TCT 通测检测 TESTING CENTRE TECHNOLOGY

Report No.: TCT150127E015

FCC REPORT

Applicant:	SKANNEX AS
Address of Applicant:	Gaustadalleen 21, Oslo, 0349, Norway
Equipment Under Test (EUT)	
Product Name:	Tablet PC
Model No.:	RL-SM02BD
Additional Model No.:	N/A
Trade mark:	N/A
FCC ID:	2AD7E-RLSM02BD
Applicable standards:	FCC CFR Title 47 Part 15 Subpart C Section 15.247
Date of sample receipt:	Jan. 27, 2015
Date of Test:	Jan. 28 – Feb. 25, 2015
Date of report issued:	Feb. 26, 2015
Test Result :	PASS *

* In the configuration tested, the EUT complied with the standards specified above.

2 Version

Version No.	Date	Description
00	*Feb. 26, 2015*	*Original*

Prepared by:  ***Date:*** ***Feb. 26, 2015***

Report Clerk

Reviewed by:  ***Date:*** ***Feb. 26, 2015***

EMC Manager

3. Contents

4. Test Summary

Test Item	Section in CFR 47	Result
Antenna requirement	15.203/15.247 (c)	Pass
AC Power Line Conducted Emission	15.207	Pass
Conducted Peak Output Power	15.247 (b)(3)	Pass
6dB Emission Bandwidth	15.247 (a)(2)	Pass
Power Spectral Density	15.247 (e)	Pass
Band Edge	15.247(d)	Pass
Spurious Emission	15.205/15.209	Pass

Pass: The EUT complies with the essential requirements in the standard.

5. General Information

5.1 Client Information

Applicant:	SKANNEX AS
Address of Applicant:	Gaustadalleen 21, Oslo, 0349, Norway
Manufacturer:	SKANNEX AS
Address of Manufacturer:	Gaustadalleen 21, Oslo, 0349, Norway

5.2 General Description of E.U.T.

Product Name:	Tablet PC
Model No.:	RL-SM02BD
Additional Model No.:	N/A
Trade mark:	N/A
Operation Frequency:	2402MHz~2480MHz
Channel numbers:	40
Channel separation:	2MHz
Modulation type:	GFSK
Antenna Type:	Internal Antenna
Antenna gain:	2dBi
AC adapter:	--
Power supply:	Rechargeable Li-ion Battery DC 3.7V

Operation Frequency each of channel for GFSK							
Channel	Frequency	Channel	Frequency	Channel	Frequency	Channel	Frequency
0	2402MHz	10	2422MHz	20	2442MHz	30	2462MHz
1	2404MHz	11	2424MHz	21	2444MHz	31	2464MHz
2	2406MHz	12	2426MHz	22	2446MHz	32	2466MHz
3	2408MHz	13	2428MHz	23	2448MHz	33	2468MHz
4	2410MHz	14	2430MHz	24	2450MHz	34	2470MHz
5	2412MHz	15	2432MHz	25	2452MHz	35	2472MHz
6	2414MHz	16	2434MHz	26	2454MHz	36	2474MHz
7	2416MHz	17	2436MHz	27	2456MHz	37	2476MHz
8	2418MHz	18	2438MHz	28	2458MHz	38	2478MHz
9	2420MHz	19	2440MHz	29	2460MHz	39	2480MHz
Remark: Channel 0, 20 &39 selected for GFSK							

Note:
In section 15.31(m), regards to the operating frequency range over 10 MHz, the Lowest frequency, the middle frequency, and the highest frequency of channel were selected to perform the test, and the selected channel see below:

Channel	Frequency
The lowest channel	2402MHz
The middle channel	2442MHz
The Highest channel	2480MHz

5.3 Measurement uncertainty

The reported uncertainty of measurement y ± U, where expended uncertainty U is based on a standard uncertainty multiplied by a coverage factor of k=2,providing a level of confidence of approximately 95 %.

No.	Item	Uncertainty
1	Conducted Emission	±3.28dB
2	RF power,conducted	±0.12dB
3	Spurious emissions,conducted	±0.11dB
4	All emissions,radiated(<1G)	±4.88dB
5	All emissions,radiated(>1G)	±4.88dB
6	Temperature	±0.5°C
7	Humidity	±2%

5.4 Test environment and mode

Operating Environment:	
Temperature:	24.0 °C
Humidity:	54 % RH
Atmospheric Pressure:	1010 mbar
Test mode:	
Operation mode	Keep the EUT in continuous transmitting with modulation
The sample was placed 0.8m above the ground plane of 3m chamber. Measurements in both horizontal and vertical polarities were performed. During the test, each emission was maximized by: having the EUT continuously working, investigated all operating modes, rotated about all 3 axis (X, Y & Z) and considered typical configuration to obtain worst position, manipulating interconnecting cables, rotating the turntable, varying antenna height from 1m to 4m in both horizontal and vertical polarizations. The emissions worst-case are shown in Test Results of the following pages.	

5.5 Laboratory Facility

The test facility is recognized, certified, or accredited by the following organizations:

- **FCC - Registration No.: 572331**

Shenzhen TCT Testing Technology Co., Ltd., Shenzhen EMC Laboratory: Shenzhen Tongce Testing Lab

The 3m Semi-anechoic chamber has been registered and fully described in a report with the (FCC) Federal Communications Commission. The acceptance letter from the FCC is maintained in our files.

- **IC - Registration No.: 10668A-1**

The 3m Semi-anechoic chamber of Shenzhen TCT Testing Technology Co., Ltd. has been registered by Certification and Engineering Bureau of Industry Canada for radio equipment testing

- **CNAS - Registration No.: CNAS L6165**

Shenzhen TCT Testing Technology Co., Ltd. is accredited to ISO/IEC 17025:2005 General Requirements for the Competence of Testing and Calibration laboratories for the competence of testing. The Registration No. is CNAS L6165.

5.6 Laboratory Location

Shenzhen Tongce Testing Lab
Address: 1F, Leinuo Watch Building, Fuyong Town, Baoan Dist, Shenzhen, China
Tel: 13410377511
Fax: --

5.7 Description of Support Units

Manufacturer	Description	Model	S/N	FCC ID/DoC
FICO	Adapter	JD-050200	N/A	N/A
Edifier	Earphone	H275P	N/A	N/A

5.8 Test Instruments list

Radiated Emission:						
Item	**Test Equipment**	**Manufacturer**	**Model No.**	**Serial No.**	**Cal. Date (mm-dd-yy)**	**Cal. Due date (mm-dd-yy)**
1	ESPI Test Receiver	ROHDE&SCHWARZ	ESVD	100008	Sep.17, 2014	Sep.16, 2015
2	Spectrum Analyzer	ROHDE&SCHWARZ	FSEM	848597/001	Sep.17, 2014	Sep.16, 2015
3	Spectrum Analyzer	ROHDE&SCHWARZ	FSU3	1166.1660.03	Sep.17, 2014	Sep.16, 2015
4	Pre-amplifier	EM Electronics Corporation CO.,LTD	EM30265	07032613	Sep.17, 2014	Sep.16, 2015
5	Pre-amplifier	HP	8447D	2727A05017	Sep.17, 2014	Sep.16, 2015
6	Loop antenna	ZHINAN	ZN30900A	12024	Dec.15, 2014	Dec.14, 2015
7	Broadband Antenna	Schwarzbeck	VULB9163	340	Sep.17, 2014	Sep.16, 2015
8	Horn Antenna	Schwarzbeck	BBHA 9120D	631	Sep.17, 2014	Sep.16, 2015
9	Loop antenna	ZHINAN	ZN30900A	12024	Dec.15, 2014	Dec.14, 2015
10	Coax cable	TCT	N/A	N/A	Sep.14, 2014	Sep.15, 2015
11	Coax cable	TCT	N/A	N/A	Sep.14, 2014	Sep.15, 2015
12	Coax cable	TCT	N/A	N/A	Sep.14, 2014	Sep.15, 2015
13	Coax cable	TCT	N/A	N/A	Sep.14, 2014	Sep.15, 2015
14	EMI Test Software	Shurple Technology	EZ-EMC	N/A	N/A	N/A

Conducted Emission:						
Item	**Test Equipment**	**Manufacturer**	**Model No.**	**Serial No.**	**Cal. Date (mm-dd-yy)**	**Cal. Due date (mm-dd-yy)**
1	EMI Test Receiver	R&S	ESCS30	100139	Sep.17, 2014	Sep.16, 2015
2	LISN-1	AFJ	LS16C	16010947251	Sep.17, 2014	Sep.16, 2015
3	LISN-2	Schwarzbeck	NSLK 8126	8126453	Sep.17, 2014	Sep.16, 2015
4	Coax cable	TCT	N/A	164080	Sep.17, 2014	Sep.16, 2015
5	EMI Test Software	Shurple Technology	EZ-EMC	N/A	N/A	N/A

Conducted method test:						
Item	**Test Equipment**	**Manufacturer**	**Model No.**	**Serial No.**	**Cal. Date (mm-dd-yy)**	**Cal. Due date (mm-dd-yy)**
1	Spectrum Analyzer	ROHDE&SCHWARZ	FSU3	200054	Sep.17, 2014	Sep.16, 2015
2	Spectrum Analyzer	Agilent	N9020A	MY49100060	Oct. 22, 2014	Oct. 23, 2015
3	Pulse Power Senor	Anritsu	MA2411B	0917070	Dec. 12 2014	Dec. 11, 2015
4	Power Meter	Anritsu	ML2495A	1005002	Dec. 12 2014	Dec. 11, 2015

6. Test results and Measurement Data

6.1 Antenna requirement:

Standard requirement:	FCC Part15 C Section 15.203 /247(c)

15.203 requirement:

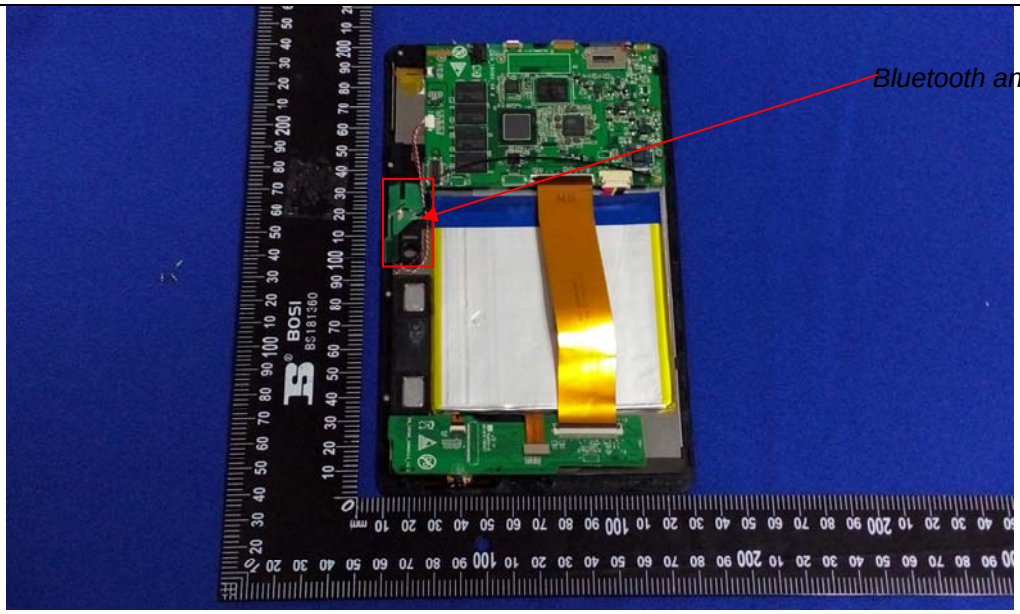
An intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device. The use of a permanently attached antenna or of an antenna that uses a unique coupling to the intentional radiator, the manufacturer may design the unit so that a broken antenna can be replaced by the user, but the use of a standard antenna jack or electrical connector is prohibited.

15.247(c) (1)(i) requirement:

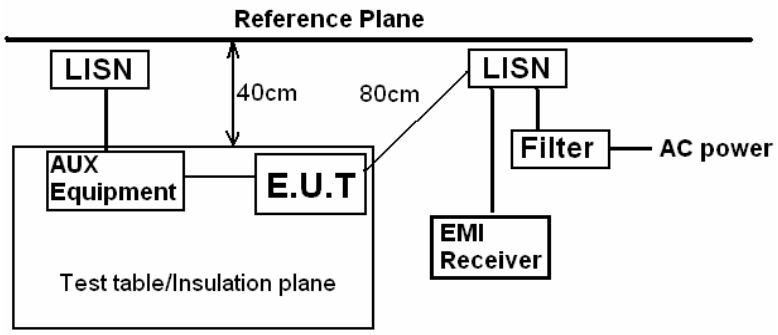
(i) Systems operating in the 2400-2483.5 MHz band that is used exclusively for fixed. Point-to-point operations may employ transmitting antennas with directional gain greater than 6dBi provided the maximum conducted output power of the intentional radiator is reduced by 1 dB for every 3 dB that the directional gain of the antenna exceeds 6dBi.

E.U.T Antenna:	

The antenna is an internal antenna which cannot replace by end-user, the best case gain of the antenna is 2 dBi.



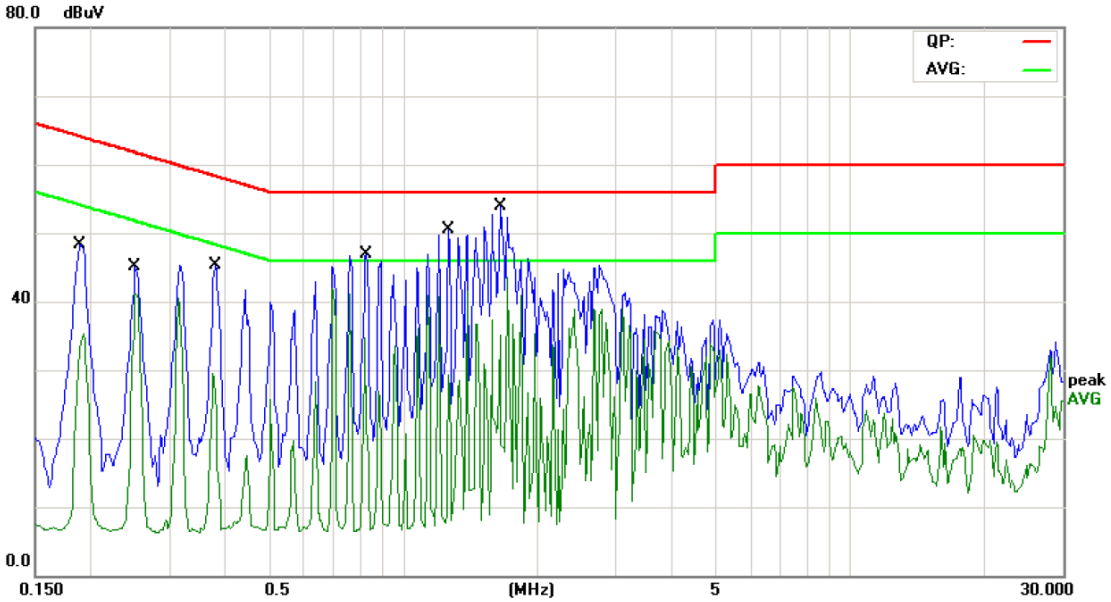
6.2 Conducted Emission

<table>
<tr><td>Test Requirement:</td><td>FCC Part15 C Section 15.207</td></tr>
<tr><td>Test Method:</td><td>ANSI C63.4: 2003</td></tr>
<tr><td>Test Frequency Range:</td><td>150 kHz to 30 MHz</td></tr>
<tr><td>Class / Severity:</td><td>Class B</td></tr>
<tr><td>Receiver setup:</td><td>RBW=9 kHz, VBW=30 kHz</td></tr>
<tr><td>Limit:</td><td>
<table>
<tr><td rowspan="2">Frequency range (MHz)</td><td colspan="2">Limit (dBuV)</td></tr>
<tr><td>Quasi-peak</td><td>Average</td></tr>
<tr><td>0.15-0.5</td><td>66 to 56*</td><td>56 to 46*</td></tr>
<tr><td>0.5-5</td><td>56</td><td>46</td></tr>
<tr><td>5-30</td><td>60</td><td>50</td></tr>
</table>
* Decreases with the logarithm of the frequency.
</td></tr>
<tr><td>Test procedure</td><td>1. The E.U.T and simulators are connected to the main power through a line impedance stabilization network (L.I.S.N.), which provides a 50ohm/50uH coupling impedance for the measuring equipment.
2. The peripheral devices are also connected to the main power through a LISN that provides a 50ohm/50uH coupling impedance with 50ohm termination. (Please refer to the block diagram of the test setup and photographs).
3. Both sides of A.C. line are checked for maximum conducted interference. In order to find the maximum emission, the relative positions of equipment and all of the interface cables must be changed according to ANSI C63.4: 2003 on conducted measurement.</td></tr>
<tr><td>Test setup:</td><td> 

Remark:
E.U.T: Equipment Under Test
LISN: Line Impedence Stabilization Network
Test table height=0.8m</td></tr>
<tr><td>Test Instruments:</td><td>Refer to section 5.7 for details</td></tr>
<tr><td>Test mode:</td><td>Refer to section 5.4 for details</td></tr>
<tr><td>Test results:</td><td>Passed</td></tr>
</table>

Measurement Data

Conducted Emission on Neutral Terminal of the power line (150 kHz to 30MHz)



Site Chamber #1 Phase: *N* Temperature: 23 (C)

Limit: FCC PART15 Conduction(QP) Power: AC 120V/60Hz Humidity: 52 %

EUT: Tablet PC

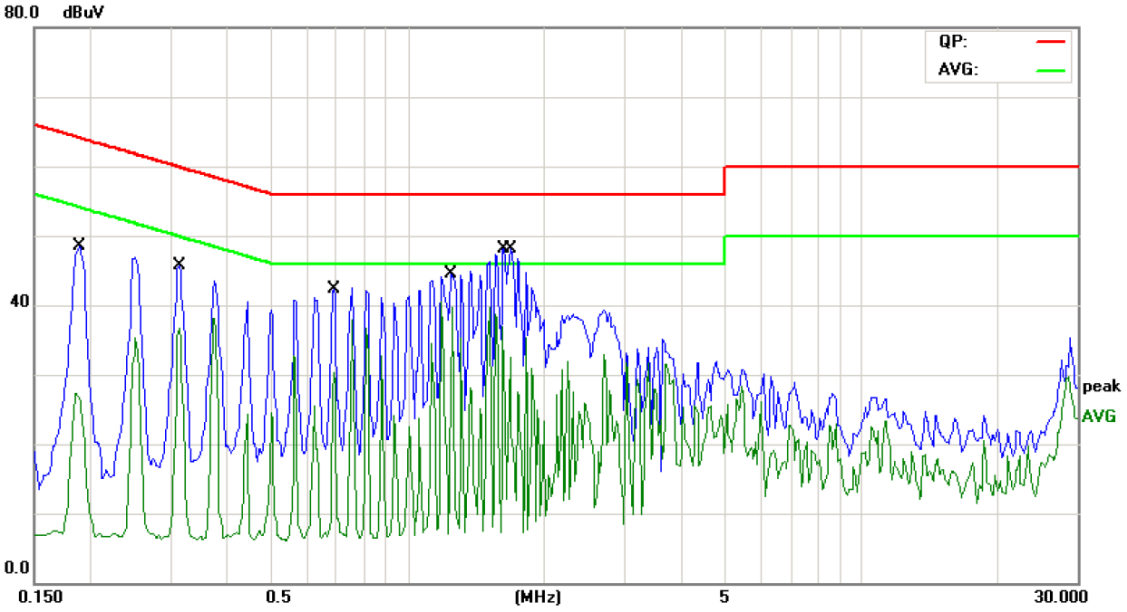
M/N: RL-SM02BD

Mode: Tx Mode

Note:

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV	dBuV	dB	Detector	Comment
1		0.1891	35.18	11.49	46.67	64.07	-17.40	QP	
2		0.1891	23.53	11.49	35.02	54.07	-19.05	AVG	
3		0.2516	32.55	11.45	44.00	61.70	-17.70	QP	
4		0.2516	24.59	11.45	36.04	51.70	-15.66	AVG	
5		0.3805	31.27	11.37	42.64	58.27	-15.63	QP	
6		0.3805	22.39	11.37	33.76	48.27	-14.51	AVG	
7		0.8297	25.76	11.21	36.97	56.00	-19.03	QP	
8		0.8297	4.28	11.21	15.49	46.00	-30.51	AVG	
9		1.2672	34.87	11.32	46.19	56.00	-9.81	QP	
10		1.2672	11.68	11.32	23.00	46.00	-23.00	AVG	
11	*	1.6461	37.22	11.51	48.73	56.00	-7.27	QP	
12		1.6461	16.46	11.51	27.97	46.00	-18.03	AVG	

Conducted Emission on Line Terminal of the power line (150 kHz to 30MHz)



Site Chamber #1 Phase: *L1* Temperature: 23 (C)

Limit: FCC PART15 Conduction(QP) Power: AC 120V/60Hz Humidity: 52 %

EUT: Tablet PC

M/N: RL-SM02BD

Mode: Tx Mode

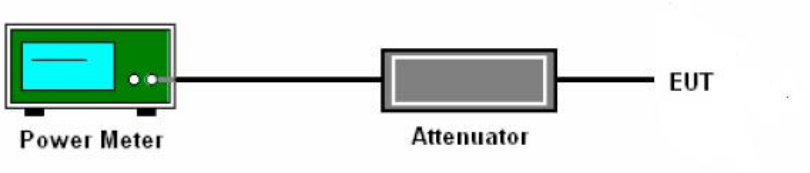
Note:

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV	dBuV	dB	Detector	Comment
1		0.1891	35.16	11.47	46.63	64.07	-17.44	QP	
2		0.1891	22.75	11.47	34.22	54.07	-19.85	AVG	
3		0.3141	32.73	11.40	44.13	59.86	-15.73	QP	
4		0.3141	24.11	11.40	35.51	49.86	-14.35	AVG	
5		0.6891	29.47	11.23	40.70	56.00	-15.30	QP	
6		0.6891	22.66	11.23	33.89	46.00	-12.11	AVG	
7		1.2477	30.96	11.29	42.25	56.00	-13.75	QP	
8		1.2477	19.11	11.29	30.40	46.00	-15.60	AVG	
9		1.6305	33.84	11.49	45.33	56.00	-10.67	QP	
10	*	1.6305	23.87	11.49	35.36	46.00	-10.64	AVG	
11		1.6969	33.44	11.52	44.96	56.00	-11.04	QP	
12		1.6969	19.05	11.52	30.57	46.00	-15.43	AVG	

Notes:

1. An initial pre-scan was performed on the line and neutral terminal of the power line with peak detector.
2. Quasi-Peak and Average measurement were performed at the frequencies with maximized peak emission.
3. Final Level =Receiver Read level + Correct Factor
4. * is meaning the worst frequency has been tested in the frequency range 150 kHz to 30MHz.

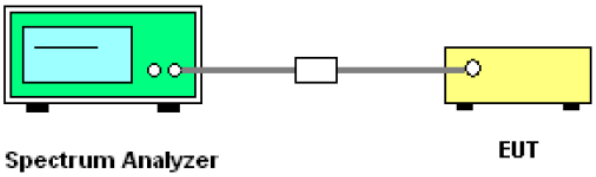
6.3 Conducted Output Power

Test Requirement:	FCC Part15 C Section 15.247 (b)(3)
Test Method:	ANSI C63.4:2003 and KDB558074
Limit:	30dBm
Test setup:	
Test Instruments:	Refer to section 4.7 for details
Test procedure:	1. The testing follows the Measurement Procedure of FCC KDB No. 558074 DTS D01 Meas. Guidance v03r02. 2. The RF output of EUT was connected to the power meter by RF cable and attenuator. The path loss was compensated to the results for each measurement. 3. Set to the maximum power setting and enable the EUT transmit continuously. 4. Measure the conducted output power and record the results in the test report.
Test results:	Passed

Measurement Data

Test CH	Maximum Conducted Output Power (dBm)	Limit(dBm)	Result
Lowest	0.64	30.00	Pass
Middle	0.51		
Highest	0.21		

6.4 Emission Bandwidth

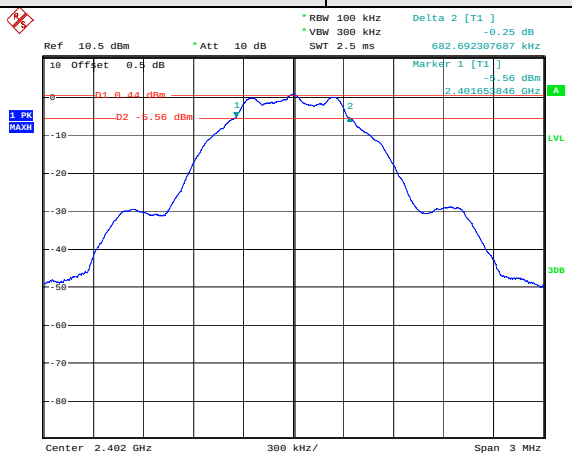
Test Requirement:	FCC Part15 C Section 15.247 (a)(2)
Test Method:	ANSI C63.4:2003 and KDB558074
Limit:	>500kHz
Test setup:	
Test Instruments:	Refer to section 5.6 for details
Test procedure:	1. The testing follows FCC KDB Publication No. 558074 DTS D01 Meas. Guidance v03r02. 2. The testing follows FCC KDB Publication No. 558074 DTS D01 Meas. Guidance v03r02. 3. Set to the maximum power setting and enable the EUT transmit continuously. 4. Make the measurement with the spectrum analyzer's resolution bandwidth (RBW) = 100 kHz. Set the Video bandwidth (VBW) = 300 kHz. In order to make an accurate measurement. The 6dB bandwidth must be greater than 500 kHz. 5. Measure and record the results in the test report.
Test results:	Passed

Measurement Data

Test CH	6dB Emission Bandwidth (KHz)	Limit(kHz)	Result
Lowest	682.69	>500	Pass
Middle	677.88		
Highest	687.50		

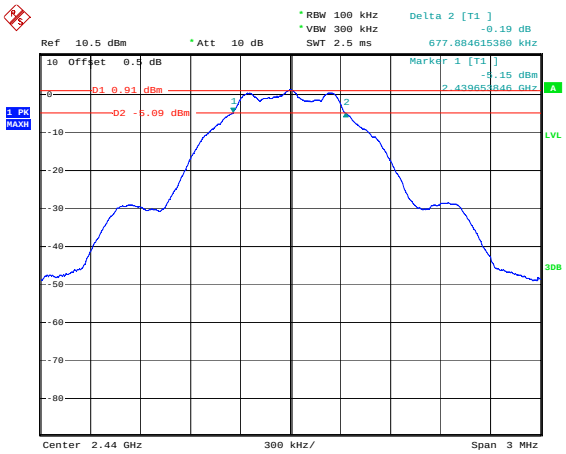
Test plot as follows:

Test mode:	GFSK



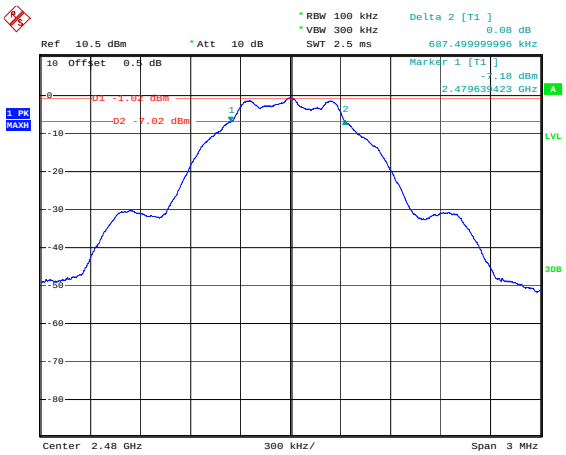
Date: 26.FEB.2015 09:34:51

Lowest channel



Date: 26.FEB.2015 09:33:41

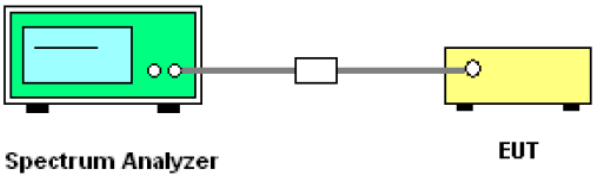
Middle channel



Date: 26.FEB.2015 09:29:36

Highest channel

6.5 Power Spectral Density

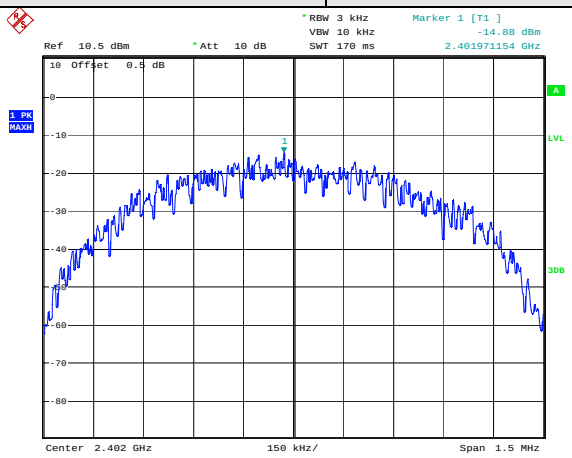
Test Requirement:	FCC Part15 C Section 15.247 (e)
Test Method:	ANSI C63.4:2003 and KDB558074
Limit:	The peak power spectral density shall not be greater than 8dBm in any 3kHz band at any time interval of continuous transmission.
Test setup:	
Test Instruments:	Refer to section 5.6 for details
Test mode:	1. The testing follows Measurement Procedure 10.2 Method PKPSD of FCC KDB Publication No.558074 D01 DTS Meas. Guidance v03r02 2. The RF output of EUT was connected to the spectrum analyzer by RF cable and attenuator. The path loss was compensated to the results for each measurement. 3. Set to the maximum power setting and enable the EUT transmit continuously. 4. Make the measurement with the spectrum analyzer's resolution bandwidth (RBW) = 3 kHz. Video bandwidth VBW = 10 kHz In order to make an accurate measurement, set the span to 1.5 times DTS Channel Bandwidth. (6dB BW) 5. Detector = peak, Sweep time = auto couple, Trace mode = max hold, Allow trace to fully stabilize. Use the peak marker function to determine the maximum power level. 6. Measure and record the results in the test report.
Test results:	Passed

Measurement Data

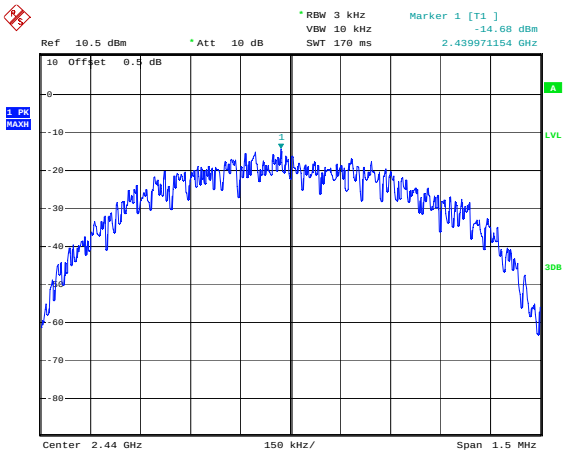
Test CH	Power Spectral Density (dBm)	Limit(dBm)	Result
Lowest	-14.88	8.00	Pass
Middle	-14.68		
Highest	-16.21		

Test plot as follows:

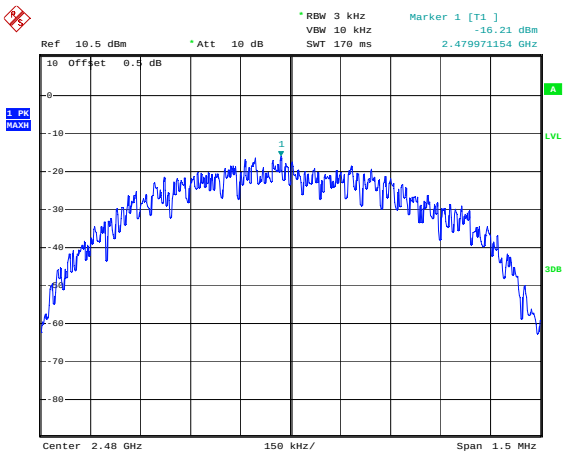
Test mode:	GFSK



Lowest channel



Middle channel



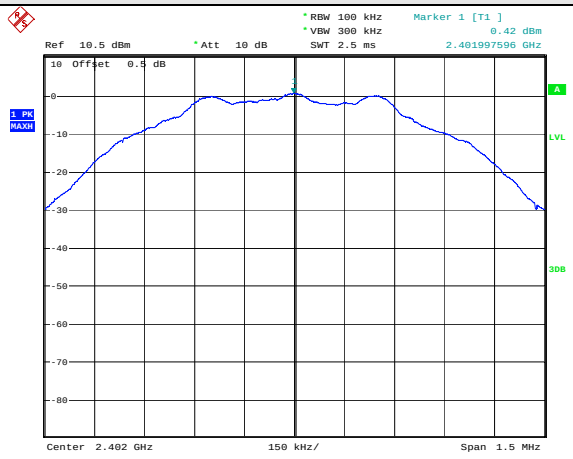
Highest channel

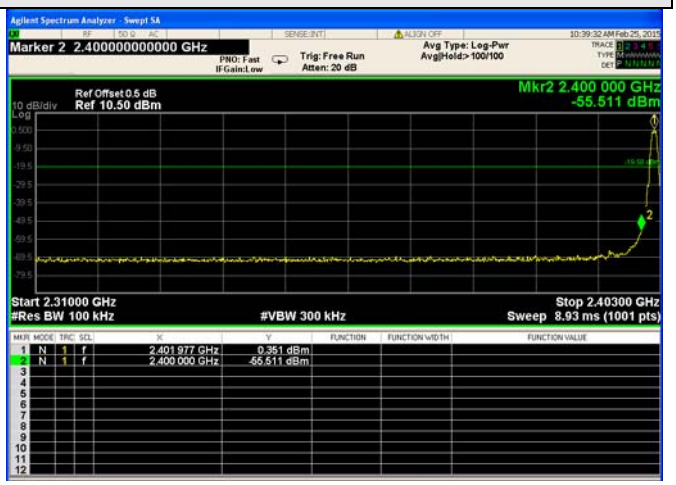
6.6 Conducted Band Edges and Spurious Emission Measurement

Test Requirement:	FCC Part15 C Section 15.247 (d)
Test Method:	ANSI C63.4:2003 and KDB558074
Limit:	In any 100 kHz bandwidth outside of the authorized frequency band, the emissions which fall in the non-restricted bands shall be attenuated at least 20 dB / 30dB relative to the maximum PSD level in 100 kHz by RF conducted measurement and radiated emissions which fall in the restricted bands, as defined in Section 15.205(a), must also comply with the radiated emission limits specified in Section 15.209(a).
Test setup:	
Test Instruments:	Refer to section 4.7 for details
Test procedure:	1. The testing follows FCC KDB Publication No. 558074 D01 DTS Meas. Guidance v03r02. 2. The RF output of EUT was connected to the spectrum analyzer by RF cable and attenuator. The path loss was compensated to the results for each measurement. 3. Set to the maximum power setting and enable the EUT transmit continuously. 4. Set RBW = 100 kHz, VBW=300 kHz, Peak Detector. Unwanted Emissions measured in any 100 kHz bandwidth outside of the authorized frequency band shall be attenuated by at least 20 dB relative to the maximum in-band peak PSD level in 100 kHz when maximum peak conducted output power procedure is used. If the transmitter complies with the conducted power limits based on the use of RMS averaging over a time interval, the attenuation required under this paragraph shall be 30 dB instead of 20 dB per 15.247(d). 5. Measure and record the results in the test report. 6. The RF fundamental frequency should be excluded against the limit line in the operating frequency band.
Test results:	Passed

Test plot as follows:

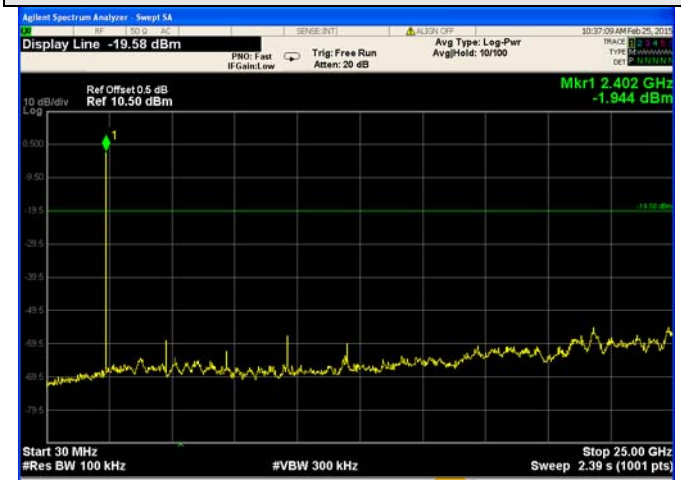
Test mode:	GFSK
100kHz PSD reference Level	Low Channel Plot



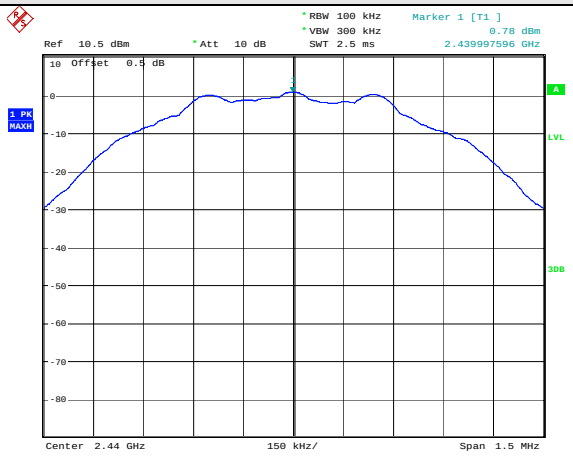


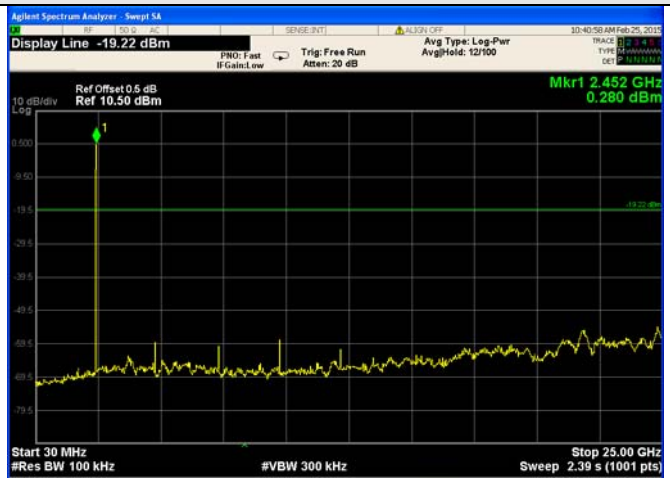
Date: 26.FEB.2015 09:35:16

Spurious emission	



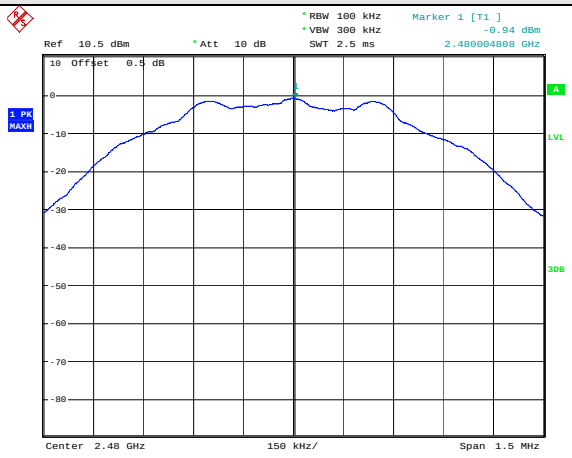
Test mode:	GFSK (Middle CH)
100kHz PSD reference Level	Spurious emission



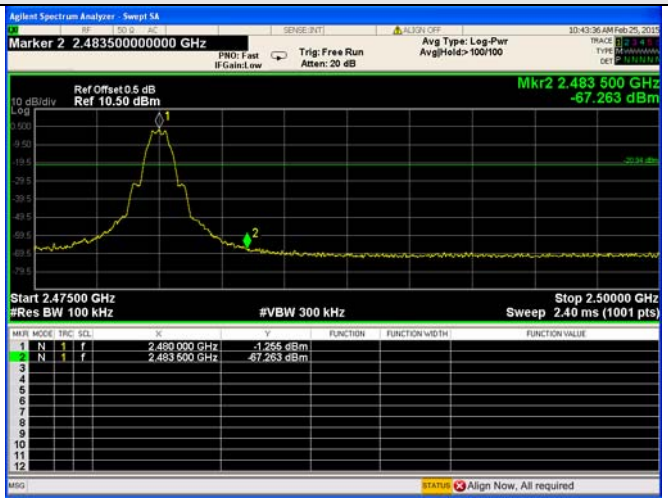


Date: 26.FEB.2015 09:31:02

Test mode:	GFSK
100kHz PSD reference Level	High Channel Plot



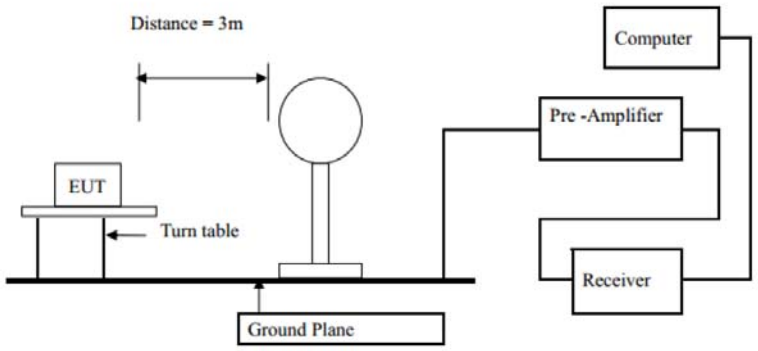
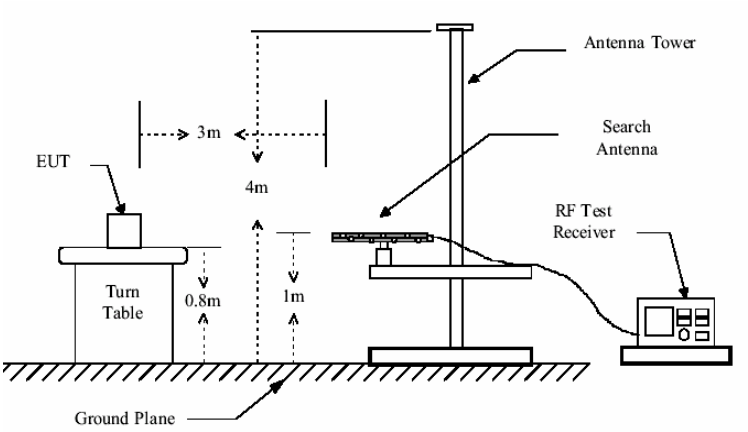
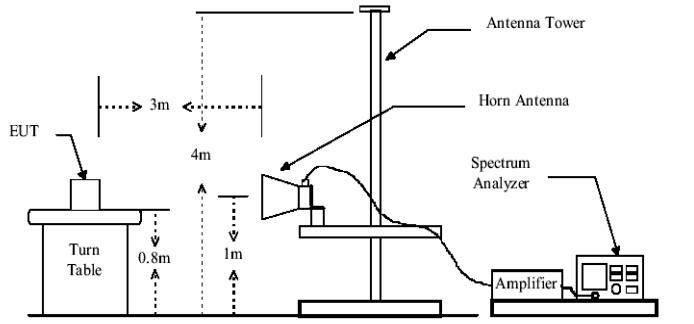
Date: 26.FEB.2015 09:30:21



Spurious emission	

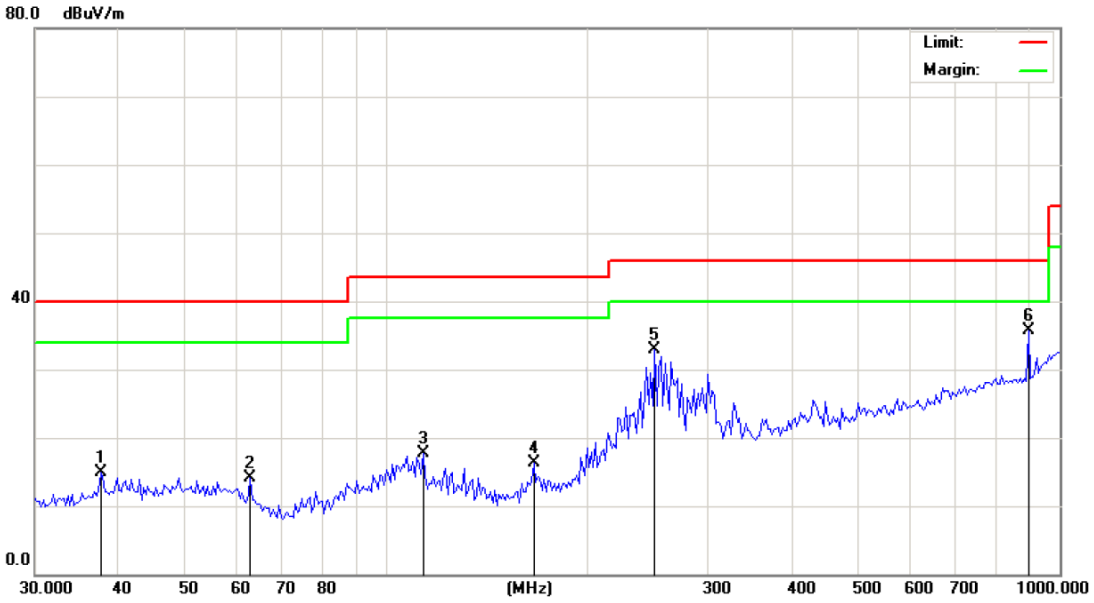
6.7 Radiated Band Edges and Spurious Emission Measurement

<table>
<tr><td>Test Requirement:</td><td>FCC Part15 C Section 15.209 and 15.205</td></tr>
<tr><td>Test Method:</td><td>ANSI C63.4:2003</td></tr>
<tr><td>Test Frequency Range:</td><td>9KHz to 25GHz</td></tr>
<tr><td>Test site:</td><td>Measurement Distance: 3m</td></tr>
<tr><td>Receiver setup:</td><td>
<table>
<tr><th>Frequency</th><th>Detector</th><th>RBW</th><th>VBW</th><th>Remark</th></tr>
<tr><td>30MHz-1GHz</td><td>Quasi-peak</td><td>120KHz</td><td>300KHz</td><td>Quasi-peak Value</td></tr>
<tr><td rowspan="2">Above 1GHz</td><td>Peak</td><td>1MHz</td><td>3MHz</td><td>Peak Value</td></tr>
<tr><td>Peak</td><td>1MHz</td><td>10Hz</td><td>Average Value</td></tr>
</table>
</td></tr>
<tr><td>Limit:</td><td>
<table>
<tr><th>Frequency</th><th>Limit (dBuV/m @3m)</th><th>Remark</th></tr>
<tr><td>30MHz-88MHz</td><td>40.0</td><td>Quasi-peak Value</td></tr>
<tr><td>88MHz-216MHz</td><td>43.5</td><td>Quasi-peak Value</td></tr>
<tr><td>216MHz-960MHz</td><td>46.0</td><td>Quasi-peak Value</td></tr>
<tr><td>960MHz-1GHz</td><td>54.0</td><td>Quasi-peak Value</td></tr>
<tr><td rowspan="2">Above 1GHz</td><td>54.0</td><td>Average Value</td></tr>
<tr><td>74.0</td><td>Peak Value</td></tr>
</table>
</td></tr>
<tr><td>Test Procedure:</td><td>1. The testing follows FCC KDB Publication No. 558074 D01 DTS Meas. Guidance v03r02.
2. The EUT was arranged to its worst case and then tune the antenna tower (from 1 m to 4 m) and turntable (from 0 degree to 360 degrees) to find the maximum reading. A pre-amp and a high pass filter are used for the test in order to get better signal level.
3. The EUT was placed on a turntable with 0.8 meter above ground.
4. The EUT was set 3 meters from the interference receiving antenna, which was mounted on the top of a variable height antenna tower.
5. Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level
6. For measurement below 1GHz, If the emission level of the EUT measured by the peak detector is 3 dB lower than the applicable limit, the peak emission level will be reported. Otherwise, the emission measurement will be repeated using the quasi-peak detector and reported.
7. Use the following spectrum analyzer settings:
(1) Span shall wide enough to fully capture the emission being measured;
(2) Set RBW=100 kHz for f < 1 GHz; VBW ≥RBW; Sweep = auto; Detector function = peak; Trace = max hold;
(3) Set RBW = 1 MHz, VBW= 3MHz for f 1 GHz for peak measurement.
For average measurement:
• VBW = 10 Hz, when duty cycle is no less than 98 percent.
• VBW ≥ 1/T, when duty cycle is less than 98 percent where T is the minimum transmission duration over which the transmitter is on and is transmitting at its maximum power control level for the tested mode of operation.</td></tr>
</table>

Test setup:	For radiated emissions below 30MHz  30MHz to 1GHz  Above 1GHz 
Test Instruments:	Refer to section 4.7for details
Test results:	Passed
Remark:	1. Pre-scan all kind of the place mode (X-axis, Y-axis, Z-axis), and found the Y-axis is the worst case. 2. 9 kHz to 30MHz is too low, the emission levels are 20 dB below the limit value, so only shows the data of above 30MHz in this report. 3. Above 13G the signal is too low, which is much less than the limit, no necessary take down the records

Below 1GHz

Horizontal ：



Site

Limit: FCC Part 15B Class B RE_3 m

EUT: Tablet PC

M/N: RL-SM02BD

Mode: Tx Mode

Note:

Polarization: ***Horizontal***

Power: AC 120V/60Hz

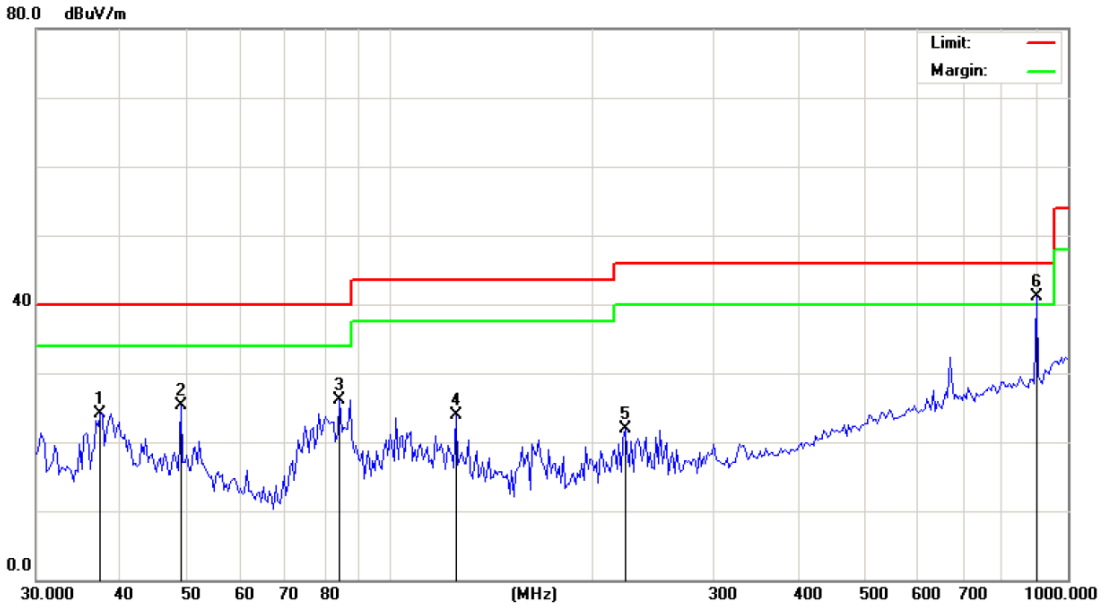
Distance: 3m

Temperature: 27

Humidity: 50 %

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		Antenna Height	Table Degree	
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	cm	degree	Comment
1		37.5648	27.76	-12.78	14.98	40.00	-25.02	peak		0	
2		62.7432	27.90	-13.83	14.07	40.00	-25.93	peak		0	
3		113.2200	30.28	-12.53	17.75	43.50	-25.75	peak		0	
4		165.4716	30.41	-14.07	16.34	43.50	-27.16	peak		0	
5		250.4860	42.78	-9.94	32.84	46.00	-13.16	peak		0	
6	*	899.9577	33.08	2.67	35.75	46.00	-10.25	peak		0	

Vertical ：



Site

Limit: FCC Part 15B Class B RE_3 m

EUT: Tablet PC

M/N: RL-SM02BD

Mode: Tx Mode

Note:

Polarization: ***Vertical***

Power: AC 120V/60Hz

Distance: 3m

Temperature: 27

Humidity: 50 %

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		Antenna Height	Table Degree	
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	cm	degree	Comment
1		37.3017	36.91	-12.81	24.10	40.00	-15.90	peak		0	
2		49.0627	37.41	-12.08	25.33	40.00	-14.67	peak		0	
3		84.2840	40.95	-14.90	26.05	40.00	-13.95	peak		0	
4		124.9250	38.30	-14.33	23.97	43.50	-19.53	peak		0	
5		222.2807	32.76	-10.91	21.85	46.00	-24.15	peak		0	
6	*	899.9577	38.36	2.67	41.03	46.00	-4.97	peak		0	

Note: Measurements were conducted in all three channels (high, middle, low), and the worst case (Low channel) was submitted only.

Above 1GHz

Low channel: 2402 MHz

Freq. (MHz)	Ant. Pol. H/V	Peak reading (dBuV)	AV reading (dBuV)	Correction Factor (dB)	Emission Level		Peak limit (dBuV/m)	AV limit (dBuV/m)	Margin (dB)
					Peak (dBuV/m)	AV (dBuV/m)			
1378.25	H	49.07	---	-4.20	44.87	---	74	54	-9.13
4804.00	H	50.48	---	-3.94	46.54	---	74	54	-7.46
7206.00	H	45.04	---	0.52	45.56	---	74	54	-8.44
---	H	---	---	---	---	---	---	---	---
---	H	---	---	---	---	---	---	---	---
1378.25	V	48.38	---	-4.25	44.13	---	74	54	-9.87
4804.00	V	50.89	---	-3.94	46.95	---	74	54	-7.05
7206.00	V	44.65	---	0.59	45.24	---	74	54	-8.76
---	V	---	---	---	---	---	---	---	---
---	V	---	---	---	---	---	---	---	---

Middle channel: 2442 MHz

Freq. (MHz)	Ant. Pol. H/V	Peak reading (dBuV)	AV reading (dBuV)	Correction Factor (dB)	Emission Level		Peak limit (dBuV/m)	AV limit (dBuV/m)	Margin (dB)
					Peak (dBuV/m)	AV (dBuV/m)			
1226.85	H	49.40	---	-4.20	45.20	---	74	54	-8.80
4884.00	H	50.67	---	-3.98	46.69	---	74	54	-7.31
7326.00	H	45.28	---	0.56	45.84	---	74	54	-8.16
---	H	---	---	---	---	---	---	---	---
---	H	---	---	---	---	---	---	---	---
1306.45	V	48.91	---	-4.25	44.66	---	74	54	-9.34
4882.00	V	50.10	---	-3.98	46.12	---	74	54	-7.88
7323.00	V	44.56	---	0.57	45.13	---	74	54	-8.87
---	V	---	---	---	---	---	---	---	---
---	V	---	---	---	---	---	---	---	---

High channel: 2480 MHz

Freq. (MHz)	Ant. Pol. H/V	Peak reading (dBuV)	AV reading (dBuV)	Correction Factor (dB)	Emission Level		Peak limit (dBuV/m)	AV limit (dBuV/m)	Margin (dB)
					Peak (dBuV/m)	AV (dBuV/m)			
1303.34	H	48.28	---	-4.20	44.08	---	74	54	-9.92
4960.00	H	49.44	---	-3.98	45.46	---	74	54	-8.54
7440.00	H	44.50	---	0.52	45.02	---	74	54	-8.98
---	H	---	---	---	---	---	---	---	---
---	H	---	---	---	---	---	---	---	---
1309.82	V	48.84	---	-4.25	44.59	---	74	54	-9.41
4960.00	V	49.93	---	-3.98	45.95	---	74	54	-8.05
7440.00	V	45.11	---	0.57	45.68	---	74	54	-8.32
---	V	---	---	---	---	---	---	---	---
---	V	---	---	---	---	---	---	---	---

Notes: 1) Measurements were conducted from 1 GHz to the 10th harmonic of highest fundamental frequency.

2) Radiated emissions measured in frequencies above 1GHz were made with peak detector and Average (AV) detector.

3) Average test would be performed if the peak readings were greater than the average limit.

4) Data of measurement shown "---"in the above table mean that the reading of emissions is attenuated more than 20 dB below the limits or the field strength is too small to be measured.

5) Emission Level=Peak (AV) Reading + Correction Factor; Correction Factor= Antenna Factor + Cable loss – Pre-amplifier

6) Margin (dB) = Emission Level (Peak) (dBuV/m)-Average limit (dBuV/m)

------End of report------