PLASMA TV SERVICE MANUAL

KPDP4212QG

KONKA GROUP CO,LTD.

Digital Flat Display Division

IMPORTANT SERVICE SAFETY INFORMATION

Operating the receiver outside of its cabinet or with its back removed involves a shock hazard. Work on these models should only be performed by those who are thoroughly familiar with precautions necessary when working on high voltage equipment.

Exercise care when servicing this chassis with power applied. if carelessly contacted, can cause serious shock or result in damage to the chassis. Maintain interconnecting ground lead connections between chassis, escutcheon, picture tube dag and tuner when operating chassis.

When it is necessary to make measurements or tests with AC power applied to the receiver chassis, an Isolation Transformer must be used as a safety precaution and to prevent possible damage to transistors. The Isolation Transformer should be connected between the TV line cord plug and the AC power outlet.

It is important to maintain specified values of all components and anywhere else in the received that could cause a rise in operating supply voltages. No changes should be made to the original design of the receiver.

Components shown in the shaded areas on the schematic diagram and/or identified by in the replacement parts list should be replaced only with exact factory recommended replacement parts. The use of unauthorized substitute parts man creates may create shock, fire, or other hazards.

Before returning the receiver to the user, perform the following safety checks:

1. Inspect all lead dress to make certain that leads are not pinched or that hardware is not lodged between the chassis and other metal parts in the receiver.
2. Replace all protective devices such as non-metallic control knobs, insulating fish papers, cabinet backs, adjustment and compartment covers of shields, isolation resistor-capacitor networks, mechanical insulators etc.
3. To be sure that not shock hazard exists, a check for the presence of leakage current should be made at each exposed metal part having a return path to the chassis (antenna, cabinet metal, screw heads knobs and/or shafts, escutcheon, etc.) in the following manner.

Plug the AC line cord directly into a 110V/220V/240V, AC receptacle. (Do not use an Isolation Transformer during these checks.) All checks must be repeated with the AC line cord plug connection reversed. (If necessary, a non-polarized adapter plug must be used only for the purpose of completing these checks.)

PLEASE READ BEFORE ATTEMPTING SERVICE

1. Use an Isolation Transformer when performing any service on this chassis.
2. Never disconnect any leads while receiver is in operation.
3. Disconnect all power before attempting any repairs.
4. Do not short any position of the circuit while the power is on.
5. For safety reasons, replace components any with identical replacement parts (SEE PARTS LIST).
6. Before alignment, warm up the TV for at least 30 minutes.
7. When removing a PCB or related component, after unfastening or changing a wire, be sure to put the wire back in its original position.
8. Inferior silicon grease can damage IC's and transistors. When replacing IC's and transistors, use only specified silicon grease. Remove all old silicon when applying new silicon.
9. Before removing the anode cap, discharge eletricity because it contains high voltage.

A. SPECIFICATION

System : PAL：I、B/G、D/K；SECAM：D/K、L、B/G

Channel : VHF~ Low BAND : 0 CH（46.25MHz） ~S9 CH（161.25MHz）
VHF~ High BAND : S10 CH（168.25MHz）~S41 CH（463.25MHz）
UHF BAND : E21CH（471.25MHz）~E69 CH（855.25MHz）

IF : VIF 38.9MHz SIF 33.4 MHz CIF 34.47 MHz

Audio Output Power : 5 W*2

Antenna Impedance : 75Ω

Power Consumption : 340W（Max）

Power Supply : ~180－240V, 50/60Hz

Item	Port List
1	RF Cable
2	Y/Composite 、Cb、Cr（SD）
3	Y、Pb、Pr（HD）
4	VGA/RGB
5	VGA/DVI Audio Input
6	DVI
7	Scart 1
9	Earphone Audio Output
10	Scart 2
11	Component Audio Input

B. ADJUSTMENT MANUAL

Ⅰ. TEST NOTE

1. Please follow the pointed test steps and choose the right test equipment to conduct adjustment, otherwise good effect of Unit could not be obtained. The unit should be warmed up for 30 minutes before adjustment and every parameter should be adjusted repeatedly till the optimum value obtained, the pointed voltage value should be ensured during test to get satisfied test result.

2. Test environment
   1) Temperature : 15°C-35°C
   2) Relative Humidity : 45-75%
   3) Air pressure : 86-106KPa

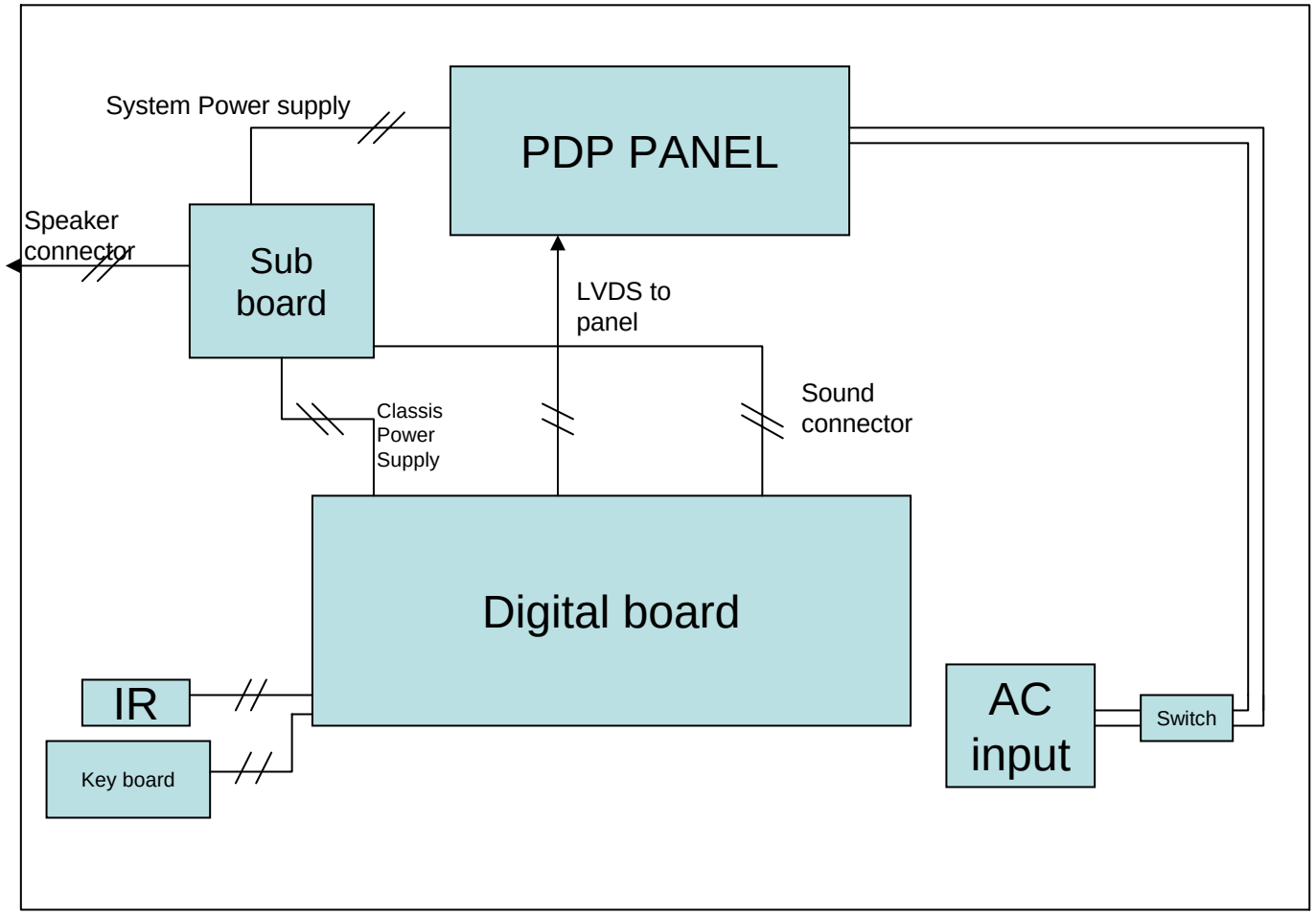
3 Test equipments（The following equipment should be calibrated before testing）
   1) Computer 1 set
   2) Multi-meter (VICTOR VC9801) 1 set
   3) Video Signal Generator (Chroma Model 2227/2327) 1 set
   4) Color Analyzer (Chroma Model 7120) 1 set
   5) DDC card (DYNACOLOR, INC D8330) 1 slice
   6) TV Video Signal Generator (FLUKE PM54200) 1 set

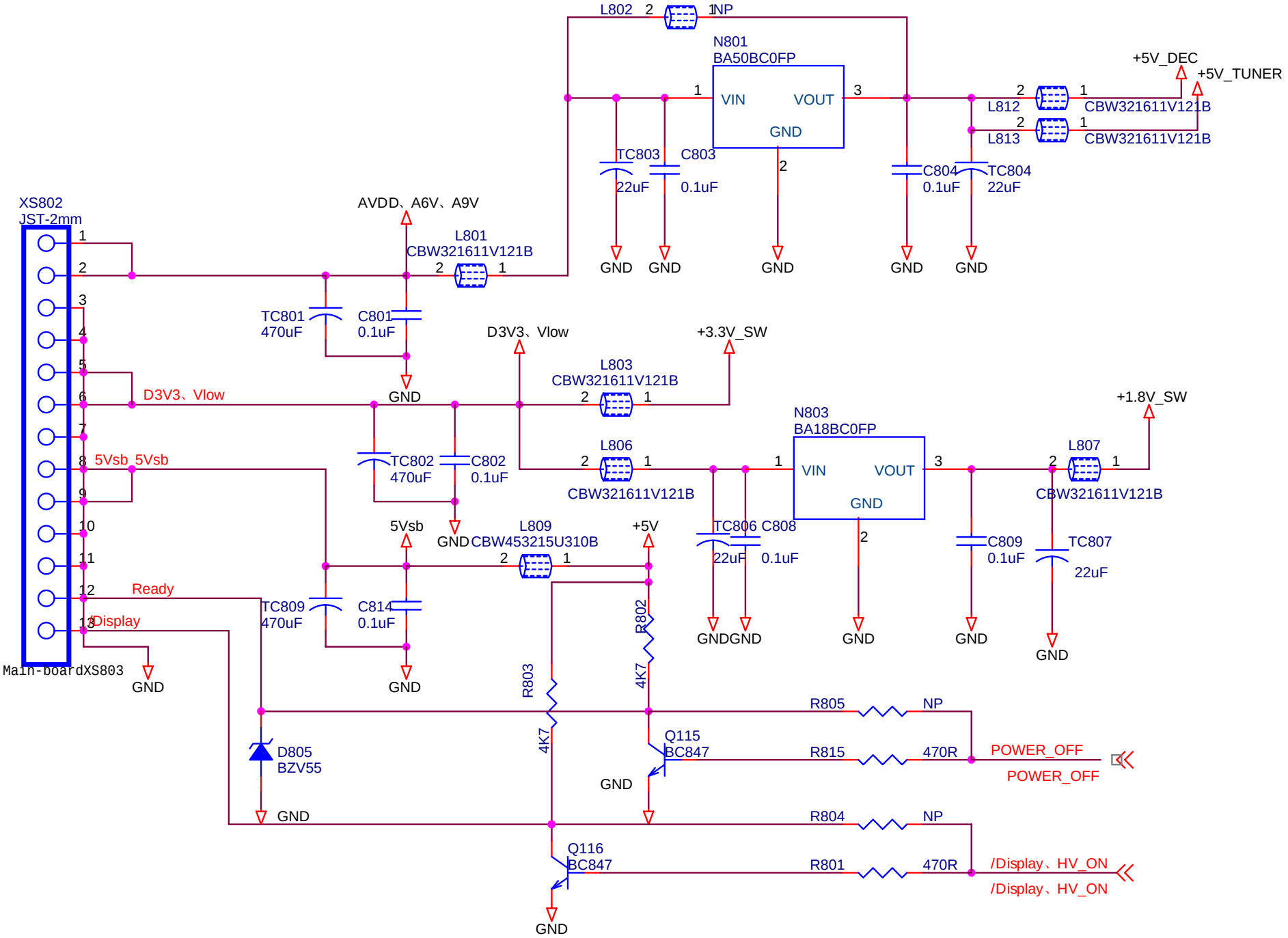
Item	Equipment	Condition	Adjust method
1. Enter the adjust menu	TV Video Signal Generator	Gray	Power on the TV , push the “call” Key of the remote controller 5 times in 3 seconds. The “ version xxxx” will display in the screen. Then push the “menu” key to enter the factory setting status.
2. Loading default data	TV Video Signal Generator	Gray	“LOAD DEFAULT”
3.Color temperature adjust			
a. Auto adjust	Pattern Generator Color analyzer	1280*1024 75HZ Color bar	“AUTO COLOR”
b.9300K	Pattern Generator Color analyzer	Full white pattern	Adjust R.G.B data in factory status x:285 y:293 Y:160cd/m^2
c.7500K	Pattern Generator Color analyzer	Full white pattern	Adjust R.G.B data in factory status x:299 y:315 Y: 160cd/m^2
d.6500K	Pattern Generator Color analyzer	Full white pattern	Adjust R.G.B data in factory status x:313 y:329 Y: 160cd/m^2
4.TV setting			
AFC setting	TV Signal Generator	60dB , Color bar and Gray	Set “AFC” on

C. Key IC list

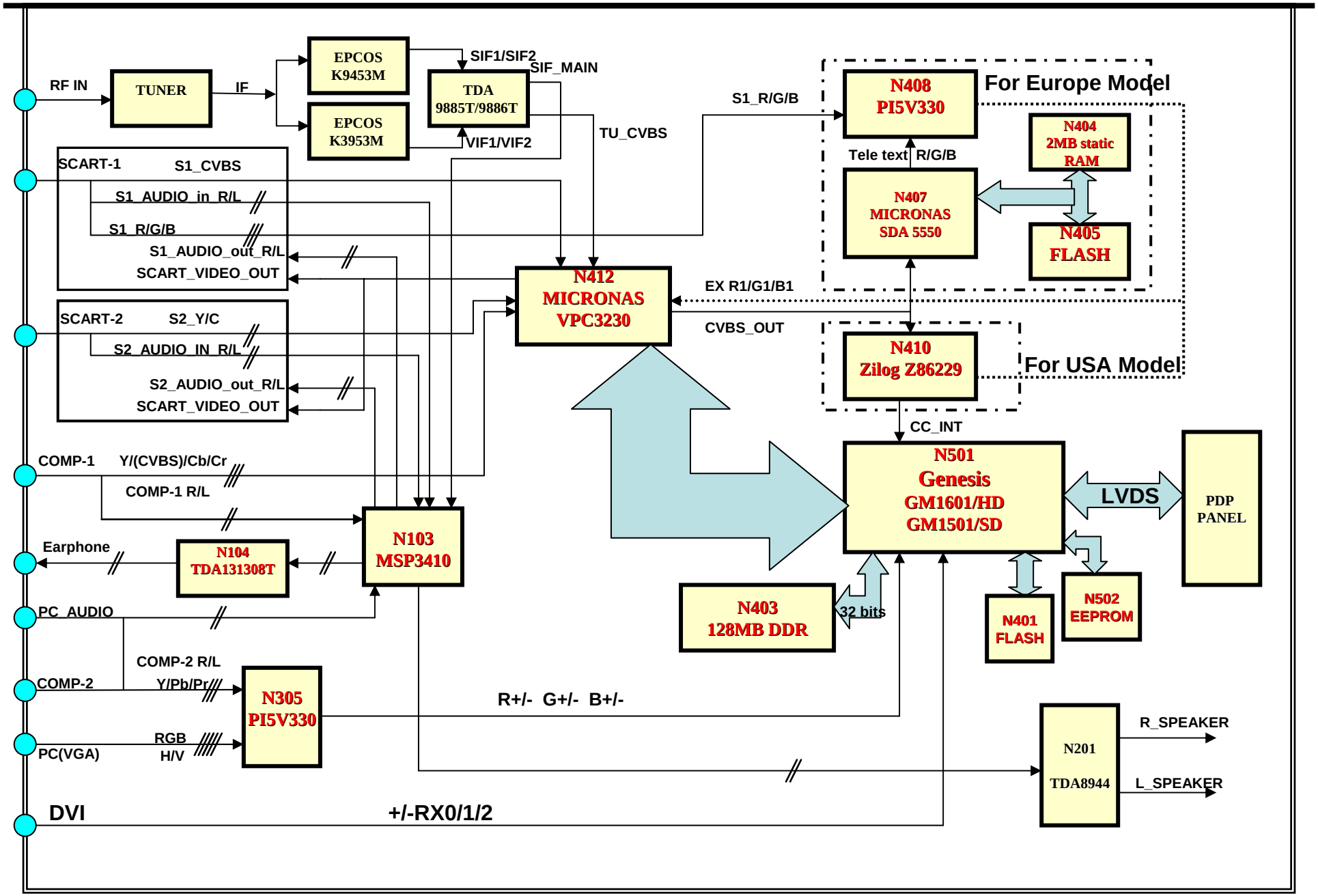
Item	P/N	Type	Circuit No.	Qty.
1	19003989	TDA9886T-PHILIPS	N102	1
2	19003674	BAV70 SOT23-PHILIPS/#	D304,D305	2
3	19004330	MSP3410G PMQFP64-MICRONAS/	N103	1
4	19004329	TDA1308-PHILIPS/#	N104	1
5	19003312	24LC21A-MICROCHIP/#	N301,N302	2
6	19003673	74LVC14A SO14-PHILIPS/#	N303	1
7	19004239 19004569	K4D263238F-UC50-SAMSUNG/# D1232AAFA-6B-ELQFP100-ELPI	N403	1
8	19003439	FSAV330-TSSOP-FAIRCHILD	N305,N408	2
9	19005599	K6F2008V2E-LF70(TSOP)-SAMSUNG	N404	1
	19004171	**IS62WV2568BLL-70H-ISSI/#**		
10	19004142	24LC32A- MICROCHIP/#	N502	1
11	19002575	24LC16B/SN-MICROCHIP/#	N406	1
12	19004169	SDA5550M-PMQFP100-MICRONAS/#	N407	1
13	19005051 19004139	W39L040AP70B-Winbond/# W39L040P-70B-WINBOND/#	N401,N405	2
14	19005170	VPC3230D-C5-PQFP80-MICRONAS	N412	1
15	19005050	GM1501-BD-416-PBGA-GENESIS/#	N501	1
16	19002896	TDA8946J-PHILIPS	N201	1(For SAMSUNG PANEL)
	19000493	TDA2616-PHILIPS/#	N201	1(For LG PANEL)
17	32001259	TUNER	N101	1

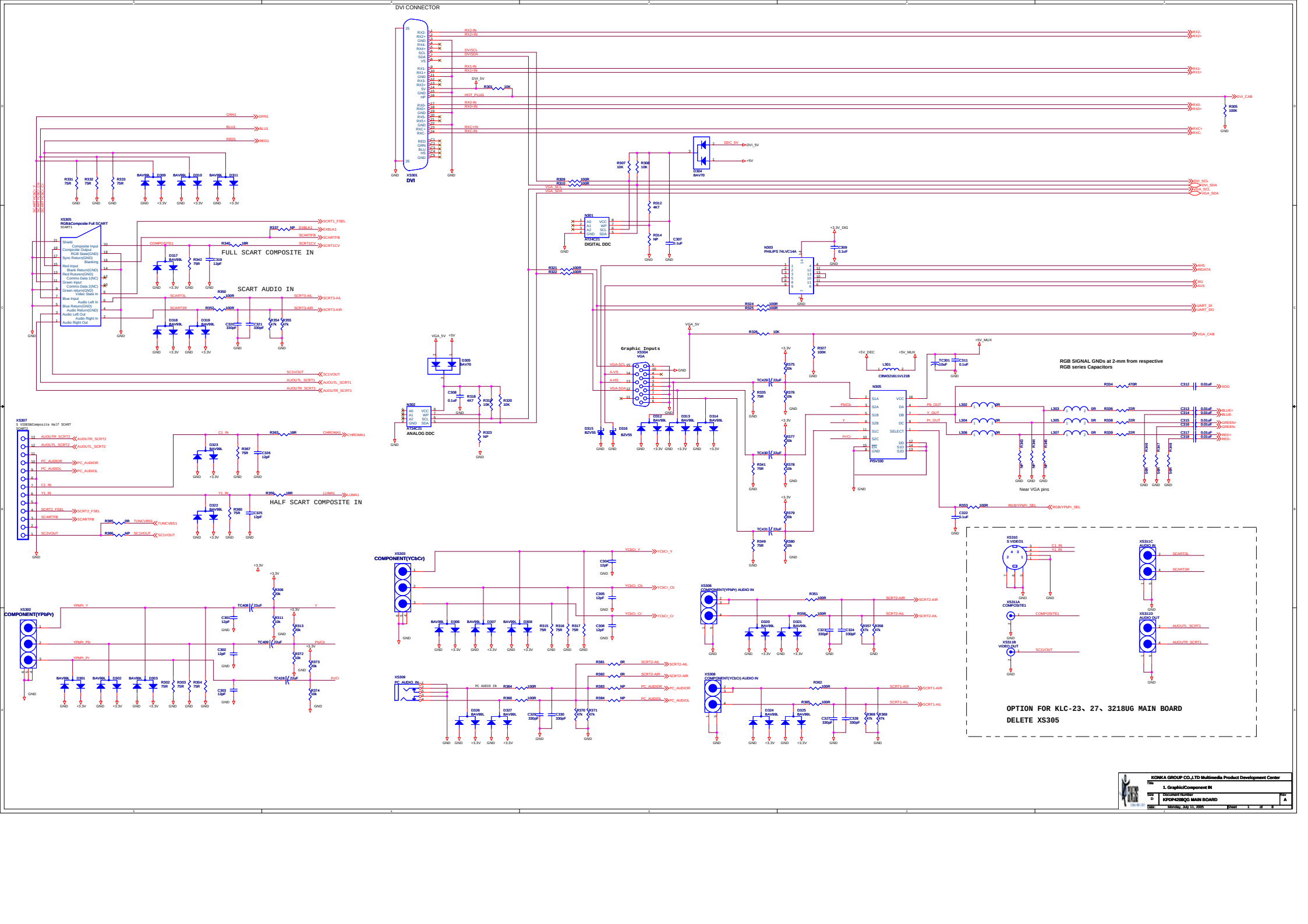
GM1601/1501 CHASSIS SYSTEM LAYOUT

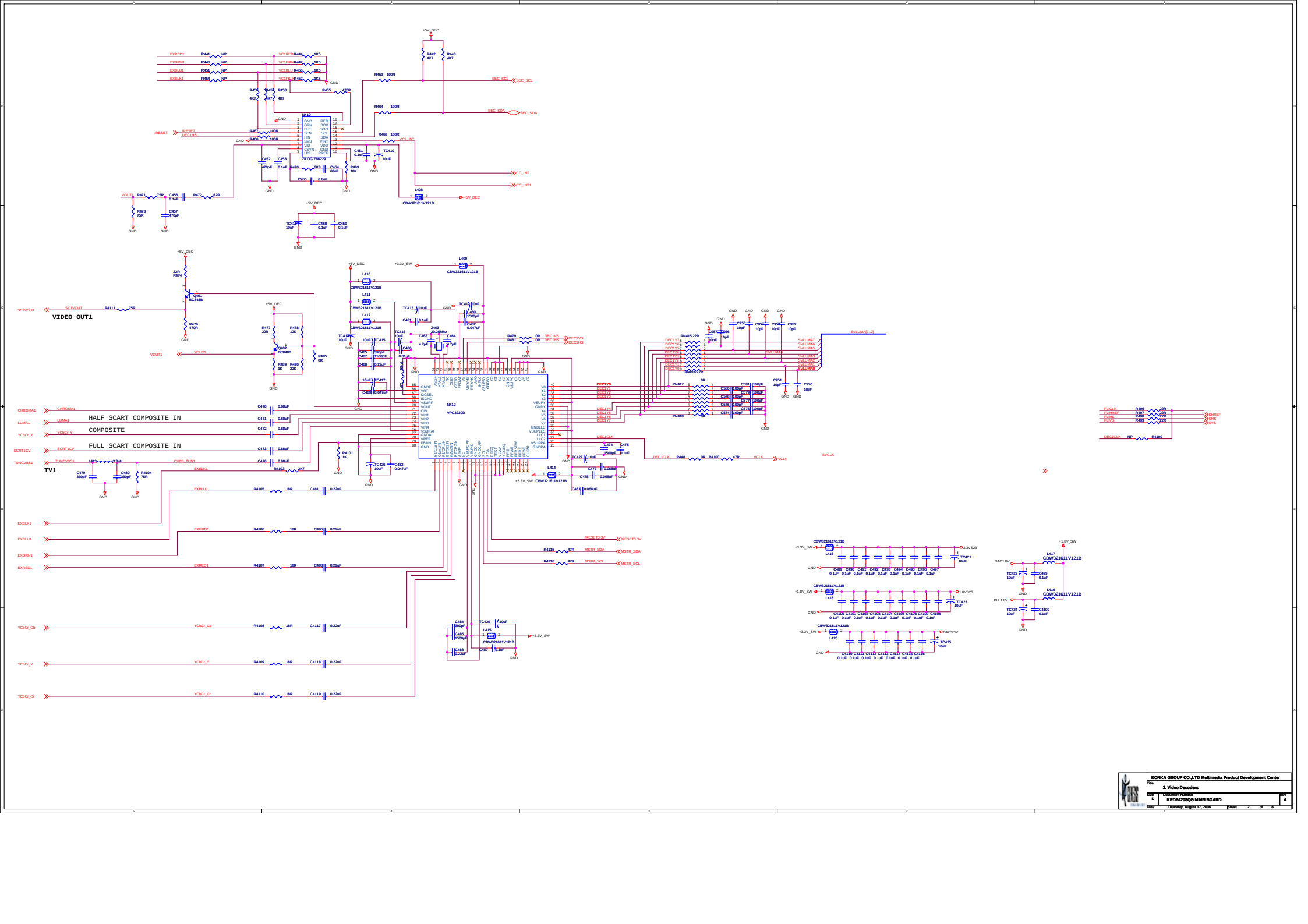



L802
NP
N801
BA50BC0FP
VIN
VOUT
GND
+5V_DEC
+5V_TUNER
L812
L813
CBW321611V121B
TC803
22uF
C803
0.1uF
C804
0.1uF
TC804
22uF
XS802
JST-2mm
AVDD、A6V、A9V
L801
CBW321611V121B
TC801
470uF
C801
0.1uF
D3V3、Vlow
+3.3V_SW
L803
CBW321611V121B
+1.8V_SW
N803
BA18BC0FP
L806
L807
TC802
470uF
C802
0.1uF
5Vsb_5Vsb
5Vsb
+5V
L809
CBW453215U310B
TC806
C808
22uF
0.1uF
C809
0.1uF
TC807
22uF
Ready
Display
TC809
470uF
C814
0.1uF
R802
4K7
R803
4K7
Main-boardXS803
D805
BZV55
Q115
BC847
R805
NP
R815
470R
POWER_OFF
Q116
BC847
R804
NP
R801
470R
/Display、HV_ON

GM1601/1501 CHASSIS SIGNAL BLOCK DIAGRAM




DVI CONNECTOR
XS301
DVI
FULL SCART COMPOSITE IN
SCART AUDIO IN
HALF SCART COMPOSITE IN
XS305
RGB&Composite Full SCART
SCART1
XS307
5 VIDEO&Composite Half SCART
SCART2
XS302
COMPONENT(YPbPr)
XS303
COMPONENT(YCbCr)
XS304
VGA
Graphic_Inputs
XS306
COMPONENT(YPbPr) AUDIO IN
XS308
COMPONENT(YCbCr) AUDIO IN
XS309
PC_AUDIO_IN
XS310
S VIDEO1
XS311A
COMPOSITE1
XS311B
VIDEO OUT
XS311C
AUDIO IN
XS311D
AUDIO OUT
N301
AT24C21
DIGITAL DDC
N302
AT24C21
ANALOG DDC
N303
PHILIPS 74LVC144A
N305
PS5V330
D304
BAV70
D305
BAV70
L301
CBW321611V121B
Near VGA pins
RGB SIGNAL GNDs at 2-mm from respective RGB series Capacitors
OPTION FOR KLC-23、27、3218UG MAIN BOARD
DELETE XS305
KONKA GROUP CO.,LTD Multimedia Product Development Center
1. Graphic/Component IN
KPDP4208QG MAIN BOARD
Monday, July 11, 2005



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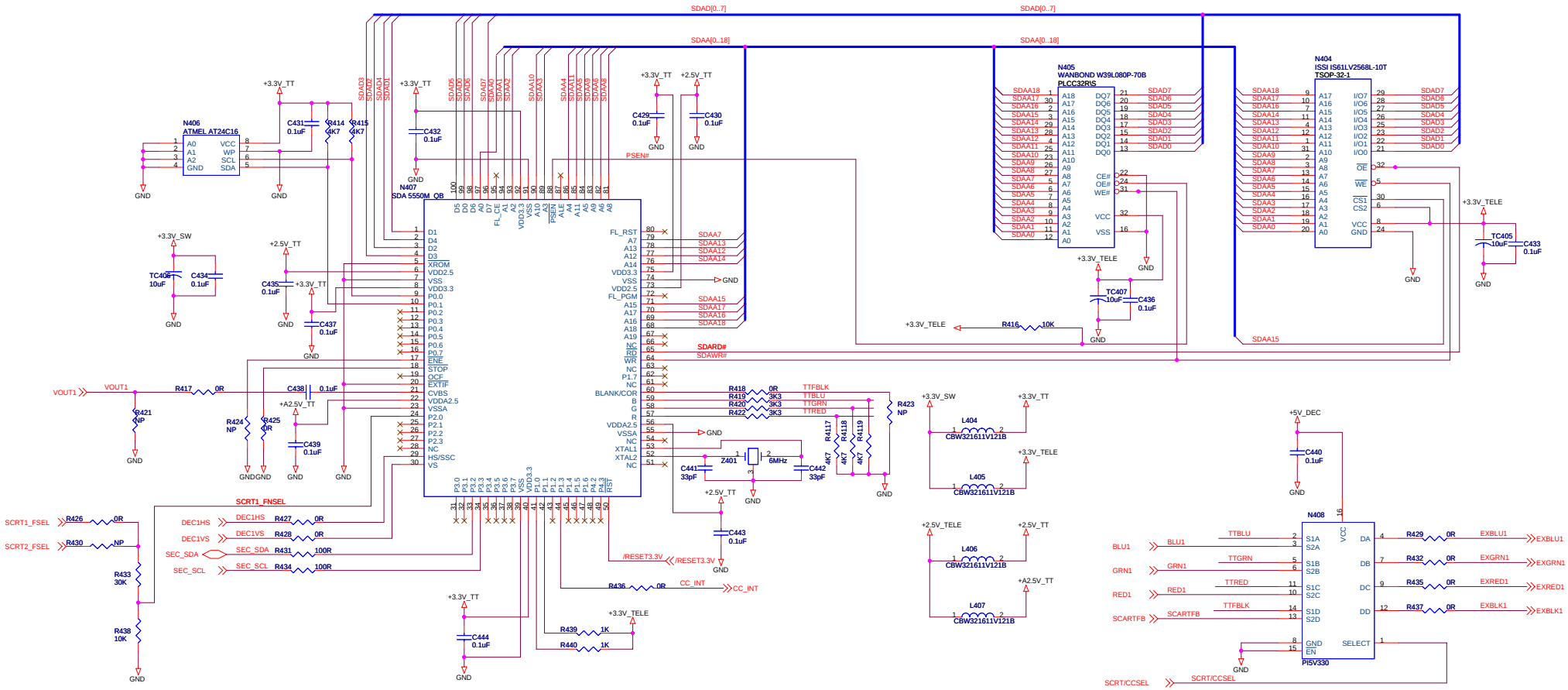
Rev: A	
Date: Thursday, August 17, 2006	Sheet 2 of 8



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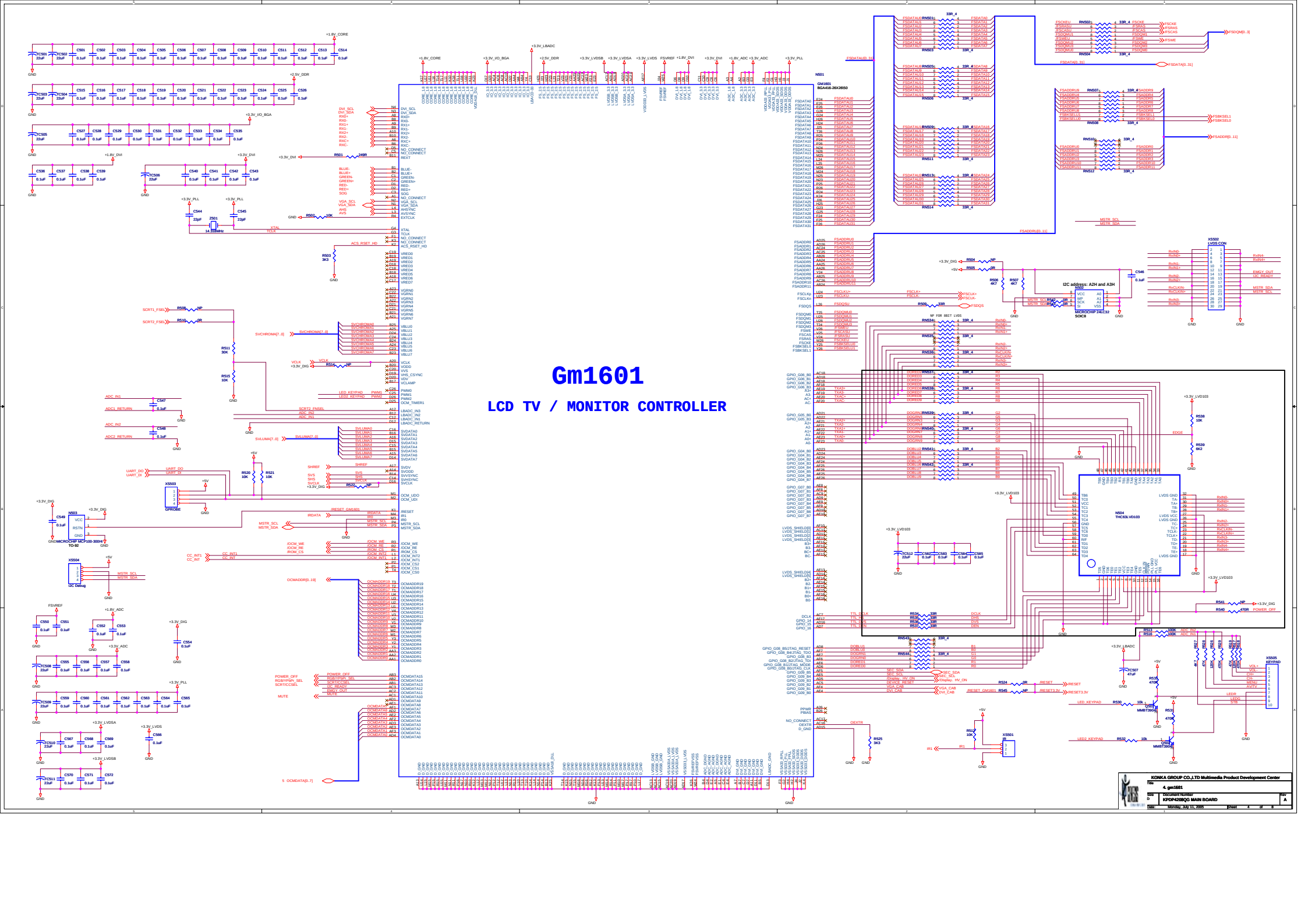
Gm1601
LCD TV / MONITOR CONTROLLER
KONKA GROUP CO.,LTD Multimedia Product Development Center
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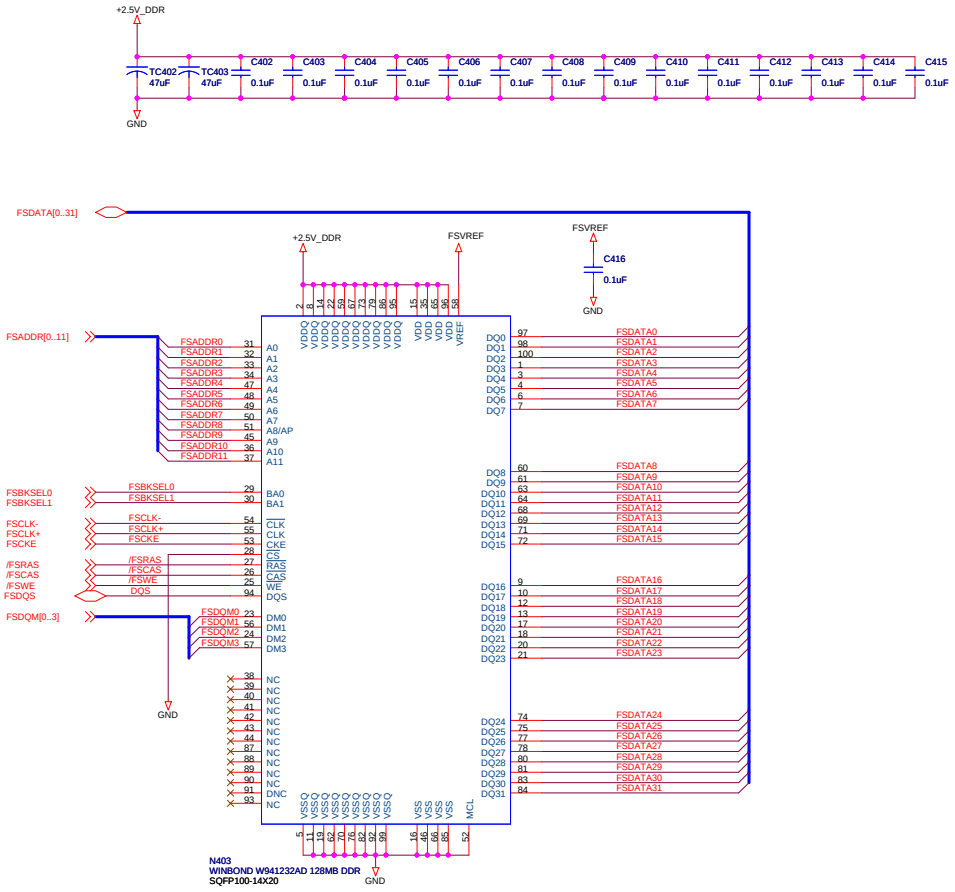

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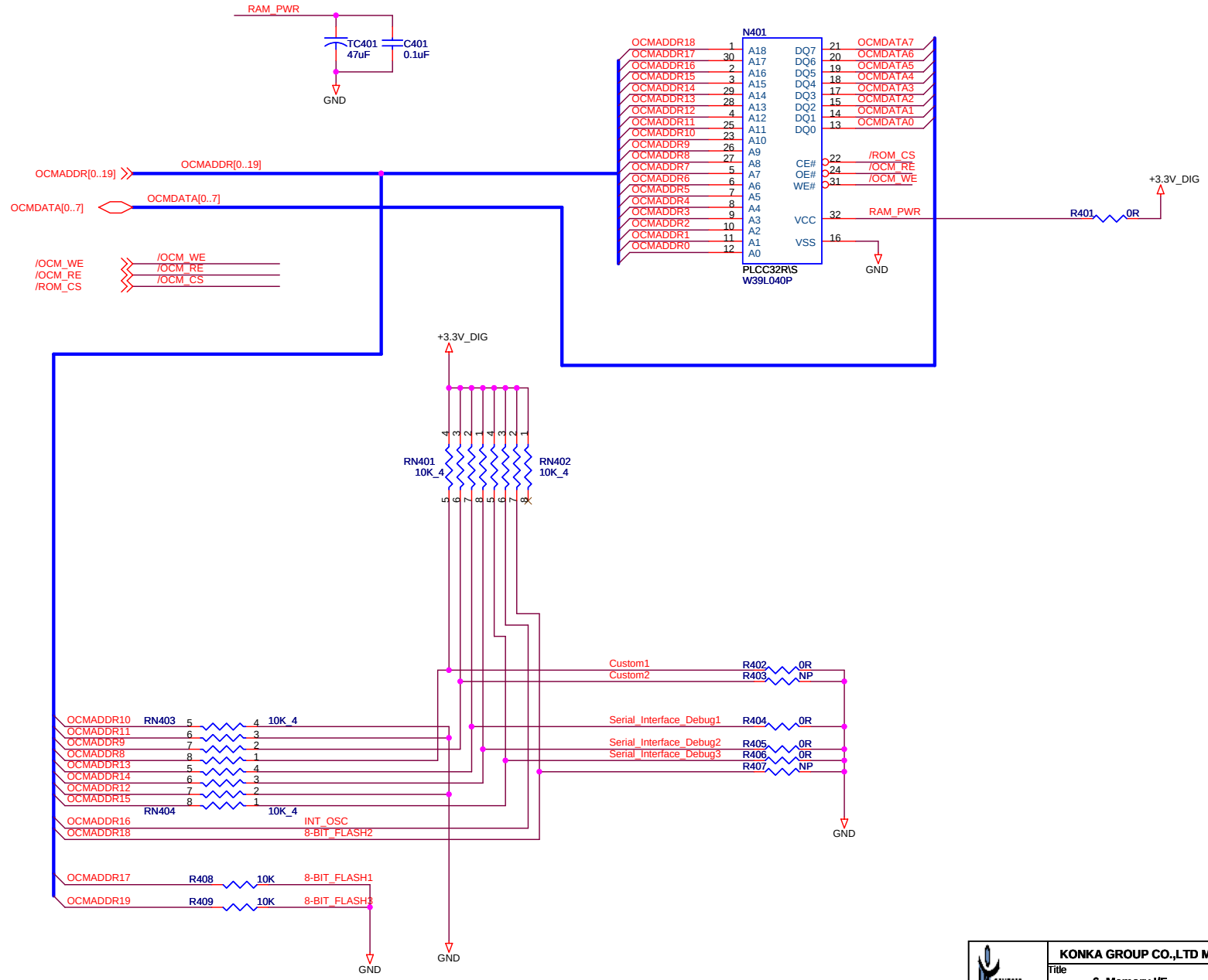

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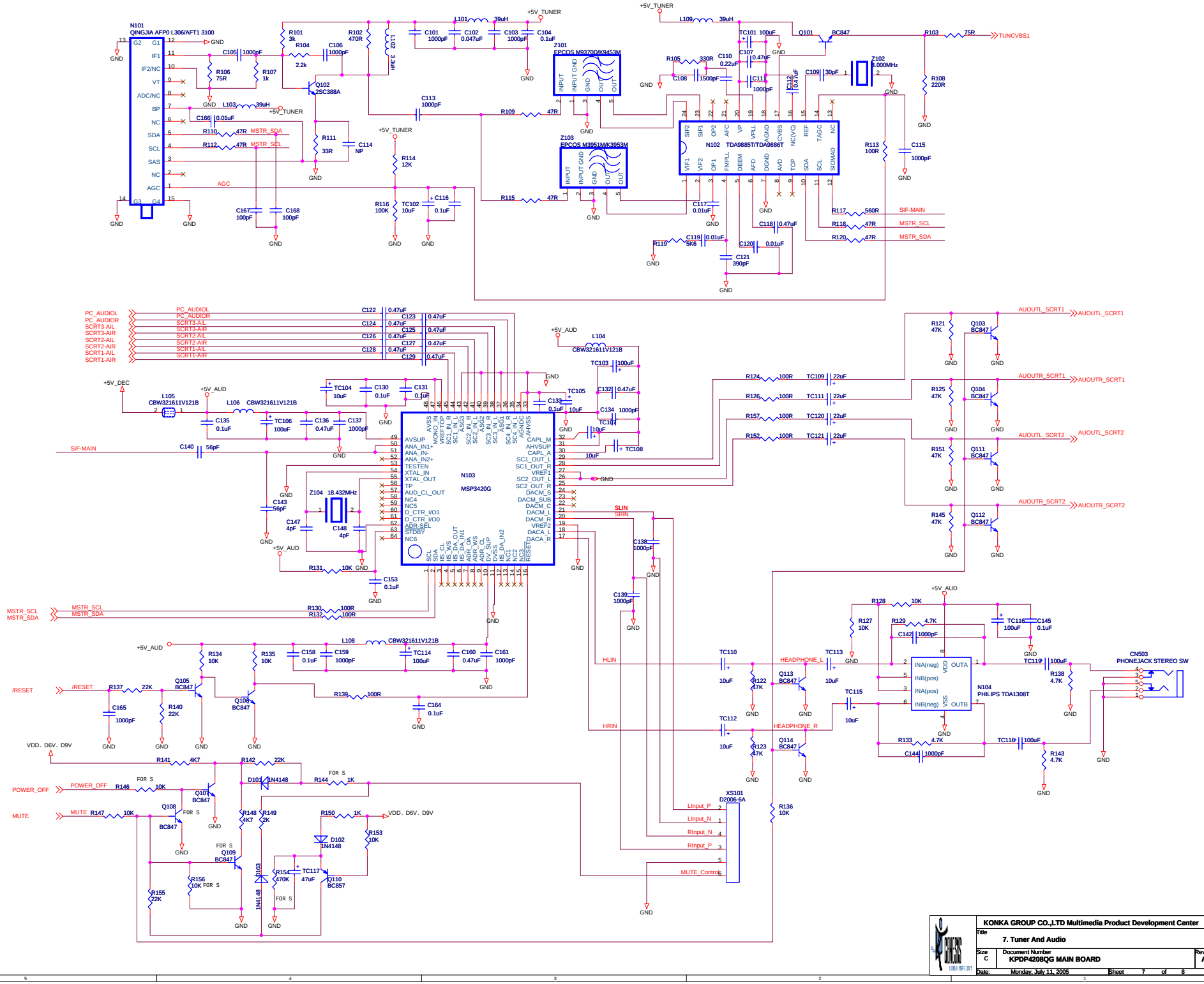
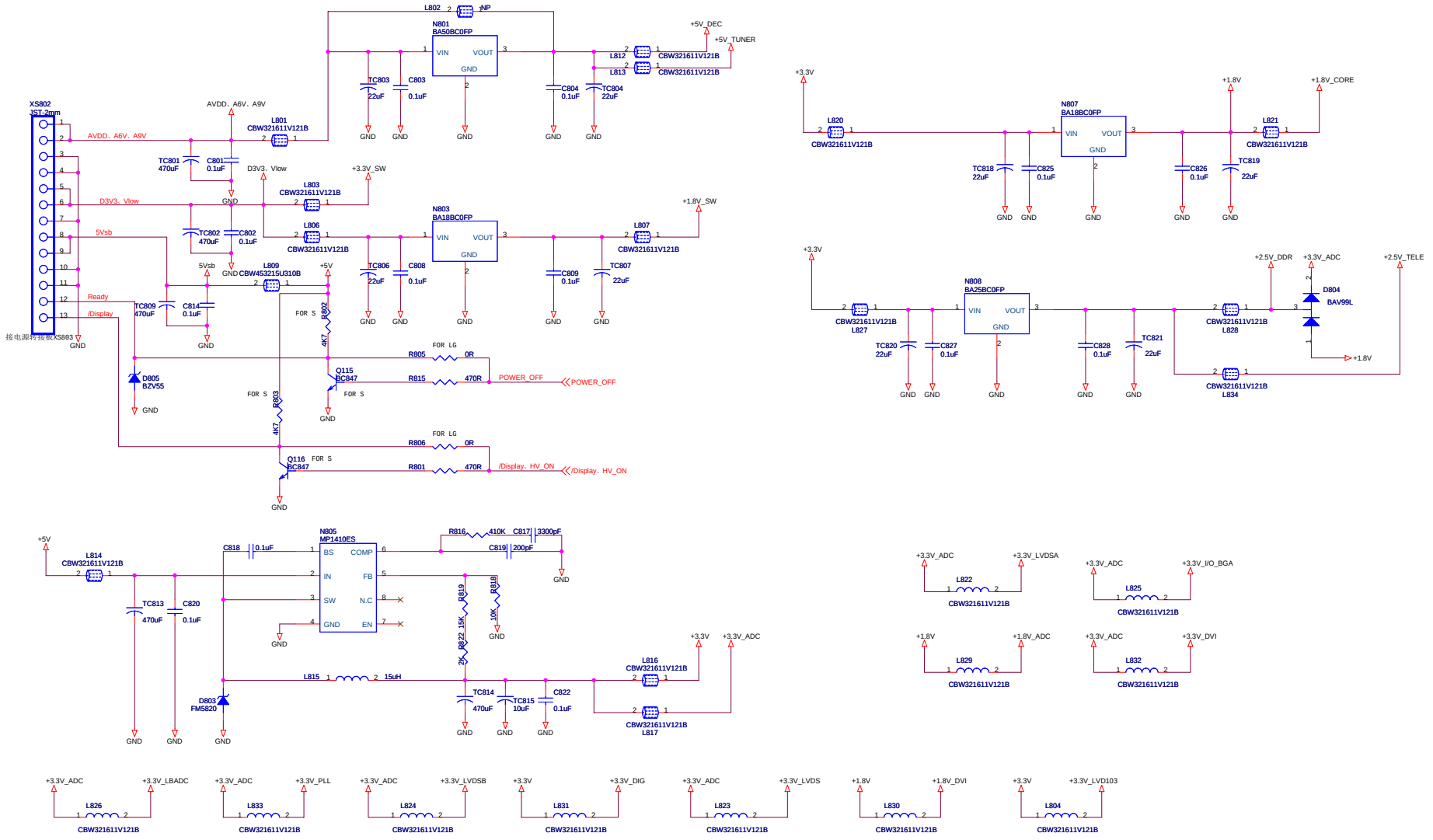

N101
QINGJIA AFP0 L306/AFT1 3100
Z101
EPCOS M9370D/K9453M
Z102
4.000MHz
Z103
EPCOS M3951M/K3953M
N102
TDA9885T/TDA9886T
N103
MSP3420G
Z104
18.432MHz
N104
PHILIPS TDA1308T
XS101
D2006-6A
CN503
PHONEJACK STEREO SW
+5V_TUNER
+5V_AUD
+5V_DEC
VDD、D6V、D9V
GND
TUNCVBS1
SIF-MAIN
AGC
MSTR_SCL
MSTR_SDA
PC_AUDIOL
PC_AUDIOR
SCRT3-AIL
SCRT3-AIR
SCRT2-AIL
SCRT2-AIR
SCRT1-AIL
SCRT1-AIR
AUOUTL_SCRT1
AUOUTR_SCRT1
AUOUTL_SCRT2
AUOUTR_SCRT2
SLIN
SRIN
HLIN
HRIN
HEADPHONE_L
HEADPHONE_R
/RESET
POWER_OFF
MUTE
LInput_P
LInput_N
RInput_N
RInput_P
MUTE_Control
KONKA GROUP CO.,LTD Multimedia Product Development Center
7. Tuner And Audio
KPDP4208QG MAIN BOARD
Monday, July 11, 2005
Sheet 7 of 8



KONKA GROUP CO.,LTD Multimedia Product Development Center		
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Date: Monday, July 11, 2005	Sheet 8 of 8	

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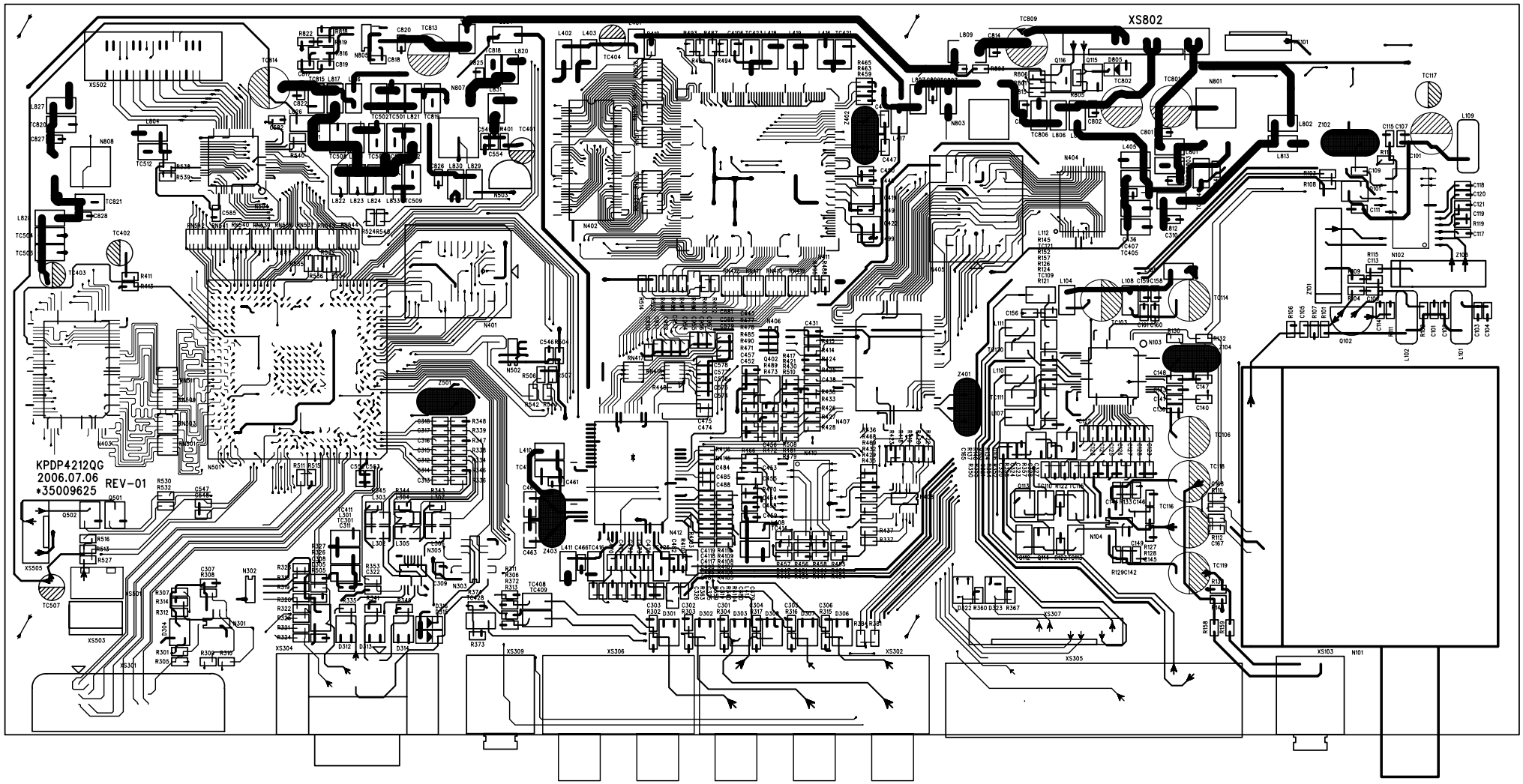

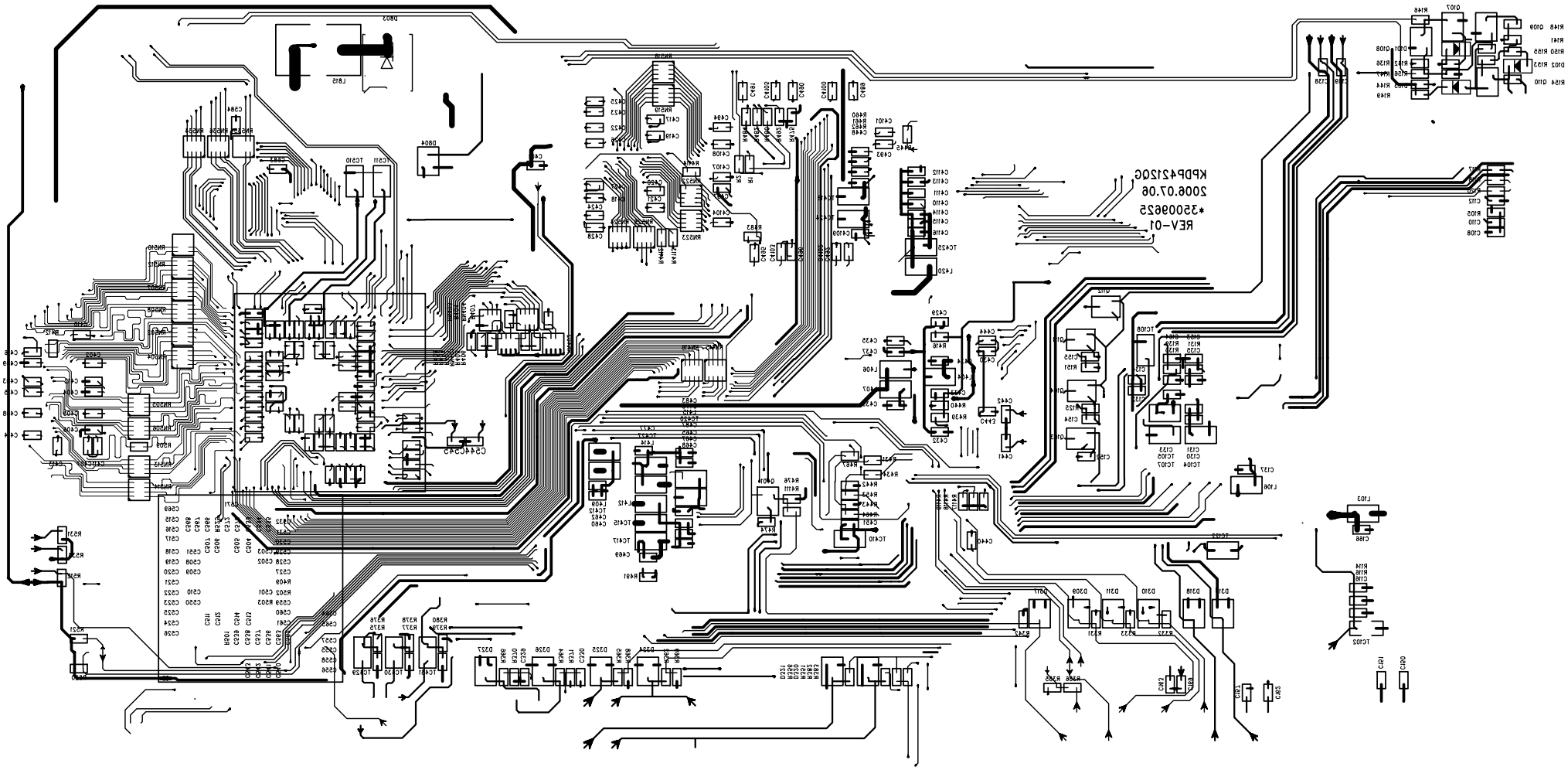
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REV-01