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Theory of Operation/Technical Description – FCC ID: VW4A091729

- RF circuit function:

The IEEE 802.15.4 compliant AT86RF233 transceiver generates a modulated carrier wave at 2.4000- 2.4835 GHz with 15 IEEE 802.15.4 channels. Integrated PA-LNA front end IC – SE2431L amplifies the RF signal to and from the transceiver. This transceiver circuit is used by system applications as a physical layer for ZigBee applications.

- RF signal flow:

The Transceiver IC outputs a differential RF signal- RFP & RFN which is amplified by the SE2431L front end and then passes through the RF path till the antenna and gets radiated or vice versa during reception

- Description of Antenna system:

RF signal from/to the SE2431L front end goes to MS147 Antenna connector and then through tuning elements to the chip antenna. Tuning elements are present to ensure compliance.

- 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 O-QPSK with half-sine pulse shaping.

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A handwritten signature in black ink, appearing to read "Saravanakumar", is positioned below the printed name.

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