FCC Test Report

Report No.: AGC11758240716FR01

FCC ID	:	2A482-W542
APPLICATION PURPOSE		Original Equipment
PRODUCT DESIGNATION	:	Wireless Charger
BRAND NAME	:	baseus
MODEL NAME	:	BSW-542, BSW-532E
APPLICANT	:	Shenzhen Baseus Technology Co., Ltd.
DATE OF ISSUE	:	Aug. 02, 2024
STANDARD(S)	:	FCC Part 15 Subpart C
REPORT VERSION	:	V 1.0

Attestation of Global Compliance (Shenzhen) Co., Ltd

REPORT REVISE RECORD

Report Version	Revise Time	Issued Date	Valid Version	Notes
V1.0	/	Aug. 02, 2024	Valid	Initial Release

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1. GENERAL INFORMATION

Applicant	Shenzhen Baseus Technology Co., Ltd.
Address	2nd Floor, Building B, Baseus Intelligence Park, No.2008, Xuegang Rd, Gangtou Community, Bantian Street, Longgang District, Shenzhen, China
Manufacturer	Shenzhen Baseus Technology Co., Ltd.
Address	2nd Floor, Building B, Baseus Intelligence Park, No.2008, Xuegang Rd, Gangtou Community, Bantian Street, Longgang District, Shenzhen, China
Factory	N/A
Address	N/A
Product Designation	Wireless Charger
Brand Name	baseus
Test Model	BSW-542
Series Model	BSW-532E
Declaration Difference	All the same except for the model name and plastic appearance color.
Date of receipt of test item	Jun. 07, 2024
Date of Test	Jun. 07, 2024 to Aug. 02, 2024
Deviation from Standard	No any deviation from the test method
Condition of Test Sample	Normal
Test Result	Pass
Test Report Form No	AGCER -FCC-WPT-V1

The test results of this report relate only to the tested sample identified in this report.

Prepared By	Jack Gui (Project Engineer)	Aug. 02, 2024
Reviewed By	Calvin Liu (Reviewer)	Aug. 02, 2024
Approved By	Max Zhang (Authorized Officer)	Aug. 02, 2024

2. PRODUCT INFORMATION

2.1 PRODUCT TECHNICAL DESCRIPTION

Hardware Version	V1.3
Software Version	v1.0
Operation Frequency	115kHz-205kHz; 360kHz±5kHz
Modulation Type	ASK
Field Strength of Fundamental	52.05dBuV/m@3m (Max)
Antenna Designation	Coil Antenna
Input Rating	DC5V 3A; DC9V 2.22A by adapter
Wireless Charging Output Power	15W Max

2.2 TEST FREQUENCY LIST

Frequency Band	Frequency
115kHz-205kHz	128kHz
360kHz±5kHz	360.0kHz

2.2 RELATED SUBMITTAL(S) / GRANT (S)

This submittal(s) (test report) is intended for **FCC ID: 2A482-W542** filing to comply with Part 2, Part 15 of the Federal Communication Commission rules.

2.3 TEST METHODOLOGY

The tests were performed according to following standards:

No.	Identity	Document Title
1	FCC 47 CFR Part 2	Frequency allocations and radio treaty matters; general rules and regulations
2	FCC 47 CFR Part 15	Radio Frequency Devices
3	ANSI C63.10-2013	American National Standard for Testing Unlicensed Wireless Devices

2.4 SPECIAL ACCESSORIES

Not available for this EUT intended for grant.

2.5 EQUIPMENT MODIFICATIONS

Not available for this EUT intended for grant.

2.6 ANTENNA REQUIREMENT

Standard Requirement
15.203 requirement: 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 antennathat uses a unique coupling to the intentional radiator, the manufacturer may design the unit so that a brokenantenna can be replaced by the user, but the use of a standard antenna jack or electrical connector is prohibited.
EUT Antenna:
The non-detachable antenna inside the device cannot be replaced by the user at will.

3. TEST ENVIRONMENT

3.1 ADDRESS OF THE TEST LABORATORY

Laboratory: Attestation of Global Compliance (Shenzhen) Co., Ltd.

Address: 1-2/F, Building 19, Junfeng Industrial Park, Chongqing Road, Heping Community, Fuhai Street, Bao'an District, Shenzhen, Guangdong, China

3.2 TEST FACILITY

The test facility is recognized, certified, or accredited by the following organizations:

CNAS-Lab Code: L5488

Attestation of Global Compliance (Shenzhen) Co., Ltd. has been assessed and proved to be in compliance with CNAS-CL01 Accreditation Criteria for Testing and Calibration Laboratories (identical to ISO/IEC17025: 2017 General Requirements) for the Competence of Testing and Calibration Laboratories.

A2LA-Lab Cert. No.: 5054.02

Attestation of Global Compliance (Shenzhen) Co., Ltd. EMC Laboratory has been accredited by A2LA for technical competence in the field of electrical testing, and proved to be in compliance with ISO/IEC 17025: 2017 General Requirements for the Competence of Testing and Calibration Laboratories and any additional program requirements in the identified field of testing.

FCC-Registration No.: 975832

Attestation of Global Compliance (Shenzhen) Co., Ltd. EMC Laboratory has been registered and fully described in a report filed with the FCC (Federal Communications Commission). The acceptance letter from the FCC is maintained in our files with Registration 975832.

IC-Registration No.: 24842 (CAB identifier: CN0063)

Attestation of Global Compliance (Shenzhen) Co., Ltd. EMC Laboratory has been registered and fully described in a report filed with the Certification and Engineering Bureau of Industry Canada. The acceptance letter from the IC is maintained in our files with Registration 24842.

3.3 ENVIRONMENTAL CONDITIONS

	NORMAL CONDITIONS	EXTREME CONDITIONS
Temperature range (℃)	15 - 35	-20 - 50
Relative humidty range	20 % - 75 %	20 % - 75 %
Pressure range (kPa)	86 - 106	86 - 106
Power supply	--	--
Note: The Extreme Temperature and Extreme Voltages declared by the manufacturer.		

3.4 MEASUREMENT UNCERTAINTY

The reported uncertainty of measurement y ±U, where expended uncertainty U is based on a standard uncertainty multiplied by a coverage factor of k=2, providing a level of confidence of approximately 95%.

Item	Measurement Uncertainty
Uncertainty of Conducted Emission for AC Port	U_c = ±2.9 dB
Uncertainty of Radiated Emission below 150kHz	U_c = ±3.9 dB
Uncertainty of Radiated Emission below 30MHz	U_c = ±3.9 dB
Uncertainty of Radiated Emission below 1GHz	U_c = ±4.9 dB
Uncertainty of total RF power, conducted	U_c = ±0.8 dB
Uncertainty of RF power density, conducted	U_c = ±2.6 dB
Uncertainty of spurious emissions, conducted	U_c = ±2 %
Uncertainty of Occupied Channel Bandwidth	U_c = ±2 %

3.5 LIST OF EQUIPMENTS USED

● RF Conducted Test System							
Used	Equipment No.	Test Equipment	Manufacturer	Model No.	Serial No.	Last Cal. Date (YY-MM-DD)	Next Cal. Date (YY-MM-DD)
☒	AGC-ER-E036	Spectrum Analyzer	Agilent	N9020A	MY49100060	2024-05-24	2025-05-23
☒	N/A	RF Connection Cable	N/A	2#	N/A	Each time	N/A

● Radiated Spurious Emission							
Used	Equipment No.	Test Equipment	Manufacturer	Model No.	Serial No.	Last Cal. Date (YY-MM-DD)	Next Cal. Date (YY-MM-DD)
☐	AGC-EM-E046	EMI Test Receiver	R&S	ESCI	10096	2024-02-01	2025-01-31
☒	AGC-EM-E116	EMI Test Receiver	R&S	ESCI	100034	2024-05-24	2025-05-23
☐	AGC-EM-E061	Spectrum Analyzer	Agilent	N9010A	MY53470504	2024-05-28	2025-05-27
☒	AGC-EM-E086	Loop Antenna	ZHINAN	ZN30900C	18051	2024-03-05	2026-03-04
☒	AGC-EM-E001	Wideband Antenna	SCHWARZBECK	VULB9168	D69250	2023-05-11	2025-05-10
☐	AGC-EM-E029	Broadband Ridged Horn Antenna	ETS	3117	00034609	2023-03-23	2025-03-22
☐	AGC-EM-E082	Horn Antenna	SCHWARZBECK	BBHA 9170	#768	2023-09-24	2025-09-23
☐	AGC-EM-E146	Pre-amplifier	ETS	3117-PA	00246148	2022-08-04	2024-08-03
☐	AGC-EM-A119	2.4GHz Filter	SongYi	N/A	N/A	2024-05-23	2025-05-22
☒	AGC-EM-A138	6dB Attenuator	Eeatsheep	LM-XX-6-5W	N/A	2023-06-09	2025-06-08
☐	AGC-EM-A139	6dB Attenuator	Eeatsheep	LM-XX-6-5W	N/A	2023-06-09	2025-06-08

● AC Power Line Conducted Emission							
Used	Equipment No.	Test Equipment	Manufacturer	Model No.	Serial No.	Last Cal. Date (YY-MM-DD)	Next Cal. Date (YY-MM-DD)
☒	AGC-EM-E045	EMI Test Receiver	R&S	ESPI	101206	2024-05-28	2025-05-27
☒	AGC-EM-A130	6dB Attenuator	Eeatsheep	LM-XX-6-5W	DC-6GZ	2023-06-09	2025-06-08
☒	AGC-EM-E023	AMN	R&S	100086	ESH2-Z5	2024-05-28	2025-05-27

● Test Software					
Used	Equipment No.	Test Equipment	Manufacturer	Model No.	Version Information
☒	AGC-EM-S003	RE Test System	FARA	EZ-EMC	V.RA-03A
☒	AGC-EM-S001	CE Test System	R&S	ES-K1	V1.71

4. SYSTEM TEST CONFIGURATION

4.1 EUT CONFIGURATION

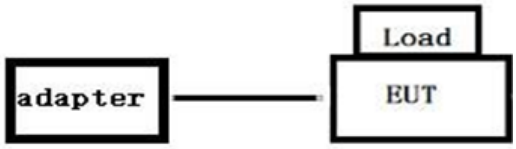
The EUT configuration for testing is installed on RF field strength measurement to meet the Commission's requirement and operating in a manner which intends to maximize its emission characteristics in a continuous normal application.

4.2 EUT EXERCISE

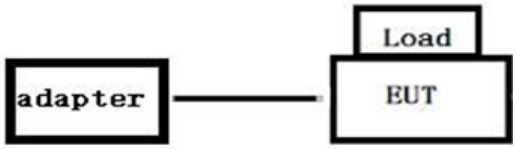
The Transmitter was operated in the normal operating mode. The TX frequency was fixed which was for the purpose of the measurements.

4.3 CONFIGURATION OF TESTED SYSTEM

Radiated Emission Configure:



Conducted Emission Configure:



4.4 EQUIPMENT USED IN TESTED SYSTEM

The Following Peripheral Devices And Interface Cables Were Connected During The Measurement:

☒ Test Accessories Come From The Laboratory

No.	Equipment	Model No.	Manufacturer	Specification Information	Cable
1	Wireless Charging Load	N/A	HUAWEI	Support 5W,7.5W,10W,15W	--
2	Adapter	HW-200440C00	HUAWEI	Input(AC):100V-240V 50/60Hz 2.4A Output(DC):USB-C(5V/3A;9V/3A;10V/4A;11V/6A;12V/3A;15V/3A;20V4.4A) USB-A(5V/2A;10V/4A;11V/6A;20V/4.4A)	--

☒ Test Accessories Come From The Manufacturer

No.	Equipment	Manufacturer	Model No.	Specification Information	Cable
1	USB Cable	--	--	--	1.45m unshielded

4.5 SUMMARY OF TEST RESULTS

Item	FCC Rules	Description Of Test	Result
1	§15.203	Antenna Equipment	Pass
2	§15.209(a)(f)	Radiated Spurious Emission	Pass
3	§15.215(c)	20dB Bandwidth	Pass
4	§15.205(a)	Restricted Bands of Operation	Pass
5	§15.207	AC Power Line Conducted Emission	Pass

5. DESCRIPTION OF TEST MODES

Summary table of Test Cases	
Test Item	Equipment type / Modulation
	WPT_(TX:128kHz /360kHz)/ ASK
Radiated & Conducted Test Cases	Mode 1: AC/DC Adapter Input DC5V 3A + EUT + Wireless load (5W)
	Mode 2: AC/DC Adapter Input DC5V 3A + EUT + Wireless load (2.5W)
	Mode 3: AC/DC Adapter Input DC5V 3A + EUT + Wireless load (0W)
	Mode 4: AC/DC Adapter Input DC9V 2.2A + EUT + Wireless load (15W)
	Mode 5: AC/DC Adapter Input DC9V 2.2A + EUT + Wireless load (7.5W)
	Mode 6: AC/DC Adapter Input DC9V 2.2A + EUT + Wireless load (0W)
AC Conducted Emission	Mode 1: AC/DC Adapter Input DC5V 3A + EUT + Wireless load (5W)
	Mode 2: AC/DC Adapter Input DC5V 3A + EUT + Wireless load (2.5W)
	Mode 3: AC/DC Adapter Input DC5V 3A + EUT + Wireless load (0W)
	Mode 4: AC/DC Adapter Input DC9V 2.2A + EUT + Wireless load (15W)
	Mode 5: AC/DC Adapter Input DC9V 2.2A + EUT + Wireless load (7.5W)
	Mode 6: AC/DC Adapter Input DC9V 2.2A + EUT + Wireless load (0W)

Note:

1. Only the result of the worst case was recorded in the report, if no other cases.
2. For Radiated Emission, 3axis were chosen for testing for each applicable mode.
3. For WPT, When the output is 15W, the working frequency is 360kHz and When the output is less than 15W, the working frequency is 115-205kHz.

6. FIELD STRENGTH OF FUNDAMENTAL

6.1 PROVISIONS APPLICABLE

<table>
<tr><td>Test Requirement:</td><td colspan="5">FCC Part15 C Section 15.209</td></tr>
<tr><td>Test Method:</td><td colspan="5">ANSI C63.10:2013</td></tr>
<tr><td>Test Frequency Range:</td><td colspan="5">9KHz to 1GHz</td></tr>
<tr><td>Test site:</td><td colspan="5">Measurement Distance: 3m</td></tr>
<tr><td>Receiver setup:</td><td colspan="5"><table>
<tr><td>Frequency</td><td>Detector</td><td>RBW</td><td>VBW</td><td>Value</td></tr>
<tr><td>9KHz-150KHz</td><td>Quasi-peak</td><td>200Hz</td><td>600Hz</td><td>Quasi-peak</td></tr>
<tr><td>150KHz-30MHz</td><td>Quasi-peak</td><td>9KHz</td><td>30KHz</td><td>Quasi-peak</td></tr>
<tr><td>30MHz-1GHz</td><td>Quasi-peak</td><td>100KHz</td><td>300KHz</td><td>Quasi-peak</td></tr>
<tr><td rowspan="2">Above 1GHz</td><td>Peak</td><td>1MHz</td><td>3MHz</td><td>Peak</td></tr>
<tr><td>Peak</td><td>1MHz</td><td>10Hz</td><td>Average</td></tr>
</table></td></tr>
</table>

Limits for frequency below 30MHz

Frequency	Limit (uV/m)	Measurement Distance(m)	Remark
0.009-0.490	2400/F(kHz)	300	Quasi-peak Value
0.490-1.705	24000/F(kHz)	30	Quasi-peak Value
1.705-30	30	30	Quasi-peak Value

Limits for frequency Above 30MHz

Frequency	Limit (dBuV/m @3m)	Remark
30MHz-88MHz	40.00	Quasi-peak Value
88MHz-216MHz	43.50	Quasi-peak Value
216MHz-960MHz	46.00	Quasi-peak Value
960MHz-1GHz	54.00	Quasi-peak Value
Above 1GHz	54.00	Average Value
	74.00	Peak Value

Remark： (1) Emission level dB μ V = 20 log Emission level μ V/m

(2) The smaller limit shall apply at the cross point between two frequency bands.

(3) Distance is the distance in meters between the measuring instrument, antenna and the closest point of any part of the device or system.

6.2 MEASUREMENT PROCEDURE

1. The EUT was placed on the top of the turntable 0.8 or 1.5 meter above ground. The phase center of the receiving antenna mounted on the top of a height-variable antenna tower was placed 3 meters far away from the turntable.
2. Power on the EUT and all the supporting units. The turntable was rotated by 360 degrees to determine the position of the highest radiation.
3. The height of the broadband receiving antenna was varied between one meter and four meters above ground to find the maximum emissions field strength of both horizontal and vertical polarization.
4. For each suspected emission, the antenna tower was scan (from 1 M to 4 M) and then the turntable was rotated (from 0 degree to 360 degrees) to find the maximum reading.
5. Set the test-receiver system to Peak or CISPR quasi-peak Detect Function with specified bandwidth under Maximum Hold Mode.
6. For emissions above 1GHz, use 1MHz RBW and 3MHz VBW for peak reading. Place the measurement antenna away from each area of the EUT determined to be a source of emissions at the specified measurement distance, while keeping the measurement antenna aimed at the source of emissions at each frequency of significant emissions, with polarization oriented for maximum response. The measurement 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 measurement antenna elevation shall be that which maximizes the emissions. The measurement 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.
7. When the radiated emissions limits are expressed in terms of the average value of the emissions, and pulsed operation is employed, the measurement field strength shall be determined by averaging over one complete pulse train, including blanking intervals, as long as the pulse train does not exceed 0.1 seconds. As an alternative (provided the transmitter operates for longer than 0.1 seconds) or in cases where the pulse train exceeds 0.1 seconds, the measured field strength shall be determined from the average absolute voltage during a 0.1 second interval during which the field strength is at its maximum values.
8. If the emissions level of the EUT in peak mode was 3 dB lower than the average limit specified, then testing will be stopped and peak values of EUT will be reported, otherwise, the emissions which do not have 3 dB margin will be repeated one by one using the quasi-peak method for below 1GHz.
9. For testing above 1GHz, the emissions level of the EUT in peak mode was lower than average limit (that means the emissions level in peak mode also complies with the limit in average mode), then testing will be stopped and peak values of EUT will be reported, otherwise, the emissions will be measured in average mode again and reported.
10. In case the emission is lower than 30MHz, loop antenna has to be used for measurement and the recorded data should be QP measured by receiver. High - Low scan is not required in this case.

6.3 FIELD STRENGTH CALCULATION

The field strength is calculated by adding the Antenna Factor and Cable Factor, and subtracting the Amplifier Gain (if any), Average Factor (optional) from the measured reading. The basic equation with a sample calculation is as follows:

FS = RA + AF + CF - AG - AV

where FS = Field Strength in dBµV/m
RA = Receiver Amplitude (including preamplifier) in dBµV
CF = Cable Attenuation Factor in dB
AF = Antenna Factor in dB/m
AG = Amplifier Gain in dB
AV = Average Factor in dB

In the following table(s), the reading shown on the data table reflects the preamplifier gain. An example for the calculations in the following table is as follows:

FS = RR + LF

where FS = Field Strength in dBµV/m
RR = RA - AG - AV in dBµV
LF = CF + AF in dB

Assume a receiver reading of 52.0 dBµV is obtained. The antenna factor of 7.4 dB/m and cable factor of 1.6 dB are added. The amplifier gain of 29 dB and average factor of 5 dB are subtracted, giving a field strength of 27 dBµV/m.
This value in dBµV/m was converted to its corresponding level in µV/m.

RA = 52.0 dBµV/m
AF = 7.4 dB/m RR = 18.0 dBµV
CF = 1.6 dB LF = 9.0 dB
AG = 29.0 dB
AV = 5.0 dB
FS = RR + LF
FS = 18 + 9 = 27 dBµV/m

Level in µV/m = Common Antilogarithm [(27 dBµV/m)/20] = 22.4 µV/m

Magnetic field strength calculation (9 kHz – 30 MHz)

When the limit is in terms of magnetic field, the following equation applies:

H[dB(µA/m)] = V[dB(µV)] + LC [dB] - GPA [dB]+ AFH [dB(S/m)]

Where,
H is the magnetic field strength (to be compared with the limit),
V is the voltage level measured by the receiver or spectrum analyzer,
LC is the cable loss,
GPA is the gain of the preamplifier (if used), and
AFH is the magnetic antenna factor.

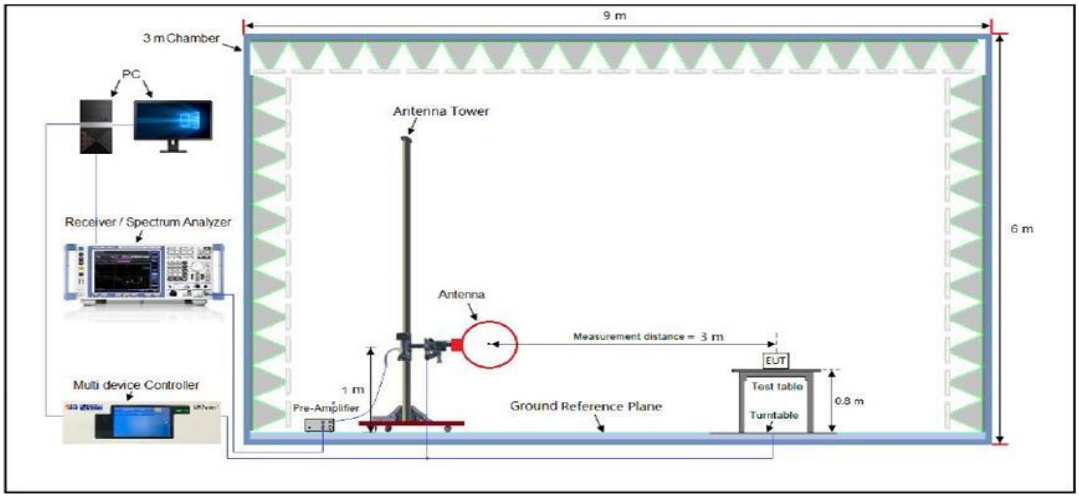
If the “electrical” antenna factor is used instead, the above equation becomes:

H[dB(µA/m)] =V[dB(µV)] + LC [dB] – GPA [dB] + AFE [dB(m-1)] - 51.5 [dBΩ]

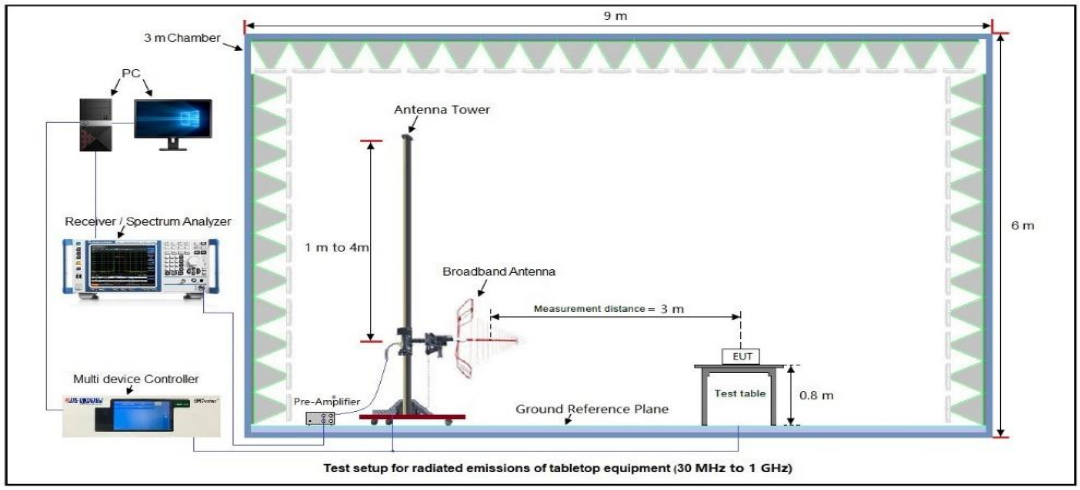
where AFE is the “electric” antenna factor, as provided by the antenna calibration laboratory.

6.4 MEASUREMENT SETUP (BLOCK DIAGRAM OF CONFIGURATION)

RADIATED EMISSION TEST SETUP 9KHz-30MHz



RADIATED EMISSION TEST SETUP 30MHz-1000MHz



The radiated emission tests were performed in the 3 meters chamber test site, using the setup accordance with the ANSI C63.10-2013. The specification used was the FCC 15.209 and FCC 15.205 limits.

6.5 MEASUREMENT RESULTS:

ELECTRIC FIELD TEST IN THE FREQUENCY RANGE 9kHz-150kHz

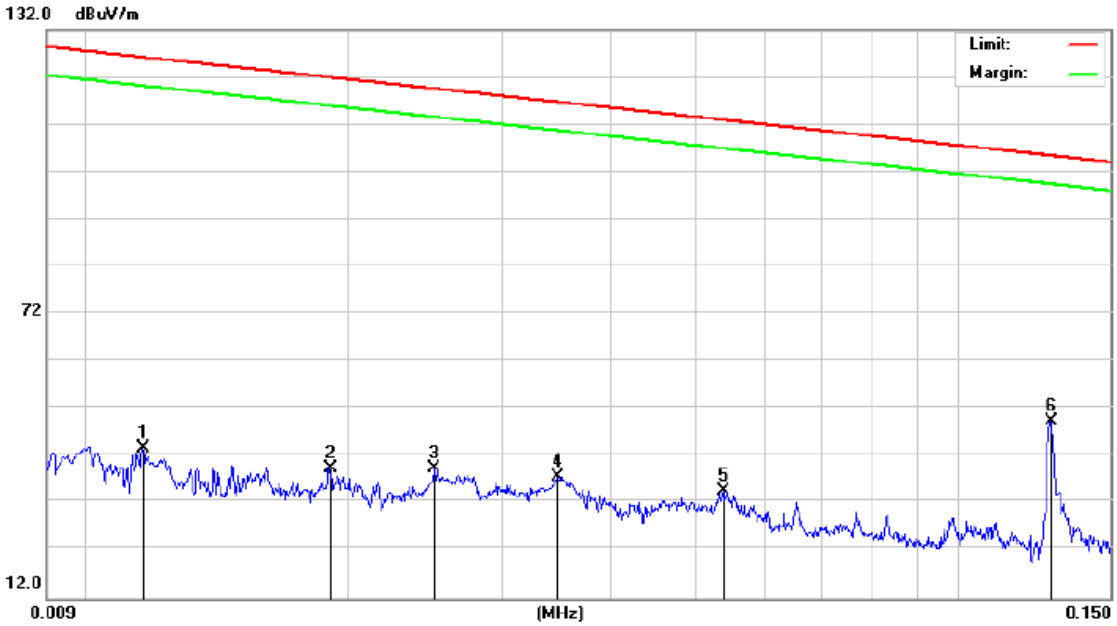
EUT	Wireless Charger	Model Name	BSW-542
Temperature	23.0° C	Relative Humidity	59.1%
Pressure	960hPa	Test Voltage	DC 5V by adapter
Test Mode	Mode 1	Antenna	Face

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over	
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector
1		0.0120	7.97	37.47	45.44	125.91	-80.47	peak
2		0.0236	3.20	34.96	38.16	120.06	-81.90	peak
3		0.0349	4.86	32.68	37.54	116.67	-79.13	peak
4		0.0495	4.31	29.99	34.30	113.64	-79.34	peak
5		0.0652	5.45	28.73	34.18	111.26	-77.08	peak
6	*	0.1281	19.33	27.62	46.95	105.41	-58.46	peak

RESULT: PASS

ELECTRIC FIELD TEST IN THE FREQUENCY RANGE 9kHz-150kHz

EUT	Wireless Charger	Model Name	BSW-542
Temperature	23.0° C	Relative Humidity	59.1%
Pressure	960hPa	Test Voltage	DC 5V by adapter
Test Mode	Mode 1	Antenna	Side

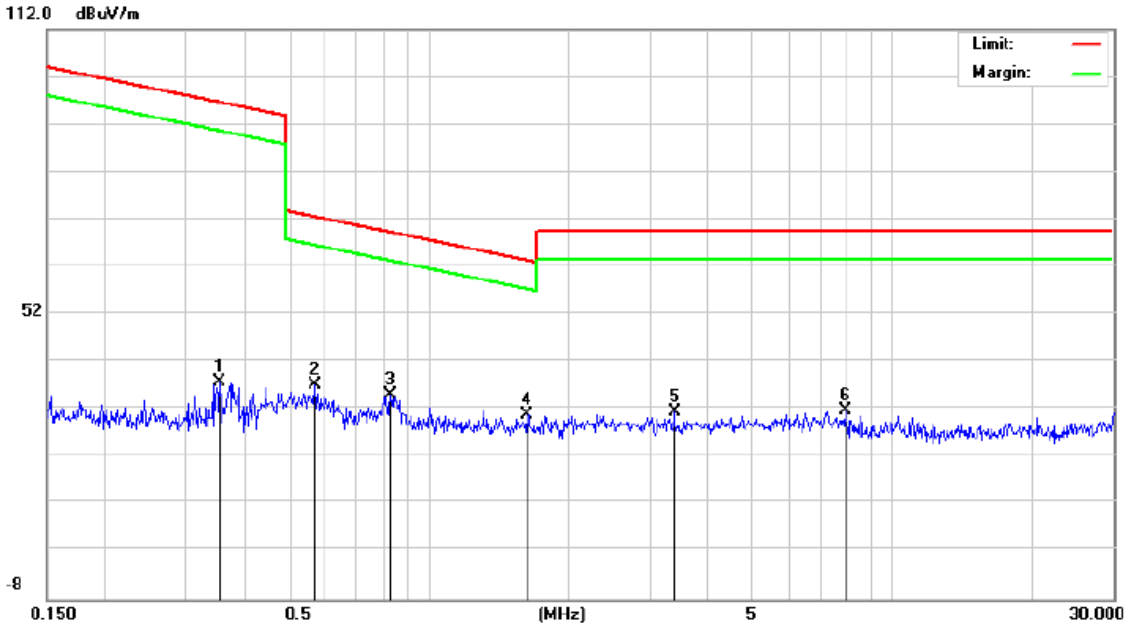


No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over	
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector
1		0.0116	6.09	37.55	43.64	126.21	-82.57	peak
2		0.0190	3.38	35.96	39.34	121.93	-82.59	peak
3		0.0251	4.82	34.64	39.46	119.52	-80.06	peak
4		0.0347	4.86	32.72	37.58	116.72	-79.14	peak
5		0.0539	4.92	29.60	34.52	112.91	-78.39	peak
6	*	0.1281	21.68	27.62	49.30	105.41	-56.11	peak

RESULT: PASS

ELECTRIC FIELD TEST IN THE FREQUENCY RANGE 150kHz-30MHz

EUT	Wireless Charger	Model Name	BSW-542
Temperature	23.0° C	Relative Humidity	59.1%
Pressure	960hPa	Test Voltage	DC 5V by adapter
Test Mode	Mode 1	Antenna	Face

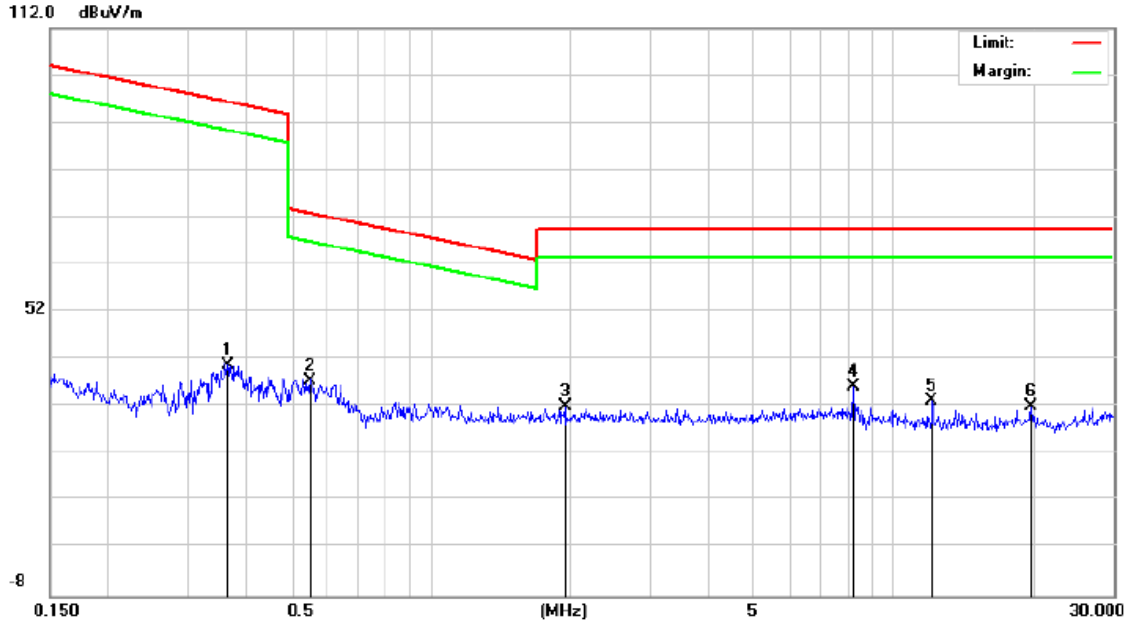


No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over	
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector
1		0.3539	12.34	25.33	37.67	96.62	-58.95	peak
2		0.5670	11.65	25.38	37.03	72.53	-35.50	peak
3		0.8261	9.75	25.29	35.04	69.26	-34.22	peak
4	*	1.6276	5.95	24.95	30.90	63.37	-32.47	peak
5		3.3814	7.34	23.97	31.31	69.54	-38.23	peak
6		7.8934	8.40	23.42	31.82	69.54	-37.72	peak

RESULT: PASS

ELECTRIC FIELD TEST IN THE FREQUENCY RANGE 150kHz-30MHz

EUT	Wireless Charger	Model Name	BSW-542
Temperature	23.0° C	Relative Humidity	59.1%
Pressure	960hPa	Test Voltage	DC 5V by adapter
Test Mode	Mode 1	Antenna	Side

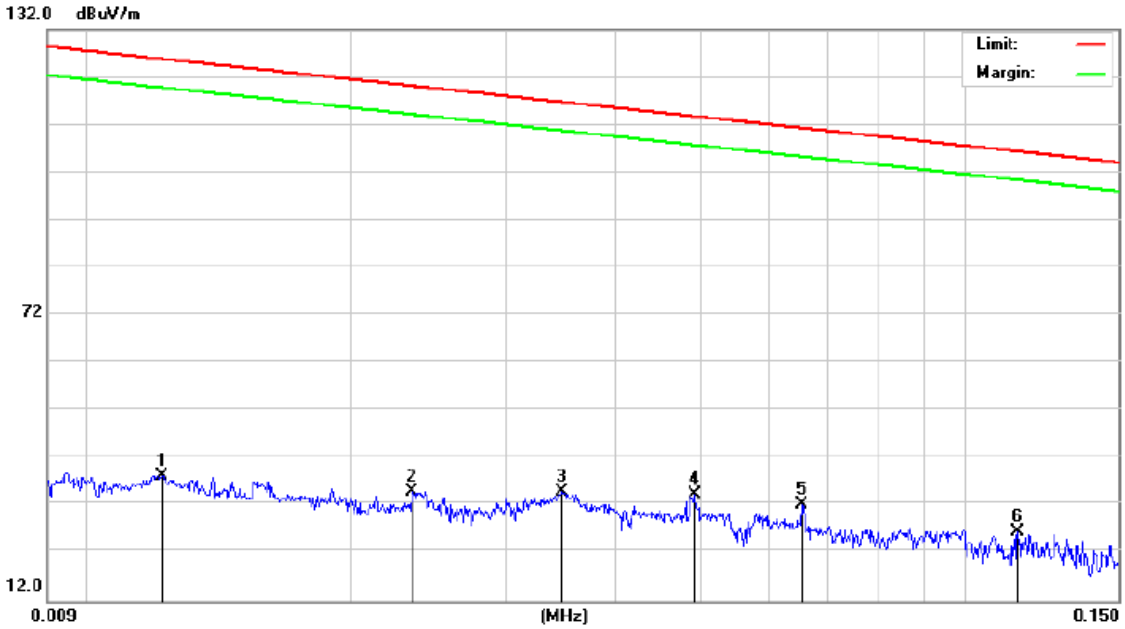


No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over	
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector
1		0.3634	15.30	25.33	40.63	96.39	-55.76	peak
2		0.5493	11.95	25.38	37.33	72.81	-35.48	peak
3		1.9489	7.22	24.82	32.04	69.54	-37.50	peak
4	*	8.1916	12.84	23.41	36.25	69.54	-33.29	peak
5		12.1240	10.64	22.75	33.39	69.54	-36.15	peak
6		19.8445	7.83	24.19	32.02	69.54	-37.52	peak

RESULT: PASS

ELECTRIC FIELD TEST IN THE FREQUENCY RANGE 9kHz-150kHz

EUT	Wireless Charger	Model Name	BSW-542
Temperature	23.0° C	Relative Humidity	59.1%
Pressure	960hPa	Test Voltage	DC 9V by adapter
Test Mode	Mode 4	Antenna	Face

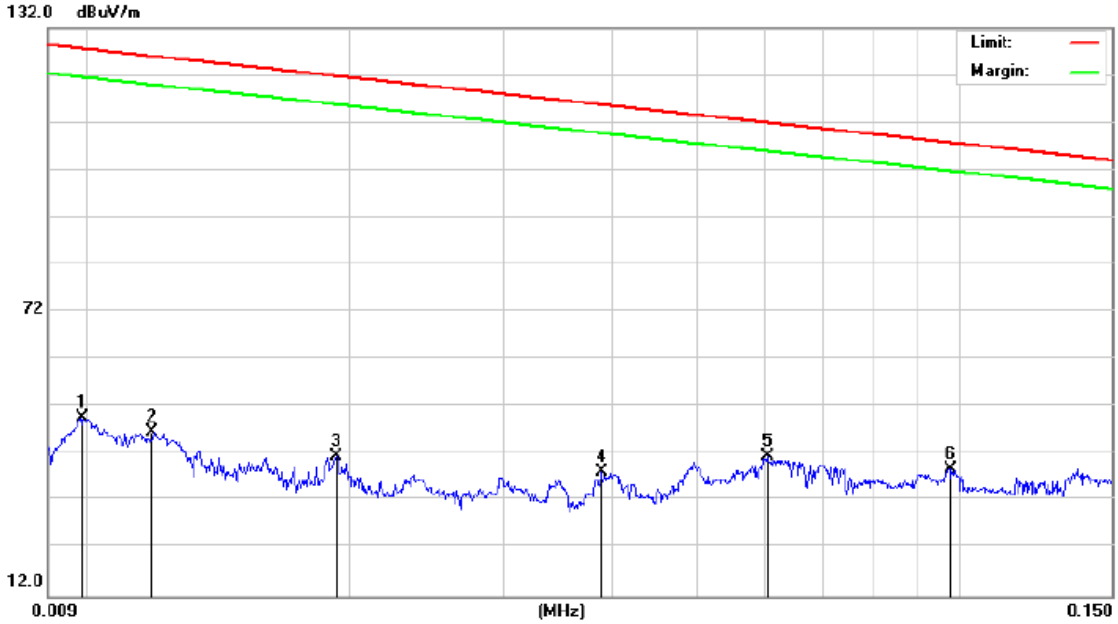


No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over	
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector
1		0.0122	0.97	37.42	38.39	125.77	-87.38	peak
2		0.0235	0.02	34.98	35.00	120.09	-85.09	peak
3		0.0348	2.28	32.70	34.98	116.70	-81.72	peak
4		0.0492	4.44	30.05	34.49	113.70	-79.21	peak
5	*	0.0652	3.41	28.73	32.14	111.26	-79.12	peak
6		0.1151	-1.23	27.80	26.57	106.34	-79.77	peak

RESULT: PASS

ELECTRIC FIELD TEST IN THE FREQUENCY RANGE 9kHz-150kHz

EUT	Wireless Charger	**Model Name**	BSW-542
Temperature	23.0° C	**Relative Humidity**	59.1%
Pressure	960hPa	**Test Voltage**	DC 9V by adapter
Test Mode	Mode 4	**Antenna**	Side

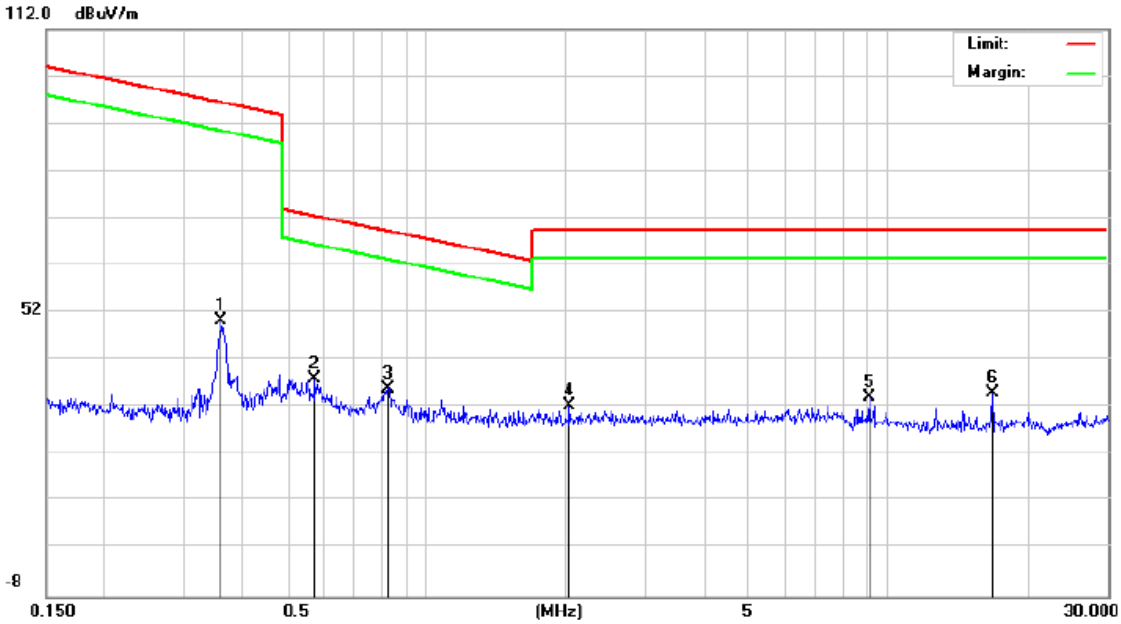


No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over	
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector
1		0.0098	11.69	37.95	49.64	127.67	-78.03	peak
2		0.0119	9.26	37.49	46.75	125.99	-79.24	peak
3		0.0193	5.79	35.89	41.68	121.80	-80.12	peak
4		0.0389	6.16	31.94	38.10	115.73	-77.63	peak
5		0.0603	12.41	29.11	41.52	111.94	-70.42	peak
6	*	0.0978	10.90	27.96	38.86	107.75	-68.89	peak

RESULT: PASS

ELECTRIC FIELD TEST IN THE FREQUENCY RANGE 150kHz-30MHz

EUT	Wireless Charger	Model Name	BSW-542
Temperature	23.0° C	Relative Humidity	59.1%
Pressure	960hPa	Test Voltage	DC 9V by adapter
Test Mode	Mode 4	Antenna	Face

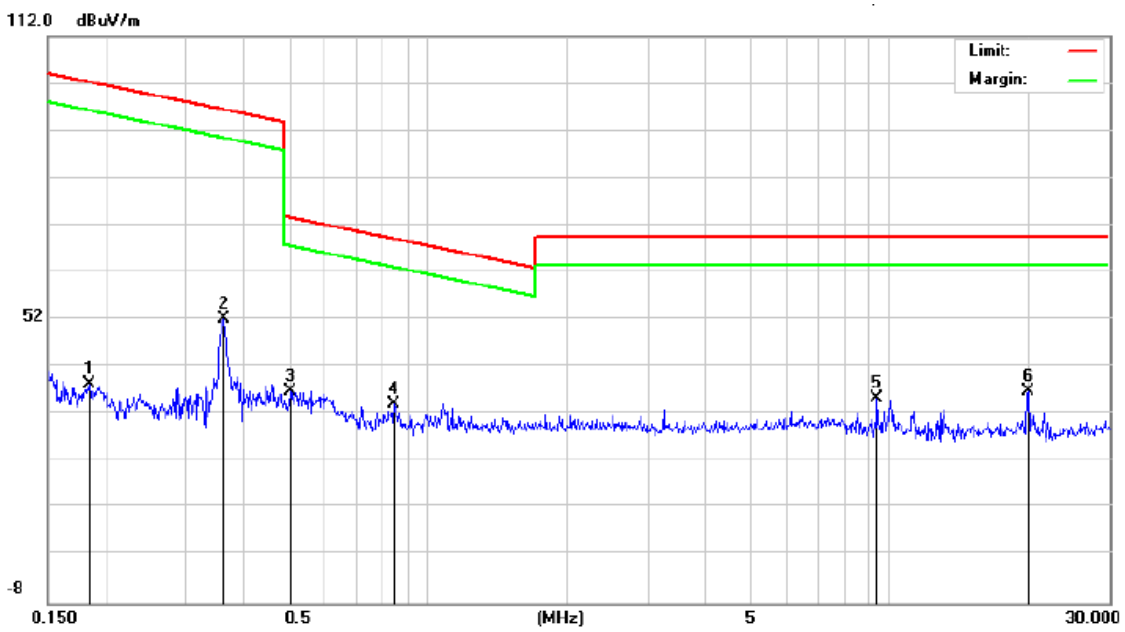


No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over	
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector
1		0.3596	25.16	25.33	50.49	96.48	-45.99	peak
2		0.5731	12.75	25.38	38.13	72.44	-34.31	peak
3	*	0.8261	10.81	25.29	36.10	69.26	-33.16	peak
4		2.0441	7.57	24.77	32.34	69.54	-37.20	peak
5		9.1073	10.55	23.46	34.01	69.54	-35.53	peak
6		16.8387	11.43	23.69	35.12	69.54	-34.42	peak

RESULT: PASS

ELECTRIC FIELD TEST IN THE FREQUENCY RANGE 150kHz-30MHz

EUT	Wireless Charger	Model Name	BSW-542
Temperature	23.0° C	Relative Humidity	59.1%
Pressure	960hPa	Test Voltage	DC 9V by adapter
Test Mode	Mode 4	Antenna	Side



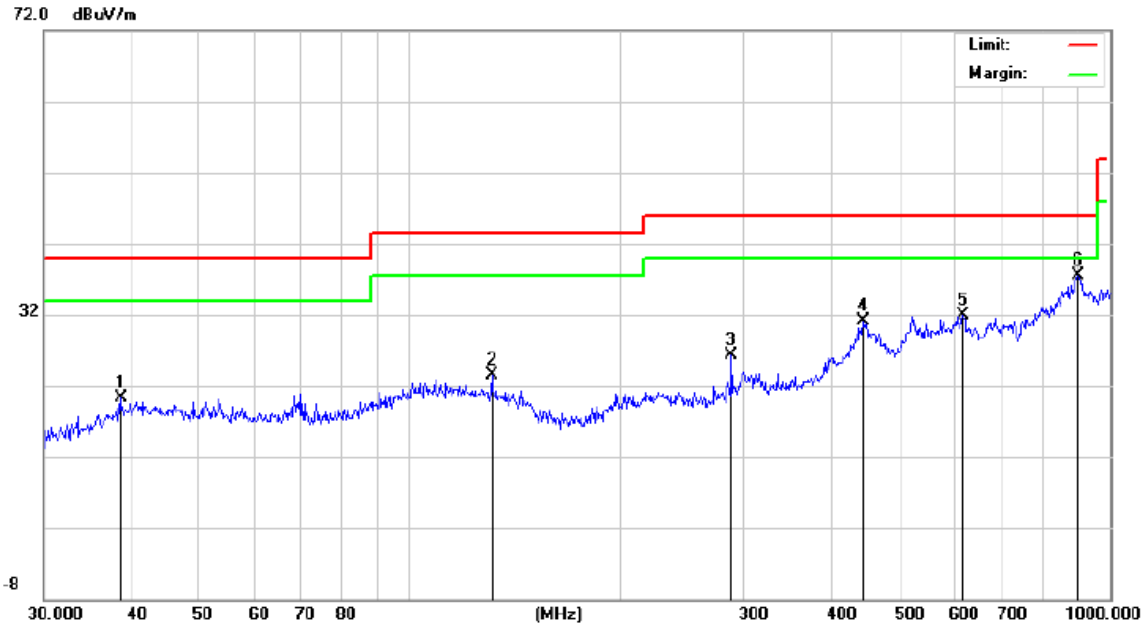
No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over	
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector
1		0.1844	11.59	26.86	38.45	102.26	-63.81	peak
2		0.3615	26.72	25.33	52.05	96.43	-44.38	peak
3		0.5047	11.57	25.40	36.97	73.54	-36.57	peak
4		0.8438	8.85	25.28	34.13	69.08	-34.95	peak
5		9.4015	11.94	23.47	35.41	69.54	-34.13	peak
6	*	19.9500	12.65	24.20	36.85	69.54	-32.69	peak

NOTES:

1. Quasi-Peak detector is used for frequency below 30MHz.
2. Negative value in the margin column shows emission below limit.
3. All measurements were made with 0.6m loop antenna at 3m distance. All emissions are below the QP limit.
4. Corr. Factor= Antenna Factor (dB/m) + Cable Loss (dB)
5. Loop antenna is used for the emission under 30MHz.

RADIATED EMISSION BELOW 1GHz

EUT	Wireless Charger	**Model Name**	BSW-542
Temperature	23.0° C	**Relative Humidity**	59.1%
Pressure	960hPa	**Test Voltage**	DC 9V by adapter
Test Mode	Mode 4	**Antenna**	Horizontal

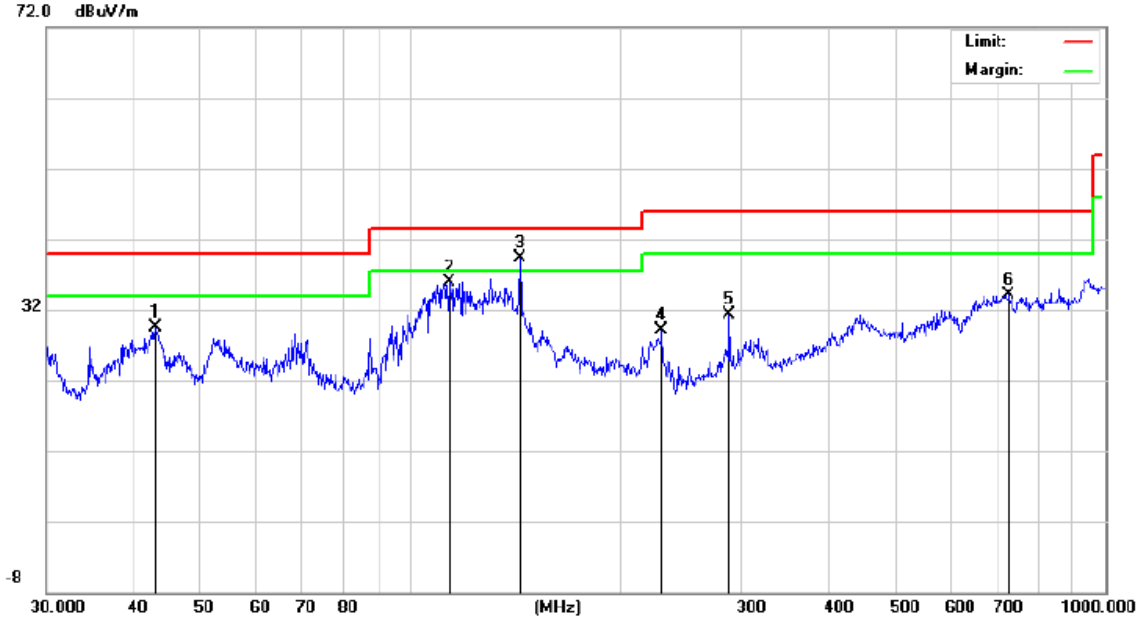


No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over	
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector
1		38.6160	6.96	13.30	20.26	40.00	-19.74	peak
2		130.8369	7.73	15.75	23.48	43.50	-20.02	peak
3		287.9904	10.70	15.54	26.24	46.00	-19.76	peak
4		444.8514	6.14	24.93	31.07	46.00	-14.93	peak
5		616.3718	6.82	25.18	32.00	46.00	-14.00	peak
6	*	900.1474	5.67	31.78	37.45	46.00	-8.55	peak

RESULT: PASS

RADIATED EMISSION BELOW 1GHz

EUT	Wireless Charger	**Model Name**	BSW-542
Temperature	23.0° C	**Relative Humidity**	59.1%
Pressure	960hPa	**Test Voltage**	DC 9V by adapter
Test Mode	Mode 4	**Antenna**	Vertical



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over	
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector
1		43.0505	12.61	16.93	29.54	40.00	-10.46	peak
2		113.7143	19.34	16.60	35.94	43.50	-7.56	peak
3	*	143.8295	21.02	18.20	39.22	43.50	-4.28	peak
4		230.0985	12.88	16.31	29.19	46.00	-16.81	peak
5		287.9904	12.78	18.60	31.38	46.00	-14.62	peak
6		726.8052	5.97	28.15	34.12	46.00	-11.88	peak

RESULT: PASS

Note: 1. Factor=Antenna Factor + Cable loss, Over=Measurement-Limit.

2. All test modes had been pre-tested. The mode 4 is the worst case and recorded in the report.

3. The “Factor” value can be calculated automatically by software of measurement system.

7. 20 dB BANDWIDTH

7.1 PROVISIONS APPLICABLE

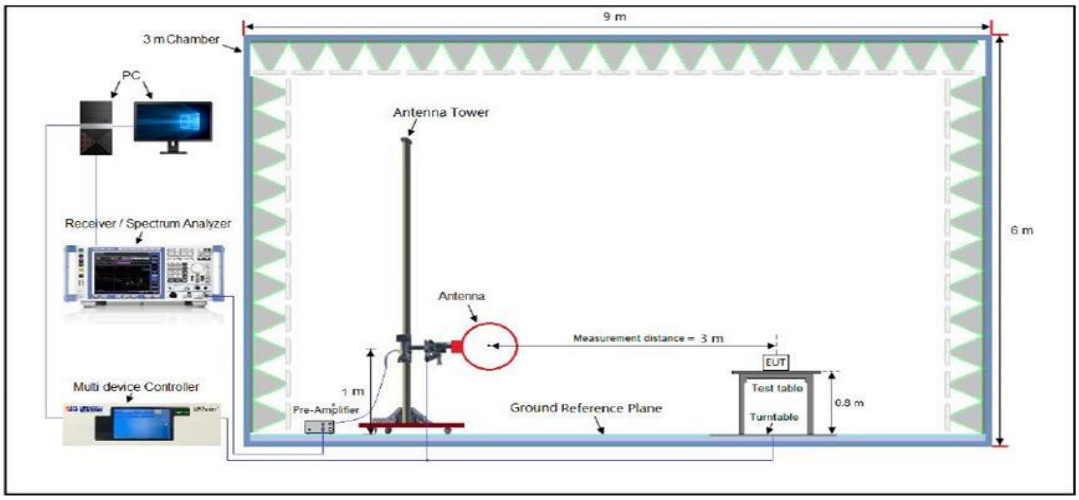
N/A

7.2 MEASUREMENT PROCEDURE

Set the parameters of SPA as below:

1. The spectrum analyzer connected via a receive antenna placed near the EUT in peak Max hold mode.
2. Centre frequency = Operation Frequency
3. The resolution bandwidth of 300Hz and the video bandwidth of 3kHz were used.
4. Span: 3kHz, Sweep time: Auto
5. Set the EUT to continue transmitting mode. Allow the trace to stabilize. Use the “N dB down” function of SPA to define the bandwidth.
6. Measured the spectrum width with power higher than 20dB below carrier.
7. Measured the 99% OBW.
8. Record the plots and Reported.

7.3 MEASUREMENT SETUP (BLOCK DIAGRAM OF CONFIGURATION)

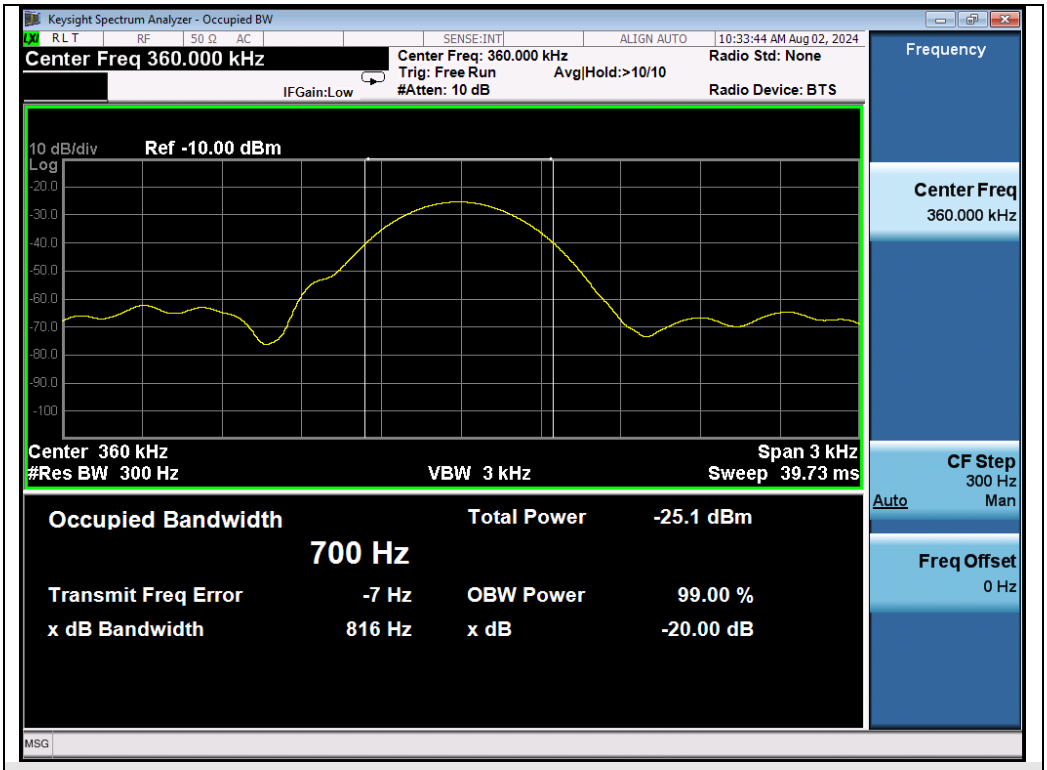


7.4 MEASUREMENT RESULTS

Test Data of Occupied Bandwidth and -20dB Bandwidth					
Test Mode	Test Channel (MHz)	99% Occupied Bandwidth (Hz)	-20dB Bandwidth (Hz)	Limits (MHz)	Pass or Fail
ASK	128	694	814	N/A	Pass
ASK	360	700	816	N/A	Pass

Test Graphs of Occupied Bandwidth&-20dB Bandwidth

Test_ Graph_ ASK_ Coil ANT_ 128kHz _ -20dB Bandwidth



Test_ Graph_ ASK_ Coil ANT_ 360kHz _ -20dB Bandwidth

8. AC POWER LINE CONDUCTED EMISSION TEST

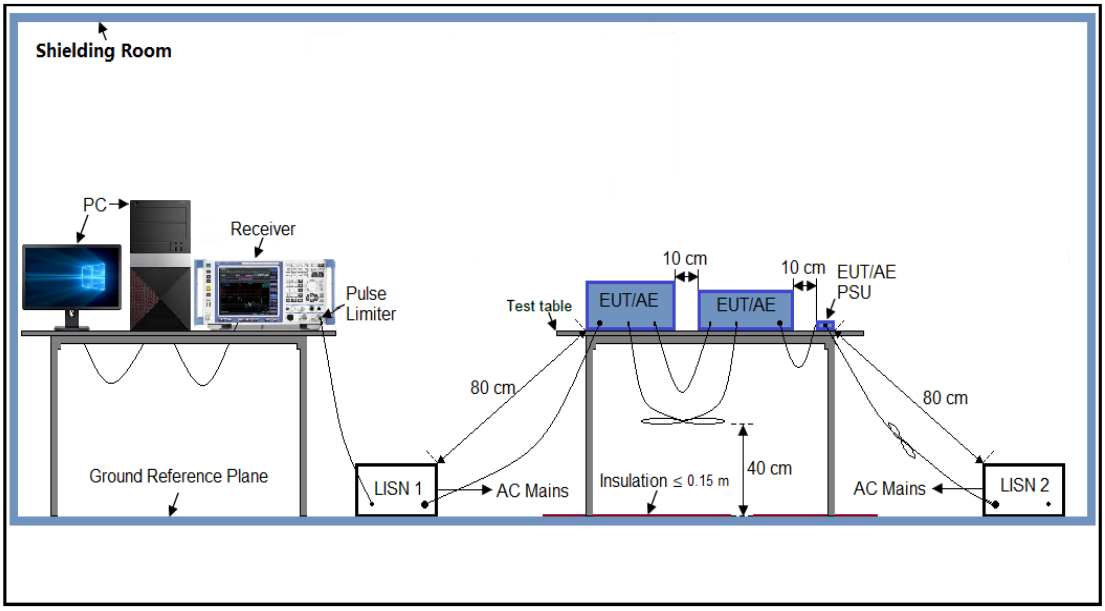
8.1 LIMITS OF LINE CONDUCTED EMISSION TEST

Frequency	Maximum RF Line Voltage	
	Q.P. (dBμV)	Average (dBμV)
150kHz~500kHz	66-56	56-46
500kHz~5MHz	56	46
5MHz~30MHz	60	50

Note:

1. The lower limit shall apply at the transition frequency.
2. The limit decreases linearly with the logarithm of the frequency in the range 0.15 MHz to 0.50 MHz.

8.2 MEASUREMENT SETUP (BLOCK DIAGRAM OF CONFIGURATION)



8.3 PRELIMINARY PROCEDURE OF LINE CONDUCTED EMISSION TEST

1. The equipment was set up as per the test configuration to simulate typical actual usage per the user's manual. When the EUT is a tabletop system, a wooden table with a height of 0.8 meters is used and is placed on the ground plane as per ANSI C63.10 (see Test Facility for the dimensions of the ground plane used). When the EUT is a floor-standing equipment, it is placed on the ground plane which has a 3-12 mm non-conductive covering to insulate the EUT from the ground plane.
2. Support equipment, if needed, was placed as per ANSI C63.10.
3. All I/O cables were positioned to simulate typical actual usage as per ANSI C63.10.
4. All support equipment received AC120V/60Hz power from a LISN, if any.
5. The EUT received DC 9V power from adapter which received AC120V/60Hz power from a LISN.
6. The test program was started. Emissions were measured on each current carrying line of the EUT using a spectrum Analyzer / Receiver connected to the LISN powering the EUT. The LISN has two monitoring points: Line 1 (Hot Side) and Line 2 (Neutral Side). Two scans were taken: one with Line 1 connected to Analyzer / Receiver and Line 2 connected to a 50ohm load; the second scan had Line 1 connected to a 50 ohm load and Line 2 connected to the Analyzer / Receiver.
7. Analyzer / Receiver scanned from 150 kHz to 30MHz for emissions in each of the test modes.
8. During the above scans, the emissions were maximized by cable manipulation.
9. The test mode(s) were scanned during the preliminary test.

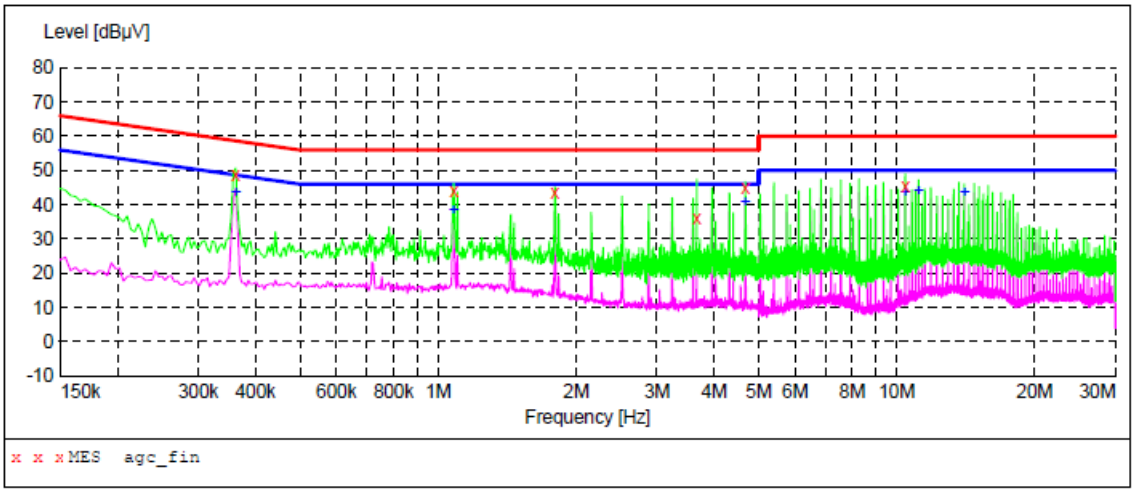
Then, the EUT configuration and cable configuration of the above highest emission level were recorded for reference of final testing.

8.4 FINAL PROCEDURE OF LINE CONDUCTED EMISSION TEST

1. EUT and support equipment was set up on the test bench as per step 2 of the preliminary test.
2. A scan was taken on both power lines, Line 1 and Line 2, recording at least the six highest emissions. Emission frequency and amplitude were recorded into a computer in which correction factors were used to calculate the emission level and compare reading to the applicable limit. If EUT emission level was less –2dB to the A.V. limit in Peak mode, then the emission signal was re-checked using Q.P and Average detector.
3. The test data of the worst case condition(s) was reported on the Summary Data page.

8.5 MEASUREMENT RESULTS

AC LINE CONDUCTED EMISSION TEST			
Test Mode	Mode 4	LISN line	Hot Side



MEASUREMENT RESULT: "agc_fin"

2024/7/29 15:00

Frequency MHz	Level dBµV	Transd dB	Limit dBµV	Margin dB	Detector	Line
0.362000	48.60	6.1	59	10.1	QP	L1
1.082000	43.90	6.2	56	12.1	QP	L1
1.798000	43.40	6.2	56	12.6	QP	L1
3.666000	36.20	6.3	56	19.8	QP	L1
4.678000	44.80	6.3	56	11.2	QP	L1
10.442000	45.50	6.7	60	14.5	QP	L1

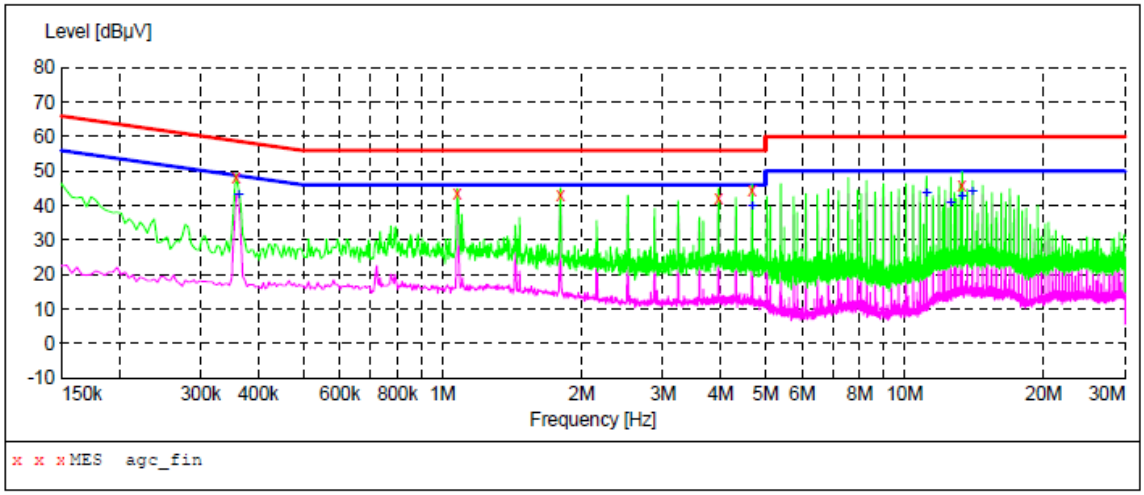
MEASUREMENT RESULT: "agc_fin2"

2024/7/29 15:00

Frequency MHz	Level dBµV	Transd dB	Limit dBµV	Margin dB	Detector	Line
0.362000	43.30	6.1	49	5.4	AV	L1
1.082000	38.50	6.2	46	7.5	AV	L1
4.678000	40.70	6.3	46	5.3	AV	L1
10.442000	43.30	6.7	50	6.7	AV	L1
11.162000	44.00	6.7	50	6.0	AV	L1
14.042000	43.70	6.8	50	6.3	AV	L1

RESULT: PASS

AC LINE CONDUCTED EMISSION TEST			
Test Mode	Mode 4	LISN line	Neutral Side



MEASUREMENT RESULT: "agc_fin"

2024/7/29 15:03

Frequency MHz	Level dBµV	Transd dB	Limit dBµV	Margin dB	Detector	Line
0.358000	48.30	6.1	59	10.5	QP	N
1.078000	43.40	6.2	56	12.6	QP	N
1.802000	43.00	6.2	56	13.0	QP	N
3.958000	42.10	6.3	56	13.9	QP	N
4.682000	44.30	6.3	56	11.7	QP	N
13.318000	45.70	6.8	60	14.3	QP	N

MEASUREMENT RESULT: "agc_fin2"

2024/7/29 15:03

Frequency MHz	Level dBµV	Transd dB	Limit dBµV	Margin dB	Detector	Line
0.362000	43.00	6.1	49	5.7	AV	N
4.682000	40.00	6.3	46	6.0	AV	N
11.162000	43.60	6.7	50	6.4	AV	N
12.602000	40.50	6.8	50	9.5	AV	N
13.318000	42.50	6.8	50	7.5	AV	N
14.038000	43.80	6.8	50	6.2	AV	N

RESULT: PASS

APPENDIX A: PHOTOGRAPHS OF TEST SETUP

Refer to the Report No.: AGC11758240716AP02

APPENDIX B: PHOTOGRAPHS OF TEST EUT

Refer to the Report No.: AGC11758240716AP03

-----END OF REPORT-----

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3.The Company shall not be called or be liable to be called to give evidence or testimony on the Report in a court of law without its prior written consent, unless required by the relevant governmental authorities, laws or court orders.

4. In the event of the improper use of the report as determined by the Company, the Company reserves the right to withdraw it, and to adopt any other additional remedies which may be appropriate.

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8. The Company is not responsible for recalling the electronic version of the original report when any revision is made to them. The Client assumes the responsibility to providing the revised version to any interested party who uses them.

9. Subject to the variable length of retention time for test data and report stored hereinto as otherwise specifically required by individual accreditation authorities, the Company will only keep the supporting test data and information of the test report for a period of six years. The data and information will be disposed of after the aforementioned retention period has elapsed. Under no circumstances shall we provide any data and information which has been disposed of after retention period. Under no circumstances shall we be liable for damage of any kind, including (but not limited to) compensatory damages, lost profits, lost data, or any form of special, incidental, indirect, consequential or punitive damages of any kind, whether based on breach of contract of warranty, tort (including negligence), product liability or otherwise, even if we are informed in advance of the possibility of such damages.