REPORT No.: SZ20100058W01

TEST REPORT

APPLICANT	:	Golden Mark (HK) Limited
PRODUCT NAME	:	Plug-In Dimmer
MODEL NAME	:	PD700
BRAND NAME	:	N/A
FCC ID	:	2AMY9PD700
STANDARD(S)	:	47 CFR Part 15 Subpart C
RECEIPT DATE	:	2020-11-05
TEST DATE	:	2020-11-17 to 2020-11-26
ISSUE DATE	:	2020-12-18

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Change History		
Version	Date	Reason for change
1.0	2020-12-18	First edition

1. Technical Information

Note: Provide by applicant.

1.1. Applicant and Manufacturer Information

Applicant:	Golden Mark (HK) Limited
Applicant Address:	6/F, Kimberley Plaza, 45-47 Kimberley Road, Tsim Sha Tsui, Kowloon, Hong Kong
Manufacturer:	Golden Mark (HK) Limited
Manufacturer Address:	6/F, Kimberley Plaza, 45-47 Kimberley Road, Tsim Sha Tsui, Kowloon, Hong Kong

1.2. Equipment Under Test (EUT) Description

Product Name:	Plug-In Dimmer
Serial No:	(N/A, marked #1 by test site)
Hardware Version:	N/A
Software Version:	N/A
Equipment Type:	Z-Wave
Operating Frequency Range:	908.4MHz, 916.0MHz
Channel Number:	2
Antenna Type:	Through-hole Antenna
Antenna Gain:	0dBi

Note 1: For a more detailed description, please refer to Specification or User's Manual supplied by the applicant and/or manufacturer.

1.3. The Channel Number and Frequency

Channel	Frequency (MHz)
1	908.4
2	916.0

1.4. Test Standards and Results

The objective of the report is to perform testing according to 47 CFR Part 15 Subpart C for the EUT FCC ID Certification:

No.	Identity	Document Title
1	47 CFR Part 15	Radio Frequency Devices

Test detailed items/section required by FCC rules and results are as below:

No.	Section	Description	Test Date	Test Engineer	Result	Method determination /Remark
1	15.203	Antenna Requirement	N/A	N/A	PASS	No deviation
2	15.215	Bandwidth	Nov 26, 2020	Tu Yanan	PASS	No deviation
3	15.207	Conducted Emission	Nov 18, 2020	Huang Zhiye	PASS	No deviation
4	15.249	Field strength	Nov 17, 2020	Yang Jie	PASS	No deviation
5	15.209, 15.249	Radiated Emission and field strength of harmonics	Nov 17, 2020	Yang Jie	PASS	No deviation

Note 1: The tests were performed according to the method of measurements prescribed in ANSIC63.10-2013.

Note 2: Additions to, deviation, or exclusions from the method shall be judged in the "method determination" column of add, deviate or exclude from the specific method shall be explained in the "Remark" of the above table.

Note 3: When the test result is a critical value, we will use the measurement uncertainty give the judgment result based on the 95% risk level.

1.5. Environmental Conditions

During the measurement, the environmental conditions were within the listed ranges:

Temperature (°C):	15-35
Relative Humidity (%):	30-60
Atmospheric Pressure (kPa):	86-106

2. 47 CFR Part 15C Requirements

2.1. Antenna Requirement

2.1.1. Applicable Standard

According to FCC 15.203, 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 shall be considered sufficient to comply with the provisions of this section.

2.1.2. Result: Compliant

The EUT has a permanently and irreplaceable attached antenna. Please refer to the EUT internal photos.

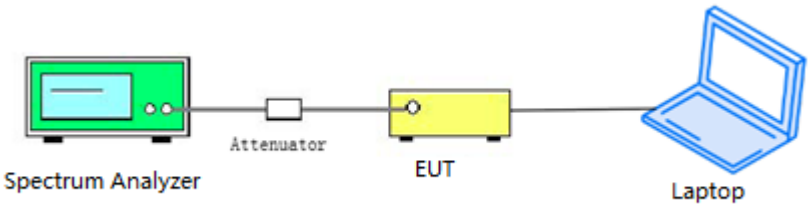
2.2. Bandwidth

2.2.1.Requirement

Refer to FCC 15.215

2.2.2.Test Description

Test Setup:



The EUT is coupled to the Spectrum Analyzer; the RF load attached to the EUT antenna terminal is 50Ohm; the path loss as the factor is calibrated to correct the reading.

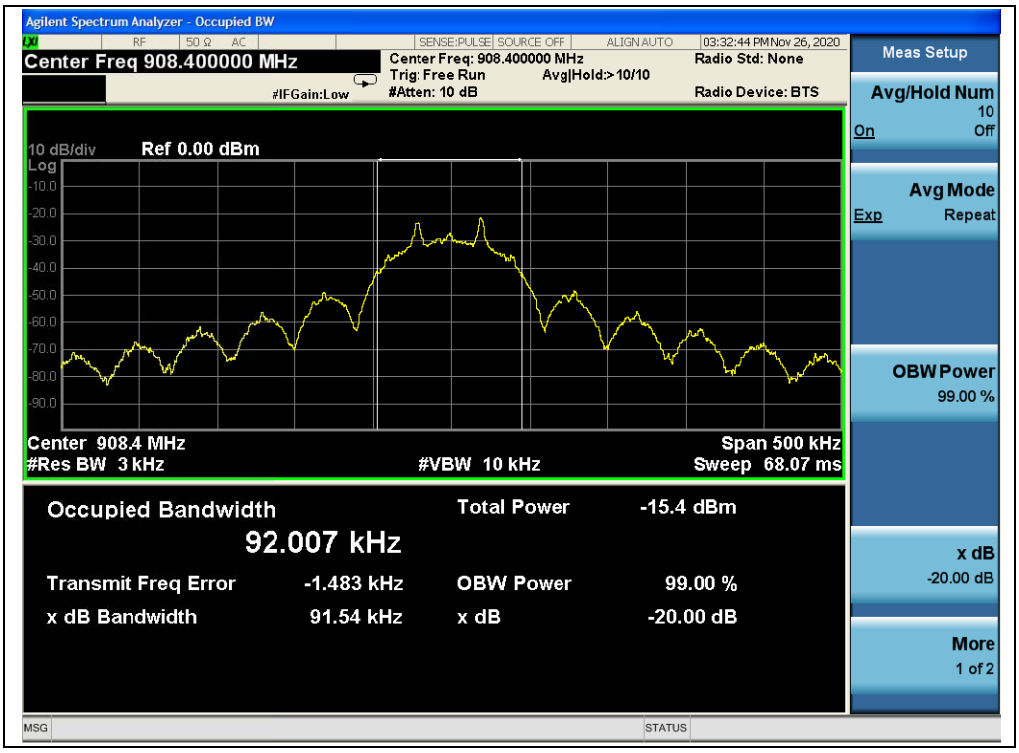
Make the measurement with the spectrum analyzer's resolution bandwidth (RBW) = 10 kHz. In order to make an accurate measurement, set the span greater than RBW.

2.2.3.Test Result

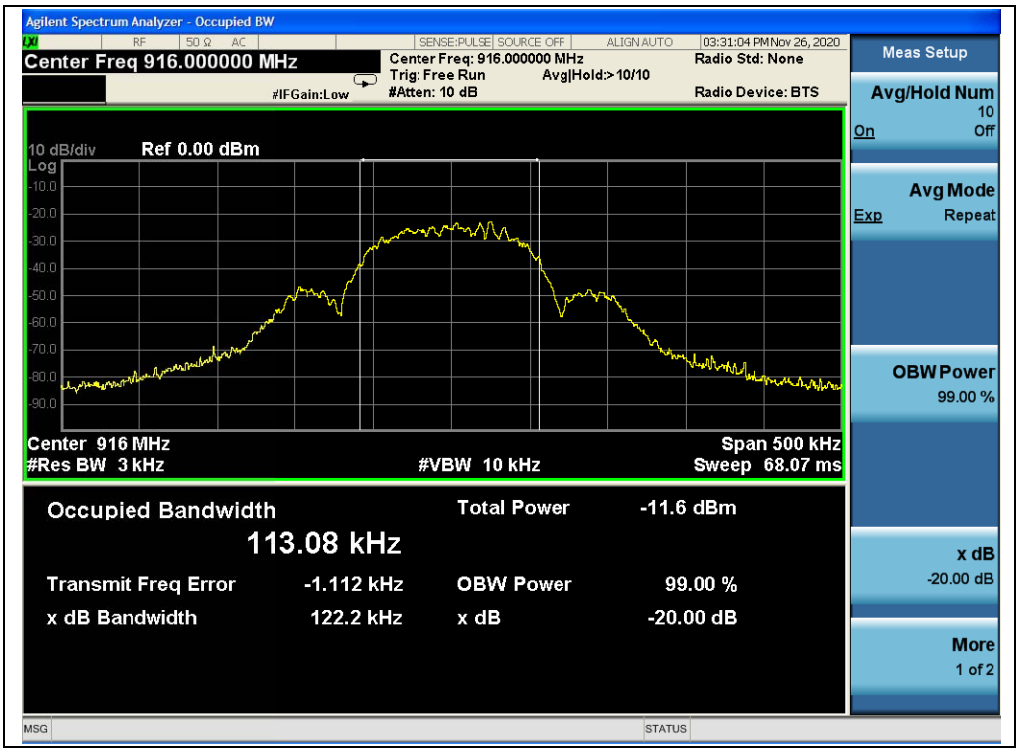
A.Test Verdict:

Channel	Frequency (MHz)	20 dB Bandwidth (kHz)	Result
1	908.4	91.54	PASS
2	916.0	122.2	PASS

B.Test Plot:



(Channel 1, 908.4MHz)



(Channel 2, 916.0MHz)

2.3. Conducted Emission

2.3.1.Requirement

According to FCC section 15.207, for an intentional radiator that is designed to be connected to the public utility (AC) power line, the radio frequency voltage that is conducted back onto the AC power line on any frequency within the band 150kHz to 30MHz shall not exceed the limits in the following table, as measured using a 50μH/50Ω line impedance stabilization network (LISN).

Frequency range (MHz)	Conducted Limit (dBμV)	
	Quai-peak	Average
0.15 - 0.50	66 to 56	56 to 46
0.50 - 5	56	46
5 - 30	60	50

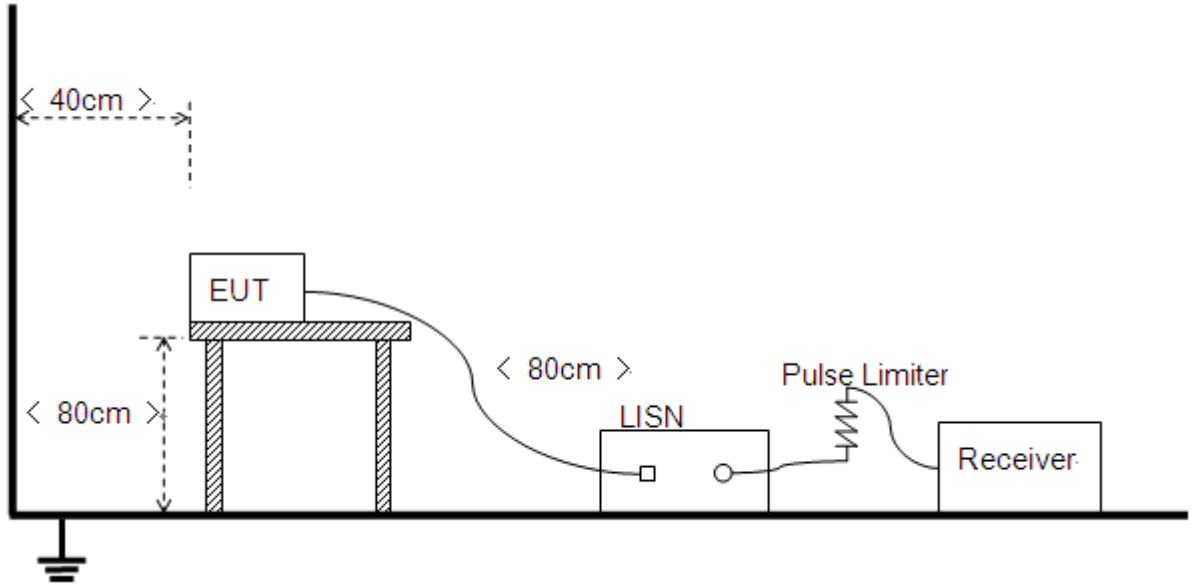
NOTE:

(a) The lower limit shall apply at the band edges.

(b) The limit decreases linearly with the logarithm of the frequency in the range 0.15 - 0.50MHz.

2.3.2.Test Description

Test Setup:



The Table-top EUT was placed upon a non-metallic table 0.8m above the horizontal metal reference ground plane. EUT was connected to LISN and LISN was connected to reference Ground Plane. EUT was 80cm from LISN. The set-up and test methods were according to ANSI C63.10: 2013.

2.3.1.Test Result

The maximum conducted interference is searched using Peak (PK), if the emission levels more than the AV and QP limits, and that have narrow margins from the AV and QP limits will be re-measured with AV and QP detectors. Tests for both L phase and N phase lines of the power mains connected to the EUT are performed. Refer to recorded points and plots below.

Note: Both of the test voltage AC 120V/60Hz and AC 230V/50Hz were considered and tested respectively, only the results of the worst case AC 120V/60Hz were recorded in this report.

A.Test Setup:

Test Mode: EUT+908MHz /916MHz TX

Test voltage: AC 120V/60Hz

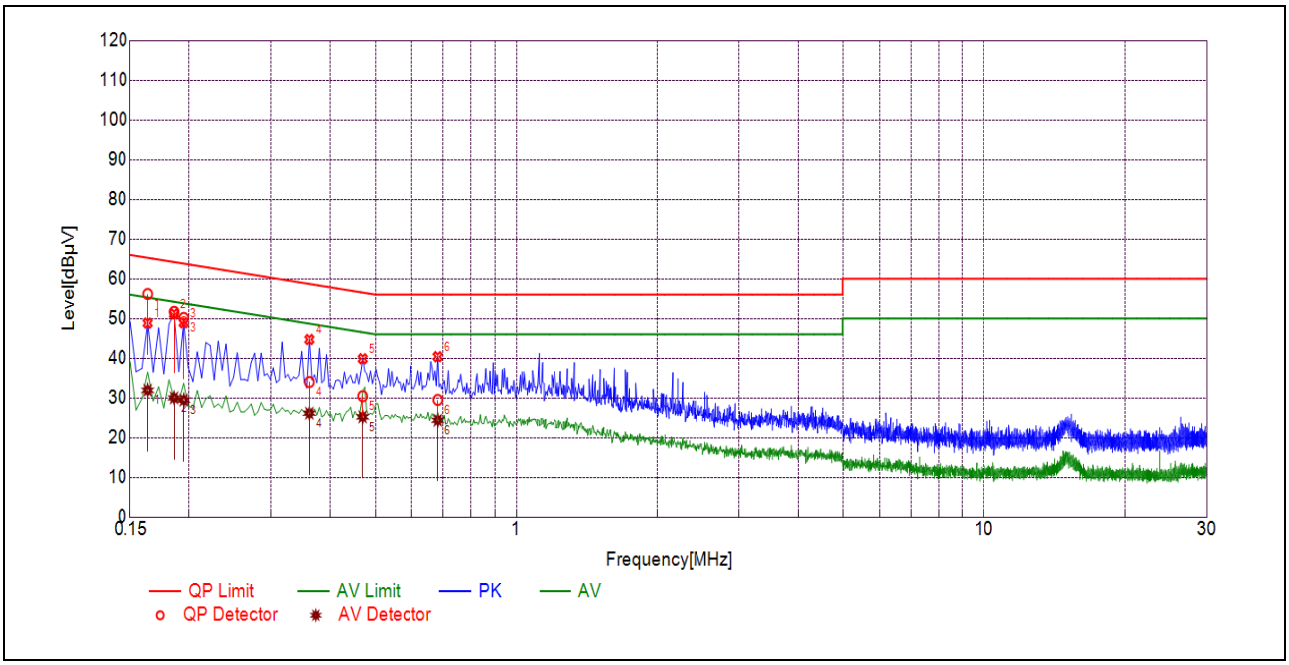
The measurement results are obtained as below:

$E\ [dB\mu V] = U_R + L_{Cable\ loss}\ [dB] + A_{Factor}$

U_R: Receiver Reading

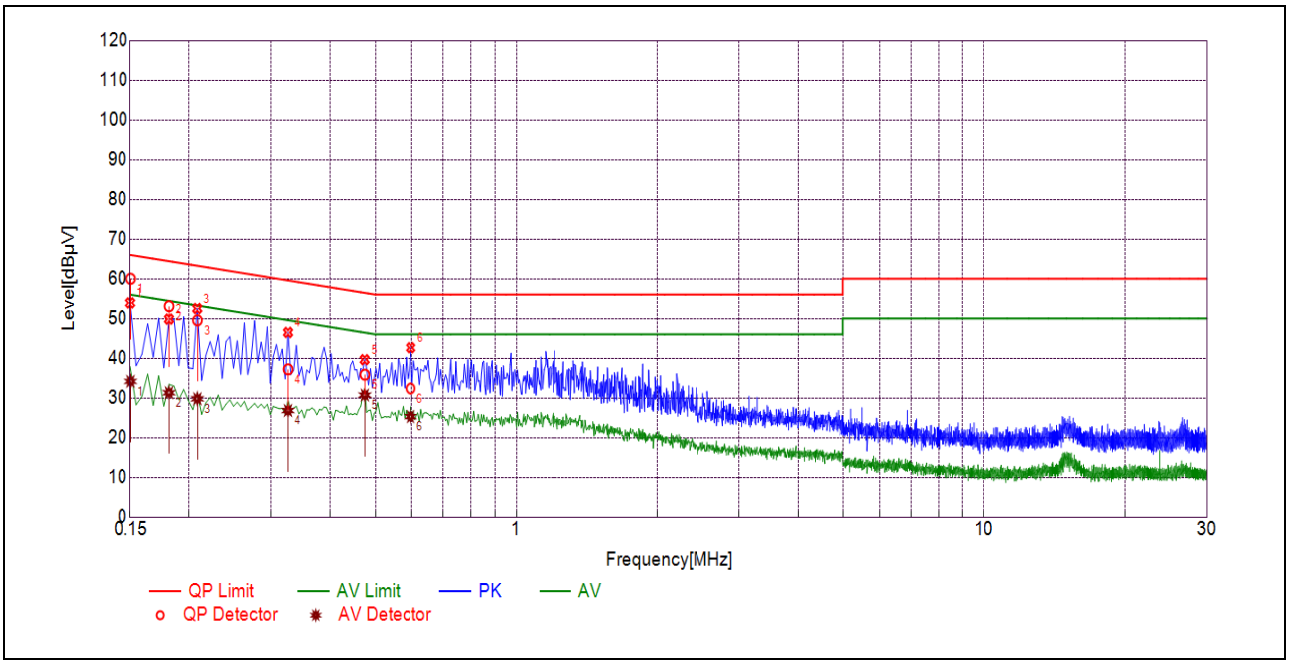
A_{Factor}: Voltage division factor of LISN

B.Test Plot:



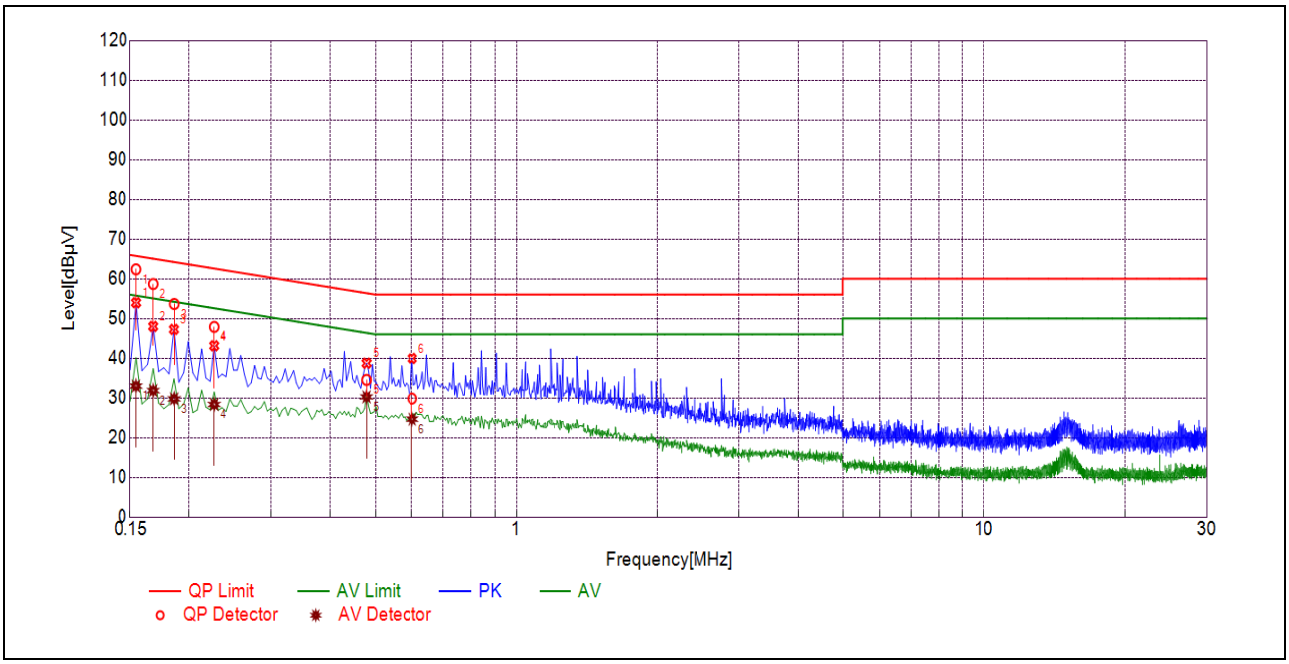
(908.4MHz, L Phase)

No.	Fre. (MHz)	Emission Level (dBµV)		Limit (dBµV)		Power-line	Verdict
		Quai-peak	Average	Quai-peak	Average		
1	0.1635	56.17	31.91	65.28	55.28	Line	PASS
2	0.1861	51.69	30.00	64.21	54.21		PASS
3	0.1951	50.14	29.45	63.82	53.82		PASS
4	0.3614	33.99	26.14	58.70	48.70		PASS
5	0.4692	30.44	25.22	56.53	46.53		PASS
6	0.6814	29.50	24.37	56.00	46.00		PASS



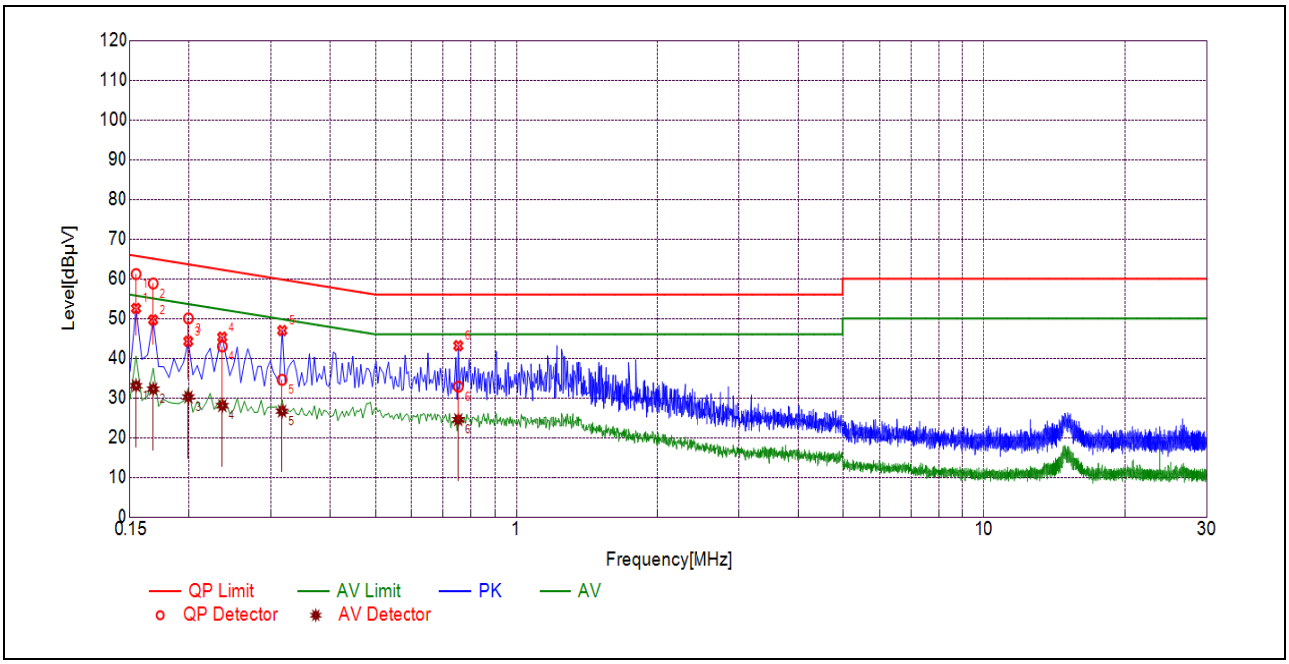
(908.4MHz, N Phase)

No.	Fre. (MHz)	Emission Level (dBµV)		Limit (dBµV)		Power-line	Verdict
		Quai-peak	Average	Quai-peak	Average		
1	0.1503	60.00	34.17	65.98	55.98	Neutral	PASS
2	0.1815	53.09	31.30	64.41	54.41		PASS
3	0.2086	49.55	29.79	63.26	53.26		PASS
4	0.3255	37.19	26.82	59.56	49.56		PASS
5	0.4744	35.85	30.72	56.44	46.44		PASS
6	0.5949	32.37	25.29	56.00	46.00		PASS



(916.0MHz, L Phase)

No.	Fre. (MHz)	Emission Level (dBµV)		Limit (dBµV)		Power-line	Verdict
		Quai-peak	Average	Quai-peak	Average		
1	0.1544	62.39	32.98	65.76	55.76	Line	PASS
2	0.1680	58.68	31.84	65.06	55.06		PASS
3	0.1862	53.66	29.76	64.21	54.21		PASS
4	0.2265	47.88	28.35	62.58	52.58		PASS
5	0.4782	34.54	30.25	56.37	46.37		PASS
6	0.5999	29.82	24.65	56.00	46.00		PASS



(916.0MHz, N Phase)

No.	Fre. (MHz)	Emission Level (dBµV)		Limit (dBµV)		Power-line	Verdict
		Quai-peak	Average	Quai-peak	Average		
1	0.1545	61.19	33.07	65.75	55.75	Neutral	PASS
2	0.1680	58.81	32.22	65.06	55.06		PASS
3	0.1996	50.02	30.24	63.63	53.63		PASS
4	0.2357	42.98	28.05	62.25	52.25		PASS
5	0.3162	34.57	26.67	59.81	49.81		PASS
6	0.7531	32.84	24.53	56.00	46.00		PASS

2.4. Field Strength of Fundamental

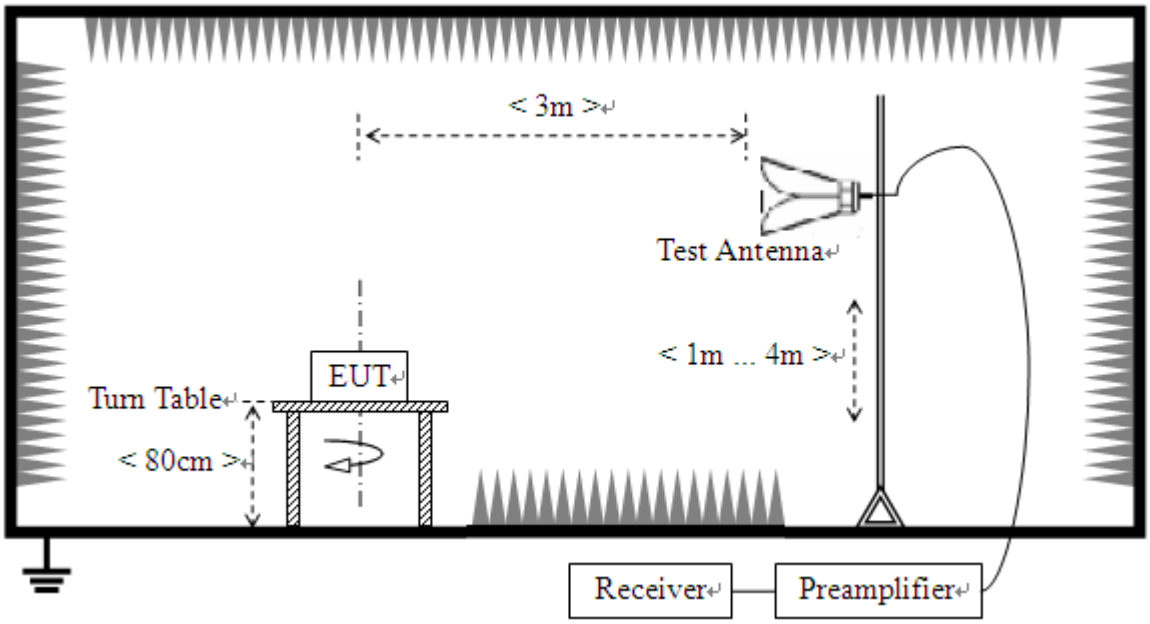
2.4.1.Requirement

According to FCC section 15.249(a), except as provided in paragraph (b) of this section, the field strength of emissions from intentional radiators operated within these frequency bands shall comply with the following:

Fundamental frequency	Field strength of fundamental (millivolts/meter)	Field strength of harmonics (microvolts/meter)
902-928 MHz	50	500
2400-2483.5 MHz	50	500
5725-5875 MHz	50	500
24.0-24.25 GHz	250	2500

2.4.2.Test Description

Test Setup:



The EUT is located in a 3m Semi-Anechoic Chamber; the antenna factors, cable loss and so on of the site as factors are calculated to correct the reading.

For the Test Antenna:

Test Antenna is 3m away from the EUT. Test Antenna height is varied from 1m to 4m above the ground to determine the maximum value of the field strength.

2.4.3.Test Procedure

Use the following spectrum analyzer settings:
Span = wide enough to fully capture the emission being measured
RBW = 120 kHz
VBW ≥ RBW
Sweep = auto
Detector function = peak
Trace = max hold

2.4.4.Test Result

The measurement results are obtained as below:
E [dBμV/m] =U_R + A_T + A_{Factor} [dB]; A_T =$L_{Cable\ loss}$ [dB]-G_{preamp} [dB]
A_T: Total correction Factor except Antenna
U_R: Receiver Reading
G_{preamp}: Preamplifier Gain
A_{Factor}: Antenna Factor at 3m
During the test, the total correction Factor AT and A_{Factor} were built in test software.
Note: All radiated emission tests were performed in X, Y, Z axis direction. And only the worst axis test condition was recorded in this test report

A.Test Verdict:

Frequency (MHz)	Detector	ANT	Receiver Reading U_R (dBuV)	A_T (dB)	A_{Factor} (dB@3m)	Max. Emission E (dBμV/m)	AV Limit (dBμV/m)	Verdict
908.4	QP	H	96.83	-34.00	22.20	85.03	93.97	PASS
	QP	V	94.79	-34.00	22.20	82.99	93.97	PASS
916.0	QP	H	97.07	-34.00	22.20	85.27	93.97	PASS
	QP	V	94.82	-34.00	22.20	83.02	93.97	PASS

2.5. Radiated Emission and Field Strength of Harmonics

2.5.1.Requirement

According to section 15.249(a), the field strength of emissions from intentional radiators operated within these frequency bands shall comply with the following:

Fundamental frequency	Field strength of fundamental (millivolts/meter)	Field strength of harmonics (microvolts/meter)
902-928 MHz	50	500
2400-2483.5 MHz	50	500
5725-5875 MHz	50	500
24.0-24.25 GHz	250	2500

According to section 15.249(d), Emission Radiated outside of the specified frequency bands, except for harmonics, shall be attenuated by at least 50dB below the level of the fundamental or to the general radiated emission limits in Section 15.209:

Frequency (MHz)	Field Strength (μV/m)	Measurement Distance (m)	Field Strength Limitation at 3m Measurement Distance	
			(uV/m)	(dBuV/m)
0.009 - 0.490	2400/F(kHz)	300	10000* 2400/F(KHz)	20log 2400/F(KHz) + 80
0.490 - 1.705	24000/F(kHz)	30	100* 2400/F(KHz)	20log 2400/F(KHz) + 40
1.705 - 30.0	30	30	100*30	20log 30 + 40
30 - 88	100	3	100	20log 100
88 - 216	150	3	150	20log 150
216 - 960	200	3	200	20log 200
Above 960	500	3	500	20log 500

According to section 15.249(e), for frequencies above 1000MHz, the above field strength limits are based on average limits. The peak field strength of any emission shall not exceed the maximum permitted average limits specified above by more than 20dB under any condition of modulation.

Note:

1) The tighter limit shall apply at the boundary between two frequency range.

2) Limitation expressed in dBuV/m is calculated by 20log Emission Level(uV/m).

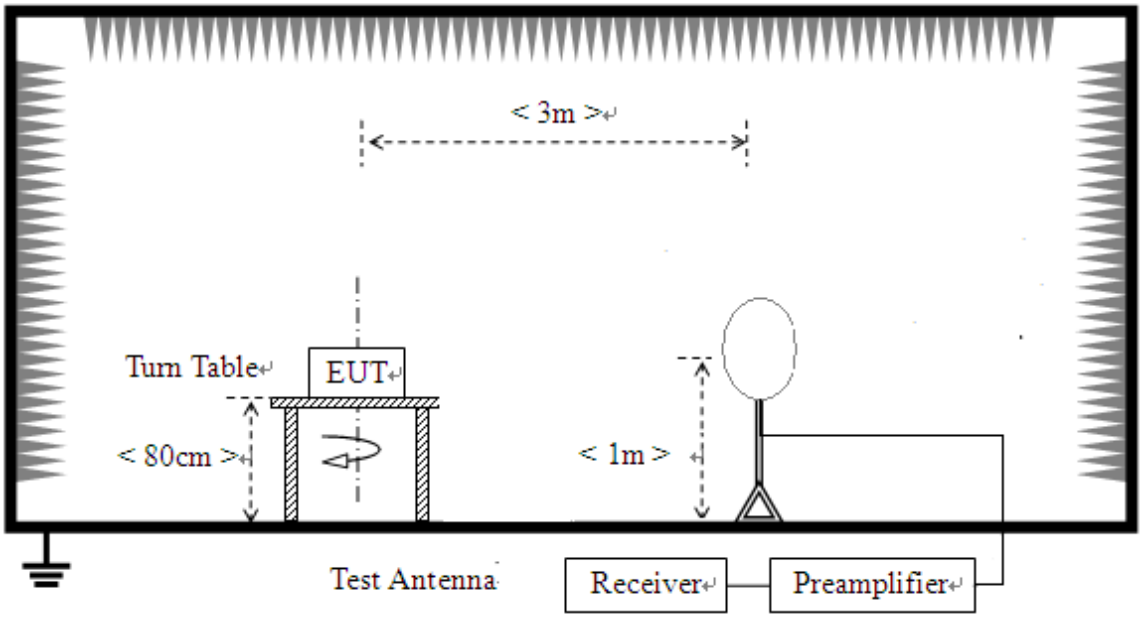
3) If measurement is made at 3m distance, then F.S Limitation at 3m distance is adjusted by using the formula of $Ld1 = Ld2 * (d2/d1)^2$.

Example: F.S Limit at 30m distance is 30uV/m, then F.S Limitation at 3m distance is adjusted as $Ld1 = L1 = 30uV/m * (10)^2 = 100 * 30uV/m$

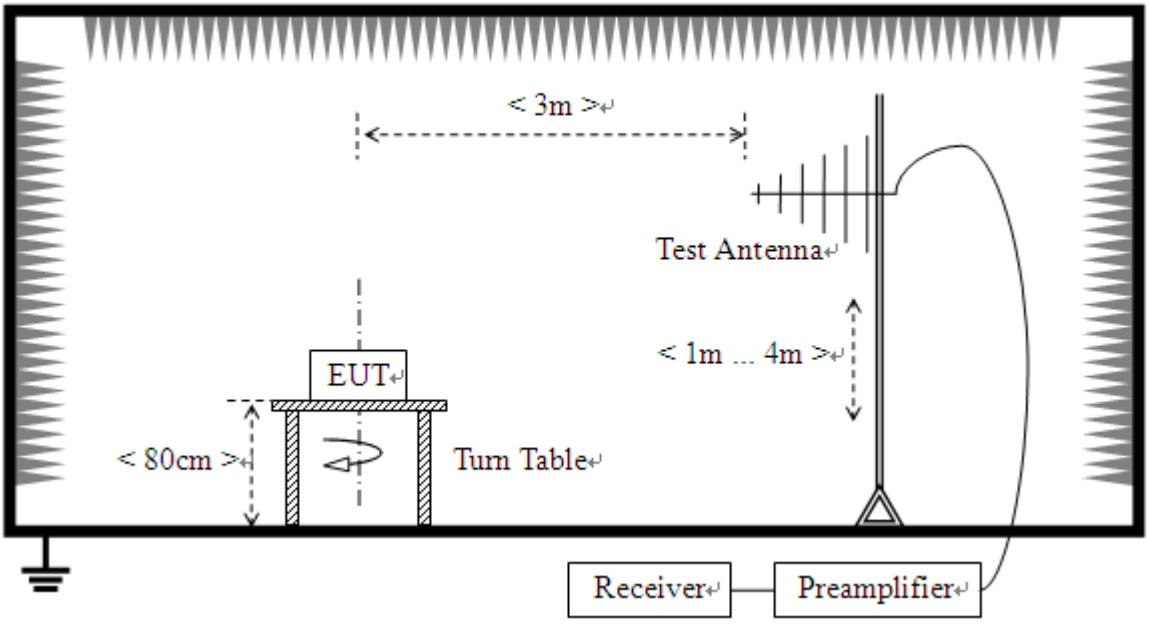
2.5.2.Test Description

A.Test Setup:

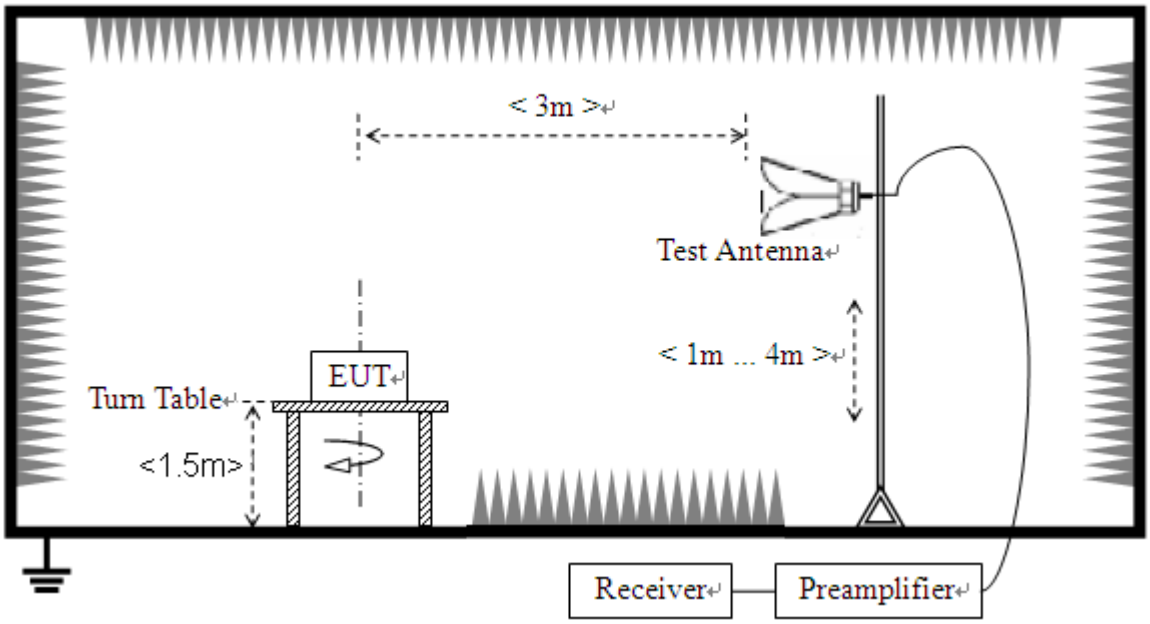
1) For radiated emissions from 9kHz to 30MHz



2) For radiated emissions from 30MHz to1GHz



3) For radiated emissions above 1GHz



The RF absorbing material used on the reference ground plane and on the turntable have a maximum height (thickness) of 30 cm (12 in) and have a minimum-rated attenuation of 20 dB at all frequencies from 1 GHz to 18 GHz. Test site have a minimum area of the ground plane covered with RF absorbing material as specified in Figure 6 of ANSI C63.4: 2014.

The test site semi-anechoic chamber has met the requirement of NSA tolerance 4dB according to the standards: ANSI C63.10:2013. For radiated emissions below or equal to 1GHz, The EUT was set-up on insulator 80cm above the Ground Plane, for radiated emissions above 1GHz, The EUT was set-up on insulator 150cm above the Ground Plane. The set-up and test methods were according to ANSI C63.10:2013.

The EUT is located in a 3m Semi-Anechoic Chamber; the antenna factors, cable loss and so on of the site as factors are calculated to correct the reading.

For the Test Antenna:

(a) In the frequency range of 9 kHz to 30MHz, magnetic field is measured with Loop Test Antenna. The Test Antenna is positioned with its plane vertical at 1m distance from the EUT. The center of the Loop Test Antenna is 1m above the ground. During the measurement the Loop Test Antenna rotates about its vertical axis for maximum response at each azimuth about the EUT.
(b) In the frequency range above 30MHz, Bi-Log Test Antenna (30MHz to 1GHz) and Horn Test Antenna (above 1GHz) are used. Place the test antenna at 3m away from area of the EUT, while keeping the test antenna aimed at the source of emissions at each frequency of significant

emissions, with polarization oriented for maximum response. The test antenna may have to be higher or lower than the EUT, depending on the radiation pattern of the emission and staying aimed at the emission source for receiving the maximum signal. The final test antenna elevation shall be that which maximizes the emissions. The test antenna elevation for maximum emissions shall be restricted to a range of heights of from 1 m to 4 m above the ground or reference ground plane. The emission levels at both horizontal and vertical polarizations should be tested.

2.5.3.Test Result

According to ANSI C63.10, because of peak detection will yield amplitudes equal to or greater than amplitudes measured with the quasi-peak (or average) detector, the measurement data from a spectrum analyzer peak detector will represent the worst-case results, if the peak measured value complies with the quasi-peak limit, it is unnecessary to perform an quasi-peak measurement.

The measurement results are obtained as below:

$E\ [dB\mu V/m] = U_R + A_T + A_{Factor}\ [dB]$; $A_T = L_{Cable\ loss}\ [dB] - G_{preamp}\ [dB]$

A_T: Total correction Factor except Antenna

U_R: Receiver Reading

G_{preamp}: Preamplifier Gain

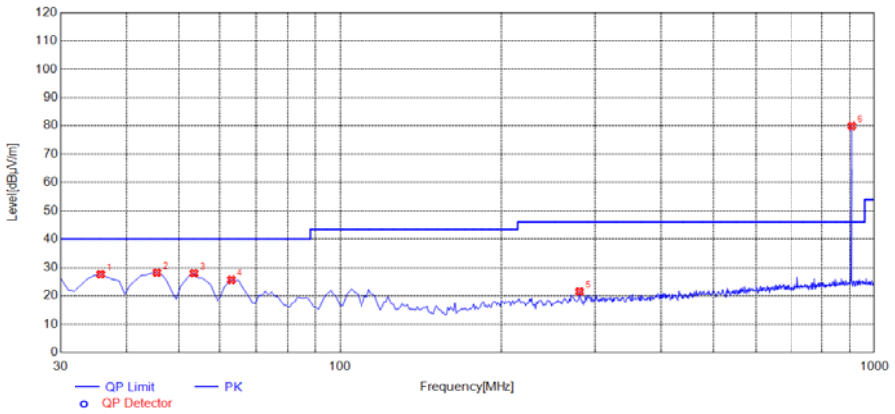
A_{Factor}: Antenna Factor at 3m

During the test, the total correction Factor A_T and A_{Factor} were built in test software.

Note 1: All radiated emission tests were performed in X, Y, Z axis direction. And only the worst axis test condition was recorded in this test report.

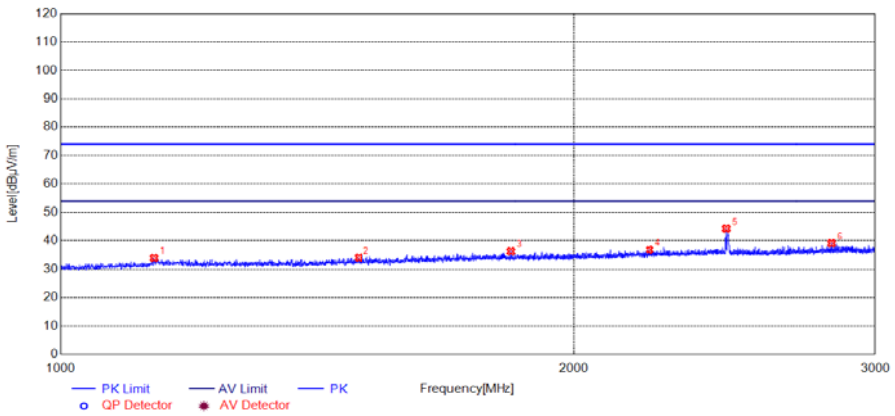
Note 2: The low frequency, which started from 9kHz to 30MHz, was pre-scanned and the result which was 20dB lower than the limit line per 15.31(o) was not reported.

Plot for 908.4MHz



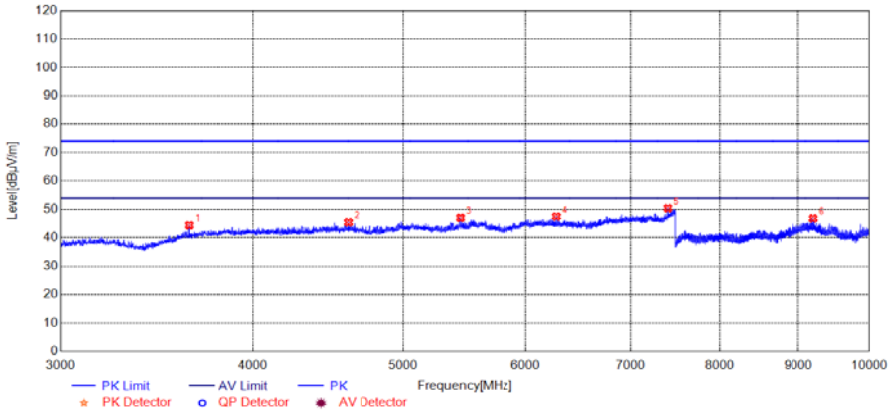
Fre. (MHz)	PK (dBµV/m)	QP (dBµV/m)	AV (dBµV/m)	Limit-PK (dBµV/m)	Limit-QP (dBµV/m)	Limit-AV (dBµV/m)	Antenna	Verdict
35.8258	27.60	N/A	N/A	N/A	40.00	N/A	Horizontal	PASS
45.5355	28.19	N/A	N/A	N/A	40.00	N/A	Horizontal	PASS
53.3033	27.97	N/A	N/A	N/A	40.00	N/A	Horizontal	PASS
63.0130	25.68	N/A	N/A	N/A	40.00	N/A	Horizontal	PASS
280.5105	21.50	N/A	N/A	N/A	46.00	N/A	Horizontal	PASS
908.7287	79.96	N/A	N/A	N/A	46.00	N/A	Horizontal	N/A

(Antenna Horizontal, 30MHz to 1GHz)



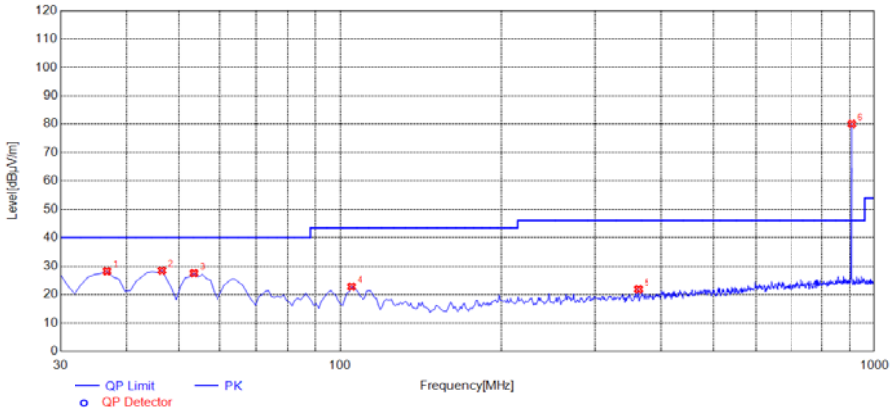
Fre. (MHz)	PK (dBµV/m)	QP (dBµV/m)	AV (dBµV/m)	Limit-PK (dBµV/m)	Limit-QP (dBµV/m)	Limit-AV (dBµV/m)	Antenna	Verdict
1135.2270	33.94	N/A	N/A	74.00	N/A	54.00	Horizontal	PASS
1494.4989	34.05	N/A	N/A	74.00	N/A	54.00	Horizontal	PASS
1839.3679	36.32	N/A	N/A	74.00	N/A	54.00	Horizontal	PASS
2213.8428	36.86	N/A	N/A	74.00	N/A	54.00	Horizontal	PASS
2455.4911	44.31	N/A	N/A	74.00	N/A	54.00	Horizontal	PASS
2829.9660	39.13	N/A	N/A	74.00	N/A	54.00	Horizontal	PASS

(Antenna Horizontal, 1GHz to 3GHz)



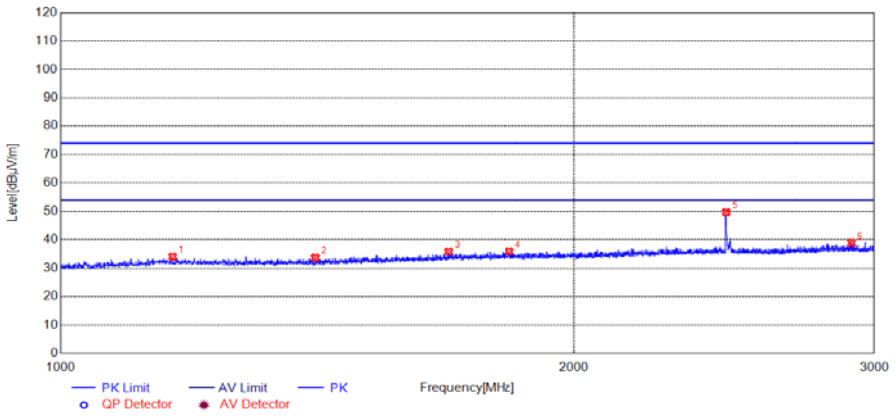
Fre. (MHz)	PK (dBµV/m)	QP (dBµV/m)	AV (dBµV/m)	Limit-PK (dBµV/m)	Limit-QP (dBµV/m)	Limit-AV (dBµV/m)	Antenna	Verdict
3633.7267	44.46	N/A	N/A	74.00	N/A	54.00	Horizontal	PASS
4601.4203	45.45	N/A	N/A	74.00	N/A	54.00	Horizontal	PASS
5440.3881	47.03	N/A	N/A	74.00	N/A	54.00	Horizontal	PASS
6277.5555	47.50	N/A	N/A	74.00	N/A	54.00	Horizontal	PASS
7412.6825	50.40	N/A	N/A	74.00	N/A	54.00	Horizontal	PASS
9203.3407	46.82	N/A	N/A	74.00	N/A	54.00	Horizontal	PASS

(Antenna Horizontal, 3GHz to 10GHz)



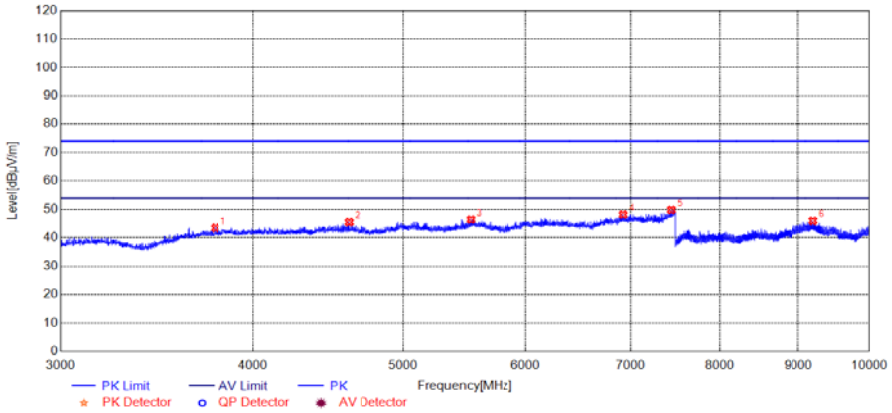
Fre. (MHz)	Pk (dBµV/m)	QP (dBµV/m)	AV (dBµV/m)	Limit-PK (dBµV/m)	Limit-QP (dBµV/m)	Limit-AV (dBµV/m)	Antenna	Verdict
36.7968	28.22	N/A	N/A	N/A	40.00	N/A	Vertical	PASS
46.5065	28.46	N/A	N/A	N/A	40.00	N/A	Vertical	PASS
53.3033	27.50	N/A	N/A	N/A	40.00	N/A	Vertical	PASS
104.7648	22.80	N/A	N/A	N/A	43.50	N/A	Vertical	PASS
360.1301	21.85	N/A	N/A	N/A	46.00	N/A	Vertical	PASS
908.7287	80.08	N/A	N/A	N/A	46.00	N/A	Vertical	N/A

(Antenna Vertical, 30MHz to 1GHz)



Fre. (MHz)	Pk (dBµV/m)	QP (dBµV/m)	AV (dBµV/m)	Limit-PK (dBµV/m)	Limit-QP (dBµV/m)	Limit-AV (dBµV/m)	Antenna	Verdict
1163.6327	34.03	N/A	N/A	74.00	N/A	54.00	Vertical	PASS
1410.0820	33.69	N/A	N/A	74.00	N/A	54.00	Vertical	PASS
1688.5377	35.84	N/A	N/A	74.00	N/A	54.00	Vertical	PASS
1834.9670	35.91	N/A	N/A	74.00	N/A	54.00	Vertical	PASS
2455.0910	49.70	N/A	N/A	74.00	N/A	54.00	Vertical	PASS
2909.9820	38.90	N/A	N/A	74.00	N/A	54.00	Vertical	PASS

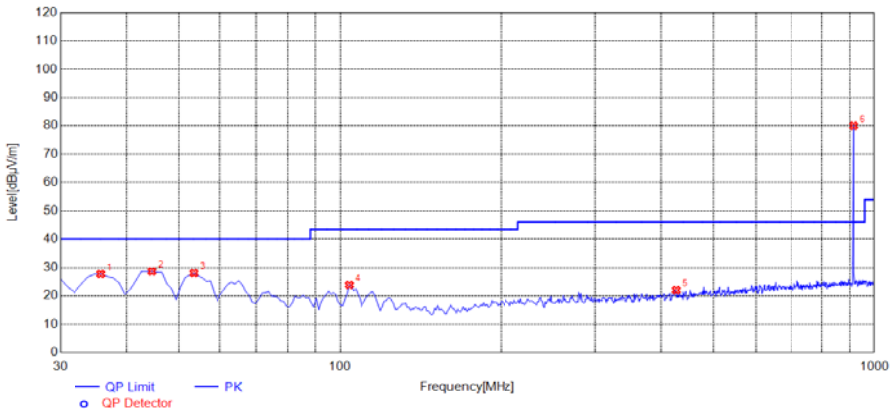
(Antenna Vertical, 1GHz to 3GHz)



Fre. (MHz)	PK (dBµV/m)	QP (dBµV/m)	AV (dBµV/m)	Limit-PK (dBµV/m)	Limit-QP (dBµV/m)	Limit-AV (dBµV/m)	Antenna	Verdict
3777.7556	43.51	N/A	N/A	74.00	N/A	54.00	Vertical	PASS
4605.9212	45.52	N/A	N/A	74.00	N/A	54.00	Vertical	PASS
5525.0050	46.43	N/A	N/A	74.00	N/A	54.00	Vertical	PASS
6921.1842	48.17	N/A	N/A	74.00	N/A	54.00	Vertical	PASS
7449.5899	49.77	N/A	N/A	74.00	N/A	54.00	Vertical	PASS
9200.8402	45.96	N/A	N/A	74.00	N/A	54.00	Vertical	PASS

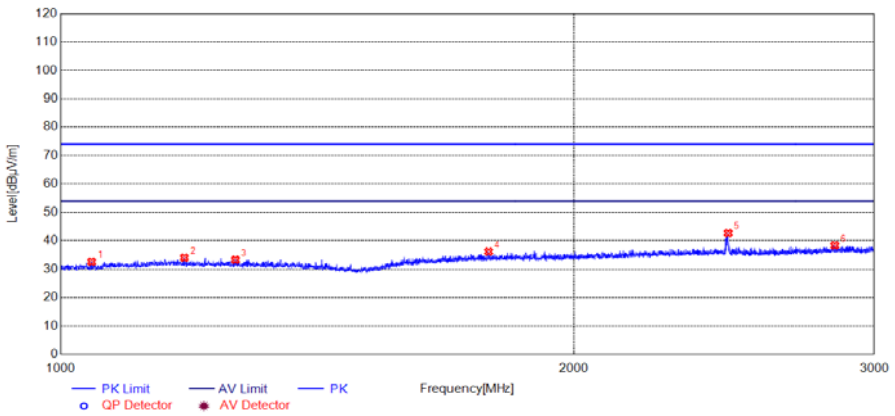
(Antenna Vertical, 3GHz to 10GHz)

Plot for 916.0MHz



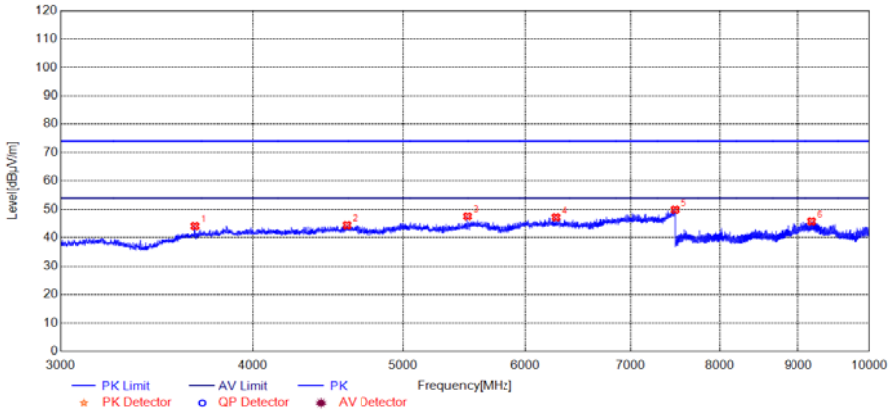
Fre. (MHz)	PK (dBµV/m)	QP (dBµV/m)	AV (dBµV/m)	Limit-PK (dBµV/m)	Limit-QP (dBµV/m)	Limit-AV (dBµV/m)	Antenna	Verdict
35.8258	27.73	N/A	N/A	N/A	40.00	N/A	Horizontal	PASS
44.5646	28.66	N/A	N/A	N/A	40.00	N/A	Horizontal	PASS
53.3033	28.08	N/A	N/A	N/A	40.00	N/A	Horizontal	PASS
103.7938	23.86	N/A	N/A	N/A	43.50	N/A	Horizontal	PASS
426.1562	22.02	N/A	N/A	N/A	46.00	N/A	Horizontal	PASS
915.5255	80.05	N/A	N/A	N/A	46.00	N/A	Horizontal	N/A

(Antenna Horizontal, 30MHz to 1GHz)



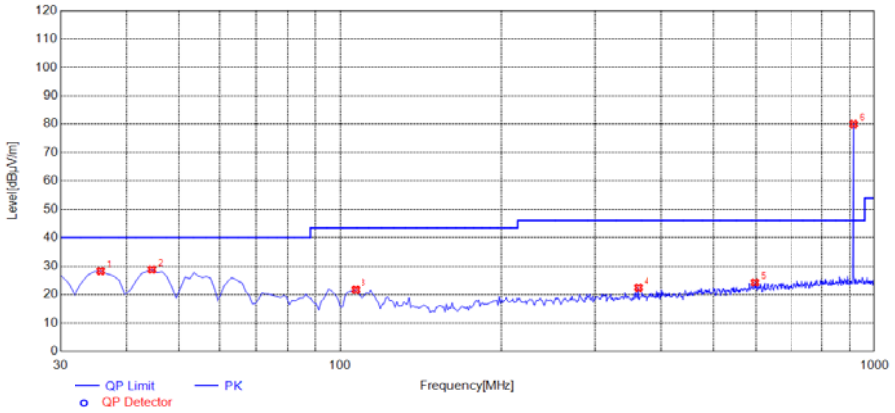
Fre. (MHz)	PK (dBµV/m)	QP (dBµV/m)	AV (dBµV/m)	Limit-PK (dBµV/m)	Limit-QP (dBµV/m)	Limit-AV (dBµV/m)	Antenna	Verdict
1044.4089	32.62	N/A	N/A	74.00	N/A	54.00	Horizontal	PASS
1182.0364	34.03	N/A	N/A	74.00	N/A	54.00	Horizontal	PASS
1268.4537	33.28	N/A	N/A	74.00	N/A	54.00	Horizontal	PASS
1780.9562	36.17	N/A	N/A	74.00	N/A	54.00	Horizontal	PASS
2461.4923	42.73	N/A	N/A	74.00	N/A	54.00	Horizontal	PASS
2845.5691	38.40	N/A	N/A	74.00	N/A	54.00	Horizontal	PASS

(Antenna Horizontal, 1GHz to 3GHz)



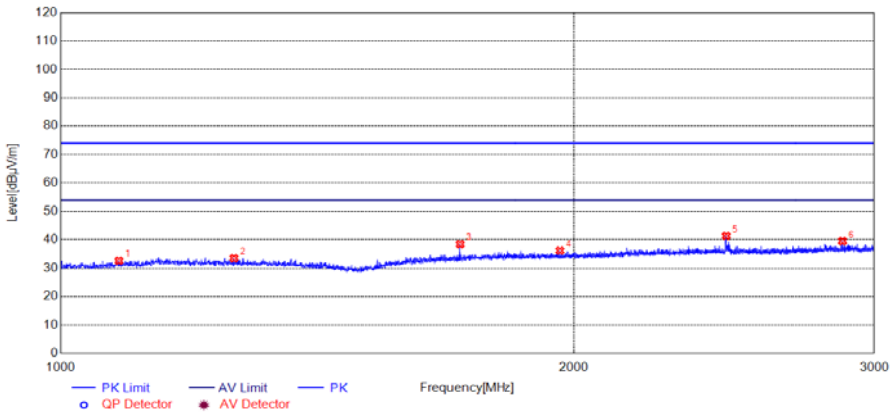
Fre. (MHz)	PK (dBµV/m)	QP (dBµV/m)	AV (dBµV/m)	Limit-PK (dBµV/m)	Limit-QP (dBµV/m)	Limit-AV (dBµV/m)	Antenna	Verdict
3664.3329	44.11	N/A	N/A	74.00	N/A	54.00	Horizontal	PASS
4590.6181	44.45	N/A	N/A	74.00	N/A	54.00	Horizontal	PASS
5496.1992	47.55	N/A	N/A	74.00	N/A	54.00	Horizontal	PASS
6274.8550	47.21	N/A	N/A	74.00	N/A	54.00	Horizontal	PASS
7491.8984	49.87	N/A	N/A	74.00	N/A	54.00	Horizontal	PASS
9184.8370	45.75	N/A	N/A	74.00	N/A	54.00	Horizontal	PASS

(Antenna Horizontal, 3GHz to 10GHz)



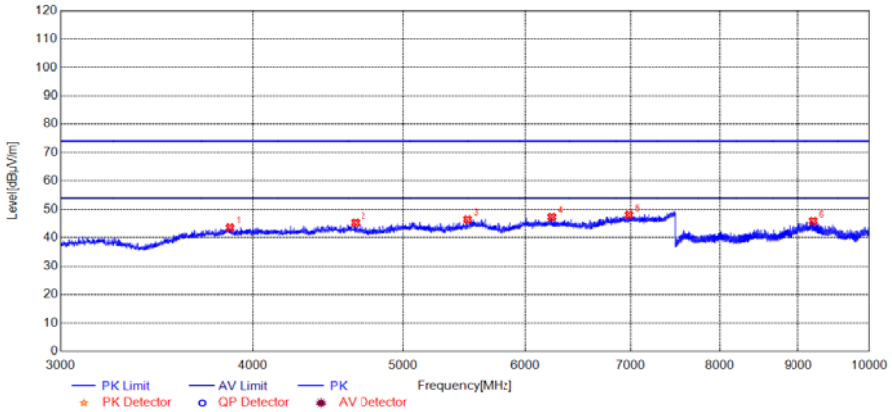
Fre. (MHz)	PK (dBµV/m)	QP (dBµV/m)	AV (dBµV/m)	Limit-PK (dBµV/m)	Limit-QP (dBµV/m)	Limit-AV (dBµV/m)	Antenna	Verdict
35.8258	28.26	N/A	N/A	N/A	40.00	N/A	Vertical	PASS
44.5646	28.81	N/A	N/A	N/A	40.00	N/A	Vertical	PASS
106.7067	21.65	N/A	N/A	N/A	43.50	N/A	Vertical	PASS
360.1301	22.40	N/A	N/A	N/A	46.00	N/A	Vertical	PASS
596.0761	24.22	N/A	N/A	N/A	46.00	N/A	Vertical	PASS
915.5255	80.02	N/A	N/A	N/A	46.00	N/A	Vertical	N/A

(Antenna Vertical, 30MHz to 1GHz)



Fre. (MHz)	PK (dBµV/m)	QP (dBµV/m)	AV (dBµV/m)	Limit-PK (dBµV/m)	Limit-QP (dBµV/m)	Limit-AV (dBµV/m)	Antenna	Verdict
1083.2166	32.61	N/A	N/A	74.00	N/A	54.00	Vertical	PASS
1266.0532	33.47	N/A	N/A	74.00	N/A	54.00	Vertical	PASS
1714.5429	38.47	N/A	N/A	74.00	N/A	54.00	Vertical	PASS
1962.9926	36.18	N/A	N/A	74.00	N/A	54.00	Vertical	PASS
2455.0910	41.36	N/A	N/A	74.00	N/A	54.00	Vertical	PASS
2875.1750	39.52	N/A	N/A	74.00	N/A	54.00	Vertical	PASS

(Antenna Vertical, 1GHz to 3GHz)



Fre. (MHz)	Pk (dBµV/m)	QP (dBµV/m)	AV (dBµV/m)	Limit-PK (dBµV/m)	Limit-QP (dBµV/m)	Limit-AV (dBµV/m)	Antenna	Verdict
3868.6737	43.55	N/A	N/A	74.00	N/A	54.00	Vertical	PASS
4649.1298	45.24	N/A	N/A	74.00	N/A	54.00	Vertical	PASS
5496.1992	46.47	N/A	N/A	74.00	N/A	54.00	Vertical	PASS
6237.0474	47.33	N/A	N/A	74.00	N/A	54.00	Vertical	PASS
6981.4963	48.06	N/A	N/A	74.00	N/A	54.00	Vertical	PASS
9206.3413	45.88	N/A	N/A	74.00	N/A	54.00	Vertical	PASS

(Antenna Vertical, 3GHz to 10GHz)

Annex A Test Uncertainty

Where relevant, the following measurement uncertainty levels have been estimated for test performed on the EUT as specified in CISPR 16-1-2:

Test items	Uncertainty
Bandwidth	±5%
Radiated Emission	±2.95dB

This uncertainty represent an expanded uncertainty expressed at approximately the 95% confidence level using a coverage factor of k=2

Annex B Testing Laboratory Information

1. Identification of the Responsible Testing Laboratory

Laboratory Name:	Shenzhen Morlab Communications Technology Co., Ltd. Morlab Laboratory
Laboratory Address:	FL.3, Building A, FeiYang Science Park, No.8 LongChang Road, Block 67, BaoAn District, ShenZhen, GuangDong Province, P. R. China
Telephone:	+86 755 36698555
Facsimile:	+86 755 36698525

2. Identification of the Responsible Testing Location

Name:	Shenzhen Morlab Communications Technology Co., Ltd. Morlab Laboratory
Address:	FL.3, Building A, FeiYang Science Park, No.8 LongChang Road, Block 67, BaoAn District, ShenZhen, GuangDong Province, P. R. China

3. Facilities and Accreditations

All measurement facilities used to collect the measurement data are located at FL.3, Building A, FeiYang Science Park, Block 67, BaoAn District, Shenzhen, 518101 P. R. China. The test site is constructed in conformance with the requirements of ANSI C63.10-2013 and CISPR Publication 22; the FCC designation number is CN1192, the test firm registration number is 226174.

4. Test Equipments Utilized

4.1 Radiated Test Equipments

Equipment Name	Serial No.	Type	Manufacturer	Cal. Date	Due Date
Receiver	MY54130016	N9038A	Agilent	2020.07.21	2021.07.20
Test Antenna - Bi-Log	9163-519	VULB 9163	Schwarzbeck	2019.05.24	2022.05.23
Test Antenna - Loop	1519-022	FMZB1519	Schwarzbeck	2019.02.14	2022.02.13
Test Antenna – Horn	01774	BBHA 9120D	Schwarzbeck	2019.07.26	2022.07.25
Coaxial cable (N male) (9KHz-30MHz)	CB04	EMC04	Morlab	N/A	N/A
Coaxial cable (N male) (30MHz-26GHz)	CB02	EMC02	Morlab	N/A	N/A
Coaxial cable (N male) (30MHz-26GHz)	CB03	EMC03	Morlab	N/A	N/A
1-18GHz pre-Amplifier	61171/61172	S020180L3203	Tonscend	2020.07.21	2021.07.20
Anechoic Chamber	N/A	9m*6m*6m	CRT	2020.01.06	2023.01.05

4.2 Conducted Emission Test Equipments

Equipment Name	Serial No.	Type	Manufacturer	Cal. Date	Due Date
Receiver	MY56400093	N9038A	KEYSIGHT	2020.03.26	2021.03.25
LISN	812744	NSLK 8127	Schwarzbeck	2020.03.26	2021.03.25
Pulse Limiter (10dB)	VTSD 9561 F-B #206	VTSD 9561-F	Schwarzbeck	2020.07.24	2021.07.23
Coaxial cable(BNC) (30MHz-26GHz)	CB01	EMC01	Morlab	N/A	N/A

END OF REPORT