

TEST REPORT

Product Name : Bluetooth speaker with wireless charger
Brand Mark : DOAGEAS
Model No. : B81
Report Number : BLA-EMC-202010-A5903
Date of Sample Receipt : 2020/10/28
Date of Test : 2020/10/28 to 2021/03/17
Date of Issue : 2021/03/17
Test Standard : 47 CFR Part 18
Test Result : Pass

Prepared for:

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5/F, 4th Bldg, Hedian Industrial Park, Guanlan, Longhua, Shenzhen,
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Prepared by:

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Date:

2021/03/17



REPORT REVISE RECORD

Version No.	Date	Description
00	2021/03/17	Original

BlueAsia

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1 TEST SUMMARY

Test item	Test Requirement	Test Method	Result
Radiated Emissions (Magnetic field Strength) (9kHz-30MHz)	47 CFR Part 18	Part18.305	Pass
Conducted Emissions at Mains Terminals (150kHz-30MHz)	47 CFR Part 18	Part18.307	Pass

2 GENERAL INFORMATION

Applicant	Shenzhen Doageas Technology Co., Ltd.
Address	5/F,4th Bldg ,HedianIndustrialPark,Guanlan,Longhua, Shenzhen,Guangdong518110,China
Manufacturer	Shenzhen Doageas Technology Co., Ltd.
Address	5/F,4th Bldg ,HedianIndustrialPark,Guanlan,Longhua, Shenzhen,Guangdong518110,China
Factory	Shenzhen Doageas Technology Co., Ltd.
Address	5/F,4th Bldg ,HedianIndustrialPark,Guanlan,Longhua, Shenzhen,Guangdong518110,China
Product Name	Bluetooth speaker with wireless charger
Test Model No.	B81

3 GENERAL DESCRIPTION OF E.U.T.

Hardware Version:	DGLS-B81-6928B-MK-V10
Software Version:	XRS-V1.0
Operation Frequency:	110K-205K
Modulation type:	Backscatter modulation
Antenna Type:	Inductive loop coil Antenna
Antenna Gain:	0dBi (Max)
Power Supply:	Input: DC 5V 1A Output: DC 5V 1A Power: 5W

Remark: This wireless charging stand can only be wirelessly charged in AC power in mode. When the internal battery is working, the wireless charging is not working

4 TEST MODE

TEST MODE	TEST MODE DESCRIPTION
Wireless Charging	Keep the EUT in wireless charging mode
Remark: Only the data of the worst mode would be recorded in this report. This wireless charging stand can only be wirelessly charged in AC power in mode. When the internal battery is working, the wireless charging is not working	

5 MEASUREMENT UNCERTAINTY

Parameter	Expanded Uncertainty (Confidence of 95%)
Radiated Emission	$\pm 4.34\text{dB}$
Radiated Emission	$\pm 4.24\text{dB}$
Radiated Emission	$\pm 4.68\text{dB}$
AC Power Line Conducted Emission	$\pm 3.45\text{dB}$

6 DESCRIPTION OF SUPPORT UNIT

Device Type	Manufacturer	Model Name	Serial No.	Remark
AC Adapter	UGREEN	CD112	N/A	N/A
Mobile	iphone	Iphone-x	N/A	N/A

7 LABORATORY LOCATION

All tests were performed at:
BlueAsia of Technical Services(Shenzhen) Co., Ltd.
Building C, No. 107, Shihuan Road, Shiyuan Sub-District, Baoan District, Shenzhen,
Guangdong Province, China
Telephone: TEL: +86-755-28682673 FAX: +86-755-28682673
No tests were sub-contracted.

8 TEST INSTRUMENTS LIST

Test Equipment Of Radiated Emissions (Magnetic field Strength) (9kHz-30MHz)					
Equipment	Manufacturer	Model	S/N	Cal.Date	Cal.Due
Chamber	SKET	966	N/A	5/8/2018	5/7/2021
Loop antenna	SCHNARZBECK	FMZB1519B	00102	2/14/2019	2/13/2022
Receiver	R&S	ESR7	101199	4/20/2020	4/19/2021
EMI software	EZ	EZ-EMC	N/A	N/A	N/A

Test Equipment Of Conducted Emissions at Mains Terminals (150kHz-30MHz)					
Equipment	Manufacturer	Model	S/N	Cal.Date	Cal.Due
Shield room	SKET	833	N/A	6/10/2018	6/9/2021
Receiver	R&S	ESPI3	101082	4/20/2020	4/19/2021
LISN	R&S	ENV216	3560.6550.15	7/1/2020	6/30/2021
LISN	AT	AT166-2	AKK1806000003	12/17/2019	12/16/2021
EMI software	EZ	EZ-EMC	N/A	N/A	N/A

1 RADIATED EMISSIONS (MAGNETIC FIELD STRENGTH) (9KHZ-30MHZ)

Test Standard	47 CFR Part 18
Test Method	FCC OST/MP-5:1986
Test Mode (Pre-Scan)	Wireless Charging
Test Mode (Final Test)	Wireless Charging
Tester	Eason
Temperature	25°C
Humidity	60%

1.1 LIMITS

(b) The field strength levels of emissions which lie outside the bands specified in §18.301, unless otherwise indicated, shall not exceed the following:

Equipment	Operating frequency	RF Power generated by equipment (watts)	Field strength limit (uV/m)	Distance (meters)
Any type unless otherwise specified (miscellaneous)	Any ISM frequency	Below 500 500 or more	25 $25 \times \text{SQRT}(\text{power}/500)$	300 ¹ 300
	Any non-ISM frequency	Below 500 500 or more	15 $15 \times \text{SQRT}(\text{power}/500)$	300 ¹ 300
Industrial heaters and RF stabilized arc welders	On or below 5,725 MHz Above 5,725 MHz	Any Any	10 (²)	1,600 (²)
Medical diathermy	Any ISM frequency Any non-ISM frequency	Any Any	25	300
			15	300
Ultrasonic	Below 490 kHz	Below 500 500 or more	$2,400/\text{F}(\text{kHz})$ $2,400/\text{F}(\text{kHz}) \times \text{SQRT}(\text{power}/500)$	300 ³ 300
	490 to 1,600 kHz Above 1,600 kHz	Any Any	$24,000/\text{F}(\text{kHz})$ 15	30 30
Induction cooking ranges	Below 90 kHz	Any	1,500	⁴ 30
	On or above 90 kHz	Any	300	⁴ 30

1.Field strength may not exceed 10 $\mu\text{V}/\text{m}$ at 1600 meters. Consumer equipment operating below 1000 MHz is not permitted the increase in field strength otherwise permitted here for power over 500 watts.

2.Reduced to the greatest extent possible.

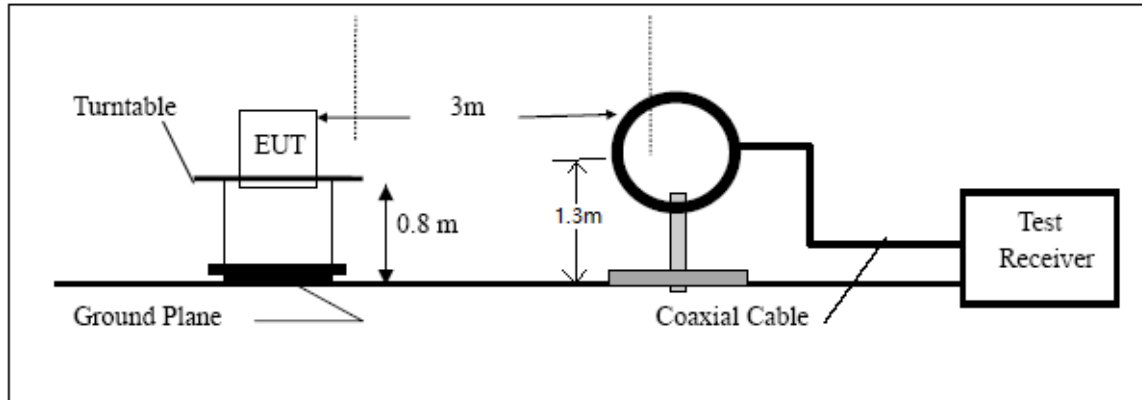
3.Field strength may not exceed 10 $\mu\text{V}/\text{m}$ at 1600 meters. Consumer equipment is not permitted the increase in field strength otherwise permitted here for over 500 watts.

4..Induction cooking ranges manufactured prior to February 1, 1980, shall be subject to the field strength limits for miscellaneous ISM equipment.

Remark:

- 1 This product belongs to non-ISM equipment, the field strength limit is 15uV/m at 300 meter distance.
- 2 Limit: $20\log(15\mu\text{V/m}) + 20\log(300/3) = 23.52 + 40 = 63.52\text{dB}\mu\text{V/m}$ at 3 meters distance

1.2 BLOCK DIAGRAM OF TEST SETUP

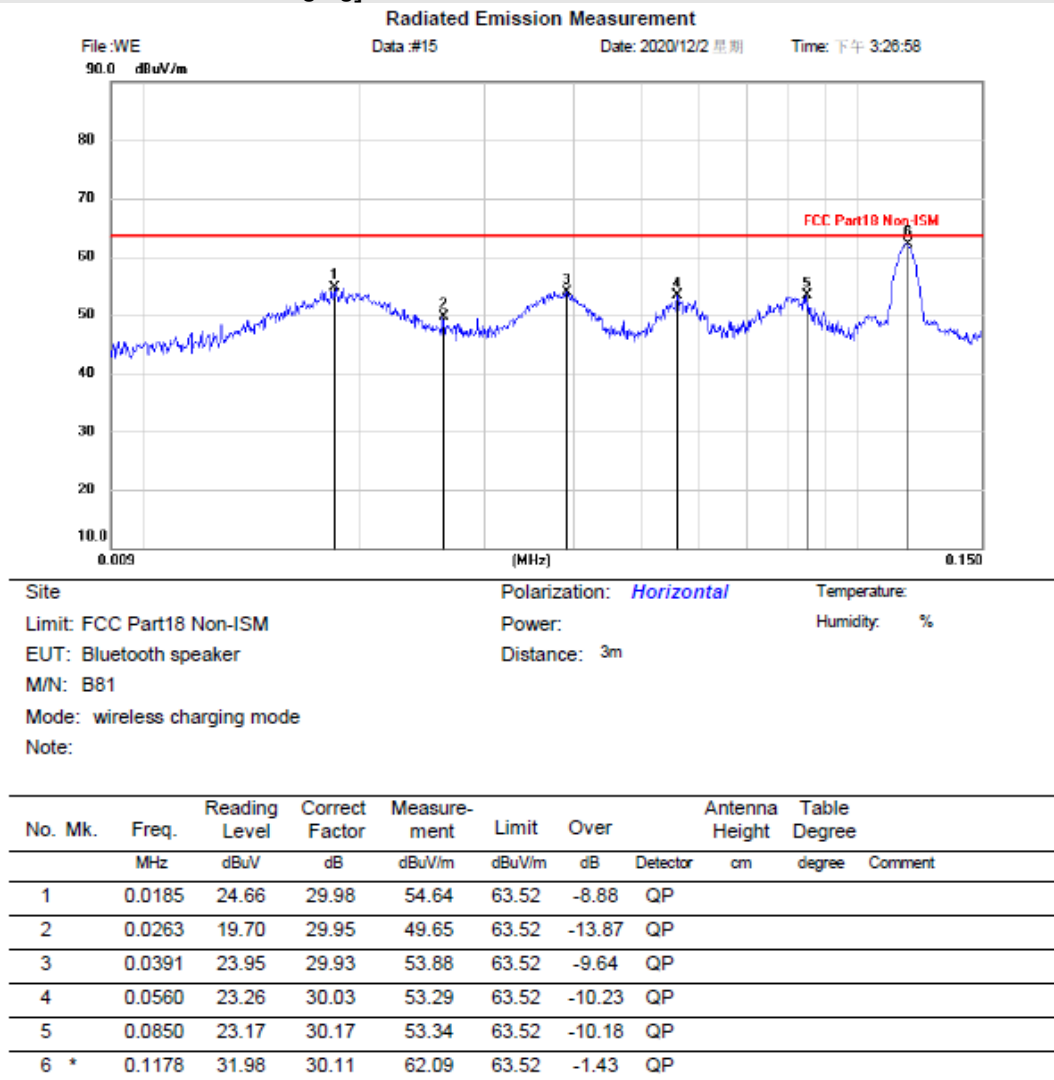


1.3 PROCEDURE

An initial pre-scan was performed in the chamber using the spectrum analyser in peak detection mode. Quasi-peak measurements were conducted based on the peak sweep graph. The EUT was measured by BiConiLog antenna with 2 orthogonal polarities.

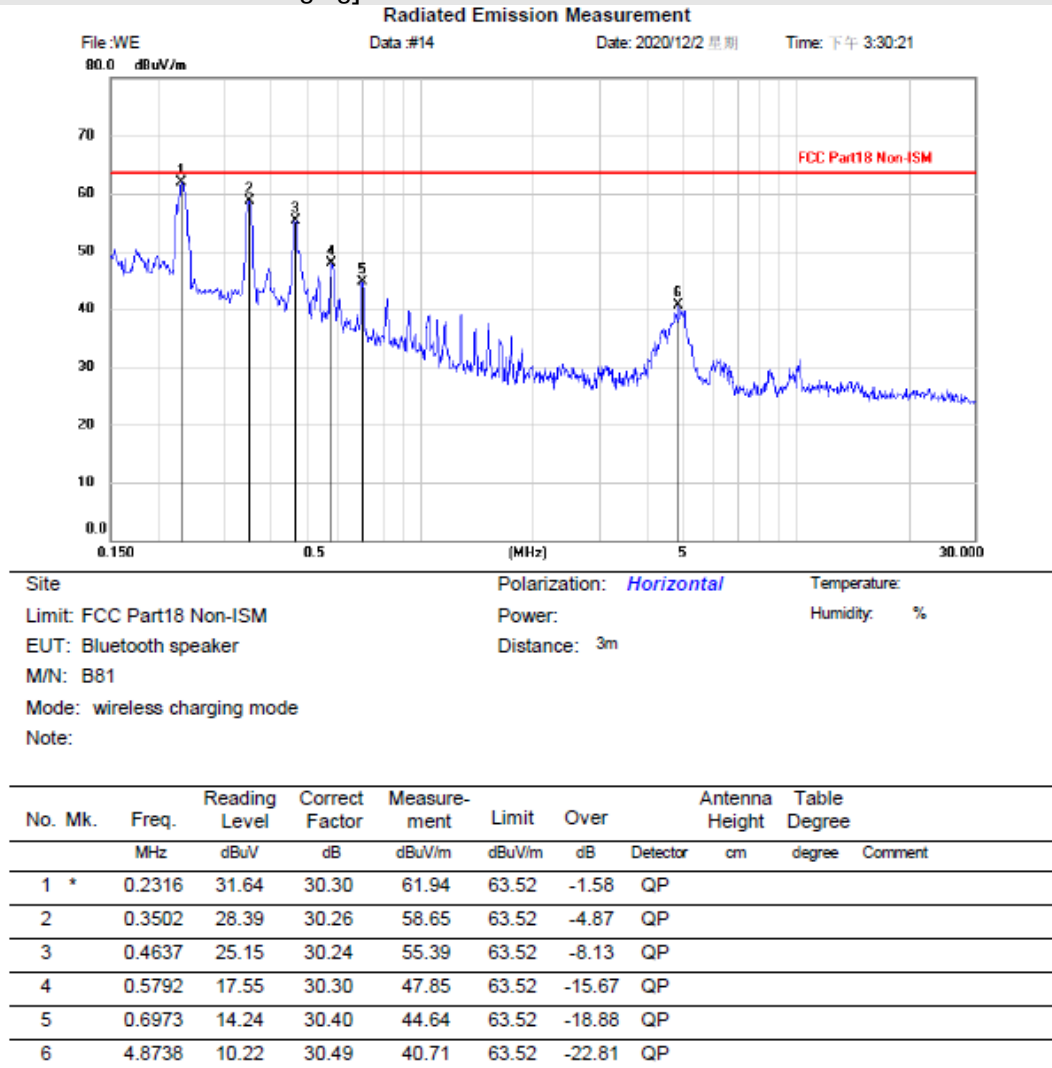
1.1 TEST DATA

[TestMode: Wireless Charging]



Test Result: Pass

[TestMode: Wireless Charging]

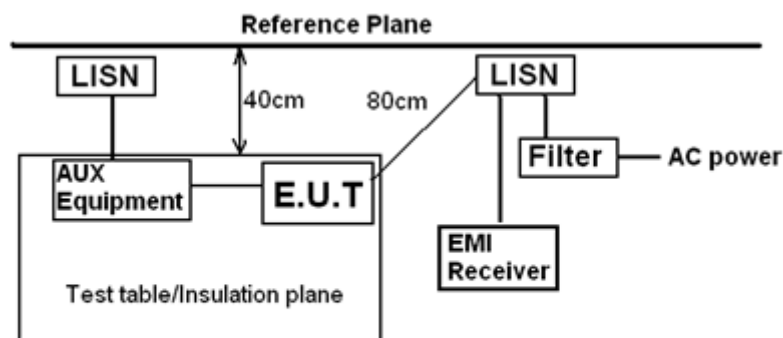


Test Result: Pass

2 CONDUCTED EMISSIONS AT MAINS TERMINALS (150KHZ-30MHZ)

Test Standard	47 CFR Part 18
Test Method	FCC OST/MP-5:1986
Test Mode (Pre-Scan)	Wireless Charging
Test Mode (Final Test)	Wireless Charging
Tester	Eason
Temperature	25℃
Humidity	60%

2.1 BLOCK DIAGRAM OF TEST SETUP



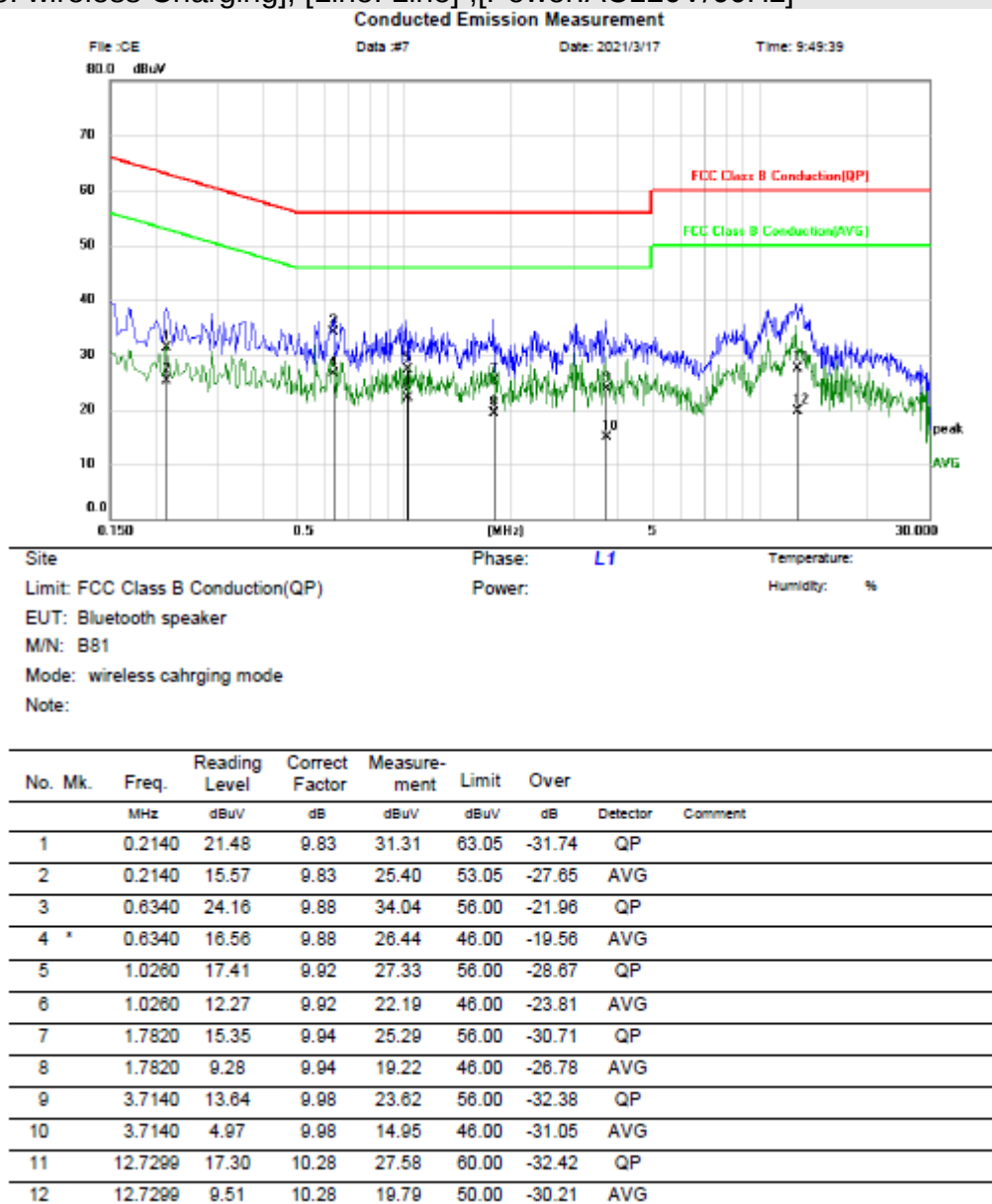
Remark:
E.U.T: Equipment Under Test
LISN: Line Impedance Stabilization Network
Test table height=0.8m

2.2 PROCEDURE

An initial pre-scan was performed with peak detector. Quasi-Peak or Average measurement were performed at the frequencies with maximized peak emission were detected.

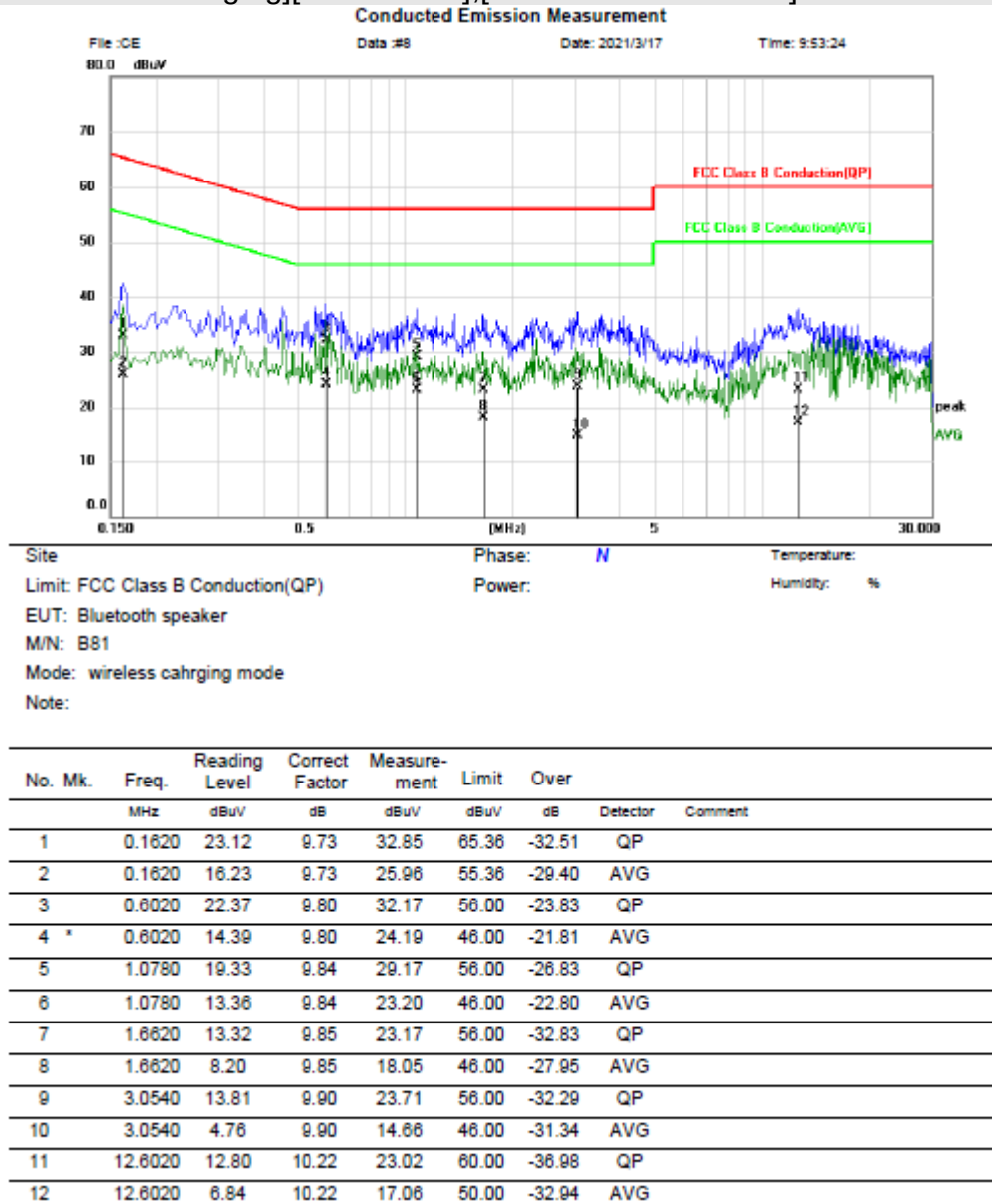
1.1 TEST DATA

[TestMode: wireless Charging]; [Line: Line] ;[Power:AC120V/60Hz]



Test Result: Pass

[TestMode: Wireless Charging][Line: Nutral];[Power:AC120V/60Hz]



Test Result: Pass

APPENDIX A: PHOTOGRAPHS OF TEST SETUP

Radiated Emissions (Magnetic field Strength) (9kHz-30MHz)



Conducted Emissions at Mains Terminals (150kHz-30MHz)



APPENDIX B: PHOTOGRAPHS OF EUT

Reference to the test report No. BLA-EMC-202010-A5902

----END OF REPORT----

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