



REPORT No. : SZ16060158W03

FCC RF TEST REPORT

APPLICANT : Nomura Engineering Co., Ltd.
PRODUCT NAME : Radio Module
MODEL NAME : TS02FE-F
TRADE NAME : N/A
BRAND NAME : N/A
FCC ID : 2AIXL-TS02FE
STANDARD(S) : 47 CFR Part 15 Subpart C
ISSUE DATE : 2016-09-08



SHENZHEN MORLAB COMMUNICATIONS TECHNOLOGY Co., Ltd.

NOTE: This document is issued by MORLAB, the test report shall not be reproduced except in full without prior written permission of the company. The test results apply only to the particular sample(s) tested and to the specific tests carried out which is available on request for validation and information confirmed at our website.

MORLAB GROUP

FL1-3, Building A, FeiYang Science Park, No.8 LongChang Road,
Block67, BaoAn District, ShenZhen , GuangDong Province, P. R. China

Tel: 86-755-36698555

Fax: 86-755-36698525

[Http://www.morlab.com](http://www.morlab.com)

E-mail: service@morlab.cn



DIRECTORY

TEST REPORT DECLARATION.....4

1. TECHNICAL INFORMATION5

1.1 APPLICANT INFORMATION5

1.2 EQUIPMENT UNDER TEST (EUT) DESCRIPTION5

1.2.1 IDENTIFICATION OF ALL USED EUTS5

1.3 TEST STANDARDS AND RESULTS5

1.3.1 TEST ENVIRONMENT CONDITIONS6

2. 47 CFR PART 15C REQUIREMENTS.....7

2.1 ANTENNA REQUIREMENT7

2.1.1 APPLICABLE STANDARD7

2.1.2 RESULT: COMPLIANT7

2.2 RELEASE TIME MEASUREMENT7

2.2.1 REQUIREMENT7

2.2.2 TEST DESCRIPTION7

2.2.3 TEST RESULT8

2.3 20DB BANDWIDTH10

2.3.1 REQUIREMENT10

2.3.2 TEST DESCRIPTION10

2.3.3 TEST RESULT11

2.4 CONDUCTED EMISSION13

2.4.1 REQUIREMENT13

2.4.2 TEST DESCRIPTION13

2.4.3 TEST RESULT13

2.5 RADIATED EMISSION14

2.5.1 REQUIREMENT14

2.5.2 TEST DESCRIPTION15

2.5.3 TEST RESULT17

ANNEX A GENERAL INFORMATION.....28



REPORT No. : SZ16060158W03

Change History

Issue	Date	Reason for change
1.0	2016-09-08	First edition

**TEST REPORT DECLARATION**

Applicant	Nomura Engineering Co., Ltd.
Applicant Address	1-7-2 Shibuya, Yamato City, Kanagawa, 242-0023 Japan
Manufacturer	Nomura Engineering Co., Ltd.
Manufacturer Address	1-7-2 Shibuya, Yamato City, Kanagawa, 242-0023 Japan
Product Name	Radio Module
Model Name	TS02FE-F
Brand Name	N/A
HW Version	P5-3
SW Version	0040
Test Standards	47 CFR Part 15 Subpart C
Test Date	2016-08-08 to 2016-09-07
Test Result	PASS

Tested by : Zou Jian
Zou Jian

Reviewed by : Qiu Xiaojun
Qiu Xiaojun

Approved by : Peng Muarui
Peng Muarui



1. TECHNICAL INFORMATION

Note: Provide by applicant.

1.1 Applicant Information

Company:	Nomura Engineering Co., Ltd.
Address:	1-7-2 Shibuya, Yamato City, Kanagawa, 242-0023 Japan

1.2 Equipment under Test (EUT) Description

Brand Name:	N/A
Trade Name:	N/A
Model Name:	TS02FE-F
Frequency Range:	The frequency used is 434.05MHz -434.5375MHz
Modulation Type:	FSK
Transmitter Bandwidth:	12.5KHz
Antenna Type:	$\lambda/4$ antenna
Antenna Gain:	2.14dBi

NOTE:

The EUT is a Radio Module and the frequencies allocated for the Radio Module is $F(\text{MHz})=434.05+0.0125*(n-1)$ ($1 \leq n \leq 40$). The lowest, middle, highest channel numbers of the Bluetooth Module used and tested in this report are separately 1 (434.05MHz), 20 (434.2875MHz) and 40 (434.5375MHz).

For a more detailed description, please refer to Specification or User's Manual supplied by the applicant and/or manufacturer.

1.2.1 Identification of all used EUTs

The EUT identity consists of numerical and letter characters, the letter character indicates the test sample, and the following two numerical characters indicate the software version of the test sample.

EUT Identity	Hardware Version	Software Version
A01	P5-3	0040

1.3 Test Standards and Results

The objective of the report is to perform testing according to 47 CFR Part 15 Subpart C for the EUT FCC ID Certification:

No.	Identity	Document Title
1	47 CFR Part 15(10-1-13 Edition)	Radio Frequency Devices



Test detailed items/section required by FCC rules and results are as below:

No.	Section	Description	Result
1	15.203	Antenna Requirement	<u>PASS</u>
2	15.231(a)(1)	Release Time measurement	<u>PASS</u>
3	15.231(c)	20dB Bandwidth	<u>PASS</u>
4	15.207	Conducted Emission	<u>PASS</u>
5	15.231(b)&15.209(a)	Radiated Emission	<u>PASS</u>

The tests of Conducted Emission and Radiated Emission were performed according to the method of measurements prescribed in ANSI C63.10 2013.

1.3.1 Test Environment Conditions

During the measurement, the environmental conditions were within the listed ranges:

Temperature (°C):	15 - 35
Relative Humidity (%):	30 -60
Atmospheric Pressure (kPa):	86-106

2. 47 CFR PART 15C REQUIREMENTS

2.1 Antenna requirement

2.1.1 Applicable Standard

According to FCC 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.

2.1.2 Result: Compliant

The EUT has a permanently and irreplaceable attached antenna. Please refer to the EUT internal photos.

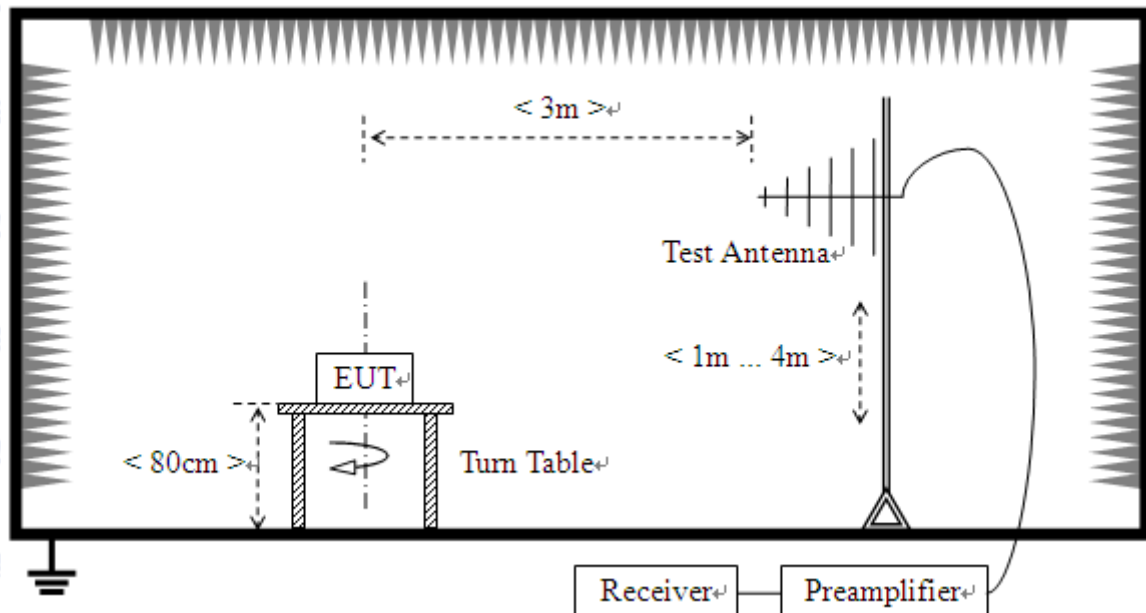
2.2 Release Time measurement

2.2.1 Requirement

A manually operated transmitter shall employ a switch that will automatically deactivate the transmitter within not more than 5 seconds of being released.

2.2.2 Test Description

A. Test Setup:





B. Test procedure:

Set SPA Center Frequency=Fundamental frequency, RBW=1MHz, VBW=3MHz, Span=0Hz, Sweep time=10s.

Set EUT as normal operation and press Transmitter button.

Set SPA View. Delta Mark time.

C. Equipments List:

Please reference ANNEX A(1.5).

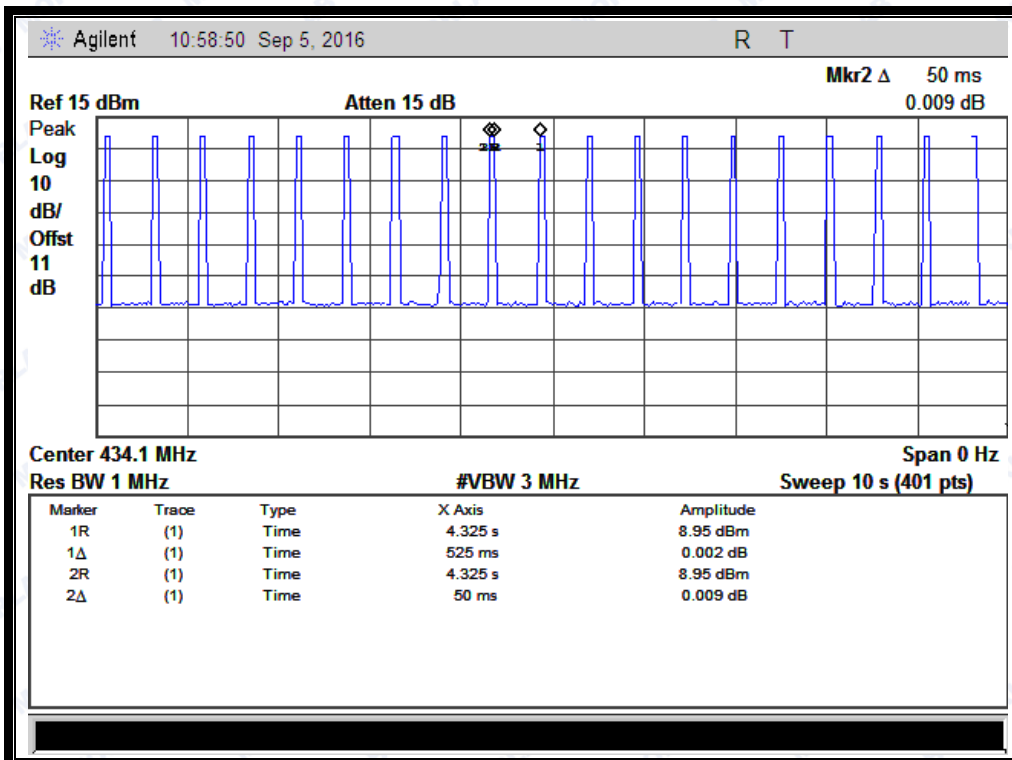
2.2.3 Test Result

The lowest, middle and highest channels are selected to perform testing to verify the radiated release time measurement of the Module.

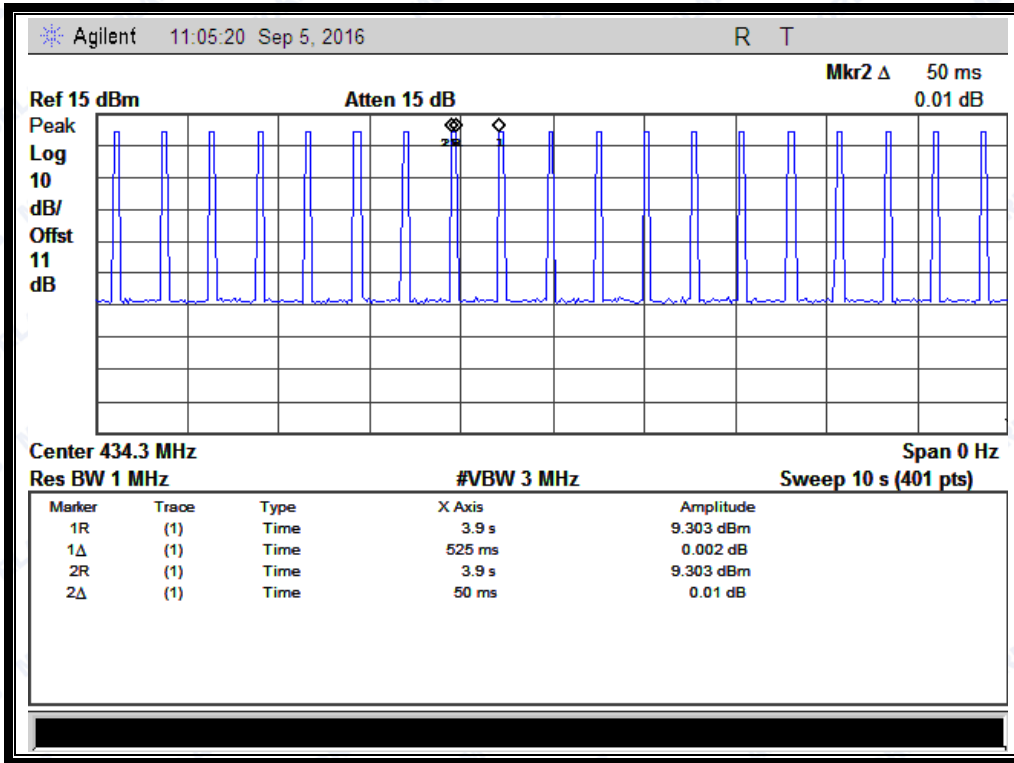
A. Test Verdict:

Channel	Frequency (MHz)	Release Time	Limit	Verdict
1	434.05	50ms	5S	PASS
20	434.2875	50ms	5S	PASS
40	434.5875	50ms	5S	PASS

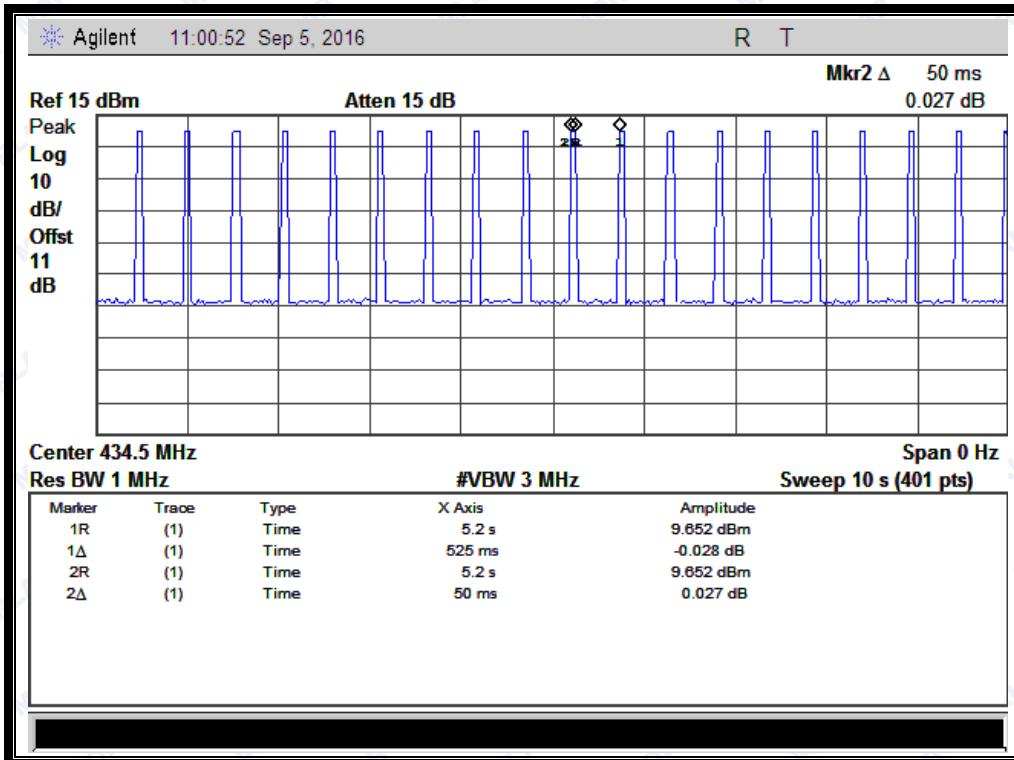
B. Test Plots:



(Channel 1 434.05MHz)



(Channel 20 434.2875MHz)



(Channel 40 434.5875MHz)

2.3 20dB Bandwidth

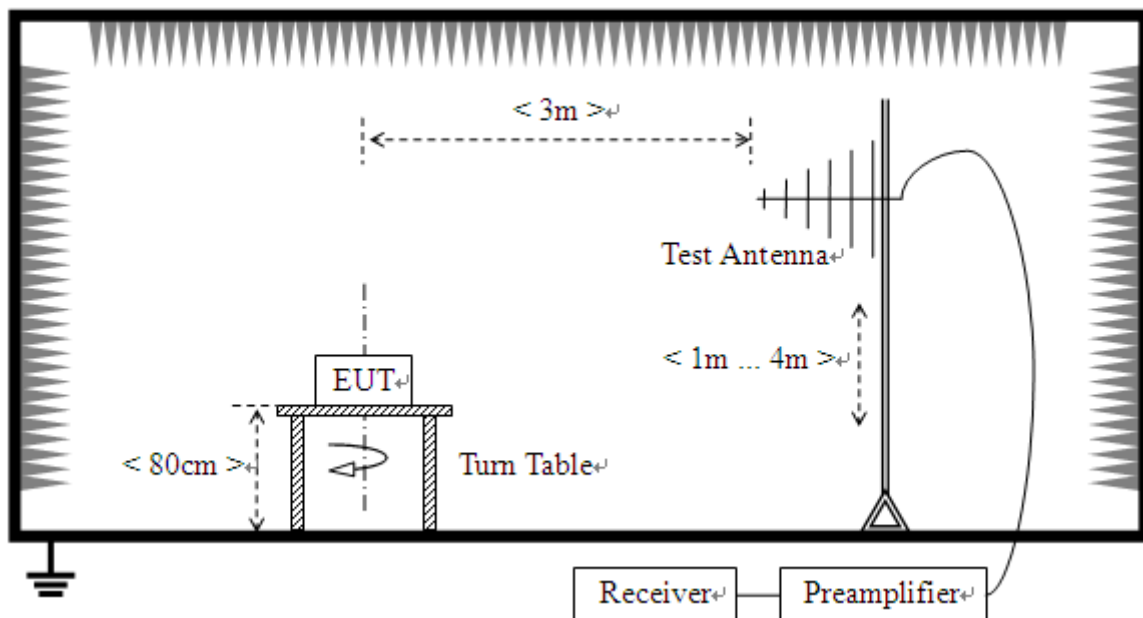
2.3.1 Requirement

The bandwidth of the emission shall be no wider than 0.25% of the center frequency for devices operating above 70 MHz and below 900 MHz. For devices operating above 900 MHz, the emission shall be no wider than 0.5% of the center frequency. Bandwidth is determined at the points 20 dB down from the modulated carrier.

As the Lowest, Middle, Highest frequency for the device operating is 434.05MHz, 434.2875MHz, 434.5375MHz, thus, the 20dB bandwidth limit is 1085.125KHz, 1085.719KHz, 1086.344KHz.

2.3.2 Test Description

A. Test Set:



B. Test procedure:

Set spectrum analyzer's Center Frequency = Fundamental frequency, RBW, VBW and span to applicable value with Peak in Max Hold, A PEAK output reading and 20db Bandwidth function in spectrum analyzer were taken.

C. Equipments List:

Please reference ANNEX A(1.5).

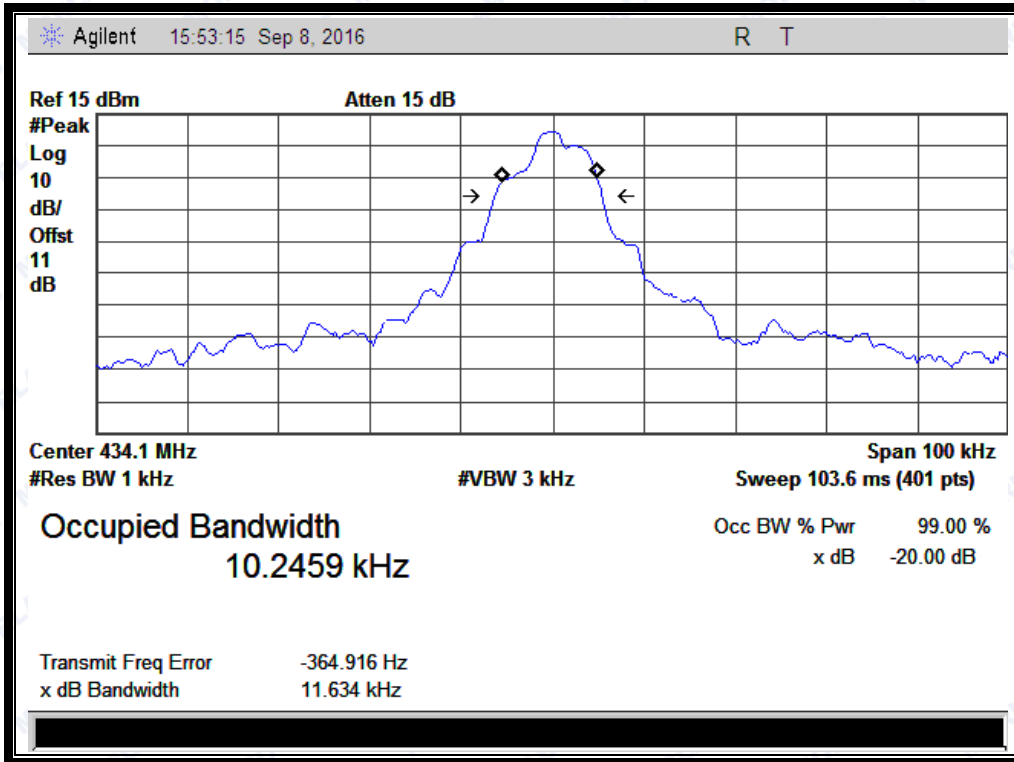


2.3.3 Test Result

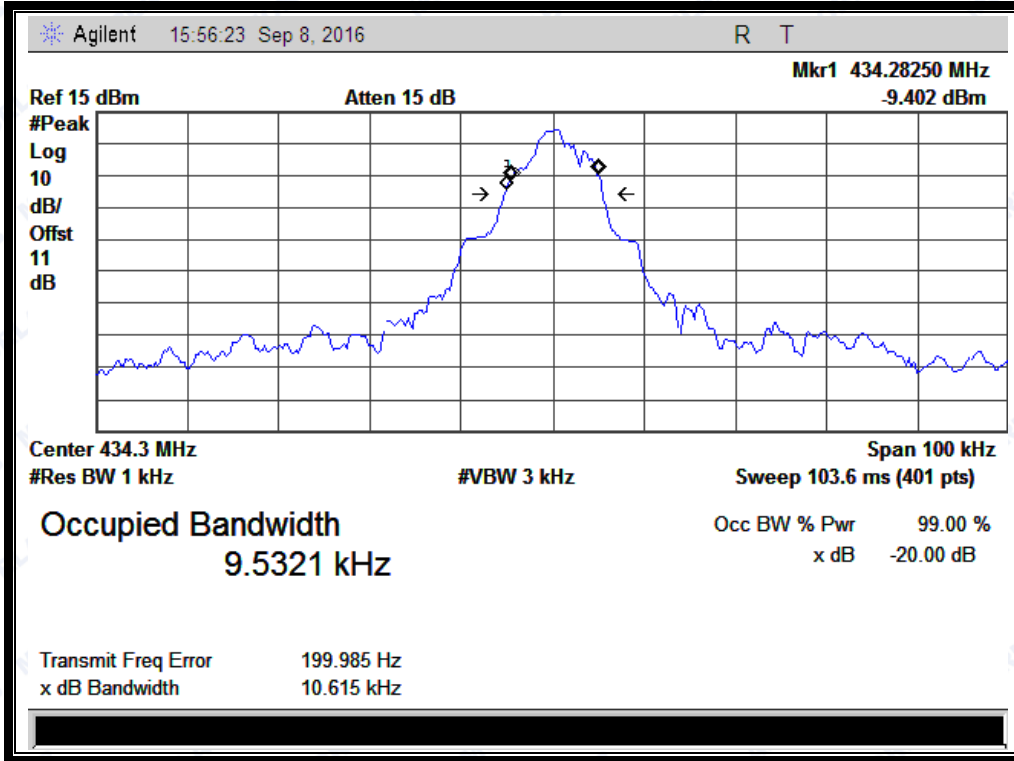
A. Test Verdict:

Channel	Frequency (MHz)	20dB Bandwidth (KHz)	Limits(kHz)	Result
1	434.05	11.634	1085.125	PASS
20	434.2875	10.615	1085.719	PASS
40	434.5375	11.331	1086.344	PASS

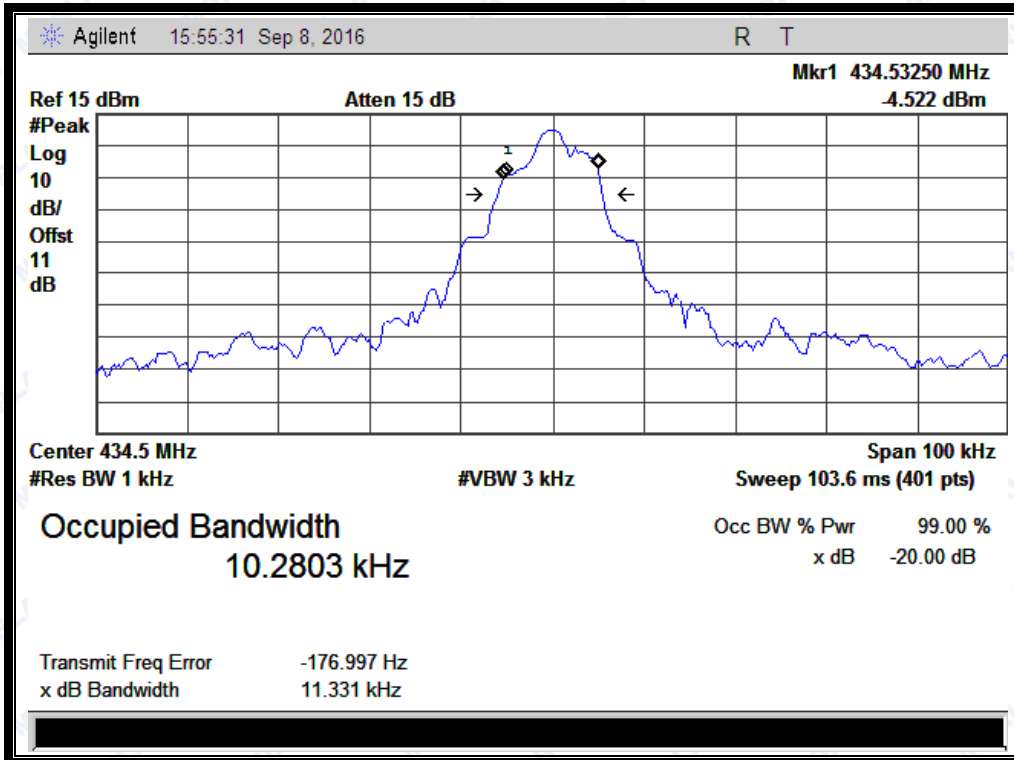
B. Test Plots:



(Channel 1 434.05MHz)



(Channel 20 434.2875MHz)



(Channel 40 434.5375MHz)

2.4 Conducted Emission

2.4.1 Requirement

According to FCC section 15.207, for an intentional radiator that is designed to be connected to the public utility (AC) power line, the radio frequency voltage that is conducted back onto the AC power line on any frequency within the band 150kHz to 30MHz shall not exceed the limits in the following table, as measured using a 50 μ H/50 Ω line impedance stabilization network (LISN).

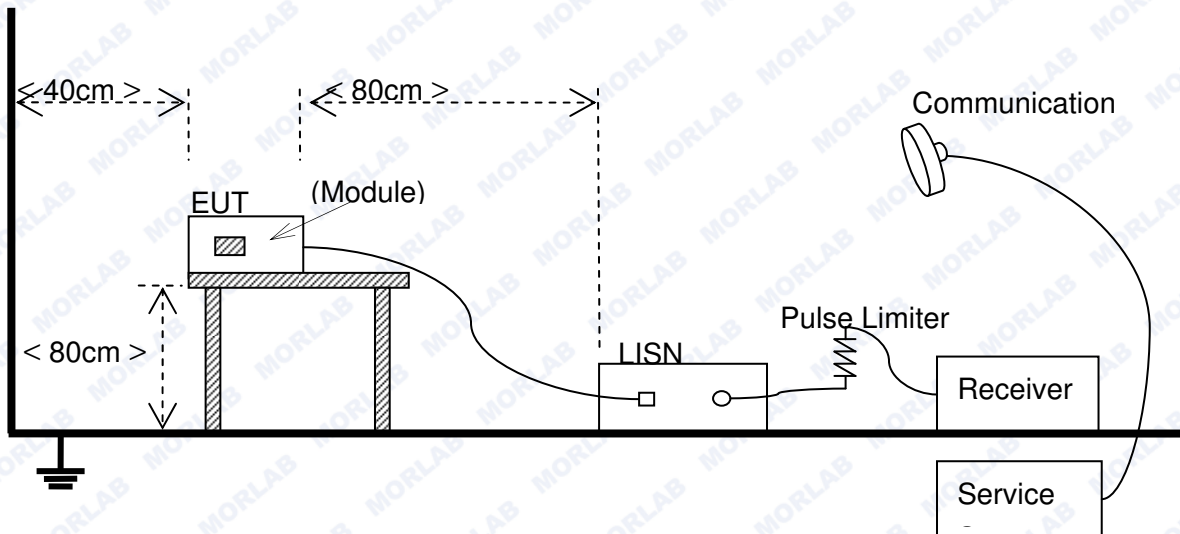
Frequency range (MHz)	Conducted Limit (dB μ V)	
	Quai-peak	Average
0.15 - 0.50	66 to 56	56 to 46
0.50 - 5	56	46
5 - 30	60	50

NOTE:

- The lower limit shall apply at the band edges.
- The limit decreases linearly with the logarithm of the frequency in the range 0.15 - 0.50MHz.

2.4.2 Test Description

A. Test Setup:



The Table-top EUT was placed upon a non-metallic table 0.8m above the horizontal metal reference ground plane. EUT was connected to LISN and LISN was connected to reference Ground Plane. EUT was 80cm from LISN. The set-up and test methods were according to ANSI C63.10:2013

B. Equipments List:

Please reference ANNEX A(1.5).

2.4.3 Test Result

This test case not applies this kind of EUT.



2.5 Radiated Emission

2.5.1 Requirement

According to FCC section 15.247(d), radiated emission outside the frequency band attenuation below the general limits specified in FCC section 15.209(a) is not required. In addition, radiated emissions which fall in the restricted bands, as defined in FCC section 15.205(a), must also comply with the radiated emission limits specified in FCC section 15.209(a).

According to FCC section 15.209 (a), except as provided elsewhere in this subpart, the emissions from an intentional radiator shall not exceed the field strength levels specified in the following table:

Frequency (MHz)	Field Strength ($\mu\text{V}/\text{m}$)	Measurement Distance (m)
0.009 - 0.490	2400/F(kHz)	300
0.490 - 1.705	24000/F(kHz)	30
1.705 - 30.0	30	30
30 - 88	100	3
88 - 216	150	3
216 - 960	200	3
Above 960	500	3

FCC Part 15.231(b)

Fundamental frequency(MHz)	Field strength of fundamental (microvolts/meter)	Field strength of spurious emission(microvolts/meter)
40.66-40.70	2250	225
70-130	1250	125
130-174	1250 to 3750	125 to 375
174-260	3750	375
260-470	3750 to 12500	375 to 1250
Above 470	12500	1250

¹ Linear interpolations.

Note:

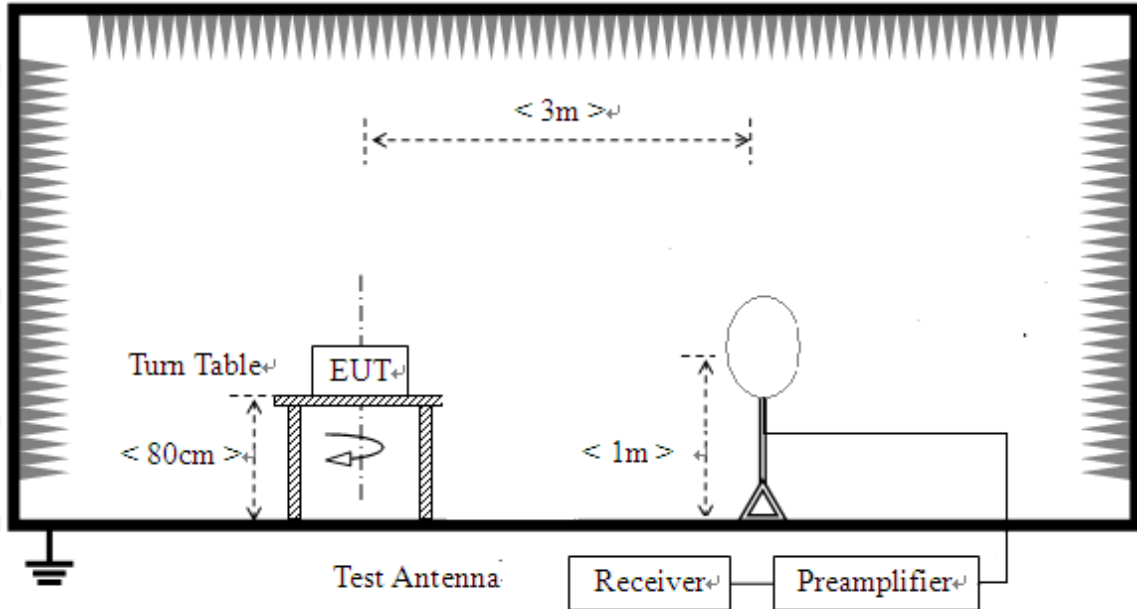
For Above 1000MHz, the emission limit in this paragraph is based on measurement instrumentation employing an average detector, measurement using instrumentation with a peak detector function, corresponding to 20dB above the maximum permitted average limit.

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

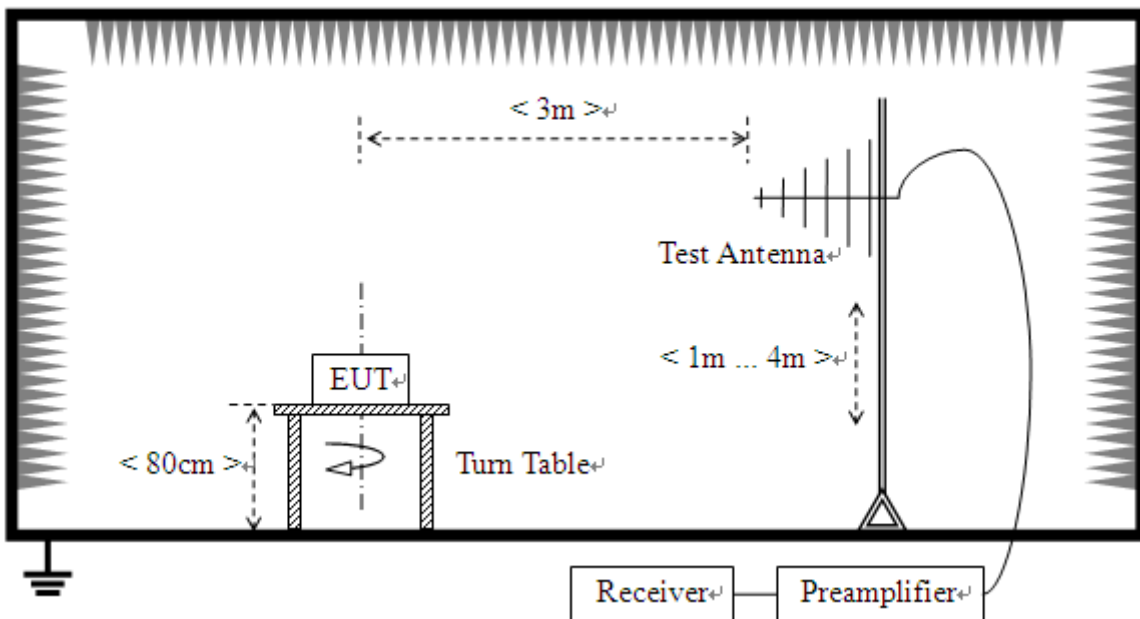
2.5.2 Test Description

A. Test Setup:

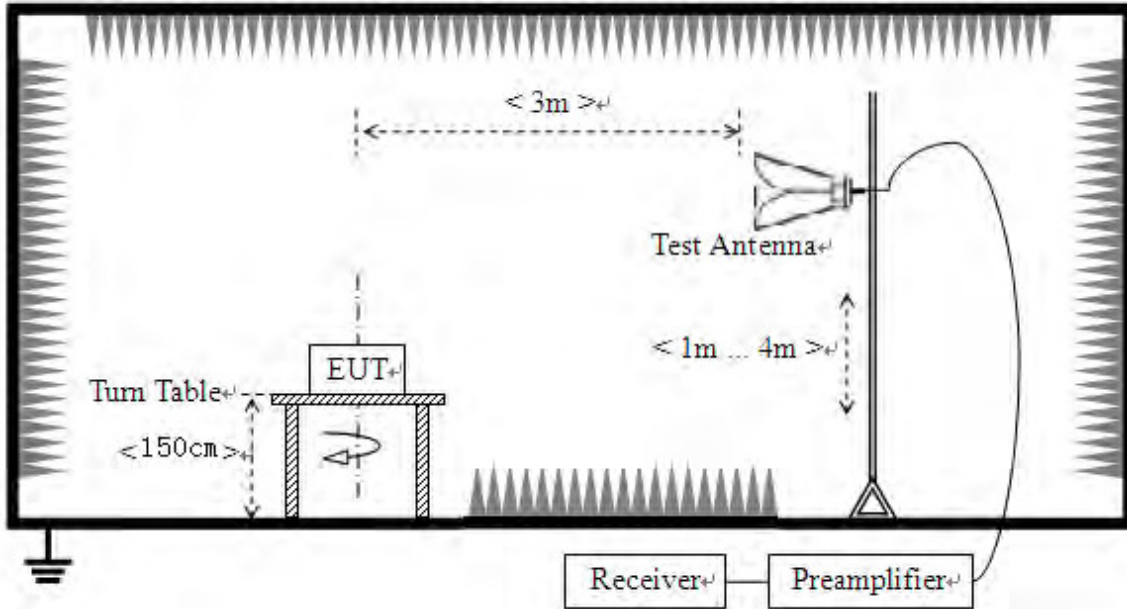
- 1) For radiated emissions from 9kHz to 30MHz



- 2) For radiated emissions from 30MHz to 1GHz



3) For radiated emissions above 1GHz



The test site semi-anechoic chamber has met the requirement of NSA tolerance 4dB according to the standards: ANSI C63.10 (2013). The EUT was set-up on insulator 80cm above the Ground Plane. The set-up and test methods were according to ANSI C63.10.

The EUT is located in a 3m Semi-Anechoic Chamber; the antenna factors, cable loss and so on of the site as factors are calculated to correct the reading.

For the Test Antenna:

- (a) In the frequency range of 9kHz to 30MHz, magnetic field is measured with Loop Test Antenna. The Test Antenna is positioned with its plane vertical at 1m distance from the EUT. The center of the Loop Test Antenna is 1m above the ground. During the measurement the Loop Test Antenna rotates about its vertical axis for maximum response at each azimuth about the EUT.
- (b) In the frequency range above 30MHz, Bi-Log Test Antenna (30MHz to 1GHz) and Horn Test Antenna (above 1GHz) are used. Test Antenna is 3m away from the EUT. Test Antenna height is varied from 1m to 4m above the ground to determine the maximum value of the field strength. The emission levels at both horizontal and vertical polarizations should be tested.

B. Equipments List:

Please reference ANNEX A(1.5).



2.5.3 Test Result

According to ANSI C63.4 selection 4.2.2, because of peak detection will yield amplitudes equal to or greater than amplitudes measured with the quasi-peak (or average) detector, the measurement data from a spectrum analyzer peak detector will represent the worst-case results, if the peak measured value complies with the quasi-peak limit, it is unnecessary to perform an quasi-peak measurement.

The measurement results are obtained as below:

$$E \text{ [dB}\mu\text{V/m]} = U_R + A_T + A_{\text{Factor}} \text{ [dB]}; A_T = L_{\text{Cable loss}} \text{ [dB]} - G_{\text{preamp}} \text{ [dB]}$$

A_T : Total correction Factor except Antenna

U_R : Receiver Reading

G_{preamp} : Preamplifier Gain

A_{Factor} : Antenna Factor at 3m

Final Emission_PK=E(peak)

Final Emission_AV=E+AV factor.

During the test, the total correction Factor A_T and A_{Factor} were built in test software.

Note: All radiated emission tests were performed in X, Y, Z axis direction. And only the worst axis test condition was recorded in this test report.

The low frequency, which started from 9KHz to 30MHz, was pre-scanned and the result which was 20dB lower than the limit line per 15.31(o) was not reported.

Field strength of fundamental, Verdict: Pass

Frequency (MHz)	PK _{read}	Cable Loss	ANT _{factor} (dB)	Final Emission_PK (dBuV/m)	AV factor (dB)	Final Emission_AV (dBuV/m)	Limit-AV (dBuV/m)
434.05	107.439	-35.4	16.1	88.14	-20.42	67.72	80.83
434.2875	108.222	-35.4	16.1	88.92	-20.42	68.50	80.84
434.5375	109.088	-35.4	16.1	89.79	-20.42	69.37	80.85

**Field strength of spurious emission:****Channel 1: 434.05MHz**

Frequency (MHz)	Final Emission_PK (dBuV/m)	AV factor(dB)	Final Emission_AV (dBuV/m)	Limit-AV (dBuV/m)	Antenna	Verdict
868.080	34.18	-20.42	13.76	60.83	Horizontal	PASS
1302.400	43.66	-20.42	23.24	60.83	Horizontal	PASS
1736.533	43.70	-20.42	23.28	60.83	Horizontal	PASS
2170.667	46.96	-20.42	26.54	60.83	Horizontal	PASS
3906.880	48.12	-20.42	27.7	60.83	Horizontal	PASS
868.080	29.41	-20.42	8.99	60.83	Vertical	PASS
1302.400	41.86	-20.42	21.44	60.83	Vertical	PASS
1736.533	44.76	-20.42	24.34	60.83	Vertical	PASS
3906.880	49.55	-20.42	29.13	60.83	Vertical	PASS

Channel 20: 434.2875MHz

Frequency (MHz)	Final Emission_PK (dBuV/m)	AV factor(dB)	Final Emission_AV (dBuV/m)	Limit-AV (dBuV/m)	Antenna	Verdict
869.050	36.04	-20.42	15.62	60.84	Horizontal	PASS
1303.467	42.11	-20.42	21.69	60.84	Horizontal	PASS
1737.600	44.64	-20.42	24.22	60.84	Horizontal	PASS
2171.733	47.13	-20.42	26.71	60.84	Horizontal	PASS
3909.440	46.88	-20.42	26.46	60.84	Horizontal	PASS
869.050	28.30	-20.42	7.88	60.84	Vertical	PASS
1303.467	42.01	-20.42	21.59	60.84	Vertical	PASS
1737.600	43.97	-20.42	23.55	60.84	Vertical	PASS
2171.733	47.12	-20.42	26.7	60.84	Vertical	PASS
3908.160	46.02	-20.42	25.6	60.84	Vertical	PASS

**Channel 40: 434.5375MHz**

Frequency (MHz)	Final Emission_PK (dBuV/m)	AV factor(dB)	Final Emission_AV (dBuV/m)	Limit-AV (dBuV/m)	Antenna	Verdict
869.050	36.04	-20.42	15.62	60.85	Horizontal	PASS
1304.000	43.33	-20.42	22.91	60.85	Horizontal	PASS
1738.667	44.54	-20.42	24.12	60.85	Horizontal	PASS
2173.333	47.63	-20.42	27.21	60.85	Horizontal	PASS
3912.000	47.98	-20.42	27.56	60.85	Horizontal	PASS
869.050	28.35	-20.42	7.93	60.85	Vertical	PASS
1304.000	43.44	-20.42	23.02	60.85	Vertical	PASS
1738.667	45.56	-20.42	25.14	60.85	Vertical	PASS
2173.333	44.68	-20.42	24.26	60.85	Vertical	PASS
3910.720	50.70	-20.42	30.28	60.85	Vertical	PASS

Note 1: The above table only shows the frequency which peak emission exceed the average limit.

The peak data of other frequencies are all below the average limit (please refer to the test graph in following pages), so the average data of other frequencies are deemed to fulfill the average limits and not reported.

Note 2: The emission below 30MHz are not reported for they are much lower than the limits

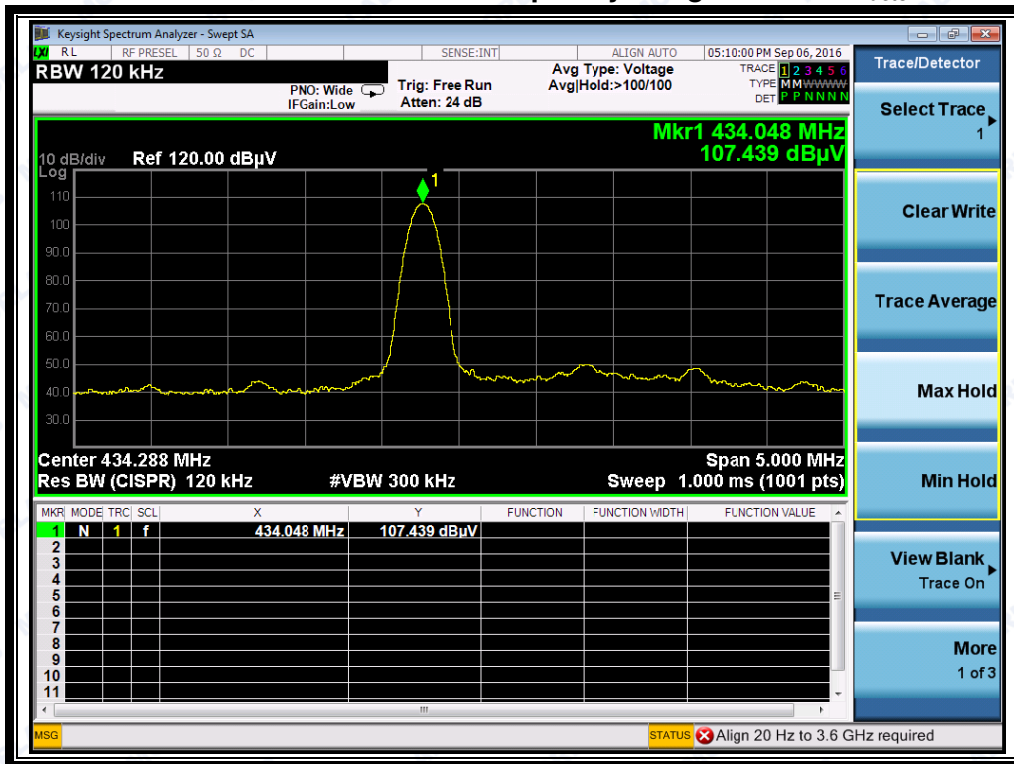
Note 3: The duty cycle is simply the on-time divided by the period:

The duration of one cycle	0.525s
Effective period of the cycle	0.05s
Duty cycle	9.5

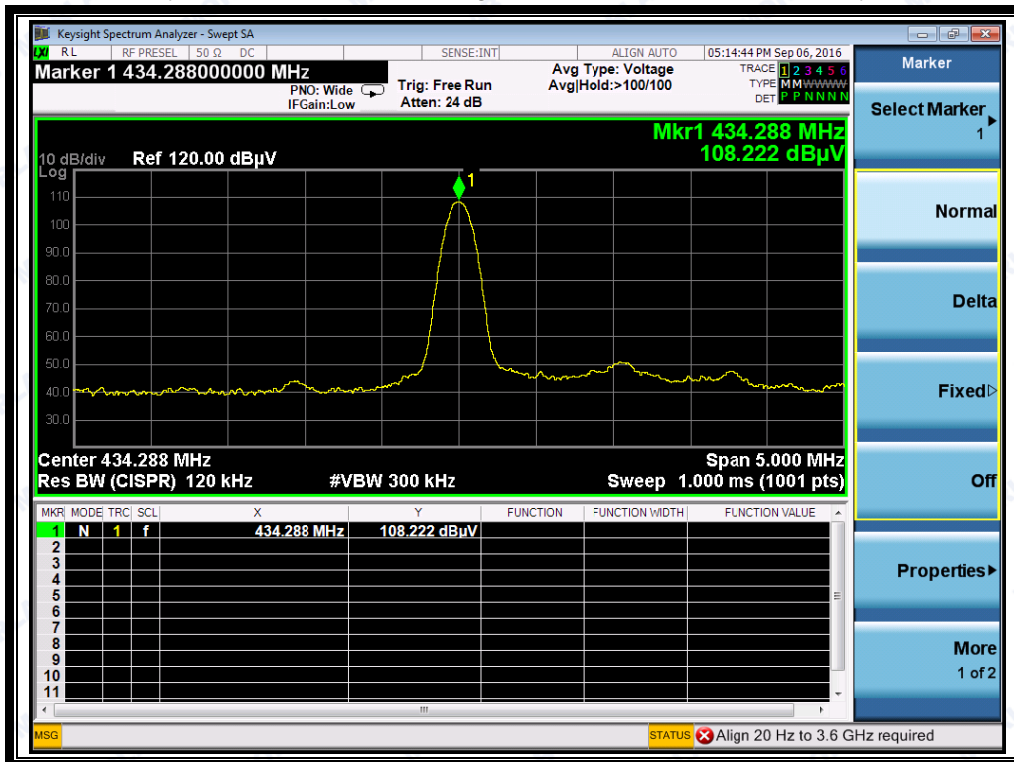
Therefore, the average factor is found by $20\log(\text{Duty cycle}) = -20.42$



A. Test Plots for the Whole Measurement Frequency Range: Antenna factor



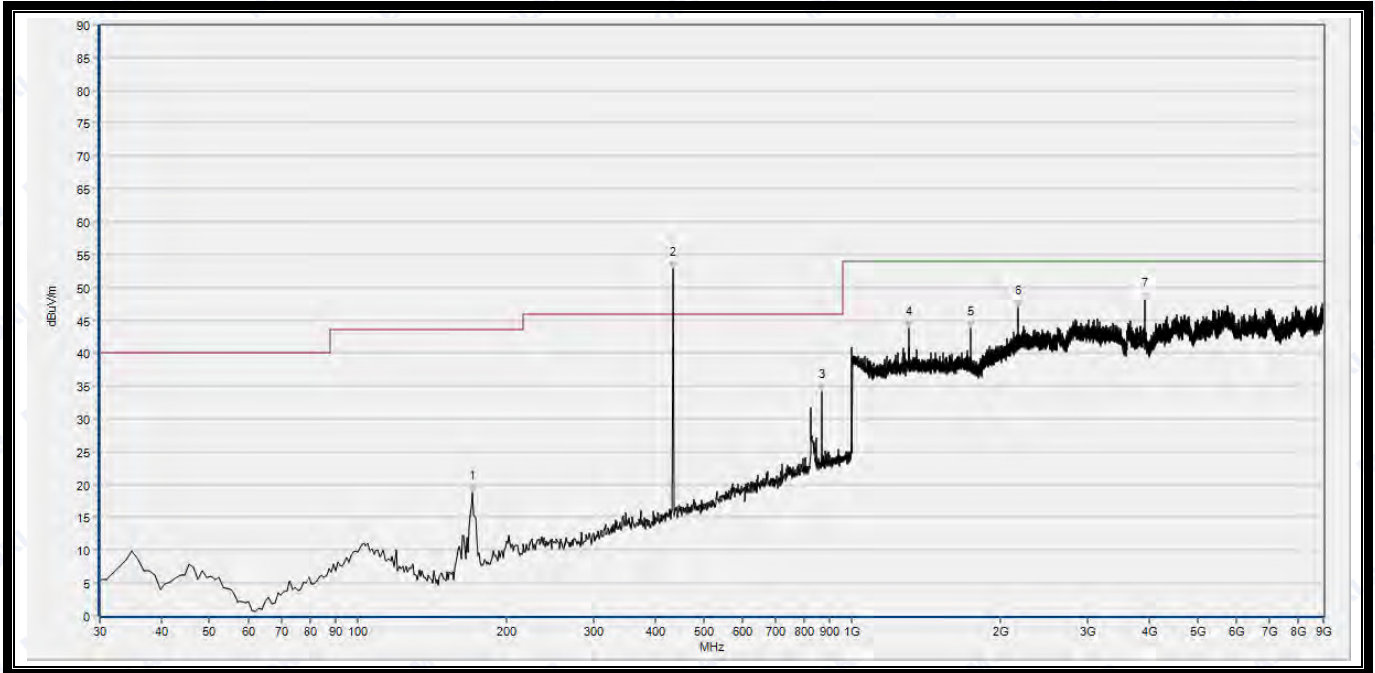
(Permissible Field Strengths @Channel 1 434.05MHz)



(Permissible Field Strengths @Channel 20 434.2875MHz)

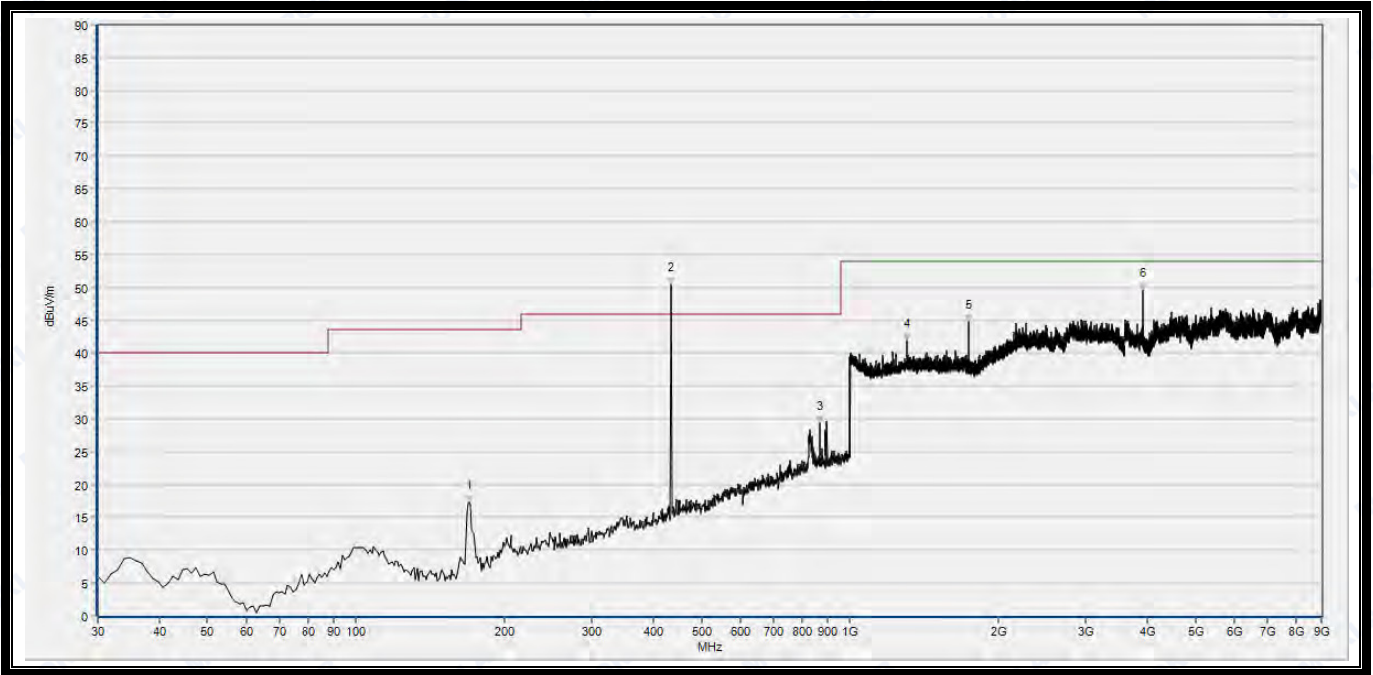


B. Test Plots for the Whole Measurement Frequency Range:



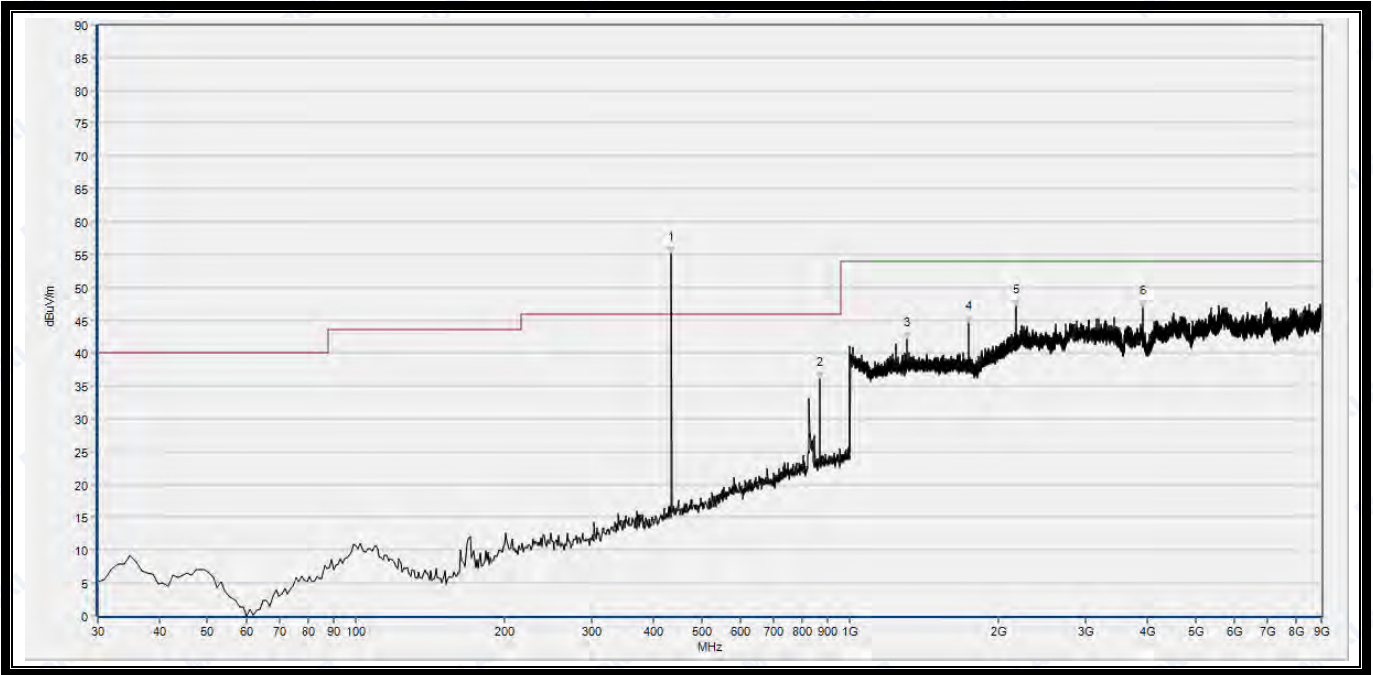
(Antenna Horizontal, 30MHz to 5GHz @Channel 1 434.05MHz)

Fre. (MHz)	Pk	QP	AV	Limit-PK	Limit-QP	Limit-AV	Antenna	Verdict
170.650	18.84	N.A	N.A	N.A	43.50	N.A	Horizontal	PASS
434.050	52.79	N.A	N.A	N.A	46.00	N.A	Horizontal	N.A
868.080	34.18	N.A	N.A	N.A	46.00	N.A	Horizontal	PASS
1302.400	43.66	N.A	N.A	74.0	N.A	54.0	Horizontal	PASS
1736.533	43.70	N.A	N.A	74.0	N.A	54.0	Horizontal	PASS
2170.667	46.96	N.A	N.A	74.0	N.A	54.0	Horizontal	PASS
3906.880	48.12	N.A	N.A	74.0	N.A	54.0	Horizontal	PASS



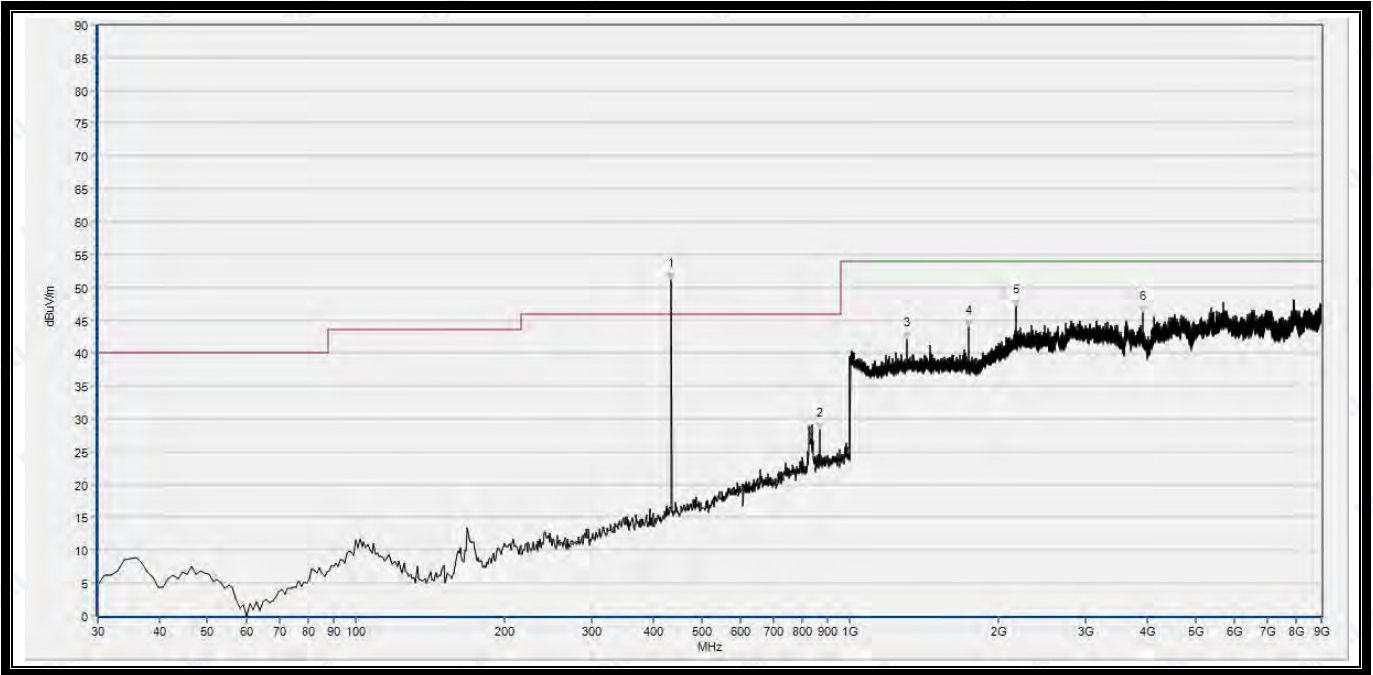
(Antenna Vertical, 30MHz to 5GHz @Channel 1 434.05MHz)

Fre. (MHz)	Pk	QP	AV	Limit-PK	Limit-QP	Limit-AV	Antenna	Verdict
169.680	17.26	N.A	N.A	N.A	43.50	N.A	Horizontal	PASS
434.050	50.42	N.A	N.A	N.A	46.00	N.A	Horizontal	N.A
868.080	29.41	N.A	N.A	N.A	46.00	N.A	Horizontal	PASS
1302.400	41.86	N.A	N.A	74.0	N.A	54.0	Horizontal	PASS
1736.533	44.76	N.A	N.A	74.0	N.A	54.0	Horizontal	PASS
3906.880	49.55	N.A	N.A	74.0	N.A	54.0	Horizontal	PASS



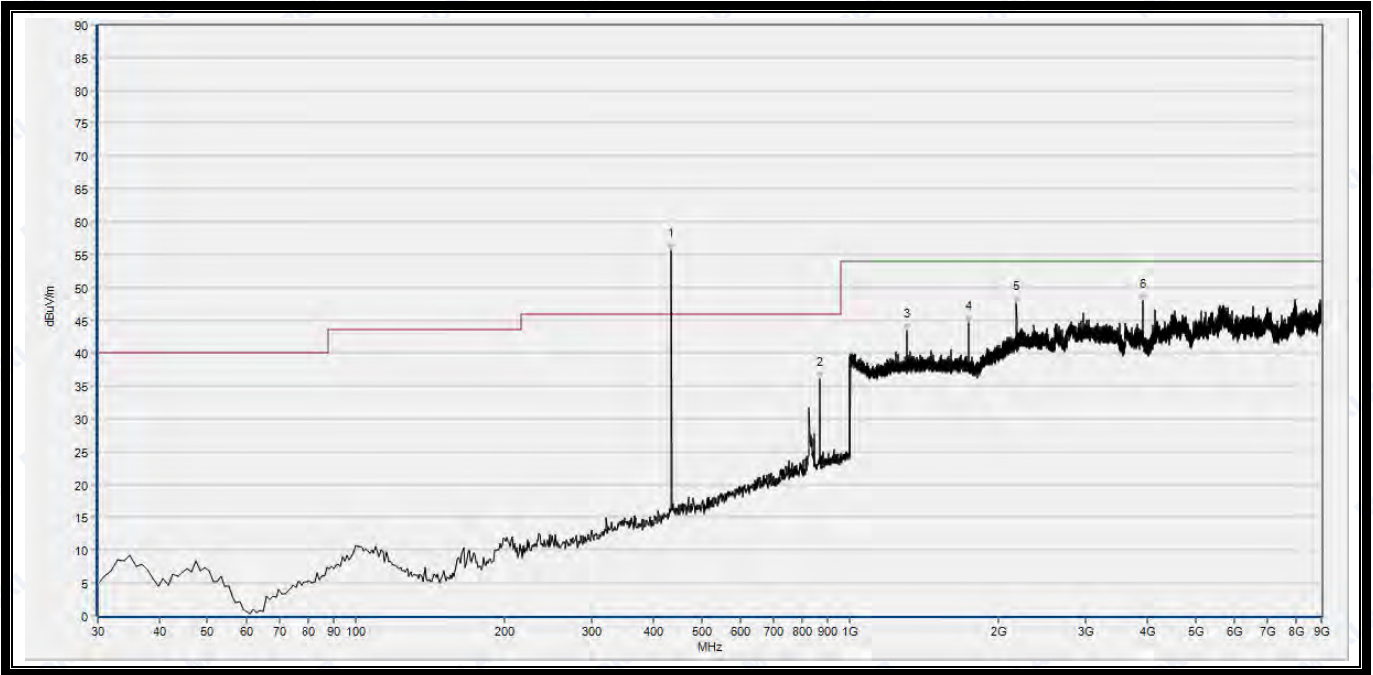
(Antenna Horizontal, 30MHz to 5GHz @Channel 20 434.2875MHz)

Fre. (MHz)	Pk	QP	AV	Limit-PK	Limit-QP	Limit-AV	Antenna	Verdict
434.287	55.21	N.A	N.A	N.A	46.00	N.A	Horizontal	N.A
869.050	36.04	N.A	N.A	N.A	46.00	N.A	Horizontal	PASS
1303.467	42.11	N.A	N.A	74.0	N.A	54.0	Horizontal	PASS
1737.600	44.64	N.A	N.A	74.0	N.A	54.0	Horizontal	PASS
2171.733	47.13	N.A	N.A	74.0	N.A	54.0	Horizontal	PASS
3909.440	46.88	N.A	N.A	74.0	N.A	54.0	Horizontal	PASS



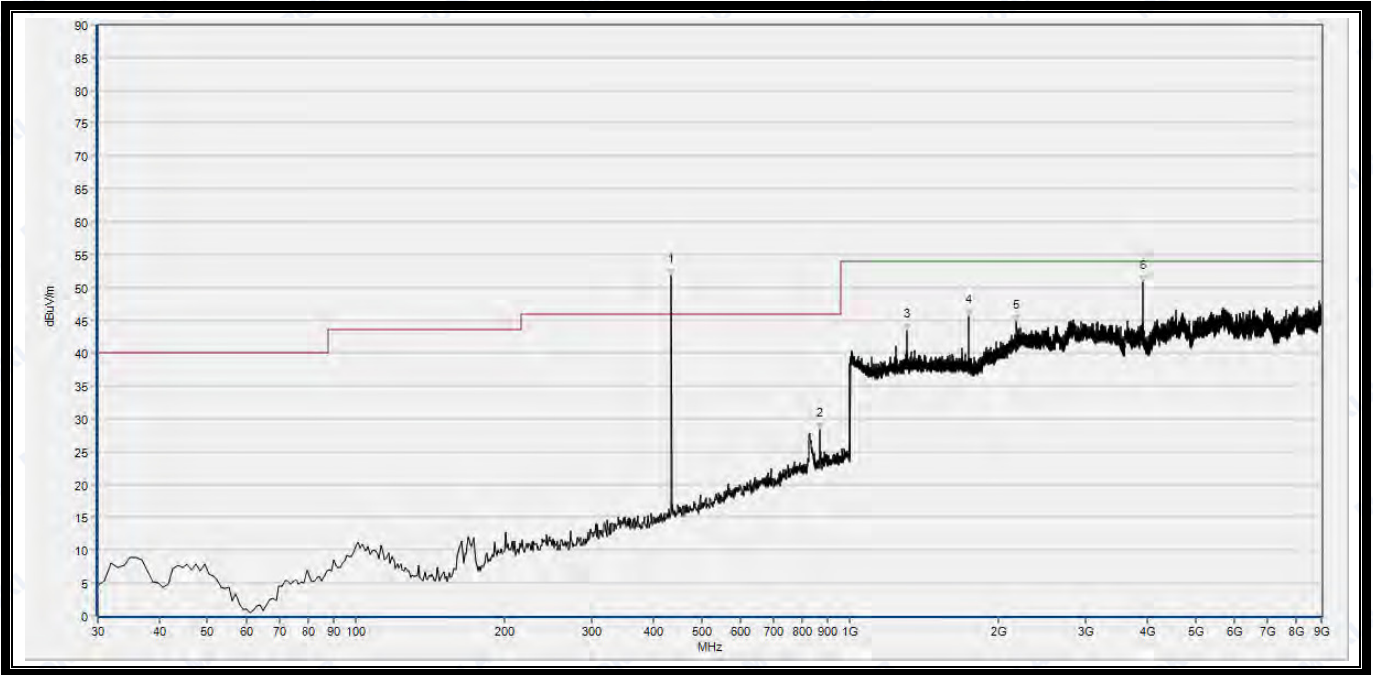
(Antenna Vertical, 30MHz to 5GHz @Channel 20 434.2875MHz)

Fre. (MHz)	Pk	QP	AV	Limit-PK	Limit-QP	Limit-AV	Antenna	Verdict
434.287	51.10	N.A	N.A	N.A	46.00	N.A	Horizontal	N.A
869.050	28.30	N.A	N.A	N.A	46.00	N.A	Horizontal	PASS
1303.467	42.01	N.A	N.A	74.0	N.A	54.0	Horizontal	PASS
1737.600	43.97	N.A	N.A	74.0	N.A	54.0	Horizontal	PASS
2171.733	47.12	N.A	N.A	74.0	N.A	54.0	Horizontal	PASS
3908.160	46.02	N.A	N.A	74.0	N.A	54.0	Horizontal	PASS



(Antenna Horizontal, 30MHz to 5GHz @Channel 40 434.5375MHz)

Fre. (MHz)	Pk	QP	AV	Limit-PK	Limit-QP	Limit-AV	Antenna	Verdict
434.537	55.64	N.A	N.A	N.A	46.00	N.A	Horizontal	N.A
869.050	36.04	N.A	N.A	N.A	46.00	N.A	Horizontal	PASS
1304.000	43.33	N.A	N.A	74.0	N.A	54.0	Horizontal	PASS
1738.667	44.54	N.A	N.A	74.0	N.A	54.0	Horizontal	PASS
2173.333	47.63	N.A	N.A	74.0	N.A	54.0	Horizontal	PASS
3912.000	47.98	N.A	N.A	74.0	N.A	54.0	Horizontal	PASS



(Antenna Vertical, 30MHz to 5GHz @Channel 40 434.5375MHz)

Fre. (MHz)	Pk	QP	AV	Limit-PK	Limit-QP	Limit-AV	Antenna	Verdict
434.537	51.71	N.A	N.A	N.A	46.00	N.A	Horizontal	N.A
869.050	28.35	N.A	N.A	N.A	46.00	N.A	Horizontal	PASS
1304.000	43.44	N.A	N.A	74.0	N.A	54.0	Horizontal	PASS
1738.667	45.56	N.A	N.A	74.0	N.A	54.0	Horizontal	PASS
2173.333	44.68	N.A	N.A	74.0	N.A	54.0	Horizontal	PASS
3910.720	50.70	N.A	N.A	74.0	N.A	54.0	Horizontal	PASS



ANNEX A GENERAL INFORMATION

1.1 Identification of the Responsible Testing Laboratory

Company Name:	Shenzhen Morlab Communications Technology Co., Ltd.
Department:	Morlab Laboratory
Address:	FL.3, Building A, FeiYang Science Park, No.8 LongChang Road, Block 67, BaoAn District, ShenZhen, GuangDong Province, P. R. China
Responsible Test Lab Manager:	Mr. Su Feng
Telephone:	+86 755 36698555
Facsimile:	+86 755 36698525

1.2 Identification of the Responsible Testing Location

Name:	Shenzhen Morlab Communications Technology Co., Ltd. Morlab Laboratory
Address:	FL.3, Building A, FeiYang Science Park, No.8 LongChang Road, Block 67, BaoAn District, ShenZhen, GuangDong Province, P. R. China

1.3 Facilities and Accreditations

Shenzhen Morlab Communications Technology Co., Ltd. Morlab Laboratory is a testing organization accredited by China National Accreditation Service for Conformity Assessment (CNAS) according to ISO/IEC 17025. The accreditation certificate number is L3572.

All measurement facilities used to collect the measurement data are located at FL.1, Building A, FeiYang Science Park, Block 67, BaoAn District, Shenzhen, 518101 P. R. China. The test site is constructed in conformance with the requirements of ANSI C63.10 2013 and CISPR Publication 22; the FCC registration number is 695796.

1.4 Maximum measurement uncertainty

Where relevant, the following measurement uncertainty levels have been estimated for test performed on the EUT as specified in CISPR 16-1-2:

Measurements	Frequency	Uncertainty
Conducted emissions	9KHz~30MHz	2.44dB
Radiated emissions	9KHz~30MHz	2.44dB
	30MHz~200MHz	2.93dB
	200MHz~1000MHz	2.95dB
	1GHz~18GHz	2.26dB
	18GHz~40GHz	1.94dB



This uncertainty represent an expanded uncertainty expressed at approximately the 95% confidence level using a coverage factor of k=2

1.5 Test Equipments Utilized

1.5.1 Radiated Test Equipments

Radiated Test Equipments						
No	Equipment Name	Serial No.	Type	Manufacturer	Cal. Date	Cal.Due Date
1	System Simulator	GB45360846	8960-E5515C	Agilent	2016.03.02	2017.03.01
2	Receiver	MY54130016	N9038A	Agilent	2016.03.02	2017.03.01
3	Test Antenna - Bi-Log	N/A	VULB9163	Schwarzbeck	2016.03.02	2017.03.01
4	Test Antenna - Horn	9170C-531	BBHA9170	Schwarzbeck	2016.03.02	2017.03.01
5	Test Antenna - Loop	1519-022	FMZB1519	Schwarzbeck	2016.03.02	2017.03.01
6	Test Antenna - Horn	71688	BBHA 9120D	Schwarzbeck	2016.03.02	2017.03.01
7	Coaxial cable(N male)	CB02	EMC02	Morlab	N/A	N/A
8	Coaxial cable(N male)	CB03	EMC03	Morlab	N/A	N/A
9	1-18GHz pre-Amplifier	MA02	TS-PR18	Rohde&Schwarz	2016.03.02	2017.03.01
10	18-26.5GHz pre-Amplifier	MA03	TS-PR18	Rohde&Schwarz	2016.03.02	2017.03.01

1.5.2 Climate Chamber

Climate Chamber						
No.	Equipment Name	Serial No.	Type	Manufacturer	Cal.Date	Cal.Due Date
1	Climate Chamber	2004012	HL4003T	Yinhe	2016.03.02	2017.03.01

1.5.3 Vibration Table

Vibration Table						
No.	Equipment Name	Serial No.	Type	Manufacturer	Cal.Date	Cal.Due Date
1	Vibration Table	N/A	ACT2000-S015L	CMI-COM	2016.03.02	2017.03.01



1.5.4 Anechoic Chamber

Anechoic Chamber						
No.	Equipment Name	Serial No.	Type	Manufacturer	Cal.Date	Cal.Due Date
1	Anechoic Chamber	N/A	9m*6m*6m	Changning	2016.03.02	2017.03.01

1.5.5 Auxiliary Test Equipment

Auxiliary Test Equipment						
No.	Equipment Name	Serial No.	Type	Manufacturer	Cal.Date	Cal.Due Date
1	Computer	N.A	PU500C	Asus	N.A	N.A

***** END OF REPORT *****