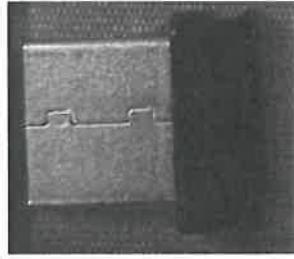




Prüfbericht-Nr.: <i>Test Report No.:</i>	17039818 001	Auftrags-Nr.: <i>Order No.:</i>	164013278	Seite 1 von 31 Page 1 of 31
Kunden-Referenz-Nr.: <i>Client Reference No.:</i>	N/A	Auftragsdatum: <i>Order date:</i>	23.04.2014	
Auftraggeber: <i>Client:</i>	SYSGRATION LTD. 6F-2., No. 1, Sec. 1, Tiding Blvd., Neihu Dist., Taipei city 114, Taiwan			
Prüfgegenstand: <i>Test item:</i>	USB Bluetooth Adapter			
Bezeichnung / Typ-Nr.: <i>Identification / Type No.:</i>	NS-PCY5BMA	NS-PCY5BMA-C		
Auftrags-Inhalt: <i>Order content:</i>	FCC Certification	IC Certification		
Prüfgrundlage: <i>Test specification:</i>	FCC CFR47 Part 15: Subpart C Section 15.247 FCC CFR47 Part 15: Subpart C Section 15.207 FCC CFR47 Part 15: Subpart C Section 15.209 FCC CFR47 Part 15: Subpart B Section 15.109 FCC KDB publication 447498 D01 v05r01 RSS-210 Issue 8 December 2010 RSS-102 Issue 4 March 2010			
Wareneingangsdatum: <i>Date of receipt:</i>	23.04.2014			
Prüfmuster-Nr.: <i>Test sample No.:</i>	A000052281 001-003			
Prüfzeitraum: <i>Testing period:</i>	14.04.2014 - 06.05.2014			
Ort der Prüfung: <i>Place of testing:</i>	Accurate Technology Co., Ltd.			
Prüflaboratorium: <i>Testing laboratory:</i>	TÜV Rheinland (Shenzhen) Co., Ltd.			
Prüfergebnis*: <i>Test result*:</i>	Pass			
geprüft von / tested by:		kontrolliert von / reviewed by:		
05.06.2014  Tom Wang/Assistant Project Manager		05.06.2014  Sam Lin/Technical Certifier		
Datum	Name / Stellung	Unterschrift	Datum	Name / Stellung
<i>Date</i>	<i>Name / Position</i>	<i>Signature</i>	<i>Date</i>	<i>Name / Position</i>
Sonstiges / Other:				
Zustand des Prüfgegenstandes bei Anlieferung: <i>Condition of the test item at delivery:</i>		Prüfmuster vollständig und unbeschädigt <i>Test item complete and undamaged</i>		
* Legende: 1 = sehr gut 2 = gut 3 = befriedigend 4 = ausreichend 5 = mangelhaft P(ass) = entspricht o.g. Prüfgrundlage(n) F(ail) = entspricht nicht o.g. Prüfgrundlage(n) N/A = nicht anwendbar N/T = nicht getestet				
Legend: 1 = very good 2 = good 3 = satisfactory 4 = sufficient 5 = poor P(ass) = passed a.m. test specification(s) F(ail) = failed a.m. test specification(s) N/A = not applicable N/T = not tested				
Dieser Prüfbericht bezieht sich nur auf das o.g. Prüfmuster und darf ohne Genehmigung der Prüfstelle nicht auszugsweise vervielfältigt werden. Dieser Bericht berechtigt nicht zur Verwendung eines Prüfzeichens. This test report only relates to the a. m. test sample. Without permission of the test center this test report is not permitted to be duplicated in extracts. This test report does not entitle to carry any test mark.				

TEST SUMMARY

5.1.1 ANTENNA REQUIREMENT

RESULT: Pass

5.1.2 PEAK OUTPUT POWER

RESULT: Pass

5.1.3 POWER DENSITY

RESULT: Pass

5.1.4 6dB BANDWIDTH

RESULT: Pass

5.1.5 99% BANDWIDTH

RESULT: Pass

5.1.6 20dB BANDWIDTH

RESULT: Pass

5.1.7 CARRIER FREQUENCY SEPARATION

RESULT: Pass

5.1.8 NUMBER OF HOPPING CHANNELS

RESULT: Pass

5.1.9 DWELL TIME

RESULT: Pass

5.1.10 CONDUCTED SPURIOUS EMISSIONS MEASURED IN 100KHz BANDWIDTH

RESULT: Pass

5.1.11 RADIATED SPURIOUS EMISSIONS

RESULT: Pass

5.1.12 CONDUCTED EMISSIONS

RESULT: Pass

5.1.13 RADIATED EMISSIONS

RESULT: Pass

6.1.1 ELECTROMAGNETIC FIELDS

RESULT: Pass

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1. General Remarks

1.1 Complementary Materials

All attachments are integral parts of this test report. This applies especially to the following appendix:

Appendix 1: Test Results

2. Test Sites

2.1 Test Facilities

Accurate Technology Co., Ltd.
F1, Bldg. A, Changyuan New Material Port, Keyuan Rd., Science & Industry Park
Nanshan District, Shenzhen 518057, P.R. China
FCC Registration No.: 752051
IC OATS Registration No.: 5077A-2

The tests at the test site have been conducted under the supervision of a TÜV engineer.

2.2 List of Test and Measurement Instruments

Table 1: List of Test and Measurement Equipment

Kind of Equipment	Manufacturer	Type	S/N	Calibrated until
Spurious emission and Radiated emission				
Spectrum Analyzer	Agilent	E7405A	MY45115511	2015-01-11
Test Receiver	Rohde & Schwarz	ESCS30	100307	2015-01-11
Bilog Antenna	Schwarzbeck	VULB9163	9163-323	2015-01-11
Loop Antenna	Schwarzbeck	FMZB1516	1516131	2015-01-11
Horn Antenna	Schwarzbeck	BBHA9120D	9120D-655	2015-01-11
50 Coaxial Switch	Anritsu Corp	MP59B	6200506474	2015-01-11
Pre-Amplifier	Rohde & Schwarz	CBLU11835 40-01	3791	2015-01-11
Broadband antenna	CHASE	CBL6111C	2576	2015-01-11
Horn Antenna	AR	AT4002A	305754	2015-01-11
Radio Test Suite				
Receiver	Rohde & Schwarz	ESPI	100396/003	2015-01-11
Conducted Emission				
Test Receiver	Rohde & Schwarz	ESCS30	100307	2015-01-11
Artificial Mains Network	Schwarzbeck	NLSK8126	8126431	2015-01-11
Pulse Limiter	Rohde & Schwarz	ESH3-Z2	100815	2015-01-11
50_ Coaxial Switch	Anritsu Corp	MP59B	6200283933	2015-01-11

2.3 Traceability

All measurement equipment calibrations are traceable to NIM (National Institute of Metrology) or where calibration is performed in other countries, to equivalent nationally recognized standards organizations.

2.4 Calibration

Equipment requiring calibration is calibrated periodically by the manufacturer or according to manufacturer's specifications. Additionally all equipment is verified for proper performance on a regular basis using in house standards or comparisons.

2.5 Measurement Uncertainty

The estimated combined standard uncertainty for radiated emissions and conducted emissions measurements are $\pm 3\text{dB}$.

2.6 Location of Original Data

The original copies of all test data taken during actual testing were included in this report and delivered to the applicant. A copy has been retained in the TÜV Rheinland (Shenzhen) file for certification follow-up purposes.

2.7 Status of Facility Used for Testing

The Shenzhen Emtek Co., Ltd. located at Bldg 69, Majialong Industry Zone, Nanshan District, Shenzhen, P.R. China, is listed on the US Federal Communications Commission list of facilities and Industry Canada OATS list approved to perform measurements.

3. General Product Information

3.1 Product Function and Intended Use

The EUTs are USB bluetooth adapter used on computer.
Two models are identical except the model name.
For details refer to the User Manual and Circuit Diagram.

3.2 Ratings and System Details

Table 2: Rating of EUT

Kind of Equipment:	USB bluetooth adapter
Type Designation:	NS-PCY5BMA, NS-PCY5BMA-C
FCC ID	HQX-R07BT
IC	2831A-R07BT

Table 3: Technical Specification of EUT

Technical Specification	Value	
Operating Frequency	2402-2480MHz	
Operation Voltage	DC 5.0V	
Modulation	LE mode	GFSK
	BDR mode	GFSK
	EDR mode	8DPSK, $\pi/4$ DQPSK
Number of channel	LE mode:40; BDR & EDR mode:79	
Chanel spacing	LE mode: 2MHz; BDR & EDR mode: 1MHz	
Bluetooth version	Bluetooth 4.0 (dual mode)	
RF Power (e.i.r.p.)	5.89 dBm	
Antenna type and Gain	PCB Antenna, 2.28dBi	

3.3 Independent Operation Modes

The basic operation modes are:

- A. Transmitting
 - 1. BDR
 - 2. EDR
 - 3. Low Energy
- B. Receiving
- C. Standby
- D. Off

3.4 Noise Generating and Noise Suppressing Parts

Refer to the Circuit Diagram.

3.5 Submitted Documents

- Block Diagram
- Bill of Material
- Rating Label
- Circuit Diagram
- Instruction Manual

4. Test Set-up and Operation Modes

4.1 Principle of Configuration Selection

Emission: The equipment under test (EUT) was configured to measure its highest possible radiation level. The test modes were adapted accordingly in reference to the instructions for use.

Immunity: The equipment under test (EUT) was configured to have its highest possible susceptibility against the tested phenomena. The test modes were adapted accordingly in reference to the instructions for use.

4.2 Test Operation and Test Software

Test operation refers to test setup in chapter 5.
Due to difference described in clause 3.1, all tests were applied on NS-PCY5BMA.

Table 4: RF channel and frequency of EUT

RF Channel of Bluetooth Basic Data Rate (BDR) an Bluetooth Enhanced Data Rate (EDR)							
RF Channel	Frequency (MHz)	RF Channel	Frequency (MHz)	RF Channel	Frequency (MHz)	RF Channel	Frequency (MHz)
0	2402.00	20	2422.00	40	2442.00	60	2462.00
1	2403.00	21	2423.00	41	2443.00	61	2463.00
2	2404.00	22	2424.00	42	2444.00	62	2464.00
3	2405.00	23	2425.00	43	2445.00	63	2465.00
4	2406.00	24	2426.00	44	2446.00	64	2466.00
5	2407.00	25	2427.00	45	2447.00	65	2467.00
6	2408.00	26	2428.00	46	2448.00	66	2468.00
7	2409.00	27	2429.00	47	2449.00	67	2469.00
8	2410.00	28	2430.00	48	2450.00	68	2470.00
9	2411.00	29	2431.00	49	2451.00	69	2471.00
10	2412.00	30	2432.00	50	2452.00	70	2472.00
11	2413.00	31	2433.00	51	2453.00	71	2473.00
12	2414.00	32	2434.00	52	2454.00	72	2474.00
13	2415.00	33	2435.00	53	2455.00	73	2475.00
14	2416.00	34	2436.00	54	2456.00	74	2476.00
15	2417.00	35	2437.00	55	2457.00	75	2477.00
16	2418.00	36	2438.00	56	2458.00	76	2478.00
17	2419.00	37	2439.00	57	2459.00	77	2479.00
18	2420.00	38	2440.00	58	2460.00	78	2480.00
19	2421.00	39	2441.00	59	2461.00		

RF Channel of Bluetooth Low Energy (LE)							
RF Channel	Frequency (MHz)	RF Channel	Frequency (MHz)	RF Channel	Frequency (MHz)	RF Channel	Frequency (MHz)
0	2402.00	10	2422.00	20	2442.00	30	2462.00
1	2404.00	11	2424.00	21	2444.00	31	2464.00
2	2406.00	12	2426.00	22	2446.00	32	2466.00
3	2408.00	13	2428.00	23	2448.00	33	2468.00
4	2410.00	14	2430.00	24	2450.00	34	2470.00
5	2412.00	15	2432.00	25	2452.00	35	2472.00
6	2414.00	16	2434.00	26	2454.00	36	2474.00
7	2416.00	17	2436.00	27	2456.00	37	2476.00
8	2418.00	18	2438.00	28	2458.00	38	2478.00
9	2420.00	19	2440.00	29	2460.00	39	2480.00

4.3 Special Accessories and Auxiliary Equipment

The EUT was tested together with the following accessories:

Description	Manufacturer	Part No.	S/N
PC	Lenovo	4290-RT8	R9-FW93G

4.4 Countermeasures to Achieve ERM Compliance

The test sample which has been tested contained the noise suppression parts as described in the Technical Construction File (TCF). No additional measures were employed to achieve compliance.

4.5 Test Setup Diagram

Diagram of Measurement Configuration for Radiation Test

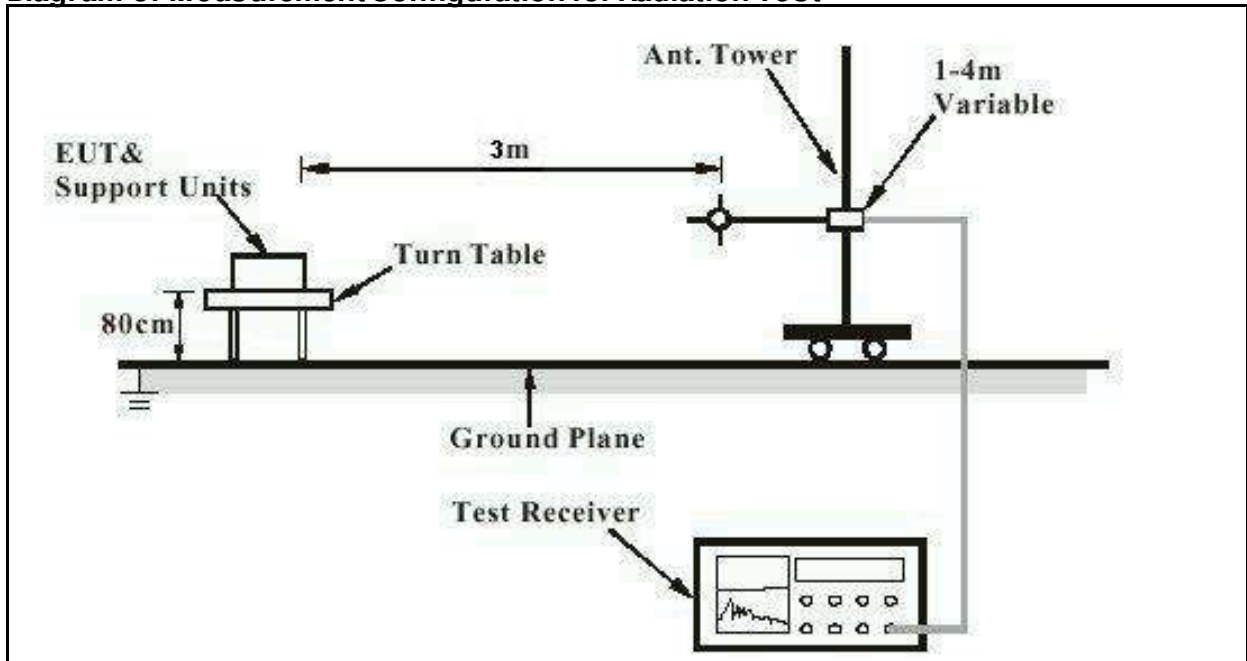


Diagram of Measurement Equipment Configuration for Conduction Measurement

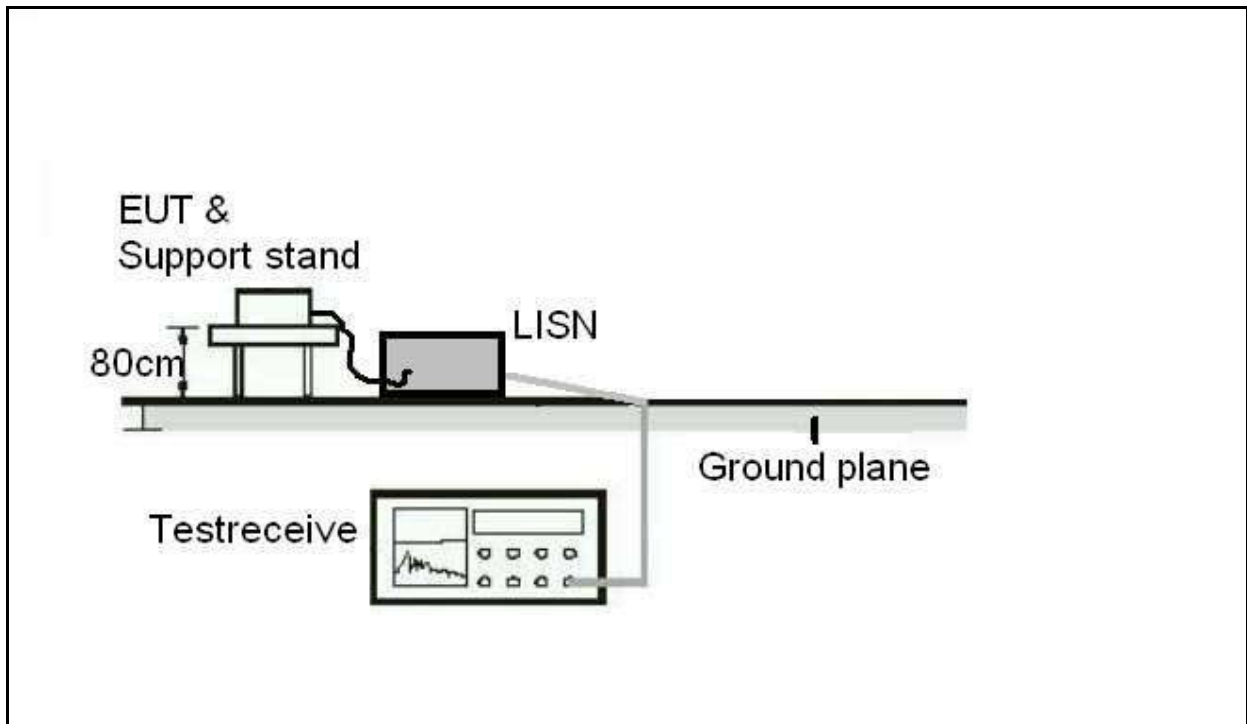
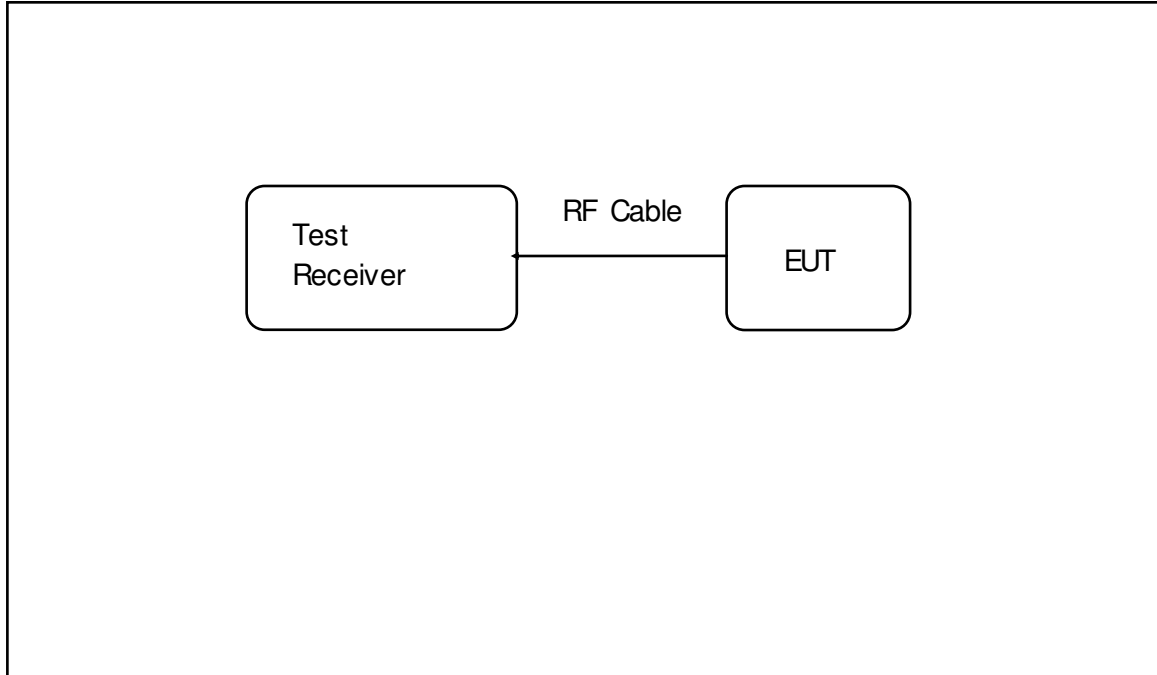


Diagram of Measurement Equipment Configuration for Conducted Transmitter Measurement



5. Test Results

5.1 Transmitter Requirement & Test Suites

5.1.1 Antenna Requirement

RESULT:

Pass

Test date	:	2014-05-06
Test standard	:	FCC Part 15.247(b)(4) and Part 15.203 RSS-Gen 7.1.4
Limit	:	the use of antennas with directional gains that do not exceed 6 dBi

According to the manufacturer declared, the EUT has an internal PCB antenna, the directional gain of antenna is 2.28dBi, and the antenna connector is designed with permanent attachment and no consideration of replacement. Therefore the EUT is considered sufficient to comply with the provision.

Refer to EUT photos for details.

5.1.2 Peak Output Power

RESULT:

Pass

Test date : 2014-04-26
 Test standard : FCC Part 15.247(b)(1)&(b)(3)
 RSS-210 A8.4 (2)&(4)
 Basic standard : ANSI C63.10: 2009
 Limit : 1 Watt
 Kind of test site : Shielded room

Test setup

Test Channel : Low / Middle/ High
 Operation Mode : A
 Ambient temperature : 23°C
 Relative humidity : 48%
 Atmospheric pressure : 101 kPa

Table 5: Test result of Peak Output Power, mode A.1

Channel	Channel Frequency (MHz)	Peak Output Power		Limit (W)
		(dBm)	(mW)	
Low Channel	2402	-11.40	0.072	1
Middle Channel	2440	-10.56	0.088	1
High Channel	2480	-10.57	0.088	1

Table 6: Test result of Peak Output Power, mode A.2

Channel	Channel Frequency (MHz)	Peak Output Power		Limit (W)
		(dBm)	(mW)	
Low Channel	2402	-7.51	0.177	1
Middle Channel	2441	-7.05	0.197	1
High Channel	2480	-7.17	0.192	1

Remark: RBW is 1MHz

Table 7: Test result of Peak Output Power, mode A.3

Channel	Channel Frequency (MHz)	Peak Output Power		Limit (W)
		(dBm)	(mW)	
Low Channel	2402	-6.31	0.234	1
Middle Channel	2441	-5.89	0.258	1
High Channel	2480	-6.04	0.249	1

Remark: RBW is 3MHz

5.1.3 Power Density

RESULT:

Pass

Date of testing : 2014-04-26
Test standard : FCC Part 15.247(e)
RSS-210 A8.2 (b)
Basic standard : ANSI C63.10: 2009
Limits : 8dBm/3kHz
Kind of test site : Shielded room

Test setup

Test Channel : Low / Middle/ High
Operation mode : A.3
Ambient temperature : 23°C
Relative humidity : 48%
Atmospheric pressure : 101 kPa

Table 8: Test result of power density

Channel	Channel Frequency (MHz)	Peak Power Density (dBm/3kHz)	Limit (dBm/3kHz)	Result
Low Channel	2402	-24.04	8	Pass
Mid Channel	2440	-23.52	8	Pass
High Channel	2480	-23.62	8	Pass

5.1.4 6dB Bandwidth

RESULT:

Pass

Date of testing : 2014-04-26
Test standard : FCC Part 15.247(a)(2)
RSS-210 A8.2 (a)
Basic standard : ANSI C63.10: 2009
Kind of test site : Shielded room

Test setup

Test Channel : Low / Middle/ High
Operation Mode : A.3
Ambient temperature : 23°C
Relative humidity : 48%
Atmospheric pressure : 101 kPa

Table 9: Test result of 6dB Bandwidth

Channel	Channel Frequency (MHz)	6dB Bandwidth (kHz)	Limit (kHz)	Result
Low Channel	2402	660	>500	Pass
Mid Channel	2440	660	>500	Pass
High Channel	2480	654	>500	Pass

5.1.5 99% Bandwidth

RESULT:

Pass

Date of testing : 2014-04-26
 Test standard : RSS-Gen clause 4.6.1
 Basic standard : ANSI C63.4: 2003
 Kind of test site : Shielded room

Test setup

Test Channel : Low / Middle/ High
 Operation Mode : A
 Ambient temperature : 23°C
 Relative humidity : 48%
 Atmospheric pressure : 101 kPa

Table 10: Test result of 99% Bandwidth, mode A.1

Channel	Channel Frequency (MHz)	99% Bandwidth (kHz)	Limit (MHz)	Result
Low Channel	2402	960	/	Pass
Mid Channel	2441	960	/	Pass
High Channel	2480	960	/	Pass

Table 11: Test result of 99% Bandwidth, mode A.2

Channel	Channel Frequency (MHz)	99% Bandwidth (MHz)	Limit (MHz)	Result
Low Channel	2402	1.236	/	Pass
Mid Channel	2441	1.236	/	Pass
High Channel	2480	1.236	/	Pass

Table 12: Test result of 99% Bandwidth, mode A.3

Channel	Channel Frequency (MHz)	99% Bandwidth (MHz)	Limit (MHz)	Result
Low Channel	2402	1.086	/	Pass
Mid Channel	2441	1.086	/	Pass
High Channel	2480	1.086	/	Pass

5.1.6 20dB Bandwidth

RESULT:

Pass

Date of testing : 2014-04-26
 Test standard : FCC Part 15.247(a)(1)
 RSS-210 A8.4 (2)
 Basic standard : ANSI C63.10: 2009
 Kind of test site : Shielded room

Test setup

Test Channel : Low / Middle/ High
 Operation Mode : A.1, A.2
 Ambient temperature : 23°C
 Relative humidity : 48%
 Atmospheric pressure : 101 kPa

Table 13: Test result of 20dB Bandwidth, mode A.1

Channel	Channel Frequency (MHz)	20dB Bandwidth (kHz)	Limit (MHz)	Result
Low Channel	2402	936	/	Pass
Middle Channel	2441	936	/	Pass
High Channel	2480	930	/	Pass

Table 14: Test result of 20dB Bandwidth, mode A.2

Channel	Channel Frequency (MHz)	20dB Bandwidth (MHz)	Limit (MHz)	Result
Low Channel	2402	1.350	/	Pass
Middle Channel	2441	1.356	/	Pass
High Channel	2480	1.356	/	Pass

5.1.7 Carrier Frequency Separation

RESULT:

Pass

Test date : 2014-04-26
 Test standard : FCC Part 15.247(a)(1)
 RSS-210 A8.1 (b)
 Basic standard : ANSI C63.10: 2009
 Limit : $\geq 25\text{kHz}$ or $2/3$ of 20dB bandw idth,
 w hichever is greater
 Kind of test site : Shielded room

Test setup

Test Channel : Low / Middle/ High
 Operation Mode : A.1+A.2
 Ambient temperature : 23°C
 Relative humidity : 48%
 Atmospheric pressure : 101 kPa

Table 15: Test result of Carrier frequency separation

Channel	Channel Frequency (MHz)	Measured Channel Separation (MHz)	Limit (kHz)	Result
Low Channel	2402	1.002	$\geq 25\text{kHz}$ or $2/3$ of 20dB bandw idth	Pass
Adjacency Channel	2403			
Middle Channel	2441	1.002	$\geq 25\text{kHz}$ or $2/3$ of 20dB bandw idth	Pass
Adjacency Channel	2442			
High Channel	2480	1.002	$\geq 25\text{kHz}$ or $2/3$ of 20dB bandw idth	Pass
Adjacency Channel	2479			

5.1.8 Number of Hopping Channels

RESULT:

Pass

Test date : 2014-02-24
Test standard : FCC Part 15.247(a)(1)(iii)
RSS-210 A8.1 (d)
Basic standard : ANSI C63.10: 2009
Limit : ≥ 15 non-overlapping channels
Kind of test site : Shielded room

Test setup

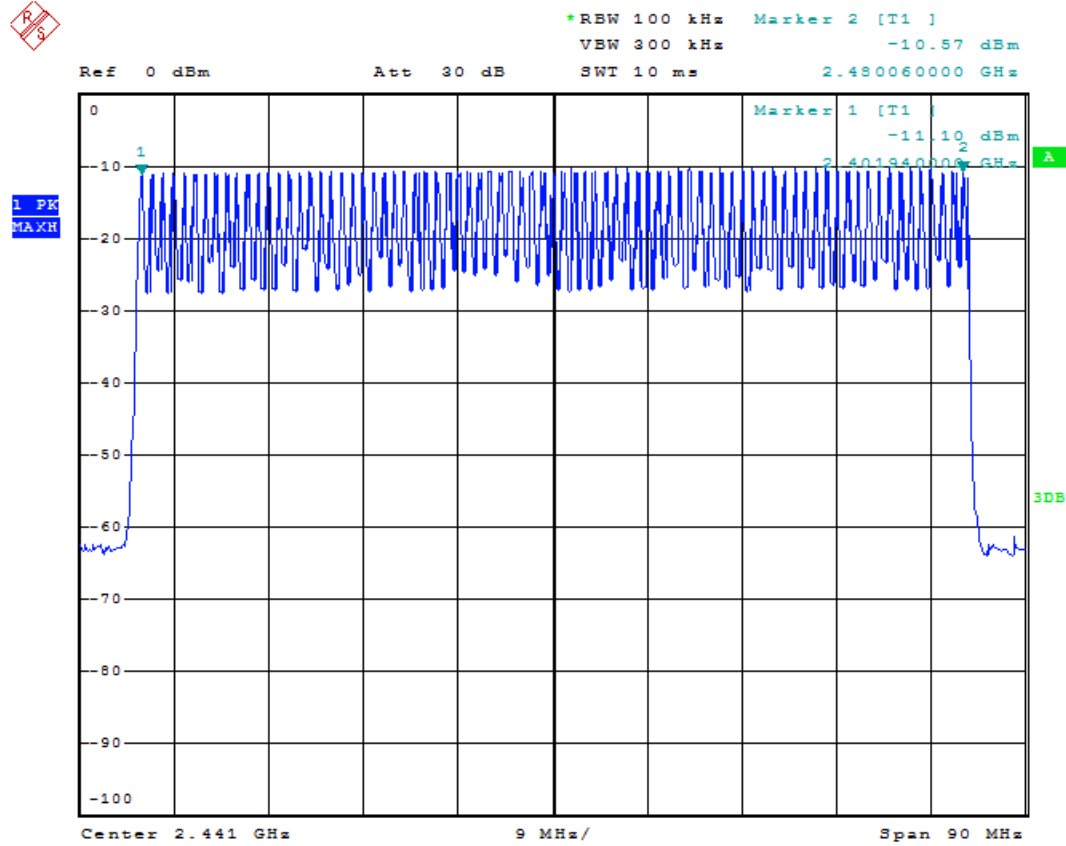
Operation Mode : A.1+A.2
Ambient temperature : 23°C
Relative humidity : 48%
Atmospheric pressure : 101 kPa

Table 16: Test Result of Number of Hopping Frequency

Frequency Range	Measured Quantity of Hopping Channel	Limit	Result
2400 to 2483.5 MHz	79	≥ 15	Pass

For details refer to the test plots.

Figure 1 Test plot of hopping channels



Date: 26.APR.2014 11:25:38

5.1.9 Dwell Time

RESULT:

Pass

Test date : 2014-02-24
 Test standard : FCC Part 15.247(a)(1)(iii)
 RSS-210 A8.1 (d)
 Basic standard : ANSI C63.10: 2009
 Limit : ≤0.4s
 Kind of test site : Shielded room

Test setup

Operation Mode : A.1, A.2
 Ambient temperature : 23°C
 Relative humidity : 48%
 Atmospheric pressure : 101 kPa

Table 17: Test result of Dwell time, mode A.1

Channel	Data Mode	Pulse width (ms)	Measured Dwell time (s)	Limit(s)	Result
Low Channel	DH1	0.47	0.15	≤0.4	Pass
	DH3	1.75	0.28	≤0.4	Pass
	DH5	3.04	0.32	≤0.4	Pass
Middle Channel	DH1	0.47	0.15	≤0.4	Pass
	DH3	1.75	0.28	≤0.4	Pass
	DH5	3.01	0.32	≤0.4	Pass
High Channel	DH1	0.47	0.15	≤0.4	Pass
	DH3	1.75	0.28	≤0.4	Pass
	DH5	3.04	0.32	≤0.4	Pass

Table 18: Test result of Time of Occupancy, mode A.2

Channel	Data Mode	Pulse width(ms)	Measured Dwell time(s)	Limit(s)	Result
Low Channel	DH1	0.47	0.15	≤0.4	Pass
	DH3	1.74	0.28	≤0.4	Pass
	DH5	3.04	0.32	≤0.4	Pass
Middle Channel	DH1	0.47	0.15	≤0.4	Pass
	DH3	1.76	0.28	≤0.4	Pass
	DH5	3.04	0.32	≤0.4	Pass
High Channel	DH1	0.47	0.15	≤0.4	Pass
	DH3	1.76	0.28	≤0.4	Pass
	DH5	3.03	0.32	≤0.4	Pass

Note:

Dwell time = Pulse width x (Hopping rate / Number of channels) x Period

Period = 0.4 (seconds/channel) x 79 (channel) = 31.6 seconds

5.1.10 Conducted Spurious Emissions Measured in 100kHz Bandwidth

RESULT:

Pass

Date of testing	:	2014-05-06
Test standard	:	FCC Part 15.247(d) RSS-210 A8.5
Basic standard	:	ANSI C63.10: 2009
Limit	:	20dB (below that in the 100kHz bandwidth within the band that contains the highest level of the desired power); In addition, radiated emissions which fall in the restricted bands, must also comply with the radiated emission limits specified in 15.209(a)
Kind of test site	:	Shield room

Test setup

Test Channel	:	Low /Middle/ High
Operation mode	:	A
Ambient temperature	:	23°C
Relative humidity	:	48%
Atmospheric pressure	:	101 kPa

For details refer to following test plots in Appendix 1.

5.1.11 Radiated Spurious Emissions

RESULT:

Pass

Date of testing : 2014-04-14~2014-04-26
Test standard : FCC Part 15.247(d), FCC 15.205,
RSS-210 Clause 2.2
Basic standard : ANSI C63.10: 2009
Limit : 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) (see §15.205(c)).
Kind of test site : 3m Semi-Anechoic Chamber

Test setup

Test Channel : Low / Middle/ High
Operation mode : A
Ambient temperature : 23°C
Relative humidity : 48%
Atmospheric pressure : 101 kPa

For details refer to the test plots in Appendix 1.

5.1.12 Conducted Emissions

RESULT:

Pass

Date of testing : 2014-05-06
Test standard : FCC Part 15.107(a)
FCC Part 15.207(a)
RSS-Gen Clause 7.2.4
Basic standard : ANSI C63.4: 2009,
Limit : Refer to FCC Part 15.107 (a)
Kind of test site : Shield room

Test setup

Operation mode : A, B, C
Ambient temperature : 23°C
Relative humidity : 48%
Atmospheric pressure : 101 kPa

For detail refer to the test plots in Appendix 1. (Only the worst case is shown)

5.1.13 Radiated Emissions

RESULT:

Pass

Date of testing : 2014-05-06
Test standard : FCC Part 15.109(a)
ICES-003 Issue 5 August 2012
Basic standard : ANSI C63.4: 2009,
Limit : Refer to FCC Part 15.107 (a)
Kind of test site : Shield room

Test setup

Operation mode : C
Ambient temperature : 23°C
Relative humidity : 48%
Atmospheric pressure : 101 kPa

For detail refer to the test plots in Appendix 1.

6. Safety Human Exposure

6.1 Radio Frequency Exposure Compliance

6.1.1 Electromagnetic Fields

RESULT:

Pass

Test standard : FCC KDB Publication 447498
RSS-102 Issue 4

The minimum distance for the EUT is 5mm, since maximum peak output power of the transmitter is 0.258mW (-5.89dBm), which is far below the SAR exclusion threshold level 10 mW (Appendix A, SAR Test Exclusion Thresholds for 100 MHz – 6 GHz and ≤ 50 mm), hence the EUT is excluded from SAR evaluation according to FCC KDB publication 447498 D01: Mobile and Portable RF Exposure.Guidance v05.

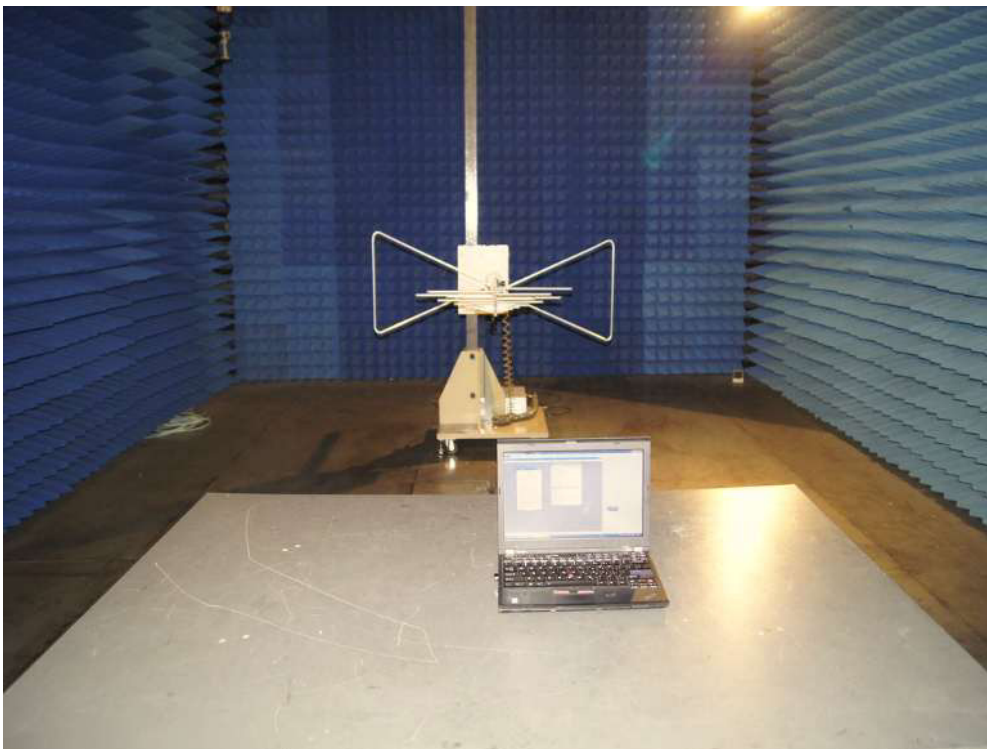
And the EUT is exempted from routine evaluation limits (SAR Evaluation) according to clause 2.5.1 of RSS-102 Issue 4 as well.

7. Photographs of the Test Set-Up

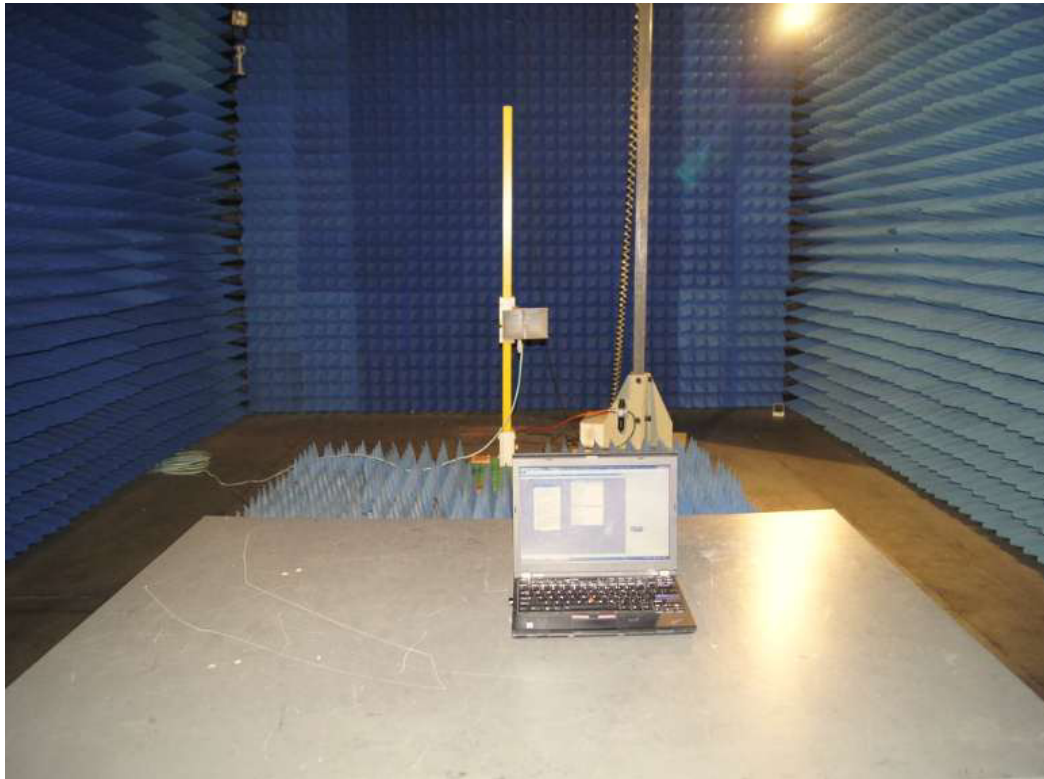
Photograph 1: Set-up for Radiated Spurious Emissions, 9 KHz-30MHz



Photograph 2: Set-up for Radiated Spurious Emissions, 30MHz-1GHz



Photograph 3: Set-up for Radiated Spurious Emissions, 1GHz-18GHz



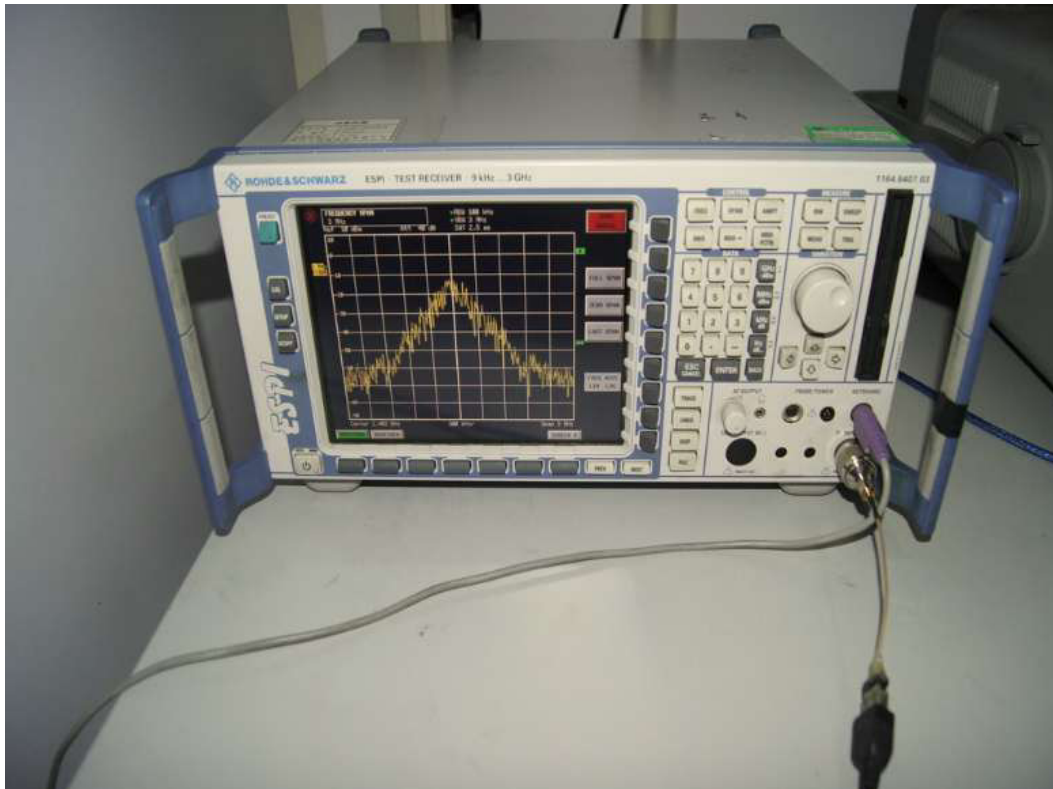
Photograph 4: Set-up for Radiated Spurious Emissions, 18GHz-25GHz



Photograph 5: Set-up for Conducted Emissions



Photograph 6: Set-up for radio spectrum test



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