

## POWER

The diagram shows the power supply section of the AP2112K 3.3V voltage regulator. The regulator (U3) is powered by a +5V input through a 10uF capacitor (C1) and a 100k resistor (R3). The output (OUT) is connected to a +3.3V output through a 100nF capacitor (C2) and a 10uF capacitor (C3). A 2K resistor (R16) is connected to the output through a green LED (LD1).

## SHIELD CONNECTIONS

The diagram illustrates the connections for the SH1 UNO SHIELD. The shield is connected to a host's 3.3V, 5V, and GND pins. It also connects to various digital pins on the host, including SCK, MISO, MOSI, D10, RESET, D8, D7, D6, D2, and D5. The shield's own pins are labeled: SCL, SDA, AREF, GND, NC, IOREF, RESET, 3.3V, 5V, GND, GND, VIN, A0, A1, A2, A3, A4, A5, GND, RESET, MOSI, SCK, +5V, MISO, 1\_TX, and 0\_RX.

# RADIO

The diagram illustrates the electrical connections for an RFM95W radio module. The circuit is powered by a 3.3V supply. A 10K resistor (R1) is connected between the 3.3V supply and the RESET pin of the RFM95W chip (U1). A BSS123 transistor (TR14) is used as a switch, with its base connected to the 3.3V supply through a 10K resistor (R10) and its emitter connected to ground. The collector of the transistor is connected to the RESET pin of the RFM95W chip. A 100nF capacitor (C5) is connected between the 3.3V supply and ground. The RFM95W chip (U1) has pins for 3.3V, RESET, MISO, MOSI, SCK, NSS, ANT, and DIO0-DIO5. The antenna (ANT) is connected to a 0V ground. The DIO0-DIO5 pins are connected to a separate connector (CN1). The connector (CN1) shows the pinout for RADIO\_RST, DIO0-DIO5, and ground.

Pin	Signal
1	3.3V
2	RESET
3	MISO
4	MOSI
5	SCK
6	NSS
7	DIO0
8	DIO1
9	DIO2
10	DIO3
11	DIO4
12	DIO5
13	ANT
14	DIO0
15	DIO1
16	DIO2
17	DIO3
18	DIO4
19	DIO5
20	0V

1

2

3

4

A

A

B

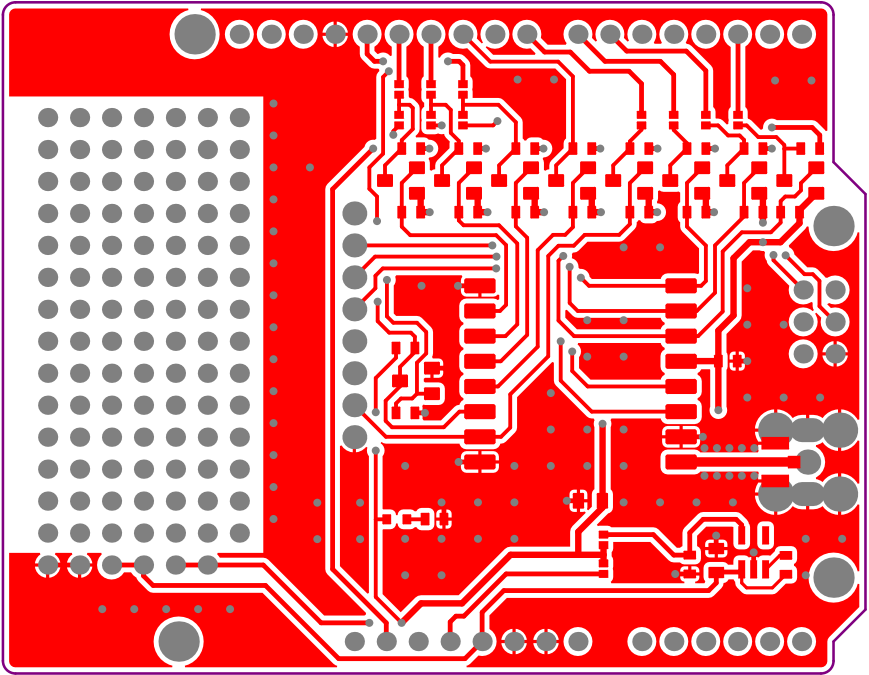
B

C

C

D

D



Project:	Lora Shield HPRF
Version:	1.0
Variant:	[No Variations]
PCB Designer:	Luis Goncalves
Date:	2017-04-10
File Name:	lora_shield.PcbDoc

1

2

3

4

A

B

C

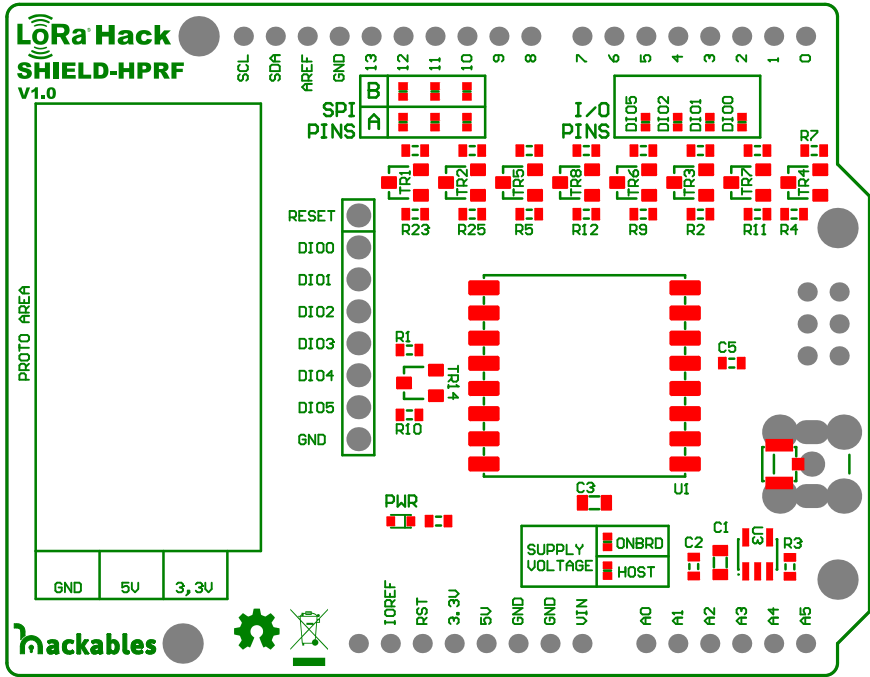
D

A

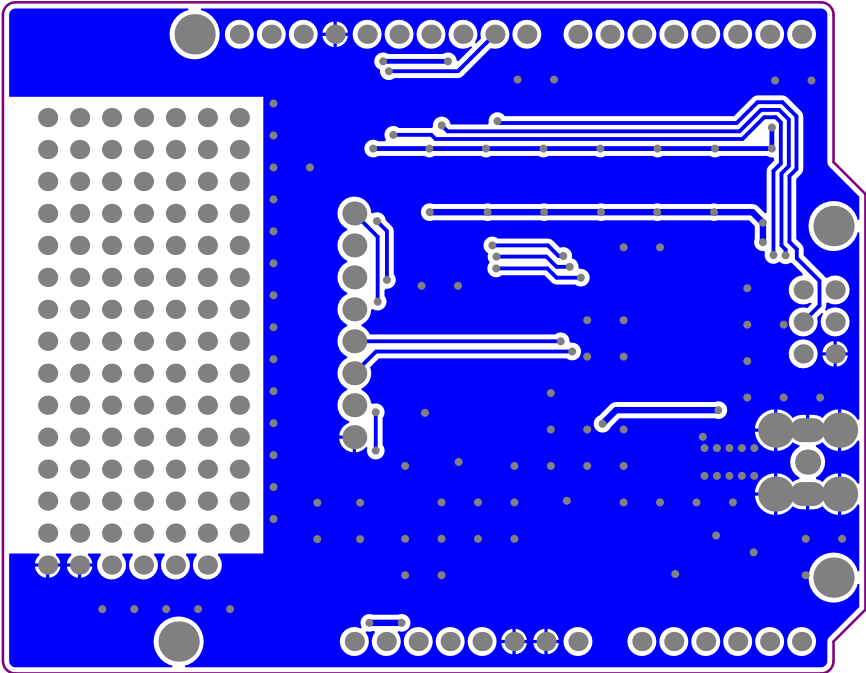
B

C

D



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1

2

3

4

A

A

B

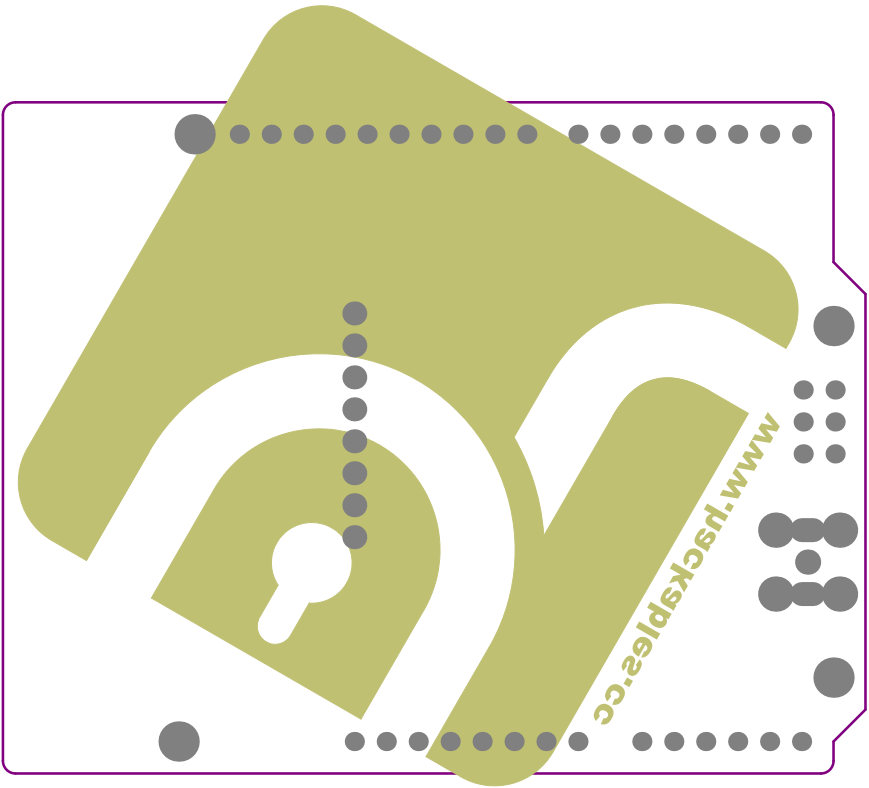
B

C

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1

2

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