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.

J522 EVT: MLB-A (WIP)

REV	ECN	DESCRIPTION OF REVISION	CK APPD / DATE
3	0025261115	ENGINEERING RELEASED	2020-09-17

LAST_MODIFICATION=Thu Sep 17 13:56:17 2020

SCH AND BOARD P/N

PART#	QTY	DESCRIPTION	REFERENCE DESIGNATOR(S)	CRITICAL	BOM OPTION
051-06625	1	SCHEM,MLB-A,YN,J522	SCH1	CRITICAL	
820-02415	1	PCBF,MLB-A,YN,J522	PCB1	CRITICAL	

PACKAGING OPTIONS

PACK_OPTIONS TO INCLUDE IN NETLIST
J522

SYNC_MASTER=MLB_P0 SYNC_DATE=07/17/2017

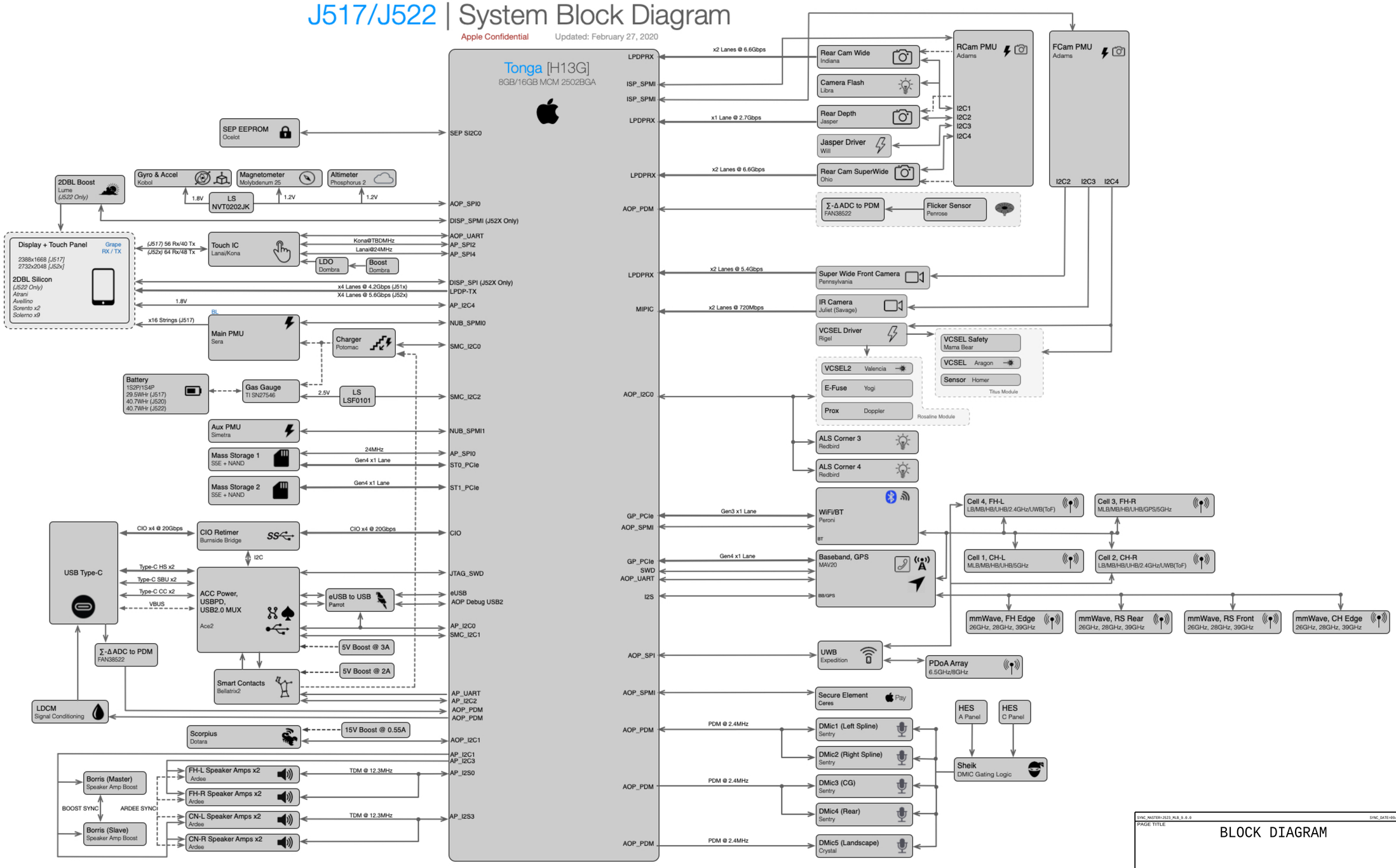
DRAWING TITLE

SCHEM,MLB-A,YN,J522

BOM_COST_GROUP=NO_COST_ITEMS

J517/J522 | System Block Diagram

Apple Confidential Updated: February 27, 2020



SYNC_MASTER=J523_MLB_9.0.0 SYNC_DATE=09/09/2020

PAGE TITLE

BLOCK DIAGRAM

BOM_COST_GROUP=NO_COST_ITEMS

BOM TABLES: SOC, PMU, NAND

SOC

PART#	QTY	DESCRIPTION	REFERENCE DESIGNATOR(S)	CRITICAL	BOM OPTION
998-23740	1	SOC,TGA,B1+8G,1Y,8C,LP,DEV,AX,M,S,M2502	U0600	CRITICAL	NAND:ULTIMATE
998-23740	1	SOC,TGA,B1+8G,1Y,8C,LP,DEV,AX,M,S,M2502	U0600	CRITICAL	NAND:SUPREME_TB
998-23740	1	SOC,TGA,B1+8G,1Y,8C,LP,DEV,AX,M,S,M2502	U0600	CRITICAL	NAND:SUPREME_HY
998-23740	1	SOC,TGA,B1+8G,1Y,8C,LP,DEV,AX,M,S,M2502	U0600	CRITICAL	NAND:EXTREME_TB
998-23740	1	SOC,TGA,B1+8G,1Y,8C,LP,DEV,AX,M,S,M2502	U0600	CRITICAL	NAND:EXTREME_HY

PART#	QTY	DESCRIPTION	REFERENCE DESIGNATOR(S)	CRITICAL	BOM OPTION
998-23748	1	SOC,TGA,B1+16G,1Y,8C,LP,DEV,BX,M,S,M2502	U0600	CRITICAL	X_VERSION

PART NUMBER	ALTERNATE FOR PART NUMBER	BOM OPTION	REF DES	COMMENTS:
998-23741	998-23740		U0600	4G MICRON ATK LP
998-23742	998-23740		U0600	4G HYNIX SCK LP
998-23743	998-23740		U0600	4G HYNIX ATK LP
998-23744	998-23740		U0600	4G MICRON SCK HP
998-23745	998-23740		U0600	4G MICRON ATK HP
998-23746	998-23740		U0600	4G HYNIX SCK HP
998-23747	998-23740		U0600	4G HYNIX ATK HP

PART NUMBER	ALTERNATE FOR PART NUMBER	BOM OPTION	REF DES	COMMENTS:
998-23749	998-23748		U0600	8G MICRON ATK LP
998-23750	998-23748		U0600	8G HYNIX SCK LP
998-23751	998-23748		U0600	8G HYNIX ATK LP
998-23752	998-23748		U0600	8G MICRON SCK HP
998-23753	998-23748		U0600	8G MICRON ATK HP
998-23754	998-23748		U0600	8G HYNIX SCK HP
998-23755	998-23748		U0600	8G HYNIX ATK HP

PMU-SERA

PART#	QTY	DESCRIPTION	REFERENCE DESIGNATOR(S)	CRITICAL	BOM OPTION
998-22364	1	IC,PMU,SERA,A0,OTP-BPC,CSP440	U8100	CRITICAL	J517&J518
998-22363	1	IC,PMU,SERA,B0,OTP-APG,CSP440	U8100	CRITICAL	J522&J523

PMU-SIMETRA

PART#	QTY	DESCRIPTION	REFERENCE DESIGNATOR(S)	CRITICAL	BOM OPTION
998-22366	1	IC,PMU,SIMETRA,A0,OTP-BPC,CSP196	U7700	CRITICAL	J517&J518
998-22365	1	IC,PMU,SIMETRA,A1,OTP-APE,CSP196	U7700	CRITICAL	J522&J523

CHARGER-POTOMAC

PART#	QTY	DESCRIPTION	REFERENCE DESIGNATOR(S)	CRITICAL	BOM OPTION
343S00388	1	IC,CHRGR,POTOMAC,D2559A0,OTP-HC,CSP182	U8500	CRITICAL	J517&J518
343S00389	1	IC,CHRGR,POTOMAC,D2559A0,OTP-IC,CSP182	U8500	CRITICAL	J522&J523

ADAMS

PART#	QTY	DESCRIPTION	REFERENCE DESIGNATOR(S)	CRITICAL	BOM OPTION
338S00589	1	IC,PMU,ADAMS REAR,D2657B0,OTP-GD	U6100	CRITICAL	J517&J518
338S00588	1	IC,PMU,ADAMS FRONT,D2657B0,OTP-GC	U6900	CRITICAL	J517&J518
338S00591	1	IC,PMU,ADAMS REAR,D2657B0,OTP-HD	U6100	CRITICAL	J522&J523
338S00590	1	IC,PMU,ADAMS FRONT,D2657B0,OTP-HC	U6900	CRITICAL	J522&J523

NAND

ULTIMATE NAND CONFIGURATIONS (U1900 NOSTUFF) 128GB

PART#	QTY	DESCRIPTION	REFERENCE DESIGNATOR(S)	CRITICAL	BOM OPTION
335S00462	1	TOSHIBA,BICS4P5,4DP	U1800	CRITICAL	NAND:ULTIMATE

PART NUMBER	ALTERNATE FOR PART NUMBER	BOM OPTION	REF DES	COMMENTS:
335S00437	335S00462	NAND:ULTIMATE	U1800	HYNIX,3DV5,2DP

SUPREME-TB NAND CONFIGURATIONS 256GB

PART#	QTY	DESCRIPTION	REFERENCE DESIGNATOR(S)	CRITICAL	BOM OPTION
335S00480	1	TOSHIBA,BICS4P5,5DP	U1800	CRITICAL	NAND:SUPREME_TB
335S00462	1	TOSHIBA,BICS4P5,4DP	U1900	CRITICAL	NAND:SUPREME_TB

SUPREME-HY NAND CONFIGURATIONS 256GB

PART#	QTY	DESCRIPTION	REFERENCE DESIGNATOR(S)	CRITICAL	BOM OPTION
335S00437	2	HYNIX,3DV5,2DP	U1800,U1900	CRITICAL	NAND:SUPREME_HY

EXTREME-TB NAND CONFIGURATIONS 512GB

PART#	QTY	DESCRIPTION	REFERENCE DESIGNATOR(S)	CRITICAL	BOM OPTION
335S00481	1	TOSHIBA,BICS4P5,9DP	U1800	CRITICAL	NAND:EXTREME_TB
335S00464	1	TOSHIBA,BICS4P5,8DP	U1900	CRITICAL	NAND:EXTREME_TB

EXTREME-HY NAND CONFIGURATIONS 512GB

PART#	QTY	DESCRIPTION	REFERENCE DESIGNATOR(S)	CRITICAL	BOM OPTION
335S00482	1	HYNIX,3DV5,5DP	U1800	CRITICAL	NAND:EXTREME_HY
335S00438	1	HYNIX,3DV5,4DP	U1900	CRITICAL	NAND:EXTREME_HY

PRIME-TB NAND CONFIGURATIONS 1TB

PART#	QTY	DESCRIPTION	REFERENCE DESIGNATOR(S)	CRITICAL	BOM OPTION
335S00466	2	TOSHIBA,BICS4P5,16DP	U1800,U1900	CRITICAL	NAND:PRIME_TB

PRIME-HY NAND CONFIGURATIONS 1TB

PART#	QTY	DESCRIPTION	REFERENCE DESIGNATOR(S)	CRITICAL	BOM OPTION
335S00483	1	HYNIX,3DV5,9DP	U1800	CRITICAL	NAND:PRIME_HY
335S00439	1	HYNIX,3DV5,8DP	U1900	CRITICAL	NAND:PRIME_HY

DOUBLE PRIME CONFIGURATIONS 2TB

PART#	QTY	DESCRIPTION	REFERENCE DESIGNATOR(S)	CRITICAL	BOM OPTION
335S00468	2	TOSHIBA,BICS4P5,16DP	U1800,U1900	CRITICAL	NAND:DBL_PRIME

PART NUMBER	ALTERNATE FOR PART NUMBER	BOM OPTION	REF DES	COMMENTS:
335S00458	335S00468	NAND:DBL_PRIME	U1800,U1900	HYNIX,3DV5,16DP

BOM_COST_GROUP=NO_COST_ITEMS

SYNC_MASTER=J523_MLB_9.0.0 SYNC_DATE=09/09/2020

PAGE TITLE

BOM TABLES: SOC/PMU/NAND

BOM TABLES: MECHANICAL, BARCODES, DISCRETES, ETC.

CKPLUS WAIVE TABLE

CKPLUS RULE EXCEPTIONS	REQUIRED
SCHEMATIC DEFINED CONSTRAINTS (YES/NO)	NO

MECHANICAL PARTS

PART#	QTY	DESCRIPTION	REFERENCE DESIGNATOR(S)	CRITICAL	BOM OPTION
806-26156	1	CAN,PENINSULA,LONG,MLB,NY,2522	PENINSULA_CAN	CRITICAL	
806-26538	1	SHIELD,RADIO,MLB,YN,2517	RF_CAN	CRITICAL	
604-31607	1	ASSY,FENCE,AP,YNN,2522	AP_FENCE	CRITICAL	
806-26273	1	CAN,AP_2,FH,MLB,NY,2523	AP2_FENCE_FH	CRITICAL	
806-26274	1	CAN,AP_2,CHIN,MLB,NY,2523	AP2_FENCE_CHIN	CRITICAL	
806-27124	1	CAN,CHIN_1,MLB,NY,2523	CHIN_CAN_1	CRITICAL	
806-27123	1	CAN,CHIN_2,MLB,NY,2523	CHIN_CAN_2	CRITICAL	

BARCODE LABEL/EEEE CODES

PART#	QTY	DESCRIPTION	REFERENCE DESIGNATOR(S)	CRITICAL	BOM OPTION
825-7691	1	EEEE 639-12972 (ULTIMATE,YN,US,2522)	EEEE_Q8RR	CRITICAL	EEEE:2522_ULTIMATE
825-7691	1	EEEE 639-12973 (SUPREME-TB,YN,US,2522)	EEEE_Q8RT	CRITICAL	EEEE:2522_SUPREME_TB
825-7691	1	EEEE 639-12974 (SUPREME-HY,YN,US,2522)	EEEE_Q8RV	CRITICAL	EEEE:2522_SUPREME_HY
825-7691	1	EEEE 639-12975 (EXTREME-TB,YN,US,2522)	EEEE_Q8RW	CRITICAL	EEEE:2522_EXTREME_TB
825-7691	1	EEEE 639-12976 (EXTREME-HY,YN,US,2522)	EEEE_Q8RX	CRITICAL	EEEE:2522_EXTREME_HY
825-7691	1	EEEE 639-12977 (PRIME-TB,YN,US,2522)	EEEE_Q8RY	CRITICAL	EEEE:2522_PRIME_TB
825-7691	1	EEEE 639-12978 (PRIME-HY,YN,US,2522)	EEEE_Q8R0	CRITICAL	EEEE:2522_PRIME_HY
825-7691	1	EEEE 639-12979 (DOUBLE-PRIME,YN,US,2522)	EEEE_Q8R1	CRITICAL	EEEE:2522_DBL_PRIME

CAPS

PART NUMBER	ALTERNATE FOR PART NUMBER	REFERENCE DESIGNATOR(S)	DESCRIPTION	BOM OPTION
138S00143	138S00144	C7740,ETC	22UF 4V KYOCERA	
138S00163	138S00144	C7740,ETC	22UF 4V TAIYO YUDEN	
132S00211	132S00092	C3204,ETC	270PF 16V KYOCERA	
132S00212	132S00092	C3204,ETC	270PF 16V TAIYO YUDEN	
132S00233	132S00014	C1144,ETC	0.22UF 6.3V	
132S00304	132S00014	C1144,ETC	0.22UF 6.3V	
138S00148	138S00149	C1220,ETC	15UF 4V KYOCERA	
138S00150	138S00149	C1220,ETC	15UF 4V SAMSUNG	
138S00151	138S00149	C1220,ETC	15UF 4V TAIYO YUDEN	
138S0614	138S0732	C2218,ETC	1UF 10V 0402	
132S00088	132S0639	C2221,ETC	0.47UF 25V TAIYO YUNDEN	
138S0706	138S0739	C1215,ETC	1UF 10V 0201 MURATA	
138S0945	138S0739	C1215,ETC	1UF 10V 0201 KYOCERA	
131S00299	131S00118	C3334,ETC	180PF 50V TAIYO YUDEN	
128S00094	128S00067	C77DF,ETC	150UF 6.3V TOKIN	
128S00069	128S00067	C77DF,ETC	150UF 6.3V ROHM	
138S00215	138S1068	C2350,ETC	4.7UF 16V TAIYO YUDEN	
131S00172	131S00164	C1232,ETC	220PF 16V KYOCERA	
131S00173	131S00164	C1232,ETC	220PF 16V TAIYO YUDEN	
131S00142	131S00019	C3236,ETC	150PF 50V 0201	
131S0730	131S0831	C40A7	15PF 50V 0201	
138S00139	138S00138	C12D1,C12F0	4UF 4V MURATA	
138S00164	138S00138	C12D1,C12F0	4UF 4V TAIYO YUDEN	
138S00084	138S00060	C8563,ETC	47UF 6.3V TAIYO YUNDEN	
131S00313	131S0824	C4632	330PF 25V TAIYO YUNDEN	
132S00175	132S00202	C4000,ETC	0.22UF KYOCERA ONLY	
132S00154	132S0683	C6352,ETC	0.1UF 01005 TAIYO	
138S0641	138S0700	C2206,ETC	2.2UF 10V 0402 TAIYO	
132S0316	132S00107	C3828,C3829	.1UF 6.3V 01005 TAIYO	
131S00164	131S00172	C2711,C2713	220PF 16V 01005 MURATA	
131S00173	131S00172	C2711,C2713	220PF 16V 01005 TAIYO	
138S00048	138S00003	C6000,ETC.	15UF 6.3V 0402 KYOCERA	
138S0888	138S00003	C6000,ETC.	15UF 6.3V 0402 TAIYO	
138S0711	138S00020	C8513	10UF 6.3V 0402 TAIYO	
128S00093	128S00009	C3034,ETC.	33UF 16V TOKIN	
128S00103	128S00009	C3034,ETC.	33UF16V SAMSUNG	
132S00200	132S00199	C77E2,ETC.	0.1UF 10V 01005 TAIYO	
132S00204	132S00199	C77E2,ETC.	0.1UF 10V 01005 KYO.	
132S00064	132S0409	C3207,ETC.	0.1UF 16V 0201 MUR.	
132S00262	132S0664	C2228,ETC.	0.047UF 25V 0201 KYO.	
132S00263	132S0664	C2228,ETC.	0.047UF 25V 0201 YAG.	
138S00117	138S00071	C7993,ETC	4UF 6.3V KYOCERA	
138S00116	138S00071	C7993,ETC	4UF 6.3V TAIYO	
138S00128	138S00133	C3801,ETC	.47UF 6.3V 01005 KYO.	
138S00269	138S00133	C3801,ETC	.47UF 6.3V 01005 TY	
138S00164	138S00139	C1200,ETC	4UF 4V 0201 TY	
138S00140	138S00141	C2858,ETC	3.9UF 6.3V 0201 KYO.	
138S00211	138S00242	C4633,ETC	6.8UF 6.3V 0402 MUR.	
138S00049	138S0831	C1141,ETC	2.2UF 6.3V 0201 KYO.	
138S00056	138S1100	C1310,ETC	10UF 4V 3-TERM TY.	
138S00101	138S00095	C3800,ETC	25UF 6.3V 0402 TY.	
138S00229	138S00107	C7820,ETC	20UF 10V 0402 KYO.	
138S00221	138S00146	C4197,ETC	18UF 6.3V 0402 KYO.	

INDUCTORS

PART NUMBER	ALTERNATE FOR PART NUMBER	REFERENCE DESIGNATOR(S)	DESCRIPTION	BOM OPTION
152S00963	152S00885	L77A0,L8490	0.47UH TAIYO YUDEN	
152S00964	152S00888	L7741,ETC	0.15UH TAIYO YUDEN	
152S01003	152S00888	L7741,ETC	0.15UH SUNLORD	
152S01090	152S01085	L3900	0.68UH 2016 CHIS.	

FERRITE BEADS

PART NUMBER	ALTERNATE FOR PART NUMBER	REFERENCE DESIGNATOR(S)	DESCRIPTION	BOM OPTION
155S00593	155S0755	FL2771,ETC	0.9 DCR TAIYO YUDEN	
155S0664	155S00018	FL2748,ETC	0.18 DCR MURATA	
155S00097	155S00018	FL2748,ETC	0.17 DCR TDK	
155S0660	155S0513	FL2761,ETC	0.04 DCR MURATA	
155S00194	155S00400	FL2602,ETC	0.69 DCR 01005 TDK	
155S00616	155S0686	FL2102,ETC	0.7 DCR 01005 TDK	
155S00414	155S0876	FL1800,ETC	0.05 DCR 01005 TDK	

MOSFETS

PART NUMBER	ALTERNATE FOR PART NUMBER	REFERENCE DESIGNATOR(S)	DESCRIPTION	BOM OPTION
376S00319	376S00104	Q2201	DIODES	
376S00182	376S00126	Q8580	DIODES	
376S00071	376S00126	Q8580	DIODES	
376S00314	376S00125	Q8051	DIODES	
376S00182	376S00070	Q8581	DIODES	
376S00190	376S00119	Q8000	DIODES	
376S1245	376S1102	Q6260,ETC	DIODES	

DIODES

PART NUMBER	ALTERNATE FOR PART NUMBER	REFERENCE DESIGNATOR(S)	DESCRIPTION	BOM OPTION
371S00133	371S00046	D8710	DIODES	
371S0685	371S00176	DZ8051	NXP	
377S0155	377S0184	DZ4014,ETC	ONSEMI	
371S00190	371S00085	D3800	DIODES	

NTCS

PART NUMBER	ALTERNATE FOR PART NUMBER	REFERENCE DESIGNATOR(S)	DESCRIPTION	BOM OPTION
107S00298	107S0208	R8422 ETC.	TDK 10K NTC	

LEVEL TRANSLATOR

PART NUMBER	ALTERNATE FOR PART NUMBER	REFERENCE DESIGNATOR(S)	DESCRIPTION	BOM OPTION
311S00212	311S00230	U2370,U4030	TI SINGLE UNI. LT	

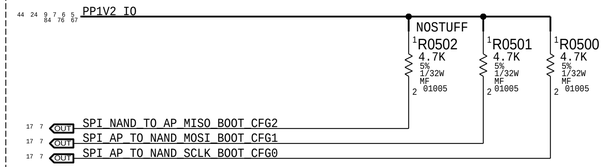
SYNC_MASTER=2523_MLB_0.11.0 SYNC_DATE=09/02/2020

PAGE TITLE

BOM TABLES: MECH/DISC/ETC

BOM_COST_GROUP=NO_COST_ITEMS

BOOT CONFIG ID

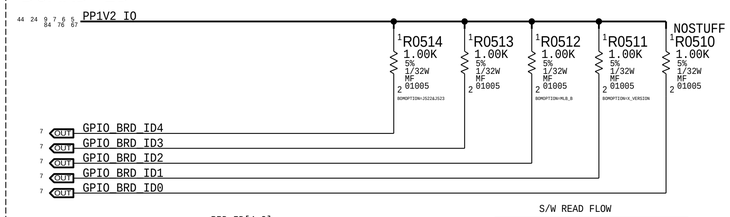


BOOT_CFG[3:0]	MODE
000	SPI0 NOR
001	SPI0 NOR TEST
010	SPI0 NAND
(PROTO) ---> 011	SPI0 NAND TEST
100	SPI1 NOR (40MHZ)
101	SPI1 NOR (40MHZ) TEST
110	SPI1 NOR (6MHZ)
111	SPI1 NOR (6MHZ) TEST

S/W READ FLOW

1. SET GPIO AS INPUT
2. DISABLE PU AND ENABLE PD
3. READ

BOARD ID

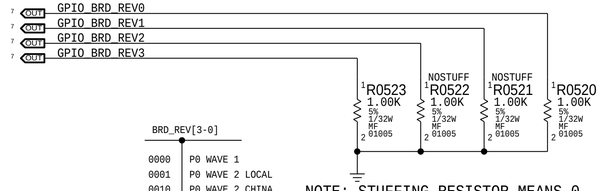


BRD_ID[4-0]	
01000	J517 AP
01001	J517 DEV
01010	J517X AP
01011	J517X DEV
01100	J518 AP
01101	J518 DEV
01110	J518X AP
01111	J518X DEV
CURRENT SETTING ---> 11000	J522 AP
11001	J522 DEV
11010	J522X AP
11011	J522X DEV
11100	J523 AP
11101	J523 DEV
11110	J523X AP
11111	J523X DEV

S/W READ FLOW

1. SET GPIO AS INPUT
2. DISABLE PU AND ENABLE PD
3. READ

BOARD REVISION



BRD_REV[3-0]	
0000	P0 WAVE 1
0001	P0 WAVE 2 LOCAL
0010	P0 WAVE 2 CHINA
0011	P1
0100	P2 PRE
0101	P2
CURRENT SETTING ---> 0110	EVT
0111	UNUSED
1000	UNUSED
1001	UNUSED
1010	UNUSED

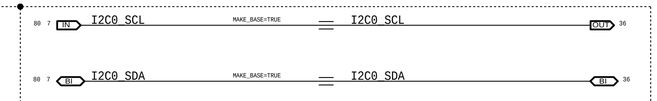
NOTE: STUFFING RESISTOR MEANS 0

S/W READ FLOW

1. SET GPIO AS INPUT
2. ENABLE PU AND DISABLE PD
3. READ

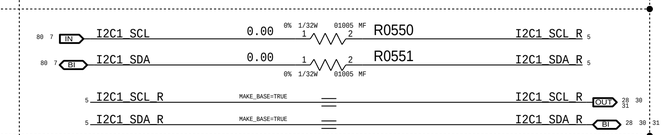
I2C0

DEVICE	8-BIT	7-BIT
ACE(ONE-ACE)	0X70	0X38
ACE(ALL)	0XD6	0X6B



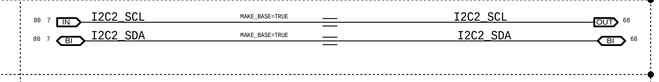
I2C1

DEVICE	8-BIT	7-BIT
SKR AMP CNRT	0X78	0X3C
SKR AMP CNRW	0X7A	0X3D
SKR AMP CNLT	0X7C	0X3E
SKR AMP CNLW	0X7E	0X3F
SKR BOOST MST	0X60	0X30
SKR BOOST SLV	0X62	0X31



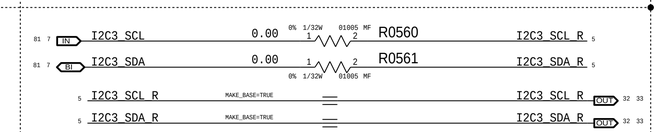
I2C2

DEVICE	8-BIT	7-BIT
BELLATRIX	0X26	0X13



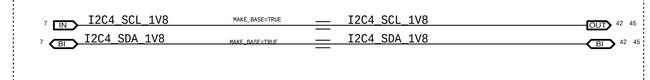
I2C3

DEVICE	8-BIT	7-BIT
SKR AMP FHRT	0X70	0X38
SKR AMP FHRW	0X72	0X39
SKR AMP FHLT	0X74	0X3A
SKR AMP FHLW	0X76	0X3B



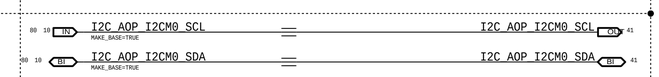
I2C4

DEVICE	8-BIT	7-BIT
TCON(LARKSPUR)	0X10	0X08
TEMP(U2400)	0XE2	0X71
TEMP(U2401)	0XE0	0X70
TEMP(U2402)	0XE4	0X72



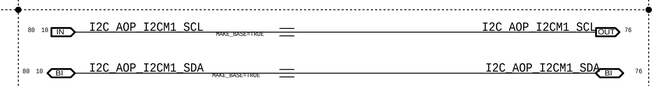
AOP I2C0

DEVICE	8-BIT	7-BIT
ALS - C4	0X52	0X29
ALS - C3	0X72	0X39
YOGI(ROSALINE)	0X66	0X33
DOPPLER (ROSA)	0XB0	0X58



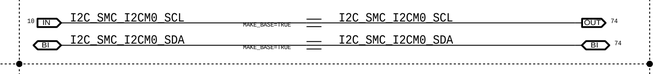
AOP I2C1

DEVICE	8-BIT	7-BIT
SCOR. DOTARA	0X72	0X39



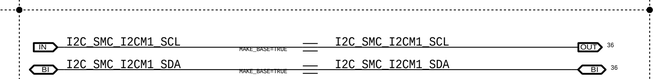
SMC I2C0

DEVICE	8-BIT	7-BIT
POTOMAC	0XEA	0X75



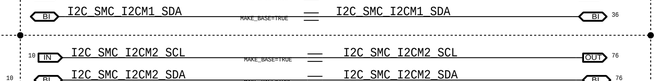
SMC I2C1

DEVICE	8-BIT	7-BIT
ACE2	0X70	0X38



SMC I2C2

DEVICE	8-BIT	7-BIT
GASGAUGE	0XAA	0X55



SMC I2C3

NOT USED

SMC I2C4

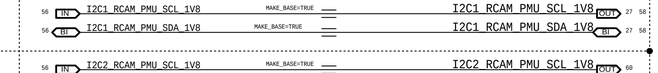
NOT USED

RPMU I2C1

DEVICE	8-BIT	7-BIT
RCAM1(FOCUS)	0X18	0X0C
RCAM1(IN)	0X20	0X10
STROBE1	0XC6	0X63
STROBE2	0XCE	0X67

RPMU I2C2

DEVICE	8-BIT	7-BIT
JA PERISCOPE	0X20	0X10
JA RIKER	0X66	0X33
JA EEPROM	0XA2	0X51



RPMU I2C3

DEVICE	8-BIT	7-BIT
WILL	0X80	0X40

RPMU I2C4

DEVICE	8-BIT	7-BIT
RCAM2(OH)	0X40	0X20

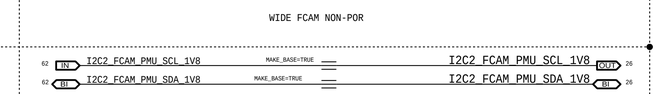
FPMU I2C1

DEVICE	8-BIT	7-BIT
WIDE FCAM	0X20	0X10

WIDE FCAM NON-POR

FPMU I2C2

DEVICE	8-BIT	7-BIT
SWIDE FCAM	0XE0	0X70

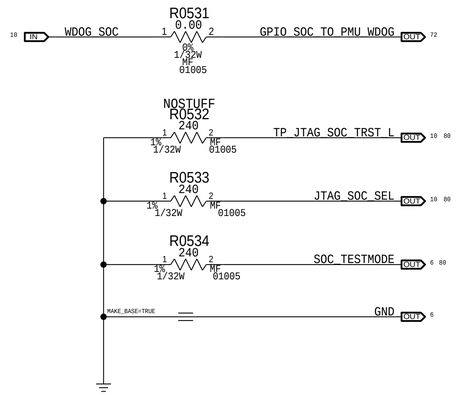


FPMU I2C3

DEVICE	8-BIT	7-BIT
JULIET	0X30	0X18

FPMU I2C4

DEVICE	8-BIT	7-BIT
TITUS	0XCC	0X66
RIGEL2	0XAA	0X55



BOM_COST_GROUP=SOC

SYNC_MASTER=J523_MLB_0.11.0 SYNC_DATE=09/02/2020

PAGE TITLE

SOC: MISC & ALIASES

SOC: MAIN

PART NUMBER	ALTERNATE FOR PART NUMBER	BOM OPTION	REF DES	COMMENTS:
197S0590	197S0591		Y0600	EPSON,24MHZ,XTAL
197S0588	197S0591		Y0600	TXC,24MHZ,XTAL

U0600
TMLR68B1-B01
BGA
SYM 1 OF 23
OMIT_TABLE

RESET
- R2 LP4_IN_RESET_N ← RESET_PMU_TO_SYSTEM_L (80 72 10 IN)
- AA49 FORCE_DFU ← GPIO_FORCE_DFU (80 77 72 36 IN)
- AK55 REQUEST_DFU1 ← GPIO_PMU_TO_SOC_BTN_ONOFF_L (72 IN)
- AJ54 REQUEST_DFU2 ← GPIO_PMU_TO_SOC_BTN_VOL_DOWN_L (72 IN)
- AD2 TESTMODE ← SOC_TESTMODE (80 5 IN)
- AL54 CFSB ← GPIO_PMU_TO_SYSTEM_ACTIVE_READY (80 72 38 IN)
- AC1 HOLD_RESET ← GND (5 IN)
- AB49 KIS_DFU_SELECT ← GND

ATC
- BB54 ATC0_USB_EDP ↔ 85_USB_E_SOC_P (38 BI)
- BB55 ATC0_USB_EDM ↔ 85_USB_E_SOC_N (38 BI)
- BE18 USB_C0_LSRX ← USB_C0_LSRX (38 IN)
- BE13 USB_C0_LSTX → USB_C0_LSTX (38 OUT)
- BB53 ATC0_USB_RESREF ← ATC0_USB_RESREF (6)
- V48 USB_C0_HPD/TMU_CLK_OUT0 → TP_TMU_CLK_OUT (80)
- BC54 ATC1_USB_EDP ← NC_ATC1_USB_EDP
- BC55 ATC1_USB_EDM ← NC_ATC1_USB_EDM
- BD3 USB_C1_LSRX ← NC_USB_C1_LSRX
- BE10 USB_C1_LSTX ← NC_USB_C1_LSTX
- BC53 ATC1_USB_RESREF ← ATC1_USB_RESREF (6)
- R48 USB_C1_HPD/TMU_CLK_OUT1 ← NC_USB_C1_HPD
- AG1 EUSB_VBUS_DETECT ← EUSB_VBUS_DETECT (82)
- BE50 ATCPHY0_RX0_P ← 85_CIO_HS_SOC_RX0_P (37 IN)
- BF50 ATCPHY0_RX0_N ← 85_CIO_HS_SOC_RX0_N (37 IN)
- BC49 ATCPHY0_TX0_P → 85_CIO_HS_SOC_TX0_C_P (37 OUT)
- BD49 ATCPHY0_TX0_N → 85_CIO_HS_SOC_TX0_C_N (37 OUT)
- BE48 ATCPHY0_RX1_P ← 85_CIO_HS_SOC_RX1_P (37 IN)
- BF48 ATCPHY0_RX1_N ← 85_CIO_HS_SOC_RX1_N (37 IN)
- BC47 ATCPHY0_TX1_P → 85_CIO_HS_SOC_TX1_C_P (37 OUT)
- BD47 ATCPHY0_TX1_N → 85_CIO_HS_SOC_TX1_C_N (37 OUT)
- AY51 ATCPHY0_AUX_P ↔ CIO_SOC_AUXCH_P (37 BI)
- AY52 ATCPHY0_AUX_N ↔ CIO_SOC_AUXCH_N (37 BI)
- BE52 ATCPHY0_RCAL_P ← ATCPHY0_RCAL_POS (6)
- BF52 ATCPHY0_RCAL_N ← ATCPHY0_RCAL_NEG (6)
- BF44 ATCPHY1_RX0_P — NC
- BE44 ATCPHY1_RX0_N — NC
- BD43 ATCPHY1_TX0_P — NC
- BC43 ATCPHY1_TX0_N — NC
- BF46 ATCPHY1_RX1_P — NC
- BE46 ATCPHY1_RX1_N — NC
- BD45 ATCPHY1_TX1_P — NC
- BC45 ATCPHY1_TX1_N — NC
- BA52 ATCPHY1_AUX_P — NC
- BA51 ATCPHY1_AUX_N — NC
- BF42 ATCPHY1_RCAL_P ← ATCPHY1_RCAL_POS (6)
- BE42 ATCPHY1_RCAL_N ← ATCPHY1_RCAL_NEG (6)

CLOCKS
- BE36 XI0 ← XTAL_SOC_24M_IN
- BF36 XO0 → XTAL_SOC_24M_OUT
- P54 TST_CLKOUT → TST_CLKOUT (80 OUT)
- AL48 ANALOGMUX_OUT ← NC_ADC_SOC_ANALOGMUX_OUT

SWD
- AJ1 SWD_TCK_OUT1 ← SWD_AP_TCK (6)
- U54 SWD_TMS2 ↔ SWD_NAND_SWDIO (17 18 BI)
- V54 SWD_TMS3 ↔ NC_SWD_BB_SWDIO (78 BI)
- AH3 SWD_TMS4 ← NC_SWD_TMS4

FPW
- V50 FPWM0/MASTER_SYNC_GEN_0 ← GPIO_WLAN_TO_SOC_TIME_SYNC (78 IN)
- Y49 FPWM1 ← NC_FPWM1
- U50 FPWM2 ← NC_FPWM2

- V51 DFU_STATUS → GPIO_1V2_SOC2ACE_DFU_STATUS (36 38 80 OUT)

PP1V2_IO (84 76 67 44 24 9 7 5)
- R0697 1.00K 5% 1/32W MF 01005 (1–2)

DC-BLOCKING CAPS LOCATION OFF-PAGE

ATC0_USB_RESREF (6)
- R0696 200 1% 1/32W MF 01005

ATC1_USB_RESREF (6)
- R0695 200 1% 1/32W MF 01005

ATCPHY0_RCAL_POS (6)
- R0699 200 1% 1/32W MF 01005
- ATCPHY0_RCAL_NEG (6)
- C0699 10PF 5% 16V NP0/C0G 01005

FROM SANJEEVM EMAIL DATED 06/23/19

ATCPHY1_RCAL_POS (6)
- R0698 200 1% 1/32W MF 01005
- ATCPHY1_RCAL_NEG (6)
- C0698 10PF 5% 16V NP0/C0G 01005

CRITICAL
R0651 499 1% 1/32W MF 01005 (1–2)

CRITICAL
Y0600
1.60X1.20MM
24.000MHZ-20PPM-9.5PF-60OHM (1–3, 2–4)

SOC_24M_O
- C0650 12PF 5% 16V NP0-C0G 01005-1 (1–2)
- C0651 12PF 5% 16V NP0-C0G 01005-1 (1–2)

XTAL DAMPING RESISTOR R0651 CHANGED FROM 1K
TO 500 OHMS PER EMAIL FROM MOON JUNG KIM ON 07/16/19

R1032 33 5% 1/32W MF 01005 (1–2)
- 6 SWD_AP_TCK → SWD_NAND1_SWCLK (17 OUT)

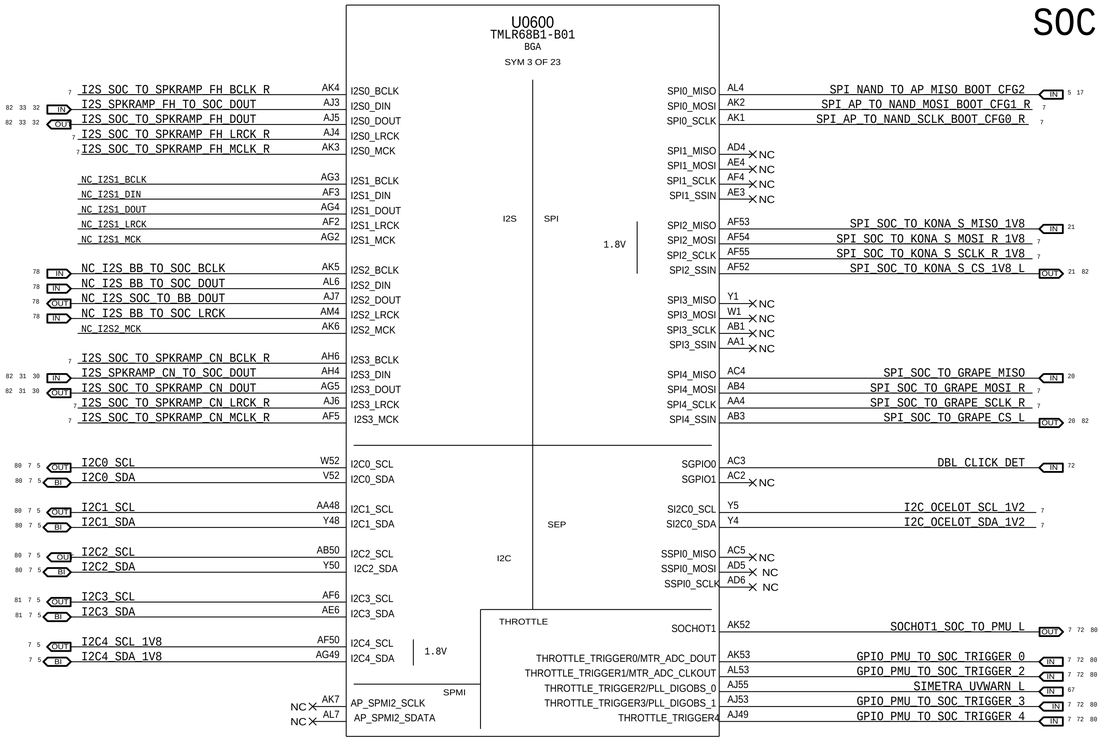
R1035 33 5% 1/32W MF 01005 DUAL_NAND (1–2)
- 6 SWD_AP_TCK → SWD_NAND2_SWCLK (18 OUT)

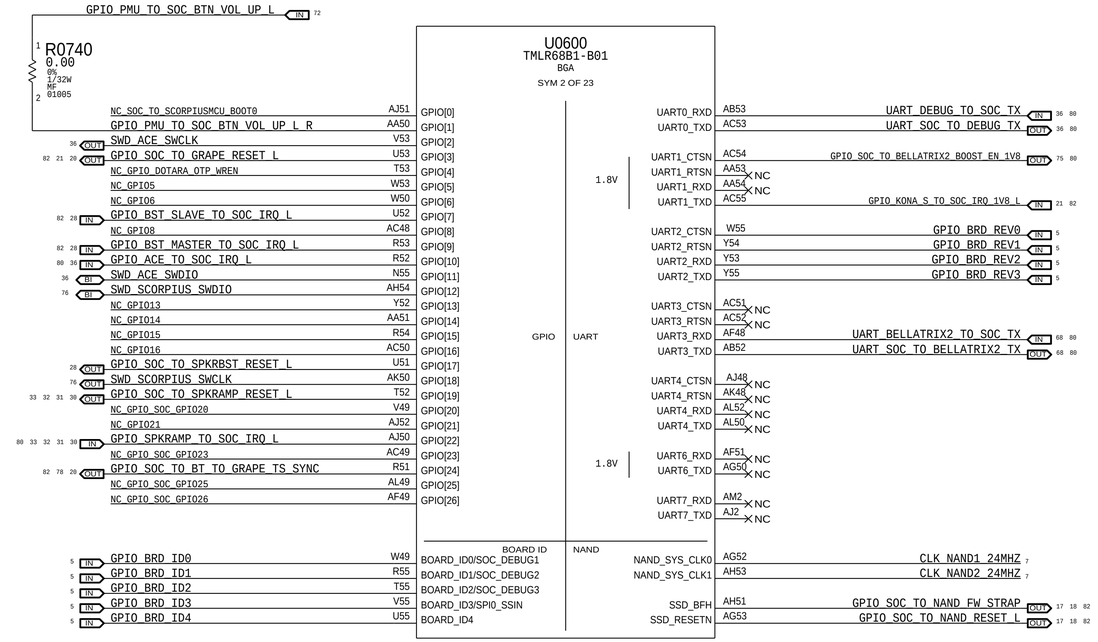
PP1V25_S2 (84)
- C1033 0.1UF 20% 6.3V X5R-CERM 01005 (1–2)
- R1034 33 5% 1/32W MF 01005 (1–2)
  - PACK_IGNORE=TRUE PACK_OPTION=J518,J523
  - 6 SWD_AP_TCK → SWD_PER_BB_SWCLK_R
- U1034 74AUP1G34GX SOT1226 (PACK_IGNORE=TRUE PACK_OPTION=J518,J523)
  - 2 → SWD_PER_BB_SWCLK_R
  - 4 → NC_SWD_BB_SWCLK (78 OUT)
  - 5 PP1V25_S2
  - 1, 3 NC

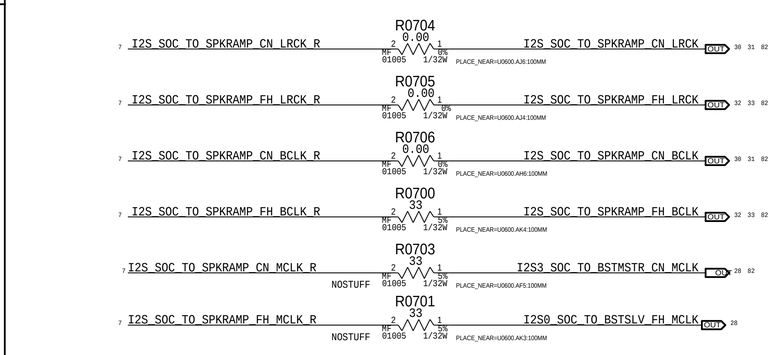
BOM_COST_GROUP=SOC

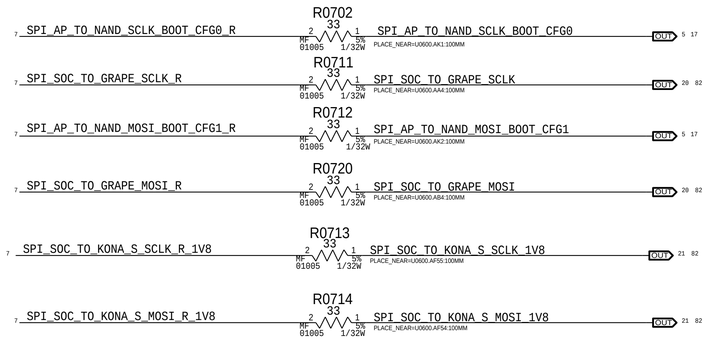
PAGE TITLE
SOC: MAIN

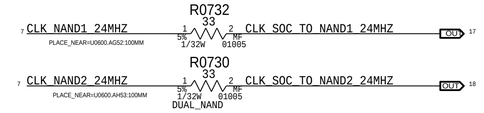
SOC: GPIO

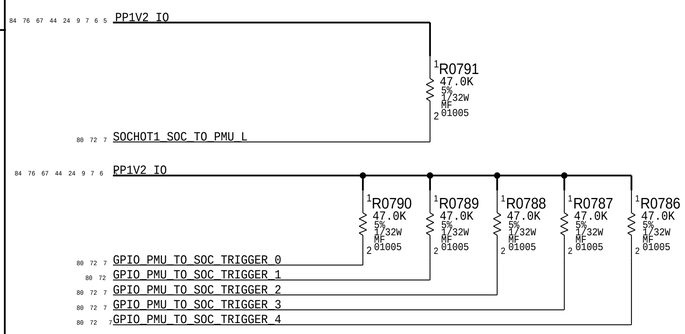


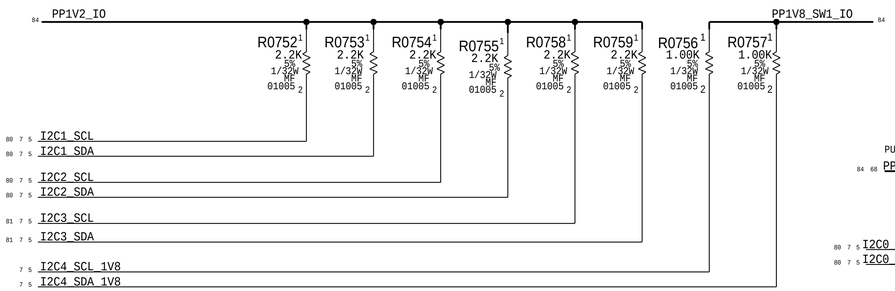


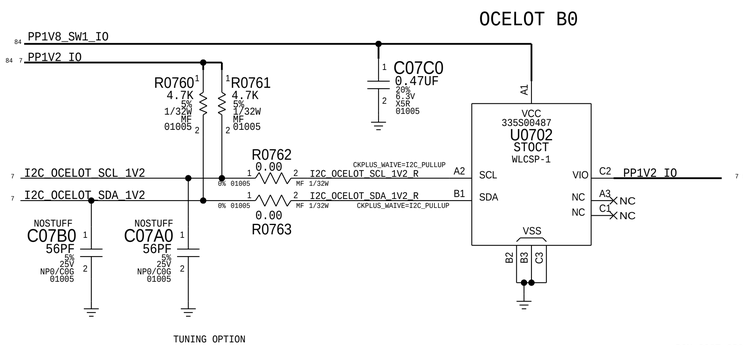


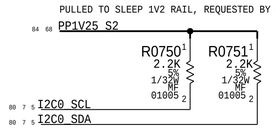










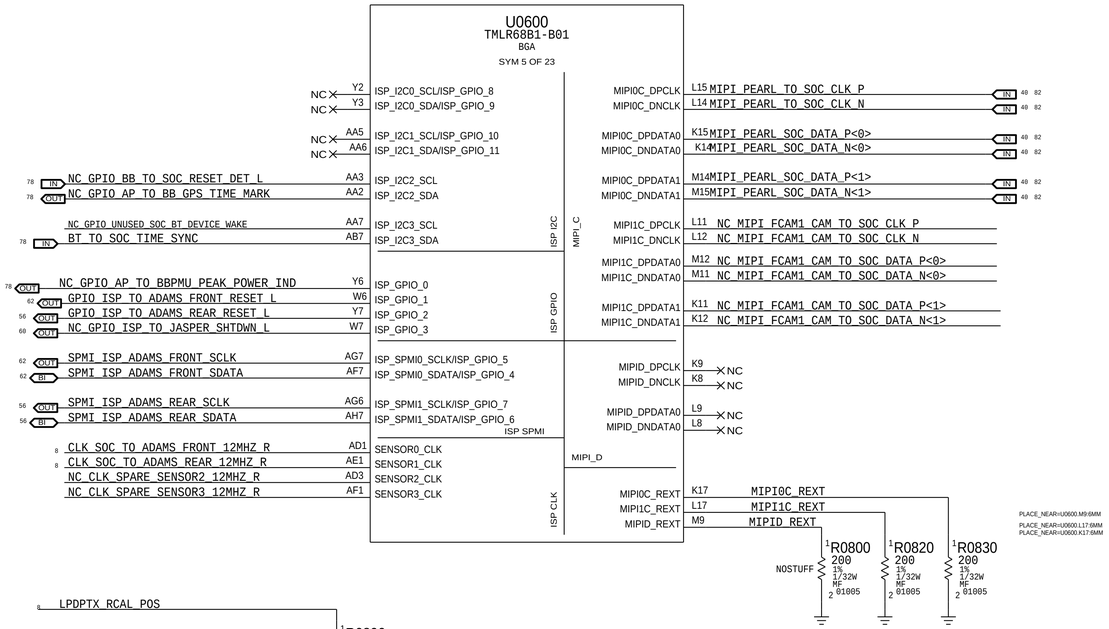


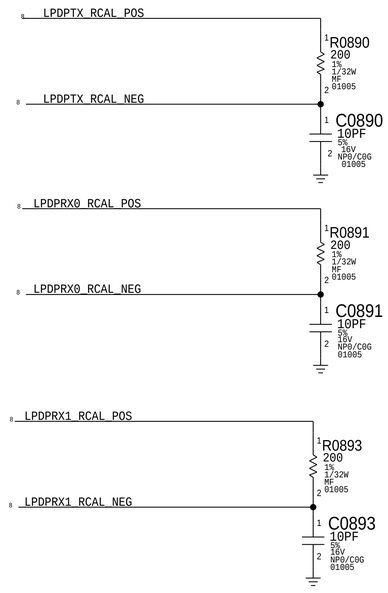
BOM_COST_GROUP=SOC

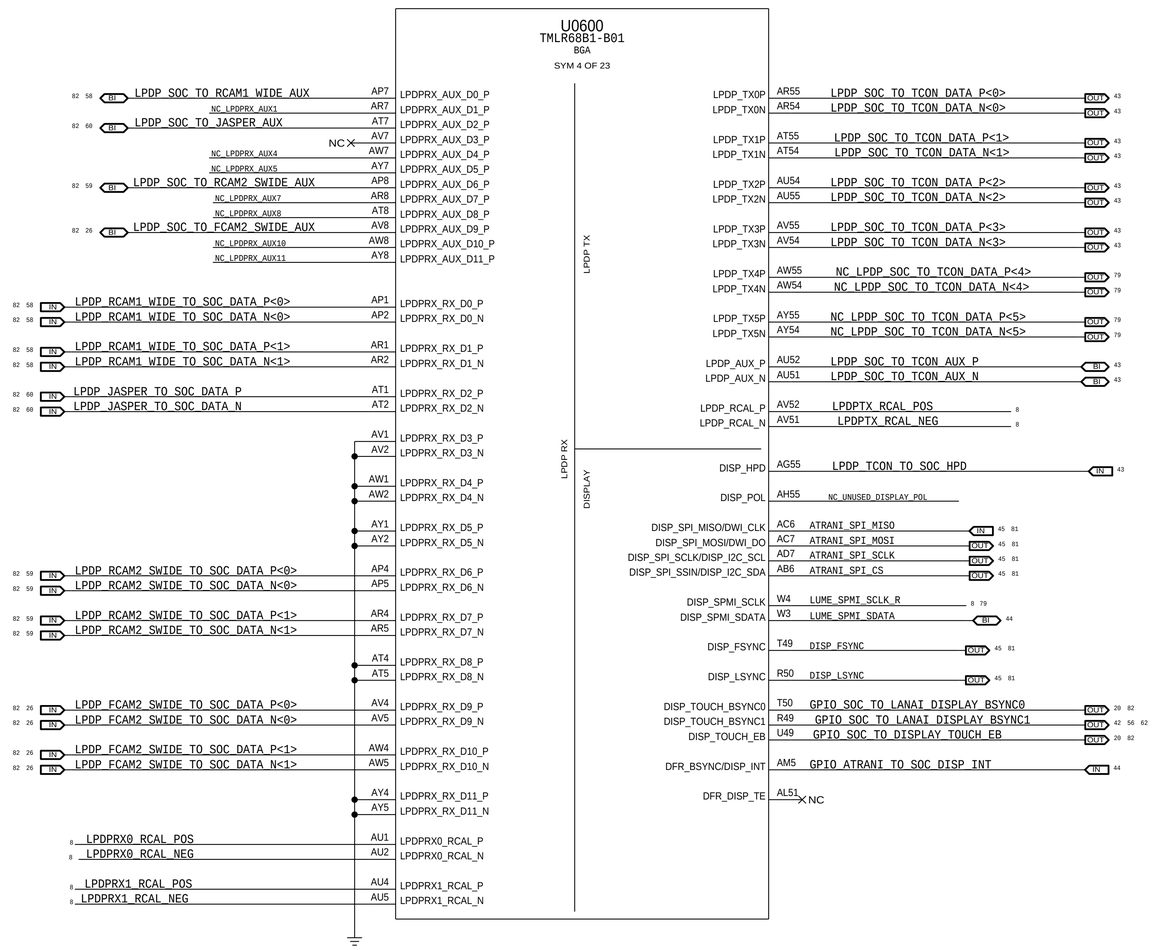
PAGE TITLE

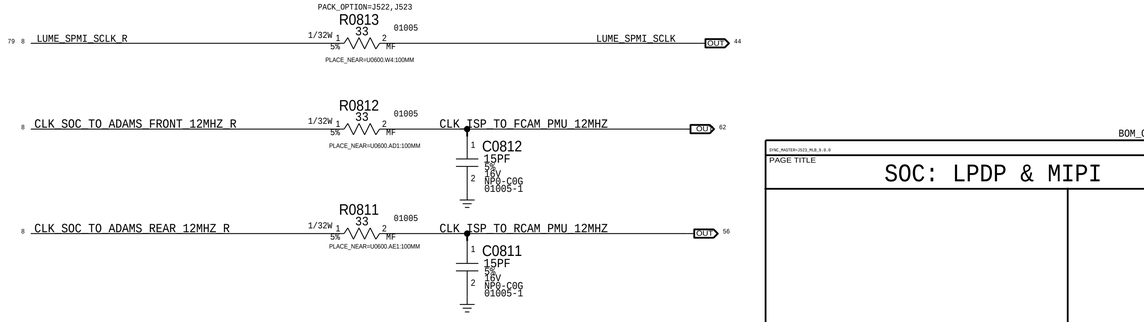
SOC: I/OS

SOC: LPDP & MIPI









BOM_COST_GROUP=SOC

PAGE TITLE

SOC: LPDP & MIPI

SOC: PCIE

PCIE GEN4 - ST LINK 0

U0600
TMLR68B1-B01
BGA
SYM 6 OF 23

PCIE ST0 / PCIE GP0

17 OUT 85_PCIE_SOC_TO_NAND1_TX_P	0.22UF 6.3V 01005 CER-X5R 10% ROOM=SOC C0930 GND_VOID=TRUE	BE26	ST_PCIE_RX0_P
17 OUT 85_PCIE_SOC_TO_NAND1_TX_N	0.22UF 6.3V 01005 CER-X5R 10% ROOM=SOC C0931 GND_VOID=TRUE	BF26	ST_PCIE_RX0_N
85_PCIE_SOC_TO_NAND1_C_TX_P		BC27	ST_PCIE_TX0_P
85_PCIE_SOC_TO_NAND1_C_TX_N		BD27	ST_PCIE_TX0_N
17 OUT 85_PCIE_SOC_TO_NAND1_REFCLK_P		BB37	ST_PCIE_REF_CLK0_P
17 OUT 85_PCIE_SOC_TO_NAND1_REFCLK_N		BC37	ST_PCIE_REF_CLK0_N
17 9 IN PCIE_NAND1_TO_SOC_CLKREQ_L		AH50	ST_PCIE_CLKREQ0_N
82 18 17 9 OUT PCIE_SOC_TO_NAND_PERST_L		AH52	ST_PCIE_PERST0_N

DC BLOCKING CAPS ON NAND PAGE

18 OUT 85_PCIE_SOC_TO_NAND2_TX_P	0.22UF 6.3V 01005 CER-X5R 10% ROOM=SOC C0932 DUAL_NAND GND_VOID=TRUE	BE28	ST_PCIE_RX1_P
18 OUT 85_PCIE_SOC_TO_NAND2_TX_N	0.22UF 6.3V 01005 CER-X5R 10% ROOM=SOC C0933 DUAL_NAND GND_VOID=TRUE	BF28	ST_PCIE_RX1_N
85_PCIE_SOC_TO_NAND2_C_TX_P		BC29	ST_PCIE_TX1_P
85_PCIE_SOC_TO_NAND2_C_TX_N		BD29	ST_PCIE_TX1_N
18 OUT 85_PCIE_SOC_TO_NAND2_REFCLK_P		BB38	ST_PCIE_REF_CLK1_P
18 OUT 85_PCIE_SOC_TO_NAND2_REFCLK_N		BC38	ST_PCIE_REF_CLK1_N
18 9 IN PCIE_NAND2_TO_SOC_CLKREQ_L		AH49	ST_PCIE_CLKREQ1_N
NC_PCIE_SOC_TO_NAND2_PERST_L		AH48	ST_PCIE_PERST1_N

PCIE ST1 / PCIE GP1

GP_PCIE_RX0_P	BE30	PCIE_WLAN_TO_SOC_TX_P	IN 78 82
GP_PCIE_RX0_N	BF30	PCIE_WLAN_TO_SOC_TX_N	IN 78 82
GP_PCIE_TX0_P	BC31	PCIE_SOC_TO_WLAN_TX_C_P	0.1UF 6.3V 01005 20% X5R-CERM C0940 GND_VOID=TRUE → PCIE_SOC_TO_WLAN_TX_P OUT 78 82
GP_PCIE_TX0_N	BD31	PCIE_SOC_TO_WLAN_TX_C_N	0.1UF 6.3V 01005 20% X5R-CERM C0941 GND_VOID=TRUE → PCIE_SOC_TO_WLAN_TX_N OUT 78 82
GP_PCIE_REF_CLK0_P	BE40	PCIE_SOC_TO_WLAN_REFCLK_P	OUT 78 82
GP_PCIE_REF_CLK0_N	BF40	PCIE_SOC_TO_WLAN_REFCLK_N	OUT 78 82
GP_PCIE_CLKREQ0_N	AB55	PCIE_WLAN_TO_SOC_CLKREQ_L	OUT 9 78
GP_PCIE_PERST0_N	AA52	PCIE_SOC_TO_WLAN_RESET_L	OUT 9 78

WLAN/BT

GP_PCIE_RX1_P	BE32	NC_PCIE_BB_TO_SOC_TX_P	IN 78
GP_PCIE_RX1_N	BF32	NC_PCIE_BB_TO_SOC_TX_N	IN 78
GP_PCIE_TX1_P	BC33	NC_PCIE_SOC_TO_BB_TX_P	OUT 78
GP_PCIE_TX1_N	BD33	NC_PCIE_SOC_TO_BB_TX_N	OUT 78
GP_PCIE_REF_CLK1_P	BE38	NC_PCIE_SOC_TO_BB_REFCLK_P	OUT 78
GP_PCIE_REF_CLK1_N	BF38	NC_PCIE_SOC_TO_BB_REFCLK_N	OUT 78
GP_PCIE_CLKREQ1_N	AA55	NC_PCIE_BB_TO_SOC_CLKREQ_L	IN 78
GP_PCIE_PERST1_N	P55	NC_PCIE_SOC_TO_BB_PERST_L	OUT 78

BASEBAND

AC COUPLING CAPS ARE IN CONNECTOR PAGE

PCIE GP2

GP_PCIE_RX2_P	BE34	NC
GP_PCIE_RX2_N	BF34	NC
GP_PCIE_TX2_P	BC35	NC
GP_PCIE_TX2_N	BD35	NC
GP_PCIE_REF_CLK2_P	BE39	NC
GP_PCIE_REF_CLK2_N	BF39	NC
GP_PCIE_CLKREQ2_N	AH1	NC
GP_PCIE_PERST2_N	AE7	NC_GPIO_SOC_TO_BB_COREDUMP OUT 78

9 PCIE_RCAL_ST_POS	BC24	ST_PCIE_RCAL_P	GP_PCIE_RCAL_P BC25 → PCIE_RCAL_GP_POS 9
9 PCIE_RCAL_ST_NEG	BB24	ST_PCIE_RCAL_N	GP_PCIE_RCAL_N BB25 → PCIE_RCAL_GP_NEG 9

MTR

NC	AM3	PAD_MTR_ANALOG_TEST_P
NC	AL3	PAD_MTR_ANALOG_TEST_N
NC	AL1	PAD_MTR_VREF_P
NC	AM1	PAD_MTR_VREF_N

84 76 67 44 24 7 6 5 PP1V2_IO → R0940 20K 5% 1/20W MF 201 → 78 9 PCIE_WLAN_TO_SOC_CLKREQ_L

9 PCIE_RCAL_ST_POS → R0990 200 1% 1/32W MF 01005 → 9 PCIE_RCAL_ST_NEG; C0990 10PF 5% 16V NP0/C0G 01005

9 PCIE_RCAL_GP_POS → R0989 200 1% 1/32W MF 01005 → 9 PCIE_RCAL_GP_NEG; C0989 10PF 5% 16V NP0/C0G 01005

78 9 PCIE_SOC_TO_WLAN_RESET_L → R0941 100K 5% 1/32W MF 01005

84 18 17 PP1V2_NAND → R0950 20K 5% 1/20W MF 201; R0930 20K 5% 1/20W MF 201

17 9 PCIE_NAND1_TO_SOC_CLKREQ_L

18 9 PCIE_NAND2_TO_SOC_CLKREQ_L

82 18 17 9 PCIE_SOC_TO_NAND_PERST_L → R0952 47.0K 5% 1/32W MF 01005

BOM_COST_GROUP=SOC

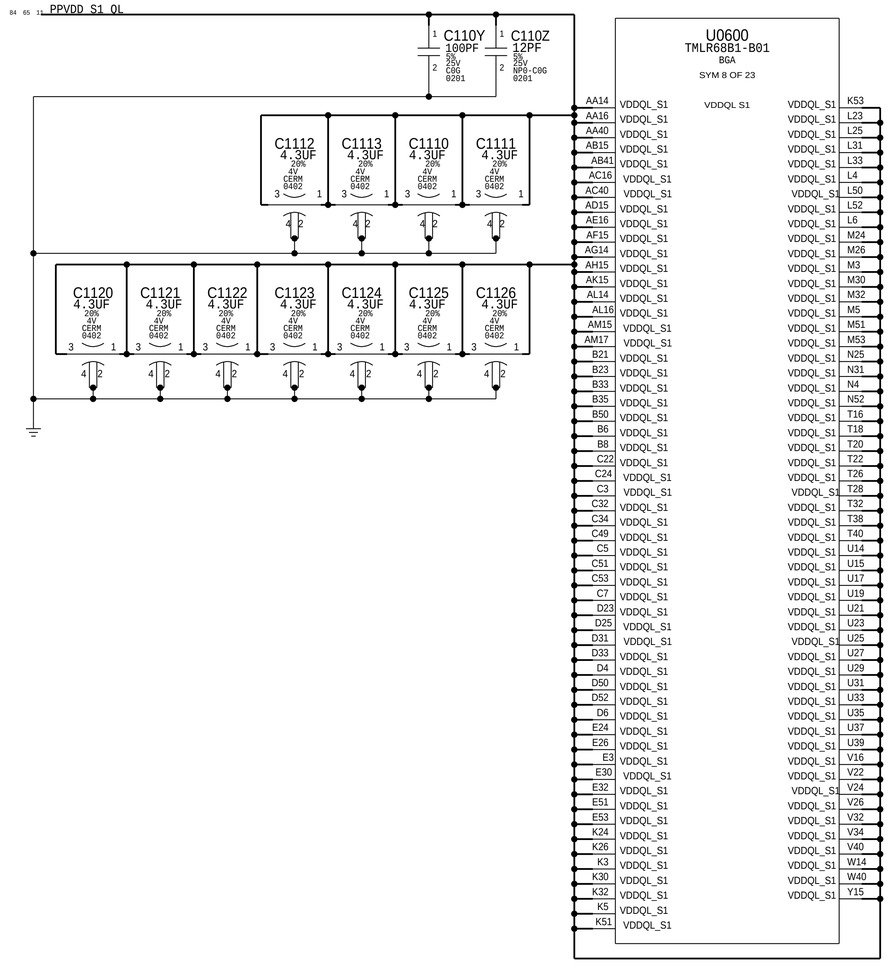
PAGE TITLE

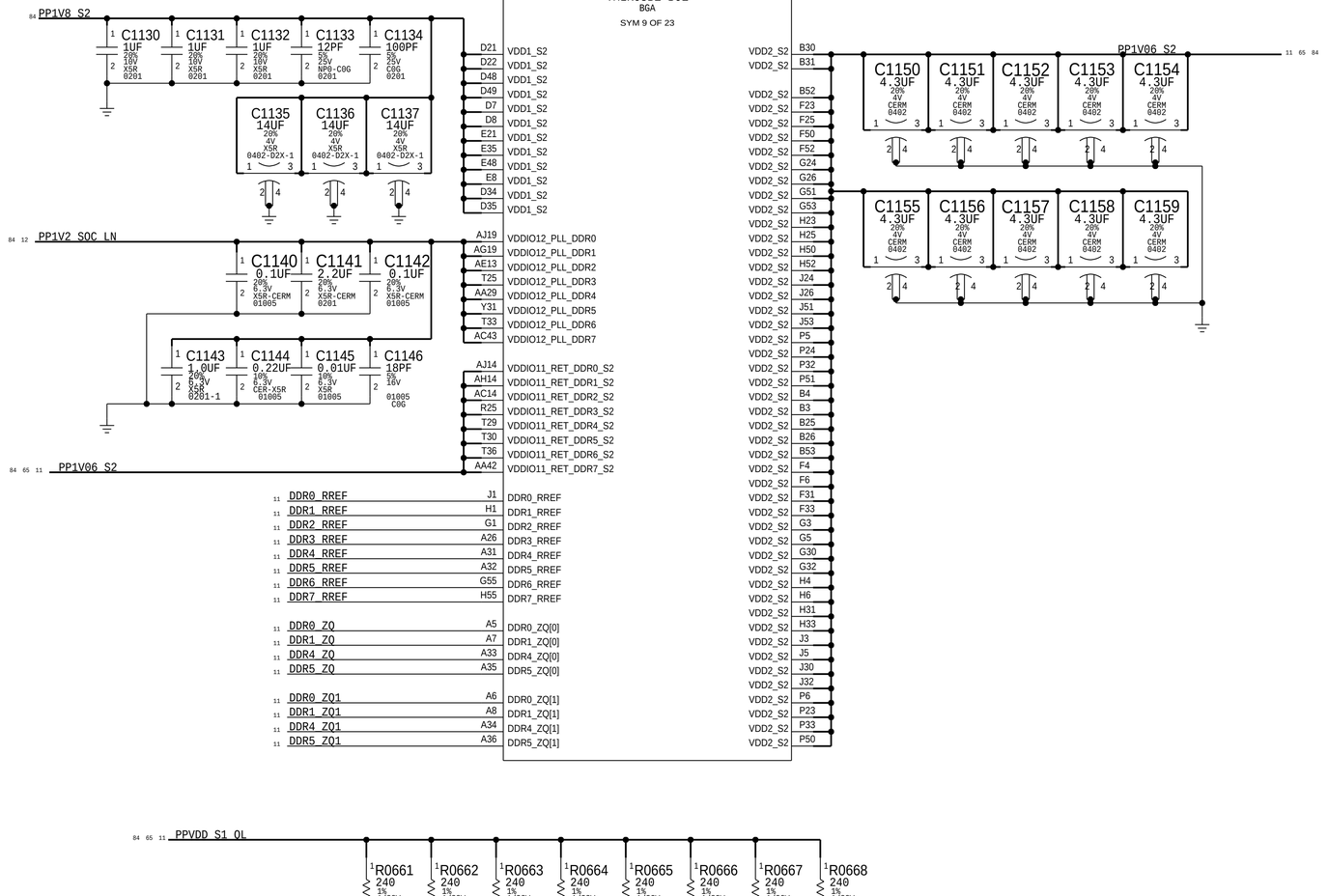
SOC: PCIE

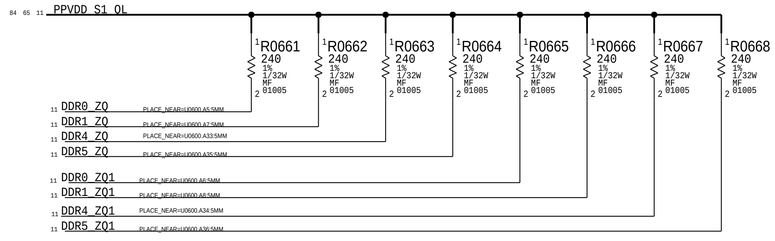
SOC: AOP

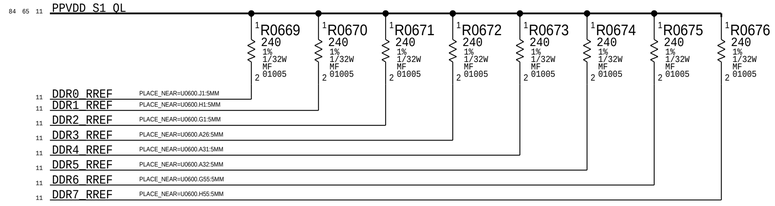
SOC: AOP
ALS IRQ PULL-UPS
PP1V25_S2
NOSTUFF R0690 47.0K 5% 1/32W MF 01005
NOSTUFF R0691 47.0K 5% 1/32W MF 01005
GPIO_ALS_FH1_TO_AOP_IRQ_L
GPIO_ALS_FH2_TO_AOP_IRQ_L
AOP I2C PULL-UPS
R1050 2.2K 5% 1/32W MF 01005
R1051 2.2K 5% 1/32W MF 01005
R1052 2.2K 5% 1/32W MF 01005
R1053 2.2K 5% 1/32W MF 01005
I2C_AOP_I2CM0_SCL
I2C_AOP_I2CM0_SDA
I2C_AOP_I2CM1_SCL
I2C_AOP_I2CM1_SDA
SPI_SENSORS_MOSI
R1020 33 5% 1/32W MF 01005
SPI_SENSORS_SCLK
R1025 33 5% 1/32W MF 01005
U0600
TMLR68B1-B01
BGA
SYM 7 OF 23
GPIO_PHOSPHORUS_TO_AOP_IRQ BB18 AOP_FUNC[0]
GPIO_MOLY_TO_AOP_IRQ BC16 AOP_FUNC[1]
GPIO_KOBOL_TO_AOP_INT BC12 AOP_FUNC[2]
GPIO_KOBOL_TO_AOP_MOTION_INT BC13 AOP_FUNC[3]
SPI_PHOSPHORUS_CS_L BA16 AOP_FUNC[4]
SPI_MOLY_CS_L BA13 AOP_FUNC[5]
SPI_KOBOL_CS_L BA15 AOP_FUNC[6]
GPIO_GRAPE_TO_AOP_IRQ_L BD13 AOP_FUNC[7]
GPIO_AOP_TO_WLAN_CONTEXT_A BD16 AOP_FUNC[8]
GPIO_AOP_TO_WLAN_CONTEXT_B BA14 AOP_FUNC[9]
NC_AOP_TO_BBPMU_FORCE_PWM BB12 AOP_FUNC[10]
NC_AOP_FUNC11 BD20 AOP_FUNC[11]
GPIO_ALS_FH1_TO_AOP_IRQ_L BA11 AOP_FUNC[12]
GPIO_ALS_FH2_TO_AOP_IRQ_L BD18 AOP_FUNC[13]
NC_GPIO_GRAPE_TO_AOP_TIME_SYNC BA10 AOP_FUNC[14]
AOP GPIO
I2C_AOP_I2CM0_SCL BC20 AOP_I2CM0_SCL
I2C_AOP_I2CM0_SDA BB19 AOP_I2CM0_SDA
I2C_AOP_I2CM1_SCL BB16 AOP_I2CM1_SCL
I2C_AOP_I2CM1_SDA BE15 AOP_I2CM1_SDA
AOP I2C
CLK_AOP_TO_LDCM_PDM BB9 AOP_PDM_IN_CLK1/AOP_I2S1_BCLK
PDM_DMIC_TOP_L_SCLK BC9 AOP_PDM_IN_CLK2/AOP_I2S0_MCK
PDM_DMIC_TOP_R_SCLK BC6 AOP_PDM_IN_CLK3/AOP_I2S0_LRCK
PDM_DMIC_FRONT_SCLK BD9 AOP_PDM_IN_CLK4/AOP_I2S0_DOUT
PDM_DMIC_BACK_SCLK BC8 AOP_PDM_IN_CLK5/AOP_I2S0_DIN
PDM_DMIC_SIDE_SCLK BD8 AOP_PDM_IN_CLK6/AOP_I2S0_BCLK
LDCM_TO_AOP_DATA1_PDM BE21 AOP_PDM_IN_DATA1/AOP_I2S1_MCK
PDM_DMIC_TOP_L_R_SD BE16 AOP_PDM_IN_DATA2/AOP_I2S1_LRCK
PDM_DMIC_FRONT_BACK_SD BE19 AOP_PDM_IN_DATA3/AOP_I2S1_DOUT/AOP_PDM_IN_CLK7
PDM_DMIC_SIDE_SD BD5 AOP_PDM_IN_DATA4/AOP_I2S1_DIN/AOP_PDM_IN_CLK8
AOP PDM
SPI_SENSORS_MISO BF15 AOP_SPI0_MISO
SPI_SENSORS_MOSI_R BF14 AOP_SPI0_MOSI
SPI_SENSORS_SCLK_R BF17 AOP_SPI0_SCLK
AOP SPI
SPMI0_AOP_SCLK_WIFI_BT_NFC BF18 AOP_SPMI0_SCLK/AOP_UART0_TXD
SPMI0_AOP_SDATA_WIFI_BT_NFC BF19 AOP_SPMI0_SDATA/AOP_UART0_RXD
NC_UART_AOP_TO_BB_TX BF20 AOP_SPMI1_SCLK/AOP_UART1_TXD
NC_UART_BB_TO_AOP_TX BF21 AOP_SPMI1_SDATA/AOP_UART1_RXD
AOP SPMI
UART_GRAPE_TO_AOP_TX BB3 AOP_UART2_RXD
UART_AOP_TO_GRAPE_TX BB4 AOP_UART2_TXD
AOP UART
CLK_PMU_TO_AOP_32K BE6 RT_CLK32768
RESET_PMU_TO_SYSTEM_L BF10 CFSB_AON
BB5 COLD_RESETN
NC_AON_SLEEP1_RESET_L BB21 AON_SLEEP1_RESETN
WDOG_SOC BF12 WDOG
AOP RESET
DBG_PROBE_VALID BF6 DBG_PROBE_VALID
85_USB_E_KIS_P BF24 DBG_USB_EDP
85_USB_E_KIS_N BE24 DBG_USB_EDM
DBG_USB_RESREF BE23 DBG_USB_RESREF
AOP DEBUG
NUB_CLK_OUT0 BA17 CLK_GRAPE_24MHZ_R
NUB_DOCK_ATTENTION/CTM_TRIGGER BC15 GPIO_AOP_TO_ORION_HWEN
NUB_DOCK_CONNECT BC17 GPIO_1V2_ACE2SOC_DOCK_CONNECT
NUB_GPIO_0/AOP_FUNC15/NUB_CLK_OUT1 BD14 GPIO_AOP_TO_PARROT_RECOVERY_STATUS
NUB_GPIO_1/AOP_PDM_IN_CLK0 BD15 PDM_PENROSE_SCLK
NUB_GPIO_2/AOP_PDM_IN_DATA0 BD21 PDM_PENROSE_SD
NUB_GPIO_3/AOP_LEAP_MADI_IN BD17 GPIO_KONA_S_TO_SCORPIUS_TIME_SYNC_AOP
NUB_GPIO_4/AOP_LEAP_MADI_OUT BB13 GPIO_TITUS_TO_AOP_B2B_DETECT
NUB_GPIO_5/AOP_PDM_OUT_CLK0 BD19 GPIO_LDCM_TO_AOP_INVALID
NUB_GPIO_6/AOP_PDM_OUT_DATA0/AOP_FUNC16 BD22 AOP_TO_LDCM_DATA0_PDM
NUB_GPIO_7/AOP_FUNC17 BB10 PROX_BI_AP_AOP_INT_L_PWM_LVT
NUB_GPIO_8/AOP_FUNC18 BD12 NC_AOP_TO_LDCM_AFE_EN_1V2
DEV PURPOSES, NOSTUFF CONNECTION TO USBC DC
NUB_GPIO_9/AOP_FUNC19 BD11 GPIO_ORION_TO_AOP_IRQ
NUB_GPIO_10/AOP_FUNC20 BC10 DOTARA_WAKE_HEART_BEAT
NUB_GPIO_11/KIS_GPIO0/AOP_FUNC21 BB7 SLG_TO_AOP_DMIC_DISABLE_WARN_L
NUB_GPIO_12/KIS_GPIO1/AOP_FUNC22 BD10 GPIO_SCORPIUS_TO_AOP_INT
NUB GPIO
NUB_SPMI0_SCLK BB15 NUB_SPMI0_SCLK
NUB_SPMI0_SDATA BC14 NUB_SPMI0_SDATA
NUB_SPMI1_SCLK BA12 NUB_SPMI1_SCLK
NUB_SPMI1_SDATA BC11 NUB_SPMI1_SDATA
NUB SPMI
NUB_SWD_TCK_OUT0 BC18 SWD_PERIPHERAL_SWCLK
NUB_SWD_TMS0 BC19 SWD_PMU_SWDIO
NUB_SWD_TMS1 BC21 SWD_GRAPE_SWDIO
NUB SWD
JTAG_SEL BE4 JTAG_SOC_SEL
JTAG_TCK BF5
JTAG_TDI BF16
JTAG_TDO BC1 TP_JTAG_SOC_TDO
JTAG_TMS BB1
JTAG_TRSTN BF7 TP_JTAG_SOC_TRST_L
JTAG
R0681 47.0K 5% 1/32W MF 01005
R0680 47.0K 5% 1/32W MF 01005
R0682 47.0K 5% 1/32W MF 01005
JTAG_SOC_TCK
TP_JTAG_SOC_TDI
JTAG_SOC_TMS
SMC_I2CM0_SCL BC3 I2C_SMC_I2CM0_SCL
SMC_I2CM0_SDA BC2 I2C_SMC_I2CM0_SDA
SMC_I2CM1_SCL/SMC_UART1_TXD BD4 I2C_SMC_I2CM1_SCL
SMC_I2CM1_SDA/SMC_UART1_RXD BB2 I2C_SMC_I2CM1_SDA
SMC_I2CM2_SCL BD6 I2C_SMC_I2CM2_SCL
SMC_I2CM2_SDA BC5 I2C_SMC_I2CM2_SDA
SMC_I2CM3_SCL BC7 NC
SMC_I2CM3_SDA BD7 NC
SMC_I2CM4_SCL BE7 NC
SMC_I2CM4_SDA BF9 NC
SMC I2C
SMC_UART0_RXD BF4 NC
SMC_UART0_TXD BF8 NC
SMC UART
SMC_GPIO0 BF11 GPIO_POTOMAC_TO_SOC_TO_PMU_IRQ_L
SMC_GPIO1 BF13 GPIO_ACE_TO_SMC_IRQ_L
SMC_FPWM0 BE12 NC_SMC_FPWM0
SMC_FPWM1 BE9 NC
SMC GPIO
R0731 33 5% 1/32W MF 01005
PLACE_NEAR=U0600.BA17:1000MM
CLK_SOC_TO_GRAPE_24MHZ
R0683 10K 5% 1/32W MF 01005
RESET_PMU_TO_SYSTEM_L
C0683 0.1UF 20% 6.3V X5R-CERM 01005
NOSTUFF
FOR CFSB ISSUE
R0684 47.0K 5% 1/32W MF 01005
PLACE_NEAR=U0600.BE23:6MM
R09A5 200 1% 1/32W MF 01005
SMC I2C PULL-UPS
R85A1 2.2K 5% 1/32W MF 01005
R85A0 2.2K 5% 1/32W MF 01005
RB164 2.2K 5% 1/32W MF 01005
RB163 2.2K 5% 1/32W MF 01005
RB902 2.2K 5% 1/32W MF 01005
RB906 2.2K 5% 1/32W MF 01005
I2C_SMC_I2CM0_SCL
I2C_SMC_I2CM0_SDA
I2C_SMC_I2CM1_SCL
I2C_SMC_I2CM1_SDA
I2C_SMC_I2CM2_SCL
I2C_SMC_I2CM2_SDA
PP1V2_S2_TOUCH
C1034 0.1UF 20% 6.3V X5R-CERM 01005
U1033 74AUP1G34GX SOT1226
SWD_PERIPHERAL_SWCLK
PLACE_NEAR=U0600.AK3:100MM
R1040 33 5% 1/32W MF 01005
SWD_PER_KONA_SWCLK_R
SWD_GRAPE_SWCLK
NO SWCLK BUFFER FOR PMU DUE TO PROXIMITY AND LOAD
NUB_SPMI_SERA_SCLK
PLACE_NEAR=U0600.BB15:100MM
R79C1 33 1/32W 5% MF 01005
NUB_SPMI0_SCLK
NUB_SPMI_SERA_SDATA
R79D1 33 1/32W 5% MF 01005
PLACE_NEAR=U0600.BC14:100MM
NUB_SPMI0_SDATA
NUB_SPMI1_SIMETRA_SCLK
PLACE_NEAR=U0600.BA12:100MM
R79C2 33 1/32W 5% MF 01005
NUB_SPMI1_SCLK
NUB_SPMI1_SIMETRA_SDATA
R79D2 33 1/32W 5% MF 01005
PLACE_NEAR=U0600.BC11:100MM
NUB_SPMI1_SDATA
R0612 1.00K 5% 1/32W MF 01005
SWD_GRAPE_SWDIO
AOP_SPMI0_SCLK_NFC
PLACE_NEAR=U0600.BF18:100MM
R78E1 33 1/32W 5% MF 01005
SPMI0_AOP_SCLK_WIFI_BT_NFC
AOP_SPMI0_SDATA_NFC
R78F1 33 1/32W 5% MF 01005
PLACE_NEAR=U0600.BF19:100MM
SPMI0_AOP_SDATA_WIFI_BT_NFC
R1098 1.00M 5% 1/32W MF 01005
R1099 1.00M 5% 1/32W MF 01005
AOP_SPMI0_SCLK_WIFI_BT
R78C1 33 1/32W 5% MF 01005
AOP_SPMI0_SDATA_WIFI_BT
R78D1 33 1/32W 5% MF 01005
BOM_COST_GROUP=SOC
PAGE TITLE
SOC: AOP

SOC: POWER (DDR)









ROM_COST_GROUP=SOC

PAGE TITLE

SOC: POWER (DDR,SRAM)

SOC: POWER (IO,FIXED)

U0600
TMLR68B1-B01
BGA
SYM 13 OF 23

PP0V8_S1_SOC_FIXED
PP0V8_S1_FIXED_DDR_PLL_SOC_FILT
PP0V8_S1_FIXED_PCIE_R
PPVDD_S1_FIXED_XTAL_R
PP0V72_S2_VDDLOW
PP0V72_S2_VDDLOW_PLL_FLPPLL
PP0V72_S2_VDDLOW_PLL_ULPPLL

C1260 4.3UF 20% 4V CERM 0402
C1261 0.1UF 20% 6.3V X5R-CERM 01005
C1262 0.1UF 20% 6.3V X5R-CERM 01005
C1270 2.2UF 20% 6.3V X5R-CERM 0201
C1271 0.1UF 20% 6.3V X5R-CERM 01005
C1280 2.2UF 20% 6.3V X5R-CERM 0201
C1281 0.1UF 20% 6.3V X5R-CERM 01005
R1290 0.00 0% 1/32W MF 01005
C1290 2.2UF 20% 6.3V X5R-CERM 0201
C1291 0.1UF 20% 6.3V X5R-CERM 01005
C12A0 4.3UF 20% 4V CERM 0402
C12A1 0.1UF 20% 6.3V X5R-CERM 01005
C12A2 0.1UF 20% 6.3V X5R-CERM 01005
C1240 2.2UF 20% 6.3V X5R-CERM 0201
C1241 0.1UF 20% 6.3V X5R-CERM 01005
C1242 0.1UF 20% 6.3V X5R-CERM 01005
R1250 120-OHM-25%-250MA-0.5DCR 01005
C1250 2.2UF 20% 6.3V X5R-CERM 0201
C1251 2.2UF 20% 6.3V X5R-CERM 0201
C1252 0.22UF 10% 6.3V CER-X5R 01005
C1253 0.1UF 20% 6.3V X5R-CERM 01005
C1254 0.1UF 20% 6.3V X5R-CERM 01005
C125Z 220PF 5% 16V C0G 01005
R12B0 10 5% 1/32W MF 01005
C12B0 4UF 20% 6.3V CER-X5R 0201
C12C0 2.2UF 20% 6.3V X5R-CERM 0201
C12D0
C12D1
C12DY 12PF 5% 25V NP0-C0G 0201
C12DZ 100PF 5% 25V C0G 0201
R12E0 10 5% 1/32W MF 01005
R12F0 49.9 1% 1/32W MF 01005
C12F0 4.7UF 20% 4V CER-X5R 0201
C12E0 0.47UF 20% 6.3V X5R 01005-1
C12G0 0.1UF 20% 6.3V X5R-CERM 01005

(7MA)	AM28	VDD_FIXED_ECPU_S1
(232MA)	AW19	VDD_FIXED_LPDP_RX_S1
	AW20	VDD_FIXED_LPDP_RX_S1
	AW21	VDD_FIXED_LPDP_RX_S1
(88MA)	BA37	VDD_FIXED_LPDP_TX_S1
	BA38	VDD_FIXED_LPDP_TX_S1
	BA39	VDD_FIXED_LPDP_TX_S1
(15MA)	R11	VDD_FIXED_MIPIC_S1
	R12	VDD_FIXED_MIPIC_S1
	R13	VDD_FIXED_MIPIC_S1
(4MA)	R10	VDD_FIXED_MIPID_PLL_S1
(5MA)	P9	VDD_FIXED_MIPID_S1
	R9	VDD_FIXED_MIPID_S1
(10MA)	AY18	VDD_FIXED_MTR_S1
(12MA)	AV33	VDD_FIXED_PCIE_REFBUF_S1
(231MA)	AV29	VDD_FIXED_PCIE_S1
	AV30	VDD_FIXED_PCIE_S1
	AV31	VDD_FIXED_PCIE_S1
	AV32	VDD_FIXED_PCIE_S1
(7MA)	AL34	VDD_FIXED_PCPU_S1
(7MA)	AT32	VDD_FIXED_PLL_ANE_S1
(7MA)	AF29	VDD_FIXED_PLL_GPU_S1
(14MA)	AR20	VDD_FIXED_PLL_SOC_S1
(14MA)	AH13	VDD_FIXED_PLL_DDR0_S1
	AG13	VDD_FIXED_PLL_DDR1_S1
	AC13	VDD_FIXED_PLL_DDR2_S1
	T24	VDD_FIXED_PLL_DDR3_S1
	R28	VDD_FIXED_PLL_DDR4_S1
	R29	VDD_FIXED_PLL_DDR5_S1
	T34	VDD_FIXED_PLL_DDR6_S1
	AC42	VDD_FIXED_PLL_DDR7_S1
(1MA)	BA32	VDD_FIXED_XTAL_S1
(10MA)	AD40	VDD_FIXED_S1
	AG40	VDD_FIXED_S1
	AJ39	VDD_FIXED_S1
	AP17	VDD_FIXED_S1
	AU32	VDD_FIXED_S1
	AV39	VDD_FIXED_S1
	AY16	VDD_FIXED_S1
	V17	VDD_FIXED_S1
	AV23	VDD_LOW_S2
	AV25	VDD_LOW_S2
	AV27	VDD_LOW_S2
	AW26	VDD_LOW_S2
	AY26	VDD_LOW_S2
	BA23	VDD_LOW_S2
	AW24	VDD_LOW_FLPPLL_S2
	AW22	VDD_LOW_ULPPLL_S2
	AW28	VDD_LOW_USB_DEBUG_S2
	BA22	VDD_HIB_S4

VDD_CIO	AV34	
VDD_CIO	AV36	
VDD_CIO	AW35	
VDD12_CIO_S2	AU42	
VDD12_CIO_S2	AU43	
VDD12_CIO_S2	AV42	
VDD12_CIO_S2	AV43	
VDD12_CIO_S2	AY34	
VDD12_CIO_S2	AY36	
VDD12_CIO_S2	BA35	
VDD_CIO_USB	AU34	
VDD12_CIO_USB_S2	AU35	
VDD12_AMUX_S2	AT42	
VDD12_LPDP_RX	AV11	
VDD12_LPDP_RX	AV20	
VDD12_LPDP_RX	AW11	
VDD12_LPDP_RX	AW13	
VDD12_LPDP_RX	AY13	
VDD12_LPDP_RX	AY19	
VDD12_LPDP_RX	AY20	
VDD12_LPDP_RX	AY21	
VDD12_LPDP_TX	AW37	
VDD12_LPDP_TX	AW38	
VDD12_LPDP_TX	AW39	
VDD12_MIPIC	P11	
VDD12_MIPIC	P12	
VDD12_MIPIC	P13	
VDD12_MIPID	P8	
VDD12_MIPID	R8	
VDD12_MTR	AW18	
VDD12_PCIE	AY29	
VDD12_PCIE	AY30	
VDD12_PCIE	AY31	
VDD12_PCIE	AY32	
VDD12_PCIE	AY43	
VDD12_PCIE	BA42	
VDD12_PCIE	BA43	
VDD12_PCIE_REFBUF	AW33	
VDD12_PLL_ANE	AP31	
VDD12_PLL_CPU	AK34	
VDD12_PLL_GPU	AG29	
VDD12_PLL_SOC	AP19	
VDD12_TSADC_CPU	AK32	
VDD12_TSADC_SOC0	U20	
VDD12_TSADC_SOC1	Y33	
VDD12_TSADC_SOC2	AH32	
VDD12_TSADC_SOC3	AY15	
VDD12_TSADC_SOC4	AE40	
VDD12_ULPPLL_S2	AW23	
VDD12_USB_DEBUG_S2	AY28	
VDD12_XTAL	BA33	
VDD12_EFUSE1	AU40	
VDD12_EFUSE2	AT20	
VDD12_EFUSE3	AB43	
VDD12_FMON	AU19	

PPVDD_S2_CIO
C1210 0.1UF 20% 6.3V X5R-CERM 01005
C1211 0.1UF 20% 6.3V X5R-CERM 01005
C1212 4.3UF 20% 4V CERM 0402
C1213 4.3UF 20% 4V CERM 0402
PP1V2_S2_CIO
C1220 0.1UF 20% 6.3V X5R-CERM 01005
C1221 0.1UF 20% 6.3V X5R-CERM 01005
C1222 4.3UF 20% 4V CERM 0402
C1223 4.3UF 20% 4V CERM 0402
C1224 0.1UF 20% 6.3V X5R-CERM 01005
C1225 0.1UF 20% 6.3V X5R-CERM 01005
PPVDD_S2_CIO
PP1V25_S2
PP1V2_IO
C12H0 0.1UF 20% 6.3V X5R-CERM 01005
C12H1 0.1UF 20% 6.3V X5R-CERM 01005
C12H2 4.3UF 20% 4V CERM 0402
PP1V2_SOC_LN
C12L0 0.1UF 20% 6.3V X5R-CERM 01005
C12L1 2.2UF 20% 6.3V X5R-CERM 0201
PP1V2_IO
C12W0 0.1UF 20% 6.3V X5R-CERM 01005
C12W1 2.2UF 20% 6.3V X5R-CERM 0201
C12T0 2.2UF 20% 6.3V X5R-CERM 0201
PP1V2_SOC_LN
C12M0 0.1UF 20% 6.3V X5R-CERM 01005
C12M1 0.1UF 20% 6.3V X5R-CERM 01005
C12M2 4.3UF 20% 4V CERM 0402
C12M3 4.3UF 20% 4V CERM 0402
PP1V2_PCIE_REFBUF_FILT
R12V0 0.00 0% 1/32W MF 01005
C12V0 0.1UF 20% 6.3V X5R-CERM 01005
C12V1 2.2UF 20% 6.3V X5R-CERM 0201
PP1V2_SOC_LN
C12N0 0.1UF 20% 6.3V X5R-CERM 01005
C12N1 0.1UF 20% 6.3V X5R-CERM 01005
C12N2 2.2UF 20% 6.3V X5R-CERM 0201
PP1V2_IO
PP1V2_ULPLL_FILT
R12P0 49.9 1% 1/32W MF 01005
PP1V25_S2
C12Q0 0.1UF 20% 6.3V X5R-CERM 01005
C12P0 4.7UF 20% 4V CER-X5R 0201
FL12R0 240-OHM-25%-0.20A-1.00CR 01005
PP1V2_XTAL_SOC_FILT
C12R0 0.1UF 20% 6.3V X5R-CERM 01005
C12R1 2.2UF 20% 6.3V X5R-CERM 0201
PP1V2_IO
PP1V2_FMON_FILT
R12S0 49.9 1% 1/32W MF 01005
C12S0 2.2UF 20% 6.3V X5R-CERM 0201
PP1V2_IO

PP0V6_S2_VDDIO06_GRP1
PP0V6_S2_VDDIO06_GRP2
C1200 4UF 20% 4V X5R 0201
C1201 4UF 20% 4V X5R 0201
PP1V25_S2
C1230 2.2UF 20% 6.3V X5R-CERM 0201
C1231 0.1UF 20% 6.3V X5R-CERM 01005
C1232 14UF 20% 4V X5R 0402-DZK-1
C1233 14UF 20% 4V X5R 0402-DZK-1
C12U0 2.2UF 20% 6.3V X5R-CERM 0201
PP1V2_IO
OMIT XW12J0 SHORT-20L-0.05MM-SM
PP1V2_IO_GRP3
C12J0 2.2UF 20% 6.3V X5R-CERM 0201
OMIT XW12J1 SHORT-20L-0.05MM-SM
PP1V2_IO_GRP4
C12J1 2.2UF 20% 6.3V X5R-CERM 0201
OMIT XW12J2 SHORT-20L-0.05MM-SM
PP1V2_IO_GRP5
C12JA 15UF 20% 6.3V X5R 0402-0.1MM-1
C12J2 2.2UF 20% 6.3V X5R-CERM 0201
PP1V8_SW1_IO
C12K0 2.2UF 20% 6.3V X5R-CERM 0201

VDDIO06_GRPx RADAR #: 48907718
Cmin = 4.7uF
Loop R < 0.2 ohm
Loop L < 1nH

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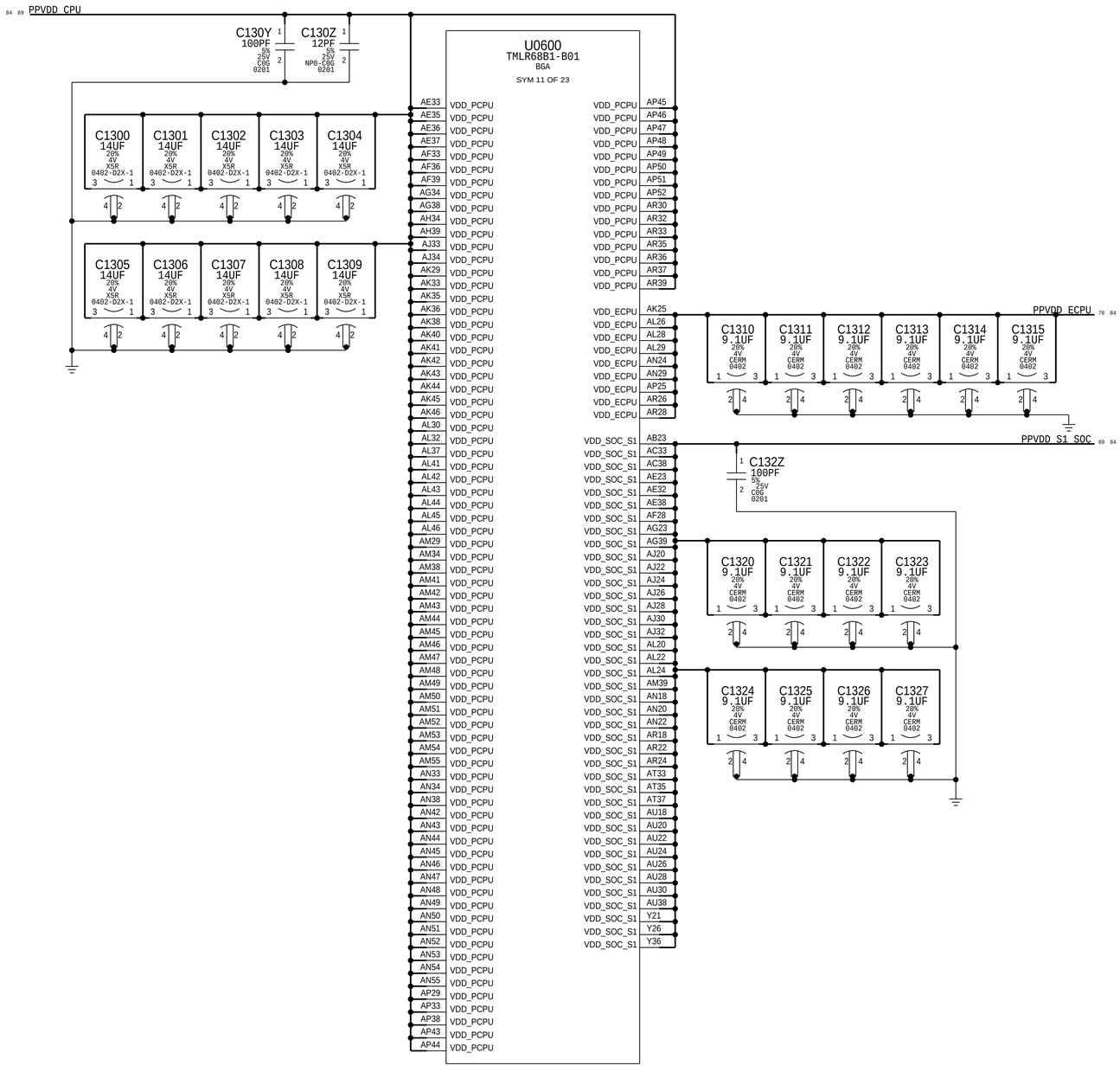
AR40	VDD06_GRP1_S2	
AP40	VDD06_GRP2_S2	
BB22	VDDDIO_HIB_S4	
AY23	VDDIO12_AOP_S2	
AY25	VDDIO12_AOP_S2	
AY27	VDDIO12_AOP_S2	
BA24	VDDIO12_AOP_S2	
BA26	VDDIO12_AOP_S2	
AP39	VDDIO12_GRP1_S2	
AF41	VDDIO12_GRP3	
AG42	VDDIO12_GRP3	
AH40	VDDIO12_GRP3	
AL40	VDDIO12_GRP3	
AN40	VDDIO12_GRP3	
AT40	VDDIO12_GRP4	
AV40	VDDIO12_GRP4	
AP16	VDDIO12_GRP5	
AR17	VDDIO12_GRP5	
AT16	VDDIO12_GRP5	
AU17	VDDIO12_GRP5	
AV16	VDDIO12_GRP5	
AW17	VDDIO12_GRP5	
AP41	VDDIO18_GRP1	
AR41	VDDIO18_GRP1	

VDD2_S2_SENSE1	B10	TPT_VDD_S2_SENSE1
VDD2_S2_SENSE2	B37	TPT_VDD_S2_SENSE2
VDD_PCPU_SENSE	AD36	TPT_VDD_PCPU_SENSE
VDD_ECPU_SENSE	AN23	TPT_VDD_ECPU_SENSE
VDD_GPU_SENSE	AC23	TPT_VDD_GPU_SENSE
VDD_SOC_S1_SENSE	AH22	TPT_VDD_SOC_S1_SENSE
VDD_DISP_S1_SENSE	Y17	TPT_VDD_DISP_S1_SENSE
VDD_DCS_SENSE	AN17	TPT_VDD_DCS_SENSE
VDDQL_SENSE	AN15	TPT_VDDQL_SENSE
VSS_PCPU_SENSE	AD37	TPT_VSS_PCPU_SENSE
VSS_DDR_SENSE	AN16	TPT_VSS_DDR_SENSE
VSS_SENSE1	B9	TPT_VSS_SENSE1
VSS_SENSE2	B36	TPT_VSS_SENSE2

BOM_COST_GROUP=SOC

PAGE TITLE
SOC: POWER (IO)

SOC: POWER (CPU, GPU)

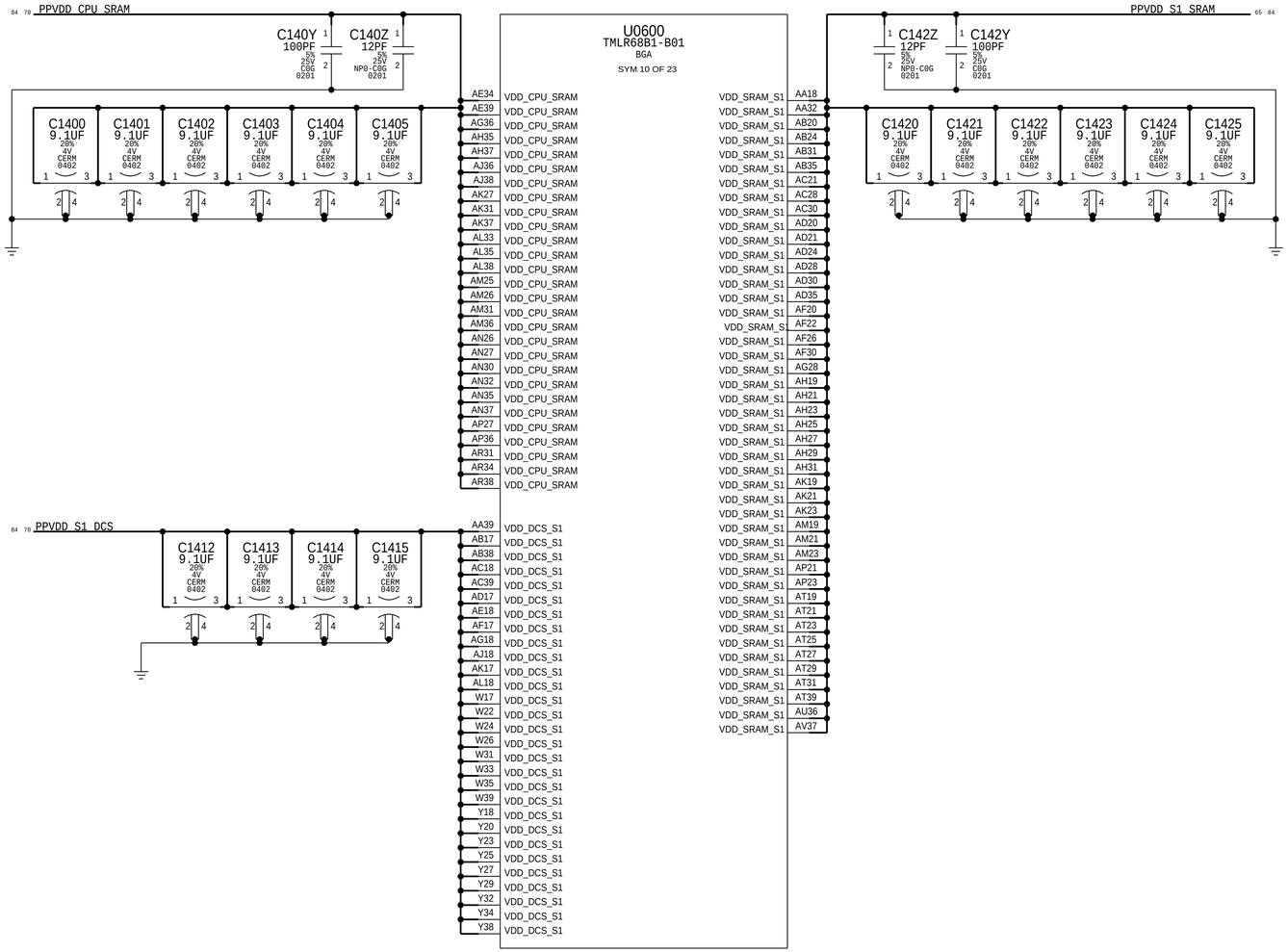


ROM_COST_GROUP=SOC

PAGE TITLE

SOC: POWER (CPU, GPU)

SOC: POWER (SRAM,SOC)



ROM_COST_GROUP=SOC

PAGE TITLE

SOC: POWER (SRAM, SOC)

SOC: GND (1)

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A10	VSS	VSS	VSS	AB42	VSS
A11	VSS		VSS	AB44	VSS
A12	VSS		VSS	AB45	VSS
A13	VSS		VSS	AB46	VSS
A14	VSS		VSS	AB47	VSS
A15	VSS		VSS	AB48	VSS
A16	VSS		VSS	AB5	VSS
A17	VSS		VSS	AB51	VSS
A18	VSS		VSS	AB54	VSS
A19	VSS		VSS	AB8	VSS
A2	VSS		VSS	AB9	VSS
A20	VSS		VSS	AC10	VSS
A21	VSS		VSS	AC11	VSS
A22	VSS		VSS	AC12	VSS
A23	VSS		VSS	AC15	VSS
A24	VSS		VSS	AC17	VSS
A25	VSS		VSS	AC20	VSS
A27	VSS		VSS	AC22	VSS
A28	VSS		VSS	AC25	VSS
A29	VSS		VSS	AC27	VSS
A3	VSS		VSS	AC29	VSS
A30	VSS		VSS	AC32	VSS
A37	VSS		VSS	AC34	VSS
A38	VSS		VSS	AC36	VSS
A39	VSS		VSS	AC41	VSS
A4	VSS		VSS	AC44	VSS
A40	VSS		VSS	AC45	VSS
A41	VSS		VSS	AC46	VSS
A42	VSS		VSS	AC47	VSS
A43	VSS		VSS	AC8	VSS
A44	VSS		VSS	AC9	VSS
A45	VSS		VSS	AD10	VSS
A46	VSS		VSS	AD11	VSS
A47	VSS		VSS	AD12	VSS
A48	VSS		VSS	AD13	VSS
A49	VSS		VSS	AD14	VSS
A50	VSS		VSS	AD16	VSS
A51	VSS		VSS	AD18	VSS
A52	VSS		VSS	AD19	VSS
A53	VSS		VSS	AD23	VSS
A54	VSS		VSS	AD26	VSS
A9	VSS		VSS	AD29	VSS
AA10	VSS		VSS	AD31	VSS
AA11	VSS		VSS	AD33	VSS
AA12	VSS		VSS	AD38	VSS
AA13	VSS		VSS	AD39	VSS
AA15	VSS		VSS	AD8	VSS
AA17	VSS		VSS	AD9	VSS
AA20	VSS		VSS	AE10	VSS
AA22	VSS		VSS	AE11	VSS
AA25	VSS		VSS	AE12	VSS
AA27	VSS		VSS	AE14	VSS
AA30	VSS		VSS	AE15	VSS
AA34	VSS		VSS	AE17	VSS
AA36	VSS		VSS	AE2	VSS
AA38	VSS		VSS	AE20	VSS
AA41	VSS		VSS	AE22	VSS
AA43	VSS		VSS	AE25	VSS
AA44	VSS		VSS	AE28	VSS
AA45	VSS		VSS	AE41	VSS
AA46	VSS		VSS	AE5	VSS
AA47	VSS		VSS	AE8	VSS
AA8	VSS		VSS	AE9	VSS
AA9	VSS		VSS	AF10	VSS
AB10	VSS		VSS	AF11	VSS
AB11	VSS		VSS	AF12	VSS
AB12	VSS		VSS	AF13	VSS
AB13	VSS		VSS	AF14	VSS
AB14	VSS		VSS	AF16	VSS
AB16	VSS		VSS	AF18	VSS
AB18	VSS		VSS	AF19	VSS
AB19	VSS		VSS	AF21	VSS
AB2	VSS		VSS	AF23	VSS
AB21	VSS		VSS	AF25	VSS
AB26	VSS		VSS	AF27	VSS
AB29	VSS		VSS	AF31	VSS
AB33	VSS		VSS	AF34	VSS
AB37	VSS		VSS	AF35	VSS
AB39	VSS		VSS	AF37	VSS
AB40	VSS		VSS	AF38	VSS

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AF40	VSS	VSS	VSS	AK12	VSS
AF42	VSS		VSS	AK13	VSS
AF43	VSS		VSS	AK14	VSS
AF44	VSS		VSS	AK16	VSS
AF45	VSS		VSS	AK18	VSS
AF46	VSS		VSS	AK20	VSS
AF47	VSS		VSS	AK22	VSS
AF8	VSS		VSS	AK24	VSS
AF9	VSS		VSS	AK26	VSS
AG10	VSS		VSS	AK28	VSS
AG11	VSS		VSS	AK30	VSS
AG12	VSS		VSS	AK39	VSS
AG15	VSS		VSS	AK47	VSS
AG20	VSS		VSS	AK49	VSS
AG22	VSS		VSS	AK51	VSS
AG24	VSS		VSS	AK54	VSS
AG26	VSS		VSS	AK8	VSS
AG30	VSS		VSS	AK9	VSS
AG32	VSS		VSS	AL10	VSS
AG35	VSS		VSS	AL11	VSS
AG37	VSS		VSS	AL12	VSS
AG41	VSS		VSS	AL13	VSS
AG43	VSS		VSS	AL15	VSS
AG44	VSS		VSS	AL17	VSS
AG45	VSS		VSS	AL19	VSS
AG46	VSS		VSS	AL2	VSS
AG47	VSS		VSS	AL21	VSS
AG48	VSS		VSS	AL23	VSS
AG51	VSS		VSS	AL25	VSS
AG54	VSS		VSS	AL27	VSS
AG8	VSS		VSS	AL31	VSS
AG9	VSS		VSS	AL36	VSS
AH10	VSS		VSS	AL39	VSS
AH11	VSS		VSS	AL47	VSS
AH12	VSS		VSS	AL5	VSS
AH18	VSS		VSS	AL55	VSS
AH2	VSS		VSS	AL8	VSS
AH20	VSS		VSS	AL9	VSS
AH24	VSS		VSS	AM10	VSS
AH26	VSS		VSS	AM11	VSS
AH28	VSS		VSS	AM12	VSS
AH30	VSS		VSS	AM13	VSS
AH33	VSS		VSS	AM14	VSS
AH36	VSS		VSS	AM16	VSS
AH38	VSS		VSS	AM18	VSS
AH41	VSS		VSS	AM20	VSS
AH42	VSS		VSS	AM22	VSS
AH43	VSS		VSS	AM24	VSS
AH44	VSS		VSS	AM27	VSS
AH45	VSS		VSS	AM30	VSS
AH46	VSS		VSS	AM32	VSS
AH47	VSS		VSS	AM33	VSS
AH5	VSS		VSS	AM35	VSS
AH8	VSS		VSS	AM37	VSS
AH9	VSS		VSS	AM40	VSS
AJ10	VSS		VSS	AM6	VSS
AJ11	VSS		VSS	AM7	VSS
AJ12	VSS		VSS	AM8	VSS
AJ13	VSS		VSS	AM9	VSS
AJ15	VSS		VSS	AN1	VSS
AJ21	VSS		VSS	AN10	VSS
AJ23	VSS		VSS	AN11	VSS
AJ25	VSS		VSS	AN12	VSS
AJ27	VSS		VSS	AN13	VSS
AJ29	VSS		VSS	AN14	VSS
AJ31	VSS		VSS	AN19	VSS
AJ35	VSS		VSS	AN2	VSS
AJ37	VSS		VSS	AN21	VSS
AJ40	VSS		VSS	AN25	VSS
AJ41	VSS		VSS	AN28	VSS
AJ42	VSS		VSS	AN3	VSS
AJ43	VSS		VSS	AN31	VSS
AJ44	VSS		VSS	AN36	VSS
AJ45	VSS		VSS	AN39	VSS
AJ46	VSS		VSS	AN4	VSS
AJ47	VSS		VSS	AN41	VSS
AJ8	VSS		VSS	AN5	VSS
AJ9	VSS		VSS	AN6	VSS
AK10	VSS		VSS	AN7	VSS
AK11	VSS		VSS	AN8	VSS

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AN9	VSS	VSS	VSS	AT52	VSS
AP10	VSS		VSS	AT53	VSS
AP11	VSS		VSS	AT6	VSS
AP12	VSS		VSS	AT9	VSS
AP13	VSS		VSS	AU10	VSS
AP14	VSS		VSS	AU11	VSS
AP15	VSS		VSS	AU12	VSS
AP18	VSS		VSS	AU13	VSS
AP20	VSS		VSS	AU14	VSS
AP22	VSS		VSS	AU15	VSS
AP24	VSS		VSS	AU16	VSS
AP26	VSS		VSS	AU21	VSS
AP28	VSS		VSS	AU23	VSS
AP3	VSS		VSS	AU25	VSS
AP30	VSS		VSS	AU27	VSS
AP32	VSS		VSS	AU29	VSS
AP34	VSS		VSS	AU3	VSS
AP35	VSS		VSS	AU31	VSS
AP37	VSS		VSS	AU33	VSS
AP42	VSS		VSS	AU37	VSS
AP53	VSS		VSS	AU39	VSS
AP54	VSS		VSS	AU41	VSS
AP55	VSS		VSS	AU44	VSS
AP6	VSS		VSS	AU45	VSS
AP9	VSS		VSS	AU46	VSS
AR10	VSS		VSS	AU47	VSS
AR11	VSS		VSS	AU48	VSS
AR12	VSS		VSS	AU49	VSS
AR13	VSS		VSS	AU50	VSS
AR14	VSS		VSS	AU53	VSS
AR15	VSS		VSS	AU6	VSS
AR16	VSS		VSS	AU7	VSS
AR19	VSS		VSS	AU8	VSS
AR21	VSS		VSS	AU9	VSS
AR23	VSS		VSS	AV10	VSS
AR25	VSS		VSS	AV12	VSS
AR27	VSS		VSS	AV13	VSS
AR29	VSS		VSS	AV14	VSS
AR3	VSS		VSS	AV15	VSS
AR42	VSS		VSS	AV17	VSS
AR43	VSS		VSS	AV18	VSS
AR44	VSS		VSS	AV19	VSS
AR45	VSS		VSS	AV21	VSS
AR46	VSS		VSS	AV22	VSS
AR47	VSS		VSS	AV24	VSS
AR48	VSS		VSS	AV26	VSS
AR49	VSS		VSS	AV28	VSS
AR50	VSS		VSS	AV3	VSS
AR51	VSS		VSS	AV35	VSS
AR52	VSS		VSS	AV38	VSS
AR53	VSS		VSS	AV41	VSS
AR6	VSS		VSS	AV44	VSS
AR9	VSS		VSS	AV45	VSS
AT10	VSS		VSS	AV46	VSS
AT11	VSS		VSS	AV47	VSS
AT12	VSS		VSS	AV48	VSS
AT13	VSS		VSS	AV49	VSS
AT14	VSS		VSS	AV50	VSS
AT15	VSS		VSS	AV53	VSS
AT17	VSS		VSS	AV6	VSS
AT18	VSS		VSS	AV9	VSS
AT22	VSS		VSS	AW10	VSS
AT24	VSS		VSS	AW12	VSS
AT26	VSS		VSS	AW14	VSS
AT28	VSS		VSS	AW15	VSS
AT3	VSS		VSS	AW16	VSS
AT30	VSS		VSS	AW25	VSS
AT34	VSS		VSS	AW27	VSS
AT36	VSS		VSS	AW29	VSS
AT38	VSS		VSS	AW3	VSS
AT41	VSS		VSS	AW30	VSS
AT43	VSS		VSS	AW31	VSS
AT44	VSS		VSS	AW32	VSS
AT45	VSS		VSS	AW34	VSS
AT46	VSS		VSS	AW36	VSS
AT47	VSS		VSS	AW40	VSS
AT48	VSS		VSS	AW41	VSS
AT49	VSS		VSS	AW42	VSS
AT50	VSS		VSS	AW43	VSS
AT51	VSS		VSS	AW44	VSS

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AW45	VSS	VSS	VSS	BA28	VSS
AW46	VSS		VSS	BA29	VSS
AW47	VSS		VSS	BA3	VSS
AW48	VSS		VSS	BA30	VSS
AW49	VSS		VSS	BA31	VSS
AW50	VSS		VSS	BA34	VSS
AW51	VSS		VSS	BA36	VSS
AW52	VSS		VSS	BA4	VSS
AW53	VSS		VSS	BA40	VSS
AW6	VSS		VSS	BA41	VSS
AW9	VSS		VSS	BA44	VSS
AY10	VSS		VSS	BA45	VSS
AY11	VSS		VSS	BA46	VSS
AY12	VSS		VSS	BA47	VSS
AY14	VSS		VSS	BA48	VSS
AY17	VSS		VSS	BA49	VSS
AY22	VSS		VSS	BA5	VSS
AY24	VSS		VSS	BA50	VSS
AY3	VSS		VSS	BA53	VSS
AY33	VSS		VSS	BA54	VSS
AY35	VSS		VSS	BA55	VSS
AY37	VSS		VSS	BA6	VSS
AY38	VSS		VSS	BA7	VSS
AY39	VSS		VSS	BA8	VSS
AY40	VSS		VSS	BA9	VSS
AY41	VSS		VSS	BB11	VSS
AY42	VSS		VSS	BB14	VSS
AY44	VSS		VSS	BB17	VSS
AY45	VSS		VSS	BB20	VSS
AY46	VSS		VSS	BB23	VSS
AY47	VSS		VSS	BB26	VSS
AY48	VSS		VSS	BB27	VSS
AY49	VSS		VSS	BB28	VSS
AY50	VSS		VSS	BB29	VSS
AY53	VSS		VSS	BB30	VSS
AY6	VSS		VSS	BB31	VSS
AY9	VSS		VSS	BB32	VSS
B1	VSS		VSS	BB33	VSS
B11	VSS		VSS	BB34	VSS
B12	VSS		VSS	BB35	VSS
B13	VSS		VSS	BB36	VSS
B14	VSS		VSS	BB39	VSS
B15	VSS		VSS	BB40	VSS
B16	VSS		VSS	BB41	VSS
B17	VSS		VSS	BB42	VSS
B18	VSS		VSS	BB43	VSS
B19	VSS		VSS	BB44	VSS
B2	VSS		VSS	BB45	VSS
B20	VSS		VSS	BB46	VSS
B22	VSS		VSS	BB47	VSS
B24	VSS		VSS	BB48	VSS
B27	VSS		VSS	BB49	VSS
B28	VSS		VSS	BB50	VSS
B29	VSS		VSS	BB51	VSS
B32	VSS		VSS	BB52	VSS
B34	VSS		VSS	BB6	VSS
B38	VSS		VSS	BB8	VSS
B39	VSS		VSS	BC22	VSS
B40	VSS		VSS	BC23	VSS
B41	VSS		VSS	BC26	VSS
B42	VSS		VSS	BC28	VSS
B43	VSS		VSS	BC30	VSS
B44	VSS		VSS	BC32	VSS
B45	VSS		VSS	BC34	VSS
B46	VSS		VSS	BC36	VSS
B47	VSS		VSS	BC39	VSS
B49	VSS		VSS	BC4	VSS
B5	VSS		VSS	BC40	VSS
B51	VSS		VSS	BC41	VSS
B54	VSS		VSS	BC42	VSS
B55	VSS		VSS	BC44	VSS
B7	VSS		VSS	BC46	VSS
BA1	VSS		VSS	BC48	VSS
BA18	VSS		VSS	BC50	VSS
BA19	VSS		VSS	BC51	VSS
BA2	VSS		VSS	BC52	VSS
BA20	VSS		VSS	BD1	VSS
BA21	VSS		VSS	BD2	VSS
BA25	VSS		VSS	BD23	VSS
BA27	VSS		VSS	BD24	VSS

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BD25	VSS	VSS	VSS	C21	VSS
BD26	VSS		VSS	C23	VSS
BD28	VSS		VSS	C25	VSS
BD30	VSS		VSS	C26	VSS
BD32	VSS		VSS	C27	VSS
BD34	VSS		VSS	C28	VSS
BD36	VSS		VSS	C29	VSS
BD37	VSS		VSS	C30	VSS
BD38	VSS		VSS	C31	VSS
BD39	VSS		VSS	C33	VSS
BD40	VSS		VSS	C35	VSS
BD41	VSS		VSS	C36	VSS
BD42	VSS		VSS	C37	VSS
BD44	VSS		VSS	C38	VSS
BD46	VSS		VSS	C39	VSS
BD48	VSS		VSS	C4	VSS
BD50	VSS		VSS	C40	VSS
BD51	VSS		VSS	C41	VSS
BD52	VSS		VSS	C42	VSS
BD53	VSS		VSS	C43	VSS
BD54	VSS		VSS	C44	VSS
BD55	VSS		VSS	C45	VSS
BE1	VSS		VSS	C46	VSS
BE11	VSS		VSS	C47	VSS
BE14	VSS		VSS	C48	VSS
BE17	VSS		VSS	C50	VSS
BE2	VSS		VSS	C52	VSS
BE20	VSS		VSS	C54	VSS
BE22	VSS		VSS	C55	VSS
BE25	VSS		VSS	C6	VSS
BE27	VSS		VSS	C8	VSS
BE29	VSS		VSS	C9	VSS
BE3	VSS		VSS	D1	VSS
BE31	VSS		VSS	D10	VSS
BE33	VSS		VSS	D11	VSS
BE35	VSS		VSS	D12	VSS
BE37	VSS		VSS	D13	VSS
BE41	VSS		VSS	D14	VSS
BE43	VSS		VSS	D15	VSS
BE45	VSS		VSS	D16	VSS
BE47	VSS		VSS	D17	VSS
BE49	VSS		VSS	D18	VSS
BE5	VSS		VSS	D19	VSS
BE51	VSS		VSS	D2	VSS
BE53	VSS		VSS	D20	VSS
BE54	VSS		VSS	D24	VSS
BE55	VSS		VSS	D26	VSS
BE8	VSS		VSS	D27	VSS
BF2	VSS		VSS	D28	VSS
BF22	VSS		VSS	D29	VSS
BF23	VSS		VSS	D3	VSS
BF25	VSS		VSS	D30	VSS
BF27	VSS		VSS	D32	VSS
BF29	VSS		VSS	D36	VSS
BF3	VSS		VSS	D37	VSS
BF31	VSS		VSS	D38	VSS
BF33	VSS		VSS	D39	VSS
BF35	VSS		VSS	D40	VSS
BF37	VSS		VSS	D41	VSS
BF41	VSS		VSS	D42	VSS
BF43	VSS		VSS	D43	VSS
BF45	VSS		VSS	D44	VSS
BF47	VSS		VSS	D45	VSS
BF49	VSS		VSS	D46	VSS
BF51	VSS		VSS	D47	VSS
BF53	VSS		VSS	D5	VSS
BF54	VSS		VSS	D51	VSS
C1	VSS		VSS	D53	VSS
C10	VSS		VSS	D54	VSS
C11	VSS		VSS	D55	VSS
C12	VSS		VSS	D9	VSS
C13	VSS		VSS	E1	VSS
C14	VSS		VSS	E10	VSS
C15	VSS		VSS	E11	VSS
C16	VSS		VSS	E12	VSS
C17	VSS		VSS	E13	VSS
C18	VSS		VSS	E14	VSS
C19	VSS		VSS	E15	VSS
C2	VSS		VSS	E16	VSS
C20	VSS		VSS	E17	VSS

BOM_COST_GROUP=SOC

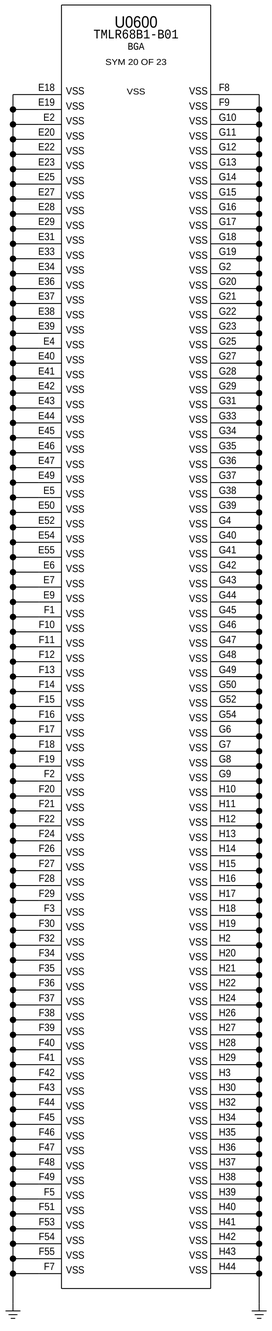
SYNC_MASTER=2023_R18_3_0 d

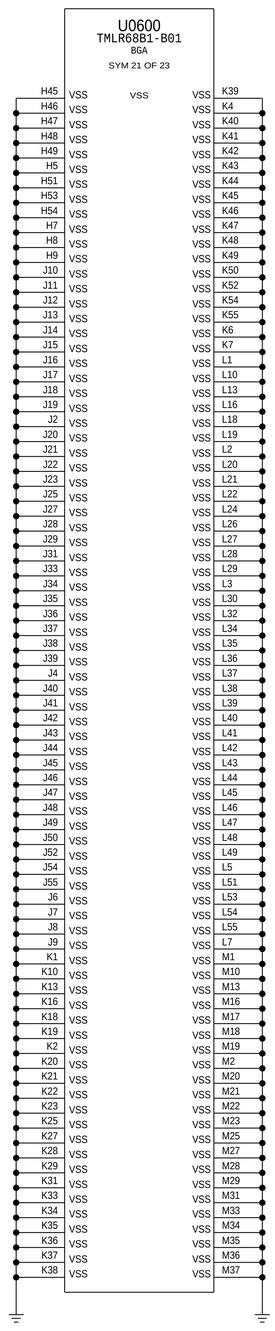
SYNC_DATE=09/19/2020

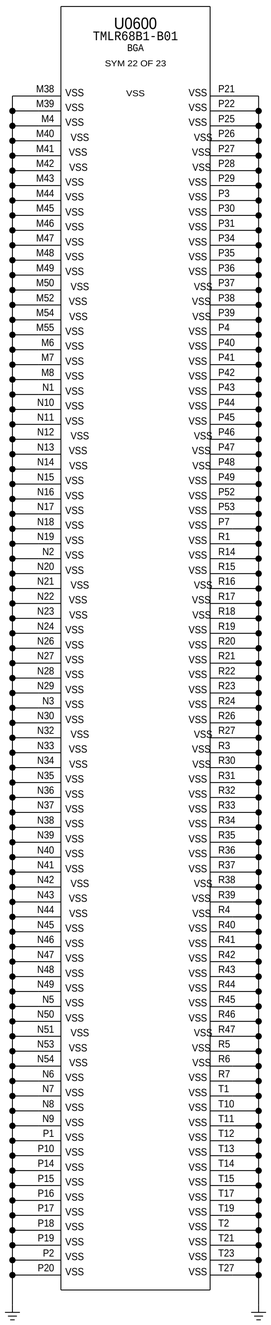
PAGE TITLE

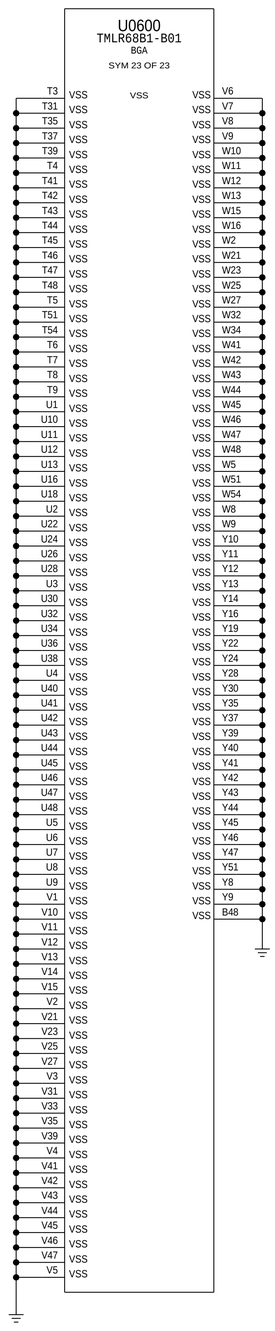
SOC: GND

SOC: GND (2)









BOM_COST_GROUP=SOC

PAGE TITLE

SOC: GND-2

S5E NAND 1

I_VCC = 1150mA MAX (1us PEAK POWER)
PP2V63_NAND
C1813 10UF 20% 6.3V CERM-X5R 0402
C1816 10UF 20% 6.3V CERM-X5R 0402
C1819 10UF 20% 6.3V CERM-X5R 0402
C1821 10UF 20% 6.3V CERM-X5R 0402
C1849 1.0UF 20% 6.3V X5R 0201-1 138S0692
C1850 1.0UF 20% 6.3V X5R 0201-1
C1851 1.0UF 20% 6.3V X5R 0201-1
C1853 330PF 10% 16V CER-X7R 01005
C1865 10UF 20% 6.3V CERM-X5R 0402
C1866 10UF 20% 6.3V CERM-X5R 0402
C1836 220PF 5% 25V C0G 01005
C1834 47PF 5% 16V NP0-C0G 01005
C1835 22PF 5% 16V C0G 01005

335S00468 U1800 OMIT_TABLE
THGBY8T3EBMLFAI
LGA
SYM 2 OF 2

D3 E12 G4 L12 R2 — VCC
J2 K9 T5 — VDDIO_1
E10 E2 N2 P9 — VDDIO_2
G6 G8 L6 L8 R6 R8 — VDD
J8 M9 N6 N8 — PCIE_VDD
F3 — NC_PP_NAND1_VPP
F5 — VQPS

VQPS used for fuse programming, GND in system

I_VDDIO1 (@ 1.2V) = 72mA MAX
PP1V2_NAND
C1841 2.2UF 20% 6.3V X5R-CERM 0201
C1824 2.2UF 20% 6.3V X5R-CERM 0201
C1826 2.2UF 20% 6.3V X5R-CERM 0201
C1810 0.1UF 20% 6.3V X5R-CERM 01005
C1811 220PF 5% 25V C0G 01005
FL1801 10-OHM-1.1A 01005
PP_NAND1_VDDIO1_F VOLTAGE=1.8 — J6 PCIE_AVDD_H
C1856 330PF 10% 16V CER-X7R 01005
C1857 47PF 5% 16V NP0-C0G 01005
C1858 22PF 5% 16V C0G 01005
C1825 2.2UF 20% 6.3V X5R-CERM 0201
R1863 2.0 5% 1/32W MF 01005
PP_NAND1_VDDIO1_R VOLTAGE=1.8 — L2 AVDD1X_PLL
C1863 2.2UF 20% 6.3V X5R-CERM 0201
(VCCQ_IO)

I_VDDIO2 (@ 1.2V) = 384mA MAX
PP1V2_NAND
C1831 15UF 20% 6.3V X5R 0402-0.1MM-1
C1830 15UF 20% 6.3V X5R 0402-0.1MM-1
C1829 15UF 20% 6.3V X5R 0402-0.1MM-1
C1843 2.2UF 20% 6.3V X5R-CERM 0201
C1845 2.2UF 20% 6.3V X5R-CERM 0201
C1847 2.2UF 20% 6.3V X5R-CERM 0201
C1859 330PF 10% 16V CER-X7R 01005
C1861 220PF 5% 25V C0G 01005
C1818 47PF 5% 16V NP0-C0G 01005
C1814 22PF 5% 16V C0G 01005
(VDD)

I_VDD = 820mA MAX
PP0V88_NAND
C1848 15UF 20% 6.3V X5R 0402-0.1MM-1
C1802 15UF 20% 6.3V X5R 0402-0.1MM-1
C1805 15UF 20% 6.3V X5R 0402-0.1MM-1
FL1800 10-OHM-1.1A 01005
PP0V88_NAND1_PLL VOLTAGE=0.83 — R4 VDD_PLL
NO CAP ON NAND SIDE IS ON PURPOSE EXPLANATION FROM NAND PI TEAM
C1823 2.2UF 20% 6.3V X5R-CERM 0201

C1800 2.2UF 20% 6.3V X5R-CERM 0201
C1801 2.2UF 20% 6.3V X5R-CERM 0201
C1822 2.2UF 20% 6.3V X5R-CERM 0201
C1827 2.2UF 20% 6.3V X5R-CERM 0201
C1840 2.2UF 20% 6.3V X5R-CERM 0201
C1842 2.2UF 20% 6.3V X5R-CERM 0201
C1844 2.2UF 20% 6.3V X5R-CERM 0201
C1846 2.2UF 20% 6.3V X5R-CERM 0201
C1807 330PF 10% 16V CER-X7R 01005
C1803 220PF 5% 25V C0G 01005
C1808 47PF 5% 16V NP0-C0G 01005
C1804 22PF 5% 16V C0G 01005

VSS
VSS_R

GPIO_SOC_TO_NAND_RESET_L
R1820 47.0K 5% 1/32W MF 01005 — NOSTUFF

NOTES:
INT PU = internal pull up to VDDIO_1
INT PD = internal pull down to VSS
Internal pulls are 40kOhm (min), 80kOhm (typ), 165kOhm (max)

U1800 OMIT_TABLE 335S00468
THGBY8T3EBMLFAI
LGA
SYM 1 OF 2

CLK_SOC_TO_NAND1_24MHZ — M3 CLK_IN
GPIO_SOC_TO_NAND_RESET_L — L4 RESET*
G10 TRST* (INT PD)
GND_VOID=TRUE
85_PCIE_SOC_TO_NAND1_REFCLK_P — K11 PCIE_REFCLK_P
85_PCIE_SOC_TO_NAND1_REFCLK_N — J12 PCIE_REFCLK_N
GND_VOID=TRUE
PCIE_NAND1_TO_SOC_CLKREQ_L — P5 PCIE_CLKREQ*
GND_VOID=TRUE
85_PCIE_SOC_TO_NAND1_TX_P — M11 PCIE_RX0_P
85_PCIE_SOC_TO_NAND1_TX_N — N12 PCIE_RX0_N
GND_VOID=TRUE
PCIE_NAND1_TO_SOC_TX_C_P — R12 PCIE_TX0_P
PCIE_NAND1_TO_SOC_TX_C_N — T11 PCIE_TX0_N
GND_VOID=TRUE
PCIE_SOC_TO_NAND_PERST_L — E8 EXT_NCE/PERST*
ANALOG_NAND1_PCIE_RESREF — H7 PCIE_RESREF
(for dev)
C1820 10PF 5% 16V NP0/C0G 01005
R1804 200 0.5% 1/32W TF 01005
C10 ZQ_0
K3 ZQ_1
(for dev)
Keep ZQ trace DCR < 200mOhm
ANALOG_NAND1_ZQ_0
ANALOG_NAND1_ZQ_1
R1800 300 1% 1/32W MF 01005-1
R1801 300 1% 1/32W MF 01005-1

(INT PU) EXT_D0/BOOT0 — B3 GPIO_PMU_TO_NAND_LOW_BATT_L
(INT PD) EXT_D1/BOOT1 — C4 GPIO_SOC_TO_NAND_FW_STRAP
EXT_D2/BOOT2/SPINAND_SCLK/SPI_SCLK — B5 SPI_AP_TO_NAND_SCLK_BOOT_CFG0
EXT_D3/SPINAND_MISO/SPI_MISO/SWD_UID — C6 SPI_NAND_TO_AP_MISO_BOOT_CFG2_R
EXT_D4/SPI_CS — B7
EXT_D5/SPINAND_MOSI/SPI_MOSI/SWD_UID1 — C8 SPI_AP_TO_NAND_MOSI_BOOT_CFG1
EXT_D6/BOOT3 — B9
EXT_D7/SPF_N — B11 SYS_ALIVE
(INT PU) EXT_DQS/BCM_N — D11 NC_NAND1_BCM_L
(INT PU) EXT_NRE/JTAG_TMS — D7 SWD_NAND_SWDIO
(INT PU) EXT_NWE/JTAG_TCK — E6 SWD_NAND1_SWCLK
EXT_RNB/JTAG_TDO — E4
(INT PU) EXT_CLE/JTAG_TDI — D5 NC_NAND1_JTAG_TDI
(INT PD) EXT_ALE/JTAG_SEL — D9
DROOP* — T3 TPT_NAND1_DROOP_L
WP* — G2 PP1V2_NAND
ANI0_VREF — G12 NAND1_ANI0_VREF
ANI1_VREF — J4 NAND1_ANI1_VREF

SPI_NAND_TO_AP_MISO_BOOT_CFG2_R — R1805 33 1/32W 5% MF 01005 — SPI_NAND_TO_AP_MISO_BOOT_CFG2
PLACE_NEAR=U1800.C6:100MM

PCIE_NAND1_TO_SOC_TX_C_P — 0.22UF C1880 — 85_PCIE_SOC_TO_NAND1_TX_P
PCIE_NAND1_TO_SOC_TX_C_N — 0.22UF C1881 — 85_PCIE_SOC_TO_NAND1_TX_N
GND_VOID=TRUE GND_VOID=TRUE

BOM_COST_GROUP=NAND
PAGE TITLE
NAND

S5E NAND 2

I_VCC = 1150mA MAX (1us PEAK POWER)

PP2V63_NAND

DUAL_NAND C1913 10UF 20% 6.3V CERM-X5R 0402
DUAL_NAND C1916 10UF 20% 6.3V CERM-X5R 0402
DUAL_NAND C1919 10UF 20% 6.3V CERM-X5R 0402
DUAL_NAND C1921 10UF 20% 6.3V CERM-X5R 0402
DUAL_NAND C1949 1.0UF 20% 6.3V X5R 0201-1
DUAL_NAND C1950 1.0UF 20% 6.3V X5R 0201-1
DUAL_NAND C1951 1.0UF 20% 6.3V X5R 0201-1
DUAL_NAND C1953 330PF 10% 16V CER-X7R 01005

DUAL_NAND C1965 10UF 20% 6.3V CERM-X5R 0402
DUAL_NAND C1966 10UF 20% 6.3V CERM-X5R 0402
DUAL_NAND C1936 220PF 5% 25V C0G 01005
DUAL_NAND C1934 47PF 5% 16V NP0-C0G 01005
DUAL_NAND C1935 22PF 5% 16V C0G 01005

335S00468 U1900 THGBY8T3EBMLFAI LGA SYM 2 OF 2 OMIT_TABLE

D3 E12 G4 L12 R2 — VCC

I_VDDIO1 (@ 1.2V) = 72mA MAX

PP1V2_NAND

DUAL_NAND C1941 2.2UF 20% 6.3V X5R-CERM 0201
DUAL_NAND C1924 2.2UF 20% 6.3V X5R-CERM 0201
DUAL_NAND C1926 2.2UF 20% 6.3V X5R-CERM 0201
DUAL_NAND C1910 0.1UF 20% 6.3V X5R-CERM 01005
DUAL_NAND C1911 220PF 5% 25V C0G 01005

J2 K9 T5 — VDDIO_1

DUAL_NAND FL1901 10-OHM-1.1A 01005

DUAL_NAND C1952 330PF 10% 16V CER-X7R 01005
DUAL_NAND C1957 47PF 5% 16V NP0-C0G 01005
DUAL_NAND C1958 22PF 5% 16V C0G 01005
DUAL_NAND C1925 2.2UF 20% 6.3V X5R-CERM 0201

PP_NAND2_VDDIO1_F VOLTAGE=1.8 — J6 PCIE_AVDD_H

DUAL_NAND R1963 2.0 5% 1/32W MF 01005

PP_NAND2_VDDIO1_R VOLTAGE=1.8 — L2 AVDD1X_PLL

DUAL_NAND C1963 2.2UF 20% 6.3V X5R-CERM 0201

(VCCQ_IO)

I_VDDIO2 (@ 1.2V) = 384mA MAX

PP1V2_NAND

DUAL_NAND C1931 15UF 20% 6.3V X5R 0402-0.1MM-1
DUAL_NAND C1930 15UF 20% 6.3V X5R 0402-0.1MM-1
DUAL_NAND C1929 15UF 20% 6.3V X5R 0402-0.1MM-1
DUAL_NAND C1943 2.2UF 20% 6.3V X5R-CERM 0201
DUAL_NAND C1945 2.2UF 20% 6.3V X5R-CERM 0201
DUAL_NAND C1947 2.2UF 20% 6.3V X5R-CERM 0201

DUAL_NAND C1959 330PF 10% 16V CER-X7R 01005
DUAL_NAND C1961 220PF 5% 25V C0G 01005
DUAL_NAND C1918 47PF 5% 16V NP0-C0G 01005
DUAL_NAND C1914 22PF 5% 16V C0G 01005

E10 E2 N2 P9 — VDDIO_2 — (VCCQ_ANI)

G6 G8 L6 L8 R6 R8 — VDD — (VDD)

J8 M9 N6 N8 — PCIE_VDD

I_VDD = 820mA MAX

PP0V88_NAND

DUAL_NAND C1948 15UF 20% 6.3V X5R 0402-0.1MM-1
DUAL_NAND C1902 15UF 20% 6.3V X5R 0402-0.1MM-1
DUAL_NAND C1905 15UF 20% 6.3V X5R 0402-0.1MM-1

DUAL_NAND FL1900 10-OHM-1.1A 01005

PP_NAND2_VDD_PLL VOLTAGE=0.83 — R4 VDD_PLL

DUAL_NAND C1923 2.2UF 20% 6.3V X5R-CERM 0201

NO CAP ON NAND SIDE IS ON PURPOSE
EXPLANATION FROM NAND PI TEAM

DUAL_NAND C1900 2.2UF 20% 6.3V X5R-CERM 0201
DUAL_NAND C1901 2.2UF 20% 6.3V X5R-CERM 0201
DUAL_NAND C1922 2.2UF 20% 6.3V X5R-CERM 0201
DUAL_NAND C1927 2.2UF 20% 6.3V X5R-CERM 0201
DUAL_NAND C1940 2.2UF 20% 6.3V X5R-CERM 0201
DUAL_NAND C1942 2.2UF 20% 6.3V X5R-CERM 0201
DUAL_NAND C1944 2.2UF 20% 6.3V X5R-CERM 0201
DUAL_NAND C1946 2.2UF 20% 6.3V X5R-CERM 0201

DUAL_NAND C1907 330PF 10% 16V CER-X7R 01005
DUAL_NAND C1903 220PF 5% 25V C0G 01005
DUAL_NAND C1908 47PF 5% 16V NP0-C0G 01005
DUAL_NAND C1904 22PF 5% 16V C0G 01005

VSS_R — A10 A4 A6 A8 U10 U4 U6 U8

VPP F3 — NC_PP_NAND2_VPP

VQPS F5

VQPS used for fuse programming, GND in system

VSS — A12 A2 B1 B13 C12 C2 D1 D13 F1 F11 F13 F7 F9 H1 H11 H13 H3 H5 H9 J10 K1 K13 K5 K7 L10 M1 M13 M5 M7 N10 N4 P1 P11 P13 P3 P7 R10 T1 T13 T7 T9 U12 U2

NOTES:

INT PU = internal pull up to VDDIO_1
INT PD = internal pull down to VSS
Internal pulls are 40kOhm (min), 80kOhm (typ), 165kOhm (max)

U1900 THGBY8T3EBMLFAI LGA SYM 1 OF 2 OMIT_TABLE 335S00468

CLK_SOC_TO_NAND2_24MHZ — M3 CLK_IN
GPIO_SOC_TO_NAND_RESET_L — L4 RESET*
G10 TRST* (INT PD)

GND_VOID=TRUE

85_PCIE_SOC_TO_NAND2_REFCLK_P — K11 PCIE_REFCLK_P
85_PCIE_SOC_TO_NAND2_REFCLK_N — J12 PCIE_REFCLK_N

GND_VOID=TRUE

PCIE_NAND2_TO_SOC_CLKREQ_L — P5 PCIE_CLKREQ*

GND_VOID=TRUE

85_PCIE_SOC_TO_NAND2_TX_P — M11 PCIE_RX0_P
85_PCIE_SOC_TO_NAND2_TX_N — N12 PCIE_RX0_N

GND_VOID=TRUE

PCIE_NAND2_TO_SOC_TX_C_P — R12 PCIE_TX0_P
PCIE_NAND2_TO_SOC_TX_C_N — T11 PCIE_TX0_N

GND_VOID=TRUE

PCIE_SOC_TO_NAND_PERST_L — E8 EXT_NCE/PERST*

ANALOG_NAND2_PCIE_RESREF (for dev) — H7 PCIE_RESREF

DUAL_NAND C1920 10PF 5% 16V NP0/C0G 01005
DUAL_NAND R1904 200 0.5% 1/32W TK 01005

(for dev)
Keep ZQ trace DCR < 200mOhm

C10 ZQ_0
K3 ZQ_1

ANALOG_NAND2_ZQ_0
ANALOG_NAND2_ZQ_1

DUAL_NAND R1900 300 1% 1/32W MF 01005-1
DUAL_NAND R1901 300 1% 1/32W MF 01005-1

(INT PU) EXT_D0/BOOT0 — B3 GPIO_PMU_TO_NAND_LOW_BATT_L
(INT PD) EXT_D1/BOOT1 — C4 GPIO_SOC_TO_NAND_FW_STRAP
EXT_D2/BOOT2/SPINAND_SCLK/SPI_SCLK — B5
EXT_D3/SPINAND_MISO/SPI_MISO/SWD_UID — C6 PP1V2_NAND
EXT_D4/SPI_CS — B7
EXT_D5/SPINAND_MOSI/SPI_MOSI/SWD_UID1 — C8
EXT_D6/BOOT3 — B9
EXT_D7/SPF_N — B11 SYS_ALIVE
(INT PU) EXT_DQS/BCM_N — D11 NC_NAND2_BCM_L

(INT PU) EXT_NRE/JTAG_TMS — D7 SWD_NAND_SWDIO
(INT PU) EXT_NWE/JTAG_TCK — E6 SWD_NAND2_SWCLK
EXT_RNB/JTAG_TDO — E4
(INT PU) EXT_CLE/JTAG_TDI — D5 NC_NAND2_JTAG_TDI
(INT PD) EXT_ALE/JTAG_SEL — D9

DROOP* — T3 TPT_NAND2_DROOP_L
WP* — G2 PP1V2_NAND

ANI0_VREF — G12 NAND2_ANI0_VREF
ANI1_VREF — J4 NAND2_ANI1_VREF

DUAL_NAND
GND_VOID=TRUE 0.22UF 01005 6.3V C1980 10% CER-X5R GND_VOID=TRUE
PCIE_NAND2_TO_SOC_TX_C_P — 85_PCIE_NAND2_TO_SOC_TX_P
PCIE_NAND2_TO_SOC_TX_C_N — 85_PCIE_NAND2_TO_SOC_TX_N
0.22UF 01005 6.3V C1981 10% CER-X5R
GND_VOID=TRUE GND_VOID=TRUE
DUAL_NAND

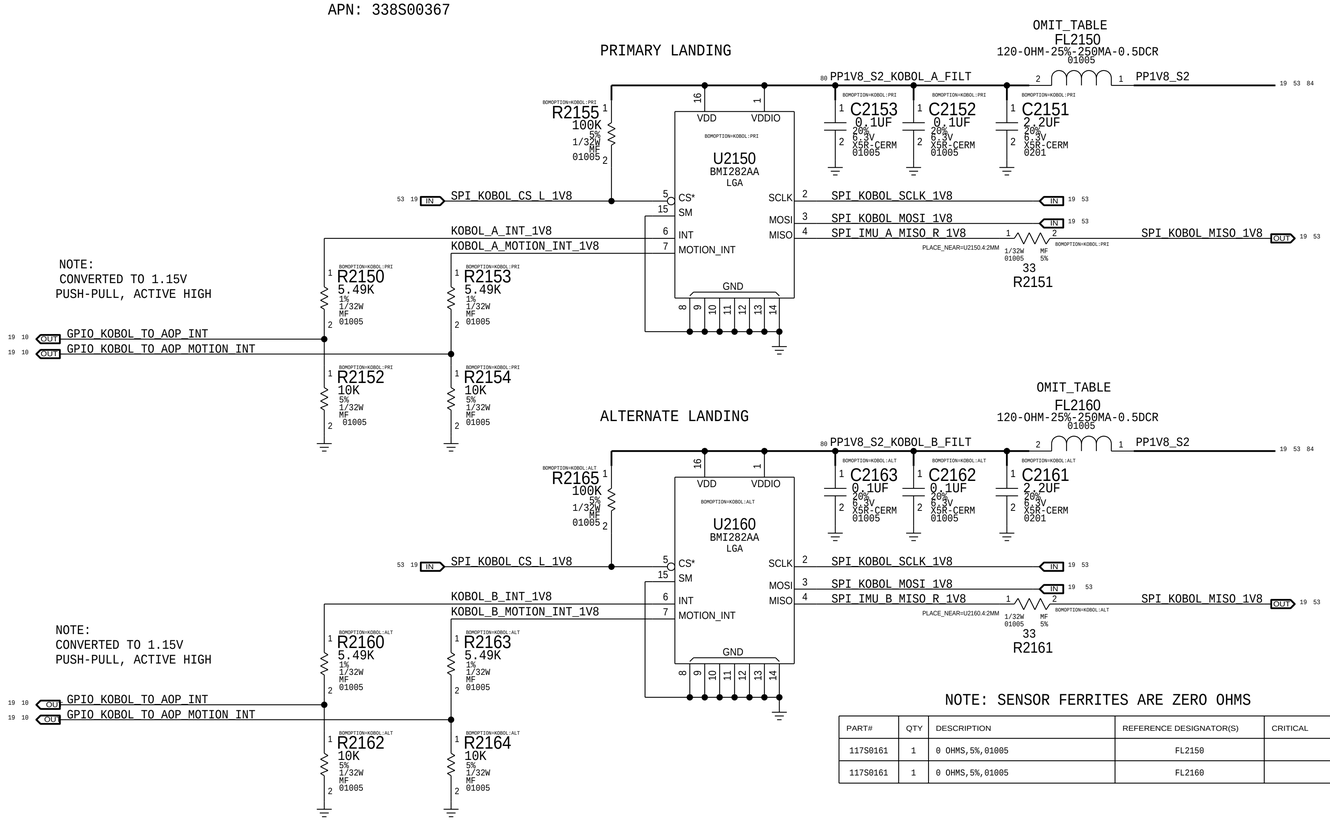
BOM_COST_GROUP=NAND

PAGE TITLE: NAND

SENSORS

KOBOL - ACCEL & GYRO

APN: 338S00367



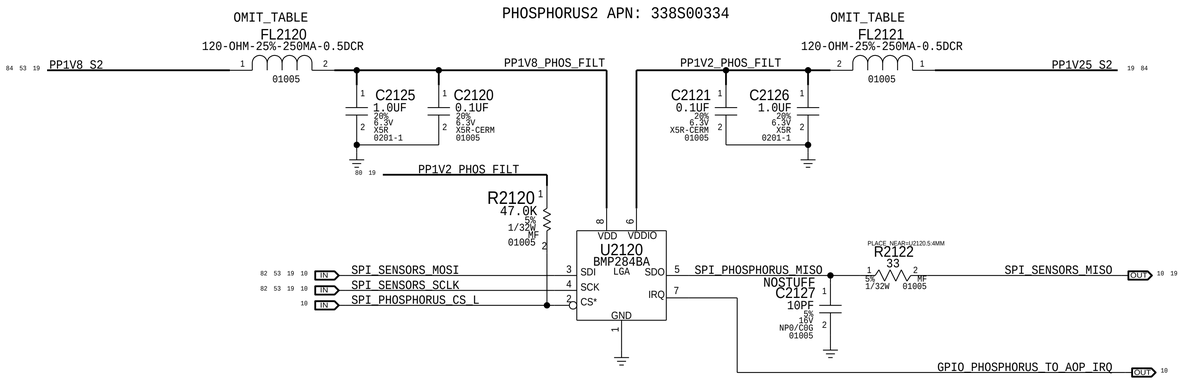
NOTE: SENSOR FERRITES ARE ZERO OHMS

PART#	QTY	DESCRIPTION	REFERENCE DESIGNATOR(S)	CRITICAL	BOM OPTION
117S0161	1	0 OHMS,5%,01005	FL2150		KOBOL:PRI
117S0161	1	0 OHMS,5%,01005	FL2160		KOBOL:ALT

PART#	QTY	DESCRIPTION	REFERENCE DESIGNATOR(S)	CRITICAL	BOM OPTION
117S0161	2	0 OHMS,5%,01005	FL2120,FL2121		

PHOSPHORUS2

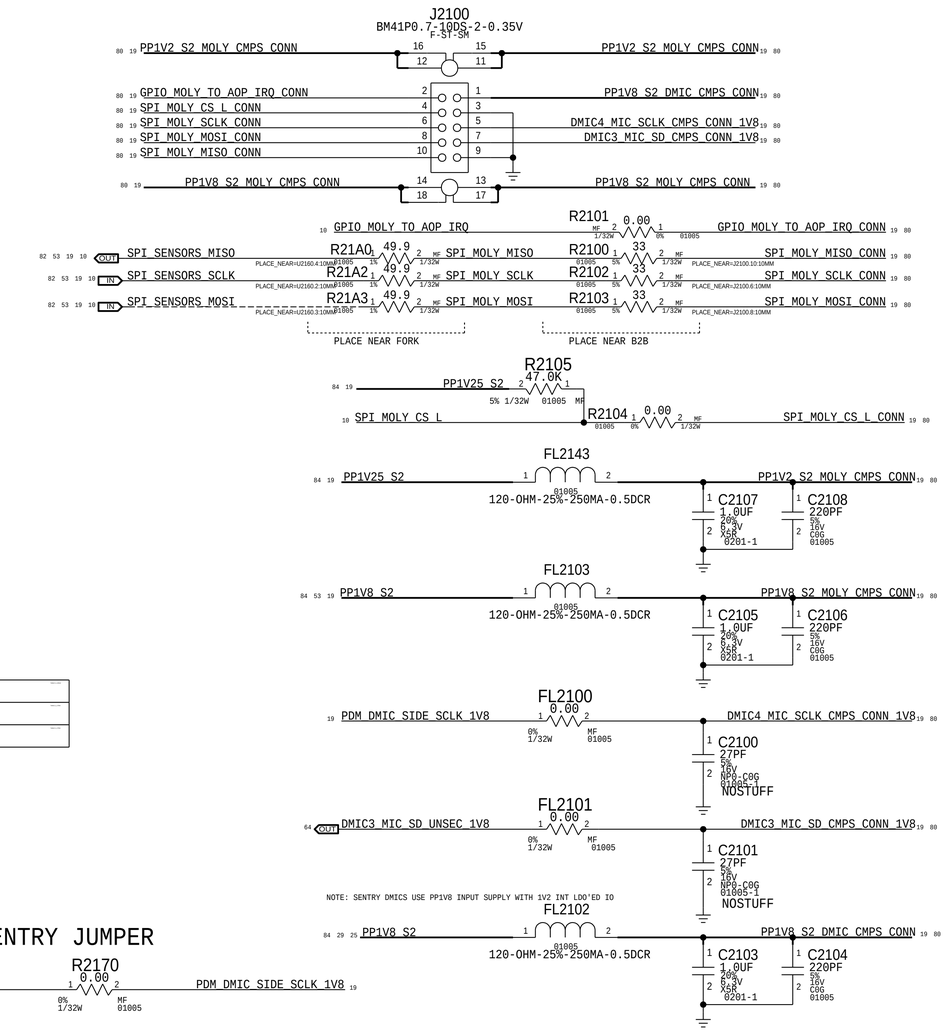
PHOSPHORUS2 APN: 338S00334



NOTE: PINOUT UPDATED PER J522 COMPASS_FLEX REV 0.3

COMPASS/DMIC FLEX B2B

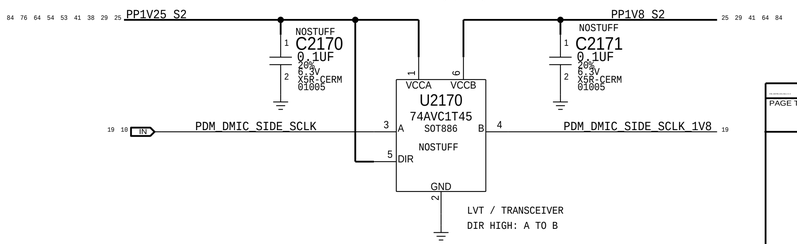
MLB SIDE: 516S00176
FLEX SIDE: 516S00175



SENTRY JUMPER

DMIC CLK VT

LVT FOR DMIC DATA IS ON GPM PAGE (CSA 76)



BOM_COST_GROUP=SENSORS

PAGE TITLE

SENSOR: KOBOL, PHOS2, MOLY

LANAI MASTER

BOOT OPTION

DOMBRA BST/LDO

U2200
BCM15957A0
BGA
SYM 1 OF 2

U2200
BCM15957A0
BGA
SYM 2 OF 2

U2280
SN1705004A0
DSBGA

U22A1
ADP7112
WLCSP
353S02157

Q2280
NTNS3190NZ
XLLGA

Q22A0
NTNS3190NZ
XLLGA

PAGE TITLE
TOUCH: LANAI MASTER

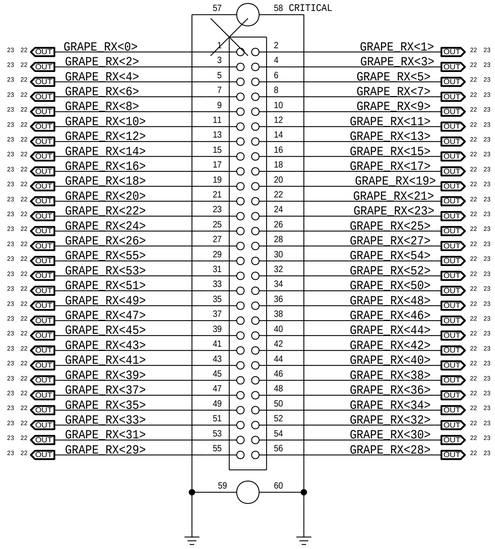

KONA: SLAVE
BOOT OPTION
PP1V8_S2_TOUCH
R2301 10K 5% 1/32W MF 01005
R2303 10K 5% 1/32W MF 01005
KONA_BOOT0_S_1V8
KONA_BOOT1_S_1V8
PP1V8_S2
R230A 10K 5% 1/32W MF 01005
LANAI_M_TO_KONA_S_IPC1_1V8
LANAI_M_TO_KONA_S_IPC2_1V8
KONA_S_TO_LANAI_M_RESET_DET_1V8_L
LANAI_M_TO_KONA_S_TTW_1V8
SPI_LANAI_M_TO_KONA_S_CS_1V8_L
GPIO_DOMBRA_BST_FB_CTRL_1V8
GPIO_DOMBRA_BST_FPWM_1V8
GPIO_KONA_S_DOMBRA_BST_EN_1V8
GPIO12_KONA_LDO_ADJ_1V8
GPIO13_KONA_LDO_EN_1V8
GPIO_GRAPE_TO_SCORPIUS_TIME_SYNC_1V8
GPIO_GRAPE_TO_TCON_FORCE_PWM_1V8
TESTPOINT_KONA_S_UART_RX_1V8
TESTPOINT_KONA_S_UART_TX_1V8
SPI_LANAI_M_TO_KONA_S_MOSI_1V8
SPI_LANAI_M_TO_KONA_S_SCLK_1V8
SPI_LANAI_M_TO_KONA_S_CS_1V8_L
KONA_S_TO_LANAI_M_INT_1V8_L
SPI_LANAI_M_TO_KONA_S_MISO_1V8
SPI_SOC_TO_KONA_S_CS_1V8_L
SCORPIUS IS 1V8 ONLY, BUT AOP IS 1V2
R2380 5.49K 1% 1/32W MF 01005
GPIO_KONA_S_TO_SCORPIUS_TIME_SYNC_AOP
R2381 10K 5% 1/32W MF 01005
GPIO_KONA_S_TO_SOC_IRQ_1V8_L
SPI_SOC_TO_KONA_S_SCLK_1V8
SPI_SOC_TO_KONA_S_MOSI_1V8
SPI_SOC_TO_KONA_S_MISO_1V8
R2315 33 5% 1/32W MF 01005
PLACE_NEAR=U2301.B8:5MM
SPI_SOC_TO_KONA_S_MISO_R_1V8
R2382 10K 5% 1/32W MF 01005
KMSI_MOSI_1V8
KMSI_MISO_1V8
KMSI_STRB_OUT_1V8
KMSI_STRB_IN_1V8
PSE_SYNC_1V8
PP1V2_S2_TOUCH
C2371 0.1UF 20% 6.3V X5R-CERM 01005
C2370 0.1UF 20% 6.3V X5R-CERM 01005
U2370 74AVC1T45 X2SON 311S00230
VCCA VCCB A B DIR GND
PU ON LANAI SIDE
GPIO_SOC_TO_GRAPE_RESET_L
DIR=1: A->B
DIR=0: B->A
R2371 10K 5% 1/32W MF 01005
TPT_SWD_KONA_SWCLK_1V8
TPT_SWD_KONA_SWDIO_1V8
GPIO_SOC_TO_KONA_RESET_1V8_L
KONA_S_TEST_MODE
R2305 10K 5% 1/32W MF 01005
LANAI_KONA_BGBIAS_1V8
CLK_KONA_S_24MHZ
C2301 10PF 5% 16V NP0/C0G 01005
U2301 BCM15900B0K BGA SYM 1 OF 2
AUXADC_REF
AUXBUF_AIO_INPUT_3V
AUXBUF_AIO_OUTPUT
GPIO_ADC_00 … GPIO_ADC_07
GPIO_08 … GPIO_19
H_INT*
H_SCLK
H_SDI
H_SDO
H_CS*
H_ALT_CS*
I2C_SCL
I2C_SDA
KMSI_MISO
KMSI_MOSI
KMSI_STRB_IN
KMSI_STRB_OUT
PSE_SYNC
BOOST_ATEST
BOOST_FBIN
BOOST_ISENSE
BOOST_NGATE
BOOST_VBAT
BOOST_VBAT_EN
JTAG_RTCK
JTAG_TCK
JTAG_TMS
JTAG_TDI
JTAG_TDO
JTAG_TRST*
JTAG_SRST*
RESET*
TEST_MODE
BOOT_CFG_0
BOOT_CFG_1
AFE_IO_BGBIAS
XTALN
XTALP
XTAL_O_CLK_EXT
IFO_CLK_EXT
PAD_I_TOUCH0 … PAD_I_TOUCH69
GRAPE_RX<33> GRAPE_RX<62> GRAPE_RX<61> GRAPE_RX<60> GRAPE_RX<59> GRAPE_RX<58> GRAPE_RX<57> GRAPE_RX<56> GRAPE_RX<55> GRAPE_RX<54> GRAPE_RX<53> GRAPE_RX<52> GRAPE_RX<51> GRAPE_RX<50> GRAPE_RX<49> GRAPE_RX<48> GRAPE_RX<47> GRAPE_RX<46> GRAPE_RX<45> GRAPE_RX<44> GRAPE_RX<43> GRAPE_RX<42> GRAPE_RX<41> GRAPE_RX<40> GRAPE_RX<39> GRAPE_RX<38> GRAPE_RX<37> GRAPE_RX<36> GRAPE_RX<35> GRAPE_RX<34>
GRAPE_TX<30> GRAPE_TX<31>
VCOM_LCD_TO_GRAPE_R_C
NC_KONA_TOUCH33
GRAPE_RX<63> GRAPE_RX<32> GRAPE_RX<31> GRAPE_RX<30> GRAPE_RX<29> GRAPE_RX<28>
GRAPE_TX<29> GRAPE_TX<28> … GRAPE_TX<0>
PAD_I_SELFCAPEXT
PAD_O_GUARDBUFFER
CORE_PMU_O_AON_TEST_PMU
NC
U2301 BCM15900B0K BGA SYM 2 OF 2
PP15V0_TOUCH_FILT
C2311 C2312 C2313 C2317 C2333 C2334 C2335 0.47UF 20% 25V CER-X5R 0201
AFE_I_VDDHV15_EXT
PP3V3_GRAPE_FILT
C2315 0.1UF 10% 10V X5R-CERM 0201
C2316 0.1UF 10% 10V X5R-CERM 0201
C2320 0.22UF 20% 10V CERM-X5R 0201
BOOST_VDDA
OTP_TMON_I_VDDA_3P3_EXT
AFE_PMU_I_VDDA_3P3_EXT
AUXBUF_PMU_I_VDDA_3P3_EXT
AUXBUF_PMU_I_VDDHV_AUX_EXT
AUXBUF_PMU_O_VDD_AUX_CAP
PP2V8_KONA_S_VDDANA
C2378 100PF 5% 25V C0G 0201
C2379 12PF 5% 25V NP0-C0G 0201
C2302 C2303 C2304 C2305 C2306 0.1UF 10% 10V X5R-CERM 0201
C2307 2.2UF 20% 6.3V X5R-CERM 0201
AFE_I_VDDANA_3P3_AFE_PMU
AFE_PMU_O_VDDANA_3P3_PMU
KONA_S_VDDADC_CAP
C2318 1UF 10% 10V X5R-CERM 0402
AFE_PMU_O_AVDD1P2_CAP
PP1V8_GRAPE_XTAL_FILT
C2321 0.1UF 10% 25V X5R 0201
C2322 0.047UF 10% 25V X5R 0201
XTAL_PLL_AVDD1P8_I_VDDLDO_1P8_EXT
C2308 C2309 C2310 0.1UF 10% 6.3V CERM-X5R 0201
AUXADC_AVDDC_I_VDDIO_1P8_3P3_EXT
AUXADC_AVDD_I_VDDIO_1P8_3P3_EXT
AFE_PMU_I_VDDLDO_1P8_EXT
AON_PAD_I_VDDIO_1P8_3P3_EXT
I2C_PAD_I_VDDIO_1P8_3P3_EXT
CORE_PAD_I_VDDIO_1P8_3P3_EXT
PP1V8_GRAPE_AON_RC
CORE_PMU_I_AON_VDDIO_1P8_3P3_EXT
CORE_PMU_I_VDDLDO_1P8_EXT
CORE_PMU_O_VDDCORE_1P2_CAP
C2325 1UF 10% 10V X5R-CERM 0402
C2314 0.1UF 10% 6.3V CERM-X5R 0201
AUXBUF_AVSS
AUXADC_AVSS
VSS
XTAL_AVSS
CORE_PMU_I_AVSS
AUXBUF_PMU_I_AVSS
PAD_I_AVSS
PGGOD SIGNAL GOES TO PMU ADC INPUT
PP15V0_TOUCH_LDO
118S00136 R23A1 60.4K 1% 1/32W TK 01005
DOMBRA_LDO_8V_PGOOD_FET
R23A2 10K 1% 1/32W MF 01005
C23A0 100PF 5% 25V C0G-CERM 01005
REMOVED 1.2V EXT BUCK, USING LDO14
BOM_COST_GROUP=TOUCH
PAGE TITLE
TOUCH: KONA SLAVE

J517 TOUCH FLEX CONNECTOR (SENSE)

MATCHES J517_GRAPE_FLEX_LS 2.0.0
MLB: 516S00419
FLEX: 516S00420

PACK_IGNORE=TRUE
PACK_OPTION=J517,J518

J2400
BM28P0.6-56DS-2-0.35V
F-ST-SM

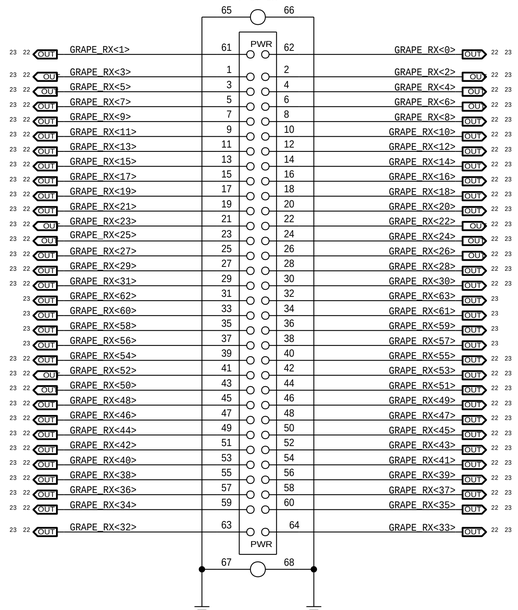


J522 TOUCH FLEX CONNECTOR (SENSE)

FLEX: 516S00375
MLB: 516S00374

PACK_OPTION=J522,J523

J2400
AA37D-S060VA2
F-ST-SM

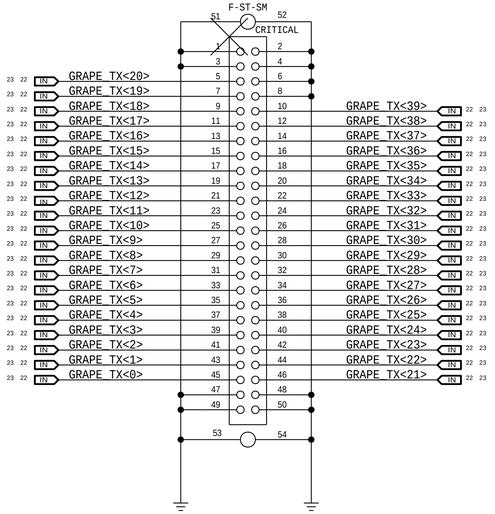


J517 TOUCH FLEX CONNECTOR (DRIVE)

MATCHES J517_GRAPE_FLEX_LS 2.0.0
MLB: 516S00099
FLEX: 516S00098

PACK_IGNORE=TRUE
PACK_OPTION=J517,J518

J2401
505066-5022
F-ST-SM

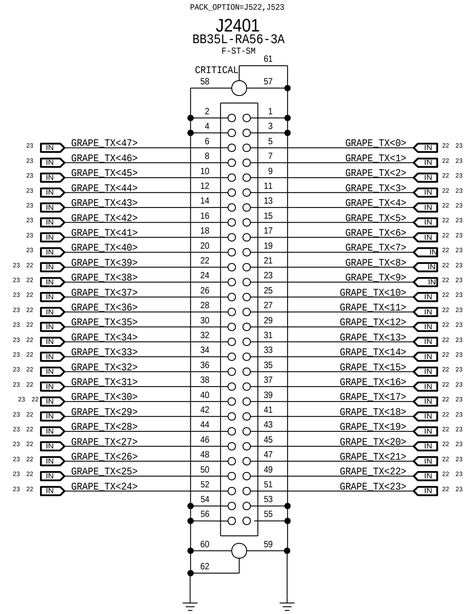


J522 TOUCH FLEX CONNECTOR (DRIVE)

FLEX: 516S00380
MLB: 516S00379

PACK_OPTION=J522,J523

J2401
BB35L-RA56-3A
F-ST-SM

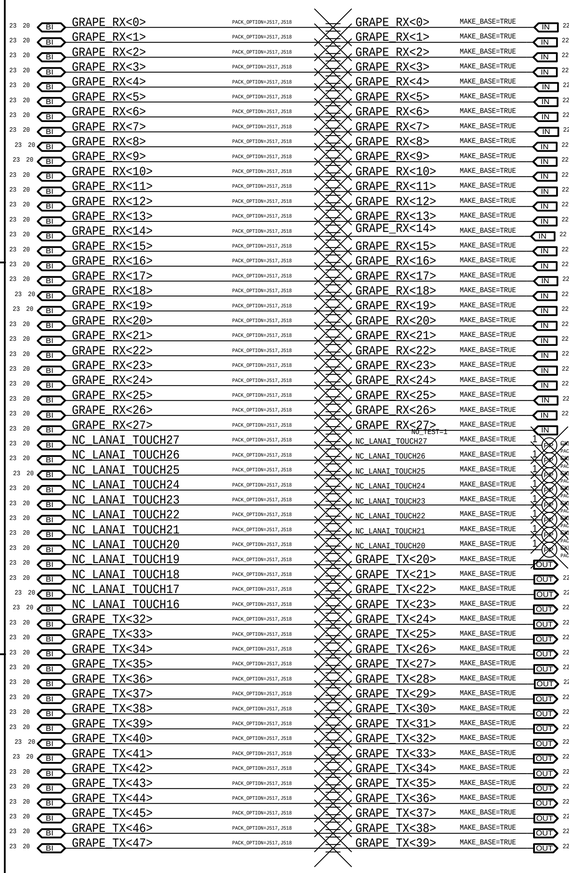


BOM_COST_GROUP=TOUCH

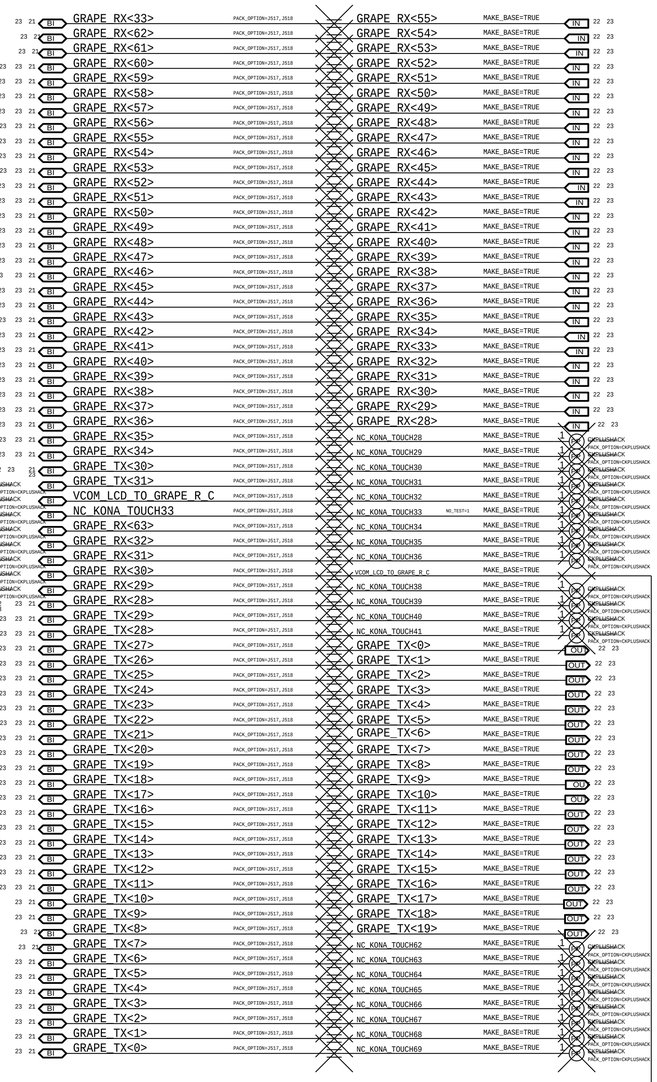
PAGE TITLE

TOUCH: GRAPE CONN

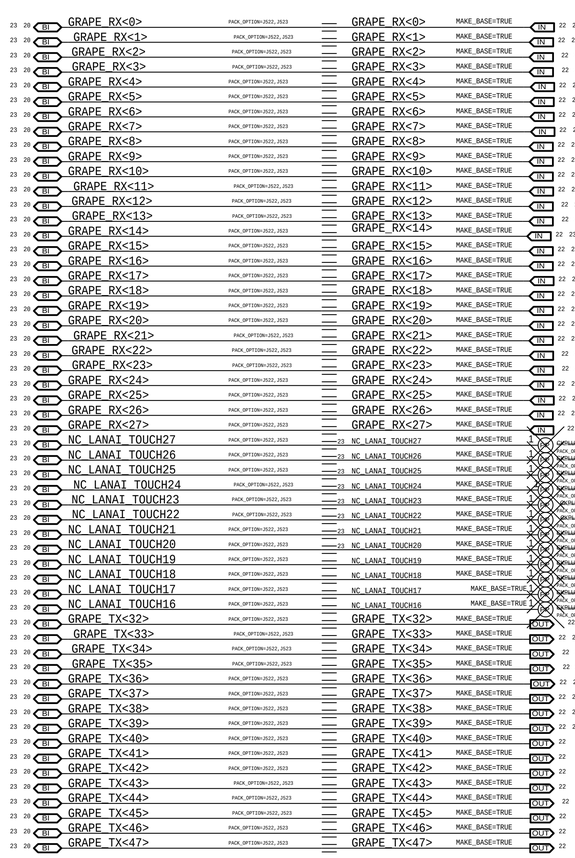
J517 LANAI RX/TX ALIAS



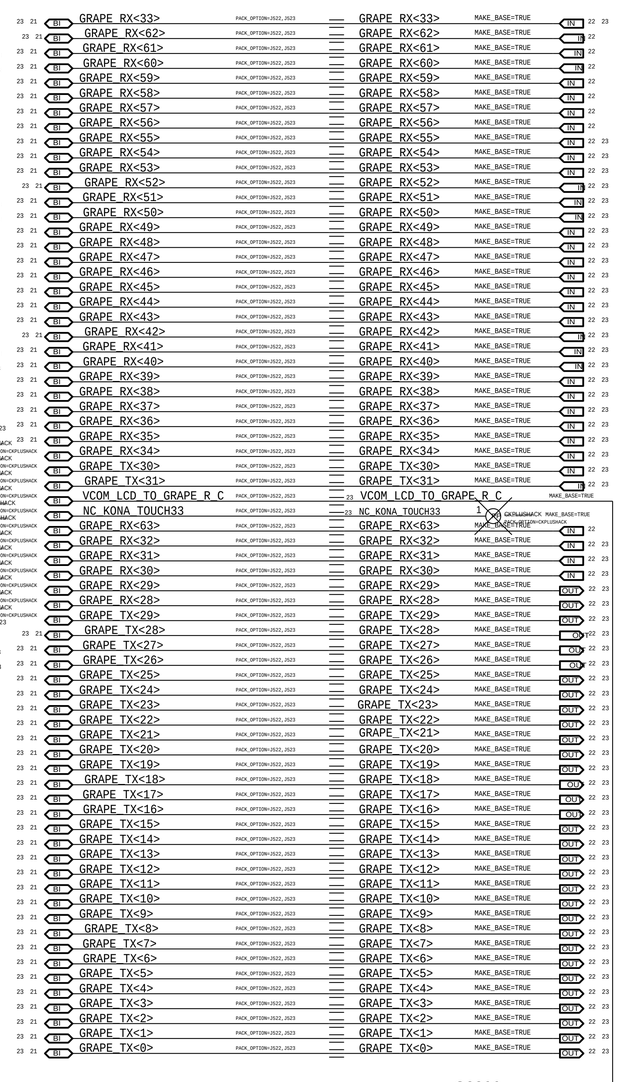
J517 KONA RX/TX ALIAS

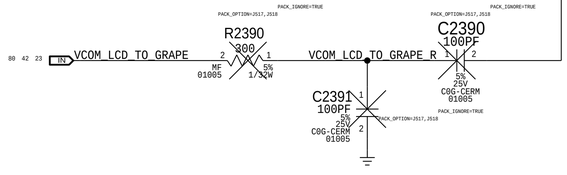


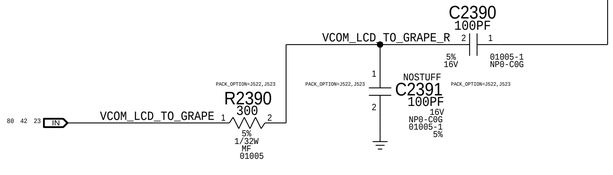
J522 LANAI RX/TX ALIAS



J522 KONA RX/TX ALIAS







BOM_COST_GROUP=TOUCH

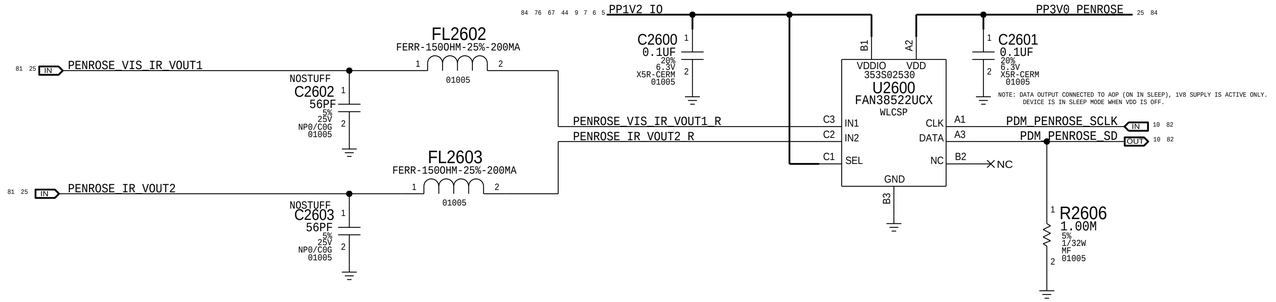
SYNC_MASTER=2023_MLB_9.0.0

SYNC_DATE=09/09/2020

PAGE TITLE

TOUCH: SENSE & DRIVE ALIAS

PENROSE ADC (FAN)



BOM_COST_GROUP=CAMERA

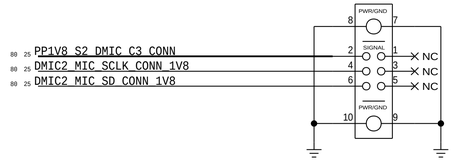
PAGE TITLE

CAMERA: PENROSE ADC

BACK DMIC FLEX

MLB APN: 516S00186
FLEX APN: 516S00185

516S00186
J2720
BM28P0.6-6DS/2-0.35V
F-ST-SM

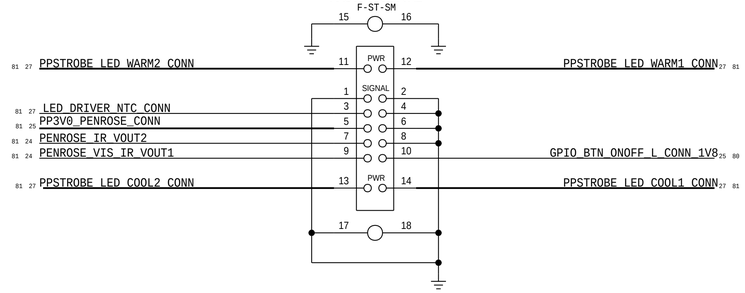


PINOUT PER HYDRA STROBE FLEX REV 0.6

HYDRA STROBE FLEX B2B

MLB APN: 516S00267
FLEX APN: 516S00268

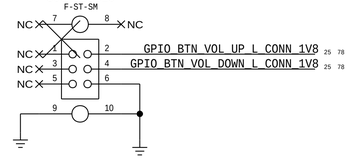
516S00267
J2710
AA36D-S010VA1
F-ST-SM



J51X VOLUME BUTTON FLEX B2B

MLB APN: 516S00321
FLEX APN: 516S00322

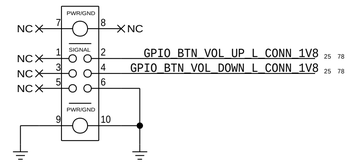
PACK_IGNORE=TRUE
PACK_OPTION=1517
516S00321
J2730
5054130610
F-ST-SM



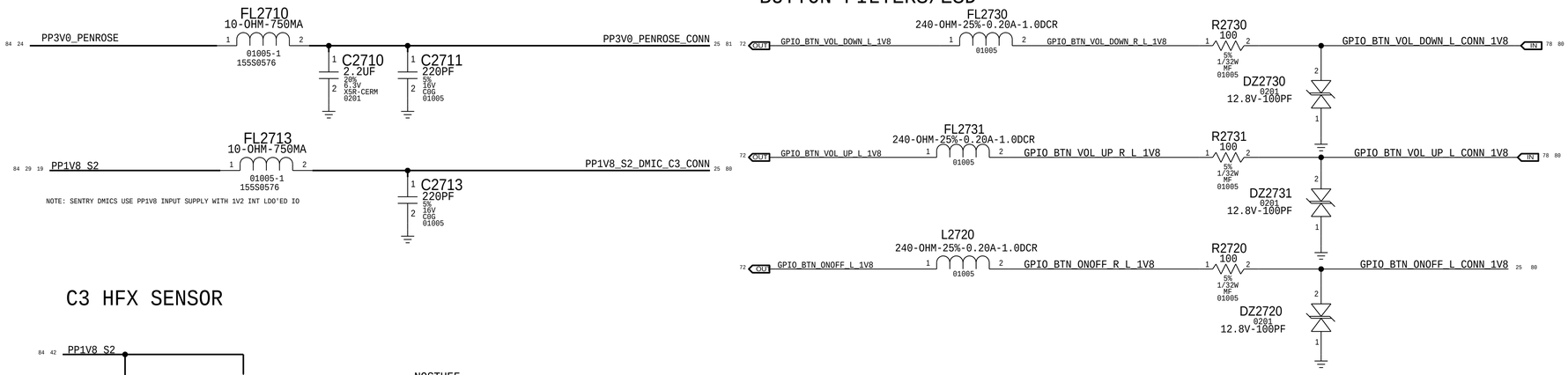
J52X VOLUME BUTTON FLEX B2B

MLB APN: 516S00186
FLEX APN: 516S00185

PACK_OPTION=1522
516S00186
J2730
BM28P0.6-6DS/2-0.35V
F-ST-SM



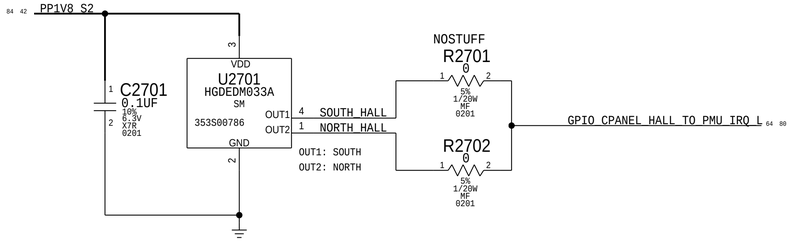
BUTTON FILTERS/ESD



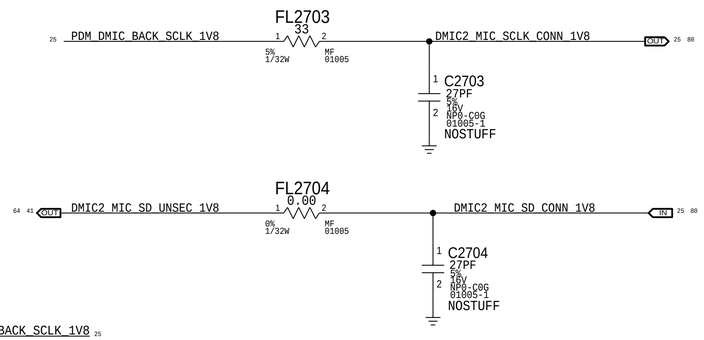
RFFE FILTERS

NOTE: RFFE FILTERS NOW ON BB PAGES

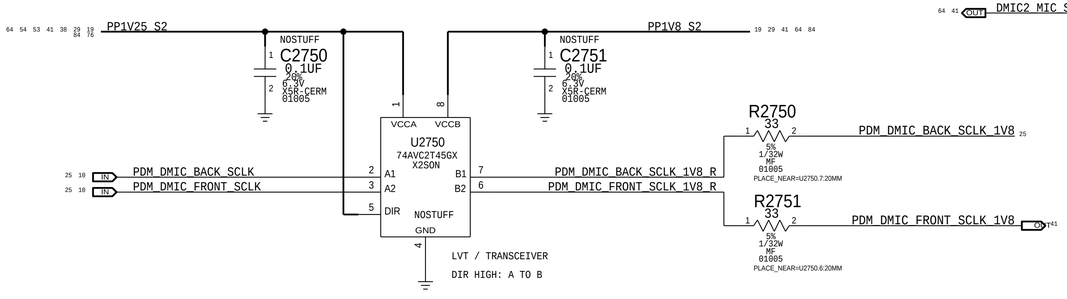
C3 HFX SENSOR



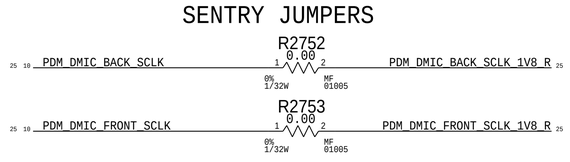
MIC#4 FILTERS



DMIC CLOCK LVT FOR FRONT AND BACK CLK



SENTRY JUMPERS



PART NUMBER	ALTERNATE FOR PART NUMBER	REFERENCE DESIGNATOR(S)	DESCRIPTION	BOM OPTION
155S00097	155S00018	FL2723,FL2725	FERR 80OHM 500MA 0.18DCR 0201	
155S0664	155S00018	FL2723,FL2725	FERR 80OHM 500MA 0.18DCR 0201	

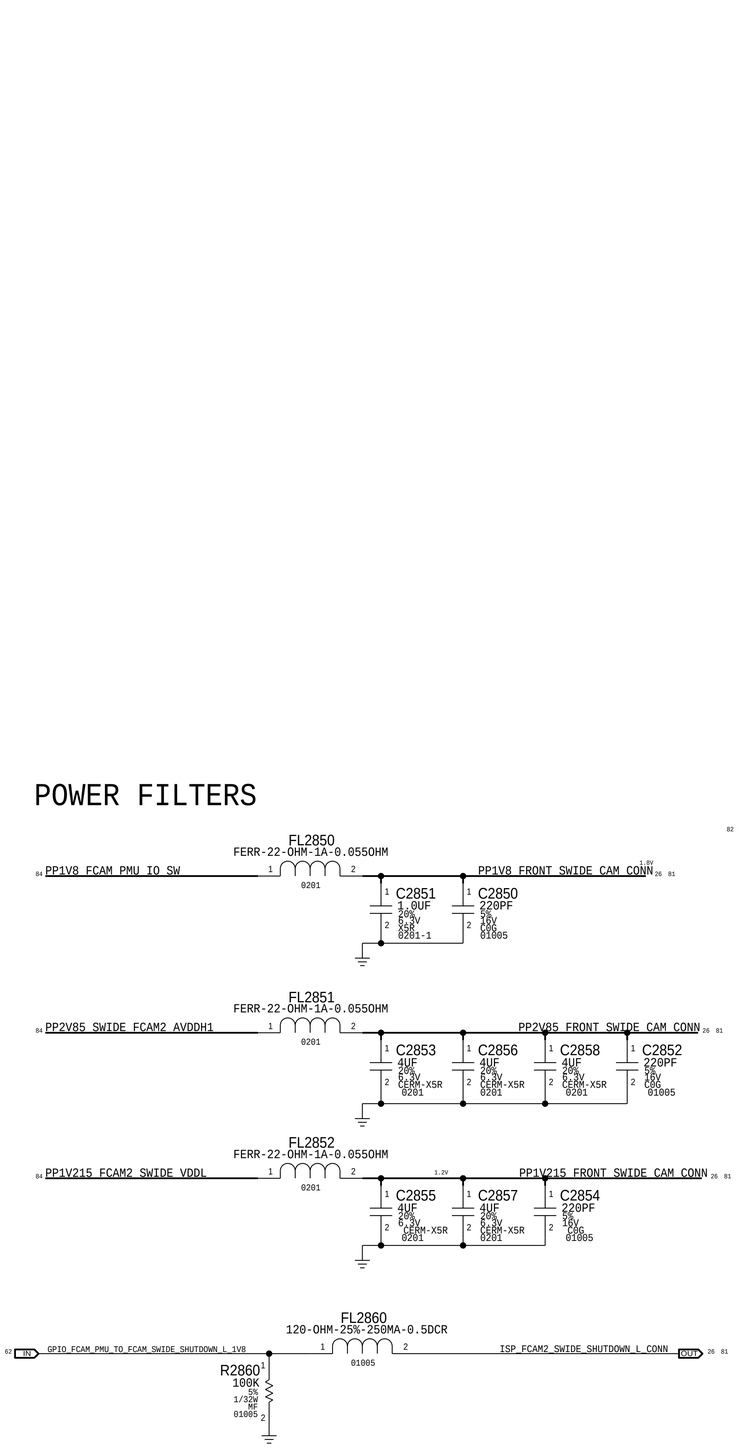
BOM_COST_GROUP=CAMERA

PAGE TITLE

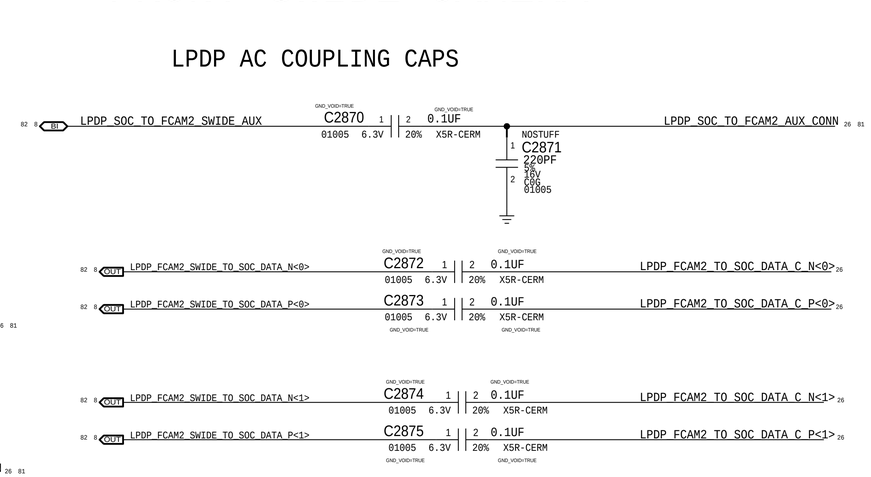
CAMERA: B2B STROBE & MISC

FRONT SWIDE CAMERA

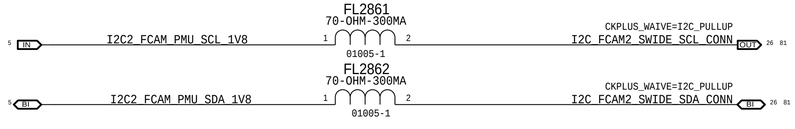
POWER FILTERS



LPDP AC COUPLING CAPS

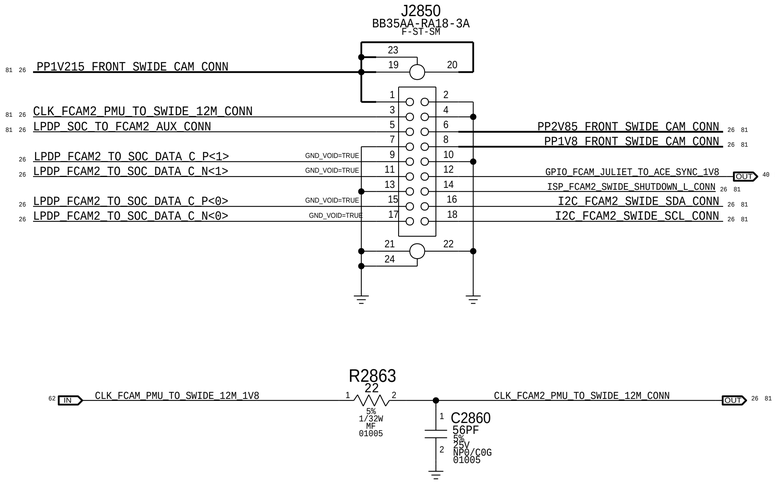


IO FILTERS



FRONT SWIDE CAM CONN

FLEX SIDE: 516S00396
MLB SIDE: 516S00395



BOM_COST_GROUP=CAMERA

PAGE TITLE

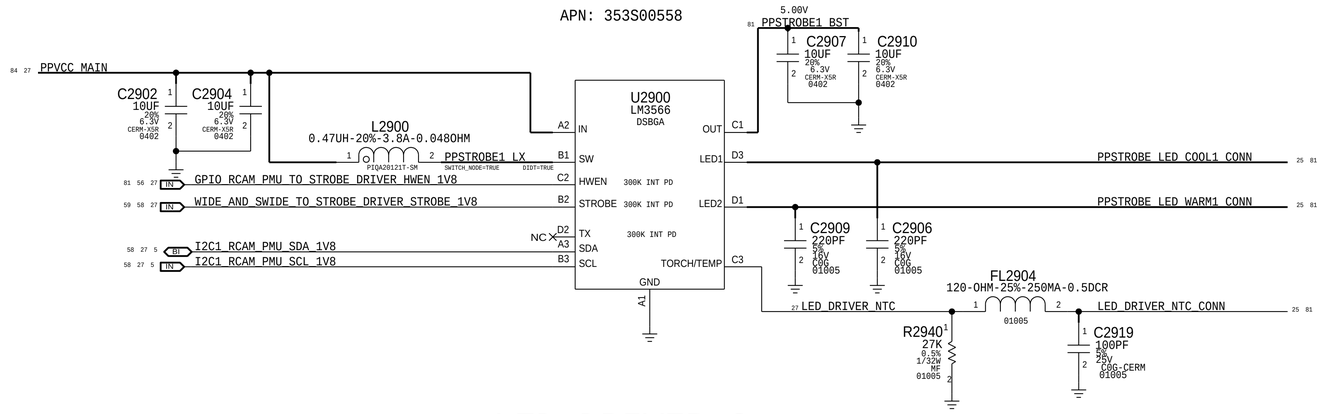
CAMERA: B2B FRONT

PART NUMBER	ALTERNATE FOR PART NUMBER	BOM OPTION	REF DES	COMMENTS:
138S0875	138S0678		C2902, ETC	RDAR://PROBLEM/26929420
152S00121	152S00081		L2900,L2950	0.47UH 3.8A 2012 TY

STROBE CIRCUITRY

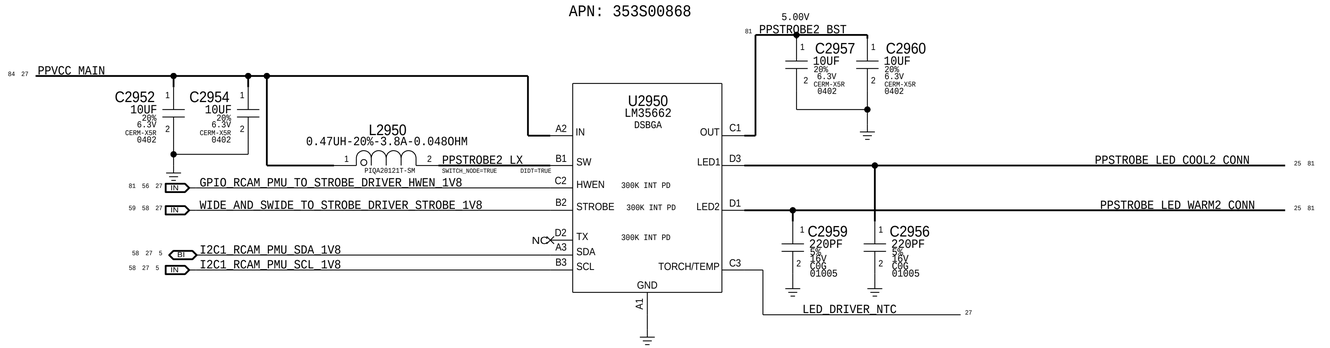
LED DRIVER 1

APN: 353S00558



LED DRIVER 2

APN: 353S00868



BOM_COST_GROUP=STROBE

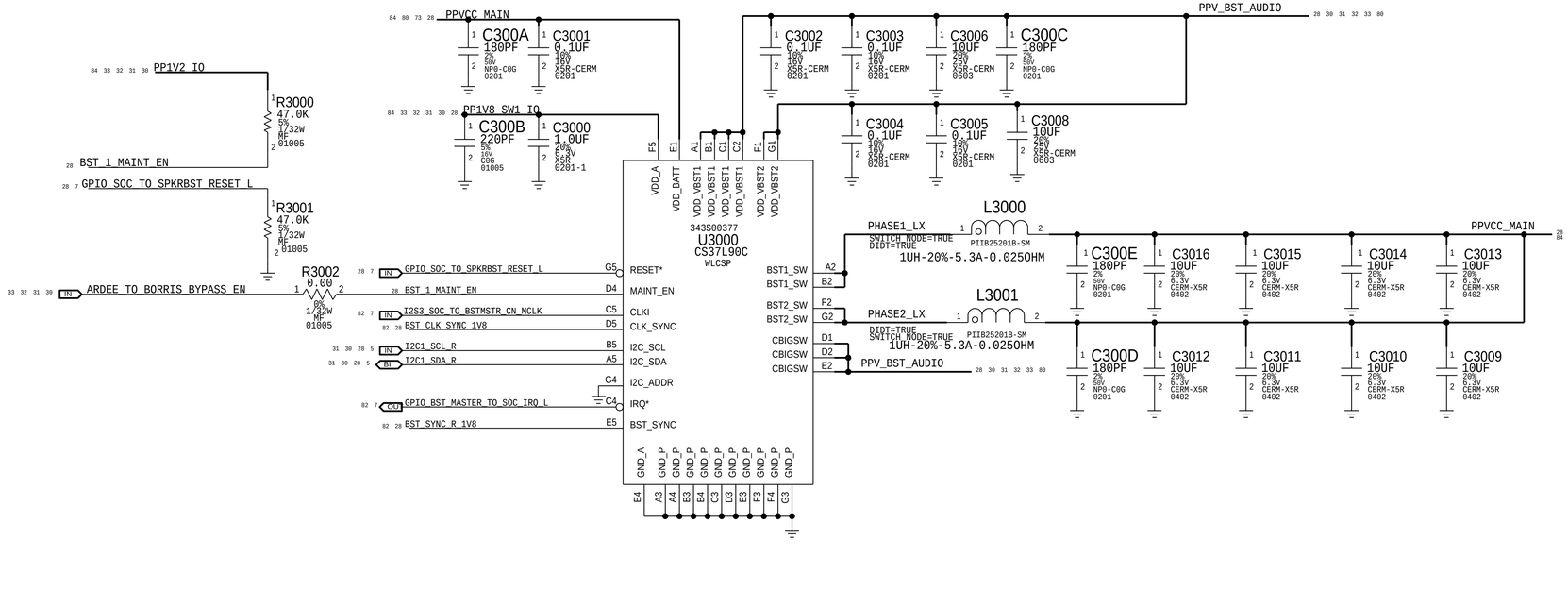
SYNC_MASTER=J523_MLB_0.11.0 SYNC_DATE=09/02/2020

PAGE TITLE

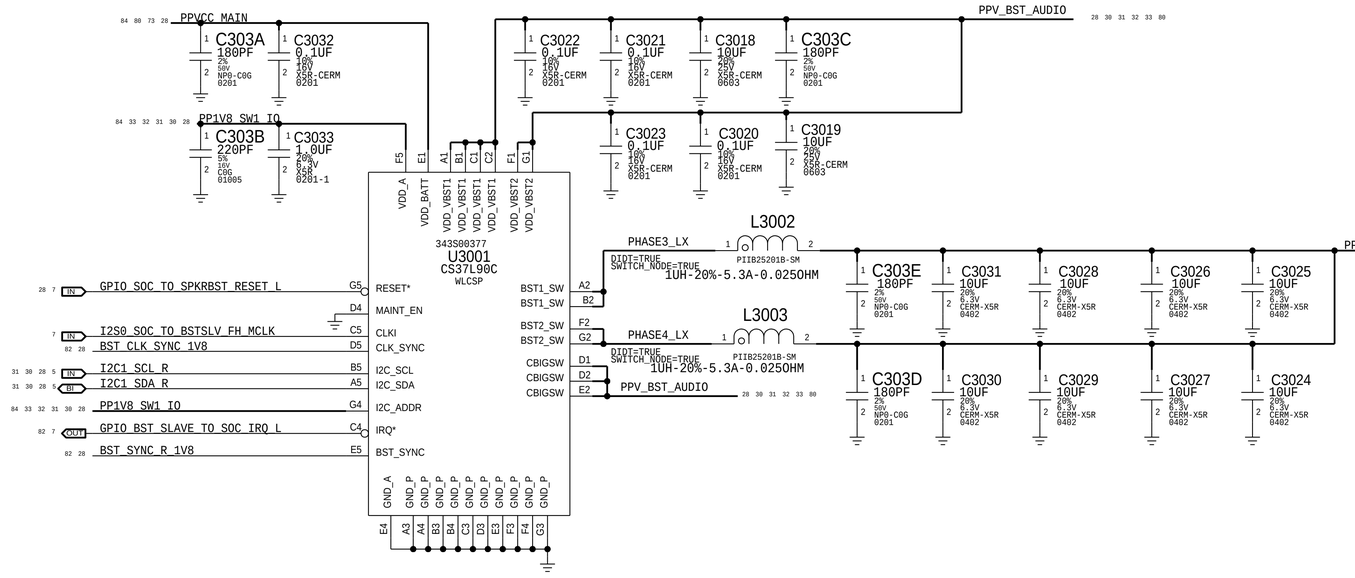
CAMERA: STROBE

BORRIS BOOST

BOOST MASTER



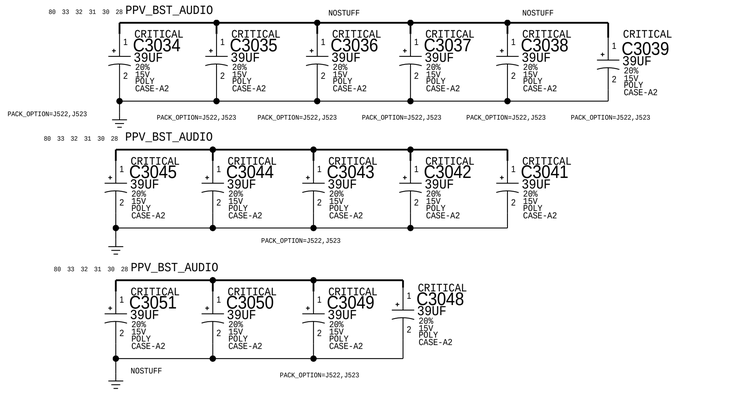
BOOST SLAVE



CS35L91 (ARDEE)			
ADDR PIN PULL	RESISTOR	I2C ADDRESS	
GND	0K	0X70	AMP1 FHRT
VDD	0K	0X72	AMP2 FHRW
GND	4.99K	0X74	AMP3 FHLT
VDD	4.99K	0X76	AMP4 FHLW
GND	20K	0X78	AMP5 CNRT
VDD	20K	0X7A	AMP6 CNRW
GND	100K	0X7C	AMP7 CNLT
VDD	100K	0X7E	AMP8 CNLW

CS37L90 (BORRIS)			
ADDR PIN PULL	RESISTOR	I2C ADDRESS	
GND	0K	0X60	MASTER
DVDD	0K	0X62	SLAVE

CAP RESERVOIR



BOM_COST_GROUP=AUDIO

PAGE TITLE

AUDIO: BORRIS BOOST

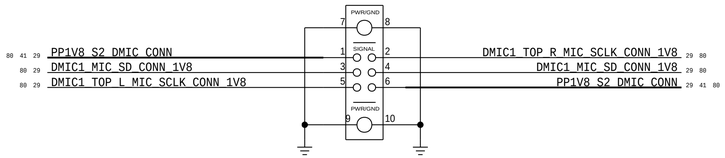
DMIC CONN AND FILTERS

PINOUT PER MIC FH FLEX REV 0.3

MIC FLEX B2B

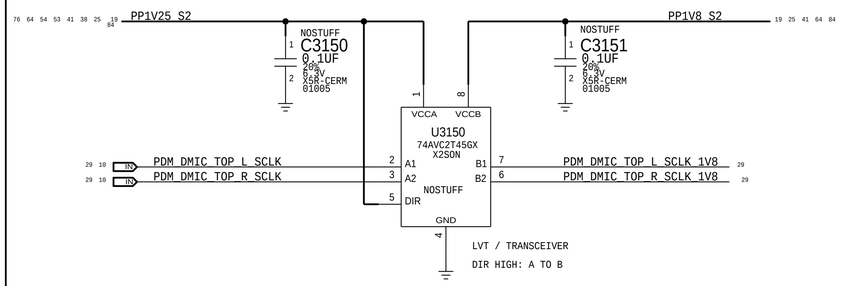
MLB APN: 516S00186
FLEX APN: 516S00185

J3100
BM28P0.6-6DS/2-0.35V
F-ST-SM

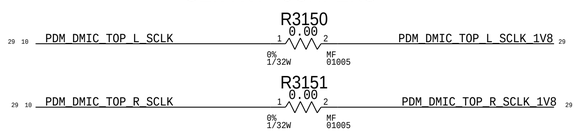


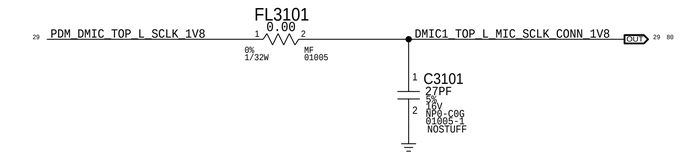
ROUTING	BUS	SELECT	LOCATION	DATA ASSERTS ON	DATA LATCHED ON
MIC#1	PDM0	HIGH	LEFT	CLK RISING EDGE	CLK FALLING EDGE
MIC#2	PDM0	LOW	RIGHT	CLK FALLING EDGE	CLK RISING EDGE
MIC#3	PDM1	HIGH	FRONT(ON TM)	CLK RISING EDGE	CLK FALLING EDGE
MIC#4	PDM1	LOW	REAR(C3)	CLK FALLING EDGE	CLK RISING EDGE
MIC#5	PDM2	HIGH	LANDSCAPE	CLK RISING EDGE	CLK FALLING EDGE

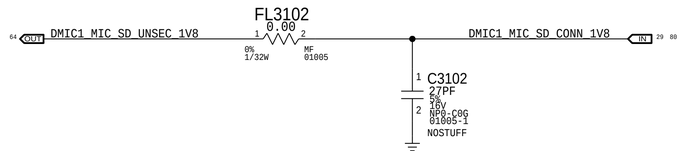
DMIC2 FILTERS

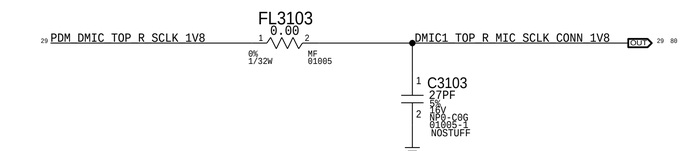


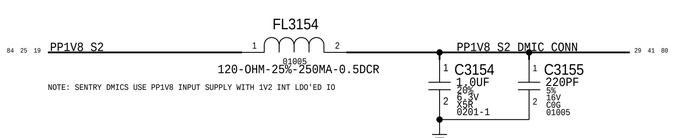
SENTRY JUMPERS











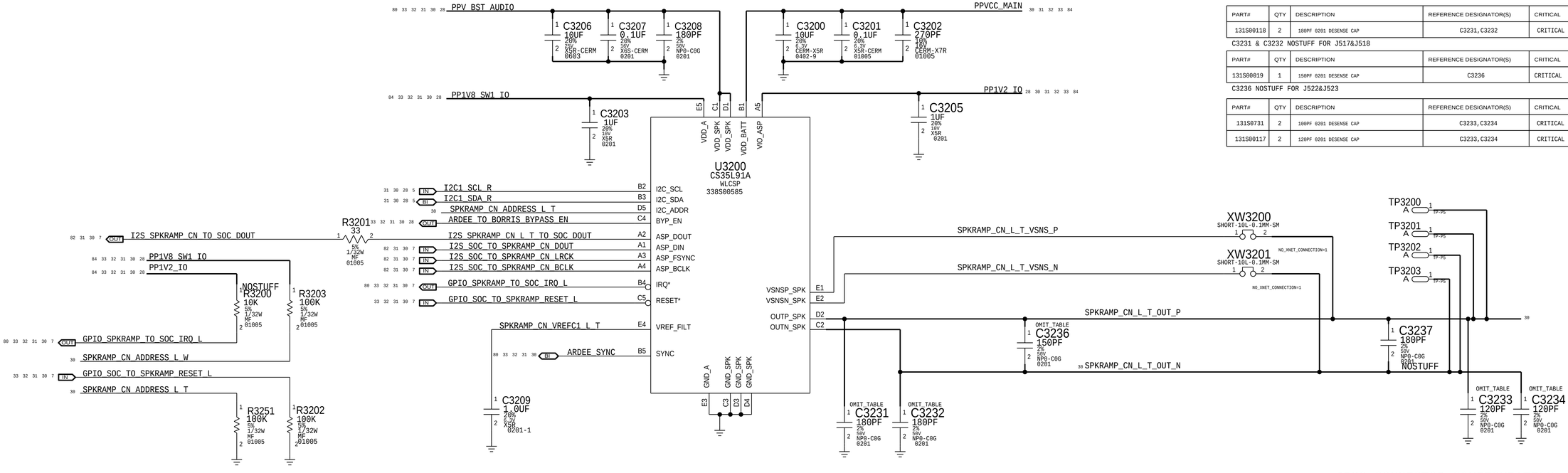
NOTE: SENTRY DMICS USE PP1V8 INPUT SUPPLY WITH 1V2 INT LDO'ED IO

BOM_COST_GROUP=AUDIO

PAGE TITLE

AUDIO: DMIC B2B & FILTERS

CN L TWEETER SPEAKER AMP



CN-L-T DESENSE CAP CONFIG

PART#	QTY	DESCRIPTION	REFERENCE DESIGNATOR(S)	CRITICAL	BOM OPTION
131S00118	2	180PF 0201 DESENSE CAP	C3231,C3232	CRITICAL	J522&J523

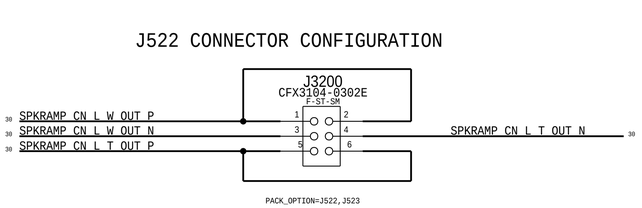
C3231 & C3232 NOSTUFF FOR J517&J518

PART#	QTY	DESCRIPTION	REFERENCE DESIGNATOR(S)	CRITICAL	BOM OPTION
131S00019	1	150PF 0201 DESENSE CAP	C3236	CRITICAL	J517&J518

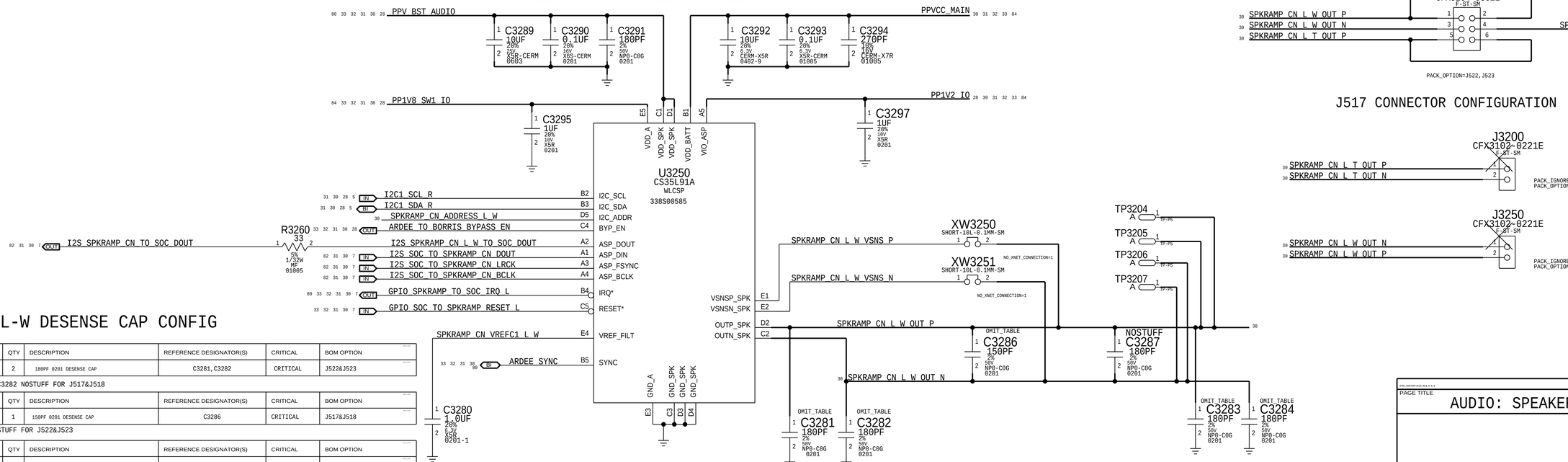
C3236 NOSTUFF FOR J522&J523

PART#	QTY	DESCRIPTION	REFERENCE DESIGNATOR(S)	CRITICAL	BOM OPTION
131S0731	2	100PF 0201 DESENSE CAP	C3233,C3234	CRITICAL	J517&J518
131S00117	2	120PF 0201 DESENSE CAP	C3233,C3234	CRITICAL	J522&J523

J522 CONNECTOR CONFIGURATION



CN L WOOFER SPEAKER AMP



CN-L-W DESENSE CAP CONFIG

PART#	QTY	DESCRIPTION	REFERENCE DESIGNATOR(S)	CRITICAL	BOM OPTION
131S00118	2	180PF 0201 DESENSE CAP	C3281,C3282	CRITICAL	J522&J523

C3281 & C3282 NOSTUFF FOR J517&J518

PART#	QTY	DESCRIPTION	REFERENCE DESIGNATOR(S)	CRITICAL	BOM OPTION
131S00019	1	150PF 0201 DESENSE CAP	C3286	CRITICAL	J517&J518

C3286 NOSTUFF FOR J522&J523

PART#	QTY	DESCRIPTION	REFERENCE DESIGNATOR(S)	CRITICAL	BOM OPTION
131S00118	2	180PF 0201 DESENSE CAP	C3283,C3284	CRITICAL	J517&J518

C3283 & C3284 NOSTUFF FOR J522&J523

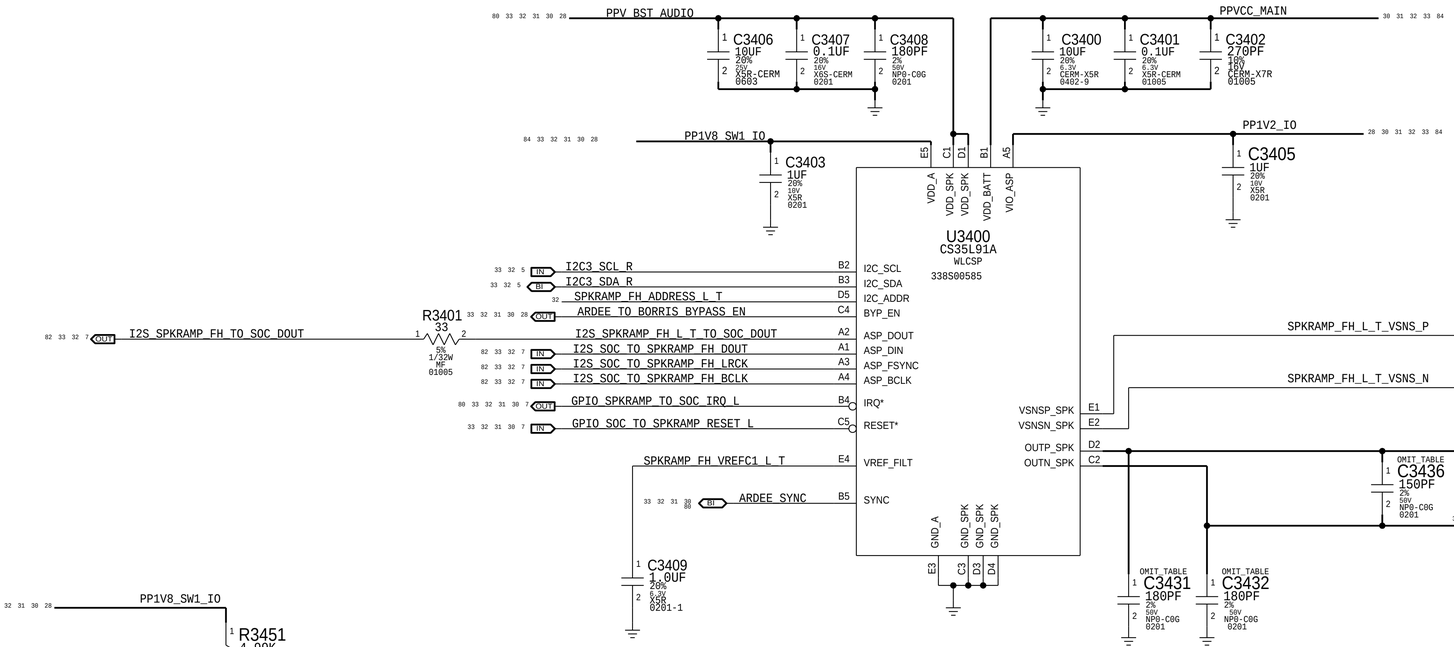
J517 CONNECTOR CONFIGURATION

BOM_COST_GROUP=AUDIO

PAGE TITLE

AUDIO: SPEAKER AMPS (CNL)

FH L TWEETER SPEAKER AMP



FH-L-T DESENSE CAP CONFIG

PART#	QTY	DESCRIPTION	REFERENCE DESIGNATOR(S)	CRITICAL	BOM OPTION
131S00118	2	180PF 0201 DESENSE CAP	C3431,C3432	CRITICAL	J522&J523

C3431 & C3432 NOSTUFF FOR J517&J518

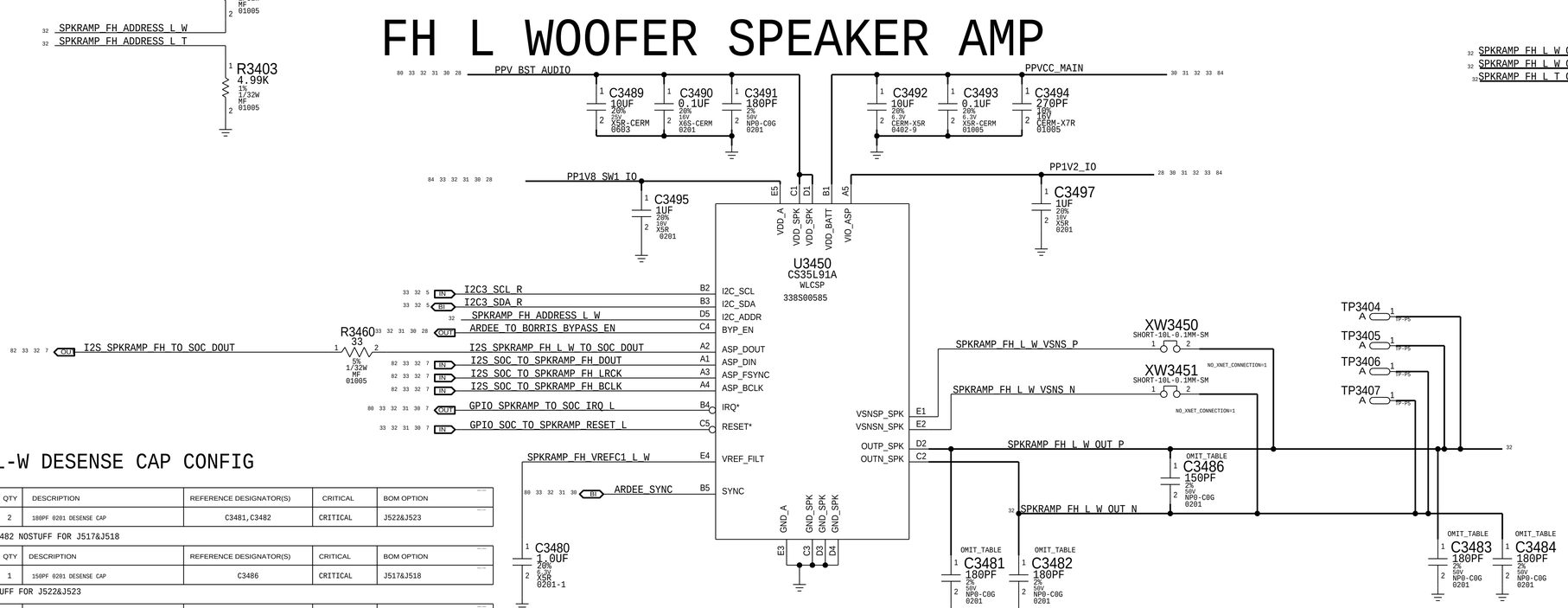
PART#	QTY	DESCRIPTION	REFERENCE DESIGNATOR(S)	CRITICAL	BOM OPTION
131S00019	1	150PF 0201 DESENSE CAP	C3436	CRITICAL	J517&J518

C3436 NOSTUFF FOR J522&J523

PART#	QTY	DESCRIPTION	REFERENCE DESIGNATOR(S)	CRITICAL	BOM OPTION
131S00118	2	180PF 0201 DESENSE CAP	C3433,C3434	CRITICAL	J517&J518

C3433 & C3434 NOSTUFF FOR J522&J523

FH L WOOFER SPEAKER AMP



FH-L-W DESENSE CAP CONFIG

PART#	QTY	DESCRIPTION	REFERENCE DESIGNATOR(S)	CRITICAL	BOM OPTION
131S00118	2	180PF 0201 DESENSE CAP	C3481,C3482	CRITICAL	J522&J523

C3481 & C3482 NOSTUFF FOR J517&J518

PART#	QTY	DESCRIPTION	REFERENCE DESIGNATOR(S)	CRITICAL	BOM OPTION
131S00019	1	150PF 0201 DESENSE CAP	C3486	CRITICAL	J517&J518

C3486 NOSTUFF FOR J522&J523

PART#	QTY	DESCRIPTION	REFERENCE DESIGNATOR(S)	CRITICAL	BOM OPTION
131S00118	2	180PF 0201 DESENSE CAP	C3483,C3484	CRITICAL	J517&J518

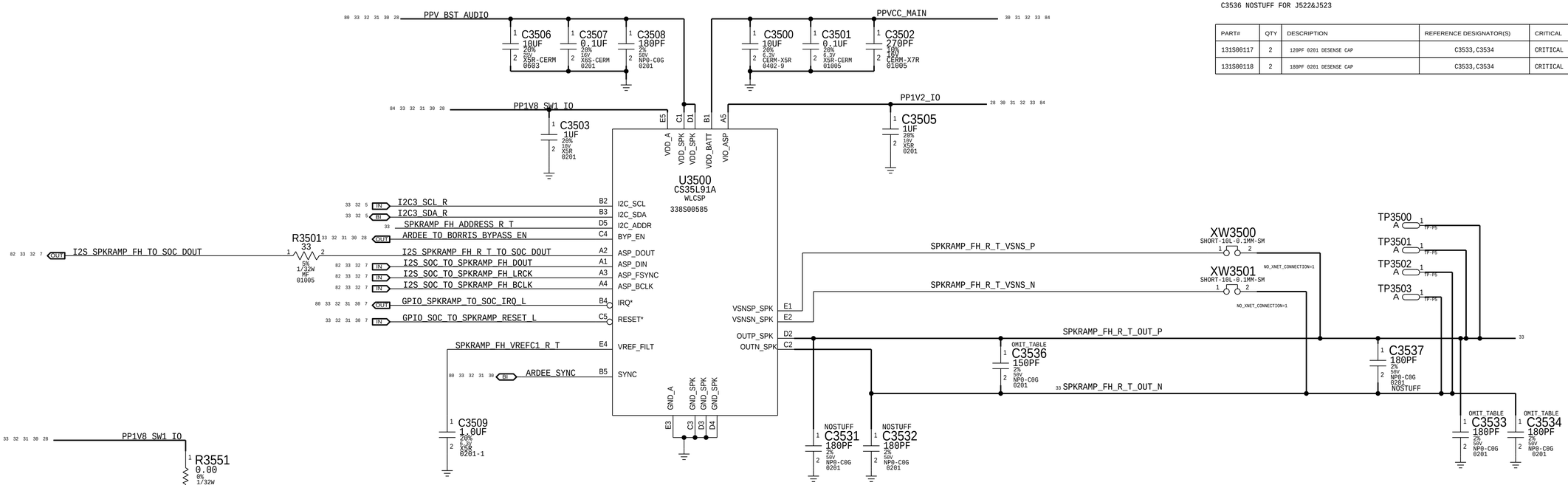
C3483 & C3484 NOSTUFF FOR J522&J523

BOM_COST_GROUP=AUDIO

PAGE TITLE

AUDIO: SPEAKER AMPS (FHL)

FH R TWEETER SPEAKER AMP



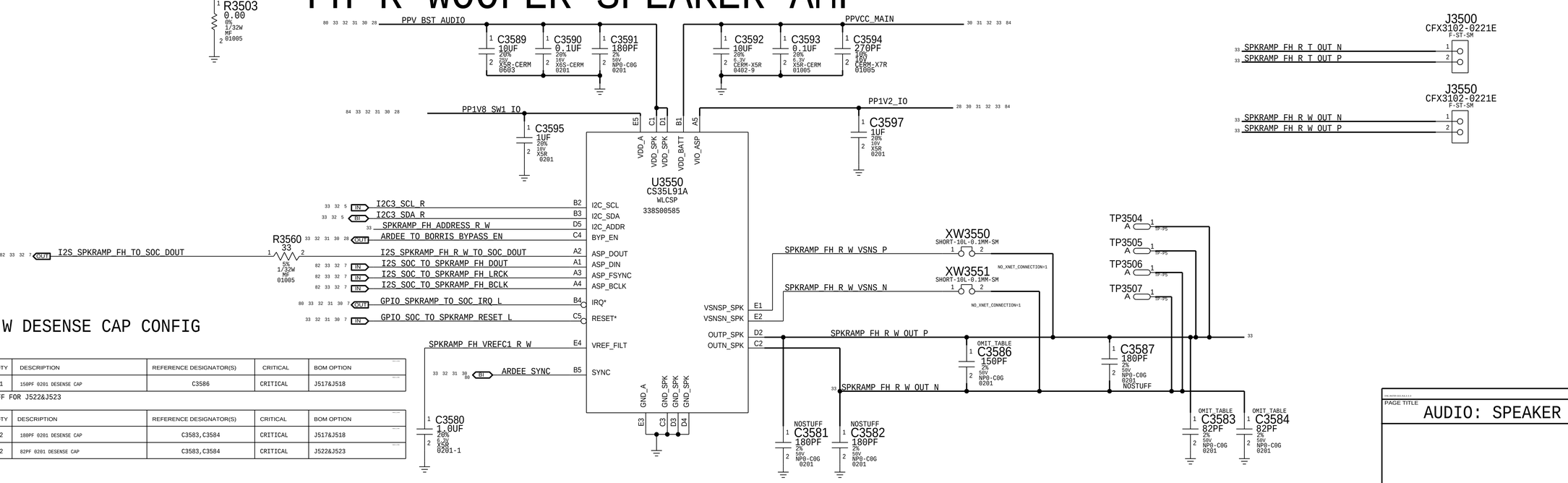
FH-R-T DESENSE CAP CONFIG

PART#	QTY	DESCRIPTION	REFERENCE DESIGNATOR(S)	CRITICAL	BOM OPTION
131S00019	1	150PF 0201 DESENSE CAP	C3536	CRITICAL	J517&J518

C3536 NOSTUFF FOR J522&J523

PART#	QTY	DESCRIPTION	REFERENCE DESIGNATOR(S)	CRITICAL	BOM OPTION
131S00117	2	120PF 0201 DESENSE CAP	C3533,C3534	CRITICAL	J517&J518
131S00118	2	180PF 0201 DESENSE CAP	C3533,C3534	CRITICAL	J522&J523

FH R WOOFER SPEAKER AMP



FH-R-W DESENSE CAP CONFIG

PART#	QTY	DESCRIPTION	REFERENCE DESIGNATOR(S)	CRITICAL	BOM OPTION
131S00019	1	150PF 0201 DESENSE CAP	C3586	CRITICAL	J517&J518

C3586 NOSTUFF FOR J522&J523

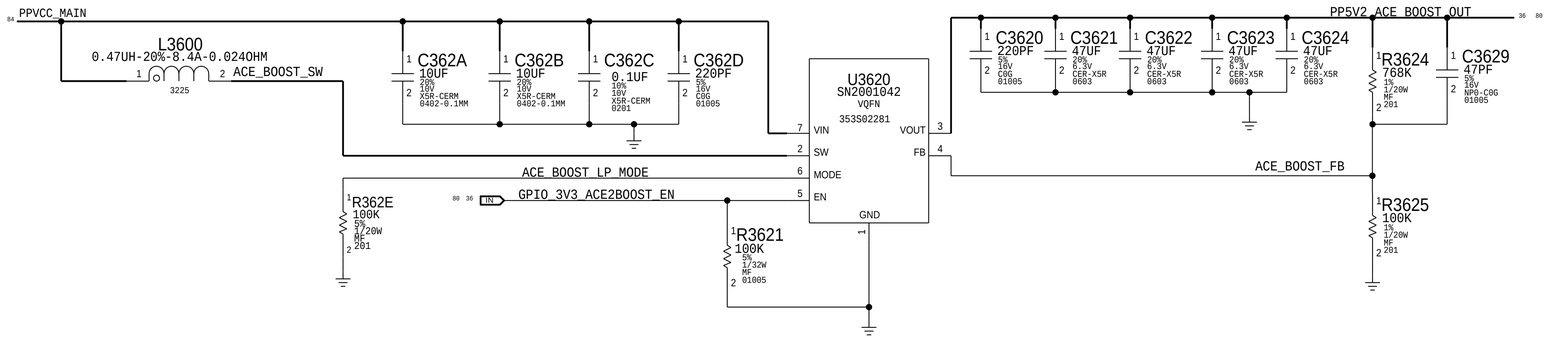
PART#	QTY	DESCRIPTION	REFERENCE DESIGNATOR(S)	CRITICAL	BOM OPTION
131S00118	2	180PF 0201 DESENSE CAP	C3583,C3584	CRITICAL	J517&J518
131S00018	2	82PF 0201 DESENSE CAP	C3583,C3584	CRITICAL	J522&J523

BOM_COST_GROUP=AUDIO

PAGE TITLE

AUDIO: SPEAKER AMPS (FHR)

ACE BOOST

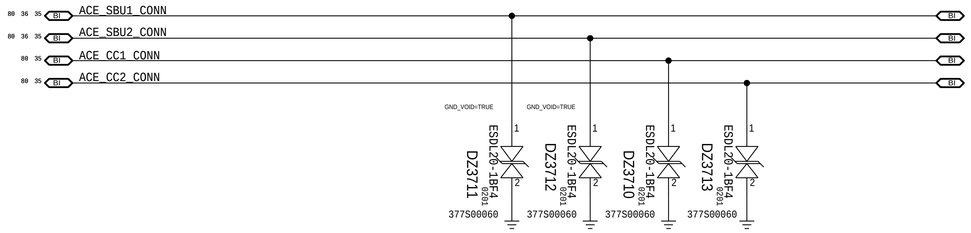


BOM_COST_GROUP=USB-C

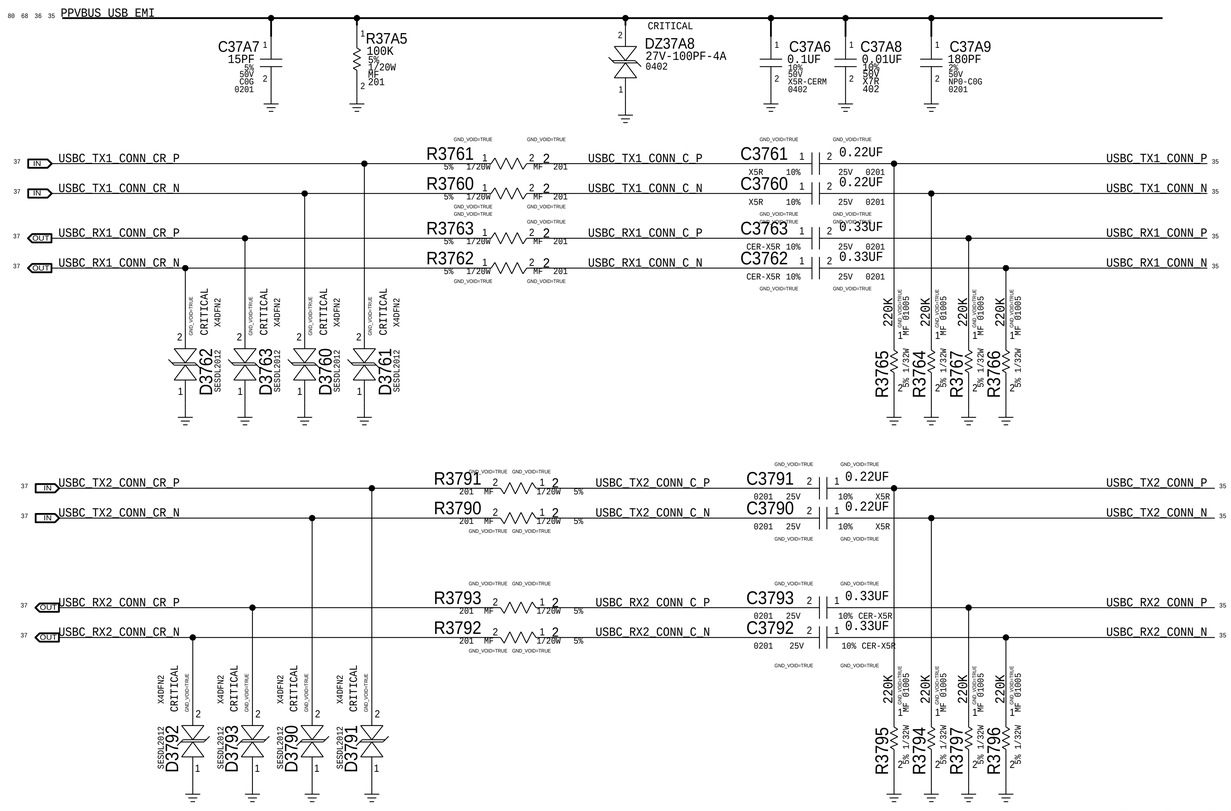
PAGE TITLE

IO: ACE PERIPHERALS

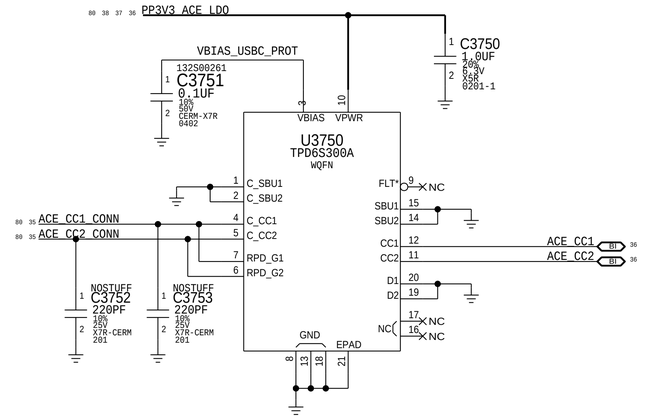
PART NUMBER	ALTERNATE FOR PART NUMBER	BOM OPTION	REF DES	COMMENTS:
372S0194	372S0187		Q3790,Q8990	XSTR,N-CHN,34V,500MA



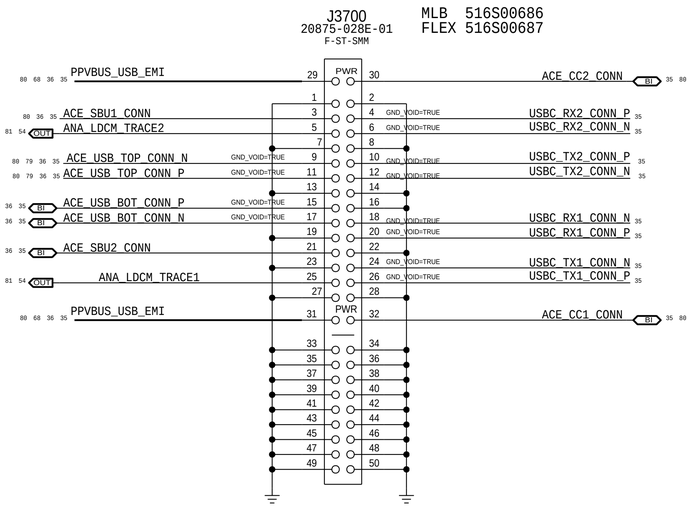
USB CONN FILTERS

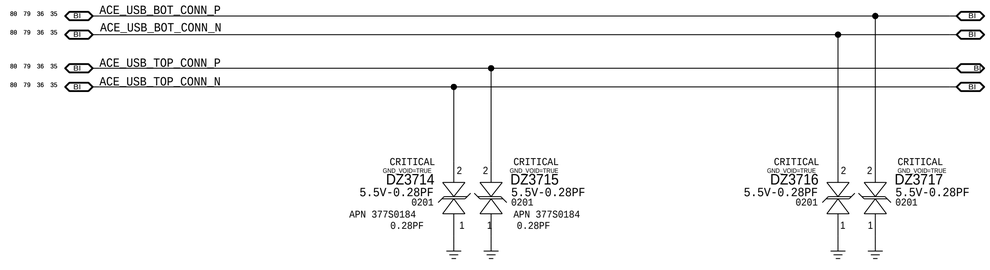


USB TYPE-C PORT PROTECTION

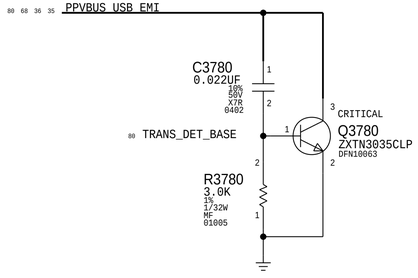


B2B CONNECTOR TO I/0 FLEX





TRANSIENT SUPPRESSION



BOM_COST_GROUP=USB-C

PAGE TITLE

IO: IOFLEX B2B & SIM B2B

PART NUMBER	ALTERNATE FOR PART NUMBER	BOM OPTION	REF DES	COMMENTS:
311S0612	311S00057		U3890	AND GATE NXP

BOM_COST_GROUP=USB-C

PAGE TITLE

IO: ACE USB-C CONTROLLER

BURNSIDE BRIDGE

PART NUMBER	ALTERNATE FOR PART NUMBER	BOM OPTION	REF DES	COMMENTS:
197S00047	197S00036		Y3900	25MHZ XTAL KYO.

USBC HIGH-SPEED 1 AC COUPLING

85_CIO_HS_SOC_TX0_C_P	C3920	0.22UF	20% 6.3V X5R 0201	USBC_SOC_TO_BSB_TX1_C_P	J1	ASSRXP1
85_CIO_HS_SOC_TX0_C_N	C3921	0.22UF	20% 6.3V X5R 0201	USBC_SOC_TO_BSB_TX1_C_N	J2	ASSRXN1
85_CIO_HS_SOC_TX1_C_P	C3922	0.22UF	20% 6.3V X5R 0201	USBC_SOC_TO_BSB_TX2_C_P	C1	ASSRXP2
85_CIO_HS_SOC_TX1_C_N	C3923	0.22UF	20% 6.3V X5R 0201	USBC_SOC_TO_BSB_TX2_C_N	C2	ASSRXN2
85_CIO_HS_SOC_RX0_P	C3924	0.22UF	20% 6.3V X5R 0201	USBC_BSB_TO_SOC_TX1_C_P	G1	ASSTXP1
85_CIO_HS_SOC_RX0_N	C3925	0.22UF	20% 6.3V X5R 0201	USBC_BSB_TO_SOC_TX1_C_N	G2	ASSTXN1
85_CIO_HS_SOC_RX1_P	C3926	0.22UF	20% 6.3V X5R 0201	USBC_BSB_TO_SOC_TX2_C_P	E1	ASSTXP2
85_CIO_HS_SOC_RX1_N	C3927	0.22UF	20% 6.3V X5R 0201	USBC_BSB_TO_SOC_TX2_C_N	E2	ASSTXN2

U3900 9999HH BGA SYM 1 OF 2

SOC SIDE

PA_AUX_P	L8
PA_AUX_N	M8
PA_LSTX_SBU1	M7
PA_LSRX_SBU2	L7
I2C_INT	A10
I2C_SCL	C9
I2C_SDA	E7
POC_GPIO_5	B9
POC_GPIO_6	A8
POC_GPIO_10	A4
POC_GPIO_11	A5
POC_GPIO_12	A6
THERMDA	M11
XTAL_25_IN	L9
XTAL_25_OUT	M9
MONDC_SVR	L12
MONDC	A11
TEST_EDM	M12
NC_A12	A12
NC_J6	J6
NC_L3	L3
NC_J5	J5

NO INTERNAL CAPS, PU, PD AVAILABLE

USB-C CONN SIDE

BSSRXP1	J12	USBC_RX1_CONN_CR_P
BSSRXN1	J11	USBC_RX1_CONN_CR_N
BSSRXP2	C12	USBC_RX2_CONN_CR_P
BSSRXN2	C11	USBC_RX2_CONN_CR_N
BSSTXP1	G12	USBC_TX1_CONN_CR_P
BSSTXN1	G11	USBC_TX1_CONN_CR_N
BSSTXP2	E12	USBC_TX2_CONN_CR_P
BSSTXN2	E11	USBC_TX2_CONN_CR_N
BSBU1	M10	ACE_AUXP2BSB_SBU1
BSBU2	L10	ACE_AUXN2BSB_SBU2
PERST*	B8	GPIO_3V3_PMU2BSB_PERST_L
RESET*	L11	GPIO_3V3_ACE2BSB_PARROT_RESET_L
TDI	A3	BSB_JTAG_TDI
TMS	C3	BSB_JTAG_TMS
TCK	B5	BSB_JTAG_TCK
TDO	C5	BSB_JTAG_TDO
EE_DI	C6	SPI_3V3_BSB_MOSI
EE_DO	B4	SPI_3V3_BSB_MISO
EE_CS*	B6	SPI_3V3_BSB_CS_L
EE_CLK	C7	SPI_3V3_BSB_CLK
TEST_EN	B11	
TEST_PWR_GOOD	B3	BSB_TEST_PWR_GOOD
RBIAS	L4	BSB_RBIAS
RSENSE	L5	BSB_RSENSE
ATEST_P	A1	NC
ATEST_N	A2	NC
FORCE_PWR	B10	GPIO_3V3_ACE2BSB_FORCE_PWR
FLASH_BUSY*	A9	GPIO_3V3_ACE2BSB_FLASH_BUSY_L
FUSE_VQPS_64	B2	
SMBUS_SCL	A7	BSB_SMBUS_SCL
SMBUS_SDA	B7	BSB_SMBUS_SDA

To SPI Flash

BB XTAL

BSB_XTAL25M_IN_R — R3903 0 0201 MF 5% 1/20W — BSB_XTAL25M_IN

C3903 20PF 5% 25V C0G 0201

C3902 20PF 5% 25V C0G 0201

Y3900 25MHZ-25PPM-20PF-50OHM 2.00X1.60-SM

R3902 0 0201 MF 5% 1/20W — BSB_XTAL25M_OUT

BSB_XTAL25M_OUT_R

PP3901 BSB_THERMDA P3MM_SM

U3900 9999HH BGA SYM 2 OF 2

VCCOP9_SVR_ANA	F6, G6
VCCOP9_SVR_PB_ANA	E9, G9
VCCOP9_LVR	L6
VCCOP9_LVR_SENSE	M6
VCC3P3_LC	E5
VCC3P3_ANA	L2
VCCOP9_LC	J3
VSS	F3, F5, G5
VSS_ANA	B1, B12, D1, D11, D12, D2, F1, F11, F12, F2
VCC3P3_SX	E6
VCC3P3A	J7
VCC3P3_SVR	M4, M5
VCCOP9_SVR	E3, G3
SVR_IND	L1, M1
SVR_VSS	M2, M3
VSS_ANA	F7, F9, G7, H1, H11, H12, H2, J9, K1, K11, K12, K2

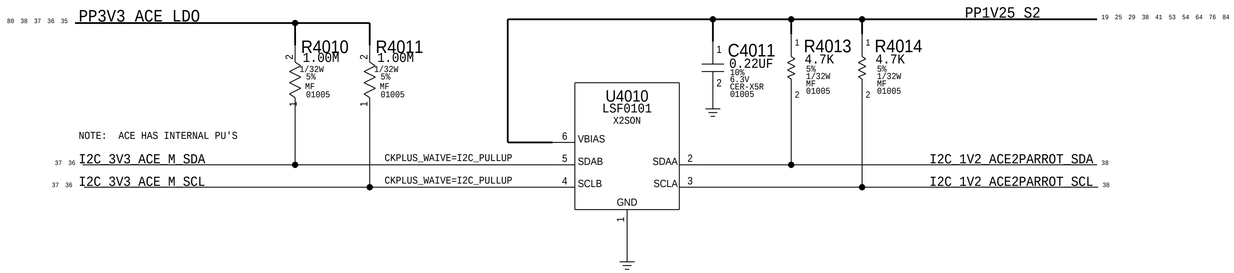
CONNECT TO GND PIN CLOSEST TO THERMDA PIN

PAGE TITLE: IO: USB-C HIGH SPEED

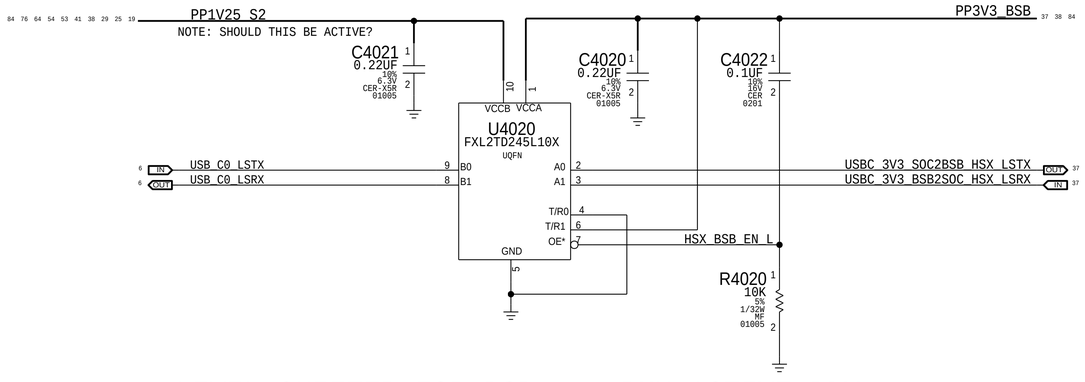
BOM_COST_GROUP=USB-C

PART NUMBER	ALTERNATE FOR PART NUMBER	BOM OPTION	REF DES	COMMENTS:
335S00537	335S00133		U4070	ACE FLASH MACRONIX

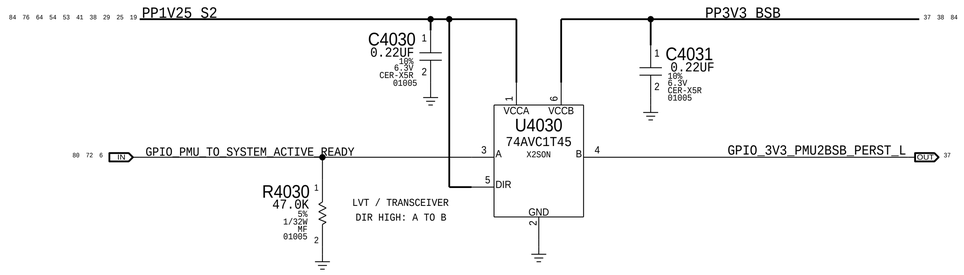
LEVEL SHIFTER FOR I2C ACE <-> PARROT



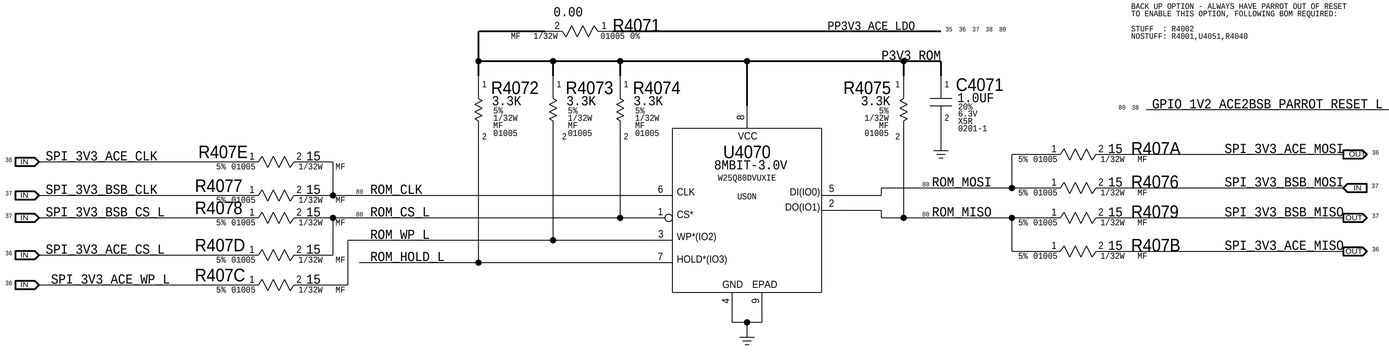
LEVEL SHIFTER FOR BSB <-> SOC LSRX/LSTX



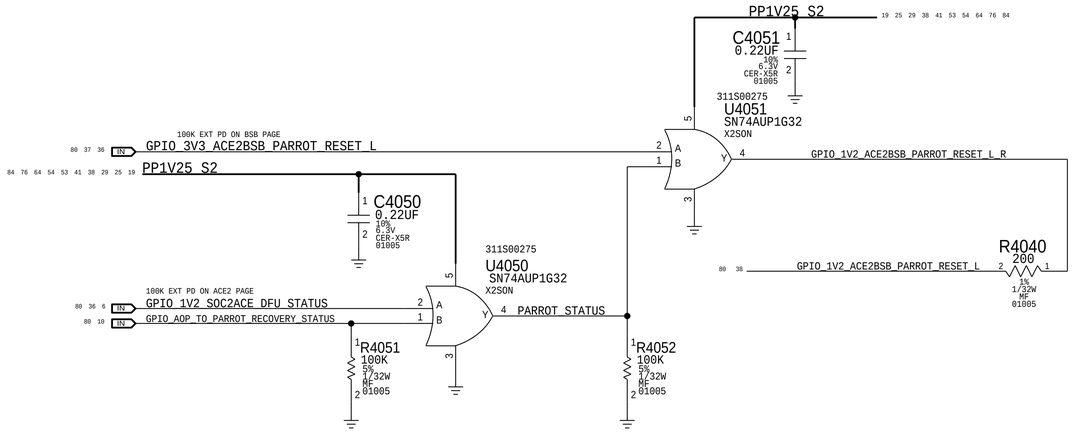
LEVEL SHIFTER FOR BSB <-> PMU ACTIVE RDY



ACE/BSB FLASH

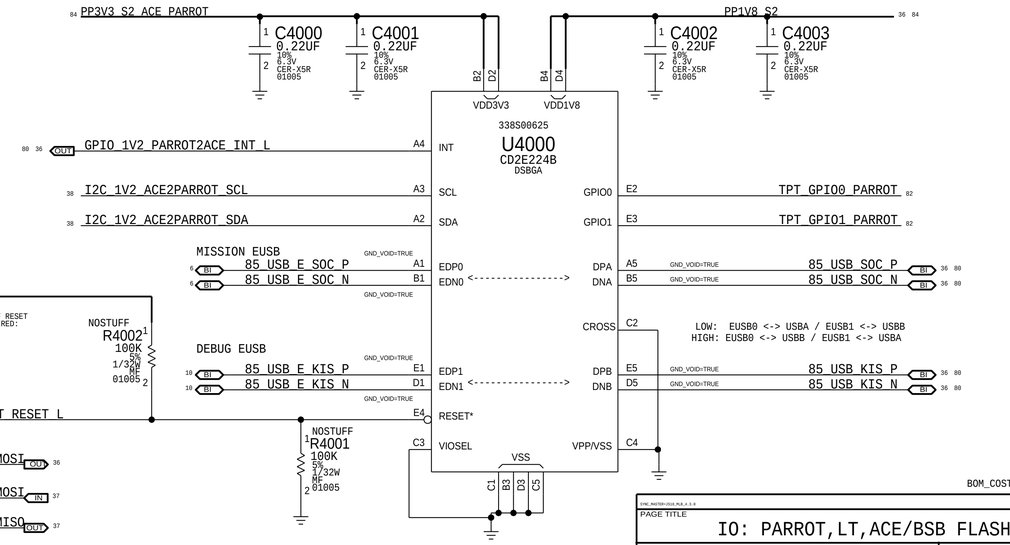


OR-GATE LEVEL SHIFTER FOR ACE <-> BSB RESET



USB REPEATER PARROT

PLACE PARROT NEAR SOC (<40MM)

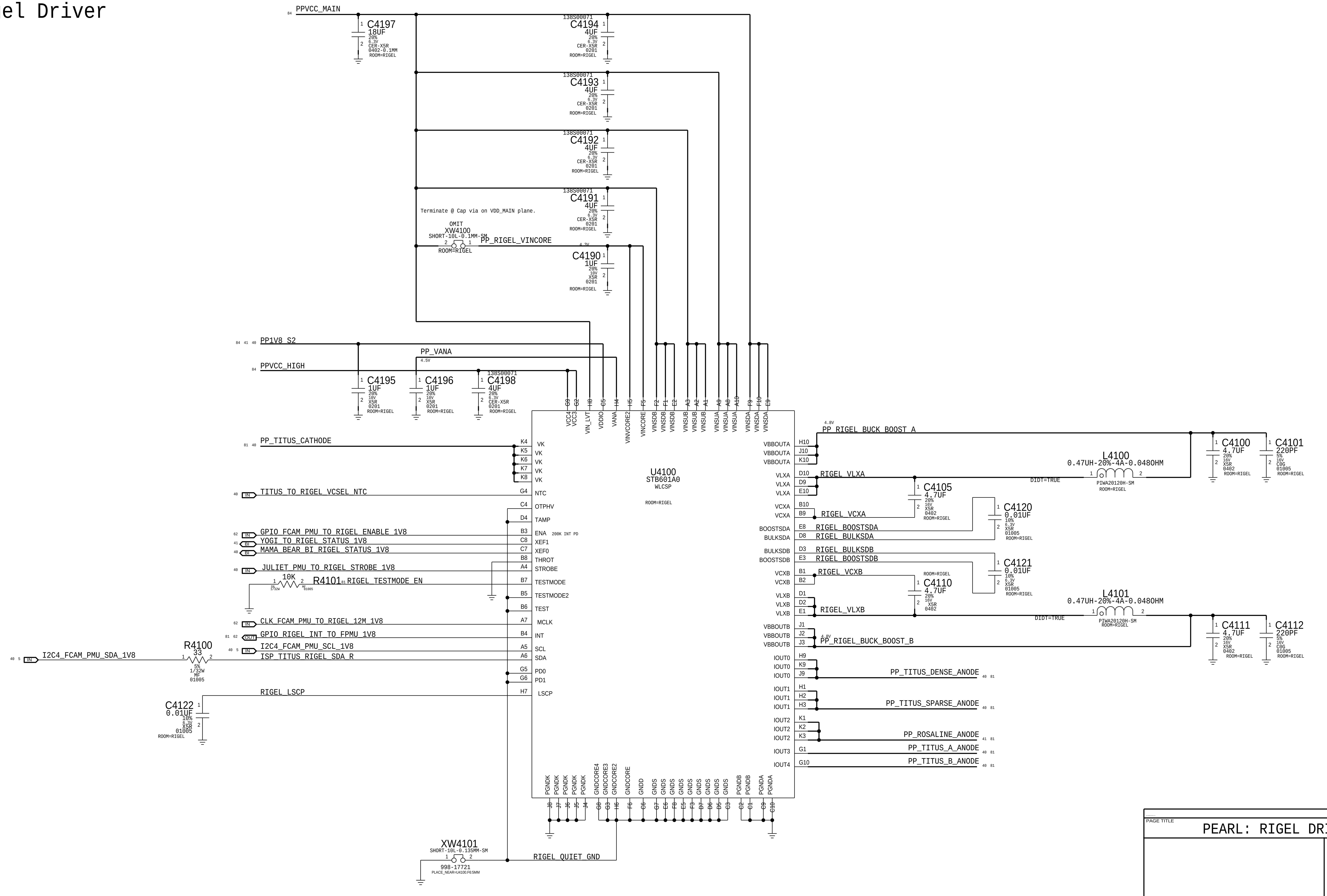


BOM_COST_GROUP=USB-C

PAGE TITLE

IO: PARROT,LT,ACE/BSB FLASH

Rigel Driver

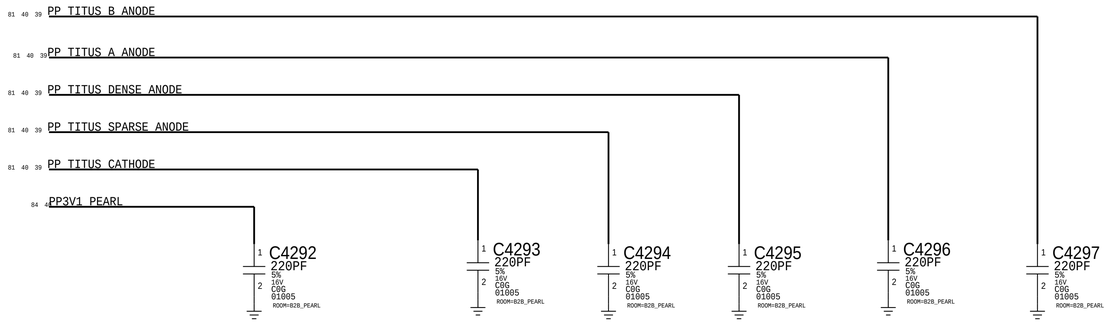


BOM_COST_GROUP=PEARL

PAGE TITLE

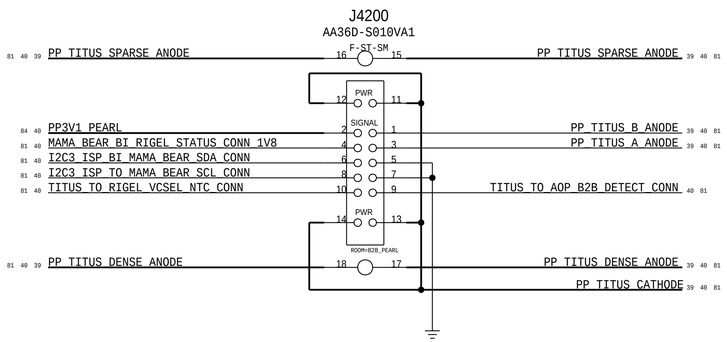
PEARL: RIGEL DRIVER

TITUS POWER FILTERING

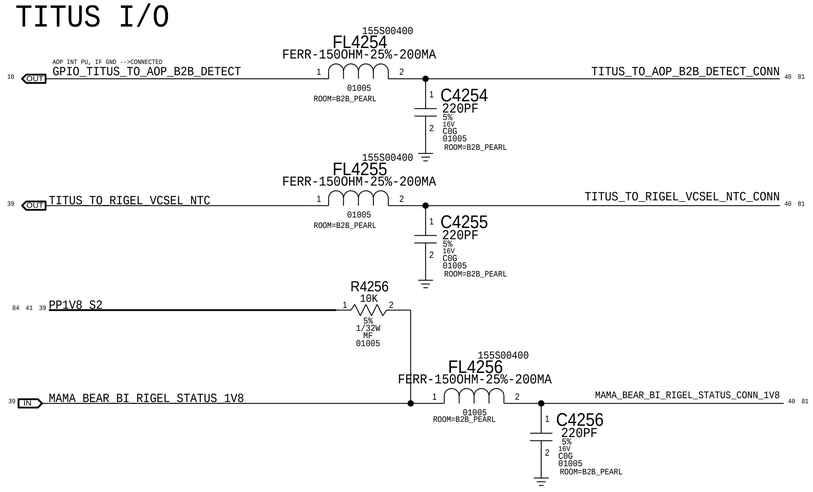


JEWEL CONNECTOR

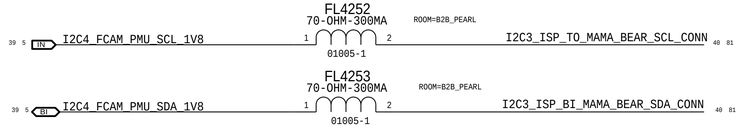
MLB: 516S00267
FLEX: 516S00268
MATCH J317_JEWEL_FLEX A.1.0



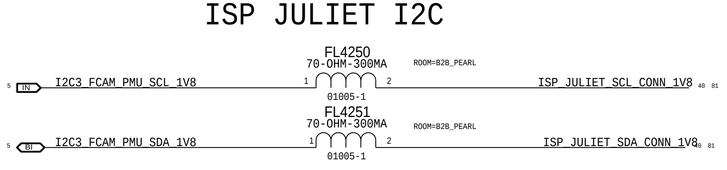
TITUS I/O



ISP TITUS_RIGEL I2C

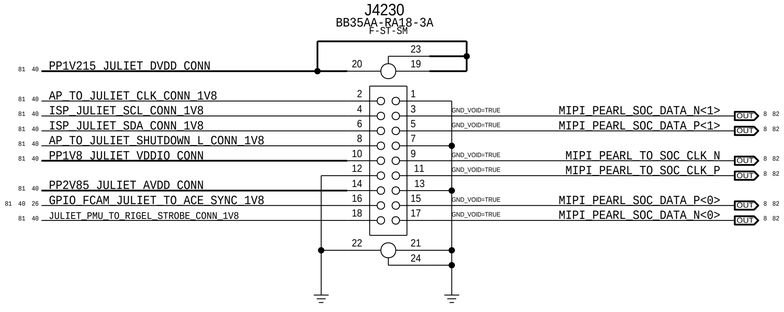


ISP JULIET I2C

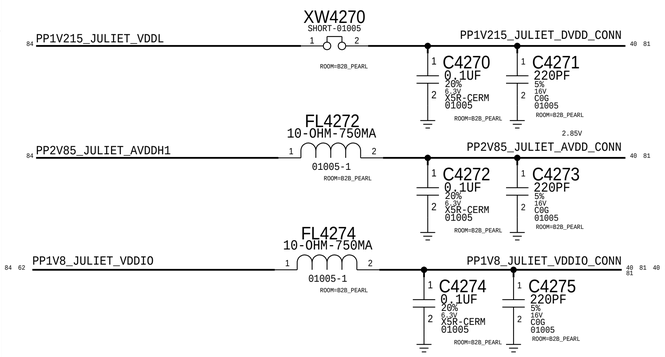


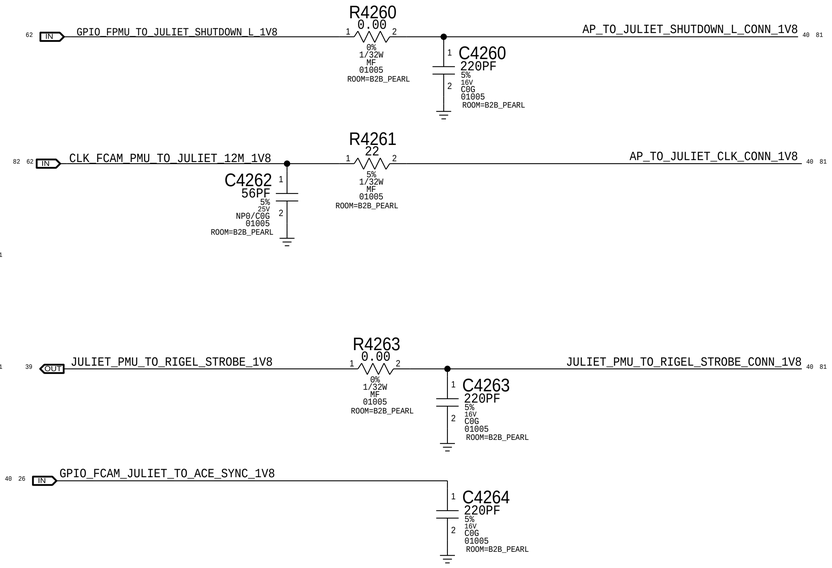
JULIET CONNECTOR

FLEX SIDE: 516S00396
MLB SIDE: 516S00395
MATCH J317_JULIET_FLEX A.0.0



Juliet Power and I/O



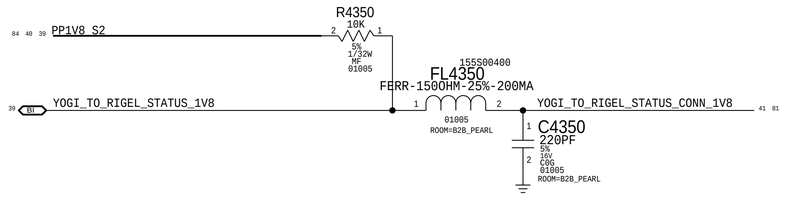


BOM_COST_GROUP=PEARL

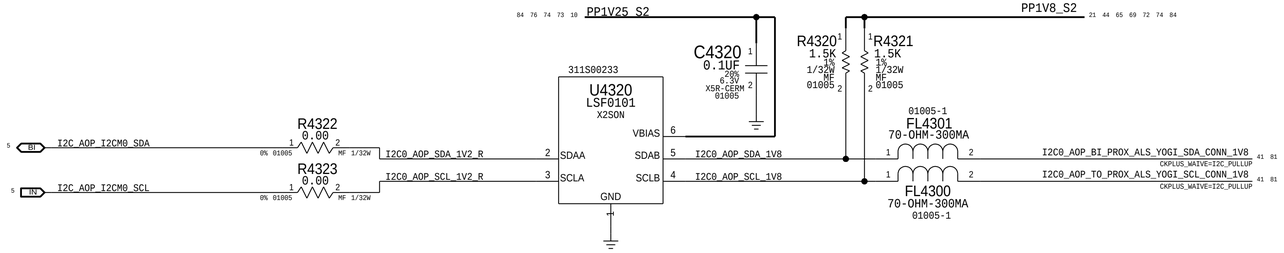
PAGE TITLE

PEARL: B2B TITUS + JULIET

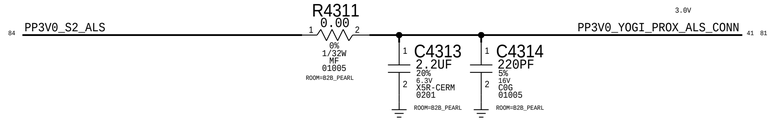
YOGI SIGNALS



I2C LEVEL TRANSLATOR

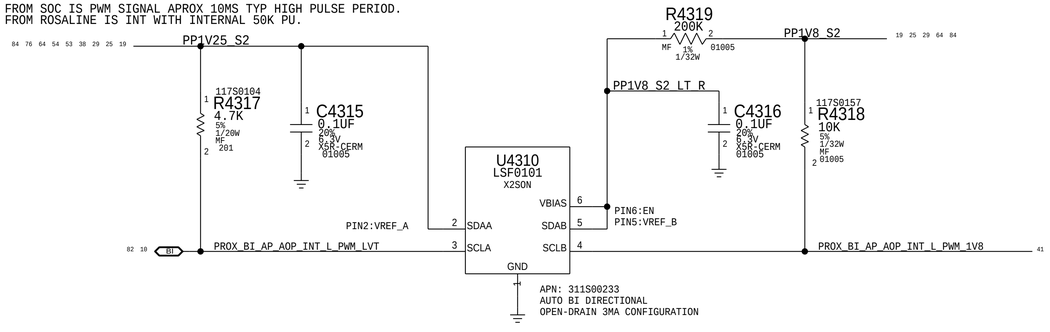


PROX & ALS POWER

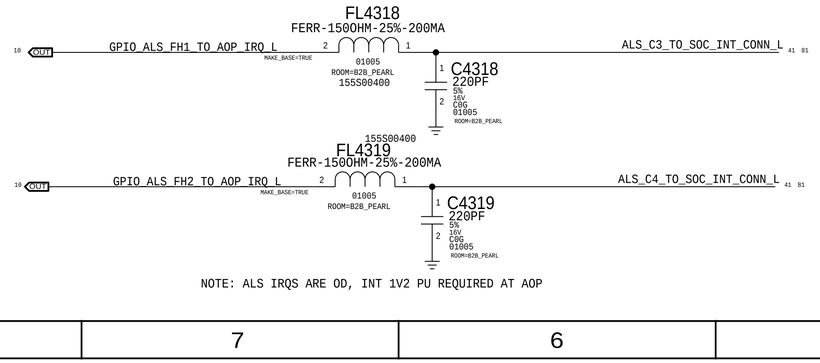


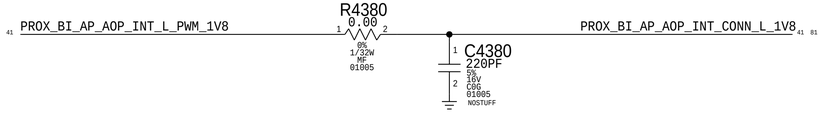
PROX/ALS I/O

PROX FROM SOC IS PWM SIGNAL APROX 10MS TYP HIGH PULSE PERIOD.
PROX FROM ROSALINE IS INT WITH INTERNAL 50K PU.



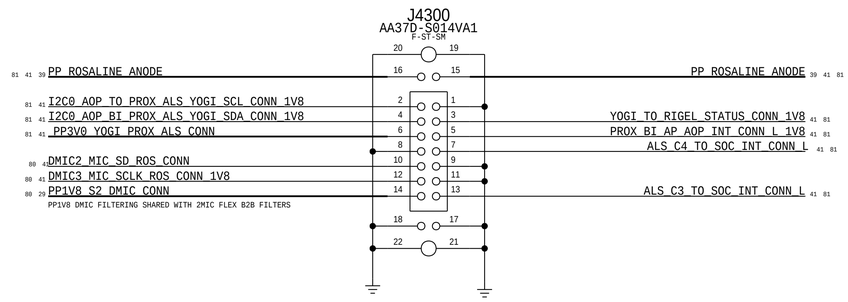
NOTE: ALS IRQS ARE OD, INT 1V2 PU REQUIRED AT AOP

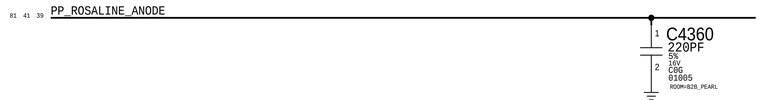




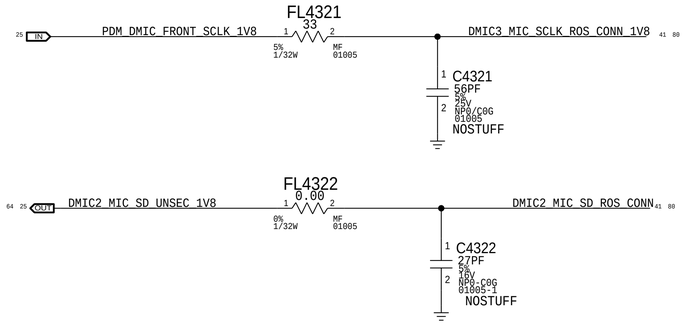
ROSALINE(AARM) CONNECTOR

MLB: 516S00150
FLEX: 516S00149
MATCH J417_AARM_FLEX A.0.0





DMIC1 FILTERS ROSALINE CONN



BOM_COST_GROUP=PEARL

PAGE TITLE
PEARL: B2B ROSALINE + MISC

EDP FLEX FILTERS AND CONNECTORS

R4502 0.00 0% 1/32W MF 01005

62 56 8 IN GPIO_SOC_TO_LANAI_DISPLAY_BSYNC1 — GPIO_SOC_TO_GRAPE_BSYNC1 20 82

R4508 0.00 0% 1/32W MF 01005

21 IN GPIO_GRAPE_TO_TCON_FORCE_PWM_1V8 — SYSTEM_TO_TCON_FORCE_PWM_1V8 42 80

TCON I2C FILTERS

FL4534 70-OHM-300MA 01005-1

45 5 BI I2C4_SDA_1V8 — I2C_TCON_SDA_CONN_1V8 42 80

C4534 27PF 5% 16V NP0_C0G 01005-1

FL4535 70-OHM-300MA 01005-1

45 6 IN I2C4_SCL_1V8 — I2C_TCON_SCL_CONN_1V8 42 80

C4535 27PF 5% 16V NP0_C0G 01005-1

HALL PWR FILTER

FL4548 80-OHM-25%-0.5A-0.13DCR 0201

84 25 PP1V8_S2 — PP1V8_S3_HALL_TCON_CONN 42 80

C454A 1.0UF 20% 6.3V X5R 0201-1

C454B 220PF 5% 16V C0G 01005

J517 BL CONN MLB SIDE 18+2 PIN B2B

FLEX APN: 516S00363
MLB APN: 516S00362
PACK_IGNORE=TRUE
PACK_OPTION=J517,J518

J4500
BM28P0.6-18DS-2-0.35V
F-ST-SM

19 20

80 71 42 OUT	LED_IO_10	1	2	LED_IO_9	OUT 42 71 80
80 71 42 OUT	LED_IO_3	3	4	LED_IO_8	OUT 42 71 80
80 71 42 OUT	LED_IO_4	5	6	LED_IO_7	OUT 42 71 80
80 71 42 OUT	LED_IO_5	7	8	LED_IO_6	OUT 42 71 80
80 71 42 OUT	LED_IO_12	9	10	LED_IO_0	OUT 42 71 80
80 71 42 OUT	LED_IO_13	11	12	LED_IO_1	OUT 42 71 80
80 71 42 OUT	LED_IO_14	13	14	LED_IO_2	OUT 42 71 80
80 71 42 OUT	LED_IO_15	15	16		
80 71 42 OUT	LED_IO_16	17	18		
J9 43 80 NC_PPLED_BACK_REG		21	22		

J522 EDP CONN MLB SIDE 39+2 PIN B2B

FLEX APN: 516S00359
MLB APN: 516S00358
PACK_OPTION=J522,J523

J4520
BM28P0.6-40DS-2-0.35V
F-ST-SM

42 41

80 79 43 42 BI	LPDP_AUX_EMI_CONN_P	GND_VOID=TRUE	2	1	
80 79 43 42 BI	LPDP_AUX_EMI_CONN_N	GND_VOID=TRUE	4	3	PP1V8_S3_HALL_TCON_CONN 42 80
			6	5	GPIO_APANEL_HALL_TO_PMU_IRQ_L OUT 42 64 80
43 42 IN	LPDP_DATA_EMI_CONN_P<0>	GND_VOID=TRUE	8	7	
43 42 IN	LPDP_DATA_EMI_CONN_N<0>	GND_VOID=TRUE	10	9	
			12	11	I2C_TCON_SCL_CONN_1V8 42 80
43 42 IN	LPDP_DATA_EMI_CONN_P<1>	GND_VOID=TRUE	14	13	I2C_TCON_SDA_CONN_1V8 42 80
43 42 IN	LPDP_DATA_EMI_CONN_N<1>	GND_VOID=TRUE	16	15	LPDP_HPD_EMI_1V8 OUT 42 43 80
			18	17	SYSTEM_TO_TCON_FORCE_PWM_1V8 42 80
43 42 IN	LPDP_DATA_EMI_CONN_P<2>	GND_VOID=TRUE	20	19	NC TCON BYSNC 1 NOT USED, NC FOR NOW
43 42 IN	LPDP_DATA_EMI_CONN_N<2>	GND_VOID=TRUE	22	21	
			24	23	VCOM_LCD_TO_GRAPE OUT 23 42 80
43 42 IN	LPDP_DATA_EMI_CONN_P<3>	GND_VOID=TRUE	26	25	
43 42 IN	LPDP_DATA_EMI_CONN_N<3>	GND_VOID=TRUE	28	27	GPIO_PMU_TO_LCD_PWREN_1V8 IN 42 43 45 72 80
80 45 43 42	PPVCC_MAIN_LCD_SW_CONN		30	29	
			32	31	PPVCC_MAIN_LCD_SW_CONN 42 43 45 80
			34	33	
			36	35	
			38	37	
			40	39	
			44	43	

J517 EDP CONN MLB SIDE 46+2 PIN B2B

PACK_IGNORE=TRUE
PACK_OPTION=J517,J518
FLEX APN: 516S00365
MLB APN: 516S00364

J4520
BM28P0.6-46DS-0.35V
F-ST-SM1

80 45 43 42 PPVCC_MAIN_LCD_SW_CONN — 47 48 — PPVCC_MAIN_LCD_SW_CONN 42 43 45 80

			1	2	
			3	4	
			5	6	
			7	8	
			9	10	
			11	12	
80 42	PP1V8_S3_HALL_TCON_CONN		13	14	
80 64 42 OUT	GPIO_APANEL_HALL_TO_PMU_IRQ_L		15	16	VCOM_LCD_TO_GRAPE OUT 23 42 80
			17	18	
			19	20	GND_VOID=TRUE LPDP_DATA_EMI_CONN_P<0> IN 42 43
			21	22	GND_VOID=TRUE LPDP_DATA_EMI_CONN_N<0> IN 42 43
			23	24	
			25	26	GND_VOID=TRUE LPDP_DATA_EMI_CONN_P<1> IN 42 43
			27	28	GND_VOID=TRUE LPDP_DATA_EMI_CONN_N<1> IN 42 43
			29	30	
80 72 45 43 42 IN	GPIO_PMU_TO_LCD_PWREN_1V8		31	32	GND_VOID=TRUE LPDP_DATA_EMI_CONN_P<2> IN 42 43
80 42	SYSTEM_TO_TCON_FORCE_PWM_1V8		33	34	GND_VOID=TRUE LPDP_DATA_EMI_CONN_N<2> IN 42 43
	TCON BYSNC 1 NOT USED, NC FOR NOW	NC	35	36	
80 43 42 OUT	LPDP_HPD_EMI_1V8		37	38	GND_VOID=TRUE LPDP_DATA_EMI_CONN_P<3> IN 42 43
			39	40	GND_VOID=TRUE LPDP_DATA_EMI_CONN_N<3> IN 42 43
80 42	I2C_TCON_SDA_CONN_1V8		41	42	
80 42	I2C_TCON_SCL_CONN_1V8		43	44	GND_VOID=TRUE LPDP_AUX_EMI_CONN_P IO 42 43 79 80
			45	46	GND_VOID=TRUE LPDP_AUX_EMI_CONN_N IO 42 43 79 80
			49	50	

LED DRIVER FILTERS

80 71 42 LED_IO_12	C4512 100PF 5% 50V C0G 0201	C4513 100PF 5% 50V C0G 0201	C4514 100PF 5% 50V C0G 0201	C4515 100PF 5% 50V C0G 0201
80 71 42 LED_IO_13				
80 71 42 LED_IO_14				
80 71 42 LED_IO_15				
80 71 42 LED_IO_0	C4502 100PF 5% 50V C0G 0201	C4503 100PF 5% 50V C0G 0201	C4504 100PF 5% 50V C0G 0201	C4505 100PF 5% 50V C0G 0201
80 71 42 LED_IO_1				
80 71 42 LED_IO_2				
80 71 42 LED_IO_3				
71 42 80 LED_IO_6	C4508 100PF 5% 50V C0G 0201	C4509 100PF 5% 50V C0G 0201	C4510 100PF 5% 50V C0G 0201	C4511 100PF 5% 50V C0G 0201
71 42 80 LED_IO_7				
71 42 80 LED_IO_8				
71 42 80 LED_IO_9				
71 42 80 LED_IO_4	C4526 100PF 5% 50V C0G 0201	C4523 100PF 5% 50V C0G 0201	C4524 100PF 5% 50V C0G 0201	C4525 100PF 5% 50V C0G 0201
71 42 80 LED_IO_10				
71 42 80 LED_IO_16				
71 42 80 LED_IO_5				

PACK_IGNORE=TRUE PACK_OPTION=J517,J518 (repeated for each LED filter)

BOM_COST_GROUP=DISPLAY

SYNC_MASTER=J523 MLB_E_0_4 — SYNC_DATE=05/09/2023

PAGE TITLE

DISPLAY: B2B CONN

EDP CONNECTOR SUPPORT

PP1V8_S2
C4653 0.1UF 10% 16V X5R-CERM 0201
R4654 10K 5% 1/32W MF 01005
R4652 10K 5% 1/32W MF 01005
SILEGO DELAY ELEMENT
QUIESCENT CURRENT : 0.5 UA
343S00293
U4601
SLG4AP41158
STQFN
VDD
SL_DEL
SL_DEL0
SL_DEL1
SL_DEL2
SL_DEL3
SL_DEL_0
NC
GND
GPIO_PMU_TO_LCD_PWREN_1V8
SL_DEL0
SL_DEL1
SL_DEL2
SL_DEL3
R4651 10K 5% 1/32W MF 01005
R4657 10K 5% 1/32W MF 01005
R4605 100K 5% 1/32W MF 01005
GPIO_PMU_TO_LCD_PWREN_DELAY
PPVCC_MAIN
C4640 0.1UF 10% 16V X5R-CERM 0201
OMIT_TABLE
353S4272
U4600
SLG5AP1423V
TFN
VDD
CAP
ON
D
S
GND
SL_CAP
C4670 4700PF 10% 25V CER-X5R 0201
C4641 0.1UF 10% 16V X5R-CERM 0201
PPVCC_MAIN_LCD_SW
R4601 51.1K 1% 1/32W MF 01005
C4603 0.1UF 10% 16V X5R-CERM 0201
C4602 10UF 20% 6.3V CERM-X5R 0402-9
C4630 100PF 5% 25V C0G-CERM 01005
L4601
FERR-22OHM-28%-8A
0603
PPVCC_MAIN_LCD_SW_CONN
C4631 330PF 2% 25V NPO-COG 0201
C4632 330PF 2% 25V NPO-COG 0201
C4633 6.8UF 20% 6.3V X5R 0402
C4634 6.8UF 20% 6.3V X5R 0402
R4680 1.00M 01005 GND_VOID=TRUE
LPDP_DATA_EMI_CONN_N<0>
R4681 1.00M 01005 GND_VOID=TRUE
LPDP_DATA_EMI_CONN_P<0>
R4682 1.00M 01005 GND_VOID=TRUE
LPDP_DATA_EMI_N<1>
R4683 1.00M 01005 GND_VOID=TRUE
LPDP_DATA_EMI_P<1>
R4684 1.00M 01005 GND_VOID=TRUE
LPDP_DATA_EMI_CONN_N<2>
R4685 1.00M 01005 GND_VOID=TRUE
LPDP_DATA_EMI_CONN_P<2>
R4686 1.00M 01005 GND_VOID=TRUE
LPDP_DATA_EMI_N<3>
R4687 1.00M 01005 GND_VOID=TRUE
LPDP_DATA_EMI_P<3>
LPDP_SOC_TO_TCON_AUX_P
LPDP_SOC_TO_TCON_AUX_N
C4650 0.1UF 01005 6.3V 20% X5R-CERM
C4651 0.1UF 01005 6.3V 20% X5R-CERM
LPDP_AUX_EMI_P
LPDP_AUX_EMI_N
R4641 100K 5% 1/32W MF 01005
R4643 100K 5% 1/32W MF 01005
L4642 NOSTUFF
3.25-OHM-0.1A-2.4GHZ
TAM0605-4SM-COMBO
CRITICAL
SYM_VER-2
LPDP_AUX_EMI_CONN_P
LPDP_AUX_EMI_CONN_N
LPDP_SOC_TO_TCON_DATA_N<0>
LPDP_SOC_TO_TCON_DATA_P<0>
C4643 0.1UF 01005 6.3V 20% X5R-CERM
C4642 0.1UF 01005 6.3V 20% X5R-CERM
LPDP_DATA_EMI_N<0>
LPDP_DATA_EMI_P<0>
L4612
3.25-OHM-0.1A-2.4GHZ
TAM0605-4SM-COMBO
CRITICAL
OMIT_TABLE
LPDP_DATA_EMI_CONN_N<0>
LPDP_DATA_EMI_CONN_P<0>
LPDP_SOC_TO_TCON_DATA_N<1>
LPDP_SOC_TO_TCON_DATA_P<1>
C4644 0.1UF 01005 6.3V 20% X5R-CERM
C4645 0.1UF 01005 6.3V 20% X5R-CERM
LPDP_DATA_EMI_N<1>
LPDP_DATA_EMI_P<1>
L4622
3.25-OHM-0.1A-2.4GHZ
TAM0605-4SM-COMBO
CRITICAL
OMIT_TABLE
LPDP_DATA_EMI_CONN_N<1>
LPDP_DATA_EMI_CONN_P<1>
LPDP_SOC_TO_TCON_DATA_N<2>
LPDP_SOC_TO_TCON_DATA_P<2>
C4646 0.1UF 01005 6.3V 20% X5R-CERM
C4647 0.1UF 01005 6.3V 20% X5R-CERM
LPDP_DATA_EMI_N<2>
LPDP_DATA_EMI_P<2>
L4632
3.25-OHM-0.1A-2.4GHZ
TAM0605-4SM-COMBO
CRITICAL
OMIT_TABLE
LPDP_DATA_EMI_CONN_N<2>
LPDP_DATA_EMI_CONN_P<2>
LPDP_SOC_TO_TCON_DATA_N<3>
LPDP_SOC_TO_TCON_DATA_P<3>
C4648 0.1UF 01005 6.3V 20% X5R-CERM
C4649 0.1UF 01005 6.3V 20% X5R-CERM
LPDP_DATA_EMI_N<3>
LPDP_DATA_EMI_P<3>
L4602
3.25-OHM-0.1A-2.4GHZ
TAM0605-4SM-COMBO
CRITICAL
OMIT_TABLE
LPDP_DATA_EMI_CONN_N<3>
LPDP_DATA_EMI_CONN_P<3>
LPDP_HPD_EMI_1V8
R4690 49.9K 1% 1/32W MF 01005
LPDP_TCON_TO_SOC_HPD
R4691 100K 5% 1/32W MF 01005
NC_PPLED_OUT
L4680
FERR-600OHM-25%-0.5A-0.34OHM
0402
PACK_IGNORE=TRUE
PACK_OPTION=J517,J518
NC_PPLED_BACK_REG
C4680 12PF 2% 100V CERM 0201
C4681 220PF 2% 50V C0G 0201

PART#	QTY	DESCRIPTION	REFERENCE DESIGNATOR(S)	CRITICAL	BOM OPTION
155S0897	4	CMC,DISPLAY DESENSE	L4602,L4612,L4622,L4632	CRITICAL	
353S00764	1	IC,SLG5AP1445,PWR SW,GREENFET3,4A,TDFN8	U4600	CRITICAL	J522&J523
353S4272	1	IC,SLG5AP1423V,PWR SW,GREENFET3,4A,TDFN8	U4600	CRITICAL	J517&J518

J52X USES ACTIVE DISCHARGE VARIANT OF SILEGO LOAD SWITCH

PART NUMBER	ALTERNATE FOR PART NUMBER	BOM OPTION	REF DES	COMMENTS:
155S00512	155S0897		L4602,ETC.	CMC MURATA

LAYOUT NOTE:
PUT THERMAL VIAS AROUND U4600 IN CASE OF SHORTED CONDITION

FALLING EDGE CONFIG

SL_DEL0 - LOW , SL_DEL1 - LOW	N/A
SL_DEL0 - LOW , SL_DEL1 - HIGH	50 MS
SL_DEL0 - HIGH, SL_DEL1 - LOW	75 MS
SL_DEL0 - HIGH, SL_DEL1 - HIGH	100 MS

MIN OFF TIME

SL_DEL2 - LOW , SL_DEL3 - LOW	N/A
SL_DEL2 - LOW , SL_DEL3 - HIGH	50 MS
SL_DEL2 - HIGH, SL_DEL3 - LOW	100 MS
SL_DEL2 - HIGH, SL_DEL3 - HIGH	150 MS

NOTE: COMMON MODE CHOKES ARE NOSTUFFED AND 2X ZERO OHMS (ON A DIFFERENT PAGE) ARE STUFFED TO TEST WITHOUT A COMMON MODE CHOKE.

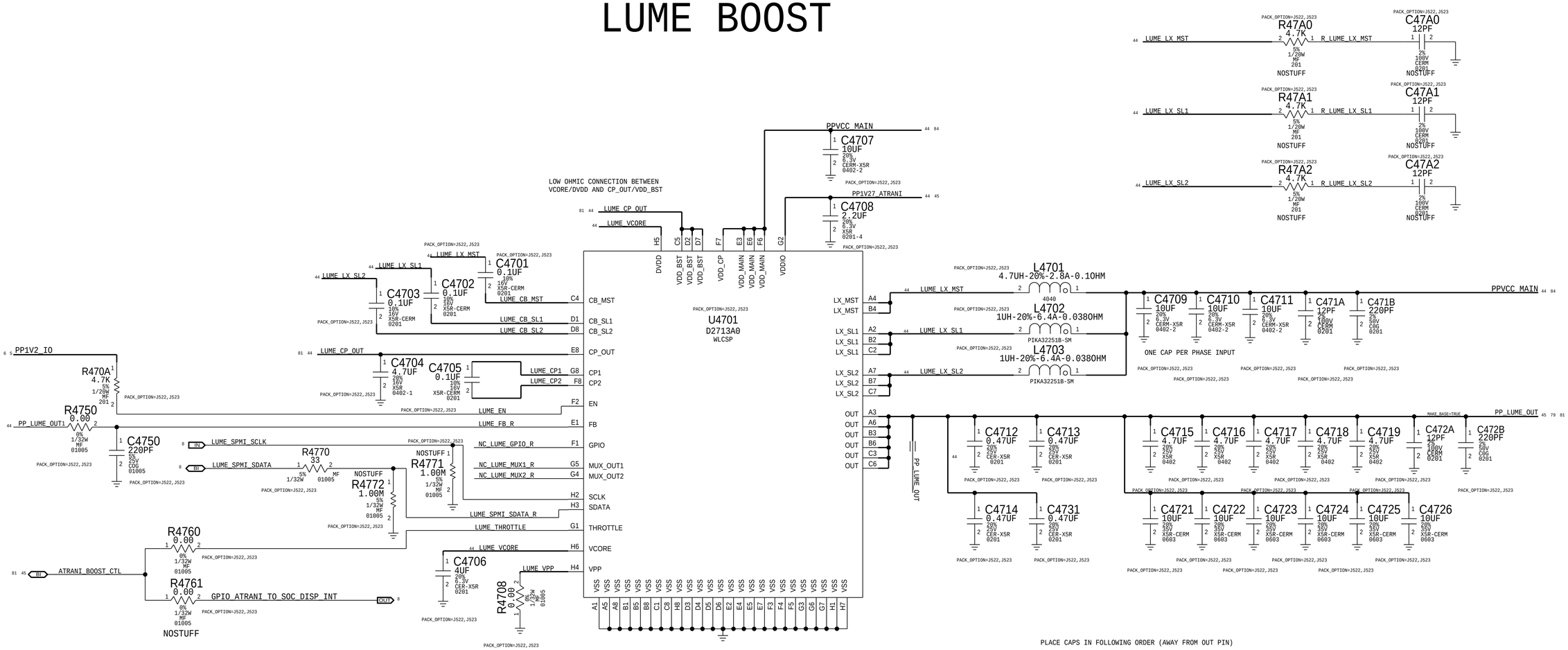
BOM_COST_GROUP=DISPLAY

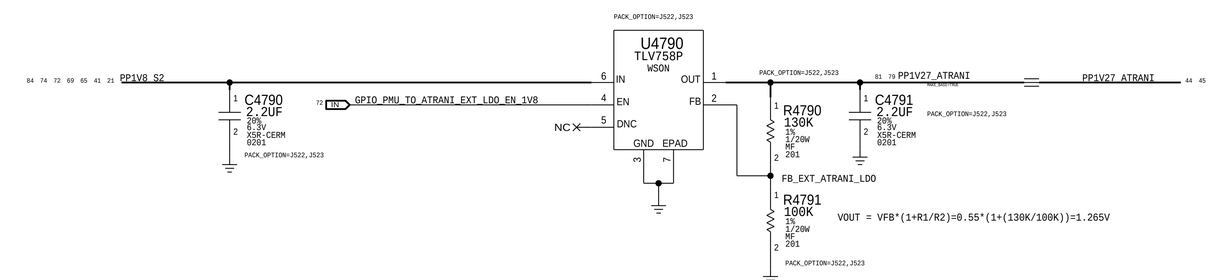
SYNC_MASTER=J523_MLB_9.0.0 SYNC_DATE=09/09/2020

PAGE TITLE

DISPLAY: EDP SUPPORT

LUME BOOST





BOM_COST_GROUP=DISPLAY

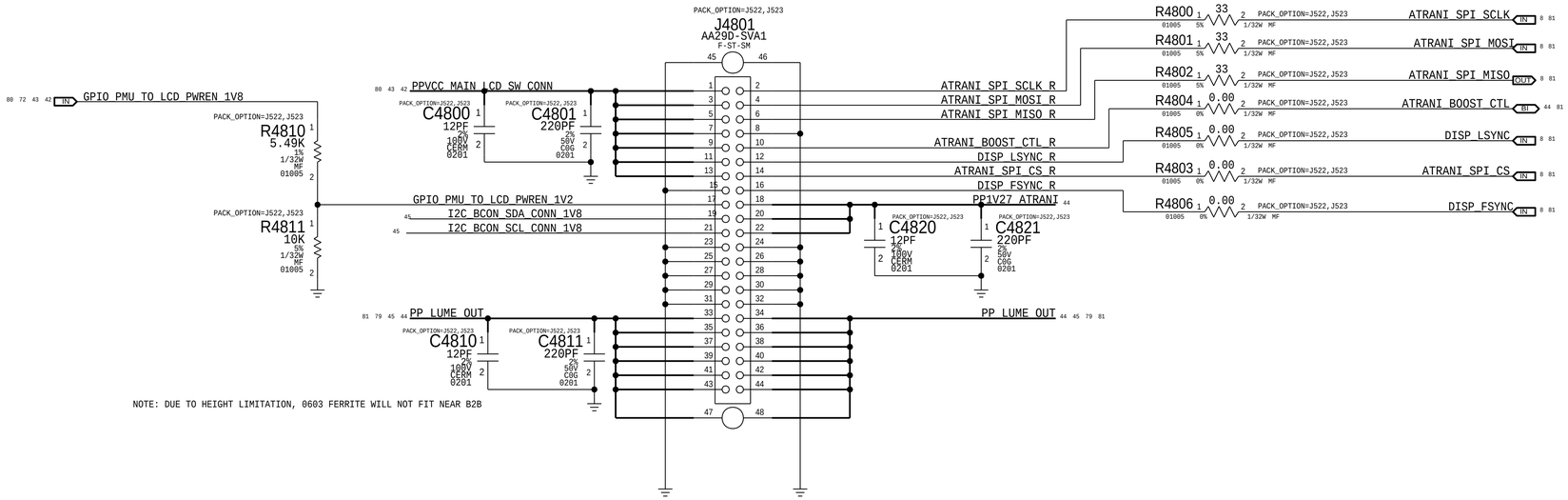
SYNC_MASTER=J523_MLB_3-0-0 SYNC_DATE=09/09/2020

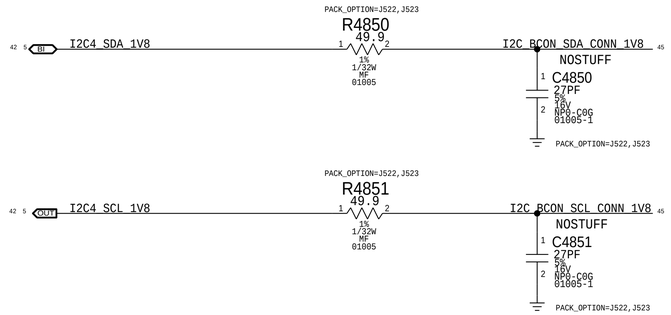
PAGE TITLE

2DBL: LUME BOOST

BCON B2B CONN

APN:516S00222
MATING APN: 516S00223





BOM_COST_GROUP=DISPLAY

SYNC_MASTER=J523_MLB_X-X-X SYNC_DATE=09/09/2020

PAGE TITLE

2DBL: B2B CONN

2G CORE0

PART#	QTY	DESCRIPTION	REFERENCE DESIGNATOR(S)	CRITICAL	BOM OPTION
131S0648	1	CAP,0.3PF,+/-0.05PF,16V,01005	C466_W	CRITICAL	J523

2G CORE1

PART#	QTY	DESCRIPTION	REFERENCE DESIGNATOR(S)	CRITICAL	BOM OPTION
152S01247	1	IND,FILM,1NH,+/-0.05NH,01005	R473_W	CRITICAL	J523
131S0648	1	CAP,0.3PF,+/-0.05PF,16V,01005	C476_W	CRITICAL	J523
117S0161	1	RES,MF,0 OHM,1/32W,01005	R473_W	CRITICAL	J522

RFFE

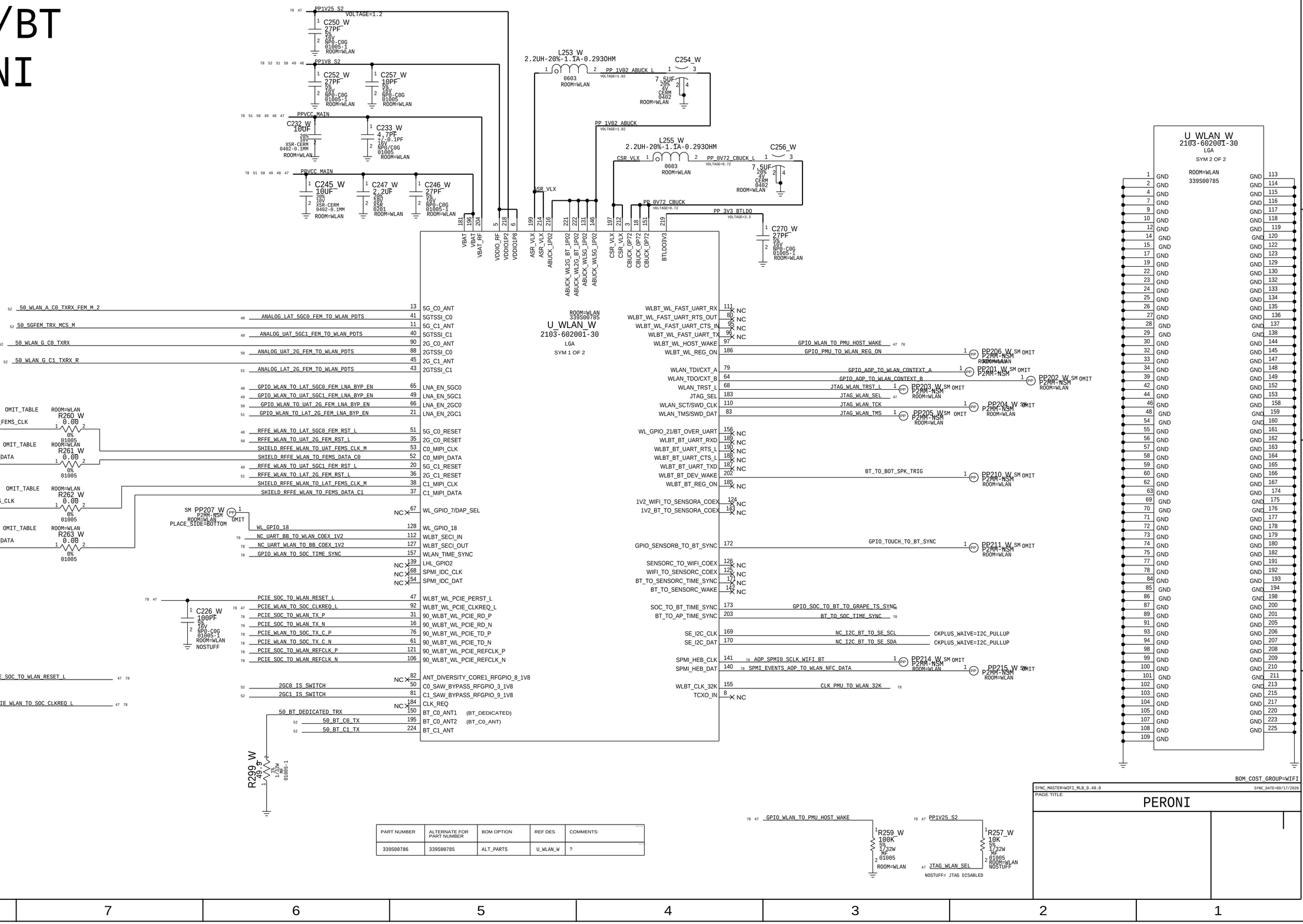
PART#	QTY	DESCRIPTION	REFERENCE DESIGNATOR(S)	CRITICAL	BOM OPTION
117S0182	1	RES,MF,22 OHM,5%,1/32W,01005	R260_W	CRITICAL	J523
117S0182	1	RES,MF,22 OHM,5%,1/32W,01005	R261_W	CRITICAL	J523
117S0182	1	RES,MF,22 OHM,5%,1/32W,01005	R262_W	CRITICAL	J523
117S0182	1	RES,MF,22 OHM,5%,1/32W,01005	R263_W	CRITICAL	J523
117S0161	1	RES,MF,0 OHM,1/32W,01005	R260_W	CRITICAL	J522
117S0161	1	RES,MF,0 OHM,1/32W,01005	R261_W	CRITICAL	J522
117S0161	1	RES,MF,0 OHM,1/32W,01005	R262_W	CRITICAL	J522
117S0161	1	RES,MF,0 OHM,1/32W,01005	R263_W	CRITICAL	J522

SYNC_MASTER=WIFI_MLB_0.49.0 BOM_COST_GROUP=WIFI SYNC_DATE=09/17/2020

PAGE TITLE

WiFi BOM Options

WIFI/BT
PERONI



PART NUMBER	ALTERNATE FOR PART NUMBER	BOM OPTION	REF DES	COMMENTS:
339S00786	339S00785	ALT_PARTS	U_WLAN_W	?

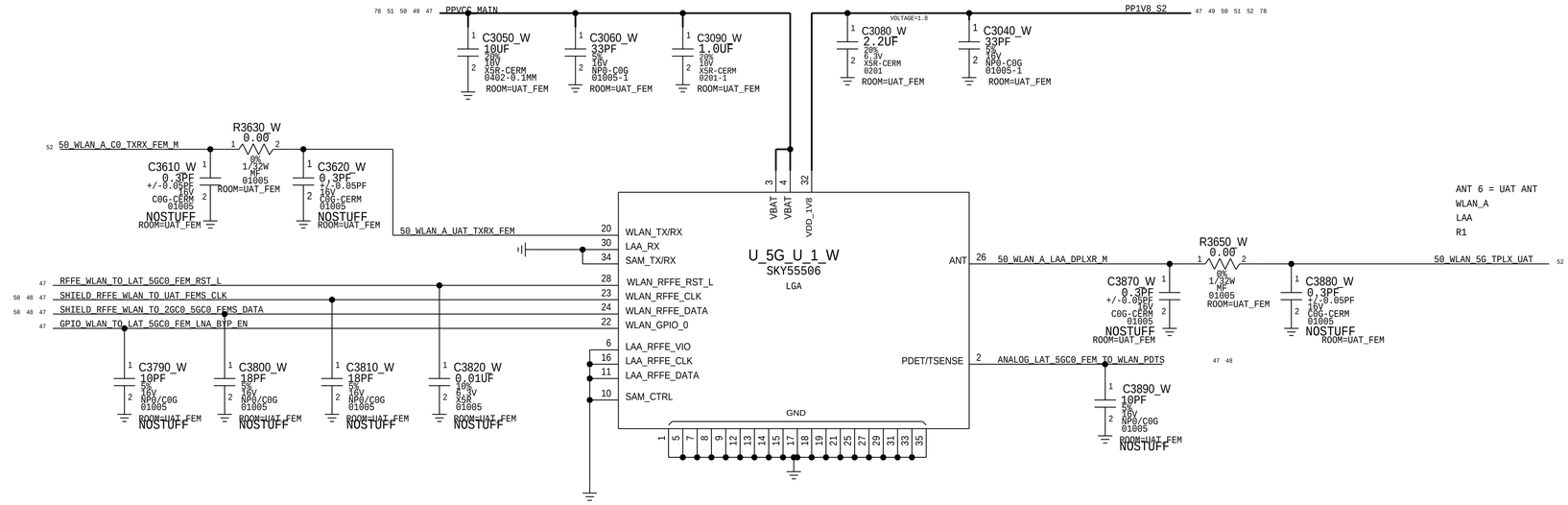
BOM_COST_GROUP=WIFI

SYNC_MASTER=WIFI_MLB_0.49.0 SYNC_DATE=09/17/2020

PAGE TITLE

PERONI

J522 UAT 5GHZ RFEM

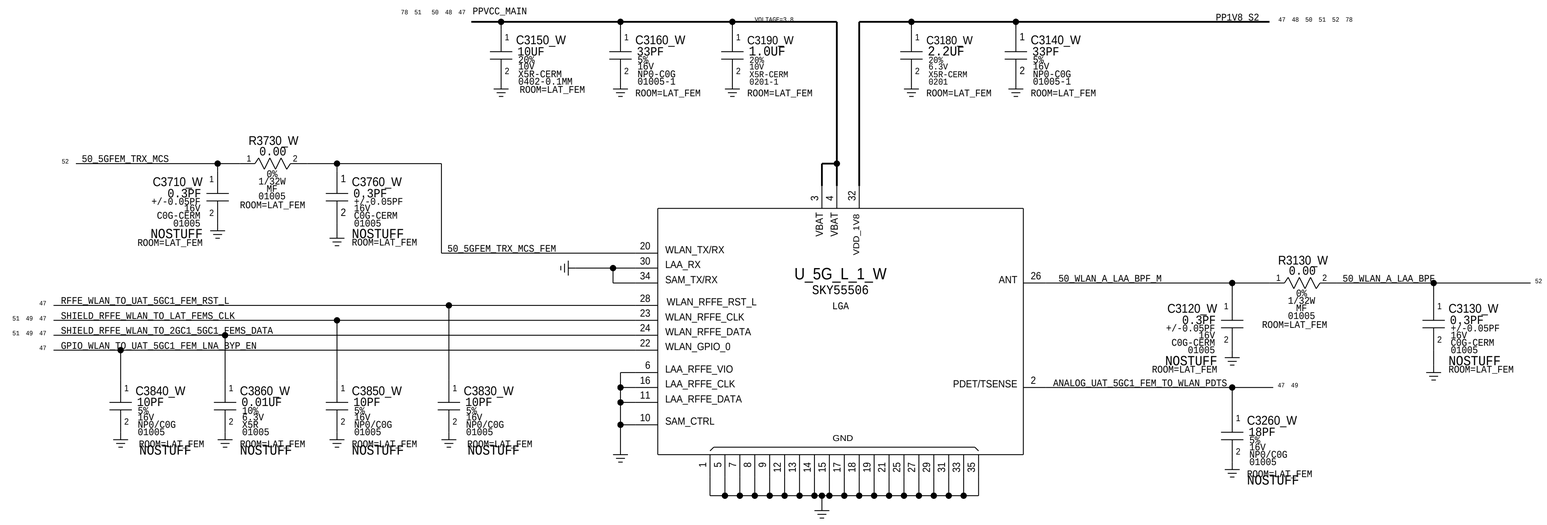


SYNC_MASTER=WIFI_MLB_0.**B0M**2 COST_GROUP=WIFI SYNC_DATE=09/17/2020

PAGE TITLE

J522 5G rFEM (UAT)

J522 LAT 5GHZ RFEM



OMIT_SMT PP2080_W P2MM-NSM ROOM=WLAN (PP) 1 — ANALOG_UAT_5GC1_FEM_TO_WLAN_PDTS 47 49

OMIT_SMT PP2200_W P2MM-NSM ROOM=WLAN (PP) 1 — SHIELD_RFFE_WLAN_TO_LAT_FEMS_CLK 47 49 51

OMIT_SMT PP2210_W P2MM-NSM ROOM=WLAN (PP) 1 — SHIELD_RFFE_WLAN_TO_2GC1_5GC1_FEMS_DATA 47 49 51

SYNC_MASTER=WIFI_MLB_0.BOM COST_GROUP=WIFI SYNC_DATE=09/17/2020

PAGE TITLE

J522 5G rFEM (LAT)

UAT 2.4 GHZ RFEM

OMIT_SM PP216_W P2MM-NSM ROOM=WLAN
PP
1
ANALOG_UAT_2G_FEM_TO_WLAN_PDTS
47 50

78 51 49 48 47 PPVCC_MAIN

C405_W 10UF ±20% 25V X5R-CERM 0402-0.1MM ROOM=UAT_FEM

C406_W 33PF ±5% 16V NP0-C0G 01005-1 ROOM=UAT_FEM

C407_W 1.0UF ±20% 16V X5R-CERM 0201-1 ROOM=UAT_FEM

C408_W 2.2UF ±20% 6.3V X5R-CERM 0201 ROOM=UAT_FEM

C404_W 33PF ±5% 16V NP0-C0G 01005-1 ROOM=UAT_FEM

VOLTAGE=1.8 PP1V8_S2 47 48 49 51 52 78

52 50_WLAN_G_C0_TXRX_FEM_M

R463_W 0.00 ±0% 1/32W MF 01005 ROOM=UAT_FEM

50_WLAN_G_UAT_TXRX_FEM

C461_W 0.3PF ±0.05PF 16V C0G-CERM 01005 NOSTUFF ROOM=UAT_FEM

C466_W 0.3PF ±0.05PF 16V C0G-CERM 01005 OMIT_TABLE ROOM=UAT_FEM

47 RFFE_WLAN_TO_UAT_2G_FEM_RST_L

48 47 SHIELD_RFFE_WLAN_TO_UAT_FEMS_CLK

48 47 SHIELD_RFFE_WLAN_TO_2GC0_5GC0_FEMS_DATA

47 GPIO_WLAN_TO_UAT_2G_FEM_LNA_BYP_EN

C479_W 10PF ±5% 16V NP0/C0G 01005 ROOM=UAT_FEM NOSTUFF

C480_W 10PF ±5% 16V NP0/C0G 01005 ROOM=UAT_FEM NOSTUFF

C481_W 10PF ±5% 16V NP0/C0G 01005 ROOM=UAT_FEM NOSTUFF

C482_W 10PF ±5% 16V NP0/C0G 01005 ROOM=UAT_FEM NOSTUFF

U_2G_U_W MDFEGYFB-132 LGA ROOM=UAT_FEM 353S02415

22 WLAN_TX/RX
48 WLAN_RFFE_RST*
40 WLAN_RFFE_CLK
47 WLAN_RFFE_DATA
33 WLAN_GPIO_0
41 USID
GND
1 2 3 4 5 6 7 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 29 30 31 32 34 35 36 37 38 39 43 46 49

VBAT 44
VBAT 45
VDD_1V8 42

ANT 28 50_WLAN_G_BT_ANT4_NPLXR1

C499_W 0.3PF ±0.05PF 16V C0G-CERM 01005 NOSTUFF ROOM=UAT_FEM

R496_W 0.00 ±0% 1/32W MF 01005 ROOM=UAT_FEM

50_TRX_WLAN24_TO_ANT4A 52

C498_W 0.3PF ±0.05PF 16V C0G-CERM 01005 NOSTUFF ROOM=UAT_FEM

PDET/TSENSE 8 ANALOG_UAT_2G_FEM_TO_WLAN_PDTS 47 50

C491_W 10PF ±5% 16V NP0/C0G 01005 NOSTUFF ROOM=UAT_FEM

BOM_COST_GROUP=WIFI

SYNC_MASTER=WIFI_MLB_0.49.0 SYNC_DATE=09/17/2020

PAGE TITLE

2G4 rFEM (UAT)

LAT 2.4 GHZ RFEM

OMIT SM PP217_W
P2MM-NSM
ROOM=WLAN
PP
1
ANALOG_LAT_2G_FEM_TO_WLAN_PDTS
47 51

78 50 49 48 47 PPVCC_MAIN

C415_W
10UF
20%
10V
X5R-CERM
0402-0.1MM
ROOM=LAT_FEM

C416_W
33PF
5%
16V
NP0-C0G
01005-1
ROOM=LAT_FEM

C417_W
1.0UF
20%
10V
X5R-CERM
0201-1
ROOM=LAT_FEM

VOLTAGE=1.8
PP1V8_S2
47 48 49 50 52 78

C418_W
2.2UF
20%
6.3V
X5R-CERM
0201
ROOM=LAT_FEM

C414_W
33PF
5%
16V
NP0-C0G
01005-1
ROOM=LAT_FEM

R473_W
1NH-+/-0.05NH-0.9A
01005
OMIT TABLE
ROOM=LAT_FEM

52 50_2GFEM_TRX_MCS

C471_W
0.3PF
+/-0.05PF
16V
C0G-CERM
01005
NOSTUFF
ROOM=LAT_FEM

50_WLAN_G_LAT_TXRX_FEM

C476_W
0.3PF
+/-0.05PF
16V
C0G-CERM
01005
OMIT TABLE
ROOM=LAT_FEM

44 45 42
VBAT
VBAT
VDD_1V8

22 WLAN_TX/RX

47 RFFE_WLAN_TO_LAT_2G_FEM_RST_L → 48 WLAN_RFFE_RST*

49 47 SHIELD_RFFE_WLAN_TO_LAT_FEMS_CLK → 40 WLAN_RFFE_CLK

49 47 SHIELD_RFFE_WLAN_TO_2GC1_5GC1_FEMS_DATA → 47 WLAN_RFFE_DATA

47 GPIO_WLAN_TO_LAT_2G_FEM_LNA_BYP_EN → 33 WLAN_GPIO_0

41 USID

ROOM=LAT_FEM
353S02415
U_2G_L_W
MDFEGYFB-132
LGA

GND

1 2 3 4 5 6 7 9 10 11 12 13 14 15 16 17 18 19 20 21 23 24 25 26 27 28 30 31 32 34 35 36 37 38 39 43 46 49

ANT 28 50_WLAN_G_BT_LAT

C489_W
0.3PF
+/-0.05PF
16V
C0G-CERM
01005
NOSTUFF
ROOM=LAT_FEM

R466_W
0.00
0%
1/32W
MF
01005
ROOM=LAT_FEM

50_TRX_WLAN24_TO_ANT2A 52

C490_W
0.3PF
+/-0.05PF
16V
C0G-CERM
01005
NOSTUFF
ROOM=LAT_FEM

PDET/TSENSE 8 ANALOG_LAT_2G_FEM_TO_WLAN_PDTS 47 51

C483_W
10PF
5%
16V
NP0/C0G
01005
ROOM=LAT_FEM
NOSTUFF

C484_W
10PF
5%
16V
NP0/C0G
01005
ROOM=LAT_FEM
NOSTUFF

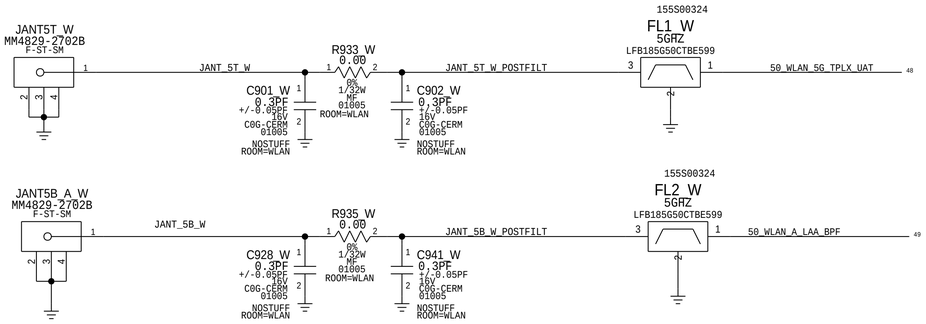
C485_W
10PF
5%
16V
NP0/C0G
01005
ROOM=LAT_FEM
NOSTUFF

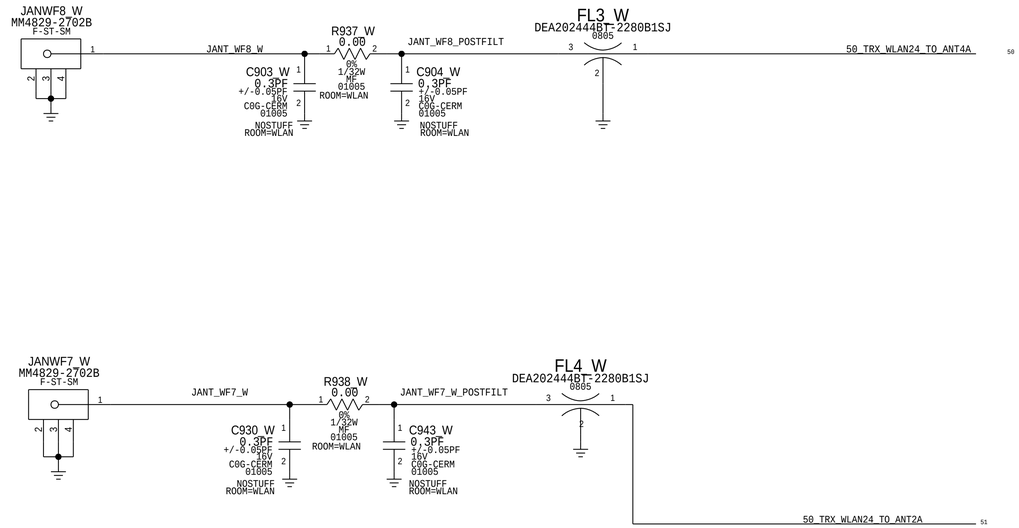
C486_W
10PF
5%
16V
NP0/C0G
01005
ROOM=LAT_FEM
NOSTUFF

C492_W
10PF
5%
16V
NP0/C0G
01005
NOSTUFF
ROOM=LAT_FEM

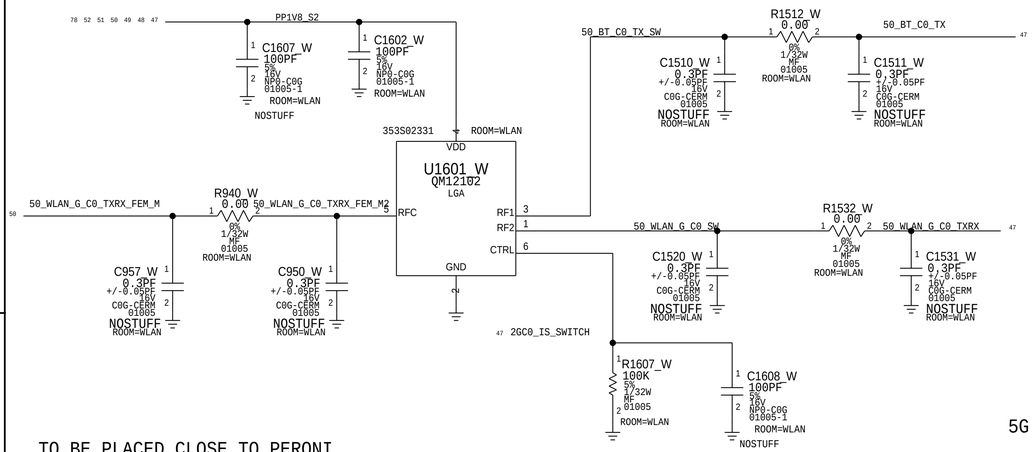
BOM_COST_GROUP=WIFI
SYNC_MASTER=WIFI_MLB_0.49.0
SYNC_DATE=09/17/2020
PAGE TITLE
2G4 rFEM (LAT)

J522 FRONT END

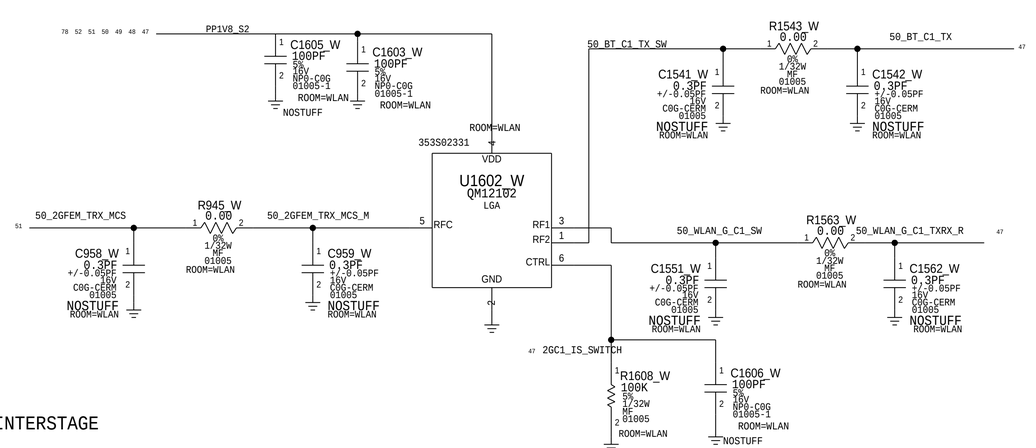




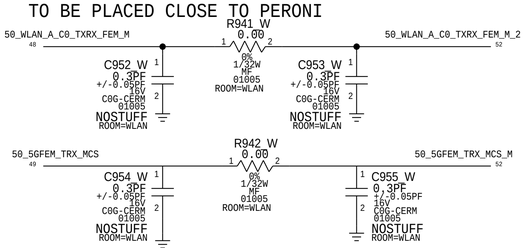
2G INTERSTAGE C0



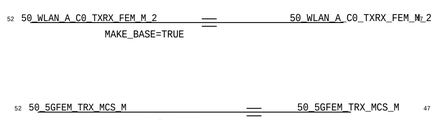
2G INTERSTAGE C1



TO BE PLACED CLOSE TO PERONI



5G INTERSTAGE

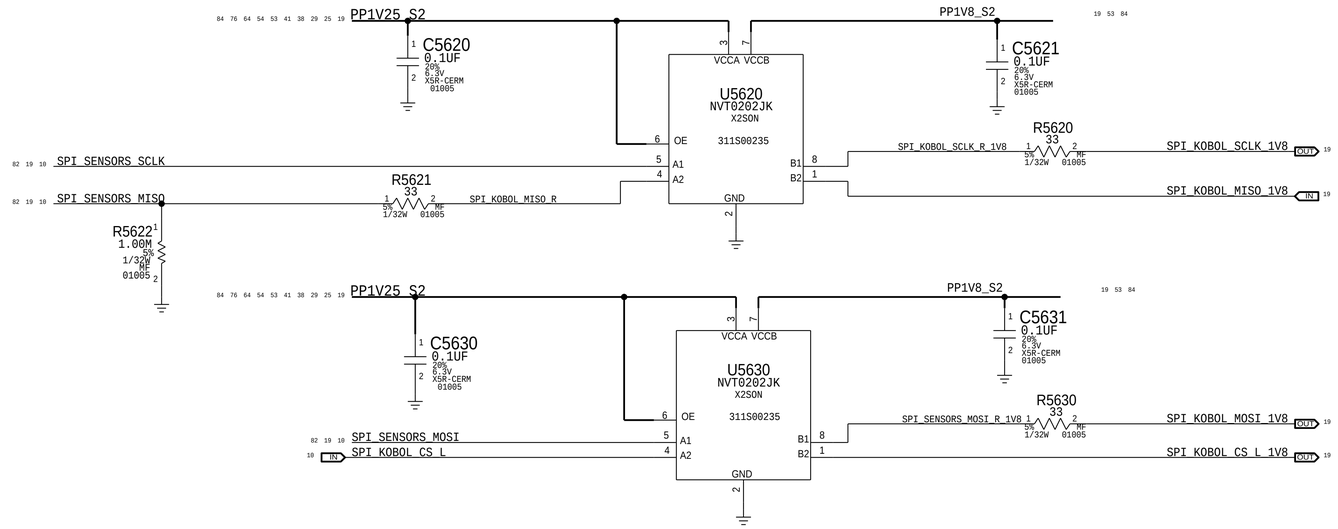


SYNC_MASTER=WIFI_MLB_0.49.00M_COST_GROUP=WIFI
SYNC_DATE=09/17/2020

PAGE TITLE

J522 Front End

KOBOL VOLTAGE TRANSLATION



BOM_COST_GROUP=SENSORS

SYNC_MASTER=2023_MLB_3.0.0 SYNC_DATE=09/09/2020

PAGE TITLE

SENSOR: KOBOL VT

LDCM

PART NUMBER	ALTERNATE FOR PART NUMBER	BOM OPTION	REF DES	COMMENTS:
138S0914	138S00109		C5930	2.2UF 6.3V 0201 MUR.

PDM attenuation

DC Bias

IN AOP_TO_LDCM_DATA0_PDM

CRITICAL R5930 0.00 0% 1/32W MF 01005

LDCM_AMP_ATN

R5931 750 1% 1/32W MF 01005 NOSTUFF CRITICAL

C5930 2.2UF 20% 6.3V CER-X5R 0201

LDCM_VSTIM_DECOUPLED

84 54 PP1V8_LDCM

C5931 0.1UF 20% 6.3V X5R-CERM 01005

CRITICAL R5932 50K 1% 1/32W MF 01005

CRITICAL R5933 50K 1% 1/32W MF 01005

CRITICAL R5934 82K 1% 1/32W MF 01005

LDCM_VSTIM_FB

C5933 680PF 10% 16V X5R 01005

CRITICAL R5935 360K 1% 1/20W TK 01005

LDCM_VSTIM_IN

C5932 200PF 5% 16V CERM 01005

U5930 MAX44290ANT BGA SHDN

PP1V8_LDCM

C5934 0.1UF 20% 6.3V X5R-CERM 01005

LDCM_VSTIM_POS

PP1V25_S2

C5900 0.1UF 20% 6.3V X5R-CERM 01005

PP1V8_LDCM

C5901 0.1UF 20% 6.3V X5R-CERM 01005

R5900 0.00 0% 1/32W MF 01005

U5900 FAN38522UCX WLCSP VDDIO VDD 353S02530

CH.1, DATA AFTER RISING EDGE

CH.2, DATA AFTER FALLING EDGE

FAN_LDCM_SEL

IN1 IN2 SEL GND CLK DATA NC

CLK_AOP_TO_LDCM_PDM_R

LDCM_TO_AOP_DATA1_PDM_R

NC

84 54 36 PP3V3_S2_ACE_PARROT

C5950 0.1UF 20% 6.3V X5R-CERM 01005

U5950 FSUSB242 WLCSP VDD GND SEL HSD1+ HSD1- HSD2+ HSD2- HSD+ HSD-

ANA_LDCM_ZREF

ANA_LDCM_TRACE1

LDCM_DEBUG_IN

CRITICAL R5940 4.99K 1% 1/32W MF 01005

LDCM_DEBUG_IN_R

CRITICAL R5941 200K 1% 1/32W MF 01005

C5941 10UF 20% 10V X5R 0402-0.1MM 138S00123

84 54 PP1V8_LDCM

C5942 0.1UF 20% 6.3V X5R-CERM 01005

LDCM_TIA_IN

LDCM_VSTIM_POS

U5940 MAX44290ANT BGA SHDN

PP1V8_LDCM

LDCM_TIA_IOUT_POS

R5942 12.4K 1% 1/32W MF 01005 CRITICAL

C5943 5PF +/-0.1PF 16V C0G 01005

R5943 3.01M 1% 1/32W TK 01005

53 41 38 29 25 10 84 76 64 54 PP1V25_S2

117S0164 R5980 47.0K 5% 1/32W MF 01005

GPIO_LDCM_TO_AOP_INVALID

72 IN GPIO_PMU_TO_LDCM_MUX_SEL0

84 54 36 PP3V3_S2_ACE_PARROT

C5960 0.1UF 20% 6.3V X5R-CERM 01005

U5960 FSUSB242 WLCSP VDD GND SEL HSD1+ HSD1- HSD2+ HSD2- HSD+ HSD-

ANA_LDCM_TRACE2

ANA_LDCM_DEBUG

LDCM_SELF_TEST_R

118S00053 R5970 24.9K 1% 1/32W MF 01005

72 IN GPIO_PMU_TO_LDCM_MUX_SEL1

81 36 ANA_ACE2LDCM_DEBUG4

R5962 200 1% 1/20W MF 201

ANA_LDCM_DEBUG

81 36 ANA_ACE2LDCM_DEBUG5

R5963 200 1% 1/20W MF 201

81 54 35 ANA_LDCM_TRACE1

NOSTUFF R5950 0.00 0% 1/32W MF 01005

LDCM_DEBUG_IN

54 ANA_LDCM_ZREF

118S00049 R5961 5.49K 1% 1/32W MF 01005

NOSTUFF C5961 0.1UF 20% 6.3V X5R-CERM 01005

54 CLK_AOP_TO_LDCM_PDM_R

R5902 0.00 0% 1/32W MF 01005

CLK_AOP_TO_LDCM_PDM IN 10

54 LDCM_TO_AOP_DATA1_PDM_R

R5903 0.00 0% 1/32W MF 01005

LDCM_TO_AOP_DATA1_PDM OUT 10

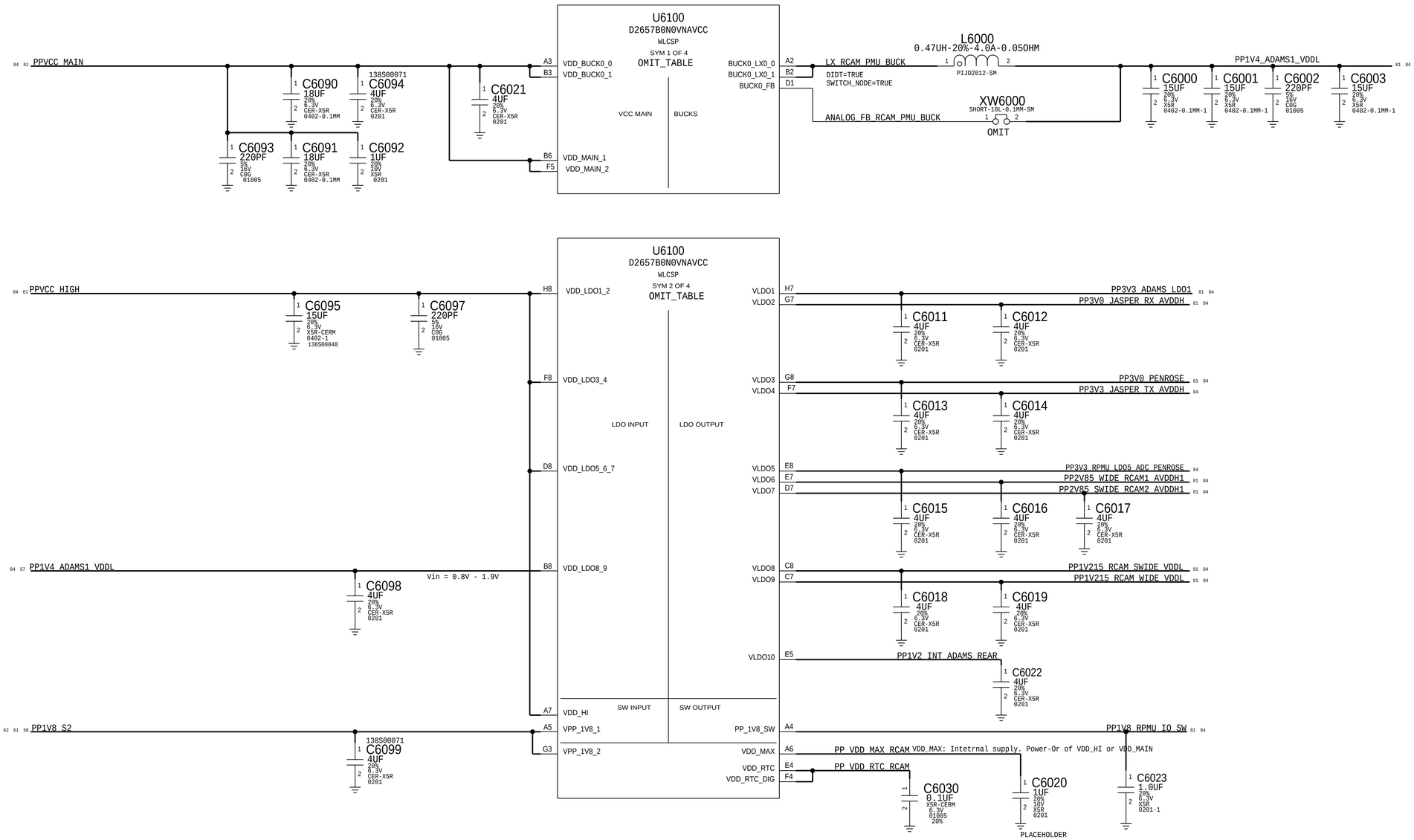
BOM_COST_GROUP=USB-C

PAGE TITLE

LDCM

PART NUMBER	ALTERNATE FOR PART NUMBER	REFERENCE DESIGNATOR(S)	DESCRIPTION	BOM OPTION
152S00992	152S00985	L6000	0.47UH 4A 2012 TAIYO	

RCAM ADAMS PMU



BOM_COST_GROUP=CAMERA

PAGE TITLE

CAMERA: ADAMS REAR POWER (1/2)

RCAM ADAMS PMU IO

PP1V8_RPMU_IO_SW

R6132 1.00K 5% 1/32W MF 01005
R6131 1.00K 5% 1/32W MF 01005
R6122 1.00K 5% 1/32W MF 01005
R6121 1.00K 5% 1/32W MF 01005
R6112 1.00K 5% 1/32W MF 01005
R6111 1.00K 5% 1/32W MF 01005
R6102 1.00K 5% 1/32W MF 01005
R6101 1.00K 5% 1/32W MF 01005

I2C1:WIDE/NEON
I2C1_RCAM_PMU_SCL_1V8
I2C1_RCAM_PMU_SDA_1V8
I2C2: JASPER(TOF)
I2C2_RCAM_PMU_SCL_1V8
I2C2_RCAM_PMU_SDA_1V8
I2C3: WILL
I2C3_RCAM_PMU_SCL_1V8
I2C3_RCAM_PMU_SDA_1V8
I2C4: SWIDE(OHIO)
I2C4_RCAM_PMU_SCL_1V8
I2C4_RCAM_PMU_SDA_1V8

SPMI_ISP_ADAMS_REAR_SCLK — R6152 0.00 1/32W 0% MF 01005 — ISP_SPMI_ADAMS_SCLK_R
SPMI_ISP_ADAMS_REAR_SDATA — R6153 33 1/32W 5% MF 01005 — ISP_SPMI_ADAMS_SDATA_R

ADAMS_CRASH_L_1V8
GPIO_ISP_TO_ADAMS_REAR_RESET_L

RCAM_PMU_VREF
RCAM_PMU_IREF

R6151 100K 5% 1/32W MF 01005
C6100 132S0444 0.1UF 10% 6.3V CERM-X5R 0201
R6150 CRITICAL 200K 0.1% 1/20W TF 0201

U6100
D2657B0N0VNAVCC
WLCSP
SYM 3 OF 4
OMIT_TABLE

SCL_1	G5	I2C	GPIO
SDA_1	G6		
SCL_2	J4		
SDA_2	J5		
SCL_3	H4		
SDA_3	H5		
SCL_4	H3		
SDA_4	J3		
SCLK (1V2 IO)	J6	SPMI	
SDATA (1V2 IO)	H6		
CRASH*	F3	RESET	
RESET* (1V2 IN)	G4		
VREF	C5	REFERENCE	CLK EXPAND
IREF	D5		

GPIO1	E1	GPIO_RCAM_PMU_TO_STROBE_DRIVER_HWEN_1V8
GPIO2	C2	GPIO_RCAM_PMU_TO_TOF_PMU_EN_1V8
GPIO3	D2	GPIO_RCAM_PMU_TO_TOF_INT_L_1V8
GPIO4	E2	GPIO_RCAM_PMU_TO_TOF_SHUTDOWN_L_1V8
GPIO5	F2	GPIO_RCAM_PMU_TO_JAS_LDO_EN_1V8
GPIO6	C3	GPIO_RCAM_PMU_TO_WIDE_SHUTDOWN_L_1V8
GPIO7	D3	GPIO_RCAM_PMU_TO_SWIDE_SHUTDOWN_L_1V8
GPIO8/TCAL	B4	ADAMS_TCAL
GPIO9/TDEV1	D6	C3_TEMP_NTC_P
GPIO10/TDEV2	F6	NC_ADAMS_GPIO10
GPIO11/TDEV3	B5	NC_ADAMS_GPIO11
GPIO12/TDEV4	C4	NC_ADAMS_GPIO12
GPIO13/FORCE_SYNC (1V2 IN)	E3	IO_TOUCH_TO_MANY_SCAN_ACTIVE

R6133 0.00 1/32W 0% MF 01005 — GPIO_SOC_TO_LANAI_DISPLAY_BSYNC1

CLKI (1V2 IN)	F1	CLK_ISP_TO_RCAM_PMU_12MHZ
CLKO_1	G2	CLK_RCAM_PMU_TO_WIDE_12MHZ_1V8
CLKO_2	G1	CLK_RCAM_PMU_TO_SWIDE_12MHZ_1V8
CLKO_3	H2	CLK_RCAM_PMU_TO_JASPER_TOF_12MHZ_1V8
CLKO_4	H1	NC
AMUX	B7	AMUX_PMU_FROM_RPMU — PP6101 P3MM
VPP_OTP	J1	Advanced Test Mode (OTP rewrite)

R6136 100K 5% 1/32W MF 01005

PP1V8_RPMU_IO_SW
R6137 10K 5% 1/32W MF 01005

PRIVACY MODE - CRASH

PP1V8_S2
R6135 100K 5% 1/32W MF 01005
ADAMS_CRASH_L_1V8

U6100
D2657B0N0VNAVCC
WLCSP
SYM 4 OF 4
OMIT_TABLE

VSS	A8	VSS_BUCK0	A1
VSS	C1	VSS_BUCK0	B1
VSS	C6		
VSS	D4		
VSS	E6		
VSS	J2		
VSS	J7		
VSS	J8		

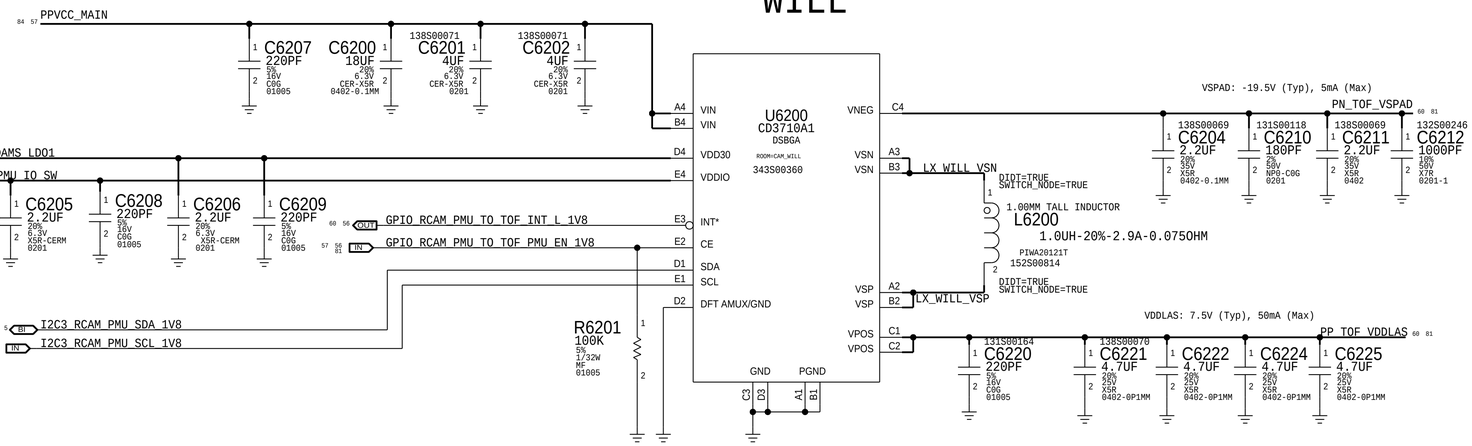
ADAMS_TCAL
CRITICAL R6144 3.92K 0.1% 1/20W MF 0201-2
C6144 100PF 5% 16V NP0-C0G 01005-1

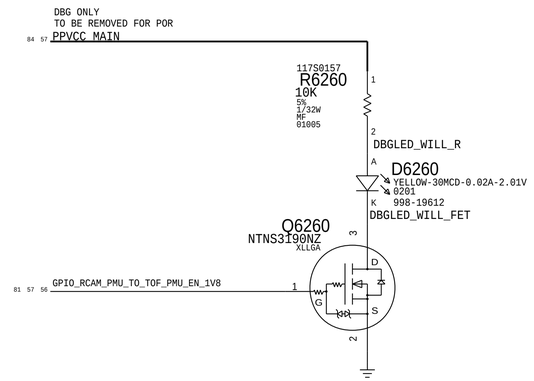
C3_TEMP_NTC_P
CRITICAL R6143 0201
C6143 100PF 5% 16V NP0-C0G 01005-1
10KOHM-1%-0.31MA
NO_XNET_CONNECTION=1
C3_TEMP_NTC_N
XW6143 SM PLACE_NEAR=U6100.D8:15MM

BOM_COST_GROUP=CAMERA

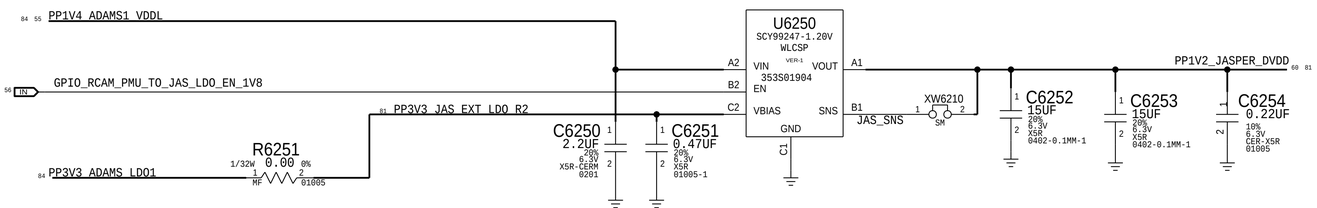
PAGE TITLE
CAMERA: ADAMS REAR IO (2/2)

WILL





JASPER VDDL LDO



BOM_COST_GROUP=JASPER

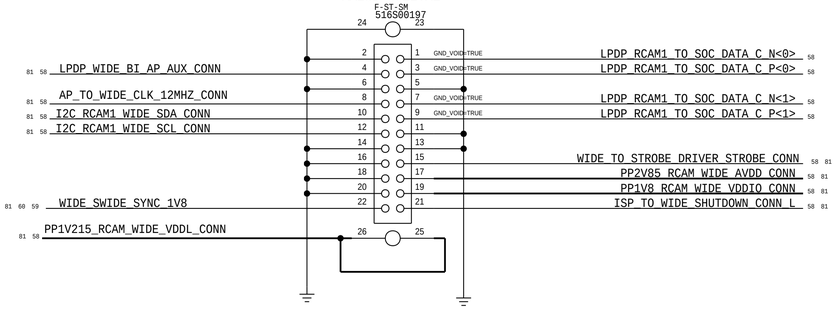
PAGE TITLE

CAMERA: JASPER POWER

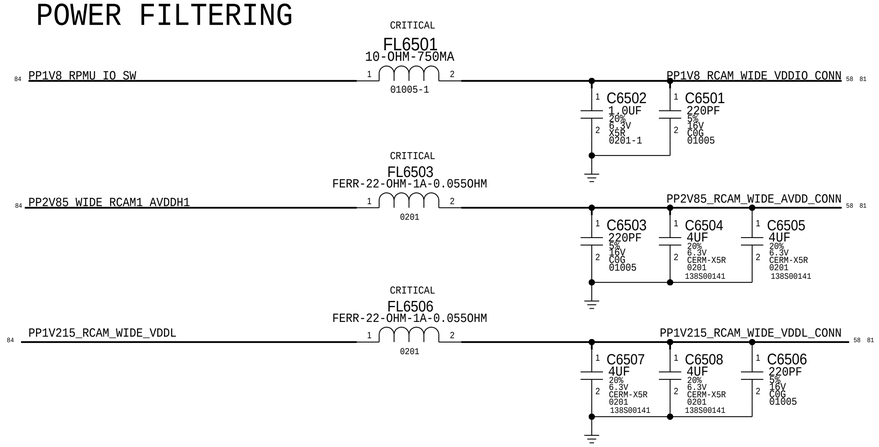
WIDE RCAM1 B2B

INDIANA
FLEX PLUG: 516S00248
MLB RCPT: 516S00197
MATCH J417_RCAM_INDIGO_FLEX 3.0.0

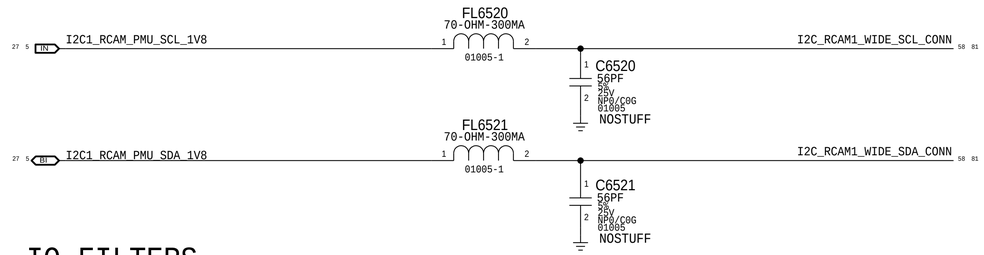
J6500
AA28D-S022VA1
F-ST-SM
516S00197



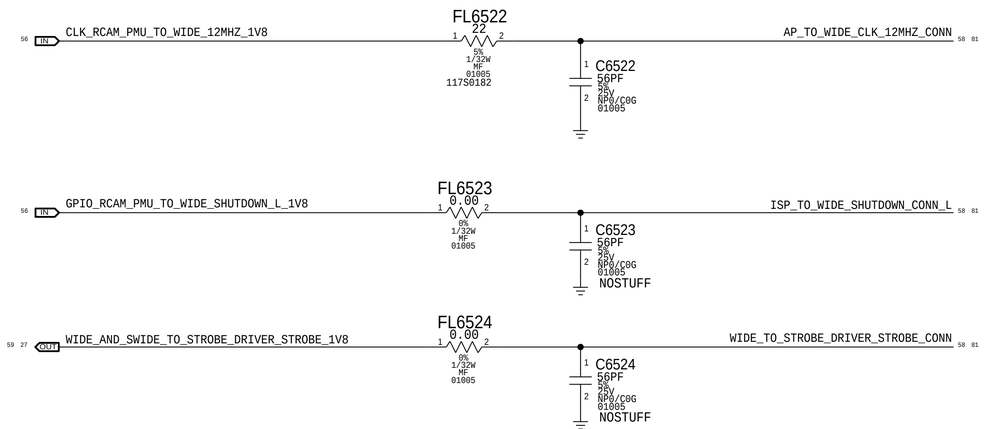
POWER FILTERING



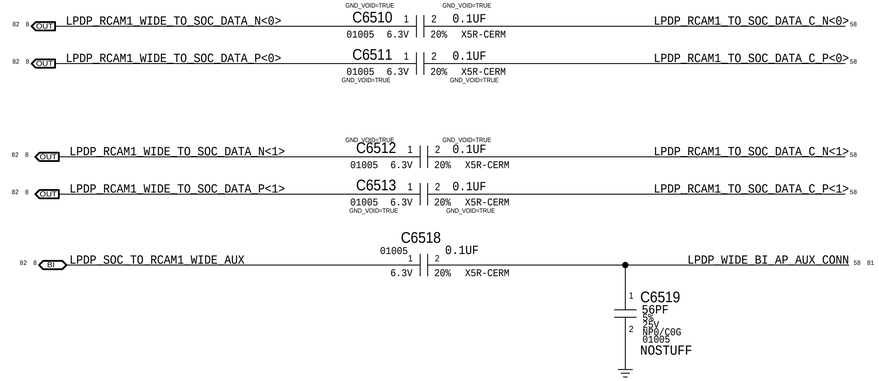
ISP I2C



IO FILTERS



LPDP FILTERS



BOM_COST_GROUP=CAMERA

PAGE TITLE

CAMERA: B2B RCAM1 WIDE

SWIDE RCAM2 B2B

OHIO
FLEX PLUG: 516S00151
MLB RCPT: 516S00152
MATCH J417_RCAM_OHIO_PLAYERS_FLEX 2.0.0
J6600
AA26D-S022VA1
F-ST-SM

81 59	PP1V8_RCAM_SWIDE_VDDIO_CONN	1	2		PP2V85_RCAM_SWIDE_AVDDH1_CONN	59 81
81 59	ISP_TO_SWIDE_SHUTDOWN_CONN_L	3	4			
81 60 58	WIDE_SWIDE_SYNC_1V8	5	6			
		7	8	GND_VOID=TRUE	LPDP_SWIDE_TO_SOC_DATA_C_P<1>	59
81 59	SWIDE_TO_STROBE_DRIVER_STROBE_CONN	9	10	GND_VOID=TRUE	LPDP_SWIDE_TO_SOC_DATA_C_N<1>	59
81 59	I2C_RCAM2_SWIDE_SCL_CONN	11	12			
81 59	I2C_RCAM2_SWIDE_SDA_CONN	13	14	GND_VOID=TRUE	LPDP_SWIDE_TO_SOC_DATA_C_P<0>	59
81 59	AP_TO_SWIDE_CLK_12MHZ_CONN	15	16	GND_VOID=TRUE	LPDP_SWIDE_TO_SOC_DATA_C_N<0>	59
		17	18			
		19	20		LPDPC_AP_BI_SWIDE_AUX_RX_D2P_CONN	59 81
		21	22			
81 59	PP1V215_RCAM_SWIDE_DVDD_CONN	25	26			

516S00152

POWER FILTERING

CRITICAL
FL6601
10-OHM-750MA
01005-1

84 PP1V8_RPMU_IO_SW → PP1V8_RCAM_SWIDE_VDDIO_CONN 59 81

C6602: 1.0UF 20% 6.3V X5R 0201-1
C6601: 220PF 5% 16V C0G 01005

CRITICAL
FL6603
FERR-22-OHM-1A-0.055OHM
0201

84 PP2V85_SWIDE_RCAM2_AVDDH1 → PP2V85_RCAM_SWIDE_AVDDH1_CONN 59 81

C6604: 4UF 20% 6.3V CERM-X5R 0201 138S00141
C6605: 4UF 20% 6.3V CERM-X5R 0201 138S00141
C6603: 220PF 5% 16V C0G 01005

CRITICAL
FL6606
FERR-22-OHM-1A-0.055OHM
0201

84 PP1V215_RCAM_SWIDE_VDDL → PP1V215_RCAM_SWIDE_DVDD_CONN 59 81

C6607: 4UF 20% 6.3V CERM-X5R 0201 138S00141
C6608: 4UF 20% 6.3V CERM-X5R 0201 138S00141
C6606: 220PF 5% 16V C0G 01005

ISP I2C

FL6620
70-OHM-300MA
01005-1

5 IN I2C4_RCAM_PMU_SCL_1V8 → I2C_RCAM2_SWIDE_SCL_CONN 59 81

C6620: 56PF 5% 25V NP0/C0G 01005 NOSTUFF

FL6621
70-OHM-300MA
01005-1

5 IN I2C4_RCAM_PMU_SDA_1V8 → I2C_RCAM2_SWIDE_SDA_CONN 59 81

C6621: 56PF 5% 25V NP0/C0G 01005 NOSTUFF

IO FILTERS

FL6622
22
5% 1/32W MF 01005
117S0182

56 IN CLK_RCAM_PMU_TO_SWIDE_12MHZ_1V8 → AP_TO_SWIDE_CLK_12MHZ_CONN 59 81

C6622: 56PF 5% 25V NP0/C0G 01005

FL6623
0.00
5% 1/32W MF 01005

56 IN GPIO_RCAM_PMU_TO_SWIDE_SHUTDOWN_L_1V8 → ISP_TO_SWIDE_SHUTDOWN_CONN_L 59 81

C6623: 56PF 5% 25V NP0/C0G 01005 NOSTUFF

FL6624
0.00
5% 1/32W MF 01005

58 27 OUT WIDE_AND_SWIDE_TO_STROBE_DRIVER_STROBE_1V8 → SWIDE_TO_STROBE_DRIVER_STROBE_CONN 59 81

C6624: 56PF 5% 25V NP0/C0G 01005 NOSTUFF

LPDP FILTERS

82 8 OUT LPDP_RCAM2_SWIDE_TO_SOC_DATA_N<0> → LPDP_SWIDE_TO_SOC_DATA_C_N<0> 59

C6610: GND_VOID=TRUE 01005 6.3V GND_VOID=TRUE | GND_VOID=TRUE 0.1UF 20% X5R-CERM GND_VOID=TRUE

82 8 OUT LPDP_RCAM2_SWIDE_TO_SOC_DATA_P<0> → LPDP_SWIDE_TO_SOC_DATA_C_P<0> 59

C6611: 01005 6.3V GND_VOID=TRUE | 0.1UF 20% X5R-CERM GND_VOID=TRUE

82 8 OUT LPDP_RCAM2_SWIDE_TO_SOC_DATA_N<1> → LPDP_SWIDE_TO_SOC_DATA_C_N<1> 59

C6612: GND_VOID=TRUE 01005 6.3V GND_VOID=TRUE | GND_VOID=TRUE 0.1UF 20% X5R-CERM GND_VOID=TRUE

82 8 OUT LPDP_RCAM2_SWIDE_TO_SOC_DATA_P<1> → LPDP_SWIDE_TO_SOC_DATA_C_P<1> 59

C6613: 01005 6.3V GND_VOID=TRUE | 0.1UF 20% X5R-CERM GND_VOID=TRUE

82 8 BI LPDP_SOC_TO_RCAM2_SWIDE_AUX → LPDPC_AP_BI_SWIDE_AUX_RX_D2P_CONN 59 81

C6618: 01005 6.3V | 0.1UF 20% X5R-CERM

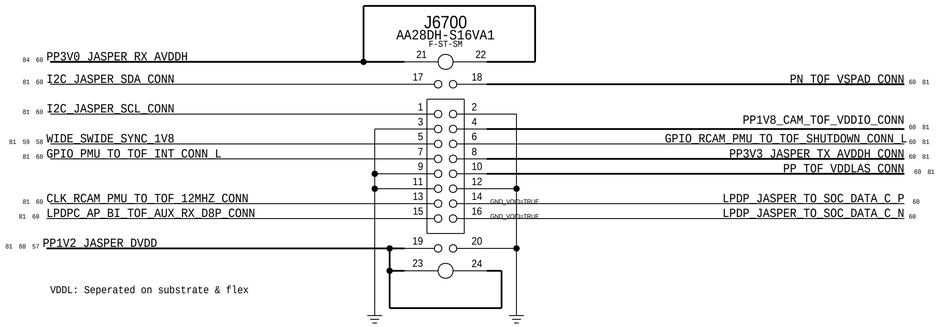
C6619: 56PF 5% 25V NP0/C0G 01005 NOSTUFF

BOM_COST_GROUP=CAMERA

PAGE TITLE
CAMERA: B2B RCAM2 SWIDE

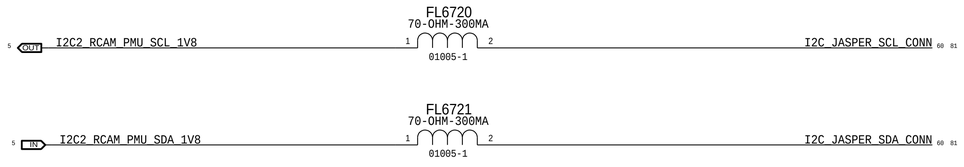
JASPER B2B

MATCH JASPER_FLEX 1.2.0
MLB RCPT: 516S00483
FLEX PLUG: 516S00484

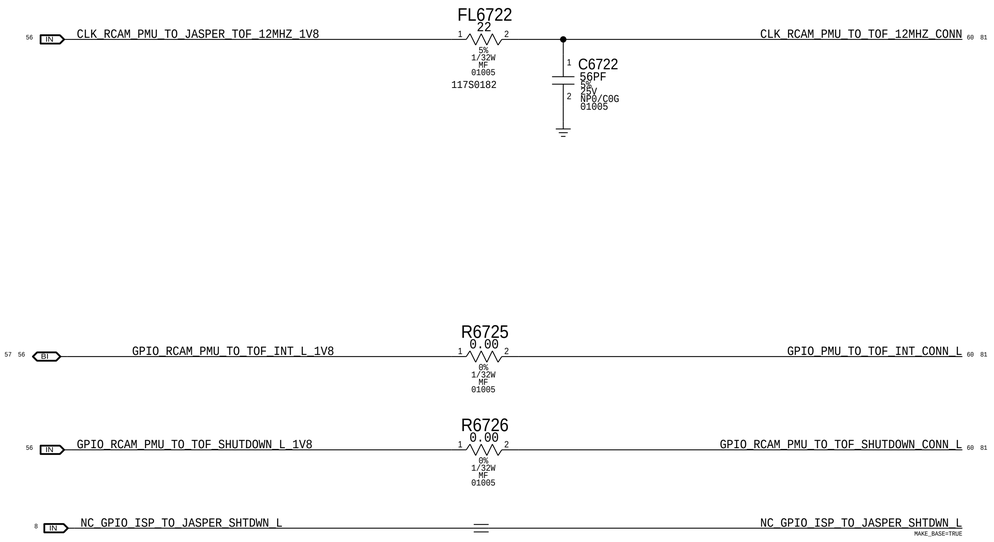


VDDL: Seperated on substrate & flex

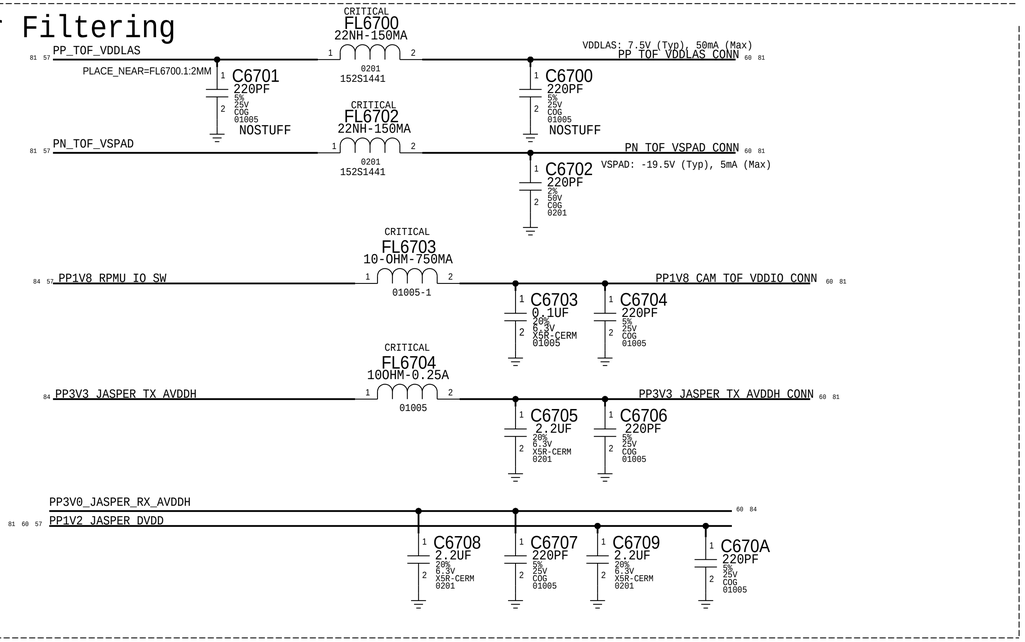
JASPER I2C



IO Filters



Power Filtering



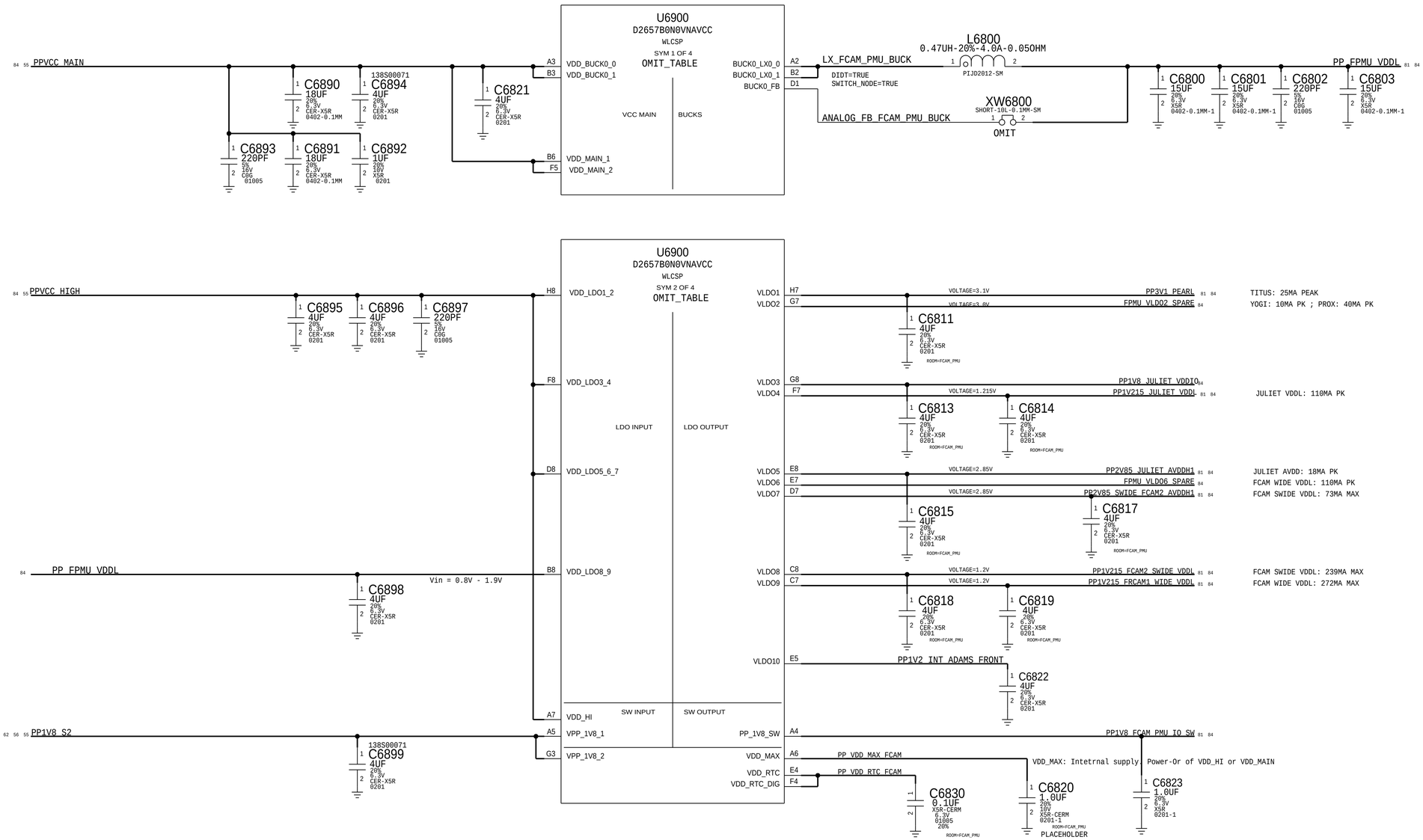
LPDP Filters

BOM_COST_GROUP=JASPER

PAGE TITLE

CAMERA: B2B JASPER

FCAM ADAMS PMU



BOM_COST_GROUP=CAMERA

PAGE TITLE

CAMERA: ADAMS FRONT POWER (1/2)

FCAM ADAMS PMU IO

PP1V8_JULIET_VDDIO
PP1V8_FCAM_PMU_IO_SW

R6932 1.00K 5% 1/32W MF 01005
R6931 1.00K 5% 1/32W MF 01005
R6922 1.00K 5% 1/32W MF 01005
R6921 1.00K 5% 1/32W MF 01005
R6912 1.00K 5% 1/32W MF 01005
R6911 1.00K 5% 1/32W MF 01005
R6902 1.00K 5% 1/32W MF 01005
R6901 1.00K 5% 1/32W MF 01005

I2C1:FCAM WIDE (NOT USED)
I2C1_FCAM_PMU_SCL_1V8
I2C1_FCAM_PMU_SDA_1V8
I2C2: FCAM SWIDE
I2C2_FCAM_PMU_SCL_1V8
I2C2_FCAM_PMU_SDA_1V8
I2C3: JULIET
I2C3_FCAM_PMU_SCL_1V8
I2C3_FCAM_PMU_SDA_1V8
I2C4: RIGEL & TITUS
I2C4_FCAM_PMU_SCL_1V8
I2C4_FCAM_PMU_SDA_1V8

SPMI_ISP_ADAMS_FRONT_SCLK
SPMI_ISP_ADAMS_FRONT_SDATA
R6952 0.00 1/32W 0% MF 01005 PLACE_NEAR=U0600.R4:50MM
R6953 33 1/32W 5% MF 01005 PLACE_NEAR=U6100.H6:20MM
ISP_SPMI_ADAMS_FRONT_SCLK_R
ISP_SPMI_ADAMS_FRONT_SDATA_R
ADAMS_FCAM_PMU_CRASH_L_1V8
GPIO_ISP_TO_ADAMS_FRONT_RESET_L

R6945 100K 5% 1/32W MF 01005
C6900 0.1UF 10% 6.3V CERM-X5R 0201 132S0444
CRITICAL R6900 200K 0.1% 1/20W TF 0201
FCAM_PMU_VREF
FCAM_PMU_IREF

U6900
D2657B0N0VNAVCC
WLCSP
SYM 3 OF 4
OMIT_TABLE

SCL_1	G5	I2C	GPIO	GPIO1 E1 GPIO_FPMU_TO_JULIET_SHUTDOWN_L_1V8
SDA_1	G6			GPIO2 C2 XNC
SCL_2	J4			GPIO3 D2 GPIO_FCAM_PMU_TO_FCAM_SWIDE_SHUTDOWN_L_1V8
SDA_2	J5			GPIO4 E2 GPIO_FCAM_PMU_TO_RIGEL_ENABLE_1V8
SCL_3	H4			GPIO5 F2 GPIO_RIGEL_INT_TO_FPMU_1V8
SDA_3	H5			GPIO6 C3 NC_FPMU_GPIO6
SCL_4	H3			GPIO7 D3 NC_FPMU_GPIO7
SDA_4	J3			GPIO8/TCAL B4 ADAMS_FCAM_PMU_TCAL
				GPIO9/TDEV1 D6 C4_TEMP_NTC_P
				GPIO10/TDEV2 F6 NC_FPMU_GPIO10
				GPIO11/TDEV3 B5 NC_FPMU_GPIO11
				GPIO12/TDEV4 C4 NC_FPMU_GPIO12
SCLK 1V2 IO		SPMI		GPIO13/FORCE_SYNC E3 TO_FPMU_TOUCH_TO_MANY_SCAN_ACTIVE
SDATA 1V2 IO				
CRASH*	F3	RESET		
RESET* 1V2 IN	G4			
VREF	C5	REFERENCE	CLK EXPAND	CLKI F1
IREF	D5			CLKO_1 G2 NC
				CLKO_2 G1 CLK_FCAM_PMU_TO_SWIDE_12M_1V8
				CLKO_3 H2 CLK_FCAM_PMU_TO_JULIET_12M_1V8
				CLKO_4 H1 CLK_FCAM_PMU_TO_RIGEL_12M_1V8
				AMUX B7 AMUX_PMU_FROM_FPMU
				VPP_OTP J1 Advanced Test Mode (OTP rewrite)

NOSTUFF R6933 0.00 1/32W 0% MF 01005 GPIO_SOC_TO_LANAI_DISPLAY_BSYNC1
CLK_ISP_TO_FCAM_PMU_12MHZ
R6936 100K 5% 1/32W MF 01005 ROOM=FCAM_PMU
PP6901 P3MM
TP6901 ORIGINALLY ON AMUX

PRIVACY MODE - CRASH

PP1V8_S2
R6935 100K 5% 1/32W MF 01005
ADAMS_FCAM_PMU_CRASH_L_1V8

08/01/19:
ONLY TYING FPMU ADAMS
CRASH PIN TO A PU.

U6900
D2657B0N0VNAVCC
WLCSP
SYM 4 OF 4
OMIT_TABLE

A8	VSS	VSS_BUCK0	A1
C1	VSS	VSS_BUCK0	B1
C6	VSS		
D4	VSS		
E6	VSS		
J2	VSS		
J7	VSS		
J8	VSS		

ADAMS_FCAM_PMU_TCAL
CRITICAL R6944 3.92K 0.1% 1/20W MF 0201-2
C6944 100PF 5% 16V NP0-C0G 01005-1

C4_TEMP_NTC_P
CRITICAL R6943 10KOHM-1%-0.31MA NO_XNET_CONNECTION=1 0201
C6943 100PF 5% 16V NP0-C0G 01005-1
C4_TEMP_NTC_N
XW6943 PLACE_NEAR=U6100.D6:15MM

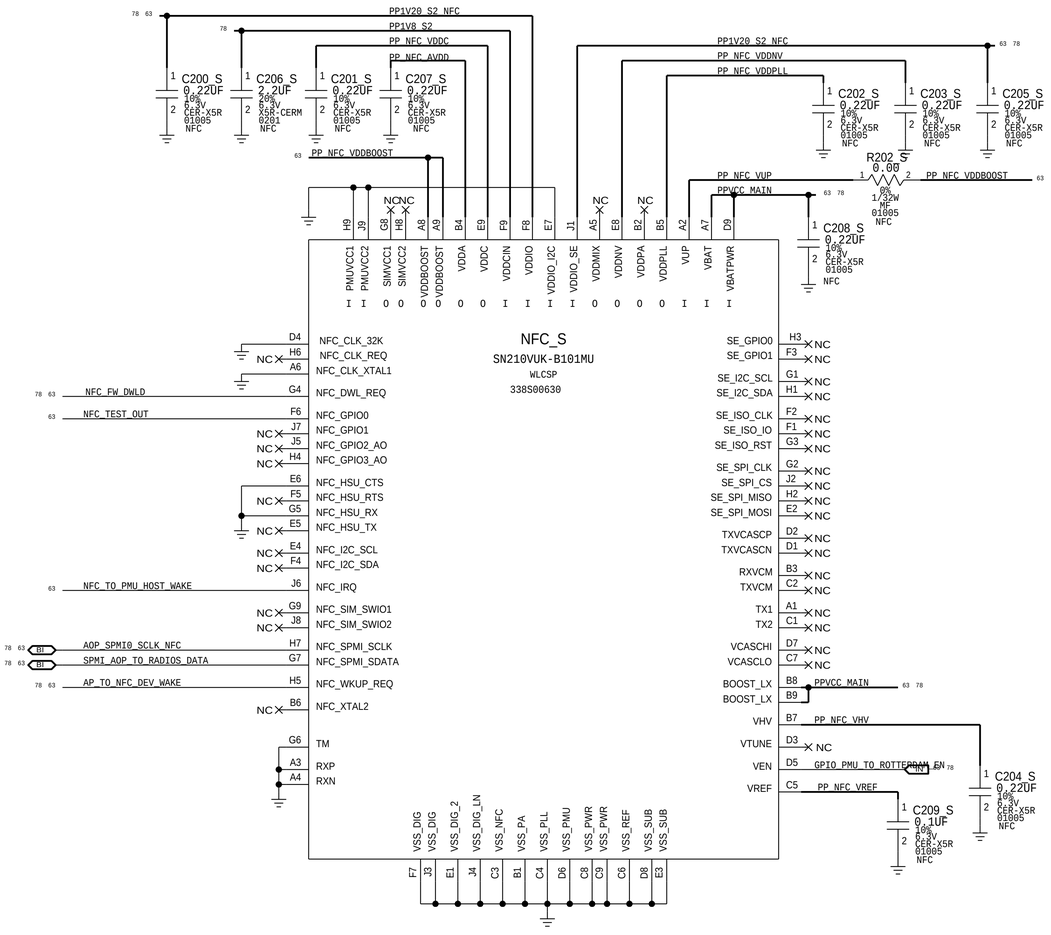
BOM_COST_GROUP=CAMERA

PAGE TITLE
CAMERA: ADAMS REAR IO (2/2)

STOCKHOLM

NFC CONTROLLER

GOAL/NAL	NET RULE ASSIGNMENT	
PLP_01	CONSTRAINT SET	COMMA SEPARATED NET NAMES (WILDCARD SUPPORT EX: DDR*)
	P PWR_300UM	PP_NFC*



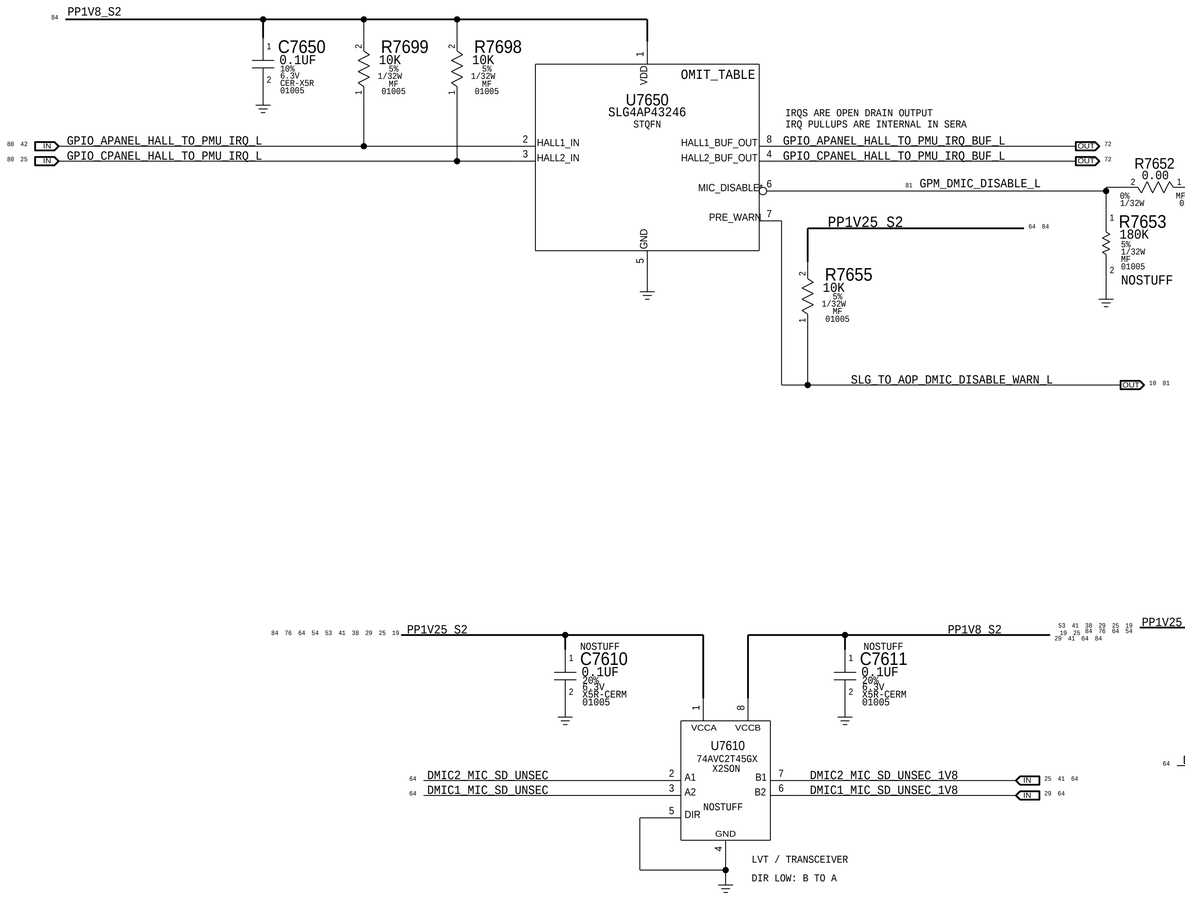
BOM_COST_GROUP=SECURE_ELEMENT

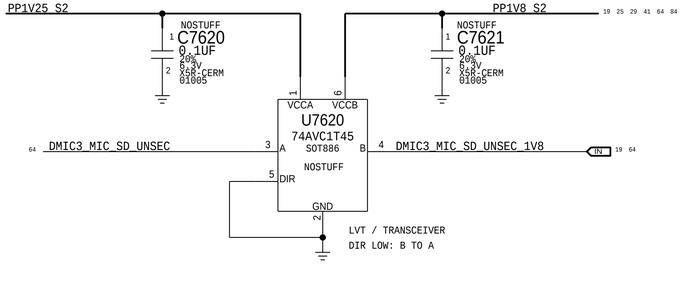
PAGE TITLE

NFC

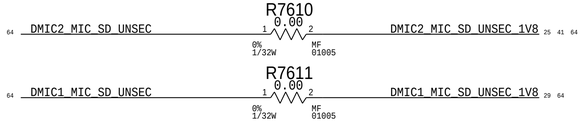
GPM: DMIC GATING

PART#	QTY	DESCRIPTION	REFERENCE DESIGNATOR(S)	CRITICAL	BOM OPTION
343S00390	1	IC,SLG4AP,HALL DMIC DISABLE,1.2V,STQFNB	U7650	CRITICAL	





SENTRY JUMPERS



SENTRY JUMPER

BOM_COST_GROUP=AUDIO

PAGE TITLE

GPM

SIMETRA PMU (1/3)

PART NUMBER	ALTERNATE FOR PART NUMBER	REFERENCE DESIGNATOR(S)	DESCRIPTION	BOM OPTION
376S00239	376S00205	Q7772	NAND DISCH NFET	
152S00839	152S01325	L7730	BUCK6 IND	

OMIT_TABLE
U7700
TMLT47A1-APE
WLCSP
SYM 1 OF 4

BUCK INPUTS
MAIN INPUTS
BUCK OUTPUTS

84 69 PPVCC MAIN
C77A0 150UF 20% 6.3V TANT-POLY CASE-B1S-1
C77AZ 220PF 5% 16V C0G 01005
C77AY 12PF 5% 25V NPO-C0G 0201
C77B0 20UF 20% 6.3V CERM-X5R 0402
C77B1 20UF 20% 6.3V CERM-X5R 0402
C77B2 20UF 20% 6.3V CERM-X5R 0402
C77B3 20UF 20% 6.3V CERM-X5R 0402
C77B4 20UF 20% 6.3V CERM-X5R 0402
C77C0 4UF 20% 6.3V CER-X5R 0201
C77C1 4UF 20% 6.3V CER-X5R 0201
C77C2 4UF 20% 6.3V CER-X5R 0201
C77C3 4UF 20% 6.3V CER-X5R 0201
C77C4 4UF 20% 6.3V CER-X5R 0201
C77C5 4UF 20% 6.3V CER-X5R 0201
C77C6 4UF 20% 6.3V CER-X5R 0201
C77C7 4UF 20% 6.3V CER-X5R 0201
C77C8 4UF 20% 6.3V CER-X5R 0201
C77C9 4UF 20% 6.3V CER-X5R 0201
C77CA 4UF 20% 6.3V CER-X5R 0201
C77CB 4UF 20% 6.3V CER-X5R 0201
C77CC 4UF 20% 6.3V CER-X5R 0201
C77CD 4UF 20% 6.3V CER-X5R 0201
C77CE 4UF 20% 6.3V CER-X5R 0201
C77CF 4UF 20% 6.3V CER-X5R 0201

C13 VDD_BUCK5_4_10
C14 VDD_BUCK5_4_10
G13 VDD_BUCK5_4_10
G14 VDD_BUCK5_4_10
M2 VDD_BUCK6
N2 VDD_BUCK6
P2 VDD_BUCK6
N6 VDD_BUCK12
P6 VDD_BUCK12
L13 VDD_BUCK13
L14 VDD_BUCK13
L1 VDD_MAIN_BUCK6
L9 VDD_MAIN_SOUTH
E8 VDD_MAIN
D2 VDD_MAIN_LDO
E2 VDD_MAIN_LDO

84 77 69 PPVCC_MAIN
XW7701 SHORT-10L-0.1MM-SM
SIMETRA_PPVCC_MAIN_SNS
D8 VDD_MAIN_SNS
SIMETRA_PPVCC_HIGH_SNS
E10 VDD_SNS_SPARE

C77E3 0.1UF 20% 6.3V X5R-CERM 01005
C12 VDD_ANA
D3 VDD_ANA
E7 VDD_ANA
G12 VDD_ANA
K3 VDD_ANA
L8 VDD_ANA
L12 VDD_ANA
M6 VDD_ANA
D5 VDD_DIG
D10 VDD_DIG
J3 VDD_DIG
66 PP1V5_SIMETRA_LDO_INT J10 VDD_DIG

D9 VDD_BOOST
84 71 69 65 PPVCC_HIGH B2 VDD_BOOST_LDO
C2 VDD_BOOST_LDO
XW7702 SHORT-10L-0.1MM-SM MAKE_BASE=TRUE
84 71 69 65 PPVCC_HIGH
SIMETRA_PPVCC_HIGH_SNS E9 VDD_BOOST_SNS
C83A3 4UF 20% 6.3V CER-X5R 0201

66 SIMETRA_BSTLQ_FB
C77E2 0.1UF 20% 10V X5R 01005
D4 VDD_HI_INT1
L4 VDD_HI_INT2
L7 VDD_HI_INT3
M10 VDD_HI_INT4
J11 VDD_HI_INT5
A11 VDD_HI_INT6
C9 VDD_HI_INT7

84 69 PP1V25_S2
C77E0 0.1UF 10% 6.3V CERM-X5R 0201
G10 VDDIO_1V2
69 44 41 21 84 74 72 PP1V8_S2
C77E1 0.1UF 10% 6.3V CERM-X5R 0201
H10 VDDIO_BUCK3
K6 VPP

84 18 17 PP2V63_NAND
R7770 102S00068 5.1 5% 1/2W TK 0805 CRITICAL
R7771 102S00068 5.1 5% 1/2W TK 0805 CRITICAL
PP2V63_NAND_DISCH_QD
VOLTAGE=2.63V
NAND S1 DISCHARGE CKT
DISABLE IN ACT, S2, AND OFF
1.8V DRIVE
67 GPIO_PMU_TO_NAND_DISCH_EN_1V8
R7772 1K 1% 1/20W MF 201
NAND_DISCH_QG
C7772 1.0UF 20% 6.3V X5R 0201-1
CRITICAL
376S00205
Q7772
DMN1017UCP3
X3-DSN1010-3

65 PP2V63_NAND_DISCH_QD TP7700
65 NAND_DISCH_QG TP7701

BUCK4_LX0 F14 BUCK4_LX0 APN: 152S01283
L7710 1.0UH-20%-4A-0.034OHM PIKD20161B
PP1V06_S2
C7710 C7711 C7712 C7713 C7714 C7715 C771Z 15UF 20% 4V CERM 0402 / 220PF 5% 16V C0G 01005
C7716 C7717 C7718 C7719 C771A C771B 15UF 20% 4V CERM 0402
PP1V06_S2 11 84

BUCK4_LX1 D13 BUCK4_LX1 D14 BUCK4_LX1 APN: 152S00204
L7711 0.22UH-20%-6.7A-0.023OHM PINA20121T-SM

BUCK4_FB F11 BUCK4_FB
XW7710 SHORT-10L-0.1MM-SM PLACE_NEAR=U0600:10MM
BUCK4_VSS_FB F12

BUCK5_LX_0 H13 BUCK5_LX0 APN: 152S01263
BUCK5_LX_1 H14
L7720 0.47UH-20%-4A-0.024OHM PIKD20121B-SM
PPVDD_S1_SRAM
C7720 C7721 C7722 C7723 C7724 C7725 C7726 15UF 20% 4V CERM 0402 / C772Z 220PF 5% 16V C0G 01005
PPVDD_S1_SRAM 14 84

BUCK5_FB H11 BUCK5_FB
XW7720 SHORT-10L-0.1MM-SM
BUCK5_VSS_FB H12

BUCK6_LX_0 M3 BUCK6_LX0 152S01325
BUCK6_LX_1 N3
BUCK6_LX_2 P3
L7730 0.47UH-20%-6.9A-0.022OHM MEMK2520-SM
PP2V63_NAND
C7730 C7731 C7732 C7733 C7734 C7735 C7736 20UF 20% 6.3V CERM-X5R 0402 / C773Z 220PF 5% 16V C0G 01005
C7737 C7738 C7739 C773A C773B 20UF 20% 6.3V CERM-X5R 0402

BUCK6_FB L3 BUCK6_FB
XW7730 SHORT-10L-0.1MM-SM
BUCK6_VSS_FB K2

BUCK6_VOUT_0 M1
BUCK6_VOUT_1 N1
BUCK6_VOUT_2 P1

BUCK10_LX_0 B13 BUCK10_LX0 APN: 152S01263
BUCK10_LX_1 B14
L7740 0.47UH-20%-4A-0.024OHM PIKD20121B-SM
PPVDD_S1_QL
C7740 C7741 C7742 C7743 C7744 C7745 15UF 20% 4V CERM 0402 / C774Z 220PF 5% 16V C0G 01005
PPVDD_S1_QL 11 84

BUCK10_FB B11 BUCK10_FB
XW7740 SHORT-10L-0.1MM-SM PLACE_NEAR=U0600:10MM
BUCK10_VSS_FB B12

BUCK12_LX_0 N5 BUCK12_LX0 APN: 152S01263
BUCK12_LX_1 P5
L7750 0.47UH-20%-4A-0.024OHM PIKD20121B-SM
PP0V88_S1
C7750 C7751 C7752 C7753 C7754 15UF 20% 4V CERM 0402 / C775Z 220PF 5% 16V C0G 01005

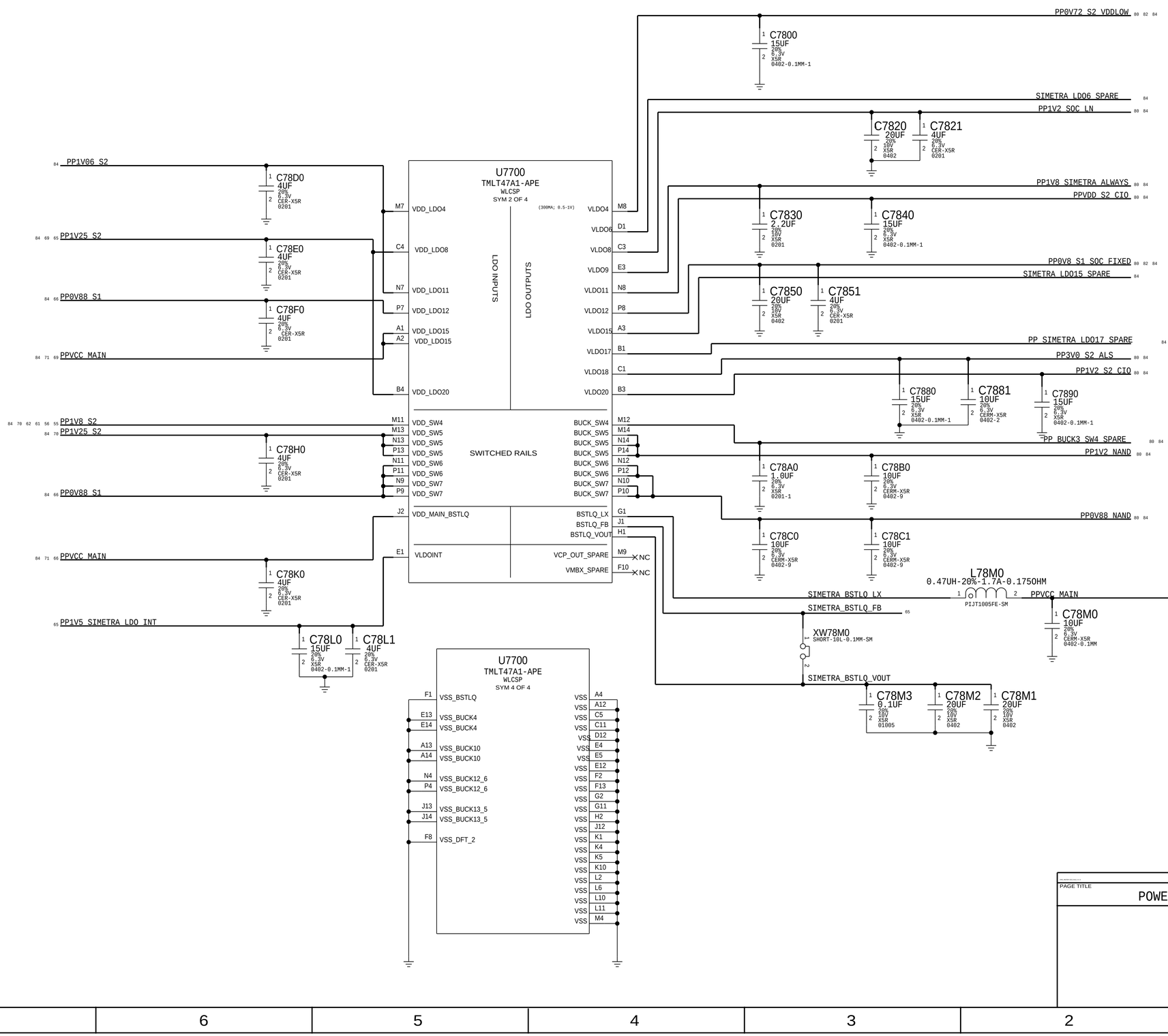
BUCK12_FB L5 BUCK12_FB
XW7750 SHORT-10L-0.1MM-SM
BUCK12_VSS_FB M5

BUCK13_LX_0 K13 BUCK13_LX0 APN: 152S01263
BUCK13_LX_1 K14
L7760 0.47UH-20%-4A-0.024OHM PIKD20121B-SM
PP1V25_S2
C7760 C7761 C7762 C776Z 15UF 20% 4V CERM 0402 / 220PF 5% 16V C0G 01005

BUCK13_FB K11 BUCK13_FB
XW7760 SHORT-10L-0.1MM-SM PLACE_NEAR=C78E0:1MM
PP1V25_S2
BUCK13_VSS_FB K12

BOM_COST_GROUP=POWER
PAGE TITLE
POWER: SIMETRA (1/3)

SIMETRA PMU (2/3)



BOM_COST_GROUP=POWER

PAGE TITLE

POWER: SIMETRA (2/3)

SIMETRA PMU (3/3)

NEAR FRONT CAM B2B
CRITICAL
R7921
10KOHM-1%-0.31MA
0201
C7921
100PF
5%
25V
C0G-CERM
01005
XW7921
SHORT-10L-0.1MM-SM
BOARD_TEMP9_N

CRITICAL
R7920
3.92K
0.1%
1/20W
MF
0201-2
C7920
100PF
5%
25V
C0G-CERM
01005

C7900
2.2UF
20%
10V
X5R
0201
C7901
0.22UF
20%
10V
CERM-X5R
0201

NEAR C3 PENINSULA
CRITICAL
R7922
10KOHM-1%-0.31MA
0201
C7922
100PF
5%
25V
C0G-CERM
01005
XW7922
SHORT-10L-0.1MM-SM
BOARD_TEMP10_N

NEAR SIMETRA
CRITICAL
R7923
10KOHM-1%-0.31MA
0201
C7923
100PF
5%
25V
C0G-CERM
01005
XW7923
SHORT-10L-0.1MM-SM
BOARD_TEMP11_N

NEAR WIFI
CRITICAL
R7924
10KOHM-1%-0.31MA
0201
C7924
100PF
5%
25V
C0G-CERM
01005
XW7924
SHORT-10L-0.1MM-SM
BOARD_TEMP12_N

NEAR NAND2
CRITICAL
R7925
10KOHM-1%-0.31MA
0201
C7925
100PF
5%
25V
C0G-CERM
01005
XW7925
SHORT-10L-0.1MM-SM
BOARD_TEMP13_N

R7910
1M
5%
1/20W
MF
201

72 10 SWD_PERIPHERAL_SWCLK — SWD_PERIPHERAL_SWCLK 67
72 10 SWD_PMU_SWDIO (MAKE_BASE=TRUE) — SWD_PMU_SWDIO (MAKE_BASE=TRUE) 67

U7700
TMLT47A1-APE
WLCSP
SYM 3 OF 4

		NC	D7	IREF	
		SIMETRA_VREF	D6	VREF	
		SIMETRA_VREF_ADC	C7	VREF_ADC	
			C6	VSS_REF	
		SIMETRA_TCAL	A7	TCAL	
		BOARD_TEMP9_P	A6	TDEV1	TDEV
		BOARD_TEMP10_P	A5	TDEV2	
		BOARD_TEMP11_P	B8	TDEV3	
		BOARD_TEMP12_P	B7	TDEV4	
		BOARD_TEMP13_P	B6	TDEV5	
		88 SIMETRA_ADC_IN	E6	ADC_IN	
		NC	B10	AMUX_A<0>	AMUX
		NC	A10	AMUX_A<1>	
		NC	A9	AMUX_A<2>	
		NC	A8	AMUX_A<3>	
		80 TPT_SIMETRA_AMUX_AY	C8	AMUX_AY	
		NC	D11	AMUX_B<0>	
		NC	E11	AMUX_B<1>	
		NC	B9	AMUX_B<2>	
		NC	C10	AMUX_B<3>	
		80 TPT_SIMETRA_AMUX_BY	B5	AMUX_BY	
		NC	J4	RESET_IN	RESET
			H8	DFT_CTRL_0	
		67 SWD_PERIPHERAL_SWCLK	J8	DFT_CTRL_1	
			F9	EXT32K_EN	CLOCK
		NC_SIMETRA_EXT_32K_IN	K9	EXT32K_IN	
		80 SIMETRA_FORCE_SYNC	G9	FORCE_SYNC	
			H7	GPIO1	GPIO
			K8	GPIO2	
		SWD_PMU_SWDIO 67	K7	GPIO3	
			J7	GPIO4	
			G7	GPIO5	
			F7	GPIO6	
			F6	GPIO7	
		NC_GPIO_SIMETRA_TO_BBPMU_ON	H6	GPIO8	
		NC_GPIO_SIMETRA_TO_BB_BOOT_CFG1 OUT 78	G6	GPIO9	
		NC_GPIO_SIMETRA_TO_BB_BOOT_CFG2 OUT 78	J6	GPIO10	
		NC_GPIO_SIMETRA_TO_WLAN_REG_ON	F5	GPIO11	
			H5	GPIO12	
		NC_SIMETRA_GPIO13	J5	GPIO13	
		GPIO_SIMETRA_IRQ_L 82	G5	GPIO14	
			F4	GPIO15	
		GPIO_PP2V63_S1_DISCH_EN_R	F3	GPIO16	
		SPMI_SCLK	J9	SPMI_SCLK	SPMI
		SPMI_SDATA	H9	SPMI_SDATA	
		SGPIO_SCLK BI 72 82	H3	SGPIO_SCLK	
		SGPIO_SDATA	G3	SGPIO_SDATA	
		UVWARN*	G8	UVWARN*	
		SCRASH*	G4	SCRASH*	
		SGPIO_READY_REQ	H4	SGPIO_READY_REQ	

R7901
33
5%
1/32W
MF
01005
82 72 BI SGPIO_SDATA_1V8

SIMETRA_UVWARN_L
R7913
47.0K
5%
1/32W
MF
01005
PP1V2_IO
5 6 7 9 24 44 76 84
1 A TP7904

SCRASH_L_1V8 BI 72 80

SGPIO_READY_REQ_1V8 72 82

R7914
0.00
0%
1/32W
MF
01005
GPIO_PMU_TO_NAND_DISCH_EN_1V8 OUT 65

NOSTUFF
R7915
0.00
0%
1/32W
MF
01005
72 IN GPIO_SERA_TO_NAND_DISCH_EN_1V8

SGPIO_SCLK_1V8 IN 72 82

R7912
0.00
0%
1/32W
MF
01005

NOTES:
UVWARN - VCC_MAIN UVWARN0 (2.95V) "PRE-UVLO"

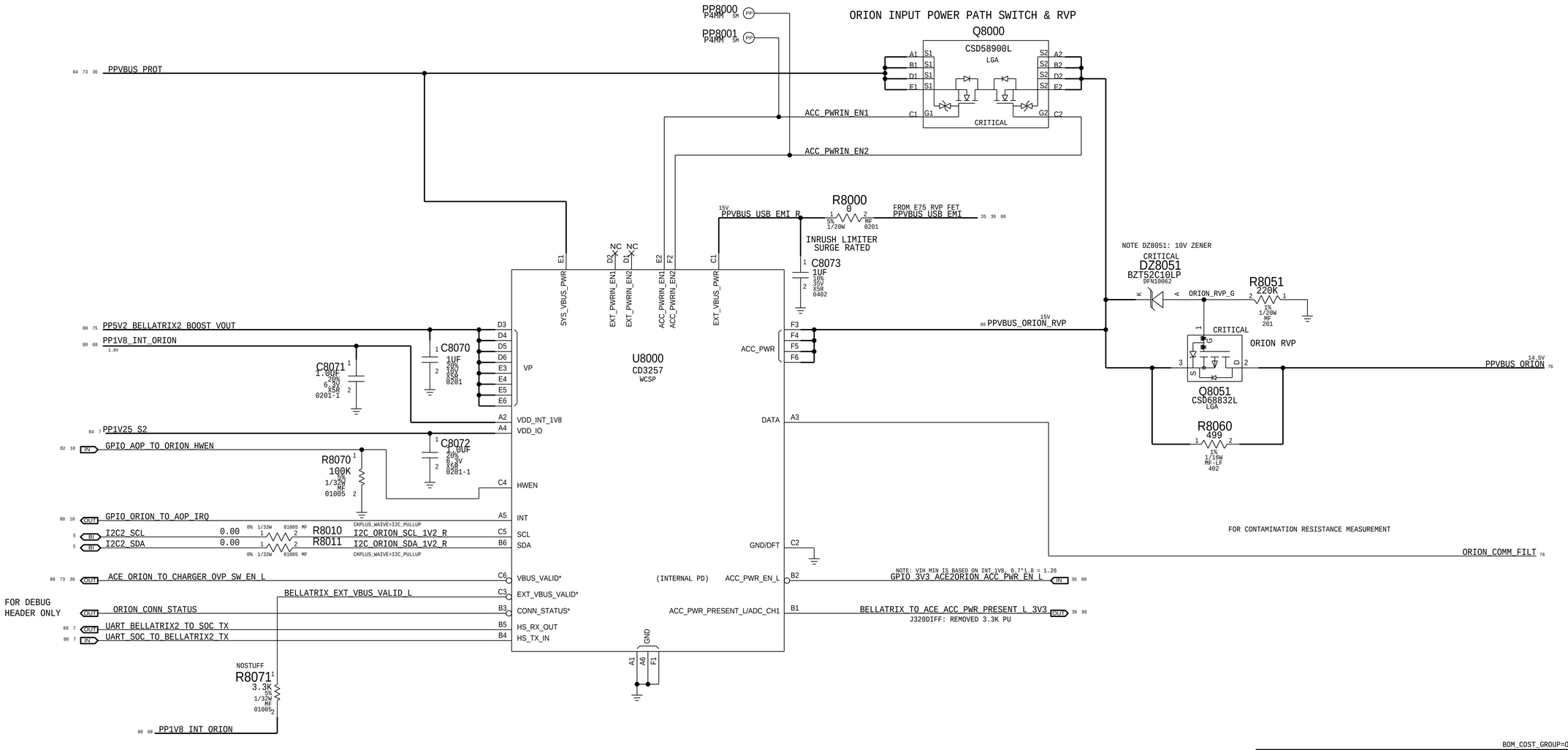
67 10 NUB_SPMI1_SIMETRA_SDATA
67 10 NUB_SPMI1_SIMETRA_SCLK

NOSTUFF
R7932
1.00M
5%
1/32W
MF
01005

NOSTUFF
R7931
1.00M
5%
1/32W
MF
01005

BOM_COST_GROUP=POWER

PAGE TITLE
POWER: SIMETRA (3/3)


ORION INPUT POWER PATH SWITCH & RVP
Q8000
CSD58900L
LGA
CRITICAL
PP8000 P4MM SH
PP8001 P4MM SH
84 73 36 PPVBUS_PROT
ACC_PWRIN_EN1
ACC_PWRIN_EN2
R8000
0
5% 1/20W MF 0201
15V PPVBUS_USB_EMI_R
FROM E75_RVP_FET PPVBUS_USB_EMI
35 36 80
INRUSH LIMITER SURGE RATED
C8073
1UF
10% 35V X5R 0402
NC NC
SYS_VBUS_PWR
EXT_PWRIN_EN1
EXT_PWRIN_EN2
ACC_PWRIN_EN1
ACC_PWRIN_EN2
EXT_VBUS_PWR
NOTE DZ8051: 10V ZENER
CRITICAL
DZ8051
BZT52C10LP
DFN1006Z
ORION_RVP_G
R8051
220K
1% 1/20W MF 201
80 75 PP5V2_BELLATRIX2_BOOST_VOUT
80 68 PP1V8_INT_ORION
1.8V
C8071
1.0UF
20% 6.3V X5R 0201-1
C8070
1UF
20% 10V X5R 0201
VP
U8000
CD3257
WCSP
15V 80 PPVBUS_ORION_RVP
CRITICAL
ORION RVP
O8051
CSD68832L
LGA
14.5V PPVBUS_ORION 76
R8060
499
1% 1/10W MF-LF 402
84 7 PP1V25_S2
C8072
1.0UF
20% 6.3V X5R 0201-1
VDD_INT_1V8
VDD_IO
82 10 IN GPIO_AOP_TO_ORION_HWEN
R8070
100K
5% 1/32W MF 01005
HWEN
80 10 OUT GPIO_ORION_TO_AOP_IRQ
INT
5 BI I2C2_SCL 0.00 R8010 I2C_ORION_SCL_1V2_R SCL
5 BI I2C2_SDA 0.00 R8011 I2C_ORION_SDA_1V2_R SDA
0% 1/32W 01005 MF
CKPLUS_WAIVE=I2C_PULLUP
80 73 36 OUT ACE_ORION_TO_CHARGER_OVP_SW_EN_L
VBUS_VALID*
BELLATRIX_EXT_VBUS_VALID_L
EXT_VBUS_VALID*
FOR DEBUG HEADER ONLY
OUT ORION_CONN_STATUS
CONN_STATUS*
80 7 OUT UART_BELLATRIX2_TO_SOC_TX
80 7 IN UART_SOC_TO_BELLATRIX2_TX
HS_RX_OUT
HS_TX_IN
NOSTUFF
R8071
3.3K
5% 1/32W MF 01005
80 68 PP1V8_INT_ORION
GND
ACC_PWR
DATA
GND/DFT
(INTERNAL PD)
ACC_PWR_EN_L
ACC_PWR_PRESENT_L/ADC_CH1
NOTE: VIN_MIN IS BASED ON INT_1V8, 0.7*1.8 = 1.26
GPIO_3V3_ACE2ORION_ACC_PWR_EN_L IN 36 80
BELLATRIX_TO_ACE_ACC_PWR_PRESENT_L_3V3 OUT 36 80
J320DIFF: REMOVED 3.3K PU
FOR CONTAMINATION RESISTANCE MEASUREMENT
ORION_COMM_FILT 76
BOM_COST_GROUP=ORION
PAGE TITLE
ORION CONNECTOR & POWER PATH

SERA BUCKS (1/4)

PART NUMBER	ALTERNATE FOR PART NUMBER	BOM OPTION	REF DES	COMMENTS:
152S01317	152S01268		L8101 ETC.	ALTERNATE IND

PPVCC_MAIN

C81A0 150UF 20% 6.3V TANT-POLY CASE-B1S-1
C81A1 150UF 20% 6.3V TANT-POLY CASE-B1S-1
C81A3 20UF 20% 6.3V CERM-X5R 0402-0.1MM
C81A4 20UF 20% 6.3V CERM-X5R 0402-0.1MM
C81A5 20UF 20% 6.3V CERM-X5R 0402-0.1MM
C81AZ 220PF 5% 16V C0G 01005
C81AY 12PF 5% 25V NP0-C0G 0201

C81B0 C81B1 C81B2 C81B3 C81B4 C81B5 C81B6 C81B7 4UF 20% 6.3V CER-X5R 0201
C81B8 C81B9 C81BA C81BB C81BC C81BD C81BE C81BF C81BG 4UF 20% 6.3V CER-X5R 0201

C81C0 C81C1 C81C2 C81C3 C81C4 C81C5 C81C6 C81C7 4UF 20% 6.3V CER-X5R 0201
C81C8 C81C9 C81CA C81CB C81CC C81CD C81CE C81CF 4UF 20% 6.3V CER-X5R 0201
C81CG C81CH C81CI C81CJ C81D0 C81D1 C81D2 C81D3 4UF 20% 6.3V CER-X5R 0201
C81D4 C81D5 C81D6 C81D7 C81D8 C81D9 C81DA C81DB 4UF 20% 6.3V CER-X5R 0201
C81DC C81DD C81DE C81DF C81DG C81DH C81DI C81DJ 4UF 20% 6.3V CER-X5R 0201

C81E0 0.1UF 10% 6.3V CERM-X5R 0201
C81E1 0.1UF 10% 6.3V CERM-X5R 0201

C81F0 4UF 20% 6.3V CER-X5R 0201

XW8101 SHORT-10L-0.1MM-SM

OMIT_TABLE

U8100 TMLT46B0-APG WLCSP SYM 1 OF 6

VOLTAGE INPUTS

L1	VDD_BUCK0_2_7_11
L2	VDD_BUCK0_2_7_11
L3	VDD_BUCK0_2_7_11
L4	VDD_BUCK0_2_7_11
R1	VDD_BUCK0_2_7_11
R2	VDD_BUCK0_2_7_11
R3	VDD_BUCK0_2_7_11
R4	VDD_BUCK0_2_7_11
W1	VDD_BUCK0_2_7_11
W2	VDD_BUCK0_2_7_11
W3	VDD_BUCK0_2_7_11
W4	VDD_BUCK0_2_7_11
W7	VDD_BUCK0_2_7_11
W11	VDD_BUCK0_2_7_11
W15	VDD_BUCK0_2_7_11
W19	VDD_BUCK0_2_7_11
Y7	VDD_BUCK0_2_7_11
Y11	VDD_BUCK0_2_7_11
Y15	VDD_BUCK0_2_7_11
Y19	VDD_BUCK0_2_7_11
A7	VDD_BUCK1_8_9
A11	VDD_BUCK1_8_9
B1	VDD_BUCK1_8_9
B2	VDD_BUCK1_8_9
B3	VDD_BUCK1_8_9
B4	VDD_BUCK1_8_9
B7	VDD_BUCK1_8_9
B11	VDD_BUCK1_8_9
F1	VDD_BUCK1_8_9
F2	VDD_BUCK1_8_9
F3	VDD_BUCK1_8_9
F4	VDD_BUCK1_8_9
K1	VDD_BUCK1_8_9
K2	VDD_BUCK1_8_9
K3	VDD_BUCK1_8_9
K4	VDD_BUCK1_8_9
A15	VDD_BUCK3_14
B15	VDD_BUCK3_14
K19	VDD_LDO2
L20	VDD_LDO3_14
K21	VDD_LDO5
J19	VDD_LDO19
C18	VDD_MAIN_WBOOST
F20	VDD_MAIN_WBOOST
F15	VDD_MAIN_WIDAC
K11	VDD_MAIN
V17	VDD_MAIN1
E19	VDD_MAIN_DRV

SENSE

K10	VDD_MAIN_SNS
F19	VDD_MAIN_SNS_WLED
H8	VDD_BOOST_SNS
R16	VDDIO_1V2
N16	VDDIO_BUCK3
N20	VDD_RTC_ALT
K6	VPP

BUCK OUTPUTS

BUCK0_LX0	W6	BUCK0_LX0
BUCK0_LX0	Y6	
BUCK0_LX1	V1	
BUCK0_LX1	V2	
BUCK0_LX1	V3	
BUCK0_LX1	V4	BUCK0_LX1
BUCK0_LX2	P1	
BUCK0_LX2	P2	
BUCK0_LX2	P3	
BUCK0_LX2	P4	BUCK0_LX3
BUCK0_LX3	T1	
BUCK0_LX3	T2	
BUCK0_LX3	T3	
BUCK0_LX3	T4	BUCK0_LX2
BUCK0_LX4	M1	BUCK0_LX4
BUCK0_LX4	M2	
BUCK0_LX4	M3	
BUCK0_LX4	M4	
BUCK0_FB	U6	BUCK0_FB
BUCK0_VSS_FB	T6	
BUCK1_LX0	A6	BUCK1_LX0
BUCK1_LX0	B6	
BUCK1_LX1	C1	
BUCK1_LX1	C2	
BUCK1_LX1	C3	
BUCK1_LX1	C4	BUCK1_LX1
BUCK1_LX2	G1	
BUCK1_LX2	G2	
BUCK1_LX2	G3	
BUCK1_LX2	G4	BUCK1_LX2
BUCK1_LX3	E1	BUCK1_LX3
BUCK1_LX3	E2	
BUCK1_LX3	E3	
BUCK1_LX3	E4	
BUCK1_LX4	J1	BUCK1_LX4
BUCK1_LX4	J2	
BUCK1_LX4	J3	
BUCK1_LX4	J4	
BUCK1_FB	D6	BUCK1_FB
BUCK1_VSS_FB	E6	
BUCK2_LX0	Y20	BUCK2_LX0
BUCK2_LX1	W18	
BUCK2_LX1	Y18	BUCK2_LX1
BUCK2_LX2	W16	BUCK2_LX2
BUCK2_LX2	Y16	
BUCK2_FB	V20	BUCK2_FB
BUCK2_VSS_FB	U20	

PACK_OPTION=J522,J523
L8100 1.0UH-20%-4A-0.038OHM PIKD20161T-SM 152S01189
L8100 1.0UH-20%-4A-0.034OHM PIKD20161B 152S01283
PACK_IGNORE=TRUE PACK_OPTION=J517,J518

(24.8A; 0.32-1.2V,TYP 1.06V)
PPVDD_CPU 80 82 84

C8100 C8101 C8102 C8103 C8104 C8105 15UF 20% 4V CERM 0402
C8106 C8107 C8108 C8109 C810A C810B 15UF 20% 4V CERM 0402
C810Z 220PF 5% 16V C0G 01005

L8101 0.1UH-20%-10.3A-0.01OHM 152S01268 PCCE20161B-SM
L8102 0.1UH-20%-10.3A-0.01OHM 152S01268 PCCE20161B-SM

XW8100 SHORT-10L-0.1MM-SM

152S01283
L8110 1.0UH-20%-4A-0.034OHM PIKD20161B

(24.8A; 0.32-1.2V,TYP 1.06V)
PPVDD_GPU 80 84

C8110 C8111 C8112 C8113 C8114 C8115 15UF 20% 4V CERM 0402
C8116 C8117 C8118 C8119 C811A C811B 15UF 20% 4V CERM 0402
C811Z 220PF 5% 16V C0G 01005

152S01268
L8111 0.1UH-20%-10.3A-0.01OHM PCCE20161B-SM
L8112 0.1UH-20%-10.3A-0.01OHM PCCE20161B-SM

XW8110 SHORT-10L-0.1MM-SM

152S01189
L8120 1.0UH-20%-4A-0.038OHM PIKD20161T-SM
L8120 1.0UH-20%-4A-0.034OHM PIKD20161B 152S01283
PACK_OPTION=J522,J523
PACK_IGNORE=TRUE PACK_OPTION=J517,J518

(7.3A; 0.32-1.2V,TYP 0.857V)
PPVDD_S1_SOC 80 82 84

C8120 C8121 C8122 C8123 15UF 20% 4V CERM 0402
C8124 C8125 C8126 C8127 15UF 20% 4V CERM 0402
C812Z 220PF 5% 16V C0G 01005
C812X 4UF 20% 6.3V CER-X5R 0201
C812Y 4UF 20% 6.3V CER-X5R 0201

L8121 152S01316 0.1UH-20%-8.7A-0.0125OHM PCCE20161T-SM

XW8120 SHORT-10L-0.1MM-SM

BOM_COST_GROUP=POWER

PAGE TITLE
POWER: SERA (1/4)

PART NUMBER	ALTERNATE FOR PART NUMBER	BOM OPTION	REF DES	COMMENTS:
152S01305	152S01316		L8121	ALTERNATE IND

SERA BUCKS (2/4)

U8100
TMLT46B0-APG
WLCSP
SYM 6 OF 6

N1	VSS_BUCK0	VSS	A18
N2	VSS_BUCK0	VSS	B8
N3	VSS_BUCK0	VSS	B18
N4	VSS_BUCK0	VSS	C5
U1	VSS_BUCK0	VSS	C6
U2	VSS_BUCK0	VSS	C9
U3	VSS_BUCK0	VSS	C10
U4	VSS_BUCK0	VSS	C13
W5	VSS_BUCK0	VSS	C17
Y1	VSS_BUCK0	VSS	D5
Y2	VSS_BUCK0	VSS	D7
Y3	VSS_BUCK0	VSS	D10
Y4	VSS_BUCK0	VSS	D11
Y5	VSS_BUCK0	VSS	D15
		VSS	D18
A1	VSS_BUCK1	VSS	D19
A2	VSS_BUCK1	VSS	D20
A3	VSS_BUCK1	VSS	E5
A4	VSS_BUCK1	VSS	E7
A5	VSS_BUCK1	VSS	E15
B5	VSS_BUCK1	VSS	E17
D1	VSS_BUCK1	VSS	E20
D2	VSS_BUCK1	VSS	F6
D3	VSS_BUCK1	VSS	F16
D4	VSS_BUCK1	VSS	F17
H1	VSS_BUCK1	VSS	F21
H2	VSS_BUCK1	VSS	F22
H3	VSS_BUCK1	VSS	G5
H4	VSS_BUCK1	VSS	G6
		VSS	G15
W17	VSS_BUCK2	VSS	G18
W21	VSS_BUCK2	VSS	H5
W22	VSS_BUCK2	VSS	H6
Y17	VSS_BUCK2	VSS	H15
Y21	VSS_BUCK2	VSS	H18
Y22	VSS_BUCK2	VSS	J5
		VSS	J6
A17	VSS_BUCK3	VSS	J13
B17	VSS_BUCK3	VSS	J17
		VSS	J18
W13	VSS_BUCK7	VSS	K15
Y13	VSS_BUCK7	VSS	K18
		VSS	L6
A9	VSS_BUCK8	VSS	L7
B9	VSS_BUCK8	VSS	L8
		VSS	L9
A13	VSS_BUCK9_14	VSS	L10
B13	VSS_BUCK9_14	VSS	L11
		VSS	L12
W9	VSS_BUCK11	VSS	L15
Y9	VSS_BUCK11	VSS	M5
		VSS	N5
V22	VSS_BSTLQ	VSS	N18
		VSS	N22
A21	VSS_WLED_LP	VSS	P5
A22	VSS_WLED_LP	VSS	P7
B21	VSS_WLED_LP	VSS	R18
B22	VSS_WLED_LP	VSS	T5
		VSS	T18
A20	VSS_WLED_HP1	VSS	U5
B20	VSS_WLED_HP1	VSS	U19
C20	VSS_WLED_HP1	VSS	V5
		VSS	V6
D21	VSS_WLED_HP2	VSS	V9
D22	VSS_WLED_HP2	VSS	V10
		VSS	V13
J11	VSS_REF	VSS	V14
		VSS	V16
K7	VSS_DFT_2	VSS	V18
		VSS	V21
		VSS	W8
		VSS	W12
		VSS	W20

TP8200 A (P:1A)
SERA ADC IN
R8203 1M 5% 1/20W MF 201
PP1V5_SERA_LDO_INT
C8202 0.1UF 20% 6.3V X5R-CERM 01005
C8200 2.2UF 20% 10V X5R 0201
R8201 1.00K 1% 1/32W MF 01005
PMU_VCC_MAIN_SNS_R_P
NO_XNET_CONNECTION=1
C8201 0.22UF 10% 6.3V CER-X5R 01005
PMU_VCC_MAIN_SNS_P
PMU_VCC_MAIN_SNS_N
R8202 1.00K 1% 1/32W MF 01005
PMU_VCC_MAIN_SNS_R_N

U8100
TMLT46B0-APG
WLCSP
SYM 2 OF 6

K9	ADC_IN	
C7	VDD_ANA	
C11	VDD_ANA	
C15	VDD_ANA	
F5	VDD_ANA	
F18	VDD_ANA	
J15	VDD_ANA	
K5	VDD_ANA	
K8	VDD_ANA	
L5	VDD_ANA	
P18	VDD_ANA	
R5	VDD_ANA	
V7	VDD_ANA	
V11	VDD_ANA	
V15	VDD_ANA	
V19	VDD_ANA	
D9	VDD_DIG	
E16	VDD_DIG	
J7	VDD_DIG	
M18	VDD_DIG	
P9	VDD_DIG	
R17	VDD_DIG	
K12	VREF	
J10	VBAT	
J9	IBAT	
J8	IREF	
R21	VDD_SW1	BUCK OUTPUTS
R22	VDD_SW1	
T20	VDD_SW2	
R19	VDD_SW3	
R20	VDD_SW3	
P21	BUCK_SW1	
P22	BUCK_SW1	
T19	BUCK_SW2	
P19	BUCK_SW3	
P20	BUCK_SW3	

SWITCHED RAILS

APN:152S01263
L8210 0.47UH-20%-4A-0.024OHM
BUCK3_LX0 — DIDT=TRUE, SWITCH_NODE=TRUE — PIKD20121B-SM
XW8210 SHORT-10L-0.1MM-SM
BUCK3_LX A16 / BUCK3_LX B16
BUCK3_FB D16
BUCK3_VSS_FB C16
L8220 1.0UH-20%-4A-0.038OHM
152S01189 — PACK_OPTION=J522,J523 — PIKD20161T-SM
L8220 1.0UH-20%-4A-0.034OHM
BUCK7_LX0 Y12 — DIDT=TRUE, SWITCH_NODE=TRUE — PACK_IGNORE=TRUE, PACK_OPTION=J517,J518 — PIKD20161B
152S01283
L8221 0.22UH-20%-6.7A-0.023OHM
BUCK7_LX1 W14 / Y14 — DIDT=TRUE, SWITCH_NODE=TRUE — PINA20121T-SM
APN:152S00204
XW8220 SHORT-10L-0.1MM-SM
BUCK7_FB U12
BUCK7_VSS_FB V12
APN:152S01283
L8230 1.0UH-20%-4A-0.034OHM
BUCK8_LX0 A8 — DIDT=TRUE, SWITCH_NODE=TRUE — PIKD20161B
APN:152S00204
L8231 0.22UH-20%-6.7A-0.023OHM
BUCK8_LX1 A10 / B10 — DIDT=TRUE, SWITCH_NODE=TRUE — PINA20121T-SM
XW8230 SHORT-10L-0.1MM-SM
BUCK8_FB D8
BUCK8_VSS_FB C8
APN:152S01263
L8240 0.47UH-20%-4A-0.024OHM
BUCK9_LX A12 / B12 — DIDT=TRUE, SWITCH_NODE=TRUE — PIKD20121B-SM
XW8240 SHORT-10L-0.1MM-SM
BUCK9_FB D12 — PLACE_NEAR=U0600:10MM
BUCK9_VSS_FB C12
L8250 1.0UH-20%-4A-0.034OHM
BUCK11_LX0 Y8 — DIDT=TRUE, SWITCH_NODE=TRUE — PACK_IGNORE=TRUE, PACK_OPTION=J517,J518 — 152S01283 — PIKD20161B
L8250 1.0UH-20%-4A-0.038OHM
BUCK11_LX1 W10 / Y10 — PACK_OPTION=J522,J523 — 152S01189 — PIKD20161T-SM
L8251 0.22UH-20%-6.7A-0.023OHM
BUCK11_FB U8
BUCK11_VSS_FB V8
BUCK11_LX1 — DIDT=TRUE, SWITCH_NODE=TRUE — 152S00204 — PINA20121T-SM
XW8250 SHORT-10L-0.1MM-SM
BUCK14_LX A14 / B14 — NC
BUCK14_FB D14 — NC
BUCK14_VSS_FB C14

PP1V8_S2 — C82R0 2.2UF 20% 10V X5R 0201
PP1V25_S2 — C82R1 2.2UF 20% 10V X5R 0201

PP1V8_SW1_IO — C82S0 1.0UF 20% 6.3V X5R 0201-1
PP1V8_S2_TOUCH — C82S1 1.0UF 20% 6.3V X5R 0201-1
PP1V2_IO — C82S2 1.0UF 20% 6.3V X5R 0201-1

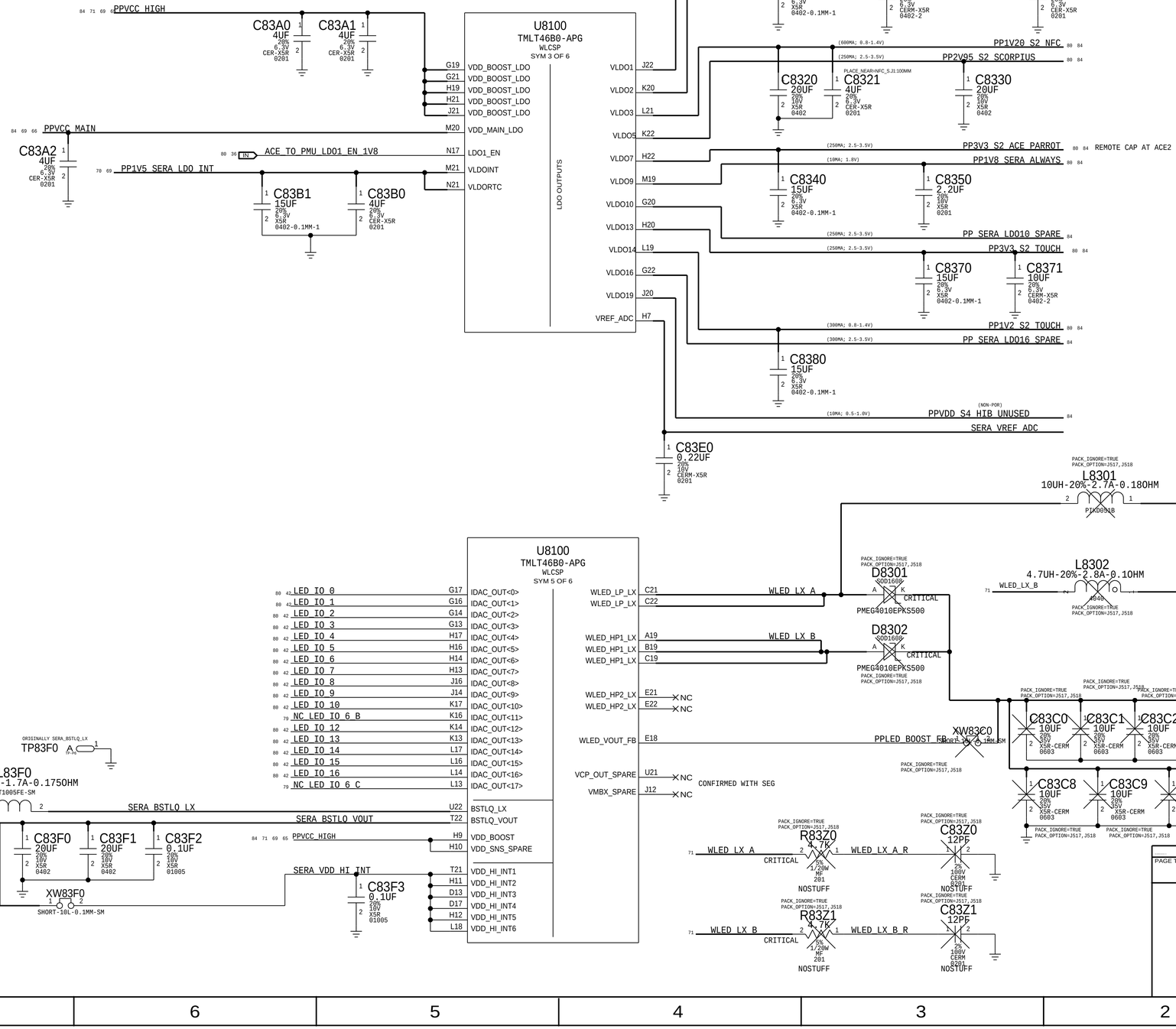
BUCK3_LX — PP1V8_S2
BUCK7_LX0 — PPVDD_CPU_SRAM
BUCK8_LX0 — PPVDD_S1_DISP
BUCK9_LX — PPVDD_S1_DCS
BUCK11_LX0 — PPVDD_ECPU

C8210 C8211 C8212 C8213 C8214 C8215 C8216 C8217 15UF 20% 4V CERM 0402
C821Z 220PF 5% 16V C0G 01005
C8220 C8221 C8222 C8223 C8224 C8225 C8226 C8227 15UF 20% 4V CERM 0402
C822Z 220PF 5% 16V C0G 01005
C822Y C822X 4UF 20% 6.3V CER-X5R 0201
NOSTUFF
C8230 C8231 C8232 C8233 C8234 C8235 15UF 20% 4V CERM 0402
C823Z 220PF 5% 16V C0G 01005
C8299 C8298 C829Y C829X 4UF 20% 6.3V CER-X5R 0201
C8240 C8241 15UF 20% 4V CERM 0402
C8242 C8243 C8244 15UF 20% 4V CERM 0402
C824Z 220PF 5% 16V C0G 01005
NOSTUFF NOSTUFF
C8250 C8251 C8252 C8253 C8254 C8255 C8256 C8257 15UF 20% 4V CERM 0402
C825Z 220PF 5% 16V C0G 01005
C825Y C825X 4UF 20% 6.3V CER-X5R 0201
NOSTUFF

BOM_COST_GROUP=POWER

PAGE TITLE
POWER: SERA (2/4)

SERA LDO/WLED (3/4)



SERA GPIOS (4/4)

NEAR BATT CONN
R8422 CRITICAL 0201 10KOHM-1%-0.31MA
C8422 100PF 5% 25V C0G-CERM 01005
XW8422 SHORT-10L-0.1MM-SM
BOARD_TEMP2_N

NEAR POTOMAC
R8423 CRITICAL 0201 10KOHM-1%-0.31MA
C8423 100PF 5% 25V C0G-CERM 01005
XW8423 SHORT-10L-0.1MM-SM
BOARD_TEMP3_N

NEAR SERA
R8424 CRITICAL 0201 10KOHM-1%-0.31MA
C8424 100PF 5% 25V C0G-CERM 01005
XW8424 SHORT-10L-0.1MM-SM
BOARD_TEMP4_N

NEAR ORION
R8425 CRITICAL 0201 10KOHM-1%-0.31MA
C8425 100PF 5% 25V C0G-CERM 01005
XW8425 SHORT-10L-0.1MM-SM
BOARD_TEMP5_N

NEAR IO FLEX
R8426 CRITICAL 0201 10KOHM-1%-0.31MA
C8426 100PF 5% 25V C0G-CERM 01005
XW8426 SHORT-10L-0.1MM-SM
BOARD_TEMP6_N

NEAR EDP B2B
R8427 CRITICAL 0201 10KOHM-1%-0.31MA
C8427 100PF 5% 25V C0G-CERM 01005
XW8427 SHORT-10L-0.1MM-SM
BOARD_TEMP7_N

NEAR SOC
R8428 CRITICAL 0201 10KOHM-1%-0.31MA
C8428 100PF 5% 25V C0G-CERM 01005
XW8428 SHORT-10L-0.1MM-SM
BOARD_TEMP8_N

Y8400 32.768KHZ-20PPM-12.5PF 1.60X1.00-SM
C8400 20PF 5% 25V C0G 0201
C8401 20PF 5% 25V C0G 0201
PMU_XTAL
PMU_EXTAL

CAPS INCREASED FROM 18PF TO 22PF TO BETTER TARGET 32768HZ
NEW XTAL...NEED TO VALIDATE FREQUENCY

BOARD_TEMP2_P
BOARD_TEMP3_P
BOARD_TEMP4_P
BOARD_TEMP5_P
BOARD_TEMP6_P
BOARD_TEMP7_P
BOARD_TEMP8_P
SERA_TCAL
C8429 100PF 5% 25V C0G-CERM 01005
R8429 3.92K 0.1% 1/20W MF 0201-2 CRITICAL

SWD PERIPHERAL SWCLK — SWD PERIPHERAL SWCLK (MAKE_BASE=TRUE)
SWD_PMU_SWDIO — SWD_PMU_SWDIO (MAKE_BASE=TRUE)

U8100
TMLT46B0-APG
WLCSP
SYM 4 OF 6

PA_NTC_P	E8	TDEV1	
BOARD_TEMP2_P	F9	TDEV2	
BOARD_TEMP3_P	F8	TDEV3	
BOARD_TEMP4_P	F7	TDEV4	
BOARD_TEMP5_P	G9	TDEV5	
BOARD_TEMP6_P	G10	TDEV6	
BOARD_TEMP7_P	G8	TDEV7	
BOARD_TEMP8_P	G7	TDEV8	
SERA_TCAL	F10	TCAL	
GPIO_BTN_VOL_DOWN_L_1V8	P10	BUTTON1	BUTTONS
GPIO_BTN_ONOFF_L_1V8	M6	BUTTON2	
GPIO_BTN_VOL_UP_L_1V8	N8	BUTTON3	
NC_GPIO_BTN_4 (NO_TEST=1)	P11	BUTTON4	
GPIO_SOC_TO_PMU_WDOG	N11	RESET_IN1	RESET
GPIO_1V2_ACE2PMU_RESET	M10	RESET_IN2	
SOCHOT1_SOC_TO_PMU_L	M9	RESET_IN3	
	R7	VBUS_DET	PMOS OD
	E9	BRICK_ID1	
	E10	BRICK_ID2	
PMU_SHUTDOWN_1V8	M8	SHDN	
	N19	NXTAL_MEMS	CLOCKS
PMU_XTAL	L22	XIN	
PMU_EXTAL	M22	XOUT	
	E13	AMUX_A<0>	AMUX
	F11	AMUX_A<1>	
	E12	AMUX_A<2>	
	E11	AMUX_A<3>	
TPT_SERA_AMUX_AY	G12	AMUX_AY	
DOMBRA_LDO_8V_PGOOD_FET	E14	AMUX_B<0>	
	F14	AMUX_B<1>	
	F12	AMUX_B<2>	
	F13	AMUX_B<3>	
TPT_SERA_AMUX_BY	G11	AMUX_BY	

	P16	GPIO1	NC_SERA_GPIO1
	T9	GPIO2	GPIO_APANEL_HALL_TO_PMU_IRQ_BUF_L
	T7	GPIO3	SWD_PMU_SWDIO
	R11	GPIO4	GPIO_CPANEL_HALL_TO_PMU_IRQ_BUF_L
SER_GPIO4_R	T8	GPIO5	GPIO_POTOMAC_TO_SOC_TO_PMU_IRQ_L (R8493 0.00 0% 1/32W MF 01005)
	U7	GPIO6	GPIO_POTOMAC_TO_PMU_WAKE_1V8
	T11	GPIO7	NC_GPIO_BB_TO_PMU_HOST_WAKE_L (IN)
	U10	GPIO8	GPIO_WLAN_TO_PMU_HOST_WAKE (IN)
	R12	GPIO9	SERA_FORCE_SYNC
	U9	GPIO10	NC_SERA_GPIO10
	T12	GPIO11	GPIO_PMU_TO_LCD_PWREN_1V8
	U11	GPIO12	GPIO_PMU_TO_POTOMAC_LINCH_EN_1V8 (R8400 0.00 0% 1/32W MP 01005; R8401 10K 5% 1/32W MF 01005; PP1V8_S2; OUT)
	T13	GPIO13	GPIO_PMU_TO_ROTTERDAM_EN (OUT)
	U13	GPIO14	GPIO_PMU_TO_SCORPIUS_EXT_DOTARA_EN_1V8 (OUT)
	M13	GPIO15	GPIO_PMU_TO_ATRANI_EXT_LDO_EN_1V8 (OUT)
	M14	GPIO16	NC_SERA_GPIO16
	N14	GPIO17	GPIO_PMU_TO_NAND_LOW_BATT_L
	R13	GPIO18	GPIO_PMU_TO_SCORPIUS_MCU_NRST_L_1V8 (OUT)
	U14	GPIO19	GPIO_PMU_TO_LDCM_MUX_SEL0 (OUT)
	U15	GPIO20	GPIO_PMU_TO_LDCM_MUX_SEL1 (OUT)
	T14	GPIO21	NC
	U16	GPIO22	NC_SERA_GPIO22
	U17	GPIO23	NC_GPIO_PMU_TO_BBPMU_ON (OUT)
	R14	GPIO24	GPIO_PMU_TO_WLAN_REG_ON (OUT)
	N10	GPIO25	GPIO_SERA_TO_NAND_DISCH_EN_1V8 (OUT)
	P8	GPIO26	NC_GPIO_PMU_TO_BBPMU_VBUS_DET
	P17	GPIO27	NC_SERA_GPIO27
	N7	BUTTONO1	GPIO_PMU_TO_SOC_BTN_VOL_DOWN_L
	N9	BUTTONO2	GPIO_PMU_TO_SOC_BTN_ONOFF_L
	M7	BUTTONO3	GPIO_PMU_TO_SOC_BTN_VOL_UP_L
	N6	DBLCLICK_DET	DBL_CLICK_DET
	N13	RESET*	RESET_PMU_TO_SYSTEM_L
	T10	FORCE_DFU	GPIO_PMU_TO_SOC_FORCE_DFU (R8402 1.00K 5% 1/32W MF 01005; GPIO_FORCE_DFU)
	M12	FAULT_OUT*	NC
	N12	SCRASH	SCRASH_L_1V8_R (PLACE NEAR SIMETRA SIDE; R8403 0.00 0% 1/32W MF 01005; SCRASH_L_1V8 BI)
	M15	SGPIO_READY_REQ	SGPIO_READY_REQ_1V8
	N15	SGPIO_SCLK	SGPIO_SCLK_1V8_R (R8405 33 5% 1/32W MF 01005; SGPIO_SCLK_1V8 OUT)
	P15	SGPIO_SDATA	SGPIO_SDATA_1V8_R (R8406 33 5% 1/32W MF 01005; SGPIO_SDATA_1V8 BI)
	R15	SPMI_SCLK	NUB_SPMI_SERA_SCLK
	T15	SPMI_SDATA	NUB_SPMI_SERA_SDATA_R (R8407 33 5% 1/32W MF 01005; PLACE_NEAR=U8100.T15:100MM; NUB_SPMI_SERA_SDATA)
	U18	SLEEP_32K	CLK_PMU_TO_AOP_32K
	T16	OUT_32K	CLK_PMU_TO_WLAN_32K
	P12	CRASH*	SERA_CRASH_L (OUT; TP8403)
	M16	DFT_CTRL0	
	M17	DFT_CTRL1	SWD_PERIPHERAL_SWCLK
	M11	SYS_ALIVE	SYS_ALIVE (OUT)
	P13	ACTIVE_READY	GPIO_PMU_TO_SYSTEM_ACTIVE_READY
	R6	REQUEST_DFU	PMU_REQUEST_DFU
	P6	CPU_TRIGGER0*	GPIO_PMU_TO_SOC_TRIGGER_2
	R9	CPU_TRIGGER1*	GPIO_PMU_TO_SOC_TRIGGER_3
	R8	GPU_TRIGGER0*	GPIO_PMU_TO_SOC_TRIGGER_0
	R10	GPU_TRIGGER1*	GPIO_PMU_TO_SOC_TRIGGER_1
	P14	UVWARN*	GPIO_PMU_TO_SOC_TRIGGER_4
	T17	VDD_BOOST_UVLO*	NC

NOTES:
CPU_TRIGGER0 - BUCK0 THERMAL WARNING
CPU_TRIGGER1 - VCC_MAIN UVWARN1 (2.8V) "SW SHUTDOWN"
GPU_TRIGGER0 - BUCK1 THERMAL WARNING
GPU_TRIGGER1 - UNUSED
UVWARN - VCC_MAIN UVWARN0 (2.95V) "PRE-UVLO"

PP1V8_S2
PP1V8_SERA_ALWAYS
R8492 100K 1% 1/32W MF 01005
R8497 100K 1% 1/32W MF 01005
R8496 100K 1% 1/32W MF 01005
GPIO_BTN_ONOFF_L_1V8
GPIO_BTN_VOL_DOWN_L_1V8
GPIO_BTN_VOL_UP_L_1V8

NUB_SPMI_SERA_SDATA_R
NUB_SPMI_SERA_SCLK
NOSTUFF R8408 1.00M 5% 1/32W MF 01005
NOSTUFF R8409 1.00M 5% 1/32W MF 01005

PP1V8_SIMETRA_ALWAYS
NOSTUFF R8404 100K 1% 1/32W MF 01005 (PLACE NEAR SIMETRA SIDE INTERNAL PU ON SERA SIDE)

GPIO_FORCE_DFU
R8499 100K 1% 1/32W MF 01005
PMU_REQUEST_DFU
R8498 100K 1% 1/32W MF 01005

BOM_COST_GROUP=POWER
PAGE TITLE
POWER: SERA (4/4)

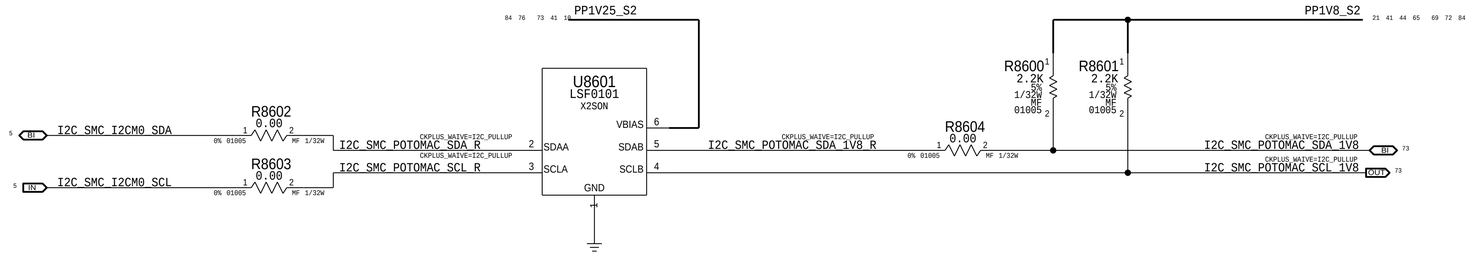
PART NUMBER	ALTERNATE FOR PART NUMBER	BOM OPTION	REF DES	COMMENTS:
107S00109	107S00094		R8582	ALTERNATE SENSE R.
132S00229	132S00010		C8555,ETC.	TY ALT 0.1UF 0201

BOM_COST_GROUP=POWER

PAGE TITLE

POWER: CHARGER

POTOMAC VOLTAGE TRANSLATOR

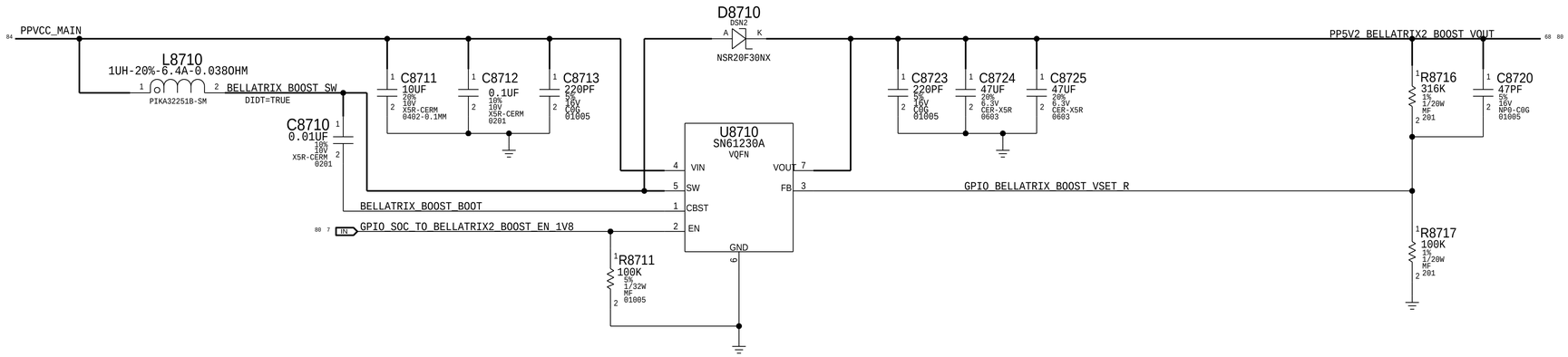


BOM_COST_GROUP=POWER

PAGE TITLE

POWER: VT LDO

BELLATRIX BOOST



SCORPIUS BOOST MOVED TO SCORPIUS BOARD

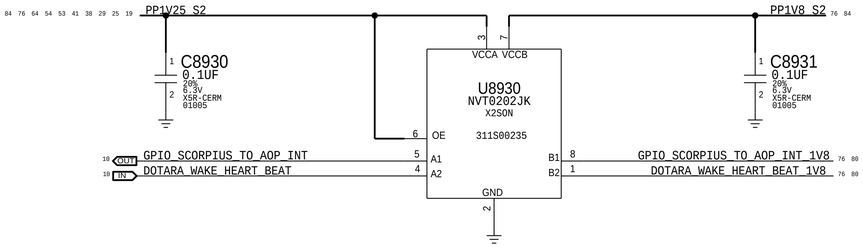
BOM_COST_GROUP=ORION

PAGE TITLE

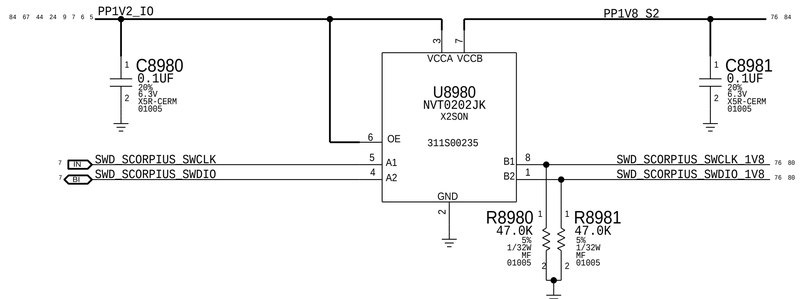
POWER: BELLATRIX2 BOOSTS

SCORPIUS THROTTLE MOVED TO SCORP. BOARD

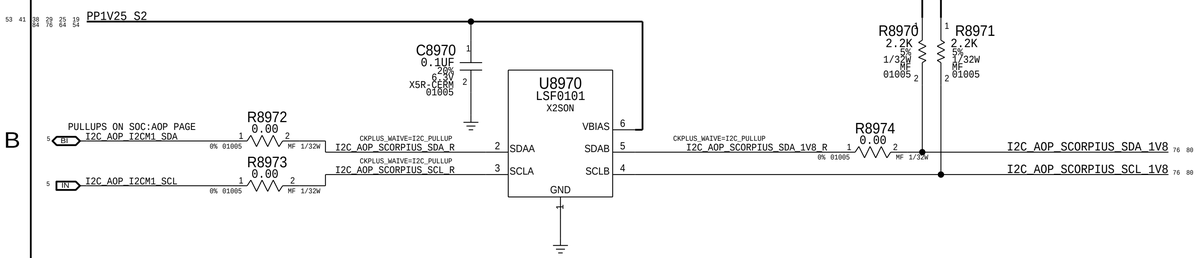
LEVEL TRANSLATOR

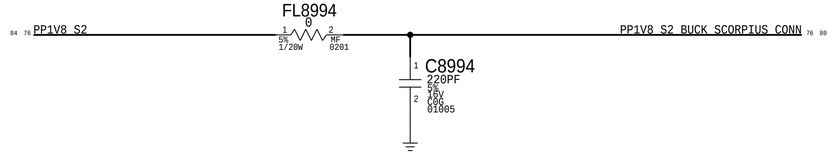


SWD LEVEL TRANSLATOR

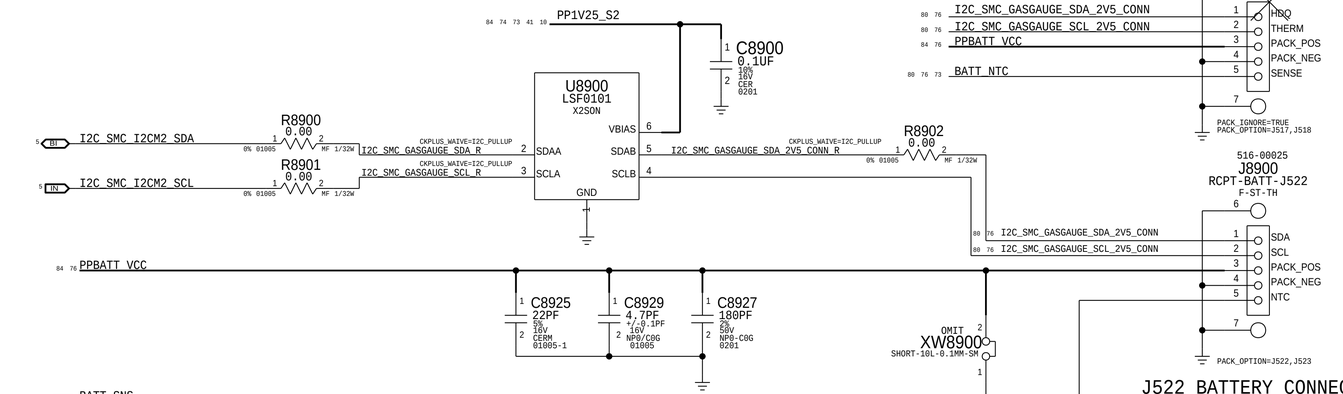


I2C LEVEL TRANSLATOR





J517 BATTERY CONNECTOR

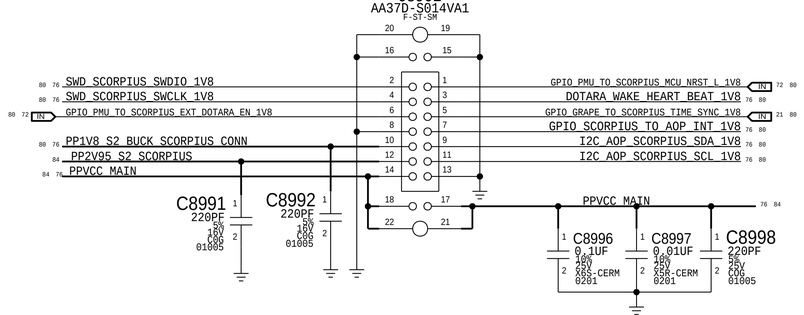


J522 BATTERY CONNECTOR

SCORPIUS FLEX CONNECTOR

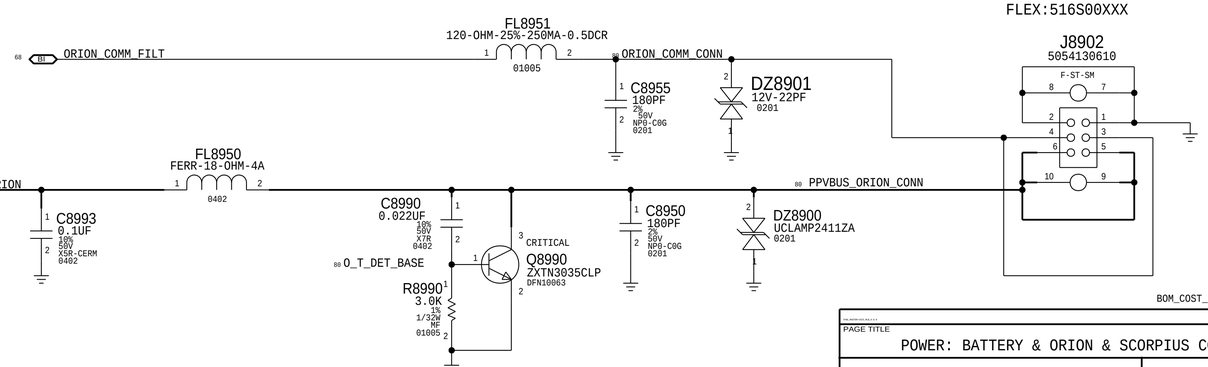
PINOUT FOLLOWS J522 SCORPIUS FLEX REV 0.8

MLB: 516S00150
FLEX: 516S00149



ORION FLEX CONNECTOR

MLB: 516S00321
FLEX:516S00XXX

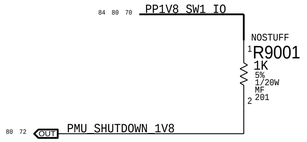


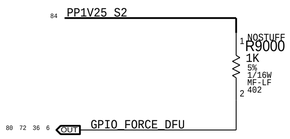
BOM_COST_GROUP=SCORPIUS

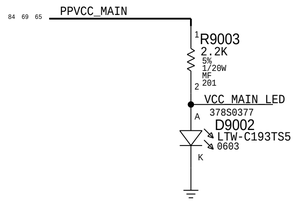
PAGE TITLE

POWER: BATTERY & ORION & SCORPIUS CONN

DEBUG RESET ACCESS







BOM_COST_GROUP=SOC

SYNC_MASTER=2023_M_8_0_0

SYNC_DATE=09/30/2020

PAGE TITLE

SOC: DEBUG

CELLULAR AND WLAN/BT ALIASES

BASEBAND

SOC/AOP/PMU GPIOS

8	OUT	NC_GPIO_BB_TO_SOC_RESET_DET_L	NC_GPIO_BB_TO_SOC_RESET_DET_L	MAKE_BASE=TRUE
9	IN	NC_GPIO_SOC_TO_BB_COREDUMP	NC_GPIO_SOC_TO_BB_COREDUMP	MAKE_BASE=TRUE
6	IN	NC_SWD_BB_SWCLK	NC_SWD_BB_SWCLK	MAKE_BASE=TRUE
6	BI	NC_SWD_BB_SWDIO	NC_SWD_BB_SWDIO	MAKE_BASE=TRUE
72	IN	NC_GPIO_PMU_TO_BBPMU_ON	NC_GPIO_PMU_TO_BBPMU_ON	MAKE_BASE=TRUE
8	IN	NC_GPIO_AP_TO_BB_GPS_TIME_MARK	NC_GPIO_AP_TO_BB_GPS_TIME_MARK	MAKE_BASE=TRUE
72	OUT	NC_GPIO_BB_TO_PMU_HOST_WAKE_L	NC_GPIO_BB_TO_PMU_HOST_WAKE_L	MAKE_BASE=TRUE
10	IN	NC_UART_AOP_TO_BB_TX	NC_UART_AOP_TO_BB_TX	MAKE_BASE=TRUE
10	OUT	NC_UART_BB_TO_AOP_TX	NC_UART_BB_TO_AOP_TX	MAKE_BASE=TRUE
8	IN	NC_GPIO_AP_TO_BBPMU_PEAK_POWER_IND	NC_GPIO_AP_TO_BBPMU_PEAK_POWER_IND	MAKE_BASE=TRUE
10	IN	NC_AOP_TO_BBPMU_FORCE_PWM	NC_AOP_TO_BBPMU_FORCE_PWM	MAKE_BASE=TRUE
72	IN	NC_GPIO_PMU_TO_BBPMU_VBUS_DET	NC_GPIO_PMU_TO_BBPMU_VBUS_DET	MAKE_BASE=TRUE
67	IN	NC_GPIO_SIMETRA_TO_BB_BOOT_CFG1	NC_GPIO_SIMETRA_TO_BB_BOOT_CFG1	MAKE_BASE=TRUE
67	IN	NC_GPIO_SIMETRA_TO_BB_BOOT_CFG2	NC_GPIO_SIMETRA_TO_BB_BOOT_CFG2	MAKE_BASE=TRUE

POWER

84	PPVCC_MAIN	PPVCC_MAIN	63 78
84	PP1V8_S2	PP1V8_S2	47 48 49 50 51 52 78
		PP1V8_S2	
		PP1V8_S2	
		NOTE: DUAL RAIL SHORTS AP AND BB PMU TOGETHER, POR SHOULD HAVE R5635_E NOSTUFF	
84	PPVCC_HIGH	PPVCC_HIGH	
84	PP1V25_S2	PP1V25_S2	47 78

USB BB

36	IN	AP_TO_BB_USB_PN_PD	AP_TO_BB_USB_PN_PD	MAKE_BASE=TRUE 78
36	IN	AP_TO_BB_USB_PN_PD	AP_TO_BB_USB_PN_PD	MAKE_BASE=TRUE 78

R38C0 100K 5% 1/32W MF 01005 (1–2)

PCIE

9	IN	NC_PCIE_SOC_TO_BB_REFCLK_P	NC_PCIE_SOC_TO_BB_REFCLK_P	MAKE_BASE=TRUE
9	IN	NC_PCIE_SOC_TO_BB_REFCLK_N	NC_PCIE_SOC_TO_BB_REFCLK_N	MAKE_BASE=TRUE
9	OUT	NC_PCIE_BB_TO_SOC_CLKREQ_L	NC_PCIE_BB_TO_SOC_CLKREQ_L	MAKE_BASE=TRUE
9	IN	NC_PCIE_SOC_TO_BB_PERST_L	NC_PCIE_SOC_TO_BB_PERST_L	MAKE_BASE=TRUE
9	IN	NC_PCIE_SOC_TO_BB_TX_P	NC_PCIE_SOC_TO_BB_TX_P	MAKE_BASE=TRUE
9	IN	NC_PCIE_SOC_TO_BB_TX_N	NC_PCIE_SOC_TO_BB_TX_N	MAKE_BASE=TRUE
9	OUT	NC_PCIE_BB_TO_SOC_TX_P	NC_PCIE_BB_TO_SOC_TX_P	MAKE_BASE=TRUE
9	OUT	NC_PCIE_BB_TO_SOC_TX_N	NC_PCIE_BB_TO_SOC_TX_N	MAKE_BASE=TRUE

I2S

7	IN	NC_I2S_BB_TO_SOC_BCLK	NC_I2S_BB_TO_SOC_BCLK	MAKE_BASE=TRUE
7	OUT	NC_I2S_BB_TO_SOC_DOUT	NC_I2S_BB_TO_SOC_DOUT	MAKE_BASE=TRUE
7	IN	NC_I2S_SOC_TO_BB_DOUT	NC_I2S_SOC_TO_BB_DOUT	MAKE_BASE=TRUE
7	IN	NC_I2S_BB_TO_SOC_LRCK	NC_I2S_BB_TO_SOC_LRCK	MAKE_BASE=TRUE

WLAN

POWER

84	PPVCC_MAIN	PPVCC_MAIN	47 48 49 50 51
84	PP1V8_S2	PP1V8_S2	47 48 49 50 51 52 78
84	PP1V25_S2	PP1V25_S2	47 78

GPIOS

78 72 47	IN	GPIO_PMU_TO_WLAN_REG_ON	GPIO_PMU_TO_WLAN_REG_ON	OUT 47 72 78
72	OUT	GPIO_WLAN_TO_PMU_HOST_WAKE	GPIO_WLAN_TO_PMU_HOST_WAKE	IN 47
80 72	IN	CLK_PMU_TO_WLAN_32K	CLK_PMU_TO_WLAN_32K	OUT 47
78 47 10	IN	GPIO_AOP_TO_WLAN_CONTEXT_A	GPIO_AOP_TO_WLAN_CONTEXT_A	OUT 10 47 78
78 47 10	IN	GPIO_AOP_TO_WLAN_CONTEXT_B	GPIO_AOP_TO_WLAN_CONTEXT_B	OUT 10 47 78
6	OUT	GPIO_WLAN_TO_SOC_TIME_SYNC	GPIO_WLAN_TO_SOC_TIME_SYNC	IN 47

(MAKE_BASE=TRUE)

PCIE

82 9	IN	PCIE_SOC_TO_WLAN_REFCLK_P	PCIE_SOC_TO_WLAN_REFCLK_P	OUT 47
82 9	IN	PCIE_SOC_TO_WLAN_REFCLK_N	PCIE_SOC_TO_WLAN_REFCLK_N	OUT 47
82 9	IN	PCIE_SOC_TO_WLAN_TX_P	PCIE_SOC_TO_WLAN_TX_P	OUT 47
82 9	IN	PCIE_SOC_TO_WLAN_TX_N	PCIE_SOC_TO_WLAN_TX_N	OUT 47
78		PCIE_WLAN_TO_SOC_TX_C_P	PCIE_WLAN_TO_SOC_TX_C_P	IN 47
78		PCIE_WLAN_TO_SOC_TX_C_N	PCIE_WLAN_TO_SOC_TX_C_N	IN 47
9	OUT	PCIE_WLAN_TO_SOC_CLKREQ_L	PCIE_WLAN_TO_SOC_CLKREQ_L	IN 47
9	IN	PCIE_SOC_TO_WLAN_RESET_L	PCIE_SOC_TO_WLAN_RESET_L	OUT 47

(MAKE_BASE=TRUE)

GND_VOID=TRUE

82 9 PCIE_WLAN_TO_SOC_TX_P — C9160 0.1UF 20% 6.3V X5R-CERM 01005 PLACE_NEAR=U_WLAN_W.28:3MM — PCIE_WLAN_TO_SOC_TX_C_P 78

82 9 PCIE_WLAN_TO_SOC_TX_N — C9161 0.1UF 20% 6.3V X5R-CERM 01005 PLACE_NEAR=U_WLAN_W.97:3MM — PCIE_WLAN_TO_SOC_TX_C_N 78

GND_VOID=TRUE

UART

47	OUT	NC_UART_BB_TO_WLAN_COEX_1V2	NC_UART_BB_TO_WLAN_COEX_1V2	MAKE_BASE=TRUE
47	IN	NC_UART_WLAN_TO_BB_COEX_1V2	NC_UART_WLAN_TO_BB_COEX_1V2	MAKE_BASE=TRUE

BLUETOOTH

SOC GPIOS

20	IN	GPIO_TOUCH_TO_BT_SYNC	GPIO_TOUCH_TO_BT_SYNC	OUT 47
82 20 7	IN	GPIO_SOC_TO_BT_TO_GRAPE_TS_SYNC	GPIO_SOC_TO_BT_TO_GRAPE_TS_SYNC	OUT 47
8	OUT	BT_TO_SOC_TIME_SYNC	BT_TO_SOC_TIME_SYNC	IN 47

(MAKE_BASE=TRUE)

WLAN/BT SPMI

10	IN	AOP_SPMI0_SCLK_WIFI_BT	AOP_SPMI0_SCLK_WIFI_BT	OUT 47
10	BI	AOP_SPMI0_SDATA_WIFI_BT	R9152 33 1/32W 5% MF 01005	SPMI_EVENTS_AOP_TO_WLAN_NFC_DATA BI 47

I2C (TO WIFI/BT)

NC_I2C_BT_TO_SE_SCL	MAKE_BASE=TRUE	NC_I2C_BT_TO_SE_SCL	47
NC_I2C_BT_TO_SE_SDA	MAKE_BASE=TRUE	NC_I2C_BT_TO_SE_SDA	47

MMW/VOL BUTTON

80 25	OUT	GPIO_BTN_VOL_UP_L_CONN_1V8	GPIO_BTN_VOL_UP_L_CONN_1V8	IN 25
80 25	OUT	GPIO_BTN_VOL_DOWN_L_CONN_1V8	GPIO_BTN_VOL_DOWN_L_CONN_1V8	IN 25

(MAKE_BASE=TRUE)

ROTTERDAM(CERES)

POWER

84	PPVCC_MAIN	PPVCC_MAIN	63 78
84	PP1V8_S2	PP1V8_S2	63
84	PP1V20_S2_NFC	PP1V20_S2_NFC	63

SPMI

10	IN	AOP_SPMI0_SCLK_NFC	AOP_SPMI0_SCLK_NFC	OUT 63
10	BI	AOP_SPMI0_SDATA_NFC	R9153 33 1/32W 5% MF 01005	SPMI_AOP_TO_RADIOS_DATA BI 63

(MAKE_BASE=TRUE)

GPIOS

		AP_TO_NFC_DEV_WAKE	AP_TO_NFC_DEV_WAKE	MAKE_BASE=TRUE 63
		NFC_FW_DWLD	NFC_FW_DWLD	MAKE_BASE=TRUE 63
72	IN	GPIO_PMU_TO_ROTTERDAM_EN	GPIO_PMU_TO_ROTTERDAM_EN	OUT 63

(MAKE_BASE=TRUE)

R0960 100K 5% 1/32W MF 01005 (1–2)

RF NTC

CRITICAL R9150 10KOHM-1%-0.31MA 0201 — NO_XNET_CONNECTION=1 — (TP1D - INSIDE RF CAN)

I121 (1–2) — C9150 100PF 5% 25V C0G-CERM 01005 — NO_XNET_CONNECTION=1

PA_NTC_P 72

PA_NTC_N — XW9150 SM

NOTE: XW SHOULD BE PLACED NEAR PMU

SYNC_MASTER=2023_MLB_E.2.0 SYNC_DATE=04/29/2020

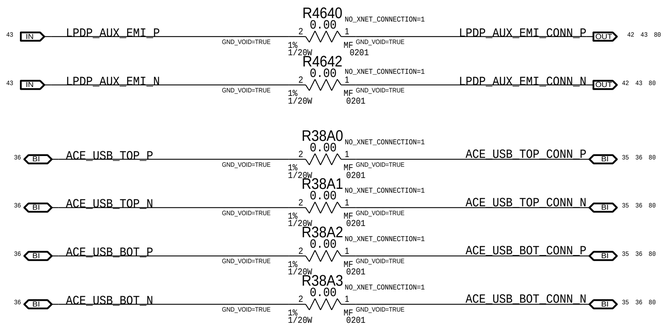
PAGE TITLE

ALIASES: BB/WLAN/BT

BOM_COST_GROUP=CELLULAR

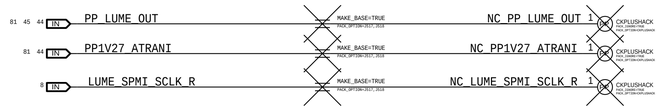
LPDP_TX/BACKLIGHT

LPDP/USB2 CMC REPLACEMENT



J522 SPECIFIC - DISPLAY & BL

J517 SPECIFIC - DISPLAY & BL



BOM_COST_GROUP=SOC

SYNC_MASTER=2022_M18_3.0.0

SYNC_DATE=08/09/2020

PAGE TITLE

ALIASES: J517/J522 DIFF

SMT TEST FIXTURE TP

POWER - BUCKS/SWITCHES

TP9301	A	1	PPVDD_CPU	69 82 84
TP9302	A	1	PPVDD_CPU	69 84
TP9303	A	1	PPVDD_S1_SOC	69 82 84
TP9304	A	1	PP1V8_S2	70 84
TP9305	A	1	PP1V8_SW4_IO	70 77 84
TP9306	A	1	PP1V8_S2_TOUCH	70 84
TP9307	A	1	PP1V06_S2	65 84
TP9308	A	1	PPVDD_S1_SRAM	65 82 84
TP9309	A	1	PPVDD_S1_DISP	70 84
TP930A	A	1	PP0V88_S1	65 84
TP930C	A	1	PP0V88_S1_NAND	66 84
TP930E	A	1	PP0V8_S1_SOC_FIXED	66 82 84
TP930F	A	1	PP2V63_NAND	65 84
TP930G	A	1	PPVDD_CPU_SRAM	70 82 84
TP930H	A	1	PP1V25_S2	65 84
TP930I	A	1	PPVDD_S1_DCS	70 84
TP930J	A	1	PPVDD_S1_QL	65 84
TP930K	A	1	PPVDD_ECPU	70 82 84
TP930L	A	1	PP1V2_TO	70 84
TP930M	A	1	PP1V2_NAND	66 84
TP930N	A	1	PP1V8_SERA_ALWAYS	71 84
TP930O	A	1	PP1V8_SIMETRA_ALWAYS	66 84
TP930Q	A	1	PP1V8_LDCM	71 84
TP930R	A	1	PP_BUCK3_SW4_SPARE	66 84
TP9311	A	1	PP3V3_S2_ACE_PARROT	71 84
TP9312	A	1	PP2V95_S2_SCORPIUS	71 84
TP9313	A	1	PP3V3_BSB	71 84
TP9318	A	1	PPVDD_S2_CIO	66 84
TP9319	A	1	PP1V20_S2_NFC	71 84
TP931A	A	1	PP0V72_S2_VDDLOW	66 82 84
TP931B	A	1 TP-P5		
TP931C	A	1	PP3V3_S2_TOUCH	71 84
TP931D	A	1	PP1V2_SOC_LN	66 84
TP931E	A	1	PP1V2_S2_TOUCH	71 84
TP931G	A	1		
TP931H	A	1	PP3V0_S2_ALS	66 84
TP931I	A	1	PP1V2_S2_CIO	66 84

POWER - OTHER

TP9340	A	1	PPVCENTER	73
TP9341	A	1	PPVBUS_PROT	84
TP9342	A	1	PPVCC_HIGH	73 80 84
TP9344	A	1	PPBATT_VCC (PACK_IGNORE=TRUE)	73 80 84
TP9345	A	1	NC_PPLED_OUT (PACK_OPTION=J517, J518)	73 79 84
TP9347	A	1	PPVCC_MAIN	28 73 80 84
TP9348	A	1 TP-P5		
TP934A	A	1 TP-P5		

POWER - DISPLAY

TP9360	A	1	PPVCC_MAIN_LCD_SW_CONN	42 43 45
TP9361	A	1	PPVCC_MAIN_LCD_SW	43

POWER - BACKLIGHT

TP9369	A	1	NC_PPLED_BACK_REG (PACK_IGNORE=TRUE, PACK_OPTION=J517, J518)	42 43 79 80
TP9370	A	1	NC_PPLED_BACK_REG (PACK_IGNORE=TRUE, PACK_OPTION=J517, J518)	42 43 79 80
TP9371	A	1	NC_PPLED_BACK_REG (PACK_IGNORE=TRUE, PACK_OPTION=J517, J518)	42 43 79 80
TP9372	A	1	LED_IO_0 (PACK_OPTION=J517, J518)	42 71
TP9373	A	1	LED_IO_1 (PACK_IGNORE=TRUE, PACK_OPTION=J517, J518)	42 71
TP9374	A	1	LED_IO_2 (PACK_IGNORE=TRUE, PACK_OPTION=J517, J518)	42 71
TP9375	A	1	LED_IO_3 (PACK_IGNORE=TRUE, PACK_OPTION=J517, J518)	42 71
TP9376	A	1	LED_IO_4 (PACK_IGNORE=TRUE, PACK_OPTION=J517, J518)	42 71
TP9377	A	1	LED_IO_5 (PACK_IGNORE=TRUE, PACK_OPTION=J517, J518)	42 71
TP937A	A	1	LED_IO_6 (PACK_IGNORE=TRUE, PACK_OPTION=J517, J518)	42 71
TP937B	A	1	LED_IO_7 (PACK_IGNORE=TRUE, PACK_OPTION=J517, J518)	42 71
TP937C	A	1	LED_IO_8 (PACK_IGNORE=TRUE, PACK_OPTION=J517, J518)	42 71
TP937D	A	1	LED_IO_9 (PACK_IGNORE=TRUE, PACK_OPTION=J517, J518)	42 71
TP937E	A	1	LED_IO_10 (PACK_IGNORE=TRUE, PACK_OPTION=J517, J518)	42 71
TP937H	A	1	LED_IO_12 (PACK_IGNORE=TRUE, PACK_OPTION=J517, J518)	42 71
TP937I	A	1	LED_IO_13 (PACK_IGNORE=TRUE, PACK_OPTION=J517, J518)	42 71
TP937J	A	1	LED_IO_14 (PACK_IGNORE=TRUE, PACK_OPTION=J517, J518)	42 71
TP937K	A	1	LED_IO_15 (PACK_IGNORE=TRUE, PACK_OPTION=J517, J518)	42 71
TP937L	A	1	LED_IO_16 (PACK_IGNORE=TRUE, PACK_OPTION=J517, J518)	42 71

BATTERY

TP9381	A	1	I2C_SMC_GASGAUGE_SCL_2V5_CONN	76
TP9382	A	1	BATT_SNS	73 76
TP9383	A	1	I2C_SMC_GASGAUGE_SDA_2V5_CONN	76
TP9384	A	1	BATT_NTC	73 76

PMU - MISC

TP93B3	A	1	TPT_VSS_PCPU_SENSE	12
TP93B4	A	1 TP-P5		
TP93B5	A	1	TPT_VDD_PCPU_SENSE	12
TP93B9	A	1	GPIO_PMU_TO_SOC_TRIGGER_0	7 72
TP93BA	A	1	GPIO_PMU_TO_SOC_TRIGGER_1	7 72
TP93BC	A	1	SOCHOT1_SOC_TO_PMU_L	7 72
TP93BD	A	1	PMU_SHUTDOWN_1V8	72 77
TP93BE	A	1	GPIO_PMU_TO_SOC_TRIGGER_2	7 72
TP93BF	A	1	GPIO_PMU_TO_SOC_TRIGGER_3	7 72
TP93BH	A	1	SERA_FORCE_SYNC	72
TP93BI	A	1	SCRASH_L_1V8	67 72
TP93BM	A	1	GPIO_PMU_TO_SOC_TRIGGER_4	7 72
TP93BS	A	1	SIMETRA_ADC_IN	67
TP93BT	A	1	TPT_SIMETRA_AMUX_AY	67
TP93BU	A	1	SIMETRA_FORCE_SYNC	67
TP93BV	A	1	TPT_SIMETRA_AMUX_BY	67
TP93BW	A	1	TPT_SERA_AMUX_AY	72
TP93BX	A	1	TPT_SERA_AMUX_BY	72
TP93BY	A	1	PMU_VCC_MAIN_SNS_R_P	70 73
TP93BZ	A	1	PMU_VCC_MAIN_SNS_R_N	70 73

SOC - JTAG/RESET

TP93C1	A	1	JTAG_SOC_SEL	5 10
TP93C2	A	1	JTAG_SOC_TCK	10 36
TP93C3	A	1	JTAG_SOC_TMS	10 36
TP93C4	A	1	TP_JTAG_SOC_TDI	10
TP93C5	A	1	TP_JTAG_SOC_TRST_L	5 10
TP93C6	A	1	TP_JTAG_SOC_TDO	10
TP93C7	A	1	SOC_TESTMODE	5 6
TP93C8	A	1	RESET_PMU_TO_SYSTEM_L	6 10 72
TP93C9	A	1	GPIO_FORCE_DFU	6 36 72 77
TP93CA	A	1	GPIO_1V2_SOC2ACE_DFU_STATUS	6 36 38
TP93CB	A	1	TST_CLKOUT	6
TP93CC	A	1	GPIO_PMU_TO_SYSTEM_ACTIVE_READY	6 38 72

SOC - UART

TP93D0	A	1	UART_SOC_TO_DEBUG_TX	7 36
TP93D1	A	1	UART_DEBUG_TO_SOC_TX	7 36

SOC - USB

TP93DA	A	1 (PLACE_NEAR=U3900.H19:6MM)	85_USB_SOC_P	36 38
TP93DB	A	1 (PLACE_NEAR=U3900.H21:6MM)	85_USB_SOC_N	36 38

USBC - CONN

TP93D4	A	1	TRANS_DET_BASE	35
TP93D6	A	1	ACE_CC1_CONN	35
TP93D7	A	1	ACE_CC2_CONN	35
TP93D8	A	1	ACE_USB_TOP_CONN_N	35 36 79
TP93D9	A	1	ACE_USB_TOP_CONN_P	35 36 79
TP93DD	A	1	ACE_USB_BOT_CONN_N	35 36 79
TP93DE	A	1	ACE_USB_BOT_CONN_P	35 36 79
TP93EB	A	1	PPVBUS_USB_EMI	35 36 68 80

ACE

TP93R1	A	1	PP5V2_ACE_BOOST_OUT	34 36
TP93R2	A	1	PP3V3_ACE_LDO	35 36 37 38
TP93R4	A	1	ROM_CLK	38
TP93R5	A	1	ROM_CS_L	38
TP93R6	A	1	ROM_MOSI	38
TP93R7	A	1	ROM_MISO	38
TP93R8	A	1	ACE_SBU1_CONN	35 36
TP93R9	A	1	ACE_SBU2_CONN	35 36
TP93RU	A	1	GPIO_ACE_TO_SOC_IRQ_L	7 36
TP93RV	A	1	GPIO_1V2_ACE2PMU_RESET	36 72
TP93RW	A	1	GPIO_3V3_ACE2BOOST_EN	34 36
TP93RZ	A	1	GPIO_1V2_ACE_HRESET	36
TP93RQ	A	1	ACE_ORION_TO_CHARGER_OVP_SW_EN_L	36 68 73
TP93RS	A	1	GPIO_ACE_TO_SMC_IRQ_L	10 36
TP93RA	A	1	TP_TMU_CLK_OUT	6
TP93RB	A	1	ACE_GPIO0_NOT_USED	36
TP93RC	A	1	ACE_TO_PMU_LDO1_EN_1V8	36 71

ORION

TP93E2	A	1	PPVBUS_ORION_RVP	68
TP93E3	A	1	PPVBUS_ORION_CONN	76 80
TP93E4	A	1	ORION_COMM_CONN	76
TP93E5	A	1	GPIO_ORION_TO_AOP_IRQ	10 68
TP93E6	A	1	PP5V2_BELLATRIX2_BOOST_VOUT	68 75
TP93E7	A	1	GPIO_SOC_TO_BELLATRIX2_BOOST_EN_1V8	7 75
TP93E8	A	1	PP1V8_INT_ORION	68
TP93E9	A	1	GPIO_3V3_ACE2ORION_ACC_PWR_EN_L	36 68
TP93ED	A	1	BELLATRIX_TO_ACE_ACC_PWR_PRESENT_L_3V3	36 68
TP93EN	A	1	O_T_DET_BASE	76
TP93ER	A	1	ORION_RVP_G	68

SCORPIUS

TP93EE	A	1	GPIO_PMU_TO_SCORPIUS_EXT_DOTARA_EN_1V8	72 76
TP93EF	A	1	GPIO_PMU_TO_SCORPIUS_MCU_NRST_L_1V8	72 76
TP93EG	A	1	GPIO_GRAPE_TO_SCORPIUS_TIME_SYNC_1V8	21 76
TP93EI	A	1	SWD_SCORPIUS_SWCLK_1V8	76
TP93EJ	A	1	SWD_SCORPIUS_SWDIO_1V8	76
TP93EK	A	1	GPIO_SCORPIUS_TO_AOP_INT_1V8	76
TP93EL	A	1	DOTARA_WAKE_HEART_BEAT_1V8	76
TP93EM	A	1	PP1V8_S2_BUCK_SCORPIUS_CONN	76
TP93EO	A	1	I2C_AOP_SCORPIUS_SDA_1V8	76
TP93EP	A	1	I2C_AOP_SCORPIUS_SCL_1V8	76
TP93EQ	A	1		76

AUDIO - SEE SPKR AMP PAGES FOR MORE

TP93E8	A	1	PPV_BST_AUDIO	28 30 31 32 33 80
TP93E9	A	1	PPV_BST_AUDIO	28 30 31 32 33 80
TP93EA	A	1	GPIO_SPKRAMP_TO_SOC_IRQ_L	7 30 31 32 33
TP93FB	A	1	ARDEE_SYNC	30 31 32 33

POWER - SENSORS

TP93G0	A	1	PP1V8_S2_KOBOL_A_FILT	19
TP93G1	A	1	PP1V8_S2_KOBOL_B_FILT	19
TP93G2	A	1	PP1V8_PHOS_FILT	19
TP93G4	A	1	PP1V8_S2_MOLY_CMPS_CONN	19
TP93L1	A	1	PP1V2_S2_MOLY_CMPS_CONN	19
TP93L2	A	1	PP1V2_PHOS_FILT	19

BUTTONS

TP93G5	A	1	GPIO_BTN_ONOFF_L_CONN_1V8	25
TP93G6	A	1	GPIO_BTN_VOL_UP_L_CONN_1V8	25 78
TP93G7	A	1	GPIO_BTN_VOL_DOWN_L_CONN_1V8	25 78

SOC I2C

TP93G8	A	1	I2C0_SCL	5 7
TP93G9	A	1	I2C0_SDA	5 7
TP93GA	A	1	I2C1_SCL	5 7
TP93GB	A	1	I2C1_SDA	5 7
TP93GC	A	1	I2C2_SCL	5 7
TP93GD	A	1	I2C2_SDA	5 7
TP93GF	A	1	I2C_AOP_I2CM0_SCL	5 10
TP93GG	A	1	I2C_AOP_I2CM0_SDA	5 10
TP93GH	A	1	I2C_AOP_I2CM1_SCL	5 10
TP93GI	A	1	I2C_AOP_I2CM1_SDA	5 10
TP93GJ	A	1		5 10

SOC - BELLATRIX2 UART

TP93N8	A	1	UART_SOC_TO_BELLATRIX2_TX	7 68
TP93N9	A	1	UART_BELLATRIX2_TO_SOC_TX	7 68

NAND

SOC - USB KIS

TP93GS	A	1 (PLACE_NEAR=U3900.D25:5MM)	85_USB_KIS_P	36 38
TP93GT	A	1 (PLACE_NEAR=U3900.D22:5MM)	85_USB_KIS_N	36 38

BASEBAND - ANT SWITCH PWR

TP93H2	A	1 TP-P5		
TP93H3	A	1 TP-P5		
TP93H4	A	1 TP-P5		
TP93H5	A	1 TP-P5		

WIFI/BT

TP93I2	A	1	CLK_PMU_TO_WLAN_32K	72 78

HALL EFFECT

TP93J5	A	1	GPIO_APANEL_HALL_TO_PMU_IRQ_L	42 64
TP93J6	A	1	GPIO_CPANEL_HALL_TO_PMU_IRQ_L	25 64

DISPLAY

TP93JC	A	1	LPDP_HPD_EMI_1V8	42 43
TP93JK	A	1	GPIO_PMU_TO_LCD_PWREN_1V8	42 43 45 72
TP93JA	A	1	I2C_TCON_SCL_CONN_1V8	42
TP93JB	A	1	I2C_TCON_SDA_CONN_1V8	42
TP93JD	A	1	PP1V8_S3_HALL_TCON_CONN	42
TP93JE	A	1	SYSTEM_TO_TCON_FORCE_PWM_1V8	42
TP93JF	A	1	LPDP_AUX_EMI_CONN_P	42 43 79
TP93JG	A	1	LPDP_AUX_EMI_CONN_N	42 43 79

AOP

TP93K1	A	1	CLK_PMU_TO_AOP_32K	10 72

AUDIO - DIGITAL MICS

TP93K2	A	1	DMIC1_TOP_L_MIC_SCLK_CONN_1V8	29
TP93K3	A	1	DMIC1_MIC_SD_CONN_1V8	29
TP93K4	A	1	DMIC2_MIC_SCLK_CONN_1V8	25
TP93K5	A	1	DMIC2_MIC_SD_CONN_1V8	25
TP93KE	A	1	DMIC3_MIC_SCLK_ROS_CONN_1V8	41
TP93KF	A	1	DMIC2_MIC_SD_ROS_CONN	41
TP93KG	A	1	PP1V8_S2_DMIC_CONN	29 41
TP93KH	A	1	DMIC4_MIC_SCLK_CMPS_CONN_1V8	19
TP93KI	A	1	DMIC3_MIC_SD_CMPS_CONN_1V8	19
TP93KJ	A	1	PP1V8_S2_DMIC_CMPS_CONN	19
TP93KK	A	1	PP1V8_S2_DMIC_C3_CONN	25
TP93KL	A	1	DMIC1_TOP_R_MIC_SCLK_CONN_1V8	29

TOUCH

TP93N1	A	1	PP15V0_TOUCH_FILT	20 21
TP93N2	A	1	PP2V8_LANAI_M_VDDANA	20
TP93N3	A	1	PP2V8_KONA_S_VDDANA	21
TP93NI	A	1	GPIO_DOMBRA_BST_FPWM_1V8	20 21
TP93NJ	A	1	GPIO_KONA_S_DOMBRA_BST_EN_1V8	20 21
TP93NK	A	1	GPIO_DOMBRA_BST_FB_CTRL_1V8	20 21
TP93NL	A	1	VCOM_LCD_TO_GRAPE	23 42
TP93NM	A	1	CLK_LANAI_M_24MHZ	20

CMPS

TP93P1	A	1	SPI_MOLY_MISO_CONN	19
TP93P2	A	1	SPI_MOLY_MOSI_CONN	19
TP93P3	A	1	SPI_MOLY_SCLK_CONN	19
TP93P4	A	1	SPI_MOLY_CS_L_CONN	19
TP93P5	A	1	GPIO_MOLY_TO_AOP_IRQ_CONN	19

BURNSIDE BRIDGE

TP93PA	A	1	BSB_JTAG_TDI	37
TP93PB	A	1	BSB_JTAG_TMS	37
TP93PC	A	1	BSB_JTAG_TCK	37
TP93PD	A	1	BSB_JTAG_TDO	37
TP93PF	A	1	GPIO_3V3_ACE2BSB_FORCE_PWR	36 37
TP93PT	A	1	GPIO_3V3_ACE2BSB_PARROT_RESET_L	36 37 38
TP93PH	A	1	PP3V3_BSB_S0_SVR	37
TP93PI	A	1	PP0V9_BSB_SVR_IND	37

PARROT

TP93CD	A	1	GPIO_1V2_ACE2BSB_PARROT_RESET_L	38
TP93CE	A	1	GPIO_1V2_PARROT2ACE_INT_L	36 38
TP93CF	A	1	GPIO_AOP_TO_PARROT_RECOVERY_STATUS	10 38

SOFT SHIELD DUMMY CAPS

C9380	1	NOSTUFF	25UF 20% 6.3V X5R 0402	CKPLUS_WAIVE=TERMSHORTED
C9381	1		10UF 20% 25V X5R-CERM 0603	CKPLUS_WAIVE=TERMSHORTED
C9382	1		10UF 20% 25V X5R-CERM 0603	CKPLUS_WAIVE=TERMSHORTED
C9383	1		10UF 20% 25V X5R-CERM 0603	CKPLUS_WAIVE=TERMSHORTED
C9384	1		10UF 20% 25V X5R-CERM 0603	CKPLUS_WAIVE=TERMSHORTED
C9385	1		10UF 20% 25V X5R-CERM 0603	CKPLUS_WAIVE=TERMSHORTED
C9386	1		10UF 20% 25V X5R-CERM 0603	CKPLUS_WAIVE=TERMSHORTED
C9387	1	(PACK_IGNORE=TRUE, PACK_OPTION=J517, J518)	10UF 20% 25V X5R-CERM 0603	

VBAT

TP939P	A	1 (PLACE_NEAR=J8900.3:15MM)	PPBATT_VCC	73 80 84
TP9399	A	1 (PLACE_NEAR=J8900.3:15MM)	TP-1P0-TOP	
TP939A	A	1 (PLACE_NEAR=J8900.3:15MM)	TP-1P0-TOP	
TP939B	A	1 (PLACE_NEAR=J8900.3:15MM)	TP-1P0-TOP	
TP9396	A	1 (PLACE_NEAR=J8900.4:15MM)	TP-1P0-TOP	
TP9397	A	1 (PLACE_NEAR=J8900.4:15MM)	TP-1P0-TOP	
TP9398	A	1 (PLACE_NEAR=J8900.4:15MM)	TP-1P0-TOP	
TP939S	A	1	TP-1P0-TOP	

VBUS ORION

TP939Q	A	1	TP-1P0-TOP	
TP939C	A	1	TP-1P0-TOP	
TP939D	A	1	TP-1P0-TOP	PPVBUS_ORION_CONN 76 80
TP939E	A	1	TP-1P0-TOP	
TP939F	A	1	TP-1P0-TOP	
TP939R	A	1	TP-1P0-TOP	

VCC_MAIN

TP939G	A	1	PPVCC_MAIN	28 73 80 84
TP939H	A	1	TP-1P0-TOP	
TP939I	A	1	TP-1P0-TOP	
TP939J	A	1	TP-1P0-TOP	

VCC_HIGH

TP939K	A	1	PPVCC_HIGH	73 80 84
TP939L	A	1	TP-1P0-TOP	
TP939M	A	1	TP-1P0-TOP	
TP939N	A	1	TP-1P0-TOP	

JASPER/PENINSULA

TP93P6	A	1 TP-PS		
TP93P7	A	1 TP-PS		
TP93P8	A	1 TP-PS		

FIDUCIALS

FID9300	FID	0P5SM1P0SQ-NSP
FID9301	FID	0P5SM1P0SQ-NSP
FID9302	FID	0P5SM1P0SQ-NSP
FID9303	FID	0P5SM1P0SQ-NSP
FID9304	FID	0P5SM1P0SQ-NSP
FID9305	FID	0P5SM1P0SQ-NSP

CAN MOUNTING HOLES

DRILL SIZE: 1.1MM X 0.4MM
PLATING SIZE: 1.4MM X 0.7MM
APN: 998-2691

SL9301	TH-NSP	SL-1.1X0.4-1.4X0.7 (PACK_OPTION=J522, J523)
SL9302	TH-NSP	SL-1.1X0.4-1.4X0.7
SL9304	TH-NSP	SL-1.1X0.4-1.4X0.7
SL9310	TH-NSP	SL-1.1X0.4-1.4X0.7
SL9320	TH-NSP	SL-1.1X0.4-1.4X0.7
SL9305	TH-NSP	SL-1.1X0.4-1.4X0.7
SL9306	TH-NSP	SL-1.1X0.4-1.4X0.7
SL9307	TH-NSP	SL-1.1X0.4-1.4X0.7
SL9321	TH-NSP	SL-1.1X0.4-1.4X0.7 (PACK_OPTION=J522, J523)
SL9322	TH-NSP	SL-1.1X0.4-1.4X0.7 (PACK_OPTION=J522, J523)
SL9323	TH-NSP	SL-1.1X0.4-1.4X0.7 (PACK_OPTION=J522, J523)
SL9312	TH-NSP	SL-0.9X0.35-1.2X0.65

DRILL : 0.9MM X 0.35MM
PLATING : 1.2MM X 0.65MM
APN:998-18658

STANDOFFS

SMT:860-01586

STD9300	STDOFF-3.3X1.8R1.036H-SM	860-01586 (PACK_OPTION=J522, J523)
STD9319	STDOFF-3.3X1.8R1.036H-SM	860-01586 (PACK_IGNORE=TRUE, PACK_OPTION=J517, J518)
STD9323	STDOFF-3.3X1.8R1.036H-SM	860-01586
STD9327	STDOFF-3.3X1.8R1.036H-SM	860-01586
STD9316	STDOFF-3.3X1.8R1.036H-SM	860-01586 (PACK_IGNORE=TRUE, PACK_OPTION=J517, J518)

SMT:860-01627

STD9312	STDOFF-2.82X2.05R-1.036H-SM	860-01627
STD9318	STDOFF-2.82X2.05R-1.036H-SM	860-01627
STD9330	STDOFF-2.82X2.05R-1.036H-SM	860-01627
STD9331	STDOFF-2.82X2.05R-1.036H-SM	860-01627
STD9333	STDOFF-2.82X2.05R-1.036H-SM	860-01627
STD9334	STDOFF-2.82X2.05R-1.036H-SM	860-01627 (PACK_OPTION=J522, J523)
STD9335	STDOFF-2.82X2.05R-1.036H-SM	860-01627 (PACK_OPTION=J522, J523)
STD9336	STDOFF-2.82X2.05R-1.036H-SM	860-01627 (PACK_IGNORE=TRUE, PACK_OPTION=J523)

SMT:860-01630

STD9315	STDOFF-3.45X2.5R-1.036H-1P65-TH	860-01630
STD9332	STDOFF-3.45X2.5R-1.036H-1P65-TH	860-01630 (PACK_IGNORE=TRUE, PACK_OPTION=J517, J518)
STD9340	STDOFF-3.45X2.5R-1.036H-1P65-TH	860-01630

NAND DUMMY CAPS

C9390	1	0.1UF 10% 6.3V CER-X5R 01005	CKPLUS_WAIVE=TERMSHORTED
C9391	1	0.1UF 10% 6.3V CER-X5R 01005	CKPLUS_WAIVE=TERMSHORTED

SMT:860-01708

STD9350	STDOFF-2.82X2.05R-0.95H-SM	860-01735 (PACK_OPTION=J522, J523)

SMT:860-01709

STD9351	STDOFF-3.45X2.5R-0.848H-1P65-TH	860-01709 (PACK_OPTION=J522, J523)

VBUS USB

TP9390	A	1 (PLACE_NEAR=C37A8:1.20MM)	PPVBUS_USB_EMI	35 36 68 80
TP9391	A	1 (PLACE_NEAR=C37A8:1.20MM)	TP-1P0-TOP	
TP9392	A	1 (PLACE_NEAR=C37A8:1.20MM)	TP-1P0-TOP	
TP9393	A	1 (PLACE_NEAR=C37A8:2.30MM)	TP-1P0-TOP	
TP9394	A	1 (PLACE_NEAR=C37A8:2.30MM)	TP-1P0-TOP	
TP9395	A	1 (PLACE_NEAR=C37A8:2.30MM)	TP-1P0-TOP	

BOM_COST_GROUP=MECHANICALS

PAGE TITLE

TEST: TPS/MECH

SMT TEST FIXTURE TP

POWER - ADAMS REAR

TP9401	A	1	PP1V4_ADAMS1_VDDL	55 84
TP9402	A	1	PP3V3_ADAMS_LDO1	55 84
TP9403	A	1	PP3V0_JASPER_RX_AVDDH	55 84
TP9405	A	1	PP3V3_JASPER_TX_AVDDH_CONN	60
TP9406	A	1	PP3V3_JAS_EXT_LDO_R2	57
TP9407	A	1	PP2V85_WIDE_RCAM1_AVDDH1	55 84
TP9408	A	1	PP2V85_SWIDE_RCAM2_AVDDH1	55 84
TP9409	A	1	PP1V215_RCAM_SWIDE_VDDL	55 84
TP940A	A	1	PP1V215_RCAM_WIDE_VDDL	55 84
TP940B	A	1	PP1V8_RPMU_IO_SW	55 84
TP940C	A	1	PN_TOF_VSPAD	57 60 81
TP940D	A	1	PN_TOF_VSPAD	57 60 81
TP940E	A	1	PP_TOF_VDDLAS	57 60 81
TP940F	A	1	PP_TOF_VDDLAS	57 60 81
TP940G	A	1	PP1V2_JASPER_DVDD	57 60
TP940H	A	1	PP1V2_INT_ADAMS_REAR	55 84
TP940I	A	1		

POWER - FRONT WIDE CAMERA

POWER - FRONT SWIDE CAMERA

TP9441	A	1	PP1V215_FRONT_SWIDE_CAM_CONN	26
TP9442	A	1	PP1V8_FRONT_SWIDE_CAM_CONN	26
TP9443	A	1	PP2V85_FRONT_SWIDE_CAM_CONN	26

POWER - JULIET

TP9414	A	1	PP1V215_JULIET_DVDD_CONN	40
TP9415	A	1	PP1V8_JULIET_VDDIO_CONN	40
TP9416	A	1	PP2V85_JULIET_AVDD_CONN	40

POWER - CAMERA (IN)

TP9417	A	1	PP1V215_RCAM_WIDE_VDDL_CONN	58
TP9418	A	1	PP1V8_RCAM_WIDE_VDDIO_CONN	58
TP9419	A	1	PP2V85_RCAM_WIDE_AVDD_CONN	58

POWER - CAMERA (OH)

TP941A	A	1	PP1V215_RCAM_SWIDE_DVDD_CONN	59
TP941B	A	1	PP1V8_RCAM_SWIDE_VDDIO_CONN	59
TP941C	A	1	PP2V85_RCAM_SWIDE_AVDDH1_CONN	59

POWER - JASPER

TP941D	A	1	PP_TOF_VDDLAS_CONN	60
TP941E	A	1	PN_TOF_VSPAD_CONN	60
TP941F	A	1	PP1V8_CAM_TOF_VDDIO_CONN	60

CAMERA-STROBE/PENROSE

TP9421	A	1	PPSTROBE_LED_COOL1_CONN	25 27 81
TP9422	A	1	PPSTROBE_LED_WARM1_CONN	25 27 81
TP9423	A	1	PPSTROBE_LED_COOL2_CONN	25 27 81
TP9424	A	1	PPSTROBE_LED_WARM2_CONN	25 27 81
TP9425	A	1	PPSTROBE_LED_COOL1_CONN	25 27 81
TP9426	A	1	PPSTROBE_LED_WARM1_CONN	25 27 81
TP9427	A	1	PPSTROBE_LED_COOL2_CONN	25 27 81
TP9428	A	1	PPSTROBE_LED_WARM2_CONN	25 27 81
TP9429	A	1	LED_DRIVER_NTC_CONN	25 27

5.00V
5.00V
5.00V
5.00V

TP942A	A	1	PPSTROBE1_BST	27
TP942B	A	1	PPSTROBE2_BST	27
TP942C	A	1	PENROSE_VIS_IR_VOUT1	24 25
TP942D	A	1	PENROSE_IR_VOUT2	24 25
TP942E	A	1	GPIO_RCAM_PMU_TO_STROBE_DRIVER_HWEN_1V8	27 56
TP942F	A	1	PP3V0_PENROSE_CONN	25
TP942G	A	1	PP3V0_PENROSE	55 84

CAMERA FRONT SWIDE

TP9444	A	1	CLK_FCAM2_PMU_TO_SWIDE_12M_CONN	26
TP9445	A	1	I2C_FCAM2_SWIDE_SCL_CONN	26
TP9446	A	1	I2C_FCAM2_SWIDE_SDA_CONN	26
TP9447	A	1	ISP_FCAM2_SWIDE_SHUTDOWN_L_CONN	26

CAMERA - IN

TP942L	A	1	AP_TO_WIDE_CLK_12MHZ_CONN	58
TP942M	A	1	I2C_RCAM1_WIDE_SCL_CONN	58
TP942N	A	1	I2C_RCAM1_WIDE_SDA_CONN	58
TP942O	A	1	ISP_TO_WIDE_SHUTDOWN_CONN_L	58
TP942Q	A	1	WIDE_TO_STROBE_DRIVER_STROBE_CONN	58

CAMERA - OH

TP942R	A	1	AP_TO_SWIDE_CLK_12MHZ_CONN	59
TP942S	A	1	I2C_RCAM2_SWIDE_SCL_CONN	59
TP942T	A	1	I2C_RCAM2_SWIDE_SDA_CONN	59
TP942U	A	1	ISP_TO_SWIDE_SHUTDOWN_CONN_L	59
TP942W	A	1	SWIDE_TO_STROBE_DRIVER_STROBE_CONN	59

CAMERA - JASPER

TP942X	A	1	CLK_RCAM_PMU_TO_TOF_12MHZ_CONN	60
TP942Y	A	1	I2C_JASPER_SCL_CONN	60
TP942Z	A	1	I2C_JASPER_SDA_CONN	60
TP943X	A	1	GPIO_PMU_TO_TOF_INT_CONN_L	60
TP943Y	A	1	WIDE_SWIDE_SYNC_1V8	58 59 60
TP943Z	A	1	GPIO_RCAM_PMU_TO_TOF_SHUTDOWN_CONN_L	60

CAMERA - AUX

TP94C0	A	1	LPDP_WIDE_BI_AP_AUX_CONN	58
TP94C2	A	1	LPDP_SOC_TO_FCAM2_AUX_CONN	26
TP94C3	A	1	LPDPC_AP_BI_TOF_AUX_RX_D8P_CONN	60
TP94C4	A	1	LPDPC_AP_BI_SWIDE_AUX_RX_D2P_CONN	59

TITUS/ROSALINE/JULIET

TP9431	A	1	PP_TITUS_DENSE_ANODE	39 40 81
TP9432	A	1	PP_TITUS_DENSE_ANODE	39 40 81
TP9433	A	1	PP_TITUS_SPARSE_ANODE	39 40 81
TP9434	A	1	PP_TITUS_SPARSE_ANODE	39 40 81
TP9435	A	1	PP_TITUS_A_ANODE	39 40 81
TP9436	A	1	PP_TITUS_A_ANODE	39 40 81
TP9437	A	1	PP_TITUS_B_ANODE	39 40 81
TP9438	A	1	PP_TITUS_B_ANODE	39 40 81
TP9439	A	1	PP_TITUS_CATHODE	39 40 81
TP943A	A	1	PP_TITUS_CATHODE	39 40 81
TP943B	A	1	PP_ROSALINE_ANODE	39 41 81
TP943C	A	1	PP_ROSALINE_ANODE	39 41 81
TP943D	A	1	GPIO_RIGEL_INT_TO_FPMU_1V8	39 62
TP943E	A	1	RIGEL_TESTMODE_EN	39
TP943F	A	1	JULIET_PMU_TO_RIGEL_STROBE_CONN_1V8	40
TP943H	A	1	I2C3_ISP_BI_MAMA_BEAR_SDA_CONN	40
TP943I	A	1	I2C3_ISP_TO_MAMA_BEAR_SCL_CONN	40
TP943J	A	1	MAMA_BEAR_BI_RIGEL_STATUS_CONN_1V8	40
TP943K	A	1	TITUS_TO_AOP_B2B_DETECT_CONN	40
TP943L	A	1	ISP_JULIET_SCL_CONN_1V8	40
TP943M	A	1	ISP_JULIET_SDA_CONN_1V8	40
TP943N	A	1	AP_TO_JULIET_CLK_CONN_1V8	40
TP943O	A	1	AP_TO_JULIET_SHUTDOWN_L_CONN_1V8	40
TP943P	A	1	I2C0_AOP_TO_PROX_ALS_YOGI_SCL_CONN_1V8	41
TP943Q	A	1	I2C0_AOP_BI_PROX_ALS_YOGI_SDA_CONN_1V8	41
TP943R	A	1	PP3V0_YOGI_PROX_ALS_CONN	41
TP943S	A	1	YOGI_TO_RIGEL_STATUS_CONN_1V8	41
TP943T	A	1	PROX_BI_AP_AOP_INT_CONN_L_1V8	41
TP943U	A	1	ALS_C4_TO_SOC_INT_CONN_L	41
TP943V	A	1	ALS_C3_TO_SOC_INT_CONN_L	41
TP943W	A	1	TITUS_TO_RIGEL_VCSEL_NTC_CONN	40

DMIC GATING

TP9461	A	1	GPM_DMIC_DISABLE_L	64
TP9463	A	1	SLG_TO_AOP_DMIC_DISABLE_WARN_L	10 64

WILL I2C

TP9464	A	1	I2C3_RCAM_PMU_SCL_1V8	5 56
TP9465	A	1	I2C3_RCAM_PMU_SDA_1V8	5 56

PENROSE ADC I2C

TP9466	A	1	I2C3_SCL	5 7
TP9467	A	1	I2C3_SDA	5 7

CAM SYNC

TP9452	A	1	GPIO_FCAM_JULIET_TO_ACE_SYNC_1V8	26 40
TP9453	A	1	GPIO_RCAM_PMU_TO_TOF_PMU_EN_1V8	56 57

2DBL

TP94A0	A	1	PP_LUME_OUT	PACK_OPTION=J522,J523 44 45 79
TP94A1	A	1		PACK_OPTION=J522,J523
TP94A2	A	1		PACK_OPTION=J522,J523
TP94A3	A	1		PACK_OPTION=J522,J523
TP94A4	A	1	PP1V27_ATRANI	PACK_OPTION=J522,J523 44 79
TP94A5	A	1	LUME_CP_OUT	PACK_OPTION=J522,J523 44
TP94A6	A	1	ATRANI_SPI_SCLK	PACK_OPTION=J522,J523 8 45
TP94A7	A	1	ATRANI_SPI_MOSI	PACK_OPTION=J522,J523 8 45
TP94A8	A	1	ATRANI_SPI_MISO	PACK_OPTION=J522,J523 8 45
TP94A9	A	1	ATRANI_SPI_CS	PACK_OPTION=J522,J523 8 45
TP94AA	A	1	DISP_FSYNC	PACK_OPTION=J522,J523 8 45
TP94AB	A	1	DISP_LSYNC	PACK_OPTION=J522,J523 8 45
TP94AC	A	1	ATRANI_BOOST_CTL	PACK_OPTION=J522,J523 44 45

LDCM

TP94B0	A	1	ANA_ACE2LDCM_DEBUG4	36 54
TP94B1	A	1	ANA_ACE2LDCM_DEBUG5	36 54
TP94B2	A	1	ANA_LDCM_TRACE1	35 54
TP94B3	A	1	GPIO_LDCM_TO_AOP_INVALID	10 54
TP94B4	A	1	ANA_LDCM_TRACE2	35 54

POWER - ADAMS FRONT

TP9471	A	1	PP_FPMU_VDDL	61 84
TP9472	A	1	PP3V1_PEARL	61 84
TP9473	A	1	PP1V215_JULIET_VDDL	61 84
TP9474	A	1	PP2V85_JULIET_AVDDH1	61 84
TP9475	A	1		
TP9476	A	1	PP2V85_SWIDE_FCAM2_AVDDH1	61 84
TP9477	A	1	PP1V215_FCAM2_SWIDE_VDDL	61 84
TP9478	A	1	PP1V215_FRCAM1_WIDE_VDDL	61 84
TP9479	A	1	PP1V2_INT_ADAMS_FRONT	61 84
TP947A	A	1	PP1V8_FCAM_PMU_IO_SW	61 84

SPARES

TP9404	A	1	TP-P5	PACK_OPTION=J522,J523
TP942V	A	1	TP-P5	PACK_OPTION=J522,J523
TP9454	A	1	TP-P5	PACK_OPTION=J522,J523

BOM_COST_GROUP=NO_COST_ITEMS

PAGE TITLE

TEST: TPS ADDITIONAL

EE CHARACTERIZATION PROBE POINT

SOC

PP9570 P3MM SM — PP 1 — TPT_VDD_SOC_S1_SENSE — 12
PP9571 P3MM SM — PP 1 — TPT_VSS_SENSE1 — 12
PP9572 P3MM SM — PP 1 — TPT_VSS_SENSE2 — 12
PP9573 P3MM SM — PP 1 — TPT_VDD2_S2_SENSE2 — 12
PP9574 P3MM SM — PP 1 — TPT_VDD_S2_SENSE1 — 12
PP9575 P3MM SM — PP 1 — TPT_VDD_ECPU_SENSE — 12
PP9576 P3MM SM — PP 1 — TPT_VDD_GPU_SENSE — 12
PP9577 P3MM SM — PP 1 — TPT_VDD_DISP_S1_SENSE — 12
PP9578 P3MM SM — PP 1 — TPT_VDD_DCS_SENSE — 12
PP9579 P3MM SM — PP 1 — TPT_VDDQL_SENSE — 12
PP957A P3MM SM — PP 1 — TPT_VSS_DDR_SENSE — 12

FOR SEG

PP9503 P4MM SM — PP 1 — PPVDD_S1_SOC — 69 80 84
PP950E P4MM SM — PP 1 — PP0V8_S1_SOC_FIXED — 66 80 84
PP950K P4MM SM — PP 1 — PPVDD_ECPU — 70 80 84
PP9505 P5MM SM — PP 1 — PPVDD_CPU — 69 80 84
PP9506 P3MM SM — PP 1 — PPVDD_S1_SRAM — 65 80 84
PP9507 P5MM SM — PP 1 — PPVDD_CPU_SRAM — 70 80 84
PP9508 P5MM SM — PP 1 — PP0V72_S2_VDDLOW — 66 80 84

ACE/REDRIVER

PP9510 P4MM SM — PP 1 — ACE_UART_RX — 36
PP9511 P4MM SM — PP 1 — ACE_UART_TX — 36

FH SPEAKER I2S

PP9521 P4MM SM — PP 1 — I2S_SOC_TO_SPKRAMP_FH_BCLK — PLACE_NEAR=U3450.A4:50MM — 7 32 33 82
PP9522 P4MM SM — PP 1 — I2S_SOC_TO_SPKRAMP_FH_LRCK — PLACE_NEAR=U3450.A3:50MM — 7 32 33 82
PP9523 P4MM SM — PP 1 — I2S_SOC_TO_SPKRAMP_FH_DOUT — PLACE_NEAR=U3450.A1:50MM — 7 32 33 82
PP9524 P4MM SM — PP 1 — I2S_SPKRAMP_FH_TO_SOC_DOUT — PLACE_NEAR=U0600.U3:50MM — 7 32 33

FH SPEAKER I2S - EXTRAS FOR U3400

PP952A P4MM SM — PP 1 — I2S_SOC_TO_SPKRAMP_FH_BCLK — 7 32 33 82
PP952B P4MM SM — PP 1 — I2S_SOC_TO_SPKRAMP_FH_LRCK — 7 32 33 82
PP952C P4MM SM — PP 1 — I2S_SOC_TO_SPKRAMP_FH_DOUT — 7 32 33 82

CN SPEAKER I2S

PP9525 P4MM SM — PP 1 — I2S3_SOC_TO_BSTMSTR_CN_MCLK — PLACE_NEAR=U3000.C5:50MM — 7 28
PP9526 P4MM SM — PP 1 — I2S_SOC_TO_SPKRAMP_CN_BCLK — PLACE_NEAR=U3250.A4:50MM — 7 30 31
PP9527 P4MM SM — PP 1 — I2S_SOC_TO_SPKRAMP_CN_LRCK — PLACE_NEAR=U3250.A3:50MM — 7 30 31
PP9528 P4MM SM — PP 1 — I2S_SOC_TO_SPKRAMP_CN_DOUT — PLACE_NEAR=U3250.A1:50MM
PP9529 P4MM SM — PP 1 — I2S_SPKRAMP_CN_TO_SOC_DOUT — PLACE_NEAR=U0600.BC32:50MM
PP952D P4MM SM — PP 1 — GPIO_BST_MASTER_TO_SOC_IRQ_L — 7 28
PP952E P4MM SM — PP 1 — GPIO_BST_SLAVE_TO_SOC_IRQ_L — 7 28
PP952F P2MM-NSM SM — PP 1 — BST_CLK_SYNC_1V8 — 28
PP952G P2MM-NSM SM — PP 1 — BST_SYNC_R_1V8 — 28

PENROSE

PP952J P4MM SM — PP 1 — PDM_PENROSE_SCLK — 10 24
PP952K P4MM SM — PP 1 — PDM_PENROSE_SD — 10 24

GRAPE

PP9580 P3MM SM — PP 1 — SPI_SOC_TO_GRAPE_SCLK — 7 20
PP9582 P3MM SM — PP 1 — SPI_SOC_TO_GRAPE_MOSI — 7 20
PP9583 P3MM SM — PP 1 — SPI_SOC_TO_GRAPE_CS_L — 7 20
PP9584 P5MM SM — PP 1 — GPIO_SOC_TO_GRAPE_RESET_L — 7 20 21
PP9585 P3MM SM — PP 1 — GPIO_GRAPE_TO_AOP_IRQ_L — 10 20
PP9586 P3MM SM — PP 1 — KONA_S_TO_LANAI_M_RESET_DET_1V8_L — 20 21
PP9587 P5MM SM — PP 1 — PSE_SYNC_1V8 — 20 21
PP9588 P3MM SM — PP 1 — KMSI_MISO_1V8 — 20 21
PP9589 P3MM SM — PP 1 — KMSI_MOSI_1V8 — 20 21
PP958A P3MM SM — PP 1 — KMSI_STRB_IN_1V8 — 20 21
PP958B P3MM SM — PP 1 — KMSI_STRB_OUT_1V8 — 20 21
PP958C P3MM SM — PP 1 — LANAI_BOOST_ATEST — 20
PP958D P3MM SM — PP 1 — TESTPOINT_KONA_S_UART_TX_1V8 — 21
PP958E P3MM SM — PP 1 — TESTPOINT_KONA_S_UART_RX_1V8 — 21

PP958H P3MM SM — PP 1 — TPT_SWD_KONA_SWDIO_1V8 — 21
PP958I P3MM SM — PP 1 — TPT_SWD_KONA_SWCLK_1V8 — 21
PP958J P5MM SM — PP 1 — GPIO12_KONA_LDO_ADJ_1V8 — 20 21
PP958K P3MM SM — PP 1 — GPIO13_KONA_LDO_EN_1V8 — 20 21
PP958L P3MM SM — PP 1 — GPIO_SOC_TO_DISPLAY_TOUCH_EB — 8 20

PP958N P3MM SM — PP 1 — GPIO_SOC_TO_LANAI_DISPLAY_BSYNC0 — 8 20
PP958P P3MM SM — PP 1 — GPIO_SOC_TO_GRAPE_BSYNC1 — 20 42
PP958X P3MM SM — PP 1 — UART_AOP_TO_GRAPE_TX — 10 20
PP958Y P3MM SM — PP 1 — UART_GRAPE_TO_AOP_TX — 10 20
PP958Z P3MM SM — PP 1 — UART_DEBUG_TO_GRAPE_TX — 20 36
PP9580 P3MM SM — PP 1 — SPI_LANAI_M_TO_KONA_S_MISO_1V8 — 20 21
PP958T P3MM SM — PP 1 — SPI_LANAI_M_TO_KONA_S_SCLK_1V8 — 20 21
PP958U P3MM SM — PP 1 — SPI_LANAI_M_TO_KONA_S_CS_1V8_L — 20 21
PP958W P3MM SM — PP 1 — SPI_LANAI_M_TO_KONA_S_MOSI_1V8 — 20 21

PP95K0 P3MM SM — PP 1 — SPI_SOC_TO_KONA_S_SCLK_1V8 — 7 21
PP95K1 P3MM SM — PP 1 — SPI_SOC_TO_KONA_S_MOSI_1V8 — 7 21
PP95K2 P3MM SM — PP 1 — SPI_SOC_TO_KONA_S_CS_1V8_L — 7 21
PP95K3 P3MM SM — PP 1 — GPIO_KONA_S_TO_SOC_IRQ_1V8_L — 7 21

GRAPE POWER

PP958R P3MM SM — PP 1 — PP3V3_GRAPE_FILT — 20 21
PP958S P3MM SM — PP 1 — PP1V8_GRAPE_XTAL_FILT — 20 21
PP958V P3MM SM — PP 1 — PP1V8_GRAPE_AON_RC — 20 21

DMIC SECURED

PP9590 P3MM SM — PP 1 — PDM_DMIC_TOP_L_R_SD — PLACE_NEAR=U0600.AK40:50MM — 10 64
PP9591 P3MM SM — PP 1 — PDM_DMIC_FRONT_BACK_SD — PLACE_NEAR=U0600.AC8:50MM — 10 64
PP9592 P3MM SM — PP 1 — PDM_DMIC_SIDE_SD — PLACE_NEAR=U0600.AK46:50MM — 10 64

PMU

PP95A0 P2MM SM — PP 1 — SGPIO_READY_REQ_1V8 — 67 72
PP95A1 P2MM SM — PP 1 — SGPIO_SCLK_1V8 — 67 72
PP95A2 P2MM SM — PP 1 — SGPIO_SDATA_1V8 — 67 72
PP95A3 P2MM SM — PP 1 — GPIO_SIMETRA_IRQ_L — 67

WIFI(SEE MORE ON PAGE 49)

PP95BL P4MM SM — PP 1 — GPIO_SOC_TO_BT_TO_GRAPE_TS_SYNC — 7 20 78

WLAN PCIE TPS

PP95E0 P2MM SM — PP 1 — PLACE_NEAR=U0600.BF11:100MM — PCIE_WLAN_TO_SOC_TX_P — 9 78
PP95E1 P2MM SM — PP 1 — PLACE_NEAR=U0600.BE11:100MM — PCIE_WLAN_TO_SOC_TX_N — 9 78
PP95E2 P2MM SM — PP 1 — PLACE_NEAR=U_WLAN_W.99:20MM — PCIE_SOC_TO_WLAN_TX_P — 9 78
PP95E3 P2MM SM — PP 1 — PLACE_NEAR=U_WLAN_W.30:20MM — PCIE_SOC_TO_WLAN_TX_N — 9 78
PP95E4 P2MM SM — PP 1 — PLACE_NEAR=U_WLAN_W.95:20MM — PCIE_SOC_TO_WLAN_REFCLK_P — 9 78
PP95E5 P2MM SM — PP 1 — PLACE_NEAR=U_WLAN_W.26:20MM — PCIE_SOC_TO_WLAN_REFCLK_N — 9 78

BB PCIE TPS

ORION

PP953B P4MM SM — PP 1 — GPIO_AOP_TO_ORION_HWEN — 10 68
PP953C P4MM SM — PP 1 — ORION_CONN_STATUS — 68

SENSOR SPI LINES

PP9544 P5MM SM — PP 1 — SPI_SENSORS_SCLK — PLACE_NEAR=U2120.4:10MM — 10 19 53
PP9545 P5MM SM — PP 1 — SPI_SENSORS_MISO — PLACE_NEAR=U0600.AC3:10MM — 10 19 53
PP9546 P3MM SM — PP 1 — SPI_SENSORS_MOSI — PLACE_NEAR=U2120.3:10MM — 10 19 53
PP9547 P3MM SM — PP 1 — SPI_MOLY_SCLK — PLACE_NEAR=R2102.1:10MM — 19
PP9549 P3MM SM — PP 1 — SPI_MOLY_MOSI — PLACE_NEAR=R2103.1:10MM — 19

PMU/CHARGER

PP95G7 P4MM SM — PP 1 — EUSB_VBUS_DETECT — 6
PP95G4 P4MM SM — PP 1 — NUB_SPMI_SERA_SCLK — 10 72
PP95G5 P4MM SM — PP 1 — NUB_SPMI_SERA_SDATA — 10 72
PP9539 P4MM SM — PP 1 — SYS_ALIVE — 17 18 72

PP95G0 P4MM SM — PP 1 — PROX_BI_AP_AOP_INT_L_PWM_LVT — 10 41

PARROT

PP95H0 P3MM SM — PP 1 — TPT_GPIO0_PARROT — 38
PP95H1 P3MM SM — PP 1 — TPT_GPIO1_PARROT — 38

NAND

PP95D0 P3MM SM — PP 1 — TPT_NAND1_DROOP_L — 17
PP95D1 P3MM SM — PP 1 — TPT_NAND2_DROOP_L — 18
PP95D2 P3MM SM — PP 1 — GPIO_PMU_TO_NAND_LOW_BATT_L — 17 18 72
PP95D6 P3MM SM — PP 1 — PCIE_SOC_TO_NAND_PERST_L — 9 17 18

PP95DE P2MM SM — PP 1 — PLACE_NEAR=U1800.J4:50MM — NAND1_ANI1_VREF — 17
PP95DF P3MM SM — PP 1 — PLACE_NEAR=U1800.G12:50MM — NAND1_ANI0_VREF — 17
PP95DG P3MM SM — PP 1 — PLACE_NEAR=U1900.J4:50MM — NAND2_ANI1_VREF — 18
PP95DH P3MM SM — PP 1 — PLACE_NEAR=U1900.G12:50MM — NAND2_ANI0_VREF — 18
PP95DI P3MM SM — PP 1 — PLACE_NEAR=U1900.C4:50MM — GPIO_SOC_TO_NAND_FW_STRAP — 7 17 18
PP95DJ P3MM SM — PP 1 — PLACE_NEAR=U1900.L4:50MM — GPIO_SOC_TO_NAND_RESET_L — 7 17 18

IR CAMERA - JULIET

PP9550 P2MM SM — PP 1 — MIPI_PEARL_TO_SOC_CLK_P — NO_XNET_CONNECTION=1 — 8 40
PP9551 P2MM SM — PP 1 — MIPI_PEARL_TO_SOC_CLK_N — NO_XNET_CONNECTION=1 — 8 40
PP9552 P2MM SM — PP 1 — MIPI_PEARL_SOC_DATA_P<0> — NO_XNET_CONNECTION=1 — 8 40
PP9553 P2MM SM — PP 1 — MIPI_PEARL_SOC_DATA_N<0> — NO_XNET_CONNECTION=1 — 8 40
PP9554 P2MM SM — PP 1 — MIPI_PEARL_SOC_DATA_P<1> — NO_XNET_CONNECTION=1 — 8 40
PP9555 P2MM SM — PP 1 — MIPI_PEARL_SOC_DATA_N<1> — NO_XNET_CONNECTION=1 — 8 40
PP9556 P2MM SM — PP 1 — CLK_FCAM_PMU_TO_JULIET_12M_1V8 — NO_XNET_CONNECTION=1 — 40 62

CAMERA - FRONT WIDE

CAMERA - FRONT SWIDE

PP9566 P2MM SM — PP 1 — LPDP_SOC_TO_FCAM2_SWIDE_AUX — NO_XNET_CONNECTION=1 — 8 26
PP9567 P2MM SM — PP 1 — LPDP_FCAM2_SWIDE_TO_SOC_DATA_P<0> — NO_XNET_CONNECTION=1 — 8 26
PP9568 P2MM SM — PP 1 — LPDP_FCAM2_SWIDE_TO_SOC_DATA_N<0> — NO_XNET_CONNECTION=1 — 8 26
PP9569 P2MM SM — PP 1 — LPDP_FCAM2_SWIDE_TO_SOC_DATA_P<1> — NO_XNET_CONNECTION=1 — 8 26
PP956A P2MM SM — PP 1 — LPDP_FCAM2_SWIDE_TO_SOC_DATA_N<1> — NO_XNET_CONNECTION=1 — 8 26

LPDPRX TPS

PP95F0 P2MM SM — PP 1 — LPDP_RCAM1_WIDE_TO_SOC_DATA_P<0> — PLACE_NEAR=U0600.AT4:150MM — 8 58
PP95F1 P2MM SM — PP 1 — LPDP_RCAM1_WIDE_TO_SOC_DATA_N<0> — PLACE_NEAR=U0600.AT5:150MM — 8 58
PP95F2 P2MM SM — PP 1 — LPDP_RCAM1_WIDE_TO_SOC_DATA_P<1> — PLACE_NEAR=U0600.AT1:150MM — 8 58
PP95F3 P2MM SM — PP 1 — LPDP_RCAM1_WIDE_TO_SOC_DATA_N<1> — PLACE_NEAR=U0600.AT2:150MM — 8 58
PP95F4 P2MM SM — PP 1 — LPDP_SOC_TO_RCAM1_WIDE_AUX — PLACE_NEAR=U0600.AT8:150MM — 8 58
PP95F5 P2MM SM — PP 1 — LPDP_RCAM2_SWIDE_TO_SOC_DATA_P<0> — PLACE_NEAR=U0600.AV4:150MM — 8 59
PP95F6 P2MM SM — PP 1 — LPDP_RCAM2_SWIDE_TO_SOC_DATA_N<0> — PLACE_NEAR=U0600.AV5:150MM — 8 59
PP95F7 P2MM SM — PP 1 — LPDP_RCAM2_SWIDE_TO_SOC_DATA_P<1> — PLACE_NEAR=U0600.AV1:150MM — 8 59
PP95F8 P2MM SM — PP 1 — LPDP_RCAM2_SWIDE_TO_SOC_DATA_N<1> — PLACE_NEAR=U0600.AV2:150MM — 8 59
PP95F9 P2MM SM — PP 1 — LPDP_SOC_TO_RCAM2_SWIDE_AUX — PLACE_NEAR=U0600.AT7:150MM — 8 59
PP95FA P2MM SM — PP 1 — LPDP_JASPER_TO_SOC_DATA_P — PLACE_NEAR=U0600.AW4:150MM — 8 60
PP95FB P2MM SM — PP 1 — LPDP_JASPER_TO_SOC_DATA_N — PLACE_NEAR=U0600.AW5:150MM — 8 60
PP95FC P2MM SM — PP 1 — LPDP_SOC_TO_JASPER_AUX — PLACE_NEAR=U0600.AU7:150MM — 8 60

BOM_COST_GROUP=NO_COST_ITEMS

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TEST: EE TP/PP

EE DC RESISTANCE TABLE

DC RESISTANCE FAI REQUIRED MEASUREMENTS				
FROM PIN (REFDES.PN)	TO PIN (RFFDES.PN)	VALUE (MILLIOHM) (OPTIONAL)	TOLERANCE (+/-) (OPTIONAL)	
U8100.C4	L8111.2	?	?	SERA BUCK1 LX1 DCR
U3800.G2	U8500.L13	?	?	PPVBUS_PROT FROM ACE TO POTOMAC DCR
Q8000.A1	U8500.L13	?	?	PPVBUS_PROT FROM BELLATRIX B2B FET TO POTOMAC DCR
Q8000.A2	Q8051.3	?	?	PPVBUS_ORION_RVP FROM BELLATRIX B2B FET TO ORION RVP FET DCR
Q8051.2	FL8950.1	?	?	PPVBUS_ORION FROM ORION RVP FET TO FERRITE DCR
FL8950.2	J8902.10	?	?	PPVBUS_ORION_CONN FROM FERRITE TO ORION B2B DCR
U3800.G6	J3700.29	?	?	PPVBUS_ORION_CONN FROM FERRITE TO ORION B2B DCR
J8900.3	R8582.2	?	?	PPBATT_VCC FROM BATT CONN TO SENSE RES DCR
R8582.1	Q8580.5	?	?	PPBATT_VCC_R FROM SENSE RES TO VBATT/VCCMAIN FET DCR
Q8580.1	U8500.A1	?	?	PPVCC_MAIN FROM SENSE RES TO POTOMAC DCR
U3500.D2	J3500.2	?	?	SPKRAMP_FH_R_T_OUT_P FROM SPKRAMP TO B2B DCR
U3500.C2	J3500.1	?	?	SPKRAMP_FH_R_T_OUT_N FROM SPKRAMP TO B2B DCR
Q8581.1	U6100.D8	?	?	PPVCC_HIGH FROM Q8581 TO ADAMS REAR DCR
Q8581.1	U6900.D8	?	?	PPVCC_HIGH FROM Q8581 TO ADAMS FRONT DCR
Q8580.1	U6100.A3	?	?	PPVCC_MAIN FROM Q8581 TO ADAMS REAR DCR
Q8580.1	U6900.A3	?	?	PPVCC_MAIN FROM Q8581 TO ADAMS FRONT DCR
U6900.D7	FL2851.1	?	?	PP2V85 SWIDE FCAM FROM FRONT ADAMS TO FERRITE DCR
U6100.D7	FL6603.1	?	?	PP2V85 SWIDE RCAM FROM REAR ADAMS TO FERRITE DCR
U6100.E7	FL6503.1	?	?	PP2V85 WIDE RCAM FROM REAR ADAMS TO FERRITE DCR
U4000.B5	R38B1.1	?	?	B5_USB_SOC_N DCR
U4000.A5	R38B0.1	?	?	B5_USB_SOC_P DCR
R38B1.2	U3800.H21	?	?	B5_USB_SOC_R_N DCR
R38B0.2	U3800.H19	?	?	B5_USB_SOC_R_P DCR
R38A3.1	J3700.17	?	?	ACE_USB_BOT_CONN_N DCR
R38A2.1	J3700.15	?	?	ACE_USB_BOT_CONN_P DCR
U3800.J22	R38A3.2	?	?	ACE_USB_BOT_N DCR
U3800.J20	R38A2.2	?	?	ACE_USB_BOT_P DCR
R38A1.1	J3700.9	?	?	ACE_USB_TOP_CONN_N DCR
R38A0.1	J3700.11	?	?	ACE_USB_TOP_CONN_P DCR
U3800.K21	R38A1.2	?	?	ACE_USB_TOP_N DCR
U3800.K19	R38A0.2	?	?	ACE_USB_TOP_P DCR
U4701.A3	J4801.47	?	?	PP_LUME_OUT FROM LUME TO BCON B2B DCR

BOM_COST_GROUP=NO_COST_ITEMS

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TEST: DCR TABLE

POWER CONNECTIONS

SERA SIMETRA BUCKS:

SERA_BUCK0 (ACTIVE)
82 80 69 PPVDD_CPU — PPVDD_CPU — 13 69
MAKE_BASE=TRUE

SERA_BUCK1 (SW CONTROL)
80 69 PPVDD_GPU — PPVDD_GPU — 13 69
MAKE_BASE=TRUE

SERA_BUCK2 (SLEEP1)
82 80 69 PPVDD_S1_SOC — PPVDD_S1_SOC — 13 69
MAKE_BASE=TRUE

SERA_BUCK3 (SLEEP2)
80 70 PP1V8_S2 — 11
MAKE_BASE=TRUE
PP1V8_S2 — 36 38
PP1V8_S2
PP1V8_S2
PP1V8_S2 — 25 42
PP1V8_S2 — 43
PP1V8_S2
PP1V8_S2 — 55 56 61 62 66 70
PP1V8_S2 — 21 41 44 65 69 72 74
PP1V8_S2 — 64
PP1V8_S2 — 76
PP1V8_S2
PP1V8_S2
PP1V8_S2 — 19 53
PP1V8_S2 — 78
PP1V8_S2 — 78
PP1V8_S2 — 39 40 41
PP1V8_S2
PP1V8_S2 — 19 25 29
PP1V8_S2 — 78
PP1V8_S2 — 19 25 29 41 64

BUCK3 SWITCHES

SERA_BUCK3_SW1 (ACTIVE)
80 77 70 PP1V8_SW1_IO — 28 30 31 32 33
MAKE_BASE=TRUE
PP1V8_SW1_IO
PP1V8_SW1_IO
PP1V8_SW1_IO — 7
PP1V8_SW1_IO — 7
PP1V8_SW1_IO — 12
PP1V8_SW1_IO — 73

SERA_BUCK3_SW2 (SLEEP2)
80 70 PP1V8_S2_TOUCH — PP1V8_S2_TOUCH — 20 21
MAKE_BASE=TRUE

SIMETRA_BUCK3_SW4 (SPARE)
80 66 PP_BUCK3_SW4_SPARE
MAKE_BASE=TRUE

SIMETRA_BUCK4 (SLEEP2)
80 65 PP1V06_S2 — 66
MAKE_BASE=TRUE
PP1V06_S2 — 11 65

SIMETRA_BUCK5 (SW CONTROL)
82 80 65 PPVDD_S1_SRAM — PPVDD_S1_SRAM — 14 65
MAKE_BASE=TRUE

SIMETRA_BUCK6 (ACTIVE)
80 65 PP2V63_NAND — PP2V63_NAND — 17 18 65
MAKE_BASE=TRUE

SERA_BUCK7 (ACTIVE)
82 80 70 PPVDD_CPU_SRAM — PPVDD_CPU_SRAM — 14 70
MAKE_BASE=TRUE

SERA_BUCK8 (SLEEP1)
80 70 PPVDD_S1_DISP — PPVDD_S1_DISP — 13 70
MAKE_BASE=TRUE

SERA_BUCK9 (SLEEP1)
80 70 PPVDD_S1_DCS — PPVDD_S1_DCS — 14 70
MAKE_BASE=TRUE

SIMETRA_BUCK10 (SLEEP1)
80 65 PPVDD_S1_QL — PPVDD_S1_QL — 11 65
MAKE_BASE=TRUE

SERA_BUCK11 (ACTIVE)
82 80 70 PPVDD_ECPD — PPVDD_ECPD — 13 70
MAKE_BASE=TRUE

SIMETRA_BUCK12 (SLEEP1)
80 65 PP0V88_S1 — PP0V88_S1 — 66
MAKE_BASE=TRUE

SIMETRA_BUCK12_SW6/7 (ACTIVE)
80 66 PP0V88_NAND — PP0V88_NAND — 17 18
MAKE_BASE=TRUE

SIMETRA_BUCK13 (SLEEP2)
80 65 PP1V25_S2 — 65 66 69
MAKE_BASE=TRUE
PP1V25_S2 — 66 70
PP1V25_S2 — 10 41 73 74 76
PP1V25_S2 — 6
PP1V25_S2 — 10
PP1V25_S2 — 10
PP1V25_S2 — 78
PP1V25_S2 — 19
PP1V25_S2 — 65 69
PP1V25_S2 — 7 68
PP1V25_S2
PP1V25_S2
PP1V25_S2 — 64
PP1V25_S2 — 36
PP1V25_S2 — 19 25 29 38 41 53 54 64 76
PP1V25_S2 — 77
PP1V25_S2 — 78
PP1V25_S2 — 12

SERA_BUCK13_SW3 (ACTIVE)
80 70 PP1V2_IO — 7
MAKE_BASE=TRUE
PP1V2_IO — 5 6 7 9 24 44 67 76
PP1V2_IO — 7
PP1V2_IO — 28 30 31 32 33
PP1V2_IO — 12

SIMETRA_BUCK13_SW5 (ACTIVE)
80 66 PP1V2_NAND — PP1V2_NAND — 9 17 18
MAKE_BASE=TRUE

SERA SIMETRA LDOS:

SERA_LDO1 (SW CONTROL)
80 71 PP3V3_BSB — PP3V3_BSB — 37 38
MAKE_BASE=TRUE

SERA_LDO2 (SW CONTROL)
80 71 PP1V8_LDCM — PP1V8_LDCM — 54
MAKE_BASE=TRUE

SERA_LDO3 (SLEEP2)
80 71 PP1V20_S2_NFC — PP1V20_S2_NFC — 78
MAKE_BASE=TRUE

SIMETRA_LDO4 (SLEEP2)
82 80 66 PP0V72_S2_VDDLOW — PP0V72_S2_VDDLOW — 225 MA(MAX) — 12
MAKE_BASE=TRUE

SERA_LDO5 (SLEEP2)
80 71 PP2V95_S2_SCORPIUS — PP2V95_S2_SCORPIUS — 76
MAKE_BASE=TRUE

SIMETRA_LDO6 (ACTIVE)
66 SIMETRA_LDO6_SPARE

SERA_LDO7 (SLEEP 2)
80 71 PP3V3_S2_ACE_PARROT — PP3V3_S2_ACE_PARROT — 36 54
MAKE_BASE=TRUE
PP3V3_S2_ACE_PARROT — 38

SIMETRA_LDO8 (ACTIVE)
80 66 PP1V2_SOC_LN — PP1V2_SOC_LN — 12
MAKE_BASE=TRUE
PP1V2_SOC_LN — 11 12

SERA_ON_BUF_LDO9 (ALWAYS)
80 71 PP1V8_SERA_ALWAYS — PP1V8_SERA_ALWAYS — 72 73
MAKE_BASE=TRUE

SIMETRA_LDO9 (ALWAYS)
80 66 PP1V8_SIMETRA_ALWAYS — PP1V8_SIMETRA_ALWAYS — 72
MAKE_BASE=TRUE

SERA_LDO10 (SPARE)
71 PP_SERA_LDO10_SPARE
NOTE: BACK UP FOR PP3V3_S2_SCORPIUS

SIMETRA_LDO11 (SLEEP2)
80 66 PPVDD_S2_CIO — PPVDD_S2_CIO — 12
MAKE_BASE=TRUE

SIMETRA_LDO12 (SLEEP1)
82 80 66 PP0V8_S1_SOC_FIXED — PP0V8_S1_SOC_FIXED — 12
MAKE_BASE=TRUE

SERA_LDO13 (SLEEP2)
80 71 PP3V3_S2_TOUCH — PP3V3_S2_TOUCH — 20
MAKE_BASE=TRUE

SERA_LDO14 (SLEEP2)
80 71 PP1V2_S2_TOUCH — PP1V2_S2_TOUCH — 10 20 21
MAKE_BASE=TRUE

SIMETRA_LDO15 (SPARE)
66 SIMETRA_LDO15_SPARE

SERA_LDO16 (SPARE)
71 PP_SERA_LDO16_SPARE

NOTE: PP3V3 PENROSE MOVED FROM LDO17 TO ADAMS REAR PMU

SIMETRA_LDO17 (SPARE)
66 PP_SIMETRA_LDO17_SPARE

SIMETRA_LDO18 (SLEEP2)
80 66 PP3V0_S2_ALS — PP3V0_S2_ALS — 41
MAKE_BASE=TRUE
PP3V0_S2_ALS

SERA_LDO19 (SLEEP4)
71 PPVDD_S4_HIB_UNUSED
(NON-POR)

SIMETRA_LDO20 (SLEEP2)
80 66 PP1V2_S2_CIO — PP1V2_S2_CIO — 12
MAKE_BASE=TRUE

CHARGER HIGH
80 73 PPVCC_HIGH — PPVCC_HIGH — 65 69 71
MAKE_BASE=TRUE
PPVCC_HIGH — 39
PPVCC_HIGH — 55 61
PPVCC_HIGH — 78

BACKLIGHT BOOST
80 79 71 NC_PPLED_OUT — NC_PPLED_OUT — 43
MAKE_BASE=TRUE

USB POWER INPUT
80 PPVBUS_PROT — PPVBUS_PROT — 36 68 73
MAKE_BASE=TRUE

ADAMS REAR CAM:

ADAMS_REAR_BUCK0 (SW CONTROL)
81 55 PP1V4_ADAMS1_VDDL — PP1V4_ADAMS1_VDDL — 55 57
MAKE_BASE=TRUE

ADAMS_REAR_LDO1 (SW CONTROL)
81 55 PP3V3_ADAMS_LDO1 — PP3V3_ADAMS_LDO1 — 57
MAKE_BASE=TRUE
3.3V
PP3V3_ADAMS_LDO1 — 57

ADAMS_REAR_LDO2 (SW CONTROL)
81 55 PP3V0_JASPER_RX_AVDDH — PP3V0_JASPER_RX_AVDDH — 60
MAKE_BASE=TRUE

ADAMS_REAR_LDO3 (SW CONTROL)
81 55 PP3V0_PENROSE — PP3V0_PENROSE — 24 25
MAKE_BASE=TRUE

ADAMS_REAR_LDO4 (SW CONTROL)
55 PP3V3_JASPER_TX_AVDDH — PP3V3_JASPER_TX_AVDDH — 60
MAKE_BASE=TRUE

ADAMS_REAR_LDO5 (SW CONTROL)
55 PP3V3_RPMU_LDO5_ADC_PENROSE — PP3V3_RPMU_LDO5_ADC_PENROSE
MAKE_BASE=TRUE

ADAMS_REAR_LDO6 (SW CONTROL)
81 55 PP2V85_WIDE_RCAM1_AVDDH1 — PP2V85_WIDE_RCAM1_AVDDH1 — 58
MAKE_BASE=TRUE

ADAMS_REAR_LDO7 (SW CONTROL)
81 55 PP2V85_SWIDE_RCAM2_AVDDH1 — PP2V85_SWIDE_RCAM2_AVDDH1 — 59
MAKE_BASE=TRUE

ADAMS_REAR_LDO8 (SW CONTROL)
81 55 PP1V215_RCAM_SWIDE_VDDL — PP1V215_RCAM_SWIDE_VDDL — 59
MAKE_BASE=TRUE

ADAMS_REAR_LDO9 (SW CONTROL)
81 55 PP1V215_RCAM_WIDE_VDDL — PP1V215_RCAM_WIDE_VDDL — 58
MAKE_BASE=TRUE

ADAMS_REAR_LDO10 (INTERNAL)
81 55 PP1V2_INT_ADAMS_REAR

ADAMS_REAR_SW1 (SW CONTROL)
81 55 PP1V8_RPMU_IO_SW — PP1V8_RPMU_IO_SW — 56
MAKE_BASE=TRUE
PP1V8_RPMU_IO_SW — 58
PP1V8_RPMU_IO_SW — 59
PP1V8_RPMU_IO_SW — 57 60

CHARGER MAIN
80 73 28 PPVCC_MAIN — PPVCC_MAIN
MAKE_BASE=TRUE
PPVCC_MAIN
PPVCC_MAIN
PPVCC_MAIN
PPVCC_MAIN — 65 69
PPVCC_MAIN — 66 69 71
PPVCC_MAIN — 34
PPVCC_MAIN — 43
PPVCC_MAIN — 69 71
PPVCC_MAIN — 39
PPVCC_MAIN — 78
PPVCC_MAIN — 78
PPVCC_MAIN — 27
PPVCC_MAIN — 65 69 77
PPVCC_MAIN — 20
PPVCC_MAIN — 30 31 32 33
PPVCC_MAIN — 76
PPVCC_MAIN — 78
PPVCC_MAIN — 75
PPVCC_MAIN — 55 61
PPVCC_MAIN — 57
PPVCC_MAIN
PPVCC_MAIN
PPVCC_MAIN
PPVCC_MAIN — 66 71
PPVCC_MAIN
PPVCC_MAIN
PPVCC_MAIN
PPVCC_MAIN — 44
PPVCC_MAIN

BATTERY
80 73 PPBATT_VCC — PPBATT_VCC — 76
MAKE_BASE=TRUE

ADAMS FRONT CAM:

ADAMS_FRONT_BUCK0 (SW CONTROL)
81 61 PP_FPMU_VDDL — PP_FPMU_VDDL — 61
MAKE_BASE=TRUE

ADAMS_FRONT_LDO1 (SW CONTROL)
81 61 PP3V1_PEARL — PP3V1_PEARL — 40
MAKE_BASE=TRUE

ADAMS_FRONT_LDO2 (SPARE)
61 FPMU_VLDO2_SPARE

ADAMS_FRONT_LDO3 (SW CONTROL)
61 PP1V8_JULIET_VDDIO — PP1V8_JULIET_VDDIO — 40 62
MAKE_BASE=TRUE

ADAMS_FRONT_LDO4 (SW CONTROL)
81 61 PP1V215_JULIET_VDDL — PP1V215_JULIET_VDDL — 40
MAKE_BASE=TRUE

ADAMS_FRONT_LDO5 (SW CONTROL)
81 61 PP2V85_JULIET_AVDDH1 — PP2V85_JULIET_AVDDH1 — 40
MAKE_BASE=TRUE

ADAMS_FRONT_LDO6 (SPARE)
61 FPMU_VLDO6_SPARE — 117

ADAMS_FRONT_LDO7 (SW CONTROL)
81 61 PP2V85_SWIDE_FCAM2_AVDDH1 — PP2V85_SWIDE_FCAM2_AVDDH1 — 26
MAKE_BASE=TRUE

ADAMS_FRONT_LDO8 (SW CONTROL)
81 61 PP1V215_FCAM2_SWIDE_VDDL — PP1V215_FCAM2_SWIDE_VDDL — 26
MAKE_BASE=TRUE

ADAMS_FRONT_LDO9 (SW CONTROL)
81 61 PP1V215_FRCAM1_WIDE_VDDL — PP1V215_FRCAM1_WIDE_VDDL
MAKE_BASE=TRUE

ADAMS_FRONT_LDO10 (INTERNAL)
81 61 PP1V2_INT_ADAMS_FRONT

ADAMS_FRONT_SW1 (SW CONTROL)
81 61 PP1V8_FCAM_PMU_IO_SW
MAKE_BASE=TRUE
PP1V8_FCAM_PMU_IO_SW
PP1V8_FCAM_PMU_IO_SW — 62
PP1V8_FCAM_PMU_IO_SW
PP1V8_FCAM_PMU_IO_SW — 26

BOM_COST_GROUP=NO_COST_ITEMS

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