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EFR32xG22 Radio Board

2.4 GHz 6 dBm

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Revision History

Rev.	Description
A00	Initial production release.

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PCB1



PCB4182A



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Designed:
TAB

Size
A3

Design Created Date:
Friday, November 03, 2017

Approved:
JSH

BOM Doc No:

Sheet Created Date:
Friday, November 03, 2017

Schematic Title
EFR32xG22 2.4 GHz 6 dBm Radio Board

Page Title
Title Page

Document number
BRD4182A

Revision
A00

Sheet Created Date
Friday, November 03, 2017

Sheet Modified Date
Friday, February 22, 2019

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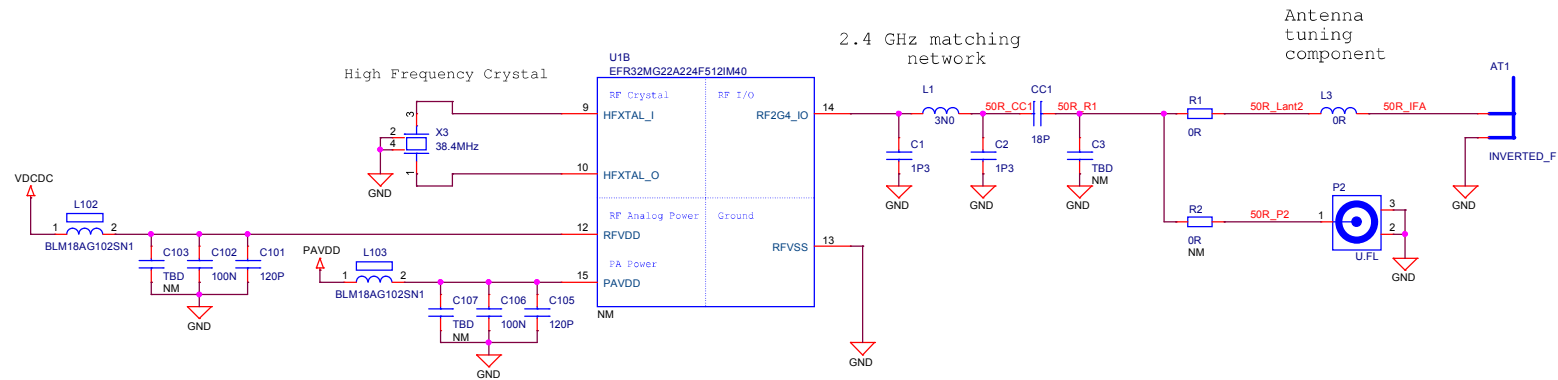
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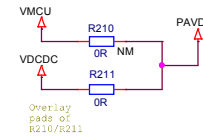
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Antenna & Radio Interface

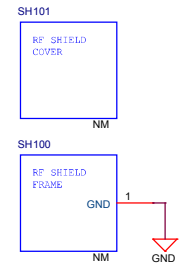


PAVDD Configuration

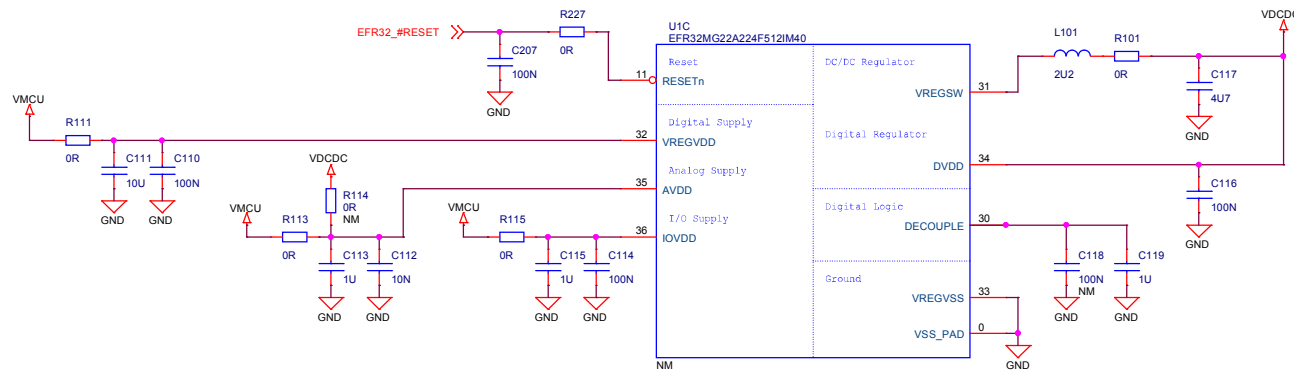
	Power Config 1 VMCU to PAVDD	Power Config 2 DCDC to PAVDD
R210	Mount	Not mount
R211	Not mount	Mount



RF Shielding



Power & Decoupling



Schematic Title

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RF, Antenna and Power

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Approved:

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EFR32 Pin Mapping

The diagram illustrates the pin mapping for the EFR32 microcontroller, showing connections between EFR32 pins, peripherals, expansion headers, WSTK breakout pins, and WSTK peripheral connections. The connections are organized into sections for different pin ranges:

- EFR32_PA0[8..0]**: Connections for PA0-PA8, including debug signals (DBG_SWCLK#, DBG_SWDIO#), expansion headers (EXP_HEADER12, EXP_HEADER14), and WSTK breakout pins (WSTK_P14, WSTK_P16, WSTK_P18, WSTK_P20, WSTK_P42, WSTK_P41, WSTK_P22, WSTK_P9, WSTK_P11, WSTK_P19, WSTK_P21).
- EFR32_PB0[4..0]**: Connections for PB0-PB4, including expansion headers (EXP_HEADER7, EXP_HEADER9, EXP_HEADER15, EXP_HEADER16), WSTK breakout pins (WSTK_P4, WSTK_P6, WSTK_P12, WSTK_P13, WSTK_P15), and WSTK peripheral connections (WSTK_F12, WSTK_F13, WSTK_F5).
- EFR32_PC0[7..0]**: Connections for PC0-PC7, including expansion headers (EXP_HEADER6, EXP_HEADER8, EXP_HEADER10, EXP_HEADER5), WSTK breakout pins (WSTK_P3, WSTK_P1, WSTK_P5, WSTK_P7, WSTK_P2, WSTK_P25, WSTK_P27, WSTK_P29, WSTK_P31), and WSTK peripheral connections (WSTK_F16, WSTK_F15, WSTK_F20, WSTK_F19, WSTK_F17, WSTK_F14).
- EFR32_PD0[3..0]**: Connections for PD0-PD3, including expansion headers (EXP_HEADER11, EXP_HEADER13), WSTK breakout pins (WSTK_P8, WSTK_P10), and WSTK peripheral connections (WSTK_F10, WSTK_F11).

The diagram also shows various components like resistors (R212, R213, R214, R215, R216, R217, R206, R205, R204, R207, R208), capacitors (C127, C128), and logic gates (OR, NM) used in the connections. A low-frequency crystal (X2, 32.768 kHz) is connected to EFR32_PD00 and EFR32_PD01. The diagram is organized into sections for different pin ranges (EFR32_PA0[8..0], EFR32_PB0[4..0], EFR32_PC0[7..0], EFR32_PD0[3..0]).

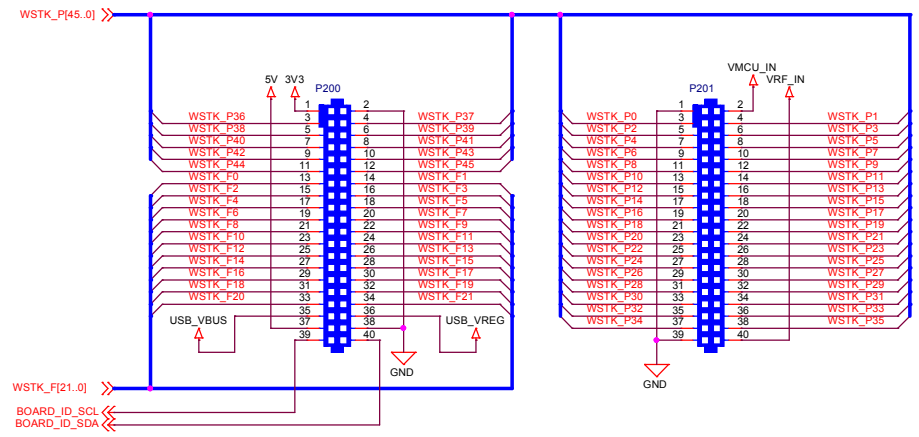
EFMR32 I/O Port Pins

Serial Flash

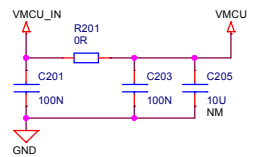
Pin	Signal	Microcontroller Pin	Component
EFMR32_PA0[8..0]	PA00-PA08	21-29	U1A: EFR32MG22A24F512IM40
EFMR32_PB0[4..0]	PB00-PB04	20-24	U1A: EFR32MG22A24F512IM40
EFMR32_PC0[7..0]	PC00-PC07	1-8	U1A: EFR32MG22A24F512IM40
EFMR32_PD0[3..0]	PD00-PD03	40-43	U1A: EFR32MG22A24F512IM40
C221, C222, C223, C224, C225, C226	TBD NM	-	Resistors

Pin	Signal	Microcontroller Pin	Component
FLASH_MOSI	SI/SIO0	D2	U100A: MX25R8035F
FLASH_SCLK	SO/SIO1	E1	U100A: MX25R8035F
FLASH_SCS	CS#	A3	U100A: MX25R8035F
FLASH_MISO	WP#/SIO2	E3	U100A: MX25R8035F
FLASH_RESET	RESET#/SIO3	C1	U100A: MX25R8035F
VCC	VCC	A1	U100B: MX25R8035F
GND	GND	B2	U100B: MX25R8035F

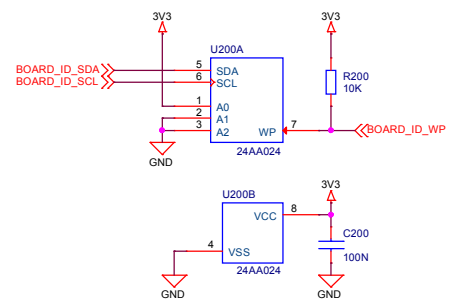
WSTK Connectors



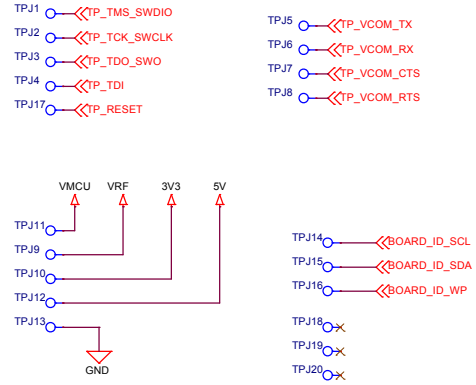
WSTK Power Decoupling



Board Identification



Test Points



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