

# FCC 15B Test Report

**Equipment** : Sentrius™ BT510  
Bluetooth v5 IP67 Multi Sensor

**Model No.** : BT510

**Brand Name** : Laird

**Applicant (for FCC)** : Laird Connectivity

**Address** : W66N220 Commerce Court, Cedarburg,  
Wisconsin 53012, USA

**Applicant (for IC)** : Laird Connectivity, LLC

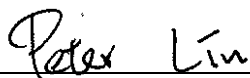
**Address** : W66N220 Commerce Court, Cedarburg, WI  
53012 United States Of America

**Standard** : FCC Part 15, Subpart B, Class B  
ICES-003 Issue 6, Class B  
ANSI C63.4:2014

**Tested Date** : Oct. 07 ~ Oct. 08, 2019

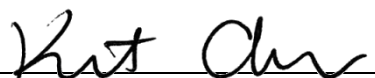
We, International Certification Corp., would like to declare that the tested sample has been evaluated and in compliance with the requirement of the above standards. It may be duplicated completely for legal use with the approval of the applicant. It shall not be reproduced except in full without the written approval of our laboratory.

Reviewed by:



Peter Lin / Supervisor

Approved by:



Kent Chen / Assistant Manager



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## Release Record

Report No.	Version	Description	Issued Date
FD991601	Rev. 01	Initial issue	Dec. 10, 2019

## Summary of Test Results

FCC Part 15, Subpart B Emission Tests				
Ref. Std. Clause	Test Standard	Test Items	Measured	Result
15.107	FCC Part 15, Subpart B, Class B	Conducted Emissions	-11.60dB AV@ 0.369MHz.	Pass
15.109	FCC Part 15, Subpart B, Class B	Radiated Emissions	-4.04dB PK@ 337.49MHz.	Pass

### Declaration of Conformity:

The test results with all measurement uncertainty excluded are presented in accordance with the regulation limits or requirements declared by manufacturers.

# 1 General Description

## 1.1 Information

### 1.1.1 Feature of Equipment under Test (EUT)

Power Supply Type	3Vdc from host
Highest Frequency of the Internal Sources	2.4GHz

### 1.1.2 Accessories

N/A

## 1.2 The Equipment List

<b>Test Item</b>	Conducted Emission				
<b>Test Site</b>	Conduction room 1 / (CO01-WS)				
<b>Test Date</b>	Oct. 08, 2019				
<b>Instrument</b>	<b>Manufacturer</b>	<b>Model No.</b>	<b>Serial No.</b>	<b>Calibration Date</b>	<b>Calibration Until</b>
Receiver	R&S	ESR3	101657	Jan. 08, 2019	Jan. 07, 2020
LISN	R&S	ENV216	101579	Mar. 08, 2019	Mar. 07, 2020
LISN (Support Unit)	SCHWARZBECK	Schwarzbeck 8127	8127-666	Nov. 29, 2018	Nov. 28, 2019
RF Cable-CON	Woken	CFD200-NL	CFD200-NL-001	Oct. 22, 2019	Oct. 21, 2020
50 ohm terminal (Support Unit)	NA	50	04	May 28, 2019	May 27, 2020
Measurement Software	AUDIX	e3	6.120210k	NA	NA
Note: Calibration Interval of instruments listed above is one year.					

<b>Test Item</b>	Radiated Emission below 1GHz				
<b>Test Site</b>	966 chamber 2 / (03CH02-WS)				
<b>Test Date</b>	Oct. 07, 2019				
<b>Instrument</b>	<b>Manufacturer</b>	<b>Model No.</b>	<b>Serial No.</b>	<b>Calibration Date</b>	<b>Calibration Until</b>
Receiver	Agilent	N9038A	MY53290044	Sep. 17, 2019	Sep. 16, 2020
Loop Antenna	R&S	HFH2-Z2	100330	Nov. 09, 2018	Nov. 08, 2019
Bilog Antenna	SCHWARZBECK	VULB9168	VULB9168-523	Dec. 03, 2018	Dec. 02, 2019
Preamplifier	EMC	EMC02325	980194	Sep. 18, 2019	Sep. 17, 2020
LF cable 1M	EMC	EMCCFD400-NM-N M-1000	160501	Oct. 22, 2018	Oct. 21, 2019
LF cable 3M	Woken	CFD400NL-LW	CFD400NL-003	Oct. 22, 2018	Oct. 21, 2019
LF cable 10M	EMCC	CFD400-E	CFD400-001	Oct. 22, 2018	Oct. 21, 2019
Measurement Software	AUDIX	e3	6.120210g	NA	NA
Note: Calibration Interval of instruments listed above is one year.					

<b>Test Item</b>	Radiated Emission above 1GHz				
<b>Test Site</b>	966 chamber 2 / (03CH02-WS)				
<b>Test Date</b>	Oct. 08, 2019				
<b>Instrument</b>	<b>Manufacturer</b>	<b>Model No.</b>	<b>Serial No.</b>	<b>Calibration Date</b>	<b>Calibration Until</b>
Spectrum Analyzer	Agilent	N9010A	MY53400091	Nov. 07, 2018	Nov. 06, 2019
Horn Antenna 1G-18G	SCHWARZBECK	BBHA 9120 D	BBHA 9120 D 1095	Sep. 26, 2019	Sep. 25, 2020
Preamplifier	Agilent	83017A	MY39501309	Sep. 24, 2019	Sep. 23, 2020
RF Cable	EMC	EMC105-SM-SM-8000	180512	Oct. 22, 2018	Oct. 21, 2019
RF Cable	HUBER+SUHNER	SUCOFLEX104	MY16018/4	Oct. 22, 2018	Oct. 21, 2019
Measurement Software	AUDIX	e3	6.120210g	NA	NA
Note: Calibration Interval of instruments listed above is one year.					

### 1.3 Testing Applied Standards

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

FCC Part 15, Subpart B, Class B  
ICES-003 Issue 6, Class B  
ANSI C63.4:2014

### 1.4 Deviation from Test Standard and Measurement Procedure

None

### 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	Frequency	Uncertainty
Conducted Emissions	150kHz ~ 30MHz	$\pm 2.92$ dB
Radiated Emissions	30MHz ~ 1GHz	$\pm 4.32$ dB
	Above 1GHz	$\pm 4.9$ dB

Note: The results of measurements of emissions shall reference the measurement uncertainty considerations contained in CISPR 16-4-2.

## 2 Test Configuration

### 2.1 Testing Condition

Test Item	Test Site	Ambient Condition	Tested By
AC Conduction	CO01-WS	23°C / 61%	Alex Tsai
Radiated Emissions	03CH02-WS	23°C / 63-64%	Brad Wu

- FCC Designation No.: TW1073
- FCC site registration No.: 933633

### 2.2 The Worst Case Measurement Configuration

The EUT was pretested with 3 orientations placed on the table for the radiated emission measurement – X, Y, and Z-axis. The **Z-axis** result was found as the worst case and was shown in this report.

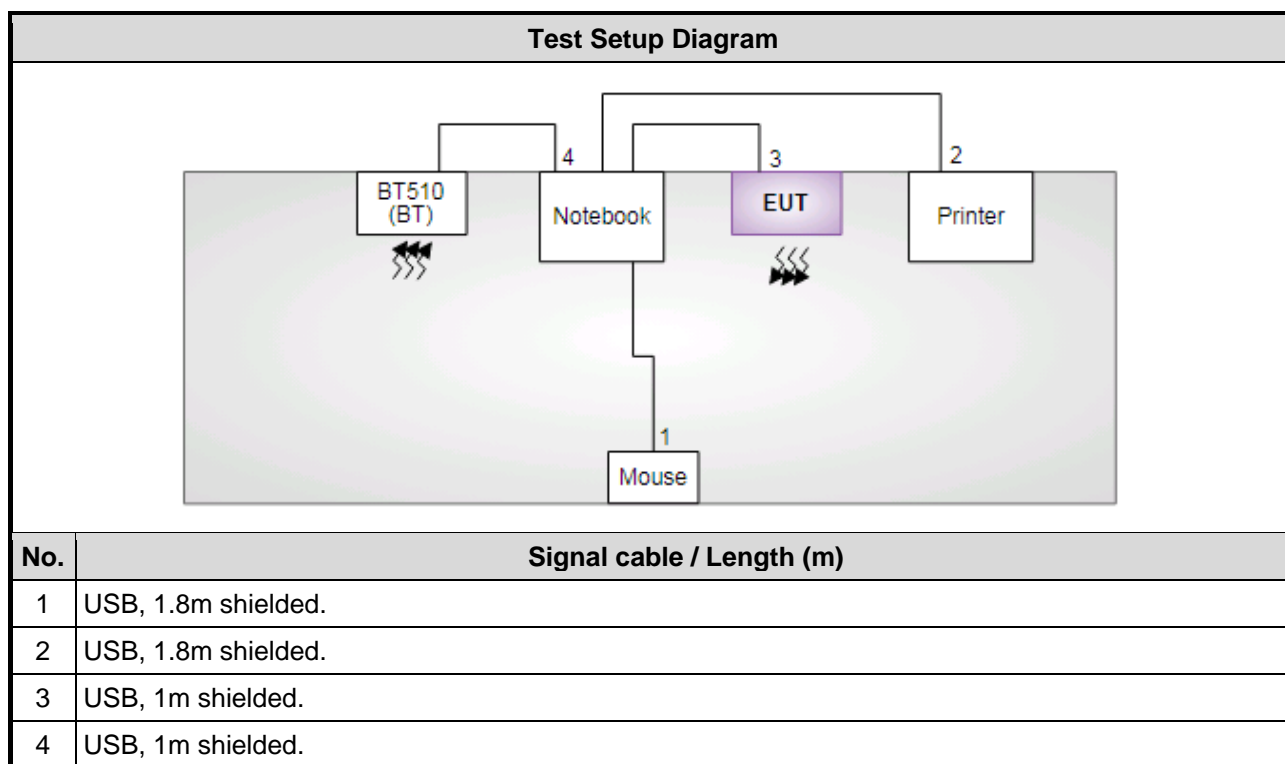
The Determined Worst Case Configurations	
Conducted Emissions	
Test Mode	Operating Description
1	BT Link, EUT: Z-axis with Notebook
Radiated Emissions	
Test Mode ≤ 1GHz	Operating Description
1	BT Link, EUT: Z-axis with Notebook
Test Mode > 1GHz	Operating Description
1	BT Link, EUT: Z-axis with Notebook



## 2.3 Local Support Equipment List

Support Equipment List					
No.	Equipment	Brand	Model	S/N	Remarks
1	Notebook	DELL	Latitude E6440	8VXMD12	---
2	Printer	EPSON	XP-30	QSDK002410	---
3	Mouse	DELL	MS111-L	2C3-00MM	---
4	Sentrius™ BT510 Bluetooth v5 IP67 Multi Sensor	Laird	BT510	---	Provided by applicant.

## 2.4 Test Setup Chart



## 2.5 Test Software and Operating Condition

- To enable all function of test system.
- The support notebook executed "WinEMC.exe" to send "H" patterns to its monitor and the monitor displayed them.
- The support notebook executed "WinEMC.exe" to send "H" patterns to the printer.
- The support notebook executed "Uwterminal.exe" to link BT function of EUT via USB cable.

### 3 Emission Tests Results

#### 3.1 Conducted Emissions

##### 3.1.1 Limit of Conducted Emissions

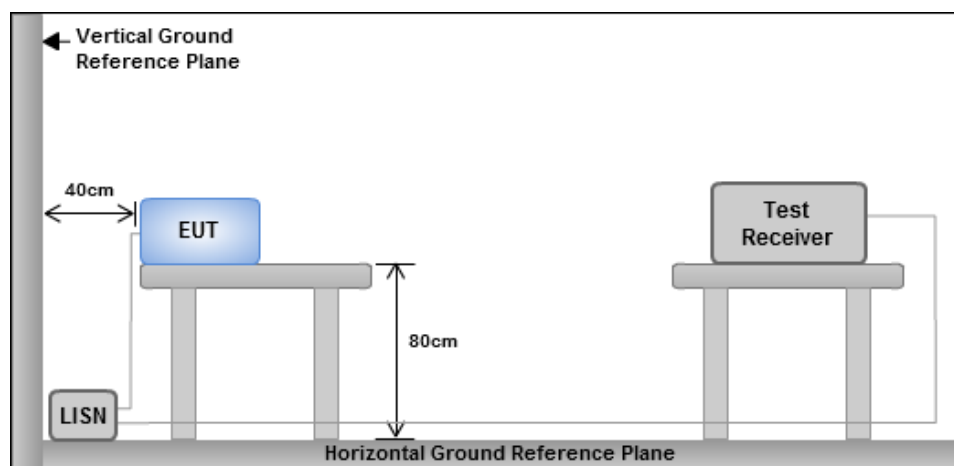
Conducted Emissions Limit		
Frequency Emission (MHz)	Quasi-Peak	Average
0,15 to 0,5	66 - 56 *	56 - 46 *
0,5 to 5	56	46
5 to 30	60	50

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

##### 3.1.2 Test Procedures

- The device is placed on a test table, raised 80 cm above the reference ground plane. The vertical conducting plane is located 40 cm to the rear of the device.
- The device is connected to line impedance stabilization network (LISN) and other accessories are connected to other LISN. Measured levels of AC power line conducted emission are across the 50  $\Omega$  LISN port.
- AC conducted emission measurements is made over frequency range from 150 kHz to 30 MHz.

##### 3.1.3 Test Setup

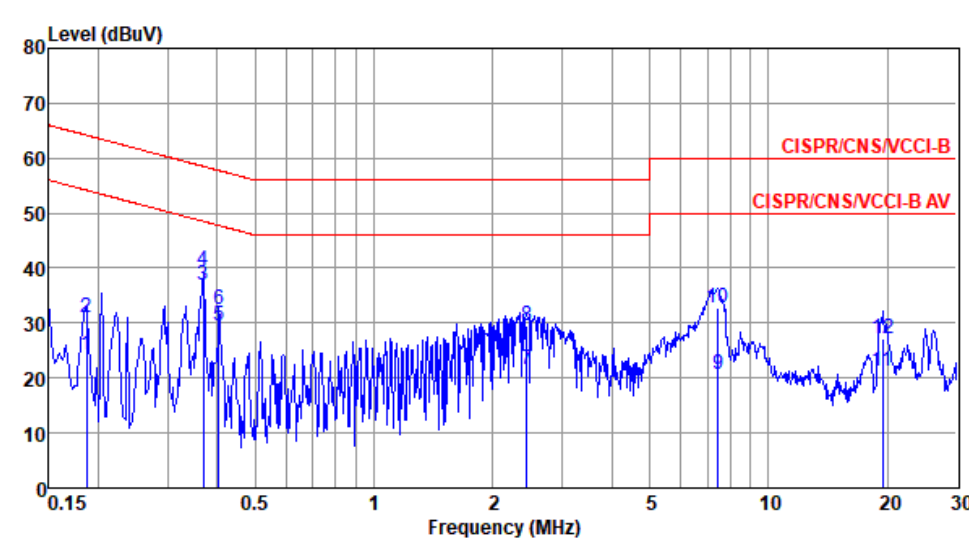


- Note: 1. Support units were connected to second LISN.  
2. Both of LISNs (AMN) are 80 cm from EUT and at least 80 cm from other units and other metal planes

### 3.1.4 Test Result of Conducted Emissions

Power Phase	Line	Test Mode	1
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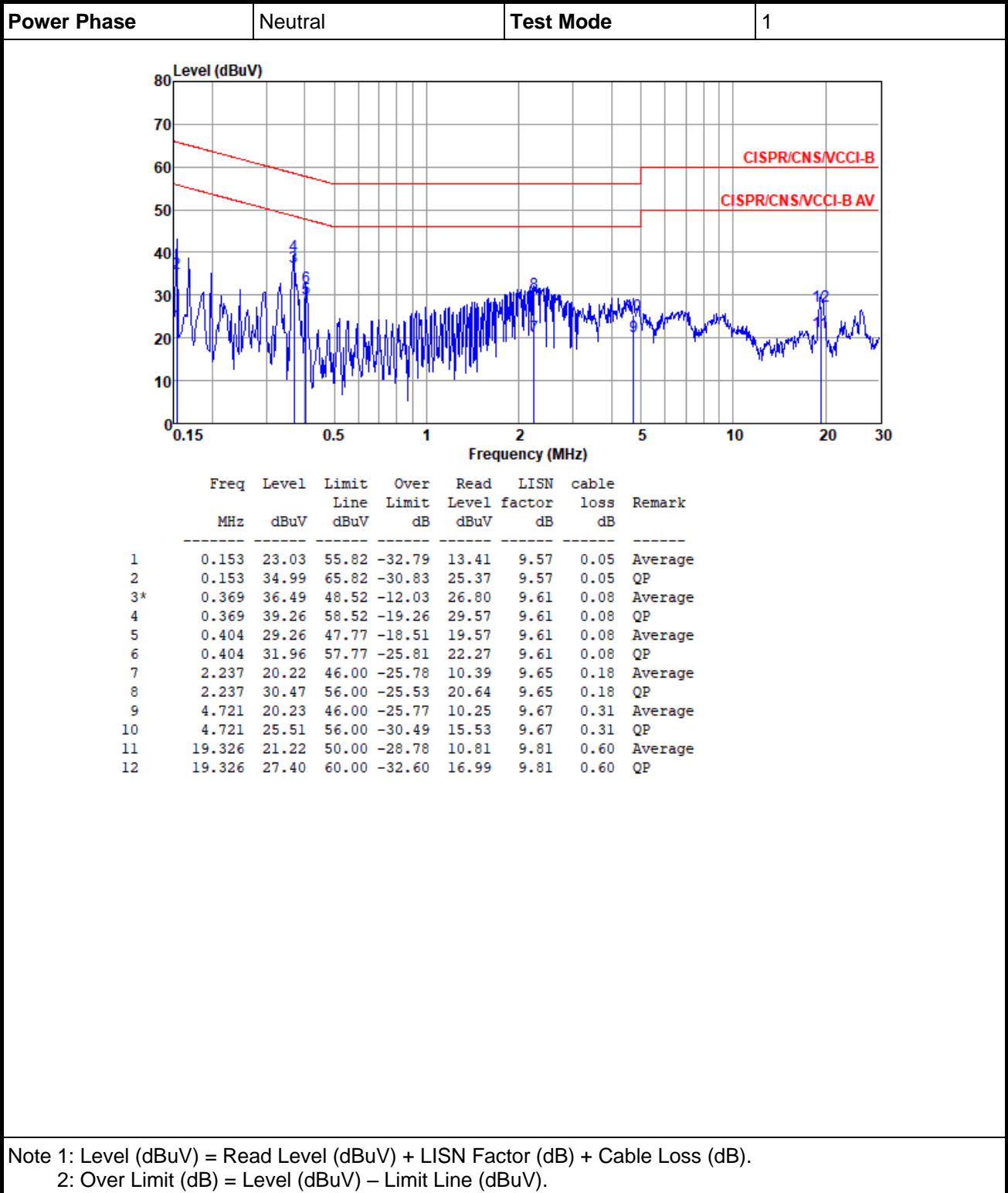
  



	Freq MHz	Level dBuV	Limit Line dBuV	Over Limit dB	Read Level dBuV	LISN factor dB	cable loss dB	Remark
1	0.186	24.30	54.20	-29.90	14.69	9.54	0.07	Average
2	0.186	31.05	64.20	-33.15	21.44	9.54	0.07	QP
3*	0.369	36.92	48.52	-11.60	27.27	9.57	0.08	Average
4	0.369	39.56	58.52	-18.96	29.91	9.57	0.08	QP
5	0.404	29.65	47.77	-18.12	20.00	9.57	0.08	Average
6	0.404	32.45	57.77	-25.32	22.80	9.57	0.08	QP
7	2.435	21.42	46.00	-24.58	11.63	9.60	0.19	Average
8	2.435	29.48	56.00	-26.52	19.69	9.60	0.19	QP
9	7.446	20.67	50.00	-29.33	10.64	9.64	0.39	Average
10	7.446	32.86	60.00	-27.14	22.83	9.64	0.39	QP
11	19.428	21.29	50.00	-28.71	11.03	9.66	0.60	Average
12	19.428	27.05	60.00	-32.95	16.79	9.66	0.60	QP

Note 1: Level (dBuV) = Read Level (dBuV) + LISN Factor (dB) + Cable Loss (dB).  
 2: Over Limit (dB) = Level (dBuV) - Limit Line (dBuV).



## 3.2 Radiated Emissions

### 3.2.1 Limit of Radiated Emissions

According to FCC Part 15, Subpart B §15.109, the field strength of radiated emissions from unintentional radiators at a distance of 3 meters shall not exceed the following values:

Frequency of Emission (MHz)	Field Strength (uV/m)	Field Strength (dBuV/m)	Measure Distance (m)
30 - 88	100	40	3
88 - 216	150	43.5	3
216 - 960	200	46	3
Above 960	500	54	3

Highest frequency generated or used in the device or on which the device operates or tunes (MHz)	Upper frequency of measurement range (MHz)
Below 1.705	30
1.705-108	1000
108-500	2000
500-1000	5000
Above 1000	5th harmonic of the highest frequency or 40 GHz, whichever is lower

Note: According to FCC Part 15, Subpart B §15.33: For an unintentional radiator is shown in the table above.

### 3.2.2 Test Procedures

#### Measuring below 1 GHz:

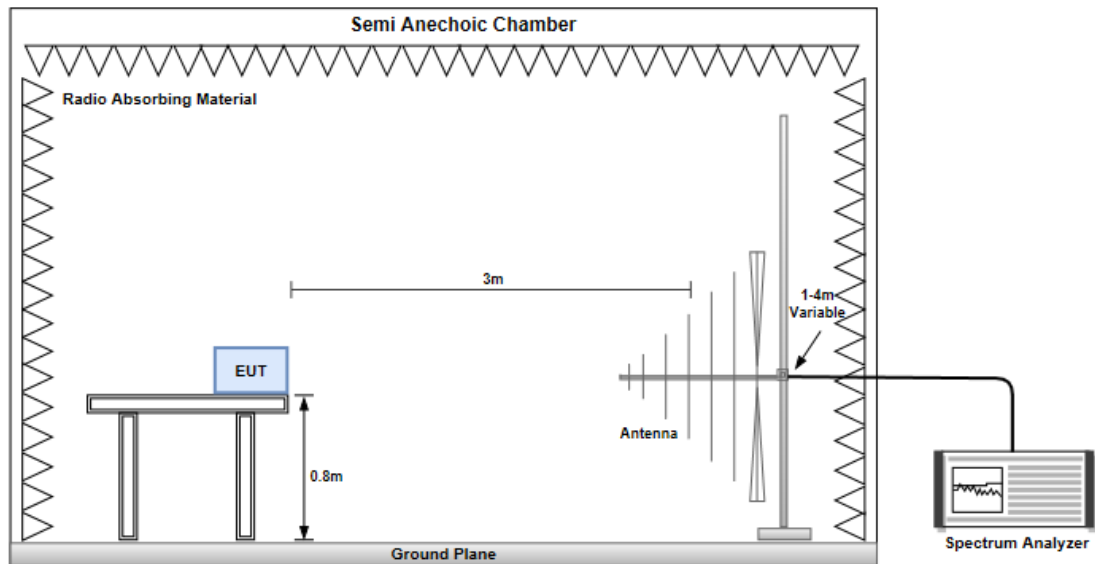
- a. Measurement is made at a semi-anechoic chamber that incorporates a turntable allowing a EUT rotation of 360°. A continuously-rotating, remotely-controlled turntable is installed at the test site to support the EUT and facilitate determination of the direction of maximum radiation for each EUT emission frequency. The EUT is placed at a height of 0.8 m test table above the ground plane.
- b. Measurement is made with the antenna positioned in both the horizontal and vertical planes of polarization. The measurement antenna is varied in height (1m ~ 4m) above the reference ground plane to obtain the maximum signal strength. Distance between EUT and antenna is 3 m.
- c. This investigation is performed with the EUT rotated 360°, the antenna height scanned between 1 m and 4 m, and the antenna rotated to repeat the measurements for both the horizontal and vertical antenna polarizations.

#### Measuring above 1 GHz:

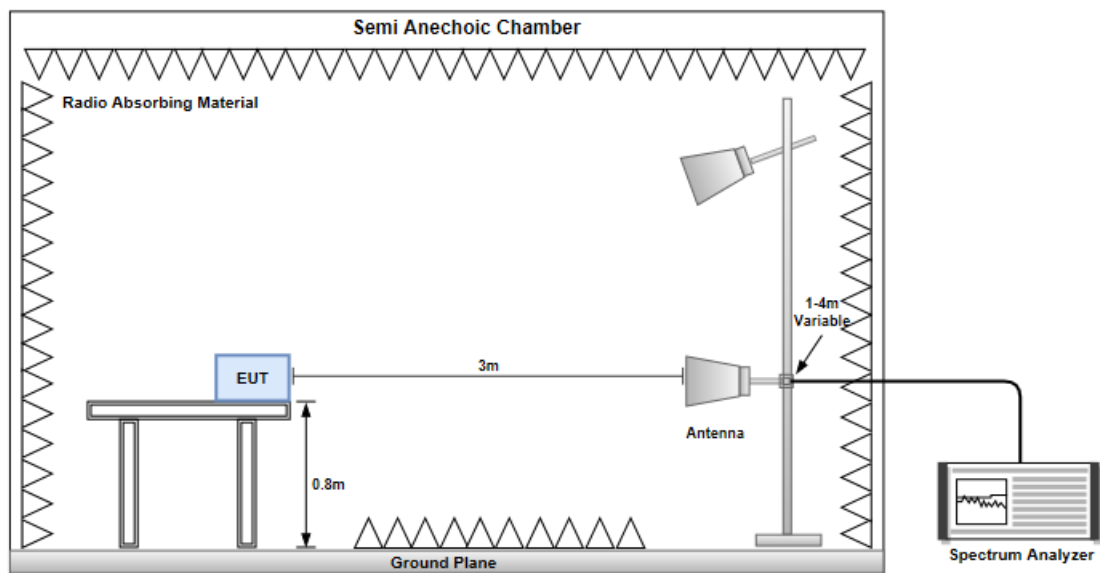
- a. Same test set up as below 1GHz radiated testing.
- b. The EUT was set 3 meters from the interference-receiving antenna which was mounted on the top of a variable height antenna tower.
- c. There should be absorber placed between the EUT and Antenna and its located size should let the test site meet CISPR16-1-4 requirement.
- d. The table was rotated 360 degrees to determine the position of the highest radiation.
- e. Set the test-receiver system to Peak Detect Function and specified bandwidth with Maximum Hold Mode.
- f. Set the Horn Antenna at 1m height, then run the turn table to get the maximum noise reading from Horizontal and Vertical polarity separately.
- g. When EUT locating on the turn-table, the Horn Antenna must be raised up and descended down, then turning around the turn-table to get the maximum noise reading of the Horizontal and Vertical polarity separately. Note the maximum raise up height is same as the top of EUT.
- h. If 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.

### 3.2.3 Test Setup

#### Radiated Emissions below 1 GHz



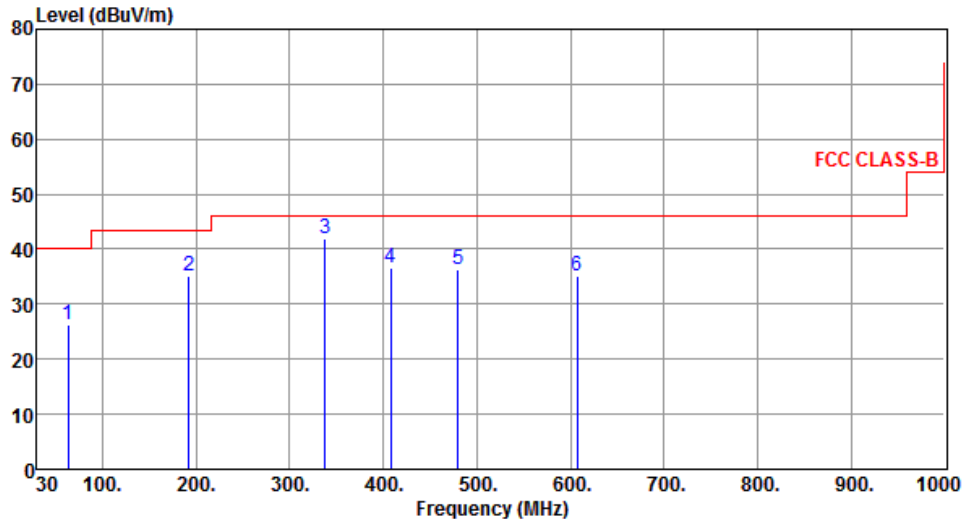
#### Radiated Emissions above 1 GHz



### 3.2.4 Radiated Emissions (Below 1GHz)

Polarization	Horizontal			Test Mode			1		
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The graph displays the radiated emission levels in dBuV/m across a frequency range from 30 MHz to 1000 MHz. A red step-function line represents the FCC CLASS-B limit, which is 40 dBuV/m from 30 to 100 MHz, 45 dBuV/m from 100 to 200 MHz, and 55 dBuV/m from 200 to 1000 MHz. Six blue vertical lines indicate measured peak levels at specific frequencies: 62.98 MHz (30 dBuV/m), 191.99 MHz (35 dBuV/m), 337.49 MHz (42 dBuV/m), 408.30 MHz (37 dBuV/m), 480.08 MHz (36 dBuV/m), and 607.15 MHz (35 dBuV/m). All measured peaks are below the FCC CLASS-B limit.

	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	62.98	26.21	40.00	-13.79	35.17	-8.96	Peak	---	---
2	191.99	35.11	43.50	-8.39	44.61	-9.50	Peak	---	---
3	337.49	41.96	46.00	-4.04	47.96	-6.00	Peak	---	---
4	408.30	36.64	46.00	-9.36	40.87	-4.23	Peak	---	---
5	480.08	36.23	46.00	-9.77	38.92	-2.69	Peak	---	---
6	607.15	35.14	46.00	-10.86	34.77	0.37	Peak	---	---

Note 1: Emission level (dBuV/m) = SA reading (dBuV) + Factor (dB)

Note 2: Margin (dB) = Emission level (dBuV/m) – Limit (dBuV/m)

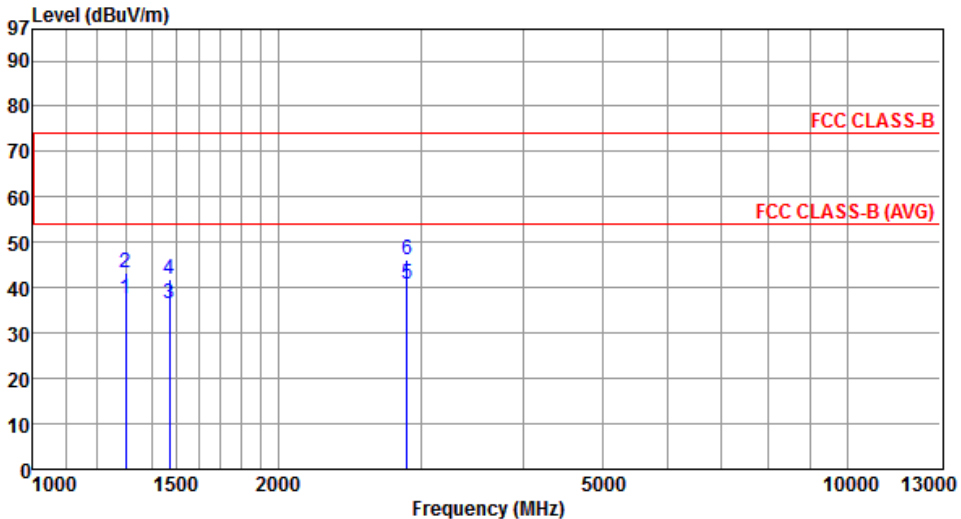


Polarization	Vertical	Test Mode	1
<div><div><div>Level (dBuV/m)</div><div><div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div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### 3.2.5 Radiated Emissions (Above 1GHz)

Polarization	Horizontal			Test Mode		1			
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	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	1300.28	37.63	54.00	-16.37	44.59	-6.96	Average	100	120
2	1300.28	43.26	74.00	-30.74	50.22	-6.96	Peak	100	120
3	1471.99	36.69	54.00	-17.31	42.91	-6.22	Average	100	82
4	1471.99	42.04	74.00	-31.96	48.26	-6.22	Peak	100	82
5	2878.71	40.67	54.00	-13.33	41.49	-0.82	Average	100	311
6	2878.71	46.26	74.00	-27.74	47.08	-0.82	Peak	100	311

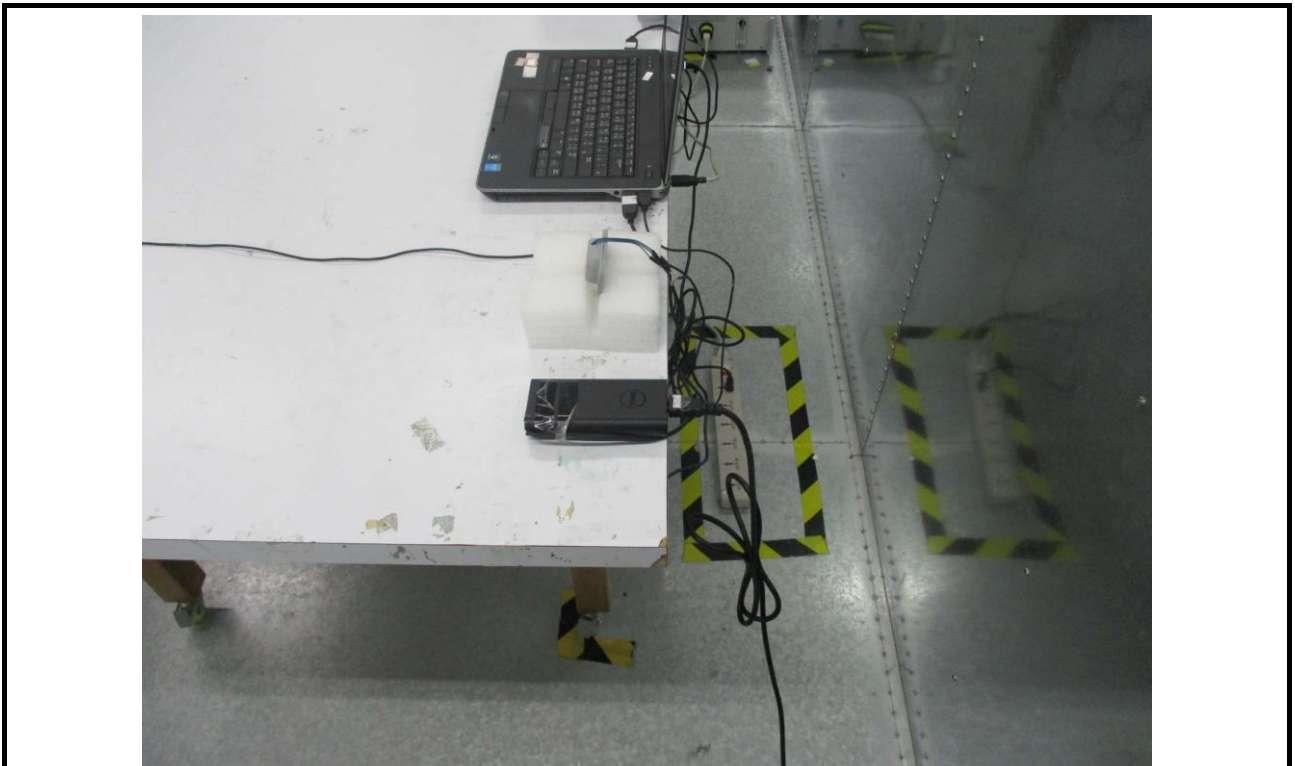
Note 1: Emission level (dBuV/m) = SA reading (dBuV) + Factor (dB)

Note 2: Margin (dB) = Emission level (dBuV/m) – Limit (dBuV/m)

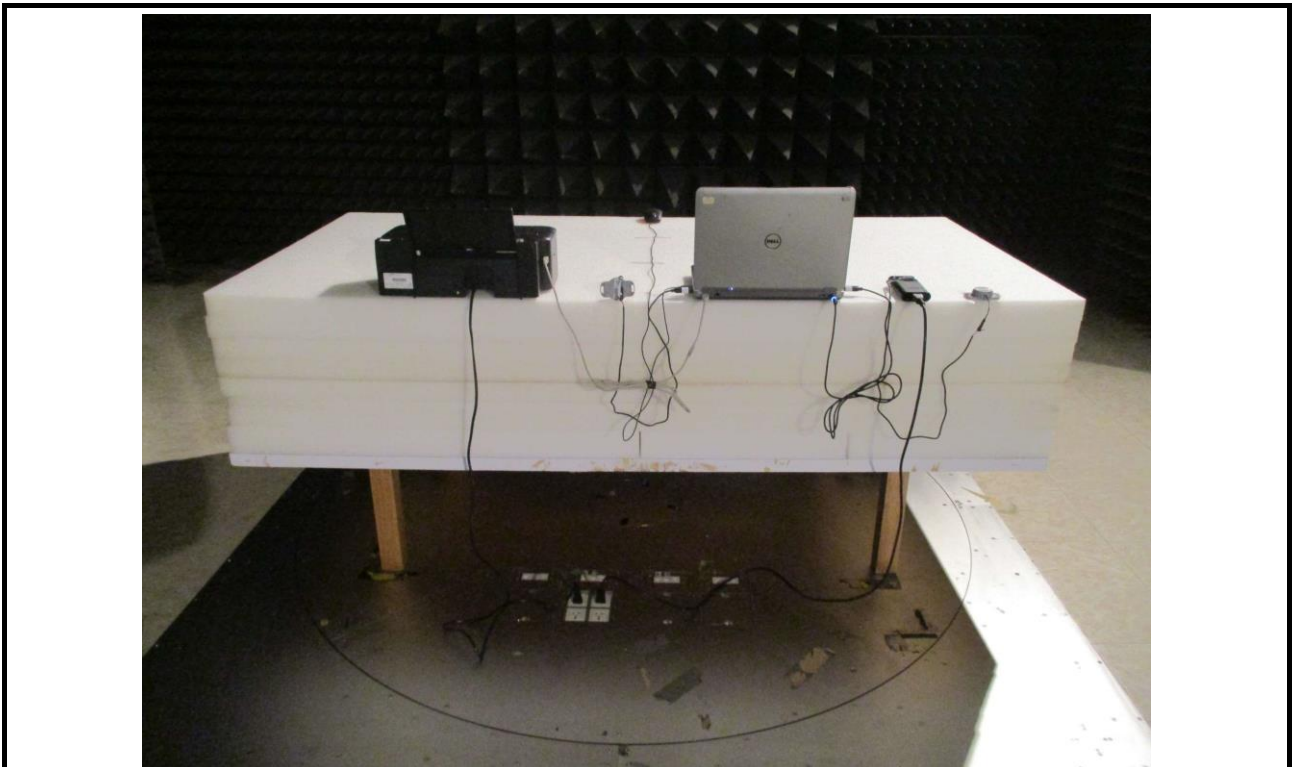
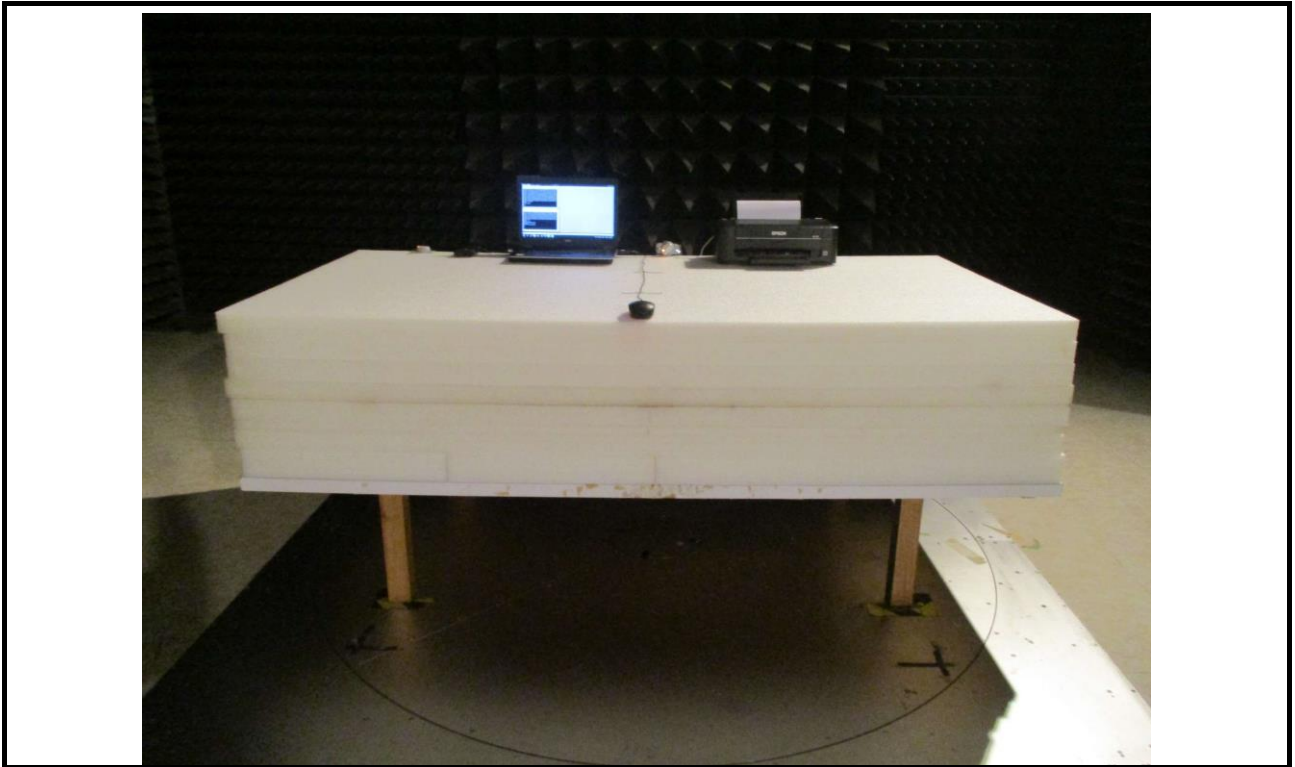
Polarization	Vertical	Test Mode	1																																																																																										
<div><div><div>Level (dBuV/m)</div><div><div><div><div><div><div>97</div><div>90</div><div>80</div><div>70</div><div>60</div><div>50</div><div>40</div><div>30</div><div>20</div><div>10</div><div>0</div></div></div><div><div><div><div><div>1000</div><div>1500</div><div>2000</div><div>5000</div><div>10000</div><div>13000</div></div></div><div>Frequency (MHz)</div></div></div><div><div><div><div><div>2</div><div>4</div><div>6</div></div><div><div><div><div><div>42.43</div><div>38.10</div><div>45.17</div></div></div><div><div><div><div><div>42.44</div><div>39.51</div><div>45.17</div></div></div><div><div><div><div><div>74.00</div><div>54.00</div><div>74.00</div></div></div><div><div><div><div><div>74.00</div><div>54.00</div><div>74.00</div></div></div><div><div><div><div><div>-31.57</div><div>-15.90</div><div>-28.83</div></div></div><div><div><div><div><div>52.19</div><div>41.87</div><div>46.89</div></div></div><div><div><div><div><div>-9.76</div><div>-3.77</div><div>-1.72</div></div></div><div><div><div><div><div>Average</div><div>Peak</div><div>Average</div><div>Peak</div><div>Average</div><div>Peak</div></div></div><div><div><div><div><div>100</div><div>100</div><div>100</div><div>100</div><div>100</div><div>100</div></div></div><div><div><div><div><div>89</div><div>230</div><div>153</div><div>89</div><div>153</div><div>89</div></div></div></div></div></div><div><table><tr><th></th><th>Freq.</th><th>Emission</th><th>Limit</th><th>Margin</th><th>SA</th><th>Factor</th><th>Remark</th><th>ANT</th><th>Turn</th></tr><tr><th></th><th>MHz</th><th>level</th><th></th><th></th><th>reading</th><th></th><th></th><th>High</th><th>Table</th></tr><tr><th></th><th></th><th>dBuV/m</th><th>dBuV/m</th><th>dB</th><th>dBuV</th><th>dB</th><th></th><th>cm</th><th>deg</th></tr><tr><td>1</td><td>1016.55</td><td>35.92</td><td>54.00</td><td>-18.08</td><td>45.68</td><td>-9.76</td><td>Average</td><td>100</td><td>89</td></tr><tr><td>2</td><td>1016.55</td><td>42.43</td><td>74.00</td><td>-31.57</td><td>52.19</td><td>-9.76</td><td>Peak</td><td>100</td><td>89</td></tr><tr><td>3</td><td>2069.33</td><td>38.10</td><td>54.00</td><td>-15.90</td><td>41.87</td><td>-3.77</td><td>Average</td><td>100</td><td>230</td></tr><tr><td>4</td><td>2069.33</td><td>42.44</td><td>74.00</td><td>-31.56</td><td>46.21</td><td>-3.77</td><td>Peak</td><td>100</td><td>230</td></tr><tr><td>5</td><td>2671.98</td><td>39.51</td><td>54.00</td><td>-14.49</td><td>41.23</td><td>-1.72</td><td>Average</td><td>100</td><td>153</td></tr><tr><td>6</td><td>2671.98</td><td>45.17</td><td>74.00</td><td>-28.83</td><td>46.89</td><td>-1.72</td><td>Peak</td><td>100</td><td>153</td></tr></table></div></div></div></div><div><div>Note 1: Emission level (dBuV/m) = SA reading (dBuV) + Factor (dB)</div><div>2: Margin (dB) = Emission level (dBuV/m) – Limit (dBuV/m)</div></div></div></div></div></div></div></div></div></div></div></div></div></div></div></div></div></div></div></div></div></div></div></div>					Freq.	Emission	Limit	Margin	SA	Factor	Remark	ANT	Turn		MHz	level			reading			High	Table			dBuV/m	dBuV/m	dB	dBuV	dB		cm	deg	1	1016.55	35.92	54.00	-18.08	45.68	-9.76	Average	100	89	2	1016.55	42.43	74.00	-31.57	52.19	-9.76	Peak	100	89	3	2069.33	38.10	54.00	-15.90	41.87	-3.77	Average	100	230	4	2069.33	42.44	74.00	-31.56	46.21	-3.77	Peak	100	230	5	2671.98	39.51	54.00	-14.49	41.23	-1.72	Average	100	153	6	2671.98	45.17	74.00	-28.83	46.89	-1.72	Peak	100	153
	Freq.	Emission	Limit	Margin	SA	Factor	Remark	ANT	Turn																																																																																				
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## 4 Photographs of the Test Configuration

### Conducted Emission Test

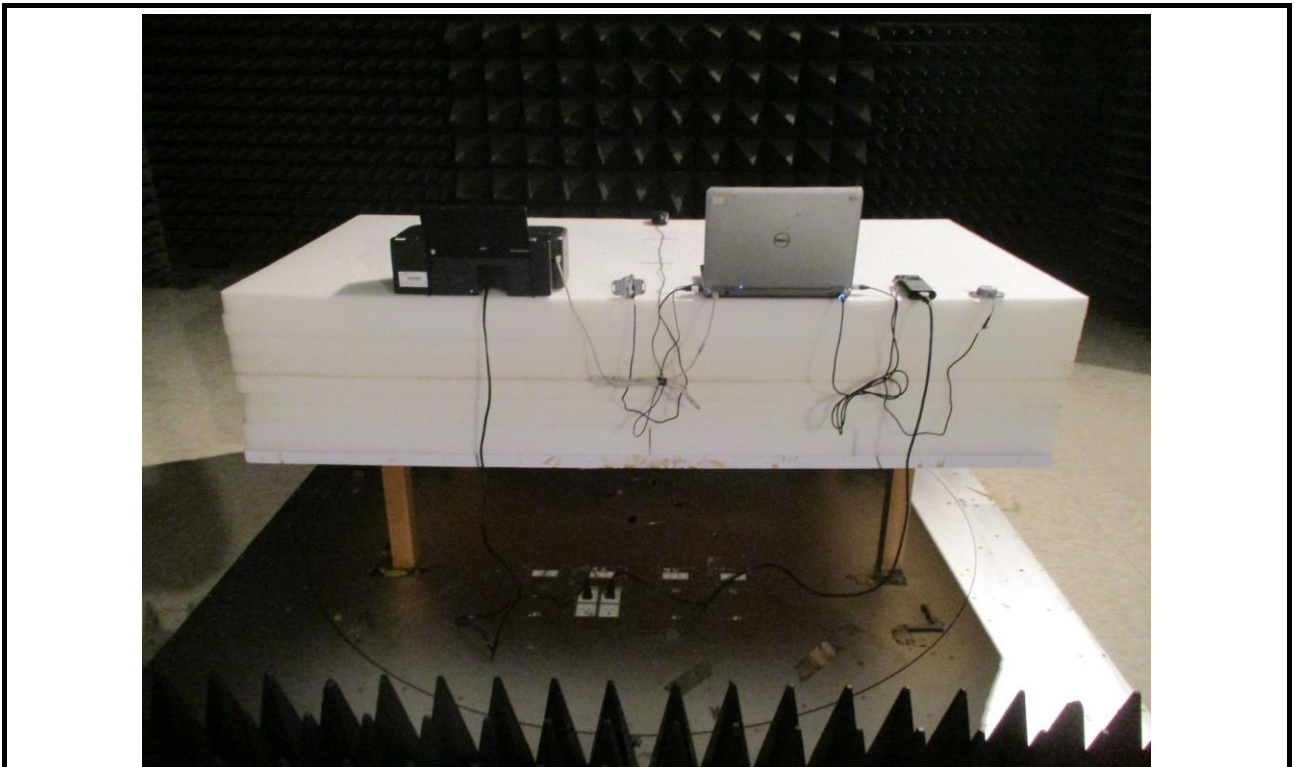
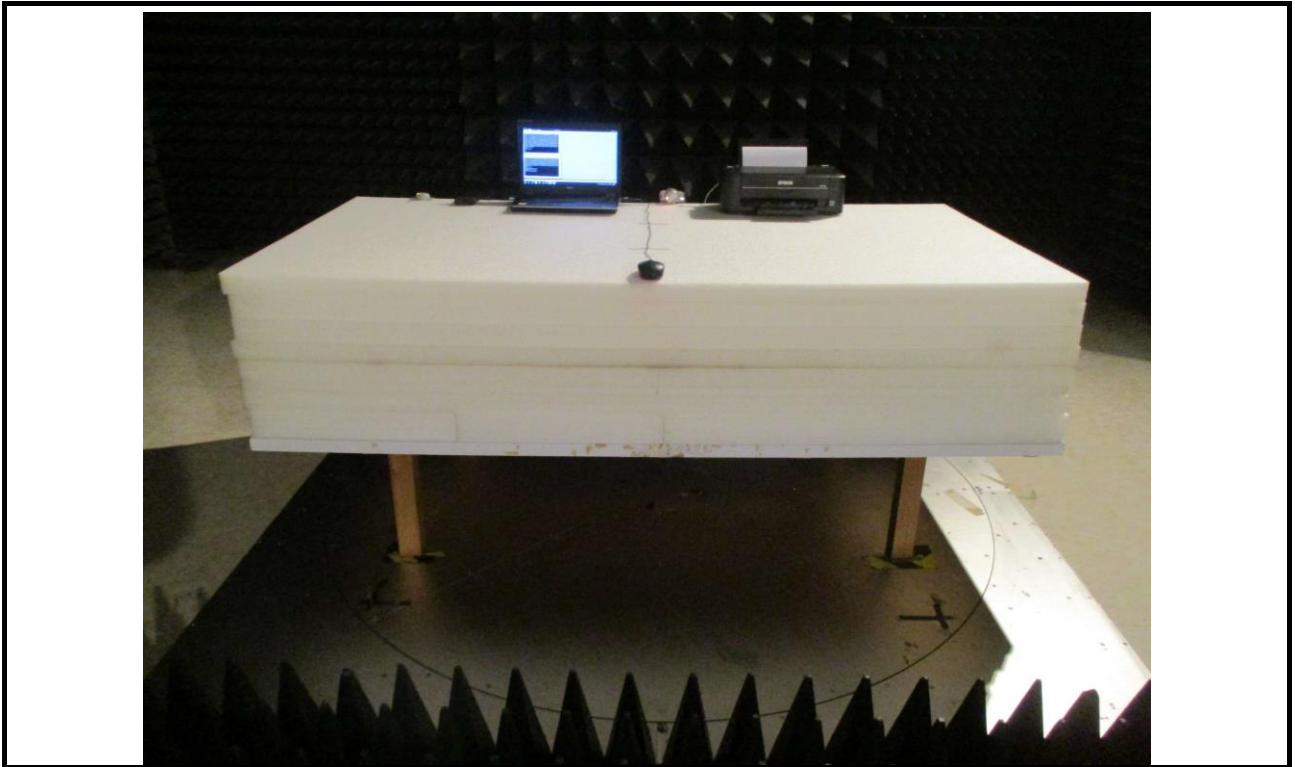


### Radiated Emission Below 1GHz Test





### Radiated Emission Above 1GHz Test



## 5 Test laboratory information

Established in 2012, ICC provides foremost EMC & RF Testing and advisory consultation services by our skilled engineers and technicians. Our services employ a wide variety of advanced edge test equipment and one of the widest certification extents in the business.

International Certification Corp (EMC and Wireless Communication Laboratory), it is our definitive objective is to institute long term, trust-based associations with our clients. The expectation we set up with our clients is based on outstanding service, practical expertise and devotion to a certified value structure. Our passion is to grant our clients with best EMC / RF services by oriented knowledgeable and accommodating staff.

Our Test sites are located at Linkou District and Kwei Shan District. Location map can be found on our website <http://www.icertifi.com.tw>.

### **Linkou**

Tel: 886-2-2601-1640

No. 30-2, Ding Fwu Tsuen, Lin Kou  
District, New Taipei City, Taiwan,  
R.O.C.

### **Kwei Shan**

Tel: 886-3-271-8666

No. 3-1, Lane 6, Wen San 3rd  
St., Kwei Shan District, Tao Yuan  
City 333, Taiwan, R.O.C.

### **Kwei Shan Site II**

Tel: 886-3-271-8640

No. 14-1, Lane 19, Wen San 3rd  
St., Kwei Shan District, Tao Yuan  
City 333, Taiwan, R.O.C.

If you have any suggestion, please feel free to contact us as below information

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