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.

J517 MLB-A: EVT CHINA

REV	ECN	DESCRIPTION OF REVISION	CK APPD / DATE
3			2020-10-18

LAST_MODIFICATION=Sun Oct 18 23:09:39 2020

SCH AND BOARD P/N

PART#	QTY	DESCRIPTION	REFERENCE DESIGNATOR(S)	CRITICAL	BOM OPTION
051-06275	1	SCHEM,MLB-A,NY,J517	SCH1	CRITICAL	
820-02300	1	PCBF,MLB-A,NY,J517	PCB1	CRITICAL	

PACKAGING OPTIONS

PACK_OPTIONS TO INCLUDE IN NETLIST
J517

TABLE OF CONTENTS

SYNC_MASTER=J522_MLB_B_1.16.0 SYNC_DATE=11/18/2019

DRAWING TITLE

SCHEM,MLB-A,YN,J517

BOM_COST_GROUP=NO_COST_ITEMS

J517/J522 | System Block Diagram

Apple Confidential Updated: February 27, 2020

Tonga [H13G]
8GB/16GB MCM 2502BGA

Tonga [H13G] pins
- LPDPRX
- ISP_SPMI
- ISP_SPMI
- LPDPRX
- LPDPRX
- AOP_PDM
- LPDPRX
- MIPIC
- AOP_I2C0
- GP_PCIe
- AOP_SPMI
- GP_PCIe
- SWD
- AOP_UART
- I2S
- AOP_SPI
- AOP_SPMI
- AOP_PDM
- AOP_PDM
- AOP_PDM
- SEP SI2C0
- AOP_SPI0
- DISP_SPMI (J52X Only)
- AOP_UART
- AP_SPI2
- AP_SPI4
- DISP_SPI (J52X Only)
- LPDP-TX
- AP_I2C4
- NUB_SPMI0
- SMC_I2C0
- SMC_I2C2
- NUB_SPMI1
- AP_SPI0
- ST0_PCIe
- ST1_PCIe
- CIO
- JTAG_SWD
- eUSB
- AOP Debug USB2
- AP_I2C0
- SMC_I2C1
- AP_UART
- AP_I2C2
- AOP_PDM
- AOP_PDM
- AOP_I2C1
- AP_I2C1
- AP_I2C3
- AP_I2S0
- AP_I2S3

Rear Cam Wide
Indiana — x2 Lanes @ 6.6Gbps

Camera Flash
Libra

Rear Depth
Jasper — x1 Lane @ 2.7Gbps

Jasper Driver
Will

Rear Cam SuperWide
Ohio — x2 Lanes @ 6.6Gbps

RCam PMU
Adams — I2C1, I2C2, I2C3, I2C4

FCam PMU
Adams — I2C2, I2C3, I2C4

∑-ΔADC to PDM
FAN38522

Flicker Sensor
Penrose

Super Wide Front Camera
Pennsylvania — x2 Lanes @ 5.4Gbps

IR Camera
Juliet (Savage) — x2 Lanes @ 720Mbps

VCSEL Driver
Rigel

VCSEL2
Valencia

E-Fuse
Yogi

Prox
Doppler

Rosaline Module

VCSEL Safety
Mama Bear

VCSEL
Aragon

Sensor
Homer

Titus Module

ALS Corner 3
Redbird

ALS Corner 4
Redbird

WiFi/BT
Peroni — BT

Baseband, GPS
MAV20 — BB/GPS

Cell 4, FH-L
LB/MB/HB/UHB/2.4GHz/UWB(ToF)

Cell 3, FH-R
MLB/MB/HB/UHB/GPS/5GHz

Cell 1, CH-L
MLB/MB/HB/UHB/5GHz

Cell 2, CH-R
LB/MB/HB/UHB/2.4GHz/UWB(ToF)

mmWave, FH Edge
26GHz, 28GHz, 39GHz

mmWave, RS Rear
26GHz, 28GHz, 39GHz

mmWave, RS Front
26GHz, 28GHz, 39GHz

mmWave, CH Edge
26GHz, 28GHz, 39GHz

UWB
Expedition

PDoA Array
6.5GHz/8GHz

Secure Element
Ceres — Pay

HES
A Panel

HES
C Panel

Sheik
DMIC Gating Logic

DMic1 (Left Spline)
Sentry — PDM @ 2.4MHz

DMic2 (Right Spline)
Sentry

DMic3 (CG)
Sentry — PDM @ 2.4MHz

DMic4 (Rear)
Sentry

DMic5 (Landscape)
Crystal — PDM @ 2.4MHz

SEP EEPROM
Ocelot

Gyro & Accel
Kobol

Magnetometer
Molybdenum 25

Altimeter
Phosphorus 2

LS
NVT0202JK — 1.8V, 1.2V, 1.2V

2DBL Boost
Lume
(J522 Only)

Display + Touch Panel
Grape
RX / TX

2388x1668 *[J517]*
2732x2048 *[J52x]*

2DBL Silicon
(J522 Only)
Atrani
Avellino
Sorento x2
Solerno x9

(J517) 56 Rx/40 Tx
(J52x) 64 Rx/48 Tx

Touch IC
Lanai/Kona — Kona@TBDMHz, Lanai@24MHz

LDO
Dombra

Boost
Dombra

x4 Lanes @ 4.2Gbps (J51x)
X4 Lanes @ 5.6Gbps (J52x)

1.8V

x16 Strings (J517)

Main PMU
Sera

Charger
Potomac

Battery
1S2P/1S4P
29.5WHr (J517)
40.7WHr (J520)
40.7WHr (J522)

Gas Gauge
TI SN27546 — 2.5V

LS
LSF0101

Aux PMU
Simetra

Mass Storage 1
S5E + NAND — 24MHz, Gen4 x1 Lane

Mass Storage 2
S5E + NAND — Gen4 x1 Lane

USB Type-C

CIO x4 @ 20Gbps

CIO Retimer
Burnside Bridge — I2C

Type-C HS x2
Type-C SBU x2
Type-C CC x2
VBUS

ACC Power, USBPD, USB2.0 MUX
Ace2

eUSB to USB
Parrot

∑-ΔADC to PDM
FAN38522

5V Boost @ 3A

5V Boost @ 2A

Smart Contacts
Bellatrix2

LDCM
Signal Conditioning

Scorpius
Dotara — 15V Boost @ 0.55A

Borris (Master)
Speaker Amp Boost

Borris (Slave)
Speaker Amp Boost

BOOST SYNC
ARDEE SYNC

FH-L Speaker Amps x2
Ardee — TDM @ 12.3MHz

FH-R Speaker Amps x2
Ardee

CN-L Speaker Amps x2
Ardee — TDM @ 12.3MHz

CN-R Speaker Amps x2
Ardee

SYNC_MASTER=J522_MLB_B_4.3.0
SYNC_DATE=12/21/2019

PAGE TITLE

BLOCK DIAGRAM

BOM_COST_GROUP=NO_COST_ITEMS

BOM TABLES: SOC, PMU, NAND

SOC

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

PART#	QTY	DESCRIPTION	REFERENCE DESIGNATOR(S)	CRITICAL	BOM OPTION
998-23748	1	SOC,TGA,B0+16G,1Y,8C,LP,DEV,BX,M,S,M2502	U0600	CRITICAL	X_VERSION

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

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

PMU-SERA

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

PMU-SIMETRA

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

CHARGER-POTOMAC

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

ADAMS

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

NAND

ULTIMATE NAND CONFIGURATIONS (U1900 NOSTUFF) 128GB

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

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

SUPREME-TB NAND CONFIGURATIONS 256GB

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

SUPREME-HY NAND CONFIGURATIONS 256GB

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

EXTREME-TB NAND CONFIGURATIONS 512GB

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

EXTREME-HY NAND CONFIGURATIONS 512GB

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

PRIME-TB NAND CONFIGURATIONS 1TB

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

PRIME-HY NAND CONFIGURATIONS 1TB

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

DOUBLE PRIME CONFIGURATIONS 2TB

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

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

BOM_COST_GROUP=NO_COST_ITEMS

SYNC_MASTER=J517_MLB_B_REV_5.5 SYNC_DATE=10/18/2020

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 FOR 639-11662 (MLB-A ULTIMATE)	EEEE_Q12Q	CRITICAL	EEEE:EEEE_MLB_A_ULTIMATE
825-7691	1	EEEE FOR 639-11663 (MLB-A SUPREME-TB)	EEEE_Q12R	CRITICAL	EEEE:EEEE_MLB_A_SUPREME-TB
825-7691	1	EEEE FOR 639-11656 (MLB-A SUPREME-HY)	EEEE_Q12J	CRITICAL	EEEE:EEEE_MLB_A_SUPREME-HY
825-7691	1	EEEE FOR 639-11657 (MLB-A EXTREME-TB)	EEEE_Q12K	CRITICAL	EEEE:EEEE_MLB_A_EXTREME-TB
825-7691	1	EEEE FOR 639-11658 (MLB-A EXTREME-HY)	EEEE_Q12L	CRITICAL	EEEE:EEEE_MLB_A_EXTREME-HY
825-7691	1	EEEE FOR 639-11659 (MLB-A PRIME-TB)	EEEE_Q12M	CRITICAL	EEEE:EEEE_MLB_A_PRIME-TB
825-7691	1	EEEE FOR 639-11660 (MLB-A PRIME-HY)	EEEE_Q12N	CRITICAL	EEEE:EEEE_MLB_A_PRIME-HY
825-7691	1	EEEE FOR 639-11661 (MLB-A DOUBLE-PRIME-HY)	EEEE_Q12P	CRITICAL	EEEE:EEEE_MLB_A_DOUBLE-PRIME-HY

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	371S00318	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	

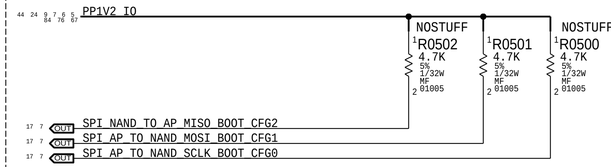
BOM_COST_GROUP=NO_COST_ITEMS

SYNC_MASTER=J522_MLB_B_4.3.0 SYNC_DATE=12/21/2019

PAGE TITLE

BOM TABLES: MECH/DISC/ETC

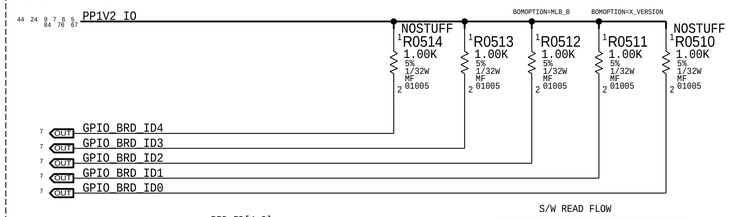
BOOT CONFIG ID



BOOT_CFG[3:0]	MODE
000	SPI0 NOR
001	SPI0 NOR TEST
(PRODUCTION CONFIG) ---> 010	SPI0 NAND
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

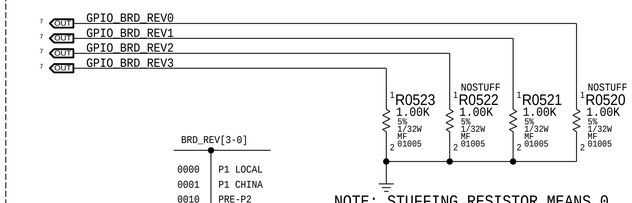
BOARD ID



BRD_ID[4-0]	
CURRENT SETTING ---> 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
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



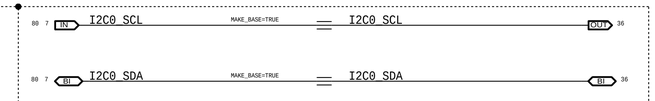
BRD_REV[3-0]	
0000	P1 LOCAL
0001	P1 CHINA
0010	PRE-P2
0011	P2 CHINA
0100	POST-P2
CURRENT SETTING ---> 0101	EVT
0110	UNUSED
0111	UNUSED
1000	UNUSED
1001	UNUSED
1010	UNUSED

NOTE: STUFFING RESISTOR MEANS 0

S/W READ FLOW
1. SET GPIO AS INPUT
2. ENABLE PU AND DISABLE PD
3. READ

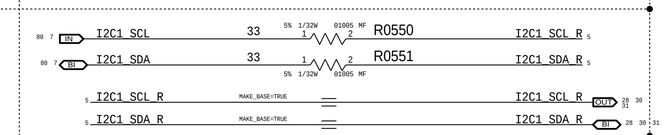
I2C0

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



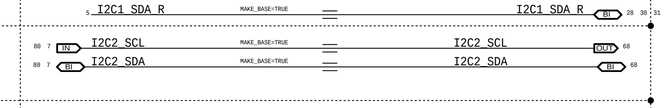
I2C1

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



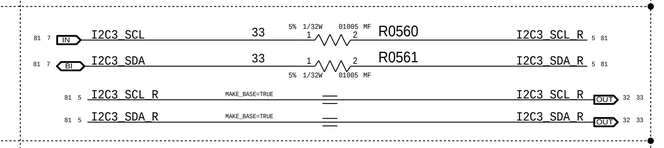
I2C2

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



I2C3

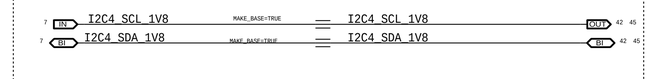
DEVICE	8-BIT	7-BIT
SKR AMP FHRT	0X70	0X38
SKR AMP FHRW	0X72	0X39
SKR AMP FHLT	0X74	0X3A
SKR AMP FHLW	0X76	0X3B



I2C4

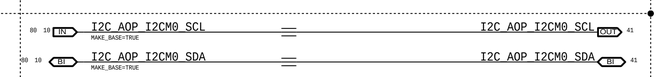
DEVICE	8-BIT	7-BIT
TCON	0X30-0X4E	0X18-0X27
MCU (U10001,NS)	0XAC	0X56
TEMP(U2400,NS)	0XE2	0X71
TEMP(U2401,S)	0XE0	0X70
TEMP(U2402,NS)	0XE4	0X72

NS-NOSTUFF
S-STUFF



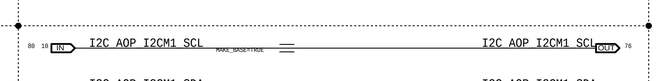
AOP I2C0

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



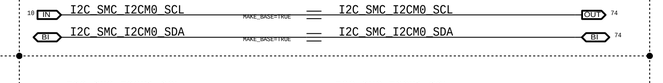
AOP I2C1

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



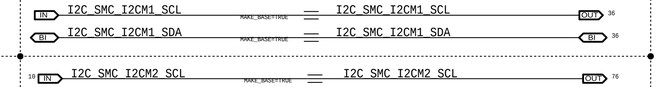
SMC I2C0

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



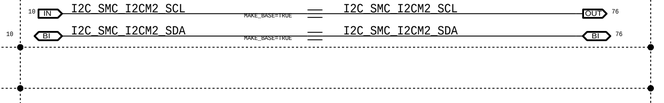
SMC I2C1

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



SMC I2C2

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



SMC I2C3

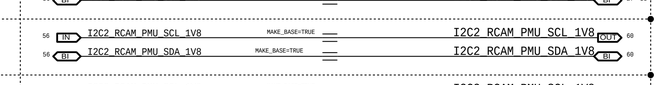
NOT USED

SMC I2C4

NOT USED

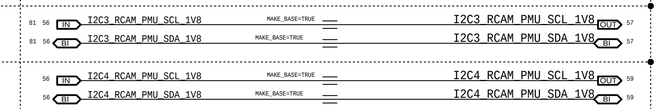
RPMU I2C1

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

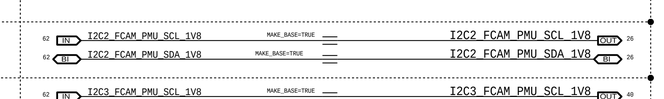


RPMU I2C3

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

RPMU I2C4

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



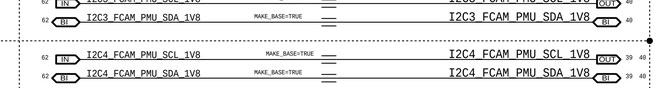
FPMU I2C1

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

WIDE FCAM NON-POR

FPMU I2C2

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

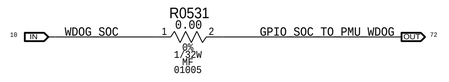


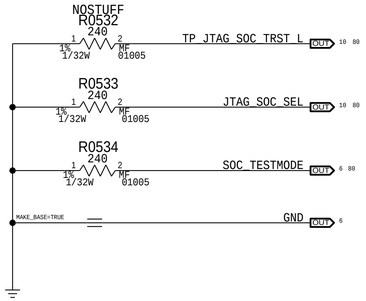
FPMU I2C3

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=2017_MLB_B_REV_5.5 SYNC_DATE=10/18/2020

PAGE TITLE

SOC: MISC & ALIASES

SOC: MAIN

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

U0600
TMLR68B1-B01
BGA
SYM 1 OF 23
OMIT_TABLE

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

ATC
- BB54 ATC0_USB_EDP ↔ 85_USB_E_SOC_P (38)
- BB55 ATC0_USB_EDM ↔ 85_USB_E_SOC_N (38)
- BE18 USB_C0_LSRX ← USB_C0_LSRX (38)
- BE13 USB_C0_LSTX → USB_C0_LSTX (38)
- 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_USBRESREF ← 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)
- BF50 ATCPHY0_RX0_N ← 85_CIO_HS_SOC_RX0_N (37)
- BC49 ATCPHY0_TX0_P → 85_CIO_HS_SOC_TX0_C_P (37)
- BD49 ATCPHY0_TX0_N → 85_CIO_HS_SOC_TX0_C_N (37)
- BE48 ATCPHY0_RX1_P ← 85_CIO_HS_SOC_RX1_P (37)
- BF48 ATCPHY0_RX1_N ← 85_CIO_HS_SOC_RX1_N (37)
- BC47 ATCPHY0_TX1_P → 85_CIO_HS_SOC_TX1_C_P (37)
- BD47 ATCPHY0_TX1_N → 85_CIO_HS_SOC_TX1_C_N (37)
- AY51 ATCPHY0_AUX_P ↔ CIO_SOC_AUXCH_P (37)
- AY52 ATCPHY0_AUX_N ↔ CIO_SOC_AUXCH_N (37)
- BE52 ATCPHY0_RCAL_P ← ATCPHY0_RCAL_POS (6)
- BF52 ATCPHY0_RCAL_N ← ATCPHY0_RCAL_NEG (6)
- BF44 ATCPHY1_RX0_P (NC)
- BE44 ATCPHY1_RX0_N (NC)
- BD43 ATCPHY1_TX0_P (NC)
- BC43 ATCPHY1_TX0_N (NC)
- BF46 ATCPHY1_RX1_P (NC)
- BE46 ATCPHY1_RX1_N (NC)
- BD45 ATCPHY1_TX1_P (NC)
- BC45 ATCPHY1_TX1_N (NC)
- BA52 ATCPHY1_AUX_P (NC)
- BA51 ATCPHY1_AUX_N (NC)
- BF42 ATCPHY1_RCAL_P ← ATCPHY1_RCAL_POS (6)
- BE42 ATCPHY1_RCAL_N ← ATCPHY1_RCAL_NEG (6)

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

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

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

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

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

FROM SANJEEVM EMAIL DATED 06/23/19

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

DFU_STATUS
- V51 GPIO_1V2_SOC2ACE_DFU_STATUS → (36 38 80)

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

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

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

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

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

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

PP1V25_S2 (84)
- C1033 0.1UF 20% 6.3V X5R-CERM 01005
- R1034 33 5% 1/32W MF 01005 (PACK_IGNORE=TRUE, PACK_OPTION=J518,J523)
- U1034 74AUP1G34GX SOT1226 (PACK_IGNORE=TRUE, PACK_OPTION=J518,J523)

SWD_AP_TCK (6) → R1034 → SWD_PER_BB_SWCLK_R → U1034 → NC_SWD_BB_SWCLK → (78)

U1034 NC

BOM_COST_GROUP=SOC

PAGE TITLE
SOC: MAIN

SOC: GPIO

U0600
TMLR68B1-B01
BGA
SYM 3 OF 23

I2S
SPI
1.8V
I2C
SEP
THROTTLE
SPMI

I2S_SOC_TO_SPKRAMP_FH_BCLK_R	AK4	I2S0_BCLK			
I2S_SPKRAMP_FH_TO_SOC_DOUT	AJ3	I2S0_DIN			
I2S_SOC_TO_SPKRAMP_FH_DOUT	AJ5	I2S0_DOUT			
I2S_SOC_TO_SPKRAMP_FH_LRCK_R	AJ4	I2S0_LRCK			
I2S_SOC_TO_SPKRAMP_FH_MCLK_R	AK3	I2S0_MCK			
NC_I2S1_BCLK	AG3	I2S1_BCLK			
NC_I2S1_DIN	AF3	I2S1_DIN			
NC_I2S1_DOUT	AG4	I2S1_DOUT			
NC_I2S1_LRCK	AF2	I2S1_LRCK			
NC_I2S1_MCK	AG2	I2S1_MCK			
NC_I2S_BB_TO_SOC_BCLK	AK5	I2S2_BCLK			
NC_I2S_BB_TO_SOC_DOUT	AL6	I2S2_DIN			
NC_I2S_SOC_TO_BB_DOUT	AJ7	I2S2_DOUT			
NC_I2S_BB_TO_SOC_LRCK	AM4	I2S2_LRCK			
NC_I2S2_MCK	AK6	I2S2_MCK			
I2S_SOC_TO_SPKRAMP_CN_BCLK_R	AH6	I2S3_BCLK			
I2S_SPKRAMP_CN_TO_SOC_DOUT	AH4	I2S3_DIN			
I2S_SOC_TO_SPKRAMP_CN_DOUT	AG5	I2S3_DOUT			
I2S_SOC_TO_SPKRAMP_CN_LRCK_R	AJ6	I2S3_LRCK			
I2S_SOC_TO_SPKRAMP_CN_MCLK_R	AF5	I2S3_MCK			
I2C0_SCL	W52	I2C0_SCL			
I2C0_SDA	V52	I2C0_SDA			
I2C1_SCL	AA48	I2C1_SCL			
I2C1_SDA	Y48	I2C1_SDA			
I2C2_SCL	AB50	I2C2_SCL			
I2C2_SDA	Y50	I2C2_SDA			
I2C3_SCL	AF6	I2C3_SCL			
I2C3_SDA	AE6	I2C3_SDA			
I2C4_SCL_1V8	AF50	I2C4_SCL			
I2C4_SDA_1V8	AG49	I2C4_SDA			
NC	AK7	AP_SPMI2_SCLK			
NC	AL7	AP_SPMI2_SDATA			
			SPI0_MISO	AL4	SPI_NAND_TO_AP_MISO_BOOT_CFG2
			SPI0_MOSI	AK2	SPI_AP_TO_NAND_MOSI_BOOT_CFG1_R
			SPI0_SCLK	AK1	SPI_AP_TO_NAND_SCLK_BOOT_CFG0_R
			SPI1_MISO	AD4	NC
			SPI1_MOSI	AE4	NC
			SPI1_SCLK	AF4	NC
			SPI1_SSIN	AE3	NC
			SPI2_MISO	AF53	SPI_SOC_TO_KONA_S_MISO_1V8
			SPI2_MOSI	AF54	SPI_SOC_TO_KONA_S_MOSI_R_1V8
			SPI2_SCLK	AF55	SPI_SOC_TO_KONA_S_SCLK_R_1V8
			SPI2_SSIN	AF52	SPI_SOC_TO_KONA_S_CS_1V8_L
			SPI3_MISO	Y1	NC
			SPI3_MOSI	W1	NC
			SPI3_SCLK	AB1	NC
			SPI3_SSIN	AA1	NC
			SPI4_MISO	AC4	SPI_SOC_TO_GRAPE_MISO
			SPI4_MOSI	AB4	SPI_SOC_TO_GRAPE_MOSI_R
			SPI4_SCLK	AA4	SPI_SOC_TO_GRAPE_SCLK_R
			SPI4_SSIN	AB3	SPI_SOC_TO_GRAPE_CS_L
			SGPIO0	AC3	DBL_CLICK_DET
			SGPIO1	AC2	NC
			SI2C0_SCL	Y5	I2C_OCELOT_SCL_1V2
			SI2C0_SDA	Y4	I2C_OCELOT_SDA_1V2
			SSPI0_MISO	AC5	NC
			SSPI0_MOSI	AD5	NC
			SSPI0_SCLK	AD6	NC
			SOCHOT1	AK52	SOCHOT1_SOC_TO_PMU_L
			THROTTLE_TRIGGER0/MTR_ADC_DOUT	AK53	GPIO_PMU_TO_SOC_TRIGGER_0
			THROTTLE_TRIGGER1/MTR_ADC_CLKOUT	AL53	GPIO_PMU_TO_SOC_TRIGGER_2
			THROTTLE_TRIGGER2/PLL_DIGOBS_0	AJ55	SIMETRA_UVWARN_L
			THROTTLE_TRIGGER3/PLL_DIGOBS_1	AJ53	GPIO_PMU_TO_SOC_TRIGGER_3
			THROTTLE_TRIGGER4	AJ49	GPIO_PMU_TO_SOC_TRIGGER_4

GPIO_PMU_TO_SOC_BTN_VOL_UP_L — IN 72

R0740 0.00 0% 1/32W MF 01005

U0600
TMLR69B1-B01
BGA
SYM 2 OF 23

GPIO
UART
1.8V
BOARD ID
NAND

NC_SOC_TO_SCORPIUSMCU_BOOT0	AJ51	GPIO[0]			
GPIO_PMU_TO_SOC_BTN_VOL_UP_L_R	AA50	GPIO[1]			
SWD_ACE_SWCLK	V53	GPIO[2]			
GPIO_SOC_TO_GRAPE_RESET_L	U53	GPIO[3]			
NC_GPIO_DOTARA_OTP_WREN	T53	GPIO[4]			
NC_GPIO05	W53	GPIO[5]			
NC_GPIO06	W50	GPIO[6]			
GPIO_BST_SLAVE_TO_SOC_IRQ_L	U52	GPIO[7]			
NC_GPIO08	AC48	GPIO[8]			
GPIO_BST_MASTER_TO_SOC_IRQ_L	R53	GPIO[9]			
GPIO_ACE_TO_SOC_IRQ_L	R52	GPIO[10]			
SWD_ACE_SWDIO	N55	GPIO[11]			
SWD_SCORPIUS_SWDIO	AH54	GPIO[12]			
NC_GPIO13	Y52	GPIO[13]			
NC_GPIO14	AA51	GPIO[14]			
NC_GPIO15	R54	GPIO[15]			
NC_GPIO16	AC50	GPIO[16]			
GPIO_SOC_TO_SPKRBST_RESET_L	U51	GPIO[17]			
SWD_SCORPIUS_SWCLK	AK50	GPIO[18]			
GPIO_SOC_TO_SPKRAMP_RESET_L	T52	GPIO[19]			
NC_GPIO_SOC_GPIO20	V49	GPIO[20]			
NC_GPIO21	AJ52	GPIO[21]			
GPIO_SPKRAMP_TO_SOC_IRQ_L	AJ50	GPIO[22]			
NC_GPIO_SOC_GPIO23	AC49	GPIO[23]			
GPIO_SOC_TO_BT_TO_GRAPE_TS_SYNC	R51	GPIO[24]			
NC_GPIO_SOC_GPIO25	AL49	GPIO[25]			
NC_GPIO_SOC_GPIO26	AF49	GPIO[26]			
			UART0_RXD	AB53	UART_DEBUG_TO_SOC_TX
			UART0_TXD	AC53	UART_SOC_TO_DEBUG_TX
			UART1_CTSN	AC54	GPIO_SOC_TO_BELLATRIX2_BOOST_EN_1V8
			UART1_RTSN	AA53	NC
			UART1_RXD	AA54	NC
			UART1_TXD	AC55	GPIO_KONA_S_TO_SOC_IRQ_1V8_L
			UART2_CTSN	W55	GPIO_BRD_REV0
			UART2_RTSN	Y54	GPIO_BRD_REV1
			UART2_RXD	Y53	GPIO_BRD_REV2
			UART2_TXD	Y55	GPIO_BRD_REV3
			UART3_CTSN	AC51	NC
			UART3_RTSN	AC52	NC
			UART3_RXD	AF48	UART_BELLATRIX2_TO_SOC_TX
			UART3_TXD	AB52	UART_SOC_TO_BELLATRIX2_TX
			UART4_CTSN	AJ48	NC
			UART4_RTSN	AK48	NC
			UART4_RXD	AL52	NC
			UART4_TXD	AL50	NC
			UART6_RXD	AF51	NC
			UART6_TXD	AG50	NC
			UART7_RXD	AM2	NC
			UART7_TXD	AJ2	NC
BOARD_ID0/SOC_DEBUG1	W49		NAND_SYS_CLK0	AG52	CLK_NAND1_24MHZ
BOARD_ID1/SOC_DEBUG2	R55		NAND_SYS_CLK1	AH53	CLK_NAND2_24MHZ
BOARD_ID2/SOC_DEBUG3	T55				
BOARD_ID3/SPI0_SSIN	V55		SSD_BFH	AH51	GPIO_SOC_TO_NAND_FW_STRAP
BOARD_ID4	U55		SSD_RESETN	AG53	GPIO_SOC_TO_NAND_RESET_L

BOARD_ID0 — IN 5 — GPIO_BRD_ID0
BOARD_ID1 — IN 5 — GPIO_BRD_ID1
BOARD_ID2 — IN 5 — GPIO_BRD_ID2
BOARD_ID3 — IN 5 — GPIO_BRD_ID3
BOARD_ID4 — IN 5 — GPIO_BRD_ID4

R0704 0.00 — I2S_SOC_TO_SPKRAMP_CN_LRCK_R → I2S_SOC_TO_SPKRAMP_CN_LRCK — OUT 30 31 82
R0705 0.00 — I2S_SOC_TO_SPKRAMP_FH_LRCK_R → I2S_SOC_TO_SPKRAMP_FH_LRCK — OUT 32 33 82
R0706 0.00 — I2S_SOC_TO_SPKRAMP_CN_BCLK_R → I2S_SOC_TO_SPKRAMP_CN_BCLK — OUT 30 31 82
R0700 33 — I2S_SOC_TO_SPKRAMP_FH_BCLK_R → I2S_SOC_TO_SPKRAMP_FH_BCLK — OUT 32 33 82
R0703 33 — I2S_SOC_TO_SPKRAMP_CN_MCLK_R → I2S3_SOC_TO_BSTMSTR_CN_MCLK — OUT 28 82 — NOSTUFF
R0701 33 — I2S_SOC_TO_SPKRAMP_FH_MCLK_R → I2S0_SOC_TO_BSTSLV_FH_MCLK — OUT 28 — NOSTUFF

R0702 33 — SPI_AP_TO_NAND_SCLK_BOOT_CFG0_R → SPI_AP_TO_NAND_SCLK_BOOT_CFG0 — OUT 5 17
R0711 33 — SPI_SOC_TO_GRAPE_SCLK_R → SPI_SOC_TO_GRAPE_SCLK — OUT 20 82
R0712 33 — SPI_AP_TO_NAND_MOSI_BOOT_CFG1_R → SPI_AP_TO_NAND_MOSI_BOOT_CFG1 — OUT 5 17
R0720 33 — SPI_SOC_TO_GRAPE_MOSI_R → SPI_SOC_TO_GRAPE_MOSI — OUT 20 82
R0713 33 — SPI_SOC_TO_KONA_S_SCLK_R_1V8 → SPI_SOC_TO_KONA_S_SCLK_1V8 — OUT 21 82
R0714 33 — SPI_SOC_TO_KONA_S_MOSI_R_1V8 → SPI_SOC_TO_KONA_S_MOSI_1V8 — OUT 21 82

R0732 33 — CLK_NAND1_24MHZ → CLK_SOC_TO_NAND1_24MHZ — OUT 17
R0730 33 — CLK_NAND2_24MHZ → CLK_SOC_TO_NAND2_24MHZ — OUT 18
DUAL_NAND

PP1V2_IO → R0791 47.0K → SOCHOT1_SOC_TO_PMU_L

PP1V2_IO → R0790 47.0K → GPIO_PMU_TO_SOC_TRIGGER_0
R0789 47.0K → GPIO_PMU_TO_SOC_TRIGGER_1
R0788 47.0K → GPIO_PMU_TO_SOC_TRIGGER_2
R0787 47.0K → GPIO_PMU_TO_SOC_TRIGGER_3
R0786 47.0K → GPIO_PMU_TO_SOC_TRIGGER_4

PP1V2_IO → R0752 2.2K, R0753 2.2K, R0754 2.2K, R0755 2.2K, R0758 2.2K, R0759 2.2K, R0756 1.00K, R0757 1.00K → PP1V8_SW1_IO
I2C1_SCL
I2C1_SDA
I2C2_SCL
I2C2_SDA
I2C3_SCL
I2C3_SDA
I2C4_SCL_1V8
I2C4_SDA_1V8

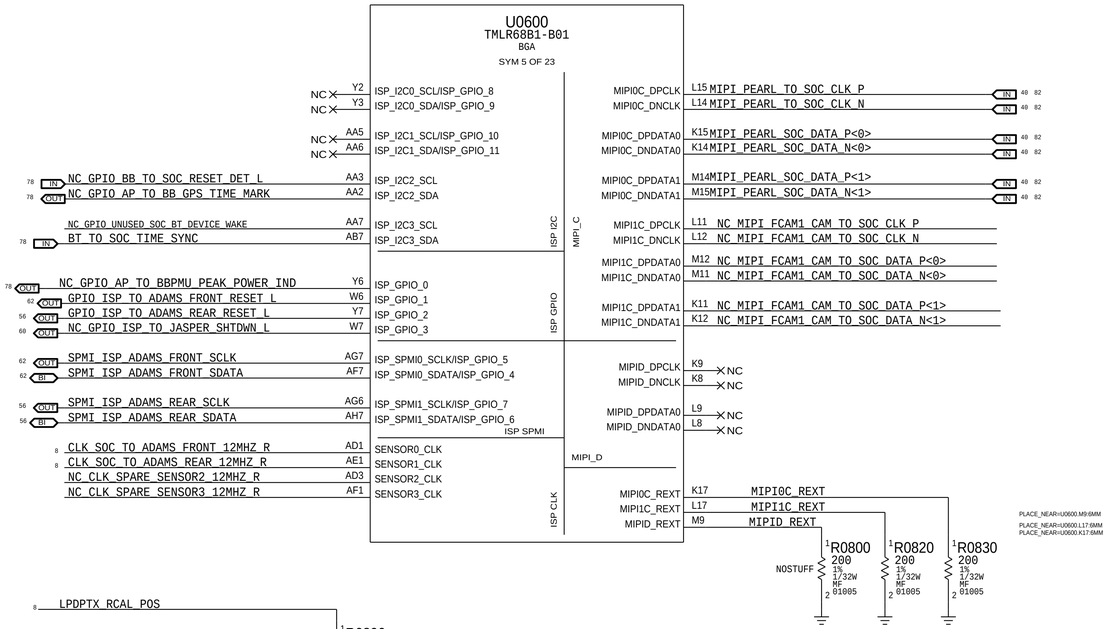
PULLED TO SLEEP 1V2 RAIL, REQUESTED BY WILL F.
PP1V25_S2 → R0750 2.2K, R0751 2.2K → I2C0_SCL, I2C0_SDA

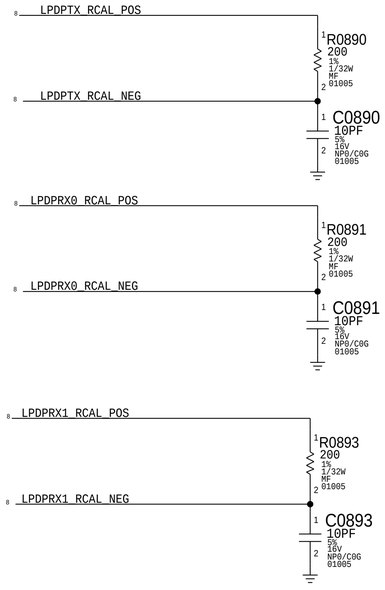
OCELOT B0

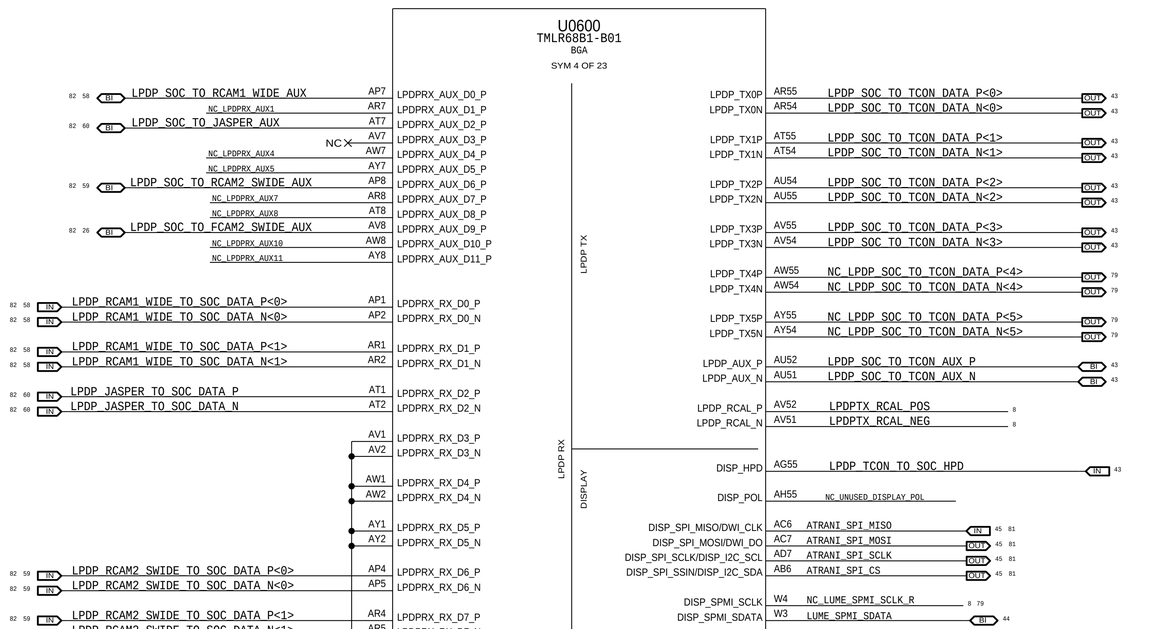
PP1V8_SW1_IO
PP1V2_IO
R0760 4.7K
R0761 4.7K
C07C0 0.47UF 20% 6.3V X5R 01005
R0762 0.00 — I2C_OCELOT_SCL_1V2 → I2C_OCELOT_SCL_1V2_R — CKPLUS_WAIVE=I2C_PULLUP
R0763 0.00 — I2C_OCELOT_SDA_1V2 → I2C_OCELOT_SDA_1V2_R — CKPLUS_WAIVE=I2C_PULLUP
NOSTUFF C07B0 56PF 5% 25V NP0/C0G 01005
NOSTUFF C07A0 56PF 5% 25V NP0/C0G 01005
VCC 335S00487 U0702 STOCT WLCSP-1
SCL, SDA, VIO → PP1V2_IO, NC, NC
VSS
C03
TUNING OPTION

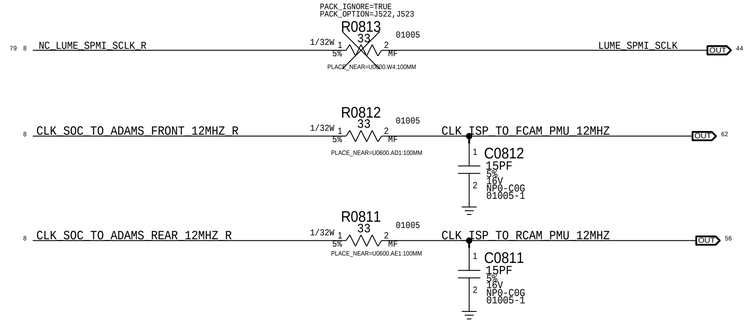
BOM_COST_GROUP=SOC
SYNC_MASTER=J117_M1_8_REV_1_1
SYNC_DATE=10/13/2020
PAGE TITLE
SOC: I/OS

SOC: LPDP & MIPI









BOM_COST_GROUP=SOC

PAGE TITLE

SOC: LPDP & MIPI

SOC: PCIE

U0600
TMLR68B1-B01
BGA
SYM 6 OF 23

PCIE GEN4 - ST LINK 0

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

DC BLOCKING CAPS ON NAND PAGE

17 IN 85_PCIE_NAND1_TO_SOC_TX_P — BE26 ST_PCIE_RX0_P
17 IN 85_PCIE_NAND1_TO_SOC_TX_N — BF26 ST_PCIE_RX0_N
85_PCIE_SOC_TO_NAND1_C_TX_P — BC27 ST_PCIE_TX0_P
85_PCIE_SOC_TO_NAND1_C_TX_N — BD27 ST_PCIE_TX0_N
17 OUT 85_PCIE_SOC_TO_NAND1_REFCLK_P — BB37 ST_PCIE_REF_CLK0_P
17 OUT 85_PCIE_SOC_TO_NAND1_REFCLK_N — BC37 ST_PCIE_REF_CLK0_N
17 9 IN PCIE_NAND1_TO_SOC_CLKREQ_L — AH50 ST_PCIE_CLKREQ0_N
82 18 17 9 OUT PCIE_SOC_TO_NAND_PERST_L — AH52 ST_PCIE_PERST0_N

PCIE ST0 | PCIE GP0

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 — IN 78 82
GP_PCIE_TX0_N — BD31 — PCIE_SOC_TO_WLAN_TX_C_N — IN 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
0.1UF 2 | 1 C0941 01005 6.3V 20% X5R-CERM
GND_VOID=TRUE

PCIE_SOC_TO_WLAN_TX_P — OUT 78 82
PCIE_SOC_TO_WLAN_TX_N — OUT 78 82

WLAN/BT

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 — BE28 ST_PCIE_RX1_P
18 IN 85_PCIE_NAND2_TO_SOC_TX_N — BF28 ST_PCIE_RX1_N
85_PCIE_SOC_TO_NAND2_C_TX_P — BC29 ST_PCIE_TX1_P
85_PCIE_SOC_TO_NAND2_C_TX_N — BD29 ST_PCIE_TX1_N
18 OUT 85_PCIE_SOC_TO_NAND2_REFCLK_P — BB38 ST_PCIE_REF_CLK1_P
18 OUT 85_PCIE_SOC_TO_NAND2_REFCLK_N — BC38 ST_PCIE_REF_CLK1_N
18 9 IN PCIE_NAND2_TO_SOC_CLKREQ_L — AH49 ST_PCIE_CLKREQ1_N
NC_PCIE_SOC_TO_NAND2_PERST_L — AH48 ST_PCIE_PERST1_N

PCIE ST1 | PCIE GP1

GP_PCIE_RX1_P — BE32 — NC_90_PCIE_BB_TO_AP_RX_R_P — IN 78
GP_PCIE_RX1_N — BF32 — NC_90_PCIE_BB_TO_AP_RX_R_N — IN 78
GP_PCIE_TX1_P — BC33 — NC_PCIE_SOC_TO_BB_TX_C_P — OUT 78
GP_PCIE_TX1_N — BD33 — NC_PCIE_SOC_TO_BB_TX_C_N — OUT 78
GP_PCIE_REF_CLK1_P — BE38 — NC_PCIE_SOC_TO_BB_REFCLK_P — OUT 78
GP_PCIE_REF_CLK1_N — BF38 — NC_PCIE_SOC_TO_BB_REFCLK_N — OUT 78
GP_PCIE_CLKREQ1_N — AA55 — NC_PCIE_BB_TO_SOC_CLKREQ_L — IN 78
GP_PCIE_PERST1_N — P55 — NC_PCIE_SOC_TO_BB_PERST_L — OUT 78

BASEBAND

AC COUPLING CAPS ARE IN CONNECTOR PAGE

PCIE GP2

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

9 PCIE_RCAL_ST_POS — BC24 ST_PCIE_RCAL_P
9 PCIE_RCAL_ST_NEG — BB24 ST_PCIE_RCAL_N

GP_PCIE_RCAL_P — BC25 — PCIE_RCAL_GP_POS — 9
GP_PCIE_RCAL_N — BB25 — PCIE_RCAL_GP_NEG — 9

MTR

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

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

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

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
R0989 200 1% 1/32W MF 01005
9 PCIE_RCAL_GP_NEG
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

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 TMLR68B1-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]	
NC_AOP_TO_BBPMU_FORCE_PWM	BB12	AOP_FUNC[10]	
NC_AOP_FUNC11	BD20	AOP_FUNC[11]	
GPIO_ALS_FH1_TO_AOP_IRQ_L	BA11	AOP_FUNC[12]	
GPIO_ALS_FH2_TO_AOP_IRQ_L	BD18	AOP_FUNC[13]	
NC_GPIO_GRAPE_TO_AOP_TIME_SYNC	BA10	AOP_FUNC[14]	
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	
NC_UART_AOP_TO_BB_TX	BF20	AOP_SPMI1_SCLK/AOP_UART1_TXD	
NC_UART_BB_TO_AOP_TX	BF21	AOP_SPMI1_SDATA/AOP_UART1_RXD	
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	

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

	BA17	NUB_CLK_OUT0	NUB GPIO
	BC15	NUB_DOCK_ATTENTION/CTM_TRIGGER	
	BC17	NUB_DOCK_CONNECT	
	BD14	NUB_GPIO_0/AOP_FUNC15/NUB_CLK_OUT1	
	BD15	NUB_GPIO_1/AOP_PDM_IN_CLK0	
	BD21	NUB_GPIO_2/AOP_PDM_IN_DATA0	
	BD17	NUB_GPIO_3/AOP_LEAP_MADI_IN	
	BB13	NUB_GPIO_4/AOP_LEAP_MADI_OUT	
	BD19	NUB_GPIO_5/AOP_PDM_OUT_CLK0	
	BD22	NUB_GPIO_6/AOP_PDM_OUT_DATA0/AOP_FUNC16	
	BB10	NUB_GPIO_7/AOP_FUNC17	
	BD12	NUB_GPIO_8/AOP_FUNC18	
	BD11	NUB_GPIO_9/AOP_FUNC19	
	BC10	NUB_GPIO_10/AOP_FUNC20	
	BB7	NUB_GPIO_11/KIS_GPIO0/AOP_FUNC21	
	BD10	NUB_GPIO_12/KIS_GPIO1/AOP_FUNC22	
	BB15	NUB_SPMI0_SCLK	NUB SPMI
	BC14	NUB_SPMI0_SDATA	
	BA12	NUB_SPMI1_SCLK	
	BC11	NUB_SPMI1_SDATA	
	BC18	NUB_SWD_TCK_OUT0	NUB SWD
	BC19	NUB_SWD_TMS0	
	BC21	NUB_SWD_TMS1	
	BE4	JTAG_SEL	JTAG
	BF5	JTAG_TCK	
	BF16	JTAG_TDI	
	BC1	JTAG_TDO	
	BB1	JTAG_TMS	
	BF7	JTAG_TRSTN	
	BC3	SMC_I2CM0_SCL	SMC I2C
	BC2	SMC_I2CM0_SDA	
	BD4	SMC_I2CM1_SCL/SMC_UART1_TXD	
	BB2	SMC_I2CM1_SDA/SMC_UART1_RXD	
	BD6	SMC_I2CM2_SCL	
	BC5	SMC_I2CM2_SDA	
	BC7	SMC_I2CM3_SCL — NC	
	BD7	SMC_I2CM3_SDA — NC	
	BE7	SMC_I2CM4_SCL — NC	
	BF9	SMC_I2CM4_SDA — NC	
	BF4	SMC_UART0_RXD — NC	SMC UART
	BF8	SMC_UART0_TXD — NC	
	BF11	SMC_GPIO0	SMC GPIO
	BF13	SMC_GPIO1	
	BE12	SMC_FPWM0	
	BE9	SMC_FPWM1 — NC	

R0731 33 5% 1/32W MF 01005 — PLACE_NEAR=U0600.BA17:1000MM — CLK_SOC_TO_GRAPE_24MHZ

GPIO_AOP_TO_PARROT_RECOVERY_STATUS
PDM_PENROSE_SCLK
PDM_PENROSE_SD
GPIO_KONA_S_TO_SCORPIUS_TIME_SYNC_AOP
GPIO_TITUS_TO_AOP_B2B_DETECT
GPIO_LDCM_TO_AOP_INVALID
AOP_TO_LDCM_DATA0_PDM
PROX_BI_AP_AOP_INT_L_PWM_LVT
NC_AOP_TO_LDCM_AFE_EN_1V2
DEV PURPOSES, NOSTUFF CONNECTION TO USBC DC
GPIO_ORION_TO_AOP_IRQ
DOTARA_WAKE_HEART_BEAT
SLG_TO_AOP_DMIC_DISABLE_WARN_L
GPIO_SCORPIUS_TO_AOP_INT

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

JTAG_SOC_SEL
TP_JTAG_SOC_TCK
TP_JTAG_SOC_TDI
TP_JTAG_SOC_TDO
JTAG_SOC_TMS
TP_JTAG_SOC_TRST_L

SWD_PERIPHERAL_SWCLK — R1040 33 5% 1/32W MF 01005 — SWD_PER_KONA_SWCLK_R — SWD_GRAPE_SWCLK

PLACE_NEAR=U0600.AK3:100MM

PP1V2_S2_DELAY_TOUCH — C1034 0.1UF 20% 6.3V X5R-CERM 01005 — U1033 74AUP1G34GX SOT1226

NO SWCLK BUFFER FOR PMU DUE TO PROXIMITY AND LOAD

NUB_SPMI_SERA_SCLK — R79C1 33 1/32W 5% MF 01005 — NUB_SPMI0_SCLK
NUB_SPMI_SERA_SDATA — R79D1 33 1/32W 5% MF 01005 — NUB_SPMI0_SDATA
PLACE_NEAR=U0600.BC14:100MM

NUB_SPMI1_SIMETRA_SCLK — R79C2 33 1/32W 5% MF 01005 — NUB_SPMI1_SCLK
NUB_SPMI1_SIMETRA_SDATA — R79D2 33 1/32W 5% MF 01005 — NUB_SPMI1_SDATA
PLACE_NEAR=U0600.BC11:100MM

PLACE_NEAR=U0600.BB15:100MM
PLACE_NEAR=U0600.BA12:100MM

AOP_SPMI0_SCLK_NFC — R78E1 33 1/32W 5% MF 01005 — SPMI0_AOP_SCLK_WIFI_BT_NFC
AOP_SPMI0_SDATA_NFC — R78F1 33 1/32W 5% MF 01005 — SPMI0_AOP_SDATA_WIFI_BT_NFC
PLACE_NEAR=U0600.BF19:100MM

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

AOP_SPMI0_SCLK_WIFI_BT — R78C1 33 1/32W 5% MF 01005
AOP_SPMI0_SDATA_WIFI_BT — R78D1 33 1/32W 5% MF 01005
PLACE_NEAR=U0600.BF18:100MM
PLACE_NEAR=U0600.BF19:100MM

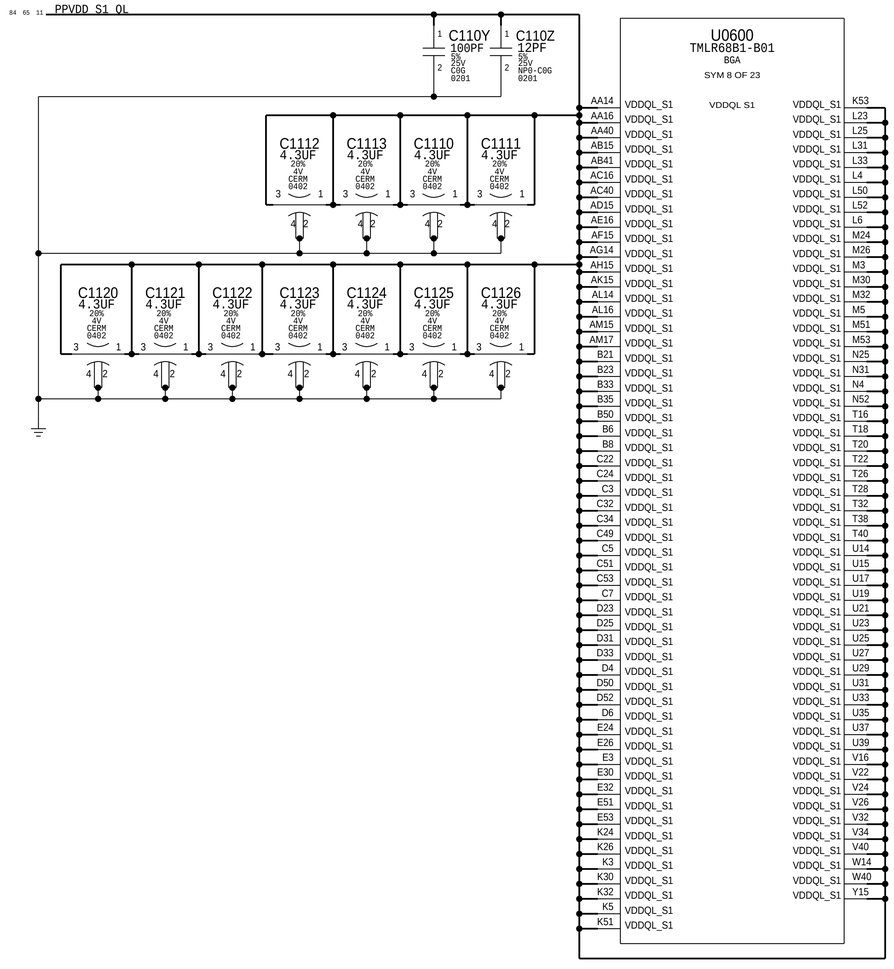
PP1V2_S2_DELAY_TOUCH — R0612 1.00K 5% 1/32W MF 01005 — SWD_GRAPE_SWDIO

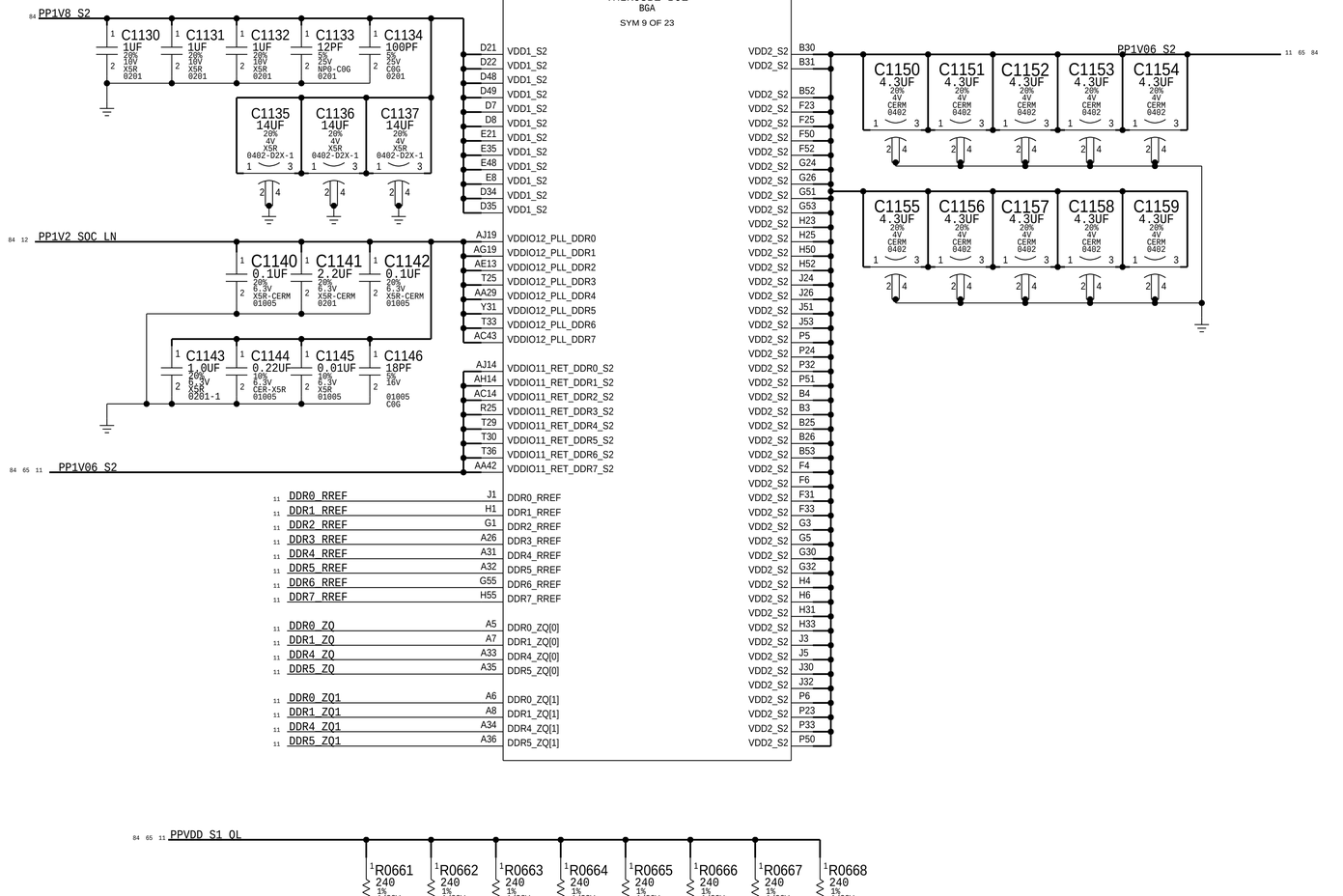
BOM_COST_GROUP=SOC

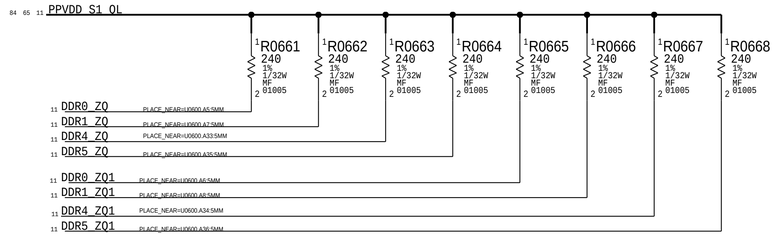
PAGE TITLE

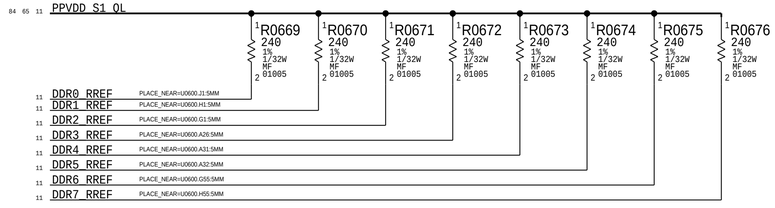
SOC: AOP

SOC: POWER (DDR)









ROM_COST_GROUP=SOC

PAGE TITLE

SOC: POWER (DDR,SRAM)

SOC: POWER (IO,FIXED)

U0600
TMLR68B1-B01
BGA
SYM 13 OF 23

PP0V8_S1_SOC_FIXED
PP0V8_S1_SOC_FIXED
C1260 4.3UF
C1261 0.1UF 20% 6.3V X5R-CERM 01005
C1262 0.1UF 20% 6.3V X5R-CERM 01005
20% 4V CERM 0402

PP0V8_S1_SOC_FIXED
C1270 2.2UF 20% 6.3V X5R-CERM 0201
C1271 0.1UF 20% 6.3V X5R-CERM 01005

PP0V8_S1_SOC_FIXED
C1280 2.2UF 20% 6.3V X5R-CERM 0201
C1281 0.1UF 20% 6.3V X5R-CERM 01005

PP0V8_S1_SOC_FIXED
PP0V8_S1_SOC_FIXED
R1290 0.00 0% 1/32W MF 01005
PPVDD_S1_FIXED_PCIE_R
C1290 2.2UF 20% 6.3V X5R-CERM 0201
C1291 0.1UF 20% 6.3V X5R-CERM 01005

PP0V8_S1_SOC_FIXED
C12A0 4.3UF 20% 4V CERM 0402
C12A1 0.1UF 20% 6.3V X5R-CERM 01005
C12A2 0.1UF 20% 6.3V X5R-CERM 01005

PP0V8_S1_SOC_FIXED
C1240 2.2UF 20% 6.3V X5R-CERM 0201
C1241 0.1UF 20% 6.3V X5R-CERM 01005
C1242 0.1UF 20% 6.3V X5R-CERM 01005

R1250 120-OHM-25%-250MA-0.5DCR 01005
PP0V8_S1_SOC_FIXED
C1250 2.2UF 20% 6.3V X5R-CERM 0201
PP0V8_S1_FIXED_DDR_PLL_SOC_FILT
C1251 2.2UF 20% 6.3V X5R-CERM 0201
C1252 0.22UF 10% 6.3V CER-X5R 01005
C1253 0.1UF 20% 6.3V X5R-CERM 01005
C1254 0.1UF 20% 6.3V X5R-CERM 01005
C125Z 220PF 5% 16V C0G 01005

PP0V8_S1_SOC_FIXED
R12B0 10 5% 1/32W MF 01005
PPVDD_S1_FIXED_XTAL_R
C12B0 4UF 20% 6.3V CER-X5R 0201

PP0V8_S1_SOC_FIXED
C12C0 2.2UF 20% 6.3V X5R-CERM 0201

PP0V72_S2_VDDLOW
C12D0
C12D1
20% 4V 14UF X5R 0402-DZX-1
C12DY 12PF 5% 25V NP0-C0G 0201
C12DZ 100PF 5% 25V C0G 0201

PP0V72_S2_VDDLOW
R12E0 10 5% 1/32W MF 01005 PP0V72_S2_VDDLOW_PLL_FLPPLL
R12F0 49.9 1% 1/32W MF 01005 PP0V72_S2_VDDLOW_PLL_ULPPLL
C12F0 4.7UF 20% 4V CER-X5R 0201
C12E0 0.47UF 20% 6.3V X5R 01005-1

PP0V72_S2_VDDLOW
C12G0 0.1UF 20% 6.3V X5R-CERM 01005
PP0V72_S2_VDDLOW

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

PPVDD_S2_CIO
C1210 0.1UF 20% 6.3V X5R-CERM 01005
C1211 0.1UF 20% 6.3V X5R-CERM 01005
C1212 4.3UF 20% 4V CERM 0402
C1213 4.3UF 20% 4V CERM 0402

PP1V2_S2_CIO
C1220 0.1UF 20% 6.3V X5R-CERM 01005
C1221 0.1UF 20% 6.3V X5R-CERM 01005
C1222 4.3UF 20% 4V CERM 0402
C1223 4.3UF 20% 4V CERM 0402
C1224 0.1UF 20% 6.3V X5R-CERM 01005
C1225 0.1UF 20% 6.3V X5R-CERM 01005

PPVDD_S2_CIO
PP1V25_S2
PP1V2_IO
C12H0 0.1UF 20% 6.3V X5R-CERM 01005
C12H1 0.1UF 20% 6.3V X5R-CERM 01005
C12H2 4.3UF 20% 4V CERM 0402

PP1V2_SOC_LN
C12L0 0.1UF 20% 6.3V X5R-CERM 01005
C12L1 2.2UF 20% 6.3V X5R-CERM 0201

PP1V2_IO
PP1V2_IO
C12W0 0.1UF 20% 6.3V X5R-CERM 01005
C12W1 2.2UF 20% 6.3V X5R-CERM 0201
C12T0 2.2UF 20% 6.3V X5R-CERM 0201

PP1V2_SOC_LN
C12M0 0.1UF 20% 6.3V X5R-CERM 01005
C12M1 0.1UF 20% 6.3V X5R-CERM 01005
C12M2 4.3UF 20% 4V CERM 0402
C12M3 4.3UF 20% 4V CERM 0402

PP1V2_PCIE_REFBUF_FILT
R12V0 0.00 0% 1/32W MF 01005
C12V0 0.1UF 20% 6.3V X5R-CERM 01005
C12V1 2.2UF 20% 6.3V X5R-CERM 0201

PP1V2_SOC_LN
C12N0 0.1UF 20% 6.3V X5R-CERM 01005
C12N1 0.1UF 20% 6.3V X5R-CERM 01005
C12N2 2.2UF 20% 6.3V X5R-CERM 0201

PP1V2_IO
PP1V2_ULPLL_FILT
R12P0 49.9 1% 1/32W MF 01005
PP1V25_S2
PP1V25_S2
C12Q0 0.1UF 20% 6.3V X5R-CERM 01005
C12P0 4.7UF 20% 4V CER-X5R 0201
FL12R0 240-OHM-25%-0.20A-1.00CR 01005

PP1V2_XTAL_SOC_FILT
PP1V2_IO
C12R0 0.1UF 20% 6.3V X5R-CERM 01005
C12R1 2.2UF 20% 6.3V X5R-CERM 0201

PP1V2_FMON_FILT
R12S0 49.9 1% 1/32W MF 01005
PP1V2_IO
C12S0 2.2UF 20% 6.3V X5R-CERM 0201

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

PP0V6_S2_VDDIO06_GRP1
PP0V6_S2_VDDIO06_GRP2
C1200 4UF 20% 4V X5R 0201
C1201 4UF 20% 4V X5R 0201

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

PP1V25_S2
PP1V25_S2
C1230 2.2UF 20% 6.3V X5R-CERM 0201
C1231 0.1UF 20% 6.3V X5R-CERM 01005
C1232 14UF 20% 4V X5R 0402-DZX-1
C1233 14UF 20% 4V X5R 0402-DZX-1

PP1V25_S2
C12U0 2.2UF 20% 6.3V X5R-CERM 0201

PP1V2_IO
OMIT XW12J0 SHORT-20L-0.05MM-SM PP1V2_IO_GRP3
C12J0 2.2UF 20% 6.3V X5R-CERM 0201
OMIT XW12J1 SHORT-20L-0.05MM-SM PP1V2_IO_GRP4
C12J1 2.2UF 20% 6.3V X5R-CERM 0201
OMIT XW12J2 SHORT-20L-0.05MM-SM PP1V2_IO_GRP5
C12JA 15UF 20% 6.3V X5R 0402-0.1MM-1
C12J2 2.2UF 20% 6.3V X5R-CERM 0201

PP1V8_SW1_IO
C12K0 2.2UF 20% 6.3V X5R-CERM 0201

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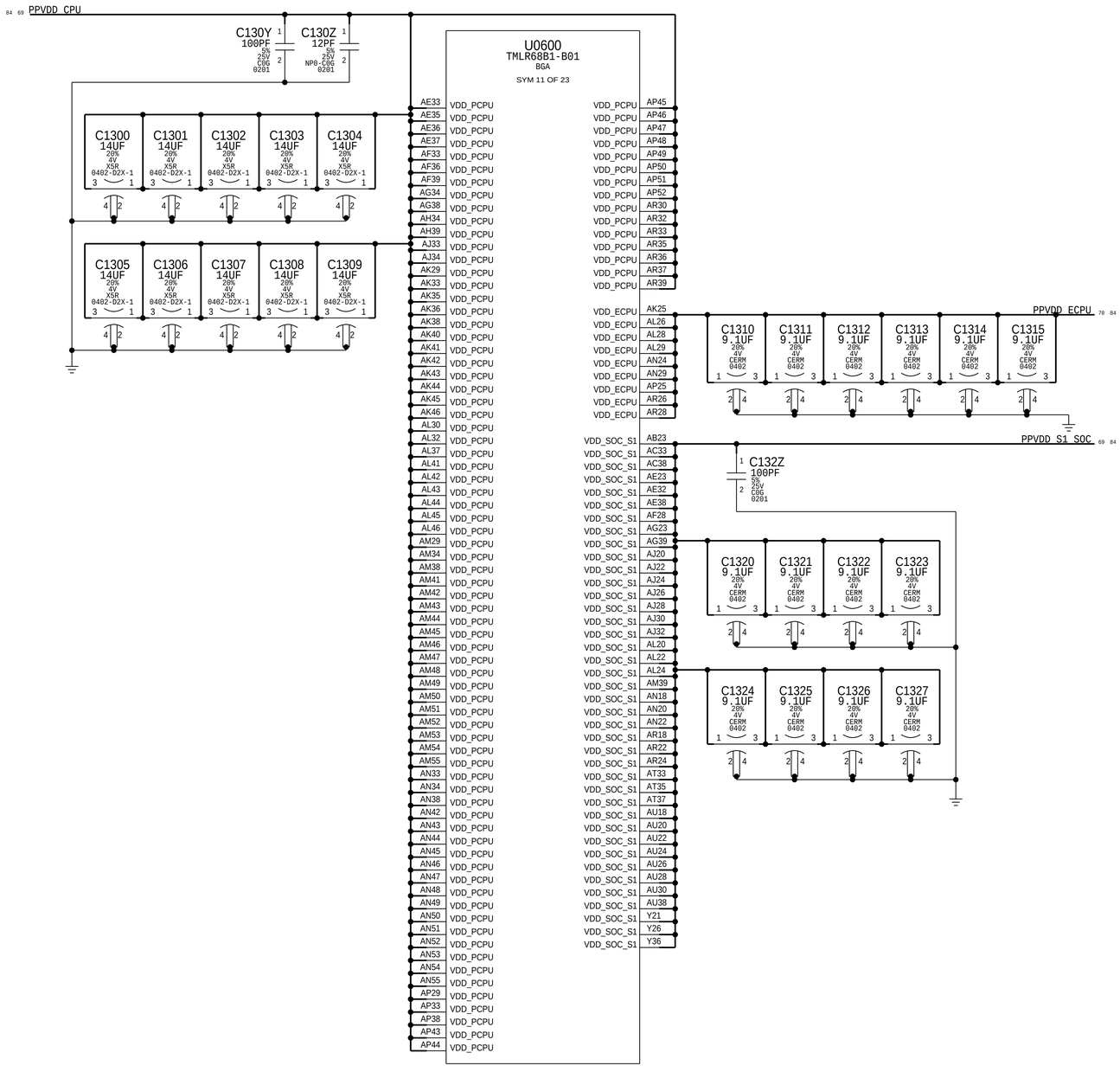
AR40	VDD06_GRP1_S2	
AP40	VDD06_GRP2_S2	
BB22	VDDDIO_HIB_S4	
AY23	VDDIO12_AOP_S2	
AY25	VDDIO12_AOP_S2	
AY27	VDDIO12_AOP_S2	
BA24	VDDIO12_AOP_S2	
BA26	VDDIO12_AOP_S2	
AP39	VDDIO12_GRP1_S2	
AF41	VDDIO12_GRP3	
AG42	VDDIO12_GRP3	
AH40	VDDIO12_GRP3	
AL40	VDDIO12_GRP3	
AN40	VDDIO12_GRP3	
AT40	VDDIO12_GRP4	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

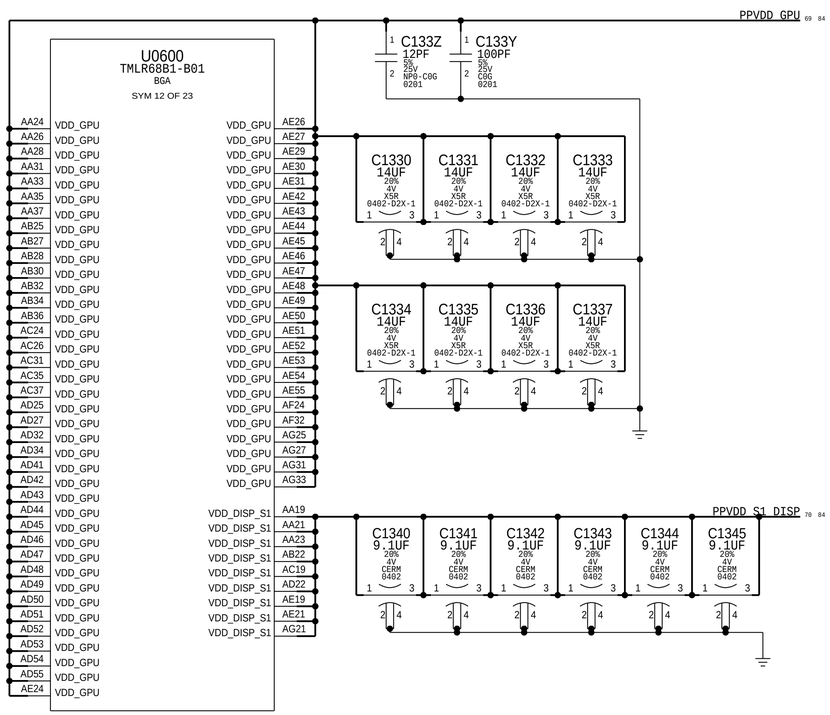
B10	VDD2_S2_SENSE1	TPT_VDD_S2_SENSE1
B37	VDD2_S2_SENSE2	TPT_VDD_S2_SENSE2
AD36	VDD_PCPU_SENSE	TPT_VDD_PCPU_SENSE
AN23	VDD_ECPU_SENSE	TPT_VDD_ECPU_SENSE
AC23	VDD_GPU_SENSE	TPT_VDD_GPU_SENSE
AH22	VDD_SOC_S1_SENSE	TPT_VDD_SOC_S1_SENSE
Y17	VDD_DISP_S1_SENSE	TPT_VDD_DISP_S1_SENSE
AN17	VDD_DCS_SENSE	TPT_VDD_DCS_SENSE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

BOM_COST_GROUP=SOC

PAGE TITLE
SOC: POWER (IO)

SOC: POWER (CPU, GPU)



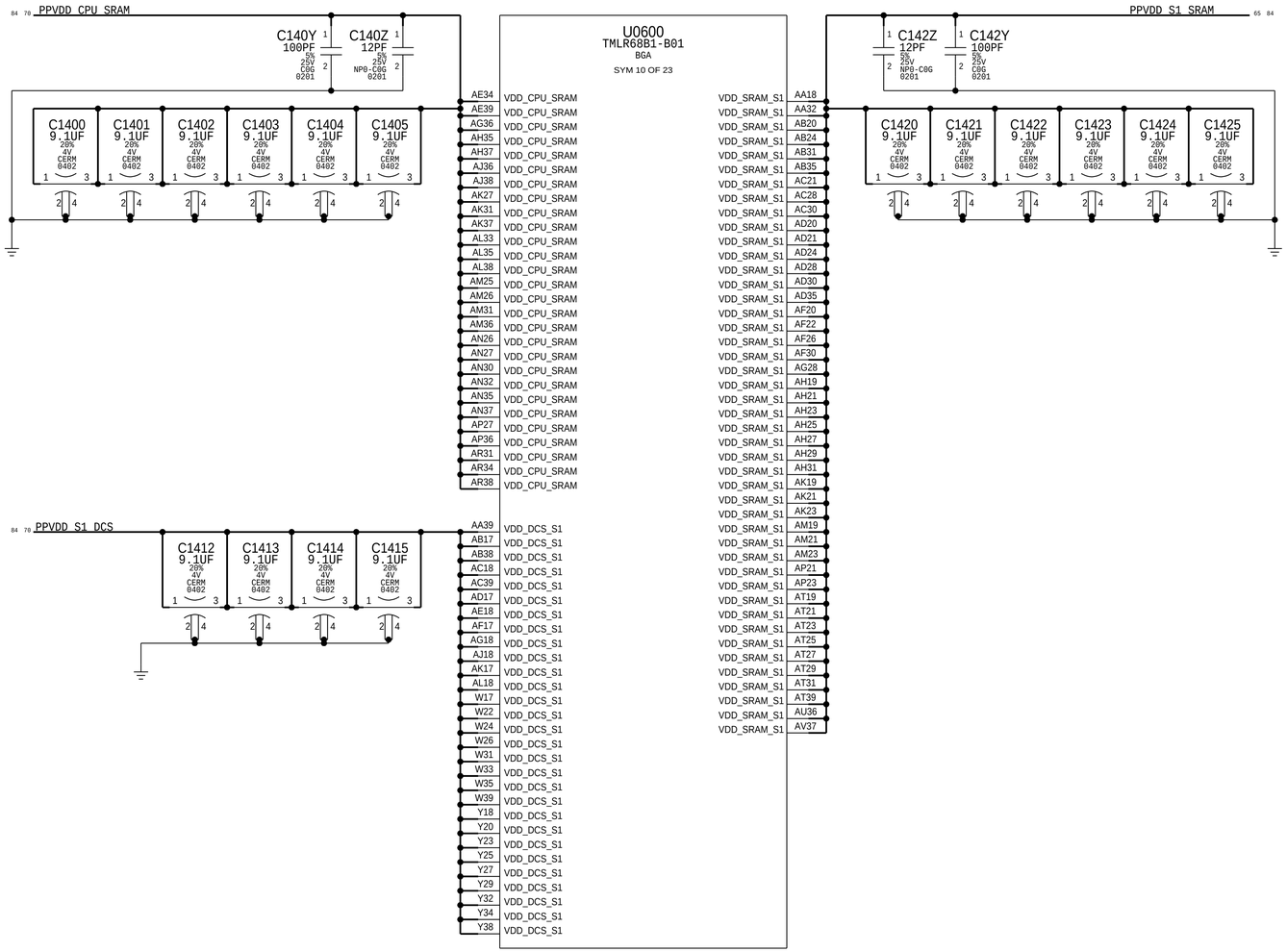


ROM_COST_GROUP=SOC

PAGE TITLE

SOC: POWER (CPU, GPU)

SOC: POWER (SRAM,SOC)



ROM_COST_GROUP=SOC

PAGE TITLE

SOC: POWER (SRAM, SOC)

SOC: GND (1)

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

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

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

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

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

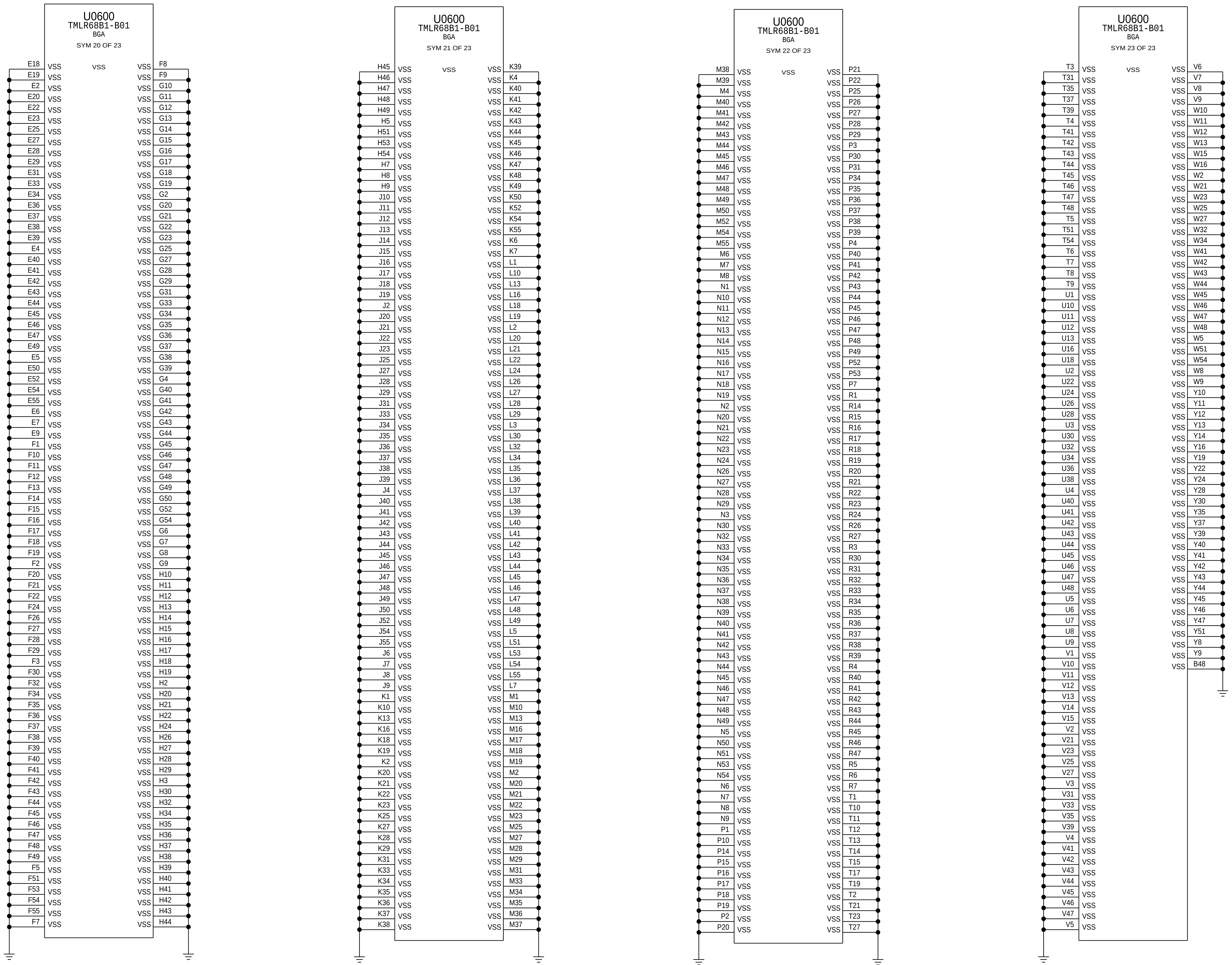
BOM_COST_GROUP=SOC

SYNC_MASTER=2017_R18_8_REV_1.1.1 SYNC_DATE=10/18/2020

PAGE TITLE

SOC: GND

SOC: GND (2)



BOM_COST_GROUP=SOC

PAGE TITLE

SOC: GND-2

S5E NAND 1

I_VCC = 1150mA MAX (1us PEAK POWER)

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

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

J2 K9 T5 — VDDIO_1

FL1801 10-OHM-1.1A 01005

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

PP_NAND1_VDDIO1_F VOLTAGE=1.8 — J6 PCIE_AVDD_H

R1863 2.0 5% 1/32W MF 01005
C1863 2.2UF 20% 6.3V X5R-CERM 0201

PP_NAND1_VDDIO1_R VOLTAGE=1.8 — L2 AVDD1X_PLL

(VCCQ_IO)

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

E10 E2 N2 P9 — VDDIO_2 — (VCCQ_ANI)

G6 G8 L6 L8 R6 R8 — VDD — (VDD)

J8 M9 N6 N8 — PCIE_VDD

I_VDD = 820mA MAX

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

C1823 2.2UF 20% 6.3V X5R-CERM 0201

PP0V88_NAND1_PLL VOLTAGE=0.83 — R4 VDD_PLL

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

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

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 — VSS

A10 A4 A6 A8 U10 U4 U6 U8 — VSS_R

F3 — VPP — NC_PP_NAND1_VPP

F5 — VQPS

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
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
K3 ZQ_1
ANALOG_NAND1_ZQ_0
ANALOG_NAND1_ZQ_1
R1800 300 1% 1/32W MF 01005-1
R1801 300 1% 1/32W MF 01005-1

(INT PU) EXT_D0/BOOT0 — B3 — GPIO_PMU_TO_NAND_LOW_BATT_L — 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 — PLACE_NEAR=U1800.C6:100MM — R1805 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 10% CER-X5R C1880 — 85_PCIE_NAND1_TO_SOC_TX_P — OUT 9
17 PCIE_NAND1_TO_SOC_TX_C_N — 0.22UF 01005 6.3V 10% CER-X5R C1881 — 85_PCIE_NAND1_TO_SOC_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_NAND
DUAL_NAND C1948 15UF 20% 6.3V X5R 0402-0.1MM-1
DUAL_NAND C1902 15UF 20% 6.3V X5R 0402-0.1MM-1
DUAL_NAND C1905 15UF 20% 6.3V X5R 0402-0.1MM-1
DUAL_NAND FL1900 10-OHM-1.1A 01005
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
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 → H7 PCIE_RESREF (for dev)
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)

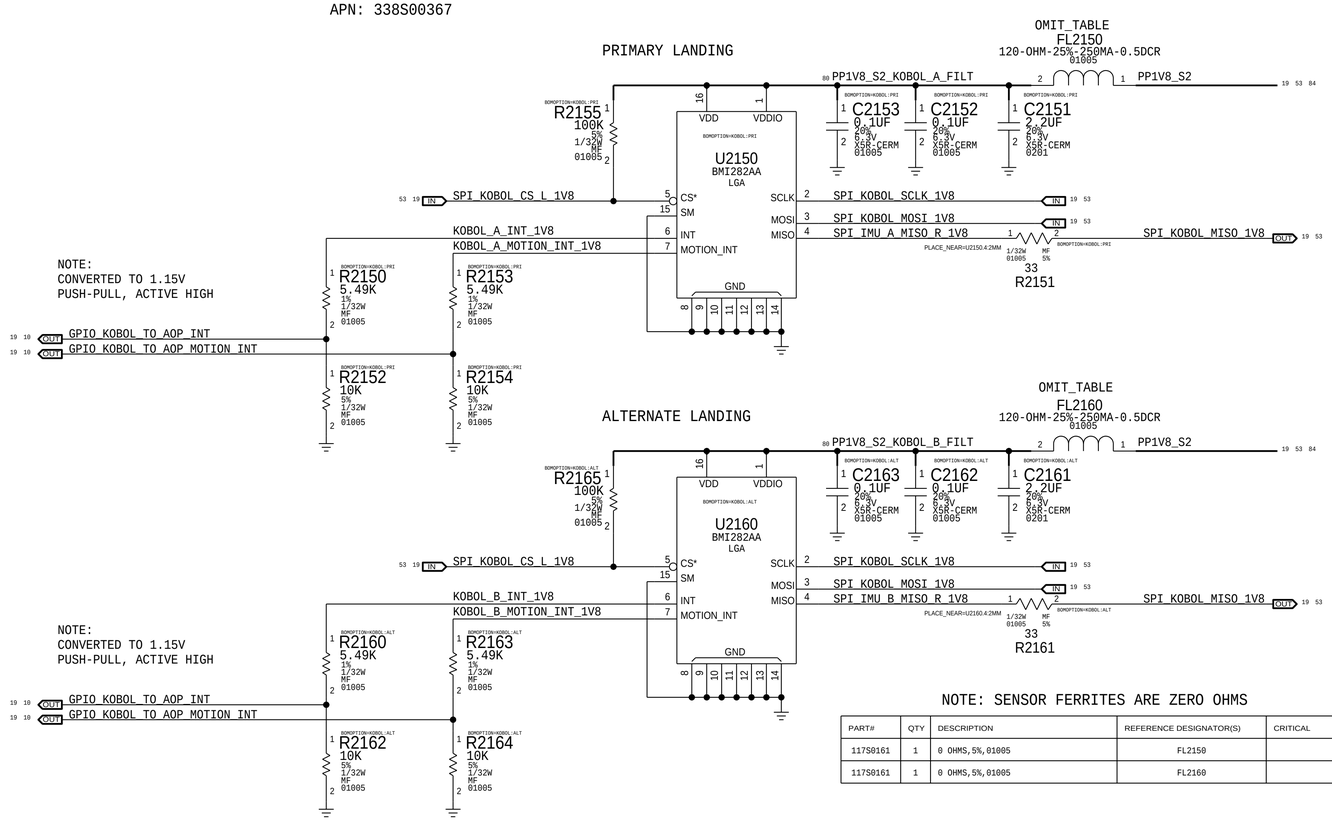
DUAL_NAND C1980 0.22UF 01005 6.3V 10% CER-X5R (GND_VOID=TRUE)
PCIE_NAND2_TO_SOC_TX_C_P (18) → 85_PCIE_NAND2_TO_SOC_TX_P (OUT 9)
PCIE_NAND2_TO_SOC_TX_C_N (18) → 85_PCIE_NAND2_TO_SOC_TX_N (OUT 9)
DUAL_NAND C1981 0.22UF 01005 6.3V 10% CER-X5R (GND_VOID=TRUE)

BOM_COST_GROUP=NAND
PAGE TITLE: NAND

SENSORS

KOBOL - ACCEL & GYRO

APN: 338S00367



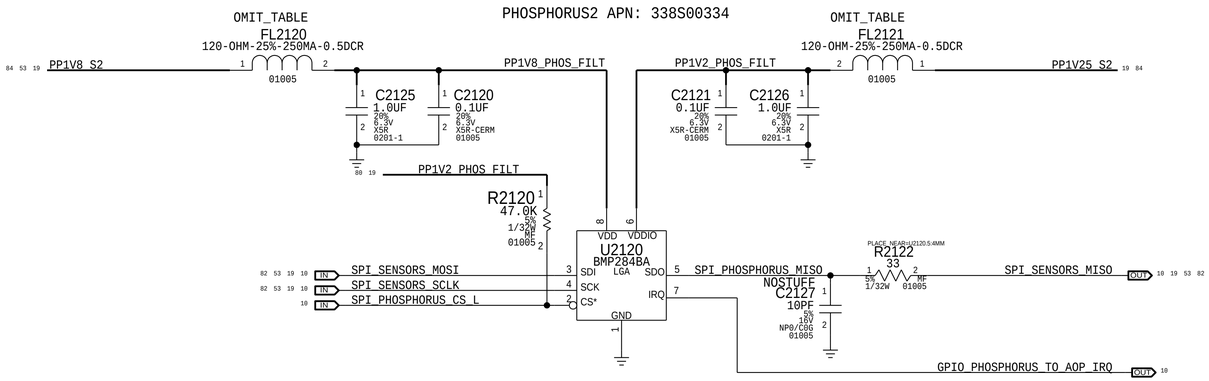
NOTE: SENSOR FERRITES ARE ZERO OHMS

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

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

PHOSPHORUS2

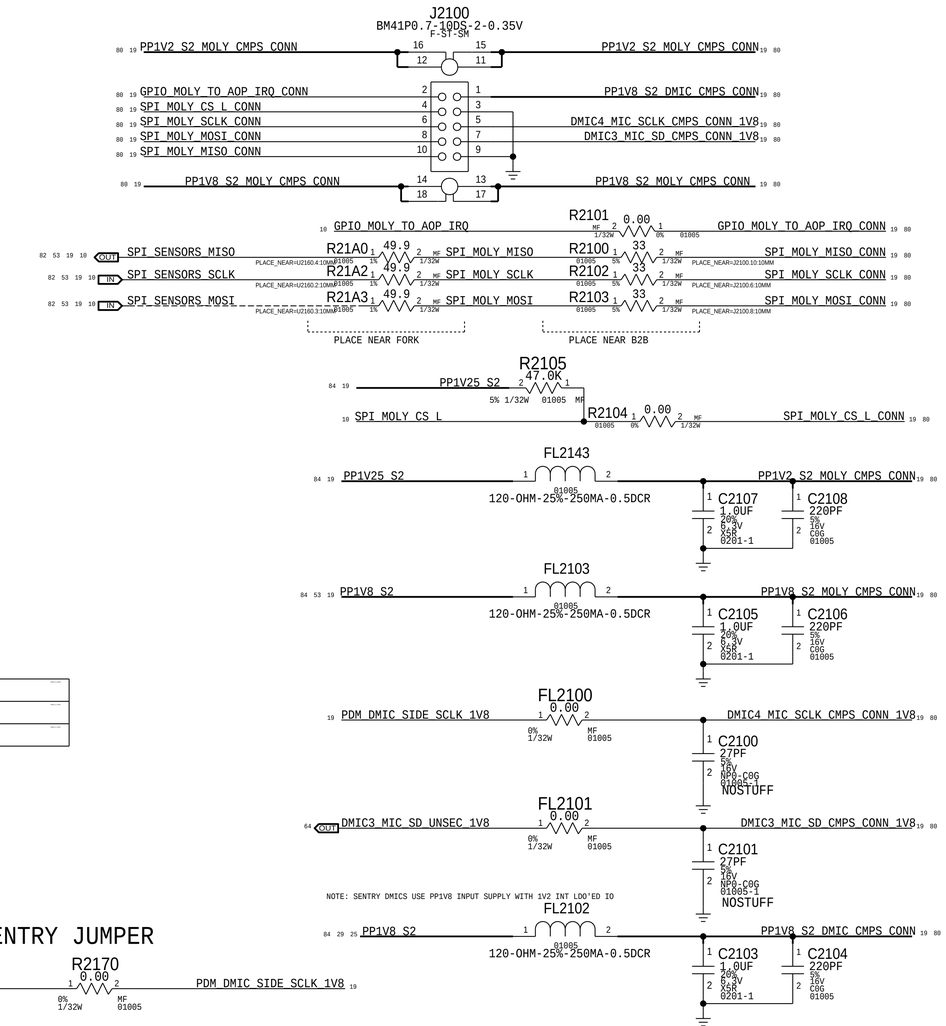
PHOSPHORUS2 APN: 338S00334



NOTE: PINOUT UPDATED PER J522 COMPASS_FLEX REV 0.3

COMPASS/DMIC FLEX B2B

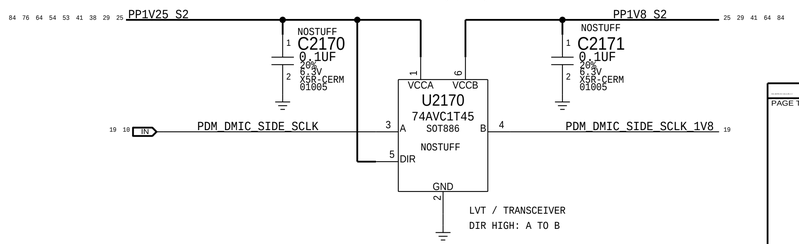
MLB SIDE: 516S00176
FLEX SIDE: 516S00175



SENTRY JUMPER

DMIC CLK VT

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



BOM_COST_GROUP=SENSORS

PAGE TITLE

SENSOR: KOBOL, PHOS2, MOLY

LANAI MASTER

U2200 BCM15957A0 BGA SYM 1 OF 2

PP1V25_S2 → R2250 10K 5% 1/32W MF 01005 → LANAI_GPIO5_FAILSAFE_PU

GPIO_SOC_TO_LANAI_DISPLAY_BSYNC0	E9	GPIO_00	
GPIO_SOC_TO_GRAPE_BSYNC1	F9	GPIO_01	
GPIO_SOC_TO_DISPLAY_TOUCH_EB	G9	GPIO_02	
UART_DEBUG_TO_GRAPE_TX	A10	GPIO_03	
UART_GRAPE_TO_DEBUG_TX	C10	GPIO_04	
LANAI_GPIO5_FAILSAFE_PU	D10	GPIO_05	1V2 IO
GPIO_SOC_TO_BT_TO_GRAPE_TS_SYNC	E10	GPIO_06	
GPIO_TOUCH_TO_BT_SYNC	F10	GPIO_07	
SPI_SOC_TO_GRAPE_CS_L	A11	GPIO_08	
UART_GRAPE_TO_AOP_TX	B11	GPIO_09	
UART_AOP_TO_GRAPE_TX	B12	GPIO_10	
KONA_S_TO_LANAI_M_RESET_DET_1V8_L	C12	GPIO_11	
LANAI_M_TO_KONA_S_TTW_1V8	H9	GPIO_12	
LANAI_M_TO_KONA_S_IPC1_1V8	J9	GPIO_13	
SPI_LANAI_M_TO_KONA_S_MISO_1V8	E11	GPIO_14	
SPI_LANAI_M_TO_KONA_S_SCLK_1V8	F11	GPIO_15	1V8 IO
SPI_LANAI_M_TO_KONA_S_CS_1V8_L	G10	GPIO_16	
KONA_S_TO_LANAI_M_INT_1V8_L	H10	GPIO_17	
SPI_LANAI_M_TO_KONA_S_MOSI_1V8	H11	GPIO_18	
LANAI_M_TO_KONA_S_IPC2_1V8	J10	GPIO_19	

SWD_GRAPE_SWDIO	K9	JTAG_TRST*	
	L10	JTAG_TMS	
	J11	JTAG_TDO	
SWD_GRAPE_SWCLK	K10	JTAG_TDI	1V2 IO
	K11	JTAG_TCK	
	L9	JTAG_SRST*	
	J11	JTAG_RTCK	
	L15	XTALP	
	K15	XTALN	
	L13	XTAL_O_CLK_EXT	
	D9	TEST_MODE	
	C9	RESET*	
PSE_SYNC_1V8	G13	PSE_SYNC	
	J12	I2C_SDA	
	J13	I2C_SCL	
SPI_SOC_TO_GRAPE_MISO_R	E15	H_SDO	
SPI_SOC_TO_GRAPE_MOSI	D15	H_SDI	
SPI_SOC_TO_GRAPE_SCLK	C15	H_SCLK	1V2 IO
GPIO_GRAPE_TO_AOP_IRQ_L	D14	H_INT_L	
SPI_SOC_TO_GRAPE_CS_L	E14	H_CS_L	
	E13	H_ALT_CS_L	
KMSI_STRB_IN_1V8	F14	KMSI_STRB_IN	
KMSI_STRB_OUT_1V8	G15	KMSI_STRB_OUT	1V8 IO
KMSI_MOSI_1V8	G14	KMSI_MOSI	
KMSI_MISO_1V8	F15	KMSI_MISO	
LANAI_BOOT1_M	A9	BOOT_CFG_1	1V2 IO
LANAI_BOOT0_M	B9	BOOT_CFG_0	
NC_LANAI_BOOST_EN	C14	BOOST_VBAT_EN	
NC_LANAI_BOOST_VBAT	A12	BOOST_VBAT	
NC_LANAI_BOOST_NGATE	C13	BOOST_NGATE	
NC_LANAI_BOOST_ISENSE	A13	BOOST_ISENSE	
NC_LANAI_BOOST_FBIN	A14	BOOST_FBIN	
LANAI_BOOST_ATEST	B14	BOOST_ATEST	
LANAI_KONA_BGBIAS_1V8	P10	AFE_IO_BGBIAS	1V8 IO
	F12	IFO_CLK_EXT	
	H12	CORE_PMU_O_AON_TEST_PMU	

	P6	GRAPE_RX<0>	
	P5	GRAPE_RX<1>	
	P4	GRAPE_RX<2>	
	P3	GRAPE_RX<3>	
	N6	GRAPE_RX<4>	
	N5	GRAPE_RX<5>	
	N4	GRAPE_RX<6>	
	N3	GRAPE_RX<7>	
	N2	GRAPE_RX<8>	
	N1	GRAPE_RX<9>	
	M6	GRAPE_RX<10>	
	M5	GRAPE_RX<11>	
	M4	GRAPE_RX<12>	
	M1	GRAPE_RX<13>	
	L5	GRAPE_RX<14>	
	L4	GRAPE_RX<15>	
	L1	GRAPE_RX<16>	
	K4	GRAPE_RX<17>	
	K3	GRAPE_RX<18>	
	K2	GRAPE_RX<19>	
	K1	GRAPE_RX<20>	
	J5	GRAPE_RX<21>	
	J4	GRAPE_RX<22>	
	J3	GRAPE_RX<23>	
	J2	GRAPE_RX<24>	
	H4	GRAPE_RX<25>	
	H3	GRAPE_RX<26>	
	H1	GRAPE_RX<27>	
	G4	NC_LANAI_TOUCH27	
	G3	NC_LANAI_TOUCH26	
	G1	NC_LANAI_TOUCH25	
	F3	NC_LANAI_TOUCH24	
	F2	NC_LANAI_TOUCH23	
	E6	NC_LANAI_TOUCH22	
	E3	NC_LANAI_TOUCH21	
	E2	NC_LANAI_TOUCH20	
	E1	GRAPE_TX<20>	
	D6	GRAPE_TX<21>	
	D5	GRAPE_TX<22>	
	D4	GRAPE_TX<23>	
	D3	GRAPE_TX<24>	
	D1	GRAPE_TX<25>	
	C6	GRAPE_TX<26>	
	C5	GRAPE_TX<27>	
	C4	GRAPE_TX<28>	
	C1	GRAPE_TX<29>	
	B6	GRAPE_TX<30>	
	B5	GRAPE_TX<31>	
	B4	GRAPE_TX<32>	
	B3	GRAPE_TX<33>	
	B2	GRAPE_TX<34>	
	B1	GRAPE_TX<35>	
	A6	GRAPE_TX<36>	
	A5	GRAPE_TX<37>	
	A4	GRAPE_TX<38>	
	A3	GRAPE_TX<39>	
	N8	NC	
	P8	NC	

PAD_I_TOUCH55 … PAD_I_TOUCH00, PAD_I_SELFCAPEXT, PAD_O_GUARDBUFFER

U2200 BCM15957A0 BGA SYM 2 OF 2

AFE_I_VDDHV15_EXT	B7	VSS	A8
AFE_I_VDDHV15_EXT	C7	VSS	A15
AFE_I_VDDHV15_EXT	D2	VSS	B0
AFE_I_VDDHV15_EXT	F5	VSS	B13
AFE_I_VDDHV15_EXT	F6	VSS	C8
AFE_I_VDDHV15_EXT	G2	VSS	D8
AFE_I_VDDHV15_EXT	G6	VSS	F8
AFE_I_VDDHV15_EXT	H6	VSS	D12
AFE_I_VDDHV15_EXT	J6	VSS	E8
AFE_I_VDDHV15_EXT	L2	VSS	G8
AFE_I_VDDHV15_EXT	L3	VSS	G11
AFE_I_VDDHV15_EXT	M7	VSS	H8
AFE_I_VDDHV15_EXT	P2	VSS	J8
		VSS	K8
BOOST_VDDA	B15	VSS	K13
OTP_TMON_I_VDDA_3P3_EXT	E12	VSS	L8
AFE_PMU_I_VDDA_3P3_EXT	P14	VSS	M8
		VSS	M9
AFE_I_VDDANA_3P3_AFE_PMU	A2	VSS	M10
AFE_I_VDDANA_3P3_AFE_PMU	A7	VSS	M11
AFE_I_VDDANA_3P3_AFE_PMU	C2	VSS	M12
AFE_I_VDDANA_3P3_AFE_PMU	E4	VSS	M13
AFE_I_VDDANA_3P3_AFE_PMU	F4		
AFE_I_VDDANA_3P3_AFE_PMU	H2	XTAL_AVSS	J15
AFE_I_VDDANA_3P3_AFE_PMU	K6	XTAL_AVSS	M14
AFE_I_VDDANA_3P3_AFE_PMU	L6	XTAL_AVSS	M15
AFE_I_VDDANA_3P3_AFE_PMU	M2		
AFE_I_VDDANA_3P3_AFE_PMU	N7	CORE_PMU_I_AVSS	H13
AFE_I_VDDANA_3P3_AFE_PMU	N9	CORE_PMU_I_AVSS	J14
AFE_I_VDDANA_3P3_AFE_PMU	N11		
AFE_I_VDDANA_3P3_AFE_PMU	P7	PAD_I_AVSS	A1
		PAD_I_AVSS	C3
AFE_PMU_O_VDDANA_3P3_PMU	P13	PAD_I_AVSS	D7
AFE_PMU_O_AVDD1P2_CAP	P12	PAD_I_AVSS	E5
		PAD_I_AVSS	E7
		PAD_I_AVSS	F1
		PAD_I_AVSS	F7
		PAD_I_AVSS	G5
		PAD_I_AVSS	G7
		PAD_I_AVSS	H5
		PAD_I_AVSS	H7
		PAD_I_AVSS	J1
		PAD_I_AVSS	J7
		PAD_I_AVSS	K5
XTAL_PLL_AVDD1P8_I_VDDLDO_1P8_EXT	K14	PAD_I_AVSS	K7
XTAL_PLL_AVDD1P8_I_VDDLDO_1P8_EXT	L14	PAD_I_AVSS	L7
		PAD_I_AVSS	M3
		PAD_I_AVSS	N10
		PAD_I_AVSS	N13
		PAD_I_AVSS	N14
		PAD_I_AVSS	N15
KMSI_VDDIO_1P8_EXT	F13	PAD_I_AVSS	P1
AFE_PMU_I_VDDLDO_1P8_EXT	N12	PAD_I_AVSS	P9
I2C_VDDIO_1P8_EXT	K12	PAD_I_AVSS	P11
ASPI_VDDIO_1P2_1P8_EXT	C11	PAD_I_AVSS	P15
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		

BOOT OPTION

PP1V2_S2_DELAY_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

GPIO_DOMBRA_BST_FPWM_1V8	A4	MODE	
GPIO_KONA_S_DOMBRA_BST_EN_1V8	B4	EN	
DOMBRA_ILIM	A3	ILIM	
DOMBRA_BST	D4	VIN	
	C4	BST	
	C1	SW	
	C2	SW	
DOMBRA_LX	C3	SW	
	D1	VOUT	
	D2	VOUT	
	D3	VOUT	
DOMBRA_FB	A1	FB	
DOMBRA_COMP	A2	COMP	
GND	B1 B2 B3	GND	

PPVCC_MAIN → C2284 0.1UF → C2283 4.7UF → C2283 47UF → C2285 47UF → C2286 47UF
DOMBRA_BST → C2282 0.1UF → L2280 2.2UH-20%-2.7A-0.090HM 2016 → DOMBRA_LX
R2286 10K 1% 1/32W MF 01005 (GPIO_DOMBRA_BST_FPWM_1V8 ÷ DOMBRA_ILIM)
R2288 909K 1% 1/32W MF 01005 (DOMBRA_ILIM → GND)
R2282 909K 1% 1/32W MF 01005 (PPVCC_MAIN → DOMBRA_FB)
NOSTUFF C22A3 100PF (DOMBRA_FB → GND)
C2292 10UF, C2293 10UF, C2294 10UF, C2295 10UF, C2298 180PF, C2299 68PF (PPVCC_MAIN → GND)
R2284 75K 1% 1/32W MF 01005 118S0768 (DOMBRA_FB → DOMBRA_FB_FET)
R2280 33K 1% 1/32W MF 01005 (DOMBRA_COMP → DOMBRA_COMP_RC)
R2283 69.8K 1% 1/32W MF 01005 (DOMBRA_COMP → DOMBRA_FB_FET)
C2288 1000PF, C2280 1000PF (DOMBRA_COMP_RC → GND) NOSTUFF
Q2280 NTNS3190NZ XLLGA (D: DOMBRA_FB_FET, G: GPIO_DOMBRA_BST_FB_CTRL_1V8, S: SW)
R2285 47.0K 5% 1/32W MF 01005 (GPIO_DOMBRA_BST_FB_CTRL_1V8 → GND)

PP15V0_TOUCH_LDO → R2222 3.3 5% 1/16W MF-LF 402 → PP15V0_TOUCH_FILT
PP15V0_TOUCH_FILT → C2221 0.47UF, C2222 0.47UF, C2223 0.47UF, C2232 0.47UF
PP15V0_TOUCH_FILT → C2233 0.47UF, C2234 0.47UF, C2235 0.47UF, C2236 100PF, C2237 12PF
PP3V3_S2_TOUCH → L2204 FERR-220-OHM 0402 → PP3V3_GRAPE_FILT
PP3V3_GRAPE_FILT → C2238 100PF, C2239 12PF, C2224 0.1UF, C2225 0.1UF, C2231 0.22UF
PP2V8_LANAI_M_VDDANA → C2278 100PF, C2279 220PF, C2201 0.1UF, C2202 0.1UF
C2203 0.1UF, C2204 0.1UF, C2205 0.1UF, C2206 2.2UF
LANAI_M_VDDADC_CAP → C2229 1UF
PP1V8_GRAPE_XTAL_FILT → L2203 FERR-220-OHM 0402 → C2227 0.1UF, C2228 0.047UF
PP1V8_S2_TOUCH → C2248 100PF, C2249 220PF, C2207 2.2UF, C2208 2.2UF, C2209 0.1UF
PP1V8_GRAPE_AON_RC → R2281 100 1% 1/20W MF 201 → C2281 2.2UF
PP1V2_S2_DELAY_TOUCH → C2260 100PF, C2261 220PF, C2262 2.2UF, C2263 2.2UF, C2264 2.2UF
PP1V2_S2_DELAY_TOUCH → C2218 1UF, C2219 0.1UF

ADP7112ACBZ-1.2-R7
U22A1 ADP7112 WLCSP 353S02157

GPIO13_KONA_LDO_EN_1V8	C1	EN	
	A1	VIN	
	A2	VOUT	
	B2	SENSE/ADJ	
	C2	GND	
	B1	SS	

TOUCH_LDO_ADJ
SS=380US WHEN FLOATING
NOSTUFF C22A1 1000PF
R22A3 15.8K 1% 1/32W MF 01005
Q22A0 NTNS3190NZ XLLGA (D: TOUCH_LDO_ADJ, G: GPIO12_KONA_LDO_ADJ_1V8, S: GND)
R22A4 47.0K 5% 1/32W MF 01005 (GPIO12_KONA_LDO_ADJ_1V8 → GND)
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
PP15V0_TOUCH_LDO → NOSTUFF C22A2 220PF, R22A1 90.9K 1% 1/32W MF 01005, R22A2 15.8K 1% 1/32W MF 01005 → TOUCH_LDO_ADJ
C2289 4.7UF, C2290 4.7UF, C2291 4.7UF, C220A 4.7UF (138S00070)

ROM_COST_GROUP=TOUCH

PAGE TITLE

TOUCH: LANAI MASTER

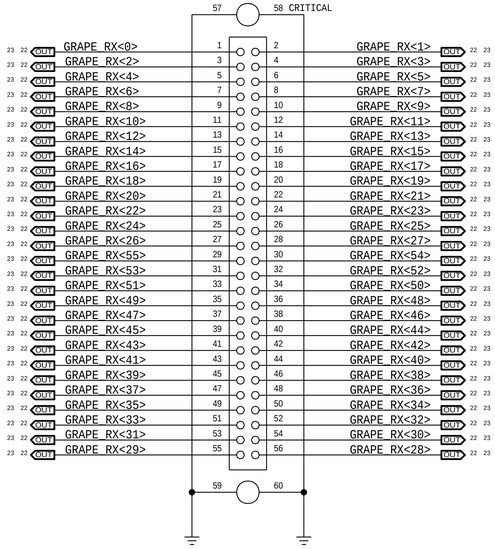

KONA: SLAVE
BOOT OPTION
PP1V8_S2_TOUCH
R2301 10K 5% 1/32W MF 01005
R2303 10K 5% 1/32W MF 01005
KONA_BOOT0_S_1V8
KONA_BOOT1_S_1V8
GPIO_GRAPE_TO_SCORPIUS_TIME_SYNC_1V8
SCORPIUS IS 1V8 ONLY, BUT AOP IS 1V2
R2380 5.49K 1% 1/32W MF 01005
GPIO_KONA_S_TO_SCORPIUS_TIME_SYNC_AOP
R2381 10K 5% 1/32W MF 01005
SPI_SOC_TO_KONA_S_MISO_1V8
R2315 33 5% 1/32W MF 01005
PLACE_NEAR=U2301:88.5MM
R2382 10K 5% 1/32W MF 01005
GPIO_KONA_S_TO_SOC_IRQ_1V8_L
C2371 0.1UF 20% 6.3V X5R-CERM 01005
PP1V2_S2_DELAY_TOUCH
C2370 0.1UF 20% 6.3V X5R-CERM 01005
PU ON LANAI SIDE
GPIO_SOC_TO_GRAPE_RESET_L
U2370 74AVC1T45 X2SON 311S00230
DIR=1: A->B
DIR=0: B->A
R2371 10K 5% 1/32W MF 01005
R2305 10K 5% 1/32W MF 01005
CLK_KONA_S_24MHZ
C2301 10PF 5% 16V NP0/C0G 01005
U2301 BCM15900B0K BGA SYM 1 OF 2
PP1V8_S2
R230A 10K 5% 1/32W MF 01005
LANAI_M_TO_KONA_S_IPC1_1V8
LANAI_M_TO_KONA_S_IPC2_1V8
KONA_S_TO_LANAI_M_RESET_DET_1V8_L
LANAI_M_TO_KONA_S_TTW_1V8
SPI_LANAI_M_TO_KONA_S_CS_1V8_L
GPIO_DOMBRA_BST_FB_CTRL_1V8
GPIO_DOMBRA_BST_FPWM_1V8
GPIO_KONA_S_DOMBRA_BST_EN_1V8
GPIO12_KONA_LDO_ADJ_1V8
GPIO13_KONA_LDO_EN_1V8
GPIO_GRAPE_TO_TCON_FORCE_PWM_1V8
TESTPOINT_KONA_S_UART_RX_1V8
TESTPOINT_KONA_S_UART_TX_1V8
SPI_LANAI_M_TO_KONA_S_MOSI_1V8
SPI_LANAI_M_TO_KONA_S_SCLK_1V8
SPI_LANAI_M_TO_KONA_S_CS_1V8_L
KONA_S_TO_LANAI_M_INT_1V8_L
SPI_LANAI_M_TO_KONA_S_MISO_1V8
SPI_SOC_TO_KONA_S_CS_1V8_L
GPIO_KONA_S_TO_SOC_IRQ_1V8_L
SPI_SOC_TO_KONA_S_SCLK_1V8
SPI_SOC_TO_KONA_S_MOSI_1V8
SPI_SOC_TO_KONA_S_MISO_R_1V8
SPI_SOC_TO_KONA_S_CS_1V8_L
KMSI_MOSI_1V8
KMSI_MISO_1V8
KMSI_STRB_OUT_1V8
KMSI_STRB_IN_1V8
PSE_SYNC_1V8
TPT_SWD_KONA_SWCLK_1V8
TPT_SWD_KONA_SWDIO_1V8
GPIO_SOC_TO_KONA_RESET_1V8_L
KONA_S_TEST_MODE
KONA_BOOT0_S_1V8
KONA_BOOT1_S_1V8
LANAI_KONA_BGBIAS_1V8
AUXADC_REF
AUXBUF_AIO_INPUT_3V
AUXBUF_AIO_OUTPUT
GPIO_ADC_00 … GPIO_ADC_07
GPIO_08 … GPIO_19
H_INT*
H_SCLK
H_SDI
H_SDO
H_CS*
H_ALT_CS*
I2C_SCL
I2C_SDA
KMSI_MISO
KMSI_MOSI
KMSI_STRB_IN
KMSI_STRB_OUT
PSE_SYNC
BOOST_ATEST
BOOST_FBIN
BOOST_ISENSE
BOOST_NGATE
BOOST_VBAT
BOOST_VBAT_EN
JTAG_RTCK
JTAG_TCK
JTAG_TMS
JTAG_TDI
JTAG_TDO
JTAG_TRST*
JTAG_SRST*
RESET*
TEST_MODE
BOOT_CFG_0
BOOT_CFG_1
AFE_IO_BGBIAS
XTALN
XTALP
XTAL_O_CLK_EXT
IFO_CLK_EXT
PAD_I_TOUCH0 … PAD_I_TOUCH69
GRAPE_RX<55> … GRAPE_RX<28>
NC_KONA_TOUCH28 … NC_KONA_TOUCH36
VCOM_LCD_TO_GRAPE_R_C
NC_KONA_TOUCH38 … NC_KONA_TOUCH41
GRAPE_TX<0> … GRAPE_TX<19>
NC_KONA_TOUCH62 … NC_KONA_TOUCH69
PAD_I_SELFCAPEXT
PAD_O_GUARDBUFFER
CORE_PMU_O_AON_TEST_PMU
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
AFE_I_VDDHV15_EXT
PP3V3_GRAPE_FILT
C2315 0.1UF 10% 10V X5R-CERM 0201
C2316 0.1UF 10% 10V X5R-CERM 0201
C2320 0.22UF 20% 10V CERM-X5R 0201
BOOST_VDDA
OTP_TMON_I_VDDA_3P3_EXT
AFE_PMU_I_VDDA_3P3_EXT
AUXBUF_PMU_I_VDDA_3P3_EXT
AUXBUF_PMU_I_VDDHV_AUX_EXT
AUXBUF_PMU_O_VDD_AUX_CAP
PP2V8_KONA_S_VDDANA
C2378 100PF 5% 25V C0G 0201
C2379 12PF 5% 25V NP0-C0G 0201
C2302 0.1UF 10% 10V X5R-CERM 0201
C2303 0.1UF 10% 10V X5R-CERM 0201
C2304 0.1UF 10% 10V X5R-CERM 0201
C2305 0.1UF 10% 10V X5R-CERM 0201
C2306 0.1UF 10% 10V X5R-CERM 0201
C2307 2.2UF 20% 6.3V X5R-CERM 0201
AFE_I_VDDANA_3P3_AFE_PMU
AFE_PMU_O_VDDANA_3P3_PMU
KONA_S_VDDADC_CAP
C2318 1UF 10% 10V X5R-CERM 0402
AFE_PMU_O_AVDD1P2_CAP
PP1V8_GRAPE_XTAL_FILT
C2321 0.1UF 10% 25V X5R 0201
C2322 0.047UF 10% 25V X5R 0201
XTAL_PLL_AVDD1P8_I_VDDLDO_1P8_EXT
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
AUXADC_AVDDC_I_VDDIO_1P8_3P3_EXT
AUXADC_AVDD_I_VDDIO_1P8_3P3_EXT
AFE_PMU_I_VDDLDO_1P8_EXT
AON_PAD_I_VDDIO_1P8_3P3_EXT
I2C_PAD_I_VDDIO_1P8_3P3_EXT
CORE_PAD_I_VDDIO_1P8_3P3_EXT
PP1V8_GRAPE_AON_RC
CORE_PMU_I_AON_VDDIO_1P8_3P3_EXT
CORE_PMU_I_VDDLDO_1P8_EXT
CORE_PMU_O_VDDCORE_1P2_CAP
PP1V2_S2_DELAY_TOUCH
C2325 1UF 10% 10V X5R-CERM 0402
C2314 0.1UF 10% 6.3V CERM-X5R 0201
AUXBUF_AVSS
AUXADC_AVSS
VSS
XTAL_AVSS
CORE_PMU_I_AVSS
AUXBUF_PMU_I_AVSS
PAD_I_AVSS
R2352 0 5% 1/20W MF 0201
PP1V2_S2_TOUCH
PP1V2_S2_DELAY_TOUCH
MAKE_BASE=TRUE
NOSTUFF
R2351 47.0K 5% 1/32W MF 01005
Q2351 LGA CSD68832L CRITICAL
NOSTUFF
NOTE: INITIAL VALUE OF 47K, TBD
DELAY_GATE_PP1V2
Q2350 NTNS3190NZ XLLGA CRITICAL NOSTUFF
NOSTUFF
R2353 0.00 0% 1/32W MF 01005
ENABLE_1V8_GATE
NOSTUFF
C2350 10PF 5% 16V NP0/C0G 01005
PMU HAS INTERNAL PD IN OFF STATE
NOTE:RC DELAY VALUES TBD, SHOULD AIM FOR 200-500US DELAY
DELAY CIRCUITRY FOR PP1V2_S2_TOUCH
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_OPTION=J517,J518

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

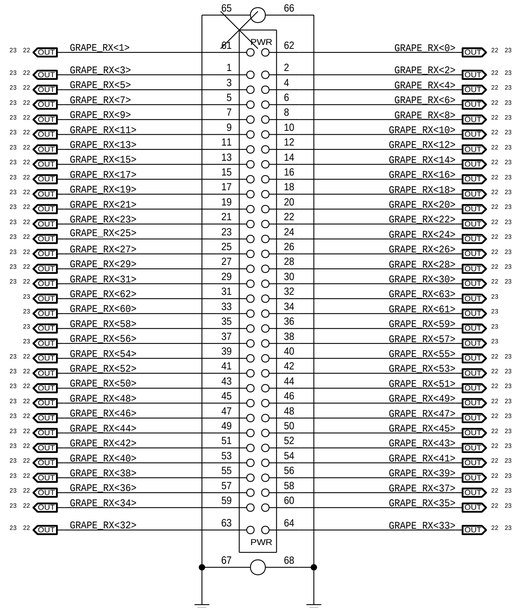


J522 TOUCH FLEX CONNECTOR (SENSE)

FLEX: 516S00375
MLB: 516S00374

PACK_IGNORE=TRUE
PACK_OPTION=J522,J523

J2400
AA37D-S060VA2
F-ST-SM

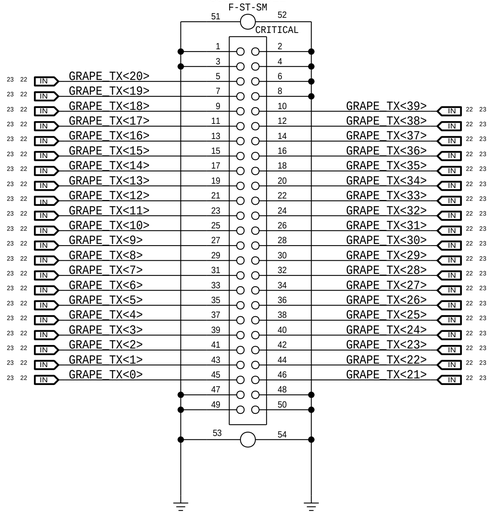


J517 TOUCH FLEX CONNECTOR (DRIVE)

MATCHES J517_GRAPE_FLEX_LS 2.0.0
MLB: 516S00099
FLEX: 516S00098

PACK_OPTION=J517,J518

J2401
505066-5022
F-ST-SM

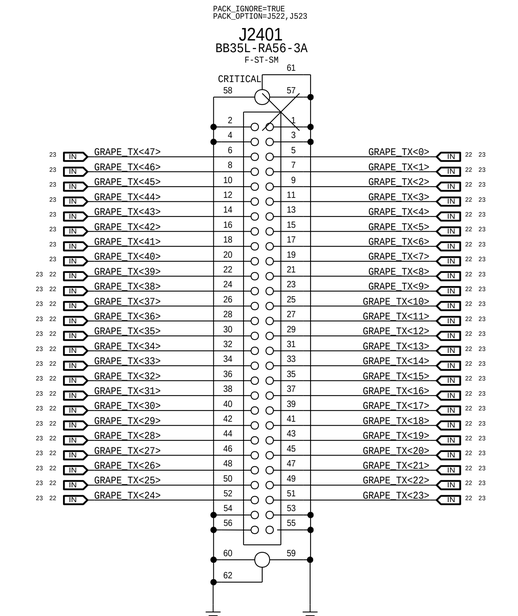


J522 TOUCH FLEX CONNECTOR (DRIVE)

FLEX: 516S00380
MLB: 516S00379

PACK_IGNORE=TRUE
PACK_OPTION=J522,J523

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



BOM_COST_GROUP=TOUCH

PAGE TITLE

TOUCH: GRAPE CONN

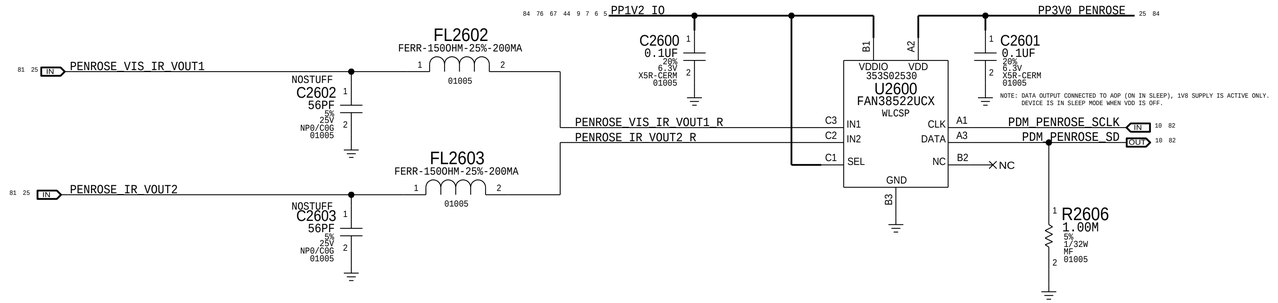
BOM_COST_GROUP=TOUCH

SYNC_MASTER=J517_MLB_B_REV_5.5 SYNC_DATE=10/18/2020

PAGE TITLE

TOUCH: SENSE & DRIVE ALIAS

PENROSE ADC (FAN)



BOM_COST_GROUP=CAMERA

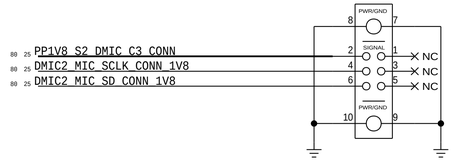
PAGE TITLE

CAMERA: PENROSE ADC

BACK DMIC FLEX

MLB APN: 516S00186
FLEX APN: 516S00185

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

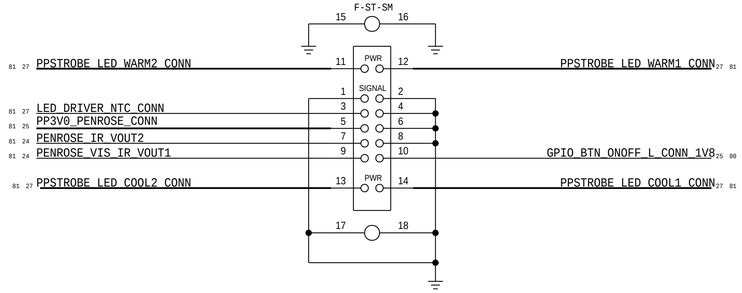


PINOUT PER HYDRA STROBE FLEX REV 0.6

HYDRA STROBE FLEX B2B

MLB APN: 516S00267
FLEX APN: 516S00268

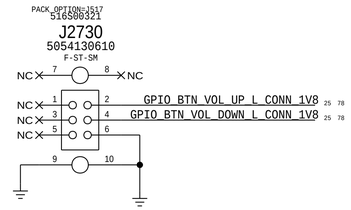
516S00267
J2710
AA36D-S010VA1
F-ST-SM



J51X VOLUME BUTTON FLEX B2B

MLB APN: 516S00321
FLEX APN: 516S00322

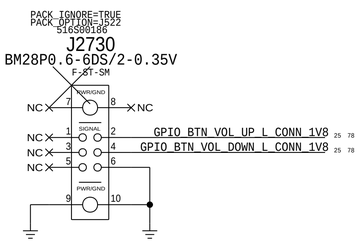
PACK_OPTION=J517
516S00321
J2730
5054130610
F-ST-SM



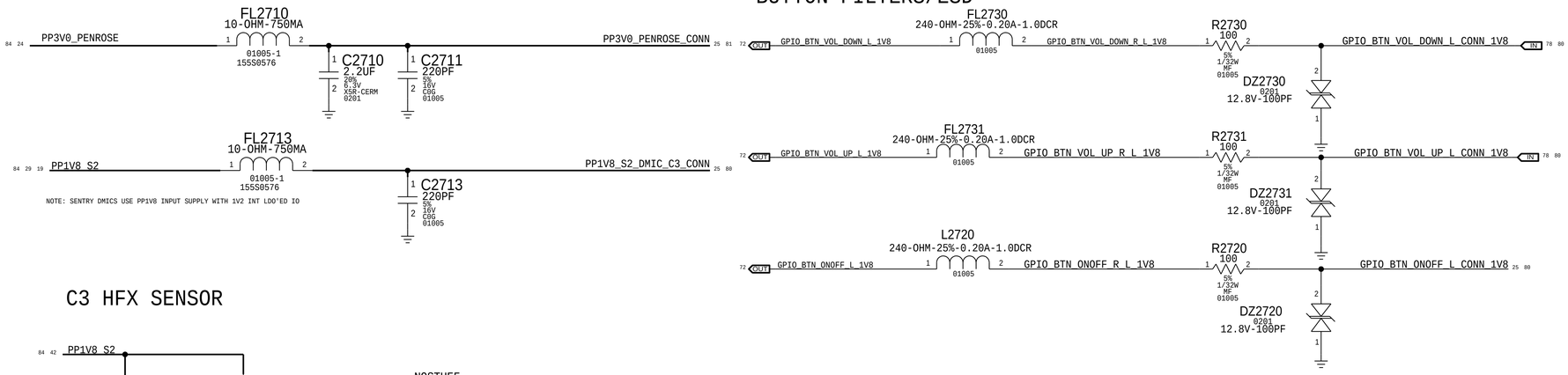
J52X VOLUME BUTTON FLEX B2B

MLB APN: 516S00186
FLEX APN: 516S00185

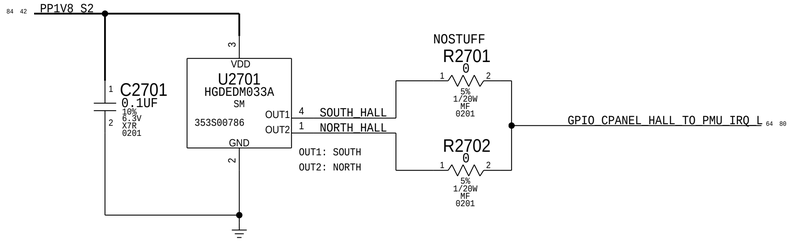
PACK_IGNORE=TRUE
PACK_OPTION=J522
516S00186
J2730
BM28P0.6-6DS/2-0.35V
F-ST-SM



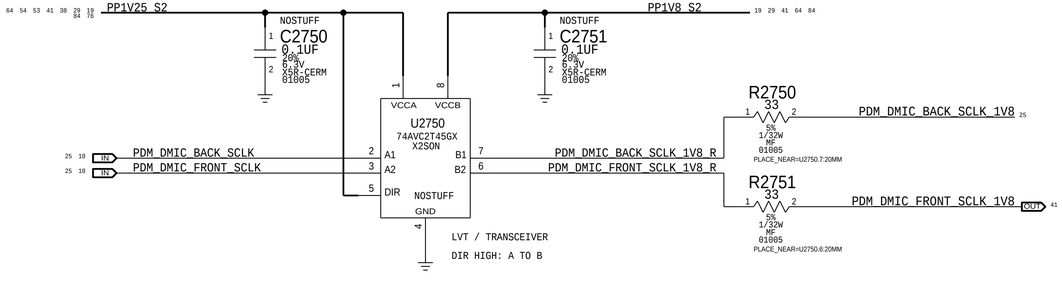
BUTTON FILTERS/ESD



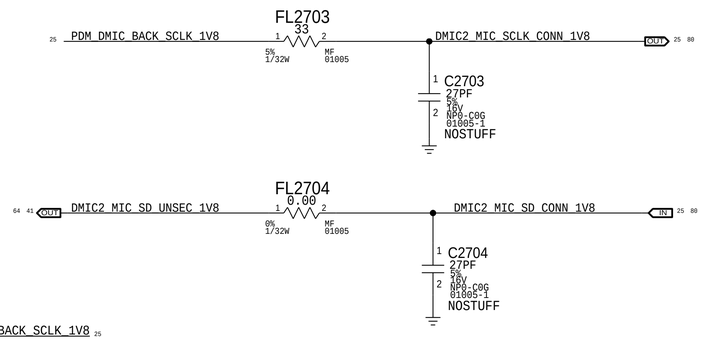
C3 HFX SENSOR



DMIC CLOCK LVT FOR FRONT AND BACK CLK



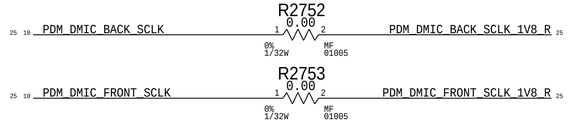
MIC#4 FILTERS



RFFE FILTERS

NOTE: RFFE FILTERS NOW ON BB PAGES

SENTRY JUMPERS



PART NUMBER	ALTERNATE FOR PART NUMBER	REFERENCE DESIGNATOR(S)	DESCRIPTION	BOM OPTION
155S00097	155S00018	FL2723,FL2725	FERR 800HM 500MA 0.18DCR 0201	
155S0664	155S00018	FL2723,FL2725	FERR 800HM 500MA 0.18DCR 0201	

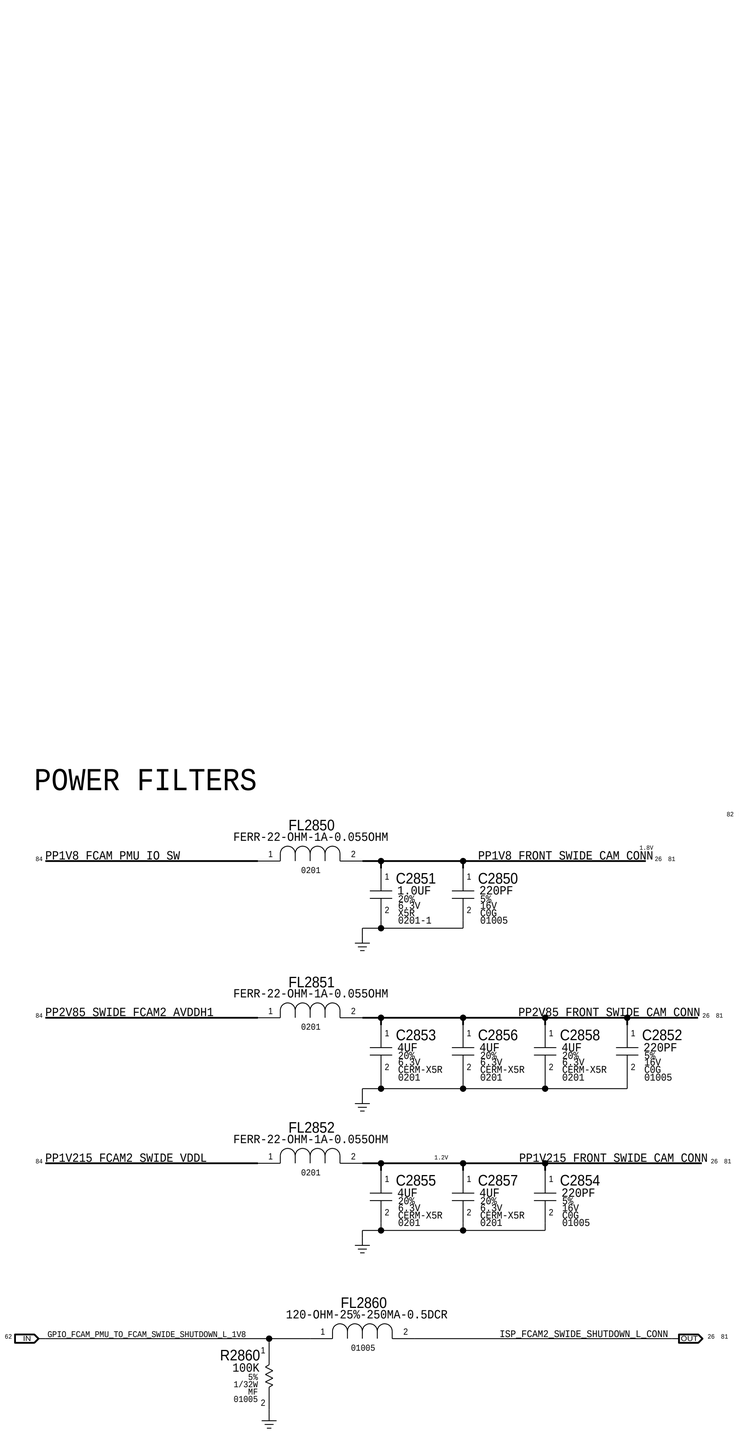
BOM_COST_GROUP=CAMERA

PAGE TITLE

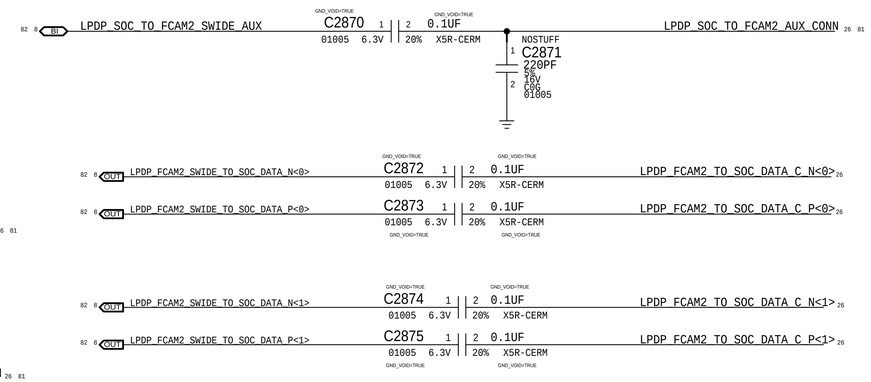
CAMERA: B2B STROBE & MISC

FRONT SWIDE CAMERA

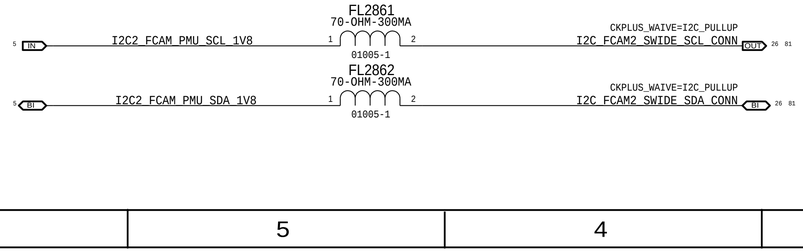
POWER FILTERS



LPDP AC COUPLING CAPS

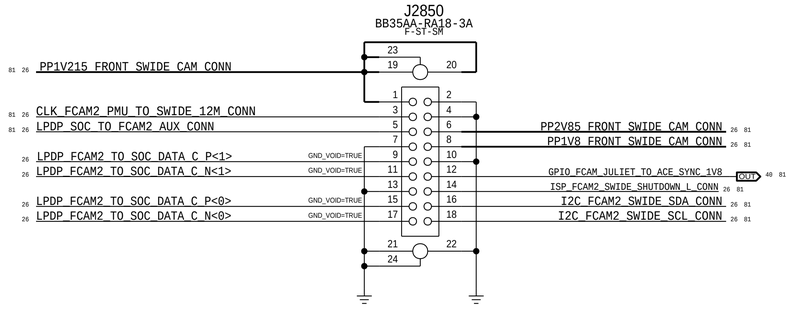


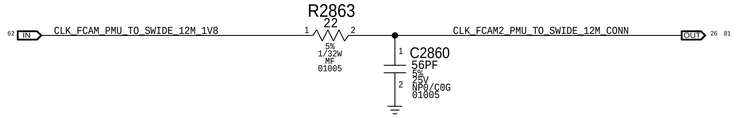
IO FILTERS



FRONT SWIDE CAM CONN

FLEX SIDE: 516S00396
MLB SIDE: 516S00395





BOM_COST_GROUP=CAMERA

PAGE TITLE

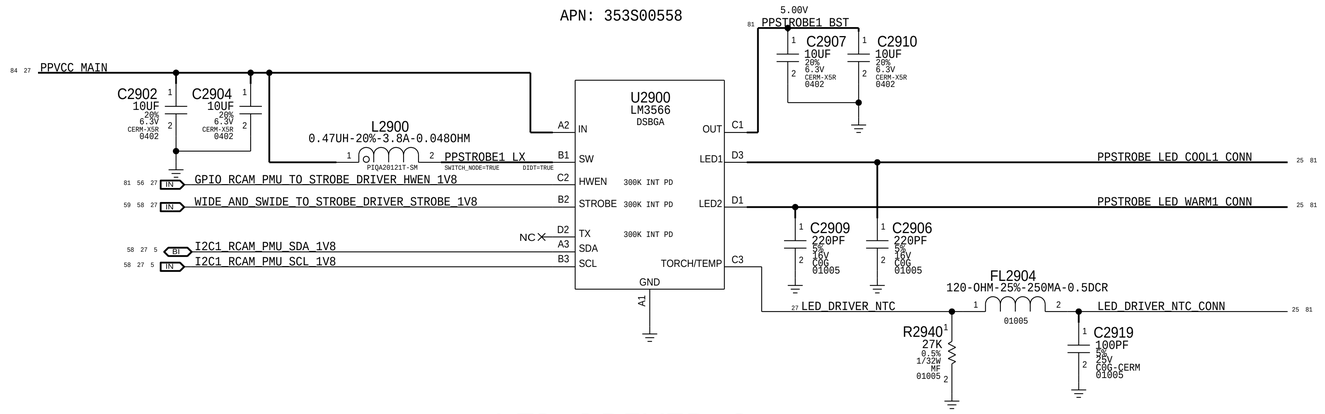
CAMERA: B2B FRONT

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

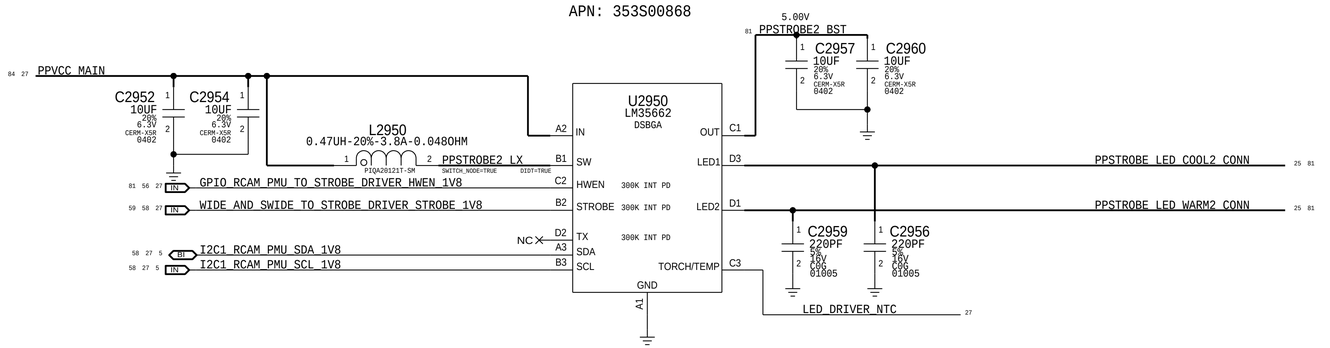
LED DRIVER 1

APN: 353S00558



LED DRIVER 2

APN: 353S00868



BOM_COST_GROUP=CAMERA

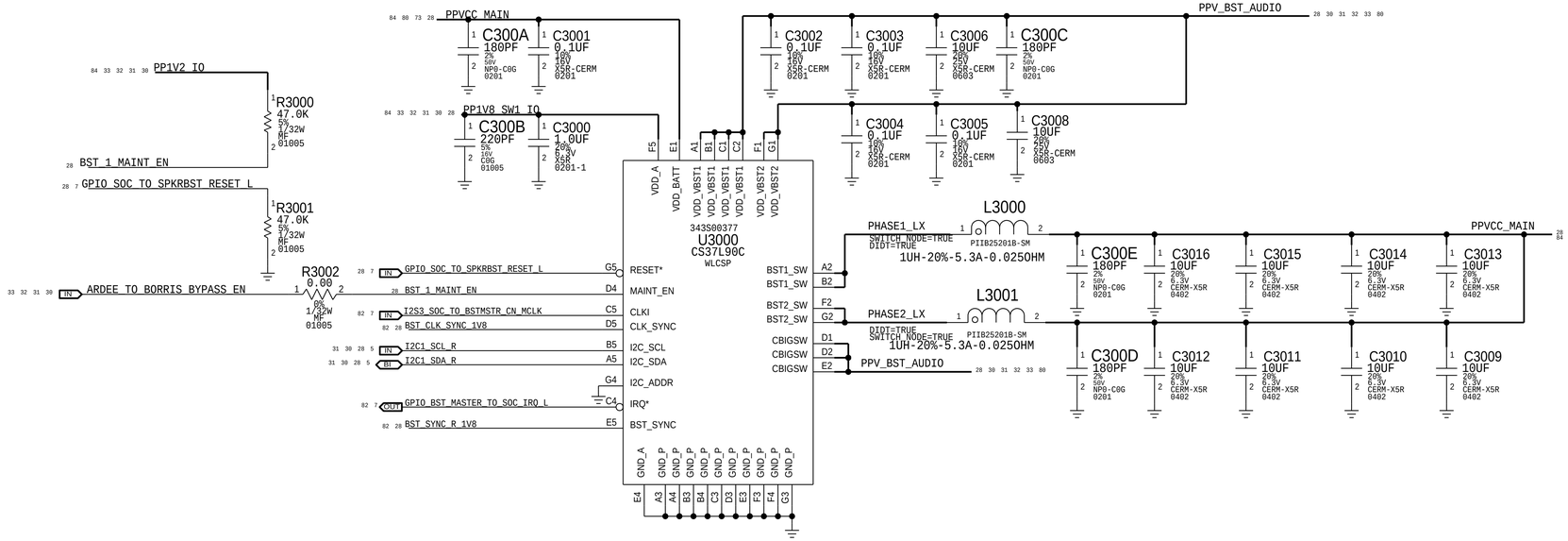
SYNC_MASTER=2517_MLB_A_REV_3.0 SYNC_DATE=10/10/2020

PAGE TITLE

CAMERA: STROBE

BORRIS BOOST

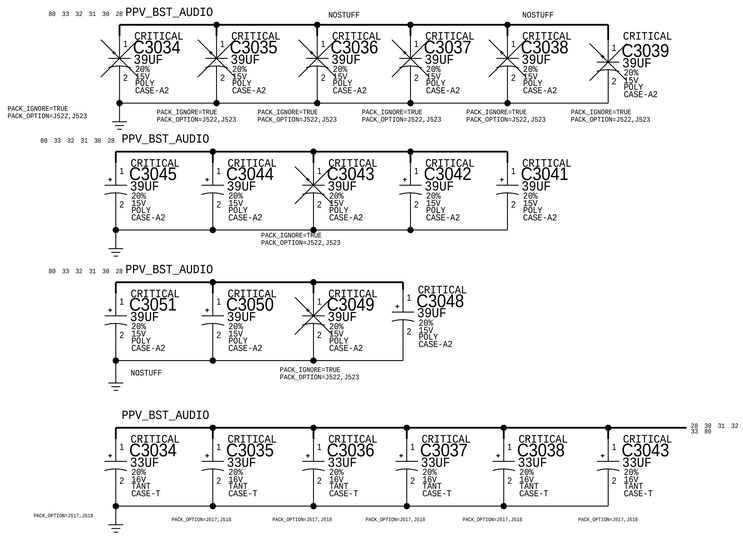
BOOST MASTER



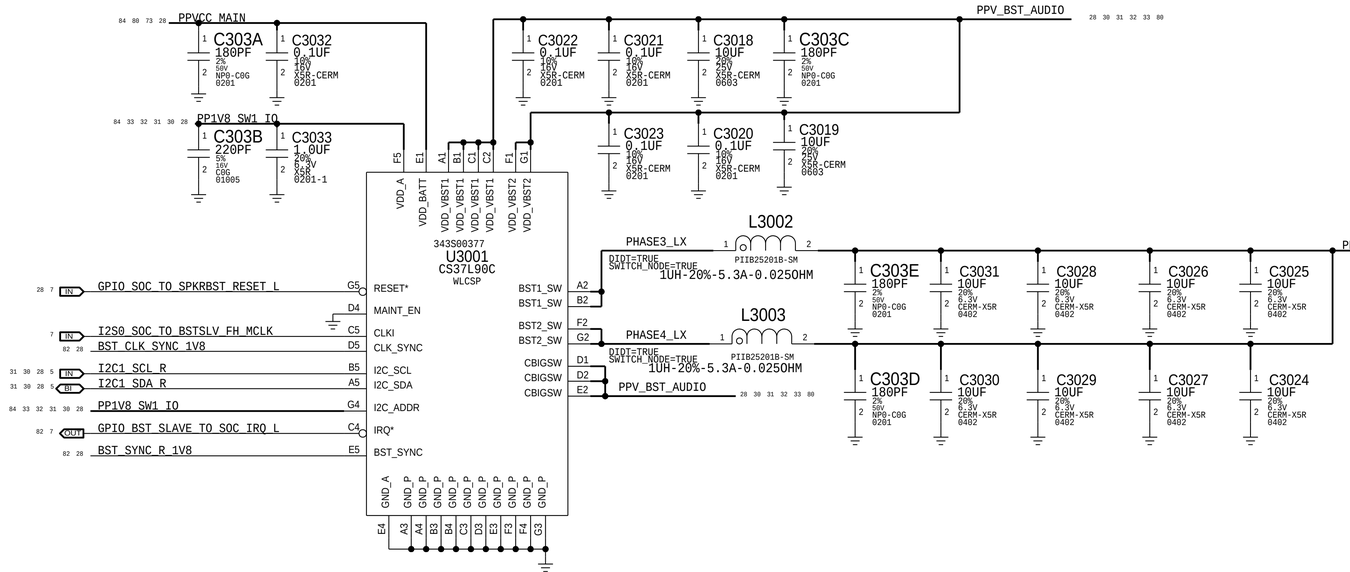
CS35L91 (ARDEE)			
ADDR PIN PULL	RESISTOR	I2C ADDRESS	
GND	0K	0X70	AMP1 FHRT
VDD	0K	0X72	AMP2 FHRW
GND	4.99K	0X74	AMP3 FHLT
VDD	4.99K	0X76	AMP4 FHLW
GND	20K	0X78	AMP5 CNRT
VDD	20K	0X7A	AMP6 CNRW
GND	100K	0X7C	AMP7 CNLT
VDD	100K	0X7E	AMP8 CNLW

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

CAP RESERVOIR



BOOST SLAVE



BOM_COST_GROUP=AUDIO

PAGE TITLE

AUDIO: BORRIS BOOST

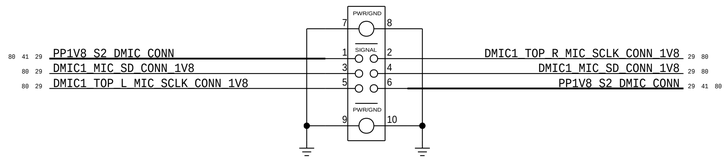
DMIC CONN AND FILTERS

PINOUT PER MIC FH FLEX REV 0.3

MIC FLEX B2B

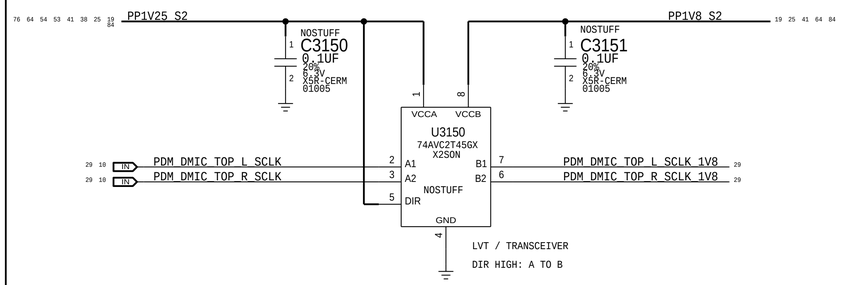
MLB APN: 516S00186
FLEX APN: 516S00185

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

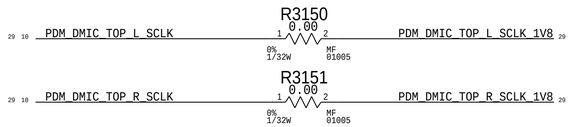


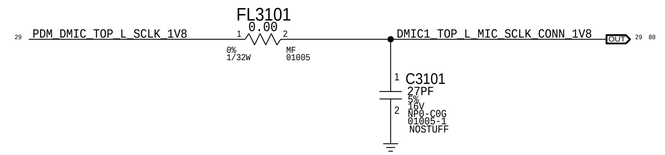
ROUTING	BUS	SELECT	LOCATION	DATA ASSERTS ON	DATA LATCHED ON
MIC#1	PDM0	HIGH	LEFT	CLK RISING EDGE	CLK FALLING EDGE
MIC#2	PDM0	LOW	RIGHT	CLK FALLING EDGE	CLK RISING EDGE
MIC#3	PDM1	HIGH	FRONT(ON TM)	CLK RISING EDGE	CLK FALLING EDGE
MIC#4	PDM1	LOW	REAR(C3)	CLK FALLING EDGE	CLK RISING EDGE
MIC#5	PDM2	HIGH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

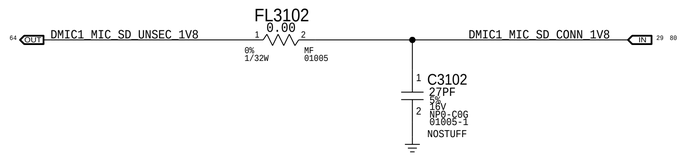
DMIC2 FILTERS

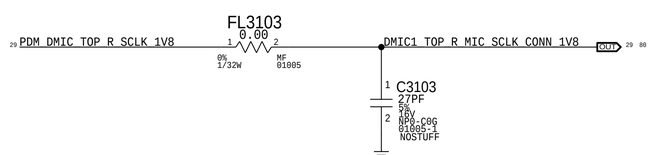


SENTRY JUMPERS









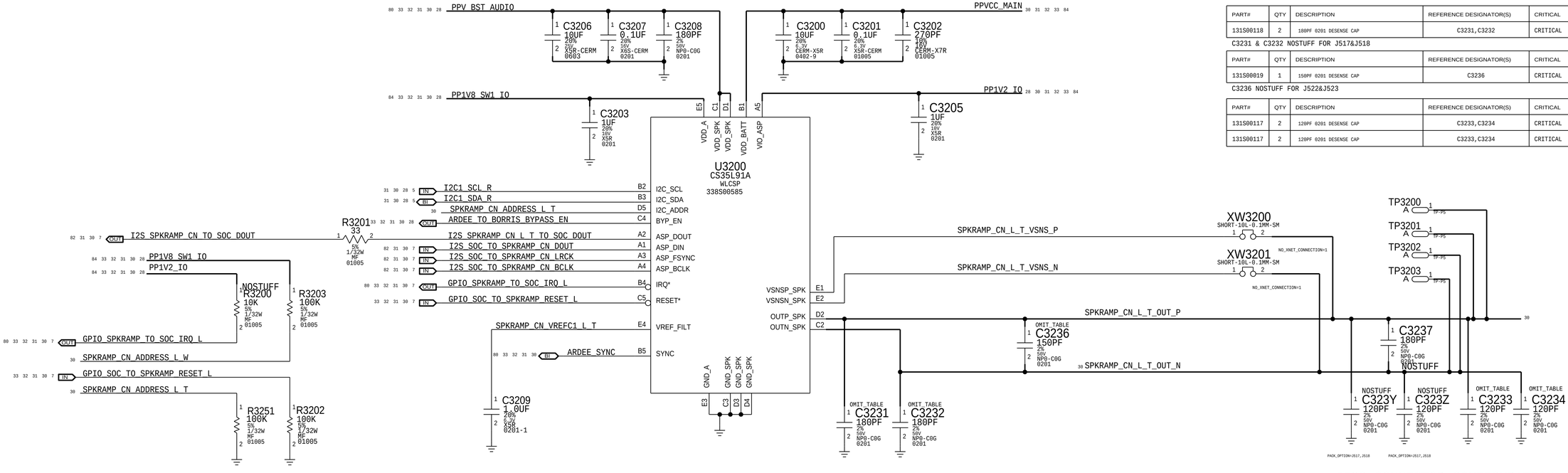
NOTE: SENTRY DMICS USE PP1V8 INPUT SUPPLY WITH 1V2 INT LDO'ED IO

BOM_COST_GROUP=AUDIO

PAGE TITLE

AUDIO: DMIC B2B & FILTERS

CN L TWEETER SPEAKER AMP



CN-L-T DESENSE CAP CONFIG

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

C3231 & C3232 NOSTUFF FOR J517&J518

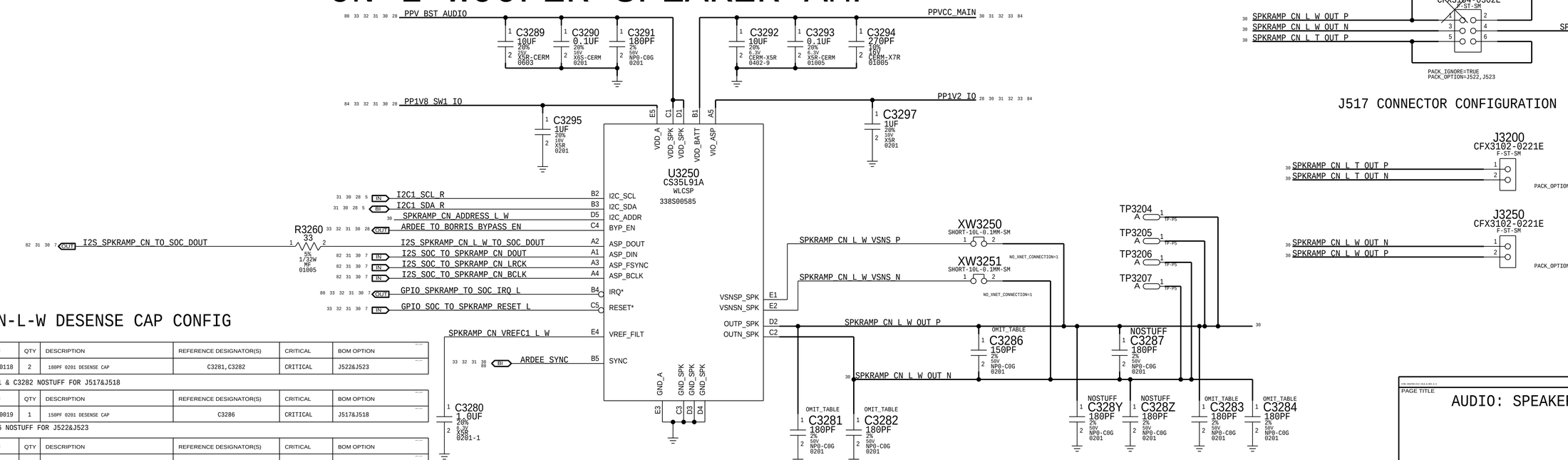
PART#	QTY	DESCRIPTION	REFERENCE DESIGNATOR(S)	CRITICAL	BOM OPTION
131S00019	1	150PF 0201 DESENSE CAP	C3236	CRITICAL	J517&J518

C3236 NOSTUFF FOR J522&J523

PART#	QTY	DESCRIPTION	REFERENCE DESIGNATOR(S)	CRITICAL	BOM OPTION
131S00117	2	120PF 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
131S00117	2	120PF 0201 DESENSE CAP	C3283,C3284	CRITICAL	J517&J518

C3283 & C3284 NOSTUFF FOR J522&J523

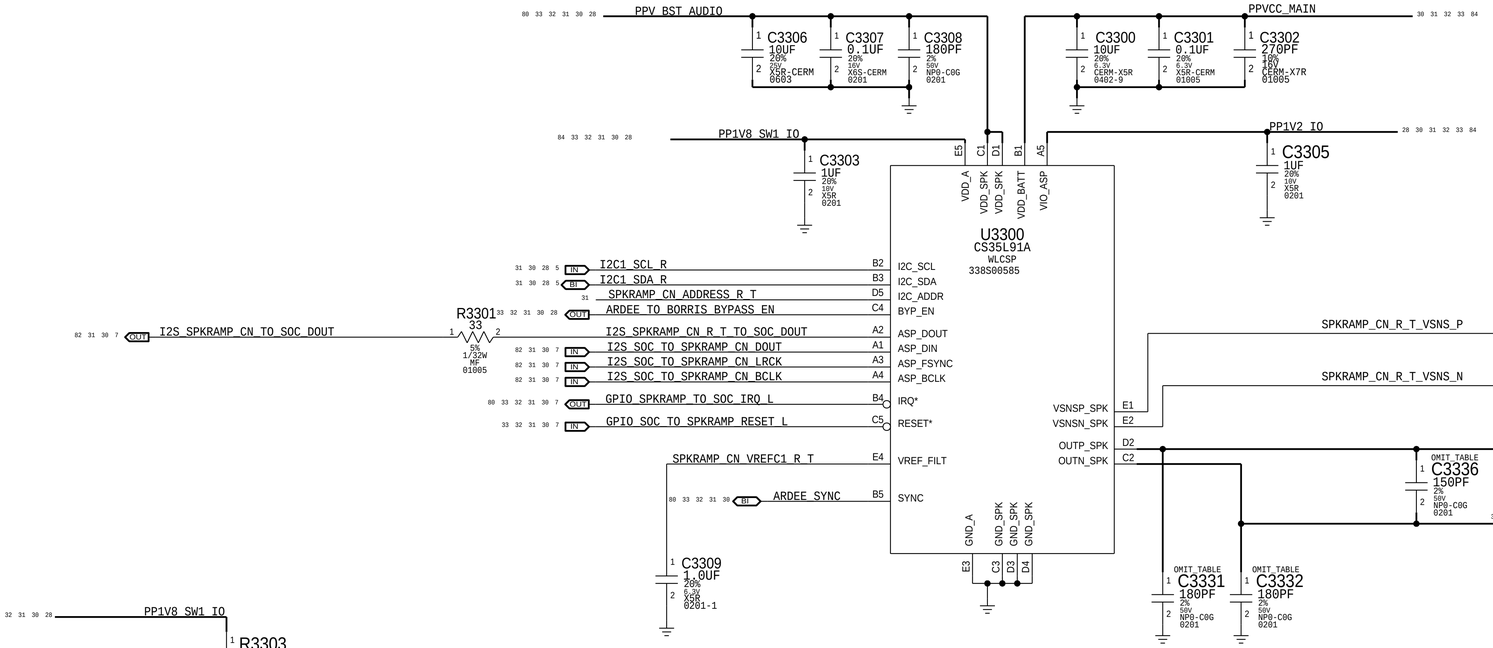
J517 CONNECTOR CONFIGURATION

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

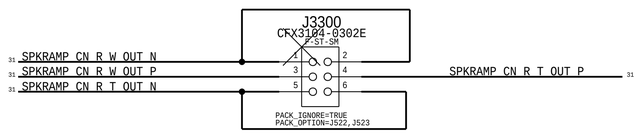
PART#	QTY	DESCRIPTION	REFERENCE DESIGNATOR(S)	CRITICAL	BOM OPTION
131S00019	1	150PF 0201 DESENSE CAP	C3336	CRITICAL	J517&J518

C3236 NOSTUFF FOR J522&J523

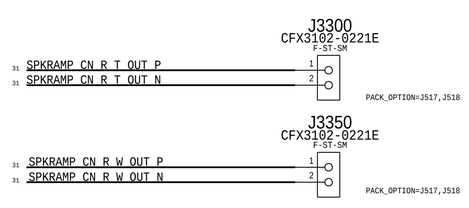
PART#	QTY	DESCRIPTION	REFERENCE DESIGNATOR(S)	CRITICAL	BOM OPTION
131S00118	2	180PF 0201 DESENSE CAP	C3333,C3334	CRITICAL	J517&J518

C3333 & C3334 NOSTUFF FOR J522&J523

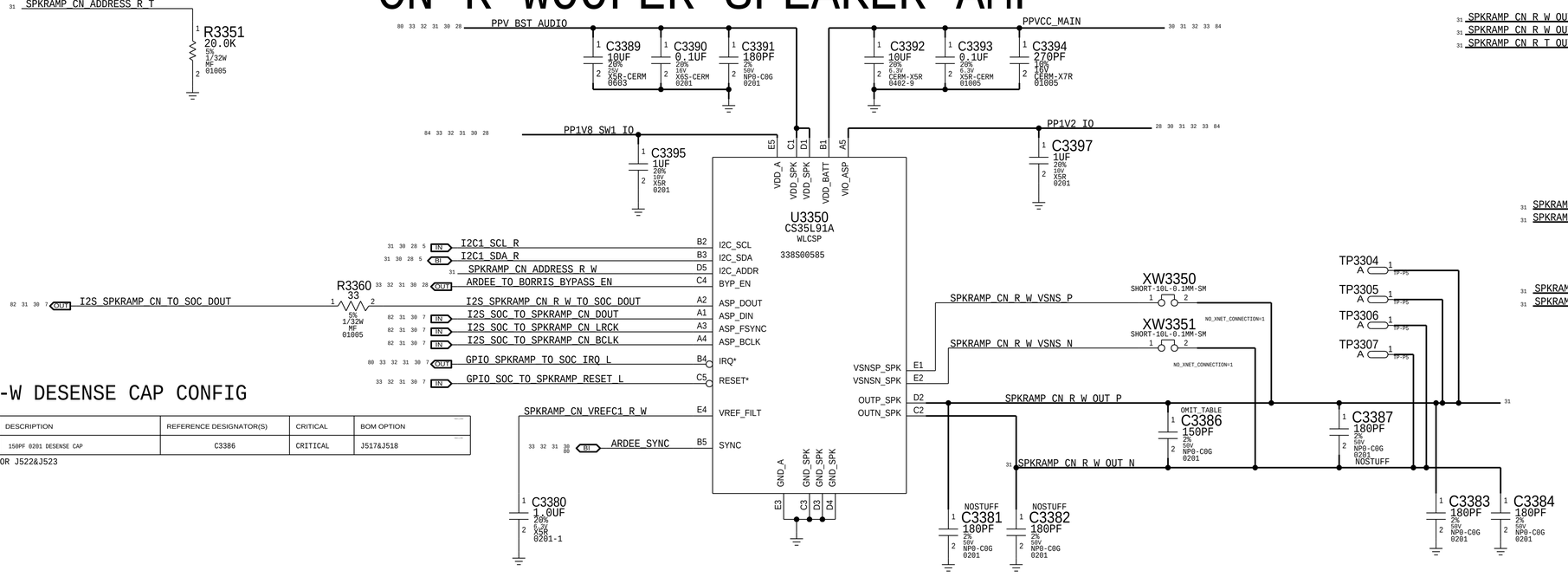
J522 CONNECTOR CONFIGURATION



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

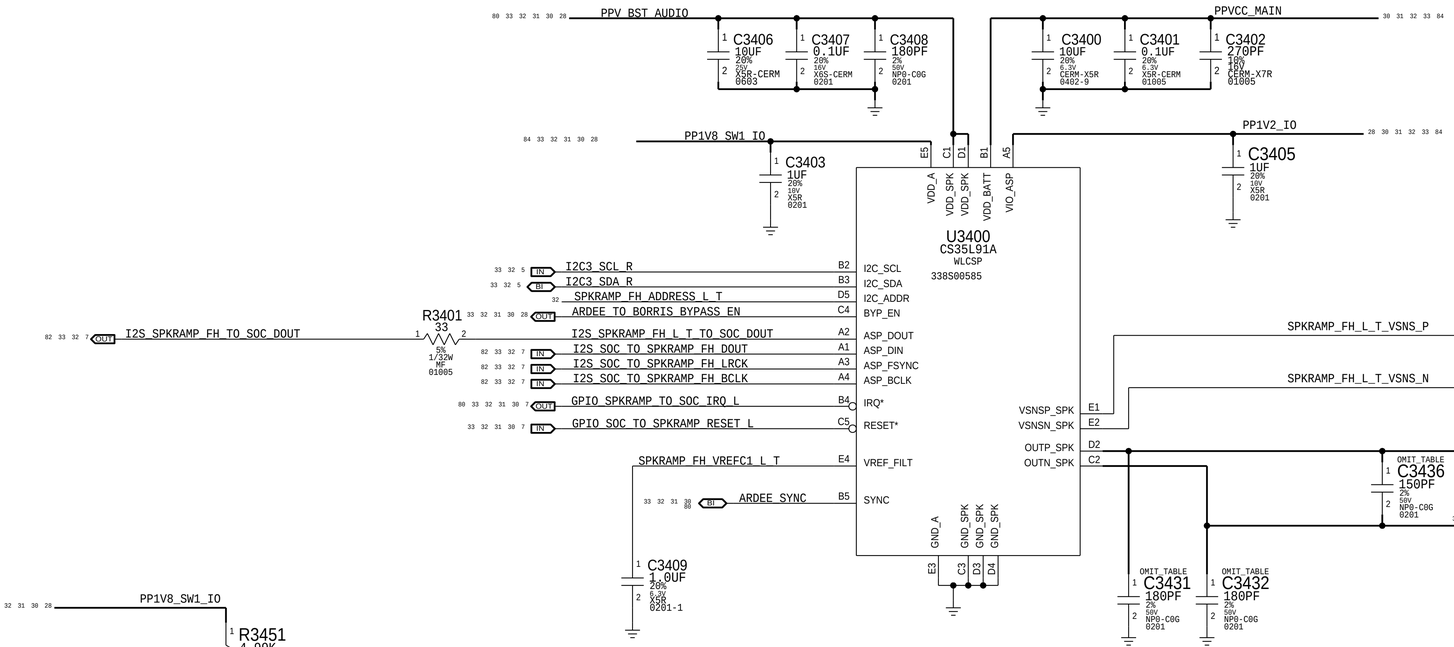
C3386 NOSTUFF FOR J522&J523

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

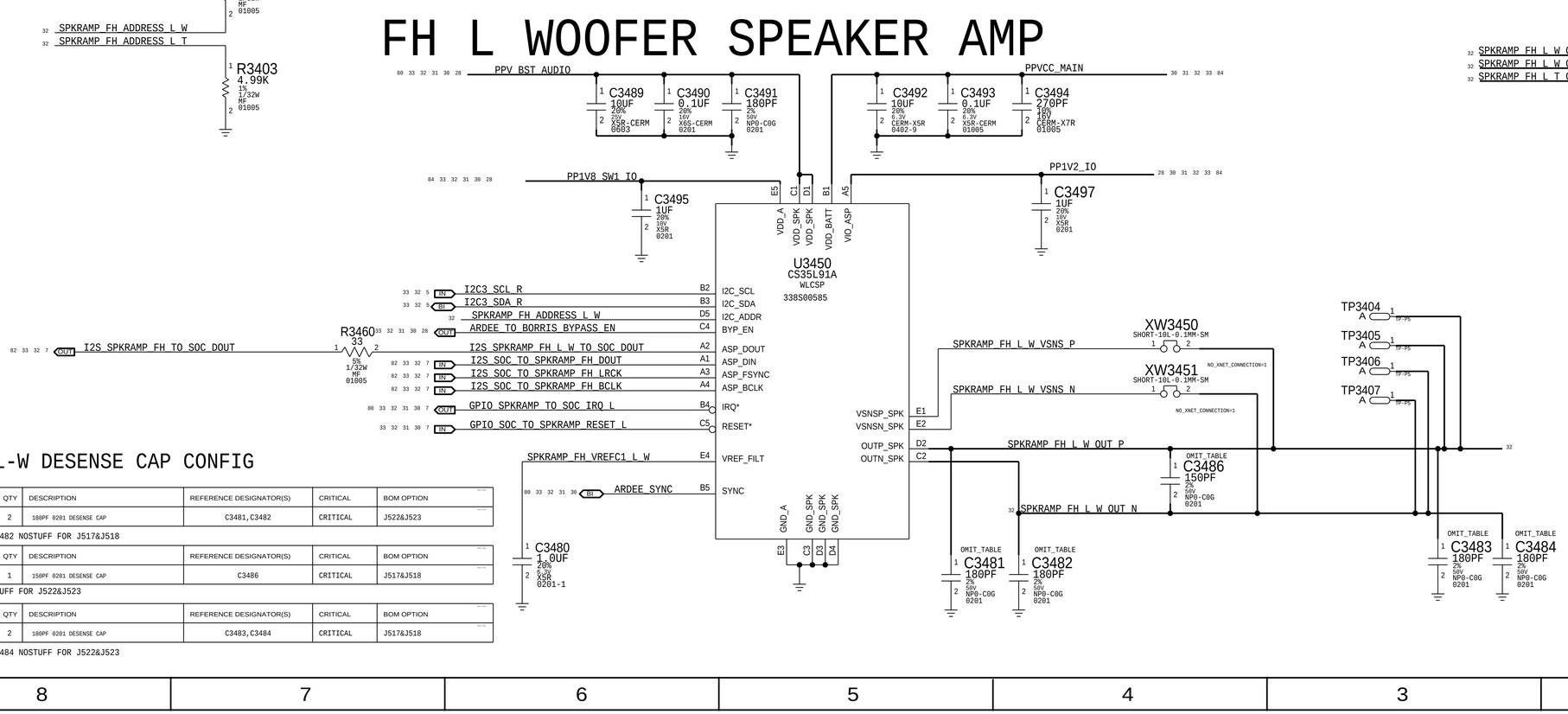
PART#	QTY	DESCRIPTION	REFERENCE DESIGNATOR(S)	CRITICAL	BOM OPTION
131S00019	1	150PF 0201 DESENSE CAP	C3436	CRITICAL	J517&J518

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

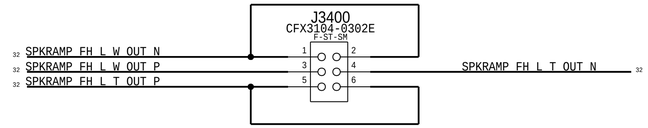
C3481 & C3482 NOSTUFF FOR J517&J518

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

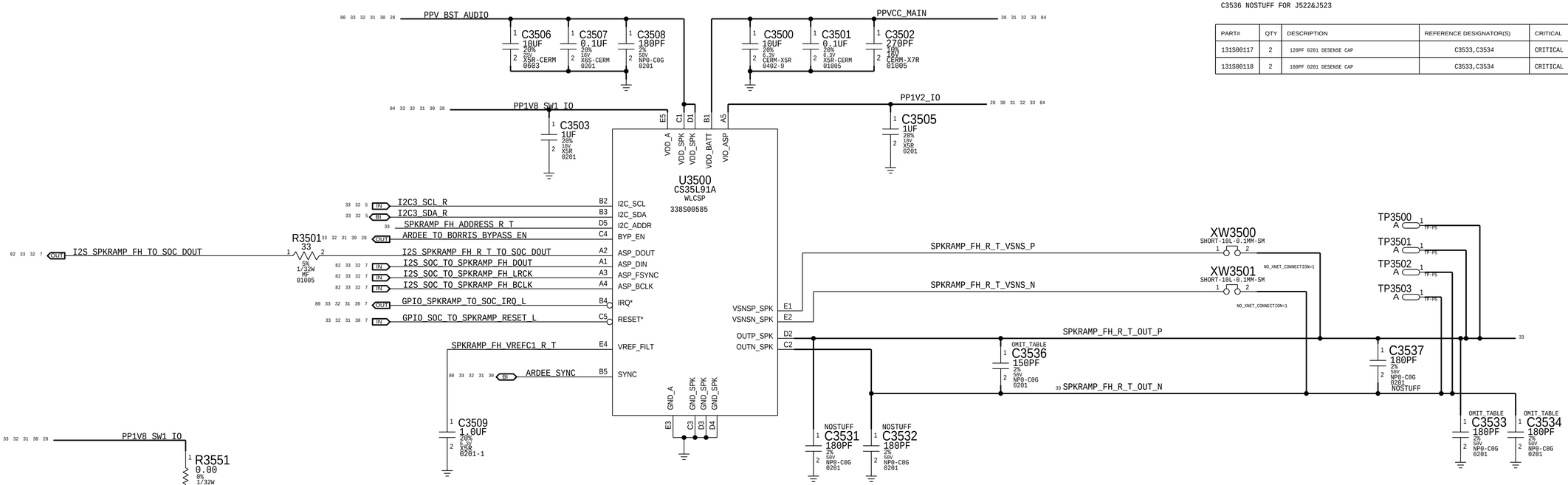


BOM_COST_GROUP=AUDIO

PAGE TITLE

AUDIO: SPEAKER AMPS (FHL)

FH R TWEETER SPEAKER AMP



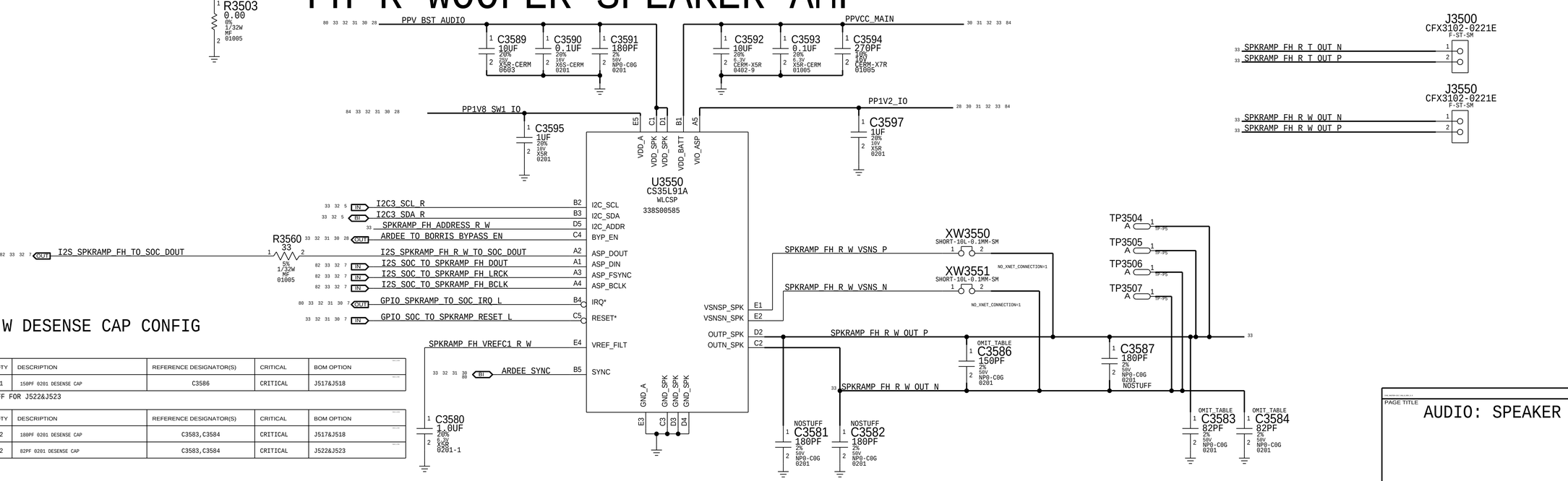
FH-R-T DESENSE CAP CONFIG

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

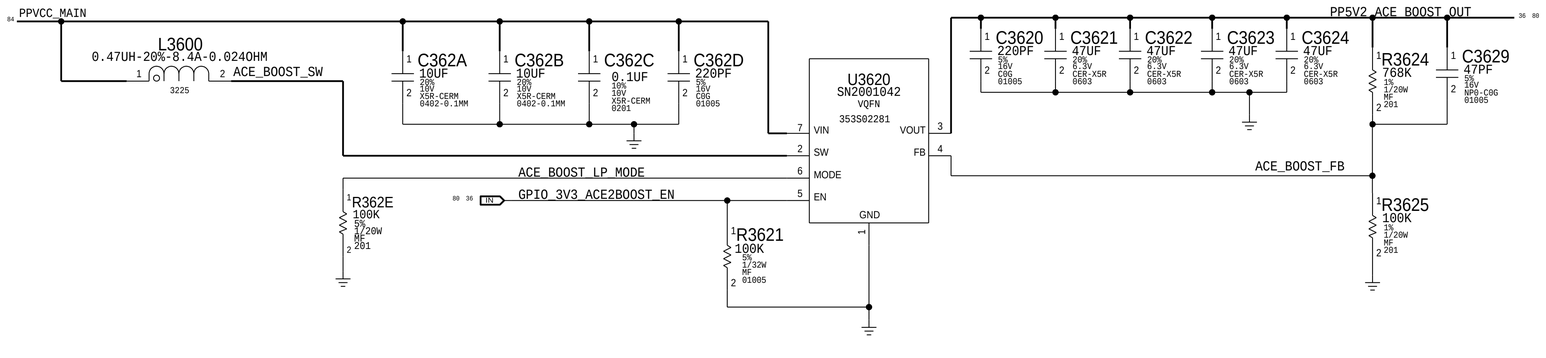
PART#	QTY	DESCRIPTION	REFERENCE DESIGNATOR(S)	CRITICAL	BOM OPTION
131S00118	2	180PF 0201 DESENSE CAP	C3583,C3584	CRITICAL	J517&J518
131S00018	2	82PF 0201 DESENSE CAP	C3583,C3584	CRITICAL	J522&J523

BOM_COST_GROUP=AUDIO

PAGE TITLE

AUDIO: SPEAKER AMPS (FHR)

ACE BOOST

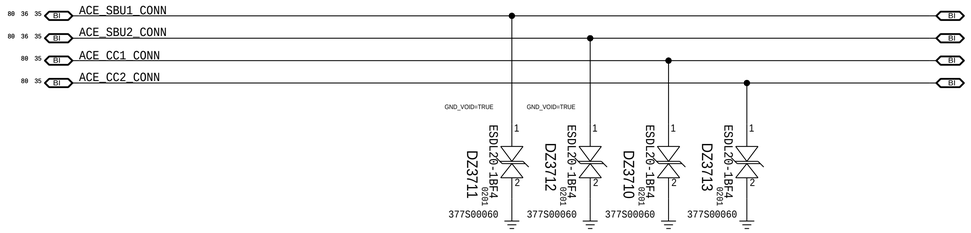


BOM_COST_GROUP=USB-C

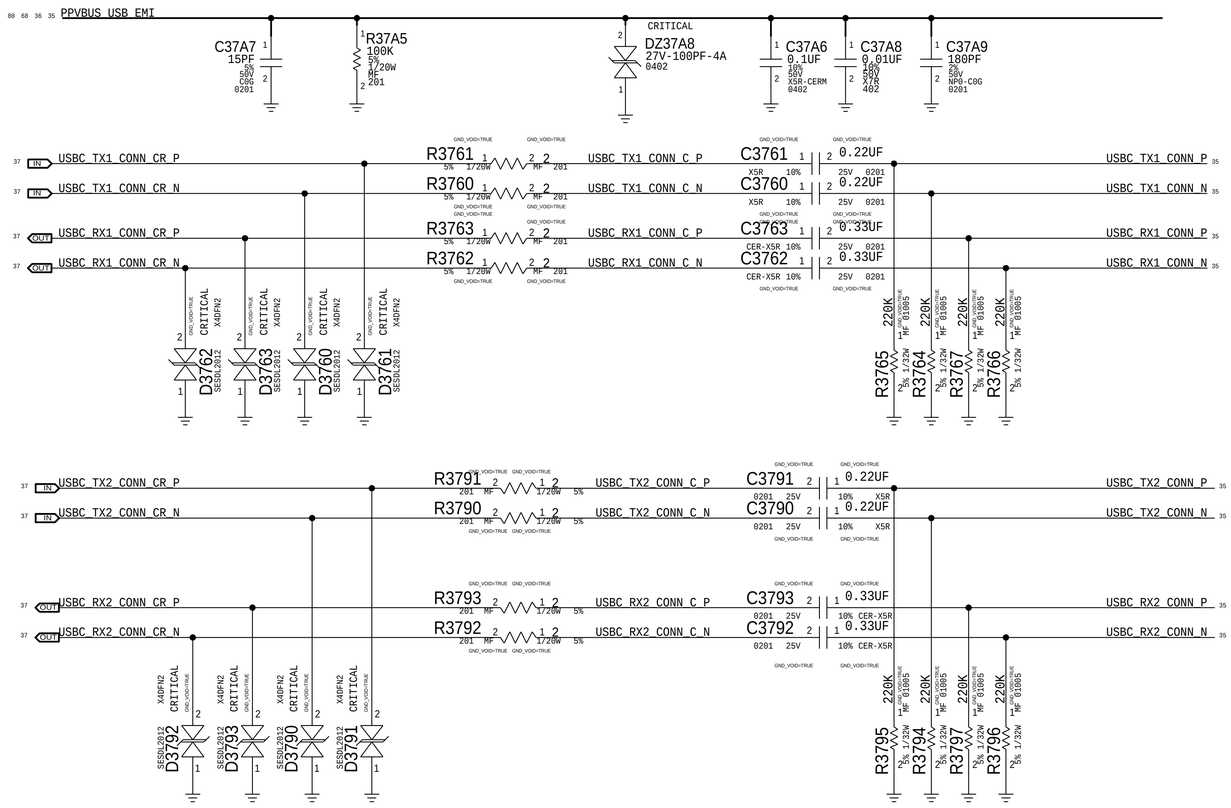
PAGE TITLE

IO: ACE PERIPHERALS

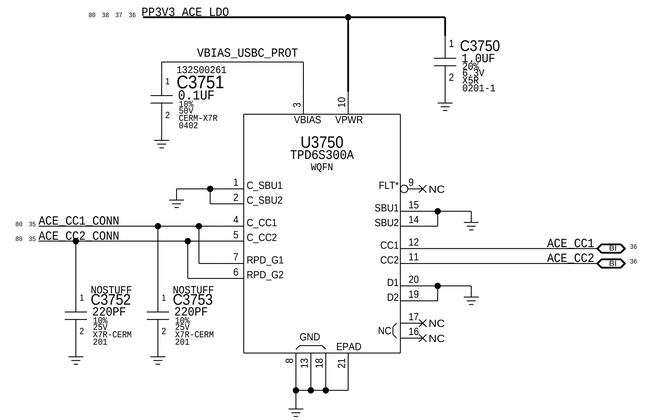
PART NUMBER	ALTERNATE FOR PART NUMBER	BOM OPTION	REF DES	COMMENTS:
372S0194	372S0187		Q3790,Q8990	XSTR,N-CHN,34V,500MA



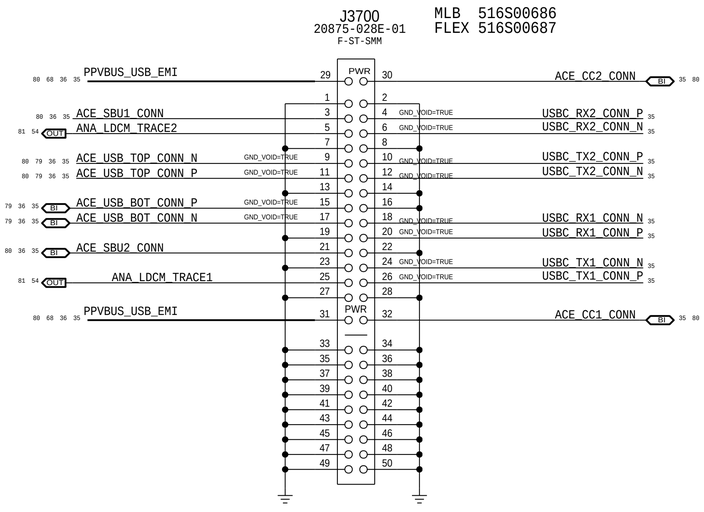
USB CONN FILTERS



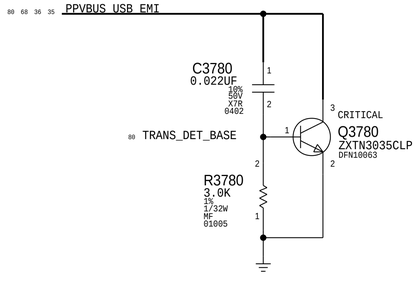
USB TYPE-C PORT PROTECTION



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

84 73 68 36 PPVBUS PROT

80 34 PP5V2 ACE BOOST OUT

K9 L10 M9 N10 K11 L12 M11 N12 N14 M13 — PP_5V0 >2.5 UF

G2 G4 H1 H3 J2 J4 K1 K3 L2 L4 M1 M3 N2 N4 — PP_CABLE >2.5 UF

PP_HV

G6 G8 H5 H7 J6 J8 K5 K7 L6 L8 M5 M7 N6 N8 — VBUS >8.5 UF

15V

C3808 1UF 10% 35V X5R 0402

D3800 DSN2 NSR20F40NX_G CRITICAL — REVERSE VOLTAGE = 40V MAX

PPVBUS USB EMI 35 36 68 80

U3800
CD3217B12BCE
FCBGA

POWER

>5 UF VIN_3V3 — C20 — PP3V3_S2_ACE_PARROT 36 54 84

>0.1 UF VDDIO — A12 — PP1V25_S2 36 84

SWD USES VDDIO VDDIO_CFG — D11

>5 UF LDO_3V3 — C22, D21 — PP3V3_ACE_LDO 35 36 37 38 80

TO USE RESETZ FOR REDRIVER

VIN_LV — L20 — PP1V8_S2 38 84

>0.1 UF VOUT_LV — L18 — ACE_TO_PMU_LDO1_EN_R_1V8 — R3891 1.00K MF 01005 5% 1/32W — ACE_TO_PMU_LDO1_EN_1V8 OUT 71 80

VRET — C16

SS — L22 — 1.55V PP_LDO_CORE — ACE_SS

>4.5 UF LDO_CORE — E22 — 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 — PLACE_NEAR=U3800.L22:2MM; C3850 0.47UF 20% 6.3V X5R 01005-1 NOSTUFF

VBUS_OPT — D5

PP_HV_OPT — F5

TYPE-C

PPVBUS_USB_EMI 35 36 68 80

PPVBUS_PROT 36 68 73 84

C_CC1 — M15, N16 — ACE_CC1

C_CC2 — M17, N18 — ACE_CC2

C3806 220PF 5% 25V C0G 01005; C3807 220PF 5% 25V C0G 01005

RPD_G1 — L14

RPD_G2 — L16

C_USB_TP — K19 — ACE_USB_TOP_P — GND_VOID=TRUE

C_USB_TN — K21 — ACE_USB_TOP_N — GND_VOID=TRUE

C_USB_BP — J20 — ACE_USB_BOT_P — GND_VOID=TRUE

C_USB_BN — J22 — ACE_USB_BOT_N — GND_VOID=TRUE

C_SBU1 — J16 — ACE_SBU1_CONN — BI 35 80

C_SBU2 — H15 — ACE_SBU2_CONN — BI 35 80

CRITICAL L3800 SYM_VER=2 — 1, 4 — ACE_USB_TOP_CONN_P — BI 35 79 80; NOSTUFF; 2, 3 — ACE_USB_TOP_CONN_N — BI 35 79 80; 3.25-OHM-0.1A-2.4GHZ TAM0605-4SM-COMBO GND_VOID=TRUE

CRITICAL L3801 SYM_VER=2 — 2, 3 — ACE_USB_BOT_CONN_P — BI 35 79 80; NOSTUFF; 1, 4 — ACE_USB_BOT_CONN_N — BI 35 79 80; 3.25-OHM-0.1A-2.4GHZ TAM0605-4SM-COMBO GND_VOID=TRUE

GND

GND_OPT — C18, E18, D17, G18

PORT_MUX

HRESET — B13 — 80 36 GPIO_1V2_ACE_HRESET

MRESET — A14

RESET* — B17 — 80 38 37 OUT GPIO_3V3_ACE2BSB_PARROT_RESET_L

CHECK THE DETAILS OF THE USAGE

GPIO0 — A2 — 80 ACE_GPIO0_NOT_USED; B1

GPIO1 — D1 — 37 OUT GPIO_3V3_ACE2BSB_FLASH_BUSY_L

GPIO2 — F1 — 36 GPIO_1V2_I2C_INT_L

GPIO3 — C2 — 80 34 OUT GPIO_3V3_ACE2BOOST_EN

GPIO4 — E2 — 80 37 OUT GPIO_3V3_ACE2BSB_FORCE_PWR

GPIO5 — B3 — 80 68 OUT GPIO_3V3_ACE2ORION_ACC_PWR_EN_L

GPIO6 — C4 — 80 73 68 36 OUT ACE_ORION_TO_CHARGER_OVP_SW_EN_L

DIGITAL CORE I/O & CONTROL

GPIO7 — D3 — 36 GPIO_1V2_ACE2SOC_DOCK_CONNECT

GPIO8 — E4 — 36 GPIO_1V2_ACE2PMU_RESET

GPIO9 — F3 — 36 GPIO_1V2_SOC2ACE_DFU_STATUS

GPIO10 — F7 — 36 GPIO_1V2_ACE2SOC_FORCE_DFU

NOTE: OUTPUT SHOULD BE 3V3, VIH MIN ON BELLATRIX2 IS 1V267

77 72 80 BI GPIO_FORCE_DFU — R3841 100 MF 01005 5% 1/32W — 80 68 36 IN BELLATRIX_TO_ACE_ACC_PWR_PRESENT_L_3V3

BUSPOWER — A18

I2C_ADDR — M19

R_OSC — R3802 15K 0.1% 0201 PLACE_NEAR=U3800.M21:2MM — M21 — ACE_ROSC

I2C_SDA_CNFG — A16 — 38 37 BI I2C_3V3_ACE_M_SDA

I2C_SCL_CNFG — B15 — 38 37 OUT I2C_3V3_ACE_M_SCL

TO BSB & PARROT

TO AP

TO SMC

I2C_SDA1 — B5 — 5 BI I2C0_SDA — 33 — R38D0 5% 1/32W 01005 MF CKPLUS_WAIVE=I2C_PULLUP — I2C_ACE_SDA_1V2_R

I2C_SCL1 — A4 — 5 IN I2C0_SCL — 33 — R38D1 5% 1/32W 01005 MF CKPLUS_WAIVE=I2C_PULLUP — I2C_ACE_SCL_1V2_R

I2C_IRQ1* — D7 — 80 36 7 OUT GPIO_ACE_TO_SOC_IRQ_L — 5% 1/32W 01005 MF CKPLUS_WAIVE=I2C_PULLUP

1V2 IO

I2C_SDA2 — B7 — 5 BI I2C_SMC_I2CM1_SDA — 33 — R38D2 5% 1/32W 01005 MF CKPLUS_WAIVE=I2C_PULLUP — I2C_SMC_ACE2_SDA_1V2_R

I2C_SCL2 — A6 — 5 IN I2C_SMC_I2CM1_SCL — 33 — R38D3 5% 1/32W 01005 MF CKPLUS_WAIVE=I2C_PULLUP — I2C_SMC_ACE2_SCL_1V2_R

I2C_IRQ2* — C8 — 80 10 OUT GPIO_ACE_TO_SMC_IRQ_L — 5% 1/32W 01005 MF CKPLUS_WAIVE=I2C_PULLUP

SPI_CLK — B9 — 38 SPI_3V3_ACE_CLK

SPI_MOSI — B11 — 38 SPI_3V3_ACE_MOSI

SPI_MISO — A10 — 38 SPI_3V3_ACE_MISO

SPI_SSZ — A8 — 38 SPI_3V3_ACE_CS_L

3V3 IO

SWD_DATA — E20 — 36 7 BI SWD_ACE_SWDIO — R3850 0.00 0% 1/32W MF 01005 — ACE_SWD_DATA_R

SWD_CLK — E16 — 36 7 IN SWD_ACE_SWCLK — R3851 0.00 0% 1/32W MF 01005 — ACE_SWD_CLK_R

1V2 IO

UART_RX — B19 — 82 36 ACE_UART_RX

UART_TX — A20 — 82 36 ACE_UART_TX — R38B0 0.00 0% 1/32W MF 01005 — GND_VOID=TRUE

USB_RP1_P — H19 — 80 38 BI 85_USB_SOC_P — R38B1 0.00 0% 1/32W MF 01005 — GND_VOID=TRUE — 85_USB_SOC_R_P

USB_RP1_N — H21 — 85_USB_SOC_R_N — GND_VOID=TRUE

USB_RP2_P — G20 — 80 38 BI 85_USB_SOC_N — R38B2 0.00 0% 1/32W MF 01005 — GND_VOID=TRUE — 85_USB_KIS_P

USB_RP2_N — G22 — 80 38 BI 85_USB_KIS_N — GND_VOID=TRUE

USB_RP3_P — F19 — 78 IN AP_TO_BB_USB_PN_PD — GND_VOID=TRUE

USB_RP3_N — F21 — 78 IN AP_TO_BB_USB_PN_PD — GND_VOID=TRUE

AUX_P — J12 — 37 36 BI ACE_AUXP2BSB_SBU1 — R3880 0.00 0% 1/32W MF 01005 — SOC_TO_ACE_AUX_P

AUX_N — H11 — 37 36 BI ACE_AUXN2BSB_SBU2 — R3881 0.00 0% 1/32W MF 01005 — SOC_TO_ACE_AUX_N

HPD — C12 — 38 OUT SPI_3V3_ACE_WP_L

3V3 IO

DEBUG0 — G12 — 80 36 7 IN UART_SOC_TO_DEBUG_TX

DEBUG1 — F11 — 80 36 7 OUT UART_DEBUG_TO_SOC_TX

DEBUG2 — E8 — 80 10 OUT JTAG_SOC_TCK

DEBUG3 — E12 — 80 10 BI JTAG_SOC_TMS

1V2 IO

DEBUG4 — G16 — 81 54 OUT ANA_ACE2LDCM_DEBUG4

DEBUG5 — F15 — 81 54 OUT ANA_ACE2LDCM_DEBUG5

ANALOG

DEBUG6 — D15 — 36 20 IN UART_GRAPE_TO_DEBUG_TX

DEBUG7 — D19 — 82 20 OUT UART_DEBUG_TO_GRAPE_TX

1V2 IO

GND — A22, H9, N20, B21, K15, N22

PARROT/BSB TO ACE INT

84 36 PP1V25_S2 — R3895 10K 5% 1/32W MF 01005 — C3890 0.1UF 20% 6.3V X5R-CERM 01005 — 31IS00057

U3890 74AUP1G08FS3 X2-DFN0808

80 38 IN GPIO_1V2_PARROT2ACE_INT_L — R3896 0.00 0% 1/32W MF 01005

37 IN GPIO_3V3_BSB2ACE_I2C_INT_L — GPIO_3V3_BSB2ACE_I2C_INT_L_R — GPIO_1V2_I2C_INT_L 36

R3897 100K 5% 1/32W MF 01005 NOSTUFF

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

36 GPIO_1V2_SOC2ACE_DFU_STATUS — MAKE_BASE=TRUE — GPIO_1V2_SOC2ACE_DFU_STATUS IN 6 38 80

36 GPIO_1V2_ACE2PMU_RESET — MAKE_BASE=TRUE — GPIO_1V2_ACE2PMU_RESET OUT 72 80

36 GPIO_1V2_ACE2SOC_DOCK_CONNECT — MAKE_BASE=TRUE — GPIO_1V2_ACE2SOC_DOCK_CONNECT OUT 10

SUPPORT PULLS

R3811 100K 5% 1/32W MF 01005 — GPIO_1V2_ACE_HRESET 36 80

R3814 100K 5% 1/32W MF 01005 — GPIO_1V2_ACE2PMU_RESET 36

R3815 100K 5% 1/32W MF 01005 — GPIO_1V2_ACE2SOC_DOCK_CONNECT 36

R3816 100K 5% 1/32W MF 01005 — GPIO_1V2_SOC2ACE_DFU_STATUS 36

R3817 2.21M 1% 1/32W MF 01005 — SWD_ACE_SWDIO 7 36

R3818 2.21M 1% 1/32W MF 01005 — SWD_ACE_SWCLK 7 36

R3870 100K 5% 1/32W MF 01005 NOSTUFF — ACE_ORION_TO_CHARGER_OVP_SW_EN_L 36 68 73 80

R3824 100K 5% 1/32W MF 01005 NOSTUFF — ACE_AUXP2BSB_SBU1 36 37

R3825 1.00M 5% 1/32W MF 01005 — ACE_UART_RX 36 82

R3860 100K 5% 1/32W MF 01005 NOSTUFF — ACE_AUXN2BSB_SBU2 36 37

PP3V3_S2_ACE_PARROT 36 54 84

R3833 100K 5% 1/32W MF 01005 NOSTUFF — ACE_AUXN2BSB_SBU2 36 37

PP3V3_ACE_LDO 35 36 37 38 80

R3827 100K 5% 1/32W MF 01005 — BELLATRIX_TO_ACE_ACC_PWR_PRESENT_L_3V3 36 68 80

PP1V25_S2 36 84

R3830 1.00M 5% 1/32W MF 01005 — UART_SOC_TO_DEBUG_TX 7 36 80

R3831 1.00M 5% 1/32W MF 01005 — UART_DEBUG_TO_SOC_TX 7 36 80

R3832 1.00M 5% 1/32W MF 01005 — UART_GRAPE_TO_DEBUG_TX — CHECK:BACK POWERING 20 36

UART DEBUG LOOPBACK

R3835 1.00M 5% 1/32W MF 01005 — GPIO_ACE_TO_SOC_IRQ_L 7 36 80

82 36 ACE_UART_RX — R3834 0.00 0% 1/32W MF 01005 — ACE_UART_TX 36 82

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 — USBC_SOC_TO_BSB_TX1_C_P — J1
85_CIO_HS_SOC_TX0_C_N — C3921 0.22UF — USBC_SOC_TO_BSB_TX1_C_N — J2
85_CIO_HS_SOC_TX1_C_P — C3922 0.22UF — USBC_SOC_TO_BSB_TX2_C_P — C1
85_CIO_HS_SOC_TX1_C_N — C3923 0.22UF — USBC_SOC_TO_BSB_TX2_C_N — C2
85_CIO_HS_SOC_RX0_P — C3924 0.22UF — USBC_BSB_TO_SOC_TX1_C_P — G1
85_CIO_HS_SOC_RX0_N — C3925 0.22UF — USBC_BSB_TO_SOC_TX1_C_N — G2
85_CIO_HS_SOC_RX1_P — C3926 0.22UF — USBC_BSB_TO_SOC_TX2_C_P — E1
85_CIO_HS_SOC_RX1_N — C3927 0.22UF — USBC_BSB_TO_SOC_TX2_C_N — E2

(C3920–C3927: 0.22UF 20% 6.3V X5R 0201; GND_VOID=TRUE)

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 — R3910 33K 1% 1/32W MF 01005 — L8 PA_AUX_P
CIO_SOC_AUXCH_R_N — R3911 33K 1% 1/32W MF 01005 — M8 PA_AUX_N

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

USBC_3V3_SOC2BSB_HSX_LSTX — R3908 1M 5% 1/20W MF 0201 NOSTUFF — M7 PA_LSTX_SBU1
USBC_3V3_BSB2SOC_HSX_LSRX — R3909 1M 5% 1/20W MF 0201 NOSTUFF — L7 PA_LSRX_SBU2

PP3V3_BSB

GPIO_3V3_BSB2ACE_I2C_INT_L — A10 I2C_INT
I2C_3V3_ACE_M_SCL — C9 I2C_SCL
I2C_3V3_ACE_M_SDA — E7 I2C_SDA

BSB_GPIO_5 — B9 POC_GPIO_5
BSB_GPIO_6 — A8 POC_GPIO_6
BSB_FLASH_SHARE_EN — A4 POC_GPIO_10
BSB_FLASH_MSTR_H_SLV_L — A5 POC_GPIO_11
BSB_GPIO_12 — A6 POC_GPIO_12

BB XTAL

PP3901 P3MM_SM — BSB_THERMDA — M11 THERMDA

BSB_XTAL25M_IN_R — R3903 0 0201 MF 5% 1/20W — BSB_XTAL25M_IN — L9 XTAL_25_IN
C3903 20PF 5% 25V C0G 0201
C3902 20PF 5% 25V C0G 0201
Y3900 25MHZ-25PPM-20PF-50OHM 2.00X1.60-SM — M9 XTAL_25_OUT
BSB_XTAL25M_OUT_R — R3902 0 0201 MF 5% 1/20W — BSB_XTAL25M_OUT

L12 MONDC_SVR
A11 MONDC
M12 TEST_EDM
A12 NC_A12 — NC
J6 NC_J6 — NC
L3 NC_L3 — NC
J5 NC_J5 — NC

U3900 9999HH BGA SYM 1 OF 2

SOC SIDE: ASSRXP1 J1, ASSRXN1 J2, ASSRXP2 C1, ASSRXN2 C2, ASSTXP1 G1, ASSTXN1 G2, ASSTXP2 E1, ASSTXN2 E2, PA_AUX_P L8, PA_AUX_N M8, PA_LSTX_SBU1 M7, PA_LSRX_SBU2 L7, I2C_INT A10, I2C_SCL C9, I2C_SDA E7, POC_GPIO_5 B9, POC_GPIO_6 A8, POC_GPIO_10 A4, POC_GPIO_11 A5, POC_GPIO_12 A6, THERMDA M11, XTAL_25_IN L9, XTAL_25_OUT M9, MONDC_SVR L12, MONDC A11, TEST_EDM M12, NC_A12 A12, NC_J6 J6, NC_L3 L3, NC_J5 J5

USB-C CONN SIDE: BSSRXP1 J12, BSSRXN1 J11, BSSRXP2 C12, BSSRXN2 C11, BSSTXP1 G12, BSSTXN1 G11, BSSTXP2 E12, BSSTXN2 E11, BSBU1 M10, BSBU2 L10, PERST* B8, RESET* L11, TDI A3, TMS C3, TCK B5, TDO C5, EE_DI C6, EE_DO B4, EE_CS* B6, EE_CLK C7, TEST_EN B11, TEST_PWR_GOOD B3, RBIAS L4, RSENSE L5, ATEST_P A1, ATEST_N A2, FORCE_PWR B10, FLASH_BUSY* A9, FUSE_VQPS_64 B2, SMBUS_SCL A7, SMBUS_SDA B7

USBC_RX1_CONN_CR_P — USBC_RX1_CONN_CR_N — USBC_RX2_CONN_CR_P — USBC_RX2_CONN_CR_N — USBC_TX1_CONN_CR_P — USBC_TX1_CONN_CR_N — USBC_TX2_CONN_CR_P — USBC_TX2_CONN_CR_N

ACE_AUXP2BSB_SBU1 — ACE_AUXN2BSB_SBU2 — GPIO_3V3_PMU2BSB_PERST_L — GPIO_3V3_ACE2BSB_PARROT_RESET_L

PP3V3_BSB: R3974 10K, R3973 10K, R3972 10K, R3971 10K (5% 1/32W MF 01005)

BSB_JTAG_TDI — BSB_JTAG_TMS — BSB_JTAG_TCK — BSB_JTAG_TDO

SPI_3V3_BSB_MOSI — SPI_3V3_BSB_MISO — SPI_3V3_BSB_CS_L — SPI_3V3_BSB_CLK

To SPI Flash

BSB_TEST_PWR_GOOD

BSB_RBIAS — R3907 4.75K 0.5% 1/20W TF 0201
BSB_RSENSE — R3906 100 5% 1/20W MF 0201

ATEST_P: NC
ATEST_N: NC

PP3V3_BSB — R3930 NOSTUFF 10K 5% 1/32W MF 01005

GPIO_3V3_ACE2BSB_FORCE_PWR — R3931 10K 5% 1/32W MF 01005

GPIO_3V3_ACE2BSB_FLASH_BUSY_L

BSB_SMBUS_SCL — BSB_SMBUS_SDA

PP3V3_BSB: C3936 2.2UF, C3937 2.2UF (20% 6.3V X5R-CERM 0201)

XW3901 SM — NO_XNET_CONNECTION=1 — PP3V3_BSB

PP3V3_BSB_S0_SVR: C3934 2.2UF, C3932 22UF 10V X5R 0402, C3933 22UF 10V X5R 0402

XW3900 SHORT-10L-0.1MM-SM — NO_XNET_CONNECTION=1 — P0V9_BSB_SVR_PGND

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

U3900 9999HH BGA SYM 2 OF 2

PP3V9_BSB_SVR — C396A 22UF, C3960 22UF, C3961 22UF, C3962 22UF, C3963 22UF, C3964 4UF, C3965 4UF, C3966 4UF, C3967 4UF, C3968 4UF, C3969 4UF (20% 6.3V X5R-CERM 0402/0201), C396Z 18PF 5% 25V CERM-C0G 01005

VCC0P9_SVR_ANA: F6, G6
VCC0P9_SVR_PB_ANA: E9, G9

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

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

PP0V9_BSB_LVR — L6 VCC0P9_LVR, M6 VCC0P9_LVR_SENSE

PP3V3_BSB_ANA — E5 VCC3P3_LC, L2 VCC3P3_ANA
PP0V9_BSB_LC — J3 VCC0P9_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

F3, F5, G5 VSS
B1, B12, D1, D11, D12, D2, F1, F11, F12, F2 VSS_ANA

VCC3P3_SX E6
VCC3P3A J7
VCC3P3_SVR M4, M5
VCC0P9_SVR E3, G3
SVR_IND L1, M1
SVR_VSS M2, M3, F7, F9, G7, H1, H11, H12, H2, J9, K1, K11, K12, K2

C3943 12PF 5% 25V NP0-C0G 0201
C3930 2.2UF 20% 6.3V X5R-CERM 0201
C3931 10UF 20% 6.3V CERM 0402

BSB_SMBUS_SCL — R3952 100K 5% 1/32W MF 01005
GPIO_3V3_BSB2ACE_I2C_INT_L — R3923 2.2K 5% 1/32W MF 01005
BSB_SMBUS_SCL — R3920 2.2K 5% 1/32W MF 01005
BSB_SMBUS_SDA — R3924 2.2K 5% 1/32W MF 01005
BSB_GPIO_12 — R3945 100K 5% 1/32W MF 01005
BSB_FLASH_SHARE_EN — R3943 100K 5% 1/32W MF 01005
BSB_GPIO_6 — R3941 NOSTUFF 10K 5% 1/32W MF 01005
R3926 0.00 01005 MF 0% 1/32W
GPIO_3V3_PMU2BSB_PERST_L — R3951 NOSTUFF 10K 5% 1/32W MF 01005
GPIO_3V3_ACE2BSB_PARROT_RESET_L — R3946 100K 5% 1/32W MF 01005
R3947 NOSTUFF 100K 5% 1/32W MF 01005
R3948 100K 5% 1/32W MF 01005
R3949 NOSTUFF 100K 5% 1/32W MF 01005
BSB_GPIO_5 — R3950 100K 5% 1/32W MF 01005

CONNECT TO GND PIN
CLOSEST TO THERMDA PIN

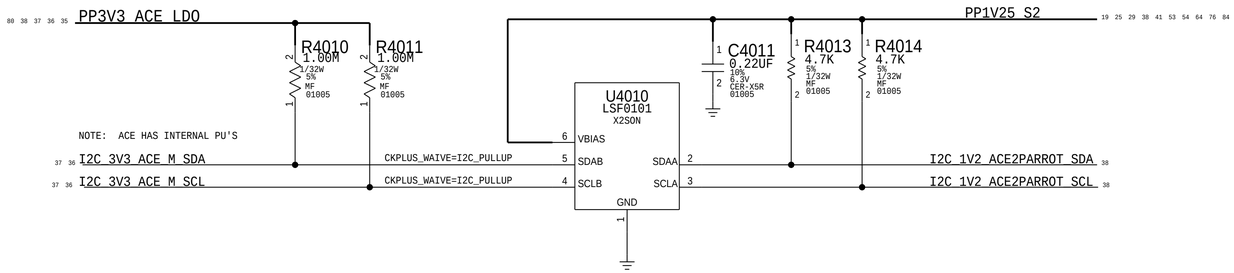
BOM_COST_GROUP=USB-C

PAGE TITLE

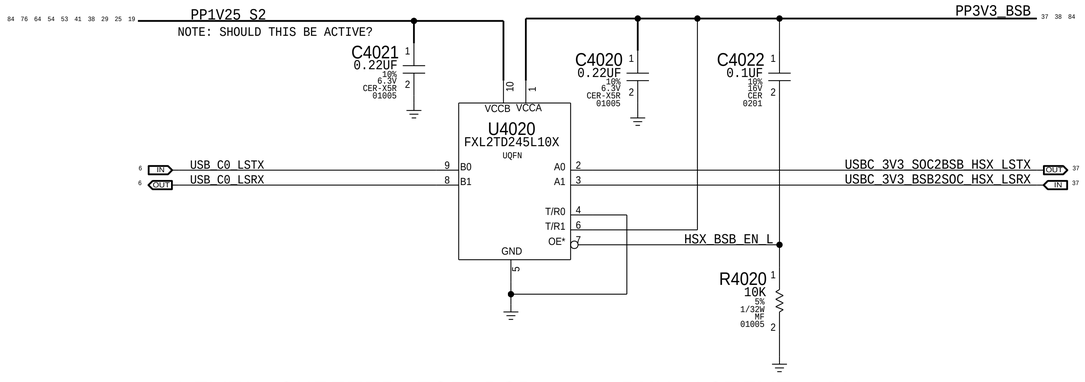
IO: USB-C HIGH SPEED

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

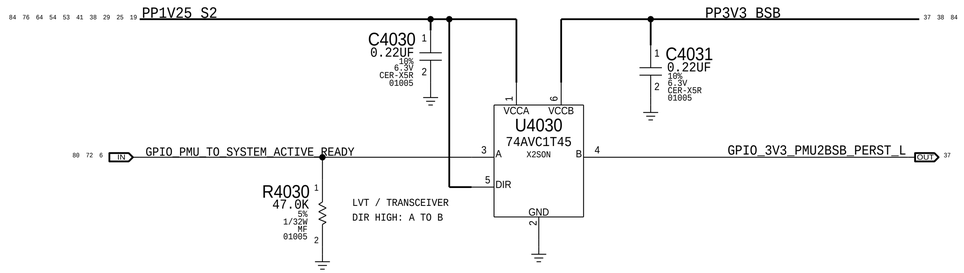
LEVEL SHIFTER FOR I2C ACE <-> PARROT



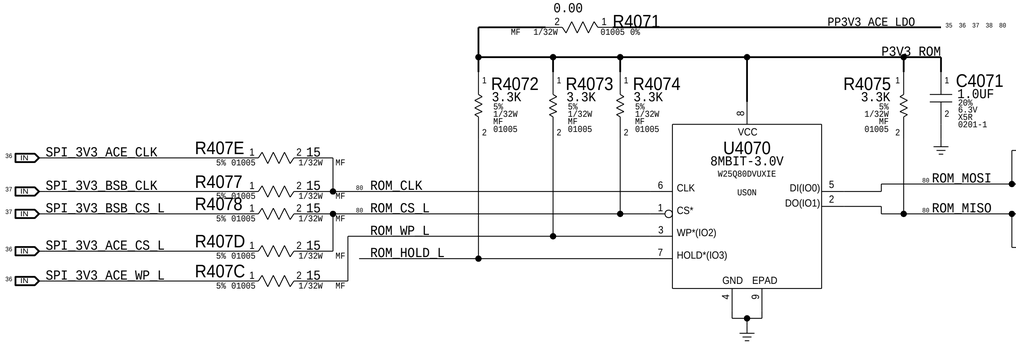
LEVEL SHIFTER FOR BSB <-> SOC LSRX/LSTX



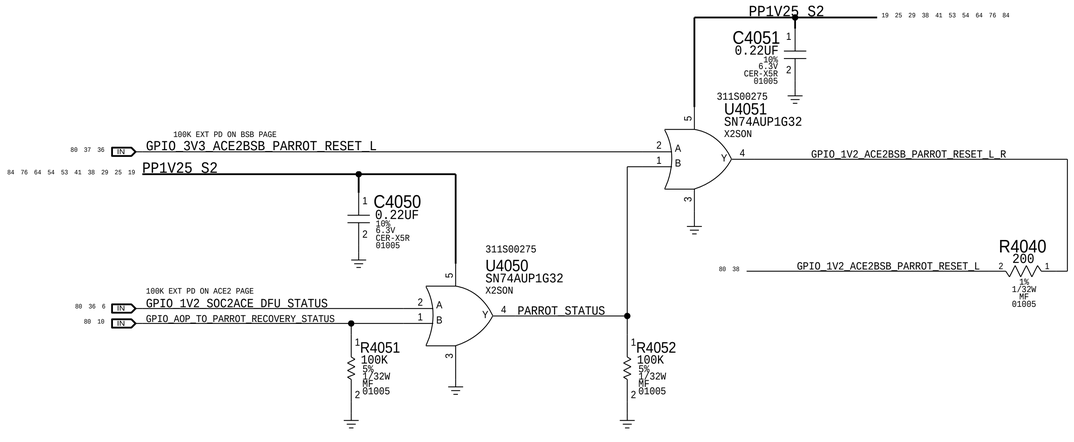
LEVEL SHIFTER FOR BSB <-> PMU ACTIVE RDY



ACE/BSB FLASH

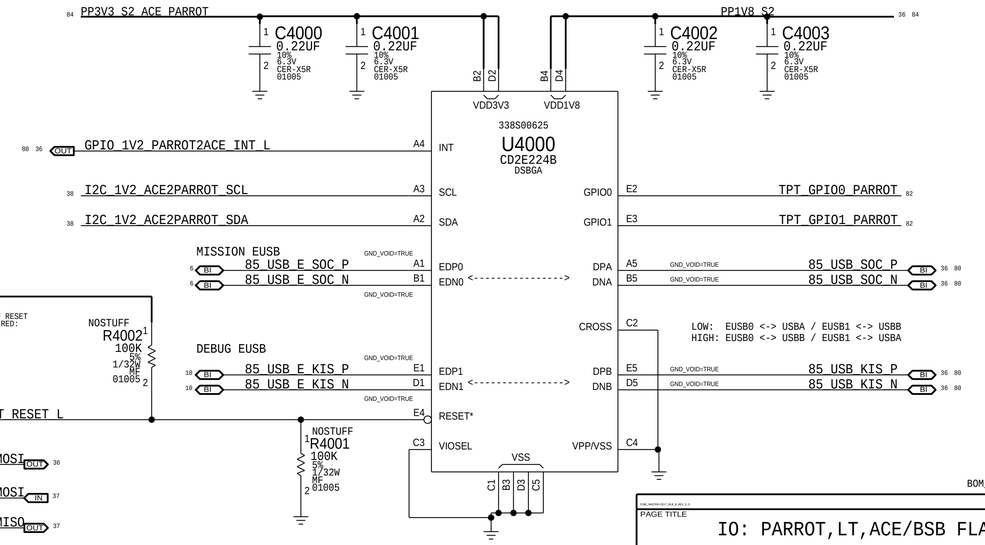


OR-GATE LEVEL SHIFTER FOR ACE <-> BSB RESET



USB REPEATER PARROT

PLACE PARROT NEAR SOC (<40MM)



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 138S00071 4UF 20% 6.3V CER-X5R 0201 ROOM=RIGEL

C4193 138S00071 4UF 20% 6.3V CER-X5R 0201 ROOM=RIGEL

C4192 138S00071 4UF 20% 6.3V CER-X5R 0201 ROOM=RIGEL

C4191 138S00071 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

C4190 4.3V 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 138S00071 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 G9, 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 G10, PGNDA

4.8V PP_RIGEL_BUCK_BOOST_A

H10	VBBOUTA	
J10	VBBOUTA	
K10	VBBOUTA	
D10	VLXA	RIGEL_VLXA
D9	VLXA	
E10	VLXA	
B10	VCXA	
B9	VCXA	RIGEL_VCXA
E8	BOOSTSDA	RIGEL_BOOSTSDA
D8	BULKSDA	RIGEL_BULKSDA
D3	BULKSDB	RIGEL_BULKSDB
E3	BOOSTSDB	RIGEL_BOOSTSDB
B1	VCXB	RIGEL_VCXB
B2	VCXB	
D1	VLXB	
D2	VLXB	
E1	VLXB	RIGEL_VLXB
J1	VBBOUTB	
J2	VBBOUTB	
J3	VBBOUTB	6.8V PP_RIGEL_BUCK_BOOST_B
H9	IOUT0	
K9	IOUT0	
J9	IOUT0	PP_TITUS_DENSE_ANODE 40 81
H1	IOUT1	
H2	IOUT1	
H3	IOUT1	PP_TITUS_SPARSE_ANODE 40 81
K1	IOUT2	
K2	IOUT2	
K3	IOUT2	PP_ROSALINE_ANODE 41 81
G1	IOUT3	PP_TITUS_A_ANODE 40 81
G10	IOUT4	PP_TITUS_B_ANODE 40 81

L4100 0.47UH-20%-4A-0.0480HM DIDT=TRUE PIWA20120H-SM ROOM=RIGEL

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

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

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

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

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

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

L4101 0.47UH-20%-4A-0.0480HM DIDT=TRUE PIWA20120H-SM ROOM=RIGEL

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

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

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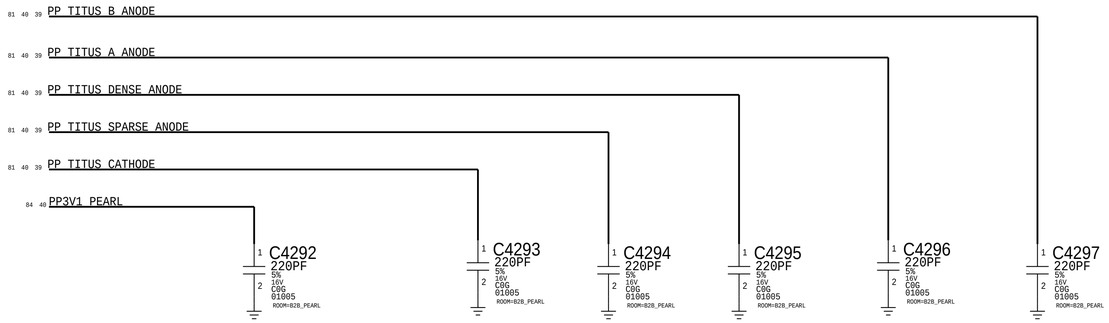
PAGE TITLE

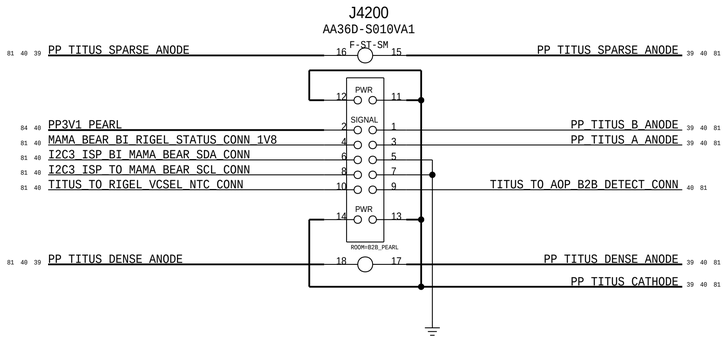
PEARL: RIGEL DRIVER

TITUS POWER FILTERING

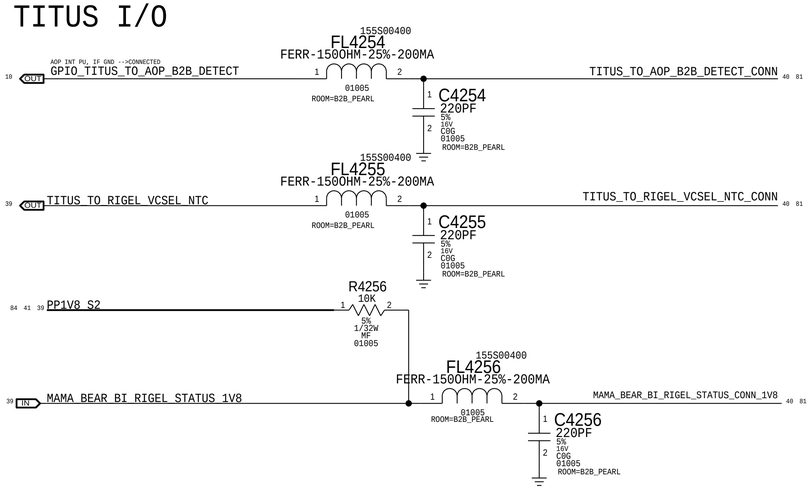


JEWEL CONNECTOR

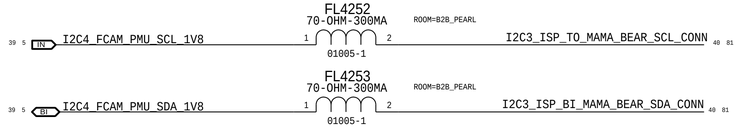
MLB: 516S00267
FLEX: 516S00268
MATCH J317_JEWEL_FLEX A.1.0



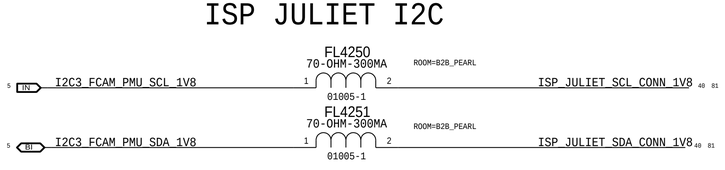
TITUS I/O



ISP TITUS_RIGEL I2C

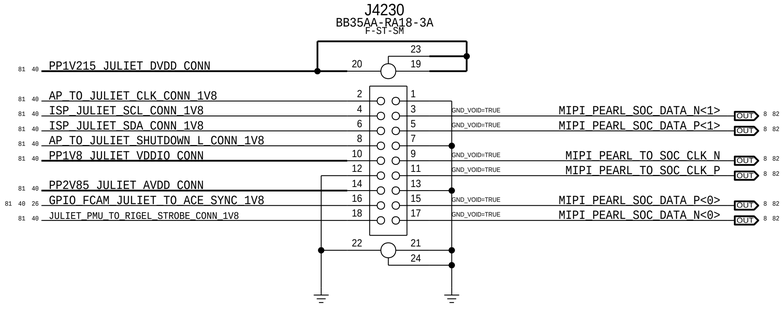


ISP JULIET I2C

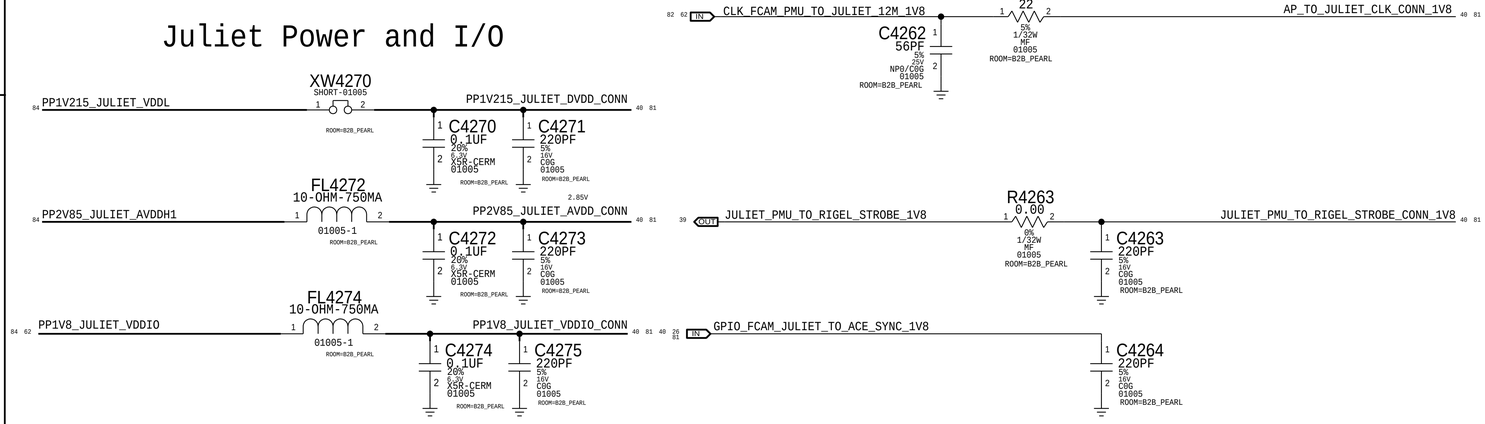


JULIET CONNECTOR

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



Juliet Power and I/O

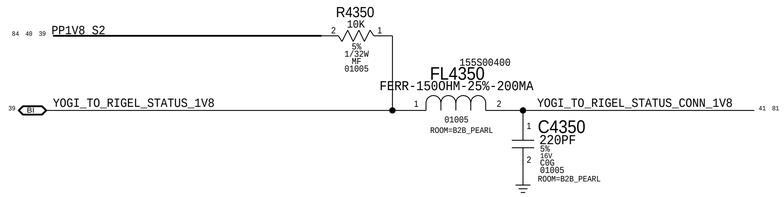


BOM_COST_GROUP=PEARL

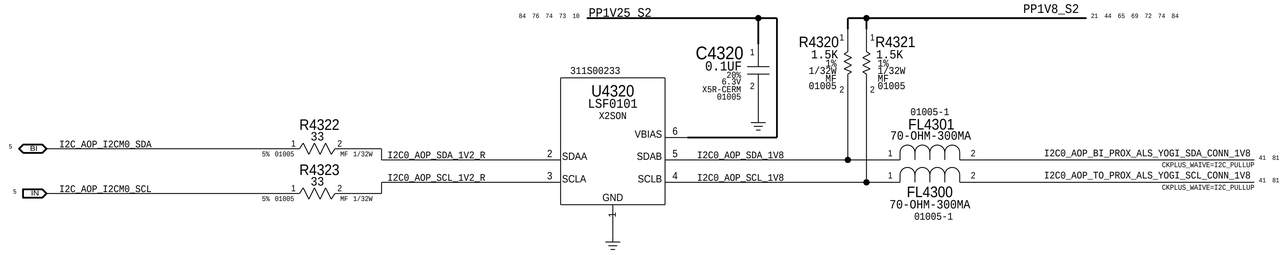
PAGE TITLE

PEARL: B2B TITUS + JULIET

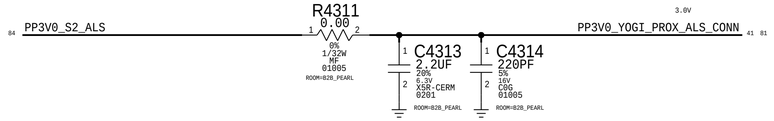
YOGI SIGNALS



I2C LEVEL TRANSLATOR

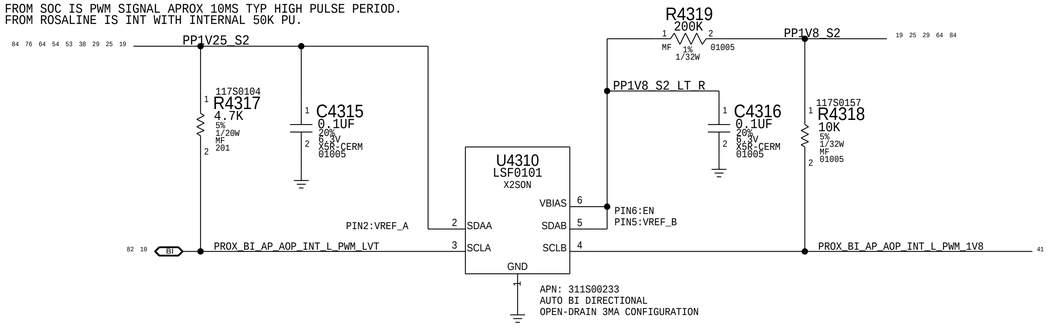


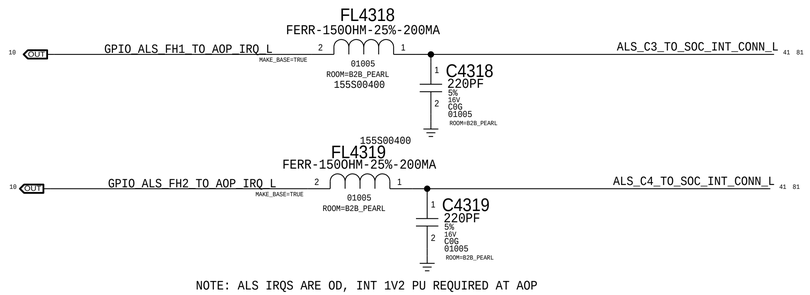
PROX & ALS POWER



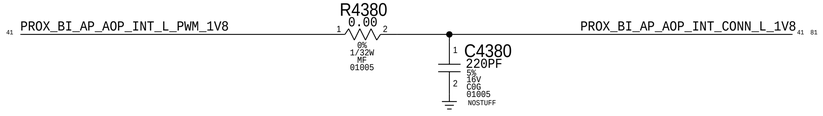
PROX/ALS I/O

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



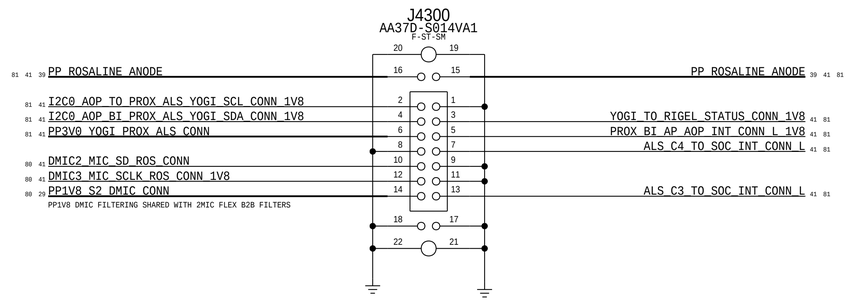


NOTE: ALS IRQS ARE OD, INT 1V2 PU REQUIRED AT AOP

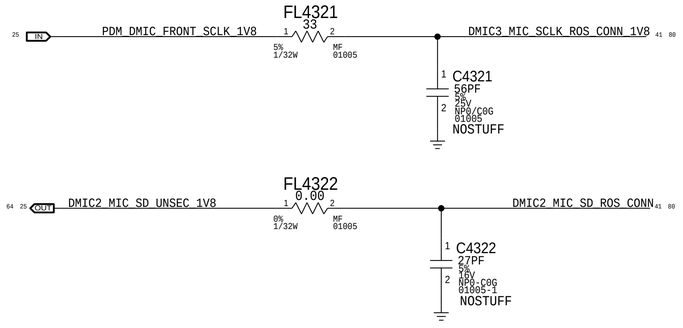


ROSALINE(AARM) CONNECTOR

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



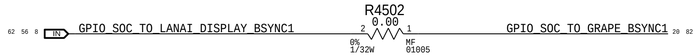
DMIC1 FILTERS ROSALINE CONN

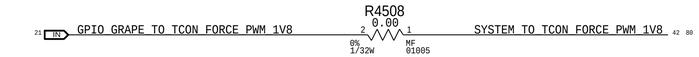


BOM_COST_GROUP=PEARL

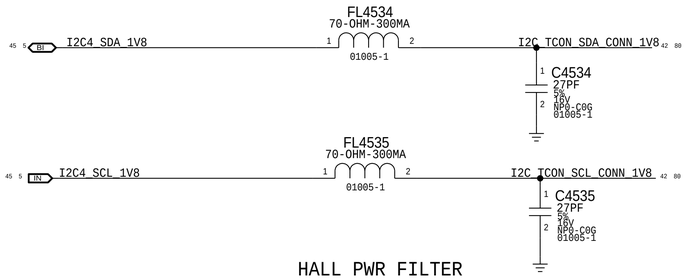
PAGE TITLE
PEARL: B2B ROSALINE + MISC

EDP FLEX FILTERS AND CONNECTORS





TCON I2C FILTERS

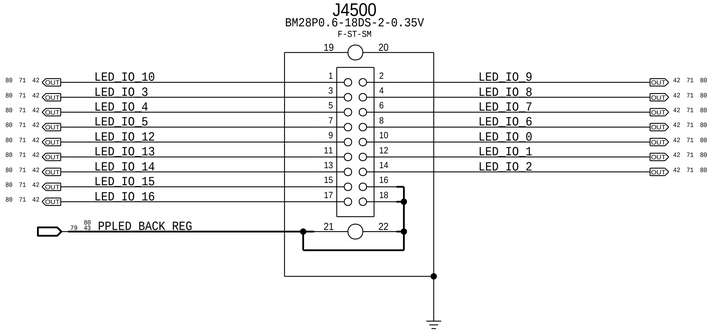


HALL PWR FILTER

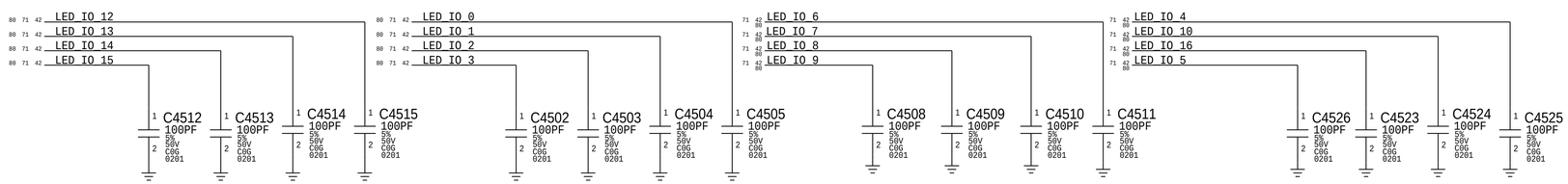
J517 BL CONN MLB SIDE 18+2 PIN B2B

FLEX APN: 516S00363
MLB APN: 516S00362

PACK_OPTION=J517,J518



LED DRIVER FILTERS

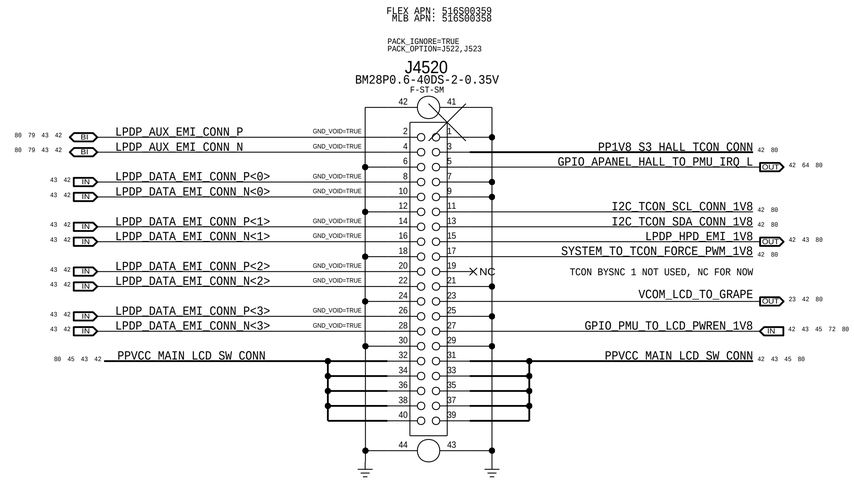


PACK_OPTION=J517,J518 PACK_OPTION=J517,J518 PACK_OPTION=J517,J518 PACK_OPTION=J517,J518 PACK_OPTION=J517,J518 PACK_OPTION=J517,J518 PACK_OPTION=J517,J518 PACK_OPTION=J517,J518 PACK_OPTION=J517,J518 PACK_OPTION=J517,J518 PACK_OPTION=J517,J518 PACK_OPTION=J517,J518 PACK_OPTION=J517,J518 PACK_OPTION=J517,J518 PACK_OPTION=J517,J518 PACK_OPTION=J517,J518

J522 EDP CONN MLB SIDE 39+2 PIN B2B

FLEX APN: 516S00359
MLB APN: 516S00358

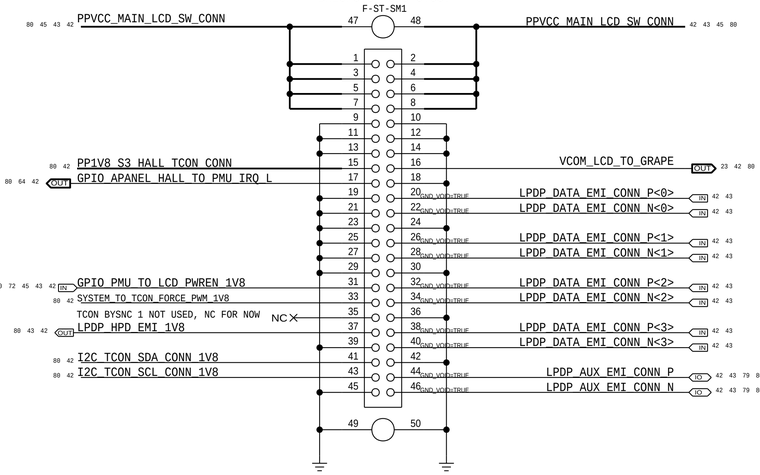
PACK_IGNORE=TRUE
PACK_OPTION=J522,J523



J517 EDP CONN MLB SIDE 46+2 PIN B2B

PACK_OPTION=J517,J518

FLEX APN: 516S00365
MLB APN: 516S00364



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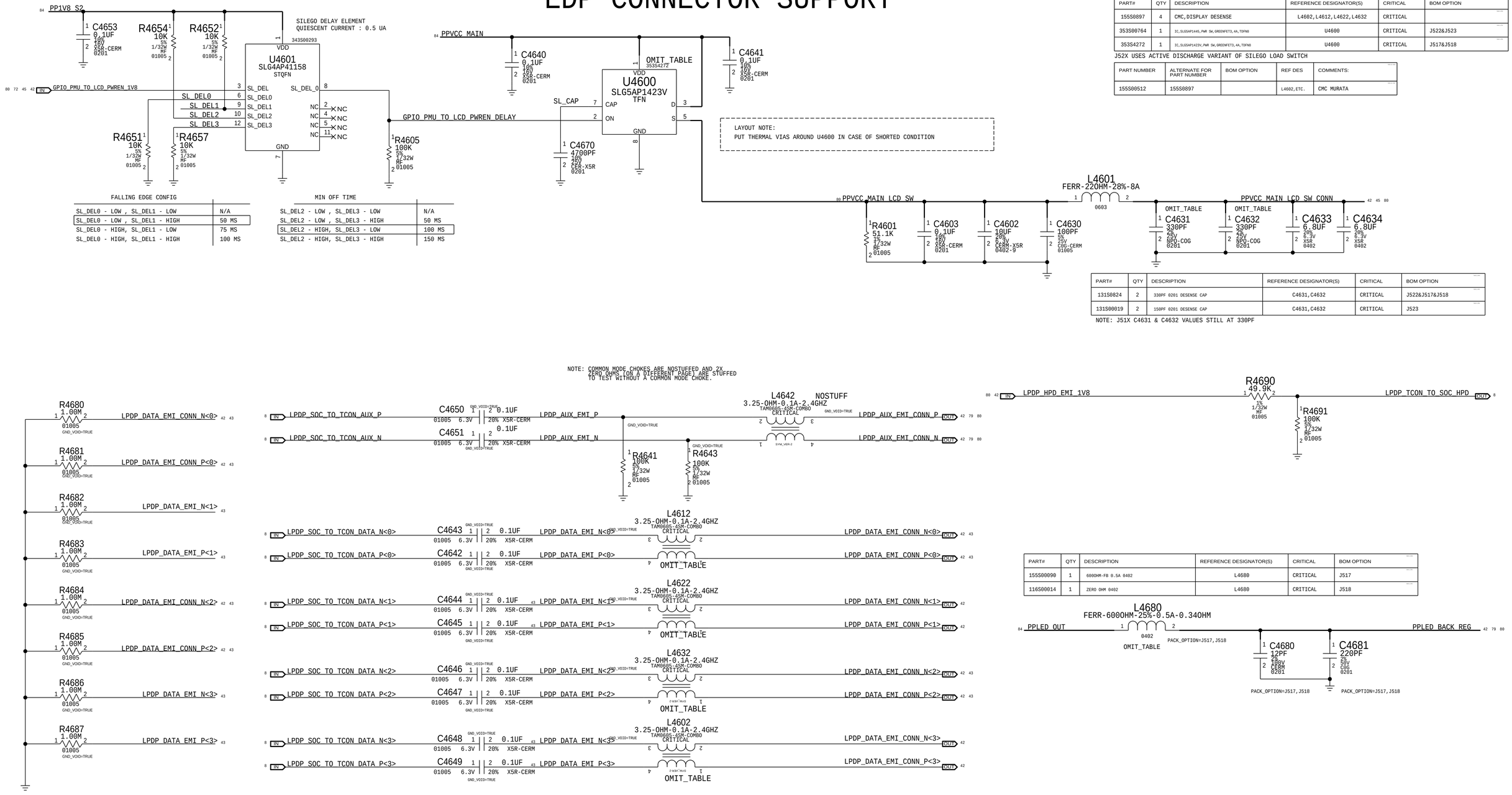
PAGE TITLE

DISPLAY: B2B CONN

EDP CONNECTOR SUPPORT



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

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

PART#	QTY	DESCRIPTION	REFERENCE DESIGNATOR(S)	CRITICAL	BOM OPTION
131S0824	2	330PF 0201 DESENSE CAP	C4631,C4632	CRITICAL	J522&J517&J518
131S00019	2	150PF 0201 DESENSE CAP	C4631,C4632	CRITICAL	J523

NOTE: J51X C4631 & C4632 VALUES STILL AT 330PF

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

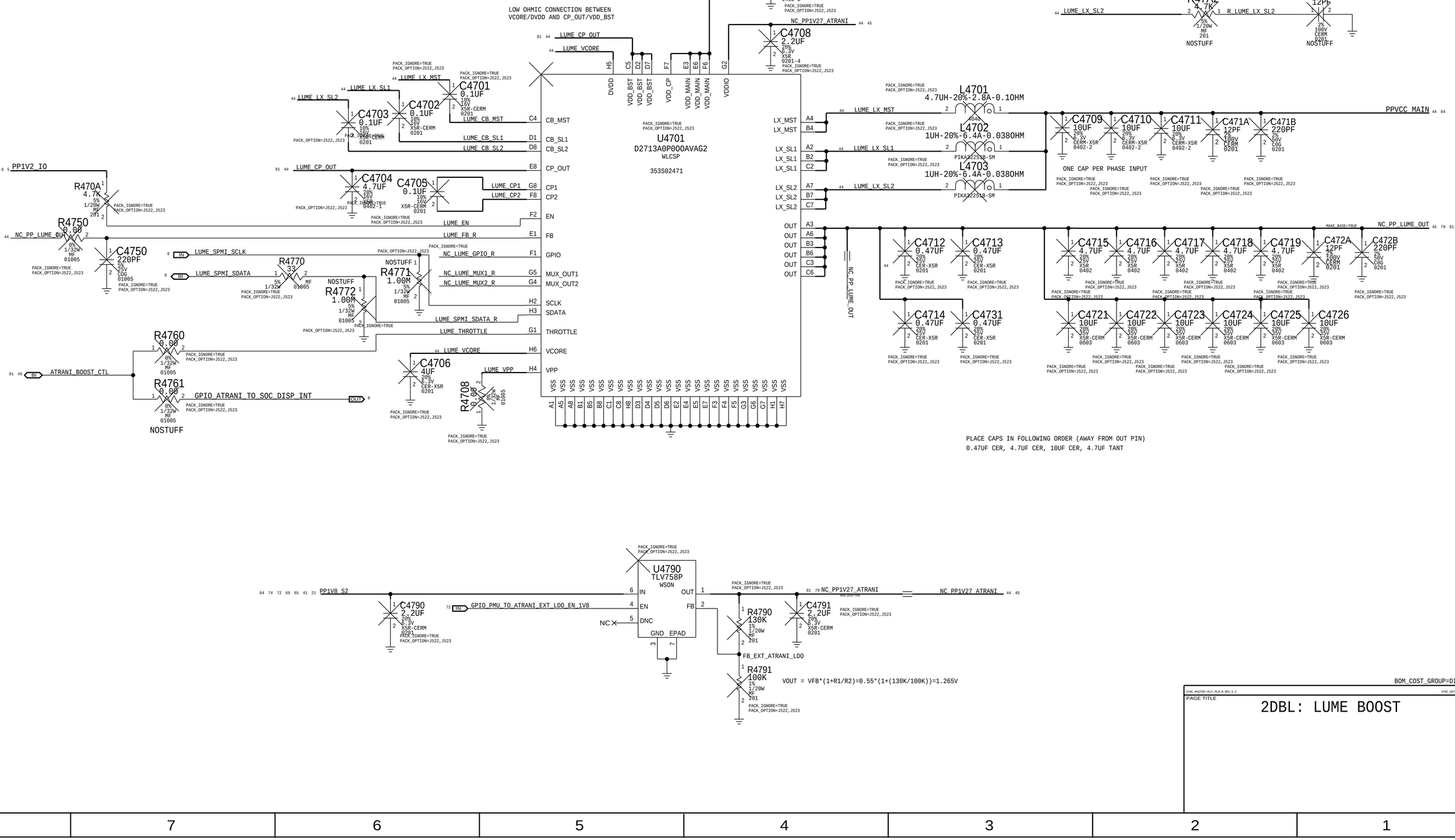
PART#	QTY	DESCRIPTION	REFERENCE DESIGNATOR(S)	CRITICAL	BOM OPTION
155S00090	1	600OHM-FB 0.5A 0402	L4680	CRITICAL	J517
116S00014	1	ZERO OHM 0402	L4680	CRITICAL	J518

BOM_COST_GROUP=DISPLAY

PAGE TITLE

DISPLAY: EDP SUPPORT

LUME BOOST



BOM_COST_GROUP=DISPLAY

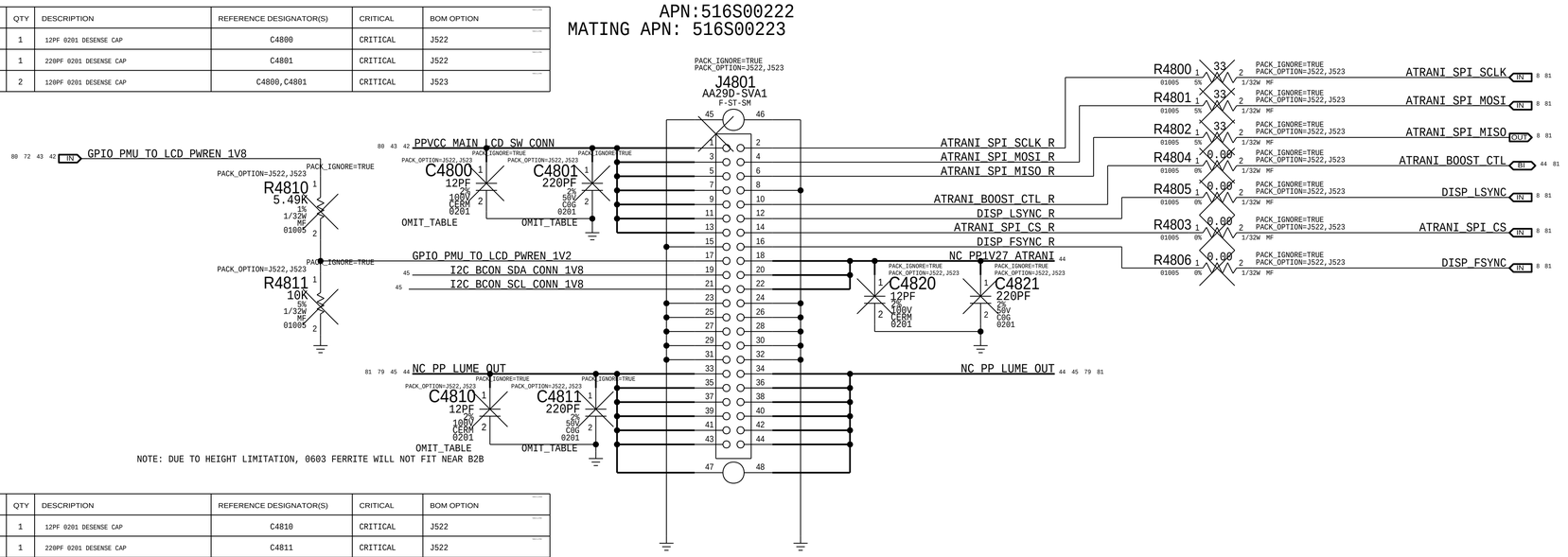
PAGE TITLE

2DBL: LUME BOOST

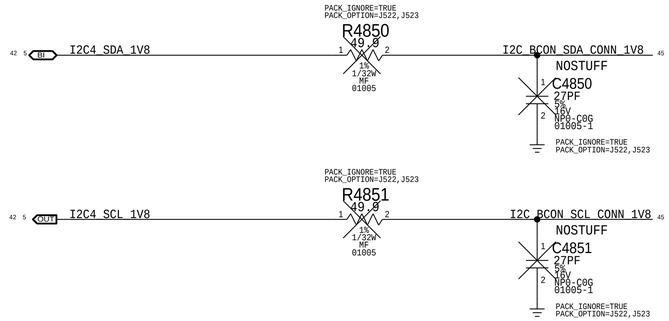
BCON B2B CONN

PART#	QTY	DESCRIPTION	REFERENCE DESIGNATOR(S)	CRITICAL	BOM OPTION
131S00039	1	12PF 0201 DESENSE CAP	C4800	CRITICAL	J522
131S0883	1	220PF 0201 DESENSE CAP	C4801	CRITICAL	J522
131S00117	2	120PF 0201 DESENSE CAP	C4800,C4801	CRITICAL	J523

APN:516S00222
MATING APN: 516S00223



PART#	QTY	DESCRIPTION	REFERENCE DESIGNATOR(S)	CRITICAL	BOM OPTION
131S00039	1	12PF 0201 DESENSE CAP	C4810	CRITICAL	J522
131S0883	1	220PF 0201 DESENSE CAP	C4811	CRITICAL	J522
131S0731	2	100PF 0201 DESENSE CAP	C4810,C4811	CRITICAL	J523



BOM_COST_GROUP=DISPLAY

SYNC_MASTER=2017_M_8_8_REV_3_5 SYNC_DATE=10/10/2020

PAGE TITLE

2DBL: B2B CONN

5G CORE0

PART#	QTY	DESCRIPTION	REFERENCE DESIGNATOR(S)	BOM OPTION
131S0893	1	CAP,CER,C0G,0.2PF,01005,HQ	C202_W	J518
152S01247	1	IND,FILM,1NH,SHQ,01005	R233_W	J518
131S00030	1	CAP,CER,C0G,0.4PF,01005	C201_W	J518
131S0648	1	CAP,CER,C0G,0.3PF,01005	C361_W	J518
152S01247	1	IND,FILM,1NH,SHQ,01005	R363_W	J518
131S0648	1	CAP,CER,C0G,0.3PF,01005	C362_W	J518

2G CORE0

PART#	QTY	DESCRIPTION	REFERENCE DESIGNATOR(S)	BOM OPTION
152S00521	1	IND,FILM,5.6NH,SHQ,01005	C520_W	J518
152S00521	1	IND,FILM,5.6NH,SHQ,01005	C530_W	J518

5G CORE1

PART#	QTY	DESCRIPTION	REFERENCE DESIGNATOR(S)	BOM OPTION
131S0893	1	CAP,CER,C0G,0.2PF,01005,HQ	C228_W	J518
131S0893	1	CAP,CER,C0G,0.2PF,01005,HQ	C206_W	J518
152S00493	1	IND,FILM,0.9NH,SHQ,01005	R202_W	J518
131S0648	1	CAP,CER,C0G,0.3PF,01005	C205_W	J518
152S01109	1	IND,FILM,0.6NH,SHQ,01005	R373_W	J518
131S0648	1	CAP,CER,C0G,0.3PF,01005	C376_W	J518

2G CORE1

PART#	QTY	DESCRIPTION	REFERENCE DESIGNATOR(S)	BOM OPTION
152S00521	1	IND,FILM,5.6NH,SHQ,01005	C561_W	J518
152S00521	1	IND,FILM,5.6NH,SHQ,01005	C552_W	J518

SYNC_MASTER=J517_WIFI_MLB BOM VC0.3 GROUP=WIFI SYNC_DATE=08/24/2020

PAGE TITLE

BOM Option

WIFI/BT
PERONI

PP1V25_S2 VOLTAGE=1.2
C250_W 27PF 5% 16V NP0-C0G 01005-1 ROOM=WLAN
PP1V8_S2
C252_W 27PF 5% 16V NP0-C0G 01005-1 ROOM=WLAN
C257_W 10PF 5% 16V NP0-C0G 01005 ROOM=WLAN
PPVCC_MAIN
C232_W 10UF 20% 10V X5R-CERM 0402-0.1MM ROOM=WLAN
C233_W 4.7PF +/-0.1PF 16V NP0/C0G 01005 ROOM=WLAN
PPVCC_MAIN
C245_W 10UF 20% 10V X5R-CERM 0402-0.1MM ROOM=WLAN
C247_W 2.2UF 20% 10V X5R 0201 ROOM=WLAN
C246_W 27PF 5% 16V NP0-C0G 01005-1 ROOM=WLAN

L253_W 2.2UH-20%-1.1A-0.293OHM 0603 ROOM=WLAN
C254_W 7.5UF 20% 4V CERM 0402 ROOM=WLAN
PP_1V02_ABUCK_L VOLTAGE=1.02
PP_1V02_ABUCK VOLTAGE=1.02
L255_W 2.2UH-20%-1.1A-0.293OHM 0603 ROOM=WLAN
C256_W 7.5UF 20% 4V CERM 0402 ROOM=WLAN
PP_0V72_CBUCK_L VOLTAGE=0.72
PP_0V72_CBUCK VOLTAGE=0.72
PP_3V3_BTLDO VOLTAGE=3.3
C270_W 27PF 5% 16V NP0-C0G 01005-1 ROOM=WLAN

VBAT VBAT VBAT_RF VDDIO_RF VDDIO1P2 VDDIO1P8 ASR_VLX ASR_VLX ASR_VLX ABUCK_1P02 ABUCK_WL2G_BT_1P02 ABUCK_WL2G_BT_1P02 ABUCK_1P02 ABUCK_WL5G_1P02 ABUCK_WL5G_1P02 CSR_VLX CSR_VLX CBUCK_0P72 CBUCK_0P72 CBUCK_0P72 BTLDO3V3

U_WLAN_W 2103-602001-30 LGA SYM 1 OF 2 ROOM=WLAN 339S00785

50_WLAN_A_C0_TXRX_FEM_M_2	13	5G_C0_ANT	
ANALOG_LAT_5GC0_FEM_TO_WLAN_PDTS	41	5GTSSI_C0	
50_5GFEM_TRX_MCS_M	11	5G_C1_ANT	
ANALOG_UAT_5GC1_FEM_TO_WLAN_PDTS	40	5GTSSI_C1	
50_WLAN_G_C0_TXRX	90	2G_C0_ANT	
ANALOG_UAT_2G_FEM_TO_WLAN_PDTS	88	2GTSSI_C0	
50_WLAN_G_C1_TXRX_R	45	2G_C1_ANT	
ANALOG_LAT_2G_FEM_TO_WLAN_PDTS	43	2GTSSI_C1	
GPIO_WLAN_TO_LAT_5GC0_FEM_LNA_BYP_EN	65	LNA_EN_5GC0	
GPIO_WLAN_TO_UAT_5GC1_FEM_LNA_BYP_EN	49	LNA_EN_5GC1	
GPIO_WLAN_TO_UAT_2G_FEM_LNA_BYP_EN	66	LNA_EN_2GC0	
GPIO_WLAN_TO_LAT_2G_FEM_LNA_BYP_EN	21	LNA_EN_2GC1	
RFFE_WLAN_TO_LAT_5GC0_FEM_RST_L	51	5G_C0_RESET	
RFFE_WLAN_TO_UAT_2G_FEM_RST_L	35	2G_C0_RESET	
SHIELD_RFFE_WLAN_TO_UAT_FEMS_CLK_M	53	C0_MIPI_CLK	
SHIELD_RFFE_WLAN_TO_FEMS_DATA_C0	52	C0_MIPI_DATA	
RFFE_WLAN_TO_UAT_5GC1_FEM_RST_L	20	5G_C1_RESET	
RFFE_WLAN_TO_LAT_2G_FEM_RST_L	36	2G_C1_RESET	
SHIELD_RFFE_WLAN_TO_LAT_FEMS_CLK_M	38	C1_MIPI_CLK	
SHIELD_RFFE_WLAN_TO_FEMS_DATA_C1	37	C1_MIPI_DATA	
PP207_W P2MM-NSM ROOM=WLAN OMIT PLACE_SIDE=BOTTOM	1	NC	67 WL_GPIO_7/DAP_SEL
WL_GPIO_18	128	WL_GPIO_18	
NC_UART_BB_TO_WLAN_COEX_1V2	112	WLBT_SECI_IN	
NC_UART_WLAN_TO_BB_COEX_1V2	127	WLBT_SECI_OUT	
GPIO_WLAN_TO_SOC_TIME_SYNC	157	WLAN_TIME_SYNC	
	139	LHL_GPIO2	NC
	168	SPMI_IDC_CLK	NC
	154	SPMI_IDC_DAT	NC
PCIE_SOC_TO_WLAN_RESET_L	47	WLBT_WL_PCIE_PERST_L	
PCIE_WLAN_TO_SOC_CLKREQ_L	92	WLBT_WL_PCIE_CLKREQ_L	
PCIE_SOC_TO_WLAN_TX_P	31	90_WLBT_WL_PCIE_RD_P	
PCIE_SOC_TO_WLAN_TX_N	16	90_WLBT_WL_PCIE_RD_N	
PCIE_WLAN_TO_SOC_TX_C_P	76	90_WLBT_WL_PCIE_TD_P	
PCIE_SOC_TO_WLAN_TX_C_N	61	90_WLBT_WL_PCIE_TD_N	
PCIE_SOC_TO_WLAN_REFCLK_P	121	90_WLBT_WL_PCIE_REFCLK_P	
PCIE_SOC_TO_WLAN_REFCLK_N	106	90_WLBT_WL_PCIE_REFCLK_N	
	82	ANT_DIVERSITY_CORE1_RFGPIO_8_1V8	NC
2GC0_IS_SWITCH	50	C0_SAW_BYPASS_RFGPIO_3_1V8	
2GC1_IS_SWITCH	81	C1_SAW_BYPASS_RFGPIO_9_1V8	
	184	CLK_REQ	NC
50_BT_DEDICATED_TRX	150	BT_C0_ANT1 (BT_DEDICATED)	
50_BT_C0_TX	195	BT_C0_ANT2 (BT_C0_ANT)	
50_BT_C1_TX	224	BT_C1_ANT	

	111	WLBT_WL_FAST_UART_RX	NC
	80	WLBT_WL_FAST_UART_RTS_OUT	NC
	95	WLBT_WL_FAST_UART_CTS_IN	NC
	96	WLBT_WL_FAST_UART_TX	NC
GPIO_WLAN_TO_PMU_HOST_WAKE	97	WLBT_WL_HOST_WAKE	
GPIO_PMU_TO_WLAN_REG_ON	186	WLBT_WL_REG_ON	
GPIO_AOP_TO_WLAN_CONTEXT_A	79	WLAN_TDI/CXT_A	
GPIO_AOP_TO_WLAN_CONTEXT_B	64	WLAN_TDO/CXT_B	
JTAG_WLAN_TRST_L	68	WLAN_TRST_L	
JTAG_WLAN_SEL	183	JTAG_SEL	
JTAG_WLAN_TCK	110	WLAN_SCT/SWD_CLK	
JTAG_WLAN_TMS	83	WLAN_TMS/SWD_DAT	
	156	WL_GPIO_21/BT_OVER_UART	NC
	189	WLBT_BT_UART_RXD	NC
	190	WLBT_BT_UART_RTS_L	NC
	188	WLBT_BT_UART_CTS_L	NC
	187	WLBT_BT_UART_TXD	NC
BT_TO_BOT_SPK_TRIG	202	WLBT_BT_DEV_WAKE	
	185	WLBT_BT_REG_ON	NC
	124	1V2_WIFI_TO_SENSORA_COEX	NC
	143	1V2_BT_TO_SENSORA_COEX	NC
GPIO_TOUCH_TO_BT_SYNC	172	GPIO_SENSORB_TO_BT_SYNC	
	126	SENSORC_TO_WIFI_COEX	NC
	125	WIFI_TO_SENSORC_COEX	NC
	171	BT_TO_SENSORC_TIME_SYNC	NC
	142	BT_TO_SENSORC_WAKE	NC
GPIO_SOC_TO_BT_TO_GRAPE_TS_SYNC	173	SOC_TO_BT_TIME_SYNC	
BT_TO_SOC_TIME_SYNC	203	BT_TO_AP_TIME_SYNC	
NC_I2C_BT_TO_SE_SCL	169	SE_I2C_CLK	CKPLUS_WAIVE=I2C_PULLUP
NC_I2C_BT_TO_SE_SDA	170	SE_I2C_DAT	CKPLUS_WAIVE=I2C_PULLUP
AOP_SPMI0_SCLK_WIFI_BT	141	SPMI_HEB_CLK	
SPMI_EVENTS_AOP_TO_WLAN_NFC_DATA	140	SPMI_HEB_DAT	
CLK_PMU_TO_WLAN_32K	155	WLBT_CLK_32K	
	8	TCXO_IN	NC

U_WLAN_W 2103-60200I-30 LGA SYM 2 OF 2 ROOM=WLAN 339S00785

1	GND	GND	113
2	GND	GND	114
4	GND	GND	115
7	GND	GND	116
9	GND	GND	117
10	GND	GND	118
12	GND	GND	119
14	GND	GND	120
15	GND	GND	122
17	GND	GND	123
19	GND	GND	129
22	GND	GND	130
23	GND	GND	132
24	GND	GND	133
25	GND	GND	134
26	GND	GND	135
27	GND	GND	136
28	GND	GND	137
29	GND	GND	138
30	GND	GND	144
32	GND	GND	145
33	GND	GND	147
34	GND	GND	148
39	GND	GND	149
42	GND	GND	152
44	GND	GND	153
46	GND	GND	158
48	GND	GND	159
54	GND	GND	160
55	GND	GND	161
56	GND	GND	162
57	GND	GND	163
58	GND	GND	164
59	GND	GND	165
60	GND	GND	166
62	GND	GND	167
63	GND	GND	174
69	GND	GND	175
70	GND	GND	176
71	GND	GND	177
72	GND	GND	178
73	GND	GND	179
74	GND	GND	180
75	GND	GND	182
77	GND	GND	191
78	GND	GND	192
84	GND	GND	193
85	GND	GND	194
86	GND	GND	198
87	GND	GND	200
89	GND	GND	201
91	GND	GND	205
93	GND	GND	206
94	GND	GND	207
98	GND	GND	208
99	GND	GND	209
100	GND	GND	210
101	GND	GND	211
102	GND	GND	213
103	GND	GND	215
104	GND	GND	217
105	GND	GND	220
107	GND	GND	223
108	GND	GND	225
109	GND		

R260_W 0.00 0% 01005 ROOM=WLAN
SHIELD_RFFE_WLAN_TO_UAT_FEMS_CLK
R261_W 0.00 0% 01005 ROOM=WLAN
SHIELD_RFFE_WLAN_TO_2GC0_5GC0_FEMS_DATA
R262_W 0.00 0% 01005 ROOM=WLAN
SHIELD_RFFE_WLAN_TO_LAT_FEMS_CLK
R263_W 0.00 0% 01005 ROOM=WLAN
SHIELD_RFFE_WLAN_TO_2GC1_5GC1_FEMS_DATA

C226_W 100PF 5% 16V NP0-C0G 01005-1 ROOM=WLAN NOSTUFF

OMIT PP222_W P2MM-NSM ROOM=WLAN PCIE_SOC_TO_WLAN_RESET_L
OMIT PP223_W P2MM-NSM ROOM=WLAN PCIE_WLAN_TO_SOC_CLKREQ_L

R299_W 49.9 1% 1/32W MF 01005-1

GPIO_WLAN_TO_PMU_HOST_WAKE
R259_W 100K 5% 1/32W MF 01005 ROOM=WLAN
PP1V25_S2
R257_W 10K 5% 1/32W MF 01005 ROOM=WLAN NOSTUFF
JTAG_WLAN_SEL
NOSTUFF= JTAG DISABLED

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

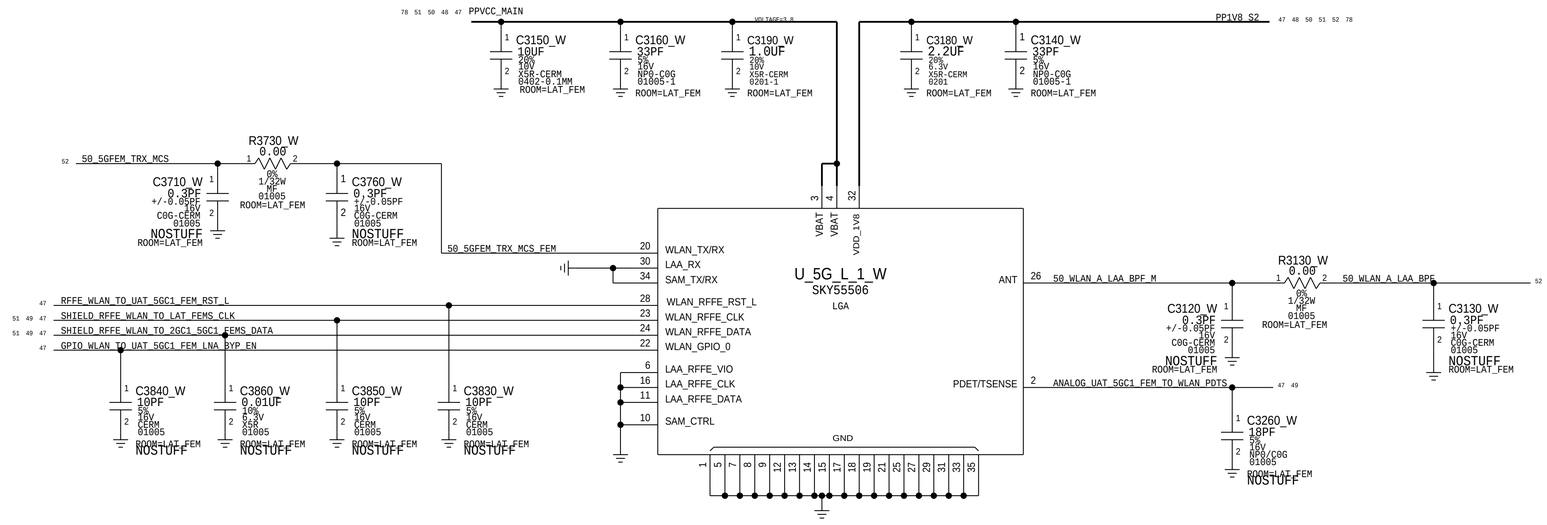
BOM_COST_GROUP=WIFI

SYNC_MASTER=J517_WIFI_ML8_REV_0.33 SYNC_DATE=08/24/2020

PAGE TITLE

PERONI

J517 LAT 5GHZ RFEM



SYNC_MASTER=J517_WIFI_MB SYNC_GROUP=WIFI SYNC_DATE=08/24/2020

PAGE TITLE

J517 5G rFEM (LAT)

UAT 2.4 GHZ RFEM

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

78 51 49 48 47 PPVCC_MAIN
C405_W 10UF 20% 10V X5R-CERM 0402-0.1MM ROOM=UAT_FEM
C406_W 33PF 5% 16V NP0-C0G 01005-1 ROOM=UAT_FEM
C407_W 1.0UF 20% 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% 16V NP0-C0G 01005-1 ROOM=UAT_FEM
VOLTAGE=1.8
PP1V8_S2
47 48 49 51 52 78

52 50_WLAN_G_C0_TXRX_FEM_M
R463_W 0.00 5% 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 NOSTUFF ROOM=UAT_FEM

VBAT 44
VBAT 45
VDD_1V8 42

22 WLAN_TX/RX
ROOM=UAT_FEM
353S02415
U_2G_U_W
MDFEGYFB-132
LGA

47 RFFE_WLAN_TO_UAT_2G_FEM_RST_L
48 47 SHIELD_RFFE_WLAN_TO_UAT_FEMS_CLK
48 47 SHIELD_RFFE_WLAN_TO_2GC0_5GC0_FEMS_DATA
47 GPIO_WLAN_TO_UAT_2G_FEM_LNA_BYP_EN

48 WLAN_RFFE_RST*
40 WLAN_RFFE_CLK
47 WLAN_RFFE_DATA
33 WLAN_GPIO_0

C479_W 10PF 5% 16V C0G-CERM 01005 ROOM=UAT_FEM NOSTUFF
C480_W 10PF 5% 16V C0G-CERM 01005 ROOM=UAT_FEM NOSTUFF
C481_W 10PF 5% 16V C0G-CERM 01005 ROOM=UAT_FEM NOSTUFF
C482_W 10PF 5% 16V C0G-CERM 01005 ROOM=UAT_FEM NOSTUFF

41 USID
GND
1 2 3 4 5 6 7 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 29 30 31 32 34 35 36 37 38 39 43 46 49

ANT 28 50_WLAN_G_BT_ANT4_NPLXR1
R496_W 0.00 5% 1/32W MF 01005 ROOM=UAT_FEM
50_TRX_WLAN24_TO_ANT4A 52
C499_W 0.3PF +/-0.05PF 16V C0G-CERM 01005 NOSTUFF ROOM=UAT_FEM
C498_W 0.3PF +/-0.05PF 16V C0G-CERM 01005 NOSTUFF ROOM=UAT_FEM

PDET/TSENSE 8 ANALOG_UAT_2G_FEM_TO_WLAN_PDTS 47 50
C491_W 10PF 5% 16V C0G-CERM 01005 NOSTUFF ROOM=UAT_FEM

BOM_COST_GROUP=WIFI
SYNC_MASTER=J517_WIFI_MLB_REV_0.33
SYNC_DATE=08/24/2020
PAGE TITLE
2G4 rFEM (UAT)

LAT 2.4 GHZ RFEM

OMIT_SM PP217_W P2MM-NSM ROOM=WLAN
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=1.8 PP1V8_S2 47 48 49 50 52 78

52 50_2GFEM_TRX_MCS
R473_W 0.00 0% 1/32W MF 01005 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 NOSTUFF ROOM=LAT_FEM

44 45 42 VBAT VBAT VDD_1V8

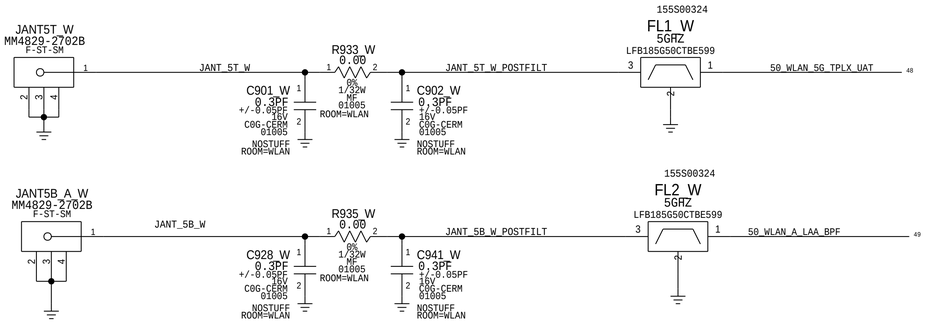
22 WLAN_TX/RX
47 RFFE_WLAN_TO_LAT_2G_FEM_RST_L 48 WLAN_RFFE_RST*
49 47 SHIELD_RFFE_WLAN_TO_LAT_FEMS_CLK 40 WLAN_RFFE_CLK
49 47 SHIELD_RFFE_WLAN_TO_2GC1_5GC1_FEMS_DATA 47 WLAN_RFFE_DATA
47 GPIO_WLAN_TO_LAT_2G_FEM_LNA_BYP_EN 33 WLAN_GPIO_0
41 USID
GND
C483_W 10PF 5% 16V CERM 01005 ROOM=LAT_FEM NOSTUFF
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

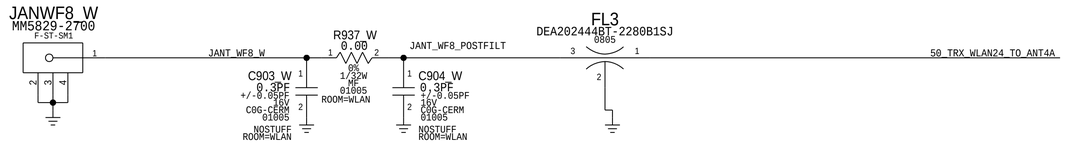
U_2G_L_W MDFEGYFB-132 LGA
ROOM=LAT_FEM 353S02415
1 2 3 4 5 6 7 9 10 11 12 13 14 15 16 17 18 19 20 21 23 24 25 26 27 28 30 31 32 34 35 36 37 38 39 43 46 49

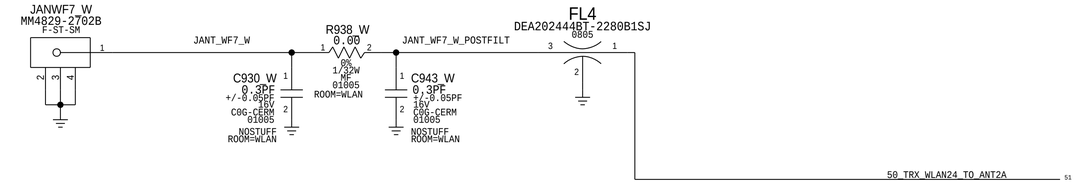
ANT 28 50_WLAN_G_BT_LAT
R466_W 0.00 0% 1/32W MF 01005 ROOM=LAT_FEM
50_TRX_WLAN24_TO_ANT2A 52
C489_W 0.3PF +/-0.05PF 16V C0G-CERM 01005 NOSTUFF ROOM=LAT_FEM
C490_W 0.3PF +/-0.05PF 16V C0G-CERM 01005 NOSTUFF ROOM=LAT_FEM
PDET/TSENSE 8 ANALOG_LAT_2G_FEM_TO_WLAN_PDTS 47 51
C492_W 10PF 5% 16V CERM 01005 NOSTUFF ROOM=LAT_FEM

BOM_COST_GROUP=WIFI
SYNC_MASTER=J517_WIFI_MLB_REV_0.33 SYNC_DATE=08/24/2020
PAGE TITLE
2G4 rFEM (LAT)

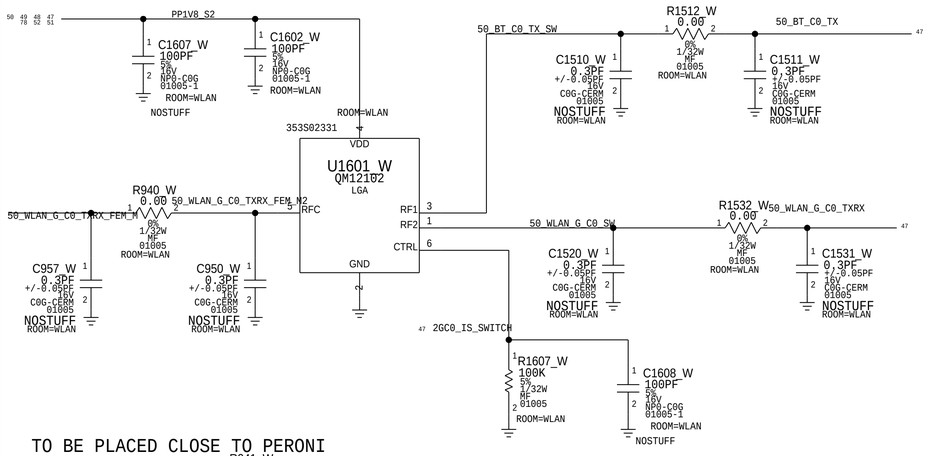
J517 FRONT END



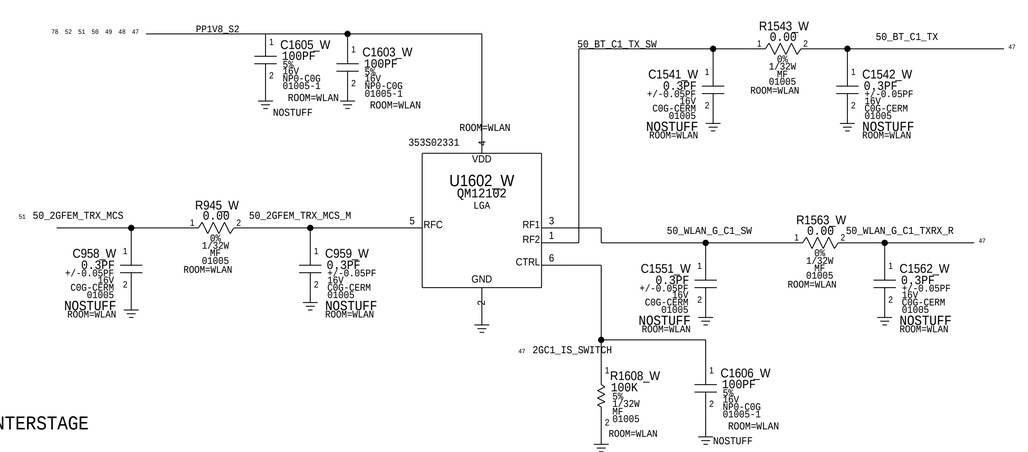




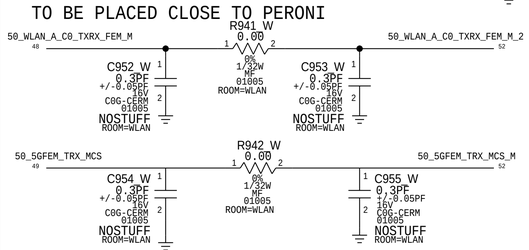
2G INTERSTAGE C0



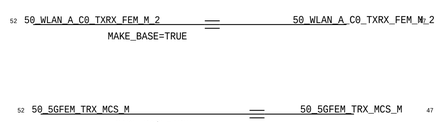
2G INTERSTAGE C1



TO BE PLACED CLOSE TO PERONI



5G INTERSTAGE

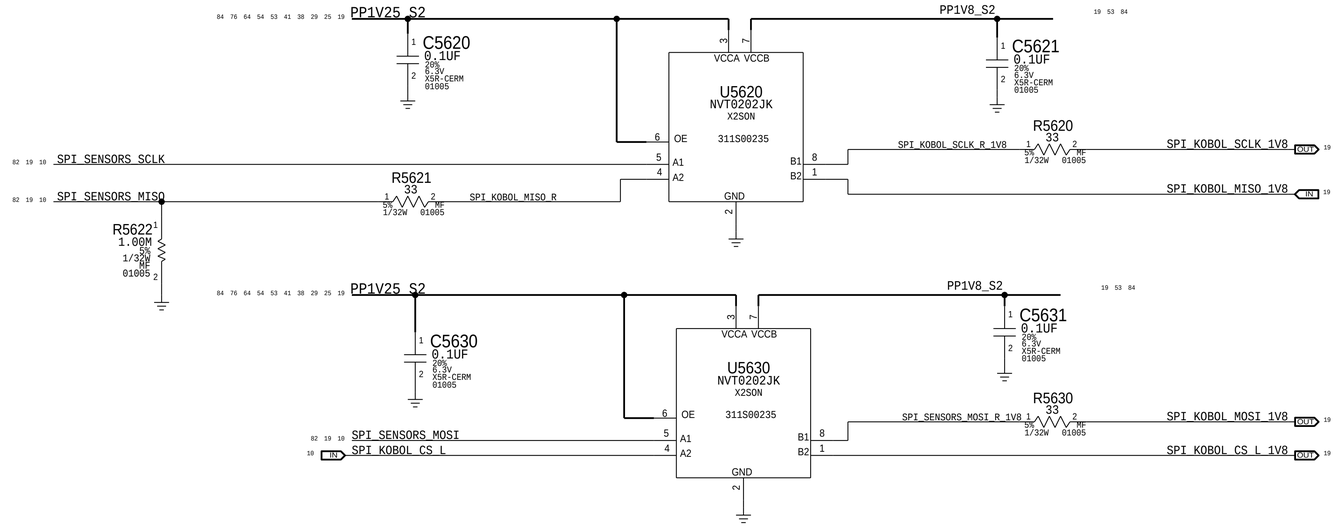


SYNC_MASTER=J517_WIFI_MLB
BOM_VOS_GROUP=WIFI
SYNC_DATE=08/24/2020

PAGE TITLE

J517 Front End

KOBOL VOLTAGE TRANSLATION



BOM_COST_GROUP=SENSORS

SYNC_MASTER=2017_MLB_B_REV_3.5 SYNC_DATE=10/10/2020

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_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
CLK_AOP_TO_LDCM_PDM_R
LDCM_TO_AOP_DATA1_PDM_R
CLK_AOP_TO_LDCM_PDM
LDCM_TO_AOP_DATA1_PDM

R5930 0.00 0% 1/32W MF 01005
R5931 750 1% 1/32W MF 01005 NOSTUFF CRITICAL
C5930 2.2UF 20% 6.3V CER-X5R 0201
C5931 0.1UF 20% 6.3V X5R-CERM 01005
R5932 50K 1% 1/32W MF 01005 CRITICAL
R5933 50K 1% 1/32W MF 01005 CRITICAL
R5934 82K 1% 1/32W MF 01005 CRITICAL
R5935 360K 1% 1/20W TK 01005 CRITICAL
C5932 200PF 5% 10V CERM 01005
C5933 680PF 10% 16V X5R 01005
U5930 MAX44290ANT BGA SHDN
C5934 0.1UF 20% 6.3V X5R-CERM 01005
R5900 0.00 0% 1/32W MF 01005
C5900 0.1UF 20% 6.3V X5R-CERM 01005
C5901 0.1UF 20% 6.3V X5R-CERM 01005
U5900 FAN38522UCX WLCSP 353S02530 VDDIO VDD
CH.1, DATA AFTER RISING EDGE
CH.2, DATA AFTER FALLING EDGE
C5950 0.1UF 20% 6.3V X5R-CERM 01005
U5950 FSUSB242 WLCSP
R5940 4.99K 1% 1/32W MF 01005 CRITICAL
R5941 200K 1% 1/32W MF 01005 CRITICAL
C5941 10UF 20% 10V X5R 0402-0.1MM 138S00123
C5942 0.1UF 20% 6.3V X5R-CERM 01005
U5940 MAX44290ANT BGA SHDN
R5942 12.4K 1% 1/32W MF 01005 CRITICAL
C5943 5PF +/-0.1PF 16V C0G 01005
R5943 3.01M 1% 1/32W TK 01005
R5980 117S0164 47.0K 5% 1/32W MF 01005
C5960 0.1UF 20% 6.3V X5R-CERM 01005
U5960 FSUSB242 WLCSP
R5970 24.9K 1% 1/32W MF 01005 118S00053
R5962 200 1% 1/20W MF 201
R5963 200 1% 1/20W MF 201
R5950 0.00 0% 1/32W MF 01005 NOSTUFF
R5961 5.49K 1% 1/32W MF 01005 118S00049
C5961 0.1UF 20% 6.3V X5R-CERM 01005 NOSTUFF
R5902 0.00 0% 1/32W MF 01005
R5903 0.00 0% 1/32W MF 01005

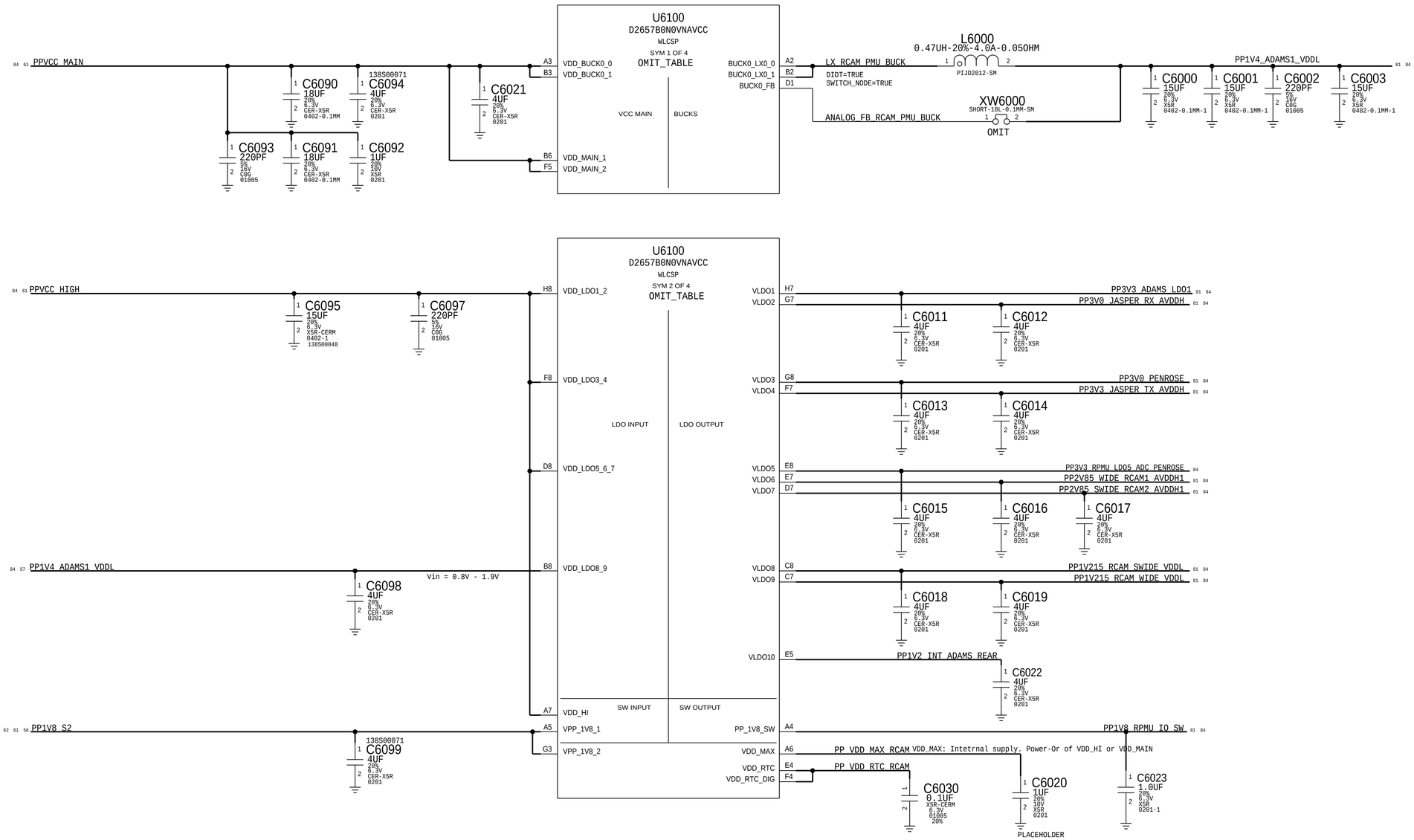
BOM_COST_GROUP=USB-C

PAGE TITLE

LDCM

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

RCAM ADAMS PMU



BOM_COST_GROUP=CAMERA

PAGE TITLE

CAMERA: ADAMS REAR POWER (1/2)

RCAM ADAMS PMU IO

PP1V8_RPMU_IO_SW

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

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

SPMI_ISP_ADAMS_REAR_SCLK
SPMI_ISP_ADAMS_REAR_SDATA
R6152 0.00 1/32W 0% MF 01005 PLACE_NEAR=U0600:R4:50MM
R6153 33 1/32W 5% MF 01005 PLACE_NEAR=U6100:H6:20MM
ISP_SPMI_ADAMS_SCLK_R
ISP_SPMI_ADAMS_SDATA_R
ADAMS_CRASH_L_1V8
GPIO_ISP_TO_ADAMS_REAR_RESET_L

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

U6100
D2657B0N0VNAVCC
WLCSP
SYM 3 OF 4
OMIT_TABLE

I2C: SCL_1, SDA_1, SCL_2, SDA_2, SCL_3, SDA_3, SCL_4, SDA_4
SPMI: SCLK (1V2 IO), SDATA (1V2 IO)
RESET: CRASH*, RESET* (1V2 IN)
REFERENCE: VREF, IREF
CLK EXPAND: CLKI (1V2 IN), CLKO_1, CLKO_2, CLKO_3, CLKO_4
GPIO: GPIO1, GPIO2, GPIO3, GPIO4, GPIO5, GPIO6, GPIO7, GPIO8/TCAL, GPIO9/TDEV1, GPIO10/TDEV2, GPIO11/TDEV3, GPIO12/TDEV4, GPIO13/FORCE_SYNC (1V2 IN)
AMUX, VPP_OTP

GPIO_RCAM_PMU_TO_STROBE_DRIVER_HWEN_1V8
GPIO_RCAM_PMU_TO_TOF_PMU_EN_1V8
GPIO_RCAM_PMU_TO_TOF_INT_L_1V8
GPIO_RCAM_PMU_TO_TOF_SHUTDOWN_L_1V8
GPIO_RCAM_PMU_TO_JAS_LDO_EN_1V8
GPIO_RCAM_PMU_TO_WIDE_SHUTDOWN_L_1V8
GPIO_RCAM_PMU_TO_SWIDE_SHUTDOWN_L_1V8
ADAMS_TCAL
C3_TEMP_NTC_P
NC_ADAMS_GPIO10
NC_ADAMS_GPIO11
NC_ADAMS_GPIO12
IO_TOUCH_TO_MANY_SCAN_ACTIVE
R6133 0.00 1/32W 0% MF 01005
GPIO_SOC_TO_LANAI_DISPLAY_BSYNC1

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

CLK_ISP_TO_RCAM_PMU_12MHZ
CLK_RCAM_PMU_TO_WIDE_12MHZ_1V8
CLK_RCAM_PMU_TO_SWIDE_12MHZ_1V8
CLK_RCAM_PMU_TO_JASPER_TOF_12MHZ_1V8
NC
R6136 100K 5% 1/32W MF 01005

AMUX_PMU_FROM_RPMU
PP6101 PP SM P3MM
Advanced Test Mode (OTP rewrite)

PRIVACY MODE - CRASH

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

U6100
D2657B0N0VNAVCC
WLCSP
SYM 4 OF 4
OMIT_TABLE
VSS: A8, C1, C6, D4, E6, J2, J7, J8
VSS_BUCK0: A1, B1

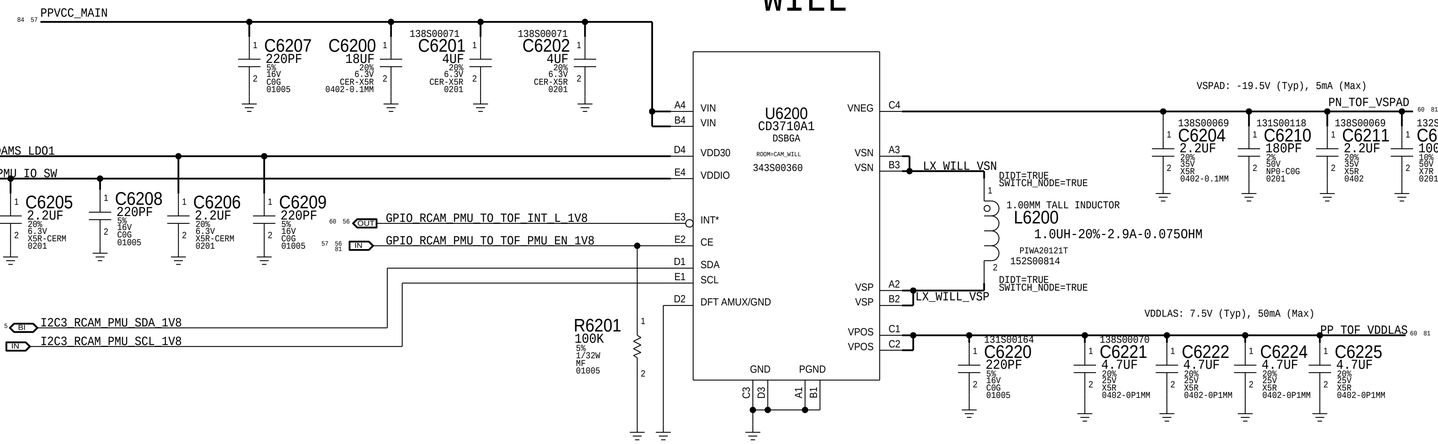
ADAMS_TCAL
CRITICAL R6144 3.92K 0.1% 1/20W MF 0201-2
C6144 100PF 5% 10V NP0-C0G 01005-1

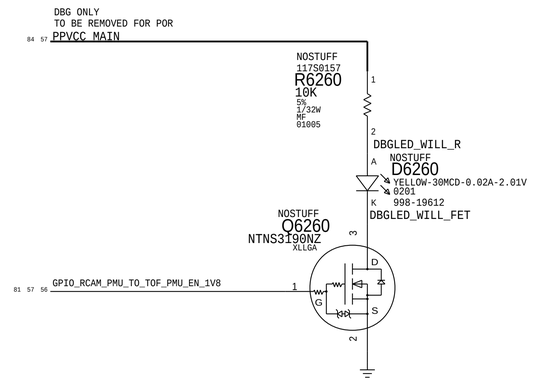
C3_TEMP_NTC_P
CRITICAL R6143 10KOHM-1%-0.31MA NO_XNET_CONNECTION=1 0201
C6143 100PF 5% 10V NP0-C0G 01005-1
C3_TEMP_NTC_N
XW6143 SM PLACE_NEAR=U6100:D6:15MM

BOM_COST_GROUP=CAMERA

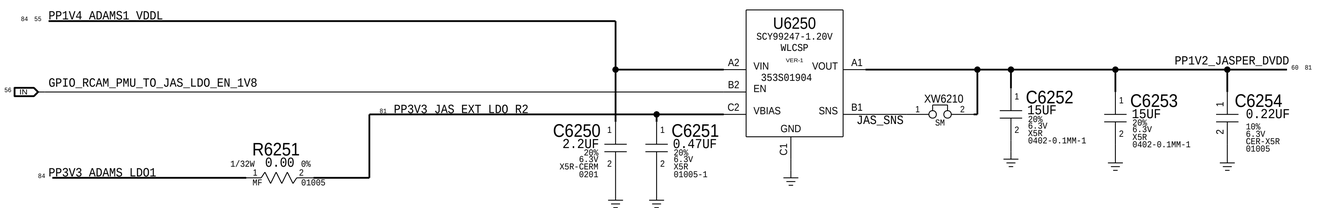
PAGE TITLE
CAMERA: ADAMS REAR IO (2/2)

WILL





JASPER VDDL LDO



BOM_COST_GROUP=JASPER

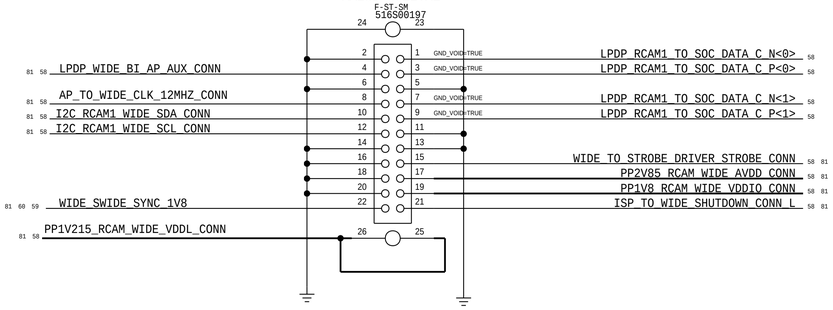
PAGE TITLE

CAMERA: JASPER POWER

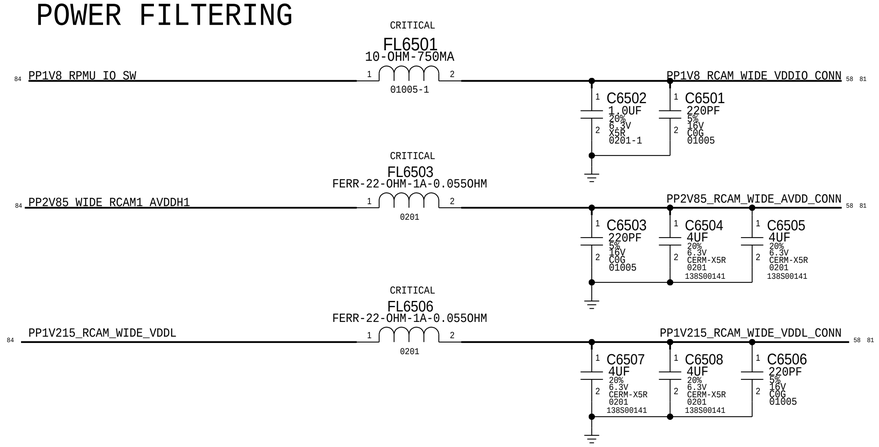
WIDE RCAM1 B2B

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

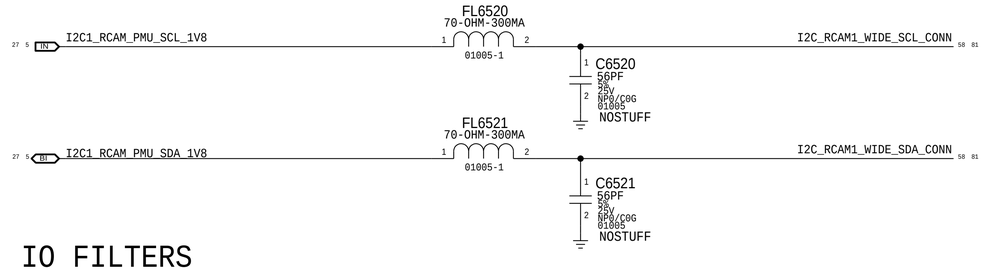
J6500
AA28D-S022VA1
F-ST-SM
516S00197



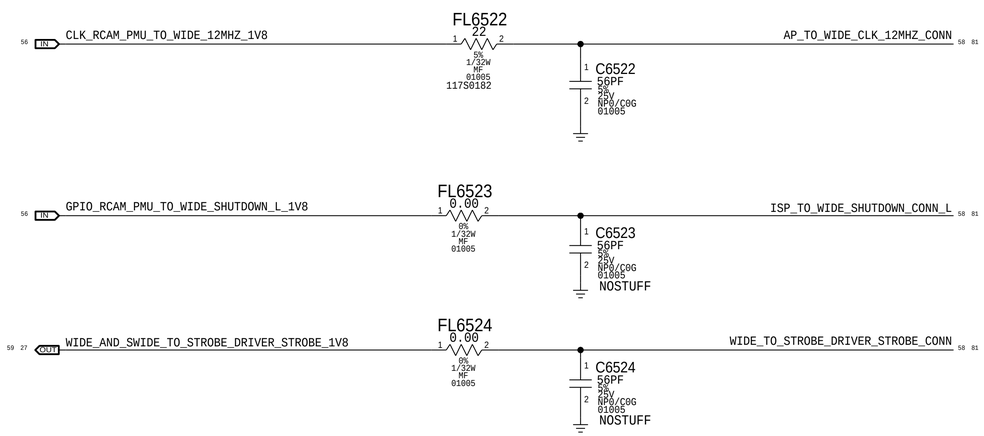
POWER FILTERING



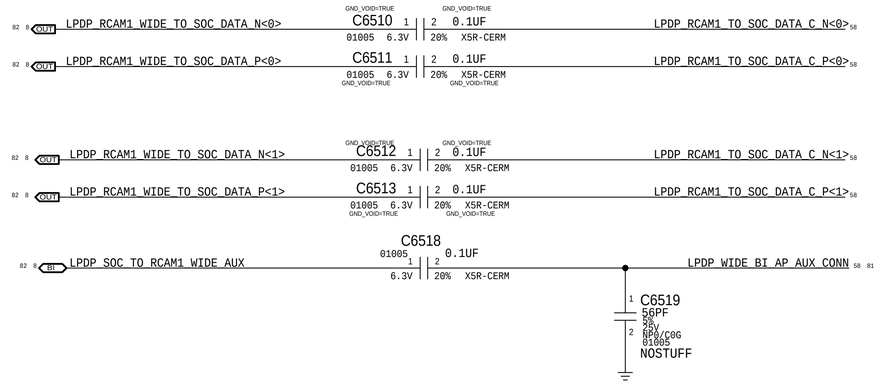
ISP I2C



IO FILTERS



LPDP FILTERS



BOM_COST_GROUP=CAMERA

PAGE TITLE

CAMERA: B2B RCAM1 WIDE

SWIDE RCAM2 B2B

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

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

23, 24 (mounting)
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 IN I2C4_RCAM_PMU_SCL_1V8 → I2C_RCAM2_SWIDE_SCL_CONN 59 81

FL6620
70-OHM-300MA
01005-1

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

5 IN I2C4_RCAM_PMU_SDA_1V8 → I2C_RCAM2_SWIDE_SDA_CONN 59 81

FL6621
70-OHM-300MA
01005-1

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

IO FILTERS

56 IN CLK_RCAM_PMU_TO_SWIDE_12MHZ_1V8 → AP_TO_SWIDE_CLK_12MHZ_CONN 59 81

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

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

56 IN GPIO_RCAM_PMU_TO_SWIDE_SHUTDOWN_L_1V8 → ISP_TO_SWIDE_SHUTDOWN_CONN_L 59 81

FL6623
0.00
5% 1/32W MF 01005

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

58 27 OUT WIDE_AND_SWIDE_TO_STROBE_DRIVER_STROBE_1V8 → SWIDE_TO_STROBE_DRIVER_STROBE_CONN 59 81

FL6624
0.00
5% 1/32W MF 01005

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

LPDP FILTERS

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

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

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

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

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

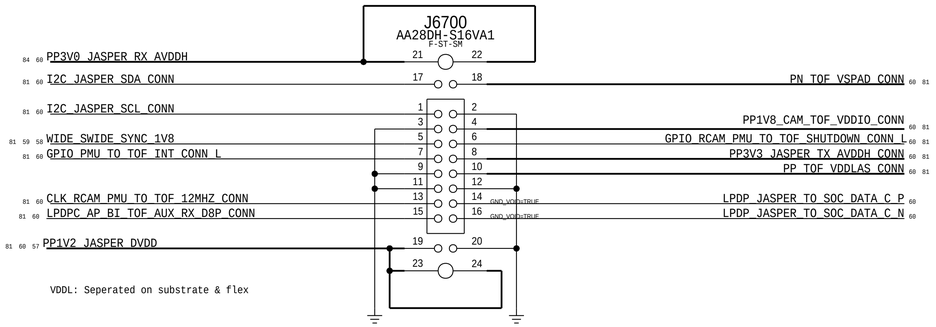
C6619: 56PF 5% 25V NP0/C0G 01005 NOSTUFF

BOM_COST_GROUP=CAMERA

PAGE TITLE
CAMERA: B2B RCAM2 SWIDE

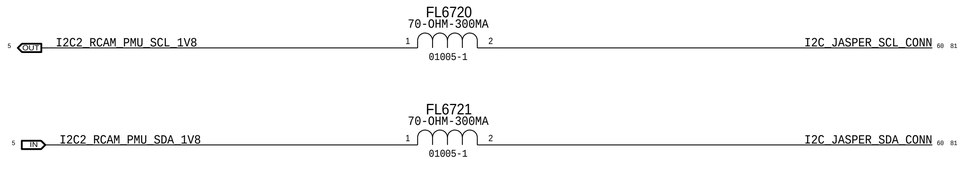
JASPER B2B

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

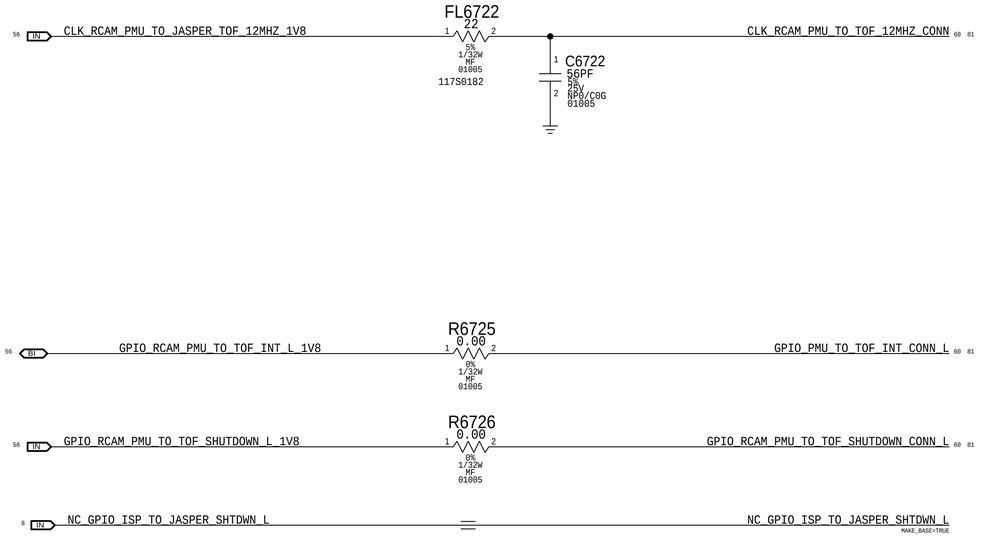


VDDL: Seperated on substrate & flex

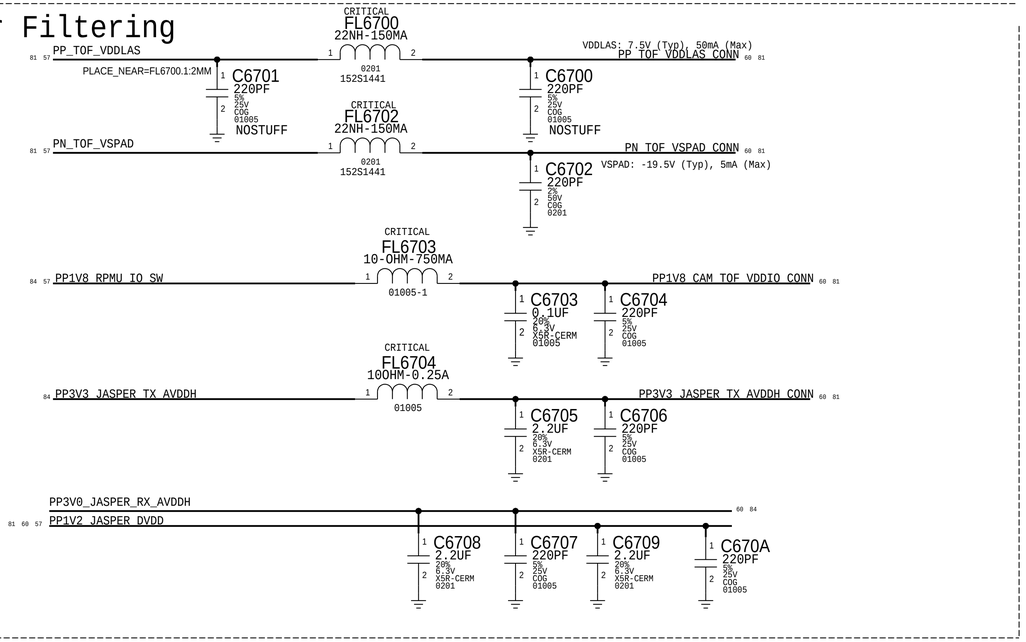
JASPER I2C



IO Filters



Power Filtering



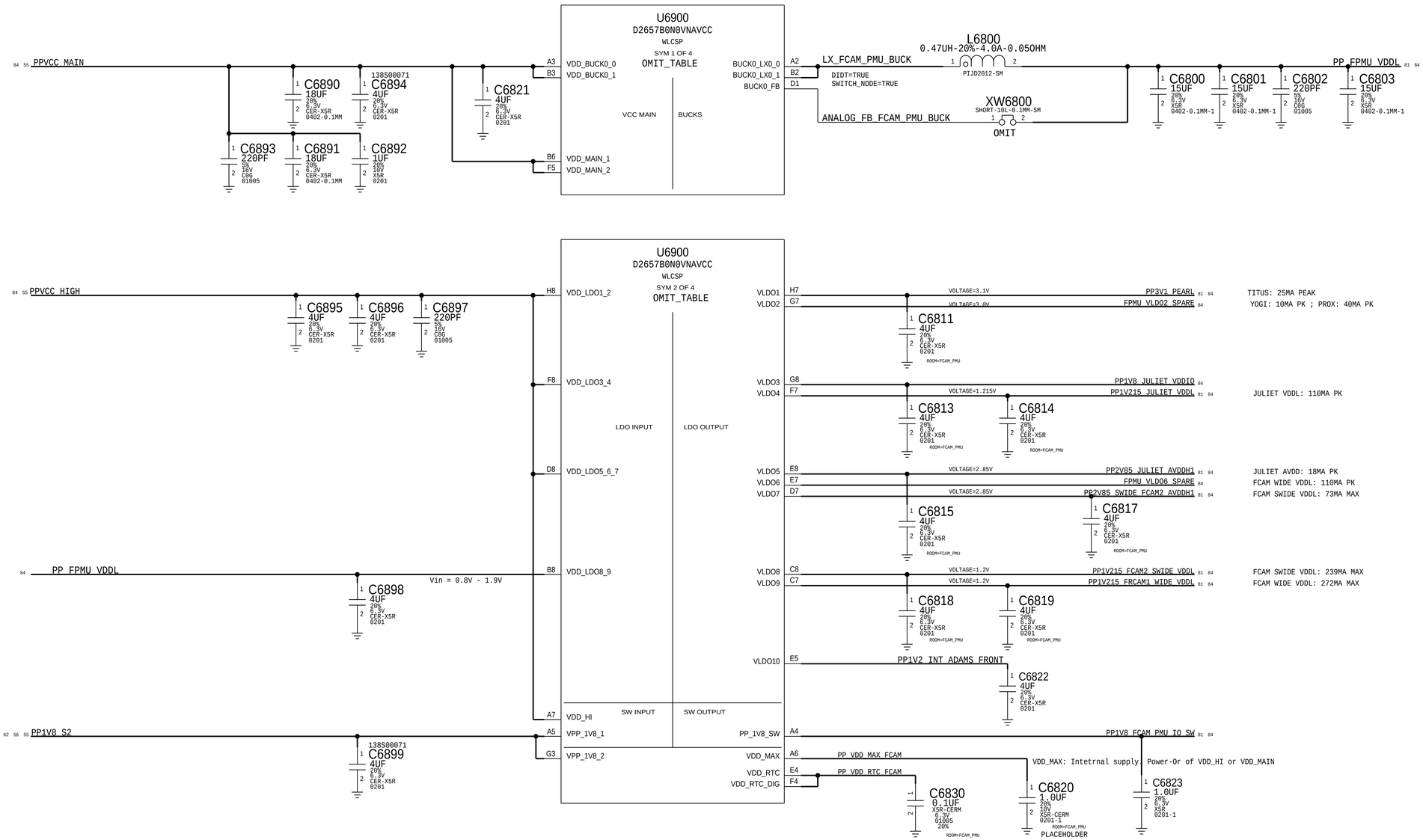
LPDP Filters

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

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

GPIO_FPMU_TO_JULIET_SHUTDOWN_L_1V8
GPIO_FCAM_PMU_TO_FCAM_SWIDE_SHUTDOWN_L_1V8
GPIO_FCAM_PMU_TO_RIGEL_ENABLE_1V8
GPIO_RIGEL_INT_TO_FPMU_1V8
NC_FPMU_GPIO6
NC_FPMU_GPIO7
ADAMS_FCAM_PMU_TCAL
C4_TEMP_NTC_P
NC_FPMU_GPIO10
NC_FPMU_GPIO11
NC_FPMU_GPIO12
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
NC
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
ADAMS_FCAM_PMU_CRASH_L_1V8

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

U6900
D2657B0N0VNAVCC
WLCSP
SYM 4 OF 4
OMIT_TABLE

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

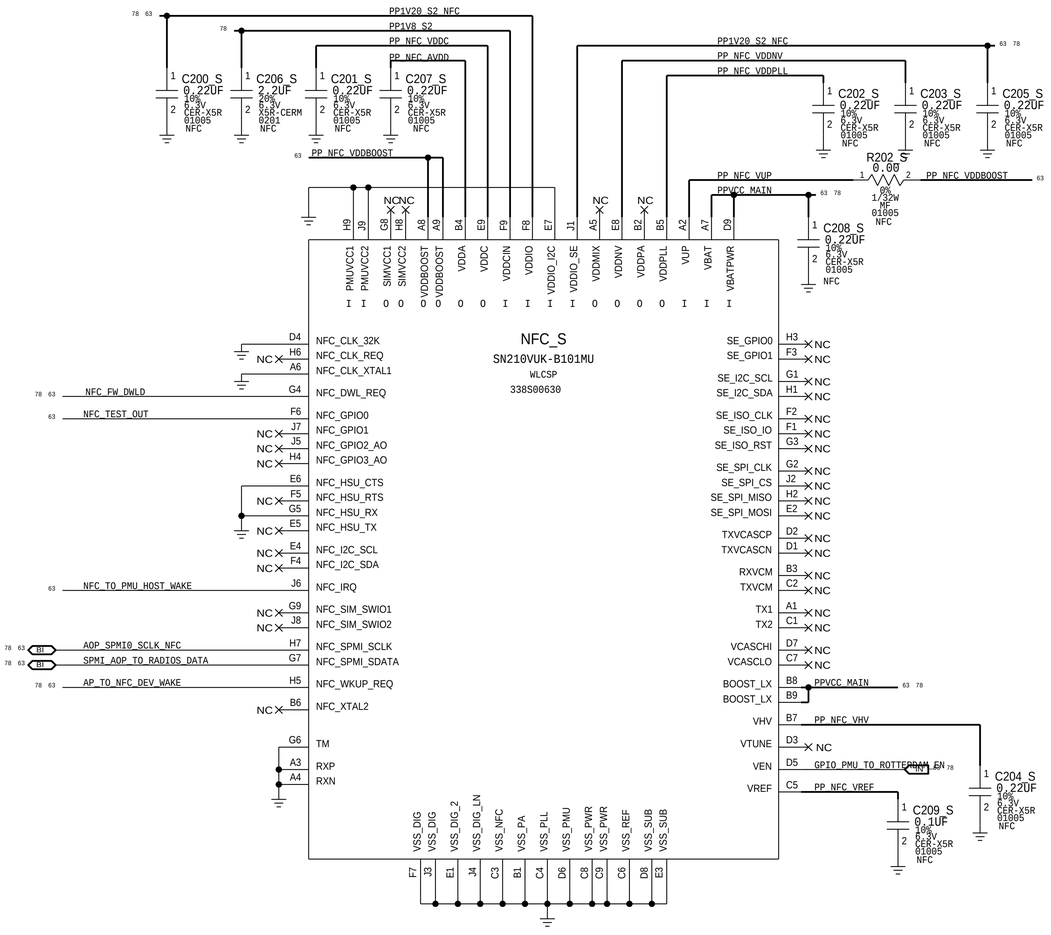
BOM_COST_GROUP=CAMERA

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

STOCKHOLM

NFC CONTROLLER

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



BOM_COST_GROUP=SECURE_ELEMENT

PAGE TITLE

NFC

GPM: DMIC GATING

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

84 PP1V8_S2
C7650 0.1UF 10% 6.3V CER-X5R 01005
R7699 10K 5% 1/32W MF 01005
R7698 10K 5% 1/32W MF 01005
U7650 SLG4AP43246 STQFN
OMIT_TABLE
VDD
GND
80 42 IN GPIO_APANEL_HALL_TO_PMU_IRQ_L
80 25 IN GPIO_CPANEL_HALL_TO_PMU_IRQ_L
HALL_IN
HALL2_IN
IRQS ARE OPEN DRAIN OUTPUT
IRQ PULLUPS ARE INTERNAL IN SERA
HALL1_BUF_OUT GPIO_APANEL_HALL_TO_PMU_IRQ_BUF_L OUT 72
HALL2_BUF_OUT GPIO_CPANEL_HALL_TO_PMU_IRQ_BUF_L OUT 72
MIC_DISABLE* 81 GPM_DMIC_DISABLE_L
PRE_WARN
R7652 0.00 0% 1/32W MF 01005
R7653 100K 5% 1/32W MF 01005 NOSTUFF
PP1V25_S2 64 84
R7655 10K 5% 1/32W MF 01005
SLG_TO_AOP_DMIC_DISABLE_WARN_L OUT 10 81

PP1V25_S2 64 84
R7651 100K 5% 1/32W MF 01005
GPM_DMIC_DISABLE_R_L 64
DMIC2_MIC_SD_UNSEC 64

PP1V25_S2 64 84
C7600 0.1UF 10% 6.3V CER-X5R 01005
U7600 74AXP1G08GX X2SON5
GPM_DMIC_DISABLE_R_L 64
DMIC1_MIC_SD_UNSEC 64
DMIC1_MIC_SD_R
R7601 100 1% 1/32W MF 01005
PDM_DMIC_TOP_L_R_SD OUT 10 82

PP1V25_S2 64 84
C7601 0.1UF 10% 6.3V CER-X5R 01005
U7601 74AXP1G08GX X2SON5
DMIC2_MIC_SD_R
R7602 100 1% 1/32W MF 01005
PDM_DMIC_FRONT_BACK_SD OUT 10 82

PP1V25_S2 64 84
C7602 0.1UF 10% 6.3V CER-X5R 01005
U7602 74AXP1G08GX X2SON5
GPM_DMIC_DISABLE_R_L 64
DMIC3_MIC_SD_UNSEC 64
DMIC3_MIC_SD_R
R7603 100 1% 1/32W MF 01005
PDM_DMIC_SIDE_SD OUT 10 82

84 76 64 54 53 41 38 29 25 19 PP1V25_S2
NOSTUFF C7610 0.1UF 10% 6.3V X5R CERM 01005
PP1V8_S2 53 41 38 29 25 19 10 25 84 76 64 54 29 41 64 84
NOSTUFF C7611 0.1UF 10% 6.3V X5R CERM 01005
U7610 74AVC2T45GX X2SON
VCCA VCCB
DIR
GND
64 DMIC2_MIC_SD_UNSEC
64 DMIC1_MIC_SD_UNSEC
DMIC2_MIC_SD_UNSEC_1V8 IN 25 41 64
DMIC1_MIC_SD_UNSEC_1V8 IN 29 64
NOSTUFF
LVT / TRANSCEIVER
DIR LOW: B TO A

PP1V25_S2
NOSTUFF C7620 0.1UF 10% 6.3V X5R CERM 01005
PP1V8_S2 19 25 29 41 64 84
NOSTUFF C7621 0.1UF 10% 6.3V X5R CERM 01005
U7620 74AVC1T45 SOT886
VCCA VCCB
DIR
GND
64 DMIC3_MIC_SD_UNSEC
DMIC3_MIC_SD_UNSEC_1V8 IN 19 64
NOSTUFF
LVT / TRANSCEIVER
DIR LOW: B TO A

SENTRY JUMPERS

64 DMIC2_MIC_SD_UNSEC
R7610 0.00 0% 1/32W MF 01005
DMIC2_MIC_SD_UNSEC_1V8 25 41 64

64 DMIC1_MIC_SD_UNSEC
R7611 0.00 0% 1/32W MF 01005
DMIC1_MIC_SD_UNSEC_1V8 29 64

SENTRY JUMPER

64 DMIC3_MIC_SD_UNSEC
R7620 0.00 0% 1/32W MF 01005
DMIC3_MIC_SD_UNSEC_1V8 19 64

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 G10 VDDIO_1V2
C77E0 0.1UF 10% 6.3V CERM-X5R 0201
69 44 41 21 84 74 72 PP1V8_S2 H10 VDDIO_BUCK3
C77E1 0.1UF 10% 6.3V CERM-X5R 0201
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
Q7772 CRITICAL 376S00205 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 BUCK4_LX1 APN: 152S00204 L7711 0.22UH-20%-6.7A-0.023OHM PINA20121T-SM
BUCK4_LX1 D14
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_LX0 APN: 152S01263 L7720 0.47UH-20%-4A-0.024OHM PIKD20121B-SM
BUCK5_LX_1 H14
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_LX0 152S01325 L7730 0.47UH-20%-6.9A-0.022OHM MEMK2520-SM
BUCK6_LX_1 N3
BUCK6_LX_2 P3
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

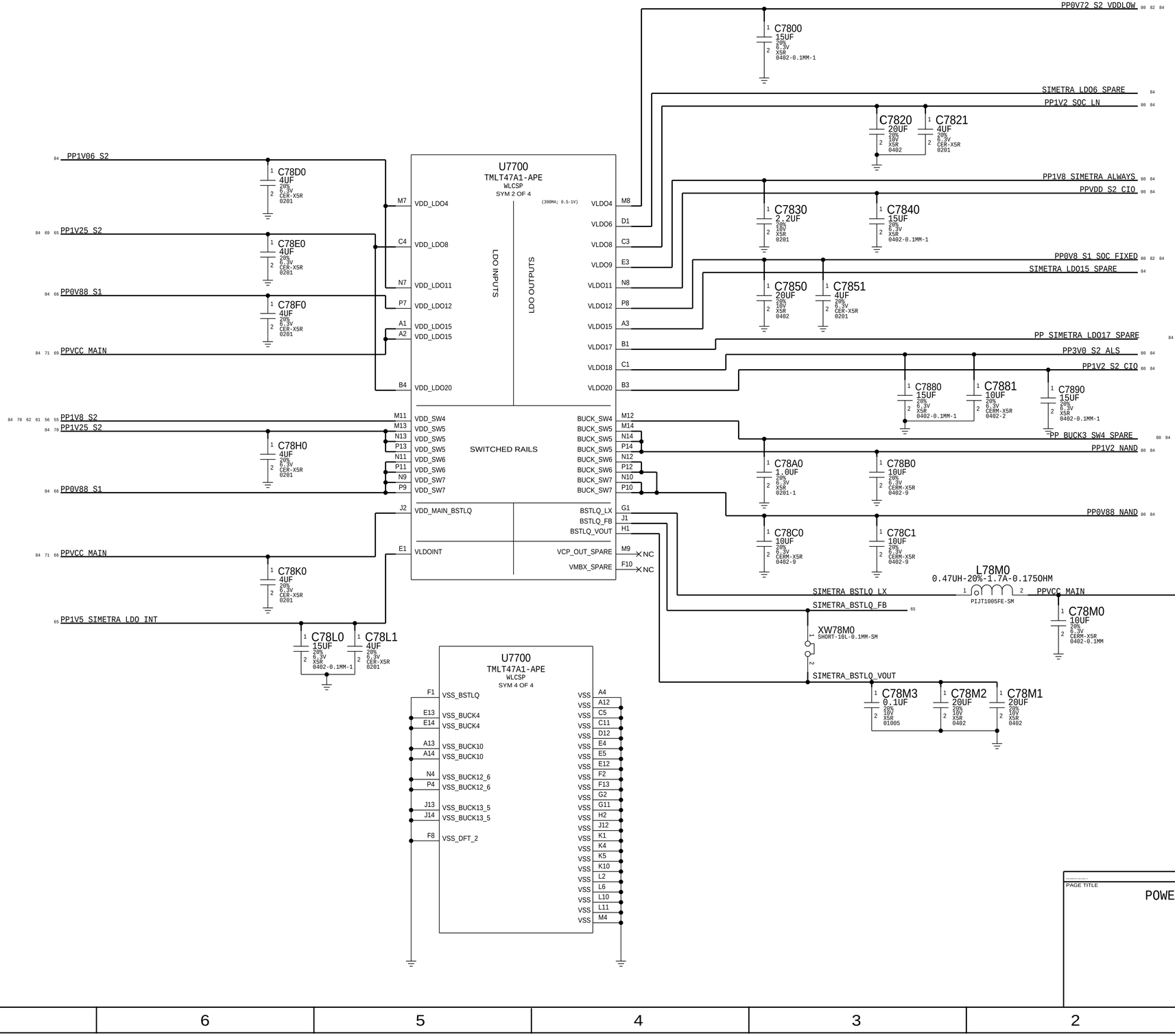
BUCK10_LX_0 B13 BUCK10_LX0 APN: 152S01263 L7740 0.47UH-20%-4A-0.024OHM PIKD20121B-SM
BUCK10_LX_1 B14
BUCK10_FB B11 BUCK10_FB XW7740 SHORT-10L-0.1MM-SM PLACE_NEAR=U0600:10MM
BUCK10_VSS_FB B12
C7740 15UF 20% 4V CERM 0402
C7741 15UF 20% 4V CERM 0402
C7742 15UF 20% 4V CERM 0402
C7743 15UF 20% 4V CERM 0402
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_LX0 APN: 152S01263 L7750 0.47UH-20%-4A-0.024OHM PIKD20121B-SM
BUCK12_LX_1 P5
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_LX0 APN: 152S01263 L7760 0.47UH-20%-4A-0.024OHM PIKD20121B-SM
BUCK13_LX_1 K14
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 66 69 84
PP1V25_S2 80 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
	BOARD_TEMP11_P	B8	TDEV3
	BOARD_TEMP12_P	B7	TDEV4
	BOARD_TEMP13_P	B6	TDEV5
TDEV			
	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
		H8	DFT_CTRL_0
	67 SWD_PERIPHERAL_SWCLK	J8	DFT_CTRL_1
RESET			
		F9	EXT32K_EN
	NC_SIMETRA_EXT_32K_IN	K9	EXT32K_IN
	80 SIMETRA_FORCE_SYNC	G9	FORCE_SYNC
CLOCK			

	GPIO1	H7	NC
	GPIO2	K8	NC
	GPIO3	K7	SWD_PMU_SWDIO 67
	GPIO4	J7	
	GPIO5	G7	NC
	GPIO6	F7	NC
	GPIO7	F6	NC
	GPIO8	H6	NC_GPIO_SIMETRA_TO_BBPMU_ON
GPIO	GPIO9	G6	NC_GPIO_SIMETRA_TO_BB_BOOT_CFG1 OUT 78
	GPIO10	J6	NC_GPIO_SIMETRA_TO_BB_BOOT_CFG2 OUT 78
	GPIO11	F5	NC_GPIO_SIMETRA_TO_WLAN_REG_ON
	GPIO12	H5	NC
	GPIO13	J5	NC_SIMETRA_GPIO13
	GPIO14	G5	GPIO_SIMETRA_IRQ_L 82
	GPIO15	F4	NC
	GPIO16	F3	GPIO_PP2V63_S1_DISCH_EN_R
	SPMI_SCLK	J9	NUB_SPMI1_SIMETRA_SCLK 10 67
SPMI	SPMI_SDATA	H9	NUB_SPMI1_SIMETRA_SDATA 10 67
	SGPIO_SCLK	H3	SGPIO_SCLK_1V8 IN 72 82
	SGPIO_SDATA	G3	SIMETRA_SGPIO_SDATA_1V8
	UVWARN*	G8	SIMETRA_UVWARN_L
	SCRASH*	G4	SCRASH_L_1V8 BI 72 80
	SGPIO_READY_REQ	H4	SGPIO_READY_REQ_1V8 72 82

R7914 0.00 0% 1/32W MF 01005
GPIO_PMU_TO_NAND_DISCH_EN_1V8 OUT 65
IN GPIO_SERA_TO_NAND_DISCH_EN_1V8
NOSTUFF R7915 0.00 0% 1/32W MF 01005

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
A TP7904

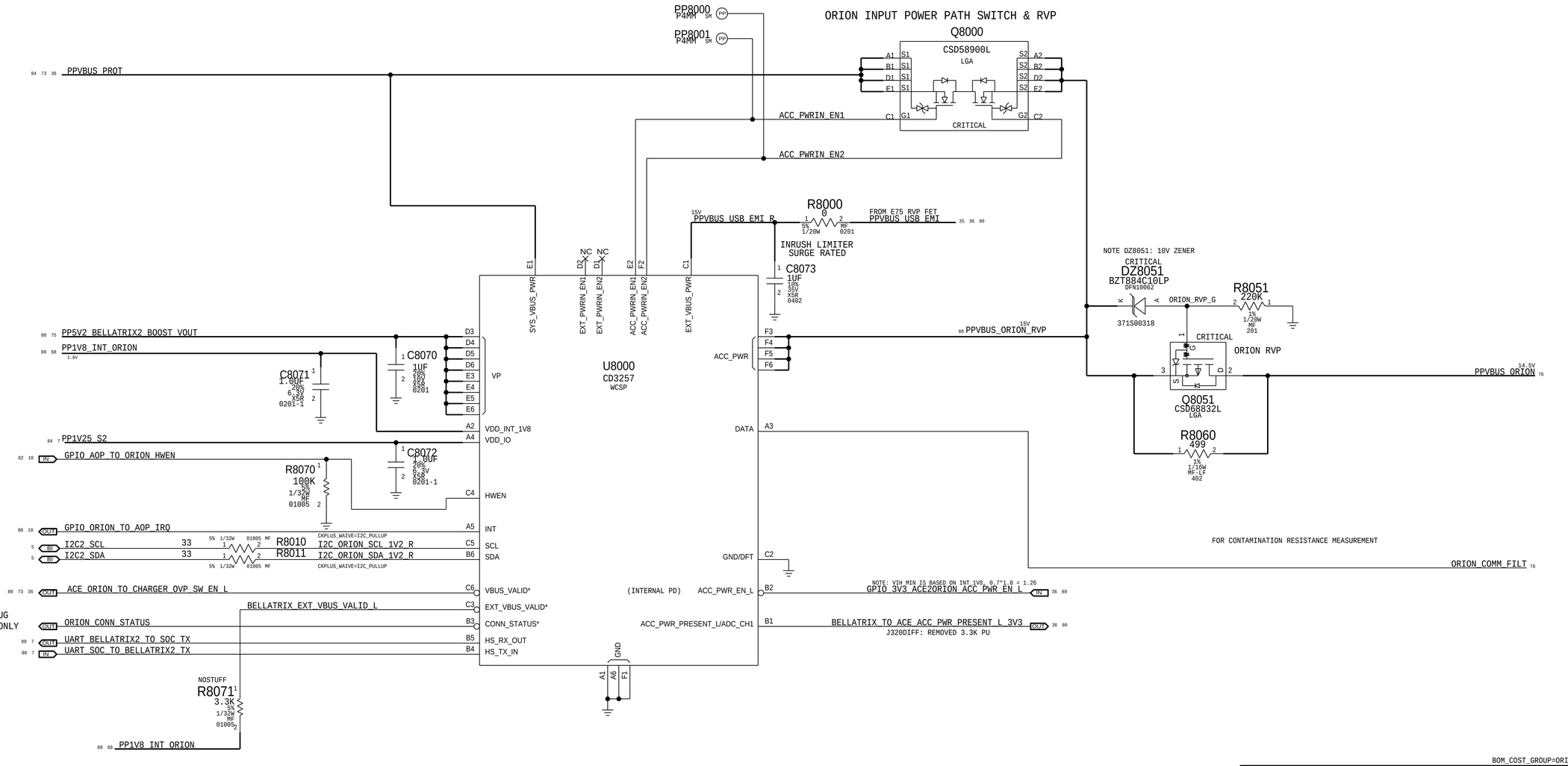
NOTES:
UVWARN - VCC_MAIN UVWARN0 (2.95V) "PRE-UVLO"

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

BOM_COST_GROUP=POWER

PAGE TITLE
POWER: SIMETRA (3/3)


ORION INPUT POWER PATH SWITCH & RVP
Q8000
CSD58900L
LGA
CRITICAL
PP8000 P4MM SH
PP8001 P4MM SH
84 73 36 PPVBUS_PROT
ACC_PWRIN_EN1
ACC_PWRIN_EN2
R8000
0
5% 1/20W MF 0201
15V PPVBUS_USB_EMI_R
FROM E75 RVP FET PPVBUS_USB_EMI
35 36 80
INRUSH LIMITER SURGE RATED
C8073
1UF
10% 35V X5R 0402
NC NC
SYS_VBUS_PWR
EXT_PWRIN_EN1
EXT_PWRIN_EN2
ACC_PWRIN_EN1
ACC_PWRIN_EN2
EXT_VBUS_PWR
NOTE DZ8051: 10V ZENER
CRITICAL
DZ8051
BZT884C10LP
DFN1006Z
371S00318
R8051
220K
1% 1/20W MF 201
ORION_RVP_G
CRITICAL
ORION RVP
O8051
CSD68832L
LGA
R8060
499
1% 1/10W MF-LF 402
14.5V PPVBUS_ORION 76
80 75 PP5V2_BELLATRIX2_BOOST_VOUT
80 68 PP1V8_INT_ORION
1.8V
C8071
1.0UF
20% 6.3V X5R 0201-1
C8070
1UF
20% 10V X5R 0201
VP
U8000
CD3257
WCSP
VDD_INT_1V8
VDD_IO
84 7 PP1V25_S2
82 10 IN GPIO_AOP_TO_ORION_HWEN
R8070
100K
5% 1/32W MF 01005
C8072
1.0UF
20% 6.3V X5R 0201-1
HWEN
80 10 OUT GPIO_ORION_TO_AOP_IRQ
INT
5 BI I2C2_SCL
5 BI I2C2_SDA
33
R8010
R8011
5% 1/32W 01005 MF
CKPLUS_WAIVE=I2C_PULLUP
I2C_ORION_SCL_1V2_R
I2C_ORION_SDA_1V2_R
SCL
SDA
80 73 36 OUT ACE_ORION_TO_CHARGER_OVP_SW_EN_L
VBUS_VALID*
BELLATRIX_EXT_VBUS_VALID_L
EXT_VBUS_VALID*
FOR DEBUG HEADER ONLY
OUT ORION_CONN_STATUS
CONN_STATUS*
80 7 OUT UART_BELLATRIX2_TO_SOC_TX
HS_RX_OUT
80 7 IN UART_SOC_TO_BELLATRIX2_TX
HS_TX_IN
NOSTUFF
R8071
3.3K
5% 1/32W MF 01005
80 68 PP1V8_INT_ORION
GND
ACC_PWR
DATA
GND/DFT
(INTERNAL PD)
ACC_PWR_EN_L
ACC_PWR_PRESENT_L/ADC_CH1
80 15V PPVBUS_ORION_RVP
NOTE: VIH_MIN IS BASED ON INT_1V8, 0.7*1.8 = 1.26
GPIO_3V3_ACE2ORION_ACC_PWR_EN_L IN 36 80
BELLATRIX_TO_ACE_ACC_PWR_PRESENT_L_3V3 OUT 36 80
J320DIFF: REMOVED 3.3K PU
ORION_COMM_FILT 76
FOR CONTAMINATION RESISTANCE MEASUREMENT
BOM_COST_GROUP=ORION
PAGE TITLE
ORION CONNECTOR & POWER PATH

SERA BUCKS (1/4)

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

PPVCC_MAIN

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

C81B0 C81B1 C81B2 C81B3 C81B4 C81B5 C81B6 C81B7 4UF 20% 6.3V CER-X5R 0201
C81B8 C81B9 C81BA C81BB C81BC C81BD C81BE C81BF C81BG 4UF 20% 6.3V CER-X5R 0201
C81C0 C81C1 C81C2 C81C3 C81C4 C81C5 C81C6 C81C7 4UF 20% 6.3V CER-X5R 0201
C81C8 C81C9 C81CA C81CB C81CC C81CD C81CE C81CF 4UF 20% 6.3V CER-X5R 0201
C81CG C81CH C81CI C81CJ C81D0 C81D1 C81D2 C81D3 4UF 20% 6.3V CER-X5R 0201
C81D4 C81D5 C81D6 C81D7 C81D8 C81D9 C81DA C81DB 4UF 20% 6.3V CER-X5R 0201
C81DC C81DD C81DE C81DF C81DG C81DH C81DI C81DJ 4UF 20% 6.3V CER-X5R 0201

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

PACK_IGNORE=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_OPTION=J517,J518

0.1UH-20%-10.3A-0.01OHM
L8101 L8102 L8111 L8112
152S01268
PCCE20161B-SM

XW8100 SHORT-10L-0.1MM-SM

(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

XW8110 SHORT-10L-0.1MM-SM

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

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

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

XW8120 SHORT-10L-0.1MM-SM

(7.3A; 0.32-1.2V,TYP 0.857V)
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

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

BOM_COST_GROUP=POWER

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

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 → K9 ADC_IN

R8203 1M 5% 1/20W MF 201 — PP1V5_SERA_LDO_INT (71 69) → C7 VDD_ANA

C8202 0.1UF 20% 6.3V X5R-CERM 01005

C8200 2.2UF 20% 10V X5R 0201

R8201 1.00K 1% 1/32W MF 01005 — PMU_VCC_MAIN_SNS_R_P (80 73)

NO_XNET_CONNECTION=1

C8201 0.22UF 10% 6.3V CER-X5R 01005

R8202 1.00K 1% 1/32W MF 01005 — PMU_VCC_MAIN_SNS_R_N (80 73)

SERA_VREF → K12 VREF

PMU_VCC_MAIN_SNS_P → J10 VBAT

PMU_VCC_MAIN_SNS_N → J9 IBAT

NC → J8 IREF

U8100
TMLT46B0-APG
WLCSP
SYM 2 OF 6

K9	ADC_IN
C7	VDD_ANA
C11	VDD_ANA
C15	VDD_ANA
F5	VDD_ANA
F18	VDD_ANA
J15	VDD_ANA
K5	VDD_ANA
K8	VDD_ANA
L5	VDD_ANA
P18	VDD_ANA
R5	VDD_ANA
V7	VDD_ANA
V11	VDD_ANA
V15	VDD_ANA
V19	VDD_ANA
D9	VDD_DIG
E16	VDD_DIG
J7	VDD_DIG
M18	VDD_DIG
P9	VDD_DIG
R17	VDD_DIG
K12	VREF
J10	VBAT
J9	IBAT
J8	IREF

BUCK OUTPUTS

SWITCHED RAILS

R21	VDD_SW1	BUCK_SW1	P21
R22	VDD_SW1	BUCK_SW1	P22
T20	VDD_SW2	BUCK_SW2	T19
R19	VDD_SW3	BUCK_SW3	P19
R20	VDD_SW3	BUCK_SW3	P20

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

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

APN:152S01263
L8210 0.47UH-20%-4A-0.024OHM — PIKD20121B-SM
BUCK3_LX (A16, B16) — DIDT=TRUE, SWITCH_NODE=TRUE
XW8210 SHORT-10L-0.1MM-SM
BUCK3_FB (D16)
BUCK3_VSS_FB (C16)
C8210–C8217 15UF 20% 4V CERM 0402
C821Z 220PF 5% 16V C0G 01005
PP1V8_S2 (80 84)

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

BUCK7_LX0 (Y12) — DIDT=TRUE, SWITCH_NODE=TRUE
152S01283
L8220 1.0UH-20%-4A-0.034OHM — PIKD20161B
PACK_OPTION=J517,J518
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
PPVDD_CPU_SRAM (80 82 84)
NOSTUFF

BUCK7_LX1 (W14, Y14)
APN:152S00204
L8221 0.22UH-20%-6.7A-0.023OHM — PINA20121T-SM
XW8220 SHORT-10L-0.1MM-SM
BUCK7_FB (U12)
BUCK7_VSS_FB (V12)
PPVDD_CPU_SRAM (14 84)

APN:152S01283
L8230 1.0UH-20%-4A-0.034OHM — PIKD20161B
BUCK8_LX0 (A8)
C8230–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_DISP (80 84)

APN:152S00204
L8231 0.22UH-20%-6.7A-0.023OHM — PINA20121T-SM
BUCK8_LX1 (A10, B10)
XW8230 SHORT-10L-0.1MM-SM
BUCK8_FB (D8)
BUCK8_VSS_FB (C8)
PPVDD_S1_DISP (13 84)

APN:152S01263
L8240 0.47UH-20%-4A-0.024OHM — PIKD20121B-SM
BUCK9_LX (A12, B12)
C8240–C8243 15UF 20% 4V CERM 0402
C8244 15UF 20% 4V CERM 0402
C824Z 220PF 5% 16V C0G 01005
PPVDD_S1_DCS (80 84)
NOSTUFF NOSTUFF

XW8240 SHORT-10L-0.1MM-SM — PLACE_NEAR=U0600:10MM
BUCK9_FB (D12)
BUCK9_VSS_FB (C12)
PPVDD_S1_DCS (14 84)
C8240 15UF 20% 4V CERM 0402
C8241 15UF 20% 4V CERM 0402

L8250 1.0UH-20%-4A-0.034OHM — PIKD20161B
BUCK11_LX0 (Y8) — DIDT=TRUE, SWITCH_NODE=TRUE
152S01283
PACK_OPTION=J517,J518
C8250–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
PPVDD_ECPU (80 82 84)

152S01189
L8250 1.0UH-20%-4A-0.038OHM — PIKD20161T-SM
PACK_IGNORE=TRUE, PACK_OPTION=J522,J523
NOSTUFF

BUCK11_LX1 (W10, Y10)
BUCK11_FB (U8)
BUCK11_VSS_FB (V8)
152S00204
L8251 0.22UH-20%-6.7A-0.023OHM — PINA20121T-SM
XW8250 SHORT-10L-0.1MM-SM
BUCK11_FB
PPVDD_ECPU (13 84)

BUCK14_LX (A14, 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

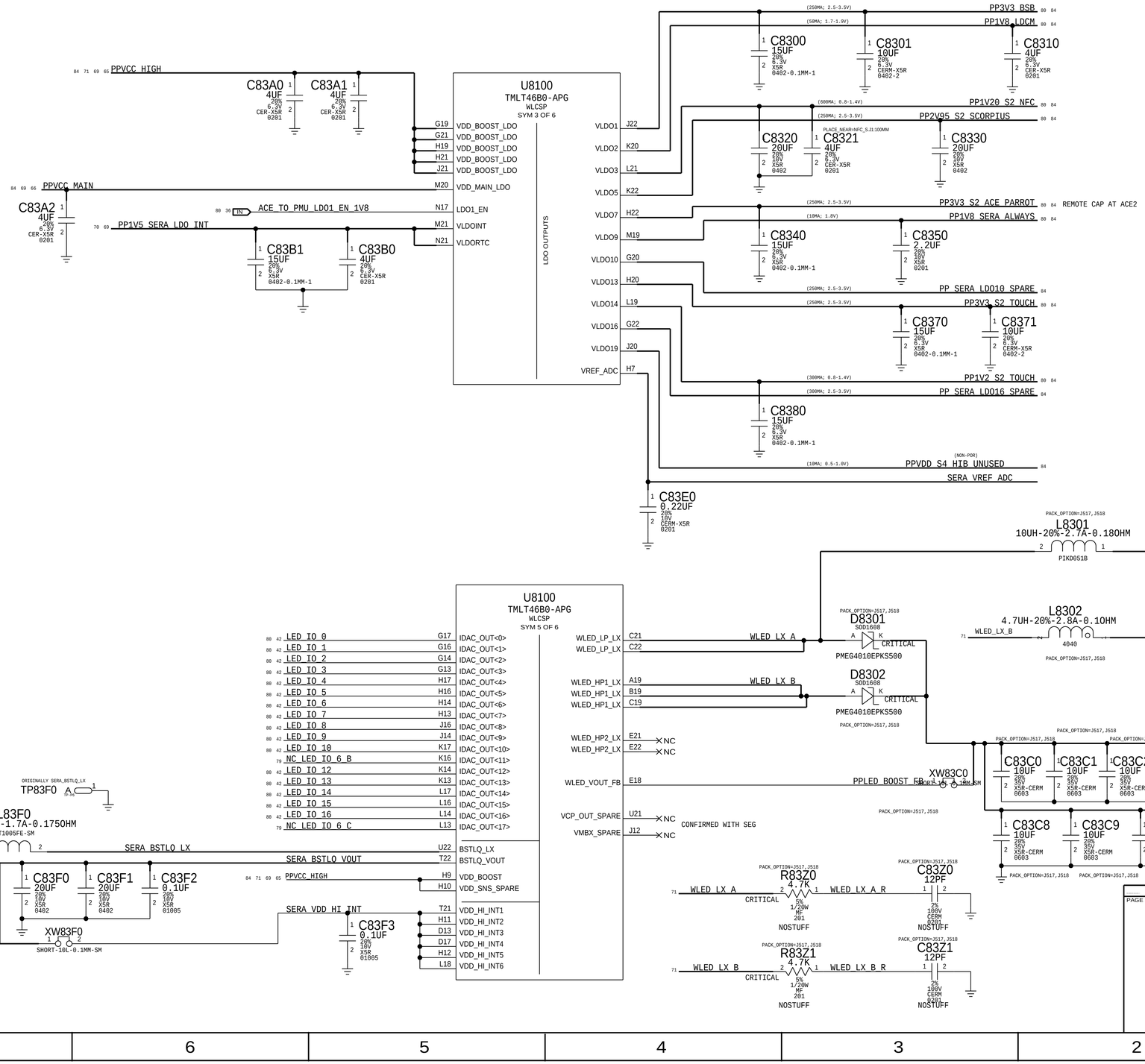
PP1V8_S2_TOUCH (80 84)
C82S1 1.0UF 20% 6.3V X5R 0201-1

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

BOM_COST_GROUP=POWER

PAGE TITLE
POWER: SERA (2/4)

SERA LDO/WLED (3/4)



SERA GPIOS (4/4)

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

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

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

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

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

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

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

Y8400 32.768KHZ-20PPM-12.5PF 1.6X1.0-SM 197S00291
131S0853 C8400 20PF 5% 25V C0G 0201
131S0853 C8401 20PF 5% 25V C0G 0201
PMU_XTAL 72
PMU_EXTAL 72

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

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

SWD PERIPHERAL SWCLK 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

	78 PA_NTC_P	E8	TDEV1	
BOARD_TEMP2_P		F9	TDEV2	
BOARD_TEMP3_P		F8	TDEV3	
BOARD_TEMP4_P		F7	TDEV4	
BOARD_TEMP5_P		G9	TDEV5	
BOARD_TEMP6_P		G10	TDEV6	
BOARD_TEMP7_P		G8	TDEV7	
BOARD_TEMP8_P		G7	TDEV8	
SERA_TCAL		F10	TCAL	
			TDEV	
			GPIO	
		P16	GPIO1	NC_SERA_GPIO1
		T9	GPIO2	GPIO_APANEL_HALL_TO_PMU_IRQ_BUF_L 64
		T7	GPIO3	SWD_PMU_SWDIO 72
		R11	GPIO4	GPIO_CPANEL_HALL_TO_PMU_IRQ_BUF_L 64
	SER_GPIO4_R — R8493 0.00 0% 1/32W MF 01005	T8	GPIO5	GPIO_POTOMAC_TO_SOC_TO_PMU_IRQ_L 10 73
		U7	GPIO6	GPIO_POTOMAC_TO_PMU_WAKE_1V8 73
		T11	GPIO7	NC_GPIO_BB_TO_PMU_HOST_WAKE_L IN 78
		U10	GPIO8	GPIO_WLAN_TO_PMU_HOST_WAKE IN 78
		R12	GPIO9	SERA_FORCE_SYNC
		U9	GPIO10	NC_SERA_GPIO10
		T12	GPIO11	GPIO_PMU_TO_LCD_PWREN_1V8 42 43 45 80
		U11	GPIO12	GPIO_PMU_TO_POTOMAC_LINCH_EN_1V8
		T13	GPIO13	GPIO_PMU_TO_ROTTERDAM_EN OUT 78
		U13	GPIO14	GPIO_PMU_TO_SCORPIUS_EXT_DOTARA_EN_1V8 OUT 76 80
		M13	GPIO15	GPIO_PMU_TO_ATRANI_EXT_LDO_EN_1V8 OUT 44
		M14	GPIO16	NC_SERA_GPIO16
		N14	GPIO17	GPIO_PMU_TO_NAND_LOW_BATT_L 17 18 82
		R13	GPIO18	GPIO_PMU_TO_SCORPIUS_MCU_NRST_L_1V8 OUT 76 80
		U14	GPIO19	GPIO_PMU_TO_LDCM_MUX_SEL0 OUT 54
		U15	GPIO20	GPIO_PMU_TO_LDCM_MUX_SEL1 OUT 54
		T14	GPIO21	NC
		U16	GPIO22	NC_SERA_GPIO22
		U17	GPIO23	NC_GPIO_PMU_TO_BBPMU_ON OUT 78
		R14	GPIO24	GPIO_PMU_TO_WLAN_REG_ON OUT 47 78
		N10	GPIO25	GPIO_SERA_TO_NAND_DISCH_EN_1V8 OUT 67
		P8	GPIO26	NC_GPIO_PMU_TO_BBPMU_VBUS_DET 78
		P17	GPIO27	NC_SERA_GPIO27
			BUTTONS	
72 25 GPIO_BTN_VOL_DOWN_L_1V8 IN		P10	BUTTON1	BUTTONO1 N7 GPIO_PMU_TO_SOC_BTN_VOL_DOWN_L 6
72 25 GPIO_BTN_ONOFF_L_1V8 IN		M6	BUTTON2	BUTTONO2 N9 GPIO_PMU_TO_SOC_BTN_ONOFF_L 6
72 25 GPIO_BTN_VOL_UP_L_1V8 IN		N8	BUTTON3	BUTTONO3 M7 GPIO_PMU_TO_SOC_BTN_VOL_UP_L 7
NC_GPIO_BTN_4 NO_TEST=1		P11	BUTTON4	DBLCLICK_DET N6 DBL_CLICK_DET 7
			RESET	
5 GPIO_SOC_TO_PMU_WDOG IN		N11	RESET_IN1	RESET* N13 RESET_PMU_TO_SYSTEM_L 6 10 80
80 36 GPIO_1V2_ACE2PMU_RESET IN		M10	RESET_IN2	
80 7 SOCHOT1_SOC_TO_PMU_L		M9	RESET_IN3	
			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
NC		R7	VBUS_DET	
		M12		FAULT_OUT* NC
		E9	BRICK_ID1	
		E10	BRICK_ID2	
80 77 PMU_SHUTDOWN_1V8 IN		M8	SHDN	SCRASH* N12 SCRASH_L_1V8_R — PLACE NEAR SIMETRA SIDE — R8403 0.00 0% 1/32W MF 01005 — SCRASH_L_1V8 BI 67 80
				SGPIO_READY_REQ M15 SGPIO_READY_REQ_1V8 67 82
			SGPIO_SCLK	SGPIO_SCLK N15 SGPIO_SCLK_1V8_R — R8405 33 5% 1/32W MF 01005 — SGPIO_SCLK_1V8 OUT 67 82
			SPMI	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
		N19	NXTAL_MEMS	
72 PMU_XTAL		L22	XIN	CLOCKS
72 PMU_EXTAL		M22	XOUT	SLEEP_32K U18 CLK_PMU_TO_AOP_32K 10 80
				OUT_32K T16 CLK_PMU_TO_WLAN_32K 78 80
NC		E13	AMUX_A<0>	
NC		F11	AMUX_A<1>	
NC		E12	AMUX_A<2>	
NC		E11	AMUX_A<3>	
80 TPT_SERA_AMUX_AY		G12	AMUX_AY	
21 IN DOMBRA_LDO_8V_PGOOD_FET		E14	AMUX_B<0>	
NC		F14	AMUX_B<1>	
NC		F12	AMUX_B<2>	
NC		F13	AMUX_B<3>	
80 TPT_SERA_AMUX_BY		G11	AMUX_BY	
			AMUX	
				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
			THROTTLE	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

R8400 0.00 0% 1/32W MF 01005
PP1V8_S2 — R8401 10K 5% 1/32W MF 01005 — OUT 73

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

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

84 74 72 69 65 44 41 21 PP1V8_S2
84 73 PP1V8_SERA_ALWAYS
R8492 100K 1% 1/32W MF 01005
R8497 100K 1% 1/32W MF 01005
R8496 100K 1% 1/32W MF 01005
72 25 GPIO_BTN_ONOFF_L_1V8
72 25 GPIO_BTN_VOL_DOWN_L_1V8
72 25 GPIO_BTN_VOL_UP_L_1V8

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

PPVBUS_PROT → C8500 10UF 20% 35V X5R 0603 (138S00340), C8501 10UF 20% 35V X5R 0603 (138S00340), C8502 10UF 20% 35V X5R 0603 (138S00340)

ACE_ORION_TO_CHARGER_OVP_SW_EN_L → R8520 0.00 0% 1/32W 01005 MF → OVP_SW_EN_L_R
SERA_CRASH_L
NC_POTOMAC_VSYS_HI_UVLO
GPIO_PMU_TO_POTOMAC_LINCH_EN_1V8 → R8521 0.00 0% 1/32W 01005 MF → GPIO_PMU_TO_POTOMAC_LINCH_EN_R
GPIO_POTOMAC_TO_PMU_WAKE_1V8 → R8522 0.00 0% 1/32W 01005 MF
NC_POTOMAC_USB_VBUS_DETECT
POTOMAC_HV_CHG_OVERRIDE
PP1V8_SW1_IO → R8523 0.00 0% 1/32W 01005 MF → GPIO_PMU_TO_POTOMAC_BOOST_EN
GPIO_POTOMAC_TO_SOC_TO_PMU_IRQ_L
I2C_SMC_POTOMAC_SCL_1V8
I2C_SMC_POTOMAC_SDA_1V8_R
BATT_NTC

U8500 ball	Net
L13, M13, N13, P13	VBUS
K13	VBUS_OVP_OFF(GPIO1)
K12	CRASH*(GPIO2)
B13	VSYS_HI_UVLO(GPIO3)
K11	LINCH_EN(GPIO4)
E11	WAKEUP(GPIO5)
C12	USB_VBUS_DET(GPIO6)
J9	HV_CHG_OVERRIDE(GPIO7)
J11	BOOST_EN(GPIO8)
G11	IRQ*
H12	SCL
H13	SDA
D12	TBAT
F13	VDD_REF_CHARGE
L5	VDD_REF_CHARGE_PH0
G1	VDD_REF_CHARGE_PH1
C13	VDD_GPIO
E13	VDDCORE
E12	VDDCORE_DIG
B6	IREF
A6	VREF
D13	ADC_REF
D11	ADC_IN_P
D10	ADC_IN_N
J12	H_TEST_MODE
F12, J13, E7	VSSA_1, VSSA_2, VSSA_3
L8, M8, N8, P8	VSS_PH0
N1, N2, N3, N4	VSS_PH1
L9, M9, N9, P9	VSS_BUBO
D6	VSS_BOOST
A5	VSS_BG_SENS
C7	VSSD_FRAME
A12, A13, B12, C6, D9, E10, E6, E8, E9, F10, F11, F6, F7, F8, F9, G10, G12, G13, G2, G3, G4, G5, G6, G7, G8, G9, H10, H11, H5, H6, H7, H8, H9, J10, J4, J5, J6, J7, J8, K10, K4, K5, K6, K8, K9	VSS_ESD

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
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

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

U8500 ball	Net
L12, M12, N12, P12	VCENTER_3
L6, M6, N6, P6	VCENTER_0
H1, H2, H3, H4	VCENTER_1
J2, J3, K2, K3	VCENTER_1_HS

PPVCENTER_1_HS
C8558 0.1UF 10% 25V X5R 0201

VBOOT_N0, P5 — POTOMAC_VBOOT0 — 0.1UF 0201 X5R-CERM 16V 10% C8560
LX_BOOT_PH0 — K7 — POTOMAC_VBOOT_PH0
VBOOT_N1, K1 — POTOMAC_VBOOT1 — 0.1UF 0201 X5R-CERM 16V 10% C8561
LX_BOOT_PH1 — M5 — POTOMAC_VBOOT_PH1

BOOST_HS_SUPPLY — D5 — POTOMAC_HS_SUPPLY
BOOST_HS_SOURCE D1, D2, D3, D4 — POTOMAC_HS_SRC
0201 X5R-CERM 16V 10% 0.1UF C8562

VSYS_HI_S — A7 — POTOMAC_VSYS_HI_S — XW8501 SHORT-10L-0.1MM-SM OMIT
VSYS_HI B1, B2, B3, B4, C1, C2, C3, C4, C5
VSYS_HI_EXT_DIO — B7 — POTOMAC_HIGH_DIO

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

VSYS_LO_BYPASS A1, A2, A3, A4

L8570 1UH-20%-6.4A-0.0380HM PIKA32251B-SM
LX_PH0 L7, M7, N7, P7 — POTOMAC_LX_PH0
LX_BUBO L10, M10, N10, P10 — POTOMAC_LX_BUBO

VSYS_LO_BUBO L11, M11, N11, P11
C85A3 4.7UF 20% 6.3V X5R 0402
C8590 47UF 20% 6.3V CER-X5R 0603
C8599 47UF 20% 6.3V CER-X5R 0603

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

LX_BOOST E1, E2, E3, E4, E5, F1, F2, F3, F4, F5

L8571 0.47UH-20%-8.6A-0.024OHM PIKA32251B-SM
LX_PH1 L1, L2, L3, L4, M1, M2, M3, M4, P1, P2, P3, P4 — POTOMAC_LX_PH1

VSYS_LO_S — D8 — POTOMAC_VSYS_LO_S — OMIT XW8500 SHORT-10L-0.1MM-SM
VSYS_LO_1 A10, B10, C10
VSYS_LO_2 A9, B9, C9
VSYS_LO_EXT_DIO — D7 — POTOMAC_LOW_DIO

IBAT_1 A11, B11, C11
IBAT_2 A8, B8, C8
VBAT — B5 — BATT_SNS_R — R8592 0.00 0% 1/32W 01005 MF — BATT_SNS

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

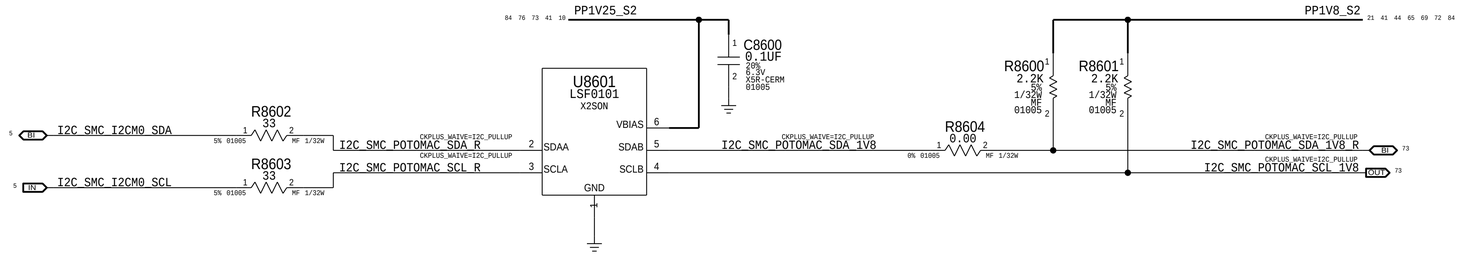
PPVCC_MAIN
C85A0 10UF 20% 16V X5R-CERM 0402-7
C8570 10UF 20% 16V X5R-CERM 0402-7
C8571 10UF 20% 16V X5R-CERM 0402-7
C8572 10UF 20% 16V X5R-CERM 0402-7
C8573 10UF 20% 16V X5R-CERM 0402-7
C8574 10UF 20% 16V X5R-CERM 0402-7
C85A1 10UF 20% 16V X5R-CERM 0402-7
C85A2 10UF 20% 16V X5R-CERM 0402-7

NO_XNET_CONNECTION=1
CRITICAL
R8582 0.0025 1% 1.5W MF 0612

PPBATT_VCC_R
C8593 47UF 20% 6.3V CER-X5R 0603
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

BOM_COST_GROUP=POWER
PAGE TITLE
POWER: CHARGER

POTOMAC VOLTAGE TRANSLATOR

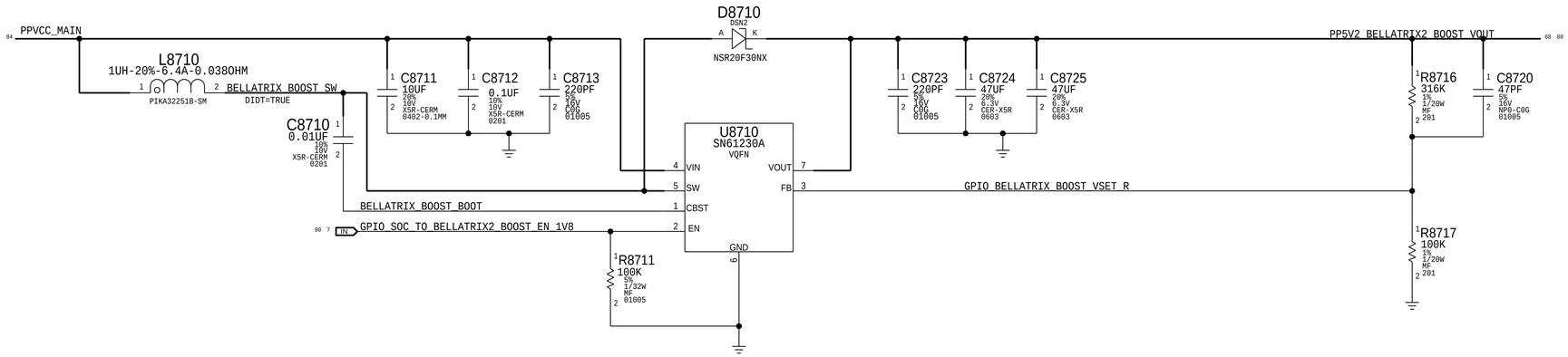


BOM_COST_GROUP=POWER

PAGE TITLE

POWER: VT LDO

BELLATRIX BOOST



SCORPIUS BOOST MOVED TO SCORPIUS BOARD

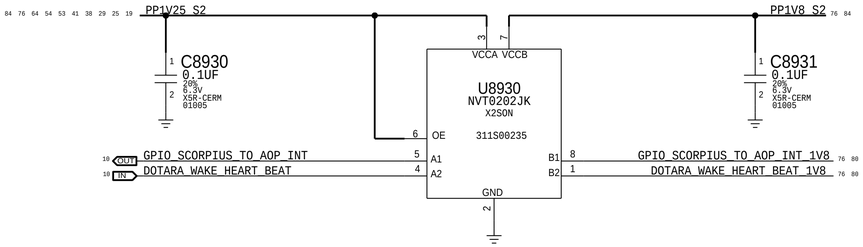
BOM_COST_GROUP=ORION

PAGE TITLE

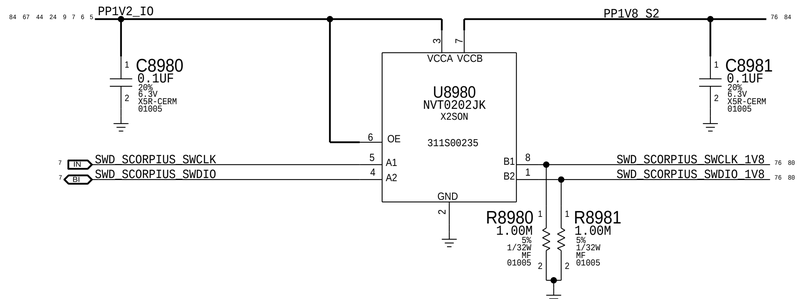
POWER: BELLATRIX2 BOOSTS

SCORPIUS THROTTLE MOVED TO SCORP. BOARD

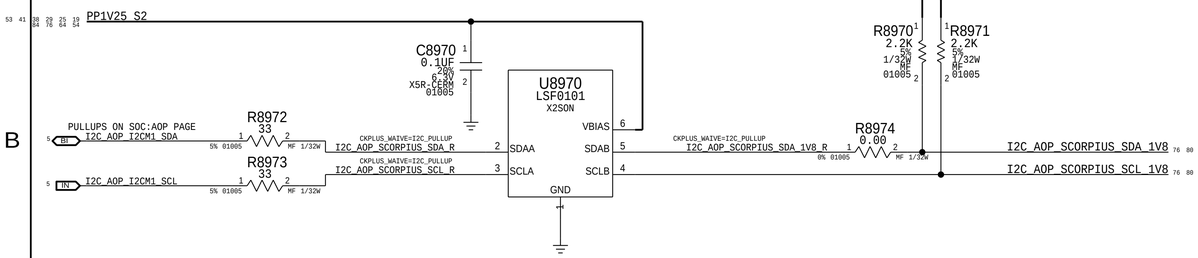
LEVEL TRANSLATOR



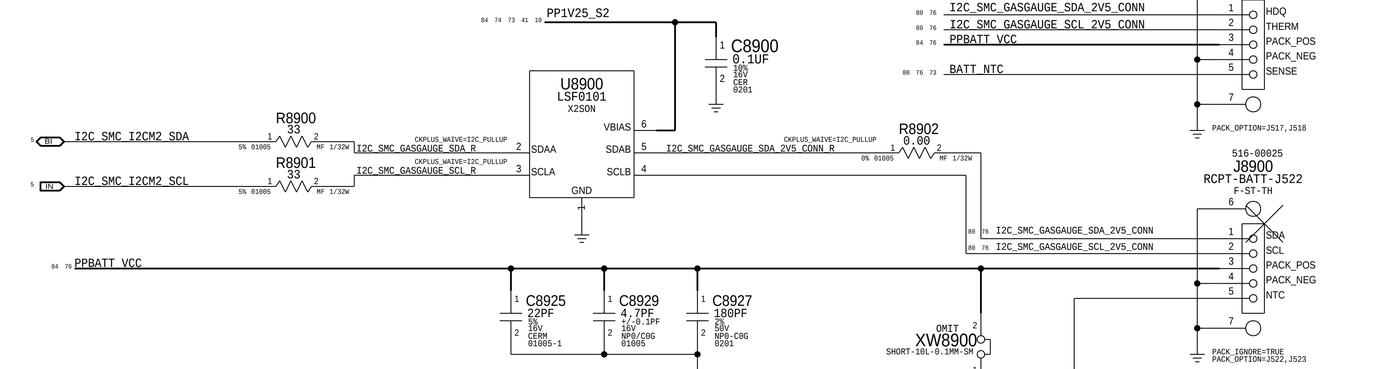
SWD LEVEL TRANSLATOR



I2C LEVEL TRANSLATOR



J517 BATTERY CONNECTOR

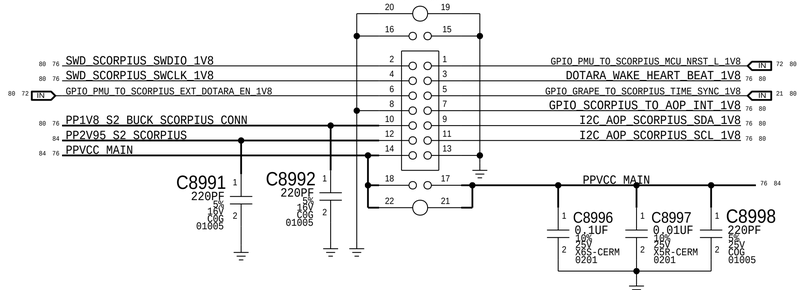


J522 BATTERY CONNECTOR

SCORPIUS FLEX CONNECTOR

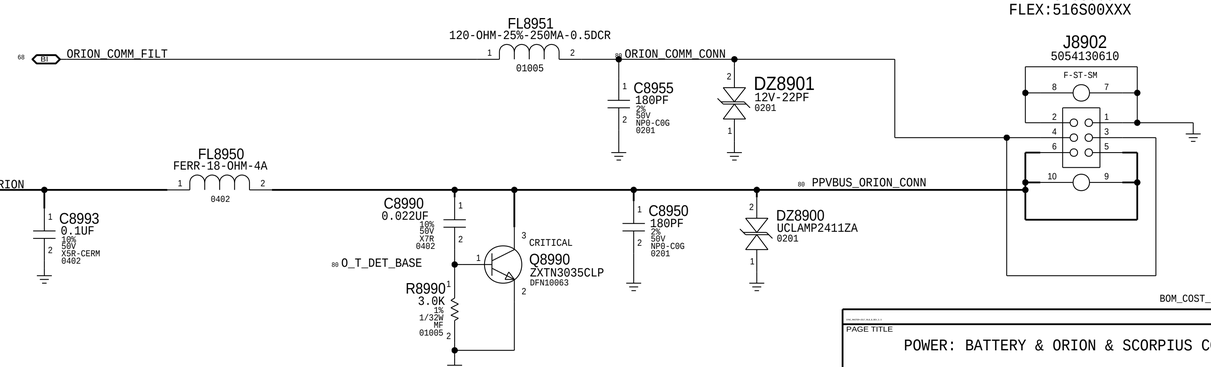
PINOUT FOLLOWS J522 SCORPIUS FLEX REV 0.8

MLB: 516S00150
FLEX: 516S00149



ORION FLEX CONNECTOR

MLB: 516S00321
FLEX:516S00XXX

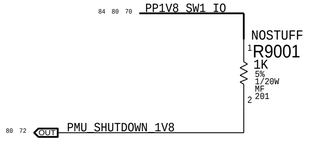


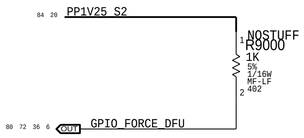
BOM_COST_GROUP=SCORPIUS

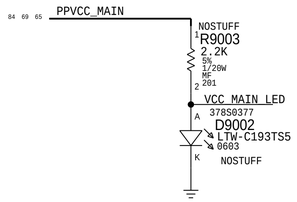
PAGE TITLE

POWER: BATTERY & ORION & SCORPIUS CONN

DEBUG RESET ACCESS







BOM_COST_GROUP=SOC

SYNC_MASTER=2117_M_8_8_REV_3_5

SYNC_DATE=10/18/2019

PAGE TITLE

SOC: DEBUG

CELLULAR AND WLAN/BT ALIASES

BASEBAND

SOC/AOP/PMU GPIOS

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

NOTE: GPIO_BB_TO_SCORPIUS_TX_IND_1V8 UNUSED

10	IN	NC_AOP_TO_BBPMU_FORCE_PWM	NC_AOP_TO_BBPMU_FORCE_PWM	MAKE_BASE=TRUE
72	IN	NC_GPIO_PMU_TO_BBPMU_VBUS_DET	NC_GPIO_PMU_TO_BBPMU_VBUS_DET	MAKE_BASE=TRUE
67	IN	NC_GPIO_SIMETRA_TO_BB_BOOT_CFG1	NC_GPIO_SIMETRA_TO_BB_BOOT_CFG1	MAKE_BASE=TRUE
67	IN	NC_GPIO_SIMETRA_TO_BB_BOOT_CFG2	NC_GPIO_SIMETRA_TO_BB_BOOT_CFG2	MAKE_BASE=TRUE

POWER

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

USB BB

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

1 R38C0 100K 5% 1/32W MF 01005 2

PCIE

9	IN	NC_PCIE_SOC_TO_BB_REFCLK_P	NC_PCIE_SOC_TO_BB_REFCLK_P	MAKE_BASE=TRUE
9	IN	NC_PCIE_SOC_TO_BB_REFCLK_N	NC_PCIE_SOC_TO_BB_REFCLK_N	MAKE_BASE=TRUE
9	OUT	NC_PCIE_BB_TO_SOC_CLKREQ_L	NC_PCIE_BB_TO_SOC_CLKREQ_L	MAKE_BASE=TRUE
9	IN	NC_PCIE_SOC_TO_BB_PERST_L	NC_PCIE_SOC_TO_BB_PERST_L	MAKE_BASE=TRUE
9	IN	NC_PCIE_SOC_TO_BB_TX_C_P	NC_PCIE_SOC_TO_BB_TX_C_P	MAKE_BASE=TRUE
9	IN	NC_PCIE_SOC_TO_BB_TX_C_N	NC_PCIE_SOC_TO_BB_TX_C_N	MAKE_BASE=TRUE
9	OUT	NC_90_PCIE_BB_TO_AP_RX_R_P	NC_90_PCIE_BB_TO_AP_RX_R_P	MAKE_BASE=TRUE
9	OUT	NC_90_PCIE_BB_TO_AP_RX_R_N	NC_90_PCIE_BB_TO_AP_RX_R_N	MAKE_BASE=TRUE

I2S

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

PHYSICAL SIM REMOVED

BASEBAND SWD

BASEBAND SPMI

NOTE: SPMI TO BASEBAND IS NOT USED

RFFE

WLAN

POWER

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

GPIOS

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

GPIO_WLAN_TO_SCORPIUS_TX_IND NOT NEEDED

PCIE

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

PLACE_NEAR=U_WLAN_W.28:3MM

82 9 PCIE_WLAN_TO_SOC_TX_P — C9160 1 2 0.1UF 20% X5R-CERM 01005 6.3V — PCIE_WLAN_TO_SOC_TX_C_P 78

82 9 PCIE_WLAN_TO_SOC_TX_N — C9161 1 2 0.1UF 20% X5R-CERM 01005 6.3V — PCIE_WLAN_TO_SOC_TX_C_N 78

PLACE_NEAR=U_WLAN_W.97:3MM

UART

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

BLUETOOTH

SOC GPIOS

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

GPIO_BT_TO_SCORPIUS_TX_IND NOT NEEDED

8	OUT	BT_TO_SOC_TIME_SYNC	BT_TO_SOC_TIME_SYNC	IN 47

WLAN/BT SPMI

10	IN	AOP_SPMI0_SCLK_WIFI_BT	AOP_SPMI0_SCLK_WIFI_BT	OUT 47
10	BI	AOP_SPMI0_SDATA_WIFI_BT	R9152 1 2 33 1/32W 5% MF 01005	SPMI_EVENTS_AOP_TO_WLAN_NFC_DATA BI 47

I2C (TO WIFI/BT)

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

MMW/VOL BUTTON

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

ROTTERDAM(CERES)

POWER

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

SPMI

10	IN	AOP_SPMI0_SCLK_NFC	AOP_SPMI0_SCLK_NFC	OUT 63
10	BI	AOP_SPMI0_SDATA_NFC	R9153 1 2 33 1/32W 5% MF 01005	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	GPIO_PMU_TO_ROTTERDAM_EN	OUT 63

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

RF NTC

PA_NTC_P 72

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

1 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=WIFI-BT

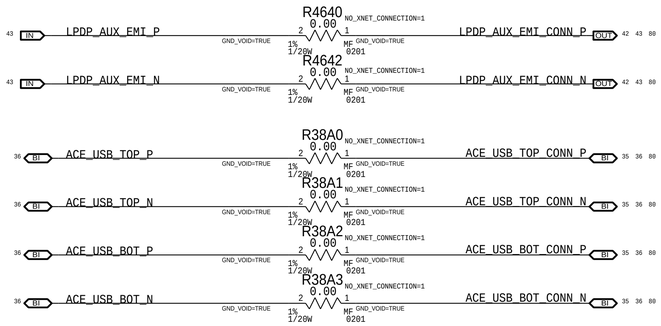
SYNC_MASTER=J517_MLB_A_REV_3.0 SYNC_DATE=10/16/2020

PAGE TITLE

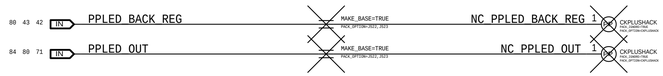
ALIASES: BB/WLAN/BT

LPDP_TX/BACKLIGHT

LPDP/USB2 CMC REPLACEMENT



J522 SPECIFIC - DISPLAY & BL



J517 SPECIFIC - DISPLAY & BL

BOM_COST_GROUP=SOC

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_GPU	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
TP930E	A	1	PP0V8_S1_SOC_FIXED	66 82 84
TP930F	A	1	PP2V63_NAND	65 84
TP930G	A	1	PPVDD_CPU_SRAM	70 82 84
TP930H	A	1	PP1V25_S2	65 84
TP930I	A	1	PPVDD_S1_DCS	70 84
TP930J	A	1	PPVDD_S1_QL	65 84
TP930K	A	1	PPVDD_ECPU	70 82 84
TP930L	A	1	PP1V2_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
TP931F	A	1 TP-P5		
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	73 80 84
TP9345	A	1	PPLED_OUT PACK_OPTION=J517, J518	73 79 84
TP9347	A	1	PPVCC_MAIN	28 73 80 84
TP9348	A	1 TP-P5		
TP934A	A	1 TP-P5		

POWER - DISPLAY

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

POWER - BACKLIGHT

TP9369	A	1	PPLED_BACK_REG PACK_OPTION=J517, J518	42 43 79 80
TP936Q	A	1	PPLED_BACK_REG PACK_OPTION=J517, J518	42 43 79 80
TP9371	A	1	PPLED_BACK_REG PACK_OPTION=J517, J518	42 43 79 80
TP9372	A	1	LED_IO_0 PACK_OPTION=J517, J518	42 71
TP9373	A	1	LED_IO_1 PACK_OPTION=J517, J518	42 71
TP9374	A	1	LED_IO_2 PACK_OPTION=J517, J518	42 71
TP9375	A	1	LED_IO_3 PACK_OPTION=J517, J518	42 71
TP9376	A	1	LED_IO_4 PACK_OPTION=J517, J518	42 71
TP9377	A	1	LED_IO_5 PACK_OPTION=J517, J518	42 71
TP937A	A	1	LED_IO_6 PACK_OPTION=J517, J518	42 71
TP937B	A	1	LED_IO_7 PACK_OPTION=J517, J518	42 71
TP937C	A	1	LED_IO_8 PACK_OPTION=J517, J518	42 71
TP937D	A	1	LED_IO_9 PACK_OPTION=J517, J518	42 71
TP937E	A	1	LED_IO_10 PACK_OPTION=J517, J518	42 71
TP937H	A	1	LED_IO_12 PACK_OPTION=J517, J518	42 71
TP937I	A	1	LED_IO_13 PACK_OPTION=J517, J518	42 71
TP937J	A	1	LED_IO_14 PACK_OPTION=J517, J518	42 71
TP937K	A	1	LED_IO_15 PACK_OPTION=J517, J518	42 71
TP937L	A	1	LED_IO_16 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
TP93DA	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		

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		

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		
TP93H3	A	1		
TP93H4	A	1		
TP93H5	A	1		

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_24MH2	20
TP93NN	A	1	PP1V2_S2_DELAY_TOUCH PACK_OPTION=J517, J518	21

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
TP93PT	A	1	GPIO_3V3_ACE2BSB_PARROT_RESET_L	36 37 38
TP93PH	A	1	PP3V3_BSB_S0_SVR	37
TP93PI	A	1	PP0V9_BSB_SVR_IND	37

PARROT

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

SOFT SHIELD DUMMY CAPS

C9380	1	NOSTUFF	25UF 20% 6.3V X5R 0402	2 CKPLUS_WAIVE=TERMSHORTED
C9381	1		10UF 20% 25V X5R-CERM 0603	2 CKPLUS_WAIVE=TERMSHORTED
C9382	1		10UF 20% 25V X5R-CERM 0603	2 CKPLUS_WAIVE=TERMSHORTED
C9383	1		10UF 20% 25V X5R-CERM 0603	2 CKPLUS_WAIVE=TERMSHORTED
C9384	1		10UF 20% 25V X5R-CERM 0603	2 CKPLUS_WAIVE=TERMSHORTED
C9385	1		10UF 20% 25V X5R-CERM 0603	2 CKPLUS_WAIVE=TERMSHORTED
C9386	1		10UF 20% 25V X5R-CERM 0603	2 CKPLUS_WAIVE=TERMSHORTED
C9387	1	PACK_OPTION=J517, J518	10UF 20% 25V X5R-CERM 0603	2

VBAT

TP9399P	A	1 PLACE_NEAR=J8900.3:15MM	PPBATT_VCC	73 80 84
TP9399	A	1 PLACE_NEAR=J8900.3:15MM	TP-1P0-TOP	
TP9399A	A	1 PLACE_NEAR=J8900.3:15MM	TP-1P0-TOP	
TP9399B	A	1 PLACE_NEAR=J8900.3:15MM	TP-1P0-TOP	
TP9396	A	1 PLACE_NEAR=J8900.4:15MM	TP-1P0-TOP	
TP9397	A	1 PLACE_NEAR=J8900.4:15MM	TP-1P0-TOP	
TP9398	A	1 PLACE_NEAR=J8900.4:15MM	TP-1P0-TOP	
TP939S	A	1	TP-1P0-TOP	

VBUS ORION

TP9399Q	A	1	TP-1P0-TOP	
TP939C	A	1	TP-1P0-TOP	
TP939D	A	1	TP-1P0-TOP PPVBUS_ORION_CONN	76 80
TP939E	A	1	TP-1P0-TOP A TP939R	
TP939F	A	1	TP-1P0-TOP	

VCC_MAIN

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

VCC_HIGH

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

JASPER/PENINSULA

TP93P6	A	1 TP-P5		
TP93P7	A	1 TP-P5		
TP93P8	A	1 TP-P5		

FIDUCIALS

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

CAN MOUNTING HOLES

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

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

STANDOFFS

SMT:860-01586

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

SMT:860-01630

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

SMT:860-01627

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

NAND DUMMY CAPS

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

PACK_IGNORE=TRUE PACK_OPTION=J522, J523
PACK_IGNORE=TRUE PACK_OPTION=J522, J523

SMT:860-01708

STD9350 STDOFF-2.82X2.05R-0.95H-SM 860-01736 PACK_IGNORE=TRUE PACK_OPTION=J522, J523

SMT:860-01709

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

VBUS USB

TP9390 PLACE_NEAR=C37A8.1:20MM PPVBUS_USB_EMI 35 36 68 80
TP9391 PLACE_NEAR=C37A8.1:20MM TP-1P0-TOP
TP9392 PLACE_NEAR=C37A8.1:20MM TP-1P0-TOP
TP9393 PLACE_NEAR=C37A8.2:30MM TP-1P0-TOP
TP9394 PLACE_NEAR=C37A8.2:30MM TP-1P0-TOP
TP9395 PLACE_NEAR=C37A8.2:30MM TP-1P0-TOP

BOM_COST_GROUP=MECHANICALS

PAGE TITLE

TEST: TPS/MECH

SMT TEST FIXTURE TP

POWER - ADAMS REAR

TP9401	A	1	TP-P5	PP1V4_ADAMS1_VDDL	55 84
TP9402	A	1	TP-P5	PP3V3_ADAMS_LDO1	55 84
TP9403	A	1	TP-P5	PP3V0_JASPER_RX_AVDDH	55 84
TP9404	A	1	TP-P5	PP3V3_JASPER_TX_AVDDH	55 84
TP9405	A	1	TP-P5	PP3V3_JASPER_TX_AVDDH_CONN	PACK_OPTION=J517,J518 PACK_OPTION=J522,J523
TP9406	A	1	TP-P5	PP3V3_JAS_EXT_LDO_R2	60
TP9407	A	1	TP-P5	PP2V85_WIDE_RCAM1_AVDDH1	57
TP9408	A	1	TP-P5	PP2V85_SWIDE_RCAM2_AVDDH1	55 84
TP9409	A	1	TP-P5	PP1V215_RCAM_SWIDE_VDDL	55 84
TP940A	A	1	TP-P5	PP1V215_RCAM_WIDE_VDDL	55 84
TP940B	A	1	TP-P5	PP1V8_RPMU_IO_SW	55 84
TP940C	A	1	TP-P5	PN_TOF_VSPAD	55 84
TP940D	A	1	TP-P5	PN_TOF_VSPAD	57 60 81
TP940E	A	1	TP-P5	PP_TOF_VDDLAS	57 60 81
TP940F	A	1	TP-P5	PP_TOF_VDDLAS	57 60 81
TP940G	A	1	TP-P5	PP1V2_JASPER_DVDD	57 60 81
TP940H	A	1	TP-P5	PP1V2_INT_ADAMS_REAR	57 60
TP940I	A	1	TP-P5		55 84

POWER - FRONT WIDE CAMERA

POWER - FRONT SWIDE CAMERA

TP9441	A	1	TP-P5	PP1V215_FRONT_SWIDE_CAM_CONN	26
TP9442	A	1	TP-P5	PP1V8_FRONT_SWIDE_CAM_CONN	26
TP9443	A	1	TP-P5	PP2V85_FRONT_SWIDE_CAM_CONN	26

POWER - JULIET

TP9414	A	1	TP-P5	PP1V215_JULIET_DVDD_CONN	40
TP9415	A	1	TP-P5	PP1V8_JULIET_VDDIO_CONN	40
TP9416	A	1	TP-P5	PP2V85_JULIET_AVDD_CONN	40

POWER - CAMERA (IN)

TP9417	A	1	TP-P5	PP1V215_RCAM_WIDE_VDDL_CONN	58
TP9418	A	1	TP-P5	PP1V8_RCAM_WIDE_VDDIO_CONN	58
TP9419	A	1	TP-P5	PP2V85_RCAM_WIDE_AVDD_CONN	58

POWER - CAMERA (OH)

TP941A	A	1	TP-P5	PP1V215_RCAM_SWIDE_DVDD_CONN	59
TP941B	A	1	TP-P5	PP1V8_RCAM_SWIDE_VDDIO_CONN	59
TP941C	A	1	TP-P5	PP2V85_RCAM_SWIDE_AVDDH1_CONN	59

POWER - JASPER

TP941D	A	1	TP-P5	PP_TOF_VDDLAS_CONN	60
TP941E	A	1	TP-P5	PN_TOF_VSPAD_CONN	60
TP941F	A	1	TP-P5	PP1V8_CAM_TOF_VDDIO_CONN	60

CAMERA-STROBE/PENROSE

TP9421	A	1	TP-P5	PPSTROBE_LED_COOL1_CONN	25 27 81
TP9422	A	1	TP-P5	PPSTROBE_LED_WARM1_CONN	25 27 81
TP9423	A	1	TP-P5	PPSTROBE_LED_COOL2_CONN	25 27 81
TP9424	A	1	TP-P5	PPSTROBE_LED_WARM2_CONN	25 27 81
TP9425	A	1	TP-P5	PPSTROBE_LED_COOL1_CONN	25 27 81
TP9426	A	1	TP-P5	PPSTROBE_LED_WARM1_CONN	25 27 81
TP9427	A	1	TP-P5	PPSTROBE_LED_COOL2_CONN	25 27 81
TP9428	A	1	TP-P5	PPSTROBE_LED_WARM2_CONN	25 27 81
TP9429	A	1	TP-P5	LED_DRIVER_NTC_CONN	25 27

TP942A	A	1	TP-P5	PPSTROBE1_BST	27
TP942B	A	1	TP-P5	PPSTROBE2_BST	27
TP942C	A	1	TP-P5	PENROSE_VIS_IR_VOUT1	24 25
TP942D	A	1	TP-P5	PENROSE_IR_VOUT2	24 25
TP942E	A	1	TP-P5	GPIO_RCAM_PMU_TO_STROBE_DRIVER_HWEN_1V8	27 56
TP942F	A	1	TP-P5	PP3V0_PENROSE_CONN	25
TP942G	A	1	TP-P5	PP3V0_PENROSE	55 84

CAMERA FRONT SWIDE

TP9444	A	1	TP-P5	CLK_FCAM2_PMU_TO_SWIDE_12M_CONN	26
TP9445	A	1	TP-P5	I2C_FCAM2_SWIDE_SCL_CONN	26
TP9446	A	1	TP-P5	I2C_FCAM2_SWIDE_SDA_CONN	26
TP9447	A	1	TP-P5	ISP_FCAM2_SWIDE_SHUTDOWN_L_CONN	26

CAMERA - IN

TP942L	A	1	TP-P5	AP_TO_WIDE_CLK_12MHZ_CONN	58
TP942M	A	1	TP-P5	I2C_RCAM1_WIDE_SCL_CONN	58
TP942N	A	1	TP-P5	I2C_RCAM1_WIDE_SDA_CONN	58
TP942O	A	1	TP-P5	ISP_TO_WIDE_SHUTDOWN_CONN_L	58
TP942Q	A	1	TP-P5	WIDE_TO_STROBE_DRIVER_STROBE_CONN	58

CAMERA - OH

TP942R	A	1	TP-P5	AP_TO_SWIDE_CLK_12MHZ_CONN	59
TP942S	A	1	TP-P5	I2C_RCAM2_SWIDE_SCL_CONN	59
TP942T	A	1	TP-P5	I2C_RCAM2_SWIDE_SDA_CONN	59
TP942U	A	1	TP-P5	ISP_TO_SWIDE_SHUTDOWN_CONN_L	59
TP942W	A	1	TP-P5	SWIDE_TO_STROBE_DRIVER_STROBE_CONN	59

CAMERA - JASPER

TP942X	A	1	TP-P5	CLK_RCAM_PMU_TO_TOF_12MHZ_CONN	60
TP942Y	A	1	TP-P5	I2C_JASPER_SCL_CONN	60
TP942Z	A	1	TP-P5	I2C_JASPER_SDA_CONN	60
TP943X	A	1	TP-P5	GPIO_PMU_TO_TOF_INT_CONN_L	60
TP943Y	A	1	TP-P5	WIDE_SWIDE_SYNC_1V8	58 59 60
TP943Z	A	1	TP-P5	GPIO_RCAM_PMU_TO_TOF_SHUTDOWN_CONN_L	60

CAMERA - AUX

TP94C0	A	1	TP-P5	LPDP_WIDE_BI_AP_AUX_CONN	58
TP94C2	A	1	TP-P5	LPDP_SOC_TO_FCAM2_AUX_CONN	26
TP94C3	A	1	TP-P5	LPDPC_AP_BI_TOF_AUX_RX_D8P_CONN	60
TP94C4	A	1	TP-P5	LPDPC_AP_BI_SWIDE_AUX_RX_D2P_CONN	59

TITUS/ROSALINE/JULIET

TP9431	A	1	TP-P5	PP_TITUS_DENSE_ANODE	39 40 81
TP9432	A	1	TP-P5	PP_TITUS_DENSE_ANODE	39 40 81
TP9433	A	1	TP-P5	PP_TITUS_SPARSE_ANODE	39 40 81
TP9434	A	1	TP-P5	PP_TITUS_SPARSE_ANODE	39 40 81
TP9435	A	1	TP-P5	PP_TITUS_A_ANODE	39 40 81
TP9436	A	1	TP-P5	PP_TITUS_A_ANODE	39 40 81
TP9437	A	1	TP-P5	PP_TITUS_B_ANODE	39 40 81
TP9438	A	1	TP-P5	PP_TITUS_B_ANODE	39 40 81
TP9439	A	1	TP-P5	PP_TITUS_CATHODE	39 40 81
TP943A	A	1	TP-P5	PP_TITUS_CATHODE	39 40 81
TP943B	A	1	TP-P5	PP_ROSALINE_ANODE	39 41 81
TP943C	A	1	TP-P5	PP_ROSALINE_ANODE	39 41 81
TP943D	A	1	TP-P5	GPIO_RIGEL_INT_TO_FPMU_1V8	39 62
TP943E	A	1	TP-P5	RIGEL_TESTMODE_EN	39
TP943F	A	1	TP-P5	JULIET_PMU_TO_RIGEL_STROBE_CONN_1V8	40
TP943H	A	1	TP-P5	I2C3_ISP_BI_MAMA_BEAR_SDA_CONN	40
TP943I	A	1	TP-P5	I2C3_ISP_TO_MAMA_BEAR_SCL_CONN	40
TP943J	A	1	TP-P5	MAMA_BEAR_BI_RIGEL_STATUS_CONN_1V8	40
TP943K	A	1	TP-P5	TITUS_TO_AOP_B2B_DETECT_CONN	40
TP943L	A	1	TP-P5	ISP_JULIET_SCL_CONN_1V8	40
TP943M	A	1	TP-P5	ISP_JULIET_SDA_CONN_1V8	40
TP943N	A	1	TP-P5	AP_TO_JULIET_CLK_CONN_1V8	40
TP943O	A	1	TP-P5	AP_TO_JULIET_SHUTDOWN_L_CONN_1V8	40
TP943P	A	1	TP-P5	I2C0_AOP_TO_PROX_ALS_YOGI_SCL_CONN_1V8	41
TP943Q	A	1	TP-P5	I2C0_AOP_BI_PROX_ALS_YOGI_SDA_CONN_1V8	41
TP943R	A	1	TP-P5	PP3V0_YOGI_PROX_ALS_CONN	41
TP943S	A	1	TP-P5	YOGI_TO_RIGEL_STATUS_CONN_1V8	41
TP943T	A	1	TP-P5	ALS_C4_TO_SOC_INT_CONN_L	41
TP943U	A	1	TP-P5	ALS_C3_TO_SOC_INT_CONN_L	41
TP943V	A	1	TP-P5	TITUS_TO_RIGEL_VCSEL_NTC_CONN	40
TP943W	A	1	TP-P5		

DMIC GATING

TP9461	A	1	TP-P5	GPM_DMIC_DISABLE_L	64
TP9463	A	1	TP-P5	SLG_TO_AOP_DMIC_DISABLE_WARN_L	10 64

WILL I2C

TP9464	A	1	TP-P5	I2C3_RCAM_PMU_SCL_1V8	5 56
TP9465	A	1	TP-P5	I2C3_RCAM_PMU_SDA_1V8	5 56

PENROSE ADC I2C

TP9466	A	1	TP-P5	I2C3_SCL	PACK_IGNORE=TRUE PACK_OPTION=J522,J523
TP9467	A	1	TP-P5	I2C3_SDA	PACK_IGNORE=TRUE PACK_OPTION=J522,J523 7
TP9466	A	1	TP-P5	I2C3_SDA_R	PACK_OPTION=J517,J518 5
TP9467	A	1	TP-P5	I2C3_SCL_R	PACK_OPTION=J517,J518 5

CAM SYNC

TP9452	A	1	TP-P5	GPIO_FCAM_JULIET_TO_ACE_SYNC_1V8	26 40
TP9453	A	1	TP-P5	GPIO_RCAM_PMU_TO_TOF_PMU_EN_1V8	56 57

2DBL

TP94A0	A	1	TP-P5	NC_PP_LUME_OUT	PACK_IGNORE=TRUE PACK_OPTION=J522,J523 44 45 79
TP94A1	A	1	TP-P5		PACK_IGNORE=TRUE PACK_OPTION=J522,J523
TP94A2	A	1	TP-P5		PACK_IGNORE=TRUE PACK_OPTION=J522,J523
TP94A3	A	1	TP-P5		PACK_IGNORE=TRUE PACK_OPTION=J522,J523
TP94A4	A	1	TP-P5	NC_PP1V27_ATRANI	PACK_IGNORE=TRUE PACK_OPTION=J522,J523 44 79
TP94A5	A	1	TP-P5	LUME_CP_OUT	PACK_OPTION=J522,J523 44
TP94A6	A	1	TP-P5	ATRANI_SPI_SCLK	PACK_IGNORE=TRUE PACK_OPTION=J522,J523 8 45
TP94A7	A	1	TP-P5	ATRANI_SPI_MOSI	PACK_IGNORE=TRUE PACK_OPTION=J522,J523 8 45
TP94A8	A	1	TP-P5	ATRANI_SPI_MISO	PACK_IGNORE=TRUE PACK_OPTION=J522,J523 8 45
TP94A9	A	1	TP-P5	ATRANI_SPI_CS	PACK_IGNORE=TRUE PACK_OPTION=J522,J523 8 45
TP94AA	A	1	TP-P5	DISP_FSYNC	PACK_IGNORE=TRUE PACK_OPTION=J522,J523 8 45
TP94AB	A	1	TP-P5	DISP_LSYNC	PACK_IGNORE=TRUE PACK_OPTION=J522,J523 8 45
TP94AC	A	1	TP-P5	ATRANI_BOOST_CTL	PACK_OPTION=J522,J523 44 45

LDCM

TP94B0	A	1	TP-P5	ANA_ACE2LDCM_DEBUG4	36 54
TP94B1	A	1	TP-P5	ANA_ACE2LDCM_DEBUG5	36 54
TP94B2	A	1	TP-P5	ANA_LDCM_TRACE1	35 54
TP94B3	A	1	TP-P5	GPIO_LDCM_TO_AOP_INVALID	10 54
TP94B4	A	1	TP-P5	ANA_LDCM_TRACE2	35 54

POWER - ADAMS FRONT

TP9471	A	1	TP-P5	PP_FPMU_VDDL	61 84
TP9472	A	1	TP-P5	PP3V1_PEARL	61 84
TP9473	A	1	TP-P5	PP1V215_JULIET_VDDL	61 84
TP9474	A	1	TP-P5	PP2V85_JULIET_AVDDH1	61 84
TP9475	A	1	TP-P5		
TP9476	A	1	TP-P5	PP2V85_SWIDE_FCAM2_AVDDH1	61 84
TP9477	A	1	TP-P5	PP1V215_FCAM2_SWIDE_VDDL	61 84
TP9478	A	1	TP-P5	PP1V215_FRCAM1_WIDE_VDDL	61 84
TP9479	A	1	TP-P5	PP1V2_INT_ADAMS_FRONT	61 84
TP947A	A	1	TP-P5	PP1V8_FCAM_PMU_IO_SW	61 84

SPARES

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

BOM_COST_GROUP=NO_COST_ITEMS

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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 SM — PP 1 — PDM_PENROSE_SD — 10 24

GRAPE

PP9580 P3MM SM — PP 1 — SPI_SOC_TO_GRAPE_SCLK — 7 20
PP9582 P3MM SM — PP 1 — SPI_SOC_TO_GRAPE_MOSI — 7 20
PP9583 P3MM SM — PP 1 — SPI_SOC_TO_GRAPE_CS_L — 7 20
PP9584 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.AK30:50MM — 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.AK36:50MM — 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.AT8:150MM — 8 58
PP95F5 P2MM SM — PP 1 — LPDP_RCAM2_SWIDE_TO_SOC_DATA_P<0> — PLACE_NEAR=U0600.AV4:150MM — 8 59
PP95F6 P2MM SM — PP 1 — LPDP_RCAM2_SWIDE_TO_SOC_DATA_N<0> — PLACE_NEAR=U0600.AV5:150MM — 8 59
PP95F7 P2MM SM — PP 1 — LPDP_RCAM2_SWIDE_TO_SOC_DATA_P<1> — PLACE_NEAR=U0600.AV1:150MM — 8 59
PP95F8 P2MM SM — PP 1 — LPDP_RCAM2_SWIDE_TO_SOC_DATA_N<1> — PLACE_NEAR=U0600.AV2:150MM — 8 59
PP95F9 P2MM SM — PP 1 — LPDP_SOC_TO_RCAM2_SWIDE_AUX — PLACE_NEAR=U0600.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

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TEST: EE TP/PP

EE DC RESISTANCE TABLE

DC RESISTANCE FAI REQUIRED MEASUREMENTS			
FROM PIN (REFDES.PN)	TO PIN (RFFDES.PN)	VALUE (MILLIOHM) (OPTIONAL)	TOLERANCE (+/-) (OPTIONAL)
U8100.C4	L8111.2	?	?
U3800.G2	U8500.L13	?	?
Q8000.A1	U8500.L13	?	?
Q8000.A2	Q8051.3	?	?
Q8051.2	FL8950.1	?	?
FL8950.2	J8902.10	?	?
U3800.G6	J3700.29	?	?
J8900.3	R8582.2	?	?
R8582.1	Q8580.5	?	?
Q8580.1	U8500.A1	?	?
U3500.D2	J3500.2	?	?
U3500.C2	J3500.1	?	?
Q8581.1	U6100.D8	?	?
Q8581.1	U6900.D8	?	?
Q8580.1	U6100.A3	?	?
Q8580.1	U6900.A3	?	?
U6900.D7	FL2851.1	?	?
U6100.D7	FL6603.1	?	?
U6100.E7	FL6503.1	?	?
U4000.B5	R38B1.1	?	?
U4000.A5	R38B0.1	?	?
R38B1.2	U3800.H21	?	?
R38B0.2	U3800.H19	?	?
R38A3.1	J3700.17	?	?
R38A2.1	J3700.15	?	?
U3800.J22	R38A3.2	?	?
U3800.J20	R38A2.2	?	?
R38A1.1	J3700.9	?	?
R38A0.1	J3700.11	?	?
U3800.K21	R38A1.2	?	?
U3800.K19	R38A0.2	?	?
U4701.A3	J4801.47	?	?

SERA BUCK1 LX1 DCR

PPVBUS_PROT FROM ACE TO POTOMAC DCR

PPVBUS_PROT FROM BELLATRIX B2B FET TO POTOMAC DCR

PPVBUS_ORION_RVP FROM BELLATRIX B2B FET TO ORION RVP FET DCR

PPVBUS_ORION FROM ORION RVP FET TO FERRITE DCR

PPVBUS_ORION_CONN FROM FERRITE TO ORION B2B DCR

PPVBUS_ORION_CONN FROM FERRITE TO ORION B2B DCR

PPBATT_VCC FROM BATT CONN TO SENSE RES DCR

PPBATT_VCC_R FROM SENSE RES TO VBATT/VCCMAIN FET DCR

PPVCC_MAIN FROM SENSE RES TO POTOMAC DCR

SPKRAMP_FH_R_T_OUT_P FROM SPKRAMP TO B2B DCR

SPKRAMP_FH_R_T_OUT_N FROM SPKRAMP TO B2B DCR

PPVCC_HIGH FROM Q8581 TO ADAMS REAR DCR

PPVCC_HIGH FROM Q8581 TO ADAMS FRONT DCR

PPVCC_MAIN FROM Q8581 TO ADAMS REAR DCR

PPVCC_MAIN FROM Q8581 TO ADAMS FRONT DCR

PP2V85 SWIDE FCAM FROM FRONT ADAMS TO FERRITE DCR

PP2V85 SWIDE RCAM FROM REAR ADAMS TO FERRITE DCR

PP2V85 WIDE RCAM FROM REAR ADAMS TO FERRITE DCR

B5_USB_SOC_N DCR

B5_USB_SOC_P DCR

B5_USB_SOC_R_N DCR

B5_USB_SOC_R_P DCR

ACE_USB_BOT_CONN_N DCR

ACE_USB_BOT_CONN_P DCR

ACE_USB_BOT_N DCR

ACE_USB_BOT_P DCR

ACE_USB_TOP_CONN_N DCR

ACE_USB_TOP_CONN_P DCR

ACE_USB_TOP_N DCR

ACE_USB_TOP_P DCR

PP_LUME_OUT FROM LUME TO BCON B2B DCR

BOM_COST_GROUP=NO_COST_ITEMS

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TEST: DCR TABLE

POWER CONNECTIONS

SERA SIMETRA BUCKS:

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

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

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

SERA_BUCK3 (SLEEP2)
80 70 PP1V8_S2 — 11; 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; 10; 10; 78; 19; 65 69; 7 68; 64; 36; 19 25 29 38 41 53 54 64 76; 20 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 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
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 PPLED_OUT — 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)
81 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 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