



EFR32xG22 QFN40 Radio Board

2.4 GHz 6 dBm

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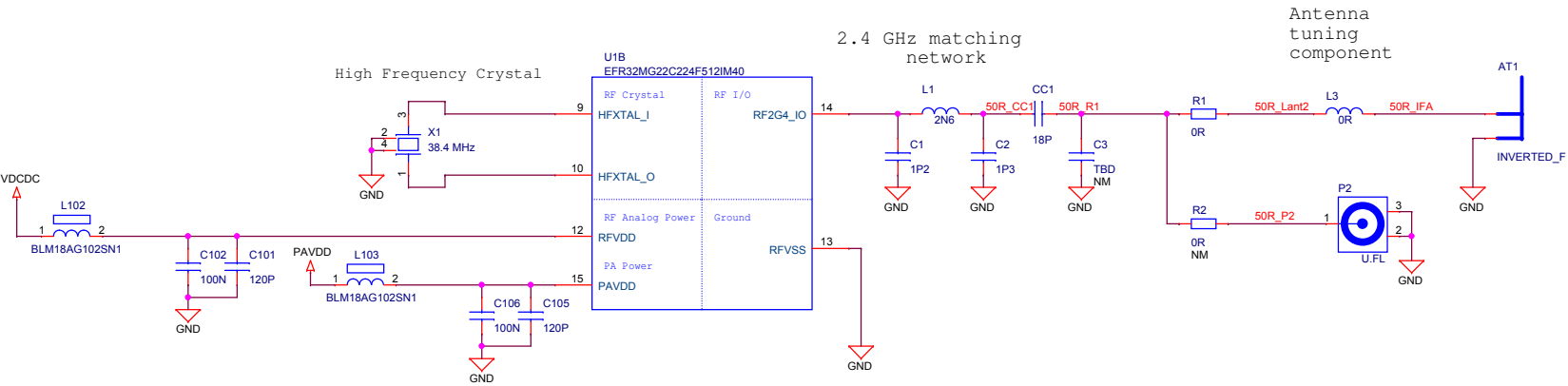


Revision History

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.

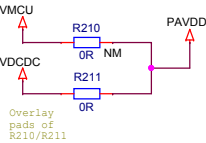
		Schematic Title	
SILICON LABS		EFR32xG22 QFN40 2.4 GHz 6 dBm Radio Board	
Designed: TAB		Approved: JSH	
Size A3		BOM Doc No: <Cage Code>	
Design Created Date: Friday, November 03, 2017		Document number	Revision
		BRD4182A	B04
Sheet Created Date: Friday, November 03, 2017		Sheet Modified Date: Wednesday, December 11, 2019	Sheet 1 of 4

Antenna & Radio Interface

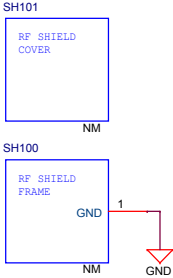


PAVDD Configuration

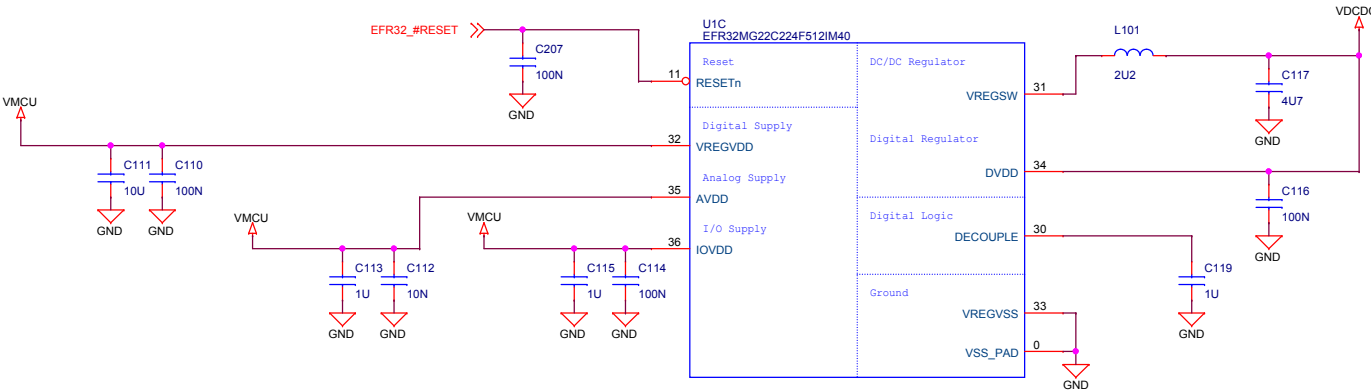
	Power Config 1 VMCU to PAVDD	Power Config 2 DCDC to PAVDD
R210	Mount	Not mount
R211	Not mount	Mount



RF Shielding



Power & Decoupling





SILICON LABS

Schematic Title
EFR32xG22 QFN40 2.4 GHz 6 dBm Radio Board

Page Title
RF, Antenna and Power

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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.

Legend:

- EFR32 Pin:** Pins of the EFR32 microcontroller.
- EFR32 Peripheral:** Peripherals connected to the EFR32 pins.
- EXP Header Connection:** Connections to the EXP header.
- WSTK Breakout Pin:** Pins of the WSTK breakout board.
- WSTK Peripheral Connection:** Connections to the WSTK peripheral.

Pin Mappings:

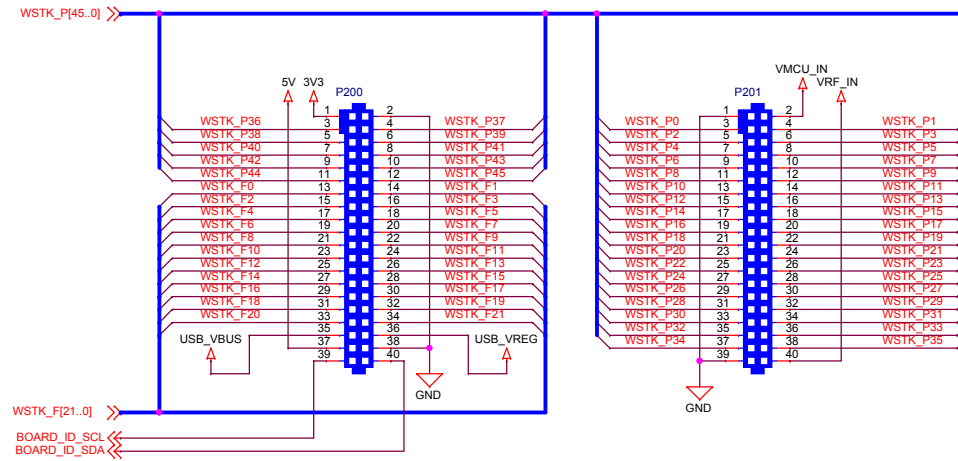
- EFR32_PA0[8..0] <<< EFR32_PA00:**
 - EFR32_PA00: DBG_SWCLK
 - EFR32_PA01: DBG_SWDIO
 - EFR32_PA02: DBG_TDO
 - EFR32_PA03: DBG_TDO_SWO
 - EFR32_PA04: US1_TX, US1_RX, US1_RTS, US1_CTS
- EFR32_PB0[4..0] <<< EFR32_PB00:**
 - EFR32_PB00: EXP_HEADER7
 - EFR32_PB01: EXP_HEADER8
 - EFR32_PB02: EXP_HEADER15
 - EFR32_PB03: EXP_HEADER16
 - EFR32_PB04: EXP_HEADER17
- EFR32_PC0[7..0] <<< EFR32_PC00:**
 - EFR32_PC00: US0_TX
 - EFR32_PC01: US0_RX
 - EFR32_PC02: US0_CLK
 - EFR32_PC03: EXP_HEADER10, EXP_HEADER5
 - EFR32_PC04: PTI_DATA
 - EFR32_PC05: PTI_SYNC
 - EFR32_PC06: DISP_SCS
 - EFR32_PC07: DISP_ENABLE
- EFR32_PD0[3..0] <<< EFR32_PD00:**
 - EFR32_PD00: LFXTAL_O
 - EFR32_PD01: LFXTAL_I
 - EFR32_PD02: EXP_HEADER11
 - EFR32_PD03: EXP_HEADER13

Other Connections:

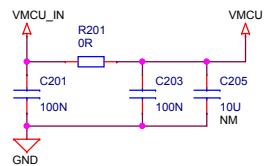
- WSTK Breakout Pins:** WSTK_P14, WSTK_P16, WSTK_P18, WSTK_P20, WSTK_P42, WSTK_P41, WSTK_P22, WSTK_P9, WSTK_P11, WSTK_P19, WSTK_P21, WSTK_P4, WSTK_P6, WSTK_P12, WSTK_P13, WSTK_P15, WSTK_P1, WSTK_P3, WSTK_P0, WSTK_P5, WSTK_P7, WSTK_P2, WSTK_P25, WSTK_P27, WSTK_P29, WSTK_P31, WSTK_P26, WSTK_P28, WSTK_P30, WSTK_P37, WSTK_P8, WSTK_P10.
- WSTK Peripheral Connections:** WSTK_F18, WSTK_F1, WSTK_F0, WSTK_F2, WSTK_F3, WSTK_F6, WSTK_F7, WSTK_F9, WSTK_F8, WSTK_F12, WSTK_F13, WSTK_F16, WSTK_F15, WSTK_F20, WSTK_F17, WSTK_F14, WSTK_F10, WSTK_F11.
- Other Components:** R212, R213, R214, R215, R216, R217, R206, R205, R204, R208, R207, R209, R210, R211, 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

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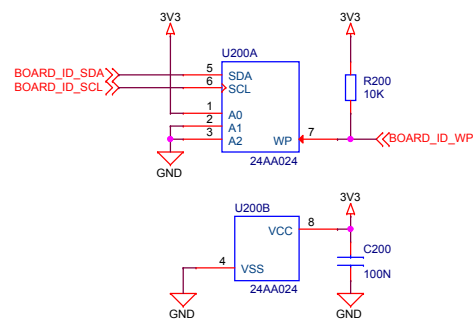
WSTK Connectors



WSTK Power Decoupling



Board Identification



Test Points

