

Tx Frequency and Transmit Power Test

Date Completed: _____

Performed by: _____

Tested Specifications:

Test #	Engineering Specification	Description	Pass Requirement
T3	ES4	Authorized Transmit Frequency	Binary (OK)
T5	ES6	Transmitter Power Output (TPO)	<30dBm

Revision History:

Revision	Description	Date
1	Document Created	12/9/2010

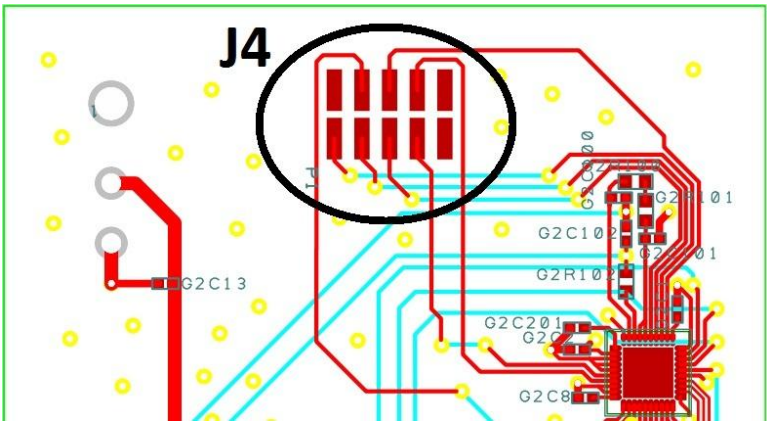

Equipment Needed:

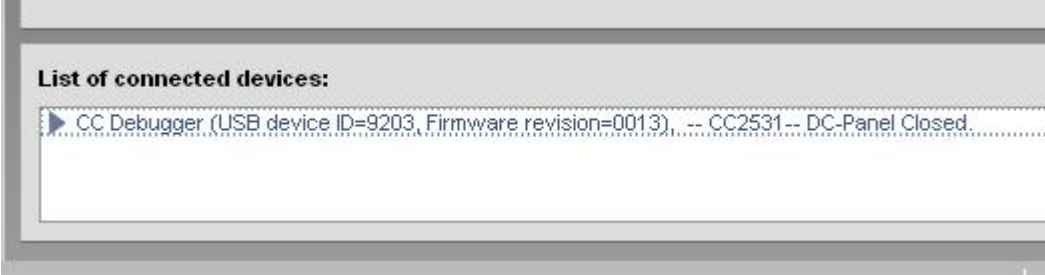

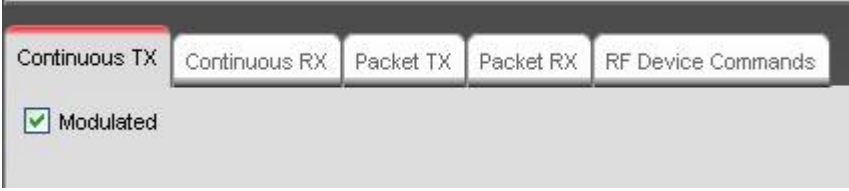
Name of Equipment	Accuracy
1 Communication Board	-
1 Spectrum Analyzer	-
1 Computer (PC)	-
1 USB cable type B male type B female	-
1 coaxial cable	-

Resources Needed:

Software	Current Revision
Place/Room with low noise/interference	-

Test:

Step #	Check Off	Procedure
1		Place a communication board upon a static free surface at least two feet off the ground. Orientate the antenna vertically. This board will be considered Board 1 for the rest of the Test Procedure.
2		Connect the port1 of the Spectrum Analyzer to the output of the RF board using a coaxial cable and turn it on.
3		Switch to frequency analysis mode and scale to observe spectrum within 2.3GHz and 2.5GHz
4		Place a PC by the communication board and turn it on.
5		Connect the CC Debugger to a USB port of the PC using a USB cable.
6		<p>Plug the programming connector from the CC Debugger to J4 on the communication board.</p> 
7		<p>Open SmartRF Studio 7 on the PC.</p> 

8		<p>Double click on the connected device to open the device control panel.</p> 
9		<p>Click on the Expert Mode on the top of the screen.</p> 
10		<p>Click on Packet Tx on the top of the screen.</p> 
11		<p>Fill in the Fields according to Figure 1 to configure channel 1 (0x0B)</p>

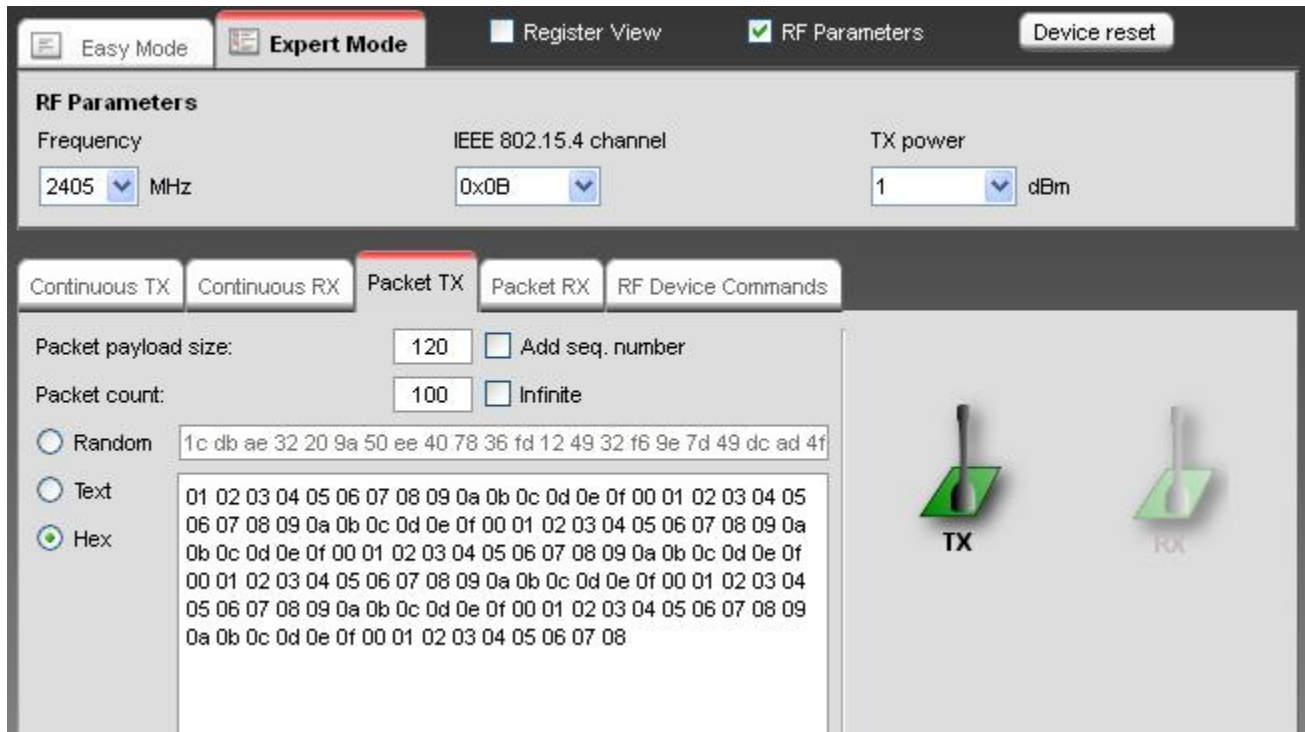


Figure 1 - Configuration Settings for Transmission on Channel 0x0B

12		Measure the bandwidth and the Transmitted Power Output and record in the Measured Results Table.
13		Repeat step but this time configure channel 16 (0x1A)
14		Measure the bandwidth and the Transmitted Power Output and record in the Measured Results Table.

Measured Results Table:

Variable Name	Recorded Value	Passable Range	Pass/Fail
Bandwidth (Hz) (1st channel)		2400 – 2483.5 MHz (FCC 15.24)	
Bandwidth (Hz) (16st channel)		2400 – 2483.5 MHz (FCC 15.24)	
Transmitter Power Output (TPO) (1st channel)		< 30dBm (+/- 1 dBm)	
Transmitter Power Output (TPO) (16st channel)		< 30dBm (+/- 1 dBm)	

Comments and Calculations:

Sign off on section completion: _____

Date of Sign Off: _____