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.

J523 EVT: MLB-B

REV	ECN	DESCRIPTION OF REVISION	CK APPD / DATE
8			2020-08-31

LAST_MODIFICATION=Mon Aug 31 16:04:42 2020

SCH AND BOARD P/N

PART#	QTY	DESCRIPTION	REFERENCE DESIGNATOR(S)	CRITICAL	BOM OPTION
051-05858	1	SCHEM,MLB-B,NY,J523	SCH1	CRITICAL	
020-02156	1	PCBF,MLB-B,NY,J523	PCB1	CRITICAL	

PACKAGING OPTIONS

PACK_OPTIONS TO INCLUDE IN NETLIST
J523

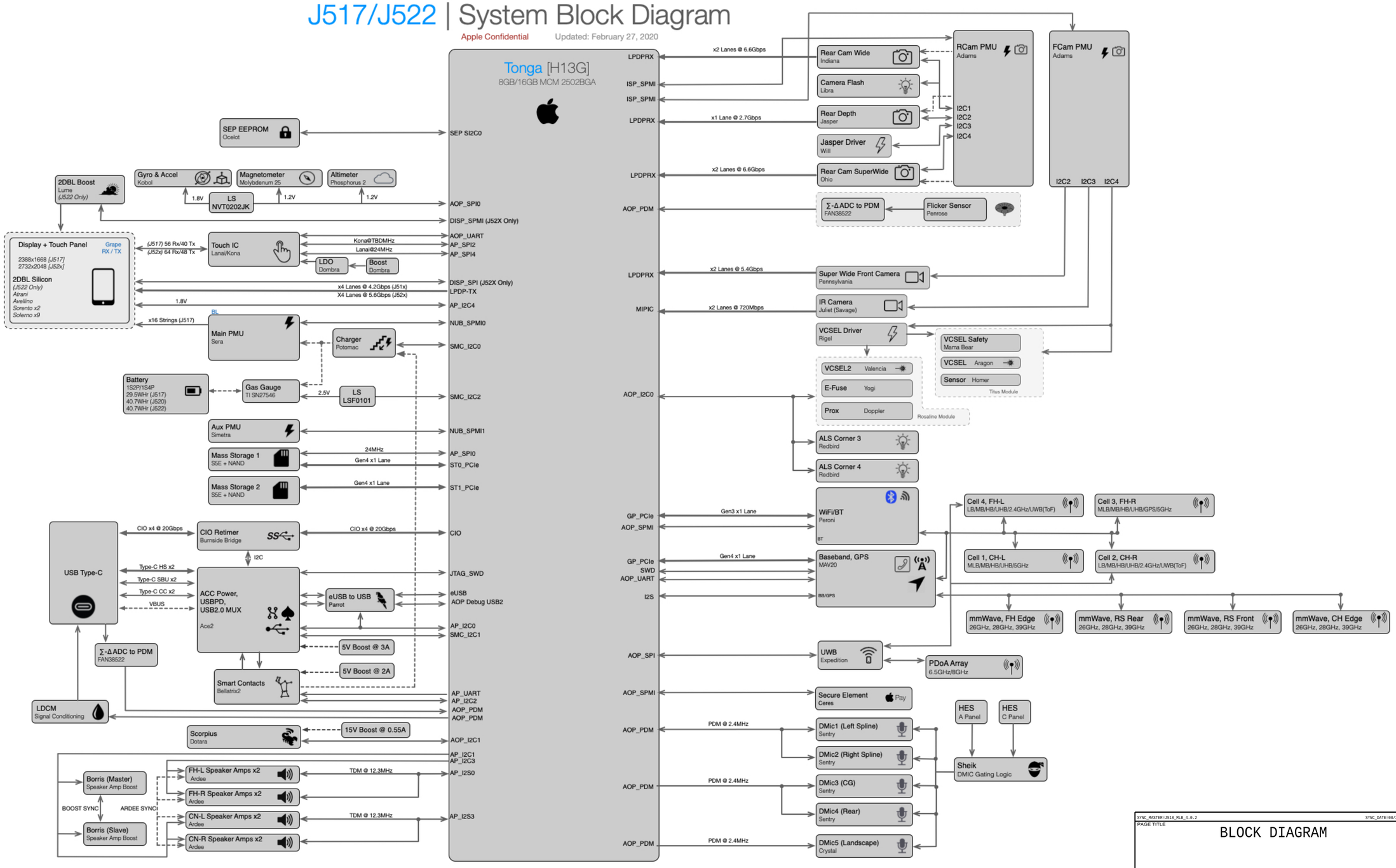
SYNC_MASTER=MLB_P0 SYNC_DATE=07/17/2017

DRAWING TITLE

SCHEM,MLB-B,NY,J523

J517/J522 | System Block Diagram

Apple Confidential Updated: February 27, 2020



SYNC_MASTER=J518_MLB_4.0.2 SYNC_DATE=08/20/2020

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
998-22422	1	IC,TONGA+8G,B0,L,DEV,M,S	U0600	CRITICAL	NAND:ULTIMATE
998-22422	1	IC,TONGA+8G,B0,L,DEV,M,S	U0600	CRITICAL	NAND:SUPREME_TB
998-22422	1	IC,TONGA+8G,B0,L,DEV,M,S	U0600	CRITICAL	NAND:SUPREME_HY
998-22422	1	IC,TONGA+8G,B0,L,DEV,M,S	U0600	CRITICAL	NAND:EXTREME_TB
998-22422	1	IC,TONGA+8G,B0,L,DEV,M,S	U0600	CRITICAL	NAND:EXTREME_HY

PART#	QTY	DESCRIPTION	REFERENCE DESIGNATOR(S)	CRITICAL	BOM OPTION
998-22436	1	IC,TONGA+16G,B0,L,DEV,M,S	U0600	CRITICAL	X_VERSION

PART NUMBER	ALTERNATE FOR PART NUMBER	BOM OPTION	REF DES	COMMENTS:
998-22423	998-22422		U0600	4G MICRON ATK LP
998-22424	998-22422		U0600	4G HYNIX SCK LP
998-22425	998-22422		U0600	4G HYNIX ATK LP
998-22426	998-22422		U0600	4G MICRON SCK HP
998-22427	998-22422		U0600	4G MICRON ATK HP
998-22428	998-22422		U0600	4G HYNIX SCK HP
998-22429	998-22422		U0600	4G HYNIX ATK HP

PART NUMBER	ALTERNATE FOR PART NUMBER	BOM OPTION	REF DES	COMMENTS:
998-22437	998-22436		U0600	8G MICRON ATK LP
998-22438	998-22436		U0600	8G HYNIX SCK LP
998-22439	998-22436		U0600	8G HYNIX ATK LP
998-22440	998-22436		U0600	8G MICRON SCK HP
998-22441	998-22436		U0600	8G MICRON ATK HP
998-22442	998-22436		U0600	8G HYNIX SCK HP
998-22443	998-22436		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=J518_MLB_4.0.2 SYNC_DATE=08/20/2020

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

TODO: ADD MECHANICAL PARTS TABLE FOR EVT

BARCODE LABEL/EEEE CODES

PART#	QTY	DESCRIPTION	REFERENCE DESIGNATOR(S)	CRITICAL	BOM OPTION
825-7691	1	EEEE 639-11797 (ULTIMATE,NY,US,J523)	EEEE_Q2GK	CRITICAL	EEEE:J523_US_ULTIMATE
825-7691	1	EEEE 639-10618 (SUPREME-TB,NY,US,J523)	EEEE_PHW3	CRITICAL	EEEE:J523_US_SUPREME_TB
825-7691	1	EEEE 639-11796 (SUPREME-HY,NY,US,J523)	EEEE_Q2GJ	CRITICAL	EEEE:J523_US_SUPREME_HY
825-7691	1	EEEE 639-11798 (EXTREME-TB,NY,US,J523)	EEEE_Q2GL	CRITICAL	EEEE:J523_US_EXTREME_TB
825-7691	1	EEEE 639-11799 (EXTREME-HY,NY,US,J523)	EEEE_Q2GM	CRITICAL	EEEE:J523_US_EXTREME_HY
825-7691	1	EEEE 639-11800 (PRIME-TB,NY,US,J523)	EEEE_Q2GN	CRITICAL	EEEE:J523_US_PRIME_TB
825-7691	1	EEEE 639-11801 (PRIME-HY,NY,US,J523)	EEEE_Q2GP	CRITICAL	EEEE:J523_US_PRIME_HY
825-7691	1	EEEE 639-11802 (DOUBLE-PRIME,NY,US,J523)	EEEE_Q2GQ	CRITICAL	EEEE:J523_US_DBL_PRIME

PART#	QTY	DESCRIPTION	REFERENCE DESIGNATOR(S)	CRITICAL	BOM OPTION
825-7691	1	EEEE 639-12984 (ULTIMATE,NY,ROW,J524)	EEEE_Q8YH	CRITICAL	EEEE:J524_ROW_ULTIMATE
825-7691	1	EEEE 639-12983 (SUPREME-TB,NY,ROW,J524)	EEEE_Q8YG	CRITICAL	EEEE:J524_ROW_SUPREME_TB
825-7691	1	EEEE 639-12811 (SUPREME-HY,NY,ROW,J524)	EEEE_Q4NL	CRITICAL	EEEE:J524_ROW_SUPREME_HY
825-7691	1	EEEE 639-12985 (EXTREME-TB,NY,ROW,J524)	EEEE_Q8YJ	CRITICAL	EEEE:J524_ROW_EXTREME_TB
825-7691	1	EEEE 639-12986 (EXTREME-HY,NY,ROW,J524)	EEEE_Q8YK	CRITICAL	EEEE:J524_ROW_EXTREME_HY
825-7691	1	EEEE 639-12987 (PRIME-TB,NY,ROW,J524)	EEEE_Q8YL	CRITICAL	EEEE:J524_ROW_PRIME_TB
825-7691	1	EEEE 639-12988 (PRIME-HY,NY,ROW,J524)	EEEE_Q8YM	CRITICAL	EEEE:J524_ROW_PRIME_HY
825-7691	1	EEEE 639-12989 (DOUBLE-PRIME,NY,ROW,J524)	EEEE_Q8YN	CRITICAL	EEEE:J524_ROW_DBL_PRIME

PART#	QTY	DESCRIPTION	REFERENCE DESIGNATOR(S)	CRITICAL	BOM OPTION
825-7691	1	EEEE 639-14784 (ULTIMATE,NY,CH,J524)	EEEE_07P7	CRITICAL	EEEE:J524_CH_ULTIMATE
825-7691	1	EEEE 639-14783 (SUPREME-TB,NY,CH,J524)	EEEE_07P6	CRITICAL	EEEE:J524_CH_SUPREME_TB
825-7691	1	EEEE 639-14782 (SUPREME-HY,NY,CH,J524)	EEEE_07P5	CRITICAL	EEEE:J524_CH_SUPREME_HY
825-7691	1	EEEE 639-14785 (EXTREME-TB,NY,CH,J524)	EEEE_07P8	CRITICAL	EEEE:J524_CH_EXTREME_TB
825-7691	1	EEEE 639-14786 (EXTREME-HY,NY,CH,J524)	EEEE_07P9	CRITICAL	EEEE:J524_CH_EXTREME_HY
825-7691	1	EEEE 639-14787 (PRIME-TB,NY,CH,J524)	EEEE_07PC	CRITICAL	EEEE:J524_CH_PRIME_TB
825-7691	1	EEEE 639-14788 (PRIME-HY,NY,CH,J524)	EEEE_07PD	CRITICAL	EEEE:J524_CH_PRIME_HY
825-7691	1	EEEE 639-14789 (DOUBLE-PRIME,NY,CH,J524)	EEEE_07PF	CRITICAL	EEEE:J524_CH_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	

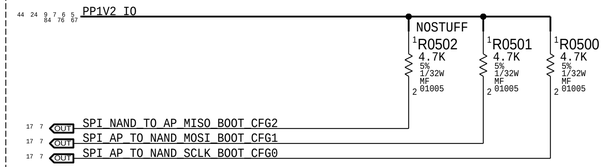
BOM_COST_GROUP=NO_COST_ITEMS

SYNC_MASTER=J518_MLB_4.0.2 SYNC_DATE=08/20/2020

PAGE TITLE

BOM TABLES: MECH/DISC/ETC

BOOT CONFIG ID



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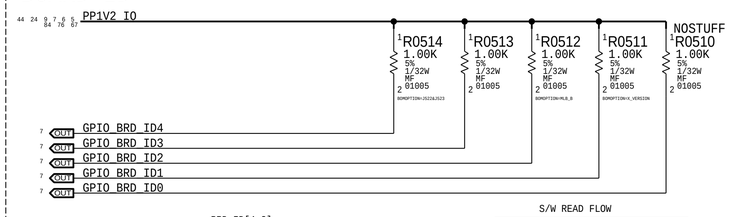
000	SPI0 NOR
001	SPI0 NOR TEST
010	SPI0 NAND
(PROTO) ---> 011	SPI0 NAND TEST
100	SPI1 NOR (40MHZ)
101	SPI1 NOR (40MHZ) TEST
110	SPI1 NOR (6MHZ)
111	SPI1 NOR (6MHZ) TEST

S/W READ FLOW

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

BOARD ID

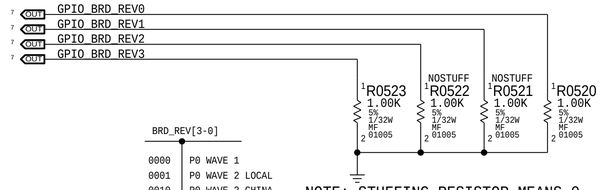


BRD_ID[4-0]	
01000	J517 AP
01001	J517 DEV
01010	J517X AP
01011	J517X DEV
01100	J518 AP
01101	J518 DEV
01110	J518X AP
01111	J518X DEV
11000	J522 AP
11001	J522 DEV
11010	J522X AP
11011	J522X DEV
CURRENT SETTING ---> 11100	J523 AP
11101	J523 DEV
11110	J523X AP
11111	J523X DEV

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

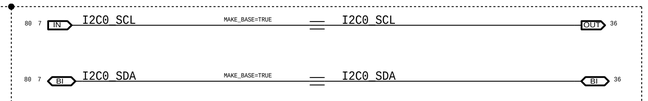
NOTE: STUFFING RESISTOR MEANS 0

S/W READ FLOW

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

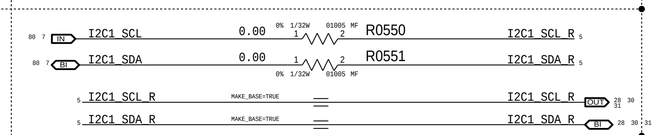
I2C0

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

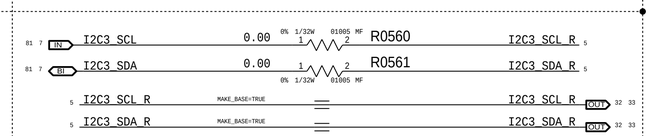


I2C2

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

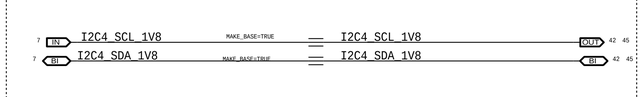
I2C3

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



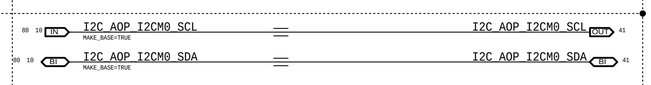
I2C4

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



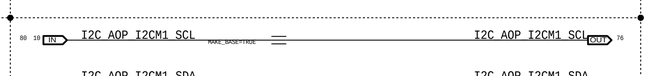
AOP I2C0

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



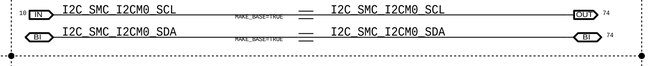
AOP I2C1

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



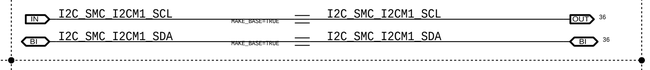
SMC I2C0

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



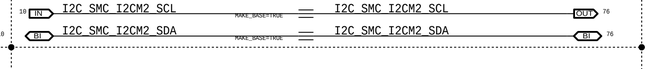
SMC I2C1

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

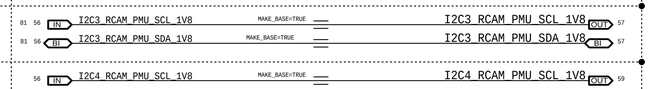
DEVICE	8-BIT	7-BIT
RCAM1(FOCUS)	0X18	0X0C
RCAM1(IN)	0X20	0X10
STROBE1	0XC6	0X63
STROBE2	0XCE	0X67

RPMU I2C2

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

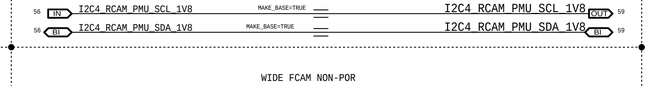
RPMU I2C3

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

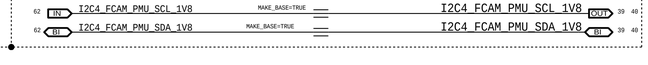
DEVICE	8-BIT	7-BIT
SWIDE FCAM	0XE0	0X70

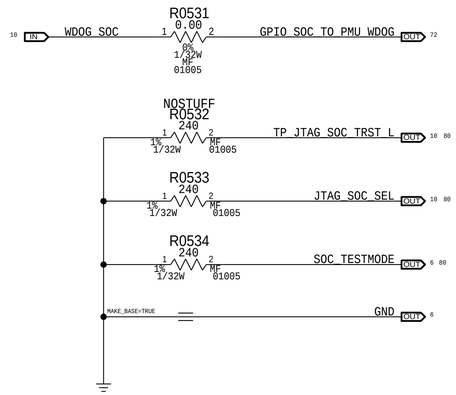
FPMU I2C3

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=J317_MLB_B SYNC_DATE=11/16/2018

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
TMLR68B0-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
- DFU_STATUS V51 → GPIO_1V2_SOC2ACE_DFU_STATUS (OUT 36 38 80)

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 (OUT 80)
- AL48 ANALOGMUX_OUT ← NC_ADC_SOC_ANALOGMUX_OUT

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

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

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

DC-BLOCKING CAPS LOCATION OFF-PAGE

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

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

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

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 → GND

CRITICAL
R0651 499 1% 1/32W MF 01005
SOC_24M_O → C0650 12PF 5% 16V NP0-C0G 01005-1 → GND
CRITICAL
Y0600 1.60X1.20MM 24.000MHZ-20PPM-9.5PF-60OHM
C0651 12PF 5% 16V NP0-C0G 01005-1 → GND

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
SWD_AP_TCK (6) → SWD_NAND1_SWCLK (OUT 17)

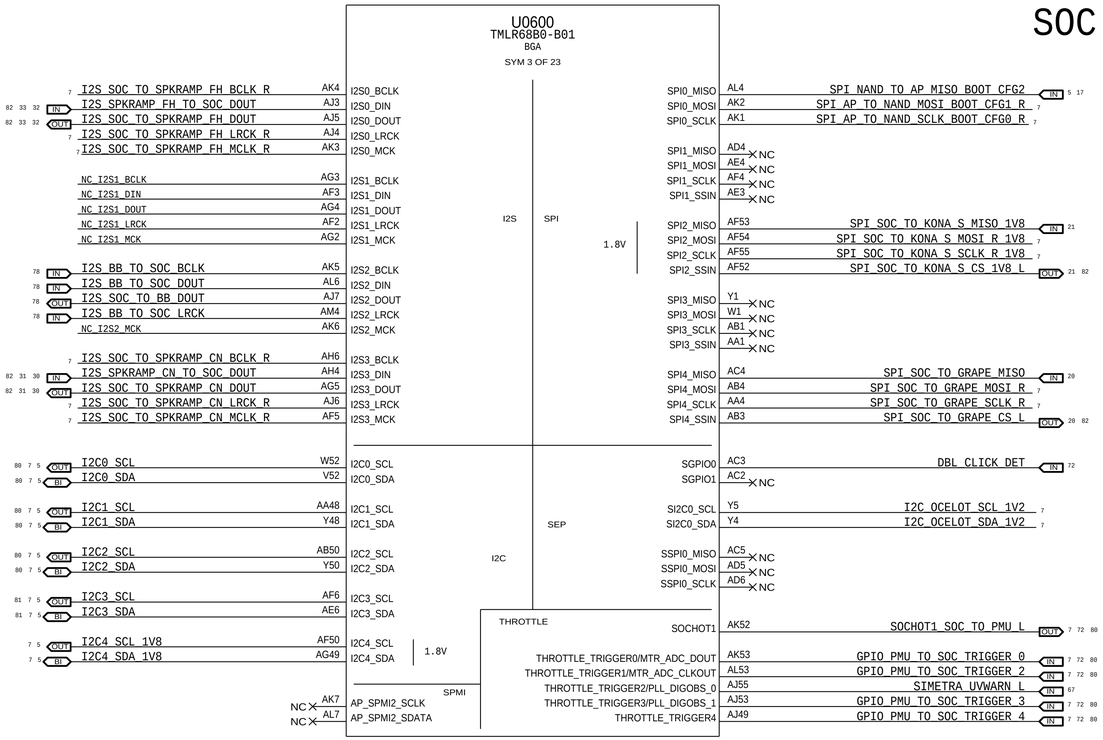
R1035 33 5% 1/32W MF 01005 DUAL_NAND
SWD_AP_TCK (6) → SWD_NAND2_SWCLK (OUT 18)

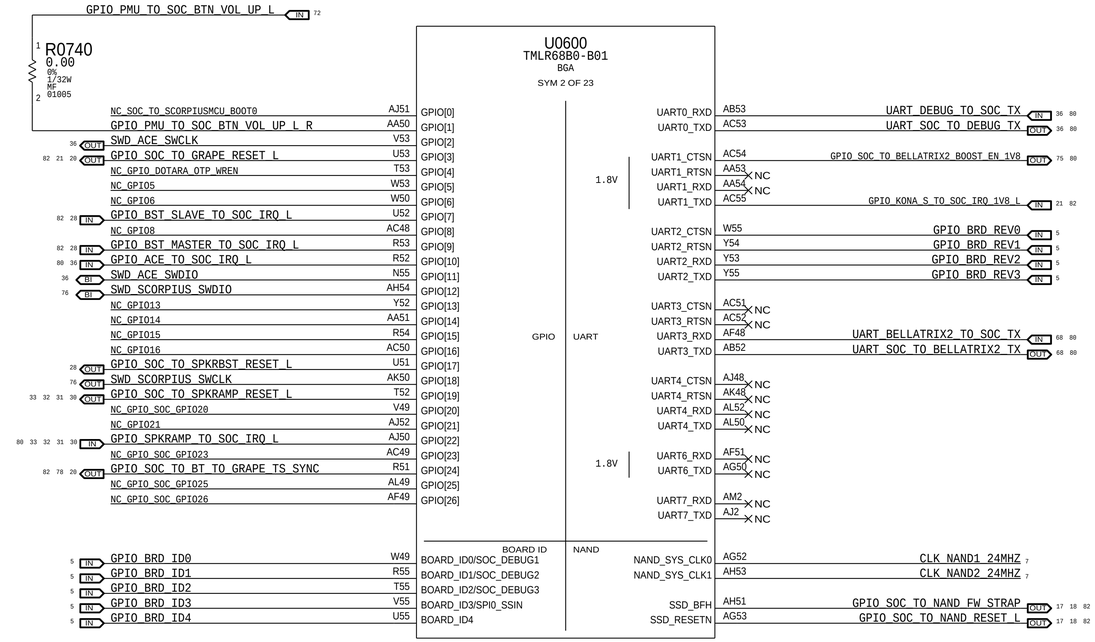
PP1V25_S2 (84 78)
C1033 0.1UF 20% 6.3V X5R-CERM 01005 → GND
PACK_OPTION=J518,J523
U1034 74AUP1G34GX SOT1226
PACK_OPTION=J518,J523
R1034 33 5% 1/32W MF 01005
SWD_AP_TCK (6) → SWD_PER_BB_SWCLK_R → SWD_BB_SWCLK (OUT 78)
NC

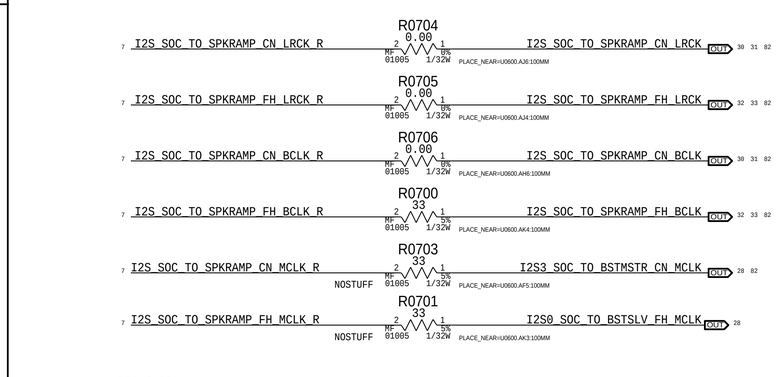
BOM_COST_GROUP=SOC

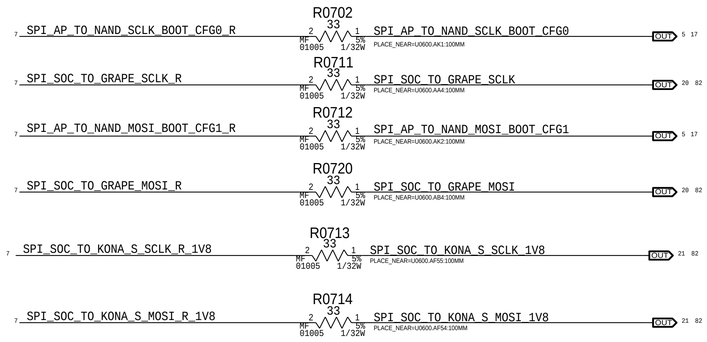
PAGE TITLE
SOC: MAIN

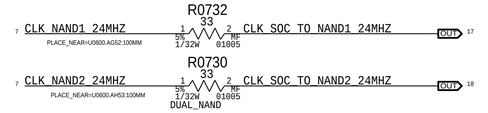
SOC: GPIO

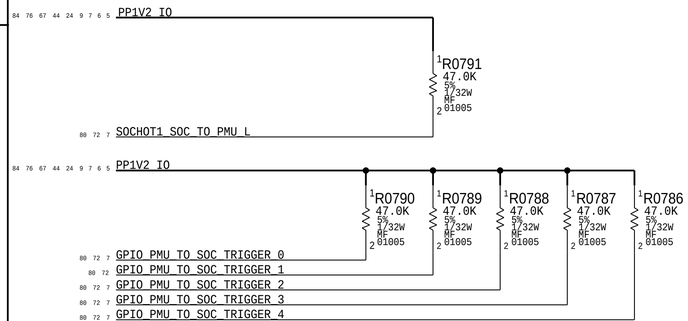


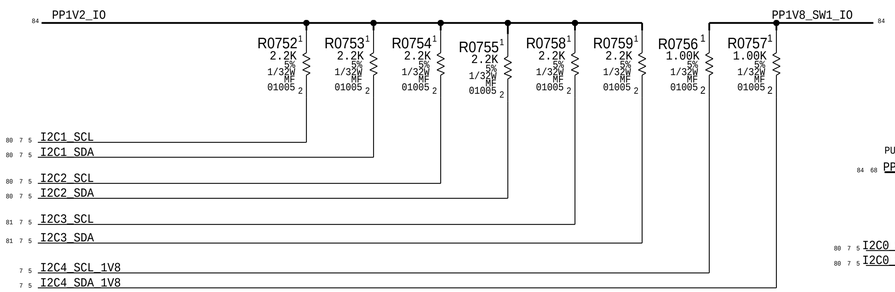


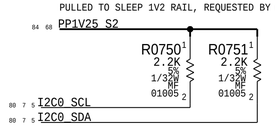


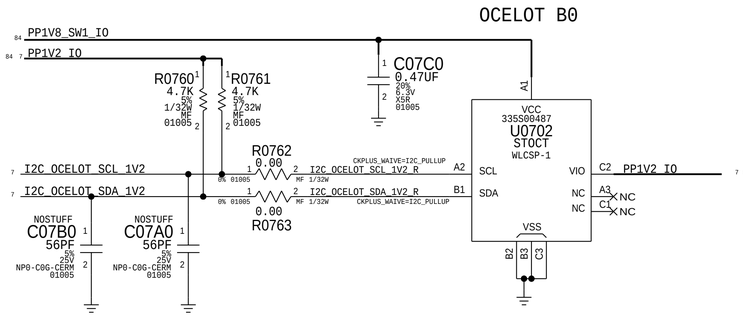












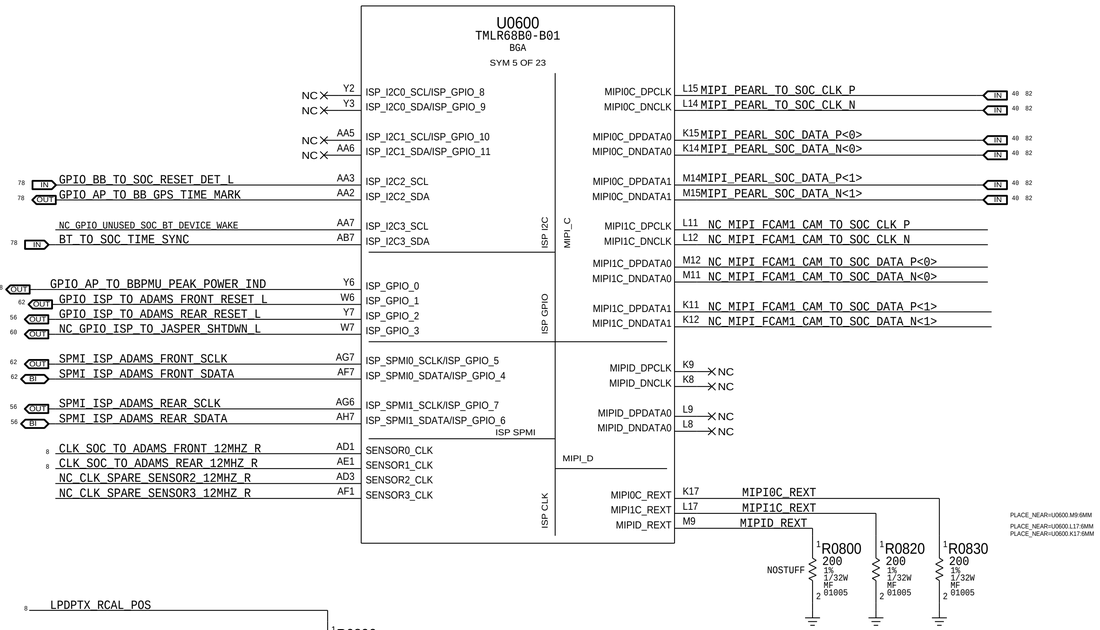
BOM_COST_GROUP=SOC

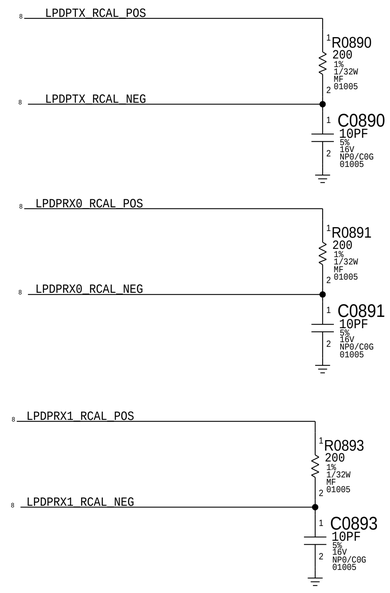
SYNC_MASTER=J517_MLB_2.3.0 SYNC_DATE=08/25/2020

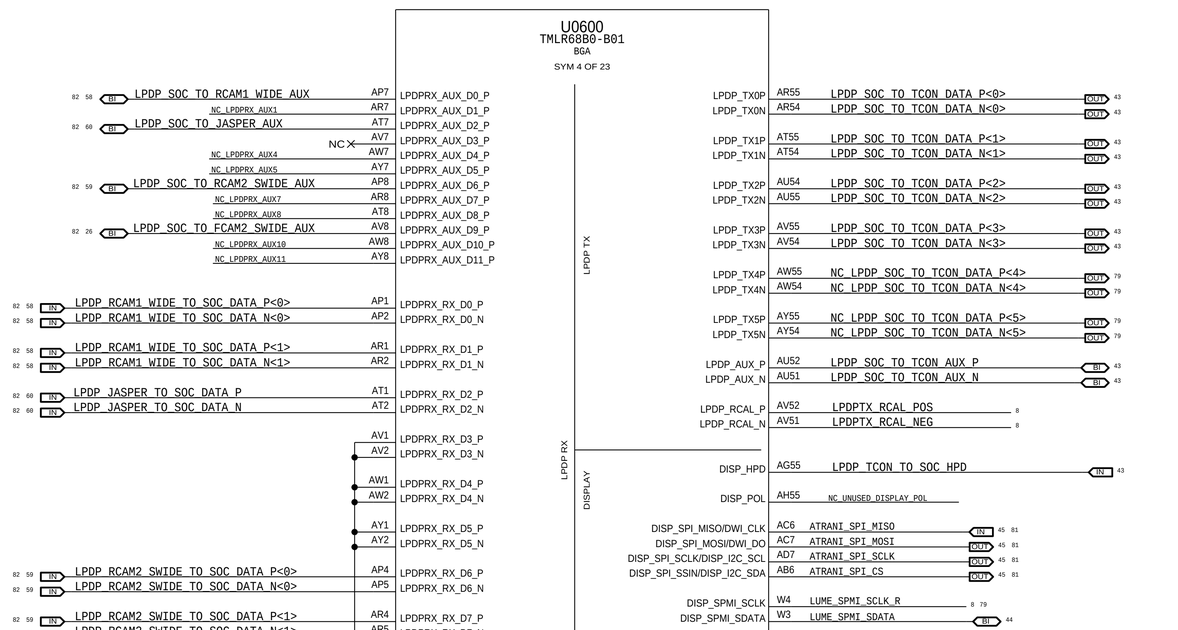
PAGE TITLE

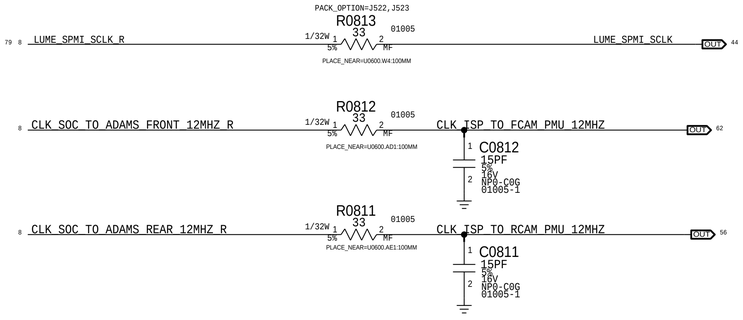
SOC: I/OS

SOC: LPDP & MIPI









BOM_COST_GROUP=SOC

SYNC_MASTER=J513_PLB_4_0_2 SYNC_DATE=08/29/2020

PAGE TITLE

SOC: LPDP & MIPI

SOC: PCIE

PCIE GEN4 - ST LINK 0

U0600
TMLR68B0-B01
BGA
SYM 6 OF 23

DC BLOCKING CAPS ON NAND PAGE

GND_VOID=TRUE
0.22UF 2 | 1 C0930 6.3V 10% 01005 CER-X5R ROOM=SOC
0.22UF 2 | 1 C0931 6.3V 10% 01005 CER-X5R ROOM=SOC
GND_VOID=TRUE

17 OUT 85_PCIE_SOC_TO_NAND1_TX_P
17 OUT 85_PCIE_SOC_TO_NAND1_TX_N
85_PCIE_SOC_TO_NAND1_C_TX_P
85_PCIE_SOC_TO_NAND1_C_TX_N
17 OUT 85_PCIE_SOC_TO_NAND1_REFCLK_P
17 OUT 85_PCIE_SOC_TO_NAND1_REFCLK_N
17 9 IN PCIE_NAND1_TO_SOC_CLKREQ_L
82 18 17 9 OUT PCIE_SOC_TO_NAND_PERST_L

DUAL_NAND
GND_VOID=TRUE
0.22UF 2 | 1 C0932 6.3V 10% 01005 CER-X5R ROOM=SOC
0.22UF 2 | 1 C0933 6.3V 10% 01005 CER-X5R ROOM=SOC
DUAL_NAND
GND_VOID=TRUE

18 OUT 85_PCIE_SOC_TO_NAND2_TX_P
18 OUT 85_PCIE_SOC_TO_NAND2_TX_N
DC BLOCKING CAPS ON NAND PAGE
18 IN 85_PCIE_NAND2_TO_SOC_TX_P
18 IN 85_PCIE_NAND2_TO_SOC_TX_N
85_PCIE_SOC_TO_NAND2_C_TX_P
85_PCIE_SOC_TO_NAND2_C_TX_N
18 OUT 85_PCIE_SOC_TO_NAND2_REFCLK_P
18 OUT 85_PCIE_SOC_TO_NAND2_REFCLK_N
18 9 IN PCIE_NAND2_TO_SOC_CLKREQ_L
NC_PCIE_SOC_TO_NAND2_PERST_L

BE26	ST_PCIE_RX0_P	PCIE ST0	PCIE GP0	GP_PCIE_RX0_P
BF26	ST_PCIE_RX0_N			GP_PCIE_RX0_N
BC27	ST_PCIE_TX0_P			GP_PCIE_TX0_P
BD27	ST_PCIE_TX0_N			GP_PCIE_TX0_N
BB37	ST_PCIE_REF_CLK0_P			GP_PCIE_REF_CLK0_P
BC37	ST_PCIE_REF_CLK0_N			GP_PCIE_REF_CLK0_N
AH50	ST_PCIE_CLKREQ0_N			GP_PCIE_CLKREQ0_N
AH52	ST_PCIE_PERST0_N			GP_PCIE_PERST0_N
BE28	ST_PCIE_RX1_P	PCIE ST1	PCIE GP1	GP_PCIE_RX1_P
BF28	ST_PCIE_RX1_N			GP_PCIE_RX1_N
BC29	ST_PCIE_TX1_P			GP_PCIE_TX1_P
BD29	ST_PCIE_TX1_N			GP_PCIE_TX1_N
BB38	ST_PCIE_REF_CLK1_P			GP_PCIE_REF_CLK1_P
BC38	ST_PCIE_REF_CLK1_N			GP_PCIE_REF_CLK1_N
AH49	ST_PCIE_CLKREQ1_N			GP_PCIE_CLKREQ1_N
AH48	ST_PCIE_PERST1_N			GP_PCIE_PERST1_N
		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 — GPIO_SOC_TO_BB_COREDUMP OUT 78
BC24	ST_PCIE_RCAL_P			GP_PCIE_RCAL_P — BC25 — PCIE_RCAL_GP_POS 9
BB24	ST_PCIE_RCAL_N			GP_PCIE_RCAL_N — BB25 — PCIE_RCAL_GP_NEG 9
AM3	PAD_MTR_ANALOG_TEST_P	MTR		
AL3	PAD_MTR_ANALOG_TEST_N			
AL1	PAD_MTR_VREF_P			
AM1	PAD_MTR_VREF_N			

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

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

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

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

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

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

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 OUT 78 82
GP_PCIE_TX0_N — BD31 — PCIE_SOC_TO_WLAN_TX_C_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

GND_VOID=TRUE
0.1UF 2 | 1 C0940 01005 6.3V 20% X5R-CERM
PCIE_SOC_TO_WLAN_TX_P OUT 78 82
0.1UF 2 | 1 C0941 01005 6.3V 20% X5R-CERM
PCIE_SOC_TO_WLAN_TX_N OUT 78 82
GND_VOID=TRUE

WLAN/BT

GP_PCIE_RX1_P — BE32 — PCIE_BB_TO_SOC_TX_P IN 78
GP_PCIE_RX1_N — BF32 — PCIE_BB_TO_SOC_TX_N IN 78
GP_PCIE_TX1_P — BC33 — PCIE_SOC_TO_BB_TX_C_P OUT 78
GP_PCIE_TX1_N — BD33 — PCIE_SOC_TO_BB_TX_C_N OUT 78
GP_PCIE_REF_CLK1_P — BE38 — PCIE_SOC_TO_BB_REFCLK_P OUT 78
GP_PCIE_REF_CLK1_N — BF38 — PCIE_SOC_TO_BB_REFCLK_N OUT 78
GP_PCIE_CLKREQ1_N — AA55 — PCIE_BB_TO_SOC_CLKREQ_L IN 78
GP_PCIE_PERST1_N — P55 — PCIE_SOC_TO_BB_PERST_L OUT 78

BASEBAND

AC COUPLING CAPS ARE IN CONNECTOR PAGE

BOM_COST_GROUP=SOC

PAGE TITLE
SOC: PCIE

SOC: AOP

ALS IRQ PULL-UPS

PP1V25_S2

R0690 47.0K 5% 1/32W MF 01005 — NOSTUFF
R0691 47.0K 5% 1/32W MF 01005 — NOSTUFF

GPIO_ALS_FH1_TO_AOP_IRQ_L
GPIO_ALS_FH2_TO_AOP_IRQ_L

AOP I2C PULL-UPS

PP1V25_S2

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

PP1V25_S2

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
PP1V25_S2
R0684 47.0K 5% 1/32W MF 01005

SMC I2C PULL-UPS

PP1V25_S2

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

U0600 TMLR68B0-B01 BGA SYM 7 OF 23

GPIO_PHOSPHORUS_TO_AOP_IRQ	BB18	AOP_FUNC[0]	AOP GPIO
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]	
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]	
I2C_AOP_I2CM0_SCL	BC20	AOP_I2CM0_SCL	AOP I2C
I2C_AOP_I2CM0_SDA	BB19	AOP_I2CM0_SDA	
I2C_AOP_I2CM1_SCL	BB16	AOP_I2CM1_SCL	
I2C_AOP_I2CM1_SDA	BE15	AOP_I2CM1_SDA	
CLK_AOP_TO_LDCM_PDM	BB9	AOP_PDM_IN_CLK1/AOP_I2S1_BCLK	AOP PDM
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	
SPI_SENSORS_MISO	BF15	AOP_SPI0_MISO	AOP SPI
SPI_SENSORS_MOSI_R	BF14	AOP_SPI0_MOSI	
SPI_SENSORS_SCLK_R	BF17	AOP_SPI0_SCLK	
SPMI0_AOP_SCLK_WIFI_BT_NFC	BF18	AOP_SPMI0_SCLK/AOP_UART0_TXD	AOP SPMI
SPMI0_AOP_SDATA_WIFI_BT_NFC	BF19	AOP_SPMI0_SDATA/AOP_UART0_RXD	
UART_AOP_TO_BB_TX	BF20	AOP_SPMI1_SCLK/AOP_UART1_TXD	
UART_BB_TO_AOP_TX	BF21	AOP_SPMI1_SDATA/AOP_UART1_RXD	
UART_GRAPE_TO_AOP_TX	BB3	AOP_UART2_RXD	AOP UART
UART_AOP_TO_GRAPE_TX	BB4	AOP_UART2_TXD	
CLK_PMU_TO_AOP_32K	BE6	RT_CLK32768	AOP RESET
RESET_PMU_TO_SYSTEM_L	BF10	CFSB_AON	
	BB5	COLD_RESETN	
NC_AON_SLEEP1_RESET_L	BB21	AON_SLEEP1_RESETN	
WDOG_SOC	BF12	WDOG	
DBG_PROBE_VALID	BF6	DBG_PROBE_VALID	AOP DEBUG
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	

DBG_USB_RESREF — R09A5 200 1% 1/32W MF 01005 — PLACE_NEAR=U0600.BE23:6MM

	BA17	CLK_GRAPE_24MHZ_R	NUB_CLK_OUT0
	BC15	GPIO_AOP_TO_ORION_HWEN	NUB_DOCK_ATTENTION/CTM_TRIGGER
	BC17	GPIO_1V2_ACE2SOC_DOCK_CONNECT	NUB_DOCK_CONNECT
	BD14	GPIO_AOP_TO_PARROT_RECOVERY_STATUS	NUB_GPIO_0/AOP_FUNC15/NUB_CLK_OUT1
	BD15	PDM_PENROSE_SCLK	NUB_GPIO_1/AOP_PDM_IN_CLK0
	BD21	PDM_PENROSE_SD	NUB_GPIO_2/AOP_PDM_IN_DATA0
	BD17	GPIO_KONA_S_TO_SCORPIUS_TIME_SYNC_AOP	NUB_GPIO_3/AOP_LEAP_MADI_IN
	BB13	GPIO_TITUS_TO_AOP_B2B_DETECT	NUB_GPIO_4/AOP_LEAP_MADI_OUT
	BD19	GPIO_LDCM_TO_AOP_INVALID	NUB_GPIO_5/AOP_PDM_OUT_CLK0
	BD22	AOP_TO_LDCM_DATA0_PDM	NUB_GPIO_6/AOP_PDM_OUT_DATA0/AOP_FUNC16
	BB10	PROX_BI_AP_AOP_INT_L_PWM_LVT	NUB_GPIO_7/AOP_FUNC17
	BD12	NC_AOP_TO_LDCM_AFE_EN_1V2	NUB_GPIO_8/AOP_FUNC18
	BD11	GPIO_ORION_TO_AOP_IRQ	NUB_GPIO_9/AOP_FUNC19
	BC10	DOTARA_WAKE_HEART_BEAT	NUB_GPIO_10/AOP_FUNC20
	BB7	SLG_TO_AOP_DMIC_DISABLE_WARN_L	NUB_GPIO_11/KIS_GPIO0/AOP_FUNC21
	BD10	GPIO_SCORPIUS_TO_AOP_INT	NUB_GPIO_12/KIS_GPIO1/AOP_FUNC22
	BB15	NUB_SPMI0_SCLK	NUB_SPMI0_SCLK
	BC14	NUB_SPMI0_SDATA	NUB_SPMI0_SDATA
	BA12	NUB_SPMI1_SCLK	NUB_SPMI1_SCLK
	BC11	NUB_SPMI1_SDATA	NUB_SPMI1_SDATA
	BC18	SWD_PERIPHERAL_SWCLK	NUB_SWD_TCK_OUT0
	BC19	SWD_PMU_SWDIO	NUB_SWD_TMS0
	BC21	SWD_GRAPE_SWDIO	NUB_SWD_TMS1
	BE4	JTAG_SOC_SEL	JTAG_SEL
	BF5	JTAG_SOC_TCK	JTAG_TCK
	BF16	TP_JTAG_SOC_TDI	JTAG_TDI
	BC1	TP_JTAG_SOC_TDO	JTAG_TDO
	BB1	JTAG_SOC_TMS	JTAG_TMS
	BF7	TP_JTAG_SOC_TRST_L	JTAG_TRSTN
	BC3	I2C_SMC_I2CM0_SCL	SMC_I2CM0_SCL
	BC2	I2C_SMC_I2CM0_SDA	SMC_I2CM0_SDA
	BD4	I2C_SMC_I2CM1_SCL	SMC_I2CM1_SCL/SMC_UART1_TXD
	BB2	I2C_SMC_I2CM1_SDA	SMC_I2CM1_SDA/SMC_UART1_RXD
	BD6	I2C_SMC_I2CM2_SCL	SMC_I2CM2_SCL
	BC5	I2C_SMC_I2CM2_SDA	SMC_I2CM2_SDA
	BC7	NC	SMC_I2CM3_SCL
	BD7	NC	SMC_I2CM3_SDA
	BE7	NC	SMC_I2CM4_SCL
	BF9	NC	SMC_I2CM4_SDA
	BF4	NC	SMC_UART0_RXD
	BF8	NC	SMC_UART0_TXD
	BF11	GPIO_POTOMAC_TO_SOC_TO_PMU_IRQ_L	SMC_GPIO0
	BF13	GPIO_ACE_TO_SMC_IRQ_L	SMC_GPIO1
	BE12	NC_SMC_FPWM0	SMC_FPWM0
	BE9	NC	SMC_FPWM1

NUB GPIO — NUB SPMI — NUB SWD — JTAG — SMC I2C — SMC UART — SMC GPIO

R0731 33 5% 1/32W MF 01005 — PLACE_NEAR=U0600.BA17:1000MM — CLK_SOC_TO_GRAPE_24MHZ
DEV PURPOSES, NOSTUFF CONNECTION TO USBC DC

R0681 47.0K 5% 1/32W MF 01005
R0680 47.0K 5% 1/32W MF 01005
R0682 47.0K 5% 1/32W MF 01005
PP1V25_S2

PP1V2_S2_TOUCH
C1034 0.1UF 20% 6.3V X5R-CERM 01005
U1033 74AUP1G34GX SOT1226

SWD_PERIPHERAL_SWCLK — R1040 33 5% 1/32W MF 01005 — SWD_PER_KONA_SWCLK_R — SWD_GRAPE_SWCLK
PLACE_NEAR=U0600.AK3:100MM
NO SWCLK BUFFER FOR PMU DUE TO PROXIMITY AND LOAD

NUB_SPMI_SERA_SCLK — R79C1 33 — NUB_SPMI0_SCLK
NUB_SPMI_SERA_SDATA — R79D1 33 — NUB_SPMI0_SDATA
PLACE_NEAR=U0600.BB15:100MM
PLACE_NEAR=U0600.BC14:100MM

NUB_SPMI1_SIMETRA_SCLK — R79C2 33 — NUB_SPMI1_SCLK
NUB_SPMI1_SIMETRA_SDATA — R79D2 33 — NUB_SPMI1_SDATA
PLACE_NEAR=U0600.BA12:100MM
PLACE_NEAR=U0600.BC11:100MM

AOP_SPMI0_SCLK_NFC — R78E1 33 — SPMI0_AOP_SCLK_WIFI_BT_NFC
AOP_SPMI0_SDATA_NFC — R78F1 33 — SPMI0_AOP_SDATA_WIFI_BT_NFC
PLACE_NEAR=U0600.BF18:100MM
PLACE_NEAR=U0600.BF19:100MM

AOP_SPMI0_SCLK_WIFI_BT — R78C1 33
AOP_SPMI0_SDATA_WIFI_BT — R78D1 33
PLACE_NEAR=U0600.BF18:100MM
PLACE_NEAR=U0600.BF19:100MM

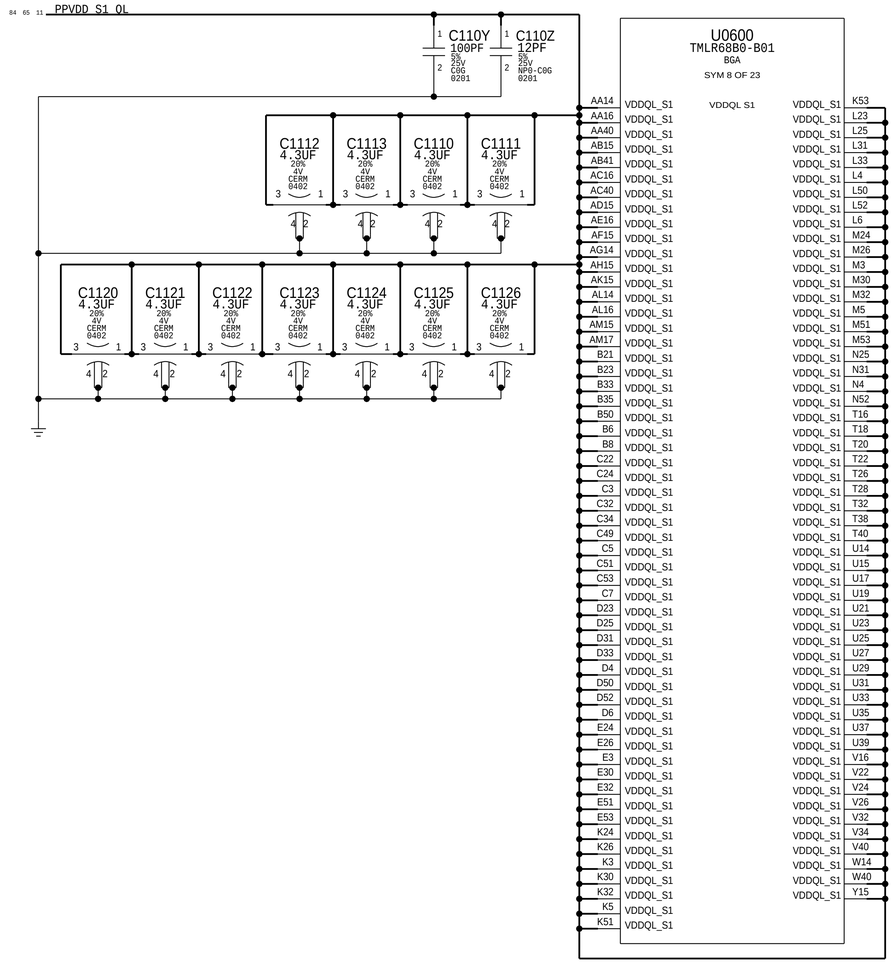
R1098 1.00M 5% 1/32W MF 01005
R1099 1.00M 5% 1/32W MF 01005

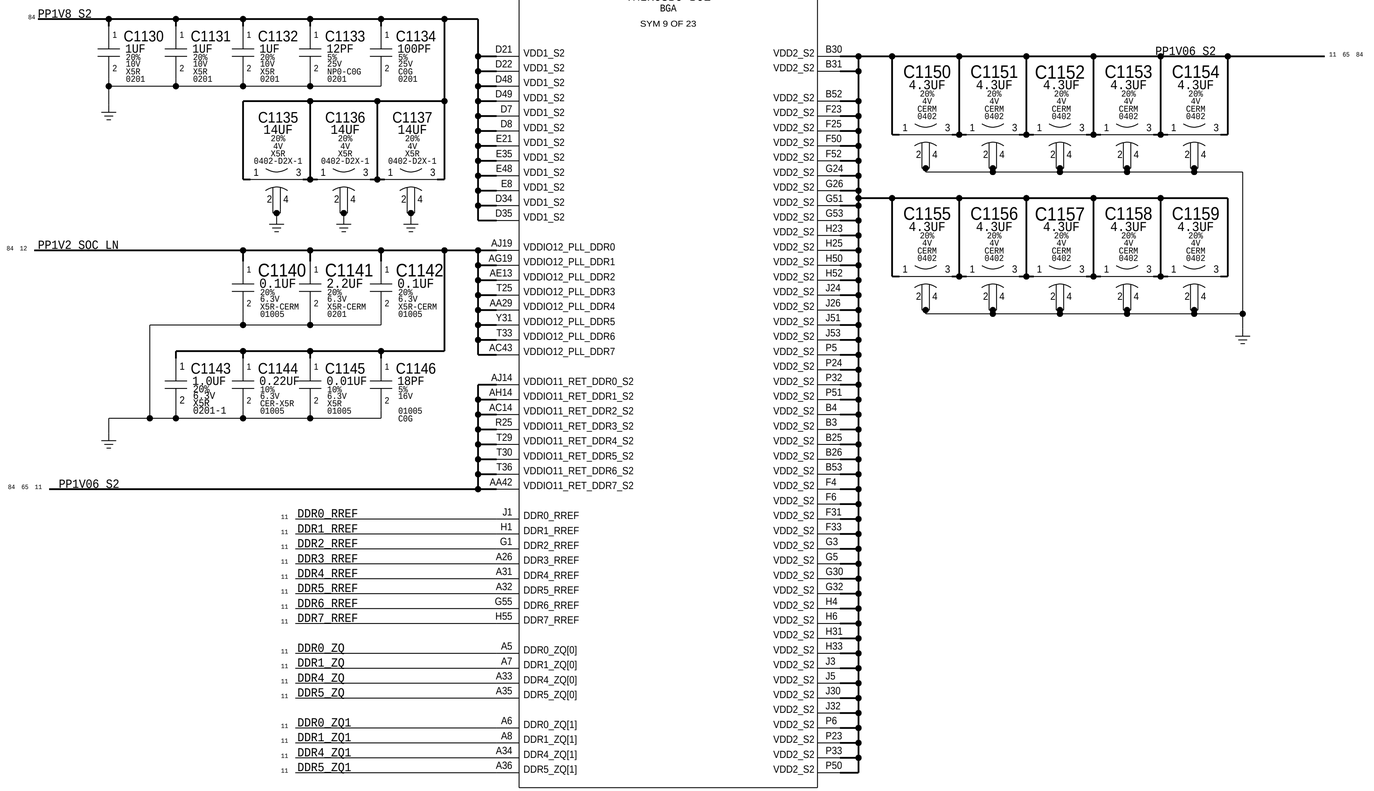
PP1V2_S2_TOUCH
R0612 1.00K 5% 1/32W MF 01005
SWD_GRAPE_SWDIO

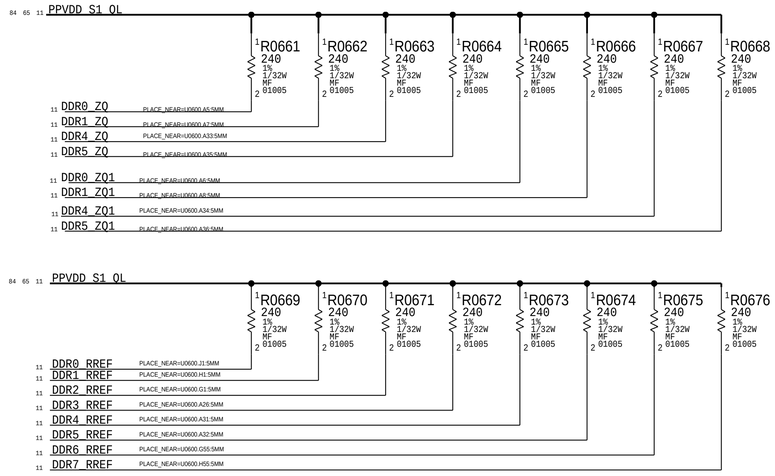
BOM_COST_GROUP=SOC

PAGE TITLE: SOC: AOP

SOC: POWER (DDR)







ROM_COST_GROUP=SOC

PAGE TITLE

SOC: POWER (DDR,SRAM)

SOC: POWER (IO,FIXED)

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BGA
SYM 13 OF 23

U0600
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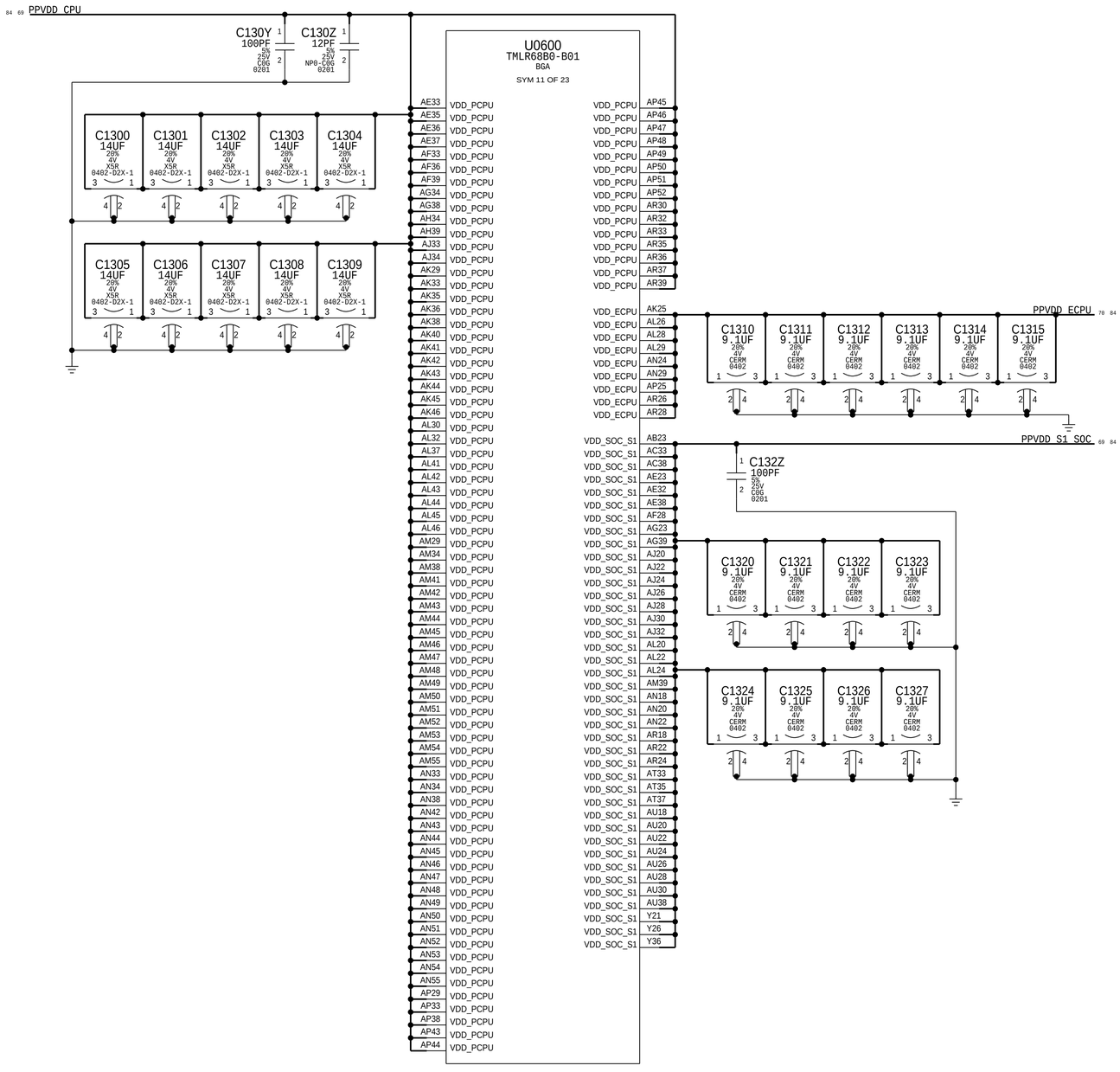
BGA
SYM 14 OF 23

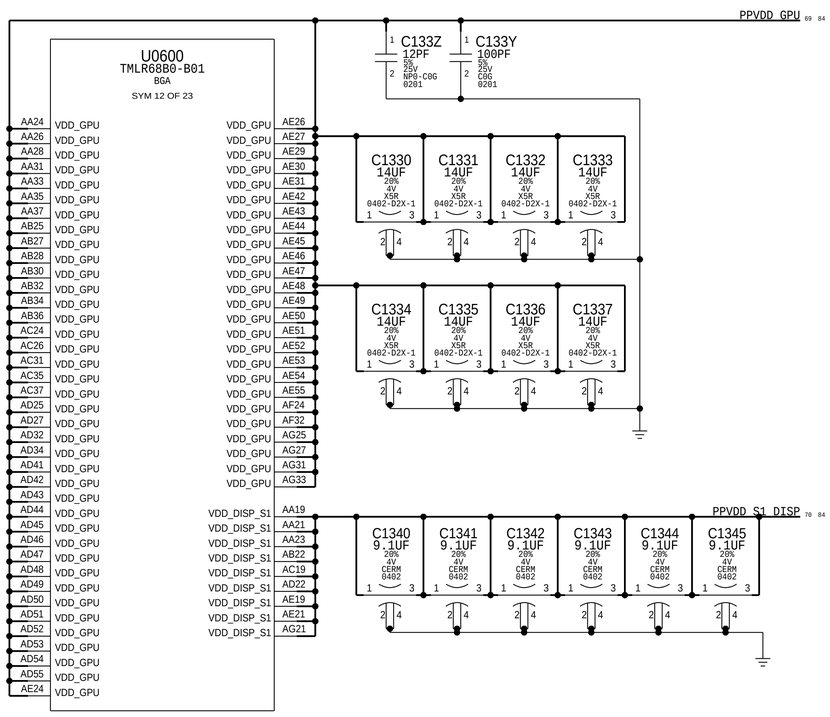
VDDIO06_GRPx RADAR #: 48907718
Cmin = 4.7uF
Loop R < 0.2 ohm
Loop L < 1nH

BOM_COST_GROUP=SOC

PAGE TITLE
SOC: POWER (IO)

SOC: POWER (CPU, GPU)



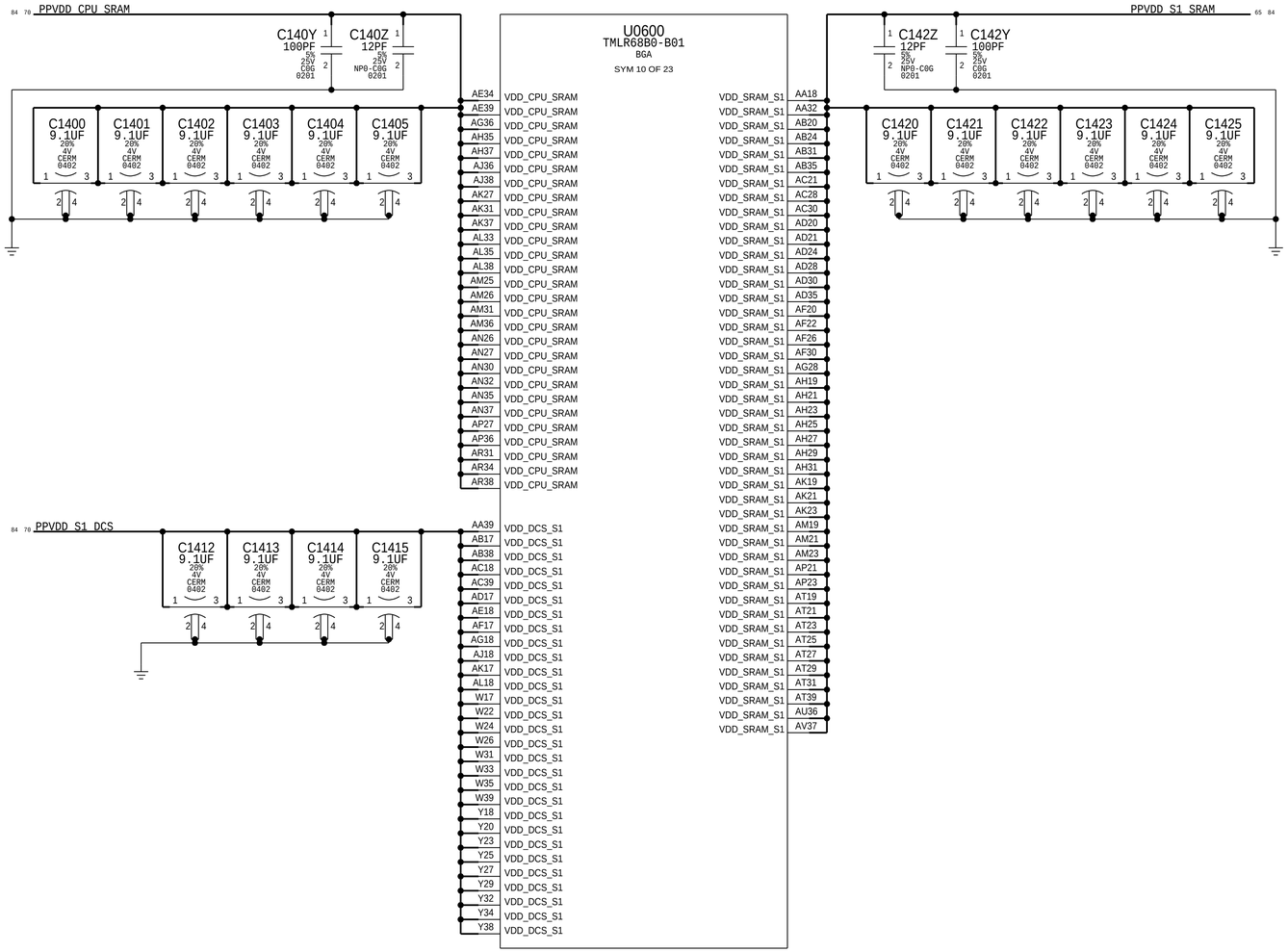


ROM_COST_GROUP=SOC

PAGE TITLE

SOC: POWER (CPU, GPU)

SOC: POWER (SRAM,SOC)

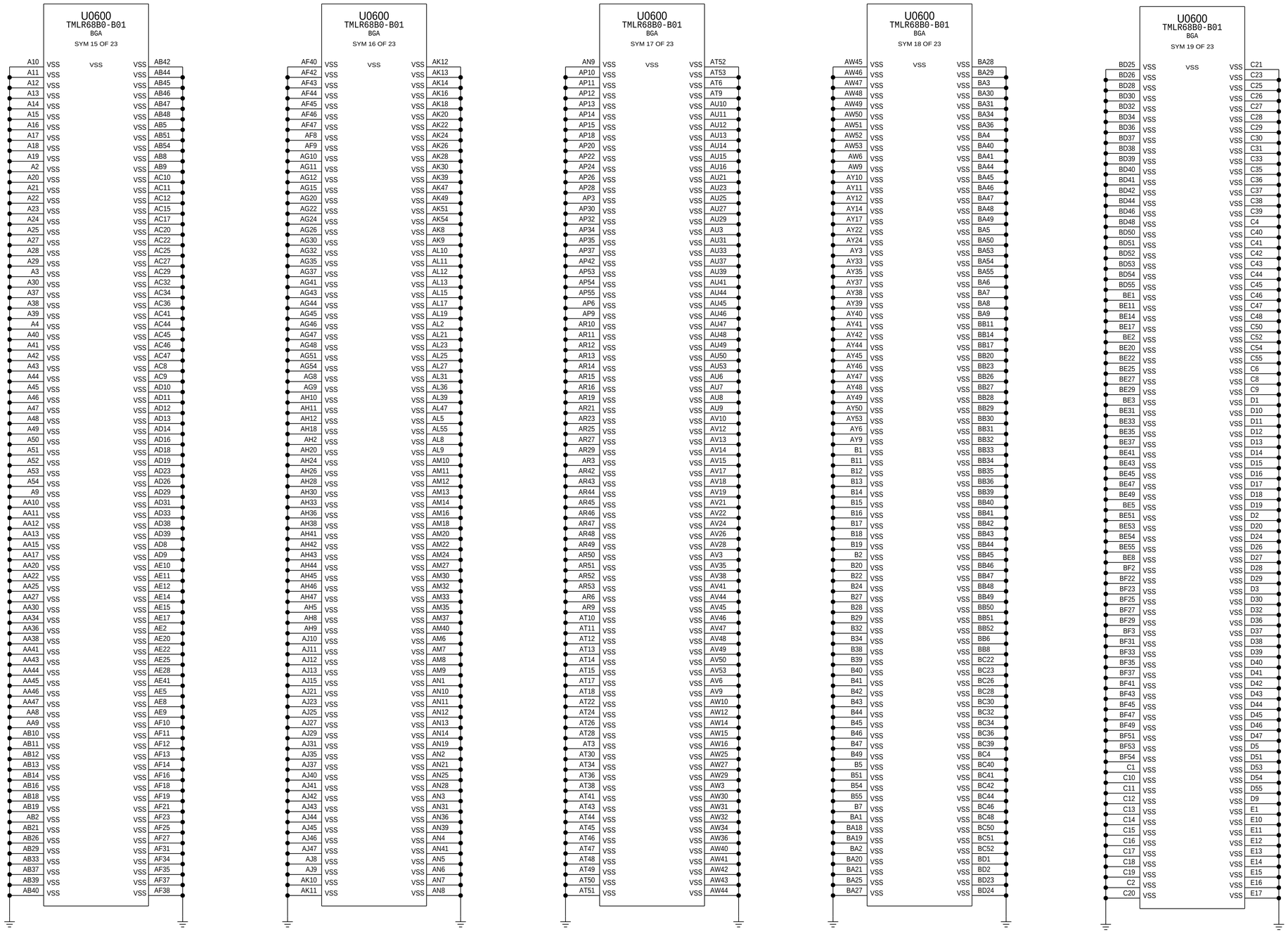


ROM_COST_GROUP=SOC

PAGE TITLE

SOC: POWER (SRAM, SOC)

SOC: GND (1)


U0600
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BGA
SYM 15 OF 23
A10 VSS
A11 VSS
A12 VSS
A13 VSS
A14 VSS
A15 VSS
A16 VSS
A17 VSS
A18 VSS
A19 VSS
A2 VSS
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AF40 VSS
AF42 VSS
AF43 VSS
AF44 VSS
AF45 VSS
AF46 VSS
AF47 VSS
AF8 VSS
AF9 VSS
AG10 VSS
AG11 VSS
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AH9 VSS
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AJ9 VSS
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AK11 VSS
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AN9 VSS
AP10 VSS
AP11 VSS
AP12 VSS
AP13 VSS
AP14 VSS
AP15 VSS
AP18 VSS
AP20 VSS
AP22 VSS
AP24 VSS
AP26 VSS
AP28 VSS
AP3 VSS
AP30 VSS
AP32 VSS
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SYM 18 OF 23
AW45 VSS
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SYM 19 OF 23
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BD28 VSS
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VSS E1
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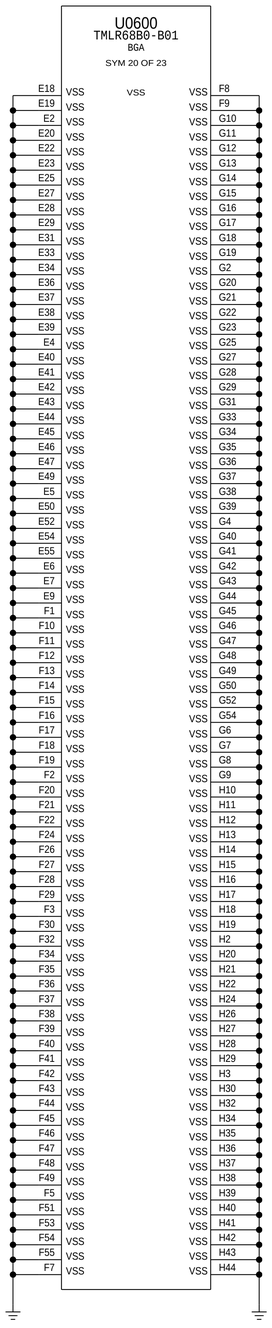
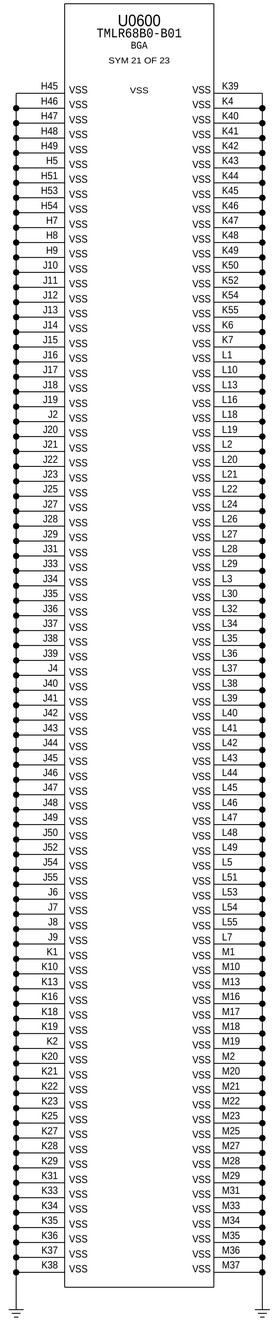
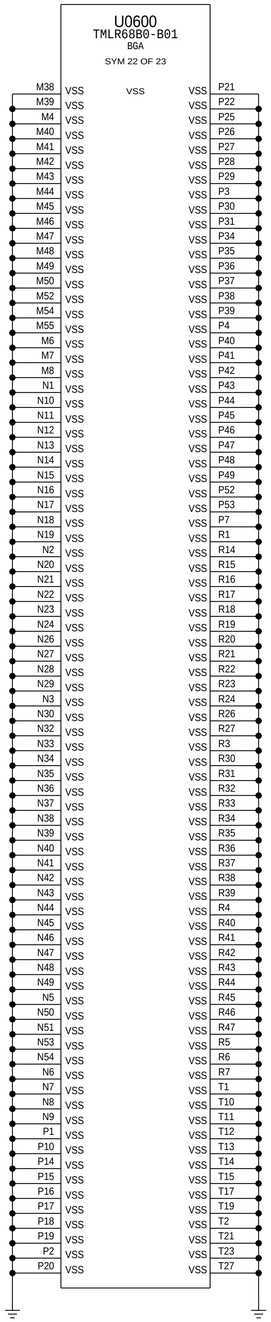
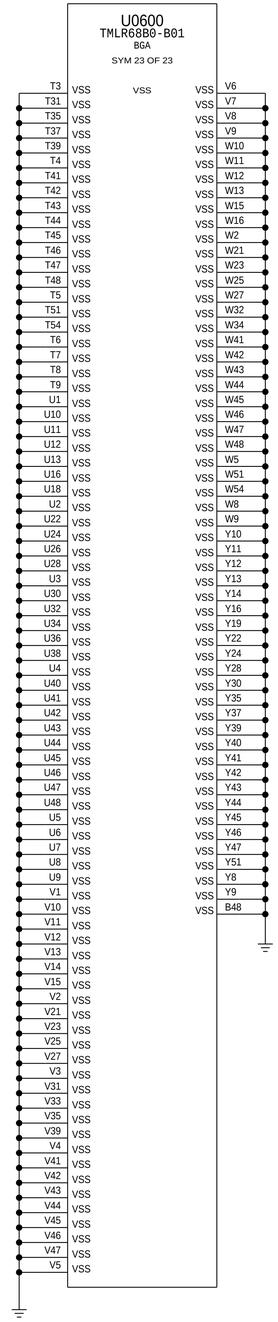
VSS E16
VSS E17
BOM_COST_GROUP=SOC
SYNC_MASTER=2510_RLS_4.0.2
SYNC_DATE=08/29/2020
PAGE TITLE
SOC: GND

SOC: GND (2)









BOM_COST_GROUP=SOC

SYNC_MASTER=2518_RLS_4.0.2 SYNC_DATE=09/20/2020

PAGE TITLE

SOC: GND-2

S5E NAND 1

I_VCC = 1150mA MAX (1us PEAK POWER)

84 65 18 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
17 C1821 10UF 20% 6.3V CERM-X5R 0402
22 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
17 C1866 10UF 20% 6.3V CERM-X5R 0402
6 C1836 220PF 5% 25V C0G 01005
C1834 47PF 5% 16V NP0-C0G 01005
40 C1835 22PF 5% 16V C0G 01005

335S00468 4 U1800 OMIT_TABLE
THGBY8T3EBMLFAI
LGA
SYM 2 OF 2

D3 E12 G4 L12 R2 — VCC
J2 K9 T5 — VDDIO_1
PCIE_AVDD_H — (VCCQ_IO)
AVDD1X_PLL — (VCCQ_IO)
E10 E2 N2 P9 — VDDIO_2 — (VCCQ_ANI)
G6 G8 L6 L8 R6 R8 — VDD — (VDD)
J8 M9 N6 N8 — PCIE_VDD

I_VDDIO1 (@ 1.2V) = 72mA MAX

84 18 17 9 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
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
C1863 2.2UF 20% 6.3V X5R-CERM 0201

I_VDDIO2 (@ 1.2V) = 384mA MAX

84 18 17 9 PP1V2_NAND

C1831 15UF 20% 6.3V X5R 0402-0.1MM-1
C1830 15UF 20% 6.3V X5R 0402-0.1MM-1
7 C1829 15UF 20% 6.3V X5R 0402-0.1MM-1
45 C1843 2.2UF 20% 6.3V X5R-CERM 0201
C1845 2.2UF 20% 6.3V X5R-CERM 0201
38 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

I_VDD = 820mA MAX

84 18 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
NO CAP ON NAND SIDE IS ON PURPOSE
EXPLANATION FROM NAND PI TEAM
C1823 2.2UF 20% 6.3V X5R-CERM 0201

49 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
VPP — F3 — NC_PP_NAND1_VPP
VQPS — F5

VQPS used for fuse programming, GND in system

82 18 17 7 GPIO_SOC_TO_NAND_RESET_L

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

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 4 THGBY8T3EBMLFAI LGA SYM 1 OF 2 OMIT_TABLE 335S00468

7 IN CLK_SOC_TO_NAND1_24MHZ → M3 CLK_IN
82 18 17 7 IN GPIO_SOC_TO_NAND_RESET_L → L4 RESET*
G10 TRST* (INT PD) — GND_VOID=TRUE
9 IN 85_PCIE_SOC_TO_NAND1_REFCLK_P → K11 PCIE_REFCLK_P
9 IN 85_PCIE_SOC_TO_NAND1_REFCLK_N → J12 PCIE_REFCLK_N
9 IN PCIE_NAND1_TO_SOC_CLKREQ_L → P5 PCIE_CLKREQ* — GND_VOID=TRUE
9 IN 85_PCIE_SOC_TO_NAND1_TX_P → M11 PCIE_RX0_P
9 IN 85_PCIE_SOC_TO_NAND1_TX_N → N12 PCIE_RX0_N — GND_VOID=TRUE
17 PCIE_NAND1_TO_SOC_TX_C_P → R12 PCIE_TX0_P
17 PCIE_NAND1_TO_SOC_TX_C_N → T11 PCIE_TX0_N — GND_VOID=TRUE
82 18 9 IN PCIE_SOC_TO_NAND_PERST_L → E8 EXT_NCE/PERST*
ANALOG_NAND1_PCIE_RESREF (for dev) → H7 PCIE_RESREF
32 C1820 10PF 5% 16V NP0/C0G 01005
R1804 200 0.5% 1/32W TK 01005
(for dev)
Keep ZQ trace DCR < 200mOhm
C10 ZQ_0 — ANALOG_NAND1_ZQ_0
K3 ZQ_1 — 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 IN 18 72 82
(INT PD) EXT_D1/BOOT1 → C4 GPIO_SOC_TO_NAND_FW_STRAP IN 7 18 82
EXT_D2/BOOT2/SPINAND_SCLK/SPI_SCLK → B5 SPI_AP_TO_NAND_SCLK_BOOT_CFG0 IN 5 7
EXT_D3/SPINAND_MISO/SPI_MISO/SWD_UID → C6 SPI_NAND_TO_AP_MISO_BOOT_CFG2_R 17
EXT_D4/SPI_CS → B7
EXT_D5/SPINAND_MOSI/SPI_MOSI/SWD_UID1 → C8 SPI_AP_TO_NAND_MOSI_BOOT_CFG1 IN 5 7
EXT_D6/BOOT3 → B9
EXT_D7/SPF_N → B11 SYS_ALIVE IN 18 72 82
(INT PU) EXT_DQS/BCM_N → D11 NC_NAND1_BCM_L
(INT PU) EXT_NRE/JTAG_TMS → D7 SWD_NAND_SWDIO BI 6 18
(INT PU) EXT_NWE/JTAG_TCK → E6 SWD_NAND1_SWCLK IN 6
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 82
WP* → G2 PP1V2_NAND 9 17 18 84
ANI0_VREF → G12 NAND1_ANI0_VREF 82
ANI1_VREF → J4 NAND1_ANI1_VREF 82

17 SPI_NAND_TO_AP_MISO_BOOT_CFG2_R → R1805 PLACE_NEAR=U1800.C6:100MM 33 1/32W 5% MF 01005 → SPI_NAND_TO_AP_MISO_BOOT_CFG2 OUT 5 7

GND_VOID=TRUE GND_VOID=TRUE
17 PCIE_NAND1_TO_SOC_TX_C_P → 0.22UF 01005 6.3V C1880 10% CER-X5R → 85_PCIE_SOC_TO_NAND1_TX_P OUT 9
17 PCIE_NAND1_TO_SOC_TX_C_N → 0.22UF 01005 6.3V C1881 10% CER-X5R → 85_PCIE_SOC_TO_NAND1_TX_N OUT 9
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

VCC: D3, E12, G4, L12, R2

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
VDDIO_1: J2, K9, T5

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
VDDIO_2: E10, E2, N2, P9 (VCCQ_ANI)
VDD: G6, G8, L6, L8, R6, R8 (VDD)
PCIE_VDD: J8, M9, N6, N8

I_VDD = 820mA MAX
PP0V88_NAND2
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
PP0V88_NAND2_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: 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, A10, A4, A6, A8, U10, U4, U6, U8
VSS_R

VPP F3 → NC_PP_NAND2_VPP
VQPS F5

VQPS used for fuse programming, GND in system

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 (GND_VOID=TRUE)
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 (GND_VOID=TRUE)
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
C10 ZQ_0, K3 ZQ_1 (for dev)
Keep ZQ trace DCR < 200mOhm
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 (IN 17 72 82)
(INT PD) EXT_D1/BOOT1 → C4 GPIO_SOC_TO_NAND_FW_STRAP (IN 7 17 82)
EXT_D2/BOOT2/SPINAND_SCLK/SPI_SCLK → B5
EXT_D3/SPINAND_MISO/SPI_MISO/SWD_UID → C6 PP1V2_NAND (9 17 18 84)
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 (IN 17 72 82)
(INT PU) EXT_DQS/BCM_N → D11 NC_NAND2_BCM_L
(INT PU) EXT_NRE/JTAG_TMS → D7 SWD_NAND_SWDIO (BI 6 17)
(INT PU) EXT_NWE/JTAG_TCK → E6 SWD_NAND2_SWCLK (IN 6)
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 (82)
WP* → G2 PP1V2_NAND (9 17 18 84)
ANI0_VREF → G12 NAND2_ANI0_VREF (82)
ANI1_VREF → J4 NAND2_ANI1_VREF (82)

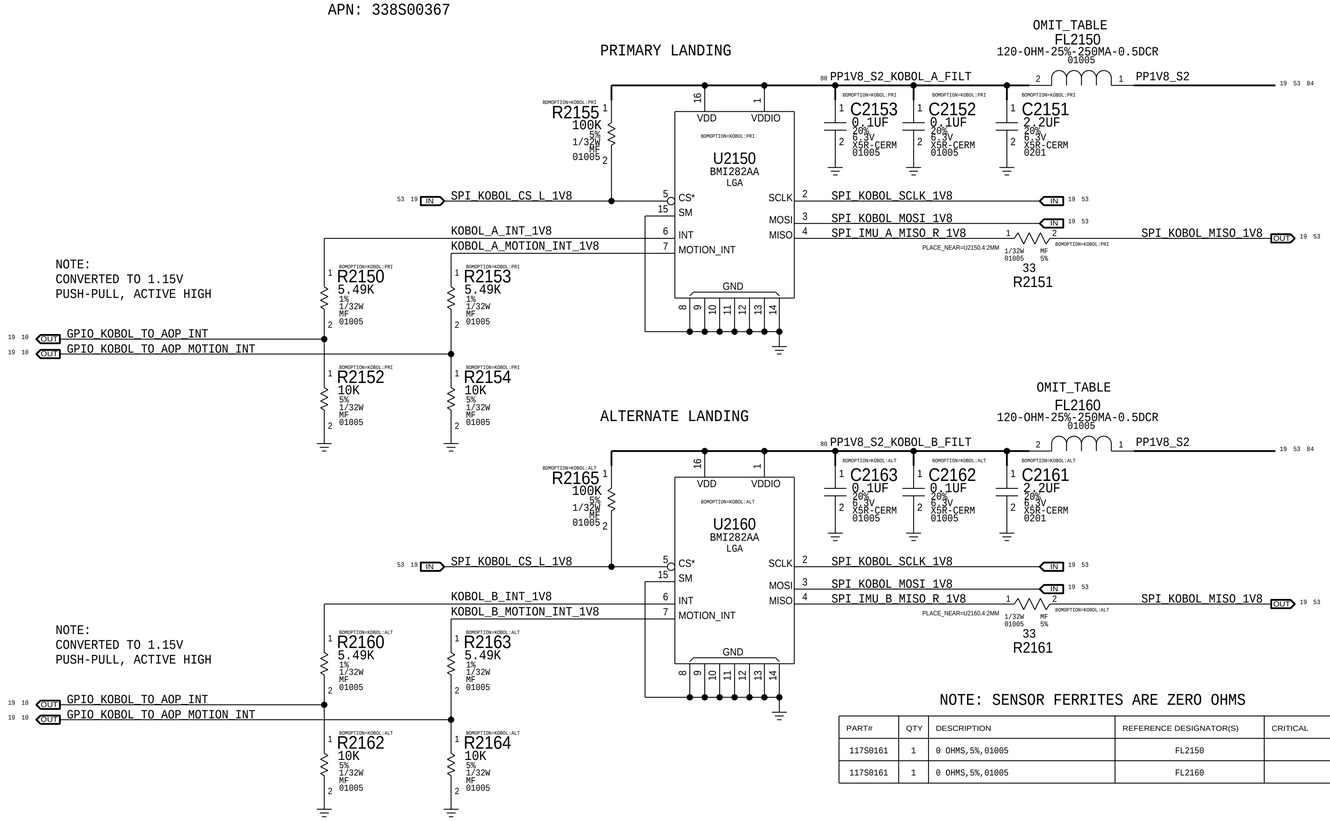
DUAL_NAND
PCIE_NAND2_TO_SOC_TX_C_P → 0.22UF 01005 6.3V C1980 10% CER-X5R (GND_VOID=TRUE, GND_VOID=TRUE) → 85_PCIE_NAND2_TO_SOC_TX_P (OUT 9)
PCIE_NAND2_TO_SOC_TX_C_N → 0.22UF 01005 6.3V C1981 10% CER-X5R (GND_VOID=TRUE, GND_VOID=TRUE) → 85_PCIE_NAND2_TO_SOC_TX_N (OUT 9)
DUAL_NAND

BOM_COST_GROUP=NAND
PAGE TITLE: NAND

SENSORS

KOBOL - ACCEL & GYRO

APN: 338S00367



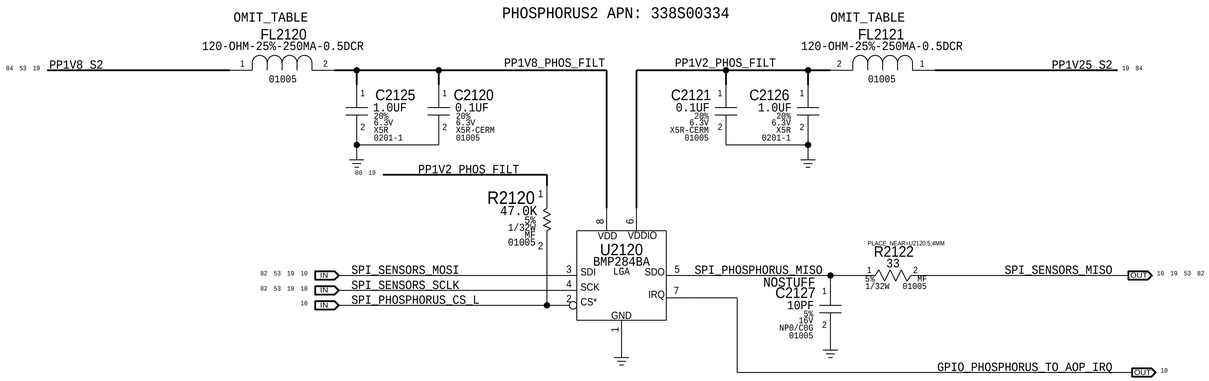
NOTE: SENSOR FERRITES ARE ZERO OHMS

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

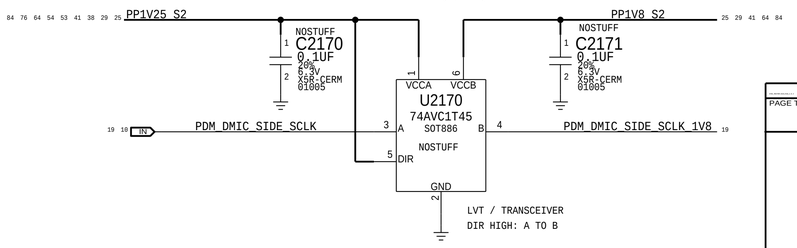
PHOSPHORUS2 APN: 338S00334



SENTRY JUMPER

DMIC CLK VT

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



NOTE: PINOUT UPDATED PER J522 COMPASS_FLEX REV 0.3

COMPASS/DMIC FLEX B2B

MLB SIDE: 516S00176
FLEX SIDE: 516S00175

BOM_COST_GROUP=SENSORS

PAGE TITLE

SENSOR: KOBOL, PHOS2, MOLY

LANAI MASTER

U2200 BCM15957A0 BGA SYM 1 OF 2

PP1V2_S2_TOUCH → R2250 10K 5% 1/32W MF 01005 → GPIO_SOC_TO_LANAI_DISPLAY_BSYNC0

GPIO_SOC_TO_LANAI_DISPLAY_BSYNC0
GPIO_SOC_TO_GRAPE_BSYNC1
GPIO_SOC_TO_DISPLAY_TOUCH_EB
UART_DEBUG_TO_GRAPE_TX
UART_GRAPE_TO_DEBUG_TX
LANAI_GPIO5_FAILSAFE_PU
GPIO_SOC_TO_BT_TO_GRAPE_TS_SYNC
GPIO_TOUCH_TO_BT_SYNC
SPI_SOC_TO_GRAPE_CS_L
UART_GRAPE_TO_AOP_TX
UART_AOP_TO_GRAPE_TX
KONA_S_TO_LANAI_M_RESET_DET_1V8_L
LANAI_M_TO_KONA_S_TTW_1V8
LANAI_M_TO_KONA_S_IPC1_1V8
SPI_LANAI_M_TO_KONA_S_MISO_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_MOSI_1V8
LANAI_M_TO_KONA_S_IPC2_1V8

GPIO_00 … GPIO_19 (E9 … J10) — 1V2 IO / 1V8 IO

SWD_GRAPE_SWDIO ↔ SWD_GRAPE_SWCLK

JTAG_TRST* JTAG_TMS JTAG_TDO JTAG_TDI JTAG_TCK JTAG_SRST* JTAG_RTCK — 1V2 IO

CLK_SOC_TO_GRAPE_24MHZ → R2271 0.00 01005 0% 1/32W MF 5% 16V NP0-C0G → CLK_TOUCH_24MHZ
C2216 33PF 01005 5% 16V NP0-C0G
XW2201 SHORT-8L-0.091MM-SM → CLK_LANAI_M_24MHZ
CLK_KONA_S_24MHZ → XW2202 SHORT-8L-0.091MM-SM → CLK_TOUCH_24MHZ_C
C2217 10PF 5% 16V NP0/C0G 01005
R2211 10K 5% 1/32W MF 01005
LANAI_M_TEST_MODE

XTALP
XTALN
XTAL_O_CLK_EXT

TEST_MODE
RESET*
PSE_SYNC

GPIO_SOC_TO_GRAPE_RESET_L
PSE_SYNC_1V8

PLACE_NEAR=U2200.E15:5MM
R2215 33 5% 01005 1/32W MF
SPI_SOC_TO_GRAPE_MISO → SPI_SOC_TO_GRAPE_MISO_R
R2224 10K 5% 1/32W MF 01005 ← PP1V2_S2_TOUCH

I2C_SDA
I2C_SCL

H_SDO
H_SDI
H_SCLK
H_INT_L
H_CS_L
H_ALT_CS_L — 1V2 IO

SPI_SOC_TO_GRAPE_MOSI
SPI_SOC_TO_GRAPE_SCLK
GPIO_GRAPE_TO_AOP_IRQ_L
SPI_SOC_TO_GRAPE_CS_L

KMSI_STRB_IN
KMSI_STRB_OUT
KMSI_MOSI
KMSI_MISO — 1V8 IO

KMSI_STRB_IN_1V8
KMSI_STRB_OUT_1V8
KMSI_MOSI_1V8
KMSI_MISO_1V8

BOOT_CFG_1 BOOT_CFG_0 — 1V2 IO

LANAI_BOOT1_M
LANAI_BOOT0_M

BOOST_VBAT_EN
BOOST_VBAT
BOOST_NGATE
BOOST_ISENSE
BOOST_FBIN
BOOST_ATEST

NC_LANAI_BOOST_EN
NC_LANAI_BOOST_VBAT
NC_LANAI_BOOST_NGATE
NC_LANAI_BOOST_ISENSE
NC_LANAI_BOOST_FBIN
LANAI_BOOST_ATEST

LANAI_KONA_BGBIAS_1V8 → AFE_IO_BGBIAS 1V8 IO

IFO_CLK_EXT
CORE_PMU_O_AON_TEST_PMU

PAD_I_TOUCH55 … PAD_I_TOUCH00 ↔ GRAPE_RX<0> … GRAPE_TX<47>

PAD_I_SELFCAPEXT → NC
PAD_O_GUARDBUFFER → NC

BOOT OPTION

PP1V2_S2_TOUCH → R2203 10K 5% 1/32W MF 01005 → LANAI_BOOT1_M
LANAI_BOOT0_M → R2202 10K 5% 1/32W MF 01005
PP3V3_GRAPE_FILT → R2214 1.00M 5% 1/32W MF 01005 → LANAI_BOOST_ATEST

DOMBRA BST/LDO

U2280 SN1705004A0 DSBGA

MODE EN ILIM VIN BST SW SW SW VOUT VOUT VOUT FB COMP GND

GPIO_DOMBRA_BST_FPWM_1V8 → MODE
GPIO_KONA_S_DOMBRA_BST_EN_1V8 → EN
DOMBRA_ILIM: R2286 10K 1% 1/32W MF 01005 / R2288 909K 1% 1/32W MF 01005

DOMBRA_BST: C2282 0.1UF 10% 10V X5R 0201 → L2280 2.2UH-20%-2.7A-0.09OHM 2016
DOMBRA_LX: DIDT=TRUE SWITCH_NODE=TRUE
NO_XNET_CONNECTION=1

DOMBRA_FB
DOMBRA_COMP
DOMBRA_COMP_RC: R2280 33K 1% 1/32W MF 01005 / R2283 69.8K 1% 1/32W MF 01005 / C2288 1000PF 10% 6.3V X5R-CERM 01005 NOSTUFF / C2280 1000PF 10% 6.3V X5R-CERM 01005
118S00051

PACK_ISNORE=TRUE
PACK_OPTION=3517,3518
PACK_OPTION=3522,3523
PACK_OPTION=3522,3523
PACK_OPTION=3522,3523

PPVCC_MAIN: C2284 0.1UF 10% 10V X5R-CERM 0201 / C2283 4.7UF 20% 6.3V X5R 0402-1 / C2283 47UF 20% 6.3V CER-X5R 0603 / C2285 47UF 20% 6.3V CER-X5R 0603 / C2286 47UF 20% 6.3V CER-X5R 0603

R2282 909K 1% 1/32W MF 01005
NOSTUFF C22A3 100PF 5% 25V C0G-CERM 01005
C2292 10UF 20% 25V X5R-CERM 0603
C2293 10UF 20% 25V X5R-CERM 0603
C2294 10UF 20% 25V X5R-CERM 0603
C2295 10UF 20% 25V X5R-CERM 0603
C2298 180PF 5% 50V NP0-C0G 0201
C2299 68PF 5% 50V C0G 0201

PP15V0_TOUCH

R2284 75K 1% 1/32W MF 01005 118S0768
DOMBRA_FB_FET: Q2280 NTNS3190NZ XLLGA
GPIO_DOMBRA_BST_FB_CTRL_1V8 → IN 21 80
R2285 47.0K 5% 1/32W MF 01005

SS=380US WHEN FLOATING

ADP7112ACBZ-1.2-R7
U22A1 ADP7112 WLCSP 353S02157
A1 VIN · C1 EN · A2 VOUT · B2 SENSE/ADJ · B1 SS · C2 GND

GPIO13_KONA_LDO_EN_1V8 → EN

NOSTUFF C22A2 220PF 5% 50V C0G 01005
R22A1 90.9K 1% 1/32W MF 01005
R22A2 15.8K 1% 1/32W MF 01005
TOUCH_LDO_ADJ_FET: Q22A0 NTNS3190NZ XLLGA
Q22A0 OFF: VOUT = 1.2V X (1 + 90.9/15.8) = 8.1V
Q22A0 ON: VOUT = 1.2V X (1 + 90.9/(15.8//15.8)) = 15V
TOUCH_LDO_ADJ
R22A3 15.8K 1% 1/32W MF 01005
NOSTUFF C22A1 1000PF 10% 6.3V X5R-CERM 01005
GPIO12_KONA_LDO_ADJ_1V8 → 21 82
R22A4 47.0K 5% 1/32W MF 01005

PP15V0_TOUCH_LDO: 138S00070 C2289 4.7UF 20% 25V X5R 0402-0P1MM / 138S00070 C2290 4.7UF 20% 25V X5R 0402-0P1MM / 138S00070 C2291 4.7UF 20% 25V X5R 0402-0P1MM / 138S00070 C220A 4.7UF 20% 25V X5R 0402-0P1MM

BOM_COST_GROUP=TOUCH

PAGE TITLE: TOUCH: LANAI MASTER

U2200 BCM15957A0 BGA SYM 2 OF 2

CRITICAL
PP15V0_TOUCH_LDO → R2222 3.3 5% 1/16W MF-LF 402 → PP15V0_TOUCH_FILT
C2221 C2222 C2223 C2232 0.47UF 20% 25V CER-X5R 0201

C2233 C2234 C2235 0.47UF 20% 25V CER-X5R 0201
C2236 100PF 5% 25V C0G 0201
C2237 12PF 5% 25V NP0-C0G 0201

PP3V3_S2_TOUCH → L2204 FERR-220-OHM 0402 → PP3V3_GRAPE_FILT
C2238 100PF 5% 25V C0G 0201
C2239 12PF 5% 25V NP0-C0G 0201
C2224 0.1UF 10% 10V X5R-CERM 0201
C2225 0.1UF 10% 10V X5R-CERM 0201
C2231 0.22UF 20% 10V CERM-X5R 0201

PP2V8_LANAI_M_VDDANA
C2278 100PF 5% 25V C0G 0201
C2279 220PF 5% 50V C0G 0201
C2201 C2202 0.1UF 10% 10V X5R-CERM 0201

C2203 C2204 C2205 0.1UF 10% 10V X5R-CERM 0201
C2206 2.2UF 20% 6.3V X5R-CERM 0201

LANAI_M_VDDADC_CAP
C2229 1UF 10% 10V X5R-CERM 0402

L2203 FERR-220-OHM 0402 → PP1V8_GRAPE_XTAL_FILT
C2227 0.1UF 10% 25V X5R 0201
C2228 0.047UF 10% 25V X5R 0201

PP1V8_S2_TOUCH
C2248 100PF 5% 25V C0G 0201
C2249 220PF 5% 50V C0G 0201
C2207 C2208 2.2UF 20% 6.3V X5R-CERM 0201
C2209 0.1UF 10% 6.3V CERM-X5R 0201

R2281 100 1% 1/20W MF 201 → PP1V8_GRAPE_AON_RC
C2281 2.2UF 20% 6.3V X5R-CERM 0201

PP1V2_S2_TOUCH
C2260 100PF 5% 25V C0G 0201
C2261 220PF 5% 50V C0G 0201
C2262 C2263 2.2UF 20% 6.3V X5R-CERM 0201
C2264 2.2UF 20% 6.3V X5R-CERM 0201

PP1V2_S2_TOUCH
C2218 1UF 10% 10V X5R-CERM 0402
C2219 0.1UF 10% 6.3V CERM-X5R 0201

AFE_I_VDDHV15_EXT (B7 C7 D2 F5 F6 G2 G6 H6 J6 L2 L3 M7 P2)
BOOST_VDDA (B15)
OTP_TMON_I_VDDA_3P3_EXT (E12)
AFE_PMU_I_VDDA_3P3_EXT (P14)
AFE_I_VDDANA_3P3_AFE_PMU (A2 A7 C2 E4 F4 H2 K6 L6 M2 N7 N9 N11 P7)
AFE_PMU_O_VDDANA_3P3_PMU (P13)
AFE_PMU_O_AVDD1P2_CAP (P12)
XTAL_PLL_AVDD1P8_I_VDDLDO_1P8_EXT (K14 L14)
KMSI_VDDIO_1P8_EXT (F13)
AFE_PMU_I_VDDLDO_1P8_EXT (N12)
I2C_VDDIO_1P8_EXT (K12)
ASPI_VDDIO_1P2_1P8_EXT (C11)
GPIO_VDDIO_1P2_1P8_EXT (D11)
HSPI_VDDIO_1P2_1P8_EXT (D13)
JTAG_VDDIO_1P2_1P8_EXT (L12)
MISC_VDDIO_1P2_1P8_EXT (B10)
CORE_PMU_I_AON_VDDIO_1P8_3P3_EXT (G12)
CORE_PMU_I_VDDLDO_1P8_EXT (H14)
CORE_PMU_O_VDDCORE_1P2_CAP (H15)

VSS (A8 A15 B0 B13 C8 D8 F8 D12 E8 G8 G11 H8 J8 K8 K13 L8 M8 M9 M10 M11 M12 M13 J15 M14 M15 H13 J14)
PAD_I_AVSS (A1 C3 D7 E5 E7 F1 F7 G5 G7 H5 H7 J1 J7 K5 K7 L7 M3 N10 N13 N14 N15 P1 P9 P11 P15)

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

GPIO_GRAPE_TO_SCORPIUS_TIME_SYNC_1V8
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

SPI_SOC_TO_KONA_S_MISO_1V8
R2315 33 5% 1/32W MF 01005
PLACE_NEAR=U2301.B8:5MM

PP1V8_S2_TOUCH
R2382 10K 5% 1/32W MF 01005
GPIO_KONA_S_TO_SOC_IRQ_1V8_L

PP1V8_S2_TOUCH
C2371 0.1UF 20% 6.3V X5R-CERM 01005

PP1V2_S2_TOUCH
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
GPIO_SOC_TO_KONA_RESET_1V8_L
KONA_S_TEST_MODE

R2305 10K 5% 1/32W MF 01005
CLK_KONA_S_24MHZ
C2301 10PF 5% 50V NP0/C0G 01005

U2301
BCM15900B0K
BGA
SYM 1 OF 2

PP1V8_S2
R230A 10K 5% 1/32W MF 01005
NC

	E11	AUXADC_REF
	G12	AUXBUF_AIO_INPUT_3V
	F13	AUXBUF_AIO_OUTPUT
LANAI_M_TO_KONA_S_IPC1_1V8	D10	GPIO_ADC_00
LANAI_M_TO_KONA_S_IPC2_1V8	D12	GPIO_ADC_01
KONA_S_TO_LANAI_M_RESET_DET_1V8_L	D11	GPIO_ADC_02
LANAI_M_TO_KONA_S_TTW_1V8	F12	GPIO_ADC_03
SPI_LANAI_M_TO_KONA_S_CS_1V8_L	E10	GPIO_ADC_04
GPIO_DOMBRA_BST_FB_CTRL_1V8	F10	GPIO_ADC_05
GPIO_DOMBRA_BST_FPWM_1V8	G10	GPIO_ADC_06
GPIO_KONA_S_DOMBRA_BST_EN_1V8	G9	GPIO_ADC_07
GPIO12_KONA_LDO_ADJ_1V8	F8	GPIO_08
GPIO13_KONA_LDO_EN_1V8	H11	GPIO_09
	J9	GPIO_10
GPIO_GRAPE_TO_TCON_FORCE_PWM_1V8	H9	GPIO_11
TESTPOINT_KONA_S_UART_RX_1V8	F7	GPIO_12
TESTPOINT_KONA_S_UART_TX_1V8	J10	GPIO_13
SPI_LANAI_M_TO_KONA_S_MOSI_1V8	A6	GPIO_14
SPI_LANAI_M_TO_KONA_S_SCLK_1V8	C6	GPIO_15
SPI_LANAI_M_TO_KONA_S_CS_1V8_L	D9	GPIO_16
KONA_S_TO_LANAI_M_INT_1V8_L	E8	GPIO_17
SPI_LANAI_M_TO_KONA_S_MISO_1V8	C9	GPIO_18
SPI_SOC_TO_KONA_S_CS_1V8_L	C5	GPIO_19
GPIO_KONA_S_TO_SOC_IRQ_1V8_L	A7	H_INT*
SPI_SOC_TO_KONA_S_SCLK_1V8	A8	H_SCLK
SPI_SOC_TO_KONA_S_MOSI_1V8	A9	H_SDI
SPI_SOC_TO_KONA_S_MISO_R_1V8	B8	H_SDO
SPI_SOC_TO_KONA_S_CS_1V8_L	B6	H_CS*
	B5	H_ALT_CS*
	A5	I2C_SCL
	A4	I2C_SDA
KMSI_MOSI_1V8	A12	KMSI_MISO
KMSI_MISO_1V8	B13	KMSI_MOSI
KMSI_STRB_OUT_1V8	B12	KMSI_STRB_IN
KMSI_STRB_IN_1V8	A13	KMSI_STRB_OUT
PSE_SYNC_1V8	C14	PSE_SYNC
	B14	BOOST_ATEST
	A15	BOOST_FBIN
	B15	BOOST_ISENSE
	D13	BOOST_NGATE
	C15	BOOST_VBAT
	D14	BOOST_VBAT_EN
	E9	JTAG_RTCK
TPT_SWD_KONA_SWCLK_1V8	J7	JTAG_TCK
TPT_SWD_KONA_SWDIO_1V8	E7	JTAG_TMS
	G7	JTAG_TDI
	H8	JTAG_TDO
	G6	JTAG_TRST*
	C7	JTAG_SRST*
	H7	RESET*
	K9	TEST_MODE
KONA_BOOT0_S_1V8	K7	BOOT_CFG_0
KONA_BOOT1_S_1V8	J8	BOOT_CFG_1
LANAI_KONA_BGBIAS_1V8	R5	AFE_IO_BGBIAS
	J15	XTALN
	K15	XTALP
	J13	XTAL_O_CLK_EXT
	B4	IFO_CLK_EXT

PAD_I_TOUCH0	J5	GRAPE_RX<33>
PAD_I_TOUCH1	H3	GRAPE_RX<62>
PAD_I_TOUCH2	J2	GRAPE_RX<61>
PAD_I_TOUCH3	J3	GRAPE_RX<60>
PAD_I_TOUCH4	J4	GRAPE_RX<59>
PAD_I_TOUCH5	K5	GRAPE_RX<58>
PAD_I_TOUCH6	K4	GRAPE_RX<57>
PAD_I_TOUCH7	K3	GRAPE_RX<56>
PAD_I_TOUCH8	M5	GRAPE_RX<55>
PAD_I_TOUCH9	L5	GRAPE_RX<54>
PAD_I_TOUCH10	M1	GRAPE_RX<53>
PAD_I_TOUCH11	K1	GRAPE_RX<52>
PAD_I_TOUCH12	L6	GRAPE_RX<51>
PAD_I_TOUCH13	N1	GRAPE_RX<50>
PAD_I_TOUCH14	P6	GRAPE_RX<49>
PAD_I_TOUCH15	N6	GRAPE_RX<48>
PAD_I_TOUCH16	R7	GRAPE_RX<47>
PAD_I_TOUCH17	N7	GRAPE_RX<46>
PAD_I_TOUCH18	R8	GRAPE_RX<45>
PAD_I_TOUCH19	M6	GRAPE_RX<44>
PAD_I_TOUCH20	P7	GRAPE_RX<43>
PAD_I_TOUCH21	M7	GRAPE_RX<42>
PAD_I_TOUCH22	N9	GRAPE_RX<41>
PAD_I_TOUCH23	P9	GRAPE_RX<40>
PAD_I_TOUCH24	M9	GRAPE_RX<39>
PAD_I_TOUCH25	R9	GRAPE_RX<38>
PAD_I_TOUCH26	N10	GRAPE_RX<37>
PAD_I_TOUCH27	M10	GRAPE_RX<36>
PAD_I_TOUCH28	R10	GRAPE_RX<35>
PAD_I_TOUCH29	P10	GRAPE_RX<34>
PAD_I_TOUCH30	D2	GRAPE_TX<30>
PAD_I_TOUCH31	D1	GRAPE_TX<31>
PAD_I_TOUCH32	C2	VCOM_LCD_TO_GRAPE_R_C
PAD_I_TOUCH33	C1	NC_KONA_TOUCH33
PAD_I_TOUCH34	B1	GRAPE_RX<63>
PAD_I_TOUCH35	P3	GRAPE_RX<32>
PAD_I_TOUCH36	N2	GRAPE_RX<31>
PAD_I_TOUCH37	P1	GRAPE_RX<30>
PAD_I_TOUCH38	P2	GRAPE_RX<29>
PAD_I_TOUCH39	P4	GRAPE_RX<28>
PAD_I_TOUCH40	G3	GRAPE_TX<29>
PAD_I_TOUCH41	D4	GRAPE_TX<28>
PAD_I_TOUCH42	D3	GRAPE_TX<27>
PAD_I_TOUCH43	G4	GRAPE_TX<26>
PAD_I_TOUCH44	E4	GRAPE_TX<25>
PAD_I_TOUCH45	E3	GRAPE_TX<24>
PAD_I_TOUCH46	F1	GRAPE_TX<23>
PAD_I_TOUCH47	F4	GRAPE_TX<22>
PAD_I_TOUCH48	F3	GRAPE_TX<21>
PAD_I_TOUCH49	H5	GRAPE_TX<20>
PAD_I_TOUCH50	F2	GRAPE_TX<19>
PAD_I_TOUCH51	G2	GRAPE_TX<18>
PAD_I_TOUCH52	G1	GRAPE_TX<17>
PAD_I_TOUCH53	H1	GRAPE_TX<16>
PAD_I_TOUCH54	P11	GRAPE_TX<15>
PAD_I_TOUCH55	N15	GRAPE_TX<14>
PAD_I_TOUCH56	N12	GRAPE_TX<13>
PAD_I_TOUCH57	P13	GRAPE_TX<12>
PAD_I_TOUCH58	P12	GRAPE_TX<11>
PAD_I_TOUCH59	R12	GRAPE_TX<10>
PAD_I_TOUCH60	N13	GRAPE_TX<9>
PAD_I_TOUCH61	M12	GRAPE_TX<8>
PAD_I_TOUCH62	R13	GRAPE_TX<7>
PAD_I_TOUCH63	L13	GRAPE_TX<6>
PAD_I_TOUCH64	P14	GRAPE_TX<5>
PAD_I_TOUCH65	M14	GRAPE_TX<4>
PAD_I_TOUCH66	M13	GRAPE_TX<3>
PAD_I_TOUCH67	N14	GRAPE_TX<2>
PAD_I_TOUCH68	M15	GRAPE_TX<1>
PAD_I_TOUCH69	R14	GRAPE_TX<0>
PAD_I_SELFCAPEXT	N5	NC
PAD_O_GUARDBUFFER	N4	NC
CORE_PMU_O_AON_TEST_PMU	C11	NC

U2301
BCM15900B0K
BGA
SYM 2 OF 2

PP15V0_TOUCH_FILT
C2311 0.47UF 20% 25V CER-X5R 0201
C2312 0.47UF 20% 25V CER-X5R 0201
C2313 0.47UF 20% 25V CER-X5R 0201
C2317 0.47UF 20% 25V CER-X5R 0201
C2333 0.47UF 20% 25V CER-X5R 0201
C2334 0.47UF 20% 25V CER-X5R 0201
C2335 0.47UF 20% 25V CER-X5R 0201

PP3V3_GRAPE_FILT
C2315 0.1UF 10% 16V X5R-CERM 0201
C2316 0.1UF 10% 16V X5R-CERM 0201
C2320 0.22UF 20% 6.3V CERM-X5R 0201

PP2V8_KONA_S_VDDANA
C2378 100PF 5% 25V C0G 0201
C2379 12PF 5% 25V NP0-C0G 0201
C2302 0.1UF 10% 16V X5R-CERM 0201
C2303 0.1UF 10% 16V X5R-CERM 0201
C2304 0.1UF 10% 16V X5R-CERM 0201
C2305 0.1UF 10% 16V X5R-CERM 0201
C2306 0.1UF 10% 16V X5R-CERM 0201
C2307 2.2UF 20% 6.3V X5R-CERM 0201

KONA_S_VDDADC_CAP
C2318 1UF 10% 16V X5R-CERM 0402

PP1V8_GRAPE_XTAL_FILT
C2321 0.1UF 10% 25V X5R 0201
C2322 0.047UF 10% 25V X5R 0201

PP1V8_S2_TOUCH
C2308 0.1UF 10% 6.3V CERM-X5R 0201
C2309 0.1UF 10% 6.3V CERM-X5R 0201
C2310 0.1UF 10% 6.3V CERM-X5R 0201

PP1V8_GRAPE_AON_RC
PP1V2_S2_TOUCH
C2325 1UF 10% 10V X5R-CERM 0402
C2314 0.1UF 10% 6.3V CERM-X5R 0201

PP15V0_TOUCH_FILT	B3	AFE_I_VDDHV15_EXT
	C4	AFE_I_VDDHV15_EXT
	L7	AFE_I_VDDHV15_EXT
	E5	AFE_I_VDDHV15_EXT
	M11	AFE_I_VDDHV15_EXT
	H2	AFE_I_VDDHV15_EXT
	K6	AFE_I_VDDHV15_EXT
	L1	AFE_I_VDDHV15_EXT
	L9	AFE_I_VDDHV15_EXT
	M3	AFE_I_VDDHV15_EXT
	E2	AFE_I_VDDHV15_EXT
	N3	AFE_I_VDDHV15_EXT
	L12	AFE_I_VDDHV15_EXT
	G5	AFE_I_VDDHV15_EXT
	R15	AFE_I_VDDHV15_EXT
PP3V3_GRAPE_FILT	E13	BOOST_VDDA
	C12	OTP_TMON_I_VDDA_3P3_EXT
	R1	AFE_PMU_I_VDDA_3P3_EXT
	G13	AUXBUF_PMU_I_VDDA_3P3_EXT
	G14	AUXBUF_PMU_I_VDDHV_AUX_EXT
NC	G15	AUXBUF_PMU_O_VDD_AUX_CAP
PP2V8_KONA_S_VDDANA	C3	AFE_I_VDDANA_3P3_AFE_PMU
	D5	AFE_I_VDDANA_3P3_AFE_PMU
	H6	AFE_I_VDDANA_3P3_AFE_PMU
	L4	AFE_I_VDDANA_3P3_AFE_PMU
	L3	AFE_I_VDDANA_3P3_AFE_PMU
	L8	AFE_I_VDDANA_3P3_AFE_PMU
	M2	AFE_I_VDDANA_3P3_AFE_PMU
	R11	AFE_I_VDDANA_3P3_AFE_PMU
	M8	AFE_I_VDDANA_3P3_AFE_PMU
	N8	AFE_I_VDDANA_3P3_AFE_PMU
	J6	AFE_I_VDDANA_3P3_AFE_PMU
	L11	AFE_I_VDDANA_3P3_AFE_PMU
	L14	AFE_I_VDDANA_3P3_AFE_PMU
	R6	AFE_I_VDDANA_3P3_AFE_PMU
	R2	AFE_PMU_O_VDDANA_3P3_PMU
KONA_S_VDDADC_CAP	R4	AFE_PMU_O_AVDD1P2_CAP
PP1V8_GRAPE_XTAL_FILT	J14	XTAL_PLL_AVDD1P8_I_VDDLDO_1P8_EXT
PP1V8_S2_TOUCH	F11	AUXADC_AVDDC_I_VDDIO_1P8_3P3_EXT
	E12	AUXADC_AVDD_I_VDDIO_1P8_3P3_EXT
	R3	AFE_PMU_I_VDDLDO_1P8_EXT
	B9	AON_PAD_I_VDDIO_1P8_3P3_EXT
	D7	AON_PAD_I_VDDIO_1P8_3P3_EXT
	E6	AON_PAD_I_VDDIO_1P8_3P3_EXT
	A2	I2C_PAD_I_VDDIO_1P8_3P3_EXT
	C13	CORE_PAD_I_VDDIO_1P8_3P3_EXT
	C8	CORE_PAD_I_VDDIO_1P8_3P3_EXT
PP1V8_GRAPE_AON_RC	B11	CORE_PMU_I_AON_VDDIO_1P8_3P3_EXT
	A10	CORE_PMU_I_VDDLDO_1P8_EXT
PP1V2_S2_TOUCH	A11	CORE_PMU_O_VDDCORE_1P2_CAP
AUXBUF_AVSS	F14	
AUXADC_AVSS	C10	
VSS	D6	
VSS	D8	
VSS	F6	
VSS	F9	
VSS	G8	
VSS	H10	
VSS	K8	
VSS	A14	
VSS	E14	
VSS	A1	
VSS	A3	
VSS	B7	
VSS	H12	
VSS	H13	
VSS	K11	
VSS	K12	
VSS	K13	
VSS	D15	
VSS	E15	
VSS	F15	
VSS	G11	
VSS	J11	
VSS	J12	
VSS	K10	
XTAL_AVSS	H15	
XTAL_AVSS	K14	
CORE_PMU_I_AVSS	B10	
AUXBUF_PMU_I_AVSS	H14	
PAD_I_AVSS	B2	
PAD_I_AVSS	E1	
PAD_I_AVSS	J1	
PAD_I_AVSS	N11	
PAD_I_AVSS	L2	
PAD_I_AVSS	P15	
PAD_I_AVSS	K2	
PAD_I_AVSS	L10	
PAD_I_AVSS	L15	
PAD_I_AVSS	M4	
PAD_I_AVSS	F5	
PAD_I_AVSS	P5	
PAD_I_AVSS	P8	
PAD_I_AVSS	H4	

REMOVED 1.2V EXT BUCK, USING LDO14

PGGOD SIGNAL GOES TO PMU ADC INPUT

PP15V0_TOUCH_LDO
118S00136
R23A1 60.4K 1% 1/32W MF 01005
DOMBRA_LDO_8V_PGOOD_FET
R23A2 10K 1% 1/32W MF 01005
C23A0 100PF 5% 25V C0G-CERM 01005

BOM_COST_GROUP=TOUCH

PAGE TITLE
TOUCH: KONA SLAVE

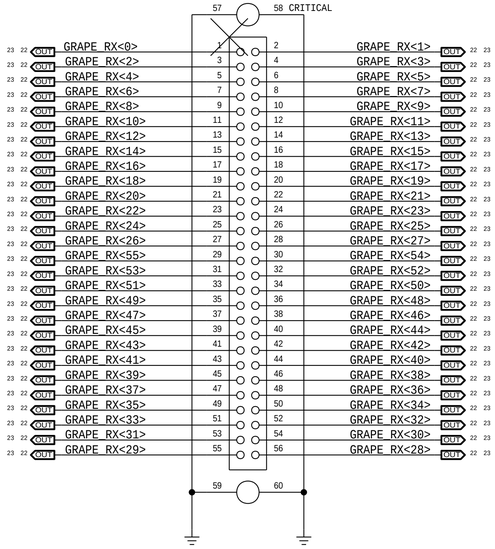
J517 TOUCH FLEX CONNECTOR (SENSE)

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

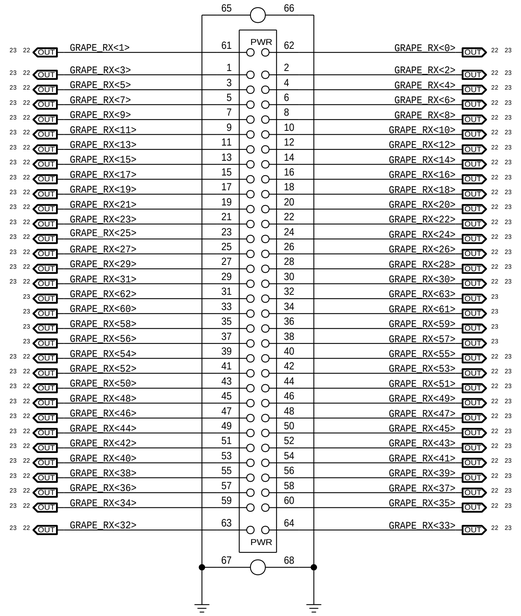


J522 TOUCH FLEX CONNECTOR (SENSE)

FLEX: 516S00375
MLB: 516S00374

PACK_OPTION=J522,J523

J2400
AA37D-S060VA2
F-ST-SM

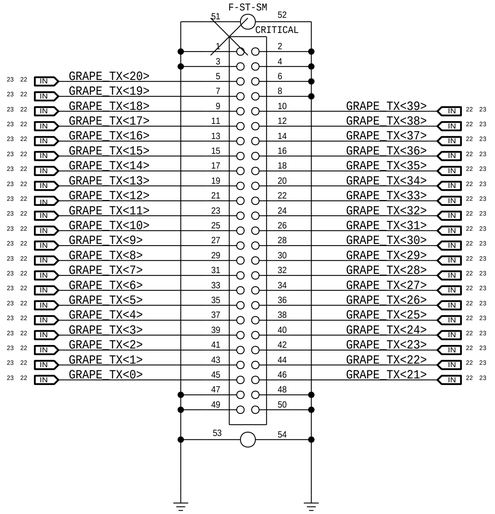


J517 TOUCH FLEX CONNECTOR (DRIVE)

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

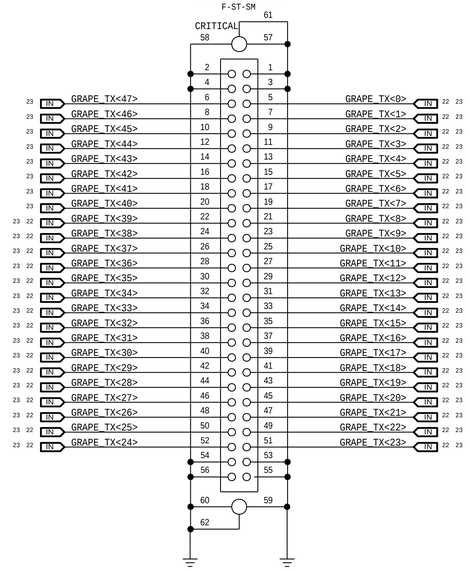


J522 TOUCH FLEX CONNECTOR (DRIVE)

FLEX: 516S00380
MLB: 516S00379

PACK_OPTION=J522,J523

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



BOM_COST_GROUP=TOUCH

PAGE TITLE

TOUCH: GRAPE CONN

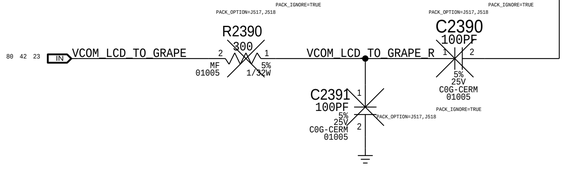
J517 LANAI RX/TX ALIAS

GRAPE_RX<0> … GRAPE_RX<27>
NC_LANAI_TOUCH27 … NC_LANAI_TOUCH16
GRAPE_TX<32> … GRAPE_TX<47>

J517 KONA RX/TX ALIAS

GRAPE_RX<33> … GRAPE_RX<0>
GRAPE_RX<55> … GRAPE_RX<28>
NC_KONA_TOUCH28 … NC_KONA_TOUCH69
GRAPE_TX<0> … GRAPE_TX<19>

VCOM_LCD_TO_GRAPE_R_C
NC_KONA_TOUCH33



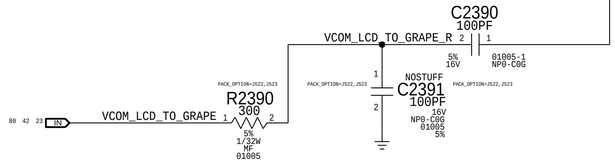
J522 LANAI RX/TX ALIAS

GRAPE_RX<0> … GRAPE_RX<27>
NC_LANAI_TOUCH27 … NC_LANAI_TOUCH16
GRAPE_TX<32> … GRAPE_TX<47>

J522 KONA RX/TX ALIAS

GRAPE_RX<33> … GRAPE_RX<0>
GRAPE_TX<0> … GRAPE_TX<19>

VCOM_LCD_TO_GRAPE_R_C
NC_KONA_TOUCH33



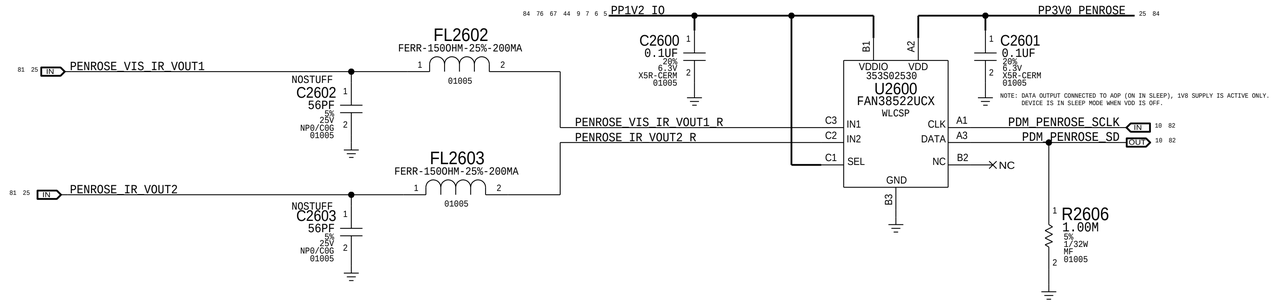
BOM_COST_GROUP=TOUCH

SYNC_MASTER=J518_MLB_4.0.2
SYNC_DATE=08/20/2020

PAGE TITLE

TOUCH: SENSE & DRIVE ALIAS

PENROSE ADC (FAN)



BOM_COST_GROUP=CAMERA

PAGE TITLE

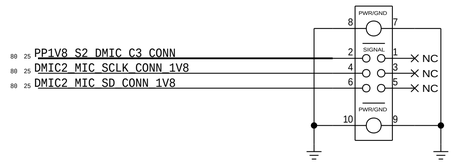
CAMERA: PENROSE ADC

PINOUT PER HYDRA STROBE FLEX REV 0.6

BACK DMIC FLEX

MLB APN: 516S00186
FLEX APN: 516S00185

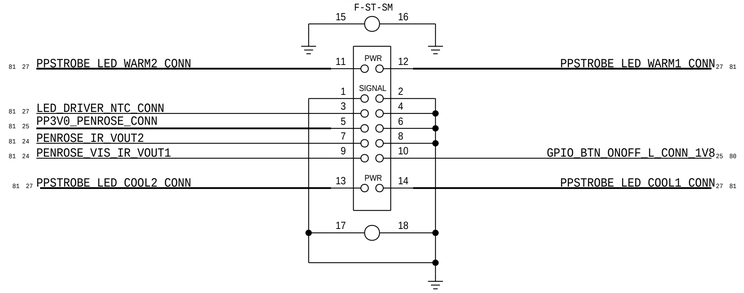
516S00186
J2720
BM28P0.6-6DS/2-0.35V
F-ST-SM



HYDRA STROBE FLEX B2B

MLB APN: 516S00267
FLEX APN: 516S00268

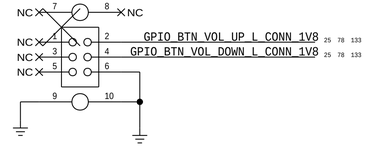
516S00267
J2710
AA36D-S010VA1
F-ST-SM



J51X VOLUME BUTTON FLEX B2B

MLB APN: 516S00321
FLEX APN: 516S00322

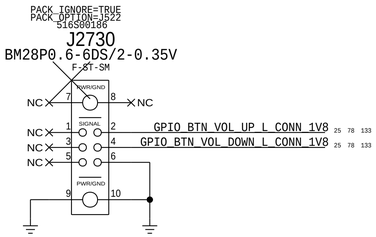
PACK_IGNORE=TRUE
PACK_OPTION=1517
516S00321
J2730
5054130610
F-ST-SM



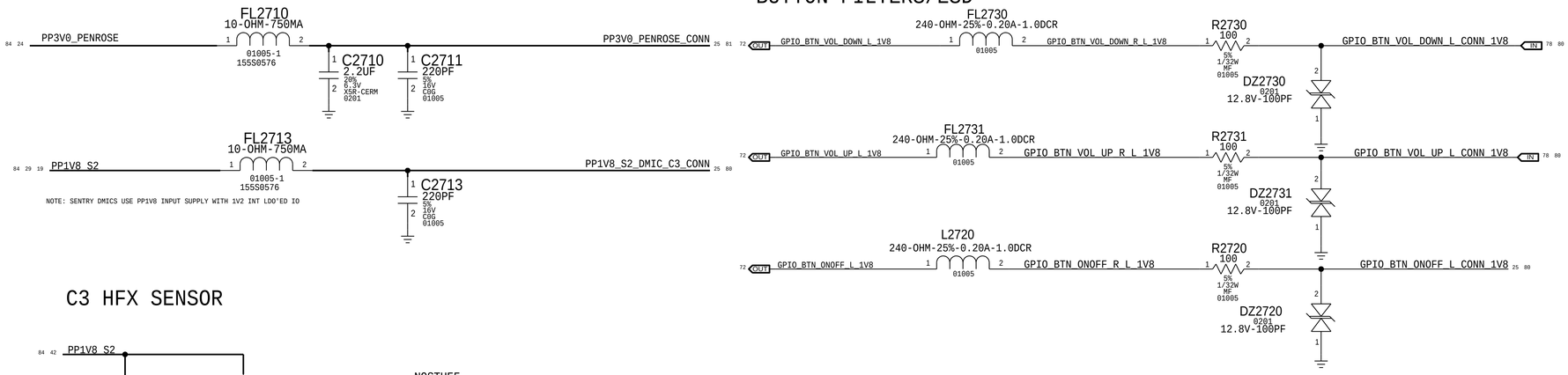
J52X VOLUME BUTTON FLEX B2B

MLB APN: 516S00186
FLEX APN: 516S00185

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



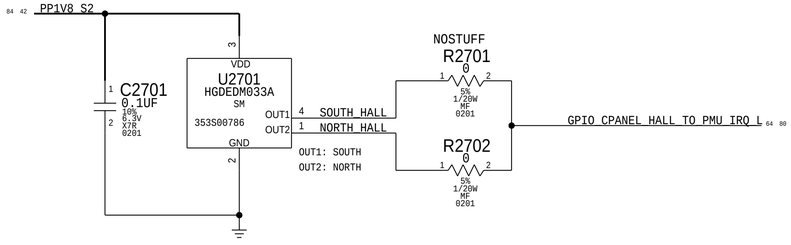
BUTTON FILTERS/ESD



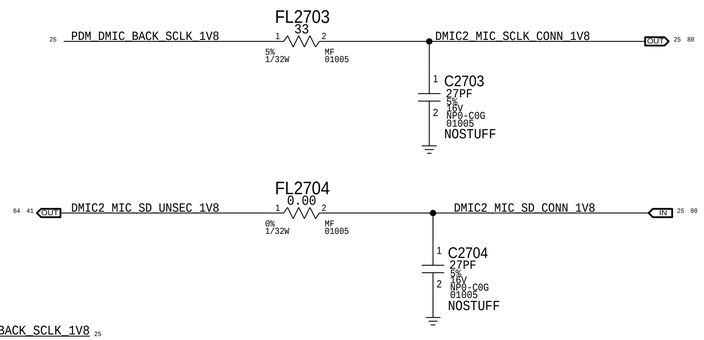
RFFE FILTERS

NOTE: RFFE FILTERS NOW ON BB PAGES

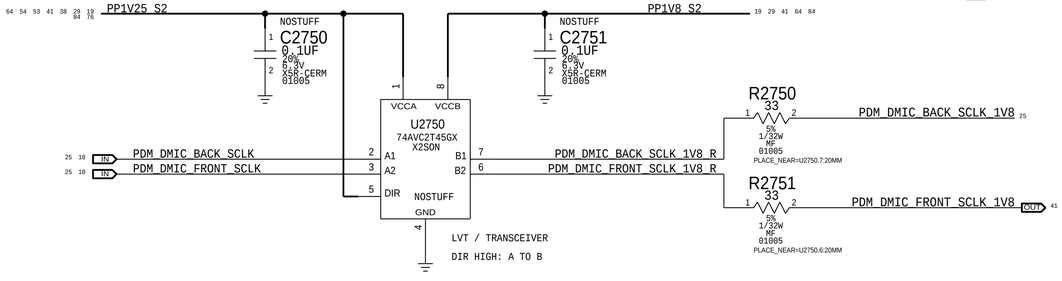
C3 HFX SENSOR



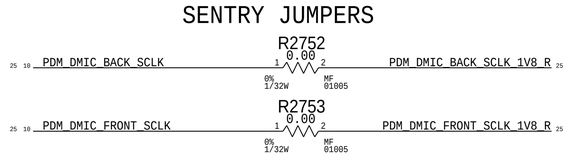
MIC#4 FILTERS



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	

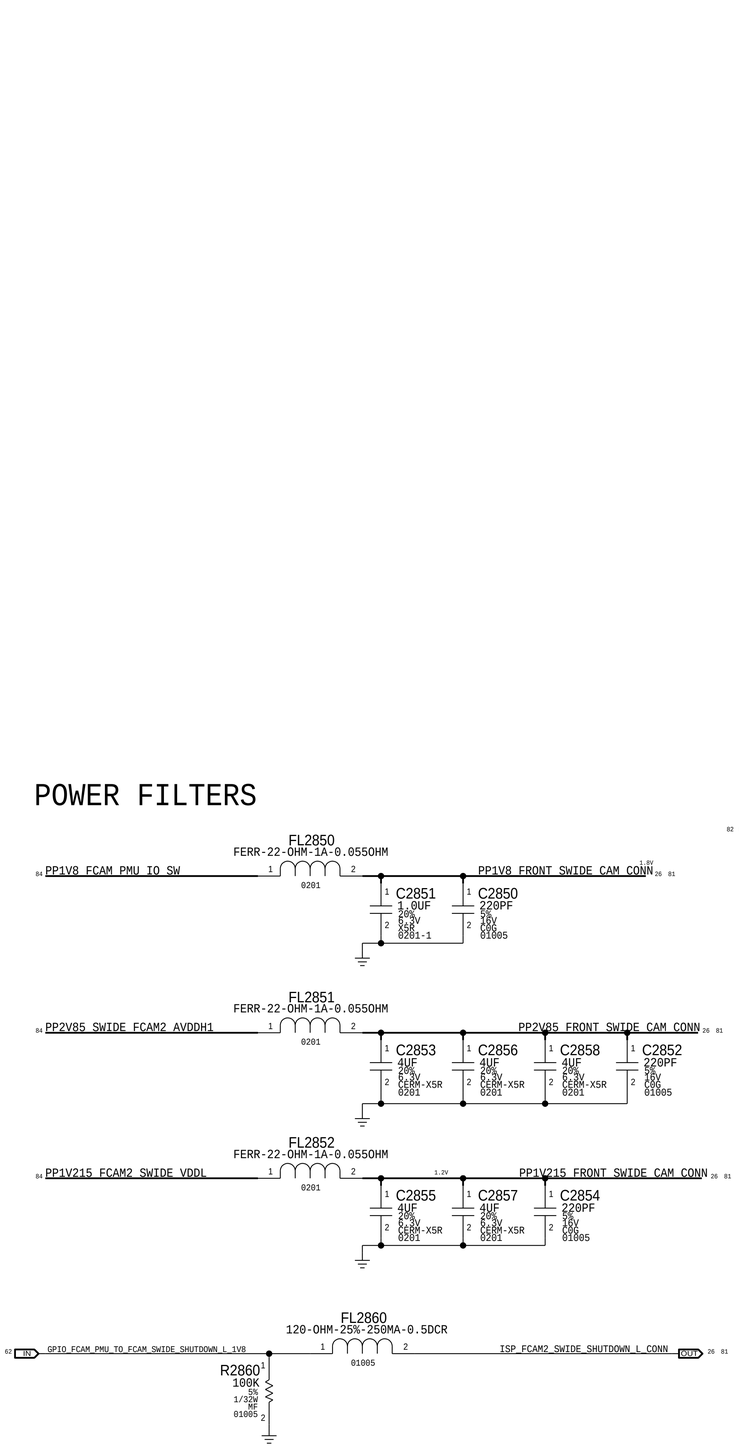
BOM_COST_GROUP=CAMERA

PAGE TITLE

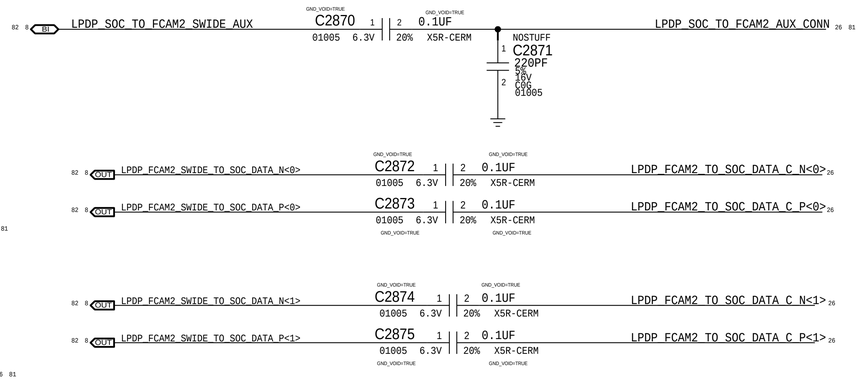
CAMERA: B2B STROBE & MISC

FRONT SWIDE CAMERA

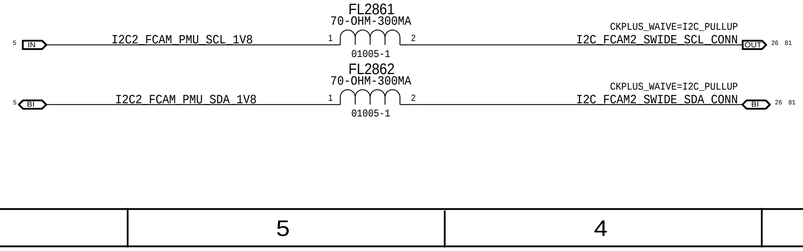
POWER FILTERS



LPDP AC COUPLING CAPS

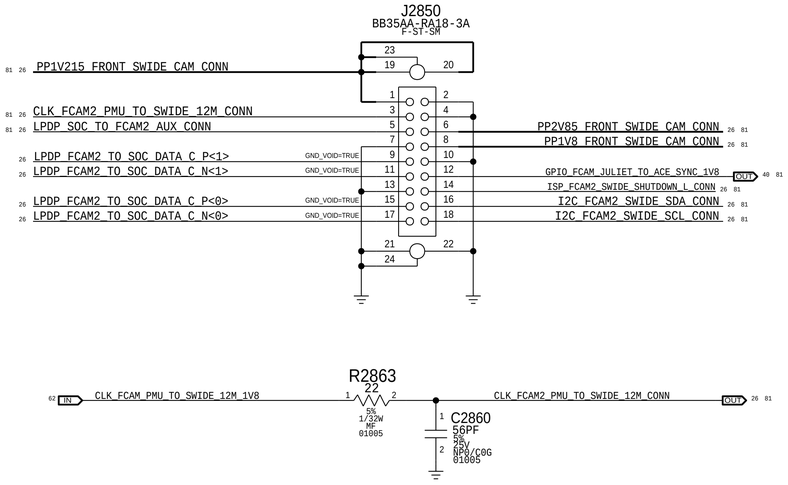


IO FILTERS



FRONT SWIDE CAM CONN

FLEX SIDE: 516S00396
MLB SIDE: 516S00395



BOM_COST_GROUP=CAMERA

PAGE TITLE

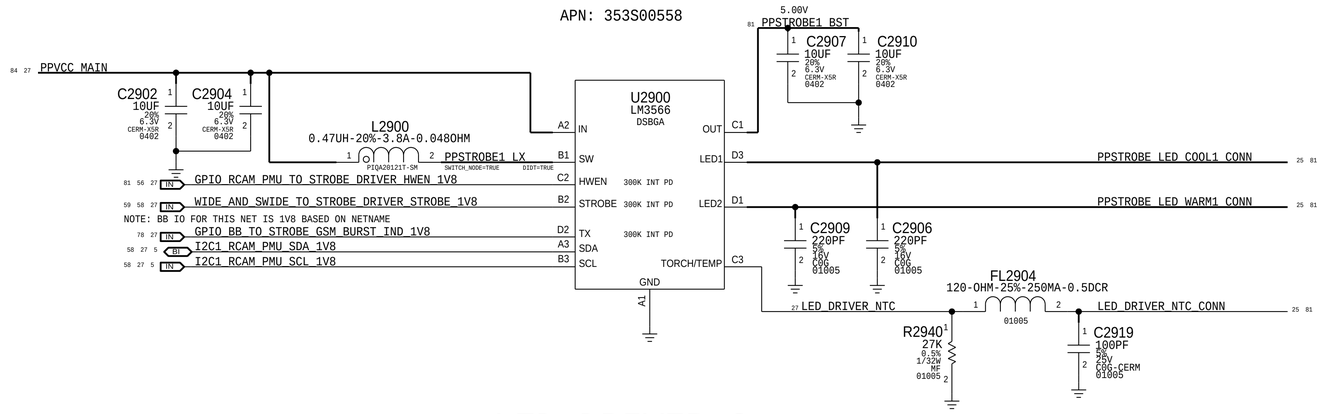
CAMERA: B2B FRONT

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

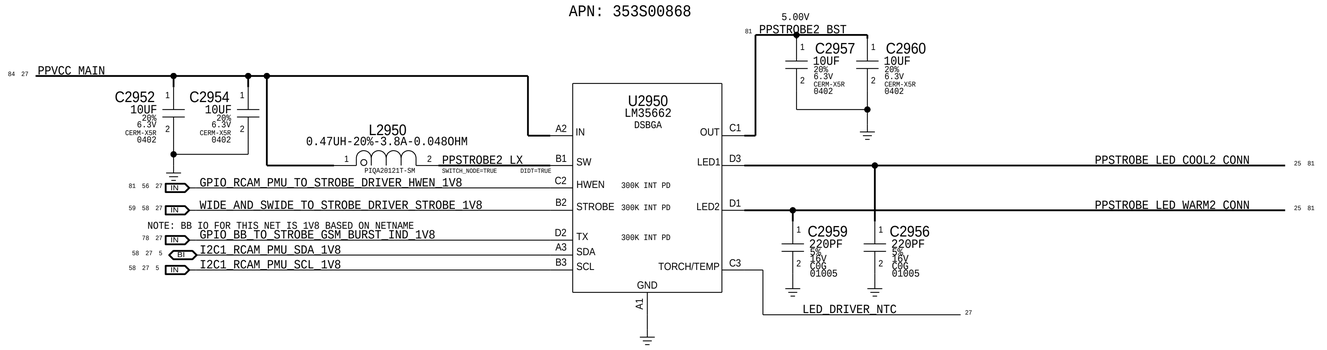
LED DRIVER 1

APN: 353S00558



LED DRIVER 2

APN: 353S00868



BOM_COST_GROUP=STROBE

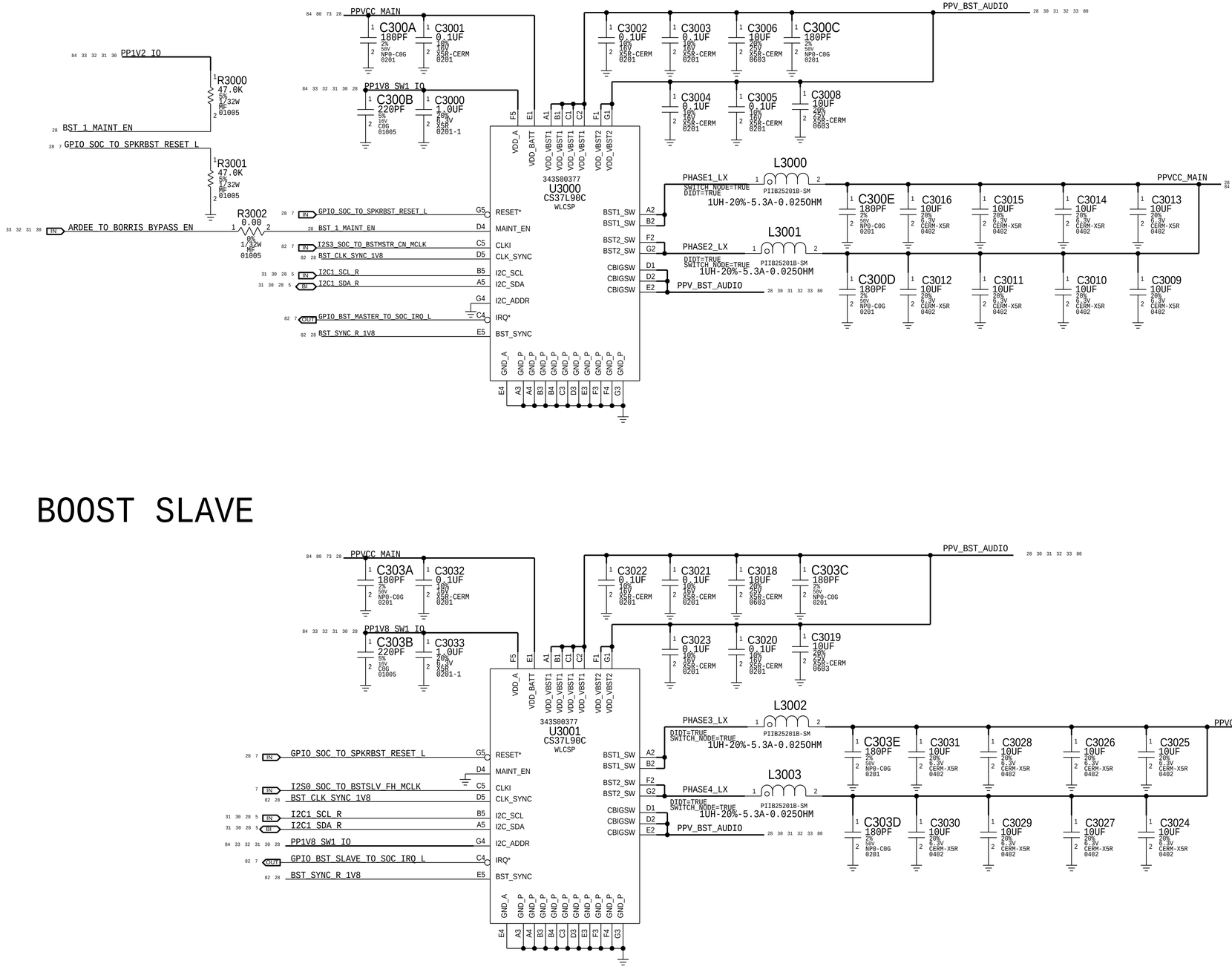
SYNC_MASTER=2S18_MLB_4.0.2 SYNC_DATE=08/20/2020

PAGE TITLE

CAMERA: STROBE

BORRIS BOOST

BOOST MASTER

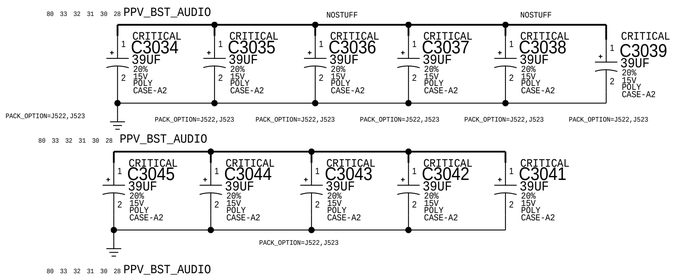


BOOST SLAVE

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

SYNC_MASTER=J518_M_R_4_0_2 SYNC_DATE=08/20/2020

PAGE TITLE

AUDIO: BORRIS BOOST

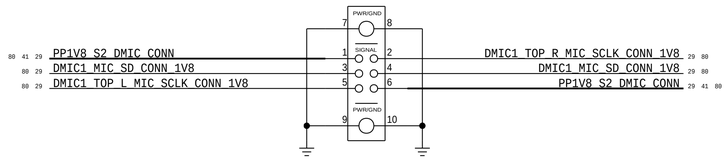
DMIC CONN AND FILTERS

PINOUT PER MIC FH FLEX REV 0.3

MIC FLEX B2B

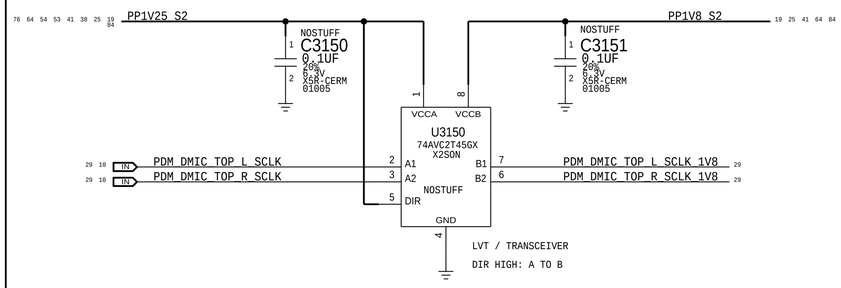
MLB APN: 516S00186
FLEX APN: 516S00185

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

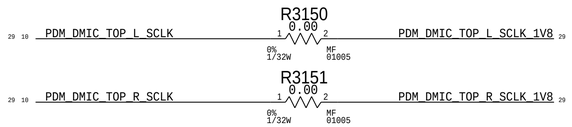


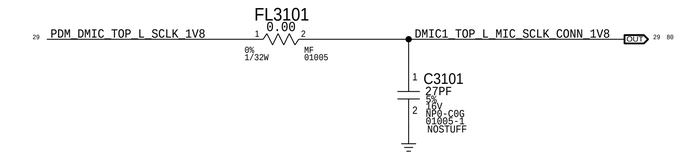
ROUTING	BUS	SELECT	LOCATION	DATA ASSERTS ON	DATA LATCHED ON
MIC#1	PDM0	HIGH	LEFT	CLK RISING EDGE	CLK FALLING EDGE
MIC#2	PDM0	LOW	RIGHT	CLK FALLING EDGE	CLK RISING EDGE
MIC#3	PDM1	HIGH	FRONT(ON TM)	CLK RISING EDGE	CLK FALLING EDGE
MIC#4	PDM1	LOW	REAR(C3)	CLK FALLING EDGE	CLK RISING EDGE
MIC#5	PDM2	HIGH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

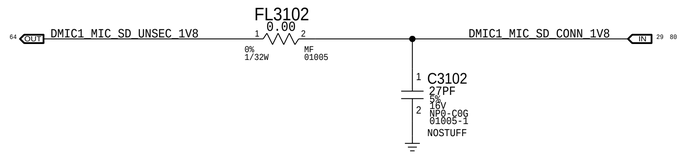
DMIC2 FILTERS

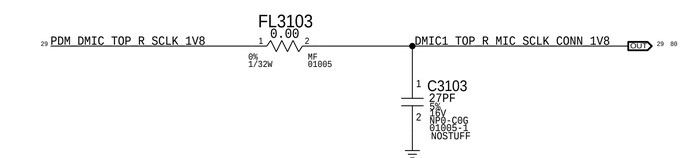


SENTRY JUMPERS









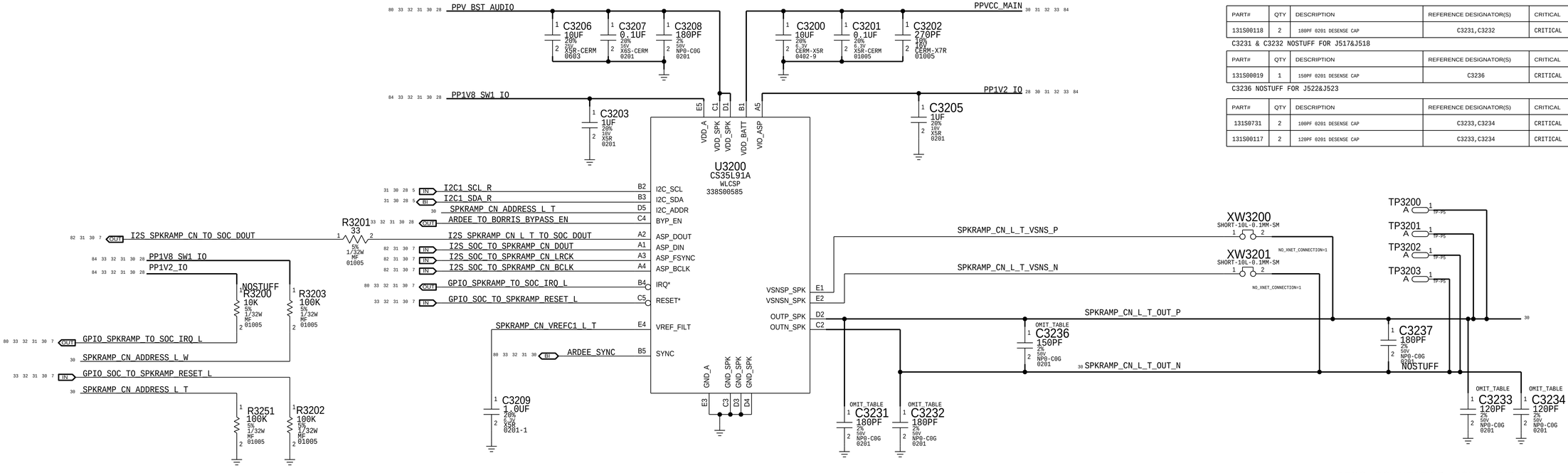
NOTE: SENTRY DMICS USE PP1V8 INPUT SUPPLY WITH 1V2 INT LDO'ED IO

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

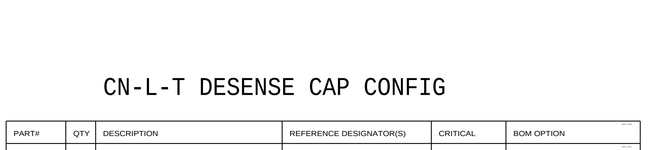
C3231 & C3232 NOSTUFF FOR J517&J518

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

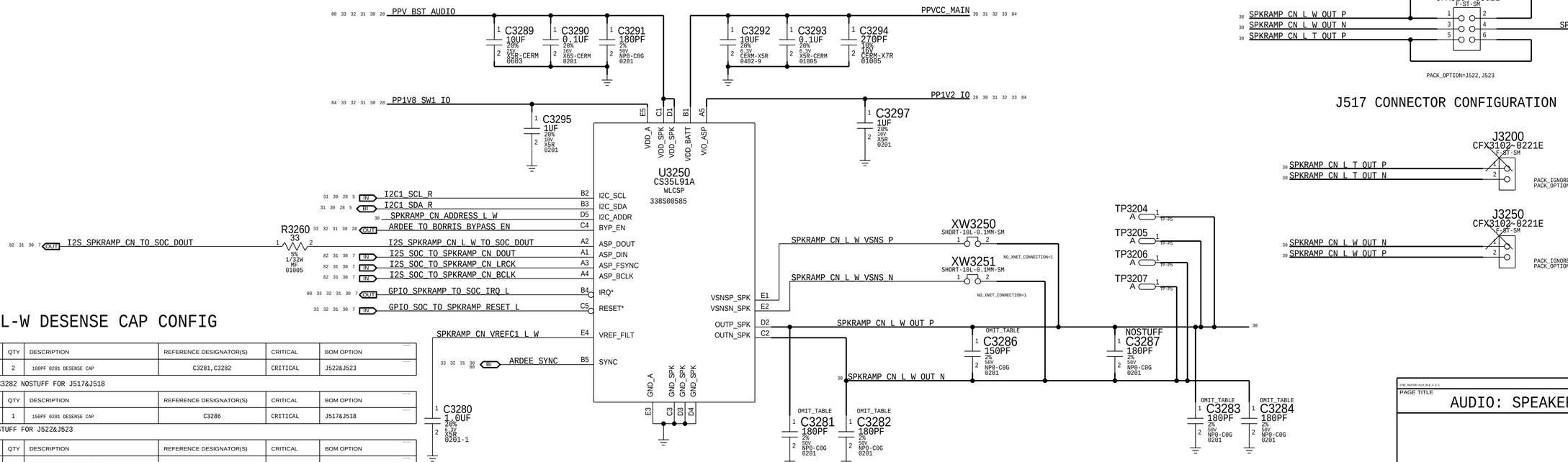
C3236 NOSTUFF FOR J522&J523

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

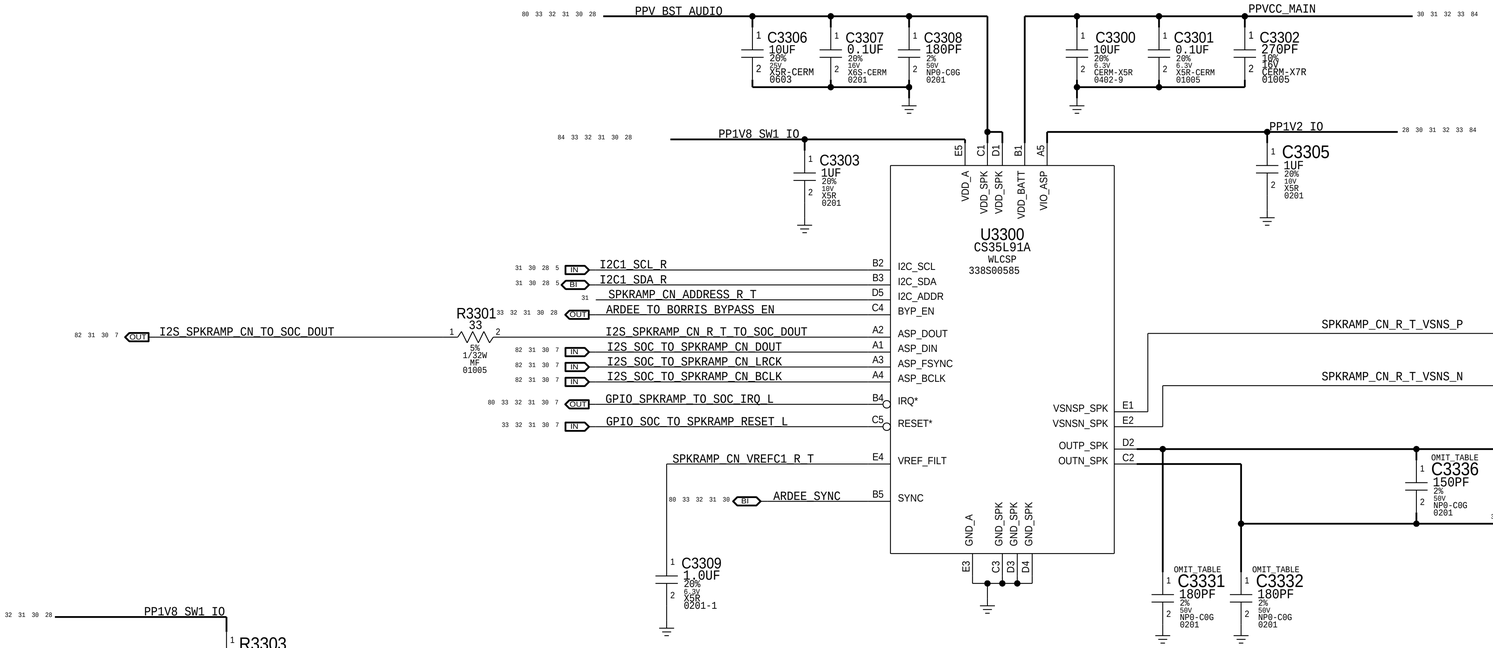
J517 CONNECTOR CONFIGURATION

BOM_COST_GROUP=AUDIO

PAGE TITLE

AUDIO: SPEAKER AMPS (CNL)

CN R TWEETER SPEAKER AMP



CN-R-T DESENSE CAP CONFIG

PART#	QTY	DESCRIPTION	REFERENCE DESIGNATOR(S)	CRITICAL	BOM OPTION
131S00118	2	180PF 0201 DESENSE CAP	C3331,C3332	CRITICAL	J522&J523

C3331 & C3332 NOSTUFF FOR J517&J518

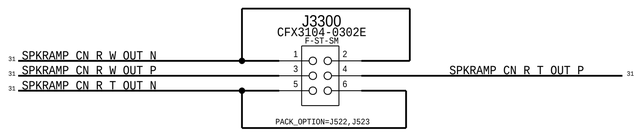
PART#	QTY	DESCRIPTION	REFERENCE DESIGNATOR(S)	CRITICAL	BOM OPTION
131S00019	1	150PF 0201 DESENSE CAP	C3336	CRITICAL	J517&J518

C3236 NOSTUFF FOR J522&J523

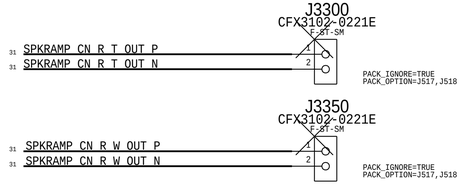
PART#	QTY	DESCRIPTION	REFERENCE DESIGNATOR(S)	CRITICAL	BOM OPTION
131S00118	2	180PF 0201 DESENSE CAP	C3333,C3334	CRITICAL	J517&J518

C3333 & C3334 NOSTUFF FOR J522&J523

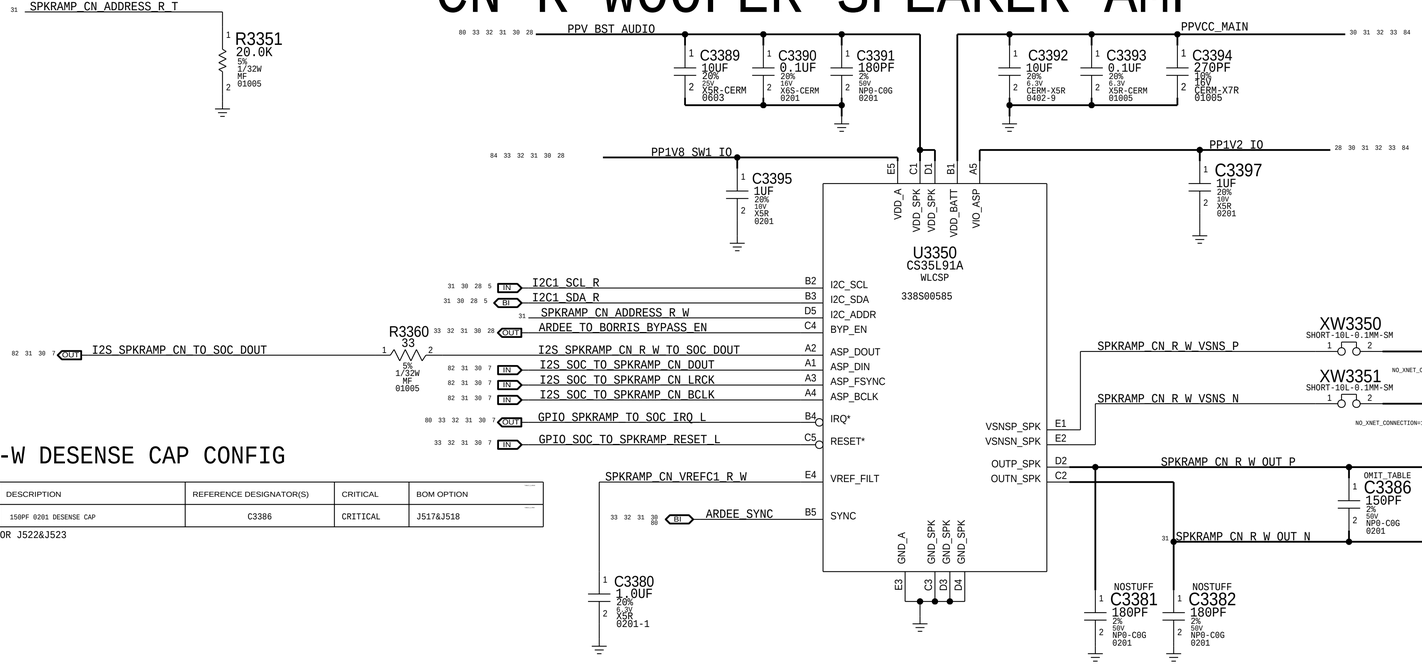
J522 CONNECTOR CONFIGURATION



J517 CONNECTOR CONFIGURATION



CN R WOOFER SPEAKER AMP



CN-R-W DESENSE CAP CONFIG

PART#	QTY	DESCRIPTION	REFERENCE DESIGNATOR(S)	CRITICAL	BOM OPTION
131S00019	1	150PF 0201 DESENSE CAP	C3386	CRITICAL	J517&J518

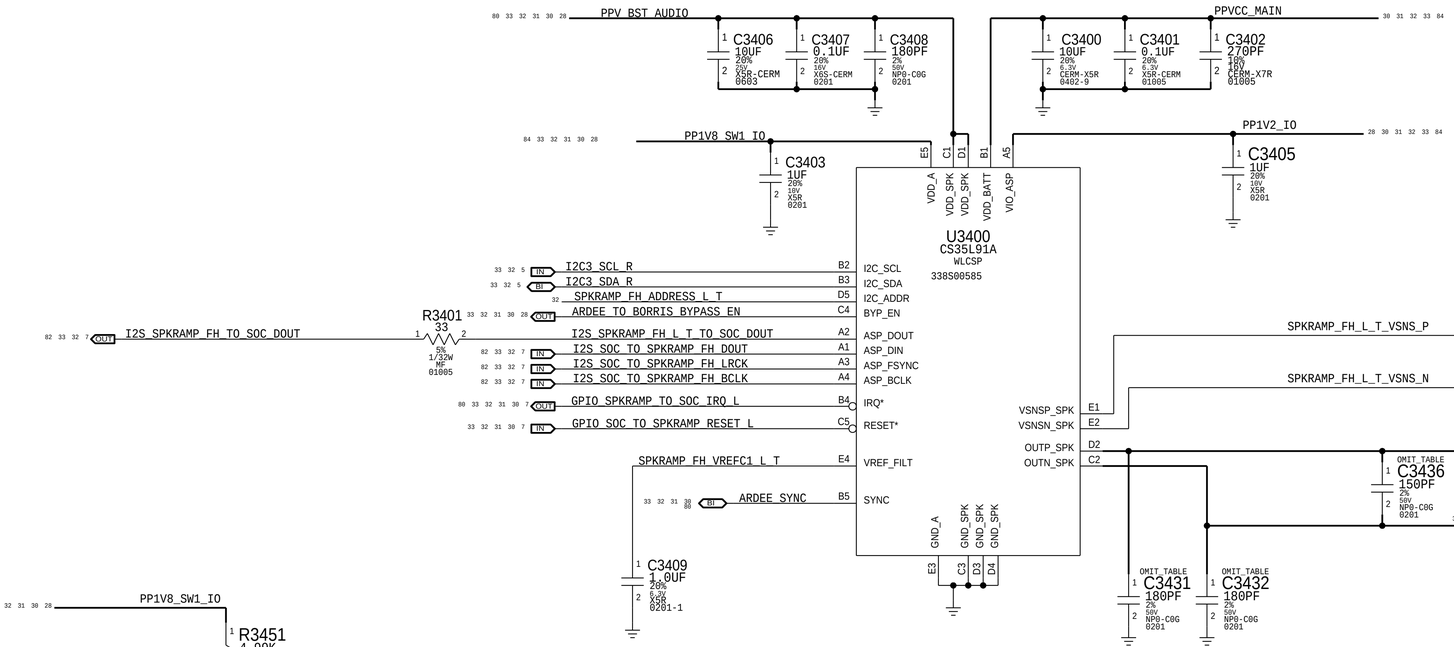
C3386 NOSTUFF FOR J522&J523

BOM_COST_GROUP=AUDIO

PAGE TITLE

AUDIO: SPEAKER AMPS (CNR)

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

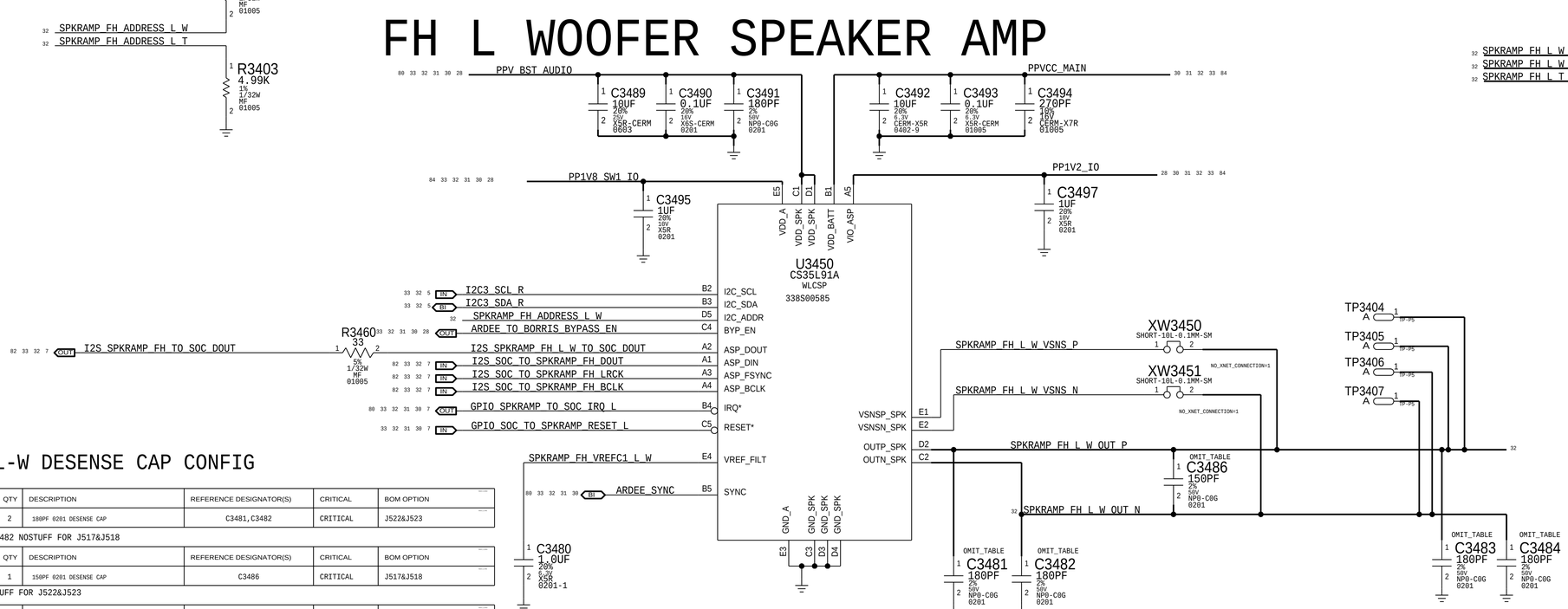
PART#	QTY	DESCRIPTION	REFERENCE DESIGNATOR(S)	CRITICAL	BOM OPTION
131S00019	1	150PF 0201 DESENSE CAP	C3436	CRITICAL	J517&J518

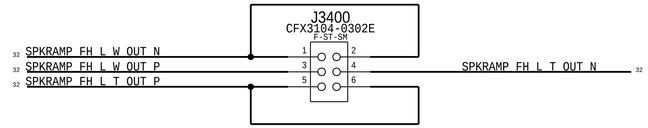
C3436 NOSTUFF FOR J522&J523

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

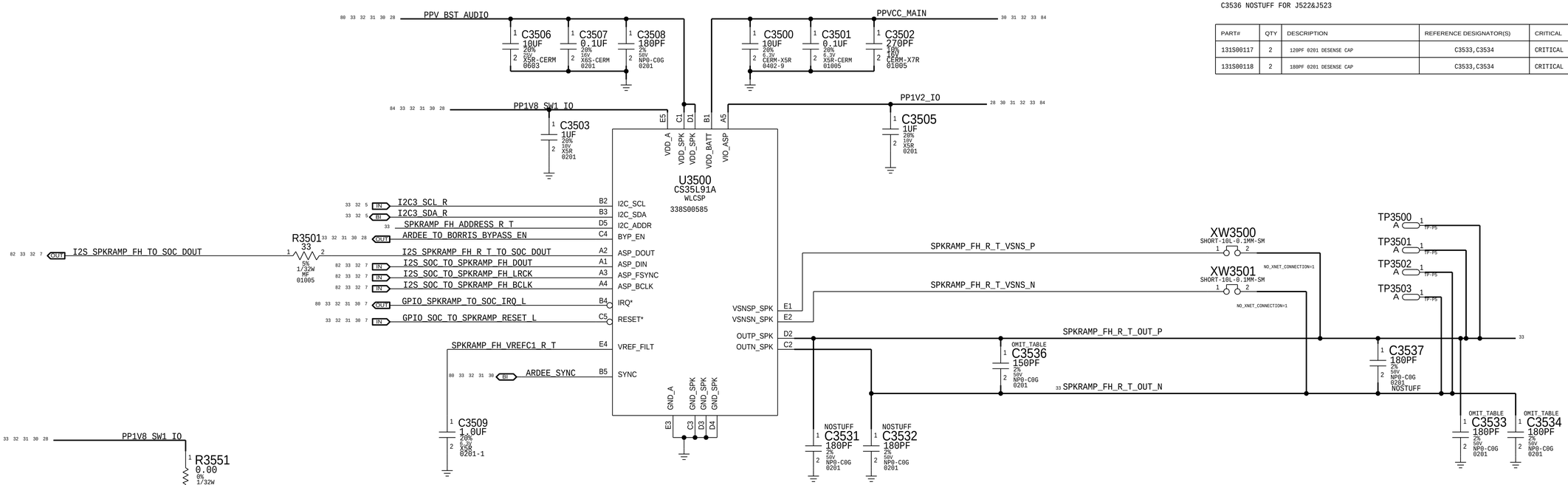
C3483 & C3484 NOSTUFF FOR J522&J523

BOM_COST_GROUP=AUDIO

PAGE TITLE

AUDIO: SPEAKER AMPS (FHL)

FH R TWEETER SPEAKER AMP



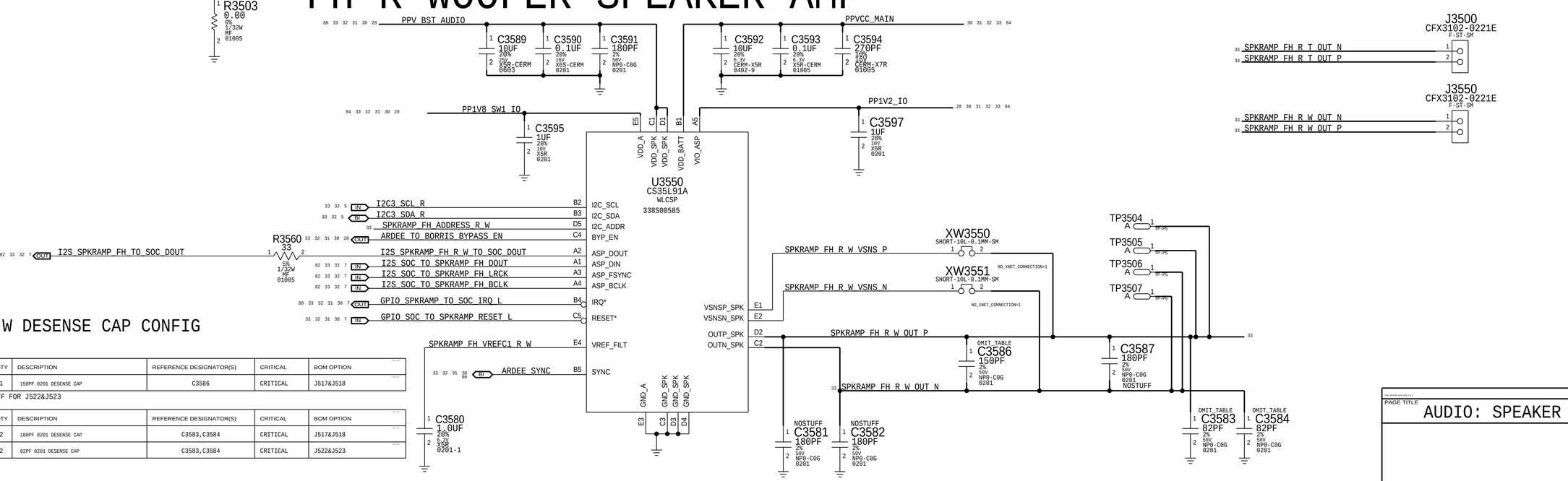
FH-R-T DESENSE CAP CONFIG

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

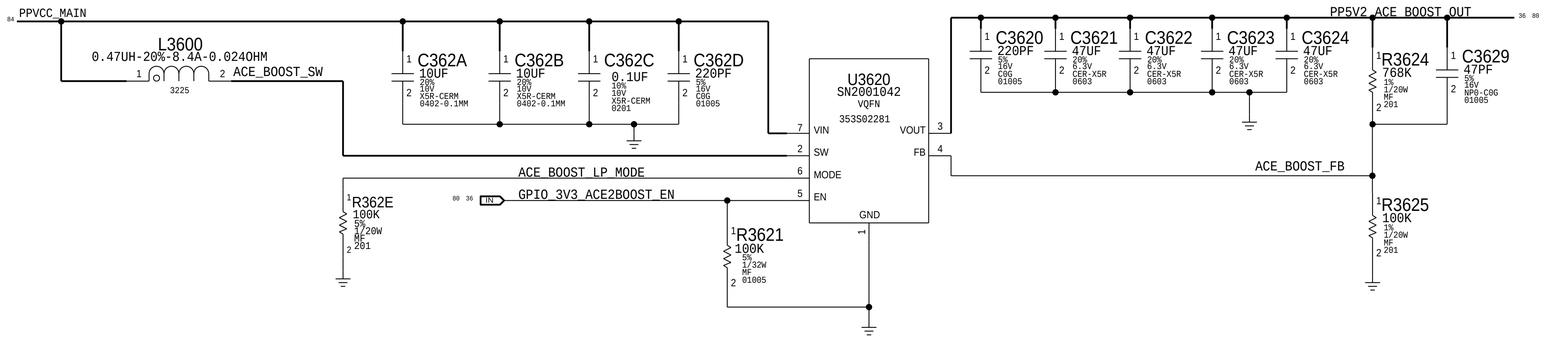
PART#	QTY	DESCRIPTION	REFERENCE DESIGNATOR(S)	CRITICAL	BOM OPTION
131S00118	2	180PF 0201 DESENSE CAP	C3583,C3584	CRITICAL	J517&J518
131S00018	2	82PF 0201 DESENSE CAP	C3583,C3584	CRITICAL	J522&J523

BOM_COST_GROUP=AUDIO

PAGE TITLE

AUDIO: SPEAKER AMPS (FHR)

ACE BOOST

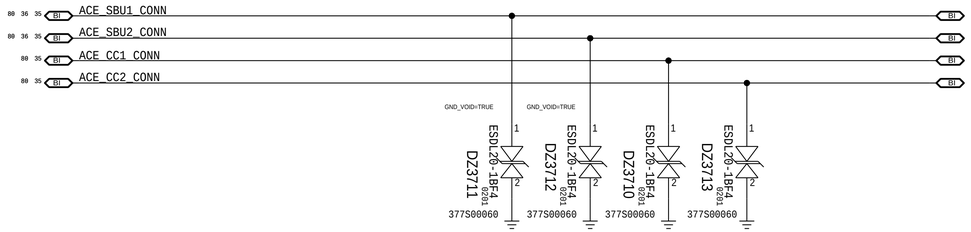


BOM_COST_GROUP=USB-C

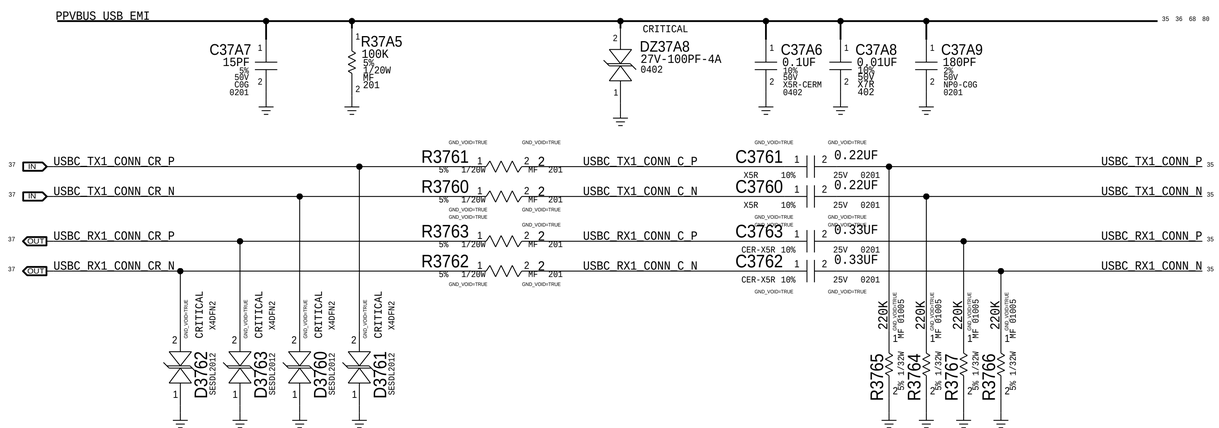
PAGE TITLE

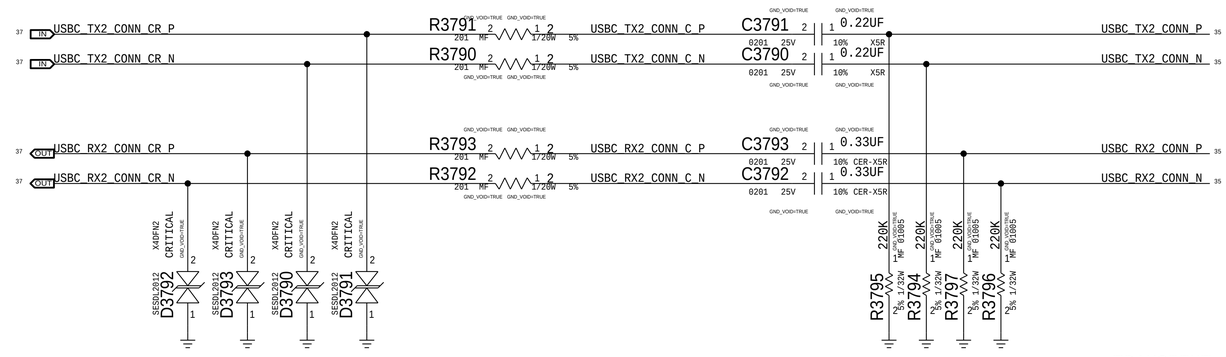
IO: ACE PERIPHERALS

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

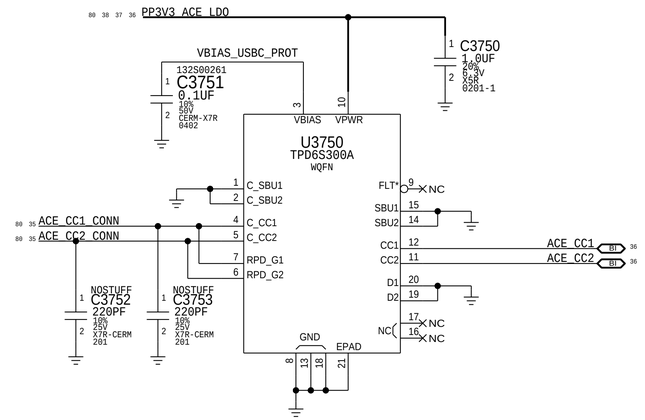


USB CONN FILTERS

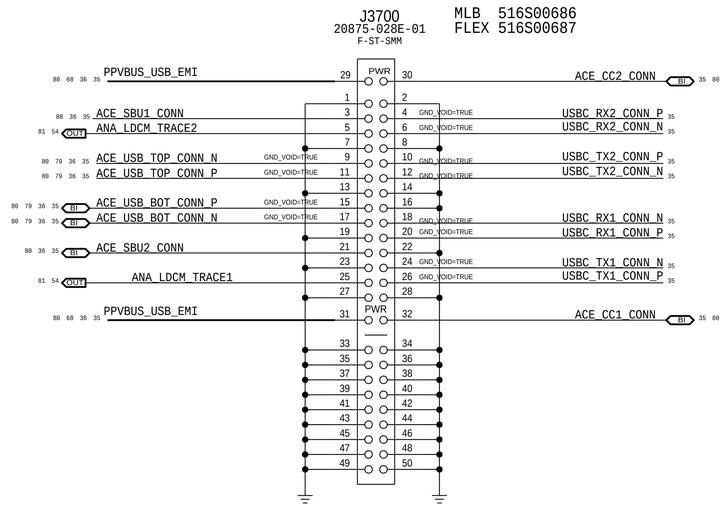


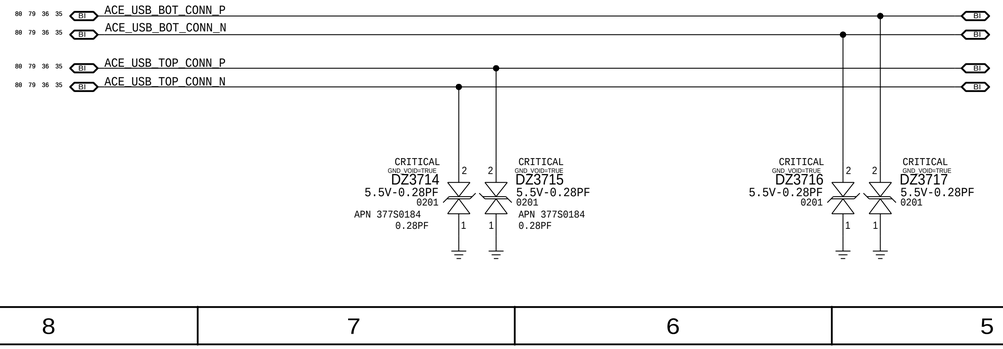


USB TYPE-C PORT PROTECTION

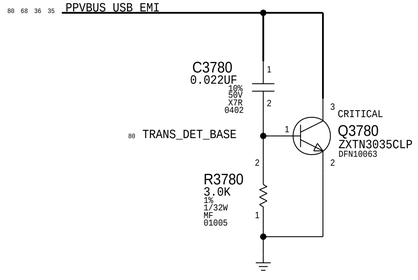


B2B CONNECTOR TO I/0 FLEX





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

PPVBUS_PROT
PP5V2_ACE_BOOST_OUT
15V
PPVBUS_USB_EMI
C3808 1UF 10% 35V X5R 0402
D3800 DSN2 NSR20F40NX_G CRITICAL
REVERSE VOLTAGE = 40V MAX

U3800
CD3217B12BCE
FCBGA

PP_5V0 >2.5 UF
PP_CABLE >2.5 UF
PP_HV
VBUS >9.5 UF

HRESET
MRESET
RESET* CHECK THE DETAILS OF THE USAGE
GPIO0
GPIO1 3V3 IO
GPIO2 ?
GPIO3
GPIO4 3V3 IO
GPIO5
GPIO6 ? DIGITAL CORE I/O & CONTROL
GPIO7
GPIO8 1V2 IO
GPIO9
GPIO10
BUSPOWER
I2C_ADDR
R_OSC
I2CM_SDA_CNFG
I2CM_SCL_CNFG 3V3 IO
I2C_SDA1
I2C_SCL1
I2C_IRQ1* 1V2 IO
I2C_SDA2
I2C_SCL2
I2C_IRQ2*
SPI_CLK
SPI_MOSI
SPI_MISO 3V3 IO
SPI_SSZ
SWD_DATA
SWD_CLK 1V2 IO
UART_RX
UART_TX
USB_RP1_P
USB_RP1_N
USB_RP2_P
USB_RP2_N
USB_RP3_P
USB_RP3_N
AUX_P
AUX_N
HPD 3V3 IO
DEBUG0
DEBUG1 1V2 IO
DEBUG2
DEBUG3
DEBUG4 ANALOG
DEBUG5
DEBUG6
DEBUG7 1V2 IO
PORT_MUX
POWER
TYPE-C
GND

GPIO_1V2_ACE_HRESET
GPIO_3V3_ACE2BSB_PARROT_RESET_L
ACE_GPIO0_NOT_USED
GPIO_3V3_ACE2BSB_FLASH_BUSY_L
GPIO_1V2_I2C_INT_L
GPIO_3V3_ACE2BOOST_EN
GPIO_3V3_ACE2BSB_FORCE_PWR
NOTE: OUTPUT SHOULD BE 3V3, VIH MIN ON BELLATRIX2 IS 1V267
GPIO_3V3_ACE2ORION_ACC_PWR_EN_L
ACE_ORION_TO_CHARGER_OVP_SW_EN_L
GPIO_1V2_ACE2SOC_DOCK_CONNECT
GPIO_1V2_ACE2PMU_RESET
GPIO_1V2_SOC2ACE_DFU_STATUS
GPIO_1V2_ACE2SOC_FORCE_DFU
R3841 100 MF 01005 5% 1/32W
GPIO_FORCE_DFU
BELLATRIX_TO_ACE_ACC_PWR_PRESENT_L_3V3
R3802 15K 0.1% 0201 PLACE_NEAR=U2800.M21:2MM
ACE_ROSC

TO BSB & PARROT
I2C_3V3_ACE_M_SDA
I2C_3V3_ACE_M_SCL
TO AP
I2C0_SDA
I2C0_SCL
GPIO_ACE_TO_SOC_IRQ_L
TO SMC
I2C_SMC_I2CM1_SDA
I2C_SMC_I2CM1_SCL
GPIO_ACE_TO_SMC_IRQ_L
R38D0 0.00 I2C_ACE_SDA_1V2_R
R38D1 0.00 I2C_ACE_SCL_1V2_R
R38D2 0.00 I2C_SMC_ACE2_SDA_1V2_R
R38D3 0.00 I2C_SMC_ACE2_SCL_1V2_R
CKPLUS_WAIVE=I2C_PULLUP

SPI_3V3_ACE_CLK
SPI_3V3_ACE_MOSI
SPI_3V3_ACE_MISO
SPI_3V3_ACE_CS_L
SPI_3V3_ACE_WP_L

R3850 0.00 SWD_ACE_SWDIO
R3851 0.00 SWD_ACE_SWCLK
ACE_SWD_DATA_R
ACE_SWD_CLK_R
ACE_UART_RX
ACE_UART_TX
R38B0 0.00 85_USB_SOC_P
R38B1 0.00 85_USB_SOC_N
85_USB_SOC_R_P
85_USB_SOC_R_N
85_USB_KIS_P
85_USB_KIS_N
90_AP_TO_BB_USB_P
90_AP_TO_BB_USB_N
GND_VOID=TRUE
R3880 0.00 ACE_AUXP2BSB_SBU1
R3881 0.00 ACE_AUXN2BSB_SBU2
SOC_TO_ACE_AUX_P
SOC_TO_ACE_AUX_N
UART_SOC_TO_DEBUG_TX
UART_DEBUG_TO_SOC_TX
JTAG_SOC_TCK
JTAG_SOC_TMS
ANA_ACE2LDCM_DEBUG4
ANA_ACE2LDCM_DEBUG5
UART_GRAPE_TO_DEBUG_TX
UART_DEBUG_TO_GRAPE_TX

VIN_3V3 >5 UF
VDDIO >0.1 UF
VDDIO_CFG SWD USES VDDIO
LDO_3V3 >5 UF
VIN_LV TO USE RESETZ FOR REDRIVER
VOUT_LV >0.1 UF
VRET
SS
LDO_CORE >4.5 UF
VBUS_OPT
PP_HV_OPT
C_CC1
C_CC2
RPD_G1
RPD_G2
C_USB_TP
C_USB_TN
C_USB_BP
C_USB_BN
C_SBU1
C_SBU2
GND_OPT

PP3V3_S2_ACE_PARROT
PP1V25_S2
PP3V3_ACE_LDO
PP1V8_S2
ACE_TO_PMU_LDO1_EN_R_1V8
ACE_TO_PMU_LDO1_EN_1V8
R3891 1.00K MF 01005 5% 1/32W
1.55V PP_LDO_CORE
ACE_SS
C3800 25UF 20% 6.3V X5R 0402 ~7.5 UF
C3801 0.47UF 20% 6.3V X5R 01005-1 ~0.22 UF
C3802 25UF 20% 6.3V X5R 0402 ~7.5 UF
C3803 0.1UF 20% 6.3V X5R-CERM 01005
C3804 10UF 20% 4V X5R 402 ~7.5 UF
C3805 0.68UF 5% 6.3V X6S 0402
C3850 0.47UF 20% 6.3V X5R 01005-1
PLACE_NEAR=U3800.L22:2MM
PPVBUS_USB_EMI
PPVBUS_PROT
ACE_CC1
ACE_CC2
C3806 220PF 5% 25V C0G 01005
C3807 220PF 5% 25V C0G 01005
GND_VOID=TRUE
ACE_USB_TOP_P
ACE_USB_TOP_N
ACE_USB_BOT_P
ACE_USB_BOT_N
ACE_SBU1_CONN
ACE_SBU2_CONN
CRITICAL L3800 SYM_VER=2 TAM0605-4SM-COMBO
ACE_USB_TOP_CONN_P
NOSTUFF
ACE_USB_TOP_CONN_N
3.25-OHM-0.1A-2.4GHZ
CRITICAL L3801 SYM_VER=2 TAM0605-4SM-COMBO
ACE_USB_BOT_CONN_P
NOSTUFF
ACE_USB_BOT_CONN_N
3.25-OHM-0.1A-2.4GHZ

PARROT/BSB TO ACE INT

PP1V25_S2
R3895 10K 5% 1/32W MF 01005
C3890 0.1UF 20% 6.3V X5R-CERM 01005
311S00057
U3890 74AUP1G08FS3 X2-DFN0808
GPIO_1V2_PARROT2ACE_INT_L
GPIO_3V3_BSB2ACE_I2C_INT_L
R3896 0.00 0% 1/32W MF 01005
GPIO_3V3_BSB2ACE_I2C_INT_L_R
R3897 100K 5% 1/32W MF 01005 NOSTUFF
GPIO_1V2_I2C_INT_L
NOTE: REMOVED VOLTAGE DIVIDER AND PASSING 3V3 AND GATE U3890 HAS VMAX 3.6V (ABS MAX OF 4.6V) REQUESTED BY ACE ARCHITECTURE TEAM (AVOID POWER LOSS)

ACE & SOC/CHARGER/ORION ALIAS

GPIO_1V2_SOC2ACE_DFU_STATUS — GPIO_1V2_SOC2ACE_DFU_STATUS
GPIO_1V2_ACE2PMU_RESET — GPIO_1V2_ACE2PMU_RESET
GPIO_1V2_ACE2SOC_DOCK_CONNECT — GPIO_1V2_ACE2SOC_DOCK_CONNECT
MAKE_BASE=TRUE

SUPPORT PULLS

R3811 100K GPIO_1V2_ACE_HRESET
R3814 100K GPIO_1V2_ACE2PMU_RESET
R3815 100K GPIO_1V2_ACE2SOC_DOCK_CONNECT
R3816 100K GPIO_1V2_SOC2ACE_DFU_STATUS
R3817 2.21M SWD_ACE_SWDIO
R3818 2.21M SWD_ACE_SWCLK
R3870 100K ACE_ORION_TO_CHARGER_OVP_SW_EN_L
NOSTUFF
R3824 100K NOSTUFF ACE_AUXP2BSB_SBU1
R3825 1.00M ACE_UART_RX
R3860 100K NOSTUFF ACE_AUXN2BSB_SBU2
PP3V3_S2_ACE_PARROT
R3833 NOSTUFF 100K ACE_AUXN2BSB_SBU2
PP3V3_ACE_LDO
R3827 100K BELLATRIX_TO_ACE_ACC_PWR_PRESENT_L_3V3
PP1V25_S2
R3830 1.00M UART_SOC_TO_DEBUG_TX
R3831 1.00M UART_DEBUG_TO_SOC_TX
R3832 1.00M UART_GRAPE_TO_DEBUG_TX CHECK:BACK POWERING
R3835 1.00M GPIO_ACE_TO_SOC_IRQ_L
UART DEBUG LOOPBACK
ACE_UART_RX R3834 0.00 ACE_UART_TX
5% 1/32W MF 01005

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
85_CIO_HS_SOC_TX0_C_N	C3921	0.22UF	20% 6.3V X5R 0201	USBC_SOC_TO_BSB_TX1_C_N	J2
85_CIO_HS_SOC_TX1_C_P	C3922	0.22UF	20% 6.3V X5R 0201	USBC_SOC_TO_BSB_TX2_C_P	C1
85_CIO_HS_SOC_TX1_C_N	C3923	0.22UF	20% 6.3V X5R 0201	USBC_SOC_TO_BSB_TX2_C_N	C2
85_CIO_HS_SOC_RX0_P	C3924	0.22UF	20% 6.3V X5R 0201	USBC_BSB_TO_SOC_TX1_C_P	G1
85_CIO_HS_SOC_RX0_N	C3925	0.22UF	20% 6.3V X5R 0201	USBC_BSB_TO_SOC_TX1_C_N	G2
85_CIO_HS_SOC_RX1_P	C3926	0.22UF	20% 6.3V X5R 0201	USBC_BSB_TO_SOC_TX2_C_P	E1
85_CIO_HS_SOC_RX1_N	C3927	0.22UF	20% 6.3V X5R 0201	USBC_BSB_TO_SOC_TX2_C_N	E2

CIO_SOC_AUXCH_P — C3910 0.1UF 20% 6.3V X5R 01005-1
CIO_SOC_AUXCH_N — C3911 0.1UF 20% 6.3V X5R 01005-1

CIO_SOC_AUXCH_R_P
CIO_SOC_AUXCH_R_N
USBC_3V3_SOC2BSB_HSX_LSTX
USBC_3V3_BSB2SOC_HSX_LSRX

R3910 33K 1% 1/32W MF 01005
R3911 33K 1% 1/32W MF 01005
C39A0 27PF 5% 16V C0G 01005-1 NOSTUFF
C39A1 27PF 5% 16V C0G 01005-1 NOSTUFF
R3912 100K 5% 1/32W MF 01005 NOSTUFF
R3913 100K 5% 1/32W MF 01005 NOSTUFF
PP3V3_BSB

NOSTUFF R3908 1M 5% 1/20W MF 201
NOSTUFF R3909 1M 5% 1/20W MF 201

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_R — BSB_XTAL25M_OUT

PP3901 P3MM_SM — BSB_THERMDA

U3900 9999HH BGA SYM 2 OF 2

ASSRXP1	J1	USBC_SOC_TO_BSB_TX1_C_P
ASSRXN1	J2	USBC_SOC_TO_BSB_TX1_C_N
ASSRXP2	C1	USBC_SOC_TO_BSB_TX2_C_P
ASSRXN2	C2	USBC_SOC_TO_BSB_TX2_C_N
ASSTXP1	G1	USBC_BSB_TO_SOC_TX1_C_P
ASSTXN1	G2	USBC_BSB_TO_SOC_TX1_C_N
ASSTXP2	E1	USBC_BSB_TO_SOC_TX2_C_P
ASSTXN2	E2	USBC_BSB_TO_SOC_TX2_C_N
PA_AUX_P	L8	NO INTERNAL CAPS, PU, PD AVAILABLE
PA_AUX_N	M8	
PA_LSTX_SBU1	M7	
PA_LSRX_SBU2	L7	
I2C_INT	A10	GPIO_3V3_BSB2ACE_I2C_INT_L
I2C_SCL	C9	I2C_3V3_ACE_M_SCL
I2C_SDA	E7	I2C_3V3_ACE_M_SDA
POC_GPIO_5	B9	BSB_GPIO_5
POC_GPIO_6	A8	BSB_GPIO_6
POC_GPIO_10	A4	BSB_FLASH_SHARE_EN
POC_GPIO_11	A5	BSB_FLASH_MSTR_H_SLV_L
POC_GPIO_12	A6	BSB_GPIO_12
THERMDA	M11	
XTAL_25_IN	L9	BSB_XTAL25M_IN
XTAL_25_OUT	M9	
MONDC_SVR	L12	
MONDC	A11	
TEST_EDM	M12	
NC_A12	A12	
NC_J6	J6	
NC_L3	L3	
NC_J5	J5	

SOC 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

USB-C CONN SIDE — To SPI Flash

PP3V3_BSB
R3974 10K 5% 1/32W MF 01005
R3973 10K 5% 1/32W MF 01005
R3972 10K 5% 1/32W MF 01005
R3971 10K 5% 1/32W MF 01005

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

R3907 4.75K 0.5% 0201 1/20W TF
R3906 100 5% 1/20W MF 201
PP3V3_BSB — NOSTUFF R3930 10K 5% 1/32W MF 01005
R3931 10K 5% 1/32W MF 01005

PP3V3_ACE_LDO
R3940 100K 5% 1/32W MF 01005 — GPIO_3V3_ACE2BSB_FLASH_BUSY_L

PP3V3_BSB

R3952	100K	BSB_FLASH_MSTR_H_SLV_L	
R3923	2.2K	GPIO_3V3_BSB2ACE_I2C_INT_L	
R3920	2.2K	BSB_SMBUS_SCL	
R3924	2.2K	BSB_SMBUS_SDA	
R3945	100K	BSB_GPIO_12	
R3943	100K	BSB_FLASH_SHARE_EN	
R3941	NOSTUFF 10K	BSB_GPIO_6	
R3951	NOSTUFF 10K		
R3946	100K	GPIO_3V3_PMU2BSB_PERST_L	
R3947	NOSTUFF 100K		
R3948	100K	GPIO_3V3_ACE2BSB_PARROT_RESET_L	
R3949	NOSTUFF 100K		
R3950	100K	BSB_GPIO_5	

R3926 0.00 01005 MF 0% 1/32W

PP0V9_BSB_LVR
C3954 10UF 20% 6.3V CERM 0402
C3955 2.2UF 20% 6.3V X5R-CERM 0201

PP3V3_BSB_ANA
PP0V9_BSB_LC
PP3V3_BSB_LC
C3956 2.2UF 20% 6.3V X5R-CERM 0201
C3957 2.2UF 20% 6.3V X5R-CERM 0201
C3958 2.2UF 20% 6.3V X5R-CERM 0201

VCC0P9_SVR_ANA	F6	
	G6	
VCC0P9_SVR_PB_ANA	E9	
	G9	
VCC0P9_LVR	L6	
VCC0P9_LVR_SENSE	M6	
VCC3P3_LC	E5	
VCC3P3_ANA	L2	
VCC0P9_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	
VCC0P9_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	

PP3V3_BSB
C3936 2.2UF 20% 6.3V X5R-CERM 0201
C3937 2.2UF 20% 6.3V X5R-CERM 0201
C3943 12PF 5% 25V NP0-C0G 0201
C3930 2.2UF 20% 6.3V X5R-CERM 0201
C3931 10UF 20% 6.3V CERM 0402
XW3901 SM NO_XNET_CONNECTION=1
PP3V3_BSB_S0_SVR
C3934 2.2UF 20% 6.3V X5R-CERM 0201
C3932 22UF 20% 10V X5R 0402
C3933 22UF 20% 10V X5R 0402
XW3900 SHORT-10L-0.1MM-SM
P0V9_BSB_SVR_PGND NO_XNET_CONNECTION=1
PP0V9_BSB_SVR VOLTAGE=0.9V DIDT=TRUE
C3938 12PF 5% 25V NP0-C0G 0201
C3939 4UF 20% 6.3V CER-X5R 0201
C3941 4UF 20% 6.3V CER-X5R 0201
C3940 22UF 20% 10V X5R 0402
L3900 0.68UH-20%-4.3A-0.043OHM 0805
PP0V9_BSB_SVR_IND VOLTAGE=0.9V DIDT=TRUE

PP0V9_BSB_SVR
C396A 22UF 20% 10V X5R 0402
C3960 22UF 20% 10V X5R 0402
C3961 22UF 20% 10V X5R 0402
C3962 22UF 20% 10V X5R 0402
C3963 22UF 20% 10V X5R 0402
C3964 4UF 20% 6.3V CER-X5R 0201
C3965 4UF 20% 6.3V CER-X5R 0201
C3966 4UF 20% 6.3V CER-X5R 0201
C3967 4UF 20% 6.3V CER-X5R 0201
C3968 4UF 20% 6.3V CER-X5R 0201
C3969 4UF 20% 6.3V CER-X5R 0201
C396Z 18PF 5% 25V CERM-C0G 01005

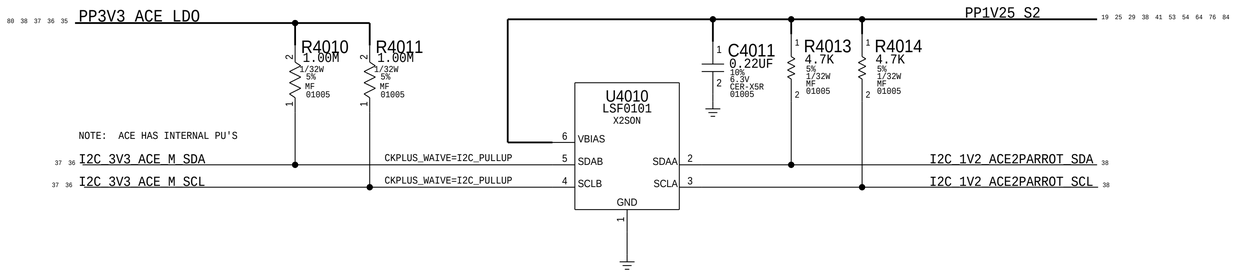
CONNECT TO GND PIN
CLOSEST TO THERMDA PIN

BOM_COST_GROUP=USB-C

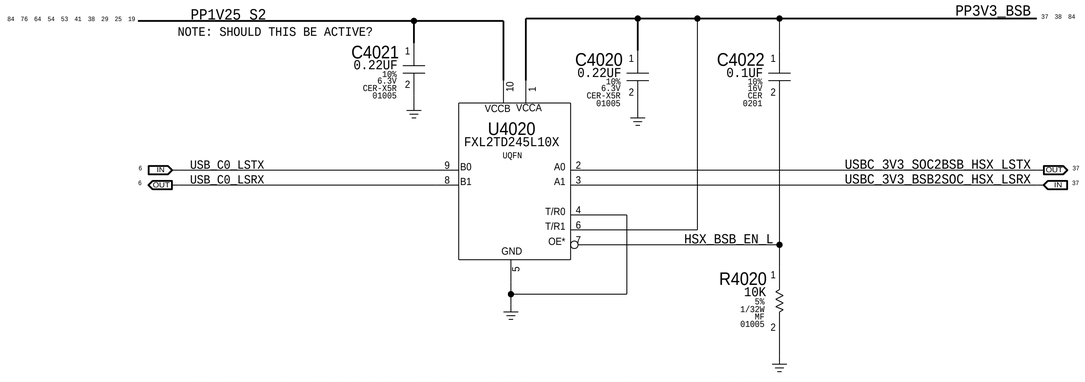
PAGE TITLE
IO: USB-C HIGH SPEED

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

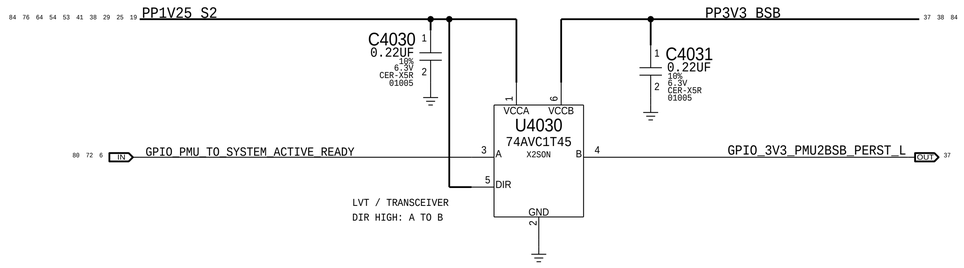
LEVEL SHIFTER FOR I2C ACE <-> PARROT



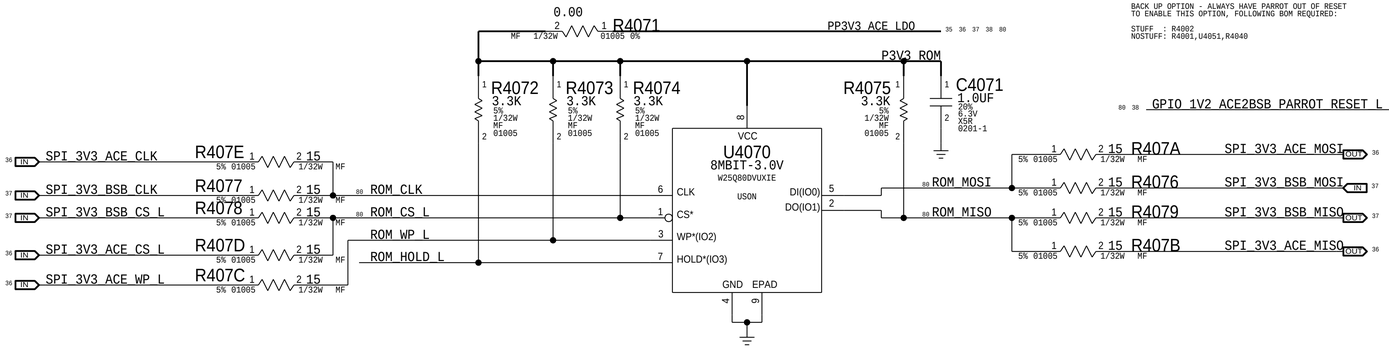
LEVEL SHIFTER FOR BSB <-> SOC LSRX/LSTX



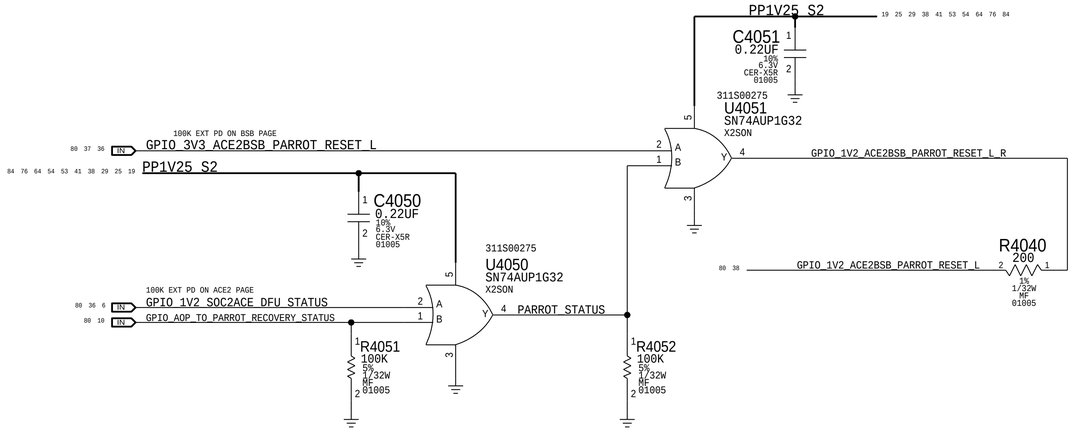
LEVEL SHIFTER FOR BSB <-> PMU ACTIVE RDY



ACE/BSB FLASH

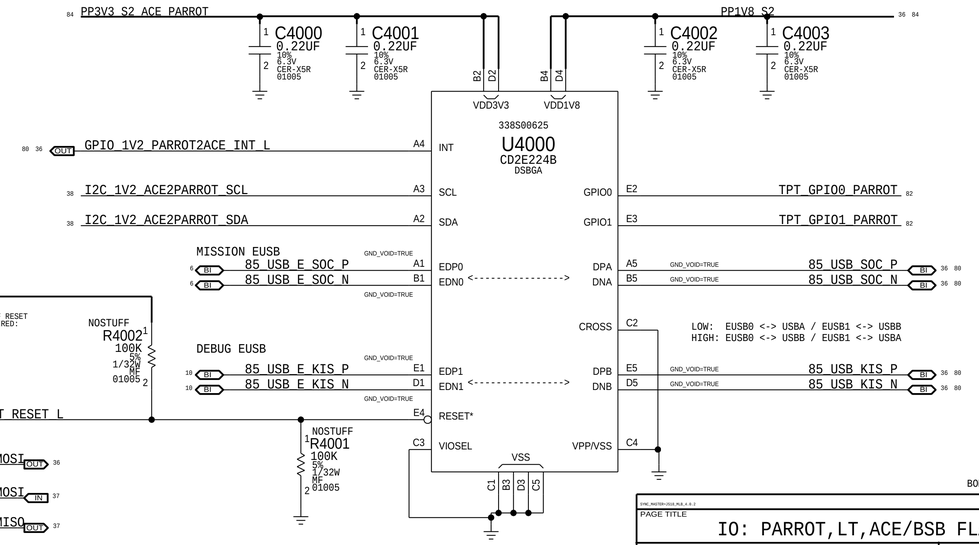


OR-GATE LEVEL SHIFTER FOR ACE <-> BSB RESET



USB REPEATER PARROT

PLACE PARROT NEAR SOC (<40MM)



BOM_COST_GROUP=USB-C

PAGE TITLE

IO: PARROT,LT,ACE/BSB FLASH

Rigel Driver

84 PPVCC_MAIN

C4197 18UF 20% 6.3V CER-X5R 0402-0.1MM ROOM=RIGEL

C4194 4UF 20% 6.3V CER-X5R 0201 ROOM=RIGEL

C4193 4UF 20% 6.3V CER-X5R 0201 ROOM=RIGEL

C4192 4UF 20% 6.3V CER-X5R 0201 ROOM=RIGEL

C4191 4UF 20% 6.3V CER-X5R 0201 ROOM=RIGEL

Terminate @ Cap via on VDD_MAIN plane.

OMIT XW4100 SHORT-10L-0.1MM-SM ROOM=RIGEL

PP_RIGEL_VINCORE 4.3V

C4190 1UF 20% 10V X5R 0201 ROOM=RIGEL

84 41 40 PP1V8_S2

PP_VANA 4.5V

84 PPVCC_HIGH

C4195 1UF 20% 10V X5R 0201 ROOM=RIGEL

C4196 1UF 20% 10V X5R 0201 ROOM=RIGEL

C4198 4UF 20% 6.3V CER-X5R 0201 ROOM=RIGEL

81 40 PP_TITUS_CATHODE

40 IN TITUS_TO_RIGEL_VCSEL_NTC

62 IN GPIO_FCAM_PMU_TO_RIGEL_ENABLE_1V8

41 BI YOGI_TO_RIGEL_STATUS_1V8

40 BI MAMA_BEAR_BI_RIGEL_STATUS_1V8

40 IN JULIET_PMU_TO_RIGEL_STROBE_1V8

R4101 10K 1/32W MF 01005 RIGEL_TESTMODE_EN

62 IN CLK_FCAM_PMU_TO_RIGEL_12M_1V8

81 62 OUT GPIO_RIGEL_INT_TO_FPMU_1V8

40 5 IN I2C4_FCAM_PMU_SCL_1V8

ISP_TITUS_RIGEL_SDA_R

40 5 IN I2C4_FCAM_PMU_SDA_1V8

R4100 33 5% 1/32W MF 01005

RIGEL_LSCP

C4122 0.01UF 10% 10V X5R 01005 ROOM=RIGEL

XW4101 SHORT-10L-0.135MM-SM 998-17721 PLACE_NEAR=U4100:F6.5MM

RIGEL_QUIET_GND

U4100 STB601A0 WLCSP ROOM=RIGEL

K4	VK	
K5	VK	
K6	VK	
K7	VK	
K8	VK	
G4	NTC	
C4	OTPHV	
D4	TAMP	
B3	ENA	200K INT PD
C8	XEF1	
C7	XEF0	
B8	THROT	
A4	STROBE	
B7	TESTMODE	
B5	TESTMODE2	
B6	TEST	
A7	MCLK	
B4	INT	
A5	SCL	
A6	SDA	
G5	PD0	
G6	PD1	
H7	LSCP	

VCC4 G3, VCC3 G2, VIN_LVT H8, VDDIO C5, VANA H4, VINVCORE2 H5, VINCORE F5, VINSDB F2, VINSDB F1, VINSDB E2, VINSUB A3, VINSUB A2, VINSUB A1, VINSUA A9, VINSUA A8, VINSUA A10, VINSDA F9, VINSDA F10, VINSDA E9

PGNDK J8, PGNDK J7, PGNDK J6, PGNDK J5, PGNDK J4, GNDCORE4 G8, GNDCORE3 G3, GNDCORE2 H6, GNDCORE F6, GNDD C6, GNDS G7, GNDS E6, GNDS F8, GNDS E5, GNDS F3, GNDS D7, GNDS D6, GNDS D5, GNDS C3, GNDS C2, PGNDB C1, PGNDB C9, PGNDA G9, PGNDA G10

4.8V PP_RIGEL_BUCK_BOOST_A

VBBOUTA H10, VBBOUTA J10, VBBOUTA K10

VLXA D10 RIGEL_VLXA, VLXA D9, VLXA E10

C4105 4.7UF 20% 16V X5R 0402 ROOM=RIGEL

VCXA B10, VCXA B9 RIGEL_VCXA

C4120 0.01UF 10% 6.3V X5R 01005 ROOM=RIGEL

BOOSTSDA E8 RIGEL_BOOSTSDA

BULKSDA D8 RIGEL_BULKSDA

BULKSDB D3 RIGEL_BULKSDB

BOOSTSDB E3 RIGEL_BOOSTSDB

C4121 0.01UF 10% 6.3V X5R 01005 ROOM=RIGEL

VCXB B1 RIGEL_VCXB

C4110 4.7UF 20% 16V X5R 0402 ROOM=RIGEL

VLXB D1, VLXB D2, VLXB E1 RIGEL_VLXB

L4100 0.47UH-20%-4A-0.048OHM DIDT=TRUE PIWA20120H-SM ROOM=RIGEL

C4100 4.7UF 20% 16V X5R 0402 ROOM=RIGEL

C4101 220PF 5% 16V C0G 01005 ROOM=RIGEL

VBBOUTB J1, VBBOUTB J2, VBBOUTB J3 4.8V PP_RIGEL_BUCK_BOOST_B

L4101 0.47UH-20%-4A-0.048OHM DIDT=TRUE PIWA20120H-SM ROOM=RIGEL

C4111 4.7UF 20% 16V X5R 0402 ROOM=RIGEL

C4112 220PF 5% 16V C0G 01005 ROOM=RIGEL

IOUT0 H9, IOUT0 K9, IOUT0 J9 PP_TITUS_DENSE_ANODE 40 81

IOUT1 H1, IOUT1 H2, IOUT1 H3 PP_TITUS_SPARSE_ANODE 40 81

IOUT2 K1, IOUT2 K2, IOUT2 K3 PP_ROSALINE_ANODE 41 81

IOUT3 G1 PP_TITUS_A_ANODE 40 81

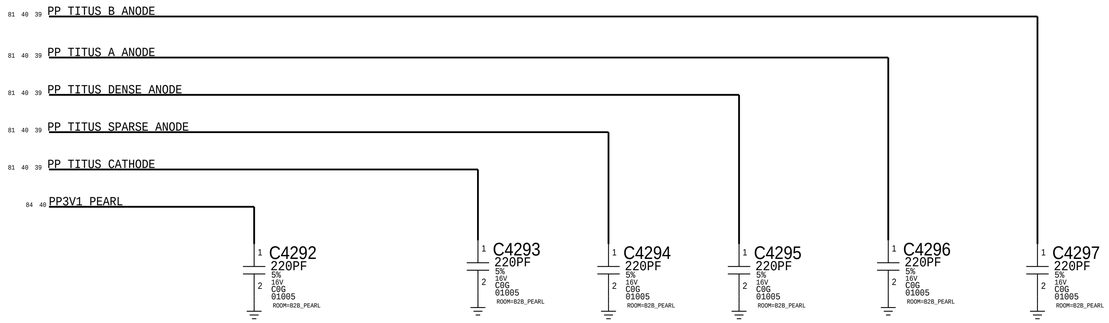
IOUT4 G10 PP_TITUS_B_ANODE 40 81

BOM_COST_GROUP=PEARL

PAGE TITLE

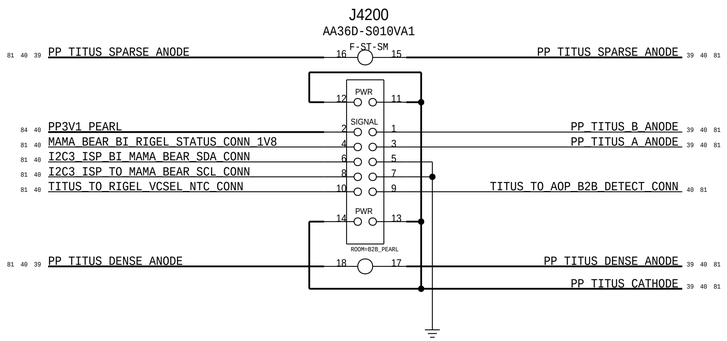
PEARL: RIGEL DRIVER

TITUS POWER FILTERING

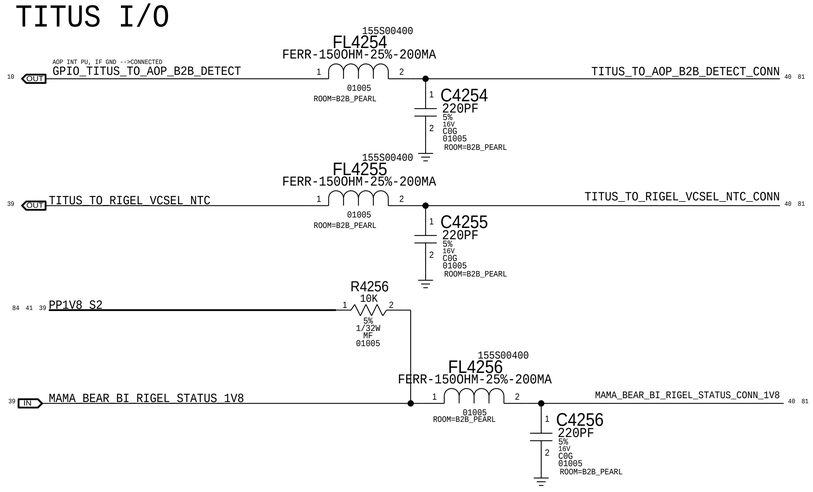


JEWEL CONNECTOR

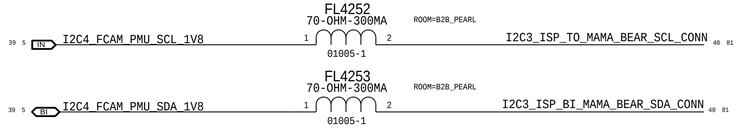
MLB: 516S00267
FLEX: 516S00268
MATCH J317_JEWEL_FLEX A.1.0



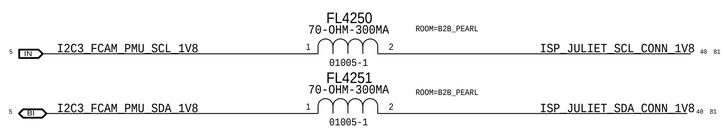
TITUS I/O



ISP TITUS_RIGEL I2C

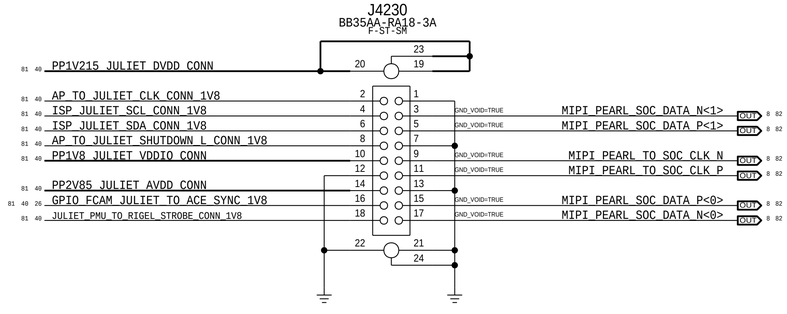


ISP JULIET I2C

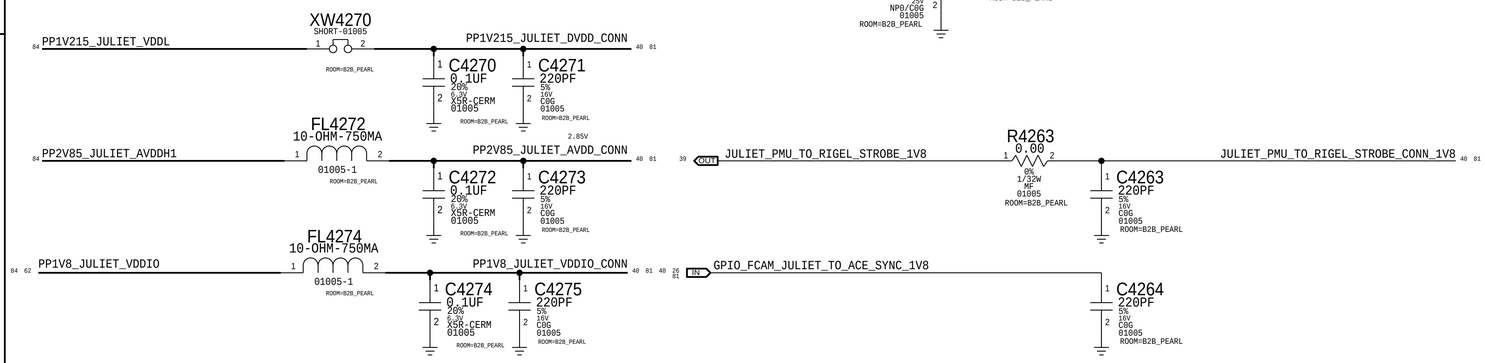


JULIET CONNECTOR

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



Juliet Power and I/O

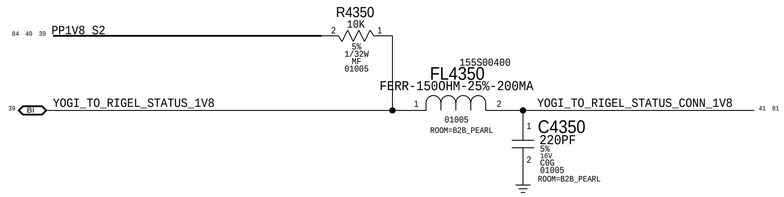


BOM_COST_GROUP=PEARL

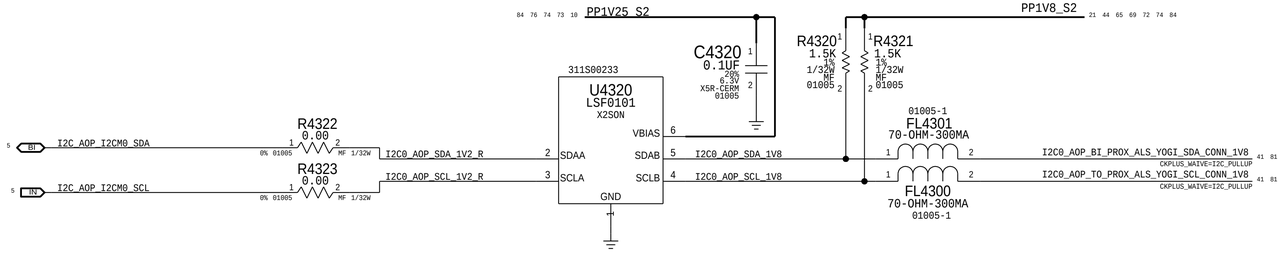
PAGE TITLE

PEARL: B2B TITUS + JULIET

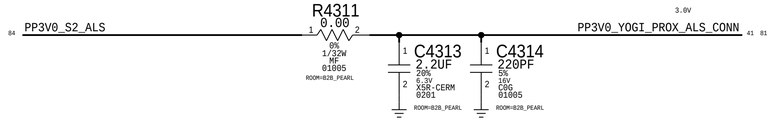
YOGI SIGNALS



I2C LEVEL TRANSLATOR

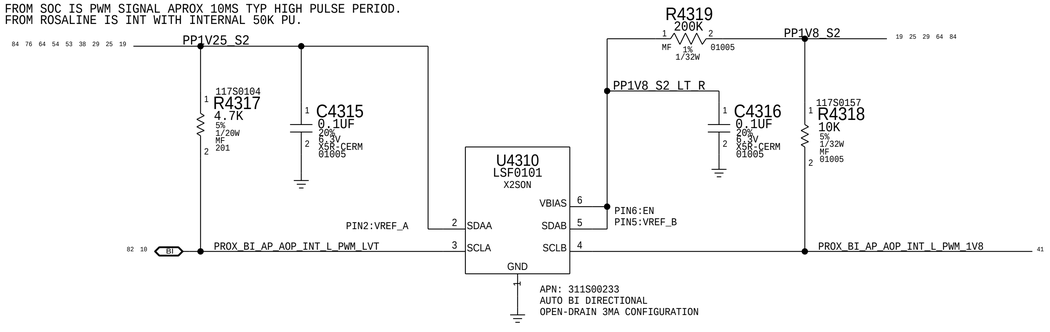


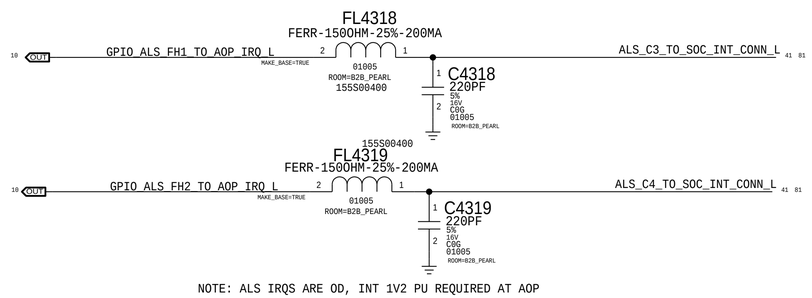
PROX & ALS POWER



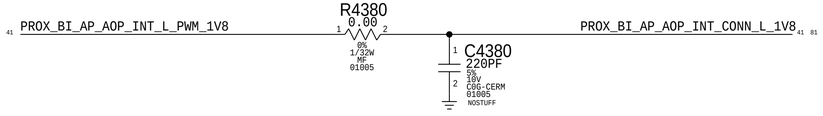
PROX/ALS I/O

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



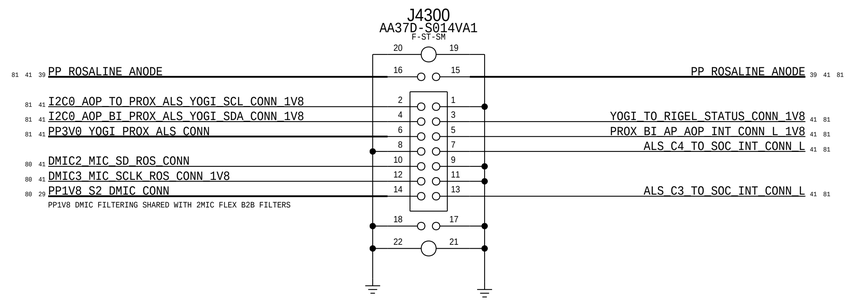


NOTE: ALS IRQS ARE OD, INT 1V2 PU REQUIRED AT AOP

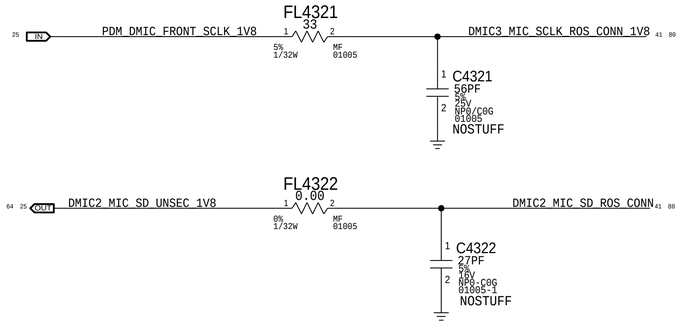


ROSALINE(AARM) CONNECTOR

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

78 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

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 80 83	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

80 79 43 42 BI	LPDP_AUX_EMI_CONN_P	2	1	PP1V8_S3_HALL_TCON_CONN	42 80
80 79 43 42 BI	LPDP_AUX_EMI_CONN_N	4	3	GPIO_APANEL_HALL_TO_PMU_IRQ_L	OUT 42 64 80
		6	5		
43 42 IN	LPDP_DATA_EMI_CONN_P<0>	8	7		
43 42 IN	LPDP_DATA_EMI_CONN_N<0>	10	9		
		12	11	I2C_TCON_SCL_CONN_1V8	42 80
43 42 IN	LPDP_DATA_EMI_CONN_P<1>	14	13	I2C_TCON_SDA_CONN_1V8	42 80
43 42 IN	LPDP_DATA_EMI_CONN_N<1>	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>	20	19	NC	TCON BYSNC 1 NOT USED, NC FOR NOW
43 42 IN	LPDP_DATA_EMI_CONN_N<2>	22	21		
		24	23	VCOM_LCD_TO_GRAPE	OUT 23 42 80
43 42 IN	LPDP_DATA_EMI_CONN_P<3>	26	25		
43 42 IN	LPDP_DATA_EMI_CONN_N<3>	28	27	GPIO_PMU_TO_LCD_PWREN_1V8	IN 42 43 45 72 80
		30	29		
80 45 43 42	PPVCC_MAIN_LCD_SW_CONN	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	LPDP_DATA_EMI_CONN_P<0>	IN 42 43
		21	22	LPDP_DATA_EMI_CONN_N<0>	IN 42 43
		23	24		
		25	26	LPDP_DATA_EMI_CONN_P<1>	IN 42 43
		27	28	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	LPDP_DATA_EMI_CONN_P<2>	IN 42 43
80 42	SYSTEM_TO_TCON_FORCE_PWM_1V8	33	34	LPDP_DATA_EMI_CONN_N<2>	IN 42 43
	TCON BYSNC 1 NOT USED, NC FOR NOW	35	36		
80 43 42 OUT	LPDP_HPD_EMI_1V8 NC	37	38	LPDP_DATA_EMI_CONN_P<3>	IN 42 43
		39	40	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	LPDP_AUX_EMI_CONN_P	IO 42 43 79 80
		45	46	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	PACK_IGNORE=TRUE PACK_OPTION=J517,J518	
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	PACK_IGNORE=TRUE PACK_OPTION=J517,J518	
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	PACK_IGNORE=TRUE PACK_OPTION=J517,J518	
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	PACK_IGNORE=TRUE PACK_OPTION=J517,J518	
71 42 80	LED_IO_10						
71 42 80	LED_IO_16						
71 42 80	LED_IO_5						

BOM_COST_GROUP=DISPLAY

SYNC_MASTER=J518_MLB_4_4_2 SYNC_DATE=08/20/2020

PAGE TITLE

DISPLAY: B2B CONN

EDP CONNECTOR SUPPORT

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

84 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

U4601
SLG4AP41158
STQFN
343S00293

80 72 45 42 IN 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

GPIO_PMU_TO_LCD_PWREN_DELAY

R4605 100K 5% 1/32W MF 01005

84 PPVCC_MAIN

C4640 0.1UF 10% 16V X5R-CERM 0201

C4641 0.1UF 10% 16V X5R-CERM 0201

U4600
SLG5AP1423V
TFN
OMIT_TABLE
353S4272

SL_CAP

C4670 4700PF 10% 25V CER-X5R 0201

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

80 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-220HM-28%-8A
0603

PPVCC_MAIN_LCD_SW_CONN 42 45 80

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

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 FOR A DIFFERENT CASE ARE STUFFED TO TEST WITHOUT A COMMON MODE CHOKE.

R4680 1.00M 01005 GND_VOID=TRUE — LPDP_DATA_EMI_CONN_N<0> 42 43

R4681 1.00M 01005 GND_VOID=TRUE — LPDP_DATA_EMI_CONN_P<0> 42 43

R4682 1.00M 01005 GND_VOID=TRUE — LPDP_DATA_EMI_N<1> 43

R4683 1.00M 01005 GND_VOID=TRUE — LPDP_DATA_EMI_P<1> 43

R4684 1.00M 01005 GND_VOID=TRUE — LPDP_DATA_EMI_CONN_N<2> 42 43

R4685 1.00M 01005 GND_VOID=TRUE — LPDP_DATA_EMI_CONN_P<2> 42 43

R4686 1.00M 01005 GND_VOID=TRUE — LPDP_DATA_EMI_N<3> 43

R4687 1.00M 01005 GND_VOID=TRUE — LPDP_DATA_EMI_P<3> 43

8 IN LPDP_SOC_TO_TCON_AUX_P — C4650 0.1UF 01005 6.3V 20% X5R-CERM GND_VOID=TRUE — LPDP_AUX_EMI_P — L4642 NOSTUFF 3.25-OHM-0.1A-2.4GHZ TAM0605-ASM-COMBO CRITICAL GND_VOID=TRUE — LPDP_AUX_EMI_CONN_P OUT 42 79 80

8 IN LPDP_SOC_TO_TCON_AUX_N — C4651 0.1UF 01005 6.3V 20% X5R-CERM GND_VOID=TRUE — LPDP_AUX_EMI_N — L4642 — LPDP_AUX_EMI_CONN_N OUT 42 79 80

R4641 100K 5% 1/32W MF 01005

R4643 100K 5% 1/32W MF 01005

L4612
3.25-OHM-0.1A-2.4GHZ
TAM0605-ASM-COMBO
CRITICAL

8 IN LPDP_SOC_TO_TCON_DATA_N<0> — C4643 0.1UF 01005 6.3V 20% X5R-CERM — LPDP_DATA_EMI_N<0> — LPDP_DATA_EMI_CONN_N<0> OUT 42 43

8 IN LPDP_SOC_TO_TCON_DATA_P<0> — C4642 0.1UF 01005 6.3V 20% X5R-CERM — LPDP_DATA_EMI_P<0> — LPDP_DATA_EMI_CONN_P<0> OUT 42 43

OMIT_TABLE

L4622
3.25-OHM-0.1A-2.4GHZ
TAM0605-ASM-COMBO
CRITICAL

8 IN LPDP_SOC_TO_TCON_DATA_N<1> — C4644 0.1UF 01005 6.3V 20% X5R-CERM 43 — LPDP_DATA_EMI_N<1> — LPDP_DATA_EMI_CONN_N<1> OUT 42

8 IN LPDP_SOC_TO_TCON_DATA_P<1> — C4645 0.1UF 01005 6.3V 20% X5R-CERM 43 — LPDP_DATA_EMI_P<1> — LPDP_DATA_EMI_CONN_P<1> OUT 42

OMIT_TABLE

L4632
3.25-OHM-0.1A-2.4GHZ
TAM0605-ASM-COMBO
CRITICAL

8 IN LPDP_SOC_TO_TCON_DATA_N<2> — C4646 0.1UF 01005 6.3V 20% X5R-CERM — LPDP_DATA_EMI_N<2> — LPDP_DATA_EMI_CONN_N<2> OUT 42 43

8 IN LPDP_SOC_TO_TCON_DATA_P<2> — C4647 0.1UF 01005 6.3V 20% X5R-CERM — LPDP_DATA_EMI_P<2> — LPDP_DATA_EMI_CONN_P<2> OUT 42 43

OMIT_TABLE

L4602
3.25-OHM-0.1A-2.4GHZ
TAM0605-ASM-COMBO
CRITICAL

8 IN LPDP_SOC_TO_TCON_DATA_N<3> — C4648 0.1UF 01005 6.3V 20% X5R-CERM 43 — LPDP_DATA_EMI_N<3> — LPDP_DATA_EMI_CONN_N<3> OUT 42

8 IN LPDP_SOC_TO_TCON_DATA_P<3> — C4649 0.1UF 01005 6.3V 20% X5R-CERM 43 — LPDP_DATA_EMI_P<3> — LPDP_DATA_EMI_CONN_P<3> OUT 42

OMIT_TABLE

80 42 IN LPDP_HPD_EMI_1V8 — R4690 49.9K 1% 1/32W MF 01005 — LPDP_TCON_TO_SOC_HPD OUT 8

R4691 100K 5% 1/32W MF 01005

L4680
FERR-600OHM-25%-0.5A-0.34OHM
0402

84 NC_PPLED_OUT — NC_PPLED_BACK_REG 42 79 80

PACK_IGNORE=TRUE
PACK_OPTION=J517,J518

C4680 12PF 2% 50V C0BM 0201

C4681 220PF 2% 50V C0G 0201

PACK_IGNORE=TRUE
PACK_OPTION=J517,J518

PACK_IGNORE=TRUE
PACK_OPTION=J517,J518

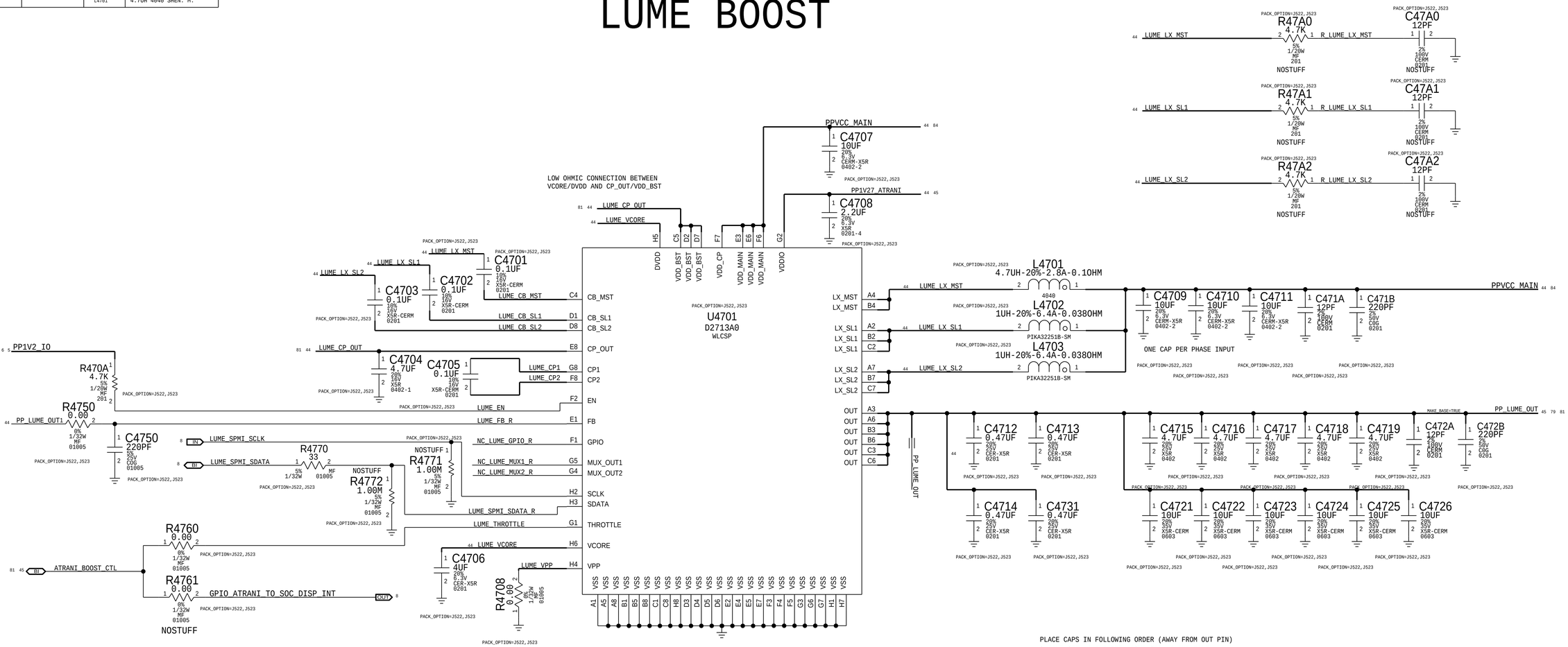
BOM_COST_GROUP=DISPLAY

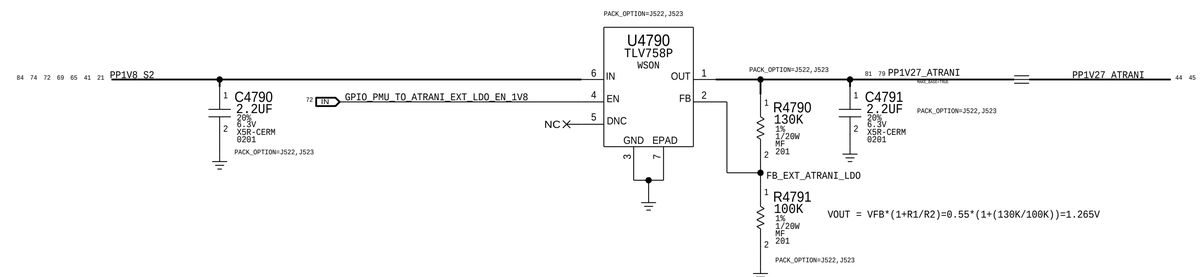
PAGE TITLE

DISPLAY: EDP SUPPORT

PART NUMBER	ALTERNATE FOR PART NUMBER	BOM OPTION	REF DES	COMMENTS:
152S01294	152S01127		L4701	4.7UH 4040 SHEN. M.

LUME BOOST





BOM_COST_GROUP=DISPLAY

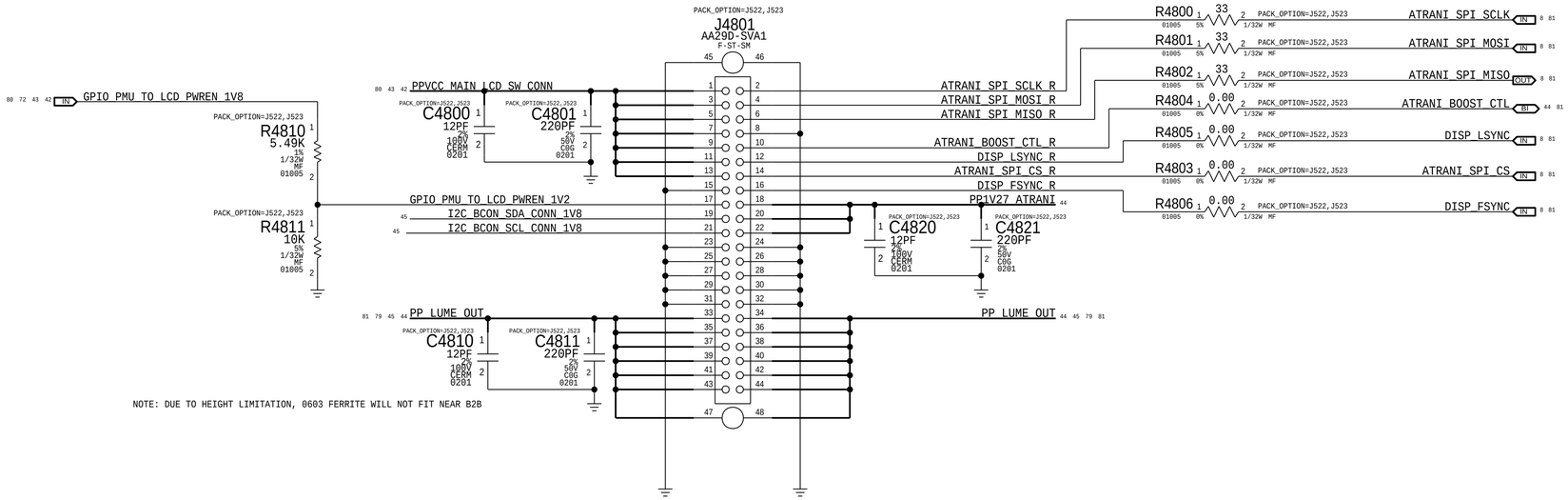
SYNC_MASTER=J518_MLB_4.0.2 SYNC_DATE=08/20/2020

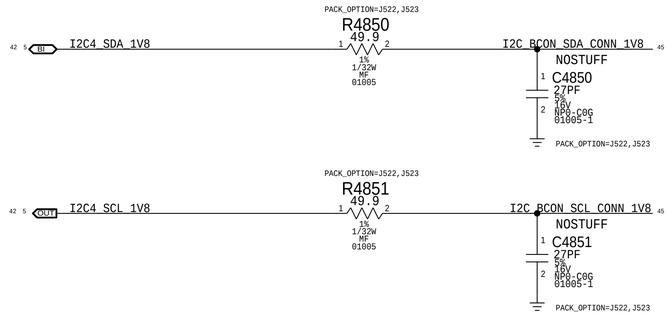
PAGE TITLE

2DBL: LUME BOOST

BCON B2B CONN

APN:516S00222
MATING APN: 516S00223





BOM_COST_GROUP=DISPLAY

SYNC_MASTER=J518_MLB_4.0.2 SYNC_DATE=08/20/2020

PAGE TITLE

2DBL: B2B CONN

BT CORE0

PART#	QTY	DESCRIPTION	REFERENCE DESIGNATOR(S)	BOM OPTION
131S0372	1	CAP,0.7PF,+-0.05PF,16V,01005	C511_W	J523
152S00427	1	IND,FILM,2.0NH,+/-0.1NH,01005	R512_W	J523

BT CORE1

PART#	QTY	DESCRIPTION	REFERENCE DESIGNATOR(S)	BOM OPTION
131S0372	1	CAP,0.7PF,+-0.05PF,16V,01005	C542_W	J523
152S00420	1	IND,FILM,1.3NH,+/-0.1NH,01005	R543_W	J523

RFFE

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

2G CORE0

PART#	QTY	DESCRIPTION	REFERENCE DESIGNATOR(S)	BOM OPTION
152S00506	1	IND,FILM,3.2NH,+/-0.1NH,01005	C520_W	J523
131S0648	1	CAP,0.3PF,+/-0.05PF,16V,01005	C466_W	J523
152S01247	1	IND,FILM,1NH,+/-0.05NH,01005	R532_W	J523

2G CORE1

PART#	QTY	DESCRIPTION	REFERENCE DESIGNATOR(S)	BOM OPTION
152S01247	1	IND,FILM,1NH,+/-0.05NH,01005	R563_W	J523
152S00506	1	IND,FILM,3.2NH,+/-0.1NH,01005	C552_W	J523
152S01247	1	IND,FILM,1NH,+/-0.05NH,01005	R473_W	J523
131S0648	1	CAP,0.3PF,+/-0.05PF,16V,01005	C476_W	J523

5G CORE0

PART#	QTY	DESCRIPTION	REFERENCE DESIGNATOR(S)	BOM OPTION
152S00497	1	IND,FILM,0.5NH,+/-0.1NH,01005	R235_W	J523
131S0648	1	CAP,CER,C0G,0.3PF,01005,HQ	C228_W	J523
131S0893	1	CAP,CER,C0G,0.2PF,01005,HQ	C206_W	J523
152S00493	1	IND,FILM,0.9NH,SHQ,01005	R202_W	J523
131S0648	1	CAP,CER,C0G,0.3PF,01005	C205_W	J523
131S0648	1	CAP,CER,C0G,0.3PF,01005	C371_W	J523
152S00494	1	IND,FILM,0.8NH,SHQ,01005	R373_W	J523
131S00030	1	CAP,CER,C0G,0.4PF,01005	C376_W	J523
131S0893	1	CAP,CER,C0G,0.2PF,01005,HQ	C312_W	J523
152S00497	1	IND,FILM,0.5NH,+/-0.1NH,01005	R313_W	J523
131S0893	1	CAP,CER,C0G,0.2PF,01005,HQ	C310_W	J523
152S00496	1	IND,FILM,0.6NH,SHQ,01005	R312_W	J523
131S0648	1	CAP,CER,C0G,0.3PF,01005	C311_W	J523

5G CORE1

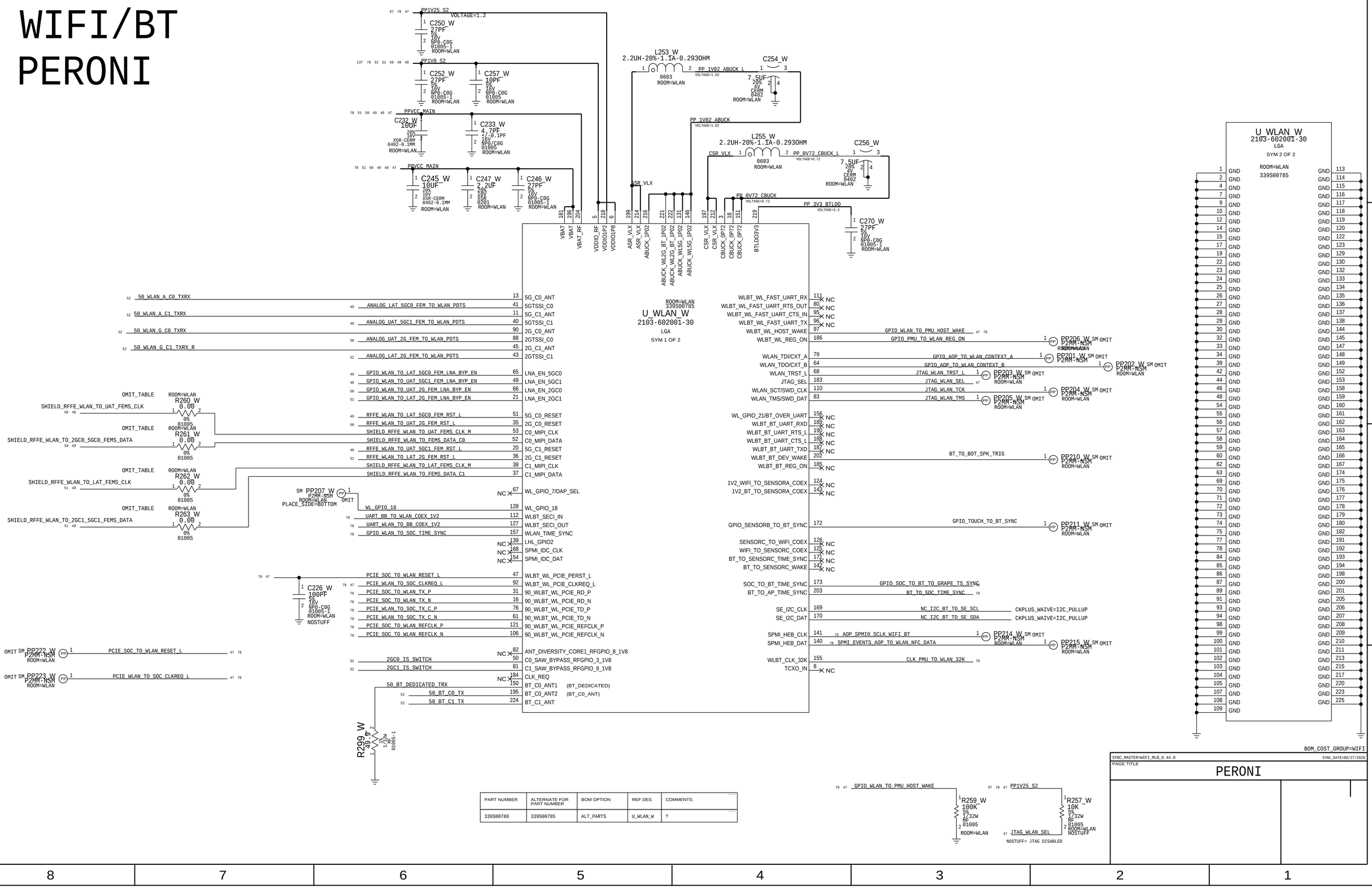
PART#	QTY	DESCRIPTION	REFERENCE DESIGNATOR(S)	BOM OPTION
131S0893	1	CAP,CER,C0G,0.2PF,01005,HQ	C202_W	J523
152S01247	1	IND,FILM,1NH,SHQ,01005	R233_W	J523
131S00030	1	CAP,CER,C0G,0.4PF,01005	C201_W	J523
131S0648	1	CAP,CER,C0G,0.3PF,01005	C361_W	J523
152S01247	1	IND,FILM,1NH,SHQ,01005	R363_W	J523
131S0648	1	CAP,CER,C0G,0.3PF,01005	C362_W	J523
131S0893	1	CAP,CER,C0G,0.2PF,01005,HQ	C387_W	J523
152S00494	1	IND,FILM,0.8NH,+/-0.1NH,01005	R365_W	J523
131S0893	1	CAP,CER,C0G,0.2PF,01005,HQ	C388_W	J523

SYNC_MASTER=WIFI_MLB_0.**80**_COST_GROUP=WIFI SYNC_DATE=08/27/2020

PAGE TITLE

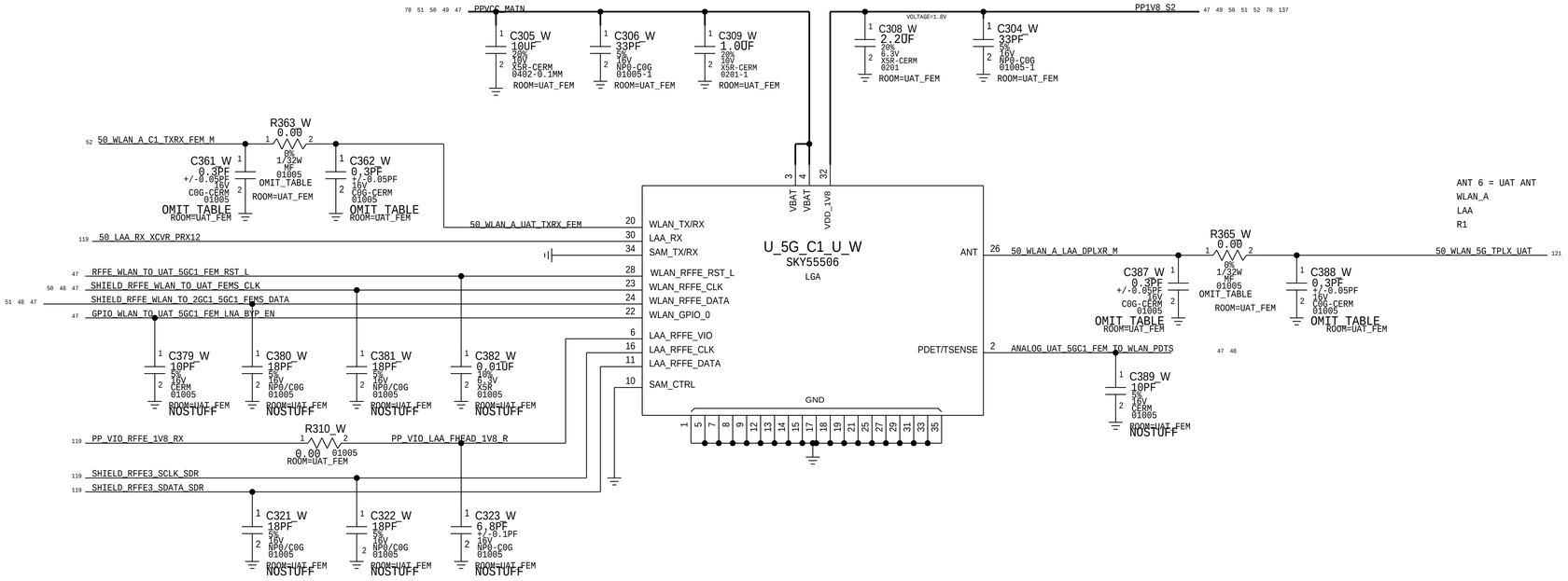
BOM Option

WIFI/BT
PERONI



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

J523 UAT 5GHZ CORE1 RFEM



OMIT SM PP209_W P2MM-NSM ROOM=WLAN (PP) 1 ANALOG_UAT_5GC1_FEM_TO_WLAN_PDTS 47 48

OMIT SM PP218_W P2MM-NSM ROOM=WLAN (PP) 1 SHIELD_RFFE_WLAN_TO_UAT_FEMS_CLK 47 48 50

OMIT SM PP219_W P2MM-NSM ROOM=WLAN (PP) 1 SHIELD_RFFE_WLAN_TO_2GC1_5GC1_FEMS_DATA 47 48 51

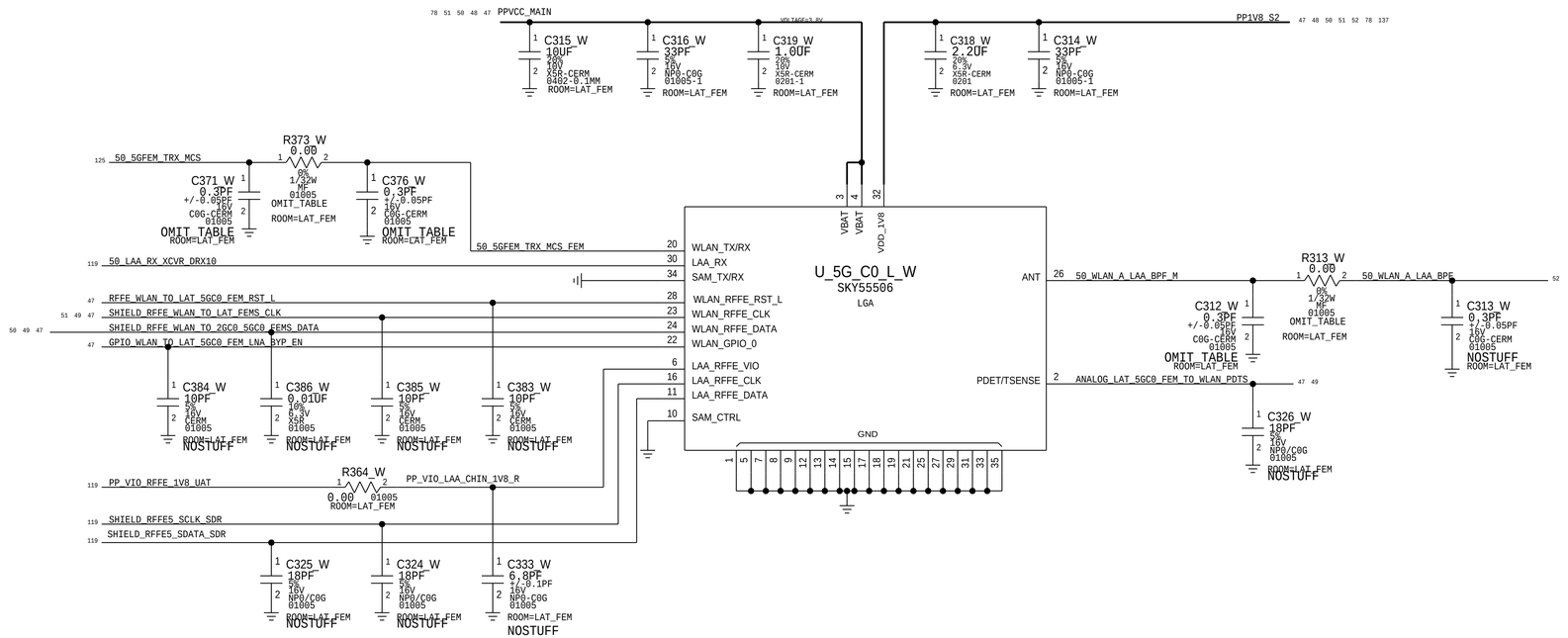
BOM_COST_GROUP=WIFI

SYNC_MASTER=WIFI_MLB_0.44.0 SYNC_DATE=08/27/2020

PAGE TITLE

J523 5G rFEM (UAT)

J523 LAT 5GHZ CORE0 RFEM



OMIT_SM PP208_W PZMM-NSM ROOM=WLAN — 1 — ANALOG_LAT_5GC0_FEM_TO_WLAN_PDTS — 47 49

OMIT_SM PP220_W PZMM-NSM ROOM=WLAN — 1 — SHIELD_RFFE_WLAN_TO_LAT_FEMS_CLK — 47 49 51

OMIT_SM PP221_W PZMM-NSM ROOM=WLAN — 1 — SHIELD_RFFE_WLAN_TO_2GC0_5GC0_FEMS_DATA — 47 49 50

BOM_COST_GROUP=WIFI

SYNC_MASTER=WIFI_MLB_0.44.0 SYNC_DATE=08/27/2020

PAGE TITLE

J523 5G rFEM (LAT)

UAT 2.4 GHZ RFEM

OMIT_SM PP216_W P2MM-NSM ROOM=WLAN
PP1 1
ANALOG_UAT_2G_FEM_TO_WLAN_PDTS 47 50

78 51 49 48 47 PPVCC_MAIN
C405_W 10UF ±20% 10V X5R-CERM 0402-0.1MM ROOM=UAT_FEM
C406_W 33PF ±5% 10V NP0-C0G 01005-1 ROOM=UAT_FEM
C407_W 1.0UF ±20% 10V X5R-CERM 0201-1 ROOM=UAT_FEM
C408_W 2.2UF ±20% 6.3V X5R-CERM 0201 ROOM=UAT_FEM
C404_W 33PF ±5% 10V NP0-C0G 01005-1 ROOM=UAT_FEM
VOLTAGE=1.8V
PP1V8_S2 47 48 49 51 52 78 137

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
49 47 SHIELD_RFFE_WLAN_TO_2GC0_5GC0_FEMS_DATA
47 GPIO_WLAN_TO_UAT_2G_FEM_LNA_BYP_EN
C479_W 10PF ±5% 16V CERM 01005 ROOM=UAT_FEM NOSTUFF
C480_W 10PF ±5% 16V CERM 01005 ROOM=UAT_FEM NOSTUFF
C481_W 10PF ±5% 16V CERM 01005 ROOM=UAT_FEM NOSTUFF
C482_W 10PF ±5% 16V CERM 01005 ROOM=UAT_FEM NOSTUFF

44 VBAT
45 VBAT
42 VDD_1V8

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 23 24 25 26 27 29 30 31 32 34 35 36 37 38 39 43 46 49

ROOM=UAT_FEM
35350415
U_2G_U_W
MDFEGYFB-132
LGA

ANT 28 50_WLAN_G_BT_ANT4_NPLXR1
PDET/TSENSE 8 ANALOG_UAT_2G_FEM_TO_WLAN_PDTS 47 50

C491_W 10PF ±5% 16V CERM 01005 NOSTUFF ROOM=UAT_FEM

R496_W 0.00 ±0% 1/32W MF 01005 ROOM=UAT_FEM
C499_W 0.3PF ±0.05PF 16V C0G-CERM 01005 NOSTUFF ROOM=UAT_FEM
50_TRX_WLAN24_TO_ANT4A 120
C498_W 0.3PF ±0.05PF 16V C0G-CERM 01005 NOSTUFF ROOM=UAT_FEM

BOM_COST_GROUP=WIFI
SYNC_MASTER=WIFI_MLB_0.44.0 SYNC_DATE=08/27/2020
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
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
VOLTAGE=1.8V PP1V8_S2 47 48 49 50 52 78 137

125 50_2GFEM_TRX_MCS
R473_W 0.00 1/32W MF 01005 OMIT_TABLE ROOM=LAT_FEM
50_WLAN_G_LAT_TXRX_FEM
C471_W 0.3PF +/-0.05PF 16V C0G-CERM 01005 NOSTUFF ROOM=LAT_FEM
C476_W 0.3PF +/-0.05PF 16V C0G-CERM 01005 OMIT_TABLE ROOM=LAT_FEM

47 RFFE_WLAN_TO_LAT_2G_FEM_RST_L
49 47 SHIELD_RFFE_WLAN_TO_LAT_FEMS_CLK
48 47 SHIELD_RFFE_WLAN_TO_2GC1_5GC1_FEMS_DATA
47 GPIO_WLAN_TO_LAT_2G_FEM_LNA_BYP_EN
C483_W 10PF 5% 16V CERM 01005 ROOM=LAT_FEM NOSTUFF
C484_W 10PF 5% 16V CERM 01005 ROOM=LAT_FEM NOSTUFF
C485_W 10PF 5% 16V CERM 01005 ROOM=LAT_FEM NOSTUFF
C486_W 10PF 5% 16V CERM 01005 ROOM=LAT_FEM NOSTUFF

44 VBAT
45 VBAT
42 VDD_1V8

U_2G_L_W MDFEGYFB-132 LGA ROOM=LAT_FEM 353S02415

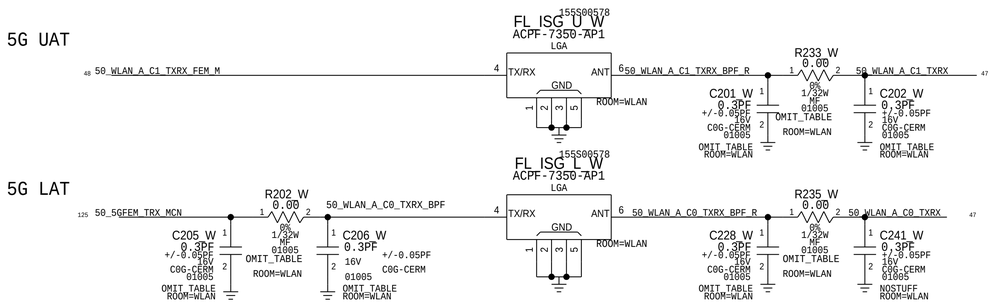
22 WLAN_TX/RX
48 WLAN_RFFE_RST*
40 WLAN_RFFE_CLK
47 WLAN_RFFE_DATA
33 WLAN_GPIO_0
41 USID
GND
1 2 3 4 5 6 7 9 10 11 12 13 14 15 16 17 18 19 20 21 23 24 25 26 27 28 30 31 32 34 35 36 37 38 39 43 46 49

ANT 28 50_WLAN_G_BT_LAT
R466_W 0.00 1/32W MF 01005 ROOM=LAT_FEM
50_TRX_WLAN24_TO_ANT2A 122
C489_W 0.3PF +/-0.05PF 16V C0G-CERM 01005 NOSTUFF ROOM=LAT_FEM
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
C492_W 10PF 5% 16V CERM 01005 NOSTUFF ROOM=LAT_FEM

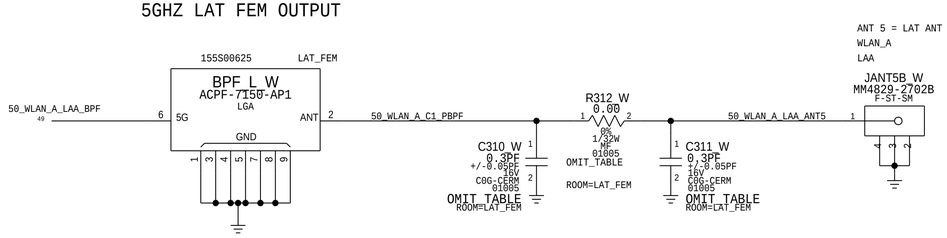
BOM_COST_GROUP=WIFI
SYNC_MASTER=WIFI_MLB_0.44.0 SYNC_DATE=08/27/2020
PAGE TITLE
2G4 rFEM (LAT)

J523 FRONT END

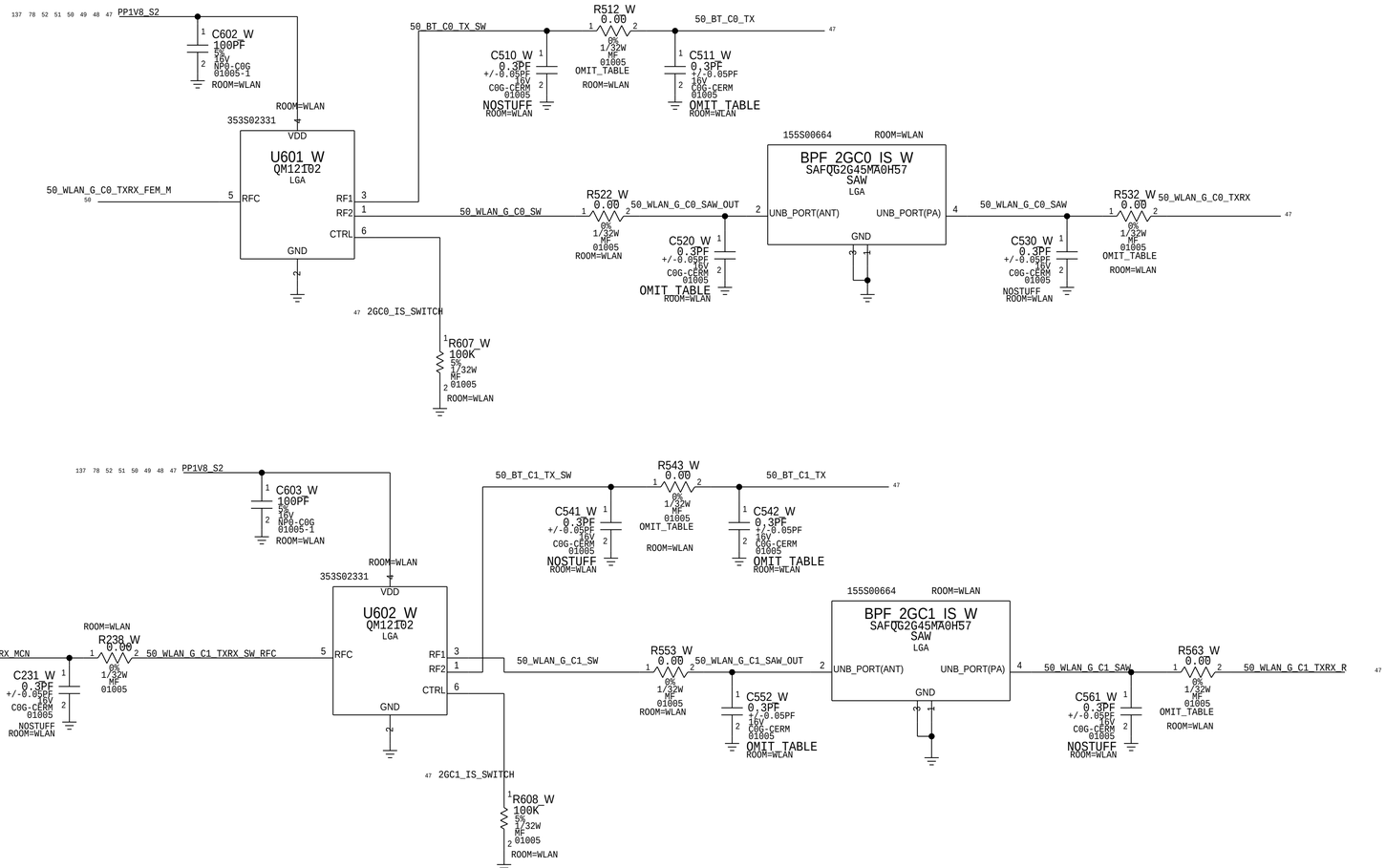
5G INTERSTATE BPFS



5GHZ LAT FEM OUTPUT

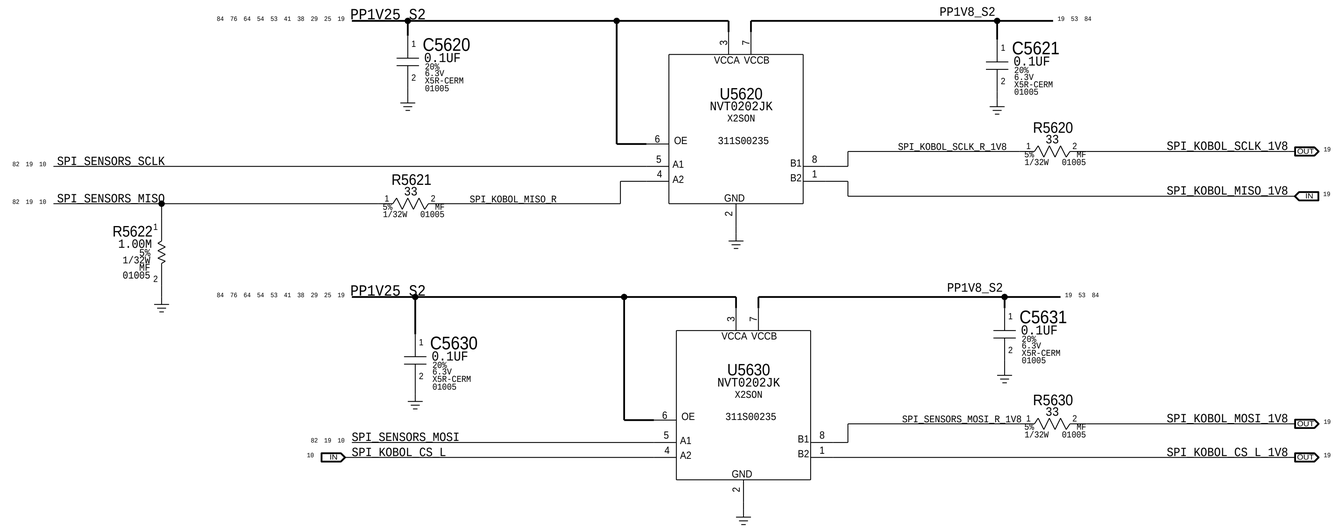


2G INTERSTAGE



SYNC_MASTER=WIFI_MLB_0.80	SYNC_DATE=08/27/2020
PAGE TITLE	
J523 Front End	

KOBOL VOLTAGE TRANSLATION



BOM_COST_GROUP=SENSORS

SYNC_MASTER=J518_MLB_4.0.2

SYNC_DATE=08/20/2020

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

AOP_TO_LDCM_DATA0_PDM

LDCM_AMP_ATN

LDCM_VSTIM_DECOUPLED

LDCM_VSTIM_FB

LDCM_VSTIM_IN

LDCM_VSTIM_POS

PP1V8_LDCM

PP1V25_S2

PP3V3_S2_ACE_PARROT

ANA_LDCM_ZREF

ANA_LDCM_TRACE1

ANA_LDCM_TRACE2

ANA_LDCM_DEBUG

LDCM_DEBUG_IN

LDCM_DEBUG_IN_R

LDCM_TIA_IN

LDCM_TIA_IOUT_POS

LDCM_VSTIM_POS

LDCM_SELF_TEST_R

GPIO_PMU_TO_LDCM_MUX_SEL0

GPIO_PMU_TO_LDCM_MUX_SEL1

GPIO_LDCM_TO_AOP_INVALID

ANA_ACE2LDCM_DEBUG4

ANA_ACE2LDCM_DEBUG5

ANA_LDCM_DEBUG

FAN_LDCM_SEL

CH.1, DATA AFTER RISING EDGE

CH.2, DATA AFTER FALLING EDGE

CLK_AOP_TO_LDCM_PDM_R

LDCM_TO_AOP_DATA1_PDM_R

CLK_AOP_TO_LDCM_PDM

LDCM_TO_AOP_DATA1_PDM

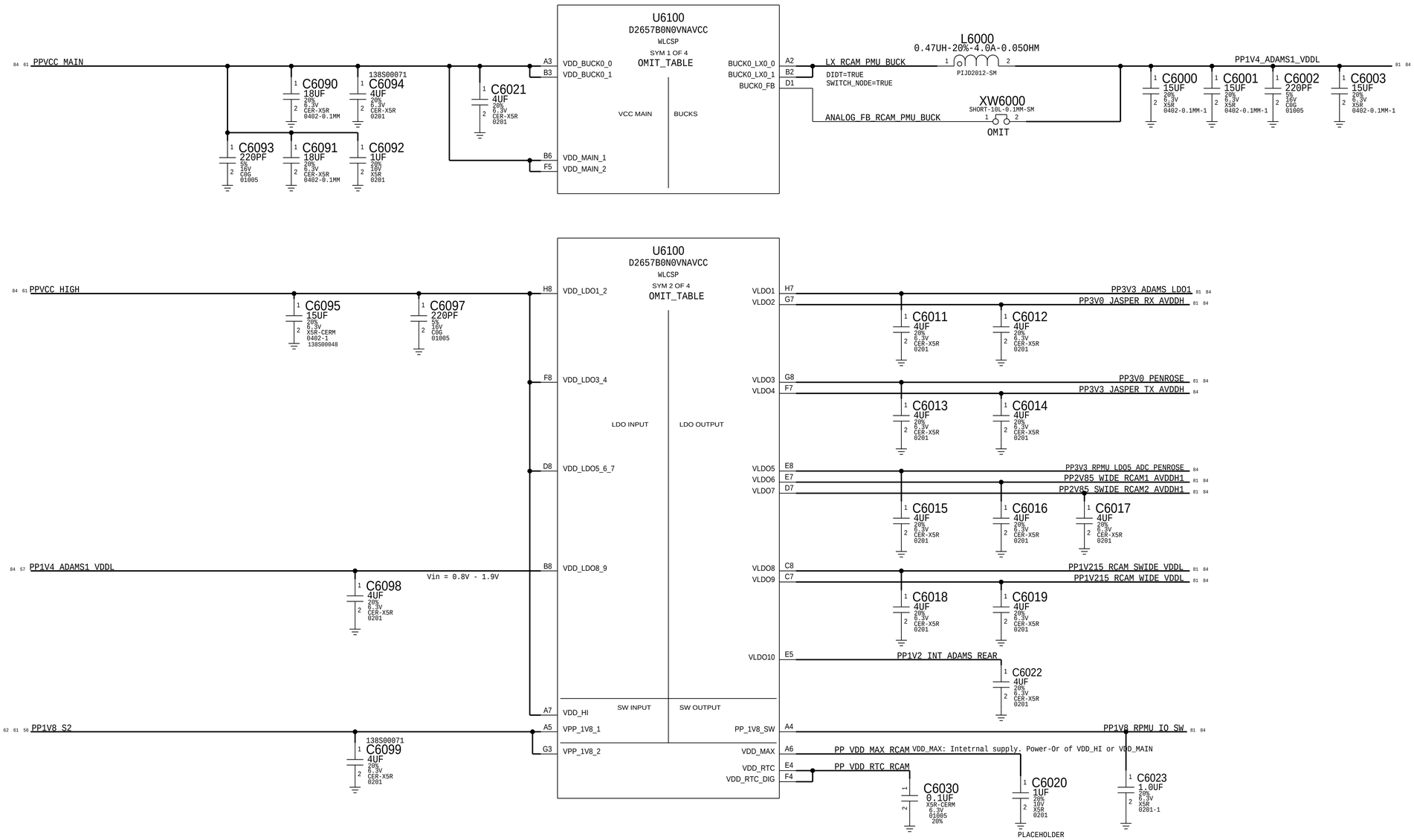
BOM_COST_GROUP=USB-C

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



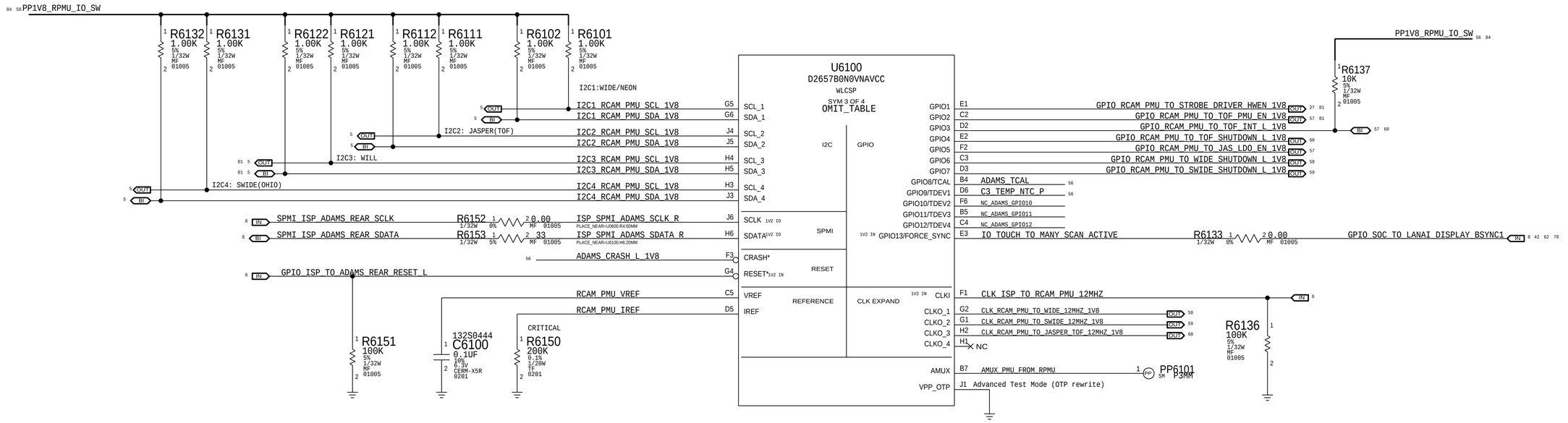
BOM_COST_GROUP=CAMERA

SYNC_MASTER=2018_MLB_A_0.2 SYNC_DATE=08/28/2020

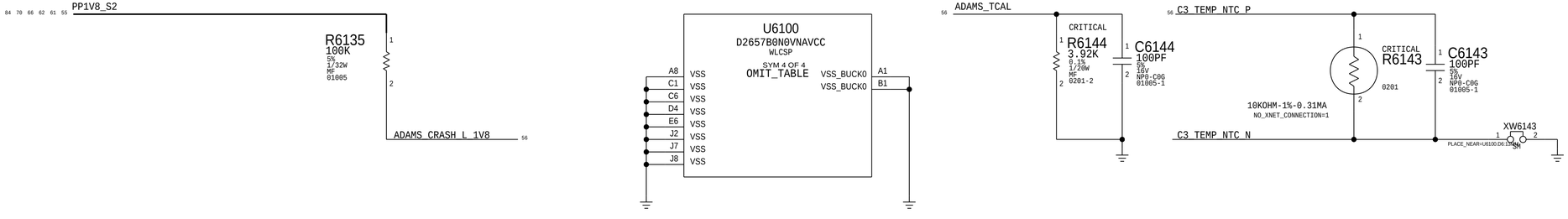
PAGE TITLE

CAMERA: ADAMS REAR POWER (1/2)

RCAM ADAMS PMU IO



PRIVACY MODE - CRASH

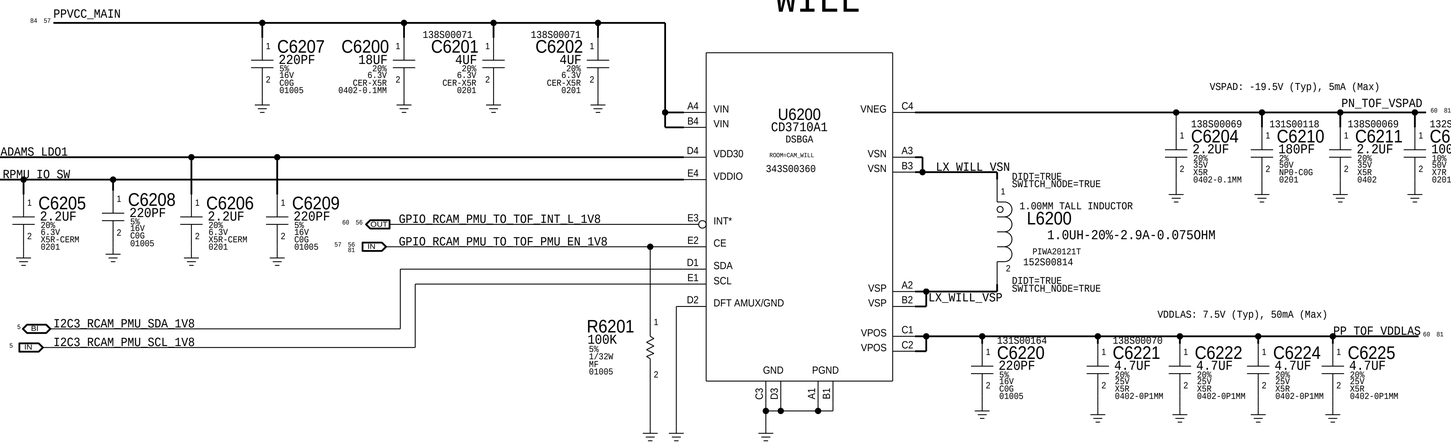


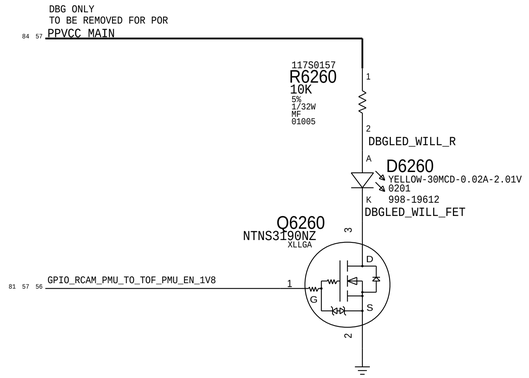
BOM_COST_GROUP=CAMERA

PAGE TITLE

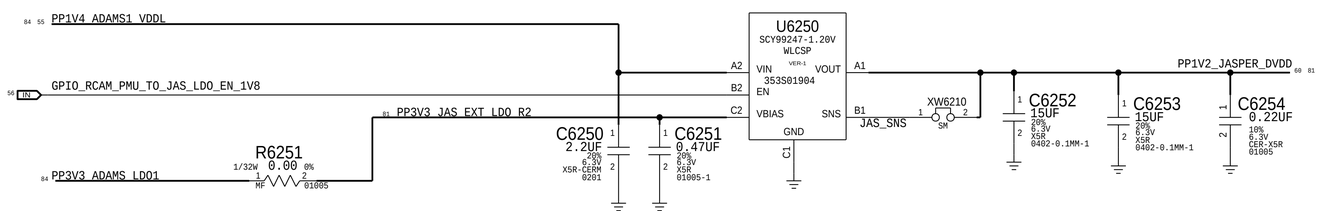
CAMERA: ADAMS REAR IO (2/2)

WILL





JASPER VDDL LDO



BOM_COST_GROUP=JASPER

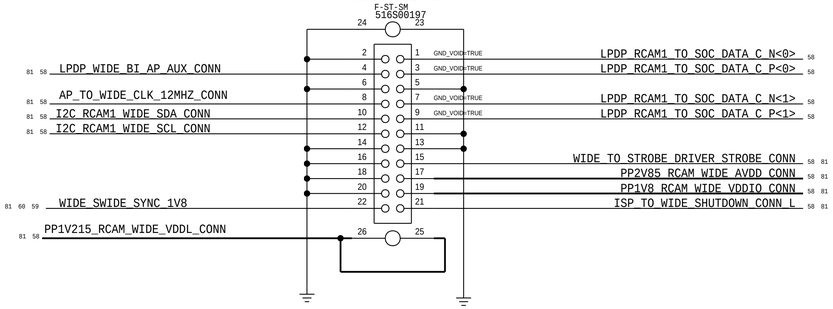
PAGE TITLE

CAMERA: JASPER POWER

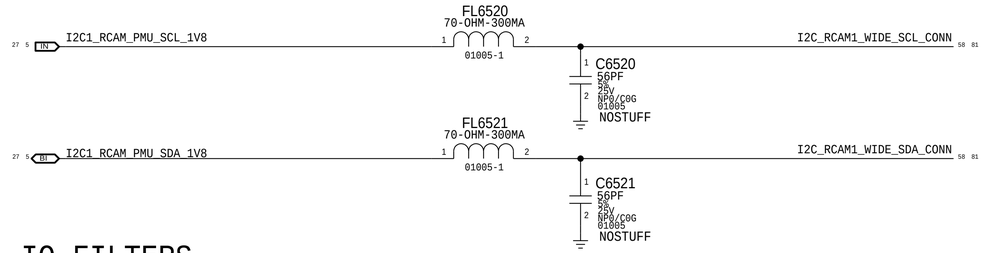
WIDE RCAM1 B2B

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

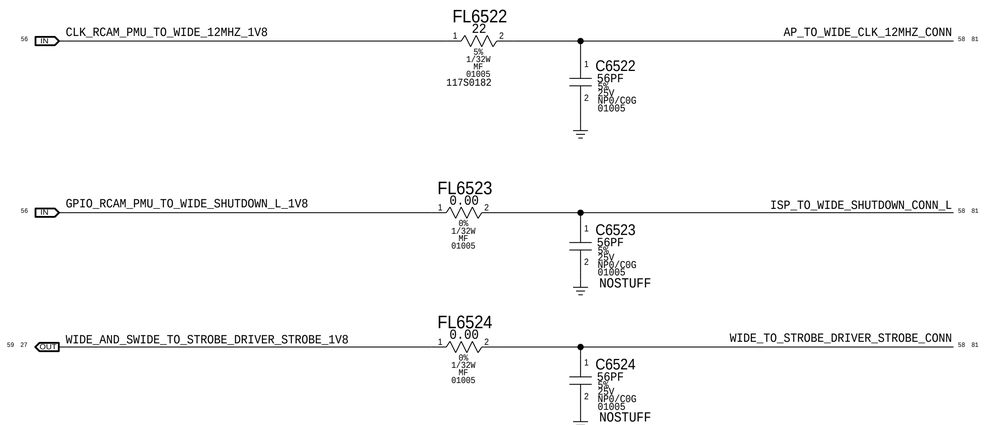
J6500
AA28D-S022VA1
F-ST-SM
516S00197



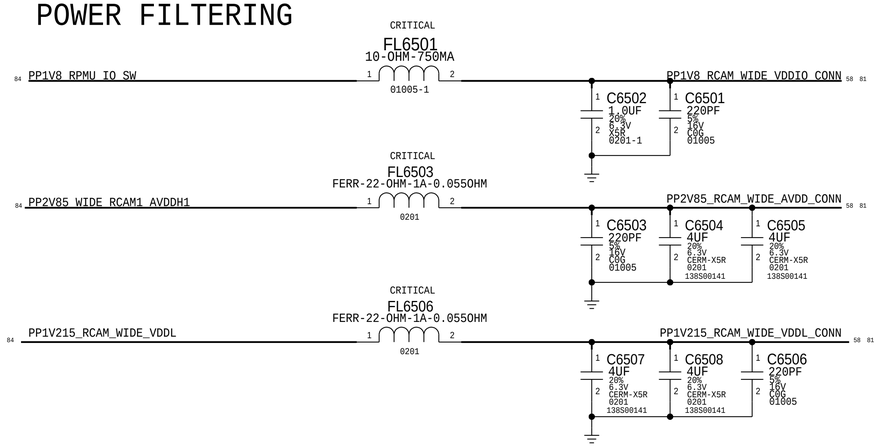
ISP I2C



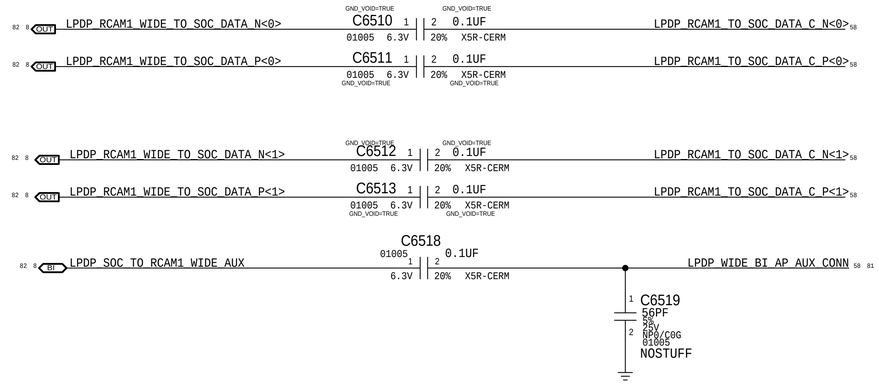
IO FILTERS



POWER FILTERING



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

5 I2C4_RCAM_PMU_SCL_1V8 (IN) → FL6620 70-OHM-300MA 01005-1 → I2C_RCAM2_SWIDE_SCL_CONN 59 81

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

5 I2C4_RCAM_PMU_SDA_1V8 (IN) → FL6621 70-OHM-300MA 01005-1 → I2C_RCAM2_SWIDE_SDA_CONN 59 81

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

IO FILTERS

56 CLK_RCAM_PMU_TO_SWIDE_12MHZ_1V8 (IN) → FL6622 22 5% 1/32W MF 01005 117S0182 → AP_TO_SWIDE_CLK_12MHZ_CONN 59 81

C6622 56PF 5% 25V NP0/C0G 01005

56 GPIO_RCAM_PMU_TO_SWIDE_SHUTDOWN_L_1V8 (IN) → FL6623 0.00 5% 1/32W MF 01005 → ISP_TO_SWIDE_SHUTDOWN_CONN_L 59 81

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

58 27 WIDE_AND_SWIDE_TO_STROBE_DRIVER_STROBE_1V8 (OUT) → FL6624 0.00 5% 1/32W MF 01005 → SWIDE_TO_STROBE_DRIVER_STROBE_CONN 59 81

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

LPDP FILTERS

82 8 LPDP_RCAM2_SWIDE_TO_SOC_DATA_N<0> (OUT) → C6610 (GND_VOID=TRUE) 01005 6.3V GND_VOID=TRUE | 0.1UF (GND_VOID=TRUE) 20% X5R-CERM → LPDP_SWIDE_TO_SOC_DATA_C_N<0> 59

82 8 LPDP_RCAM2_SWIDE_TO_SOC_DATA_P<0> (OUT) → C6611 01005 6.3V GND_VOID=TRUE | 0.1UF GND_VOID=TRUE 20% X5R-CERM → LPDP_SWIDE_TO_SOC_DATA_C_P<0> 59

82 8 LPDP_RCAM2_SWIDE_TO_SOC_DATA_N<1> (OUT) → C6612 (GND_VOID=TRUE) 01005 6.3V GND_VOID=TRUE | 0.1UF (GND_VOID=TRUE) 20% X5R-CERM → LPDP_SWIDE_TO_SOC_DATA_C_N<1> 59

82 8 LPDP_RCAM2_SWIDE_TO_SOC_DATA_P<1> (OUT) → C6613 01005 6.3V GND_VOID=TRUE | 0.1UF GND_VOID=TRUE 20% X5R-CERM → LPDP_SWIDE_TO_SOC_DATA_C_P<1> 59

82 8 LPDP_SOC_TO_RCAM2_SWIDE_AUX (BI) → C6618 01005 6.3V | 0.1UF 20% X5R-CERM → LPDPC_AP_BI_SWIDE_AUX_RX_D2P_CONN 59 81

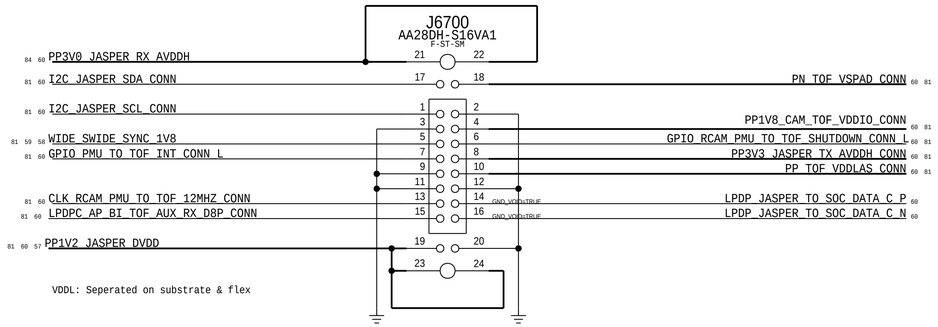
C6619 56PF 5% 25V NP0/C0G 01005 NOSTUFF

BOM_COST_GROUP=CAMERA

PAGE TITLE
CAMERA: B2B RCAM2 SWIDE

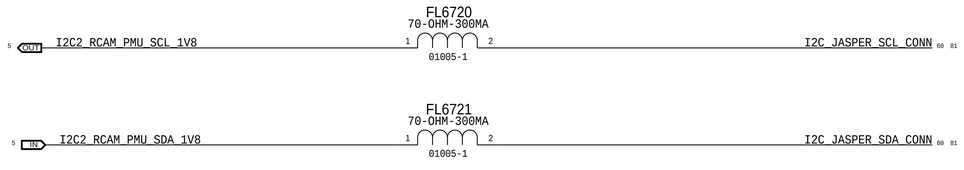
JASPER B2B

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

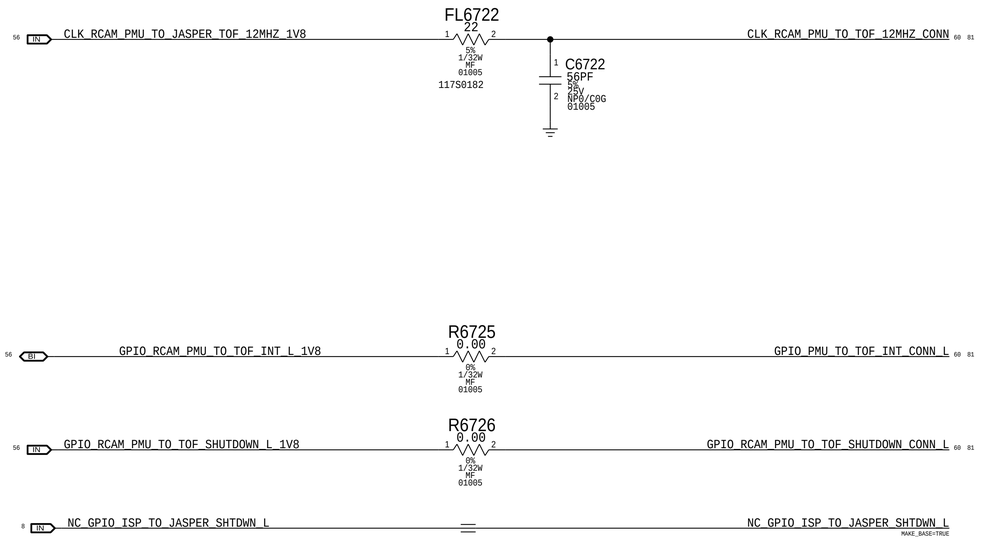


VDDL: Seperated on substrate & flex

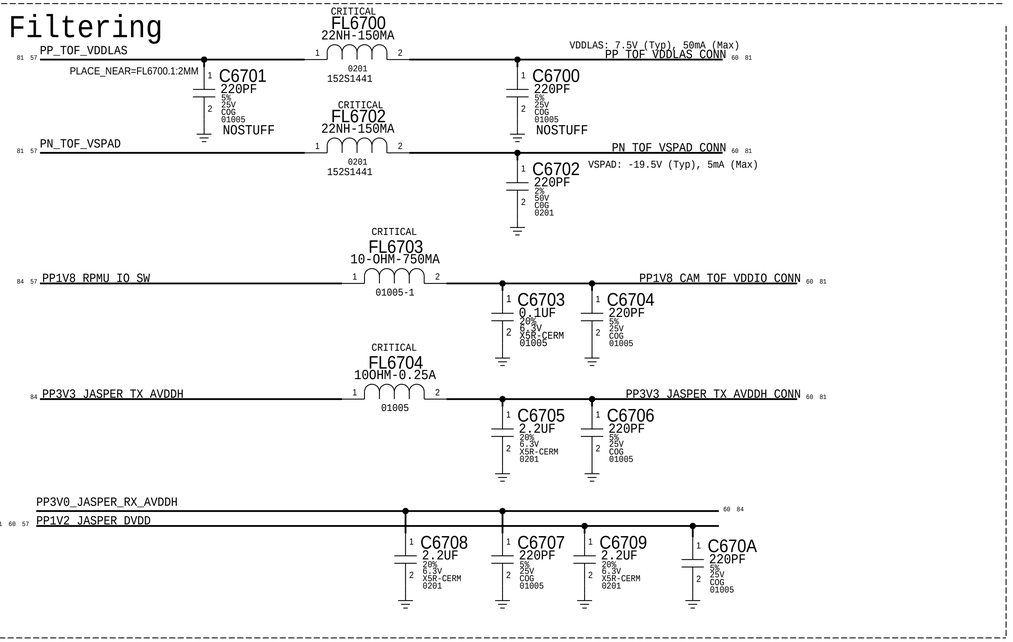
JASPER I2C



IO Filters



Power Filtering



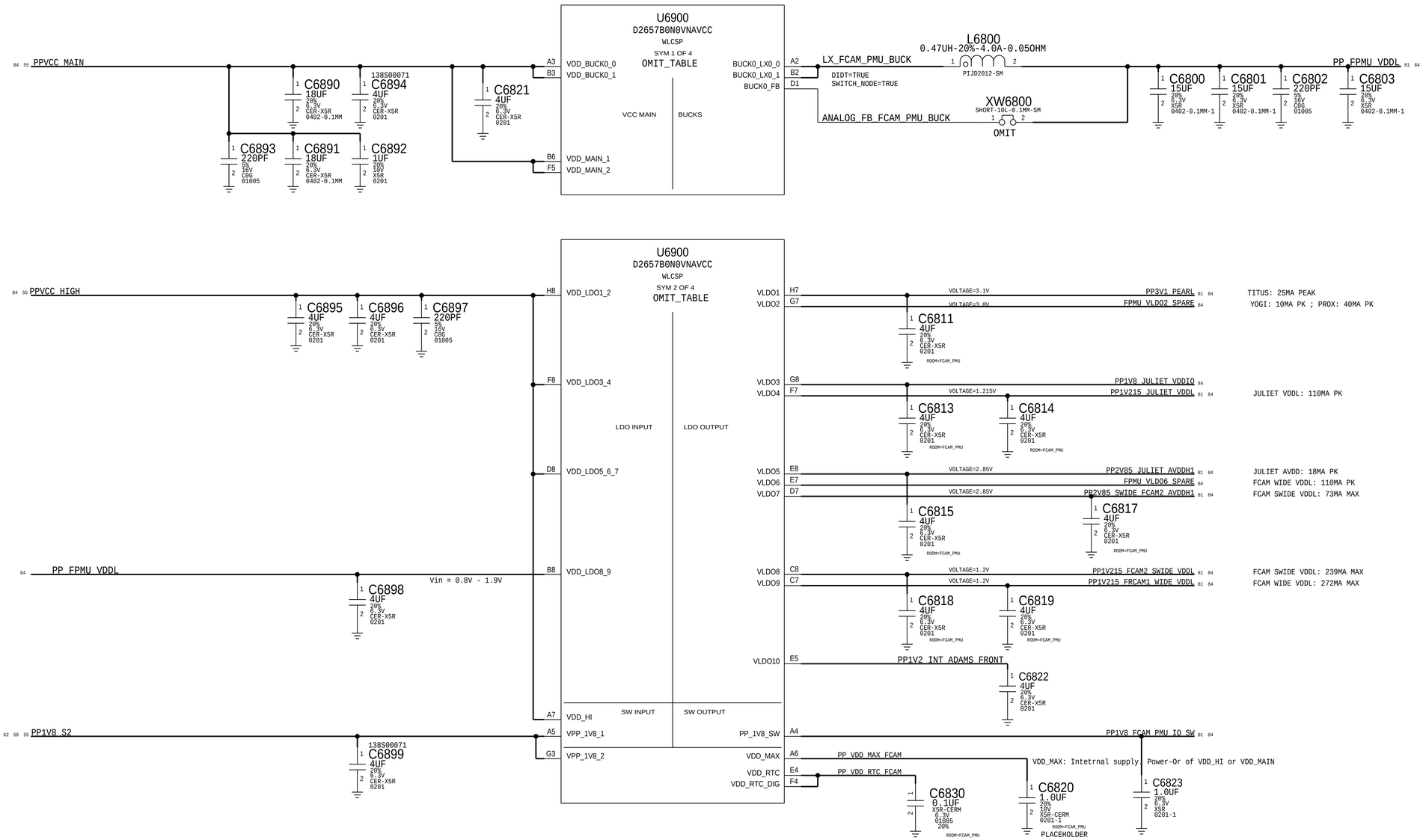
LPDP Filters

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
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	
IREF	D5		
CLKI 1V2 IN	F1	CLK EXPAND	
CLKO_1	G2		
CLKO_2	G1		
CLKO_3	H2		
CLKO_4	H1		
AMUX	B7		
VPP_OTP	J1		

GPIO1	E1	GPIO_FPMU_TO_JULIET_SHUTDOWN_L_1V8
GPIO2	C2	XNC
GPIO3	D2	GPIO_FCAM_PMU_TO_FCAM_SWIDE_SHUTDOWN_L_1V8
GPIO4	E2	GPIO_FCAM_PMU_TO_RIGEL_ENABLE_1V8
GPIO5	F2	GPIO_RIGEL_INT_TO_FPMU_1V8
GPIO6	C3	NC_FPMU_GPIO6
GPIO7	D3	NC_FPMU_GPIO7
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
1V2 IN GPIO13/FORCE_SYNC	E3	IO_FPMU_TOUCH_TO_MANY_SCAN_ACTIVE

R6933 NOSTUFF 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
CLK_FCAM_PMU_TO_SWIDE_12M_1V8
CLK_FCAM_PMU_TO_JULIET_12M_1V8
CLK_FCAM_PMU_TO_RIGEL_12M_1V8
AMUX_PMU_FROM_FPMU
PP6901 P3MM
Advanced Test Mode (OTP rewrite)
TP6901 ORIGINALLY ON AMUX

PRIVACY MODE - CRASH

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

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

ADAMS_FCAM_PMU_CRASH_L_1V8

U6900
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_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

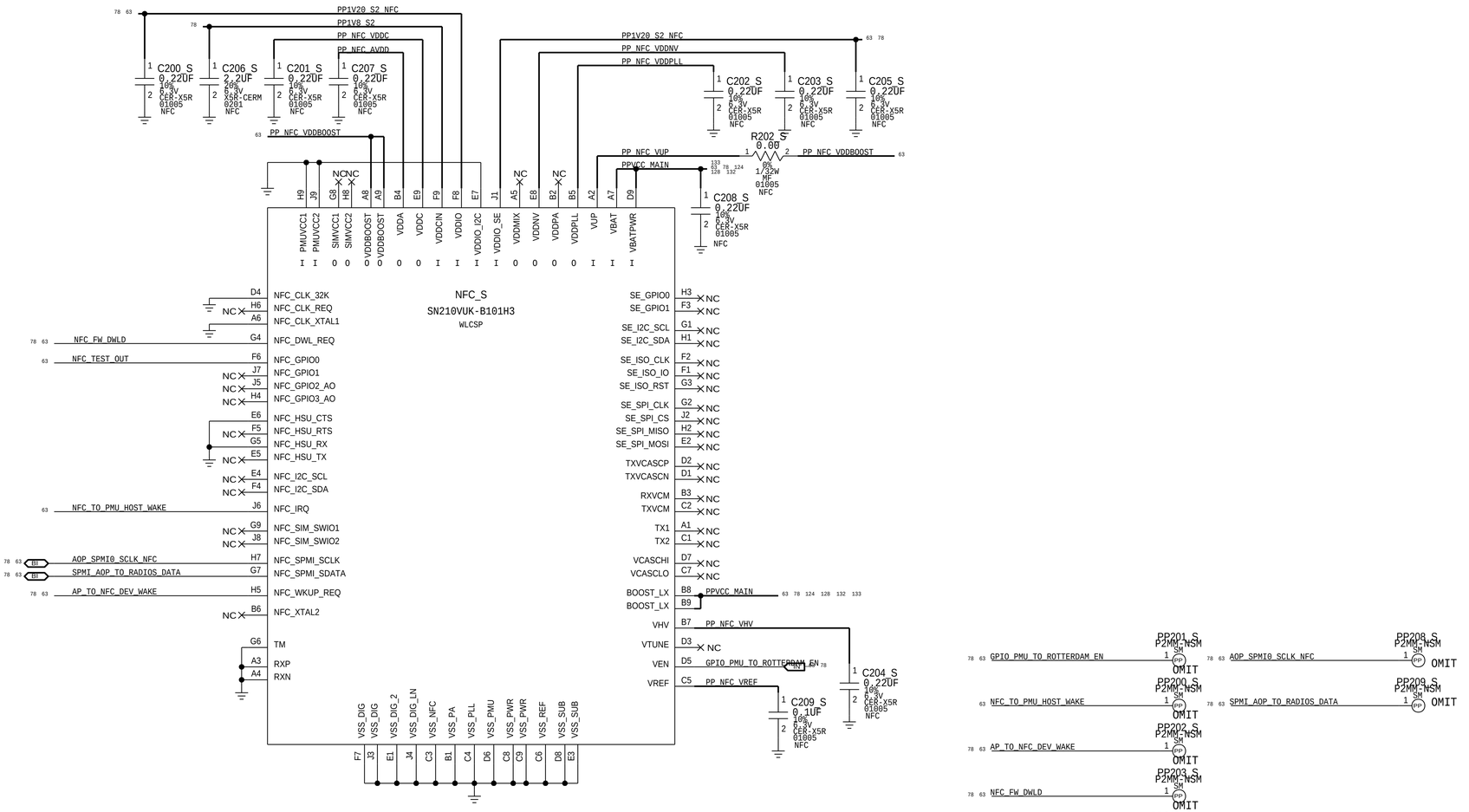
BOM_COST_GROUP=CAMERA

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

STOCKHOLM

NFC CONTROLLER

	NET RULE ASSIGNMENT	
DOMAIN	CONSTRAINT SET	COMMA SEPARATED NET NAMES (WILDCARD SUPPORT EX: DDR*)
P	PWR_300UM	PP_NFC*



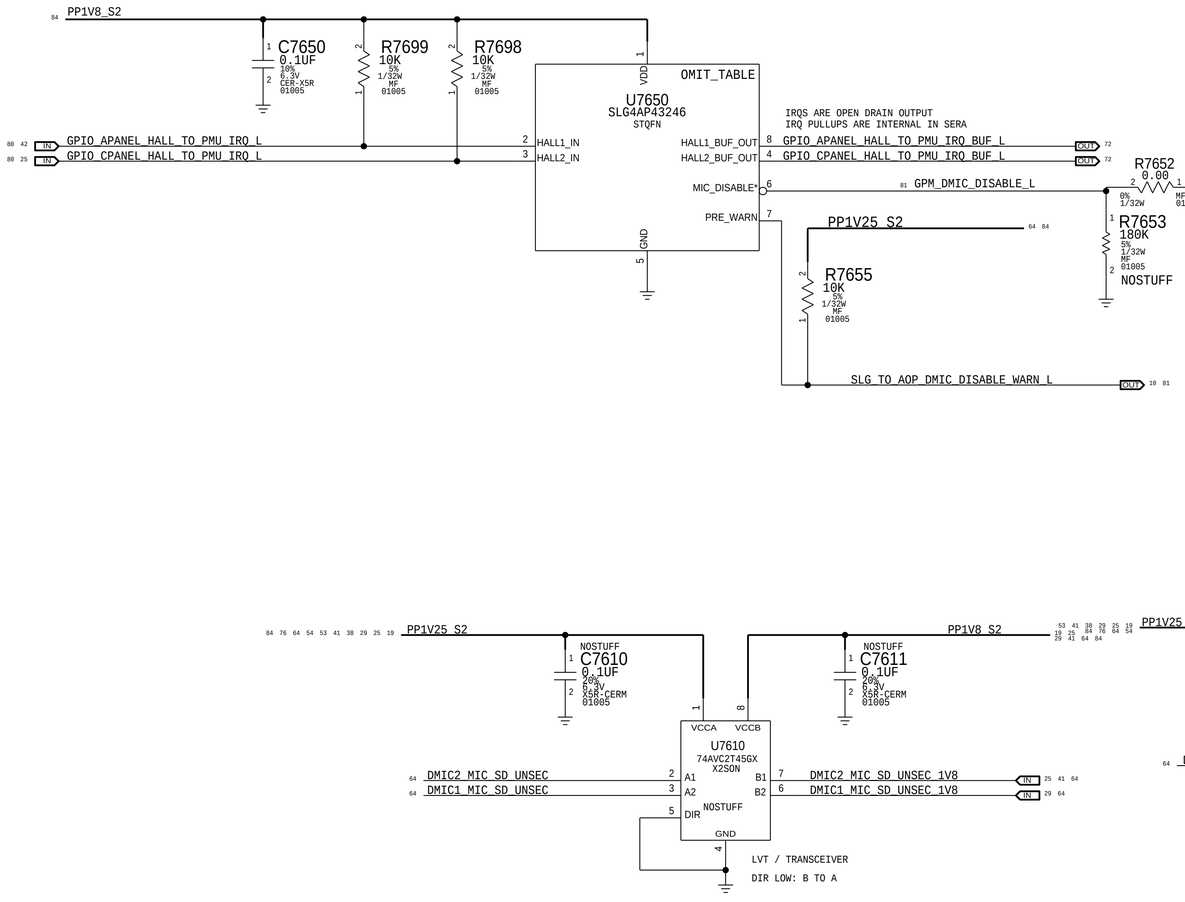
BOM_COST_GROUP=SECURE_ELEMENT

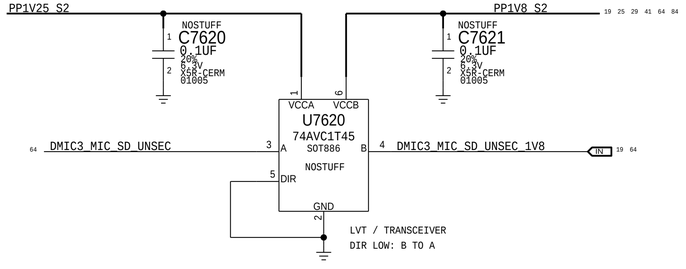
PAGE TITLE

NFC

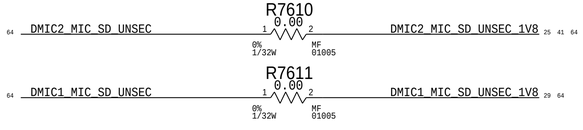
GPM: DMIC GATING

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





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

XW7701 SHORT-10L-0.1MM-SM
84 77 69 PPVCC_MAIN
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
66 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
BUCK4_LX1 D13 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
C7710 15UF 20% 4V CERM 0402
C7711 15UF 20% 4V CERM 0402
C7712 15UF 20% 4V CERM 0402
C7713 15UF 20% 4V CERM 0402
C7714 15UF 20% 4V CERM 0402
C7715 15UF 20% 4V CERM 0402
C771Z 220PF 5% 16V C0G 01005
C7716 15UF 20% 4V CERM 0402
C7717 15UF 20% 4V CERM 0402
C7718 15UF 20% 4V CERM 0402
C7719 15UF 20% 4V CERM 0402
C771A 15UF 20% 4V CERM 0402
C771B 15UF 20% 4V CERM 0402
PP1V06_S2 80 84
PP1V06_S2 11 84

BUCK5_LX_0 H13 BUCK5_LX_1 H14 BUCK5_LX0 APN: 152S01263
L7720 0.47UH-20%-4A-0.024OHM PIKD20121B-SM
BUCK5_FB H11 BUCK5_FB
XW7720 SHORT-10L-0.1MM-SM
BUCK5_VSS_FB H12
C7720 15UF 20% 4V CERM 0402
C7721 15UF 20% 4V CERM 0402
C7722 15UF 20% 4V CERM 0402
C7723 15UF 20% 4V CERM 0402
C7724 15UF 20% 4V CERM 0402
C7725 15UF 20% 4V CERM 0402
C7726 15UF 20% 4V CERM 0402
C772Z 220PF 5% 16V C0G 01005
PPVDD_S1_SRAM 80 82 84
PPVDD_S1_SRAM 14 84

BUCK6_LX_0 M3 BUCK6_LX_1 N3 BUCK6_LX_2 P3 BUCK6_LX0 152S01325
L7730 0.47UH-20%-6.9A-0.022OHM MEMK2520-SM
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
C7730 20UF 20% 6.3V CERM-X5R 0402
C7731 20UF 20% 6.3V CERM-X5R 0402
C7732 20UF 20% 6.3V CERM-X5R 0402
C7733 20UF 20% 6.3V CERM-X5R 0402
C7734 20UF 20% 6.3V CERM-X5R 0402
C7735 20UF 20% 6.3V CERM-X5R 0402
C7736 20UF 20% 6.3V CERM-X5R 0402
C773Z 220PF 5% 16V C0G 01005
C7737 20UF 20% 6.3V CERM-X5R 0402
C7738 20UF 20% 6.3V CERM-X5R 0402
C7739 20UF 20% 6.3V CERM-X5R 0402
C773A 20UF 20% 6.3V CERM-X5R 0402
C773B 20UF 20% 6.3V CERM-X5R 0402
PP2V63_NAND 80 84

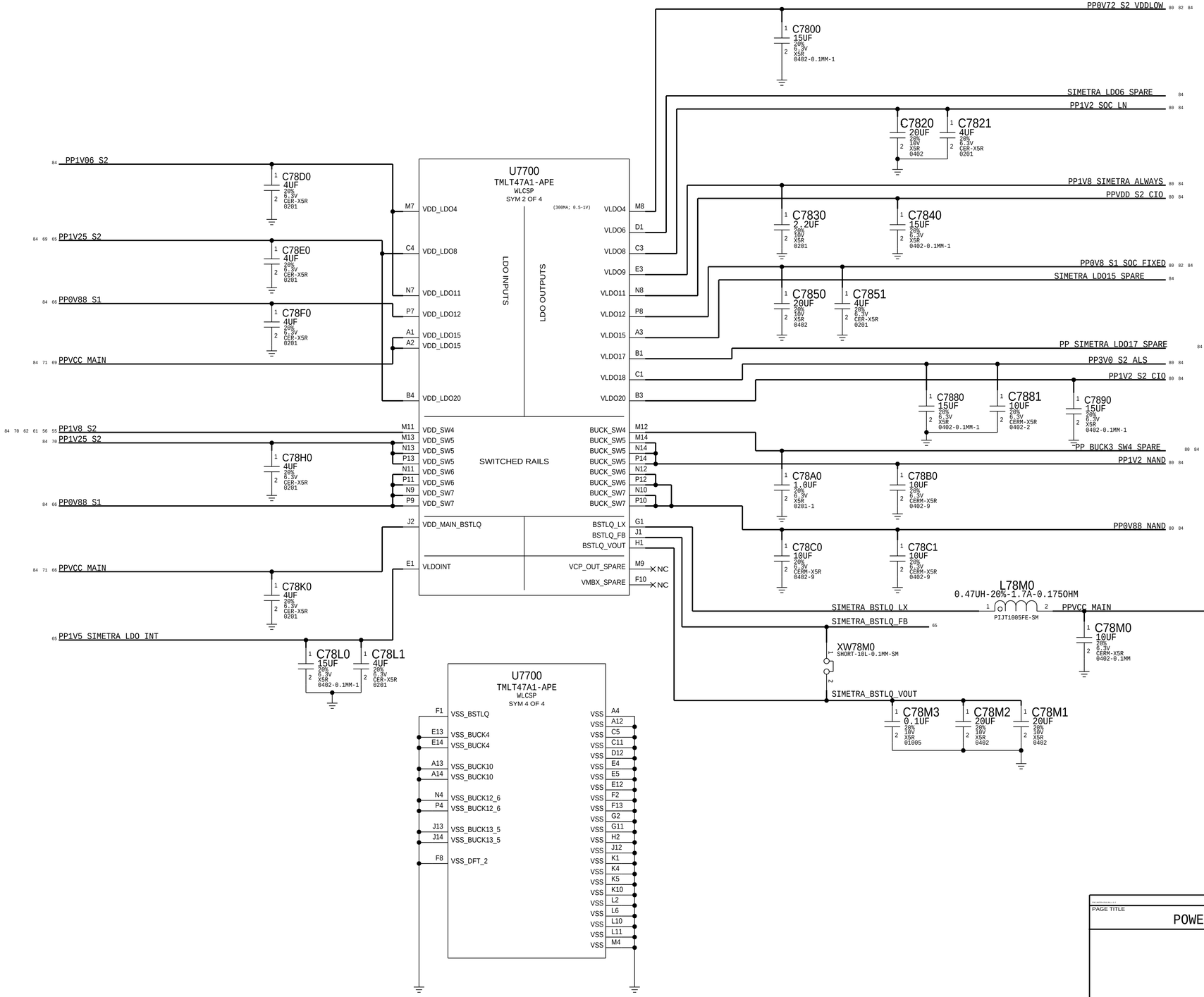
BUCK10_LX_0 B13 BUCK10_LX_1 B14 BUCK10_LX0 APN: 152S01263
L7740 0.47UH-20%-4A-0.024OHM PIKD20121B-SM
BUCK10_FB B11 BUCK10_FB
XW7740 SHORT-10L-0.1MM-SM PLACE_NEAR=U0600:10MM
BUCK10_VSS_FB B12
C7740 15UF 20% 4V CERM 0402
C7741 15UF 20% 4V CERM 0402
C7742 15UF 20% 4V CERM 0402
C7743 15UF 20% 4V CERM 0402
C7744 15UF 20% 4V CERM 0402
C7745 15UF 20% 4V CERM 0402
C774Z 220PF 5% 16V C0G 01005
PPVDD_S1_QL 80 84
PPVDD_S1_QL 11 84

BUCK12_LX_0 N5 BUCK12_LX_1 P5 BUCK12_LX0 APN: 152S01263
L7750 0.47UH-20%-4A-0.024OHM PIKD20121B-SM
BUCK12_FB L5 BUCK12_FB
XW7750 SHORT-10L-0.1MM-SM
BUCK12_VSS_FB M5
C7750 15UF 20% 4V CERM 0402
C7751 15UF 20% 4V CERM 0402
C7752 15UF 20% 4V CERM 0402
C7753 15UF 20% 4V CERM 0402
C7754 15UF 20% 4V CERM 0402
C775Z 220PF 5% 16V C0G 01005
PP0V88_S1 80 84

BUCK13_LX_0 K13 BUCK13_LX_1 K14 BUCK13_LX0 APN: 152S01263
L7760 0.47UH-20%-4A-0.024OHM PIKD20121B-SM
BUCK13_FB K11 BUCK13_FB
XW7760 SHORT-10L-0.1MM-SM PLACE_NEAR=C78E0:1MM
BUCK13_VSS_FB K12
C7760 15UF 20% 4V CERM 0402
C7761 15UF 20% 4V CERM 0402
C7762 15UF 20% 4V CERM 0402
C776Z 220PF 5% 16V C0G 01005
PP1V25_S2 80 84
PP1V25_S2 66 69 84

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

R7910
1M
5%
1/20W
MF
201

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

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	
		BOARD_TEMP10_P	A5	TDEV2	TDEV
		BOARD_TEMP11_P	B8	TDEV3	
		BOARD_TEMP12_P	B7	TDEV4	
		BOARD_TEMP13_P	B6	TDEV5	
80	SIMETRA_ADC_IN		E6	ADC_IN	
		NC	B10	AMUX_A<0>	
		NC	A10	AMUX_A<1>	
		NC	A9	AMUX_A<2>	
		NC	A8	AMUX_A<3>	
80	TPT_SIMETRA_AMUX_AY		C8	AMUX_AY	AMUX
		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	NC
			K8	GPIO2	NC
		SWD_PMU_SWDIO 67	K7	GPIO3	
			J7	GPIO4	NC
			G7	GPIO5	NC
			F7	GPIO6	NC
			F6	GPIO7	NC
		NC_GPIO_SIMETRA_TO_BBPMU_ON	H6	GPIO8	
		GPIO_SIMETRA_TO_BB_BOOT_CFG1 OUT 78	G6	GPIO9	
		GPIO_SIMETRA_TO_BB_BOOT_CFG2 OUT 78	J6	GPIO10	
		NC_GPIO_SIMETRA_TO_WLAN_REG_ON	F5	GPIO11	
			H5	GPIO12	NC
		NC_SIMETRA_GPIO13	J5	GPIO13	
		GPIO_SIMETRA_IRQ_L 82	G5	GPIO14	
			F4	GPIO15	NC
		GPIO_PP2V63_S1_DISCH_EN_R	F3	GPIO16	
SPMI_SCLK		NUB_SPMI1_SIMETRA_SCLK 10 67	J9		
SPMI_SDATA		NUB_SPMI1_SIMETRA_SDATA 10 67	H9		
SGPIO_SCLK		SGPIO_SCLK_1V8 IN 72 82	H3		
SGPIO_SDATA		SIMETRA_SGPIO_SDATA_1V8	G3		
UVWARN*		SIMETRA_UVWARN_L	G8		
SCRASH*		SCRASH_L_1V8 BI 72 80	G4		
SGPIO_READY_REQ		SGPIO_READY_REQ_1V8 72 82	H4		

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

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

PP1V2_IO 5 6 7 9 24 44 76 84

R7913
47.0K
5%
1/32W
MF
01005

TP7904

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

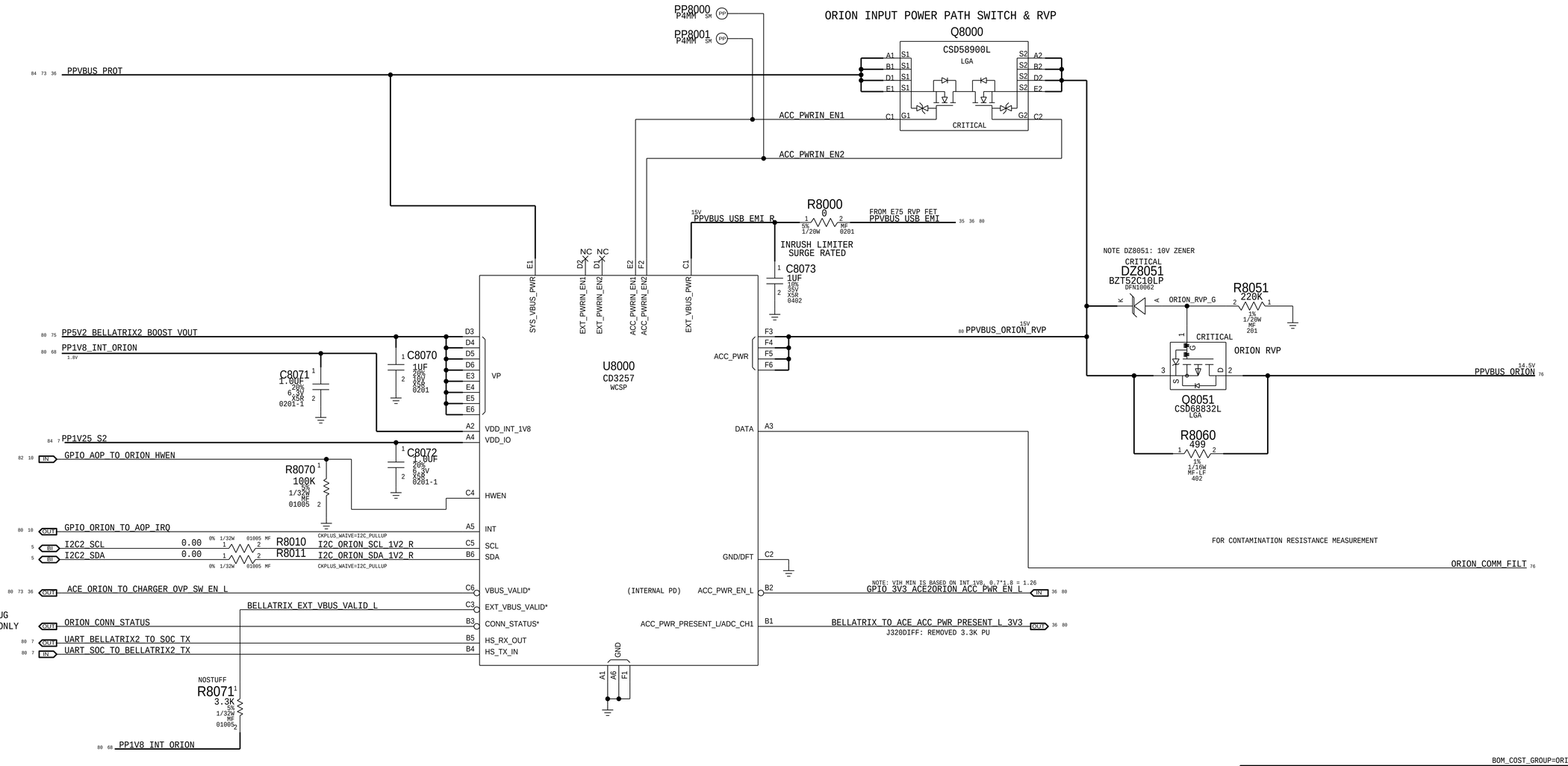
R7912
0.00
0%
1/32W
MF
01005

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

PAGE TITLE



BOM_COST_GROUP=ORION

SYNC_MASTER=2517_MLB_2.3.0 SYNC_DATE=08/25/2020

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

C81F0 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

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
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

SENSE

PPVCC_MAIN
PP1V25_S2
PPVCC_HIGH
PP1V5_SERA_LDO_INT
PPVCC_MAIN
PPVCC_MAIN
SERA_PPVCC_MAIN_SNS
PPVCC_HIGH
PP1V25_S2
PP1V8_S2
PPVCC_MAIN

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	T1	BUCK0_LX3
BUCK0_LX3	T2	
BUCK0_LX3	T3	
BUCK0_LX3	T4	
BUCK0_LX4	M1	BUCK0_LX2
BUCK0_LX4	M2	
BUCK0_LX4	M3	
BUCK0_LX4	M4	BUCK0_LX4
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	

DIRECTIVE SWITCH_MODE=TRUE

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

(24.8A; 0.32-1.2V,TYP 1.06V)
PPVDD_CPU
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 PCCE20161B-SM
152S01268

XW8100 SHORT-10L-0.1MM-SM
PPVDD_CPU

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

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

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

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

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

XW8110 SHORT-10L-0.1MM-SM
PPVDD_GPU

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

(7.3A; 0.32-1.2V,TYP 0.857V)
PPVDD_S1_SOC
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 0.1UH-20%-8.7A-0.0125OHM PCCE20161T-SM
152S01316

XW8120 SHORT-10L-0.1MM-SM
PPVDD_S1_SOC

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

BOM_COST_GROUP=POWER

PAGE TITLE
POWER: SERA (1/4)

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 → U8100 K9 ADC_IN

R8203 1M 5% 1/20W MF 201 — 1 — 2

71 69 PP1V5_SERA_LDO_INT → C8202 0.1UF 20% 6.3V X5R-CERM 01005

C8200 2.2UF 20% 10V X5R 0201

80 73 PMU_VCC_MAIN_SNS_R_P → R8201 1.00K 1% 1/32W MF 01005

NO_XNET_CONNECTION=1

C8201 0.22UF 10% 6.3V CER-X5R 01005

80 73 PMU_VCC_MAIN_SNS_R_N → R8202 1.00K 1% 1/32W MF 01005

PMU_VCC_MAIN_SNS_P

PMU_VCC_MAIN_SNS_N

NC

SERA_VREF

U8100 TMLT46B0-APG WLCSP SYM 2 OF 6

		K9	ADC_IN
71 69 PP1V5_SERA_LDO_INT		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
	SERA_VREF	K12	VREF
	PMU_VCC_MAIN_SNS_P	J10	VBAT
	PMU_VCC_MAIN_SNS_N	J9	IBAT
NC		J8	IREF

BUCK OUTPUTS

SWITCHED RAILS

		R21	VDD_SW1
		R22	VDD_SW1
		T20	VDD_SW2
		R19	VDD_SW3
		R20	VDD_SW3

84 66 62 61 56 55 PP1V8_S2 → C82R0 2.2UF 20% 10V X5R 0201

84 66 PP1V25_S2 → C82R1 2.2UF 20% 10V X5R 0201

		BUCK_SW1	P21
		BUCK_SW1	P22
		BUCK_SW2	T19
		BUCK_SW3	P19
		BUCK_SW3	P20

APN:152S01263 L8210 0.47UH-20%-4A-0.024OHM — BUCK3_LX A16, BUCK3_LX B16 — DIDT=TRUE SWITCH_NODE=TRUE — PIKD20121B-SM

BUCK3_FB D16 — XW8210 SHORT-10L-0.1MM-SM

BUCK3_VSS_FB C16

152S01189 L8220 1.0UH-20%-4A-0.038OHM PIKD20161T-SM — PACK_OPTION=J522,J523

BUCK7_LX0 Y12 — 152S01283 L8220 1.0UH-20%-4A-0.034OHM PIKD20161B — PACK_IGNORE=TRUE PACK_OPTION=J517,J518

BUCK7_LX1 W14, BUCK7_LX1 Y14 — APN:152S00204 L8221 0.22UH-20%-6.7A-0.023OHM PINA20121T-SM

BUCK7_FB U12 — XW8220 SHORT-10L-0.1MM-SM

BUCK7_VSS_FB V12

APN:152S01283 L8230 1.0UH-20%-4A-0.034OHM

BUCK8_LX0 A8 — PIKD20161B

BUCK8_LX1 A10, BUCK8_LX1 B10 — APN:152S00204 L8231 0.22UH-20%-6.7A-0.023OHM PINA20121T-SM

BUCK8_FB D8 — XW8230 SHORT-10L-0.1MM-SM

BUCK8_VSS_FB C8

APN:152S01263 L8240 0.47UH-20%-4A-0.024OHM

BUCK9_LX A12, BUCK9_LX B12 — PIKD20121B-SM

BUCK9_FB D12 — XW8240 SHORT-10L-0.1MM-SM — PLACE_NEAR=U0600:10MM

BUCK9_VSS_FB C12

L8250 1.0UH-20%-4A-0.034OHM

BUCK11_LX0 Y8 — 152S01283 — PACK_IGNORE=TRUE PACK_OPTION=J517,J518 — PIKD20161B

BUCK11_LX1 W10, BUCK11_LX1 Y10 — 152S01189 L8250 1.0UH-20%-4A-0.038OHM PIKD20161T-SM — PACK_OPTION=J522,J523

BUCK11_FB U8 — 152S00204 L8251 0.22UH-20%-6.7A-0.023OHM PINA20121T-SM

BUCK11_VSS_FB V8

BUCK11_LX1 — XW8250 SHORT-10L-0.1MM-SM

BUCK11_FB

BUCK14_LX A14 NC, BUCK14_LX B14 NC

BUCK14_FB D14 NC

BUCK14_VSS_FB C14

PP1V8_SW1_IO 77 80 84 → C82S0 1.0UF 20% 6.3V X5R 0201-1

PP1V8_S2_TOUCH 80 84 → C82S1 1.0UF 20% 6.3V X5R 0201-1

PP1V2_IO 80 84 → C82S2 1.0UF 20% 6.3V X5R 0201-1

PP1V8_S2 80 84 — C8210–C8217 15UF 20% 4V CERM 0402; C821Z 220PF 5% 16V C0G 01005

PPVDD_CPU_SRAM 80 82 84 — C8220–C8227 15UF 20% 4V CERM 0402; C822Z 220PF 5% 16V C0G 01005; C822Y 4UF 20% 6.3V CER-X5R 0201; C822X 4UF 20% 6.3V CER-X5R 0201

NOSTUFF

PPVDD_S1_DISP 80 84 — C8230–C8234 15UF 20% 4V CERM 0402; C8235 15UF 20% 4V CERM 0402; C823Z 220PF 5% 16V C0G 01005; C8299 4UF 20% 6.3V CER-X5R 0201; C8298 4UF 20% 6.3V CER-X5R 0201; C829Y 4UF 20% 6.3V CER-X5R 0201; C829X 4UF 20% 6.3V CER-X5R 0201

PPVDD_S1_DCS 80 84 — C8242 15UF 20% 4V CERM 0402; C8243 15UF 20% 4V CERM 0402; C8244 15UF 20% 4V CERM 0402; C824Z 220PF 5% 16V C0G 01005

NOSTUFF NOSTUFF

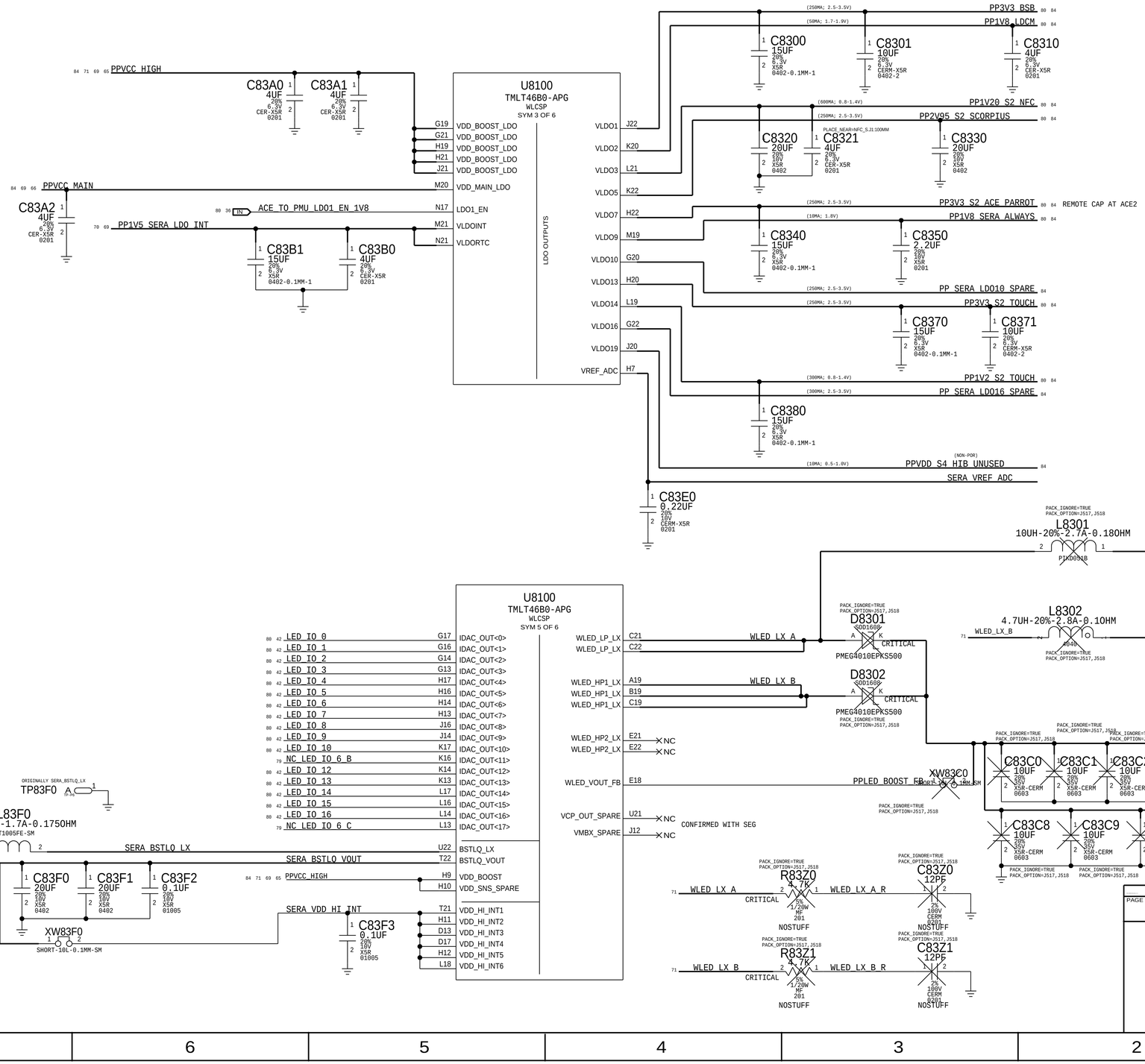
PPVDD_ECPU 80 82 84 — C8250–C8256 15UF 20% 4V CERM 0402; C8257 15UF 20% 4V CERM 0402; C825Z 220PF 5% 16V C0G 01005; C825Y 4UF 20% 6.3V CER-X5R 0201; C825X 4UF 20% 6.3V CER-X5R 0201

NOSTUFF

BOM_COST_GROUP=POWER

PAGE TITLE: POWER: SERA (2/4)

SERA LDO/WLED (3/4)



SERA GPIOS (4/4)

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

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

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

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

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

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

NEAR SOC
CRITICAL
R8428 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
PMU_XTAL 72
PMU_EXTAL 72
C8400 22PF 5% 50V C0G 0201
C8401 22PF 5% 50V C0G 0201

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

C8429 100PF 5% 25V C0G-CERM 01005
R8429 3.92K 0.1% 1/20W MF 0201-2 CRITICAL
SERA_TCAL

SWD PERIPHERAL SWCLK (67 10) = SWD PERIPHERAL SWCLK (72) MAKE_BASE=TRUE
SWD_PMU_SWDIO (67 10) = SWD_PMU_SWDIO (72) MAKE_BASE=TRUE

U8100
TMLT46B0-APG
WLCSP
SYM 4 OF 6

		TDEV1	E8	78 PA_NTC_P
		TDEV2	F9	BOARD_TEMP2_P
		TDEV3	F8	BOARD_TEMP3_P
		TDEV4	F7	BOARD_TEMP4_P
		TDEV5	G9	BOARD_TEMP5_P
		TDEV6	G10	BOARD_TEMP6_P
		TDEV7	G8	BOARD_TEMP7_P
		TDEV8	G7	BOARD_TEMP8_P
		TCAL	F10	SERA_TCAL
	GPIO	GPIO1	P16	NC_SERA_GPIO1
		GPIO2	T9	GPIO_APANEL_HALL_TO_PMU_IRQ_BUF_L (64)
		GPIO3	T7	SWD_PMU_SWDIO (72)
		GPIO4	R11	GPIO_CPANEL_HALL_TO_PMU_IRQ_BUF_L (64)
		GPIO5	T8	SER_GPIO4_R — R8493 0.00 0% 1/32W MF 01005 — GPIO_POTOMAC_TO_SOC_TO_PMU_IRQ_L (10 73)
		GPIO6	U7	GPIO_POTOMAC_TO_PMU_WAKE_1V8 (73)
		GPIO7	T11	GPIO_BB_TO_PMU_HOST_WAKE_L (IN 78)
		GPIO8	U10	GPIO_WLAN_TO_PMU_HOST_WAKE (IN 78)
		GPIO9	R12	SERA_FORCE_SYNC — R8400 0.00 0% 1/32W MF 01005 — PP1V8_S2 (21 41 44 65 69 72 74 84) — R8401 10K 5% 1/32W MF 01005 — (OUT 73)
		GPIO10	U9	NC_SERA_GPIO10
		GPIO11	T12	GPIO_PMU_TO_LCD_PWREN_1V8 (42 43 45 80)
		GPIO12	U11	GPIO_PMU_TO_POTOMAC_LINCH_EN_1V8
		GPIO13	T13	GPIO_PMU_TO_ROTTERDAM_EN (OUT 78)
		GPIO14	U13	GPIO_PMU_TO_SCORPIUS_EXT_DOTARA_EN_1V8 (OUT 76 80)
		GPIO15	M13	GPIO_PMU_TO_ATRANI_EXT_LDO_EN_1V8 (OUT 44)
		GPIO16	M14	NC_SERA_GPIO16
		GPIO17	N14	GPIO_PMU_TO_NAND_LOW_BATT_L (17 18 82)
		GPIO18	R13	GPIO_PMU_TO_SCORPIUS_MCU_NRST_L_1V8 (OUT 76 80)
		GPIO19	U14	GPIO_PMU_TO_LDCM_MUX_SEL0 (OUT 54)
		GPIO20	U15	GPIO_PMU_TO_LDCM_MUX_SEL1 (OUT 54)
		GPIO21	T14	NC
		GPIO22	U16	NC_SERA_GPIO22
		GPIO23	U17	GPIO_PMU_TO_BBPMU_ON (OUT 78)
		GPIO24	R14	GPIO_PMU_TO_WLAN_REG_ON (OUT 47 78)
		GPIO25	N10	GPIO_SERA_TO_NAND_DISCH_EN_1V8 (OUT 67)
		GPIO26	P8	GPIO_PMU_TO_BBPMU_VBUS_DET (78)
		GPIO27	P17	NC_SERA_GPIO27
	BUTTONS	BUTTON1	P10	GPIO_BTN_VOL_DOWN_L_1V8 (72 25 IN)
		BUTTON2	M6	GPIO_BTN_ONOFF_L_1V8 (72 25 IN)
		BUTTON3	N8	GPIO_BTN_VOL_UP_L_1V8 (72 25 IN)
		BUTTON4	P11	NC_GPIO_BTN_4 (NO_TEST=1)
		BUTTON1	N7	GPIO_PMU_TO_SOC_BTN_VOL_DOWN_L (6)
		BUTTON2	N9	GPIO_PMU_TO_SOC_BTN_ONOFF_L (6)
		BUTTON3	M7	GPIO_PMU_TO_SOC_BTN_VOL_UP_L (7)
		DBLCLICK_DET	N6	DBL_CLICK_DET (7)
	RESET	RESET_IN1	N11	GPIO_SOC_TO_PMU_WDOG (5 IN)
		RESET_IN2	M10	GPIO_1V2_ACE2PMU_RESET (80 36 IN)
		RESET_IN3	M9	SOCHOT1_SOC_TO_PMU_L (80 7)
		RESET*	N13	RESET_PMU_TO_SYSTEM_L (6 10 80)
	PMOS OD	FORCE_DFU	T10	GPIO_PMU_TO_SOC_FORCE_DFU — R8402 1.00K 5% 1/32W MF 01005 — GPIO_FORCE_DFU (6 36 72 77 80)
		VBUS_DET	R7	NC
		FAULT_OUT*	M12	NC
		BRICK_ID1	E9	
		BRICK_ID2	E10	
		SCRASH*	N12	SCRASH_L_1V8_R — PLACE NEAR SIMETRA SIDE — R8403 0.00 0% 1/32W MF 01005 — SCRASH_L_1V8 (BI 67 80)
		SHDN	M8	PMU_SHUTDOWN_1V8 (80 77 IN)
		SGPIO_READY_REQ	M15	SGPIO_READY_REQ_1V8 (67 82)
	SPMI	SGPIO_SCLK	N15	SGPIO_SCLK_1V8_R — R8405 33 5% 1/32W MF 01005 — SGPIO_SCLK_1V8 (OUT 67 82)
		SGPIO_SDATA	P15	SGPIO_SDATA_1V8_R — R8406 33 5% 1/32W MF 01005 — SGPIO_SDATA_1V8 (BI 67 82)
		SPMI_SCLK	R15	NUB_SPMI_SERA_SCLK (10 72 82)
		SPMI_SDATA	T15	NUB_SPMI_SERA_SDATA_R — R8407 33 5% 1/32W MF 01005 (PLACE_NEAR=U8100.T15:100MM) — NUB_SPMI_SERA_SDATA (10 82)
	CLOCKS	NXTAL_MEMS	N19	
		XIN	L22	PMU_XTAL (72)
		XOUT	M22	PMU_EXTAL (72)
		SLEEP_32K	U18	CLK_PMU_TO_AOP_32K (10 80)
		OUT_32K	T16	CLK_PMU_TO_WLAN_32K (78 80)
	AMUX	AMUX_A<0>	E13	NC
		AMUX_A<1>	F11	NC
		AMUX_A<2>	E12	NC
		AMUX_A<3>	E11	NC
		AMUX_AY	G12	TPT_SERA_AMUX_AY (80)
		AMUX_B<0>	E14	DOMBRA_LDO_8V_PGOOD_FET (21 IN)
		AMUX_B<1>	F14	NC
		AMUX_B<2>	F12	NC
		AMUX_B<3>	F13	NC
		AMUX_BY	G11	TPT_SERA_AMUX_BY (80)
	THROTTLE	CRASH*	P12	SERA_CRASH_L — (OUT 73) — A TP8403
		DFT_CTRL0	M16	
		DFT_CTRL1	M17	SWD_PERIPHERAL_SWCLK (72)
		SYS_ALIVE	M11	SYS_ALIVE (OUT 17 18 82)
		ACTIVE_READY	P13	GPIO_PMU_TO_SYSTEM_ACTIVE_READY (6 38 80)
		REQUEST_DFU	R6	PMU_REQUEST_DFU (72)
		CPU_TRIGGER0*	P6	GPIO_PMU_TO_SOC_TRIGGER_2 (7 80)
		CPU_TRIGGER1*	R9	GPIO_PMU_TO_SOC_TRIGGER_3 (7 80)
		GPU_TRIGGER0*	R8	GPIO_PMU_TO_SOC_TRIGGER_0 (7 80)
		GPU_TRIGGER1*	R10	GPIO_PMU_TO_SOC_TRIGGER_1 (7 80)
		UVWARN*	P14	GPIO_PMU_TO_SOC_TRIGGER_4 (7 80)
		VDD_BOOST_UVLO*	T17	NC

NOSTUFF R8404 100K 1% 1/32W MF 01005 — PP1V8_SIMETRA_ALWAYS (84) — PLACE NEAR SIMETRA SIDE INTERNAL PU ON SERA SIDE

GPIO_FORCE_DFU (80 77 72 36 6) — R8499 100K 1% 1/32W MF 01005
PMU_REQUEST_DFU (72) — R8498 100K 1% 1/32W MF 01005

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 (84 74 72 69 65 44 41 21)
PP1V8_SERA_ALWAYS (84 73)
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 (72 25)
GPIO_BTN_VOL_DOWN_L_1V8 (72 25)
GPIO_BTN_VOL_UP_L_1V8 (72 25)

NUB_SPMI_SERA_SDATA_R (72)
NUB_SPMI_SERA_SCLK (10 72 82)
NOSTUFF R8408 1.00M 5% 1/32W MF 01005
NOSTUFF R8409 1.00M 5% 1/32W MF 01005

BOM_COST_GROUP=POWER

PAGE TITLE
POWER: SERA (4/4)

POTOMAC

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

U8500
D2559A0P0V2AVAC2
WLCSP
OMIT_TABLE

VBUS, VBUS, VBUS, VBUS
VBUS_OVP_OFF(GPIO1)
CRASH*(GPIO2)
VSYS_HI_UVLO(GPIO3)
LINCH_EN(GPIO4)
WAKEUP(GPIO5)
USB_VBUS_DET(GPIO6)
HV_CHG_OVERRIDE(GPIO7)
BOOST_EN(GPIO8)
IRQ*
SCL
SDA
TBAT
VDD_REF_CHARGE
VDD_REF_CHARGE_PH0
VDD_REF_CHARGE_PH1
VDD_GPIO
VDDCORE
VDDCORE_DIG
IREF
VREF
ADC_REF
ADC_IN_P
ADC_IN_N
H_TEST_MODE
VSSA_1, VSSA_2, VSSA_3
VSS_PH0, VSS_PH0, VSS_PH0, VSS_PH0
VSS_PH1, VSS_PH1, VSS_PH1, VSS_PH1
VSS_BUBO, VSS_BUBO, VSS_BUBO, VSS_BUBO
VSS_BOOST
VSS_BG_SENS
VSSD_FRAME
VSS_ESD

VCENTER_3, VCENTER_3, VCENTER_3, VCENTER_3
VCENTER_0, VCENTER_0, VCENTER_0, VCENTER_0
VCENTER_1, VCENTER_1, VCENTER_1, VCENTER_1
VCENTER_1_HS, VCENTER_1_HS, VCENTER_1_HS, VCENTER_1_HS
VBOOT_N0, VBOOT_DRV0
LX_BOOT_PH0
VBOOT_N1, VBOOT_DRV1
LX_BOOT_PH1
BOOST_HS_SUPPLY
BOOST_HS_SOURCE, BOOST_HS_SOURCE, BOOST_HS_SOURCE, BOOST_HS_SOURCE
VSYS_HI_S
VSYS_HI, VSYS_HI, VSYS_HI, VSYS_HI, VSYS_HI, VSYS_HI, VSYS_HI, VSYS_HI, VSYS_HI, VSYS_HI
VSYS_HI_EXT_DIO
VSYS_LO_BYPASS, VSYS_LO_BYPASS, VSYS_LO_BYPASS, VSYS_LO_BYPASS
LX_PH0, LX_PH0, LX_PH0, LX_PH0
LX_BUBO, LX_BUBO, LX_BUBO, LX_BUBO
VSYS_LO_BUBO, VSYS_LO_BUBO, VSYS_LO_BUBO, VSYS_LO_BUBO
LX_BOOST, LX_BOOST, LX_BOOST, LX_BOOST, LX_BOOST, LX_BOOST, LX_BOOST, LX_BOOST, LX_BOOST, LX_BOOST
LX_PH1, LX_PH1, LX_PH1, LX_PH1, LX_PH1, LX_PH1, LX_PH1, LX_PH1, LX_PH1, LX_PH1, LX_PH1, LX_PH1, LX_PH1, LX_PH1, LX_PH1, LX_PH1
VSYS_LO_S
VSYS_LO_1, VSYS_LO_1, VSYS_LO_1, VSYS_LO_2, VSYS_LO_2, VSYS_LO_2
VSYS_LO_EXT_DIO
IBAT_1, IBAT_1, IBAT_1, IBAT_2, IBAT_2, IBAT_2
VBAT

ACE_ORION_TO_CHARGER_OVP_SW_EN_L
R8520 0.00 0% 1/32W 01005 MF
OVP_SW_EN_L_R

GPIO_PMU_TO_POTOMAC_LINCH_EN_1V8
R8521 0.00 0% 1/32W 01005 MF
GPIO_PMU_TO_POTOMAC_LINCH_EN_R

R8522 0.00 0% 1/32W 01005 MF
GPIO_PMU_TO_PMU_WAKE_1V8

R8523 0.00 0% 1/32W 01005 MF
PP1V8_SW1_IO

NC_POTOMAC_VSYS_HI_UVLO
NC_POTOMAC_USB_VBUS_DETECT
POTOMAC_HV_CHG_OVERRIDE
GPIO_PMU_TO_POTOMAC_BOOST_EN
GPIO_POTOMAC_TO_SOC_TO_PMU_IRQ_L
I2C_SMC_POTOMAC_SCL_1V8
I2C_SMC_POTOMAC_SDA_1V8
BATT_NTC

PPVBUS_PROT
C8500 10UF 20% 35V X5R 0603 138S00340
C8501 10UF 20% 35V X5R 0603 138S00340
C8502 10UF 20% 35V X5R 0603 138S00340

PPVCENTER
C8555 0.1UF 10% 25V X5R 0201
C8550 10UF 20% 35V X5R 0603 138S00340
C8557 0.1UF 10% 25V X5R 0201
C8551 10UF 20% 35V X5R 0603 138S00340
C8556 0.1UF 10% 25V X5R 0201
C8552 10UF 20% 35V X5R 0603 138S00340

PPVCENTER_1_HS
C8558 0.1UF 10% 25V X5R 0201

VBOOT_N0 / VBOOT_DRV0
POTOMAC_VBOOT0
C8560 0.1UF 0201 X5R-CERM 16V 10%

VBOOT_N1 / VBOOT_DRV1
POTOMAC_VBOOT1
C8561 0.1UF 0201 X5R-CERM 16V 10%

BOOST_HS_SUPPLY
POTOMAC_HS_SUPPLY
C8562 0.1UF 10% 16V X5R-CERM 0201

VSYS_HI_S
POTOMAC_VSYS_HI_S
XW8501 OMIT SHORT-10L-0.1MM-SM

VSYS_HI_EXT_DIO
POTOMAC_HIGH_DIO
NOSTUFF R8581 470K 5% 1/32W MF 01005
CRITICAL Q8581 FDMC6688P MLP3.3X3.3

LX_PH0
POTOMAC_LX_PH0
L8570 1UH-20%-6.4A-0.038OHM PIKA32251B-SM
POTOMAC_LX_BUBO

VSYS_LO_BUBO
C85A3 4.7UF 20% 10V X5R 0402
C8590 47UF 20% 6.3V CER-X5R 0603
C8599 47UF 20% 6.3V CER-X5R 0603

LX_BOOST / LX_PH1
L8571 0.47UH-20%-8.6A-0.024OHM PIKA32251B-SM
POTOMAC_LX_PH1

VSYS_LO_S
OMIT XW8500 SHORT-10L-0.1MM-SM
POTOMAC_VSYS_LO_S

VSYS_LO_EXT_DIO
POTOMAC_LOW_DIO
NOSTUFF R8580 470K 5% 1/32W MF 01005
CRITICAL Q8580 FDMC6686P POWER33

VBAT
R8592 0.00 0% 1/32W 01005 MF
BATT_SNS_R — BATT_SNS

PPBATT_VCC_R
C8593 47UF 20% 6.3V CER-X5R 0603
NO_XNET_CONNECTION=1 CRITICAL
R8582 0.0025 1% 1.5W MF 0612
PMU_VCC_MAIN_SNS_R_N
PMU_VCC_MAIN_SNS_R_P
PPBATT_VCC
C8591 10UF 20% 6.3V CERM-X5R 0402-9
C8592 10UF 20% 6.3V CERM-X5R 0402-9
PPBATT_POS_RC
R8591 0.5 1% 1/10W MF 402
NOTE: FOR NO BATTERY SITUATION

PPVCC_HIGH
C8567 47UF 20% 6.3V CER-X5R 0603
C8568 47UF 20% 6.3V CER-X5R 0603
C8569 47UF 20% 6.3V CER-X5R 0603
C8563 47UF 20% 6.3V CER-X5R 0603
C8564 47UF 20% 6.3V CER-X5R 0603
C8565 47UF 20% 6.3V CER-X5R 0603
C8566 47UF 20% 6.3V CER-X5R 0603
C8580 20UF 20% 6.3V CERM-X5R 0402
C8588 20UF 20% 6.3V CERM-X5R 0402
C8589 20UF 20% 6.3V CERM-X5R 0402
C8581 20UF 20% 6.3V CERM-X5R 0402
C8582 20UF 20% 6.3V CERM-X5R 0402
C8583 20UF 20% 6.3V CERM-X5R 0402
C8584 1.0UF 20% 6.3V X5R 0201-1

PPVCC_MAIN
C85A0 10UF 20% 10V X5R-CERM 0402-7
C8570 10UF 20% 10V X5R-CERM 0402-7
C8571 10UF 20% 10V X5R-CERM 0402-7
C8572 10UF 20% 10V X5R-CERM 0402-7
C8573 10UF 20% 10V X5R-CERM 0402-7
C8574 10UF 20% 10V X5R-CERM 0402-7
C85A1 10UF 20% 10V X5R-CERM 0402-7
C85A2 10UF 20% 10V X5R-CERM 0402-7

138S00020
C8512 0.1UF 10% 16V X5R-CERM 0201
C8513 10UF 20% 6.3V X5R 0402-8
C8516 0.1UF 10% 16V X5R-CERM 0201

PPVDD_REF_CHG
PPVDD_POTOMAC_GPIO
PPVDD_POTOMAC_CORE
POTOMAC_IREF
POTOMAC_VREF
POTOMAC_ADC_REF

C8510 0.1UF 10% 16V X5R-CERM 0201
C8511 0.1UF 10% 16V X5R-CERM 0201
CRITICAL R8515 200K 0.5% 1/20W MF 0201
C8515 0.1UF 10% 6.3V CERM-X5R 0201
C8514 0.1UF 10% 16V X5R-CERM 0201

PP1V8_SERA_ALWAYS
R8525 100K 5% 1/32W MF 01005
GPIO_POTOMAC_TO_PMU_WAKE_1V8

PP1V25_S2
R8526 10K 5% 1/32W MF 01005
GPIO_POTOMAC_TO_SOC_TO_PMU_IRQ_L

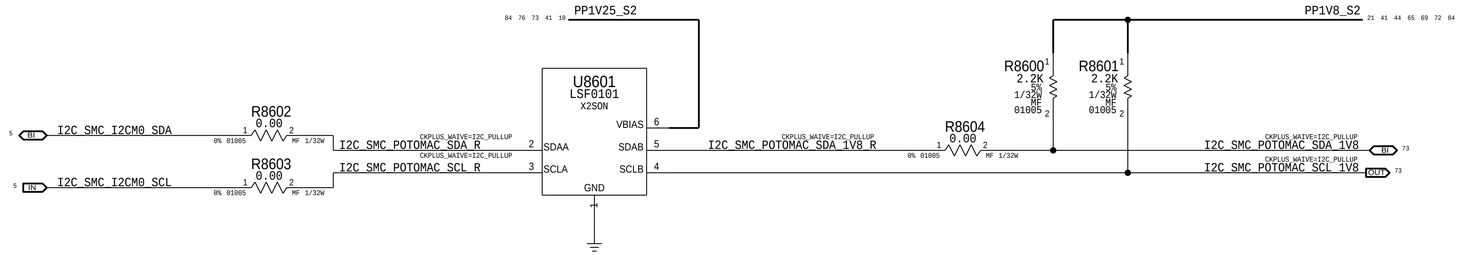
PP1V8_SERA_ALWAYS
R8528 10K 5% 1/32W MF 01005 NOSTUFF
R8527 20K 5% 1/20W MF 201 NOSTUFF

OPTION FOR 1V8 ALWAYS RAIL PULLUP

BOM_COST_GROUP=POWER

PAGE TITLE
POWER: CHARGER

POTOMAC VOLTAGE TRANSLATOR



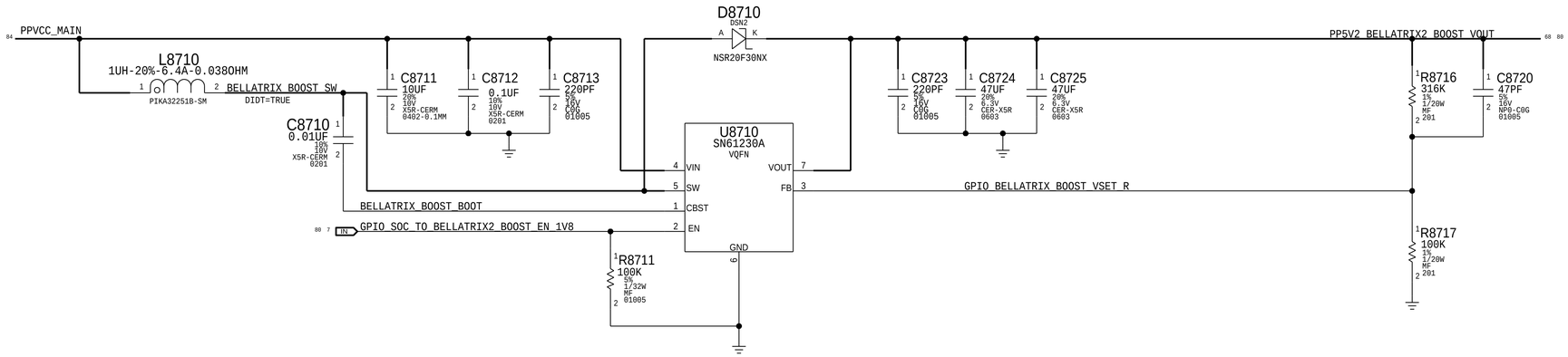
BOM_COST_GROUP=POWER

SYNC_MASTER=2017_MLB_2.3.0 SYNC_DATE=08/29/2020

PAGE TITLE

POWER: VT LDO

BELLATRIX BOOST



SCORPIUS BOOST MOVED TO SCORPIUS BOARD

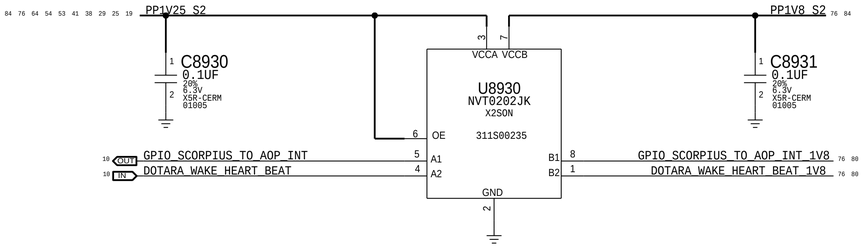
BOM_COST_GROUP=ORION

PAGE TITLE

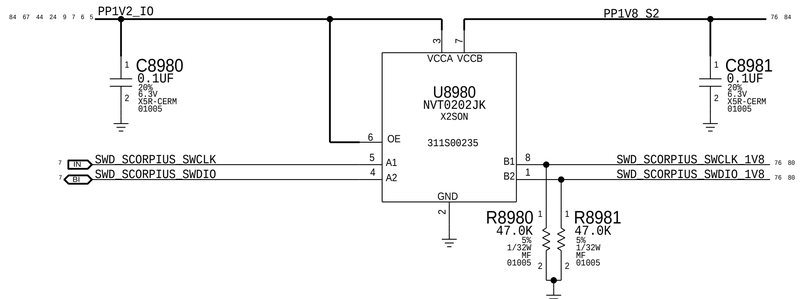
POWER: BELLATRIX2 BOOSTS

SCORPIUS THROTTLE MOVED TO SCORP. BOARD

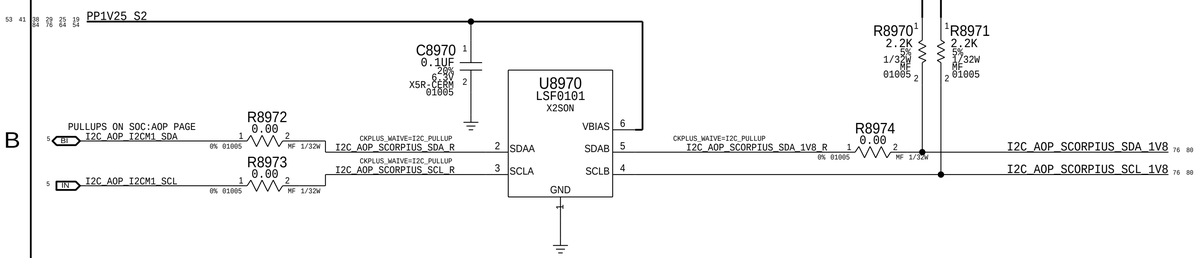
LEVEL TRANSLATOR

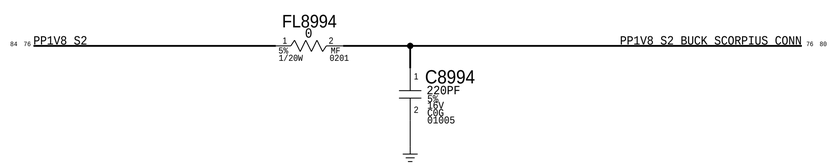


SWD LEVEL TRANSLATOR

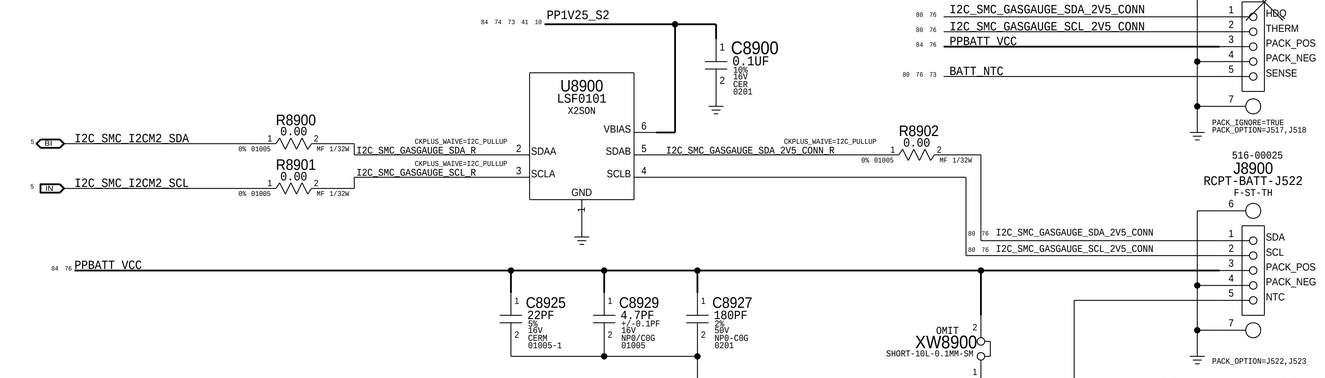


I2C LEVEL TRANSLATOR





J517 BATTERY CONNECTOR

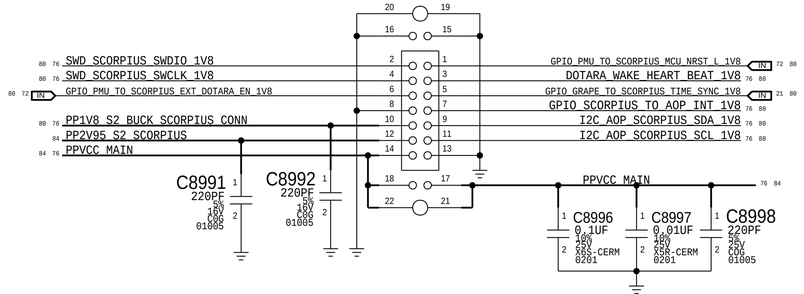


J522 BATTERY CONNECTOR

SCORPIUS FLEX CONNECTOR

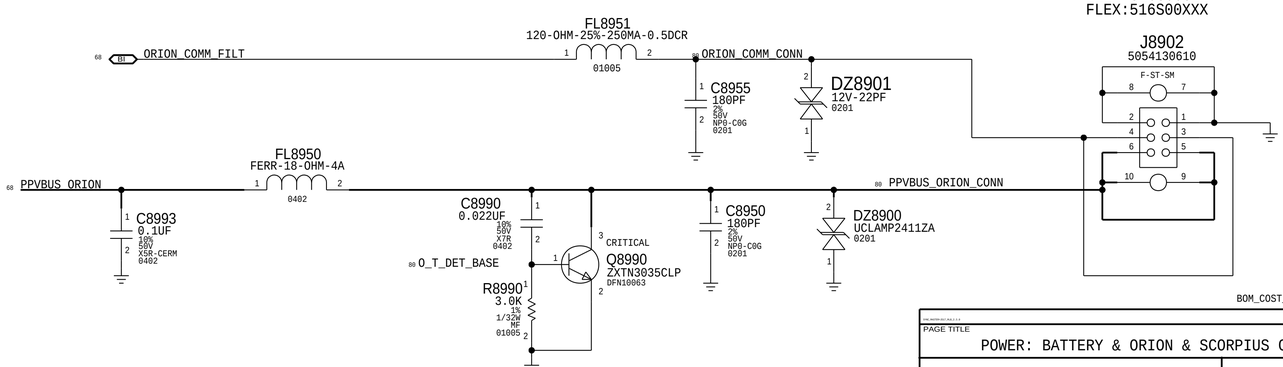
PINOUT FOLLOWS J522 SCORPIUS FLEX REV 0.8

MLB: 516S00150
FLEX: 516S00149



ORION FLEX CONNECTOR

MLB: 516S00321
FLEX:516S00XXX

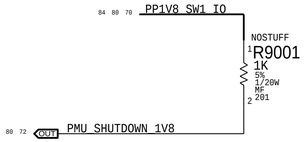


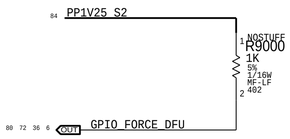
BOM_COST_GROUP=SCORPIUS

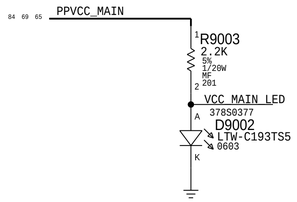
PAGE TITLE

POWER: BATTERY & ORION & SCORPIUS CONN

DEBUG RESET ACCESS







BOM_COST_GROUP=SOC

SYNC_MASTER=J516_MLB_A:0.2 SYNC_DATE=08/20/2020

PAGE TITLE

SOC: DEBUG

CELLULAR AND WLAN/BT ALIASES

BASEBAND

SOC/AOP/PMU GPIOS

8	OUT	GPIO_BB_TO_SOC_RESET_DET_L	MAKE_BASE=TRUE	GPIO_BB_TO_SOC_RESET_DET_L	IN	97 127
9	IN	GPIO_SOC_TO_BB_COREDUMP	MAKE_BASE=TRUE	GPIO_SOC_TO_BB_COREDUMP	OUT	97 127
6	IN	SWD_BB_SWCLK	MAKE_BASE=TRUE	SWD_BB_SWCLK	OUT	97 127
78 6	BI	SWD_BB_SWDIO	MAKE_BASE=TRUE	SWD_BB_SWDIO	BI	97 127
72	IN	GPIO_PMU_TO_BBPMU_ON	MAKE_BASE=TRUE	GPIO_PMU_TO_BBPMU_ON	OUT	94 127 129
8	IN	GPIO_AP_TO_BB_GPS_TIME_MARK	MAKE_BASE=TRUE	GPIO_AP_TO_BB_GPS_TIME_MARK	OUT	97 127
72	OUT	GPIO_BB_TO_PMU_HOST_WAKE_L	MAKE_BASE=TRUE	GPIO_BB_TO_PMU_HOST_WAKE_L	IN	97 127 129
10	IN	UART_AOP_TO_BB_TX	MAKE_BASE=TRUE	UART_AOP_TO_BB_TX	OUT	97 127
10	OUT	UART_BB_TO_AOP_TX	MAKE_BASE=TRUE	UART_BB_TO_AOP_TX	IN	97 127
8	IN	GPIO_AP_TO_BBPMU_PEAK_POWER_IND	MAKE_BASE=TRUE	GPIO_AP_TO_BBPMU_PEAK_POWER_IND	OUT	97 127

NOTE: GPIO_BB_TO_SCORPIUS_TX_IND_1V8 UNUSED

62 56 42 8	IN	GPIO_SOC_TO_LANAI_DISPLAY_BSYNC1	MAKE_BASE=TRUE	GPIO_SOC_TO_LANAI_DISPLAY_BSYNC1	OUT	94 127
10	IN	AOP_TO_BBPMU_FORCE_PWM	MAKE_BASE=TRUE	AOP_TO_BBPMU_FORCE_PWM	OUT	94 127
72	IN	GPIO_PMU_TO_BBPMU_VBUS_DET	MAKE_BASE=TRUE	GPIO_PMU_TO_BBPMU_VBUS_DET	OUT	137
67	IN	GPIO_SIMETRA_TO_BB_BOOT_CFG1	MAKE_BASE=TRUE	GPIO_SIMETRA_TO_BB_BOOT_CFG1	OUT	137
67	IN	GPIO_SIMETRA_TO_BB_BOOT_CFG2	MAKE_BASE=TRUE	GPIO_SIMETRA_TO_BB_BOOT_CFG2	OUT	137

POWER

84	PPVCC_MAIN	PPVCC_MAIN	63 78 124 128 132 133
84	PP3V0_S2_ALS — XW9100 (1 2) SHORT-10L-0.1MM-SM PLACE_NEAR=C7881.1:1MM	PP_3V0_S2	131 137
84	PP1V8_S2	PP1V8_S2	47 48 49 50 51 52 78 137
		PP1V8_S2	
		PP1V8_S2	
84	PPVCC_HIGH	PPVCC_HIGH	128 129
84	PP1V25_S2	PP1V25_S2	47 78 97

NOTE: THIS MAY SHORTS AP AND BB PMU TOGETHER, POR SHOULD HAVE R5635_E NOSTUFF

USB BB

137 78 36	IN	90_AP_TO_BB_USB_P	MAKE_BASE=TRUE	90_AP_TO_BB_USB_P	OUT	36 78 137
137 78 36	IN	90_AP_TO_BB_USB_N	MAKE_BASE=TRUE	90_AP_TO_BB_USB_N	OUT	36 78 137

PCIE

9	IN	PCIE_SOC_TO_BB_REFCLK_P	MAKE_BASE=TRUE	PCIE_SOC_TO_BB_REFCLK_P	OUT	97 127
9	IN	PCIE_SOC_TO_BB_REFCLK_N	MAKE_BASE=TRUE	PCIE_SOC_TO_BB_REFCLK_N	OUT	97 127
9	OUT	PCIE_BB_TO_SOC_CLKREQ_L	MAKE_BASE=TRUE	PCIE_BB_TO_SOC_CLKREQ_L	IN	97 127 129
78 9	IN	PCIE_SOC_TO_BB_PERST_L	MAKE_BASE=TRUE	PCIE_SOC_TO_BB_PERST_L	OUT	97 127
78	IN	PCIE_SOC_TO_BB_TX_P	MAKE_BASE=TRUE	PCIE_SOC_TO_BB_TX_P	OUT	97
78	IN	PCIE_SOC_TO_BB_TX_N	MAKE_BASE=TRUE	PCIE_SOC_TO_BB_TX_N	OUT	97
9	OUT	PCIE_BB_TO_SOC_TX_P	MAKE_BASE=TRUE	PCIE_BB_TO_SOC_TX_P	IN	97
9	OUT	PCIE_BB_TO_SOC_TX_N	MAKE_BASE=TRUE	PCIE_BB_TO_SOC_TX_N	IN	97

9	IN	PCIE_SOC_TO_BB_TX_C_P	C0950 1 2 6.3V 10% 01005 CER-X5R 0.22UF GND_VOID=TRUE	PCIE_SOC_TO_BB_TX_P	78
			PLACE_NEAR=U0600.BC12: 8MM		
9	IN	PCIE_SOC_TO_BB_TX_C_N	C0951 1 2 6.3V 10% 01005 CER-X5R 0.22UF GND_VOID=TRUE	PCIE_SOC_TO_BB_TX_N	78
			PLACE_NEAR=U0600.BB12: 8MM		

I2S

7	OUT	I2S_BB_TO_SOC_BCLK	MAKE_BASE=TRUE	I2S_BB_TO_SOC_BCLK	IN	97 127
7	OUT	I2S_BB_TO_SOC_DOUT	MAKE_BASE=TRUE	I2S_BB_TO_SOC_DOUT	IN	97 127
7	IN	I2S_SOC_TO_BB_DOUT	MAKE_BASE=TRUE	I2S_SOC_TO_BB_DOUT	OUT	97 127
7	OUT	I2S_BB_TO_SOC_LRCK	MAKE_BASE=TRUE	I2S_BB_TO_SOC_LRCK	IN	97 127

GPIO TO STROBE SHOULD BE 1V8 COMPLIANT, BB IO IS 1V8 (PER NETNAME)

27	OUT	GPIO_BB_TO_STROBE_GSM_BURST_IND_1V8	MAKE_BASE=TRUE	GPIO_BB_TO_STROBE_GSM_BURST_IND_1V8	IN	97 127

PHYSICAL SIM REMOVED

BASEBAND SWD

78 9 PCIE_SOC_TO_BB_PERST_L — R0951 100K 5% 1/32W MF 01005 — 2

84 6 PP1V25_S2 — R0611 1.00K 5% 1/32W MF 01005 — 2

78 6 SWD_BB_SWDIO

BASEBAND SPMI

NOTE: SPMI TO BASEBAND IS NOT USED

WLAN

POWER

84	PPVCC_MAIN	PPVCC_MAIN	47 48 49 50 51
84	PP1V8_S2	PP1V8_S2	47 48 49 50 51 52 78 137
84	PP1V25_S2	PP1V25_S2	47 78 97

GPIOS

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

GPIO_WLAN_TO_SCORPIUS_TX_IND NOT NEEDED

PCIE

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

GND_VOID=TRUE

82 9	PCIE_WLAN_TO_SOC_TX_P	C9160 1 2 20% XSR-CERM 0.1UF 01005 6.3V	PLACE_NEAR=U_WLAN_W.28:3MM	PCIE_WLAN_TO_SOC_TX_C_P	78
82 9	PCIE_WLAN_TO_SOC_TX_N	C9161 1 2 20% XSR-CERM 0.1UF 01005 6.3V	PLACE_NEAR=U_WLAN_W.97:3MM	PCIE_WLAN_TO_SOC_TX_C_N	78

GND_VOID=TRUE

UART

47	OUT	UART_BT_TO_WLAN_COEX_1V2	MAKE_BASE=TRUE	UART_BT_TO_WLAN_COEX_1V2	IN	97 127
47	IN	UART_WLAN_TO_BB_COEX_1V2	MAKE_BASE=TRUE	UART_WLAN_TO_BB_COEX_1V2	OUT	97 127

BLUETOOTH

SOC GPIOS

20	IN	GPIO_TOUCH_TO_BT_SYNC	MAKE_BASE=TRUE	GPIO_TOUCH_TO_BT_SYNC	OUT	47
82 20 7	IN	GPIO_SOC_TO_BT_TO_GRAPE_TS_SYNC	MAKE_BASE=TRUE	GPIO_SOC_TO_BT_TO_GRAPE_TS_SYNC	OUT	47

GPIO_BT_TO_SCORPIUS_TX_IND NOT NEEDED

9	OUT	BT_TO_SOC_TIME_SYNC	MAKE_BASE=TRUE	BT_TO_SOC_TIME_SYNC	IN	47

WLAN/BT SPMI

10	IN	AOP_SPMI0_SCLK_WIFI_BT	MAKE_BASE=TRUE	AOP_SPMI0_SCLK_WIFI_BT	OUT	47
10	BI	AOP_SPMI0_SDATA_WIFI_BT	R9152 1 2 1/32W 5% MF 01005 33	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	MAKE_BASE=TRUE	GPIO_BTN_VOL_UP_L_CONN_1V8	IN	25 133
80 25	OUT	GPIO_BTN_VOL_DOWN_L_CONN_1V8	MAKE_BASE=TRUE	GPIO_BTN_VOL_DOWN_L_CONN_1V8	IN	25 133

ROTTERDAM(CERES)

POWER

84	PPVCC_MAIN	PPVCC_MAIN	63 78 124 128 132 133
84	PP1V8_S2	PP1V8_S2	63
84	PP1V20_S2_NFC	PP1V20_S2_NFC	63

SPMI

18	IN	AOP_SPMI0_SCLK_NFC	MAKE_BASE=TRUE	AOP_SPMI0_SCLK_NFC	OUT	63
10	BI	AOP_SPMI0_SDATA_NFC	R9153 1 2 1/32W 5% MF 01005 33	SPMI_AOP_TO_RADIOS_DATA	BI	63

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	MAKE_BASE=TRUE	GPIO_PMU_TO_ROTTERDAM_EN	OUT	63

GPIO_PMU_TO_ROTTERDAM_EN — R0960 100K 5% 1/32W MF 01005 — 2

RF NTC

CRITICAL R9150 10KOHM-1%-0.31MA 0201 NO_XNET_CONNECTION=1 (TP1D - INSIDE RF CAN) — I121 1 2

PA_NTC_P 72 — C9150 100PF 5% 25V C0G-CERM 01005 — 2

NO_XNET_CONNECTION=1 — XW9150 (1 2 SM) — PA_NTC_N

NOTE: XW SHOULD BE PLACED NEAR PMU

BOM_COST_GROUP=CELLULAR

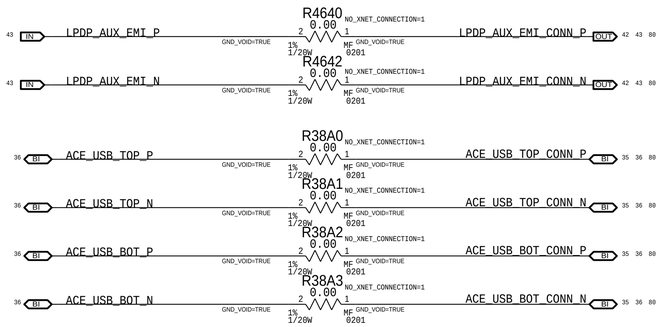
SYNC_MASTER=J516_MLB_4.0.2 SYNC_DATE=08/20/2020

PAGE TITLE

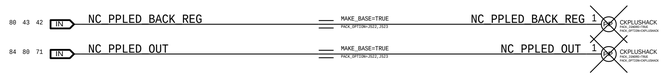
ALIASES: BB/WLAN/BT

LPDP_TX/BACKLIGHT

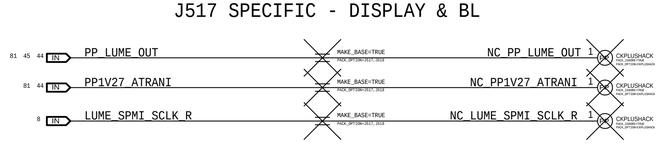
LPDP/USB2 CMC REPLACEMENT



J522 SPECIFIC - DISPLAY & BL



J517 SPECIFIC - DISPLAY & BL



BOM_COST_GROUP=SOC

SPWC_MASTER=J518_MLB_4.0.2 SPWC_DATE=08/28/2020

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_NAND	66 84
TP930F	A	1	PP0V8_S1_SOC_FIXED	66 82 84
TP930E	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_IO	70 84
TP930M	A	1	PP1V2_NAND	66 84
TP930N	A	1	PP1V8_SERA_ALWAYS	71 84
TP930P	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
TP9313	A	1	PP2V05_S2_SCORPIUS	71 84
TP9315	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, PACK_OPTION=J517, J518)	73 80 84
TP9345	A	1	NC_PPLED_OUT	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_IGNORE=TRUE, 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
TP93DC	A	1	ACE_USB_BOT_CONN_N	35 36 79
TP93E1	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
TP93R3	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.G20:5MM	85_USB_KIS_P	36 38
TP93GT	A	1 PLACE_NEAR=U3900.G22:5MM	85_USB_KIS_N	36 38

BASEBAND - ANT SWITCH PWR

TP93H2	A	1	BB_TO_UAT_RFFE_DATA_A_ANT3_SW_FILT	135
TP93H3	A	1	PP_1V8_S2_UAT_ANT3_SW_FILT	135
TP93H4	A	1	BB_TO_UAT_RFFE_CLK_A_ANT3_SW_FILT	135
TP93H5	A	1	PP_3V0_S2_UAT_ANT3_SW_FILT	135

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
TP93PE	A	1	GPIO_3V3_ACE2BSB_FORCE_PWR	36 37
TP93PF	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	2	25UF 20% 6.3V X5R 0402	CKPLUS_WAIVE=TERMSHORTED
C9381	1	2	10UF 20% 25V X5R-CERM 0603	CKPLUS_WAIVE=TERMSHORTED
C9382	1	2	10UF 20% 25V X5R-CERM 0603	CKPLUS_WAIVE=TERMSHORTED
C9383	1	2	10UF 20% 25V X5R-CERM 0603	CKPLUS_WAIVE=TERMSHORTED
C9384	1	2	10UF 20% 25V X5R-CERM 0603	CKPLUS_WAIVE=TERMSHORTED
C9385	1	2	10UF 20% 25V X5R-CERM 0603	CKPLUS_WAIVE=TERMSHORTED
C9386	1	2	10UF 20% 25V X5R-CERM 0603	CKPLUS_WAIVE=TERMSHORTED
C9387	1	2	10UF 20% 25V X5R-CERM 0603 (PACK_IGNORE=TRUE, PACK_OPTION=J517, J518)	

VBAT

TP939P	A	1 PLACE_NEAR=J8900.3:15MM	PPBATT_VCC	73 80 84
TP9399	A	1 PLACE_NEAR=J8900.3:15MM		
TP939A	A	1 PLACE_NEAR=J8900.3:15MM		
TP939B	A	1 PLACE_NEAR=J8900.3:15MM		
TP9396	A	1 PLACE_NEAR=J8900.4:15MM		
TP9397	A	1 PLACE_NEAR=J8900.4:15MM		
TP9398	A	1 PLACE_NEAR=J8900.4:15MM		
TP939S	A	1		

VBUS ORION

TP939Q	A	1		
TP939C	A	1		
TP939D	A	1	PPVBUS_ORION_CONN	76 80
TP939E	A	1	TP939R	
TP939F	A	1		

VCC_MAIN

TP939G	A	1	PPVCC_MAIN	28 73 80 84
TP939H	A	1		
TP939I	A	1		
TP939J	A	1		

VCC_HIGH

TP939K	A	1	PPVCC_HIGH	73 80 84
TP939L	A	1		
TP939M	A	1		
TP939N	A	1		

JASPER/PENINSULA

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

NAND DUMMY CAPS

C9390	1	2	0.1UF 10% 6.3V CER-X5R 01005	CKPLUS_WAIVE=TERMSHORTED
C9391	1	2	0.1UF 10% 6.3V CER-X5R 01005	CKPLUS_WAIVE=TERMSHORTED

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		
TP9392	A	1 PLACE_NEAR=C37A8.1:20MM		
TP9393	A	1 PLACE_NEAR=C37A8.2:30MM		
TP9394	A	1 PLACE_NEAR=C37A8.2:30MM		
TP9395	A	1 PLACE_NEAR=C37A8.2:30MM		

FIDUCIALS

FID9300 FID 0P5SM1P0SQ-NSP 1
FID9301 FID 0P5SM1P0SQ-NSP 1
FID9302 FID 0P5SM1P0SQ-NSP 1
FID9303 FID 0P5SM1P0SQ-NSP 1
FID9304 FID 0P5SM1P0SQ-NSP 1
FID9305 FID 0P5SM1P0SQ-NSP 1

CAN MOUNTING HOLES

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

SL9301 TH-NSP 1 SL-1.1X0.4-1.4X0.7
SL9302 TH-NSP 1 SL-1.1X0.4-1.4X0.7
SL9304 TH-NSP 1 SL-1.1X0.4-1.4X0.7
SL9310 TH-NSP 1 SL-1.1X0.4-1.4X0.7
SL9320 TH-NSP 1 (PACK_OPTION=J522, J523) SL-1.1X0.4-1.4X0.7
SL9305 TH-NSP 1 (PACK_OPTION=J522, J523) SL-1.1X0.4-1.4X0.7

SL9306 TH-NSP 1 SL-1.1X0.4-1.4X0.7
SL9307 TH-NSP 1 SL-1.1X0.4-1.4X0.7
SL9321 TH-NSP 1 (PACK_OPTION=J522, J523) SL-1.1X0.4-1.4X0.7
SL9322 TH-NSP 1 (PACK_OPTION=J522, J523) SL-1.1X0.4-1.4X0.7
SL9323 TH-NSP 1 (PACK_OPTION=J522, J523) SL-1.1X0.4-1.4X0.7

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

SL9312 FID TH-NSP 1 SL-0.9X0.35-1.2X0.65

STANDOFFS

SMT:860-01586

STD9300 STDOFF-3.3X1.8R1.036H-SM 1 860-01586 PACK_OPTION=J522,J523
STD9319 STDOFF-3.3X1.8R1.036H-SM 1 860-01586 (PACK_IGNORE=TRUE, PACK_OPTION=J517,J518)
STD9323 STDOFF-3.3X1.8R1.036H-SM 1 860-01586
STD9327 STDOFF-3.3X1.8R1.036H-SM 1 860-01586
STD9316 STDOFF-3.3X1.8R1.036H-SM 1 860-01586 (PACK_IGNORE=TRUE, PACK_OPTION=J517,J518)

SMT:860-01627

STD9312 STDOFF-2.82X2.05R-1.036H-SM 1 860-01627
STD9318 STDOFF-2.82X2.05R-1.036H-SM 1 860-01627
STD9330 STDOFF-2.82X2.05R-1.036H-SM 1 860-01627
STD9331 STDOFF-2.82X2.05R-1.036H-SM 1 860-01627
STD9333 STDOFF-2.82X2.05R-1.036H-SM 1 860-01627
STD9334 STDOFF-2.82X2.05R-1.036H-SM 1 860-01627 PACK_OPTION=J522,J523
STD9335 STDOFF-2.82X2.05R-1.036H-SM 1 860-01627 PACK_OPTION=J522,J523
STD9336 STDOFF-2.82X2.05R-1.036H-SM 1 860-01627 PACK_OPTION=J523

SMT:860-01630

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

SMT:860-01708

STD9350 STDOFF-2.82X2.05R-0.95H-SM 1 860-01735 PACK_OPTION=J522,J523

SMT:860-01709

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

PACK_OPTION=J522,J523 PACK_OPTION=J522,J523

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 P4MM SM — PP 1 — PPVDD_CPU — 69 80 84
PP9506 P3MM SM — PP 1 — PPVDD_S1_SRAM — 65 80 84
PP9507 P3MM SM — PP 1 — PPVDD_CPU_SRAM — 70 80 84
PP9508 P3MM 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 — PP 1 SM — BST_CLK_SYNC_1V8 — 28
PP952G P2MM-NSM — PP 1 SM — BST_SYNC_R_1V8 — 28

PENROSE

PP952J P4MM SM — PP 1 — PDM_PENROSE_SCLK — 10 24
PP952K P4MM SN — 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 P3MM 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 P3MM 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 P3MM 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.AK36:50MM — 10 64
PP9591 P3MM SM — PP 1 — PDM_DMIC_FRONT_BACK_SD — PLACE_NEAR=U0600.AC3:50MM — 10 64
PP9592 P3MM SM — PP 1 — PDM_DMIC_SIDE_SD — PLACE_NEAR=U0600.AK40:50MM — 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 P3MM SM — PP 1 — SPI_SENSORS_SCLK — PLACE_NEAR=U2120.4:10MM — 10 19 53
PP9545 P3MM 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 P2MM SM — PP 1 — PLACE_NEAR=U1800.G12:50MM — NAND1_ANI0_VREF — 17
PP95DG P2MM SM — PP 1 — PLACE_NEAR=U1900.J4:50MM — NAND2_ANI1_VREF — 18
PP95DH P2MM 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 — PP 1 — MIPI_PEARL_TO_SOC_CLK_P — 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.AT6:150MM — 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.AT3:150MM — 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

SYNC_MASTER=J510_MLB_A_0.2 — SYNC_DATE=06/28/2020

PAGE TITLE

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

PAGE TITLE

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; 36 38; 25 42; 43; 55 56 61 62 66 70; 21 41 44 65 69 72 74; 64; 76; 19 53; 78; 78; 39 40 41; 19 25 29; 78; 19 25 29 41 64
MAKE_BASE=TRUE

BUCK3 SWITCHES

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

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; 11 65
MAKE_BASE=TRUE

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; 66 70; 10 41 73 74 76; 6 78; 10; 10; 78; 19; 65 69; 7 68; 64; 36; 19 25 29 38 41 53 54 64 76; 77; 78; 12
MAKE_BASE=TRUE

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

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; PP3V3_S2_ACE_PARROT 38
MAKE_BASE=TRUE

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

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; PP3V0_S2_ALS 78
MAKE_BASE=TRUE

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; PPVCC_HIGH 39; PPVCC_HIGH 55 61; PPVCC_HIGH 78
MAKE_BASE=TRUE

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; PP1V8_RPMU_IO_SW 58; PP1V8_RPMU_IO_SW 59; PP1V8_RPMU_IO_SW 57 60
MAKE_BASE=TRUE

CHARGER MAIN
80 73 28 PPVCC_MAIN — 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; PPVCC_MAIN 44; PPVCC_MAIN
MAKE_BASE=TRUE

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 1177

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 — PP1V8_FCAM_PMU_IO_SW; PP1V8_FCAM_PMU_IO_SW 62; PP1V8_FCAM_PMU_IO_SW; PP1V8_FCAM_PMU_IO_SW 26
MAKE_BASE=TRUE

BOM_COST_GROUP=NO_COST_ITEMS

PAGE TITLE
ALIASES: POWER

BOM TABLES

ALT TABLES

PART NUMBER	ALTERNATE FOR PART NUMBER	BOM OPTION	REF DES	COMMENTS:
197S00254	197S00250	?	Y601_E	EPS,38.4MHZ,8PF,1612
197S00283	197S00250	?	Y601_E	KYC,38.4MHZ,8PF,1612

PART NUMBER	ALTERNATE FOR PART NUMBER	BOM OPTION	REF DES	COMMENTS:
152S01350	998-20498	?	L401_E	IND,MLD,0.47UH,20%,4.8A,26MOHM,0805,H0.8
152S01350	998-20498	?	L402_E	IND,MLD,0.47UH,20%,4.8A,26MOHM,0805,H0.8
152S01350	998-20498	?	L403_E	IND,MLD,0.47UH,20%,4.8A,26MOHM,0805,H0.8
152S01350	998-20498	?	L406_E	IND,MLD,0.47UH,20%,4.8A,26MOHM,0805,H0.8
152S01350	998-20498	?	L407_E	IND,MLD,0.47UH,20%,4.8A,26MOHM,0805,H0.8
152S01352	998-20497	?	L404_E	IND,PWR,1.0UH,20%,3.3A,60MOHM,2012
152S01352	998-20497	?	L405_E	IND,PWR,1.0UH,20%,3.3A,60MOHM,2012

PART NUMBER	ALTERNATE FOR PART NUMBER	BOM OPTION	REF DES	COMMENTS:
335S00013	335S0894	?	EEPROM_E	EEPROM,8KBIT,I2C
107S0245	107S0244	?	R607_E	THERMISTOR,NTC,100K OHM,1%,B=4250,01005
117S00012	117S00040	?	FL5921_E,FL5922_E,FL5924_E	RES,0 OHM,JUMPER,1/10W,4.5A,0201

OPTION A) IS FOR THE CASE THAT CHINA WILL NOT ACCEPT ESIM. (337S00848: PROD)
OPTION B) IS IN CASE CHINA ACCEPTS ESIM, THEN THE CHINA CONFIGS WILL USE PROD-CN PARTS.(337S00848: PROD-CN)

OMIT TABLE

PART#	QTY	DESCRIPTION	REFERENCE DESIGNATOR(S)	BOM OPTION
118S00050	1	RES,MF,5.6K OHM,1%,1/32W,01005	R630_E	RF_SKU:WW+KOLKATA
118S0730	1	RES,MF,12.0K OHM,1%,1/32W,01005	R630_E	RF_SKU:WW
118S00050	1	RES,MF,5.6K OHM,1%,1/32W,01005	R631_E	BOARD_REV:PROTO0
118S0730	1	RES,MF,12.0K OHM,1%,1/32W,01005	R631_E	BOARD_REV:PROTO1
118S0626	1	RES,MF,100.0K OHM,1%,1/32W,01005	R631_E	BOARD_REV:PROTO2
118S00193	1	RES,MF,36.5K OHM,1%,1/32W,01005	R631_E	BOARD_REV:EVT
118S0868	1	RES,MF,47.5K OHM,1%,1/32W,01005	R631_E	BOARD_REV:CRB
118S00136	1	RES,TK,60.4K OHM,1%,1/32W,01005	R631_E	BOARD_REV:DVT
118S0768	1	RES,MF,75.0K OHM,1%,1/32W,01005	R631_E	BOARD_REV:PVT
118S0626	1	RES,MF,100K OHM,1%,1/32W,01005	R632_E	J518
118S0737	1	RES,MF,124K OHM,1%,1/32W,01005	R632_E	J523
118S00122	1	RES,MF,27.0K OHM,1%,1/32W,01005	R631_E	BOARD_REV:PRE-PROTO2

BOM_COST_GROUP=NO_COST_ITEMS

SYNC_MASTER=RADIO_MLB_3.27.0 SYNC_DATE=08/31/2020

PAGE TITLE

BOM TABLES

IMPEDANCE TABLES

SPACING CAPPED TABLES

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Spacing CSet Definitions

Custom mmW Constraint

Physical

Spacing

SYNC_MASTER=RADIO_MLB_3.27.0 SYNC_DATE=08/31/2020

PAGE TITLE

CONSTRAINTS: Impedance Tables

BOM_COST_GROUP=NO_COST_ITEMS

50-OHM PHYSICAL CONSTRAINTS

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SYNC_MASTER=RADIO_MLB_3.27.0 SYNC_DATE=08/31/2020

PAGE TITLE

CONSTRAINTS: RF Physical

BOM_COST_GROUP=NO_COST_ITEMS

50-OHM SPACING CONSTRAINTS

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SYNC_MASTER=RADIO_MLB_3.27.0 SYNC_DATE=08/31/2020

PAGE TITLE

CONSTRAINTS : RF Spacing

BOM_COST_GROUP=NO_COST_ITEMS

POWER CONSTRAINTS

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90-ohm Diff Pair Constraints

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SYNC_MASTER=RADIO_MLB_3.27.0 SYNC_DATE=08/31/2020

PAGE TITLE

CONSTRAINTS : 90ohm

BOM_COST_GROUP=NO_COST_ITEMS

Diff Pair Constraints

Grouping Constraints

RF-Shield

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SYNC_MASTER=RADIO_MLB_3.27.0 SYNC_DATE=08/31/2020

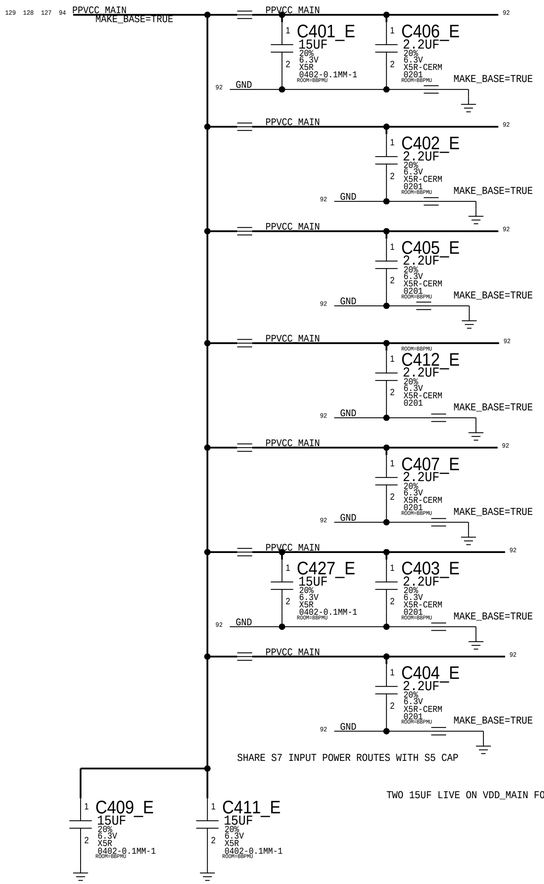
PAGE TITLE

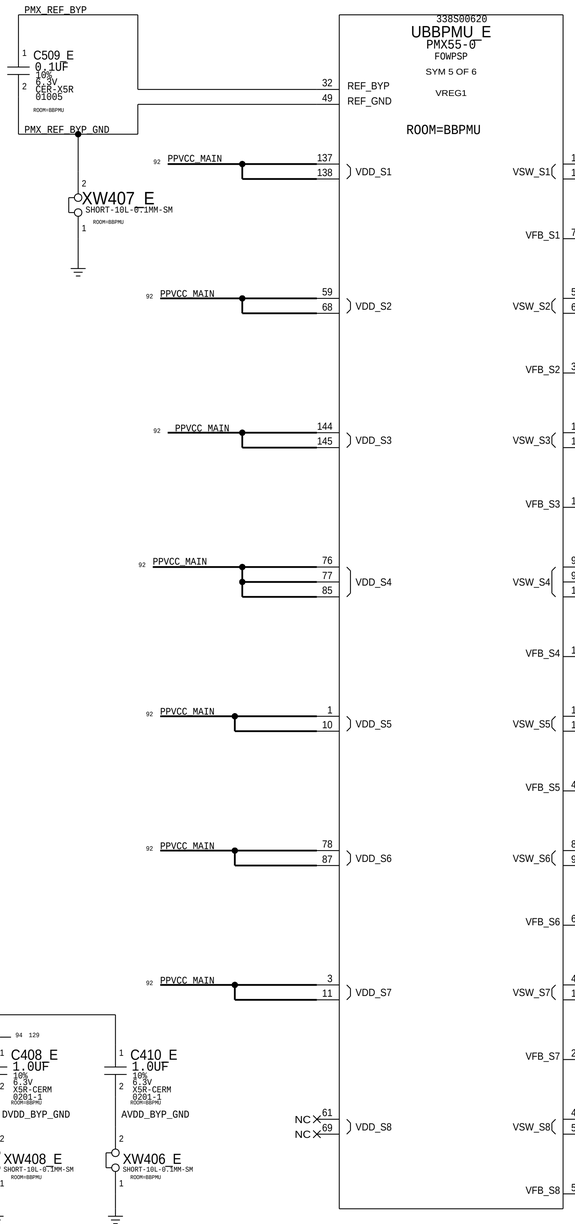
CONSTRAINTS: Misc

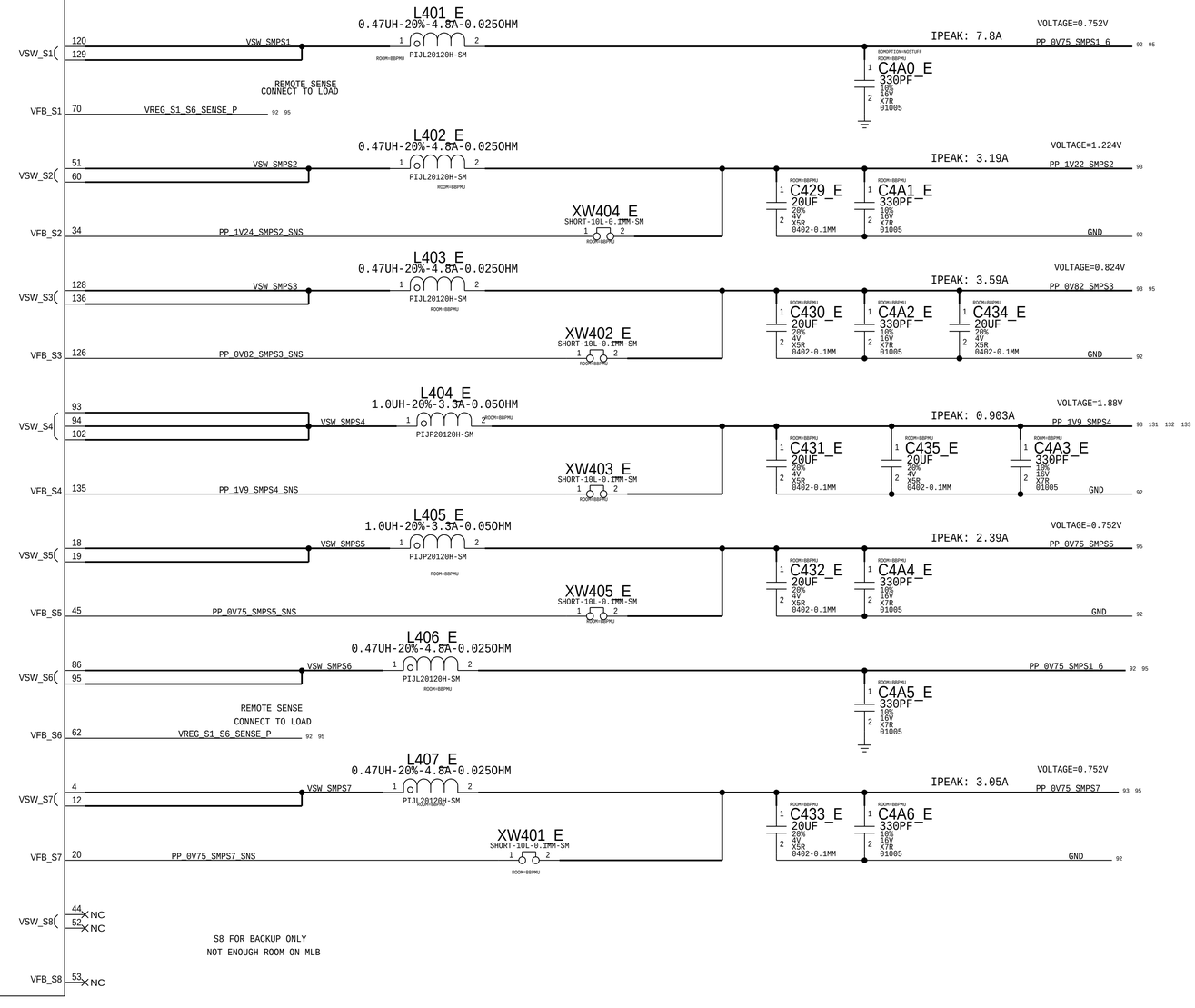
BOM_COST_GROUP=NO_COST_ITEMS

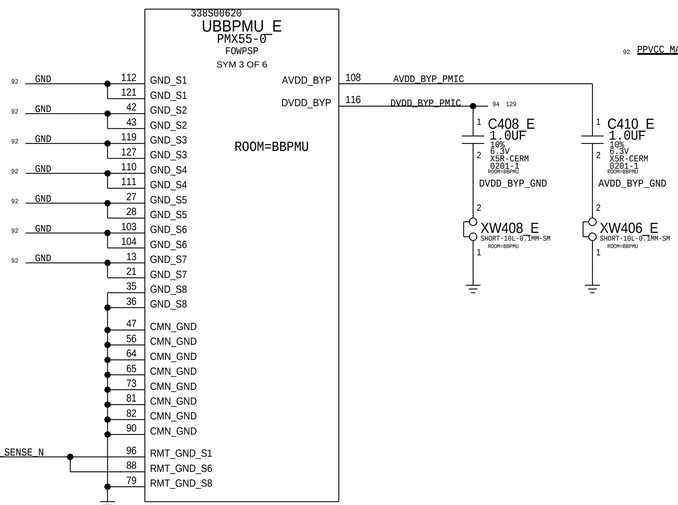
BB PMU: SMPS

SMPS INPUT CAPS









BOM_COST_GROUP=CELLULAR

SYNC_MASTER=RADIO_MLB_3.27.0 SYNC_DATE=08/31/2020

PAGE TITLE

PMIC: BUCKs

BB PMU: LDOS

338S00620
UBBPMU_E
PMX55-0
FOWPSP
SYM 6 OF 6

VREG2

ROOM=BBPMU

129 128 93	PP_1V2_LDO15	33	VDD_AP_IO			
		17	VDD_L1_L2	VREG_L1	9	VOLTAGE: 1.2V IPEAK: 1.2A
93 92	PP_1V22_SMPS2	25	VDD_L1_L2	VREG_L1	26	
				VREG_L2	8	VOLTAGE: 1.128V IPEAK: 0.324A
95 93 92	PP_0V82_SMPS3	124	VDD_L3_L9	VREG_L3	132	VOLTAGE: 0.8V IPEAK: 1.28A
				VREG_L9	115	VOLTAGE: 0.8V IPEAK: 0.283A
93 92	PP_1V22_SMPS2	15	VDD_L4_L12	VREG_L4	16	VOLTAGE: 0.912V IPEAK: 1.85A
		24	VDD_L4_L12			
				VREG_L12	7	VOLTAGE: 1.2V IPEAK: 0.586A
133 132 131 93 92	PP_1V9_SMPS4	134	VDD_L5_L6	VREG_L5	143	VOLTAGE: 1.8V IPEAK: 0.178A
				VREG_L6	142	VOLTAGE: 1.8V IPEAK: 0.229A
95 93 92	PP_0V82_SMPS3	123	VDD_L7_L8	VREG_L7	140	VOLTAGE: 0.744V IPEAK: 1.18A
		131	VDD_L7_L8			
				VREG_L8	139	VOLTAGE: 0.744V IPEAK: 0.825A
128 127	PPVCC_HIGH	48	VDD_L10_L11_L13	VREG_L10	40	VOLTAGE: 3.088V IPEAK: 0.0002A
				VREG_L11	31	VOLTAGE: 2.848V IPEAK: 0.07A
				VREG_L13	39	VOLTAGE: 2.848V IPEAK: 0.07A
95 92	PP_0V75_SMPS7	14	VDD_L14	VREG_L14	5	VOLTAGE: 0.62V IPEAK: 0.369A
93 92	PP_1V22_SMPS2	23	VDD_L15	VREG_L15	6	VOLTAGE: 1.2V IPEAK: 0.03A
133 132 131 93 92	PP_1V9_SMPS4	133	VDD_L16	VREG_L16	141	VOLTAGE: 1.864V IPEAK: 0.415A
				VREG_L14_S	22	PP_0V6_LDO14_SNS

ROOM=BBPMU
C528_E
2.2UF
20%
6.3V
X5R-CERM
0201

PP_0V8_LDO1	93 95 98	VOLTAGE=1.2V	
PP_1V1_LDO2	95	VOLTAGE=1.128V	
PP_0V8_LDO3	99	VOLTAGE=0.8V	
PP_0V8_LDO9	130	VOLTAGE=0.80V	
PP_0V875_LDO4	95 98 130	VOLTAGE=0.90V	
PP_1V2_LDO12	130	VOLTAGE=1.2V	
PP_1V8_LDO5	95 130	VOLTAGE=1.8V	
PP_1V8_LDO6	93 94 95 97 102 103 128 129 130 137	VOLTAGE=1.8V	
PP_0V8_LDO7	130	VOLTAGE=0.8V	
PP_0V8_LDO8	98	VOLTAGE=0.8V	
PP_3V1_LDO10	95	VOLTAGE=3.1V	
PP_UIM1_LDO11	95 127 132 134 137	VOLTAGE=2.85V	
PP_UIM2_LDO13	95 126	VOLTAGE=2.85V	
PP_0V6_LDO14	95 97	VOLTAGE=0.6V	
PP_1V2_LDO15	93 128 129	VOLTAGE=1.2V	
PP_1V7_LDO16	98	VOLTAGE=1.7V	

XW501_E
SHORT-18L-0.1MM-SM
ROOM=BBPMU

C511_E	138S00071	4UF 20% 6.3V CER-X5R 0201		
C512_E	138S00071	4UF 20% 6.3V CER-X5R 0201		
C513_E	138S00071	4UF 20% 6.3V CER-X5R 0201		
C514_E	138S00071	4UF 20% 6.3V CER-X5R 0201		
C515_E	138S00071	4UF 20% 6.3V CER-X5R 0201		
C516_E	138S00071	4UF 20% 6.3V CER-X5R 0201		
C517_E	138S00071	4UF 20% 6.3V CER-X5R 0201		
C518_E	138S0079	10UF 20% 10V X5R-CERM 0402-8		
C501_E		0.47UF 20% 6.3V X5R 01005		
C502_E		0.47UF 20% 6.3V X5R 01005		
C503_E		0.47UF 20% 6.3V X5R 01005		
C522_E	138S0079	10UF 20% 10V X5R-CERM 0402-8		
C523_E	138S0079	20UF 20% 4V X5R 0402-0.1MM	PATH=I62	
C524_E	138S00071	4UF 20% 6.3V CER-X5R 0201		
C525_E	138S00071	4UF 20% 6.3V CER-X5R 0201	PATH=I38	
C526_E	138S00071	4UF 20% 6.3V CER-X5R 0201		

XW502_E	SHORT-8L-0.1MM-SM	PP_1V2_LDO1 (98 95 93)	PP_VDD_RF_1V2 (106 107 108 109 110 111 112 113 114 128)
XW503_E	SHORT-8L-0.1MM-SM	PP_1V8_LDO6 (137 130 129 128 103 102 97 95 94 93)	PP_VIO_RFFE_1V8_TX (106 107 108 109 115 128)
XW504_E	SHORT-8L-0.1MM-SM		PP_VIO_RFFE_1V8_RX (106 107 108 109 113 119)
XW505_E	SHORT-8L-0.1MM-SM		PP_VIO_RFFE_1V8_UAT (119 128)

C530_E
1.0UF
20%
6.3V
X5R
0201-1
ROOM=BBPMU

PMX55 LDO CAPACITOR TABLE
N1200 (L1, L2, L3, L4, L7, L8, L9, L12, L14, L15) 4.7UF MIN, 22UF MAX N1200 (L14) 2X10UF OR 1X22UF MIN, 44UF MAX
MVP150 (L10, L11, L13) 0.47UF MIN, 5UF MAX
LVP600 (L5, L6, L16) 4.7UF MIN, 23.5UF MAX

BOM_COST_GROUP=CELLULAR

SYNC_MASTER=RADIO_MLB_3.27.0 SYNC_DATE=08/31/2020
PAGE TITLE
PMIC: LDOs

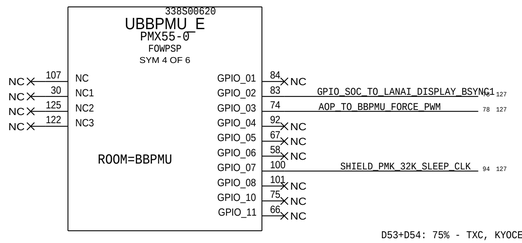
BB PMU: XTAL, CLK, ANALOG, IO

BOARD_ID	APN	R631_E	MLB/RADIO_DEV	HEX
0.05V-0.15V	118S00050	5.6K	PROTO0/DEV1	0X01
0.15V-0.25V	118S0730	12.0K	PROTO1/DEV2	0X02
0.25V-0.35V	118S00088	19.1K	PROTO1.5/DEV3	0X03
0.35V-0.45V	118S00122	27.0K	PRE-PROTO2/DEV4	0X04
0.45V-0.55V	118S00193	36.5K	EVT/DEV5	0X05
0.55V-0.65V	118S0868	47.5K	CARRIER/DEV6	0X06
0.65V-0.75V	118S00136	60.4K	DVT/DEV7	0X07
0.75V-0.85V	118S0768	75.0K	PVT	0X08
0.85V-0.95V	118S0626	100K	PROTO2	0X09
0.95V-1.05V	118S0737	124K	SPARE	0X0A
1.05V-1.15V	118S0688	143K	SPARE	0X0B
1.15V-1.25V	TBD	TBD	SPARE	SPARE

PLATFORM_ID	APN	R632_E	MLB/RADIO_DEV	HEX
0.05V-0.15V	118S00050	5.6K	RADIO_DEV	0X1
0.15V-0.25V	118S0730	12.0K	DARWIN_FX	0X2
0.25V-0.35V	118S00088	19.1K	DARWIN_PG	0X3
0.35V-0.45V	118S00122	27.0K	MAV20.0	0X4
0.45V-0.55V	118S00193	36.5K	MAV20.1	0X5
0.55V-0.65V	118S0868	47.5K	MAV20.2	0X6
0.65V-0.75V	118S00136	60.4K	RESERVED	0X7
0.75V-0.85V	118S0768	75.0K	RESERVED	0X8
0.85V-0.95V	118S0626	100K	MAV20.5	0X9
0.95V-1.05V	118S0737	124K	MAV20.6	0XA
1.05V-1.15V	118S0688	143K	DEV BEERPONG	0XB
1.15V-1.25V	TBD	TBD	SPARE	SPARE

SKU_ID	APN	R630_E	MLB/RADIO_DEV	HEX
0.05V-0.15V	118S00050	5.6K	WW+KOLKATA	0X1
0.15V-0.25V	118S0730	12.0K	WW	0X2
0.25V-0.35V	118S00088	19.1K	SPARE	0X3
0.35V-0.45V	118S00122	27.0K	SPARE	0X4
0.45V-0.55V	118S00193	36.5K	SPARE	0X5
0.55V-0.65V	118S0868	47.5K	SPARE	0X6
0.65V-0.75V	118S00136	60.4K	SPARE	0X7
0.75V-0.85V	118S0768	75.0K	SPARE	0X8
0.85V-0.95V	118S0626	100K	SPARE	0X9
0.95V-1.05V	118S0737	124K	SPARE	0XA
1.05V-1.15V	118S0688	143K	SPARE	0XB
1.15V-1.25V	TBD	TBD	SPARE	SPARE

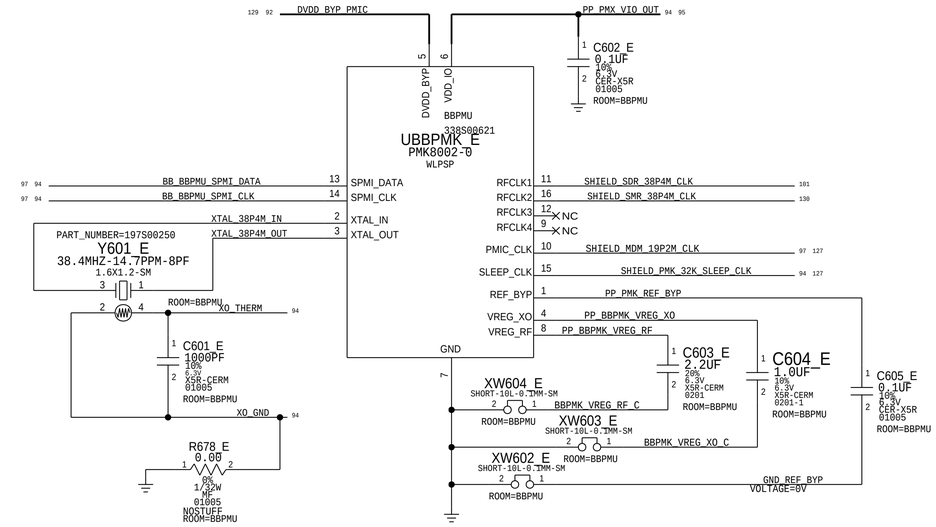
NOTE: ONLY 2 RF SKUS IN J5XX
SIM VARIANTS (PSIM , ESIM, PSIM+ESIM) ARE NOT RF_SKUS

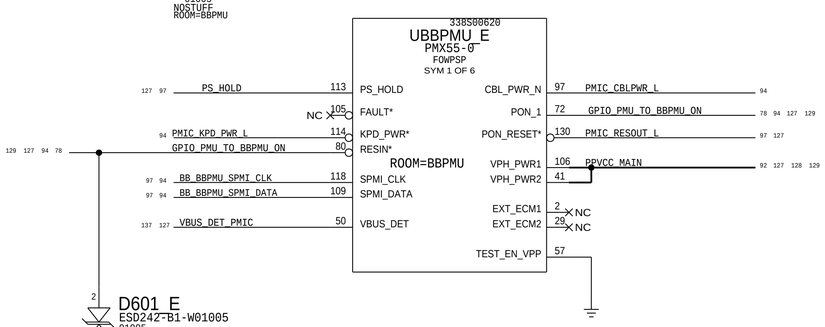


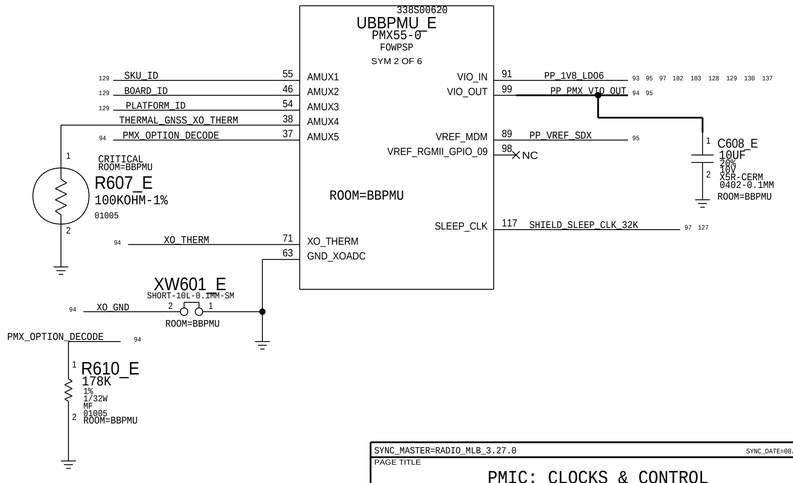
D53+D54: 75% - TXC, KYOCERA, NDK
D52+J5XX ~25% - TXC, KYOCERA, EPSON

197S00249: NDK EXS00A-CS12723
197S00250: TXC OW38410007
197S00254: EPSON X1E000401000400
197S00283 : KYOCERA CT1612DB38400D0FLHA3

NEED TO ADD KYOCERA XTAL Y601_E APN AFTER NEW APN CREATION







SYNC_MASTER=RADIO_MLB_3.27.0 SYNC_DATE=08/31/2020
PAGE TITLE
PMIC: CLOCKS & CONTROL

BOM_COST_GROUP=CELLULAR

BB: PDN

337S00865 U_BB_E SDX-55M-0-PSP547-02-1 PSP SYM 5 OF 8 PWR

95 92 PP_0V75_SMPS5 → AA29 AB12 AB14 AB16 AC11 AC13 AC15 AC17 AC19 AC21 AC23 AC25 AC27 AC29 AC9 AD18 AD20 AD22 AD26 W29 VDDCX

95 93 92 PP_0V75_SMPS7 → AB10 AB22 AB24 AB8 AD24 AE25 G23 G25 G27 H10 H8 K16 K18 L25 L27 M8 P28 P8 R19 R21 T14 T16 T28 T8 U21 U23 W13 W15 W19 W21 VDDMX

AA19 AA27 G21 H12 H14 H16 H18 H20 H22 H24 H26 H28 J11 J9 L11 L13 L15 L17 L19 L21 L23 L9 M10 M12 M14 M16 M18 M20 M22 M24 M26 M28 R11 R13 R15 R17 R23 R25 R27 R9 T10 T12 T18 T20 T22 T24 T26 W11 W17 W23 W25 W27 W5 W9 Y10 Y12 Y14 Y16 Y18 Y20 Y22 Y24 Y26 Y28 Y4 Y6 Y8 VDD_MODEM

95 92 PP_0V75_SMPS1_6 → C761_E 22UF 20% 4V CER-X5R 0402-0.1MM; C762_E 20UF 20% 4V X5R 0402-0.1MM; C763_E 20UF 20% 4V X5R 0402-0.1MM; C764_E 20UF 20% 4V X5R 0402-0.1MM; NOSTUFF

XW701_E SHORT-10L-0.1MM-SM 2 1 VREG_S1_S6_SENSE_P 92

XW702_E SHORT-10L-0.1MM-SM 2 1 VREG_S1_S6_SENSE_N 92

137 130 129 128 103 102 97 95 94 93 PP_1V8_LDO6 → C719_E 0.22UF; C724_E 0.22UF; C729_E 2.2UF; C733_E 2.2UF; C739_E 0.22UF; C741_E 0.22UF

93 PP_1V1_LDO2 → C720_E 0.22UF; C725_E 0.22UF; C730_E 0.22UF; C734_E 0.22UF; C737_E 0.22UF; C740_E 0.22UF

94 PP_PMX_VIO_OUT

137 134 132 127 93 PP_UIM1_LDO11

126 93 PP_UIM2_LDO13

98 95 93 PP_1V2_LDO1 → C738_E 0.22UF; C789_E 2.2UF; C735_E 2.2UF; C732_E 2.2UF; C726_E 2.2UF; C722_E 2.2UF; C728_E 2.2UF; C721_E 2.2UF; C765_E 1.0UF

128 PP_1V8_LDO6

128 PP_1V2_LDO15

128 PP_1V2_LDO15

128 PP_1V2_LDO15

94 PP_VREF_SDX → C767_E 0.22UF; C723_E 0.22UF; C727_E 0.22UF; C731_E 0.22UF; 132S00014 C736_E 0.22UF

97 95 93 PP_0V6_LDO14

93 92 PP_0V82_SMPS3

129 128 103 102 97 95 94 93 137 130 PP_1V8_LDO6 → AE29 VDD_QFPROM

130 98 95 93 PP_0V875_LDO4 → AF12 VDD_USB_HS_DVDD

337S00865 U_BB_E SDX-55M-0-PSP547-02-1 PSP SYM 6 OF 8 PWR

AC37 G37 VDD1

AA37 C37 K36 L37 R37 U37 VDD2

AE37 AH2 AK22 AK34 B36 C1 R1 VDDPX_3

AG1 V2 W1 AF6 J1 AJ33 AG37 AJ21 AH4 VDDPX_0 VDDPX_4 VDDPX_5 VDDPX_11 VDDPX_12 VDDPX_71 VDDPX_72 VDDPX_73 VDDPX_74

V6 VDDPX_VBIAS_UIM

D36 F36 H36 M36 T36 V36 Y36 VDDQ

F32 VDD_ILDO_NAV

VDDA_DDRSS L29 N29 R29 U29 V30 P32 W31

VDDA_DDRSS_CC

VDDA_DDRSS_HV

VDDA_DDRSS_PLL_HV

VDDA_PCIE_0P9 AF10 AG11 AF8

VDDA_PCIE_1P2

VDDA_QREF_0P9 G9 AC7

VDDA_QREF_1P8 AE7

VDDA_USB_HS_1P8 AE13

VDDA_USB_HS_3P3 AG13

VDDA_USB_SS_0P9 AF14

VDDA_USB_SS_1P2 AE15

VDDA_QLINK0_HV G19

VDDA_QLINK0_LV F20 G17 F18

VDDA_QLINK0_LV_CK

VDDA_QLINK1_HV G13

VDDA_QLINK1_LV G11 G15

VDDA_QLINK1_LV_CK F12 F14

VDDIO_DDRSS J31 L31 N31 U31 R31

VDDIO_DDRSS_CK

PP_0V75_SMPS7 → C749_E 0.22UF; C768_E 2.2UF; C769_E 2.2UF

PP_1V2_LDO1 → C742_E 0.22UF; C744_E 0.22UF; C745_E 2.2UF; C752_E 2.2UF; C758_E 0.22UF

PP_0V875_LDO4 → C759_E 0.22UF; C755_E 0.22UF; C766_E 0.22UF; C746_E 2.2UF; C750_E 0.22UF

PP_0V6_LDO14 → C743_E 2.2UF; C748_E 2.2UF; C770_E 0.22UF; C771_E 0.22UF; C772_E 0.22UF; C773_E 2.2UF; C774_E 0.22UF

VDD_CX

95 92 PP_0V75_SMPS5 → C701_E 2.2UF; C704_E 2.2UF; 132S00014 C706_E 0.22UF; C709_E 0.22UF; C712_E 0.22UF; C715_E 0.22UF; C754_E 0.22UF; C757_E 0.22UF; C775_E 0.22UF; C776_E 0.22UF

VDD_MX

95 93 92 PP_0V75_SMPS7 → C702_E 2.2UF; 132S00014 C705_E 0.22UF; 132S00014 C707_E 0.22UF; 132S00014 C710_E 0.22UF; C713_E 0.22UF; C716_E 0.22UF; C718_E 0.22UF; C779_E 0.22UF; C781_E 0.22UF; C783_E 0.22UF

VDD_MODEM

95 92 PP_0V75_SMPS1_6 → C777_E 2.2UF; 138S00071 C787_E 4UF; 138S00071 C788_E 4UF; C708_E 0.22UF; C711_E 0.22UF; C714_E 0.22UF; C717_E 0.22UF; C778_E 0.22UF; C780_E 0.22UF; C782_E 0.22UF; C784_E 0.22UF; C785_E 0.22UF; C786_E 0.22UF

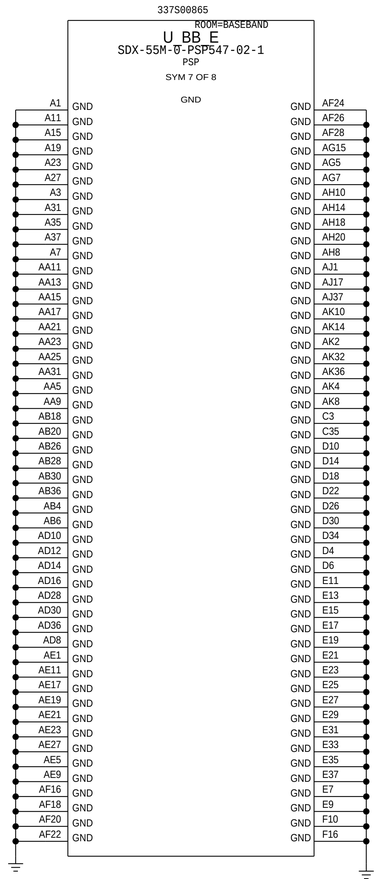
BOM_COST_GROUP=CELLULAR

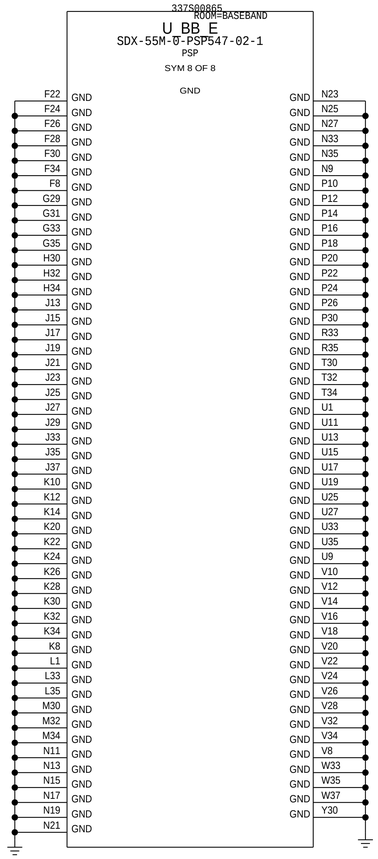
SYNC_MASTER=RADIO_MLB_3.27.0 SYNC_DATE=08/31/2020

PAGE TITLE

BB: POWER

BB: GND





BOM_COST_GROUP=CELLULAR

SYNC_MASTER=RADIO_MLB_3.27.0 SYNC_DATE=08/31/2020

PAGE TITLE

BB: GND

BB:IO,MEM,SERDES,EEPROM

337S00865
U_BB_E
SDX-55M-0-PSP547-02-1
PSP
SYM 2 OF 8
QLINK

85_SUB6_QLINK_L0_P	C29	QLINK0_L0_P	QLINK1_L0_P	C11	85_MMW_QLINK_L0_P
85_SUB6_QLINK_L0_N	B28	QLINK0_L0_M	QLINK1_L0_M	D12	85_MMW_QLINK_L0_N
85_SUB6_QLINK_L1_P	D32	QLINK0_L1_P	QLINK1_L1_P	B14	85_MMW_QLINK_L1_P
85_SUB6_QLINK_L1_N	C31	QLINK0_L1_M	QLINK1_L1_M	A13	85_MMW_QLINK_L1_N
85_SUB6_QLINK_L2_P	C33	QLINK0_L2_P	QLINK1_L2_P	B18	85_MMW_QLINK_L2_P
85_SUB6_QLINK_L2_N	B32	QLINK0_L2_M	QLINK1_L2_M	A17	85_MMW_QLINK_L2_N
85_SUB6_QLINK_L3_P	D24	QLINK0_L3_P	QLINK1_L3_P	B8	85_MMW_QLINK_L3_P
85_SUB6_QLINK_L3_N	C23	QLINK0_L3_M	QLINK1_L3_M	C9	85_MMW_QLINK_L3_N
85_SUB6_QLINK_L4_P	D28	QLINK0_L4_P	QLINK1_L4_P	B6	85_MMW_QLINK_L4_P
85_SUB6_QLINK_L4_N	C27	QLINK0_L4_M	QLINK1_L4_M	A5	85_MMW_QLINK_L4_N
85_SUB6_QLINK_L5_P	C25	QLINK0_L5_P	QLINK1_L5_P	C17	85_MMW_QLINK_L5_P
85_SUB6_QLINK_L5_N	B24	QLINK0_L5_M	QLINK1_L5_M	B16	85_MMW_QLINK_L5_N
85_SUB6_QLINK_L6_P	B26	QLINK0_L6_P	QLINK1_L6_P	B20	85_MMW_QLINK_L6_P
85_SUB6_QLINK_L6_N	A25	QLINK0_L6_M	QLINK1_L6_M	C21	85_MMW_QLINK_L6_N
85_SUB6_QLINK_L7_P	B34	QLINK0_L7_P	QLINK1_L7_P	B12	85_MMW_QLINK_L7_P
85_SUB6_QLINK_L7_N	A33	QLINK0_L7_M	QLINK1_L7_M	C13	85_MMW_QLINK_L7_N
85_SUB6_QLINK_CLK_P	A29	QLINK0_CLK_P	QLINK1_L8_P	B10	85_MMW_QLINK_L8_P
85_SUB6_QLINK_CLK_N	B30	QLINK0_CLK_M	QLINK1_L8_M	A9	85_MMW_QLINK_L8_N
			QLINK1_L9_P	D8	85_MMW_QLINK_L9_P
			QLINK1_L9_M	C7	85_MMW_QLINK_L9_N
			QLINK1_L10_P	B22	85_MMW_QLINK_L10_P
			QLINK1_L10_M	A21	85_MMW_QLINK_L10_N
			QLINK1_L11_P	C19	85_MMW_QLINK_L11_P
			QLINK1_L11_M	D20	85_MMW_QLINK_L11_N
			QLINK1_L12_P	B4	85_MMW_QLINK_L12_P
			QLINK1_L12_M	C5	85_MMW_QLINK_L12_N
			QLINK1_CLK_P	C15	85_MMW_QLINK_CLK_P
			QLINK1_CLK_M	D16	85_MMW_QLINK_CLK_N

337S00865
U_BB_E
SDX-55M-0-PSP547-02-1
PSP
SYM 3 OF 8
GPIO

	AA3	GPIO_0	
BB_SIM2_DETECT	AA1	GPIO_1	
BB_SIM2_RESET	AB2	GPIO_2	
BB_SIM2_CLK	Y2	GPIO_3	
	T6 NC	GPIO_4	
	U3 NC	GPIO_5	
	V4 NC	GPIO_6	
	U5 NC	GPIO_7	
UART_BB_TO_AOP_TX	AK26	GPIO_8	BB_TX
UART_AOP_TO_BB_TX	AJ25	GPIO_9	BB_RX
BB_EEPROM_I2C_SDA	AH26	GPIO_10	
BB_EEPROM_I2C_SCL	AG25	GPIO_11	
I2S_BB_TO_SOC_LRCK	AF30	GPIO_12	
I2S_SOC_TO_BB_DOUT	AF32	GPIO_13	
I2S_BB_TO_SOC_DOUT	AG31	GPIO_14	
I2S_BB_TO_SOC_BCLK	AH30	GPIO_15	
	AK30 NC	GPIO_16	
	AG33 NC	GPIO_17	
	AH32 NC	GPIO_18	
BB_TO_DOTARA_COEX : NOT USED	AJ31 NC	GPIO_19	
	AJ27 NC	GPIO_20	
	AG27 NC	GPIO_21	
	AG29 NC	GPIO_22	
	AD28 NC	GPIO_23	
BOOT_CFG2	AA33	GPIO_24	
	Y34 NC	GPIO_25	
	K2 NC	GPIO_26	
	K4 NC	GPIO_27	
BB_TO_SDR_WMSS_RESET_L	E1	GPIO_28	
SHIELD_RFFE4_SCLK_BB	G3	GPIO_29	
SHIELD_RFFE4_SDATA_BB	F4	GPIO_30	
	AG23 NC	GPIO_31	
GPIO_AP_TO_BB_GPS_TIME_MARK	AH24	GPIO_32	
GPIO_BB_TO_STROBE_GSM_BURST_IND_1V8	G1	GPIO_33	
QLINK_EN_BB_TO_SDR	F2	GPIO_34	
QLINK_REQ_SDR_TO_BB	E5	GPIO_35	
SHIELD_RFFE0_SDATA_BB	J5	GPIO_36	
SHIELD_RFFE0_SCLK_BB	J3	GPIO_37	
SHIELD_RFFE1_SDATA_BB	G5	GPIO_38	
SHIELD_RFFE1_SCLK_BB	H6	GPIO_39	

	H2 NC	GPIO_40	
	H4 NC	GPIO_41	
	AK28 NC	GPIO_42	BB_FORCE_USB_BOOT (IO NOT USED FOR USB BOOT)
	Y32 NC	GPIO_43	MUXED WITH UART (FOR WCI-2 BB-WLAN COEX)
	AJ23	GPIO_44	UART_BB_TO_WLAN_COEX_1V2
	AK24	GPIO_45	UART_WLAN_TO_BB_COEX_1V2
	AC33 NC	GPIO_46	
	AA35	GPIO_47	GPIO_BB_TO_SOC_RESET_DET_L
	AJ35	GPIO_48	GPIO_SOC_TO_BB_COREDUMP
	AH36 NC	GPIO_49	
	AG35 NC	GPIO_50	
	AF36 NC	GPIO_51	
	AC31 NC	GPIO_52	
	AE33	GPIO_53	GPIO_BB_TO_PMU_HOST_WAKE_L
	AE35 NC	GPIO_54	
	AD34 NC	GPIO_55	
	AF34	GPIO_56	PCIE_BB_TO_SOC_CLKREQ_L
	AE31	GPIO_57	PCIE_SOC_TO_BB_PERST_L
	AB34	GPIO_58	BOOT_CFG1
	AC35 NC	GPIO_59	GPIO_59/BOOT_CFG3 NOT NEEDED
	AB37 NC	GPIO_60	GPIO_60 RESERVED FOR VFR_IRQ
	AD32	GPIO_61	GPIO_AP_TO_BBPMU_PEAK_POWER_IND
	AG29 NC	GPIO_62	
	K6 NC	GPIO_63	
	L3 NC	GPIO_64	
	L5 NC	GPIO_65	
	M4 NC	GPIO_66	
	AD2	GPIO_67	BB_SIM1_DATA
	AC1	GPIO_68	BB_SIM1_DETECT
	AD4	GPIO_69	BB_SIM1_RESET
	AC3	GPIO_70	BB_SIM1_CLK
	AH34 NC	GPIO_71	
	E3	GPIO_72	QLINK_EN_BB_TO_SMR
	D2	GPIO_73	QLINK_REQ_SMR_TO_BB
	B2	GPIO_74	BB_TO_SMR_WMSS_RESET_L
	AH22 NC	GPIO_75	
	AG21 NC	GPIO_76	
	F6 NC	GPIO_77	
	AF4 NC	GPIO_78	
	AG3 NC	GPIO_79	

NOTE:

ENSURE THAT THERE ARE NO UNINTENTIONAL EXTERNAL PULL-UPS ON THE FOLLOWING GPIOS AND THESE GPIOS ARE NOT LOGIC HIGH UNINTENTIONALLY BEFORE SDX55M COMES OUT OF RESET

(I.E. BEFORE SDX_RESOUT_N DE-ASSERTS TO LOGIC HIGH): GPIO_24, 54, 58, 59, AND 75.
SEE BOOT CONFIGURATION GPIOS PAGE OF SDX55M DESIGN GUIDELINES (80-PK565-5BM) FOR DETAILS.

NOTE: TYPO IN SPEC

AP_TO_BB_DEV_WAKE : NOT USED
WAKE O/P WHEN BB IS END POINT

BB EEPROM

PP_1V8_LDO6
R908_E 10K 1% 1/32W MF 01005 ROOM=BASEBAND
C901_E 1UF 20% 10V X5R 0201 ROOM=BASEBAND
R909_E 10K 1% 1/32W MF 01005 ROOM=BASEBAND
EEPROM_E CAT24C08C4A WLCSP ROOM=BASEBAND
A1 VCC
B1 SCL
SDA B2
A2 VSS
BB_EEPROM_I2C_SCL
BB_EEPROM_I2C_SDA

DUAL-VOLTAGE IO PADS
VDD_PX71: GPIO8,9,12-23
VDD_PX72: GPIO46-57,59-61,71
VDD_PX73: GPIO31-32,44-45, 75-76
VDD_PX74: GPIO78-79

BOOT SEQ	BOOT_CFG3	BOOT_CFG2	BOOT_CFG1	CONFIG
NAND>HSUSB	0	0	0	
PCIE	0	0	1	POR
USB	0	1	0	EUREKA
EMMC>USB	0	1	1	

PSIM AND ESIM: SIM2_DET STUFF PU

PP_1V8_LDO6
R905_E 100K 5% 1/32W MF 01005 ROOM=BASEBAND BOMOPTION=ESIM
R907_E 100K 5% 1/32W MF 01005 ROOM=BASEBAND BOMOPTION=PSIM
BB_SIM1_DETECT
BB_SIM2_DETECT
R906_E 100K 5% 1/32W MF 01005 ROOM=BASEBAND BOMOPTION=ESIM:OFF
R950_E 100K 5% 1/32W MF 01005 ROOM=BASEBAND BOMOPTION=PSIM:OFF

337S00865
U_BB_E
SDX-55M-0-PSP547-02-1
PSP
SYM 1 OF 8
CONTROL

SHIELD_SLEEP_CLK_32K	W3	SLEEP_CLK	EBI_ZQ	P36
SHIELD_CXO_REXT	AJ3	QREFS_CXO_REXT	EBI_CA_CAL	N37
SHIELD_MDM_19P2M_CLK	AD6	CXO		
BB_JTAG_RST_L	P6	SRST*	RESOUT*	T2 NC
PMIC_RESOUT_L	AC5	RESIN*	PS_HOLD	T4
	N3 NC	MODE_0	DNC	AG19 NC
	M4 NC	MODE_1	DNC	M6 NC
			DNC	N5 NC
			DNC	P3 NC
BB_JTAG_TCK_SWD_CLK_1V8_R	N1	TCK	REFGEN_REXT	AK20
BB_JTAG_TRST_L	P2	TRST*		
BB_JTAG_TMS_SWD_IO_1V8_R	R3	TMS	PMIC_SPMI_CLK	AF2
BB_JTAG_TDI	R5	TDI	PMIC_SPMI_DATA	AE3
BB_JTAG_TDO	P4	TDO		

SHIELD_BB_BDM_ZQ
SHIELD_BB_EBI1_CAL
PS_HOLD
SHIELD_PCIE_CAL_RES
BB_BBPMU_SPMI_CLK
BB_BBPMU_SPMI_DATA

R904_E 3.0K 1% 1/32W MF 01005 ROOM=BASEBAND
R902_E 240 1% 1/32W MF 01005 ROOM=BASEBAND
R903_E 240 1% 1/32W MF 01005 ROOM=BASEBAND
PP_0V6_LDO14
R901_E 100 1% 1/32W MF 01005 ROOM=BASEBAND
C904_E 10PF 5% 10V NP0/C0G 01005 ROOM=BASEBAND NOSTUFF
C905_E 10PF 5% 10V NP0/C0G 01005 ROOM=BASEBAND NOSTUFF

C906_E 33PF 5% 10V NP0-C0G 01005-1 ROOM=BASEBAND

337S00865
U_BB_E
SDX-55M-0-PSP547-02-1
PSP
SYM 4 OF 8
USB_PCIE

	AJ9	PCIE_REFCLK_P	PCIE_SOC_TO_BB_REFCLK_P
	AG9	PCIE_REFCLK_M	PCIE_SOC_TO_BB_REFCLK_N
	AJ13	PCIE_TX0_P	90_PCIE_BB_TO_AP_RX_SDX_P
	AH12	PCIE_TX0_M	90_PCIE_BB_TO_AP_RX_SDX_N
	AJ11 NC	PCIE_TX1_P	
	AK13 NC	PCIE_TX1_M	
	AJ5	PCIE_RX0_P	PCIE_SOC_TO_BB_TX_P
	AK6	PCIE_RX0_M	PCIE_SOC_TO_BB_TX_N
	AH6 NC	PCIE_RX1_P	
	AJ7 NC	PCIE_RX1_M	
90_USB_BB_P	AJ15	USB_HS_DP	
90_USB_BB_N	AK16	USB_HS_DM	
	AG17 NC	USB_SS_TX_P	
	AG16 NC	USB_SS_TX_M	
	AK18 NC	USB_SS_RX_P	
	AJ19 NC	USB_SS_RX_M	

132S00232 CAN NOT BE USED FOR ANY 0.22UF PARTS ON CELLULAR SIDE

C903_E 0.22UF 10% 6.3V CER-X5R 01005 ROOM=BASEBAND 132S00232
C902_E 0.22UF 10% 6.3V CER-X5R 01005 ROOM=BASEBAND 132S00232
PCIE_BB_TO_SOC_TX_P
PCIE_BB_TO_SOC_TX_N

UNUSED/NOSTUFF FOR VENDOR CONFIG

PP1V25_S2
C907_E 0.1UF 10% 6.3V CER-X5R 01005 ROOM=BASEBAND
R910_E 10K 1% 1/32W MF 01005 ROOM=BASEBAND
VCCA VCCB
SWD_E NVT0202JK X2SON 311S00235 ROOM=BASEBAND
SWD_OE
OE
A1
A2
GND
NOSTUFF
R911_E 10K 1% 1/32W MF 01005 ROOM=BASEBAND
R912_E 0.00 0% 1/32W MF 01005 ROOM=BASEBAND
SWD_BB_SWCLK
SWD_BB_SWDIO
BB_JTAG_TMS_SWD_IO_R
C908_E 0.1UF 10% 6.3V CER-X5R 01005 ROOM=BASEBAND
PP_1V8_LDO6
R914_E 0.00 0% 1/32W MF 01005 ROOM=BASEBAND
R913_E 0.00 0% 1/32W MF 01005 ROOM=BASEBAND
BB_JTAG_TCK_SWD_CLK_1V8
BB_JTAG_TMS_SWD_IO_1V8
BB_JTAG_TCK_SWD_CLK_1V8_R
BB_JTAG_TMS_SWD_IO_1V8_R

BOM_COST_GROUP=CELLULAR

SYNC_MASTER=RADIO_MLB_3.27.0 SYNC_DATE=08/31/2020
PAGE TITLE
BB: GPIOS & QLINK

TRANSCEIVER: PDN

NOTE: 4UF BULK COULD BE FURTHER AWAY AND MAKE SURE THE STAR ROUTING IS FROM 4UF.
NOTE: 1UF SHOULD BE AS CLOSE AS POSSIBLE TO CORRESPONDING PIN ON SDR

98 95 93 PP_1V2_LDO1

C1135_E 4UF 20% 6.3V CER-X5R 0201 — C1136_E 4UF 20% 6.3V CER-X5R 0201

STAR ROUTE

U_SDR_E
SDR865-0
PSP
SYM 6 OF 8
338S00647
SHIELD=TTS

A24	VDDAM_TP0	VDDAH_TP0	B25
AG26	VDDAM_TP1	VDDAH_TP1	AF25
B29	VDDAM_TX0	VDDAH_TX0	A30
AF29	VDDAM_TX1	VDDAH_TX1	AF31
AF23	VDDAM_TX2	VDDAH_TX2	AG22
E2	VDDAM_RP0	VDDAH_RP0	C2
F1	VDDAM_RP1	VDDAH_RP1	G2
P1	VDDAM_RP2	VDDAH_RP2	M1
V1	VDDAM_RP3	VDDAH_RP3	Y1
AB1	VDDAM_RP4	VDDAH_RP4	AG4
AF15	VDDAM_RP5	VDDAH_RP5_2	AF9
A16	VDDAM_RX0	VDDAH_RX0	AF13
AG10	VDDAM_RX5		A18
D21	VDDAM_BBRX_TOP	VDDAH_TXDAC0	J32
AA22	VDDAM_BBRX_BOT	VDDAH_TXDAC1	W30
V35	VDD_CX	VDDAH_LVDS	T21
W36	VDD_CX		
L36	VDD_CX		
J34	VDD_MX0		
V33	VDD_MX1		
L34	VDD_PHY		
K35	VDD_PX		
K33	VDD_PXM		

98 95 93 PP_1V2_LDO1
- XW1181_E SHORT-8L-0.1MM-SM — ROOM=SUB6_XCVR
- XW1101_E SHORT-8L-0.1MM-SM — ROOM=SUB6_XCVR
- XW1102_E SHORT-8L-0.1MM-SM — ROOM=SUB6_XCVR
- XW1186_E SHORT-8L-0.25MM-SM — ROOM=SUB6_XCVR
- XW1103_E SHORT-8L-0.1MM-SM — ROOM=SUB6_XCVR
- XW1104_E SHORT-8L-0.1MM-SM — ROOM=SUB6_XCVR
- XW1105_E SHORT-8L-0.1MM-SM — ROOM=SUB6_XCVR
- XW1187_E SHORT-8L-0.25MM-SM — ROOM=SUB6_XCVR
- XW1106_E SHORT-8L-0.1MM-SM — ROOM=SUB6_XCVR
- XW1107_E SHORT-8L-0.1MM-SM — ROOM=SUB6_XCVR
- XW1108_E SHORT-8L-0.1MM-SM — ROOM=SUB6_XCVR
- XW1190_E SHORT-8L-0.25MM-SM — ROOM=SUB6_XCVR
- XW1109_E SHORT-8L-0.1MM-SM — ROOM=SUB6_XCVR
- XW1110_E SHORT-8L-0.1MM-SM — ROOM=SUB6_XCVR
- XW1111_E SHORT-8L-0.1MM-SM — ROOM=SUB6_XCVR
- XW1185_E SHORT-8L-0.5MM-SM — ROOM=SUB6_XCVR
- XW1112_E SHORT-8L-0.25MM-SM — ROOM=SUB6_XCVR
- XW1113_E SHORT-8L-0.25MM-SM — ROOM=SUB6_XCVR
- XW1114_E SHORT-8L-0.1MM-SM — ROOM=SUB6_XCVR
- XW1115_E SHORT-8L-0.25MM-SM — ROOM=SUB6_XCVR
- XW1117_E SHORT-8L-0.25MM-SM — ROOM=SUB6_XCVR
- XW1118_E SHORT-8L-0.1MM-SM — ROOM=SUB6_XCVR
- XW1119_E SHORT-8L-0.1MM-SM — ROOM=SUB6_XCVR
- XW1120_E SHORT-8L-0.1MM-SM — ROOM=SUB6_XCVR

PP_LDO1_SDR_VDDAM_TP0_30 · PP_LDO1_SDR_VDDAM_TP1_30 · PP_LDO1_SDR_VDDAM_TX0_40 · PP_LDO1_SDR_VDDAM_TX1_40 · PP_LDO1_SDR_VDDAM_TX2_40 · PP_LDO1_SDR_VDDAM_RP0_57 · PP_LDO1_SDR_VDDAM_RP1_57 · PP_LDO1_SDR_VDDAM_RP2_57 · PP_LDO1_SDR_VDDAM_RP3_57 · PP_LDO1_SDR_VDDAM_RP4_57 · PP_LDO1_SDR_VDDAM_RP5_30 · PP_LDO1_SDR_VDDAM_RX0_171 · PP_LDO1_SDR_VDDAM_RX5_138 · PP_LDO1_SDR_VDDAM_BBRX_TOP_97 · PP_LDO1_SDR_VDDAM_BBRX_BOT_215

93 PP_0V8_LDO8
- C1137_E 4UF 20% 6.3V CER-X5R 0201
- C1116_E 0.1UF 10% 6.3V CER-X5R 01005
- C1117_E 0.1UF 10% 6.3V CER-X5R 01005

130 95 93 PP_0V875_LDO4
- C1118_E 0.1UF 10% 6.3V CER-X5R 01005
- PP_LDO4_VDD_MX0_PHY_123
- XW1118_E SHORT-8L-0.1MM-SM — ROOM=SUB6_XCVR
- PP_LDO4_VDD_MX1_96
- C1138_E 4UF 20% 6.3V CER-X5R 0201
- C1119_E 0.1UF 10% 6.3V CER-X5R 01005

128 PP_1V8_LDO6
- C1139_E 4UF 20% 6.3V CER-X5R 0201
- C1120_E 0.1UF 10% 6.3V CER-X5R 01005
- PP_LDO6_SDR_VDD_PX_20
- XW1120_E SHORT-8L-0.1MM-SM — ROOM=SUB6_XCVR
- C1142_E 4UF 20% 6.3V CER-X5R 0201
- C1143_E 0.1UF 10% 6.3V CER-X5R 01005
- PP_LDO6_SDR_VDD_PXM_20

C1101_E C1108_E C1113_E C1109_E C1102_E C1114_E C1110_E C1103_E C1115_E C1111_E C1104_E C1105_E C1112_E C1106_E C1107_E C1116_E C1117_E

PP_1V7_LDO16
- C1140_E 4UF 20% 6.3V CER-X5R 0201
- C1141_E 4UF 20% 6.3V CER-X5R 0201

STAR ROUTE

PP_LDO16_SDR_VDDAH_TP0_35 · PP_LDO16_SDR_VDDAH_TP1_35 · PP_LDO16_SDR_VDDAH_TX0_40 · PP_LDO16_SDR_VDDAH_TX1_40 · PP_LDO16_SDR_VDDAH_TX2_40 · PP_LDO16_SDR_VDDAH_RP0_5 · PP_LDO16_SDR_VDDAH_RP1_5 · PP_LDO16_SDR_VDDAH_RP2_35 · PP_LDO16_SDR_VDDAH_RP3_35 · PP_LDO16_SDR_VDDAH_RP4_35 · PP_LDO16_SDR_VDDAH_RP5_5 · PP_LDO16_SDR_VDDAH_RP5_2_30 · PP_LDO16_SDR_VDDAH_RX0_10 · PP_LDO16_SDR_VDDAH_TXDAC0_13 · PP_LDO16_SDR_VDDAH_TXDAC1_26 · PP_LDO16_SDR_VDDAH_LVDS_12

- XW1151_E SHORT-8L-0.1MM-SM — ROOM=SUB6_XCVR
- XW1184_E SHORT-8L-0.1MM-SM — ROOM=SUB6_XCVR
- PP_1V7_LDO16_SDR_VDDAH_TP — 93 98
- XW1152_E SHORT-8L-0.1MM-SM — ROOM=SUB6_XCVR
- C1121_E 0.1UF 10% 6.3V CER-X5R 01005 — ROOM=SUB6_XCVR
- C1122_E 0.1UF 10% 6.3V CER-X5R 01005 — ROOM=SUB6_XCVR
- XW1153_E SHORT-8L-0.1MM-SM — ROOM=SUB6_XCVR
- XW1189_E SHORT-8L-0.25MM-SM — ROOM=SUB6_XCVR
- PP_1V7_LDO16_SDR_VDDAH_TX — ROOM=SUB6_XCVR
- C1123_E 0.1UF 10% 6.3V CER-X5R 01005 — ROOM=SUB6_XCVR
- XW1154_E SHORT-8L-0.1MM-SM — ROOM=SUB6_XCVR
- C1124_E 0.1UF 10% 6.3V CER-X5R 01005 — ROOM=SUB6_XCVR
- XW1155_E SHORT-8L-0.1MM-SM — ROOM=SUB6_XCVR
- C1125_E 0.1UF 10% 6.3V CER-X5R 01005 — ROOM=SUB6_XCVR
- XW1156_E SHORT-8L-0.1MM-SM — ROOM=SUB6_XCVR
- XW1183_E SHORT-8L-0.25MM-SM — ROOM=SUB6_XCVR
- PP_1V7_LDO16_SDR_VDDAH_RP — ROOM=SUB6_XCVR
- XW1157_E SHORT-8L-0.1MM-SM — ROOM=SUB6_XCVR
- C1126_E 0.1UF 10% 6.3V CER-X5R 01005 — ROOM=SUB6_XCVR
- C1144_E 0.1UF 10% 6.3V CER-X5R 01005 — ROOM=SUB6_XCVR
- XW1158_E SHORT-8L-0.1MM-SM — ROOM=SUB6_XCVR
- C1127_E 0.1UF 10% 6.3V CER-X5R 01005 — ROOM=SUB6_XCVR
- XW1159_E SHORT-8L-0.1MM-SM — ROOM=SUB6_XCVR
- C1130_E 0.1UF 10% 6.3V CER-X5R 01005 — ROOM=SUB6_XCVR
- XW1160_E SHORT-8L-0.1MM-SM — ROOM=SUB6_XCVR
- C1128_E 0.1UF 10% 6.3V CER-X5R 01005 — ROOM=SUB6_XCVR
- XW1161_E SHORT-8L-0.1MM-SM — ROOM=SUB6_XCVR
- XW1162_E SHORT-8L-0.1MM-SM — ROOM=SUB6_XCVR
- C1131_E 0.1UF 10% 6.3V CER-X5R 01005 — ROOM=SUB6_XCVR
- C1145_E 0.1UF 10% 6.3V CER-X5R 01005 — ROOM=SUB6_XCVR
- XW1163_E SHORT-8L-0.1MM-SM — ROOM=SUB6_XCVR
- C1129_E 0.1UF 10% 6.3V CER-X5R 01005 — ROOM=SUB6_XCVR
- XW1164_E SHORT-8L-0.1MM-SM — ROOM=SUB6_XCVR
- XW1182_E SHORT-8L-0.1MM-SM — ROOM=SUB6_XCVR
- PP_1V7_LDO16_SDR_VDDAH_TXDAC — ROOM=SUB6_XCVR
- XW1165_E SHORT-8L-0.1MM-SM — ROOM=SUB6_XCVR
- C1133_E 0.1UF 10% 6.3V CER-X5R 01005 — ROOM=SUB6_XCVR
- C1132_E 0.1UF 10% 6.3V CER-X5R 01005 — ROOM=SUB6_XCVR
- XW1166_E SHORT-8L-0.1MM-SM — ROOM=SUB6_XCVR — PATH=I226
- C1134_E 0.1UF 10% 6.3V CER-X5R 01005 — ROOM=SUB6_XCVR

BOM_COST_GROUP=CELLULAR

SYNC_MASTER=RADIO_MLB_3.27.0 SYNC_DATE=08/31/2020

PAGE TITLE

XCVR POWER_1

TRANSCEIVER: PDN

NOTE: 4UF BULK COULD BE FURTHER AWAY AND MAKE SURE THE STAR ROUTING IS FROM 4UF.
NOTE: 1UF SHOULD BE AS CLOSE AS POSSIBLE TO CORRESPONDING PIN ON SDR

U_SDR_E
SDR865-0
PSP
SYM 5 OF 8
338S00647
SHIELD=TTS

VDDAL_RP0 D1
VDDAL_RP1 F3
VDDAL_RP2 N2
VDDAL_RP3 W2
VDDAL_RP4 AC2
VDDAL_RP5 AG16
VDDAL_RX0 B13
VDDAL_RX1 C6
VDDAL_RX2 J6
VDDAL_RX3 L6
VDDAL_RX4 W6
VDDAL_RX5 AC6
VDDAL_RX6 AG12
VDDAL_RXLO0 E12
VDDAL_RXLO4 N12
VDDAL_RXLO5 R12
VDDAL_RXLO7 W12
VDDAL_TP0 A26
VDDAL_TP1 AF27
VDDAL_TX0 A28
VDDAL_TX1 AG30
VDDAL_TX2 AE22

VDDAL_DIG_RP0 A4
VDDAL_DIG_RP1 K1
VDDAL_DIG_RP2 L2
VDDAL_DIG_RP3 AA2
VDDAL_DIG_RP4 AE2
VDDAL_DIG_RP5 AG14
VDDAL_DIG_TP0 G24
VDDAL_DIG_TP1 AA24
VDDAL_DIG1 B21
VDDAL_DIG2 Y23
VDDAL_FBRX H21
VDDAL_GNSS B17
VDDAL_ICON6 A20
VDDAL_ICON32 T19
VDDAL_XO T1

PP_0V8_LDO3_SDR_VDDAL_RP
PP_0V8_LDO3
PP_LDO3_SDR_VDDAL_RP0_57
PP_LDO3_SDR_VDDAL_RP1_57
PP_LDO3_SDR_VDDAL_RP2_57
PP_LDO3_SDR_VDDAL_RP3_57
PP_LDO3_SDR_VDDAL_RP4_57
PP_LDO3_SDR_VDDAL_RP5_57
PP_0V8_LDO3_SDR_VDDAL_RX
PP_LDO3_SDR_VDDAL_RX0_67
PP_LDO3_SDR_VDDAL_RX1_22
PP_LDO3_SDR_VDDAL_RX2_22
PP_LDO3_SDR_VDDAL_RX3_22
PP_LDO3_SDR_VDDAL_RX4_22
PP_LDO3_SDR_VDDAL_RX5_22
PP_LDO3_SDR_VDDAL_RX6_90
PP_0V8_LDO3_SDR_VDDAL_RXLO
PP_LDO3_SDR_VDDAL_RXLO0_27
PP_LDO3_SDR_VDDAL_RXLO4_27
PP_LDO3_SDR_VDDAL_RXLO5_27
PP_LDO3_SDR_VDDAL_RXLO7_27
PP_0V8_LDO3_SDR_VDDAL_TP
PP_LDO3_SDR_VDDAL_TP0_30
PP_LDO3_SDR_VDDAL_TP1_30
PP_0V8_LDO3_SDR_VDDAL_TX
PP_LDO3_SDR_VDDAL_TX0_20
PP_LDO3_SDR_VDDAL_TX1_20
PP_LDO3_SDR_VDDAL_TX2_20
PP_LDO3_SDR_VDDAL_DIG_RP0_6
PP_LDO3_SDR_VDDAL_DIG_RP1_6
PP_LDO3_SDR_VDDAL_DIG_RP2_6
PP_LDO3_SDR_VDDAL_DIG_RP3_6
PP_LDO3_SDR_VDDAL_DIG_RP4_6
PP_LDO3_SDR_VDDAL_DIG_RP5_6
PP_0V8_LDO3_SDR_VDDAL_DIG_RP
PP_LDO3_SDR_VDDAL_DIG_TP0_10
PP_LDO3_SDR_VDDAL_DIG_TP1_10
PP_0V8_LDO3_SDR_VDDAL_DIG_TP
PP_LDO3_SDR_VDDAL_DIG1_171
PP_LDO3_SDR_VDDAL_DIG2_124
PP_0V8_LDO3_SDR_VDDAL_DIG
PP_LDO3_SDR_VDDAL_FBRX_20
PP_LDO3_SDR_VDDAL_GNSS_40
PP_LDO3_SDR_VDDAL_ICON6_5
PP_0V8_LDO3_SDR_VDDAL_ICON
PP_LDO3_SDR_VDDAL_ICON32_25
PP_LDO3_SDR_VDDAL_XO_18

XW1288_E SHORT-8L-0.5MM-SM
XW1202_E XW1203_E XW1204_E XW1205_E XW1206_E XW1207_E SHORT-8L-0.1MM-SM
XW1289_E SHORT-8L-0.25MM-SM
XW1208_E XW1209_E XW1210_E XW1211_E XW1212_E XW1213_E XW1214_E SHORT-8L-0.1MM-SM
XW1281_E XW1215_E XW1216_E XW1217_E XW1218_E SHORT-8L-0.1MM-SM
XW1282_E SHORT-8L-0.1MM-SM
XW1201_E SHORT-10L-0.1MM-SM
XW1237_E XW1238_E XW1239_E XW1240_E SHORT-8L-0.1MM-SM
XW1283_E SHORT-8L-0.1MM-SM
XW1223_E XW1224_E XW1225_E XW1226_E XW1227_E XW1228_E SHORT-8L-0.1MM-SM
XW1286_E SHORT-8L-0.1MM-SM
XW1229_E XW1232_E SHORT-8L-0.1MM-SM
XW1285_E SHORT-8L-0.1MM-SM
XW1230_E SHORT-8L-0.25MM-SM
XW1290_E SHORT-8L-0.5MM-SM
XW1231_E SHORT-8L-0.25MM-SM
XW1287_E XW1233_E XW1291_E XW1284_E SHORT-8L-0.1MM-SM
XW1235_E SHORT-8L-0.1MM-SM
XW1236_E SHORT-8L-0.1MM-SM
PATH=I106

C1202_E C1217_E C1215_E C1212_E C1209_E C1205_E C1201_E
C1233_E C1206_E C1234_E C1235_E C1210_E C1213_E
C1203_E C1236_E C1237_E C1207_E C1204_E C1208_E
C1216_E C1214_E C1211_E
C1219_E C1220_E C1222_E C1223_E C1225_E C1218_E
C1221_E C1224_E C1238_E C1230_E C1239_E C1229_E
C1231_E C1232_E C1228_E

0.1UF 10% 6.3V CER-X5R 01005 ROOM=SUB6_XCVR

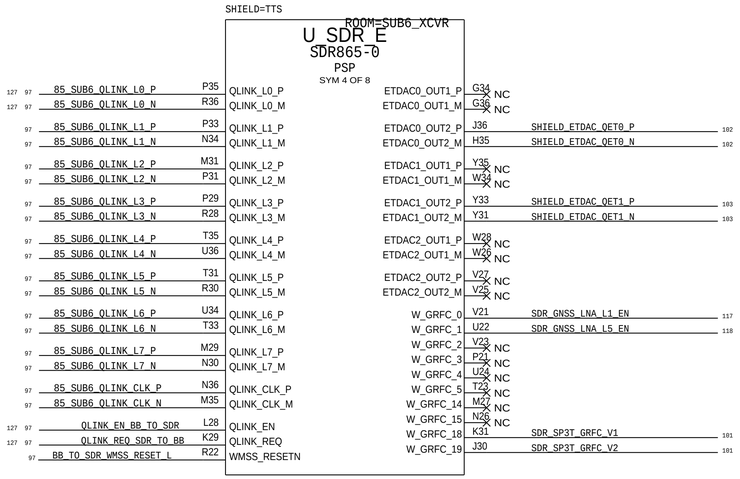
C1226_E C1227_E 4UF 20% 6.3V CER-X5R 0201 ROOM=SUB6_XCVR

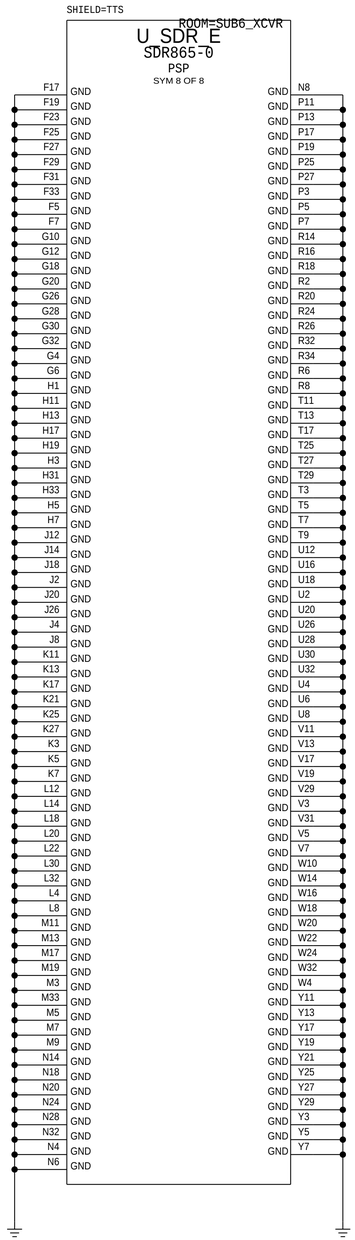
ROOM=SUB6_XCVR

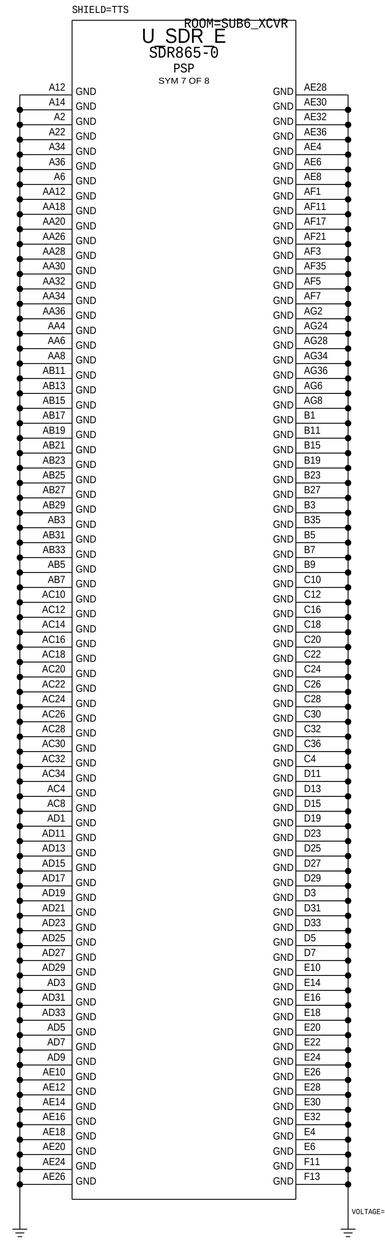
BOM_COST_GROUP=CELLULAR

SYNC_MASTER=RADIO_MLB_3.27.0
SYNC_DATE=08/31/2020
PAGE TITLE
XCVR POWER_2

TRANSCEIVER: DIGITAL & GND







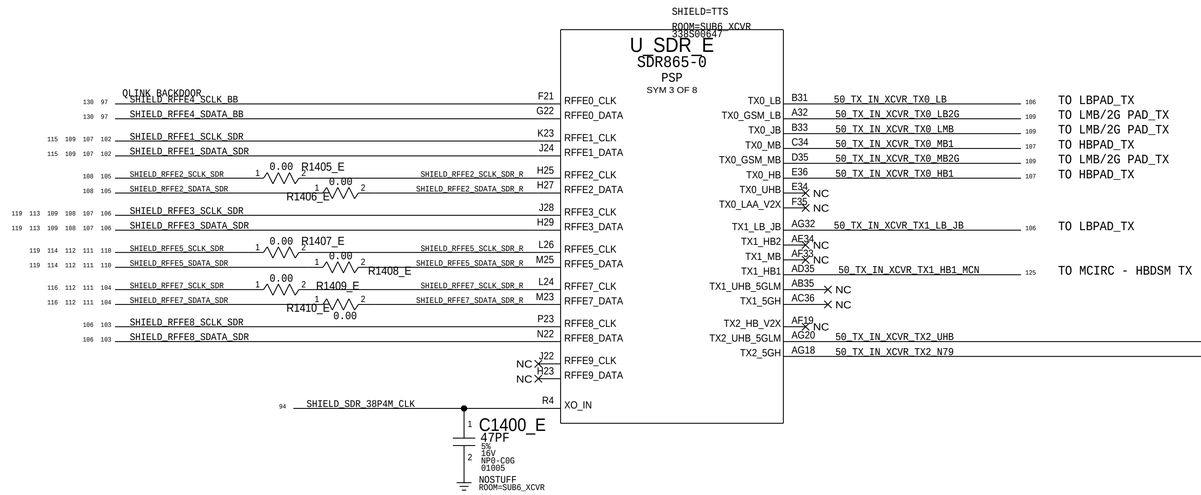
SYNC_MASTER=RADIO_MLB_3.27.0 SYNC_DATE=08/31/2020

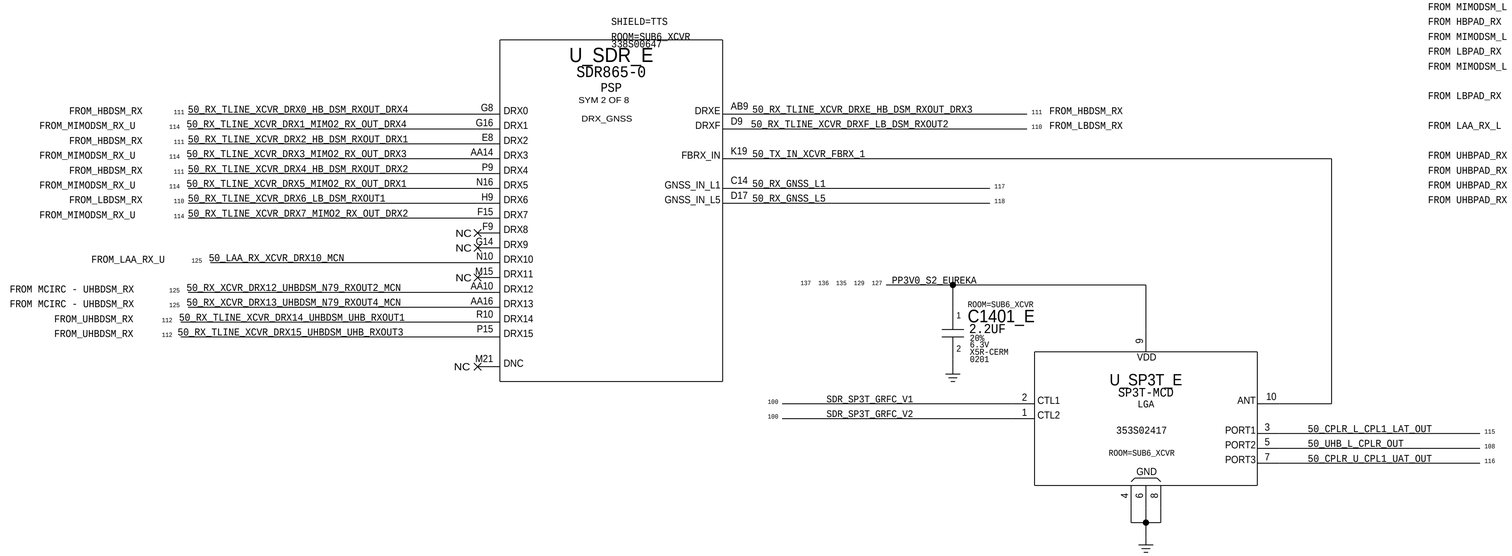
PAGE TITLE

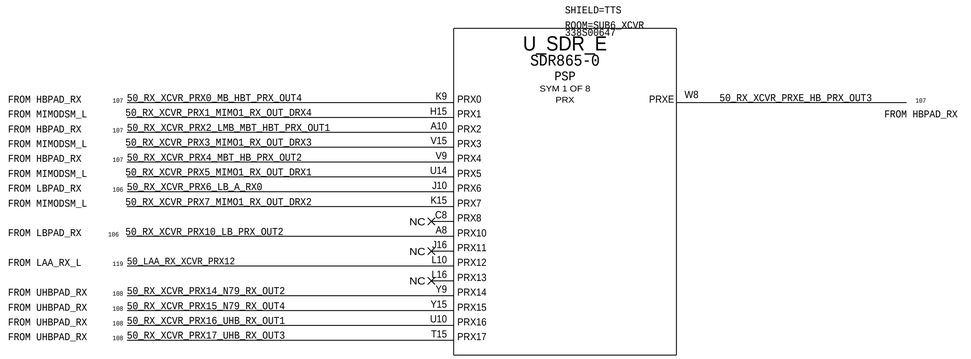
XCVR DIGITAL & GND

BOM_COST_GROUP=CELLULAR

TRANSCEIVER: TX & RX







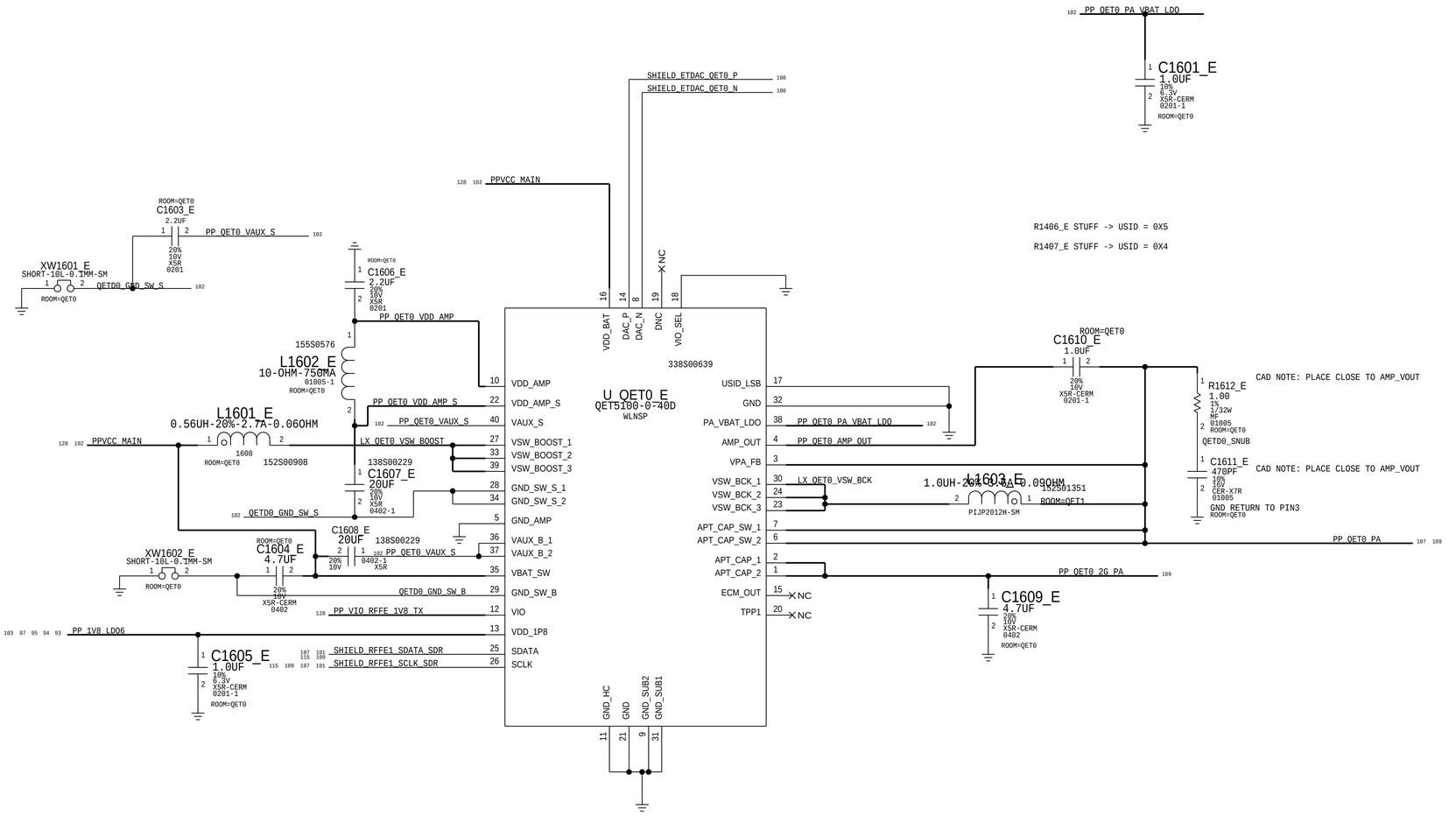
SYNC_MASTER=RADIO_MLB_3.27.0 SYNC_DATE=08/31/2020

PAGE TITLE

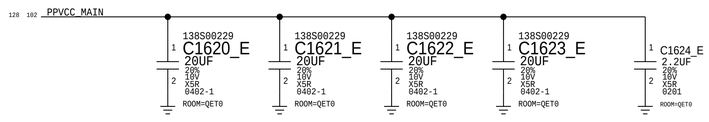
XCVR RF

BOM_COST_GROUP=CELLULAR

DISCRETE QET5100 0 HB/LMB-2G



QET0/1 SHARED SUPPLY BULK CAPACITANCE



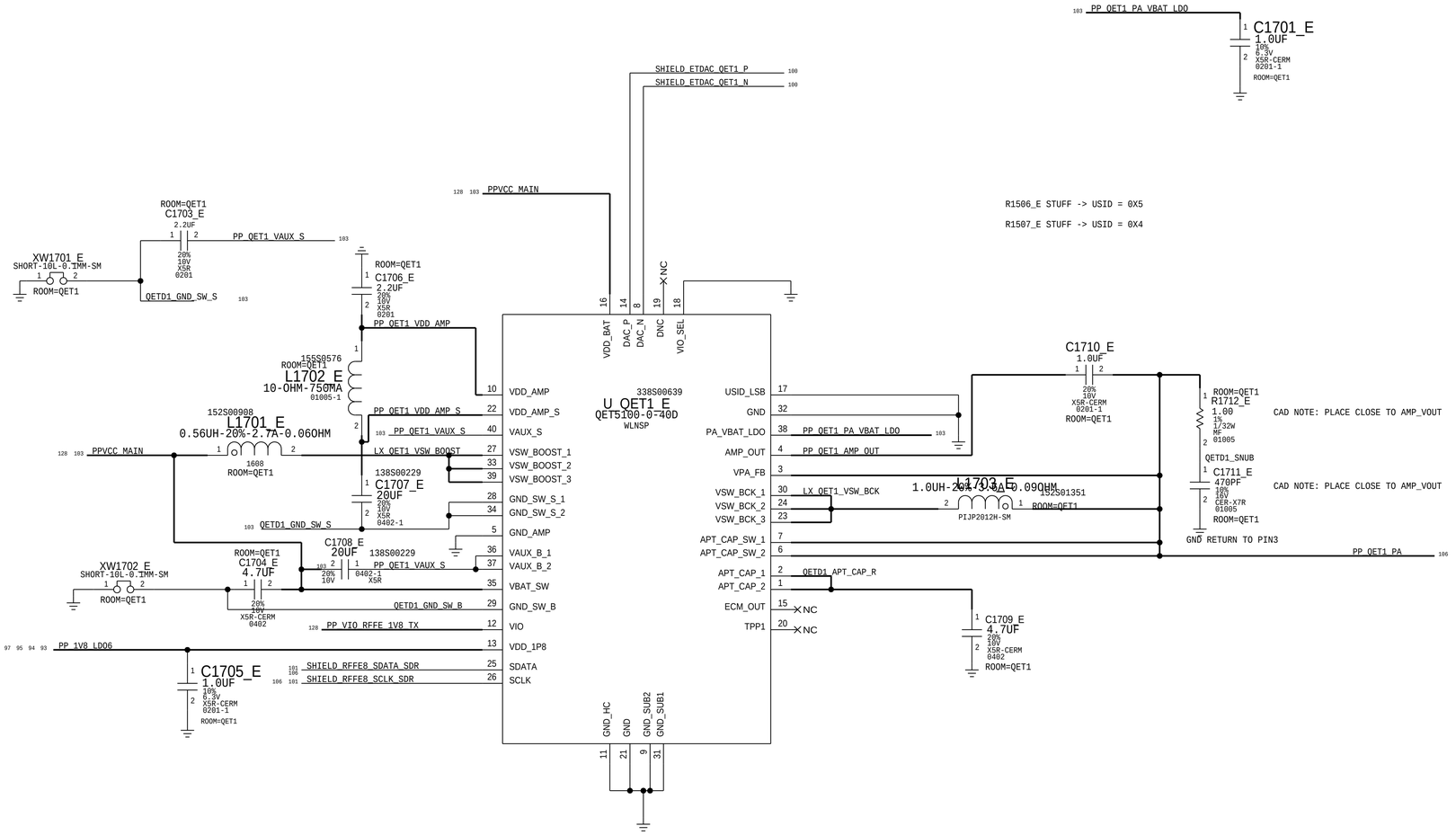
SYNC_MASTER=RADIO_MLB_3.27.0 SYNC_DATE=08/31/2020

PAGE TITLE

QET_DISCRETE_0

BOM_COST_GROUP=CELLULAR

DISCRETE QET5100 1
LB ONLY



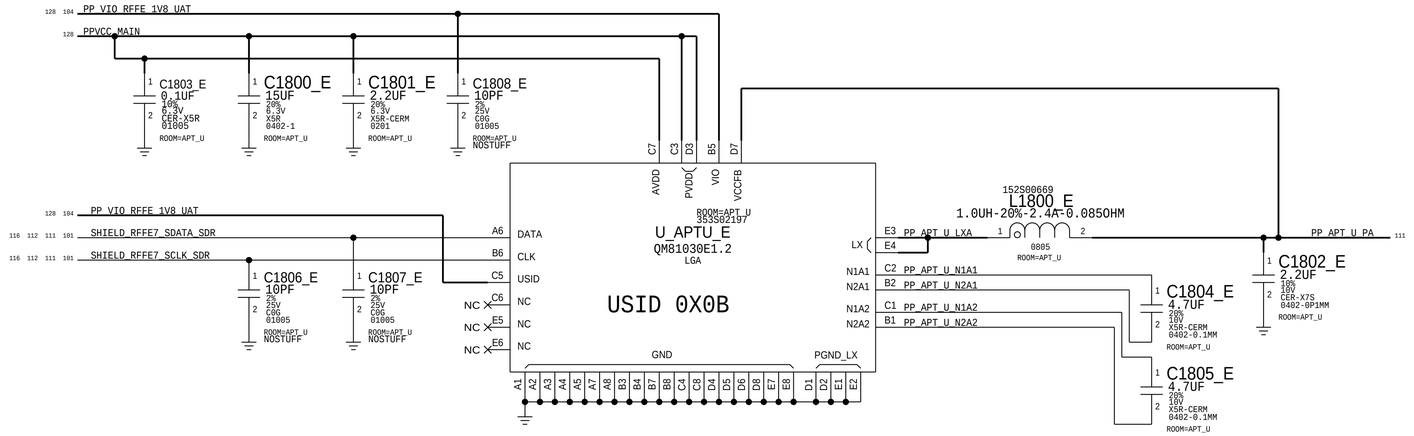
SYNC_MASTER=RADIO_MLB_3.27.0 SYNC_DATE=08/31/2020

PAGE TITLE

QET_DISCRETE_1

BOM_COST_GROUP=CELLULAR

APT DCDC 2



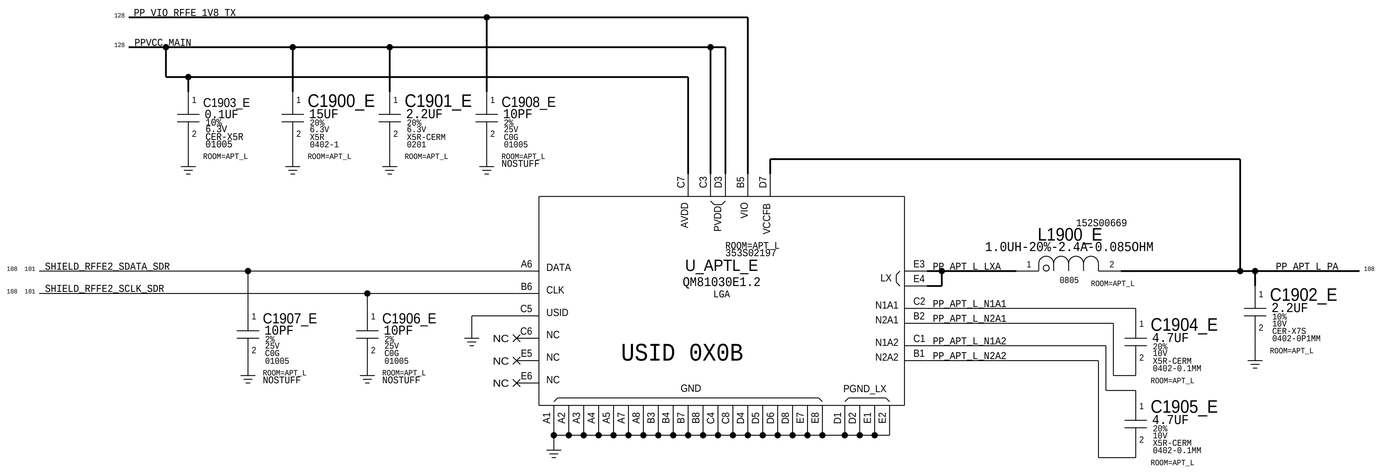
BOM_COST_GROUP=CELLULAR

SYNC_MASTER=RADIO_MLB_3.27.0 SYNC_DATE=08/31/2020

PAGE TITLE

DCDC2

APT DCDC 1



BOM_COST_GROUP=CELLULAR

SYNC_MASTER=RADIO_MLB_3.27.0 SYNC_DATE=08/31/2020

PAGE TITLE

DCDC1

LB PAD

PART#	QTY	DESCRIPTION	REFERENCE DESIGNATOR(S)	BOM OPTION
131S00437	1	CAP,CER,C0G,1.8PF,+/-0.05PF,16V,01005	L2003_E	J523
117S0161	1	RES,MF,0 OHM,1/32W,01005	R2008_E	J518
152S00514	1	IND,F1LM,5.1NH,3%,350MA,SHQ,01005	R2008_E	J523

J518 NOSTUFF

PA_LB_E
SKY58240
DSBGA
SYM 2 OF 2

A1	GND	GND	H6
A2	GND	GND	H7
A3	GND	GND	H14
A4	GND	GND	J1
A5	GND	GND	J2
A6	GND	GND	J3
A7	GND	GND	J4
A8	GND	GND	J5
A9	GND	GND	J6
A10	GND	GND	J7
A11	GND	GND	J13
A12	GND	GND	J14
A13	GND	GND	K1
A14	GND	GND	K3
B1	GND	GND	K5
B2	GND	GND	K12
B14	GND	GND	K14
C1	GND	GND	L1
C13	GND	GND	L3
C14	GND	GND	L4
D1	GND	GND	L5
D14	GND	GND	L6
E1	GND	GND	L7
E13	GND	GND	L8
E14	GND	GND	L9
F1	GND	GND	L10
F14	GND	GND	L11
G1	GND	GND	L12
G4	GND	GND	L13
G5	GND	GND	L14
G14	GND		
H1	GND		
H2	GND		
H3	GND		
H4	GND		
H5	GND		

353S02386
SHIELD=YES
ROOM=LBPAD

103 PP_QET1_PA
128 PPVCC_HIGH

C2004_E 0.1UF 10% 6.3V X6S-CERM 01005 — LBPAD
C2009_E 47PF 5% 16V NP0-C0G 01005 — LBPAD
C2001_E 18PF 5% 16V NP0/C0G 01005 — NOSTUFF LBPAD

128 115 109 108 107 93 PP_VIO_RFFE_1V8_TX
103 101 SHIELD_RFFE8_SCLK_SDR
103 101 SHIELD_RFFE8_SDATA_SDR

C2007_E 47PF 5% 16V NP0-C0G 01005 — NOSTUFF LBPAD
C2006_E 47PF 5% 16V NP0-C0G 01005 — NOSTUFF LBPAD
C2005_E 47PF 5% 16V NP0-C0G 01005 — LBPAD

119 113 109 108 107 93 PP_VIO_RFFE_1V8_RX
119 113 109 108 107 101 SHIELD_RFFE3_SCLK_SDR
119 113 109 108 107 101 SHIELD_RFFE3_SDATA_SDR

C2008_E 47PF 5% 16V NP0-C0G 01005 — NOSTUFF LBPAD
C2003_E 47PF 5% 16V NP0-C0G 01005 — NOSTUFF LBPAD
C2002_E 47PF 5% 16V NP0-C0G 01005 — LBPAD

K10 SDATA_RX
K9 SCLK_RX
K11 VIO_RX
K7 SDATA_TX
K6 SCLK_TX
K8 VIO_TX
K4 VBIAS
G3 VCC1
G2 VCC2
K13 VDD_LNA

VDD_LNA_LB_PAD — R2006_E 0.00 0% 1/32W MF 01005 LBPAD — PP_VDD_RF_1V2 (93 107 108 109 110 111 112 113 114 120)
C2010_E 47PF 5% 16V NP0-C0G 01005 — LBPAD

PA_LB_E
SKY58240
DSBGA
SYM 1 OF 2
SHIELD=YES
ROOM=LBPAD
353S02386

101 50_TX_IN_XCVR_TX0_LB — R2003_E 0.00 0% 1/32W MF 01005 LBPAD — 50_TX_IN_TX0_LB_PAD_TX_LB_IN — K2 TX_LB_IN
FROM XCVR

109 50_TRX_IN_LMB_PAD_2G_LB_OUT_M — R2004_E 5.6NH+/-3%-0.4A 0201 LBPAD — 50_TRX_LB_PAD_TX_2G_IN — B7 TX_2G_IN
FROM 2G PA

MATCHING NOTE: 0201

USID RX=0X01

USID TX=0X01

101 50_RX_XCVR_PRX6_LB_A_RX0 — MAKE_BASE=TRUE — 50_RX_XCVR_PRX6_LB_A_RX0 — H13 PRX_OUT1
TO XCVR

101 50_RX_XCVR_PRX10_LB_PRX_OUT2 — MAKE_BASE=TRUE — 50_RX_XCVR_PRX10_LB_PRX_OUT2 — G13 PRX_OUT2
TO XCVR

101 50_TX_IN_XCVR_TX1_LB_JB — R2009_E 0.00 0% 1/32W MF 01005 LBPAD — 50_TX_IN_XCVR_TX1_LB_JB_M — L2 TX_LB_IN2
FROM XCVR

MATCHING NOTE: 0201/01005 NETWORK

DRX_OUT F13 — 50_TRX_LB_PORTB_RX1 — R2007_E 0.00 0% 1/32W MF 0201 LBPAD — 50_TRX_LB_PORTB_RX1_MCN (125)
TO MCIRC
L2005_E 10NH-+/-3%-0.25A 01005 NOSTUFF LBPAD
L2001_E 10NH-+/-3%-0.25A 01005 NOSTUFF LBPAD

ANT1 B13 — 50_TRX_LB_PAD_ANT1 (115)
LB QPLX -> CPLR_L -> ANT3

MATCHING NOTE: 0201/01005 NETWORK

ANT2 D13 — 50_TRX_LB_PORTB_TX_ANT2 — R2008_E 0.00 0% 1/32W MF 01005 LBPAD — 50_TRX_LB_PORTB_TX_MCN (125)
TO MCIRC
L2003_E 10NH-+/-3%-0.25A 01005 OMIT_TABLE LBPAD
OMIT_TABLE
L2002_E 10NH-+/-3%-0.25A 01005 NOSTUFF LBPAD

SYNC_MASTER=RADIO_MLB_3.27.0 SYNC_DATE=08/31/2020
PAGE TITLE
LB PAD

BOM_COST_GROUP=CELLULAR

HB PAD

PART#	QTY	DESCRIPTION	REFERENCE DESIGNATOR(S)	BOM OPTION
152S00525	1	IND,FILM,0.2NH,+/-3%,300MA,SHQ,01005	C2120_E	J518
131S0369	1	CAP,CER,C0G,0.5PF,+/-0.05PF,16V,01005	C2120_E	J523
131S0405	1	CAP,CER,NP0/C0G,4.0PF,+/-0.1PF,16V,01005	R2110_E	J518
152S00495	1	IND,FILM,0.7NH,+/-0.1NH,900MA,SHQ,01005	R2110_E	J523
131S0366	1	CAP,CER,NP0/C0G,0.2PF,+/-0.1PF,16V,01005	C2111_E	J523

PP_QET0_PA
PPVCC_HIGH
PP_VIO_RFFE_1V8_TX
SHIELD_RFFE1_SCLK_SDR
SHIELD_RFFE1_SDATA_SDR
PP_VIO_RFFE_1V8_RX
SHIELD_RFFE3_SCLK_SDR
SHIELD_RFFE3_SDATA_SDR

C2121_E 10PF 25V C0G 01005 RADIO_HB_PAD NOSTUFF
C2106_E 10PF 25V C0G 01005 RADIO_HB_PAD NOSTUFF
C2104_E 10PF 25V C0G 01005 RADIO_HB_PAD NOSTUFF
C2102_E 10PF 25V C0G 01005 RADIO_HB_PAD
C2108_E 1UF 20% 10V X5R-CERM-X5R 0201 RADIO_HB_PAD
C2107_E 10PF 25V C0G 01005 RADIO_HB_PAD NOSTUFF
C2105_E 10PF 25V C0G 01005 RADIO_HB_PAD NOSTUFF
C2103_E 10PF 25V C0G 01005 RADIO_HB_PAD

VDD_LNA_HB_PAD
R2107_E 0.00 0% 1/32W MF 01005 RADIO_HB_PAD
PP_VDD_RF_1V2
C2109_E 1000PF 10% 6.3V X5R-CERM 01005 RADIO_HB_PAD

K1 SDATA_RX
J1 SCLK_RX
H1 VIO_RX
L17 SDATA_TX
K17 SCLK_TX
J17 VIO_TX
Q14 VBIAS
P15 VCC1
N15 VCC2
F1 VDD_LNA

50_TX_IN_XCVR_TX0_MB1 — MAKE_BASE=TRUE — FROM XCVR
N10 TX_MB_IN1

PA_HB_E
AFEM-8200-AP1
DSBGA
SYM 1 OF 2
ROOM=RADIO_HB_PAD
SHIELD=YES
353S02405

NC N11 TX_MB_IN2
50_TX_IN_XCVR_TX0_HB1 — MAKE_BASE=TRUE — FROM XCVR
N13 TX_HB_IN1
NC N12 TX_HB_IN2

FROM LMB/2G PAD
50_TRX_IN_LMB_PAD_LMB_ANT_M — B12 LMB_IN
50_TRX_IN_LMB_PAD_2G_MB_OUT_M — B14 2G_IN
FROM LMB/2G PAD

50_RX_XCVR_PRX2_LMB_MBT_HBT_PRX_OUT1 — MAKE_BASE=TRUE — TO XCVR
50_RX_XCVR_PRX4_MBT_HB_PRX_OUT2 — MAKE_BASE=TRUE — TO XCVR
50_RX_XCVR_PRXE_HB_PRX_OUT3 — MAKE_BASE=TRUE — TO XCVR
50_RX_XCVR_PRX0_MB_HBT_PRX_OUT4 — MAKE_BASE=TRUE — TO XCVR

50_RX_XCVR_PRX2_LMB_MBT_HBT_PRX_OUT1 — P4 PRX_OUT1
50_RX_XCVR_PRX4_MBT_HB_PRX_OUT2 — P3 PRX_OUT2
50_RX_XCVR_PRXE_HB_PRX_OUT3 — P2 PRX_OUT3
50_RX_XCVR_PRX0_MB_HBT_PRX_OUT4 — P1 PRX_OUT4

DRX_OUT B10 50_TRX_LMB_HB_PORTB_RX1_DRX_OUT
R2108_E 0.00 0% 1/32W MF 01005 RADIO_HB_PAD
50_TRX_LMB_HB_PORTB_RX1_MCN — TO MCIRC
C2115_E 0.5PF +/-0.05PF 16V C0G-CERM 01005 RADIO_HB_PAD NOSTUFF
C2111_E 0.5PF +/-0.05PF 16V C0G-CERM 01005 RADIO_HB_PAD OMIT_TABLE

ANT1 F16 50_TRX_HB_PAD_ANT1
TO LMB/MB/HB QPLX -> CPLR_L -> ANT3

MATCHING NOTE: 0201/01005 NETWORK

ANT2 D16 50_TRX_HB_PAD_ANT2
R2109_E 1.6NH-+/-0.1NH-1A-0.05OHM 0201 RADIO_HB_PAD
50_TRX_HB_PAD_ANT2_M — TO CPLR_L -> MBHB TPLX -> ANT4B
C2114_E 0.5PF +/-0.05PF 16V C0G-CERM 01005 RADIO_HB_PAD NOSTUFF
C2112_E 18NH-3%-0.16A-1.63OHM 01005 RADIO_HB_PAD

R2111_E 0.9NH-+/-0.1NH-0.9A-0.05OHM 01005 RADIO_HB_PAD
50_TRX_HB_PAD_MIMO_RX_OUT
50_TRX_HB_PAD_MIMO1_RX_OUT_M — TO MIMO1 DSM
C2113_E 0.5PF +/-0.05PF 16V C0G-CERM 01005 RADIO_HB_PAD NOSTUFF

MIMO_RX_OUT B16
PP_QET0_PA
C2101_E 1.0UF 10% 6.3V X5R-CERM 0201-1
VCC_CAP_GND H15 HBPAD_CAP_GND

50_RX_LMB_PAD_LMB_PRX_OUT_M — FROM LMB 2G PAD

B11/B21 M1
UAT B8 50_TRX_LMB_HB_PORTB_TX_UAT
R2110_E 0.00 0% 1/32W MF 01005 RADIO_HB_PAD OMIT_TABLE
50_TRX_LMB_HB_PORTB_TX_MCN — TO MCIRC
C2120_E 0.5PF +/-0.05PF 16V C0G-CERM 01005 RADIO_HB_PAD OMIT_TABLE
C2110_E 0.5PF +/-0.05PF 16V C0G-CERM 01005 RADIO_HB_PAD NOSTUFF

USID RX=0X03
USID TX=0X03

PA_HB_E
AFEM-8200-AP1
DSBGA
SYM 2 OF 2
ROOM=RADIO_HB_PAD
SHIELD=YES
353S02405

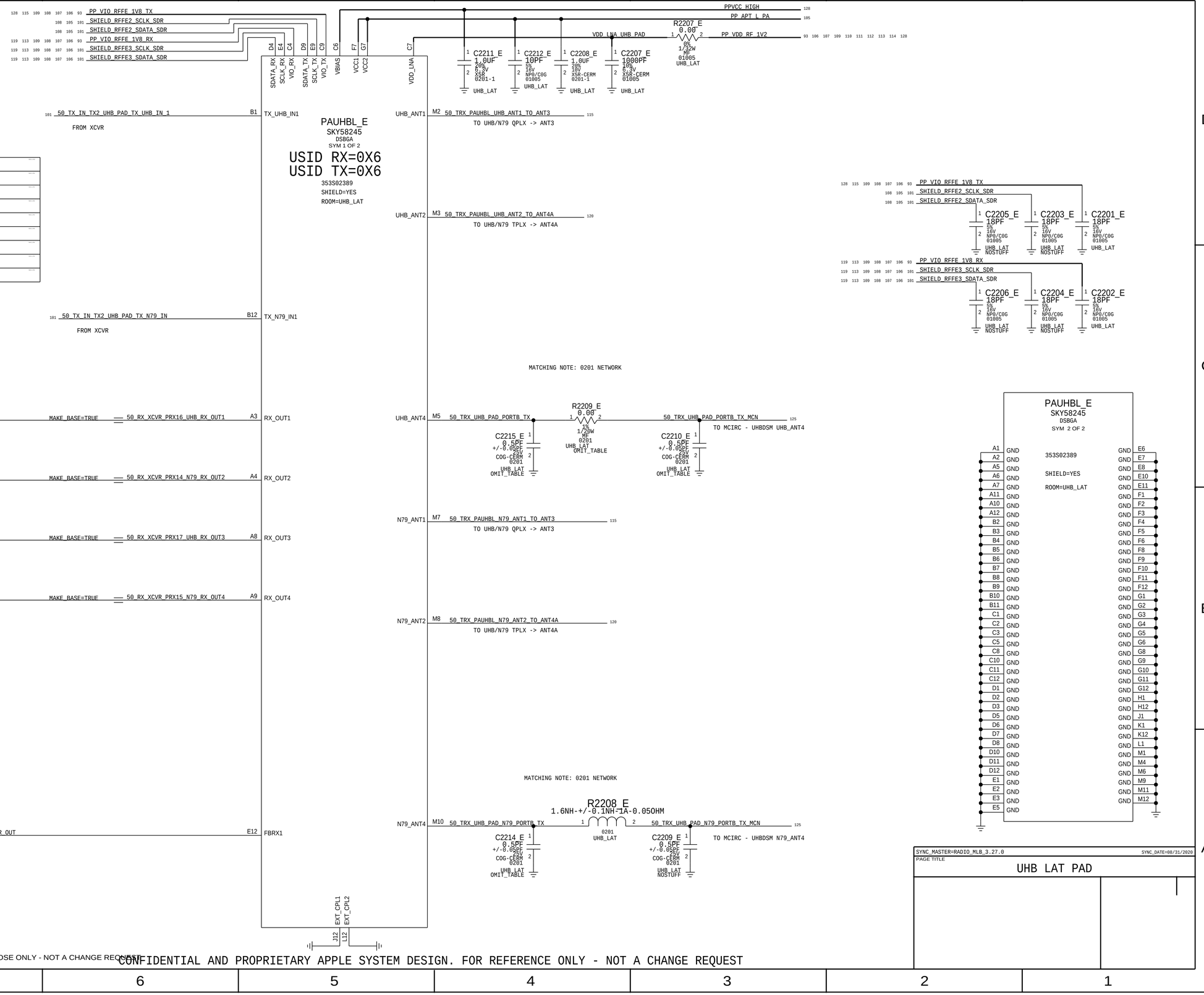
A1	GND	GND	G16
A2	GND	GND	G17
A3	GND	GND	H7
A4	GND	GND	H8
A5	GND	GND	H9
A6	GND	GND	H10
A7	GND	GND	H11
A8	GND	GND	H12
A9	GND	GND	H13
A10	GND	GND	H14
A11	GND	GND	H16
A12	GND	GND	H17
A13	GND	GND	J7
A14	GND	GND	J8
A15	GND	GND	J9
A16	GND	GND	J10
A17	GND	GND	J11
B1	GND	GND	K7
B2	GND	GND	K8
B3	GND	GND	K9
B4	GND	GND	K10
B5	GND	GND	K11
B6	GND	GND	L1
B7	GND	GND	L7
B9	GND	GND	L8
B11	GND	GND	L9
B13	GND	GND	L10
B15	GND	GND	L11
B17	GND	GND	M7
C1	GND	GND	M8
C2	GND	GND	M9
C3	GND	GND	M10
C4	GND	GND	M11
C5	GND	GND	M17
C6	GND	GND	N1
C7	GND	GND	N7
C8	GND	GND	N8
C16	GND	GND	N9
C17	GND	GND	N14
D1	GND	GND	N16
D5	GND	GND	N17
D6	GND	GND	P1
D7	GND	GND	P3
D8	GND	GND	P5
D17	GND	GND	P7
E1	GND	GND	P9
E7	GND	GND	P10
E8	GND	GND	P11
E16	GND	GND	P12
E17	GND	GND	P13
F7	GND	GND	P14
F8	GND	GND	P16
F9	GND	GND	P17
F10	GND	GND	Q1
F11	GND	GND	Q2
F12	GND	GND	Q3
F13	GND	GND	Q4
F14	GND	GND	Q5
F15	GND	GND	Q6
F17	GND	GND	Q7
G1	GND	GND	Q8
G7	GND	GND	Q9
G8	GND	GND	Q10
G9	GND	GND	Q11
G10	GND	GND	Q12
G11	GND	GND	Q13
G12	GND	GND	Q15
G13	GND	GND	Q16
G14	GND	GND	Q17
G15	GND		

SYNC_MASTER=RADIO_MLB_3.27.0
SYNC_DATE=08/31/2020
PAGE TITLE
HB PAD

BOM_COST_GROUP=CELLULAR

UHB LAT PAD

PART#	QTY	DESCRIPTION	REFERENCE DESIGNATOR(S)	BOM OPTION
131S0431	1	CAP,CER,C0G,0.2PF,+/-0.05PF,25V,0201,H-Q	C2210_E	J518
131S0431	1	CAP,CER,C0G,0.2PF,+/-0.05PF,25V,0201,H-Q	C2219_E	J523
131S00356	1	CAP,CER,C0G,0.4PF,+/-0.05PF,50V,0201	C2214_E	J518
131S0431	1	CAP,CER,C0G,0.2PF,+/-0.05PF,25V,0201,H-Q	C2214_E	J523
131S0431	1	CAP,CER,C0G,0.2PF,+/-0.05PF,25V,0201,H-Q	C2215_E	J518
131S00356	1	CAP,CER,C0G,0.4PF,+/-0.05PF,50V,0201	C2215_E	J523
152S2021	1	IND,FILM,1.5NH,+/-0.1NH,1000MA,UH-Q,0201	R2209_E	J518
152S2021	1	IND,FILM,1.5NH,+/-0.1NH,1000MA,UH-Q,0201	R2209_E	J523



BOM_COST_GROUP=CELLULAR

CONFIDENTIAL AND PROPRIETARY APPLE SYSTEM DESIGN. FOR REFERENCE ONLY - NOT A CHANGE REQUEST

SYNC_MASTER=RADIO_MLB_3.27.0 SYNC_DATE=08/31/2020

PAGE TITLE

UHB LAT PAD

LMB_2G_PAD

PP_QET0_2G_PA
C2305_E 100PF 5% 25V NP0-C0G 01005 LMB_2GPAD
C2304_E 2.2UF 20% 10V X5R 0201 LMB_2GPAD
PPVCC_HIGH
C2306_E 1.0UF 20% 6.3V X5R 0201-1 LMB_2GPAD
PP_VIO_RFFE_1V8_TX
SHIELD_RFFE1_SCLK_SDR
SHIELD_RFFE1_SDATA_SDR
C2311_E 18PF 5% 16V NP0/C0G 01005 LMB_2GPAD
C2313_E 18PF 5% 16V NP0/C0G 01005 NOSTUFF LMB_2GPAD
C2302_E 10PF 2% 25V C0G 01005 NOSTUFF LMB_2GPAD
PP_VIO_RFFE_1V8_RX
SHIELD_RFFE3_SCLK_SDR
SHIELD_RFFE3_SDATA_SDR
C2312_E 18PF 5% 16V NP0/C0G 01005 LMB_2GPAD
PP_QET0_PA
C2314_E 18PF 5% 16V NP0/C0G 01005 NOSTUFF LMB_2GPAD
VFE_LO_1V14_LMB_PAD
C2315_E 1000PF 10% 6.3V X5R-CERM 01005 LMB_2GPAD
R2315_E 0.00 5% 1/32W MF 01005 LMB_2GPAD
PP_VDD_RF_1V2

SDATA_RX A7
CLK_RX A6
VIO_RX A5
SDATA_TX J4
SCLK_TX J3
VIO_TX J2
2G_VAPT_1 F6
2G_VAPT_2 F7
VBIAS H1
VCC1 J6
VCC2 J7
VDD_LNA A9

MATCHING NOTE: 0201/01005 NETWORKS

50_TX_IN_XCVR_TX0_LB2G FROM XCVR
MAKE_BASE=TRUE
50_TX_IN_XCVR_TX0_LB2G C1 2G_LB_IN
2G_LB_OUT B11 50_TRX_IN_LMB_PAD_2G_LB_OUT
R2305_E 0.00 1% 1/20W MF 0201 LMB_2GPAD
50_TRX_IN_LMB_PAD_2G_LB_OUT_M TO LB PAD
C2307_E 2.1PF +/-0.1PF 16V NP0-C0G 01005 LMB_2GPAD

PA_LMB_E
SKY58232
DSBGA
SYM 1 OF 2
ROOM=LMB_2GPAD
SHIELD=YES
353S02393

50_TX_IN_XCVR_TX0_MB2G FROM XCVR
MAKE_BASE=TRUE
50_TX_IN_XCVR_TX0_MB2G D1 2G_MB_IN
2G_MB_OUT D11 50_TRX_IN_LMB_PAD_2G_MB_OUT
R2306_E 1.2NH-+/-0.05NH-1.1A-0.04OHM 0201 LMB_2GPAD
50_TRX_IN_LMB_PAD_2G_MB_OUT_M TO HB PAD
C2316_E 22NH-3%-0.14A-2.26OHM 01005 LMB_2GPAD
R2309_E 0.00 5% 1/32W MF 01005 LMB_2GPAD
C2308_E 0.2PF +/-0.05PF 25V C0G-CERM 01005 LMB_2GPAD

USID RX=0X05
USID TX=0X05

NC E1 NC
LMB_ANT G11 50_TRX_IN_LMB_PAD_LMB_ANT
R2307_E 3.4NH-+/-0.1NH-0.5A-0.17OHM 0201 LMB_2GPAD
50_TRX_IN_LMB_PAD_LMB_ANT_M TO HB PAD
C2317_E 1.1PF +/-0.1PF 25V C0G-CERM 0201 LMB_2GPAD
C2309_E 0.2PF +/-0.05PF 25V C0G-CERM 0201 LMB_2GPAD

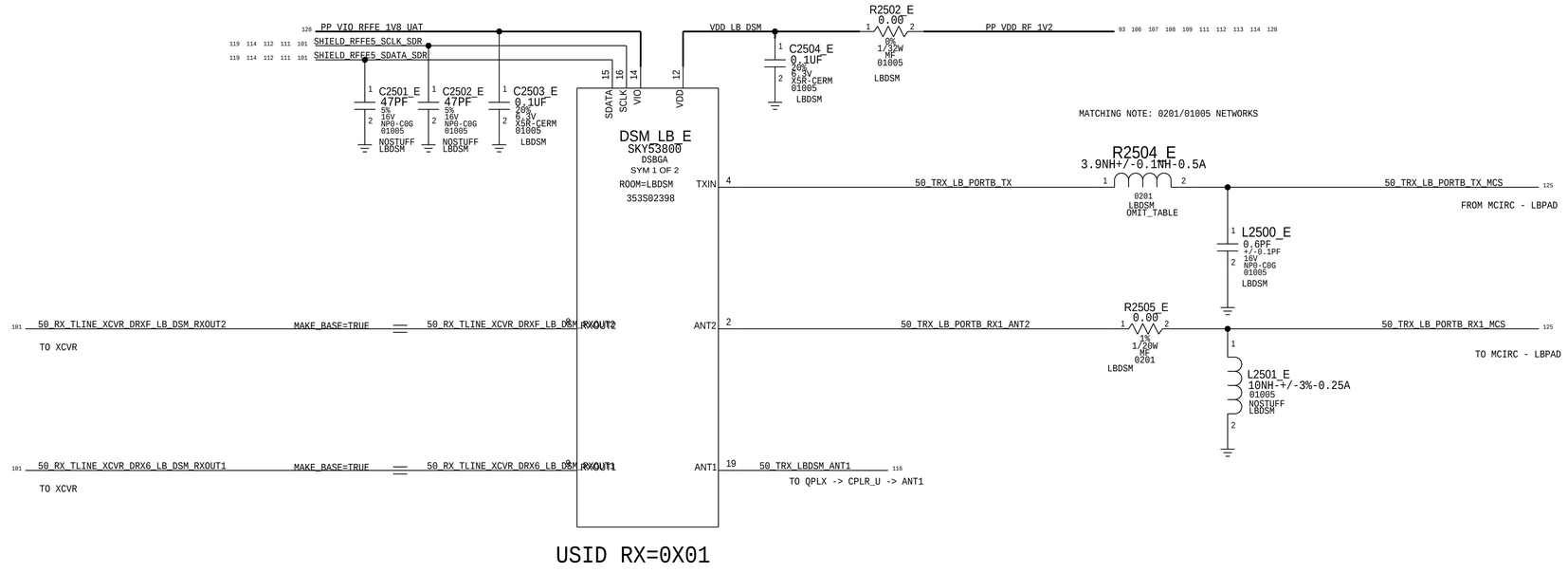
50_TX_IN_XCVR_TX0_LMB FROM XCVR
MAKE_BASE=TRUE
50_TX_IN_XCVR_TX0_LMB F1 TX_LMB_IN
LMB_PRX_OUT C4 50_RX_LMB_PAD_LMB_PRX_OUT
R2308_E 0.00 5% 1/32W MF 01005 LMB_2GPAD
50_RX_LMB_PAD_LMB_PRX_OUT_M TO HB PAD
C2310_E 0.5PF +/-0.05PF 25V C0G-CERM 01005 LMB_2GPAD NOSTUFF

PA_LMB_E
SKY58232
DSBGA
SYM 2 OF 2
ROOM=LMB_2GPAD
SHIELD=YES
353S02393
GND

BOM_COST_GROUP=CELLULAR

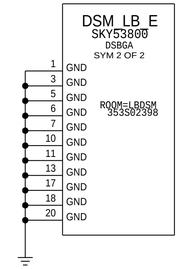
SYNC_MASTER=RADIO_MLB_3.27.0 SYNC_DATE=08/31/2020
PAGE TITLE
LMB_2G_PAD

LB DIVERSITY MODULE



USID RX=0X01

PART#	QTY	DESCRIPTION	REFERENCE DESIGNATOR(S)	BOM OPTION
152S2035	1	IND,FILM,3.9NH,+/-0.1NH,500MA,UH-Q,0201	R2504_E	J518
152S2045	1	IND,FILM,3.0NH,+/-0.1NH,600MA,UH-Q,0201	R2504_E	J523



BOM_COST_GROUP=CELLULAR

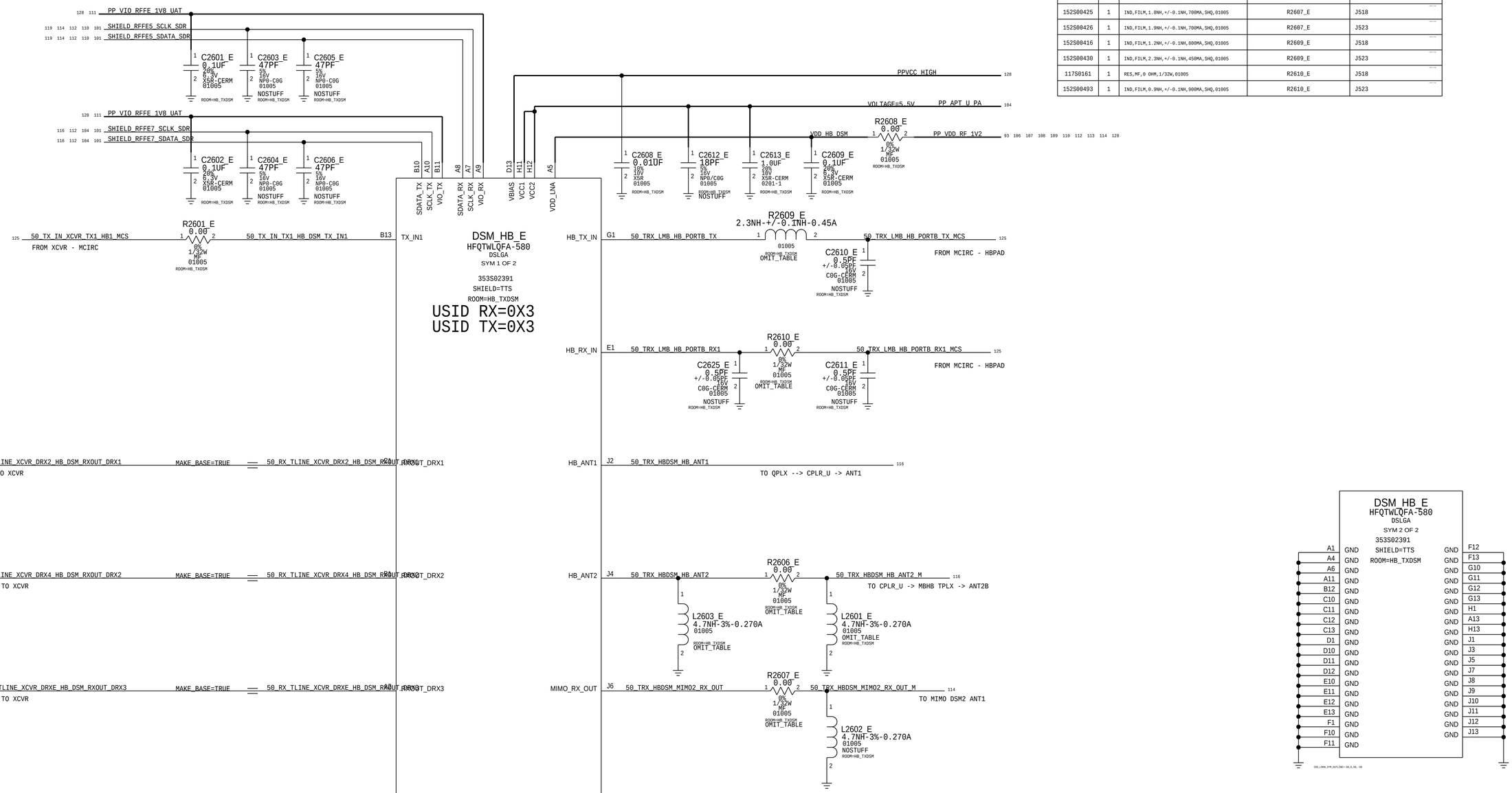
SYNC_MASTER=RADIO_MLB_3.27.0 SYNC_DATE=08/31/2020

PAGE TITLE

LB DSM

HB RECEIVE DIVERSITY & TX MODULE

PART#	QTY	DESCRIPTION	REFERENCE DESIGNATOR(S)	BOM OPTION
131S0648	1	CAP,CER,C0G,0.3PF,+/-0.05PF,16V,01005	L2601_E	J518
152S00533	1	IND,FILM,22NH,+/-3%,140MA,SHQ,01005	L2601_E	J523
152S00058	1	IND,FILM,1.7NH,+/-0.1NH,800MA,UH-Q,0201	R2606_E	J518
152S00419	1	IND,FILM,1.1NH,+/-0.1NH,850MA,SHQ,01005	R2606_E	J523
131S0369	1	CAP,CER,C0G,0.5PF,+/-0.05PF,16V,01005	L2603_E	J523 J518 NOSTUFF
152S00425	1	IND,FILM,1.8NH,+/-0.1NH,700MA,SHQ,01005	R2607_E	J518
152S00426	1	IND,FILM,1.9NH,+/-0.1NH,700MA,SHQ,01005	R2607_E	J523
152S00416	1	IND,FILM,1.2NH,+/-0.1NH,800MA,SHQ,01005	R2609_E	J518
152S00430	1	IND,FILM,2.3NH,+/-0.1NH,450MA,SHQ,01005	R2609_E	J523
117S0161	1	RES,MF,0 OHM,1/32W,01005	R2610_E	J518
152S00493	1	IND,FILM,0.9NH,+/-0.1NH,900MA,SHQ,01005	R2610_E	J523



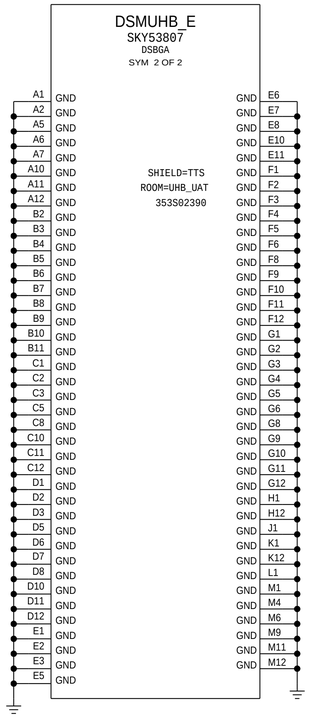
SYNC_MASTER=RADIO_MLB_3.27.0 SYNC_DATE=08/31/2020

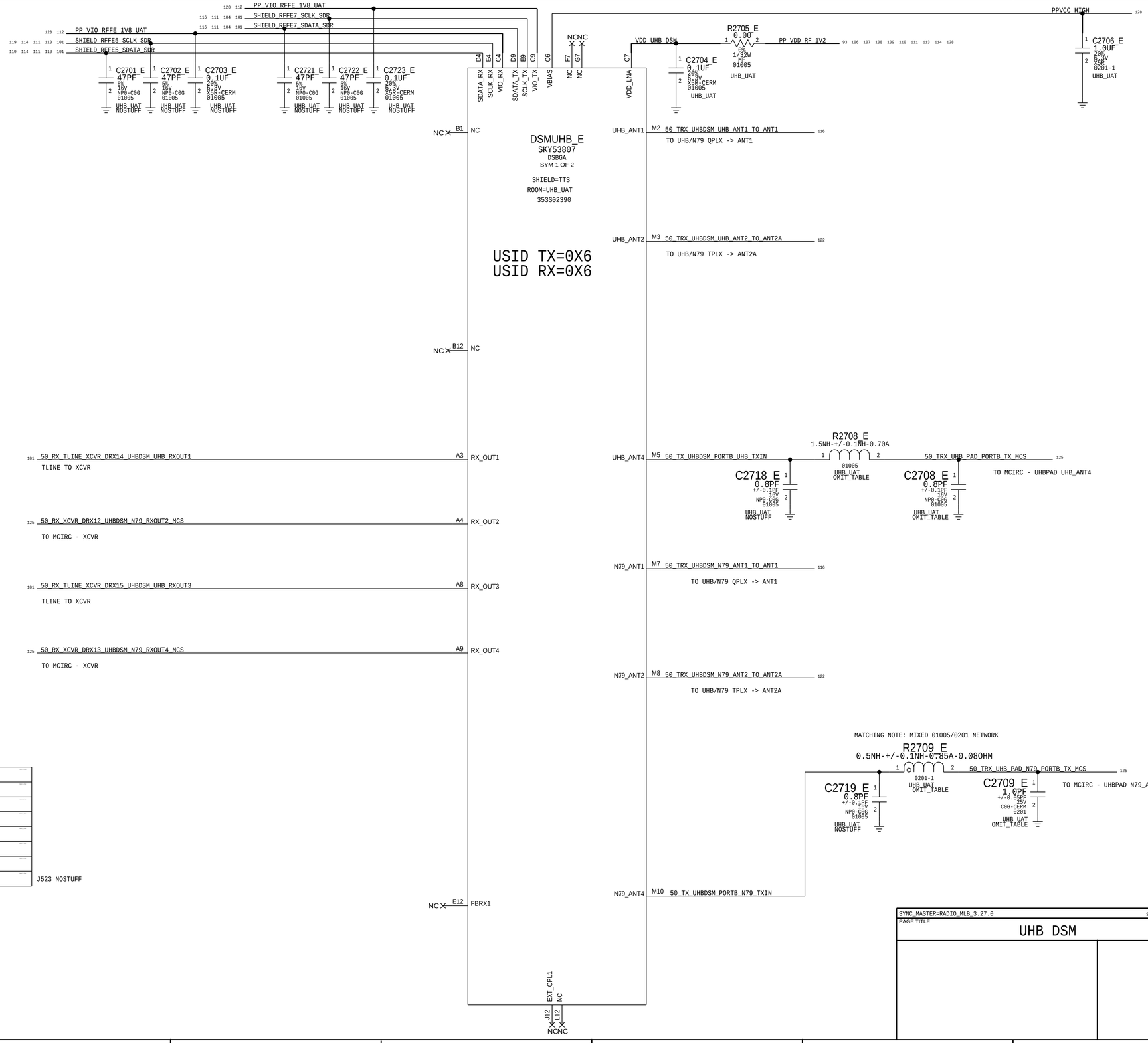
PAGE TITLE

HB TXDSM

BOM_COST_GROUP=CELLULAR

UHB DSM





PART#	QTY	DESCRIPTION	REFERENCE DESIGNATOR(S)	BOM OPTION
152S00850	1	IND,0.5NH,+/-0.1NH,0.85A,0.08OHM,0201	R2709_E	J518
152S2021	1	IND,FILM,1.5NH,+/-0.1NH,1000MA,UH-Q,0201	R2709_E	J523
131S0555	1	CAP,CER,C0G,HF,1.0PF,+/-0.05PF,25V,0201	C2709_E	J518
131S00356	1	CAP,CER,C0G,0.4PF,+/-0.05PF,50V,0201	C2709_E	J523
152S00422	1	IND,FILM,1.5NH,+/-0.1NH,700MA,SHQ,01005	R2708_E	J518
152S00494	1	IND,FILM,0.8NH,+/-0.1NH,900MA,SHQ,01005	R2708_E	J523
131S0373	1	CAP,CER,NP0/C0G,0.8PF,+/-0.1PF,16V,01005	C2708_E	J518

J523 NOSTUFF

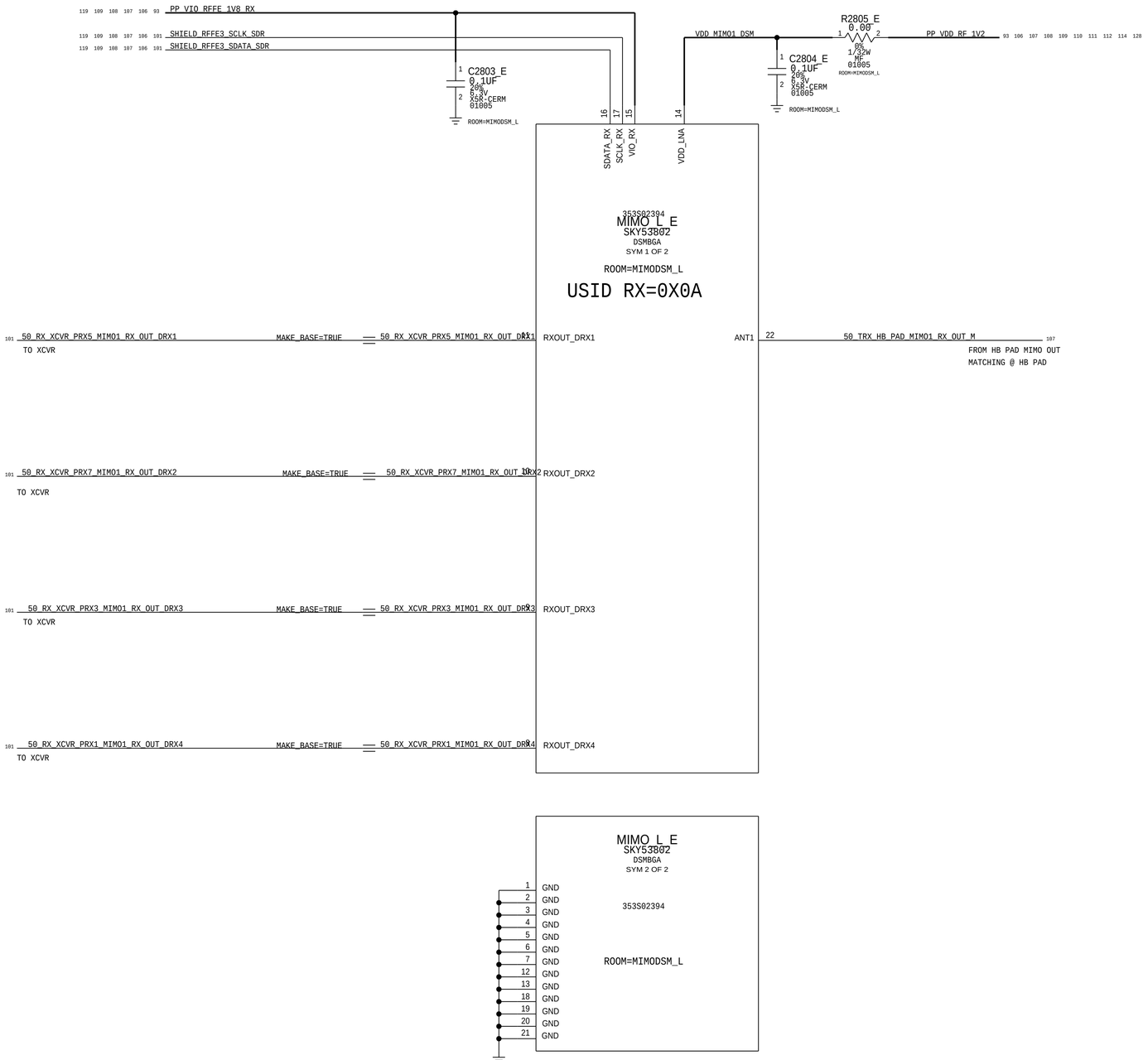
BOM_COST_GROUP=CELLULAR

SYNC_MASTER=RADIO_MLB_3.27.0 SYNC_DATE=08/31/2020

PAGE TITLE

UHB DSM

LOWER MIMO DIVERSITY MODULE



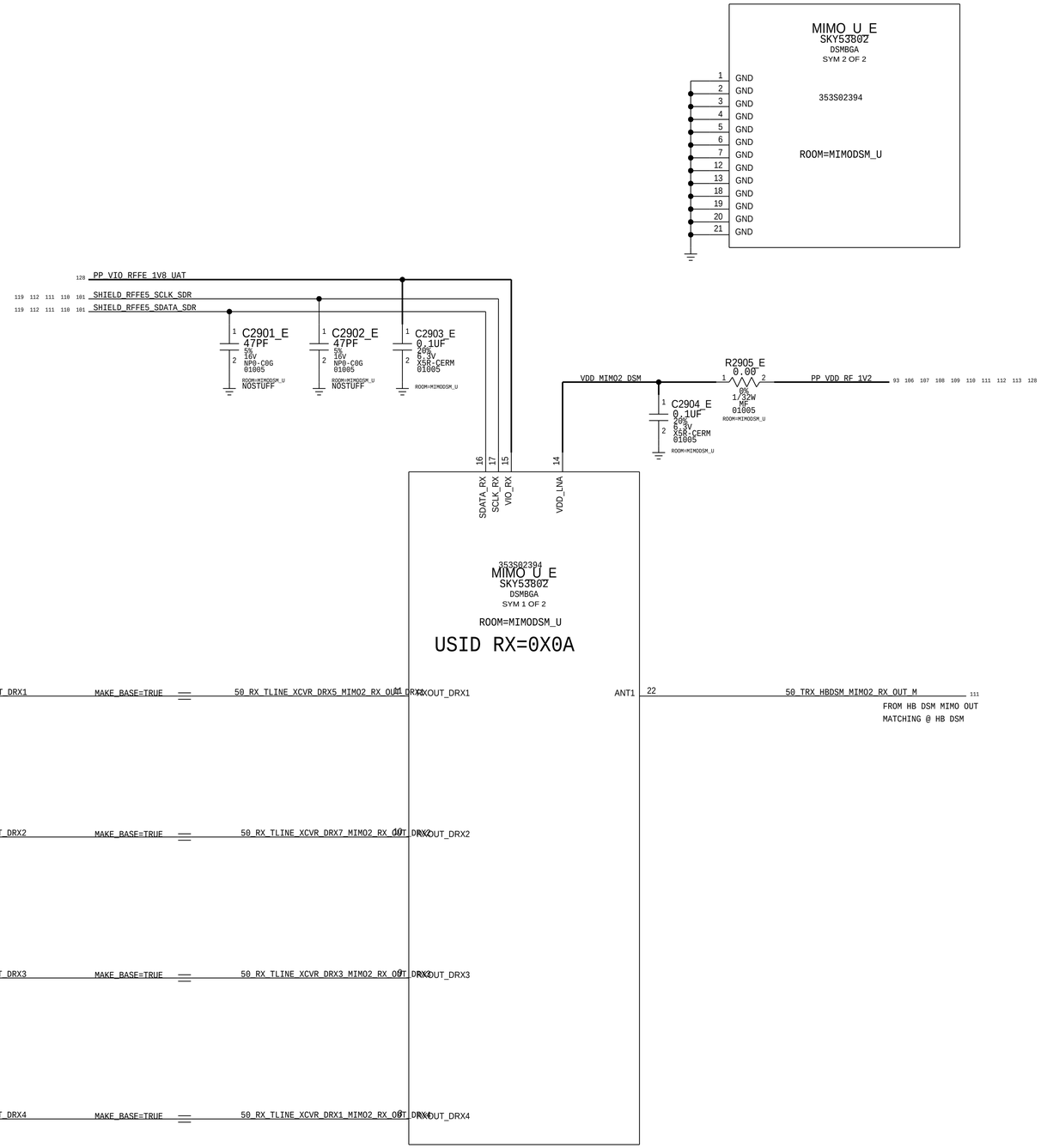
SYNC_MASTER=RADIO_MLB_3.27.0 SYNC_DATE=08/31/2020

PAGE TITLE

MIMO DSM LOWER

BOM_COST_GROUP=CELLULAR

UPPER MIMO DIVERSITY MODULE



BOM_COST_GROUP=CELLULAR

SYNC_MASTER=RADIO_MLB_3.27.0 SYNC_DATE=08/31/2020

PAGE TITLE

MIMO DSM UPPER

LOWER COUPLER

PP_VIO_RFFE_1V8_TX
SHIELD_RFFE1_SCLK_SDR
SHIELD_RFFE1_SDATA_SDR
PPVCC_HIGH

C3001_E 47PF 5% 16V NP0-C0G 01005 NOSTUFF CPLR_L
C3002_E 47PF 5% 16V NP0-C0G 01005 NOSTUFF CPLR_L
C3003_E 47PF 5% 16V NP0-C0G 01005 CPLR_L
C3004_E 47PF 5% 16V NP0-C0G 01005 CPLR_L

CPLR_L_E
MDFEXCGB-137
LGA
SYM 1 OF 2
155S00618
ROOM=CPLR_L
USID=0X8

SDATA SCLK VIO VDD USID

CPL1_ANT
CPL2_ANT
CPL_OUT

R3003_E 1.8NH-+/-0.1NH-0.70A 01005 CPLR_L
50_TRX_HB_PAD_ANT1
HBPAD ANT1 PIN -> ANT3 QPLX
50_TRX_HB_PAD_ANT1_M
C3010_E 15NH-3%-0.17A-1.53OHM 01005 CPLR_L
C3007_E 0.9PF +/-0.05PF 16V C0G-CERM 01005 CPLR_L

UHB/N79_L ANT2 PIN -> ANT3 QPLX
R3008_E 1NH-+/-0.05NH-0.9A 01005 CPLR_L
50_TRX_PAUHBL_UHB_ANT1_TO_ANT3
50_TRX_PAUHBL_UHB_ANT1_TO_ANT3_M
C3013_E 0.5PF +/-0.05PF 16V C0G-CERM 01005 CPLR_L NOSTUFF
C3014_E 0.3PF +/-0.05PF 16V C0G-CERM 01005 CPLR_L

UHB/N79_L ANT2 PIN -> ANT3 QPLX
R3007_E 0.6NH-+/-0.1NH-0.95A-0.05OHM 01005 CPLR_L
50_TRX_PAUHBL_N79_ANT1_TO_ANT3
50_TRX_PAUHBL_N79_ANT1_TO_ANT3_M
C3011_E 0.2PF +/-0.05PF 16V C0G-CERM 01005 CPLR_L
C3012_E 0.2PF +/-0.05PF 16V C0G-CERM 01005 CPLR_L

LBPAD ANT1 PIN -> ANT3 QPLX
R3004_E 1.2NH-+/-0.1NH-0.80A 01005 CPLR_L
50_TRX_LB_PAD_ANT1
50_TRX_LB_PAD_ANT1_M
L3002_E 10NH-+/-3%-0.25A 01005 NOSTUFF CPLR_L
L3001_E 10NH-+/-3%-0.25A 01005 NOSTUFF CPLR_L

QPLX3_E
ACFM-10N77-AP1
LGA
155S00695
ROOM=CPLR_L
MHB UHB N79 LB ANT GND EPAD

MATCHING NOTE: 0201/01005 NETWORK

50_TRX_QPLX_L_CPL1
R3005_E 1.1NH-+/-0.05NH-1.1A-0.04OHM 0201 CPLR_L
50_TRX_QPLX_L_CPL1_M
C3008_E 0.3PF +/-0.05PF 16V C0G-CERM 01005 CPLR_L NOSTUFF
C3009_E 0.5PF +/-0.05PF 16V C0G-CERM 01005 CPLR_L NOSTUFF

50_TRX_HB_PAD_ANT2_M
CPL1_IN
CPL2_IN

50_ANT3_M
R3002_E 0.8NH-+/-0.1NH-0.9A-0.05OHM 01005 CPLR_L
50_ANT3
TO ANT3
C3005_E 0.5PF +/-0.05PF 16V C0G-CERM 01005 CPLR_L NOSTUFF
C3006_E 0.3PF +/-0.05PF 16V C0G-CERM 01005 CPLR_L NOSTUFF
50_ANT3_NOTCH
R3006_E 0.00 0% 1/32W MF 01005 CPLR_L

50_TRX_CPLR_L_CPL2_ANT_LMB_MB_HB
TO MBHB TPLX --> ANT4B

50_CPLR_L_CPL1_LAT_OUT
TO SP3T

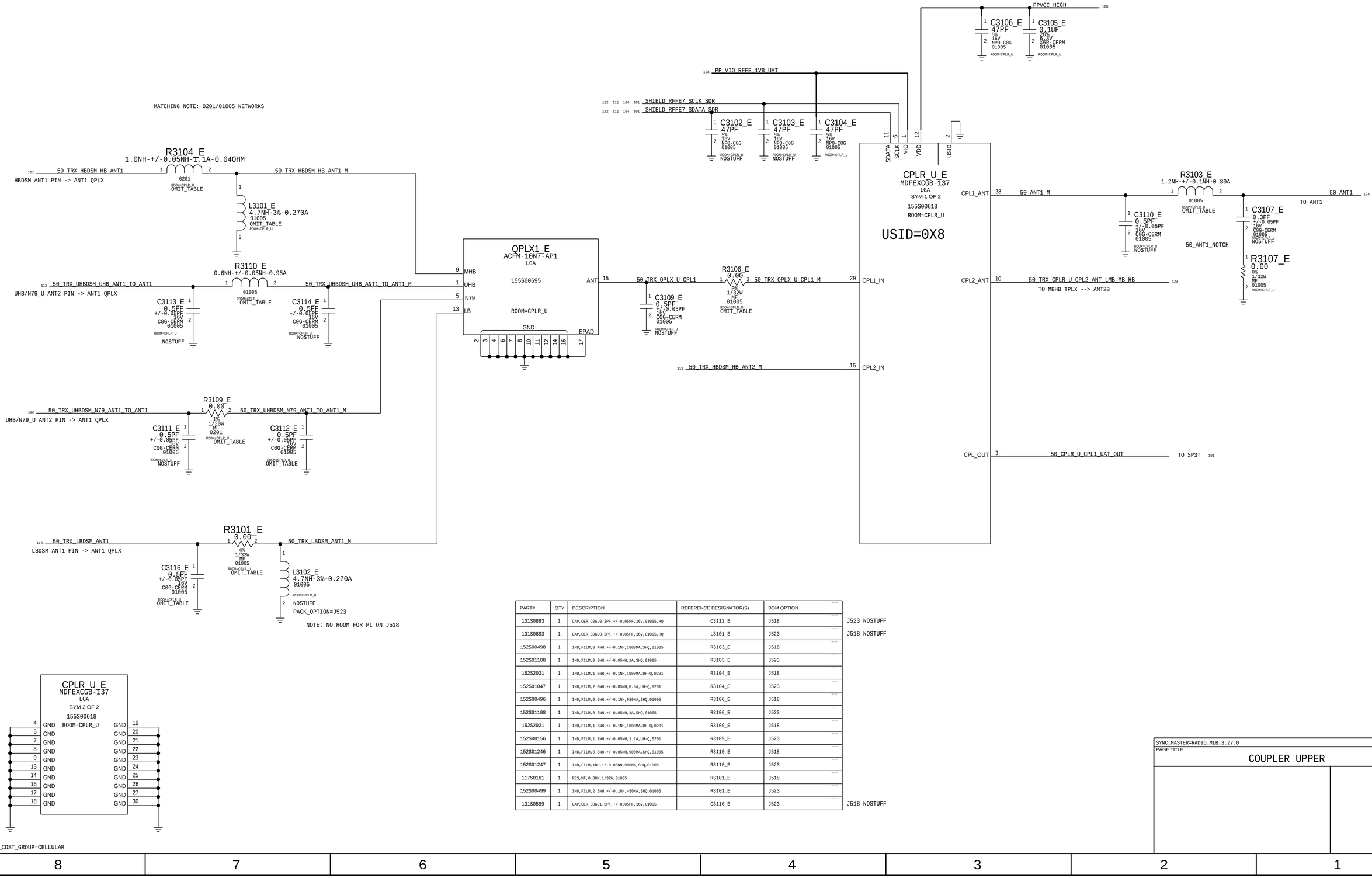
CPLR_L_E
MDFEXCGB-137
LGA
SYM 2 OF 2
155S00618
ROOM=CPLR_L
GND pins 4 5 7 8 9 13 14 16 17 18 19 20 21 22 23 24 25 26 27 30

BOM_COST_GROUP=CELLULAR

SYNC_MASTER=RADIO_MLB_3.27.0
SYNC_DATE=08/31/2020
PAGE TITLE
COUPLER LOWER

UPPER COUPLER

MATCHING NOTE: 0201/01005 NETWORKS



BOM_COST_GROUP=CELLULAR

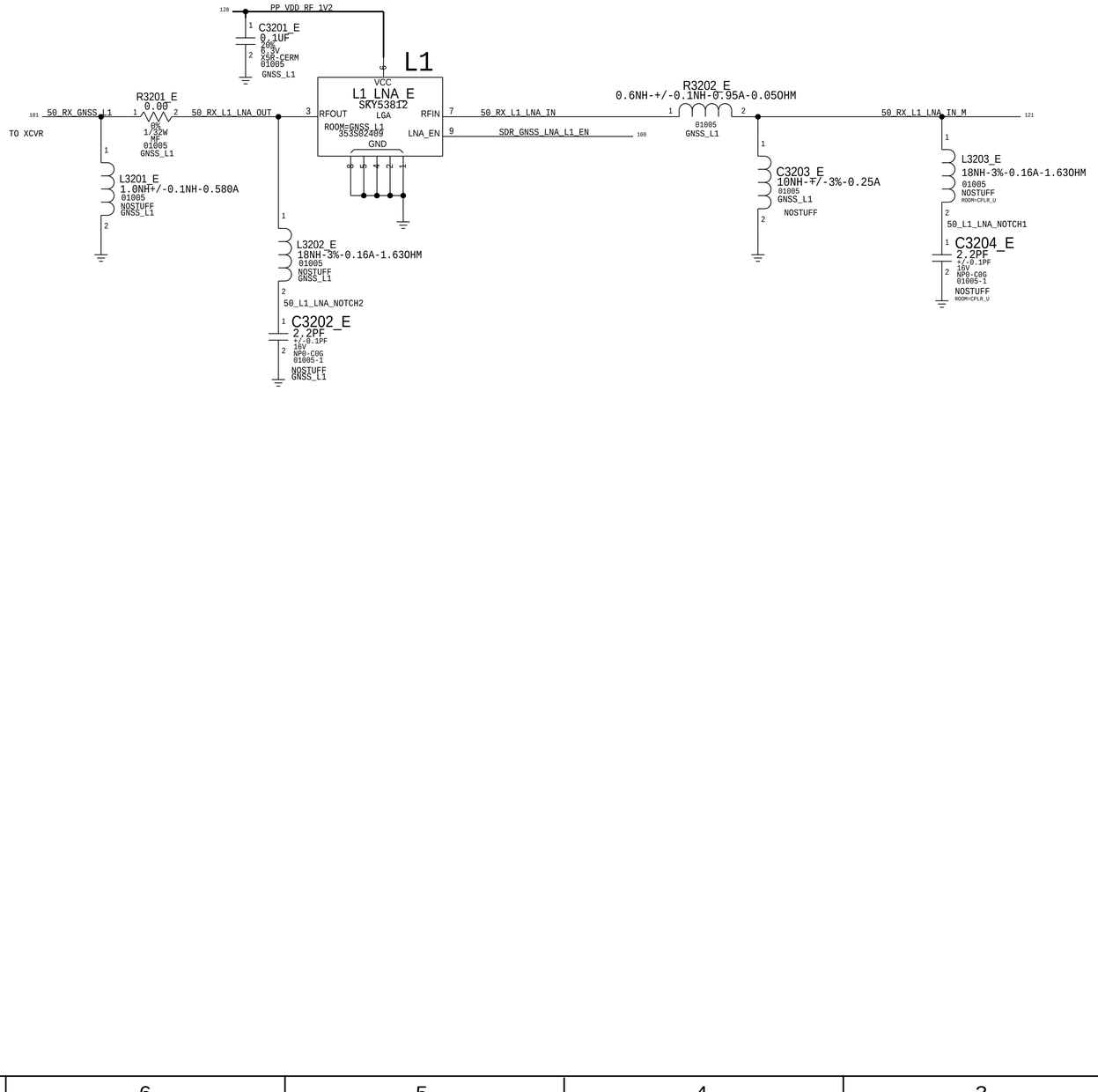
PART#	QTY	DESCRIPTION	REFERENCE DESIGNATOR(S)	BOM OPTION	
131S0893	1	CAP,CER,C0G,0.2PF,+/-0.05PF,16V,01005,HQ	C3112_E	J518	J523 NOSTUFF
131S0893	1	CAP,CER,C0G,0.2PF,+/-0.05PF,16V,01005,HQ	L3101_E	J523	J518 NOSTUFF
152S00498	1	IND,FILM,0.4NH,+/-0.1NH,1000MA,SHQ,01005	R3103_E	J518	
152S01108	1	IND,FILM,0.3NH,+/-0.05NH,1A,SHQ,01005	R3103_E	J523	
152S2021	1	IND,FILM,1.5NH,+/-0.1NH,1000MA,UH-Q,0201	R3104_E	J518	
152S01047	1	IND,FILM,2.0NH,+/-0.05NH,0.6A,UH-Q,0201	R3104_E	J523	
152S00496	1	IND,FILM,0.6NH,+/-0.1NH,950MA,SHQ,01005	R3106_E	J518	
152S01108	1	IND,FILM,0.3NH,+/-0.05NH,1A,SHQ,01005	R3106_E	J523	
152S2021	1	IND,FILM,1.5NH,+/-0.1NH,1000MA,UH-Q,0201	R3109_E	J518	
152S00156	1	IND,FILM,1.1NH,+/-0.05NH,1.1A,UH-Q,0201	R3109_E	J523	
152S01246	1	IND,FILM,0.8NH,+/-0.05NH,900MA,SHQ,01005	R3110_E	J518	
152S01247	1	IND,FILM,1NH,+/-0.05NH,900MA,SHQ,01005	R3110_E	J523	
117S0161	1	RES,MF,0 OHM,1/32W,01005	R3101_E	J518	
152S00499	1	IND,FILM,2.5NH,+/-0.1NH,450MA,SHQ,01005	R3101_E	J523	
131S0599	1	CAP,CER,C0G,1.5PF,+/-0.05PF,16V,01005	C3116_E	J523	J518 NOSTUFF

SYNC_MASTER=RADIO_MLB_3.27.0 SYNC_DATE=08/31/2020

PAGE TITLE

COUPLER UPPER

GNSS_L1



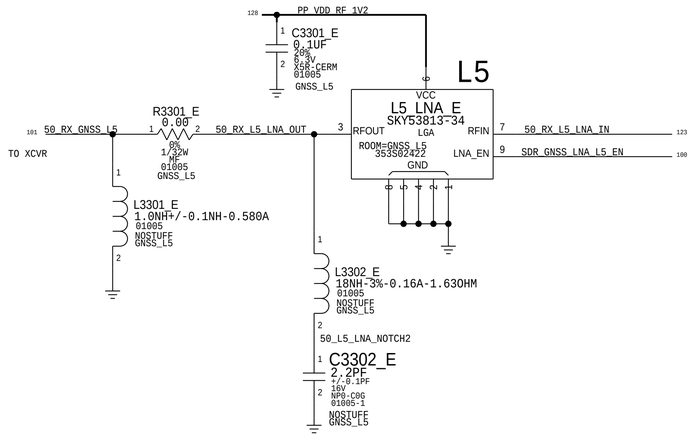
BOM_COST_GROUP=CELLULAR

SYNC_MASTER=RADIO_MLB_3.27.0 SYNC_DATE=08/31/2020

PAGE TITLE

GNSS_L1

GNSS_L5



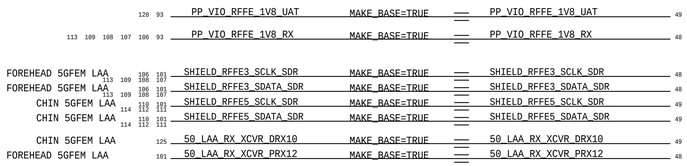
BOM_COST_GROUP=CELLULAR

SYNC_MASTER=RADIO_MLB_3.27.0 SYNC_DATE=08/31/2020

PAGE TITLE

GNSS_L5

LAA CONNECTIONS



BOM_COST_GROUP=CELLULAR

SYNC_MASTER=RADIO_MLB_3.27.0 SYNC_DATE=08/31/2020

PAGE TITLE

LAA CONNECTIONS

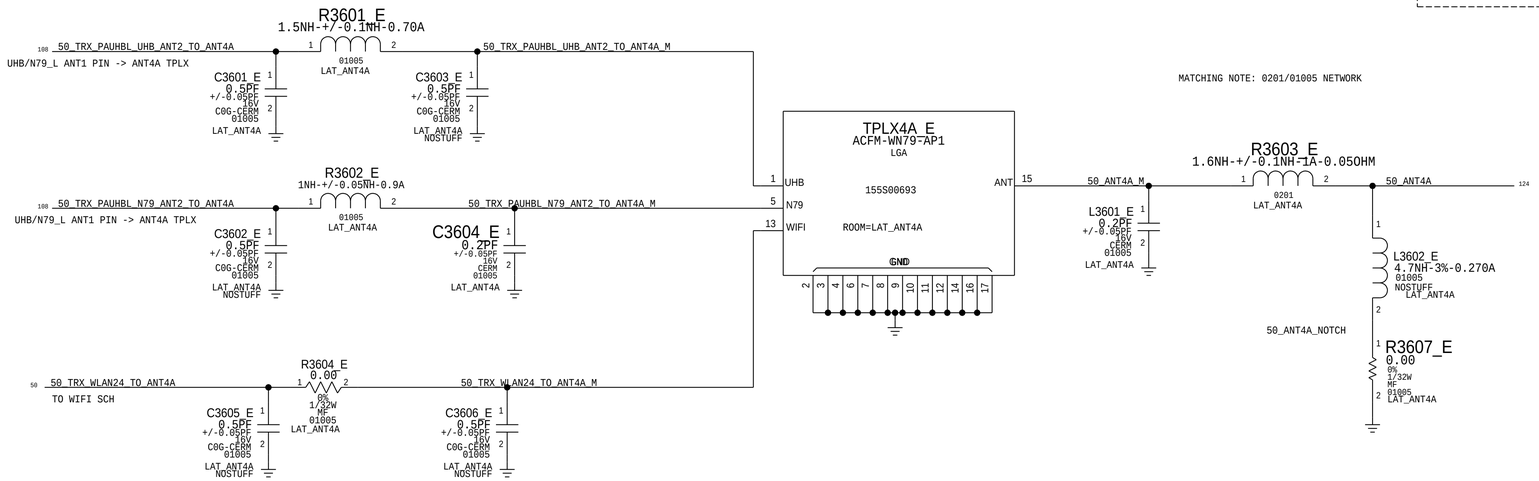
FOREHEAD ANTENNA FEEDS: ANT4A

CHIN ANTENNAS

ANT1	ANT2A	ANT2B	ANT5B	ANT2U
LB	2.4GHZ	L5 GNSS	5GHZ	SAM
LMB/MB/HB	UHB	MB/HB		
UHB	N79	5GHZ		
N79				

FOREHEAD ANTENNAS

ANT3	ANT4A	ANT4B
LB	2.4GHZ	L1 GNSS
LMB/MB/HB	UHB	MB/HB
UHB	N79	5GHZ
N79		



ANT4A

SYNC_MASTER=RADIO_MLB_3.27.0	SYNC_DATE=08/31/2020
PAGE TITLE	
FOREHEAD ANTENNA FEEDS_ANT4A	

BOM_COST_GROUP=CELLULAR

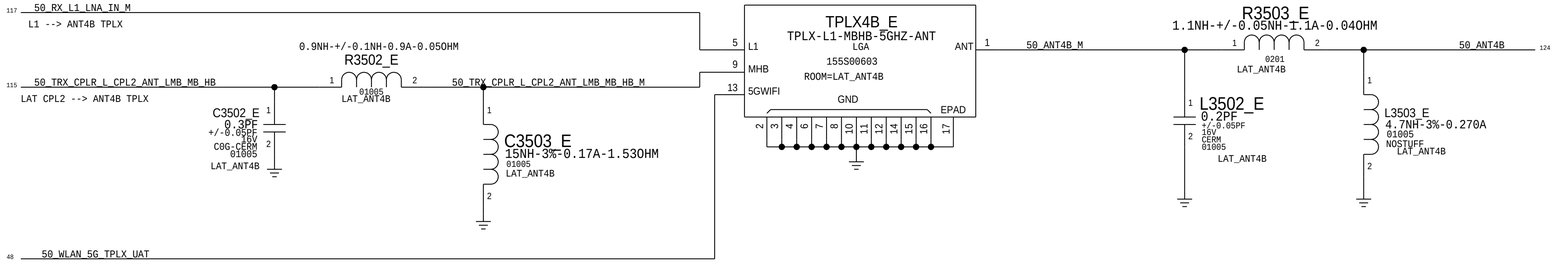
FOREHEAD ANTENNA FEEDS: ANT4B

CHIN ANTENNAS

ANT1	ANT2A	ANT2B	ANT5B	ANT2U
LB	2.4GHZ	L5 GNSS	5GHZ	SAM
LMB/MB/HB	UHB	MB/HB		
UHB	N79	5GHZ		
N79				

FOREHEAD ANTENNAS

ANT3	ANT4A	ANT4B
LB	2.4GHZ	L1 GNSS
LMB/MB/HB	UHB	MB/HB
UHB	N79	5GHZ
N79		



ANT4B

BOM_COST_GROUP=CELLULAR

SYNC_MASTER=RADIO_MLB_3.27.0 SYNC_DATE=08/31/2020

PAGE TITLE

FOREHEAD ANTENNA FEEDS_ANT4B

CHIN ANTENNA FEEDS: ANT2A

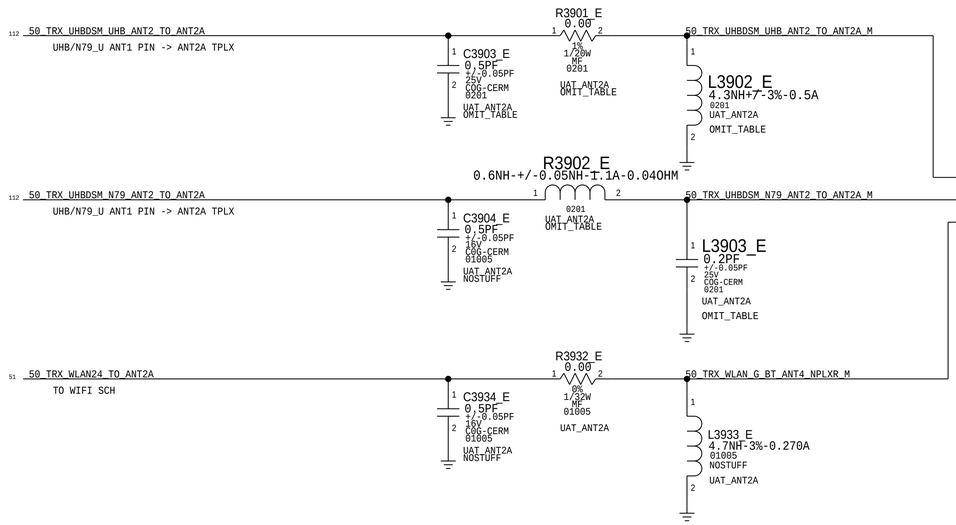
CHIN ANTENNAS

ANT1	ANT2A	ANT2B	ANT5B	ANT2U
LB	2.4GHZ	L5 GNSS	5GHZ	SAM
LMB/MB/HB	UHB	MB/HB		
UHB	N79	5GHZ		
N79				

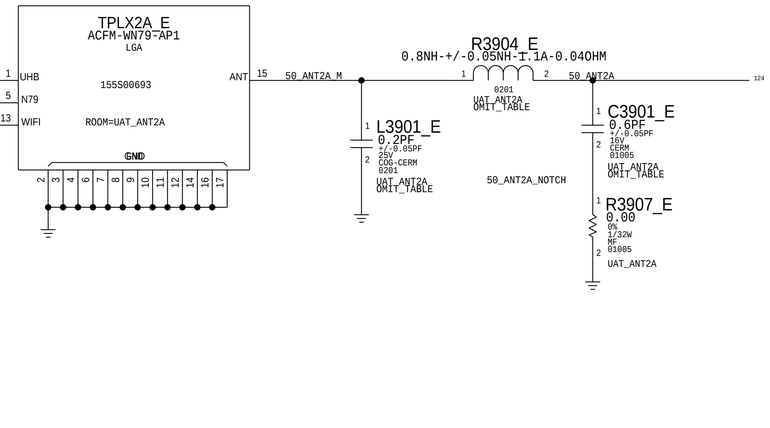
FOREHEAD ANTENNAS

ANT3	ANT4A	ANT4B
LB	2.4GHZ	L1 GNSS
LMB/MB/HB	UHB	MB/HB
UHB	N79	5GHZ
N79		

MATCHING NOTE: 0201/01005 NETWORKS



MATCHING NOTE: 0201/01005 NETWORK



ANT2A

PART#	QTY	DESCRIPTION	REFERENCE DESIGNATOR(S)	BOM OPTION	
131S0631	1	CAP,CER,C0G,0.3PF,+/-0.05PF,25V,0201,H-Q	C3903_E	J518	
131S0631	1	CAP,CER,C0G,0.3PF,+/-0.05PF,25V,0201,H-Q	C3903_E	J523	
131S0431	1	CAP,CER,C0G,0.2PF,+/-0.05PF,25V,0201,H-Q	L3902_E	J518	
152S2054	1	IND,FILM,9.1NH,+/-3%,300MA,UH-Q,0201	L3902_E	J523	
131S0431	1	CAP,CER,C0G,0.2PF,+/-0.05PF,25V,0201,H-Q	L3903_E	J518	
152S2054	1	IND,FILM,9.1NH,+/-3%,300MA,UH-Q,0201	L3903_E	J523	
152S2021	1	IND,FILM,1.5NH,+/-0.1NH,1000MA,UH-Q,0201	R3901_E	J518	
152S00156	1	IND,FILM,1.1NH,+/-0.05NH,1.1A,UH-Q,0201	R3901_E	J523	
152S00157	1	IND,FILM,1.2NH,+/-0.05NH,1.1A,UH-Q,0201	R3902_E	J518	
118S0724	1	RES,MF,0.0 OHM,1,1/20W,0201,HIGH FREQ	R3902_E	J523	
152S2051	1	IND,FILM,1.3NH,+/-0.1NH,1.1A,UH-Q,0201	R3904_E	J518	
152S00153	1	IND,FILM,1.0NH,+/-0.05NH,1.1A,UH-Q,0201	R3904_E	J523	
131S0431	1	CAP,CER,C0G,0.2PF,+/-0.05PF,25V,0201,H-Q	L3901_E	J523	J518 NOSTUFF
152S00533	1	IND,FILM,22NH,+/-3%,140MA,SHQ,01005	C3901_E	J523	J518 NOSTUFF

BOM_COST_GROUP=CELLULAR

SYNC_MASTER=RADIO_MLB_3.27.0 SYNC_DATE=08/31/2020

PAGE TITLE

CHIN ANTENNA FEEDS_ANT2A

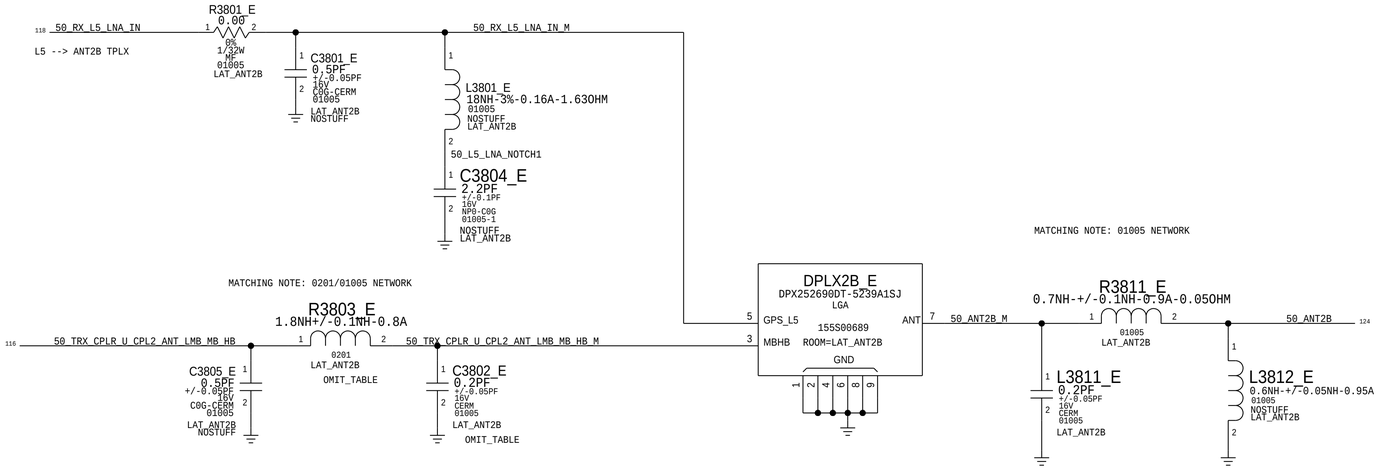
CHIN ANTENNA FEEDS: ANT2B

CHIN ANTENNAS

ANT1	ANT2A	ANT2B	ANT5B	ANT2U
LB	2.4GHZ	L5 GNSS	5GHZ	SAM
LMB/MB/HB	UHB	MB/HB		
UHB	N79	5GHZ		
N79				

FOREHEAD ANTENNAS

ANT3	ANT4A	ANT4B
LB	2.4GHZ	L1 GNSS
LMB/MB/HB	UHB	MB/HB
UHB	N79	5GHZ
N79		



ANT2B

PART#	QTY	DESCRIPTION	REFERENCE DESIGNATOR(S)	BOM OPTION
152S2042	1	IND,FILM,1.8NH,+/-0.1NH,800MA,UH-Q,0201	R3803_E	J518
131S0343	1	CAP,CER,C0G,HF,3.6PF,+/-0.05PF,25V,0201	R3803_E	J523
131S0893	1	CAP,CER,C0G,0.2PF,+/-0.05PF,16V,01005,HQ	C3802_E	J518
152S00522	1	IND,FILM,6.2NH,+/-3%,300MA,SHQ,01005	C3802_E	J523

SYNC_MASTER=RADIO_MLB_3.27.0 SYNC_DATE=08/31/2020

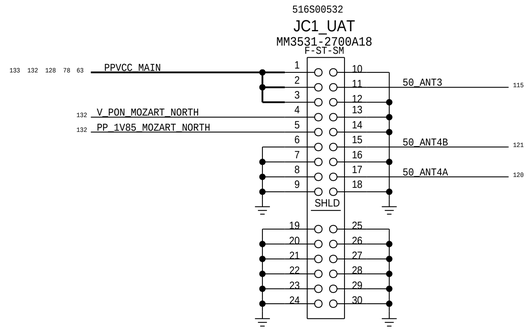
PAGE TITLE

CHIN ANTENNA FEEDS_ANT2B

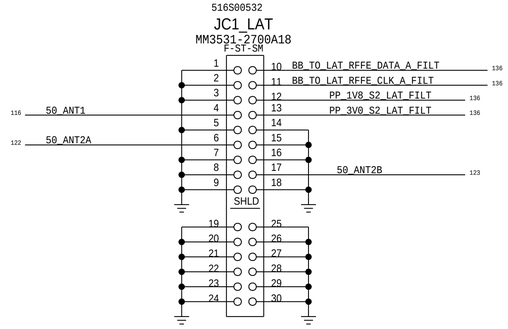
BOM_COST_GROUP=CELLULAR

ANTENNA CONNECTORS

INDY - FOREHEAD



DAYTONA - CHIN



BOM_COST_GROUP=CELLULAR

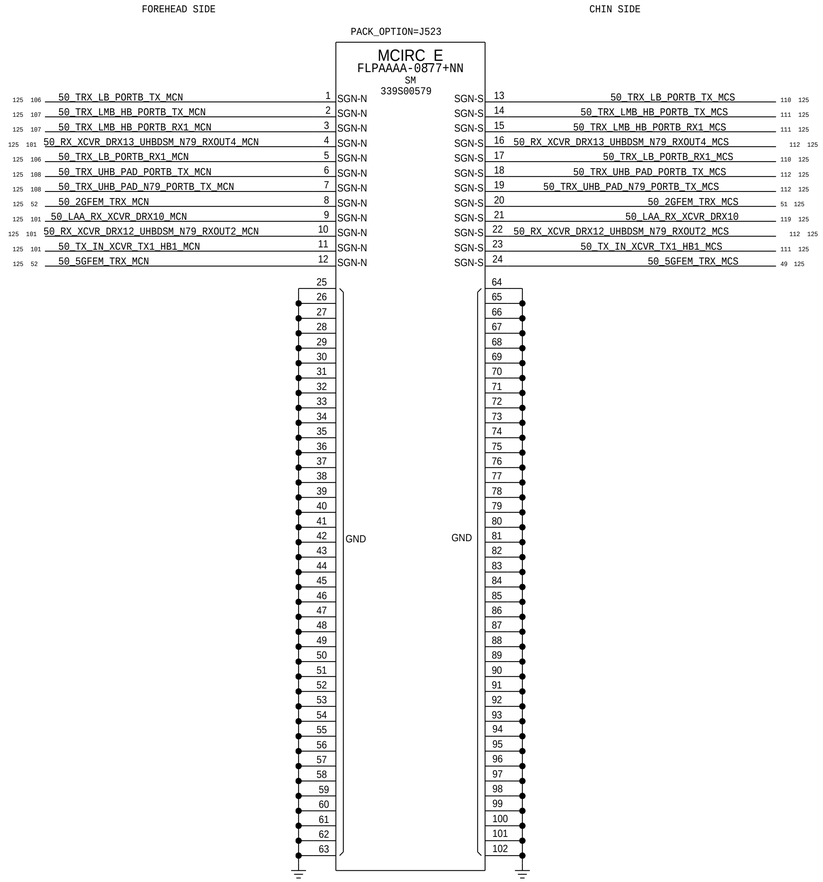
SYNC_MASTER=RADIO_MLB_3.27.0 SYNC_DATE=08/31/2020

PAGE TITLE

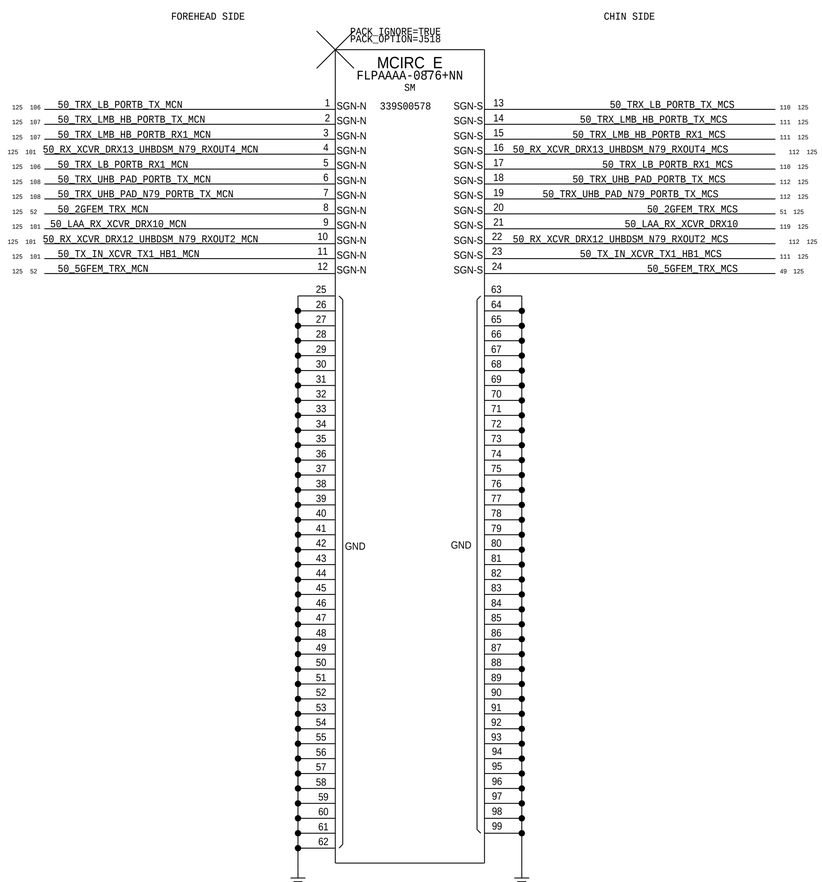
ANT CONNECTORS

ONBOARD METROCIRC

J523



J518



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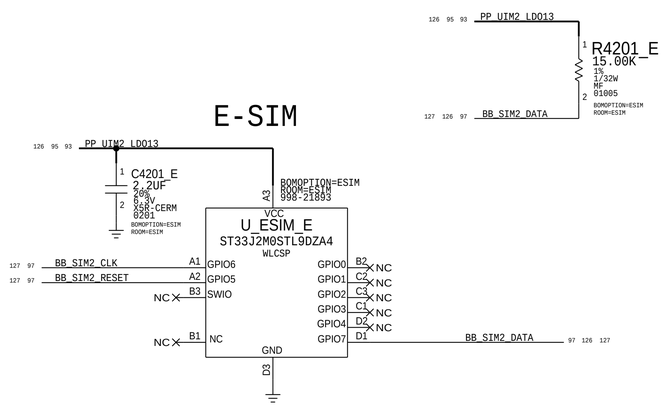
PAGE TITLE

METROCIRC

BOM_COST_GROUP=CELLULAR

E SIM



Birch OS 6.0	APN	MPN
Dev1	998-19944	ST33J2M0STL9D**ZA0**
Dev2	998-21086	ST33J2M0STL9D**ZA2**
Dev2-CN	998-21087	ST33J2M0STL9D**ZA3**
Dev3	998-21893	ST33J2M0STL9D**ZA4**
Dev3-CN	998-21895	ST33J2M0STL9D**ZA5**
Prod	337S00848	ST33J2M0STL9D**ZB0**
Prod-CN	337S00849	ST33J2M0STL9D**ZB1**

BOM_COST_GROUP=CELLULAR

SYNC_MASTER=RADIO_MLB_3.27.0 SYNC_DATE=08/31/2020

PAGE TITLE

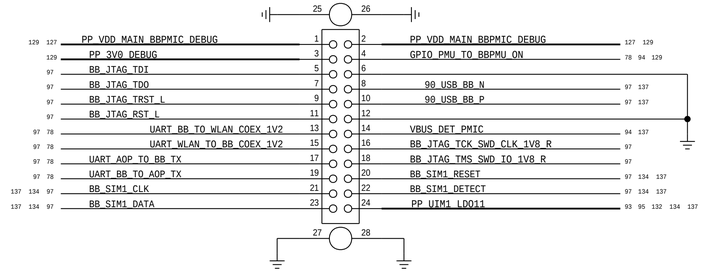
ESIM

DEBUG & BB PROBE POINTS

NOSTUFF
ROOM=DEBUG

JDEBUG_E

BM29P-24DP-2-0.35V
M-ST-SM



BASEBAND

PP4652_E
P2MM-NSM
SM
PP 1 GPIO_SOC_TO_BB_COREDUMP 78 97

PP4658_E
P2MM-NSM
SM
PP 1 GPIO_AP_TO_BB_GPS_TIME_MARK 78 97

UART_BB_TO_AOP_RXD ON JDEBUG_E

UART_AOP_TO_BB_TXD ON JDEBUG_E

UART_BB_TO_WLAN_COEX_TX_1V2 ON WIFI SCH

UART_WLAN_TO_BB_COEX_RX_1V2 ON WIFI SCH

PP4653_E
P2MM-NSM
SM
PP 1 GPIO_SOC_TO_LANAI_DISPLAY_BSYNC1 78 94

PP4654_E
P2MM-NSM
SM
PP 1 AOP_TO_BBPMU_FORCE_PWM 78 94

PP4687_E
P2MM-NSM
SM
PP 1 GPIO_BB_TO_SOC_RESET_DET_L 78 97

APPMU_TO_BBPMU_RESET_L ON JDEBUG_E

PP4618_E
P2MM-NSM
SM
PP 1 PS_HOLD 94 97

PP4605_E
P2MM-NSM
SM
PP 1 PMIC_RESOUT_L 94 97

PP4689_E
P2MM-NSM
SM
PP 1 GPIO_BB_TO_STROBE_GSM_BURST_IND_1V8 78 97

PP4600_E
P2MM-NSM
SM
PP 1 GPIO_AP_TO_BBPMU_PEAK_POWER_IND 78 97

QLINK

PP4681_E
P2MM-NSM
SM
PP 1 QLINK_REQ_SDR_TO_BB 97 100

PP4682_E
P2MM-NSM
SM
PP 1 QLINK_EN_BB_TO_SDR 97 100

PP4683_E
P2MM-NSM
SM
PP 1 QLINK_REQ_SMR_TO_BB 97 130

PP4688_E
P2MM-NSM
SM
PP 1 QLINK_EN_BB_TO_SMR 97 130

PP4601_E
P2MM-NSM
SM
PP 1 85_SUB6_QLINK_L0_P 97 100

PP4602_E
P2MM-NSM
SM
PP 1 85_SUB6_QLINK_L0_N 97 100

PP4603_E
P2MM-NSM
SM
PP 1 85_MMW_QLINK_L0_P 97 130

PP4604_E
P2MM-NSM
SM
PP 1 85_MMW_QLINK_L0_N 97 130

AP POWER

PP4607_E
P2MM-NSM
SM
PP 1 PPVCC_MAIN 92 94 128 129

PP4679_E
P2MM-NSM
SM
PP 1 PPVCC_HIGH 93 128

PP4698_E
P2MM-NSM
SM
PP 1 PP3V0_S2_EUREKA 101 129 135 136 137

PP4684_E
P2MM-NSM
SM
PP 1 GPIO_BB_TO_PMU_HOST_WAKE_L 78 97 129

PP4685_E
P2MM-NSM
SM
PP 1 PCIE_SOC_TO_BB_PERST_L 78 97

PP4686_E
P2MM-NSM
SM
PP 1 PCIE_BB_TO_SOC_CLKREQ_L 78 97 129

SWD

PP4691_E
P2MM-NSM
SM
PP 1 SWD_BB_SWCLK 78 97

PP4692_E
P2MM-NSM
SM
PP 1 SWD_BB_SWDIO 78 97

ESIM

PP4693_E
P2MM-NSM
SM
PP 1 BB_SIM2_CLK 97 126

PP4694_E
P2MM-NSM
SM
PP 1 BB_SIM2_RESET 97 126

PP4695_E
P2MM-NSM
SM
PP 1 BB_SIM2_DATA 97 126

PCIE

PP4634_E
P2MM-NSM
SM
PP 1 PCIE_SOC_TO_BB_REFCLK_P 78 97

PP4635_E
P2MM-NSM
SM
PP 1 PCIE_SOC_TO_BB_REFCLK_N 78 97

I2S

PP46A0_E
P2MM-NSM
SM
PP 1 I2S_SOC_TO_BB_DOUT 78 97

PP46A1_E
P2MM-NSM
SM
PP 1 I2S_BB_TO_SOC_BCLK 78 97

PP46A2_E
P2MM-NSM
SM
PP 1 I2S_BB_TO_SOC_DOUT 78 97

PP46A3_E
P2MM-NSM
SM
PP 1 I2S_BB_TO_SOC_LRCK 78 97

CLOCKS

PP4651_E
P2MM-NSM
SM
PP 1 SHIELD_MDM_19P2M_CLK 94 97

PP4623_E
P2MM-NSM
SM
PP 1 SHIELD_PMK_32K_SLEEP_CLK 94

PP4624_E
P2MM-NSM
SM
PP 1 SHIELD_SLEEP_CLK_32K 94 97

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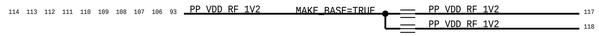
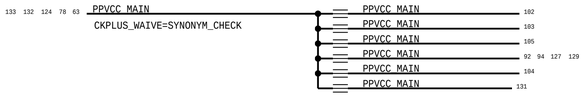
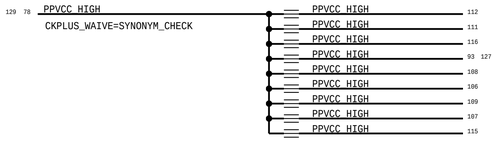
PAGE TITLE

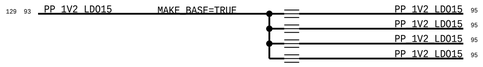
DEBUG & TEST POINTS

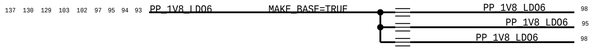
SYNONYMS
COPY PAGE TO MLB_TOP

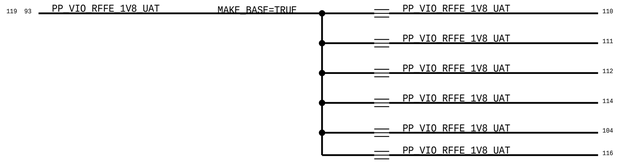


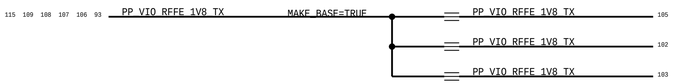












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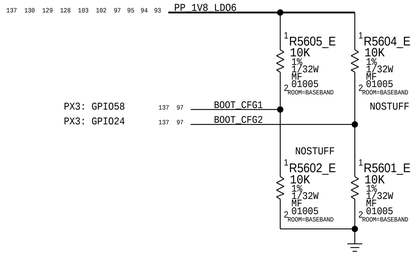
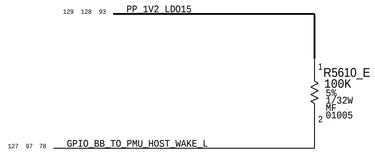
SYNC_MASTER=RADIO_MLB_3.27.0 SYNC_DATE=08/31/2020

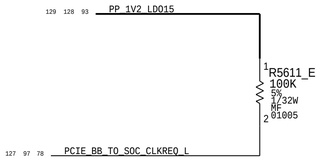
PAGE TITLE

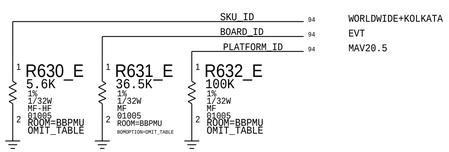
SYNONYMS

MLB ADJUSTABLES

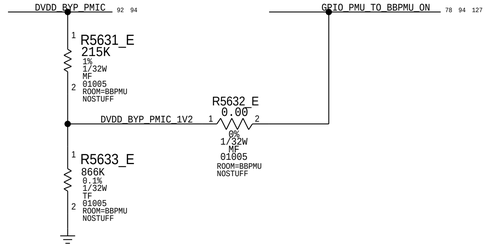




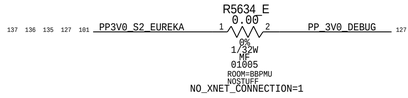


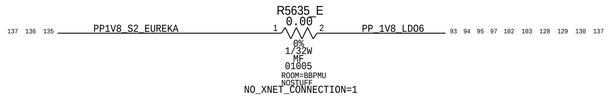


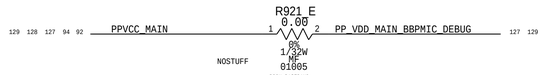
AUTO POWER ON FOR EUREKA CONFIG

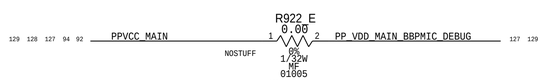


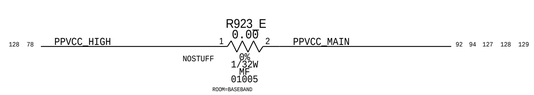
STUFF ONLY FOR VENDOR CONFIG











NOTE: AP PMU NOT STUFFED ON VENDOR CONFIG

BOM_COST_GROUP=CELLULAR

SYNC_MASTER=RADIO_MLB_3.27.0 SYNC_DATE=08/31/2020

PAGE TITLE

MLB ADJUSTABLES

MMW IF TRANSCEIVER IC

1.2A VDD_CX MAX CURRENT

93 PP_0V8_LDO7

C5831_E 4UF 20% 6.3V CER-X5R 0201 ROOM=MMW_IFIC BOMOPTION=RF_SKU:WW+KOLKATA

C5801_E 4UF 20% 6.3V CER-X5R 0201 ROOM=MMW_IFIC BOMOPTION=RF_SKU:WW+KOLKATA

C5804_E 0.1UF 10% 6.3V CER-X5R 01005 ROOM=MMW_IFIC RF_SKU:WW+KOLKATA

C5807_E 0.1UF 10% 6.3V CER-X5R 01005 ROOM=MMW_IFIC RF_SKU:WW+KOLKATA

C5809_E 0.1UF 10% 6.3V CER-X5R 01005 ROOM=MMW_IFIC RF_SKU:WW+KOLKATA

C5830_E 0.1UF 10% 6.3V CER-X5R 01005 ROOM=MMW_IFIC RF_SKU:WW+KOLKATA

XW5801_E SHORT-8L-0.1MM-SM ROOM=MMW_IFIC

137 129 128 103 102 97 95 94 93 PP_1V8_LDO6

C5802_E 4UF 20% 6.3V CER-X5R 0201 ROOM=MMW_IFIC BOMOPTION=RF_SKU:WW+KOLKATA

PP_LDO6_SMR_VDD_PX_20

C5805_E 0.1UF 10% 6.3V CER-X5R 01005 ROOM=MMW_IFIC RF_SKU:WW+KOLKATA

XW5824_E SHORT-8L-0.1MM-SM ROOM=MMW_IFIC

98 95 93 PP_0V875_LDO4

C5803_E 4UF 20% 6.3V CER-X5R 0201 ROOM=MMW_IFIC BOMOPTION=RF_SKU:WW+KOLKATA

PP_LDO4_SMR_MX_115

XW5825_E SHORT-8L-0.1MM-SM ROOM=MMW_IFIC

PP_LDO4_SMR_PHY_152

C5806_E 0.1UF 10% 6.3V CER-X5R 01005 ROOM=MMW_IFIC RF_SKU:WW+KOLKATA

C5808_E 0.1UF 10% 6.3V CER-X5R 01005 ROOM=MMW_IFIC RF_SKU:WW+KOLKATA

BOMOPTION=RF_SKU:WW+KOLKATA

338S00651

U_SMR_E

SMR526-0

PSP

SYM 2 OF 3

ROOM=MMW_IFIC

B12	VDD_CX	VDDAH_1	A7
F12	VDD_CX	VDDAH_2	H4
M14	VDD_CX	VDDAH_3	P2
R7	VDD_CX	VDDAH_4	H8
		VDDAL_1	C5
P10	VDD_PX	VDDAL_2	B4
P12	VDD_MX	VDDAL_3	F4
H18	VDDA_PHY	VDDAL_4	R5
		VDDAL_5	B10
		VDDAL_6	E11
		VDDAL_7	R9
		VDDAM_1	B6
		VDDAM_2	G5
		VDDAM_3	P4
		VDDAM_4	A9
		VDDAM_5	P8

XW5802_E SHORT-8L-0.1MM-SM ROOM=MMW_IFIC

PP_LDO5_SMR_VDDAH_1_10

XW5803_E SHORT-8L-0.25MM-SM ROOM=MMW_IFIC

PP_LDO5_SMR_VDDAH_2_140

XW5804_E SHORT-8L-0.1MM-SM ROOM=MMW_IFIC

PP_LDO5_SMR_VDDAH_3_10

XW5805_E SHORT-8L-0.1MM-SM ROOM=MMW_IFIC

PP_LDO5_SMR_VDDAH_4_40

PP_1V8_LDO5 93 95

C5823_E 4UF 20% 6.3V CER-X5R 0201 ROOM=MMW_IFIC BOMOPTION=RF_SKU:WW+KOLKATA

C5812_E 0.1UF 10% 6.3V CER-X5R 01005 ROOM=MMW_IFIC RF_SKU:WW+KOLKATA

C5814_E 0.1UF 10% 6.3V CER-X5R 01005 ROOM=MMW_IFIC RF_SKU:WW+KOLKATA

C5818_E 0.1UF 10% 6.3V CER-X5R 01005 ROOM=MMW_IFIC RF_SKU:WW+KOLKATA

C5820_E 0.1UF 10% 6.3V CER-X5R 01005 ROOM=MMW_IFIC RF_SKU:WW+KOLKATA

XW5806_E SHORT-8L-0.1MM-SM ROOM=MMW_IFIC

PP_LDO9_SMR_VDDAL_1_50

XW5807_E SHORT-8L-0.1MM-SM ROOM=MMW_IFIC

PP_LDO9_SMR_VDDAL_2_10

XW5808_E SHORT-8L-0.25MM-SM ROOM=MMW_IFIC

PP_LDO9_SMR_VDDAL_3_140

XW5809_E SHORT-8L-0.1MM-SM ROOM=MMW_IFIC

PP_LDO9_SMR_VDDAL_4_90

XW5810_E SHORT-8L-0.1MM-SM ROOM=MMW_IFIC

PP_LDO9_SMR_VDDAL_5_10

XW5811_E SHORT-8L-0.1MM-SM ROOM=MMW_IFIC

PP_LDO9_SMR_VDDAL_6_10

XW5812_E SHORT-8L-0.1MM-SM ROOM=MMW_IFIC

PP_LDO9_SMR_VDDAL_7_10

PP_0V8_LDO9 93

C5828_E 4UF 20% 6.3V CER-X5R 0201 ROOM=MMW_IFIC BOMOPTION=RF_SKU:WW+KOLKATA

C5832_E 4UF 20% 6.3V CER-X5R 0201 ROOM=MMW_IFIC BOMOPTION=RF_SKU:WW+KOLKATA

C5810_E 0.1UF 10% 6.3V CER-X5R 01005 ROOM=MMW_IFIC RF_SKU:WW+KOLKATA

C5813_E 0.47UF 20% 6.3V CER-X5R 01005 ROOM=MMW_IFIC RF_SKU:WW+KOLKATA

C5816_E 0.1UF 10% 6.3V CER-X5R 01005 ROOM=MMW_IFIC RF_SKU:WW+KOLKATA

C5819_E 0.1UF 10% 6.3V CER-X5R 01005 ROOM=MMW_IFIC RF_SKU:WW+KOLKATA

C5822_E 0.1UF 10% 6.3V CER-X5R 01005 ROOM=MMW_IFIC RF_SKU:WW+KOLKATA

C5825_E 0.1UF 10% 6.3V CER-X5R 01005 ROOM=MMW_IFIC RF_SKU:WW+KOLKATA

C5826_E 0.1UF 10% 6.3V CER-X5R 01005 ROOM=MMW_IFIC RF_SKU:WW+KOLKATA

PLACE C5813 CLOSE TO PIN B4

XW5813_E SHORT-8L-0.1MM-SM ROOM=MMW_IFIC

PP_LDO12_SMR_VDDAM_1_70

XW5814_E SHORT-8L-0.25MM-SM ROOM=MMW_IFIC

PP_LDO12_SMR_VDDAM_2_120

XW5815_E SHORT-8L-0.1MM-SM ROOM=MMW_IFIC

PP_LDO12_SMR_VDDAM_3_70

XW5816_E SHORT-8L-0.25MM-SM ROOM=MMW_IFIC

PP_LDO12_SMR_VDDAM_4_240

XW5817_E SHORT-8L-0.25MM-SM ROOM=MMW_IFIC

PP_LDO12_SMR_VDDAM_5_240

PP_1V2_LDO12 93

VDD_AM MAX CURRENT 740 MA

C5827_E 4UF 20% 6.3V CER-X5R 0201 ROOM=MMW_IFIC BOMOPTION=RF_SKU:WW+KOLKATA

C5811_E 0.1UF 10% 6.3V CER-X5R 01005 ROOM=MMW_IFIC RF_SKU:WW+KOLKATA

C5815_E 0.1UF 10% 6.3V CER-X5R 01005 ROOM=MMW_IFIC RF_SKU:WW+KOLKATA

C5817_E 0.1UF 10% 6.3V CER-X5R 01005 ROOM=MMW_IFIC RF_SKU:WW+KOLKATA

C5821_E 0.1UF 10% 6.3V CER-X5R 01005 ROOM=MMW_IFIC RF_SKU:WW+KOLKATA

C5824_E 0.1UF 10% 6.3V CER-X5R 01005 ROOM=MMW_IFIC RF_SKU:WW+KOLKATA

94 SHIELD_SMR_38P4M_CLK

BOMOPTION=RF_SKU:WW+KOLKATA

338S00651

U_SMR_E

SMR526-0

PSP

SYM 1 OF 3

ROOM=MMW_IFIC

		A3	XO_IN	XO	
		G9	XO_SEL	XO	
133	50_MMW_SMR526_IFH1	J1	IFH1	IF	
NC		K2	IFH2	IF	
132	50_MMW_SMR526_IFH3	L1	IFH3	IF	
132	50_MMW_SMR526_IFH4	M2	IFH4	IF	
132	50_MMW_SMR526_IFV1	F2	IFV1	IF	
132	50_MMW_SMR526_IFV2	E1	IFV2	IF	
NC		D2	IFV3	IF	
133	50_MMW_SMR526_IFV4	C1	IFV4	IF	
132	GRFC1_PON_TO_MMW_IFH3IFV2	P6	GRFC_1_QTM3_PON	QLINK PHY	
133	GRFC2_PON_TO_MMW_IFH1IFV4	G7	GRFC_2_QTM0_PON	QLINK PHY	
NC		K10	GRFC_3	QLINK PHY	
NC		J7	GRFC_4_QTM1_PON	QLINK PHY	
132	GRFC5_PON_TO_MMW_IFH4IFV1	N5	GRFC_5_QTM2_PON	QLINK PHY	
NC		D12	GRFC_6	GRFC	
NC		M12	GRFC_7	GRFC	
NC		N11	GRFC_8	GRFC	
NC		H12	GRFC_9	GRFC	
NC		J11	GRFC_10	GRFC	
101 97	SHIELD_RFFE4_SDATA_BB	K12	RFFE0_DATA	RFFE	
101 97	SHIELD_RFFE4_SCLK_BB	L11	RFFE0_CLK	RFFE	
NC		C11	DNC	DNC	
127 97	QLINK_REQ_SMR_TO_BB	D14	QLINK_REQ	QLINK PHY	
127 97	QLINK_EN_BB_TO_SMR	G13	QLINK_EN	QLINK PHY	
97	BB_TO_SMR_WMSS_RESET_L	J13	WMSS_RESET*	QLINK PHY	

QLINK_L0_P	K14	85_MMW_QLINK_L0_P	97	127
QLINK_L0_M	J15	85_MMW_QLINK_L0_N	97	127
QLINK_L1_P	G15	85_MMW_QLINK_L1_P	97	
QLINK_L1_M	F14	85_MMW_QLINK_L1_N	97	
QLINK_L2_P	E15	85_MMW_QLINK_L2_P	97	
QLINK_L2_M	D16	85_MMW_QLINK_L2_N	97	
QLINK_L3_P	L15	85_MMW_QLINK_L3_P	97	
QLINK_L3_M	M16	85_MMW_QLINK_L3_N	97	
QLINK_L4_P	P16	85_MMW_QLINK_L4_P	97	
QLINK_L4_M	R15	85_MMW_QLINK_L4_N	97	
QLINK_L5_P	D18	85_MMW_QLINK_L5_P	97	
QLINK_L5_M	E17	85_MMW_QLINK_L5_N	97	
QLINK_L6_P	B16	85_MMW_QLINK_L6_P	97	
QLINK_L6_M	A15	85_MMW_QLINK_L6_N	97	
QLINK_L7_P	K18	85_MMW_QLINK_L7_P	97	
QLINK_L7_M	J17	85_MMW_QLINK_L7_N	97	
QLINK_L8_P	L17	85_MMW_QLINK_L8_P	97	
QLINK_L8_M	M18	85_MMW_QLINK_L8_N	97	
QLINK_L9_P	P18	85_MMW_QLINK_L9_P	97	
QLINK_L9_M	R17	85_MMW_QLINK_L9_N	97	
QLINK_L10_P	A13	85_MMW_QLINK_L10_P	97	
QLINK_L10_M	B14	85_MMW_QLINK_L10_N	97	
QLINK_L11_P	B18	85_MMW_QLINK_L11_P	97	
QLINK_L11_M	A17	85_MMW_QLINK_L11_N	97	
QLINK_L12_P	R13	85_MMW_QLINK_L12_P	97	
QLINK_L12_M	P14	85_MMW_QLINK_L12_N	97	
QLINK_CLK_P	G17	85_MMW_QLINK_CLK_P	97	
QLINK_CLK_M	F18	85_MMW_QLINK_CLK_N	97	

BOMOPTION=RF_SKU:WW+KOLKATA

338S00651

U_SMR_E

SMR526-0

PSP

SYM 3 OF 3

ROOM=MMW_IFIC

A1	GND	GND	H10
A5	GND	GND	H14
A11	GND	GND	H16
B2	GND	GND	J3
B8	GND	GND	J5
C3	GND	GND	J9
C7	GND	GND	K4
C9	GND	GND	K6
C13	GND	GND	K8
C15	GND	GND	K16
C17	GND	GND	L3
D4	GND	GND	L5
D6	GND	GND	L7
D8	GND	GND	L9
D10	GND	GND	L13
E3	GND	GND	M4
E5	GND	GND	M6
E7	GND	GND	M8
E9	GND	GND	M10
E13	GND	GND	N1
F6	GND	GND	N3
F8	GND	GND	N7
F10	GND	GND	N9
F16	GND	GND	N13
G1	GND	GND	N15
G3	GND	GND	N17
G11	GND	GND	R1
H2	GND	GND	R3
H6	GND	GND	R11

SYNC_MASTER=RADIO_MLB_3.27.0 SYNC_DATE=08/31/2020

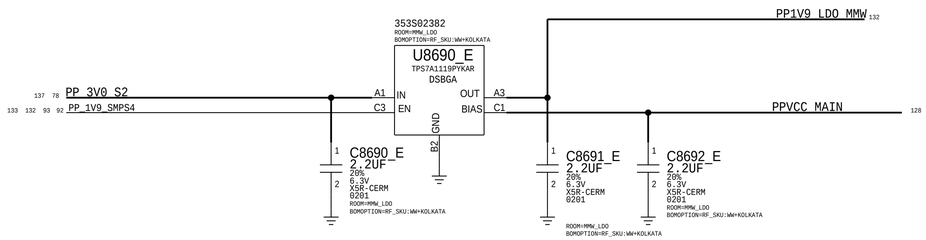
PAGE TITLE

MMW

BOM_COST_GROUP=CELLULAR

MMW DISCRETE 1V9 LDO

1.9V LDO TO SOURCE POWER FOR BANJO_B B2B DUE TO SMPS4 DCR



BOM_COST_GROUP=CELLULAR

SYNC_MASTER=RADIO_MLB_3.27.0 SYNC_DATE=08/31/2020

PAGE TITLE

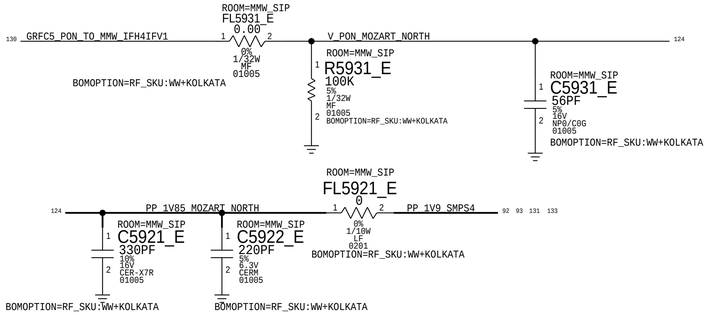
MMW 1V9 LDO

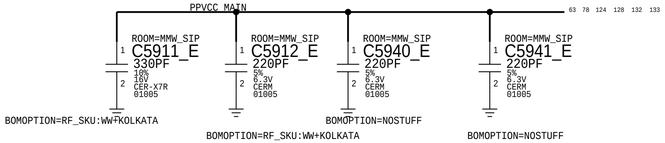
MMW CONNECTORS - MOZART

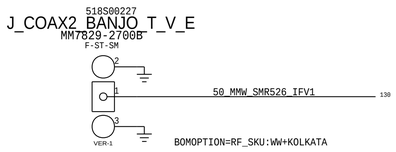
MOZART NORTH CONNECTIONS

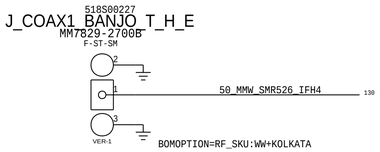
VIA INDY AND BANJO_T

INDY B2B ON ANT
CONNECTORS PAGE



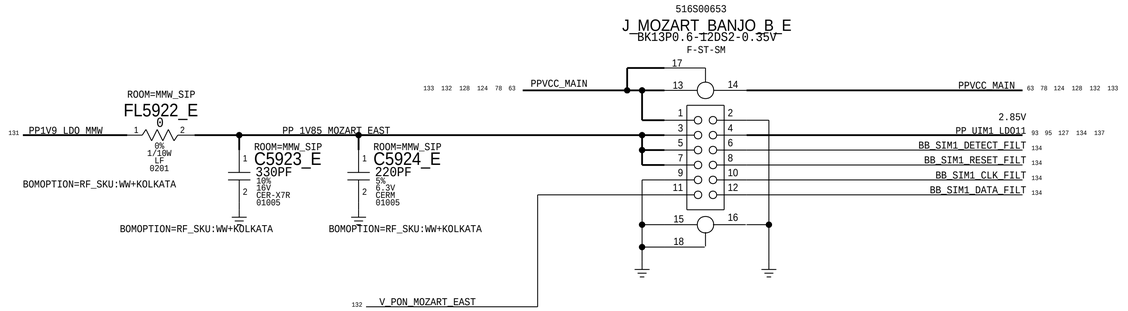


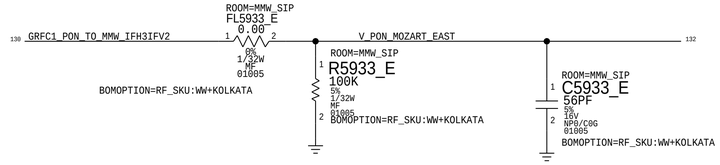


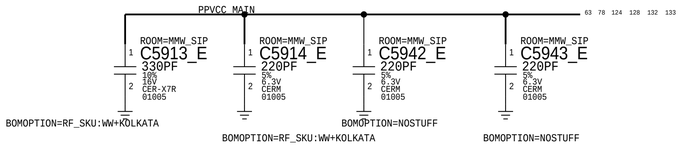


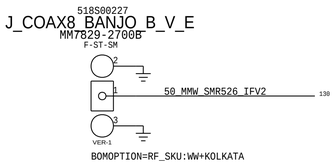
MOZART EAST/SOUTH CONNECTIONS

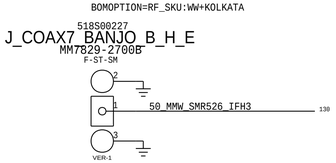
VIA BANJO_B











SYNC_MASTER=RADIO_MLB_3.27.0 SYNC_DATE=08/31/2020

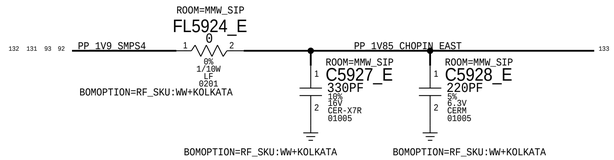
PAGE TITLE

MMW_MOZART_CONN

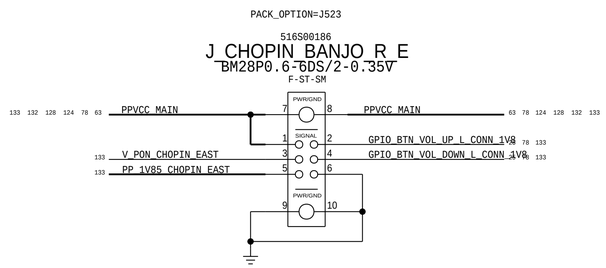
BOM_COST_GROUP=CELLULAR

MMW CONNECTORS - CHOPIN

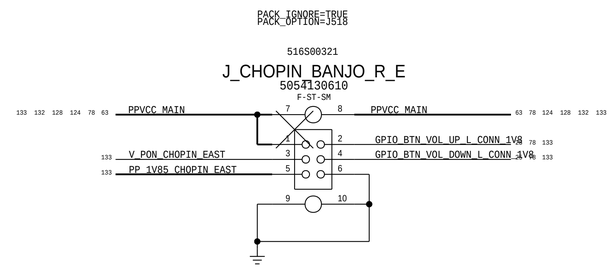
CHOPIN CONNECTIONS
VIA BANJO_R

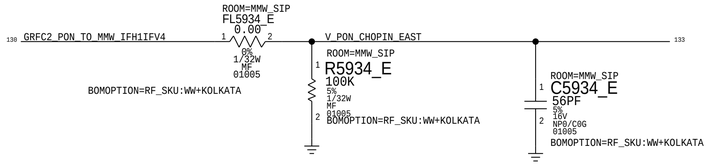


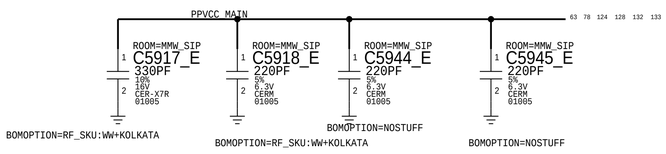
J523 B2B

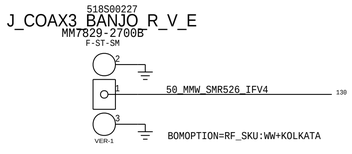


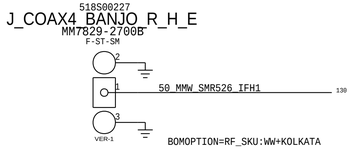
J518 B2B











BOM_COST_GROUP=CELLULAR

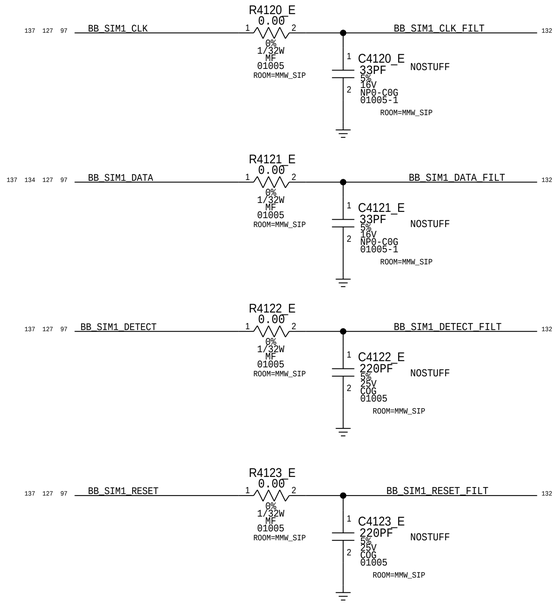
SYNC_MASTER=RADIO_MLB_3.27.0 SYNC_DATE=08/31/2020

PAGE TITLE

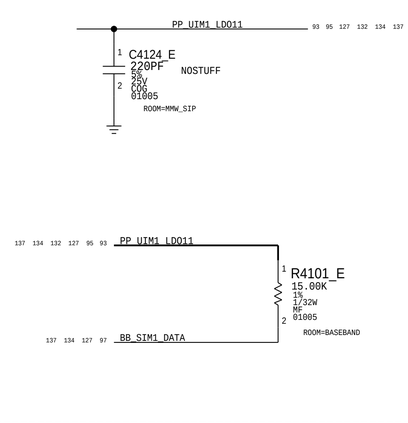
MMW_CHOPIN_CONN

PSIM FILTERS - TO BANJO

SIM1 IO FILTERS - BANJO_B_SIM



SIM1 POWER + DETECT - BANJO_B_SIM



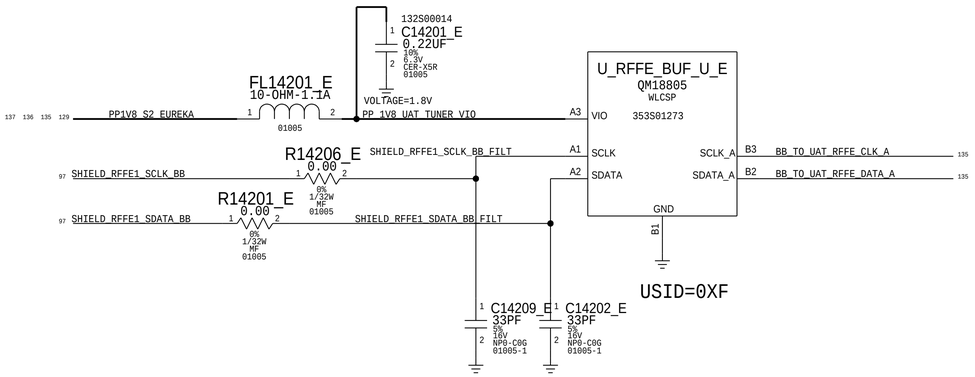
BOM_COST_GROUP=CELLULAR

SYNC_MASTER=RADIO_MLB_3.27.0 SYNC_DATE=08/31/2020

PAGE TITLE

PSIM FILTERS

ANTENNA SYSTEM UAT



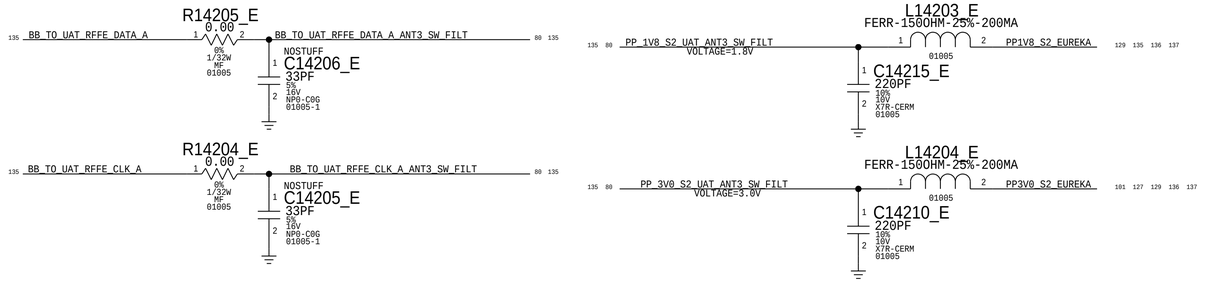
CONNECTIONS TO INDY B2B

NONE

CONNECTIONS TO HYDRA B2B

NONE

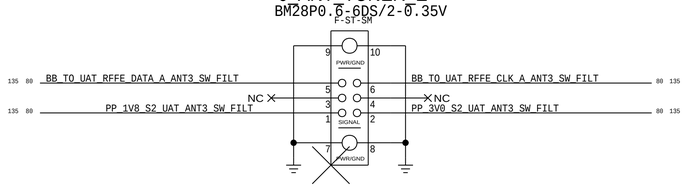
B2B TO ANT3_SW FLEX



J518 PINOUT

PACK_IGNORE=TRUE
PACK_OPTION=J518

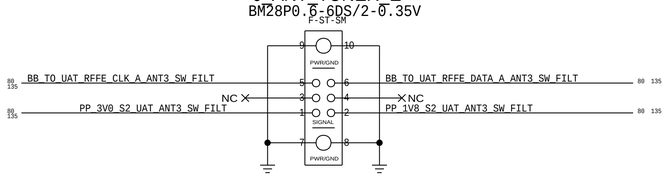
516S00186



J523 PINOUT

PACK_OPTION=J523

516S00186



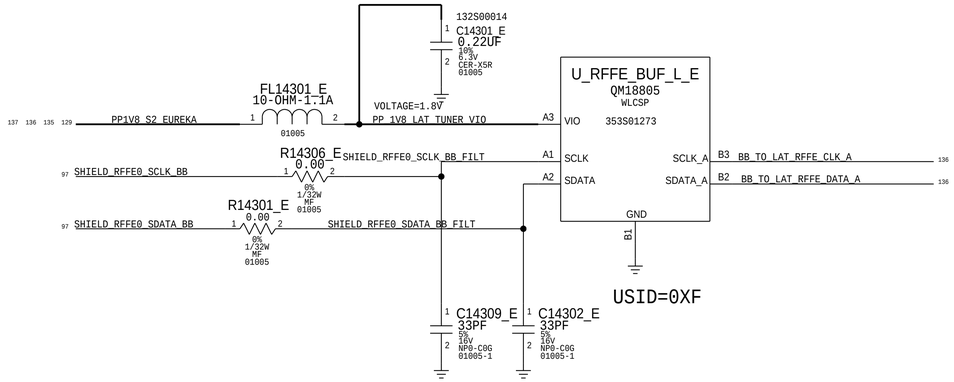
BOM_COST_GROUP=CELLULAR

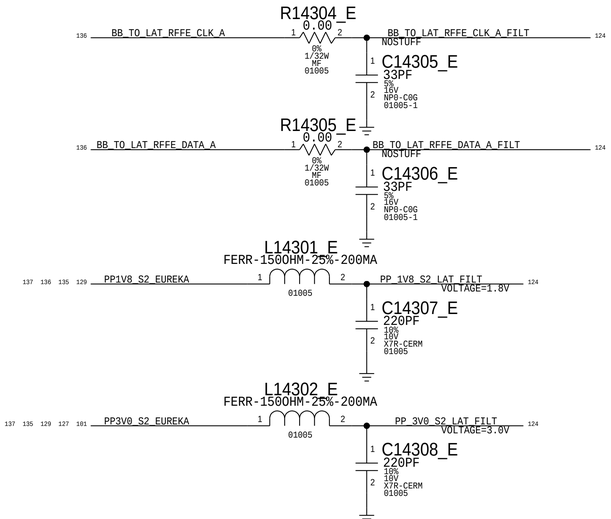
SYNC_MASTER=RADIO_MLB_3.27.0 SYNC_DATE=08/31/2020

PAGE TITLE

UAT ANT SYSTEM

ANTENNA SYSTEM LAT





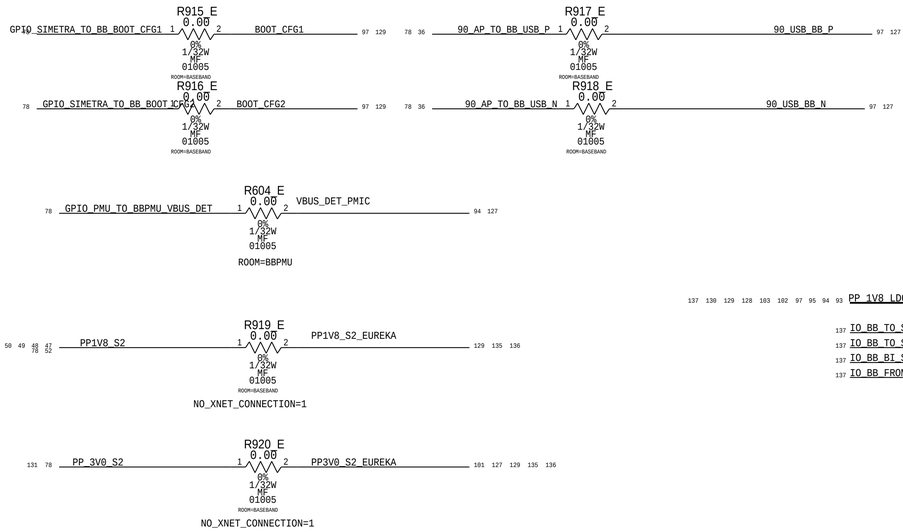
BOM_COST_GROUP=CELLULAR

SYNC_MASTER=RADIO_MLB_3.27.0 SYNC_DATE=08/31/2020

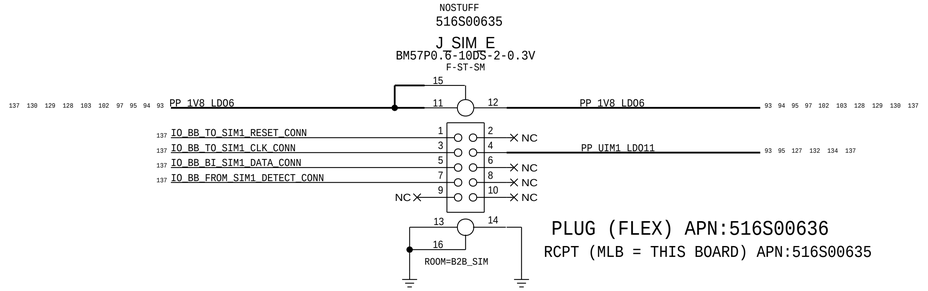
PAGE TITLE

LAT ANT SYSTEM

R917_E, R918_E : PLACE CLOSE TO U_BB_E



SIM1 B2B - BOT SIDE BACKUP IF

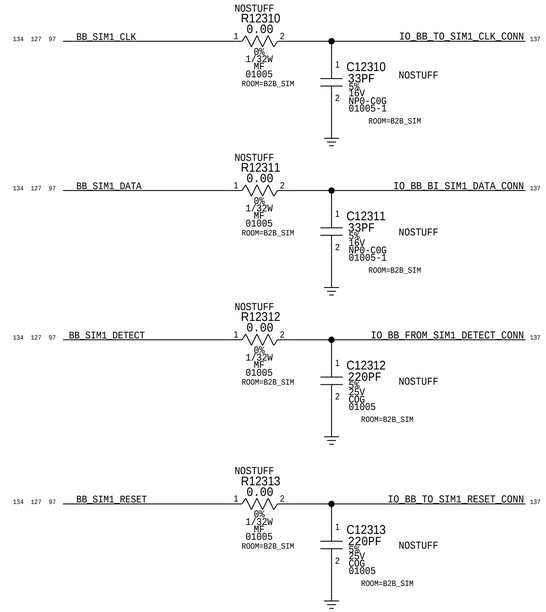


PLUG (FLEX) APN:516S00636
RCPT (MLB = THIS BOARD) APN:516S00635

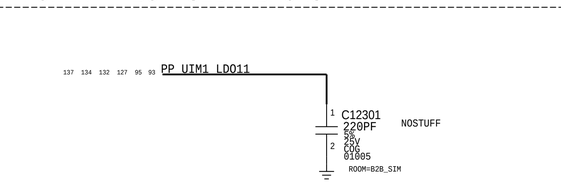
PLACE THIS ON BOTTOM SIDE
NON-POR (TESTING ONLY FOR CONFORMANCE)

NOTE: J5XX SIM CONNECTOR ONLY CARRY SIM1 SIGNALS SINCE ESIM IS ON THE MLB
USE ONE OF THESE FLEX_SIM FROM D54:
632-03520 PSIM+ESIM
632-03518 DUAL
632-03519 PSIM ONLY - NOT USED

SIM1 IO FILTERS - BOTTOM SIDE BACKUP IF



SIM1 POWER - BOT SIDE BACKUP IF



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