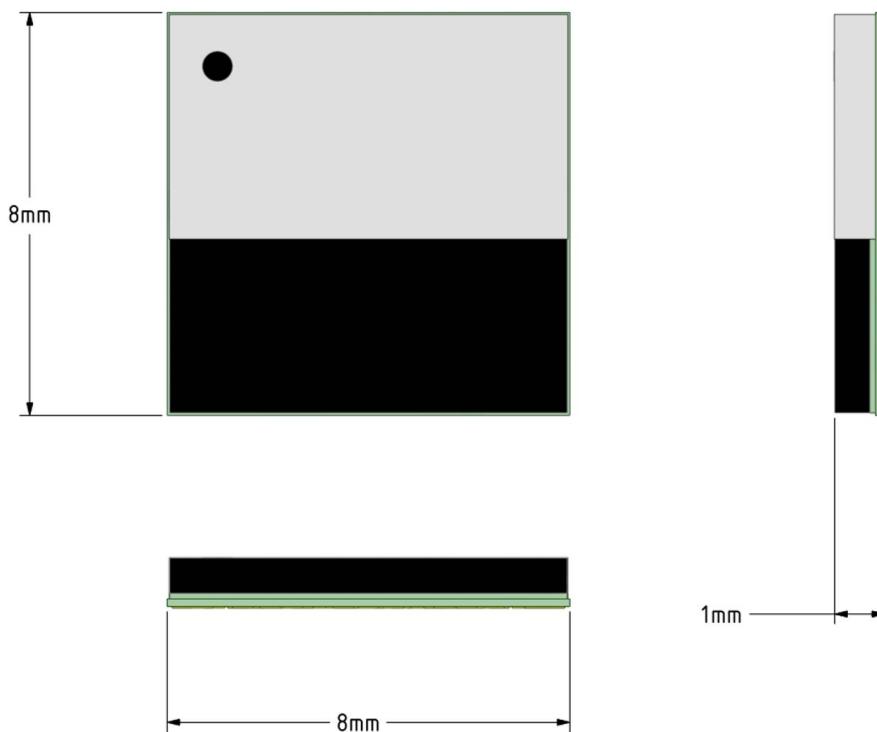
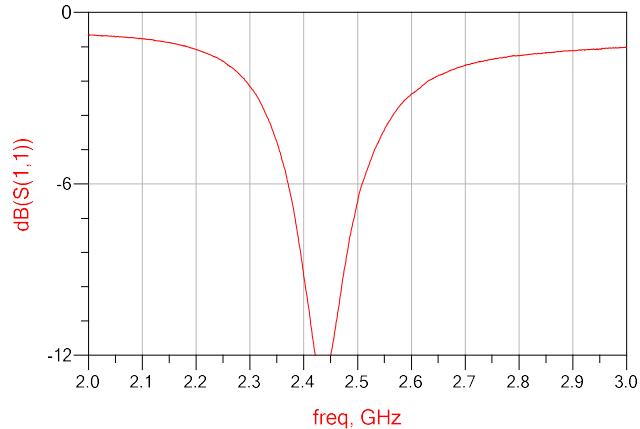


For optimal antenna performance, it is recommended to respect a metal exclusion zone to the edge of the board: no metal, no traces and no components on any application PCB layer except mechanical LGA pads.



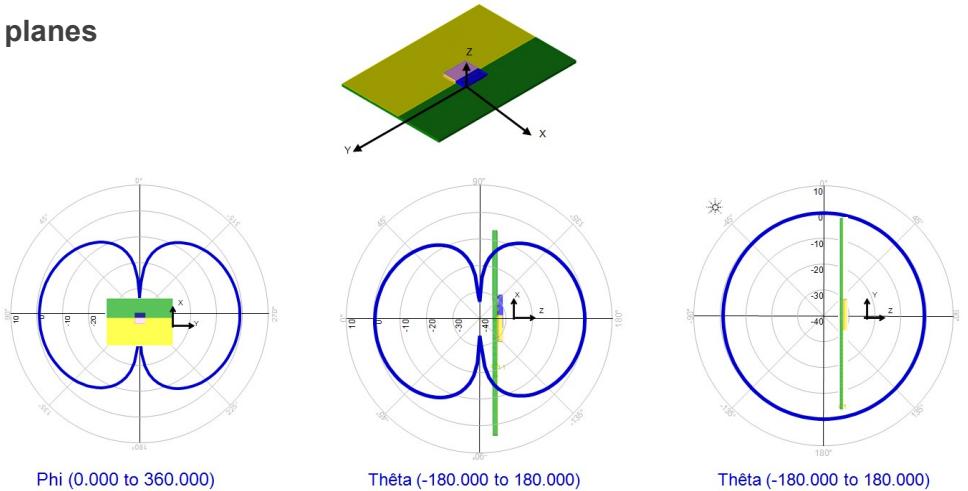
## Antenna Performance

### Typical Antenna Return Loss



### Radiation Pattern in 3 planes

Gain measurement in dBi  
 @ 2.400 GHz.  
 @ 2.450 GHz.  
 @ 2.500 GHz.



The antenna Gain max is 0.6 dBi

### Module test set up description

The ISP130603E Interface Board allows to program and control the BLE module through UART interface and Segger J-Link board.

Fig. 2 shows connection in order to set the BLE module in test mode thought 2 wires UART cable. On the ISP130603E Interface Board, connect the 2-lead patch cable in order to connect RXD to P0\_08 and TXD to P0\_06. Make sure the RXD/TXD labels match for each wire. This matches the default setting in the SDK project ble\_app\_dtm.

Details on hardware and software for using and testing the BLE module is described in document [isp\\_ble\\_AN181104.pdf](#).