



InnerView handpiece and base station

Antenna declaration letter

1. Antenna Report/Datasheet

- Antenna manufacturer's name
 - Perimetrics, Inc
- Model number/part number
 - No specific PN is assigned. PCB trace antenna is, fully integrated and non-detachable, on the main board assembly (PN 05-2006ART04)

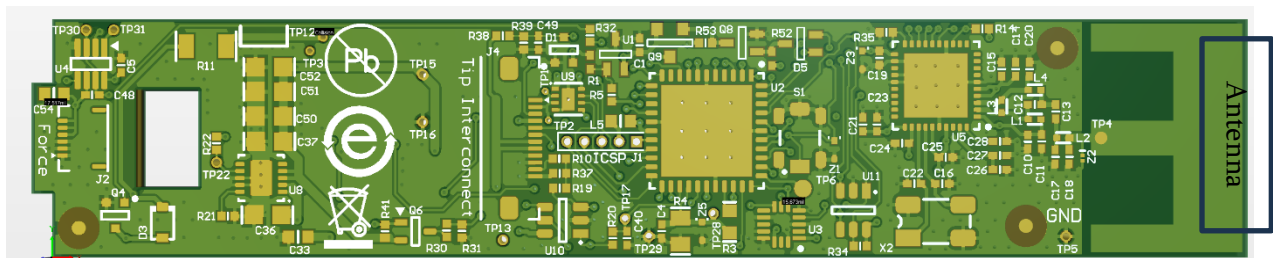


Fig.1- 05-2006ART04- PCB with built-in antenna

- Antenna image and dimensions





- Material
 - The antenna is made of copper
- Type of antenna
 - E-shaped internal PCB trace microstrip Patch antenna
- Gain specifications:
 - Peak gain in dBi
 - Base station: -8dB gain typical combined with matching circuit losses (as per previous measurements)
 - Handpiece: -9dB gain typical combined with matching circuit losses (as per previous measurements)
 - Average gain if applicable
 - No gain variations expected from PCB trace antenna
 - Gain tolerances
 - No output power tolerances are provided by the transceiver chip manufacturer. PCB antenna gain is expected not to vary significantly from one unit to another due to bare PCB fabrication uniformity.
- Radiation patterns
 - Typical E-shaped PCB trace antenna having omnidirectional pattern in the horizontal plane

2. Operational Description Requirements

- Operating frequency bands
 - 2.405 – 2.48 GHz ISM Frequency Band
- Channel spacing and number
 - 5Mz channel spacing, channel 25 used
- Modulation type and parameters
 - IEEE 802.15.4 compliant OQPSK
- Maximum rated output power
 - Maximum transceiver chip output= 0 dBm. Selected power via software = -2.8dBm before going through matching circuit losses and antenna gain/losses.
- Operating modes
 - Idle (transmitting periodically)
 - Active (transmitting continually)
 - Asleep (no transmission)
- Power supply requirements
 - Standard USB Type A
 - Base Station: 5V as supplied by the connected computer USB port at up to 500mA



- Handpiece: Internal rechargeable Li-Ion battery pack (not user replaceable)
- Description of user controls
 - User connects base station to PC via USB-A. The base station transmits and receives messages from the handpiece during idle and active operating states. When user decides to begin measurement, user undocks the handpiece and applies a secure tip. The app handles all control of messages that transmit through base station to handpiece. Once measurements are complete the handpiece is docked, setting it back into the idle state. Within 15 minutes of idle state the handpiece will fall asleep and no longer transmit or receive packets.
- Security features if applicable
 - Encrypted data transfer of sensitive elements including:
 - Tip serial number, manufacturer information
 - Device drive specifications (Tap Times)
 - Device operation instructions (Allow Acquisition)