

FCC REPORT

(RFID)

Applicant: Automotive Data Solutions Inc.

Address of Applicant: 8400 Bougainville Montreal Quebec Canada H4P 2G1

Equipment Under Test (EUT)

Product Name: CAR ALARM (TWO WAY)

Model No.: TR3450BF

FCC ID: 2AEPJ-TR3450AF

Applicable standards: FCC CFR Title 47 Part 15 Subpart C Section 15.247

Date of sample receipt: 22 May, 2018

Date of Test: 22 May, to 24 May., 2018

Date of report issued: 24 May, 2018

Test Result: PASS *

* In the configuration tested, the EUT complied with the standards specified above.

Authorized Signature:



Bruce Zhang
Laboratory Manager

This report details the results of the testing carried out on one sample. The results contained in this test report do not relate to other samples of the same product and does not permit the use of the CCIS product certification mark. The manufacturer should ensure that all products in series production are in conformity with the product sample detailed in this report.

This report may only be reproduced and distributed in full. If the product in this report is used in any configuration other than that detailed in the report, the manufacturer must ensure the new system complies with all relevant standards.

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2 Version

Version No.	Date	Description
00	24 May, 2018	<i>This report was amended on FCC ID: 2AEPJ-TR3450AF follow FCC Class II Permissive Change. The differences between them as below: Model No., shell, Base on the differences description, Radiated Emission Method tests were performed..</i>

Tested by:



Date:

24 May, 2018

Test Engineer

Reviewed by:



Date:

24 May, 2018

Project Engineer

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4 Test Summary

Test Items	Section in CFR 47	Result
Antenna requirement	15.203/15.247 (c)	Pass*
AC Power Line Conducted Emission	15.207	N/A
Conducted Peak Output Power	15.247 (b)(3)	Pass*
6dB Emission Bandwidth	15.247 (a)(2)	Pass*
Power Spectral Density	15.247 (e)	Pass*
Band Edge	15.247(d)	Pass
Conducted and radiated Spurious Emission	15.205/15.209	Pass
<p><i>Remark:</i> <i>Pass: Meet the requirement.</i> <i>Pass*: Please refer to the FCC ID: 2AEPJ-TR3450AF</i> <i>N/A: Not Applicable for Non-adaptive equipment.</i></p>		

5 General Information

5.1 Client Information

Applicant:	Automotive Data Solutions Inc.
Address:	8400 Bougainville Montreal Quebec Canada H4P 2G1
Manufacturer/Factory:	DONGGUAN PORTMAN ELECTRONIC SCIENCE AND TECHNOLOGY CO., LTD
Address:	NO.10, LUYI 2 ROAD, TANGXIA TOWN, DONGGUAN CITY, GUANGDONG PROVINCE CHINA

5.2 General Description of E.U.T.

Product Name:	CAR ALARM (TWO WAY)
Model No.:	TR3450BF
Operation Frequency:	915 MHz
Channel numbers:	1
Modulation technology:	Lora
Antenna Type:	Internal Antenna
Antenna gain:	-1.25dBi
Power supply:	DC 3V CR2450 battery

5.3 Test environment and test mode

Operating Environment:	
Temperature:	24.0 °C
Humidity:	54 % RH
Atmospheric Pressure:	1010 mbar
Test mode:	
Transmitting mode	Keep the EUT in continuous transmitting with modulation
<p>The sample was placed 0.8m (below 1GHz)/1.5m (above 1GHz) above the ground plane of 3m chamber. Measurements in both horizontal and vertical polarities were performed. During the test, each emission was maximized by: having the EUT continuously working, investigated all operating modes, rotated about all 3 axis (X, Y & Z) and considered typical configuration to obtain worst position, manipulating interconnecting cables, rotating the turntable, varying antenna height from 1m to 4m in both horizontal and vertical polarizations. The emissions worst-case are shown in Test Results of the following pages. Duty cycle setting during the transmission is 100% with maximum power setting for all modulations.</p>	

5.4 Description of Support Units

Manufacturer	Description	Model	S/N	FCC ID/DoC
/	/	/	/	/

5.5 Measurement Uncertainty

Parameters	Expanded Uncertainty
Conducted Emission (9kHz ~ 30MHz)	±2.22 dB (k=2)
Radiated Emission (9kHz ~ 30MHz)	±2.76 dB (k=2)
Radiated Emission (30MHz ~ 1000MHz)	±4.28 dB (k=2)
Radiated Emission (1GHz ~ 18GHz)	±5.72 dB (k=2)
Radiated Emission (18GHz ~ 40GHz)	±2.88 dB (k=2)

5.6 Laboratory Facility

<p>The test facility is recognized, certified, or accredited by the following organizations:</p> <ul style="list-style-type: none"> ● FCC - Registration No.: 727551 Shenzhen Zhongjian Nanfang Testing Co., Ltd. has been accredited as a testing laboratory by FCC (Federal Communications Commission). The Registration No. is 727551. ● IC - Registration No.: 10106A-1 The 3m Semi-anechoic chamber of Shenzhen Zhongjian Nanfang Testing Co., Ltd. has been Registered by Certification and Engineering Bureau of Industry Canada for radio equipment testing with Registration No.: 10106A-1. ● CNAS - Registration No.: CNAS L6048 Shenzhen Zhongjian Nanfang Testing Co., Ltd. is accredited to ISO/IEC 17025:2005 General Requirements for the Competence of Testing and Calibration laboratories for the competence of testing. The Registration No. is CNAS L6048. ● A2LA - Registration No.: 4346.01 This laboratory is accredited in accordance with the recognized International Standard ISO/IEC 17025:2005 General requirements for the competence of testing and calibration laboratories. The test scope can be found as below link: https://portal.a2la.org/scopepdf/4346-01.pdf

5.7 Laboratory Location

Shenzhen Zhongjian Nanfang Testing Co., Ltd.
 Address: No. B-C, 1/F., Building 2, Laodong No.2 Industrial Park, Xixiang Road,
 Bao'an District, Shenzhen, Guangdong, China
 Tel: +86-755-23118282, Fax: +86-755-23116366
 Email: info@ccis-cb.com, Website: http://www.ccis-cb.com

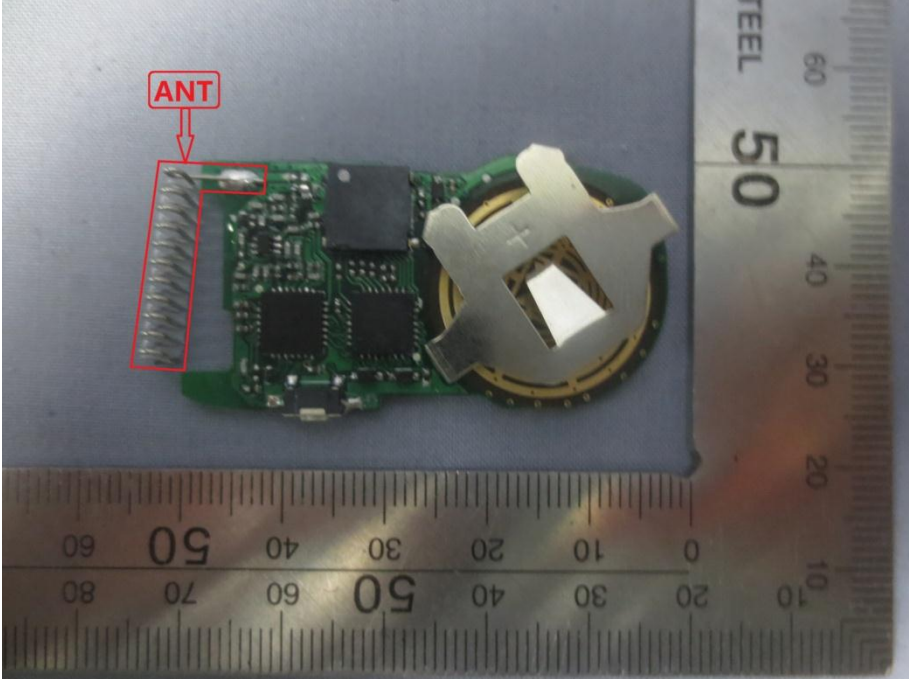
5.8 Test Instruments list

Radiated Emission:					
Test Equipment	Manufacturer	Model No.	Serial No.	Cal. Date (mm-dd-yy)	Cal. Due date (mm-dd-yy)
3m SAC	SAEMC	9m*6m*6m	966	07-22-2017	07-21-2020
BiConiLog Antenna	SCHWARZBECK	VULB9163	497	03-16-2018	03-15-2019
Horn Antenna	SCHWARZBECK	BBHA9120D	916	03-16-2018	03-15-2019
EMI Test Software	AUDIX	E3	6.110919b	N/A	N/A
Pre-amplifier	HP	8447D	2944A09358	03-07-2018	03-06-2019
Pre-amplifier	CD	PAP-1G18	11804	03-07-2018	03-06-2019
Spectrum analyzer	Rohde & Schwarz	FSP30	101454	03-07-2018	03-06-2019
EMI Test Receiver	Rohde & Schwarz	ESRP7	101070	03-07-2018	03-06-2019
Simulated Station	Anritsu	MT8820C	6201026545	03-07-2018	03-06-2019
Cable	ZDECL	Z108-NJ-NJ-81	1608458	03-07-2018	03-06-2019
Cable	MICRO-COAX	MFR64639	K10742-5	03-07-2018	03-06-2019
Cable	SUHNER	SUCOFLEX100	58193/4PE	03-07-2018	03-06-2019

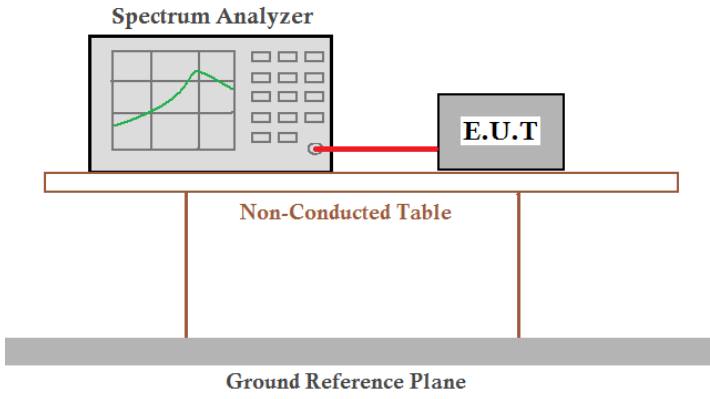
Conducted Emission:					
Test Equipment	Manufacturer	Model No.	Serial No.	Cal. Date (mm-dd-yy)	Cal. Due date (mm-dd-yy)
EMI Test Receiver	Rohde & Schwarz	ESCI	101189	03-07-2018	03-06-2019
Pulse Limiter	SCHWARZBECK	OSRAM 2306	9731	03-07-2018	03-06-2019
LISN	CHASE	MN2050D	1447	03-19-2018	03-18-2019
LISN	Rohde & Schwarz	ESH3-Z5	8438621/010	07-21-2017	07-20-2018
Cable	HP	10503A	N/A	03-07-2018	03-06-2019
EMI Test Software	AUDIX	E3	6.110919b	N/A	N/A

6 Test results and Measurement Data

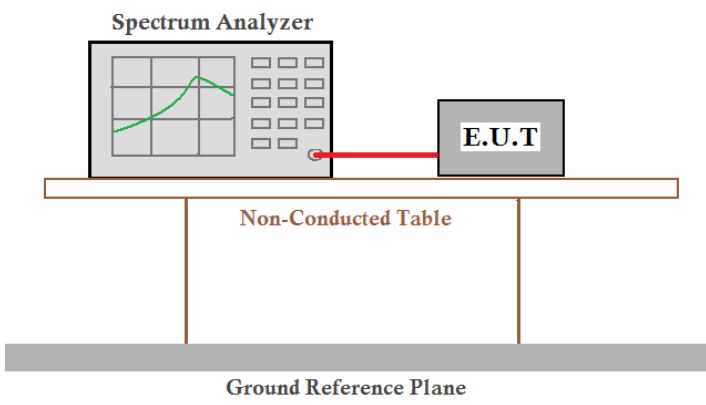
6.1 Antenna requirement:

Standard requirement:	FCC Part 15 C Section 15.203 /247(c)
<p>15.203 requirement: 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, the manufacturer may design the unit so that a broken antenna can be replaced by the user, but the use of a standard antenna jack or electrical connector is prohibited.</p> <p>15.247(c) (1)(i) requirement: (i) Systems operating in the 2400-2483.5 MHz band that is used exclusively for fixed. Point-to-point operations may employ transmitting antennas with directional gain greater than 6dBi provided the maximum conducted output power of the intentional radiator is reduced by 1 dB for every 3 dB that the directional gain of the antenna exceeds 6dBi.</p>	
E.U.T Antenna:	
<p>The BLE antenna is an External antenna which cannot replace by end-user, the best-case gain of the antenna is -1.25 dBi.</p>	
	

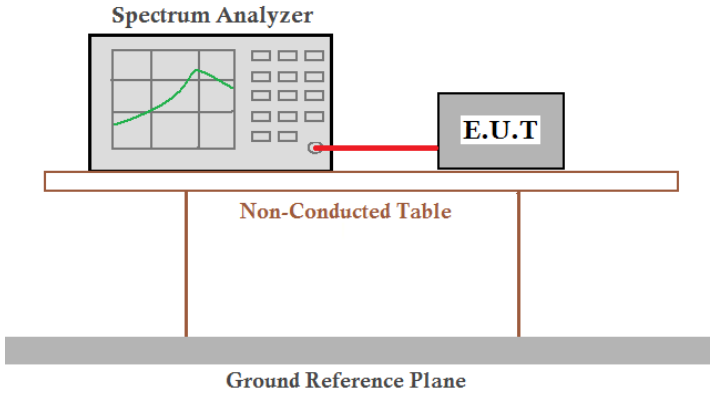
6.3 Conducted Output Power

Test Requirement:	FCC Part 15 C Section 15.247 (b)(3)
Test Method:	ANSI C63.10:2013 and KDB558074
Limit:	30dBm
Test setup:	 <p>The diagram illustrates the test setup. A Spectrum Analyzer is connected to an E.U.T. (Equipment Under Test) via a red cable. Both the Spectrum Analyzer and the E.U.T. are placed on a Non-Conducted Table. The table is supported by a Ground Reference Plane.</p>
Test Instruments:	Refer to section 5.8 for details
Test mode:	Refer to section 5.3 for details
Test results:	Refer to FCC ID: 2AEPJ-TR3450AF

6.4 Occupy Bandwidth

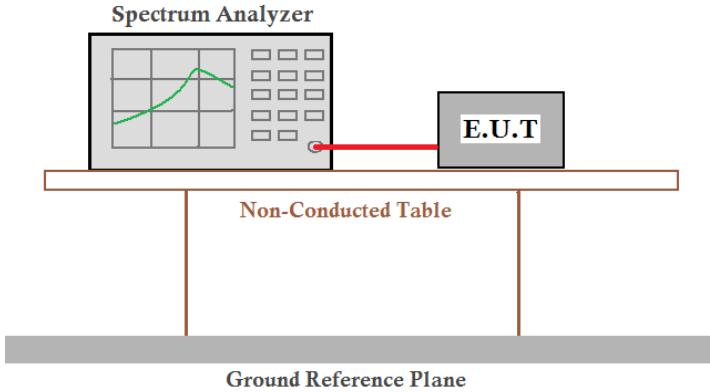
Test Requirement:	FCC Part 15 C Section 15.247 (a)(2)
Test Method:	ANSI C63.10:2013 and KDB558074
Limit:	>500kHz
Test setup:	 <p>The diagram illustrates the test setup. A Spectrum Analyzer is connected to an E.U.T. (Equipment Under Test) via a red cable. Both are placed on a Non-Conducted Table, which is supported by a Ground Reference Plane.</p>
Test Instruments:	Refer to section 5.8 for details
Test mode:	Refer to section 5.3 for details
Test results:	Refer to FCC ID: 2AEPJ-TR3450AF

6.5 Power Spectral Density

Test Requirement:	FCC Part 15 C Section 15.247 (e)
Test Method:	ANSI C63.10:2013 and KDB558074
Limit:	8 dBm
Test setup:	 <p>The diagram illustrates the test setup. A Spectrum Analyzer is connected to an E.U.T. (Equipment Under Test) via a red cable. Both are placed on a Non-Conducted Table, which is supported by a Ground Reference Plane.</p>
Test Instruments:	Refer to section 5.8 for details
Test mode:	Refer to section 5.3 for details
Test results:	Refer to FCC ID: 2AEPJ-TR3450AF

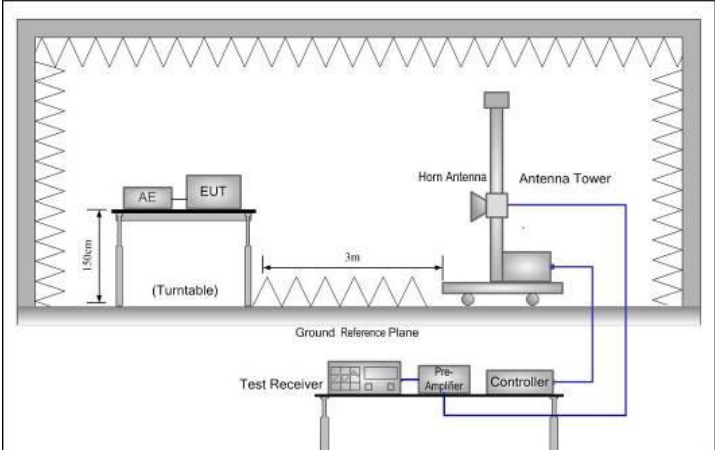
6.6 Band Edge

6.6.1 Conducted Emission Method

Test Requirement:	FCC Part 15 C Section 15.247 (d)
Test Method:	ANSI C63.10:2013 and KDB558074
Limit:	In any 100 kHz bandwidth outside the frequency band in which the spread spectrum intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement.
Test setup:	 <p>The diagram illustrates the test setup. A Spectrum Analyzer is connected to an E.U.T (Equipment Under Test) via a red cable. Both are placed on a Non-Conducted Table, which is supported by two vertical legs. Below the table is a Ground Reference Plane.</p>
Test Instruments:	Refer to section 5.8 for details
Test mode:	Refer to section 5.3 for details
Test results:	Refer to FCC ID: 2AEPJ-TR3450AF

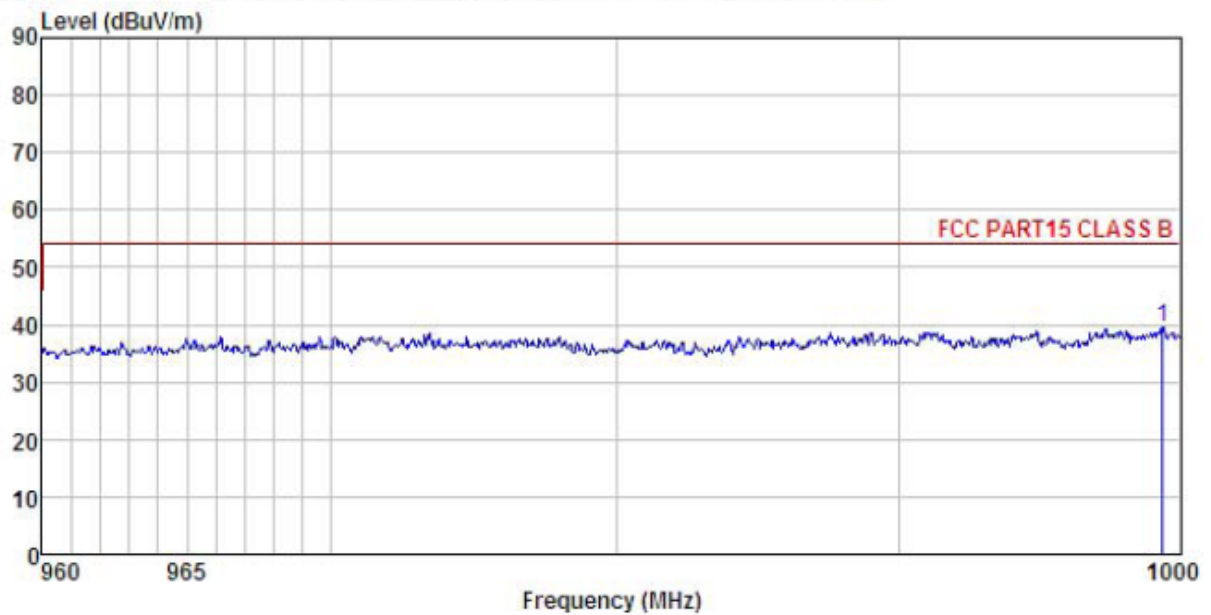
6.6.2 Radiated Emission Method

Test Requirement:	FCC Part15 C Section 15.209 and 15.205				
Test Method:	ANSI C63.10: 2013 and KDB 558074				
Test Frequency Range:	960MHz to 1.240GHz				
Test site:	Measurement Distance: 3m				
Receiver setup:	Frequency	Detector	RBW	VBW	Remark
	960MHz-1GHz	Quasi-peak	120kHz	300kHz	Quasi-peak Value
	Above 1GHz	Peak	1MHz	3MHz	Peak Value
RMS		1MHz	3MHz	Average Value	
Limit:	Frequency	Limit (dBuV/m @3m)		Remark	
	960MHz-1GHz	54.00		Quasi-peak Value	
	Above 1GHz	54.00		Average Value	
74.00		Peak Value			
Test Procedure:	<ol style="list-style-type: none"> 1. The EUT was placed on the top of a rotating table 0.8m(below 1GHz) /1.5m(above 1GHz) above the groundat a 3 meter chamber.The table was rotated 360 degrees todetermine the position of the highest radiation. 2. The EUT was set 3 meters away from the interference-receiving antenna, whichwas mounted on the top of a variable-height antenna tower. 3. The antenna height is varied from one meter to four meters above the ground to determine the maximum value of the field strength. Both horizontal and vertical polarizations of the antenna are set to make the measurement. 4. For each suspected emission, the EUT was arranged to its worst case and thenthe antenna was tuned to heights from 1 meter to 4 meters and the rotatablewas turned from 0 degrees to 360 degrees to find the maximum reading. 5. The test-receiver system was set to Peak Detect Function and SpecifiedBandwidth with Maximum Hold Mode. 6. If the emission level of the EUT in peak mode was 10dB lower than the limitspecified, then testing could be stopped and the peak values of the EUT wouldbe reported. Otherwise the emissions that did not have 10dB margin would bere-tested one by one using peak, quasi-peak or average method as specified andthen reported in a data sheet. 				
Test setup:	<p>Below 1GHz</p>				

	<p>Above 1GHz</p> 
<p>Test Instruments:</p>	<p>Refer to section 5.8 for details</p>
<p>Test mode:</p>	<p>Refer to section 5.3 for details</p>
<p>Test results:</p>	<p>Passed</p>

Test channel: Lowest

Horizontal:

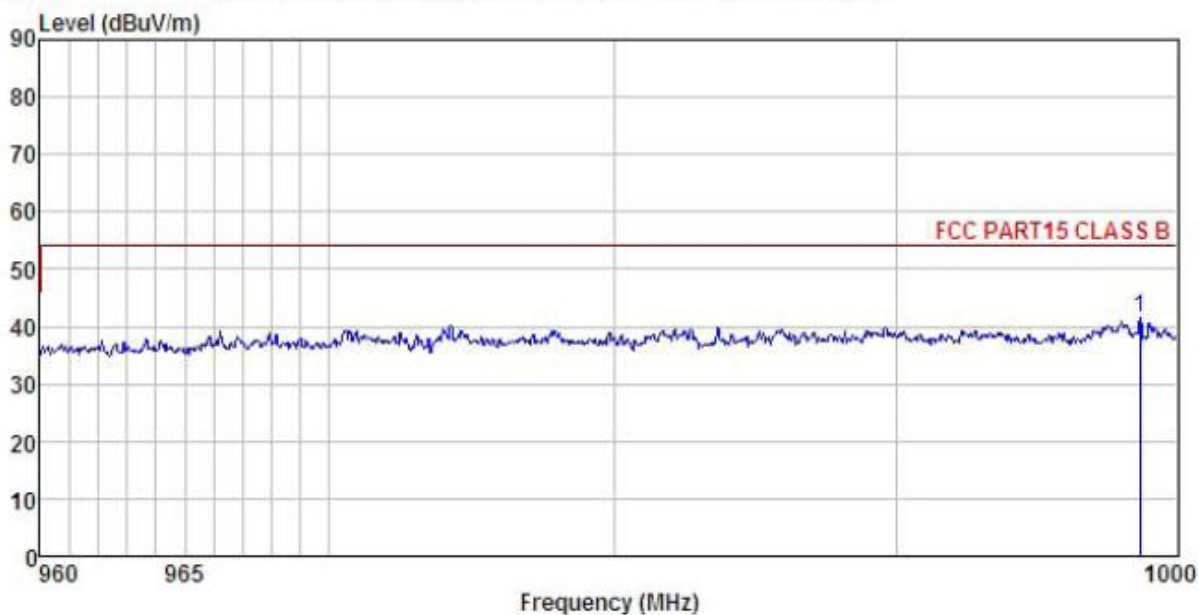


Site : 3m chamber
 Condition : FCC PART15 CLASS B 3m VULB9163(30M2G) HORIZONTAL
 EUT : CAR ALARM (TWO WAY)
 Model : TR3450BF
 Test mode : IX mode
 Power Rating : DC 3V
 Environment : Temp:25.5°C Humi:55%
 Test Engineer: Carey
 Remark :

	Read	Antenna	Cable	Preamp	Limit	Over		
Freq	Level	Factor	Loss	Factor	Level	Line	Limit	
MHz	dBuV	dB/m	dB	dB	dBuV/m	dBuV/m	dB	
1	999.388	12.22	22.80	4.46	0.00	39.48	54.00	-14.52 QP

Test channel: Lowest

Vertical:

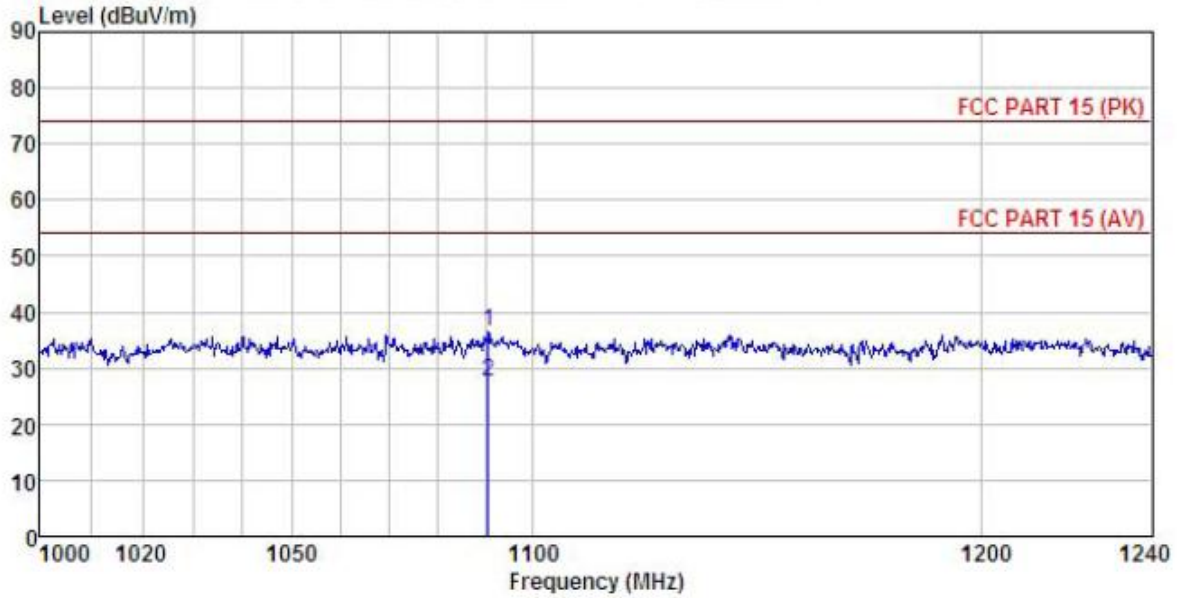


Site : 3m chamber
 Condition : FCC PART15 CLASS B 3m VULB9163(30M2G) VERTICAL
 EUT : CAR ALARM (TWO WAY)
 Model : TR3450BF
 Test mode : IX mode
 Power Rating : DC 3V
 Environment : Temp:25.5°C Humi:55%
 Test Engineer: Carey
 Remark :

	Read	Antenna	Cable	Preamp	Limit	Over	
Freq	Level	Factor	Loss	Factor	Level	Line	Limit
MHz	dBuV	dB/m	dB	dB	dBuV/m	dBuV/m	dB
1	998.654	14.30	22.79	4.46	0.00	41.55	54.00 -12.45

Test channel: Highest

Horizontal:

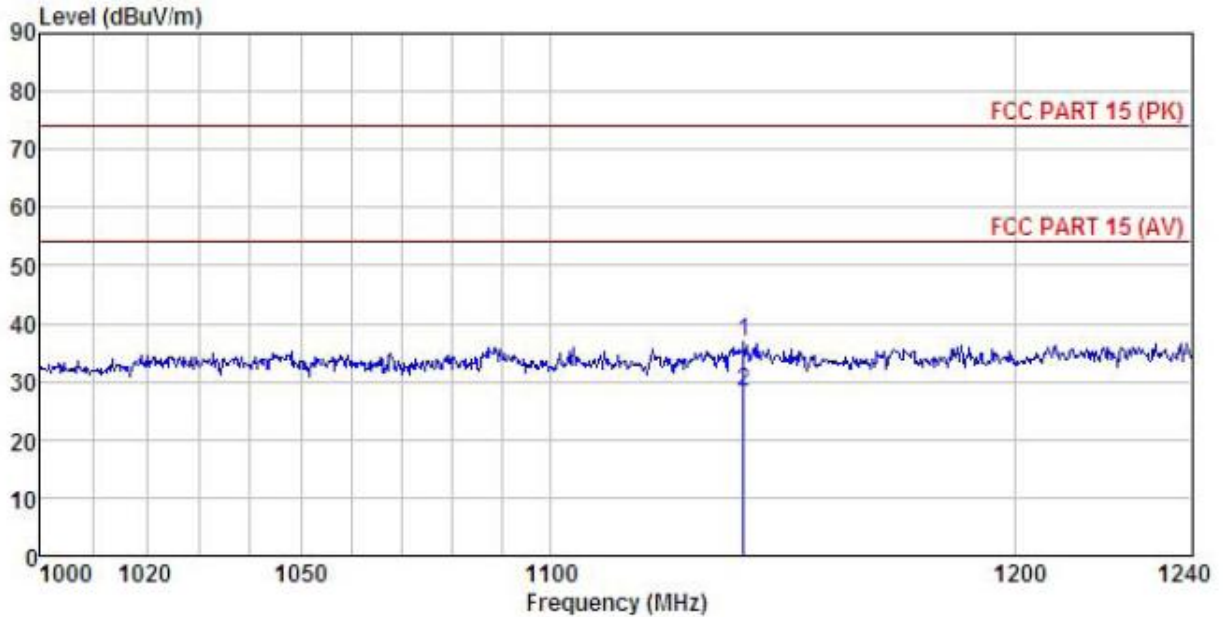


Site : 3m chamber
 Condition : FCC PART 15 (PK) 3m BBHA9120(1G18G) HORIZONTAL
 EUT : CAR ALARM (TWO WAY)
 Model : TR3450BF
 Test mode : IX mode
 Power Rating : DC 3V
 Environment : Temp:25.5°C Humi:55%
 Test Engineer: Carey
 Remark :

	Read	Antenna	Cable	Preamp	Limit	Over		
Freq	Level	Factor	Loss	Factor	Level	Line	Limit	
MHz	dBuV	dB/m	dB	dB	dBuV/m	dBuV/m	dB	
1	1090.558	9.51	23.94	3.16	0.00	36.61	74.00	-37.39 Peak
2	1090.558	0.32	23.94	3.16	0.00	27.42	54.00	-26.58 Average

Test channel: Highest

Vertical:

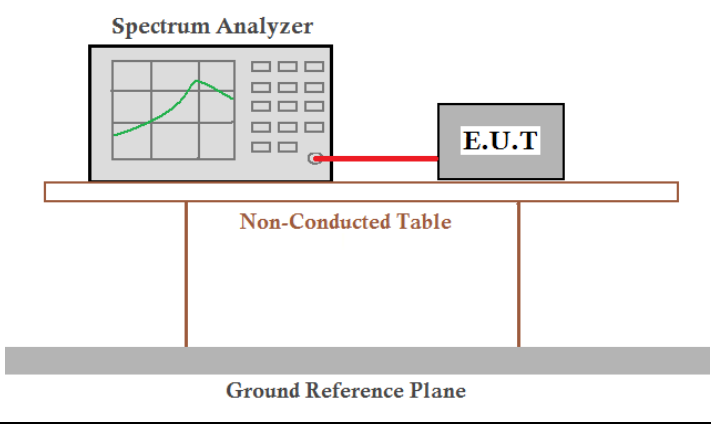


Site : 3m chamber
 Condition : FCC PART 15 (PK) 3m BBHA9120(1G18G) VERTICAL
 EUT : CAR ALARM (TWO WAY)
 Model : TR3450BF
 Test mode : TX mode
 Power Rating : DC 3V
 Environment : Temp:25.5°C Humi:55%
 Test Engineer: Carey
 Remark :

	Freq	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Level	Limit Line	Over Limit	Remark
	MHz	dBuV	dB/m	dB	dB	dBuV/m	dBuV/m	dB	
1	1140.462	9.54	24.12	3.23	0.00	36.89	74.00	-37.11	Peak
2	1140.462	0.75	24.12	3.23	0.00	28.10	54.00	-25.90	Average

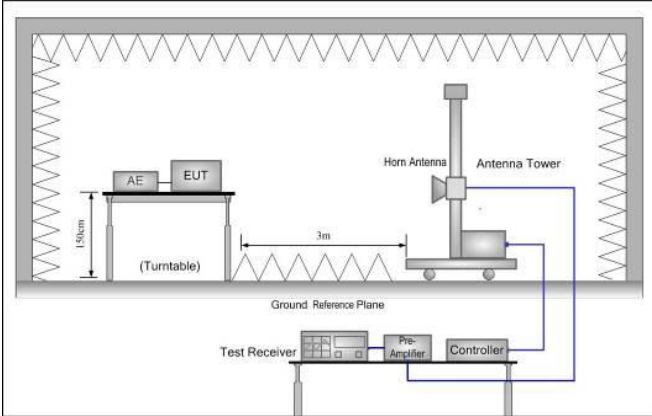
6.7 Spurious Emission

6.7.1 Conducted Emission Method

Test Requirement:	FCC Part 15 C Section 15.247 (d)
Test Method:	ANSI C63.10:2013 and KDB558074
Limit:	In any 100 kHz bandwidth outside the frequency band in which the spread spectrum intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement.
Test setup:	 <p>The diagram illustrates the test setup. A Spectrum Analyzer is connected to an E.U.T. (Equipment Under Test) via a red cable. Both are placed on a Non-Conducted Table, which is supported by a Ground Reference Plane.</p>
Test Instruments:	Refer to section 5.8 for details
Test mode:	Refer to section 5.3 for details
Test results:	Refer to FCC ID: 2AEPJ-TR3450AF

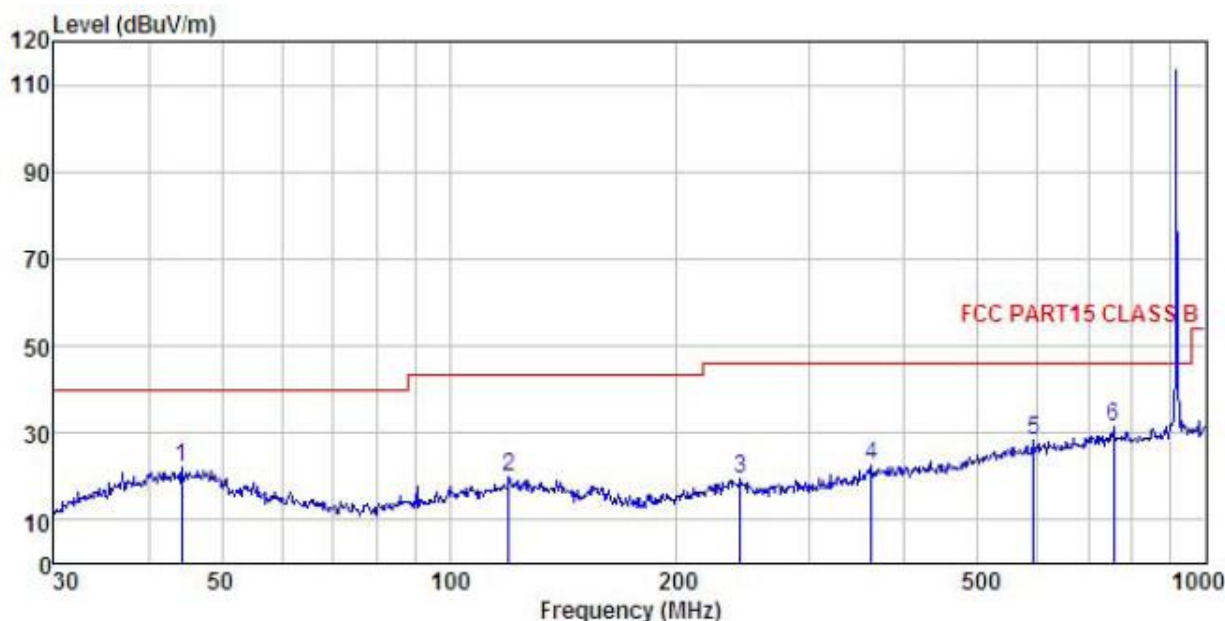
6.7.2 Radiated Emission Method

Test Requirement:	FCC Part 15 C Section 15.209 and 15.205				
Test Method:	ANSI C63.10:2013				
Test Frequency Range:	9kHz to 25GHz				
Test Distance:	3m				
Receiver setup:	Frequency	Detector	RBW	VBW	Remark
	30MHz-1GHz	Quasi-peak	120KHz	300KHz	Quasi-peak Value
	Above 1GHz	Peak	1MHz	3MHz	Peak Value
RMS		1MHz	3MHz	Average Value	
Limit:	Frequency	Limit (dBuV/m @3m)		Remark	
	30MHz-88MHz	40.0		Quasi-peak Value	
	88MHz-216MHz	43.5		Quasi-peak Value	
	216MHz-960MHz	46.0		Quasi-peak Value	
	960MHz-1GHz	54.0		Quasi-peak Value	
	Above 1GHz	54.0		Average Value	
74.0		Peak Value			
Test Procedure:	<ol style="list-style-type: none"> The EUT was placed on the top of a rotating table 0.8m(below 1GHz)/1.5m(above 1GHz) above the ground at a 3 meter camber. The table was rotated 360 degrees to determine the position of the highest radiation. The EUT was set 3 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower. The antenna height is varied from one meter to four meters above the ground to determine the maximum value of the field strength. Both horizontal and vertical polarizations of the antenna are set to make the measurement. For each suspected emission, the EUT was arranged to its worst case and then the antenna was tuned to heights from 1 meter to 4 meters and the rota table was turned from 0 degrees to 360 degrees to find the maximum reading. The test-receiver system was set to Peak Detect Function and Specified Bandwidth with Maximum Hold Mode. If the emission level of the EUT in peak mode was 10 dB lower than the limit specified, then testing could be stopped and the peak values of the EUT would be reported. Otherwise the emissions that did not have 10 dB margin would be re-tested one by one using peak, quasi-peak or average method as specified and then reported in a data sheet. 				
Test setup:	<p>Below 1GHz</p>				

	<p>Above 1GHz</p> 
<p>Test Instruments:</p>	<p>Refer to section 5.8 for details</p>
<p>Test mode:</p>	<p>Refer to section 5.3 for details</p>
<p>Test results:</p>	<p>Passed</p>
<p>Remark:</p>	<ol style="list-style-type: none"> 1. Pre-scan all kind of the place mode (X-axis, Y-axis, Z-axis), and found the Y-axis is the worst case. 2. 9 kHz to 30MHz is too low, so only shows the data of above 30MHz in this report.

Below 1GHz

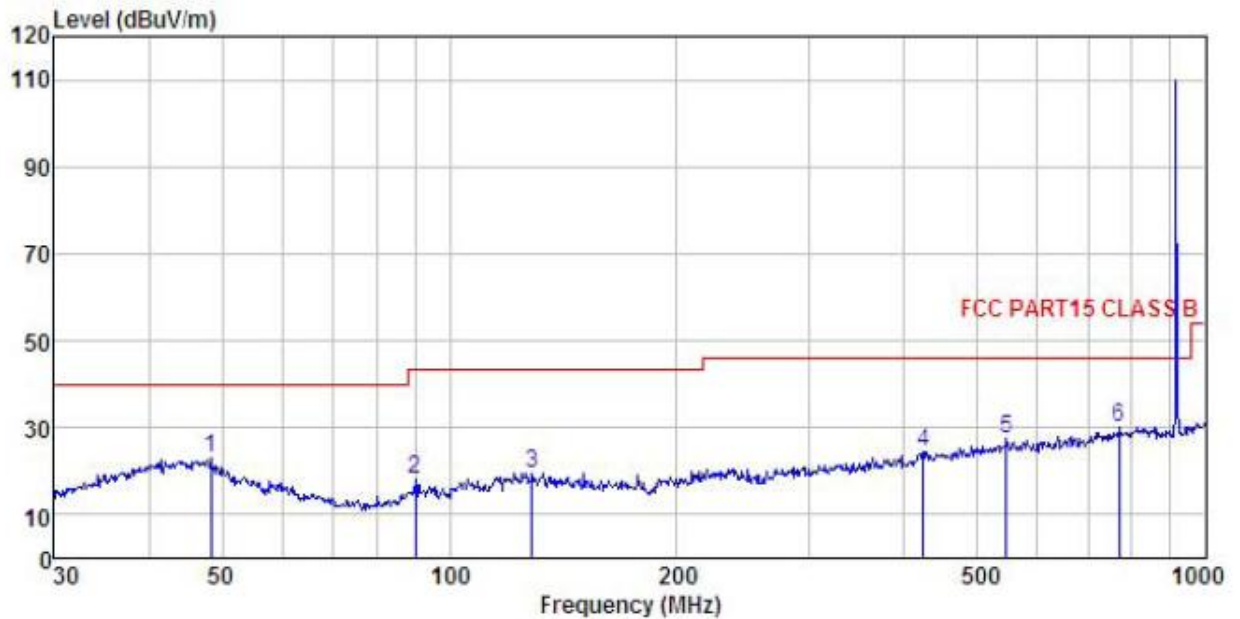
Horizontal:



Site : 3m chamber
 Condition : FCC PART15 CLASS B 3m VULB9163(30M2G) HORIZONTAL
 EUT : CAR ALARM (TWO WAY)
 Model : TR3450BF
 Test mode : TX mode
 Power Rating : DC 3V
 Environment : Temp:25.5°C Humi:55%
 Test Engineer: Carey
 Remark :

Freq	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Level	Limit Line	Over Limit	Remark
MHz	dBuV	dB/m	dB	dB	dBuV/m	dBuV/m	dB	
1	44.275	37.00	13.58	1.28	29.87	21.99	40.00	-18.01 QP
2	119.856	37.00	10.23	2.17	29.39	20.01	43.50	-23.49 QP
3	242.525	32.14	13.06	2.82	28.58	19.44	46.00	-26.56 QP
4	361.714	33.11	14.82	3.10	28.61	22.42	46.00	-23.58 QP
5	593.050	34.19	19.04	3.93	28.96	28.20	46.00	-17.80 QP
6	755.387	34.44	21.00	4.36	28.45	31.35	46.00	-14.65 QP

Vertical:



Site : 3m chamber
 Condition : FCC PART15 CLASS B 3m VULB9163(30M3G) VERTICAL
 EUT : CAR ALARM (TWO WAY)
 Model : TR3450BF
 Test mode : IX mode
 Power Rating : DC 3V
 Environment : Temp:25.5°C Humi:55%
 Test Engineer: Carey
 Remark :

	ReadAntenna	Cable	Preamp		Limit	Over		
Freq	Level	Factor	Loss	Factor	Level	Line	Limit	
MHz	dBuV	dB/m	dB	dB	dBuV/m	dBuV/m	dB	
1	48.332	51.55	0.00	1.27	29.83	22.99	40.00	-17.01 QP
2	90.220	45.85	0.00	2.03	29.57	18.31	43.50	-25.19 QP
3	128.563	46.73	0.00	2.27	29.34	19.66	43.50	-23.84 QP
4	423.540	50.03	0.00	3.14	28.82	24.35	46.00	-21.65 QP
5	545.183	52.61	0.00	3.86	29.08	27.39	46.00	-18.61 QP
6	768.748	54.22	0.00	4.36	28.37	30.21	46.00	-15.79 QP

Above 1GHz

Peak value								
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization
1830.00	45.28	26.03	4.15	41.27	34.19	74.00	-39.81	Vertical
2745.00	38.58	28.12	5.08	41.72	30.06	74.00	-43.94	Vertical
3660.00	36.79	29.34	5.95	41.62	30.46	74.00	-43.54	Vertical
4575.00	41.21	31.23	6.87	42.12	37.19	74.00	-36.81	Vertical
5490.00	41.86	32.40	7.22	41.83	39.65	74.00	-34.35	Vertical
6405.00	42.28	34.30	8.24	41.92	42.90	74.00	-31.10	Vertical
1830.00	35.83	26.03	4.15	41.27	24.74	74.00	-49.26	Horizontal
2745.00	33.51	28.12	5.08	41.72	24.99	74.00	-49.01	Horizontal
3660.00	37.17	29.34	5.95	41.62	30.84	74.00	-43.16	Horizontal
4575.00	42.09	31.23	6.87	42.12	38.07	74.00	-35.93	Horizontal
5490.00	41.63	32.40	7.22	41.83	39.42	74.00	-34.58	Horizontal
6405.00	36.03	34.30	8.24	41.92	36.65	74.00	-37.35	Horizontal
Average value								
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization
1830.00	37.76	26.03	4.15	41.27	26.67	54.00	-27.33	Vertical
2745.00	30.81	28.12	5.08	41.72	22.29	54.00	-31.71	Vertical
3660.00	28.60	29.34	5.95	41.62	22.27	54.00	-31.73	Vertical
4575.00	33.26	31.23	6.87	42.12	29.24	54.00	-24.76	Vertical
5490.00	33.53	32.40	7.22	41.83	31.32	54.00	-22.68	Vertical
6405.00	34.93	34.30	8.24	41.92	35.55	54.00	-18.45	Vertical
1830.00	24.53	26.03	4.15	41.27	13.44	54.00	-40.56	Horizontal
2745.00	25.40	28.12	5.08	41.72	16.88	54.00	-37.12	Horizontal
3660.00	28.78	29.34	5.95	41.62	22.45	54.00	-31.55	Horizontal
4575.00	34.40	31.23	6.87	42.12	30.38	54.00	-23.62	Horizontal
5490.00	33.41	32.40	7.22	41.83	31.20	54.00	-22.80	Horizontal
6405.00	28.31	34.30	8.24	41.92	28.93	54.00	-25.07	Horizontal

Remark:

1. *Final Level = Receiver Read level + Antenna Factor + Cable Loss – Preamplifier Factor*
2. *The emission levels of other frequencies are very lower than the limit and not show in test report.*