RADIO PERFORMANCE TEST REPORT

Test Report No.	**: OT-203-RWD-067**
AGR No	**: A19DA-366R1**
Applicant	**: BROS&COMPANY INC.**
Address	**: A-402, InnoValley, 253, Pangyo-ro, Bundang-gu, Seongnam-si, Gyeonggi-do, Korea**
Manufacturer	**: BROS&COMPANY INC.**
Address	**: A-402, InnoValley, 253, Pangyo-ro, Bundang-gu, Seongnam-si, Gyeonggi-do, Korea**
Type of Equipment	**: EYES8**
FCC ID.	**: 2AQIS-POUT-02001**
Model Name	**: POUT-02001**
Multiple Model Name	**: N/A**
Serial number	**: N/A**
Total page of Report	**: 41 pages (including this page)**
Date of Incoming	**: January 02, 2020**
Date of issue	**: March 25, 2020**

SUMMARY

The equipment complies with the regulation; **FCC CFR47 Part 15 Subpart C Section 15.207 and 15.209**

This test report only contains the result of a single test of the sample supplied for the examination.

It is not a generally valid assessment of the features of the respective products of the mass-production.

Reviewed by: Ha-Ram Lee / Manager
ONETECH Corp.

Approved by: Jae-Ho Lee / General Manager
ONETECH Corp.

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Revision History

Issue Report No.	Issued Date	Revisions	Effect Section
OT-203-RWD-067	March 25, 2020	Initial Release	All

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1. VERIFICATION OF COMPLIANCE

APPLICANT	: BROS&COMPANY INC.
ADDRESS	: A-402, InnoValley, 253, Pangyo-ro, Bundang-gu, Seongnam-si, Gyeonggi-do, Korea
CONTACT PERSON	: KIYEOL PARK / CEO
TELEPHONE NO	: +82-31-286-8646
FCC ID	: 2AQIS-POUT-02001
MODEL NAME	: POUT-02001
BRAND NAME	: N/A
SERIAL NUMBER	: N/A
DATE	: March 25, 2020

EQUIPMENT CLASS	**DCD – Part 15 Low Power Transmitter Below 1 705 kHz**
KIND OF EQUIPMENT	EYES8
THIS REPORT CONCERNS	Original Grant
MEASUREMENT PROCEDURES	ANSI C63.10: 2013
TYPE OF EQUIPMENT TESTED	Pre-Production
KIND OF EQUIPMENT AUTHORIZATION REQUESTED	Certification
EQUIPMENT WILL BE OPERATED UNDER FCC&IC RULES PART(S)	FCC CFR47 Part 15 Subpart C Section 15.207 and 15.209
MODIFICATIONS ON THE EQUIPMENT TO ACHIEVE COMPLIANCE	No
FINAL TEST WAS CONDUCTED ON	3 m, Semi Anechoic Chamber

-. The above equipment was tested by ONETECH Corp. for compliance with the requirement set forth in the FCC Rules and Regulations. The equipment in the configuration described in this report shows the maximum emission levels emanating from equipment are within the compliance requirements.

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2. TEST SUMMARY

2.1 Test items and results

SECTION	TEST ITEMS	RESULTS
15.209, 15.209(a)	Radiated emission, Spurious Emission and Field Strength of Fundamental	Met the Limit / PASS
2.1049	20 dB Bandwidth	Met the Limit / PASS
15.207	Transmitter AC Power Line Conducted Emission	Met the Limit / PASS

2.2 Additions, deviations, exclusions from standards

No additions, deviations or exclusions have been made from standard.

2.3 Related Submittal(s) / Grant(s)

Original submittal only

2.4 Purpose of the test

To determine whether the equipment under test fulfills the requirements of the regulation stated in FCC CFR47 Part 15 Subpart C Section 15.207 and 15.209, 2.1049.

2.5 Test Methodology

Radiated testing was performed according to the procedures in ANSI C63.10: 2013 at a distance of 3 m from EUT to the antenna.

2.6 Test Facility

The ONETECH Corp. has been designated to perform equipment testing in compliance with ISO/IEC 17025.

The Electromagnetic compatibility measurement facilities are located at 301-14, Daessangnyeong-ri, Chowol-eup, Gwangju-si, Gyeonggi-do, 464-862 Korea.

-. Site Filing:

VCCI (Voluntary Control Council for Interference) – Registration No. R-4112/ C-4617/ G-666/ T-1842

ISED (Innovation, Science and Economic Development Canada) – Registration No. Site# 3736A-3

-. Site Accreditation:

KOLAS (Korea Laboratory Accreditation Scheme) - Accreditation NO. KT085

FCC (Federal Communications Commission) - Accreditation No. KR0013

RRA (Radio Research Agency) – Designation No. KR0013

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3. GENERAL INFORMATION

3.1 Product Description

The BROS&COMPANY INC., Model: POUT-02001 (referred to as the EUT in this report) is an EYES8. Product specification information described herein was obtained from product data sheet or user's manual.

DEVICE TYPE	Wireless Charger
OPERATING FREQUENCY	111 kHz ~ 205 kHz
RATED RF OUTPUT POWER	54.0 dBμV/m
ANTENNA TYPE	Coil Antenna
MODULATION	ASK
RATED SUPPLY VOLTAGE	DC 5.0 V, DC 9.0 V, DC 12.0 V

3.2 Alternative type(s)/model(s); also covered by this test report.

-. None

4. EUT MODIFICATIONS

-. None

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5. SYSTEM TEST CONFIGURATION

5.1 Justification

This device was configured for testing in a typical way as a normal customer is supposed to be used. During the test, the following components were installed inside of the EUT.

DEVICE TYPE	MANUFACTURER	MODEL/PART NUMBER	FCC ID
Main Board	N/A	N/A	N/A

5.2 Peripheral equipment

Model	Manufacturer	Description	Connected to
N/A	N/A	DUMMY load	N/A

5.3 Mode of operation during the test

For the testing, software used to control the EUT for staying in continuous transmitting is programmed.

For final testing, the EUT was set as following condition.

- Max. load (118 kHz), Mid. load (126 kHz), and Min. load (134 kHz) for 5V.
- Max. load (116 kHz), Mid. load (130 kHz), and Min. load (136 kHz) for 9V.
- Max. load (113 kHz), Mid. load (131 kHz), and Min. load (136 kHz) for 12V.

To get a maximum emission levels from the EUT, the EUT was moved throughout the XY, XZ, and YZ planes and the worst case is “XY” axis.

Mode	Charging current	Description
Charging Mode With load	1 000 mA	Using Max. load
	500 mA	Using Mid. load
	100 mA	Using Min. load

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5.4 Configuration of Test System

Line Conducted Test **:** The EUT was tested in a charging mode. The EUT was connected to USB and the power of USB was connected to Adapter. All supporting equipment were connected to another LISN. Preliminary Power line Conducted Emission test was performed by using the procedure in ANSI C63.4: 2009 7.3.3 to determine the worse operating conditions.

Radiated Emission Test **:** Preliminary radiated emissions test were conducted using the procedure in ANSI C63.10: 2013 to determine the worse operating conditions. Final radiated emission tests were conducted at 3 m Semi Anechoic Chamber.

The turntable was rotated through 360 degrees and the EUT was tested by positioned three orthogonal planes to obtain the highest reading on the field strength meter. Once maximum reading was determined, the search antenna was raised and lowered in both vertical and horizontal polarization.

5.5 Antenna Requirement

According to section 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.

Antenna Construction:

The antenna of the EUT is a Coil Antenna on the main board in the EUT, so no consideration of replacement by the user.

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6. PRELIMINARY TEST

6.1 AC Power line Conducted Emissions Tests

During Preliminary Tests, the following operating modes were investigated

Operation Mode	The Worse operating condition (Please check one only)
Transmitting Mode	X

6.2 General Radiated Emissions Tests

During Preliminary Tests, the following operating modes were investigated

Operation Mode	The Worse operating condition (Please check one only)
Transmitting Mode	X

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7. 20 dB BANDWIDTH

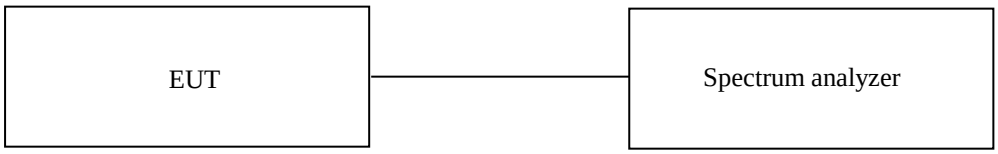
7.1 Operating environment

Temperature	:	23 ℃
Relative humidity	:	49 % R.H.

7.2 Test set-up

a. Span = approximately 2 to 3 times the 20 dB bandwidth, RBW = greater than 1 % of the 20 dB bandwidth, VBW = RBW, Sweep = auto, Detector = peak, Trace = max hold.

b. The marker-to-peak function to set the mark to the peak of the emission. Use the marker-delta function to measure 20 dB down one side of the emission. Reset the function, and move the marker to the other side of the emission, until it is (as close as possible to) even with the reference marker level.
The marker-delta reading at this point is 20 dB bandwidth of the emission.



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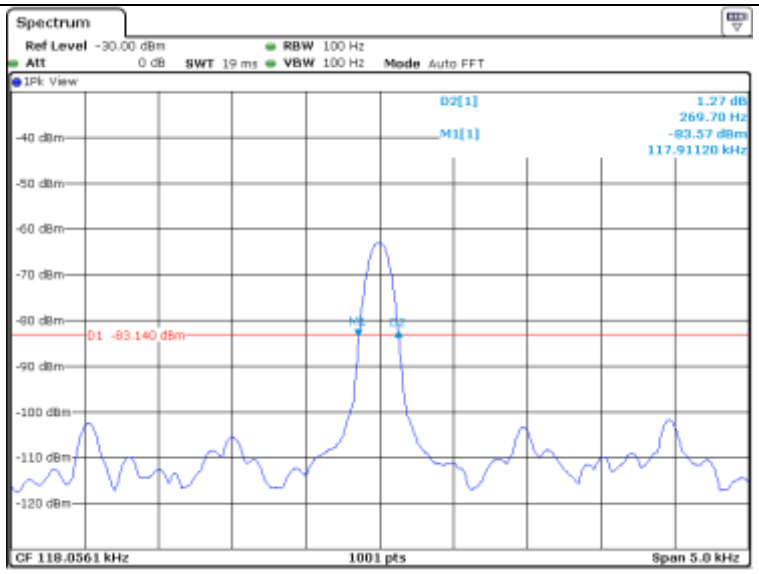
7.3 Test data for 5V

Test Date : January 02, 2020

Frequency : 118.05 KHz

20 dB Bandwidth : 269.70 Hz



Tested by: Sieon Lee / Assistant Manager

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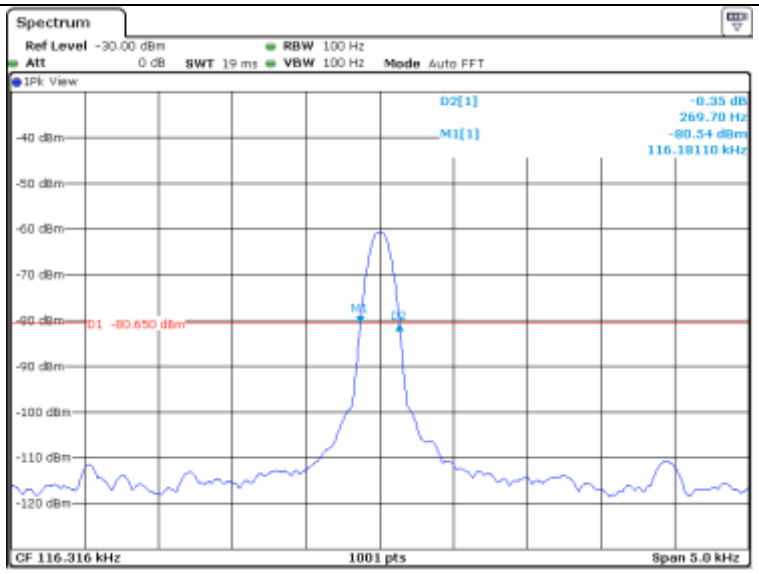
7.4 Test data for 9V

-. Test Date : January 02, 2020

Frequency : 116.31 KHz

20 dB Bandwidth : 269.70 Hz



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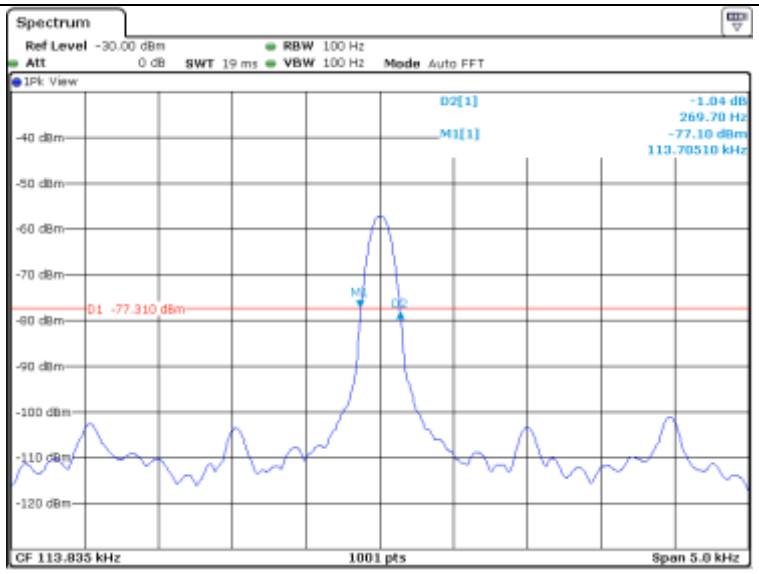
7.5 Test data for 12V

-. Test Date : January 02, 2020

Frequency : 113.83 KHz

20 dB Bandwidth : 269.70 Hz



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8. Spurious Emission Test

8.1 Regulation

According to §15.209(a), for an intentional device, the general requirement of field strength of radiated emissions from intentional radiators at a distance of 3 meters shall not exceed the following values:

Frequency [MHz]	Field strength [μ V/m]	Field strength [dBμ V/m]	Measurement distance [m]
0.009 ~ 0.490	2 400 / F (kHz)	48.52 ~ 13.80	300
0.490 ~ 1.705	24 000 / F (kHz)	33.8 ~ 22.97	30
1.705 ~ 30	30	29.50	30
30 ~ 88	*100	40.00	3
88 ~ 216	*150	43.52	3
216 ~ 960	*200	46.02	3
Above 960	500	53.98	3

*Except as provided in paragraph (g), fundamental emissions from intentional radiators operating under this Section shall not be located in the frequency bands 54 ~ 72 MHz, 76 ~ 88 MHz, 174 ~ 216 MHz or 470 ~ 806 MHz. However, operation within these frequency bands is permitted under other sections of this Part, e.g., Sections 15.231 and 15.241.

8.2 Test set-up

The radiated emissions measurements were on the 3 m semi anechoic chamber. The EUT and other support equipment were placed on a non-conductive turntable above the ground plane. The interconnecting cables from outside test site were inserted into ferrite clamps at the point where the cables reach the turntable.

The frequency spectrum from 30 kHz to 1 GHz was scanned and maximum emission levels at each frequency recorded. The system was rotated 360°, and the antenna was varied in the height between 1.0 m and 4.0 ms in order to determine the maximum emission levels. This procedure was performed for horizontal and vertical polarization of the receiving antenna.

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8.3 Test data for Using Max load (1 000 mA) (5V)

8.3.1 Spurious Radiated Emission Below 30 MHz

Humidity Level : 49 % R.H. Temperature: 23 ℃

Limits apply to : FCC CFR 47, PART 15, SUBPART C, SECTION 15.209

Frequency Range : 9 kHz ~ 30 MHz

Result : PASSED

EUT : EYES8 Date: January 02, 2020

Operating Condition : Transmitting Mode

Frequency (MHz)	Detector	Ant. Pol. (H/V)	Reading (dBμV)	Ant. Factor (dB/m)	Cable Loss	Emission Level at 3m (dBμV/m)	Emission Level at 300m (dBμV/m)	Limit at 300m (dBμV/m)	Margin (dB)
*0.118	QP	H	52.1	19.4	0.0	71.5	-8.5	26.2	34.7
0.329	QP	H	30.1	19.4	0.0	49.5	-30.5	17.3	47.8

Frequency (MHz)	Detector	Ant. Pol. (H/V)	Reading (dBμV)	Ant. Factor (dB/m)	Cable Loss	Emission Level at 3m (dBμV/m)	Emission Level at 30m (dBμV/m)	Limit at 30m (dBμV/m)	Margin (dB)
0.568	QP	H	25.4	19.3	0.0	44.7	4.7	32.5	27.8
0.807	QP	H	20.0	19.3	0.0	39.3	-0.7	29.5	30.2
1.046	QP	H	15.9	19.3	0.1	35.3	-4.7	27.2	31.9
1.284	QP	H	14.8	19.3	0.1	34.2	-5.8	25.4	31.2

-. Remark: “H” Horizontal, “V” Vertical

-. “*” Means Fundamental frequency

-. Emission Level at 3m [dB μ V/m] = Reading [dBμV] + Ant. Factor [dB/m] + Cable Loss [dB]

-. Margin [dB] = Emission Level at 300m [dBμV/m] – Limit at 300m [dBμV/m]

= Emission Level at 300m [dBμV/m] – Limit at 30m [dBμV/m]

-. Emission Level at 300m [dBμV/m] = Emission Level at 3m [dBμV/m] - 40log (300/3), 80 dB for up to 0.49 MHz

-. Emission Level at 30m [dBμV/m] = Emission Level at 3m [dBμV/m] - 40log (30/3), 40 dB for above 0.49 MHz, Below 30 MHz

Tested by: Sieon Lee / Assistant Manager

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8.3.2 Spurious Radiated Emission below 1 GHz

The following table shows the highest levels of radiated emissions on both polarizations of horizontal and vertical.

Humidity Level : 49 % R.H. Temperature: 23 ℃

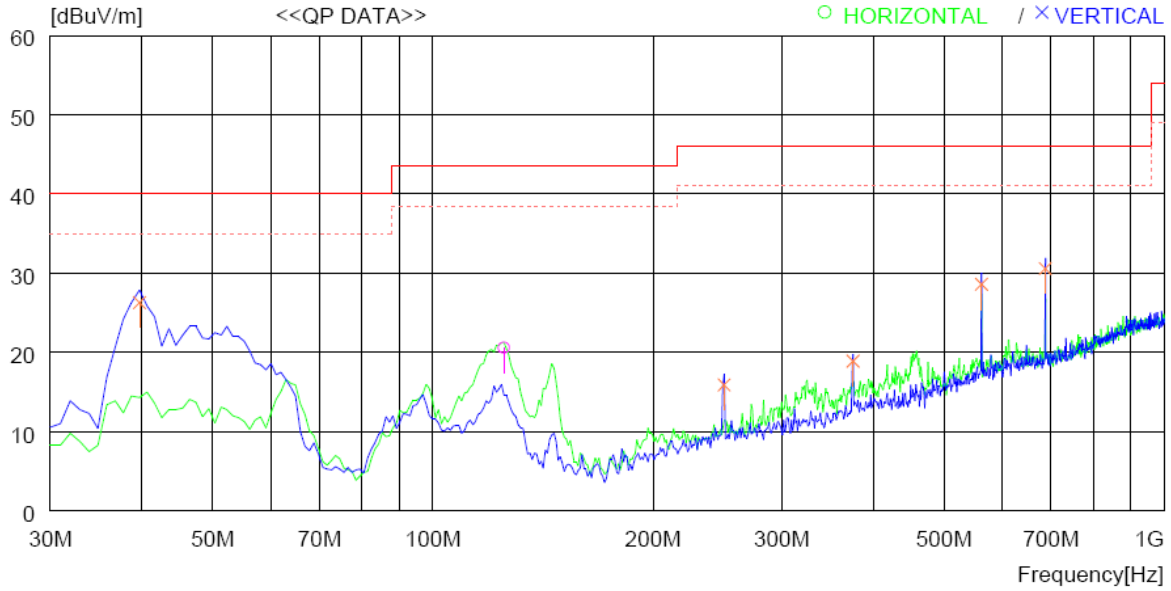
Limits apply to : FCC CFR 47, PART 15, SUBPART C, SECTION 15.209

Frequency range : 30 MHz ~ 1 000 MHz

Result : PASSED

EUT : EYES8 Date: January 02, 2020

Operating Condition : Transmitting Mode



No.	FREQ [MHz]	READING QP [dBuV]	ANT FACTOR [dB]	LOSS [dB]	GAIN [dB]	RESULT [dBuV/m]	LIMIT [dBuV/m]	MARGIN [dB]	ANTENNA [cm]	TABLE [DEG]
----- Horizontal ------										
1	125.060	42.0	9.9	1.4	32.7	20.6	43.5	22.9	400	359
----- Vertical ------										
2	39.700	43.5	14.6	0.9	32.7	26.3	40.0	13.7	100	359
3	250.190	33.7	12.9	2.0	32.7	15.9	46.0	30.1	100	15
4	375.320	33.9	15.4	2.3	32.7	18.9	46.0	27.1	100	148
5	562.529	39.1	19.6	2.9	33.0	28.6	46.0	17.4	300	359
6	687.655	39.4	20.7	3.4	32.9	30.6	46.0	15.4	200	177

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8.4 Test data for Using Max load (1 000 mA) (9V)

8.4.1 Spurious Radiated Emission Below 30 MHz

Humidity Level : 49 % R.H. Temperature: 23 ℃

Limits apply to : FCC CFR 47, PART 15, SUBPART C, SECTION 15.209

Frequency Range : 9 kHz ~ 30 MHz

Result : PASSED

EUT : EYES8 Date: January 02, 2020

Operating Condition : Transmitting Mode

Frequency (MHz)	Detector	Ant. Pol. (H/V)	Reading (dBμV)	Ant. Factor (dB/m)	Cable Loss	Emission Level at 3m (dBμV/m)	Emission Level at 300m (dBμV/m)	Limit at 300m (dBμV/m)	Margin (dB)
*0.116	QP	H	52.8	19.4	0.0	72.2	-7.8	26.3	34.1
0.210	QP	H	28.0	19.4	0.0	47.4	-32.6	21.2	53.8
0.329	QP	H	27.9	19.4	0.0	47.3	-32.7	17.3	50.0
0.449	QP	H	22.7	19.3	0.0	42.0	-38.0	14.6	52.6

Frequency (MHz)	Detector	Ant. Pol. (H/V)	Reading (dBμV)	Ant. Factor (dB/m)	Cable Loss	Emission Level at 3m (dBμV/m)	Emission Level at 30m (dBμV/m)	Limit at 30m (dBμV/m)	Margin (dB)
0.568	QP	H	24.0	19.3	0.0	43.3	3.3	32.5	29.2
0.807	QP	H	18.7	19.3	0.0	38.0	-2.0	29.5	31.5

-. Remark: “H” Horizontal, “V” Vertical

-. “*” Means Fundamental frequency

-. Emission Level at 3m [dB μ V/m] = Reading [dBμV] + Ant. Factor [dB/m] + Cable Loss [dB]

-. Margin [dB] = Emission Level at 300m [dBμV/m] – Limit at 300m [dBμV/m]

= Emission Level at 300m [dBμV/m] – Limit at 30m [dBμV/m]

-. Emission Level at 300m [dBμV/m] = Emission Level at 3m [dBμV/m] - 40log (300/3), 80 dB for up to 0.49 MHz

-. Emission Level at 30m [dBμV/m] = Emission Level at 3m [dBμV/m] - 40log (30/3), 40 dB for above 0.49 MHz, Below 30 MHz

Tested by: Sieon Lee / Assistant Manager

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8.4.2 Spurious Radiated Emission below 1 GHz

The following table shows the highest levels of radiated emissions on both polarizations of horizontal and vertical.

Humidity Level : 49 % R.H. Temperature: 23 ℃

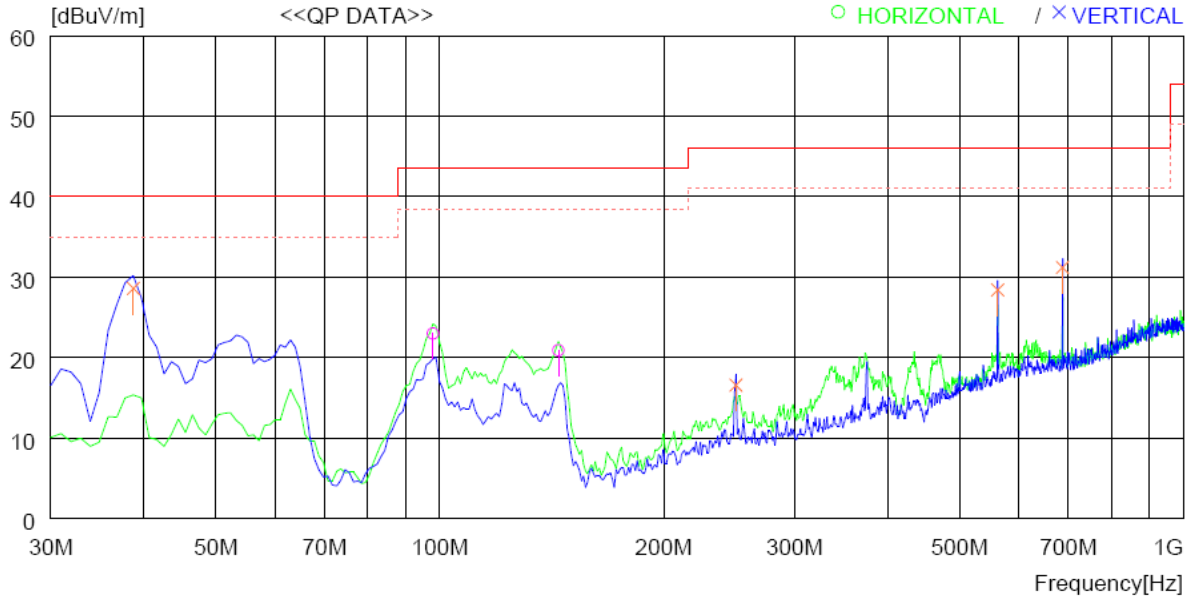
Limits apply to : FCC CFR 47, PART 15, SUBPART C, SECTION 15.209

Frequency range : 30 MHz ~ 1 000 MHz

Result : PASSED

EUT : EYES8 Date: January 02, 2020

Operating Condition : Transmitting Mode



No.	FREQ [MHz]	READING QP [dBuV]	ANT FACTOR [dB]	LOSS [dB]	GAIN [dB]	RESULT [dBuV/m]	LIMIT [dBuV/m]	MARGIN [dB]	ANTENNA [cm]	TABLE [DEG]
----- Horizontal ------										
1	97.900	42.2	12.3	1.2	32.7	23.0	43.5	20.5	300	346
2	144.460	43.6	8.6	1.4	32.7	20.9	43.5	22.6	200	237
----- Vertical ------										
3	38.730	45.9	14.5	0.9	32.7	28.6	40.0	11.4	100	109
4	250.190	34.4	12.9	2.0	32.7	16.6	46.0	29.4	100	359
5	562.529	38.9	19.6	2.9	33.0	28.4	46.0	17.6	100	151
6	687.655	40.0	20.7	3.4	32.9	31.2	46.0	14.8	200	326

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8.5 Test data for Using Max load (1 000 mA) (12V)

8.5.1 Spurious Radiated Emission Below 30 MHz

Humidity Level : 49 % R.H. Temperature: 23 ℃

Limits apply to : FCC CFR 47, PART 15, SUBPART C, SECTION 15.209

Frequency Range : 9 kHz ~ 30 MHz

Result : PASSED

EUT : EYES8 Date: January 02, 2020

Operating Condition : Transmitting Mode

Frequency (MHz)	Detector	Ant. Pol. (H/V)	Reading (dBμV)	Ant. Factor (dB/m)	Cable Loss	Emission Level at 3m (dBμV/m)	Emission Level at 300m (dBμV/m)	Limit at 300m (dBμV/m)	Margin (dB)
*0.113	QP	H	54.0	19.4	0.0	73.4	-6.6	26.5	33.1
0.210	QP	H	28.4	19.4	0.0	47.8	-32.2	21.2	53.4
0.329	QP	H	28.1	19.4	0.0	47.5	-32.5	17.3	49.8
0.449	QP	H	21.3	19.3	0.0	40.6	-39.4	14.6	54.0

Frequency (MHz)	Detector	Ant. Pol. (H/V)	Reading (dBμV)	Ant. Factor (dB/m)	Cable Loss	Emission Level at 3m (dBμV/m)	Emission Level at 30m (dBμV/m)	Limit at 30m (dBμV/m)	Margin (dB)
0.538	QP	H	23.7	19.3	0.0	43.0	3.0	33.0	30.0
0.777	QP	H	18.6	19.3	0.0	37.9	-2.1	29.8	31.9

-. Remark: “H” Horizontal, “V” Vertical

-. “*” Means Fundamental frequency

-. Emission Level at 3m [dB μ V/m] = Reading [dBμV] + Ant. Factor [dB/m] + Cable Loss [dB]

-. Margin [dB] = Emission Level at 300m [dBμV/m] – Limit at 300m [dBμV/m]

= Emission Level at 300m [dBμV/m] – Limit at 30m [dBμV/m]

-. Emission Level at 300m [dBμV/m] = Emission Level at 3m [dBμV/m] - 40log (300/3), 80 dB for up to 0.49 MHz

-. Emission Level at 30m [dBμV/m] = Emission Level at 3m [dBμV/m] - 40log (30/3), 40 dB for above 0.49 MHz, Below 30 MHz

Tested by: Sieon Lee / Assistant Manager

8.5.2 Spurious Radiated Emission below 1 GHz

The following table shows the highest levels of radiated emissions on both polarizations of horizontal and vertical.

Humidity Level : 49 % R.H. Temperature: 23 ℃

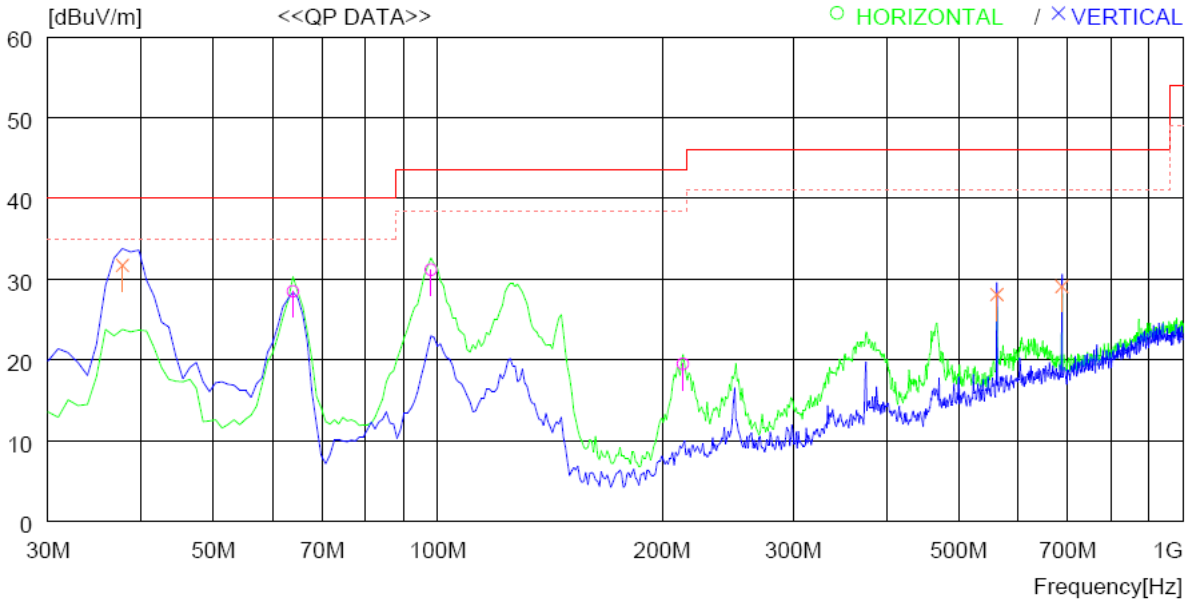
Limits apply to : FCC CFR 47, PART 15, SUBPART C, SECTION 15.209

Frequency range : 30 MHz ~ 1 000 MHz

Result : PASSED

EUT : EYES8 Date: January 02, 2020

Operating Condition : Transmitting Mode



No.	FREQ [MHz]	READING QP [dBuV]	ANT FACTOR [dB]	LOSS [dB]	GAIN [dB]	RESULT [dBuV/m]	LIMIT [dBuV/m]	MARGIN [dB]	ANTENNA [cm]	TABLE [DEG]
----- Horizontal ------										
1	63.950	48.9	11.4	0.9	32.7	28.5	40.0	11.5	400	231
2	97.900	50.4	12.3	1.2	32.7	31.2	43.5	12.3	300	297
3	213.330	39.1	11.2	1.8	32.6	19.5	43.5	24.0	200	137
----- Vertical ------										
4	37.760	49.2	14.3	0.9	32.7	31.7	40.0	8.3	100	55
5	562.529	38.6	19.6	2.9	33.0	28.1	46.0	17.9	100	112
6	687.655	37.9	20.7	3.4	32.9	29.1	46.0	16.9	100	238

Tested by: Sieon Lee / Assistant Manager

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8.6 Test data for Using Mid. load (500 mA) (5V)

8.6.1 Spurious Radiated Emission Below 30 MHz

Humidity Level : 49 % R.H. Temperature: 23 ℃

Limits apply to : FCC CFR 47, PART 15, SUBPART C, SECTION 15.209

Frequency Range : 9 kHz ~ 30 MHz

Result : PASSED

EUT : EYES8 Date: January 02, 2020

Operating Condition : Transmitting Mode

Frequency (MHz)	Detector	Ant. Pol. (H/V)	Reading (dBµV)	Ant. Factor (dB/m)	Cable Loss	Emission Level at 3m (dBµV/m)	Emission Level at 300m (dBµV/m)	Limit at 300m (dBµV/m)	Margin (dB)
*0.126	QP	H	51.4	19.4	0.0	70.8	-9.2	25.6	34.8
0.240	QP	H	27.8	19.4	0.0	47.2	-32.8	20.0	52.8
0.359	QP	H	27.8	19.4	0.0	47.2	-32.8	16.5	49.3
0.478	QP	H	23.0	19.3	0.0	42.3	-37.7	14.0	51.7

Frequency (MHz)	Detector	Ant. Pol. (H/V)	Reading (dBµV)	Ant. Factor (dB/m)	Cable Loss	Emission Level at 3m (dBµV/m)	Emission Level at 30m (dBµV/m)	Limit at 30m (dBµV/m)	Margin (dB)
0.628	QP	H	22.2	19.3	0.0	41.5	1.5	31.6	30.1
0.866	QP	H	16.9	19.3	0.0	36.2	-3.8	28.9	32.7

-. Remark: “H” Horizontal, “V” Vertical

-. “*” Means Fundamental frequency

-. Emission Level at 3m [dB µ V/m] = Reading [dBµV] + Ant. Factor [dB/m] + Cable Loss [dB]

-. Margin [dB] = Emission Level at 300m [dBµV/m] – Limit at 300m [dBµV/m]

= Emission Level at 300m [dBµV/m] – Limit at 30m [dBµV/m]

-. Emission Level at 300m [dBµV/m] = Emission Level at 3m [dBµV/m] - 40log (300/3), 80 dB for up to 0.49 MHz

-. Emission Level at 30m [dBµV/m] = Emission Level at 3m [dBµV/m] - 40log (30/3), 40 dB for above 0.49 MHz, Below 30 MHz

Tested by: Sieon Lee / Assistant Manager

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8.6.2 Spurious Radiated Emission below 1 GHz

The following table shows the highest levels of radiated emissions on both polarizations of horizontal and vertical.

Humidity Level : 49 % R.H. Temperature: 23 ℃

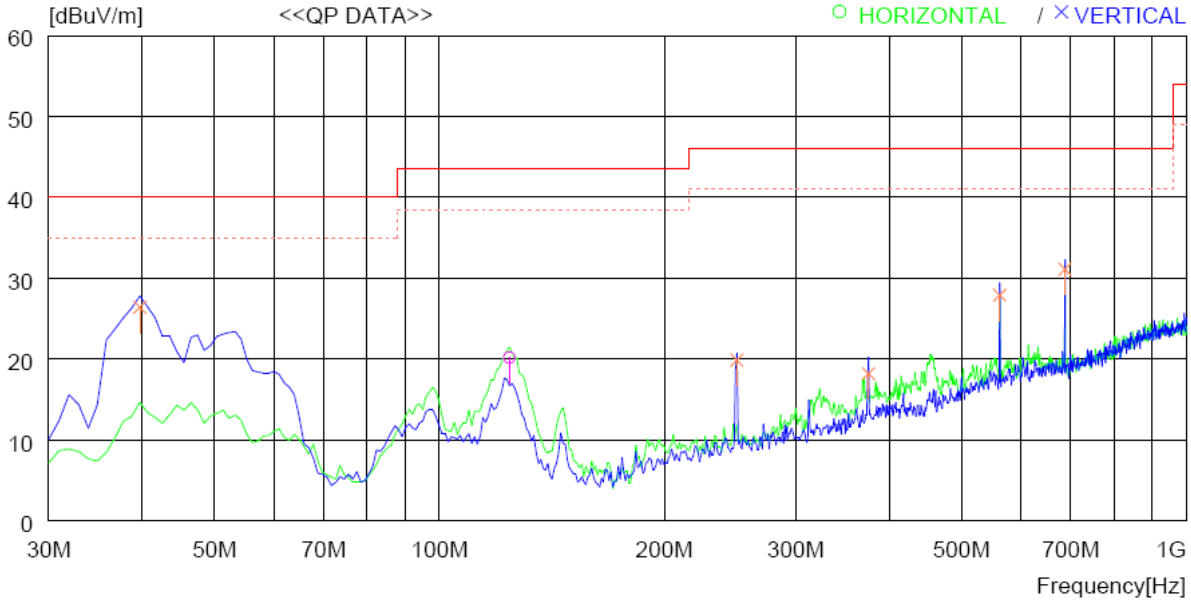
Limits apply to : FCC CFR 47, PART 15, SUBPART C, SECTION 15.209

Frequency range : 30 MHz ~ 1 000 MHz

Result : PASSED

EUT : EYES8 Date: January 02, 2020

Operating Condition : Transmitting Mode



No.	FREQ [MHz]	READING QP [dBuV]	ANT FACTOR [dB]	LOSS [dB]	GAIN [dB]	RESULT [dBuV/m]	LIMIT [dBuV/m]	MARGIN [dB]	ANTENNA [cm]	TABLE [DEG]
----- Horizontal ------										
1	124.090	41.5	10.0	1.4	32.7	20.2	43.5	23.3	300	121
----- Vertical ------										
2	39.700	43.6	14.6	0.9	32.7	26.4	40.0	13.6	100	349
3	250.190	37.7	12.9	2.0	32.7	19.9	46.0	26.1	200	64
4	375.320	33.2	15.4	2.3	32.7	18.2	46.0	27.8	100	258
5	562.529	38.4	19.6	2.9	33.0	27.9	46.0	18.1	300	342
6	687.655	39.9	20.7	3.4	32.9	31.1	46.0	14.9	200	0

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8.7 Test data for Using Mid. load (500 mA) (9V)

8.7.1 Spurious Radiated Emission Below 30 MHz

Humidity Level : 49 % R.H. Temperature: 23 ℃

Limits apply to : FCC CFR 47, PART 15, SUBPART C, SECTION 15.209

Frequency Range : 9 kHz ~ 30 MHz

Result : PASSED

EUT : EYES8 Date: January 02, 2020

Operating Condition : Transmitting Mode

Frequency (MHz)	Detector	Ant. Pol. (H/V)	Reading (dBµV)	Ant. Factor (dB/m)	Cable Loss	Emission Level at 3m (dBµV/m)	Emission Level at 300m (dBµV/m)	Limit at 300m (dBµV/m)	Margin (dB)
*0.130	QP	H	51.8	19.4	0.0	71.2	-8.8	25.3	34.1
0.240	QP	H	28.4	19.4	0.0	47.8	-32.2	20.0	52.2
0.389	QP	H	28.8	19.4	0.0	48.2	-31.8	15.8	47.6

Frequency (MHz)	Detector	Ant. Pol. (H/V)	Reading (dBµV)	Ant. Factor (dB/m)	Cable Loss	Emission Level at 3m (dBµV/m)	Emission Level at 30m (dBµV/m)	Limit at 30m (dBµV/m)	Margin (dB)
0.508	QP	H	24.6	19.3	0.0	43.9	3.9	33.5	29.6
0.628	QP	H	23.0	19.3	0.0	42.3	2.3	31.6	29.3
0.777	QP	H	18.2	19.3	0.0	37.5	-2.5	29.8	32.3

-. Remark: “H” Horizontal, “V” Vertical

-. “*” Means Fundamental frequency

-. Emission Level at 3m [dB µ V/m] = Reading [dBµV] + Ant. Factor [dB/m] + Cable Loss [dB]

-. Margin [dB] = Emission Level at 300m [dBµV/m] – Limit at 300m [dBµV/m]

= Emission Level at 300m [dBµV/m] – Limit at 30m [dBµV/m]

-. Emission Level at 300m [dBµV/m] = Emission Level at 3m [dBµV/m] - 40log (300/3), 80 dB for up to 0.49 MHz

-. Emission Level at 30m [dBµV/m] = Emission Level at 3m [dBµV/m] - 40log (30/3), 40 dB for above 0.49 MHz, Below 30 MHz

Tested by: Sieon Lee / Assistant Manager

8.7.2 Spurious Radiated Emission below 1 GHz

The following table shows the highest levels of radiated emissions on both polarizations of horizontal and vertical.

Humidity Level : 49 % R.H. Temperature: 23 ℃

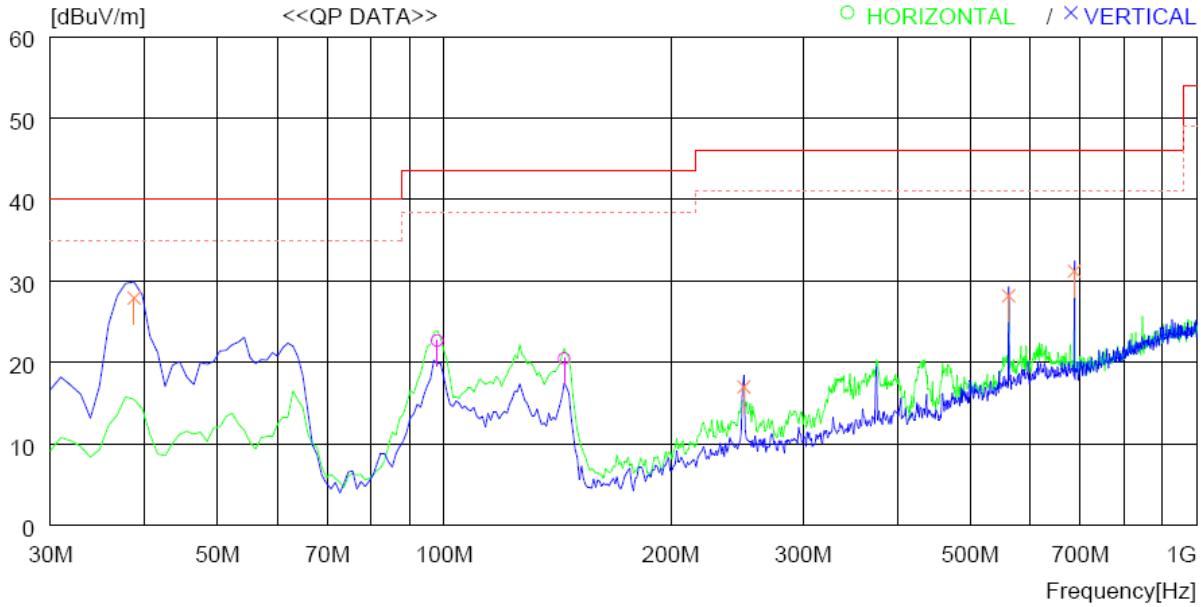
Limits apply to : FCC CFR 47, PART 15, SUBPART C, SECTION 15.209

Frequency range : 30 MHz ~ 1 000 MHz

Result : PASSED

EUT : EYES8 Date: January 02, 2020

Operating Condition : Transmitting Mode



No.	FREQ [MHz]	READING QP [dBuV]	ANT FACTOR [dB]	LOSS [dB]	GAIN [dB]	RESULT [dBuV/m]	LIMIT [dBuV/m]	MARGIN [dB]	ANTENNA [cm]	TABLE [DEG]
----- Horizontal ------										
1	97.900	41.9	12.3	1.2	32.7	22.7	43.5	20.8	200	339
2	144.460	43.2	8.6	1.4	32.7	20.5	43.5	23.0	400	241
----- Vertical ------										
3	38.730	45.2	14.5	0.9	32.7	27.9	40.0	12.1	100	120
4	250.190	34.8	12.9	2.0	32.7	17.0	46.0	29.0	100	359
5	562.529	38.7	19.6	2.9	33.0	28.2	46.0	17.8	100	359
6	687.655	40.0	20.7	3.4	32.9	31.2	46.0	14.8	200	0

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8.8 Test data for Using Mid. load (500 mA) (12V)

8.8.1 Spurious Radiated Emission Below 30 MHz

Humidity Level : 49 % R.H. Temperature: 23 ℃

Limits apply to : FCC CFR 47, PART 15, SUBPART C, SECTION 15.209

Frequency Range : 9 kHz ~ 30 MHz

Result : PASSED

EUT : EYES8 Date: January 02, 2020

Operating Condition : Transmitting Mode

Frequency (MHz)	Detector	Ant. Pol. (H/V)	Reading (dBμV)	Ant. Factor (dB/m)	Cable Loss	Emission Level at 3m (dBμV/m)	Emission Level at 300m (dBμV/m)	Limit at 300m (dBμV/m)	Margin (dB)
*0.131	QP	H	53.0	19.4	0.0	72.4	-7.6	25.3	32.9
0.389	QP	H	33.2	19.4	0.0	52.6	-27.4	15.8	43.2

Frequency (MHz)	Detector	Ant. Pol. (H/V)	Reading (dBμV)	Ant. Factor (dB/m)	Cable Loss	Emission Level at 3m (dBμV/m)	Emission Level at 30m (dBμV/m)	Limit at 30m (dBμV/m)	Margin (dB)
0.508	QP	H	21.0	19.3	0.0	40.3	0.3	33.5	33.2
0.628	QP	H	26.1	19.3	0.0	45.4	5.4	31.6	26.2
0.896	QP	H	20.8	19.3	0.0	40.1	0.1	28.6	28.5
1.165	QP	H	17.1	19.3	0.1	36.5	-3.5	26.3	29.8

-. Remark: “H” Horizontal, “V” Vertical

-. “*” Means Fundamental frequency

-. Emission Level at 3m [dB μ V/m] = Reading [dBμV] + Ant. Factor [dB/m] + Cable Loss [dB]

-. Margin [dB] = Emission Level at 300m [dBμV/m] – Limit at 300m [dBμV/m]

= Emission Level at 300m [dBμV/m] – Limit at 30m [dBμV/m]

-. Emission Level at 300m [dBμV/m] = Emission Level at 3m [dBμV/m] - 40log (300/3), 80 dB for up to 0.49 MHz

-. Emission Level at 30m [dBμV/m] = Emission Level at 3m [dBμV/m] - 40log (30/3), 40 dB for above 0.49 MHz, Below 30 MHz

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8.8.2 Spurious Radiated Emission below 1 GHz

The following table shows the highest levels of radiated emissions on both polarizations of horizontal and vertical.

Humidity Level : 49 % R.H. Temperature: 23 ℃

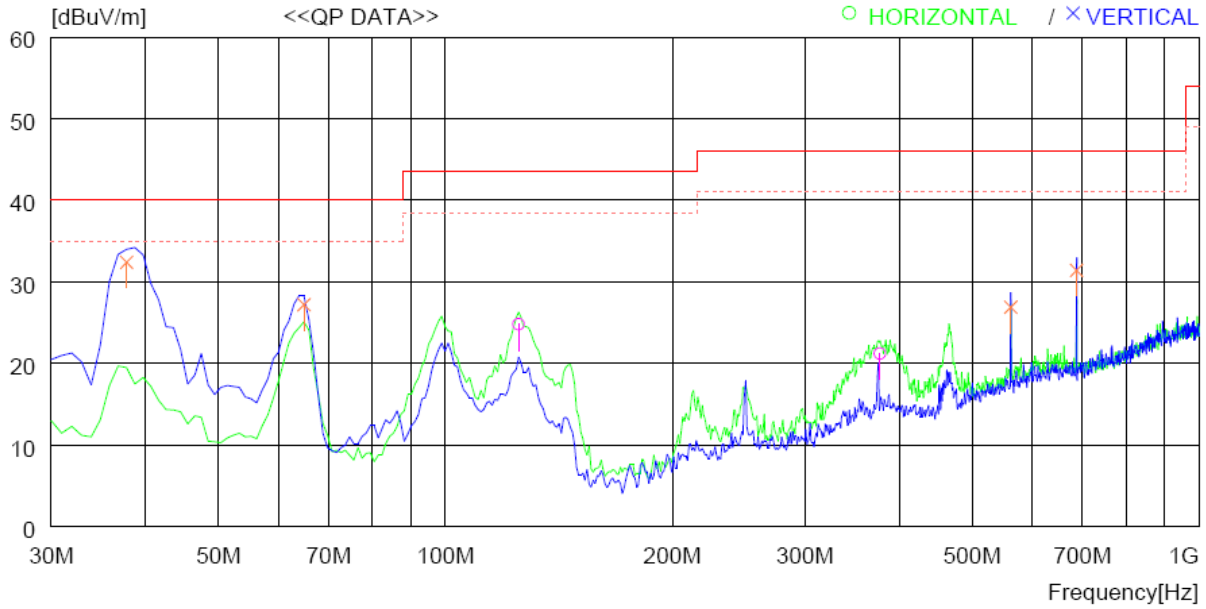
Limits apply to : FCC CFR 47, PART 15, SUBPART C, SECTION 15.209

Frequency range : 30 MHz ~ 1 000 MHz

Result : PASSED

EUT : EYES8 Date: January 02, 2020

Operating Condition : Transmitting Mode



No.	FREQ [MHz]	READING QP [dBuV]	ANT FACTOR [dB]	LOSS [dB]	GAIN [dB]	RESULT [dBuV/m]	LIMIT [dBuV/m]	MARGIN [dB]	ANTENNA [cm]	TABLE [DEG]
----- Horizontal ------										
1	125.060	46.2	9.9	1.4	32.7	24.8	43.5	18.7	400	302
2	377.260	36.2	15.4	2.3	32.7	21.2	46.0	24.8	100	268
----- Vertical ------										
3	37.760	49.9	14.3	0.9	32.7	32.4	40.0	7.6	100	94
4	64.920	48.0	11.0	0.9	32.7	27.2	40.0	12.8	100	359
5	562.529	37.4	19.6	2.9	33.0	26.9	46.0	19.1	100	359
6	687.655	40.2	20.7	3.4	32.9	31.4	46.0	14.6	200	305

Tested by: Sieon Lee / Assistant Manager

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8.9 Test data for Using Min. load (100 mA) (5V)

8.9.1 Spurious Radiated Emission Below 30 MHz

Humidity Level : 49 % R.H. Temperature: 23 ℃

Limits apply to : FCC CFR 47, PART 15, SUBPART C, SECTION 15.209

Frequency Range : 9 kHz ~ 30 MHz

Result : PASSED

EUT : EYES8 Date: January 02, 2020

Operating Condition : Transmitting Mode

Frequency (MHz)	Detector	Ant. Pol. (H/V)	Reading (dBμV)	Ant. Factor (dB/m)	Cable Loss	Emission Level at 3m (dBμV/m)	Emission Level at 300m (dBμV/m)	Limit at 300m (dBμV/m)	Margin (dB)
*0.134	QP	H	50.6	19.4	0.0	70.0	-10.0	25.1	35.1
0.389	QP	H	30.0	19.4	0.0	49.4	-30.6	15.8	46.4

Frequency (MHz)	Detector	Ant. Pol. (H/V)	Reading (dBμV)	Ant. Factor (dB/m)	Cable Loss	Emission Level at 3m (dBμV/m)	Emission Level at 30m (dBμV/m)	Limit at 30m (dBμV/m)	Margin (dB)
0.657	QP	H	21.5	19.3	0.0	40.8	0.8	31.3	30.5
0.926	QP	H	16.6	19.3	0.0	35.9	-4.1	28.3	32.4
1.195	QP	H	13.0	19.3	0.1	32.4	-7.6	26.1	33.7
1.463	QP	H	11.7	19.3	0.1	31.1	-8.9	24.3	33.2

-. Remark: “H” Horizontal, “V” Vertical

-. “*” Means Fundamental frequency

-. Emission Level at 3m [dB μ V/m] = Reading [dBμV] + Ant. Factor [dB/m] + Cable Loss [dB]

-. Margin [dB] = Emission Level at 300m [dBμV/m] – Limit at 300m [dBμV/m]

= Emission Level at 300m [dBμV/m] – Limit at 30m [dBμV/m]

-. Emission Level at 300m [dBμV/m] = Emission Level at 3m [dBμV/m] - 40log (300/3), 80 dB for up to 0.49 MHz

-. Emission Level at 30m [dBμV/m] = Emission Level at 3m [dBμV/m] - 40log (30/3), 40 dB for above 0.49 MHz, Below 30 MHz

Tested by: Sieon Lee / Assistant Manager

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8.9.2 Spurious Radiated Emission below 1 GHz

The following table shows the highest levels of radiated emissions on both polarizations of horizontal and vertical.

Humidity Level : 49 % R.H. Temperature: 23 ℃

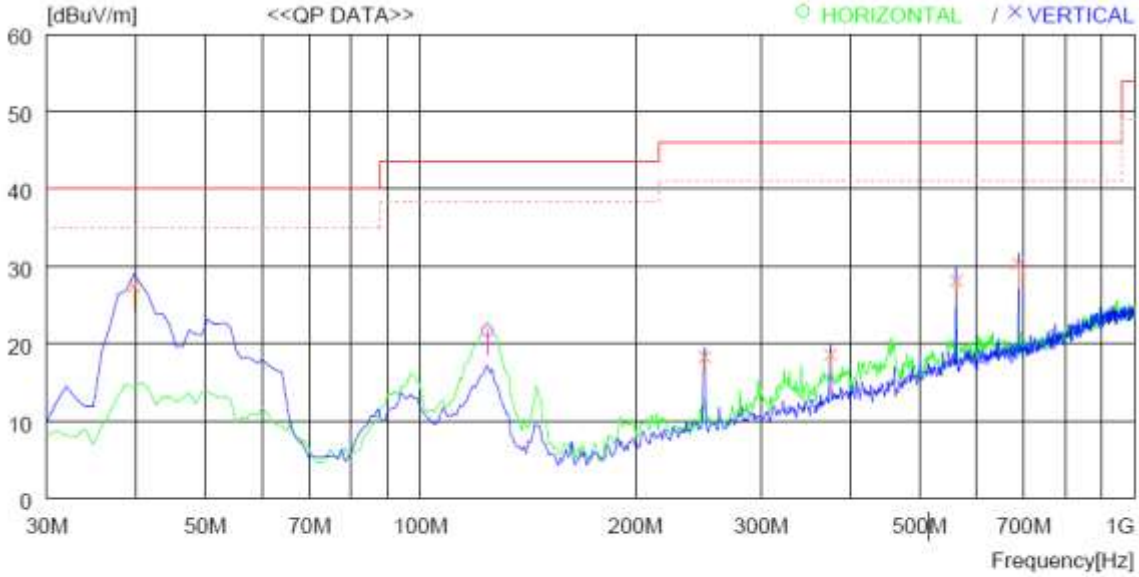
Limits apply to : FCC CFR 47, PART 15, SUBPART C, SECTION 15.209

Frequency range : 30 MHz ~ 1 000 MHz

Result : PASSED

EUT : EYES8 Date: January 02, 2020

Operating Condition : Transmitting Mode



No.	FREQ [MHz]	READING QP [dBuV]	ANT FACTOR [dB]	LOSS [dB]	GAIN [dB]	RESULT [dBuV/m]	LIMIT [dBuV/m]	MARGIN [dB]	ANTENNA [cm]	TABLE [DEG]
----- Horizontal ------										
1	124.090	43.0	10.0	1.4	32.7	21.7	43.5	21.8	400	359
----- Vertical ------										
2	39.700	44.6	14.6	0.9	32.7	27.4	40.0	12.6	100	70
3	250.190	36.1	12.9	2.0	32.7	18.3	46.0	27.7	100	359
4	375.320	33.6	15.4	2.3	32.7	18.6	46.0	27.4	100	151
5	562.529	38.6	19.6	2.9	33.0	28.1	46.0	17.9	100	359
6	687.655	39.1	20.7	3.4	32.9	30.3	46.0	15.7	200	0

Tested by: Sieon Lee / Assistant Manager

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8.10 Test data for Using Min. load (100 mA) (9V)

8.10.1 Spurious Radiated Emission Below 30 MHz

Humidity Level : 49 % R.H. Temperature: 23 ℃

Limits apply to : FCC CFR 47, PART 15, SUBPART C, SECTION 15.209

Frequency Range : 9 kHz ~ 30 MHz

Result : PASSED

EUT : EYES8 Date: January 02, 2020

Operating Condition : Transmitting Mode

Frequency (MHz)	Detector	Ant. Pol. (H/V)	Reading (dBμV)	Ant. Factor (dB/m)	Cable Loss	Emission Level at 3m (dBμV/m)	Emission Level at 300m (dBμV/m)	Limit at 300m (dBμV/m)	Margin (dB)
*0.136	QP	H	50.6	19.4	0.0	70.0	-10.0	24.9	34.9
0.389	QP	H	28.8	19.4	0.0	48.2	-31.8	15.8	47.6

Frequency (MHz)	Detector	Ant. Pol. (H/V)	Reading (dBμV)	Ant. Factor (dB/m)	Cable Loss	Emission Level at 3m (dBμV/m)	Emission Level at 300m (dBμV/m)	Limit at 300m (dBμV/m)	Margin (dB)
0.657	QP	H	21.8	19.3	0.0	41.1	1.1	31.3	30.2
0.926	QP	H	16.0	19.3	0.0	35.3	-4.7	28.3	33.0
1.225	QP	H	13.0	19.3	0.1	32.4	-7.6	25.8	33.4
1.493	QP	H	11.0	19.3	0.1	30.4	-9.6	24.1	33.7

-. Remark: “H” Horizontal, “V” Vertical

-. “*” Means Fundamental frequency

-. Emission Level at 3m [dB μ V/m] = Reading [dBμV] + Ant. Factor [dB/m] + Cable Loss [dB]

-. Margin [dB] = Emission Level at 300m [dBμV/m] – Limit at 300m [dBμV/m]

= Emission Level at 300m [dBμV/m] – Limit at 30m [dBμV/m]

-. Emission Level at 300m [dBμV/m] = Emission Level at 3m [dBμV/m] - 40log (300/3), 80 dB for up to 0.49 MHz

-. Emission Level at 30m [dBμV/m] = Emission Level at 3m [dBμV/m] - 40log (30/3), 40 dB for above 0.49 MHz, Below 30 MHz

Tested by: Sieon Lee / Assistant Manager

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8.10.2 Spurious Radiated Emission Below 1 GHz

The following table shows the highest levels of radiated emissions on both polarizations of horizontal and vertical.

Humidity Level : 49 % R.H. Temperature: 23 ℃

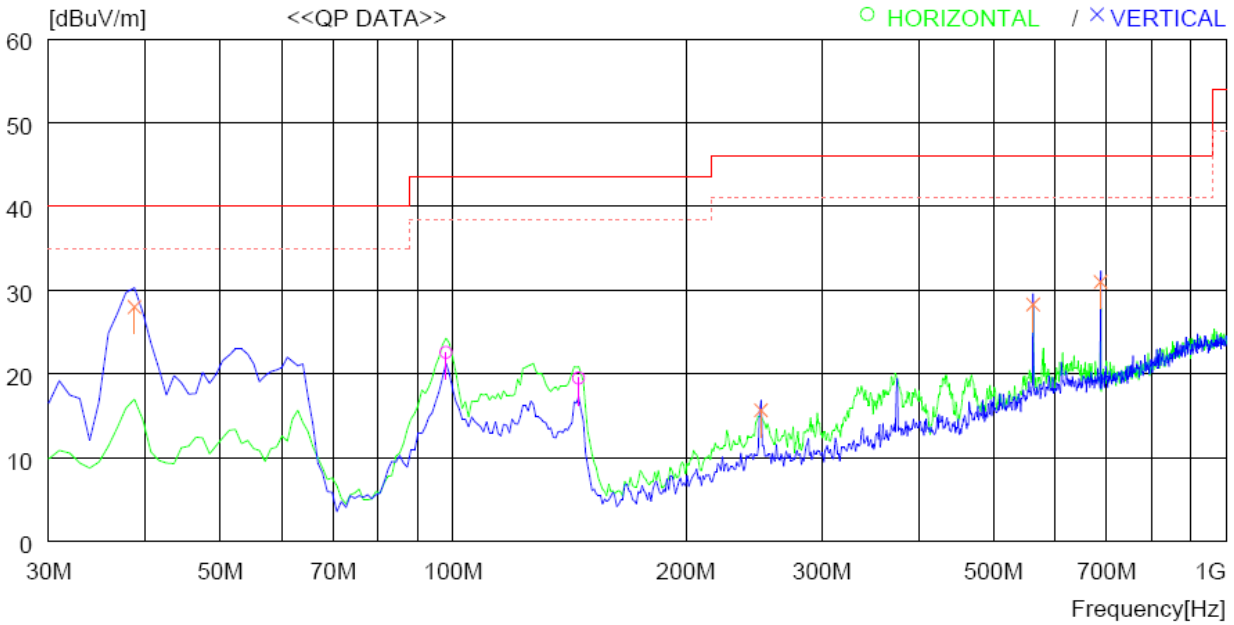
Limits apply to : FCC CFR 47, PART 15, SUBPART C, SECTION 15.209

Frequency range : 30 MHz ~ 1 000 MHz

Result : PASSED

EUT : EYES8 Date: January 02, 2020

Operating Condition : Transmitting Mode



No.	FREQ [MHz]	READING QP [dBuV]	ANT FACTOR [dB]	LOSS [dB]	GAIN [dB]	RESULT [dBuV/m]	LIMIT [dBuV/m]	MARGIN [dB]	ANTENNA [cm]	TABLE [DEG]
----- Horizontal ------										
1	97.900	41.8	12.3	1.2	32.7	22.6	43.5	20.9	300	341
2	145.430	42.2	8.5	1.5	32.7	19.5	43.5	24.0	300	359
----- Vertical ------										
3	38.730	45.3	14.5	0.9	32.7	28.0	40.0	12.0	100	0
4	250.190	33.5	12.9	2.0	32.7	15.7	46.0	30.3	200	358
5	562.529	38.8	19.6	2.9	33.0	28.3	46.0	17.7	100	103
6	687.655	39.8	20.7	3.4	32.9	31.0	46.0	15.0	200	359

Tested by: Sieon Lee / Assistant Manager

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8.11 Test data for Using Min. load (100 mA) (12V)

8.11.1 Spurious Radiated Emission Below 30 MHz

Humidity Level : 49 % R.H. Temperature: 23 ℃

Limits apply to : FCC CFR 47, PART 15, SUBPART C, SECTION 15.209

Frequency Range : 9 kHz ~ 30 MHz

Result : PASSED

EUT : EYES8 Date: January 02, 2020

Operating Condition : Transmitting Mode

Frequency (MHz)	Detector	Ant. Pol. (H/V)	Reading (dBμV)	Ant. Factor (dB/m)	Cable Loss	Emission Level at 3m (dBμV/m)	Emission Level at 300m (dBμV/m)	Limit at 300m (dBμV/m)	Margin (dB)
*0.136	QP	H	51.4	19.4	0.0	70.8	-9.2	24.9	34.1
0.389	QP	H	29.1	19.4	0.0	48.5	-31.5	15.8	47.3

Frequency (MHz)	Detector	Ant. Pol. (H/V)	Reading (dBμV)	Ant. Factor (dB/m)	Cable Loss	Emission Level at 3m (dBμV/m)	Emission Level at 300m (dBμV/m)	Limit at 300m (dBμV/m)	Margin (dB)
0.657	QP	H	22.7	19.3	0.0	42.0	2.0	31.3	29.3
0.926	QP	H	16.6	19.3	0.0	35.9	-4.1	28.3	32.4
1.225	QP	H	14.3	19.3	0.1	33.7	-6.3	25.8	32.1
1.493	QP	H	13.0	19.3	0.1	32.4	-7.6	24.1	31.7

-. Remark: “H” Horizontal, “V” Vertical

-. “*” Means Fundamental frequency

-. Emission Level at 3m [dB μ V/m] = Reading [dBμV] + Ant. Factor [dB/m] + Cable Loss [dB]

-. Margin [dB] = Emission Level at 300m [dBμV/m] – Limit at 300m [dBμV/m]

= Emission Level at 300m [dBμV/m] – Limit at 30m [dBμV/m]

-. Emission Level at 300m [dBμV/m] = Emission Level at 3m [dBμV/m] - 40log (300/3), 80 dB for up to 0.49 MHz

-. Emission Level at 30m [dBμV/m] = Emission Level at 3m [dBμV/m] - 40log (30/3), 40 dB for above 0.49 MHz, Below 30 MHz

Tested by: Sieon Lee / Assistant Manager

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8.11.2 Spurious Radiated Emission Below 1 GHz

The following table shows the highest levels of radiated emissions on both polarizations of horizontal and vertical.

Humidity Level : 49 % R.H. Temperature: 23 ℃

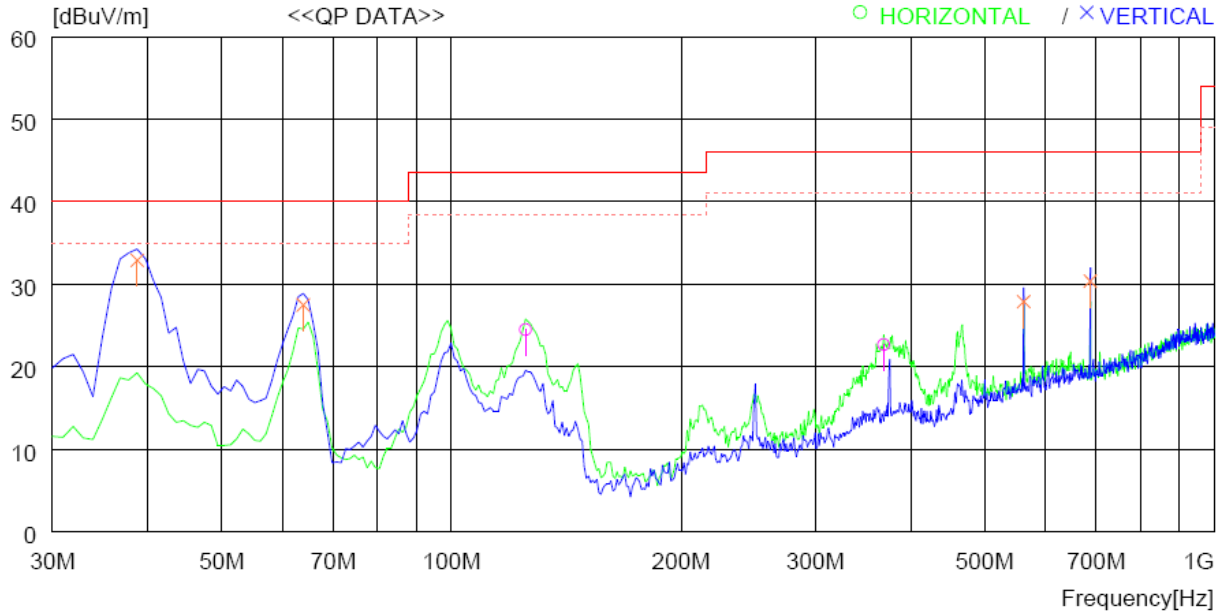
Limits apply to : FCC CFR 47, PART 15, SUBPART C, SECTION 15.209

Frequency range : 30 MHz ~ 1 000 MHz

Result : PASSED

EUT : EYES8 Date: January 02, 2020

Operating Condition : Transmitting Mode



No.	FREQ [MHz]	READING QP [dBuV]	ANT FACTOR [dB]	LOSS [dB]	GAIN [dB]	RESULT [dBuV/m]	LIMIT [dBuV/m]	MARGIN [dB]	ANTENNA [cm]	TABLE [DEG]
----- Horizontal ------										
1	125.060	45.9	9.9	1.4	32.7	24.5	43.5	19.0	400	287
2	368.530	38.0	15.1	2.3	32.7	22.7	46.0	23.3	100	261
----- Vertical ------										
3	38.730	50.2	14.5	0.9	32.7	32.9	40.0	7.1	100	359
4	63.950	47.9	11.4	0.9	32.7	27.5	40.0	12.5	100	132
5	562.529	38.4	19.6	2.9	33.0	27.9	46.0	18.1	100	109
6	687.655	39.2	20.7	3.4	32.9	30.4	46.0	15.6	200	0

Tested by: Sieon Lee / Assistant Manager

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9. CONDUCTED EMISSION TEST

9.1 Operating environment

Temperature	:	23 ℃
Relative humidity	:	49 % R.H

9.2 Test set-up

The EUT was placed on a wooden table, 0.8 m height above the floor. Power was fed to the EUT through a 50 Ω / 50 μH + 5 Ω Artificial Mains Network (AMN). The ground plane was electrically bonded to the reference ground system and all power lines were filtered from ambient.

9.3 Test equipment used

All test equipment used is calibrated on a regular basis.

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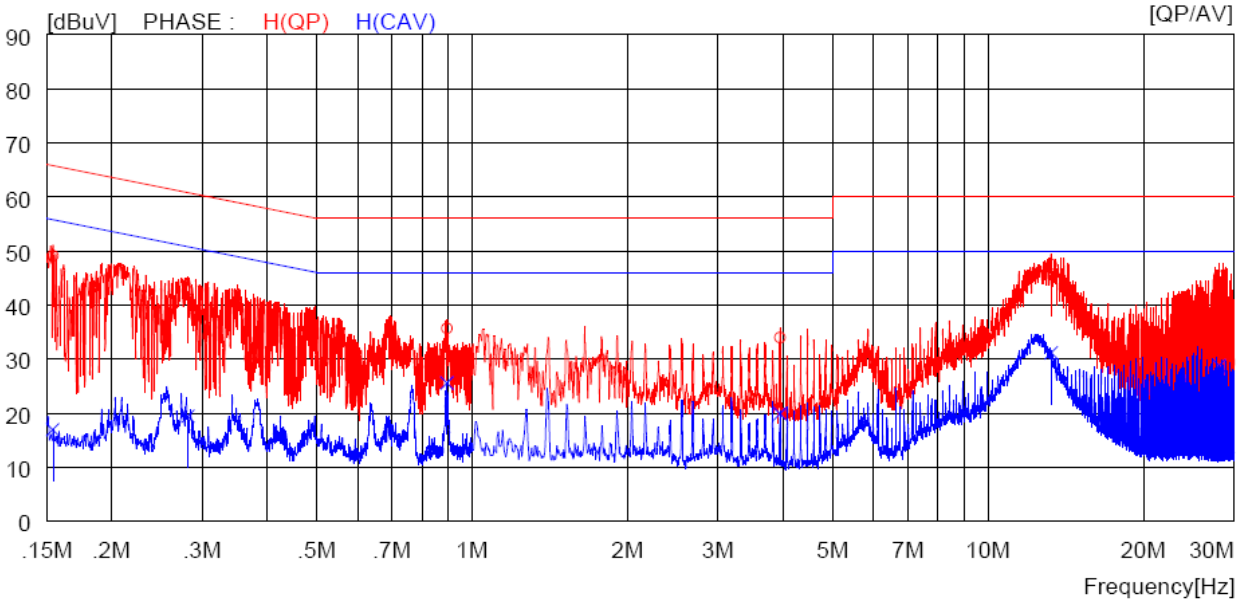
9.4 Test data for 5V

-. Test Date : January 03, 2020

-. Resolution bandwidth : 9 kHz

-. Frequency range : 0.15 MHz ~ 30 MHz

-. Tested Line : HOT LINE



NO	FREQ [MHz]	READING QP [dBuV]	READING AV [dBuV]	C.FACTOR [dB]	RESULT QP [dBuV]	RESULT AV [dBuV]	LIMIT QP [dBuV]	LIMIT AV [dBuV]	MARGIN QP [dBuV]	MARGIN AV [dBuV]	PHASE
1	0.15400	39.1	----	10.0	49.1	----	65.8	----	16.7	----	H(QP)
2	0.28100	32.6	----	10.0	42.6	----	60.8	----	18.2	----	H(QP)
3	0.89400	25.7	----	10.0	35.7	----	56.0	----	20.3	----	H(QP)
4	3.95200	23.9	----	10.1	34.0	----	56.0	----	22.0	----	H(QP)
5	13.27000	37.0	----	10.5	47.5	----	60.0	----	12.5	----	H(QP)
6	28.06000	34.6	----	10.8	45.4	----	60.0	----	14.6	----	H(QP)
7	0.15400	----	7.0	10.0	----	17.0	----	55.8	----	38.8	H(CAV)
8	0.28100	----	9.5	10.0	----	19.5	----	50.8	----	31.3	H(CAV)
9	0.89400	----	15.6	10.0	----	25.6	----	46.0	----	20.4	H(CAV)
10	3.95200	----	9.9	10.1	----	20.0	----	46.0	----	26.0	H(CAV)
11	13.27000	----	20.7	10.5	----	31.2	----	50.0	----	18.8	H(CAV)
12	28.06000	----	18.0	10.8	----	28.8	----	50.0	----	21.2	H(CAV)

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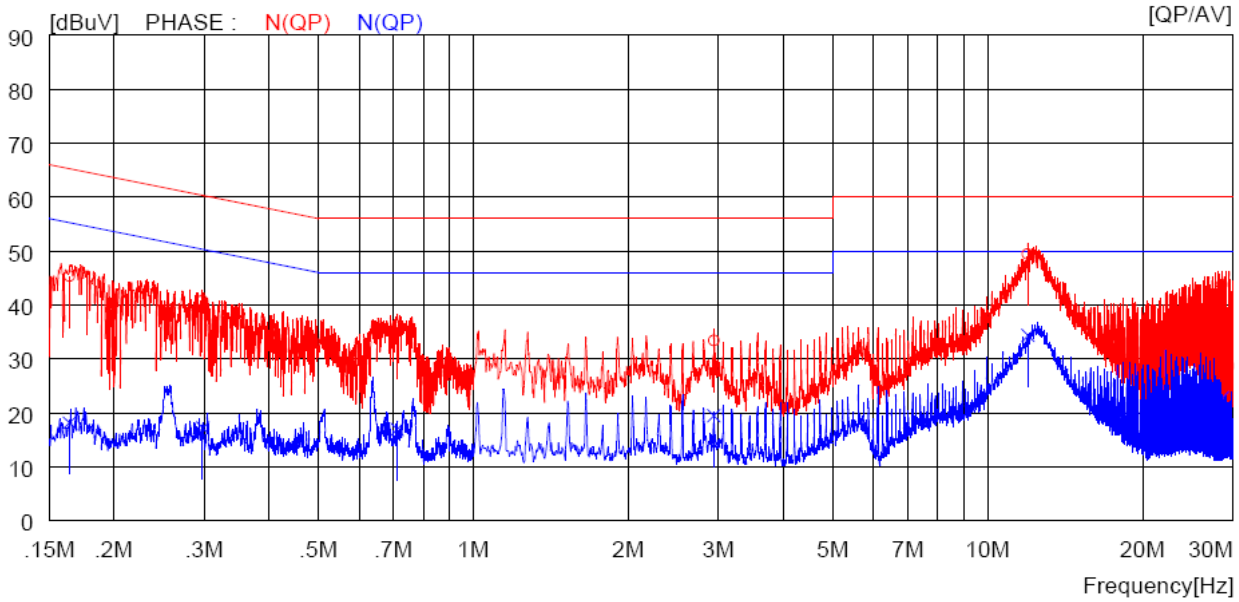
-. Tested Line : NEUTRAL LINE



NO	FREQ [MHz]	READING QP [dBuV]	READING AV [dBuV]	C.FACTOR [dB]	RESULT QP [dBuV]	RESULT AV [dBuV]	LIMIT QP [dBuV]	LIMIT AV [dBuV]	MARGIN QP [dBuV]	MARGIN AV [dBuV]	PHASE
1	0.16400	35.3	----	10.0	45.3	----	65.3	----	20.0	----	N(QP)
2	0.29800	30.8	----	10.0	40.8	----	60.3	----	19.5	----	N(QP)
3	0.71200	25.9	----	10.0	35.9	----	56.0	----	20.1	----	N(QP)
4	2.93600	23.3	----	10.1	33.4	----	56.0	----	22.6	----	N(QP)
5	11.98000	39.0	----	10.5	49.5	----	60.0	----	10.5	----	N(QP)
6	28.58000	33.0	----	10.8	43.8	----	60.0	----	16.2	----	N(QP)
7	0.16400	----	8.2	10.0	----	18.2	----	55.3	----	37.1	N(CAV)
8	0.29800	----	7.2	10.0	----	17.2	----	50.3	----	33.1	N(CAV)
9	0.71200	----	7.0	10.0	----	17.0	----	46.0	----	29.0	N(CAV)
10	2.93600	----	9.4	10.1	----	19.5	----	46.0	----	26.5	N(CAV)
11	11.98000	----	23.9	10.5	----	34.4	----	50.0	----	15.6	N(CAV)
12	28.58000	----	12.0	10.8	----	22.8	----	50.0	----	27.2	N(CAV)

Remark: Margin (dB) = Limit – Level (Result)

The emission level in above table is included the transducer factor that means insertion loss (LISN), cable loss and attenuator.

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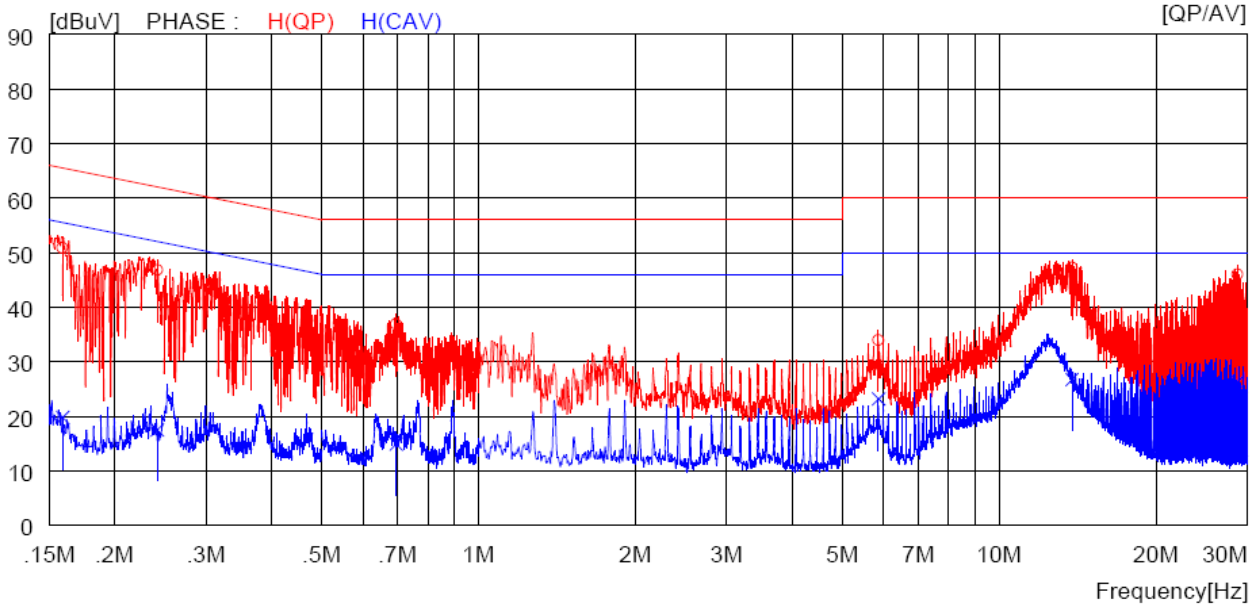
9.5 Test data for 9V

-. Test Date : January 03, 2020

-. Resolution bandwidth : 9 kHz

-. Frequency range : 0.15 MHz ~ 30 MHz

-. Tested Line : HOT LINE



NO	FREQ [MHz]	READING QP [dBuV]	READING AV [dBuV]	C.FACTOR [dB]	RESULT QP [dBuV]	RESULT AV [dBuV]	LIMIT QP [dBuV]	LIMIT AV [dBuV]	MARGIN QP [dBuV]	MARGIN AV [dBuV]	PHASE
1	0.15900	40.9	----	10.0	50.9	----	65.5	----	14.6	----	H(QP)
2	0.24200	36.8	----	10.0	46.8	----	62.0	----	15.2	----	H(QP)
3	0.69500	26.9	----	10.0	36.9	----	56.0	----	19.1	----	H(QP)
4	5.86500	23.8	----	10.2	34.0	----	60.0	----	26.0	----	H(QP)
5	13.80000	36.8	----	10.5	47.3	----	60.0	----	12.7	----	H(QP)
6	28.70000	35.2	----	10.8	46.0	----	60.0	----	14.0	----	H(QP)
7	0.15900	----	9.8	10.0	----	19.8	----	55.5	----	35.7	H(CAV)
8	0.24200	----	7.6	10.0	----	17.6	----	52.0	----	34.4	H(CAV)
9	0.69500	----	4.9	10.0	----	14.9	----	46.0	----	31.1	H(CAV)
10	5.86500	----	13.0	10.2	----	23.2	----	50.0	----	26.8	H(CAV)
11	13.80000	----	16.3	10.5	----	26.8	----	50.0	----	23.2	H(CAV)
12	28.70000	----	15.5	10.8	----	26.3	----	50.0	----	23.7	H(CAV)

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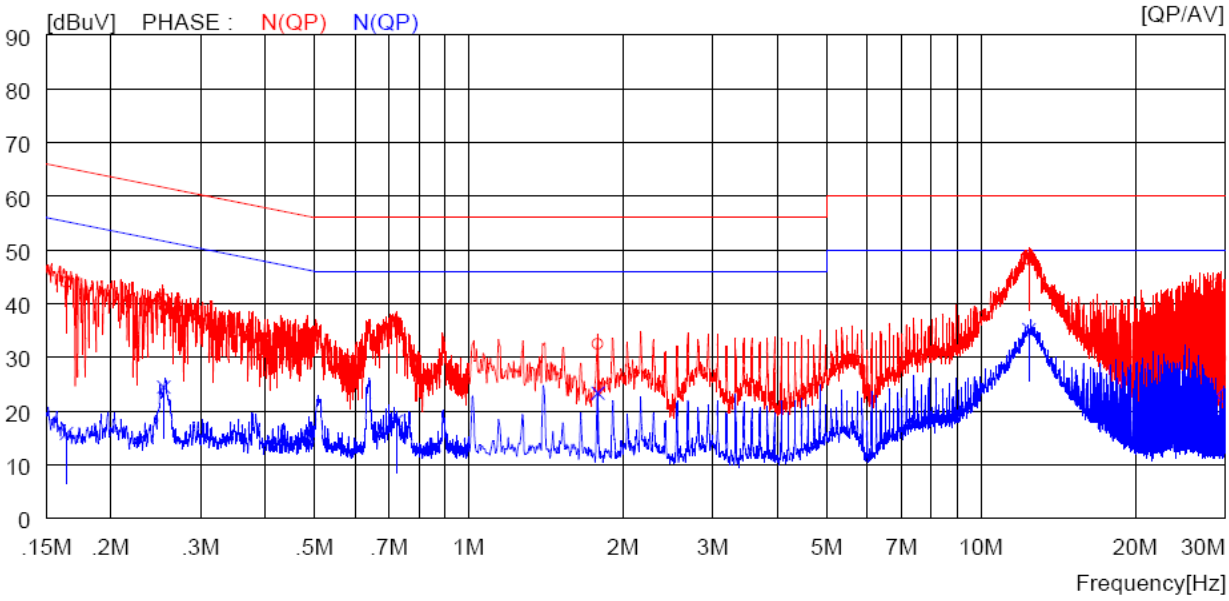
-. Tested Line : NEUTRAL LINE



NO	FREQ [MHz]	READING QP [dBuV]	READING AV [dBuV]	C.FACTOR [dB]	RESULT QP [dBuV]	RESULT AV [dBuV]	LIMIT QP [dBuV]	LIMIT AV [dBuV]	MARGIN QP [dBuV]	MARGIN AV [dBuV]	PHASE
1	0.16400	34.0	----	10.0	44.0	----	65.3	----	21.3	----	N(QP)
2	0.25400	30.9	----	10.0	40.9	----	61.6	----	20.7	----	N(QP)
3	0.72200	26.6	----	10.0	36.6	----	56.0	----	19.4	----	N(QP)
4	1.78800	22.4	----	10.1	32.5	----	56.0	----	23.5	----	N(QP)
5	12.42000	37.7	----	10.5	48.2	----	60.0	----	11.8	----	N(QP)
6	28.83000	32.9	----	10.8	43.7	----	60.0	----	16.3	----	N(QP)
7	0.16400	----	5.9	10.0	----	15.9	----	55.3	----	39.4	N(CAV)
8	0.25400	----	14.5	10.0	----	24.5	----	51.6	----	27.1	N(CAV)
9	0.72200	----	8.1	10.0	----	18.1	----	46.0	----	27.9	N(CAV)
10	1.78800	----	13.3	10.1	----	23.4	----	46.0	----	22.6	N(CAV)
11	12.42000	----	24.7	10.5	----	35.2	----	50.0	----	14.8	N(CAV)
12	28.83000	----	12.1	10.8	----	22.9	----	50.0	----	27.1	N(CAV)

Remark: Margin (dB) = Limit – Level (Result)

The emission level in above table is included the transducer factor that means insertion loss (LISN), cable loss and attenuator.

Tested by: Sieon Lee / Assistant Manager

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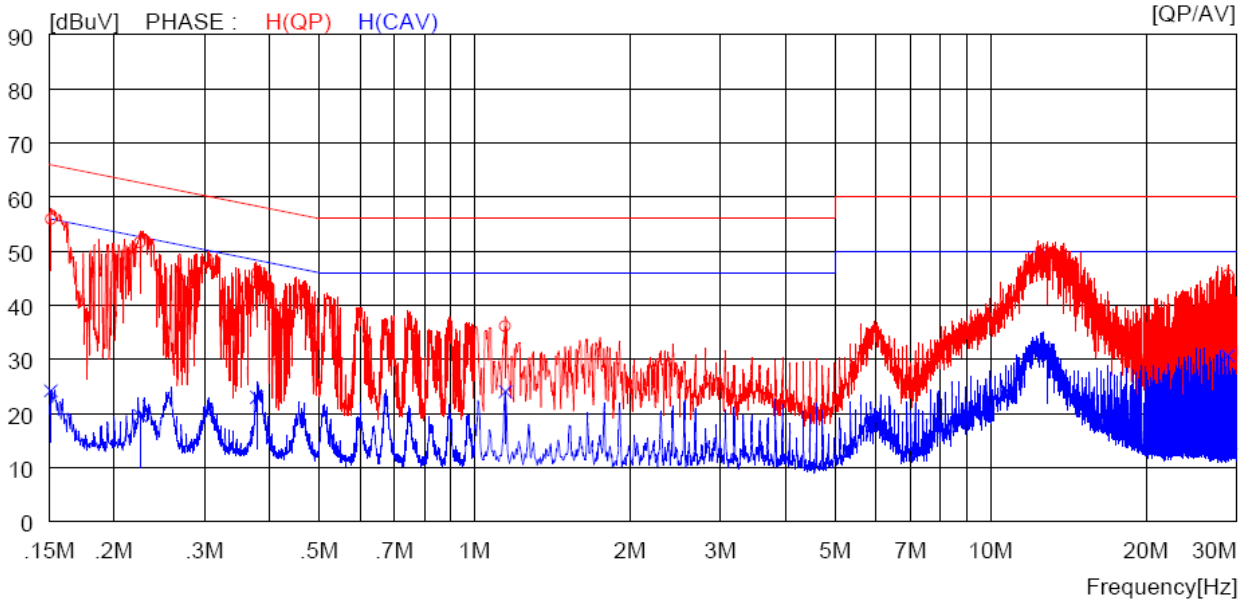
9.6 Test data for 12V

-. Test Date : January 03, 2020

-. Resolution bandwidth : 9 kHz

-. Frequency range : 0.15 MHz ~ 30 MHz

-. Tested Line : HOT LINE



NO	FREQ [MHz]	READING QP [dBuV]	READING AV [dBuV]	C.FACTOR [dB]	RESULT QP [dBuV]	RESULT AV [dBuV]	LIMIT QP [dBuV]	LIMIT AV [dBuV]	MARGIN QP [dBuV]	MARGIN AV [dBuV]	PHASE
1	0.15100	45.9	----	10.0	55.9	----	65.9	----	10.0	----	H(QP)
2	0.22500	41.6	----	10.0	51.6	----	62.6	----	11.0	----	H(QP)
3	0.37900	35.9	----	10.0	45.9	----	58.3	----	12.4	----	H(QP)
4	1.14800	26.0	----	10.1	36.1	----	56.0	----	19.9	----	H(QP)
5	12.90000	39.3	----	10.5	49.8	----	60.0	----	10.2	----	H(QP)
6	28.83000	34.8	----	10.8	45.6	----	60.0	----	14.4	----	H(QP)
7	0.15100	----	14.2	10.0	----	24.2	----	55.9	----	31.7	H(CAV)
8	0.22500	----	9.6	10.0	----	19.6	----	52.6	----	33.0	H(CAV)
9	0.37900	----	13.0	10.0	----	23.0	----	48.3	----	25.3	H(CAV)
10	1.14800	----	13.9	10.1	----	24.0	----	46.0	----	22.0	H(CAV)
11	12.90000	----	20.9	10.5	----	31.4	----	50.0	----	18.6	H(CAV)
12	28.83000	----	19.9	10.8	----	30.7	----	50.0	----	19.3	H(CAV)

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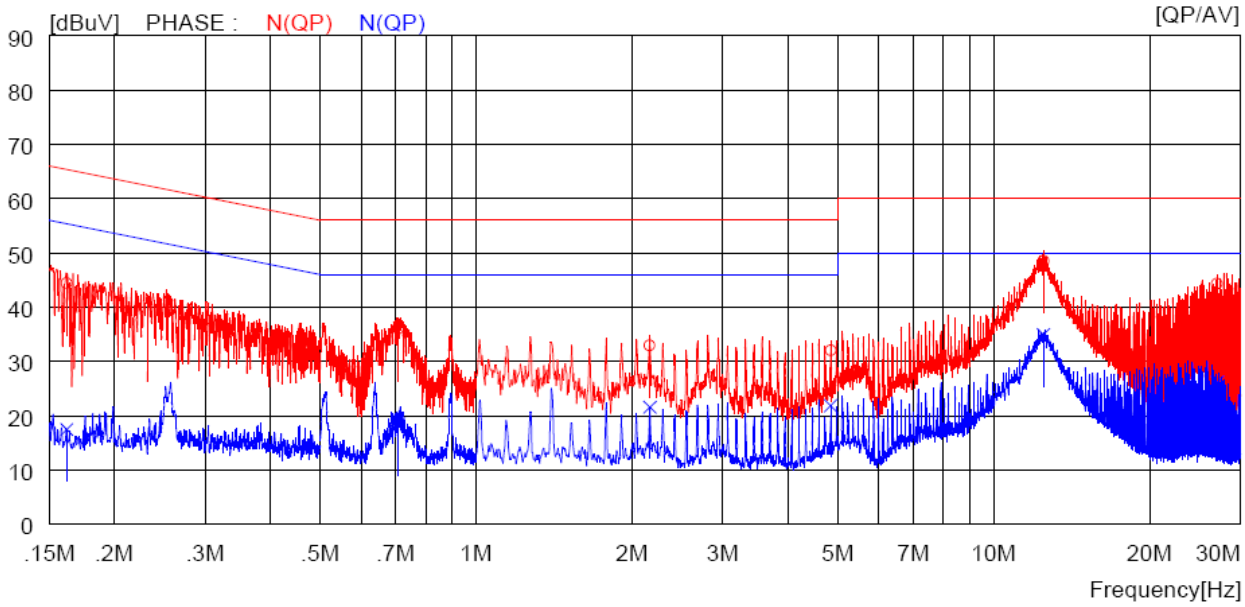
-. Tested Line : NEUTRAL LINE



NO	FREQ [MHz]	READING QP [dBuV]	READING AV [dBuV]	C.FACTOR [dB]	RESULT QP [dBuV]	RESULT AV [dBuV]	LIMIT QP [dBuV]	LIMIT AV [dBuV]	MARGIN QP [dBuV]	MARGIN AV [dBuV]	PHASE
1	0.16200	34.4	----	10.0	44.4	----	65.4	----	21.0	----	N(QP)
2	0.70900	26.0	----	10.0	36.0	----	56.0	----	20.0	----	N(QP)
3	2.16800	22.9	----	10.1	33.0	----	56.0	----	23.0	----	N(QP)
4	4.84800	22.0	----	10.1	32.1	----	56.0	----	23.9	----	N(QP)
5	12.50000	38.0	----	10.5	48.5	----	60.0	----	11.5	----	N(QP)
6	27.04000	33.5	----	10.8	44.3	----	60.0	----	15.7	----	N(QP)
7	0.16200	----	7.5	10.0	----	17.5	----	55.4	----	37.9	N(CAV)
8	0.70900	----	8.5	10.0	----	18.5	----	46.0	----	27.5	N(CAV)
9	2.16800	----	11.5	10.1	----	21.6	----	46.0	----	24.4	N(CAV)
10	4.84800	----	11.8	10.1	----	21.9	----	46.0	----	24.1	N(CAV)
11	12.50000	----	24.4	10.5	----	34.9	----	50.0	----	15.1	N(CAV)
12	27.04000	----	15.4	10.8	----	26.2	----	50.0	----	23.8	N(CAV)

Remark: Margin (dB) = Limit – Level (Result)

The emission level in above table is included the transducer factor that means insertion loss (LISN), cable loss and attenuator.

Tested by: Sieon Lee / Assistant Manager

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10. LIST OF TEST EQUIPMENT

No.	EQUIPMENTS	MFR.	MODEL	SER. NO.	LAST CAL	DUE CAL	USE
1	Spectrum analyzer	R/S	FSV30	101199	Mar. 11, 2019	One Year	■
2	Test receiver	R/S	ESCI	101420	Mar. 28, 2019	One Year	■
3	Amplifier	Sonoma Instrument	310N	392756	Oct. 16, 2019	One Year	■
4	TRILOG Broadband Antenna	Schwarzbeck	VULB9163	9163-225	Sep. 17, 2018	Two Year	■
5	Controller	Innco Systems GmbH	CO3000	1026/40960617/P	N/A	N/A	■
6	Turn Table	Innco Systems GmbH	DT2000-2t	930611	N/A	N/A	■
7	LISN	Schwarzbeck	NSLK8126	8126-404	Mar. 19, 2019	One Year	■
		Schwarzbeck	NSLK8128	8128-216	Mar. 20, 2019	One Year	■
8	AMN	EMCO	3825/2	9109-1867	Mar. 27, 2019	One Year	■
9	Antenna Master	Innco Systems GmbH	MA-4640-XPET	MA4640/652/43100318/P	N/A	N/A	■
10	Loop Antenna	Schwarzbeck	FMZB 1513	1513-235	May. 13, 2018	Two Years	■
11	Environmental Test Chamber	ESPEC	PSL-2KP	14009407	Feb. 22, 2019	One Year	■
12	DC Power Supply	LG Precision Co.,Ltd	GP-4303D	5071069	Jan. 10, 2019	One Year	■

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