

FCC Part 15C

Measurement and Test Report




For

Shenzhen Reie intelligent technology Co., ltd

401, 4F, No.1 Building, Zhongkenuo Industry park, Hezhou development

Zone, Xixiang Street, Bao'an District, Shenzhen City, China

FCC ID: 2AJU3RT726

FCC Rule(s):	<u>FCC Part 15.249</u>
Product Description:	<u>Dual Mode Multimedia Keyboard Touchpad Combo</u>
Tested Model:	<u>RT726</u>
Report No.:	<u>STR18108262I-2</u>
Sample Receipt Date:	<u>2018-10-25</u>
Tested Date:	<u>2018-10-26 to 2018-12-10</u>
Issued Date:	<u>2018-12-11</u>
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Note: This test report is limited to the above client company and the product model only. It may not be duplicated without prior permitted by Shenzhen SEM Test Technology Co., Ltd.

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1. GENERAL INFORMATION

1.1 Product Description for Equipment Under Test (EUT)

Client Information

Applicant: Shenzhen Reie intelligent technology Co., ltd
Address of applicant: 401, 4F, No.1 Building, Zhongkenuo Industry park, Hezhou development Zone, Xixiang Street, Bao'an District, Shenzhen City, China

Manufacturer: Shenzhen Reie intelligent technology Co., ltd
Address of manufacturer: 401, 4F, No.1 Building, Zhongkenuo Industry park, Hezhou development Zone, Xixiang Street, Bao'an District, Shenzhen City, China

General Description of EUT	
Product Name:	Dual Mode Multimedia Keyboard Touchpad Combo
Trade Name:	/
Model No.:	RT726
Adding Model(s):	i4, i4+, i4S, RT726+, RT726S, ZW-i4, ZW-i4+
Rated Voltage:	Battery: DC3.7V; USB 5V charging purpose only
Power Adapter Model:	/
<i>Note: The test data is gathered from a production sample, provided by the manufacturer. The appearance of others models listed in the report is different from main-test model RT726, but the circuit and the electronic construction do not change, declared by the manufacturer.</i>	

Technical Characteristics of EUT	
Frequency Range:	2405MHz-2476MHz
Max. Field Strength:	92.86 dBuV/m
Modulation:	GFSK
Antenna Type:	PCB Antenna
Antenna Gain:	2.05dBi
Lowest Internal Frequency of EUT:	12MHz

1.2 Test Standards

The tests were performed according to following standards:

FCC Rules Part 15.249: Operation within the bands 902-928 MHz, 2400-2483.5 MHz, 5725-5875 MHz, and 24.0-24.25 GHz.

ANSI C63.10-2013: American National Standard for Testing Unlicensed Wireless Devices.

Maintenance of compliance is the responsibility of the manufacturer. Any modification of the product, which results in lowering the emission, should be checked to ensure compliance has been maintained.

1.3 Test Methodology

All measurements contained in this report were conducted with ANSI C63.10-2013, The equipment under test (EUT) was configured to measure its highest possible emission level. The test modes were adapted accordingly in reference to the Operating Instructions.

1.4 Test Facility

FCC – Registration No.: 125990

Shenzhen SEM Test Technology Co., Ltd. Laboratory has been recognized to perform compliance testing on equipment subject to the Commissions Declaration Of Conformity (DOC). The Designation Number is CN5010, and Test Firm Registration Number is 125990.

Industry Canada (IC) Registration No.: 11464A

The 3m Semi-anechoic chamber of Shenzhen SEM Test Technology Co., Ltd. has been registered by Certification and Engineering Bureau of Industry Canada for radio equipment testing with Registration No.: 11464A.

1.5 EUT Setup and Test Mode

The EUT was operated in the engineering mode to fix the Tx frequency that was for the purpose of the measurements. All testing shall be performed under maximum output power condition, and to measure its highest possible emissions level, more detailed description as follows:

Test Mode List		
Test Mode	Description	Remark
TM1	Low Channel	2405MHz
TM2	Middle Channel	2440MHz
TM3	High Channel	2476MHz

Test Conditions	
Temperature:	22~25 °C
Relative humidity	50~55 %.
ATM Pressure:	1019 mbar

EUT Cable List and Details			
Cable Description	Length (m)	Shielded/Unshielded	With / Without Ferrite
USB Cable	0.8	Shielded	Without Ferrite

Special Cable List and Details			
Cable Description	Length (m)	Shielded/Unshielded	With / Without Ferrite
/	/	/	/

Auxiliary Equipment List and Details			
Description	Manufacturer	Model	Serial Number
/	/	/	/

1.6 Measurement Uncertainty

Measurement uncertainty		
Parameter	Conditions	Uncertainty
RF Output Power	Conducted	$\pm 0.42\text{dB}$
Occupied Bandwidth	Conducted	$\pm 1.5\%$
Conducted Spurious Emission	Conducted	$\pm 2.17\text{dB}$
Conducted Emissions	Conducted	9-150kHz $\pm 3.74\text{dB}$
		0.15-30MHz $\pm 3.34\text{dB}$
Transmitter Spurious Emissions	Radiated	30-200MHz $\pm 4.52\text{dB}$
		0.2-1GHz $\pm 5.56\text{dB}$
		1-6GHz $\pm 3.84\text{dB}$
		6-18GHz $\pm 3.92\text{dB}$

1.7 Test Equipment List and Details

No.	Description	Manufacturer	Model	Serial No.	Cal Date	Due Date
SEMT-1072	Spectrum Analyzer	Agilent	E4407B	MY41440400	2018-05-22	2019-05-21
SEMT-1031	Spectrum Analyzer	Rohde & Schwarz	FSP30	836079/035	2018-05-22	2019-05-21
SEMT-1007	EMI Test Receiver	Rohde & Schwarz	ESVB	825471/005	2018-05-22	2019-05-21
SEMT-1008	Amplifier	Agilent	8447F	3113A06717	2018-05-22	2019-05-21
SEMT-1043	Amplifier	C&D	PAP-1G18	2002	2018-05-22	2019-05-21
SEMT-1011	Broadband Antenna	Schwarz beck	VULB9163	9163-333	2017-06-08	2020-06-07
SEMT-1042	Horn Antenna	ETS	3117	00086197	2017-06-08	2020-06-07
SEMT-1121	Horn Antenna	Schwarzbeck	BBHA 9170	BBHA9170582	2017-06-08	2020-06-07
SEMT-1069	Loop Antenna	Schwarz beck	FMZB 1516	9773	2017-06-08	2020-06-07
SEMT-1001	EMI Test Receiver	Rohde & Schwarz	ESPI	101611	2018-05-22	2019-05-21
SEMT-1003	L.I.S.N	Schwarz beck	NSLK8126	8126-224	2018-05-22	2019-05-21
SEMT-1002	Pulse Limiter	Rohde & Schwarz	ESH3-Z2	100911	2018-05-22	2019-05-21
SEMT-1168	Pre-amplifier	Direction Systems Inc.	PAP-0126	14141-12838	2018-05-22	2019-05-21
SEMT-1169	Pre-amplifier	Direction Systems Inc.	PAP-2640	14145-14153	2018-05-22	2019-05-21
SEMT-1163	Spectrum Analyzer	Rohde & Schwarz	FSP40	100612	2018-05-22	2019-05-21
SEMT-1170	DRG Horn Antenna	A.H. SYSTEMS	SAS-574	571	2018-03-19	2021-03-18
SEMT-1166	Power Limiter	Agilent	N9356B	MY45450376	2018-05-22	2019-05-21
SEMT-1048	RF Limiter	ATTEN	AT-BSF-2400~2500	/	2018-05-22	2019-05-21
SEMT-1076	RF Switcher	Top Precision	RCS03-A2	/	2018-05-22	2019-05-21
SEMT-C001	Cable	Zheng DI	LL142-07-07-10M(A)	/	2018-03-19	2019-03-18
SEMT-C002	Cable	Zheng DI	ZT40-2.92J-2.92J-6M	/	2018-03-19	2019-03-18
SEMT-C003	Cable	Zheng DI	ZT40-2.92J-2.92J-2.5M	/	2018-03-19	2019-03-18
SEMT-C004	Cable	Zheng DI	2M0RFC	/	2018-03-19	2019-03-18
SEMT-C005	Cable	Zheng DI	1M0RFC	/	2018-03-19	2019-03-18
SEMT-C006	Cable	Zheng DI	1M0RFC	/	2018-03-19	2019-03-18

2. SUMMARY OF TEST RESULTS

FCC Rules	Description of Test Item	Result
§ 15.203	Antenna Requirement	Compliant
§15.205	Restricted Band of Operation	Compliant
§ 15.207(a)	Conducted Emission	Compliant
§ 15.209(a)(f)	Radiated Spurious Emissions	Compliant
§15.249(a)	Field Strength of Emissions	Compliant
§15.249(d)	Out of Band Emission	Compliant
§15.215 (c)	Emission Bandwidth	Compliant

3. Antenna Requirements

3.1 Standard Applicable

According to FCC Part 15.203, 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 shall be considered sufficient to comply with the provisions of this section.

3.2 Test Result

This product has a PCB antenna, fulfill the requirement of this section.

4. Radiated Emissions

4.1 Standard Applicable

According to §15.249(a), the field strength of emissions from intentional radiators operated within these frequency bands shall comply with the following:

Fundamental Frequency	Field strength of fundamental (milli-volts/meter)	Field strength of Harmonics (micro-volts/meter)
902-928 MHz	50	500
2400-2483.5 MHz	50	500
5725-5875 MHz	50	500
24.0-24.25 GHz	250	2500

(d) Emissions radiated outside of the specified frequency bands, except for harmonics, shall be attenuated by at least 50 dB below the level of the fundamental or to the general radiated emission limits in §15.209, whichever is the lesser attenuation.

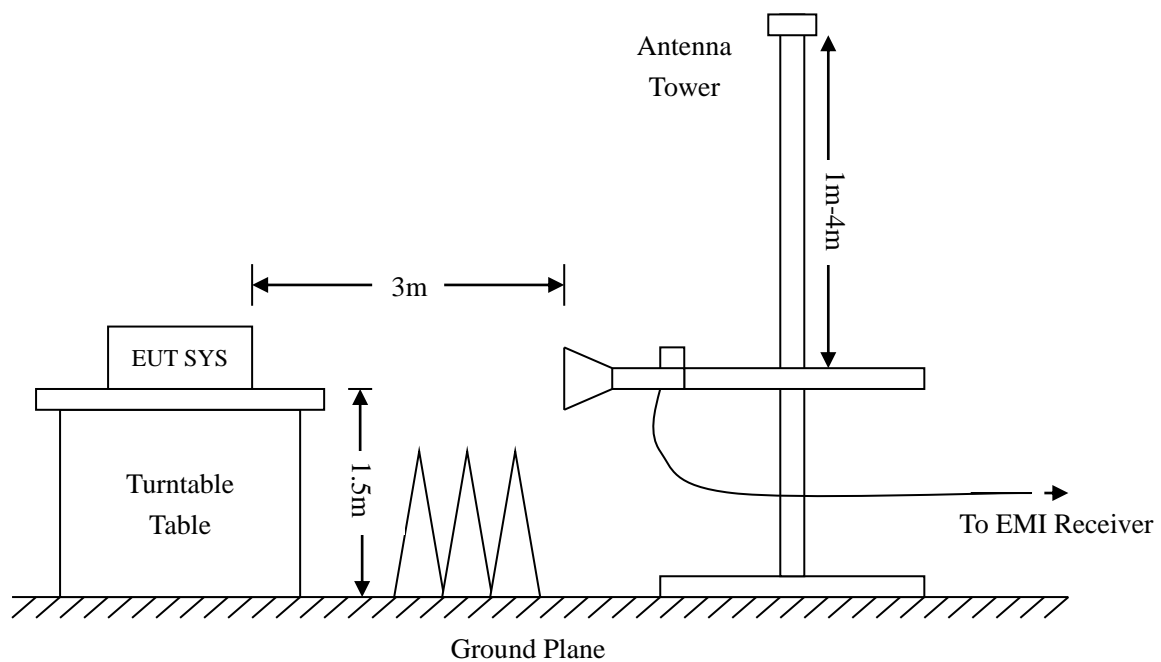
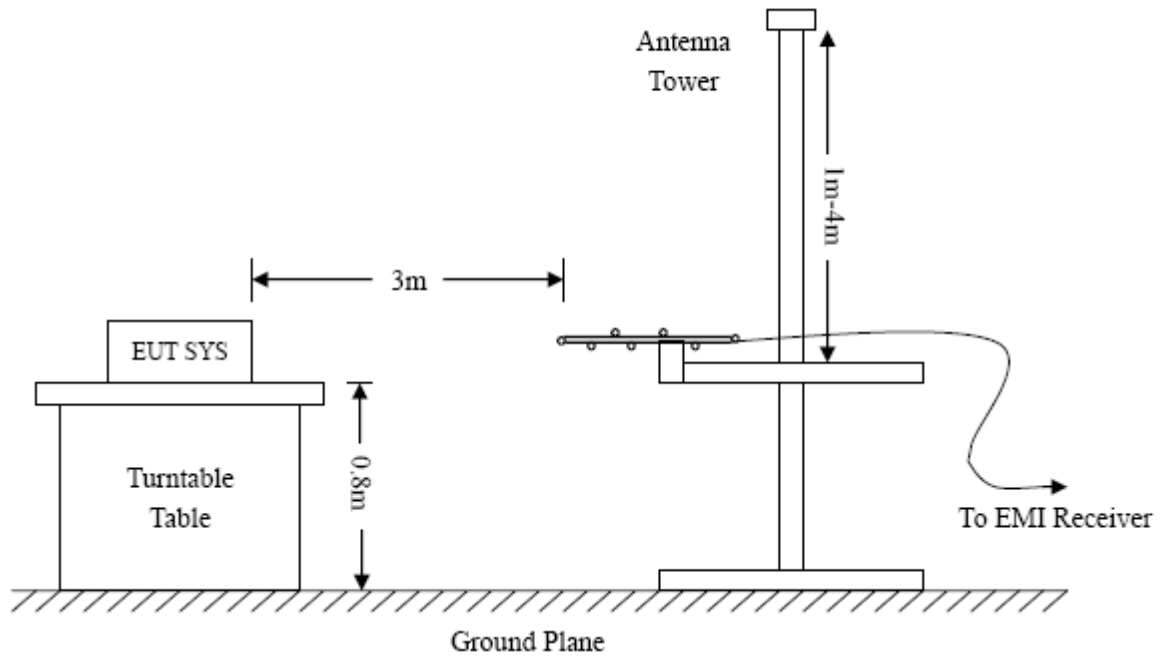
The emission limit in this paragraph is based on measurement instrumentation employing an average detector. The provisions in §15.35 for limiting peak emissions apply. Spurious Radiated Emissions measurements starting below or at the lowest crystal frequency.

4.2 Test Procedure

The setup of EUT is according with per ANSI C63.10-2013 measurement procedure. The specification used was with the FCC Part 15.205 15.249(a) and FCC Part 15.209 Limit.

The external I/O cables were draped along the test table and formed a bundle 30 to 40 cm long in the middle.

The spacing between the peripherals was 10 cm.



Frequency :9kHz-30MHz
 RBW=10KHz,
 VBW =30KHz
 Sweep time= Auto
 Trace = max hold
 Detector function = peak

Frequency :30MHz-1GHz
 RBW=120KHz,
 VBW=300KHz
 Sweep time= Auto
 Trace = max hold
 Detector function = peak, QP

Frequency :Above 1GHz
 RBW=1MHz,
 VBW=3MHz(Peak), 10Hz(AV)
 Sweep time= Auto
 Trace = max hold
 Detector function = peak, AV

4.3 Corrected Amplitude & Margin Calculation

The Corrected Amplitude is calculated by adding the Antenna Factor and the Cable Factor, and subtracting the Amplifier Gain from the Amplitude reading. The basic equation is as follows:

$$\text{Corr. Ampl.} = \text{Indicated Reading} + \text{Ant. Factor} + \text{Cable Loss} - \text{Ampl. Gain}$$

The “**Margin**” column of the following data tables indicates the degree of compliance with the applicable limit. For example, a margin of -6dB μ V means the emission is 6dB μ V below the maximum limit. The equation for margin calculation is as follows:

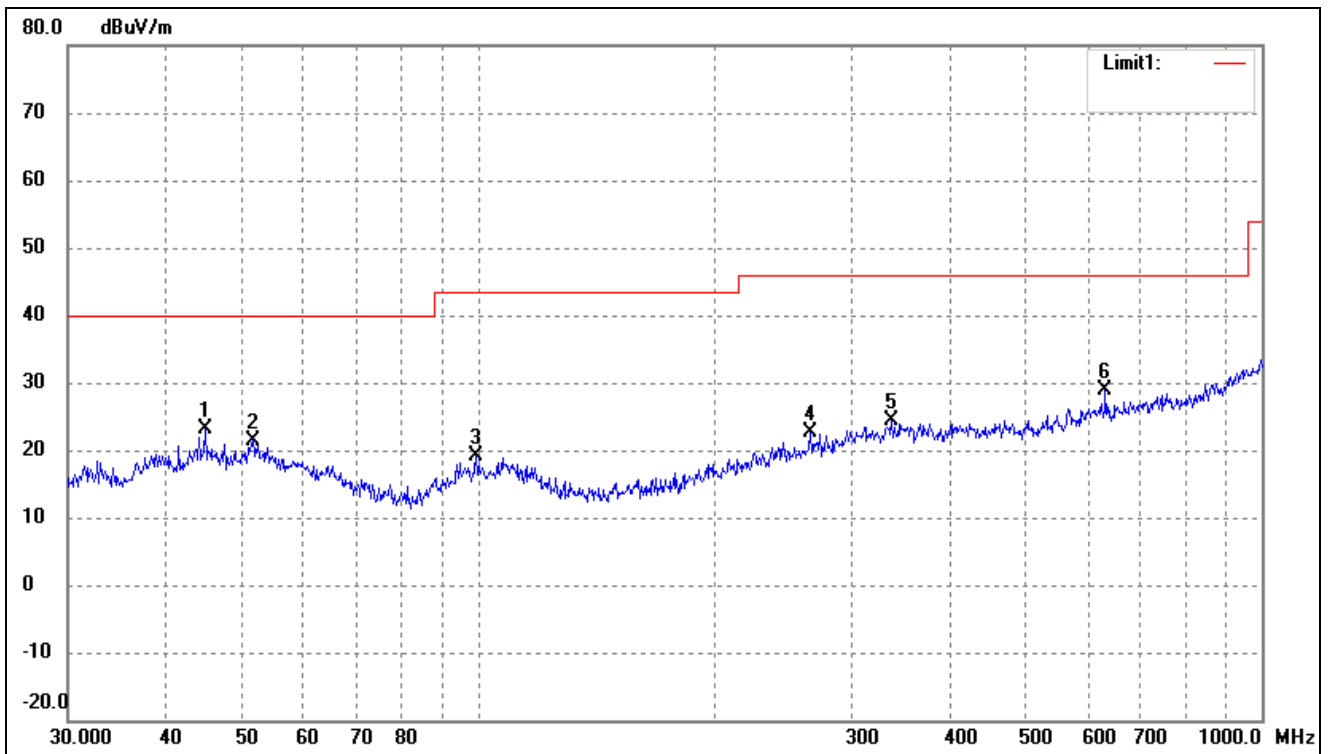
$$\text{Margin} = \text{Corr. Ampl.} - \text{FCC Part 15C Limit}$$

4.4 Summary of Test Results/Plots

Note: this EUT was tested in 3 orthogonal positions and the worst case position data was reported.

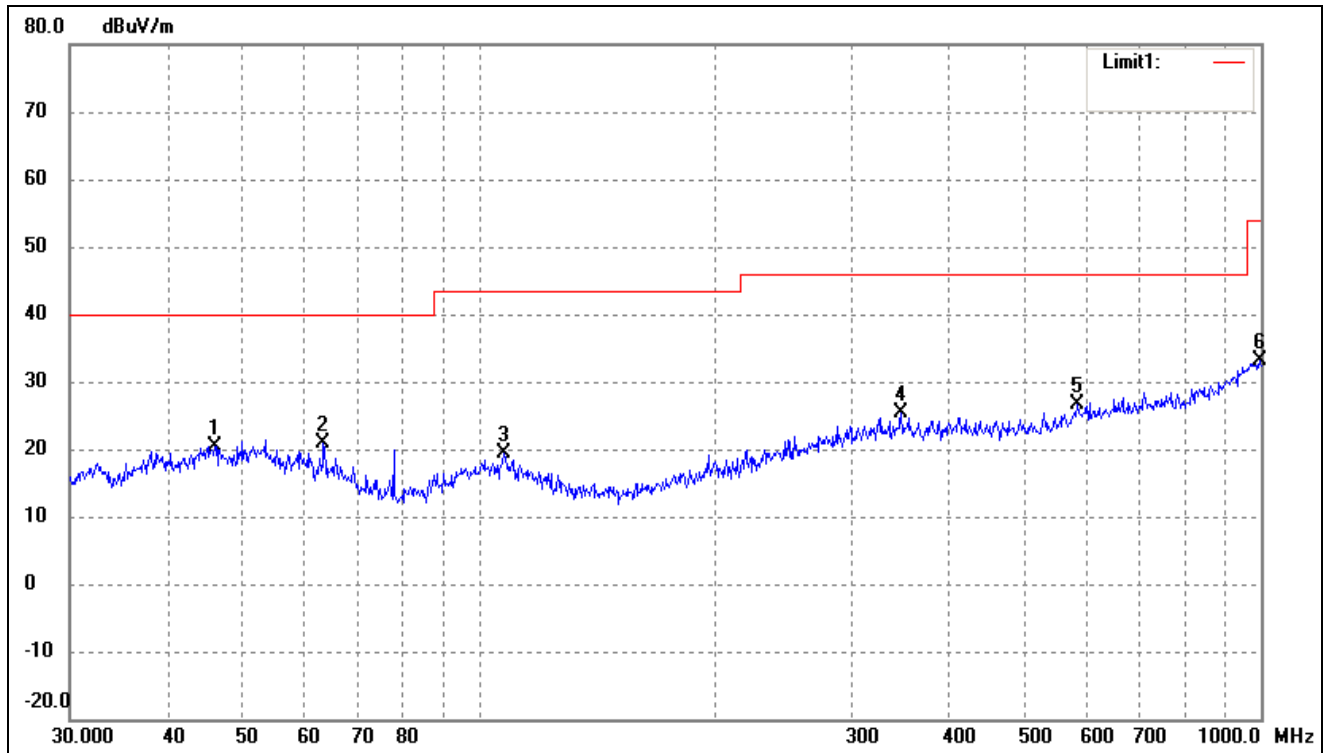
➤ Spurious Emissions Below 1GHz

Test Channel	Low	Polarity:	Horizontal
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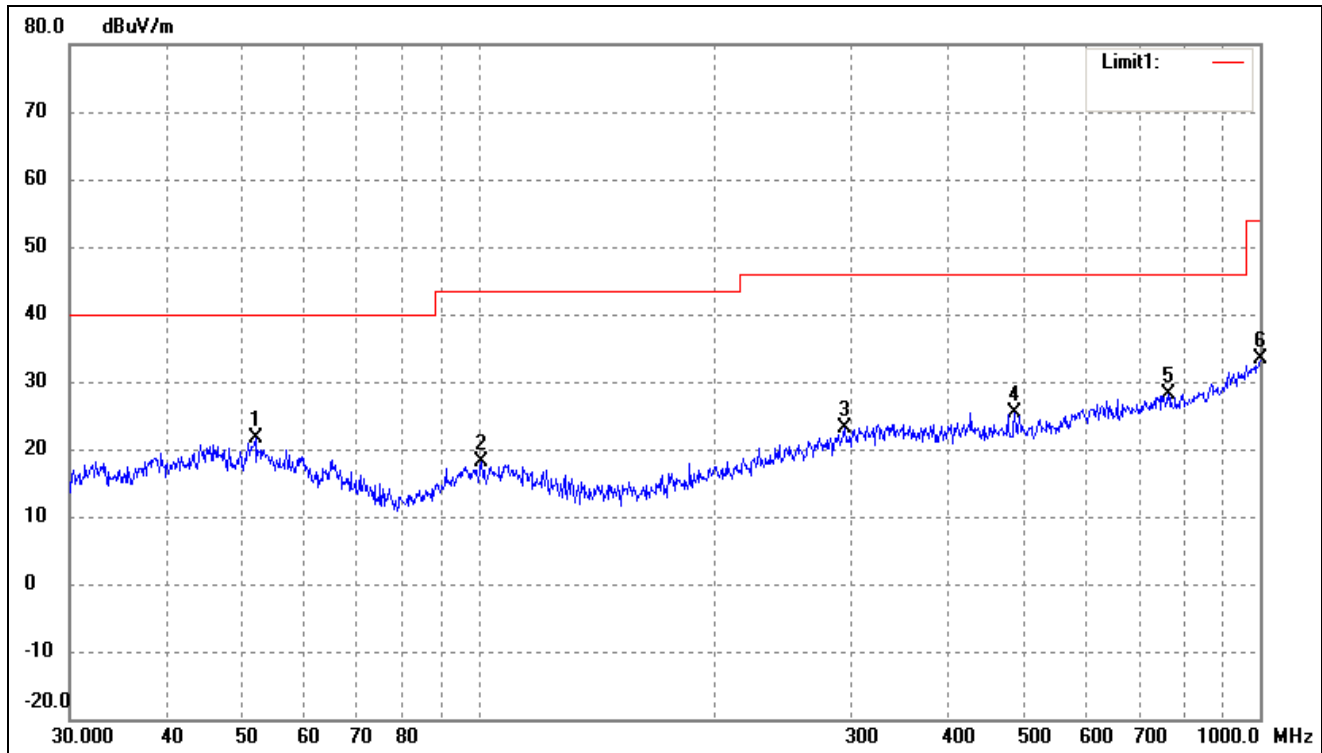
No.	Frequency (MHz)	Reading (dBuV/m)	Correct dB/m	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Degree ()	Height (cm)	Remark
1	44.9006	36.02	-12.98	23.04	40.00	-16.96	274	100	peak
2	51.6616	34.32	-12.82	21.50	40.00	-18.50	90	100	peak
3	99.5281	33.71	-14.53	19.18	43.50	-24.32	103	100	peak
4	265.6757	31.54	-8.97	22.57	46.00	-23.43	98	100	peak
5	337.2155	30.95	-6.59	24.36	46.00	-21.64	131	100	peak
6	631.6884	32.50	-3.69	28.81	46.00	-17.19	169	100	peak

Test Channel	Low	Polarity:	Vertical
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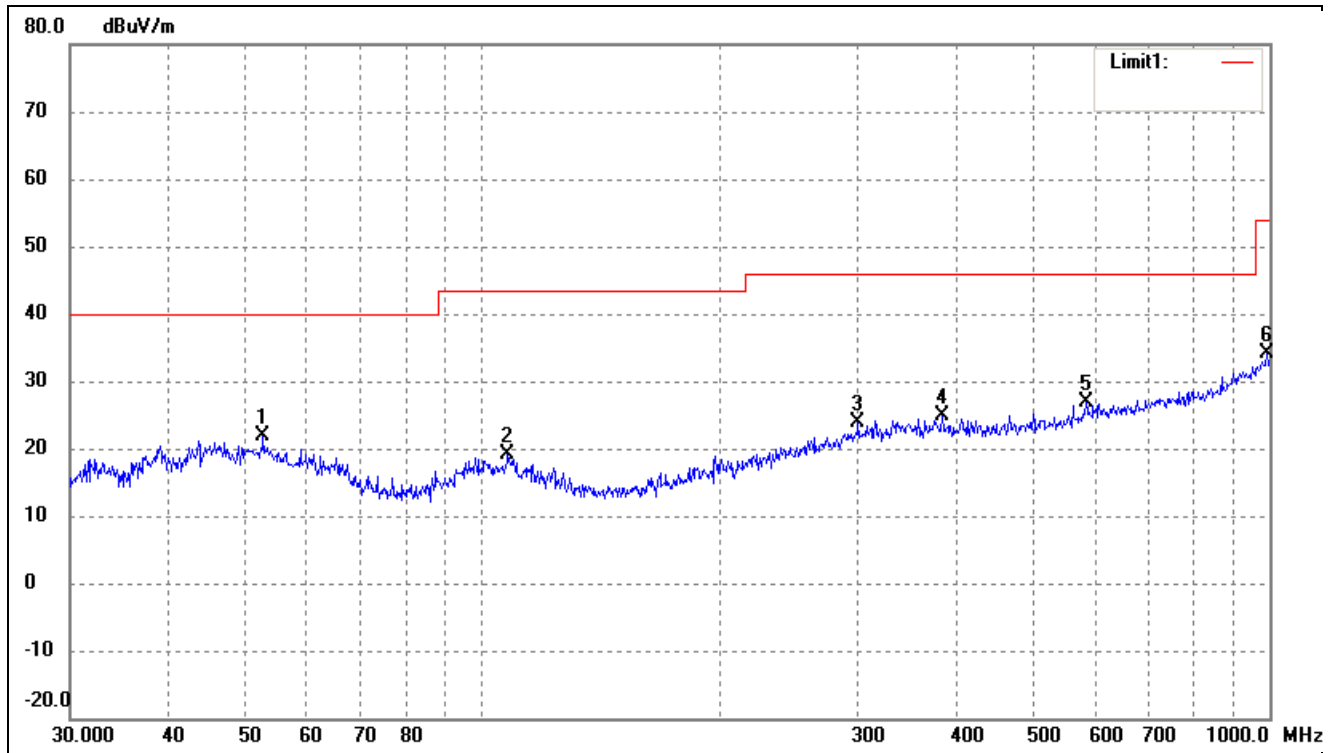
No.	Frequency (MHz)	Reading (dBuV/m)	Correct dB/m	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Degree ()	Height (cm)	Remark
1	46.0164	33.38	-12.91	20.47	40.00	-19.53	226	100	peak
2	63.3132	35.89	-15.02	20.87	40.00	-19.13	96	100	peak
3	107.5101	33.31	-13.97	19.34	43.50	-24.16	173	100	peak
4	346.8092	31.93	-6.49	25.44	46.00	-20.56	110	100	peak
5	582.7425	30.90	-4.29	26.61	46.00	-19.39	218	100	peak
6	996.4996	29.17	3.98	33.15	54.00	-20.85	311	100	peak

Test Channel	Middle	Polarity:	Horizontal
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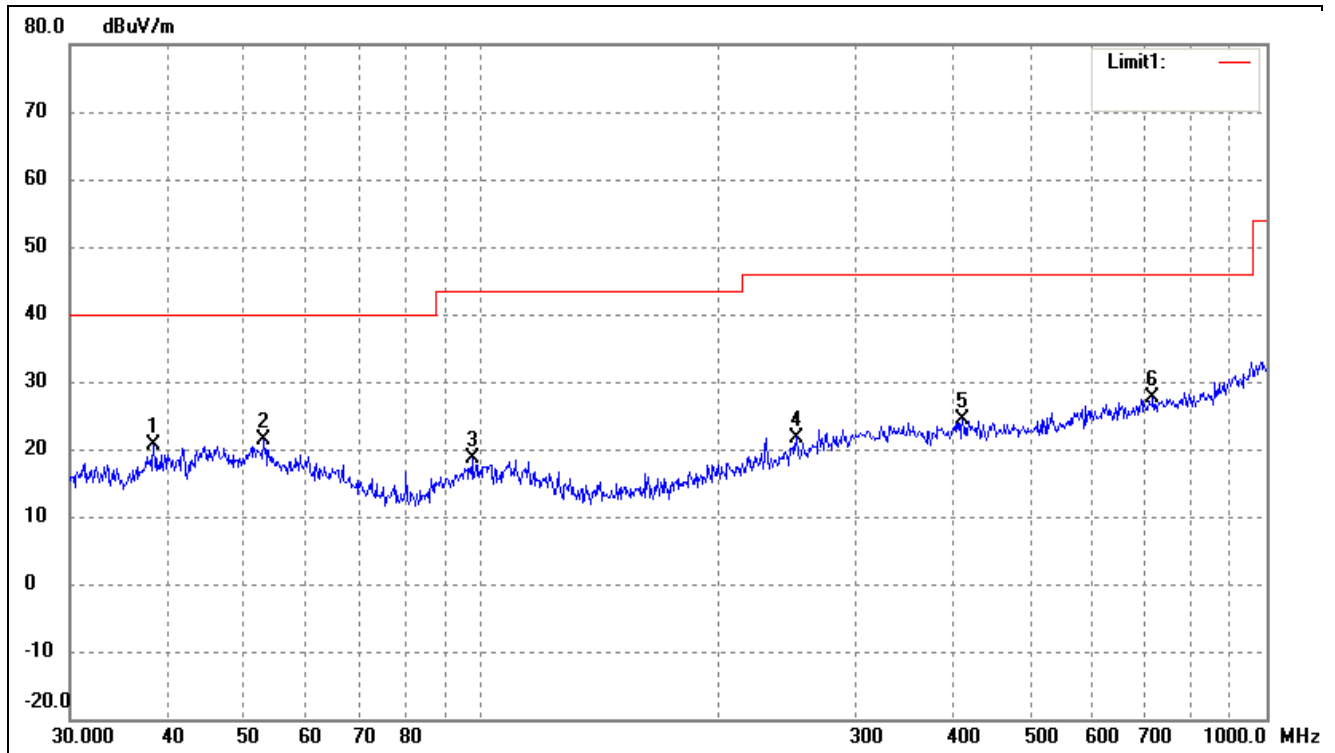
No.	Frequency (MHz)	Reading (dBuV/m)	Correct dB/m	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Degree ()	Height (cm)	Remark
1	51.8430	34.46	-12.81	21.65	40.00	-18.35	240	100	peak
2	100.9340	32.53	-14.38	18.15	43.50	-25.35	203	100	peak
3	294.1137	30.76	-7.58	23.18	46.00	-22.82	100	100	peak
4	485.6093	31.35	-6.05	25.30	46.00	-20.70	174	100	peak
5	763.3757	29.84	-1.67	28.17	46.00	-17.83	241	100	peak
6	1000.0000	29.41	4.04	33.45	54.00	-20.55	155	100	peak

Test Channel	Middle	Polarity:	Vertical
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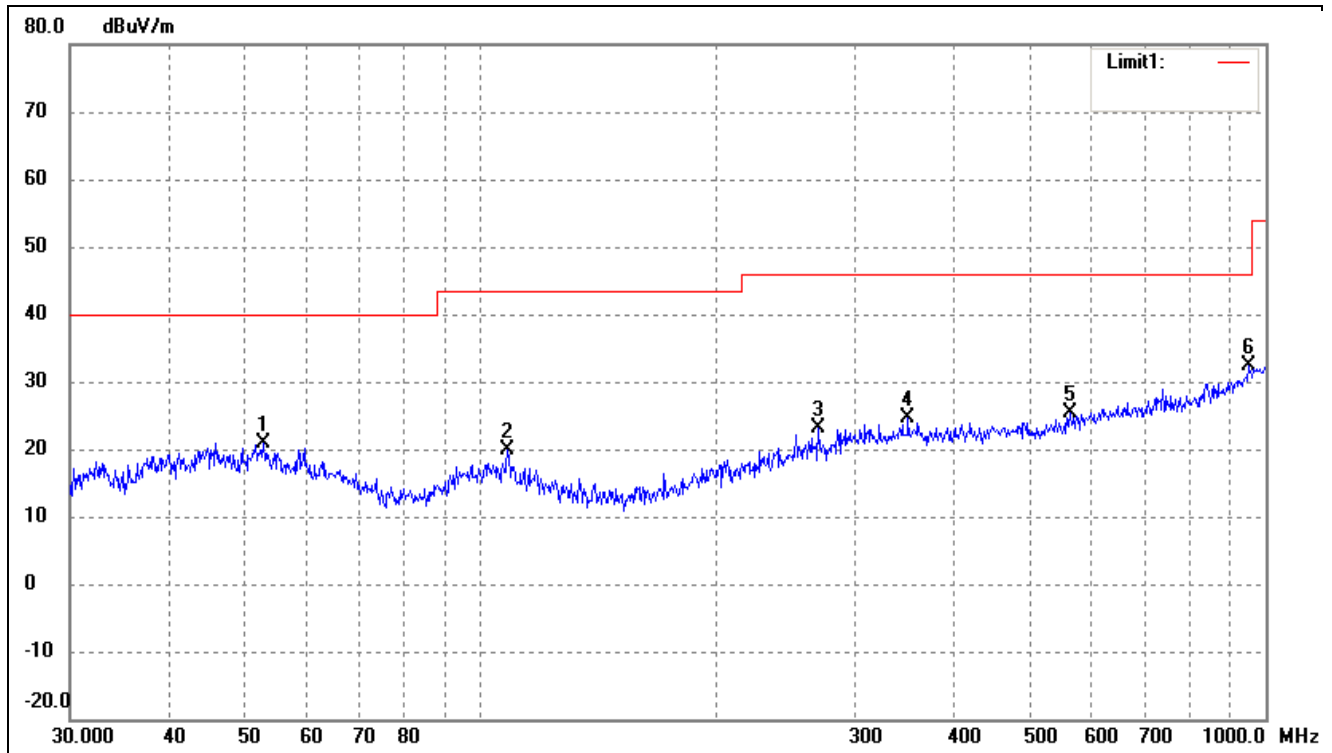
No.	Frequency (MHz)	Reading (dBuV/m)	Correct dB/m	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Degree ()	Height (cm)	Remark
1	52.7600	34.65	-12.87	21.78	40.00	-18.22	166	100	peak
2	107.8877	33.17	-13.97	19.20	43.50	-24.30	194	100	peak
3	300.3673	31.20	-7.44	23.76	46.00	-22.24	102	100	peak
4	383.9318	31.49	-6.67	24.82	46.00	-21.18	123	100	peak
5	584.7895	31.03	-4.21	26.82	46.00	-19.18	351	100	peak
6	993.0114	30.30	3.93	34.23	54.00	-19.77	180	100	peak

Test Channel	High	Polarity:	Horizontal
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No.	Frequency (MHz)	Reading (dBuV/m)	Correct dB/m	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Degree ()	Height (cm)	Remark
1	38.3462	35.08	-14.38	20.70	40.00	-19.30	61	100	peak
2	52.9453	34.29	-12.88	21.41	40.00	-18.59	145	100	peak
3	97.4560	33.36	-14.84	18.52	43.50	-24.98	120	100	peak
4	252.0627	31.48	-9.73	21.75	46.00	-24.25	94	100	peak
5	410.3825	30.53	-6.27	24.26	46.00	-21.74	63	100	peak
6	716.6820	30.05	-2.40	27.65	46.00	-18.35	163	100	peak

Test Channel	High	Polarity:	Vertical
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No.	Frequency (MHz)	Reading (dBuV/m)	Correct dB/m	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Degree ()	Height (cm)	Remark
1	52.9453	33.86	-12.88	20.98	40.00	-19.02	194	100	peak
2	108.2667	33.83	-13.96	19.87	43.50	-23.63	150	100	peak
3	269.4284	32.06	-8.82	23.24	46.00	-22.76	120	100	peak
4	350.4768	31.02	-6.49	24.53	46.00	-21.47	103	100	peak
5	562.6624	30.33	-4.88	25.45	46.00	-20.55	255	100	peak
6	952.0937	29.38	2.91	32.29	46.00	-13.71	213	100	peak

Spurious Emissions Above 1GHz

Frequency	Reading	Correct	Result	Limit	Margin	Polar	Detector
(MHz)	(dBuV/m)	dB/m	(dBuV/m)	(dBuV/m)	(dB)	H/V	
Low Channel-2405MHz							
2405	100.26	-7.40	92.86	114	-21.14	H	PK
2405	98.04	-7.40	90.64	94	-3.36	H	AV
4810	49.70	-6.48	43.22	74	-30.78	H	PK
4810	50.02	-6.48	43.54	54	-10.46	H	AV
7215	53.88	-8.91	44.97	74	-29.03	H	PK
7215	52.71	-8.91	43.80	54	-10.20	H	AV
2405	98.53	-7.40	91.13	114	-22.87	V	PK
2405	97.14	-7.40	89.74	94	-4.26	V	AV
4810	52.01	-6.48	45.53	74	-28.47	V	PK
4810	51.46	-6.48	44.98	54	-9.02	V	AV
7215	52.70	-8.91	43.79	74	-30.21	V	PK
7215	50.66	-8.91	41.75	54	-12.25	V	AV
Middle Channel-2440MHz							
2440	95.45	-7.36	88.09	114	-25.91	H	PK
2440	93.93	-7.36	86.57	94	-7.43	H	AV
4880	51.17	-6.02	45.15	74	-28.85	H	PK
4880	51.47	-6.02	45.45	54	-8.55	H	AV
7320	52.03	-6.88	45.15	74	-28.85	H	PK
7320	52.52	-6.88	45.64	54	-8.36	H	AV
2440	95.08	-7.36	87.72	114	-26.28	V	PK
2440	90.68	-7.36	83.32	94	-10.68	V	AV
4880	52.53	-6.02	46.51	74	-27.49	V	PK
4880	48.71	-6.02	42.69	54	-11.31	V	AV
7320	55.07	-6.88	48.19	74	-25.81	V	PK
7320	52.74	-6.88	45.86	54	-8.14	V	AV

Frequency	Reading	Correct	Result	Limit	Margin	Polar	Detector
(MHz)	(dBuV/m)	dB/m	(dBuV/m)	(dBuV/m)	(dB)	H/V	
High Channel-2476MHz							
2476	98.30	-7.28	91.02	114	-22.98	H	PK
2476	95.71	-7.28	88.43	94	-5.57	H	AV
4952	51.77	-7.03	44.74	74	-29.26	H	PK
4952	48.99	-7.03	41.96	54	-12.04	H	AV
7428	56.27	-9.47	46.80	74	-27.20	H	PK
7428	53.28	-9.47	43.81	54	-10.19	H	AV
2476	96.55	-7.28	89.27	114	-24.73	V	PK
2476	92.44	-7.28	85.16	94	-8.84	V	AV
4952	50.34	-7.03	43.31	74	-30.69	V	PK
4952	49.72	-7.03	42.69	54	-11.31	V	AV
7428	54.21	-9.47	44.74	74	-29.26	V	PK
7428	52.43	-9.47	42.96	54	-11.04	V	AV

Note: Testing is carried out with frequency rang 9kHz to the tenth harmonics, which above 5th Harmonics are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.

The measurements greater than 20dB below the limit from 9kHz to 30MHz..

5. Out of Band Emissions

5.1 Standard Applicable

Emissions radiated outside of the specified frequency bands, except for harmonics, shall be attenuated by at least 50 dB below the level of the fundamental or to the general radiated emission limits in §15.209, whichever is the lesser attenuation.

5.2 Test Procedure

As the radiation test, set the Lowest and Highest Transmitting Channel, observed the outside band of 2400MHz to 2483.5MHz, than mark the higher-level emission for comparing with the FCC rules.

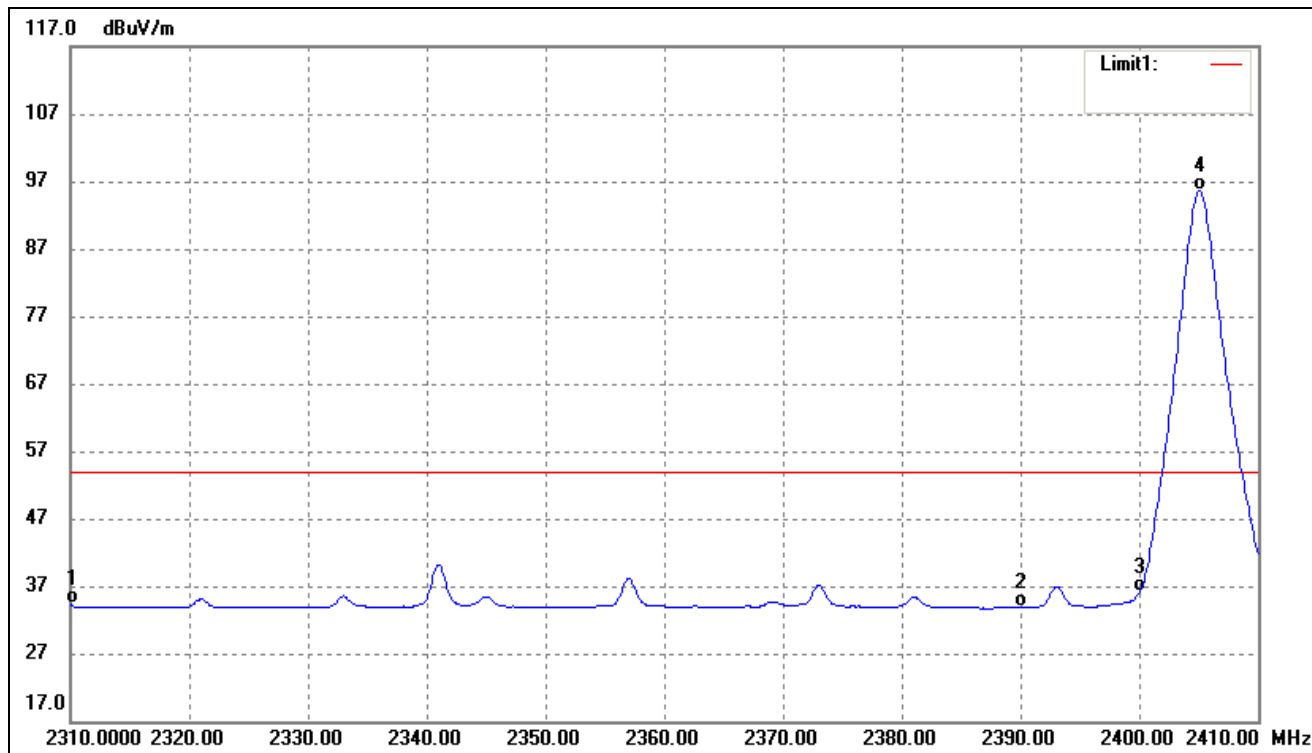
5.3 Summary of Test Results/Plots

Test mode	Frequency	Limit	Result
	MHz	dBuV / dBc	
Lowest	2310.00	<54 dBuV	Pass
	2390.00	<54 dBuV	Pass
	2400.00	<54 dBuV	Pass
Highest	2483.50	<54 dBuV	Pass
	2500.00	<54 dBuV	Pass

The edge emissions are below the FCC 15.209 Limits or complies with the 15.249 requirements.

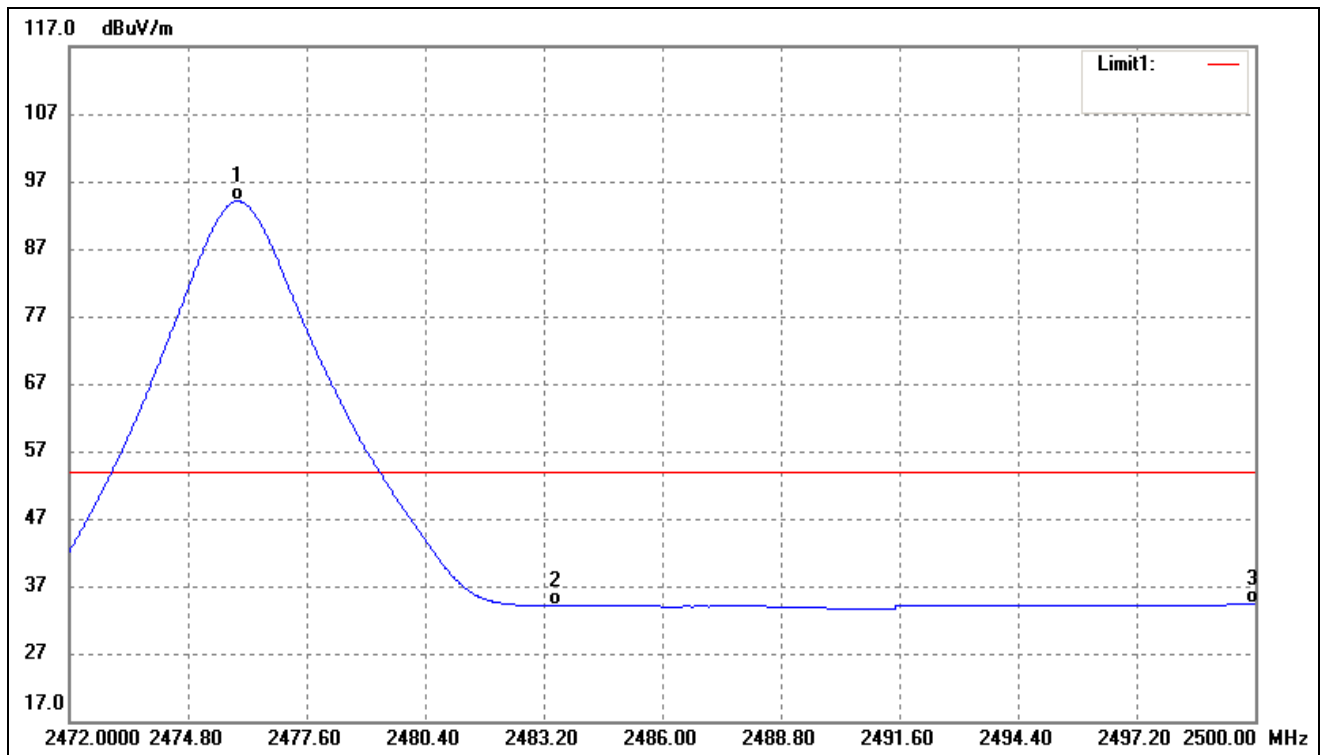
Please refer to the test plots as below.

Test Channel	Low	Polarity:	Vertical(worst case)
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No.	Frequency (MHz)	Reading (dBuV/m)	Correct dB/m	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2310.000	42.12	-7.78	34.34	54.00	-19.66	Ave Detector
	2310.000	54.29	-7.78	46.51	74.00	-27.49	Peak Detector
2	2390.000	41.20	-7.32	33.88	54.00	-20.12	Ave Detector
	2390.000	52.56	-7.32	45.24	74.00	-28.76	Peak Detector
3	2400.000	43.30	-7.26	36.04	54.00	-17.96	Ave Detector
	2400.000	54.79	-7.26	47.53	74.00	-26.47	Peak Detector
4	2405.100	102.77	-7.22	95.55	/	/	Ave Detector
	2405.000	102.98	-7.22	95.76	/	/	Peak Detector

Test Channel	High	Polarity:	Vertical(worst case)
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No.	Frequency (MHz)	Reading (dBuV/m)	Correct dB/m	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2475.976	100.89	-6.81	94.08	/	/	Ave Detector
	2475.892	101.08	-6.81	94.27	/	/	Peak Detector
2	2483.500	40.88	-6.77	34.11	54.00	-19.89	Ave Detector
	2483.500	52.90	-6.77	46.13	74.00	-27.87	Peak Detector
3	2500.000	40.93	-6.67	34.26	54.00	-19.74	Ave Detector
	2500.000	52.63	-6.67	45.96	74.00	-28.04	Peak Detector

6. Emission Bandwidth

6.1 Standard Applicable

According to 15.215 (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.

6.2 Test Procedure

According to the ANSI 63.10-2013, the emission bandwidth test method as follows.

Remove the antenna from the EUT and then connect a low loss RF cable from the antenna port to the spectrum analyzer.

Set span = 1MHz, centered on a transmitting channel

RBW $\geq 1\%$ 20dB Bandwidth, VBW \geq RBW

Sweep = auto

Detector function = peak

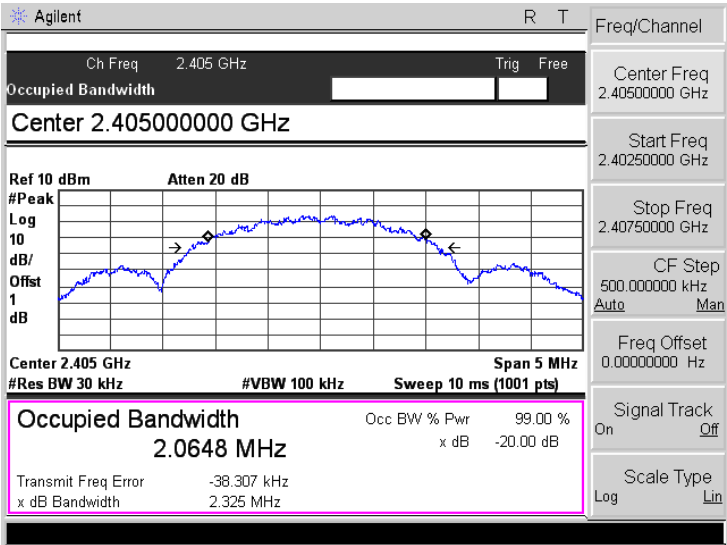
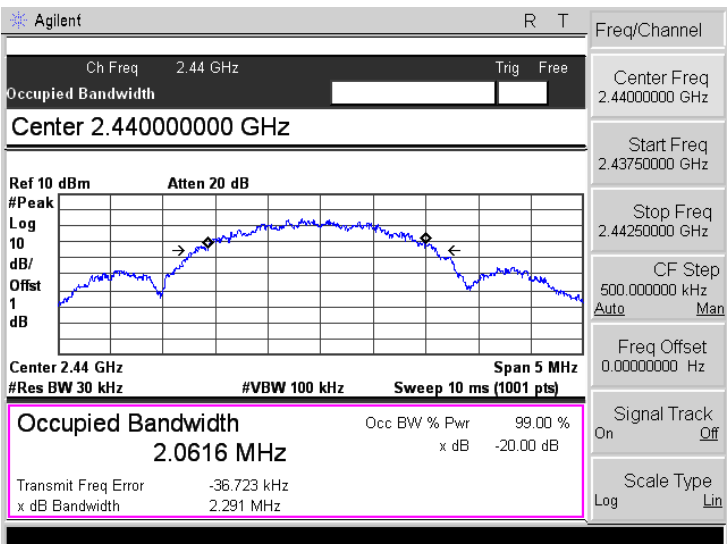
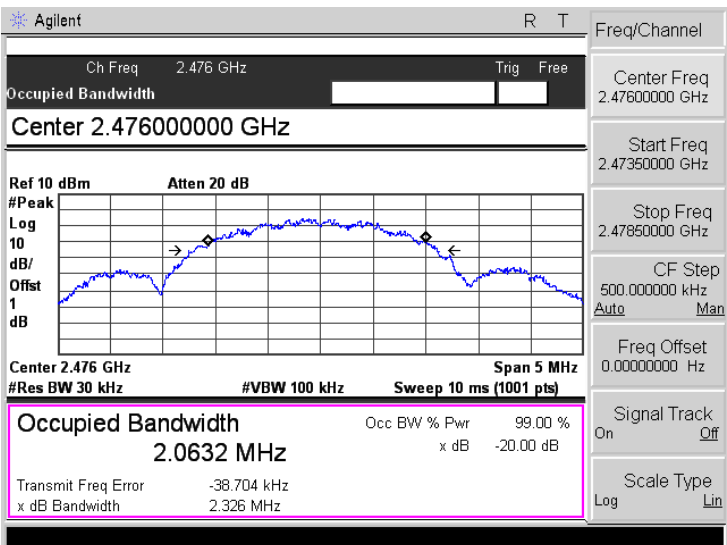
Trace = max hold

All the trace to stabilize, use the marker-to-peak function to set the marker to the peak of the emission, use the marker-delta function to measure and record the 20dB down and 99% bandwidth of the emission.

6.3 Summary of Test Results/Plots

Test Channel	20dB Bandwidth(kHz)
Low Channel	2325
Middle Channel	2291
High Channel	2326

Please refer to the following test plots

Low Channel	 <p>Agilent R T</p> <p>Ch Freq 2.405 GHz Trig Free</p> <p>Occupied Bandwidth</p> <p>Center 2.40500000 GHz</p> <p>Ref 10 dBm Atten 20 dB</p> <p>#Peak Log 10 dB/Offset 1 dB</p> <p>Center 2.405 GHz Span 5 MHz</p> <p>#Res BW 30 kHz #VBW 100 kHz Sweep 10 ms (1001 pts)</p> <p>Occupied Bandwidth 2.0648 MHz</p> <p>Occ BW % Pwr 99.00 % x dB -20.00 dB</p> <p>Transmit Freq Error -38.307 kHz</p> <p>x dB Bandwidth 2.325 MHz</p> <p>Freq/Channel</p> <p>Center Freq 2.40500000 GHz</p> <p>Start Freq 2.40250000 GHz</p> <p>Stop Freq 2.40750000 GHz</p> <p>CF Step 500.000000 kHz Auto Man</p> <p>Freq Offset 0.00000000 Hz</p> <p>Signal Track On Off</p> <p>Scale Type Log Lin</p>
Middle Channel	 <p>Agilent R T</p> <p>Ch Freq 2.44 GHz Trig Free</p> <p>Occupied Bandwidth</p> <p>Center 2.44000000 GHz</p> <p>Ref 10 dBm Atten 20 dB</p> <p>#Peak Log 10 dB/Offset 1 dB</p> <p>Center 2.44 GHz Span 5 MHz</p> <p>#Res BW 30 kHz #VBW 100 kHz Sweep 10 ms (1001 pts)</p> <p>Occupied Bandwidth 2.0616 MHz</p> <p>Occ BW % Pwr 99.00 % x dB -20.00 dB</p> <p>Transmit Freq Error -36.723 kHz</p> <p>x dB Bandwidth 2.291 MHz</p> <p>Freq/Channel</p> <p>Center Freq 2.44000000 GHz</p> <p>Start Freq 2.43750000 GHz</p> <p>Stop Freq 2.44250000 GHz</p> <p>CF Step 500.000000 kHz Auto Man</p> <p>Freq Offset 0.00000000 Hz</p> <p>Signal Track On Off</p> <p>Scale Type Log Lin</p>
High Channel	 <p>Agilent R T</p> <p>Ch Freq 2.476 GHz Trig Free</p> <p>Occupied Bandwidth</p> <p>Center 2.47600000 GHz</p> <p>Ref 10 dBm Atten 20 dB</p> <p>#Peak Log 10 dB/Offset 1 dB</p> <p>Center 2.476 GHz Span 5 MHz</p> <p>#Res BW 30 kHz #VBW 100 kHz Sweep 10 ms (1001 pts)</p> <p>Occupied Bandwidth 2.0632 MHz</p> <p>Occ BW % Pwr 99.00 % x dB -20.00 dB</p> <p>Transmit Freq Error -38.704 kHz</p> <p>x dB Bandwidth 2.326 MHz</p> <p>Freq/Channel</p> <p>Center Freq 2.47600000 GHz</p> <p>Start Freq 2.47350000 GHz</p> <p>Stop Freq 2.47850000 GHz</p> <p>CF Step 500.000000 kHz Auto Man</p> <p>Freq Offset 0.00000000 Hz</p> <p>Signal Track On Off</p> <p>Scale Type Log Lin</p>

7. Conducted Emissions

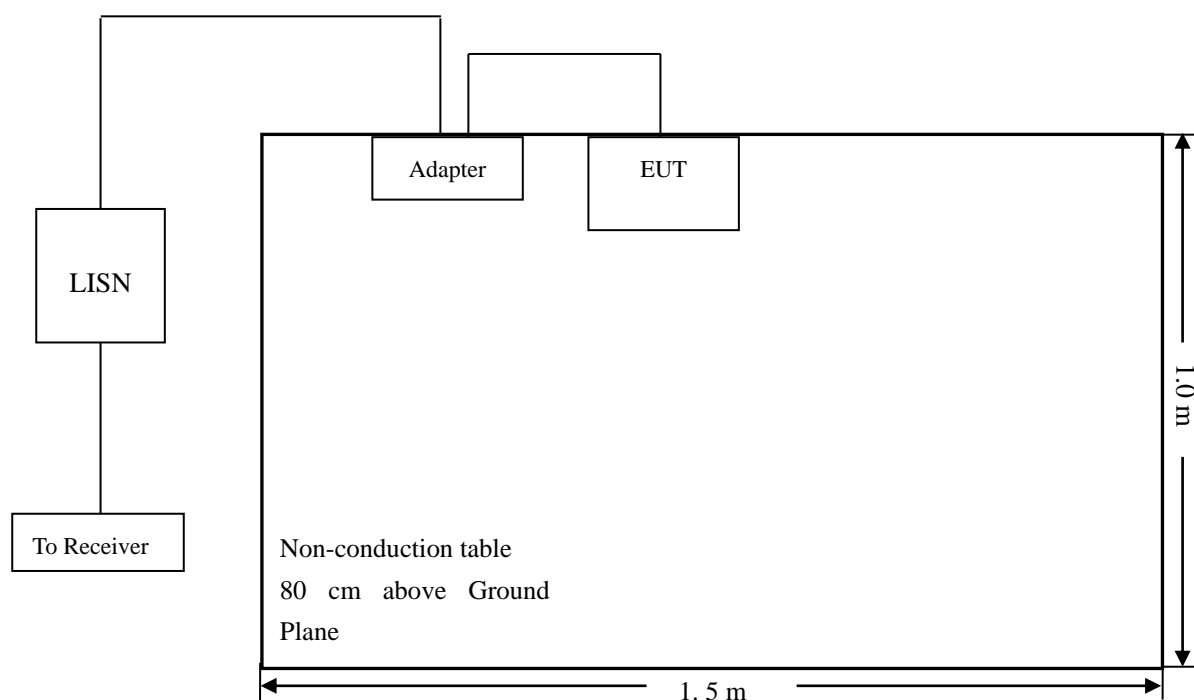
7.1 Test Procedure

The setup of EUT is according with per ANSI C63.10-2013 measurement procedure. The specification used was with the FCC Part 15.207 Limit.

The external I/O cables were draped along the test table and formed a bundle 30 to 40 cm long in the middle.

The spacing between the peripherals was 10 cm.

7.2 Basic Test Setup Block Diagram



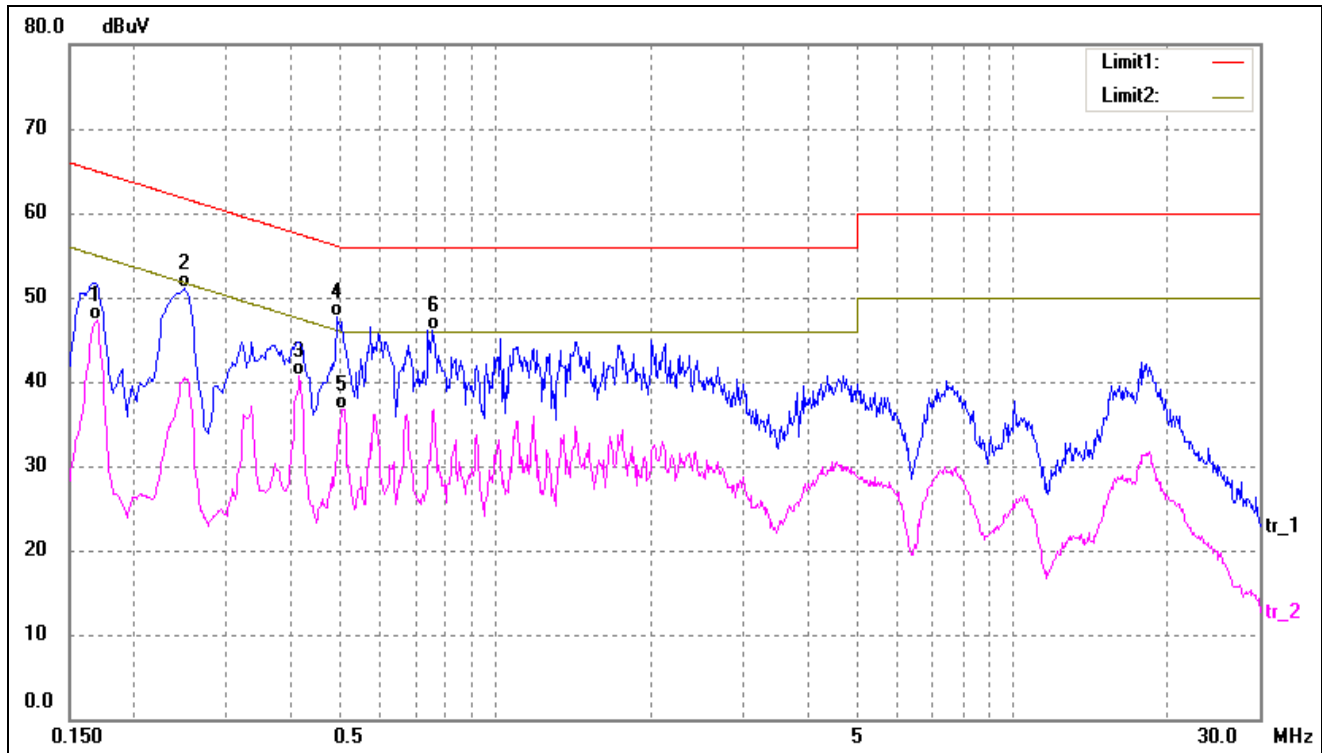
7.3 Test Receiver Setup

During the conducted emission test, the test receiver was set with the following configurations:

Start Frequency	150 kHz
Stop Frequency	30 MHz
Sweep Speed	Auto
IF Bandwidth.....	10 kHz
Quasi-Peak Adapter Bandwidth	9 kHz
Quasi-Peak Adapter Mode	Normal

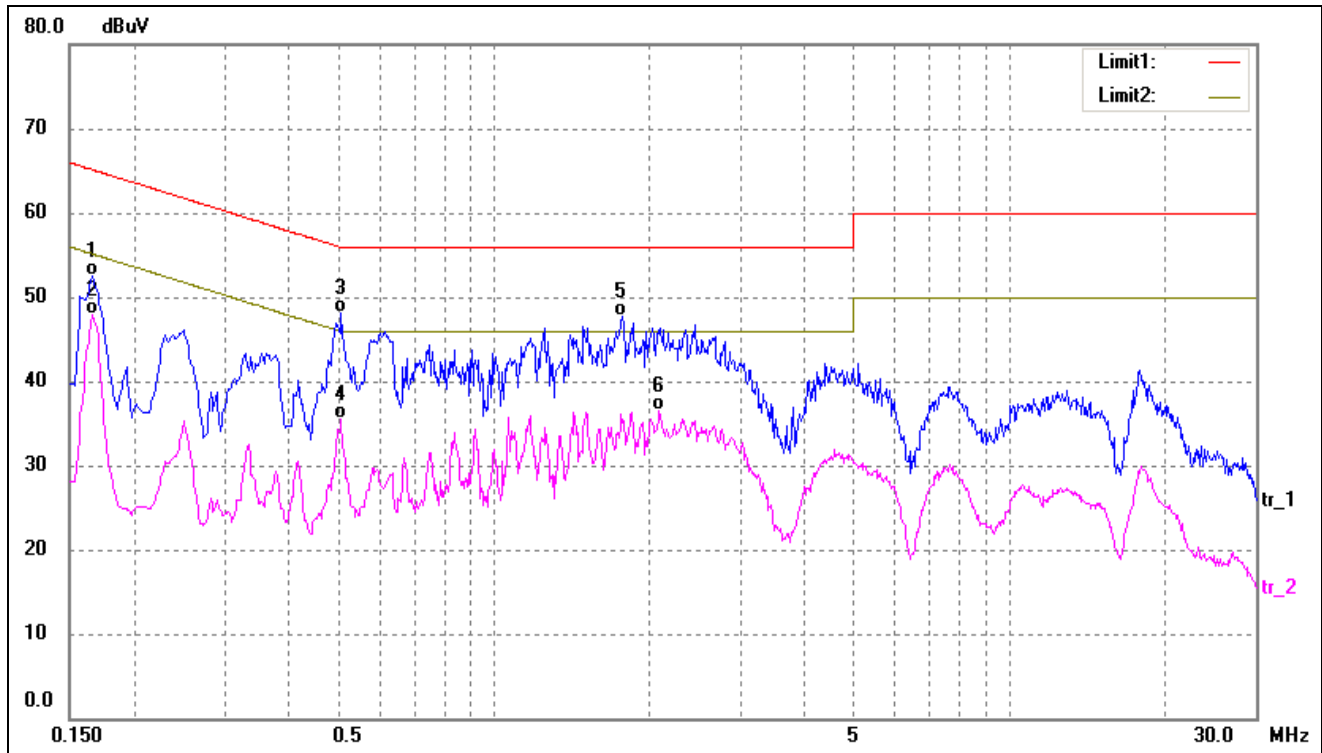
7.4 Summary of Test Results/Plots

Test Mode	Communication	AC120V 60Hz	Polarity:	Neutral
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No.	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV)	Limit (dBuV)	Margin (dB)	Detector
1	0.1700	37.21	10.11	47.32	54.96	-7.64	AVG
2	0.2500	40.97	10.16	51.13	61.76	-10.63	QP
3*	0.4180	30.35	10.26	40.61	47.49	-6.88	AVG
4	0.4940	37.35	10.29	47.64	56.10	-8.46	QP
5	0.5060	26.50	10.29	36.79	46.00	-9.21	AVG
6	0.7540	35.77	10.41	46.18	56.00	-9.82	QP

Test Mode	Communication	AC120V 60Hz	Polarity:	Line
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***** END OF REPORT *****