

8

7

6

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1

1. ALL RESISTANCE VALUES ARE IN OHMS, 0.1 WATT +/- 5%.

2. ALL CAPACITANCE VALUES ARE IN MICROFARADS.

3. ALL CRYSTALS & OSCILLATOR VALUES ARE IN HERTZ.

REV

ECN

DESCRIPTION OF REVISION

CK  
APPD

DATE

2011-04-18

SCHEM,PCB,LIO,K21

EVT, 2011-4-14

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ALTERNATIVE PARTS

PART NUMBER	ALTERNATE FOR PART NUMBER	BOM OPTION	REF DES	COMMENTS:
155S0660	155S0513		ALL	TDK ALT TO MURATA
155S0661	155S0511		ALL	TDK ALT TO MURATA
155S0694	155S0387		ALL	TDK ALT TO MURATA

Schematic / PCB #'s

PART NUMBER	QTY	DESCRIPTION	REFERENCE DES	CRITICAL	BOM OPTION
051-8933	1	SCHEM,PCB,LIO,K21	SCH	CRITICAL	
820-3057	1	PCBF,LIO,K21	PCB	CRITICAL	
825-7563	1	LABEL,LIO,K21/K78	[EEEE_DK6V]	CRITICAL	
946-3092	1	LIO LOCTITE UV EB 0.07, K21	UV_GLUE	CRITICAL	

PRODUCT SAFETY REQUIREMENTS:

PCB, UL RECOGNIZED, MIN. 130-C TEMP. RATING AND V-0 FLAME RATING PER UL 796 & UL 94.

PCB TO BE SILK-SCREENED WITH UL/CUL RECOGNITION MARK, MANUFACTURER'S UL FILE

NUMBER, UL PCB MATERIAL DESIGNATION, 130-C TEMP. RATING AND V-0 FLAME RATING.

SCHEM,PCB,LIO,K21

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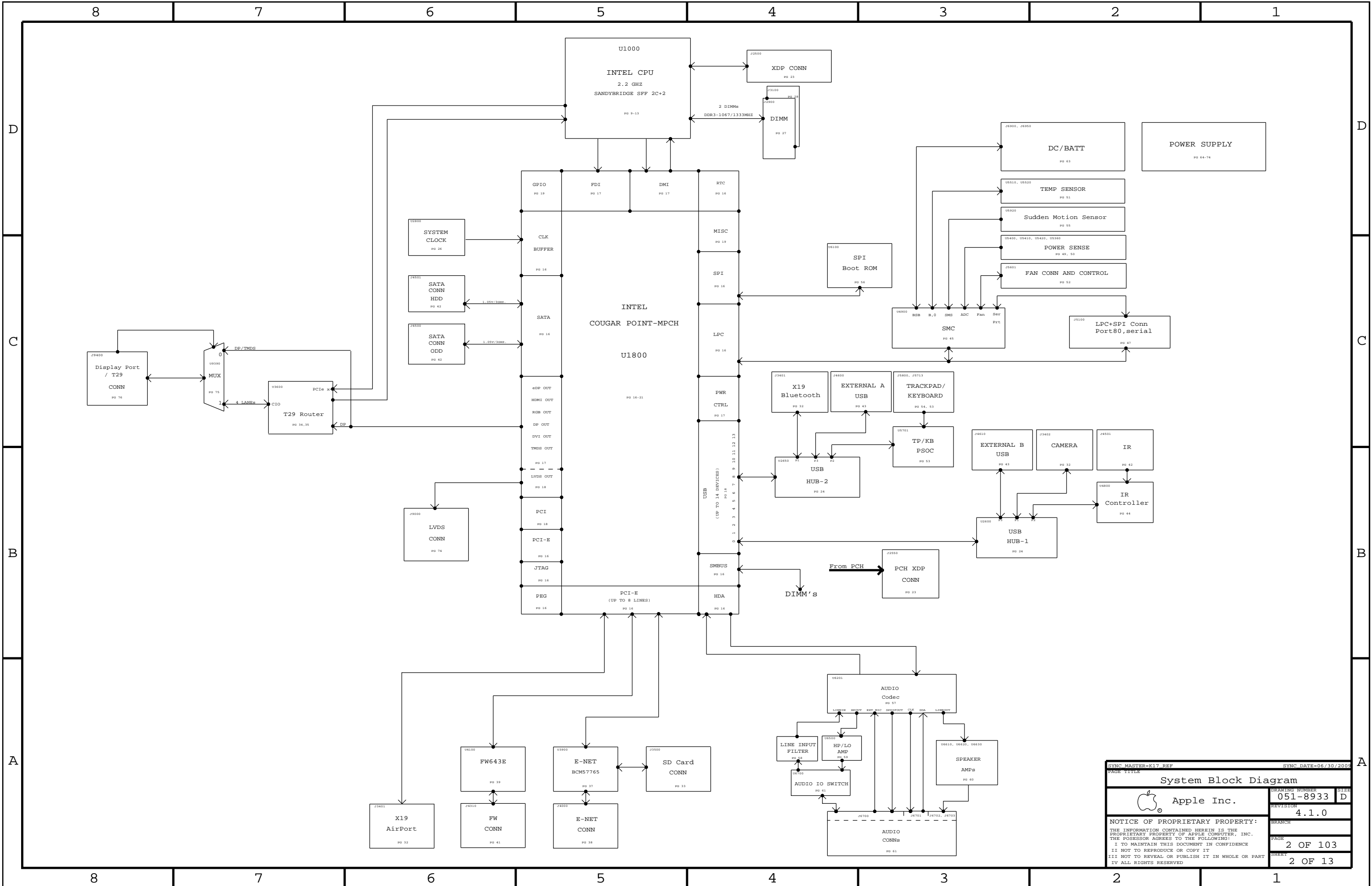
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SYNC MASTER=K17 REF

SYNC DATE=06/30/2009

System Block Diagram

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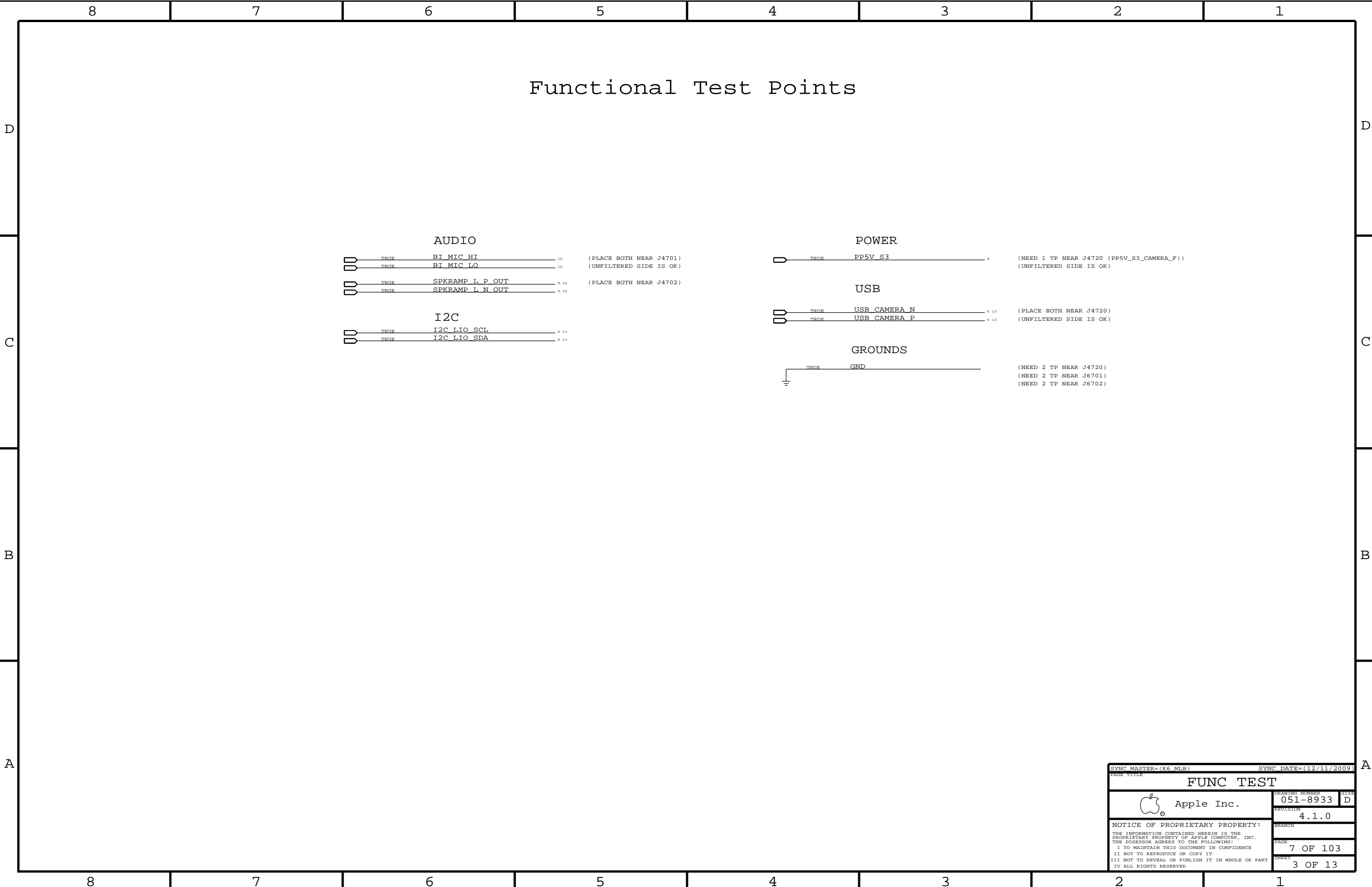
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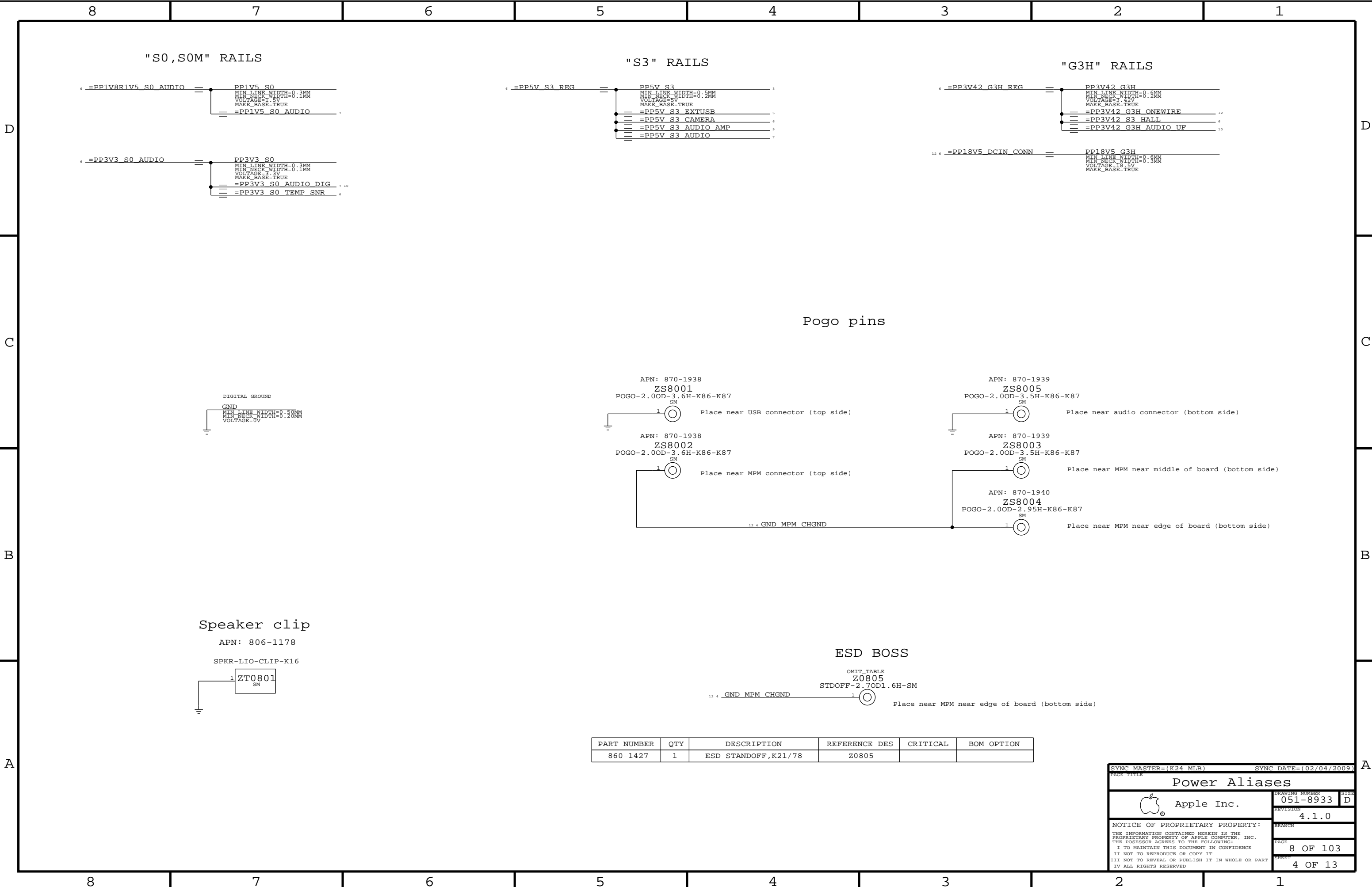
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PART NUMBER	QTY	DESCRIPTION	REFERENCE DES	CRITICAL	BOM OPTION
860-1427	1	ESD STANDOFF,K21/78	Z0805		

SYNC MASTER=(K24 MLB)

SYNC DATE=(02/04/2009)

Power Aliases

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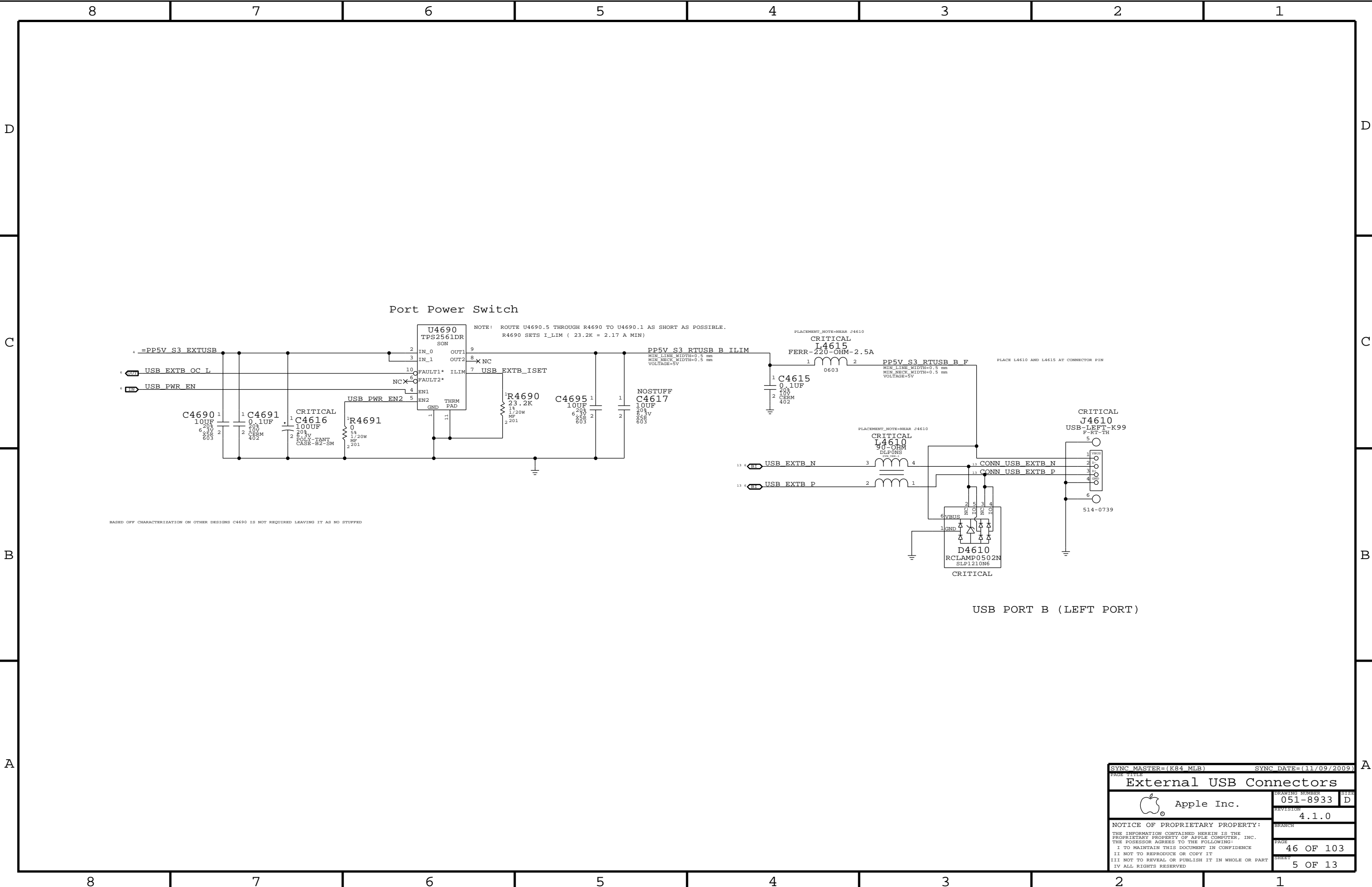
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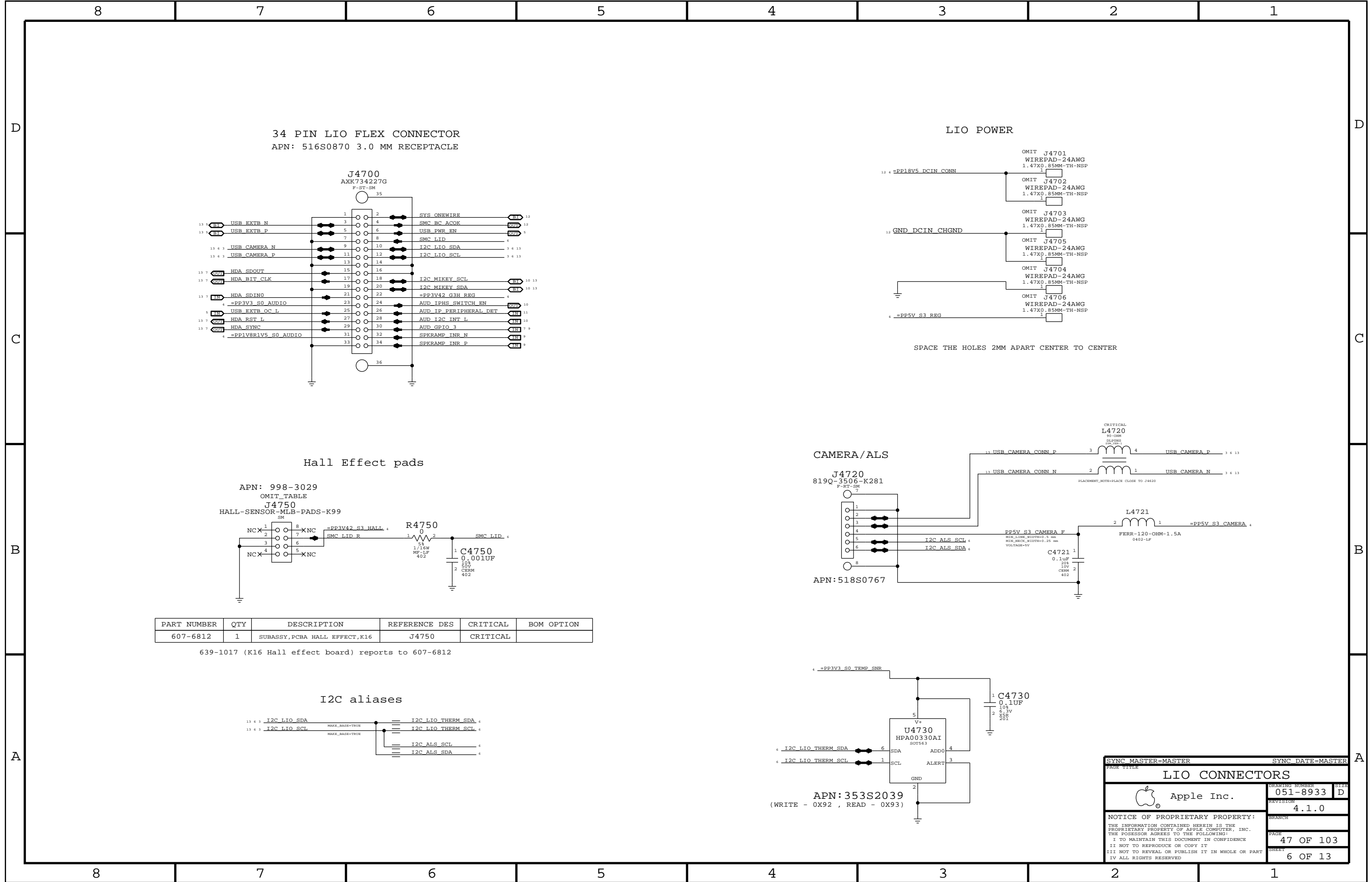
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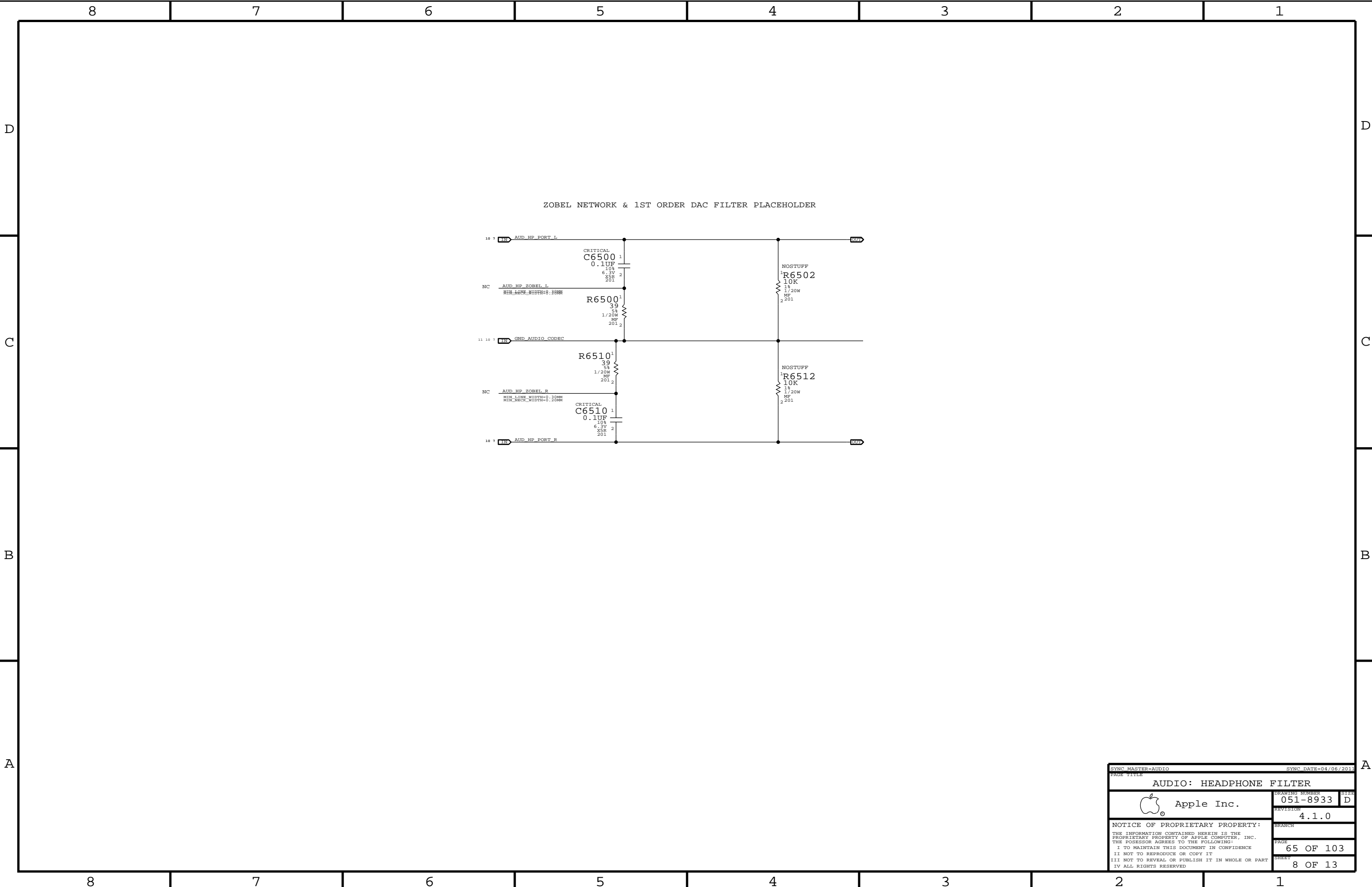
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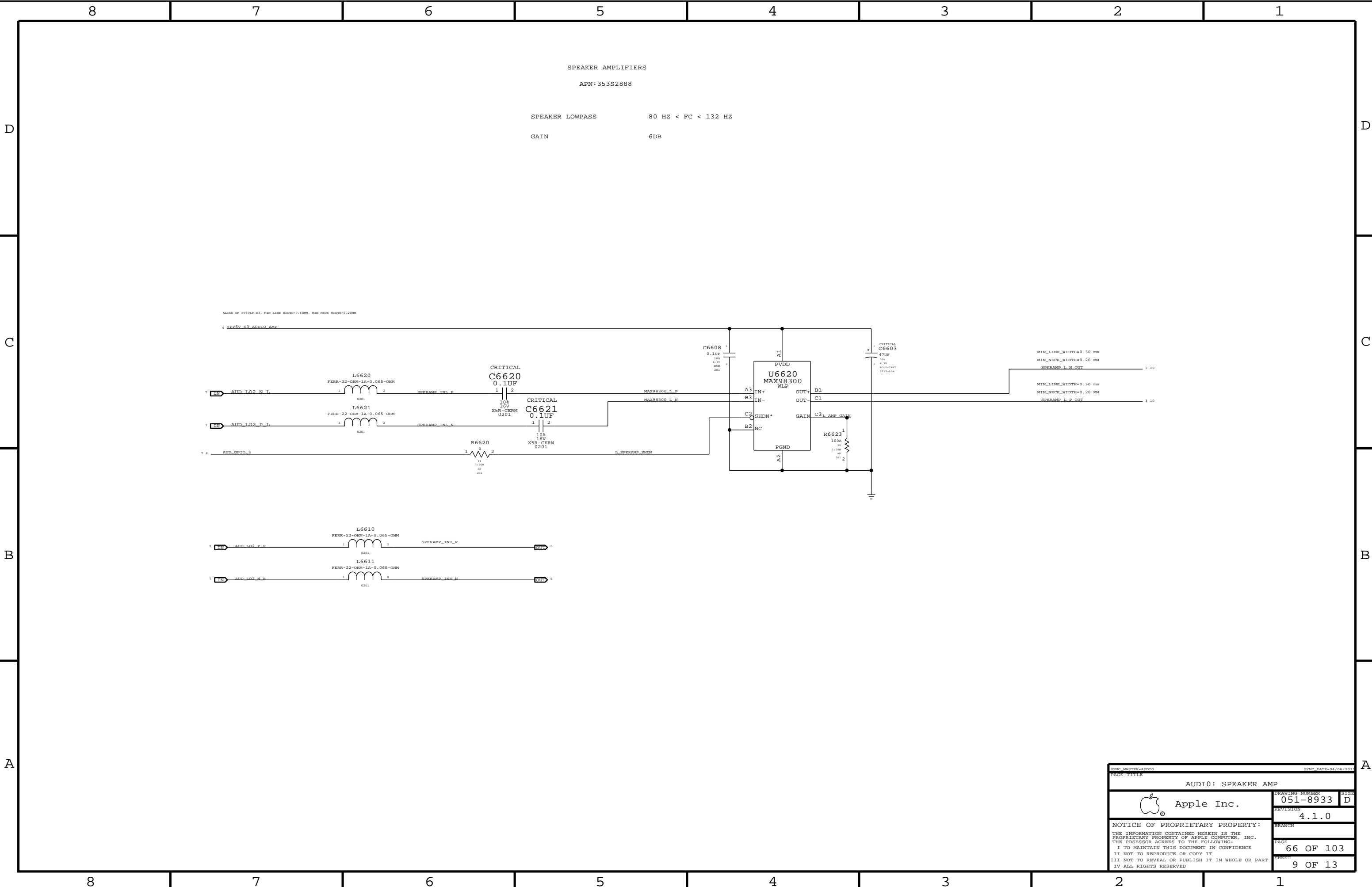
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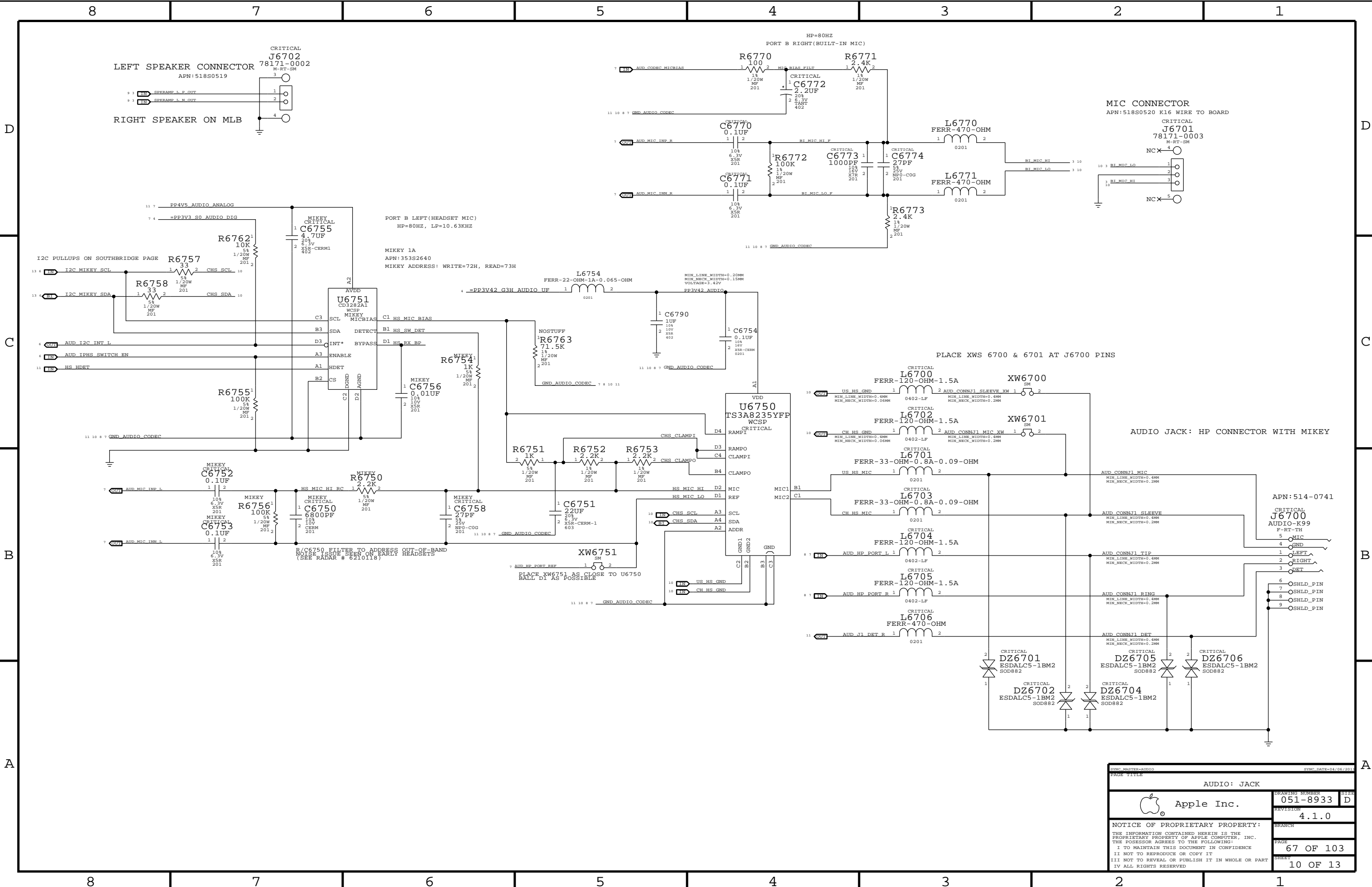






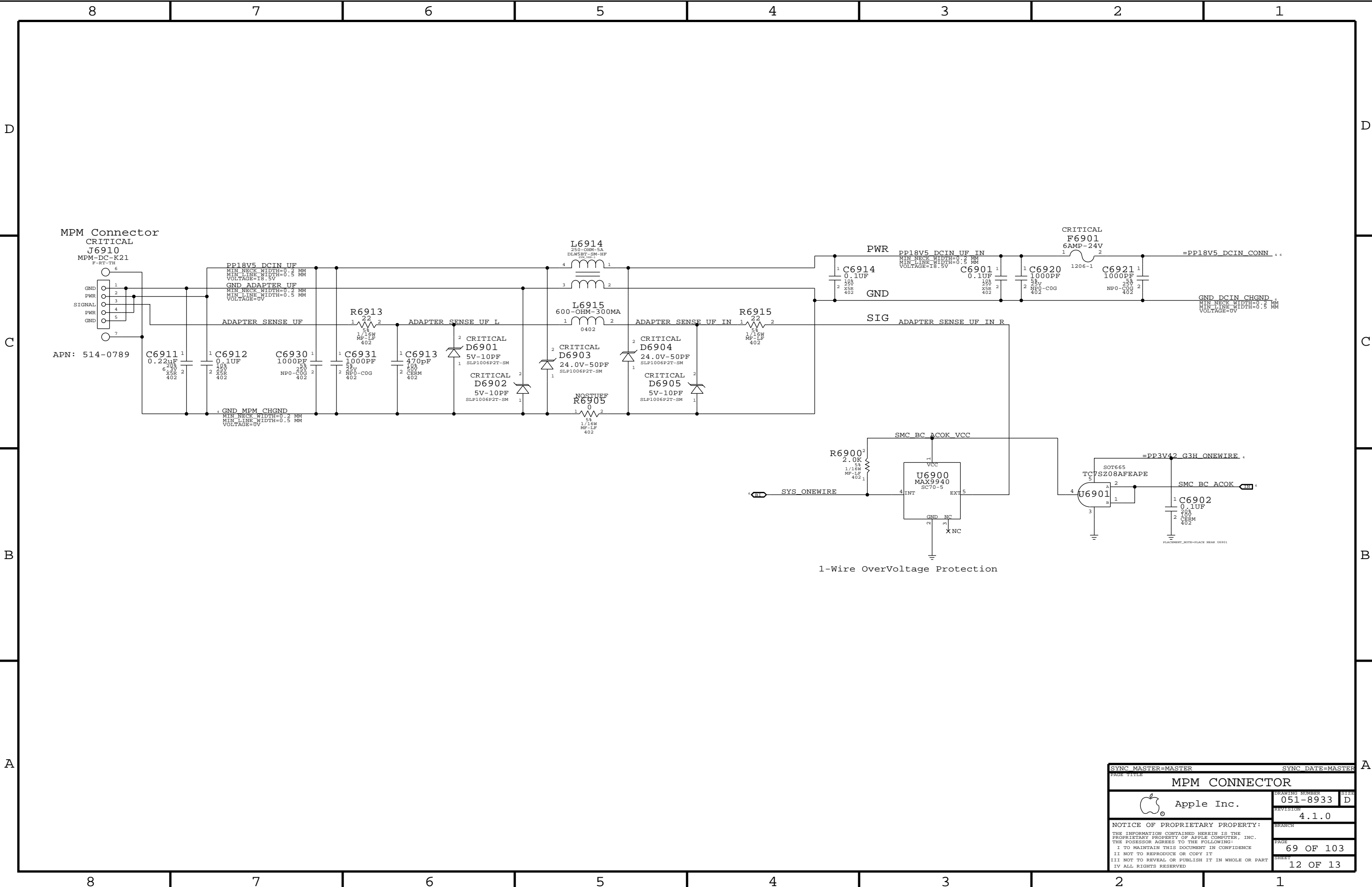







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SYNC MASTER=MASTER		SYNC DATE=MASTER	
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MPM CONNECTOR			
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## K21 LIO BOARD-SPECIFIC SPACING & PHYSICAL CONSTRAINTS

BOARD LAYERS	BOARD AREAS	BOARD UNITS (MIL or MM)	ALLEGRO VERSION
TOP, ISL2, ISL3, ISL4, ISL5, BOTTOM	NO_TYPE, BGA_P100H	MM	15.5.1

PHYSICAL_RULE_SET	LAYER	ALLOW ROUTE ON LAYER?	MINIMUM LINE WIDTH	MINIMUM NECK WIDTH	MAXIMUM NECK LENGTH	DIFFPAIR PRIMARY GAP	DIFFPAIR NECK GAP
DEFAULT	*	Y	=50_OHM_SE	0.1000MM	30 MM	0 MM	0 MM
STANDARD	*	Y	=DEFAULT	=DEFAULT	12.7 MM	=DEFAULT	=DEFAULT

PHYSICAL_RULE_SET	LAYER	ALLOW ROUTE ON LAYER?	MINIMUM LINE WIDTH	MINIMUM NECK WIDTH	MAXIMUM NECK LENGTH	DIFFPAIR PRIMARY GAP	DIFFPAIR NECK GAP
55_08M_SE	TOP,BOTTOM	Y	0.12 MM	0.12 MM			
55_08M_SE	*	Y	0.110 MM	0.110 MM	=STANDARD	=STANDARD	=STANDARD

PHYSICAL_RULE_SET	LAYER	ALLOW ROUTE ON LAYER?	MINIMUM LINE WIDTH	MINIMUM NECK WIDTH	MAXIMUM NECK LENGTH	DIFFPAIR PRIMARY GAP	DIFFPAIR NECK GAP
90_OHM_DIFF	*	N	=STANDARD	=STANDARD	=STANDARD	=STANDARD	=STANDARD
90_OHM_DIFF	ISL3, ISL4	Y	0.115 MM	0.115 MM		0.130 MM	0.130 MM
90_OHM_DIFF	TOP, BOTTOM	Y	0.125 MM	0.125 MM		0.11 MM	0.11 MM

PHYSICAL_RULE_SET	LAYER	ALLOW ROUTE ON LAYER?	MINIMUM LINE WIDTH	MINIMUM NECK WIDTH	MAXIMUM NECK LENGTH	DIFFPAIR PRIMARY GAP	DIFFPAIR NECK GAP
50_OHM_SE	TOP,BOTTOM	Y	0.090 MM	0.090 MM			
50_OHM_SE	*	Y	0.076 MM	0.076 MM	=STANDARD	=STANDARD	=STANDARD

SPACING_RULE_SET	LAYER	LINE-TO-LINE SPACING	WEIGHT
2L_SINGLEACT10	TOP_ACT10N	0.180 MM	7
4L_SINGLEACT10	TOP_ACT10N	0.180 MM	7
2L_SINGLEACT10	-	0.254 MM	7
4L_SINGLEACT10	-	0.508 MM	7

## USB 2.0 INTERFACE CONSTRAINTS

PHYSICAL_RULE_SET	LAYER	ALLOW ROUTE ON LAYER?	MINIMUM LINE WIDTH	MINIMUM NECK WIDTH	MAXIMUM NECK LENGTH	DIFFPAIR PRIMARY GAP	DIFFPAIR NECK GAP
USER_80D	*	+90_OHM_DIFF	+90_OHM_DIFF	+90_OHM_DIFF	+90_OHM_DIFF	+90_OHM_DIFF	+90_OHM_DIFF

SPACING_RULE_SET	LAYER	LINE-TO-LINE SPACING	WEIGHT	SPACING_RULE_SET	LAYER	LINE-TO-LINE SPACING	WEIGHT
USB	*	~2x_DIELECTRIC	?	USB	TOP, BOTTOM	~4x_DIELECTRIC	?

SOURCE: MCP79 Interface DG (DG-03328-001\_v0D), Section 2.10.1.

## SMBus Interface Constraints

PHYSICAL_RULE_SET	LAYER	ALLOW ROUTE ON LAYER?	MINIMUM LINE WIDTH	MINIMUM NECK WIDTH	MAXIMUM NECK LENGTH	DIFFPAIR PRIMARY GAP	DIFFPAIR NECK GAP
SMB_S5S	*	+55_OHM_SE	+55_OHM_SE	+55_OHM_SE	+55_OHM_SE	-STANDARD	-STANDARD

SPACING_RULE.SET	LAYER	LINE-TO-LINE SPACING	WEIGHT
SMB	*	=2x_DIELECTRIC	?



















SOURCE: MCP79 Interface DG (DG-03328-001\_v0D), Section 2.11.1.

## HD Audio Interface Constraints

PHYSICAL_RULE_SET	LAYER	ALLOW ROUTE ON LAYER?	MINIMUM LINE WIDTH	MINIMUM NECK WIDTH	MAXIMUM NECK LENGTH	DIFFPAIR PRIMARY GAP	DIFFPAIR NECK GAP
HDA_55S	*	+55_OHM_SE	+55_OHM_SE	+55_OHM_SE	+55_OHM_SE	-STANDARD	+STANDARD

SPACING_RULE_SET	LAYER	LINE-TO-LINE SPACING	WEIGHT
HDA	*	=2x_DIELECTRIC	?

SOURCE: MCP79 Interface DG (DG-03328-001\_v0D), Section 2.12.1.

ELECTRICAL_CONSTRAINT_SET		SMT_TYPE		
	PHYSICAL		SPACING	
	USB_EXT_A	USB_90D	USB	CONN USB EXT_B N 5
	USB_EXT_A	USB_90D	USB	CONN USB EXT_B P 5
	USB_EXT_A	USB_90D	USB	USB EXT_B N 5
	USB_EXT_A	USB_90D	USB	USB EXT_B P 5 6
	USB_CAMERA	USB_90D	USB	USB CAMERA P 3 6
	USB_CAMERA	USB_90D	USB	USB CAMERA N 3 6
	USB_CAMERA	USB_90D	USB	USB CAMERA CONN P 6
	USB_CAMERA	USB_90D	USB	USB CAMERA CONN N 6
		SMB_55S	SMB	I2C LIO_SDA 3
		SMB_55S	SMB	I2C LIO_SCL 3 6
		SMB_55S	SMB	I2C MIKEY_SCL 6 10
		SMB_55S	SMB	I2C MIKEY_SDA 6 10
	HDA_BIT_CLK	HDA_55S	HDA	HDA BIT_CLK 6 7
	HDA_SYNC	HDA_55S	HDA	HDA SYNC 6 7
		HDA_55S	HDA	HDA_RST_L 6 7
	HDA_SDIN0	HDA_55S	HDA	HDA SDIN0 6 7
		HDA_55S	HDA	AUD SDI_R 7
	HDA_SDOUT	HDA_55S	HDA	HDA SDOUT 6 7