10-Jun-14

Theory of Operation/Technical Description – FCC ID: VW4A092127

- RF circuit function:

The IEEE 802.15.4 compliant ATSAMR21E16A-MUT IC generates a modulated carrier wave at 2405MHz – 2480MHz with 16 IEEE 802.15.4 channels. This IC circuit is used by system applications as a physical layer for ZigBee applications.

- RF signal flow:

The IC outputs a differential RF signal- RFP & RFN which is converted to single ended by the balun and then passes through the RF path till the antenna and gets radiated or vice versa during reception

- Description of Antenna system:

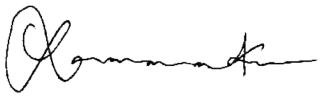
RF signal from/to the front end goes to SMA Antenna connector / Chip Antenna via switch control and then through tuning elements to the chip antenna / SMA antenna. Filter elements are present to ensure compliance.

- 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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