

■ Schematics

Audio

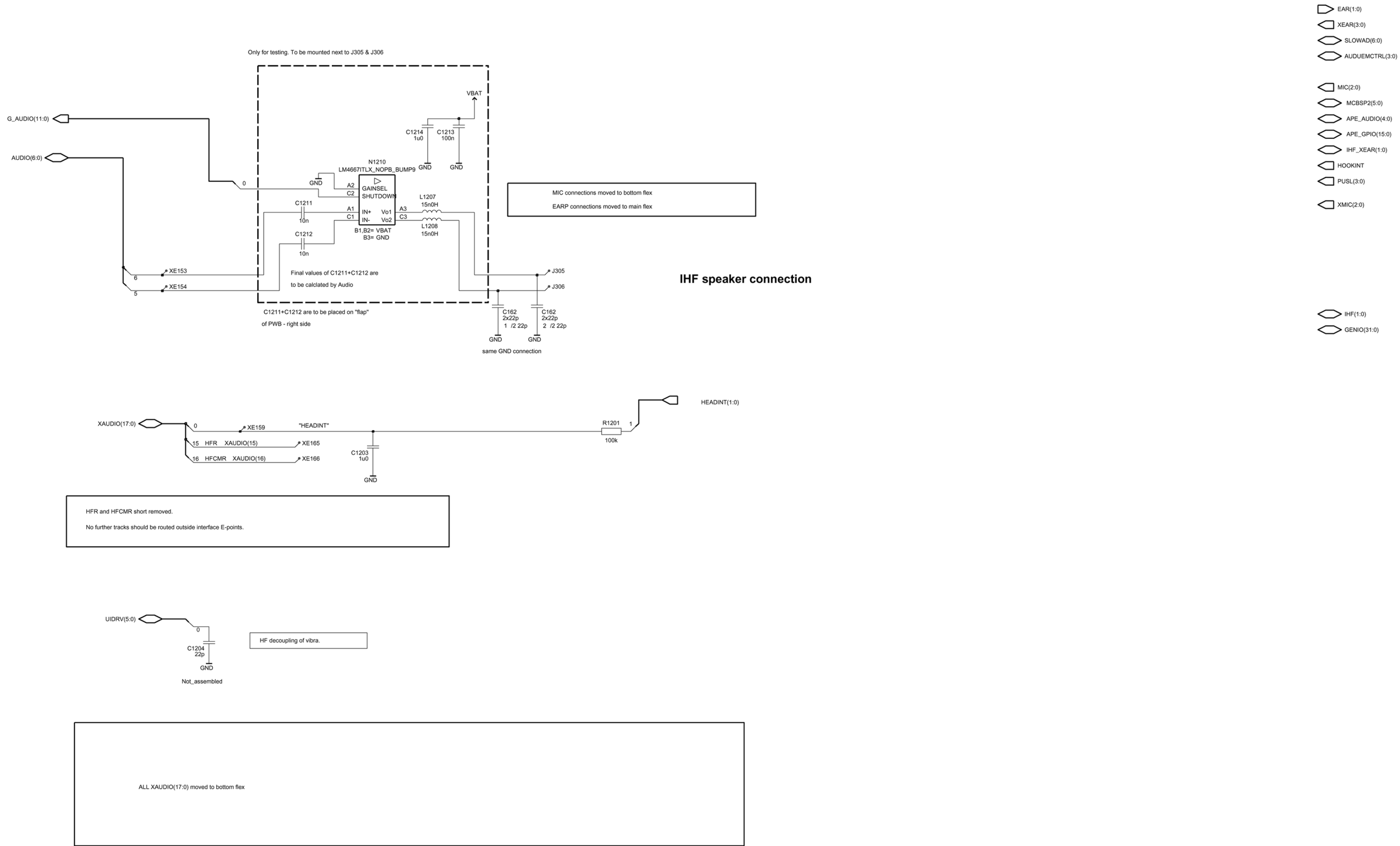


Figure 132 RM-13/33 Audio, v. 2.0, ed. 287

The schematic diagram illustrates the internal circuitry of the CSR BC3 ROM 1.0 ASIC. Key components and connections include:

- ASIC Pins (Left):** G_LPRF(23:0), GENIO(31:0), AUDUEMCTRL(3:0), RFCONVCTRL(2:0), BT_ANT, LPRFCLK, PUSL(3:0), and various voltage inputs (VR3, VBAT, VIO, VR3).
- ASIC Pins (Right):** G_LPRF(23:0), G_LPRF(23:0), G_LPRF(23:0), and various voltage inputs (VR3, VBAT, VIO, VR3).
- Internal Components:**
 - DC-DC Converter:** Z6030 (LFB2H2G44BB2A257, 2441.75MHz) converting VBAT to VIO.
 - Crystal:** D6030 (74LX1604BJR, 1MHz) connected to XTAL_IN and XTAL_OUT.
 - Capacitors:** C6040, C6038, C6042, C6044, C6046, C6039, C6041, C6043, C6045, C6031, C6035, C6047, C6033, C6036.
 - Resistors:** R6040, R6041, R6042, R6034, R6035, R6036, R6037, R6038, R6039, R6040, R6041, R6042, R6043, R6044, R6045, R6046, R6047, R6048, R6049, R6050, R6051, R6052, R6053, R6054, R6055, R6056, R6057, R6058, R6059, R6060, R6061, R6062, R6063, R6064, R6065, R6066, R6067, R6068, R6069, R6070, R6071, R6072, R6073, R6074, R6075, R6076, R6077, R6078, R6079, R6080, R6081, R6082, R6083, R6084, R6085, R6086, R6087, R6088, R6089, R6090, R6091, R6092, R6093, R6094, R6095, R6096, R6097, R6098, R6099, R6100, R6101, R6102, R6103, R6104, R6105, R6106, R6107, R6108, R6109, R6110, R6111, R6112, R6113, R6114, R6115, R6116, R6117, R6118, R6119, R6120, R6121, R6122, R6123, R6124, R6125, R6126, R6127, R6128, R6129, R6130, R6131, R6132, R6133, R6134, R6135, R6136, R6137, R6138, R6139, R6140, R6141, R6142, R6143, R6144, R6145, R6146, R6147, R6148, R6149, R6150, R6151, R6152, R6153, R6154, R6155, R6156, R6157, R6158, R6159, R6160, R6161, R6162, R6163, R6164, R6165, R6166, R6167, R6168, R6169, R6170, R6171, R6172, R6173, R6174, R6175, R6176, R6177, R6178, R6179, R6180, R6181, R6182, R6183, R6184, R6185, R6186, R6187, R6188, R6189, R6190, R6191, R6192, R6193, R6194, R6195, R6196, R6197, R6198, R6199, R6200, R6201, R6202, R6203, R6204, R6205, R6206, R6207, R6208, R6209, R6210, R6211, R6212, R6213, R6214, R6215, R6216, R6217, R6218, R6219, R6220, R6221, R6222, R6223, R6224, R6225, R6226, R6227, R6228, R6229, R6230, R6231, R6232, R6233, R6234, R6235, R6236, R6237, R6238, R6239, R6240, R6241, R6242, R6243, R6244, R6245, R6246, R6247, R6248, R6249, R6250, R6251, R6252, R6253, R6254, R6255, R6256, R6257, R6258, R6259, R6260, R6261, R6262, R6263, R6264, R6265, R6266, R6267, R6268, R6269, R6270, R6271, R6272, R6273, R6274, R6275, R6276, R6277, R6278, R6279, R6280, R6281, R6282, R6283, R6284, R6285, R6286, R6287, R6288, R6289, R6290, R6291, R6292, R6293, R6294, R6295, R6296, R6297, R6298, R6299, R6300, R6301, R6302, R6303, R6304, R6305, R6306, R6307, R6308, R6309, R6310, R6311, R6312, R6313, R6314, R6315, R6316, R6317, R6318, R6319, R6320, R6321, R6322, R6323, R6324, R6325, R6326, R6327, R6328, R6329, R6330, R6331, R6332, R6333, R6334, R6335, R6336, R6337, R6338, R6339, R6340, R6341, R6342, R6343, R6344, R6345, R6346, R6347, R6348, R6349, R6350, R6351, R6352, R6353, R6354, R6355, R6356, R6357, R6358, R6359, R6360, R6361, R6362, R6363, R6364, R6365, R6366, R6367, R6368, R6369, R6370, R6371, R6372, R6373, R6374, R6375, R6376, R6377, R6378, R6379, R6380, R6381, R6382, R6383, R6384, R6385, R6386, R6387, R6388, R6389, R6390, R6391, R6392, R6393, R6394, R6395, R6396, R6397, R6398, R6399, R6400, R6401, R6402, R6403, R6404, R6405, R6406, R6407, R6408, R6409, R6410, R6411, R6412, R6413, R6414, R6415, R6416, R6417, R6418, R6419, R6420, R6421, R6422, R6423, R6424, R6425, R6426, R6427, R6428, R6429, R6430, R6431, R6432, R6433, R6434, R6435, R6436, R6437, R6438, R6439, R6440, R6441, R6442, R6443, R6444, R6445, R6446, R6447, R6448, R6449, R6450, R6451, R6452, R6453, R6454, R6455, R6456, R6457, R6458, R6459, R6460, R6461, R6462, R6463, R6464, R6465, R6466, R6467, R6468, R6469, R6470, R6471, R6472, R6473, R6474, R6475, R6476, R6477, R6478, R6479, R6480, R6481, R6482, R6483, R6484, R6485, R6486, R6487, R6488, R6489, R6490, R6491, R6492, R6493, R6494, R6495, R6496, R6497, R6498, R6499, R6500, R6501, R6502, R6503, R6504, R6505, R6506, R6507, R6508, R6509, R6510, R6511, R6512, R6513, R6514, R6515, R6516, R6517, R6518, R6519, R6520, R6521, R6522, R6523, R6524, R6525, R6526, R6527, R6528, R6529, R6530, R6531, R6532, R6533, R6534, R6535, R6536, R6537, R6538, R6539, R6540, R6541, R6542, R6543, R6544, R6545, R6546, R6547, R6548, R6549, R6550, R6551, R6552, R6553, R6554, R6555, R6556, R6557, R6558, R6559, R6560, R6561, R6562, R6563, R6564, R6565, R6566, R6567, R6568, R6569, R6570, R6571, R6572, R6573, R6574, R6575, R6576, R6577, R6578, R6579, R6580, R6581, R6582, R6583, R6584, R6585, R6586, R6587, R6588, R6589, R6590, R6591, R6592, R6593, R6594, R6595, R6596, R6597, R6598, R6599, R6600, R6601, R6602, R6603, R6604, R6605, R6606, R6607, R6608, R6609, R6610, R6611, R6612, R6613, R6614, R6615, R6616, R6617, R6618, R6619, R6620, R6621, R6622, R6623, R6624, R6625, R6626, R6627, R6628, R6629, R6630, R6631, R6632, R6633, R6634, R6635, R6636, R6637, R6638, R6639, R6640, R6641, R6642

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Top level

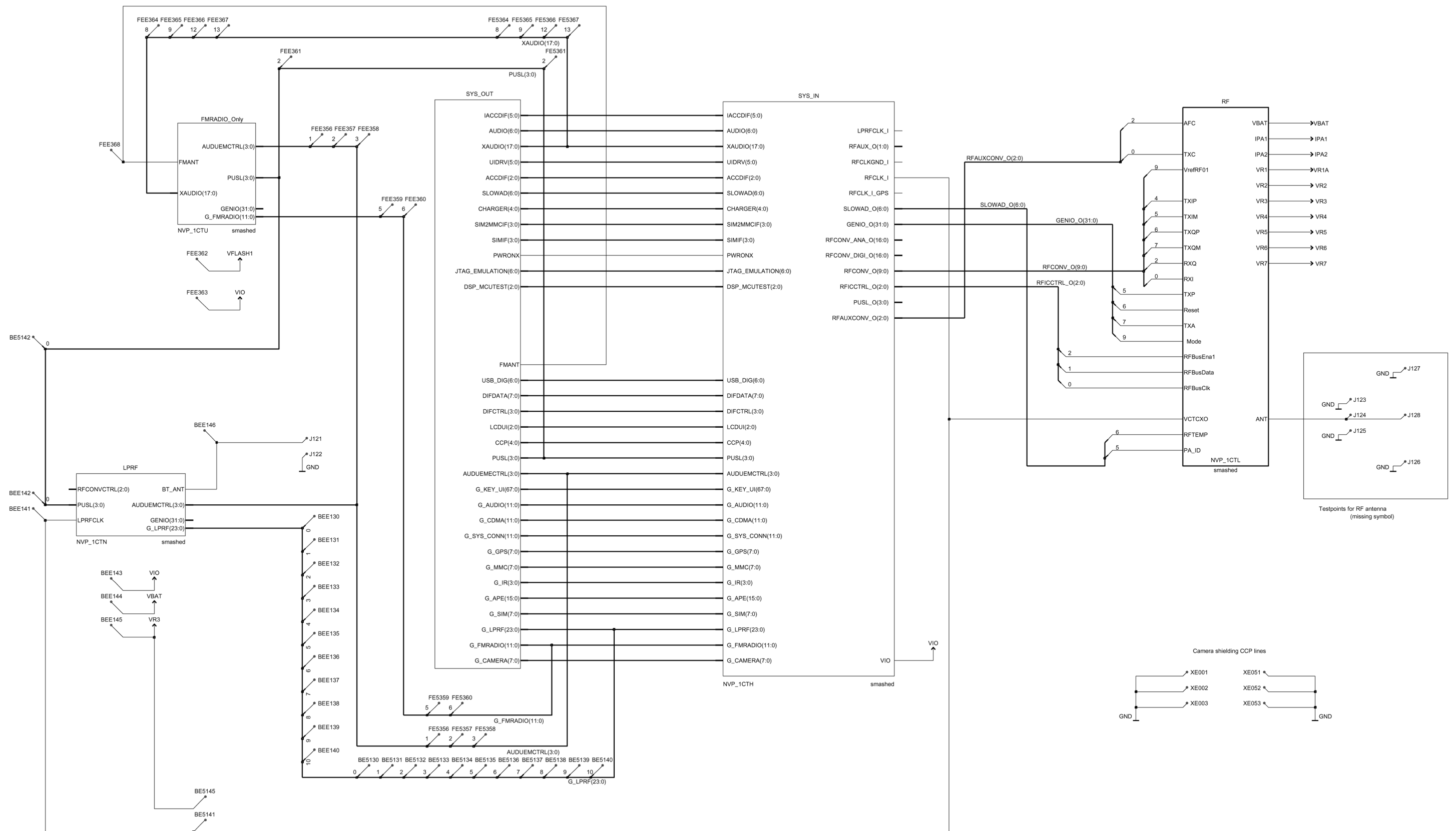


Figure 134 RM-13/33 Top level, ed. 443

RF top level

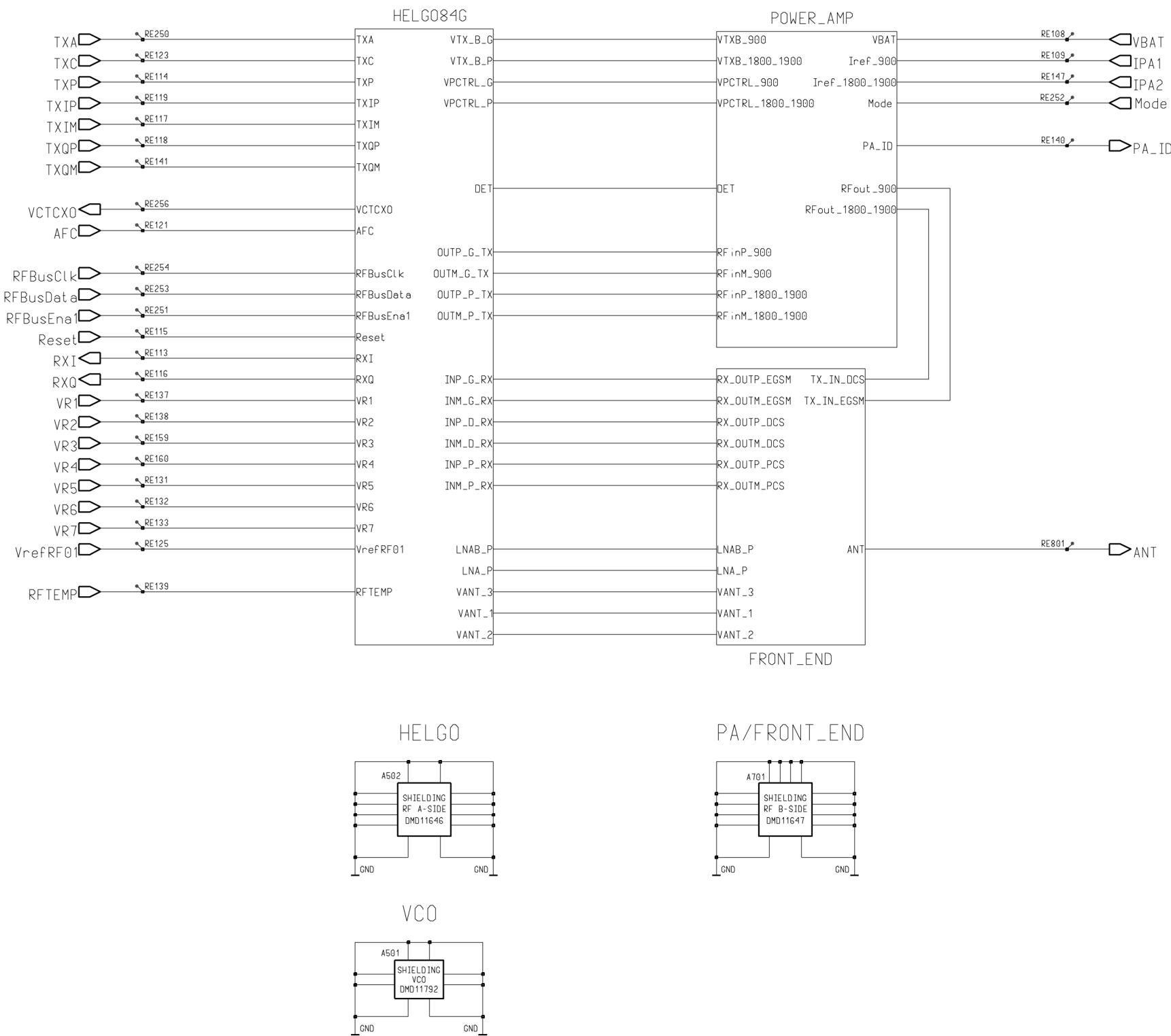


Figure 135 RM-13/33 RF top level, ed. 224

RX front end and antenna switch

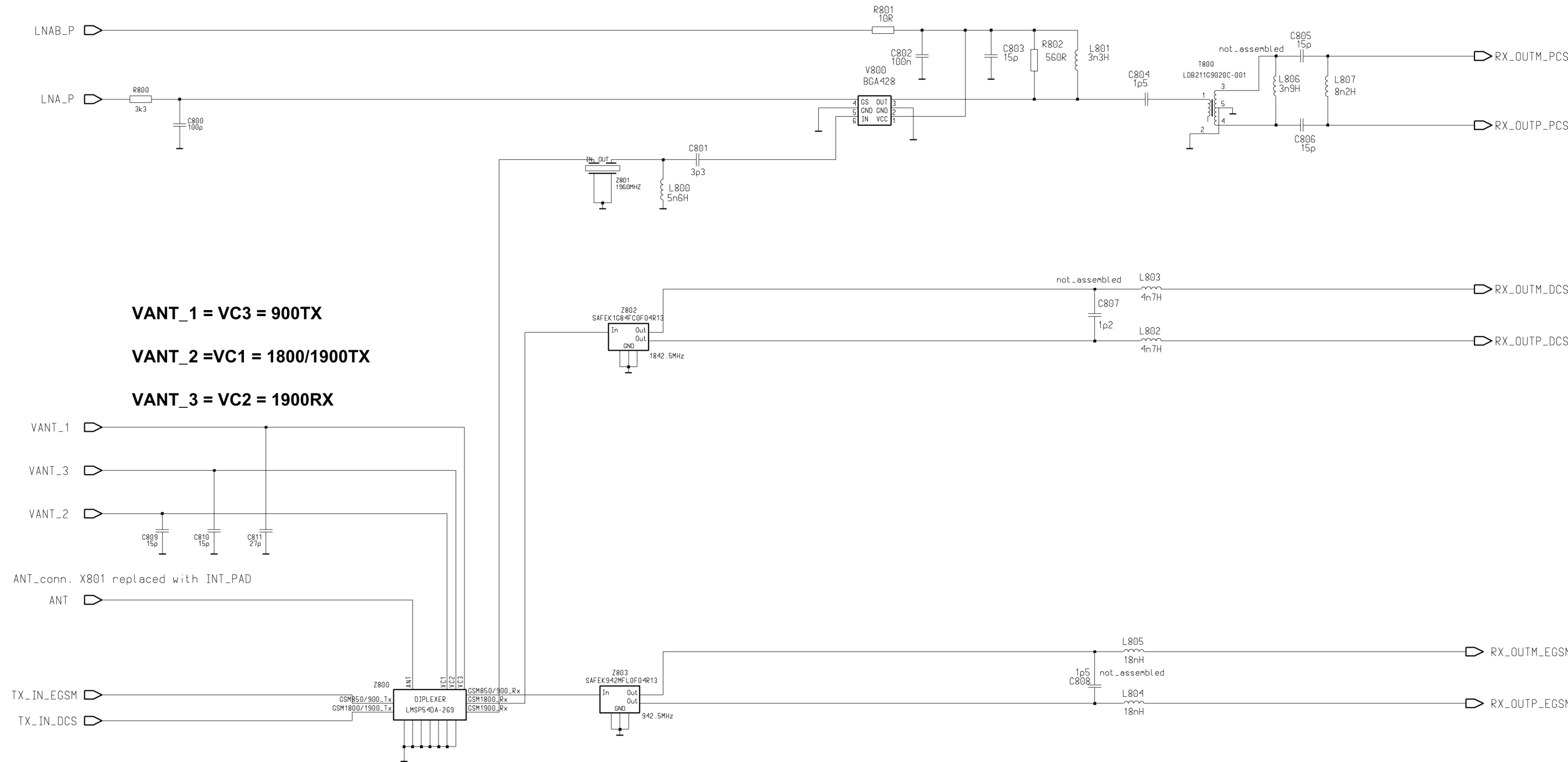


Figure 136 RM-13/33 RX front end and antenna switch, ed. 182

Helgo (RF ASIC)

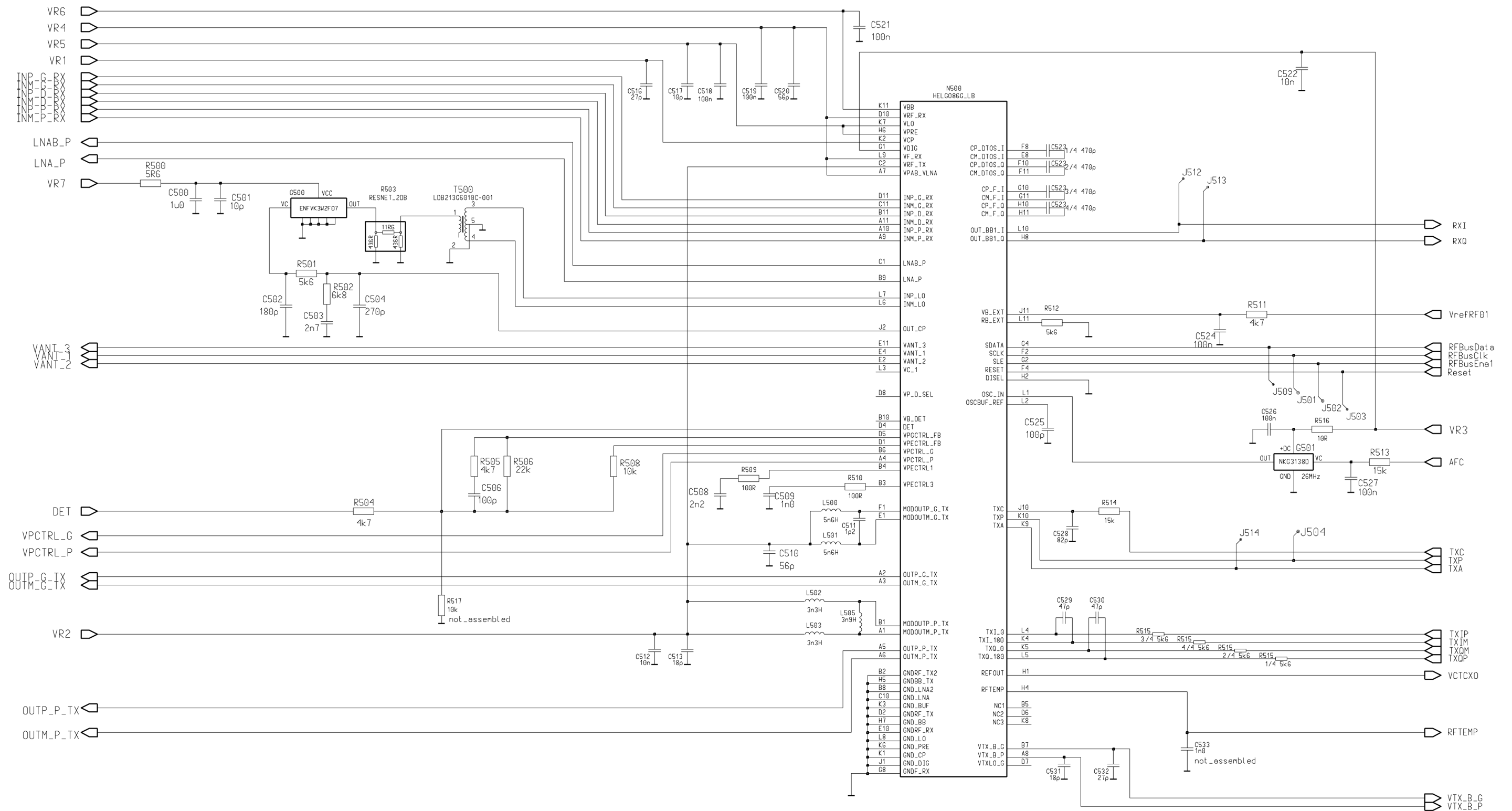


Figure 137 RM-13/33 Helgo, ed. 227

Power amplifier and detection

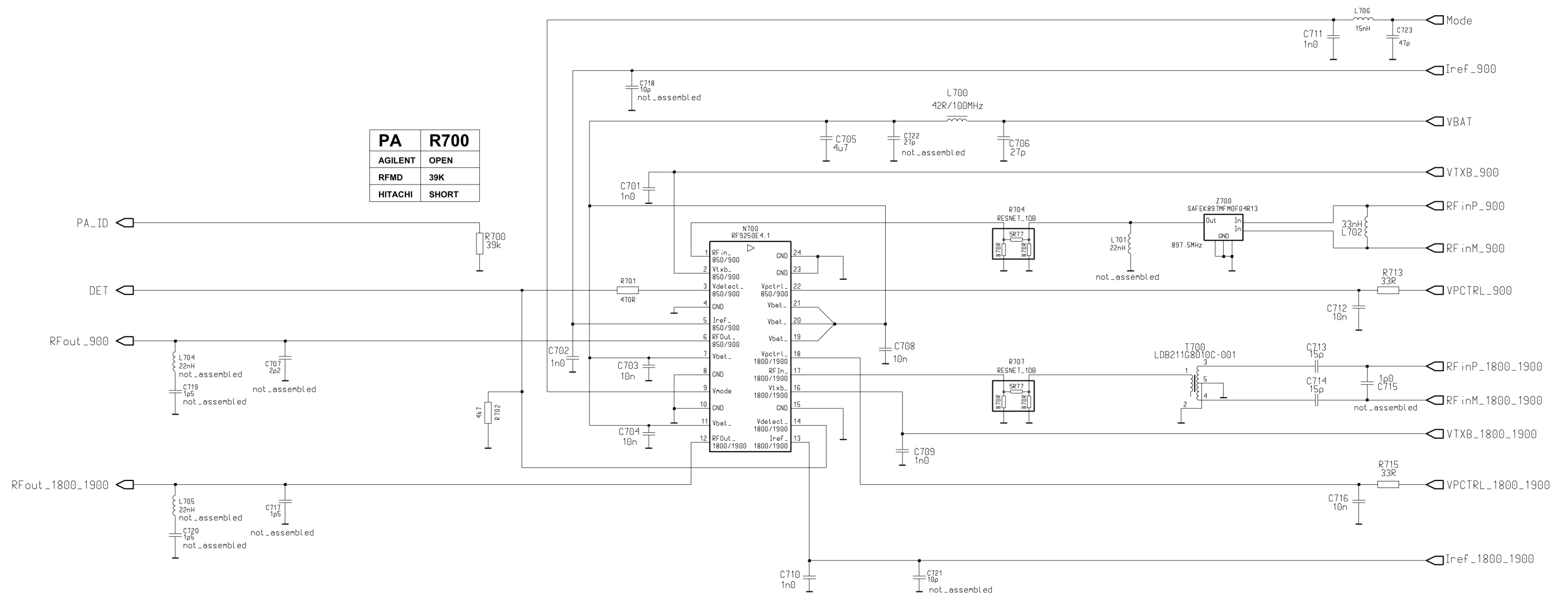


Figure 138 RM-13/33 Power amplifier and power detection, ed. 161

Baseband engine

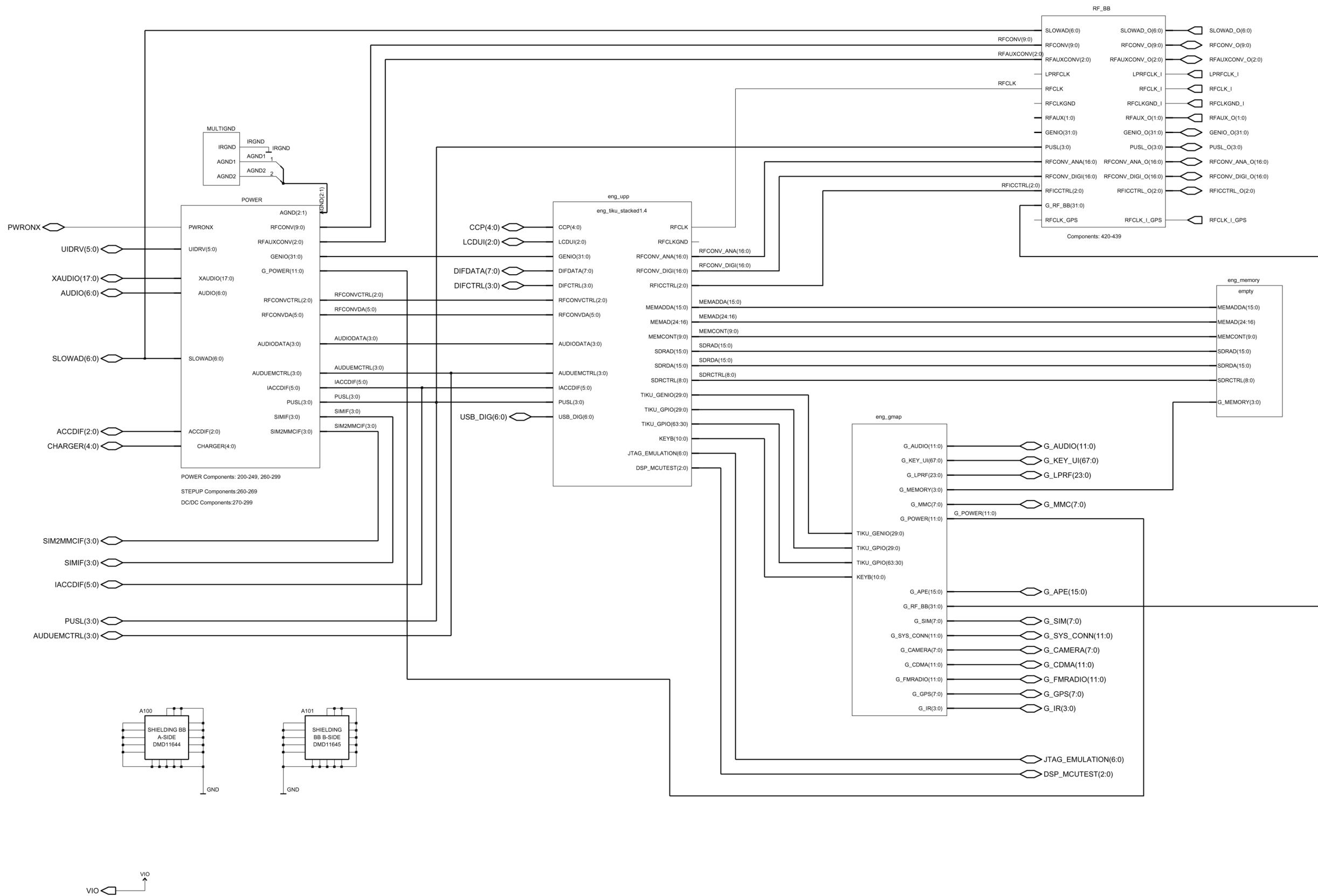


Figure 139 RM-13/33 BB engine, v. 0.0, ed. 3

RF-baseband interface

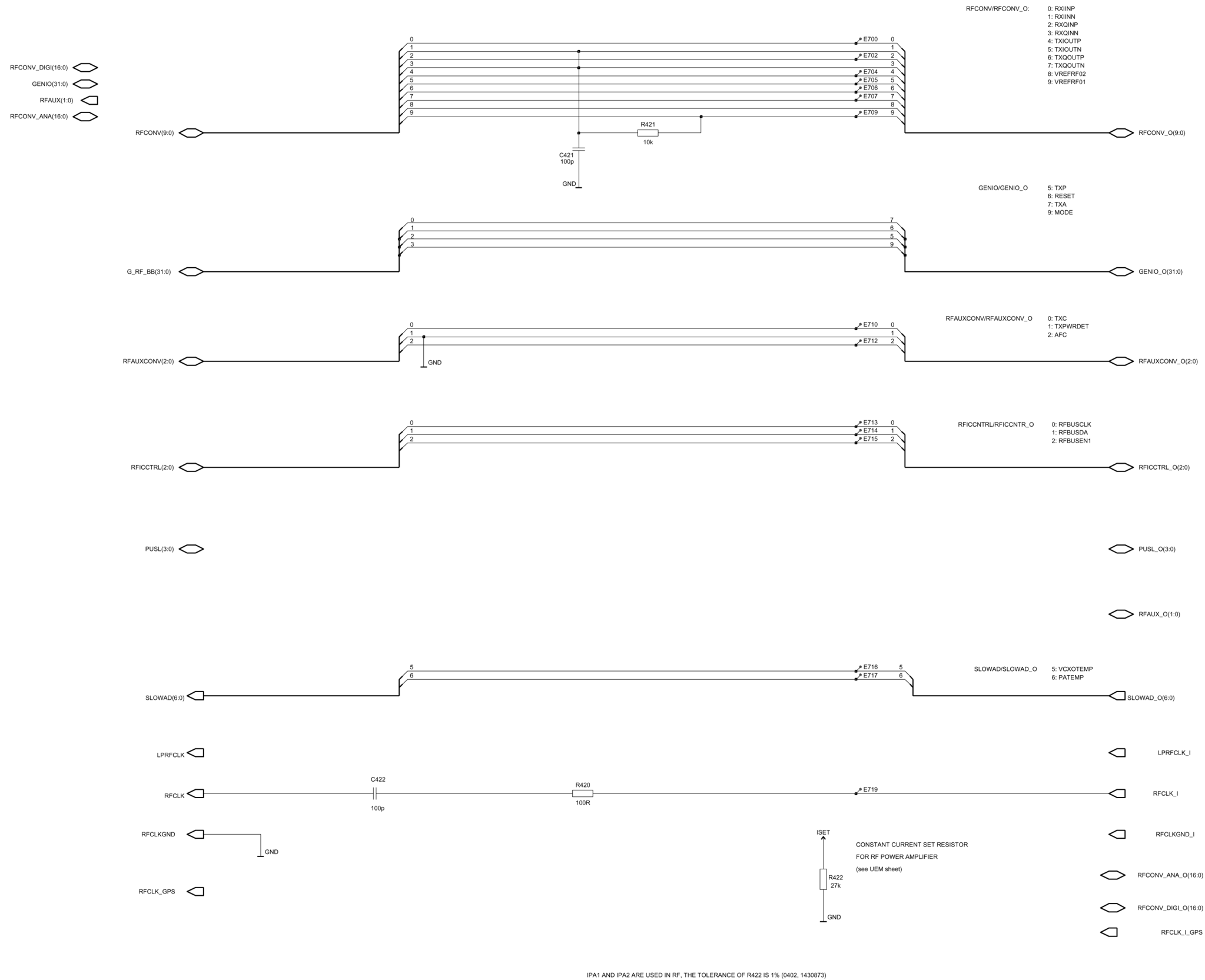
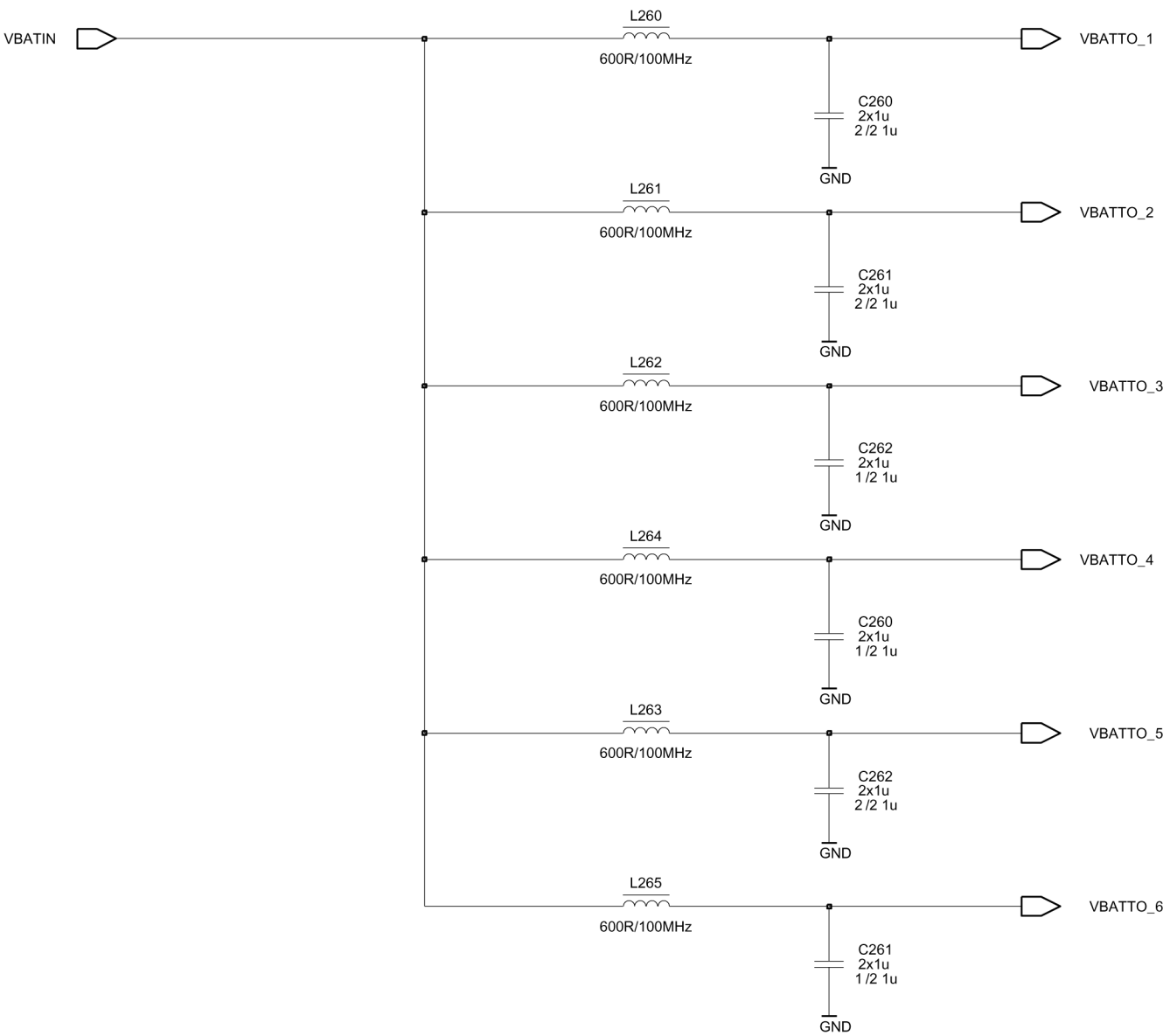


Figure 140 RM-13/33 RF-BB interface, v. 1.3, ed. 3

9240218 (Issue 1)



Light filtering



NOTE: This sheet uses dual 1uF capacitors. Check that full approval has been granted for these parts before use, or use this sheet at risk

Figure 142 RM-13/33 Light filtering, v. 1.0, ed. 3

DC_DC for Tiku and VIO

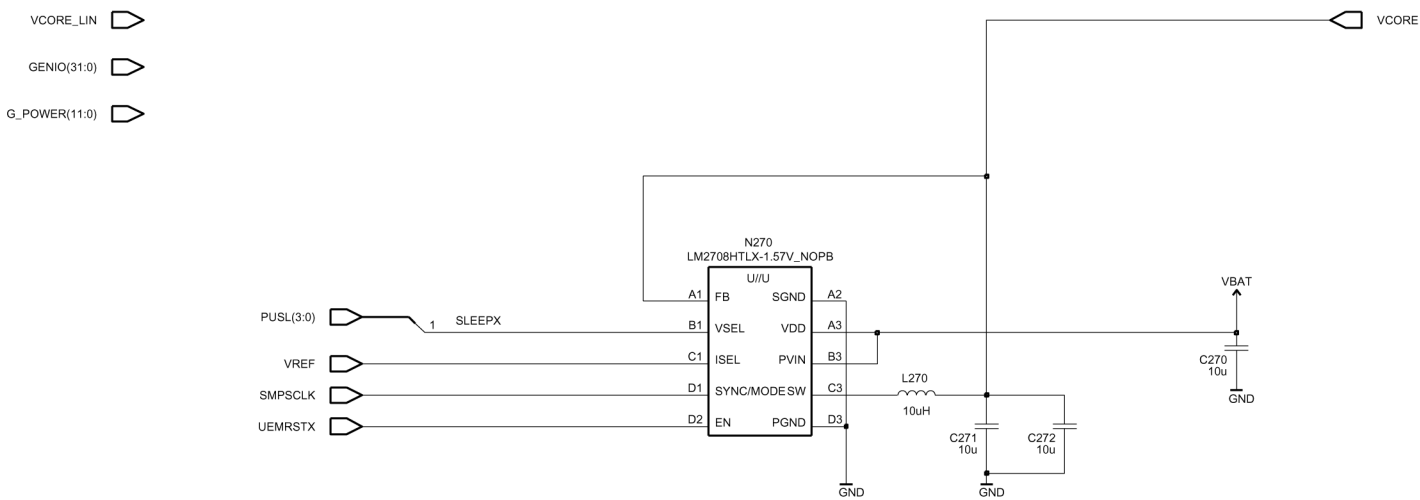


Figure 143 RM-13/33 DC_DC for Tiku and VIO, v. 1.7, ed. 3

MultiGND and connections

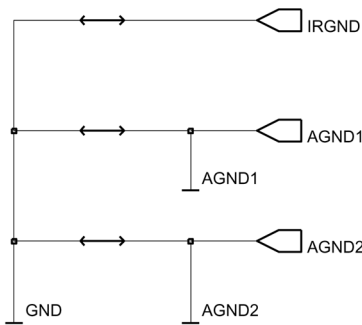
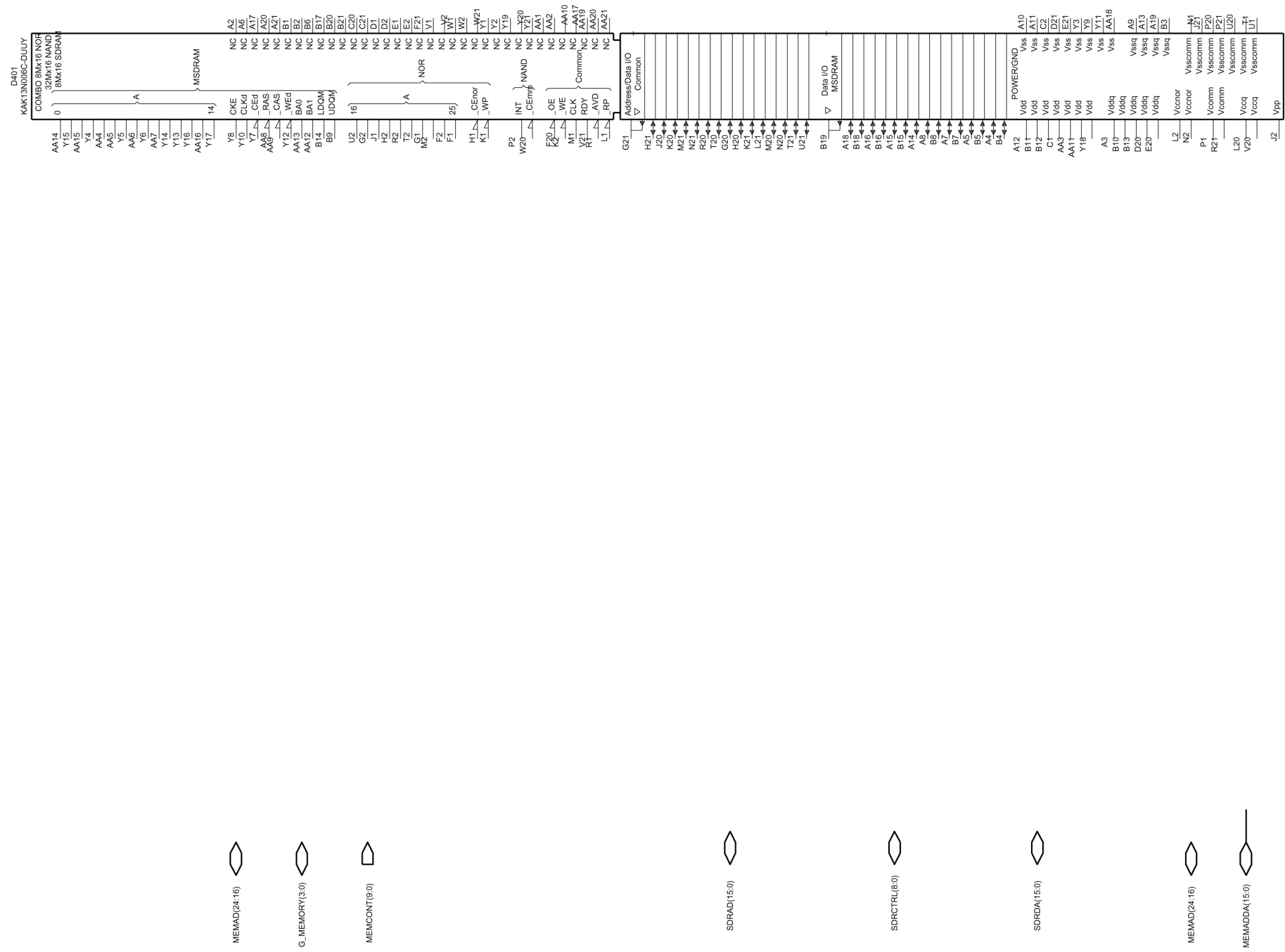


Figure 144 RM-13/33 MultiGND connecting AGNDs & IRGND to global GND, v. 0.0, ed. 3

Flash memory



TiKuEDGE

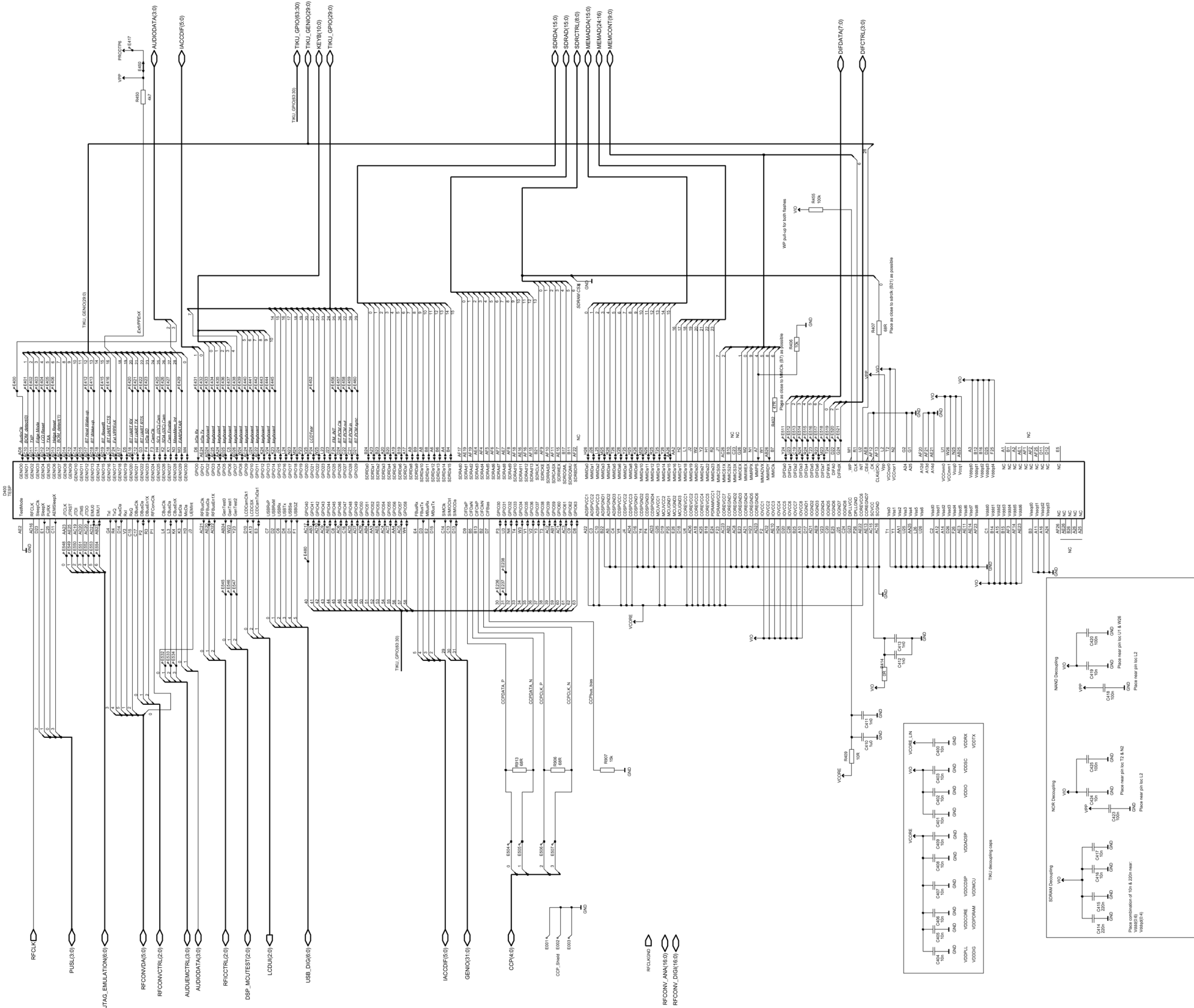


Figure 146 RM-13/33 TiKuEDGE part of uBB engine, v. 1, ed. 3

GENIO and GPIO

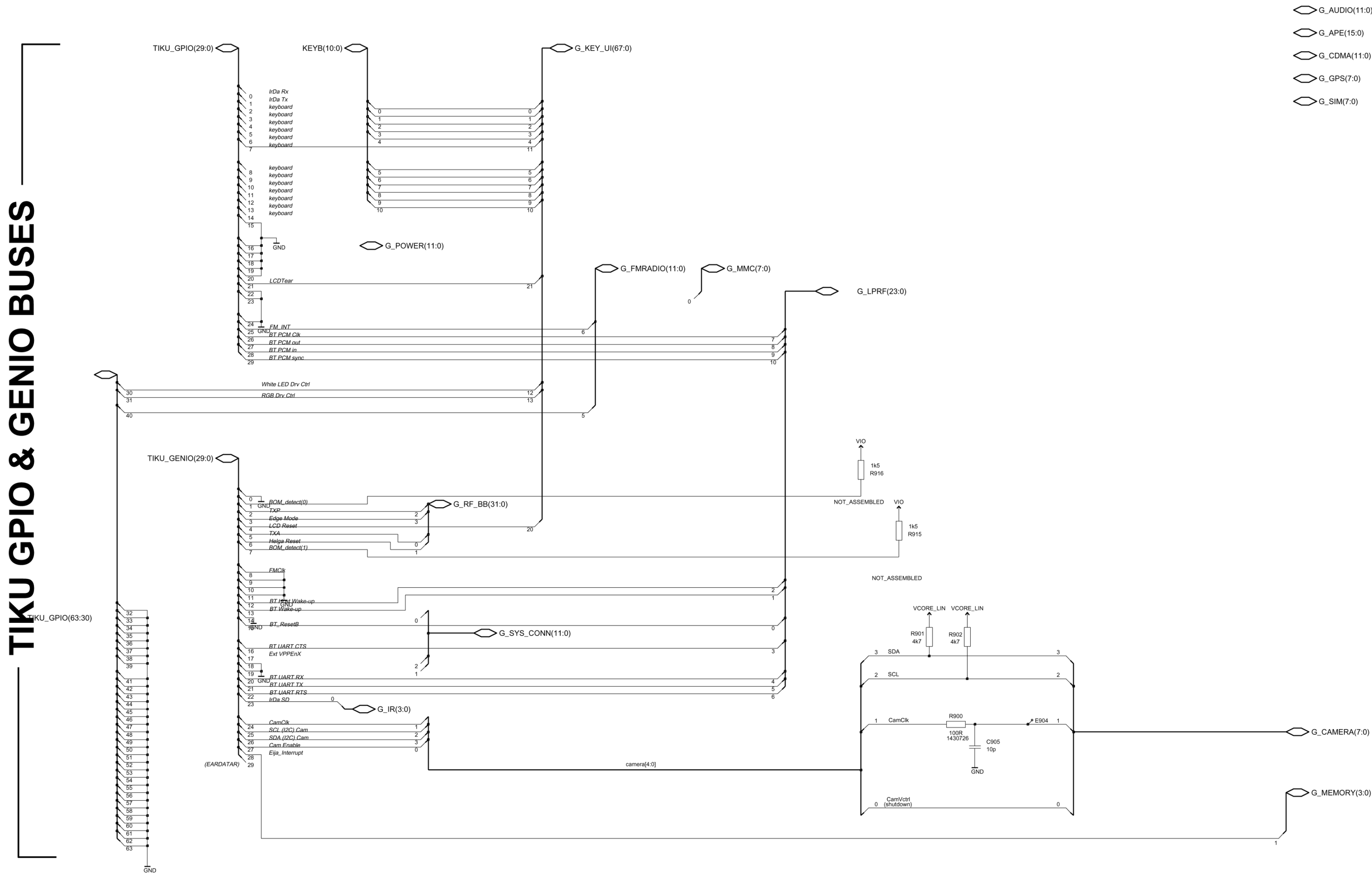
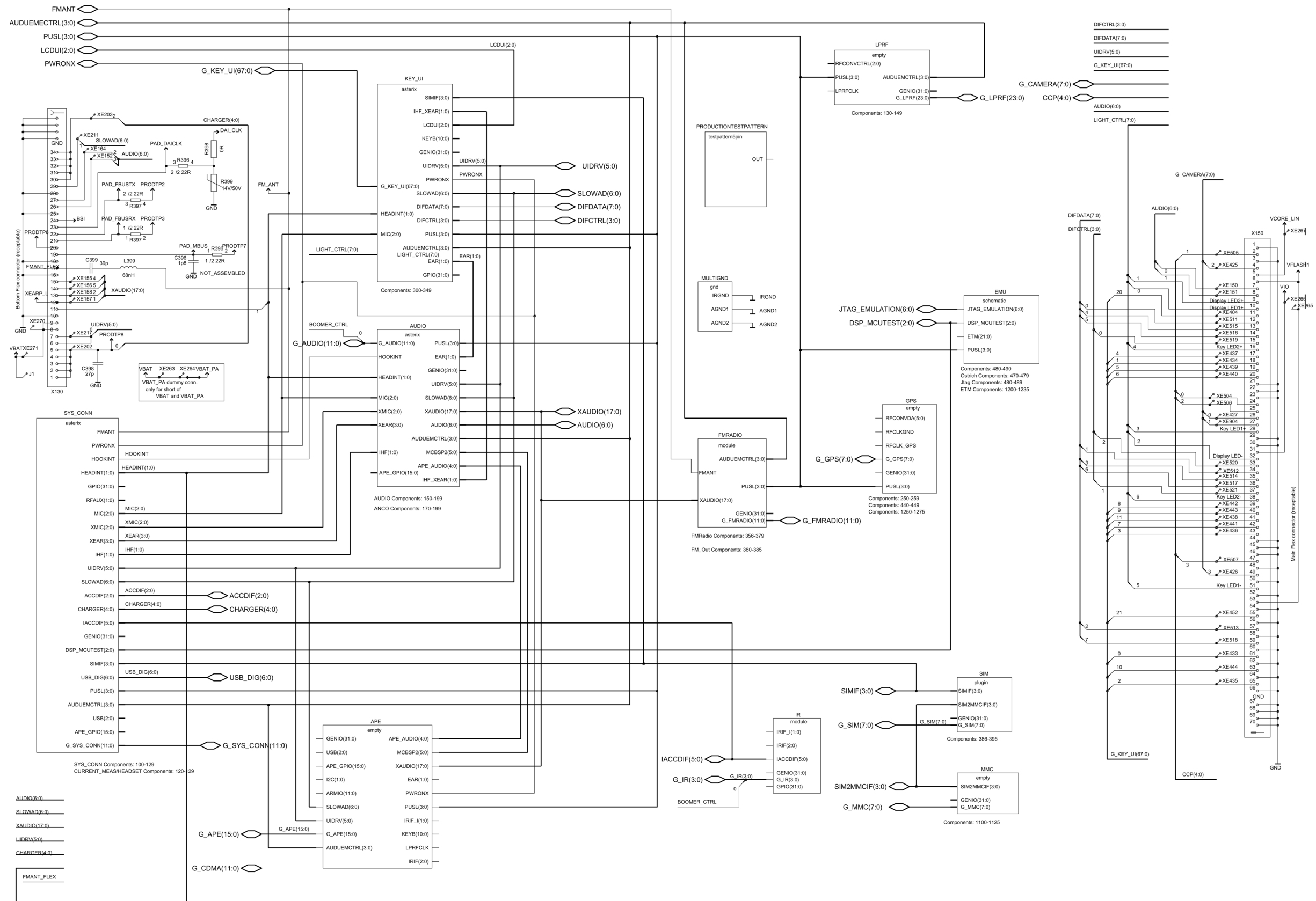


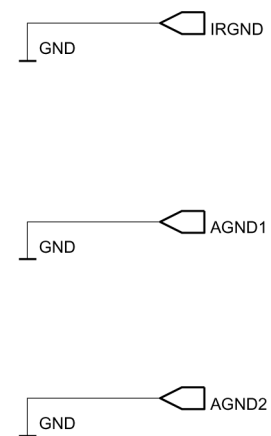
Figure 147 RM-13/33 GENIO & GPIO connection block, v. 0.0, ed. 3

SYS_OUT



[illegible]

MultiGND symbol bypass



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System connector

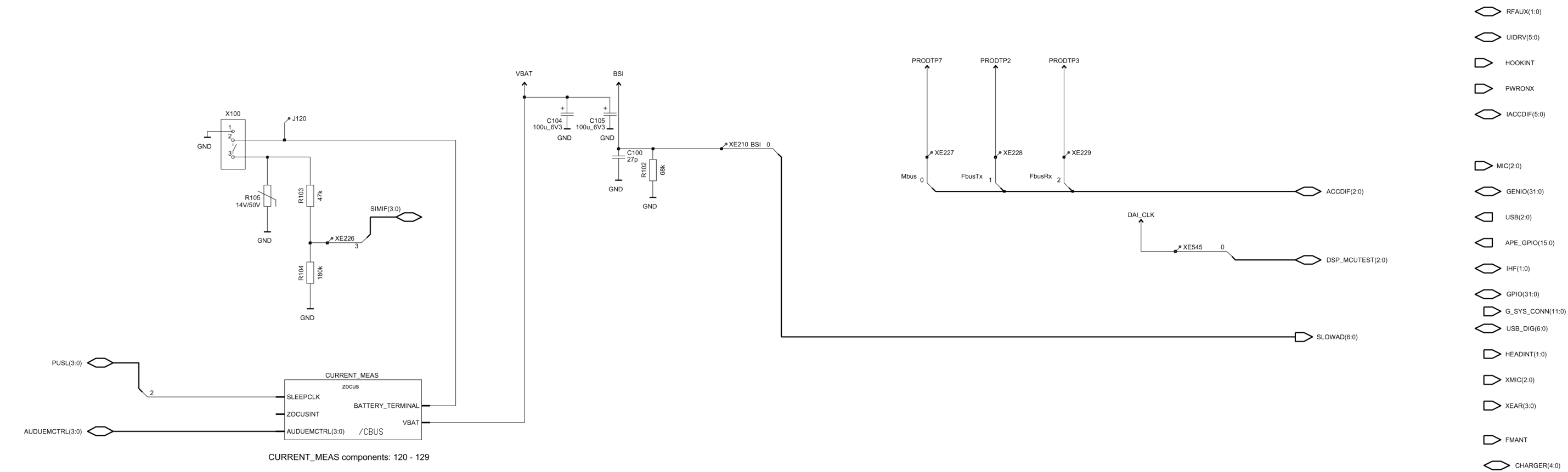


Figure 151 RM-13/33 System connector, v. 3.3, ed. 327

Zocus (current measurement)

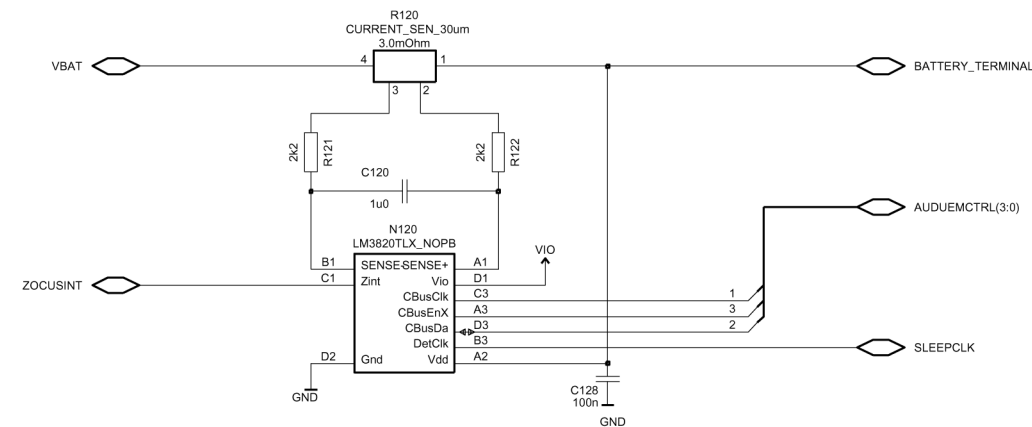


Figure 152 RM-13/33 Zocus current measurement, v. 2.1, ed. 99

UI components

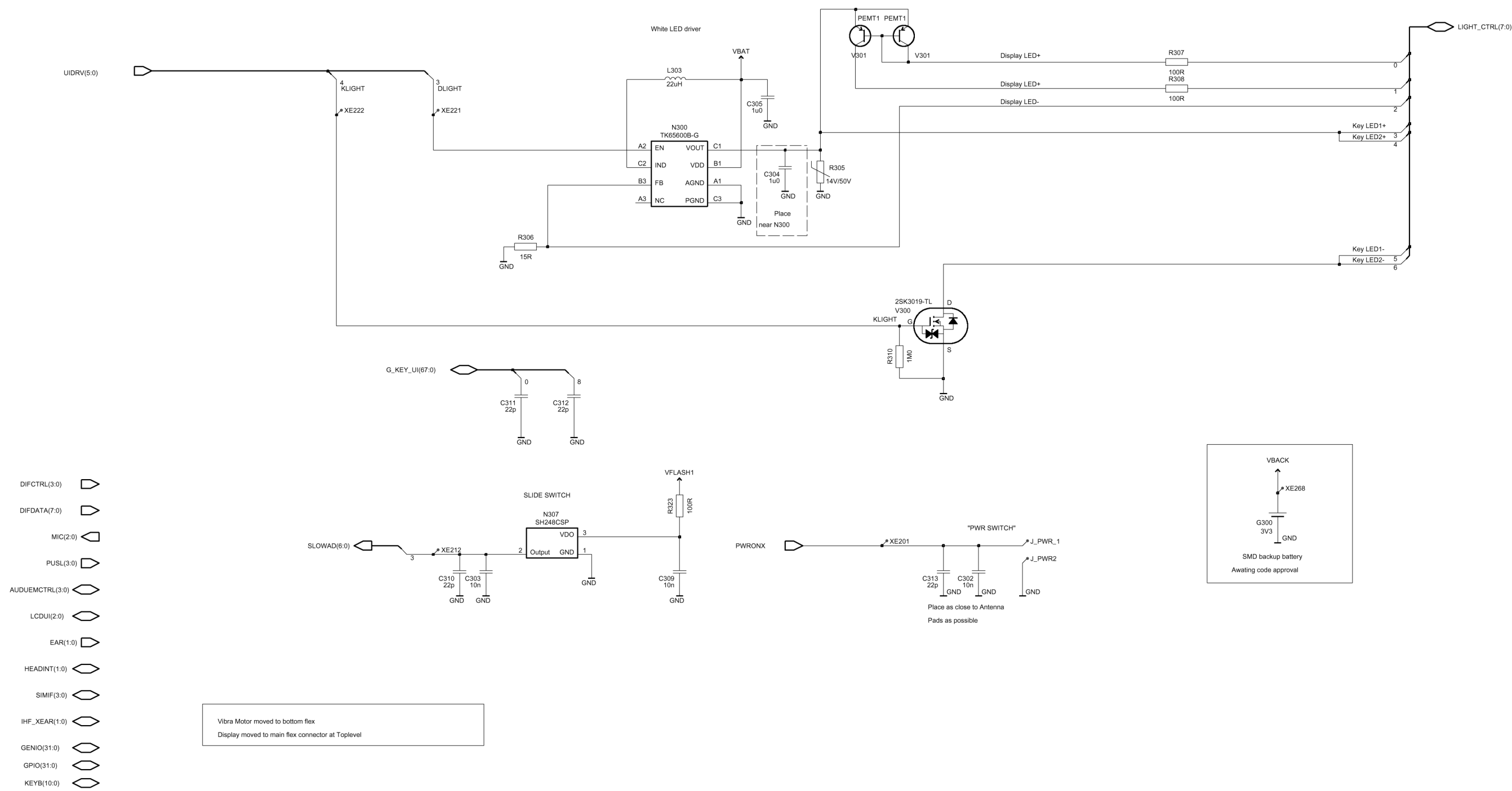
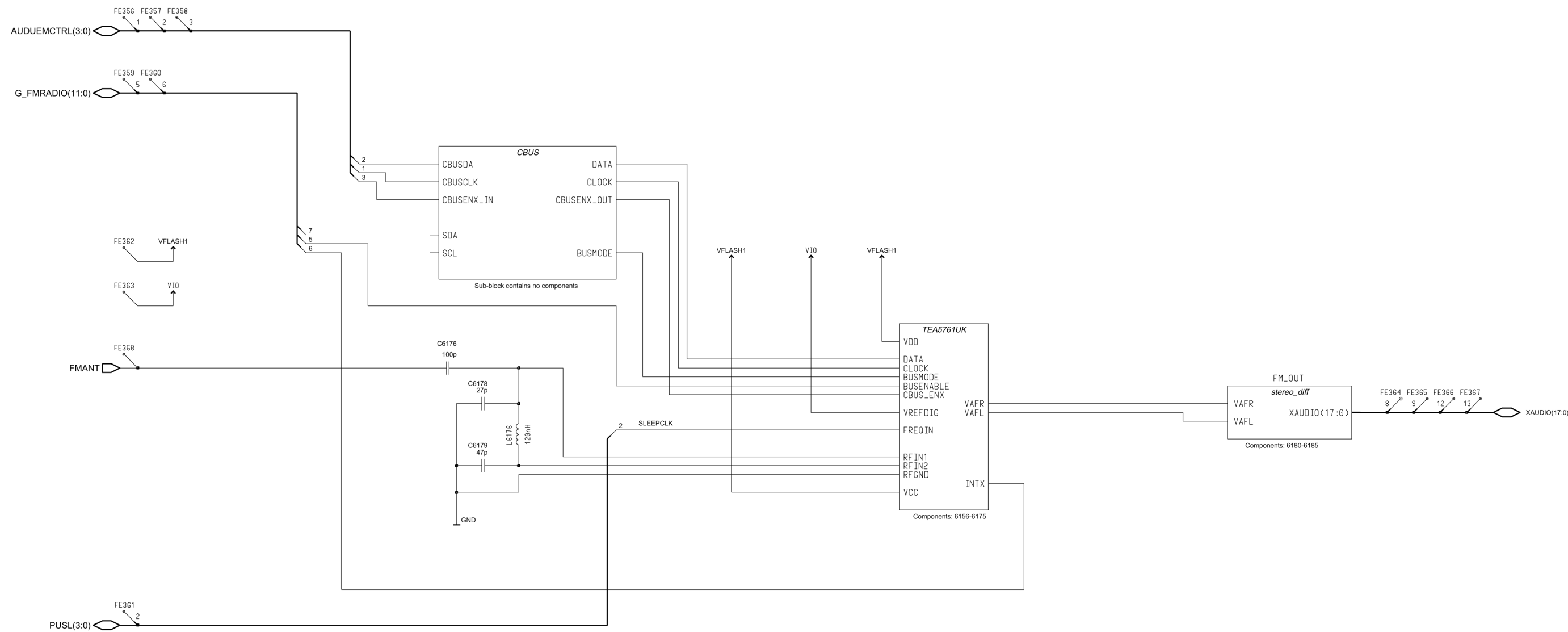


Figure 153 RM-33 UI components, v. 2.3, ed. 534

FM interface (RM-13)



Note: For Layout information, see FM Radio Application Note: Document No. DHJ00379

Interface Designation	BB Release	G_MAP sheet Recommended connection(s)	Signal	Function
G_FMRADIO(5)	BB4.0	GENIO(24)	INTX	Falling Edge Interrupt
	BB4.5	GENIO(8) or GENIO(9) or GENIO(10) or GENIO(11)		
FmRadio_2V7_ANA		VANA	VCC/VDD	Main 2.7Vdc Supply
FmRadio_1V8_Dig		VIO	VREFDIG	1.8Vdc IO Supply

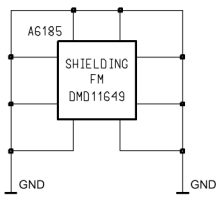


Figure 155 RM-13 FM interface, v. 0.0, ed. 128

CBus

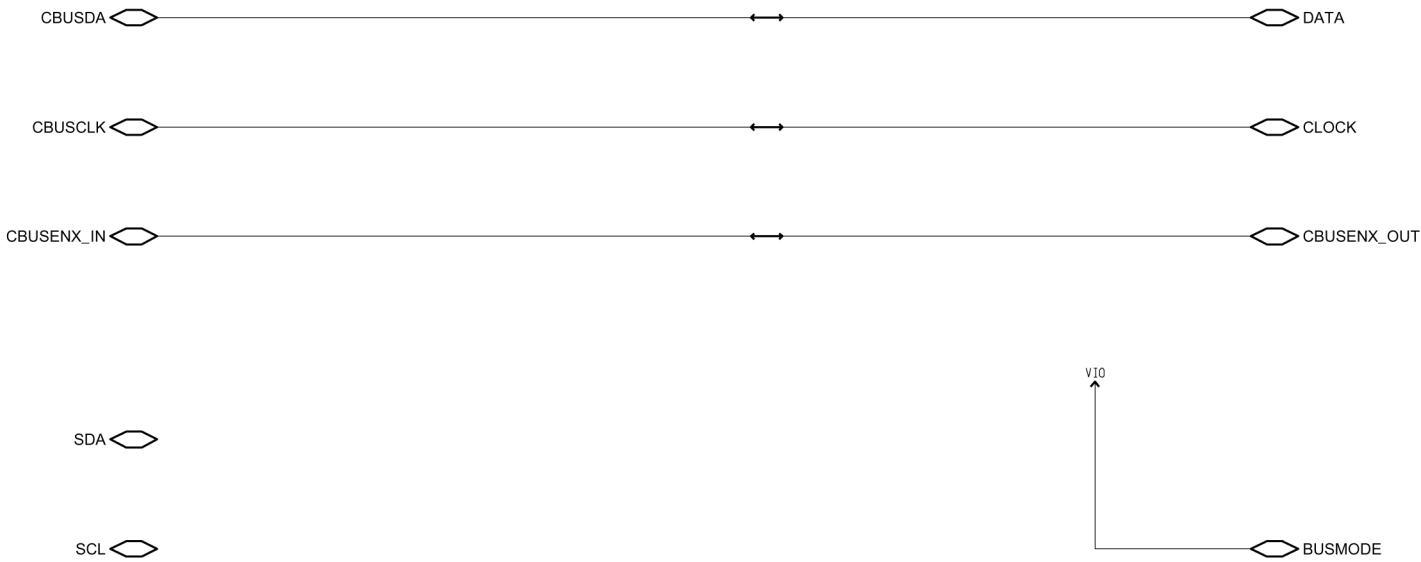


Figure 156 RM-13/33 CBus, v. 0.0, ed. 64

Differential stereo

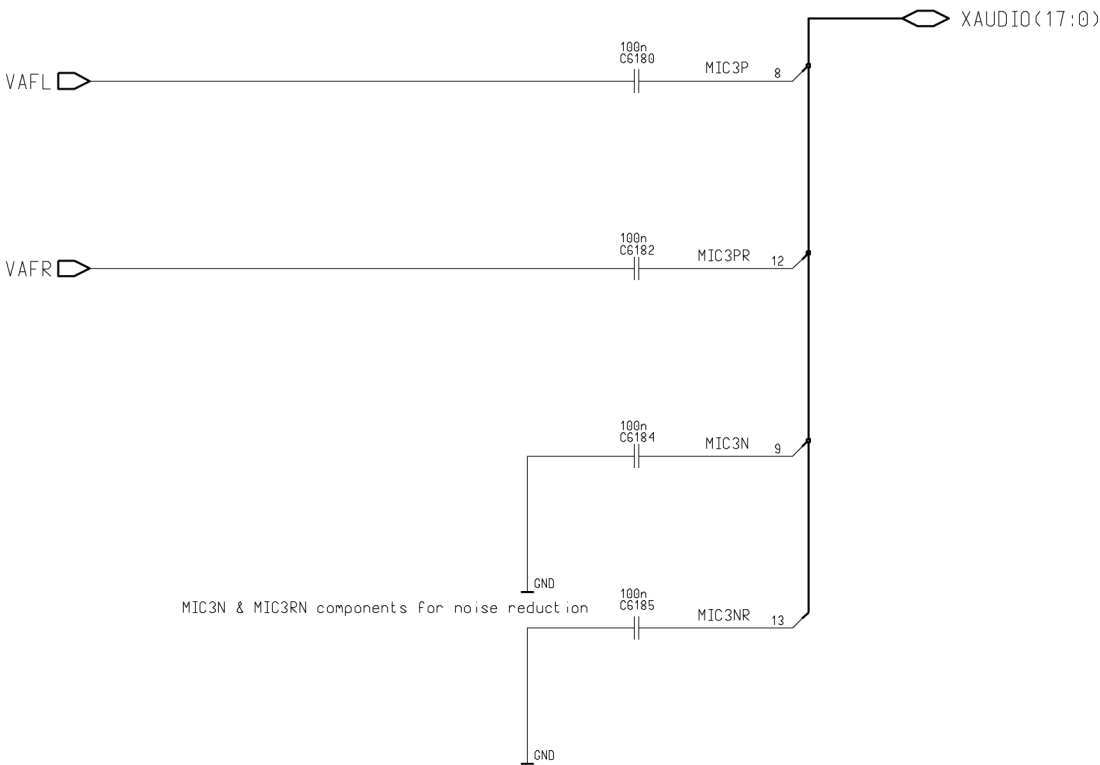


Figure 157 RM-13/33 Differential stereo, v. 0.0, ed. 71

FM radio

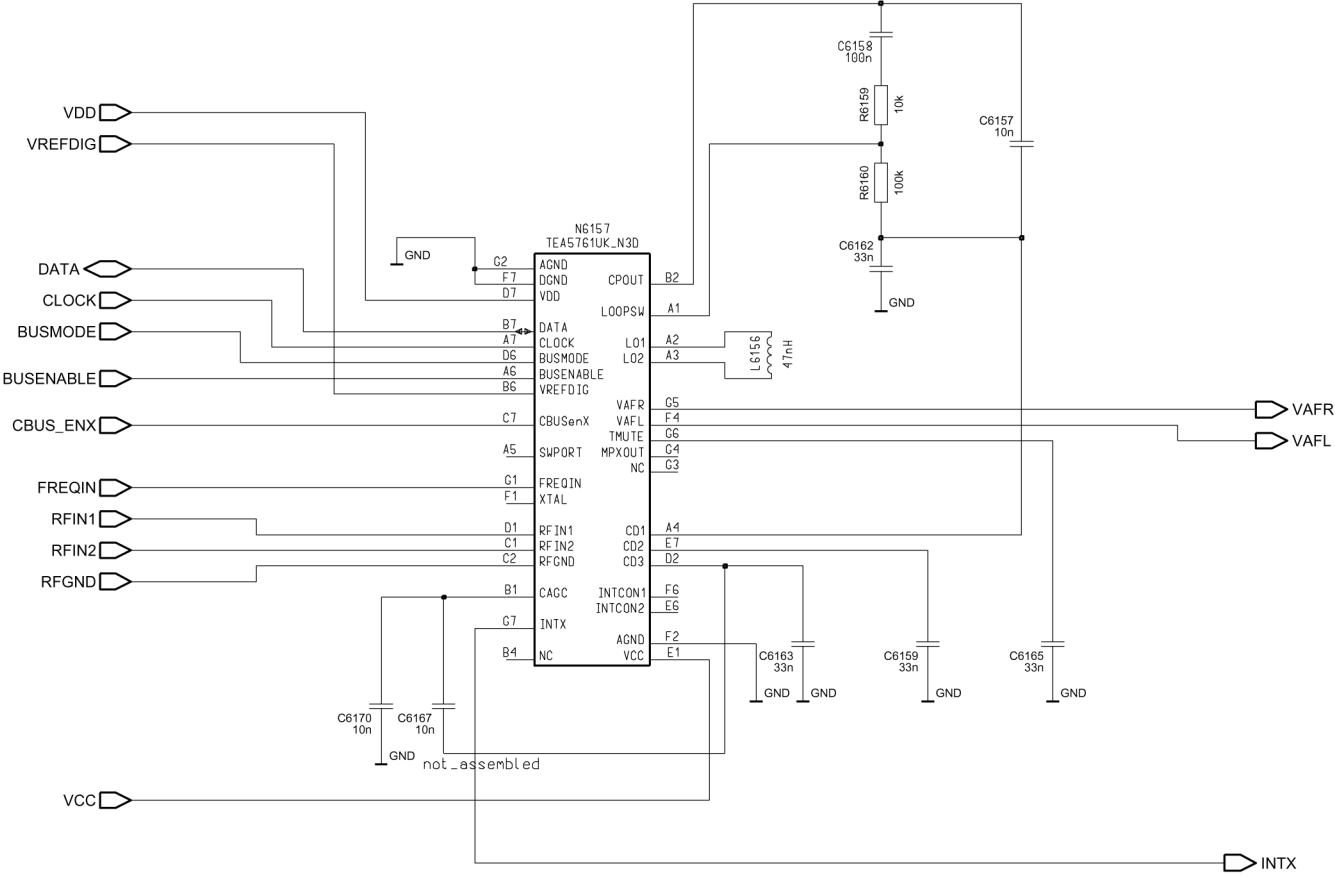


Figure 158 RM-13/33 FM radio, v. 0.0, ed. 31

Component layout, top side

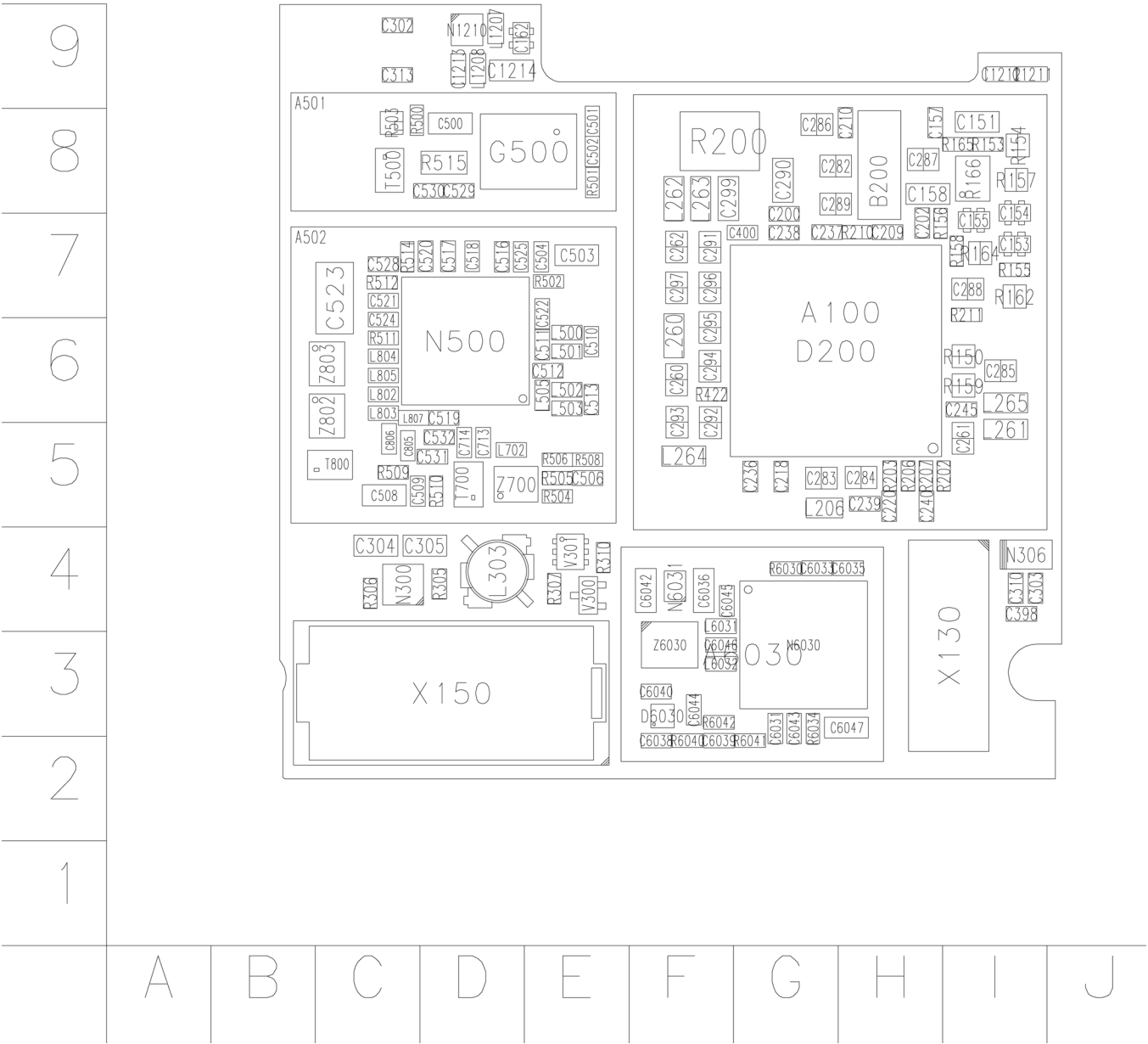


Figure 159 RM-13/33 Component layout 1eaa_11a/b, top side

Component layout bottom side

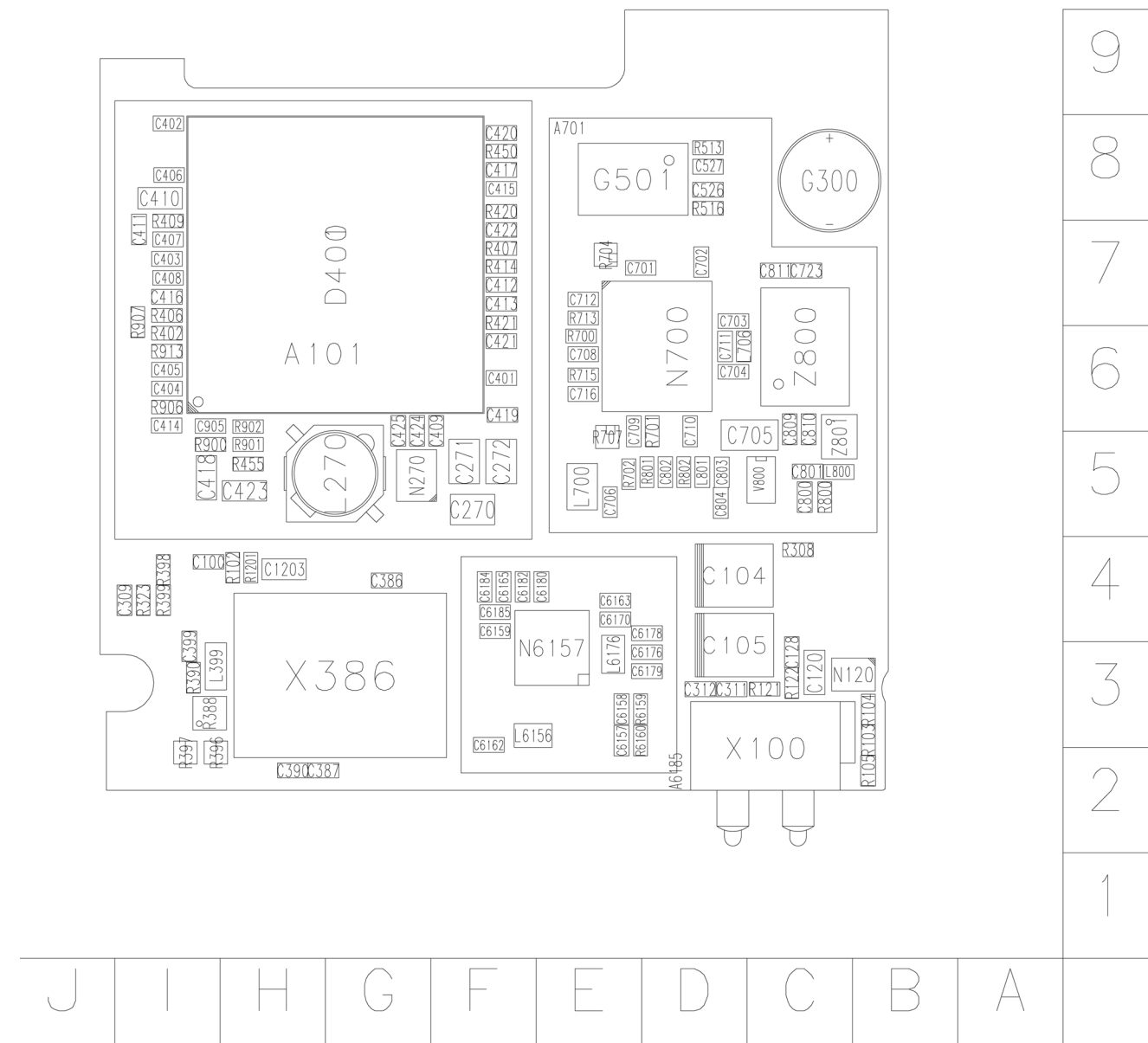


Figure 160 RM-13/33 Component layout 1eaa_11a/b, bottom side