1. ALL RESISTANCE VALUES ARE IN OHMS, 0.1 WATT +/- 5%.
2. ALL CAPACITANCE VALUES ARE IN MICROFARADS.
3. ALL CRYSTALS & OSCILLATOR VALUES ARE IN HERTZ.

REV	ECN	DESCRIPTION OF REVISION	CK APPD DATE
3	0001890418	ENGINEERING RELEASED	2013-03-19

X64 EVT SINGLE_BRD

Tue Mar 19 16:23:08 2013

SCH 051-0143
BRD 820-3581

BOM 639-4501

X64 BOM CALLOUTS

PART#	QTY	DESCRIPTION	REFERENCE DESIGNATOR(S)	CRITICAL	BOM OPTION
051-0143	1	SCH, SINGLE_BRD, X64	SCH	Y	?
820-3581	1	PCB, SINGLE_BRD, X64	PCB	Y	?
825-6838	1	LABEL FOR X64 639-4501	EEEE_FF16	Y	EEEE_16G
825-6838	1	LABEL FOR X64 639-4768	EEEE_FHFH	Y	EEEE_DTD

COMPASS BOM OPTIONS

PART#	QTY	DESCRIPTION	REFERENCE DESIGNATOR(S)	CRITICAL	BOM OPTION
639-4024	1	ST GYRO - COMPASS POP	U16	Y	COMPASS_POP

NAND BOM OPTIONS

PART#	QTY	DESCRIPTION	REFERENCE DESIGNATOR(S)	CRITICAL	BOM OPTION
335S0878	1	NAND,19NM,16GX8,MLC,PPN1.5	U4	Y	NAND_16G

BOARD_ID RADIO BOM OPTIONS

PART#	QTY	DESCRIPTION	REFERENCE DESIGNATOR(S)	CRITICAL	BOM OPTION
118S0659	1	255K 1% 01005	R25_RF	Y	N48_CFG_A
118S0626	1	100K 1% 01005	R26_RF	Y	N48_CFG_A
118S0689	1	147K 1% 01005	R25_RF	Y	N48_CFG_B
118S0626	1	100K 1% 01005	R26_RF	Y	N48_CFG_B
118S0626	1	100K 1% 01005	R25_RF	Y	N49_ALL
118S0650	1	499K 1% 01005	R26_RF	Y	N49_ALL
118S0732	1	50K 1% 01005	R25_RF	Y	N49_DTD
118S0621	1	1.00M 1% 01005	R26_RF	Y	N49_DTD

CONFIG ALL/DTD BOM OPTIONS

PART#	QTY	DESCRIPTION	REFERENCE DESIGNATOR(S)	CRITICAL	BOM OPTION
152S1656	1	3.0NH +/-0.1NH 200MA 01005	C249_RF	CRITICAL	N49_ALL
117S0161	1	0.00OHM 01005	C249_RF		N49_DTD
131S0639	1	0.8PF 01005	C252_RF	CRITICAL	N49_ALL
118S0652	1	49.9OHM 1% 01005	C252_RF		N49_DTD
152S1577	1	15NH 3% 140MA 01005	C263_RF	CRITICAL	N49_ALL
118S0652	1	49.9OHM 1% 01005	C263_RF		N49_DTD
152S1336	1	8.2NH +/-3% 0.25A 0.7OHM 0201	C114_RF	CRITICAL	N49_ALL
118S0407	1	49.9OHM 1% 0201	C114_RF		N49_DTD
152S1320	1	7.5NH 0.30A 0201	C115_RF	CRITICAL	N49_ALL
118S0407	1	49.9OHM 1% 0201	C115_RF		N49_DTD
152S1568	1	3.6NH +/-1NH 180MA 01005	C93_RF		NOSTUFF
118S0652	1	49.9OHM 1% 01005	C93_RF		N49_DTD
152S1336	1	8.2NH +/-3% 0.25A 0.7OHM 0201	L41_RF	CRITICAL	N49_ALL
118S0407	1	49.9OHM 1% 0201	L41_RF		N49_DTD
152S1408	1	7.5NH 5NH% 140MA 01005	L56_RF	CRITICAL	N49_ALL
118S0652	1	49.9OHM 1% 01005	L56_RF		N49_DTD
152S1623	1	5.1NH 3% 0.16A 01005	L77_RF	CRITICAL	N49_ALL
118S0652	1	49.9OHM 1% 01005	L77_RF		N49_DTD
152S1567	1	3.3NH +/-0.1NH 180MA 01005	L63_RF	CRITICAL	N49_ALL
118S0652	1	49.9OHM 1% 01005	L63_RF		N49_DTD

CHESTNUT BOM OPTIONS

PART#	QTY	DESCRIPTION	REFERENCE DESIGNATOR(S)	CRITICAL	BOM OPTION
152S1802	1	TI CHESTNUT - 1.5 UH IND	L19	Y	CHESTNUT_TI_CYN
152S1842	1	TI CHESTNUT -1.5 UH IND	L19	Y	CHESTNUT_TI_TY
152S1849	1	TI CHESTNUT -1.5 UH IND	L19	Y	CHESTNUT_TI_MU

L46_RF BOM OPTIONS

PART#	QTY	DESCRIPTION	REFERENCE DESIGNATOR(S)	CRITICAL	BOM OPTION
131S0447	1	7.5PF CAPACITOR VALUE	L46_RF	Y	L46_RF_ALL
117S0161	1	0 OHM RES	L46_RF	Y	L46_RF_DTD

VCM RESISTOR BOM OPTIONS

PART#	QTY	DESCRIPTION	REFERENCE DESIGNATOR(S)	CRITICAL	BOM OPTION
118S0765	1	RES 11.OHM 01005 1%	R56	Y	VCM_RES

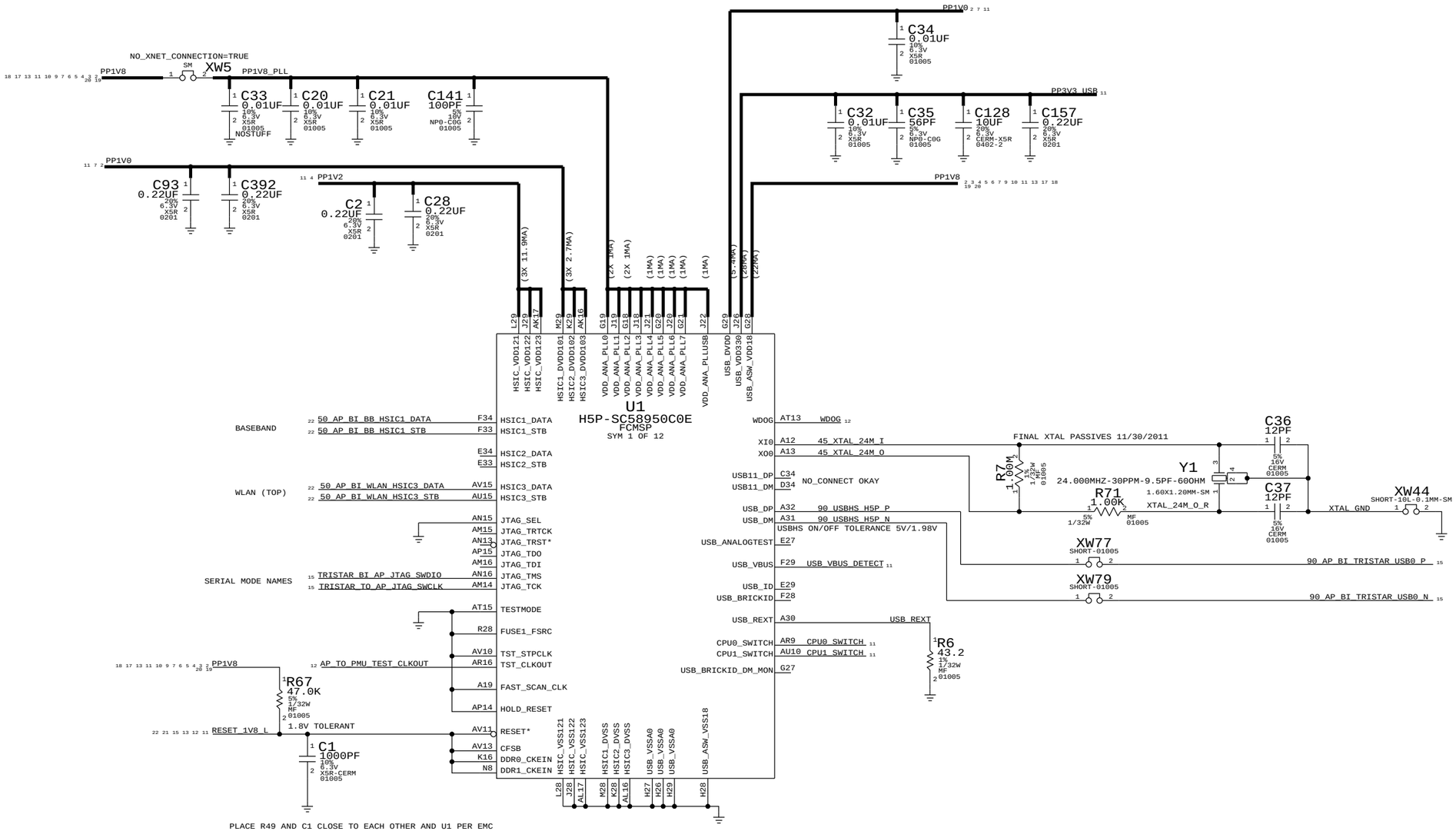
ALTERNATES

PART NUMBER	ALTERNATE FOR PART NUMBER	BOM OPTION	REF DES	COMMENTS:
138S0648	138S0652	ALTERNATE	?	4.7UF CERM 0402 6.3V
339S0178	339S0177	ALTERNATE	?	H5P ALTERNATE
107S0146	107S0208	ALTERNATE	?	THERMISTOR,NTC,10K
127S0162	127S0160	ALTERNATE	?	CAP,TANT,1UF,20%,25V
127S0164	127S0160	ALTERNATE	?	CAP,TANT,1UF,20%,25V
138S0703	138S0648	ALTERNATE	?	CAP,CER,X5R,4.7UF,20%
138S0702	138S0657	ALTERNATE	?	CAP,CER,610,4.7UF,20%
138S0697	138S0695	ALTERNATE	?	CAP,CER,X6S,1UF,20%
138S0746	138S0705	ALTERNATE	?	CAP,CER,X6S,1UF,20%
138S0739	138S0706	ALTERNATE	?	CAP,CER,X6S,1UF,20%
155S0773	155S0453	ALTERNATE	?	FERR BD,120OHM,210MA
155S0667	155S0583	ALTERNATE	?	FLTR,COMMON MODE,90OHM
197S0369	197S0392	ALTERNATE	?	XTAL,32.768KHZ
197S0399	197S0392	ALTERNATE	?	XTAL,32.768KHZ
311S0591	311S0273	ALTERNATE	?	IC,74LVCG32 OR GATE
335S0895	335S0874	ALTERNATE	?	U6_RF
311S0591	311S0273	ALTERNATE	?	IC,74LVCG32 OR GATE
335S0895	335S0874	ALTERNATE	?	U6_RF
376S1120	376S0774	ALTERNATE	?	CSD75202W15
118S0764	118S0717	ALTERNATE	?	R54 ALTERNATE
152S1850	152S1721	ALTERNATE	?	L11 ALTERNATE
152S1836	152S1844	ALTERNATE	L4	L4 ALTERNATE
335S0895	335S0874	ALTERNATE	U6_RF	RF WINBOND NOR ALT
339S0204	339S0205	ALTERNATE	U8_RF	RF USI WIFI ALT
339S0209	339S0205	ALTERNATE	U8_RF	RF TDK WIFI ALT
197S0491	197S0470	ALTERNATE	Y1_RF	RF KYOCERA ALT
197S0482	197S0470	ALTERNATE	Y1_RF	RF EPSON ALT
152S1803	152S1805	ALTERNATE	L14	L14 ALTERNATE
376S1060	376S0882	ALTERNATE	?	CSD68803W15
338S1213	338S1116	ALTERNATE	U21	L81 ALT, SSMC FLOW

DRAWING TITLE: SCHEM, MLB

Apple Inc.

DRAWING NUMBER: 051-0143 SIZE: D
REVISION: 3.0.0
BRANCH:
PAGE: 1 OF 22
SHEET: 1 OF 49


NO_XNET_CONNECTION=TRUE
XW5
SM
PP1V8
PP1V8_PLL
C33 0.01UF 10% 6.3V X5R 01005 NOSTUFF
C20 0.01UF 10% 6.3V X5R 01005
C21 0.01UF 10% 6.3V X5R 01005
C141 100PF 5% 10V NP0-C0G 01005
PP1V0
C93 0.22UF 20% 6.3V X5R 0201
C392 0.22UF 20% 6.3V X5R 0201
PP1V2
C2 0.22UF 20% 6.3V X5R 0201
C28 0.22UF 20% 6.3V X5R 0201
C34 0.01UF 10% 6.3V X5R 01005
PP3V3_USB
C32 0.01UF 10% 6.3V X5R 01005
C35 56PF 5% 6.3V NP0-C0G 01005
C128 10UF 20% 6.3V CERM-X5R 0402-2
C157 0.22UF 20% 6.3V X5R 0201
(3X 11.9MA)
(3X 2.7MA)
(2X 1MA)
(1MA)
(5.4MA)
(28MA)
(22MA)
U1
H5P-SC58950C0E
FCMSP
SYM 1 OF 12
BASEBAND
WLAN (TOP)
SERIAL MODE NAMES
50_AP_BI_BB_HSIC1_DATA
50_AP_BI_BB_HSIC1_STB
50_AP_BI_WLAN_HSIC3_DATA
50_AP_BI_WLAN_HSIC3_STB
TRISTAR_BI_AP_JTAG_SWDIO
TRISTAR_TO_AP_JTAG_SWCLK
HSIC1_DATA
HSIC1_STB
HSIC2_DATA
HSIC2_STB
HSIC3_DATA
HSIC3_STB
JTAG_SEL
JTAG_TRTCK
JTAG_TRST*
JTAG_TDO
JTAG_TDI
JTAG_TMS
JTAG_TCK
TESTMODE
FUSE1_FSRC
TST_STPCLK
TST_CLKOUT
FAST_SCAN_CLK
HOLD_RESET
RESET*
CFSB
DDR0_CKEIN
DDR1_CKEIN
AP_TO_PMU_TEST_CLKOUT
R67 47.0K 5% 1/32W MF 01005
1.8V TOLERANT
RESET_1V8_L
C1 1000PF 10% 6.3V X5R-CERM 01005
PLACE R49 AND C1 CLOSE TO EACH OTHER AND U1 PER EMC
WDOG
XI0
XO0
USB11_DP
USB11_DM
USB_DP
USB_DM
USB_ANALOGTEST
USB_VBUS
USB_ID
USB_BRICKID
USB_REXT
CPU0_SWITCH
CPU1_SWITCH
USB_BRICKID_DM_MON
45_XTAL_24M_I
45_XTAL_24M_O
NO_CONNECT OKAY
90_USBHS_H5P_P
90_USBHS_H5P_N
USBHS ON/OFF TOLERANCE 5V/1.98V
USB_VBUS_DETECT
USB_REXT
CPU0_SWITCH
CPU1_SWITCH
FINAL XTAL PASSIVES 11/30/2011
R7 10.0M 1% 1/32W MF 01005
Y1 24.000MHZ-30PPM-9.5PF-600HM 1.60X1.20MM-SM
C36 12PF 5% 16V CERM 01005
C37 12PF 5% 16V CERM 01005
R71 1.00K 1% 1/32W MF 01005
XTAL_24M_O_R
XTAL_GND
XW44 SHORT-10L-0.1MM-SM
XW77 SHORT-01005
XW79 SHORT-01005
90_AP_BI_TRISTAR_USB0_P
90_AP_BI_TRISTAR_USB0_N
R6 43.2 1% 1/32W MF 01005

BOARD_REV[3:0]={EHCI_PORT3,EHCI_PORT_PWR2,EHCI_PORT_PWR1,EHCI_PORT_PWR0}
FLOAT=LOW, PULLUP=HIGH

1011 - PROTO1 TRISTAR 2
1010 - EVT TRISTAR 2 <---EVT SELECTED

BOARD_ID[3:0]={GPIO16,SPIO0_MISO,SPI0_MOSI,SPI0_SCLK}
FLOAT=LOW, PULLUP=HIGH
1110 X64 MLB <--- SELECTED

BOOT_CONFIG[3:0]={GPIO29_CONFIG3,GPIO28_CONFIG2,GPIO25_CONFIG1,GPIO18_CONFIG0}
FLOAT=LOW, PULLUP=HIGH

0000	SPI0
0001	SPI3
0010	SPI0 W/TEST
0011	SPI3 W/TEST
0100	FMI0 2CS
0101	FMI0 4CS
0110	FMI0 4CS W/TEST
0111	RESERVED
1000	FMI1 2 CS
1001	FMI1 4 CS
1010	FMI1 4CS W/TEST
1100	FMI0/1 2/2 CS <--- SELECTED
1101	FMI0/1 4/4 CS
1110	FMI0/1 4/4 CS W/TEST
1111	RESERVED

COMMON PULL UP FOR BOARD_REV, BOARD_ID AND BOOT_CONFIG PINS

3 BOARD_INFO — R12 1.00K 01005 — PP1V8

R12 MUST WIN OVER 6X INTERNAL PULL-DOWNS THAT ARE ~100K

22 15 13 12 11 9 4 PP1V8_SDRAM

R52 220K 5% 1/32W MF 01005 — 12 8 BUTTON_TO_AP_RINGER_A

(OPEN DRAIN@PMU) NEW --->

L19A KEEP (STAYING) ALIVE -->

RESERVED

BB_JTAG_TCK 22 AP_TO_BB_JTAG_TCK
BB_JTAG_TDI 22 AP_TO_BB_JTAG_TDI
BB_JTAG_TMS 22 AP_TO_BB_JTAG_TMS
BB_JTAG_TDO 22 BB_TO_AP_JTAG_TDO

BOARD_ID3 3 BOARD_INFO
BOOT_CONFIG0
BOOT_CONFIG1
DFU STATUS
BOOT_CONFIG2 20 PP1V8
BOOT_CONFIG3 20 PP1V8
DEV_HSIC1_RDY 22 BB_TO_AP_HSIC1_RDY

PP5 SM P2MM-NSM

RESERVED FOR NON-TRISTAR DESIGN --->

16 AP_TO_HEADSET_HS3_CTRL
16 AP_TO_HEADSET_HS4_CTRL

U1 H5P-SC58950C0E FCMSP SYM 2 OF 12

GPIO0	W3		
GPIO1	N2		
GPIO2	M4		
GPIO3	V3		
GPIO4	T4		
GPIO5	W2		
GPIO6	P3		
GPIO7	M3		
GPIO8	U3		
GPIO9	P4		
GPIO10/SDIO_D3	W1		
GPIO11/SDIO_D2	M2		
GPIO12/SDIO_D1	R3		
GPIO13/SDIO_D0	N3		
GPIO14/SDIO_CMD	M1		
GPIO15/SDIO_CLK	AC3		
GPIO16	T3		
GPIO17	V1		
GPIO18	AC2		
GPIO19	V4		
GPIO20	R31		
GPIO21	P34		
GPIO22	P33		
GPIO23	P32		
GPIO24	N32		
GPIO25	L33		
GPIO26	P30		
GPIO27	P31	UART4_CTSN/SPI4_SSIN	AJ4
GPIO28	L34	UART4_RTSN/SPI4_SCLK	AE1
GPIO29	M32	UART4_RXD/SPI4_MISO	AJ2
GPIO30	K32	UART4_TXD/SPI_MOSI	AH4
GPIO31	L32		
GPIO32	C22	UART5_RXD	AK4
GPIO33	D22	UART5_TXD	AJ3
GPIO34	C21		
GPIO35	D21	UART6_CTSN	AH2
GPIO36	C20	UART6_RTSN	AL1
GPIO37 <50MHZ	D20	UART6_RXD	AK3
GPIO38	C19	UART6_TXD	AD1
GPIO39 <50MHZ	D19		
GPIO_3V0	AT11	GPIO_SVSEL18_FMI	AU13
GPIO_3V1	AP12	GPIO_SVSEL25_FMI	AR14
		GPIO_VSEL25_I2C2	AR13
		GPIO_VSEL25_SPI3	AT12

EHCI_PORT_PWR0	AE4		
EHCI_PORT_PWR1	AD3	PP1V8	BOARD_REV0
EHCI_PORT_PWR2	AD4		BOARD_REV1
EHCI_PORT_PWR3	AE3	PP1V8	BOARD_REV2
			BOARD_REV3
TMR32_PWM0	AT6	GYRO_TO_AP_INT2	19
TMR32_PWM1	AP8	VIB_PWM	8
TMR32_PWM2	AP1	45_AP_TO_TOUCH_CLK32K_RESET_L	17
UART0_RXD	AR15		
UART0_TXD	AU12	AP_TO_LEDDRV_EN	14
UART1_CTSN	AA3	BB_TO_AP_UART1_CTS_L	22
UART1_RTSN	AB2	AP_TO_BB_UART1_RTS_L	22
UART1_RXD	AB3	BB_TO_AP_UART1_RXD	15 22
UART1_TXD	AF5	AP_TO_BB_UART1_TXD	15 22
UART2_CTSN	AG3	TRISTAR_TO_AP_INT	12 15
UART2_RTSN	AA1	ACCEL_TO_AP_INT1	19
UART2_RXD	AE2	TRISTAR_TO_AP_ACC_UART2_RXD	15
UART2_TXD	AF3	AP_TO_TRISTAR_ACC_UART2_TXD	15
UART3_CTSN	AH3	BT_TO_AP_UART3_CTS_L	22
UART3_RTSN	AB1	AP_TO_BT_UART3_RTS_L	22
UART3_RXD	AF4	BT_TO_AP_UART3_RXD	22
UART3_TXD	AG4	AP_TO_BT_UART3_TXD	22
UART4_CTSN/SPI4_SSIN	AJ4	AP_TO_BB_JTAG_TRST_L	22
UART4_RTSN/SPI4_SCLK	AE1	AP_TO_CAM_RF_VDDCORE_EN	20
UART4_RXD/SPI4_MISO	AJ2	WLAN_TO_AP_UART4_RXD	22
UART4_TXD/SPI_MOSI	AH4	AP_TO_WLAN_UART4_TXD	22
UART5_RXD	AK4	AP_BI_BATTERY_SWI	12 21
UART5_TXD	AJ3	BB_TO_AP_RESET_DET_L	22
UART6_CTSN	AH2	BB_TO_AP_PP_SYNC	22
UART6_RTSN	AL1	AP_TO_SPKAMP_RESET_L	14
UART6_RXD	AK3	TRISTAR_TO_AP_DEBUG_UART6_RXD	15
UART6_TXD	AD1	AP_TO_TRISTAR_DEBUG_UART6_TXD	15

FMI, 00=1.8V | 01=3.0V | 10=3.3V

I2C2, 0=1.8V | 1=3.0V
SPI3, 0=1.8V | 1=3.0V

CODEC ASP
BASEBAND
SPKR AMP
BLUETOOTH
CODEC XSP
GRAPE
BB
BT
WIFI UART
GAS GAUGE
CODEC

9 45_AP_TO_CODEC_I2S_MCLK — R16 33.2 1% 1/32W MF 01005 — 45_I2S0_MCK_R AP30
14 45_AP_TO_SPKAMP_I2S2_MCLK — R5 33.2 1% 1/32W MF 01005 — 45_I2S2_MCK_R AM29

9 3	45_AP_TO_CODEC_ASP_I2S0_BCLK	AM30	I2S0_MCK
9	AP_TO_CODEC_ASP_I2S0_LRCLK	AH31	I2S0_BCLK
9 3	CODEC_TO_AP_ASP_I2S0_DIN	AH30	I2S0_LRCK
9 3	AP_TO_CODEC_ASP_I2S0_DOUT	AJ30	I2S0_DIN
		AK29	I2S0_DOUT
22	45_BB_TO_AP_I2S1_BCLK	AL31	I2S1_MCK
22	BB_TO_AP_I2S1_LRCLK	AN31	I2S1_BCLK
22	BB_TO_AP_I2S1_DIN	AH29	I2S1_LRCK
22	AP_TO_BB_I2S1_DOUT	AH32	I2S1_DIN
			I2S1_DOUT
14 3	45_AP_TO_SPKAMP_XSP_I2S2_BCLK	AM28	I2S2_MCK
14	AP_TO_SPKAMP_XSP_I2S2_LRCLK	AJ31	I2S2_BCLK
14 3	SPKAMP_TO_AP_XSP_I2S2_DIN	AM33	I2S2_LRCK
14 3	AP_TO_SPKAMP_XSP_I2S2_DOUT	AN30	I2S2_DIN
			I2S2_DOUT
		AM31	I2S3_MCK
22 3	45_AP_TO_BT_I2S3_BCLK	AK31	I2S3_BCLK
22	AP_TO_BT_I2S3_LRCLK	AL28	I2S3_LRCK
22 3	BT_TO_AP_I2S3_DIN	AL30	I2S3_DIN
22 3	AP_TO_BT_I2S3_DOUT	AP31	I2S3_DOUT
		AK30	I2S4_MCK
9 3	45_AP_TO_CODEC_XSP_I2S4_BCLK	AM32	I2S4_BCLK
9	AP_TO_CODEC_XSP_I2S4_LRCLK	AP32	I2S4_LRCK
9 3	CODEC_TO_AP_XSP_I2S4_DIN	AK32	I2S4_DIN
9 3	AP_TO_CODEC_XSP_I2S4_DOUT	AR32	I2S4_DOUT
		AR31	SPDIF
	BOARD_INFO	AM4	SPI0_MISO
	BOARD_INFO	AR5	SPI0_MOSI
		AM2	SPI0_SCLK
18	LCM_TO_AP_PIFA	AP3	SPI0_SSIN
17	TOUCH_TO_AP_SPI1_MISO	AN3	SPI1_MISO
17	AP_TO_TOUCH_SPI1_MOSI	AL3	SPI1_MOSI
17	AP_TO_TOUCH_SPI1_CLK	AK1	SPI1_SCLK
17	AP_TO_TOUCH_SPI1_CS_L	AR4	SPI1_SSIN
		AN4	SPI2_MISO
22	BB_TO_AP_IPC_GPIO	AM3	SPI2_MOSI
22	AP_TO_WLAN_HSIC2_RDY	AN6	SPI2_SCLK
22	WLAN_TO_AP_HSIC2_RDY	AN1	SPI2_SSIN
9	CODEC_TO_AP_SPI3_MISO	AP9	SPI3_MISO
9	AP_TO_CODEC_SPI3_MOSI	AM9	SPI3_MOSI
9	AP_TO_CODEC_SPI3_CLK	AM13	SPI3_SCLK
9	AP_TO_CODEC_SPI3_CS_L	AN12	SPI3_SSIN

U1 H5P-SC58950C0E FCMSP SYM 3 OF 12

I2C0_SCL	AR7	AP_TO_I2C0_SCL	12 13 14 15 19
I2C0_SDA	AT4	AP_BI_I2C0_SDA	12 13 14 15 19
I2C1_SCL	AV6	AP_TO_I2C1_SCL	19
I2C1_SDA	AT3	AP_BI_I2C1_SDA	19
I2C2_SCL	AT9	AP_TO_I2C2_SCL	10
I2C2_SDA	AR8	AP_BI_I2C2_SDA	10
SWI_DATA	AP5		
DWI_CLK	AT7	45_AP_TO_PMU_DWI_CLK_H5P	45_AP_TO_PMU_DWI_CLK 12 13
DWI_DI	AV7		45_AP_TO_PMU_DWI_DI 12
DWI_DO	AM8		45_AP_TO_PMU_DWI_DO 12 13

PP1V8 2 3 4 5 6 7 9 10 11 13 17 18 19 20

R17 2.2K 5% 1/32W MF 01005 — R91 2.2K 5% 1/32W MF 01005
R18 2.2K 5% 1/32W MF 01005
R19 2.2K 5% 1/32W MF 01005
R21 2.2K 5% 1/32W MF 01005 — R92 2.2K 5% 1/32W MF 01005

PP13 SM P2MM-NSM
PP15 SM P2MM-NSM

ACATHA PMU: 1110100X
CS35L20 AMP: 1111111X
AP3GDL20-BC GYRO: 1101010X
TRISTAR: 0011010X
LM3534: 1100011X
CHESTNUT: 0100111X
I2C0
AP3DSH ACCEL: 0011101X
AK8963C COMPASS: 0001100X
I2C1
CT814 ALS: 0101001X
I2C2

R47 33.2 1% 1/32W MF 01005

I2S PROBE POINTS

45_AP_TO_CODEC_ASP_I2S0_BCLK — PP194
45_AP_TO_SPKAMP_XSP_I2S2_BCLK — PP195
45_AP_TO_BT_I2S3_BCLK — PP196
45_AP_TO_CODEC_XSP_I2S4_BCLK — PP197
CODEC_TO_AP_ASP_I2S0_DIN — PP198
AP_TO_CODEC_ASP_I2S0_DOUT — PP199
SPKAMP_TO_AP_XSP_I2S2_DIN — PP200
AP_TO_SPKAMP_XSP_I2S2_DOUT — PP201
BT_TO_AP_I2S3_DIN — PP202
AP_TO_BT_I2S3_DOUT — PP203
CODEC_TO_AP_XSP_I2S4_DIN — PP204
AP_TO_CODEC_XSP_I2S4_DOUT — PP205

(all: SM P2MM-NSM)

MENU & POWER / HOLD KEY

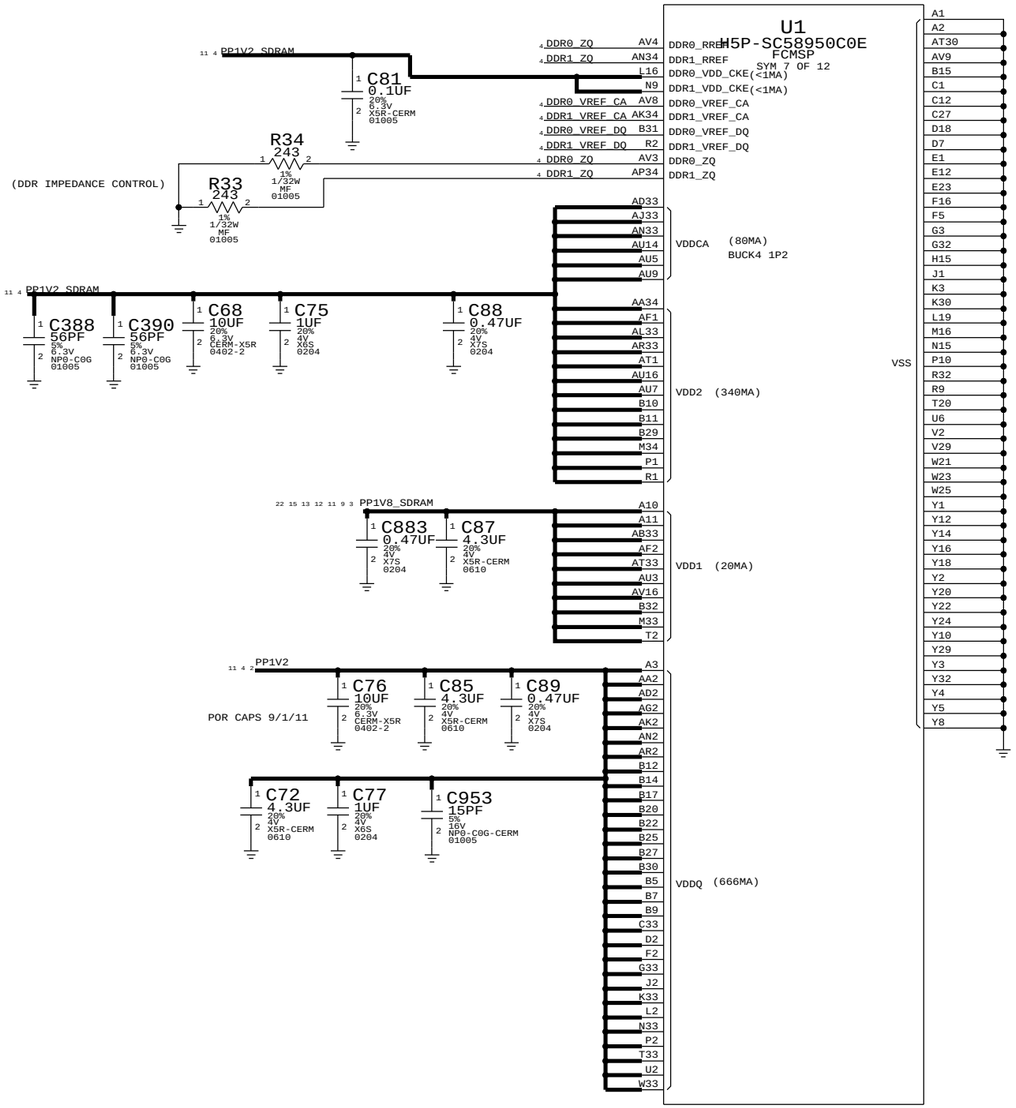
11 PP1V8_ALWAYS

R22 392K 1% 1/32W MF 01005
R20 392K 1% 1/32W MF 01005

U25 74AUP2G34GN SOT1115 (VCC, GND)

16 BUTTON_TO_AP_MENU_KEY_L — 1A — 1Y — BUTTON_TO_AP_MENU_KEY_BUFF_L 3 12
8 BUTTON_TO_AP_HOLD_KEY_L — 2A — 2Y — BUTTON_TO_AP_HOLD_KEY_BUFF_L 3 12

DEBUG UART: TOLERANCE 1.98V


U1
H5P-SC58950C0E
FCMSP
SYM 7 OF 12
PP1V2_SDRAM
C81 0.1UF
R34 243
R33 243
(DDR IMPEDANCE CONTROL)
DDR0_ZQ
DDR1_ZQ
DDR0_VREF_CA
DDR1_VREF_CA
DDR0_VREF_DQ
DDR1_VREF_DQ
DDR0_RREF
DDR1_RREF
DDR0_VDD_CKE(<1MA)
DDR1_VDD_CKE(<1MA)
C388 56PF
C390 56PF
C68 10UF
C75 1UF
C88 0.47UF
VDDCA (80MA)
BUCK4 1P2
VDD2 (340MA)
VSS
PP1V8_SDRAM
C883 0.47UF
C87 4.3UF
VDD1 (20MA)
PP1V2
C76 10UF
C85 4.3UF
C89 0.47UF
POR CAPS 9/1/11
C72 4.3UF
C77 1UF
C953 15PF
VDDQ (666MA)
PP1V2_SDRAM
C60 0.01UF
C66 0.01UF
R11 10K
R13 10K
DDR0_VREF_CA
C78 0.01UF
C80 0.01UF
R14 10K
R24 10K
DDR1_VREF_CA
PP1V2
C90 0.01UF
C91 0.01UF
R25 4.7K
R27 4.7K
DDR0_VREF_DQ
C94 0.01UF
C96 0.01UF
R28 4.7K
R29 4.7K
DDR1_VREF_DQ
U1
H5P-SC58950C0E
FCMSP
SYM 9 OF 12
PP1V2
POR CAPS NOV/1/2010
CAPS FOR VDDIOD ARE SHARED WITH VDDQ
NOSTUFF
C816 0.1UF
VDDIOD (INCLUDED IN VDDQ)
VSS
PP1V8
VDDIO18_GRP1 (45MA)
FL40
1KOHM-25%-0.2A
PP1V8_XTAL
C123 2.2UF
VDDIO18_GRP2 (8MA)
VDDIO18_GPIO22 (7MA)
VDDIO18_I2S0_MCK (18MA)
PVDDP_I2C2_SDA

C83 MOVED TO CPUB FROM 1V2_SDRAM PER SEG SIM RESULTS

C104 MOVED TO CPU0 FROM PP1V8 PER SEG SIMS

POR CAPS 9/1/2011

POR CAPS 5/6/2011

NAND POWER GROUP
POR CAPS 12/14/2011

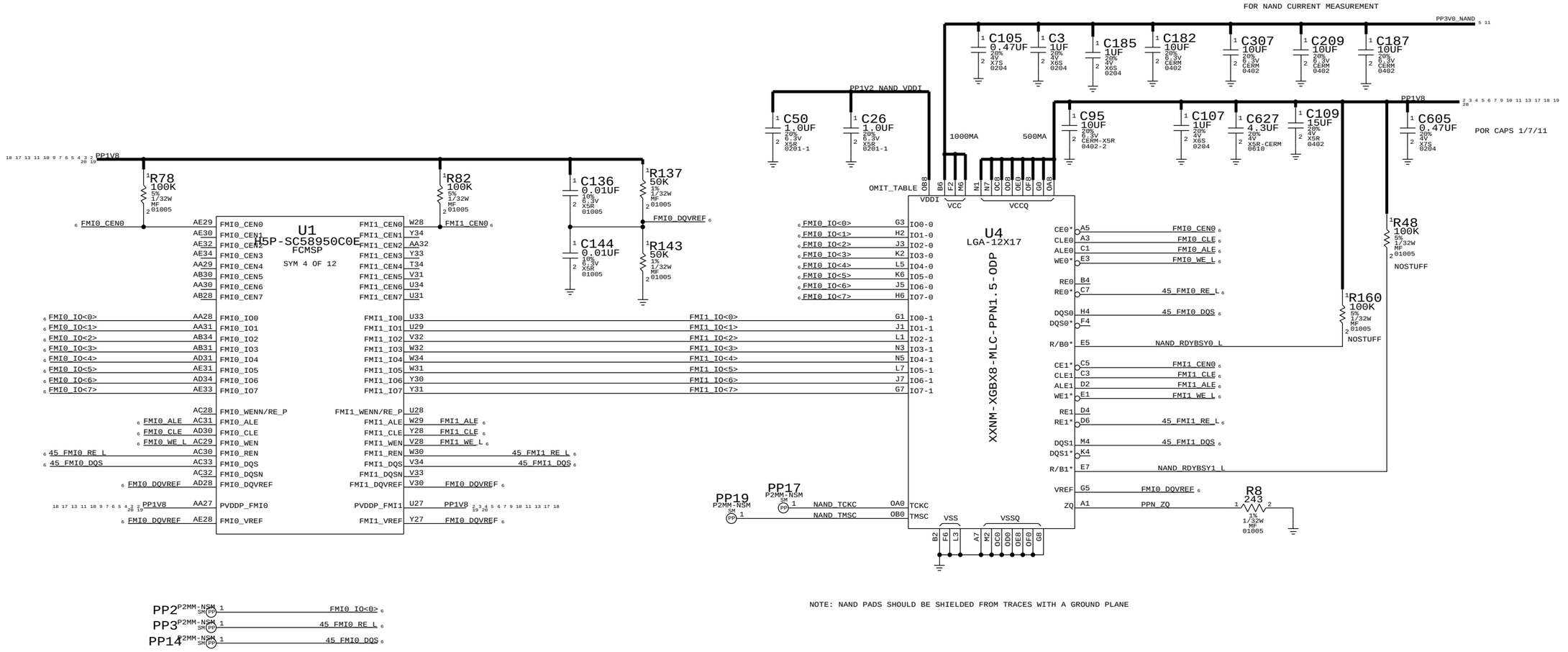
THERE WERE 10X 0.01UF HERE
BUT THEY WERE NOT NEEDED PER P.CODD 1/6/11

C86 MOVED TO PP1V1_SOC FROM PP1V2, PER SEG SIMS

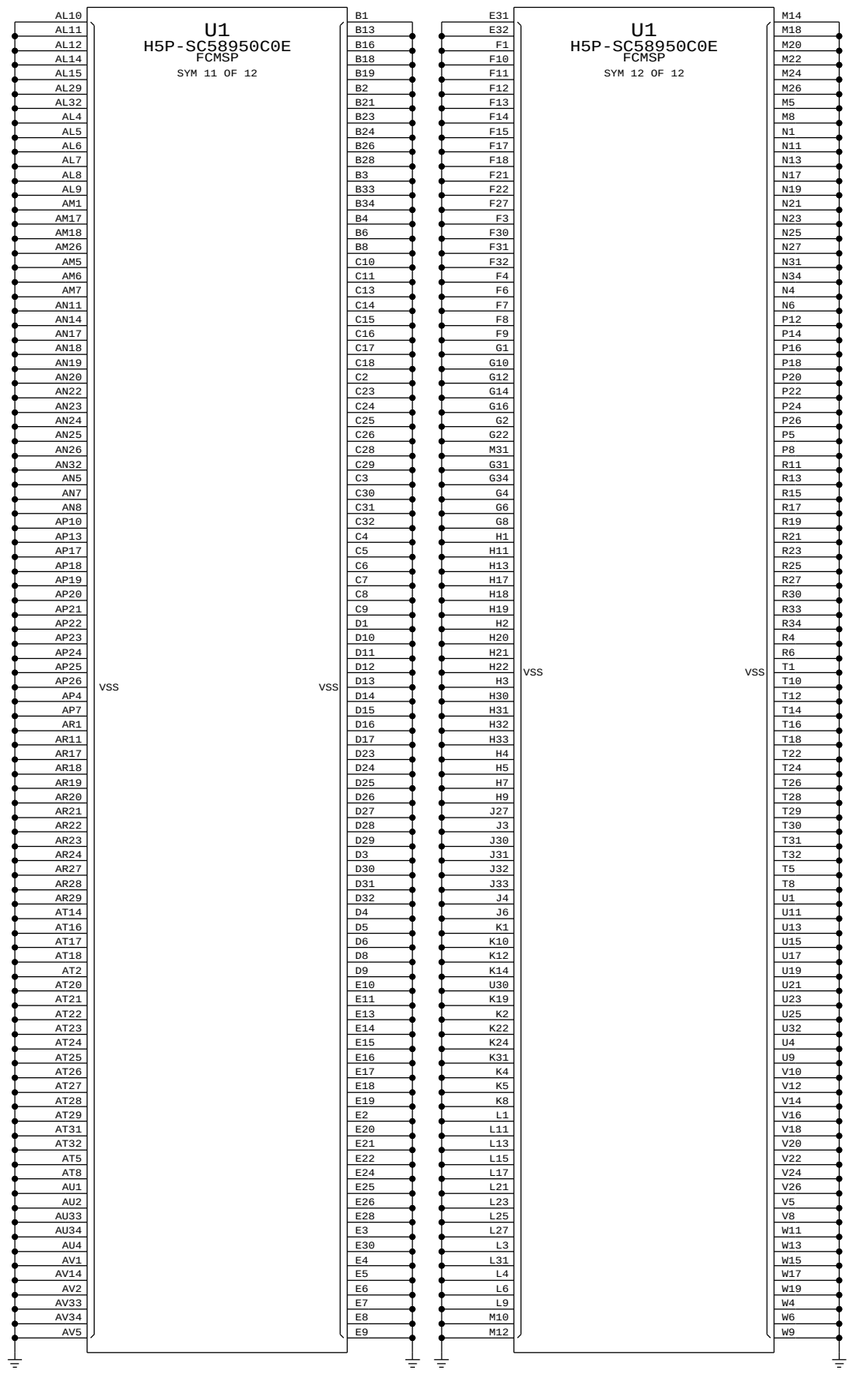
C181,C177,C174 CHANGED FROM 0.47UF TO 1UF
PER SEG - ZHENGGANG - 09/01/12 PRE-PROTO1

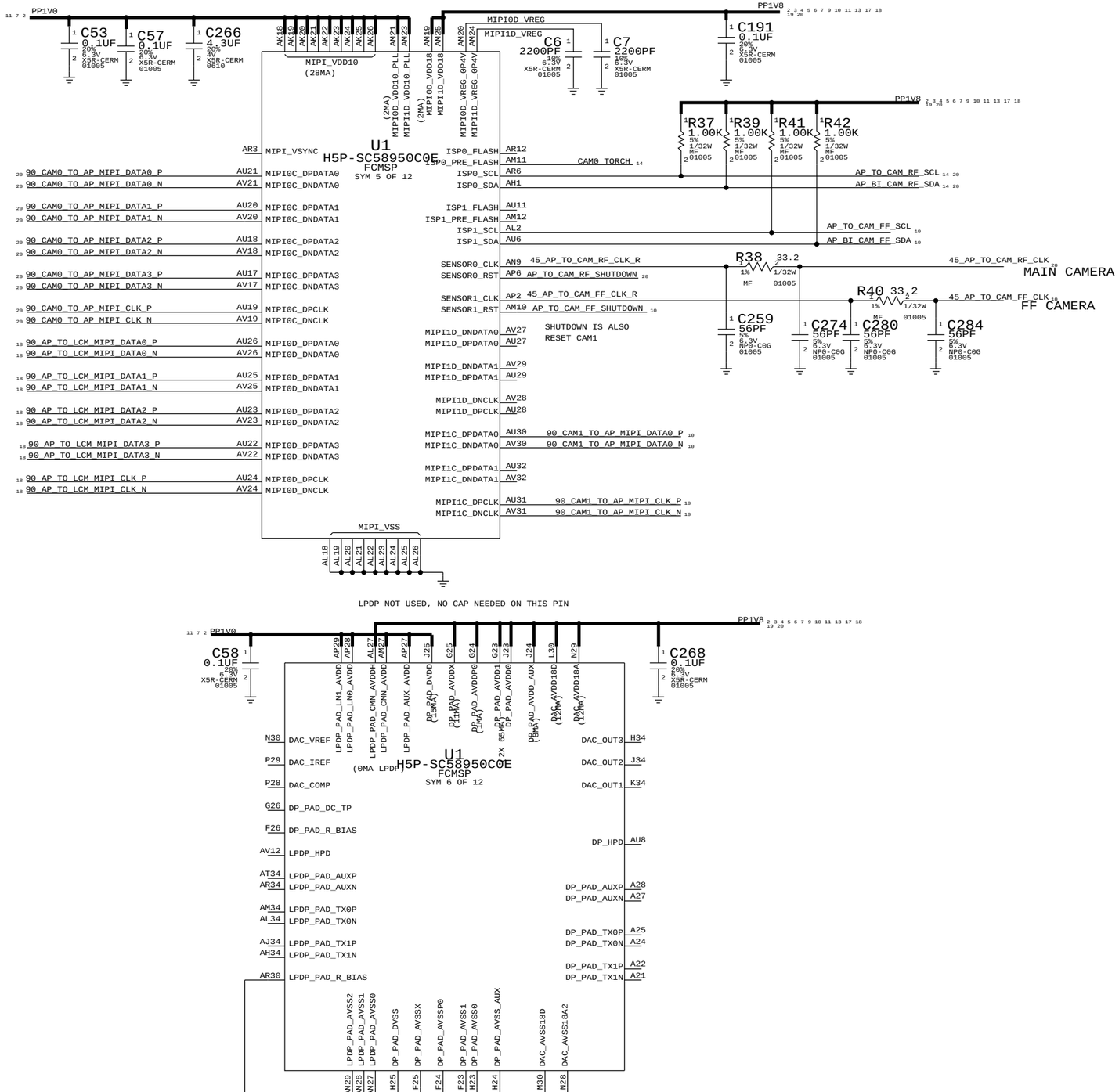
SYNC_MASTER=N/A SYNC_DATE=N/A

NAND

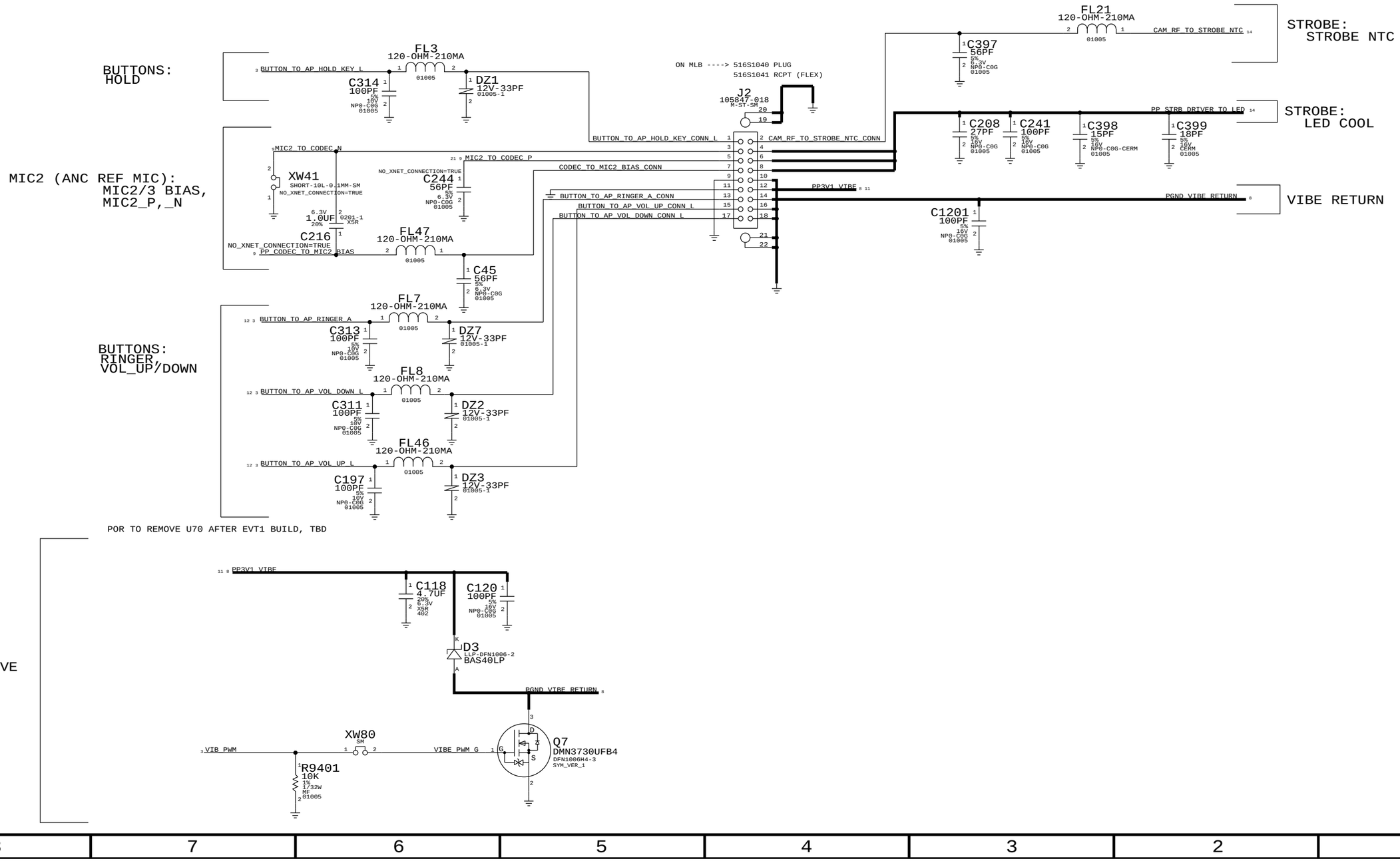


NOTE: NAND PADS SHOULD BE SHIELDED FROM TRACES WITH A GROUND PLANE


U1
H5P-SC58950C0E
FCMSP
SYM 11 OF 12
U1
H5P-SC58950C0E
FCMSP
SYM 12 OF 12
VSS


PP1V0
C53 0.1UF 20% 6.3V X5R-CERM 01005
C57 0.1UF 20% 6.3V X5R-CERM 01005
C266 4.3UF 20% 4V X5R-CERM 0610
MIPI_VDD10 (28MA)
MIPI0D_VREG
MIPI1D_VREG
C6 2200PF 10% 6.3V X5R-CERM 01005
C7 2200PF 10% 6.3V X5R-CERM 01005
PP1V8
C191 0.1UF 20% 6.3V X5R-CERM 01005
R37 1.00K 5% 1/32W MF 01005
R39 1.00K 5% 1/32W MF 01005
R41 1.00K 5% 1/32W MF 01005
R42 1.00K 5% 1/32W MF 01005
U1
H5P-SC58950C0E
FCMSP
SYM 5 OF 12
CAM0_TORCH
AP_TO_CAM_RF_SCL
AP_BI_CAM_RF_SDA
AP_TO_CAM_FF_SCL
AP_BI_CAM_FF_SDA
R38 33.2 1% 1/32W MF 01005
R40 33.2 1% 1/32W MF 01005
45_AP_TO_CAM_RF_CLK_R
45_AP_TO_CAM_RF_CLK
MAIN CAMERA
45_AP_TO_CAM_FF_CLK_R
45_AP_TO_CAM_FF_CLK
FF CAMERA
C259 56PF 5% 6.3V NP0-C0G 01005
C274 56PF 5% 6.3V NP0-C0G 01005
C280 56PF 5% 6.3V NP0-C0G 01005
C284 56PF 5% 6.3V NP0-C0G 01005
SHUTDOWN IS ALSO
RESET CAM1
MIPI_VSYNC
90_CAM0_TO_AP_MIPI_DATA0_P
90_CAM0_TO_AP_MIPI_DATA0_N
90_CAM0_TO_AP_MIPI_DATA1_P
90_CAM0_TO_AP_MIPI_DATA1_N
90_CAM0_TO_AP_MIPI_DATA2_P
90_CAM0_TO_AP_MIPI_DATA2_N
90_CAM0_TO_AP_MIPI_DATA3_P
90_CAM0_TO_AP_MIPI_DATA3_N
90_CAM0_TO_AP_MIPI_CLK_P
90_CAM0_TO_AP_MIPI_CLK_N
90_AP_TO_LCM_MIPI_DATA0_P
90_AP_TO_LCM_MIPI_DATA0_N
90_AP_TO_LCM_MIPI_DATA1_P
90_AP_TO_LCM_MIPI_DATA1_N
90_AP_TO_LCM_MIPI_DATA2_P
90_AP_TO_LCM_MIPI_DATA2_N
90_AP_TO_LCM_MIPI_DATA3_P
90_AP_TO_LCM_MIPI_DATA3_N
90_AP_TO_LCM_MIPI_CLK_P
90_AP_TO_LCM_MIPI_CLK_N
90_CAM1_TO_AP_MIPI_DATA0_P
90_CAM1_TO_AP_MIPI_DATA0_N
90_CAM1_TO_AP_MIPI_CLK_P
90_CAM1_TO_AP_MIPI_CLK_N
MIPI_VSS
LPDP NOT USED, NO CAP NEEDED ON THIS PIN
C58 0.1UF 20% 6.3V X5R-CERM 01005
C268 0.1UF 20% 6.3V X5R-CERM 01005
U1
H5P-SC58950C0E
FCMSP
SYM 6 OF 12
(0MA LPDP)
DAC_VREF
DAC_IREF
DAC_COMP
DP_PAD_DC_TP
DP_PAD_R_BIAS
LPDP_HPD
LPDP_PAD_AUXP
LPDP_PAD_AUXN
LPDP_PAD_TX0P
LPDP_PAD_TX0N
LPDP_PAD_TX1P
LPDP_PAD_TX1N
LPDP_PAD_R_BIAS
DAC_OUT3
DAC_OUT2
DAC_OUT1
DP_HPD
DP_PAD_AUXP
DP_PAD_AUXN
DP_PAD_TX0P
DP_PAD_TX0N
DP_PAD_TX1P
DP_PAD_TX1N

BUTTON FLEX (VIBE DRIVER, BUTTONS, ANC REF MIC, STROBE, STROBE_NTC)



POWER, MICBIAS

DIGITAL SYSTEM I/O

L81 AUDIO CODEC

ANC REF MIC
HEADPHONE MIC
VOICE MIC
ANC ERROR MIC
MIKEY TO TRISTAR
KEEP THESE CAPS AT CODEC PINS
KEEP THIS CAP AT CODEC PINS
50PF LIMIT ON AOUTX PINS
HEADPHONES

CG FLEX B2B

(FF CAM, PROX, ALS, RECEIVER, ANC ERROR MIC)

FRONT CAM: CLK, I2C, SHDN

PROX: POWER, RX, RX_EN

ALS: POWER, I2C, INT

RECEIVER

FRONT CAM: POWER AND MIPI

MIC3 (ANC ERROR MIC)

CAM1 ALS INT

PROX: PWR, TX EN

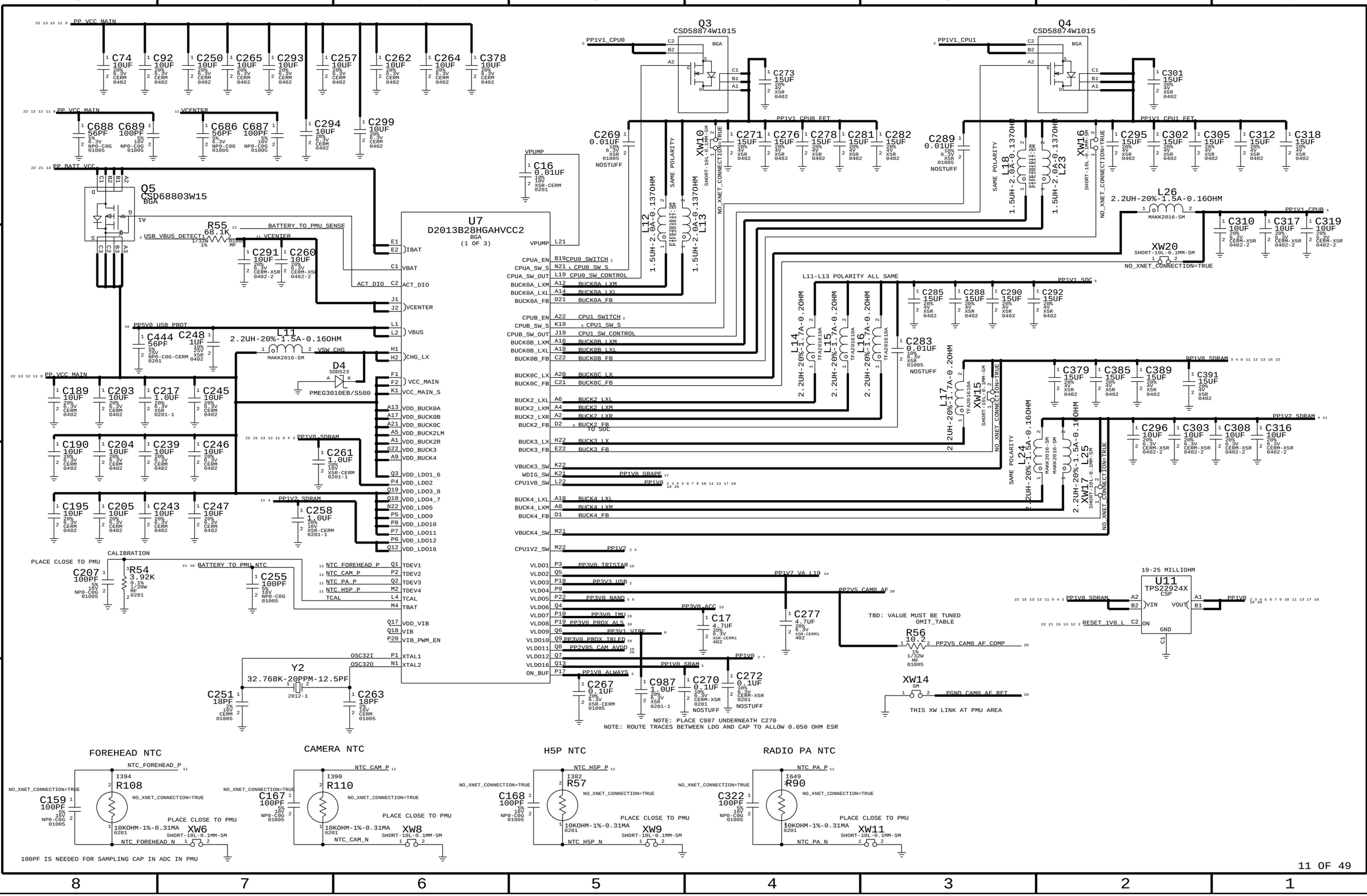
THIS ON ONE MLB ---> 516S0986 RCPT
516S0987 PLUG

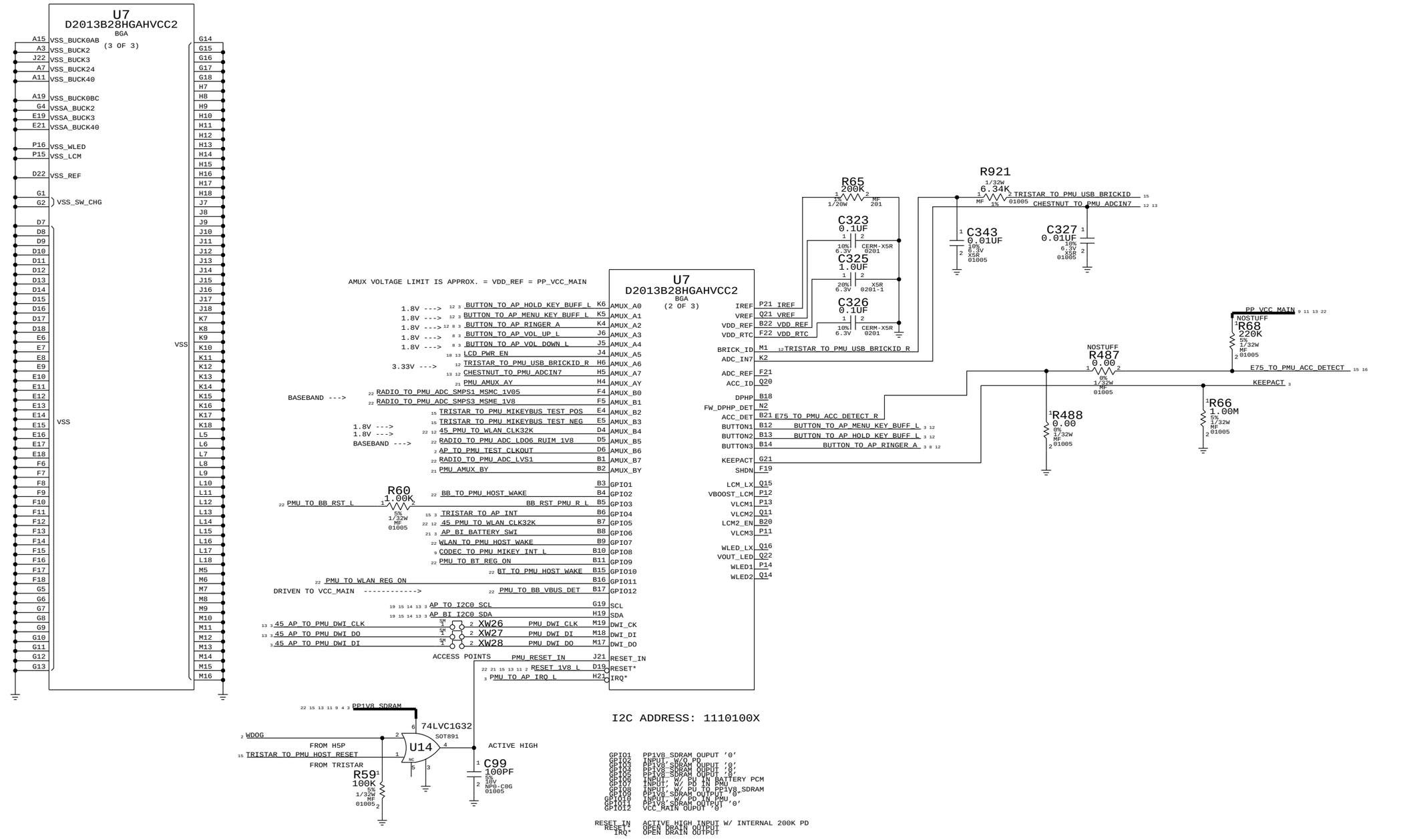
PCB: PLACE THESE AT J1 CONN

PROX_RX SIGNAL MUST BE TREATED WITH CARE

NOTE: J1.30 GROUNDED ON BOTH MLB AND FLEX SIDE - RADAR://12828034

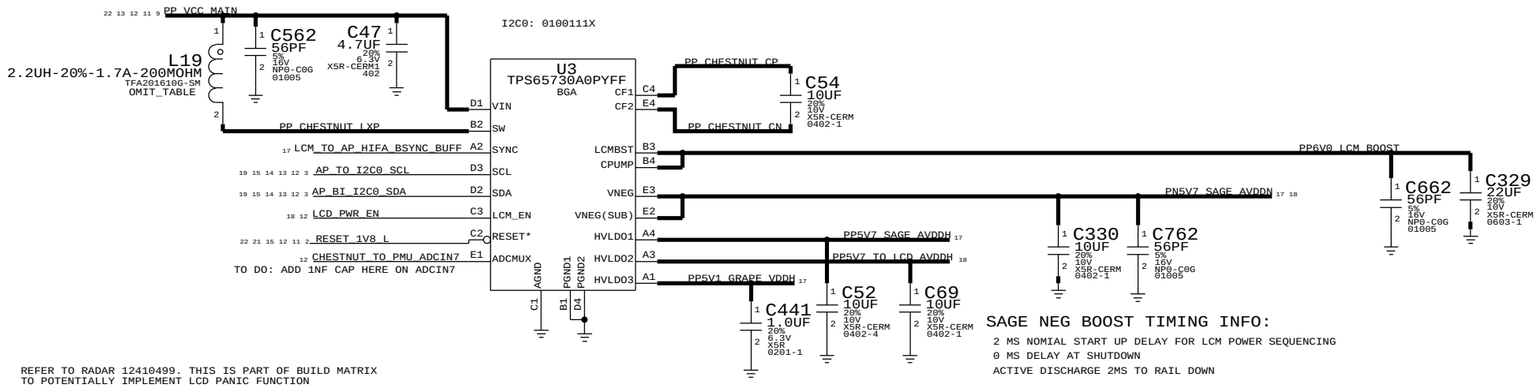
SPECIAL Z = 0.60 MM MAX


PP_VCC_MAIN
C74 10UF
C92 10UF
C250 10UF
C265 10UF
C293 10UF
C257 10UF
C262 10UF
C264 10UF
C378 10UF
C294 10UF
C299 10UF
C688 56PF
C689 100PF
C686 56PF
C687 100PF
VCENTER
PP_BATT_VCC
Q5
CSD68803W15
BGA
R55
68.1K
USB_VBUS_DETECT
BATTERY_TO_PMU_SENSE
C291 10UF
C260 10UF
PP5V0_USB_PROT
C444 56PF
C248 1UF
L11
2.2UH-20%-1.5A-0.16OHM
MAKK2016-SM
VSW_CHG
D4
SOD523
PMEG3010EB/S500
C189 10UF
C203 10UF
C217 1.0UF
C245 10UF
C190 10UF
C204 10UF
C239 10UF
C246 10UF
PP1V8_SDRAM
C261 1.0UF
C195 10UF
C205 10UF
C243 10UF
C247 10UF
PP1V2_SDRAM
C258 1.0UF
CALIBRATION
PLACE CLOSE TO PMU
C207 100PF
R54 3.92K
BATTERY_TO_PMU_NTC
C255 100PF
U7
D2013B28HGAHVCC2
BGA
(1 OF 3)
IBAT
VBAT
ACT_DIO
VCENTER
VBUS
CHG_LX
VCC_MAIN
VCC_MAIN_S
VDD_BUCK0A
VDD_BUCK0B
VDD_BUCK0C
VDD_BUCK2LM
VDD_BUCK2R
VDD_BUCK3
VDD_BUCK4
VDD_LDO1_6
VDD_LDO2
VDD_LDO3_8
VDD_LDO4_7
VDD_LDO5
VDD_LDO9
VDD_LDO10
VDD_LDO11
VDD_LDO12
VDD_LDO16
TDEV1
TDEV2
TDEV3
TDEV4
TCAL
TBAT
VDD_VIB
VIB
VIB_PWM_EN
XTAL1
XTAL2
NTC_FOREHEAD_P
NTC_CAM_P
NTC_PA_P
NTC_H5P_P
TCAL
Y2
32.768K-20PPM-12.5PF
2012-1
C251 18PF
C263 18PF
VPUMP
C16 0.01UF
CPUA_EN
CPUA_SW_S
CPUA_SW_OUT
BUCK0A_LXM
BUCK0A_LXL
BUCK0A_FB
CPU0_SWITCH
CPU0_SW_S
CPU0_SW_CONTROL
CPUB_EN
CPUB_SW_S
CPUB_SW_OUT
BUCK0B_LXM
BUCK0B_LXL
BUCK0B_FB
CPU1_SWITCH
CPU1_SW_S
CPU1_SW_CONTROL
BUCK0C_LX
BUCK0C_FB
BUCK2_LXL
BUCK2_LXM
BUCK2_LXR
BUCK2_FB
TO SOC
BUCK3_LX
BUCK3_FB
VBUCK3_SW
WDIG_SW
CPU1V8_SW
PP1V8_GRAPE
PP1V8
BUCK4_LXL
BUCK4_LXM
BUCK4_FB
VBUCK4_SW
CPU1V2_SW
PP1V2
VLD01
VLD02
VLD03
VLD04
VLD05
VLD06
VLD07
VLD08
VLD09
VLD010
VLD011
VLD012
VLD016
ON_BUF
PP3V0_TRISTAR
PP3V3_USB
PP3V0_NAND
PP3V0_IMU
PP3V0_PROX_ALS
PP3V1_VIBE
PP3V0_PROX_1RLED
PP2V85_CAM_AVDD
PP1V8_ALWAYS
PP3V0_ACC
PP1V7_VA_L19
PP2V5_CAM0_AF
PP1V0_SRAM
PP1V0
C267 0.1UF
C987 1.0UF
C270 0.1UF
C272 0.1UF
C17 4.7UF
C277 4.7UF
NOSTUFF
NOTE: PLACE C987 UNDERNEATH C270
NOTE: ROUTE TRACES BETWEEN LDO AND CAP TO ALLOW 0.050 OHM ESR
TBD: VALUE MUST BE TUNED OMIT_TABLE
R56 10.2
PP2V5_CAM0_AF_COMP
XW14
PGND_CAM0_AF_RET
THIS XW LINK AT PMU AREA
Q3
CSD58874W1015
PP1V1_CPU0
C273 15UF
PP1V1_CPU0_FET
C269 0.01UF
L12
1.5UH-2.0A-0.137OHM
L13
XW10
SHORT-10L-0.1MM-SM
C271 15UF
C276 15UF
C278 15UF
C281 15UF
C282 15UF
SAME POLARITY
NO_XNET_CONNECTION=TRUE
Q4
CSD58874W1015
PP1V1_CPU1
C301 15UF
PP1V1_CPU1_FET
C289 0.01UF
L18
L23
XW16
C295 15UF
C302 15UF
C305 15UF
C312 15UF
C318 15UF
L26
2.2UH-20%-1.5A-0.16OHM
MAKK2016-SM
PP1V1_CPUB
C310 10UF
C317 10UF
C319 10UF
XW20
NO_XNET_CONNECTION=TRUE
L11-L13 POLARITY ALL SAME
PP1V1_SOC
L14
L15
L16
TFA201610A
C285 15UF
C288 15UF
C290 15UF
C292 15UF
C283 0.01UF
L17
XW15
C379 15UF
C385 15UF
C389 15UF
C391 15UF
PP1V8_SDRAM
L24
L25
XW17
C296 10UF
C303 10UF
C308 10UF
C316 10UF
PP1V2_SDRAM
U11
TPS22924X
CSP
VIN
VOUT
ON
GND
PP1V8
RESET_1V8_L
19-25 MILLIOHM
FOREHEAD NTC
I394
R108
C159 100PF
10KOHM-1%-0.31MA
XW6
CAMERA NTC
I390
R110
C167 100PF
XW8
H5P NTC
I382
R57
C168 100PF
XW9
RADIO PA NTC
I649
R90
C322 100PF
XW11
PLACE CLOSE TO PMU
NO_XNET_CONNECTION=TRUE
100PF IS NEEDED FOR SAMPLING CAP IN ADC IN PMU
11 OF 49

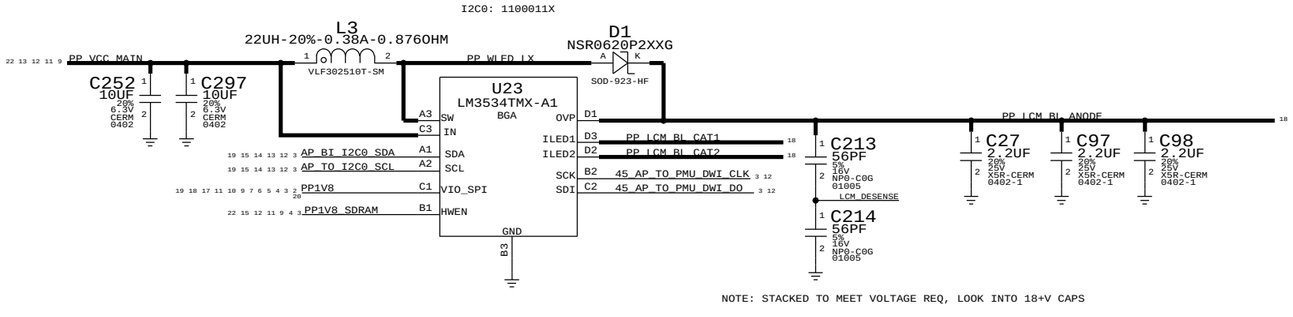

U7
D2013B28HGAHVCC2
BGA
(3 OF 3)
VSS_BUCK0AB
VSS_BUCK2
VSS_BUCK3
VSS_BUCK24
VSS_BUCK40
VSS_BUCK0BC
VSSA_BUCK2
VSSA_BUCK3
VSSA_BUCK40
VSS_WLED
VSS_LCM
VSS_REF
VSS_SW_CHG
VSS
AMUX VOLTAGE LIMIT IS APPROX. = VDD_REF = PP_VCC_MAIN
U7
D2013B28HGAHVCC2
BGA
(2 OF 3)
BUTTON_TO_AP_HOLD_KEY_BUFF_L
BUTTON_TO_AP_MENU_KEY_BUFF_L
BUTTON_TO_AP_RINGER_A
BUTTON_TO_AP_VOL_UP_L
BUTTON_TO_AP_VOL_DOWN_L
LCD_PWR_EN
TRISTAR_TO_PMU_USB_BRICKID_R
CHESTNUT_TO_PMU_ADCIN7
PMU_AMUX_AY
RADIO_TO_PMU_ADC_SMPS1_MSMC_1V05
RADIO_TO_PMU_ADC_SMPS3_MSME_1V8
TRISTAR_TO_PMU_MIKEYBUS_TEST_POS
TRISTAR_TO_PMU_MIKEYBUS_TEST_NEG
45_PMU_TO_WLAN_CLK32K
RADIO_TO_PMU_ADC_LDO6_RUIM_1V8
AP_TO_PMU_TEST_CLKOUT
RADIO_TO_PMU_ADC_LVS1
PMU_AMUX_BY
BB_TO_PMU_HOST_WAKE
BB_RST_PMU_R_L
TRISTAR_TO_AP_INT
45_PMU_TO_WLAN_CLK32K
AP_BI_BATTERY_SWI
WLAN_TO_PMU_HOST_WAKE
CODEC_TO_PMU_MIKEY_INT_L
PMU_TO_BT_REG_ON
BT_TO_PMU_HOST_WAKE
PMU_TO_WLAN_REG_ON
PMU_TO_BB_VBUS_DET
AP_TO_I2C0_SCL
AP_BI_I2C0_SDA
45_AP_TO_PMU_DWI_CLK
45_AP_TO_PMU_DWI_DO
45_AP_TO_PMU_DWI_DI
PMU_RESET_IN
RESET_1V8_L
PMU_TO_AP_IRQ_L
PMU_DWI_CLK
PMU_DWI_DI
PMU_DWI_DO
AMUX_A0
AMUX_A1
AMUX_A2
AMUX_A3
AMUX_A4
AMUX_A5
AMUX_A6
AMUX_A7
AMUX_AY
AMUX_B0
AMUX_B1
AMUX_B2
AMUX_B3
AMUX_B4
AMUX_B5
AMUX_B6
AMUX_B7
AMUX_BY
GPIO1
GPIO2
GPIO3
GPIO4
GPIO5
GPIO6
GPIO7
GPIO8
GPIO9
GPIO10
GPIO11
GPIO12
SCL
SDA
DWI_CK
DWI_DI
DWI_DO
RESET_IN
RESET*
IRQ*
1.8V --->
3.33V --->
BASEBAND --->
DRIVEN TO VCC_MAIN ----------->
ACCESS POINTS
R60
1.00K
5%
1/32W
MF
01005
PMU_TO_BB_RST_L
XW26
XW27
XW28
R65
200K
1%
1/20W
MF
201
R921
6.34K
1/32W
MF
1%
01005
TRISTAR_TO_PMU_USB_BRICKID
CHESTNUT_TO_PMU_ADCIN7
C323
0.1UF
10%
6.3V
CERM-X5R
0201
C325
1.0UF
20%
6.3V
X5R
0201-1
C326
0.1UF
10%
6.3V
CERM-X5R
0201
C343
0.01UF
10%
6.3V
X5R
01005
C327
0.01UF
10%
6.3V
X5R
01005
IREF
VREF
VDD_REF
VDD_RTC
BRICK_ID
ADC_IN7
ADC_REF
ACC_ID
DPHP
FW_DPHP_DET
ACC_DET
BUTTON1
BUTTON2
BUTTON3
KEEPACT
SHDN
LCM_LX
VBOOST_LCM
VLCM1
VLCM2
LCM2_EN
VLCM3
WLED_LX
VOUT_LED
WLED1
WLED2
E75_TO_PMU_ACC_DETECT_R
BUTTON_TO_AP_MENU_KEY_BUFF_L
BUTTON_TO_AP_HOLD_KEY_BUFF_L
BUTTON_TO_AP_RINGER_A
NOSTUFF
R487
0.00
0%
1/32W
MF
01005
R488
0.00
0%
1/32W
MF
01005
NOSTUFF
R68
220K
5%
1/32W
MF
01005
PP_VCC_MAIN
E75_TO_PMU_ACC_DETECT
KEEPACT
R66
1.00M
5%
1/32W
MF
01005
PP1V8_SDRAM
74LVC1G32
SOT891
U14
WDOG
FROM H5P
TRISTAR_TO_PMU_HOST_RESET
FROM TRISTAR
ACTIVE HIGH
R59
100K
5%
1/32W
MF
01005
C99
100PF
5%
10V
NP0-C0G
01005
I2C ADDRESS: 1110100X
GPIO1 PP1V8_SDRAM OUPUT '0'
GPIO2 INPUT, W/O PD
GPIO3 PP1V8_SDRAM OUPUT '0'
GPIO4 PP1V8_SDRAM OUPUT '0'
GPIO5 PP1V8_SDRAM OUPUT '0'
GPIO6 INPUT, W/ PU TO BATTERY PCM
GPIO7 INPUT, W/ PD TO PMU
GPIO8 INPUT, W/ PU TO PP1V8_SDRAM
GPIO9 PP1V8_SDRAM OUTPUT '0'
GPIO10 INPUT, W/ PD TO PMU
GPIO11 PP1V8_SDRAM OUTPUT '0'
GPIO12 VCC_MAIN OUPUT '0'
RESET_IN ACTIVE HIGH INPUT W/ INTERNAL 200K PD
RESET* OPEN DRAIN OUTPUT
IRQ* OPEN DRAIN OUTPUT

CHESTNUT, BACKLIGHT DRIVER

D404 DISPLAY PMU (INTERSIL CHESTNUT, 338S1168)
(TI CHESTNUT, 338S1172)



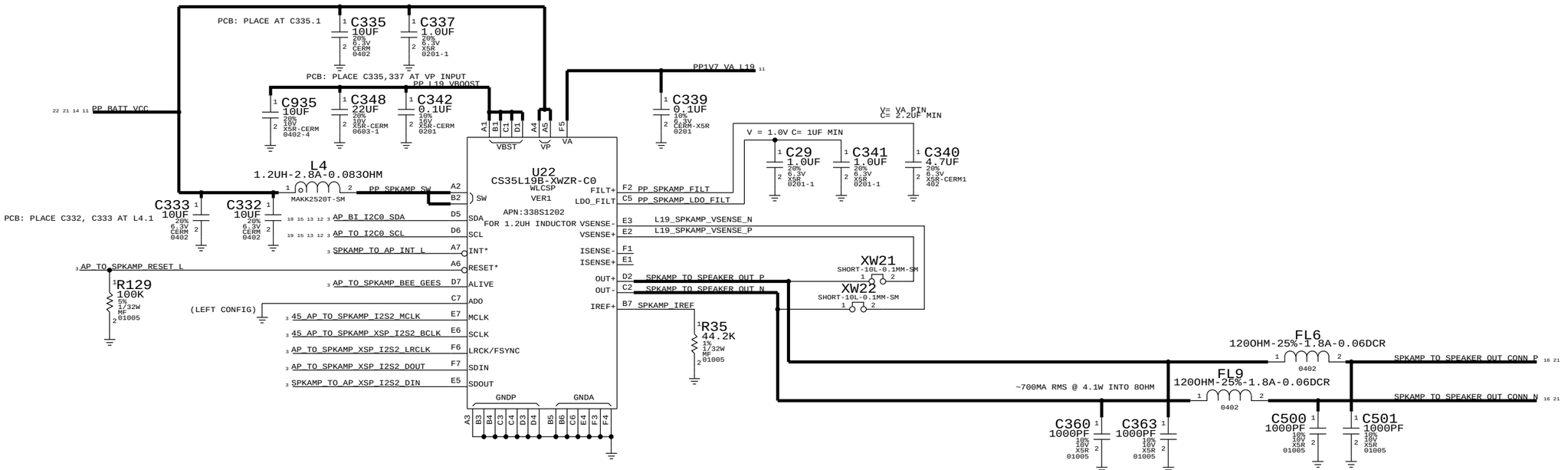
D404 BACKLIGHT DRIVER



SPEAKER AMP, LED DRIVER

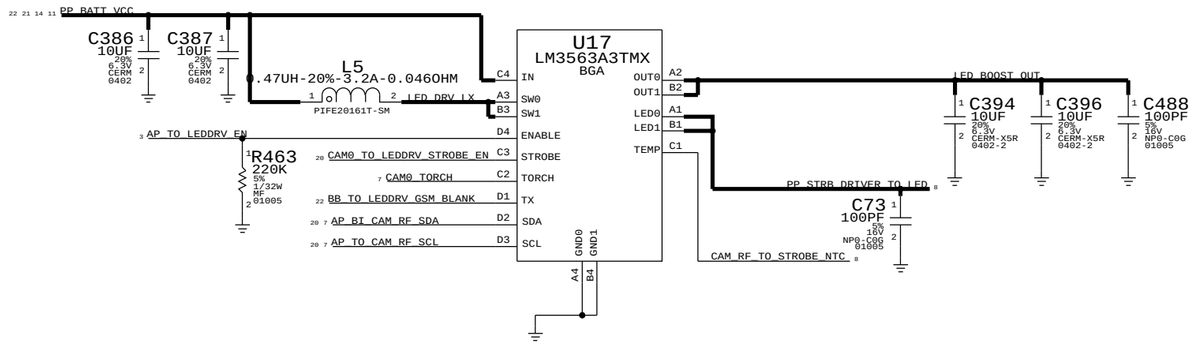
SPEAKER AMP L19

I2C ADDRESS: 1000000X



LED DRIVER

I2C ADDRESS: 1100011X



TRISTAR

I2C ADDRESS: 0011010X

11 PP3V0_TRISTAR

C38 1.0UF 20% 6.3V X5R 0201-1

C254 0.1UF 20% 6.3V X5R-CERM 01005

22 13 12 11 9 4 3 PP1V8_SDRAM

C39 0.01UF 10% 6.3V X5R 01005

PP3V0_ACC 11
ACC_PWR

12 TRISTAR_TO_PMU_MIKEYBUS_TEST_POS

NO_XNET_CONNECTION=TRUE

R83 100K 5% 1/32W MF 01005

XW78 SHORT-01005

9 90_CODEC_BI_TRISTAR_MIKEYBUS_P

XW82 SHORT-01005

9 90_CODEC_BI_TRISTAR_MIKEYBUS_N

R84 100K 5% 1/32W MF 01005

PLACEHOLDERS FOR INDUCTORS

12 TRISTAR_TO_PMU_MIKEYBUS_TEST_NEG

NO_XNET_CONNECTION=TRUE

90_CODEC_BI_TRISTAR_MIKEYBUS_DIG_P

90_CODEC_BI_TRISTAR_MIKEYBUS_DIG_N

BB DEBUG USB

22 90_TRISTAR_BI_BB_USB_P

22 90_TRISTAR_BI_BB_USB_N

BRICK_ID

12 TRISTAR_TO_PMU_USB_BRICKID

SOC USB

2 90_AP_BI_TRISTAR_USB0_P

2 90_AP_BI_TRISTAR_USB0_N

ACCESSORY UART

3 AP_TO_TRISTAR_ACC_UART2_TXD

3 TRISTAR_TO_AP_ACC_UART2_RXD

DEBUG UART

3 AP_TO_TRISTAR_DEBUG_UART6_TXD

3 TRISTAR_TO_AP_DEBUG_UART6_RXD

22 3 BB_TO_AP_UART1_RXD

22 3 AP_TO_BB_UART1_TXD

2 TRISTAR_TO_AP_JTAG_SWCLK

2 TRISTAR_BI_AP_JTAG_SWDIO

U2
CBTL1610A0UK
WLCSP

F3	VDD_1V8		
F4	VDD_3V0		
D5	ACC_PWR		
C3	DIG_DP	P_IN	F6
C4	DIG_DN	ACC1	C5
		ACC2	E5
A1	USB1_DP	DP1	A2
B1	USB1_DN	DN1	B2
C2	BRICK_ID	DP2	A4
A3	USB0_DP	DN2	B4
B3	USB0_DN		
E2	UART0_TX	CON_DET_L	E3
E1	UART0_RX	OVP_SW_EN*	D6
F2	UART1_TX	SWITCH_EN	E4
F1	UART1_RX	HOST_RESET	B6
D2	UART2_TX	SDA	D3
D1	UART2_RX	SCL	D4
A5	JTAG_CLK	INT	C6
B5	JTAG_DIO	BYPASS	E6
F5	DVSS		
C1	DVSS		
A6	DVSS		

PP5V0_USB_RPROT 16
PIN FOR HANDSHAKE

C304 1UF 10% 25V X5R 0402

PP ACC1_E75_TO_TRISTAR 16

PP ACC2_E75_TO_TRISTAR 16

90_TRISTAR_BI_E75_PAIR1_P 16 21

90_TRISTAR_BI_E75_PAIR1_N 16 21

90_TRISTAR_BI_E75_PAIR2_P 16 21

90_TRISTAR_BI_E75_PAIR2_N 16 21

E75_TO_PMU_ACC_DETECT 12 16

PP22 COMM-NSM SM

TRISTAR_TO_PMU_OVP_SW_EN_L 16

RESET_1V8_L 2 11 12 13 21 22

TRISTAR_TO_PMU_HOST_RESET 12

HOST_RESET ACTIVE HIGH AMBER HAS 200K INT PD

AP_BI_I2C0_SDA 3 12 13 14 19

AP_TO_I2C0_SCL 3 12 13 14 19

TRISTAR_TO_AP_INT 3 12

TRISTAR_BYPASS

R8401 100K 5% 1/32W MF 01005

NO_XNET_CONNECTION=TRUE

C338 1.0UF 20% 6.3V X5R 0201-1

C110 100PF 5% 10V NP0-C0G 01005 NOSTUFF

TO DO: ADD PPS TO SOC-SIDE USB

DOCKFLEX B2B (USB VBUS, MENU BTN, SPEAKER, HP, HP EXTMIC, NAVAJO, ANTENNA PAC/LAT SW CTRL, MIC1 (VOICE MIC), ACC DET/ID/PWR, E75 DIFFPAIRS)

MENU BUTTON

BUTTON_TO_AP_MENU_KEY_L
FL5 120-OHM-210MA 01005
C176 56PF 5% 6.3V NP0-C0G 01005

HPHONE: HS3/HS4

CODEC_TO_HPHONE_HS3
CODEC_TO_HPHONE_HS4
FL10 240-OHM-25%-0.20A-1.0DCR 01005
FL1 240-OHM-25%-0.20A-1.0DCR 01005
C5 27PF 5% 16V NP0-C0G 01005
C8 27PF 16V5% NP0-C0G 01005
DZ75 6.8V-68PF 01005
DZ76 6.8V-68PF 01005
CODEC_TO_HPHONE_HS3_CONN
CODEC_TO_HPHONE_HS4_CONN

MIC1 PRIMARY MIC

PP_CODEC_TO_MIC1_BIAS
FL49 120-OHM-210MA 01005
C215 1.0UF 20% 6.3V X5R 0201-1
NO_XNET_CONNECTION=TRUE
PP_CODEC_TO_MIC1_BIAS_CONN
C355 56PF 5% 6.3V NP0-C0G 01005
C359 56PF 5% 6.3V NP0-C0G 01005
XW45 SHORT-10L-0.1MM-SM
PCB: PUT XW AT J7.17
MIC1_TO_CODEC_N
MIC1_TO_CODEC_P

HPHONE: HS3/HS4 CTRL, HPDET

HPHONE_TO_CODEC_DET
R107 3.3K 5% 1/32W MF 01005
C242 56PF 5% 6.3V NP0-C0G 01005
AP_TO_HEADSET_HS3_CTRL
FL69 150OHM-25%-200MA-0.7DCR 01005
AP_TO_HEADSET_HS4_CTRL
FL68 150OHM-25%-200MA-0.7DCR 01005
AP_TO_HEADSET_HS3_CTRL_CONN
AP_TO_HEADSET_HS4_CTRL_CONN
DZ9 6.8V-100PF 01005
DZ10 6.8V-100PF 01005
R629 100K 5% 1/32W MF 01005 NOSTUFF
R630 100K 5% 1/32W MF 01005 NOSTUFF

ANTENNA: PAC VDD (2.65V)

FL495 150OHM-25%-200MA-0.7DCR 01005
PP_LDO14_2P65
PP_LDO14_2P65_CONN
C855 56PF 5% 6.3V NP0-C0G 01005

VBUS

Q2 CSD75202W15 CSP (2 OF 2)
Q2 CSD75202W15 CSP (1 OF 2)
PP5V0_USB_PROT
C153 1.0UF 20% 6.3V X5R-CERM 0201-1
REVERSE_GATE
R58 15.00K 1% 1/32W MF 01005
OVP_GATE
R73 100K 1% 1/20W MF 201
FROM TRISTAR TRISTAR_TO_PMU_OVP_SW_EN_L
TO TRISTAR PP5V0_USB_RPROT
R74 5.1K 5% 1/20W MF 201
C368 0.01UF 10% 25V X5R-CERM 0201
C119 0.01UF 10% 25V X5R-CERM 0201
C12 100PF 5% 16V NP0-C0G 01005
C13 100PF 5% 16V NP0-C0G 01005
USB_CONN_SNUB
PP5V0_USB_CONN

SPEAKER: SPEAKER LEADS VSENSE,

SPKAMP_TO_SPEAKER_OUT_CONN_P
SPKAMP_TO_SPEAKER_OUT_CONN_N

THIS ONE ON MLB ---> 516S1032 PLUG
516S1031 RCPT (USED ON FLEX)

J7 105847038102829 M-ST-SM

HPHONE_TO_CODEC_DET_CONN
CODEC_TO_HPHONE_L_CONN
CODEC_TO_HPHONE_HS3_REF_CONN
BUTTON_TO_AP_MENU_KEY_CONN_L
PP_LDO14_2P65_CONN
PP5V0_USB_CONN
AP_TO_HEADSET_HS4_CTRL_CONN
CODEC_TO_HPHONE_HS3_CONN
CODEC_TO_HPHONE_HS4_CONN
CODEC_TO_HPHONE_HS4_REF_CONN
CODEC_TO_HPHONE_R_CONN
BATTERY_NTC_CONN
90_TRISTAR_BI_E75_PAIR1_CONN_P
90_TRISTAR_BI_E75_PAIR1_CONN_N
90_TRISTAR_BI_E75_PAIR2_CONN_N
90_TRISTAR_BI_E75_PAIR2_CONN_P
E75_TO_PMU_ACC_DETECT_CONN
PP_E75_TO_TRISTAR_ACC1_CONN
PP_E75_TO_TRISTAR_ACC2_CONN

C879 56PF 5% 16V NP0-C0G 01005
C878 56PF 5% 16V NP0-C0G 01005
C913 100PF 5% 16V NP0-C0G 01005
C914 100PF 5% 16V NP0-C0G 01005

FL2302 120-OHM-210MA 01005
BATTERY_TO_PMU_NTC
C2307 56PF 5% 16V NP0-C0G 01005

BATTERY NTC

L7 10-OHM-1.1A 01005
DZ6 6.8V-100PF 01005
CODEC_TO_HPHONE_L
CODEC_TO_HPHONE_R
L6 10-OHM-1.1A 01005
DZ5 6.8V-100PF 01005
PER STAN, REPLACING L7 AND L6 WITH 01005 PARTS

HPHONE AUDIO

BB_TO_LAT_SW2_CTL
BB_TO_LAT_SW1_CTL
C188 56PF 5% 6.3V NP0-C0G 01005
C206 56PF 5% 6.3V NP0-C0G 01005

ANTENNA: LAT SW CTRL

FL16 120-OHM-210MA 01005
FL17 120-OHM-210MA 01005
CODEC_TO_HPHONE_HS3_REF_CONN
CODEC_TO_HPHONE_HS4_REF_CONN
CODEC_TO_HPHONE_HS3_REF
CODEC_TO_HPHONE_HS4_REF
DZ11 6.8V-100PF 01005
DZ12 6.8V-100PF 01005

HS3/HS4 REF EXTMIC

C70 56PF 5% 6.3V NP0-C0G 01005
C71 56PF 5% 6.3V NP0-C0G 01005
PCB: PLACE NEAR J7 (DESENSE CAPS)
C240 27PF 5% 16V NP0-C0G 01005

XW85 SHORT-0201 90_TRISTAR_BI_E75_PAIR1_P
XW86 SHORT-0201 90_TRISTAR_BI_E75_PAIR1_N
XW87 SHORT-0201 90_TRISTAR_BI_E75_PAIR2_N
XW88 SHORT-0201 90_TRISTAR_BI_E75_PAIR2_P

E75 DIFFPAIRS

R130 1.00K 5% 1/32W MF 01005
E75_TO_PMU_ACC_DETECT
FL60 10-OHM-750MA 01005-1
PP_E75_TO_TRISTAR_ACC1
FL53 10-OHM-750MA 01005-1
PP_E75_TO_TRISTAR_ACC2

ACCESSORY: DETECT, ID, PWR

D404 (B2B,DRIVER ICS)

SAGE2 C0

343S0628: B0 APN FOR PROTO1
343S0645: C0 APN FOR EVT1

CUMULUS C1

343S0638

(TURN ON LATER THAN PP1V8_GRAPE)
(TURN OFF SAME TIME AS PP1V8_GRAPE)

PP5V1_GRAPE_VDDH → C369 10UF 20% 16V X5R-CERM 0402-1

PP_CUMULUS_VDDCORE → C370 4.7UF 20% 6.3V X6S-CERM1 402

PP_CUMULUS_VDDANA → C371 4.7UF 20% 6.3V X6S-CERM1 402

XW36 SM: PP1V8_CUMULUS_VDDLDO → PP1V8_GRAPE

C372 1.0UF 20% 6.3V X5R 0201-1

45_PROX_TO_CUMULUS_RX → C79 1000PF 10% 6.3V X5R-CERM 01005

45_PROX_TO_CUMULUS_RX_FILT → R26 22.1K 1% 1/32W MF 01005

C130 27PF 5% 16V NP0-C0G 01005

CUMULUS_IN IS SENSITIVE

SAGE_TO_CUMULUS_IN<2>	B9	IN0_0
SAGE_TO_CUMULUS_IN<1>	B8	IN1_0
SAGE_TO_CUMULUS_IN<6>	A9	IN2_0
SAGE_TO_CUMULUS_IN<7>	B7	IN3_0
SAGE_TO_CUMULUS_IN<4>	B6	IN4_0
SAGE_TO_CUMULUS_IN<8>	A8	IN5_0
SAGE_TO_CUMULUS_IN<3>	B5	IN6_0
SAGE_TO_CUMULUS_IN<5>	B4	IN7_0
SAGE_TO_CUMULUS_IN<9>	A7	IN8_0
SAGE_TO_CUMULUS_IN<0>	B3	IN9_0
SAGE_TO_CUMULUS_IN<14>	A6	IN10_0
SAGE_TO_CUMULUS_IN<10>	A3	IN11_0
SAGE_TO_CUMULUS_IN<13>	A5	IN12_0
SAGE_TO_CUMULUS_IN<11>	A4	IN13_0
SAGE_TO_CUMULUS_IN<12>	B2	IN14_0
45_PROX_TO_CUMULUS_RX_IN	A2	IN14_1

U12 CUMULUS-C1 WLBGA

VDDANA B1, VDDCORE C1, VDDH C8, VDDIO C5 F4, VDDLDO A1

VSTM_0	E9	CUMULUS_TO_SAGE_VSTM_OUT<2>
VSTM_1	E5	CUMULUS_TO_SAGE_VSTM_OUT<5>
VSTM_2	F7	CUMULUS_TO_SAGE_VSTM_OUT<16>
VSTM_3	E6	CUMULUS_TO_SAGE_VSTM_OUT<18>
VSTM_4	E7	CUMULUS_TO_SAGE_VSTM_OUT<17>
VSTM_5	F8	CUMULUS_TO_SAGE_VSTM_OUT<11>
VSTM_6	G9	CUMULUS_TO_SAGE_VSTM_OUT<13>
VSTM_7	D6	CUMULUS_TO_SAGE_VSTM_OUT<7>
VSTM_8	D7	CUMULUS_TO_SAGE_VSTM_OUT<3>
VSTM_9	D8	CUMULUS_TO_SAGE_VSTM_OUT<9>
VSTM_10	F9	CUMULUS_TO_SAGE_VSTM_OUT<10>
VSTM_11	D5	CUMULUS_TO_SAGE_VSTM_OUT<1>
VSTM_12	F6	CUMULUS_TO_SAGE_VSTM_OUT<4>
VSTM_13	F5	CUMULUS_TO_SAGE_VSTM_OUT<8>
VSTM_14	G4	CUMULUS_TO_SAGE_VSTM_OUT<12>
VSTM_15	E8	CUMULUS_TO_SAGE_VSTM_OUT<0>
VSTM_16	G8	CUMULUS_TO_SAGE_VSTM_OUT<15>
VSTM_17	G7	CUMULUS_TO_SAGE_VSTM_OUT<19>
VSTM_18	G6	CUMULUS_TO_SAGE_VSTM_OUT<14>
VSTM_19	G5	CUMULUS_TO_SAGE_VSTM_OUT<6>

THESE ARE ROUTED TOGETHER
SPECIAL - CANNOT SWAP
SPECIAL - CANNOT SWAP

R86 220K 5% 1/32W MF 01005

GPIO_1/CK	G1	NOTE: LCM_TO_AP_HIFA_BSYNC_BUFF
GPIO_2/SD	D4	CUMULUS_TO_SAGE_BOOST_EN
GPIO_3	F2	U12_GPIO_3 → PP9
GPIO_4	F3	CUMULUS_TO_SAGE_GCM_SEL
TM_ACS*	C2	CUMULUS_TO_PROX_RX_EN_1V8
TM_OVR	G3	

R79 100K 5% 1/32W MF 01005 → PP1V8_GRAPE

GND: C7, C9, G2

PP7 P4MM-NSM SM
PP8 P4MM-NSM SM

AP_TO_TOUCH_SPI1_CS_L	E4	H_CS*
TOUCH_TO_AP_INT_L	F1	H_INT*
AP_TO_TOUCH_SPI1_CLK	D3	H_SCLK
AP_TO_TOUCH_SPI1_MOSI	D2	H_SDI
TOUCH_TO_AP_SPI1_MISO	E1	H_SDO

R136 10.2 1% 1/32W MF 01005: TOUCH_TO_AP_SPI1_MISO_R

	C4	JTAG_TCK
	C3	JTAG_TDI
	E2	JTAG_TDO
PP1V8_CUMULUS_VDDLDO	C6	JTAG_TMS
CUMULUS_TO_PROX_TX_EN_1V8_L	E3	BCFG_RTCK
	D1	CLKIN/RESET*
AP_TO_TOUCH_GRAPE_RESET_L	D9	RSTOVR*

PP765 P4MM-NSM SM
PP766 P4MM-NSM SM
PP767 P4MM-NSM SM

45_AP_TO_TOUCH_CLK32K_RESET_L
(ALSO A RESET IF CLOCK STOPS)

PP12 P4MM-NSM SM

J4 504459-1210-AA21-P042VA1 M-ST-SM-COMBO

ON MLB ---> 516S1061 PLUG
516S1060 RCPT (ON FLEX)

TOUCH B2B

C5	TOUCH_TO_SAGE_SENSE_IN<5>	1	2	TOUCH_TO_SAGE_SENSE_IN<6>	C6
C4	TOUCH_TO_SAGE_SENSE_IN<4>	3	4	TOUCH_TO_SAGE_SENSE_IN<13>	GS3
C0	TOUCH_TO_SAGE_SENSE_IN<0>	5	6	TOUCH_TO_SAGE_SENSE_IN<7>	C7
C3	TOUCH_TO_SAGE_SENSE_IN<3>	7	8	SAGE_TO_TOUCH_VCPH_REF_CONN	VGH_REF
GS1	TOUCH_TO_SAGE_SENSE_IN<11>	9	10	SAGE_TO_TOUCH_VCPL_REF_CONN	VGL_REF
C2	TOUCH_TO_SAGE_SENSE_IN<2>	11	12	TOUCH_TO_SAGE_VCM_IN_CONN	VCOM
C1	TOUCH_TO_SAGE_SENSE_IN<1>	13	14	TOUCH_TO_SAGE_SENSE_IN<12>	GS2
GS0	TOUCH_TO_SAGE_SENSE_IN<10>	15	16	TOUCH_TO_SAGE_SENSE_IN<9>	C9
VGL	PP_SAGE_TO_TOUCH_VCPL_CONN	17	18	TOUCH_TO_SAGE_SENSE_IN<8>	C8
VGH	PP_SAGE_TO_TOUCH_VCPH_CONN	19	20	TOUCH_TO_SAGE_SENSE_IN<14>	GS4
R10	SAGE_TO_TOUCH_VSTM_OUT<10>	21	22		
R7	SAGE_TO_TOUCH_VSTM_OUT<7>	23	24	SAGE_TO_TOUCH_VSTM_OUT<17>	R17
R1	SAGE_TO_TOUCH_VSTM_OUT<1>	25	26	SAGE_TO_TOUCH_VSTM_OUT<16>	R16
R5	SAGE_TO_TOUCH_VSTM_OUT<5>	27	28	SAGE_TO_TOUCH_VSTM_OUT<15>	R15
R6	SAGE_TO_TOUCH_VSTM_OUT<6>	29	30	SAGE_TO_TOUCH_VSTM_OUT<14>	R14
R8	SAGE_TO_TOUCH_VSTM_OUT<8>	31	32	SAGE_TO_TOUCH_VSTM_OUT<13>	R13
R9	SAGE_TO_TOUCH_VSTM_OUT<9>	33	34	SAGE_TO_TOUCH_VSTM_OUT<12>	R12
R4	SAGE_TO_TOUCH_VSTM_OUT<4>	35	36	SAGE_TO_TOUCH_VSTM_OUT<11>	R11
R3	SAGE_TO_TOUCH_VSTM_OUT<3>	37	38	SAGE_TO_TOUCH_VSTM_OUT<0>	R0_RIGHT
R2	SAGE_TO_TOUCH_VSTM_OUT<2>	39	40	SAGE_TO_TOUCH_VSTM_OUT<18>	R18
R0_LEFT	SAGE_TO_TOUCH_VSTM_OUT<0>	41	42	SAGE_TO_TOUCH_VSTM_OUT<19>	R19

47, 43, 44, 45, 46, 48

NO_XNET_CONNECTION=TRUE
XW7 SM: SAGE_TO_TOUCH_VCPH_REF_CONN 1 2 SAGE_TO_TOUCH_VCPH_REF
NO_XNET_CONNECTION=TRUE
XW13 SM: SAGE_TO_TOUCH_VCPL_REF_CONN 1 2 SAGE_TO_TOUCH_VCPL_REF
NO_XNET_CONNECTION=TRUE
XW18 SM: TOUCH_TO_SAGE_VCM_IN_CONN 1 2 TOUCH_TO_SAGE_VCM_IN
NO_XNET_CONNECTION=TRUE
XW19 SM: PP_SAGE_TO_TOUCH_VCPL_CONN 1 2 PP_SAGE_TO_TOUCH_VCPL
NO_XNET_CONNECTION=TRUE
XW23 SM: PP_SAGE_TO_TOUCH_VCPH_CONN 1 2 PP_SAGE_TO_TOUCH_VCPH

PP5V5_SAGE_AVDDN → R10 4.7 1% 1/32W MF 01005 → PN5V7_SAGE_AVDDN

TBD R10 MAYBE 4.7 OHMS

C381 0.1UF 10% 16V X5R-CERM 0201
C306 0.1UF 10% 16V X5R-CERM 0201
C315 1UF 10% 16V X6S-CERM 0402
C324 1UF 10% 16V X6S-CERM 0402
C331 1UF 10% 16V X6S-CERM 0402
C365 0.1UF 10% 25V X5R-CERM 0201

PP_SAGE_TO_TOUCH_VCPL 13.5V → C170 0.1UF 10% 16V X5R-CERM 0201

PN5V7_SAGE_AVDDN_FILT

C59 10UF 20% 10V X5R-CERM 0402-1
C149 10UF 20% 10V X5R-CERM 0402-1
DZ4 GDZT2R6.2B GDZ-0201 (TO CLAMP THE NEGATIVE RAIL)

PP5V7_SAGE_AVDDH 5.45-5.98V → C156 10UF 20% 10V X5R-CERM 0402-4

PP_SAGE_VCPL_F 3.5V → C163 0.1UF 10% 6.3V CERM-X5R 0201

PP1V8 → C165 0.1UF 20% 6.3V X5R-CERM 01005

SAGE PANEL IN IS SENSITIVE
KEEP THESE NETS FROM XTALK

TOUCH_TO_SAGE_SENSE_IN<4>	E4	SNS_IN0	
TOUCH_TO_SAGE_SENSE_IN<3>	D4	SNS_IN1	
TOUCH_TO_SAGE_SENSE_IN<5>	C4	SNS_IN2	
TOUCH_TO_SAGE_SENSE_IN<0>	B4	SNS_IN3	
TOUCH_TO_SAGE_SENSE_IN<12>	A4	SNS_IN4	
TOUCH_TO_SAGE_SENSE_IN<7>	A6	SNS_IN5	
TOUCH_TO_SAGE_SENSE_IN<10>	B6	SNS_IN6	
TOUCH_TO_SAGE_SENSE_IN<1>	C6	SNS_IN7	
TOUCH_TO_SAGE_SENSE_IN<11>	D6	SNS_IN8	
TOUCH_TO_SAGE_SENSE_IN<2>	E6	SNS_IN9	
TOUCH_TO_SAGE_SENSE_IN<13>	E8	SNS_IN10	
TOUCH_TO_SAGE_SENSE_IN<14>	D8	SNS_IN11	
TOUCH_TO_SAGE_SENSE_IN<8>	C8	SNS_IN12	
TOUCH_TO_SAGE_SENSE_IN<9>	B8	SNS_IN13	
TOUCH_TO_SAGE_SENSE_IN<6>	A8	SNS_IN14	

CUMULUS_TO_SAGE_VSTM_OUT<8>	G1	DRV_IN0	
CUMULUS_TO_SAGE_VSTM_OUT<6>	H1	DRV_IN1	
CUMULUS_TO_SAGE_VSTM_OUT<12>	J1	DRV_IN2	
CUMULUS_TO_SAGE_VSTM_OUT<1>	K1	DRV_IN3	
CUMULUS_TO_SAGE_VSTM_OUT<7>	L1	DRV_IN4	
CUMULUS_TO_SAGE_VSTM_OUT<15>	G2	DRV_IN5	
CUMULUS_TO_SAGE_VSTM_OUT<14>	H2	DRV_IN6	
CUMULUS_TO_SAGE_VSTM_OUT<18>	J2	DRV_IN7	
CUMULUS_TO_SAGE_VSTM_OUT<5>	K2	DRV_IN8	
	L2	DRV_IN9	
	L3	DRV_IN10	
CUMULUS_TO_SAGE_VSTM_OUT<4>	K3	DRV_IN11	
CUMULUS_TO_SAGE_VSTM_OUT<19>	J3	DRV_IN12	
CUMULUS_TO_SAGE_VSTM_OUT<13>	H3	DRV_IN13	
CUMULUS_TO_SAGE_VSTM_OUT<16>	G3	DRV_IN14	
CUMULUS_TO_SAGE_VSTM_OUT<3>	L4	DRV_IN15	
CUMULUS_TO_SAGE_VSTM_OUT<2>	K4	DRV_IN16	
CUMULUS_TO_SAGE_VSTM_OUT<0>	J4	DRV_IN17	
CUMULUS_TO_SAGE_VSTM_OUT<11>	H4	DRV_IN18	
CUMULUS_TO_SAGE_VSTM_OUT<17>	G4	DRV_IN19	

U15 SAGE2-C06 CSP

SAGE_VBIAS	D3	VBIAS	
	A2	VCPH_REF/EN	
	F2	VCPL_REF/EN	
	B1	VBST_OUTH	
	E1	VBST_OUTL	
	C1	L_X	
	D1	L_Y	

CUMULUS_IN IS SENSITIVE
KEEP THESE NETS FROM XTALK

SNS_OUT0	E5	SAGE_TO_CUMULUS_IN<4>	
SNS_OUT1	D5	SAGE_TO_CUMULUS_IN<3>	
SNS_OUT2	C5	SAGE_TO_CUMULUS_IN<5>	
SNS_OUT3	B5	SAGE_TO_CUMULUS_IN<0>	
SNS_OUT4	A5	SAGE_TO_CUMULUS_IN<12>	
SNS_OUT5	A7	SAGE_TO_CUMULUS_IN<7>	
SNS_OUT6	B7	SAGE_TO_CUMULUS_IN<10>	
SNS_OUT7	C7	SAGE_TO_CUMULUS_IN<1>	
SNS_OUT8	D7	SAGE_TO_CUMULUS_IN<11>	
SNS_OUT9	E7	SAGE_TO_CUMULUS_IN<2>	
SNS_OUT10	E9	SAGE_TO_CUMULUS_IN<13>	
SNS_OUT11	D9	SAGE_TO_CUMULUS_IN<14>	
SNS_OUT12	C9	SAGE_TO_CUMULUS_IN<8>	
SNS_OUT13	B9	SAGE_TO_CUMULUS_IN<9>	
SNS_OUT14	A9	SAGE_TO_CUMULUS_IN<6>	

DRV_OUT0	G6	SAGE_TO_TOUCH_VSTM_OUT<8>	
DRV_OUT1	H6	SAGE_TO_TOUCH_VSTM_OUT<6>	
DRV_OUT2	J6	SAGE_TO_TOUCH_VSTM_OUT<12>	
DRV_OUT3	K6	SAGE_TO_TOUCH_VSTM_OUT<1>	
DRV_OUT4	L6	SAGE_TO_TOUCH_VSTM_OUT<7>	
DRV_OUT5	G7	SAGE_TO_TOUCH_VSTM_OUT<15>	
DRV_OUT6	H7	SAGE_TO_TOUCH_VSTM_OUT<14>	
DRV_OUT7	J7	SAGE_TO_TOUCH_VSTM_OUT<18>	
DRV_OUT8	K7	SAGE_TO_TOUCH_VSTM_OUT<5>	
DRV_OUT9	L7	SAGE_TO_TOUCH_VSTM_OUT<9>	
DRV_OUT10	L8	SAGE_TO_TOUCH_VSTM_OUT<10>	
DRV_OUT11	K8	SAGE_TO_TOUCH_VSTM_OUT<4>	
DRV_OUT12	J8	SAGE_TO_TOUCH_VSTM_OUT<19>	
DRV_OUT13	H8	SAGE_TO_TOUCH_VSTM_OUT<13>	
DRV_OUT14	G8	SAGE_TO_TOUCH_VSTM_OUT<16>	
DRV_OUT15	L9	SAGE_TO_TOUCH_VSTM_OUT<3>	
DRV_OUT16	K9	SAGE_TO_TOUCH_VSTM_OUT<2>	
DRV_OUT17	J9	SAGE_TO_TOUCH_VSTM_OUT<0>	
DRV_OUT18	H9	SAGE_TO_TOUCH_VSTM_OUT<11>	
DRV_OUT19	G9	SAGE_TO_TOUCH_VSTM_OUT<17>	

BSYNC	K5	LCM_TO_AP_HIFA_BSYNC	
GCM_TEST	F9	CUMULUS_TO_SAGE_GCM_SEL	
GO	F7		
VCM_IN	J5	TOUCH_TO_SAGE_VCM_IN	
I2C_SCL	F5		
I2C_SDA	G5		
BOOST_EN	B2	CUMULUS_TO_SAGE_BOOST_EN	

PP11 P4MM-NSM SM
PP18 P4MM-NSM SM

AGND1	B3	VCPH	A1
AGND2	C4	VCPL	F1
AGND3	F4	VCPL_F	E2
AGND4	F6	VDDIO	C3
AGND5	E3	AVDDH1	D2
AGND6	L5	AVDDH2	A3
		AVDDH3	F3
		AVDDH4	F5
		AVDDL1	H5

C2

SAGE_VBIAS → C150 0.01UF 10% 6.3V X5R 01005
C147 0.01UF 10% 6.3V X5R 01005
C137 0.1UF 10% 6.3V CERM-X5R 0201

PP_SAGE_VBST_OUTH → C321 0.33UF 20% 16V TANT 0402
C328 1000PF 10% 25V X7R-CERM 0201
C349 1000PF 10% 25V X7R-CERM 0201

PP5V7_SAGE_AVDDH

PP_SAGE_VBST_OUTL → PP_SAGE_LX → PP_SAGE_LY → L21 10UH-0.32A-1.56OHM PSB121010T-SM

0603-LLP C320 1UF 20% 25V TANT
C346 1000PF 10% 25V X7R-CERM 0201
C364 1000PF 10% 25V X7R-CERM 0201

PP1V8_GRAPE → R2 100K 5% 1/32W MF 01005

U5 74AUP2G3404GN SOT1115 (VCC, GND)

LCM_TO_AP_HIFA_BSYNC_BUFF	6	1Y	1A	1	LCM_TO_AP_HIFA_BSYNC
CUMULUS_TO_PROX_TX_EN_BUFF	4	2Y	2A	3	CUMULUS_TO_PROX_TX_EN_1V8_L

R36 100K 5% 1/32W MF 01005

LCM B2B

LCM CONNECTOR

THIS ONE ON MLB ---> 516S1066 PLUG
516S1065 RCPT (FLEX)

XW83
SHORT-01005

J5
AA22LB-P
M-ST-SM

L2
90-OHM-50MA
TCM0605-1

L9
90-OHM-50MA
TCM0605-1

L8
90-OHM-50MA
TCM0605-1

L10
90-OHM-50MA
TCM0605-1

L1
90-OHM-50MA
TCM0605-1

FL25
120-OHM-210MA
01005

FL18
80-OHM-0.2A-0.4-OHM
0201-2
NO_XNET_CONNECTION=TRUE

FL26
80-OHM-0.2A-0.4-OHM
0201-2

FL27
120-OHM-210MA
01005

FL61
120-OHM-210MA
01005

FL35
0201-2
240-OHM-0.2A-0.8-OHM

FL24
0201-2
240-OHM-0.2A-0.8-OHM

FL36
0201-2
240-OHM-0.2A-0.8-OHM

FL34
120-OHM-210MA
01005

C610 56PF 5% 16V NP0-C0G 01005
C42 56PF 5% 6.3V NP0-C0G 01005
C46 0.1UF 10% 6.3V CERM-X5R 0201
C30 56PF 5% 16V NP0-C0G 01005
C43 4.7UF 20% 6.3V X5R 402
C49 4.7UF 20% 6.3V X5R 402
C40 56PF 5% 6.3V NP0-C0G 01005
C24 56PF 5% 6.3V NP0-C0G 01005
C19 56PF 5% 6.3V NP0-C0G 01005
C41 56PF 5% 6.3V NP0-C0G 01005
C10 56PF 5% 16V NP0-C0G 01005
C15 56PF 5% 16V NP0-C0G 01005
C14 56PF 5% 16V NP0-C0G 01005
C18 56PF 5% 16V NP0-C0G 01005

R971 100K 1% 1/32W MF 01005 BOMOPTION=NOSTUFF
R4 1.00K 5% 1/32W MF 01005 NOSTUFF
R32 100K 5% 1/32W MF 01005
R31 100K 1% 1/32W MF 01005

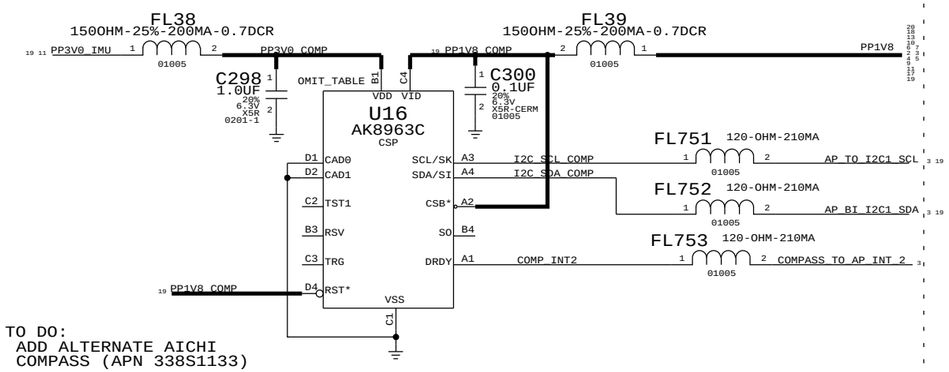
PP_SAGE_TO_TOUCH_VCPL
PP_SAGE_TO_LCM_VCPL_CONN
90_AP_TO_LCM_MIPI_DATA0_P
90_AP_TO_LCM_MIPI_DATA0_N
90_AP_TO_LCM_MIPI_DATA1_P
90_AP_TO_LCM_MIPI_DATA1_N
90_AP_TO_LCM_MIPI_CLK_P
90_AP_TO_LCM_MIPI_CLK_N
90_AP_TO_LCM_MIPI_DATA2_P
90_AP_TO_LCM_MIPI_DATA2_N
90_AP_TO_LCM_MIPI_DATA3_N
90_AP_TO_LCM_MIPI_DATA3_P
90_LCM_MIPI_DATA0_CONN_P
90_LCM_MIPI_DATA0_CONN_N
90_LCM_MIPI_DATA1_CONN_P
90_LCM_MIPI_DATA1_CONN_N
90_LCM_MIPI_CLK_CONN_P
90_LCM_MIPI_CLK_CONN_N
90_LCM_MIPI_DATA2_CONN_P
90_LCM_MIPI_DATA2_CONN_N
90_LCM_MIPI_DATA3_CONN_N
90_LCM_MIPI_DATA3_CONN_P
PN5V7_LCM_AVDDN_CONN
PN5V7_LCD_AVDDH_CONN
PP1V8_LCM_CONN
LCD_PWR_EN_CONN
LCD_RESET_L_CONN
LCD_HIFA_BSYNC_CONN
LCD_PANIC_L_CONN
LCD_PIFA
LCD_BL_CA_CONN
LCD_BL_CC1_CONN
LCD_BL_CC2_CONN
LCD_DESENSE_CONN
PN5V7_SAGE_AVDDN
PP1V8
PP5V7_TO_LCD_AVDDH
LCD_PWR_EN
LCM_TO_AP_PIFA
LCM_TO_AP_HIFA_BSYNC
AP_TO_LCM_RESET_L
PP_LCM_BL_CAT2
PP_LCM_BL_CAT1
PP_LCM_BL_ANODE

SENSORS

THIS PART OUTSIDE OF SHIELD

COMPASS

COMPASS DEVICE: 338S1014
COMPASS INTERPOSER: 998-5120

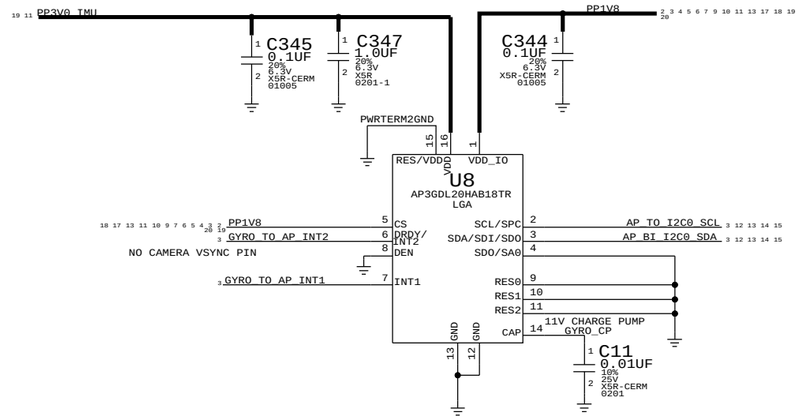


TO DO:
ADD ALTERNATE AICHI
COMPASS (APN 338S1133)

THESE PARTS INSIDE OF SHIELD

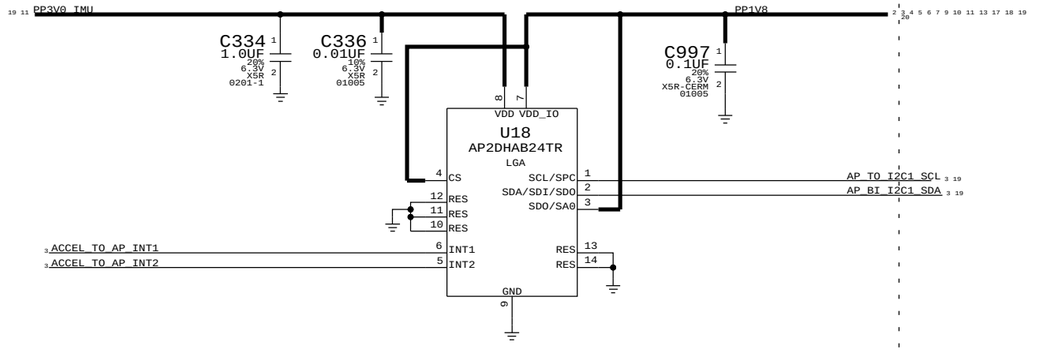
GYRO

AP3GDL20HAB, APN 338S1192



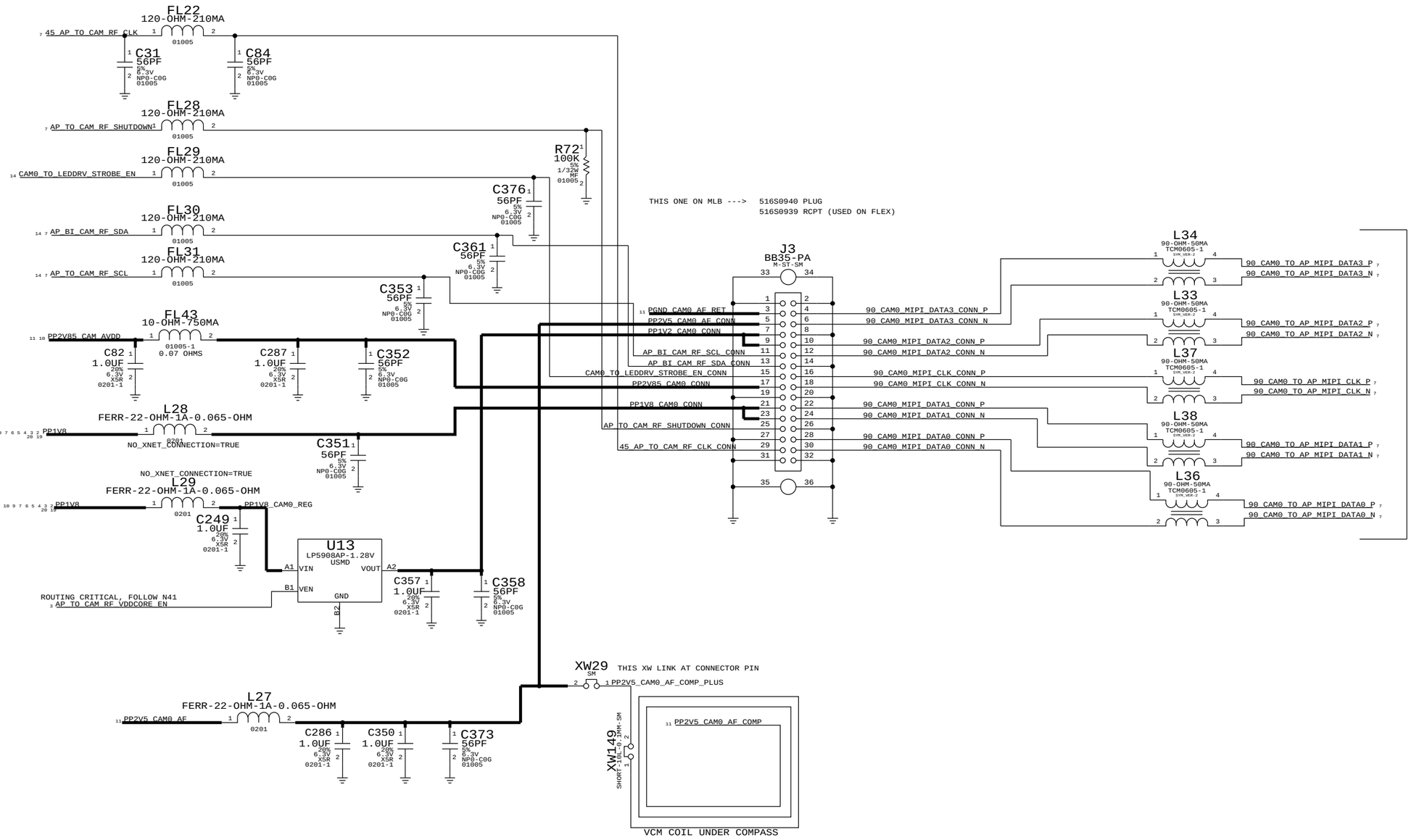
ACCELEROMETER

AP2DHAB, APN 338S1191



TO DO: VERIFY CONNECTIONS ON ACCEL (CS, SDO PINS)

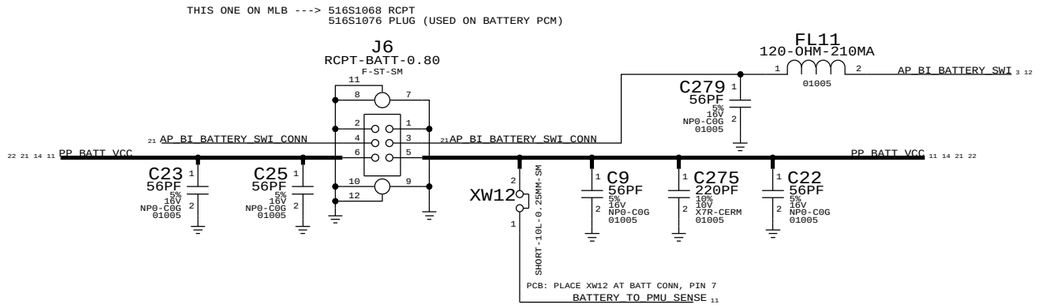
CAM0: MAIN CAMERA CONNECTOR



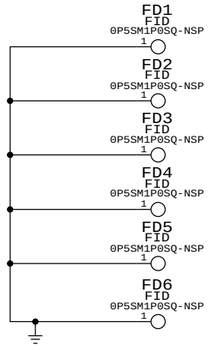
CAM0:
4-LANE MIPI

BATT CONN, TPS, STANDOFFS/SHIELDS/FIDUCIALS

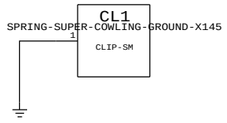
BATTERY CONN



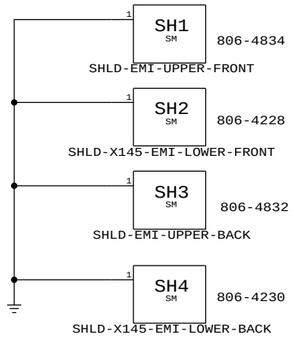
FIDUCIALS



COWLING UPPER LEFT



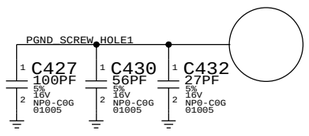
SHIELDS



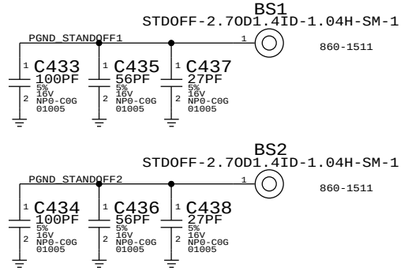
AC COUPLED SCREW HOLES + STANDOFFS

(ON NORTH END OF SINGLE_BRD, TO MITIGATE COMPASS RETURN CURRENTS)

SCREW HOLES



STANDOFFS



TESTPOINTS

POWER TP

PP5V0_USB_CONN → TP1	VBUS
TP2	POWER GROUND
PP_BATT_VCC → TP3	VBATT
TP11	VBATT GROUND
TP34	POWER GROUND
PP_BATT_VCC → TP4	VBATT
PP_BATT_VCC → TP40	VBATT
PP_BATT_VCC → TP50	VBATT
BATTERY_TO_PMU_NTC → TP5	BATTERY NTC

SUPER TP

PMU_AMUX_AY → TP6	ANALOG MUX A OUTPUT
PMU_AMUX_BY → TP7	ANALOG MUX B OUTPUT

RESET

RESET_1V8_L → TP8	H6P & BB RESET

DFU

FORCE_DFU → TP9	FORCE DFU

SPKAMP OUTPUT TP

SPKAMP_TO_SPEAKER_OUT_CONN_P → TP91	
SPKAMP_TO_SPEAKER_OUT_CONN_N → TP92	

E75 - USB/UART/ID/POWER

90_TRISTAR_BI_E75_PAIR1_P → TP21	
90_TRISTAR_BI_E75_PAIR1_N → TP22	
90_TRISTAR_BI_E75_PAIR2_P → TP23	
90_TRISTAR_BI_E75_PAIR2_N → TP24	
PP_E75_TO_TRISTAR_ACC1_CONN → TP26	ACCESSORY ID AND POWER
PP_E75_TO_TRISTAR_ACC2_CONN → TP27	
TP25	POWER GROUND
TP32	POWER GROUND
E75_TO_PMU_ACC_DETECT_CONN → TP10	FOR DIAGS

MIC AUDIO

MIC1_TO_CODEC_P → TP15	MIC1 POSITIVE
MIC2_TO_CODEC_P → TP16	MIC2 POSITIVE
MIC3_TO_CODEC_CONN_P → TP17	MIC3 POSITIVE

DRIVE MIC WRT NEAREST GROUND TEST POINT

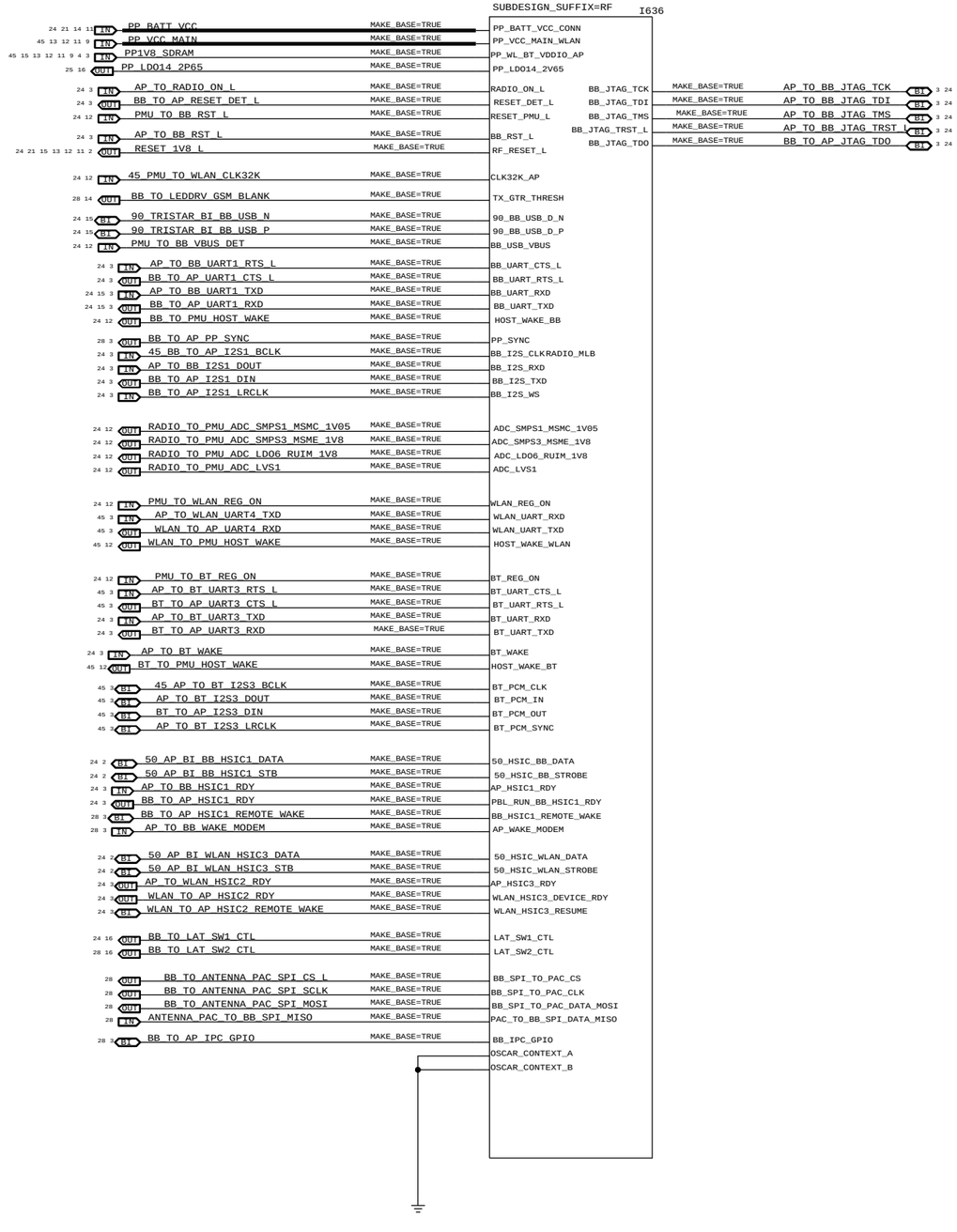
CODEC_TO_RCVR_TP_P → TP65	RCVR POSITIVE
CODEC_TO_RCVR_TP_N → TP66	RCVR NEGATIVE

LCM BACKLIGHT

LCD_BL_CC2_CONN → TP18	LCD BACKLIGHT SINK1
LCD_BL_CC1_CONN → TP19	LCD BACKLIGHT SINK2
LCD_BL_CA_CONN → TP20	LCD BACKLIGHT SOURCE

RADIO_MLB HIERARCHICAL SYMBOL

AP/RADIO INTERFACE



1. ALL RESISTANCE VALUES ARE IN OHMS, 0.1 WATT +/- 5%.
2. ALL CAPACITANCE VALUES ARE IN MICROFARADS.
3. ALL CRYSTALS & OSCILLATOR VALUES ARE IN HERTZ.

REV	ECN	DESCRIPTION OF REVISION	CK APPD / DATE
3	0001890418	ENGINEERING RELEASED	2013-03-19

X64_RADIO_MLB SUBDESIGN EVT1 03/19/2013

SCH :951-3301
BOM :639-4501
BOARD :820-3581

PART#	QTY	DESCRIPTION	REFERENCE DESIGNATOR(S)	CRITICAL	BOM OPTION
951-3301	1	X64_RADIO_MLB	SCH	Y	
825-2029	1	EEE FOR 939-0308	EEEE_????	Y	NA

AP INTERFACE & DEBUG CONNECTORS

AP CONNECTIONS

IN = FROM AP
OUT = TO AP

16 15 14 13 12 11 3 2	PP_BATT_VCC_CONN	OUT		
23	PP_VCC_MAIN_WLAN	OUT		
6	TX_GTR_THRESH	OUT		
4 2	BB_RST_L	IN		
6 2	RESET_DET_L	OUT		
4 2	RADIO_ON_L	IN		
4 2	RESET_PMU_L	IN		
6 2	HOST_WAKE_BB	OUT		
2	RF_RESET_L	OUT		
6 2	PBL_RUN_BB_HSIC1_RDY	OUT		
23 2	WLAN_HSIC3_RESUME	OUT		
6	AP_WAKE_MODEM	OUT		
6 2	AP_HSIC1_RDY	IN		
5 2	S0_HSIC_BB_DATA	IO		
5 2	S0_HSIC_BB_STROBE	IO		
6	BB_HSIC1_REMOTE_WAKE	OUT		
6 2	BB_UART_TXD	OUT		
6 2	BB_UART_RXD	IN		
6 2	BB_UART_RTS_L	OUT		
6 2	BB_UART_CTS_L	IN		
5 2	BB_USB_VBUS	IN		
5 2	90_BB_USB_D_P	IO		
5 2	90_BB_USB_D_N	IO		
6 2	BB_I2S_CLK	IN		
6 2	BB_I2S_WS	IN		
6 2	BB_I2S_TXD	OUT		
6 2	BB_I2S_RXD	IN		
6	PP_SYNC	OUT		
23	PP_WL_BT_VDDIO_AP	IN		
23 2	CLK32K_AP	IN		
23 2	WLAN_REG_ON	IN		
23	WLAN_UART_TXD	OUT		
23	WLAN_UART_RXD	IN		
23	HOST_WAKE_WLAN	OUT		
23 2	WLAN_HSIC3_DEVICE_RDY	OUT		
23 2	AP_HSIC3_RDY	IN		
23 2	S0_HSIC_WLAN_DATA	IO		
23 2	S0_HSIC_WLAN_STROBE	IO		
23	HOST_WAKE_BT	OUT		
23 2	BT_WAKE	IN		
23 2	BT_UART_TXD	OUT		
23 2	BT_UART_RXD	IN		
23	BT_UART_RTS_L	OUT		
23	BT_UART_CTS_L	IN		
23 2	BT_REG_ON	IN		
23	BT_PCM_CLK	IO		
23	BT_PCM_SYNC	IO		
23	BT_PCM_OUT	IO		
23	BT_PCM_IN	IO		
6 2	LAT_SW1_CTL	OUT		
6	LAT_SW2_CTL	OUT		
20 6	BB_SPI_TO_PAC_CS	OUT		
20 6	BB_SPI_TO_PAC_DATA_MOSI	OUT		
20 6	BB_SPI_TO_PAC_CLK	OUT		
20 6	PAC_TO_BB_SPI_DATA_MISO	IN		
20 18 17 11 10 3	PP_LDO14_2V65	OUT		
5 2	BB_JTAG_TCK	IN		
5 2	BB_JTAG_TDI	IN		
5 2	BB_JTAG_TMS	IN		
5 2	BB_JTAG_TRST_L	IN		
5 2	BB_JTAG_TDO	OUT		
2	ADC_SMPS1_MSMC_1V05	OUT		
2	ADC_SMPS3_MSME_1V8	OUT		
2	ADC_LDO6_RUIM_1V8	OUT		
2	ADC_LVS1	OUT		
6	BB_IPC_GPIO	OUT		
23 6	OSCAR_CONTEXT_A	IN		
23 6	OSCAR_CONTEXT_B	IN		

PROBE POINTS

PP1_RF — P4MM-NSM — SM PP 1 BB_ERROR_FLAG — 6
PP2_RF — P4MM-NSM — SM PP 1 SLEEP_CLK_32K — 4 5
PP3_RF — P4MM-NSM — SM PP 1 PMIC_SSBI — 4 5
PP11_RF — P4MM-NSM — SM PP 1 CLK32K_AP — 2 23
PP14_RF — P4MM-NSM — SM PP 1 AP_HSIC3_RDY — 2 23
PP15_RF — P4MM-NSM — SM PP 1 WLAN_HSIC3_DEVICE_RDY — 2 23
PP18_RF — P4MM-NSM — SM PP 1 WLAN_HSIC3_RESUME — 2 23
PP19_RF — P4MM-NSM — SM PP 1 WTR_SSBI_TX_GPS — 6 7
PP20_RF — P4MM-NSM — SM PP 1 WTR_SSBI_PRX_DRX — 6 7
PP21_RF — P4MM-NSM — SM PP 1 WTR_RX_ON — 6 7
PP22_RF — P4MM-NSM — SM PP 1 WTR_RF_ON — 6 7
PP40_RF — P4MM-NSM — SM PP 1 WLAN_COEX_TXD — 23
PP41_RF — P4MM-NSM — SM PP 1 LTE_COEX_TXD — 6 23
PP42_RF — P4MM-NSM — SM PP 1 S0_HSIC_BB_STROBE — 2 5
PP43_RF — P4MM-NSM — SM PP 1 S0_HSIC_BB_DATA — 2 5
PP44_RF — P4MM-NSM — SM PP 1 S0_HSIC_WLAN_STROBE — 2 23
PP45_RF — P4MM-NSM — SM PP 1 S0_HSIC_WLAN_DATA — 2 23
PP46_RF — P4MM-NSM — SM PP 1 BT_UART_TXD — 2 23
PP47_RF — P4MM-NSM — SM PP 1 BT_UART_RXD — 2 23
PP4_RF — P4MM-NSM — SM PP 1 BB_I2S_CLK — 2 6
PP5_RF — P4MM-NSM — SM PP 1 BB_I2S_WS — 2 6
PP6_RF — P4MM-NSM — SM PP 1 BB_I2S_RXD — 2 6
PP7_RF — P4MM-NSM — SM PP 1 BB_I2S_TXD — 2 6
PP10_RF — P4MM-NSM — SM PP 1 SPI_DATA_MOSI — 6
PP12_RF — P4MM-NSM — SM PP 1 SPI_CLK — 6
PP13_RF — P4MM-NSM — SM PP 1 SPI_CS_L — 6
PP16_RF — P4MM-NSM — SM PP 1 SPI_DATA_MISO — 6

PROBE POINTS NEAR AP

PP60_RF — P4MM-NSM — SM PP 1 S0_HSIC_BB_STROBE — 2 5
PP61_RF — P4MM-NSM — SM PP 1 S0_HSIC_BB_DATA — 2 5

DEBUG CONNECTOR

J1_RF
AXE654124
M-ST-SM

			PP_BATT_VCC_CONN	IN	2 3 11 12 13 14 15 16		
5	DEBUG_RST_L	OUT	10 9	PP_SMPS3_MSME_1V8	IN	2 3 5 6 8	
4 2	RESET_PMU_L	OUT	12 11	BT_WAKE	OUT	2 23	
4 2	RADIO_ON_L	OUT	14 13				
			16 15	PP_LDO6_RUIM_1V8	IN	2 3 5	
5 2	BB_USB_VBUS	OUT	18 17	WLAN_REG_ON	OUT	2 23	
5 2	90_BB_USB_D_N	BI	20 19	NC			
5 2	90_BB_USB_D_P	BI	22 21	NC			
2	RF_RESET_L	OUT	24 23	PMIC_RESOUT_L	IN	4 5	
5 2	BB_JTAG_TCK	OUT	26 25	NC			
5 2	BB_JTAG_TMS	OUT	28 27				
5 2	BB_JTAG_TDO	IN	30 29	AP_HSIC1_RDY	IN	2 6	
5 2	BB_JTAG_TDI	OUT	32 31	BT_REG_ON	IN	2 23	
5 2	BB_JTAG_TRST_L	OUT	34 33	HOST_WAKE_BB	IN	2 6	
5	BB_JTAG_RTCLK	OUT	36 35	NC			
			38 37	RESET_DET_L	IN	2 6	
4	PS_HOLD_PMIC	OUT	40 39	SIMCRD_CLK_CONN	IN	2 6	
6 2	BB_UART_TXD	IN	42 41	SIMCRD_IO_CONN	BI	2 6	
6 2	BB_UART_RXD	OUT	44 43	SIM_TRAY_DETECT	OUT	2 6	
6 2	BB_UART_RTS_L	IN	46 45	BB_RST_L	IN	2 4	
6 2	BB_UART_CTS_L	OUT	48 47	SIMCRD_RST_CONN	IN	2 6	
6	GPIO_DEBUG_LED	IN	50 49	PBL_RUN_BB_HSIC1_RDY	IN	2 6	
6	GPIO_51 GPIO51/BOOT_CONFIG_3	OUT	52 51 GPIO54/BOOT_CONFIG_0	ANT_SEL_2	OUT	6 17 18	
18 17 11 6	ANT_SEL_1 GPIO53/BOOT_CONFIG_1	OUT	54 53 GPIO48/BOOT_CONFIG_6	LAT_SW1_CTL	OUT	2 6	
			58 57				

BOOT OPTIONS	BOOT_CONFIG SW REGISTER VALUE	GPIO/BOOT_CONFIG CONFIGURATION							
			6	5	4	3	2	1	0
		47	48	49	50	51	52	53	54	55
BOOT_DEFAULT_OPTION	0X00	X	0	0	0	0	0	0	X
BOOT_NAND_OPTION	0X01	X	1	0	0	0	0	1	X
BOOT_HSIC_OPTION	0X02	X	1	0	0	0	1	0	X
BOOT_USB_OPTION	0X03	X	1	0	0	0	1	1	X
ENABLE SAHARA PROTOCOL	0X08	X	1	0	0	1	0	X	X

J2_RF
MM4829-2702
F-ST-SM
NOSTUFF — 1 — 50_HSIC_BB_DATA — 2 5

J3_RF
MM4829-2702
F-ST-SM
NOSTUFF — 1 — 50_HSIC_BB_STROBE — 2 5

SIM CARD CONNECTOR

5 3 2 PP_LDO6_RUIM_1V8
R3_RF 15.00K 1% 1/32W MF 01005
J11_RF SIM-CARD-N48 F-ST-SM
6 2 IN SIMCRD_RST_CONN — 2 RST
6 2 IN SIMCRD_CLK_CONN — 3 CLK
VCC 1
I/O 7 — SIMCRD_IO_CONN — BI 2 6
DETECT 12 — SIM_TRAY_DETECT — OUT 2 6
SWP 6
GND 8 9 10 11 13 5
C700_RF 100PF 5% 16V NP0-C0G 01005

SIM CARD ESD PROTECTION

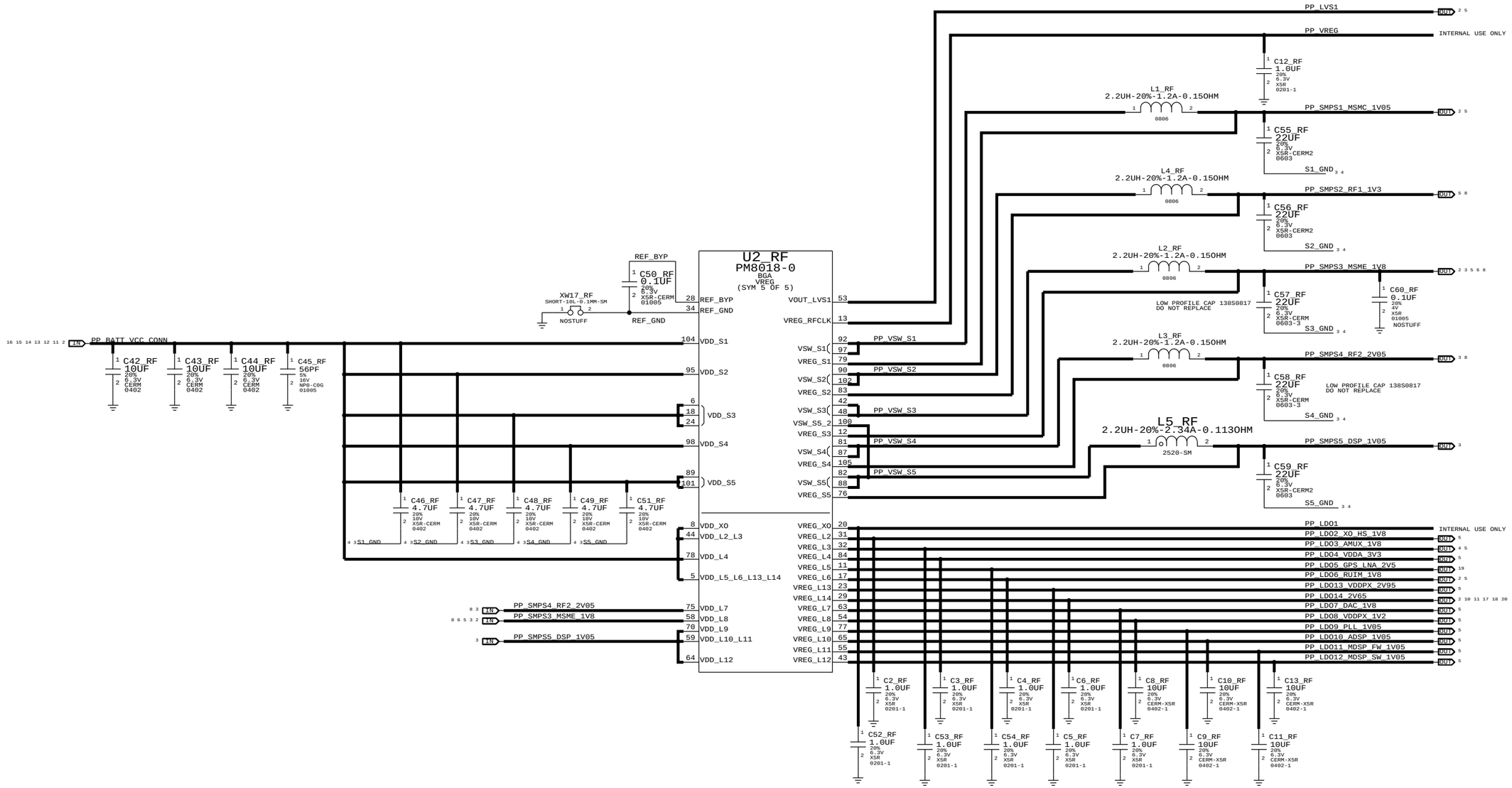
PP_LDO6_RUIM_1V8 2 3 5
C1_RF 12V-33PF 01005
U5_RF TPD4E101DPWR SON4
6 2 SIMCRD_IO_CONN — 1 — 4 — SIM_TRAY_DETECT 2 6
5 GND
6 2 SIMCRD_RST_CONN — 2 — 3 — SIMCRD_CLK_CONN 2 6

XW12_RF / XW13_RF / XW14_RF / XW15_RF

SHORT-10L-0.1MM-SM

XW12_RF	5 3 PP_SMPS1_MSMC_1V05	ADC_SMPS1_MSMC_1V05 2
XW13_RF	8 6 5 3 2 PP_SMPS3_MSME_1V8	ADC_SMPS3_MSME_1V8 2
XW14_RF	5 3 2 PP_LDO6_RUIM_1V8	ADC_LDO6_RUIM_1V8 2
XW15_RF	5 3 PP_LVS1	ADC_LVS1 2

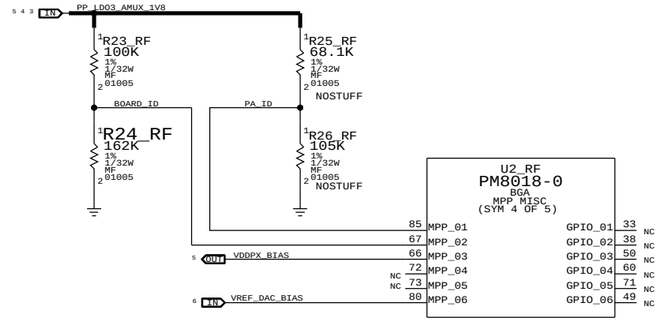
PMU (1 OF 2)



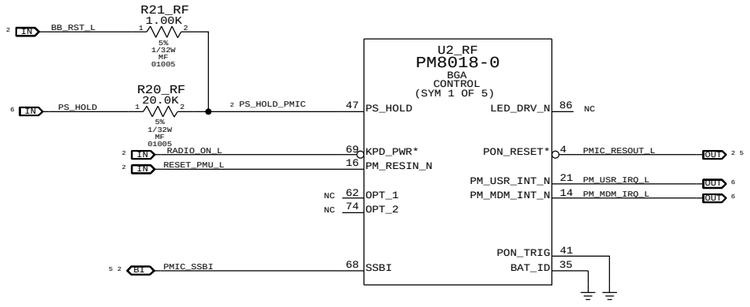
PMU (2 OF 2)

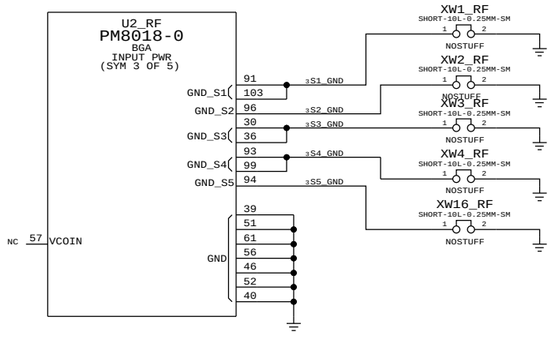
PA_ID	CONFIG
1.1V	MAV7 APAC
1.3V	MAV7 EU
1.5V	MAV7.3 APAC
1.7V	MAV7.3 EU

BOARD_ID	REVISION
0.1V	UNUSED
0.3V	UNUSED
0.5V	UNUSED
0.7V	PROTO1
0.9V	PROTO2
1.1V	EVT1
1.3V	E1C
1.5V	EVT2
1.7V	DVT/PVT

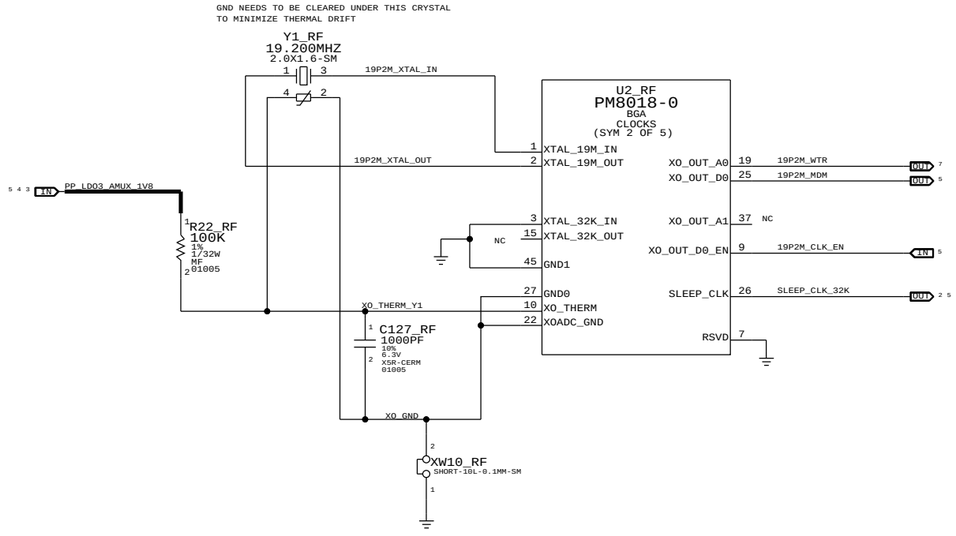


AP SECTION NEEDS ITS OWN THERMISTOR PLACED NEAR THE PA'S.

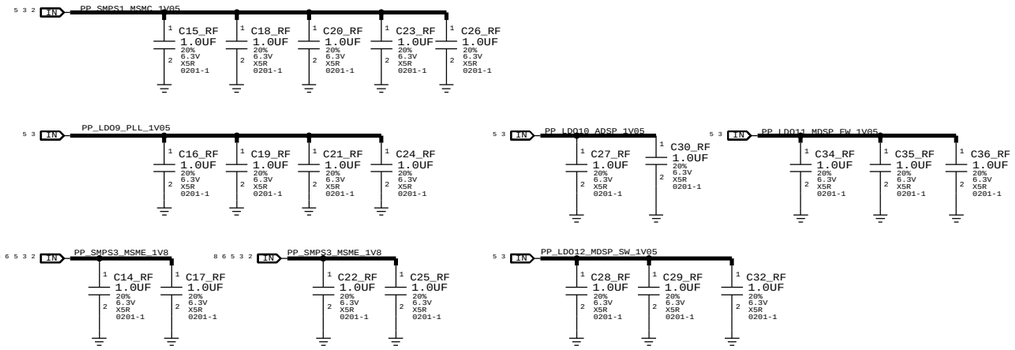


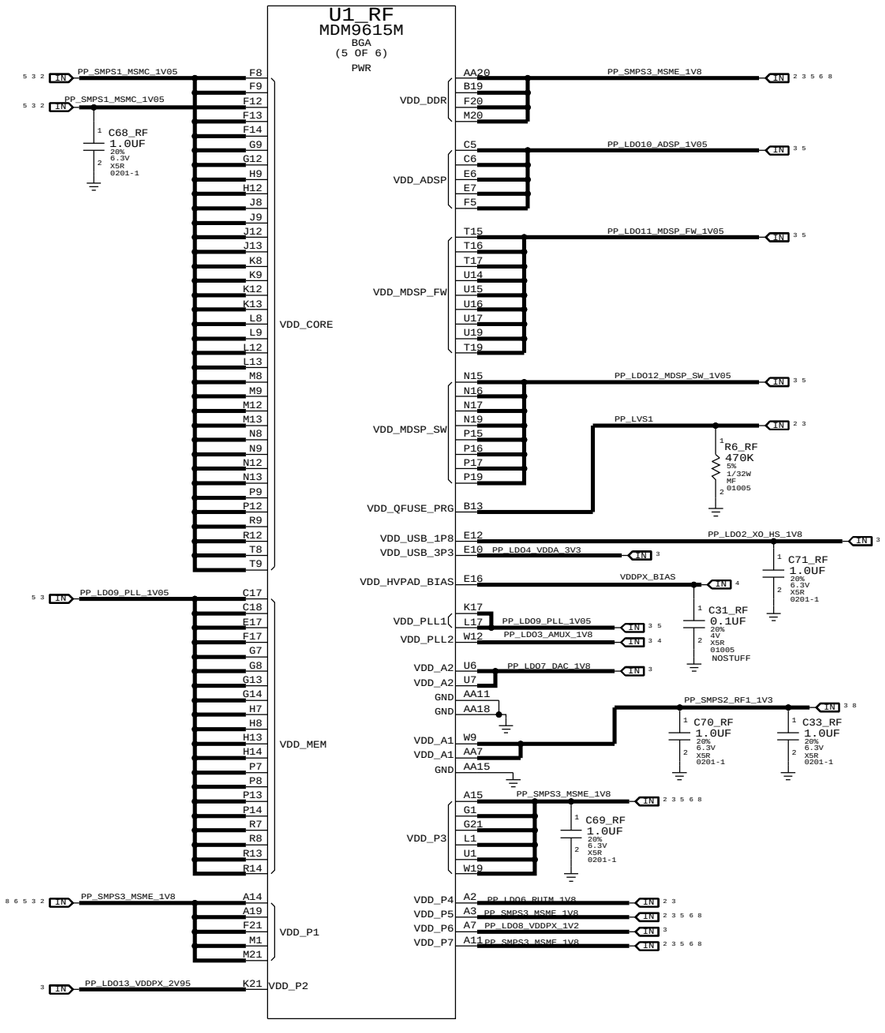


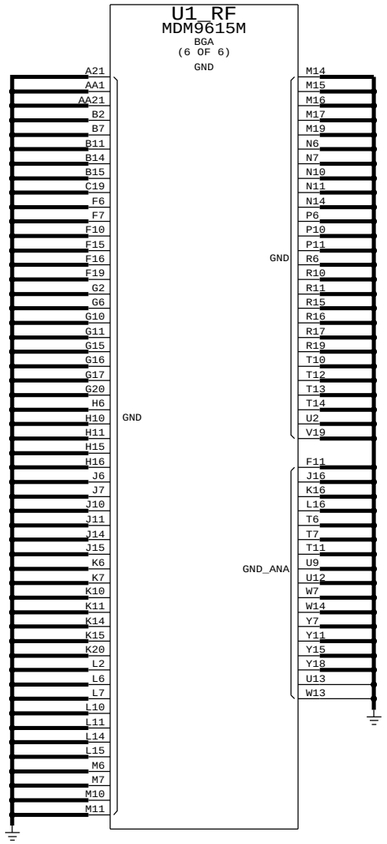
GND NEEDS TO BE CLEARED UNDER THIS CRYSTAL
TO MINIMIZE THERMAL DRIFT

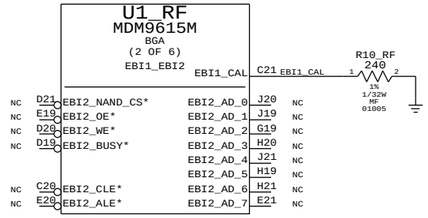


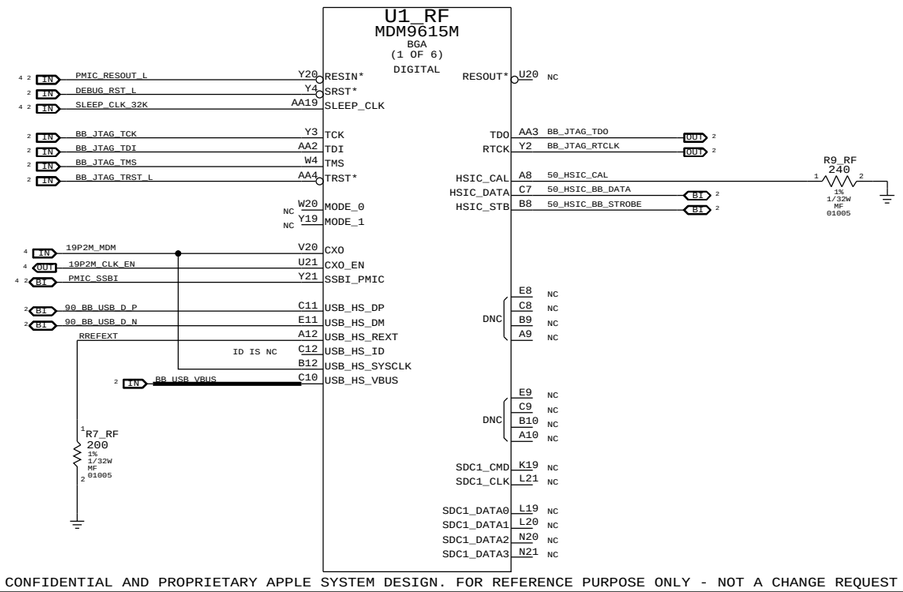
BASEBAND (1 OF 2)



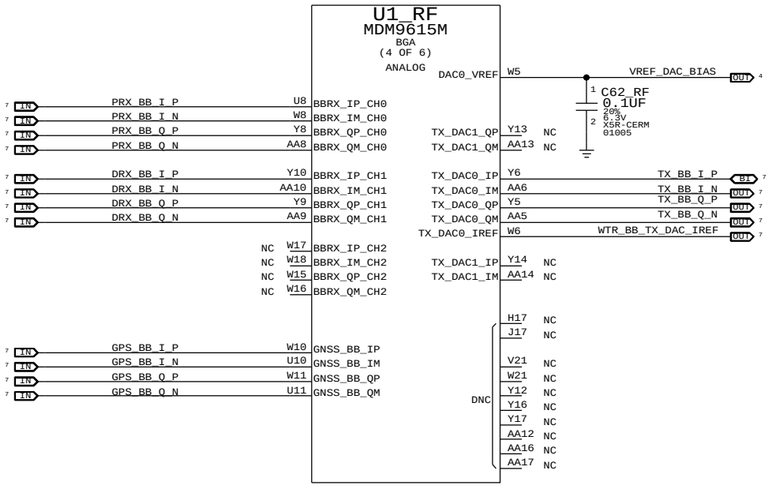


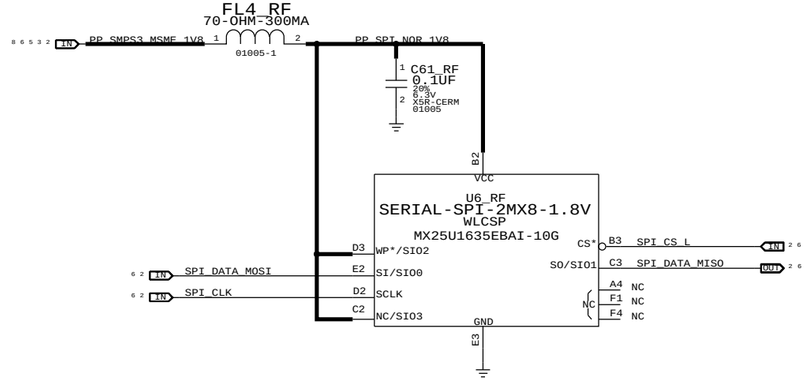


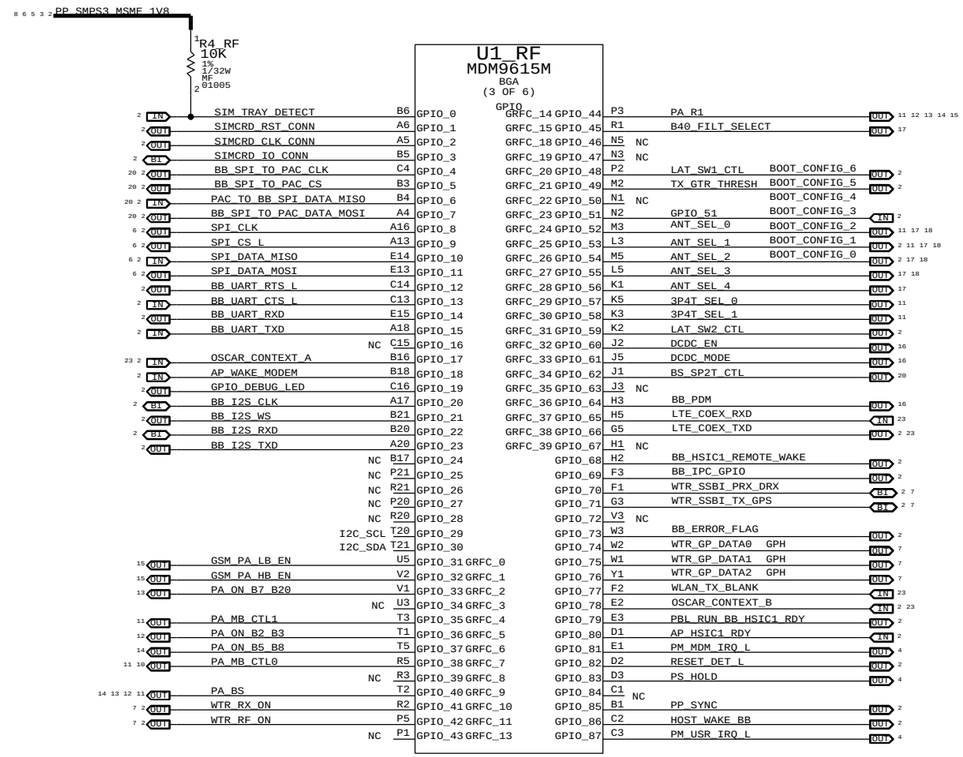




BASEBAND (2 OF 2)

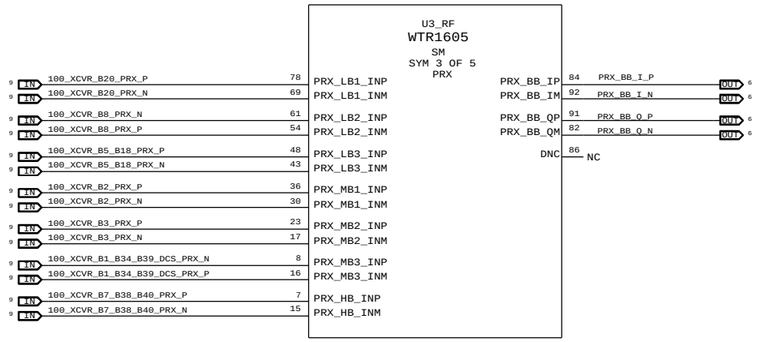




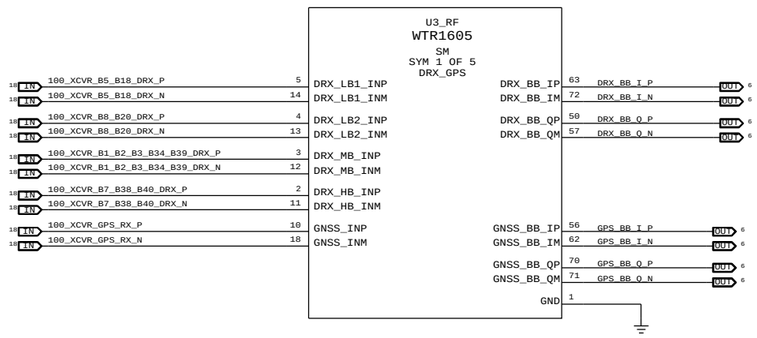


RF TRANSCEIVER (1 OF 2)

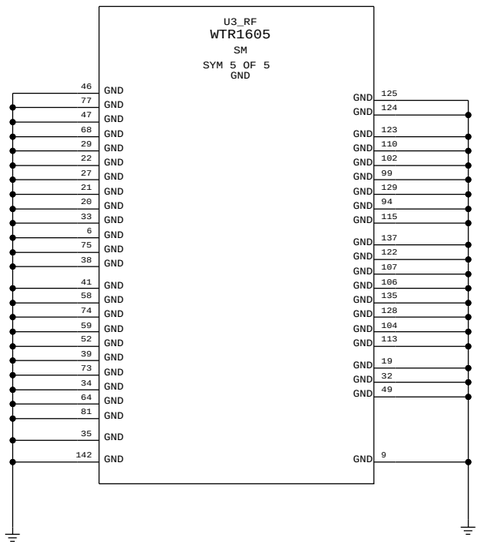
PRX TRANSCEIVER RF AND IQ PORTS



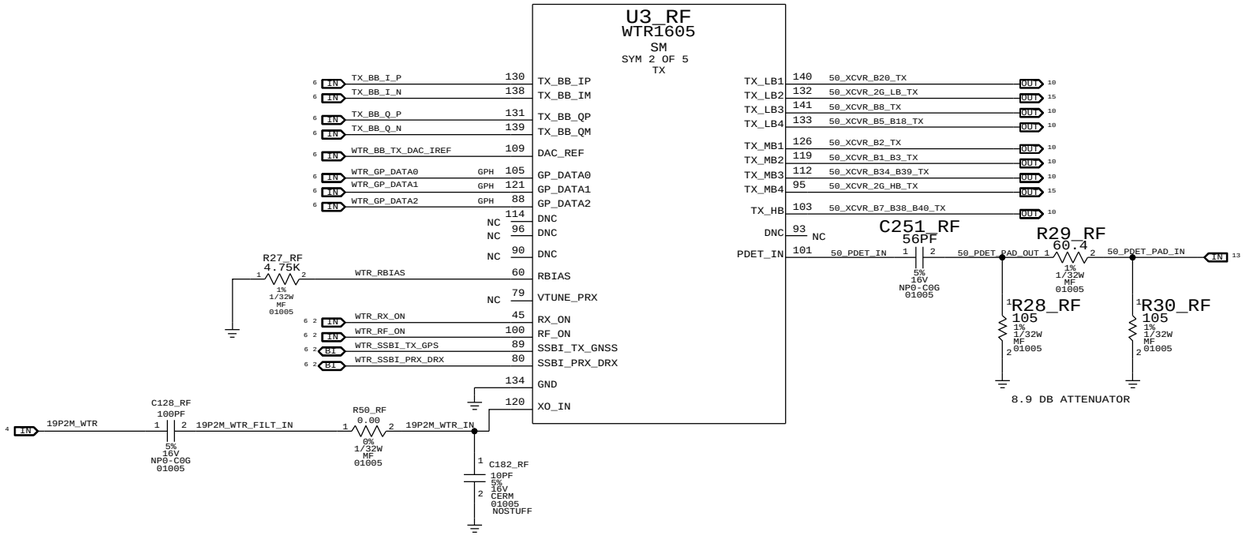
DRX TRANSCEIVER RF AND IQ PORTS



TRANSCEIVER GROUND CONNECTIONS



TRANSCEIVER PHASE CONTROL, TX RF & IQ PORTS



RF TRANSCEIVER (2 OF 2)

RF1_1V3

R53_RF
22-OHM-25%-1800MA
0201

PP_SMPS2_RF1_1V3 → PP_SMPS2_RF1_1V3_FILT

C72_RF 10UF 20% 10V X5R-CERM 0402-1

STAR ROUTING

PP_RF1_1V3_PRX_PLL	C73_RF 0.1UF 20% 6.3V X5R-CERM 01005	PLACE NEAR U3.66
PP_RF1_1V3_SHDR_PLL	C74_RF 0.1UF 20% 6.3V X5R-CERM 01005	PLACE NEAR U3.65
PP_RF1_1V3_PRX_VCO	C75_RF 0.1UF 20% 6.3V X5R-CERM 01005	PLACE NEAR U3.76
PP_RF1_1V3_SHDR_VCO	C76_RF 0.1UF 20% 6.3V X5R-CERM 01005	PLACE NEAR U3.40
PP_RF1_1V3_TX_DA	C77_RF 0.1UF 20% 6.3V X5R-CERM 01005 NOSTUFF; C274_RF 56PF 5% 16V NP0-C0G 01005	PLACE NEAR U3.118
PP_RF1_1V3_TX_SYNTH	C78_RF 0.1UF 20% 6.3V X5R-CERM 01005	PLACE NEAR U3.98
PP_RF1_1V3_TX_LO	C79_RF 0.1UF 20% 6.3V X5R-CERM 01005	PLACE NEAR U3.116
PP_RF1_1V3_TX_UPCONVERTER	C80_RF 100PF 5% 16V NP0-C0G 01005	PLACE NEAR U3.117
PP_RF1_1V3_PRX_FELO1; PP_RF1_1V3_DRX_FE	C81_RF 0.1UF 20% 6.3V X5R-CERM 01005	PLACE NEAR U3.53 AND U3.26
PP_RF1_1V3_PRX_FELO2	C82_RF 0.1UF 20% 6.3V X5R-CERM 01005	PLACE NEAR U3.42
PP_RF1_1V3_DRX_LBLO; PP_RF1_1V3_DRX_MBLO	C83_RF 0.1UF 20% 6.3V X5R-CERM 01005	PLACE NEAR U3.25 AND U3.28
PP_RF1_1V3_JAM_DET		

RF1_1V3

PP_SMPS2_RF1_1V3_FILT

PP_RF1_1V3_GPS_LNA; PP_RF1_1V3_GPS_DIG	C85_RF 0.1UF 20% 6.3V X5R-CERM 01005	PLACE NEAR U3.24 AND U3.31
PP_RF1_1V3_GPS_VCO; PP_RF1_1V3_GPS_PLL	C86_RF 0.1UF 20% 6.3V X5R-CERM 01005	PLACE NEAR U3.37 AND U3.55

RF1_1V8

PP_SMPS3_MSME_1V8 → PP_RF1_1V8_DIG

C87_RF 1.0UF 20% 10V X5R-CERM 0201-1 PLACE NEAR U3.87

RF2_2V05

PP_SMPS4_RF2_2V05 → PP_SMPS4_RF2_2V05_FILT

R19_RF 0 5% 1/20W MF 201

C88_RF 10UF 20% 10V X5R-CERM 0402-1

STAR ROUTING

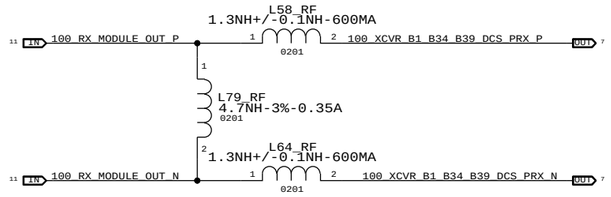
PP_RF2_2V05_DRX_BB		
PP_RF2_2V05_TX_DA	C244_RF 100PF 5% 16V NP0-C0G 01005	PLACE NEAR U3.111 NOSTUFF
PP_RF2_2V05_PRX_BB; PP_RF2_2V05_TX_BB		
PP_RF2_2V05_PRX_VCO	C89_RF 0.1UF 20% 6.3V X5R-CERM 01005	PLACE NEAR U3.67
PP_RF2_2V05_SHDR_VCO	C90_RF 0.1UF 20% 6.3V X5R-CERM 01005	PLACE NEAR U3.51
PP_RF2_2V05_TX_VCO	C91_RF 0.1UF 20% 6.3V X5R-CERM 01005	PLACE NEAR U3.136
PP_RF2_2V05_TX_PLL		
PP_RF2_2V05_XO_FILT	C92_RF 0.1UF 20% 6.3V X5R-CERM 01005	PLACE NEAR U3.127

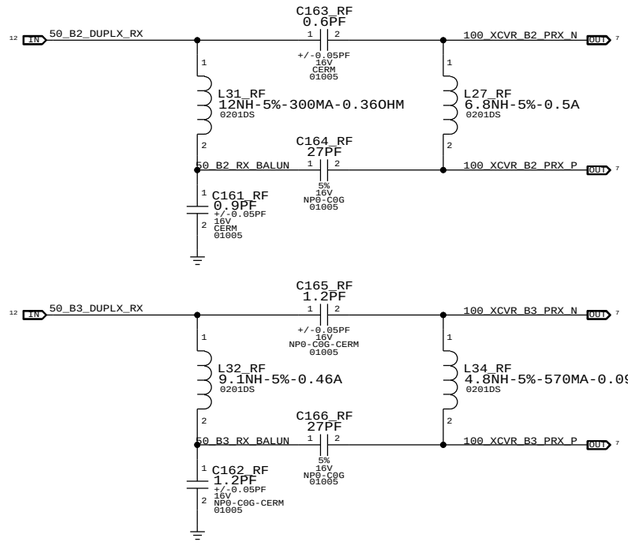
TRANSCEIVER POWER CONNECTIONS

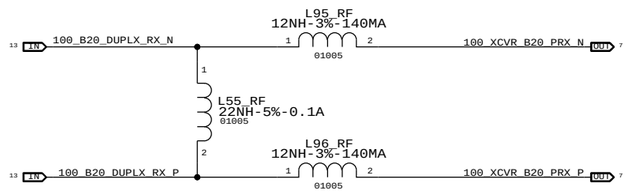
U3_RF
WTR1605
SM
SRM 4 OF 5
PWR

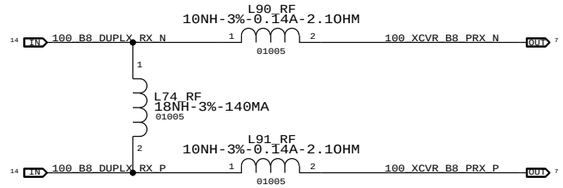
PP_RF1_1V3_PRX_FELO1	53	VDD_RF1_P_FELO	VDD_RF2_T_DA	111	PP_RF2_2V05_TX_DA
PP_RF1_1V3_PRX_FELO2	42	VDD_RF1_P_FELO	VDD_RF1_T_DA	118	PP_RF1_1V3_TX_DA
PP_RF1_1V3_DRX_LBLO	28	VDD_RF1_D_LBLO	VDD_RF1_T_UPC	117	PP_RF1_1V3_TX_UPCONVERTER
PP_RF1_1V3_DRX_FE	26	VDD_RF1_D_FE	VDD_RF1_T_LO	116	PP_RF1_1V3_TX_LO
PP_RF1_1V3_DRX_MBLO	25	VDD_RF1_D_MBLO	VDD_RF2_T_BB	108	PP_RF2_2V05_TX_BB
PP_RF1_1V3_JAM_DET	85	VDD_RF1_JDET	VDD_RF2_T_VCO	136	PP_RF2_2V05_TX_VCO
PP_RF2_2V05_PRX_BB	83	VDD_RF2_P_BB	VDD_RF2_XO	127	PP_RF2_2V05_XO_FILT
PP_RF2_2V05_DRX_BB	44	VDD_RF2_D_BB	VDD_RF1_T_SYN	98	PP_RF1_1V3_TX_SYNTH
PP_RF2_2V05_PRX_VCO	67	VDD_RF2_P_VCO	VDD_RF2_T_PLL	97	PP_RF2_2V05_TX_PLL
PP_RF1_1V3_PRX_VCO	76	VDD_RF1_P_VCO			
PP_RF1_1V3_PRX_PLL	66	VDD_RF1_P_PLL	VDD_RF1_G_LNA	24	PP_RF1_1V3_GPS_LNA
PP_RF2_2V05_SHDR_VCO	51	VDD_RF2_S_VCO	VDD_RF1_G_VCO	37	PP_RF1_1V3_GPS_VCO
PP_RF1_1V3_SHDR_VCO	40	VDD_RF1_S_VCO	VDD_RF1_G_PLL	55	PP_RF1_1V3_GPS_PLL
PP_RF1_1V3_SHDR_PLL	65	VDD_RF1_S_PLL	VDD_RF1_G_BB	31	PP_RF1_1V3_GPS_DIG
			VDD_DIO	87	PP_RF1_1V8_DIG

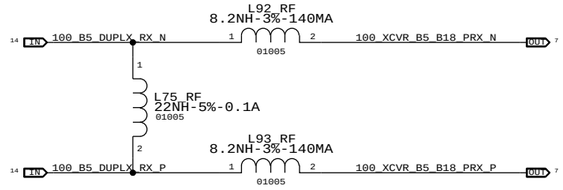
RX MATCHING

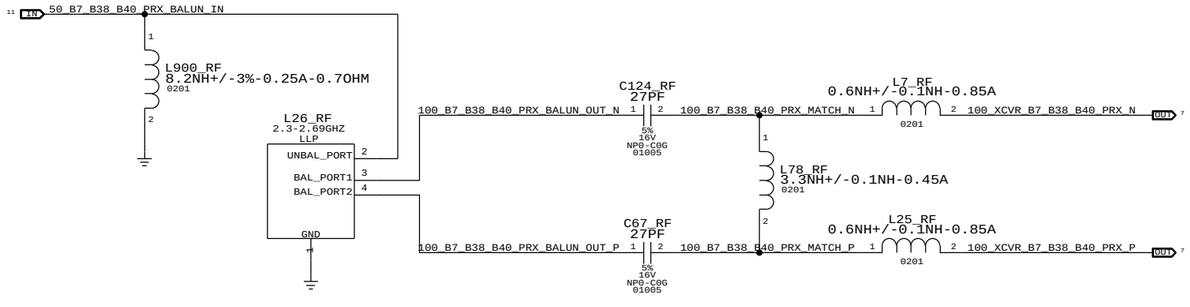

L58_RF
1.3NH+/-0.1NH-600MA
100_RX_MODULE_OUT_P
0201
100_XCVR_B1_B34_B39_DCS_PRX_P
L79_RF
4.7NH-3%-0.35A
0201
L64_RF
1.3NH+/-0.1NH-600MA
100_RX_MODULE_OUT_N
0201
100_XCVR_B1_B34_B39_DCS_PRX_N

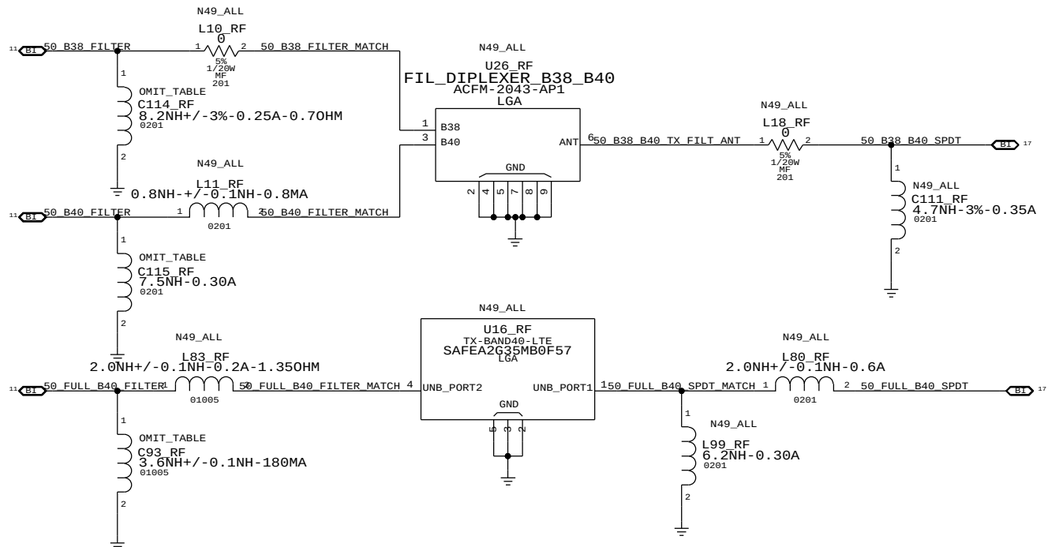

C163_RF
0.6PF
50_B2_DUPLX_RX
100_XCVR_B2_PRX_N
L31_RF
12NH-5%-300MA-0.36OHM
0201DS
L27_RF
6.8NH-5%-0.5A
0201DS
C164_RF
27PF
50_B2_RX_BALUN
100_XCVR_B2_PRX_P
C161_RF
0.9PF
C165_RF
1.2PF
50_B3_DUPLX_RX
100_XCVR_B3_PRX_N
L32_RF
9.1NH-5%-0.46A
0201DS
L34_RF
4.8NH-5%-570MA-0.096OHM
0201DS
C166_RF
27PF
50_B3_RX_BALUN
100_XCVR_B3_PRX_P
C162_RF
1.2PF


L95_RF
12NH-3%-140MA
100_B20_DUPLX_RX_N
01005
100_XCVR_B20_PRX_N
L55_RF
22NH-5%-0.1A
01005
L96_RF
12NH-3%-140MA
100_B20_DUPLX_RX_P
01005
100_XCVR_B20_PRX_P

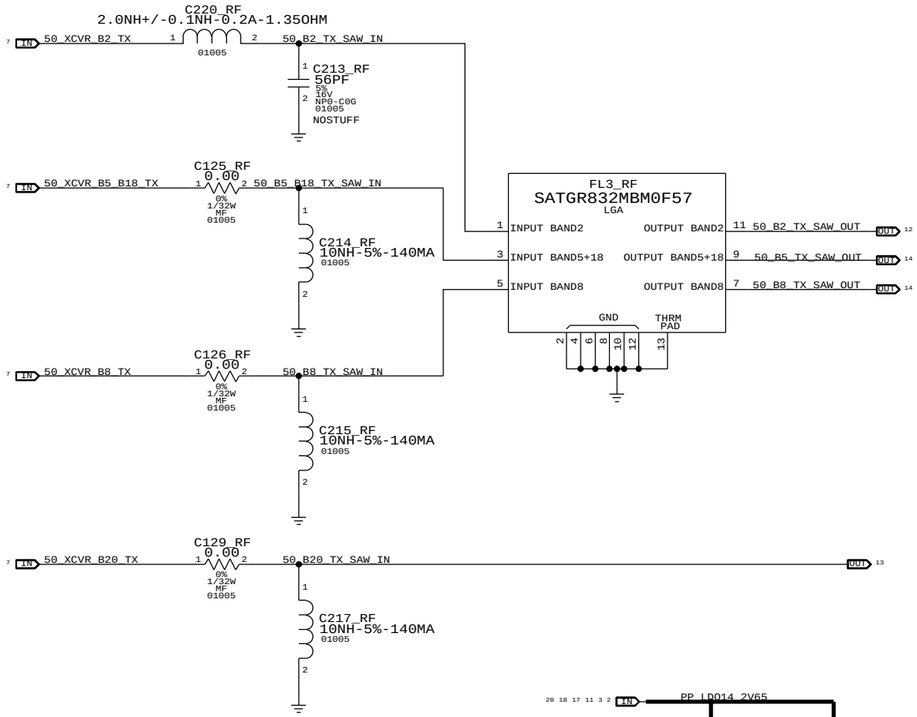

L90_RF
10NH-3%-0.14A-2.1OHM
100_B8_DUPLX_RX_N
01005
100_XCVR_B8_PRX_N
L74_RF
18NH-3%-140MA
01005
L91_RF
10NH-3%-0.14A-2.1OHM
100_B8_DUPLX_RX_P
01005
100_XCVR_B8_PRX_P

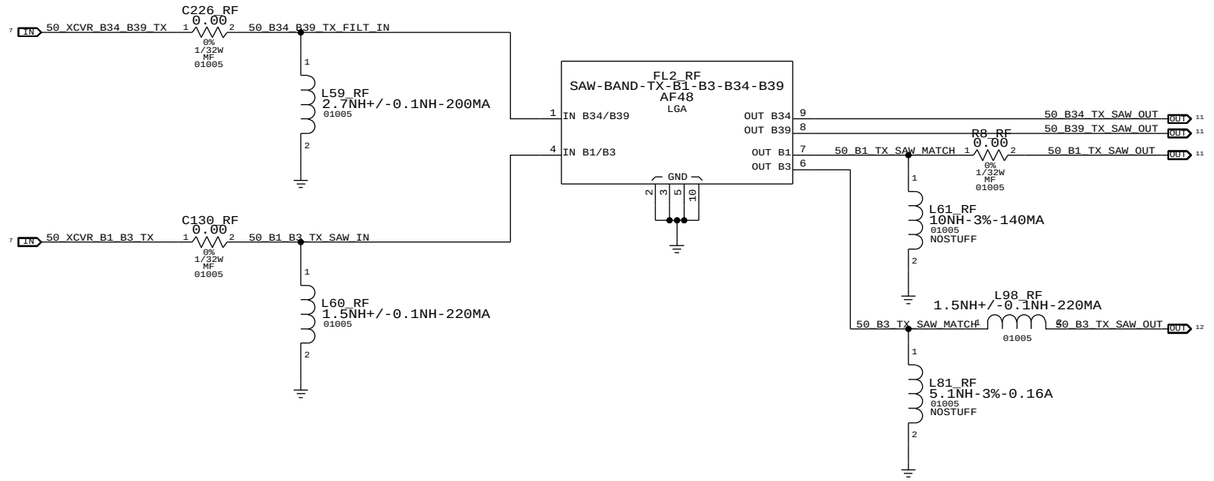

L92_RF
8.2NH-3%-140MA
100_B5_DUPLX_RX_N
01005
100_XCVR_B5_B18_PRX_N
L75_RF
22NH-5%-0.1A
01005
L93_RF
8.2NH-3%-140MA
100_B5_DUPLX_RX_P
01005
100_XCVR_B5_B18_PRX_P

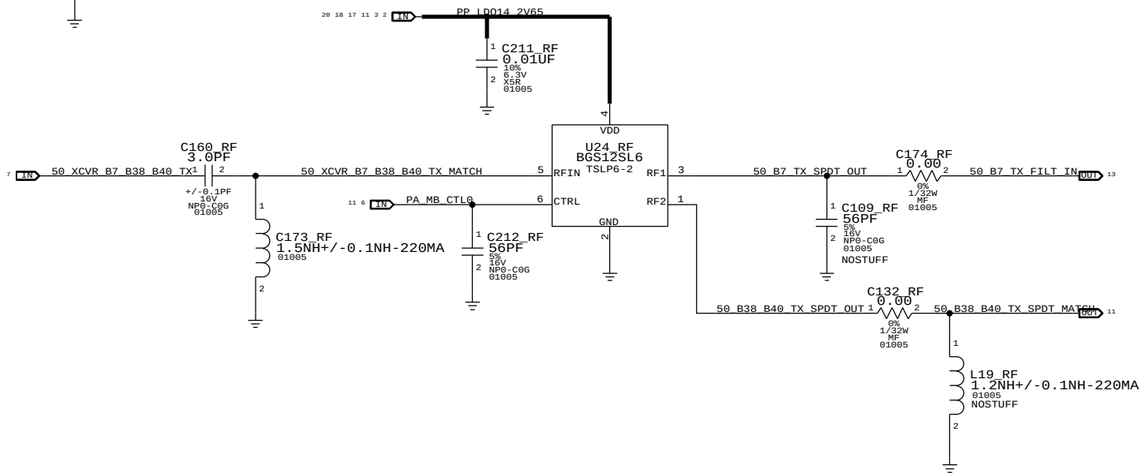

50_B7_B38_B40_PRX_BALUN_IN
L900_RF
8.2NH+/-3%-0.25A-0.7OHM
0201
L26_RF
2.3-2.69GHZ
LLP
UNBAL_PORT
BAL_PORT1
BAL_PORT2
GND
100_B7_B38_B40_PRX_BALUN_OUT_N
C124_RF
27PF
100_B7_B38_B40_PRX_MATCH_N
L7_RF
0.6NH+/-0.1NH-0.85A
0201
100_XCVR_B7_B38_B40_PRX_N
L78_RF
3.3NH+/-0.1NH-0.45A
0201
100_B7_B38_B40_PRX_BALUN_OUT_P
C67_RF
27PF
100_B7_B38_B40_PRX_MATCH_P
L25_RF
0.6NH+/-0.1NH-0.85A
0201
100_XCVR_B7_B38_B40_PRX_P


N49_ALL
L10_RF
0
50_B38_FILTER
50_B38_FILTER_MATCH
N49_ALL
U26_RF
FIL_DIPLEXER_B38_B40
ACFM-2043-AP1
LGA
B38
B40
ANT
GND
50_B38_B40_TX_FILT_ANT
N49_ALL
L18_RF
0
50_B38_B40_SPDT
OMIT_TABLE
C114_RF
8.2NH+/-3%-0.25A-0.7OHM
0201
N49_ALL
C111_RF
4.7NH-3%-0.35A
0201
N49_ALL
L11_RF
0.8NH-+/-0.1NH-0.8MA
0201
50_B40_FILTER
50_B40_FILTER_MATCH
OMIT_TABLE
C115_RF
7.5NH-0.30A
0201
N49_ALL
U16_RF
TX-BAND40-LTE
SAFEA2G35MB0F57
LGA
UNB_PORT2
UNB_PORT1
GND
N49_ALL
L83_RF
2.0NH+/-0.1NH-0.2A-1.35OHM
01005
50_FULL_B40_FILTER
50_FULL_B40_FILTER_MATCH
50_FULL_B40_SPDT_MATCH
N49_ALL
L80_RF
2.0NH+/-0.1NH-0.6A
0201
50_FULL_B40_SPDT
OMIT_TABLE
C93_RF
3.6NH+/-0.1NH-180MA
01005
N49_ALL
L99_RF
6.2NH-0.30A
0201

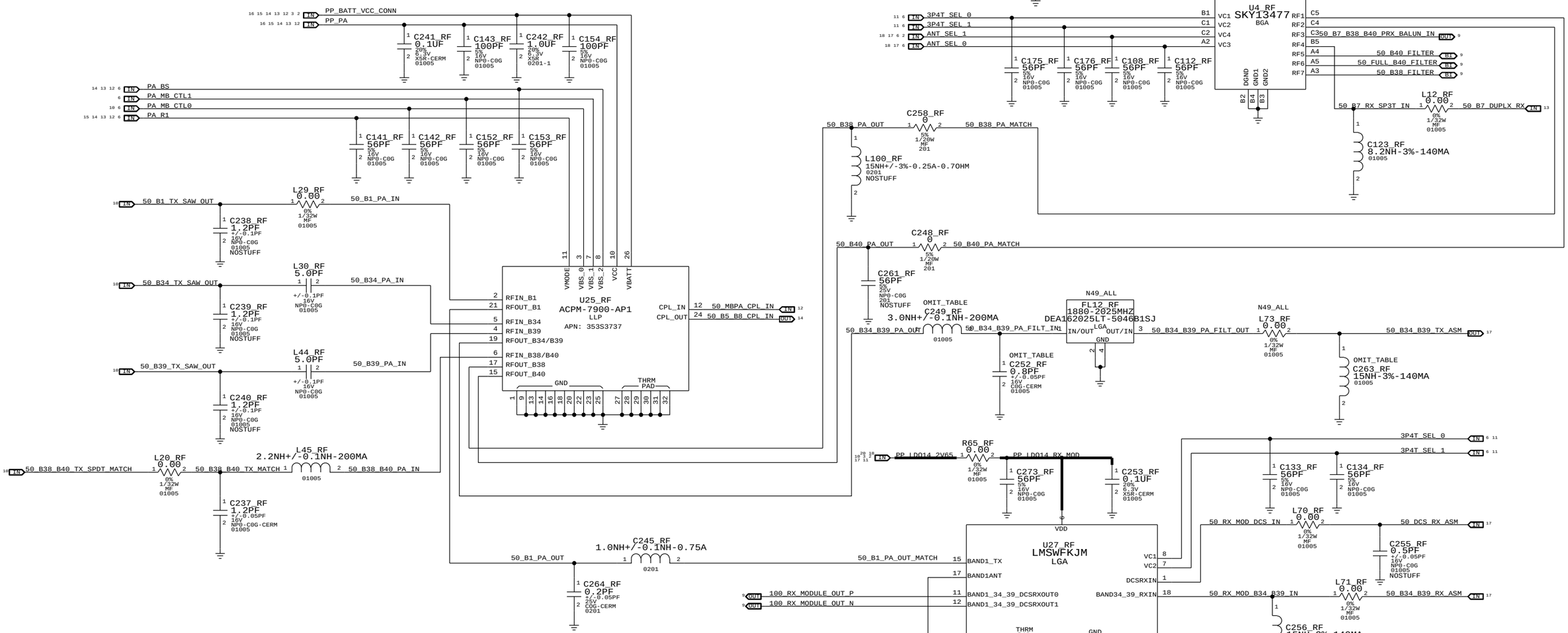
TX INTERSTAGE FILTERS





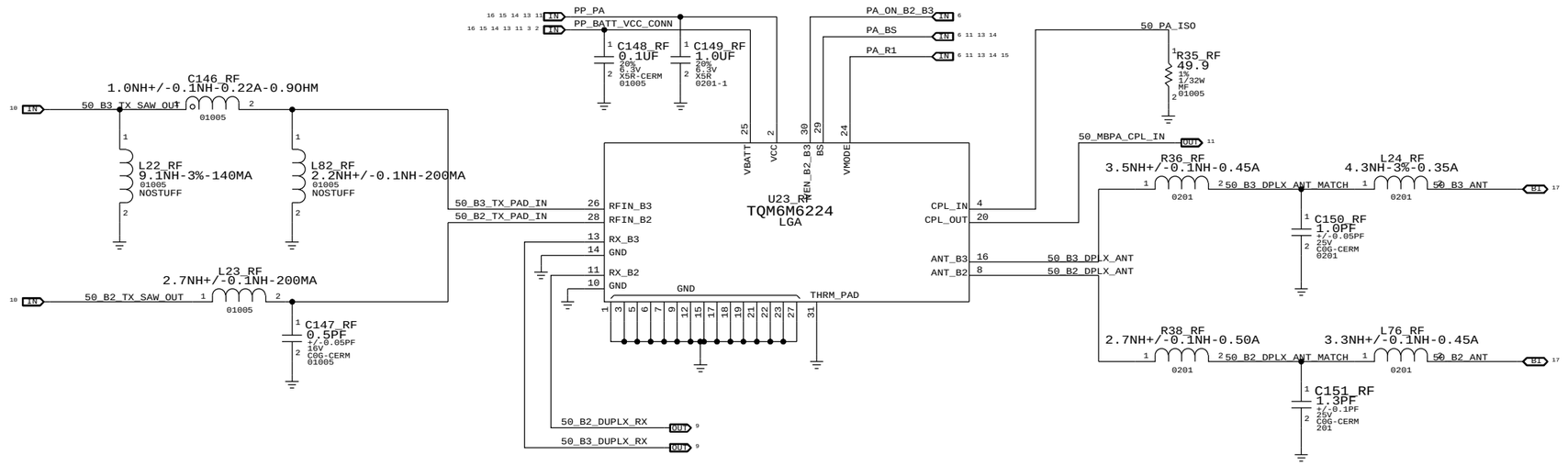


BAND 1/34/39/38/40 TX



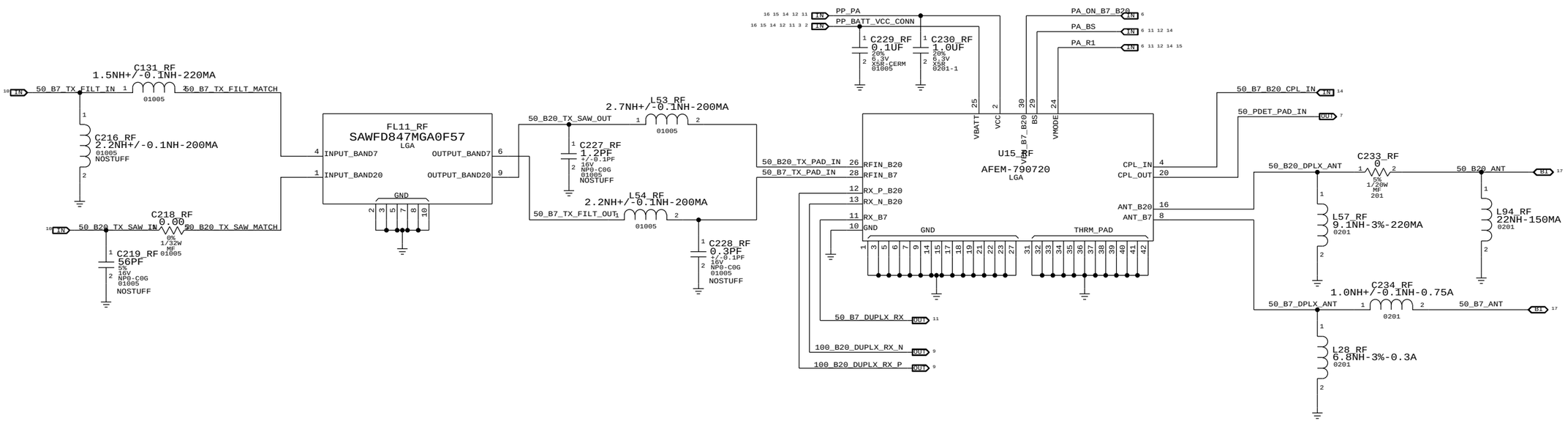
BAND	PA POWER MODE	PA_BS	PA_CTL1	PA_CTL0	PA_R1
OFF	X	X	0	0	0
B1	HPM	X	1	0	0
B1	LPM	X	1	0	1
B34	HPM	1	0	1	0
B34	LPM	1	0	1	1
B39	HPM	0	0	1	0
B39	LPM	0	0	1	1
B38	HPM	1	1	1	0
B38	LPM	1	1	1	1
B40	HPM	0	1	1	0
B40	LPM	0	1	1	1

BAND 2/3 PAD



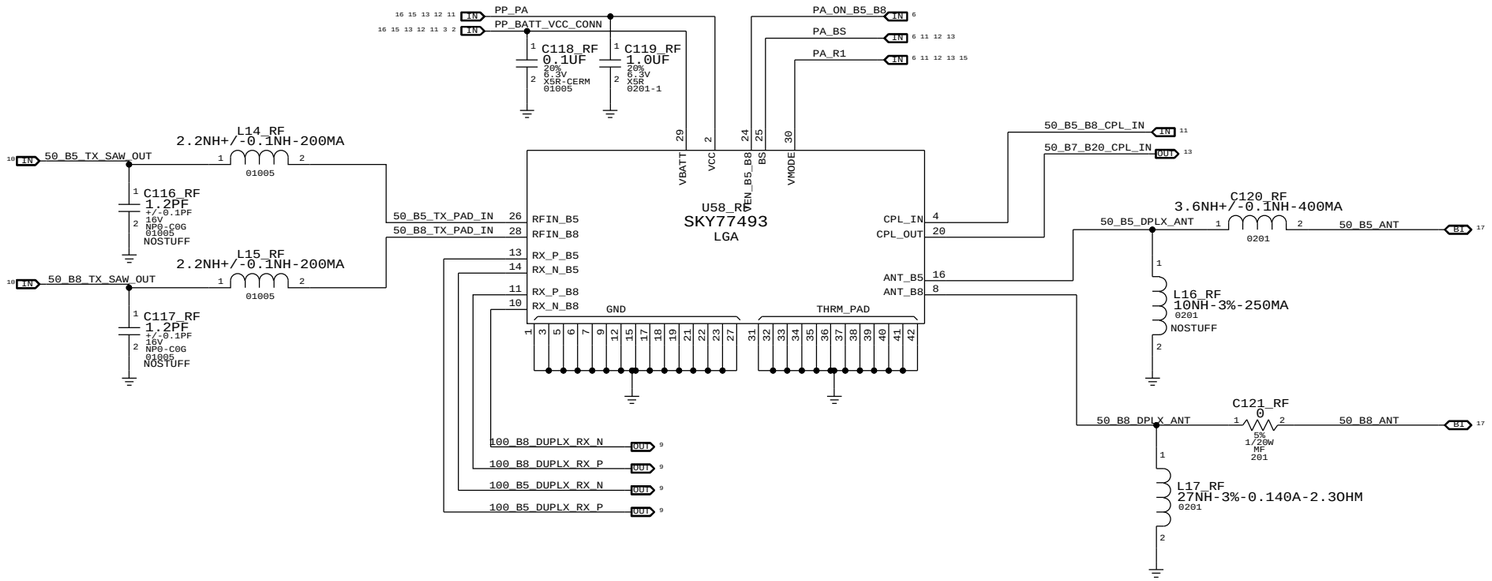
BAND	PA POWER MODE	PA_BS	PA_ON_B2_B3	PA_R1
OFF	X	X	0	X
B3	HPM	0	1	0
B3	LPM	0	1	1
B2	HPM	1	1	0
B2	LPM	1	1	1

BAND 20/7 PAD



BAND	PA POWER MODE	PA_BS	PA_ON_B20_B7	PA_R1
OFF	X	X	0	X
B20	HPM	0	1	0
B20	LPM	0	1	1
B7	HPM	1	1	0
B7	LPM	1	1	1

BAND 5/8 PAD

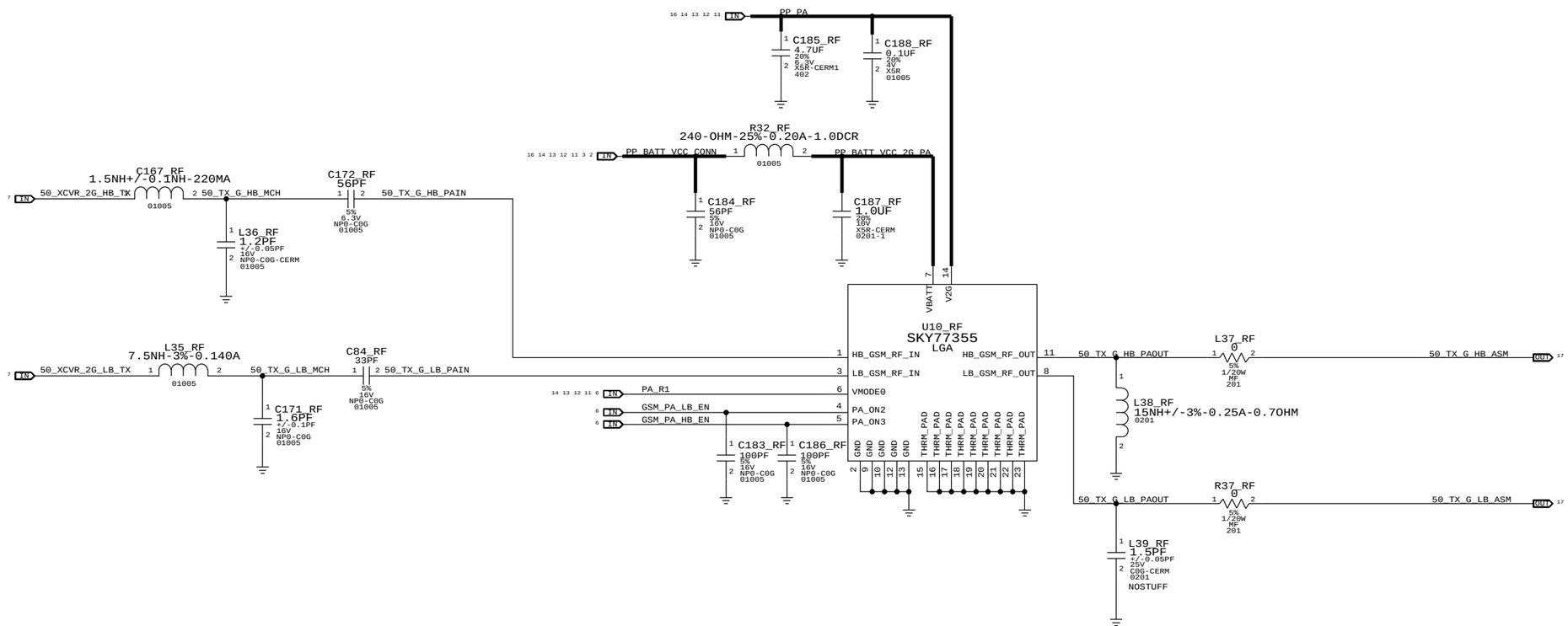


BAND	PA POWER MODE	PA_BS	PA_ON_B5_B8	PA_R1
OFF	X	X	0	X
B5	HPM	0	1	0
B5	LPM	0	1	1
B8	HPM	1	1	0
B8	LPM	1	1	1

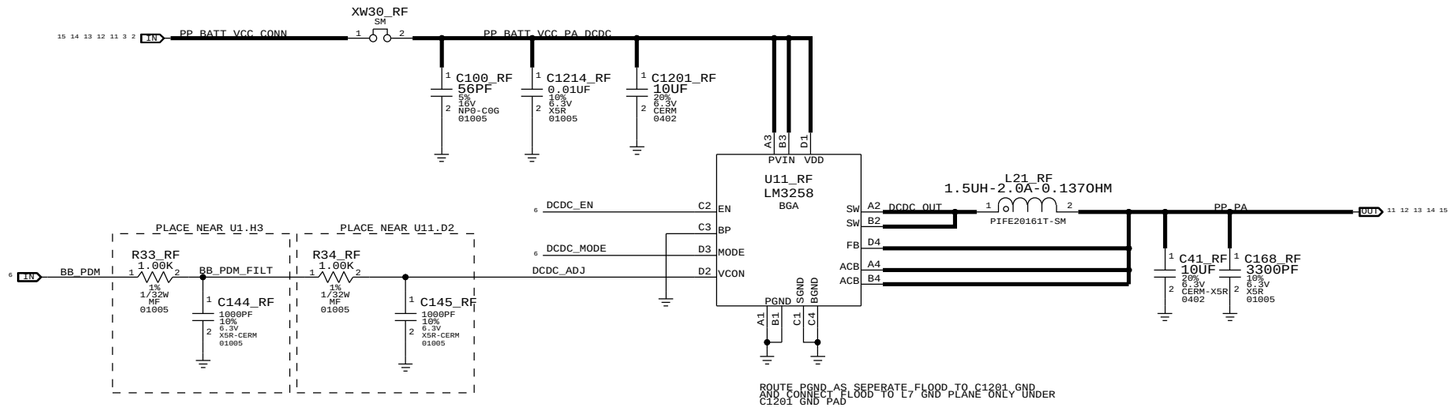
2G PA

2G PA GAIN MODES

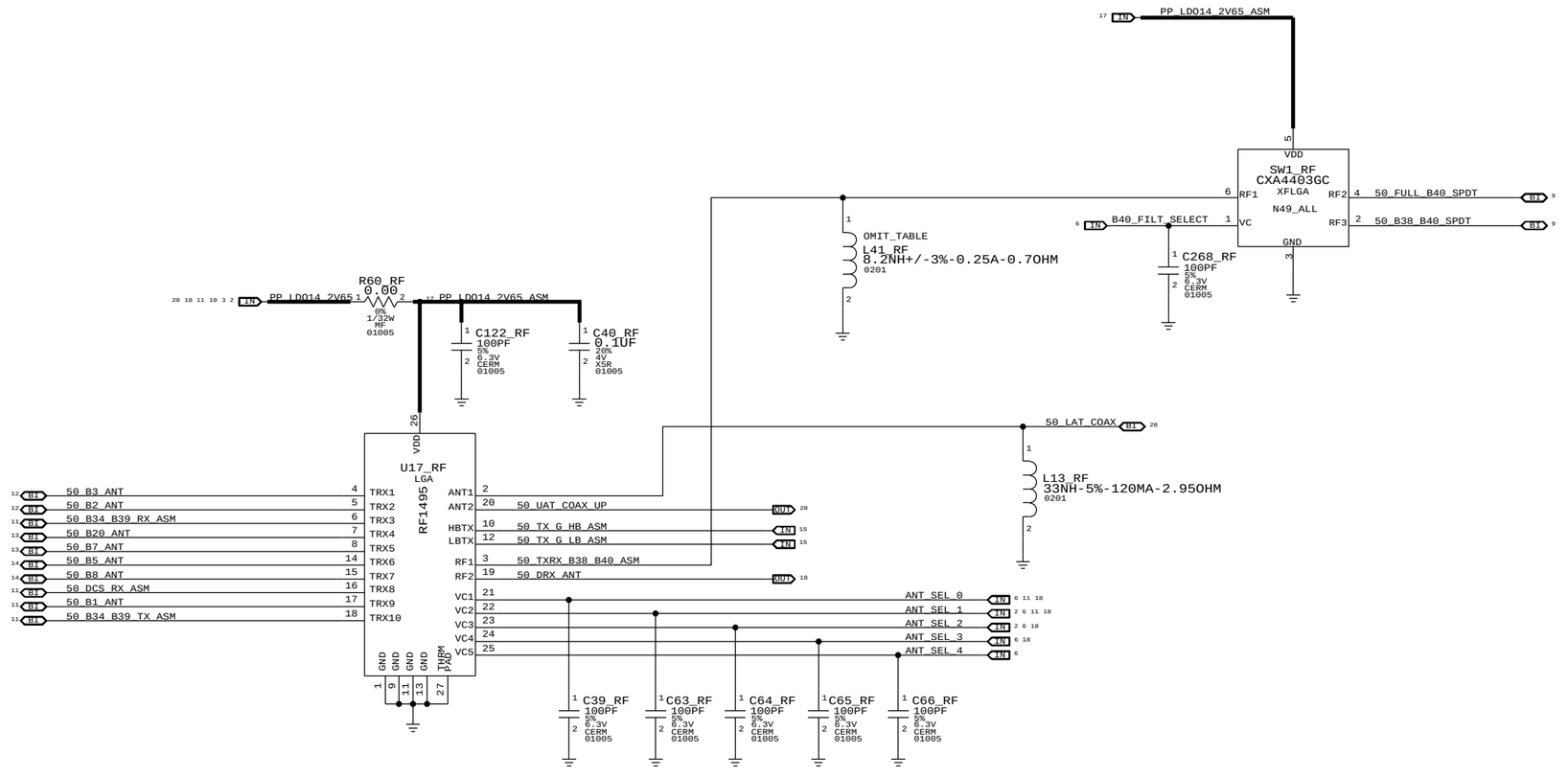
BAND	MODE	GAIN MODE	PA_R1	PCL RANGE
LOW BAND	GSM	ULTRA LOW	HIGH	16 TO 19
LOW BAND	GSM	LOW	HIGH	14 TO 15
LOW BAND	GSM	MEDIUM	LOW	7 TO 13
LOW BAND	GSM	HIGH	LOW	5 TO 6
HIGH BAND	GSM	ULTRA LOW	HIGH	10 TO 15
HIGH BAND	GSM	LOW	HIGH	7 TO 9
HIGH BAND	GSM	HIGH	LOW	0 TO 6
LOW BAND	EDGE	LOW	HIGH	15 TO 19
LOW BAND	EDGE	MEDIUM	LOW	10 TO 14
LOW BAND	EDGE	HIGH	LOW	8 TO 9
HIGH BAND	EDGE	LOW	HIGH	9 TO 15
HIGH BAND	EDGE	HIGH	LOW	2 TO 8



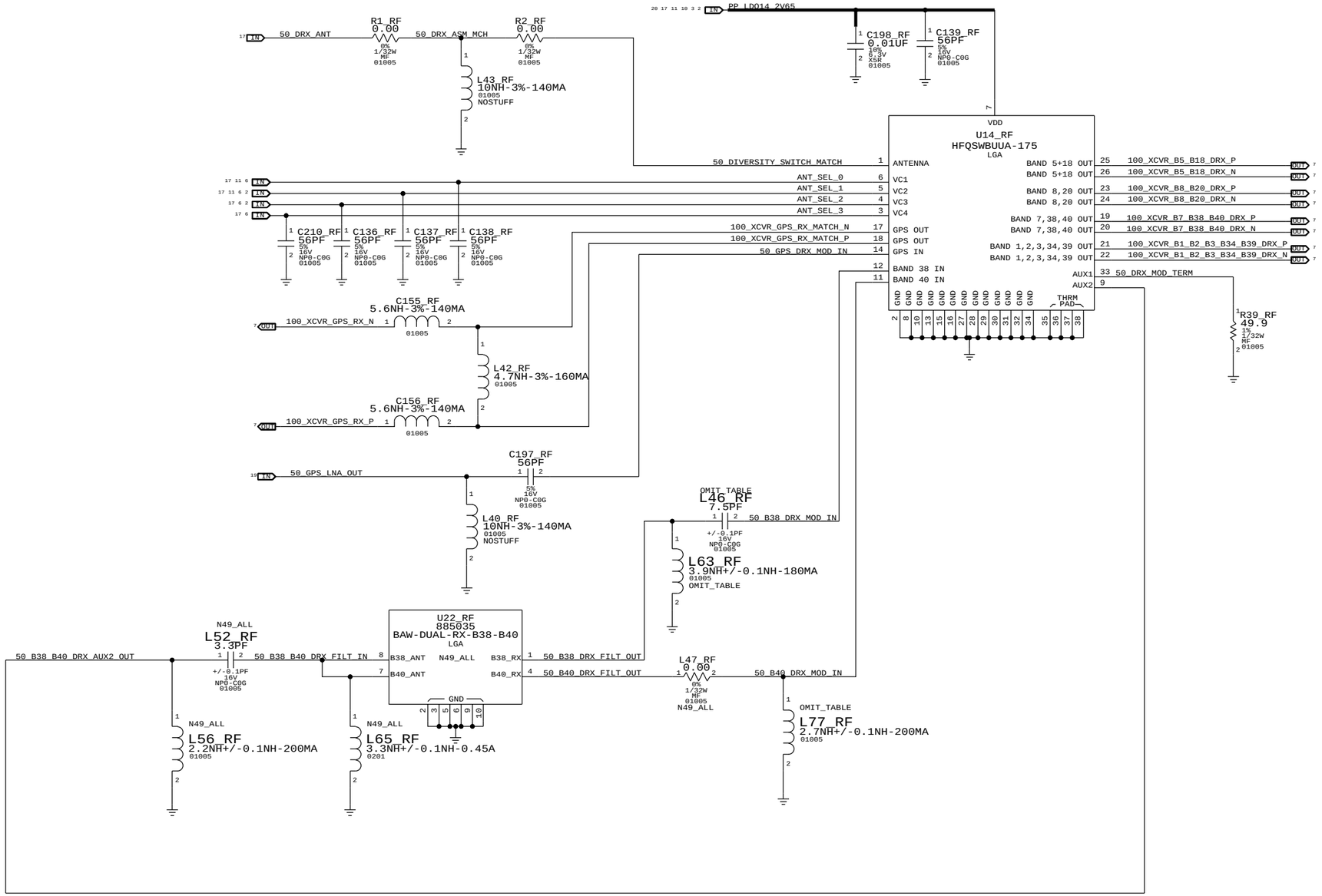
PA DC/DC CONVERTER



PRIMARY ASM

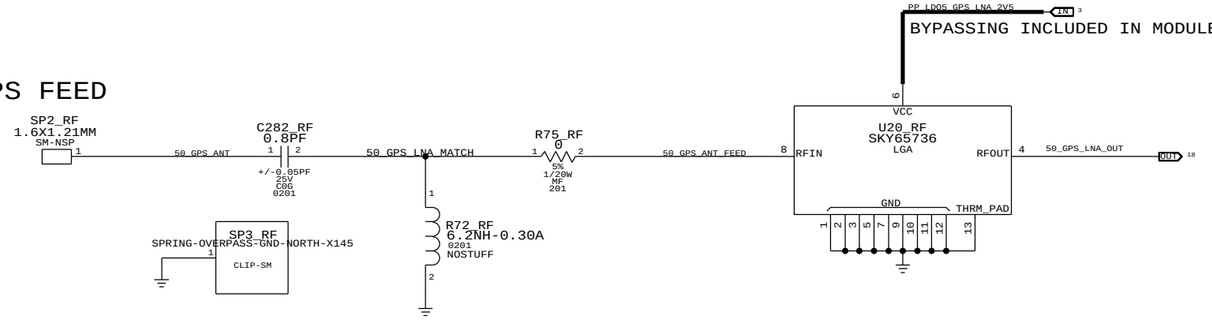


RX DIVERSITY



GPS

GPS FEED


SP2_RF
1.6X1.21MM
SM-NSP
1
50_GPS_ANT
C282_RF
0.8PF
1
2
+/-0.05PF
25V
C0G
0201
50_GPS_LNA_MATCH
R75_RF
0
1
2
5%
1/20W
MF
201
50_GPS_ANT_FEED
SP3_RF
SPRING-OVERPASS-GND-NORTH-X145
1
CLIP-SM
R72_RF
6.2NH-0.30A
0201
NOSTUFF
1
2
PP_LDO5_GPS_LNA_2V5
LN
3
BYPASSING INCLUDED IN MODULE
6
VCC
U20_RF
SKY65736
LGA
8
RFIN
RFOUT
4
50_GPS_LNA_OUT
OUT
18
GND
THRM_PAD
1
2
3
5
7
9
10
11
12
13

ANTENNA FEEDS

UAT1

SP1_RF
BRKT-FEED-DAT-SK200-N48
50_UPPER_ANT_FEED

FL1701_RF
FLTR-GPS-0603
LFE18832MHC1D449
NC

L1732_RF
2.4NH+/-0.2NH-0.57A-0.07OHM
03015
50_NTCH_FLT_OUT
50_UPPER_MCH_1

C1726_RF
0.8PF
+/-0.05PF
16V
C0G-CERM
01005

L6_RF
5.6NH-3%-140MA
01005
PAC_TO_BB_SPI_DATA_MISO
PAC_TO_BB_SPI_DATA_MISO_FILT

L66_RF
5.6NH-3%-140MA
01005
BB_SPI_TO_PAC_CS
BB_SPI_TO_PAC_CS_FILT

L67_RF
5.6NH-3%-140MA
01005
BB_SPI_TO_PAC_DATA_MOSI
BB_SPI_TO_PAC_DATA_MOSI_FILT

L68_RF
5.6NH-3%-140MA
01005
BB_SPI_TO_PAC_CLK
BB_SPI_TO_PAC_CLK_FILT

R5_RF
10K
1%
1/32W
MF
01005

C96_RF 56PF 5% 16V NP0-C0G 01005
C97_RF 56PF 5% 16V NP0-C0G 01005
C98_RF 56PF 5% 16V NP0-C0G 01005
C38_RF 56PF 5% 16V NP0-C0G 01005

U7_RF
RF1112
WLCSP
VDD
MISO
RF1
CS
MOSI
SCLK
RF2
NC
GND

L69_RF
5.6NH-3%-140MA
01005
PP_LDO14_PAC_2V65
PP_LDO14_2V65

C247_RF 56PF 5% 16V NP0-C0G 01005
C99_RF 0.01UF 10% 6.3V X5R 01005

TP1_RF
TP-P6
50_UAT_CELL

L8_RF
8.2NH-+/-0.2NH-0.35A-0.00023OHM
03015

U18_RF
0.3-2170MHZ
LLP
IN/OUT
OUT/IN
GND
50_UAT1_LPF

L48_RF
1.5NH+/-0.1NH-600MA
0201
50_WLAN_G
50_EXTRACTOR_WIFI

U9_RF
885041
DIPLEXER-CELL-WIFI
LGA
ANT
SMD2_ANT/SMD4_GND
SMD3/WLAN
RF2/CELL_SMD1
SMD1
GND

L51_RF
4.3NH-3%-0.35A
0201
50_EXTRACTOR_CELL
50_B7_B38_B40_SPDT

U13_RF
SKY13448
WLCSP
VDD
RF1
RF2
ANT
V1
GND
50_UAT_COAX_DOWN
50_UAT_COAX_UP

C271_RF 56PF 5% 16V NP0-C0G 01005
C157_RF 0.01UF 10% 6.3V X5R 01005
PP_LDO14_2V65

J6_RF MM5829-2700 F-ST-SM
J5_RF MM5829-2700 F-ST-SM

C158_RF 56PF 5% 16V NP0-C0G 01005

BS_SP2T_CTL

UAT1 COAX

UAT2

DPX165950DT-8030C1
U12_RF
SM
LOW_BAND
HIGH_BAND
COMMON
GND
50_UAT2_DIPLEX
50_WLAN_A

L50_RF
3.2NH+/-0.1NH-0.45A-025OHM
0201
50_EXTRACTOR_DIPLEX_1

L49_RF
5.6NH-3%-0.23A-1.3OHM
01005

J10_RF
MM5829-2700
F-ST-SM
50_UAT2_ANT_FD

C101_RF
0.2PF
+/-0.1PF
25V
C0G-CERM
201
NOSTUFF

R13_RF
0
5%
1/20W
MF
201
250_UAT2_ANT_MATCH

LAT

J4_RF
MM5829-2700
F-ST-SM
50_LAT_COAX

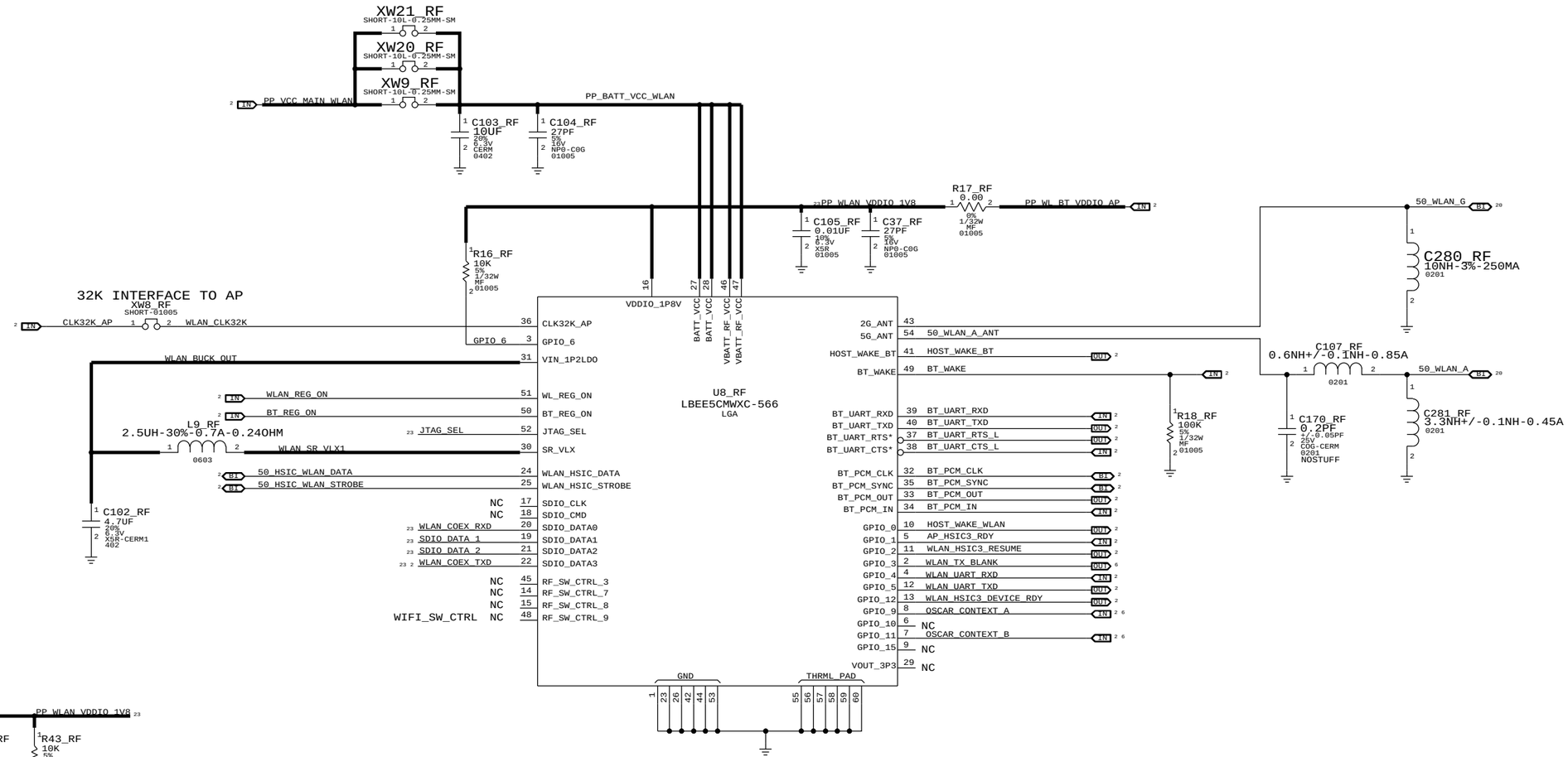
ANTENNA FEEDS (2 OF 2)

FRONT END LOGIC TABLE

BAND	ANT_SEL_0	ANT_SEL_1	ANT_SEL_2	ANT_SEL_3	ANT_SEL_4	PRX PATH	DRX PATH
GSM LB TX	LOW	HIGH	LOW	LOW	LOW	LAT	TERMINATED
GSM LB TX	LOW	HIGH	LOW	LOW	HIGH	UAT	TERMINATED
GSM HB TX	HIGH	HIGH	LOW	HIGH	LOW	LAT	TERMINATED
GSM HB TX	HIGH	HIGH	LOW	HIGH	HIGH	UAT	TERMINATED
B1	HIGH	HIGH	HIGH	HIGH	LOW	LAT	UAT
B1	HIGH	HIGH	HIGH	HIGH	HIGH	UAT	LAT
B2/B25, 1900RX	HIGH	LOW	LOW	HIGH	LOW	LAT	UAT
B2/B25, 1900RX	HIGH	LOW	LOW	HIGH	HIGH	UAT	LAT
B3	HIGH	HIGH	LOW	LOW	LOW	LAT	UAT
B3	HIGH	HIGH	LOW	LOW	HIGH	UAT	LAT
B5/B6/B18, 850RX	HIGH	LOW	LOW	LOW	LOW	LAT	UAT
B5/B6/B18, 850RX	HIGH	LOW	LOW	LOW	HIGH	UAT	LAT
B20	HIGH	LOW	HIGH	HIGH	LOW	LAT	UAT
B20	HIGH	LOW	HIGH	HIGH	HIGH	UAT	LAT
B34/B39 TX	LOW	LOW	HIGH	HIGH	LOW	LAT	TERMINATED
B34/B39 TX	LOW	LOW	HIGH	HIGH	HIGH	UAT	TERMINATED
B34 RX	LOW	LOW	LOW	HIGH	LOW	LAT	UAT
B34 RX	LOW	LOW	LOW	HIGH	HIGH	UAT	LAT
B39 RX	LOW	LOW	HIGH	LOW	LOW	LAT	UAT
B39 RX	LOW	LOW	HIGH	LOW	HIGH	UAT	LAT
B38/B40 TX	LOW	HIGH	HIGH	LOW	LOW	LAT	TERMINATED
B38/B40 TX	LOW	HIGH	HIGH	LOW	HIGH	UAT	TERMINATED
B38 RX	HIGH	LOW	HIGH	LOW	LOW	LAT	UAT
B38 RX	HIGH	LOW	HIGH	LOW	HIGH	UAT	LAT
B40 RX	HIGH	HIGH	HIGH	LOW	LOW	LAT	UAT
B40 RX	HIGH	HIGH	HIGH	LOW	HIGH	UAT	LAT
B7	LOW	HIGH	HIGH	HIGH	LOW	LAT	UAT
B7	LOW	HIGH	HIGH	HIGH	HIGH	UAT	LAT
B8, GSM900 RX	LOW	HIGH	LOW	HIGH	LOW	LAT	UAT
B8, GSM900 RX	LOW	HIGH	LOW	HIGH	HIGH	UAT	LAT
GSM1800 RX	LOW	LOW	LOW	LOW	LOW	LAT	TERMINATED
GSM1800 RX	LOW	LOW	LOW	LOW	HIGH	UAT	TERMINATED

LAT = LOWER ANTENNA
UAT = UPPER ANTENNA

WLAN/BT



PULL-UP ON GPIO6, SDIO_DATA_2 & PULL-DOWN ON SDIO_DATA_1 REQUIRED FOR HSIC BOOTSTRAPPING

Title: Basenet Report
Design: radio_mlb
Date: Nov 27 0:19:39 2012

Base nets and synonyms for radio_mlb_lib.RADIO_MLB(@radio_mlb_lib.radio_mlb(sch_1))

Base Signal	Synonyms	Location([Zone][dir])
3P4T_SEL_0	3P4T_SEL_0 - @radio_mlb_lib.RADIO_MLB	6C2 11B1 11D4
3P4T_SEL_1	3P4T_SEL_1 - @radio_mlb_lib.RADIO_MLB	6C2 11B1 11D4
19P2M_CLK_EN	19P2M_CLK_EN - @radio_mlb_lib.RADIO_MLB	4B2 5A5
19P2M_MDM	19P2M_MDM - @radio_mlb_lib.RADIO_MLB	4B2 5A5
19P2M_WTR	19P2M_WTR - @radio_mlb_lib.RADIO_MLB	4B2 7C5
19P2M_WTR_FILT_IN	19P2M_WTR_FILT_IN - @radio_mlb_lib.RADIO_MLB	7C5
19P2M_WTR_IN	19P2M_WTR_IN - @radio_mlb_lib.RADIO_MLB	7C4
19P2M_XTAL_IN	19P2M_XTAL_IN - @radio_mlb_lib.RADIO_MLB	4B4
19P2M_XTAL_OUT	19P2M_XTAL_OUT - @radio_mlb_lib.RADIO_MLB	4B4
50_B1_ANT	50_B1_ANT - @radio_mlb_lib.RADIO_MLB	11A1 17B7
50_B1_B3_TX_SAW_IN	50_B1_B3_TX_SAW_IN - @radio_mlb_lib.RADIO_MLB	10C4
50_B1_PA_IN	50_B1_PA_IN - @radio_mlb_lib.RADIO_MLB	11C7
50_B1_PA_OUT	50_B1_PA_OUT - @radio_mlb_lib.RADIO_MLB	11B6
50_B1_PA_OUT_MATCH	50_B1_PA_OUT_MATCH - @radio_mlb_lib.RADIO_MLB	11B4
50_B1_RX_MOD_ANT	50_B1_RX_MOD_ANT - @radio_mlb_lib.RADIO_MLB	11A3
50_B1_TX_SAW_MATCH	50_B1_TX_SAW_MATCH - @radio_mlb_lib.RADIO_MLB	10D2
50_B1_TX_SAW_OUT	50_B1_TX_SAW_OUT - @radio_mlb_lib.RADIO_MLB	10D1 11C8
50_B2_ANT	50_B2_ANT - @radio_mlb_lib.RADIO_MLB	12C2 17B7
50_B2_B3_CPL_IN	50_B2_B3_CPL_IN - @radio_mlb_lib.RADIO_MLB	12C3 13C2
50_B2_DPLX_ANT	50_B2_DPLX_ANT - @radio_mlb_lib.RADIO_MLB	12C4
50_B2_DPLX_ANT_MATCH	50_B2_DPLX_ANT_MATCH - @radio_mlb_lib.RADIO_MLB	12C3
50_B2_DUPLX_RX	50_B2_DUPLX_RX - @radio_mlb_lib.RADIO_MLB	9C8 12C5
50_B2_RX_BALUN	50_B2_RX_BALUN - @radio_mlb_lib.RADIO_MLB	9C7
50_B2_TX_PAD_IN	50_B2_TX_PAD_IN - @radio_mlb_lib.RADIO_MLB	12C6
50_B2_TX_SAW_IN	50_B2_TX_SAW_IN - @radio_mlb_lib.RADIO_MLB	10D7
50_B2_TX_SAW_OUT	50_B2_TX_SAW_OUT - @radio_mlb_lib.RADIO_MLB	10D5 12C7
50_B3_ANT	50_B3_ANT - @radio_mlb_lib.RADIO_MLB	12C2 17B7
50_B3_DPLX_ANT	50_B3_DPLX_ANT - @radio_mlb_lib.RADIO_MLB	12C4
50_B3_DPLX_ANT_MATCH	50_B3_DPLX_ANT_MATCH - @radio_mlb_lib.RADIO_MLB	12C3
50_B3_DUPLX_RX	50_B3_DUPLX_RX - @radio_mlb_lib.RADIO_MLB	9B8 12C5
50_B3_RX_BALUN	50_B3_RX_BALUN - @radio_mlb_lib.RADIO_MLB	9B7
50_B3_TX_PAD_IN	50_B3_TX_PAD_IN - @radio_mlb_lib.RADIO_MLB	12C6
50_B3_TX_SAW_MATCH	50_B3_TX_SAW_MATCH - @radio_mlb_lib.RADIO_MLB	10C2
50_B3_TX_SAW_OUT	50_B3_TX_SAW_OUT - @radio_mlb_lib.RADIO_MLB	10C1 12C7
50_B5_ANT	50_B5_ANT - @radio_mlb_lib.RADIO_MLB	14C2 17B7
50_B5_B8_CPL_IN	50_B5_B8_CPL_IN - @radio_mlb_lib.RADIO_MLB	11C4 14D3
50_B5_B18_TX_SAW_IN	50_B5_B18_TX_SAW_IN - @radio_mlb_lib.RADIO_MLB	10D7
50_B5_DPLX_ANT	50_B5_DPLX_ANT - @radio_mlb_lib.RADIO_MLB	14C3
50_B5_TX_PAD_IN	50_B5_TX_PAD_IN - @radio_mlb_lib.RADIO_MLB	14C6
50_B5_TX_SAW_OUT	50_B5_TX_SAW_OUT - @radio_mlb_lib.RADIO_MLB	10D5 14C7
50_B7_ANT	50_B7_ANT - @radio_mlb_lib.RADIO_MLB	13B1 17B7
50_B7_B38_B40_PRX_BALUN_IN	50_B7_B38_B40_PRX_BALUN_IN - @radio_mlb_lib.RADIO_MLB	9C6 11D1
50_B7_B38_B40_SPDT	50_B7_B38_B40_SPDT - @radio_mlb_lib.RADIO_MLB	20C3
50_B7_DPLX_ANT	50_B7_DPLX_ANT - @radio_mlb_lib.RADIO_MLB	13B3
50_B7_DUPLX_RX	50_B7_DUPLX_RX - @radio_mlb_lib.RADIO_MLB	11D1 13B4
50_B7_RX_SP3T_IN	50_B7_RX_SP3T_IN - @radio_mlb_lib.RADIO_MLB	11D2
50_B7_TX_FILT_IN	50_B7_TX_FILT_IN - @radio_mlb_lib.RADIO_MLB	10B4 13C8
50_B7_TX_FILT_MATCH	50_B7_TX_FILT_MATCH - @radio_mlb_lib.RADIO_MLB	13C7
50_B7_TX_FILT_OUT	50_B7_TX_FILT_OUT - @radio_mlb_lib.RADIO_MLB	13C6
50_B7_TX_PAD_IN	50_B7_TX_PAD_IN - @radio_mlb_lib.RADIO_MLB	13C5
50_B7_TX_SPDT_OUT	50_B7_TX_SPDT_OUT - @radio_mlb_lib.RADIO_MLB	10B5
50_B8_ANT	50_B8_ANT - @radio_mlb_lib.RADIO_MLB	14C2 17B7
50_B8_DPLX_ANT	50_B8_DPLX_ANT - @radio_mlb_lib.RADIO_MLB	14C3
50_B8_TX_PAD_IN	50_B8_TX_PAD_IN - @radio_mlb_lib.RADIO_MLB	14C6
50_B8_TX_SAW_IN	50_B8_TX_SAW_IN - @radio_mlb_lib.RADIO_MLB	10C7
50_B8_TX_SAW_OUT	50_B8_TX_SAW_OUT - @radio_mlb_lib.RADIO_MLB	10C5 14C7
50_B20_ANT	50_B20_ANT - @radio_mlb_lib.RADIO_MLB	13C1 17B7
50_B20_DPLX_ANT	50_B20_DPLX_ANT - @radio_mlb_lib.RADIO_MLB	13C3
50_B20_TX_PAD_IN	50_B20_TX_PAD_IN - @radio_mlb_lib.RADIO_MLB	13C5
50_B20_TX_SAW_IN	50_B20_TX_SAW_IN - @radio_mlb_lib.RADIO_MLB	10C5 13C8
50_B20_TX_SAW_MATCH	50_B20_TX_SAW_MATCH - @radio_mlb_lib.RADIO_MLB	13C8
50_B20_TX_SAW_OUT	50_B20_TX_SAW_OUT - @radio_mlb_lib.RADIO_MLB	13C6
50_B34_B39_PA_FILT_IN	50_B34_B39_PA_FILT_IN - @radio_mlb_lib.RADIO_MLB	11C4
50_B34_B39_PA_FILT_OUT	50_B34_B39_PA_FILT_OUT - @radio_mlb_lib.RADIO_MLB	11C3
50_B34_B39_PA_OUT	50_B34_B39_PA_OUT - @radio_mlb_lib.RADIO_MLB	11C4
50_B34_B39_RX_ASM	50_B34_B39_RX_ASM - @radio_mlb_lib.RADIO_MLB	11B1 17B7
50_B34_B39_TX_ASM	50_B34_B39_TX_ASM - @radio_mlb_lib.RADIO_MLB	11C1 17B7
50_B34_B39_TX_FILT_IN	50_B34_B39_TX_FILT_IN - @radio_mlb_lib.RADIO_MLB	10D4
50_B34_PA_IN	50_B34_PA_IN - @radio_mlb_lib.RADIO_MLB	11C7
50_B34_TX_SAW_OUT	50_B34_TX_SAW_OUT - @radio_mlb_lib.RADIO_MLB	10D1 11C8
50_B38_B40_DRX_AUX2_OUT	50_B38_B40_DRX_AUX2_OUT - @radio_mlb_lib.RADIO_MLB	18A7
50_B38_B40_DRX_FILT_IN	50_B38_B40_DRX_FILT_IN - @radio_mlb_lib.RADIO_MLB	18A6
50_B38_B40_PA_IN	50_B38_B40_PA_IN - @radio_mlb_lib.RADIO_MLB	11B7
50_B38_B40_SPDT	50_B38_B40_SPDT - @radio_mlb_lib.RADIO_MLB	9B2 17C2
50_B38_B40_TX_FILT_ANT	50_B38_B40_TX_FILT_ANT - @radio_mlb_lib.RADIO_MLB	9B3
50_B38_B40_TX_MATCH	50_B38_B40_TX_MATCH - @radio_mlb_lib.RADIO_MLB	11B7
50_B38_B40_TX_SPDT_MATCH	50_B38_B40_TX_SPDT_MATCH - @radio_mlb_lib.RADIO_MLB	10B4 11B8
50_B38_B40_TX_SPDT_OUT	50_B38_B40_TX_SPDT_OUT - @radio_mlb_lib.RADIO_MLB	10B5
50_B38_DRX_FILT_OUT	50_B38_DRX_FILT_OUT - @radio_mlb_lib.RADIO_MLB	18A5
50_B38_DRX_MOD_IN	50_B38_DRX_MOD_IN - @radio_mlb_lib.RADIO_MLB	18B4
50_B38_FILTER	50_B38_FILTER - @radio_mlb_lib.RADIO_MLB	9B5 11D1
50_B38_FILTER_MATCH	50_B38_FILTER_MATCH - @radio_mlb_lib.RADIO_MLB	9B4
50_B38_PA_MATCH	50_B38_PA_MATCH - @radio_mlb_lib.RADIO_MLB	11D4
50_B38_PA_OUT	50_B38_PA_OUT - @radio_mlb_lib.RADIO_MLB	11D4
50_B39_PA_IN	50_B39_PA_IN - @radio_mlb_lib.RADIO_MLB	11C7
50_B39_TX_SAW_OUT	50_B39_TX_SAW_OUT - @radio_mlb_lib.RADIO_MLB	10D1 11C8
50_B40_DRX_FILT_OUT	50_B40_DRX_FILT_OUT - @radio_mlb_lib.RADIO_MLB	18A5
50_B40_DRX_MOD_IN	50_B40_DRX_MOD_IN - @radio_mlb_lib.RADIO_MLB	18A4
50_B40_FILTER	50_B40_FILTER - @radio_mlb_lib.RADIO_MLB	9A5 11D1
50_B40_FILTER_MATCH	50_B40_FILTER_MATCH - @radio_mlb_lib.RADIO_MLB	9A4
50_B40_PA_MATCH	50_B40_PA_MATCH - @radio_mlb_lib.RADIO_MLB	11C4
50_B40_PA_OUT	50_B40_PA_OUT - @radio_mlb_lib.RADIO_MLB	11C4
50_DCS_RX_ASM	50_DCS_RX_ASM - @radio_mlb_lib.RADIO_MLB	11B1 17B7
50_DIVERSITY_SWITCH_MATCH	50_DIVERSITY_SWITCH_MATCH - @radio_mlb_lib.RADIO_MLB	18C4
50_DRX_ANT	50_DRX_ANT - @radio_mlb_lib.RADIO_MLB	17B4 18D6
50_DRX_ASM_MCH	50_DRX_ASM_MCH - @radio_mlb_lib.RADIO_MLB	18D6
50_DRX_MOD_TERM	50_DRX_MOD_TERM - @radio_mlb_lib.RADIO_MLB	18C3
50_EXTRACTOR_CELL	50_EXTRACTOR_CELL - @radio_mlb_lib.RADIO_MLB	20C3
50_EXTRACTOR_DIPLEX_1	50_EXTRACTOR_DIPLEX_1 - @radio_mlb_lib.RADIO_MLB	20B5
50_EXTRACTOR_WIFI	50_EXTRACTOR_WIFI - @radio_mlb_lib.RADIO_MLB	20C4
50_FULL_B40_FILTER	50_FULL_B40_FILTER - @radio_mlb_lib.RADIO_MLB	9A5 11D1
50_FULL_B40_FILTER_MATCH	50_FULL_B40_FILTER_MATCH - @radio_mlb_lib.RADIO_MLB	9A4
50_FULL_B40_SPDT	50_FULL_B40_SPDT - @radio_mlb_lib.RADIO_MLB	9A2 17C2
50_FULL_B40_SPDT_MATCH	50_FULL_B40_SPDT_MATCH - @radio_mlb_lib.RADIO_MLB	9A3
50_GPS_ANT	50_GPS_ANT - @radio_mlb_lib.RADIO_MLB	19B6
50_GPS_ANT_FEED	50_GPS_ANT_FEED - @radio_mlb_lib.RADIO_MLB	19B5
50_GPS_DRX_MOD_IN	50_GPS_DRX_MOD_IN - @radio_mlb_lib.RADIO_MLB	18C4
50_GPS_LNA_MATCH	50_GPS_LNA_MATCH - @radio_mlb_lib.RADIO_MLB	19B6
50_GPS_LNA_OUT	50_GPS_LNA_OUT - @radio_mlb_lib.RADIO_MLB	18B6 19B3
50_HSIC_BB_DATA	50_HSIC_BB_DATA - @radio_mlb_lib.RADIO_MLB	2B1 2B6 2C8 5B3
50_HSIC_BB_STROBE	50_HSIC_BB_STROBE - @radio_mlb_lib.RADIO_MLB	2B1 2B6 2C8 5B3
50_HSIC_CAL	50_HSIC_CAL - @radio_mlb_lib.RADIO_MLB	5B3
50_HSIC_WLAN_DATA	50_HSIC_WLAN_DATA - @radio_mlb_lib.RADIO_MLB	2B6 2C8 23B6
50_HSIC_WLAN_STROBE	50_HSIC_WLAN_STROBE - @radio_mlb_lib.RADIO_MLB	2B6 2C8 23B6
50_LAT_COAX	50_LAT_COAX - @radio_mlb_lib.RADIO_MLB	20A6
50_LAT_MATCH	50_LAT_MATCH - @radio_mlb_lib.RADIO_MLB	20A5
50_LAT_TEST	50_LAT_TEST - @radio_mlb_lib.RADIO_MLB	17B3 20A3
50_MBPA_CPL_IN	50_MBPA_CPL_IN - @radio_mlb_lib.RADIO_MLB	11C4 12C3
50_NTCH_FILT_OUT	50_NTCH_FILT_OUT - @radio_mlb_lib.RADIO_MLB	20D7
50_PA_ISO	50_PA_ISO - @radio_mlb_lib.RADIO_MLB	13C3
50_PDET_IN	50_PDET_IN - @radio_mlb_lib.RADIO_MLB	7C3
50_PDET_PAD_IN	50_PDET_PAD_IN - @radio_mlb_lib.RADIO_MLB	7C1 14C3
50_PDET_PAD_OUT	50_PDET_PAD_OUT - @radio_mlb_lib.RADIO_MLB	7C2
50_RX_MOD_B34_B39_IN	50_RX_MOD_B34_B39_IN - @radio_mlb_lib.RADIO_MLB	11B2
50_RX_MOD_DCS_IN	50_RX_MOD_DCS_IN - @radio_mlb_lib.RADIO_MLB	11B2
50_TXRX_B38_B40_ASM	50_TXRX_B38_B40_ASM - @radio_mlb_lib.RADIO_MLB	17B5
50_TX_G_HB_ASM	50_TX_G_HB_ASM - @radio_mlb_lib.RADIO_MLB	15B2 17B4
50_TX_G_HB_MCH	50_TX_G_HB_MCH - @radio_mlb_lib.RADIO_MLB	15C7
50_TX_G_HB_PAIN	50_TX_G_HB_PAIN - @radio_mlb_lib.RADIO_MLB	15C6
50_TX_G_HB_PAOUT	50_TX_G_HB_PAOUT - @radio_mlb_lib.RADIO_MLB	15B4
50_TX_G_LB_ASM	50_TX_G_LB_ASM - @radio_mlb_lib.RADIO_MLB	15B2 17B4
50_TX_G_LB_MCH	50_TX_G_LB_MCH - @radio_mlb_lib.RADIO_MLB	15B7
50_TX_G_LB_PAIN	50_TX_G_LB_PAIN - @radio_mlb_lib.RADIO_MLB	15B6
50_TX_G_LB_PAOUT	50_TX_G_LB_PAOUT - @radio_mlb_lib.RADIO_MLB	15B4
50_UAT1_LPF	50_UAT1_LPF - @radio_mlb_lib.RADIO_MLB	20D3
50_UAT2_ANT_FD	50_UAT2_ANT_FD - @radio_mlb_lib.RADIO_MLB	20B7
50_UAT2_ANT_MATCH	50_UAT2_ANT_MATCH - @radio_mlb_lib.RADIO_MLB	20B7
50_UAT2_DIPLEX	50_UAT2_DIPLEX - @radio_mlb_lib.RADIO_MLB	20C6
50_UAT_CELL	50_UAT_CELL - @radio_mlb_lib.RADIO_MLB	20D4
50_UAT_COAX_DOWN	50_UAT_COAX_DOWN - @radio_mlb_lib.RADIO_MLB	20C2
50_UAT_COAX_UP	50_UAT_COAX_UP - @radio_mlb_lib.RADIO_MLB	17B4 20C1
50_UPPER_ANT_FEED	50_UPPER_ANT_FEED - @radio_mlb_lib.RADIO_MLB	20D8
50_UPPER_MCH_1	50_UPPER_MCH_1 - @radio_mlb_lib.RADIO_MLB	20D6
50_WLAN_A	50_WLAN_A - @radio_mlb_lib.RADIO_MLB	20C6 23C1
50_WLAN_A_ANT	50_WLAN_A_ANT - @radio_mlb_lib.RADIO_MLB	23C4
50_WLAN_G	50_WLAN_G - @radio_mlb_lib.RADIO_MLB	20C4 23C1
50_WLAN_G_ANT	50_WLAN_G_ANT - @radio_mlb_lib.RADIO_MLB	23C4
50_XCVR_2G_HB_TX	50_XCVR_2G_HB_TX - @radio_mlb_lib.RADIO_MLB	7D2 15C8
50_XCVR_2G_LB_TX	50_XCVR_2G_LB_TX - @radio_mlb_lib.RADIO_MLB	7D2 15B8
50_XCVR_B1_B3_TX	50_XCVR_B1_B3_TX - @radio_mlb_lib.RADIO_MLB	7D2 10C5
50_XCVR_B2_TX	50_XCVR_B2_TX - @radio_mlb_lib.RADIO_MLB	7D2 10D8
50_XCVR_B5_B18_TX	50_XCVR_B5_B18_TX - @radio_mlb_lib.RADIO_MLB	7D2 10D8
50_XCVR_B7_B38_B40_TX	50_XCVR_B7_B38_B40_TX - @radio_mlb_lib.RADIO_MLB	7C2 10B7
50_XCVR_B7_B38_B40_TX_MATCH	50_XCVR_B7_B38_B40_TX_MATCH - @radio_mlb_lib.RADIO_MLB	10B6
50_XCVR_B8_TX	50_XCVR_B8_TX - @radio_mlb_lib.RADIO_MLB	7D2 10C8
50_XCVR_B20_TX	50_XCVR_B20_TX - @radio_mlb_lib.RADIO_MLB	7D2 10C8
50_XCVR_B34_B39_TX	50_XCVR_B34_B39_TX - @radio_mlb_lib.RADIO_MLB	7D2 10D5
90_BB_USB_D_N	90_BB_USB_D_N - @radio_mlb_lib.RADIO_MLB	2C3 2C8 5A5
90_BB_USB_D_P	90_BB_USB_D_P - @radio_mlb_lib.RADIO_MLB	2C3 2C8 5A5
100_B5_DUPLX_RX_N	100_B5_DUPLX_RX_N - @radio_mlb_lib.RADIO_MLB	9C4 14C5
100_B5_DUPLX_RX_P	100_B5_DUPLX_RX_P - @radio_mlb_lib.RADIO_MLB	9C4 14C5
100_B7_B38_B40_PRX_BALUN_OUT_N	100_B7_B38_B40_PRX_BALUN_OUT_N - @radio_mlb_lib.RADIO_MLB	9C4
100_B7_B38_B40_PRX_BALUN_OUT_P	100_B7_B38_B40_PRX_BALUN_OUT_P - @radio_mlb_lib.RADIO_MLB	9B4
100_B7_B38_B40_PRX_MATCH_N	100_B7_B38_B40_PRX_MATCH_N - @radio_mlb_lib.RADIO_MLB	9C3
100_B7_B38_B40_PRX_MATCH_P	100_B7_B38_B40_PRX_MATCH_P - @radio_mlb_lib.RADIO_MLB	9B3
100_B8_DUPLX_RX_N	100_B8_DUPLX_RX_N - @radio_mlb_lib.RADIO_MLB	9D4 14C5
100_B8_DUPLX_RX_P	100_B8_DUPLX_RX_P - @radio_mlb_lib.RADIO_MLB	9D4 14C5
100_B20_DUPLX_RX_N	100_B20_DUPLX_RX_N - @radio_mlb_lib.RADIO_MLB	9B8 13B4
100_B20_DUPLX_RX_P	100_B20_DUPLX_RX_P - @radio_mlb_lib.RADIO_MLB	9A8 13B4
100_RX_MODULE_OUT_N	100_RX_MODULE_OUT_N - @radio_mlb_lib.RADIO_MLB	9C8 11B5
100_RX_MODULE_OUT_P	100_RX_MODULE_OUT_P - @radio_mlb_lib.RADIO_MLB	9D8 11B5
100_XCVR_B1_B2_B3_B34_B39_DRX_N	100_XCVR_B1_B2_B3_B34_B39_DRX_N - @radio_mlb_lib.RADIO_MLB	7C8 18C2
100_XCVR_B1_B2_B3_B34_B39_DRX_P	100_XCVR_B1_B2_B3_B34_B39_DRX_P - @radio_mlb_lib.RADIO_MLB	7C8 18C2
100_XCVR_B1_B34_B39_DCS_PRX_N	100_XCVR_B1_B34_B39_DCS_PRX_N - @radio_mlb_lib.RADIO_MLB	7C8 9C6
100_XCVR_B1_B34_B39_DCS_PRX_P	100_XCVR_B1_B34_B39_DCS_PRX_P - @radio_mlb_lib.RADIO_MLB	7C8 9D6
100_XCVR_B2_PRX_N	100_XCVR_B2_PRX_N - @radio_mlb_lib.RADIO_MLB	7C8 9C6
100_XCVR_B2_PRX_P	100_XCVR_B2_PRX_P - @radio_mlb_lib.RADIO_MLB	7D8 9C6
100_XCVR_B3_PRX_N	100_XCVR_B3_PRX_N - @radio_mlb_lib.RADIO_MLB	7C8 9B6
100_XCVR_B3_PRX_P	100_XCVR_B3_PRX_P - @radio_mlb_lib.RADIO_MLB	7C8 9B6
100_XCVR_B5_B18_DRX_N	100_XCVR_B5_B18_DRX_N - @radio_mlb_lib.RADIO_MLB	7C8 18C2
100_XCVR_B5_B18_DRX_P	100_XCVR_B5_B18_DRX_P - @radio_mlb_lib.RADIO_MLB	7C8 18C2
100_XCVR_B5_B18_PRX_N	100_XCVR_B5_B18_PRX_N - @radio_mlb_lib.RADIO_MLB	7D8 9C3
100_XCVR_B5_B18_PRX_P	100_XCVR_B5_B18_PRX_P - @radio_mlb_lib.RADIO_MLB	7D8 9C3
100_XCVR_B7_B38_B40_DRX_N	100_XCVR_B7_B38_B40_DRX_N - @radio_mlb_lib.RADIO_MLB	7C8 18C2
100_XCVR_B7_B38_B40_DRX_P	100_XCVR_B7_B38_B40_DRX_P - @radio_mlb_lib.RADIO_MLB	7C8 18C2
100_XCVR_B7_B38_B40_PRX_N	100_XCVR_B7_B38_B40_PRX_N - @radio_mlb_lib.RADIO_MLB	7C8 9C2
100_XCVR_B7_B38_B40_PRX_P	100_XCVR_B7_B38_B40_PRX_P - @radio_mlb_lib.RADIO_MLB	7C8 9B2
100_XCVR_B8_B20_DRX_N	100_XCVR_B8_B20_DRX_N - @radio_mlb_lib.RADIO_MLB	7C8 18C2
100_XCVR_B8_B20_DRX_P	100_XCVR_B8_B20_DRX_P - @radio_mlb_lib.RADIO_MLB	7C8 18C2
100_XCVR_B8_PRX_N	100_XCVR_B8_PRX_N - @radio_mlb_lib.RADIO_MLB	7D8 9D3
100_XCVR_B8_PRX_P	100_XCVR_B8_PRX_P - @radio_mlb_lib.RADIO_MLB	7D8 9D3
100_XCVR_B20_PRX_N	100_XCVR_B20_PRX_N - @radio_mlb_lib.RADIO_MLB	7D8 9B6
100_XCVR_B20_PRX_P	100_XCVR_B20_PRX_P - @radio_mlb_lib.RADIO_MLB	7D8 9A6
100_XCVR_GPS_RX_MATCH_N	100_XCVR_GPS_RX_MATCH_N - @radio_mlb_lib.RADIO_MLB	18C4
100_XCVR_GPS_RX_MATCH_P	100_XCVR_GPS_RX_MATCH_P - @radio_mlb_lib.RADIO_MLB	18C4
100_XCVR_GPS_RX_N	100_XCVR_GPS_RX_N - @radio_mlb_lib.RADIO_MLB	7B8 18C6
100_XCVR_GPS_RX_P	100_XCVR_GPS_RX_P - @radio_mlb_lib.RADIO_MLB	7B8 18B6
ADC_LDO6_RUIM_1V8	ADC_LDO6_RUIM_1V8 - @radio_mlb_lib.RADIO_MLB	2A7 2B8
ADC_LVS1	ADC_LVS1 - @radio_mlb_lib.RADIO_MLB	2A7 2A8
ADC_SMPS1_MSMC_1V05	ADC_SMPS1_MSMC_1V05 - @radio_mlb_lib.RADIO_MLB	2A7 2B8
ADC_SMPS3_MSME_1V8	ADC_SMPS3_MSME_1V8 - @radio_mlb_lib.RADIO_MLB	2A7 2B8
ANT_SEL_0	ANT_SEL_0 - @radio_mlb_lib.RADIO_MLB	6C2 11D4 17B3 18C6
ANT_SEL_1	ANT_SEL_1 - @radio_mlb_lib.RADIO_MLB	2C3 6C2 11D4 17B3 18C6
ANT_SEL_2	ANT_SEL_2 - @radio_mlb_lib.RADIO_MLB	2C1 6C2 17B3 18C6
ANT_SEL_3	ANT_SEL_3 - @radio_mlb_lib.RADIO_MLB	6C2 17B3 18C6
ANT_SEL_4	ANT_SEL_4 - @radio_mlb_lib.RADIO_MLB	6C2 17B3
AP_HSIC1_RDY	AP_HSIC1_RDY - @radio_mlb_lib.RADIO_MLB	2C1 2C8 6B2
AP_HSIC3_RDY	AP_HSIC3_RDY - @radio_mlb_lib.RADIO_MLB	2C6 2C8 23B3
AP_WAKE_MODEM	AP_WAKE_MODEM - @radio_mlb_lib.RADIO_MLB	2D8 6B4
B40_FILT_SELECT	B40_FILT_SELECT - @radio_mlb_lib.RADIO_MLB	6C2 17C3
BB_ERROR_FLAG	BB_ERROR_FLAG - @radio_mlb_lib.RADIO_MLB	2D6 6B2
BB_HSIC1_REMOTE_WAKE	BB_HSIC1_REMOTE_WAKE - @radio_mlb_lib.RADIO_MLB	2C8 6B2
BB_I2S_CLK	BB_I2S_CLK - @radio_mlb_lib.RADIO_MLB	2B6 2C8 6B4
BB_I2S_RXD	BB_I2S_RXD - @radio_mlb_lib.RADIO_MLB	2B6 2C8 6B4
BB_I2S_TXD	BB_I2S_TXD - @radio_mlb_lib.RADIO_MLB	2A6 2C8 6B4
BB_I2S_WS	BB_I2S_WS - @radio_mlb_lib.RADIO_MLB	2B6 2C8 6B4
BB_IPC_GPIO	BB_IPC_GPIO - @radio_mlb_lib.RADIO_MLB	2A8 6B2
BB_JTAG_RTCLK	BB_JTAG_RTCLK - @radio_mlb_lib.RADIO_MLB	2C3 5B3
BB_JTAG_TCK	BB_JTAG_TCK - @radio_mlb_lib.RADIO_MLB	2B8 2C3 5B5
BB_JTAG_TDI	BB_JTAG_TDI - @radio_mlb_lib.RADIO_MLB	2B8 2C3 5B5
BB_JTAG_TDO	BB_JTAG_TDO - @radio_mlb_lib.RADIO_MLB	2B8 2C3 5B3
BB_JTAG_TMS	BB_JTAG_TMS - @radio_mlb_lib.RADIO_MLB	2B8 2C3 5B5
BB_JTAG_TRST_L	BB_JTAG_TRST_L - @radio_mlb_lib.RADIO_MLB	2B8 2C3 5B5
BB_PDM	BB_PDM - @radio_mlb_lib.RADIO_MLB	6B2 16C7
BB_PDM_FILT	BB_PDM_FILT - @radio_mlb_lib.RADIO_MLB	16C6
BB_RST_L	BB_RST_L - @radio_mlb_lib.RADIO_MLB	2C1 2D8 4C8
BB_SPI_TO_PAC_CLK	BB_SPI_TO_PAC_CLK - @radio_mlb_lib.RADIO_MLB	2B8 6C4 20C7
BB_SPI_TO_PAC_CLK_FILT	BB_SPI_TO_PAC_CLK_FILT - @radio_mlb_lib.RADIO_MLB	20C6
BB_SPI_TO_PAC_CS	BB_SPI_TO_PAC_CS - @radio_mlb_lib.RADIO_MLB	2B8 6C4 20D7
BB_SPI_TO_PAC_CS_FILT	BB_SPI_TO_PAC_CS_FILT - @radio_mlb_lib.RADIO_MLB	20D6
BB_SPI_TO_PAC_DATA_MOSI	BB_SPI_TO_PAC_DATA_MOSI - @radio_mlb_lib.RADIO_MLB	2B8 6C4 20C7
BB_SPI_TO_PAC_DATA_MOSI_FILT	BB_SPI_TO_PAC_DATA_MOSI_FILT - @radio_mlb_lib.RADIO_MLB	20C6
BB_UART_CTS_L	BB_UART_CTS_L - @radio_mlb_lib.RADIO_MLB	2C3 2C8 6C4
BB_UART_RTS_L	BB_UART_RTS_L - @radio_mlb_lib.RADIO_MLB	2C3 2C8 6C4
BB_UART_RXD	BB_UART_RXD - @radio_mlb_lib.RADIO_MLB	2C3 2C8 6C4
BB_UART_TXD	BB_UART_TXD - @radio_mlb_lib.RADIO_MLB	2C3 2C8 6C4
BB_USB_VBUS	BB_USB_VBUS - @radio_mlb_lib.RADIO_MLB	2C3 2C8 5A5
BOARD_ID	BOARD_ID - @radio_mlb_lib.RADIO_MLB	4D4
BS_SP2T_CTL	BS_SP2T_CTL - @radio_mlb_lib.RADIO_MLB	6B2 20B1
BT_PCM_CLK	BT_PCM_CLK - @radio_mlb_lib.RADIO_MLB	2B8 23B3
BT_PCM_IN	BT_PCM_IN - @radio_mlb_lib.RADIO_MLB	2B8 23B3
BT_PCM_OUT	BT_PCM_OUT - @radio_mlb_lib.RADIO_MLB	2B8 23B3
BT_PCM_SYNC	BT_PCM_SYNC - @radio_mlb_lib.RADIO_MLB	2B8 23B3
BT_REG_ON	BT_REG_ON - @radio_mlb_lib.RADIO_MLB	2B8 2C1 23C6
BT_UART_CTS_L	BT_UART_CTS_L - @radio_mlb_lib.RADIO_MLB	2B8 23B3
BT_UART_RTS_L	BT_UART_RTS_L - @radio_mlb_lib.RADIO_MLB	2B8 23C3

BT_UART_RXD	BT_UART_RXD - @radio_mlb_lib.RADIO_MLB	2B6 2B8 23C3
BT_UART_TXD	BT_UART_TXD - @radio_mlb_lib.RADIO_MLB	2B6 2B8 23C3
BT_WAKE	BT_WAKE - @radio_mlb_lib.RADIO_MLB	2B8 2D1 23C2
CLK32K_AP	CLK32K_AP - @radio_mlb_lib.RADIO_MLB	2C8 2D6 23C7
DCDC_ADJ	DCDC_ADJ - @radio_mlb_lib.RADIO_MLB	16C5
DCDC_EN	DCDC_EN - @radio_mlb_lib.RADIO_MLB	6C2 16C5
DCDC_MODE	DCDC_MODE - @radio_mlb_lib.RADIO_MLB	6B2 16C5
DCDC_OUT	DCDC_OUT - @radio_mlb_lib.RADIO_MLB	16C4
DEBUG_RST_L	DEBUG_RST_L - @radio_mlb_lib.RADIO_MLB	2D3 5B5
DRX_BB_I_N	DRX_BB_I_N - @radio_mlb_lib.RADIO_MLB	6C8 7C5
DRX_BB_I_P	DRX_BB_I_P - @radio_mlb_lib.RADIO_MLB	6C8 7C5
DRX_BB_Q_N	DRX_BB_Q_N - @radio_mlb_lib.RADIO_MLB	6C8 7C5
DRX_BB_Q_P	DRX_BB_Q_P - @radio_mlb_lib.RADIO_MLB	6C8 7C5
EBI1_CAL	EBI1_CAL - @radio_mlb_lib.RADIO_MLB	5D2
GPIO_6	GPIO_6 - @radio_mlb_lib.RADIO_MLB	23C5
GPIO_51	GPIO_51 - @radio_mlb_lib.RADIO_MLB	2C3 6C2
GPIO_DEBUG_LED	GPIO_DEBUG_LED - @radio_mlb_lib.RADIO_MLB	2C3 6B4
GPS_BB_I_N	GPS_BB_I_N - @radio_mlb_lib.RADIO_MLB	6C8 7B5
GPS_BB_I_P	GPS_BB_I_P - @radio_mlb_lib.RADIO_MLB	6C8 7B5
GPS_BB_Q_N	GPS_BB_Q_N - @radio_mlb_lib.RADIO_MLB	6C8 7B5
GPS_BB_Q_P	GPS_BB_Q_P - @radio_mlb_lib.RADIO_MLB	6C8 7B5
GSM_PA_HB_EN	GSM_PA_HB_EN - @radio_mlb_lib.RADIO_MLB	6B4 15B5
GSM_PA_LB_EN	GSM_PA_LB_EN - @radio_mlb_lib.RADIO_MLB	6B4 15B5
HOST_WAKE_BB	HOST_WAKE_BB - @radio_mlb_lib.RADIO_MLB	2C1 2D8 6B2
HOST_WAKE_BT	HOST_WAKE_BT - @radio_mlb_lib.RADIO_MLB	2C8 23C3
HOST_WAKE_WLAN	HOST_WAKE_WLAN - @radio_mlb_lib.RADIO_MLB	2C8 23B3
JTAG_SEL	JTAG_SEL - @radio_mlb_lib.RADIO_MLB	23A7 23C6
LAT_SW1_CTL	LAT_SW1_CTL - @radio_mlb_lib.RADIO_MLB	2B8 2C1 6C2
LAT_SW2_CTL	LAT_SW2_CTL - @radio_mlb_lib.RADIO_MLB	2B8 6C2
LAT_SW3_CTL	LAT_SW3_CTL - @radio_mlb_lib.RADIO_MLB	2B8 6C2
LTE_COEX_RXD	LTE_COEX_RXD - @radio_mlb_lib.RADIO_MLB	6B2 23A6
LTE_COEX_TXD	LTE_COEX_TXD - @radio_mlb_lib.RADIO_MLB	2C6 6B2 23A6
OSCAR_CONTEXT_A	OSCAR_CONTEXT_A - @radio_mlb_lib.RADIO_MLB	2A8 6B4 23B3
OSCAR_CONTEXT_B	OSCAR_CONTEXT_B - @radio_mlb_lib.RADIO_MLB	2A8 6B2 23B3
PAC_TO_BB_SPI_DATA_MISO	PAC_TO_BB_SPI_DATA_MISO - @radio_mlb_lib.RADIO_MLB	2B8 6C4 20D7
PAC_TO_BB_SPI_DATA_MISO_FILT	PAC_TO_BB_SPI_DATA_MISO_FILT - @radio_mlb_lib.RADIO_MLB	20D6
PA_BS	PA_BS - @radio_mlb_lib.RADIO_MLB	6B4 11D8 12D4 13C3 14D4
PA_ID	PA_ID - @radio_mlb_lib.RADIO_MLB	4D3
PA_MB_CTL0	PA_MB_CTL0 - @radio_mlb_lib.RADIO_MLB	6B4 10B6 11D8
PA_MB_CTL1	PA_MB_CTL1 - @radio_mlb_lib.RADIO_MLB	6B4 11D8
PA_ON_B2_B3	PA_ON_B2_B3 - @radio_mlb_lib.RADIO_MLB	6B4 12D4
PA_ON_B5_B8	PA_ON_B5_B8 - @radio_mlb_lib.RADIO_MLB	6B4 14D4
PA_ON_B7_B20	PA_ON_B7_B20 - @radio_mlb_lib.RADIO_MLB	6B4 13C3
PA_R1	PA_R1 - @radio_mlb_lib.RADIO_MLB	6C2 11D8 12D4 13C3 14D4 15B5
PBL_RUN_BB_HSIC1_RDY	PBL_RUN_BB_HSIC1_RDY - @radio_mlb_lib.RADIO_MLB	2C1 2D8 6B2
PMIC_RESOUT_L	PMIC_RESOUT_L - @radio_mlb_lib.RADIO_MLB	2C1 4C6 5B5
PMIC_SSBI	PMIC_SSBI - @radio_mlb_lib.RADIO_MLB	2D6 4C8 5A5
PM_MDM_IRQ_L	PM_MDM_IRQ_L - @radio_mlb_lib.RADIO_MLB	4C6 6B2
PM_USR_IRQ_L	PM_USR_IRQ_L - @radio_mlb_lib.RADIO_MLB	4C6 6A2
PP_BATT_VCC_2G_PA	PP_BATT_VCC_2G_PA - @radio_mlb_lib.RADIO_MLB	15C4
PP_BATT_VCC_CONN	PP_BATT_VCC_CONN - @radio_mlb_lib.RADIO_MLB	2D1 2D8 3C8 11D7 12D5 13C5 14D6 15C5 16C6
PP_BATT_VCC_WLAN	PP_BATT_VCC_WLAN - @radio_mlb_lib.RADIO_MLB	23D5
PP_LDO1	PP_LDO1 - @radio_mlb_lib.RADIO_MLB	3B2
PP_LDO2_XO_HS_1V8	PP_LDO2_XO_HS_1V8 - @radio_mlb_lib.RADIO_MLB	3B1 5B5
PP_LDO3_AMUX_1V8	PP_LDO3_AMUX_1V8 - @radio_mlb_lib.RADIO_MLB	3B1 4B5 4D4 5B6
PP_LDO4_VDDA_3V3	PP_LDO4_VDDA_3V3 - @radio_mlb_lib.RADIO_MLB	3B1 5B6
PP_LDO5_GPS_LNA_2V5	PP_LDO5_GPS_LNA_2V5 - @radio_mlb_lib.RADIO_MLB	3B1 19C4
PP_LDO6_RUIM_1V8	PP_LDO6_RUIM_1V8 - @radio_mlb_lib.RADIO_MLB	2A4 2A6 2A8 2D1 3B1 5A6
PP_LDO7_DAC_1V8	PP_LDO7_DAC_1V8 - @radio_mlb_lib.RADIO_MLB	3B1 5A6
PP_LDO8_VDDPX_1V2	PP_LDO8_VDDPX_1V2 - @radio_mlb_lib.RADIO_MLB	3B1 5A6
PP_LDO9_PLL_1V05	PP_LDO9_PLL_1V05 - @radio_mlb_lib.RADIO_MLB	3B1 5B6 5B8 5D8
PP_LDO10_ADSP_1V05	PP_LDO10_ADSP_1V05 - @radio_mlb_lib.RADIO_MLB	3B1 5C6 5D7
PP_LDO11_MDSP_FW_1V05	PP_LDO11_MDSP_FW_1V05 - @radio_mlb_lib.RADIO_MLB	3B1 5C6 5D6
PP_LDO12_MDSP_SW_1V05	PP_LDO12_MDSP_SW_1V05 - @radio_mlb_lib.RADIO_MLB	3B1 5B6 5D7
PP_LDO13_VDDPX_2V95	PP_LDO13_VDDPX_2V95 - @radio_mlb_lib.RADIO_MLB	3B1 5A8
PP_LDO14_2V65	PP_LDO14_2V65 - @radio_mlb_lib.RADIO_MLB	2B8 3B1 10B6 11B4 11D4 17C6 18D4 20D1 20D3
PP_LDO14_2V65_ASM	PP_LDO14_2V65_ASM - @radio_mlb_lib.RADIO_MLB	17C5 17D3
PP_LDO14_3P4T	PP_LDO14_3P4T -	11D3
	@radio_mlb_lib.RADIO_MLB	
PP_LDO14_PAC_2V65	PP_LDO14_PAC_2V65 - @radio_mlb_lib.RADIO_MLB	20D5
PP_LDO14_RX_MOD	PP_LDO14_RX_MOD - @radio_mlb_lib.RADIO_MLB	11B3
PP_LVS1	PP_LVS1 - @radio_mlb_lib.RADIO_MLB	2A8 3D1 5B6
PP_PA	PP_PA - @radio_mlb_lib.RADIO_MLB	11D7 12D5 13C5 14D6 15C5 16C2
PP_RF1_1V3_DRX_FE	PP_RF1_1V3_DRX_FE - @radio_mlb_lib.RADIO_MLB	8B4 8B5
	PP_RF1_1V3_DRX_LBLO - @radio_mlb_lib.RADIO_MLB	8A5 8B4
	PP_RF1_1V3_DRX_MBLO - @radio_mlb_lib.RADIO_MLB	8A5 8B4
	PP_RF1_1V3_GPS_DIG - @radio_mlb_lib.RADIO_MLB	8A1 8D4
	PP_RF1_1V3_GPS_LNA - @radio_mlb_lib.RADIO_MLB	8A1 8D4
	PP_RF1_1V3_GPS_PLL - @radio_mlb_lib.RADIO_MLB	8A1 8D4
	PP_RF1_1V3_GPS_VCO - @radio_mlb_lib.RADIO_MLB	8A1 8D4
	PP_RF1_1V3_JAM_DET - @radio_mlb_lib.RADIO_MLB	8A6 8B4
	PP_RF1_1V3_PRX_FELO1 - @radio_mlb_lib.RADIO_MLB	8B4 8B5
	PP_RF1_1V3_PRX_FELO2 - @radio_mlb_lib.RADIO_MLB	8B4 8B6
	PP_RF1_1V3_PRX_PLL - @radio_mlb_lib.RADIO_MLB	8A4 8D6
	PP_RF1_1V3_PRX_VCO - @radio_mlb_lib.RADIO_MLB	8B4 8D6
	PP_RF1_1V3_SHDR_PLL - @radio_mlb_lib.RADIO_MLB	8A4 8D6
	PP_RF1_1V3_SHDR_VCO - @radio_mlb_lib.RADIO_MLB	8A4 8C6
	PP_RF1_1V3_TX_DA - @radio_mlb_lib.RADIO_MLB	8B1 8C6
	PP_RF1_1V3_TX_LO - @radio_mlb_lib.RADIO_MLB	8B1 8B6
	PP_RF1_1V3_TX_SYNTH - @radio_mlb_lib.RADIO_MLB	8B1 8C6
	PP_RF1_1V3_TX_UPCONVERTER - @radio_mlb_lib.RADIO_MLB	8B1 8B6
	PP_SMPS2_RF1_1V3_FILT - @radio_mlb_lib.RADIO_MLB	8D5 8D8
	PP_RF1_1V3_TX_UPCONVERTER - @radio_mlb_lib.RADIO_MLB	8B1 8B6
	PP_RF1_1V3_TX_SYNTH - @radio_mlb_lib.RADIO_MLB	8B1 8C6
	PP_RF1_1V3_TX_LO - @radio_mlb_lib.RADIO_MLB	8B1 8B6
	PP_RF1_1V3_TX_DA - @radio_mlb_lib.RADIO_MLB	8B1 8C6
	PP_RF1_1V3_SHDR_VCO - @radio_mlb_lib.RADIO_MLB	8A4 8C6
	PP_RF1_1V3_SHDR_PLL - @radio_mlb_lib.RADIO_MLB	8A4 8D6
	PP_RF1_1V3_PRX_VCO - @radio_mlb_lib.RADIO_MLB	8B4 8D6
	PP_RF1_1V3_PRX_PLL - @radio_mlb_lib.RADIO_MLB	8A4 8D6
	PP_RF1_1V3_PRX_FELO1 - @radio_mlb_lib.RADIO_MLB	8B4 8B5
	PP_RF1_1V3_JAM_DET - @radio_mlb_lib.RADIO_MLB	8A6 8B4
PP_RF1_1V8_DIG	PP_RF1_1V8_DIG - @radio_mlb_lib.RADIO_MLB	8A1 8C4
	PP_SMPS3_MSME_1V8 - @radio_mlb_lib.RADIO_MLB	2A8 2D1 3B6 3C1 5A6 5A6 5A6 5A8 5C6 5D7 5D8 6B8 6C4 8C5
PP_RF2_2V05_DRX_BB	PP_RF2_2V05_DRX_BB - @radio_mlb_lib.RADIO_MLB	8B4 8D1
	PP_RF2_2V05_PRX_BB - @radio_mlb_lib.RADIO_MLB	8B4 8D1
	PP_RF2_2V05_PRX_VCO - @radio_mlb_lib.RADIO_MLB	8B4 8C1
	PP_RF2_2V05_SHDR_VCO - @radio_mlb_lib.RADIO_MLB	8A4 8C1
	PP_RF2_2V05_TX_BB - @radio_mlb_lib.RADIO_MLB	8B1 8D1
	PP_RF2_2V05_TX_DA - @radio_mlb_lib.RADIO_MLB	8B1 8D1
	PP_RF2_2V05_TX_PLL - @radio_mlb_lib.RADIO_MLB	8B1 8C1
	PP_RF2_2V05_TX_VCO - @radio_mlb_lib.RADIO_MLB	8B1 8C1
	PP_RF2_2V05_XO_FILT - @radio_mlb_lib.RADIO_MLB	8B1 8C1
	PP_SMPS4_RF2_2V05_FILT - @radio_mlb_lib.RADIO_MLB	8D3
	PP_RF2_2V05_XO_FILT - @radio_mlb_lib.RADIO_MLB	8B1 8C1
	PP_RF2_2V05_TX_VCO - @radio_mlb_lib.RADIO_MLB	8B1 8C1
	PP_RF2_2V05_TX_PLL - @radio_mlb_lib.RADIO_MLB	8B1 8C1
	PP_RF2_2V05_TX_DA - @radio_mlb_lib.RADIO_MLB	8B1 8D1
	PP_RF2_2V05_TX_BB - @radio_mlb_lib.RADIO_MLB	8B1 8D1
	PP_RF2_2V05_SHDR_VCO - @radio_mlb_lib.RADIO_MLB	8A4 8C1
	PP_RF2_2V05_PRX_VCO - @radio_mlb_lib.RADIO_MLB	8B4 8C1
	PP_RF2_2V05_PRX_BB - @radio_mlb_lib.RADIO_MLB	8B4 8D1
PP_SMPS1_MSMC_1V05	PP_SMPS1_MSMC_1V05 - @radio_mlb_lib.RADIO_MLB	2A8 3D1 5C8 5C8 5D8
PP_SMPS2_RF1_1V3	PP_SMPS2_RF1_1V3 - @radio_mlb_lib.RADIO_MLB	3D1 5A5 8D8
PP_SMPS4_RF2_2V05	PP_SMPS4_RF2_2V05 - @radio_mlb_lib.RADIO_MLB	3B6 3C1 8D3
PP_SMPS5_DSP_1V05	PP_SMPS5_DSP_1V05 - @radio_mlb_lib.RADIO_MLB	3B6 3C1
	@radio_mlb_lib.RADIO_MLB	
PP_SPI_NOR_1V8	PP_SPI_NOR_1V8 - @radio_mlb_lib.RADIO_MLB	6B7
PP_SYNC	PP_SYNC - @radio_mlb_lib.RADIO_MLB	2C8 6B2
PP_VCC_MAIN_WLAN	PP_VCC_MAIN_WLAN - @radio_mlb_lib.RADIO_MLB	2D8 23D6
PP_VREG	PP_VREG - @radio_mlb_lib.RADIO_MLB	3D2
PP_VSW_S1	PP_VSW_S1 - @radio_mlb_lib.RADIO_MLB	3C4
PP_VSW_S2	PP_VSW_S2 - @radio_mlb_lib.RADIO_MLB	3C4
PP_VSW_S3	PP_VSW_S3 - @radio_mlb_lib.RADIO_MLB	3C4
PP_VSW_S4	PP_VSW_S4 - @radio_mlb_lib.RADIO_MLB	3C4
PP_VSW_S5	PP_VSW_S5 - @radio_mlb_lib.RADIO_MLB	3B4
PP_WLAN_VDDIO_1V8	PP_WLAN_VDDIO_1V8 - @radio_mlb_lib.RADIO_MLB	23B7 23C4
PP_WL_BT_VDDIO_AP	PP_WL_BT_VDDIO_AP - @radio_mlb_lib.RADIO_MLB	2C8 23C3
PRX_BB_I_N	PRX_BB_I_N - @radio_mlb_lib.RADIO_MLB	6C8 7D5
PRX_BB_I_P	PRX_BB_I_P - @radio_mlb_lib.RADIO_MLB	6C8 7D5
PRX_BB_Q_N	PRX_BB_Q_N - @radio_mlb_lib.RADIO_MLB	6C8 7D5
PRX_BB_Q_P	PRX_BB_Q_P - @radio_mlb_lib.RADIO_MLB	6C8 7D5
PS_HOLD	PS_HOLD - @radio_mlb_lib.RADIO_MLB	4C8 6B2
PS_HOLD_PMIC	PS_HOLD_PMIC - @radio_mlb_lib.RADIO_MLB	2C3 4C7
RADIO_ON_L	RADIO_ON_L - @radio_mlb_lib.RADIO_MLB	2D3 2D8 4C8
REF_BYP	REF_BYP - @radio_mlb_lib.RADIO_MLB	3C5
REF_GND	REF_GND - @radio_mlb_lib.RADIO_MLB	3C5
RESET_DET_L	RESET_DET_L - @radio_mlb_lib.RADIO_MLB	2C1 2D8 6B2
RESET_PMU_L	RESET_PMU_L - @radio_mlb_lib.RADIO_MLB	2D3 2D8 4C8
RF_RESET_L	RF_RESET_L - @radio_mlb_lib.RADIO_MLB	2C3 2D8
RREFEXT	RREFEXT - @radio_mlb_lib.RADIO_MLB	5A5
S1_GND	S1_GND - @radio_mlb_lib.RADIO_MLB	3B6 3D2 4B6
S2_GND	S2_GND - @radio_mlb_lib.RADIO_MLB	3B6 3C2 4B6
S3_GND	S3_GND - @radio_mlb_lib.RADIO_MLB	3B6 3C2 4B6
S4_GND	S4_GND - @radio_mlb_lib.RADIO_MLB	3B6 3C2 4B6
S5_GND	S5_GND - @radio_mlb_lib.RADIO_MLB	3B2 3B5 4B6
SDIO_DATA_1	SDIO_DATA_1 - @radio_mlb_lib.RADIO_MLB	23A7 23B6
SDIO_DATA_2	SDIO_DATA_2 - @radio_mlb_lib.RADIO_MLB	23A7 23B6
SIMCRD_CLK_CONN	SIMCRD_CLK_CONN - @radio_mlb_lib.RADIO_MLB	2A2 2A6 2C1 2D5 6C4
SIMCRD_IO_CONN	SIMCRD_IO_CONN - @radio_mlb_lib.RADIO_MLB	2A4 2A4 2C1 6C4
SIMCRD_RST_CONN	SIMCRD_RST_CONN - @radio_mlb_lib.RADIO_MLB	2A4 2A6 2C1 2D5 6C4
SIM_TRAY_DETECT	SIM_TRAY_DETECT - @radio_mlb_lib.RADIO_MLB	2A2 2A5 2C1 6C4
SLEEP_CLK_32K	SLEEP_CLK_32K - @radio_mlb_lib.RADIO_MLB	2D6 4B2 5B5
SPI_CLK	SPI_CLK - @radio_mlb_lib.RADIO_MLB	2D5 6A8 6C4
SPI_CS_L	SPI_CS_L - @radio_mlb_lib.RADIO_MLB	2C5 6A6 6C4
SPI_DATA_MISO	SPI_DATA_MISO - @radio_mlb_lib.RADIO_MLB	2C5 6A6 6C4
SPI_DATA_MOSI	SPI_DATA_MOSI - @radio_mlb_lib.RADIO_MLB	2D5 6A8 6C4
TX_BB_I_N	TX_BB_I_N - @radio_mlb_lib.RADIO_MLB	6C6 7D4
TX_BB_I_P	TX_BB_I_P - @radio_mlb_lib.RADIO_MLB	6C6 7D4
TX_BB_Q_N	TX_BB_Q_N - @radio_mlb_lib.RADIO_MLB	6C6 7D4
TX_BB_Q_P	TX_BB_Q_P - @radio_mlb_lib.RADIO_MLB	6C6 7D4
TX_GTR_THRESH	TX_GTR_THRESH - @radio_mlb_lib.RADIO_MLB	2D8 6C2
VDDPX_BIAS	VDDPX_BIAS - @radio_mlb_lib.RADIO_MLB	4D3 5B6
VREF_DAC_BIAS	VREF_DAC_BIAS - @radio_mlb_lib.RADIO_MLB	4C3 6C6
WLAN_BUCK_OUT	WLAN_BUCK_OUT - @radio_mlb_lib.RADIO_MLB	23C7
WLAN_CLK32K	WLAN_CLK32K - @radio_mlb_lib.RADIO_MLB	23C6
WLAN_COEX_RXD	WLAN_COEX_RXD - @radio_mlb_lib.RADIO_MLB	23A5 23B6
WLAN_COEX_TXD	WLAN_COEX_TXD - @radio_mlb_lib.RADIO_MLB	2C6 23A5 23B6
WLAN_HSIC3_DEVICE_RDY	WLAN_HSIC3_DEVICE_RDY - @radio_mlb_lib.RADIO_MLB	2C6 2C8 23B3
WLAN_HSIC3_RESUME	WLAN_HSIC3_RESUME - @radio_mlb_lib.RADIO_MLB	2C6 2D8 23B3
WLAN_REG_ON	WLAN_REG_ON - @radio_mlb_lib.RADIO_MLB	2C1 2C8 23C6
WLAN_SR_VLX1	WLAN_SR_VLX1 - @radio_mlb_lib.RADIO_MLB	23B6
WLAN_TX_BLANK	WLAN_TX_BLANK - @radio_mlb_lib.RADIO_MLB	6B2 23B3
WLAN_UART_RXD	WLAN_UART_RXD - @radio_mlb_lib.RADIO_MLB	2C8 23B3
WLAN_UART_TXD	WLAN_UART_TXD - @radio_mlb_lib.RADIO_MLB	2C8 23B3
WTR_BB_TX_DAC_IREF	WTR_BB_TX_DAC_IREF - @radio_mlb_lib.RADIO_MLB	6C6 7D4
WTR_GP_DATA0	WTR_GP_DATA0 - @radio_mlb_lib.RADIO_MLB	6B2 7D4
WTR_GP_DATA1	WTR_GP_DATA1 - @radio_mlb_lib.RADIO_MLB	6B2 7D4
WTR_GP_DATA2	WTR_GP_DATA2 - @radio_mlb_lib.RADIO_MLB	6B2 7C4
WTR_RBIAS	WTR_RBIAS - @radio_mlb_lib.RADIO_MLB	7C4
WTR_RF_ON	WTR_RF_ON - @radio_mlb_lib.RADIO_MLB	2C6 6B4 7C4
WTR_RX_ON	WTR_RX_ON - @radio_mlb_lib.RADIO_MLB	2C6 6B4 7C4
WTR_SSBI_PRX_DRX	WTR_SSBI_PRX_DRX - @radio_mlb_lib.RADIO_MLB	2C6 6B2 7C4
WTR_SSBI_TX_GPS	WTR_SSBI_TX_GPS - @radio_mlb_lib.RADIO_MLB	2C6 6B2 7C4
XO_GND	XO_GND - @radio_mlb_lib.RADIO_MLB	4A4
XO_THERM_Y1	XO_THERM_Y1 -	4B4
	@radio_mlb_lib.RADIO_MLB	

Title: Cref Part Report
Design: radio_mlb
Date: Nov 27 0:19:39 2012

C1	SUPPR_TRANSIENT_2P1_01005	radio_mlb[2A4]
C2	CAP_0201-1	radio_mlb[3B4]
C3	CAP_0201-1	radio_mlb[3B4]
C4	CAP_0201-1	radio_mlb[3B4]
C5	CAP_0201-1	radio_mlb[3A3]
C6	CAP_0201-1	radio_mlb[3B3]
C7	CAP_0201-1	radio_mlb[3A3]
C8	CAP_0402-1	radio_mlb[3B3]
C9	CAP_0402-1	radio_mlb[3A3]
C10	CAP_0402-1	radio_mlb[3B3]
C11	CAP_0402-1	radio_mlb[3A2]
C12	CAP_0201-1	radio_mlb[3D2]
C13	CAP_0402-1	radio_mlb[3B2]
C14	CAP_0201-1	radio_mlb[5D8]
C15	CAP_0201-1	radio_mlb[5D8]
C16	CAP_0201-1	radio_mlb[5D8]
C17	CAP_0201-1	radio_mlb[5D8]
C18	CAP_0201-1	radio_mlb[5D7]
C19	CAP_0201-1	radio_mlb[5D7]
C20	CAP_0201-1	radio_mlb[5D7]
C21	CAP_0201-1	radio_mlb[5D7]
C22	CAP_0201-1	radio_mlb[5D7]
C23	CAP_0201-1	radio_mlb[5D7]
C24	CAP_0201-1	radio_mlb[5D7]
C25	CAP_0201-1	radio_mlb[5D7]
C26	CAP_0201-1	radio_mlb[5D7]
C27	CAP_0201-1	radio_mlb[5D6]
C28	CAP_0201-1	radio_mlb[5D6]
C29	CAP_0201-1	radio_mlb[5D6]
C30	CAP_0201-1	radio_mlb[5D6]
C31	CAP_01005	radio_mlb[5B6]
C32	CAP_0201-1	radio_mlb[5D6]
C33	CAP_0201-1	radio_mlb[5A6]
C34	CAP_0201-1	radio_mlb[5D6]
C35	CAP_0201-1	radio_mlb[5D5]
C36	CAP_0201-1	radio_mlb[5D5]
C37	CAP_01005	radio_mlb[23C4]
C38	CAP_01005	radio_mlb[20C6]
C39	CAP_01005	radio_mlb[17B5]
C40	CAP_01005	radio_mlb[17C5]
C41	CAP_0402	radio_mlb[16C3]
C42	CAP_0402-1	radio_mlb[3C8]
C43	CAP_0402-1	radio_mlb[3C7]
C44	CAP_0402-1	radio_mlb[3C7]
C45	CAP_01005	radio_mlb[3C7]
C46	CAP_0402	radio_mlb[3B6]
C47	CAP_0402	radio_mlb[3B6]
C48	CAP_0402	radio_mlb[3B6]
C49	CAP_0402	radio_mlb[3B6]
C50	CAP_01005	radio_mlb[3C5]
C51	CAP_0402	radio_mlb[3B5]
C52	CAP_0201-1	radio_mlb[3A4]
C53	CAP_0201-1	radio_mlb[3A4]
C54	CAP_0201-1	radio_mlb[3A4]
C55	CAP_0603	radio_mlb[3D2]
C56	CAP_0603	radio_mlb[3C2]
C57	CAP_0603-3	radio_mlb[3C2]
C58	CAP_0603-3	radio_mlb[3C2]
C59	CAP_0603	radio_mlb[3B2]
C60	CAP_01005	radio_mlb[3C2]
C61	CAP_01005	radio_mlb[6B7]
C62	CAP_01005	radio_mlb[6C6]
C63	CAP_01005	radio_mlb[17B5]
C64	CAP_01005	radio_mlb[17B4]
C65	CAP_01005	radio_mlb[17B4]
C66	CAP_01005	radio_mlb[17B4]
C67	CAP_01005	radio_mlb[9B4]
C68	CAP_0201-1	radio_mlb[5C8]
C69	CAP_0201-1	radio_mlb[5A6]
C70	CAP_0201-1	radio_mlb[5A6]
C71	CAP_0201-1	radio_mlb[5B6]
C72	CAP_0402-1	radio_mlb[8D7]
C73	CAP_01005	radio_mlb[8D6]
C74	CAP_01005	radio_mlb[8D6]
C75	CAP_01005	radio_mlb[8C6]
C76	CAP_01005	radio_mlb[8C6]
C77	CAP_01005	radio_mlb[8C6]
C78	CAP_01005	radio_mlb[8C6]
C79	CAP_01005	radio_mlb[8B6]
C80	CAP_01005	radio_mlb[8B6]
C81	CAP_01005	radio_mlb[8B6]
C82	CAP_01005	radio_mlb[8A6]
C83	CAP_01005	radio_mlb[8A6]
C84	CAP_01005	radio_mlb[15B6]
C85	CAP_01005	radio_mlb[8D5]
C86	CAP_01005	radio_mlb[8D5]
C87	CAP_0201-1	radio_mlb[8C5]
C88	CAP_0402-1	radio_mlb[8D3]
C89	CAP_01005	radio_mlb[8C1]
C90	CAP_01005	radio_mlb[8C1]
C91	CAP_01005	radio_mlb[8C1]
C92	CAP_01005	radio_mlb[8B1]
C93	IND_01005	radio_mlb[9A5]
C94	CAP_201	radio_mlb[20A5]
C95	CAP_201	radio_mlb[20A5]
C96	CAP_01005	radio_mlb[20C6]
C97	CAP_01005	radio_mlb[20C6]
C98	CAP_01005	radio_mlb[20C6]
C99	CAP_01005	radio_mlb[20D4]
C100	CAP_01005	radio_mlb[16C6]
C101	CAP_201	radio_mlb[20B7]
C102	CAP_402	radio_mlb[23B7]
C103	CAP_0402-2	radio_mlb[23D5]
C104	CAP_01005	radio_mlb[23D5]
C105	CAP_01005	radio_mlb[23C4]
C106	CAP_0201	radio_mlb[23C2]
C107	CAP_0201	radio_mlb[23C2]
C108	CAP_01005	radio_mlb[11D3]
C109	CAP_01005	radio_mlb[10B5]
C111	IND_0201	radio_mlb[9A2]
C112	CAP_01005	radio_mlb[11D3]
C114	IND_0201	radio_mlb[9B5]
C115	IND_0201	radio_mlb[9A5]
C116	CAP_01005	radio_mlb[14C7]
C117	CAP_01005	radio_mlb[14C7]
C118	CAP_01005	radio_mlb[14D5]
C119	CAP_0201-1	radio_mlb[14D5]
C120	IND_0201	radio_mlb[14C3]
C121	RES_201	radio_mlb[14C3]
C122	CAP_01005	radio_mlb[17C5]
C123	IND_01005	radio_mlb[11D2]
C124	CAP_01005	radio_mlb[9C4]
C125	RES_01005	radio_mlb[10D7]
C126	RES_01005	radio_mlb[10C7]
C127	CAP_01005	radio_mlb[4B4]
C128	CAP_01005	radio_mlb[7C5]
C129	RES_01005	radio_mlb[10C7]
C130	RES_01005	radio_mlb[10C4]
C131	CAP_01005	radio_mlb[13C8]
C132	RES_01005	radio_mlb[10B4]
C133	CAP_01005	radio_mlb[11B2]
C134	CAP_01005	radio_mlb[11B2]
C136	CAP_01005	radio_mlb[18C6]
C137	CAP_01005	radio_mlb[18C6]
C138	CAP_01005	radio_mlb[18C5]
C139	CAP_01005	radio_mlb[18D3]
C141	CAP_01005	radio_mlb[11D7]
C142	CAP_01005	radio_mlb[11D6]
C143	CAP_01005	radio_mlb[11D6]
C144	CAP_01005	radio_mlb[16C6]
C145	CAP_01005	radio_mlb[16C6]
C146	IND_P_01005	radio_mlb[12C7]
C147	CAP_01005	radio_mlb[12C6]
C148	CAP_01005	radio_mlb[12D5]
C149	CAP_0201-1	radio_mlb[12D5]
C150	CAP_201	radio_mlb[12C3]
C151	IND_0201	radio_mlb[12B3]
C152	CAP_01005	radio_mlb[11D6]
C153	CAP_01005	radio_mlb[11D6]
C154	CAP_01005	radio_mlb[11D6]
C155	IND_01005	radio_mlb[18C6]
C156	IND_01005	radio_mlb[18B6]
C157	CAP_01005	radio_mlb[20D2]
C158	CAP_01005	radio_mlb[20B2]
C160	CAP_01005	radio_mlb[10B7]
C161	CAP_01005	radio_mlb[9C7]
C162	CAP_01005	radio_mlb[9B7]
C163	CAP_01005	radio_mlb[9C7]
C164	CAP_01005	radio_mlb[9C7]
C165	CAP_01005	radio_mlb[9B7]
C166	CAP_01005	radio_mlb[9B7]
C167	CAP_01005	radio_mlb[15C7]
C168	CAP_01005	radio_mlb[16C3]
C170	CAP_0201	radio_mlb[23C2]
C171	CAP_01005	radio_mlb[15B7]
C172	RES_01005	radio_mlb[15C6]
C173	IND_01005	radio_mlb[10B7]
C174	RES_01005	radio_mlb[10B4]
C175	CAP_01005	radio_mlb[11D3]
C176	CAP_01005	radio_mlb[11D3]
C182	CAP_01005	radio_mlb[7C4]
C183	CAP_01005	radio_mlb[15B5]
C184	CAP_01005	radio_mlb[15C5]
C185	CAP_402	radio_mlb[15C5]
C186	CAP_01005	radio_mlb[15B5]
C187	CAP_0201-1	radio_mlb[15C4]
C188	CAP_01005	radio_mlb[15C4]
C197	CAP_01005	radio_mlb[18B5]
C198	CAP_01005	radio_mlb[18D4]
C210	CAP_01005	radio_mlb[18C6]
C211	CAP_01005	radio_mlb[10B6]
C212	CAP_01005	radio_mlb[10B6]
C213	CAP_01005	radio_mlb[10D7]
C214	IND_01005	radio_mlb[10D7]
C215	IND_01005	radio_mlb[10C7]
C216	IND_01005	radio_mlb[13C8]
C217	IND_01005	radio_mlb[10C7]
C218	RES_01005	radio_mlb[13C8]
C219	CAP_01005	radio_mlb[13B8]
C220	IND_01005	radio_mlb[10D7]
C226	RES_01005	radio_mlb[10D4]
C227	CAP_01005	radio_mlb[13C6]
C228	CAP_01005	radio_mlb[13B5]
C229	CAP_01005	radio_mlb[13C4]
C230	CAP_0201-1	radio_mlb[13C4]
C233	RES_201	radio_mlb[13C2]
C234	IND_0201	radio_mlb[13B2]
C237	IND_01005	radio_mlb[11B7]
C238	CAP_01005	radio_mlb[11C7]
C239	CAP_01005	radio_mlb[11C7]
C240	CAP_01005	radio_mlb[11C7]
C241	CAP_01005	radio_mlb[11D6]
C242	CAP_0201-1	radio_mlb[11D6]
C244	CAP_01005	radio_mlb[8D1]
C245	IND_0201	radio_mlb[11B5]
C247	CAP_01005	radio_mlb[20D5]
C248	RES_201	radio_mlb[11C4]
C249	RES_01005	radio_mlb[11C4]
C251	CAP_01005	radio_mlb[7C2]
C252	CAP_01005	radio_mlb[11C3]
C253	CAP_01005	radio_mlb[11B3]
C255	CAP_01005	radio_mlb[11B2]
C256	IND_01005	radio_mlb[11B2]
C258	RES_201	radio_mlb[11D4]
C261	CAP_201	radio_mlb[11C4]
C263	IND_01005	radio_mlb[11C2]
C264	CAP_201	radio_mlb[11B6]
C268	CAP_01005	radio_mlb[17C3]
C271	CAP_01005	radio_mlb[20D2]
C272	CAP_01005	radio_mlb[11D3]
C273	CAP_01005	radio_mlb[11B3]
C274	CAP_01005	radio_mlb[8C6]
C280	CAP_0201	radio_mlb[23C2]
C281	CAP_0201	radio_mlb[23C2]
C282	CAP_0201	radio_mlb[19B6]
C700	CAP_01005	radio_mlb[2A5]
C1201	CAP_0402	radio_mlb[16C5]
C1214	CAP_01005	radio_mlb[16C5]
C1726	CAP_01005	radio_mlb[20D7]
FL2	FIL_SAW_TX_B1B3B34B39_LGA	radio_mlb[10D3]
FL3	FILTER_SAW_SATGR832M BM0F57_LGA	radio_mlb[10D6]
FL4	FILTER_2P_01005-1	radio_mlb[6B7]
FL11	FILTER_SAWFD847MGA0F57_LGA	radio_mlb[13C7]
FL12	FIL_LOWPASS_INOUT_4P_LGA	radio_mlb[11C3]
FL1701	FILTER_3P5_LFE18832M HC1D449	radio_mlb[20D7]
J1	CON_M54ST_D4MT_SM_M-ST-SM	radio_mlb[2D2]
J2	CON_F1ST_COAX_S3MT_S M_F-ST-SM	radio_mlb[2B2]
J3	CON_F1ST_COAX_S3MT_S M_F-ST-SM	radio_mlb[2B2]
J4	CON_F1ST_COAX_S3MT_S M_F-ST-SM	radio_mlb[20A6]
J5	CON_F1ST_COAX_S3MT_S M_F-ST-SM	radio_mlb[20C1]
J6	CON_F1ST_COAX_S3MT_S M_F-ST-SM	radio_mlb[20C1]
J9	CON_F2ST_COAX_3MT_SM_F-RT-SM	radio_mlb[20A4]
J10	CON_F1ST_COAX_S3MT_S M_F-ST-SM	radio_mlb[20B8]
J11	CON_F6ST_6MT_SIMCARD_SM3_F-ST-SM	radio_mlb[2A6]
L1	IND_0806	radio_mlb[3D3]
L2	IND_0806	radio_mlb[3C3]
L3	IND_0806	radio_mlb[3C3]
L4	IND_0806	radio_mlb[3D3]
L5	IND_TFA252010-SM	radio_mlb[3C3]
L6	IND_01005	radio_mlb[20D7]
L7	IND_0201	radio_mlb[9C3]
L8	IND_03015	radio_mlb[20D4]
L9	IND_0603	radio_mlb[23B6]
L10	RES_201	radio_mlb[9B4]
L11	RES_201	radio_mlb[9A4]
L12	CAP_01005-1	radio_mlb[11D1]
L13	IND_0201	radio_mlb[17B3]
L14	IND_01005	radio_mlb[14C6]
L15	IND_01005	radio_mlb[14C6]
L16	IND_0201	radio_mlb[14C3]
L17	IND_0201	radio_mlb[14C3]
L18	RES_201	radio_mlb[9B2]
L19	IND_01005	radio_mlb[10A4]
L20	RES_01005	radio_mlb[11B8]
L21	IND_DFE201610C-SM	radio_mlb[16C4]
L22	IND_01005	radio_mlb[12C7]
L23	IND_01005	radio_mlb[12C7]
L24	IND_0201	radio_mlb[12C3]
L25	IND_0201	radio_mlb[9B3]
L26	FILTER_4P11_LLP	radio_mlb[9C5]
L27	IND_0201DS	radio_mlb[9C7]
L28	IND_0201	radio_mlb[13B2]
L29	RES_01005	radio_mlb[11C7]
L30	RES_01005	radio_mlb[11C7]
L31	IND_0201DS	radio_mlb[9C7]
L32	IND_0201DS	radio_mlb[9B7]
L34	IND_0201DS	radio_mlb[9B7]
L35	IND_01005	radio_mlb[15B7]
L36	IND_01005	radio_mlb[15C7]
L37	RES_201	radio_mlb[15B3]
L38	IND_0201	radio_mlb[15B3]
L39	IND_0201	radio_mlb[15B3]
L40	IND_01005	radio_mlb[18B5]
L41	IND_0201	radio_mlb[17C4]
L42	IND_01005	radio_mlb[18B5]
L43	IND_01005	radio_mlb[18C5]
L44	RES_01005	radio_mlb[11C7]
L45	CAP_01005	radio_mlb[11B7]
L46	RES_01005	radio_mlb[18B4]
L47	RES_01005	radio_mlb[18A4]
L48	IND_0201	radio_mlb[20C4]
L49	IND_01005	radio_mlb[20B5]
L50	IND_P_0201	radio_mlb[20C5]
L51	IND_0201	radio_mlb[20C3]
L52	CAP_01005	radio_mlb[18A6]
L53	IND_01005	radio_mlb[13C5]
L54	IND_01005	radio_mlb[13C5]
L55	IND_01005	radio_mlb[9B7]
L56	IND_01005	radio_mlb[18A7]
L57	IND_0201	radio_mlb[13C2]
L58	IND_0201	radio_mlb[9D7]
L59	IND_01005	radio_mlb[10D4]
L60	IND_01005	radio_mlb[10C4]
L61	IND_01005	radio_mlb[10C2]
L63	IND_01005	radio_mlb[18B4]
L64	IND_0201	radio_mlb[9C7]
L65	IND_0201	radio_mlb[18A6]
L66	IND_01005	radio_mlb[20D7]
L67	IND_01005	radio_mlb[20C7]
L68	IND_01005	radio_mlb[20C7]
L69	IND_01005	radio_mlb[20D4]
L70	RES_01005	radio_mlb[11B2]
L71	RES_01005	radio_mlb[11B2]
L72	RES_201	radio_mlb[11A2]
L73	RES_01005	radio_mlb[11C2]
L74	IND_01005	radio_mlb[9D4]
L75	IND_01005	radio_mlb[9C4]
L76	IND_0201	radio_mlb[12C3]
L77	IND_01005	radio_mlb[18A4]
L78	IND_0201	radio_mlb[9B3]
L79	IND_0201	radio_mlb[9D7]
L80	IND_0201	radio_mlb[9A2]
L81	IND_01005	radio_mlb[10C2]
L82	IND_01005	radio_mlb[12C6]
L83	RES_01005	radio_mlb[9A4]
L90	IND_01005	radio_mlb[9D4]
L91	IND_01005	radio_mlb[9D4]
L92	IND_01005	radio_mlb[9C4]
L93	IND_01005	radio_mlb[9C4]
L94	IND_0201	radio_mlb[13C2]
L95	IND_01005	radio_mlb[9B7]
L96	IND_01005	radio_mlb[9A7]
L97	IND_0201	radio_mlb[11A2]
L98	IND_01005	radio_mlb[10C2]
L99	IND_0201	radio_mlb[9A3]
L100	IND_0201	radio_mlb[11D4]
L900	IND_0201	radio_mlb[9C5]
L1732	IND_03015	radio_mlb[20D6]
PP1	PROBEPOINT_SM	radio_mlb[2D7]
PP2	PROBEPOINT_SM	radio_mlb[2D7]
PP3	PROBEPOINT_SM	radio_mlb[2D7]
PP4	PROBEPOINT_SM	radio_mlb[2B7]
PP5	PROBEPOINT_SM	radio_mlb[2B7]
PP6	PROBEPOINT_SM	radio_mlb[2B7]
PP7	PROBEPOINT_SM	radio_mlb[2A7]
PP8	PROBEPOINT_SM	radio_mlb[2D6]
PP9	PROBEPOINT_SM	radio_mlb[2D6]
PP10	PROBEPOINT_SM	radio_mlb[2D6]
PP11	PROBEPOINT_SM	radio_mlb[2D7]
PP12	PROBEPOINT_SM	radio_mlb[2D6]
PP13	PROBEPOINT_SM	radio_mlb[2C6]
PP14	PROBEPOINT_SM	radio_mlb[2C7]
PP15	PROBEPOINT_SM	radio_mlb[2C7]
PP16	PROBEPOINT_SM	radio_mlb[2C6]
PP18	PROBEPOINT_SM	radio_mlb[2C7]
PP19	PROBEPOINT_SM	radio_mlb[2C7]
PP20	PROBEPOINT_SM	radio_mlb[2C7]
PP21	PROBEPOINT_SM	radio_mlb[2C7]
PP22	PROBEPOINT_SM	radio_mlb[2C7]
PP40	PROBEPOINT_SM	radio_mlb[2C7]
PP41	PROBEPOINT_SM	radio_mlb[2C7]
PP42	PROBEPOINT_SM	radio_mlb[2B7]
PP43	PROBEPOINT_SM	radio_mlb[2B7]
PP44	PROBEPOINT_SM	radio_mlb[2B7]
PP45	PROBEPOINT_SM	radio_mlb[2B7]
PP46	PROBEPOINT_SM	radio_mlb[2B7]
PP47	PROBEPOINT_SM	radio_mlb[2B7]
R1	RES_01005	radio_mlb[18D6]
R2	RES_01005	radio_mlb[18D5]
R3	RES_01005	radio_mlb[2A5]
R4	RES_01005	radio_mlb[6C4]
R6	RES_01005	radio_mlb[5B6]
R7	RES_01005	radio_mlb[5A5]
R8	RES_01005	radio_mlb[10D2]
R9	RES_01005	radio_mlb[5B2]
R10	RES_01005	radio_mlb[5D1]
R11	IND_0201	radio_mlb[20A5]
R13	RES_201	radio_mlb[20B7]
R14	RES_01005	radio_mlb[23B7]
R15	RES_01005	radio_mlb[23A7]
R16	RES_01005	radio_mlb[23C5]
R17	RES_01005	radio_mlb[23C3]
R18	RES_01005	radio_mlb[23C3]
R19	RES_201	radio_mlb[8D3]
R20	RES_01005	radio_mlb[4C8]
R21	RES_01005	radio_mlb[4C8]
R22	RES_01005	radio_mlb[4B5]
R23	RES_01005	radio_mlb[4D4]
R24	RES_01005	radio_mlb[4D4]
R25	RES_01005	radio_mlb[4D3]
R26	RES_01005	radio_mlb[4D3]
R27	RES_01005	radio_mlb[7C4]
R28	RES_01005	radio_mlb[7C2]
R29	RES_01005	radio_mlb[7C2]
R30	RES_01005	radio_mlb[7C2]
R32	RES_01005	radio_mlb[15C5]
R33	RES_01005	radio_mlb[16C6]
R34	RES_01005	radio_mlb[16C6]
R35	RES_01005	radio_mlb[13C3]
R36	RES_0201	radio_mlb[12C3]
R37	RES_201	radio_mlb[15B3]
R38	RES_0201	radio_mlb[12C3]
R39	RES_01005	radio_mlb[18C2]
R43	RES_01005	radio_mlb[23B7]
R44	RES_01005	radio_mlb[23A7]
R50	RES_01005	radio_mlb[7C4]
R51	RES_01005	radio_mlb[23A6]
R52	RES_01005	radio_mlb[23A6]
R53	RES_201	radio_mlb[8D8]
R60	RES_01005	radio_mlb[17C6]
R64	RES_01005	radio_mlb[11D4]
R65	RES_01005	radio_mlb[11B4]
R72	IND_0201	radio_mlb[19B6]
R75	CAP_0201	radio_mlb[19B5]
SP1	SMT_PAD_SM-NSP	radio_mlb[20D8]
SP2	SMT_PAD_SM-NSP	radio_mlb[19B7]
SP3	SPRING_CLIP_1P_CLIP-SM	radio_mlb[19B6]
SW1	SWI_SPDT_CXA4403GC_XFLGA	radio_mlb[17C3]
TP1	TP_TP-P6	radio_mlb[20D4]
U1	MODEM_MDM9615M_1_BGA	radio_mlb[5D2 5C7 5D4 5B4]
U1	MODEM_MDM9615M_1_BGA	radio_mlb[6C3 6D7]
U2	PM8018_WLNSP105_BGA	radio_mlb[3C5]
U2	PM8018_WLNSP105_BGA	radio_mlb[4B7 4C7 4D3 4B4]
U3	WTR1605_SM	radio_mlb[7D4 7B7 7D7 7C7]
U3	WTR1605_SM	radio_mlb[8B3]
U4	SWI_CXA4402GC_XFLGA	radio_mlb[11D2]
U5	SUPPR_TPD4E101_SON4	radio_mlb[2A3]
U6	FLASH_MX25U1635E_WLCSP	radio_mlb[6A7]
U7	RF1112_WLCSP	radio_mlb[20D5]
U8	MOD_WIFI_BT_IMPERIAL_LGA60_LGA	radio_mlb[23C5]
U9	FIL_DIPLEXER_885041_LGA	radio_mlb[20C4]
U10	SKY77355_LGA	radio_mlb[15C4]
U11	DCDC_LM3258_BGA	radio_mlb[16C5]
U12	FIL_DIPLEXER_HILOBAND_SM	radio_mlb[20C6]
U13	SWI_SPDT_CXA4011GC_XFLGA	radio_mlb[20C2]
U14	TSINGTAO_LGA	radio_mlb[18C4]
U15	AMP_DUPLEXER_BAND7_LGA30_LGA	radio_mlb[13C4]
U16	FILTER_SAW_2UNB_LGA	radio_mlb[9A3]
U17	SWI_RF1495_LGA	radio_mlb[17B6]
U18	FILTER_4P12_LLP	radio_mlb[20D3]
U20	AMP_SKY65716_LGA	radio_mlb[19C4]
U22	FIL_BAW_885035_LGA	radio_mlb[18B6]
U23	AMP_TQM6M6224_LGA	radio_mlb[12C5]
U24	SWI_SPDT_BGS12SL6_TSLP6-2	radio_mlb[10B6]
U25	AMP_PENTA_BAND_LGA26_LGA	radio_mlb[11C6]
U26	FIL_DIPLEXER_B38_B40_9P1_LGA	radio_mlb[9B3]
U27	MOD_LMSWFKJM_LGA	radio_mlb[11B3]
U58	AMP_DUPLEXER_BAND58_LGA30_LGA	radio_mlb[14D5]
XW1	SHORT10LP25_WITH_ALTS_SHORT-10L-0.25MM-SM	radio_mlb[4B6]
XW2	SHORT10LP25_WITH_ALTS_SHORT-10L-0.25MM-SM	radio_mlb[4B6]
XW3	SHORT10LP25_WITH_ALTS_SHORT-10L-0.25MM-SM	radio_mlb[4B6]
XW4	SHORT10LP25_WITH_ALTS_SHORT-10L-0.25MM-SM	radio_mlb[4B6]
XW8	SHORT_SHORT-01005	radio_mlb[23C7]
XW9	SHORT_LAYER_9_SHORT-L9-SM	radio_mlb[23D6]
XW10	SHORT10LP1_WITH_ALTS	radio_mlb[4A4]

	_SHORT-10L-0.1MM-SM	
XW12	SHORT10LP1_WITH_ALTS	radio_mlb[2A7]
	_SHORT-10L-0.1MM-SM	
XW13	SHORT10LP1_WITH_ALTS	radio_mlb[2A7]
	_SHORT-10L-0.1MM-SM	
XW14	SHORT10LP1_WITH_ALTS	radio_mlb[2A7]
	_SHORT-10L-0.1MM-SM	
XW15	SHORT10LP1_WITH_ALTS	radio_mlb[2A7]
	_SHORT-10L-0.1MM-SM	
XW16	SHORT10LP25_WITH_ALT	radio_mlb[4A6]
	S_SHORT-10L-0.25MM-S	
	M	
XW17	SHORT10LP1_WITH_ALTS	radio_mlb[3C5]
	_SHORT-10L-0.1MM-SM	
XW20	SHORT_LAYER_9_SHORT-	radio_mlb[23D6]
	L9-SM	
Y1	CRYSTAL_4PIN2_2.0X1.	radio_mlb[4B4]
	60MM	