------|
| 39    | I2S_SCLK  | S=In<br>M=Out | I2S Digital Audio Port Bit Clock In                                    | I2S Digital Audio Port Bit Clock Out        | Out= 4mA, SLC<br>In=LVTTL S/T |
| 41    | I2S_LRCLK | S=In<br>M=Out | I2S Digital Audio Port Left/Right Clock In                             | I2S Digital Audio Port Left/Right Clock Out | Out= 4mA, SLC<br>In=LVTTL S/T |
| 43    | I2S_OCLK  | S=In<br>M=Out | I2S Digital Audio Port Oversample Clock (not used - connect to Gnd???) | I2S Digital Audio Port Oversample Clock Out | Out= 4mA, SLC                 |
| 45    | SAII_CLK  | S=Out<br>M=In | SAII Port Clock Output                                                 | SAII Port Clock Input                       | Out= 4mA, SLC<br>3.3V S/T     |
| 47    | SAII_DATA | S=Out<br>M=In | SAII Port Data Output                                                  | SAII Port Data Input                        | Out= 4mA, SLC<br>In=LVTTL S/T |
| 48    | SAII_REQ  | S=In<br>M=Out | SAII Port Request Input                                                | SAII Port Request Output                    | Out= 4mA, SLC<br>In=LVTTL S/T |

| Pin#                                             | Pin Name | Type | Function in Slave Mode | Function in Master Mode | Notes |
|--------------------------------------------------|----------|------|------------------------|-------------------------|-------|
| 4, 8, 17, 20, 27, 33, 40, 46                     | VDD      | PWR  | +3.3V Supply Voltage   | +3.3V Supply Voltage    |       |
| 2, 6, 10, 16, 21, 24, 25, 29, 31, 25, 38, 42, 44 | VSS      | GND  | Digital Ground         | Digital Ground          |       |

Notes: All Inputs are 3.3V LVTTL compatible; S/T = Schmitt Trigger inputs; SLC = Slew Rate Controller Output

## BA7626F (IC601) MAIN P.W.B.

Block diagram



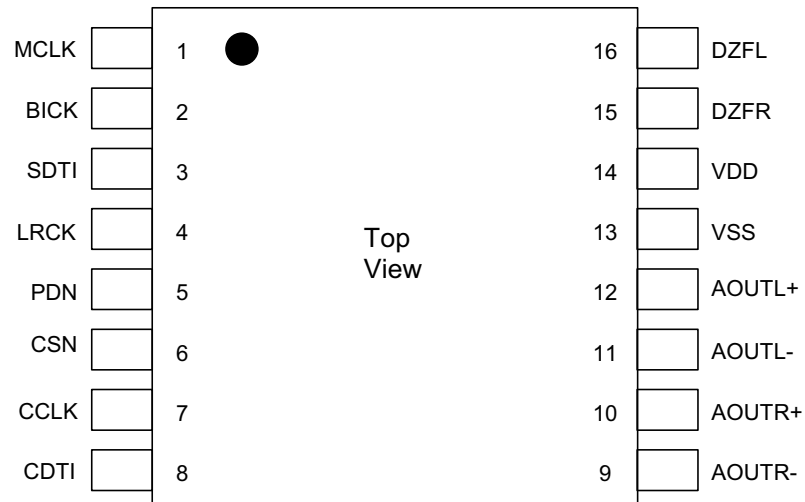
Truth table

| A | B | E | Monitor OUT |
|---|---|---|-------------|
| L | L | * | IN1         |
| H | L | * | IN2         |
| L | H | * | IN3         |
| H | H | L | IN4         |
| H | H | H | IN5         |

| C | D | E | V <sub>OUT1</sub> |
|---|---|---|-------------------|
| L | L | * | —                 |
| H | L | * | IN2               |
| L | H | * | IN3               |
| H | H | L | IN4               |
| H | H | H | IN5               |

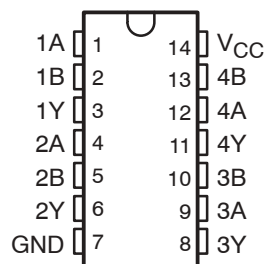
| C | D | E | V <sub>OUT2</sub> |
|---|---|---|-------------------|
| L | L | * | IN1               |
| H | L | * | —                 |
| L | H | * | IN3               |
| H | H | L | IN4               |
| H | H | H | IN5               |

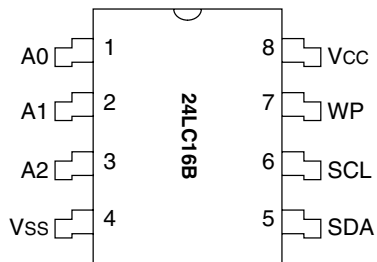
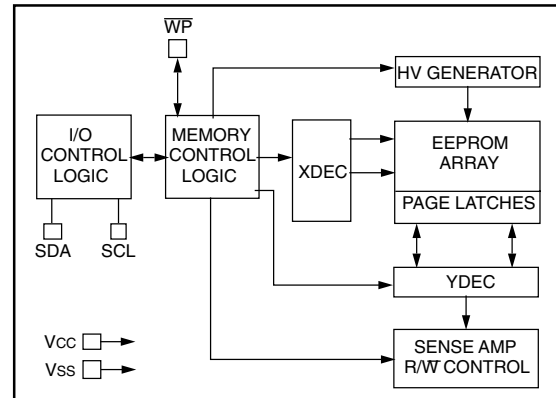
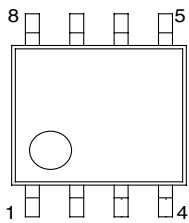
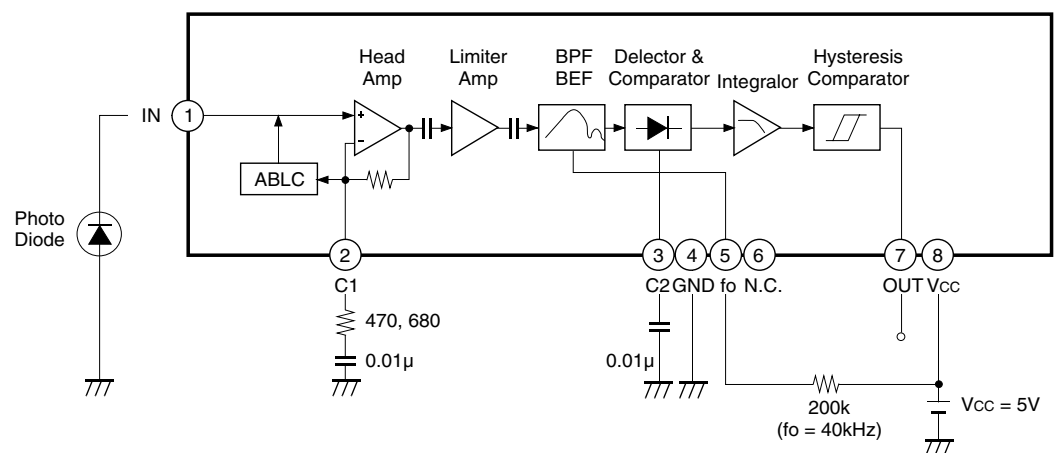
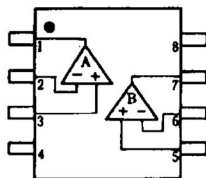
Note 1: \* indicates "don't care" (H or L).

**AK4385 (IC 207) XM-READY P.W.B.****Pin function**

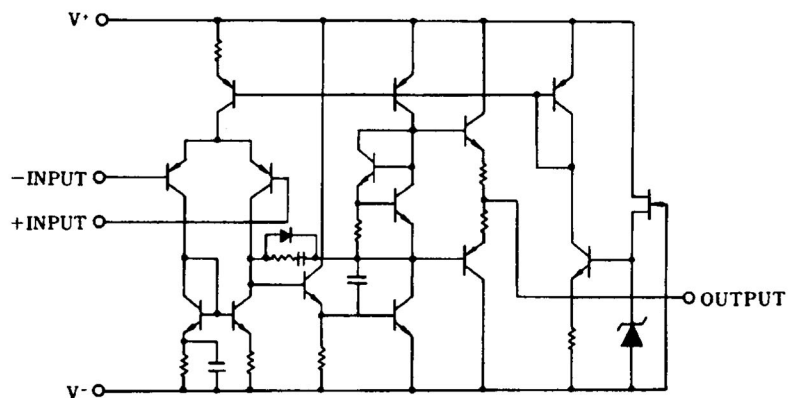
| No. | Pin Name | I/O | Function                                                                                                                                           |
|-----|----------|-----|----------------------------------------------------------------------------------------------------------------------------------------------------|
| 1   | MCLK     | I   | Master Clock Input Pin<br>An external TTL clock should be input on this pin.                                                                       |
| 2   | BICK     | I   | Audio Serial Data Clock Pin                                                                                                                        |
| 3   | SDTI     | I   | Audio Serial Data Input Pin                                                                                                                        |
| 4   | LRCK     | I   | L/R Clock Pin                                                                                                                                      |
| 5   | PDN      | I   | Power-Down Mode Pin<br>When at “L”, the AK4385 is in the power-down mode and is held in reset.<br>The AK4385 should always be reset upon power-up. |
| 6   | CSN      | I   | Chip Select Pin                                                                                                                                    |
| 7   | CCLK     | I   | Control Data Input Pin                                                                                                                             |
| 8   | CDTI     | I   | Control Data Input Pin                                                                                                                             |
| 9   | AOUTR-   | O   | Rch Negative Analog Output Pin                                                                                                                     |
| 10  | AOUTR+   | O   | Rch Positive Analog Output Pin                                                                                                                     |
| 11  | AOUTL-   | O   | Lch Negative Analog Output Pin                                                                                                                     |
| 12  | AOUTL+   | O   | Lch Positive Analog Output Pin                                                                                                                     |
| 13  | VSS      | -   | Ground Pin                                                                                                                                         |
| 14  | VDD      | -   | Power Supply Pin                                                                                                                                   |
| 15  | DZFR     | O   | Rch Data Zero Input Detect Pin                                                                                                                     |
| 16  | DZFL     | O   | Lch Data Zero Input Detect Pin                                                                                                                     |

Note: All input pins should not be left floating.

**SN74LV08A (IC 204) XM-READY P.W.B.**  
**SN74HCT08 (IC 205, 206, 211) XM-READY**


**24LC16B (IC 404) FRONT P.W.B****BLOCK DIAGRAM****CXA1511M (IC 201) XM-READY P.W.B.****Block Diagram and Pin Configuration****NJM2068 (IC 104, 108-113, 120) INPUT P.W.B.  
(IC 209) XM-READY**

1. A OUTPUT
2. A-INPUT
3. A+INPUT
4. V-
5. B+INPUT
6. B-INPUT
7. B OUTPUT
8. V+

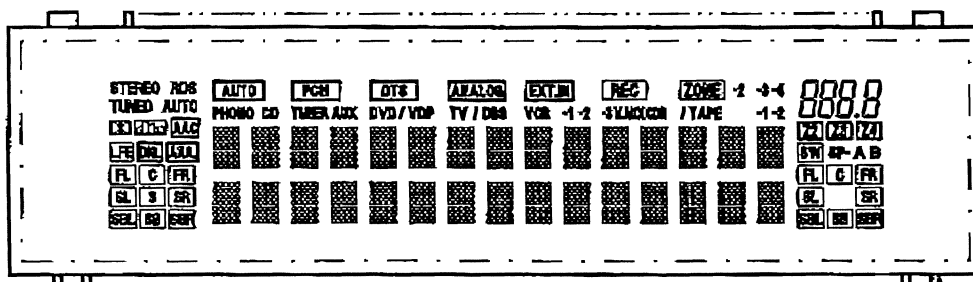


## 2. FL DISPLAY

### 16-ST-87GINK (FLT301) for DRA-397 model

62

1



#### PIN CONNECTION

|            |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
|------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| PIN NO.    | 6 | 6 | 6 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 4 | 4 | 4 | 4 | 4 | ~ | 5 | 4 | 3 | 2 | 1 |   |
|            | 2 | 1 | 0 | 9 | 8 | 7 | 6 | 5 | 4 | 3 | 2 | 1 | 0 | 9 | 8 | 7 | 6 | 5 | 4 | 3 | 2 | 1 |   |
| CONNECTION | F | N | N | N | N | N | V | D | S | E | C | C | D | S | S | G |   | N |   | N | N | N | F |
|            | 2 | X | P | P | P | D | D | H | D | C | T | S | P | A | A | B | G | X |   | P | P | X | 1 |

NOTE 1) F1, F2 --- Filament 4) NX ----- No extend pin  
 2) NP ----- No pin 5) DL ----- Datum Line  
 3) 16G ----- Grid

#### GRID ASSIGNMENT

| 16G                                                                                 | 1G                                                                                                                                                                                                                               | 2G                                                                                                                                                                                                                                | 3G                                                                                                                                                                                                                              | 4G                                                                                                                                                                                                                             | 5G                                                                                                                                                                                                                               | 6G                                                                                                                                                                                                                                 | 7G                                                                                                                                                                                                                              | 8G                                                                                                                                                                                                                               | 9G                                                                          | 10G | 11G | 12G | 13G | 14G | 15G | 16G |
|-------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------|-----|-----|-----|-----|-----|-----|-----|
| STEREO RDS<br>TUNED AUTO<br>DQ  AAC<br>LFE  ANA<br>FL C FR<br>SL S SR<br>SBL SB SBR | <br>PHONO CD<br><br>0000 0000<br>0000 0000<br>0000 0000<br>0000 0000<br>0000 0000<br>0000 0000<br>0000 0000<br>0000 0000<br>0000 0000<br>0000 0000<br>0000 0000<br>0000 0000<br>0000 0000<br>0000 0000<br>0000 0000<br>0000 0000 | <br>TUNER AUX<br><br>0000 0000<br>0000 0000<br>0000 0000<br>0000 0000<br>0000 0000<br>0000 0000<br>0000 0000<br>0000 0000<br>0000 0000<br>0000 0000<br>0000 0000<br>0000 0000<br>0000 0000<br>0000 0000<br>0000 0000<br>0000 0000 | <br>DVD VDP<br><br>0000 0000<br>0000 0000<br>0000 0000<br>0000 0000<br>0000 0000<br>0000 0000<br>0000 0000<br>0000 0000<br>0000 0000<br>0000 0000<br>0000 0000<br>0000 0000<br>0000 0000<br>0000 0000<br>0000 0000<br>0000 0000 | <br>TV DBS<br><br>0000 0000<br>0000 0000<br>0000 0000<br>0000 0000<br>0000 0000<br>0000 0000<br>0000 0000<br>0000 0000<br>0000 0000<br>0000 0000<br>0000 0000<br>0000 0000<br>0000 0000<br>0000 0000<br>0000 0000<br>0000 0000 | <br>VCR -1-2<br><br>0000 0000<br>0000 0000<br>0000 0000<br>0000 0000<br>0000 0000<br>0000 0000<br>0000 0000<br>0000 0000<br>0000 0000<br>0000 0000<br>0000 0000<br>0000 0000<br>0000 0000<br>0000 0000<br>0000 0000<br>0000 0000 | <br>-3V.ANYCDR<br><br>0000 0000<br>0000 0000<br>0000 0000<br>0000 0000<br>0000 0000<br>0000 0000<br>0000 0000<br>0000 0000<br>0000 0000<br>0000 0000<br>0000 0000<br>0000 0000<br>0000 0000<br>0000 0000<br>0000 0000<br>0000 0000 | -2<br>/TAPE<br><br>0000 0000<br>0000 0000<br>0000 0000<br>0000 0000<br>0000 0000<br>0000 0000<br>0000 0000<br>0000 0000<br>0000 0000<br>0000 0000<br>0000 0000<br>0000 0000<br>0000 0000<br>0000 0000<br>0000 0000<br>0000 0000 | -3-4<br>-1-2<br><br>0000 0000<br>0000 0000<br>0000 0000<br>0000 0000<br>0000 0000<br>0000 0000<br>0000 0000<br>0000 0000<br>0000 0000<br>0000 0000<br>0000 0000<br>0000 0000<br>0000 0000<br>0000 0000<br>0000 0000<br>0000 0000 | 000.0<br>000.0<br>Z2 Z3 Z4<br>SW SP-A B<br>FL C FR<br>SL S SR<br>SBL SB SBR |     |     |     |     |     |     |     |

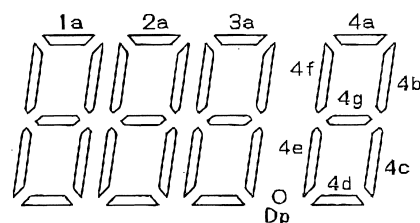
(上段)

|       |       |       |       |       |
|-------|-------|-------|-------|-------|
| 1-1 B | 2-1 B | 3-1 B | 4-1 B | 5-1 B |
| 1-2 B | 2-2 B | 3-2 B | 4-2 B | 5-2 B |
| 1-3 B | 2-3 B | 3-3 B | 4-3 B | 5-3 B |
| 1-4 B | 2-4 B | 3-4 B | 4-4 B | 5-4 B |
| 1-5 B | 2-5 B | 3-5 B | 4-5 B | 5-5 B |
| 1-6 B | 2-6 B | 3-6 B | 4-6 B | 5-6 B |
| 1-7 B | 2-7 B | 3-7 B | 4-7 B | 5-7 B |

(下段)

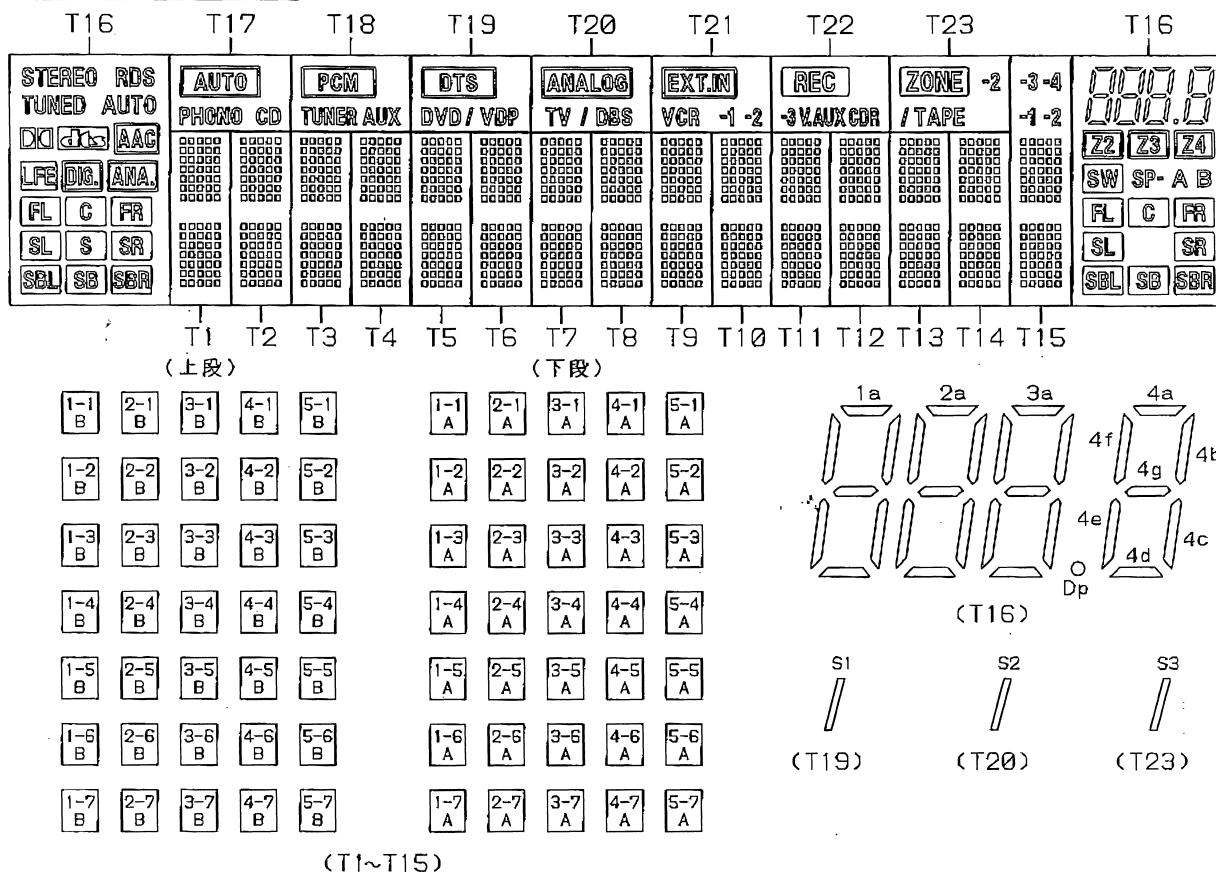
|       |       |       |       |       |
|-------|-------|-------|-------|-------|
| 1-1 A | 2-1 A | 3-1 A | 4-1 A | 5-1 A |
| 1-2 A | 2-2 A | 3-2 A | 4-2 A | 5-2 A |
| 1-3 A | 2-3 A | 3-3 A | 4-3 A | 5-3 A |
| 1-4 A | 2-4 A | 3-4 A | 4-4 A | 5-4 A |
| 1-5 A | 2-5 A | 3-5 A | 4-5 A | 5-5 A |
| 1-6 A | 2-6 A | 3-6 A | 4-6 A | 5-6 A |
| 1-7 A | 2-7 A | 3-7 A | 4-7 A | 5-7 A |

(1G~15G)



(16G)

## TIMING ASSIGNMENT



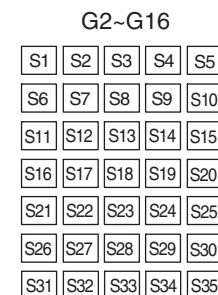
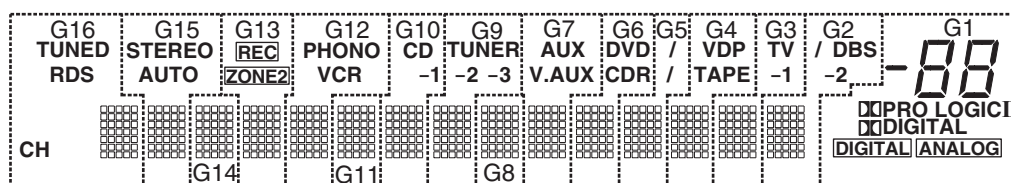
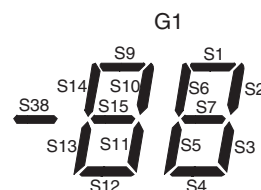
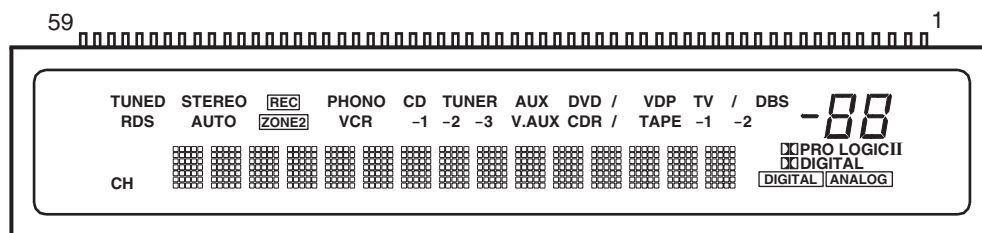
## ANODE TIMING CHART

|      | T1~T14 | T15  | T16 | T17 | T18 | T19 | T20 | T21 | T22 | T23 |
|------|--------|------|-----|-----|-----|-----|-----|-----|-----|-----|
| D0A  | 1-1A   | 1-1A | Dp  |     |     |     |     |     |     |     |
| D1A  | 2-1A   | 2-1A | 1d  |     |     |     |     |     |     |     |
| D2A  | 3-1A   | 3-1A | 2d  |     |     |     |     |     |     |     |
| D3A  | 4-1A   | 4-1A | 3d  |     |     |     |     |     |     |     |
| D4A  | 5-1A   | 5-1A | 4d  |     |     |     |     |     |     |     |
| D5A  | 1-2A   | 1-2A |     |     |     |     |     |     |     |     |
| D6A  | 2-2A   | 2-2A | 1e  |     |     |     |     |     |     |     |
| D7A  | 3-2A   | 3-2A | 2e  |     |     |     |     |     |     |     |
| D8A  | 4-2A   | 4-2A | 3e  |     |     |     |     |     |     |     |
| D9A  | 5-2A   | 5-2A | 4e  |     |     |     |     |     |     |     |
| D10A | 1-3A   | 1-3A |     |     |     |     |     |     |     |     |
| D11A | 2-3A   | 2-3A | 1c  |     |     |     |     |     |     |     |
| D12A | 3-3A   | 3-3A | 2c  |     |     |     |     |     |     |     |
| D13A | 4-3A   | 4-3A | 3c  |     |     |     |     |     |     |     |
| D14A | 5-3A   | 5-3A | 4c  |     |     |     |     |     |     |     |
| D15A | 1-4A   | 1-4A |     |     |     |     |     |     |     |     |
| D16A | 2-4A   | 2-4A | 1g  |     |     |     |     |     |     |     |
| D17A | 3-4A   | 3-4A | 2g  |     |     |     |     |     |     |     |
| D18A | 4-4A   | 4-4A | 3g  |     |     |     |     |     |     |     |
| D19A | 5-4A   | 5-4A | 4g  |     |     |     |     |     |     |     |
| D20A | 1-5A   | 1-5A |     |     |     |     |     |     |     |     |
| D21A | 2-5A   | 2-5A | 1f  |     |     |     |     |     |     |     |
| D22A | 3-5A   | 3-5A | 2f  |     |     |     |     |     |     |     |
| D23A | 4-5A   | 4-5A | 3f  |     |     |     |     |     |     |     |
| D24A | 5-5A   | 5-5A | 4f  |     |     |     |     |     |     |     |
| D25A | 1-6A   | 1-6A |     |     |     |     |     |     |     |     |
| D26A | 2-6A   | 2-6A | 1b  |     |     |     |     |     |     |     |
| D27A | 3-6A   | 3-6A | 2b  |     |     |     |     |     |     |     |
| D28A | 4-6A   | 4-6A | 3b  |     |     |     |     |     |     |     |
| D29A | 5-6A   | 5-6A | 4b  |     |     |     |     |     |     |     |
| D30A | 1-7A   | 1-7A |     |     |     |     |     |     |     |     |
| D31A | 2-7A   | 2-7A | 1a  |     |     |     |     |     |     |     |
| D32A | 3-7A   | 3-7A | 2a  |     |     |     |     |     |     |     |
| D33A | 4-7A   | 4-7A | 3a  |     |     |     |     |     |     |     |
| D34A | 5-7A   | 5-7A | 4a  |     |     |     |     |     |     |     |

## ANODE TIMING CHART

|      | T1~T14 | T15  | T16     | T17   | T18   | T19 | T20    | T21    | T22  | T23  |
|------|--------|------|---------|-------|-------|-----|--------|--------|------|------|
| D0B  | 1-1B   | 1-1B | 22      |       |       |     |        |        |      |      |
| D1B  | 2-1B   | 2-1B | 23      |       |       |     |        |        |      |      |
| D2B  | 3-1B   | 3-1B | 24      |       |       |     |        |        |      |      |
| D3B  | 4-1B   | 4-1B |         |       |       |     |        |        |      |      |
| D4B  | 5-1B   | 5-1B | DCI     |       |       |     |        |        |      |      |
| D5B  | 1-2B   | 1-2B | DCI     |       |       |     |        |        |      |      |
| D6B  | 2-2B   | 2-2B | AAC     |       |       |     |        |        |      |      |
| D7B  | 3-2B   | 3-2B | LFE     |       |       |     |        |        |      |      |
| D8B  | 4-2B   | 4-2B | ANA     |       |       |     |        |        |      |      |
| D9B  | 5-2B   | 5-2B | ANA     |       |       |     |        |        |      |      |
| D10B | 1-3B   | 1-3B |         |       |       |     |        |        |      |      |
| D11B | 2-3B   | 2-3B |         |       |       |     |        |        |      |      |
| D12B | 3-3B   | 3-3B |         |       |       |     |        |        |      |      |
| D13B | 4-3B   | 4-3B | SW      |       |       |     |        |        |      |      |
| D14B | 5-3B   | 5-3B | SP-     |       |       |     |        |        |      |      |
| D15B | 1-4B   | 1-4B | A       |       |       |     |        |        |      |      |
| D16B | 2-4B   | 2-4B | B       |       |       |     |        |        |      |      |
| D17B | 3-4B   | 3-4B | FL (右)  |       |       |     |        |        |      |      |
| D18B | 4-4B   | 4-4B | C (右)   |       |       |     |        |        |      |      |
| D19B | 5-4B   | 5-4B | FR (右)  |       |       |     |        |        |      |      |
| D20B | 1-5B   | 1-5B | SL (右)  |       |       |     |        |        |      |      |
| D21B | 2-5B   | 2-5B | SR (右)  |       |       |     |        |        |      |      |
| D22B | 3-5B   | 3-5B | SBL (右) |       |       |     |        |        |      |      |
| D23B | 4-5B   | 4-5B | SBR (右) |       |       |     |        |        |      |      |
| D24B | 5-5B   | 5-5B | SBR (右) |       |       |     |        |        |      |      |
| D25B | 1-6B   | 1-6B |         |       |       |     |        |        |      |      |
| D26B | 2-6B   | 2-6B | FL (左)  |       |       |     |        |        |      |      |
| D27B | 3-6B   | 3-6B | C (左)   |       |       |     |        |        |      |      |
| D28B | 4-6B   | 4-6B | FR (左)  |       |       |     |        |        |      |      |
| D29B | 5-6B   | 5-6B | SL (左)  |       |       |     |        |        |      |      |
| D30B | 1-7B   | 1-7B | S       |       |       |     |        |        |      |      |
| D31B | 2-7B   | 2-7B | SBL (左) |       |       |     |        |        |      |      |
| D32B | 3-7B   | 3-7B | SBL (左) |       |       |     |        |        |      |      |
| D33B | 4-7B   | 4-7B | SBR (左) |       |       |     |        |        |      |      |
| D34B | 5-7B   | 5-7B | SBR (左) |       |       |     |        |        |      |      |
| AD1  |        | -3   | STEREO  | AUTO  | PCM   | DTS | ANALOG | EXT.IN | REC  | ZONE |
| AD2  |        | -4   | RDS     | PHONO | TUNER | DVD | TV     | VCR    | -3   | -2   |
| AD3  |        | -1   | TUNED   | CD    | AUX   | S1  | S2     | -1     | VAUX | S3   |
| AD4  |        | -2   | AUTO    |       | VDP   | DBS | -2     | COR    | TAPE |      |

## HNA-16SM13T (FL301) for DRA-297, 37 model



## Pin Assignment

|            |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| PIN NO.    | 1   | 2   | 3   | 4   | 5   | 6   | 7   | 8   | 9   | 10  | 11  | 12  | 13  | 14  | 15  | 16  | 17  | 18  | 19  | 20  |
| CONNECTION | F1  | F1  | NP  | S1  | S2  | S3  | S4  | S5  | S6  | S7  | S8  | S9  | S10 | S11 | S12 | S13 | S14 | S15 | S16 | S17 |
| PIN NO.    | 21  | 22  | 23  | 24  | 25  | 26  | 27  | 28  | 29  | 30  | 31  | 32  | 33  | 34  | 35  | 36  | 37  | 38  | 39  | 40  |
| CONNECTION | S18 | S19 | S20 | S21 | S22 | S23 | S24 | S25 | S26 | S27 | S28 | S29 | S30 | S31 | S32 | S33 | S34 | S35 | S36 | S37 |
| PIN NO.    | 41  | 42  | 43  | 44  | 45  | 46  | 47  | 48  | 49  | 50  | 51  | 52  | 53  | 54  | 55  | 56  | 57  | 58  | 59  |     |
| CONNECTION | S38 | G16 | G15 | G14 | G13 | G12 | G11 | G10 | G9  | G8  | G7  | G6  | G5  | G4  | G3  | G2  | G1  | F2  | F2  |     |

F1, F2 : Filament  
G1~G16: Grid  
S1~S38 : Anode

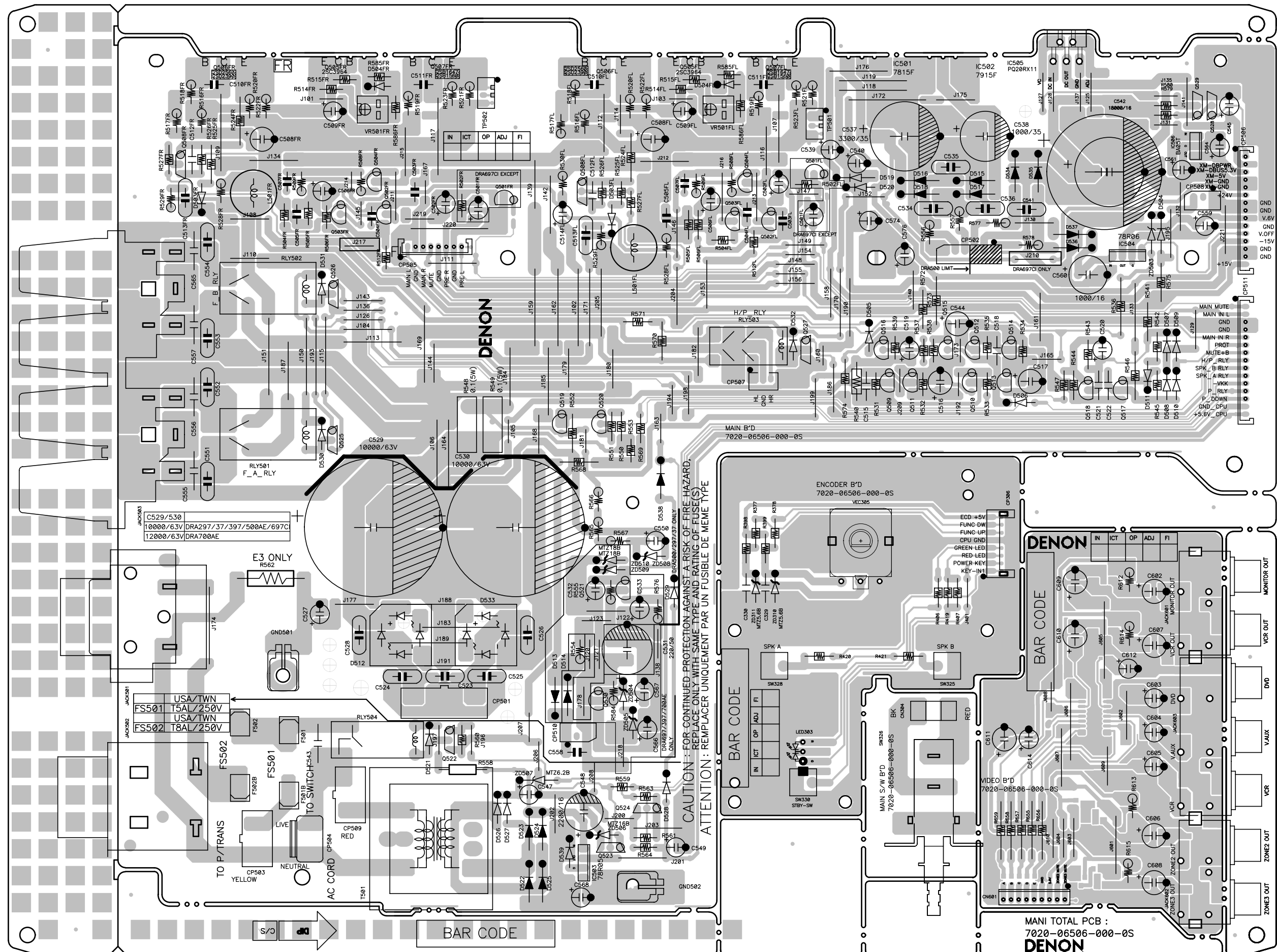
## Anode &amp; Grid Assignment

|    | G1 | G2~G16 |     | G1           | G2~G16 |     | G1 | G2~G16 |     | G1 | G2~G16 |
|----|----|--------|-----|--------------|--------|-----|----|--------|-----|----|--------|
| S1 | S1 | S1     | S10 | S10          | S10    | S19 | —  | S19    | S28 | —  | S28    |
| S2 | S2 | S2     | S11 | S11          | S11    | S20 | —  | S20    | S29 | —  | S29    |
| S3 | S3 | S3     | S12 | S12          | S12    | S21 | —  | S21    | S30 | —  | S30    |
| S4 | S4 | S4     | S13 | S13          | S13    | S22 | —  | S22    | S31 | —  | S31    |
| S5 | S5 | S5     | S14 | S14          | S14    | S23 | —  | S23    | S32 | —  | S32    |
| S6 | S6 | S6     | S15 | S15          | S15    | S24 | —  | S24    | S33 | —  | S33    |
| S7 | S7 | S7     | S16 | —            | S16    | S25 | —  | S25    | S34 | —  | S34    |
| S8 | —  | S8     | S17 | DIGITAL      | S17    | S26 | —  | S26    | S35 | —  | S35    |
| S9 | S9 | S9     | S18 | PRO LOGIC II | S18    | S27 | —  | S27    |     |    |        |

|     | G1      | G2  | G3 | G4   | G5     | G6  | G7    | G8 | G9    | G10 | G11 | G12   | G13   | G14 | G15    | G16   |
|-----|---------|-----|----|------|--------|-----|-------|----|-------|-----|-----|-------|-------|-----|--------|-------|
| S36 | DIGITAL | /   | TV | VDP  | /(DVD) | DVD | AUX   | —  | TUNER | CD  | —   | PHONO | REC   | —   | STEREO | TUNED |
| S37 | ANALOG  | -2  | -1 | TAPE | /(CDR) | CDR | V.AUX | —  | -2    | -1  | —   | VCR   | ZONE2 | —   | AUTO   | RDS   |
| S38 | S38     | DBS | —  | —    | —      | —   | —     | —  | -3    | —   | —   | —     | —     | —   | —      | CH    |

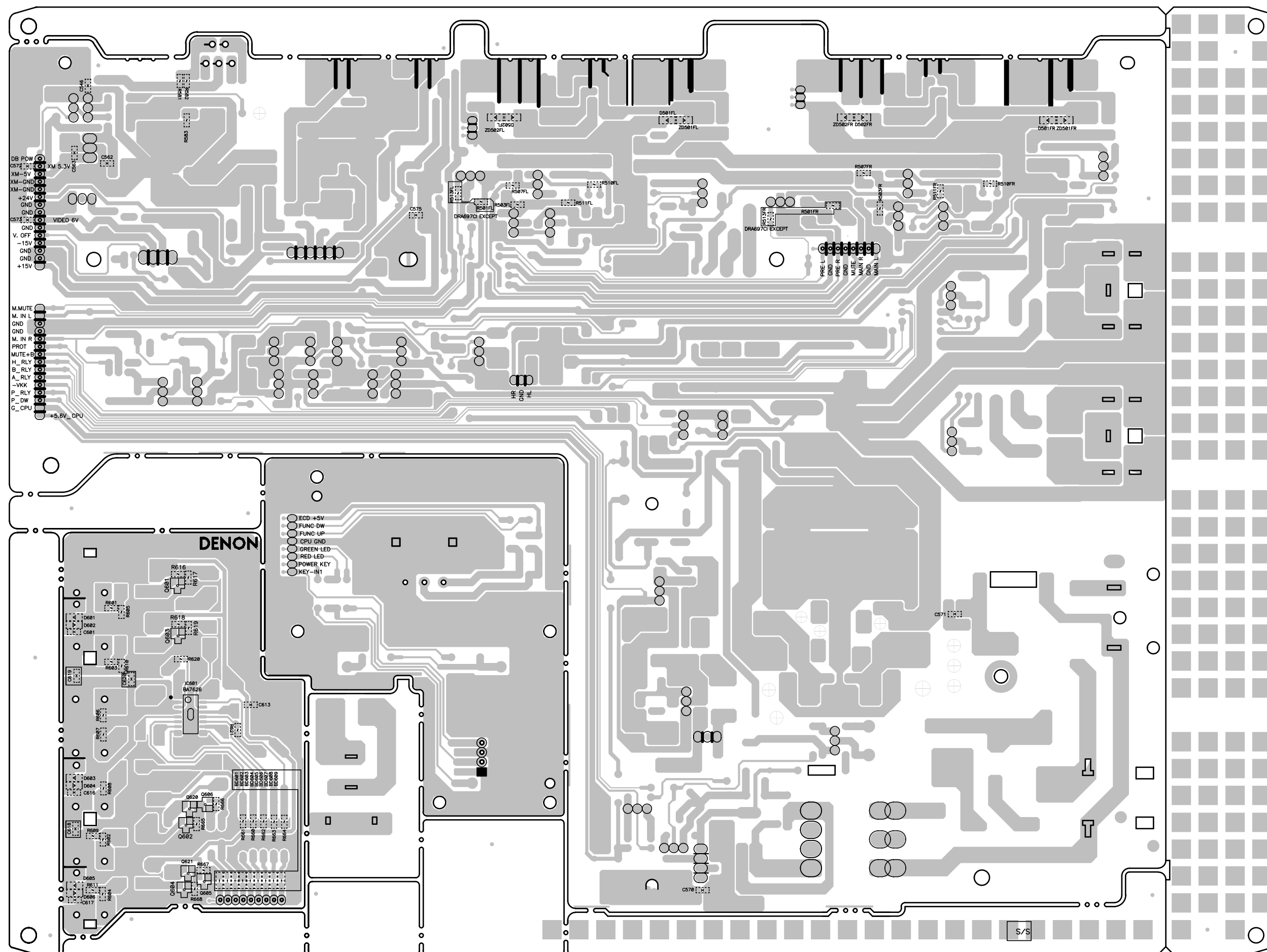
# PRINTED WIRING BOARDS

## MAIN P.W.B. UNIT (for ALL model)



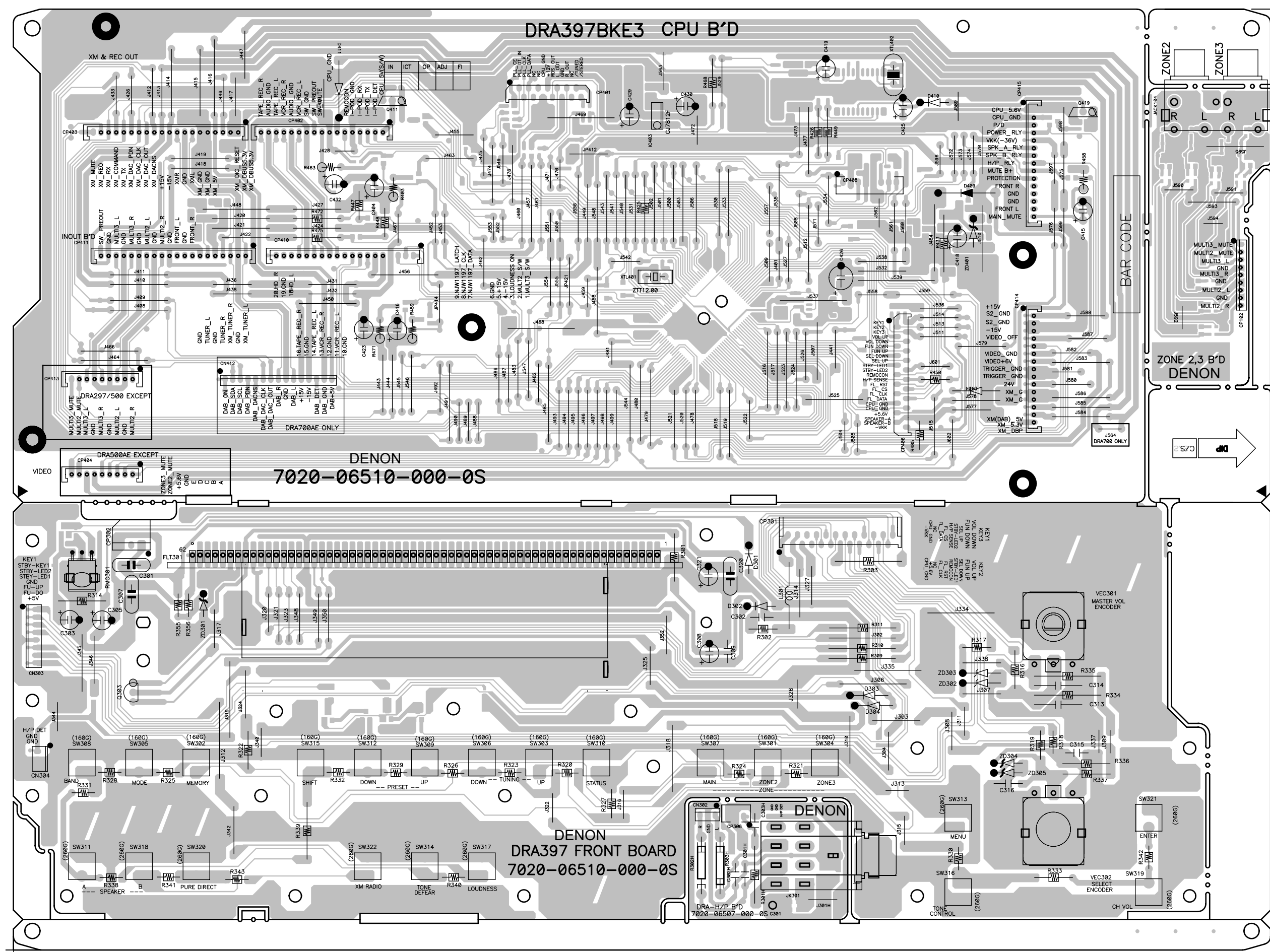
COMPONENT SIDE



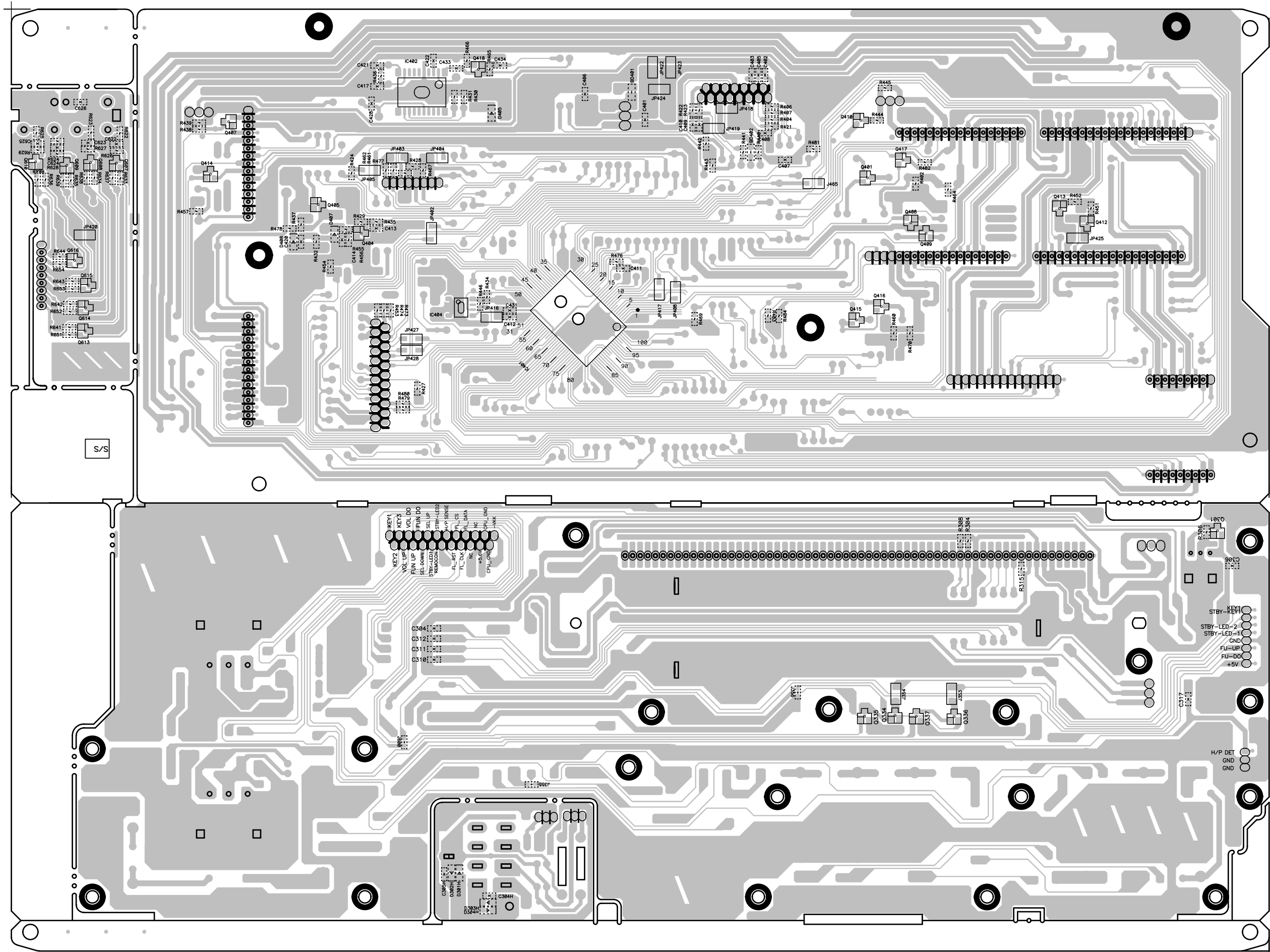


**FOIL SIDE**

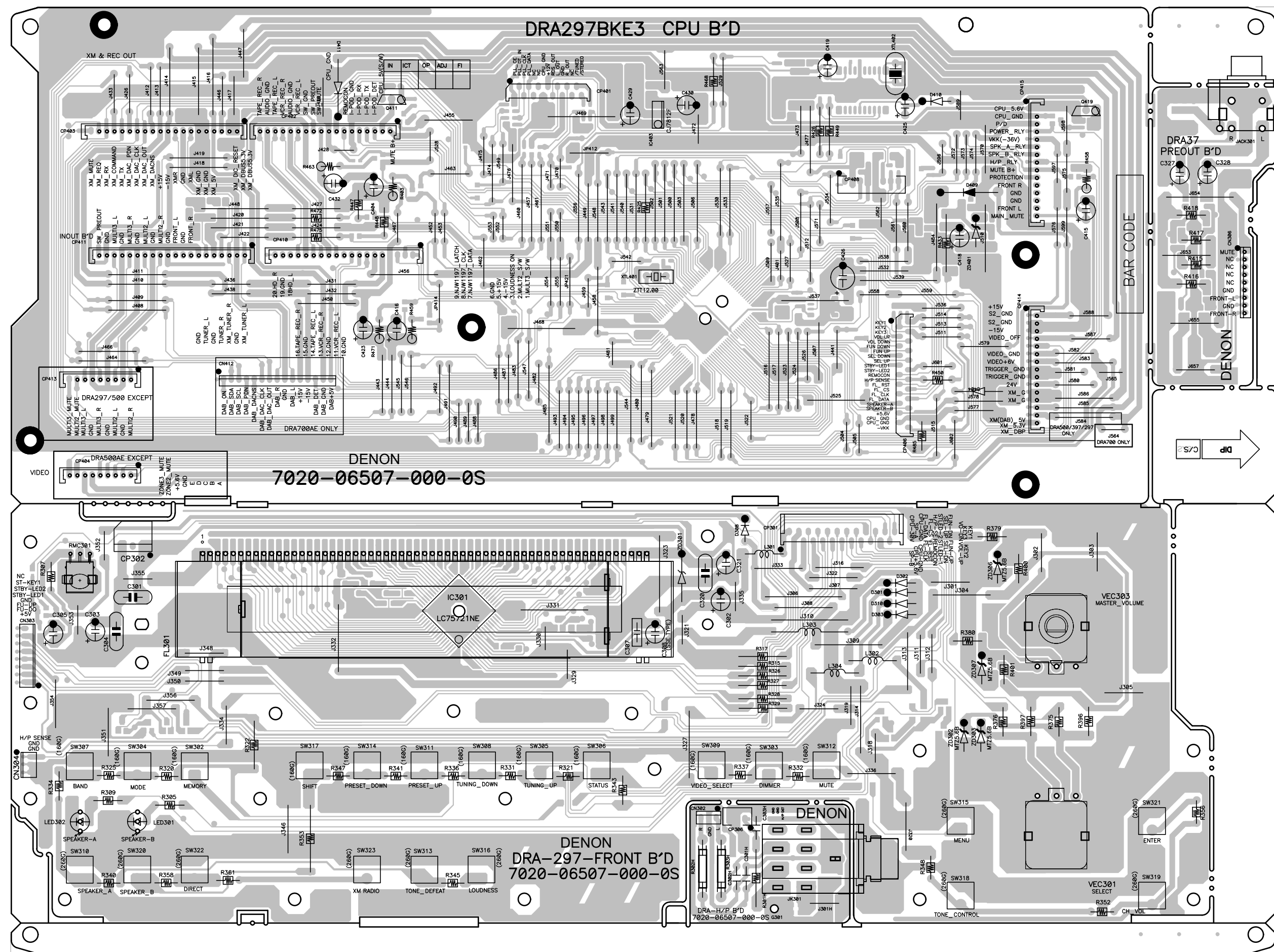
## FRONT P.W.B.UNIT (for DRA-397 model)

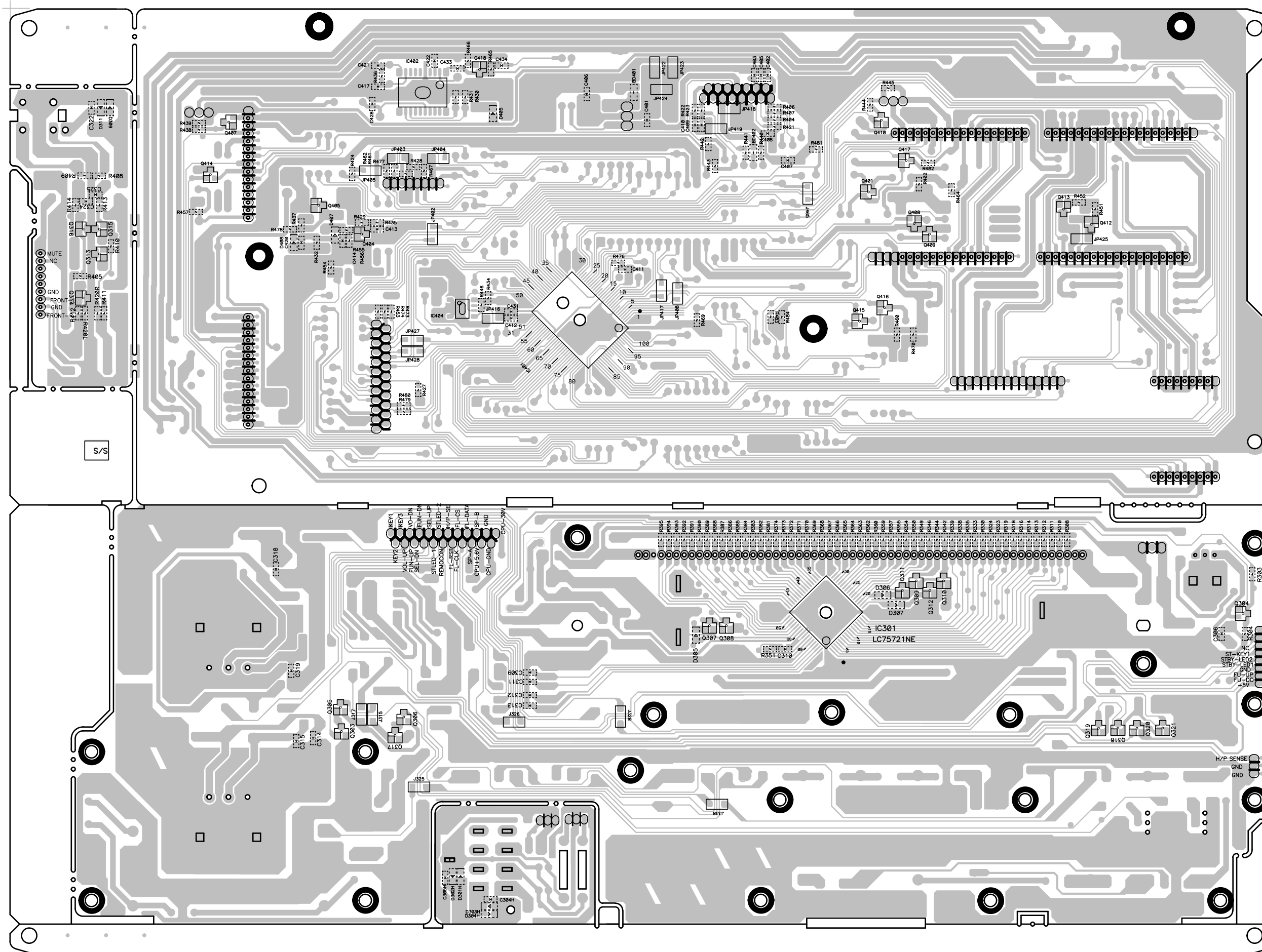


COMPONENT SIDE

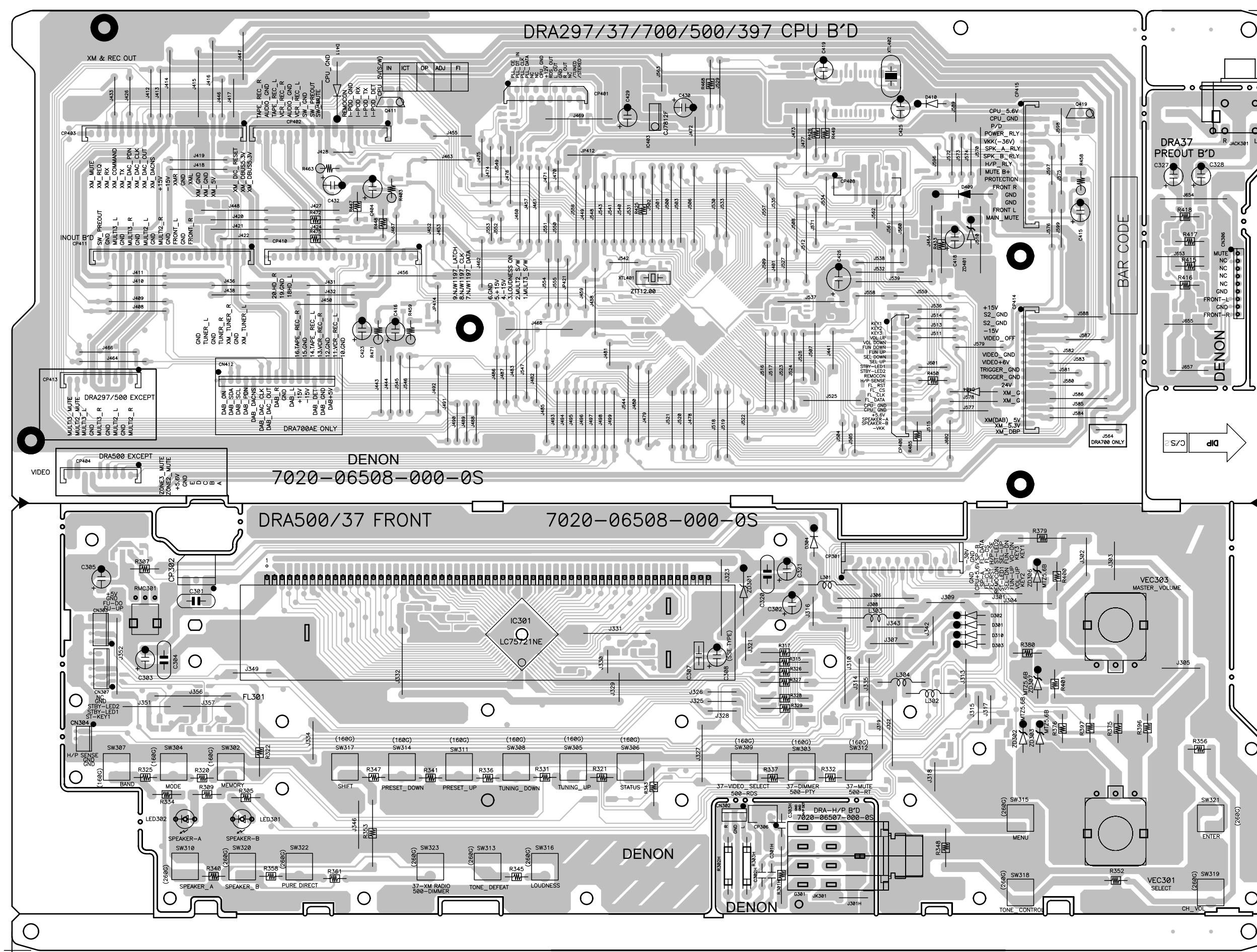


## FRONT P.W.B.UNIT (for DRA-297 model)

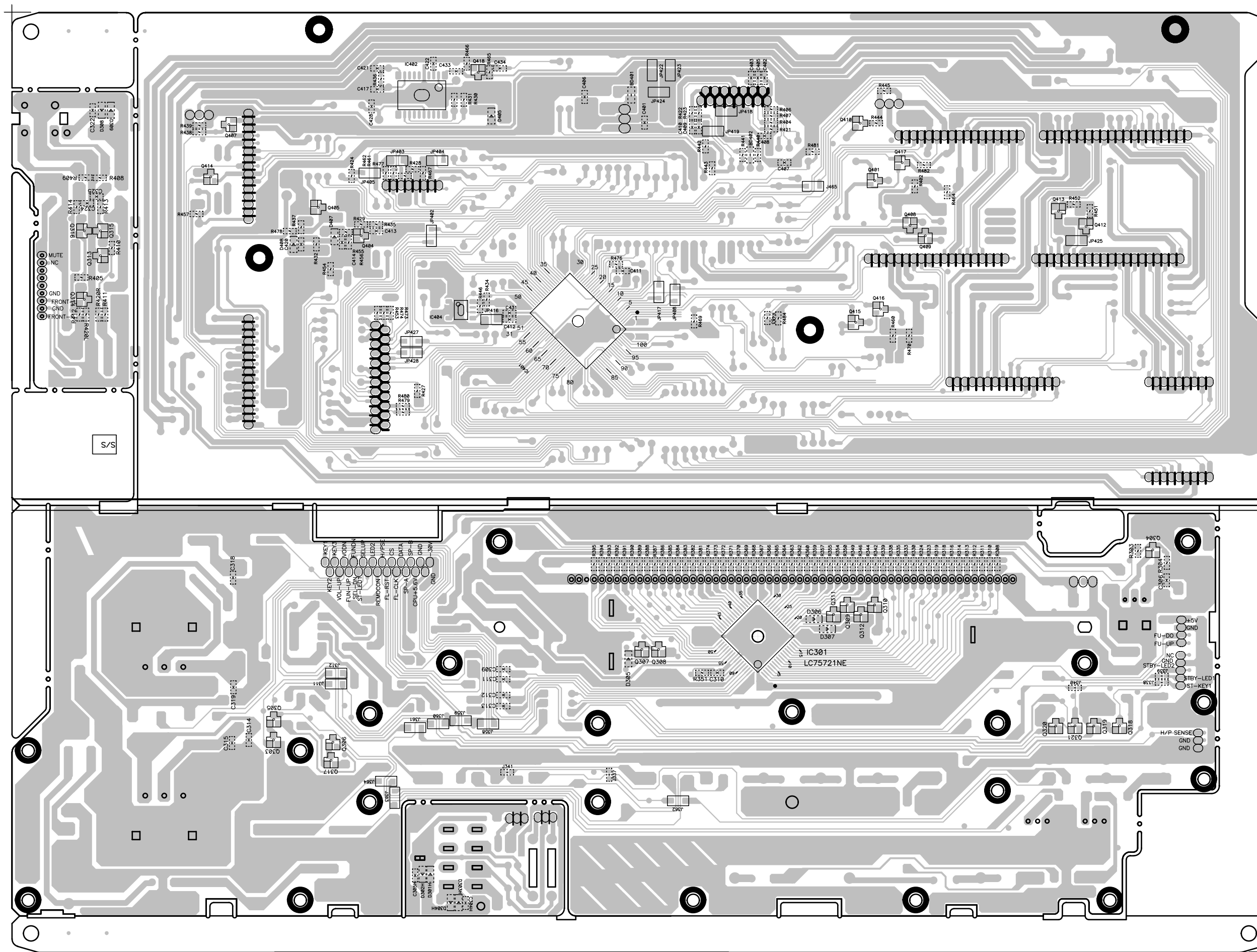




### FRONT P.W.B.UNIT (for DRA-37 model)

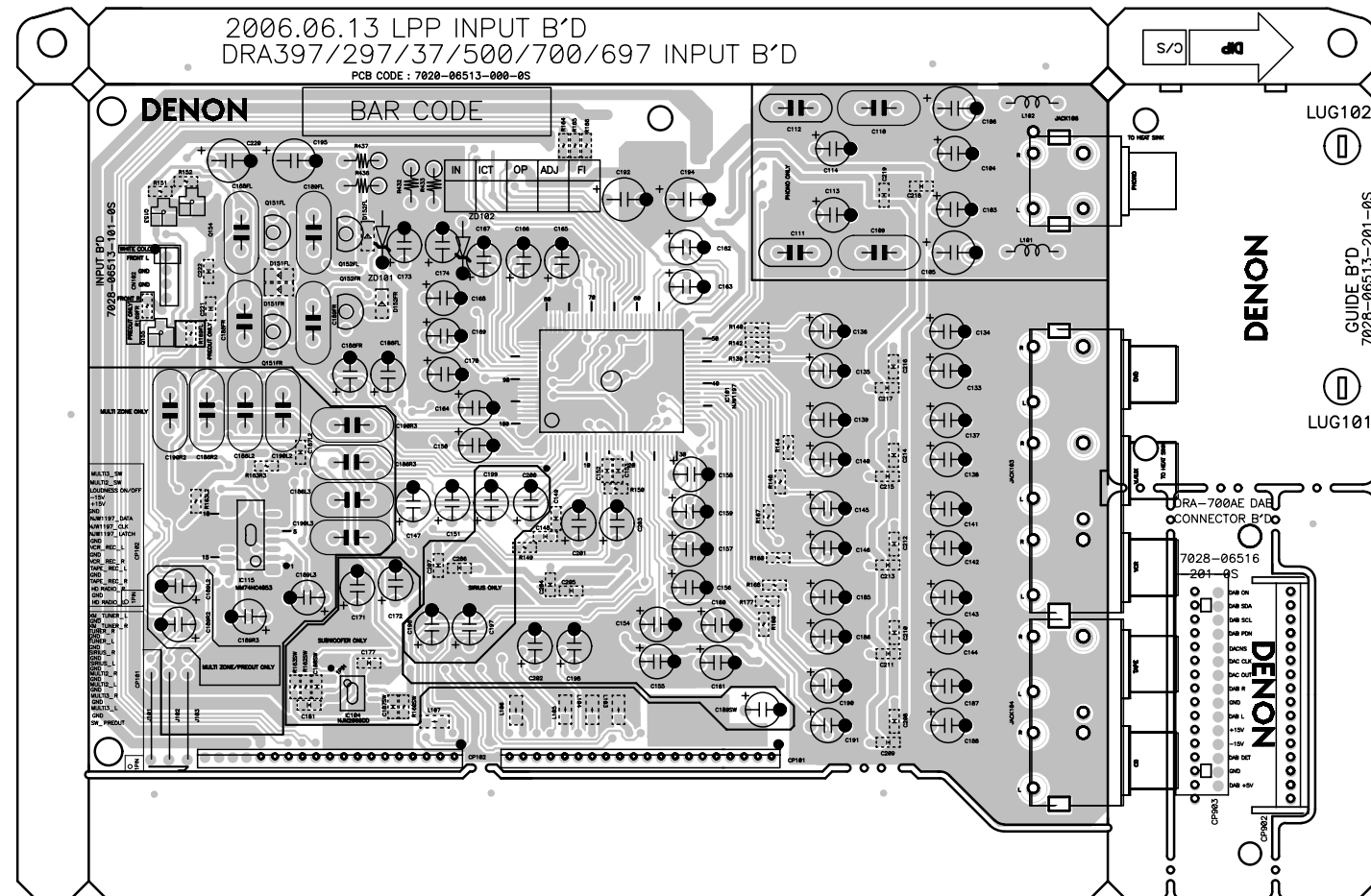




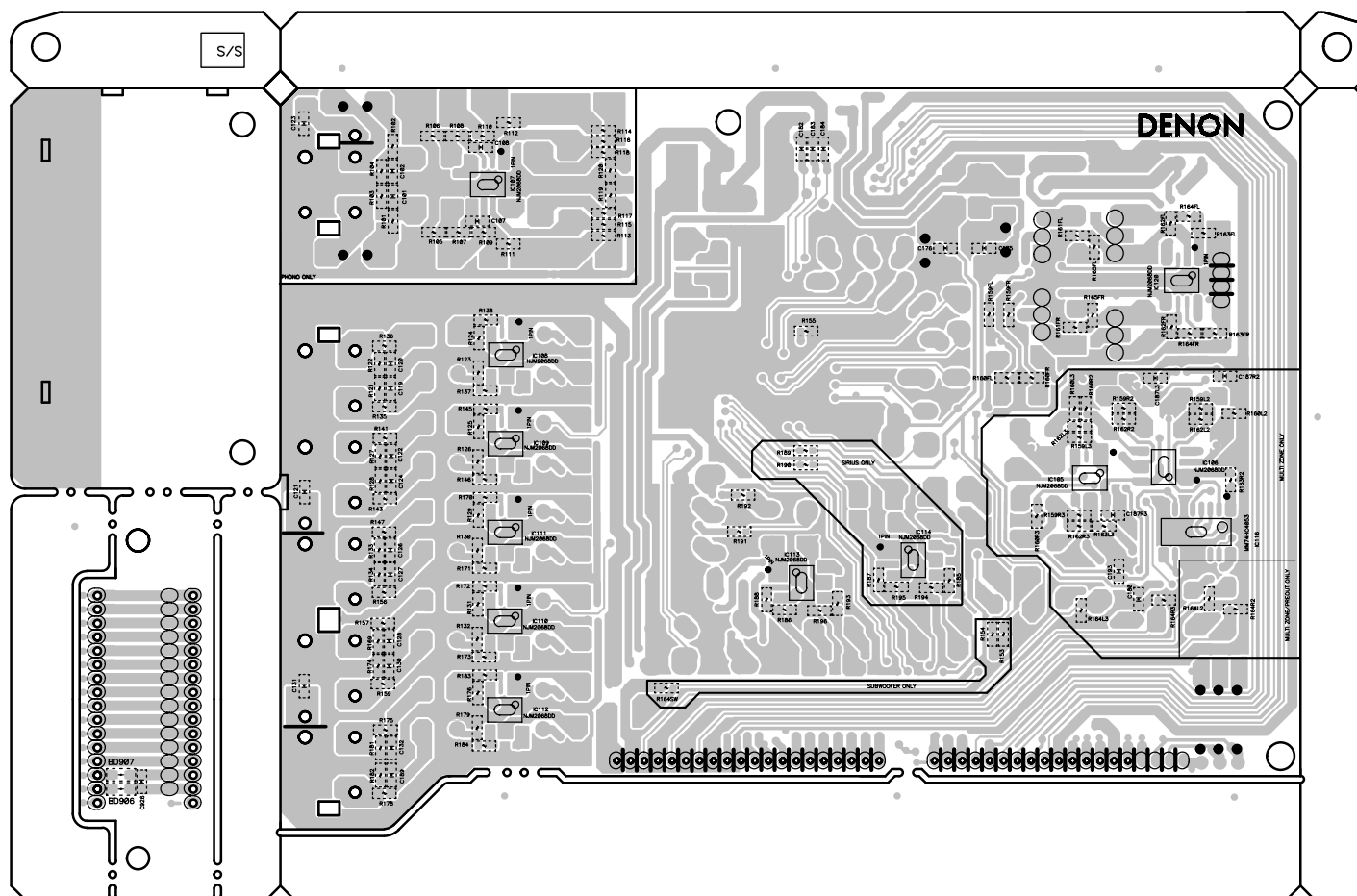




### INPUT P.W.B. UNIT (for ALL model)



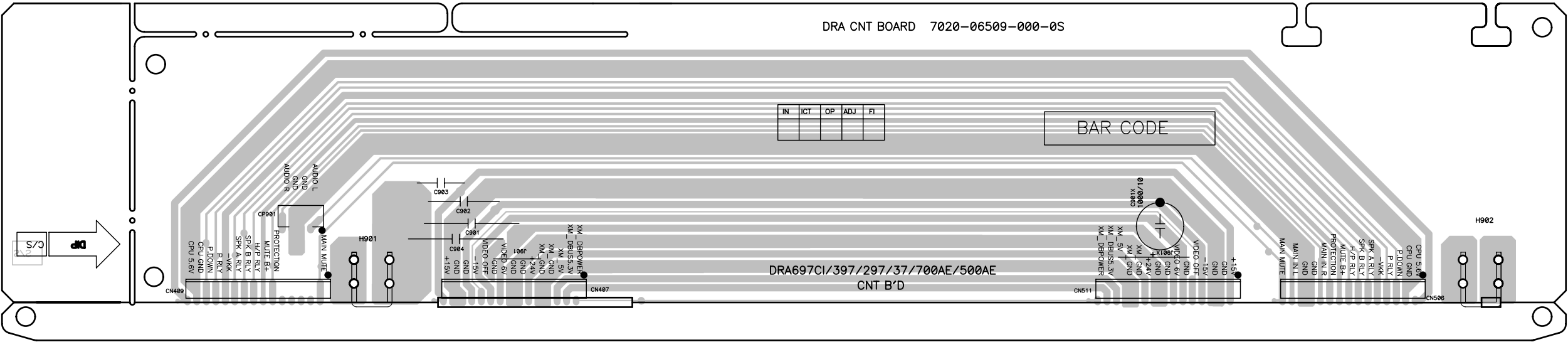
## COMPONENT SIDE



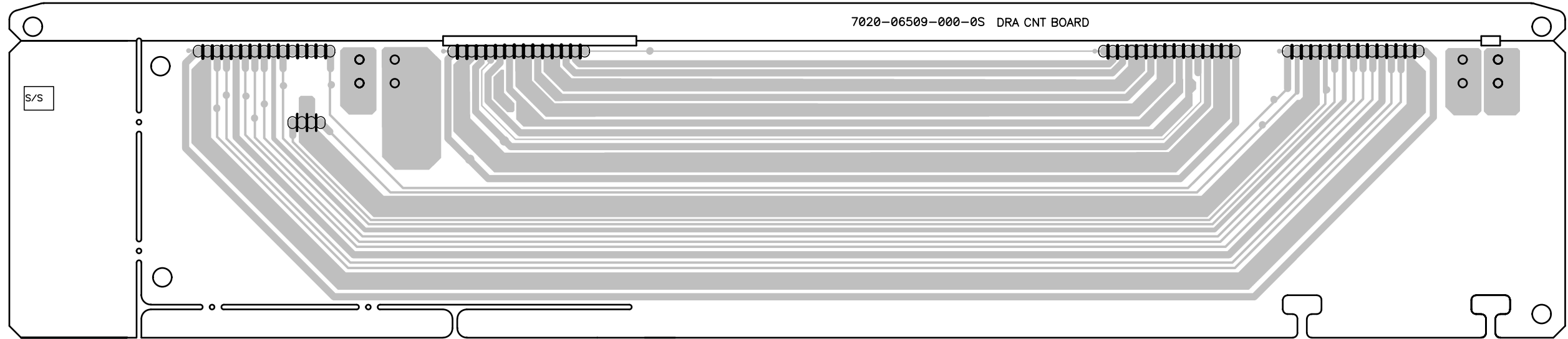
**FOIL SIDE**



CNT P.W.B. UNIT (for ALL model)

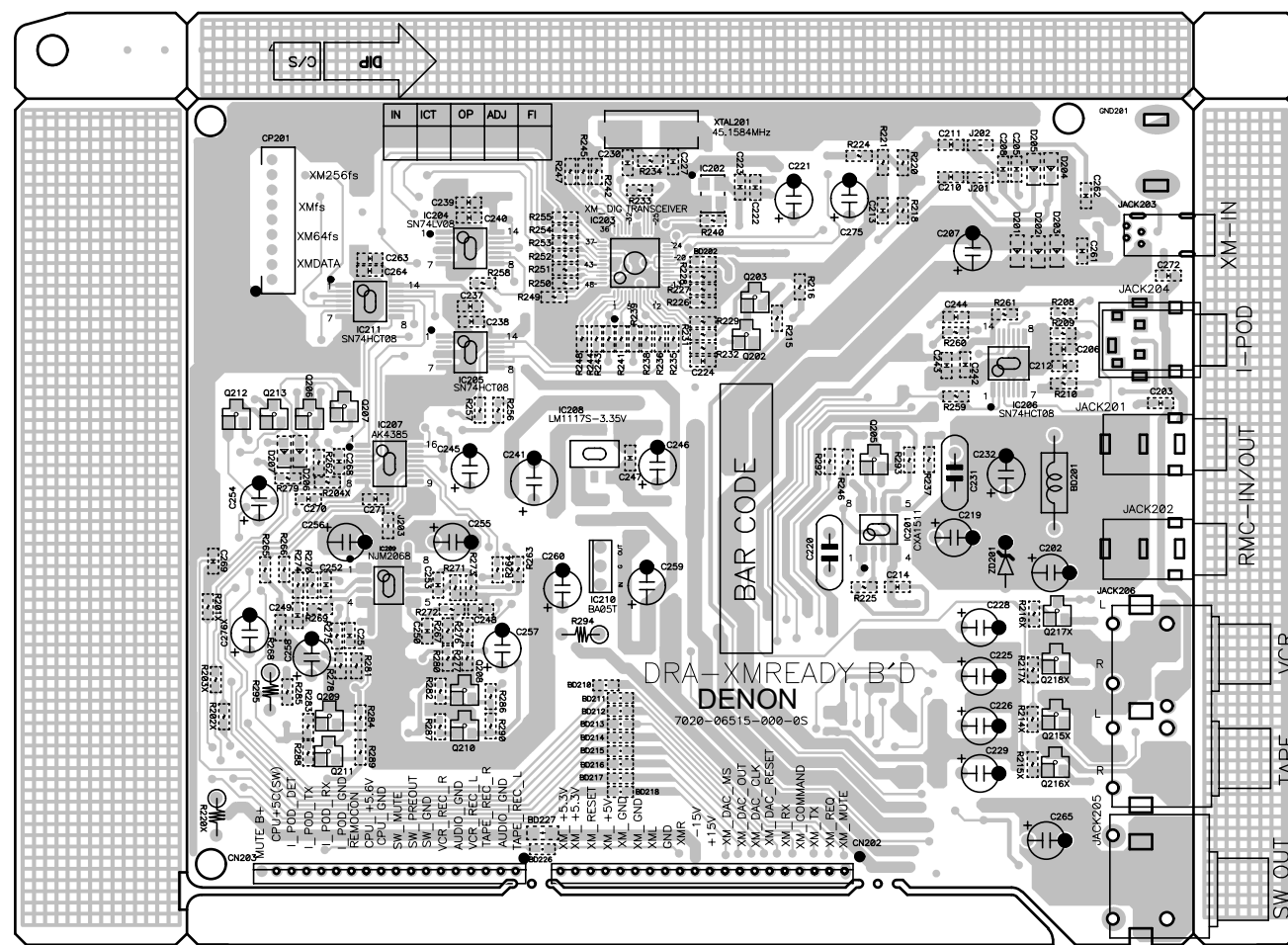


COMPONENT SIDE

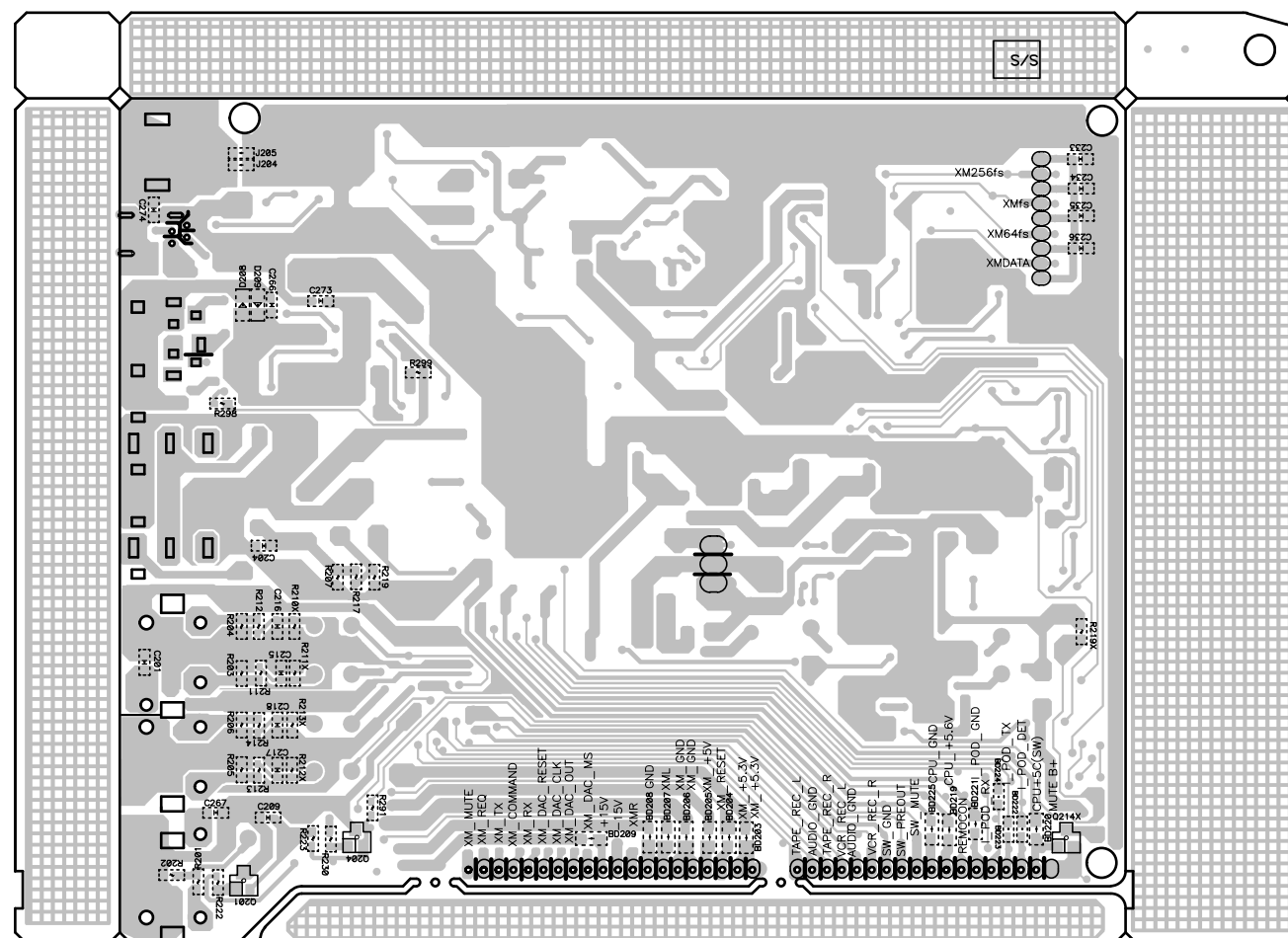


FOIL SIDE

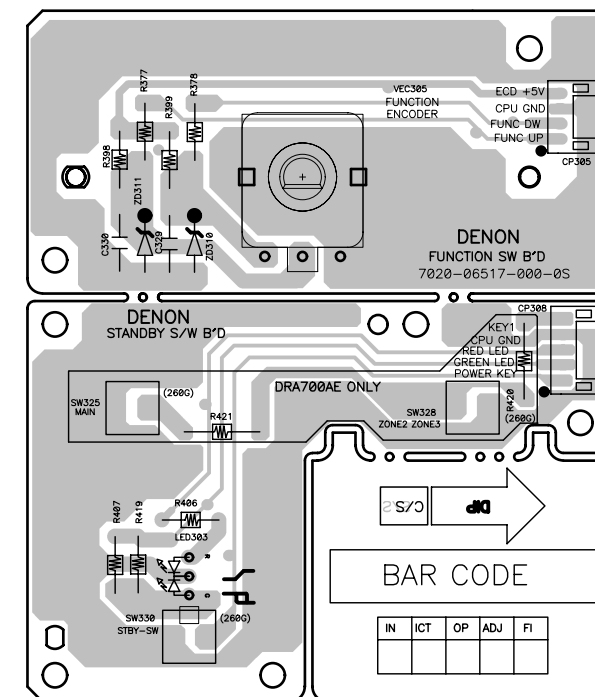
## **XM-READY P.W.B. UNIT (for ALL model)**



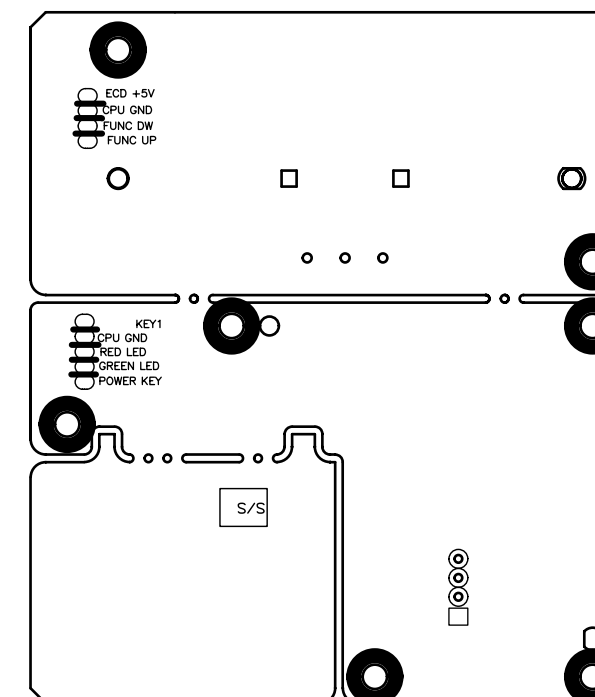
### COMPONENT SIDE

**FOIL SIDE**

### **FUNCTION SW P.W.B. UNIT (for DRA-37 model)**



### COMPONENT SIDE

**FOIL SIDE**

## NOTE FOR PARTS LIST

- Part indicated with the mark "nsp" are not always in stock and possibly to take a long period of time for supplying, or in some case supplying of part may be refused.
- When ordering of part, clearly indicate "1" and "I" (i) to avoid mis-supplying.
- Ordering part without stating its part number can not be supplied.
- Part indicated with the mark "★" is not illustrated in the exploded view.
- Not including General-purpose Carbon Film Resistor in the P.W.Board parts list. (Refer to the Schematic Diagram for those parts.)
- Not including General-purpose Carbon Chip Resistor in the P.W.Board parts list. (Refer to the Schematic Diagram for those parts.)

### WARNING:

Parts marked with this symbol  $\triangle$  have critical characteristics.

Use ONLY replacement parts recommended by the manufacturer.

### ● Resistors

Ex.: RN 14K 2E 182 G FR  
Type Shape and performance Power Resistance Allowable error Others

|                       |           |          |                          |
|-----------------------|-----------|----------|--------------------------|
| RD : Carbon           | 2B : 1/8W | F : ±1%  | P : Pulse-resistant type |
| RC : Composition      | 2E : 1/4W | G : ±2%  | NL : Low noise type      |
| RS : Metal oxide film | 2H : 1/2W | J : ±5%  | NB : Non-burning type    |
| RW : Winding          | 3A : 1W   | K : ±10% | FR : Fuse-resistor       |
| RN : Metal film       | 3D : 2W   | M : ±20% | F : Lead wire forming    |
| RK : Metal mixture    | 3F : 3W   |          |                          |
|                       | 3H : 5W   |          |                          |

#### \* Resistance

1 8 2  $\Rightarrow$  1800 ohm = 1.8 kohm  
Indicates number of zeros after effective number.  
2-digit effective number.

• Units: ohm

1 R 2  $\Rightarrow$  1.2 ohm  
1-digit effective number.  
2-digit effective number, decimal point indicated by R.

• Units: ohm

### ● Capacitors

Ex.: CE 04W 1H 2R2 M BP  
Type Shape and performance Dielectric strength Capacity Allowable error Others

|                                  |           |             |                                  |
|----------------------------------|-----------|-------------|----------------------------------|
| CE : Aluminum foil electrolytic  | 0J : 6.3V | F : ±1%     | HS : High stability type         |
| CA : Aluminum solid electrolytic | 1A : 10V  | G : ±2%     | BP : Non-polar type              |
| CS : Tantalum electrolytic       | 1C : 16V  | J : ±5%     | HR : Ripple-resistant type       |
| CQ : Film                        | 1E : 25V  | K : ±10%    | DL : For change and discharge    |
| CK : Ceramic                     | 1V : 35V  | M : ±20%    | HF : For assuring high frequency |
| CC : Ceramic                     | 1H : 50V  | Z : +80%    | U : UL part                      |
| CP : Oil                         | 2A : 100V | -20%        | C : CSA part                     |
| CM : Mica                        | 2B : 125V | P : +100%   | W : UL-CSA type                  |
| CF : Metallized                  | 2C : 160V | -0%         | F : Lead wire forming            |
| CH : Metallized                  | 2D : 200V | C : ±0.25pF |                                  |
|                                  | 2E : 250V | D : ±0.5pF  |                                  |
|                                  | 2H : 500V | = : Others  |                                  |
|                                  | 2J : 630V |             |                                  |

#### \* Capacity (electrolyte only)

2 2 2  $\Rightarrow$  2200μF  
Indicates number of zeros after effective number.  
2-digit effective number.

• Units: μF.

2 R 2  $\Rightarrow$  2.2μF  
1-digit effective number.  
2-digit effective number, decimal point indicated by R.

• Units: μF.

#### \* Capacity (except electrolyte)

2 2 2  $\Rightarrow$  2200pF=0.0022μF  
(More than 2) — Indicates number of zeros after effective number.  
2-digit effective number.

• Units: pF.

2 2 1  $\Rightarrow$  220pF  
(0 or 1) — Indicates number of zeros after effective number.  
2-digit effective number.

• Units: pF.

• When the dielectric strength is indicated in AC, "AC" is included after the dielectric strength value.

## 部品表について

- nsp 印の部品は常時在庫していませんので供給に長時間を要することがあります。  
場合によっては、供給をお断りすることがあります。
- 部品を発注する際は特に数字の "1" と英字の "I" との区別をはっきり記入してください。
- 部品番号を表示していない部品は供給できません。
- $\triangle$ 印の部品は安全上重要な部品です。交換するときは、安全および性能維持のため必ず指定の部品をご使用ください。
- ★印のついている部品は分解図中には記載していません。
- 汎用カーボン抵抗器は記載していません。定数は回路図を参照願います。
- 汎用カーボンチップ抵抗器は記載していません。定数は回路図を参照願います。
- 部品表の抵抗器、コンデンサの品名記号の読み方は表を参照してください。

### ●抵抗器

例) RN 14K 2E 182 G FR  
種類 形状特性 電力 抵抗値 許容差 その他

|            |            |          |             |
|------------|------------|----------|-------------|
| RD : カーボン  | 2B : 1/8 W | F : ±1%  | P : 耐パルス形   |
| RC : 固定体   | 2E : 1/4 W | G : ±2%  | NL : 低雑音形   |
| RS : 金属系皮膜 | 2H : 1/2 W | J : ±5%  | NB : 不燃形    |
| RW : 巻線    | 3A : 1 W   | K : ±10% | FR : ヒューズ抵抗 |
| RN : 金属皮膜  | 3D : 2 W   | M : ±20% | F : リード線成形  |
| RK : 金属混合体 | 3F : 3 W   |          |             |
|            | 3H : 5 W   |          |             |

#### \* 抵抗値

18 2  $\Rightarrow$  1800Ω=1.8kΩ  
有効数字につづく0の数を表わす。  
2桁の有効数字を表わす。

1R 2  $\Rightarrow$  1.2Ω  
1桁の有効数字を表わす。  
2桁の有効数字で小数点はRで表わす。  
: 単位はΩ

### ●コンデンサ

例) CE 04W 1H 2R2 M BP  
種類 形状特性 耐圧 容量 許容差 その他

|              |            |             |               |
|--------------|------------|-------------|---------------|
| CE : アルミ箔電解  | 0J : 6.3 V | F : ±1%     | HS : 高安定形     |
| CA : アルミ固体電解 | 1A : 10 V  | G : ±2%     | BP : 無極性形     |
| CS : タンタル電解  | 1C : 16 V  | J : ±5%     | HR : 耐リップル形   |
| CQ : フィルム    | 1E : 25 V  | K : ±10%    | DL : 充電対策用    |
| CK : セラミック   | 1V : 35 V  | M : ±20%    | HF : 高周波保証用   |
| CC : セラミック   | 1H : 50 V  | Z : +80%    | U : UL 部品     |
| CP : オイル     | 2A : 100 V | -20%        | C : CSA 部品    |
| CM : マイカ     | 2B : 125 V | P : +100%   | W : UL-CSA 部品 |
| CF : メタライズド  | 2C : 160 V | - 0%        | F : リード線成形    |
| CH : メタライズド  | 2D : 200 V | C : ±0.25pF |               |
|              | 2E : 250 V | D : ±0.5pF  |               |
|              | 2H : 500 V | = : その他     |               |
|              | 2J : 630 V |             |               |

#### \* 容量値

##### ● 電解コンデンサの場合

22 2  $\Rightarrow$  2200μF  
有効数字につづく0の数を表わす。  
2桁の有効数字を表わす。  
: 単位はμF

2R 2  $\Rightarrow$  2.2μF  
1桁の有効数字を表わす。  
2桁の有効数字で小数点はRで表わす。  
: 単位はμF

##### ● 電解コンデンサ以外の場合

22 2  $\Rightarrow$  2200pF=0.0022μF  
有効数字につづく0の数を表わす。  
(0の数が2以上の場合)  
2桁の有効数字を表わす。  
: 単位はpF

22 1  $\Rightarrow$  220pF  
有効数字につづく0の数を表わす。  
(0の数が0または1の場合)  
2桁の有効数字を表わす。  
: 単位はpF

● 耐圧を交流で表示する場合は、耐圧表示の次に「AC」を表示します。

## PARTS LIST OF P.W.B. UNIT

\* 本表に記載されている部品は、補修用部品のため製品に使用している部品とは一部、形状、寸法などが異なる場合があります。

\* The parts listed below are for maintenance only, might differ from the parts used in the unit in appearances or dimensions.

\* "nsp" 印の部品は常時在庫していませんので供給に長時間を要することがあります。場合によっては、供給をお断りする場合があります。

\* Part indicated with the mark "nsp" are not always in stock and possibly to take a long period of time for supplying, or in some case supplying of part may be refused.

### MAIN P.W.B. UNIT ASSY

|                             | Ref. No. | nsp | Part No.         | Part Name              | Remarks     |                | Q'ty | New |
|-----------------------------|----------|-----|------------------|------------------------|-------------|----------------|------|-----|
| <b>SEMICONDUCTORS GROUP</b> |          |     |                  |                        |             |                |      |     |
|                             | IC503    |     | 00D 963 0057 806 | IC KIA78R05PI          |             | J126780500370S |      |     |
|                             | IC504    |     | 00D 963 0313 809 | IC KIA78R06PI          |             | J126780600210S |      |     |
|                             | IC506    |     | 00D 263 1092 003 | IC BA05T               |             | J126050000020S |      |     |
|                             | IC601    |     | 00D 963 0083 304 | IC BA7626F             |             | J171762600010S |      |     |
|                             | Q501FL   |     | 00D 960 0196 603 | TR KTC2874B            |             | J502287400010S |      |     |
|                             | Q501FR   |     | 00D 960 0196 603 | TR KTC2874B            |             | J502287400010S |      |     |
|                             | Q502FL   |     | 00D 960 0196 205 | TR KSA992F             |             | J5000992F0050S |      |     |
|                             | Q502FR   |     | 00D 960 0196 205 | TR KSA992F             |             | J5000992F0050S |      |     |
|                             | Q503FL   |     | 00D 960 0196 205 | TR KSA992F             |             | J5000992F0050S |      |     |
|                             | Q503FR   |     | 00D 960 0196 205 | TR KSA992F             |             | J5000992F0050S |      |     |
|                             | Q504FL   |     | 00D 960 0196 506 | TR KSC1845F            |             | J5021845F0000S |      |     |
|                             | Q504FR   |     | 00D 960 0196 506 | TR KSC1845F            |             | J5021845F0000S |      |     |
|                             | Q508FL   |     | 00D 960 0196 506 | TR KSC1845F            |             | J5021845F0000S |      |     |
|                             | Q508FR   |     | 00D 960 0196 506 | TR KSC1845F            |             | J5021845F0000S |      |     |
|                             | Q509     |     | 00D 960 0196 302 | TR KTA1268BL           |             | J5001268B0050S |      |     |
|                             | Q510,511 |     | 00D 960 0005 202 | TR KTC3198Y            |             | J5023198Y0000S |      |     |
|                             | Q512     |     | 00D 960 0196 302 | TR KTA1268BL           |             | J5001268B0050S |      |     |
|                             | Q513-515 |     | 00D 960 0005 202 | TR KTC3198Y            |             | J5023198Y0000S |      |     |
|                             | Q516,517 |     | 00D 960 0196 302 | TR KTA1268BL           |             | J5001268B0050S |      |     |
|                             | Q518     |     | 00D 960 0196 700 | TR KTC3200BL           |             | J5023200B0050S |      |     |
|                             | Q519,520 |     | 00D 960 0196 302 | TR KTA1268BL           |             | J5001268B0050S |      |     |
|                             | Q521     |     | 00D 960 0189 005 | TR KSA916Y             | for 297, 37 | J5000916Y0050S |      |     |
|                             | Q522     |     | 00D 960 0196 409 | TR 2SC1740SR           |             | J5021740S0010S |      |     |
|                             | Q523     |     | 00D 963 0121 208 | TR KRC107M             |             | J6020107M0010S |      |     |
|                             | Q524     |     | 00D 960 0196 409 | TR 2SC1740SR           |             | J5021740S0010S |      |     |
|                             | Q525-527 |     | 00D 963 0219 602 | TR KRC106M             |             | J6020106M0010S |      |     |
|                             | Q528,529 |     | 00D 960 0097 304 | TR KRC102M             |             | J6020102M0010S |      |     |
|                             | Q530     |     | 00D 963 0226 705 | TR KTC1027Y            | for 397     | J5021027Y0020S |      |     |
|                             | Q601     |     | 00D 960 0068 207 | TR KTA1504Y(ASY)       |             | J5201504Y0210S |      |     |
|                             | Q602     |     | 00D 960 0068 207 | TR KTA1504Y(ASY)       | for 397     | J5201504Y0210S |      |     |
|                             | Q603     |     | 00D 960 0068 207 | TR KTA1504Y(ASY)       |             | J5201504Y0210S |      |     |
|                             | Q604     |     | 00D 960 0068 207 | TR KTA1504Y(ASY)       | for 397     | J5201504Y0210S |      |     |
|                             | Q605,606 |     | 00D 963 0245 003 | TR KRC106S (NF)        |             | J522010600210S |      |     |
|                             | Q620,621 |     | 00D 963 0159 102 | TR KRC111S (NM)        |             | J522011100210S |      |     |
|                             | D501FL   |     | 00D 963 0219 709 | D,SWITCHING 1N4148W    |             | K005041480020S |      |     |
|                             | D501FR   |     | 00D 963 0219 709 | D,SWITCHING 1N4148W    |             | K005041480020S |      |     |
|                             | D502FL   |     | 00D 963 0219 709 | D,SWITCHING 1N4148W    |             | K005041480020S |      |     |
|                             | D502FR   |     | 00D 963 0219 709 | D,SWITCHING 1N4148W    |             | K005041480020S |      |     |
|                             | D503FL   |     | 00D 963 0020 309 | D,SWITCHING 1SS133T    |             | K000013300520S |      |     |
|                             | D503FR   |     | 00D 963 0020 309 | D,SWITCHING 1SS133T    |             | K000013300520S |      |     |
|                             | D504-511 |     | 00D 963 0020 309 | D,SWITCHING 1SS133T    |             | K000013300520S |      |     |
|                             | D512     |     | 00D 960 0197 107 | D,RECTIFIER KBPC604 6A |             | K047604000020S |      |     |
|                             | D513     |     | 00D 963 0058 407 | D,SWITCHING IN4007     | for 297, 37 | K000400700520S |      |     |
|                             | D514     |     | 00D 963 0058 407 | D,SWITCHING IN4007     | for 397     | K000400700520S |      |     |
|                             | D515-518 |     | 00D 963 0058 407 | D,SWITCHING IN4007     |             | K000400700520S |      |     |
|                             | D519-521 |     | 00D 963 0020 309 | D,SWITCHING 1SS133T    |             | K000013300520S |      |     |

|                        | Ref. No.  | nsp | Part No.         | Part Name                | Remarks      |                | Q'ty | New |
|------------------------|-----------|-----|------------------|--------------------------|--------------|----------------|------|-----|
|                        | D522-525  |     | 00D 963 0058 407 | D,SWITCHING IN4007       |              | K000400700520S |      |     |
|                        | D526-532  |     | 00D 963 0020 309 | D,SWITCHING 1SS133T      |              | K000013300520S |      |     |
|                        | D533      |     | 00D 960 0197 107 | D,RECTIFIER KBPC604 6A   |              | K047604000020S |      |     |
|                        | D534-538  |     | 00D 963 0058 407 | D,SWITCHING IN4007       |              | K000400700520S |      |     |
|                        | D539      |     | 00D 963 0020 309 | D,SWITCHING 1SS133T      |              | K000013300520S |      |     |
|                        | D601-604  |     | 00D 963 0219 709 | D,SWITCHING 1N4148W      |              | K005041480020S |      |     |
|                        | D605-606  |     | 00D 963 0219 709 | D,SWITCHING 1N4148W      | for 397      | K005041480020S |      |     |
|                        | ZD310,311 |     | 00D 960 0095 607 | D,ZENER MTZJ5.6B         | for 397, 297 | K06005R644520S |      |     |
|                        | ZD501FL   |     | 00D 963 0279 804 | D,ZENER UDZS4.3B         |              | K06604R34P410S |      |     |
|                        | ZD501FR   |     | 00D 963 0279 804 | D,ZENER UDZS4.3B         |              | K06604R34P410S |      |     |
|                        | ZD502FL   |     | 00D 963 0295 503 | D,ZENER UDZS3.6B         |              | K06603R64P400S |      |     |
|                        | ZD502FR   |     | 00D 963 0295 503 | D,ZENER UDZS3.6B         |              | K06603R64P400S |      |     |
|                        | ZD503     |     | 00D 963 0314 206 | D,ZENER MTZJ7.5B         |              | K06007R544520S |      |     |
|                        | ZD504,505 |     | 00D 963 0314 206 | D,ZENER MTZJ20B          | for 397      | K06020R044520S |      |     |
|                        | ZD506     |     | 00D 963 0314 206 | D,ZENER MTZJ20B          |              | K06020R044520S |      |     |
|                        | ZD507     |     | 00D 960 0095 704 | D,ZENER MTZJ6.2B         |              | K06006R244520S |      |     |
|                        | ZD508     |     | 00D 960 0095 500 | D,ZENER MTZJ5.1B         |              | K06005R144520S |      |     |
|                        | ZD509,510 |     | 00D 963 0148 605 | LED,ROUND SML1216W       | for 297, 37  | K06018R044520S |      |     |
|                        | LED303    |     | 00D 963 0148 605 | LED SML1216W(RED/GREEN)  | for 397, 297 | K500052600030S |      |     |
|                        |           |     |                  |                          |              |                |      |     |
| <b>RESISTORS GROUP</b> |           |     |                  |                          |              |                |      |     |
|                        | R508FL    |     | 00D 960 9004 301 | R,METAL FILM 47-J,1/4W   |              | C060047063050S |      |     |
|                        | R508FR    |     | 00D 960 9004 301 | R,METAL FILM 47-J,1/4W   |              | C060047063050S |      |     |
|                        | R509FL    |     | 00D 960 9005 902 | R,METAL FILM 1.2K-J,1/4W |              | C060012263050S |      |     |
|                        | R509FR    |     | 00D 960 9005 902 | R,METAL FILM 1.2K-J,1/4W |              | C060012263050S |      |     |
|                        | R516FL    |     | 00D 963 9006 285 | R,FIXED1WJ-5.6K          |              | N113135656220S |      |     |
|                        | R516FR    |     | 00D 963 9006 285 | R,FIXED1WJ-5.6K          |              | N113135656220S |      |     |
|                        | R517FL    |     | 00D 963 9006 285 | R,FIXED1WJ-5.6K          |              | N113135656220S |      |     |
|                        | R517FR    |     | 00D 963 9006 285 | R,FIXED1WJ-5.6K          |              | N113135656220S |      |     |
|                        | R518FL    |     | 00D 963 0215 907 | R,METAL FILM 4.7-J,1W    |              | C0604R7065050S |      |     |
|                        | R518FR    |     | 00D 963 0215 907 | R,METAL FILM 4.7-J,1W    |              | C0604R7065050S |      |     |
|                        | R519FL    |     | 00D 963 0215 907 | R,METAL FILM 4.7-J,1W    |              | C0604R7065050S |      |     |
|                        | R519FR    |     | 00D 963 0215 907 | R,METAL FILM 4.7-J,1W    |              | C0604R7065050S |      |     |
|                        | R520FL    |     | 00D 963 9006 269 | R,FIXED1WJ-0.22          |              | N113135622820S |      |     |
|                        | R520FR    |     | 00D 963 9006 269 | R,FIXED1WJ-0.22          |              | N113135622820S |      |     |
|                        | R521FL    |     | 00D 963 9006 269 | R,FIXED1WJ-0.22          |              | N113135622820S |      |     |
|                        | R521FR    |     | 00D 963 9006 269 | R,FIXED1WJ-0.22          |              | N113135622820S |      |     |
|                        | R522FL    |     | 00D 963 9006 269 | R,FIXED1WJ-0.22          |              | N113135622820S |      |     |
|                        | R522FR    |     | 00D 963 9006 269 | R,FIXED1WJ-0.22          |              | N113135622820S |      |     |
|                        | R523FL    |     | 00D 963 9006 269 | R,FIXED1WJ-0.22          |              | N113135622820S |      |     |
|                        | R523FR    |     | 00D 963 9006 269 | R,FIXED1WJ-0.22          |              | N113135622820S |      |     |
|                        | R528FL    |     | 00D 963 9006 256 | R,FIXED1WJ-10            |              | N113135610020S |      |     |
|                        | R528FR    |     | 00D 963 9006 256 | R,FIXED1WJ-10            |              | N113135610020S |      |     |
|                        | R529FL    |     | 00D 963 9006 256 | R,FIXED1WJ-10            |              | N113135610020S |      |     |
|                        | R529FR    |     | 00D 963 9006 256 | R,FIXED1WJ-10            |              | N113135610020S |      |     |
|                        | R530FL    |     | 00D 963 9006 256 | R,FIXED1WJ-10            |              | N113135610020S |      |     |
|                        | R540      |     | 00D 963 0232 906 | R,METAL FILM 47K-F,1/4W  |              | C060047343530S |      |     |
|                        | R548,549  |     | 00D 963 0144 502 | R,CEMENT 0.1-J 5W        |              | C141R10069000S |      |     |
|                        | R554      |     | 00D 963 0215 907 | R,METAL FILM 4.7-J,1W    | for 297, 37  | C0604R7065050S |      |     |
|                        | R555      |     | 00D 963 0310 404 | R,METAL FILM 2.2K-J,1W   |              | C060022265050S |      |     |
|                        | R556,557  |     | 00D 963 0216 003 | R,METAL FILM 0.22-J,1W   |              | C060R22065050S |      |     |
|                        | R558      |     | 00D 963 0232 809 | R,METAL FILM 10-J,1/4W   |              | C060010063520S |      |     |
|                        | R562      |     | 00D 963 0244 305 | R,METAL FILM 2.2M 0.5W   |              | C060022564520S |      |     |

|                         | Ref. No.                                       | nsp | Part No.                                                                                         | Part Name                                                                                                                                             | Remarks                |                                                                                        | Q'ty | New |
|-------------------------|------------------------------------------------|-----|--------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------|----------------------------------------------------------------------------------------|------|-----|
|                         | R565-567<br>R576<br>R577,578<br>R584<br>R612   |     | 00D 960 9005 642<br>00D 963 0310 501<br>00D 963 0216 003<br>00D 963 0310 404<br>00D 963 9005 639 | R,METAL FILM 1.2K-J,1W<br>R,METAL FILM 47K-J,1/4W<br>R,METAL FILM 0.22-J,1W<br>R,METAL FILM 2.2K-J,1W<br>R,METAL FILM 100-J,1W                        | for 397                | C060012265050S<br>C060047363050S<br>C060R22065050S<br>C060022265050S<br>C060010165060S |      |     |
|                         | R613<br>R614<br>R615<br><br>VR501FL            |     | 00D 963 9005 639<br>00D 963 9005 639<br>00D 963 9005 639<br><br>00D 963 0310 802                 | R,METAL FILM 100-J,1W<br>R,METAL FILM 100-J,1W<br>R,METAL FILM 100-J,1W<br><br>VR,SEMI CERMET 1KB                                                     | for 397<br><br>for 397 | C060010165060S<br>C060010165060S<br>C060010165060S<br><br>C544102015130S               |      |     |
|                         | VR501FR                                        |     | 00D 963 0310 802                                                                                 | VR,SEMI CERMET 1KB                                                                                                                                    |                        | C544102015130S                                                                         |      |     |
| <b>CAPACITORS GROUP</b> |                                                |     |                                                                                                  |                                                                                                                                                       |                        |                                                                                        |      |     |
|                         | C329,330                                       |     | 00D 963 0233 303                                                                                 | C,CERAMIC 0.01UF-M/16V                                                                                                                                | for 397, 297           | D005103773530S                                                                         |      |     |
|                         | C501FL<br>C501FR<br>C502FL<br>C502FR<br>C503FL |     | 00D 963 0312 004<br>00D 963 0312 004<br>00D 963 0311 306<br>00D 963 0311 306<br>00D 963 0216 207 | C,ELECT 22UF-M/25V<br>C,ELECT 22UF-M/25V<br>C,ELECT 10UF-M/50V<br>C,ELECT 10UF-M/50V<br>C,CERAMIC 220PF 500V                                          |                        | D040220084050S<br>D040220084050S<br>D040100087070S<br>D040100087070S<br>D009092212500S |      |     |
|                         | C503FR<br>C504FL<br>C504FR<br>C505FL<br>C505FR |     | 00D 963 0216 207<br>00D 963 0216 207<br>00D 963 0216 207<br>00D 963 0216 100<br>00D 963 0216 100 | C,CERAMIC 220PF 500V<br>C,CERAMIC 220PF 500V<br>C,CERAMIC 220PF 500V<br>C,CERAMIC 33PF-J/500V<br>C,CERAMIC 33PF-J/500V                                |                        | D009092212500S<br>D009092212500S<br>D009092212500S<br>D00033006D050S<br>D00033006D050S |      |     |
|                         | C506FL<br>C506FR<br>C507FL<br>C507FR<br>C508FL |     | 00D 963 0311 500<br>00D 963 0311 500<br>-<br>-<br>00D 963 0234 506                               | C,ELECT 100UF-M/10V<br>C,ELECT 100UF-M/10V<br>C,FILM 0.0022UF-J/100V<br>C,FILM 0.0022UF-J/100V<br>C,ELECT 47UF-M/50V (Pb Free)                        |                        | D040101082070S<br>D040101082070S<br>D02022206C060S<br>D02022206C060S<br>D040470087070S |      |     |
|                         | C508FR<br>C509FL<br>C509FR<br>C510FL<br>C510FR |     | 00D 963 0234 506<br>00D 963 0311 306<br>00D 963 0311 306<br>00D 963 9003 084<br>00D 963 9003 084 | C,ELECT 47UF-M/50V (Pb Free)<br>C,ELECT 10UF-M/50V<br>C,ELECT 10UF-M/50V<br>C,CERAMIC 100PF-K/500V<br>C,CERAMIC 100PF-K/500V                          |                        | D040470087070S<br>D040100087070S<br>D040100087070S<br>D00410106D050S<br>D00410106D050S |      |     |
|                         | C511FL<br>C511FR<br>C512FL<br>C512FR<br>C513FL |     | 00D 963 9003 084<br>00D 963 9003 084<br>00D 960 9003 108<br>00D 960 9003 108<br>00D 963 9003 097 | C,CERAMIC 100PF-K/500V<br>C,CERAMIC 100PF-K/500V<br>C,CERAMIC 0.022UF-Z/25V<br>C,CERAMIC 0.022UF-Z/25V<br>C,FILM -0.1UF-K/250V                        |                        | D00410106D050S<br>D00410106D050S<br>D005223594520S<br>D005223594520S<br>D02010407H080S |      |     |
|                         | C513FR<br>C514FL<br>C515<br>C516<br>C517       |     | 00D 963 9003 097<br>00D 963 0311 403<br>00D 963 0020 202<br>00D 963 0311 607<br>00D 963 0130 309 | C,FILM -0.1UF-K/250V<br>C,ELECT 10UF-M/100V<br>C,CERAMIC 0.1UF-Z/50V<br>C,ELECT 100UF-M/16V<br>C,ELECT 470UF-M/6.3V                                   |                        | D02010407H080S<br>D04010008C050S<br>D005104597530S<br>D040101083090S<br>D040471081230S |      |     |
|                         | C518<br>C519<br>C520<br>C521,522<br>C523-526   |     | 00D 963 0020 202<br>00D 963 0244 606<br>00D 963 0312 606<br>00D 963 0233 303<br>00D 963 9003 097 | C,CERAMIC 0.1UF-Z/50V<br>C,ELECT 0.1UF-M/50V (Pb Free)<br>C,ELECT 2.2UF-M/50V(GREEN CAP)<br>C,CERAMIC 0.01UF-M/16V<br>C,FILM -0.1UF-K/250V            |                        | D005104597530S<br>D040R10087080S<br>D0402R2087270S<br>D005103773530S<br>D02010407H080S |      |     |
|                         | C527<br>C528<br>C529,530<br>C531<br>C532,533   |     | 00D 963 0311 102<br>00D 963 9003 097<br>00D 963 0149 400<br>00D 963 0312 402<br>00D 963 0311 102 | C,ELECT 1UF-M/50V (Pb Free)<br>C,FILM -0.1UF-K/250V<br>CAP.E.GENERIC 10000UF/63V(M)<br>C,ELECT 220UF-M/50V SY (Pb Free)<br>C,ELECT 1UF-M/50V(Pb Free) | for 297, 37            | D040010087150S<br>D02010407H080S<br>N211210388110S<br>D040221087140S<br>D040010087150S |      |     |
|                         | C534-536                                       |     | -                                                                                                | C,FILM 0.047UF-J/100V                                                                                                                                 |                        | D02047306C060S                                                                         |      |     |

|                    | Ref. No.                                         | nsp                          | Part No.                                                                                         | Part Name                                                                                                                             | Remarks      |                                                                                        | Q'ty | New |
|--------------------|--------------------------------------------------|------------------------------|--------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------|--------------|----------------------------------------------------------------------------------------|------|-----|
|                    | C537<br>C538<br>C539,540<br>C541                 |                              | 00D 963 0312 703<br>00D 963 0311 801<br>00D 963 0311 102<br>00D 963 9003 097                     | C,ELECT 3300UF-M/35V<br>C,ELECT 1000UF-M/35V(SHL)<br>C,ELECT 1UF-M/50V (Pb Free)<br>C,FILM -0.1UF-K/250V                              |              | D040332085050S<br>D040102085040S<br>D040010087150S<br>D02010407H080S                   |      |     |
|                    | C542<br>C543<br>C544<br>C544<br>C545             |                              | 00D 963 0255 501<br>00D 963 9006 191<br>00D 963 0234 506<br>00D 963 0312 101<br>00D 963 0311 500 | C,ELECT 18000UF-M/16V(10MM)<br>C,CERAMIC AC13F472MDOA<br>C,ELECT 47UF-M/50V (Pb Free)<br>C,ELECT 22UF-M/50V<br>C,ELECT 100UF-M/10V    | for 397      | D040183083000S<br>D00847208K070S<br>D040470087070S<br>D040220087060S<br>D040101082070S |      |     |
|                    | C546<br>C547<br>C548<br>C549,550<br>C551-554     |                              | -<br>00D 963 0311 102<br>00D 963 0312 509<br>00D 963 0311 306<br>-                               | C,CERAMIC 0.1UF-K/50V<br>C,ELECT 1UF-M/50V (Pb Free)<br>C,ELECT 2200UF-M/16V<br>C,ELECT 10UF-M/50V<br>C,FILM 0.01UF-J/100V            |              | D011104577161S<br>D040010087150S<br>D040222083080S<br>D040100087070S<br>D02010306C060S |      |     |
|                    | C555-557<br>C558<br>C559<br>C560<br>C561         |                              | 00D 963 0233 400<br>00D 963 9003 097<br>00D 963 0311 306<br>00D 963 0311 704<br>00D 963 0311 607 | C,CERAMIC 2200PF-K/16V<br>C,FILM -0.1UF-K/250V<br>C,ELECT 10UF-M/50V<br>C,ELECT 1000UF-M/16V<br>C,ELECT 100UF-M/16V                   | for 397      | D005222773530S<br>D02010407H080S<br>D040100087070S<br>D040102083030S<br>D040101083090S |      |     |
|                    | C562,563<br>C564<br>C565<br>C566-567<br>C568     | nsp                          | 00D 963 0224 105<br>00D 963 0311 500<br>00D 963 0233 400<br>00D 963 0311 102<br>00D 963 0311 102 | C,CERAMIC 1000PF-K/50V<br>C,ELECT 100UF-M/10V<br>C,CERAMIC 2200PF-K/16V<br>C,ELECT 1UF-M/50V (Pb Free)<br>C,ELECT 1UF-M/50V (Pb Free) | for 397      | D011102777160S<br>D040101082070S<br>D005222773530S<br>D040010087150S<br>D040010087150S |      |     |
|                    | C570-573<br>C601<br>C602<br>C603-605<br>C606-608 |                              | -<br>-<br>00D 963 9005 901<br>00D 963 0312 004<br>00D 963 9005 901                               | C,CERAMIC 0.1UF-K/50V<br>C,CERAMIC 0.1UF-K/50V<br>C,ELECT 470UF-M/10V<br>C,ELECT 22UF-M/25V<br>C,ELECT 470UF-M/10V                    |              | D011104577161S<br>D011104577161S<br>D040471082060S<br>D040220084050S<br>D040471082060S |      |     |
|                    | C609-611<br>C612<br>C613<br>C614<br>C616         | nsp                          | 00D 963 0311 500<br>00D 963 0312 004<br>00D 963 0234 001<br>00D 963 0312 004<br>-                | C,ELECT 100UF-M/10V<br>C,ELECT 22UF-M/25V<br>C,CERAMIC 0.047UF-Z/50V<br>C,ELECT 22UF-M/25V<br>C,CERAMIC 0.1UF-K/50V                   |              | D040101082070S<br>D040220084050S<br>D011473597160S<br>D040220084050S<br>D011104577161S |      |     |
|                    | C617<br>C618-620                                 |                              | -<br>00D 963 9003 372                                                                            | C,CERAMIC 0.1UF-K/50V<br>R,THICK 0-J,1/16W                                                                                            | for 397      | D011104577161S<br>C20000006M160S                                                       |      |     |
| OTHERS PARTS GROUP |                                                  |                              |                                                                                                  |                                                                                                                                       |              |                                                                                        |      |     |
|                    | BD601-609<br><br>CN304<br>CN601                  | nsp<br><br>nsp               | 00D 963 0220 002<br><br>00D 963 0301 109<br>00D 963 0085 506                                     | BEAD,COIL 121JT<br><br>CN,WIRE 350MM/2P<br>CN.WAFER 9P                                                                                |              | 7611010000020S<br><br>L000351020160S<br>L101100030910S                                 |      |     |
|                    | CP306<br>CP501<br>CP502<br>CP503<br>CP504        | nsp<br>nsp<br>nsp            | 00D 963 0160 900<br>00D 963 0066 208<br>00D 960 0128 804<br>00D 963 0315 302<br>00D 963 0262 604 | CN.WAFER 2.0MM 8P<br>CN.WAFER 3.96MM<br>CN.WAFER 2.5MM 6P<br>CN.WAFER 7.92MM<br>CN.WAFER 7.92MM                                       | for 397, 297 | L101220080010S<br>L104353280300S<br>L102526700600S<br>L108353280290S<br>L108202000220S |      |     |
|                    | CP506<br>CP507<br>CP508<br>CP509<br>CP510        | nsp<br>nsp<br>nsp<br><br>nsp | 00D 963 0097 507<br>00D 963 0235 806<br>00D 960 0123 207<br>00D 963 0315 205<br>00D 960 0123 207 | CN.WAFER 2.0MM 15P<br>CN.WAFER 2.0MM<br>CN.WAFER 2.5MM 3P<br>CN.WAFER 7.92MM<br>CN.WAFER 2.5MM 3P                                     |              | L101100041510S<br>L101220030000S<br>L102526700300S<br>L108353280280S<br>L102526700300S |      |     |
|                    | CP511                                            | nsp                          | 00D 963 0097 507                                                                                 | CN.WAFER 2.0MM 15P                                                                                                                    |              | L101100041510S                                                                         |      |     |

|   | Ref. No.   | nsp | Part No.         | Part Name                         | Remarks      |                | Q'ty | New |
|---|------------|-----|------------------|-----------------------------------|--------------|----------------|------|-----|
|   | F501       |     | 00D 960 0005 804 | HOLDER,FUSE CLIP                  |              | G645000050010S |      |     |
|   | F501B      |     | 00D 960 0005 804 | HOLDER,FUSE CLIP                  |              | G645000050010S |      |     |
|   | F502       |     | 00D 960 0005 804 | HOLDER,FUSE CLIP                  |              | G645000050010S |      |     |
|   | F502B      |     | 00D 960 0005 804 | HOLDER,FUSE CLIP                  |              | G645000050010S |      |     |
|   | GND501,502 |     | 00D 960 9006 600 | TERMINAL GND PLATE                |              | 3790040876010S |      |     |
|   | JACK501    |     | 00D 963 0313 508 | SOCKET,POWER RECEPTA 3P           |              | G435206D00050S |      |     |
|   | JACK503    |     | 00D 963 0119 906 | TER,BOARD SCREW 8P JB-801A(V0)-02 | for 397      | G614801A0200YS |      |     |
|   | JACK601    |     | 00D 963 0257 004 | TER,RCA 2PIN                      |              | G601206B0100YS |      |     |
|   | JACK602    |     | 00D 963 0257 004 | TER,RCA 2PIN                      |              | G601206B0100YS |      |     |
|   | JACK603    |     | 00D 963 0257 101 | TER,RCA 3PIN                      |              | G606303B1010YS |      |     |
|   | L501FL     | nsp | 00D 963 0313 003 | COIL,INDUCTOR 0.5UH               |              | D330R50000000S |      |     |
|   | L501FR     |     | 00D 963 0313 003 | COIL,INDUCTOR 0.5UH               |              | D330R50000000S |      |     |
|   | RLY501,502 |     | 00D 960 0181 702 | RELAY G5PA-28 24V 5A              |              | G680240502020S |      |     |
|   | RLY503     |     | 00D 963 0218 506 | RELAY BC3-24 24V 2A               |              | G680240202040S |      |     |
|   | RLY504     |     | 00D 963 0218 205 | RELAY HL3-1A-9SH DC9V 1A          |              | G680090102020S |      |     |
|   | SW324      |     | 00D 963 0145 802 | SW,PUSH SDDL-005-S(C-UL)          |              | G000122006060S |      |     |
|   | SW325      |     | 00D 963 0200 103 | SW,TACT SKHV10920A                | for 397      | G180000270010S |      |     |
|   | SW328      |     | 00D 963 0200 103 | SW,TACT SKHV10920A                | for 397      | G180000270010S |      |     |
|   | SW330      |     | 00D 963 0200 103 | SW,TACT SKHV10920A                | for 397, 297 | G180000270010S |      |     |
|   | TP501,502  | nsp | 00D 960 0161 405 | CN.WAFER 3P                       |              | L101530140310S |      |     |
|   | VEC305     |     | 00D 963 0095 208 | SW,ENCODER EC16B24SA              | for 397, 297 | G121162400040S |      |     |
| ⚠ | FS501,502  |     | 00D 963 0236 106 | FUSE T8A /250V                    |              | N751228001110S |      |     |
| ⚠ | T501       |     | 00D 963 0232 100 | POWER TRANS 120V/60HZ             |              | 8200350150200S |      |     |



## FRONT P.W.B. UNIT ASSY

|                      | Ref. No. | nsp | Part No.         | Part Name                  | Remarks                    |                | Q'ty | New |
|----------------------|----------|-----|------------------|----------------------------|----------------------------|----------------|------|-----|
| SEMICONDUCTORS GROUP |          |     |                  |                            |                            |                |      |     |
|                      | IC301    |     | 00D 960 0180 004 | IC LC7572                  | for 297, 37                | J127757210010S |      |     |
|                      | IC401    |     | 00D 963 0354 402 | IC CPU MICRO PROCESS(L020) | for 397<br>M30624FGPFP     | 8952397000010  |      |     |
|                      | IC401    |     | 00D 963 0354 509 | IC CPU MICRO PROCESS(L017) | for 297, 37<br>M30624FGPFP | 8952297000010  |      |     |
|                      | IC403    |     | 00D 960 0296 105 | IC CJ7812F                 |                            | J126781200220S |      |     |
|                      | IC404    |     | 00D 963 0313 605 | IC 24LC16B                 |                            | J000241600050S |      |     |
|                      | Q301     |     | 00D 963 0121 402 | TR KRA104S                 | for 397                    | J520010400210S |      |     |
|                      | Q303     |     | 00D 960 0005 202 | TR KTC3198Y                | for 397                    | J5023198Y0000S |      |     |
|                      | Q303     |     | 00D 963 0121 606 | TR KRC107S                 | for 297, 37                | J522107S00210S |      |     |
|                      | Q304     |     | 00D 963 0121 402 | TR KRA104S                 | for 297, 37                | J520010400210S |      |     |
|                      | Q305,306 |     | 00D 963 0120 704 | TR KRA102S(PB)             | for 297, 37                | J520010200210S |      |     |
|                      | Q307     |     | 00D 963 0120 801 | TR KRC102S (NB)            | for 297, 37                | J522010200210S |      |     |
|                      | Q308-310 |     | 00D 963 0120 704 | TR KRA102S(PB)             | for 297, 37                | J520010200210S |      |     |
|                      | Q311,312 |     | 00D 963 0120 801 | TR KRC102S (NB)            | for 297, 37                | J522010200210S |      |     |
|                      | Q313-316 |     | 00D 963 0044 301 | TR KTC2875B(MB)            | for 37                     | J5222875B0010S |      |     |
|                      | Q317     |     | 00D 963 0121 606 | TR KRC107S (NH)            | for 297, 37                | J522107S00210S |      |     |
|                      | Q318     |     | 00D 963 0120 704 | TR KRA102S(PB)             | for 297, 37                | J520010200210S |      |     |
|                      | Q319,320 |     | 00D 963 0121 606 | TR KRC107S (NH)            | for 297, 37                | J522107S00210S |      |     |
|                      | Q321     |     | 00D 963 0120 704 | TR KRA102S(PB)             | for 297, 37                | J520010200210S |      |     |
|                      | Q334     |     | 00D 963 0120 704 | TR KRA102S(PB)             | for 397                    | J520010200210S |      |     |
|                      | Q335     |     | 00D 963 0121 606 | TR KRC107S                 | for 397                    | J522107S00210S |      |     |
|                      | Q336     |     | 00D 963 0120 704 | TR KRA102S(PB)             | for 397                    | J520010200210S |      |     |
|                      | Q337     |     | 00D 963 0121 606 | TR KRC107S                 | for 397                    | J522107S00210S |      |     |
|                      | Q401     |     | 00D 963 0120 704 | TR KRA102S(PB)             |                            | J520010200210S |      |     |
|                      | Q404     |     | 00D 963 0121 509 | TR KTC3875S                |                            | J522038750210S |      |     |
|                      | Q405     |     | 00D 960 0285 006 | TR KRC104S                 |                            | J522104S00210S |      |     |
|                      | Q408,409 |     | 00D 963 0044 301 | TR KTC2875B                |                            | J5222875B0010S |      |     |
|                      | Q410     |     | 00D 963 0245 003 | TR KRC106S (NF)            |                            | J522010600210S |      |     |
|                      | Q411     |     | 00D 963 0102 803 | TR 2SA933S                 |                            | J5000933S0050S |      |     |
|                      | Q412,413 |     | 00D 963 0044 301 | TR KTC2875B                |                            | J5222875B0010S |      |     |
|                      | Q414     |     | 00D 963 0120 704 | TR KRA102S(PB)             |                            | J520010200210S |      |     |
|                      | Q415     |     | 00D 963 0120 704 | TR KRA102S(PB)             | for 397, 37                | J520010200210S |      |     |
|                      | Q416     |     | 00D 963 0120 704 | TR KRA102S(PB)             | for 397                    | J520010200210S |      |     |
|                      | Q417     |     | 00D 963 0120 704 | TR KRA102S(PB)             |                            | J520010200210S |      |     |
|                      | Q607-610 |     | 00D 963 0044 301 | TR KTC2875B                | for 397                    | J5222875B0010S |      |     |
|                      | Q613-616 |     | 00D 963 0044 301 | TR KTC2875B                | for 397                    | J5222875B0010S |      |     |
|                      | D301     |     | 00D 963 0020 309 | D,SWITCHING 1SS133T        |                            | K000013300520S |      |     |
|                      | D301H    |     | 00D 963 0219 709 | D,SWITCHING 1N4148W        |                            | K005041480020S |      |     |
|                      | D302     |     | 00D 963 0020 309 | D,SWITCHING 1SS133T        |                            | K000013300520S |      |     |
|                      | D302H    |     | 00D 963 0219 709 | D,SWITCHING 1N4148W        |                            | K005041480020S |      |     |
|                      | D303     |     | 00D 963 0020 309 | D,SWITCHING 1SS133T        |                            | K000013300520S |      |     |
|                      | D303H    |     | 00D 963 0219 709 | D,SWITCHING 1N4148W        |                            | K005041480020S |      |     |
|                      | D304     |     | 00D 963 0020 309 | D,SWITCHING 1SS133T        | for 297, 37                | K000013300520S |      |     |
|                      | D304H    |     | 00D 963 0219 709 | D,SWITCHING 1N4148W        |                            | K005041480020S |      |     |
|                      | D305     |     | 00D 963 0020 309 | D,SWITCHING 1SS133T        | for 397                    | K000013300520S |      |     |
|                      | D305     |     | 00D 963 0219 709 | D,SWITCHING 1N4148W        | for 37                     | K005041480020S |      |     |
|                      | D306     |     | 00D 963 0020 309 | D,SWITCHING 1SS133T        | for 297                    | K000013300520S |      |     |
|                      | D306     |     | 00D 960 009 5607 | D,SWITCHING 1N4148W        | for 37                     | K005041480020S |      |     |
|                      | D307     |     | 00D 963 0020 309 | D,SWITCHING 1SS133T        | for 297                    | K000013300520S |      |     |
|                      | D307-309 |     | 00D 960 009 5607 | D,SWITCHING 1N4148W        | for 37                     | K005041480020S |      |     |
|                      | D310     |     | 00D 963 0020 309 | D,SWITCHING 1SS133T        | for 297, 37                | K000013300520S |      |     |

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|                         | Ref. No.   | nsp | Part No.         | Part Name                  | Remarks     |                | Q'ty | New |
|-------------------------|------------|-----|------------------|----------------------------|-------------|----------------|------|-----|
|                         | D404       |     | 00D 963 0020 309 | D,SWITCHING 1SS133T        |             | K000013300520S |      |     |
|                         | D405       |     | 00D 963 0219 709 | D,SWITCHING 1N4148W        |             | K005041480020S |      |     |
|                         | D407,408   |     | 00D 963 0219 709 | D,SWITCHING 1N4148W        |             | K005041480020S |      |     |
|                         | D409       |     | 00D 963 0058 407 | D,SWITCHING IN4007         |             | K000400700520S |      |     |
|                         | D411       |     | 00D 963 0020 309 | D,SWITCHING 1SS133T        |             | K000013300520S |      |     |
|                         | ZD301      |     | 00D 960 0095 801 | D,ZENER MTZJ6.8B           |             | K06006R844520S |      |     |
|                         | ZD302-303  |     | 00D 960 0095 607 | D,ZENER MTZJ5.6B           | for 397     | K06005R644520S |      |     |
|                         | ZD304      |     | 00D 960 0095 607 | D,ZENER MTZJ5.6B           |             | K06005R644520S |      |     |
|                         | ZD305      |     | 00D 960 0095 607 | D,ZENER MTZJ5.6B           |             | K06005R644520S |      |     |
|                         | ZD307      |     | 00D 960 0095 607 | D,ZENER MTZJ5.6B           | for 297, 37 | K06005R644520S |      |     |
|                         | ZD401      |     | 00D 963 0047 502 | D,ZENER MTZJ3.3B           |             | K06003R344520S |      |     |
|                         | LED301,302 |     | 00D 960 0197 204 | LED,ROUND HL50RDRF4T       | for 297, 37 | K500052015010S |      |     |
| <b>RESISTORS GROUP</b>  |            |     |                  |                            |             |                |      |     |
|                         | R302H      |     | 00D 960 9009 270 | R,METAL FILM 470-J,2W      |             | C060047166520S |      |     |
|                         | R303H      |     | 00D 960 9009 270 | R,METAL FILM 470-J,2W      |             | C060047166520S |      |     |
|                         | R403       |     | 00D 963 0128 007 | R,METAL FILM 1K-J,1/4W     |             | C060010263050S |      |     |
|                         | R458       |     | 00D 963 0128 007 | R,METAL FILM 1K-J,1/4W     |             | C060010263050S |      |     |
|                         | R459       |     | 00D 963 0128 007 | R,METAL FILM 1K-J,1/4W     | for 397, 37 | C060010263050S |      |     |
|                         | R463       |     | 00D 963 0128 007 | R,METAL FILM 1K-J,1/4W     |             | C060010263050S |      |     |
|                         | R471       |     | 00D 963 0128 007 | R,METAL FILM 1K-J,1/4W     | for 397     | C060010263050S |      |     |
| <b>CAPACITORS GROUP</b> |            |     |                  |                            |             |                |      |     |
|                         | C301       |     | -                | C,FILM 0.1UF-J/100V        |             | D02010406C060S |      |     |
|                         | C301H      |     | 00D 963 0233 206 | C,CERAMIC 0.001UF-K/50V    |             | D005102177530S |      |     |
|                         | C302       |     | 00D 963 0020 202 | C,CERAMIC 0.1UF-Z/50V      | for 397     | D005104597530S |      |     |
|                         | C302       |     | 00D 963 0311 209 | C,ELECT 10UF-M/50V         | for 297, 37 | D040100087060S |      |     |
|                         | C302H      |     | 00D 963 0233 206 | C,CERAMIC 0.001UF-K/50V    |             | D005102177530S |      |     |
|                         | C303       |     | 00D 960 9010 366 | C,ELECT 47UF-M/16V         | for 397     | D040470083070S |      |     |
|                         | C303       |     | 00D 963 0311 005 | C,ELECT 1UF-M/50V(Pb Free) | for 297, 37 | D040010087090S |      |     |
|                         | C303H      |     | 00D 963 0233 303 | C,CERAMIC 0.01UF-M/16V     |             | D005103773530S |      |     |
|                         | C304       | nsp | 00D 963 0224 105 | C,CERAMIC 1000PF-K/50V     | for 397     | D011102777160S |      |     |
|                         | C304       |     | -                | C,FILM 0.047UF-J/50V       | for 297, 37 | D020473167050S |      |     |
|                         | C304H      | nsp | 00D 963 9004 698 | C,CERAMIC 0.01UF-K/50V     |             | D011103777160S |      |     |
|                         | C305       |     | 00D 963 0311 005 | C,ELECT 1UF-M/50V(Pb Free) | for 397     | D040010087090S |      |     |
|                         | C305       |     | 00D 960 9010 366 | C,ELECT 47UF-M/16V         | for 297, 37 | D040470083070S |      |     |
|                         | C305H      | nsp | 00D 963 9004 698 | C,CERAMIC 0.01UF-K/50V     |             | D011103777160S |      |     |
|                         | C306       |     | 00D 963 9010 641 | C,CERAMIC 0.047UF-K/16V    | for 397     | D011473773160S |      |     |
|                         | C306       |     | 00D 963 0234 001 | C,CERAMIC 0.047UF-Z/50V    | for 297     | D011473597160S |      |     |
|                         | C307       |     | -                | C,FILM 0.047UF-J/100V      | for 397     | D02047306C060S |      |     |
|                         | C307       |     | -                | C,FILM 0.047UF-J/100V      | for 297, 37 | D02047306C070S |      |     |
|                         | C308       |     | 00D 963 0311 209 | C,ELECT 10UF-M/50V         | for 397     | D040100087060S |      |     |
|                         | C308       |     | 00D 960 9010 366 | C,ELECT 47UF-M/16V         | for 297, 37 | D040470083070S |      |     |
|                         | C309       |     | 00D 963 0020 202 | C,CERAMIC 0.1UF-Z/50V      | for 397     | D005104597530S |      |     |
|                         | C309       | nsp | 00D 963 0224 105 | C,CERAMIC 1000PF-K/50V     | for 297, 37 | D011102777160S |      |     |
|                         | C310       | nsp | 00D 963 0223 601 | C,CERAMIC 100PF-J/50V      | for 397     | D010101167160S |      |     |
|                         | C310       |     | 00D 963 0233 701 | C,CERAMIC30PF-J/50V        | for 297, 37 | D010300167160S |      |     |
|                         | C311,312   | nsp | 00D 963 0223 601 | C,CERAMIC 100PF-J/50V      |             | D010101167160S |      |     |
|                         | C313       |     | 00D 963 0233 303 | C,CERAMIC 0.01UF-M/16V     | for 397     | D005103773530S |      |     |
|                         | C313       |     | 00D 963 0223 601 | C,CERAMIC 100PF-J/50V      | for 297, 37 | D010101167160S |      |     |
|                         | C314       |     | 00D 963 0233 303 | C,CERAMIC 0.01UF-M/16V     | for 397     | D005103773530S |      |     |
|                         | C314       | nsp | 00D 963 9004 698 | C,CERAMIC 0.01UF-K/50V     | for 297, 37 | D011103777160S |      |     |

|                           | Ref. No.  | nsp | Part No.         | Part Name                     | Remarks     |                | Q'ty | New |
|---------------------------|-----------|-----|------------------|-------------------------------|-------------|----------------|------|-----|
|                           | C315      |     | 00D 963 0233 303 | C,CERAMIC 0.01UF-M/16V        | for 397     | D005103773530S |      |     |
|                           | C315      | nsp | 00D 963 9004 698 | C,CERAMIC0.01UF-K/50V         | for 297, 37 | D011103777160S |      |     |
|                           | C316      |     | 00D 963 0233 303 | C,CERAMIC 0.01UF-M/16V        | for 397     | D005103773530S |      |     |
|                           | C317      |     | 00D 963 9010 641 | C,CERAMIC 0.047UF-K/16V       | for 397     | D011473773160S |      |     |
|                           | C318,319  | nsp | 00D 963 9004 698 | C,CERAMIC0.01UF-K/50V         | for 297, 37 | D011103777160S |      |     |
|                           | C320      |     | -                | C,FILM 0.047UF-J/100V         | for 397     | D02047306C060S |      |     |
|                           | C320      |     | -                | C,FILM 0.047UF-J/50V          | for 297, 37 | D020473167050S |      |     |
|                           | C321      |     | 00D 963 0311 005 | C,ELECT 1UF-M/50V(Pb Free)    |             | D040010087090S |      |     |
|                           | C322      |     | -                | C,CERAMIC 0.1UF-K/50V         | for 37      | D011104577161S |      |     |
|                           | C323      |     | -                | WIRE 1PJUMPER (0.6/52MM)      | for 37      | L045084006040S |      |     |
|                           | C324-326  |     | -                | C,CERAMIC100PF-J/50V          | for 37      | D010101167160S |      |     |
|                           | C327,328  |     | -                | C,ELECT 10UF-M/50V            | for 37      | D040100087070S |      |     |
|                           | C401      | nsp | 00D 963 9004 698 | C,CERAMIC 0.01UF-K/50V        |             | D011103777160S |      |     |
|                           | C402,403  | nsp | 00D 963 0223 601 | C,CERAMIC 100PF-J/50V         |             | D010101167160S |      |     |
|                           | C404      |     | 00D 963 0244 606 | C,ELECT 0.1UF-M/50V (Pb Free) |             | D040R10087080S |      |     |
|                           | C405      | nsp | 00D 963 0223 601 | C,CERAMIC 100PF-J/50V         |             | D010101167160S |      |     |
|                           | C406,407  | nsp | 00D 963 9004 698 | C,CERAMIC 0.01UF-K/50V        |             | D011103777160S |      |     |
|                           | C408-410  | nsp | 00D 963 0223 601 | C,CERAMIC 100PF-J/50V         |             | D010101167160S |      |     |
|                           | C411,412  |     | -                | C,CERAMIC 0.1UF-K/50V         |             | D011104577161S |      |     |
|                           | C413,414  | nsp | 00D 963 9004 698 | C,CERAMIC 0.01UF-K/50V        |             | D011103777160S |      |     |
|                           | C415      |     | 00D 963 0244 606 | C,ELECT 0.1UF-M/50V (Pb Free) |             | D040R10087080S |      |     |
|                           | C416      |     | 00D 963 0244 606 | C,ELECT 0.1UF-M/50V (Pb Free) | for 397, 37 | D040R10087080S |      |     |
|                           | C418      |     | 00D 960 9010 010 | C,ELECT 4.7UF-M/50V           |             | D0404R7087250S |      |     |
|                           | C420      | nsp | 00D 963 9004 698 | C,CERAMIC 0.01UF-K/50V        |             | D011103777160S |      |     |
|                           | C423      |     | 00D 963 0244 606 | C,ELECT 0.1UF-M/50V (Pb Free) | for 397     | D040R10087080S |      |     |
|                           | C426      |     | 00D 963 0311 500 | C,ELECT 100UF-M/10V           |             | D040101082070S |      |     |
|                           | C429,430  |     | 00D 963 0311 306 | C,ELECT 10UF-M/50V            |             | D040100087070S |      |     |
|                           | C431      |     | -                | C,CERAMIC 0.1UF-K/50V         |             | D011104577161S |      |     |
|                           | C432      |     | 00D 963 0244 606 | C,ELECT 0.1UF-M/50V (Pb Free) |             | D040R10087080S |      |     |
|                           | C622-625  | nsp | 00D 963 0223 601 | C,CERAMIC 100PF-J/50V         | for 397     | D010101167160S |      |     |
|                           | C626      |     | -                | C,CERAMIC 0.1UF-K/50V         | for 397     | D011104577161S |      |     |
| <b>OTHERS PARTS GROUP</b> |           |     |                  |                               |             |                |      |     |
|                           | BD401,402 | nsp | 00D 963 0220 002 | BEAD,COIL 121JT               |             | 7611010000020S |      |     |
|                           | CN302     |     | 00D 963 0314 400 | CN,WIRE 240MM/3P              |             | L000241030010S |      |     |
|                           | CN303     |     | 00D 963 0314 808 | CN,WIRE 60MM/8P               |             | L000600080040S |      |     |
|                           | CN304     |     | 00D 963 0246 002 | CN,WIRE 80MM/3P               |             | L000800030110S |      |     |
|                           | CN306     |     | 00D 963 0085 506 | CN.WAFER 2.0MM 9P             | for 37      | L101100030910S |      |     |
|                           | CN307     |     | 00D 963 0314 701 | CN,WIRE 60MM/5P               | for 37      | L000600050030S |      |     |
|                           | CP102     | nsp | 00D 963 0085 506 | CN.WAFER 9P                   | for 397     | L101100030910S |      |     |
|                           | CP301     |     | 00D 963 0315 409 | CN.FPC 1.25MM 23P             |             | L131102300010S |      |     |
|                           | CP302     | nsp | 00D 963 0236 009 | CN.WAFER 2.5MM 3P             |             | L102526803010S |      |     |
|                           | CP306     | nsp | 00D 963 0235 806 | CN.WAFER 2.0MM                |             | L101220030000S |      |     |
|                           | CP401     |     | 00D 963 0149 303 | CN.FPC 1.25MM 15P             |             | L131111500010S |      |     |
|                           | CP402     |     | 00D 963 0087 902 | CN.WAFER 2.0MM 17P            |             | L101100041710S |      |     |
|                           | CP403     |     | 00D 963 0315 001 | CN.WAFER 2.0MM 20P            |             | L101100042010S |      |     |
|                           | CP404     | nsp | 00D 963 0206 505 | CN.WAFER 2.0MM 9P             |             | L101100040910S |      |     |
|                           | CP406     |     | 00D 963 0161 103 | CN.FPC 1.25MM 23P             |             | L131112300010S |      |     |
|                           | CP408     | nsp | 00D 963 0060 709 | CN.WAFER 2.0MM 8P             |             | L101220080000S |      |     |
|                           | CP410     | nsp | 00D 963 0087 504 | CN.WAFER 2.0MM 19P            |             | L101100041910S |      |     |
|                           | CP411     |     | 00D 963 0315 001 | CN.WAFER 2.0MM 20P            |             | L101100042010S |      |     |
|                           | CP413     | nsp | 00D 963 0206 505 | CN.WAFER 2.0MM 9P WAFER       | for 397, 37 | L101100040910S |      |     |
|                           | CP414,415 | nsp | 00D 963 0097 507 | CN.WAFER 2.0MM 15P            |             | L101100041510S |      |     |

|  | Ref. No.                                      | nsp | Part No.                                                                                         | Part Name                                                                                                      | Remarks                                              |                                                                                        | Q'ty | New |
|--|-----------------------------------------------|-----|--------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------|------------------------------------------------------|----------------------------------------------------------------------------------------|------|-----|
|  | G301                                          |     | -                                                                                                | RING,TER WIRE 120MM/1P                                                                                         |                                                      | 8410121010060S                                                                         |      |     |
|  | JACK104<br>JACK301                            |     | 00D 963 0146 209                                                                                 | TER,RCA 4PIN<br>TER,RCA 2PIN                                                                                   | for 397<br>for 37                                    | G602405B01000S<br>G601207AE010YS                                                       |      |     |
|  | JK301                                         |     | 00D 963 0294 708                                                                                 | JACK,D6.5 PHONE                                                                                                |                                                      | G402PJ612AG0YS                                                                         |      |     |
|  | L301<br>L302-304                              | nsp | 00D 960 0128 008<br>00D 960 0010 307                                                             | COIL,INDUCTOR 100UH<br>COIL,INDUCTOR 10UH                                                                      | for 297, 37                                          | D330101001020S<br>D330100700520S                                                       |      |     |
|  | RMC301                                        |     | 00D 963 0217 808                                                                                 | MODULE,REMOCON NJL34H380A                                                                                      |                                                      | E940343800010S                                                                         |      |     |
|  | SW301<br>SW302-309<br>SW310                   |     | 00D 963 0095 305<br>00D 963 0095 305<br>00D 963 0095 305                                         | SW,TACT SKHV10910D01<br>SW,TACT SKHV10910D01<br>SW,TACT SKHV10910D01                                           | for 397<br><br>for 397                               | G180040500010S<br>G180040500010S<br>G180040500010S                                     |      |     |
|  | SW310<br>SW311<br>SW311<br>SW312<br>SW313,314 |     | 00D 963 0200 103<br>00D 963 0200 103<br>00D 963 0095 305<br>00D 963 0095 305<br>00D 963 0200 103 | SW,TACT SKHV10920A<br>SW,TACT SKHV10920A<br>SW,TACT SKHV10910D01<br>SW,TACT SKHV10910D01<br>SW,TACT SKHV10920A | for 297, 37<br>for 397<br>for 297, 37                | G180000270010S<br>G180000270010S<br>G180040500010S<br>G180040500010S<br>G180000270010S |      |     |
|  | SW315<br>SW315<br>SW316<br>SW317<br>SW317     |     | 00D 963 0095 305<br>00D 963 0200 103<br>00D 963 0200 103<br>00D 963 0200 103<br>00D 963 0095 305 | SW,TACT SKHV10910D01<br>SW,TACT SKHV10920A<br>SW,TACT SKHV10920A<br>SW,TACT SKHV10920A<br>SW,TACT SKHV10910D01 | for 397<br>for 297, 37<br><br>for 397<br>for 297, 37 | G180040500010S<br>G180000270010S<br>G180000270010S<br>G180000270010S<br>G180040500010S |      |     |
|  | SW318-322<br>SW323                            |     | 00D 963 0200 103<br>00D 963 0200 103                                                             | SW,TACT SKHV10920A<br>SW,TAC TSKHV10920A                                                                       | for 297, 37                                          | G180000270010S<br>G180000270010S                                                       |      |     |
|  | VEC301,302                                    |     | 00D 963 0095 208                                                                                 | SW,ENCODER EC16B24SA                                                                                           |                                                      | G121162400040S                                                                         |      |     |
|  | FLT301<br>FL301                               |     | 00D 963 0300 906<br>00D 963 0257 305                                                             | DISPLAY,FLT 16-ST-87GINK<br>DISPLAY,FLT 16SM13T                                                                | for 397<br>for 297, 37                               | K530168700010S<br>K530161300020S                                                       |      |     |
|  | XTL401                                        |     | 00D 963 0217 701                                                                                 | RESONATOR ZTT12.00MT-TF                                                                                        |                                                      | E830120000060S                                                                         |      |     |
|  | JP402<br>JP403<br>JP404<br>JP405<br>JP408     |     | 00D 963 0258 003<br>00D 963 0258 003<br>00D 963 0258 003<br>00D 963 0258 003<br>00D 963 0258 003 | R,THICK 0-J,1/8W<br>R,THICK 0-J,1/8W<br>R,THICK 0-J,1/8W<br>R,THICK 0-J,1/8W<br>R,THICK 0-J,1/8W               |                                                      | C200000061300S<br>C200000061300S<br>C200000061300S<br>C200000061300S<br>C200000061300S |      |     |
|  | JP416<br>JP417<br>JP418<br>JP419<br>JP420     |     | 00D 963 0258 003<br>00D 963 0258 003<br>00D 963 0258 003<br>00D 963 0258 003<br>00D 963 0258 003 | R,THICK 0-J,1/8W<br>R,THICK 0-J,1/8W<br>R,THICK 0-J,1/8W<br>R,THICK 0-J,1/8W<br>R,THICK 0-J,1/8W               | for 397                                              | C200000061300S<br>C200000061300S<br>C200000061300S<br>C200000061300S<br>C200000061300S |      |     |
|  | JP422<br>JP423<br>JP424<br>JP425<br>JP427     |     | 00D 963 0258 003<br>00D 963 0258 003<br>00D 963 0258 003<br>00D 963 0258 003<br>00D 963 0258 003 | R,THICK 0-J,1/8W<br>R,THICK 0-J,1/8W<br>R,THICK 0-J,1/8W<br>R,THICK 0-J,1/8W<br>R,THICK 0-J,1/8W               | for 397, 37<br>for 397, 37                           | C200000061300S<br>C200000061300S<br>C200000061300S<br>C200000061300S<br>C200000061300S |      |     |
|  | JP428                                         |     | 00D 963 0258 003                                                                                 | R,THICK 0-J,1/8W                                                                                               |                                                      | C200000061300S                                                                         |      |     |
|  |                                               |     | -                                                                                                | HOLDER FLT                                                                                                     | for 397                                              | 4320210536000S                                                                         |      |     |
|  |                                               |     | 00D 960 0184 408                                                                                 | HOLDER FLT                                                                                                     | for 297, 37                                          | 4320200026000S                                                                         |      |     |

## INPUT P.W.B. UNIT ASS'Y

|                             | Ref. No.  | nsp | Part No.         | Part Name                   | Remarks |                | Q'ty | New |
|-----------------------------|-----------|-----|------------------|-----------------------------|---------|----------------|------|-----|
| <b>SEMICONDUCTORS GROUP</b> |           |     |                  |                             |         |                |      |     |
|                             | IC101     |     | 00D 963 0295 202 | IC NJW1197                  |         | J084119700010S |      |     |
|                             | IC104     |     | 00D 963 0202 305 | IC NJM2068M                 |         | J121206800020S |      |     |
|                             | IC105-107 |     | 00D 963 0202 305 | IC NJM2068M                 | for 397 | J121206800020S |      |     |
|                             | IC108-113 |     | 00D 963 0202 305 | IC NJM2068M                 |         | J121206800020S |      |     |
|                             | IC115,116 |     | 00D 963 0116 103 | IC MM74HC4053MX             | for 397 | J040744053040S |      |     |
|                             | IC120     |     | 00D 963 0202 305 | IC NJM2068M                 |         | J121206800020S |      |     |
|                             | Q151FL    |     | 00D 960 0196 807 | FET/2SN FET 2SK117Y (TYPE2) |         | J5441170Y0050S |      |     |
|                             | Q151FR    |     | 00D 960 0196 807 | FET/2SN FET 2SK117Y (TYPE2) |         | J5441170Y0050S |      |     |
|                             | Q152FL    |     | 00D 960 0196 807 | FET/2SN FET 2SK117Y (TYPE2) |         | J5441170Y0050S |      |     |
|                             | Q152FR    |     | 00D 960 0196 807 | FET/2SN FET 2SK117Y (TYPE2) |         | J5441170Y0050S |      |     |
|                             | Q153,154  |     | 00D 963 0121 402 | TR KRA104S                  |         | J520010400210S |      |     |
|                             | Q155      |     | 00D 960 0285 006 | TR KRC104S                  |         | J522104S00210S |      |     |
|                             | D151FL    |     | 00D 963 0219 709 | D,SWITCHING 1N4148W         |         | K005041480020S |      |     |
|                             | D151FR    |     | 00D 963 0219 709 | D,SWITCHING 1N4148W         |         | K005041480020S |      |     |
|                             | D152FL    |     | 00D 963 0219 709 | D,SWITCHING 1N4148W         |         | K005041480020S |      |     |
|                             | D152FR    |     | 00D 963 0219 709 | D,SWITCHING 1N4148W         |         | K005041480020S |      |     |
|                             | ZD101,102 |     | 00D 963 0314 206 | D,ZENER MTZJ7.5B            |         | K06007R544520S |      |     |
| <b>RESISTORS GROUP</b>      |           |     |                  |                             |         |                |      |     |
|                             | R432,433  |     | 00D 963 9005 668 | R,METAL FILM 220-J,1W       |         | C060022165050S |      |     |
|                             | R436,437  |     | 00D 963 9005 639 | R,METAL FILM 100-J,1W       |         | C060010165060S |      |     |
| <b>CAPACITORS GROUP</b>     |           |     |                  |                             |         |                |      |     |
|                             | C101,102  | nsp | 00D 963 0233 604 | C,CERAMIC COG220PF-J/50V    | for 397 | D010221167160S |      |     |
|                             | C103,104  |     | 00D 963 0311 306 | C,ELECT 10UF-M/50V          | for 397 | D040100087070S |      |     |
|                             | C105,106  |     | 00D 963 0312 305 | C,ELECT 220UF-M/16V         | for 397 | D040221083110S |      |     |
|                             | C107,108  | nsp | 00D 963 0223 601 | C,CERAMIC COG100PF-J/50V    | for 397 | D010101167160S |      |     |
|                             | C109,110  |     | -                | C,FILM 0.024UF-J/50V        | for 397 | D020243167050S |      |     |
|                             | C111,112  |     | -                | C,FILM 0.0068UF-J/50V       | for 397 | D020682167050S |      |     |
|                             | C113,114  |     | 00D 963 0311 306 | C,ELECT 10UF-M/50V          | for 397 | D040100087070S |      |     |
|                             | C119,120  | nsp | 00D 963 0223 601 | C,CERAMIC 100PF-J/50V       |         | D010101167160S |      |     |
|                             | C121      |     | 00D 963 9003 372 | R,THICK 0-J,1/16W           |         | C20000006M160S |      |     |
|                             | C122      | nsp | 00D 963 0223 601 | C,CERAMIC 100PF-J/50V       |         | D010101167160S |      |     |
|                             | C123      |     | -                | C,CERAMIC 0.1UF-K/50V       | for 397 | D011104577161S |      |     |
|                             | C124      | nsp | 00D 963 0223 601 | C,CERAMIC 100PF-J/50V       |         | D010101167160S |      |     |
|                             | C126-128  | nsp | 00D 963 0223 601 | C,CERAMIC 100PF-J/50V       |         | D010101167160S |      |     |
|                             | C130      | nsp | 00D 963 0223 601 | C,CERAMIC 100PF-J/50V       |         | D010101167160S |      |     |
|                             | C131      |     | 00D 963 9003 372 | R,THICK 0-J,1/16W           |         | C20000006M160S |      |     |
|                             | C132      | nsp | 00D 963 0223 601 | C,CERAMIC 100PF-J/50V       |         | D010101167160S |      |     |
|                             | C133-146  |     | 00D 963 0311 306 | C,ELECT 10UF-M/50V          |         | D040100087070S |      |     |
|                             | C147      |     | 00D 960 9010 010 | C,ELECT 4.7UF-M/50V         |         | D0404R7087250S |      |     |
|                             | C148      |     | -                | C,CERAMIC 0.1UF-K/50V       |         | D011104577161S |      |     |
|                             | C149      |     | 00D 963 0276 108 | C,CERAMIC 3300PF-K/50V      |         | D011332777160S |      |     |
|                             | C150      |     | 00D 963 0310 909 | C,ELECT 1UF-M/50V           |         | D040010087070S |      |     |
|                             | C151      |     | 00D 960 9010 010 | C,ELECT 4.7UF-M/50V         |         | D0404R7087250S |      |     |
|                             | C152      |     | -                | C,CERAMIC 0.1UF-K/50V       |         | D011104577161S |      |     |
|                             | C153      |     | 00D 963 0276 108 | C,CERAMIC 3300PF-K/50V      |         | D011332777160S |      |     |
|                             | C154-161  |     | 00D 963 9005 862 | C,ELECT 47UF-M/16V          |         | D040470083080S |      |     |
|                             | C162,163  |     | 00D 963 0311 306 | C,ELECT 10UF-M/50V          |         | D040100087070S |      |     |
|                             | C164      |     | 00D 963 0310 909 | C,ELECT 1UF-M/50V           |         | D040010087070S |      |     |
|                             | C165-172  |     | 00D 963 0311 306 | C,ELECT 10UF-M/50V          |         | D040100087070S |      |     |
|                             | C173,174  |     | 00D 963 0311 607 | C,ELECT 100UF-M/16V         |         | D040101083090S |      |     |

|                           | Ref. No. | nsp | Part No.         | Part Name             | Remarks     |                | Q'ty | New |
|---------------------------|----------|-----|------------------|-----------------------|-------------|----------------|------|-----|
|                           | C175-177 |     | -                | C,CERAMIC 0.1UF-K/50V |             | D011104577161S |      |     |
|                           | C180     |     | -                | C,CERAMIC 0.1UF-K/50V | for 397     | D011104577161S |      |     |
|                           | C181     | nsp | -                | C,CERAMIC 0.1UF-K/50V |             | D011104577161S |      |     |
|                           | C182-184 |     | 00D 963 0223 601 | C,CERAMIC 100PF-J/50V |             | D010101167160S |      |     |
|                           | C185,186 |     | 00D 963 0311 306 | C,ELECT 10UF-M/50V    |             | D040100087070S |      |     |
|                           | C186FL   |     | 00D 963 0311 306 | C,ELECT 10UF-M/50V    |             | D040100087070S |      |     |
|                           | C186FR   |     | 00D 963 0311 306 | C,ELECT 10UF-M/50V    |             | D040100087070S |      |     |
|                           | C186L2   |     | -                | C,FILM 0.068UF-K/63V  | for 397     | D020683078060S |      |     |
|                           | C186L3   |     | -                | C,FILM 0.068UF-K/63V  | for 397     | D020683078060S |      |     |
|                           | C186R2   |     | -                | C,FILM 0.068UF-K/63V  | for 397     | D020683078060S |      |     |
|                           | C186R3   |     | -                | C,FILM 0.068UF-K/63V  | for 397     | D020683078060S |      |     |
|                           | C187     |     | 00D 963 0311 306 | C,ELECT 10UF-M/50V    |             | D040100087070S |      |     |
|                           | C187L2   |     | -                | C,CERAMIC 0.1UF-K/50V | for 397     | D011104577161S |      |     |
|                           | C187L3   |     | -                | C,CERAMIC 0.1UF-K/50V | for 397     | D011104577161S |      |     |
|                           | C187R2   |     | -                | C,CERAMIC 0.1UF-K/50V | for 397     | D011104577161S |      |     |
|                           | C187R3   |     | -                | C,CERAMIC 0.1UF-K/50V | for 397     | D011104577161S |      |     |
|                           | C187SW   | nsp | 00D 963 0233 808 | C,CERAMIC 47PF-J/50V  |             | D010470167160S |      |     |
|                           | C188     |     | 00D 963 0311 306 | C,ELECT 10UF-M/50V    |             | D040100087070S |      |     |
|                           | C188FL   |     | -                | C,FILM 0.068UF-K/63V  |             | D020683078060S |      |     |
|                           | C188FR   |     | -                | C,FILM 0.068UF-K/63V  |             | D020683078060S |      |     |
|                           | C188SW   | nsp | 00D 963 0223 601 | C,CERAMIC 100PF-J/50V |             | D010101167160S |      |     |
|                           | C189     | nsp | 00D 963 0223 601 | C,CERAMIC 100PF-J/50V |             | D010101167160S |      |     |
|                           | C189FL   |     | -                | C,FILM 0.024UF-J/50V  |             | D020243167050S |      |     |
|                           | C189FR   |     | -                | C,FILM 0.024UF-J/50V  |             | D020243167050S |      |     |
|                           | C189L2   |     | 00D 963 0311 306 | C,ELECT 10UF-M/50V    | for 397, 37 | D040100087070S |      |     |
|                           | C189L3   |     | 00D 963 0311 306 | C,ELECT 10UF-M/50V    | for 397     | D040100087070S |      |     |
|                           | C189R2   |     | 00D 963 0311 306 | C,ELECT 10UF-M/50V    | for 397, 37 | D040100087070S |      |     |
|                           | C189R3   |     | 00D 963 0311 306 | C,ELECT 10UF-M/50V    | for 397     | D040100087070S |      |     |
|                           | C189SW   |     | 00D 963 0311 306 | C,ELECT 10UF-M/50V    |             | D040100087070S |      |     |
|                           | C190     |     | 00D 963 0311 306 | C,ELECT 10UF-M/50V    |             | D040100087070S |      |     |
|                           | C190L2   |     | -                | C,FILM 0.068UF-K/63V  | for 397, 37 | D020683078060S |      |     |
|                           | C190L3   |     | -                | C,FILM 0.068UF-K/63V  | for 397     | D020683078060S |      |     |
|                           | C190R2   |     | -                | C,FILM 0.068UF-K/63V  | for 397, 37 | D020683078060S |      |     |
|                           | C190R3   |     | -                | C,FILM 0.068UF-K/63V  | for 397     | D020683078060S |      |     |
|                           | C191     |     | 00D 963 0311 306 | C,ELECT 10UF-M/50V    |             | D040100087070S |      |     |
|                           | C192     |     | 00D 963 9005 875 | C,ELECT 47UF-M/25V    |             | D040470084070S |      |     |
|                           | C193     |     | -                | C,CERAMIC 0.1UF-K/50V |             | D011104577161S |      |     |
|                           | C194,195 |     | 00D 963 9005 875 | C,ELECT 47UF-M/25V    |             | D040470084070S |      |     |
|                           | C198     |     | 00D 963 0311 306 | C,ELECT 10UF-M/50V    |             | D040100087070S |      |     |
|                           | C201-203 |     | 00D 963 0311 306 | C,ELECT 10UF-M/50V    |             | D040100087070S |      |     |
|                           | C204,205 |     | -                | C,CERAMIC 0.1UF-K/50V |             | D011104577161S |      |     |
|                           | C208-217 |     | -                | C,CERAMIC 0.1UF-K/50V | for 397     | D011104577161S |      |     |
|                           | C218-219 |     | -                | C,CERAMIC 0.1UF-K/50V | for 397     | D011104577161S |      |     |
|                           | C220     |     | 00D 963 9005 875 | C,ELECT 47UF-M/25V    |             | D040470084070S |      |     |
|                           | C221,222 |     | -                | C,CERAMIC 0.1UF-K/50V |             | D011104577161S |      |     |
| <b>OTHERS PARTS GROUP</b> |          |     |                  |                       |             |                |      |     |
|                           | CN102    |     | 00D 963 0314 303 | CN,WIRE 180MM/4P      |             | L000181040080S |      |     |
|                           | CP101    |     | 00D 963 0314 905 | CN.WAFER 2.0MM 20P    |             | L101100032010S |      |     |
|                           | CP102    | nsp | 00D 963 0086 204 | CN.WAFER 2.0MM 19P    |             | L101100031910S |      |     |
|                           | JACK103  |     | 00D 960 0268 803 | TER,RCA 6PIN          |             | G603603B09000S |      |     |
|                           | JACK104  |     | 00D 963 0146 209 | TER,RCA 4PIN          |             | G602405B01000S |      |     |
|                           | JACK106  |     | 00D 963 0158 501 | TER,RCA 2PIN          | for 397     | G601207AE010YS |      |     |
|                           | L101,102 |     | 00D 963 0312 907 | COIL,INDUCTOR 47UH    | for 397     | D330470001020S |      |     |
|                           | L103-107 | nsp | 00D 963 0220 002 | BEAD,COIL 121JT       |             | 7611010000020S |      |     |

## XM-READY P.W.B. UNIT ASS'Y

|                             | Ref. No.  | nsp | Part No.         | Part Name                   | Remarks |                | Q'ty | New |
|-----------------------------|-----------|-----|------------------|-----------------------------|---------|----------------|------|-----|
| <b>SEMICONDUCTORS GROUP</b> |           |     |                  |                             |         |                |      |     |
|                             | IC201     |     | 00D 960 0174 104 | IC CXA1511M                 |         | J030151100010S |      |     |
|                             | IC201     |     | 00D 263 1092 003 | IC BA05T                    |         | J126050000020S |      |     |
|                             | IC203     |     | 00D 262 3517 907 | IC F2602                    |         | J080260200010S |      |     |
|                             | IC204     |     | 00D 262 2517 908 | IC SN74LVO8APW              |         | J040740800200S |      |     |
|                             | IC205,206 |     | 00D 262 2813 903 | IC SN74AHCT08               |         | J040740800190S |      |     |
|                             | IC207     |     | 00D 963 0294 902 | IC AK4385                   |         | J042438500010S |      |     |
|                             | IC208     |     | 00D 963 0300 702 | IC LM1117S                  |         | J126111733030S |      |     |
|                             | IC209     |     | 00D 963 0202 305 | IC NJM2068M                 |         | J121206800020S |      |     |
|                             | IC211     |     | 00D 262 2813 903 | IC SN74AHCT08               |         | J040740800190S |      |     |
|                             | Q201      |     | 00D 963 0044 301 | TR KTC2875B                 |         | J5222875B0010S |      |     |
|                             | Q202      |     | 00D 963 0245 003 | TR KRC106S (NF)             |         | J522010600210S |      |     |
|                             | Q203      |     | 00D 963 0121 402 | TR KRA104S                  |         | J520010400210S |      |     |
|                             | Q204      |     | 00D 963 0044 301 | TR KTC2875B                 |         | J5222875B0010S |      |     |
|                             | Q205      |     | 00D 963 0314 109 | TR KRA106S (PF)             |         | J520010600210S |      |     |
|                             | Q206      |     | 00D 963 0245 003 | TR KRC106S (NF)             |         | J522010600210S |      |     |
|                             | Q207      |     | 00D 963 0120 704 | TR KRA102S(PB)              |         | J520010200210S |      |     |
|                             | Q208-211  |     | 00D 963 0044 301 | TR KTC2875B                 |         | J5222875B0010S |      |     |
|                             | Q212      |     | 00D 963 0245 003 | TR KRC106S (NF)             |         | J522010600210S |      |     |
|                             | Q213      |     | 00D 963 0120 704 | TR KRA102S(PB)              |         | J520010200210S |      |     |
|                             | D201-209  |     | 00D 963 0219 709 | D,SWITCHING 1N4148W         |         | K005041480020S |      |     |
|                             | ZD201     |     | 00D 960 0095 704 | D,ZENER MTZJ6.2B            |         | K06006R244520S |      |     |
| <b>RESISTORS GROUP</b>      |           |     |                  |                             |         |                |      |     |
|                             | R294,295  |     | 00D 963 9005 639 | R,METAL FILM 100-J,1W       |         | C060010165060S |      |     |
| <b>CAPACITORS GROUP</b>     |           |     |                  |                             |         |                |      |     |
|                             | C201      |     | -                | C,CERAMIC 0.1UF-K/50V       |         | D011104577161S |      |     |
|                             | C202      |     | 00D 963 0311 102 | C,ELECT 1UF-M/50V (Pb Free) |         | D040010087150S |      |     |
|                             | C203      |     | -                | C,CERAMIC 0.1UF-K/50V       |         | D011104577161S |      |     |
|                             | C204      | nsp | 00D 963 9004 698 | C,CERAMIC 0.01UF-K/50V      |         | D011103777160S |      |     |
|                             | C205      | nsp | 00D 963 9006 528 | C,CERAMIC 20PF-J/50V        |         | D010200167160S |      |     |
|                             | C206      | nsp | 00D 963 0223 601 | C,CERAMIC 100PF-J/50V       |         | D010101167160S |      |     |
|                             | C207      |     | 00D 963 0311 306 | C,ELECT 10UF-M/50V          |         | D040100087070S |      |     |
|                             | C208      | nsp | 00D 963 9006 528 | C,CERAMIC 20PF-J/50V        |         | D010200167160S |      |     |
|                             | C209      | nsp | 00D 963 0223 601 | C,CERAMIC 100PF-J/50V       |         | D010101167160S |      |     |
|                             | C210,211  |     | -                | C,CERAMIC 0.1UF-K/50V       |         | D011104577161S |      |     |
|                             | C212      | nsp | 00D 963 0223 601 | C,CERAMIC 100PF-J/50V       |         | D010101167160S |      |     |
|                             | C213      |     | -                | C,CERAMIC 0.1UF-K/50V       |         | D011104577161S |      |     |
|                             | C214-218  | nsp | 00D 963 0223 601 | C,CERAMIC 100PF-J/50V       |         | D010101167160S |      |     |
|                             | C219      |     | 00D 960 9010 010 | C,ELECT 4.7UF-M/50V         |         | D0404R7087250S |      |     |
|                             | C220      |     | -                | C,FILM 0.012UF-J/100V       |         | D02012306C060S |      |     |
|                             | C224      |     | -                | C,CERAMIC 0.1UF-K/50V       |         | D011104577161S |      |     |
|                             | C225,226  |     | 00D 963 0311 306 | C,ELECT 10UF-M/50V          |         | D040100087070S |      |     |
|                             | C227      |     | -                | C,CERAMIC 8PF-D/50V         |         | D010080117160S |      |     |
|                             | C228,229  |     | 00D 963 0311 306 | C,ELECT 10UF-M/50V          |         | D040100087070S |      |     |
|                             | C230      |     | -                | C,CERAMIC 8PF-D/50V         |         | D010080117160S |      |     |
|                             | C231      |     | -                | C,FILM 0.012UF-J/100V       |         | D02012306C060S |      |     |
|                             | C232      |     | 00D 963 9005 875 | C,ELECT 47UF-M/25V          |         | D040470084070S |      |     |
|                             | C233-236  |     | -                | C,CERAMIC 0.1UF-K/50V       |         | D011104577161S |      |     |

|                           | Ref. No.    | nsp | Part No.         | Part Name                     | Remarks |                | Q'ty | New |
|---------------------------|-------------|-----|------------------|-------------------------------|---------|----------------|------|-----|
|                           | C237        | nsp | 00D 963 0224 105 | C,CERAMIC 1000PF-K/50V        |         | D011102777160S |      |     |
|                           | C238        |     | -                | C,CERAMIC 0.1UF-K/50V         |         | D011104577161S |      |     |
|                           | C239        | nsp | 00D 963 0224 105 | C,CERAMIC 1000PF-K/50V        |         | D011102777160S |      |     |
|                           | C240        |     | -                | C,CERAMIC 0.1UF-K/50V         |         | D011104577161S |      |     |
|                           | C241        |     | 00D 963 0311 607 | C,ELECT 100UF-M/10V (Pb Free) |         | D040101082090S |      |     |
|                           | C242        |     | -                | C,CERAMIC 0.1UF-K/50V         |         | D011104577161S |      |     |
|                           | C243        | nsp | 00D 963 0224 105 | C,CERAMIC 1000PF-K/50V        |         | D011102777160S |      |     |
|                           | C244        | nsp | 00D 963 0233 808 | C,CERAMIC 47PF-J/50V          |         | D010470167160S |      |     |
|                           | C245,246    |     | 00D 963 0311 306 | C,ELECT 10UF-M/50V            |         | D040100087070S |      |     |
|                           | C247        | nsp | 00D 963 9004 698 | C,CERAMIC 0.01UF-K/50V        |         | D011103777160S |      |     |
|                           | C248,249    |     | 00D 963 0276 108 | C,CERAMIC 3300PF-K/50V        |         | D011332777160S |      |     |
|                           | C250-253    |     | 00D 963 0224 008 | C,CERAMIC 470PF-J/50V         |         | D010471167160S |      |     |
|                           | C254        |     | 00D 963 0244 606 | C,ELECT 0.1UF-M/50V (Pb Free) |         | D040R10087080S |      |     |
|                           | C255,256    |     | 00D 963 0311 306 | C,ELECT 10UF-M/50V            |         | D040100087070S |      |     |
|                           | C257,258    |     | 00D 963 0312 208 | C,ELECT 22UF-M/50V,6*11       |         | D040220087100S |      |     |
|                           | C259,260    |     | 00D 963 0311 306 | C,ELECT 10UF-M/50V            |         | D040100087070S |      |     |
|                           | C261,262    | nsp | 00D 963 9006 528 | C,CERAMIC 20PF-J/50V          |         | D010200167160S |      |     |
|                           | C263        |     | -                | C,CERAMIC 0.1UF-K/50V         |         | D011104577161S |      |     |
|                           | C264        | nsp | 00D 963 0224 105 | C,CERAMIC 1000PF-K/50V        |         | D011102777160S |      |     |
|                           | C265        |     | 00D 963 0311 306 | C,ELECT 10UF-M/50V            |         | D040100087070S |      |     |
|                           | C266,267    |     | -                | C,CERAMIC 0.1UF-K/50V         |         | D011104577161S |      |     |
|                           | C268-271    | nsp | 00D 963 0233 808 | C,CERAMIC 47PF-J/50V          |         | D010470167160S |      |     |
|                           | C272,273    |     | -                | C,CERAMIC 0.1UF-K/50V         |         | D011104577161S |      |     |
| <b>OTHERS PARTS GROUP</b> |             |     |                  |                               |         |                |      |     |
|                           | BD201       |     | 00D 963 0312 800 | COIL,LINE BFS2550A0F1         |         | D320255000520S |      |     |
|                           | BD202       | nsp | 00D 963 0234 603 | COIL,BEAD MB-160808           |         | D340160800060S |      |     |
|                           | BD203-209   | nsp | 00D 963 0220 002 | BEAD,COIL 121JT               |         | 7611010000020S |      |     |
|                           | BD210-218   | nsp | 00D 963 0234 603 | COIL,BEAD MB-160808           |         | D340160800060S |      |     |
|                           | BD219-221   | nsp | 00D 963 0220 002 | BEAD,COIL 121JT               |         | 7611010000020S |      |     |
|                           | BD225       | nsp | 00D 963 0220 002 | BEAD,COIL 121JT               |         | 7611010000020S |      |     |
|                           | BD226       | nsp | 00D 963 0234 603 | COIL,BEAD MB-160808           |         | D340160800060S |      |     |
|                           | BD227       | nsp | 00D 963 0220 002 | BEAD,COIL 121JT               |         | 7611010000020S |      |     |
|                           | CN202       |     | 00D 963 0314 905 | CN.WAFER 2.0MM 20P            |         | L101100032010S |      |     |
|                           | CN203       |     | 00D 963 0085 302 | CN.WAFER 2.0MM 17P            |         | L101100031710S |      |     |
|                           | CP201       | nsp | 00D 963 0068 303 | CN.WAFER 2.0MM                |         | L101220090000S |      |     |
|                           | GND201      |     | -                | SHIELD PLATE GND              |         | 3070045526010S |      |     |
|                           | JACK201,202 |     | 00D 963 0244 703 | JACK,D3.5 EARPHONE            |         | G40130802000YS |      |     |
|                           | JACK203     |     | 00D 205 1362 009 | CN.WAFER 4PIN                 |         | L109040000010S |      |     |
|                           | JACK204     |     | 00D 963 0294 601 | JACK,D3.5 EARPHONE            |         | G40100350000YS |      |     |
|                           | JACK205     |     | 00D 963 0146 005 | TER,RCA 1PIN                  |         | G600107A0000YS |      |     |
|                           | JACK206     |     | 00D 963 0146 209 | TER,RCA 4PIN                  |         | G602405B01000S |      |     |
|                           | XTAL201     |     | 00D 963 0313 304 | CRYSTAL FCX-02(45.1584MHz)    |         | E80545R150010S |      |     |



**CTN P.W.B. UNIT ASS'Y**

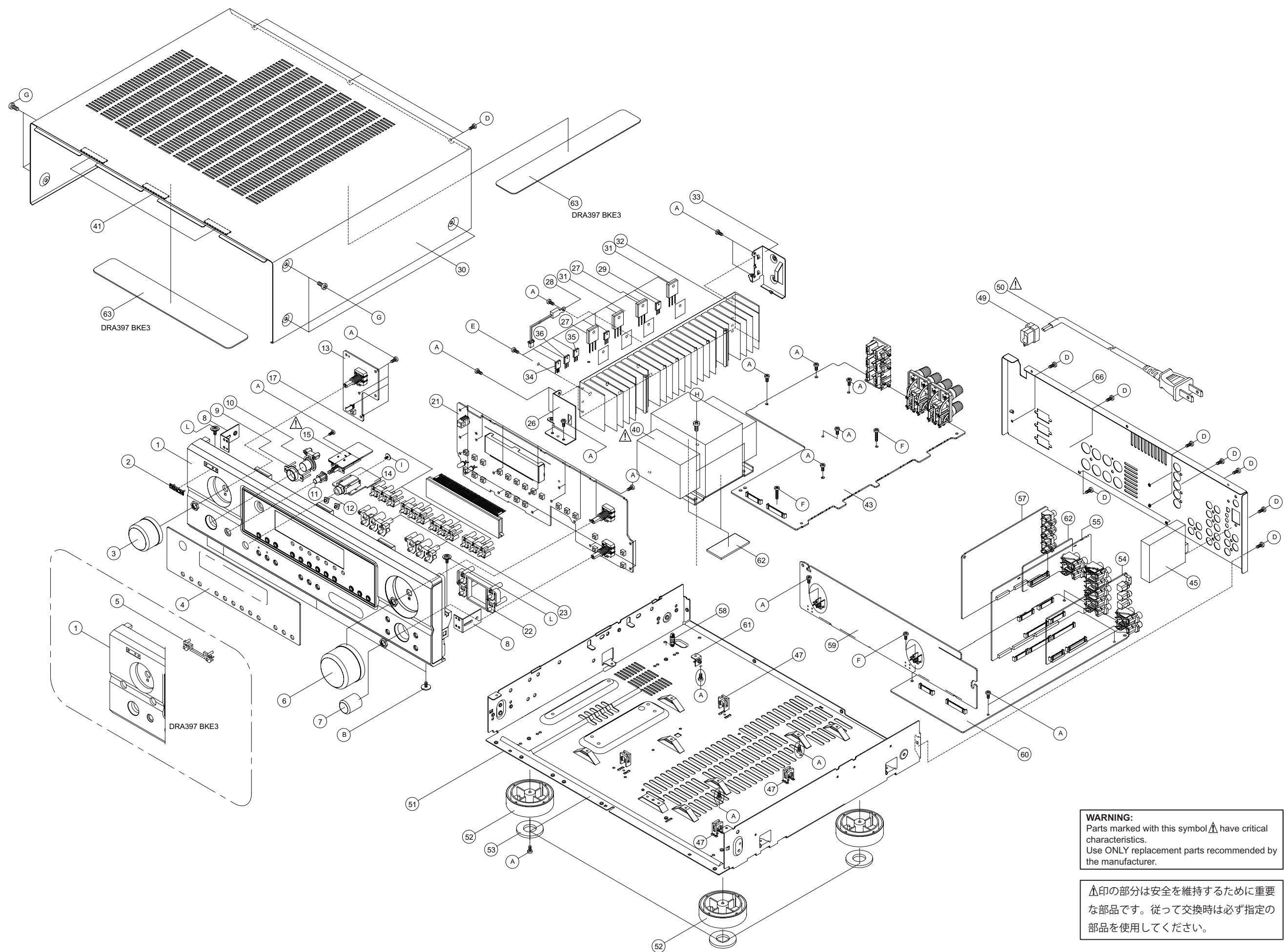
|                           | Ref. No. | nsp | Part No.         | Part Name          | Remarks |                | Q'ty | New |
|---------------------------|----------|-----|------------------|--------------------|---------|----------------|------|-----|
| <b>OTHERS PARTS GROUP</b> |          |     |                  |                    |         |                |      |     |
|                           | CN407    | nsp | 00D 963 0097 303 | CN.WAFER 2.0MM 15P |         | L101100031510S |      |     |
|                           | CN409    | nsp | 00D 963 0097 303 | CN.WAFER 2.0MM 15P |         | L101100031510S |      |     |
|                           | CN506    | nsp | 00D 963 0097 303 | CN.WAFER 2.0MM 15P |         | L101100031510S |      |     |
|                           | CN511    | nsp | 00D 963 0097 303 | CN.WAFER 2.0MM 15P |         | L101100031510S |      |     |
|                           | CP901    | nsp | 00D 963 0235 903 | CN.WAFER 2.0MM     |         | L101220040000S |      |     |
|                           | H901,902 | nsp | 00D 960 0184 000 | BRACKET SCREW      |         | 4010210196000S |      |     |

**FUNCTION SW P.W.B. UNIT ASS'Y (for DRA-37 model)**

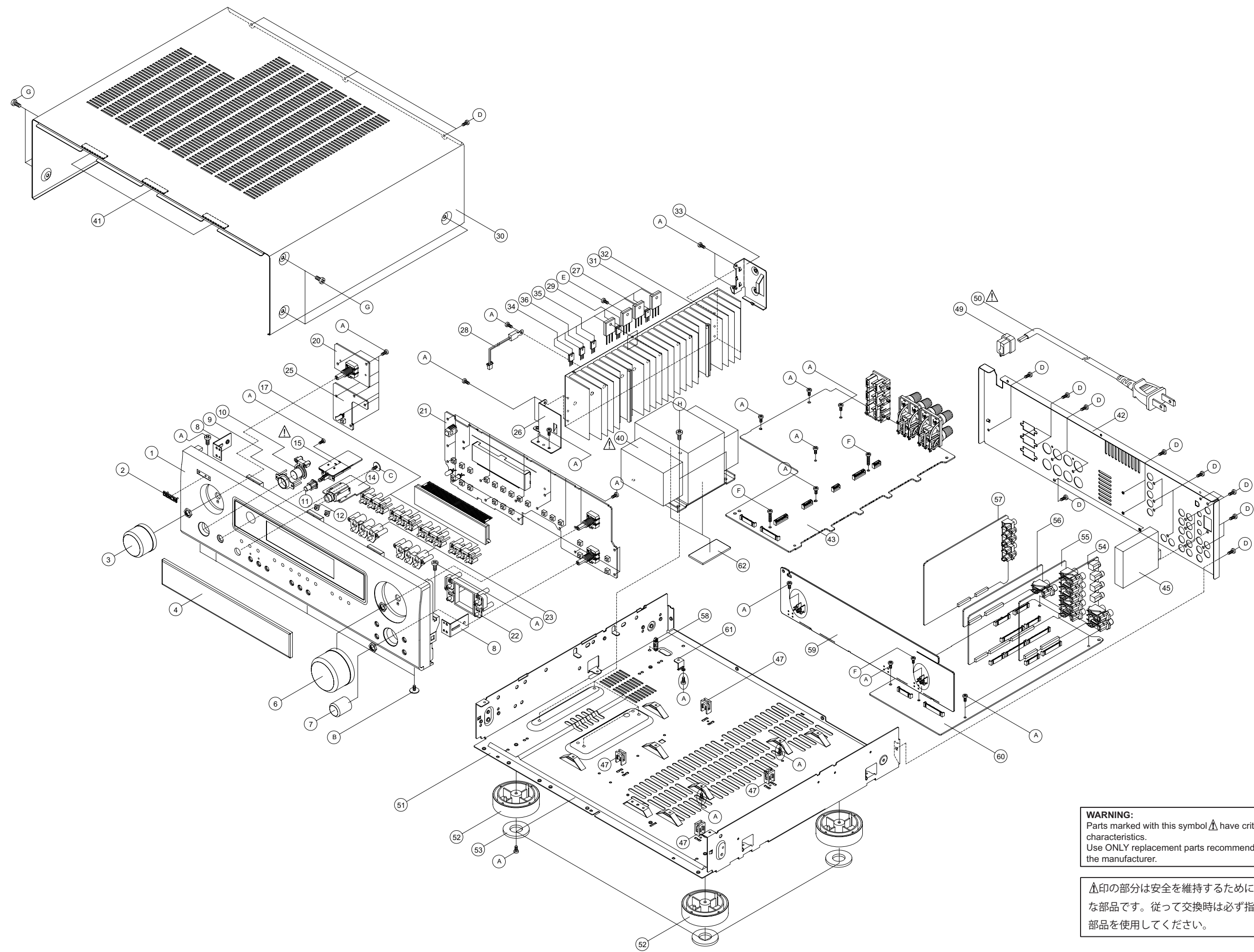
|                             | Ref. No.  | nsp | Part No.         | Part Name              | Remarks |                | Q'ty | New |
|-----------------------------|-----------|-----|------------------|------------------------|---------|----------------|------|-----|
| <b>SEMICONDUCTORS GROUP</b> |           |     |                  |                        |         |                |      |     |
|                             | ZD310,311 |     | 00D 960 0095 607 | D,ZENER MTZJ5.6B       |         | K06005R644520S |      |     |
|                             | LED303    |     | 00D 963 0148 605 | LEDSML1216W(RED/GREEN) |         | K500052600030S |      |     |
| <b>CAPACITORS GROUP</b>     |           |     |                  |                        |         |                |      |     |
|                             | C329,330  |     | 00D 963 0233 303 | C,CERAMIC 0.01UF-M/16V |         | D005103773530S |      |     |
| <b>OTHERS PARTS GROUP</b>   |           |     |                  |                        |         |                |      |     |
|                             | CP305     |     | 00D 963 0228 101 | CN.WAFER 2.0MM         |         | L101220040010S |      |     |
|                             | CP308     |     | 00D 960 0254 901 | CN.WAFER 2.0MM         |         | L101220050010S |      |     |
|                             | SW330     |     | 00D 963 0200 103 | SW,TACT SKHV10920A     |         | G180000270010S |      |     |
|                             | VEC305    |     | 00D 963 0095 208 | SW,ENCODER EC16B24SA   |         | G121162400040S |      |     |

EXPLODED VIEW  
DRA-397/297 model

DRA-397/297/37



DRA-37 model



**WARNING:**  
Parts marked with this symbol  have critical characteristics.  
Use ONLY replacement parts recommended by the manufacturer.

△印の部分は安全を維持するために重要な部品です。従って交換時は必ず指定の部品を使用してください。

## PARTS LIST OF EXPLODED VIEW

\* 本表に記載されている部品は、補修用部品のため製品に使用している部品とは一部、形状、寸法などが異なる場合があります。

\* The parts listed below are for maintenance only, might differ from the parts used in the unit in appearances or dimensions.

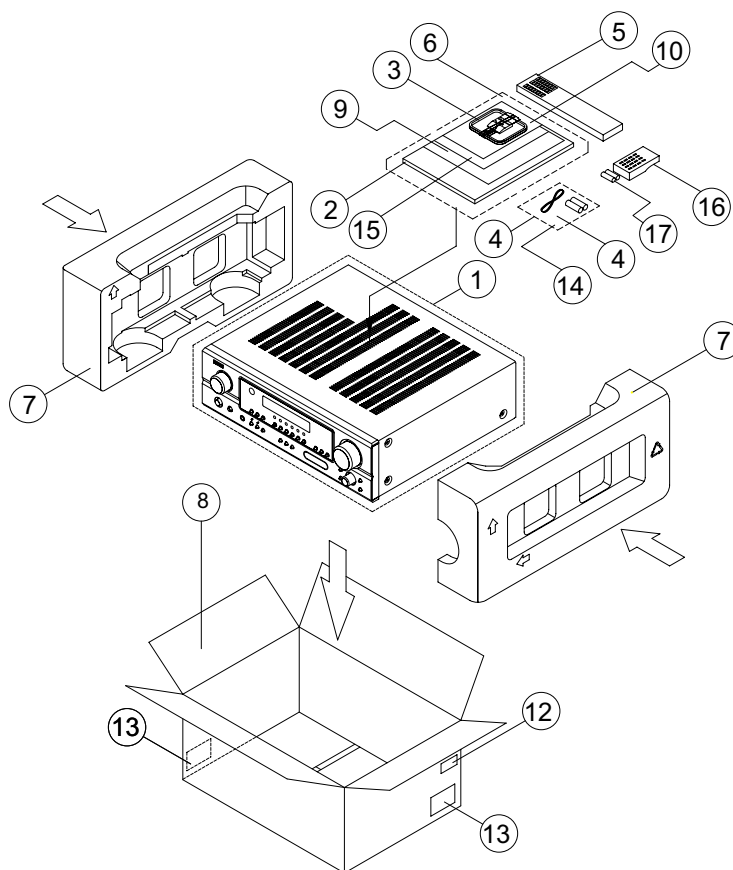
\* "nsp" 印の部品は常時在庫していませんので供給に長時間を要することがあります。場合によっては、供給をお断りする場合があります。

\* Part indicated with the mark "nsp" are not always in stock and possibly to take a long period of time for supplying, or in some case supplying of part may be refused.

|   | Ref. No. | nsp | Part No.         | Part Name                 | Remarks      |                 | Q'ty | New |
|---|----------|-----|------------------|---------------------------|--------------|-----------------|------|-----|
| ⚠ | 44A      |     | -                | MAIN P.W.B. UNIT ASSY     | for 397      | 7025HK0604010   | 1    |     |
|   | 43A      |     | -                | MAIN P.W.B. UNIT ASSY     | for 297      | 7025HK0603010   | 1    |     |
|   | 43A      |     | -                | MAIN P.W.B. UNIT ASSY     | for 37       | 7025HK0603040   | 1    |     |
|   | 13       |     |                  | P.C.B FUNCTION UNIT       | for 297, 397 |                 |      |     |
|   | 15       |     |                  | P.C.B POWER SW UNIT       |              |                 |      |     |
|   | 43       |     |                  | P.C.B MAIN UNIT           |              |                 |      |     |
|   | 57       |     |                  | P.C.B VIDEO UNIT          |              |                 |      |     |
|   | 22A      |     | -                | FRONT P.W.B. UNIT ASSY    | for 397      | 7025HK0604011   | 1    |     |
|   | 21A      |     | -                | FRONT P.W.B. UNIT ASSY    | for 297      | 7025HK0603011   | 1    |     |
|   | 21A      |     | -                | FRONT P.W.B. UNIT ASSY    | for 37       | 7025HK0603041   | 1    |     |
|   | 14       |     |                  | P.C.B HEADPHONE UNIT      | for 37       |                 |      |     |
|   | 21       |     |                  | P.C.B FRONT UNIT          |              |                 |      |     |
|   | 56       |     |                  | P.C.B PREOUT UNIT         |              |                 |      |     |
|   | 60       |     |                  | P.C.B CPU UNIT            |              |                 |      |     |
|   | 62       |     |                  | P.C.B ZONE UNIT           | for 397      |                 |      |     |
|   | 20A      |     | -                | FUNCTION P.W.B. UNIT ASSY | for 37       | 7025HK0603044   | 1    |     |
|   | 20       |     |                  | P.C.B FUNCTION SW UNIT    |              |                 |      |     |
|   | 25       |     |                  | P.C.B STANDBY SW UNIT     |              |                 |      |     |
|   |          |     |                  |                           |              |                 |      |     |
|   | 54       |     | -                | XM-READY P.W.B. UNIT ASSY | for 397      | 7025HK0604013   | 1    |     |
|   | 54       |     | -                | XM-READY P.W.B. UNIT ASSY | for 297      | 7025HK0603013   | 1    |     |
|   | 54       |     | -                | XM-READY P.W.B. UNIT ASSY | for 37       | 7025HK0603043   | 1    |     |
|   | 55       |     | -                | INPUT P.W.B. UNIT ASSY    | for 397      | 7025HK0604012   | 1    |     |
|   | 55       |     | -                | INPUT P.W.B. UNIT ASSY    | for 297      | 7025HK0603012   | 1    |     |
|   | 55       |     | -                | INPUT P.W.B. UNIT ASSY    | for 37       | 7025HK0603042   | 1    |     |
|   | 59       |     | -                | CNT P.W.B. UNIT ASSY      | for 397      | 7025HK0604014   | 1    |     |
|   |          |     |                  |                           |              |                 |      |     |
|   | 59       |     | -                | CNT P.W.B. UNIT ASSY      | for 297      | 7025HK0603014   | 1    |     |
|   | 59       |     | -                | CNT P.W.B. UNIT ASSY      | for 37       | 7025HK0603045   | 1    |     |
|   | 1        |     | 00D 963 0304 203 | PANEL FRONT               | for 397      | 3067212741000S  | 1    | *   |
|   | 1        |     | 00D 963 0304 300 | PANEL FRONT               | for 297      | 3067212741100S  | 1    | *   |
|   | 1        |     | 00D 963 0316 107 | PANEL FRONT               | for 37       | 3067212731000S  | 1    | *   |
|   | 2        |     | 00D 963 0051 501 | BADGE DENON               |              | 5630210028000S  | 1    |     |
|   | 3        |     | 00D 963 0298 306 | KNOB INPUT ASSY           | for 397      | 5088211278000SZ | 1    |     |
|   | 3        |     | 00D 963 0138 301 | KNOB INPUT                | for 297, 37  | 5087210961000S  | 1    |     |
|   | 4        |     | 00D 963 0305 600 | WINDOW DISPLAY            | for 397      | 50772119220L0S  | 1    | *   |
|   | 4        |     | 00D 963 0305 503 | WINDOW DISPLAY            | for 297      | 50772119220K0S  | 1    | *   |
|   | 4        |     | 00D 963 0316 408 | WINDOW DISPLAY            | for 37       | 5077212283010S  | 1    | *   |
|   | 5        |     | 00D 963 0316 709 | BUTTON 2KEY               | for 397      | 5097213171000S  | 1    |     |
|   | 6        |     | 00D 963 0298 209 | KNOB VOLUME ASSY          | for 397      | 5088211268020SZ | 1    |     |
|   | 6        |     | 00D 963 0138 806 | KNOB VOLUME               | for 297, 37  | 5087210981000S  | 1    |     |
|   | 7        |     | 00D 963 0152 905 | KNOB SELECT               | for 397      | 5087210958000SZ | 1    |     |
|   | 7        |     | 00D 963 0138 505 | KNOB SELECT               | for 297, 37  | 5087210971000S  | 1    |     |
|   | 8        | nsp | 00D 963 0138 000 | BRACKET SIDE L/R          |              | 4010211986000S  | 2    |     |
|   | 9        |     | 00D 963 0137 807 | LENS STANDBY              |              | 3710210503000S  | 1    |     |
|   | 10       |     | 00D 963 0184 106 | BUTTON STANDBY            |              | 5097212368000SZ | 1    |     |
|   | 11       |     | 00D 963 0184 009 | BUTTON POWER              |              | 5097212358000SZ | 1    |     |
|   | 12       |     | 00D 960 0191 417 | LENS LED                  |              | 3710210043001S  | 2    |     |

|               | Ref. No. | nsp | Part No.         | Part Name                     | Remarks                    |                | Q'ty | New |
|---------------|----------|-----|------------------|-------------------------------|----------------------------|----------------|------|-----|
|               | 17       |     | 00D 963 0094 801 | BUTTON /3KEY(A)               | for 397, 297               | 5090211741000S | 1    |     |
|               | 17       |     | 00D 963 0094 801 | BUTTON /3KEY(A)               | for 37                     | 5097211741000S | 1    |     |
|               | 22       |     | 00D 963 0139 407 | BUTTON 4KEY                   | for 397, 297               | 5097212341000S | 1    |     |
|               | 22       |     | 00D 963 0316 602 | BUTTON 4KEY                   | for 37                     | 5097213161000S | 1    |     |
|               | 23       |     | 00D 963 0139 106 | BUTTON 3KEY                   | for 397, 297               | 5097212331000S | 2    |     |
|               | 23       |     | 00D 963 0316 505 | BUTTON 3KEY                   | for 37                     | 5097213131000S | 2    |     |
|               | 26       | nsp | 00D 960 0184 301 | BRACKET HEAT SINK-F           |                            | 4010210396000S | 1    |     |
|               | 27       |     | 00D 963 0280 107 | TR,2SC3964                    | Q505FR, Q505FL             | J502396400000S | 2    |     |
|               | 28       |     | 00D 960 0187 900 | POSISTOR P43T7D330BW16        |                            | F320161001020S | 1    |     |
|               | 29       |     | 00D 963 0044 107 | TR,2SB1560-Y                  | for 397 Q507FR, Q507FL     | J5011560Y0000S | 2    |     |
|               | 29       |     | 00D 963 0313 906 | TR,2SB2SB1559Y                | for 297, 37 Q507FR, Q507FL | J5011559Y1170S | 2    |     |
|               | 30       | nsp | 00D 963 0247 108 | CABINET                       |                            | 3000210096400S | 1    |     |
|               | 31       |     | 00D 963 0044 204 | TR,2SD2390-Y                  | for 397 Q506FR, Q506FL     | J5032390Y0000S | 2    |     |
|               | 31       |     | 00D 963 0314 002 | TR,2SD2SD2389Y                | for 297, 37 Q506FL, Q506FR | J5032389Y1170S | 2    |     |
|               | 32       | nsp | -                | HEAT SINK MAIN                | for 397                    | 2120210968100S | 1    |     |
|               | 32       | nsp | -                | HEAT SINK MAIN                | for 297, 37                | 2120210968000S | 1    |     |
|               | 33       | nsp | 00D 960 0184 204 | BRACKET HEAT SINK-B           |                            | 4010210386000S | 1    |     |
|               | 34       |     | 00D 263 1223 005 | IC,PQ20RX11                   | IC505                      | J126201100010S | 1    |     |
| ⚠             | 35       |     | 00D 960 0299 209 | IC,CJ7815F                    | IC501                      | J126781500100S | 1    |     |
| ⚠             | 36       |     | 00D 963 0219 505 | IC,CJ7915F                    | IC502                      | J126791500070S | 1    |     |
|               | 40       |     | 00D 963 0307 103 | POWER TRANS MAIN              | for 397                    | 8200880690010S | 1    |     |
|               | 40       |     | 00D 963 0306 900 | POWER TRANS MAIN              | for 297, 37                | 8200880570010S | 1    | *   |
|               | 41       | nsp | 00D 963 0268 802 | SHEET CABINET                 |                            | 1210210235000S | 3    |     |
|               | 42       |     | 00D 963 0304 504 | CHASSIS BACK                  | for 397                    | 3207211946200S | 1    | *   |
|               | 42       |     | 00D 963 0304 407 | CHASSIS BACK                  | for 297                    | 3207211946000S | 1    | *   |
|               | 42       |     | -                | CHASSIS BACK                  | for 37                     | 3207211946100S | 1    | *   |
|               | 45       |     | 00D 963 0145 608 | TUNER,FM/AM                   |                            | E903014000020S | 1    |     |
|               | 47       | nsp | 00D 960 0003 301 | SUPPORTER PCB                 |                            | 4070001601010S | 4    |     |
| ⚠             | 49       | nsp | 00D 960 0192 403 | STOPPER CORD AC               |                            | 4380210002000S | 1    |     |
|               | 50       |     | 00D 963 0292 205 | CORD ASSY                     |                            | L068125100020S | 1    |     |
|               | 51       | nsp | -                | CHASSIS MAIN                  |                            | 3200210146306S | 1    |     |
|               | 52       | nsp | 00D 963 0137 904 | FOOT                          |                            | 4007210261000S | 4    |     |
|               | 53       | nsp | 00D 963 0214 607 | CUSHION FOOT                  |                            | 4050211295000S | 4    |     |
|               | 58       | nsp | -                | SUPPORTER P.C.                |                            | 4070210192000S | 1    |     |
|               | 61       | nsp | 00D 960 0184 107 | BRACKET SUPPORTER             |                            | 4010210206000S | 1    |     |
|               | 62       | nsp | 00D 963 0316 903 | RUBBER SHEET                  |                            | 4050212635000S | 2    |     |
|               | 63       | nsp | 00D 963 0317 009 | PLATE TOP                     | for 397                    | 4470211066000S | 2    |     |
| ★             | 64       |     | 00D 963 0315 603 | CABLE,FLAT CARD 1.25MM        |                            | N712151743810S | 1    |     |
| ★             | 65       |     | 00D 963 0315 506 | CABLE,FLAT CARD               |                            | L301171230020S | 1    |     |
| ★             | 66       | nsp | 00D 960 0183 807 | TERMINAL                      | for 397                    | 3790000090000S | 1    |     |
| ★             | 67       |     | -                | LABEL RATING                  |                            | 5527042410290S | 1    |     |
| ★             | 68       | nsp | 00D 513 3333 005 | LABEL (TRANS)                 |                            |                |      |     |
| <b>SCREWS</b> |          |     |                  |                               |                            |                |      |     |
|               | A        | nsp | 00D 963 0018 007 | SCREW(3X8 B-TYPE ZNY/BH)      | for 397, 297               | B020030081B10S | 50   |     |
|               | A        | nsp | 00D 963 0018 007 | SCREW(3X8 B-TYPE ZNY/BH)      | for 37                     | B020030081B10S | 57   |     |
|               | B        | nsp | 00D 963 0136 701 | SCREW(3X8 BK WASHER PI12)     |                            | 1500001456020S | 4    |     |
|               | C        | nsp | 00D 960 9008 420 | SCREW(3X8 ZnY WASHER PI12)    | for 37                     | 1500001456010S | 1    |     |
|               | D        | nsp | 00D 960 0108 701 | SCREW(3X10 B-TYPE(DOT) BK/BH) | for 397, 37                | B020030103B11S | 24   |     |
|               | D        | nsp | 00D 960 0108 701 | SCREW(3X10 B-TYPE(DOT) BK/BH) | for 297                    | B020030103B11S | 23   |     |
|               | E        | nsp | 00D 963 9006 175 | SCREW(3X14 P+S-WASHER ZNY/HH) |                            | B018230141H11S | 9    |     |
|               | F        | nsp | 00D 963 0018 104 | SCREW(3X17 B-TYPE ZNY/BH)     |                            | B020030171B10S | 4    |     |
|               | G        | nsp | 00D 963 0048 307 | SCREW(4X8 B-TYPE(DOT) BK/BH)  |                            | 1500040083B10S | 6    |     |
|               | H        | nsp | 00D 960 9008 417 | SCREW(4X8 P+S-WASHER ZNY/BH)  |                            | B028940081B10S | 4    |     |
|               | I        | nsp | 00D 960 9008 420 | SCREW(3X8 ZnY WASHER PI12)    | for 397, 297               | 1500001456010S | 1    |     |
|               | L        | nsp | 00D 963 0136 507 | SCREW(3X8 PI9.5 B-TYPE ZNY)   | for 397, 297               | 1500001206010S | 2    |     |

## PACKING VIEW



## PARTS LIST OF PACKING & ACCESSORIES

\* 本表に記載されている部品は、補修用部品のため製品に使用している部品とは一部、形状、寸法などが異なる場合があります。

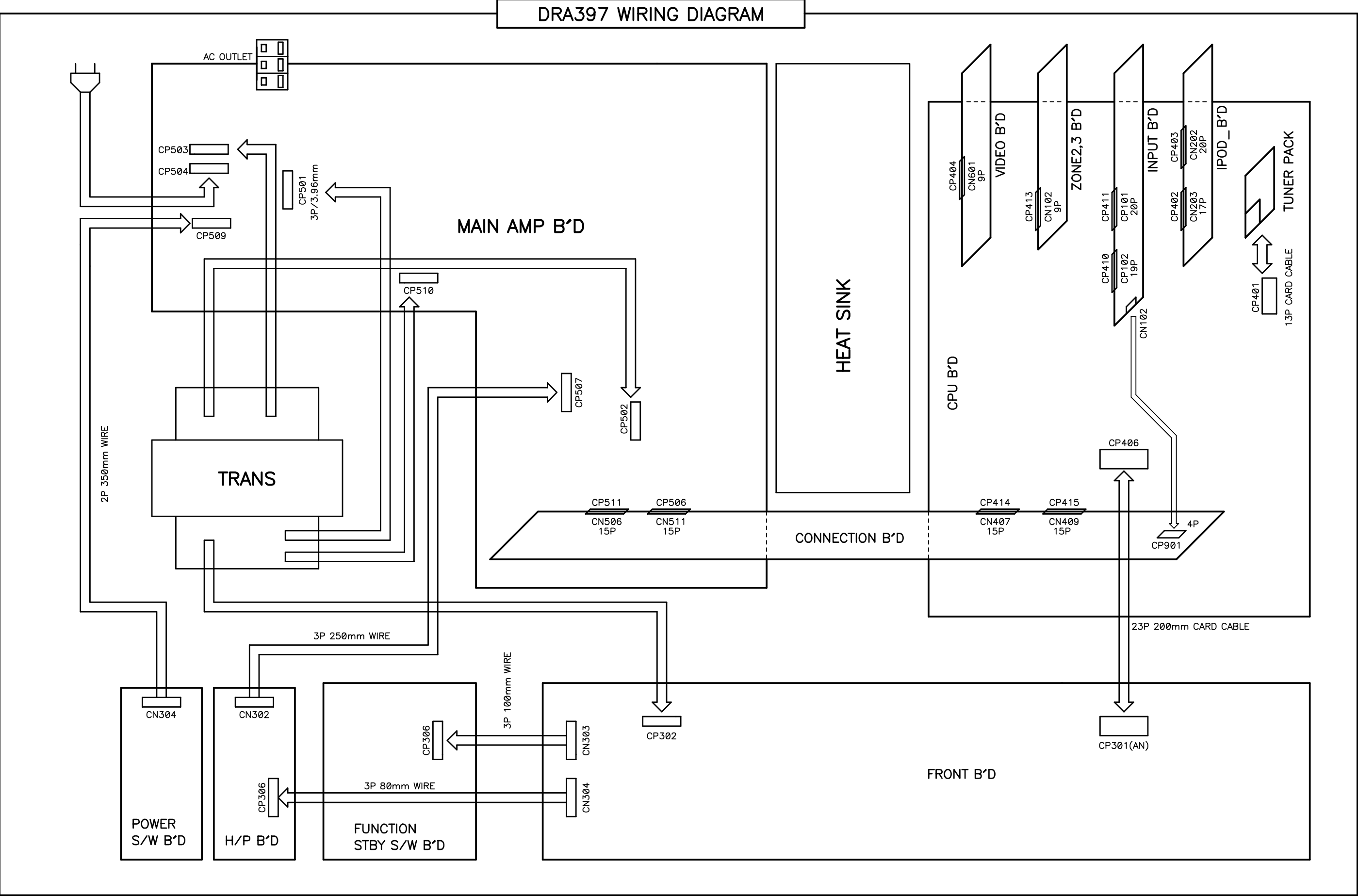
\* The parts listed below are for maintenance only, might differ from the parts used in the unit in appearances or dimensions.

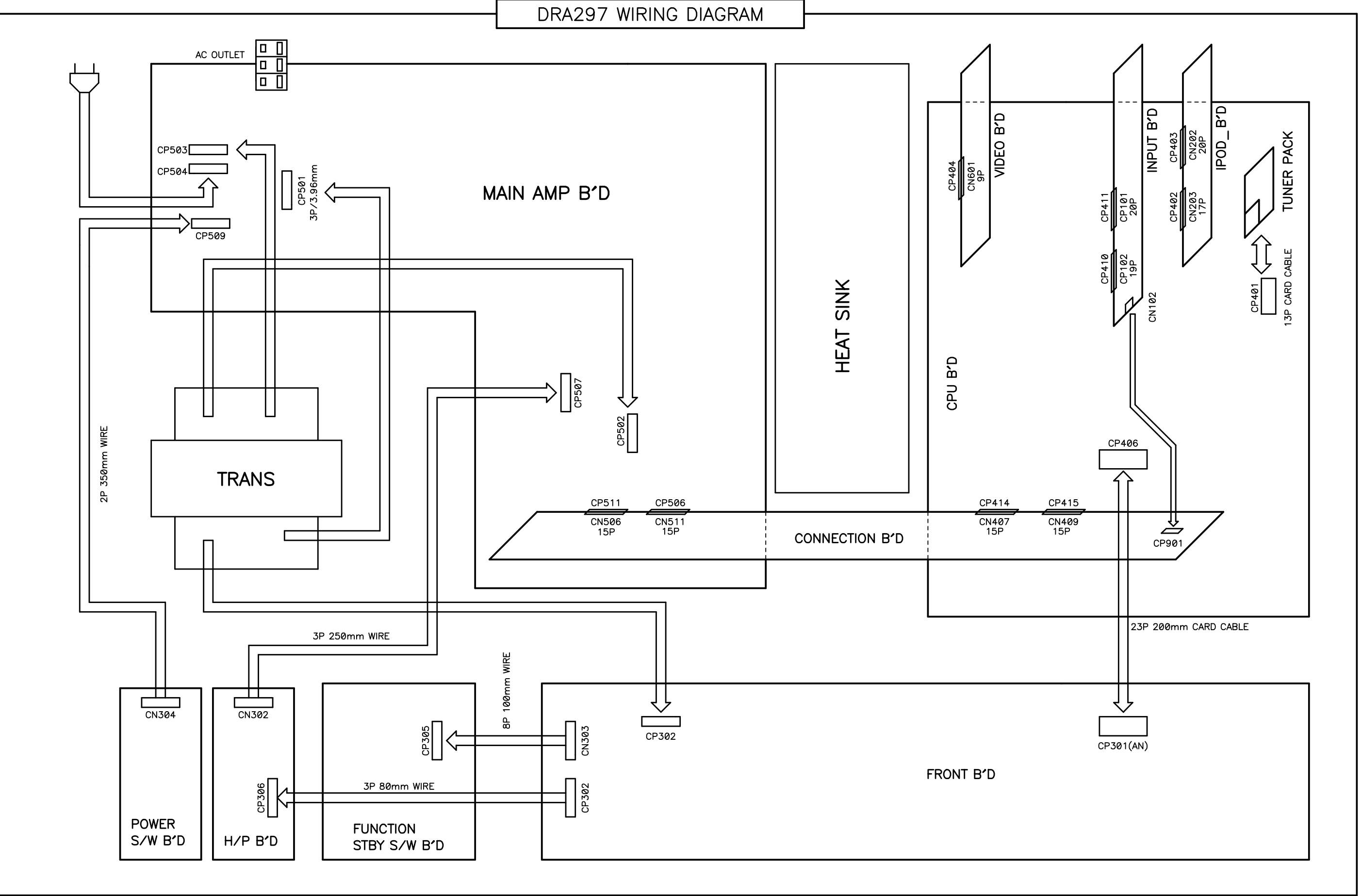
\* "nsp" 印の部品は常時在庫していませんので供給に長時間を要することがあります。場合によっては、供給をお断りする場合があります。

\* Part indicated with the mark "nsp" are not always in stock and possibly to take a long period of time for supplying, or in some case supplying of part may be refused.

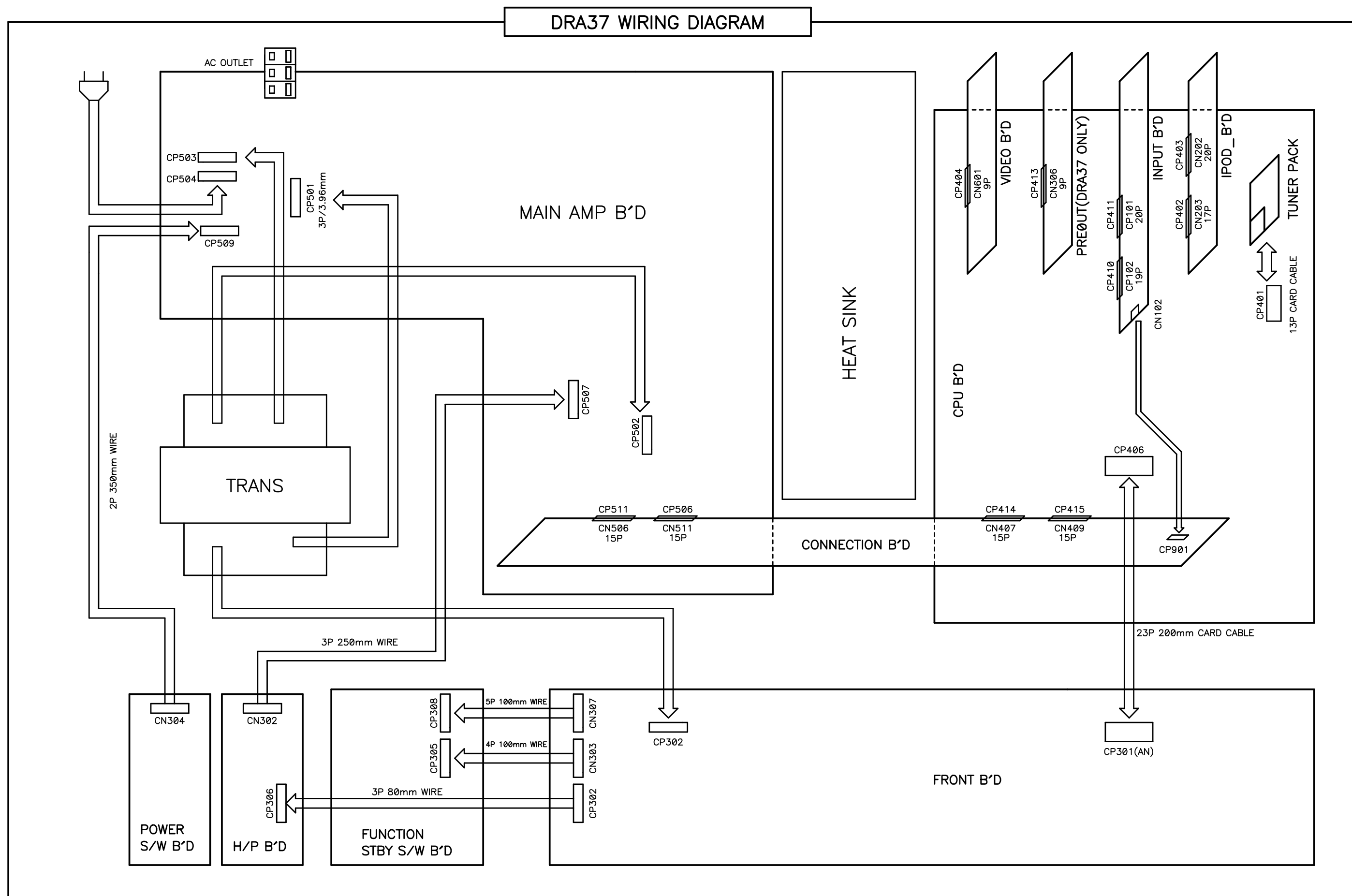
|  | Ref. No. | nsp | Part No.         | Part Name              | Remarks     |                | Q'ty | New |
|--|----------|-----|------------------|------------------------|-------------|----------------|------|-----|
|  | 1        | nsp | 00D 963 0241 405 | POLY BAG SET           |             | 6327040059000S | 1    |     |
|  | 2        |     | 00D 963 0306 104 | INSTRUCTION MANUAL     | for 397     | 5707210130240S | 1    | *   |
|  | 2        |     | 00D 963 0305 901 | INSTRUCTION MANUAL     | for 297     | 5707210130210S | 1    | *   |
|  | 2        |     | 00D 511 4541 007 | INSTRUCTION MANUAL     | for 37      | 5707210130230S | 1    | *   |
|  | 3        |     | 00D 231 0089 007 | AM ANTENNA WIRE        |             | E605010110010S | 1    |     |
|  | 4        |     | 00D 963 0158 006 | FM ANTENNA WIRE        |             | E605010070001S | 1    |     |
|  | 5        |     | 00D 963 0307 307 | REMOTE CONTROL         | for 397     | 8300105200010S | 1    | *   |
|  | 5        |     | 00D 963 0307 404 | REMOTE CONTROL         | for 297, 37 | 8300105300010S | 1    | *   |
|  | 6        | nsp | 00D 963 0045 106 | POLY BAG               |             | 6330000240000S | 1    |     |
|  | 7        | nsp | 00D 963 0193 101 | CUSHION SNOW L/R       |             | 6230210154001S | 1    |     |
|  | 8        | nsp | 00D 963 0306 502 | BOX GIFT               | for 397     | 6007210310730S | 1    | *   |
|  | 8        | nsp | 00D 963 0306 405 | BOX GIFT               | for 297     | 6007210310720S | 1    | *   |
|  | 8        | nsp | 00D 963 0316 806 | BOX GIFT               | for 37      | 6007210310760S | 1    | *   |
|  | 9        |     | -                | CARD WARRANTY          |             | 5777001610036S | 1    |     |
|  | 10       |     | -                | CARD S.S. LIST         |             | 5777001620019S | 1    |     |
|  | 11       |     | -                | BATTERY DRY            |             | -              | 2    |     |
|  | 12       |     | -                | LABEL UPC              | for 397     | 5507002340800S | 1    |     |
|  | 12       |     | -                | LABEL UPC              | for 297     | 5507002360200S | 1    |     |
|  | 12       |     | -                | LABEL UPC              | for 37      | 5507002360230S | 1    |     |
|  | 13       |     | -                | LABEL CONTROL          |             | 5500014920010S | 2    |     |
|  | 14       | nsp | 00D 963 0268 006 | POLY BAG ACCESSORY     |             | 6330210222000S | 1    |     |
|  | 15       |     | -                | WARRANTY CARD-XM RADIO |             | 5727001230051S | 1    |     |
|  | 16       |     | 00D 963 0310 307 | REMOTE CONTROL         | for 397     | 8300105600010S | 1    | *   |
|  | 17       |     | -                | BATTERY DRY            | for 397     | -              | 2    |     |

WIRING DIAGRAM









## NOTE FOR SCHEMATIC DIAGRAM

### WARNING:

Parts marked with this symbol  $\triangle$  have critical characteristics. Use ONLY replacement parts recommended by the manufacturer.

### CAUTION:

Before returning the unit to the customer, make sure you make either (1) a leakage current check or (2) a line to chassis resistance check. If the leakage current exceeds 0.5 milliamps, or if the resistance from chassis to either side of the power cord is less than 460 kohms, the unit is defective.

### WARNING:

DO NOT return the unit to the customer until the problem is located and corrected.

### NOTICE:

ALL RESISTANCE VALUES IN OHM. k=1,000 OHM

M=1,000,000 OHM

ALL CAPACITANCE VALUES IN MICRO FARAD.

P=MICRO-MICRO FARAD

EACH VOLTAGE AND CURRENT ARE MEASURED AT NO SIGNAL INPUT CONDITION.

CIRCUIT AND PARTS ARE SUBJECT TO CHANGE WITHOUT PRIOR NOTICE.

## 配線図について

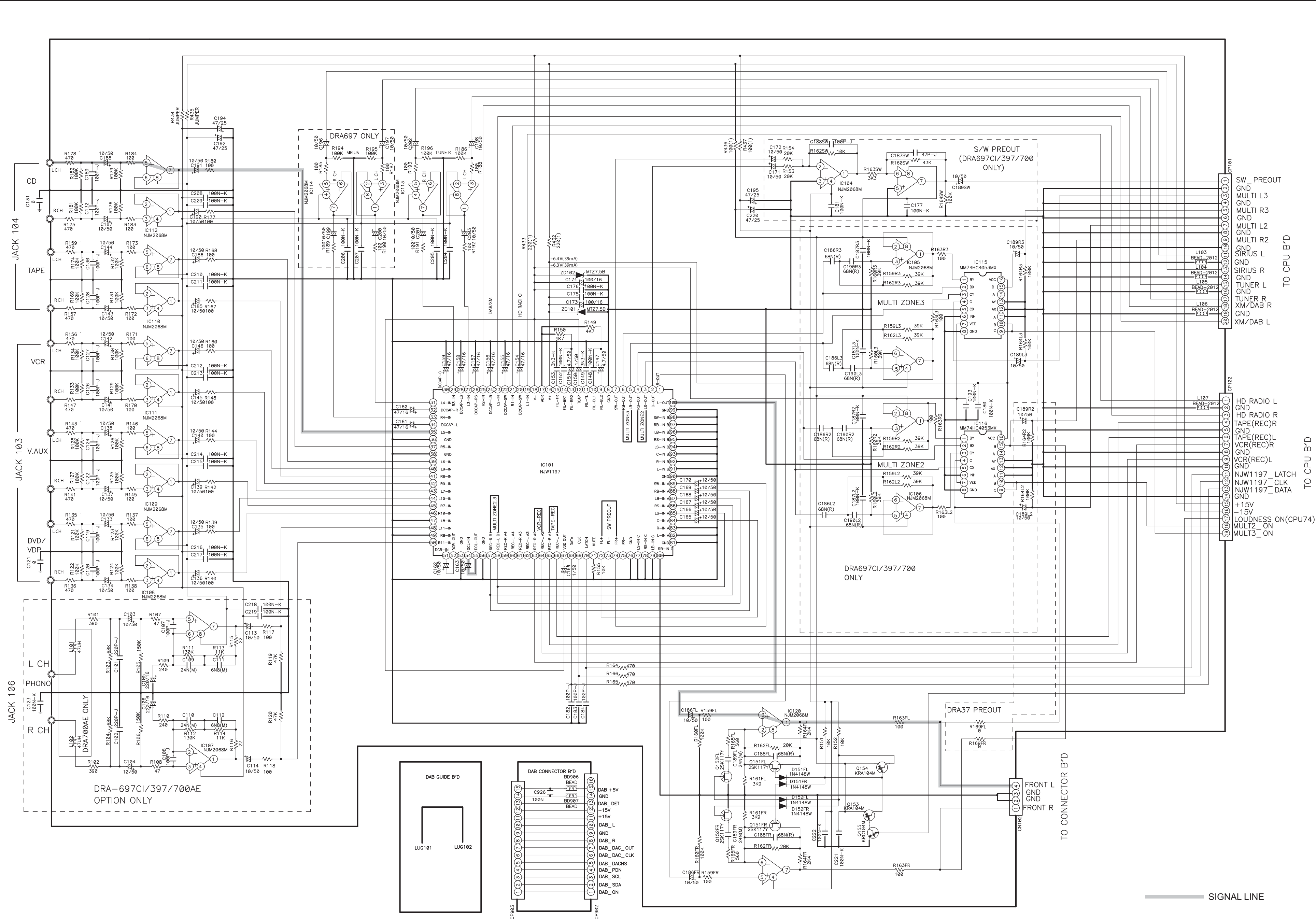
$\triangle$ 印の部品は安全を維持するために重要な部品です。従って交換時は必ず指定の部品を使用してください。

### 注)

- (1) 指定なき抵抗値は  $\Omega$ 、k は k  $\Omega$ 、M は M  $\Omega$  を示す。
- (2) 指定なきコンデンサーの値は  $\mu F$ 、p は pF を示す。
- (3) 各部の電圧は無信号の値を示す。
- (4) この配線図は基本配線図です。改良等のため変更することがありますのでご了承ください。

## SCHEMATIC DIAGRAMS (1/8)

1 2 3 4 5 6 7 8 9 10 11

SCHEMATIC DIAGRAMS (1/8)  
INPUT UNIT  
(for ALL model)





## SCHEMATIC DIAGRAMS (3/8)

1

2

3

4

5

6

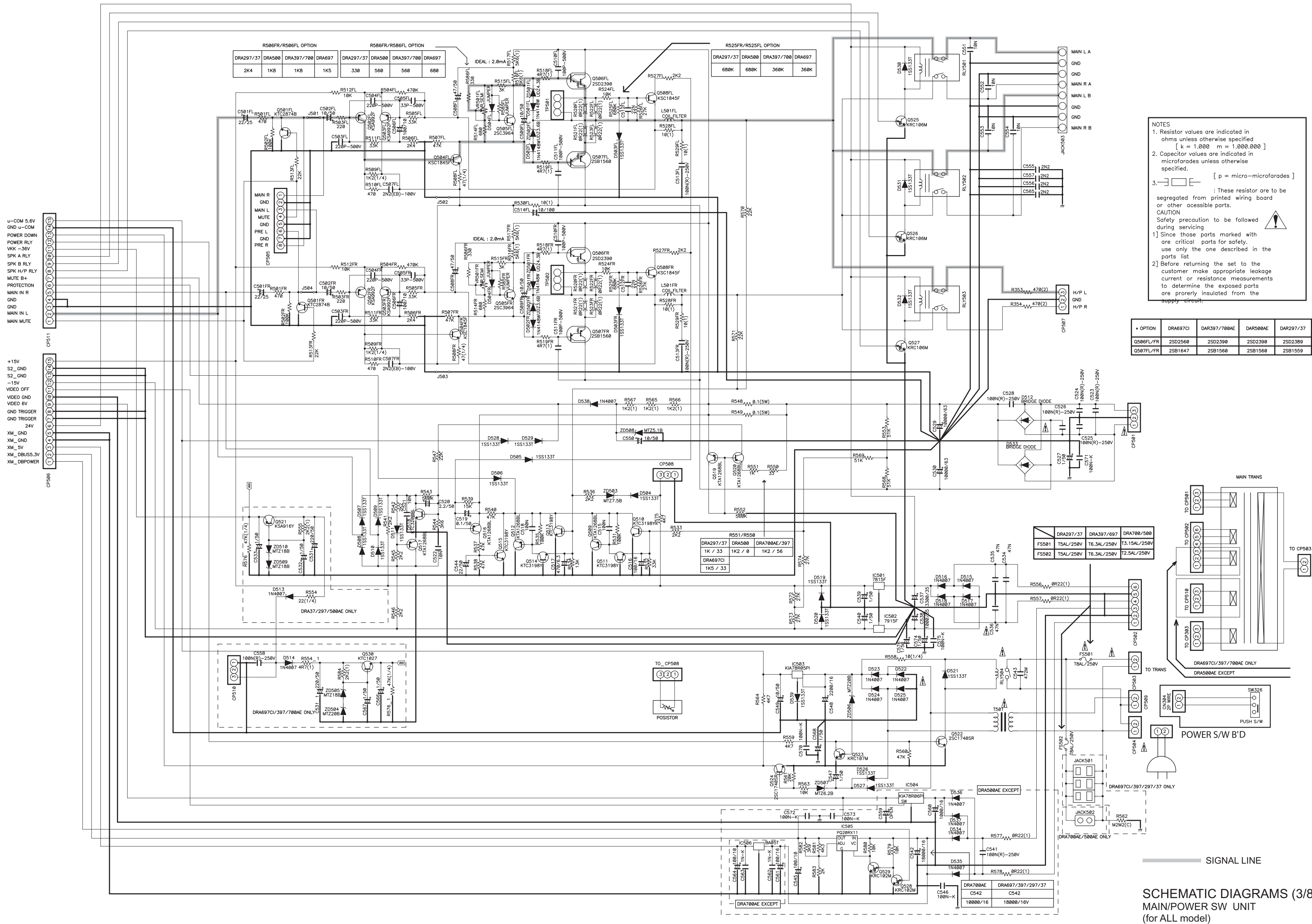
7

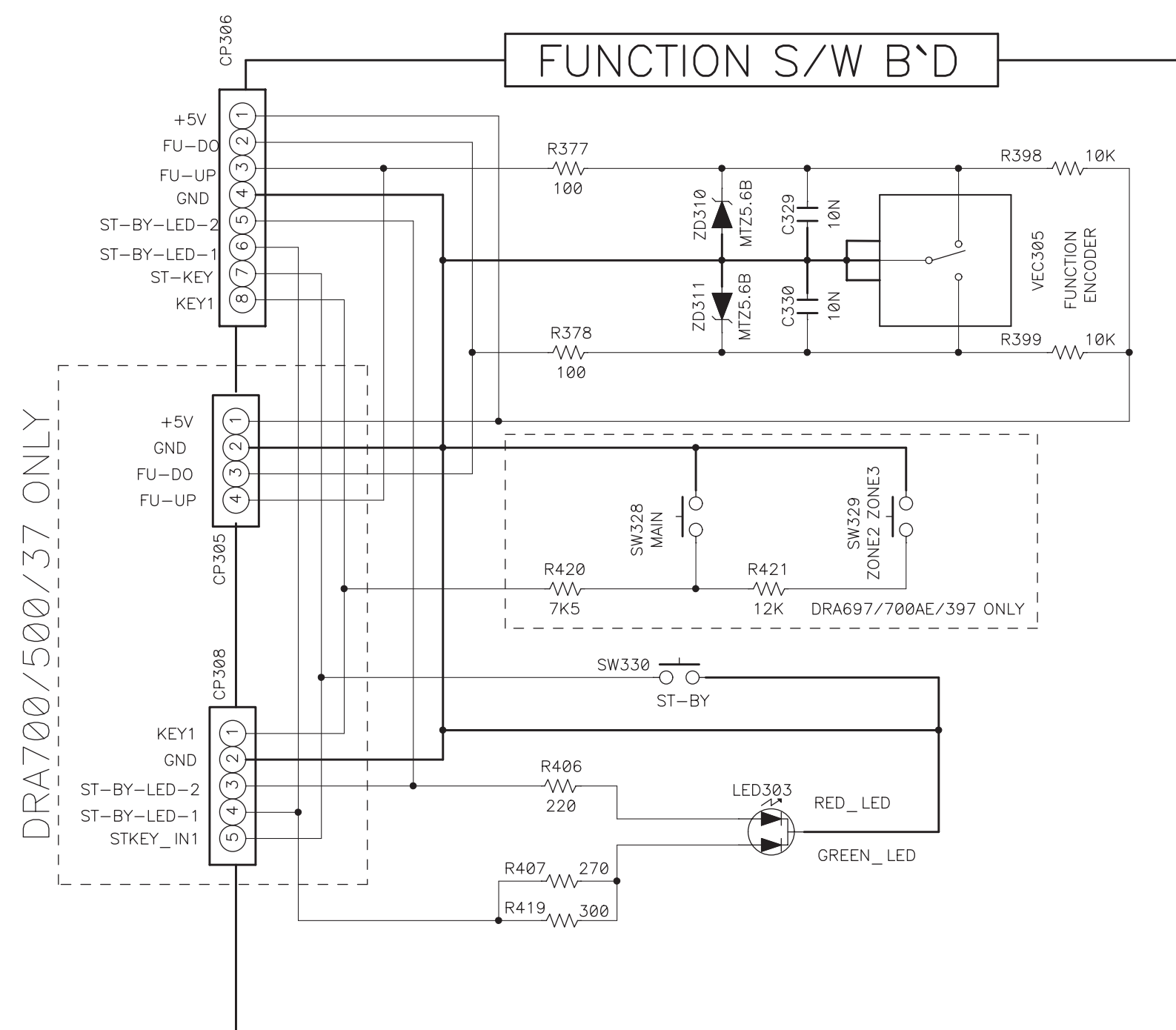
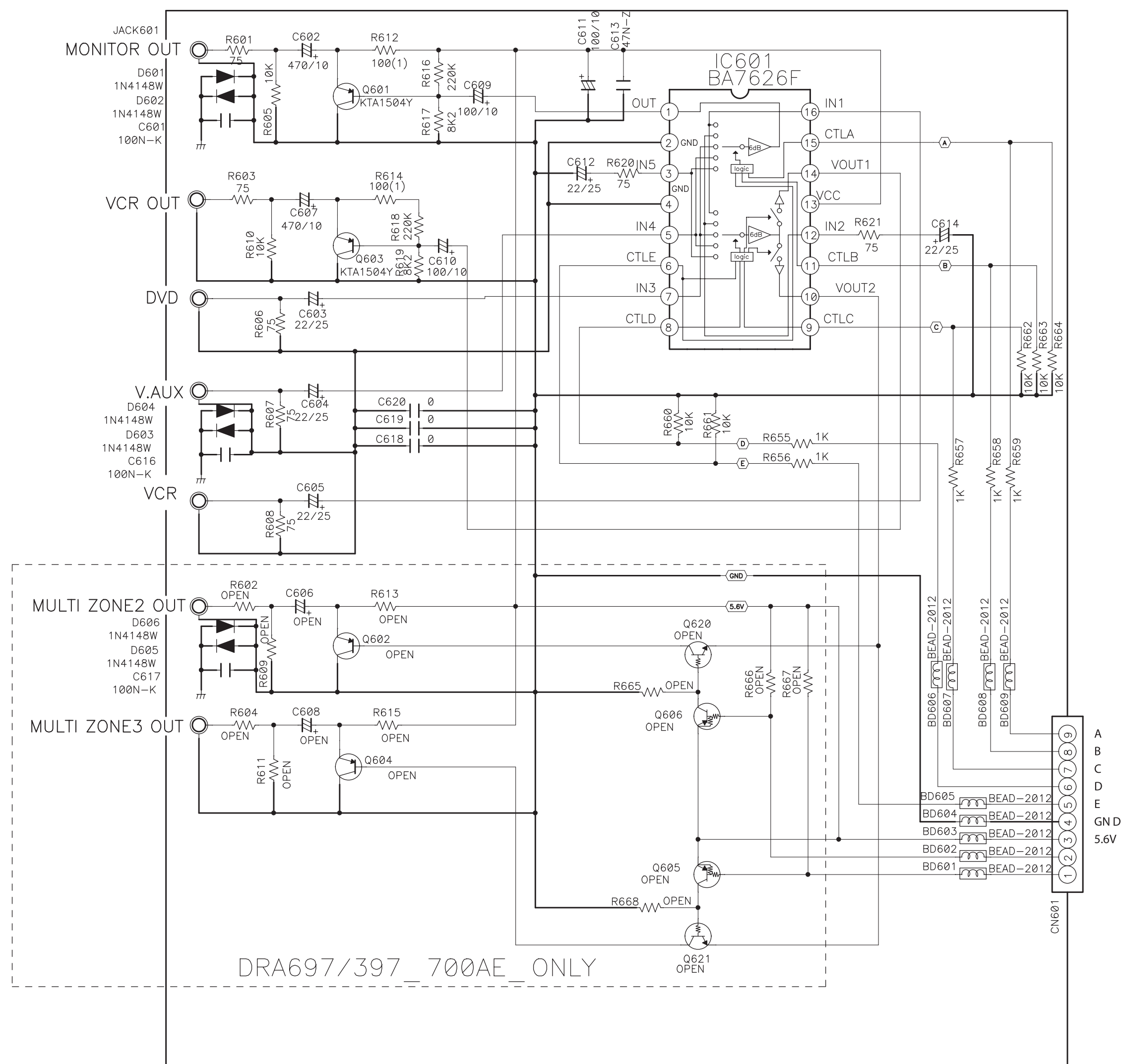
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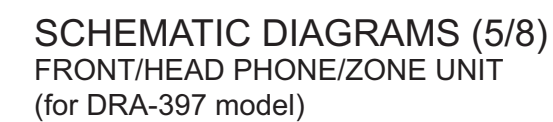
10

11





SCHEMATIC DIAGRAMS (4/8)  
VIDEO UNIT  
FUNCTION SW UNIT  
(for ALL model)





## SCHEMATIC DIAGRAMS (6/8)

1 2 3 4 5 6 7 8 9 10 11

