



FCC TEST REPORT

FCC ID:2AFJI-B4P0JA

Report Number..... : ZKT-2303011146E

Date of Test..... Mar. 07, 2023 to Mar. 13, 2023

Date of issue..... : Mar. 14, 2023

Total number of pages..... 13

Test Result : PASS

Testing Laboratory..... : Shenzhen ZKT Technology Co., Ltd.

Address : 1/F, No. 101, Building B, No. 6, Tangwei Community Industrial Avenue, Fuhai Street, Bao'an District, Shenzhen, China

Applicant's name : QUANTUM CREATIONS, LLC

Address : 15705 NW 13th Ave Miami Gardens, FL 33169

Manufacturer's name : QUTHC Limited

Address : 7th Floor, Building C, Longsheng Industrial Park, No. 11 of Qiuchang Xihu Village, Huiyang District, Huizhou City, Guangdong province (516211) P.R.China

Test specification:

Standard..... : FCC Part 15 B
ANSI C63.4:2014

Test procedure..... : /

Non-standard test method : N/A

Test Report Form No..... : TRF-EL-117_V0

Test Report Form(s) Originator..... : ZKT Testing

Master TRF : Dated: 2020-01-06

This device described above has been tested by ZKT, and the test results show that the equipment under test (EUT) is in compliance with the FCC requirements. And it is applicable only to the tested sample identified in the report.

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Product name..... : BYTE4-Pro, EVERGLADES 2

Trademark : AZULLE/Simply NUC

Model/Type reference..... : B4P0JA

NUC10EGC

Ratings..... : Input: DC 12V/2A, 24W

Adapter: AC 100-240V ~ 50/60Hz, 0.6A Max



Testing procedure and testing location:

Testing Laboratory.....: **Shenzhen ZKT Technology Co., Ltd.**

Address.....: 1/F, No. 101, Building B, No. 6, Tangwei Community
Industrial Avenue, Fuhai Street, Bao'an District,
Shenzhen, China

Tested by (name + signature).....: Jim Liu

Jim Liu

Reviewer (name + signature).....: Jackson Fang

Jackson Fang

Approved (name + signature).....: Lake Xie





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1.VERSION

Report No.	Version	Description	Approved
ZKT-2303011146E	Rev.01	Initial issue of report	Mar. 14, 2023



2.GENERAL INFORMATION

2.1 Description of Device (EUT)

EUT	BYTE4-Pro, EVERGLADES 2
Trademark	: AZULLE/Simply NUC
Model Number	B4P0JA NUC10EGC
Model Difference	: Only the model name is different
Power Supply	Input: DC 12V/2A, 24W Adapter: AC 100-240V ~ 50/60Hz, 0.6A Max

2.2 Tested System Details

None.

2.3 Test Facility

Shenzhen ZKT Technology Co., Ltd.
Add. : 1/F, No. 101, Building B, No. 6, Tangwei Community Industrial Avenue, Fuhai Street, Bao'an District, Shenzhen, China

FCC Test Firm Registration Number: 692225
Designation Number: CN1299
IC Registered No.: 27033

2.4 MEASUREMENT UNCERTAINTY

Where relevant, the following measurement uncertainty levels have been estimated for tests performed on the Product as specified in CISPR 16-4-2. This uncertainty represents an expanded uncertainty expressed at approximately the 95% confidence level using a coverage factor of k=2.

Test item	Value (dB)
Conducted Emission (150K-30MHZ)	3.20
Radiated disturbance30MHz-1000MHz	4.80



2.5 Test Instrument Used

Conducted emissions Test

Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Last calibration	Calibrated until
1	LISN	R&S	ENV216	101471	Oct. 21, 2022	Oct. 20, 2023
2	LISN	CYBERTEK	EM5040A	E1850400149	Oct. 21, 2022	Oct. 20, 2023
3	Test Cable	N/A	C-01	N/A	Oct. 21, 2022	Oct. 20, 2023
4	Test Cable	N/A	C-02	N/A	Oct. 21, 2022	Oct. 20, 2023
5	Test Cable	N/A	C-03	N/A	Oct. 21, 2022	Oct. 20, 2023
6	EMI Test Receiver	R&S	ESCI3	101393	Oct. 28, 2022	Oct. 27, 2023
7	Triple-Loop Antenna	N/A	RF300	N/A	Oct. 28, 2022	Oct. 27, 2023
8	Absorbing Clamp	DZ	ZN23201	15034	Oct. 31, 2022	Oct. 30, 2023
9	EMC Software	Frad	EZ-EMC	Ver.EMC-CON 3A1.1	\	\

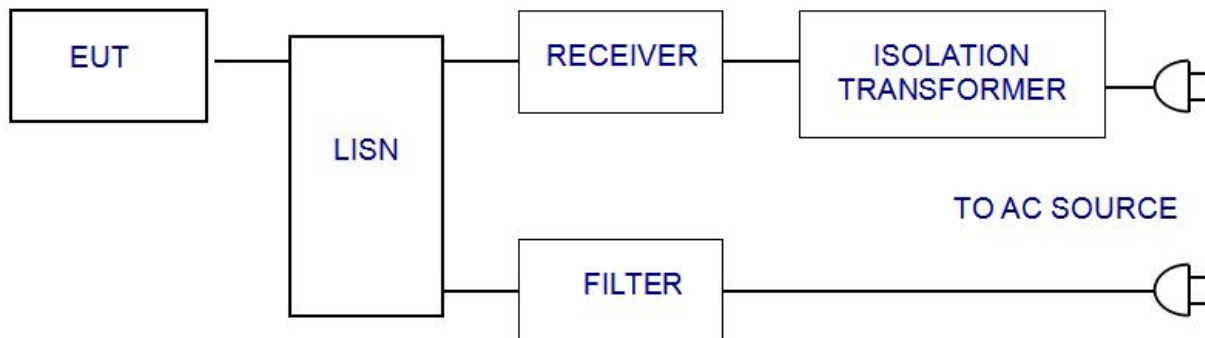
Radiated emissions Test (966 chamber)

Item	Equipment	Manufacturer	Type No.	Serial No.	Last calibration	Calibrated until
1	Spectrum Analyzer (9kHz-26.5GHz)	KEYSIGHT	9020A	MY55370835	Oct. 28, 2022	Oct. 27, 2023
2	Spectrum Analyzer (10kHz-39.9GHz)	R&S	FSQ	100363	Oct. 28, 2022	Oct. 27, 2023
3	EMI Test Receiver (9kHz-7GHz)	R&S	ESCI7	101169	Oct. 28, 2022	Oct. 27, 2023
4	Bilog Antenna (30MHz-1500MHz)	Schwarzbeck	VULB9168	N/A	Nov. 02, 2022	Nov. 01, 2023
5	Horn Antenna (1GHz-18GHz)	Agilent	AH-118	071145	Nov. 01, 2022	Oct. 31, 2023
6	Horn Antenna (15GHz-40GHz)	A.H.System	SAS-574	588	Oct. 28, 2022	Oct. 27, 2023
7	Loop Antenna	TESEQ	HLA6121	58357	Nov. 01, 2022	Oct. 31, 2023
8	Amplifier (30-1000MHz)	EM Electronics	EM330 Amplifier	060747	Nov. 15, 2022	Nov. 14, 2023
9	Amplifier (1GHz-26.5GHz)	Agilent	8449B	3008A00315	Oct. 28, 2022	Oct. 27, 2023
10	Amplifier (500MHz-40GHz)	全聚达	DLE-161	097	Oct. 28, 2022	Oct. 27, 2023
11	Test Cable	N/A	R-01	N/A	Oct. 28, 2022	Oct. 27, 2023
12	Test Cable	N/A	R-02	N/A	Oct. 28, 2022	Oct. 27, 2023
13	Test Cable	N/A	R-03	N/A	Oct. 28, 2022	Oct. 27, 2023
14	Magnetic Field Probe Tester	Narda	ELT-400	0-0344	Nov. 15, 2022	Nov. 14, 2023
15	D.C. Power Supply	LongWei	TPR-6405D	N/A	\	\
16	EMC Software	Frad	EZ-EMC	Ver.EMC-CO N 3A1.1	\	\
17	Turntable	MF	MF-7802BS	N/A	\	\
18	Antenna tower	MF	MF-7802BS	N/A	\	\



3.CONDUCTED EMISSION AT THE MAINS TERMINALS TEST

3.1 Block Diagram Of Test Setup



3.2 Test Standard

FCC PART 15 B

3.3 Power Line Conducted Emission Limit

Frequency MHz	Limits dB(μV)	
	Quasi-peak Level	Average Level
0.15 ~ 0.50	66 ~ 56*	56 ~ 46*
0.50 ~ 5.00	56	46
5.00 ~ 30.00	60	50

Notes: 1. *Decreasing linearly with logarithm of frequency.
2. The lower limit shall apply at the transition frequencies.

3.4 EUT Configuration on Test

The following equipments are installed on conducted emission test to meet FCC PART 15 B requirement and operating in a manner which tends to maximize its emission characteristics in a normal application.

3.5 Operating Condition of EUT

3.5.1 Setup the EUT and simulators as shown in Section 3.1.

3.5.2 Turn on the power of all equipments.

3.5.3 Let the EUT work in test modes and test it.

3.6 Test Procedure

The EUT is put on the ground and connected to the AC mains through a Artificial Mains Network (AMN). This provided a 50ohm coupling impedance for the tested equipments. Both sides of AC line are checked to find out the maximum conducted emission levels according to the **FCC PART 15 B** regulations during conducted emission test.

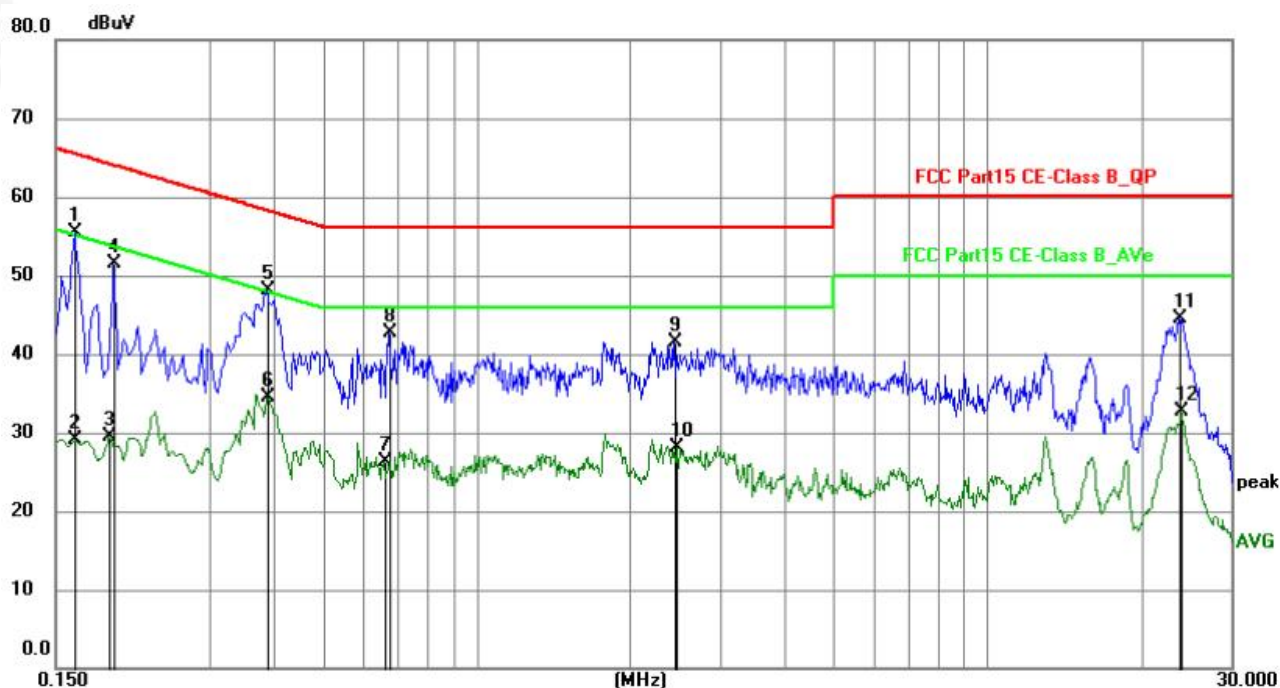
The bandwidth of the test receiver (R&S Test Receiver ESCI) is set at 10KHz.

The frequency range from 150 KHz to 30 MHz is investigated.



3.7 Test Result

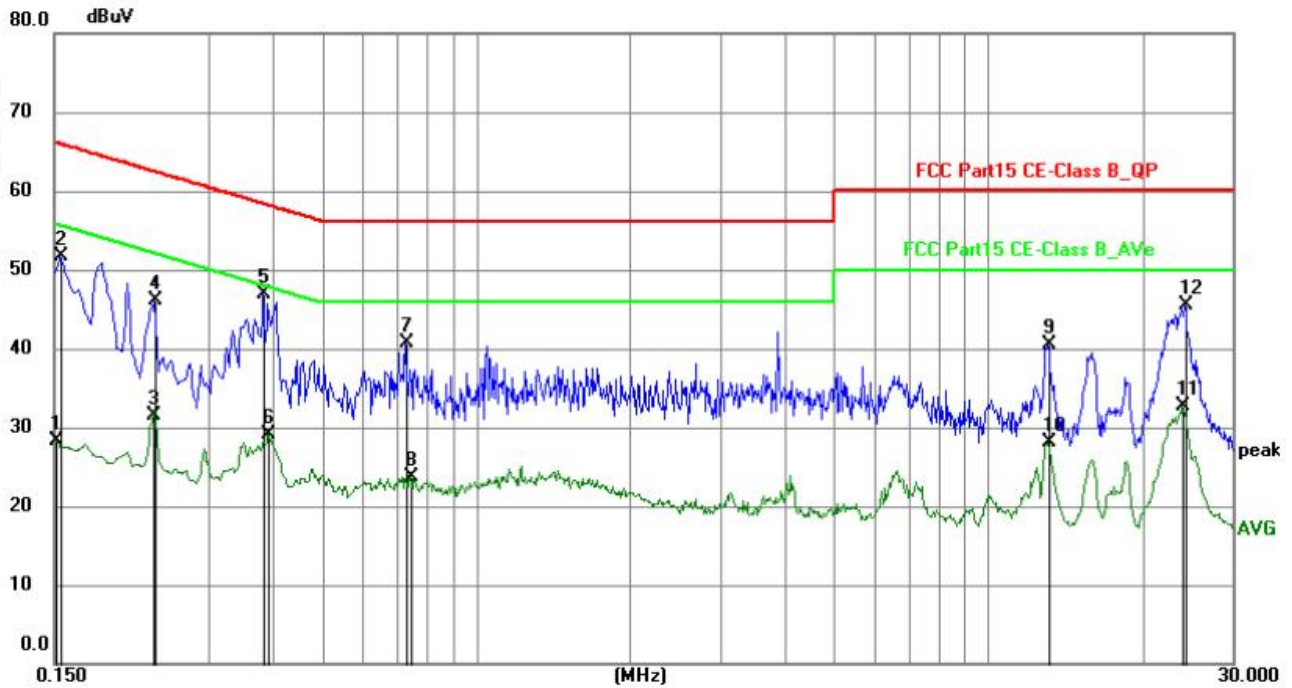
Temperature:	26 °C	Relative Humidity:	54%
Pressure:	1010hPa	Phase :	L
Test Voltage :	AC 120V/60Hz	Test Mode:	Working



No.	Frequency (MHz)	Reading (dBuV)	Factor (dB)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Detector	P/F	Remark
1	0.1635	34.99	20.58	55.57	65.28	-9.71	QP	P	
2	0.1635	8.50	20.58	29.08	55.28	-26.20	AVG	P	
3	0.1905	8.95	20.61	29.56	54.01	-24.45	AVG	P	
4	0.1949	30.97	20.62	51.59	63.83	-12.24	QP	P	
5	0.3885	27.53	20.63	48.16	58.10	-9.94	QP	P	
6	0.3885	13.78	20.63	34.41	48.10	-13.69	AVG	P	
7	0.6584	5.72	20.64	26.36	46.00	-19.64	AVG	P	
8	0.6719	22.04	20.64	42.68	56.00	-13.32	QP	P	
9	2.4448	20.86	20.71	41.57	56.00	-14.43	QP	P	
10	2.4720	7.41	20.71	28.12	46.00	-17.88	AVG	P	
11	23.7300	23.92	20.52	44.44	60.00	-15.56	QP	P	
12	24.0045	12.22	20.52	32.74	50.00	-17.26	AVG	P	



Temperature:	26 °C	Relative Humidity:	54%
Pressure:	1010hPa	Phase :	N
Test Voltage :	AC 120V/60Hz	Test Mode:	Working

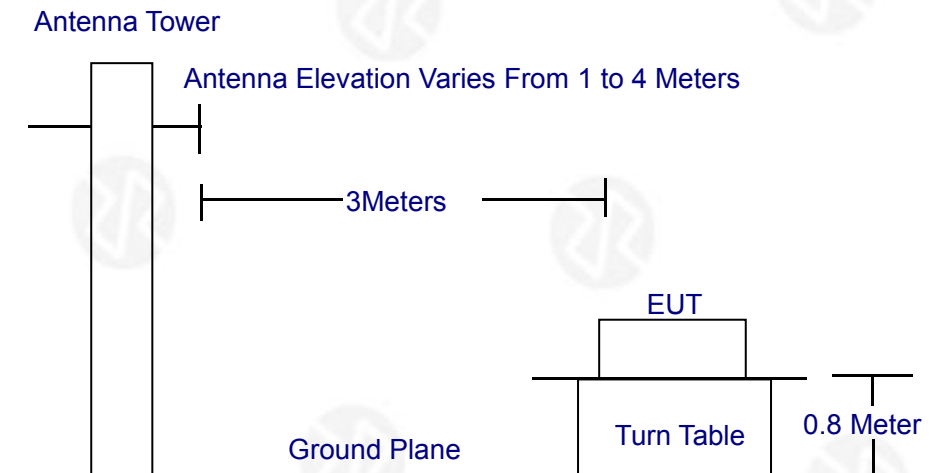


No.	Frequency (MHz)	Reading (dBuV)	Factor (dB)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Detector	P/F	Remark
1	0.1515	7.62	20.60	28.22	55.92	-27.70	AVG	P	
2	0.1544	31.17	20.59	51.76	65.76	-14.00	QP	P	
3	0.2340	11.07	20.53	31.60	52.31	-20.71	AVG	P	
4	0.2355	25.64	20.53	46.17	62.25	-16.08	QP	P	
5	0.3840	26.30	20.59	46.89	58.19	-11.30	QP	P	
6	0.3930	8.51	20.59	29.10	48.00	-18.90	AVG	P	
7	0.7304	20.10	20.59	40.69	56.00	-15.31	QP	P	
8	0.7439	3.06	20.59	23.65	46.00	-22.35	AVG	P	
9	13.0649	19.86	20.63	40.49	60.00	-19.51	QP	P	
10	13.0649	7.43	20.63	28.06	50.00	-21.94	AVG	P	
11	23.9010	12.16	20.60	32.76	50.00	-17.24	AVG	P	
12	24.1575	24.88	20.60	45.48	60.00	-14.52	QP	P	



4.RADIATION EMISSION TEST

4.1 Block Diagram of Test Setup



4.2 Test Standard

FCC PART 15 B

4.3 Radiation Limit

FREQUENCY (MHz)	DISTANCE (Meters)	FIELD STRENGTHS LIMITS (dB μ V/m)
30 ~ 88	3	40.0
88 ~ 216	3	43.5
216 ~ 960	3	46.0
960 ~ 1000	3	54.0

4.4 EUT Configuration on Test

The FCC PART 15 B regulations test method must be used to find the maximum emission during radiated emission test. The configuration of EUT is the same as used in conducted emission test. Please refer to Section 2.2.

4.5 Operating Condition of EUT

Same as conducted emission test, which is listed in Section 2.2 except the test set up replaced as Section 4.1.

4.6 Test Procedure

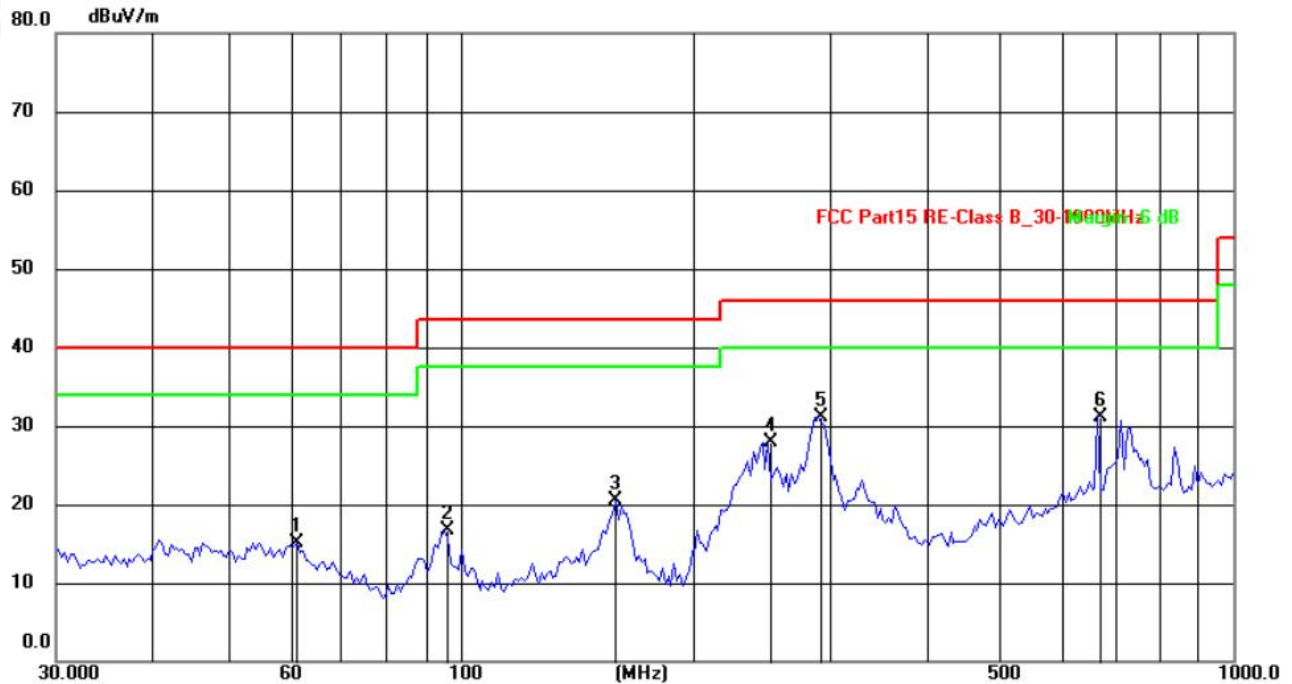
The EUT and its simulators are placed on a turned table that is 0.8 meter above the ground. The turned table can rotate 360 degrees to determine the position of the maximum emission level. The EUT is set 3 meters away from the receiving antenna that is mounted on the antenna tower. The antenna can move up and down between 1 meter and 4 meters to find out the maximum emission level. Broadband antenna (calibrated biconical and log periodical antenna) is used as receiving antenna. Both horizontal and vertical polarization of the antenna is set on test. In order to find the maximum emission levels, the interface cable must be manipulated according to FCC PART 15 B on radiated emission test.

The bandwidth setting on the field strength meter (R&S Test Receiver ESCI) is set at 120KHz below 1GHz, set at 1MHz above 1GHz. The frequency range from 30MHz to 1000MHz is checked. The highest frequency of the internal sources of the EUT was below 108MHz, so the measurement was only made up to 1GHz.



4.7 Test Result

Radiation Emission Test Data			
Temperature:	26℃	Relative Humidity:	60%
Pressure:	1009hPa	Phase :	Horizontal
Test Voltage :	AC 120V/60Hz	Test Mode:	Working

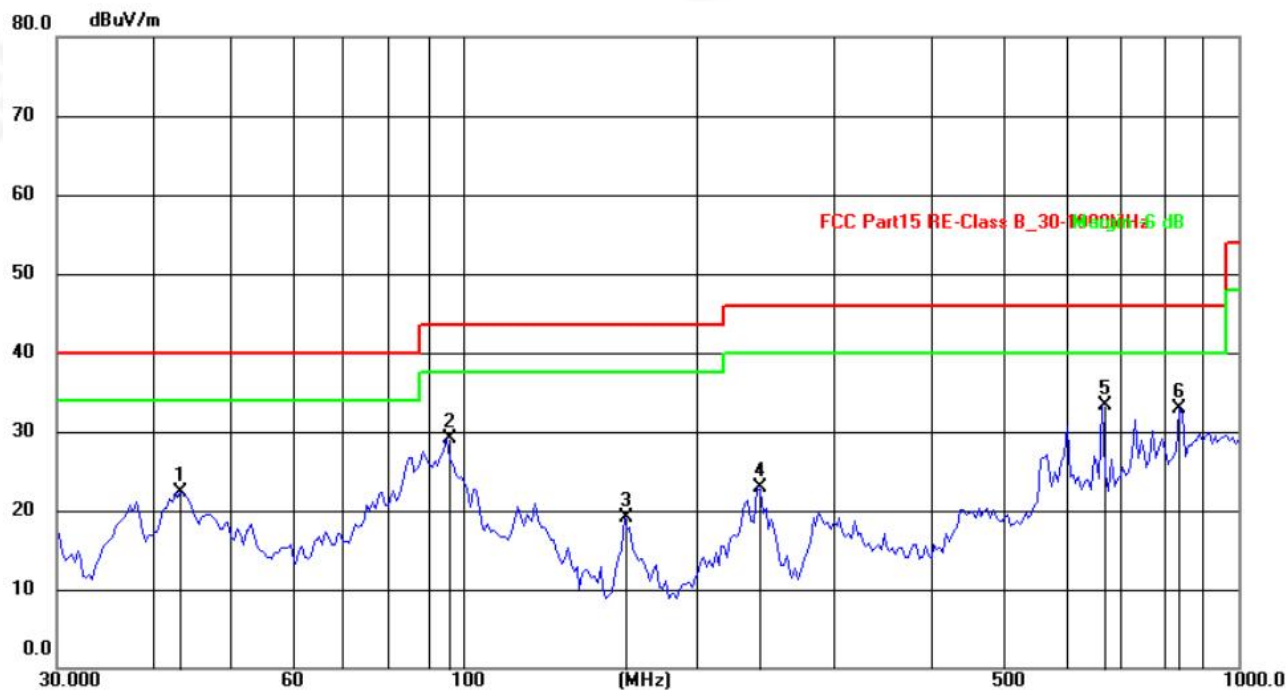


No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
1	61.5618	29.78	-14.66	15.12	40.00	-24.88	QP
2	95.4270	36.79	-19.99	16.80	43.50	-26.70	QP
3	158.6677	36.71	-16.24	20.47	43.50	-23.03	QP
4	250.3012	43.84	-15.90	27.94	46.00	-18.06	QP
5	290.5262	46.92	-15.73	31.19	46.00	-14.81	QP
6	668.1423	38.45	-7.39	31.06	46.00	-14.94	QP



Radiation Emission Test Data

Temperature:	26℃	Relative Humidity:	60%
Pressure:	1009hPa	Phase :	Vertical
Test Voltage :	AC 120V/60Hz	Test Mode:	Working



No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
1	43.3534	39.38	-17.01	22.37	40.00	-17.63	QP
2	95.4270	50.49	-21.34	29.15	43.50	-14.35	QP
3	161.4742	39.28	-20.17	19.11	43.50	-24.39	QP
4	239.5670	43.10	-20.28	22.82	46.00	-23.18	QP
5	668.1423	40.91	-7.69	33.22	46.00	-12.78	QP
6	839.1818	35.31	-2.47	32.84	46.00	-13.16	QP



5.EUT TEST PHOTOGRAPHS

Reference to the appendix I for details.

6.EUT PHOTOGRAPHS

Reference to the appendix II for details.

***** END OF REPORT *****