



7 inch Digital Photo Frame LF700A

Service Manual

Contents

- 1. Service Warning**
- 2. Important Safety Instruction**
- 3. Electrostatically Sensitive Devices Precautions**
- 4. Specification**
- 5. Pin Assignments**
- 6. Troubleshooting**
- 7. Exploded View**
- 8. Electrical Parts list**
- 9. Schematics Diagrams**

1. Service Warning

To prevent from fire or shock hazard, do not expose monitor to any rain or any form of water. High voltage is inside the monitor so please do not remove the back cover of the cabinet if you are not a qualified monitor engineer. Contact us if you need help.

2. Important Safety Instruction

Prior to using this service manual, please ensure that you have carefully followed all the procedures outlined in the user's manual for this product.

1. Read all of these instructions.
2. Save these instructions.
3. Follow all warnings and instructions marked on the product.
4. Unplug this product from the wall outlet before cleaning. Do not use liquid cleaners or aerosol cleaners, use a damp cloth for cleaning.
5. Do not use this product near water.
6. Do not place this product on an unstable cart, stand or table. The product may fall, causing serious damage to the product.
7. Slots and openings in the cabinet and the back or bottom are provided for ventilation, to ensure reliable operation of the product and to protect it from overheating, those openings must not be blocked or covered. The openings should never be blocked by placing the product on a bed, sofa, rug, or other similar surface. This product should not be placed in a built-in installation unless proper ventilation is provided.
8. This product should be operated from the type of power source indicated on the mark label. If you are not sure of the type of power available, consult us if you need help.
9. This product is equipped with a 3-wire grounding type plug, a plug having a third (grounding) pin. This plug will only fit into a grounding-type power outlet. This is a safety feature, if you are unable to insert the plug into the outlet, contact your electrician to replace your obsolete outlet. Do not defeat the purpose of the grounding-type plug.
10. Do not allow anything to rest on the power cord. Do not locate this product where persons will walk on the cord.
11. If an extension cord is used with this product, make sure that the total of the ampere ratings on the product plugged into the extension cord to the plugged into outlet does not exceed 15 ampere.
12. Never push objects of any kind into this product through cabinet slots as they may touch dangerous voltage points or short out parts that could result in a risk of fire or electric shock. Never spill liquid of any kind on the product.
13. Do not attempt to service this product yourself, as opening or removing covers may expose you to dangerous voltage points or other risks. Refer all servicing to service personnel.
14. Unplug this product from the wall outlet and refer servicing to qualified service personnel under the following conditions.
 - a. When the power cord or plug is damaged or frayed.
 - b. If liquid has been spilled into the product.
 - c. If the product has been exposed to rain or water.
 - d. If the product does not operate normally, when the operating instructions are followed. Adjust only those controls that are covered by the operating instructions since improper adjustment of other controls may result in damage and will often require extension work by a qualified technician to restore the product to normal operation.
 - e. If the product has been dropped or the cabinet has been damaged.
 - f. If the product exhibits a distinct change in performance, indicating a need for service.

3. Electrostatically Sensitive Devices Precautions

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

1. Immediately before handling any semiconductor components or assemblies, drain the electrostatic charge from your body by touching a known earth ground. Alternatively, wear a discharging wriststrap device. To avoid a shock hazard, be sure to remove the wrist strap before applying power to the monitor.
2. After removing an ESD-equipped assembly, place it on a conductive surface such as aluminum foil to prevent accumulation of an electrostatic charge.
3. Do not use freon-propelled chemicals. These can generate electrical charges sufficient to damage ESDs.
4. Use only a grounded-tip soldering iron to solder or desolder ESDs.
5. Use only an anti-static solder removal device. Some solder removal devices not classified as anti-static can generate electrical charges sufficient to damage ESDs. can generate electrical charges sufficient to damage ESDs.
6. Do not remove a replacement ESD from its protective package until you are ready to install it. Most replacement ESDs are packaged with leads that are electrically shorted together by conductive foam, aluminum foil or other conductive materials.
7. Immediately before removing the protective material from the leads of a replacement ESD, touch the protective material to the chassis or circuit assembly into which the device will be installed.

Caution: Be sure no power is applied to the chassis or circuit and observe all other safety precautions. 8. Minimize body motions when handling unpackaged replacement ESDs. Motions such as brushing clothes together, or lifting your foot from a carpeted floor can generate enough static electricity to damage an ESD.

4. Specification

Screen size:	7.0inch
Screen:	Color TFT-LCD
Aspect:	ratio: 16:9
Dot pitch:	0.1070(W)×0.3185(H)
Resolution:	480(H)×234(V)
Contrast ratio:	400:1
Brightness :	250cd/m ²
View angle:	U:65/ D:50/ L/R:65
Response time:	35ms
Menu display:	OSD display
Analogue adjust item:	brightness, contrast ratio, volume, OSD language
Backlight life:	≥10,000 hours
Backlight type:	LED
Audio output:	1w×2(speaker) Headphone×1
Power:	DC 12v 2A
Power consumption:	12w
Dimension:	L243mm x W175mm xH 30mm
Net weight:	530g

5. Pin Assignments

5.1 Power

Tip	+
Shield	Gnd

5.2 Headphone

Tip	pin 1 L
1 st	2 R
Shield	Gnd

5.3 Mini USB

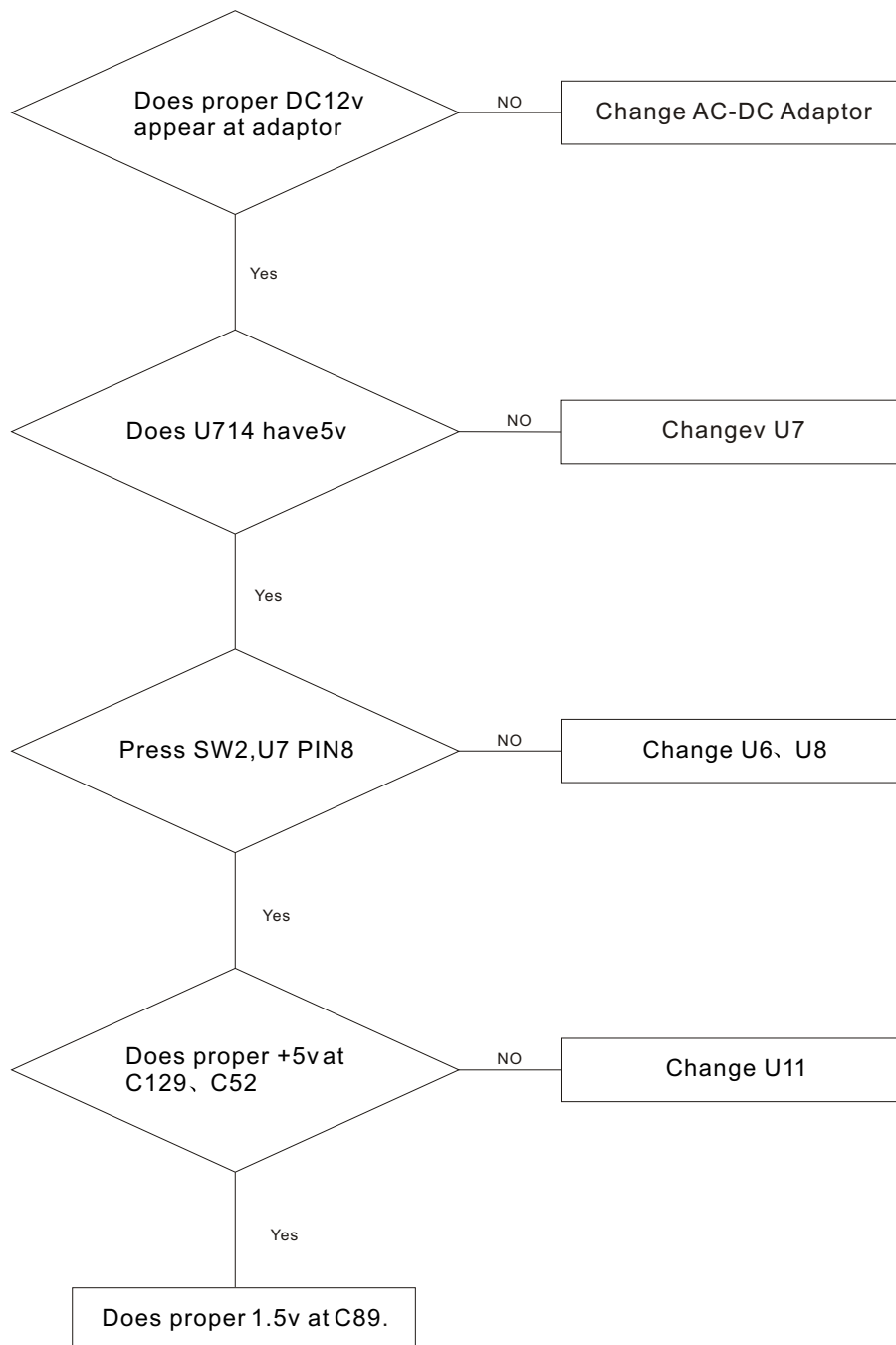
1	PC 5V
2	- DM
3	+DP
4	I D
5	Gnd

5.4 USB

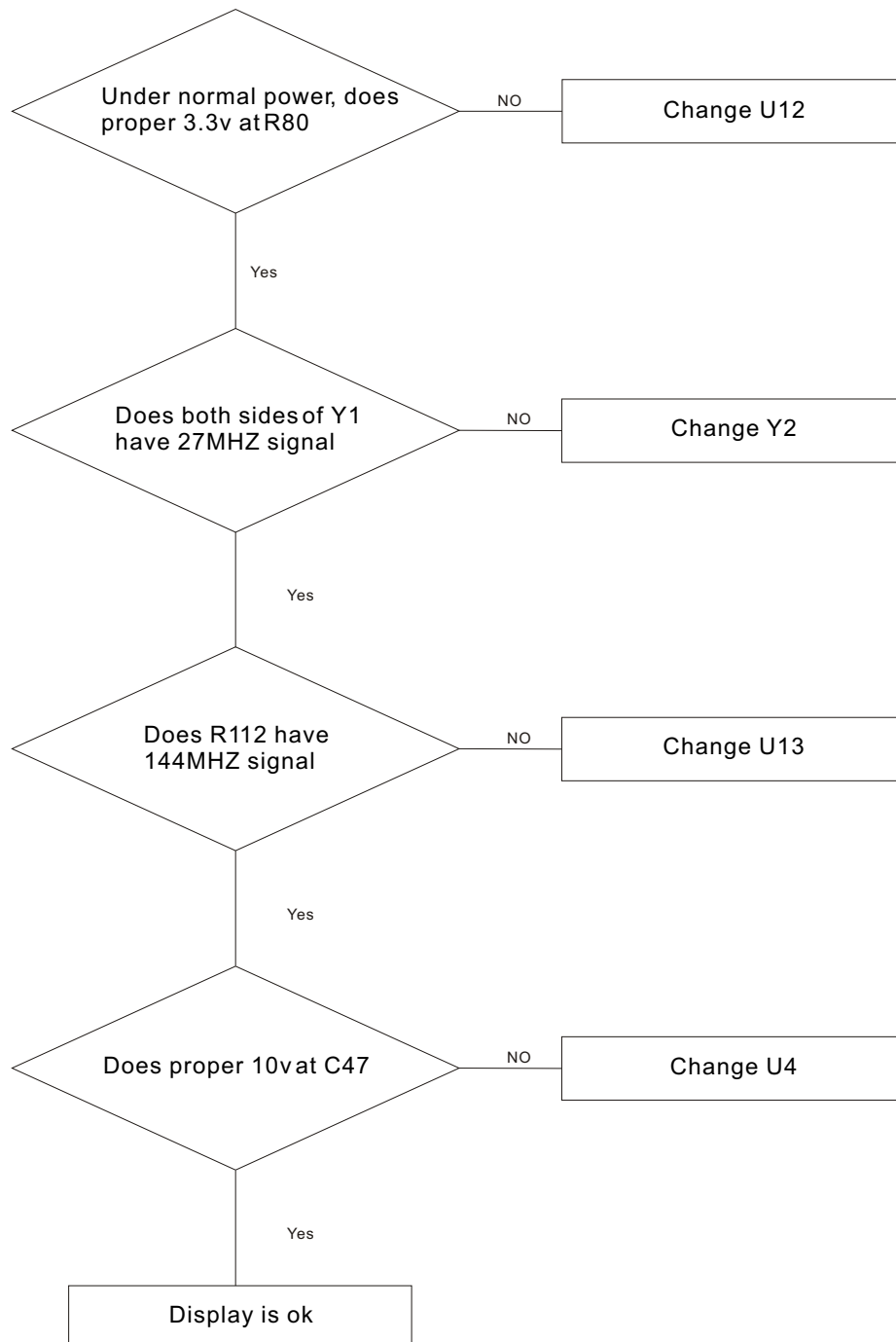
1	VCC
2	-DM
3	+DP
4	Gnd

6. Troubleshooting

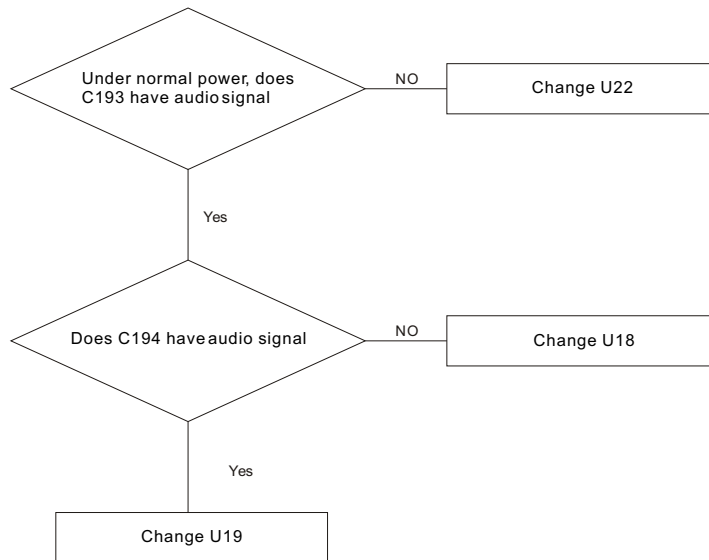
6.1. No Power



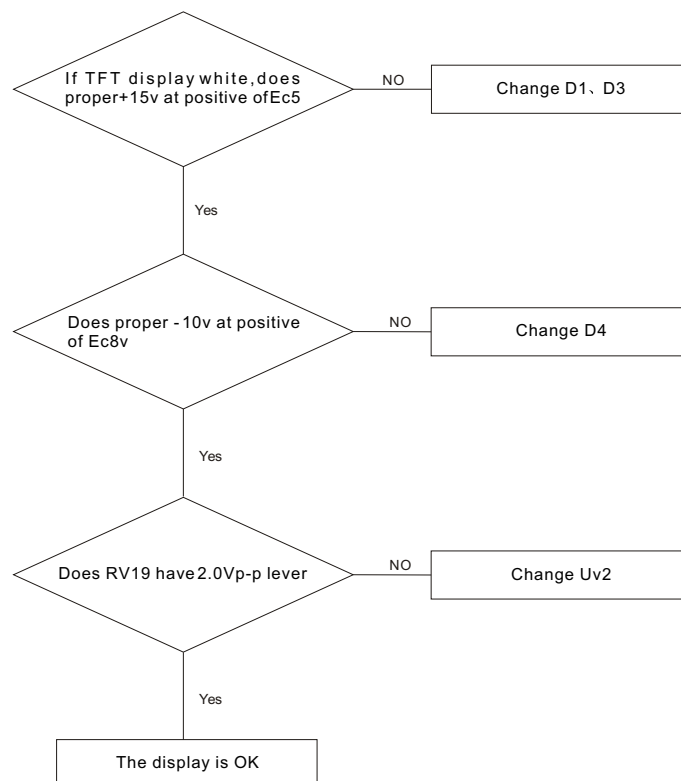
6.2. No Backlight



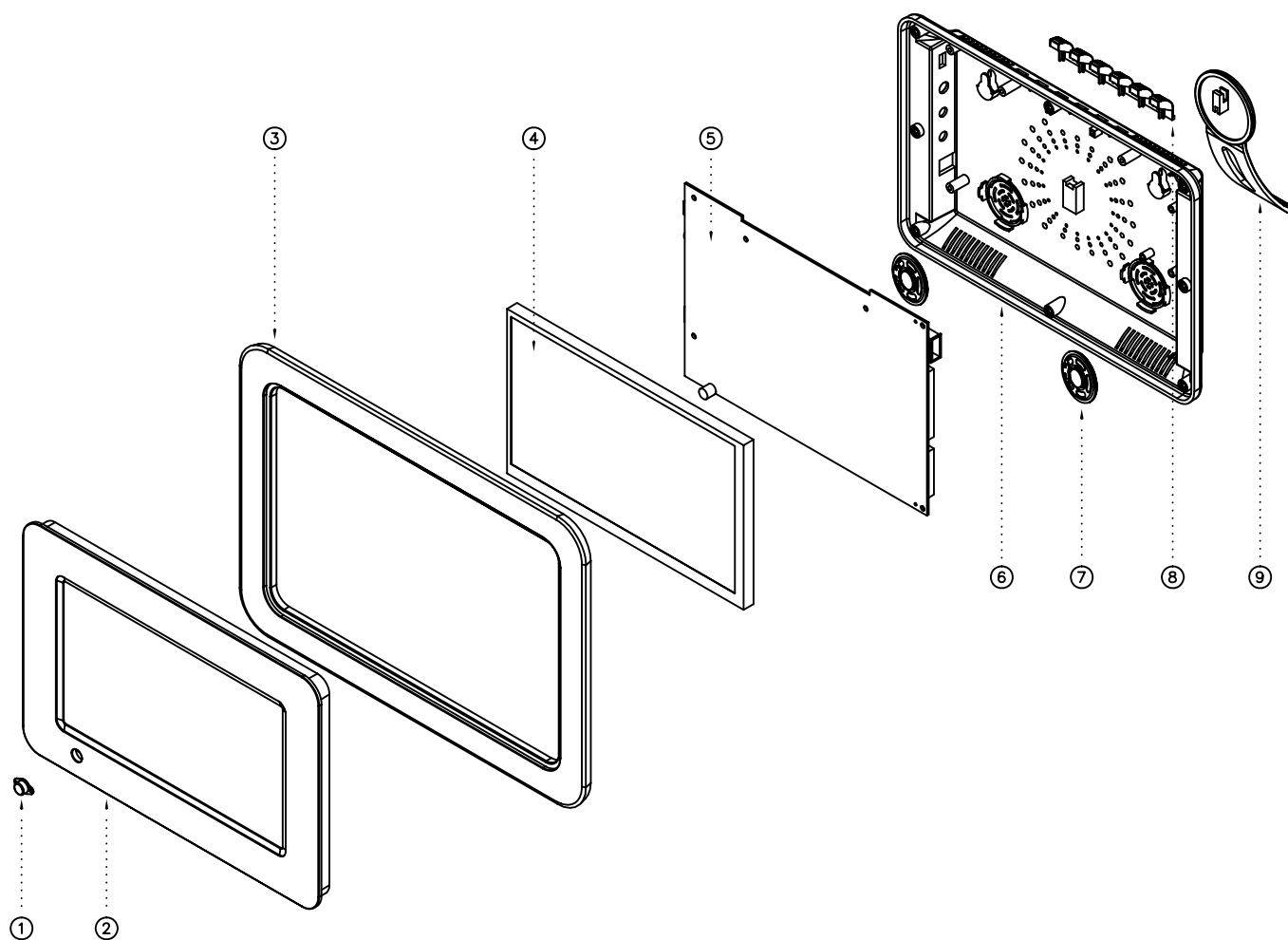
6.3. No Sound



6.4. No Video



7. Exploded View



- | | |
|---|----------------------------|
| 1 | IR receiver window |
| 2 | Front panel |
| 3 | Transparency Acrylic Frame |
| 4 | LCD panel |
| 5 | Main PCB |
| 6 | Back cover |
| 7 | Speaker |
| 8 | Button kit |
| 9 | Bracket |

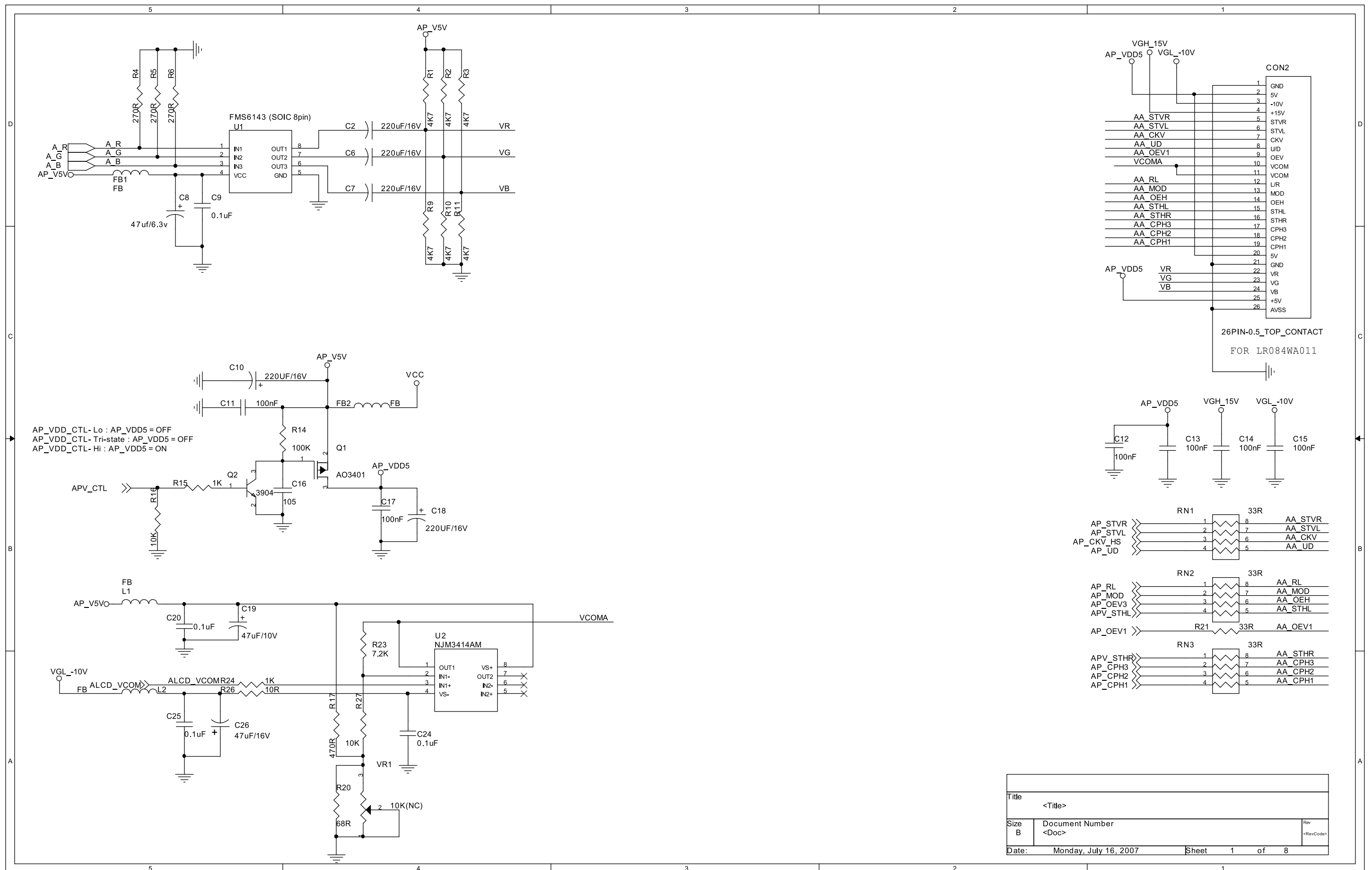
8. Electrical Parts List

Parts code	Parts name	Location number	Description
JAKDA701	RC		28 Button remote control unit
JFXS0005	Audio output cable		L 1M 2 x RCA head(red, white), Ø3.5mm headphone plug.
JFXV0003	Video output cable		L 1M RCA head(yellow), Ø3.5mm headphone plug
JTA12V1.5A	AC-DC adaptor		12V DC 1.5A
JKWATV921	IR lens		radial plastic tranpancey PS material
ERJ3GEYJ472V	R-chip,SMD		4.7K 0603 ±5%
YLA070WQ-L03	LG LCD panel"	screen	7inch TFT-LCD DISPLAY LG YLA070WQ-L03
JGGATV921-2	LCD panel locker		metal type
JGE2804-2W	Speaker		round type, Ø 28mm, height 6.2mm.
JSW6*6-L4.3	switch	SW1 SW2 SW3 SW4 SW5 SW6	6mm x 6mm x 4.3mm 2 pin DIP
ERD25TJ4R7T	R chip	R50	4.7R 1/4W ±5% DIP metal
ECEA1CKA1-Z2.5	C-organic,chip	C192	1.0UF 16V EC4 x 5 ±20% DIP
ECEA1CKA4R7-Z2.5	C-organic,chip	C210 C212	4.7UF 16V EC4 x 5 ±20% DIP
ECEA1CKA100-Z2.5	C-organic,chip	C100 C186 C193 C74 C78 C189 C194 C30	10UF 16V EC4 x 5 ±20% DIP
ECEA1CKA470-Z2.5	C-organic,chip	C5 C8 C10 C17 C19 C26 C82 C103 C124 C126 C179 C44 C47 C94 C180 C118 C85 C173 C168 C150 C176 C220 C224 C225 C226	47UF 16V EC4 x 5 ±20% DIP
ECEA1EKA221-Z2.5	C-organic,chip	C53	220UF 16V EC6.3 x 8 ±20% DIP
ECEA1CKA101-Z2.5	C-organic,chip	C52 C59 C54 C84 C89 C105 C182 C187 C190 C111 C129 C219	100UF 16V EC6 x 7 ±20% DIP
KSM-6032M	IR receiver	U21	3 pin metal sheilding central earth
ST-2120D00	headphone socket	J5	3.5mm 5 pin stereo socket
ST-0290S00	Av output socket	J6 J7	ST-0290S00 SMD
JJU4P1.25A	4 Pin socket	J15	2P 1.25mm white vertical
DC-006	DC socket	JR1	DC-006 2.0mm diameter
HC49S27M33	Crystal	Y1	27MHz S TYPE Load capacity 33PF tolerance 10PPM DIP
HC49P32.768K6	Crystal	Y2	32.768KHz Cylindrical Load capacity 33PF tolerance 10PPM DIP
JJCDA701	battery slot	BT1	L28mm x W24mm x H8mm
78L05	IC	U5	78L05 TO-92 3PIN
JBDA701M	dual layer PCB		L170mm x W117m x 1.2mm DA701 FR-4
FU1808-12V1.5		CN1	12V Ihold=750mA Imax=1.5A SMT1206 restorable
ERJ3GEY0R00V	R-chip,SMD	R87 R88 R94 R194 R54	0R 0603
ERJ3GEYJ100V	R-chip,SMD	R26	10R 0603 ±5%
EXB38V220JV	R-chip,SMD	RN10 RN11 RN12 RN13 RN14 RN15	22R 0603 ±5% 8 pin
ERJ3GEYJ220V	R-chip,SMD	R117 R118 R119 R120 R121 R122 R123 R124 R125 R134 R136 R137 R144 R145 R146 R112 R48 R8 R12 R13 R18	22R 0603 ±5%
EXB38V330JV	R-chip,SMD	RN1 RN2 RN3 RN18 RN19 RN20 RN21 RN17	33R 0603 ±5% 8 pin
ERJ3GEYJ330V	R-chip,SMD	R21	33R 0603 ±5%
ERJ3GEYJ620V	R-chip,SMD	R85	62R 0603 ±5%
ERJ3GEYJ680V	R-chip,SMD	R20	68R 0603 ±5%
ERJ3GEYJ750V	R-chip,SMD	R190 R193 R195	75R 0603 ±5%
ERJ3GEYJ101V	R-chip,SMD	R209 R7 R160 R171	100R 0603 ±5%
ERJ3GEYJ201V	R-chip,SMD	R84	200R 0603 ±5%
ERJ3GEYJ271V	R-chip,SMD	R4 R5 R6	270R 0603 ±5%
ERJ3GEYJ471V	R-chip,SMD	R17	470R 0603 ±5%
ERJ3GEYJ102V	R-chip,SMD	R15 R24 R44 R62 R69 R72 R162 R163 R174 R200 R201 R202 R20 R205 R206 R208	3 1K 0603 ±5%
ERJ3GEYJ202V		R45	2K 0603 ±5%
ERJ3EKF3481V	R-chip,SMD	R100 R99	3.48K 0603 ±5%
EXB38V472JV	R-chip,SMD	RN4 RN5 RN6 RN7 RN8 RN9	4.7K 0603 ±5% 8 pin
ERJ3GEYJ472V	R-chip,SMD	R1 R2 R3 R9 R10 R11 R95 R97 R131 R133 R138 R181 R210	4.7K 0603 ±5%
ERJ3GEYJ722V	R-chip,SMD	R23	7.2K 0603 ±5%
ERJ3GEYJ103V	R-chip,SMD	R16 R27 R49 R51 R53 R56 R57 R63 R77 R78 R79 R80 R81 R82 R83 R93 R98 R102 R103 R126 R127 R128 R129 R143 R147 R149 R158 R159 R168 R169 R204 R207 R151 R178	10K 0603 ±5%
ERJ3GEYJ153V	R-chip,SMD	R55 R61	15K 0603 ±5%
ERJ3GEYJ203V	R-chip,SMD	R155 R157 R164 R167	20K 0603 ±5%
ERJ3GEYJ433V	R-chip,SMD	R130 R135 R52 R58	43K 0603 ±5%
ERJ3GEYJ473V	R-chip,SMD	R59 R60 R166 R176	47K 0603 ±5%
ERJ3GEYJ683V	R-chip,SMD	R46	68k 0603 ±5%
ERJ3GEYJ104V	R-chip,SMD	R14 R25 R28 R74 R76 R75 R170 R173	100K 0603 ±5%
ERJ3GEYJ105V	R-chip,SMD	R86	1M 0603 ±5%
ECJ1VB1E471K	C-organic,chip	C60	471 25V 0603 ±10%
ECJ1VB1E102K	C-organic,chip	C3 C4 C27 C28	102 25V 0603 ±10%
ECJ1VB1E104K	C-organic,chip	C1 C9 C11 C12 C13 C14 C15 C18 C20 C21 C22 C24 C25 C29 C45 C46 C49 C51 C55 C56 C61 C83 C65 C73 C75 C76 C77 C79 C81 C8 C87 C90 C93 C92 C95 C96 C98 C99 C104 C108 C109 C110 C112 C113 C114 C115 C116 C119 C120 C121 C122 C125 C127 C128 C130 C131 C132 C133 C134 C135 C136 C137 C140 C141 C142 C143 C144 C145 C146 C147 C148 C149 C151 C152 C153 C154 C155 C156 C157 C158 C160 C161 C162 C163 C164 C165 C166 C167 C174 C175 C177 C178 C181 C183 C184 C204 C214 C215 C216 C217 C218 C169 C170 C171 C223	1 04 25V 0603 ±10%
ECJ1VB1E103K	C-organic,chip	C50 C58 C101 C102 C211 C213	103 25V 0603 ±10%
ECJ1VB1E392K	C-organic,chip	C64 C57	392 25V 0603 ±10%
ECJ1VB1E471K	C-organic,chip	C60	471 25V 0603 ±10%
ECJ1VB1E105K	C-organic,chip	C71 C80 C16	105 25V 0603 ±10%
ECJ1VC1E220K	C-organic,chip	C88 C200 C203 C207	22P 25V 0603 ±10%

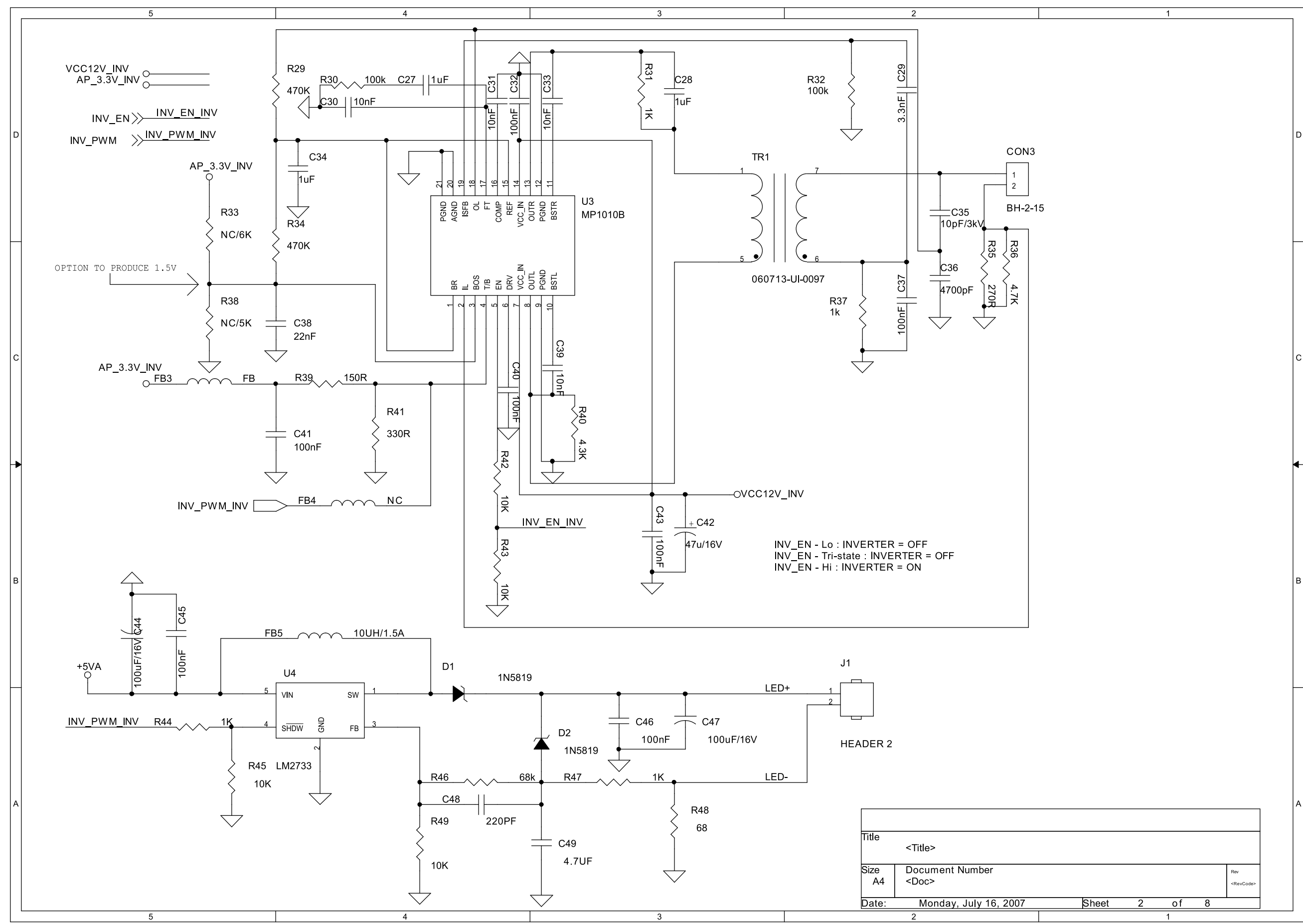
Parts code	Parts name	Location number	Description
ECJ1VB1E330K	C-organic,chip	C106 C107	33P 25V 0603 ±10%
N/A	C-organic,chip	R108 R109 R110 R139 R140 R141 R142 C172 C62 C66 R111	open
ECJ1VB1E101K	C-organic,chip	C201 C205 C208	101 25V 0603 ±10%
ECJ1VB1E121K	C-organic,chip	C185 C195	121 25V 0603 ±10%
ECJ1VB1E681K	C-organic,chip	C188 C197	681 25V 0603 ±10%
ECJ1VB1E222K	C-organic,chip	C191 C196	222 25V 0603 ±10%
ECJ1VB1E331K	C-organic,chip	C202 C206 C209	331 25V 0603 ±10%
1N5819-SMD	Diode, SMD	D1 D2 D6 D4	IN5819 SS14 SMD
ECJ1VB1E330K	C-organic,chip	C106 C107	33P 25V 0603 ±10%
N/A	C-organic,chip	R108 R109 R110 R139 R140 R141 R142 C172 C62 C66 R111	open
ECJ1VB1E101K	C-organic,chip	C201 C205 C208	101 25V 0603 ±10%
ECJ1VB1E121K	C-organic,chip	C185 C195	121 25V 0603 ±10%
ECJ1VB1E681K	C-organic,chip	C188 C197	681 25V 0603 ±10%
ECJ1VB1E222K	C-organic,chip	C191 C196	222 25V 0603 ±10%
ECJ1VB1E331K	C-organic,chip	C202 C206 C209	331 25V 0603 ±10%
1N5819-SMD	Diode, SMD	D1 D2 D6 D4	IN5819 SS14 SMD
BZX55C10V-SMD	Diode rectifier, SMD	D12	10V 1206
BZX55C15V-SMD	Diode rectifier, SMD	D10	15V 1206
BAV70-SMD	Diode, SMD	D17 D18 D19 D20	BAV70 SOT-23
BAV99-SMD	Diode, SMD	D3 D9 D11 D13 D16	BAV99 SOT-23
GZ2012D0R00T	Magnet, SMD	L1 L2 L6 FB1 FB2 FB6 FB10 FB11 FB16	OR 0805 FBI-310
GZ1608D0R00T	Magnet, SMD	FB8 FB9 FB12 FB13 FB14 FB15 FB17 FB18 FB19 FB20 FB21 FB22 FB23	OR 0603 FBI-310
CD75-47UH	Inductor-coil, SMD	L3 L4	47UH/1.5A CD75 L7.8mm x W7mm x 5mm
CD75-10UH	Inductor-coil, SMD	FB5	10UH/0.5A CD75 L7.8mm x W7mm x 5mm
CD75-2.2UH	Inductor-coil, SMD	L7	2.2UH/0.5A CD 75 L7.8mm x W7mm x 5mm
JJZDA701-SF	CF card reader socket	J3	low profile CF card socket
SDFL2012Q1R8	Inductor, SMD	L8 L9 L10	1.8UH 0805
A03401-SMD	FET, SMD	Q1 Q5 Q6 Q15 Q18	A03401 P channel SOT-23 SMD
SMD-2N3904	Triode, SMD	Q2 Q16 Q17 Q19 Q20	2N3904 NPN SOT-23 SMD
FMS6143-SMD	IC, SMD	U1	FMS6143 SOP-8 8PIN
NJM3414AM-SMD	IC, SMD	U2	NJM3414AM SOP-8 8PIN
LM2733-SMD	IC, SMD	U4	LM2733 SOT-23-5 5PIN
ACT4060-SMD	IC, SMD	U6 U8	ACT4060 SOP-8 8PIN
CD4069UBF-SMD	IC, SMD	U7	CD4069UBF SOP-8 8PIN
AMS1117-3.3V-SMD	IC, SMD	U10	
APS1006-ADJ-SMD	IC, SMD	U11	APS1006-ADJ SOT-23-5 5PIN
MAX809TEUR-SMD	IC, SMD	U12	MAX809TEUR SOTR-23 (reset IC)
AML7216-SMD	IC, SMD	U13	AML7216 QFP256LD 256 PIN
24C02-SMD	IC, SMD	U14	24C02 SOP-8 8PIN A T M E L
K9F2G08U0M-SMD	IC, SMD	U15	256M *8bit nand flash SAMSUNG K9F2G08U0M
MBM29LV160TE/BE-SMD	IC, SMD	U17	SPANSION S29AL016D70TF102 TSOP-48 PIN
MC4588-SMD	IC, SMD	U18	MC4588 SOP-8 8PIN
HWD4863-SMD	IC, SMD	U19	HWD4863 TSSOP-20 20PIN
PT7C4337-SMD	IC, SMD	U20	PT7C4337 (SOP-8)
CS4334-SMD	IC, SMD	U22	CS4334 SOP-8 8PIN
JJZDA701	4 in 1 card reader	TAISOL 4IN1	4-IN-1 SOCKET (TAISOL)
JJS26P0.5WU-SMD	FFC socket (SMD)	CON2	26P 0.5mm white up connect type
USB-007	USB socket	CON5	Normal USB JACK 4PIN
SUB-5P	MINI USB socket	CON6	Mini USB JACK 5PIN
JWT4P1.25-130	4 Pin flex-cable	LR speaker	4P 1.25mm plug, 5 mm tin head, 4P/1.25mm end, L130mm
JJFDA701	mounting bracket		ABS, white
BA3*7 head Ø4.0	screw taplite		4mm white nickel-plate

9. Schematics Diagrams

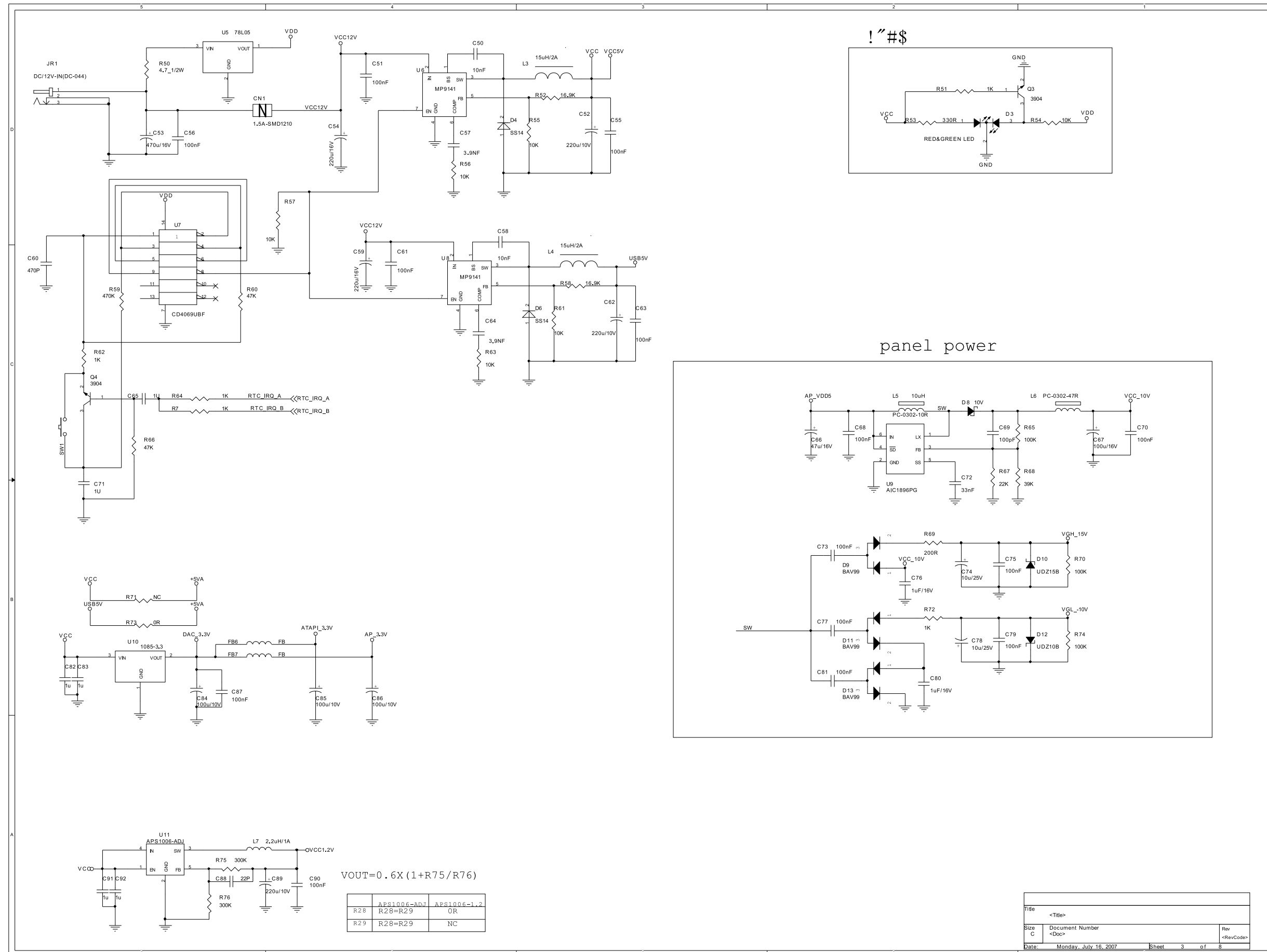
9.1. video output



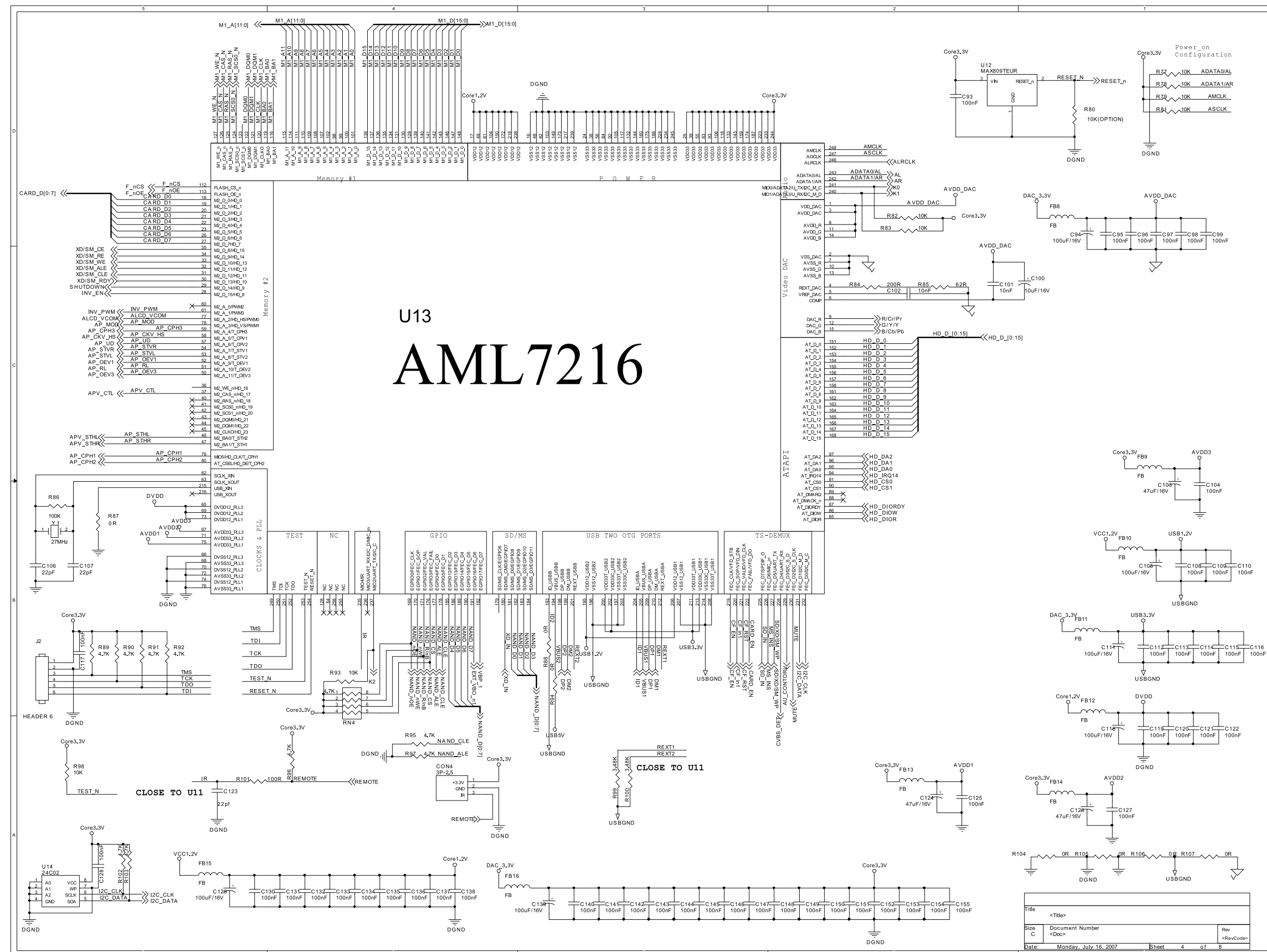
9.2. High voltage driver



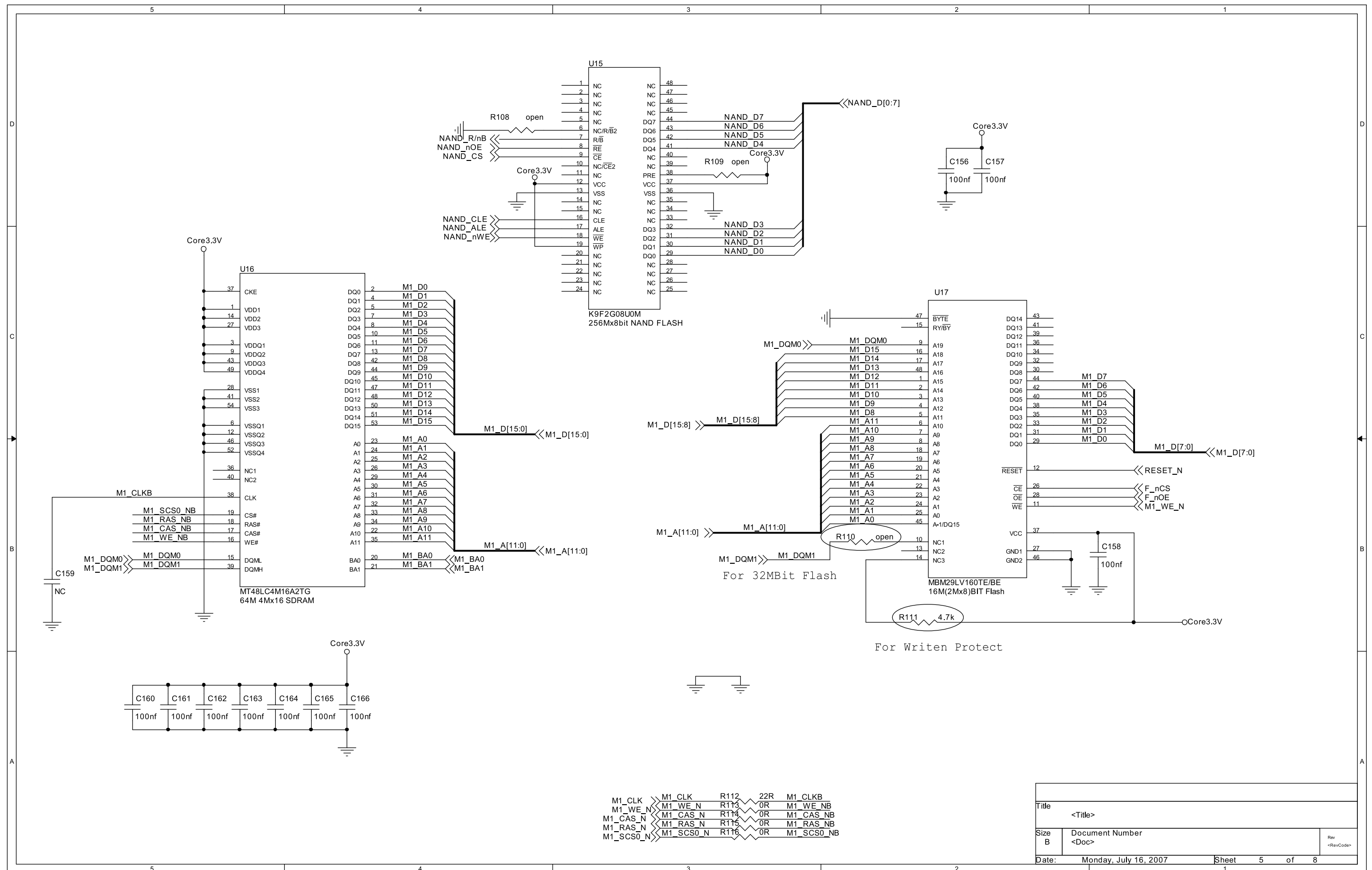
9.3. power supply part



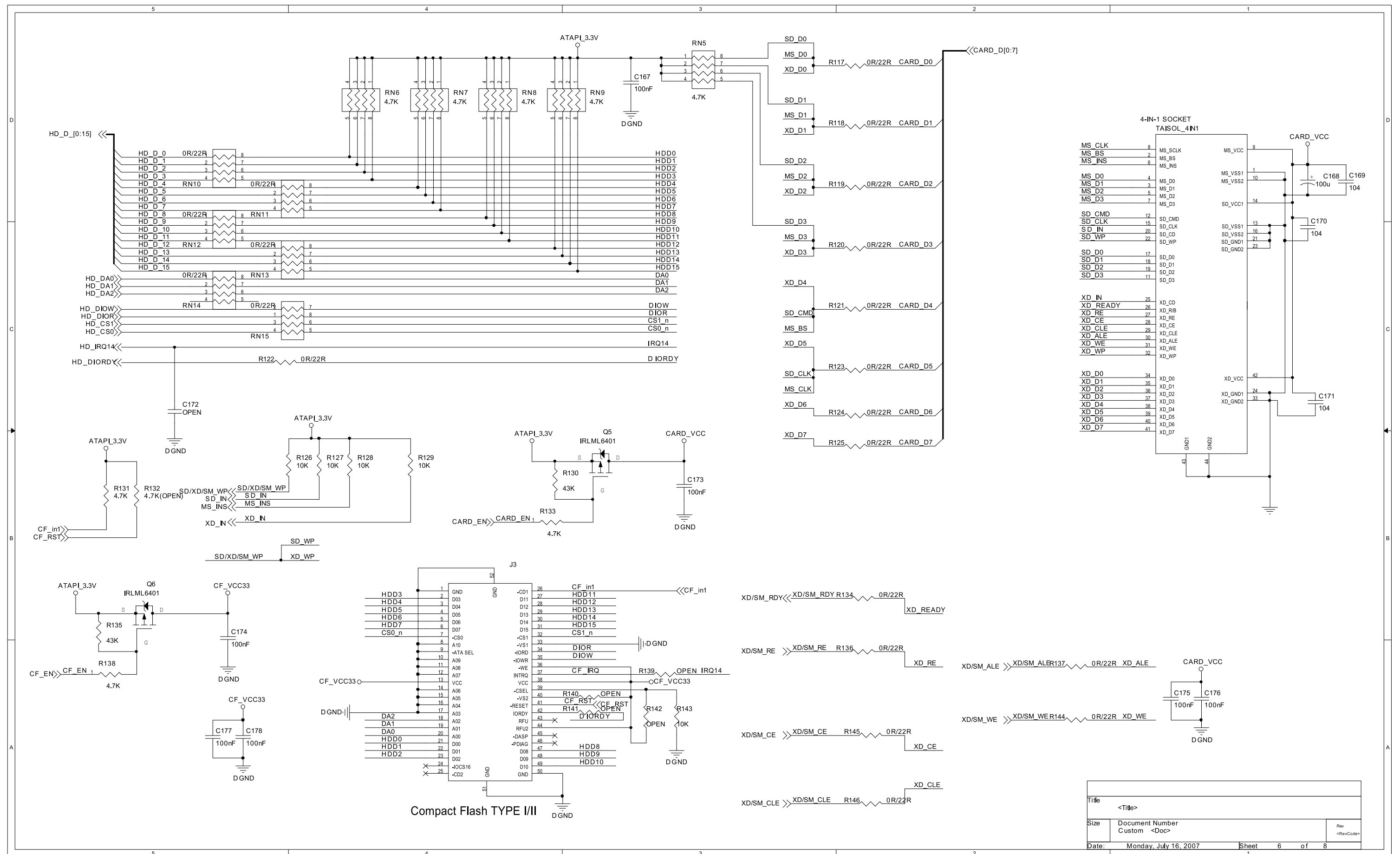
9.4. main decoder part



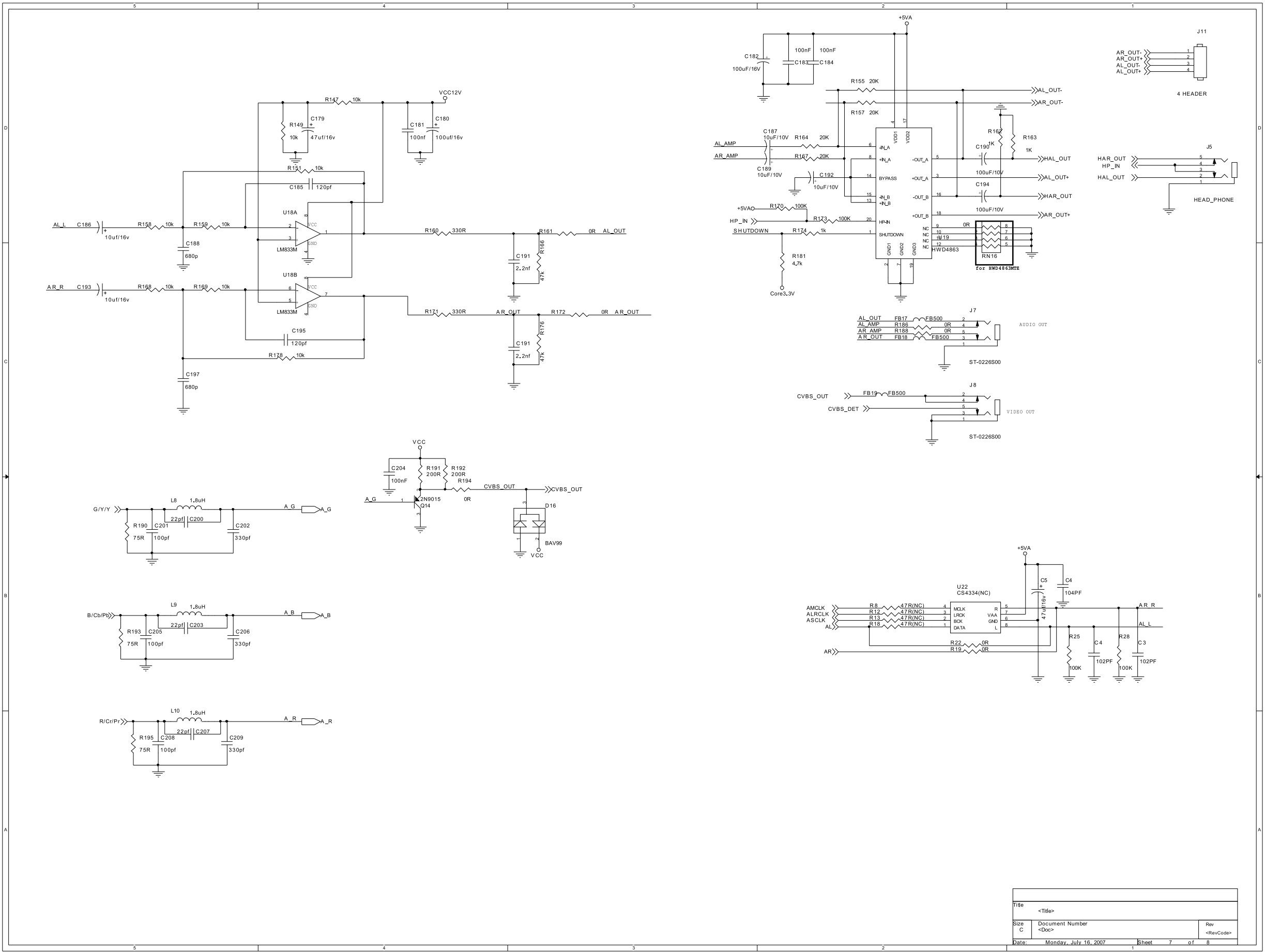
9.5. flash memory part



9.6. Inupt terminal



9.7. audio output part



9.8. time display control part

