02-May-14

Theory of Operation/Technical Description – FCC ID: VW4A091619

- RF circuit function:

The IEEE 802.15.4 compliant AT86RF212B transceiver generates a modulated carrier wave at 906- 924MHz with 10 IEEE 802.15.4 channels. 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 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 Transceiver goes to SMA Antenna connector through tuning elements. Tuning elements are present to ensure compliance.

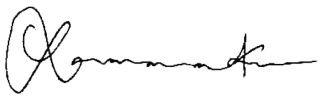
- Compliance with 15.203 antenna requirements:

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 BPSK.

By,



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02-May-14

To whomsoever it may concern

Product Application

This document explains the nature of intended application of the product mentioned below.

Product name: REB212BSMA-EK

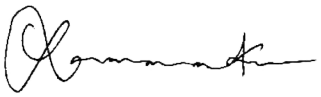
Product Model: A09-1619

FCC ID: VW4A091619

Product Application:

The REB212BSMA-EK is a ZigBee module of the Atmel AT86RF212B radio transceiver. The radio transceiver supports the worldwide accessible 900MHz ISM band.
The system is designed standard-based applications such as ZigBee/IEEE 802.15.4, ZigBee RF4CE, and 6LoWPAN, as well as high data rate ISM applications.

Sincerely,



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Specifications of EUT

Operating Frequency	902 - 928 MHz
No. of channel	10
Channel Spacing	2 MHz
Modulation	BPSK
Transmitted Power	10.38dBm
Data Rate	40 kbps
Antenna Type	External Antenna
Number of antenna	One
Antenna Gain	0dBi
Supply Voltage	3.0VDC (Battery Operated)
Dimensions	20mm x 30mm
Environmental	-40 degrees to +85 degrees C