Antenna Datasheet

The Thynk product uses a PCB trace antenna implemented to TI specification in the referenced TI App Note AN043.

https://www.ti.com/lit/an/swra117d/swra117d.pdf?ts=1740321773535

Gain in XY plane 4.5 dB Gain in XZ plane 5.3 dB Gain in YZ plane 5.3 dB Gain in XY plane, connected to laptop 3.3 dB LOS range 240 m Antenna size 15.2 x 5.7 mm Table 6: IFA Properties (Measured on CC2511 Dongle Reference Design)

This application note shows that it is possible to implement a 2.4 GHz antenna on a small area and still achieve good performance. Table 6 lists the most important properties of the Inverted F Antenna, described in this document. The free line of sight (LOS) range was measured with 250 kbps and 1 % PER. Gain in XY plane 4.5 dB Gain in XZ plane 5.3 dB Gain in YZ plane 5.3 dB Gain in XY plane, connected to laptop 3.3 dB LOS range 240 m Antenna size 15.2 x 5.7 mm Table 6: IFA Properties (Measured on CC2511 Dongle Reference Design) The results provided in section 5 shows that it is possible to comply with both ETSI and FCC regulations when implementing the suggested antenna together with CC2511 on a USB dongle.

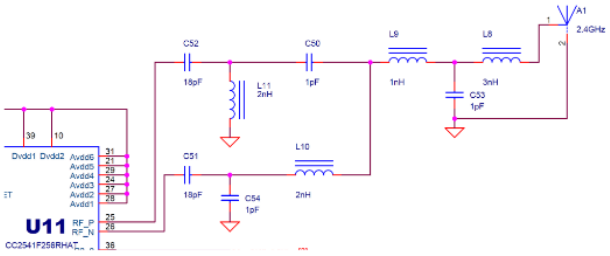
Antenna Details

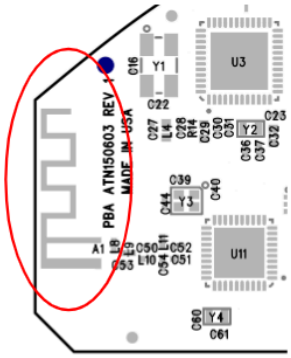
PCB Trace Antenna implemented to TI application information:

	
Design / Application Note	SWRA117 *2
Frequency	2.4 GHz
Typical Efficiency	68 % (EB)
Bandwidth@ VSWR 2:0	101 MHz
Dimensions (mm)	15 x 6

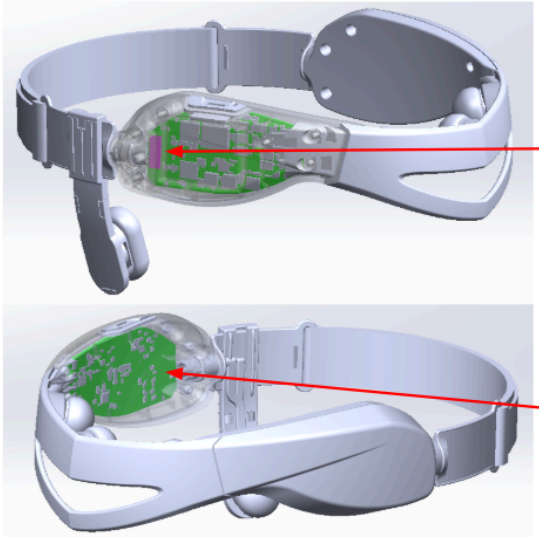
Technical details see:

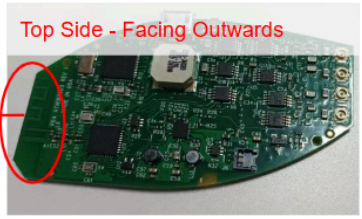
TI Application Note AN043

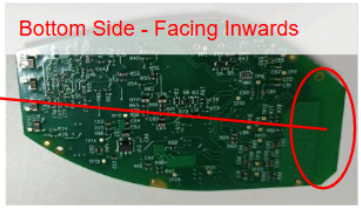




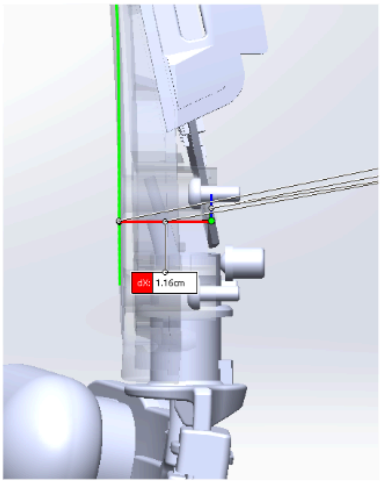
RF Antenna Separation Distance

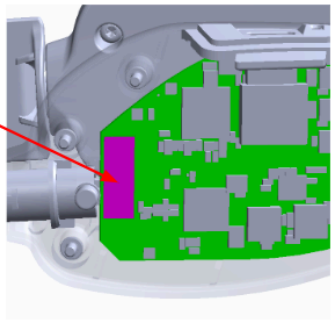


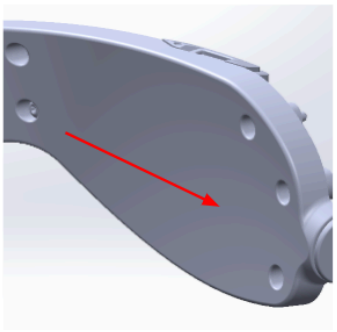




Distance from top layer PCB to the inner housing surface: 1.16cm







PCB Antenna