LOXONE

Theory of Operation/Technical Description – FCC ID: 2ARRV-000375

RF circuit function:

The IEEE 802.15.4 compliant AT86RF212B transceiver generates a modulated carrier wave at 906- 924 MHz with 10 IEEE 802.15.4 channels. This transceiver circuit is used by system applications as a physical layer for 6LowPAN Smart Home applications.

RF signal flow:

The Transceiver IC outputs a differential RF signal (RFP & RFN) which is converted to single ended by the balun and then passes through the RF path via pads to the antenna on the carrier board and gets radiated or vice versa during reception.

Description of Antenna system:

RF signal from/to the front end goes via pads to carrier board which connects the antenna. Only antennas with a radiation pattern and a gain being less than or equal to antennas listed in the manual are allowed for operation.

Compliance with 15.203 antenna requirements:

FCC 15.203 requirements for this design are tested and verified during FCC compliance testing.

Description of all modulation schemes used in the product:

Module uses BPSK and O-QPSK with half-sine pulse shaping.