TEST REPORT

Report Number: 102162151LAX-006
Project Number: G102162151
July 16, 2015

Testing performed on
WhiteStar Signature Pro Advanced Linear Pedal

Model: NGP680703
FCC ID: VGENGP703T
IC: 7228A-NGP703T

to

FCC Part 15 Subpart C (15.247)
Industry Canada RSS-247 Issue 1

For

Abbott Medical Optics Inc.

Test Performed by:
Intertek
25791 Commercentre Drive
Lake Forest, CA 92630 USA

Test Authorized by:
Abbott Medical Optics Inc.
1700 East Saint Andrew Place
Mail Station SA-2M
Santa Ana, CA 92705, USA

Prepared by: _____ **Date:** July 16, 2015
Grace Lin

Reviewed by: _____ **Date:** July 16, 2015
Krishna K Vemuri

Report No. 102162151-006

Equipment Under Test:	Foot Pedal
Trade Name:	WhiteStar Signature Pro Advanced Linear Pedal
Model Number:	NGP680703
Serial Number:	150800011
Applicant:	Abbott Medical Optics Inc.
Contact:	Nelson Chong
Address:	1700 East Saint Andrew Place Mail Station SA-2M Santa Ana, CA 92705
Country	USA
Tel. Number:	(714) 247-8389
Email:	Nelson.Chong@amo.abbott.com
Applicable Regulation:	FCC Part 15 Subpart C (15.247) Industry Canada RSS-247 Issue 1
Date of Test:	June 26, 2015 to June 29, 2015

We attest to the accuracy of this report:

Grace Lin
EMC Staff Engineer

Krishna K Vemuri
EMC Senior Staff Engineer

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1.0 Summary of Tests

Test	Reference FCC	Reference Industry Canada	Result
6 dB Bandwidth	§15.247(a)(2)	RSS-247, §5.2(1)	Complies
RF Output Power	§15.247(b)(3)	RSS-247, §5.4(4)	Complies
Power Spectral Density	15.247(e)	RSS-247, §5.2(2)	Complies
Out of Band Antenna Conducted Emission	15.247(d)	RSS-247, §5.5	Complies
Transmitter Radiated Emissions	15.247(d), 15.209, 15.205	RSS-247	Complies
AC Line Conducted Emission	15.207	RSS-Gen	Not applicable[1]
Antenna Requirement	15.203	RSS-Gen	Complies (Internal Antenna)

[1] EUT is battery powered.

EUT receive date: June 23, 2015
EUT receive condition: The pre-production version of the EUT was received in good condition with no apparent damage. As declared by the Applicant, it is identical to the production units.
Test start date: June 26, 2015
Test completion date: June 29, 2015
The test results in this report pertain only to the item tested.

2.0 General Information

2.1 Product Description

Equipment under Test (EUT) is the WhiteStar Signature Pro Advanced Linear Pedal, Model: NGP680703, containing two Bluetooth Low Energy transceivers for wireless control.

Information about the 2.4GHz radio is presented below:

Applicant	Abbott Medical Optics Inc.
Model No.	NGP680703
FCC Identifier	VGENGP703T
IC Identifier	7228A-NGP703T
IEEE Reference standard	802.15.1 Bluetooth Low Energy (BLE)
Type of transmission	Digital Transmission System (DTS)
Modes	Single mode (Classic Bluetooth mode is not supported)
Rated RF Output	0 dBm (1 mW)
Frequency Range	2402 – 2480 MHz
Type of modulation/data rate	GFSK / 1Mbps
Number of Channel(s)	40 (from 0 to 39)
Duty Cycle (during testing)	>98%
Antenna(s) & Gain	PCB antenna, Gain: 2.0 dBi (2.38 GHz), 2.45 dBi (2.45 GHz), 2.0 dBi (2.6 GHz)
Applicant & Address	Abbott Medical Optics Inc. 1700 East Saint Andrew Place, Mail Station SA-2M Santa Ana, CA 92705, USA

2.2 Related Submittal(s) Grants

None.

2.3 Test Facility

The test site used to collect the radiated data is a 3 meter semi-anechoic chamber. This test facility and site measurement data have been fully placed on file with the FCC, Industry Canada, and A2LA accredited.

2.4 Test Methodology

Antenna conducted measurements were performed according to the FCC documents “Guidance for Performing Compliance Measurement on Digital Transmission Systems (DTS) Operating under §15.247” (KDB 558074), and RSS-247, RSS-Gen.

Radiated emissions and AC mains conducted emissions measurements were performed according to the procedures in ANSI C63.10-2013. Radiated tests were performed at an antenna to EUT distance of 3 meters, unless stated otherwise in the "Data Sheet" of this report.

2.5 Measurement Uncertainty

Compliance with the limits was based on the results of the measurements and doesn’t take into account the measurement uncertainty.

Estimated Measurement Uncertainty

Measurement	Expanded Uncertainty (k=2)		
	0.15 MHz – 1 GHz	1 GHz – 2.5 GHz	> 2.5 GHz
RF Power and Power Density – antenna conducted	-	0.7 dB	-
Unwanted emissions - antenna conducted	1.1 dB	1.3 dB	1.9 dB
Bandwidth – antenna conducted	-	30 Hz	-
Radiated emissions	4.2 dB	3.4 dB	4.4 dB
AC mains conducted emissions	2.4 dB	-	-

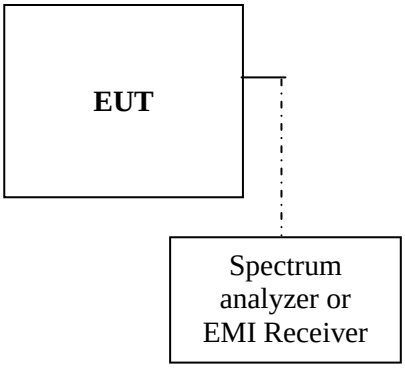
3.0 System Test Configuration

3.1 Support Equipment

EUT was tested as a standalone device. No Support equipment is used in test setup.

3.2 Block Diagram of Test Setup

Antenna was disconnected. A coaxial cable was used for Conducted Measurements.
Internal antenna was used for Radiated Measurements.



3.3 Justification

For radiated emission measurements the EUT is placed on a non-conductive table. The EUT is programmed to transmit continuously and in full power.

EUT consists of two transmitters. In normal operation they can transmit same information simultaneously on the same channel or different channels. All conducted RF measurements were performed on both transmitters individually. RF Output power and Power Density were summed linearly and reported worst case data. All radiated RF measurements were performed while both transmitters are operating simultaneously on the same channel.

3.4 Software Exercise Program

The EUT exercise program used during radiated and conducted testing was provided by Abbott Medical Optics Inc.

3.5 Mode of Operation during Test

During transmitter testing, the transmitter was setup to transmit at maximum RF power on low, middle and high frequencies/channels.

3.6 Modifications Required for Compliance

Intertek installed no modifications during compliance testing in order to bring the product into compliance.

3.7 Additions, Deviations and Exclusions from Standards

No additions, deviations or exclusions from the standard were made.

4.0 Measurement Results

4.1 6 dB Bandwidth and Occupied Bandwidth
FCC Rule: 15.247(a)(2); RSS-247 §5.2(1), and RSS-Gen §6.6

4.1.1 Requirement

The minimum 6 dB bandwidth shall be at least 500 kHz

4.1.2 Procedure

For FCC 6 dB (DTS) bandwidth, the procedure described in the FCC publication 558074 D01 DTS Meas Guidance v03r03 June 9, 2015 was used to determine the 6 dB Bandwidth. Section 8.1 Option 1 was used.

1. Set RBW = 100 kHz.
2. Set the video bandwidth (VBW) ≥ 3 x RBW.
3. Detector = Peak.
4. Trace mode = max hold.
5. Sweep = auto couple.
6. Allow the trace to stabilize.
7. Measure the maximum width of the emission that is constrained by the frequencies associated with the two outermost amplitude points (upper and lower frequencies) that are attenuated by 6 dB relative to the maximum level measured in the fundamental emission.

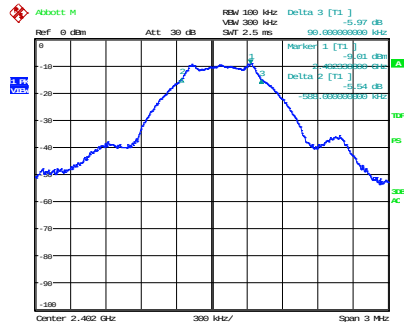
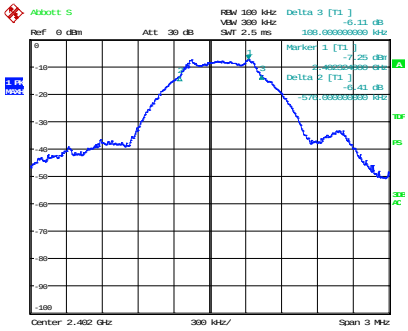
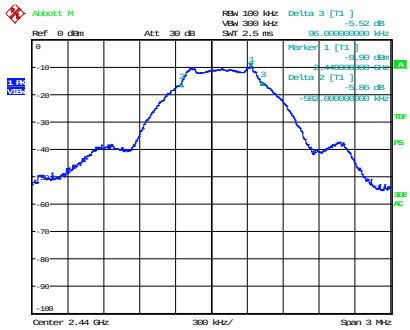
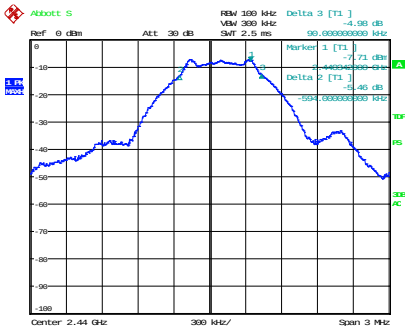
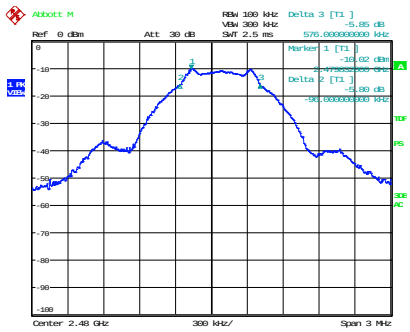
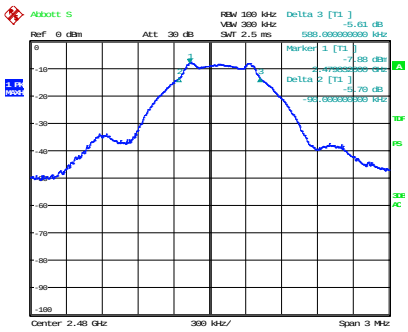
For 99% occupied bandwidth measurement, the bandwidth was determined by using the built-in 99% occupied bandwidth function of the spectrum analyzer. The resolution bandwidth is set to 1% of the selected span as is without being below 1%. The video bandwidth shall be set to 3 times the resolution bandwidth.

4.1.3 Test Results

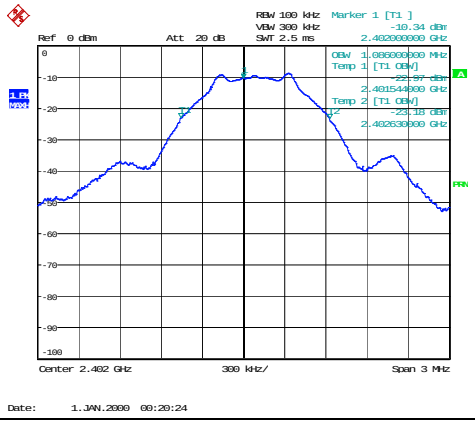
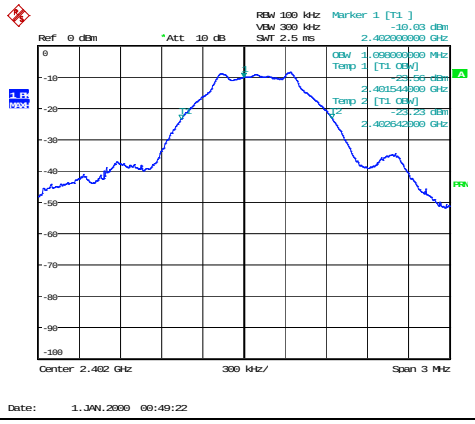
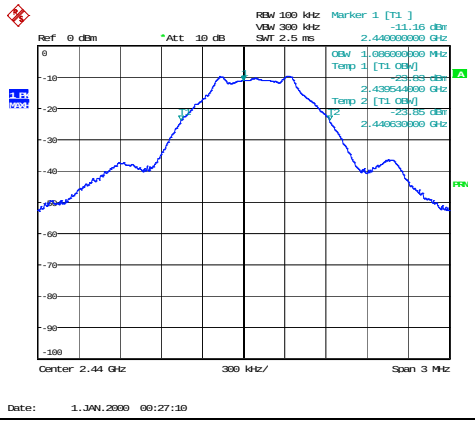
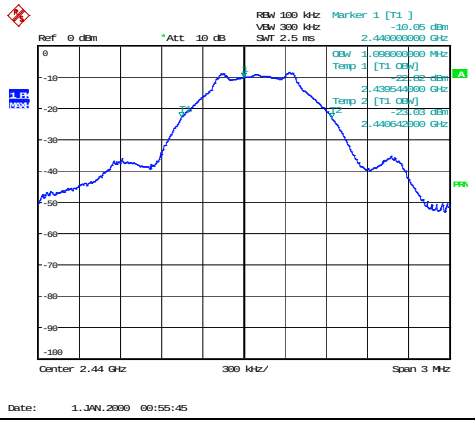
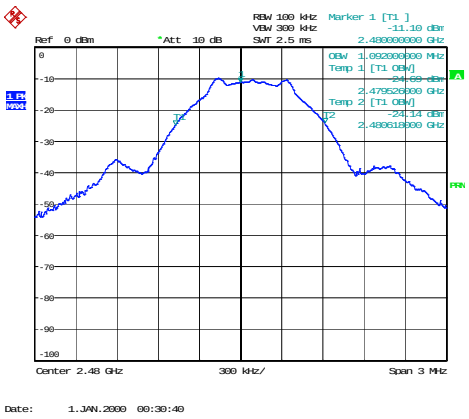
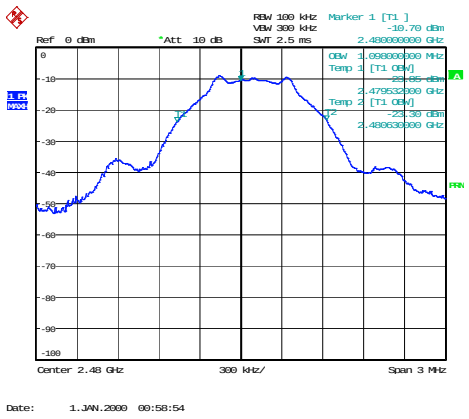
Frequency (MHz)	**6 dB bandwidth FCC 15.247, RSS-247, RSS-Gen (kHz)**		**Occupied bandwidth, RSS-Gen, (MHz)**		**Plot**
	Port 0	Port 1	Port 0	Port 1	
2402	678	684	-	-	1.1
	-	-	1.056	1.098	1.2
2440	678	684	-	-	1.1
	-	-	1.086	1.098	1.2
2480	672	678	-	-	1.1
	-	-	1.092	1.098	1.2

Results	**Complies**

Plot 1. 1

6 dB Bandwidth	
Port 0, 2402 MHz	Port 1, 2402 MHz
	
Port 0, 2440 MHz	Port 1, 2440 MHz
	
Port 0, 2480 MHz	Port 1, 2480 MHz
	

Plot 1. 2

99% Occupied Bandwidth	
Port 0, 2402 MHz	Port 1, 2402 MHz
	
Port 0, 2440 MHz	Port 1, 2440 MHz
	
Port 0, 2480 MHz	Port 1, 2480 MHz
	

4.2 Maximum Peak Conducted Output Power at Antenna Terminals
FCC Rule: 15.247(b)(3); RSS-247 §5.4(4)

4.2.1 Requirement

For antennas with gains of 6 dBi or less, maximum allowed transmitter output is 1 watt or 30 dBm.
For antennas with gains greater than 6 dBi, transmitter output level must be decreased appropriately, by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

4.2.2 Procedure

The procedure described in FCC Publication 558074 D01 DTS Meas Guidance v03r03 June 9, 2015 was used. Specifically, section 9.1.1 RBW ≥ DTS bandwidth was utilized as the spectrum analyzer's resolution bandwidth was greater than the DTS bandwidth.

1. Set the RBW ≥ DTS Bandwidth
2. Set the VBW ≥ 3 x RBW
3. Set the span ≥ 3 x RBW
4. Sweep time = Auto couple
5. Detector = Peak
6. Trace mode = Max Hold
7. Allow trace to fully stabilize
8. Use peak marker function to determine the peak amplitude level.

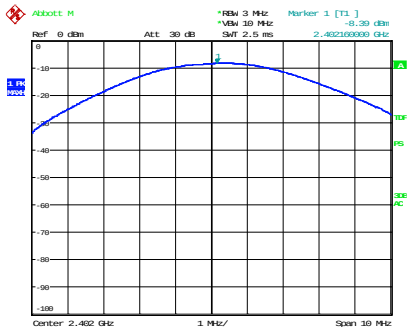
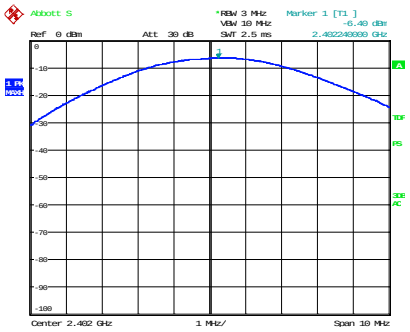
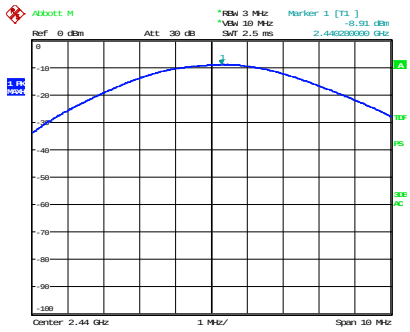
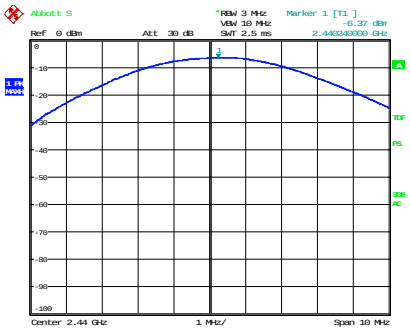
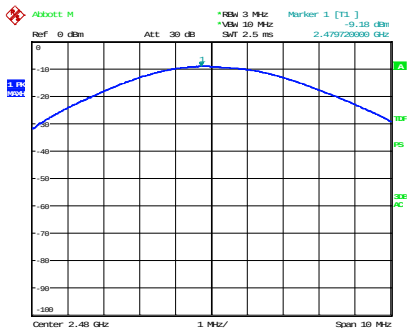
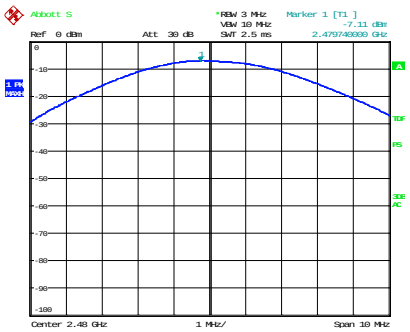
4.3.3 Test Results

Refer to the following plots 2.1 for the test details.

Frequency (MHz)	Output Power (dBm)			Output Power (mW)			Limit	Margin
	Port 0	Port 1	Total	Port 0	Port 1	Total	(W)	(W)
2402	-8.39	-6.40	-4.31	0.14	0.23	0.37	1.000	-0.99963
2440	-8.91	-6.37	-4.44	0.13	0.23	0.36	1.000	-0.99964
2480	-9.18	-7.11	-5.00	0.12	0.20	0.32	1.000	-0.99968

Results	Complies

Plot 2. 1

Peak Conducted Output Power	
Port 0, 2402 MHz	Port 1, 2402 MHz
	
Port 0, 2440 MHz	Port 1, 2440 MHz
	
Port 0, 2480 MHz	Port 1, 2480 MHz
	

4.3 Maximum Power Spectral Density
FCC: 15.247 (e); RSS-247 §5.2(2)

4.3.1 Requirement

For digitally modulated systems, the power spectral density conducted from the intentional radiator to the antenna should not be greater than 8 dBm in any 3 kHz band during any time interval of continuous transmission.

4.3.2 Procedure

The procedure described in FCC Publication 558074 D01 DTS Meas Guidance v03r03 June 9, 2015, specifically Section 10.2 Method PKPSD (peak PSD).

1. Set analyzer center frequency to DTS channel center frequency.
2. Set the span to 1.5 times the *DTS bandwidth*.
3. Set the RBW to: 3 kHz ≤ RBW ≤ 100 kHz.
4. Set the VBW ≥ 3 x RBW.
5. Detector = peak.
6. Sweep time = auto couple.
7. Trace mode = max hold.
8. Allow trace to fully stabilize.
9. Use the peak marker function to determine the maximum amplitude level within the RBW.
10. If measured value exceeds limit, reduce RBW (no less than 3 kHz) and repeat.

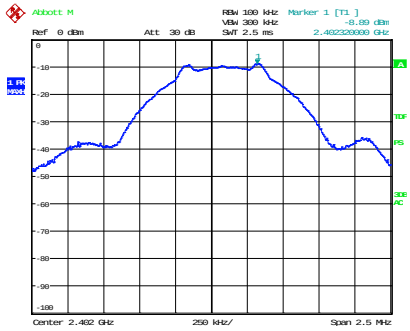
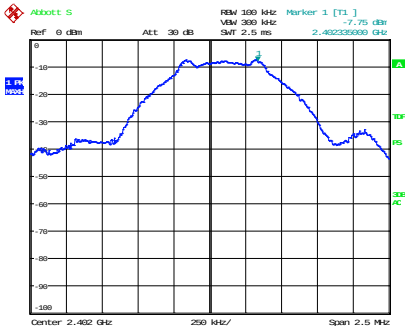
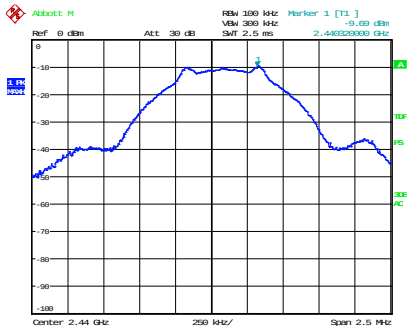
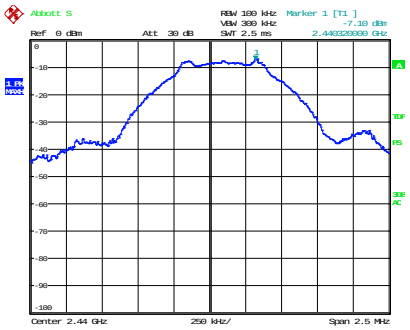
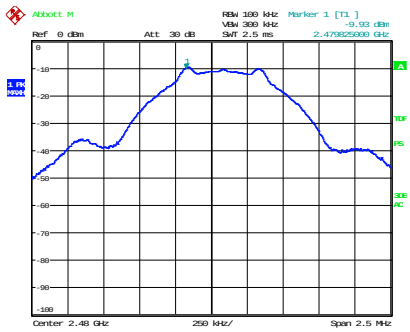
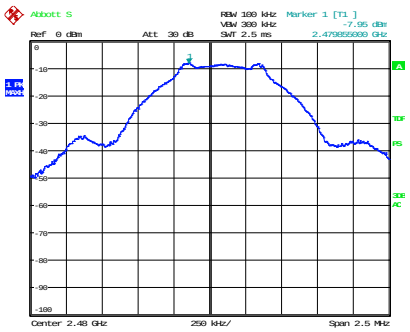
4.3.3 Test Results

Refer to the following plots for the test result

Frequency (MHz)	PSD (dBm)			PSD (mW)			Limit	Margin
	Port 0	Port 1	Total	Port 0	Port 1	Total	(dBm)	(dB)
2402	-8.89	-7.75	-5.23	0.13	0.17	0.30	8.00	-13.23
2440	-9.69	-7.10	-5.09	0.11	0.20	0.31	8.00	-13.09
2480	-9.93	-7.95	-5.85	0.10	0.16	0.26	8.00	-13.85

Results	Complies

Plot 3. 1

Power Spectral Density	
Port 0, 2402 MHz	Port 1, 2402 MHz
 Date: 28.JUN.2015 22:22:00	 Date: 28.JUN.2015 22:56:44
Port 0, 2440 MHz	Port 1, 2440 MHz
 Date: 28.JUN.2015 22:23:58	 Date: 28.JUN.2015 22:58:39
Port 0, 2480 MHz	Port 1, 2480 MHz
 Date: 28.JUN.2015 22:20:15	 Date: 28.JUN.2015 22:55:16

4.4 Unwanted Conducted Emissions
FCC: 15.247(d); RSS-247 §5.5

4.4.1 Requirement

In any 100 kHz bandwidth outside the EUT pass-band, the RF power shall be below the maximum in-band 100 kHz emissions by at least 20 dB (if peak power of in-band emission is measured) or 30 dB (if average power of in-band emission is measured).

In addition, radiated emissions which fall in the restricted bands, as defined in § 15.205(a), must also comply with the radiated emission limits specified in § 15.209(a)

4.4.2 Procedure

The procedure described in FCC Publication 558074 D01 DTS Meas Guidance v03r03, June 9, 2015, specifically Section 11.0 Emissions in non-restricted frequency bands.

A spectrum analyzer was connected to the antenna port of the transmitter.

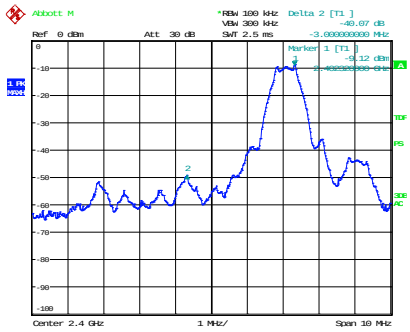
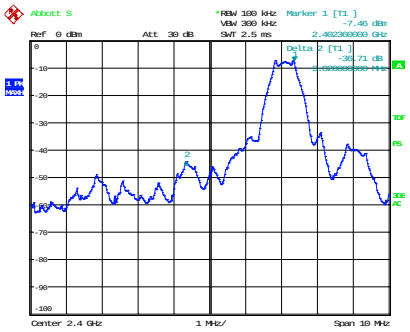
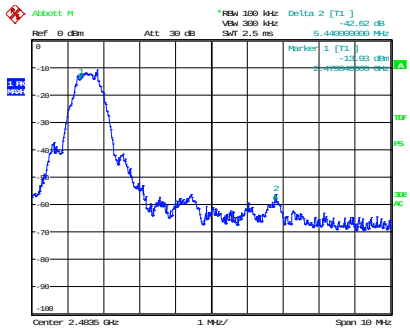
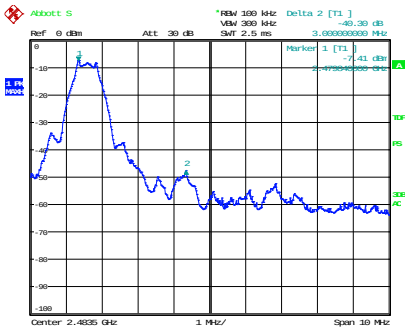
1. Set the RBW = 100 kHz.
2. Set the VBW ≥ 3 x RBW.
3. Detector = peak.
4. Sweep time = auto couple.
5. Trace mode = max hold.
6. Allow trace to fully stabilize.
7. Use the peak marker function to determine the maximum amplitude level.

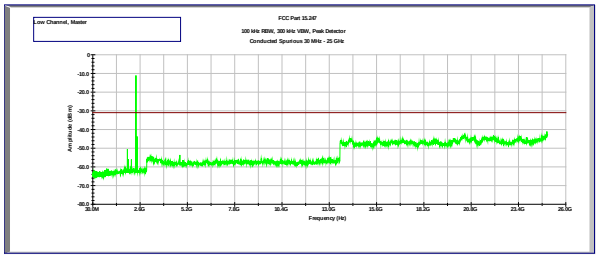
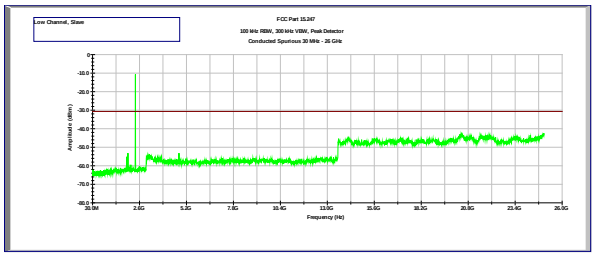
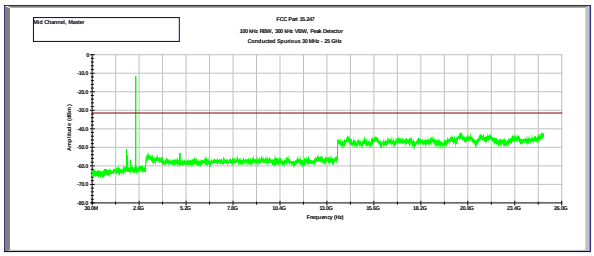
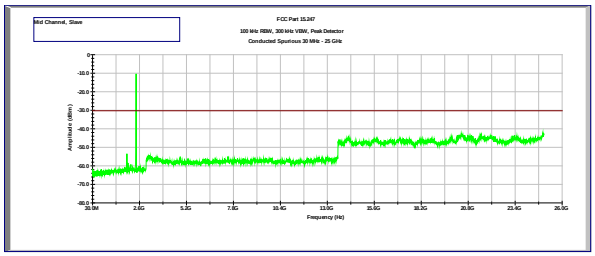
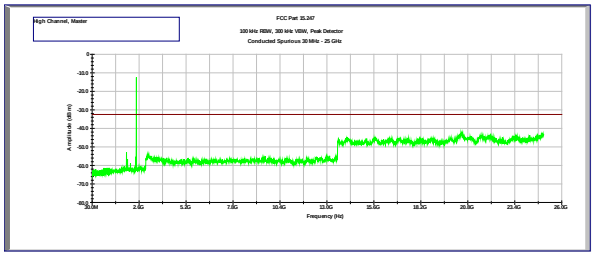
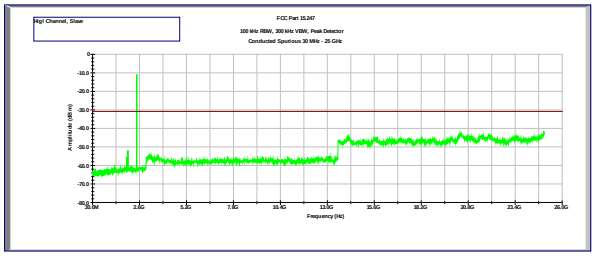
The unwanted emissions were measured from 30 MHz to 25 GHz. Plots below are corrected for cable loss and then compared to the limits.

4.4.3 Test Results

Results	**Complies**

See plots below for details.

Band Edge	
Port 0, 2400 MHz Band Edge	Port 1, 2400 MHz Band Edge
 Date: 28.JUN.2015 22:30:12	 Date: 28.JUN.2015 22:34:49
Port 0, 2483.5 MHz Band Edge	Port 1, 2483.5 MHz Band Edge
 Date: 28.JUN.2015 22:28:03	 Date: 28.JUN.2015 22:36:35

Conducted Spurious Emissions	
Port 0, 2402 MHz	Port 1, 2402 MHz
	
Port 0, 2440 MHz	Port 1, 2440 MHz
	
Port 0, 2480 MHz	Port 1, 2480 MHz
	

4.5 Transmitter Radiated Emissions
FCC Rules: 15.247(d), 15.209, 15.205; RSS-247 §5.5;

4.5.1 Requirement

Radiated emissions which fall in the restricted bands, as defined in §15.205(a), must comply with the radiated emission limits specified in §15.209(a) (see §15.205(c)).

In any 100 kHz bandwidth outside the EUT pass-band, the RF power shall be below the maximum in-band 100 kHz emissions by at least 20 dB (if peak power of in-band emission is measured) or 30 dB (if average power of in-band emission is measured).

4.5.2 Procedure

Radiated emission measurements were performed from 30 MHz to 25 GHz according to the procedure described in ANSI C64.10. Spectrum analyzer resolution bandwidth is 100 kHz or greater for frequencies 30 MHz to 1000 MHz, 1 MHz for frequencies above 1000 MHz. Above 1000 MHz Peak and Average measurements were performed.

The EUT is placed on a plastic turntable that is 80 cm in height for frequencies 30 MHz to 1000 MHz, 1.5 meters for frequency above 1000 MHz. If the EUT attaches to peripherals, they are connected and operational (as typical as possible). During testing, all cables were manipulated to produce worst-case emissions. The signal is maximized through rotation. The antenna height and polarization are varied during the search for maximum signal level. The antenna height is varied from 1 to 4 meters.

Radiated emissions are taken at 3 meters for frequencies below 18 and 1 meter for frequencies above 18 GHz.

Data included is representative of the worst-case configuration (the configuration which resulted in the highest emission levels). Plots below are corrected for distance, cables, preamp, filters and antenna factors then compared to the limits.

4.5.3 Field Strength Calculation

Field Strength Calculation

The field strength is calculated by adding the Antenna Factor and Cable Factor, and subtracting the Amplifier Gain (if any) from the measured reading. The basic equation with a sample calculation is as follows:

FS = RA + AF + CF – AG; if measurement is performed at a distance other than specified in the rule, a Distance Correction Factor (DCF) shall be added.

Where FS = Field Strength in dB(μV/m)
RA = Receiver Amplitude (including preamplifier) in dB(μV); AF = Antenna Factor in dB(1/m)
CF = Cable Attenuation Factor in dB; AG = Amplifier Gain in dB

Assume a receiver reading of 52.0 dB(μV) is obtained. The antennas factor of 7.4 dB(1/m) and cable factor of 1.6 dB is added. The amplifier gain of 29 dB is subtracted, giving field strength of 32 dB(μV/m). This value in dB(μV/m) was converted to its corresponding level in μV/m.
RA = 52.0 dB(μV)
AF = 7.4 dB(1/m)
CF = 1.6 dB
AG = 29.0 dB
FS = 52.0+7.4+1.6-29.0 = 32 dB(μV/m).
Level in μV/m = Common Antilogarithm [(32 dBμV/m)/20] = 39.8 μV/m.

4.5.4 Test Results

The data on the following pages list the significant emission frequencies, the limit and the margin of compliance.

Radiated emission measurements were performed up to 25GHz. No Emissions were identified when scanned from 18-25 GHz.

Results	**Complies** by 4.2dB

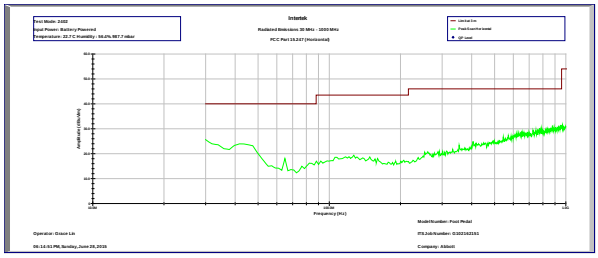
See plots below for details.

Test Results: 15.209 Radiated Spurious Emissions Low Channel, Tx at 2402MHz

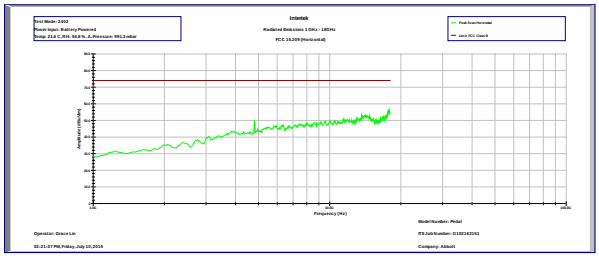
Radiated Spurious Emissions

2402 MHz, Horizontal

30 MHz - 1000 MHz, Peak Scan, Limit Line – QP

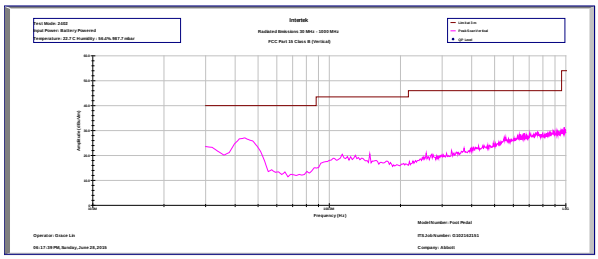


1- 18 GHz, Peak Scan, Limit Line – Peak

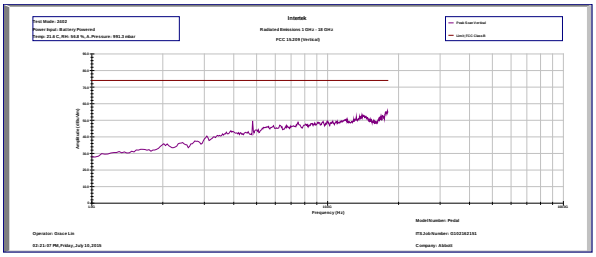


2402 MHz, Vertical

30 MHz - 1000 MHz, Peak Scan, Limit Line – QP



1- 18 GHz, Peak Scan, Limit Line – Peak



Antenna Polarization	Frequency (MHz)	Level (dB)	Limit@3m (dBuV/m)	Margin (dB)	Raw (dBuV)	Cable (dB)	Preamp (dB)	AF dB(1/m)	Ant HT (cm)	TT (degree)	Detector
H	2390.0	25.1	54.0	-28.9	38.37	2.7	44.9	28.9	168	215	AVE
H	2390.0	37.6	74.0	-36.4	50.87	2.7	44.9	28.9	168	215	PK
V	2390.0	24.0	54.0	-30.0	37.33	2.7	44.9	28.9	171	35	AVE
V	2390.0	35.4	74.0	-38.6	48.69	2.7	44.9	28.9	171	35	PK
H	4804.0	46.1	54.0	-7.9	51.3	4.4	43.1	33.5	100	204	AVE
H	4804.0	53.3	74.0	-20.7	58.5	4.4	43.1	33.5	100	204	PK
V	4804.0	44.6	54.0	-9.5	49.8	4.4	43.1	33.5	103	206	AVE
V	4804.0	52.3	74.0	-21.7	57.5	4.4	43.1	33.5	103	206	PK

Note: All other emissions not reported are noise floor which is at least 10 dB below the limit.

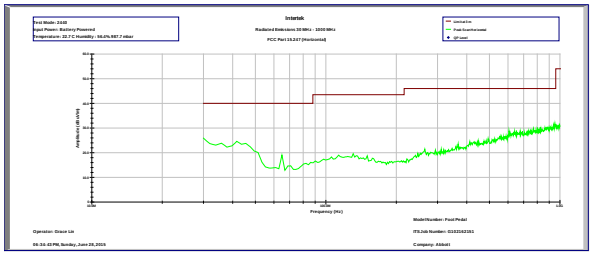
Results	**Complies**

Test Results: 15.209 Radiated Spurious Emissions Mid Channel, Tx at 2440MHz

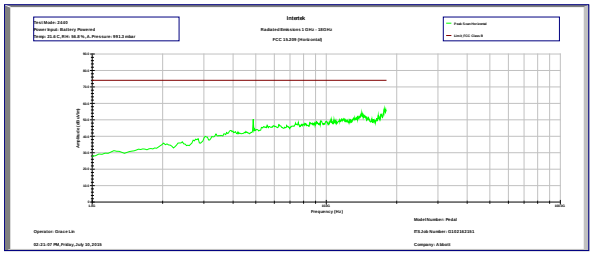
Radiated Spurious Emissions

2440 MHz, Horizontal

30 MHz - 1000 MHz, Peak Scan, Limit Line – QP

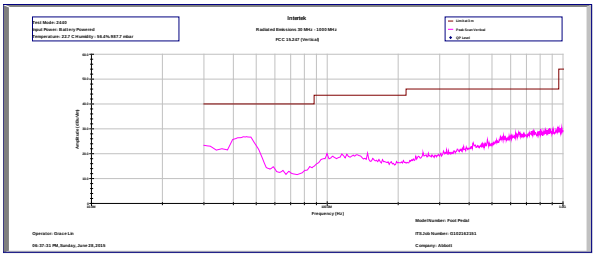


1- 18 GHz, Peak Scan, Limit Line – Peak

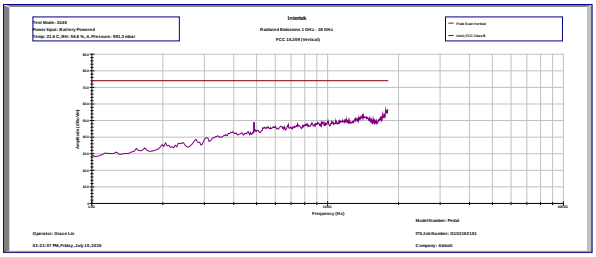


2440 MHz, Vertical

30 MHz - 1000 MHz, Peak Scan, Limit Line – QP



1- 18 GHz, Peak Scan, Limit Line – Peak



Antenna Polarization	Frequency (MHz)	Level (dB)	Limit@3m (dBuV/m)	Margin (dB)	Raw (dBuV)	Cable (dB)	Preamp (dB)	AF dB(1/m)	Ant HT (cm)	TT (degree)	Detector
H	4880.0	47.5	54.0	-6.5	52.5	4.5	43.2	33.7	106	168	AVE
H	4880.0	54.3	74.0	-19.7	59.3	4.5	43.2	33.7	106	168	PK
V	4880.0	43.5	54.0	-10.5	48.5	4.5	43.2	33.7	128	311	AVE
V	4880.0	52.2	74.0	-21.8	57.2	4.5	43.2	33.7	128	311	PK

Note: All other emissions not reported are noise floor which is at least 10 dB below the limit.

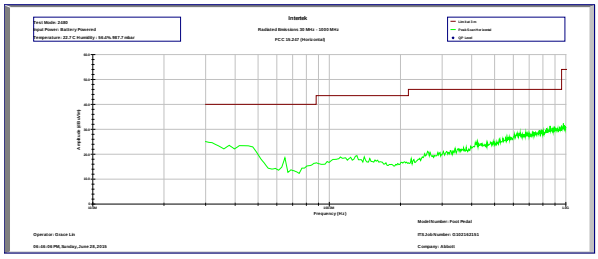
Results	**Complies**

Test Results: 15.209 Radiated Spurious Emissions High Channel, Tx at 2480MHz

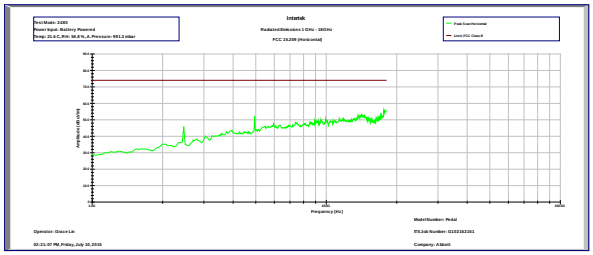
Radiated Spurious Emissions

2480 MHz, Horizontal

30 MHz - 1000 MHz, Peak Scan, Limit Line – QP

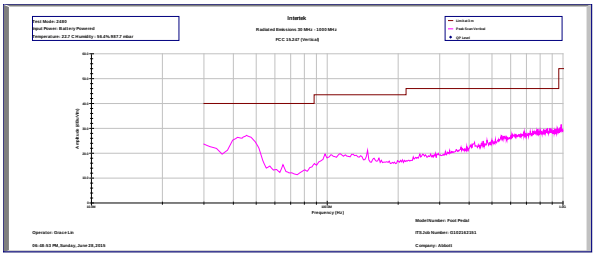


1- 18 GHz, Peak Scan, Limit Line – Peak

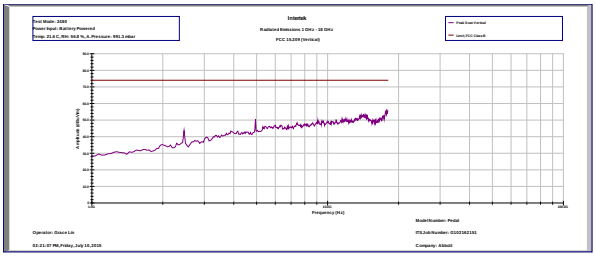


2480 MHz, Vertical

30 MHz - 1000 MHz, Peak Scan, Limit Line – QP



1- 18 GHz, Peak Scan, Limit Line – Peak



Antenna Polarization	Frequency (MHz)	Level (dB)	Limit@3m (dBuV/m)	Margin (dB)	Raw (dBuV)	Cable (dB)	Preamp (dB)	AF dB(1/m)	Ant HT (cm)	TT (degree)	Detector
H	2483.5	49.8	54.0	-4.2	62.0	3.6	44.7	28.9	100	197	AVE
H	2483.5	58.1	74.0	-15.9	70.3	3.6	44.7	28.9	100	197	PK
V	2483.5	45.8	54.0	-8.2	58.0	3.6	44.7	28.9	105	23	AVE
V	2483.5	53.6	74.0	-20.4	65.8	3.6	44.7	28.9	105	23	PK
H	4960.0	48.2	54.0	-5.8	52.8	4.5	43.0	33.9	179	192	AVE
H	4960.0	56.1	74.0	-18.0	60.7	4.5	43.0	33.9	179	192	PK
V	4960.0	44.8	54.0	-9.2	49.4	4.5	43.0	33.9	109	302	AVE
V	4960.0	53.9	74.0	-20.1	58.5	4.5	43.0	33.9	109	302	PK

Note: All other emissions not reported are noise floor which is at least 10 dB below the limit.

Results	**Complies**

4.7 AC Line Conducted Emission
FCC: 15.207; RSS-Gen;

4.7.1 Requirement

Frequency Band MHz	Class B Limit dB(µV)		Class A Limit dB(µV)	
	Quasi-Peak	Average	Quasi-Peak	Average
0.15-0.50	66 to 56 *	56 to 46 *	79	66
0.50-5.00	56	46	73	60
5.00-30.00	60	50	73	60

*Note: *Decreases linearly with the logarithm of the frequency*
At the transition frequency the lower limit applies.

4.7.2 Procedure

Measurements are carried out using quasi-peak and average detector receivers in accordance with CISPR 16. An AMN is required to provide a defined impedance at high frequencies across the power feed at the point of measurement of terminal voltage and also to provide isolation of the circuit under test from the ambient noise on the power lines. An AMN as defined in CISPR 16 shall be used.

The EUT is located so that the distance between the boundary of the EUT and the closest surface of the AMN is 0.8m.

Where a flexible mains cord is provided by the manufacturer, this shall be 1m long or if in excess of 1m, the excess cable is folded back and forth as far as possible so as to form a bundle not exceeding 0.4m in length.

The EUT is arranged and connected with cables terminated in accordance with the product specification.

Conducted disturbance is measured between the phase lead and the reference ground, and between the neutral lead and the reference ground. Both measured values are reported.

The EUT, where intended for tabletop use, is placed on a table whose top is 0.8m above the ground plane. A vertical, metal reference plane is placed 0.4m from the EUT. The vertical metal reference-plane is at least 2m by 2m. The EUT shall be kept at least 0.8m from any other metal surface or other ground plane not being part of the EUT. The table is constructed of non-conductive materials. Its dimensions are 1m by 1.5m, but may be extended for larger EUT.

Floor standing EUT are placed on a horizontal metal ground plane and isolated from the ground plane by resting on an insulating material. The metal ground plane extends at least 0.5m beyond the boundaries of the EUT and has minimum dimensions of 2m by 2m.

Equipment setup for conducted disturbance tests followed the guidelines of ANSI C63.4.

Results	**Not Applicable. EUT is battery powered only.**

5.0 List of Test Equipment

Measurement equipment used for emission compliance testing utilized the equipment on the following list:

Equipment	Manufacturer	Model/Type	Asset #	Cal Int	Cal Date
BI-Log Antenna	Teseq	CBL 6112D	ITS 1147	12	02/20/15
Thermometer	Omega	iServer MicroServer	ITS 1003	12	07/07/14
Thermometer	Omega	iServer MicroServer	ITS 1002	12	06/20/15
Pre-Amplifier	Miteq	AMF-6D-00501800-24-10P	ITS 1135	12	03/30/15
Spectrum Analyzer	Rohde & Schwarz	FSP	ITS 690	12	01/05/15
EMI Receiver	Rohde & Schwarz	ESCI 7	ITS 1140	12	02/04/15
Horn Antenna	ETS-Lindgren	3115	ITS 692	12	05/06/15
Horn Antenna	ETS-Lindgren	3116C	ITS 00880	12	11/24/15

6.0 Document History

Revision/ Job Number	Writer Initials	Reviewers Initials	Date	Change
1.0 / G102162151	GL	KV	July 16, 2015	Original document