FCC 47 CFR PART 15 SUBPART C

RF Test Report

Applicant	:	Integrity Tracking LLC, dba MobileHelp
Product Type	:	Cellular Base Station Gen4.0
Trade Name	:	MobileHelp
Model Number	:	CBS4-01
Test Specification	:	FCC 47 CFR PART 15 SUBPART C ANSI C63.10:2013
Receive Date	:	Feb. 08, 2017
Test Period	:	Feb. 10, 2017
Issue Date	:	Mar. 17, 2017

Issue by

A Test Lab Techno Corp.
No. 140-1, Changan Street, Bade District,
Taoyuan City 33465, Taiwan (R.O.C)
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Taiwan Accreditation Foundation accreditation number: 1330

Revision History

Rev.	Issue Date	Revisions	Revised By
00	Mar. 01, 2017	Initial Issue	Snow Wang
01	Mar. 17, 2017	Revised report information.	Joyce Liao

Verification of Compliance

Issued Date: Mar. 17, 2017

Applicant	:	Integrity Tracking LLC, dba MobileHelp
Product Type	:	Cellular Base Station Gen4.0
Trade Name	:	MobileHelp
Model Number	:	CBS4-01
FCC ID	:	PXTCBS4-01
EUT Rated Voltage	:	DC 5.0V 3.0A
Test Voltage	:	120 Vac / 60 Hz
Applicable Standard	:	FCC 47 CFR PART 15 SUBPART C ANSI C63.10:2013
Test Result	:	Complied
Performing Lab.	:	A Test Lab Techno Corp. No. 140-1, Changan Street, Bade District, Taoyuan City 33465, Taiwan (R.O.C) Tel：+886-3-2710188 / Fax：+886-3-2710190 Taiwan Accreditation Foundation accreditation number: 1330 http://www.atl-lab.com.tw/e-index.htm

A Test Lab Techno Corp. tested the above equipment in accordance with the requirements set forth in the above standards. All indications of Pass/Fail in this report are opinions expressed by A Test Lab Techno Corp. based on interpretations and/or observations of test results. Measurement Uncertainties were not taken into account and are published for informational purposes only. The test results show that the equipment tested is capable of demonstrating compliance with the requirements as documented in this report.

Approved By	:	Fly Lu	Reviewed By	:	Eric Ou Yang
(Manager)		(Fly Lu)	(Testing Engineer)		(Eric Ou Yang)

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1 General Information

1.1 Summary of Test Result

Reference 47 CFR Part 15.231	Test	Results	Remark
15.207(a)	Conducted Emissions Voltage	PASS	---
15.231(e)	Radiated Emission Limits	PASS	---
15.231	Duration of transmission	PASS	---
15.231(c)	Bandwidth measurement	PASS	---

The test results of this report relate only to the tested sample(s) identified in this report. Manufacturer or whom it may concern should recognize the pass or fail of the test result.

1.2 Measurement Uncertainty

Test Item	Frequency Range	Uncertainty
Conducted Emission	9kHz ~ 150KHz	2.7
	150kHz ~ 30MHz	2.7
Radiated Emission	9kHz ~ 30MHz	1.7
	30MHz ~ 1000MHz	5.7
	1000MHz ~ 18000MHz	5.5
	18000MHz ~ 26500MHz	4.8
	26500MHz ~ 40000MHz	4.8
RF Bandwidth		4.96%
Frequency Stability		+ 2.212 x 10-7% / - 2.170 x 10-7

2 EUT Description

Applicant	Integrity Tracking LLC, dba MobileHelp 3701 FAU Blvd., Suite 300, Boca Raton, Florida 33431, United States
Manufacturer	Daviscomms (Malaysia) Sdn Bhd Plot 18, Lorong Perusahaan Maju 1,Kawasan Perusahaan Perai 4,13600 Perai, Malaysia
Product	Cellular Base Station Gen4.0
Trade Name	MobileHelp
Model Number	CBS4-01
FCC ID	PXTCBS4-01
Frequency Range	433.92MHz
Modulation Type	ASK
Number of Channels	1 Channel
Antenna Type	PCB Antenna
Antenna Max. Gain	-4.23dbi

3 Test Methodology

3.1. Mode of Operation

The following test mode(s) were scanned during the preliminary test：

Pre-Test Mode
Mode 1: Transmit Mode

ATL has verified the construction and function in typical operation. All the test modes were carried out with the EUT in normal operation.

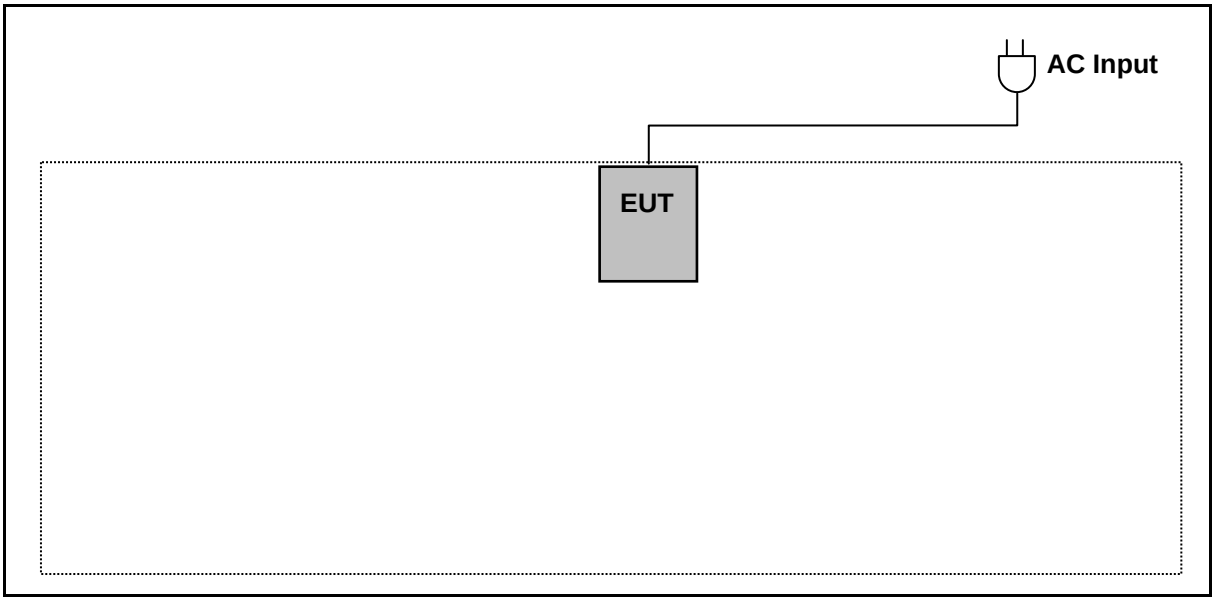
3.2. EUT Exercise Software

1.	Setup the EUT as shown on 3.3.
2.	Turn on the power of all equipment.
3.	The EUT will start to operate function.

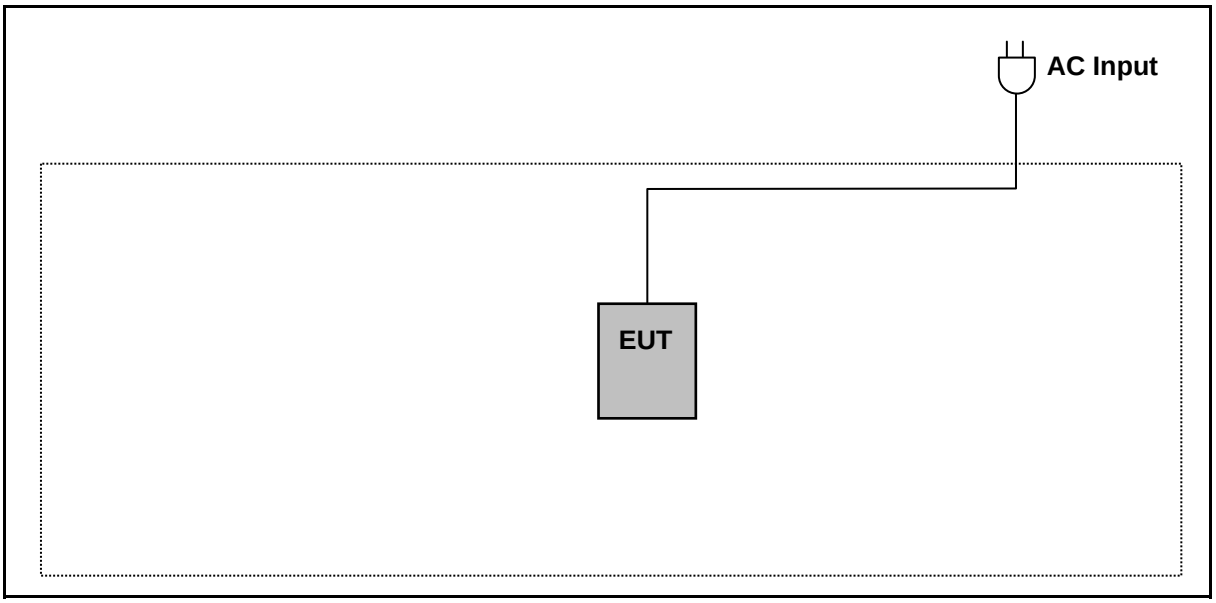
Measurement Software	
1	EZ-EMC Ver. ATL-03A1-1
2	EZ-EMC Ver ATL-ITC-3A1-1

3.3. Configuration of Test System Details

Conducted Emission



Radiated Emission



3.4. Test Site Environment

Items	Required (IEC 60068-1)	Actual
Temperature (°C)	15-35	26
Humidity (%RH)	25-75	60
Barometric pressure (mbar)	860-1060	950

4 Test Results

4.1. AC Power Line Conducted Emission Measurement

■ **Limit**

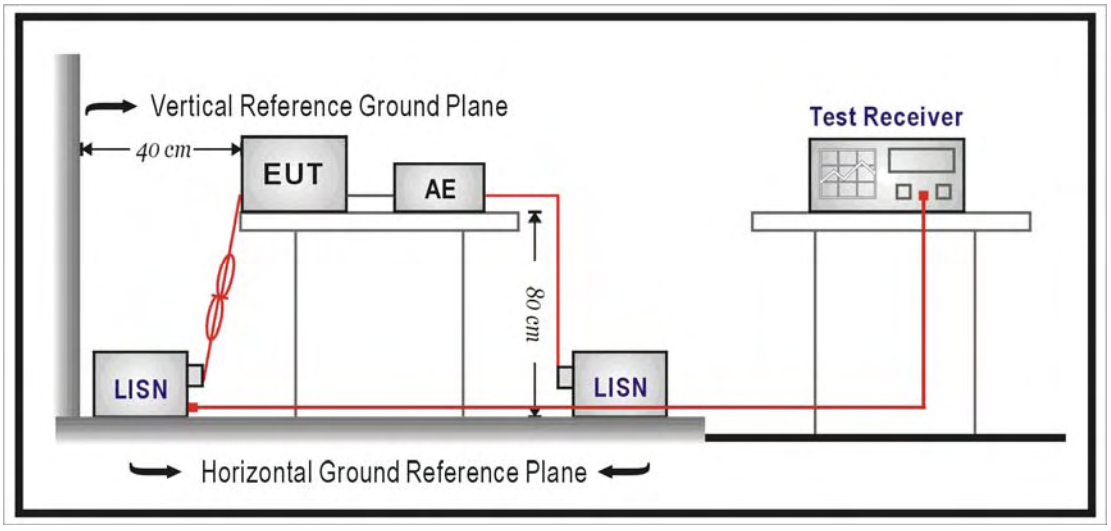
Frequency (MHz)	Quasi-peak	Average
0.15 - 0.5	66 to 56	56 to 46
0.50 - 5.0	56	46
5.0 - 30.0	60	50

■ **Test Instruments**

Describe	Manufacturer	Model Number	Serial Number	Cal. Date	Remark
Test Receiver	R&S	ESCI	100367	05/31/2016	1 year
LISN	R&S	ENV216	101040	03/15/2016	1 year
LISN	R&S	ENV216	101041	03/07/2016	1 year
Microwave Cable	EMCI	EMC104-SM-SM-1500	140303	02/23/2016	1 year
Test Site	ATL	TE02	TE02	N.C.R.	-----

NOTE: N.C.R. = No Calibration Request.

■ **Test Setup**



■ Test Procedure

The EUT and simulators are connected to the main power through a line impedance stabilization network (L.I.S.N.). This provides a 50Ω// 50uH coupling impedance for the measuring equipment. The peripheral devices are also connected to the main power through a LISN that provides a 50Ω// 50uH coupling impedance with 50ohm termination.

Tabletop device shall be placed on a non-conducting platform, of nominal size 1 m by 1.5 m, raised 80 cm above the reference ground plane. The wall of screened room shall be located 40cm to the rear of the EUT. Other surfaces of tabletop or floor standing EUT shall be at least 80cm from any other ground conducting surface including one or more LISNs. For floor-standing device shall be placed under the EUT with a 12mm insulating material.

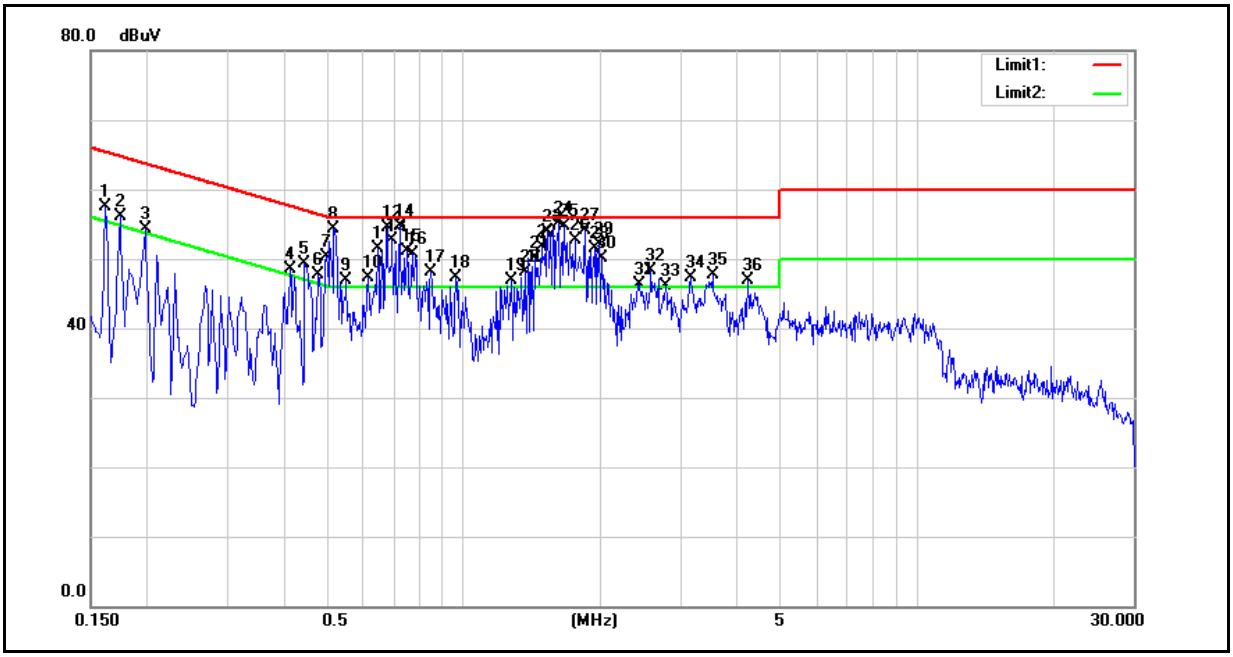
Conducted emissions were investigated over the frequency range from 0.15 MHz to 30 MHz using a resolution bandwidth of 9 kHz. The equipment under test (EUT) shall be meet the limits in section 4.1, as applicable, including the average limit and the quasi-peak limit when using respectively, an average detector and quasi-peak detector measured in accordance with the methods described of related standard. When all of peak value were complied with quasi-peak and average limit from 150kHz to 30MHz then quasi-peak and average measurement was unnecessary.

The AMN shall be placed 0,8 m from the boundary of the unit under test and bonded to a ground reference plane for AMNs mounted on top of the ground reference plane. This distance is between the closest points of the AMN and the EUT. All other units of the EUT and associated equipment shall be at least 0,8 m from the AMN. If the mains power cable is longer than 1m then the cable shall be folded back and forth at the centre of the lead to form a bundle no longer than 0.4m. All of interconnecting cables that hang closer than 40cm to the ground plane shall be folded back and forth in the center forming a bundle 30 cm to 40 cm long. All of EUT and AE shall be separate place more than 0.1m. All 50 Ω ports of the LISN shall be resistively terminated into 50 Ω loads when not connected to the measuring instrument.

If the reading of the measuring receiver shows fluctuations close to the limit, the reading shall be observed for at least 15 s at each measurement frequency; the higher reading shall be recorded with the exception of any brief isolated high reading which shall be ignored.

■ **Test Result**

Standard:	FCC Part 15C	Line:	L1
Test item:	Conducted Emission	Power:	AC 120V/60Hz
Mode:	Mode 1	Temp.(℃)/Hum.(%RH):	26(℃)/60%RH
		Date:	02/10/2017
Description:			



Standard:	FCC Part 15C	Line:	L1
Test item:	Conducted Emission	Power:	AC 120V/60Hz
Mode:	Mode 1	Temp.(℃)/Hum.(%RH):	26(℃)/60%RH
		Date:	02/10/2017
Description:			

No.	Frequency (MHz)	QP reading (dBuV)	AVG reading (dBuV)	Correction factor (dB)	QP result (dBuV)	AVG result (dBuV)	QP limit (dBuV)	AVG limit (dBuV)	QP margin (dB)	AVG margin (dB)	Remark
1	0.1620	41.70	17.49	9.60	51.30	27.09	65.36	55.36	-14.06	-28.27	Pass
2	0.1740	39.11	26.50	9.60	48.71	36.10	64.77	54.77	-16.06	-18.67	Pass
3	0.1980	36.94	19.97	9.59	46.53	29.56	63.69	53.69	-17.16	-24.13	Pass
4	0.4140	35.05	22.77	9.60	44.65	32.37	57.57	47.57	-12.92	-15.20	Pass
5	0.4460	38.64	25.95	9.60	48.24	35.55	56.95	46.95	-8.71	-11.40	Pass
6	0.4780	33.69	22.77	9.61	43.30	32.38	56.37	46.37	-13.07	-13.99	Pass
7	0.4980	40.25	24.94	9.61	49.86	34.55	56.03	46.03	-6.17	-11.48	Pass
8	0.5180	41.36	35.48	9.61	50.97	45.09	56.00	46.00	-5.03	-0.91	Pass
9	0.5500	33.14	27.40	9.61	42.75	37.01	56.00	46.00	-13.25	-8.99	Pass
10	0.6140	33.49	25.74	9.61	43.10	35.35	56.00	46.00	-12.90	-10.65	Pass
11	0.6460	38.52	30.72	9.61	48.13	40.33	56.00	46.00	-7.87	-5.67	Pass
12	0.6780	39.76	32.32	9.62	49.38	41.94	56.00	46.00	-6.62	-4.06	Pass
13	0.6940	39.59	32.82	9.62	49.21	42.44	56.00	46.00	-6.79	-3.56	Pass
14	0.7260	37.33	30.70	9.63	46.96	40.33	56.00	46.00	-9.04	-5.67	Pass
15	0.7500	36.02	29.10	9.63	45.65	38.73	56.00	46.00	-10.35	-7.27	Pass
16	0.7700	37.00	30.60	9.63	46.63	40.23	56.00	46.00	-9.37	-5.77	Pass
17	0.8460	34.61	28.87	9.63	44.24	38.50	56.00	46.00	-11.76	-7.50	Pass
18	0.9620	32.20	21.39	9.64	41.84	31.03	56.00	46.00	-14.16	-14.97	Pass
19	1.2740	31.18	24.05	9.65	40.83	33.70	56.00	46.00	-15.17	-12.30	Pass
20	1.3620	29.68	23.09	9.65	39.33	32.74	56.00	46.00	-16.67	-13.26	Pass
21	1.4380	30.60	25.45	9.66	40.26	35.11	56.00	46.00	-15.74	-10.89	Pass
22	1.4820	31.66	26.38	9.66	41.32	36.04	56.00	46.00	-14.68	-9.96	Pass
23	1.5300	36.96	28.68	9.67	46.63	38.35	56.00	46.00	-9.37	-7.65	Pass
24	1.6220	36.73	28.40	9.67	46.40	38.07	56.00	46.00	-9.60	-7.93	Pass
25	1.6660	35.67	27.27	9.68	45.35	36.95	56.00	46.00	-10.65	-9.05	Pass
26	1.7580	34.66	26.65	9.68	44.34	36.33	56.00	46.00	-11.66	-9.67	Pass
27	1.8500	32.43	23.33	9.68	42.11	33.01	56.00	46.00	-13.89	-12.99	Pass
28	1.9420	29.57	21.22	9.69	39.26	30.91	56.00	46.00	-16.74	-15.09	Pass
29	1.9900	29.86	21.01	9.69	39.55	30.70	56.00	46.00	-16.45	-15.30	Pass
30	2.0380	28.71	21.86	9.69	38.40	31.55	56.00	46.00	-17.60	-14.45	Pass

Note: 1. Result (dBuV) = Correction factor (dB) + Reading(dBuV).

2. Correction factor (dB) = Cable loss (dB) + L.I.S.N. factor (dB).

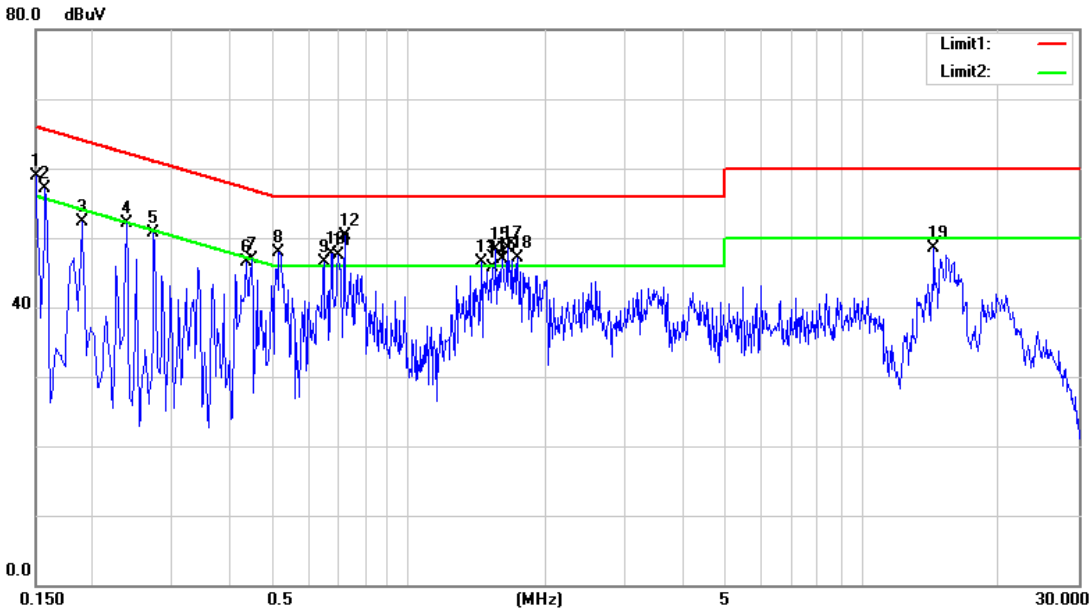
Standard:	FCC Part 15C	Line:	L1
Test item:	Conducted Emission	Power:	AC 120V/60Hz
Mode:	Mode 1	Temp.(℃)/Hum.(%RH):	26(℃)/60%RH
		Date:	02/10/2017
Description:			

No.	Frequency (MHz)	QP reading (dBuV)	AVG reading (dBuV)	Correction factor (dB)	QP result (dBuV)	AVG result (dBuV)	QP limit (dBuV)	AVG limit (dBuV)	QP margin (dB)	AVG margin (dB)	Remark
31	2.4380	32.62	21.42	9.70	42.32	31.12	56.00	46.00	-13.68	-14.88	Pass
32	2.5820	32.71	22.37	9.71	42.42	32.08	56.00	46.00	-13.58	-13.92	Pass
33	2.7900	26.98	19.01	9.71	36.69	28.72	56.00	46.00	-19.31	-17.28	Pass
34	3.1580	31.60	21.91	9.73	41.33	31.64	56.00	46.00	-14.67	-14.36	Pass
35	3.5380	31.06	22.87	9.74	40.80	32.61	56.00	46.00	-15.20	-13.39	Pass
36	4.2460	30.23	21.05	9.75	39.98	30.80	56.00	46.00	-16.02	-15.20	Pass

Note: 1. Result (dBuV) = Correction factor (dB) + Reading(dBuV).

2. Correction factor (dB) = Cable loss (dB) + L.I.S.N. factor (dB).

Standard:	FCC Part 15C	Line:	N
Test item:	Conducted Emission	Power:	AC 120V/60Hz
Mode:	Mode 1	Temp.(℃)/Hum.(%RH):	26(℃)/60%RH
		Date:	02/10/2017
Description:			



Standard:	FCC Part 15C	Line:	N
Test item:	Conducted Emission	Power:	AC 120V/60Hz
Mode:	Mode 1	Temp.(℃)/Hum.(%RH):	26(℃)/60%RH
		Date:	02/10/2017
Description:			

No.	Frequency (MHz)	QP reading (dBuV)	AVG reading (dBuV)	Correction factor (dB)	QP result (dBuV)	AVG result (dBuV)	QP limit (dBuV)	AVG limit (dBuV)	QP margin (dB)	AVG margin (dB)	Remark
1	0.1500	36.90	19.91	9.59	46.49	29.50	66.00	56.00	-19.51	-26.50	Pass
2	0.1580	42.13	19.44	9.59	51.72	29.03	65.57	55.57	-13.85	-26.54	Pass
3	0.1900	37.25	18.72	9.58	46.83	28.30	64.04	54.04	-17.21	-25.74	Pass
4	0.2380	37.21	14.92	9.58	46.79	24.50	62.17	52.17	-15.38	-27.67	Pass
5	0.2740	33.29	14.76	9.59	42.88	24.35	61.00	51.00	-18.12	-26.65	Pass
6	0.4380	31.43	17.53	9.59	41.02	27.12	57.10	47.10	-16.08	-19.98	Pass
7	0.4500	33.05	16.03	9.59	42.64	25.62	56.88	46.88	-14.24	-21.26	Pass
8	0.5180	36.14	30.59	9.60	45.74	40.19	56.00	46.00	-10.26	-5.81	Pass
9	0.6500	30.38	22.45	9.61	39.99	32.06	56.00	46.00	-16.01	-13.94	Pass
10	0.6740	34.62	28.07	9.61	44.23	37.68	56.00	46.00	-11.77	-8.32	Pass
11	0.6980	28.77	22.20	9.61	38.38	31.81	56.00	46.00	-17.62	-14.19	Pass
12	0.7220	35.33	28.63	9.62	44.95	38.25	56.00	46.00	-11.05	-7.75	Pass
13	1.4420	32.74	23.27	9.65	42.39	32.92	56.00	46.00	-13.61	-13.08	Pass
14	1.5340	33.53	25.67	9.66	43.19	35.33	56.00	46.00	-12.81	-10.67	Pass
15	1.5540	33.60	25.25	9.66	43.26	34.91	56.00	46.00	-12.74	-11.09	Pass
16	1.6020	34.33	26.13	9.66	43.99	35.79	56.00	46.00	-12.01	-10.21	Pass
17	1.6460	34.41	25.68	9.67	44.08	35.35	56.00	46.00	-11.92	-10.65	Pass
18	1.7420	30.17	24.57	9.67	39.84	34.24	56.00	46.00	-16.16	-11.76	Pass
19	14.4020	33.00	19.39	10.00	43.00	29.39	60.00	50.00	-17.00	-20.61	Pass

Note: 1. Result (dBuV) = Correction factor (dB) + Reading(dBuV).

2. Correction factor (dB) = Cable loss (dB) + L.I.S.N. factor (dB).

4.2. Radiated Emissions Measurement

■ **Limit**

According to §15.231 (e) Intentional radiators may operate at a periodic rate exceeding that specified in paragraph (a) of this section and may be employed for any type of operation, including operation prohibited in paragraph (a) of this section, provided the intentional radiator complies with the provisions of paragraphs (b) through (d) of this section, except the field strength table in paragraph (b) of this section is replaced by the following:

Linear interpolations.

Fundamental frequency (MHz)	Field strength of fundamental (microvolts/meter)	Field strength of spurious emission (microvolts/meter)
40.66-40.70	1,000	100
70-130	500	50
130-174	500 to 1,500[1]	50 to 150[1]
174-260	1,500	150
260-470	1,500 to 5,000[1]	150 to 500[1]
Above 470	5,000	500

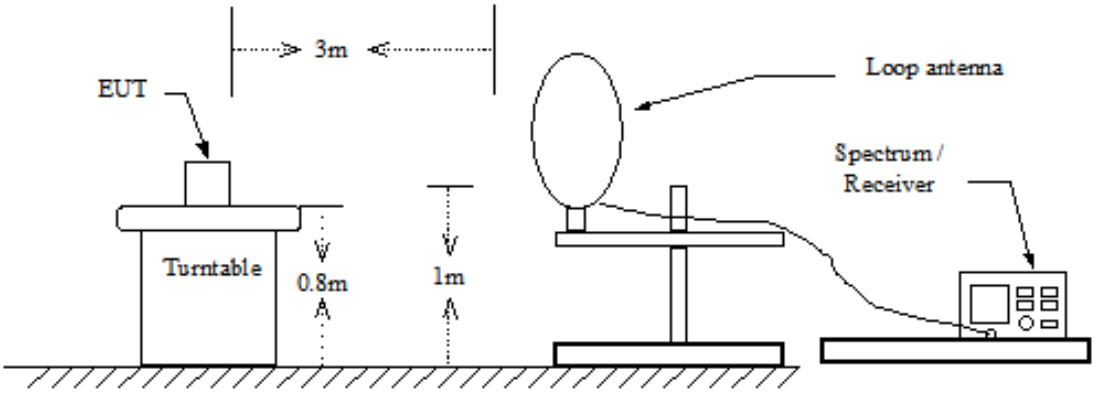
■ Test Instruments

3 Meter Chamber					
Equipment	Manufacturer	Model Number	Serial Number	Cal. Date	Cal. Period
RF Pre-selector	Agilent	N9039A	MY46520256	03/22/2016	1 year
Spectrum Analyzer	Agilent	E4446A	MY46180578	03/22/2016	1 year
Pre Amplifier	Agilent	8449B	3008A02237	10/11/2016	1 year
Pre Amplifier	Agilent	8447D	2944A11119	01/12/2017	1 year
Broadband Antenna	Schwarzbeck	VULB9168	416	10/13/2016	1 year
Horn Antenna (1~18GHz)	SCHWARZBECK MESS-ELEKTRONIK	BBHA9120D	9120D-550	06/06/2016	1 year
Horn Antenna (18~40GHz)	ETS	3116	86467	09/05/2016	1 year
Loop Antenna	COM-POWER CORPORATION	AL-130	121014	01/26/2017	1 year
Microwave Cable	EMCI	EMC102-KM-KM-14000	151001	02/23/2016	1 year
Microwave Cable	EMCI	EMC-104-SM-SM-14000	140202	02/23/2016	1 year
Microwave Cable	EMCI	EMC104-SM-SM-600	140301	02/23/2016	1 year
Test Site	ATL	TE01	888001	08/29/2016	1 year

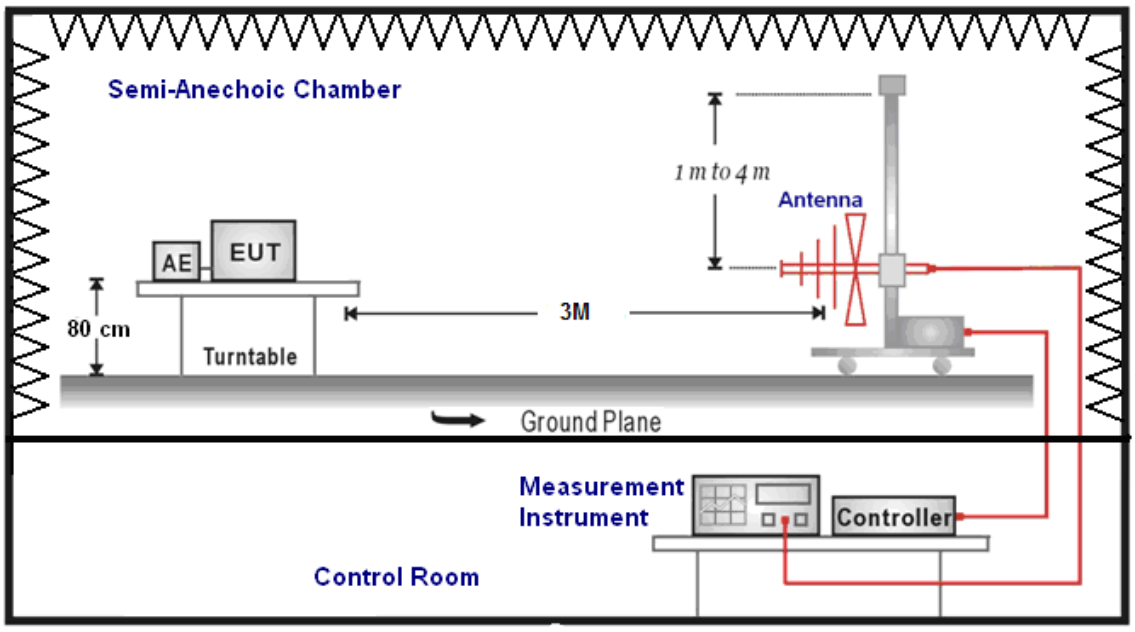
Note: N.C.R. = No Calibration Request.

■ Setup

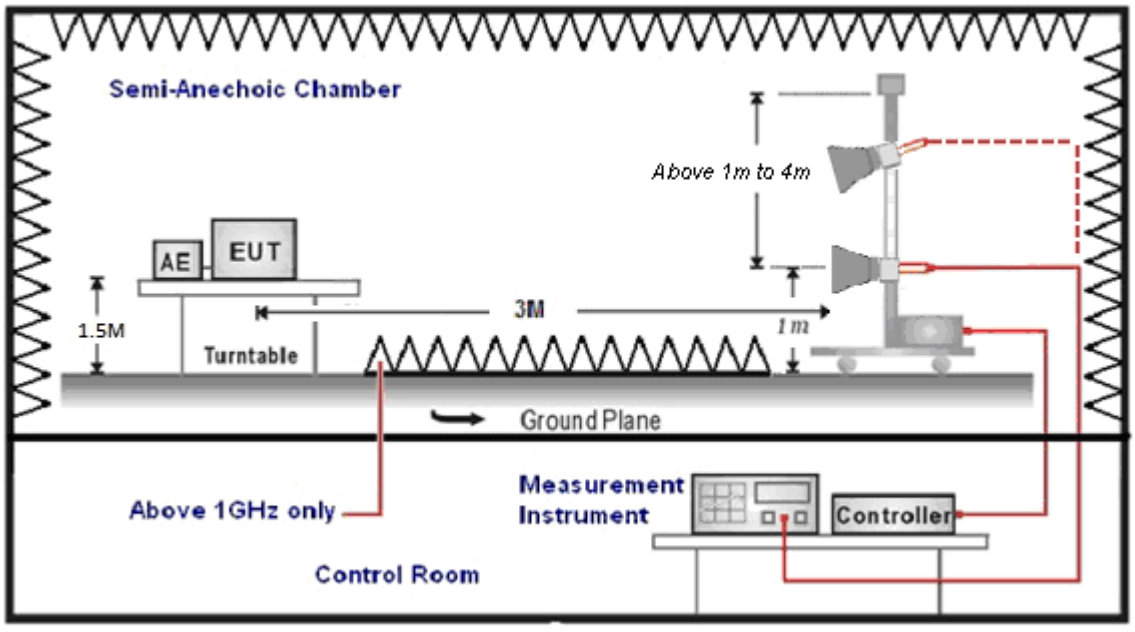
9kHz ~ 30MHz



Below 1GHz



Above 1GHz



■ Test Procedure

Final radiation measurements were made on a three-meter, Semi Anechoic Chamber. The EUT system was placed on a nonconductive turntable which is 0.8 or 1.5 meters height(below 1GHz use 0.8m turntable / above 1GHz use 1.5m turntable), top surface 1.0 x 1.5 meter. The spectrum was examined from 250 MHz to 2.5 GHz in order to cover the whole spectrum below 10th harmonic which could generate from the EUT. During the test, EUT was set to transmit continuously & Measurements spectrum range from 9 kHz to 26.5 GHz is investigated.

For measurements below 1 GHz the resolution bandwidth is set to 100 kHz for peak detection measurements or 120 kHz for quasi-peak detection measurements. Peak detection is used unless otherwise noted as quasi-peak.

For measurements above 1 GHz the resolution bandwidth is set to 1 MHz, and then the video bandwidth is set to 1 MHz for peak measurements and 10 Hz for average measurements when Duty cycle >98% / 1/T for average measurements when Duty cycle <98%. A nonconductive material surrounded the EUT to supporting the EUT for standing on tree orthogonal planes. At each condition, the EUT was rotated 360 degrees, and the antenna was raised and lowered from one to four meters to find the maximum emission levels. Measurements were taken using both horizontal and vertical antenna polarization.

SCHWARZBECK MESS-ELEKTRONIK Biconilog Antenna at 3 Meter and the SCHWARZBECK Double Ridged Guide Antenna was used in frequencies 1 – 26.5 GHz at a distance of 1 meter. All test results were extrapolated to equivalent signal at 3 meters utilizing an inverse linear distance extrapolation Factor (20dB/decade).

For testing above 1GHz, the emission level of the EUT in peak mode was 20dB lower than average limit (that means the emission level in peak mode also complies with the limit in average mode), then testing will be stopped and peak values of EUT will be reported, otherwise, the emissions will be measured in average mode again and reported.

Appropriate preamplifiers were used for improving sensitivity and precautions were taken to avoid overloading or desensitizing the spectrum analyzer. No post – detector video filters were used in the test.

The spectrum analyzer's 6 dB bandwidth was set to 1 MHz, and the analyzer was operated in the peak detection mode, for frequencies both below and up 1 GHz. The average levels were obtained by subtracting the duty cycle correction factor from the peak readings.

The following procedures were used to convert the emission levels measured in decibels referenced to 1 microvolt (dBuV) into field intensity in micro volts pre meter (uV/m).

The actual field intensity in decibels referenced to 1 microvolt in to field intensity in micro colts per meter (dBuV/m).

The actual field is intensity in referenced to 1 microvolt per meter (dBuV/m) is determined by algebraically adding the measured reading in dBuV, the antenna factor (dB), and cable loss (dB) and Subtracting the gain of preamplifier (dB) is auto calculate in spectrum analyzer.

(1) Amplitude (dBuV/m) = FI (dBuV) +AF (dBuV) +CL (dBuV)-Gain (dB)
FI= Reading of the field intensity.
AF= Antenna factor.
CL= Cable loss.
P.S Amplitude is auto calculate in spectrum analyzer.

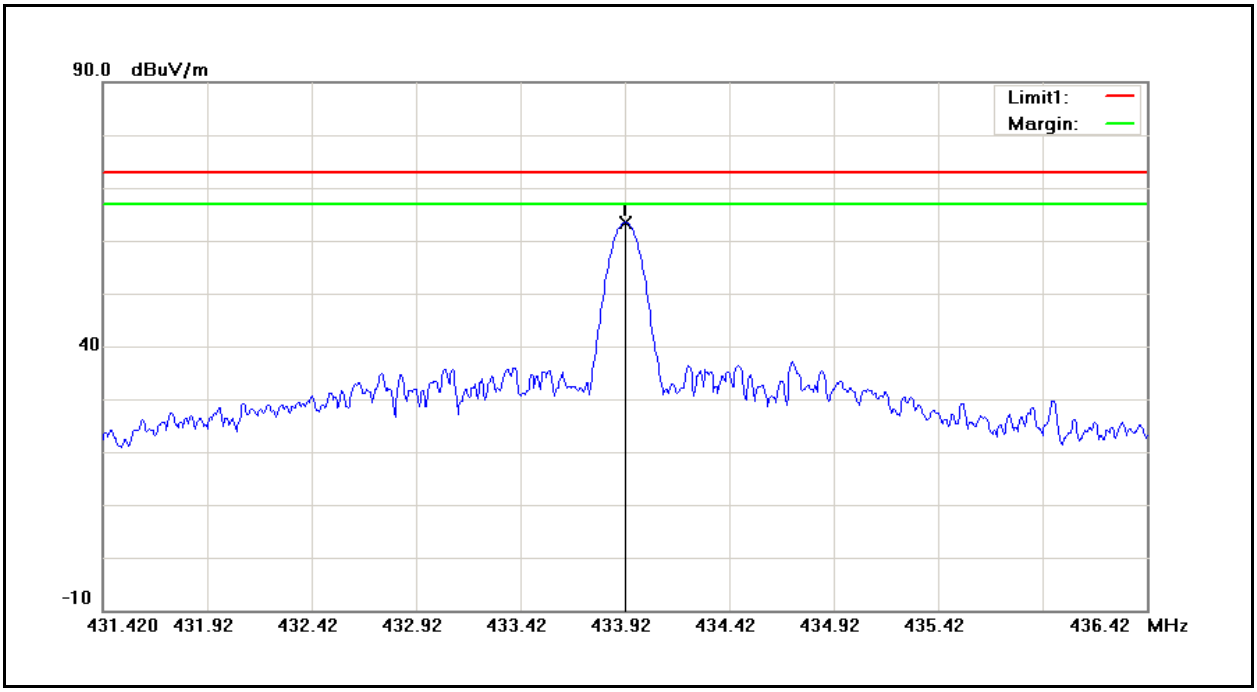
(2) Actual Amplitude (dBuV/m) = Amplitude (dBuV)-Dis(dB)
The FCC specified emission limits were calculated according the EUT operating frequency and by following linear interpolation equations:
(a) For fundamental frequency : Transmitter Output < +30dBm
(b) For spurious frequency : Spurious emission limits = fundamental emission limit /10

Data of measurement within this frequency range without mark in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.

■ **Test Result**

Fundamental

Standard:	FCC Part 15C	Test Distance:	3m
Test Mode:	Mode 1	Power:	AC 120V/60Hz
Ant.Polar.:	Horizontal	Temp.(℃)/Hum.(%RH):	26(℃)/60%RH
		Date:	02/10/2017



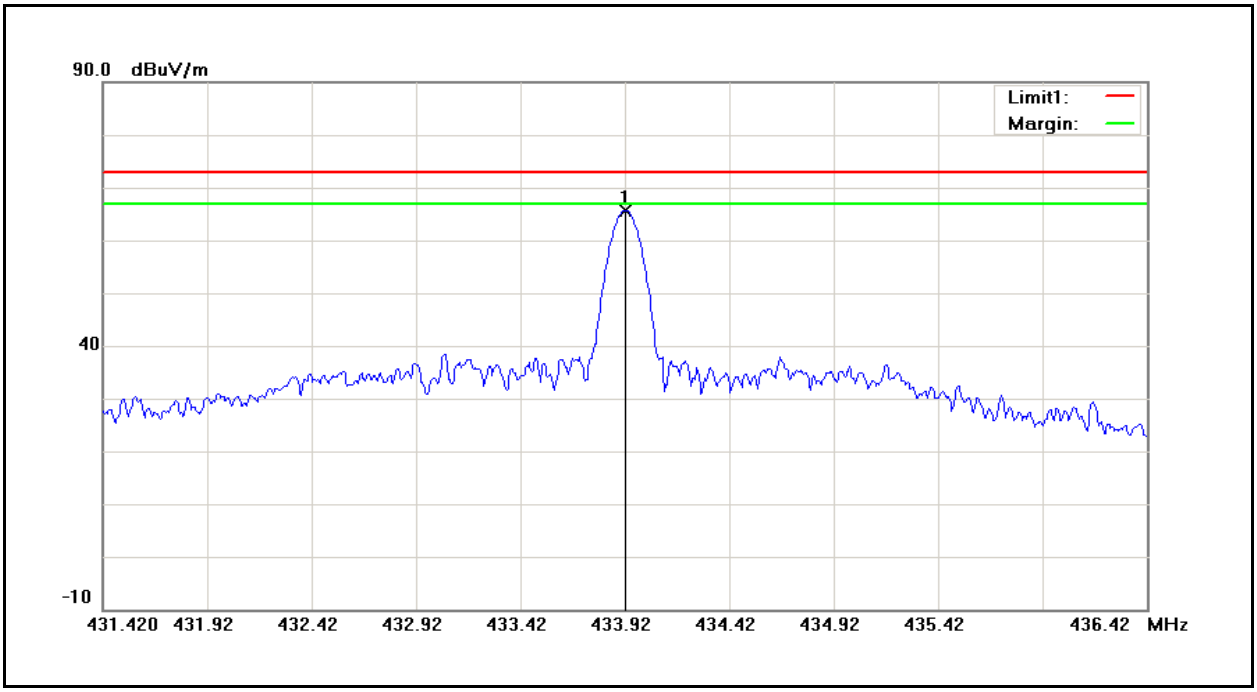
No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	433.9250	64.15	-0.65	63.50	72.87	-9.37	peak

Note: 1. Result (dBuV) = Correction factor (dB) + Reading(dBuV).

2. Correction factor (dB/m) = Antenna Factor (dB/m) + Cable loss (dB) – Pre-Amplifier gain (dB).

3. When peak results are less than average limit, so not need to evaluate the average.

Standard:	FCC Part 15C	Test Distance:	3m
Test Mode:	Mode 1	Power:	AC 120V/60Hz
Ant.Polar.:	Vertical	Temp.(℃)/Hum.(%RH):	26(℃)/60%RH
		Date:	02/10/2017



No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	433.9200	66.31	-0.65	65.66	72.87	-7.21	peak

Note: 1. Result (dBuV) = Correction factor (dB) + Reading(dBuV).

2. Correction factor (dB/m) = Antenna Factor (dB/m) + Cable loss (dB) – Pre-Amplifier gain (dB).

3. When peak results are less than average limit, so not need to evaluate the average.

Below 1GHz

Standard:	FCC Part 15C	Test Distance:	3m
Test Mode:	Mode 1	Power:	AC 120V/60Hz
		Temp.(℃)/Hum.(%RH):	26(℃)/60%RH
		Date:	02/10/2017

Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark	Ant.Polar. H / V
152.0000	25.80	-5.24	20.56	43.50	-22.94	QP	H
306.0000	23.42	-3.28	20.14	46.00	-25.86	QP	H
488.0000	25.05	0.52	25.57	46.00	-20.43	QP	H
577.0000	25.33	2.25	27.58	46.00	-18.42	QP	H
721.5000	25.49	5.24	30.73	46.00	-15.27	QP	H
903.0000	24.94	8.66	33.60	46.00	-12.40	QP	H
139.5000	26.78	-5.89	20.89	43.50	-22.61	QP	V
325.5000	24.34	-3.02	21.32	46.00	-24.68	QP	V
578.5000	25.30	2.29	27.59	46.00	-18.41	QP	V
760.5000	24.15	6.16	30.31	46.00	-15.69	QP	V
896.0000	24.28	8.52	32.80	46.00	-13.20	QP	V
942.0000	24.75	9.49	34.24	46.00	-11.76	QP	V

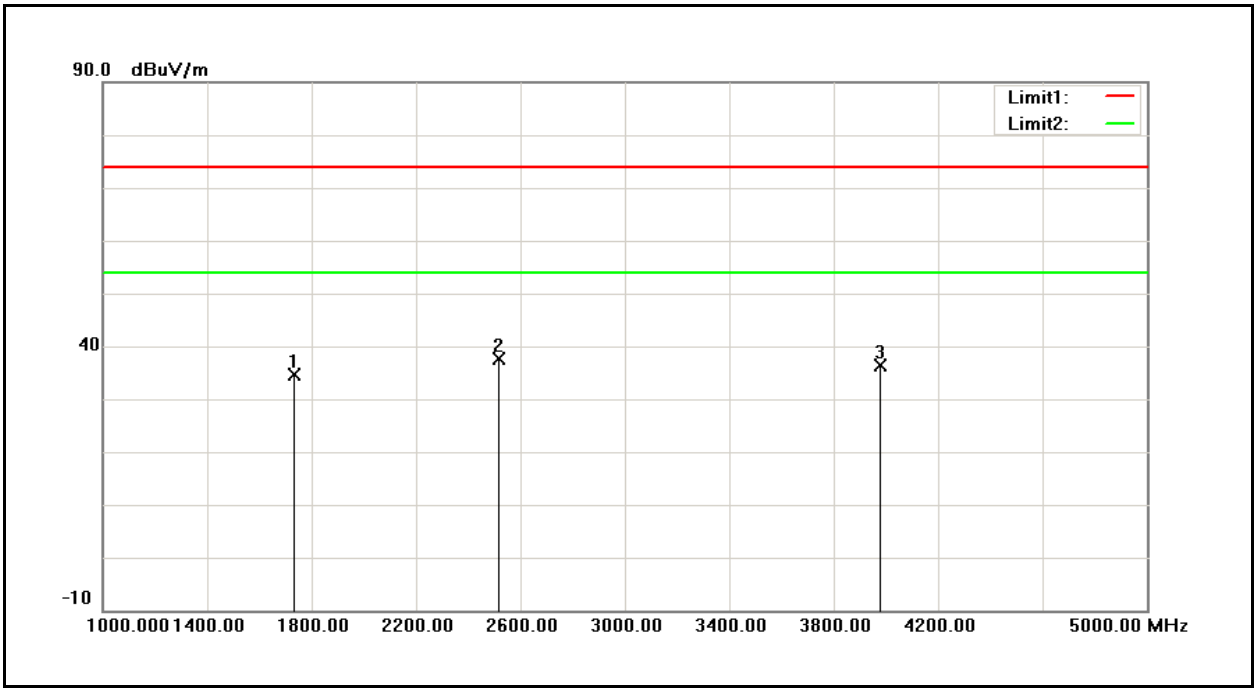
Note: 1. Result (dBuV) = Correction factor (dB) + Reading(dBuV).

2. Correction factor (dB/m) = Antenna Factor (dB/m) + Cable loss (dB) – Pre-Amplifier gain (dB).

3. No emission found between lowest internal used/generated frequencies to 30MHz (9 kHz~30MHz).

Above 1GHz

Standard:	FCC Part 15C	Test Distance:	3m
Test Mode:	Mode 1	Power:	AC 120V/60Hz
Ant.Polar.:	Horizontal	Temp.(℃)/Hum.(%RH):	26(℃)/60%RH
		Date:	02/10/2017



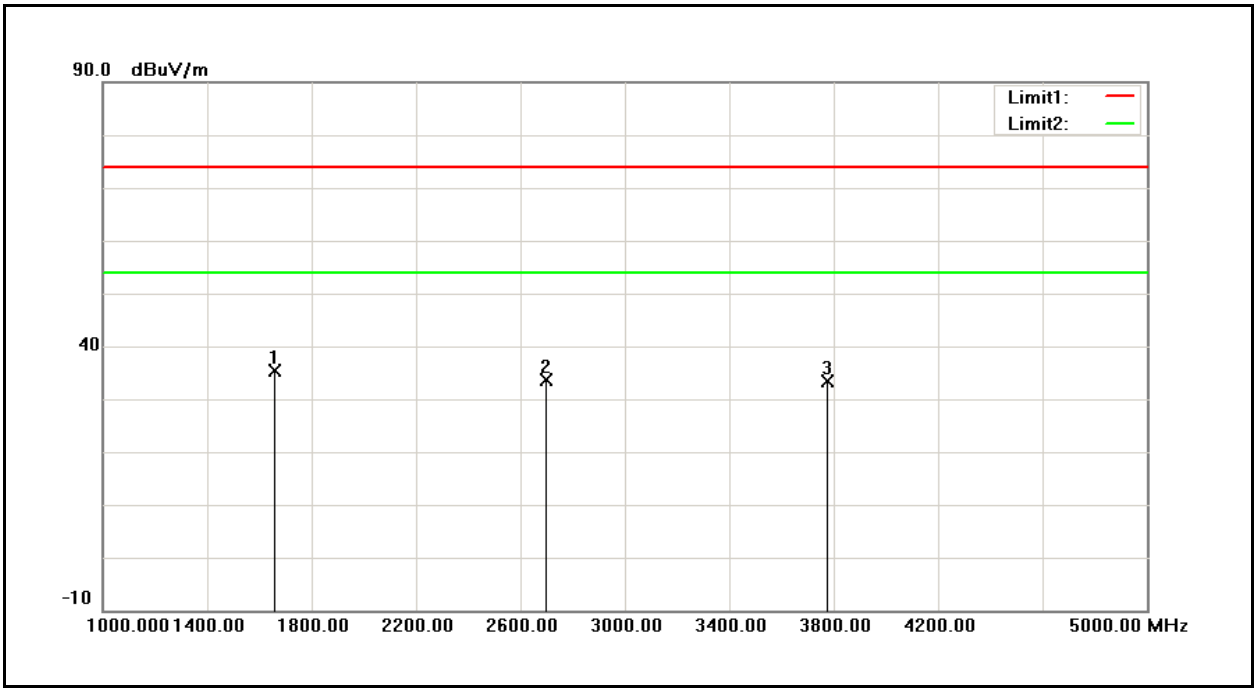
No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	1732.000	51.91	-17.18	34.73	74.00	-39.27	peak
2	2516.000	51.88	-14.22	37.66	74.00	-36.34	peak
3	3980.000	46.62	-10.24	36.38	74.00	-37.62	peak

Note: 1. Result (dBuV) = Correction factor (dB) + Reading(dBuV).

2. Correction factor (dB/m) = Antenna Factor (dB/m) + Cable loss (dB) – Pre-Amplifier gain (dB).

3. When peak results are less than average limit, so not need to evaluate the average.

Standard:	FCC Part 15C	Test Distance:	3m
Test Mode:	Mode 1	Power:	AC 120V/60Hz
Ant.Polar.:	Vertical	Temp.(℃)/Hum.(%RH):	26(℃)/60%RH
		Date:	02/10/2017



No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	1660.000	52.88	-17.43	35.45	74.00	-38.55	peak
2	2700.000	47.48	-13.80	33.68	74.00	-40.32	peak
3	3776.000	43.94	-10.53	33.41	74.00	-40.59	peak

Note: 1. Result (dBuV) = Correction factor (dB) + Reading(dBuV).

2. Correction factor (dB/m) = Antenna Factor (dB/m) + Cable loss (dB) – Pre-Amplifier gain (dB).

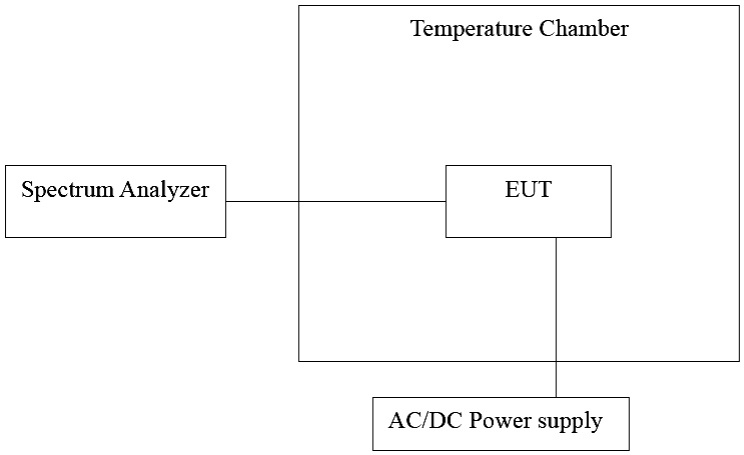
3. When peak results are less than average limit, so not need to evaluate the average.

4.3. Duration of transmission

■ **Limit**

In addition, devices operated under the provisions of this paragraph shall be provided with a means for automatically limiting operation so that the duration of each transmission shall not be greater than one second and the silent period between transmissions shall be at least 30 times the duration of the transmission but in no case less than 10 seconds.

■ **Test Setup**



■ **Test Instruments**

Equipment	Manufacturer	Model Number	Serial Number	Cal. Date	Remark
Spectrum Analyzer	Agilent	E4408B	MY45107753	08/08/2016	1 year
Temperature & Humidity Chamber	TAICHY	MHU-225LA	980729	04/18/2016	1 year
Test Site	ATL	TE05	TE05	N.C.R.	-----

NOTE: N.C.R. = No Calibration Request.

■ Test Procedure

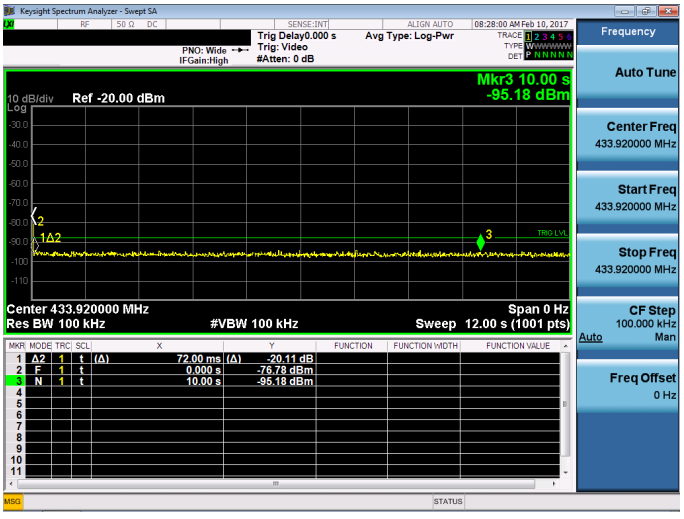
1. Place the EUT on the table and set it in the transmitting mode.
2. Remove the antenna from the EUT and then connect a low loss RF cable from the antenna port to the spectrum analyzer.
3. Set the environment into appropriate environment.
4. Set the spectrum analyzer as RBW=100kHz, VBW = RBW, Span = 0Hz, Sweep = 12S.
5. Mark the peak frequency and measure the frequency tolerance using frequency counter function.
6. Repeat until all the results are investigated.

■ Test Result

Mode 1: Transmit Mode				
Frequency (MHz)	Duration Time		Silent Time	
	Results (ms)	Limit (s)	Results (s)	Limit (s)
433.92	72	≦ 1	> 10	≧ 10 and 2.16

NOTE: Silent Time limit = Duration Time * 30

■ Test Graphs

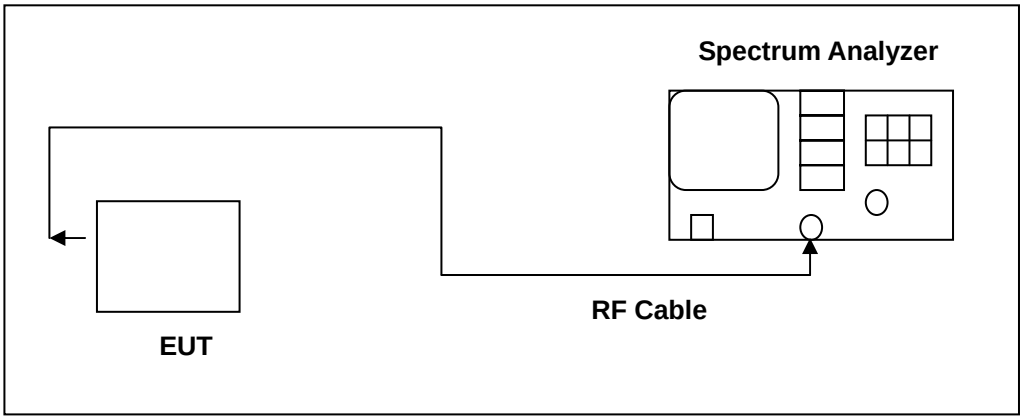
Mode 1: Transmit Mode	
	

4.4. Bandwidth measurement

■ Limit

According to §15.231 (c) 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.

■ Test Setup



■ Test Instruments

Equipment	Manufacturer	Model Number	Serial Number	Cal. Date	Remark
Spectrum Analyzer	Agilent	E4445A	MY46181986	05/19/2016	1 year
Test Site	ATL	TE05	TE05	N.C.R.	-----

NOTE: N.C.R. = No Calibration Request.

■ Test Procedure

1. Place the EUT on the table and set it in the transmitting mode.
2. Remove the antenna from the EUT and then connect a low loss RF cable from the antenna port to the spectrum analyzer.
3. Set the environment into appropriate environment.
4. Set the spectrum analyzer as RBW=10kHz, VBW = 30KHz, Span = 1MHz, Sweep = 12.4ms.
5. Mark the peak frequency and measure the frequency tolerance using frequency counter function.
6. Repeat until all the results are investigated.

■ **Test Result**

Mode 1: Transmit Mode			
Frequency (MHz)	**Bandwidth Emission (KHz)**	**Limit (KHz)**	**Result**
433.9275	49.56	<1084.81875	Pass

■ **Test Graphs**

Mode 1: Transmit Mode