EMC TEST REPORT

Applicant	Samsung Electronics Co., Ltd.
FCC ID	ZCASMR391
Product	Wearable device
Brand	SAMSUNG
Model	SM-R391
Report No.	EFTA26070127-IE-01-E1
Issue Date	July 30, 2026

Eurofins TA Technology (Shanghai) Co., Ltd. tested the above equipment in accordance with the requirements in **FCC Code CFR47 Part15B (2025)/ ANSI C63.4-2014**. The test results show that the equipment tested is capable of demonstrating compliance with the requirements as documented in this report.

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Summary of measurement results

Number	Test Case	Clause in FCC Rules	Conclusion
1	Radiated Emission	FCC Part15.109, ANSI C63.4-2014	PASS
2	Conducted Emission	FCC Part15.107, ANSI C63.4-2014	PASS
Date of Testing: July 20, 2026 Date of Sample Received: July 15, 2026			
Note: 1. The conformity assessment in this report is based on a direct comparison of the test results with the limits by Eurofins TA Technology (Shanghai) Co., Ltd., without considering measurement uncertainty.			

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1 Test Laboratory

1.1 Notes of the Test Report

This report shall not be reproduced in full or partial, without the written approval of **Eurofins TA Technology (Shanghai) Co., Ltd.** The results documented in this report apply only to the tested sample, under the conditions and modes of operation as described herein. Measurement Uncertainties were not taken into account and are published for informational purposes only. This report is written to support regulatory compliance of the applicable standards stated above.

1.2 Test Facility

FCC (Designation number: CN1179, Test Firm Registration Number: 446626)

Eurofins TA Technology (Shanghai) Co., Ltd. has been listed on the US Federal Communications Commission list of test facilities recognized to perform measurements.

A2LA (Certificate Number: 3857.01)

Eurofins TA Technology (Shanghai) Co., Ltd. has been listed by American Association for Laboratory Accreditation to perform measurement.

1.3 Testing Location

Company:	Eurofins TA Technology (Shanghai) Co., Ltd.
Address:	Building 3, No.145, Jintang Rd, Pudong Shanghai, P.R.China
City:	Shanghai
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2 General Description of Equipment Under Test

2.1 Applicant and Manufacturer Information

Applicant	Samsung Electronics Co., Ltd.
Applicant address	19 Chapin Rd.,Building D Pine Brook, NJ 07058
Manufacturer	Samsung Electronics Co., Ltd.
Manufacturer address	Samsung R5, 129 Samsung-ro, Yeongtong-gu, Suwon-si, Gyeonggi-do, Republic of Korea

2.2 General Information

EUT Description			
Device Type	Portable Device		
Model	SM-R391		
Lab internal SN	260713-31-001		
HW Version	REV2.0		
SW Version	R391XXU0AZG2		
Power Rating	DC 3.85V		
Connecting I/O Port(s)	Please refer to the User's Manual.		
Antenna Type	Internal Antenna		
Frequency	Band	Tx (MHz)	Rx (MHz)
	Bluetooth	2402 ~ 2480	2402 ~ 2480
EUT Accessory			
Battery	Manufacturer: EVE Model: HQ-8339EV		
Charging base 1	Manufacturer: Shenzhen Pomagtor Precision Electronics Co.,Ltd Model: HY90.M00000050.04		
Charging base 2	Manufacturer: Huizhou Juwei Electronics Co., Ltd. Model: JWUB2240-H17H		
Charging base 3	Manufacturer: Saibao(Jiangxi)Industrial Co..Ltd. Model: SHQ-A307A		
Charging base 4	Manufacturer: HUIZHOU WASHIN ELECTRONICS CO., LTD Model: A02007000003		
Auxiliary Test Equipment			
Adapter	Manufacturer: HAEM Model: EP-T1510		

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Phone	Manufacturer: Xiaomi Model: MI 8
Note: 1. The EUT is sent from the applicant to Eurofins TA and the information of the EUT is declared by the applicant. 2. There are more than one Charging bases, each one should be applied throughout the compliance test respectively, however, only the worst case (Charging base 3) will be recorded in this report.	

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2.3 Applied Standards

According to the specifications of the manufacturer, it must comply with the requirements of the following standards:

Test standards
FCC Code CFR47 Part15B (2025)
ANSI C63.4-2014

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2.4 Test Mode

Test Mode	
Mode 1	Adapter +USB cable+ EUT+ BT link phone

Test Type	Test Mode	Worst Mode
Radiated Emission	Mode 1	Mode 1
Conducted Emission	Mode 1	Mode 1
After technical evaluation or/and preliminary test, the test data of the worst-case condition was recorded in this report.		

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3 Test Case Results

3.1 Radiated Emission

Ambient Condition

Temperature	Relative humidity
15°C ~ 35°C	30% ~ 60%

Methods of Measurement

When the EUT is a tabletop system, a wooden turntable with a height of 0.8 meters is used which is placed on the ground plane, when the EUT is a floor standing equipment, it is placed on the ground plane which has a 15cm non-conductive covering to insulate the EUT from the ground plane.
The distance between EUT and receive antenna should be 3 meters. During the test, the EUT was operating in its typical mode. The test method is according to ANSI C63.4-2014. Sweep the whole frequency band through the range from 30MHz to the 5th harmonic of the carrier. During the test, the height of receive antenna shall be moved from 1 to 4 meters, and the antenna shall be performed under horizontal and vertical polarization. The turn table shall be rotated from 0 to 360 degrees for detecting the maximum of radiated signal level.
The data of cable loss and antenna factor has been calibrated in full testing frequency range before the testing. During the test, the EUT is worked at maximum output power.
Set the spectrum analyzer in the following:

Below 1GHz:
RBW=100 kHz / VBW=300 kHz / Sweep=AUTO
Above 1GHz:
(a) PEAK Detector: RBW=1MHz / VBW=3MHz/ Sweep=AUTO
(b) AVERAGE Detector: RBW=1MHz / VBW=3MHz / Sweep=AUTO

The radiated emission was measured in the following position: EUT stand-up position (Z axis), lie-down position (X, Y axis). The worst emission was found in lie-down position (X axis) and the worst case was recorded.

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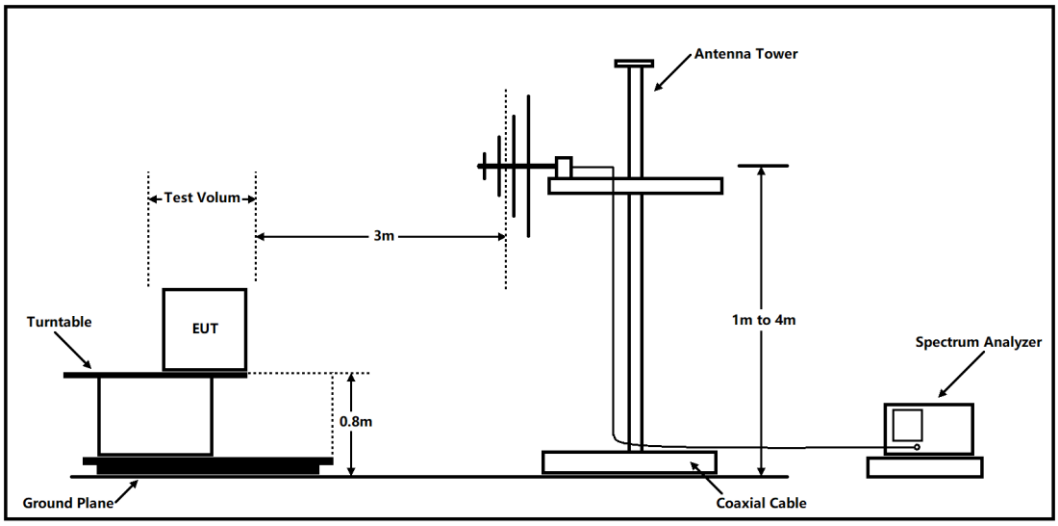
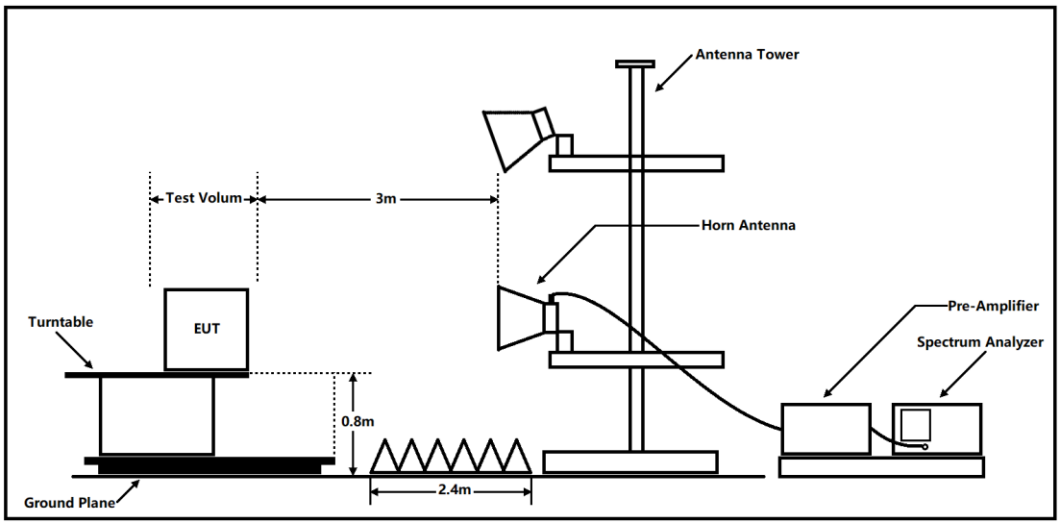
Test Setup

Below 1GHz



Above 1GHz



Note: Area side: 2.4mX3.6m

Antenna Tower meets ANSI C63.4 requirements for measurements above 1 GHz by keeping the antenna aimed at the EUT during the antenna's ascent/ descent along the antenna mast.

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Limits

Class B

Frequency (MHz)	Field Strength (dBμV/m)	Detector
30 -88	40.0	Quasi-peak
88-216	43.5	Quasi-peak
216 – 960	46.0	Quasi-peak
960-1000	54.0	Quasi-peak
1000-5th harmonic of the highest frequency or 40GHz, which is lower	54 74	Average Peak

Frequency range of radiated measurements

Highest frequency generated or used in the device or on which the device operates or tunes (MHz)	Upper frequency of measurement range (MHz)
Below 1.705	30
1.705-108	1000
108-500	2000
500-1000	5000
Above 1000	5th harmonic of the highest frequency or 40 GHz, whichever is lower.

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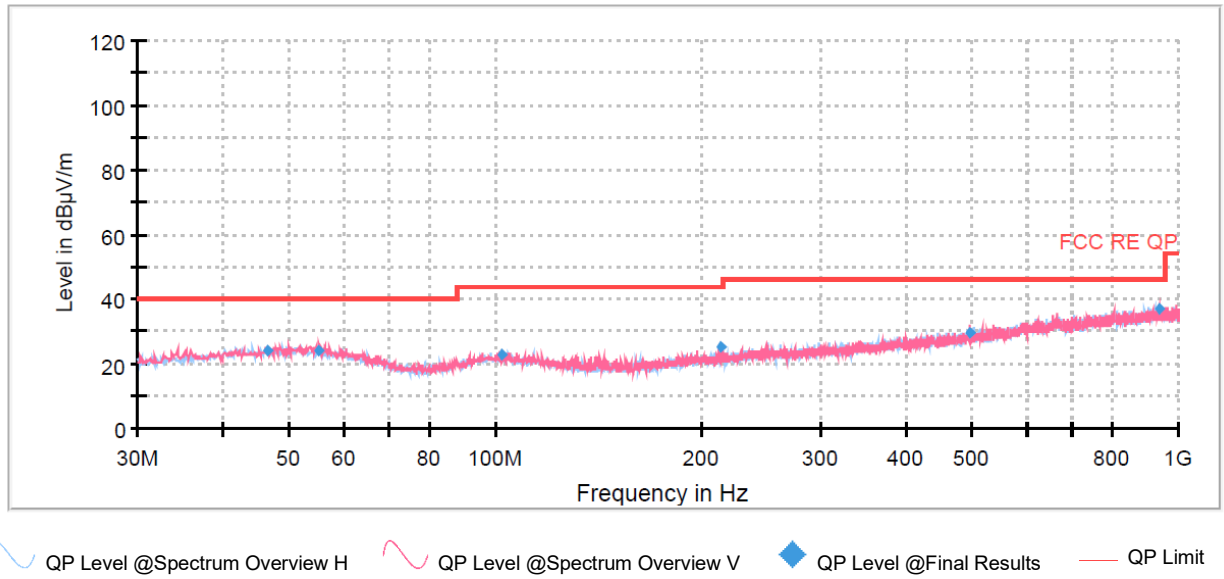
Test Results

Sweep the whole frequency band through the range from 30MHz to the 5th harmonic of the carrier. The Emissions in the frequency band 18GHz – 26.5GHz is more than 20dB below the limit are not reported.

The following graphs display the maximum values of horizontal and vertical by software.



Radiated Emission from 30MHz to 1GHz

Final_Result

Frequency (MHz)	QuasiPeak (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Meas. Time (ms)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
46.49	24.29	40.00	15.71	1000.00	200.0	H	114.00	20
55.34	24.19	40.00	15.81	1000.00	199.0	V	193.00	20
102.39	22.75	43.50	20.75	1000.00	199.0	V	352.00	19
214.54	25.02	43.50	18.48	1000.00	200.0	V	27.00	18
495.48	29.71	46.00	16.29	1000.00	100.0	V	49.00	25
936.83	37.00	46.00	9.00	1000.00	200.0	H	262.00	32

Remark: 1. Correction Factor = Antenna factor + Insertion loss(cable loss)

2. Margin = Limit – Quasi-Peak

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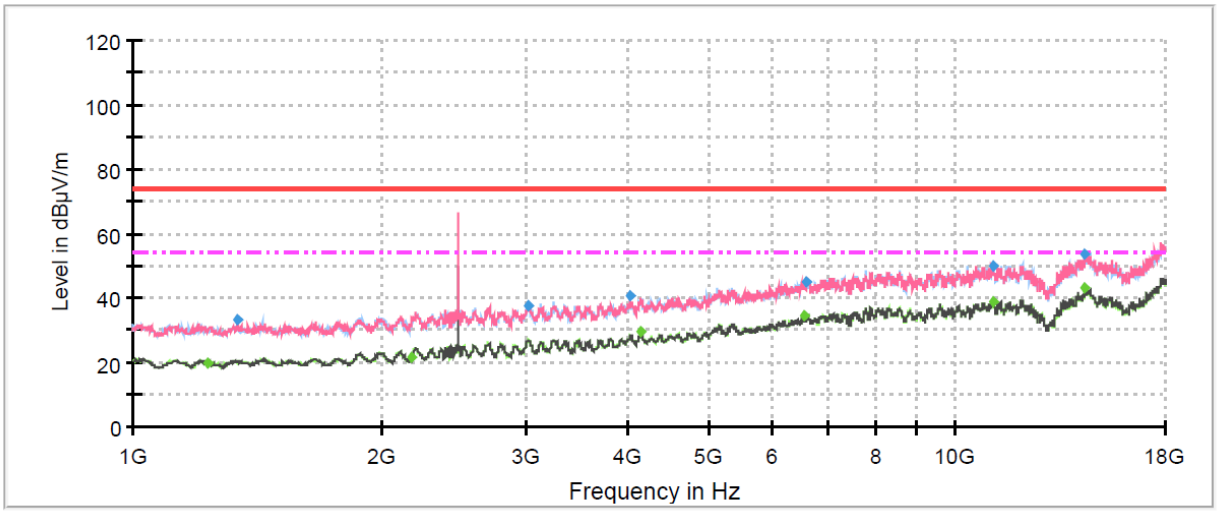

PK Level @Spectrum Overview H
PK Level @Spectrum Overview V
PK Level @Final Results
PK Limit
AVG Level @Spectrum Overview H
AVG Level @Spectrum Overview V
AVG Level @Final Results
AVG Limit

Note: The signal beyond the limit is carrier.
Radiated Emission from 1GHz to 18GHz

Final_Result

Frequency (MHz)	MaxPeak (dBµV/m)	Average (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Meas. Time (ms)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
1233.75	---	19.77	54.00	34.23	500.00	100.0	H	188.00	-23
1342.13	33.32	---	74.00	40.68	500.00	100.0	V	358.00	-22
2183.63	---	21.60	54.00	32.40	500.00	200.0	H	6.00	-18
3023.00	37.50	---	74.00	36.50	500.00	200.0	V	110.00	-14
4030.25	40.42	---	74.00	33.58	500.00	100.0	V	294.00	-12
4147.13	---	29.31	54.00	24.69	500.00	200.0	H	49.00	-11
6542.00	---	34.62	54.00	19.38	500.00	100.0	H	0.00	-4
6603.63	45.22	---	74.00	28.78	500.00	100.0	H	55.00	-4
11108.63	49.90	---	74.00	24.10	500.00	200.0	V	6.00	2
11115.00	---	38.68	54.00	15.32	500.00	200.0	H	0.00	2
14400.25	---	42.89	54.00	11.11	500.00	200.0	H	346.00	7
14400.25	53.39	---	74.00	20.61	500.00	100.0	H	173.00	7

Remark: 1. Correction Factor = Antenna factor + Insertion loss (cable loss + amplifier gain)
2. Margin = Limit – MaxPeak / Average

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3.2 Conducted Emission

Ambient Condition

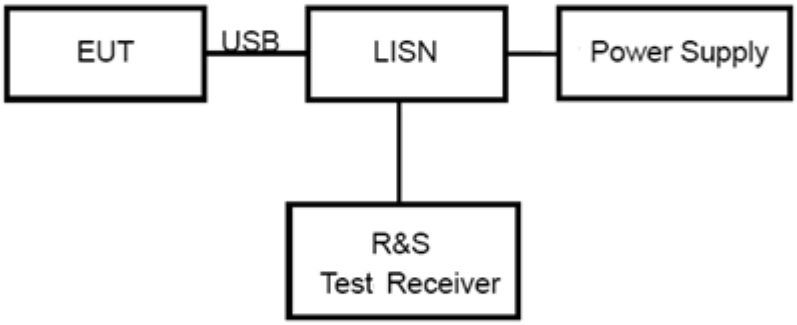
Temperature	Relative humidity
15°C ~ 35°C	30% ~ 60%

Methods of Measurement

When the EUT is a tabletop system, the EUT is placed on a non-metallic table of 80cm height above the horizontal metal reference ground plane; When the EUT is a floor standing equipment, the EUT is placed on the ground plane which has a 15cm non-conductive covering to insulate the EUT from the ground plane

During the test, the EUT was operating in its typical mode. The test method is according to ANSI C63.4-2014. Connect the AC power line of the EUT to the L.I.S.N. Use EMI receiver to detect the average and Quasi-peak value. RBW is set to 9 kHz, VBW is set to 30kHz. The measurement result should include both L line and N line.

Test Setup



Note: Power Supply is AC Power source and it is used to change the voltage 120V/60Hz.

Limits

Frequency (MHz)	Class A (dBμV)		Class B (dBμV)	
	Quasi-peak	Average	Quasi-peak	Average
0.15 - 0.5	79	66	66 to 56 *	56 to 46*
0.5 - 5	73	60	56	46
5 - 30	73	60	60	50
*: Decreases with the logarithm of the frequency.				

Note: The EUT should meet CLASS B limit.

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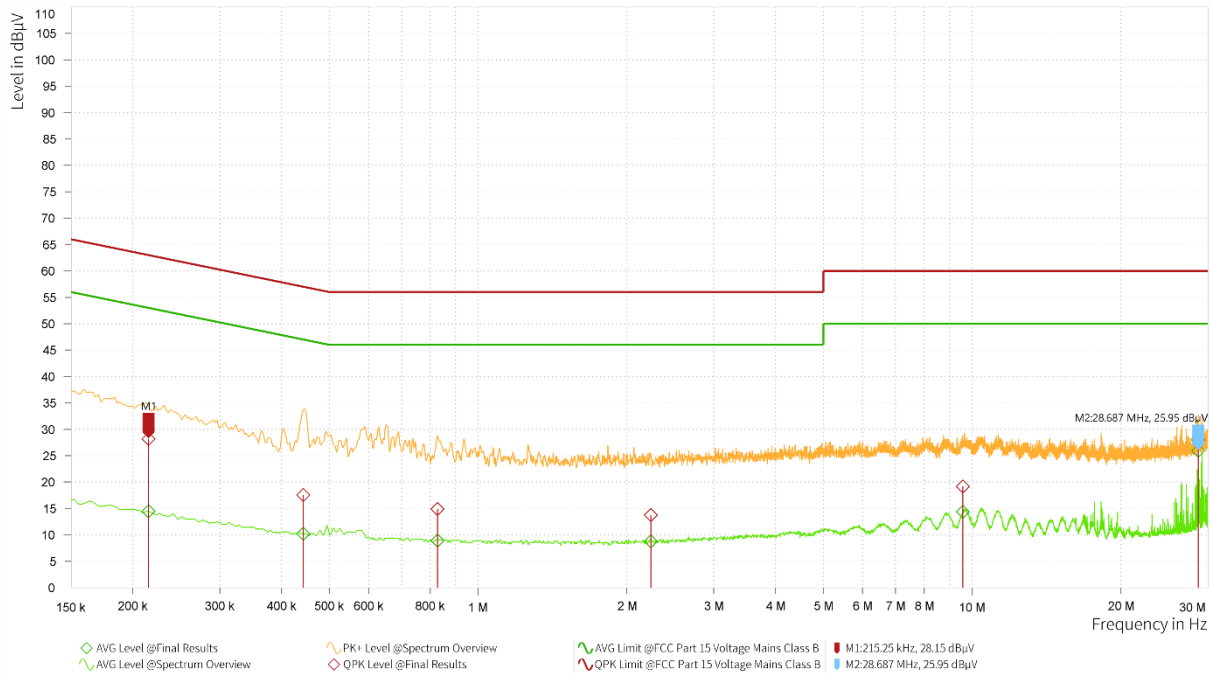
Test Results



Frequency [MHz]	QPK Level [dBµV]	QPK Limit [dBµV]	QPK Margin [dB]	AVG Level [dBµV]	AVG Limit [dBµV]	AVG Margin [dB]	Correction [dB]	Line	Meas. BW [kHz]	Meas. Time [s]
0.215	28.15	63.00	34.85	14.49	53.00	38.51	21.32	L1	9.000	1.000
0.443	17.57	57.01	39.44	10.21	47.01	36.81	21.18	L1	9.000	1.000
0.827	14.91	56.00	41.09	8.91	46.00	37.09	20.63	L1	9.000	1.000
2.236	13.74	56.00	42.26	8.75	46.00	37.25	19.95	L1	9.000	1.000
9.578	19.16	60.00	40.84	14.37	50.00	35.63	19.77	L1	9.000	1.000
28.687	27.97	60.00	32.03	25.95	50.00	24.05	20.17	L1	9.000	1.000

Remark: Correct factor=cable loss + LISN factor

L line

Conducted Emission from 150 kHz to 30 MHz

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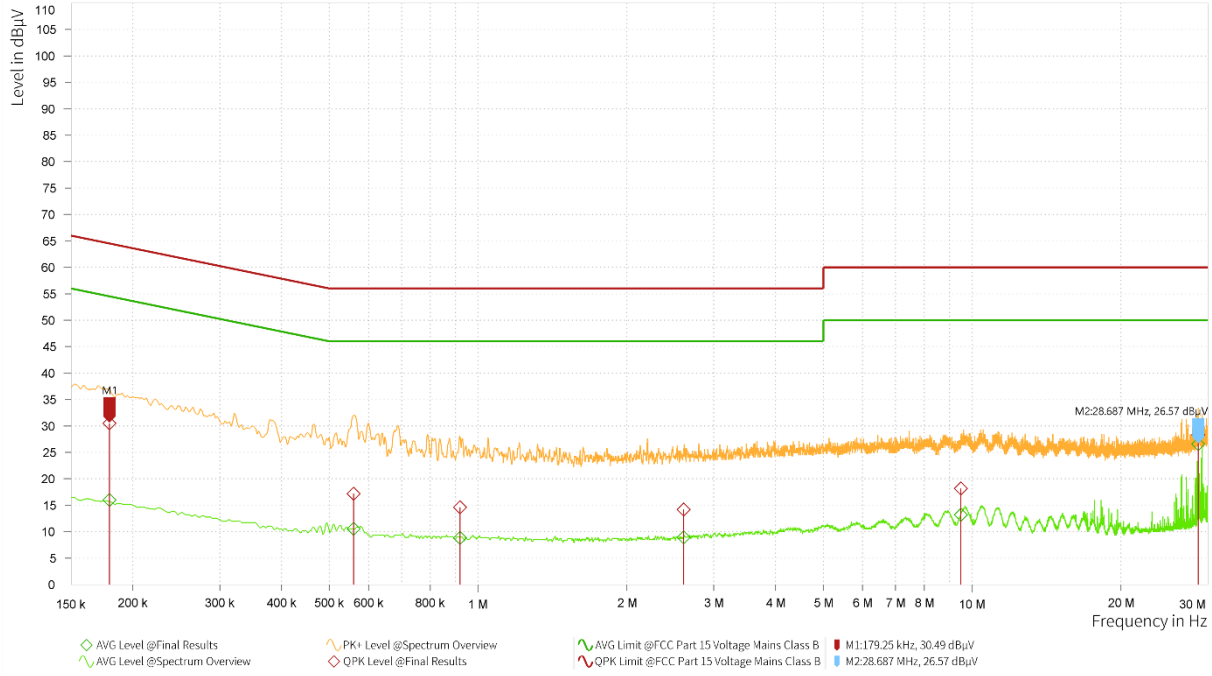

Frequency [MHz]	QPK Level [dBµV]	QPK Limit [dBµV]	QPK Margin [dB]	AVG Level [dBµV]	AVG Limit [dBµV]	AVG Margin [dB]	Correction [dB]	Line	Meas. BW [kHz]	Meas. Time [s]
0.179	30.49	64.52	34.03	15.99	54.52	38.53	21.31	N	9.000	1.000
0.560	17.19	56.00	38.81	10.51	46.00	35.49	21.01	N	9.000	1.000
0.920	14.60	56.00	41.40	8.83	46.00	37.17	20.56	N	9.000	1.000
2.607	14.16	56.00	41.84	8.92	46.00	37.08	19.86	N	9.000	1.000
9.490	18.18	60.00	41.82	13.17	50.00	36.83	19.72	N	9.000	1.000
28.687	28.30	60.00	31.70	26.57	50.00	23.43	20.21	N	9.000	1.000

Remark: Correct factor=cable loss + LISN factor

N line

Conducted Emission from 150 kHz to 30 MHz

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4 Uncertainty Measurement

Case	Uncertainty	Factor k
Radiated Emission 30MHz – 200MHz	4.17 dB	1.96
Radiated Emission 200MHz – 1GHz	4.84 dB	1.96
Radiated Emission 1GHz – 18GHz	4.35 dB	1.96
Conducted Emission	2.57 dB	2

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5 Main Test Instruments

Name of Equipment	Manufacturer	Type/Model	Serial Number/ Version	Calibration Date	Expiration Time
Radiated Emission					
EMI Test Receiver	R&S	ESCI3	100948	2026-04-20	2027-04-19
Signal Analyzer	R&S	FSV40	101186	2026-04-21	2027-04-20
TRILOG Broadband Antenna	SCHWARZBECK	VULB 9163	371	2025-10-26	2028-10-25
Horn Antenna	SCHWARZBECK	BBHA 9120D	430	2024-07-18	2027-07-17
Amplifier	R&S	SCU18F	101022	2026-04-20	2027-04-19
Software	R&S	EMC32	9.26.01	/	/
Conducted Emission					
Artificial main network	R&S	ENV216	102191	2025-11-24	2026-11-23
EMI Test Receiver	R&S	ESR	101667	2026-04-20	2027-04-19
Software	R&S	ELEKTRA	5.02.1	/	/

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6 The EUT Appearance

Refer to *EUT Appearance*.

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7 Test Setup Photos

Refer to *EMC Test Setup*.

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

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