

FCC - TEST REPORT

Report Number : **6895025119101** Date of Issue: **2025-09-10**

Model/HVIN : **BSP3300**

Product Type : Smartphone holder and charger

Applicant : Robert Bosch GmbH

Address : Markwiesenstrasse 58, 72770, Reutlingen, Germany

Manufacturer : Robert Bosch GmbH

Address : Markwiesenstrasse 58, 72770, Reutlingen, Germany

Factory : Xiamen Intretech Inc.

Address : No. 100 Dongfu West Road, Haicang District, 361027 Xiamen,
PEOPLE'S REPUBLIC OF CHINA

Test Result : ☒ **Positive** ☐ **Negative**

Total pages including
Appendices : **17**

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2 Details about the Test Laboratory

Details about the Test Laboratory

Test Site 1

Company name: TÜV SÜD Certification and Testing (China) Co., Ltd. Shenzhen Branch
Building 12 & 13, Zhiheng Wisdomland Business Park, Guankou Erlu,
Nantou, Nanshan District, Shenzhen, Guangdong, China

Telephone: +86 755 8828 6998

Fax: +86 755 8828 5299

FCC Registration No.: 514049

FCC Designation Number: CN5009

3 Description of the Equipment Under Test

Product Type:	Smartphone holder and charger
HVIN:	BSP3300
FCC ID:	2AWRC-BSP3300
Hardware Version:	v03
Software Version:	554c354d4f (Firmware version at IP6806)
Rating:	Input: 5VDC, 1.5A (powered by Bosch Display Socket - BDS) Output: 5VDC, 1.5A (USB Type-C port), 5W (wireless output)
RF Transmission Frequency:	111-150kHz
Antenna Type:	Integrated coil antenna
Modulation Type:	FSK/ASK
WPT Type:	Magnetic Induction
Description of the EUT:	The Equipment Under Test (EUT) is a smartphone holder and charger which operate at 111-150kHz for WPT function.

4 Summary of Test Standards

Test Standards	
FCC Part 15 Subpart C 10-1-2023 Edition	PART 15 - RADIO FREQUENCY DEVICES Subpart C - Intentional Radiators

All the test methods were according to ANSI C63.10 (2020).

5 Summary of Test Results

Technical Requirements					
FCC Part 15 Subpart C					
Test Condition		Test Site	Test Result		
			Pass	Fail	N/A
§15.207	Conducted emission AC power port	Site 1	☐	☐	☒
§15.215(c)	20dB bandwidth	Site 1	☒	☐	☐
§15.209	Radiated emission	Site 1	☒	☐	☐
§15.203	Antenna requirement	See note 1	☒	☐	☐

Note 1: The EUT uses an integrated coil antenna. In accordance to §15.203, it is considered sufficiently to comply with the provisions of this section.

Note 2: The EUT is DC powered.

6 General Remarks

Remarks

This submittal(s) (test report) is intended for FCC ID: 2AOKB-BSP3300 complies with Section 15.207, 15.209, 15.205 of the FCC Part 15, Subpart C rules.

SUMMARY:

All tests according to the regulations cited on page 5 were

■ - Performed

□ - **Not** Performed

The Equipment under Test

■ - **Fulfills** the general approval requirements.

□ - **Does not** fulfill the general approval requirements.

Sample Received Date: 2025-06-25

Testing Start Date: 2025-06-25

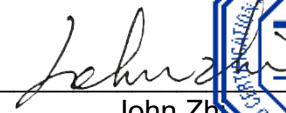
Testing End Date: 2025-06-25

- TÜV SÜD Certification and Testing (China) Co., Ltd. Shenzhen Branch -

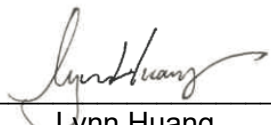
Reviewed by:

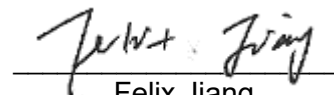
Prepared by:

Tested by:


John Zhang
Project Manager



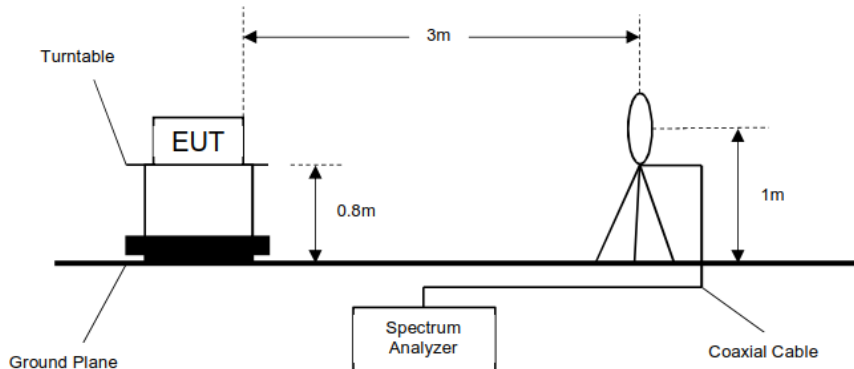

Lynn Huang
Project Engineer


Felix Jiang
Test Engineer

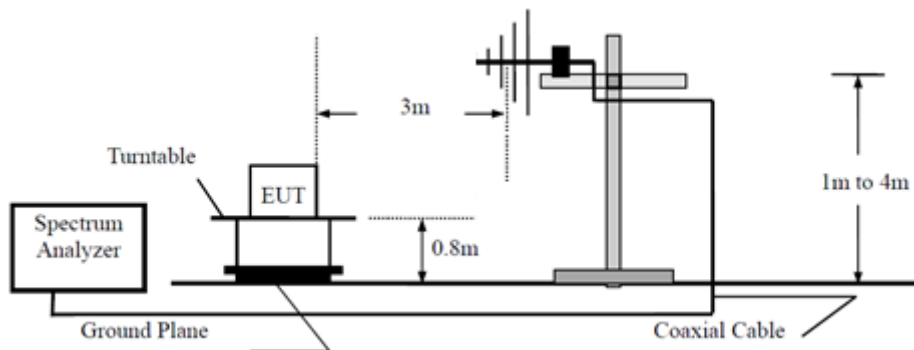
7 Test Setups

7.1 Radiated test setups

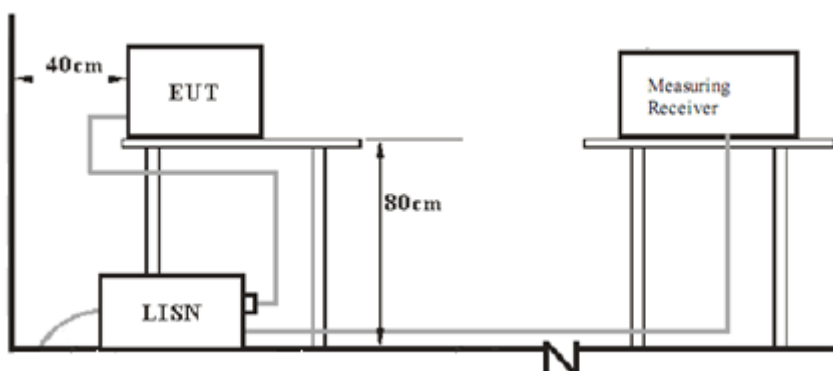
Below 30MHz



30MHz-1GHz



7.2 AC Power Line Conducted Emission test setups



8 Systems test configuration

Auxiliary Equipment Used during Test:

Description	Model	Manufacturer	Remark
Phone	Mi 10	Xiaomi	The load for USB-C charging
Wireless power receiver	V3.1	YBZ	The load for Wireless power receive
Ebike handle bar	---	---	---
Bosch Display Socket (BDS)	BDS32xx	Bosch	BDS is mounted at the Ebike handle bar.
Bosch Ebike system cable	---	Bosch	Cable length = 2 meters

9 Technical Requirement

9.1 20 dB Bandwidth

Test Method

1. The RF output of EUT was connected to the spectrum analyzer by RF cable. The path loss was compensated to the results for each measurement.
2. Set to the maximum power setting and enable the EUT transmit continuously.
3. Use the following test receiver settings:
Span = approximately 2 to 3 times the 20 dB bandwidth, centered on a hopping channel
RBW $\geq$ 1% to 5% of the 20 dB bandwidth, VBW $\geq$ 3RBW, Sweep = auto,
Detector function = peak, Trace = max hold
4. Allow the trace to stabilize. Use the marker-to-peak function to set the marker to the peak of the emission. Measure the frequency difference of two frequencies that were attenuated 20 dB from the reference level. Record the frequency difference as the emission bandwidth. Record the results.

Limit

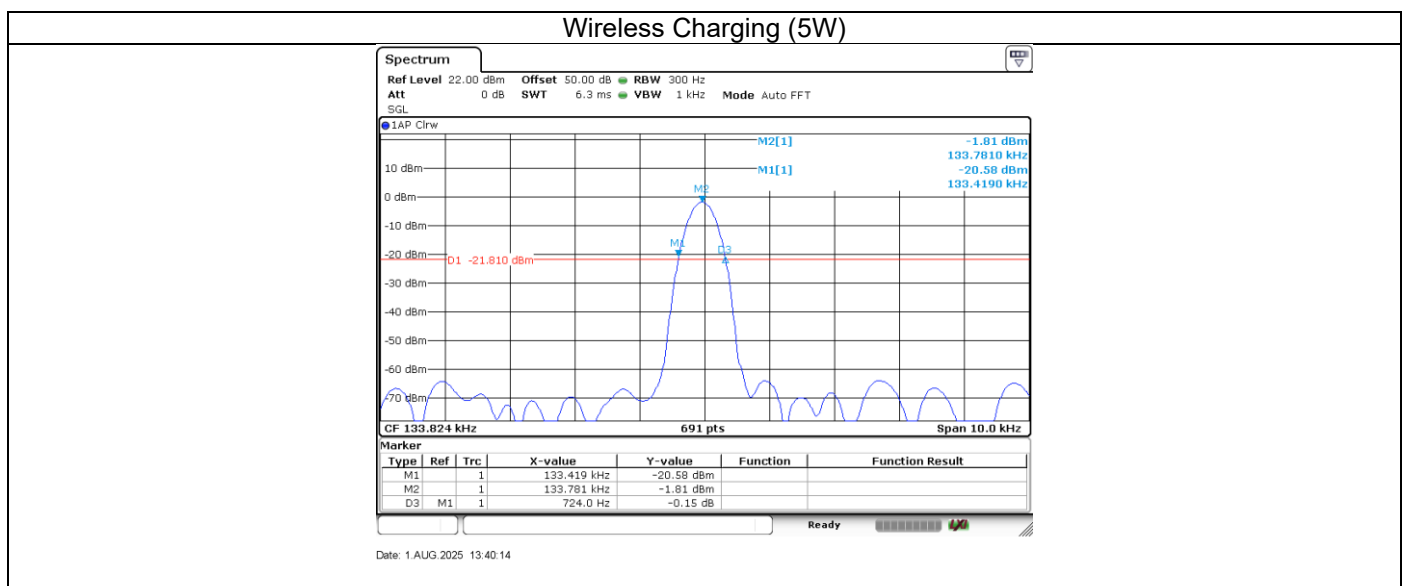
Intentional radiators must be designed to ensure that the 20 dB bandwidth of the emission, or whatever bandwidth may otherwise be specified in the specific rule section under which the equipment operates, is contained within the frequency band designated in the rule section under which the equipment is operated.

Test Result

Frequency	20dB bandwidth	Result		Result
kHz	kHz	F _L (kHz)	F _H (kHz)	
133.7	0.724	133.419	134.143	Pass

The device didn't operate in the 90-110 kHz band.

Test Graph



9.2 Radiated Emission Test

Test Method

1. The EUT was placed on a turn table which is 0.8m above ground plane. The table was rotated 360 degrees to determine the position of the highest radiation.
2. Set to the maximum power setting and enable the EUT transmit continuously
3. The EUT was set 3 meters away from the interference – receiving antenna, which was mounted on the top of a variable – height antenna tower.
4. The height of antenna is varied from one meter to four meters above the ground to determine the maximum value of the field strength. Both horizontal and vertical polarizations of the antenna are set to make the measurement.
5. For each suspected emission, the EUT was arranged to its worst case and then the antenna was tuned to heights from 1 meter to 4 meters and the rotatable table was turned from 0 degrees to 360 degrees to find the maximum reading.

Use the following test receiver settings According to C63.10:

For Below 9kHz-1GHz, use the following spectrum analyzer settings:

Span = wide enough to capture the peak level of the in-band emission and all spurious

9kHz -150kHz

RBW = 200Hz, VBW = 600Hz for peak measurement, Sweep = auto, Detector function = peak,

Trace = max hold.

150kHz - 30MHz

RBW = 10 kHz, VBW = 30 kHz for peak measurement, Sweep = auto, Detector function = peak,

Trace = max hold.

30MHz - 1GHz

RBW = 10 kHz, VBW = 30 kHz for peak measurement, Sweep = auto, Detector function = peak,

Trace = max hold.

Limit

The emissions from an intentional radiator shall not exceed the field strength levels specified in the following table:

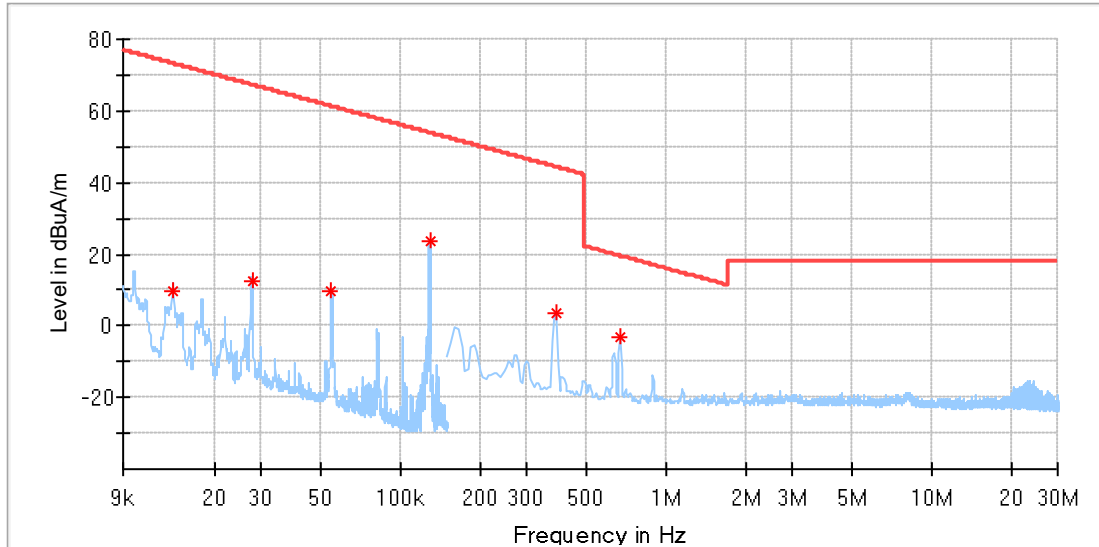
Frequency MHz	Field Strength $\mu\text{V/m}$	Field Strength $\text{dB}\mu\text{V/m}$	Detector	Measurement distance meters
0.009-0.490	2400/F(kHz)	48.5-13.8	QP	300
0.490-1.705	24000/F(kHz)	33.8-23.0	QP	30
1.705-30	30	29.5	QP	30
30-88	100	40	QP	3
88-216	150	43.5	QP	3
216-960	200	46	QP	3
960-1000	500	54	QP	3
Above 1000	500	54	AV	3
Above 1000	5000	74	PK	3

Note 1: Limit $3\text{m}(\text{dB}\mu\text{V/m}) = \text{Limit } 300\text{m}(\text{dB}\mu\text{V/m}) + 40\text{Log}(300\text{m}/3\text{m})$ (Below 30MHz)

Note 2: Limit $3\text{m}(\text{dB}\mu\text{V/m}) = \text{Limit } 30\text{m}(\text{dB}\mu\text{V/m}) + 40\text{Log}(30\text{m}/3\text{m})$ (Below 30MHz)

Radiated emissions test (9KHz-30MHz)

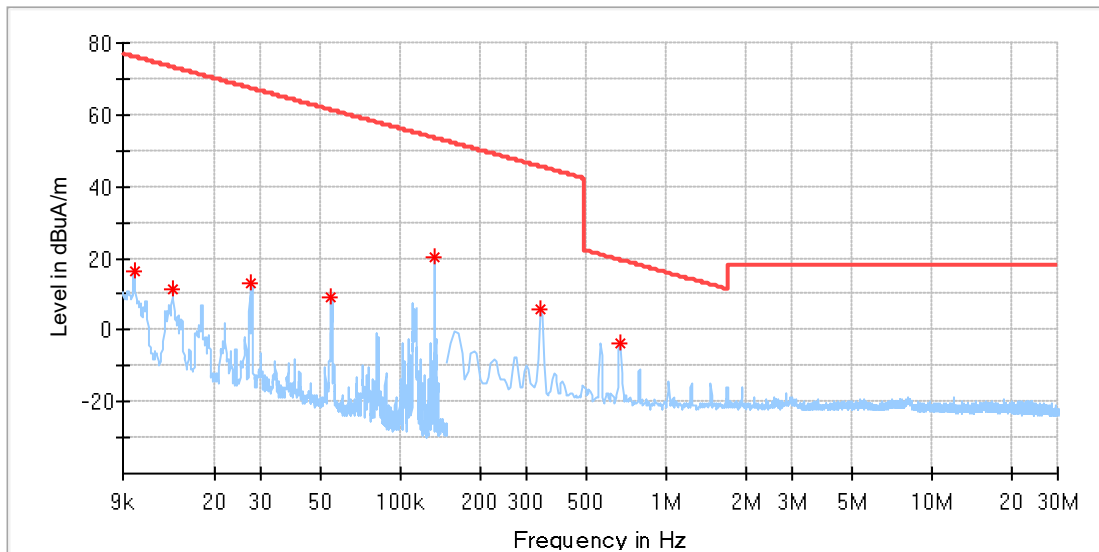
Model: BSP3300
 Test Mode: Wireless Power Transfer
 Test Voltage: 12VDC to BDS, 5VDC from BDS to BSP3300
 Remark: 5W wireless charging output



Frequency (MHz)	MaxPeak (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Pol	Azimuth (deg)	Corr. (dB/m)
0.013794	9.65	73.29	63.64	H	328.0	-31.45
0.027706	12.43	67.23	54.80	H	319.0	-31.65
0.054496	9.62	61.35	51.74	H	353.0	-31.61
0.133025	23.41	53.80	30.39	H	237.0	-31.61
0.383825	3.61	44.39	40.78	H	228.0	-31.63
0.672375	-3.32	19.50	22.82	H	335.0	-31.61

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 Test Voltage: 12VDC to BDS, 5VDC from BDS to BSP3300
 Remark: 5W wireless charging output



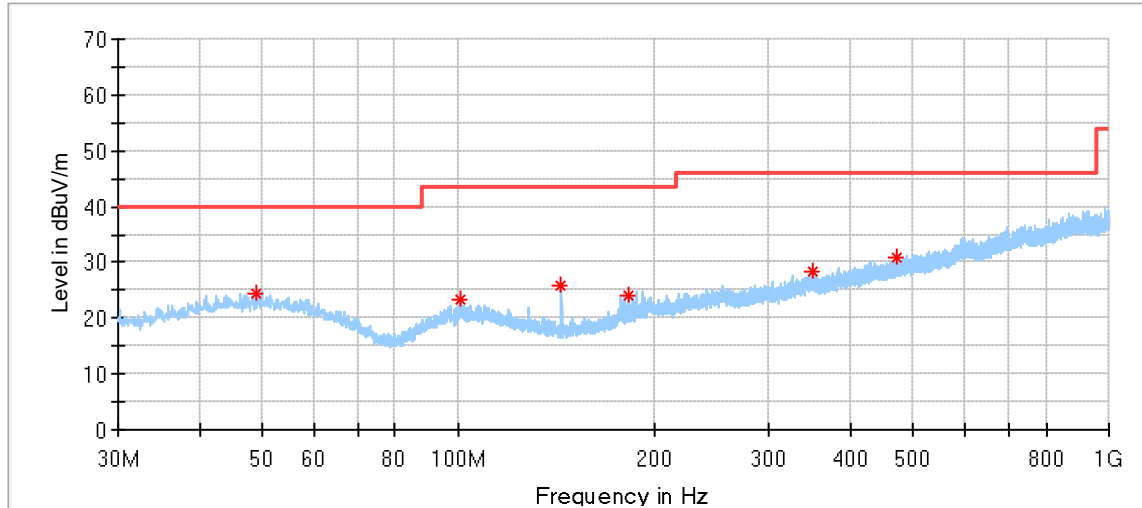
Frequency (MHz)	MaxPeak (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Pol	Azimuth (deg)	Corr. (dB/m)
0.009940	16.19	76.14	59.95	V	313.0	-31.32
0.013935	11.54	73.20	61.66	V	322.0	-31.46
0.027189	13.29	67.39	54.10	V	182.0	-31.66
0.054496	9.30	61.35	52.05	V	359.0	-31.61
0.134158	20.18	53.85	33.67	V	118.0	-31.60
0.339050	6.00	45.47	39.47	V	129.0	-31.63
0.672375	-3.64	19.50	23.14	V	335.0	-31.61

Remark:

- (1) Below 1GHz: Corrector factor = Antenna Factor + Cable Loss.
- (2) The worst-case data were reported and no other spurious and harmonics emissions were reported greater than listed emission above table.

Radiated emissions test (30MHz-1000MHz)

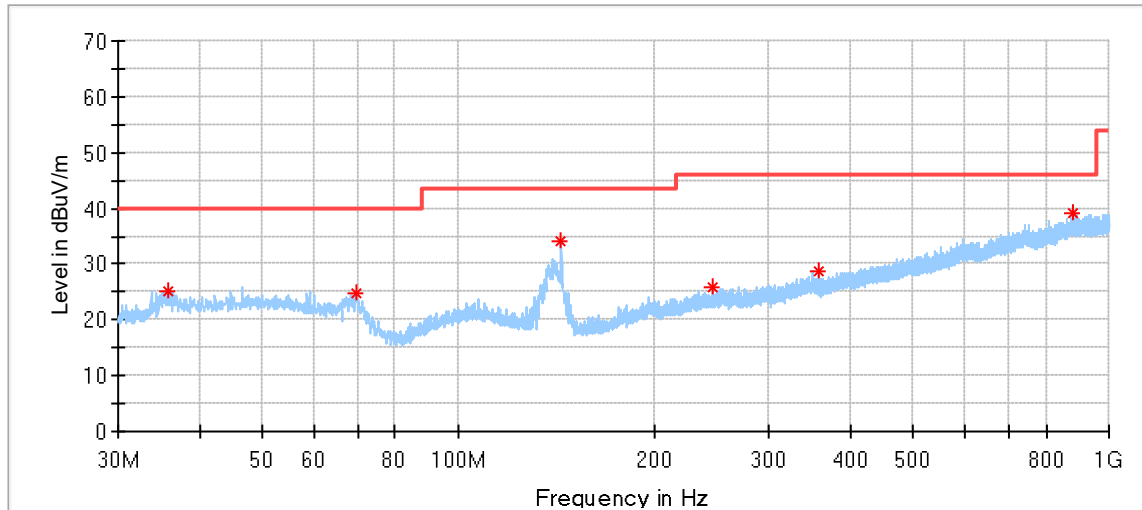
Model: BSP3300
 Test Mode: Wireless Power Transfer
 Test Voltage: 12VDC to BDS, 5VDC from BDS to BSP3300
 Remark: 5W wireless charging output



Critical_Freqs

Frequency (MHz)	MaxPeak (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
48.968889	24.45	40.00	15.55	200.0	H	203.0	18.13
100.540556	23.41	43.50	20.09	100.0	H	0.0	15.67
144.028889	25.68	43.50	17.82	200.0	H	61.0	12.52
182.559444	24.09	43.50	19.41	100.0	H	31.0	14.47
349.830556	28.43	46.00	17.57	100.0	H	38.0	20.32
471.727222	30.80	46.00	15.20	100.0	H	356.0	22.32

Model: BSP3300
 Test Mode: Wireless Power Transfer
 Test Voltage: 12VDC to BDS, 5VDC from BDS to BSP3300
 Remark: 5W wireless charging output



Critical_Freqs

Frequency (MHz)	MaxPeak (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
35.927778	25.23	40.00	14.77	200.0	V	284.0	15.54
69.716111	24.71	40.00	15.29	200.0	V	229.0	13.77
143.975000	34.12	43.50	9.38	100.0	V	60.0	12.52
246.040556	25.71	46.00	20.29	100.0	V	20.0	17.66
357.159444	28.67	46.00	17.33	100.0	V	314.0	19.91
878.534444	39.08	46.00	6.92	100.0	V	107.0	29.38

Remark:

- (1) Below 1GHz: Corrector factor = Antenna Factor + Cable Loss.
- (2) The worst-case data were reported and no other spurious and harmonics emissions were reported greater than listed emission above table.

10 Test Equipment List

List of Test Instruments

Radiated Emission Test (9kHz-30MHz) (SAC-3 #1)

DESCRIPTION	MANUFACTURER	MODEL NO.	EQUIPMENT ID	SERIAL NO.	CAL INTERVAL (YEAR)	CAL. DUE DATE
EMI Test Receiver	Rohde & Schwarz	ESR 7	68-4-74-19-001	102176	1	2026-4-25
Loop Antenna	Rohde & Schwarz	HFH2-Z2	68-4-80-14-006	100398	1	2026-7-17
Cable	HUBER-SUHNER	RG214	68-4-90-14-001-A21	----	----	----
3m Semi-anechoic chamber	TDK	SAC-3 #1	68-4-90-14-001	----	3	2026-10-25
Test software	Rohde & Schwarz	EMC32	68-4-90-14-001-A10	Version10.35.02	N/A	N/A

Radiated Emission Test (30MHz-1GHz) (SAC-3 #1)

DESCRIPTION	MANUFACTURER	MODEL NO.	EQUIPMENT ID	SERIAL NO.	CAL INTERVAL (YEAR)	CAL. DUE DATE
EMI Test Receiver	Rohde & Schwarz	ESR 7	68-4-74-19-001	102176	1	2026-4-25
Trilog Super Broadband Test Antenna	Schwarzbeck	VULB 9163	68-4-80-14-002	707	1	2026-6-10
Attenuator	Mini-circuits	UNAT-6+	68-4-81-21-001	15542	1	2026-4-19
Cable	HUBER-SUHNER	RG214	68-4-90-14-001-A20	----	----	----
3m Semi-anechoic chamber	TDK	SAC-3 #1	68-4-90-14-001	----	3	2026-10-25
Test software	Rohde & Schwarz	EMC32	68-4-90-14-001-A10	Version10.35.02	N/A	N/A

11 System Measurement Uncertainty

For a 95% confidence level, the measurement expanded uncertainties for defined systems, in accordance with the recommendations of ISO 17025 were:

System Measurement Uncertainty	
Items	Extended Uncertainty
Uncertainty for Conducted Emission in shielding room (68-4-90-19-004) 9kHz-150kHz	3.67dB
Uncertainty for Conducted Emission in shielding room (68-4-90-19-004) 150kHz-30MHz (for test using AMN ENV432 or ENV4200)	3.26dB
Uncertainty for Radiated Emission in 3m chamber (68-4-90-14-001) 9kHz-30MHz	4.69dB
Uncertainty for Radiated Emission in 3m chamber (68-4-90-14-001) 30MHz-1000MHz	Horizontal: 4.78dB; Vertical: 5.85dB;
Uncertainty Evaluation for Temperature	0.26°C
Uncertainty Evaluation for Humidity	1.32%

Measurement Uncertainty Decision Rule

Determination of conformity with the specification limits is based on the decision rule according to IEC Guide 115: 2023, clause 4.3.3 and 4.3.4.

---END OF TEST REPORT---