



EFR32xG22 QFN40 Radio Board 2.4 GHz 6 dBm	
Board Function	Page
Title Page	1
RF, Antenna & Power	2
I/O Port Connections	3
WSTK Connectors & Board ID	4

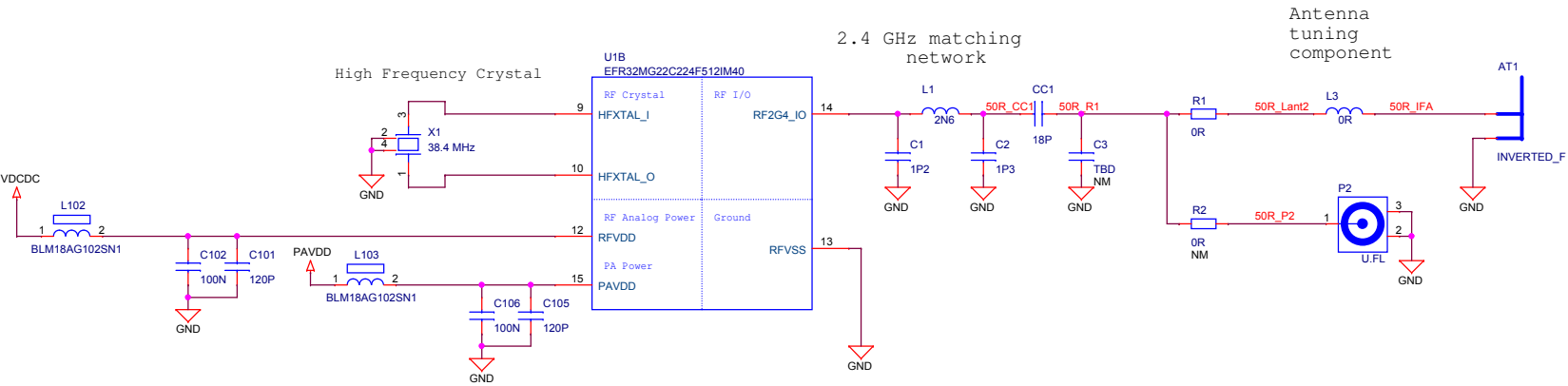
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Revision History	
Rev.	Description
A00	Initial production release.
A01	Mounted U1. Updated C1, C2 P/N.
A02	Matching layout improvement at C1 GND pad.
B00	X3-->X1. Updated U1, X1 P/N, matching and USART markings. PCB siksreen fix.
B01	Updated matching network.
B02	Updated matching network.
B03	Updated U1 P/N. Fixed X2 P/N.
B04	Removed optional/not mounted components. Fixed L101 P/N.
B05	New P/N for X2.

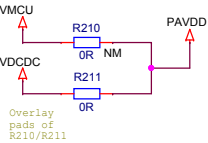
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SILICON LABS		EFR32xG22 QFN40 2.4 GHz 6 dBm Radio Board	
Designed: TAB		Approved: JSH	
Size A3		BOM Doc No: <Cage Code>	
Design Created Date: Friday, November 03, 2017		Document number	Revision
		BRD4182A	B05
Sheet Created Date: Friday, November 03, 2017		Sheet Modified Date: Friday, February 14, 2020	Sheet 1 of 4

Antenna & Radio Interface

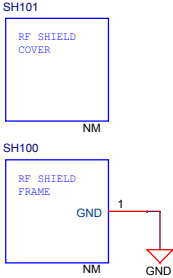


PAVDD Configuration

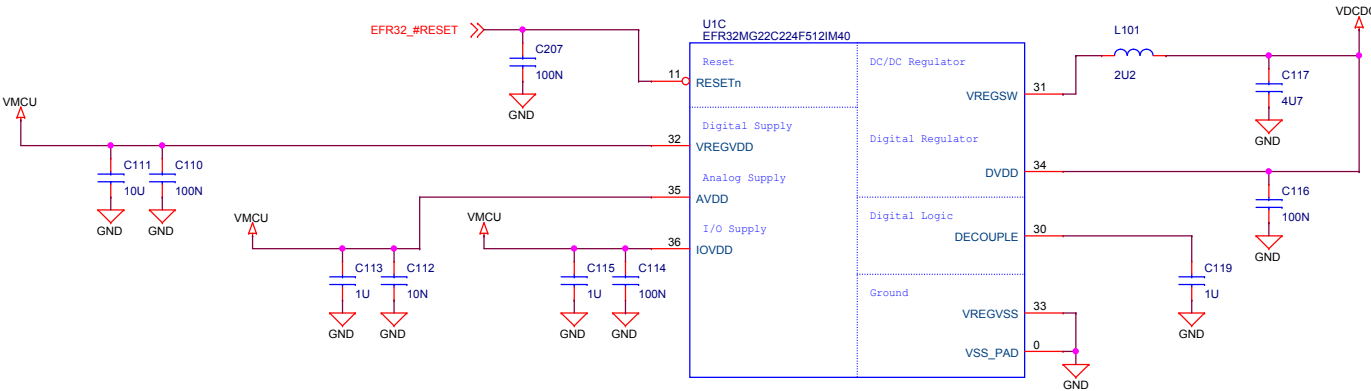
	Power Config 1 VMCU to PAVDD	Power Config 2 DCDC to PAVDD
R210	Mount	Not mount
R211	Not mount	Mount



RF Shielding



Power & Decoupling





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Page Title
RF, Antenna and Power

Document number
BRD4182A

Revision
B05

Sheet
2 of 4

EFR32 Pin Mapping

The diagram illustrates the pin mapping for the EFR32 microcontroller, showing connections between EFR32 pins, peripherals, EXP headers, WSTK breakout pins, and WSTK peripheral connections. The connections are organized into sections labeled A, B, C, and D.

Section A: EFR32_PA0[8..0] to EFR32_PA08. Connections include EFR32_PA00 to WSTK_P14, EFR32_PA01 to WSTK_P16, EFR32_PA02 to WSTK_P18, EFR32_PA03 to WSTK_P20, EFR32_PA04 to WSTK_P42, EFR32_PA05 to WSTK_P9, EFR32_PA07 to WSTK_P19, and EFR32_PA08 to WSTK_P21. Other connections include EFR32_PA04 to WSTK_P22, EFR32_PA05 to WSTK_P11, EFR32_PA07 to WSTK_P19, and EFR32_PA08 to WSTK_P21. A note indicates that EFR32_PA04, EFR32_PA05, EFR32_PA07, and EFR32_PA08 are US1 TX, US1 RX, US1 RTS, and US1 CTS respectively.

Section B: EFR32_PB0[4..0]. Connections include EFR32_PB00 to WSTK_P4, EFR32_PB01 to WSTK_P6, EFR32_PB02 to WSTK_P12, EFR32_PB03 to WSTK_P13, and EFR32_PB04 to WSTK_P15. Other connections include EFR32_PB00 to WSTK_P4, EFR32_PB01 to WSTK_P6, EFR32_PB02 to WSTK_P12, EFR32_PB03 to WSTK_P13, and EFR32_PB04 to WSTK_P15. A note indicates that EFR32_PB00, EFR32_PB01, EFR32_PB02, and EFR32_PB03 are EXP_HEADER7, EXP_HEADER9, EXP_HEADER15, and EXP_HEADER16 respectively.

Section C: EFR32_PC0[7..0]. Connections include EFR32_PC00 to WSTK_P1, EFR32_PC01 to WSTK_P1, EFR32_PC02 to WSTK_P1, EFR32_PC03 to WSTK_P7, EFR32_PC04 to WSTK_P25, EFR32_PC05 to WSTK_P27, EFR32_PC06 to WSTK_P29, and EFR32_PC07 to WSTK_P31. Other connections include EFR32_PC00 to WSTK_P1, EFR32_PC01 to WSTK_P1, EFR32_PC02 to WSTK_P1, EFR32_PC03 to WSTK_P7, EFR32_PC04 to WSTK_P25, EFR32_PC05 to WSTK_P27, EFR32_PC06 to WSTK_P29, and EFR32_PC07 to WSTK_P31. A note indicates that EFR32_PC00, EFR32_PC01, and EFR32_PC02 are US0 TX, US0 RX, and US0 CLK respectively. A note also indicates that EFR32_PC03, EFR32_PC04, EFR32_PC05, and EFR32_PC06 are EXP_HEADER4, EXP_HEADER6, EXP_HEADER8, and EXP_HEADER10 respectively. A note also indicates that EFR32_PC07 is EXP_HEADER5.

Section D: EFR32_PD0[3..0]. Connections include EFR32_PD00 to WSTK_P8, EFR32_PD01 to WSTK_P10, EFR32_PD02 to WSTK_P8, and EFR32_PD03 to WSTK_P10. Other connections include EFR32_PD00 to WSTK_P8, EFR32_PD01 to WSTK_P10, EFR32_PD02 to WSTK_P8, and EFR32_PD03 to WSTK_P10. A note indicates that EFR32_PD00 and EFR32_PD01 are LFXTAL O and LFXTAL I respectively. A note also indicates that EFR32_PD02 and EFR32_PD03 are EXP_HEADER11 and EXP_HEADER13 respectively.

The diagram also shows connections to various peripherals and components, including R212, R213, R214, R215, R216, R217, R218, R219, R220, R221, R222, R223, R224, R225, R226, R227, R228, R229, R230, R231, R232, R233, R234, R235, R236, R237, R238, R239, R240, R241, R242, R243, R244, R245, R246, R247, R248, R249, R250, R251, R252, R253, R254, R255, R256, R257, R258, R259, R260, R261, R262, R263, R264, R265, R266, R267, R268, R269, R270, R271, R272, R273, R274, R275, R276, R277, R278, R279, R280, R281, R282, R283, R284, R285, R286, R287, R288, R289, R290, R291, R292, R293, R294, R295, R296, R297, R298, R299, R300, R301, R302, R303, R304, R305, R306, R307, R308, R309, R310, R311, R312, R313, R314, R315, R316, R317, R318, R319, R320, R321, R322, R323, R324, R325, R326, R327, R328, R329, R330, R331, R332, R333, R334, R335, R336, R337, R338, R339, R340, R341, R342, R343, R344, R345, R346, R347, R348, R349, R350, R351, R352, R353, R354, R355, R356, R357, R358, R359, R360, R361, R362, R363, R364, R365, R366, R367, R368, R369, R370, R371, R372, R373, R374, R375, R376, R377, R378, R379, R380, R381, R382, R383, R384, R385, R386, R387, R388, R389, R390, R391, R392, R393, R394, R395, R396, R397, R398, R399, R400, R401, R402, R403, R404, R405, R406, R407, R408, R409, R410, R411, R412, R413, R414, R415, R416, R417, R418, R419, R420, R421, R422, R423, R424, R425, R426, R427, R428, R429, R430, R431, R432, R433, R434, R435, R436, R437, R438, R439, R440, R441, R442, R443, R444, R445, R446, R447, R448, R449, R450, R451, R452, R453, R454, R455, R456, R457, R458, R459, R460, R461, R462, R463, R464, R465, R466, R467, R468, R469, R470, R471, R472, R473, R474, R475, R476, R477, R478, R479, R480, R481, R482, R483, R484, R485, R486, R487, R488, R489, R490, R491, R492, R493, R494, R495, R496, R497, R498, R499, R500, R501, R502, R503, R504, R505, R506, R507, R508, R509, R510, R511, R512, R513, R514, R515, R516, R517, R518, R519, R520, R521, R522, R523, R524, R525, R526, R527, R528, R529, R530, R531, R532, R533, R534, R535, R536, R537, R538, R539, R540, R541, R542, R543, R544, R545, R546, R547, R548, R549, R550, R551, R552, R553, R554, R555, R556, R557, R558, R559, R560, R561, R562, R563, R564, R565, R566, R567, R568, R569, R570, R571, R572, R573, R574, R575, R576, R577, R578, R579, R580, R581, R582, R583, R584, R585, R586, R587, R588, R589, R590, R591, R592, R593, R594, R595, R596, R597, R598, R599, R600, R601, R602, R603, R604, R605, R606, R607, R608, R609, R610, R611, R612, R613, R614, R615, R616, R617, R618, R619, R620, R621, R622, R623, R624, R625, R626, R627, R628, R629, R630, R631, R632, R633, R634, R635, R636, R637, R638, R639, R640, R641, R642, R643, R644, R645, R646, R647, R648, R649, R650, R651, R652, R653, R654, R655, R656, R657, R658, R659, R660, R661, R662, R663, R664, R665, R666, R667, R668, R669, R670, R671, R672, R673, R674, R675, R676, R677, R678, R679, R680, R681, R682, R683, R684, R685, R686, R687, R688, R689, R690, R691, R692, R693, R694, R695, R696, R697, R698, R699, R700, R701, R702, R703, R704, R705, R706, R707, R708, R709, R710, R711, R712, R713, R714, R715, R716, R717, R718, R719, R720, R721, R722, R723, R724, R725, R726, R727, R728, R729, R730, R731, R732, R733, R734, R735, R736, R737, R738, R739, R740, R741, R742, R743, R744, R745, R746, R747, R748, R749, R750, R751, R752, R753, R754, R755, R756, R757, R758, R759, R760, R761, R762, R763, R764, R765, R766, R767, R768, R769, R770, R771, R772, R773, R774, R775, R776, R777, R778, R779, R

EFR32 PA00

EFR32 PA01

EFR32 PA02

EFR32 PA03

EFR32 PA04

EFR32 PA05

EFR32 PA06

EFR32 PA07

EFR32 PA08

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PA00

PA01

PA02

PA03

PA04

PA05

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PA07

PA08

EFR32 PB00

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PB00

PB01

PB02

PB03

PB04

EFR32 PC00

EFR32 PC01

EFR32 PC02

EFR32 PC03

EFR32 PC04

EFR32 PC05

EFR32 PC06

EFR32 PC07

1

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3

4

5

6

7

8

PC00

PC01

PC02

PC03

PC04

PC05

PC06

PC07

EFR32 PD00

EFR32 PD01

EFR32 PD02

EFR32 PD03

40

39

38

37

PD00

PD01

PD02

PD03

U1A

EFR32MG22C224F512IM40

Serial Flash

FLASH_MOSI

FLASH_SCLK

FLASH_SCS

VMCU

VMCU

VMCU

D2

E1

A3

E3

C1

U100A

SI / SIO0

SCLK

CS#

WP# / SIO2

RESET# / SIO3

MX25R8035F

C3

C3

FLASH_MISO

U100B

VCC

GND

MX25R8035F

A1

B2

VMCU

GND

C124

100N

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I/O Port Connections

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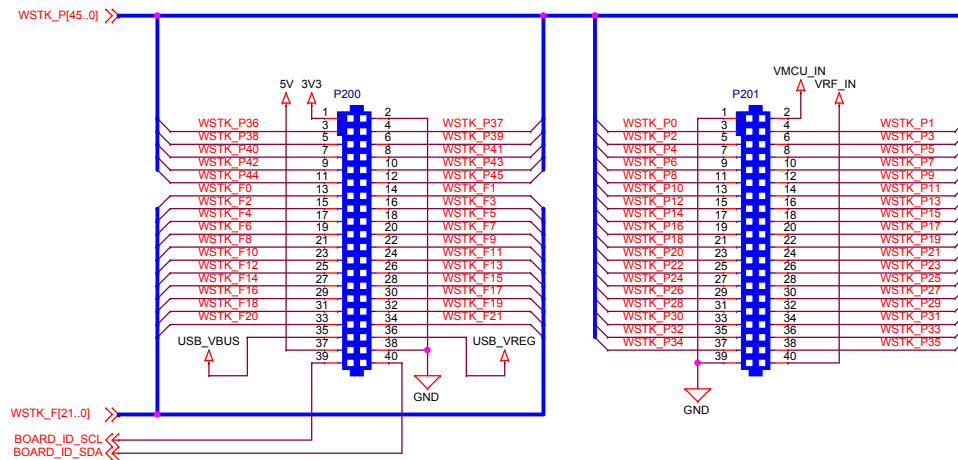
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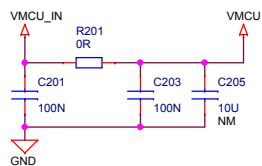
Sheet

3 of 4

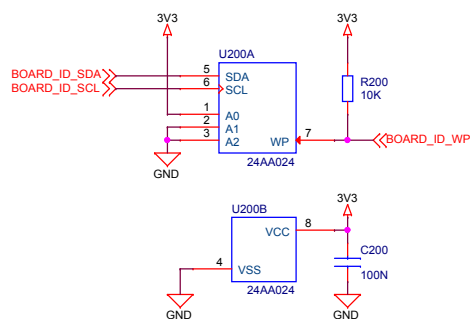
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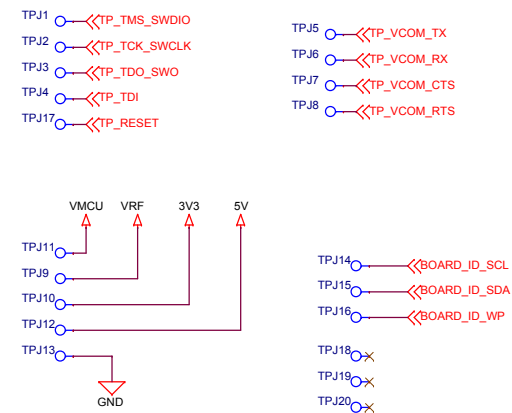
WSTK Power Decoupling



Board Identification



Test Points



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Size A3		WSTK Connectors & Board ID	
BOM Doc No: <Cage Code>		Document number	Revision
Design Created Date: Friday, November 03, 2017		BRD4182A	B05
Sheet Created Date: Friday, November 03, 2017		Sheet Modified Date: Friday, February 14, 2020	Sheet 4 of 4