

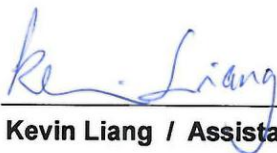
# FCC Test Report

**Equipment** : Mobile Device Gen3.0  
**Brand Name** : MobileHelp  
**Model No.** : MD3-01  
**FCC ID** : PXTMD3-01  
**Standard** : 47 CFR FCC Part 15.231  
**Operating Band** : 433.92MHz  
**Operation** : Manually operated within 5 sec  
**Applicant** : MobileHelp  
3701 FAU Blvd., Suite 300. Boca Raton FL, 33431  
**Manufacturer** : Daviscomms (Malaysia) Sdn Bhd  
Plot 18, Lorong Perusahaan Maju 1. Kawasan  
Perusahaan Perai 4, 13600 Perai, Malaysia

The product sample received on Jun. 09, 2015 and completely tested on Jun. 11, 2015. We, SPORTON, would like to declare that the tested sample has been evaluated in accordance with the procedures given in ANSI C63.10-2009 and shown compliance with the applicable technical standards.

The test results in this report apply exclusively to the tested model / sample. Without written approval of SPORTON INTERNATIONAL INC., the test report shall not be reproduced except in full.

Reviewed by:

  
Kevin Liang / Assistant Manager



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### Summary of Test Result

Conformance Test Specifications					
Report Clause	Ref. Std. Clause	Description	Measured	Limit	Result
1.1.2	15.203	Antenna Requirement	Antenna connector mechanism complied	FCC 15.203	Complied
3.1	15.207	AC Power-line Conducted Emissions	[dBuV]:0.1986310MHz 27.10 (Margin 26.57dB) - AV 48.92 (Margin 14.75dB) - QP	FCC 15.207	Complied
3.2	15.231(c)	Emission Bandwidth	62.52kHz	Fc(70~900MHz): BW ≤ fc x 0.25%	Complied
3.3	15.231(b)/(e)	Fundamental Emissions	[dBuV/m at 3m]: 59.17(Margin 21.66dB) Average	[dBuV/m at 3m]: average:80.83	Complied
3.4	15.249(b)/(e)	Transmitter Radiated Unwanted Emissions	[dBuV/m at 3m]: 81.700MHz 35.90 (Margin 4.10dB) - QP	FCC 15.231 (b)/(e) or FCC 15.209, whichever limit permits higher field strength.	Complied
3.5	15.231(a)/(e)	Operation Restriction	Operated time and silent time are less than limits.	Manually operated within 5 sec	Complied



# 1 General Description

## 1.1 Information

### 1.1.1 RF General Information

RF General Information				
Frequency Range (MHz)	Modulation	Ch. Frequency (MHz)	Channel Number	Fundamental Field Strength (dBuV/m)
433.92	ASK	433.92	1	59.17

Note 1: Field strength performed average level at 3m.

### 1.1.2 Antenna Information

Antenna Category	
<input checked="" type="checkbox"/>	Integral antenna (antenna permanently attached)
<input type="checkbox"/>	External antenna (dedicated antennas) ; Unique antenna connector

### 1.1.3 Type of EUT

Identify EUT	
EUT Serial Number	N/A
HW Version / SW Version	R05 / 3.00
Presentation of Equipment	<input checked="" type="checkbox"/> Production ; <input type="checkbox"/> Pre-Production ; <input type="checkbox"/> Prototype
Type of EUT	
<input checked="" type="checkbox"/>	Stand-alone
<input type="checkbox"/>	Combined (EUT where the radio part is fully integrated within another device) Combined Equipment - Brand Name / Model No.: ...
<input type="checkbox"/>	Plug-in radio (EUT intended for a variety of host systems) Host System - Brand Name / Model No.: ...
<input type="checkbox"/>	Other:

### 1.1.4 EUT Operational Condition

Supply Voltage	<input type="checkbox"/> AC mains	<input checked="" type="checkbox"/> DC	
Type of DC Source	<input type="checkbox"/> Internal DC supply	<input type="checkbox"/> External adapter	<input checked="" type="checkbox"/> Battery

### 1.1.5 Test Signal Duty Cycle

Operated Mode for Worst Duty Cycle	
<input type="checkbox"/>	Operated normally mode for worst duty cycle
<input checked="" type="checkbox"/>	Operated test mode for worst duty cycle
Test Signal Duty Cycle (x)	Duty Cycle Correction Factor [dB] – (20 log x)
<input checked="" type="checkbox"/> 100%	0

## 1.2 Accessories Information

Accessories Information				
Li-ion Battery 1	Brand Name	Daviscomm	Model Name	STK614041-ML
	Power Rating	3.7Vdc, 1050mAh		
Li-ion Battery 2	Brand Name	Daviscomm	Model Name	BAT-000008-0-0
	Power Rating	3.7Vdc, 1050mAh		

Note: Regarding to more detail and other information, please refer to user manual.

## 1.3 Testing Applied Standards

According to the specifications of the manufacturer, the EUT must comply with the requirements of the following standards:

- ◆ 47 CFR FCC Part 15
- ◆ ANSI C63.10-2009

## 1.4 Testing Location Information

Testing Location				
<input checked="" type="checkbox"/>	HWA YA	ADD : No. 52, Hwa Ya 1st Rd., Hwa Ya Technology Park, Kwei-Shan District, Tao Yuan City, Taiwan, R.O.C.		
		TEL : 886-3-327-3456	FAX : 886-3-327-0973	
Test Condition	Test Site No.	Test Engineer	Test Environment	
AC Conduction	CO04-HY	Zeus	21°C / 60%	
RF Conducted	TH01-HY	Shiming	23.3°C / 60.5%	
Radiated Emission	03CH03-HY	Terry	20.7°C / 54%	

## 1.5 Measurement Uncertainty

ISO/IEC 17025 requires that an estimate of the measurement uncertainties associated with the emissions test results be included in the report. The measurement uncertainties given below are based on a 95% confidence level (based on a coverage factor (k=2))

Measurement Uncertainty		
Test Item		Uncertainty
AC power-line conducted emissions		±2.3 dB
Emission bandwidth, 6dB bandwidth		±0.6 %
RF output power, conducted		±0.1 dB
Power density, conducted		±0.6 dB
Unwanted emissions, conducted	9 – 150 kHz	±0.4 dB
	0.15 – 30 MHz	±0.4 dB
	30 – 1000 MHz	±0.6 dB
	1 – 18 GHz	±0.5 dB
	18 – 40 GHz	±0.5 dB
	40 – 200 GHz	N/A
All emissions, radiated	9 – 150 kHz	±2.5 dB
	0.15 – 30 MHz	±2.3 dB
	30 – 1000 MHz	±2.6 dB
	1 – 18 GHz	±3.6 dB
	18 – 40 GHz	±3.8 dB
	40 – 200 GHz	N/A
Temperature		±0.8 °C
Humidity		±5 %
DC and low frequency voltages		±0.9%
Time		±1.4 %
Duty Cycle		±0.6 %



## 2 Test Configuration of EUT

### 2.1 The Worst Case Modulation Configuration

Modulation Used for Conformance Testing	
Test Mode	Field Strength (dBuV/m at 3 m)
ASK	59.17

### 2.2 Test Channel Frequencies Configuration

Test Channel Frequencies Configuration	
Test Mode	Test Channel Frequencies (MHz)
ASK	433.92






### 2.3 The Worst Case Measurement Configuration

The Worst Case Mode for Following Conformance Tests	
<b>Tests Item</b>	AC power-line conducted emissions
<b>Condition</b>	AC power-line conducted measurement for line and neutral (120Vac / 60Hz)
<b>Operating Mode</b>	Operation Mode Description
1	EUT with Notebook via UAB cable (within Li-ion Battery 1)
2	EUT with Notebook via UAB cable (within Li-ion Battery 2)
For operating mode 1 is the worst case and it was record in this test report.	

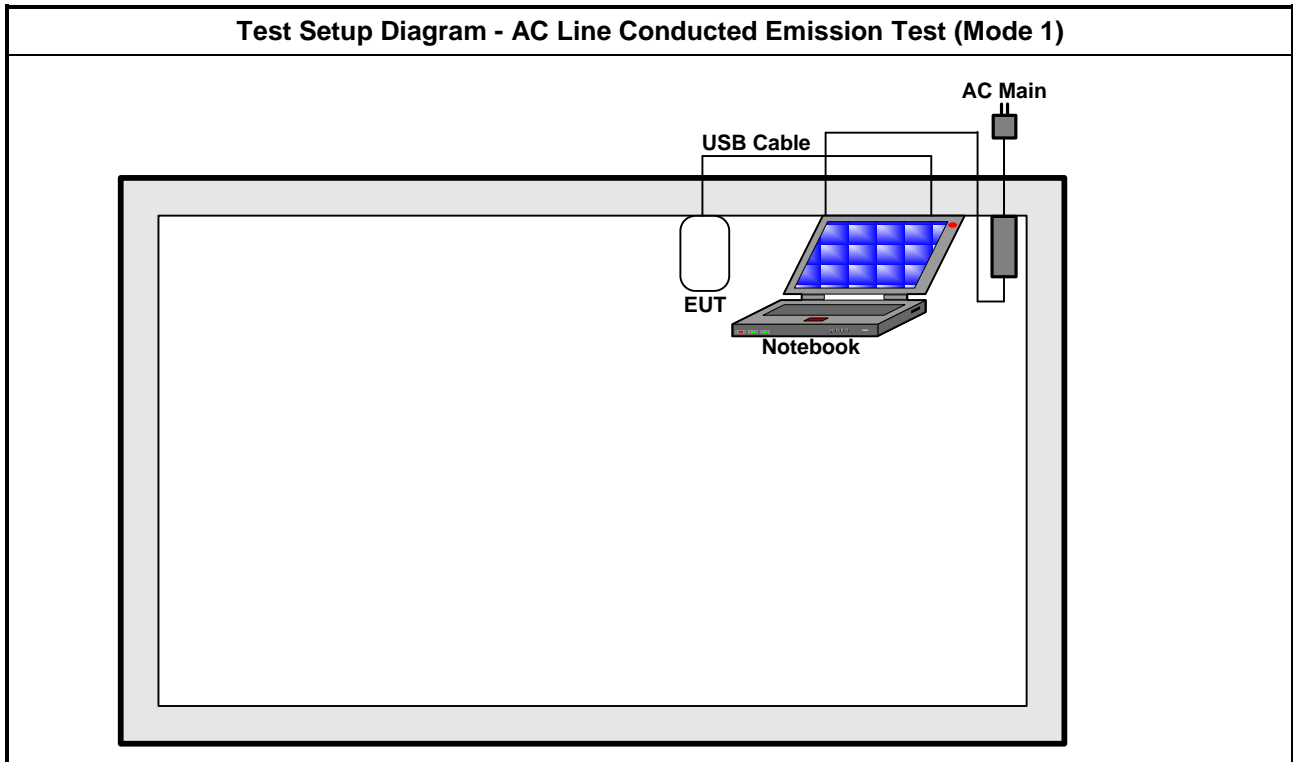
The Worst Case Mode for Following Conformance Tests	
<b>Tests Item</b>	Emission Bandwidth, Fundamental Emissions, Radiated Unwanted Emissions
<b>Test Condition</b>	Radiated measurement
<b>User Position</b>	<input type="checkbox"/> EUT will be placed in fixed position. <input type="checkbox"/> EUT will be placed in mobile position and operating multiple positions. EUT shall be performed two orthogonal planes. <input checked="" type="checkbox"/> EUT will be a hand-held or body-worn battery-powered devices and operating multiple positions. EUT shall be performed three orthogonal planes.
<b>Operating Mode</b>	<input checked="" type="checkbox"/> 1. EUT with Notebook via UAB cable (within Li-ion Battery 1) <input checked="" type="checkbox"/> 2. EUT with Notebook via UAB cable (within Li-ion Battery 2)

For operating mode 1 is the worst case and it was record in this test report.

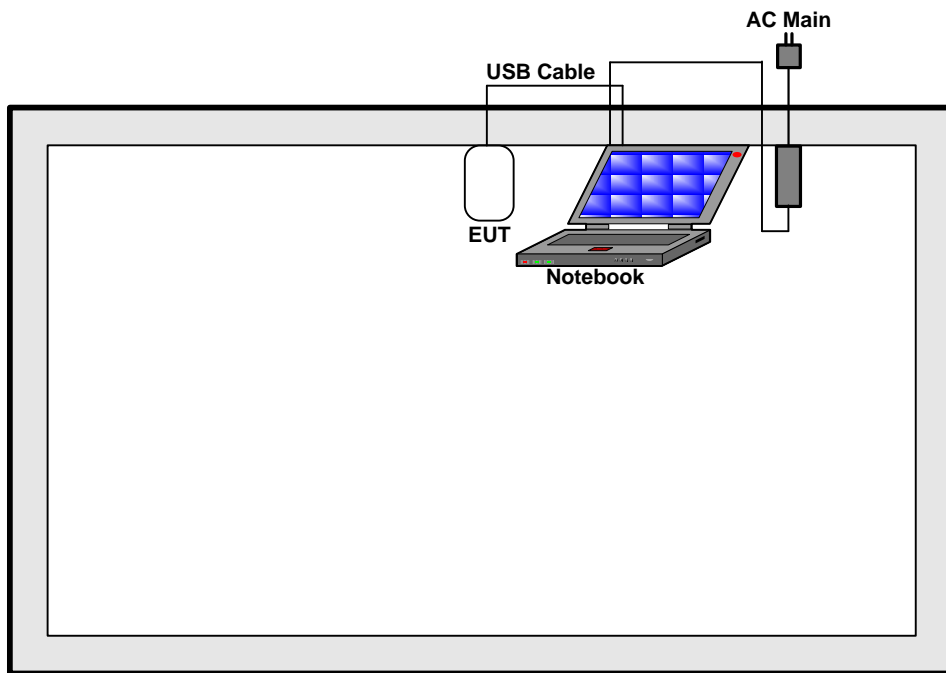
<b>Test Mode</b>	ASK		
<b>Orthogonal Planes of EUT</b>	<b>X Plane</b> 	<b>Y Plane</b> 	<b>Z Plane</b> 
<b>Worst Planes of EUT</b>			V

The Worst Case Mode for Following Conformance Tests	
<b>Tests Item</b>	Operation Restriction (silent time and operated time)
<b>Test Condition</b>	Radiated measurement
<b>Test Mode</b>	Operated normally mode for worst duty cycle condition.

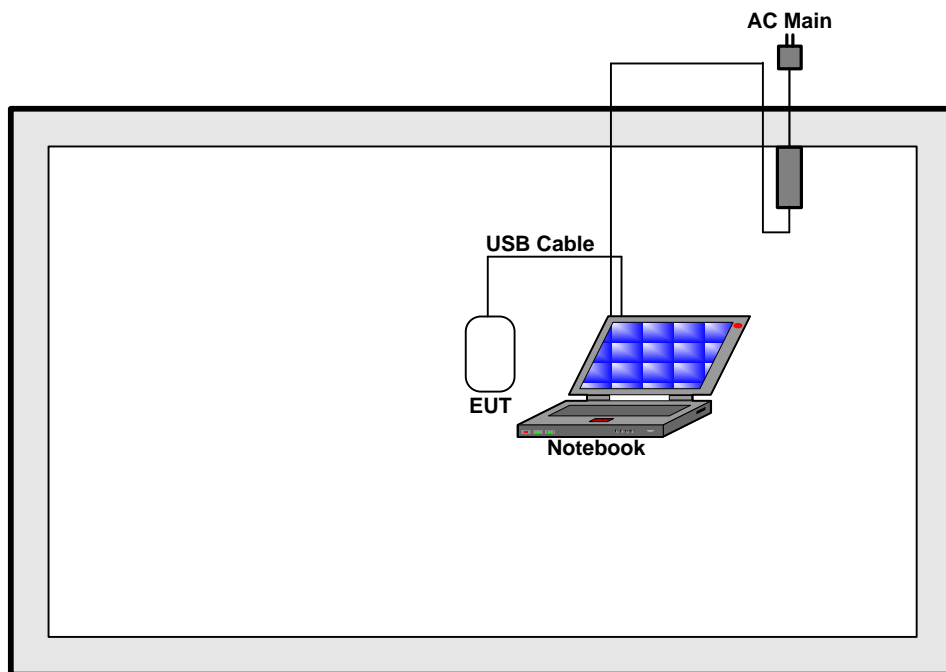
## 2.4 Test Setup Diagram



Test Setup Diagram - Radiated Test Below 1GHz (Mode 1)



Test Setup Diagram - Radiated Test Above 1GHz (Mode 1)



### 3 Transmitter Test Result

#### 3.1 AC Power-line Conducted Emissions

##### 3.1.1 AC Power-line Conducted Emissions Limit

AC Power-line Conducted Emissions Limit		
Frequency Emission (MHz)	Quasi-Peak	Average
0.15-0.5	66 - 56 *	56 - 46 *
0.5-5	56	46
5-30	60	50

Note 1: \* Decreases with the logarithm of the frequency.

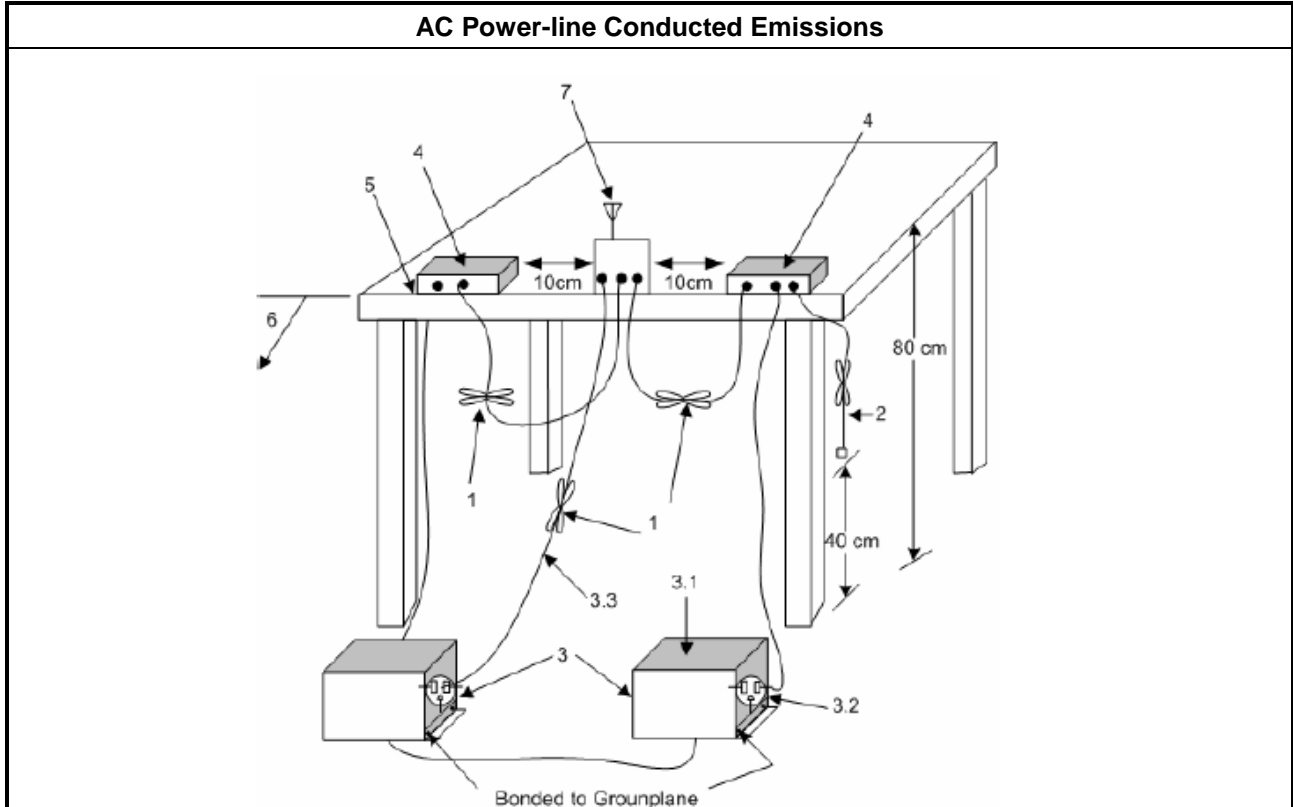
##### 3.1.2 Measuring Instruments

Refer a test equipment and calibration data table in this test report.

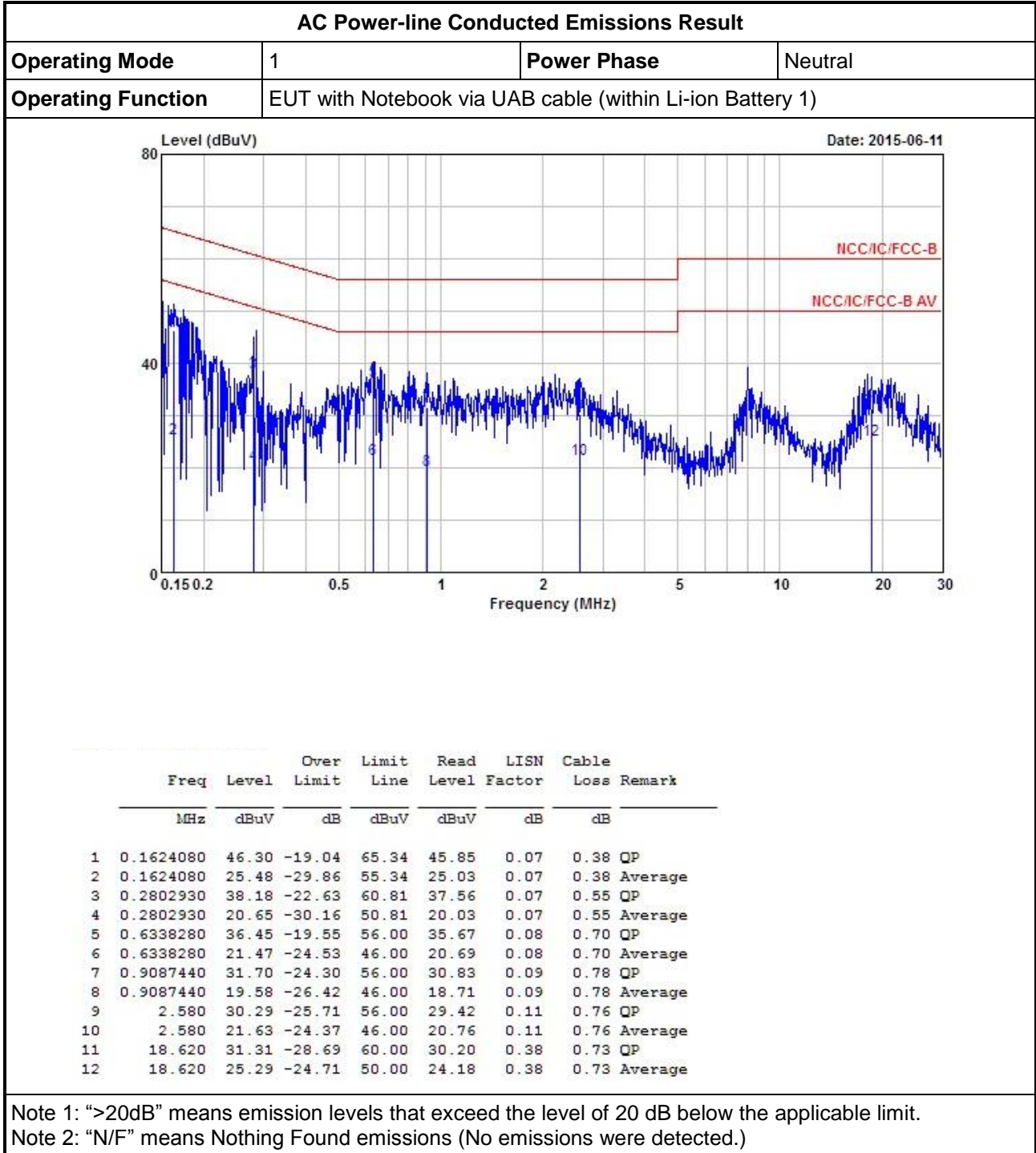
##### 3.1.3 Test Procedures

Test Method
<input checked="" type="checkbox"/> Refer as ANSI C63.10-2009, clause 6.2 for AC power-line conducted emissions.

##### 3.1.4 Test Setup

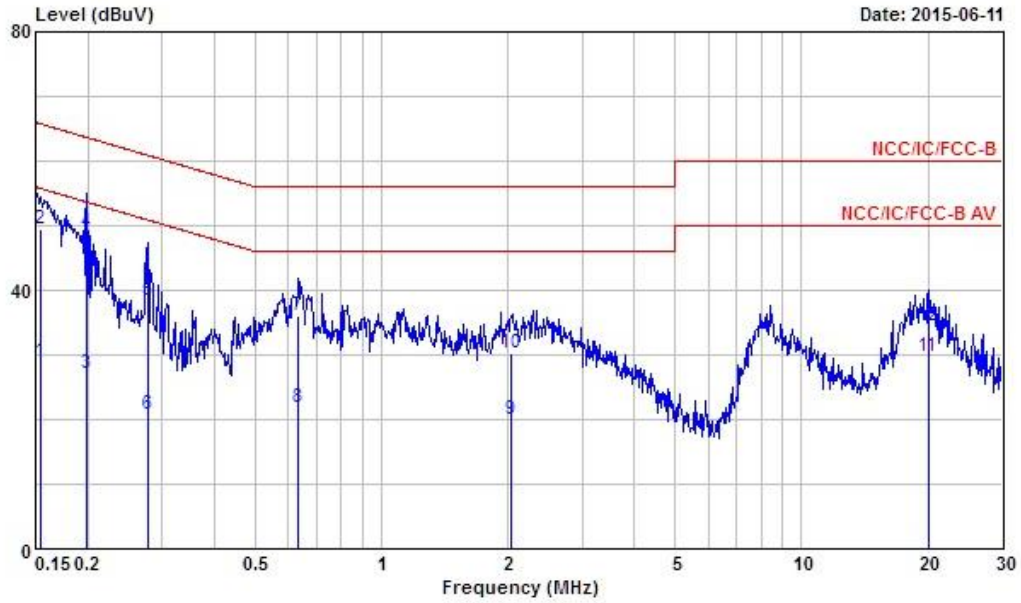


3.1.5 Test Result of AC Power-line Conducted Emissions



AC Power-line Conducted Emissions Result

Operating Mode	1	Power Phase	Line
Operating Function	EUT with Notebook via UAB cable (within Li-ion Battery 1)		



	Freq	Level	Over	Limit	Read	LISN	Cable	Remark
	MHz	dBuV	Limit	Line	Level	Factor	Loss	
			dB	dBuV	dBuV	dB	dB	
1	0.1540270	28.89	-26.89	55.78	28.49	0.05	0.35	Average
2	0.1540270	49.55	-16.23	65.78	49.15	0.05	0.35	QP
3	0.1986310	27.10	-26.57	53.67	26.54	0.06	0.50	Average
4	0.1986310	48.92	-14.75	63.67	48.36	0.06	0.50	QP
5	0.2788120	38.43	-22.42	60.85	37.82	0.06	0.55	QP
6	0.2788120	20.80	-30.05	50.85	20.19	0.06	0.55	Average
7	0.6338280	36.08	-19.92	56.00	35.31	0.07	0.70	QP
8	0.6338280	21.76	-24.24	46.00	20.99	0.07	0.70	Average
9	2.040	20.08	-25.92	46.00	19.18	0.10	0.80	Average
10	2.040	30.24	-25.76	56.00	29.34	0.10	0.80	QP
11	20.060	29.84	-20.16	50.00	28.78	0.36	0.70	Average
12	20.060	34.60	-25.40	60.00	33.54	0.36	0.70	QP

Note 1: ">20dB" means emission levels that exceed the level of 20 dB below the applicable limit.  
 Note 2: "N/F" means Nothing Found emissions (No emissions were detected.)

### 3.2 Emission Bandwidth

#### 3.2.1 Emission Bandwidth Limit

Emission Bandwidth Limit	
<input checked="" type="checkbox"/>	Emission bandwidth falls completely within authorized band.
<input checked="" type="checkbox"/>	Fc(70~900MHz): $BW \leq fc \times 0.25\%$
<input type="checkbox"/>	Fc(>900MHz): $BW \leq fc \times 0.5\%$

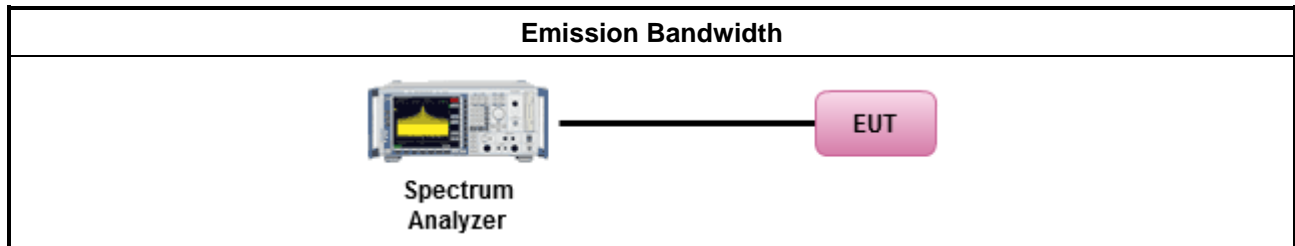
#### 3.2.2 Measuring Instruments

Refer a test equipment and calibration data table in this test report.

#### 3.2.3 Test Procedures

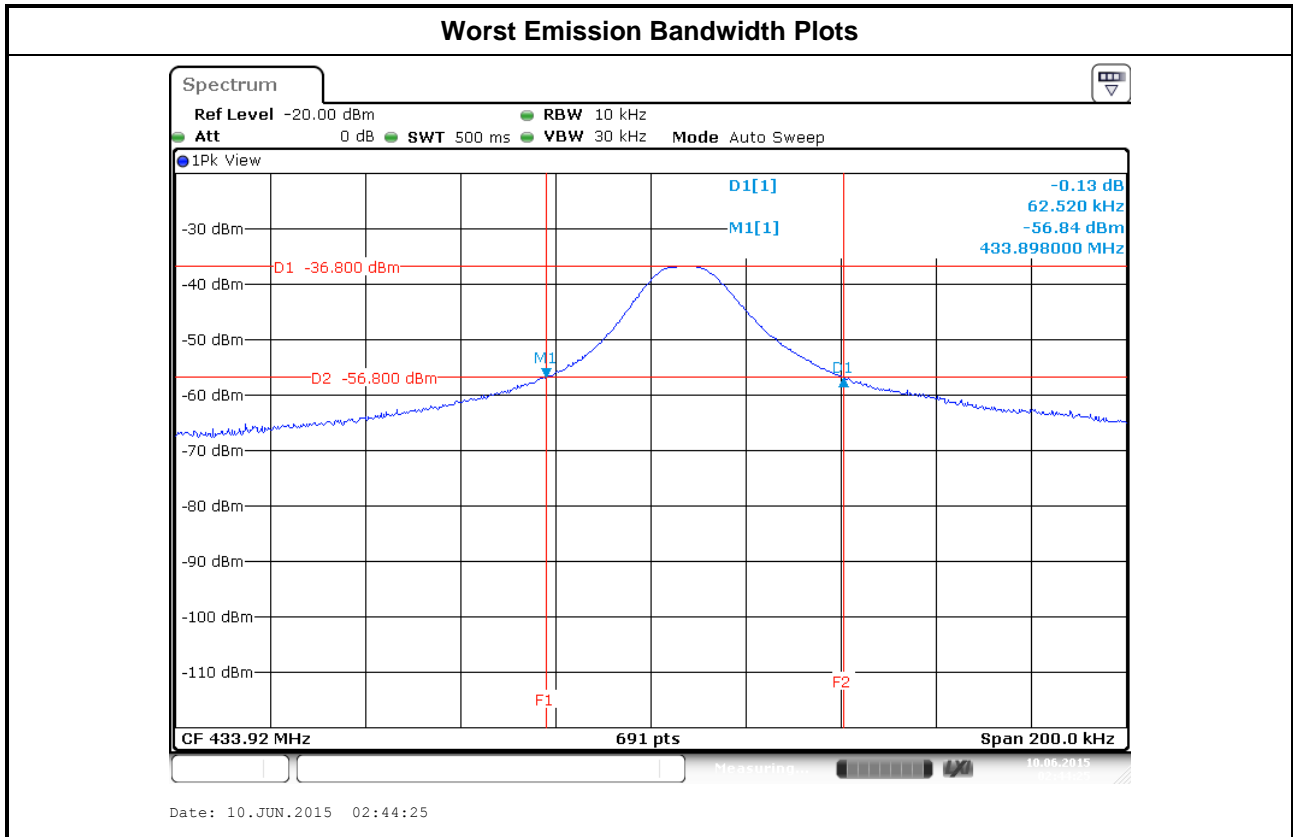
Test Method	
<input checked="" type="checkbox"/>	Refer as ANSI C63.10, clause 6.9.2 for 20 dB emission bandwidth and 99% occupied bandwidth measurement.

#### 3.2.4 Test Setup



### 3.2.5 Test Result of Emission Bandwidth

Emission Bandwidth Result			
Modulation Mode	Frequency (MHz)	99% Bandwidth (kHz)	20dB BW (kHz)
ASK	433.92	105.35	62.52
Limit		N/A	1080
Result		Complied	





### 3.3 Fundamental Emissions

#### 3.3.1 Fundamental Emissions Limit

For manually operated within 5 sec, activated automatically within 5 sec, periodic transmissions		
Frequency Band (MHz)	Fundamental Limit (uV/m) at 3m	Fundamental Limit (dBuV/m) at 3m
40.66-40.70	2250	67
70-130	1250	61.9
130-174	1250-3750(**)	61.9-71.5
174-260	3750	71.5
260-470	3750-12500(**)	71.5-81.9
Above 470	12500	81.9

\*\*1. Linear interpolations, the formulas for calculating the maximum permitted fundamental field strengths are as follows:  
 (1) for the band 130 - 174 MHz,  $\mu\text{V/m}$  at 3 meters =  $56.81818 \times (\text{operating frequency, MHz}) - 6136.3636$ ;  
 (2) for the band 260 - 470 MHz,  $\mu\text{V/m}$  at 3 meters =  $41.6667 \times (\text{operating frequency, MHz}) - 7083.3333$ .  
 Based on the average value of the measured emissions.

For periodic transmissions (lower field strength)		
Frequency Band (MHz)	Fundamental Limit (uV/m) at 3m	Fundamental Limit (dBuV/m) at 3m
40.66-40.70	1000	60
70-130	500	54
130-174	500-1500(**)	54-63.5
174-260	1500	63.5
260-470	1500-5000(**)	63.5-74
Above 470	5000	74

\*\* 1. Linear interpolations, the formulas for calculating the maximum permitted fundamental field strengths are as follows:  
 (1) for the band 130 - 174 MHz,  $\mu\text{V/m}$  at 3 meters =  $22.72727 \times (\text{operating frequency, MHz}) - 2454.545$ ;  
 (2) for the band 260 - 470 MHz,  $\mu\text{V/m}$  at 3 meters =  $16.6667 \times (\text{operating frequency, MHz}) - 2833.3333$ .  
 Based on the average value of the measured emissions.

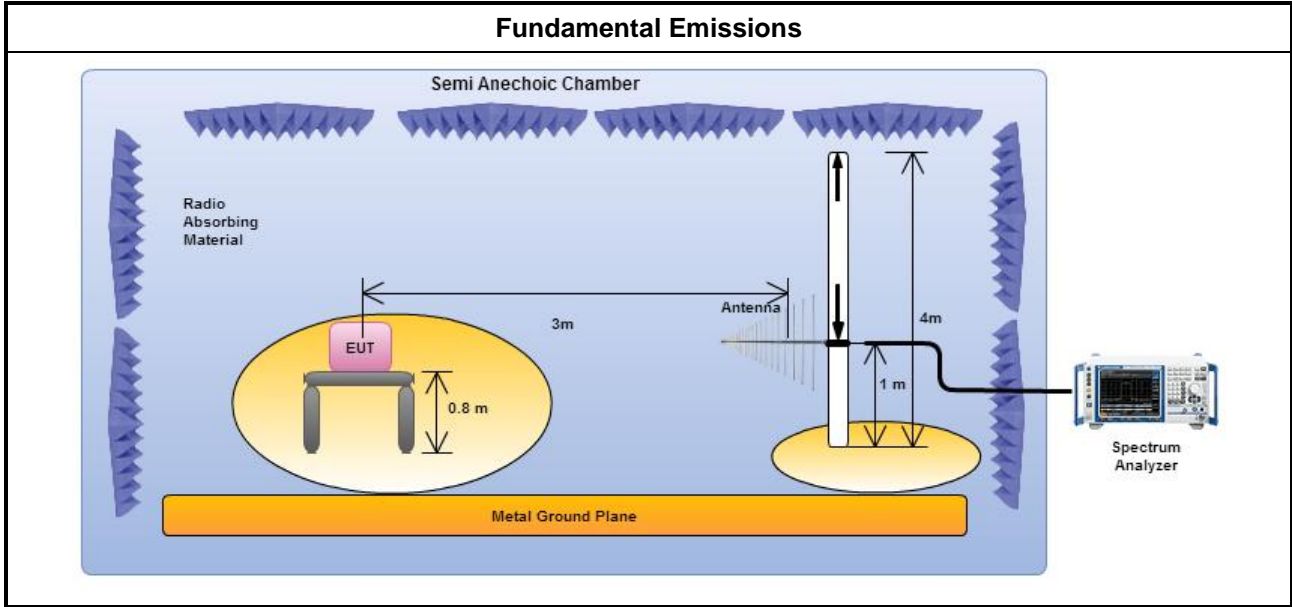
#### 3.3.2 Measuring Instruments

Refer a test equipment and calibration data table in this test report.

#### 3.3.3 Test Procedures

<input checked="" type="checkbox"/>	For the transmitter emissions shall be measured using following options below:
<input type="checkbox"/>	Refer as ANSI C63.10, clause 4.1.4.2.3 (Reduced VBW) – Duty cycle $\geq$ 100%.
<input checked="" type="checkbox"/>	Refer as ANSI C63.10, clause 4.1.4.2.4 average value of pulsed emissions. Adjusted by a “duty cycle correction factor”, derived from $20 \log (\text{dwell time}/100 \text{ ms})$ . Average emission = peak emission + $20 \log (\text{duty cycle})$ .
<input checked="" type="checkbox"/>	Refer as ANSI C63.10, clause 4.1.4.2.2 measurement procedure peak limit.
<input checked="" type="checkbox"/>	For radiated measurement, refer as ANSI C63.10, clause 6.5 for radiated emissions

### 3.3.4 Test Setup



### 3.3.5 Test Result of Fundamental Emissions

Field Strength of Fundamental Emissions Result					
Modulation Mode	Frequency (MHz)	Fundamental (dBuV/m)@3m	Margin (dB)	Limit (dBuV/m)@3m	Type
ASK	433.92	59.17	21.66	80.83	Average
<b>Result</b>		<b>Complied</b>			
Note 1: Measurement worst emissions of receive antenna polarization: Horizontal					
Note 2: If duty cycle < 100%, average emission = peak emission + 20 log (duty cycle).					

### 3.4 Transmitter Radiated Unwanted Emissions

#### 3.4.1 Transmitter Radiated Unwanted Emissions Limit

For manually operated within 5 sec, activated automatically within 5 sec, periodic transmissions		
Unwanted emissions limit follow this table or the general limits FCC 15.209, whichever limit permits higher field strength.		
Frequency Band (MHz)	Spurious Limit (uV/m) at 3m	Spurious Limit (dBuV/m) at 3m
40.66-40.70	225	47
70-130	125	41.9
130-174	125-375(**)	41.9-51.5
174-260	375	51.5
260-470	375-1250(**)	51.5-61.9
Above 470	1250	61.9
**1. Linear interpolations, the formulas for calculating the maximum permitted fundamental field strengths are as follows: (1) for the band 130 - 174 MHz, $\mu\text{V/m}$ at 3 meters = $56.81818 \times (\text{operating frequency, MHz}) - 6136.3636$ ; (2) for the band 260 - 470 MHz, $\mu\text{V/m}$ at 3 meters = $41.6667 \times (\text{operating frequency, MHz}) - 7083.3333$ . Based on the average value of the measured emissions.		

For periodic transmissions (lower field strength)		
Unwanted emissions limit follow this table or the general limits FCC 15.209, whichever limit permits higher field strength.		
Frequency Band (MHz)	Spurious Limit (uV/m) at 3m	Spurious Limit (dBuV/m) at 3m
40.66-40.70	100	40
70-130	50	34
130-174	50-150(**)	34-43.5
174-260	150	43.5
260-470	150-500(**)	43.5-54
Above 470	500	54
** 1. Linear interpolations, the formulas for calculating the maximum permitted fundamental field strengths are as follows: (1) for the band 130 - 174 MHz, $\mu\text{V/m}$ at 3 meters = $22.72727 \times (\text{operating frequency, MHz}) - 2454.545$ ; (2) for the band 260 - 470 MHz, $\mu\text{V/m}$ at 3 meters = $16.6667 \times (\text{operating frequency, MHz}) - 2833.3333$ . Based on the average value of the measured emissions.		

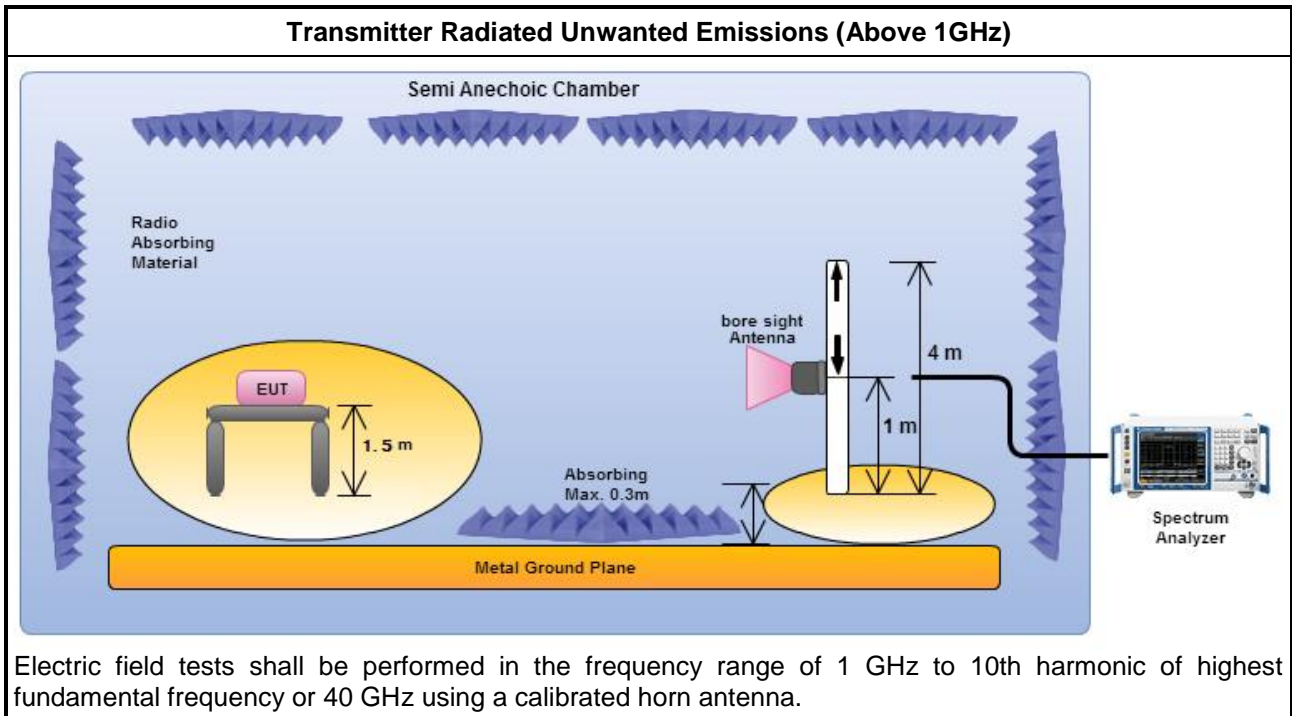
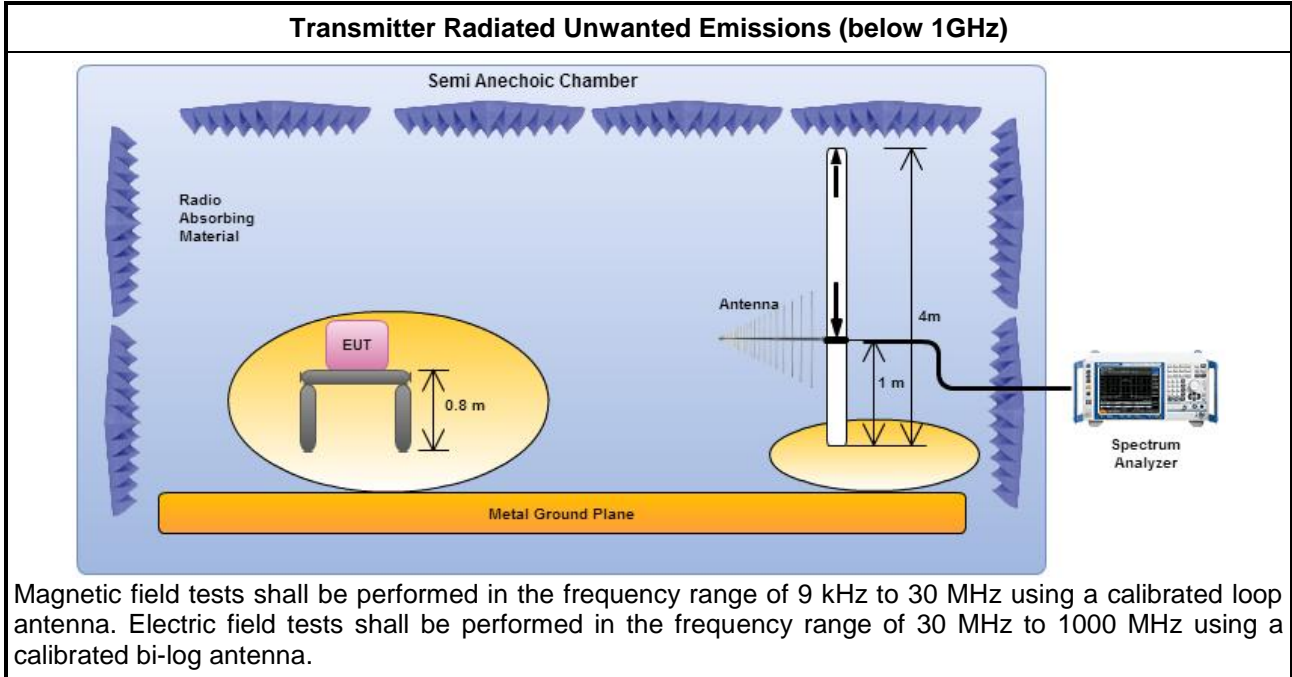
#### 3.4.2 Measuring Instruments

Refer a test equipment and calibration data table in this test report.

3.4.3 Test Procedures

Test Method – General Information	
<input checked="" type="checkbox"/>	The average emission levels shall be measured in [duty cycle ≥ 98 or duty factor].
<input checked="" type="checkbox"/>	Refer as ANSI C63.10, clause 6.10 bandedge testing shall be performed at the lowest frequency channel and highest frequency channel within the allowed operating band.
<input checked="" type="checkbox"/>	For the transmitter unwanted emissions shall be measured using following options below:
<input type="checkbox"/>	Refer as ANSI C63.10, clause 4.1.4.2.3 (Reduced VBW) – Duty cycle ≥ 100%.
<input checked="" type="checkbox"/>	Refer as ANSI C63.10, clause 4.1.4.2.4 average value of pulsed emissions. Adjusted by a “duty cycle correction factor”, derived from 20log (dwell time/100 ms). Average emission = peak emission + 20 log (duty cycle).
<input checked="" type="checkbox"/>	Refer as ANSI C63.10, clause 4.1.4.2.2 measurement procedure peak limit.
<input checked="" type="checkbox"/>	For the transmitter bandedge emissions shall be measured using following options below:
<input checked="" type="checkbox"/>	Refer as ANSI C63.10, clause 6.10 for band-edge testing.
<input type="checkbox"/>	Refer as ANSI C63.10, clause 6.10.6.2 for marker-delta method for band-edge measurements.
<input checked="" type="checkbox"/>	For radiated measurement.
<input checked="" type="checkbox"/>	Refer as ANSI C63.10, clause 6.4 for radiated emissions below 30 MHz and test distance is 3m.
<input checked="" type="checkbox"/>	Refer as ANSI C63.10, clause 6.5 for radiated emissions 30 MHz to 1 GHz and test distance is 3m.
<input checked="" type="checkbox"/>	Refer as ANSI C63.10, clause 6.6 for radiated emissions above 1 GHz and test distance is 3m.
<input checked="" type="checkbox"/>	The any unwanted emissions level shall not exceed the fundamental emission level.
<input checked="" type="checkbox"/>	All amplitude of spurious emissions that are attenuated by more than 20 dB below the permissible value has no need to be reported.

### 3.4.4 Test Setup



Note: FCC's permission to use 1.5m as an alternative per TCBC Conf call of Dec. 02, 2014.

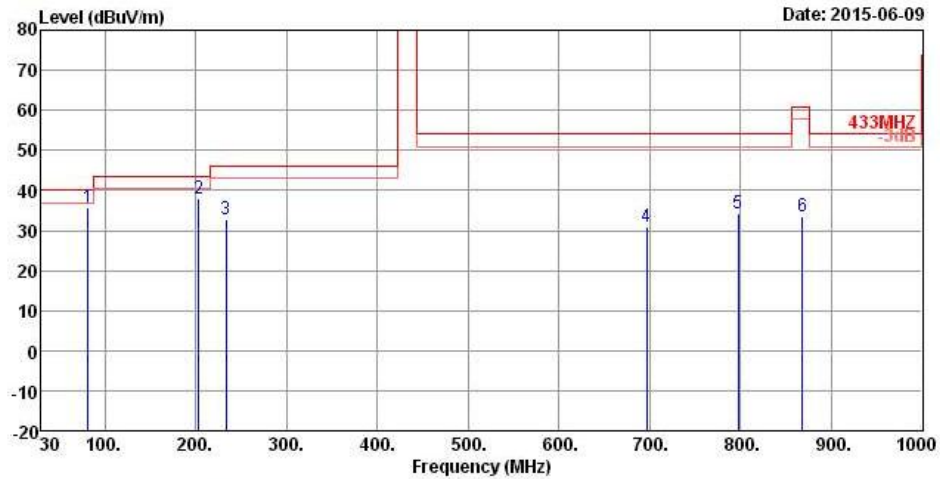
### 3.4.5 Transmitter Radiated Unwanted Emissions (Below 30MHz)

All amplitude of spurious emissions that are attenuated by more than 20 dB below the permissible value has no need to be reported.



3.4.6 Transmitter Radiated Unwanted Emissions (Below 1GHz)

Transmitter Radiated Unwanted Emissions (Below 1GHz)			
Operating Mode	1	Test Freq. (FX)	433.92
Operating Function	ASK	Polarization	V



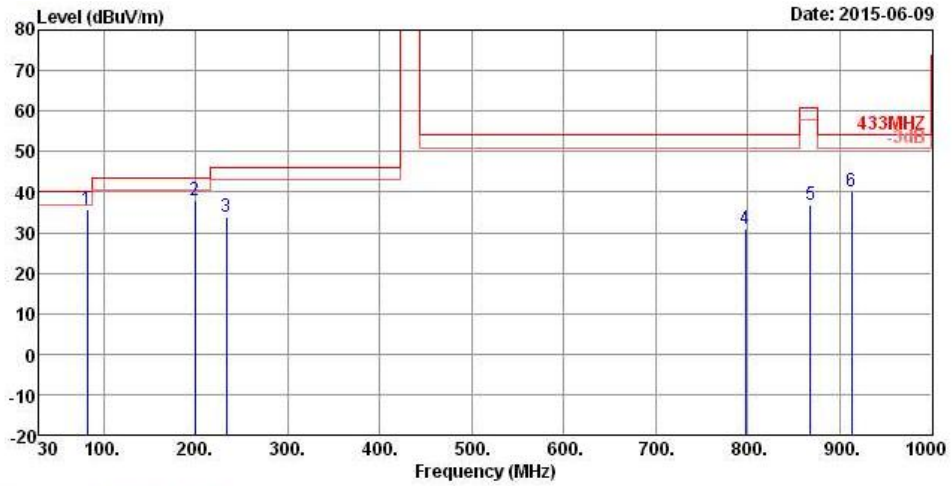
	Freq	Level	Over Limit	Limit Line	ReadAntenna Level	Antenna Factor	Cable Loss	Preamp Factor	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	
1	81.700	35.90	-4.10	40.00	55.02	6.81	1.47	27.40	QP
2	202.960	38.04	-5.46	43.50	53.67	8.97	2.35	26.95	Peak
3	233.040	32.81	-13.19	46.00	46.97	10.19	2.51	26.86	Peak
4	697.000	30.98	-23.02	54.00	35.84	18.51	4.55	27.92	Peak
5	797.000	34.24	-19.76	54.00	37.68	19.45	4.90	27.79	Peak
6	868.000	33.46	-27.33	60.79	35.93	20.18	5.02	27.67	Peak

Note 1: ">20dB" means spurious emission levels that exceed the level of 20 dB below the applicable limit.  
 Note 2: "N/F" means Nothing Found spurious emissions (No spurious emissions were detected.)  
 Note 3: Measurement receive antenna polarization: H (Horizontal), V (Vertical)  
 Note 4: If duty cycle < 100%, average emission = peak emission + 20 log (duty cycle).  
 Note 5: No level of unwanted emissions exceeds the level of the fundamental emission.



Transmitter Radiated Unwanted Emissions (Below 1GHz)

Operating Mode	1	Test Freq. (FX)	433.92
Operating Function	ASK	Polarization	H



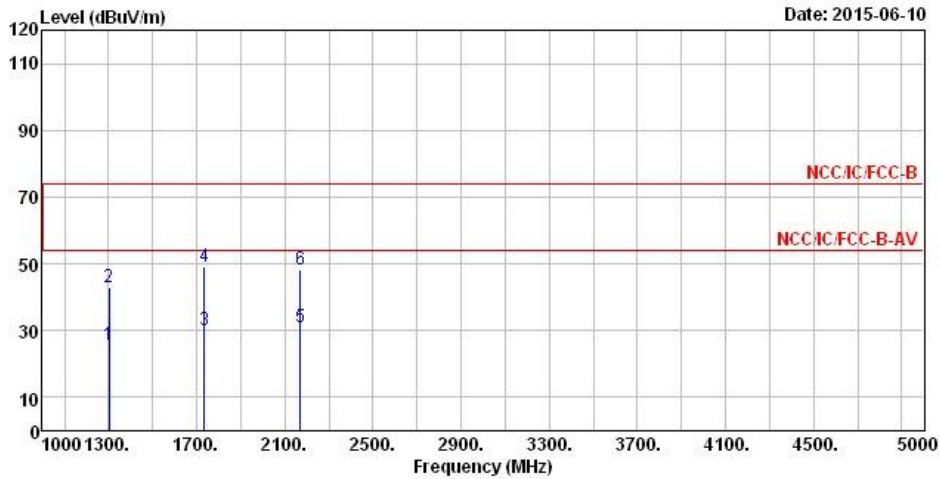
	Freq	Level	Over Limit	Limit Line	ReadAntenna Level	Antenna Factor	Cable Loss	Preamp Factor	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	
1	82.640	35.58	-4.42	40.00	54.53	6.97	1.48	27.40	QP
2	199.200	37.87	-5.63	43.50	53.48	9.03	2.32	26.96	Peak
3	233.040	34.03	-11.97	46.00	48.19	10.19	2.51	26.86	Peak
4	797.000	30.95	-23.05	54.00	34.39	19.45	4.90	27.79	Peak
5	868.000	36.67	-24.12	60.79	39.14	20.18	5.02	27.67	Peak
6	913.000	40.17	-13.83	54.00	42.29	20.21	5.23	27.56	Peak

Note 1: ">20dB" means spurious emission levels that exceed the level of 20 dB below the applicable limit.  
 Note 2: "N/F" means Nothing Found spurious emissions (No spurious emissions were detected.)  
 Note 3: Measurement receive antenna polarization: H (Horizontal), V (Vertical)  
 Note 4: If duty cycle < 100%, average emission = peak emission + 20 log (duty cycle).  
 Note 5: No level of unwanted emissions exceeds the level of the fundamental emission.



3.4.7 Transmitter Radiated Unwanted Emissions (Above 1GHz)

Transmitter Radiated Unwanted Emissions (Above 1GHz)			
Operating Mode	1	Test Freq. (FX)	433.92
Operating Function	ASK	Polarization	V



	Freq	Level	Over Limit	Limit Line	ReadAntenna Level	Antenna Factor	Cable Loss	Preamp Factor	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	
1	1301.760	25.48	-28.52	54.00	31.57	24.88	2.33	33.30	Average
2	1301.760	42.76	-31.24	74.00	48.85	24.88	2.33	33.30	Peak
3	1733.680	30.32	-23.68	54.00	33.95	26.42	2.70	32.75	Average
4	1733.680	49.28	-24.72	74.00	52.91	26.42	2.70	32.75	Peak
5	2169.600	30.81	-23.19	54.00	32.32	28.01	3.04	32.56	Average
6	2169.600	48.20	-25.80	74.00	49.71	28.01	3.04	32.56	Peak

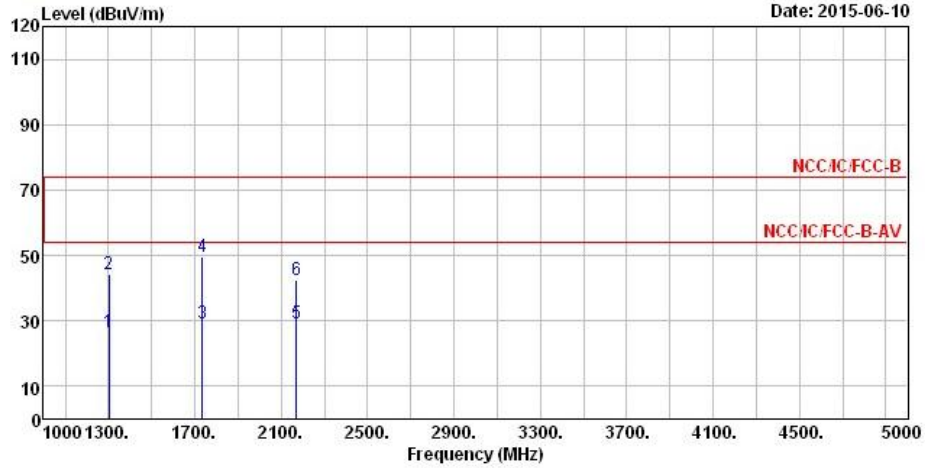
- Note 1: ">20dB" means spurious emission levels that exceed the level of 20 dB below the applicable limit.
- Note 2: Measurement receive antenna polarization: H (Horizontal), V (Vertical)
- Note 3: For the peak measurement is fully sufficient, as the max field strength as measured with the Peak-Detector meets the AV-Limit so that the AV level does not need to be reported in addition.
- Note 4: If duty cycle < 100%, average emission = peak emission + 20 log (duty cycle).
- Note 5: No level of unwanted emissions exceeds the level of the fundamental emission.





Transmitter Radiated Unwanted Emissions (Above 1GHz)

Operating Mode	1	Test Freq. (FX)	433.92
Operating Function	ASK	Polarization	H



	Freq	Level	Over Limit	Limit Line	ReadAntenna Level	Cable Factor	Preamp Loss	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB
1	1301.760	26.42	-27.58	54.00	32.51	24.88	2.33	33.30 Average
2	1301.760	44.37	-29.63	74.00	50.46	24.88	2.33	33.30 Peak
3	1733.680	29.28	-24.72	54.00	32.91	26.42	2.70	32.75 Average
4	1733.680	49.47	-24.53	74.00	53.10	26.42	2.70	32.75 Peak
5	2169.600	29.24	-24.76	54.00	30.75	28.01	3.04	32.56 Average
6	2169.600	42.53	-31.47	74.00	44.04	28.01	3.04	32.56 Peak

- Note 1: ">20dB" means spurious emission levels that exceed the level of 20 dB below the applicable limit.
- Note 2: Measurement receive antenna polarization: H (Horizontal), V (Vertical)
- Note 3: For the peak measurement is fully sufficient, as the max field strength as measured with the Peak-Detector meets the AV-Limit so that the AV level does not need to be reported in addition.
- Note 4: If duty cycle < 100%, average emission = peak emission + 20 log (duty cycle).
- Note 5: No level of unwanted emissions exceeds the level of the fundamental emission.

### 3.5 Operation Restriction

#### 3.5.1 Operation Restriction Limit

Operation Restriction Limit	
<input checked="" type="checkbox"/>	Manually operated: manually operated transmitter shall employ a switch that will automatically deactivate the transmitter within not more than 5 sec of being released.
<input type="checkbox"/>	Activated automatically: transmitter activated automatically shall cease transmission within 5 sec after activation.
<input type="checkbox"/>	Periodic transmissions: permitted with total transmission time of 2 sec per hour or less.
<input type="checkbox"/>	Periodic transmissions (lower field strength): each transmission is not greater than 1 sec and the silent period between transmissions is at least 30 times the duration of the transmission but in no case less than 10 sec.

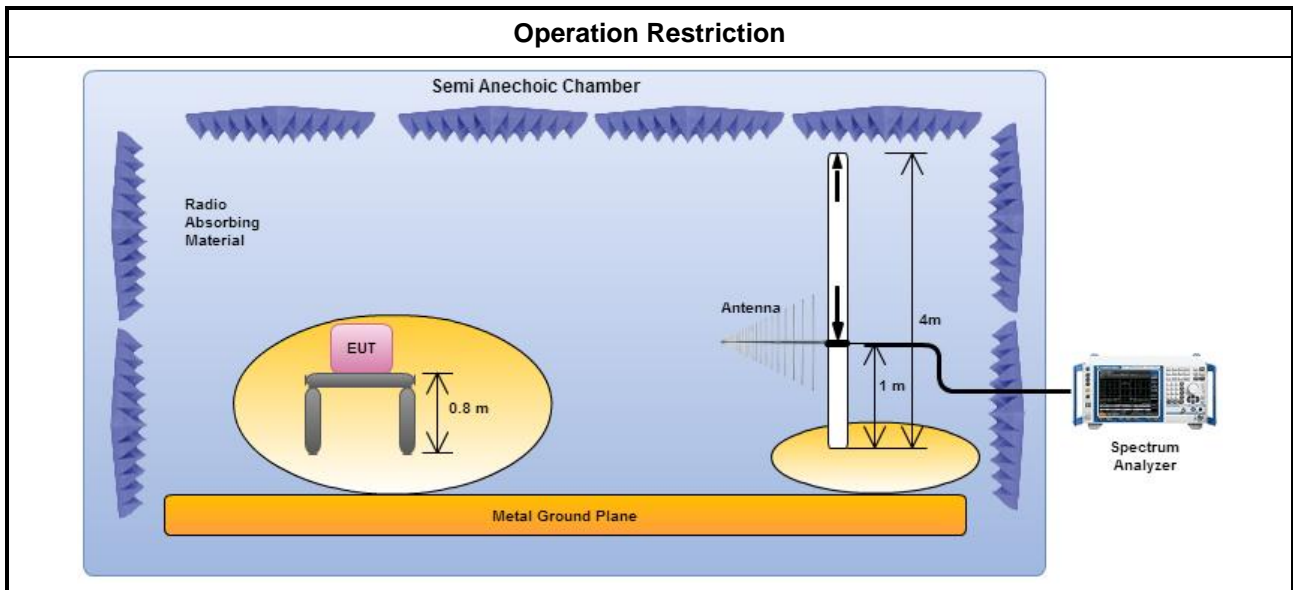
#### 3.5.2 Measuring Instruments

Refer a test equipment and calibration data table in this test report. Activated automatically within 5 sec

#### 3.5.3 Test Procedures

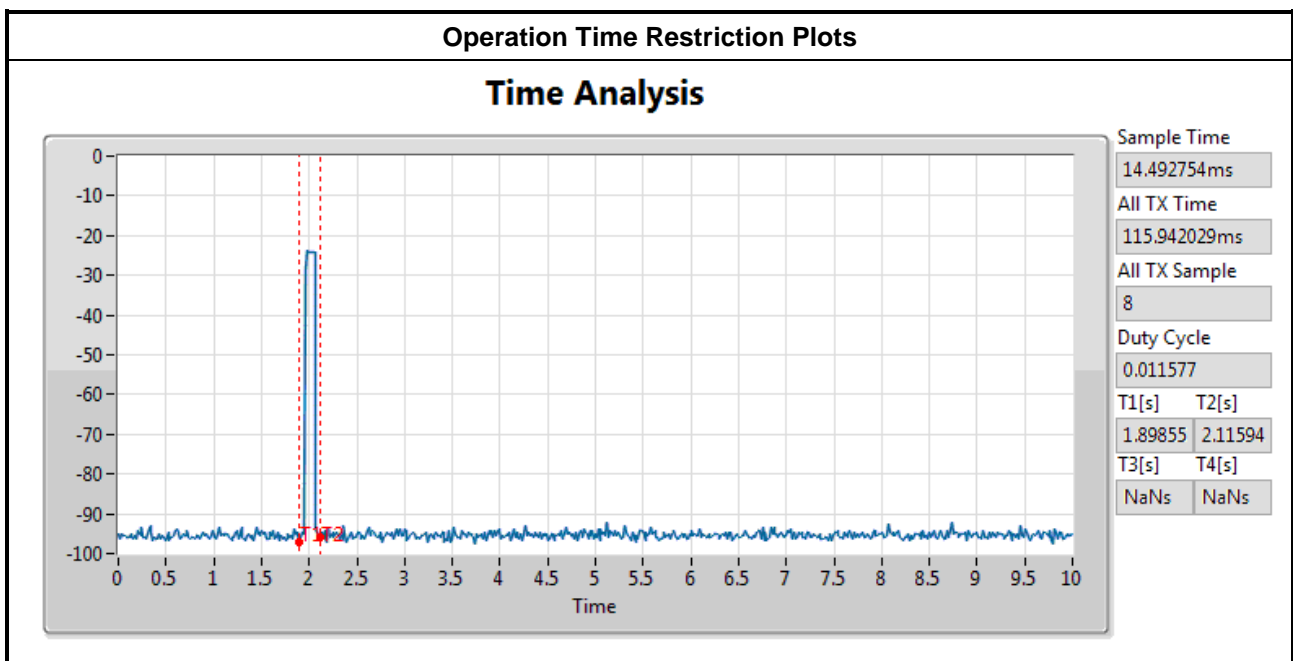
Test Method	
<input checked="" type="checkbox"/>	Refer as ANSI C63.10, clause 7.4 for periodic operation measurement.

#### 3.5.4 Test Setup



### 3.5.5 Test Result of Operation Restriction

Operation Restriction Limit	
<input checked="" type="checkbox"/>	Manually operated: manually operated transmitter shall employ a switch that will automatically deactivate the transmitter within not more than 5 sec of being released.
<input type="checkbox"/>	Activated automatically: transmitter activated automatically shall cease transmission within 5 sec after activation.
<input type="checkbox"/>	Periodic transmissions: permitted with total transmission time of 2 sec per hour or less.
<input type="checkbox"/>	Periodic transmissions (lower field strength): each transmission is not greater than 1 sec and the silent period between transmissions is at least 30 times the duration of the transmission but in no case less than 10 sec.





## 4 Test Equipment and Calibration Data

Instrument	Manufacturer	Model No.	Serial No.	Characteristics	Calibration Date	Remark
EMC Receiver	R&S	ESCS 30	100174	9kHz ~ 2.75GHz	Apr. 15, 2015	AC Conduction
LISN	SCHWARZBECK MESS-ELEKTRONIK	NSLK 8127	8127-477	9kHz ~ 30MHz	Jan. 22, 2015	AC Conduction
RF Cable-CON	HUBER+SUHNER	RG213/U	07611832020001	9kHz ~ 30MHz	Oct. 31, 2014	AC Conduction
EMI Filter	LINDGREN	LRE-2030	2651	< 450 Hz	N/A	AC Conduction

Note: Calibration Interval of instruments listed above is one year.

Instrument	Manufacturer	Model No.	Serial No.	Characteristics	Calibration Date	Remark
Spectrum Analyzer	R&S	FSV 40	101500	9KHz~40GHz	May 05, 2015	RF Conducted

Note: Calibration Interval of instruments listed above is one year.

Instrument	Manufacturer	Model No.	Serial No.	Characteristics	Calibration Date	Remark
3m Semi Anechoic Chamber	SIDT FRANKONIA	SAC-3M	03CH03-HY	30MHz ~ 1GHz 3m	Nov. 29, 2014	Radiation
Amplifier	HP	8447D	2944A08033	10kHz ~ 1.3GHz	May 11, 2015	Radiation
Amplifier	Agilent	8449B	3008A02120	1GHz ~ 26.5GHz	Sep. 01, 2014	Radiation
Spectrum	R&S	FSP40	100004	9kHz ~ 40GHz	Apr. 02, 2015	Radiation
Bilog Antenna	SCHAFFNER	CBL 6112D	22237	30MHz ~ 1GHz	Sep. 20, 2014	Radiation
Horn Antenna	ETS · LINDGREN	3115	6741	1GHz ~ 18GHz	Jul. 11, 2014	Radiation
RF Cable-R03m	Jye Bao	RG142	CB021	9kHz ~ 1GHz	Nov. 15, 2014	Radiation
RF Cable-high	SUHNER	SUCOFLEX 106	03CH03-HY	1GHz ~ 40GHz	Dec. 12, 2014	Radiation
Turn Table	EM Electronics	EM Electronics	060615	0 ~ 360 degree	N/A	Radiation
Antenna Mast	MF	MF-7802	MF780208179	1 ~ 4 m	N/A	Radiation

Note: Calibration Interval of instruments listed above is one year.

Instrument	Manufacturer	Model No.	Serial No.	Characteristics	Calibration Date	Remark
Loop Antenna	TESEQ	HLA 6120	31244	9 kHz~30 MHz	Feb. 02, 2015	Radiation

Note: Calibration Interval of instruments listed above is two years.