

This memo serves to address the issues brought up by the FCC regarding compliance application (Part 15) for the AX551 spread spectrum transceiver.

1. Please provide a description of the test procedure used to generate the processing gain data, as well as an explanation of the data submitted.

[See separate attachment for explanation of processing gain.]

2. Please provide peak radiated emission data in order to show compliance with the peak limit of Section 15.35(b).

[Emissions data were taken in peak mode. The reference to quasi-peak in the report was a mistake.]

3. In order for a device to be marketed without a chassis (outer case), it must meet the criteria for a modular approval, attached below. Please address each point in the modular policy statement.

There are no official FCC Rules that permit authorization of a transmitter as a module but the following standards have been uniformly applied as a Commission policy in support of industry needs. For a module to be approved, it must satisfy the following requirements:

(1) a modular transmitter must have its own RF shielding,

[The AX551 does have shielding – also, the bottom layer of the PC board is a ground plane]

(2) a modular transmitter must have buffered modulation/data inputs (if such inputs are provided),

[All of data inputs for the AX551 are isolated by resistors, and each input goes to only one digital device, except for one. That input is also pulled up through a 2.7M resistor.]

(3) a modular transmitter must have its own power supply regulation,

[The AX551 has voltage regulation on the digital PCB.]

(4) a modular transmitter must have an antenna which complies with the requirements of Section 15.203 to be permanently attached or employ a "unique" antenna coupler,

[The antennas of the AX551 are soldered onto the PCB]

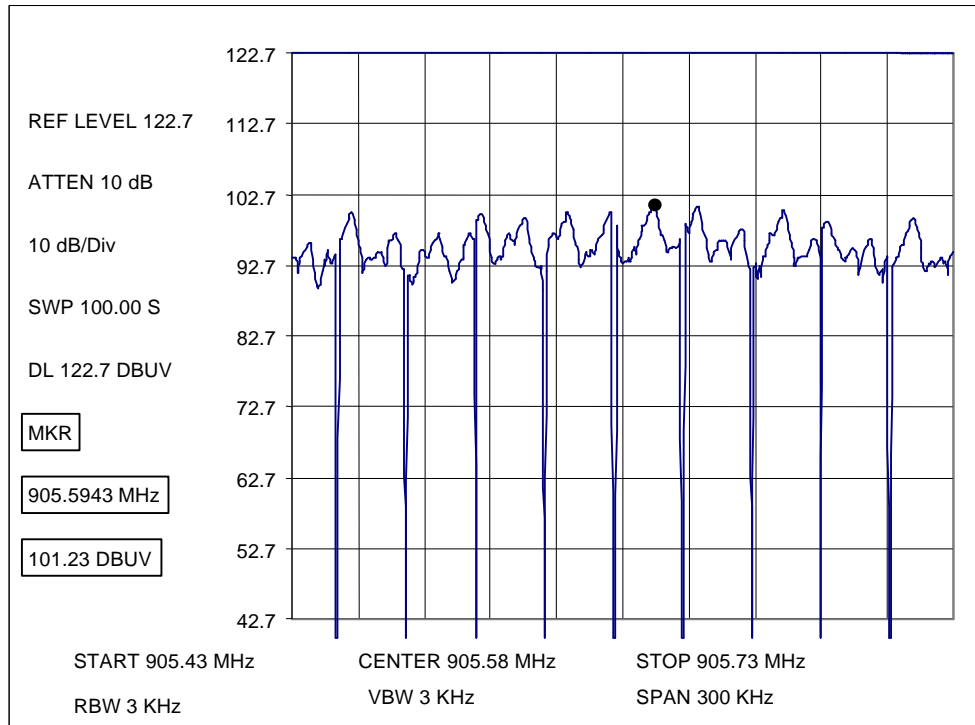
(5) a modular transmitter must be tested in a stand-alone configuration, i.e., the antenna, AC or DC power and data input/output lines must be connected to the module but, the module must not be inside another case during testing, and

[The AX551 was tested in the aforementioned configuration by Intertek Testing Services]

(6) a modular transmitter must be labeled with its own FCC ID number, and if the FCC ID is not visible when the module is installed inside another device, then the outside of the device into which the module is installed must also display a label referring to the enclosed module. This exterior label can use wording such as the following: "Contains Transmitter Module FCC ID: XYZMODEL1" or "Contains FCC ID: XYZMODEL1." The exact wording is not specified in our Rules (since modules are not specifically addressed), so you may use similar wording which expresses the same meaning.

[All user documentation will specify that the user must apply a label that states that the product "Contains FCC ID: L2VAX551"]

Axonn, Inc.
Low Channel (905.594MHz) Power Spectral Density



Using the formula:

$$E = \sqrt{(30 \cdot P \cdot G)/d}$$

Where:

G = 0.7943 (gain)

P = (unknown), Power in Watts

D = 3 m (Distance in meters)

E = 101.23 dB μ V/m (Field Strength)

E = 0.1152 V/m

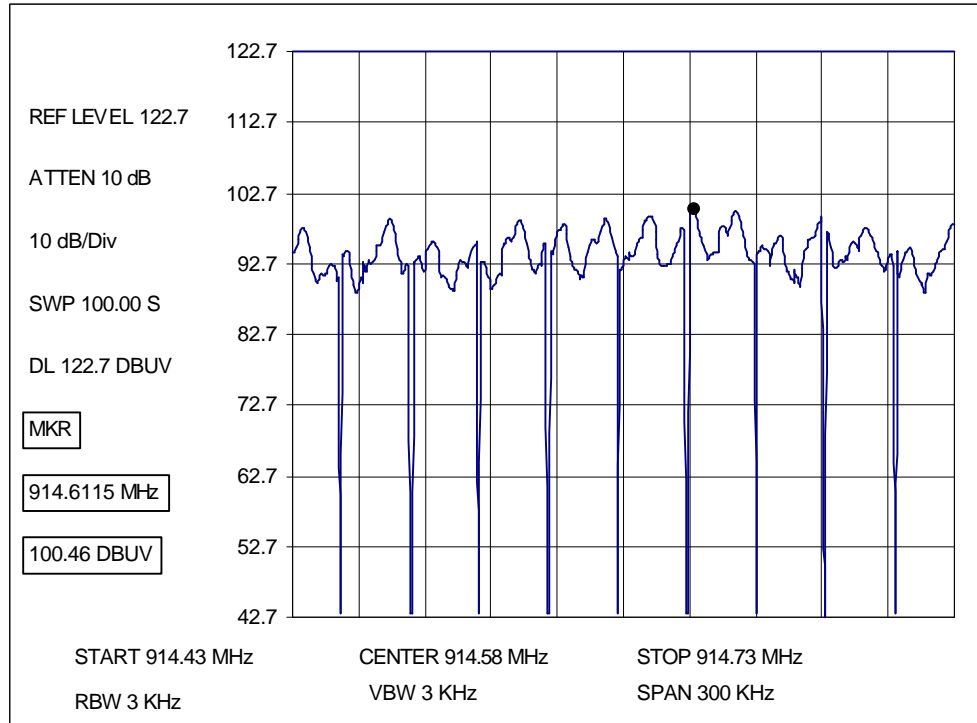
Therefore:

$$0.1152 = \sqrt{(30 \cdot P \cdot 0.794328)/3}$$

$$P = 0.005W$$

$$P = 7.0 \text{ dBm}$$

Axonn, Inc.
Mid Channel (914.611MHz) Power Spectral Density

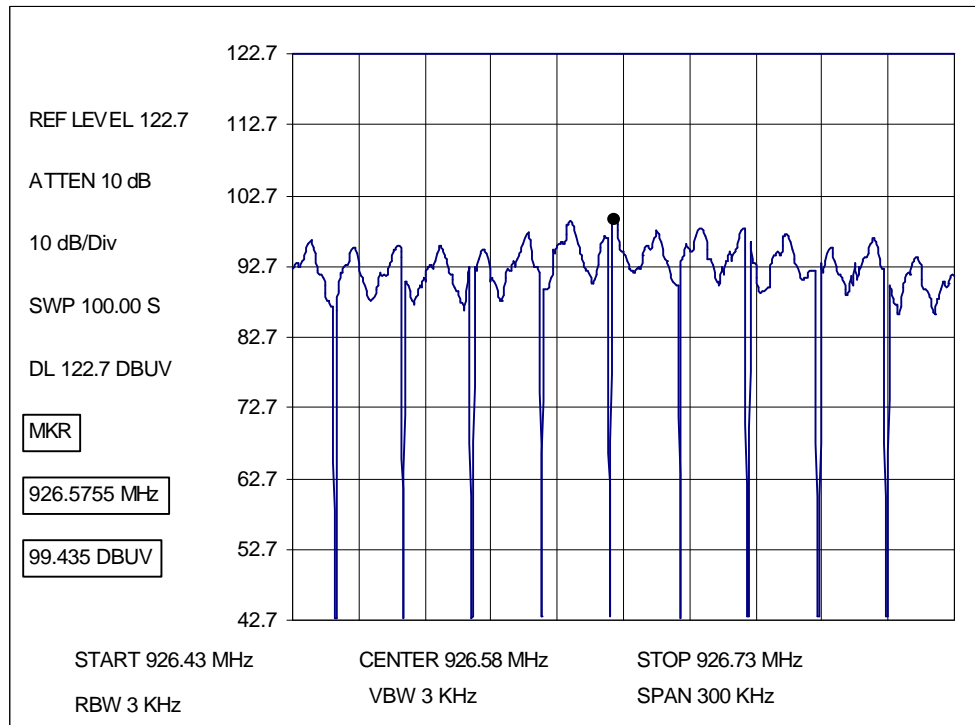


Using the formula: $E = \sqrt{(30 \cdot P \cdot G)/d}$

Where:
 $G = 0.7943$ (gain)
 $P =$ (unknown), Power in Watts
 $D = 3$ m (Distance in meters)
 $E = 100.46$ dB μ V/m (Field Strength)
 $E = 0.1054$ V/m

Therefore:
 $0.1152 = \sqrt{(30 \cdot P \cdot 0.794328)/3}$
 $P = 0.004$ W
 $P = 6.2$ dBm

Axonn, Inc.
High Channel (926.575MHz) Power Spectral Density



Using the formula:

$$E = \sqrt{(30 \cdot P \cdot G)/d}$$

Where:

$G = 0.7943$ (gain)

$P =$ (unknown), Power in Watts

$D = 3$ m (Distance in meters)

$E = 99.43$ dB μ V/m (Field Strength)

$E = 0.936$ V/m

Therefore:

$$0.936 = \sqrt{(30 \cdot P \cdot 0.794328)/3}$$

$$P = 0.0033\text{W}$$

$$P = 5.2 \text{ dBm}$$