

TEST REPORT

Report Number: 100169659ATL-001

December 9, 2010

Product Designation: Personal Tracker

Standard: FCC 15.247 and RSS-210, Issue 7, 2007
Frequency Hopping and Digital Modulation Systems operatin within the
bands 902-928 MHz, 2400-2483.5 MHz, and 5725-5850 MHz

Tested by:

Intertek Testing Services NA Inc.
1950 Evergreen Blvd., Suite 100
Duluth, GA 30096

Client:

Recon Dynamic
2300 Carillon Point
Kirkland, WA 98033-7445
Contact: Elliott Hoole
Phone: 425-828-8051

Tests performed by:



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Project Engineer

Report reviewed by:



Jeremy O. Pickens
EMC Department Manager

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1.0 Introduction and Conclusion

The tests indicated in section 2.0 were performed on the product constructed as described in section 3.0. The remaining test sections are the verbatim text from the actual data sheets used during the investigation. These test sections include the test name, the specified test Method, a list of the actual Test Equipment Used, documentation Photos, Results and raw Data. No additions, deviations, or exclusions have been made from the standard(s) unless specifically noted.

Based on the results of our investigation, we have concluded the product tested complies with the requirements of the standard(s) indicated. The results obtained in this test report pertain only to the item(s) tested.

2.0 Test Summary

Section	Test Full Name	Test Date	Result
4.0	System setup including cable interconnection details, support equipment and simplified block diagram. (System Setup)		
5.0	Transmitter Information for equipment operating under Parts 11, 15 and 18 of the rules (Transmitter Info - Unlicensed)		
6.0	FCC Part 15.247(a)(2) / RSS-210 A8.2(a) (6 dB Bandwidth)	10/28/2010	PASS
7.0	FCC Part 15.247(b)(3) / RSS-210 A8.4(4) (Peak Output Power)	11/04/2010	PASS
8.0	FCC Part 15.247(e) / RSS-210 A8.2(2) (Power Spectral Density)	11/04/2010	PASS
9.0	FCC Part 15.247(d) / RSS-210 A8.5 - Conducted (Conducted Spurious Emissions)	10/28/2010	PASS
10.0	FCC Part 15.247(d) / RSS-210 A8.5 - Radiated (Radiated Spurious Emissions)	10/29/2010	PASS
11.0	FCC Part 15.205 / RSS-210 2.2 (Restricted Bands)	11/26/2010	PASS
12.0	Additional provisions to the general radiated emission limitations. (FCC 15C - 15.215)	11/26/2010	PASS

3.0 Description of Equipment Under Test

Equipment Under Test			
Description	Manufacturer	Model Number	Serial Number
Tracking Device	Recon Dynamics, LLC	Personal tracker - Generic Sensor Alarm with LBS	39618-00055 R2 911-A2-0003-00

EUT receive date:	10/27/2010
EUT receive condition:	Good

Description of EUT provided by Client:

RECON Dynamics lets you create that “always know where they are” and set some custom rules for an additional sense of security. You'll be able to define specific parameters for location boundaries and crucial measurements like motion, temperature, altitude, and flow rate - virtually anything you want to track and monitor. You can rest easy knowing RECON is always keeping an eye out, ready to alert you at a moment's notice. You'll be notified based on your custom parameters and event notification priorities.

In addition, if there is a problem, the user has a “panic button” to alert you to a problem.

Description of EUT exercising:

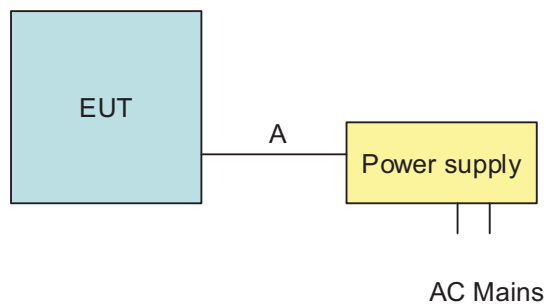
The device was placed in a continuous transmit state with normal modulation for testing.

4.0 System setup including cable interconnection details, support equipment and simplified block diagram. (System Setup)

Method:

Record the details of EUTcabling, document the support equipment, and show the interconnections in a block diagram.

Drawing:



Simplified block diagram

Data:

4.0 System setup including cable interconnection details, support equipment and simplified block diagram. (System Setup)

EUT Cabling						
ID	Description	Length	Shielding	Ferrites	Connection	
					From	To
A	DC Power cord	6'	No	No	EUT	Power supply

Support Equipment			
Description	Manufacturer	Model Number	Serial Number
Power supply	Cincon Electronics	TRG513-1	TRG513-1-A-121E03

5.0 Transmitter Information for equipment operating under Parts 11, 15 and 18 of the rules (Transmitter Info - Unlicensed)

Method:

Complete the overview spreadsheet.

Related Submittal(s) Grants: This report is for use with an application for certification of a low power transmitter. One transmitter is included in the application.

Data:

FCC Rule Part			
2.1033(b)(1)	Applicant	Company Name:	Recon Dynamics
		Address:	2300 Carillon Point
		Phone:	425-828-8051
		Fax:	425-828-8060
		Contact Name:	Elliot Hoole
		Email:	ehoole@recondynamics.com
	Manufacturer	Company Name:	Recon Dynamics
		Address:	2300 Carillon Point
		Phone:	425-828-8051
		Fax:	425-828-8060
Contact Name:		Elliot Hoole	
	Email:	ehoole@recondynamics.com	
2.1033(b)(2)	Equipment	FCC ID:	YQN-PT10A
		EUT Model Number:	Personal tracker - Generic Sensor Alarm
		EUT Serial Number:	911-A2-0003-00
2.1033(b)(3)	User Manual	Attach as separate exhibit.	
2.1033(b)(4)	Brief description of circuit functions	Attach as separate exhibit.	
2.1033(b)(5)	Block diagram showing frequency of oscillators	Attach as separate exhibit.	
2.1033(b)(6)	Test report	Incorporated with this document	
2.1033(b)(7)	Internal and external photographs	Attach as separate exhibit.	
2.1033(b)(8)	Peripheral Equipment	Can be used?	No
		Comercially available?	NA
2.1033(b)(9)	Transition rules apply?	No	
2.1033(b)(10)	Scanning receiver?	No	
2.1033(b)(11)	Transmitter in 59-64 GHz band?	No	
2.1033(b)(12)	Software defined radio?	No	

6.0 FCC Part 15.247(a)(2) / RSS-210 A8.2(a) (6 dB Bandwidth)

Method:

TEST PROCEDURE REFERENCE

FCC's KDB Publication 558074, "Measurement of Digital Transmission Systems Operating under Section 15.247" March 23, 2005

TEST LIMIT

The minimum 6 dB bandwidth shall be at least 500 kHz.

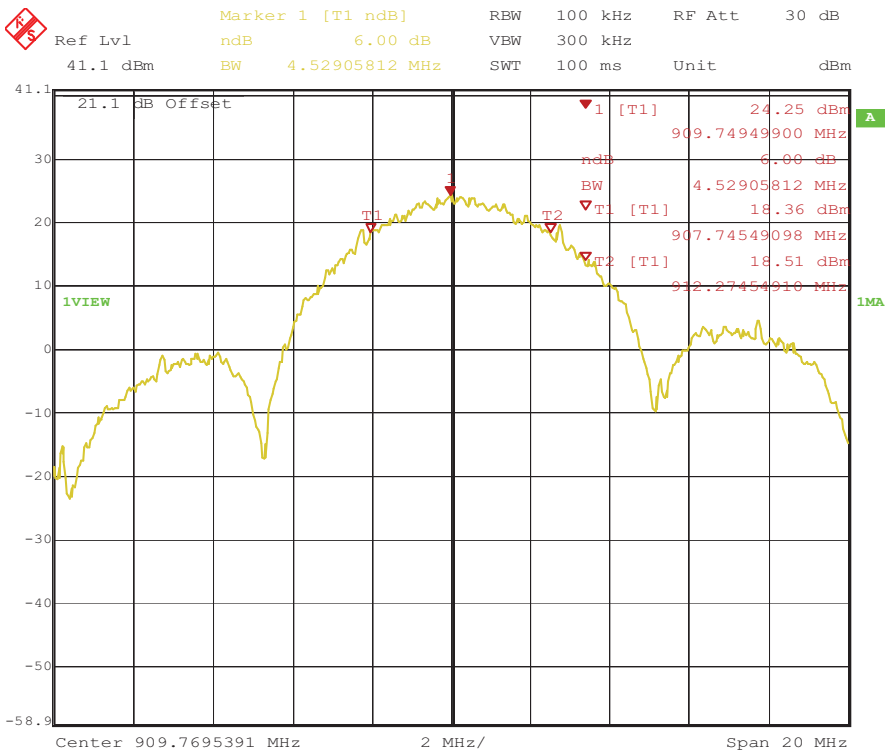
Connect the antenna port of the EUT to the input of a spectrum analyzer. Input a referency level offset into the spectrum analyzer to account for the associated cable loss. Set the analyzer resolution and video bandwidths to 100kHz and turn on the max hold function. Use the marker peak search on the resultant trace to find the peak amplitude. Positioned the markers on either side of the peak amplitude such that they were 6dB lower than the peak amplitude. The 6dB bandwidth is the frequency difference between the marker on the lower side and the marker on the higher side of the peak amplitude. The 6dB bandwidth shall be measured for the highest data rate for each possible modulation mode on the high, middle, and low channels.

Test Equipment Used:

Description:	Manufacturer:	Model:	Asset Number:	Cal Date:	Cal Due:
Attenuator, 20 dB, <18GHz	Weinschel Corp	2	200008	10/04/2010	10/04/2011
Cable E201, 18 GHz, N, 3m	Megaphase	TM18 NKNK 118	E201	02/02/2010	02/02/2011
Spectrum Analyzer, 20Hz-40GHz	Rohde & Schwarz	FSEK30	200062	10/22/2010	10/22/2011

Results: The sample tested was found to Comply.

Plot:



Date: 3.DEC.2010 08:54:04

6dB Bandwidth

Data:

6.0 FCC Part 15.247(a)(2) / RSS-210 A8.2(a) (6 dB Bandwidth)

Channel	6 dB Bandwidth	RBW kHz	VBW kHz
910MHz	4.529MHz	100	300

7.0 FCC Part 15.247(b)(3) / RSS-210 A8.4(4) (Peak Output Power)

Method:

TEST PROCEDURE REFERENCE

FCC's KDB Publication 558074, "Measurement of Digital Transmission Systems Operating under Section 15.247" March 23, 2005

TEST LIMIT

The maximum peak conducted output power of the intentional radiator shall not exceed the following: For systems using digital modulation in the 902-928 MHz, 2400-2483.5 MHz, and 5725-5850 MHz bands: 1 Watt.

As an alternative to a peak power measurement, compliance with the one Watt limit can be based on a measurement of the maximum conducted output power. Maximum Conducted Output Power is defined as the total transmit power delivered to all antennas and antenna elements averaged across all symbols in the signaling alphabet when the transmitter is operating at its maximum power control level. Power must be summed across all antennas and antenna elements. The average must not include any time intervals during which the transmitter is off or is transmitting at a reduced power level.

If multiple modes of operation are possible (e.g., alternative modulation methods), the maximum conducted output power is the highest total transmit power occurring in any mode.

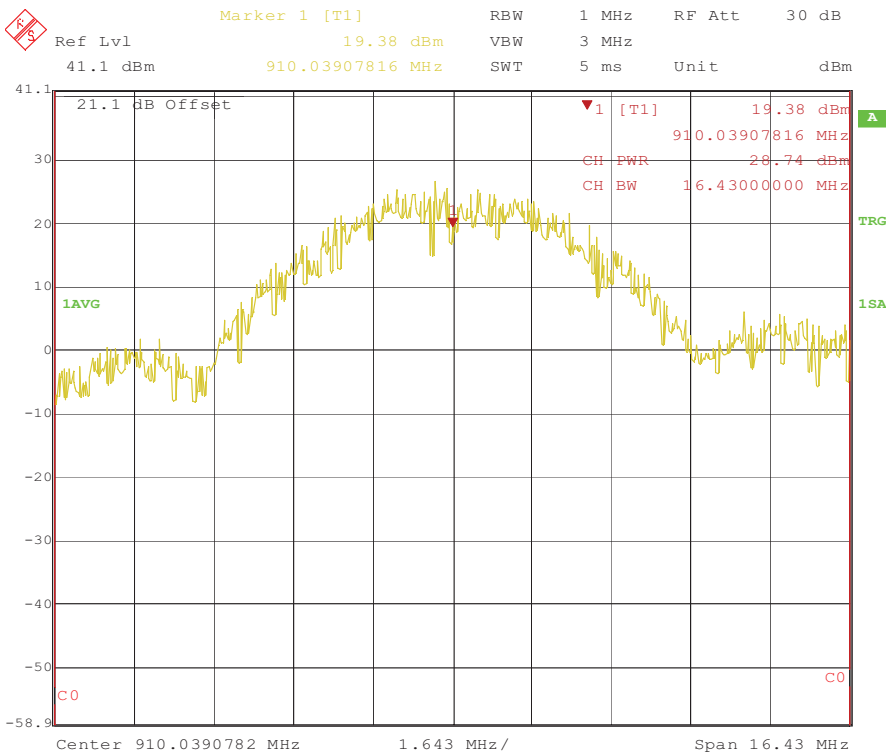
Connect the antenna port of the EUT to the input of a peak power meter (or spectrum analyzer with resolution bandwidth set greater than the emission bandwidth). Read the power directly from the power meter (or equivalent) that is corrected for cable loss to obtain the power at the antenna terminals. Measure the conducted power on the high, middle and low channels for all data rates and modulation modes.

Test Equipment Used:

Description:	Manufacturer:	Model:	Asset Number:	Cal Date:	Cal Due:
Attenuator, 20 dB, <18GHz	Weinschel Corp	2	200008	10/04/2010	10/04/2011
Cable E201, 18 GHz, N, 3m	Megaphase	TM18 NKNK 118	E201	02/02/2010	02/02/2011
Spectrum Analyzer, 20Hz-40GHz	Rohde & Schwarz	FSEK30	200062	10/22/2010	10/22/2011

Results: The sample tested was found to Comply.

Plot:

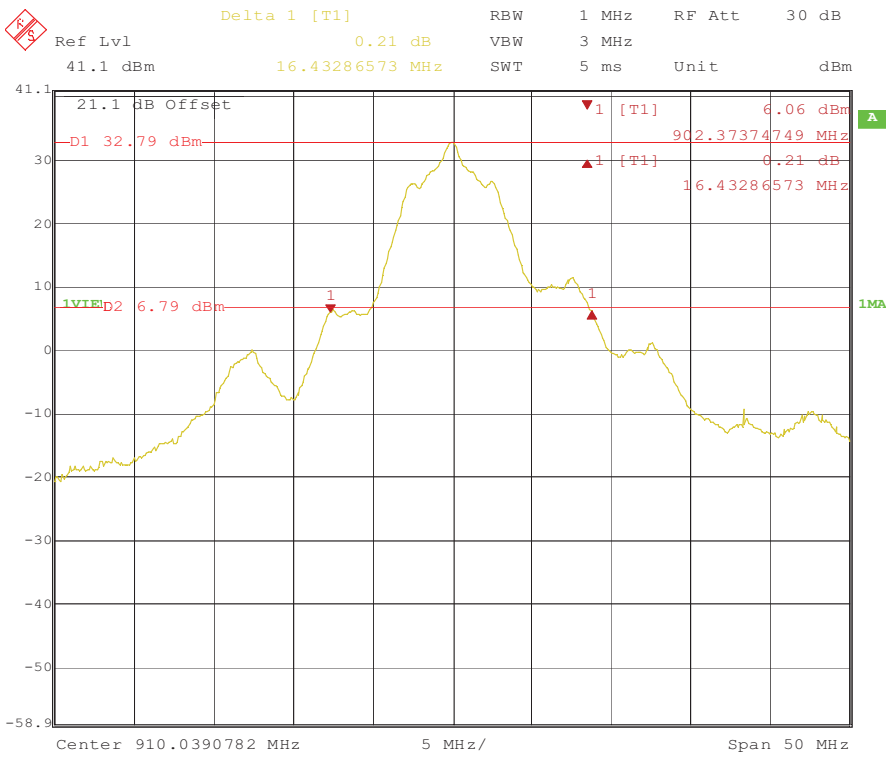


Date: 1.DEC.2010 08:45:47

100 traces averaged, sample detector, triggered

7.0 FCC Part 15.247(b)(3) / RSS-210 A8.4(4) (Peak Output Power)

Plot:



Date: 1.DEC.2010 09:03:46

26dB Bandwidth for Channel power measurement

Data:

7.0 FCC Part 15.247(b)(3) / RSS-210 A8.4(4) (Peak Output Power)

Channel	Peak Power	RBW MHz	VBW MHz
910MHz	28.74	1	3

8.0 FCC Part 15.247(e) / RSS-210 A8.2(2) (Power Spectral Density)**Method:**

TEST PROCEDURE REFERENCE

FCC's KDB Publication 558074, "Measurement of Digital Transmission Systems Operating under Section 15.247" March 23, 2005

TEST LIMIT

The peak level measured must be no greater than +8 dBm.

Connect the antenna port of the EUT to the input of a spectrum analyzer. Input an offset into the analyzer amplitude to account for the associated cable loss.

Set the span to cover the entire emission bandwidth. With a bandwidth of 100kHz or greater, set the marker to the peak emission and move that frequency to the center of the display. Set the analyzer resolution and video bandwidths to 3kHz and turn on the max hold function. Set the frequency span was set to 300kHz around the highest amplitude occurring in the peak emission envelope. The total sweep time was calculated as follows:

$$\text{Sweep time (Sec.)} = (\text{Fstop} - \text{Fstart}) / \text{Resolution Bandwidth}$$

Example:

Sweep time (Sec) = 300kHz / 3kHz

Sweep time (Sec) = 100 Seconds

Perform a peak search on the resultant trace. Record the amplitude of that peak as the maximum power density in dBm. Measure the power density for all data rates and modulation modes on the middle channel.

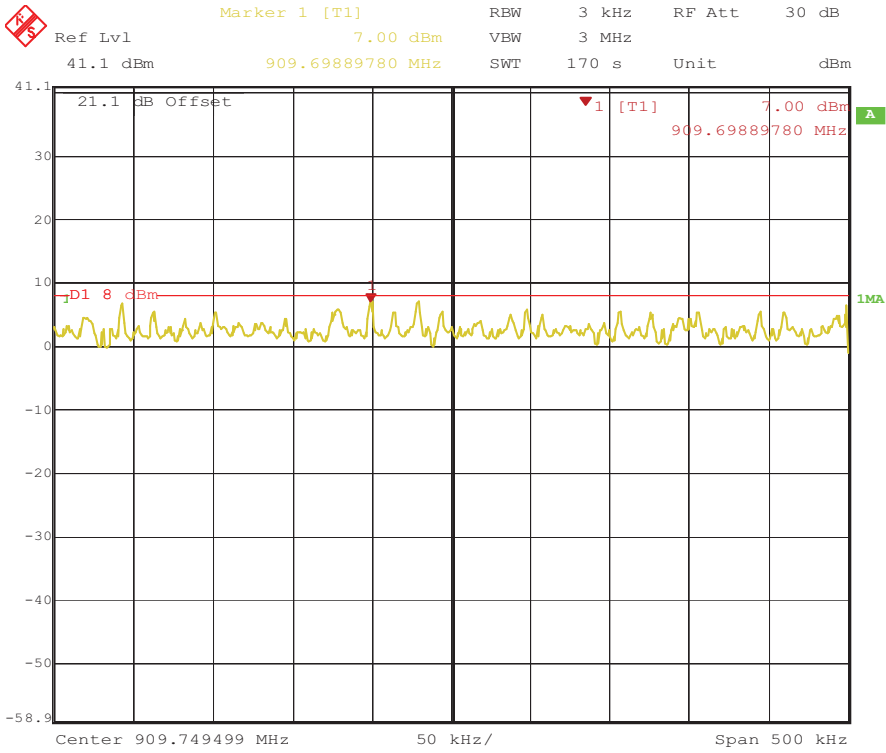
For the high and low channels, measure the power density at the data rate and modulation mode that resulted in the highest and lowest conducted power for that channel.

Test Equipment Used:

Description:	Manufacturer:	Model:	Asset Number:	Cal Date:	Cal Due:
Attenuator, 20 dB, <18GHz	Weinschel Corp	2	200008	10/04/2010	10/04/2011
Cable E201, 18 GHz, N, 3m	Megaphase	TM18 NKNK 118	E201	02/02/2010	02/02/2011
Spectrum Analyzer, 20Hz-40GHz	Rohde & Schwarz	FSEK30	200062	10/22/2010	10/22/2011

Results: The sample tested was found to Comply.**Plot:**

8.0 FCC Part 15.247(e) / RSS-210 A8.2(2) (Power Spectral Density)



Date: 3.DEC.2010 10:17:30

Spectral density

Data:

8.0 FCC Part 15.247(e) / RSS-210 A8.2(2) (Power Spectral Density)

Channel	PSD dBm	Limit dBm	RBW kHz	Span kHz	Sweep Time seconds
910MHz	7	8	3	500	170

9.0 FCC Part 15.247(d) / RSS-210 A8.5 - Conducted (Conducted Spurious Emissions)

Method:

TEST PROCEDURE REFERENCE

FCC's KDB Publication 558074, "Measurement of Digital Transmission Systems Operating under Section 15.247" March 23, 2005

TEST LIMIT

In any 100 kHz bandwidth outside the frequency band in which the spread spectrum or digitally modulated device is operating, the radio frequency power that is produced shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement, provided the transmitter demonstrates compliance with the peak conducted power limits.

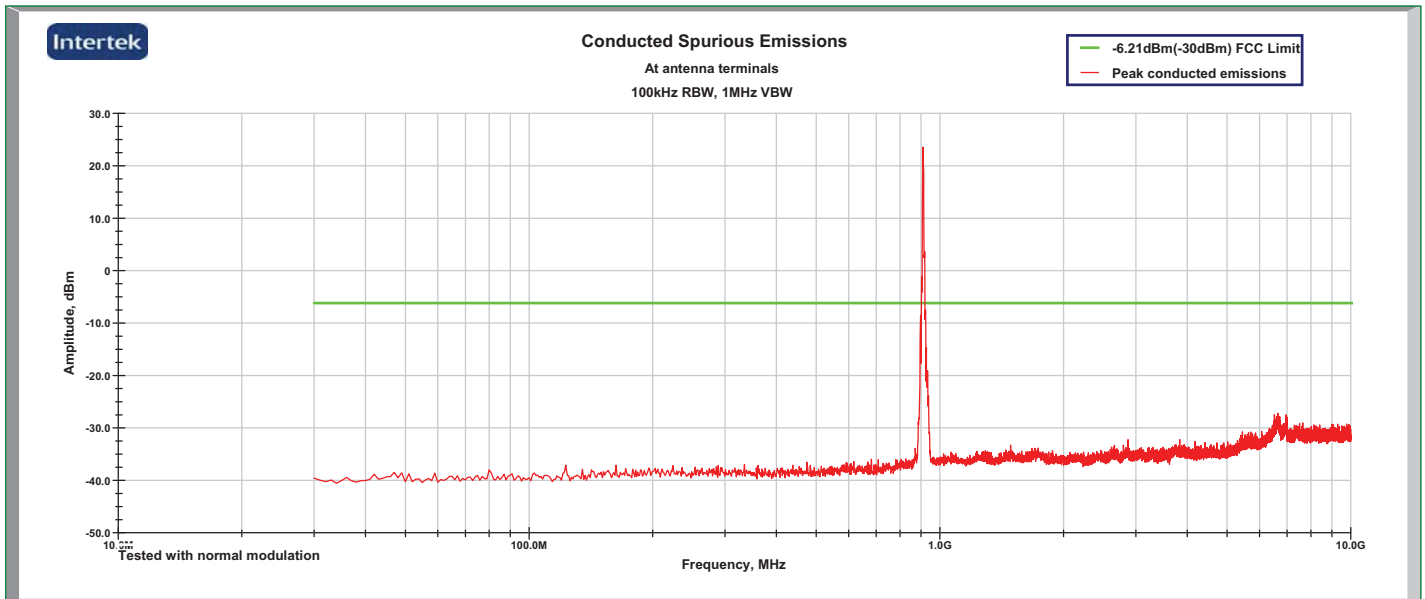
If the transmitter complies with the conducted power limits based on the use of RMS averaging over a time interval, as permitted under section A8.4(4), the attenuation required shall be 30 dB instead of 20 dB.

Test Equipment Used:

Description:	Manufacturer:	Model:	Asset Number:	Cal Date:	Cal Due:
Attenuator, 20 dB, <18GHz	Weinschel Corp	2	200008	10/04/2010	10/04/2011
Cable E201, 18 GHz, N, 3m	Megaphase	TM18 NKNK 118	E201	02/02/2010	02/02/2011
Spectrum Analyzer, 20Hz-40GHz	Rohde & Schwarz	FSEK30	200062	10/22/2010	10/22/2011

Results: The sample tested was found to Comply.

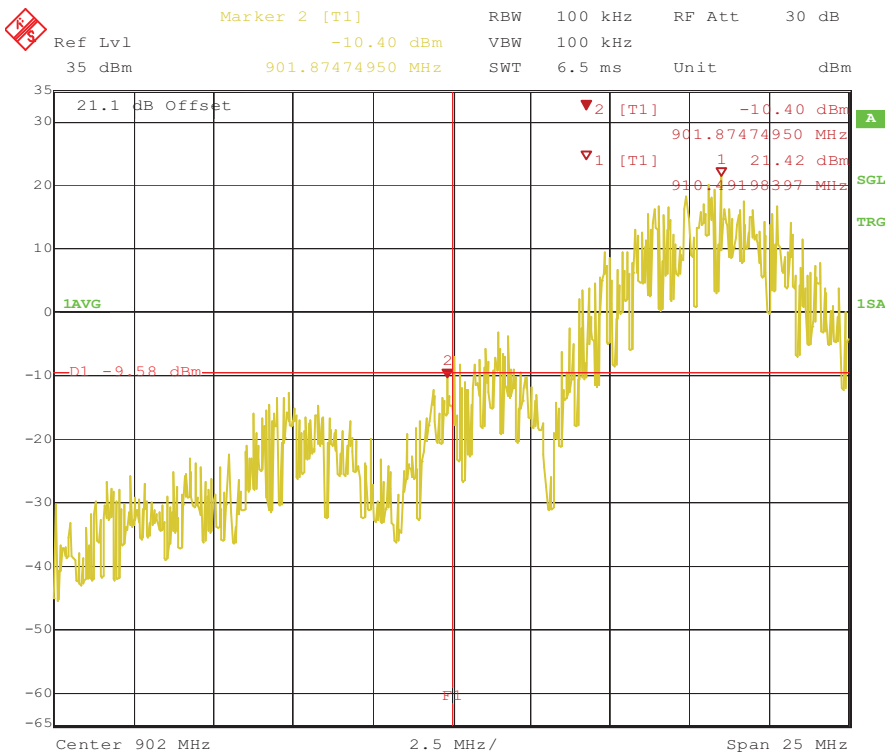
Plot:



Conducted spurious emissions

9.0 FCC Part 15.247(d) / RSS-210 A8.5 - Conducted (Conducted Spurious Emissions)

Plot:

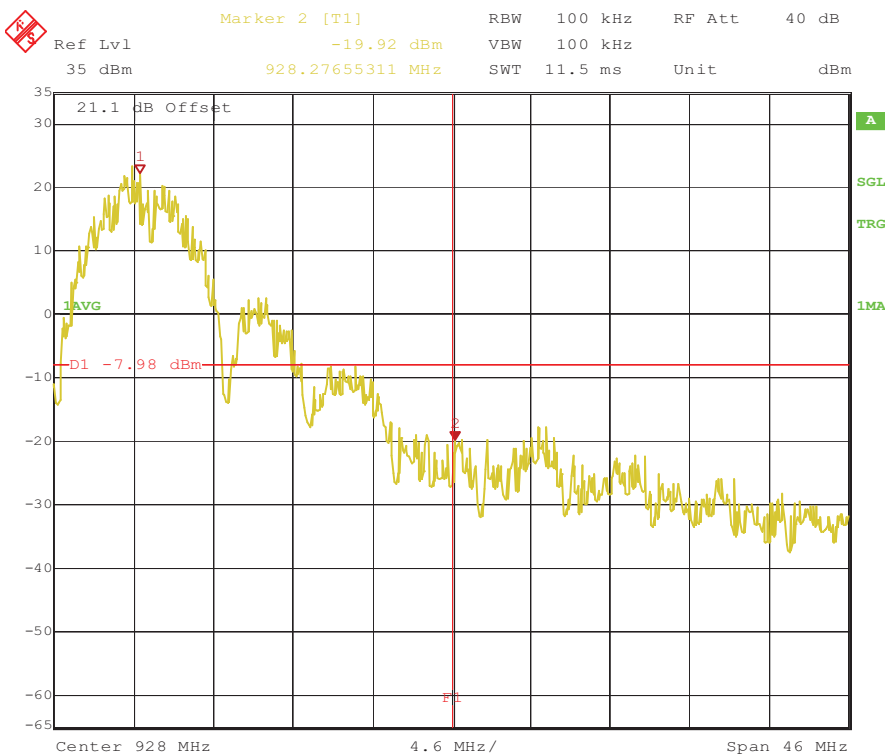


Date: 8.NOV.2010 07:18:37

Lower edgeband - 30dB down

9.0 FCC Part 15.247(d) / RSS-210 A8.5 - Conducted (Conducted Spurious Emissions)

Plot:



Date: 6.DEC.2010 09:05:12

Upper edgeband - 30dB down

10.0 FCC Part 15.247(d) / RSS-210 A8.5 - Radiated (Radiated Spurious Emissions)**Method:**

TEST PROCEDURE REFERENCE

FCC's KDB Publication 558074, "Measurement of Digital Transmission Systems Operating under Section 15.247" March 23, 2005

TEST LIMIT

In any 100 kHz bandwidth outside the frequency band in which the spread spectrum or digitally modulated device is operating, the radio frequency power that is produced shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement, provided the transmitter demonstrates compliance with the peak conducted power limits.

Attenuation below the general limits specified in Tables 2 and 3 of RSS-210 is not required. In addition, radiated emissions which fall in the restricted bands must also comply with the radiated emission limits specified in FCC 15.209 and Tables 2 and 3 of RSS-210.

Test Equipment Used:

Description:	Manufacturer:	Model:	Asset Number:	Cal Date:	Cal Due:
Antenna, Horn, <18 GHz	EMCO	3115	213061	05/07/2010	05/07/2011
Cable MP3, 18 GHz, N, 10m	Megaphase	G919-NKNK-394	MP3	05/04/2010	05/04/2011
Cable, 7 meters, 1-18GHz	Storm Products Co.	PR90-241-7MTR	ST-2	08/19/2010	08/19/2011
Cable, N-N 3 meters, 18GHz	Megaphase	TM18 NKNK 118	E203	05/04/2010	05/04/2011
EMI Receiver	Hewlett Packard	8546A	211505	02/02/2010	02/02/2011
EMI Receiver, Preselector section	Hewlett Packard	85460A	015762	02/02/2010	02/02/2011
Excel spreadsheet for radiated emissions	Software	Excel - RE Worksh	SW004	12/09/2009	12/09/2010
Filter, 1 GHz High Pass	Filtek	HP12/1000-5AB	213156a	04/21/2010	04/21/2011
Preamplifier, 20 MHz to 18 GHz, 40 dB	A.H. Systems	PAM-0118	200108	04/21/2010	04/21/2011
Spectrum Analyzer, 20Hz-40GHz	Rohde & Schwarz	FSEK30	200062	10/22/2010	10/22/2011
Tile - software profile for radiated and conducted emissions testing.	Software	Tile - Emissions	SW006	12/09/2009	12/09/2010

Results: The sample tested was found to Comply.

Photo:

10.0 FCC Part 15.247(d) / RSS-210 A8.5 - Radiated (Radiated Spurious Emissions)



Test setup

Data:

10.0 FCC Part 15.247(d) / RSS-210 A8.5 - Radiated (Radiated Spurious Emissions)

Date: 11/14/2010

Test Distance (m): 3

Frequency Range (MHz): 1000-10000

Limit: FCC15

Input power: 120Vac/60Hz

Modifications for compliance (y/n): n

A	B	C	D	E	F	G	H	I	J	
Ant. Pol. (V/H)	Frequency MHz	Reading dB(uV)	Antenna Factor dB(1/m)	Cable Loss dB	Pre-amp Factor dB	Net dB(uV/m)	3m Limit dB(uV/m)	Margin dB	Detectors / Bandwidths Det/RBW/VBW	
V	1820.000	85.3	26.7	8.3	37.3	83.0	98.7	-15.7	Pk/100k/300k	X
H	1820.000	57.6	26.5	8.3	37.3	55.1	98.7	-43.6	Pk/100k/300k	X
V	1820.000	56.8	26.7	8.3	37.3	54.5	98.7	-44.2	Pk/100k/300k	Y
H	1820.000	70.2	26.5	8.3	37.3	67.7	98.7	-31.0	Pk/100k/300k	Y
V	1820.000	73.7	26.7	8.3	37.3	71.3	98.7	-27.4	Pk/100k/300k	Z
H	1820.000	67.1	26.5	8.3	37.3	64.6	98.7	-34.1	Pk/100k/300k	Z
V	2730.000	83.4	28.7	9.9	37.8	84.2	98.7	-14.5	Pk/100k/300k	X
H	2730.000	53.4	28.8	9.9	37.8	54.3	98.7	-44.4	Pk/100k/300k	X
V	2730.000	50.0	28.7	9.9	37.8	50.8	98.7	-47.9	Pk/100k/300k	Y
H	2730.000	76.1	28.8	9.9	37.8	77.0	98.7	-21.7	Pk/100k/300k	Y
V	2730.000	72.2	28.7	9.9	37.8	73.0	98.7	-25.7	Pk/100k/300k	Z
H	2730.000	64.9	28.8	9.9	37.8	65.8	98.7	-32.9	Pk/100k/300k	Z
V	3639.990	63.4	31.5	11.4	37.5	68.8	98.7	-29.9	Pk/100k/300k	X
H	3639.990	49.2	31.9	11.4	37.5	54.9	98.7	-43.8	Pk/100k/300k	X
V	3639.990	48.6	31.5	11.4	37.5	54.0	98.7	-44.7	Pk/100k/300k	Y
H	3639.990	55.5	31.9	11.4	37.5	61.2	98.7	-37.5	Pk/100k/300k	Y
V	3639.990	49.5	31.5	11.4	37.5	54.9	98.7	-43.8	Pk/100k/300k	Z
H	3639.990	51.1	31.9	11.4	37.5	56.8	98.7	-41.9	Pk/100k/300k	Z
V	4550.090	49.4	32.3	13.1	37.3	57.4	98.7	-41.3	Pk/100k/300k	X
H	4550.090	37.2	32.2	13.1	37.3	45.1	98.7	-53.6	Pk/100k/300k	X
V	4550.090	37.4	32.3	13.1	37.3	45.4	98.7	-53.3	Pk/100k/300k	Y
H	4550.090	37.2	32.2	13.1	37.3	45.1	98.7	-53.6	Pk/100k/300k	Y
V	4550.090	36.4	32.3	13.1	37.3	44.4	98.7	-54.3	Pk/100k/300k	Z
H	4550.090	33.7	32.2	13.1	37.3	41.6	98.7	-57.1	Pk/100k/300k	Z
Calculations		G=C+D+E-F		I=G-H						

11.0 FCC Part 15.205 / RSS-210 2.2 (Restricted Bands)**Method:**

TEST PROCEDURE REFERENCE
ANSI C63.4: 2003

TEST LIMIT

Unwanted emissions falling into restricted bands shall meet the general field strength limits. It should also be noted that unwanted emissions falling in non-restricted bands do not need to be suppressed to a level lower than the general field strength limits (FCC 15.209).

Specifically, at the restricted band frequency nearest the lowest and highest channel of each available band, the field strength shall meet the general field strength limits.

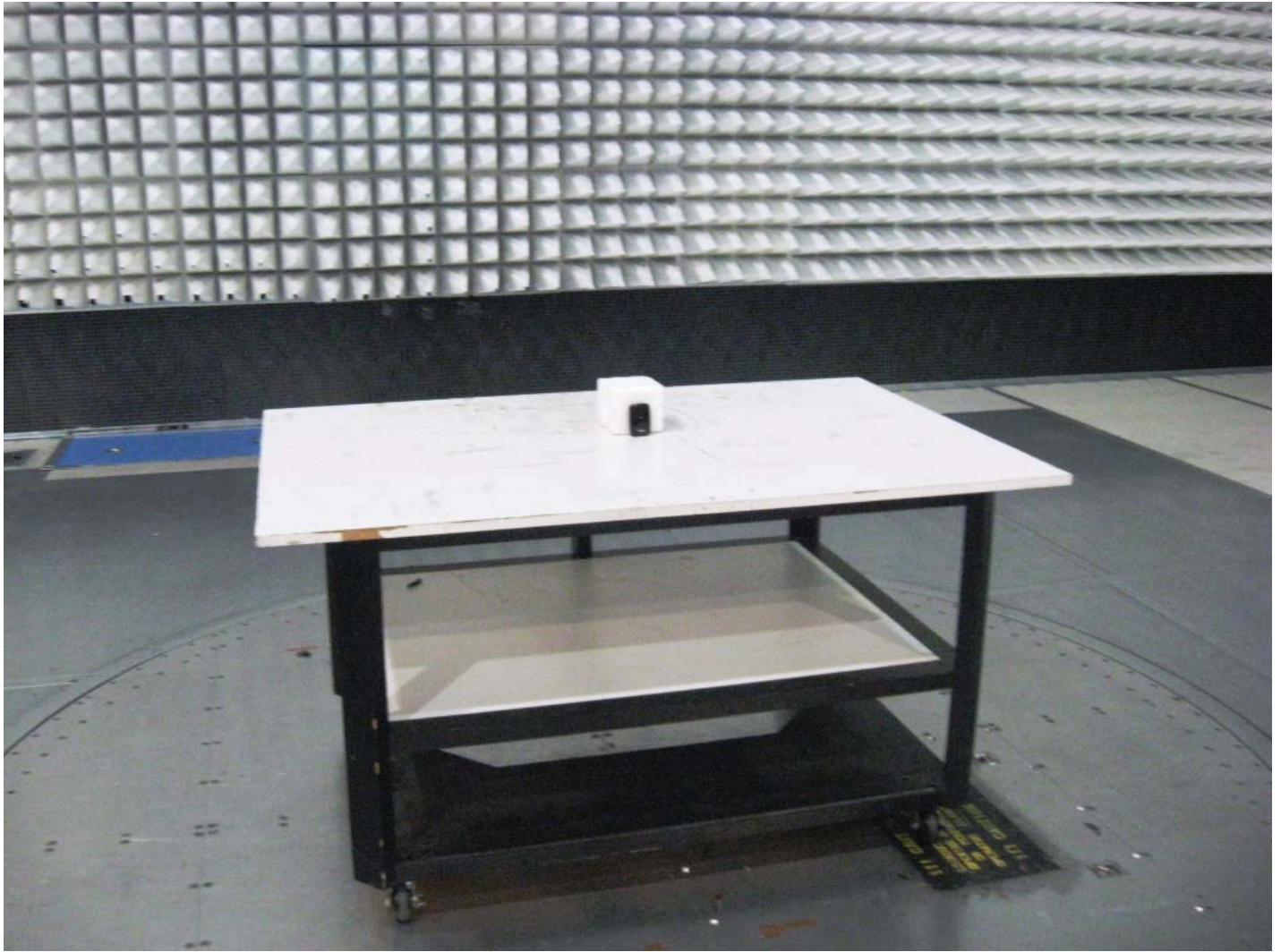
Test Equipment Used:

Description:	Manufacturer:	Model:	Asset Number:	Cal Date:	Cal Due:
Antenna, Horn, <18 GHz	EMCO	3115	213061	05/07/2010	05/07/2011
Cable MP3, 18 GHz, N, 10m	Megaphase	G919-NKNK-394	MP3	05/04/2010	05/04/2011
Cable, 7 meters, 1-18GHz	Storm Products Co.	PR90-241-7MTR	ST-2	08/19/2010	08/19/2011
Cable, N-N 3 meters, 18GHz	Megaphase	TM18 NKNK 118	E203	05/04/2010	05/04/2011
Excel spreadsheet for radiated emissions	Software	Excel - RE Worksh	SW004	12/09/2009	12/09/2010
Preamplifier, 20 MHz to 18 GHz, 40 dB	A.H. Systems	PAM-0118	200108	04/21/2010	04/21/2011
Spectrum Analyzer, 20Hz-40GHz	Rohde & Schwarz	FSEK30	200062	10/22/2010	10/22/2011
Tile - software profile for radiated and conducted emissions testing.	Software	Tile - Emissions	SW006	12/09/2009	12/09/2010

Results: The sample tested was found to Comply.

Photo:

11.0 FCC Part 15.205 / RSS-210 2.2 (Restricted Bands)



Test setup

Data:

11.0 FCC Part 15.205 / RSS-210 2.2 (Restricted Bands)

Frequency Range (MHz): 1000-10000

Test Distance (m): 3

Input power: 120Vac/60Hz

Limit: FCC15 Class B-3m

Modifications for compliance (y/n): n

A	B	C	D	E	F	G	H	I	J	
Ant. Pol. (V/H)	Frequency MHz	Reading dB(uV)	Antenna Factor dB(1/m)	Cable Loss dB	Pre-amp Factor dB	Net dB(uV/m)	3m Limit dB(uV/m)	Margin dB	Detectors / Bandwidths Det/RBW/VBW	
V	2730.000	52.3	28.7	9.9	37.8	53.1	54.0	-0.9	AV/1M/10Hz	X
H	2730.000	23.7	28.8	9.9	37.8	24.6	54.0	-29.4	AV/1M/10Hz	X
V	2730.000	29.6	28.7	9.9	37.8	30.4	54.0	-23.6	AV/1M/10Hz	Y
H	2730.000	45.8	28.8	9.9	37.8	46.7	54.0	-7.3	AV/1M/10Hz	Y
V	2730.000	42.6	28.7	9.9	37.8	43.4	54.0	-10.6	AV/1M/10Hz	Z
H	2730.000	35.2	28.8	9.9	37.8	36.1	54.0	-17.9	AV/1M/10Hz	Z
V	3639.990	34.5	31.5	11.4	37.5	39.9	54.0	-14.1	AV/1M/10Hz	X
H	3639.990	22.9	31.9	11.4	37.5	28.6	54.0	-25.4	AV/1M/10Hz	X
V	3639.990	23.4	31.5	11.4	37.5	28.8	54.0	-25.2	AV/1M/10Hz	Y
H	3639.990	24.4	31.9	11.4	37.5	30.1	54.0	-23.9	AV/1M/10Hz	Y
V	3639.990	27.3	31.5	11.4	37.5	32.7	54.0	-21.3	AV/1M/10Hz	Z
H	3639.990	25.7	31.9	11.4	37.5	31.4	54.0	-22.6	AV/1M/10Hz	Z
V	4550.090	26.8	32.3	13.1	37.3	34.8	54.0	-19.2	AV/1M/10Hz	X
H	4550.090	22.7	32.2	13.1	37.3	30.6	54.0	-23.4	AV/1M/10Hz	X
V	4550.090	23.0	32.3	13.1	37.3	31.0	54.0	-23.0	AV/1M/10Hz	Y
H	4550.090	23.6	32.2	13.1	37.3	31.5	54.0	-22.5	AV/1M/10Hz	Y
V	4550.090	22.9	32.3	13.1	37.3	30.9	54.0	-23.1	AV/1M/10Hz	Z
H	4550.090	23.0	32.2	13.1	37.3	30.9	54.0	-23.1	AV/1M/10Hz	Z
Calculations		G=C+D+E-F		I=G-H						

Note: Needed several high-pass filters to use a pre-amp in order to achieve a 6dB noise floor.

12.0 Additional provisions to the general radiated emission limitations. (FCC 15C - 15.215)

Method:

§ 15.215 Additional provisions to the general radiated emission limitations.

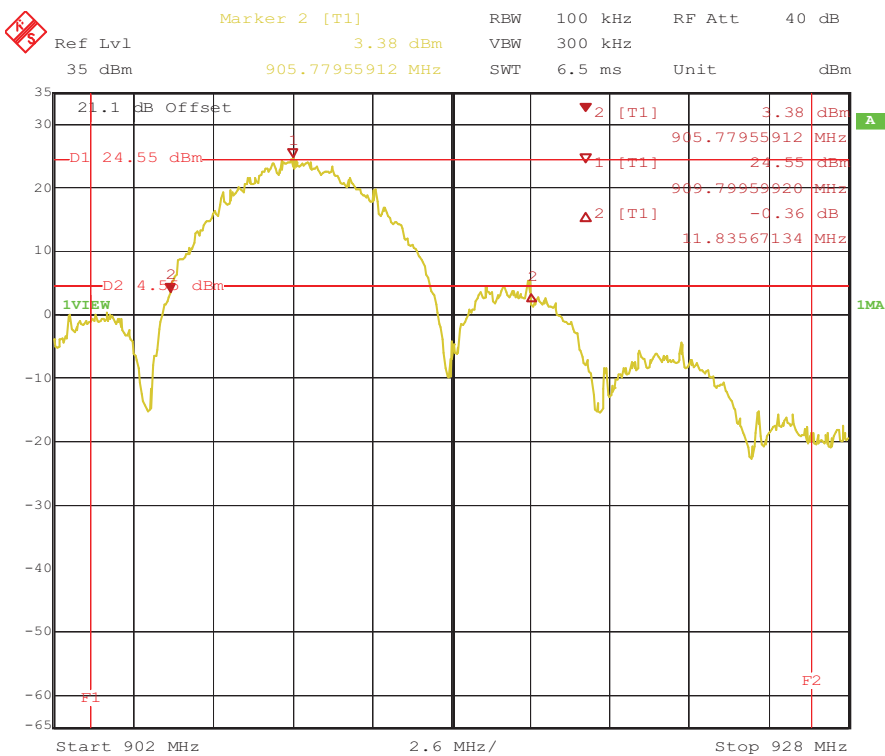
(a) The regulations in §§15.217 through 15.257 provide alternatives to the general radiated emission limits for intentional radiators operating in specified frequency bands. Unless otherwise stated, there are no restrictions as to the types of operation permitted under these sections.

(b) In most cases, unwanted emissions outside of the frequency bands shown in these alternative provisions must be attenuated to the emission limits shown in §15.209. In no case shall the level of the unwanted emissions from an intentional radiator operating under these additional provisions exceed the field strength of the fundamental emission.

(c) Intentional radiators operating under the alternative provisions to the general emission limits, as contained in §§15.217 through 15.257 and in Subpart E of this part, must be designed to ensure that the 20 dB bandwidth of the emission, or whatever bandwidth may otherwise be specified in the specific rule section under which the equipment operates, is contained within the frequency band designated in the rule section under which the equipment is operated. The requirement to contain the designated bandwidth of the emission within the specified frequency band includes the effects from frequency sweeping, frequency hopping and other modulation techniques that may be employed as well as the frequency stability of the transmitter over expected variations in temperature and supply voltage. If a frequency stability is not specified in the regulations, it is recommended that the fundamental emission be kept within at least the central 80% of the permitted band in order to minimize the possibility of out-of-band operation.

Results: The sample tested was found to Comply.

Plot:



Date: 7.DEC.2010 08:14:28

20dB bandwidth within 80% of operating range