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LCD TV

SCHEMATICS AND EXPLODED VIEW

CHASSIS : LA12C

MODEL : 47LW5600 47LW5600-UA

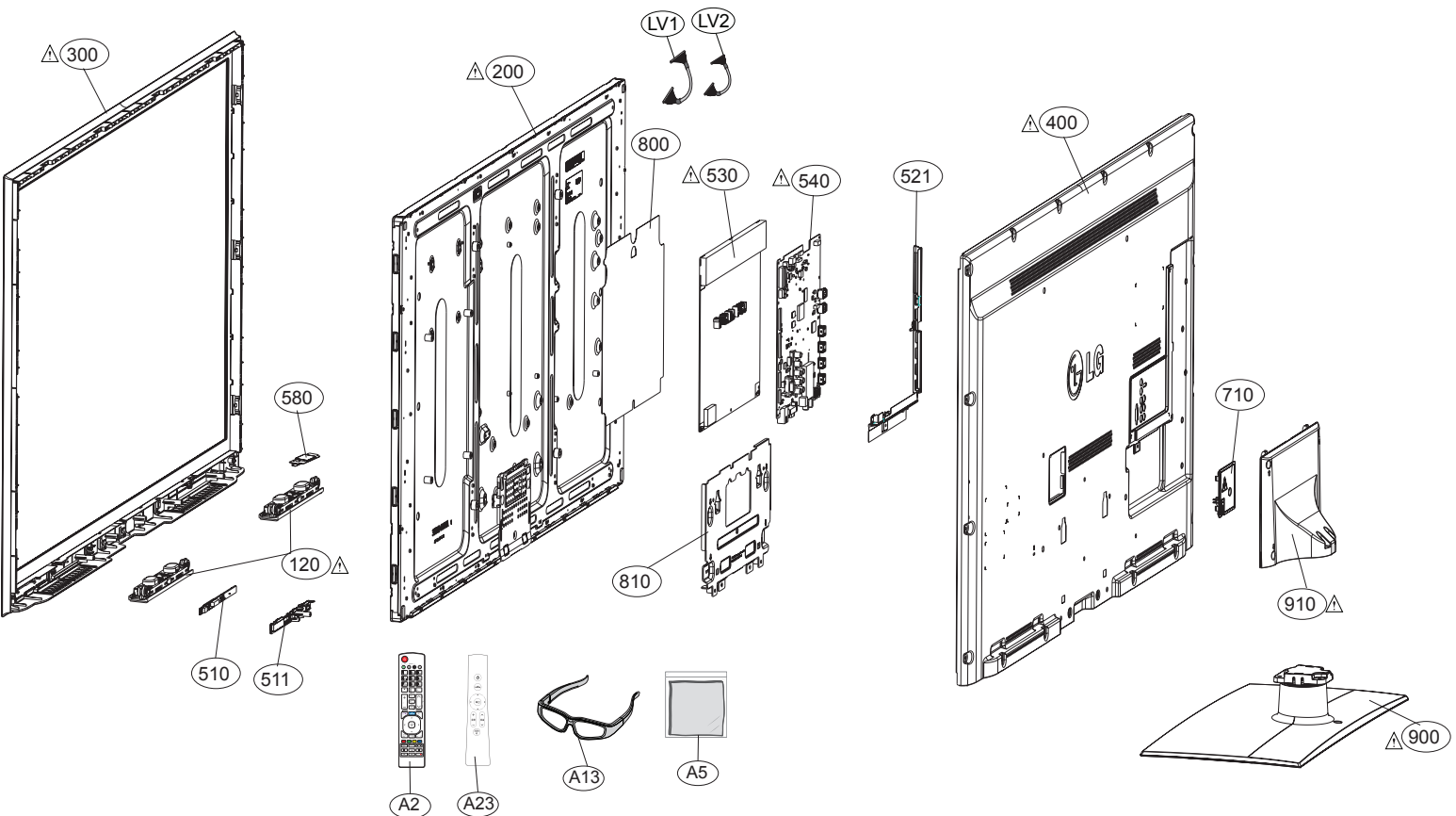
CAUTION

BEFORE SERVICING THE CHASSIS,
READ THE SAFETY PRECAUTIONS IN THIS MANUAL.

EXPLODED VIEW

IMPORTANT SAFETY NOTICE

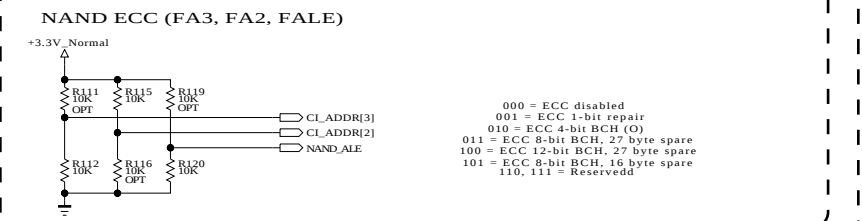
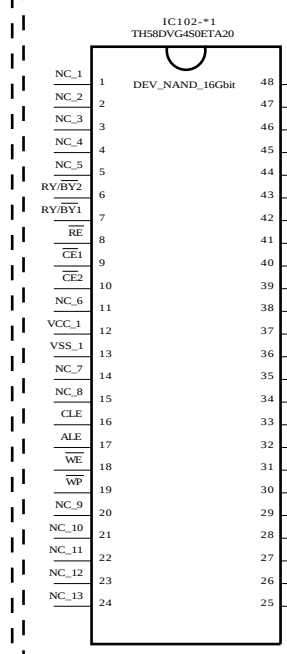
Many electrical and mechanical parts in this chassis have special safety-related characteristics. These parts are identified by ⚠ in the Schematic Diagram and EXPLODED VIEW. It is essential that these special safety parts should be replaced with the same components as recommended in this manual to prevent X-RADIATION, Shock, Fire, or other Hazards. Do not modify the original design without permission of manufacturer.



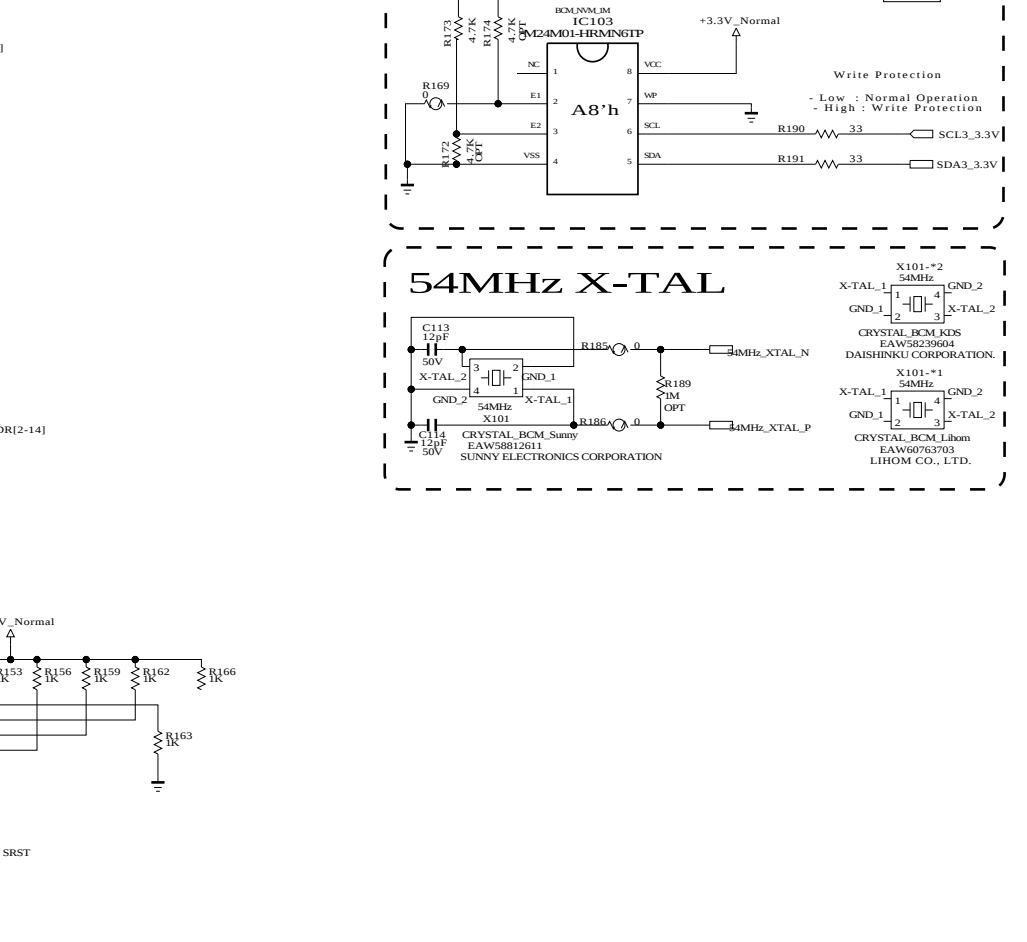
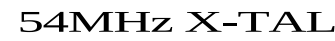
47LW5600 EXPLODED VIEW PARTS LIST

ITEM	PART No	DESCRIPTION
120	EAB62088401	Speaker :EN1080C-6795 ND 10W 8OHM 79DB 150HZ 200x25x27
200	EAJ61768201	Panel: LC470EUF-SDF1 FHD 47INCH 1920X1080 16/9 1600:1 240Hz(T) With Inverter and T-Con Edge V6 LG Display Co. Ltd. AUSYLHR, AUSYLJR, AL
200	EAJ61928101	Panel: LC470EUF-SDF1 FHD 47INCH 1920X1080 16/9 1600:1 240Hz(T) With Inverter and T-Con Edge V6 LG Display Co. Ltd. AUSYLUR
300	ABJ73289108	Front Frame: 47LW5600 Cabinet Assembly
400	ACQ85373502	Back Cover: 47LW5600
510	EBR72671301	IR + Soft Touch Assembly: LW4500
511	MAZ62853702	Soft Touch Bracket
521	MGJ62689302	Side AV Metal Bracket: (Around Main Board)
530	EAY62169801	Power Supply: LGP4247-11SLPB FREE LGP4247-11SLPB LCD HNE/YUYANG/LGIT/LIENCHANG - H&E CO.,LTD
540	EBR72948402	Main Board: BPR Insert PCB Assembly AUSYLHR
540	EBR73145901	Main Board: BPR Insert PCB Assembly AUSYLJR
540	EBR72948404	Main Board: BPR Insert PCB Assembly AUSYLUR
580	EBR72499601	Motion Remote Receiver Board (M3)
710	MAZ62827604	Decorative Piece Around Power Cord
800	AGU73528803	Insulator Sheet behind Power Supply: (Insulation assy to attach on module for 42/47)
810	MJH62198002	Stand Guide Metal
900	AAN73430406	Stand Base
910	MJH62197902	Stand Supporter
A2	AKB73295502	Remote Control
A3	EAD60817902	AC Power Cord 1.625M 75MM 125V 10A SVT 18AWG 3C BLACK. UL/CSA
A5	MAF60779001	Cloth Cleaner
A7	EAT60713304	Dongle WN8522B2-LF-19 AN-WF100 BCM4323 802.11a/b/g/n
A10	FAB30016104	Screw: FAB30016104 Machine Type D4.0 L12.0 Washer D8.5 t0.6
A21	MCK66265801	Remocon Battery Cover
A13	EBX61268401	Accessory,3D Glasses
A23	AKB72914043	Motion Remote Controller (M3)
LV1	EAD61652505	LVDS 455MM 0.50MM 41P White UL20861 Reverse A: 95mm B: 220mm C: 160mm D: 55mm
LV2	EAD61668615	LVDS 365MM 0.50MM 51P White UL20861 reverse Locking A: 95mm B: 180mm C: 125mm D: 55mm

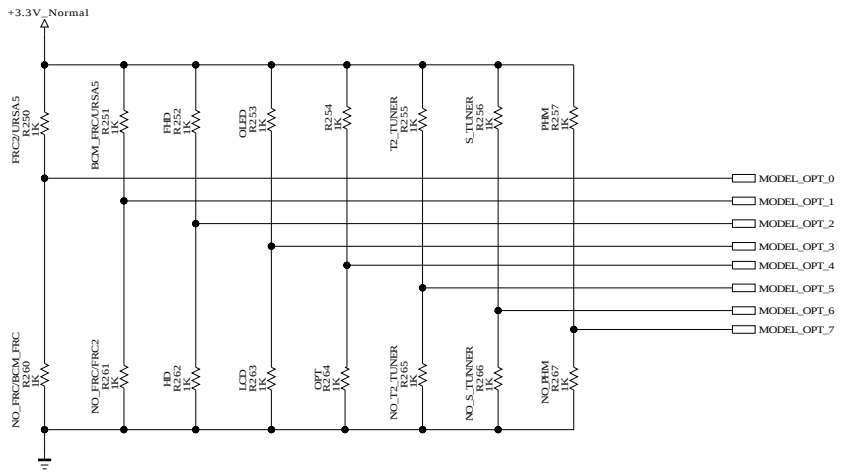
16Gbit



Strap Setting



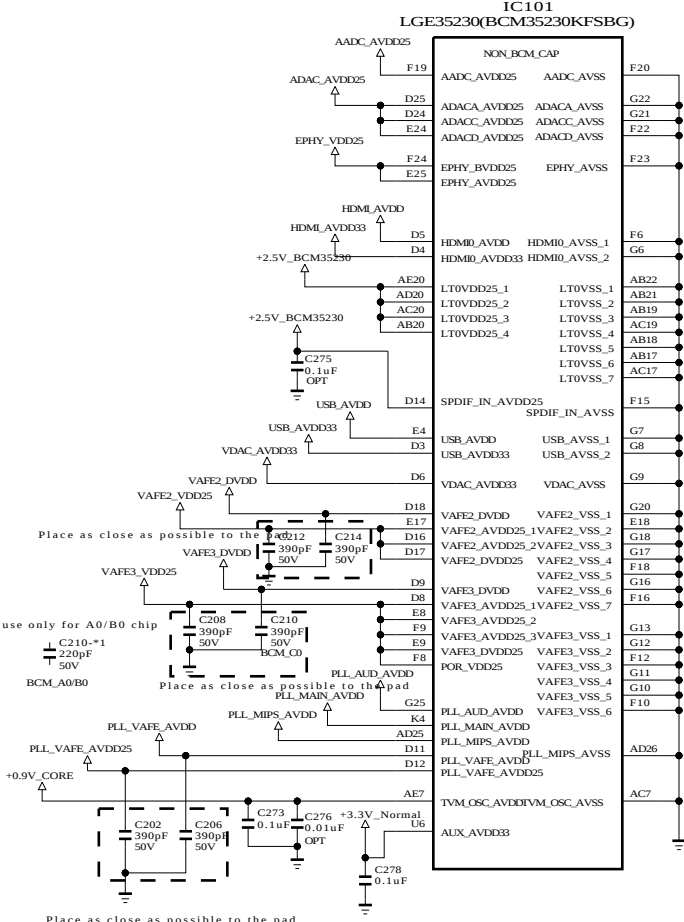
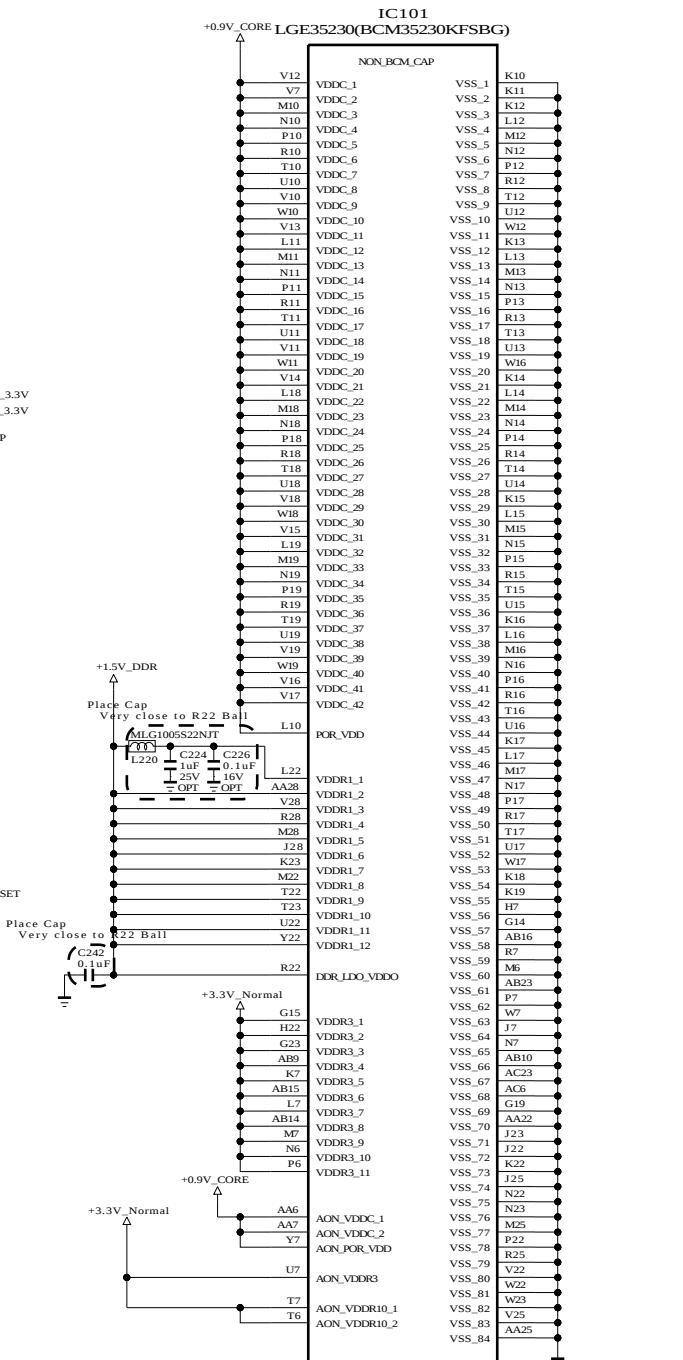
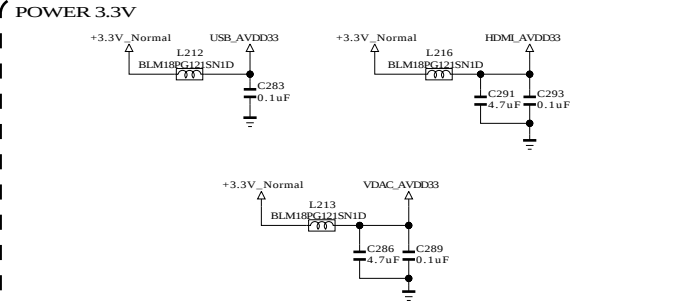
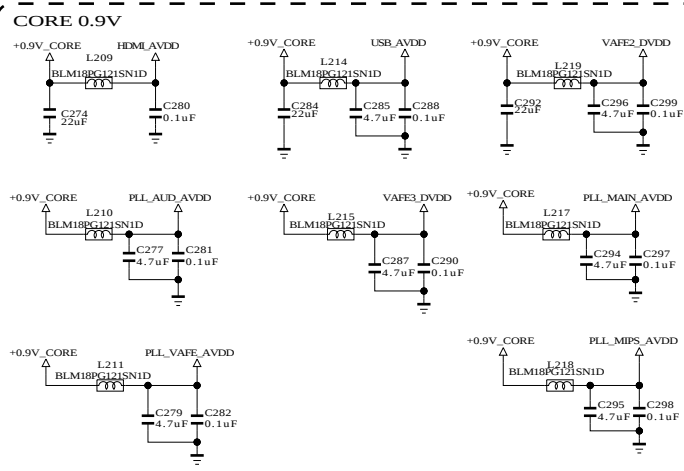
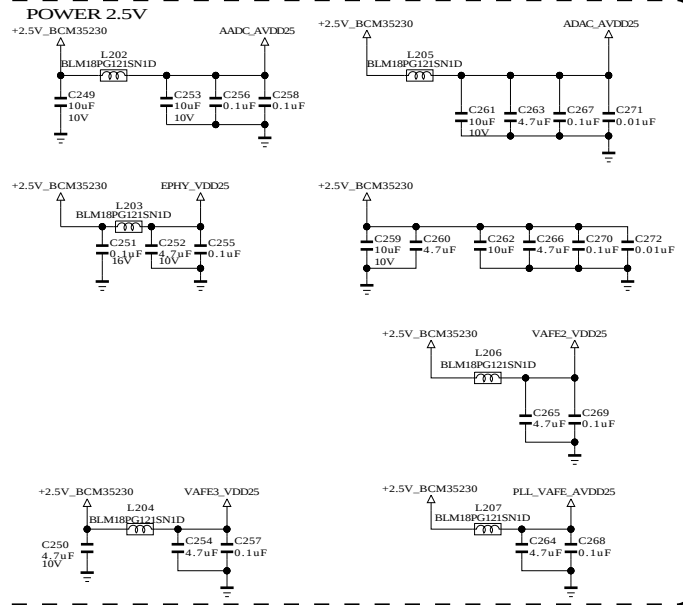
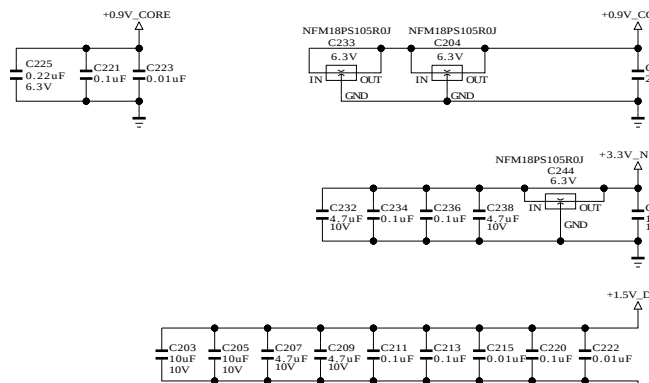
MODEL	BCM35230	DATE	2010.09.18
BLOCK	MAIN & NAND FLASH	SHEET	1 /



MODEL OPTION

	NO_FRC	BCM Internal FRC	LG FRC2	external URSA5
MODEL_OPT_0	0	0	1	1
MODEL_OPT_1	0	1	0	1

	HIGH	LOW
MODEL_OPT_2		HD
MODEL_OPT_3		LCD
MODEL_OPT_4	DDR speed	1333
MODEL_OPT_5	T2 Tuner	Support
MODEL_OPT_6	S Tuner	Support
MODEL_OPT_7	PHM	Enable

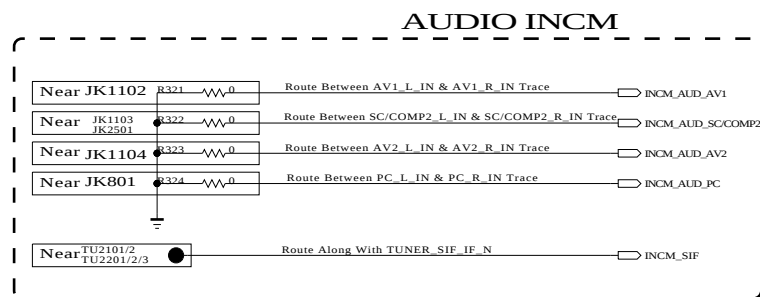
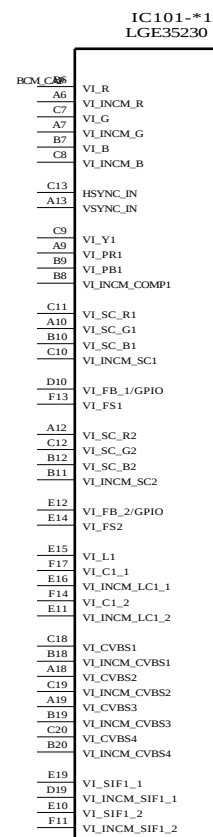
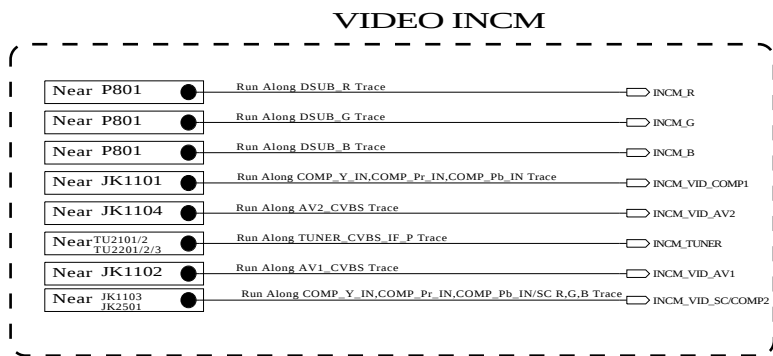


THE  SYMBOL MARK OF THIS SCHEMATIC DIAGRAM INCORPORATES SPECIAL FEATURES IMPORTANT FOR PROTECTION FROM X-RADIATION. FILRE AND ELECTRICAL SHOCK HAZARDS, WHEN SERVICING IF IS ESSENTIAL THAT ONLY MANUFACTURES SPECIFIED PARTS BE USED FOR THE CRITICAL COMPONENTS IN THE  SYMBOL MARK OF THE SCHEMATIC.

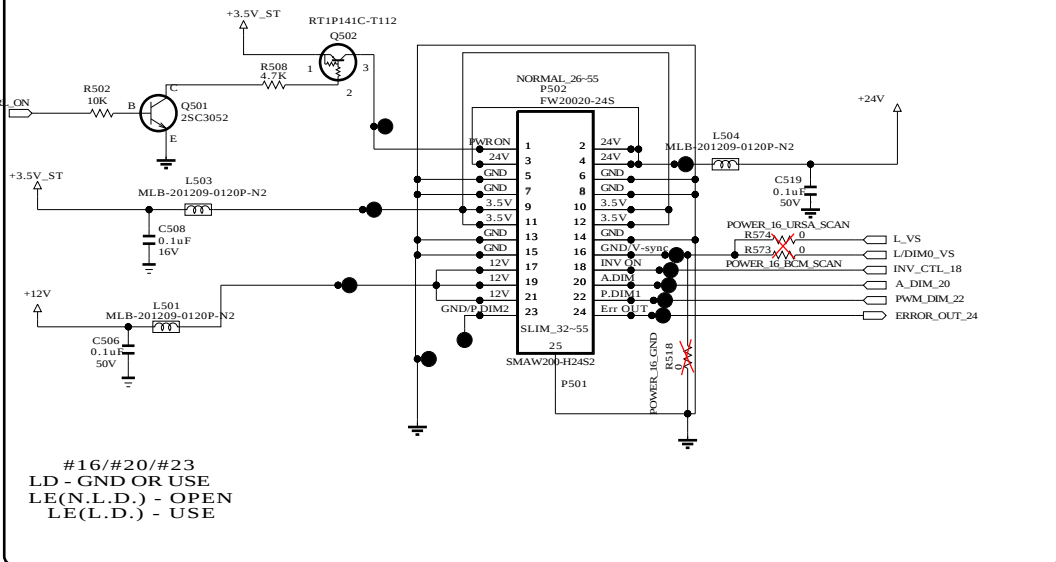
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LG ELECTRONICS

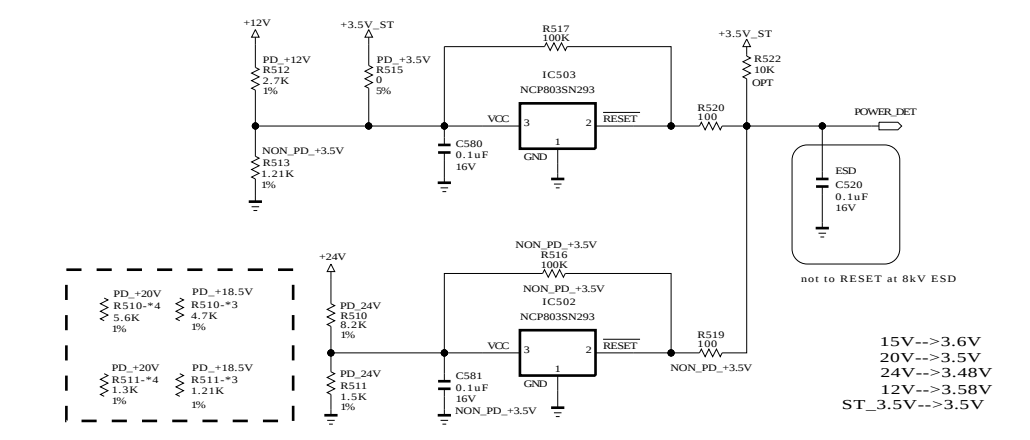
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BLOCK	MAIN POWER	SHEET	2 / 50



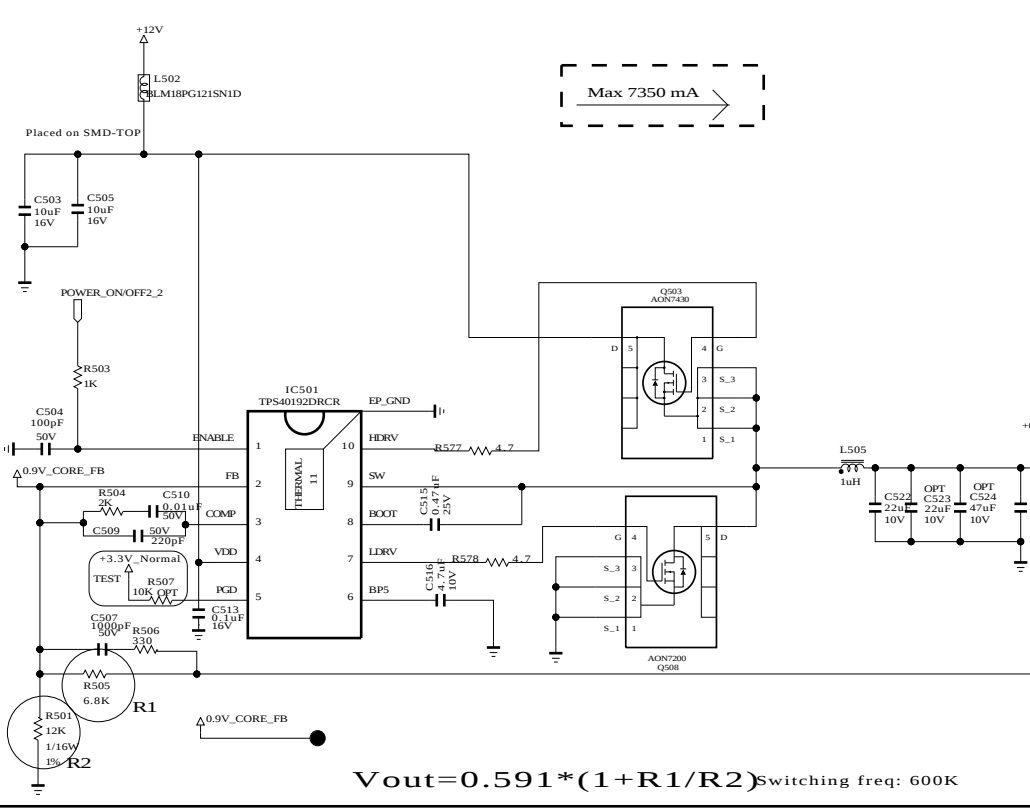
FROM LIPS & POWER B/D



Power_DET

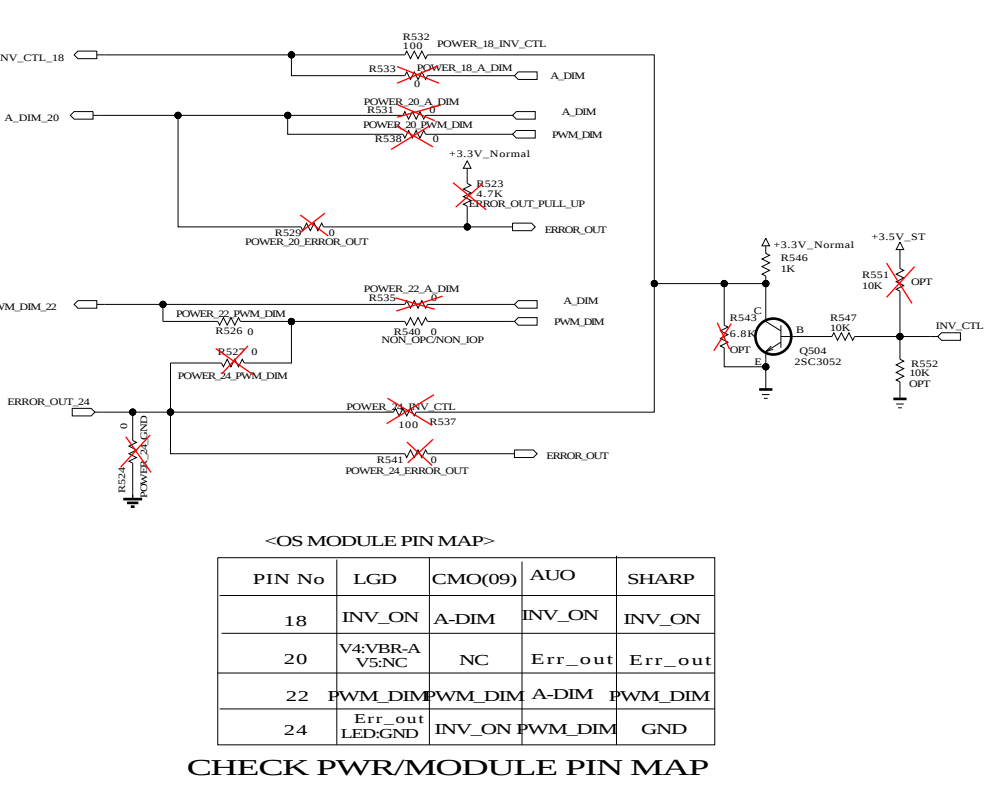


+0.9V_CORE_BCM35230

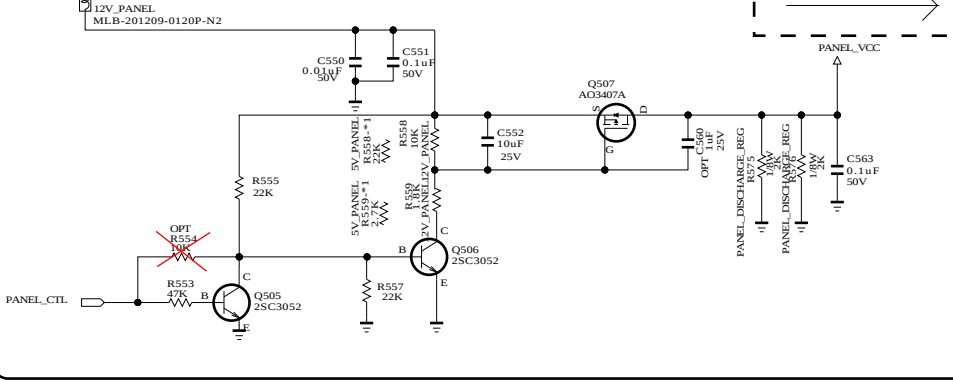


DUAL COMPONENT	
Q501,Q504,Q505,Q506	1ST : 0TRIY80001A 2ND : 0TR387500AA
Q502	1ST : 0TRIH80004A, 2ND : EBK61012501, 3RD : 0TR102009AM
Q507	1ST : EBK60752501, 2ND : EBK61011501
IC502,IC503	1ST : EAN61151001, 2ND : EAN60670101

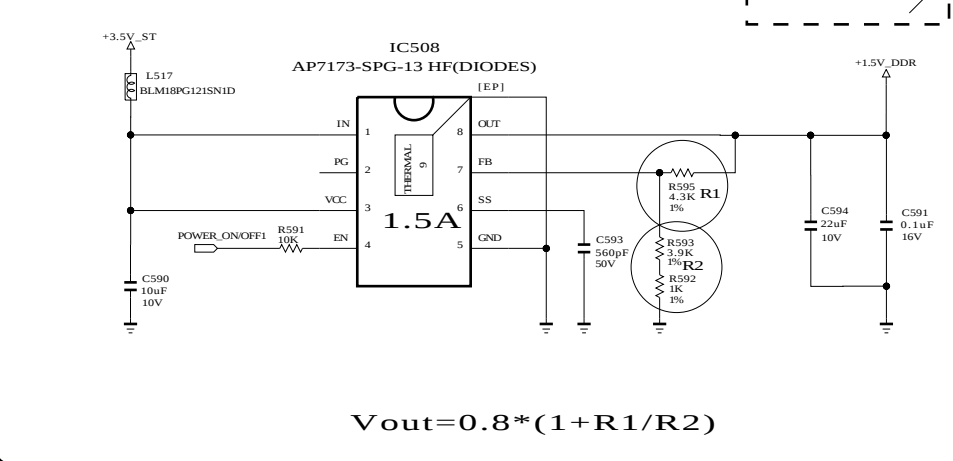
OS Module OPT



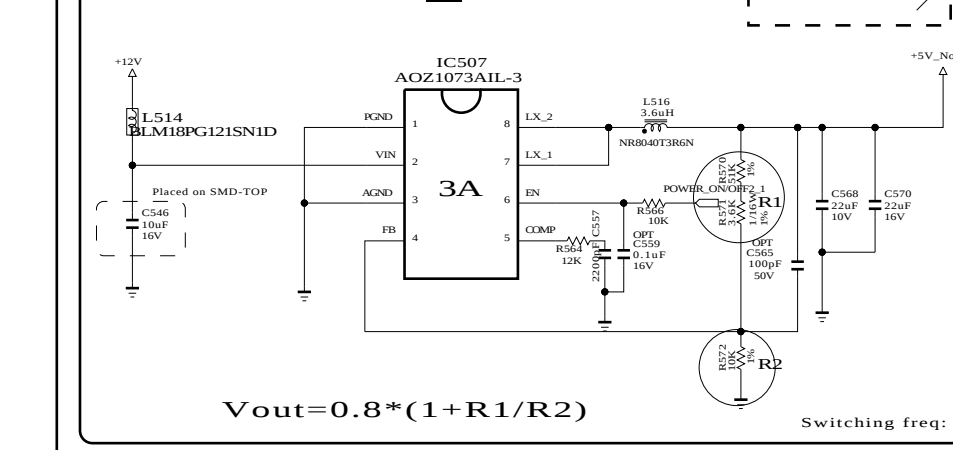
PANEL_POWER



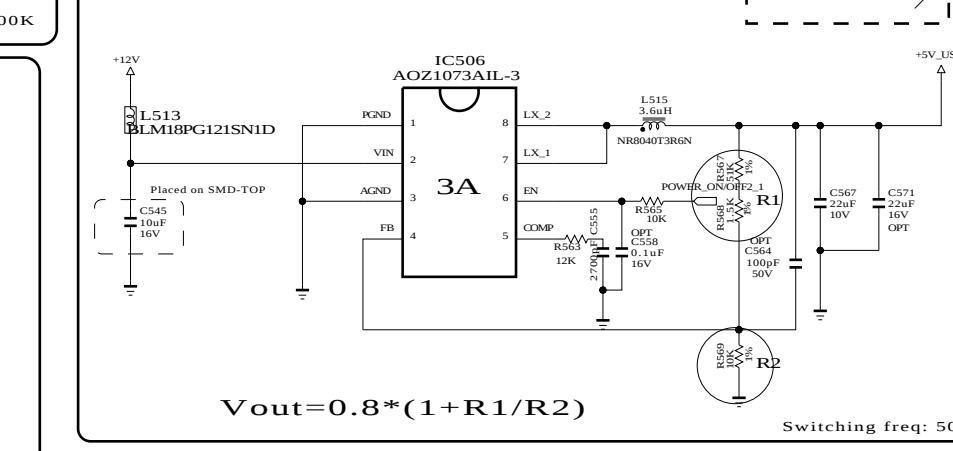
+1.5V_DDR



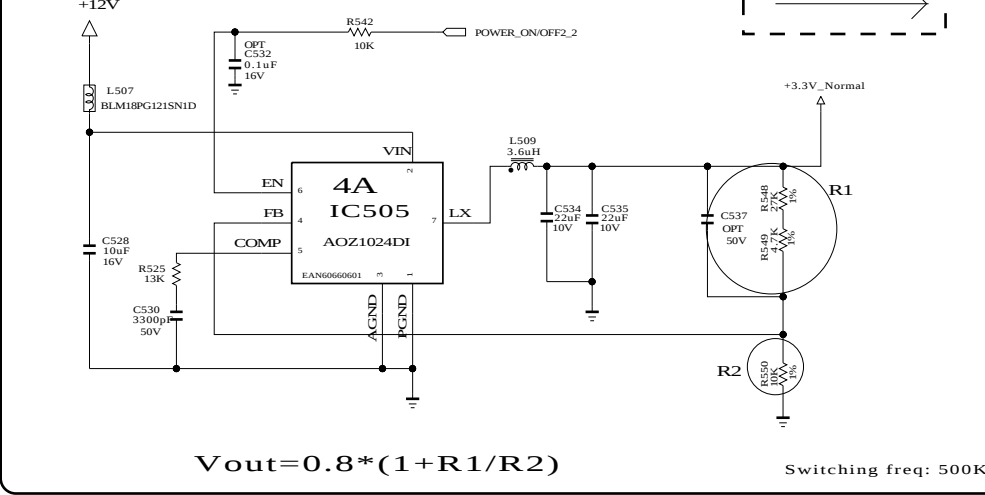
+5V_Normal



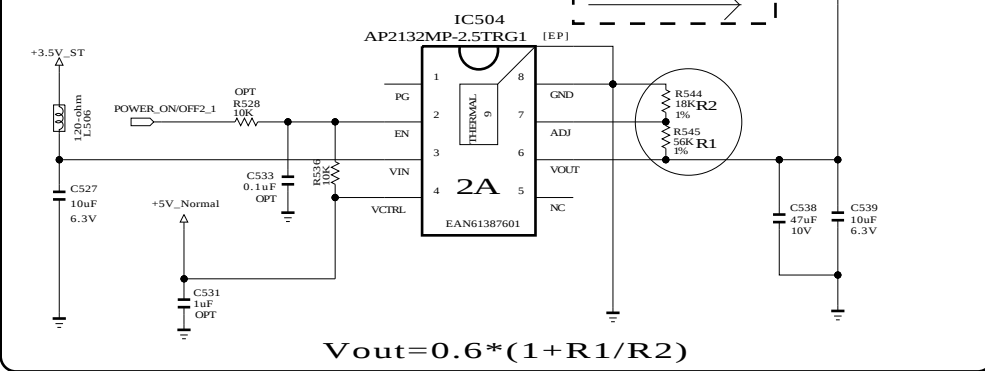
+5V_USB+WIFI



+3.3V_NORMAL



+2.5V_BCM35230

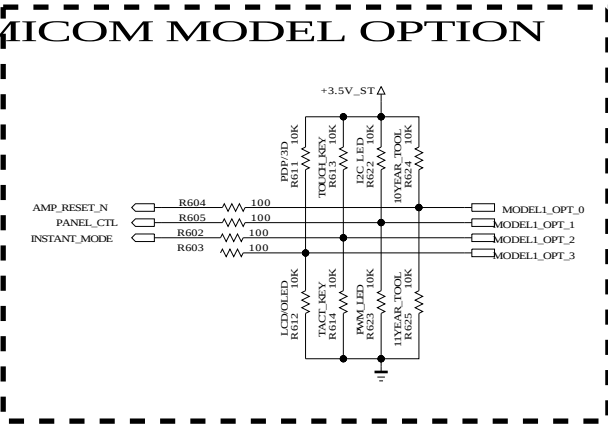
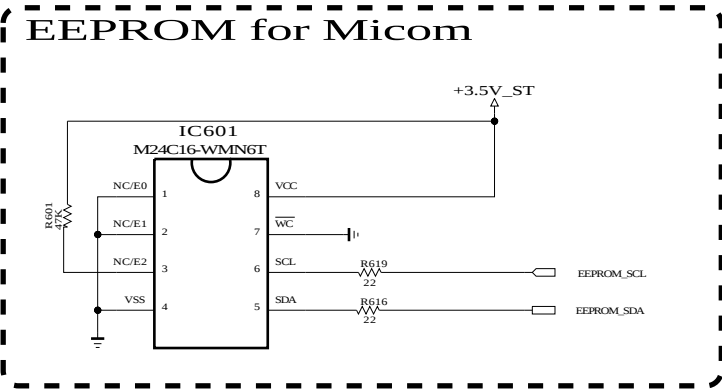
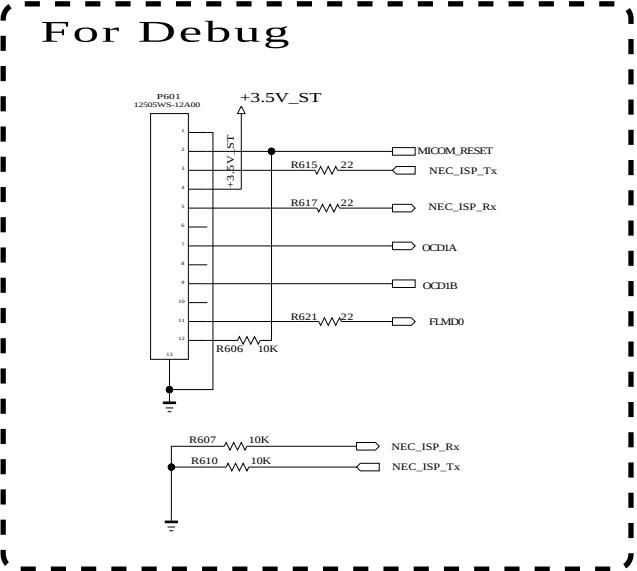


THE SYMBOL MARK OF THIS SCHEMATIC DIAGRAM INCORPORATES SPECIAL FEATURES IMPORTANT FOR PROTECTION FROM X-RADIATION. FILRE AND ELECTRICAL SHOCK HAZARDS, WHEN SERVICING IF IS ESSENTIAL THAT ONLY MANUFACTURES SPECIFIED PARTS BE USED FOR THE CRITICAL COMPONENTS IN THE SYMBOL MARK OF THE SCHEMATIC.

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LG ELECTRONICS

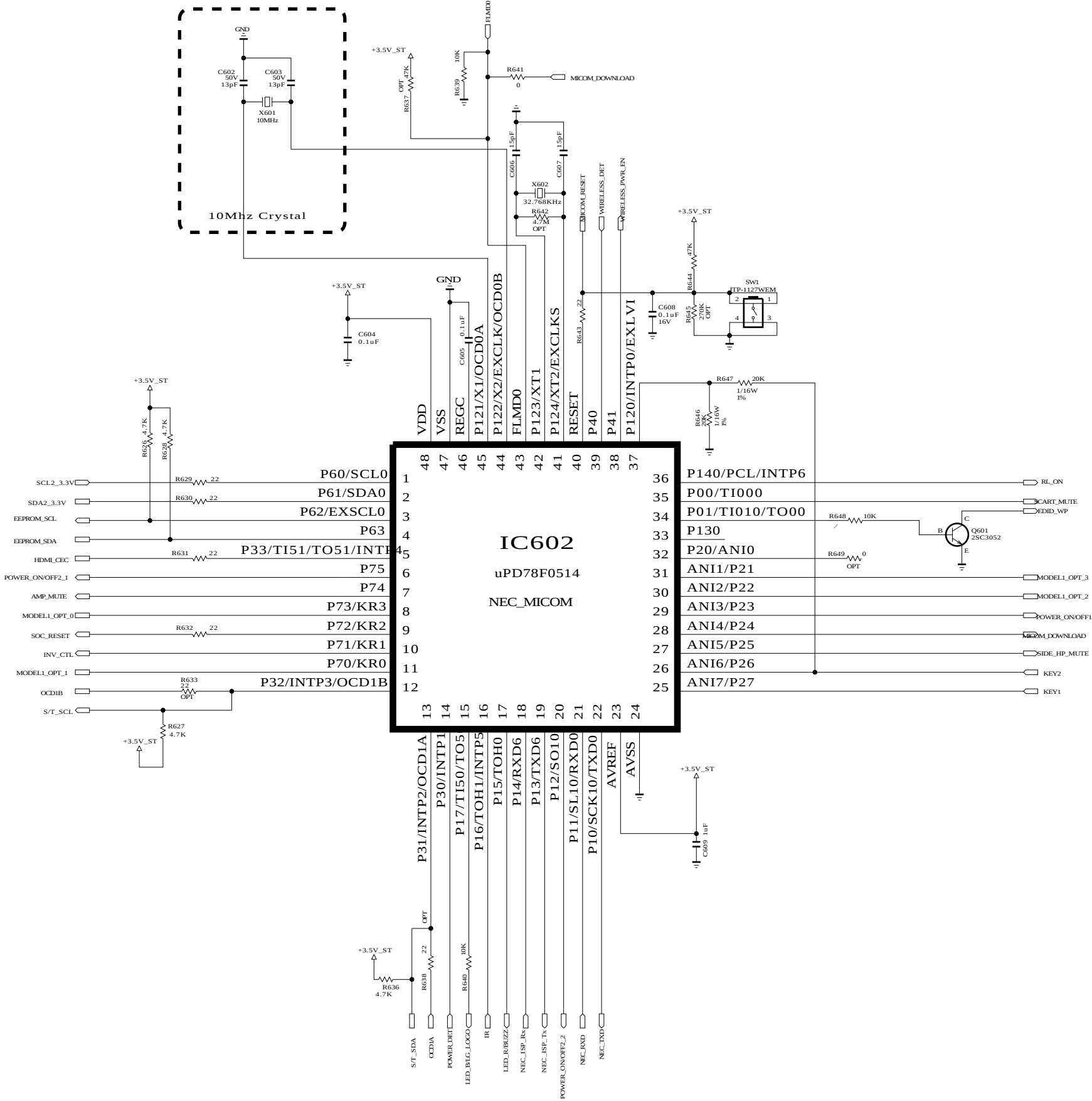
MODEL	BCM35230	DATE	
BLOCK	POWER	SHEET	5 / 58



MODEL OPTION				
PIN NAME	PIN NO.	HIGH	LOW	
MODEL_OPT_0	8	10YEAR TOOL (10 SENSOR)	11YEAR TOOL (11 SENSOR)	
MODEL_OPT_1	11	I2C_LED	PWM_LED	
MODEL_OPT_2	30	TOUCH_KEY	TACT_KEY	
MODEL_OPT_3	31	PDP/3D	LCD/OLED	

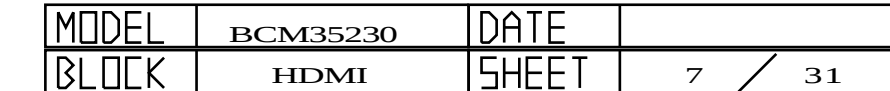
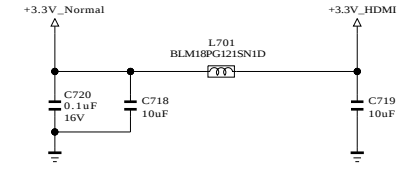
	LCD	PDP	OLED	3D
MODEL_OPT_3	0	1	0	1

	LOW	LOW_SMALL	TBD	HIGH
MODEL_OPT_1	0	0	1	1
MODEL_OPT_2	0	1	0	1

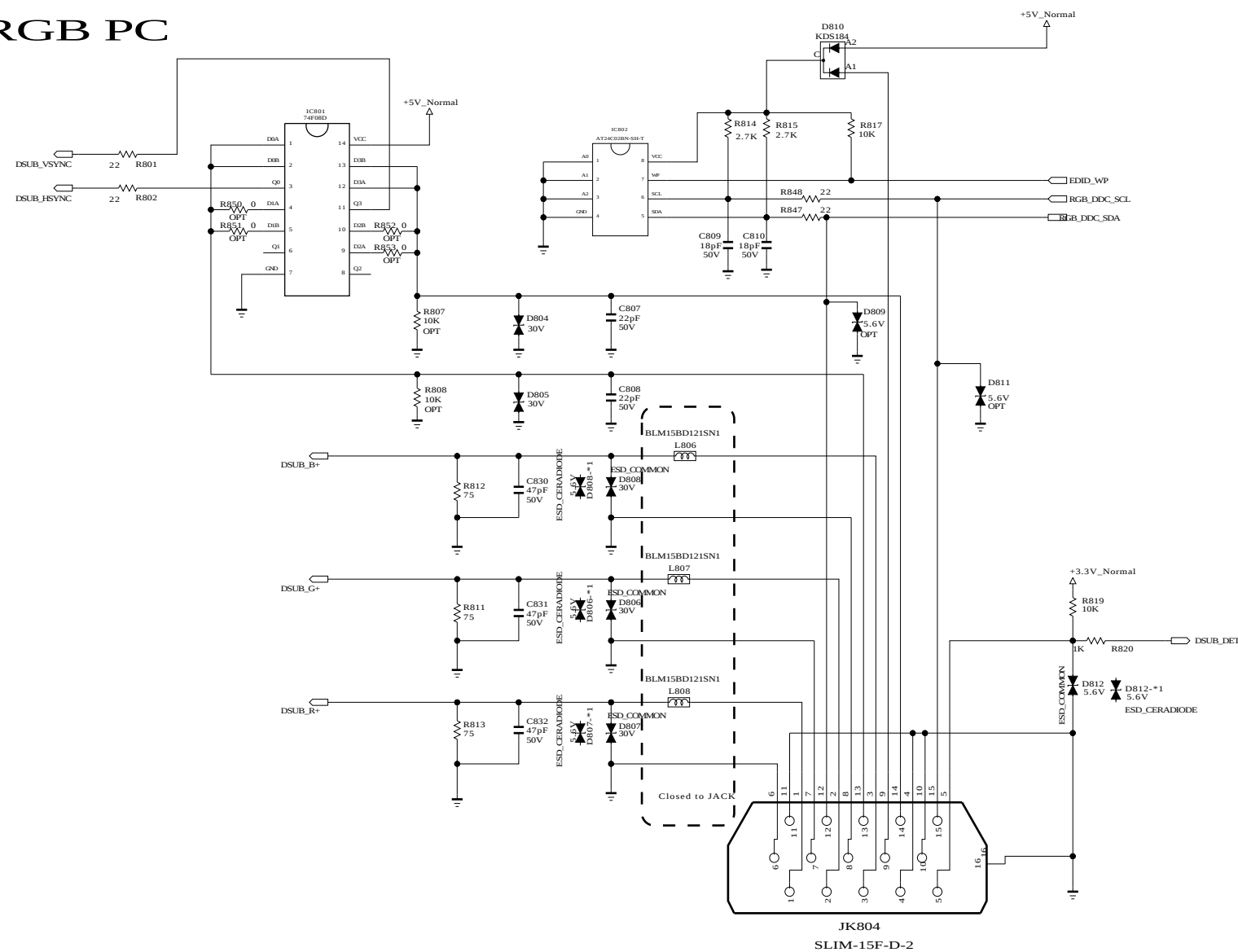




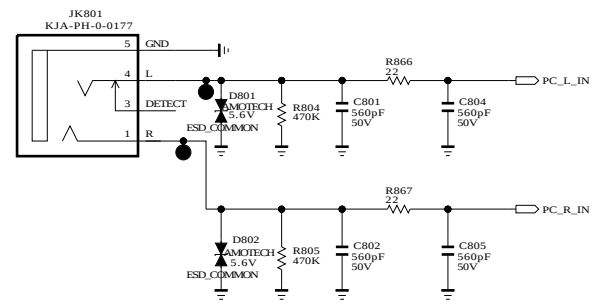
* HDMI CEC



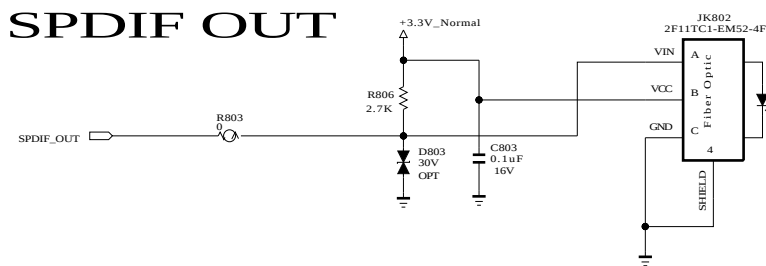
RGB PC



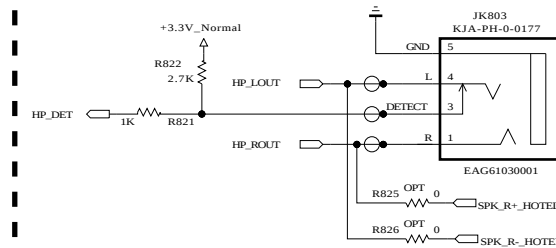
PC AUDIO



[SPDIF OUT]

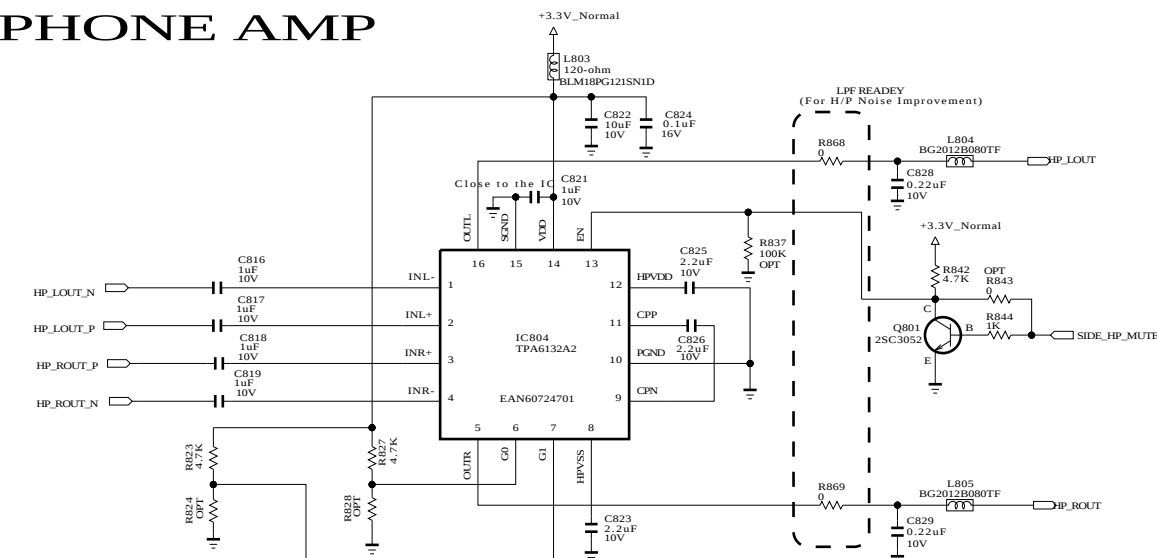


TEARPHON JACK

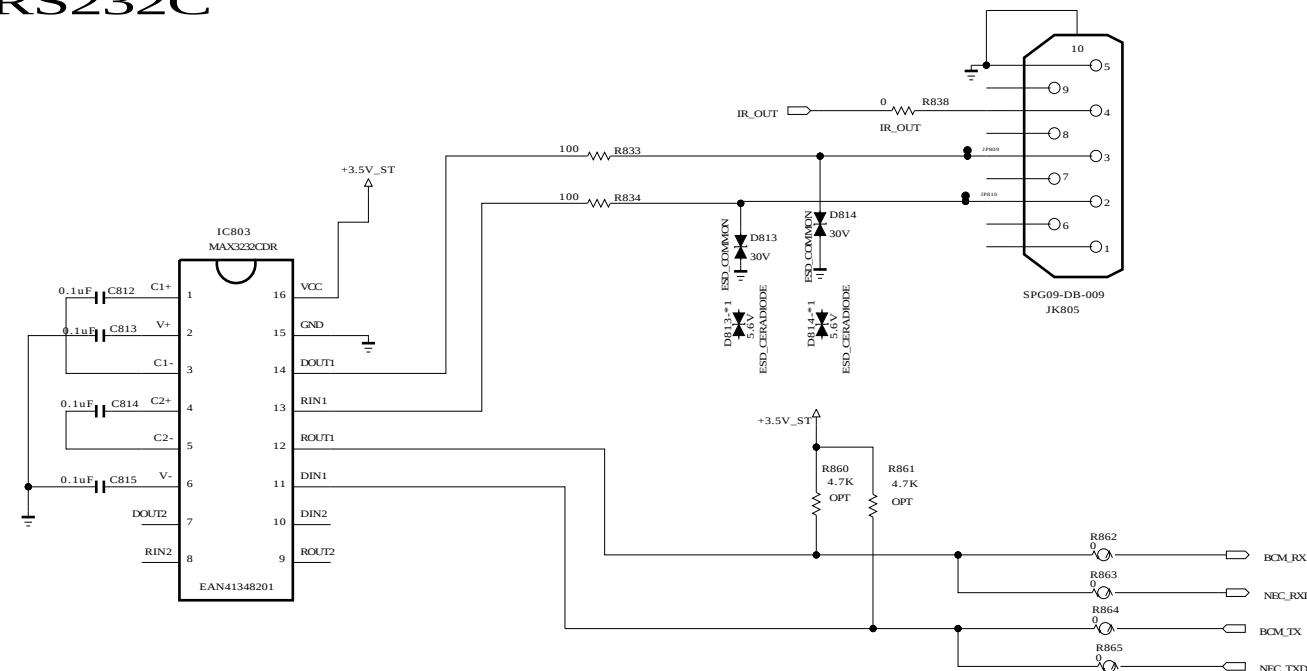


DUAL COMPONENT	
D804, D805, D806 D807, D808, D813 D814	1ST : EAH39491601, 2ND : EAH33945901
D810	1ST : 0DD184009AA, 2ND : 0DSIH00028A
Q801	1ST : 0TRIY80001A, 2ND : 0TR387500AA
IC805	1ST : EAN61151201, 2ND : EAN61130001

EARPHONE AMP



RS232C

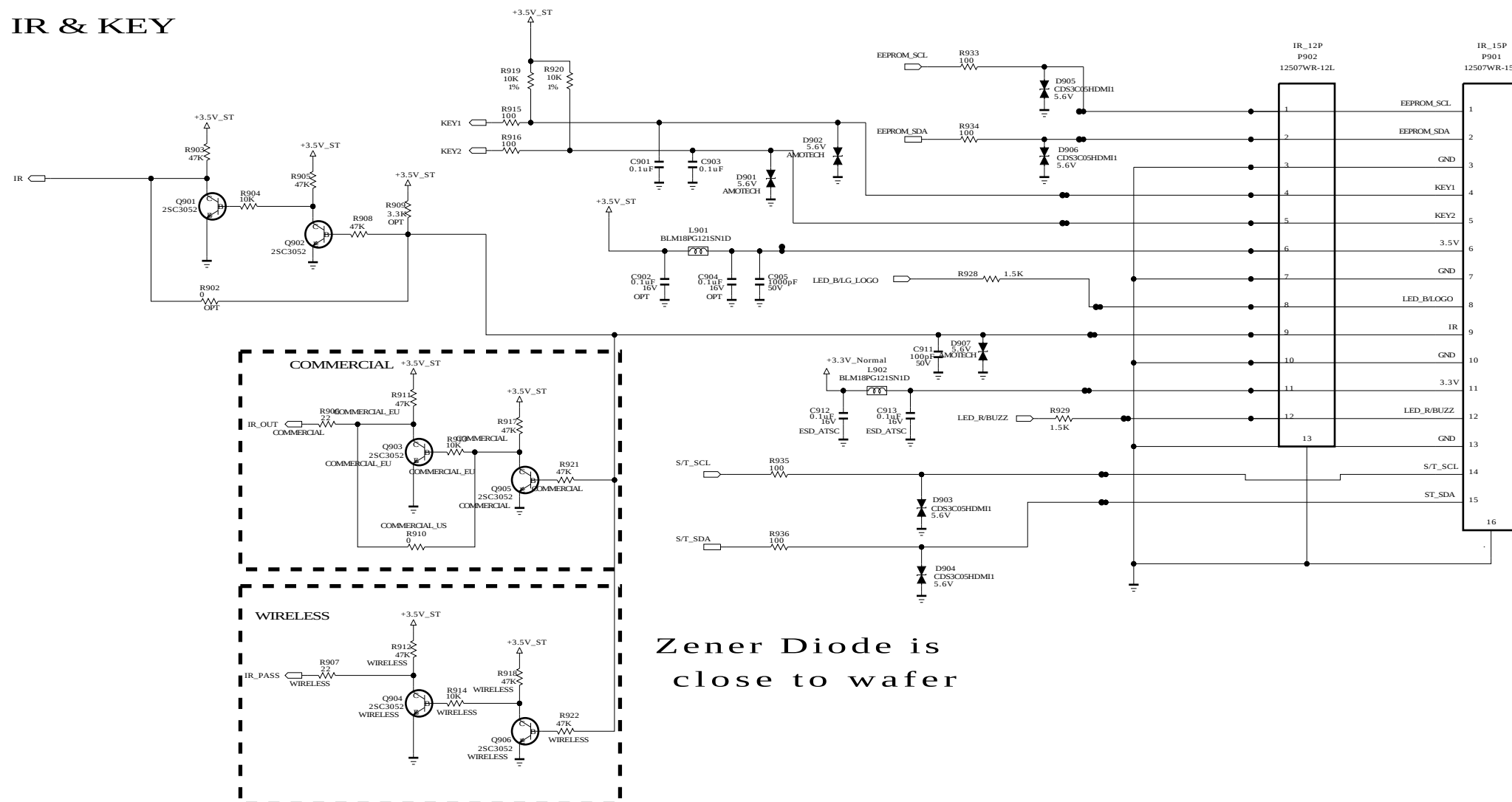


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MODEL	BCM35230	DATE	2010.10.21
BLOCK	COMMON JACK	SHEET	8 / 58

DUAL COMPONENT	
Q901,Q902,Q903 Q904,Q905,Q906	1ST : 0TRIY80001A 2ND : 0TR387500AA
D903,D904 D905,D906	1ST : EAH42720601, 2ND : EAH60994401

IR & KEY



Zener Diode is
close to wafer

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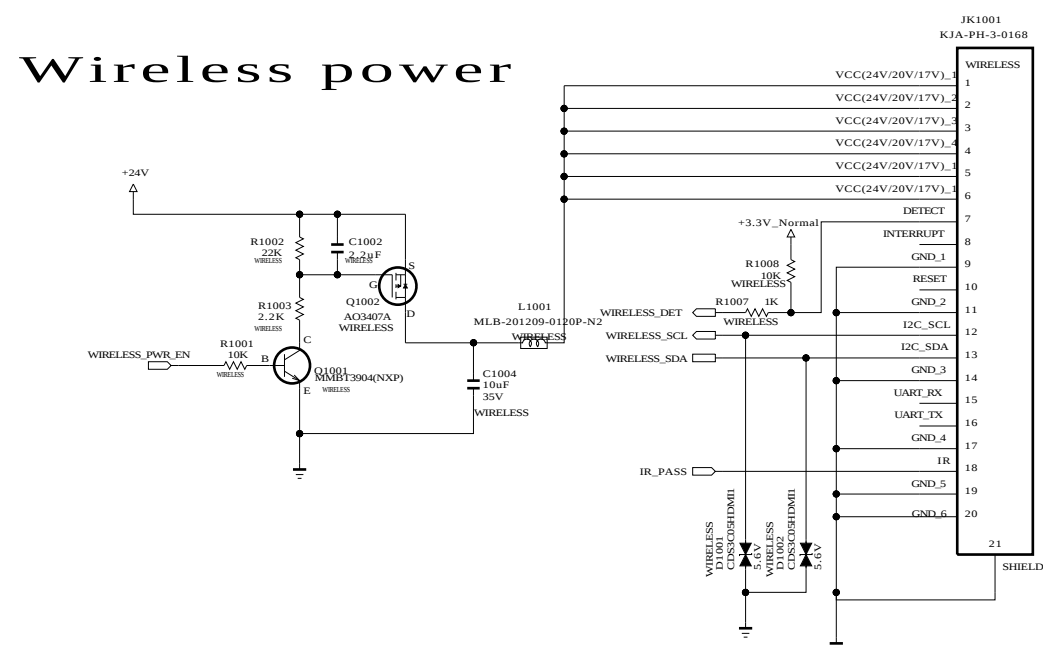
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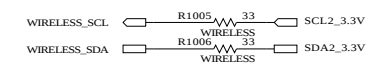
MODEL	BCM35230	DATE	
BLOCK	IR/KEY	SHEET	9 / 50

TIRELESS READY MODEL

DUAL COMPONENT	
D1001,D1002	1ST : EAH42720601 2ND : EAH60994401
Q1001	1ST : EBK61012601, 2ND : 0TRDI80002A
Q1002	1ST : EBK60752501, 2ND : EBK61011501



Wireless I2C connection with I2C_1
Address : 0X20



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MODEL	BCM35230	DATE	
BLOCK	WIRELESS	SHEET	10 / 50

The schematic diagram illustrates the internal circuitry of the AV2 connector. It features a central AV2_JACK (PPJ233-01) component, which is connected to a JACK_PACK (JK1105, PPJ238-01). The circuit includes several diodes (D1109, D1110, D1101, D1102, D1111) and resistors (R1116, R1117, R1141, R1142, R1118, R1128, R1129, R1140) that manage the signal flow and provide protection. Capacitors (C1118, C1119, C1123, C1124, C1120) are used for filtering and timing. The output signals are AV2_R_IN, AV2_L_IN, AV2_CVBS_IN, and AV2_CVBS_DET. The circuit is powered by a +3.3V Normal supply.

COMPONENT PI Filter

L1110-*1
CM2012FR10KT

C1102-*1 C1125-*1
47pF 47pF
50V 50V

L1107-*1
CM2012FR10KT

C1117-*1 C1130-*1
47pF 47pF
50V 50V

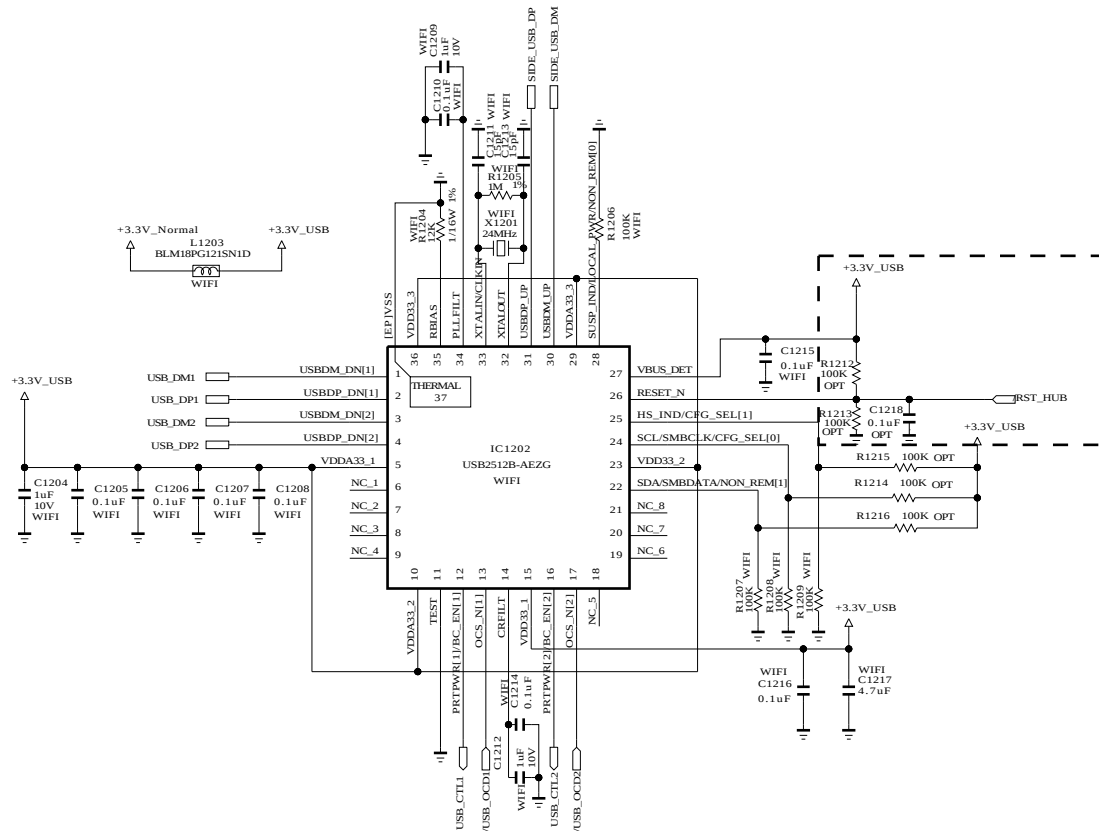
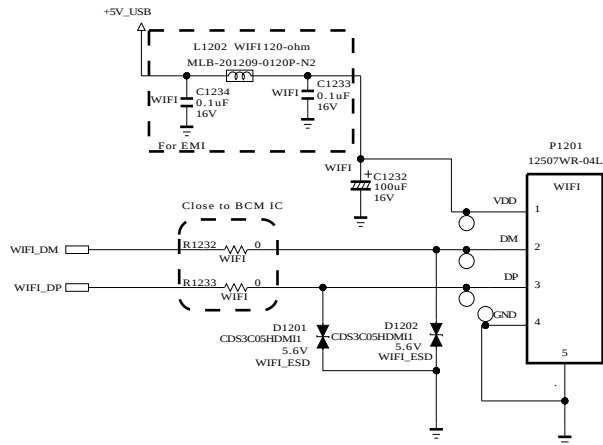
L1110-*1
CM2012FR10KT

C1102-*1 47pF 50V C1125-*1 47pF 50V

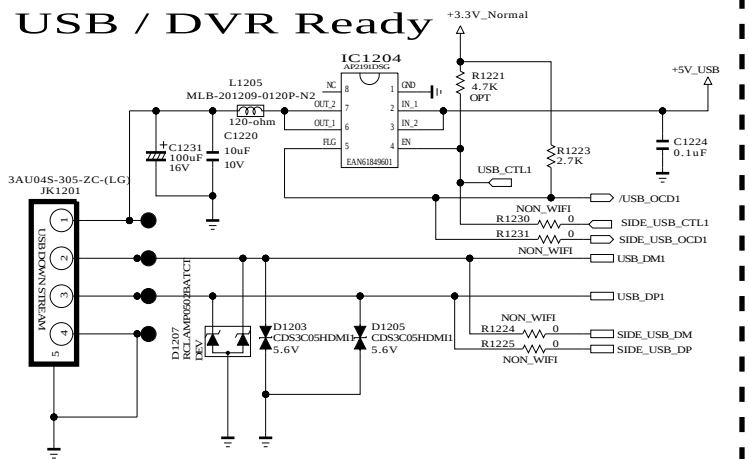
L1107-*1
CM2012FR10KT

C1117-*1 47pF 50V C1130-*1 47pF 50V

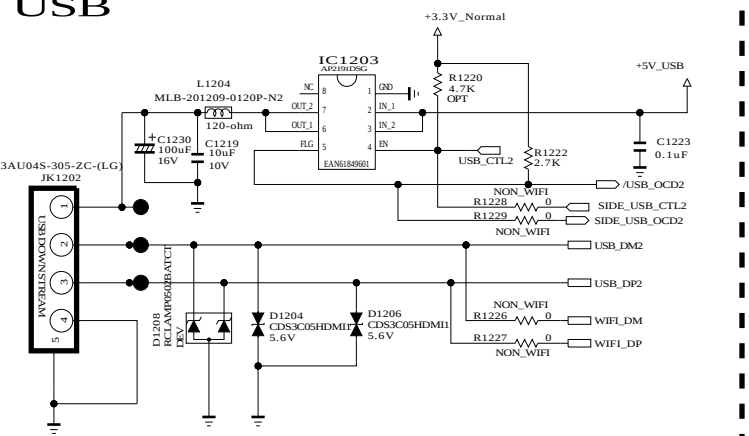
USB_WIFI



DUAL COMPONENT	
D1201,D1202 D1203,D1204 D1205,D1206	1ST : EAH42720601 2ND : EAH60994401



USB



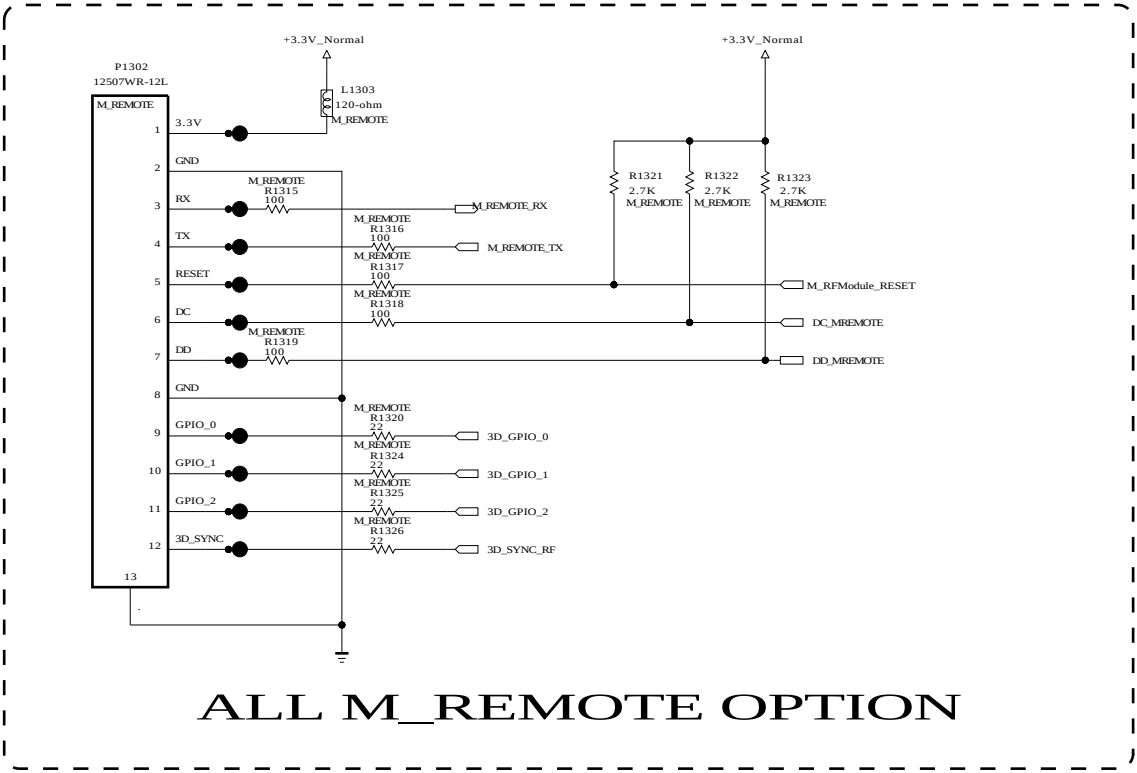
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MODEL	BCM35230	DATE	
BLOCK	USB + WIFI	SHEET	12 /

TI solution M_REMOTE OPTION

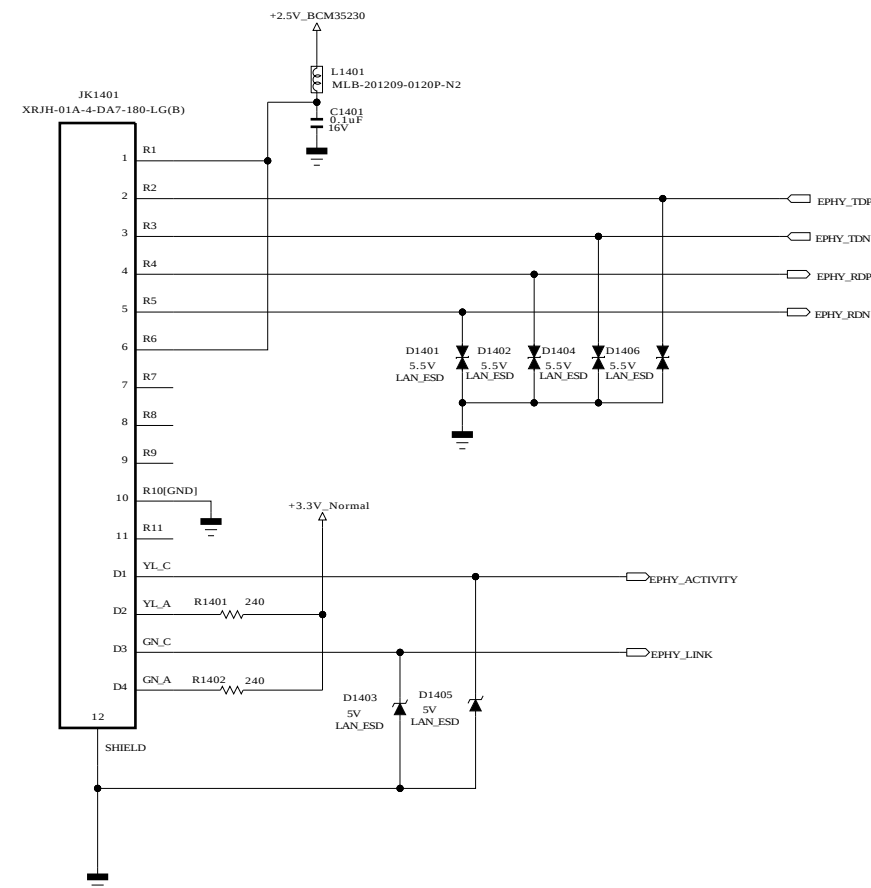


ALL M_REMOTE OPTION

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Ethernet Block

DUAL COMPONENT	
D1401,D1402 D1403,D1404 D1405,D1406	1ST : EAH42720601 2ND : EAH60994401



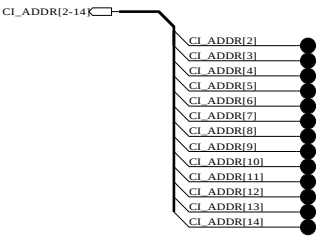
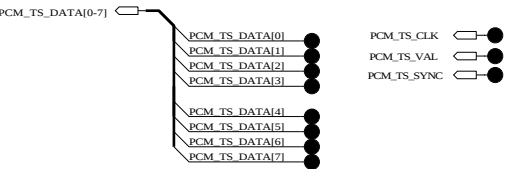
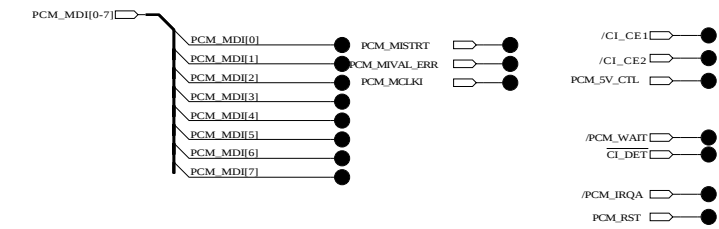
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MODEL	BCM35230	DATE	
BLOCK	ETHERNET	SHEET	14 / 50

NON CI



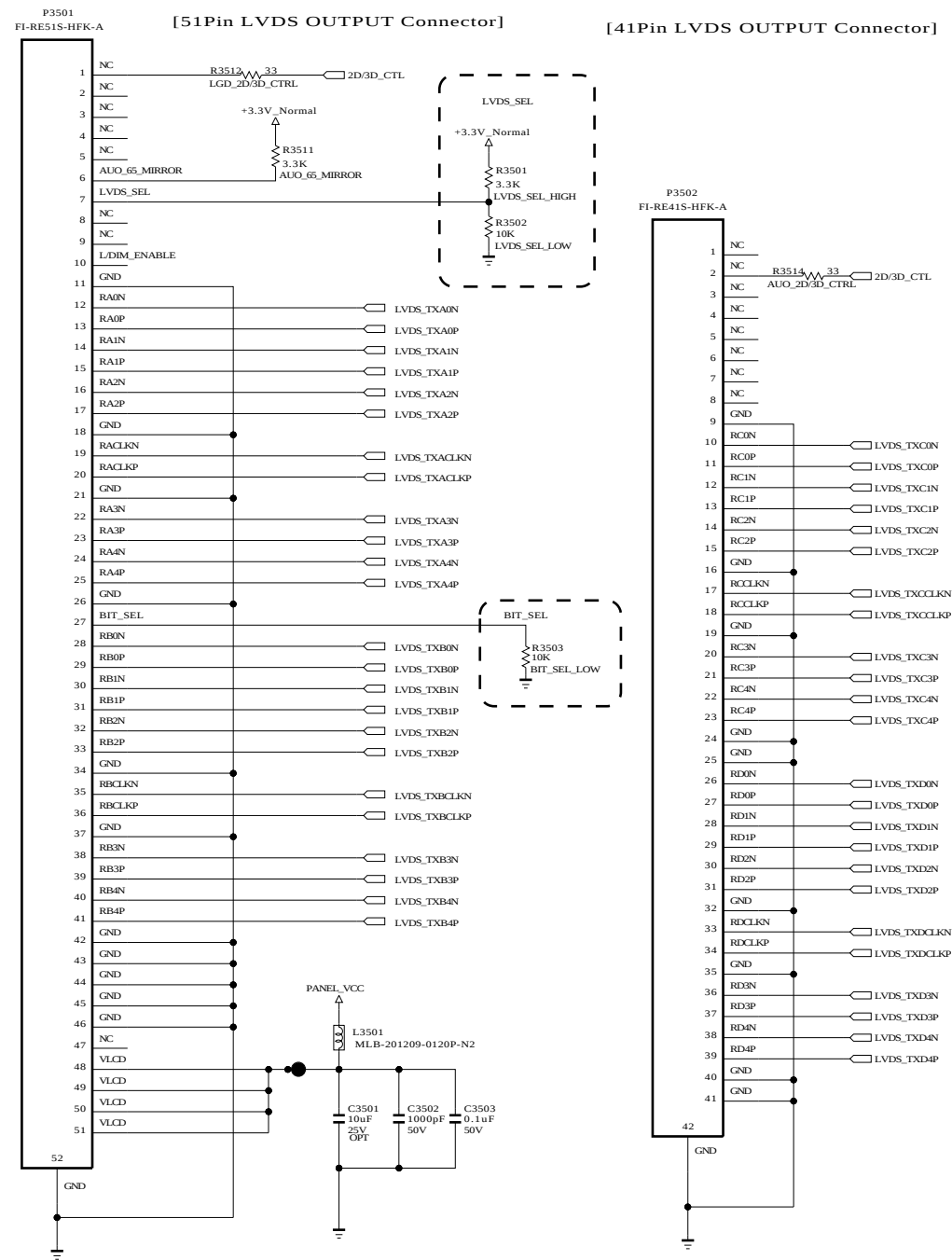
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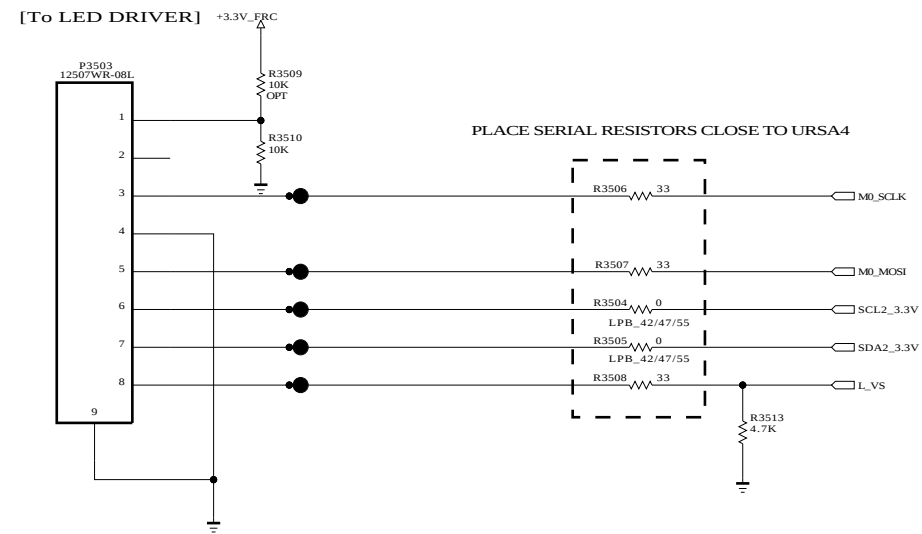


MODEL	BCM35230	DATE	
BLOCK	NON CI	SHEET	20 / 50

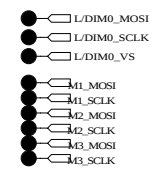
LVDS



LOCAL DIMMING



NON USED L/DIMMING (FOR EDGE_LED)



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SECRET
LGElectronics

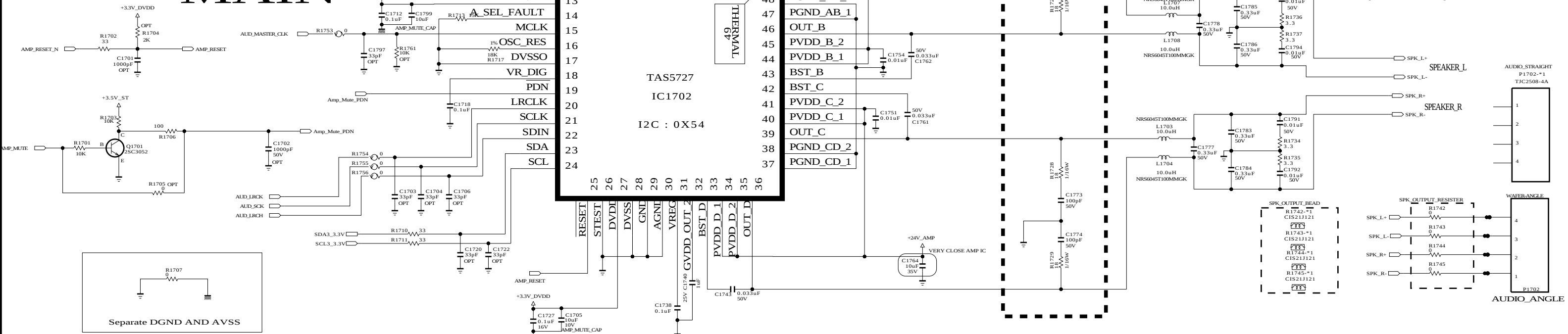


MODEL	BCM35230	DATE	2010. 10. 20
BLOCK	Interface block	SHEET	35 / 58

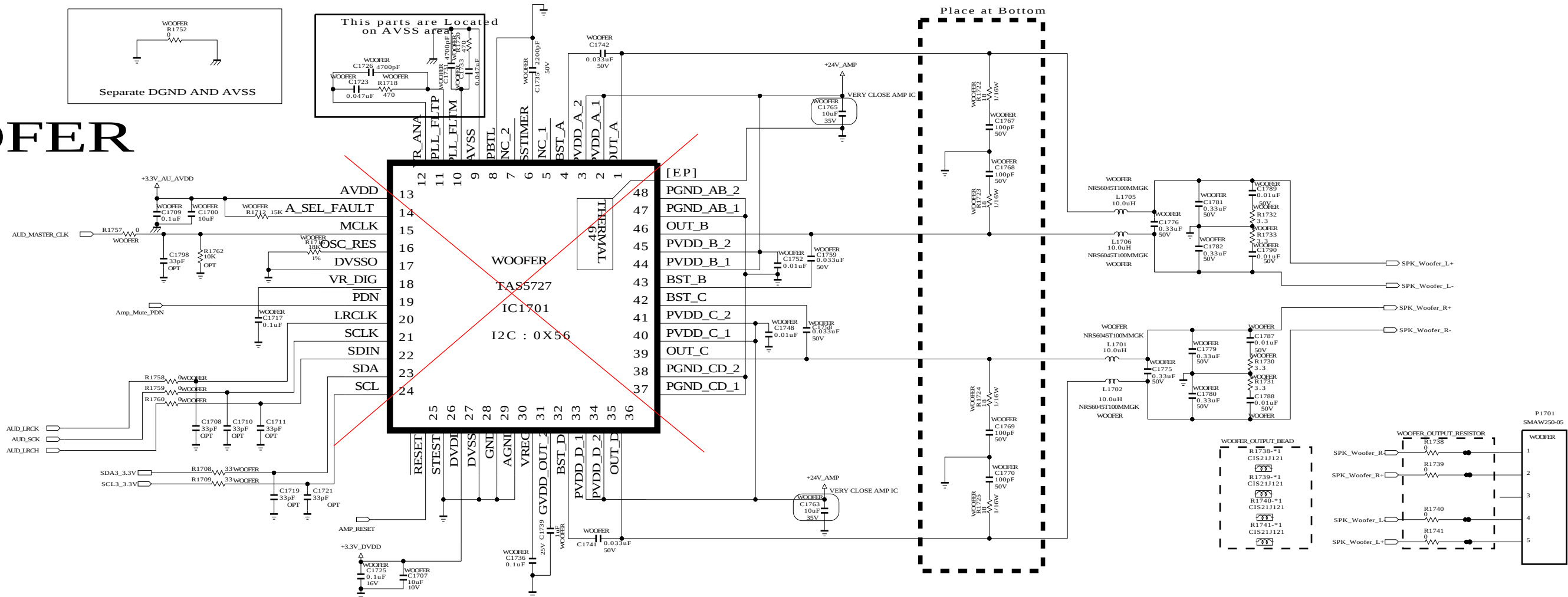
TAS5727

DUAL COMPONENT	
Q1701	1ST : 0TRIY80001A 2ND : 0TR387500AA

MAIN



WOOFER



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

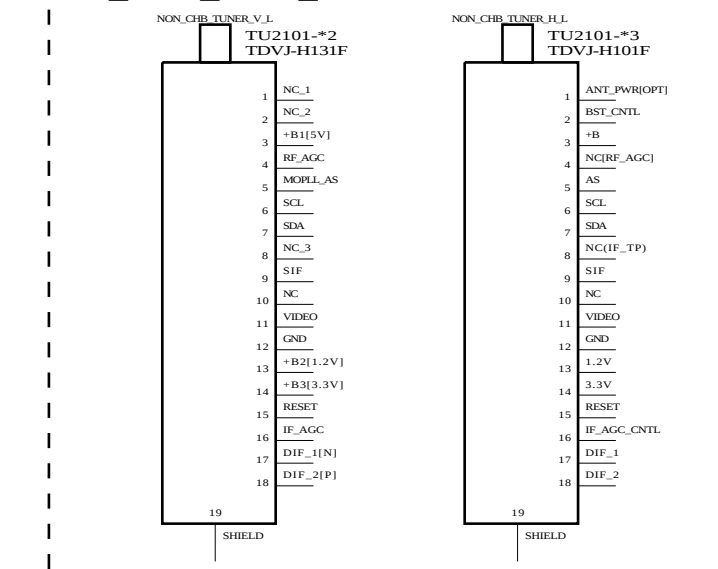
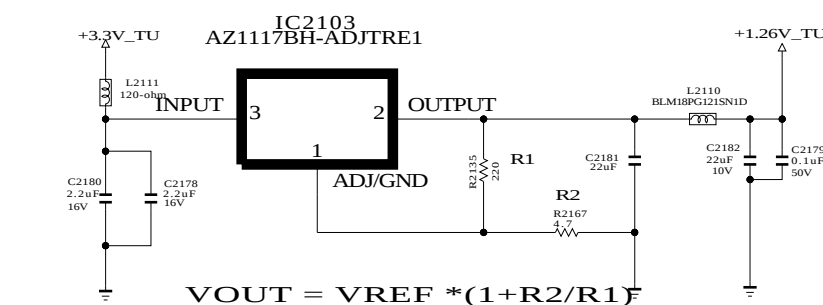
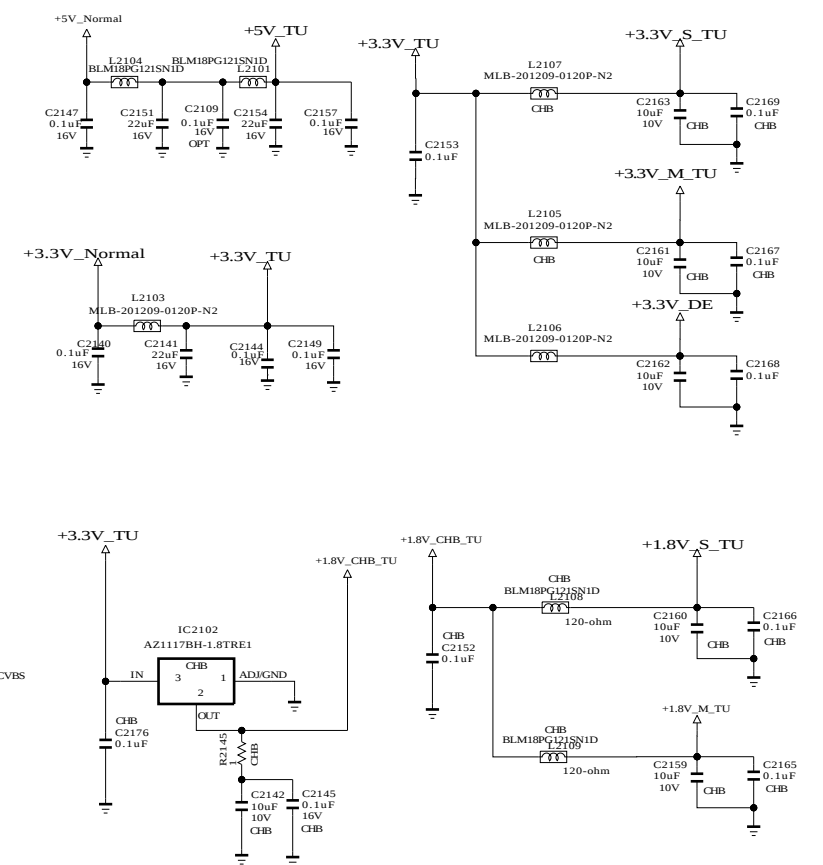
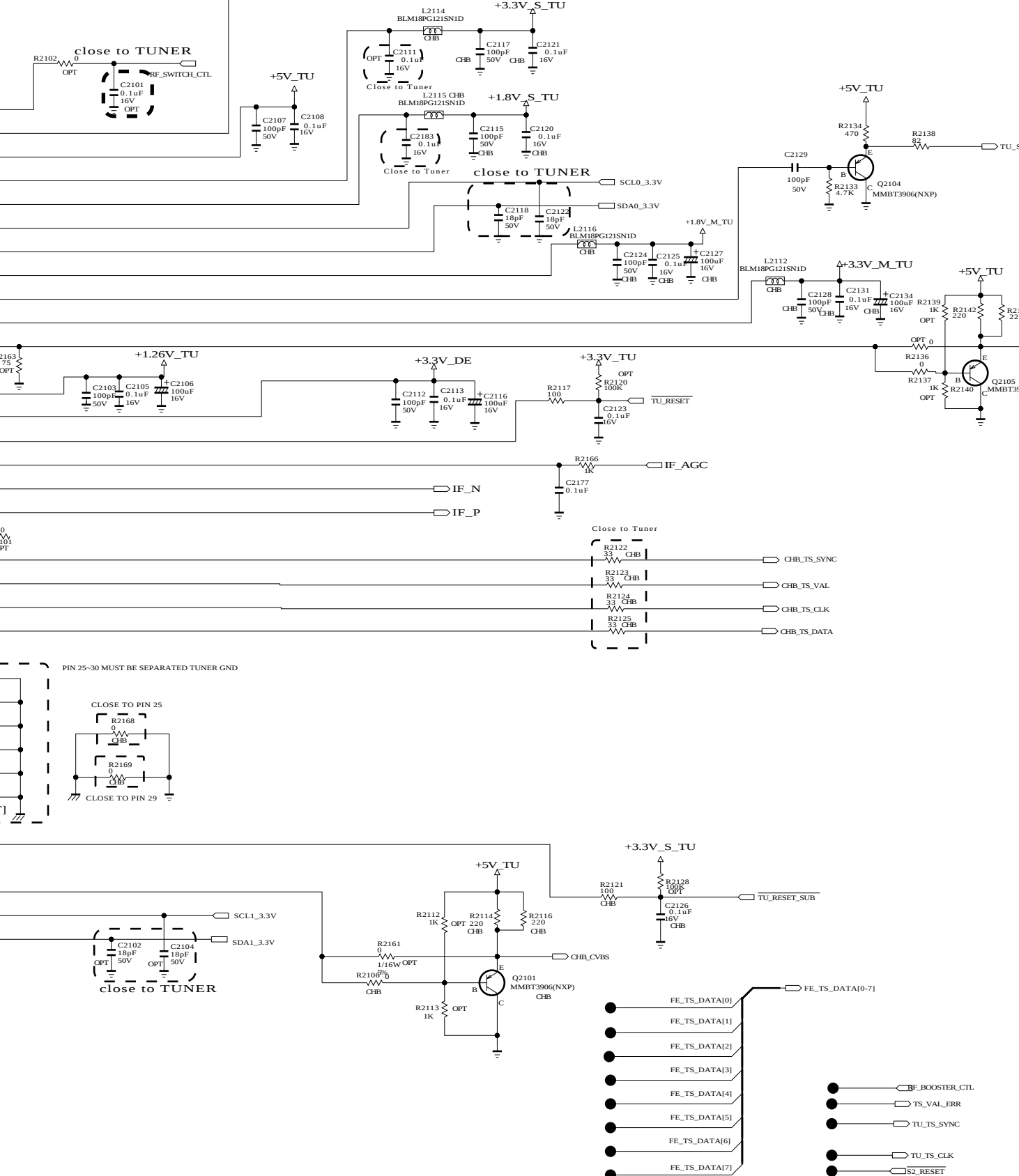
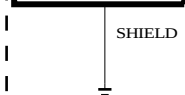
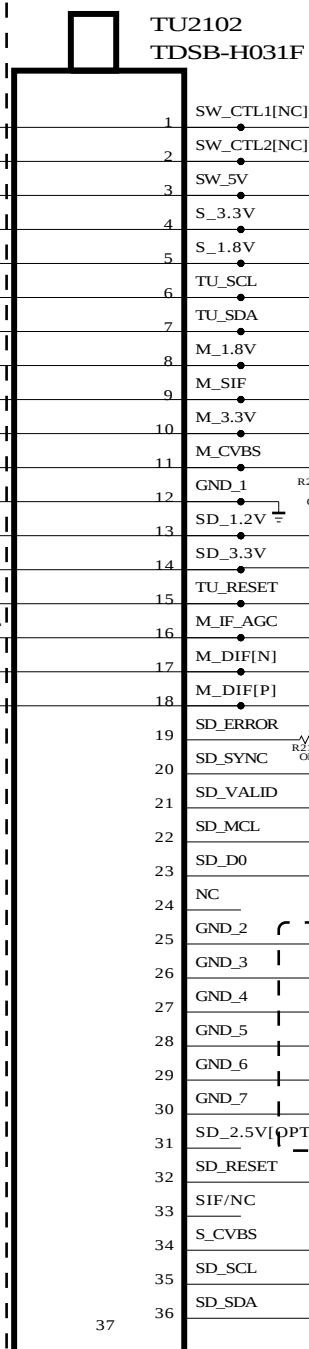
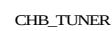
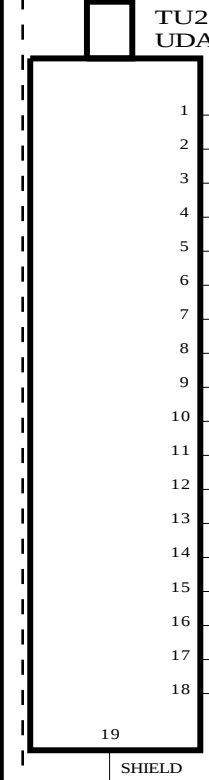
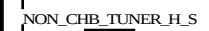
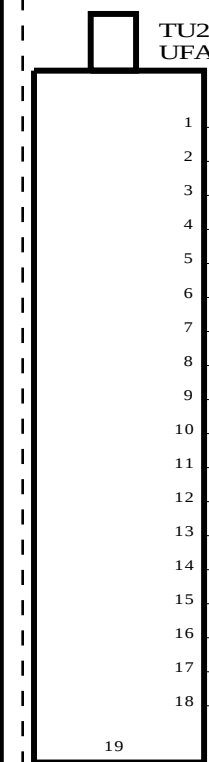
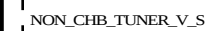
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LG Electronics



MODEL	BCM35230	DATE	
BLK PK	AUDIO[TI]	SHEET	17 / 50

NON_CHB & CHB TUNER (KOR/USA)

DUAL COMPONENT	
IC2102	1ST : EAN61829801, 2ND : EAN544289201
IC2103	1ST : EAN61507501, 2ND : EAN54428101



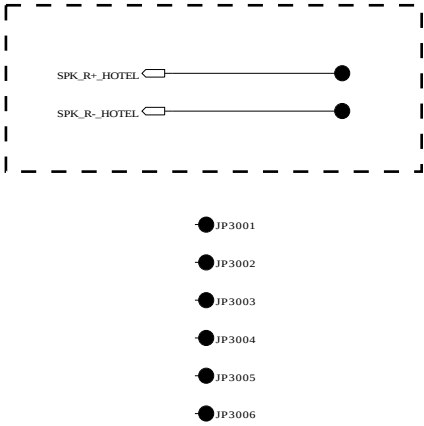
THE  SYMBOL MARK OF THIS SCHEMATIC DIAGRAM INCORPORATES SPECIAL FEATURES IMPORTANT FOR PROTECTION FROM X-RADIATION. FILRE AND ELECTRICAL SHOCK HAZARDS, WHEN SERVICING IF IS ESSENTIAL THAT ONLY MANUFACTURES SPECIFIED PARTS BE USED FOR THE CRITICAL COMPONENTS IN THE  SYMBOL MARK OF THE SCHEMATIC.

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LGElectronics



MODEL	BCM35230	DATE	
BLOCK	ATSC_TUNER	SHEET	21 / 50

NON CHINA HOTEL



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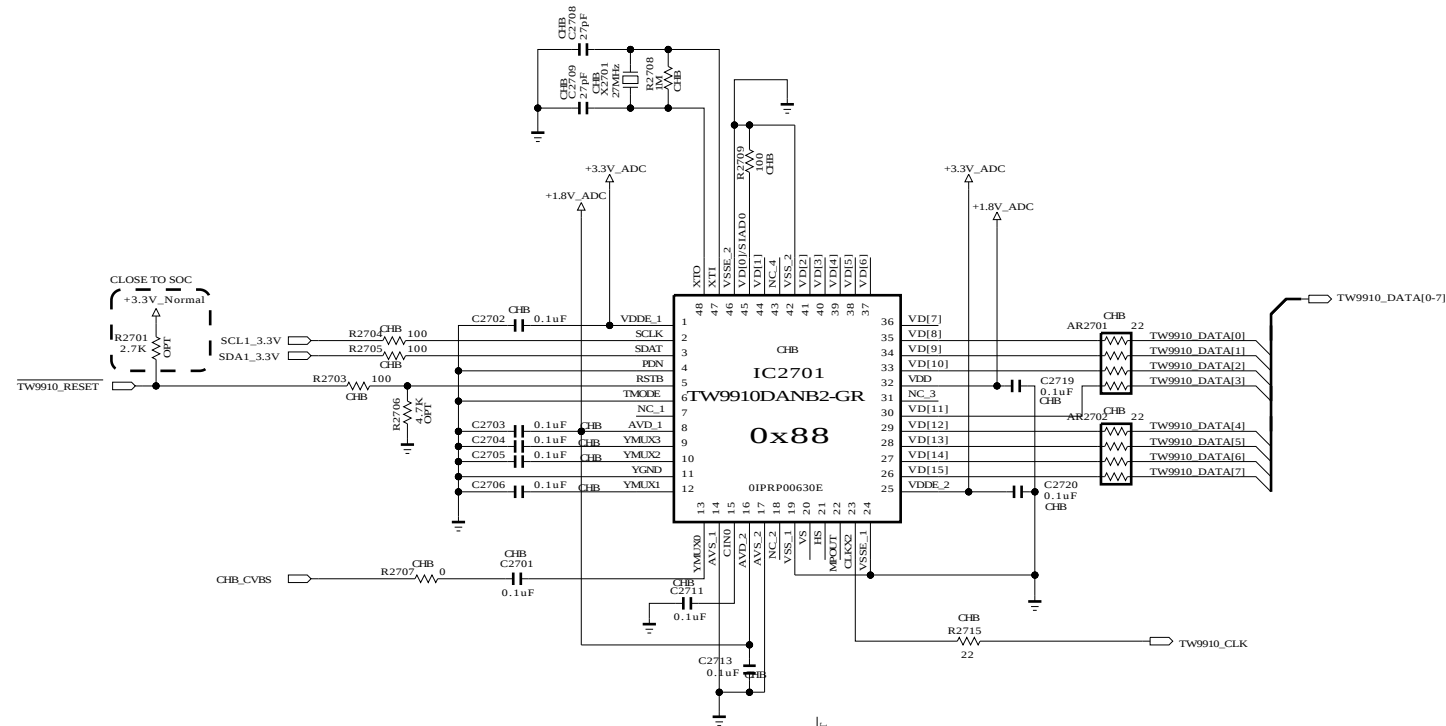
SECRET
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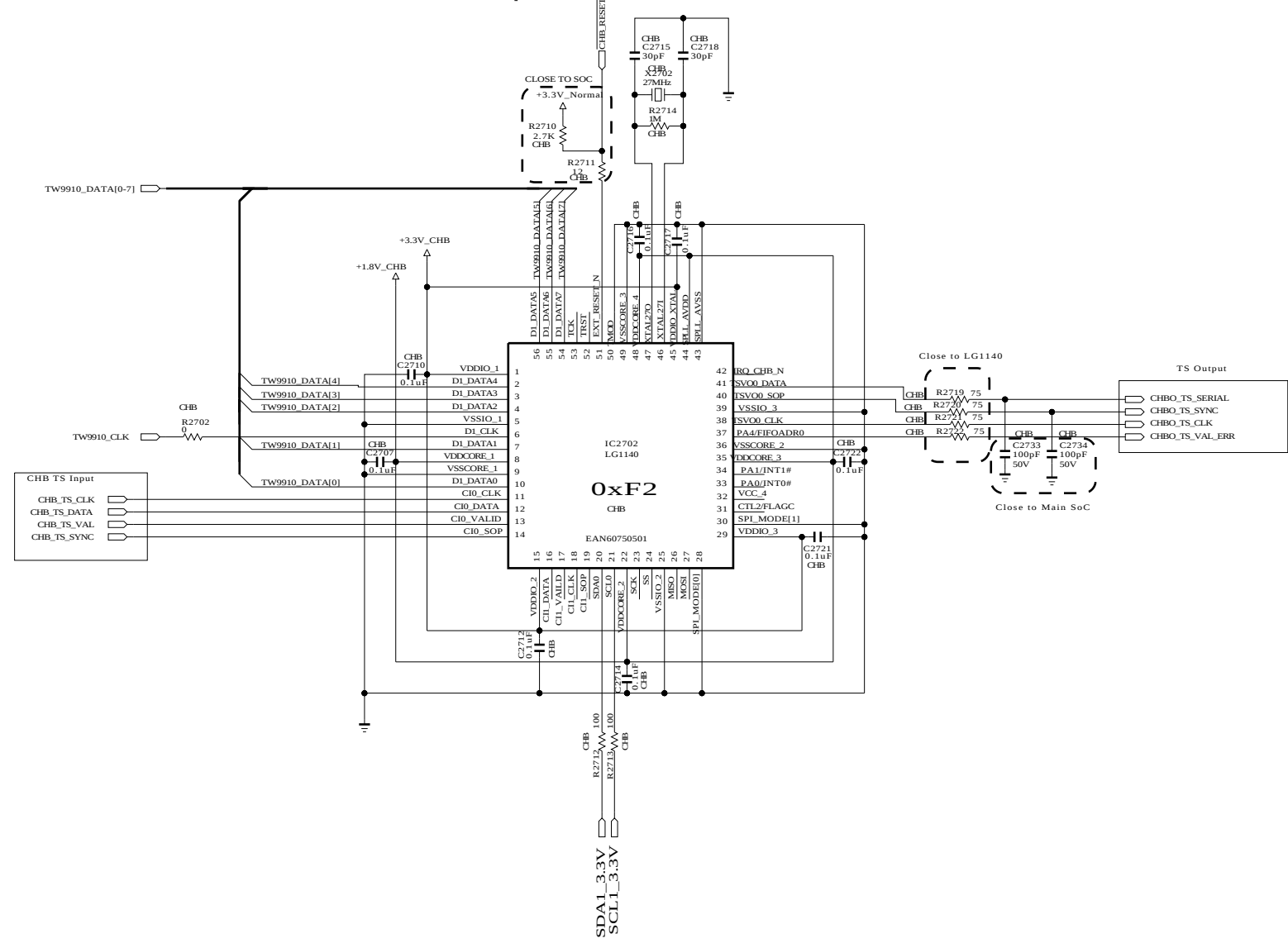
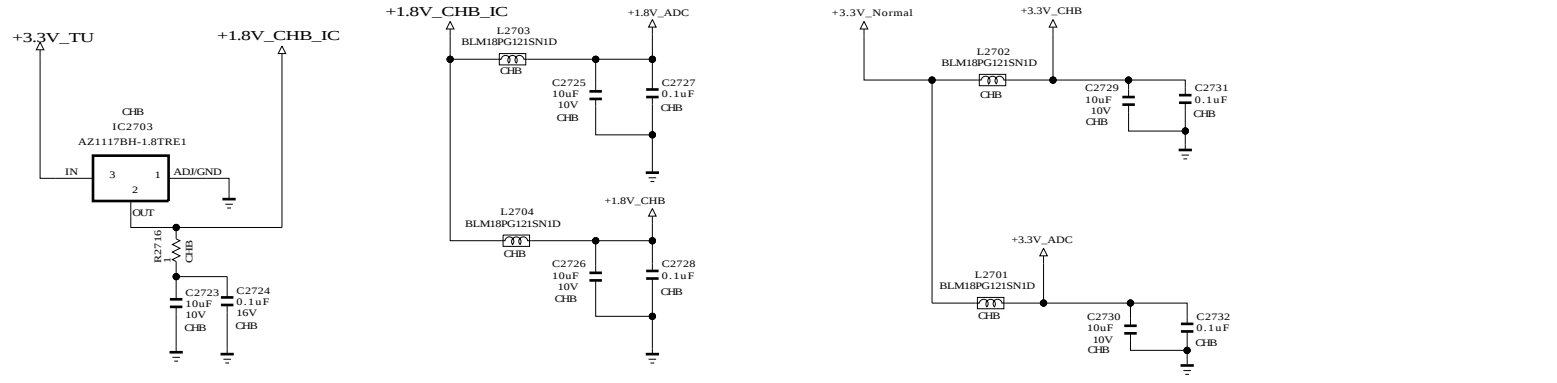
MODEL	BCM35230	DATE	
BLOCK	NON CHINA HOTEL	SHEET	30 / 50

CHANNEL BROWSER

DUAL COMPONENT	
IC2703	1ST : EAN61829801 2ND : EAN54428201



CHB OPTION

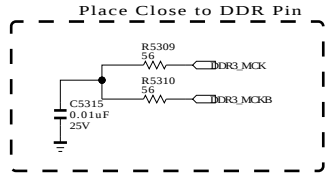
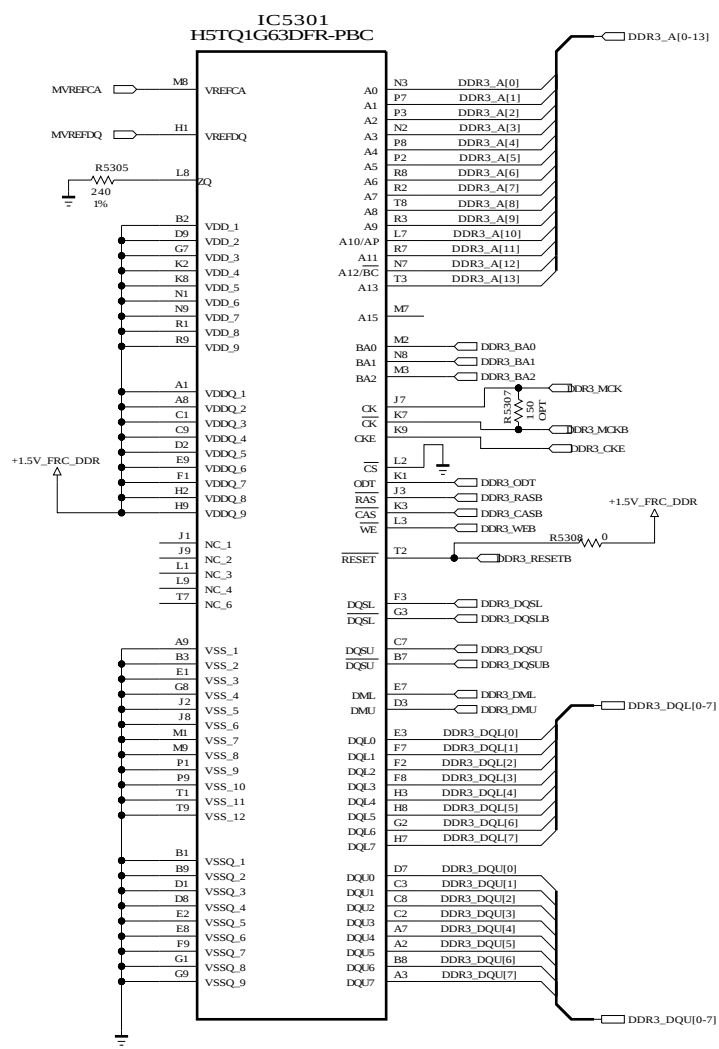
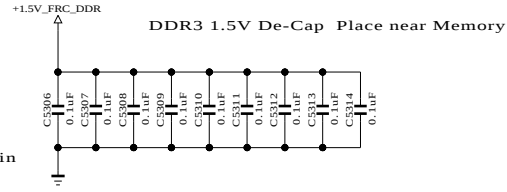
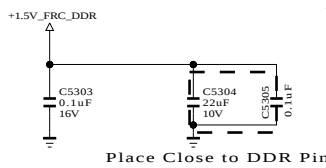
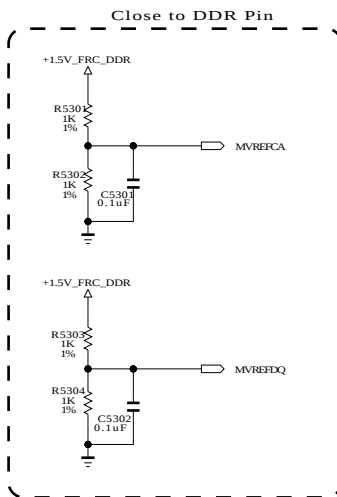


THE  SYMBOL MARK OF THIS SCHEMATIC DIAGRAM INCORPORATES SPECIAL FEATURES IMPORTANT FOR PROTECTION FROM X-RADIATION. FILRE AND ELECTRICAL SHOCK HAZARDS, WHEN SERVICING IF IS ESSENTIAL THAT ONLY MANUFACTURES SPECIFIED PARTS BE USED FOR THE CRITICAL COMPONENTS IN THE  SYMBOL MARK OF THE SCHEMATIC.

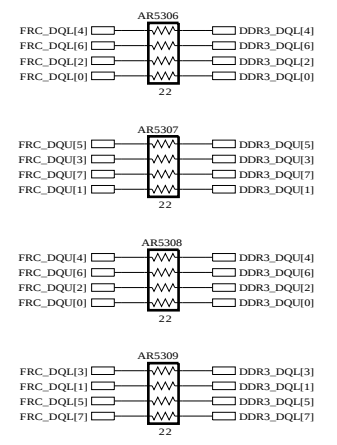
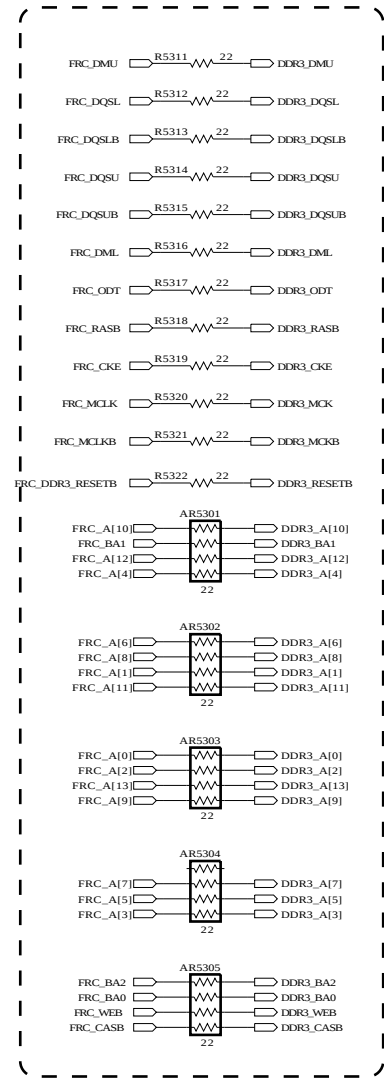
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MODEL	BCM35230	DATE	
BLOCK	CHB	SHEET	27 / 50



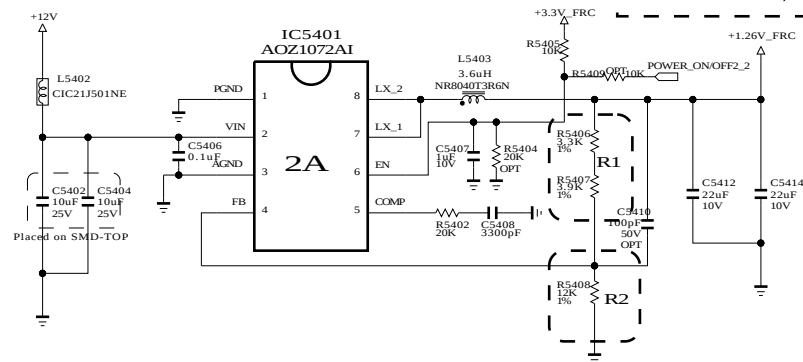
Place the serial damping resist in the middle of DRAM pattern



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CORE +1.26V_FRC

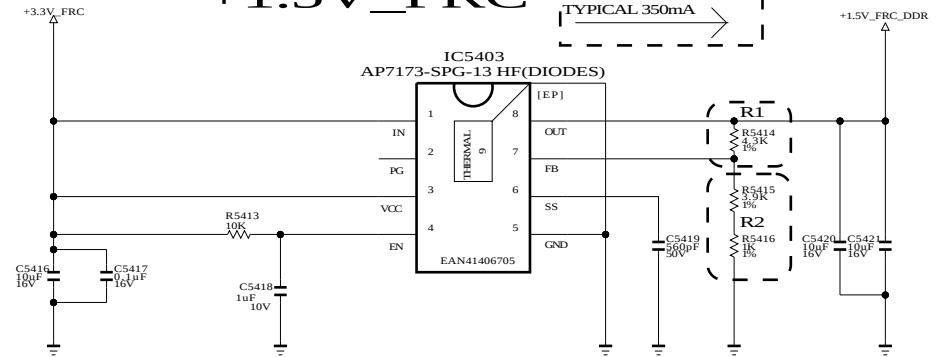
TYPICAL 980mA



$$V_{out} = (1 + R1/R2) * 0.8$$

+1.5V_FRC

TYPICAL 350mA

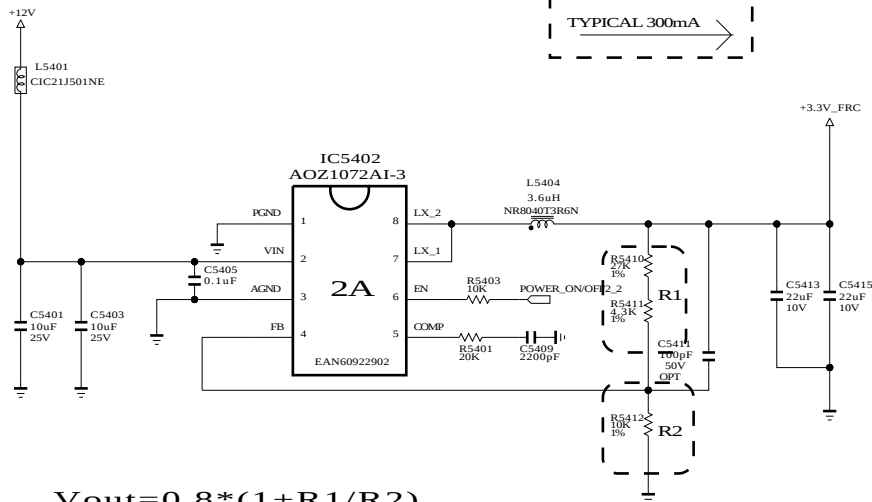


$$V_{out} = 0.6 * (1 + R1/R2)$$

+1.5V of DDR&URSA5 uses same power line

+3.3V_FRC

TYPICAL 300mA



$$V_{out} = 0.8 * (1 + R1/R2)$$

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SECRET

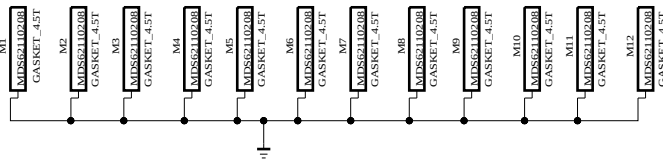
LG Electronics

LG ELECTRONICS

MODEL	MStar URSA5	DATE	2010. 08.18
BLOCK	URSA5 Power Block	SHEET	54 / 55

SMD GASKET

SMD GASKET 4.5T



SMD GASKET 5.0T



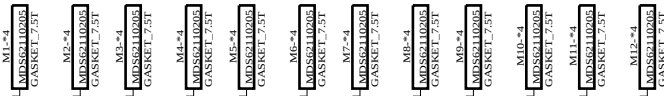
SMD GASKET 5.5T



SMD GASKET 6.5T



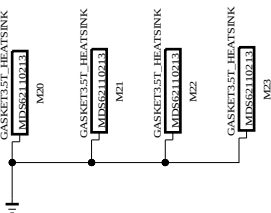
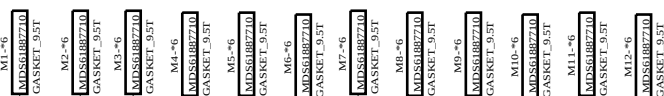
SMD GASKET 7.5T



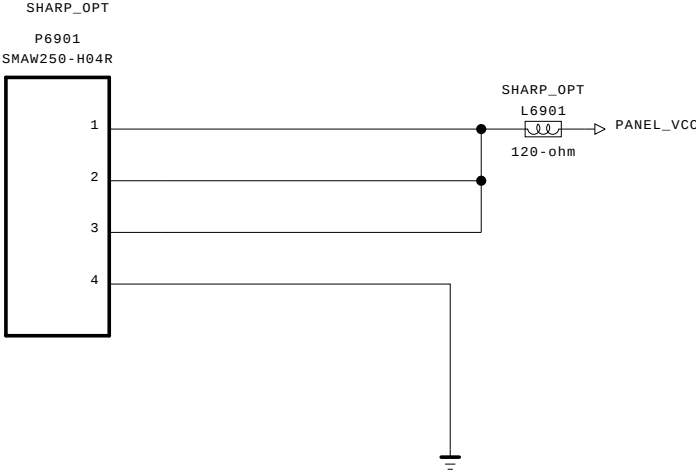
SMD GASKET 8.5T



SMD GASKET 9.5T

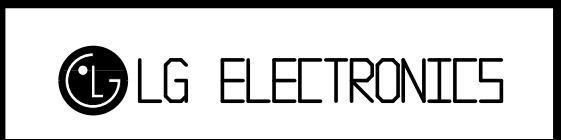


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MODEL		DATE	
BLOCK		SHEET	/