

EMC TEST REPORT

Applicant Suzhou MobyData Smart System Co., Ltd.

FCC ID 2A398-M16

Product Barcord Reader

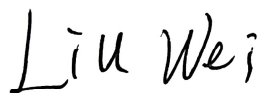
Brand MobyData

Model M93; M93S; M93 5G; OA96; OA98; OA89; OA99;
MB98; MB89; MB99; MB96; SA98; SA89; SA96;
SA99; V53; TP96; ER98; UT78; MS96,PDX50;
PDX50L

Report No. EFTA26040218-IE-01-E1V1

Issue Date July 27, 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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Version	Revision Description	Issue Date
Rev.0	Initial issue of report.	July 17, 2026
Rev.1	Updated information.	July 27, 2026
Note: This revised report (Report No.: EFTA26040218-IE-01-E1V1) supersedes and replaces the previously issued report (Report No.: EFTA26040218-IE-01-E1). Please discard or destroy the previously issued report and dispose of it accordingly.		

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: April 25, 2026 ~ April 27, 2026			
Date of Sample Received: April 16, 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.			

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.
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2 General Description of Equipment Under Test

2.1 Applicant and Manufacturer Information

Applicant	Suzhou MobyData Smart System Co., Ltd.
Applicant address	3f, building E, Yida Science Park, No.11 Jinpu Road, SIP, Suzhou, Jiangsu Province, China.
Manufacturer	Suzhou MobyData Smart System Co., Ltd.
Manufacturer address	3f, building E, Yida Science Park, No.11 Jinpu Road, SIP, Suzhou, Jiangsu Province, China.

2.2 General Information

EUT Description			
Device Type	Portable Device		
Model	M93; M93S; M93 5G; OA96; OA98; OA89; OA99; MB98; MB89; MB99; MB96; SA98; SA89; SA96; SA99; V53; TP96; ER98; UT78; MS96,PDX50; PDX50L		
IMEI	IMEI 1: 865940070207536 IMEI 2: 865940070207544		
HW Version	V01		
SW Version	M16.01.01.20260309		
Power Rating	DC 3.85V		
Connecting I/O Port(s)	Please refer to the User's Manual.		
Antenna Type	PIFA Antenna		
Frequency	Band	Tx (MHz)	Rx (MHz)
	GSM 850	824 ~ 849	869 ~ 894
	GSM 1900	1850 ~ 1910	1930 ~ 1990
	WCDMA Band II	1850 ~ 1910	1930 ~ 1990
	WCDMA Band IV	1710 ~ 1755	2110 ~ 2155
	WCDMA Band V	824 ~ 849	869 ~ 894
	LTE Band 2	1850 ~ 1910	1930 ~ 1990
	LTE Band 4	1710 ~ 1755	2110 ~ 2155
	LTE Band 5	824 ~ 849	869 ~ 894
	LTE Band 7	2500 ~ 2570	2620 ~ 2690
	LTE Band 12	699 ~ 716	729 ~ 746
	LTE Band 13	777 ~ 787	746 ~ 756
	LTE Band 17	704 ~ 716	734 ~ 746
	LTE Band 25	1850 ~ 1915	1930 ~ 1995
	LTE Band 26	824 ~ 849	869 ~ 894

	(824 ~ 849)		
	LTE Band 26 (814 ~ 824)	814 ~ 824	859 ~ 869
	LTE Band 41	2496 ~ 2690	2496 ~ 2690
	LTE Band 66	1710 ~ 1780	2110 ~ 2180
	NR Band n2	1850 ~ 1910	1930 ~ 1990
	NR Band n5	824 ~ 849	869 ~ 894
	NR Band n12	699 ~ 716	729 ~ 746
	NR Band n13	777 ~ 787	746 ~ 756
	NR Band n25	1850 ~ 1915	1930 ~ 1995
	NR Band n26 (824 ~ 849)	824 ~ 849	869 ~ 894
	NR Band n26 (814 ~ 824)	814 ~ 824	859 ~ 869
	NR Band n30	2305 ~ 2315	2350 ~ 2360
	NR Band n38	2570 ~ 2620	2570 ~ 2620
	NR Band n41	2496 ~ 2690	2496 ~ 2690
	NR Band n66	1710 ~ 1780	2110 ~ 2180
	NR Band n77 Subset 1	3450 ~ 3550	3450 ~ 3550
	NR Band n77 Subset 2	3700 ~ 3980	3700 ~ 3980
	NR Band n78 Subset 1	3450 ~ 3550	3450 ~ 3550
	NR Band n78 Subset 2	3700 ~ 3800	3700 ~ 3800
	Bluetooth	2402 ~2480	2402 ~2480
	Wi-Fi 2.4GHz	2412 ~ 2462	2412 ~ 2462
	Wi-Fi 5GHz (U-NII-1)	5150 ~ 5250	5150 ~ 5250
	Wi-Fi 5GHz (U-NII-2A)	5250 ~ 5350	5250 ~ 5350
	Wi-Fi 5GHz (U-NII-2C)	5470 ~ 5600 5650 ~ 5725	5470 ~ 5600 5650 ~ 5725
	Wi-Fi 5GHz (U-NII-3)	5725 ~ 5850	5725 ~ 5850
	NFC	13.56	13.56
EN-DC Band	DC_2A_n41A; DC_5A_n41A; DC_12A_n41A; DC_25A_n41A; DC_26A_n41A; DC_66A_n41A; DC_2A_n77A; DC_5A_n77A; DC_7A_n77A; DC_12A_n77A; DC_13A_n77A; DC_25A_n77A; DC_66A_n77A; DC_2A_n78A; DC_5A_n78A; DC_7A_n78A; DC_12A_n78A; DC_13A_n78A; DC_25A_n78A; DC_26A_n78A; DC_66A_n78A		
EUT Accessory			
Battery	Manufacturer: SHEN ZHEN UTILITY ENERGY CO.,LTD. Model: BATM15 DC 3.85V, 5000mAh		
Auxiliary Test Equipment			
PC	Manufacturer: DELL Model: Latitude 3420		
Adapter	Manufacturer: Jiangxi Jian Aohai Technology Co.,Ltd.		

	Model: A319-050200U-US2 Input:100-240V~50/60Hz Max 0.3A Output:5V  2A
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Note:

1. The EUT is sent from the applicant to Eurofins TA and the information of the EUT is declared by the applicant.
2. Radio equipment in band n77 is only allowed to operate from 3450 MHz to 3550 MHz for Subset 1; 3700 MHz to 3980 MHz for Subset 2 for the transmitter and receiver.
Radio equipment in band n78 is only allowed to operate from 3450 MHz to 3550 MHz for Subset 1; 3700 MHz to 3800 MHz for Subset 2 for the transmitter and receiver.
3. The customer declares that the differences between the models are the sales area and the naming methods of customer needs.

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

2.4 Test Mode

Test Mode	
Mode 1	Adapter +USB cable+ + Front camera On
Mode 2	Adapter +USB cable+ Rear camera On
Mode 3	Adapter + USB cable + play (1kHz)
Mode 4	Adapter + USB cable + Bluetooth WLAN NFC receiver
Mode 5	USB Copy (EUT with PC) + USB cable
Mode 6	USB Copy (SD card with PC) + USB cable
Mode 7	EUT + MP4
Mode 8	EUT + Front Camera On
Mode 9	EUT + Rear camera On
Mode 10	EUT + Bluetooth WLAN NFC receiver

Test Type	Test Mode	Worst Mode
Radiated Emission	Mode 1~10	Mode 5
Conducted Emission	Mode 1~6	Mode 1
After technical evaluation or/and preliminary test, the test data of the worst-case condition was recorded in this report.		

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

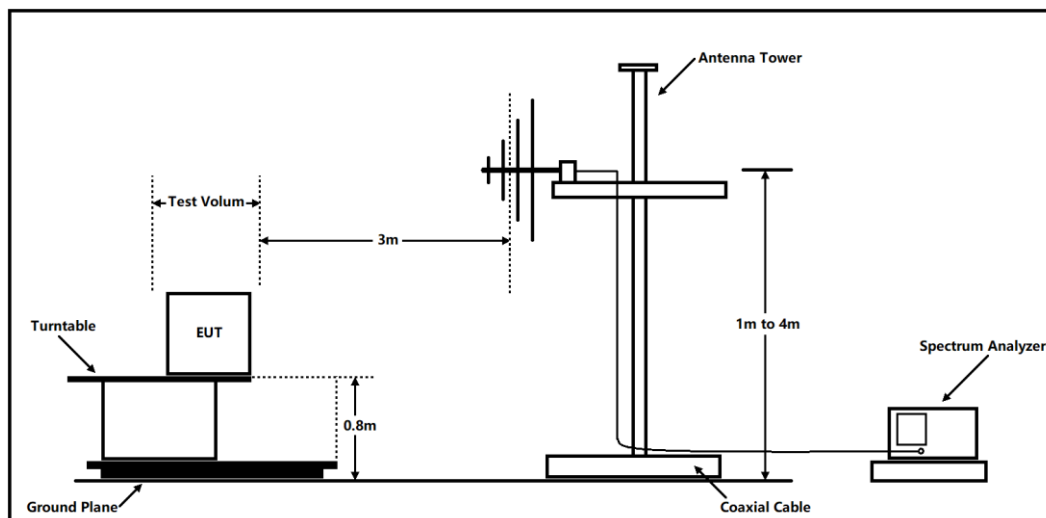
(b) AVERAGE Detector: RBW=1MHz / VBW=3MHz / Sweep=AUTO

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.

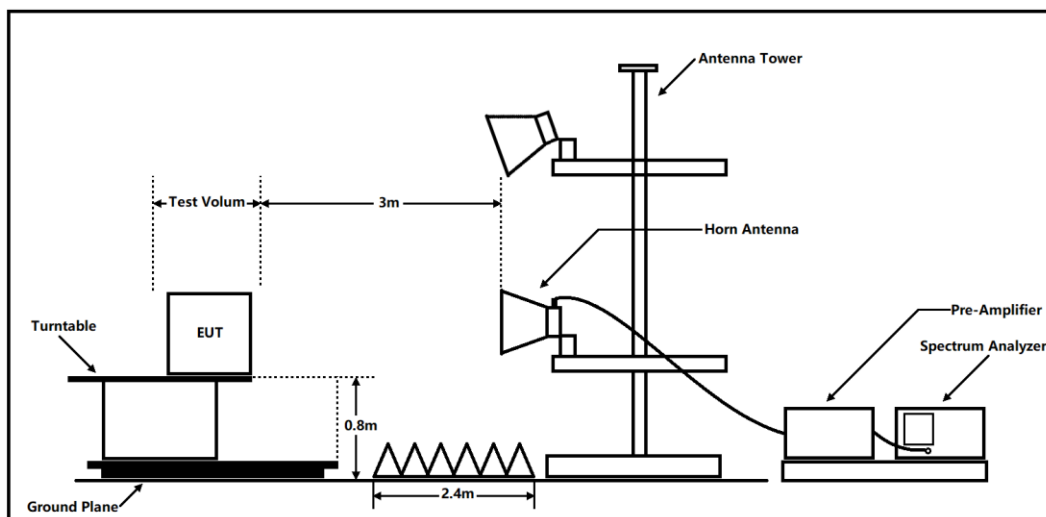
During the test, EUT is connected to a laptop via a USB cable in the case of Transfer Data mode. The EUT is used as the peripheral equipment of the PC. The data is transferred from EUT to PC; PC is connected to server via a long LAN cable.

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.

Limits

Class B

Frequency (MHz)	Field Strength (dB μ V/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
1000-5 th harmonic of the highest frequency or 40GHz, which is lower	54 74	Average Peak

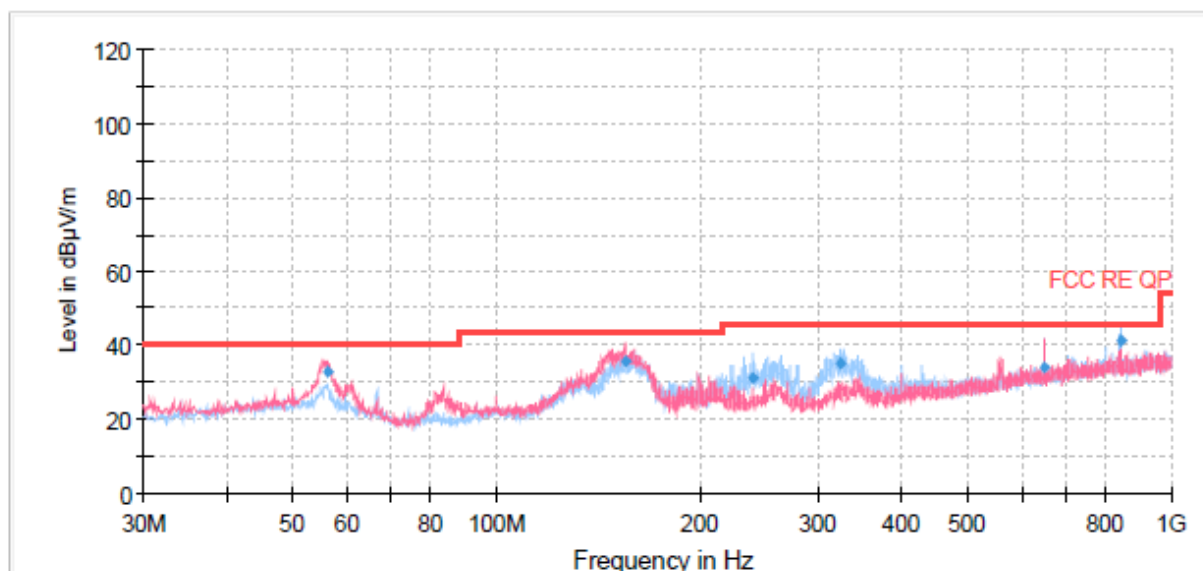
Frequency range of radiated measurements

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.

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 – 40GHz is more than 20dB below the limit are not reported.

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



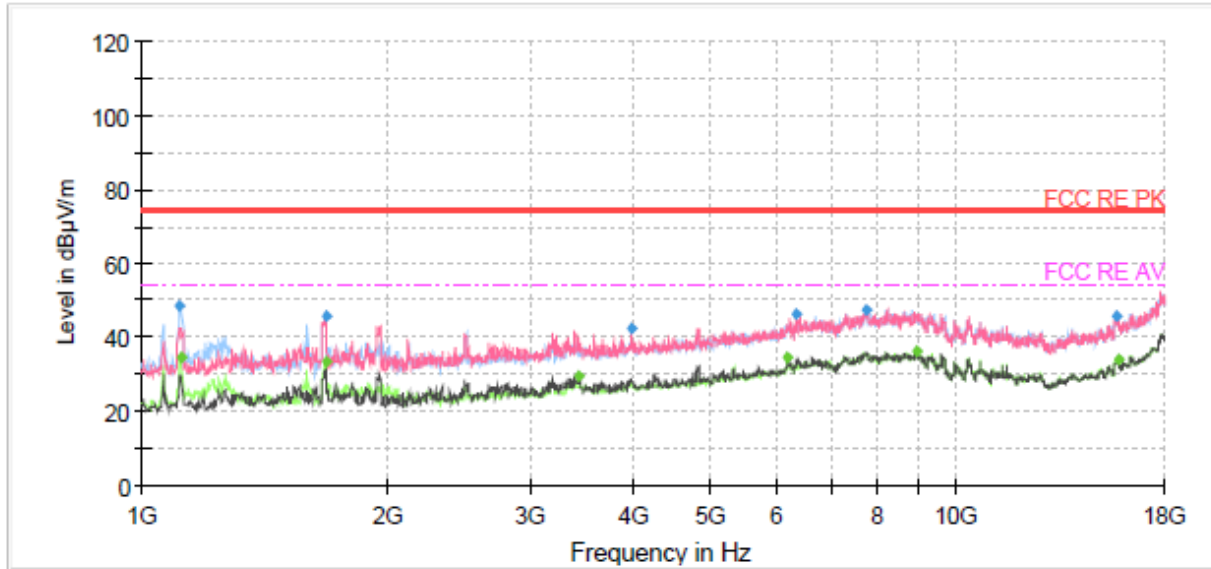
QP Level @Spectrum Overview H
 QP Level @Spectrum Overview V
 QP Level @Final Results
 QP Limit

Radiated Emission from 30MHz to 1GHz

Frequency (MHz)	Quasi-Peak (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Height (cm)	Polarization	Azimuth (deg)	Correct Factor (dB)
56.07	32.85	40.00	7.15	100.0	V	249.00	20
154.89	35.65	43.50	7.85	100.0	V	338.00	15
239.64	31.40	46.00	14.60	100.0	H	90.00	20
323.43	34.93	46.00	11.07	100.0	H	208.00	21
650.07	33.96	46.00	12.04	100.0	H	17.00	28
840.31	41.16	46.00	4.84	100.0	H	261.00	30

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

2. Margin = Limit – Quasi-Peak



~ 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

Radiated Emission from 1GHz to 18GHz

Frequency (MHz)	MaxPeak (dBμV/m)	Average (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Meas. Time (ms)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
1110.50	48.42	---	74.00	25.58	500.00	100.0	H	235.00	-22
1114.75	---	34.77	54.00	19.23	500.00	100.0	H	235.00	-22
1680.00	---	33.66	54.00	20.34	500.00	100.0	H	296.00	-20
1680.00	45.64	---	74.00	28.36	500.00	100.0	H	296.00	-20
3441.63	---	29.68	54.00	24.32	500.00	100.0	V	290.00	-13
3983.50	42.58	---	74.00	31.42	500.00	100.0	V	4.00	-11
6180.75	---	34.61	54.00	19.39	500.00	100.0	V	105.00	-5
6365.63	46.21	---	74.00	27.79	500.00	100.0	V	259.00	-4
7755.38	47.60	---	74.00	26.40	500.00	200.0	H	333.00	1
8907.13	---	36.25	54.00	17.75	500.00	200.0	H	13.00	1
15736.88	45.89	---	74.00	28.11	500.00	200.0	V	338.00	7
15760.25	---	34.10	54.00	19.90	500.00	200.0	H	2.00	7

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

2. Margin = Limit – MaxPeak / Average

3.2 Conducted Emission

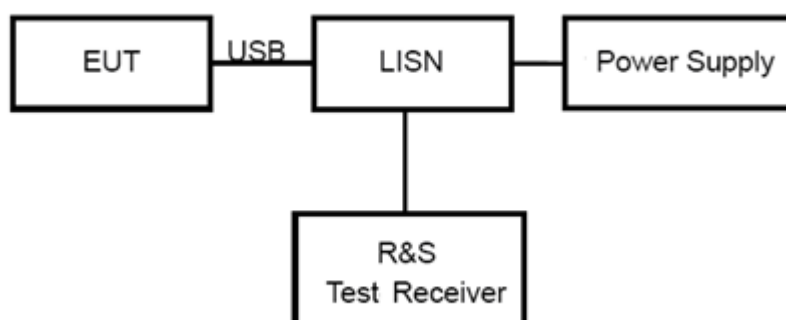
Ambient Condition

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

Methods of Measurement

The EUT is placed on a non-metallic table of 80cm height above the horizontal metal reference 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.

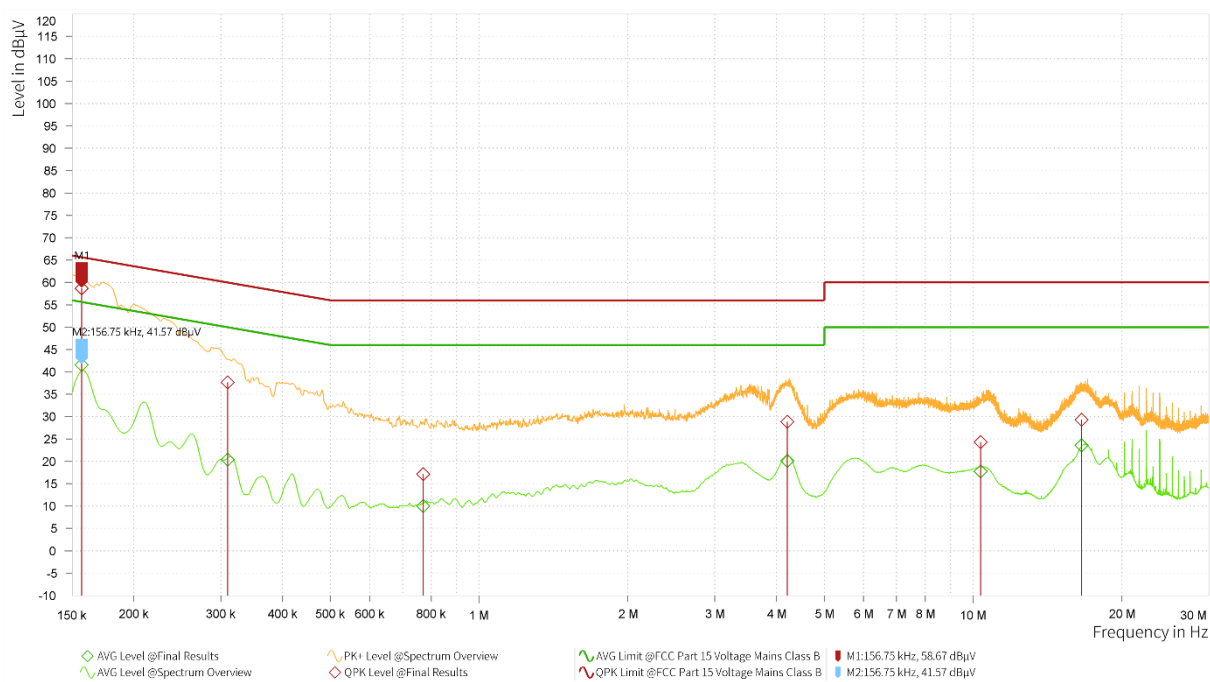
Limits

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.

Test Results

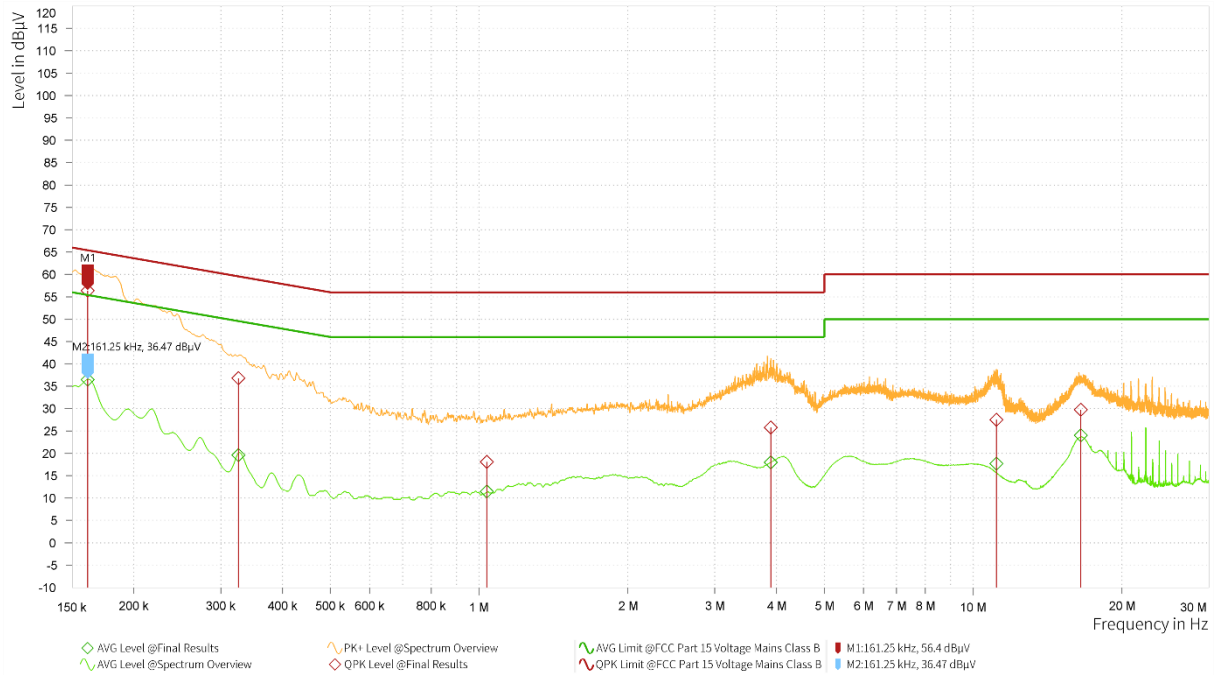


Frequency [MHz]	QPK Level [dBμV]	QPK Limit [dBμV]	QPK Margin [dB]	AVG Level [dBμV]	AVG Limit [dBμV]	AVG Margin [dB]	Correction [dB]	Line	Meas. BW [kHz]	Meas. Time [s]
0.157	58.67	65.63	6.97	41.57	55.63	14.06	20.90	L1	9.000	1.000
0.310	37.66	59.98	22.31	20.38	49.98	29.59	20.93	L1	9.000	1.000
0.771	17.11	56.00	38.89	9.99	46.00	36.01	20.35	L1	9.000	1.000
4.207	28.83	56.00	27.17	20.12	46.00	25.88	19.42	L1	9.000	1.000
10.361	24.30	60.00	35.70	17.74	50.00	32.26	19.42	L1	9.000	1.000
16.577	29.32	60.00	30.68	23.55	50.00	26.45	19.55	L1	9.000	1.000

Remark: Correct factor=cable loss + LISN factor

L line

Conducted Emission from 150 kHz to 30 MHz



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]
0.161	56.40	65.40	9.00	36.47	55.40	18.93	20.90	N	9.000	1.000
0.326	36.81	59.57	22.76	19.61	49.57	29.95	20.94	N	9.000	1.000
1.037	18.07	56.00	37.93	11.49	46.00	34.51	20.14	N	9.000	1.000
3.894	25.75	56.00	30.25	17.97	46.00	28.03	19.44	N	9.000	1.000
11.150	27.52	60.00	32.48	17.69	50.00	32.31	19.43	N	9.000	1.000
16.526	29.74	60.00	30.26	24.02	50.00	25.98	19.59	N	9.000	1.000

Remark: Correct factor=cable loss + LISN factor

N line

Conducted Emission from 150 kHz to 30 MHz

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
Radiated Emission 18GHz – 26.5GHz	5.90 dB	1.96
Radiated Emission 26.5GHz – 40GHz	5.92 dB	1.96
Conducted Emission	2.57 dB	2

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	1023	2023-07-14	2026-07-13
Horn Antenna	SCHWARZBECK	BBHA 9120D	430	2024-07-18	2027-07-17
Amplifier	R&S	SCU18F	101022	2026-04-20	2027-04-19
Horn Antenna	R&S	BBHA 9170	101301	2023-09-16	2026-09-15
Amplifier	MicroWave	SCU40F1	100649	2025-12-01	2026-11-30
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	/	/

6 The EUT Appearance

Refer to *EUT Appearance*.

7 Test Setup Photos

Refer to *EMC Test Setup*.

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