

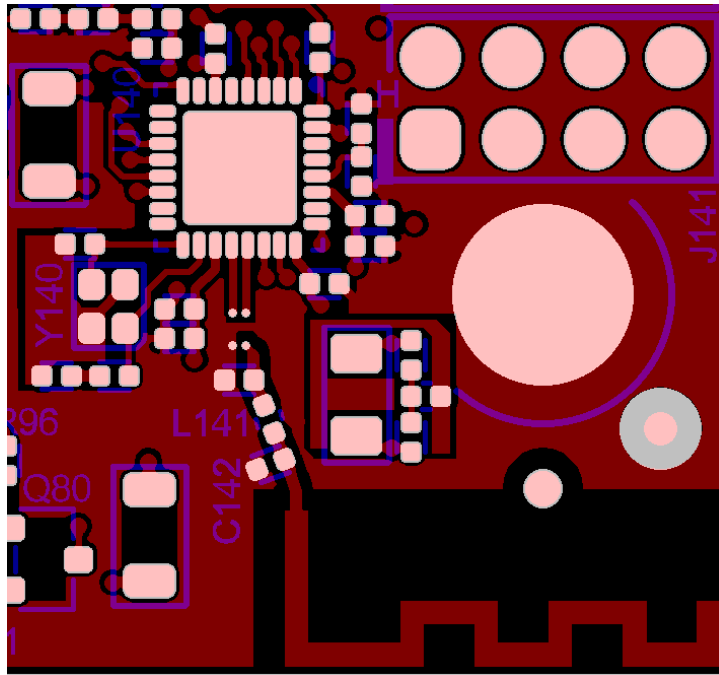
1 MM300/MM100 BLE antenna specification

1.1 Company: ST

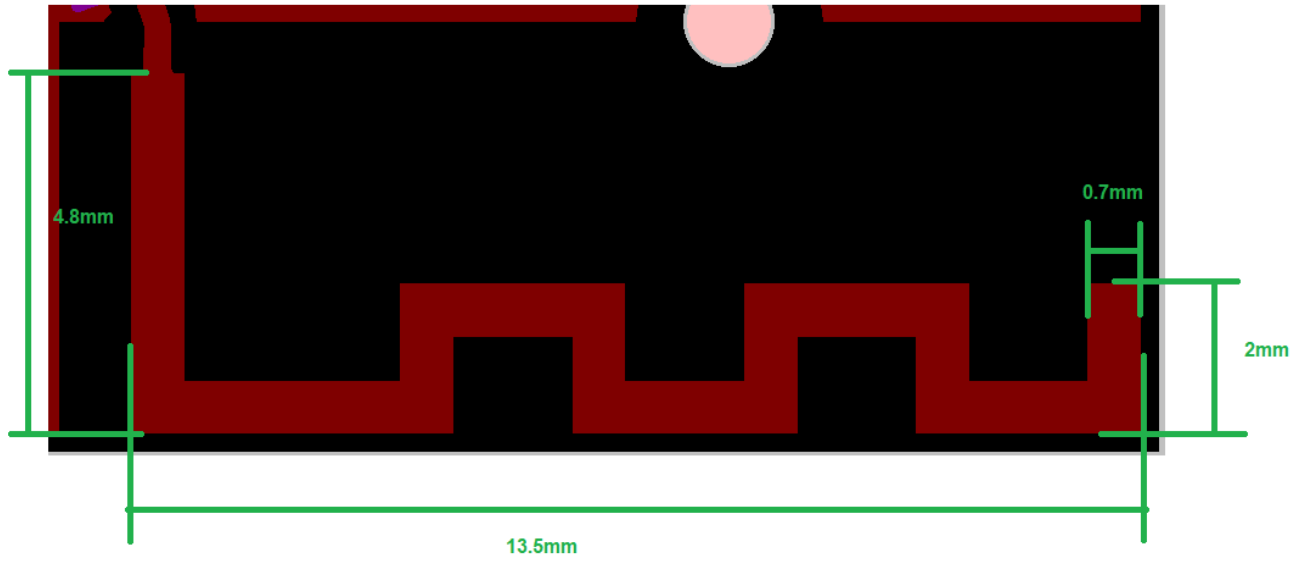
1. Product name: Programmable Bluetooth® LE 5.2 Wireless SoC
2. RF module/chip: BLUENRG-232
3. Antenna description

Antenna type	PCB Omni-directional
IC	RF Transceiver: ST BLUENRG-232 https://www.st.com/resource/en/datasheet/bluenrg-2.pdf
Frequency range	2.4 GHz ISM band (2400-2483.5 MHz)
Modulation	GFSK BT = 0.3, 0.5, 0.7; FSK/MSK
Antenna gain max (peak)	2.65dBi
Typical Receiver Sensitivity (BLE)	-88 dBm

4. PCB IC and Antenna Layout



5. PCB Antenna



6. Antenna photo:



7. Antenna Pattern

IL antenna with matching components 3D Chamber Efficiency D Chamber Efficiency
 Antenna Test Results Antenna Test Results

Band	Frequency [MHz]	Ant EFF [%]	Ant 3D EFF [dbi]	Peak Gain [dBi]
BT	2402	50.42	-2.97	2.65
BT	2442	42.43	-3.72	2.11
BT	2480	39.85	-4.00	1.97

