



FCC Test Report

Report No.: BUMK-ESH-P20122218B-1

FCC ID: 2ANTYB0040

Product: Smart Door Lock

Test Model: 2354X

Received: Dec.29, 2020

ISSUED: Jan.12.2021

Applicant: HAMPTON PRODUCTS INTERNATIONAL CORP.

Address: 50 Icon, Foothill Ranch CA 92610-3000 USA

Issued By: BUREAU VERITAS ADT (Shanghai) Corporation

Lab Location: No. 829, Xinzhuang Road, Shanghai, P.R.China (201612)

This test report consists of 31 pages in total. It may be duplicated completely for legal use with the approval of the applicant. It should not be reproduced except in full, without the written approval of our laboratory. The client should not use it to claim product certification, approval, or endorsement by A2LA, CNAS, or any government agency. The test results in the report only apply to the tested item. The test results in this report are traceable to the national or international standards.



Contents

1. TEST PROGRAM.....	3
2. Summary of Test Procedure and Test Results	4
3. Test Configuration of Equipment under Test	5
3.1 Manufacturer information.....	5
3.2 Feature of Equipment under Test.....	5
3.3 Measurement Uncertainty	6
4 Test of Conducted Emission	7
4.1 Test Limit	7
4.2 Test Procedures	8
4.3 Typical Test Setup	8
4.4 Measurement Equipment	9
4.5 Test Result and Data	10
4.6 Test Photographs	14
5 Test of Radiated Emission	15
5.1 Test Limit	15
5.2 Test Procedures	16
5.3 Typical Test Setup	16
5.4 Measurement Equipment	17
5.5 Test Result and Data (30MHz ~ 1GHz).....	18
5.6 Test Result and Data (1GHz ~ 18GHz)	26
5.7 Test Photographs (30MHz ~ 1000MHz)	30
5.8 Test Photographs (1000MHz ~ 18000MHz)	31



1. TEST PROGRAM

PRODUCT: Smart Door Lock

TEST MODEL: 2354X

APPLICANT: HAMPTON PRODUCTS INTERNATIONAL CORP.

TESTED: Dec.29, 2020 to Jan.11.2021

STANDARDS: 47 CFR FCC Part15, Subpart B, Class B
ANSI C63.4:2014

We, BUREAU VERITAS ADT (Shanghai) Corporation, declare that the equipment above has been tested and found compliance with the requirement limits of applicable standards. The test record, data evaluation and Equipment Under Test (EUT) configurations represented herein are true and accurate under the standards herein specified.

PREPARED BY : Yuan Zhang, **DATE:** Jan.12, 2021
Yuan ZHANG
Project Engineer

APPROVED BY : Daniel Sun, **DATE:** Jan.12, 2021
Daniel Sun
EMC Lab Manager



2. Summary of Test Procedure and Test Results

EMISSION (47 CFR FCC Part15, Subpart B)		
Test Item	Normative References	Test Result
Conducted Emission	47 CFR FCC Part15, Subpart B 15.107	Meets the Class B requirements
Radiated Emission	47 CFR FCC Part15, Subpart B 15.109	Meets the Class B requirements

3. Test Configuration of Equipment under Test

3.1 Manufacturer information

Manufacturer : Taiwan Fu Hsing Industrial Co., Ltd.

Address : No.88, Yucai Rd., Gangshan Dist.,Kaohsiung City 820, Taiwan R.O.C.

3.2 Feature of Equipment under Test

Product Name:	Smart Door Lock
Brand:	--
Test Model:	2354X
Model Discrepancy:	--
EUT Power Rating:	Powered by battery; AC Adaptor for battery: INPUT: 100-240Vac,50/60Hz 0.3A OUTPUT: 5Vdc,2A

Note:

1. Please refer to user manual.
2. The EUT is matched with two different gain antennas. In addition to the different gain and material (one metal + bracket, the other is FPC + bracket), other characteristics of the antenna are almost the same. They are all PIFA antennas.

3.3 Measurement Uncertainty

Where relevant, the following measurement uncertainty levels have been estimated for tests performed on the EUT:

This listed uncertainties are the worst case uncertainty for the entire range of measurement. Please note that the uncertainty values are provided for informational purposes only and are not used in determining the PASS/FAIL results.

Measurement		Value
Conducted emissions		2.55 dB
Radiated emissions	30 MHz ~ 1GHz	3.22 dB
	Above 1GHz	2.89 dB

4 Test of Conducted Emission

4.1 Test Limit

TEST STANDARD:

CFR 47 FCC Part 15, Subpart B (Section: 15.107)

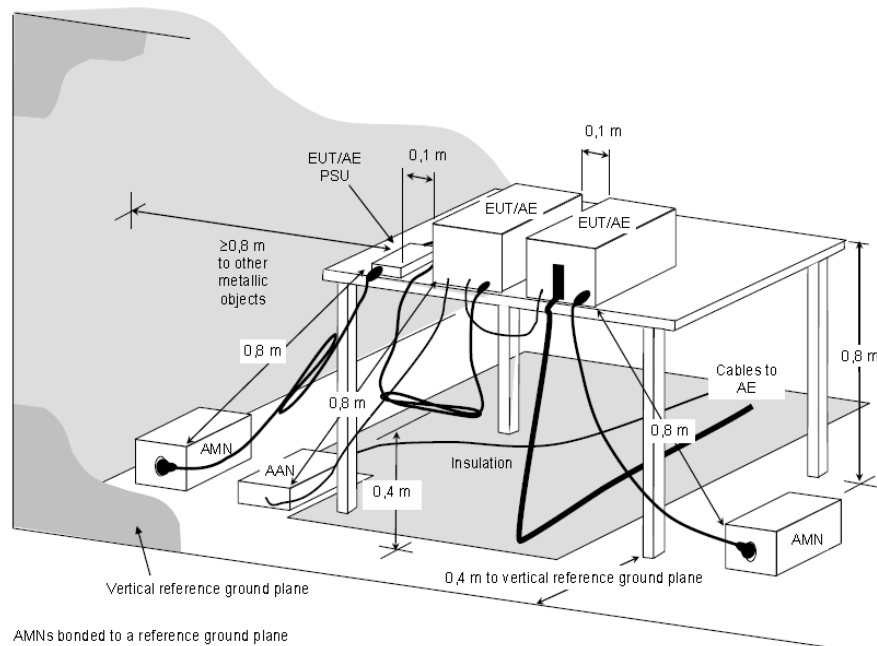
FREQUENCY (MHz)	Class A (dB μ V)		Class B (dB μ V)	
	Quasi-peak	Average	Quasi-peak	Average
0.15 - 0.5	79	66	66 - 56	56 - 46
0.50 - 5.0	73	60	56	46
5.0 - 30.0	73	60	60	50

- NOTES:**
1. The lower limit shall apply at the transition frequencies.
 2. The limit decreases in line with the logarithm of the frequency in the range of 0.15 to 0.50MHz.
 3. All emanations from a class A/B digital device or system, including any network of conductors and apparatus connected thereto, shall not exceed the level of field strengths specified above.

4.2 Test Procedures

1. The EUT was placed on a desk 0.8 meter height from the metal ground plane and 0.4 meter from the conducting wall of the shielding room and it was kept at least 0.8 meters from any other grounded conducting surface.
2. Connect EUT to the power mains through a Artificial Mains Network (AMN).
3. All the support units are connecting to the other AMN.
4. The AMN provides 50 ohm coupling impedance for the measuring instrument.
5. The CISPR states that a 50 ohm, 50 micro-Henry AMN should be used.
6. Both sides of AC line were checked for maximum conducted interference.
7. The frequency range from 150 kHz to 30 MHz was searched
8. Set the test-receiver system to Peak Detect Function and Specified Bandwidth with Maximum Hold Mode.

4.3 Typical Test Setup



NOTE The 0.8 m distance specified between EUT/AE/PSU and AMN/AAN, is applicable only to the EUT being measured. If the device is AE then it shall be ≥ 0.8 m.

**Figure D.2 – Example measurement arrangement for table-top EUT
(Conducted emission measurement – alternative 1)**

4.4 Measurement Equipment

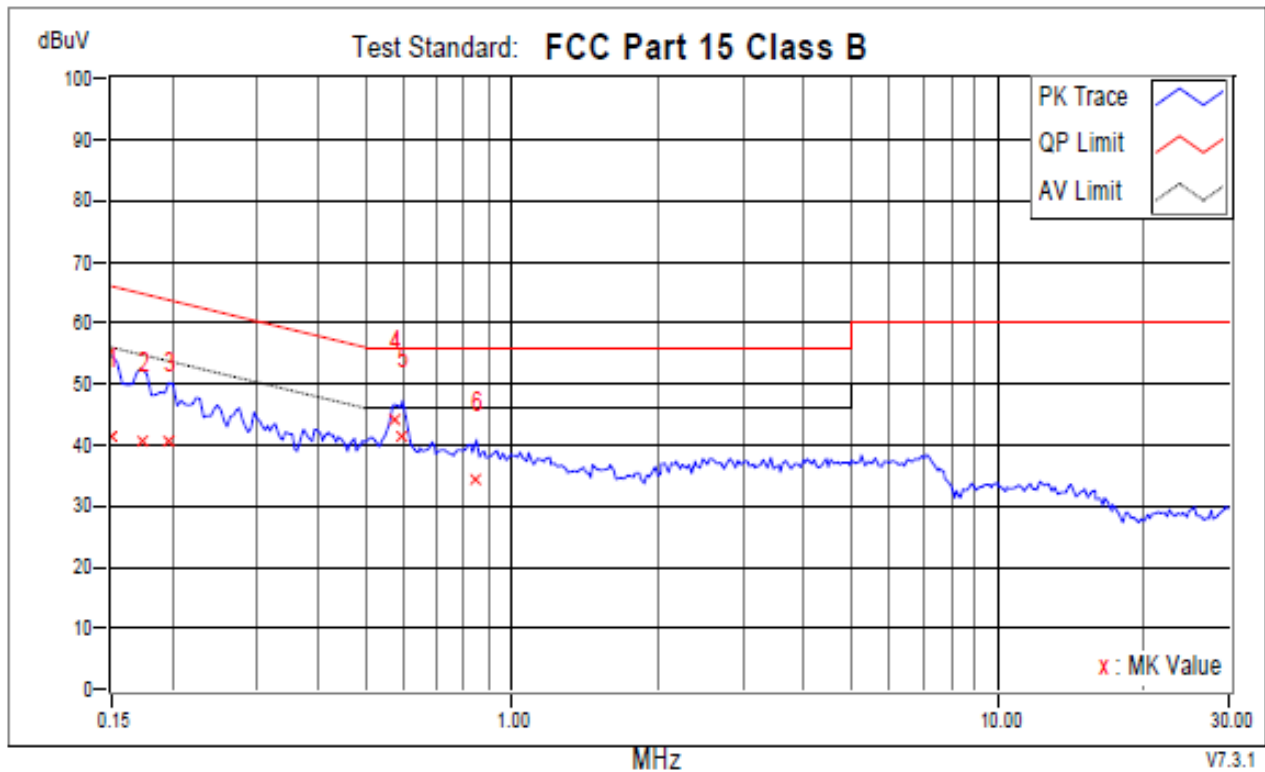
DESCRIPTION & MANUFACTURER	MODEL NO.	SERIAL NO.	CALIBRATED UNTIL
Test Receiver ROHDE & SCHWARZ	ESCS30	E1R1001	Mar.11, 2021
LISN ROHDE & SCHWARZ	ENV216	E1L1011	Mar.11, 2021
Software ADT	ADT_Cond_V7.3.0	N/A	N/A

4.5 Test Result and Data

Conducted Emission Test Data

Charging mode for battery with charging base

Phase : LINE

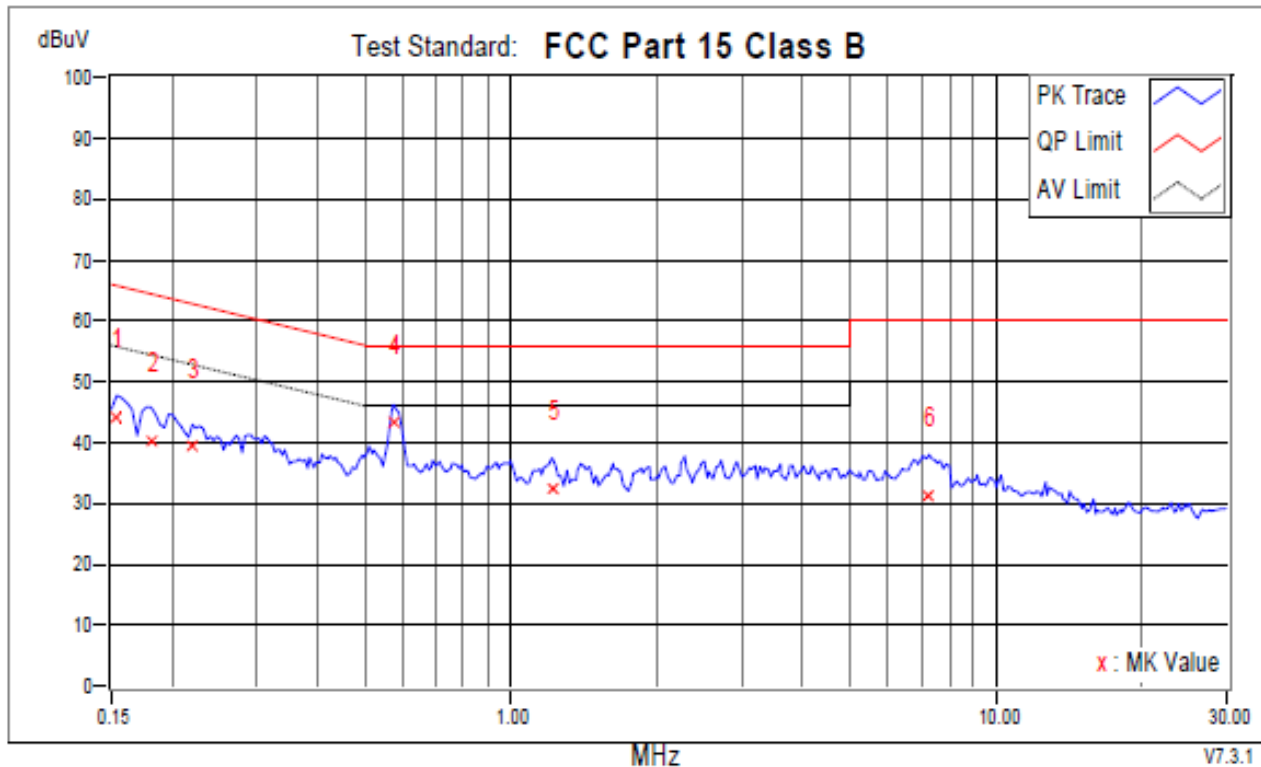


No.	Frequency	Corr. Factor	Reading dBuV		Emission dBuV		Limit dBuV		Margins dB		Notes
	MHz	dB	QP	AV	QP	AV	QP	AV	QP	AV	
1	0.15000	9.87	31.70	15.01	41.57	24.88	66.00	56.00	-24.43	-31.12	
2	0.17346	9.88	30.68	13.55	40.56	23.43	64.79	54.79	-24.23	-31.36	
3	0.19692	9.89	30.54	12.69	40.43	22.58	63.74	53.74	-23.31	-31.16	
+4	0.57228	9.70	34.57	22.97	44.27	32.67	56.00	46.00	-11.73	-13.33	
5	0.59574	9.69	31.84	21.40	41.53	31.09	56.00	46.00	-14.47	-14.91	
6	0.84598	9.61	24.72	13.74	34.33	23.35	56.00	46.00	-21.67	-22.65	

REMARKS:

1. Q.P. and AV. are abbreviations of quasi-peak and average individually.
2. The emission levels of other frequencies were very low against the limit.
3. Margin value = Emission level - Limit value
4. Correction factor = Insertion loss + Cable loss
5. Emission Level = Correction Factor + Reading Value.

Phase : NEUTRAL



No.	Frequency	Corr. Factor	Reading dBuV		Emission dBuV		Limit dBuV		Margins dB		Notes
	MHz	dB	QP	AV	QP	AV	QP	AV	QP	AV	
1	0.15391	9.88	34.17	20.92	44.05	30.80	65.79	55.79	-21.74	-24.99	
2	0.18128	9.85	30.43	15.83	40.28	25.68	64.43	54.43	-24.15	-28.75	
3	0.22038	9.84	29.58	11.77	39.42	21.61	62.80	52.80	-23.38	-31.19	
+4	0.57228	9.86	33.61	25.16	43.47	35.02	56.00	46.00	-12.53	-10.98	
5	1.21505	9.92	22.63	15.09	32.55	25.01	56.00	46.00	-23.45	-20.99	
6	7.27946	10.21	20.90	12.84	31.11	23.05	60.00	50.00	-28.89	-26.95	

REMARKS:

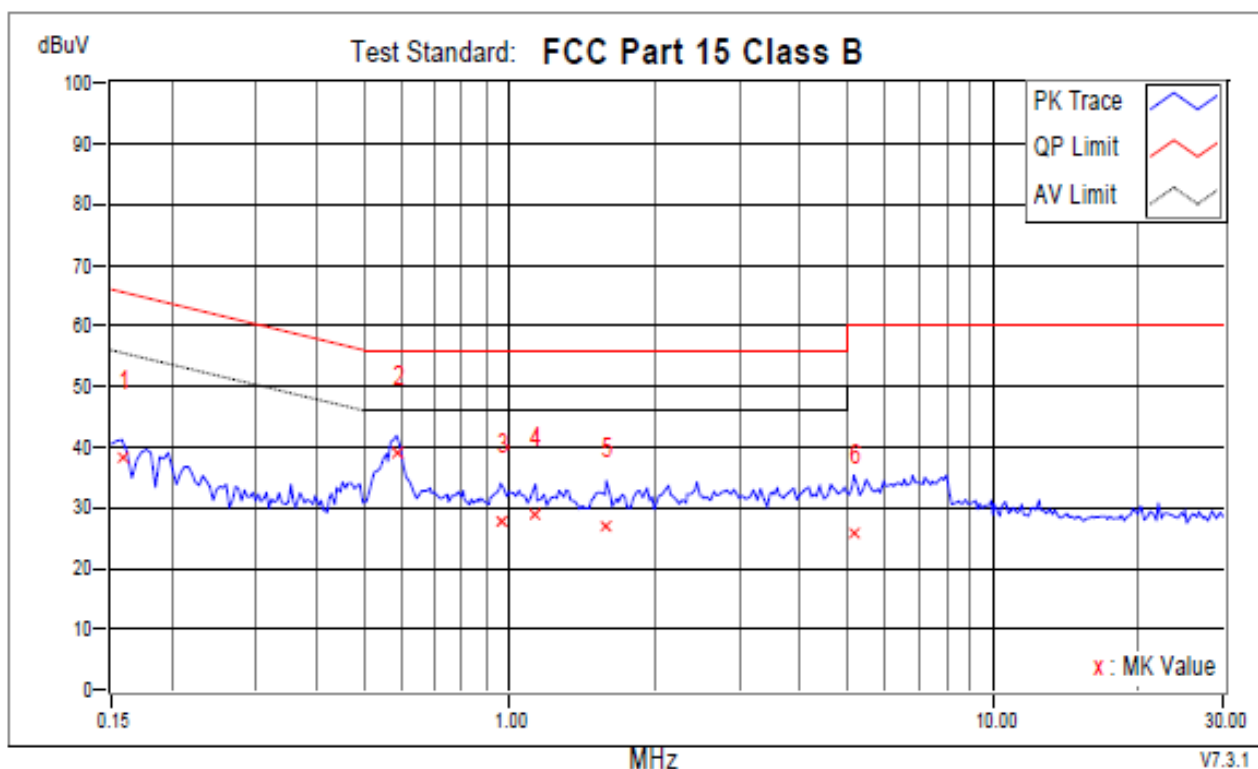
1. Q.P. and AV. are abbreviations of quasi-peak and average individually.
2. The emission levels of other frequencies were very low against the limit.
3. Margin value = Emission level - Limit value
4. Correction factor = Insertion loss + Cable loss
5. Emission Level = Correction Factor + Reading Value.

Charging mode for battery without charging base

Phase : LINE



BUREAU
VERITAS



	Frequency	Corr. Factor	Reading dBuV		Emission dBuV		Limit dBuV		Margins dB		Notes
No.	MHz	dB	QP	AV	QP	AV	QP	AV	QP	AV	
1	0.15782	9.87	28.44	14.55	38.31	24.42	65.58	55.58	-27.26	-31.15	
+2	0.58401	9.70	29.49	24.85	39.19	34.55	56.00	46.00	-16.81	-11.45	
3	0.95937	9.61	18.03	12.14	27.64	21.75	56.00	46.00	-28.36	-24.25	
4	1.13294	9.63	19.37	10.02	29.00	19.65	56.00	46.00	-27.00	-26.35	
5	1.58650	9.72	17.14	11.47	26.86	21.19	56.00	46.00	-29.14	-24.81	
6	5.15633	10.08	15.82	7.70	25.90	17.78	60.00	50.00	-34.10	-32.22	

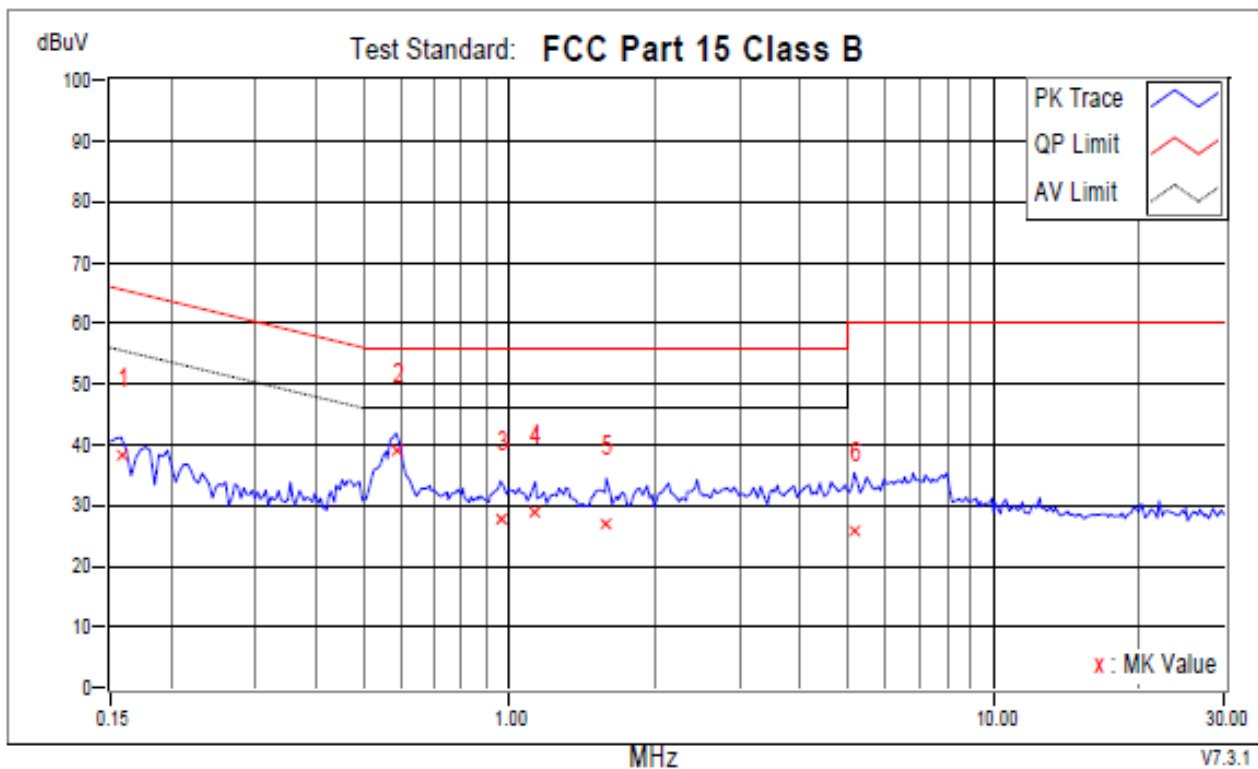
REMARKS:

1. Q.P. and AV. are abbreviations of quasi-peak and average individually.
2. The emission levels of other frequencies were very low against the limit.
3. Margin value = Emission level - Limit value
4. Correction factor = Insertion loss + Cable loss
5. Emission Level = Correction Factor + Reading Value.

Phase : NEUTRAL



BUREAU
VERITAS



	Frequency	Corr. Factor	Reading dBuV		Emission dBuV		Limit dBuV		Margins dB		Notes
No.	MHz	dB	QP	AV	QP	AV	QP	AV	QP	AV	
1	0.15782	9.87	28.44	14.55	38.31	24.42	65.58	55.58	-27.26	-31.15	
+2	0.58401	9.70	29.49	24.85	39.19	34.55	56.00	46.00	-16.81	-11.45	
3	0.95937	9.61	18.03	12.14	27.64	21.75	56.00	46.00	-28.36	-24.25	
4	1.13294	9.63	19.37	10.02	29.00	19.65	56.00	46.00	-27.00	-26.35	
5	1.58650	9.72	17.14	11.47	26.86	21.19	56.00	46.00	-29.14	-24.81	
6	5.15633	10.08	15.82	7.70	25.90	17.78	60.00	50.00	-34.10	-32.22	

REMARKS:

1. Q.P. and AV. are abbreviations of quasi-peak and average individually.
2. The emission levels of other frequencies were very low against the limit.
3. Margin value = Emission level - Limit value
4. Correction factor = Insertion loss + Cable loss
5. Emission Level = Correction Factor + Reading Value.

4.6 Test Photographs

Please refer to the attached file (Test Setup Photo).

5 Test of Radiated Emission

5.1 Test Limit

TEST STANDARD:

CFR 47 FCC Part 15, Subpart B (Section: 15.109)

FOR FREQUENCY BELOW 1000 MHz

FREQUENCY (MHz)	Class A (at 10m)		Class B (at 3m)	
	$\mu\text{V/m}$	$\text{dB}\mu\text{V/m}$	$\mu\text{V/m}$	$\text{dB}\mu\text{V/m}$
30 – 88	90	39.1	100	40.0
88 – 216	150	43.5	150	43.5
216 – 960	210	46.4	200	46.0
960 – 1000	300	49.5	500	54.0

LIMIT OF RADIATED EMISSION OF FCC PART 15, SUBPART B FOR FREQUENCY ABOVE 1000 MHz

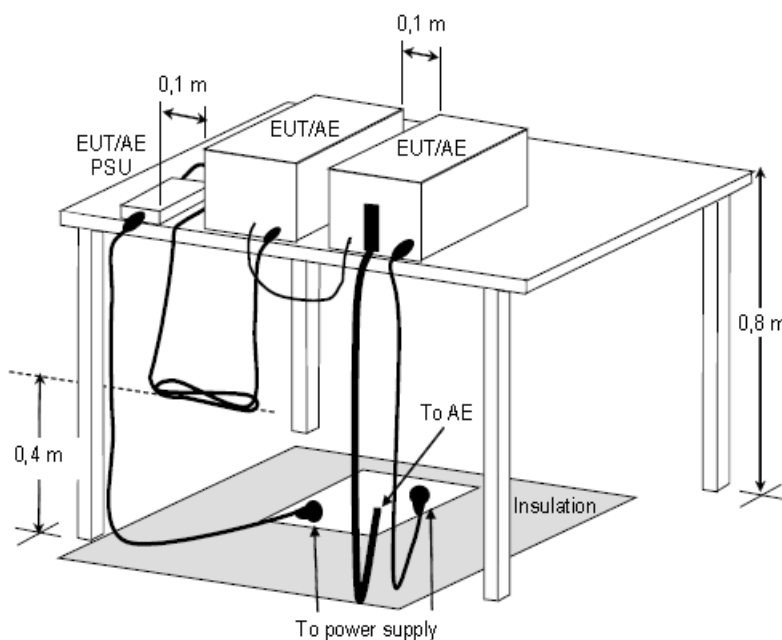
FREQUENCY (MHz)	Class A ($\text{dB}\mu\text{V/m}$) (at 3m)		Class B ($\text{dB}\mu\text{V/m}$) (at 3m)	
	PEAK	AVERAGE	PEAK	AVERAGE
Above 1000	80.0	60.0	74.0	54.0

- Note:**
1. The lower limit shall apply at the transition frequencies.
 2. Emission level ($\text{dB}\mu\text{V/m}$) = $20 \log$ Emission level ($\mu\text{V/m}$).
 3. All emanation from a class A/B digital device or system, including any network of conductors and apparatus connected thereto, shall not exceed the level of field strengths specified above.

5.2 Test Procedures

1. The EUT was placed on a rotatable table top 0.8 meter above ground.
2. The EUT was set 3/10 meters from the interference receiving antenna which was mounted on the top of a variable height antenna tower.
3. The table was rotated 360 degrees to determine the position of the highest radiation.
4. The antenna is a half wave dipole and its height is varied between one meter and four meters above ground to find the maximum value of the field strength both horizontal polarization and vertical polarization of the antenna are set to make the measurement.
5. For each suspected emission the EUT was arranged to its worst case and then tune the antenna tower (from 1 M to 4 M) and turn table (from 0 degree to 360 degrees) to find the maximum reading.
6. Set the test-receiver system to Peak Detect Function and specified bandwidth with Maximum Hold Mode.
7. If the emission level of the EUT in peak mode was 3 dB lower than the limit specified, then testing will be stopped and peak values of EUT will be reported, otherwise, the emissions which do not have 3 dB margin will be repeated one by one using the quasi-peak method and reported.

5.3 Typical Test Setup



**Figure D.8 – Example measurement arrangement for table-top EUT
(Radiated emission measurement)**



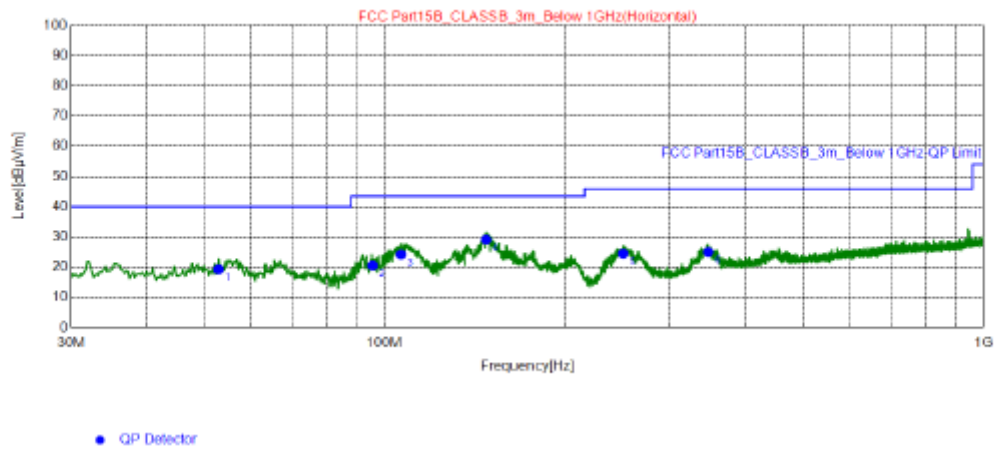
5.4 Measurement Equipment

DESCRIPTION & MANUFACTURER	MODEL NO.	SERIAL NO.	CALIBRATED UNTIL
EMI Test Spectrum ROHDE & SCHWARZ	ESR7	E1R1005	May.11, 2021
Spectrum Analyzer Keysight	N9030B	E1S1003	Aug.03, 2021
Broad-Band Antenna Schwarzbeck	VULB9168	E1A1012	Jul.27, 2021
Double Riaged Vroadband Horn Antenna Schwarzbeck	BBHA9120D	E1A1017	Jan.25, 2021
Preamplifier Agilent	8447D	E1A2001	Apr.19, 2021
Preamplifier Agilent	EMC051845SE	E1A2009	Jul.05, 2021

5.5 Test Result and Data (30MHz ~ 1GHz)

Charging mode for battery with charging base

Position: Horizontal



Final Data List

NO.	Freq. [MHz]	QP Reading [dB μV/m]	Factor [dB]	QP Value [dB μV/m]	QP Limit [dB μV/m]	QP Margin [dB]	Height [cm]	Angle [°]	Polarity
1	52.89	29.15	-9.87	19.28	40.00	20.72	100	116	Horizontal
2	95.57	35.95	-15.38	20.57	43.50	22.93	200	154	Horizontal
3	106.6	38.41	-14.15	24.26	43.50	19.24	200	154	Horizontal
4	147.9	39.19	-10.10	29.09	43.50	14.41	200	212	Horizontal
5	250.5	35.08	-10.54	24.54	46.00	21.46	100	166	Horizontal
6	347.5	32.5	-7.46	25.04	46.00	20.96	100	139	Horizontal

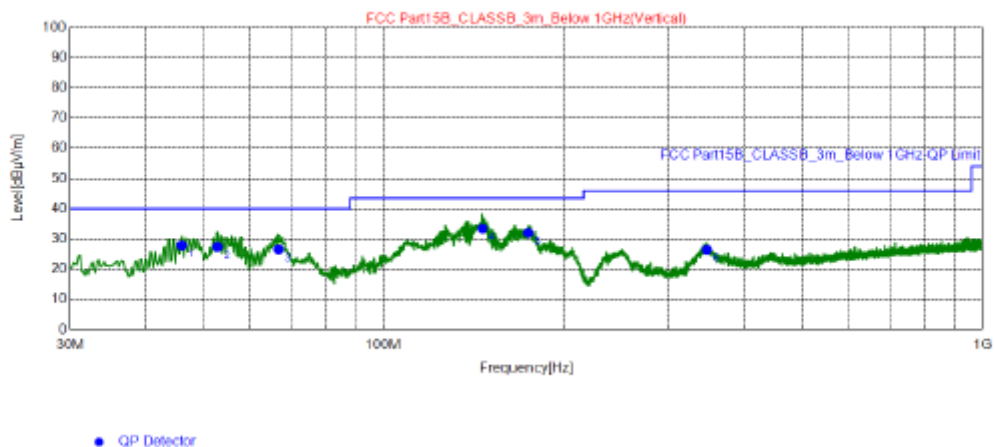
REMARKS:

1. Q.P. is abbreviation of quasi-peak individually.
2. The emission levels of other frequencies were very low against the limit.
3. QP Margin value = QP Limit value – QP value.
4. Factor = Antenna Factor + Amplifier Factor + Cable loss.
5. QP value = Factor + Reading Value.



BUREAU
VERITAS

Position: Vertical



Final Data List

NO.	Freq. [MHz]	QP Reading [dB µV/m]	Factor [dB]	QP Value [dB µV/m]	QP Limit [dB µV/m]	QP Margin [dB]	Height [cm]	Angle [°]	Polarity
1	46.10	37.88	-9.99	27.89	40.00	12.11	100	11	Vertical
2	52.89	37.28	-9.87	27.41	40.00	12.59	100	16	Vertical
3	66.86	38.07	-11.49	26.58	40.00	13.42	100	360	Vertical
4	146.4	43.58	-10.14	33.44	43.50	10.06	100	203	Vertical
5	174.7	42.61	-10.59	32.02	43.50	11.48	100	137	Vertical
6	346.9	33.93	-7.48	26.45	46.00	19.55	100	56	Vertical

REMARKS:

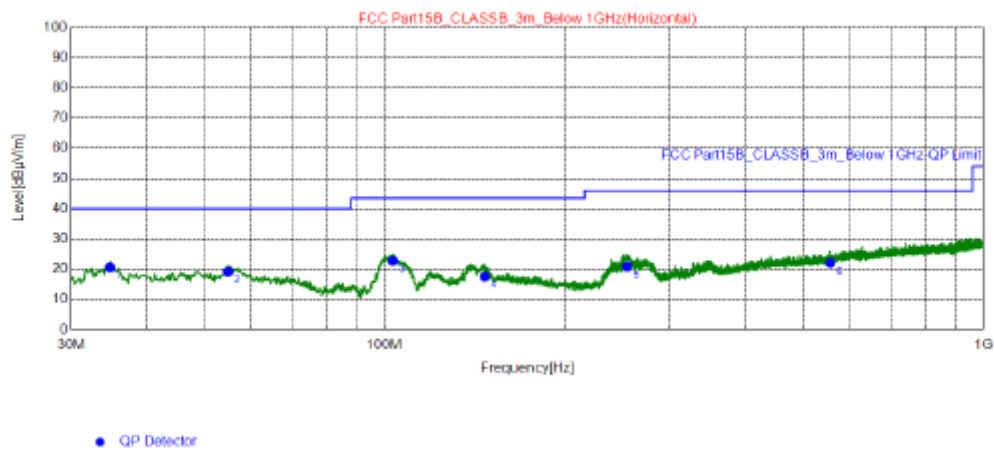
1. Q.P. is abbreviation of quasi-peak individually.
2. The emission levels of other frequencies were very low against the limit.
3. QP Margin value = QP Limit value – QP value
4. Factor = Antenna Factor + Amplifier Factor + Cable loss
5. QP value = Factor + Reading Value.

Charging mode for battery without charging base

Position: Horizontal



BUREAU
VERITAS



Final Data List

NO.	Freq. [MHz]	QP Reading [dB μV/m]	Factor [dB]	QP Value [dB μV/m]	QP Limit [dB μV/m]	QP Margin [dB]	Height [cm]	Angle [°]	Polarity
1	34.85	31.68	-11.07	20.61	40.00	19.39	200	118	Horizontal
2	54.83	29.12	-9.98	19.14	40.00	20.86	200	278	Horizontal
3	103.3	37.32	-14.56	22.76	43.50	20.74	200	158	Horizontal
4	147.1	27.72	-10.12	17.60	43.50	25.90	100	184	Horizontal
5	254.2	31.26	-10.36	20.90	46.00	25.10	100	161	Horizontal
6	555.3	25.63	-3.56	22.07	46.00	23.93	100	255	Horizontal

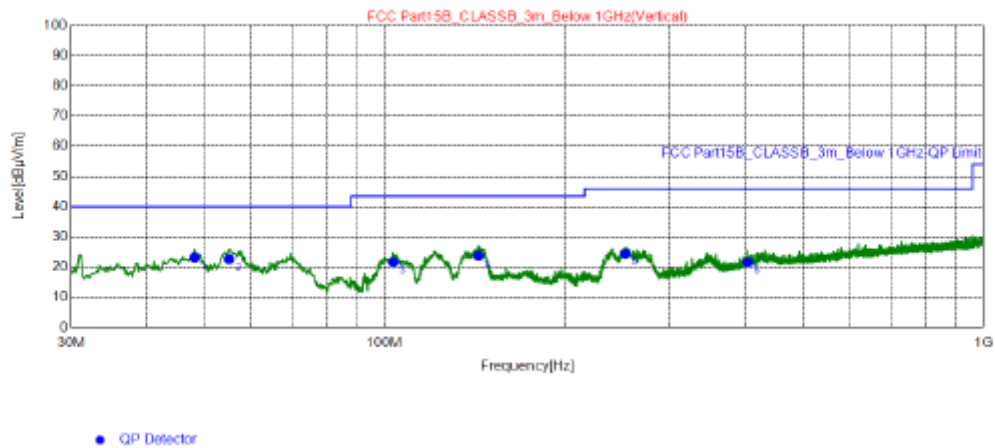
REMARKS:

1. Q.P. is abbreviation of quasi-peak individually.
2. The emission levels of other frequencies were very low against the limit.
3. QP Margin value = QP Limit value – QP value.
4. Factor = Antenna Factor + Amplifier Factor + Cable loss.
5. QP value = Factor + Reading Value.

Position: Vertical



BUREAU
VERITAS



Final Data List

NO.	Freq. [MHz]	QP Reading [dB μV/m]	Factor [dB]	QP Value [dB μV/m]	QP Limit [dB μV/m]	QP Margin [dB]	Height [cm]	Angle [°]	Polarity
1	48.23	33.02	-9.83	23.19	40.00	16.81	100	25	Vertical
2	55.02	32.64	-9.99	22.65	40.00	17.35	100	298	Vertical
3	103.5	36.22	-14.53	21.69	43.50	21.81	100	74	Vertical
4	143.6	33.99	-10.22	23.77	43.50	19.73	100	182	Vertical
5	252.5	34.93	-10.45	24.48	46.00	21.52	100	173	Vertical
6	404.4	27.85	-6.20	21.65	46.00	24.35	100	272	Vertical

REMARKS:

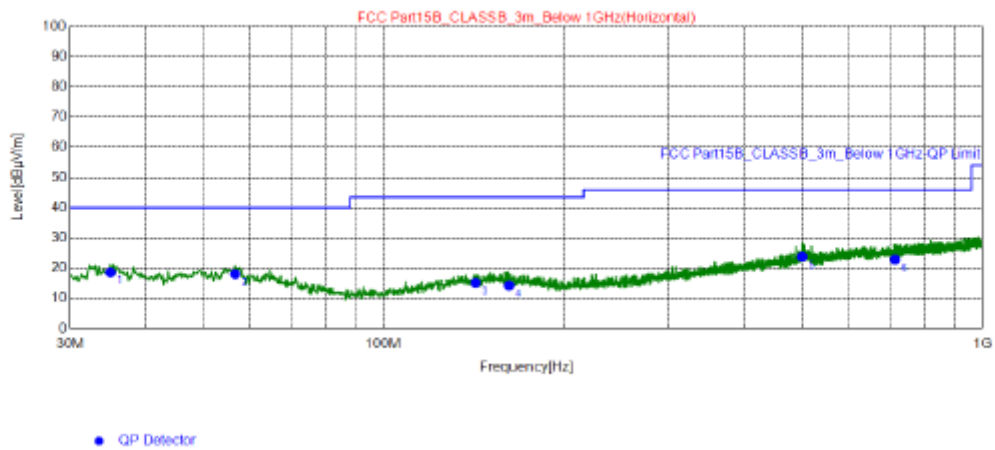
1. Q.P. is abbreviation of quasi-peak individually.
2. The emission levels of other frequencies were very low against the limit.
3. QP Margin value = QP Limit value – QP value
4. Factor = Antenna Factor + Amplifier Factor + Cable loss
5. QP value = Factor + Reading Value.

Low Gain Ant

Position: Horizontal



BUREAU
VERITAS



Final Data List

NO.	Freq. [MHz]	QP Reading [dB μV/m]	Factor [dB]	QP Value [dB μV/m]	QP Limit [dB μV/m]	QP Margin [dB]	Height [cm]	Angle [°]	Polarity
1	35.04	29.65	-11.04	18.61	40.00	21.39	200	164	Horizontal
2	56.57	28.19	-10.08	18.11	40.00	21.89	200	110	Horizontal
3	142.5	25.42	-10.25	15.17	43.50	28.33	100	86	Horizontal
4	162.1	24.17	-9.88	14.29	43.50	29.21	100	332	Horizontal
5	500.6	28.33	-4.53	23.80	46.00	22.20	100	162	Horizontal
6	715.4	24.12	-1.27	22.85	46.00	23.15	100	15	Horizontal

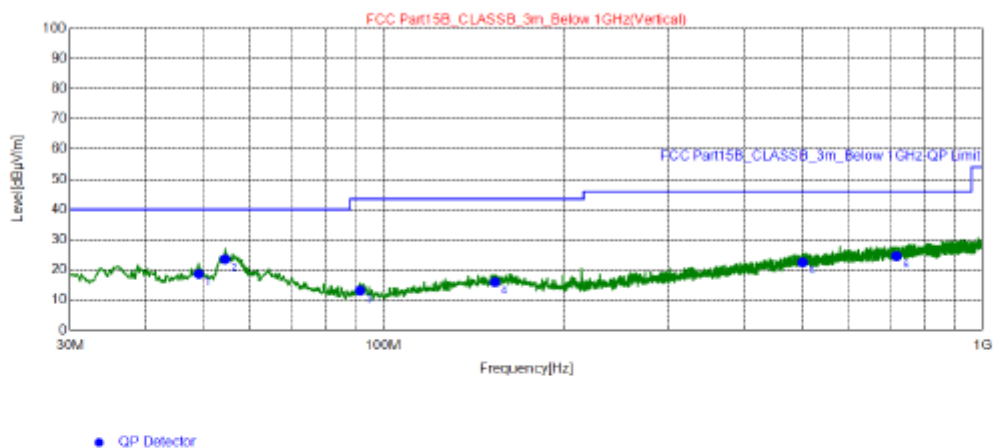
REMARKS:

1. Q.P. is abbreviation of quasi-peak individually.
2. The emission levels of other frequencies were very low against the limit.
3. QP Margin value = QP Limit value – QP value.
4. Factor = Antenna Factor + Amplifier Factor + Cable loss.
5. QP value = Factor + Reading Value.

Position: Vertical



BUREAU
VERITAS



Final Data List

NO.	Freq. [MHz]	QP Reading [dB μV/m]	Factor [dB]	QP Value [dB μV/m]	QP Limit [dB μV/m]	QP Margin [dB]	Height [cm]	Angle [°]	Polarity
1	49.20	28.39	-9.76	18.63	40.00	21.37	100	192	Vertical
2	54.44	33.51	-9.96	23.55	40.00	16.45	100	287	Vertical
3	91.49	28.92	-15.76	13.16	43.50	30.34	100	345	Vertical
4	153.5	25.85	-9.94	15.91	43.50	27.59	100	309	Vertical
5	501.6	26.97	-4.51	22.46	46.00	23.54	200	69	Vertical
6	719.2	25.84	-1.20	24.64	46.00	21.36	200	176	Vertical

REMARKS:

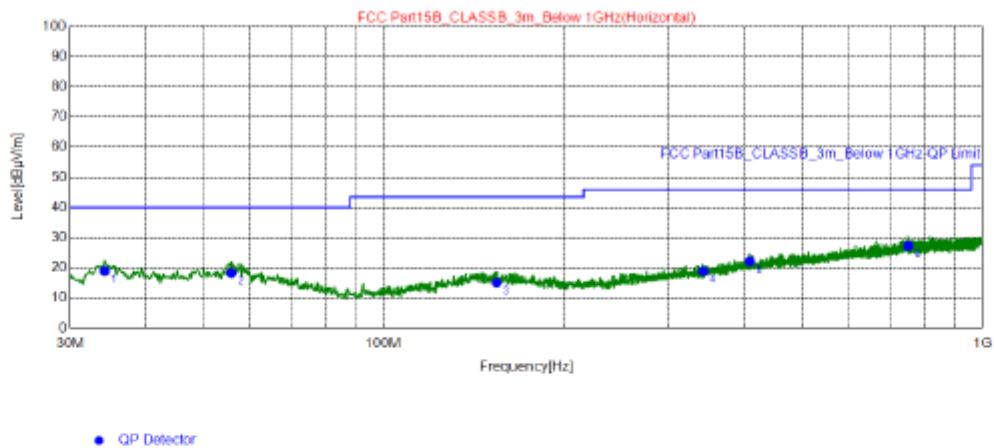
1. Q.P. is abbreviation of quasi-peak individually.
2. The emission levels of other frequencies were very low against the limit.
3. QP Margin value = QP Limit value – QP value
4. Factor = Antenna Factor + Amplifier Factor + Cable loss
5. QP value = Factor + Reading Value.

High Gain Ant

Position: Horizontal



BUREAU
VERITAS



Final Data List

NO.	Freq. [MHz]	QP Reading [dB µV/m]	Factor [dB]	QP Value [dB µV/m]	QP Limit [dB µV/m]	QP Margin [dB]	Height [cm]	Angle [°]	Polarity
1	34.26	30.06	-11.14	18.92	40.00	21.08	200	272	Horizontal
2	55.80	28.38	-10.03	18.35	40.00	21.65	200	268	Horizontal
3	154.5	25.06	-9.91	15.15	43.50	28.35	200	331	Horizontal
4	342.1	26.45	-7.57	18.88	46.00	27.12	200	240	Horizontal
5	408.8	28.21	-6.09	22.12	46.00	23.88	200	196	Horizontal
6	752.4	27.94	-0.63	27.31	46.00	18.69	100	64	Horizontal

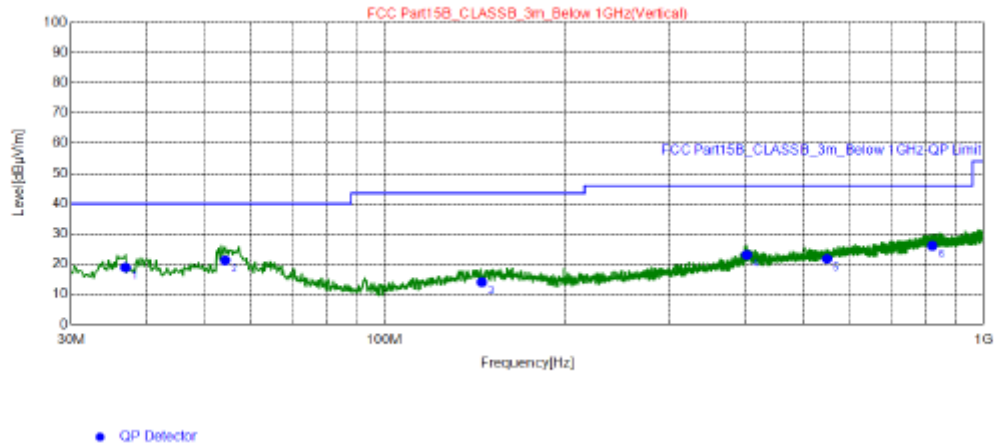
REMARKS:

1. Q.P. is abbreviation of quasi-peak individually.
2. The emission levels of other frequencies were very low against the limit.
3. QP Margin value = QP Limit value – QP value.
4. Factor = Antenna Factor + Amplifier Factor + Cable loss.
5. QP value = Factor + Reading Value.

Position: Vertical



BUREAU
VERITAS



Final Data List

NO.	Freq. [MHz]	QP Reading [dB μV/m]	Factor [dB]	QP Value [dB μV/m]	QP Limit [dB μV/m]	QP Margin [dB]	Height [cm]	Angle [°]	Polarity
1	36.98	29.67	-10.80	18.87	40.00	21.13	100	354	Vertical
2	54.25	31.28	-9.94	21.34	40.00	18.66	100	0	Vertical
3	145.4	24.25	-10.17	14.08	43.50	29.42	100	304	Vertical
4	402.8	29.31	-6.23	23.08	46.00	22.92	100	255	Vertical
5	548.3	25.52	-3.72	21.80	46.00	24.20	200	20	Vertical
6	822.2	26.05	0.02	26.07	46.00	19.93	100	259	Vertical

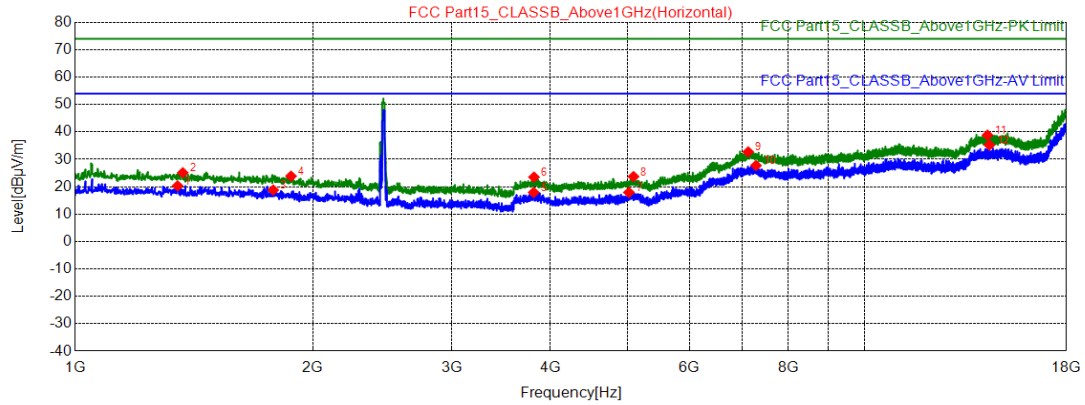
REMARKS:

1. Q.P. is abbreviation of quasi-peak individually.
2. The emission levels of other frequencies were very low against the limit.
3. QP Margin value = QP Limit value – QP value
4. Factor = Antenna Factor + Amplifier Factor + Cable loss
5. QP value = Factor + Reading Value.

5.6 Test Result and Data (1GHz ~ 18GHz)

Low Gain Ant

Position: Horizontal



★ AV Detector

NO.	Freq. [MHz]	Reading [dBμV/m]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Height [cm]	Angle [°]	Polarity	Detector
1	1348.5000	39.67	20.31	54.00	33.69	200	301	Horizontal	AV
2	1368.9000	44.40	25.10	74.00	48.90	200	52	Horizontal	PK
3	1782.0000	36.71	18.79	54.00	35.21	100	296	Horizontal	AV
4	1877.2000	41.48	23.85	74.00	50.15	100	192	Horizontal	PK
5	3808.4000	29.78	17.91	54.00	36.09	200	104	Horizontal	AV
6	3811.8000	35.35	23.49	74.00	50.51	100	275	Horizontal	PK
7	5027.3000	28.65	17.92	54.00	36.08	100	68	Horizontal	AV
8	5095.3000	34.20	23.70	74.00	50.30	100	37	Horizontal	PK
9	7118.3000	33.06	32.70	74.00	41.30	100	285	Horizontal	PK
10	7283.2000	28.51	27.73	54.00	26.27	200	333	Horizontal	AV
11	14304.200	35.75	38.83	74.00	35.17	100	275	Horizontal	PK
12	14382.400	32.07	35.21	54.00	18.79	100	358	Horizontal	AV

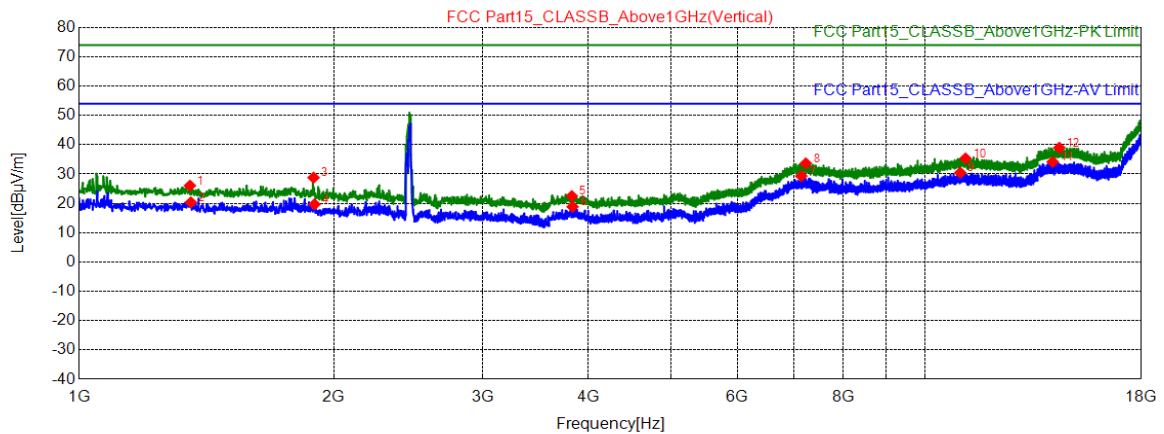
REMARKS:

1. The emission levels of other frequencies were very low against the limit.
2. Margin = Limit – Level



BUREAU
VERITAS

Position: Vertical



★ AV Detector

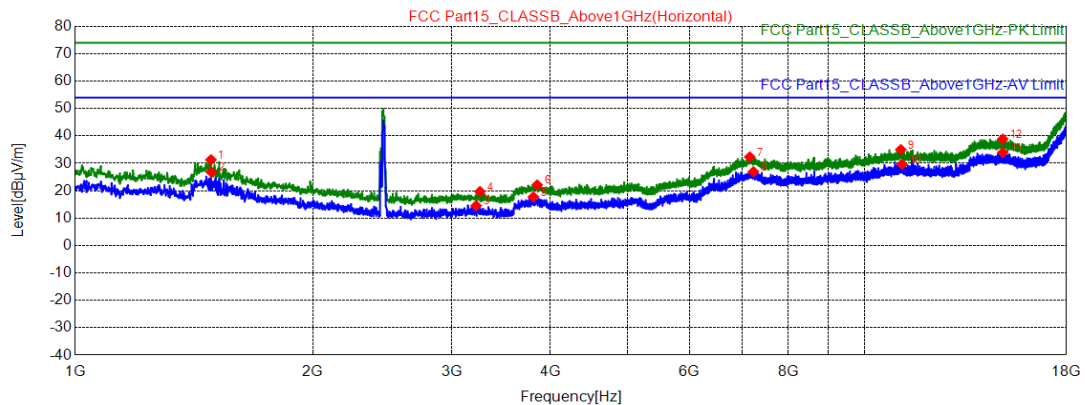
NO.	Freq. [MHz]	Reading [dBμV/m]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Height [cm]	Angle [°]	Polarity	Detector
1	1351.9000	45.38	26.03	74.00	47.97	100	197	Vertical	PK
2	1355.3000	39.69	20.35	54.00	33.65	100	197	Vertical	AV
3	1892.5000	46.36	28.78	74.00	45.22	100	176	Vertical	PK
4	1897.6000	37.25	19.68	54.00	34.32	100	176	Vertical	AV
5	3822.0000	34.33	22.49	74.00	51.51	100	51	Vertical	PK
6	3830.5000	30.64	18.82	54.00	35.18	200	276	Vertical	AV
7	7137.0000	29.72	29.32	54.00	24.68	100	343	Vertical	AV
8	7225.4000	34.28	33.65	74.00	40.35	100	124	Vertical	PK
9	11001.100	30.03	30.45	54.00	23.55	100	155	Vertical	AV
10	11159.200	34.82	35.31	74.00	38.69	200	224	Vertical	PK
11	14146.100	31.18	34.15	54.00	19.85	100	124	Vertical	AV
12	14404.500	35.81	38.96	74.00	35.04	100	82	Vertical	PK

REMARKS:

1. The emission levels of other frequencies were very low against the limit.
2. Margin = Limit –Level

High Gain Ant

Position: Horizontal



★ AV Detector

NO.	Freq. [MHz]	Reading [dBμV/m]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Height [cm]	Angle [°]	Polarity	Detector
1	1486.2000	50.20	31.30	74.00	42.70	200	178	Horizontal	PK
2	1487.9000	45.71	26.81	54.00	27.19	200	189	Horizontal	AV
3	3220.2000	27.77	14.55	54.00	39.45	200	220	Horizontal	AV
4	3255.9000	32.87	19.73	74.00	54.27	200	13	Horizontal	PK
5	3805.0000	29.59	17.72	54.00	36.28	200	13	Horizontal	AV
6	3847.5000	33.89	22.11	74.00	51.89	100	163	Horizontal	PK
7	7150.6000	32.78	32.34	74.00	41.66	200	44	Horizontal	PK
8	7227.1000	27.56	26.93	54.00	27.07	100	91	Horizontal	AV
9	11111.600	34.53	35.00	74.00	39.00	200	127	Horizontal	PK
10	11154.100	29.12	29.61	54.00	24.39	200	178	Horizontal	AV
11	14953.600	30.54	33.93	54.00	20.07	200	2	Horizontal	AV
12	14953.600	35.46	38.85	74.00	35.15	200	220	Horizontal	PK

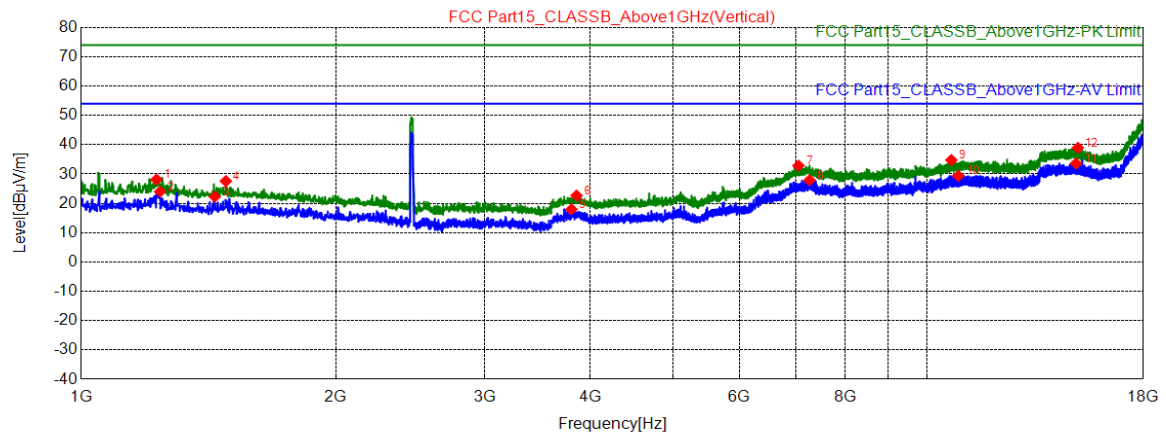
REMARKS:

1. The emission levels of other frequencies were very low against the limit.
2. Margin = Limit – Level



BUREAU
VERITAS

Position: Vertical



NO.	Freq. [MHz]	Reading [dBμV/m]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Height [cm]	Angle [°]	Polarity	Detector
1	1227.8000	47.88	28.13	74.00	45.87	100	333	Vertical	PK
2	1239.7000	43.73	24.02	54.00	29.98	100	343	Vertical	AV
3	1438.6000	41.37	22.31	54.00	31.69	200	59	Vertical	AV
4	1482.8000	46.51	27.60	74.00	46.40	200	17	Vertical	PK
5	3798.2000	29.83	17.94	54.00	36.06	100	136	Vertical	AV
6	3850.9000	34.44	22.67	74.00	51.33	200	142	Vertical	PK
7	7045.2000	33.03	32.86	74.00	41.14	200	329	Vertical	PK
8	7259.4000	28.62	27.90	54.00	26.10	200	287	Vertical	AV
9	10678.100	34.95	34.77	74.00	39.23	200	163	Vertical	PK
10	10883.800	29.17	29.38	54.00	24.62	200	89	Vertical	AV
11	14992.700	30.18	33.59	54.00	20.41	200	235	Vertical	AV
12	15069.200	35.59	38.95	74.00	35.05	200	266	Vertical	PK

REMARKS:

1. The emission levels of other frequencies were very low against the limit.
2. Margin = Limit – Level

5.7 Test Photographs (30MHz ~ 1000MHz)

Please refer to the attached file (Test Setup Photo).

5.8 Test Photographs (1000MHz ~ 18000MHz)

Please refer to the attached file (Test Setup Photo).

--- END ---