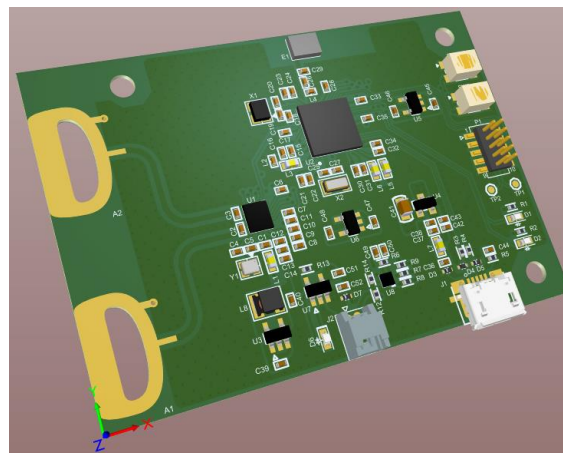


Approval Sheet

(ver1.0)

Product : X-RTLS-100



Designed	CHECKED	APPROVAL
2022. .	2022. .	2022. .

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1. Key Benefits

- ✓ UWB + BLE integrated Module
- ✓ Antennas(UWB, BLE)
- ✓ Supports high tag densities in RTLS
- ✓ Asset location to an accuracy of 10cm
- ✓ High multipath fading immunity Secure ranging/distance
- ✓ I2C/SPI/UART supported
- ✓ Charging for battery
- ✓ Size : 43 x 62mm
- ✓ Weight : 11g

2. Functionality

- ✓ IEEE802.15.4-2015 UWB IEEE802.15.4z (BPRF mode)
- ✓ Supports channels 5 & 9 (6489.6MHz & 7987.2 MHz)
- ✓ Supports 2-way ranging, TDoA and PDoA location schemes
- ✓ Bluetooth 5, IEEE 802.15.4-2006, 2.4 GHz transceiver
- ✓ ARM Cortex-M4 32-bit processor with FPU, 64 MHz
- ✓ 1 MB flash and 256 kB RAM

3. Electrical & Temperature Specification

3.1 Nominal Operating Conditions

Parameter	Min	Typ	Max	Unit
Supply voltage - USB	4.25	5.0	6.0	V
Supply voltage - BAT	3.7		4.2	V
Operating temperature	-40		+85	°C

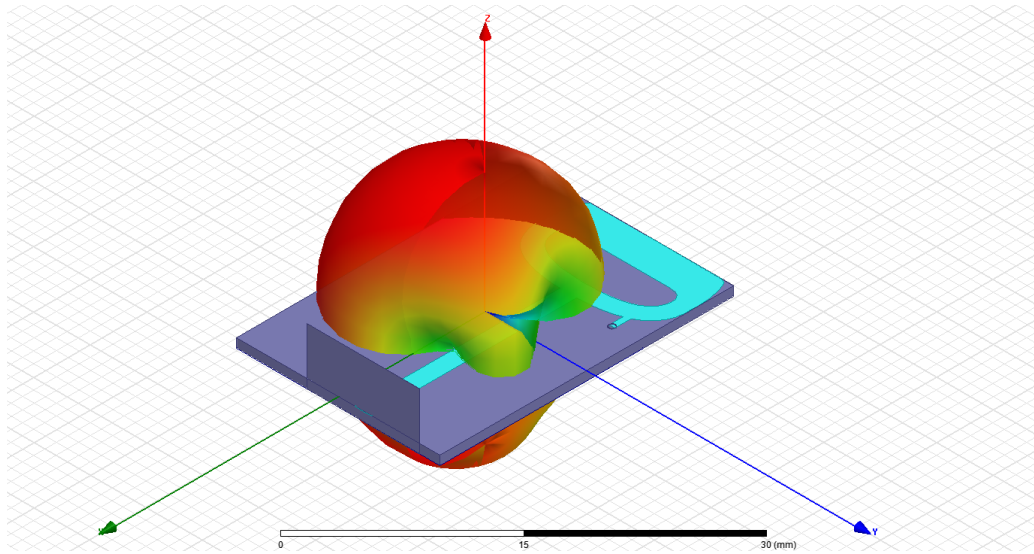
3.2 RF Characteristics

Parameter	Min	Typ	Max	Unit
Frequency Cannel 5		6489.6		MHz
Frequency Cannel 9		7987.2		MHz
Channel bandwidths		499.2		MHz
Frequency BLE		2.4		GHz

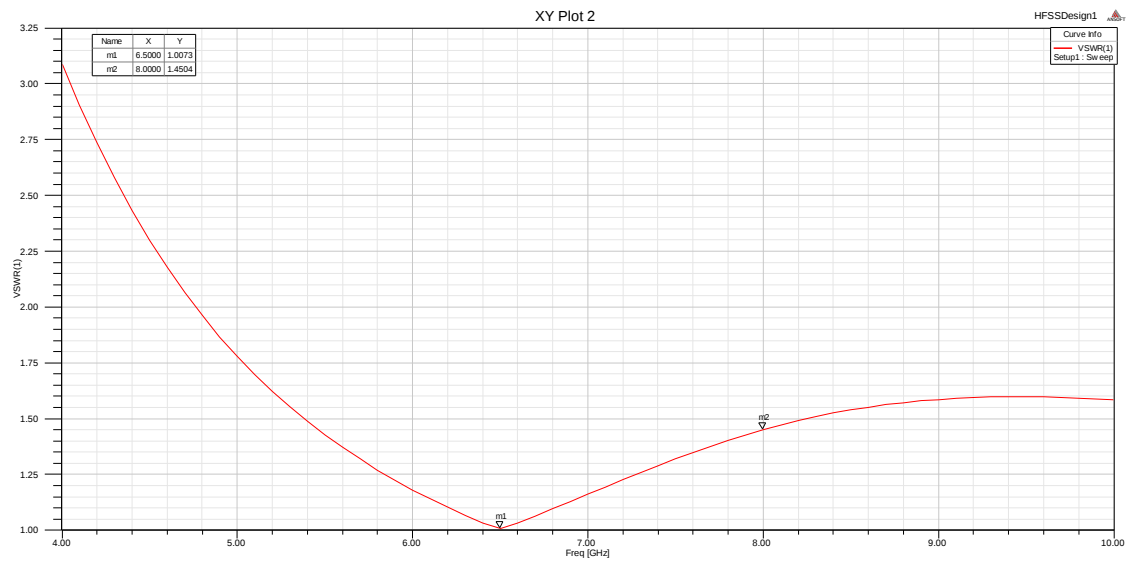
3.3 Current Consumption

Parameter	Min	Typ	Max	Unit	Condition
TX CH5		14		mA	Current single frame Tx/Rx
TX CH9		17			
RX CH5		16			
RX CH9		19			

4. Antenna Radiation Pattern



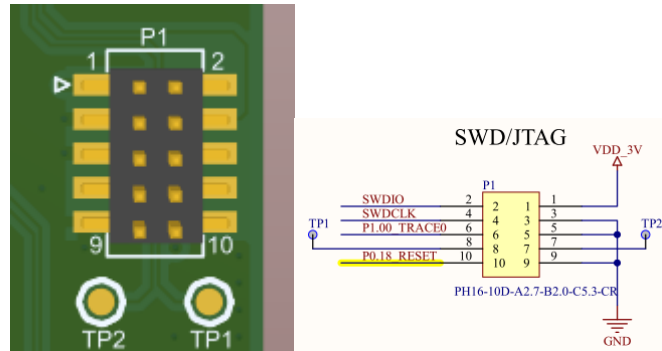
Parameter	Min	Typ	Max	Unit
Gain		0		dBi



Parameter	Min	Typ	Max	Unit
M1 at 6.5GHz		1.0		VSWR
M2 at 8GHz		1.45		VSWR

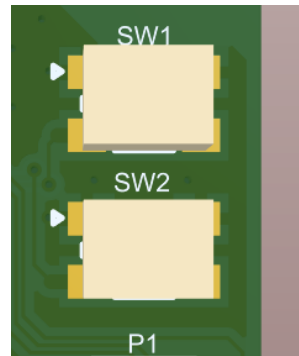
5. Pin Definition

5.1 Serial wire debug(SWD)



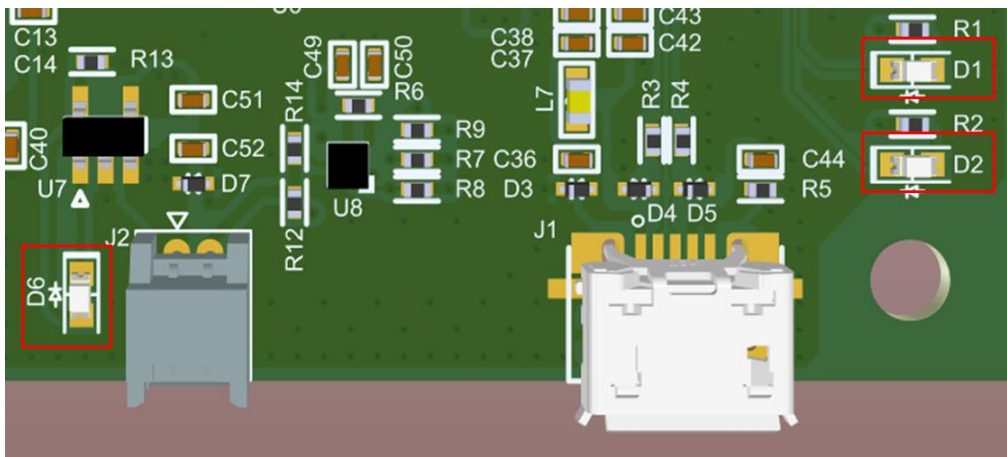
NO.	Name	Type	Description
1	VDD_3V	Power	3V
2	SWDIO	Debug	Serial wire debug I/O for debug and programming
3	GND	Ground	Ground
4	SWDCLK	Debug	Serial wire debug clock input for debug and programming
5	GND	Ground	Round
6	TRACE0	-	Trace buffer TRACEDATA[0] Serial wire output (SWO)
7	TP1	-	Test Point 1
8	TP2	-	Test Point 2
9	GND	Ground	Ground
10	RESET	-	Configurable as system RESET.

5.2 Switch Button



NO.	Name	Type	Description
1	SW1	-	GPIO
2	SW2	-	Reset

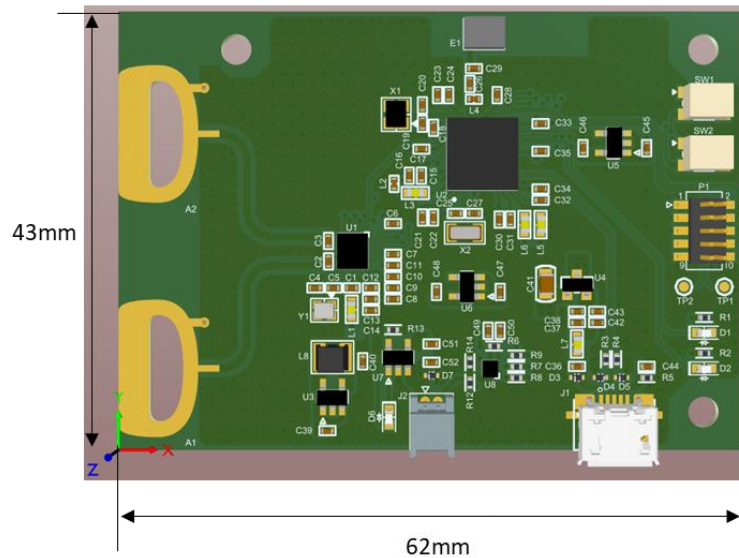
5.3 LED



NO.	Name	Type	Description
1	D1	-	GPIO
2	D2	-	GPIO
3	D6	-	Charge Status Output Pin

6. Dimension & Order Information

6.1 Dimension



6.2 Order Information

Part Number		Description
X-RTLS-100		UWB + BLE Module
CASE-RT		Case for RTLS1000 *not included
BAT-RT		BAT for RTLS1000 *not included

*not included : should be purchased separately

***All the contents are subject to change without any notice.**