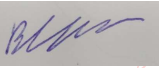


NF0108 Hailie™ for GSK pMDI Sensors

FCC ID: PN2-MDI2

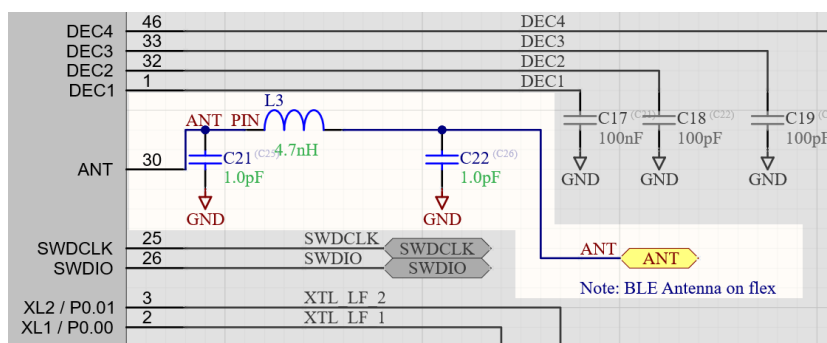
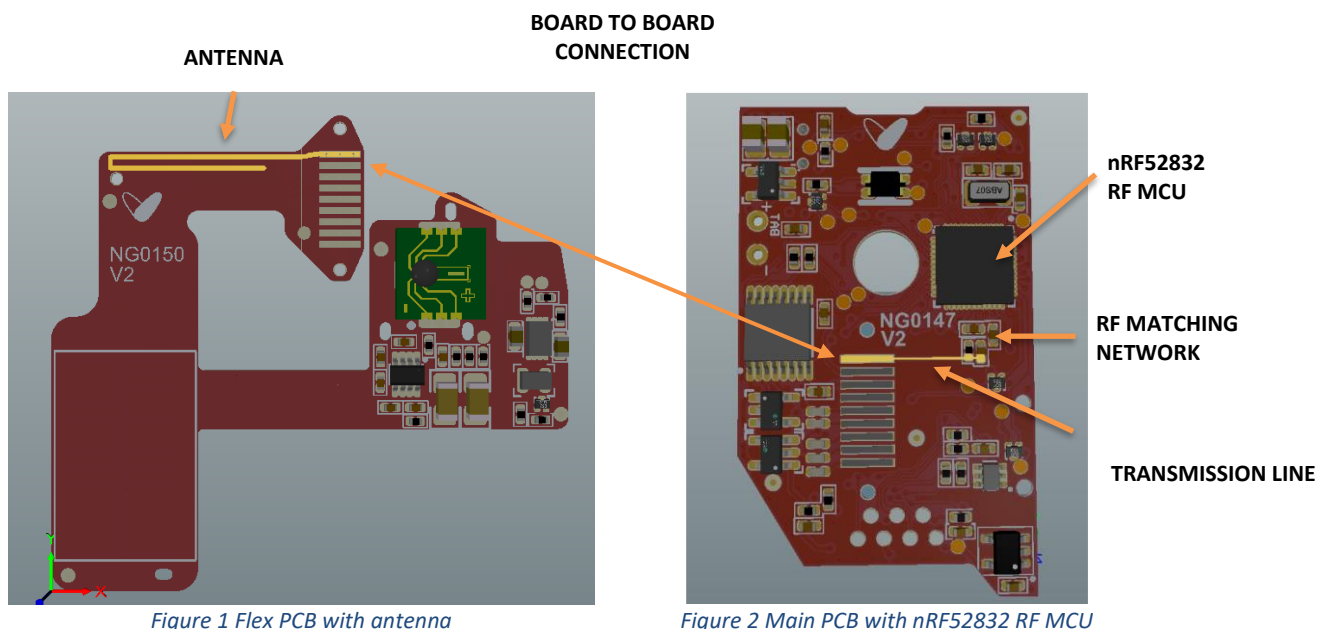


Version/Date	Author	Date	Checked	Date	Approved	Date
V1 29 Sep 2022	 B Wilson, Contract Device Engineer	Digitally signed by Ben Wilson Date: 2022.09.29 15:23:31 +13'00'	 T Kirker, Snr Device Engineer	Digitally signed by Tony Kirker Date: 2022.09.29 16:36:33 +13'00'	 M Gormack, Head of Devices	Digitally signed by Michael Gormack Date: 2022.10.05 13:12:41 +13'00'

RF Antenna

The Hailie™ Sensor uses a 2.4GHz radio frequency antenna to communicate using the Bluetooth Low Energy protocol. The antenna is driven by the Nordic nRF52832 microcontroller, which is configured to operate at 1.0 mW (0dBm) output power at 2.40 - 2.48 GHz on 40 channels of 2MHz bandwidth using GFSK modulation.

An omnidirectional antenna is implemented in copper as part of the flexible printed circuit board and is used for both transmit and receive.



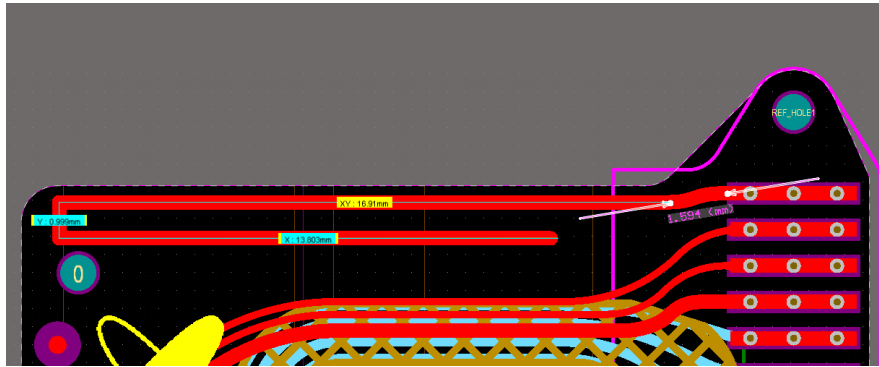


Figure 4 - Antenna Length Dimensions

Total PCB Antenna Length = $1.594 + 16.910 + 0.999 + 13.803 = 33.3\text{mm}$

Antenna Style = Folded Monopole

Antenna Type = Omni-directional

EMC – Antenna RF Test Results

Product	Test	Result
NF0108	Conducted power after matching network	-10.5dBm
NF0108	Radiated Power (EIRP)	-7.8dBm

Antenna Gain

Antenna Gain = Radiated Power – Conducted Power

$$(-7.8 \text{ dBm}) - (-10.5 \text{ dBm}) = +2.7 \text{ dBi Gain}$$