PMIC

File: PMIC.kicad_sch

GPIO MCASP VOUT

File: SoC_MCASP_GPIO_VOUT.kicad_sch

Wireless

File: Wireless.kicad_sch

SoC_Power

File: soc_power.kicad_sch

USB OLDI CSI USBC

File: SoC USB OLDI CSI USBC.kicad_sch

MSPM0

File: MSPM0.kicad_sch

SoC_Caps

File: SoC_Caps.kicad_sch

Portenta B2B Interconnect

File: B2BInterconnect.kicad_sch

DDR_Caps

File: untitled.kicad_sch

RGMII_OSPI

File: SoC_RGMII_OSPI.kicad_sch

SoC_eMMC_SD

File: SoC_eMMC_SD.kicad_sch

WORK IN PROGRESS

SoC_WKUP_MCU_SYSTEM

File: SoC_WKUP_MCU_SYSTEM.kicad_sch

SoC Bootstrap

File: SoC Bootstrap.kicad_sch

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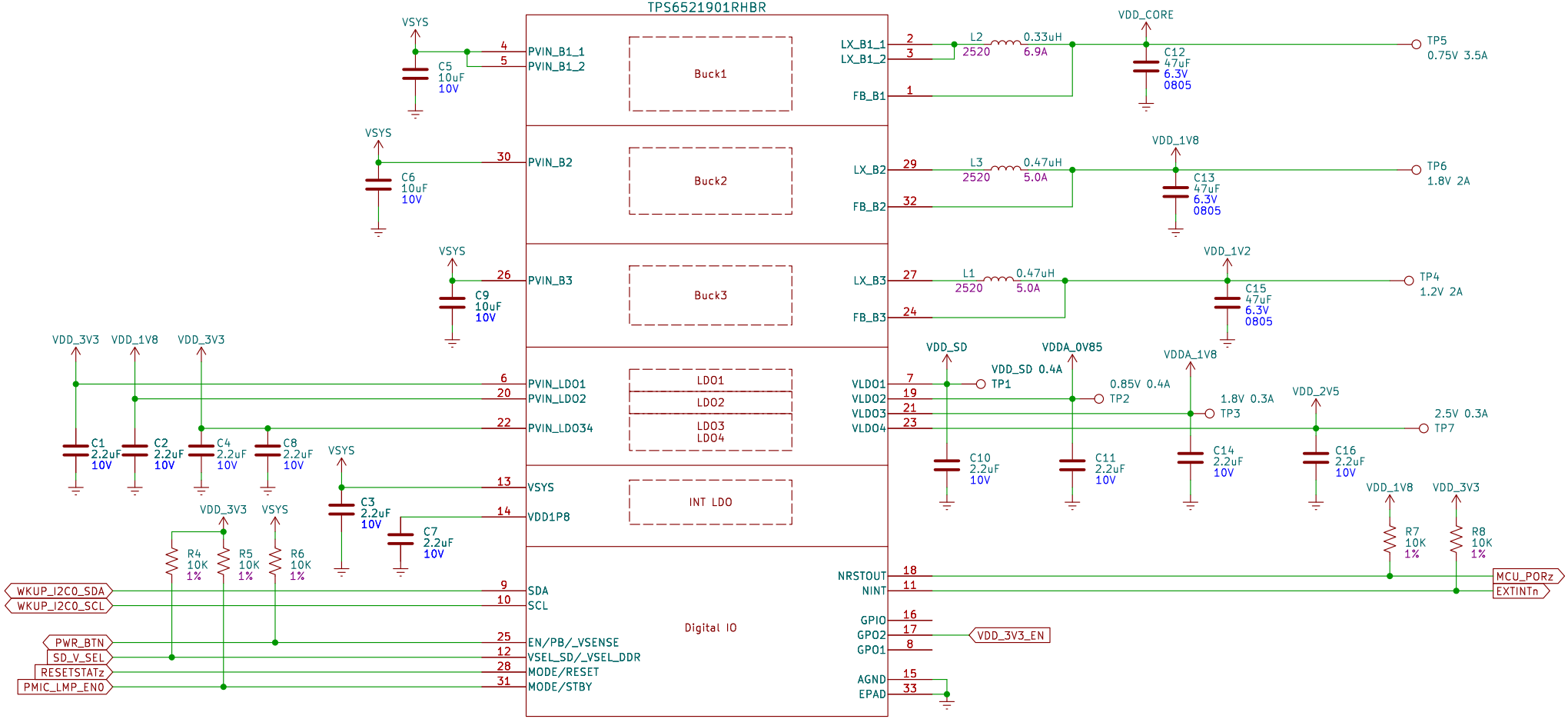
Sheet: /
File: TI Ember.kicad_sch

Title: TI Ember AM62 SiP Concept

Size: A4	Date: 2023-06-09	**Rev: Rev 0**
KiCad E.D.A. kicad 7.0.2		Id: 1/14

PMIC



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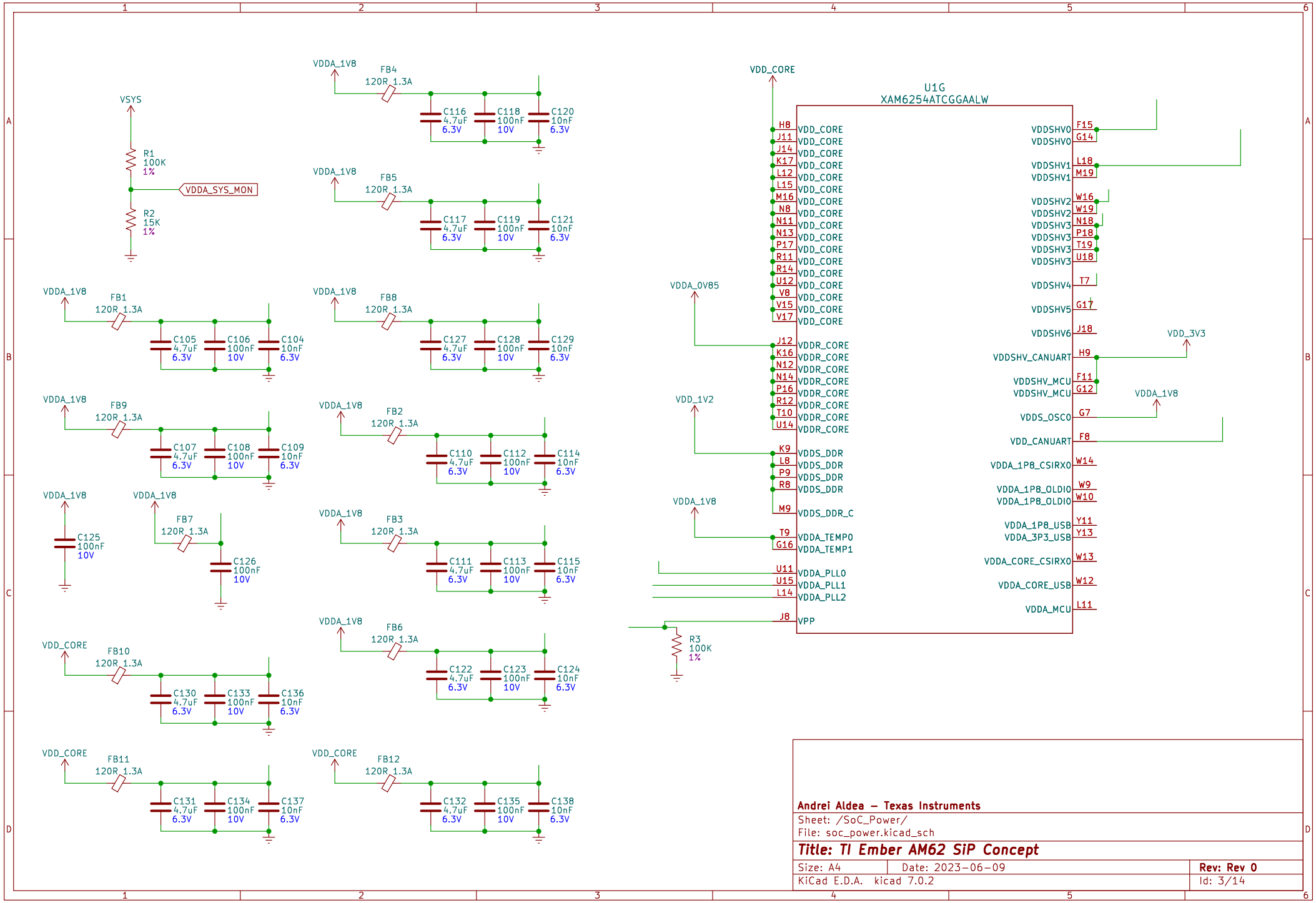
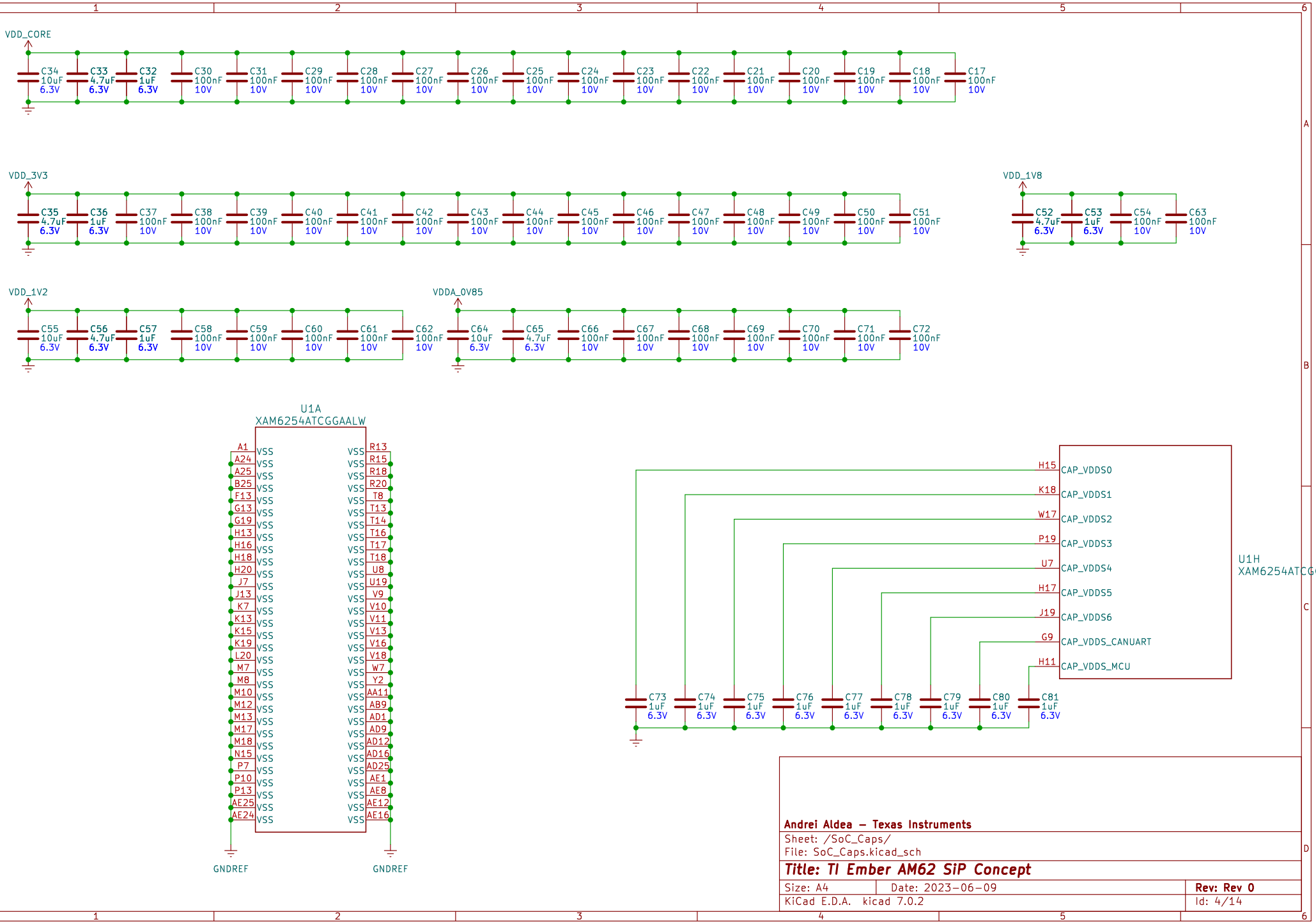
Sheet: /PMIC/
File: PMIC.kicad_sch

Title: TI Ember AM62 SiP Concept

Size: A4	Date: 2023-06-09	**Rev: Rev 0**
KiCad E.D.A. kicad 7.0.2		Id: 2/14


VSYS
R1
100K
1%
VDDA_SYS_MON
R2
15K
1%
VDDA_1V8
FB4
120R_1.3A
C116
4.7uF
6.3V
C118
100nF
10V
C120
10nF
6.3V
FB5
C117
C119
C121
FB1
C105
C106
C104
FB8
C127
C128
C129
FB9
C107
C108
C109
FB2
C110
C112
C114
C125
100nF
10V
FB7
C126
FB3
C111
C113
C115
VDD_CORE
FB10
C130
C133
C136
FB6
C122
C123
C124
FB11
C131
C134
C137
FB12
C132
C135
C138
U1G
XAM6254ATCGGAALW
VDD_CORE
VDDA_0V85
VDD_1V2
VDDA_1V8
VDDR_CORE
VDDS_DDR
VDDS_DDR_C
VDDA_TEMP0
VDDA_TEMP1
VDDA_PLL0
VDDA_PLL1
VDDA_PLL2
VPP
R3
100K
1%
VDDSHV0
VDDSHV1
VDDSHV2
VDDSHV3
VDDSHV4
VDDSHV5
VDDSHV6
VDDSHV_CANUART
VDDSHV_MCU
VDDS_OSC0
VDD_CANUART
VDDA_1P8_CSIRX0
VDDA_1P8_OLDI0
VDDA_1P8_USB
VDDA_3P3_USB
VDDA_CORE_CSIRX0
VDDA_CORE_USB
VDDA_MCU
VDD_3V3
VDDA_1V8
Andrei Aldea – Texas Instruments
Sheet: /SoC_Power/
File: soc_power.kicad_sch
Title: TI Ember AM62 SiP Concept
Size: A4
Date: 2023-06-09
Rev: Rev 0
KiCad E.D.A. kicad 7.0.2
Id: 3/14


VDD_CORE
C34 10uF 6.3V
C33 4.7uF 6.3V
C32 1uF 6.3V
C30 100nF 10V
C31 100nF 10V
C29 100nF 10V
C28 100nF 10V
C27 100nF 10V
C26 100nF 10V
C25 100nF 10V
C24 100nF 10V
C23 100nF 10V
C22 100nF 10V
C21 100nF 10V
C20 100nF 10V
C19 100nF 10V
C18 100nF 10V
C17 100nF 10V
VDD_3V3
C35 4.7uF 6.3V
C36 1uF 6.3V
C37 100nF 10V
C38 100nF 10V
C39 100nF 10V
C40 100nF 10V
C41 100nF 10V
C42 100nF 10V
C43 100nF 10V
C44 100nF 10V
C45 100nF 10V
C46 100nF 10V
C47 100nF 10V
C48 100nF 10V
C49 100nF 10V
C50 100nF 10V
C51 100nF 10V
VDD_1V8
C52 4.7uF 6.3V
C53 1uF 6.3V
C54 100nF 10V
C63 100nF 10V
VDD_1V2
C55 10uF 6.3V
C56 4.7uF 6.3V
C57 1uF 6.3V
C58 100nF 10V
C59 100nF 10V
C60 100nF 10V
C61 100nF 10V
C62 100nF 10V
VDDA_0V85
C64 10uF 6.3V
C65 4.7uF 6.3V
C66 100nF 10V
C67 100nF 10V
C68 100nF 10V
C69 100nF 10V
C70 100nF 10V
C71 100nF 10V
C72 100nF 10V
U1A
XAM6254ATCGGAALW
A1 A24 A25 B25 F13 G13 G19 H13 H16 H18 H20 J7 J13 K7 K13 K15 K19 L20 M7 M8 M10 M12 M13 M17 M18 N15 P7 P10 P13 AE25 AE24
VSS
R13 R15 R18 R20 T8 T13 T14 T16 T17 T18 U8 U19 V9 V10 V11 V13 V16 V18 W7 Y2 AA11 AB9 AD1 AD9 AD12 AD16 AD25 AE1 AE8 AE12 AE16
GNDREF
GNDREF
H15 CAP_VDDS0
K18 CAP_VDDS1
W17 CAP_VDDS2
P19 CAP_VDDS3
U7 CAP_VDDS4
H17 CAP_VDDS5
J19 CAP_VDDS6
G9 CAP_VDDS_CANUART
H11 CAP_VDDS_MCU
U1H
XAM6254ATCGGAALW
C73 1uF 6.3V
C74 1uF 6.3V
C75 1uF 6.3V
C76 1uF 6.3V
C77 1uF 6.3V
C78 1uF 6.3V
C79 1uF 6.3V
C80 1uF 6.3V
C81 1uF 6.3V
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Sheet: /SoC_Caps/
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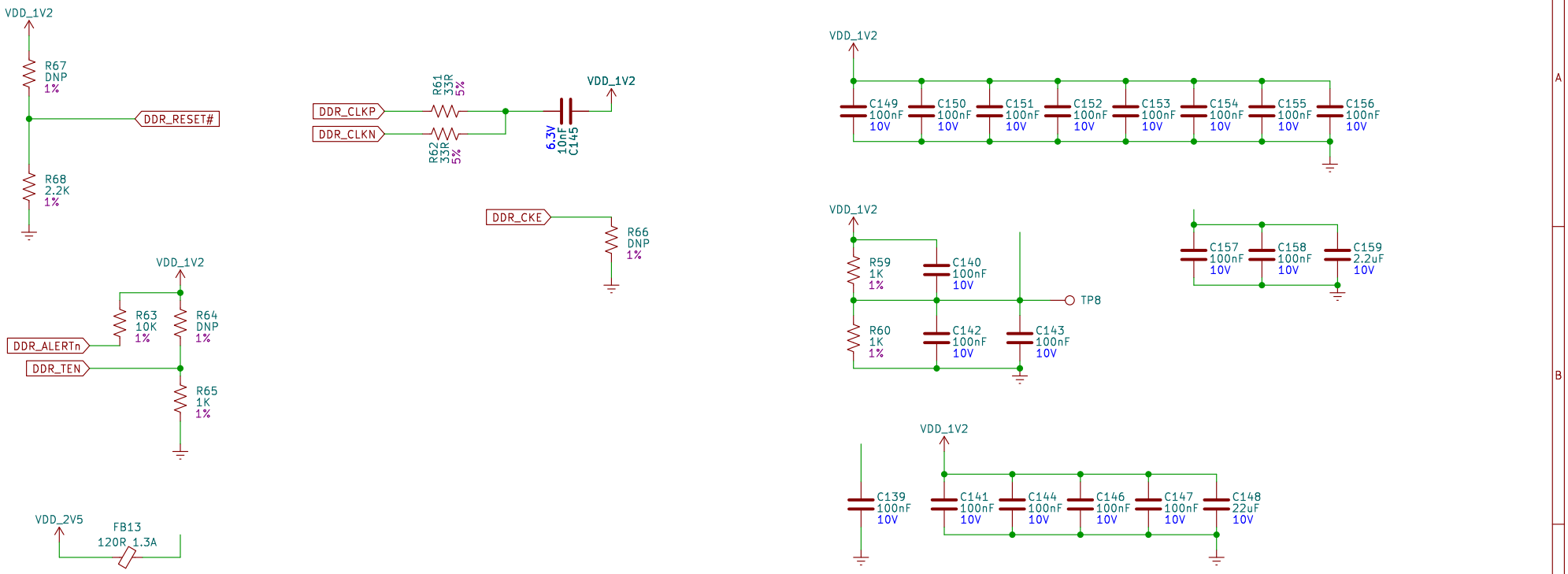
Title: TI Ember AM62 SiP Concept
Size: A4
Date: 2023-06-09
Rev: Rev 0
KiCad E.D.A. kicad 7.0.2
Id: 4/14



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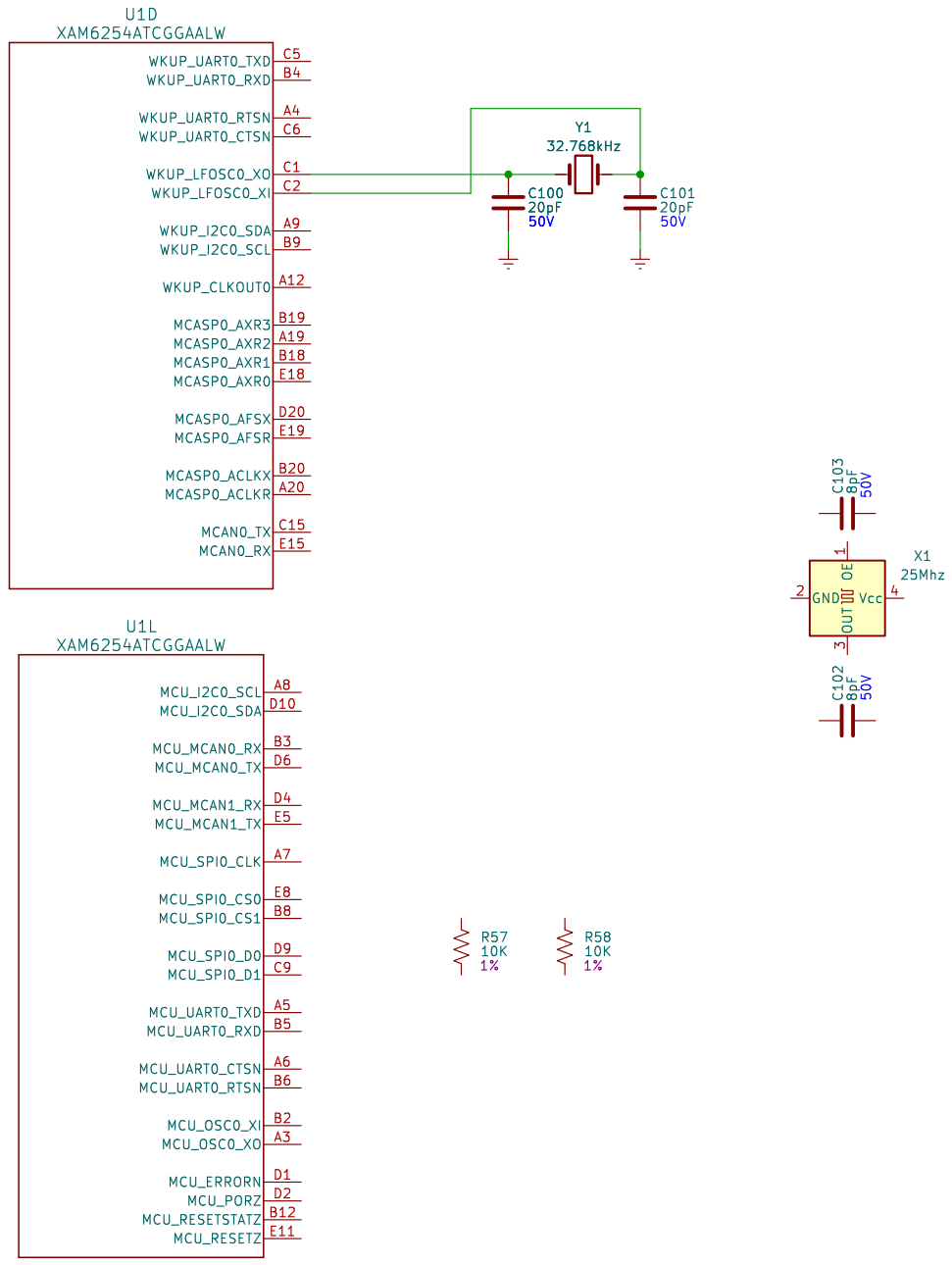
Title:		
Size: A4	Date:	**Rev:**
KiCad E.D.A. kicad 7.0.2		Id: 5/14


U1D
XAM6254ATCGGAALW
WKUP_UART0_TXD C5
WKUP_UART0_RXD B4
WKUP_UART0_RTSN A4
WKUP_UART0_CTSN C6
WKUP_LFOSC0_XO C1
WKUP_LFOSC0_XI C2
WKUP_I2C0_SDA A9
WKUP_I2C0_SCL B9
WKUP_CLKOUT0 A12
MCASP0_AXR3 B19
MCASP0_AXR2 A19
MCASP0_AXR1 B18
MCASP0_AXR0 E18
MCASP0_AFSX D20
MCASP0_AFSR E19
MCASP0_ACLKX B20
MCASP0_ACLKR A20
MCAN0_TX C15
MCAN0_RX E15
U1L
XAM6254ATCGGAALW
MCU_I2C0_SCL A8
MCU_I2C0_SDA D10
MCU_MCAN0_RX B3
MCU_MCAN0_TX D6
MCU_MCAN1_RX D4
MCU_MCAN1_TX E5
MCU_SPI0_CLK A7
MCU_SPI0_CS0 E8
MCU_SPI0_CS1 B8
MCU_SPI0_D0 D9
MCU_SPI0_D1 C9
MCU_UART0_TXD A5
MCU_UART0_RXD B5
MCU_UART0_CTSN A6
MCU_UART0_RTSN B6
MCU_OSC0_XI B2
MCU_OSC0_XO A3
MCU_ERRORN D1
MCU_PORZ D2
MCU_RESETSTATZ B12
MCU_RESETZ E11
Y1
32.768kHz
C100
20pF
50V
C101
20pF
50V
C103
8pF
50V
X1
25Mhz
GND
OUT
OE
Vcc
C102
8pF
50V
R57
10K
1%
R58
10K
1%
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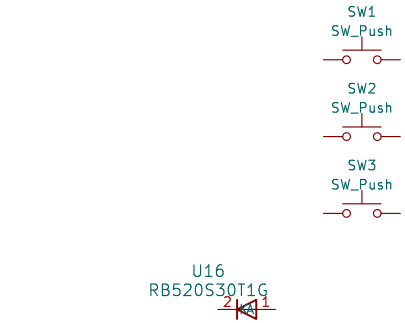
Sheet: /SoC_WKUP_MCU_SYSTEM/
File: SoC_WKUP_MCU_SYSTEM.kicad_sch
Title: TI Ember AM62 SiP Concept
Size: A4
Date: 2023-06-09
Rev: Rev 0
KiCad E.D.A. kicad 7.0.2
Id: 6/14



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Sheet: /SoC Bootstrap/
File: SoC Bootstrap.kicad_sch

Title: TI Ember AM62 SiP Concept

Size: A4	Date: 2023-06-09	**Rev: Rev 0**
KiCad E.D.A. kicad 7.0.2		Id: 7/14

TBD

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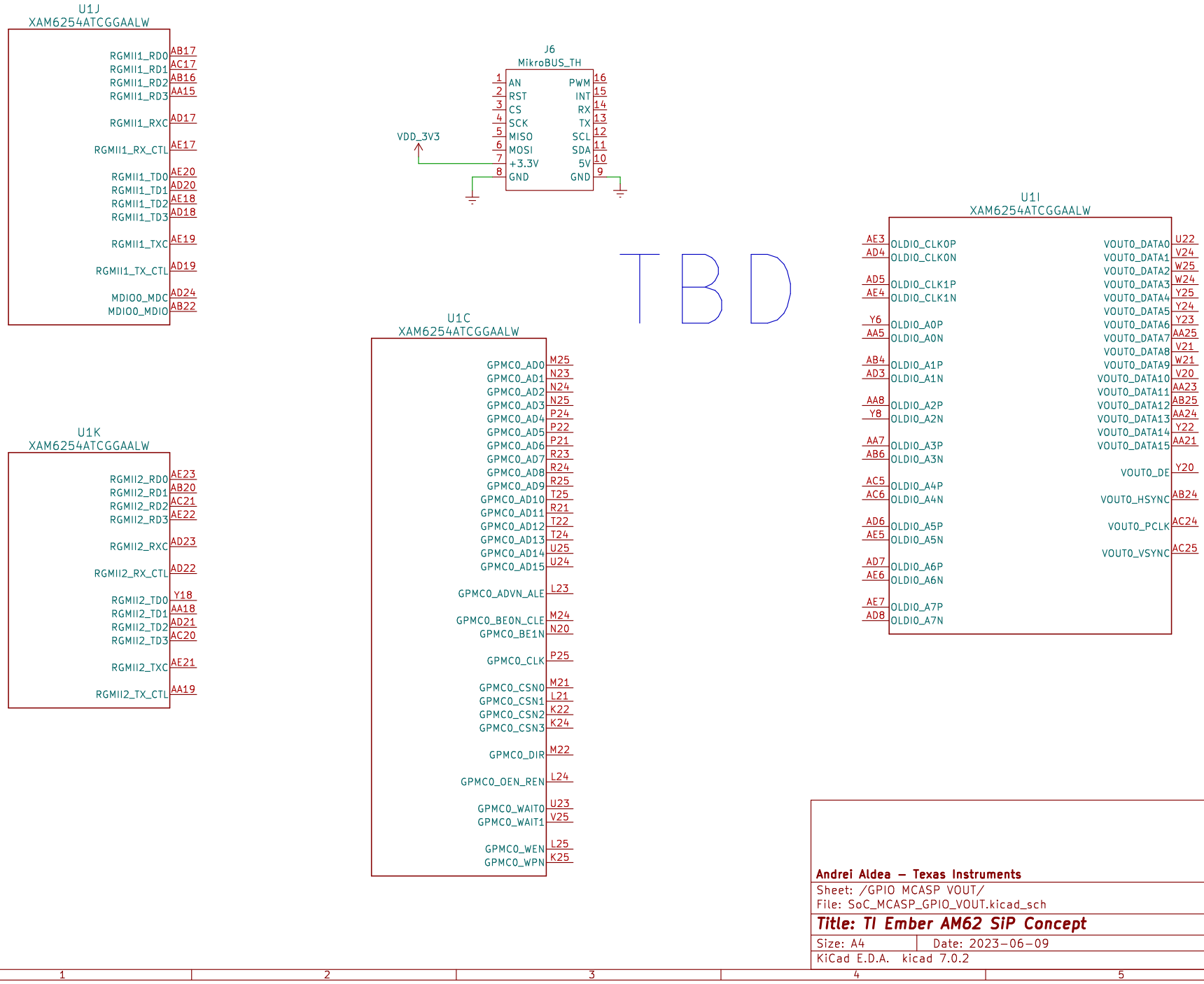
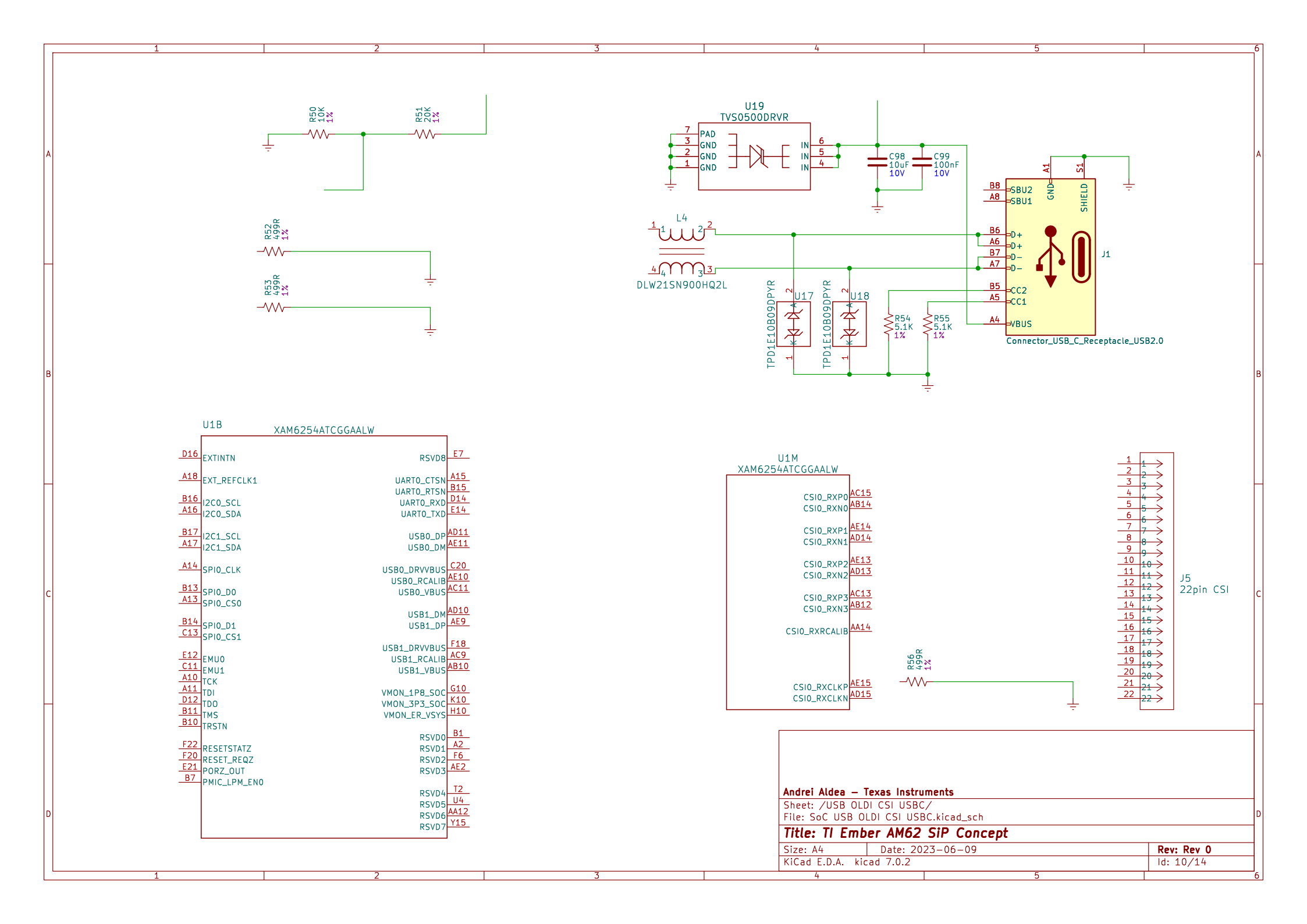
Sheet: /RGMII_OSPI/
File: SoC_RGMII_OSPI.kicad_sch

Title: TI Ember AM62 SiP Concept

Size: A4	Date: 2023-06-09	**Rev: Rev 0**
KiCad E.D.A. kicad 7.0.2		Id: 8/14


U1J
XAM6254ATCGGAALW
RGMII1_RD0 AB17
RGMII1_RD1 AC17
RGMII1_RD2 AB16
RGMII1_RD3 AA15
RGMII1_RXC AD17
RGMII1_RX_CTL AE17
RGMII1_TD0 AE20
RGMII1_TD1 AD20
RGMII1_TD2 AE18
RGMII1_TD3 AD18
RGMII1_TXC AE19
RGMII1_TX_CTL AD19
MDIO0_MDC AD24
MDIO0_MDIO AB22
J6
MikroBUS_TH
VDD_3V3
1 AN
2 RST
3 CS
4 SCK
5 MISO
6 MOSI
7 +3.3V
8 GND
16 PWM
15 INT
14 RX
13 TX
12 SCL
11 SDA
10 5V
9 GND
TBD
U1I
XAM6254ATCGGAALW
AE3 OLDI0_CLK0P
AD4 OLDI0_CLK0N
AD5 OLDI0_CLK1P
AE4 OLDI0_CLK1N
Y6 OLDI0_A0P
AA5 OLDI0_A0N
AB4 OLDI0_A1P
AD3 OLDI0_A1N
AA8 OLDI0_A2P
Y8 OLDI0_A2N
AA7 OLDI0_A3P
AB6 OLDI0_A3N
AC5 OLDI0_A4P
AC6 OLDI0_A4N
AD6 OLDI0_A5P
AE5 OLDI0_A5N
AD7 OLDI0_A6P
AE6 OLDI0_A6N
AE7 OLDI0_A7P
AD8 OLDI0_A7N
VOUT0_DATA0 U22
VOUT0_DATA1 V24
VOUT0_DATA2 W25
VOUT0_DATA3 W24
VOUT0_DATA4 Y25
VOUT0_DATA5 Y24
VOUT0_DATA6 Y23
VOUT0_DATA7 AA25
VOUT0_DATA8 V21
VOUT0_DATA9 W21
VOUT0_DATA10 V20
VOUT0_DATA11 AA23
VOUT0_DATA12 AB25
VOUT0_DATA13 AA24
VOUT0_DATA14 Y22
VOUT0_DATA15 AA21
VOUT0_DE Y20
VOUT0_HSYNC AB24
VOUT0_PCLK AC24
VOUT0_VSYNC AC25
U1C
XAM6254ATCGGAALW
GPMC0_AD0 M25
GPMC0_AD1 N23
GPMC0_AD2 N24
GPMC0_AD3 N25
GPMC0_AD4 P24
GPMC0_AD5 P22
GPMC0_AD6 P21
GPMC0_AD7 R23
GPMC0_AD8 R24
GPMC0_AD9 R25
GPMC0_AD10 T25
GPMC0_AD11 R21
GPMC0_AD12 T22
GPMC0_AD13 T24
GPMC0_AD14 U25
GPMC0_AD15 U24
GPMC0_ADVN_ALE L23
GPMC0_BEON_CLE M24
GPMC0_BE1N N20
GPMC0_CLK P25
GPMC0_CSN0 M21
GPMC0_CSN1 L21
GPMC0_CSN2 K22
GPMC0_CSN3 K24
GPMC0_DIR M22
GPMC0_OEN_REN L24
GPMC0_WAIT0 U23
GPMC0_WAIT1 V25
GPMC0_WEN L25
GPMC0_WPN K25
U1K
XAM6254ATCGGAALW
RGMII2_RD0 AE23
RGMII2_RD1 AB20
RGMII2_RD2 AC21
RGMII2_RD3 AE22
RGMII2_RXC AD23
RGMII2_RX_CTL AD22
RGMII2_TD0 Y18
RGMII2_TD1 AA18
RGMII2_TD2 AD21
RGMII2_TD3 AC20
RGMII2_TXC AE21
RGMII2_TX_CTL AA19
Andrei Aldea – Texas Instruments
Sheet: /GPIO MCASP VOUT/
File: SoC_MCASP_GPIO_VOUT.kicad_sch
Title: TI Ember AM62 SiP Concept
Size: A4
Date: 2023-06-09
Rev: Rev 0
KiCad E.D.A. kicad 7.0.2
Id: 9/14



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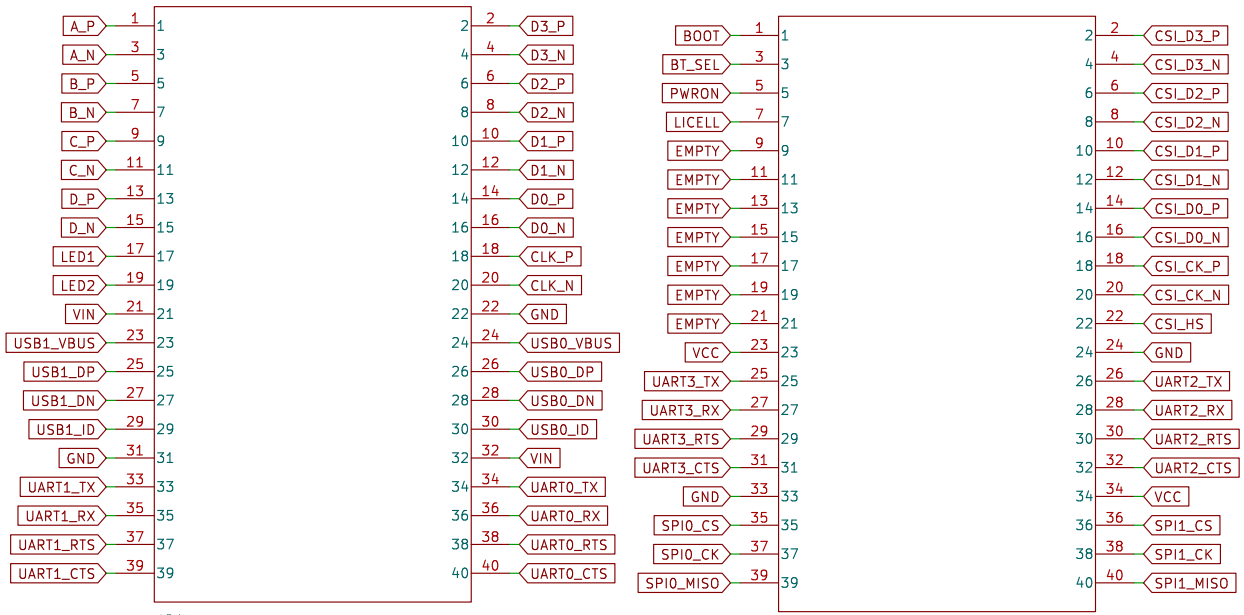
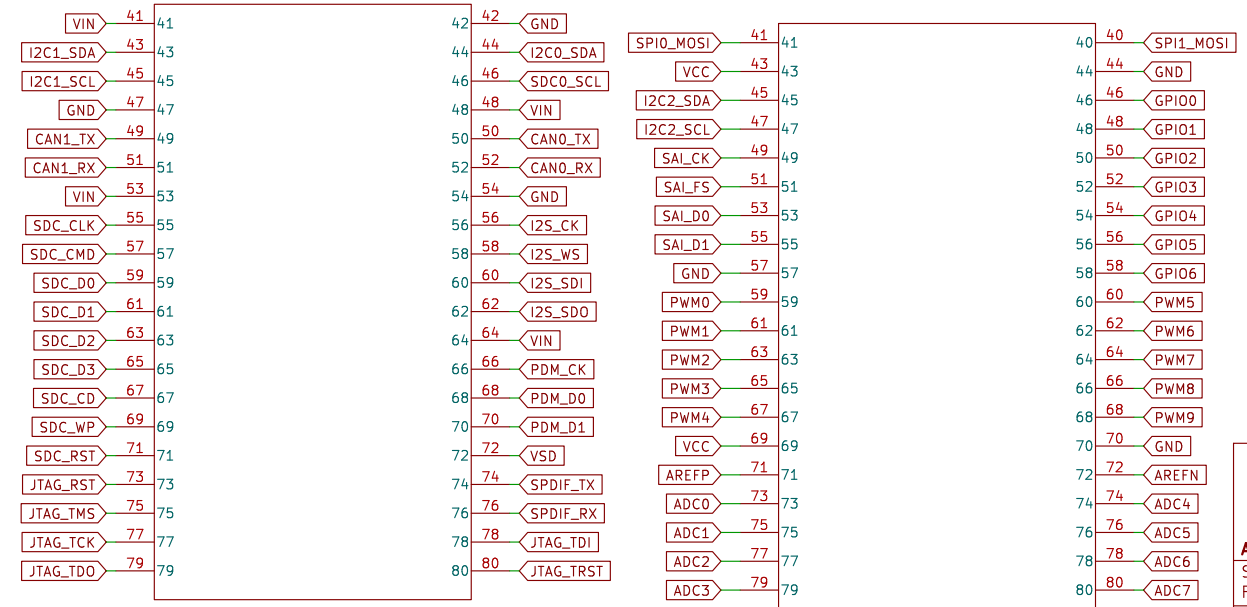
Sheet: /USB OLDI CSI USBC/

File: SoC USB OLDI CSI USBC.kicad_sch

Title: TI Ember AM62 SiP Concept

Size: A4	Date: 2023-06-09	Rev: Rev 0
KiCad E.D.A. kicad 7.0.2		Id: 10/14





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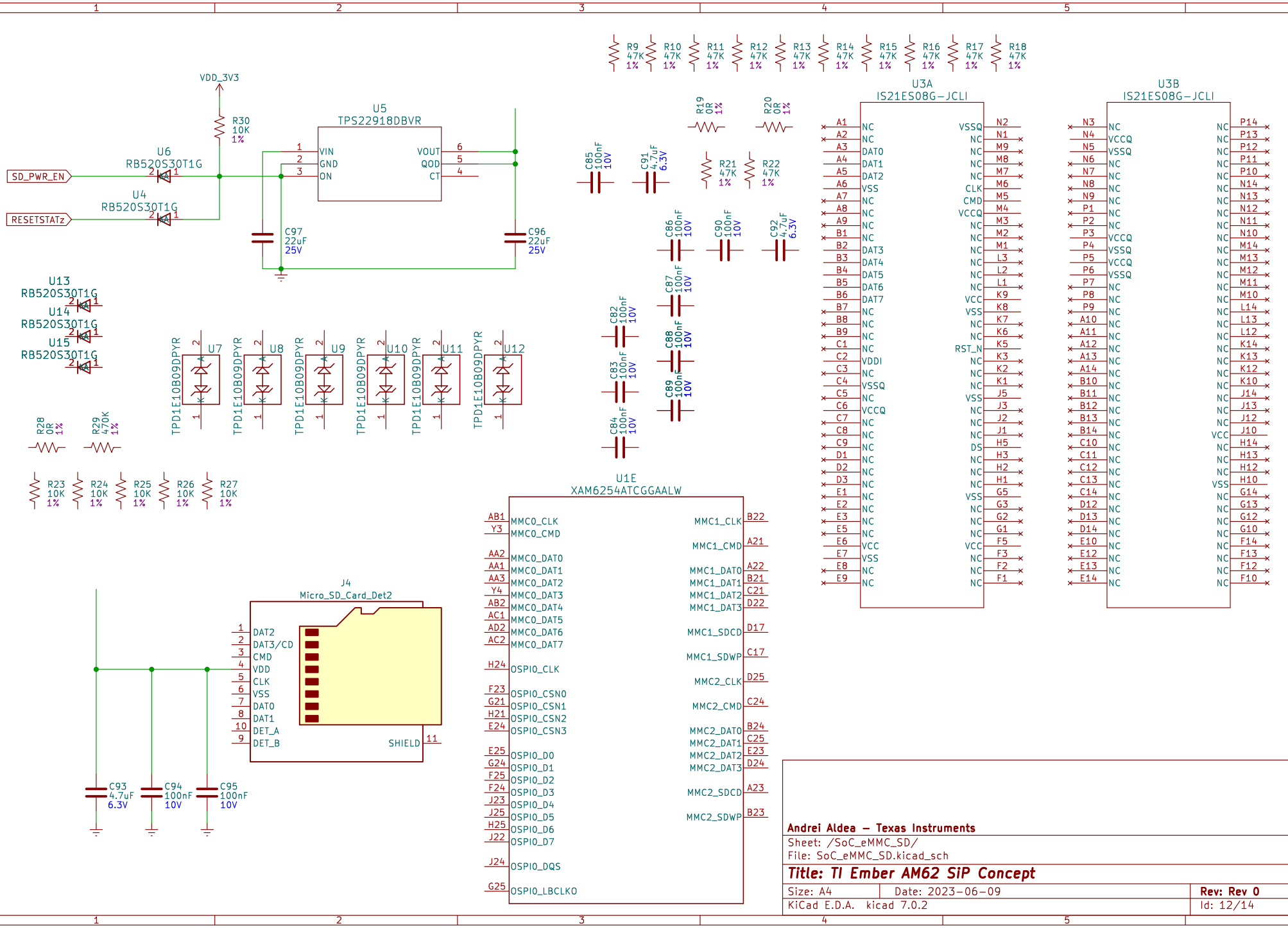
Sheet: /Portenta B2B Interconnect/
File: B2BInterconnect.kicad_sch

Title: TI Ember AM62 SiP Concept

Size: A4	Date: 2023-06-09	**Rev: Rev 0**
KiCad E.D.A. kicad 7.0.2		Id: 11/14


R9 47K 1%
R10 47K 1%
R11 47K 1%
R12 47K 1%
R13 47K 1%
R14 47K 1%
R15 47K 1%
R16 47K 1%
R17 47K 1%
R18 47K 1%
VDD_3V3
R30 10K 1%
U6
RB520S30T1G
SD_PWR_EN
U4
RB520S30T1G
RESETSTATz
U5
TPS22918DBVR
VIN
GND
ON
VOUT
QOD
CT
C97 22uF 25V
C96 22uF 25V
R19 0R 1%
R20 0R 1%
R21 47K 1%
R22 47K 1%
C85 100nF 10V
C91 4.7uF 6.3V
C86 100nF 10V
C90 100nF 10V
C92 4.7uF 6.3V
C87 100nF 10V
C88 100nF 10V
C89 100nF 10V
C82 100nF 10V
C83 100nF 10V
C84 100nF 10V
U3A
IS21ES08G-JCLI
U3B
IS21ES08G-JCLI
U13
RB520S30T1G
U14
RB520S30T1G
U15
RB520S30T1G
U7
U8
U9
U10
U11
U12
TPD1E10B09DPYR
R28 0R 1%
R29 470K 1%
R23 10K 1%
R24 10K 1%
R25 10K 1%
R26 10K 1%
R27 10K 1%
U1E
XAM6254ATCGGAALW
MMC0_CLK
MMC0_CMD
MMC0_DAT0
MMC0_DAT1
MMC0_DAT2
MMC0_DAT3
MMC0_DAT4
MMC0_DAT5
MMC0_DAT6
MMC0_DAT7
OSPI0_CLK
OSPI0_CSN0
OSPI0_CSN1
OSPI0_CSN2
OSPI0_CSN3
OSPI0_D0
OSPI0_D1
OSPI0_D2
OSPI0_D3
OSPI0_D4
OSPI0_D5
OSPI0_D6
OSPI0_D7
OSPI0_DQS
OSPI0_LBCLKO
MMC1_CLK
MMC1_CMD
MMC1_DAT0
MMC1_DAT1
MMC1_DAT2
MMC1_DAT3
MMC1_SDCD
MMC1_SDWP
MMC2_CLK
MMC2_CMD
MMC2_DAT0
MMC2_DAT1
MMC2_DAT2
MMC2_DAT3
MMC2_SDCD
MMC2_SDWP
J4
Micro_SD_Card_Det2
DAT2
DAT3/CD
CMD
VDD
CLK
VSS
DAT0
DAT1
DET_A
DET_B
SHIELD
C93 4.7uF 6.3V
C94 100nF 10V
C95 100nF 10V
Andrei Aldea – Texas Instruments
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File: SoC_eMMC_SD.kicad_sch
Title: TI Ember AM62 SiP Concept
Size: A4
Date: 2023-06-09
Rev: Rev 0
KiCad E.D.A. kicad 7.0.2
Id: 12/14

TBD

CC33x Wifi 6 + BT Module

Sheet: /Wireless/
File: Wireless.kicad_sch

Title:

Size: A4 | Date: | **Rev:**
KiCad E.D.A. kicad 7.0.2 | Id: 13/14

TBD

MSPM0 MCU

Sheet: /MSPM0/
File: MSPM0.kicad_sch

Title:

Size: A4 | Date: | **Rev:**
KiCad E.D.A. kicad 7.0.2 | Id: 14/14