



FCC PART 15B TEST REPORT

No. 25T04Z100217-018

for

TCL Communication Ltd.

GSM/UMTS/LTE mobile phone

Model Name: T517H

FCC ID: 2ACCJB237

with

Hardware Version: 05

Software Version: 3P3L

Issued Date: 2025-03-24

Note:

The test results in this test report relate only to the devices specified in this report. This report shall not be reproduced except in full without the written approval of CTTL.

Test Laboratory:

CTTL-Telecommunication Technology Labs, CAICT

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REPORT HISTORY

Report Number	Revision	Description	Issue Date
25T04Z100217-018	Rev.0	1 st edition	2025-03-24

Note: the latest revision of the test report supersedes all previous version.

CONTENTS

1. TEST LABORATORY	4
1.1. TESTING LOCATION.....	4
1.2. TESTING ENVIRONMENT	4
1.3. PROJECT DATA	4
1.4. SIGNATURE	4
2. CLIENT INFORMATION	5
2.1. APPLICANT INFORMATION.....	5
2.2. MANUFACTURER INFORMATION	5
3. EQUIPMENT UNDER TEST (EUT) AND ANCILLARY EQUIPMENT (AE)	6
3.1. ABOUT EUT	6
3.2. INTERNAL IDENTIFICATION OF EUT USED DURING THE TEST	6
3.3. INTERNAL IDENTIFICATION OF AE USED DURING THE TEST.....	6
3.4. EUT SET-UPS	6
4. REFERENCE DOCUMENTS.....	7
4.1. REFERENCE DOCUMENTS FOR TESTING.....	7
5. SUMMARY OF TEST RESULTS.....	8
6. TEST EQUIPMENTS UTILIZED	9
7. MEASUREMENT UNCERTAINTY	10
ANNEX A: MEASUREMENT RESULTS	11

1. Test Laboratory

1.1. Testing Location

CTTL (huayuan North Road)

Address: No. 52, Huayuan North Road, Haidian District, Beijing,
P. R. China 100191

1.2. Testing Environment

Normal Temperature: 15-35°C

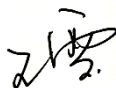
Relative Humidity: 20-75%

1.3. Project data

Testing Start Date: 2025-03-16

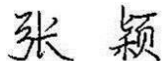
Testing End Date: 2025-03-21

1.4. Signature



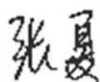
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2. Client Information

2.1. Applicant Information

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2.2. Manufacturer Information

Company Name: TCL Communication Ltd.
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City: Hong Kong
Contact Person: Ting Wang
Contact Email: ting.wang.hz@tcl.com
Telephone: +86 752 2639091

3. Equipment Under Test (EUT) and Ancillary Equipment (AE)

3.1. About EUT

Description	GSM/UMTS/LTE mobile phone
Model Name	T517H
FCC ID:	2ACCJB237

Note: Components list, please refer to documents of the manufacturer; it is also included in the original test record of CTTL, Telecommunication Technology Labs, CAICT.

3.2. Internal Identification of EUT used during the test

EUT ID*	SN or IMEI	HW Version	SW Version
UT25a	359573440000118/ 359573440000126	05	3P3L

*EUT ID: is used to identify the test sample in the lab internally.

3.3. Internal Identification of AE used during the test

AE ID*	Description	Model	Manufacturer	Remark
AE1	Battery1	TLp050C7	Dongguan Veken Battery Co., Ltd.	
AE2	Battery2	TLp050CB	Shenzhen Aerospace Electronic Co., Ltd.	
AE3	Charger1	QC13US-N	ShenZhen BajunDa Electronics Co.,Ltd	
AE4	Charger2	QC13US	Huizhou Juwei Electronics Co., Ltd.	
AE5	USB Cable1	JWUB1686-M01R	Huizhou Juwei Electronics Co.,Ltd	
AE6	USB Cable2	FKY-23-367	Qiyang Fukangyuan Electronic Technology Co., Ltd.	
AE7	Headset	JWEP1295-M01R	Huizhou Juwei Electronics Co.,Ltd	
AE8	Charger3	QC13EU-N	ShenZhen BajunDa Electronics Co.,Ltd	Require no test
AE9	Charger4	QC13UK-N	ShenZhen BajunDa Electronics Co.,Ltd	Require no test
AE10	Charger5	QC13AU-N	ShenZhen BajunDa Electronics Co.,Ltd	Require no test
AE11	Charger6	QC13AR-N	ShenZhen BajunDa Electronics Co.,Ltd	Require no test
AE12	Charger7	QC13EU	Huizhou Juwei Electronics Co., Ltd.	Require no test

*AE ID: is used to identify the test sample in the lab internally.

3.4. EUT set-ups

EUT set-up No.	Combination of EUT and AE	Remarks
Set.2-1	UT25a + AE1/2 +AE3+AE5/6	T517H+Charger1+MP3+F Camera +GSM 850 idle with Single SIM card
Set.2-2	UT25a + AE1/2 +AE4+AE5/6	T517H+Charger2+R Camera + WCDMA B5 idle with Dual SIM card
Set.2-3	UT25a + AE1/2 +AE5+AE7	T517H+USB cable1+ FM
Set.2-4	UT25a + AE1/2 +AE6	T517H+USB cable2+ LTE B5 idle

Note:

Equipment Under Test (EUT) is a model of GSM/UMTS/LTE mobile phone.

It supports

GSM Band 850/900/1800/1900

UMTS Band FDD Band I(W2100) /FDD Band II(W1900) /FDD Band IV(W1700)/FDD V(W850)/FDD Band VIII(W900)

LTE Band FDD Bands 1/2/3/4/5/7/8/12/13/17/20/26/28/66, TDD Bands38/40/41

It has MP3, Camera, USB memory, Bluetooth 5.2, Wi-Fi (802.11a/b/g/n/ac, 802.11n supports 20MHz and 40MHz bandwidth, 802.11ac supports 20MHz, 40MHz and 80MHz bandwidth) and GNSS function.

The device contains receivers which tune and operate between 30MHz-960MHz in the following mode: GSM 850, WCDMA850, LTE Band 5/12/13/17/26 ,FM. All licensed band receivers that tune in the range of 30MHz-960MHz are investigated. Only the worst-case emissions are reported.

4. Reference Documents

4.1. Reference Documents for testing

The following documents listed in this section are referred for testing.

Reference	Title	Version
FCC Part 15, Subpart B	Radio frequency devices - Unintentional Radiators	2024
ANSI C63.4	American National Standard for Methods of Measurement of Radio- Noise Emissions from Low-Voltage Electrical and Electronic Equipment in the Range of 9 kHz to 40 GHz	2014

Note: The test methods have no deviation with standards.

5. SUMMARY OF TEST RESULTS

Abbreviations used in this clause:		
Verdict Column	P	Pass
	NA	Not applicable
	F	Fail

Items	Test Name	Clause in FCC rules	Section in this report	Verdict	Test Location
1	Radiated Emission	15.109(a)	B.1	P	CTTL(huayuan North Road)
2	Conducted Emission	15.107(a)	B.2	BR	CTTL(huayuan North Road)

Note: The T517H is a variant model based on T517F. According to the declaration of changes, following items are test, others are derived from 25T04Z100217-017.

Items	Test status	Set-up
Radiated Emission	Charging mode and USB mode	Set.2-1/2-2/2-3/2-4

6. Test Equipments Utilized

NO.	Description	TYPE	SERIES NUMBER	MANUFACTURE	CAL DUE DATE	CALIBRATION INTERVAL
1	Test Receiver	ESW44	103023	R&S	2025-06-06	1 year
2	EMI Antenna	VULB 9163	01222	SCHWARZBECK	2025-09-11	1 year
3	EMI Antenna	3115	00167250	ETS-Lindgren	2025-04-11	1 year
4	Universal Communication Tester	CMW500	116588	R&S	2026-01-25	1 year
5	Signal Generator	SML01	106247	R&S	2025-05-15	1 year

Test software information		
Test Item	Software	Version
Radiated Emission	EMC32	V11.50.00
Conducted Emission	EMC32	V8.53.00

Semi-anechoic chamber utilized did not exceed following limits along the testing:

Temperature	Min. = 15 °C, Max. = 35 °C
Relative humidity	Min. = 15 %, Max. = 75 %
Shielding effectiveness	0.014MHz-1MHz, >60dB; 1MHz - 1000MHz, >90dB.
Electrical insulation	> 2 MΩ
Ground system resistance	< 4 Ω
Normalised site attenuation (NSA)	< ±4 dB, 10 m distance
Site voltage standing-wave ratio (S_{VSWR})	Between 0 and 6 dB, from 1GHz to 6GHz

Shielded room utilized did not exceed following limits along the testing:

Temperature	Min. = 15 °C, Max. = 35 °C
Relative humidity	Min. = 20 %, Max. = 75 %
Shielding effectiveness	0.014MHz-1MHz, >60dB; 1MHz—1000MHz, >90dB.
Electrical insulation	> 2 MΩ
Ground system resistance	< 4 Ω

7. Measurement Uncertainty

Where relevant, the following measurement uncertainty(worse case) levels have been estimated for tests performed on the EUT as specified in CISPR 16-4-2:

Location 1: CTTL(huayuan North Road)

Test item	Frequency ranges	Measurement uncertainty
Radiated Emission	30MHz-1GHz	4.72dB($k=2$)
	1GHz-18GHz	4.84dB($k=2$)
Conducted Emission	150kHz-30MHz	AC Power Line: 3.08dB($k=2$)

ANNEX A: MEASUREMENT RESULTS

A.1 Radiated Emission

Reference

FCC: CFR Part 15.109(a).

A.1.1 Method of measurement

The field strength of radiated emissions from the unintentional radiator (USB mode of MS and charging mode of MS) at distances of 3 meters is tested. Tested in accordance with the procedures of ANSI C63.4 – 2014, section 8.3.

The EUT was placed on a non-conductive table. The measurement antenna was placed at a distance of 3/10 meters from the EUT. During the tests, the antenna height and the EUT azimuth were varied in order to identify the maximum level of emissions from the EUT. This maximization process was repeated with the EUT positioned in each of its three orthogonal orientations.

A.1.2 EUT Operating Mode

The MS is operating in the USB mode and charging mode. During the test MS is connected to a PC via a USB cable in the case of USB mode, and is connected to a charger in the case of charging mode.

The EUT was tested while operating in licensed band Rx mode. All licensed band receivers that tune in the range of 30MHz-960MHz, as listed in section 3.4, are investigated. Only the worst case emissions are reported.

All equipment is placed on the test table top and arranged in a typical configuration in accordance with ANSI C63.4-2014 and manipulated to obtain worst case emissions.

The model of the PC is M4000E-17, and the serial number of the PC is M706GWXD. The software is used to let the PC keep on copying data to MS, reading and erasing the data after copy action was finished.

Note: I/O information: Printer – USB, Mouse – PS/2, Keyboard – USB.

The EUT was tested while operating in licensed band Rx mode. All licensed band receivers that tune in the range of 30MHz-960MHz, as listed in section 3.4, are investigated. Only the worst case emissions are reported.

All equipment is placed on the test table top and arranged in a typical configuration in accordance with ANSI C63.4-2014 and manipulated to obtain worst case emissions.

A.1.3 Measurement Limit

Frequency range (MHz)	Field strength limit ($\mu\text{V/m}$)		
	Quasi-peak	Average	Peak
30-88	100		
88-216	150		
216-960	200		
960-1000	500		
>1000		500	5000

Note: the above limit is for 3 meters test distance. 10 meters' limit is got by converting.

A.1.4 Test Condition

Frequency range (MHz)	RBW/VBW	Sweep Time (s)	Detector
30-1000	120kHz (IF Bandwidth)	5	Peak/Quasi-peak
Above 1000	1MHz/3MHz	15	Peak, Average

A.1.5 Measurement Results

A "reference path loss" is established and the A_{Rpl} is the attenuation of "reference path loss". It includes the antenna factor of receive antenna and the path loss.

The measurement results are obtained as described below:

$$\text{Result} = P_{\text{Mea}} + A_{\text{Rpl}} = P_{\text{Mea}} + G_A + G_{\text{PL}}$$

Where

G_A : Antenna factor of receive antenna

G_{PL} : Path Loss

P_{Mea} : Measurement result on receiver.

Measurement results for Set.2-1:

Charing Mode/Average detector

Frequency (MHz)	Measurement Result (dBμV/m)	Cable loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBμV)	Limit (dBμV/m)	Margin (dB)	Antenna Pol. (H/V)
5190.2	61.98	-37.13	32.7	66.41	54	-7.98	H
5189.8	57.02	-37.13	32.7	61.45	54	-3.02	H
17899	44.81	-26.8	42.3	29.31	54	9.19	H
17923.8	44.77	-26.8	42.3	29.27	54	9.23	V
17916.4	44.58	-26.8	42.3	29.08	54	9.42	H
17945.9	44.58	-26.8	42.3	29.08	54	9.42	H

Charging Mode/Peak detector

Frequency (MHz)	Measurement Result (dBμV/m)	Cable loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBμV)	Limit (dBμV/m)	Margin (dB)	Antenna Pol. (H/V)
17926.2	56.02	-26.8	42.3	40.52	74	17.98	V
17919.4	55.83	-26.8	42.3	40.33	74	18.17	H
17971.1	55.65	-26.8	42.3	40.15	74	18.35	V
17921.8	55.64	-26.8	42.3	40.14	74	18.36	H
17938.1	55.41	-26.8	42.3	39.91	74	18.59	V
17914.7	55.34	-26.8	42.3	39.84	74	18.66	V

Measurement results for Set.2-2:
Charging Mode/Average detector

Frequency (MHz)	Measurement Result (dB μ V/m)	Cable loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dB μ V)	Limit (dB μ V/m)	Margin (dB)	Antenna Pol. (H/V)
14660.2	69.53	-28.75	39.4	58.88	54	-15.53	H
14668	68.95	-28.75	39.4	58.3	54	-14.95	H
14659.8	68.9	-28.75	39.4	58.25	54	-14.9	H
14667.7	68.24	-28.75	39.4	57.59	54	-14.24	H
14667.3	68.04	-28.75	39.4	57.39	54	-14.04	H
14668.3	67.81	-28.75	39.4	57.16	54	-13.81	H

Charging Mode/Peak detector

Frequency (MHz)	Measurement Result (dB μ V/m)	Cable loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dB μ V)	Limit (dB μ V/m)	Margin (dB)	Antenna Pol. (H/V)
17866.4	56.21	-26.8	42.3	40.71	74	17.79	H
17936.8	55.79	-26.8	42.3	40.29	74	18.21	H
17251	55.36	-27.46	42	40.82	74	18.64	H
17906.2	55.31	-26.8	42.3	39.81	74	18.69	V
17960.6	55.29	-26.8	42.3	39.79	74	18.71	V
17840.2	55.27	-26.8	42.3	39.77	74	18.73	H

Measurement results for Set.2-3:
USB Mode/Average detector

Frequency (MHz)	Measurement Result (dB μ V/m)	Cable loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dB μ V)	Limit (dB μ V/m)	Margin (dB)	Antenna Pol. (H/V)
6053.8	47.35	-36.15	35.4	48.1	54	6.65	V
6053.4	46.37	-36.15	35.4	47.12	54	7.63	V
6054.1	45.23	-36.15	35.4	45.98	54	8.77	V
17942.2	44.66	-26.8	42.3	29.16	54	9.34	V
17934.7	44.62	-26.8	42.3	29.12	54	9.38	H
17898.7	44.59	-26.8	42.3	29.09	54	9.41	V

USB Mode/Peak detector

Frequency (MHz)	Measurement Result (dB μ V/m)	Cable loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dB μ V)	Limit (dB μ V/m)	Margin (dB)	Antenna Pol. (H/V)
17956.8	55.62	-26.8	42.3	40.12	74	18.38	H
17926.2	55.57	-26.8	42.3	40.07	74	18.43	H
17865.7	55.41	-26.8	42.3	39.91	74	18.59	V
17959.9	55.22	-26.8	42.3	39.72	74	18.78	V
17909.9	55.19	-26.8	42.3	39.69	74	18.81	V
17993.2	55.18	-26.8	42.3	39.68	74	18.82	V

Measurement results for Set.2-4:
USB Mode/Average detector

Frequency (MHz)	Measurement Result (dB μ V/m)	Cable loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dB μ V)	Limit (dB μ V/m)	Margin (dB)	Antenna Pol. (H/V)
6053.4	46.26	-36.15	35.4	47.01	54	7.74	V
6053.8	45.71	-36.15	35.4	46.46	54	8.29	V
6054.1	45.33	-36.15	35.4	46.08	54	8.67	V
17930	44.81	-26.8	42.3	29.31	54	9.19	V
17952.7	44.8	-26.8	42.3	29.3	54	9.2	V
17911.9	44.75	-26.8	42.3	29.25	54	9.25	H

USB Mode/Peak detector

Frequency (MHz)	Measurement Result (dB μ V/m)	Cable loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dB μ V)	Limit (dB μ V/m)	Margin (dB)	Antenna Pol. (H/V)
17928.6	55.81	-26.8	42.3	40.31	74	18.19	H
17833.7	55.75	-26.8	42.3	40.25	74	18.25	V
17905.8	55.7	-26.8	42.3	40.2	74	18.3	V
17924.2	55.55	-26.8	42.3	40.05	74	18.45	H
17971.8	55.31	-26.8	42.3	39.81	74	18.69	V
17892.6	55.29	-26.8	42.3	39.79	74	18.71	V

Measurement results for Set.2-1:

Full Spectrum

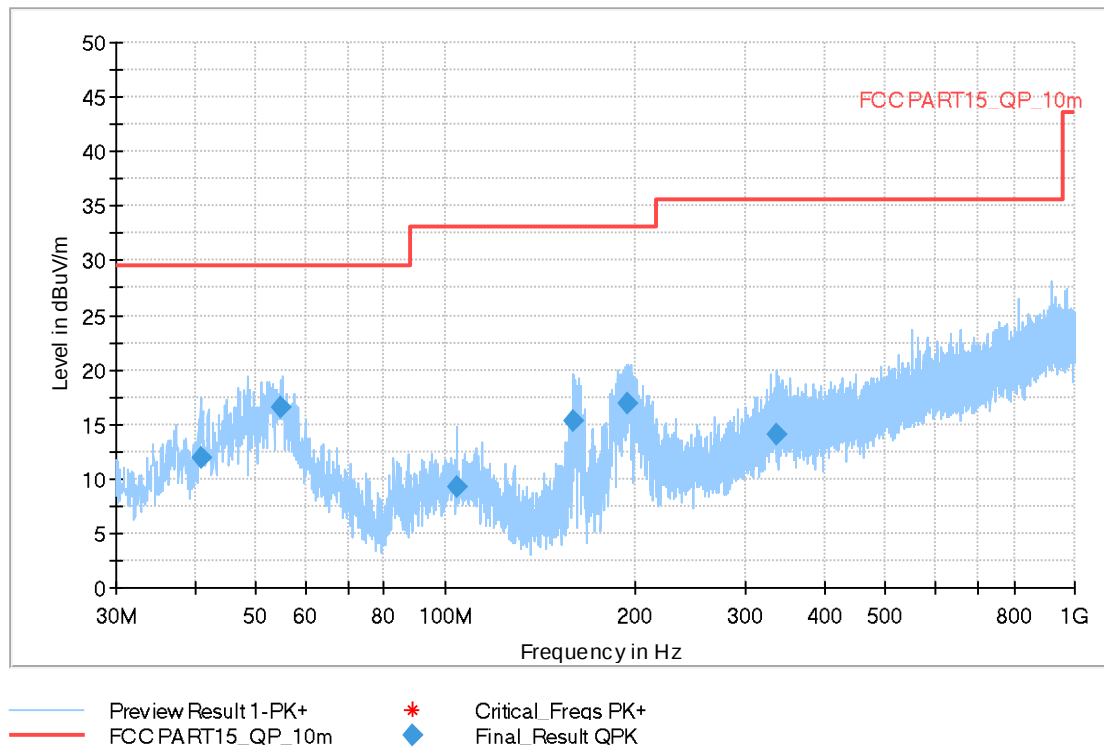


Fig A.1 Radiated Emission from 30MHz to 1GHz

Final Result 1

Frequency (MHz)	QuasiPeak (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)
40.864000	11.91	29.54	17.63	120.000	225.0	V	76.0
54.735000	16.52	29.54	13.02	120.000	205.0	V	0.0
104.641500	9.20	33.06	23.86	120.000	206.0	V	126.0
159.737500	15.38	33.06	17.68	120.000	206.0	V	-22.0
194.997000	16.95	33.06	16.11	120.000	125.0	V	263.0
334.871000	14.10	35.56	21.46	120.000	325.0	H	277.0

Full Spectrum

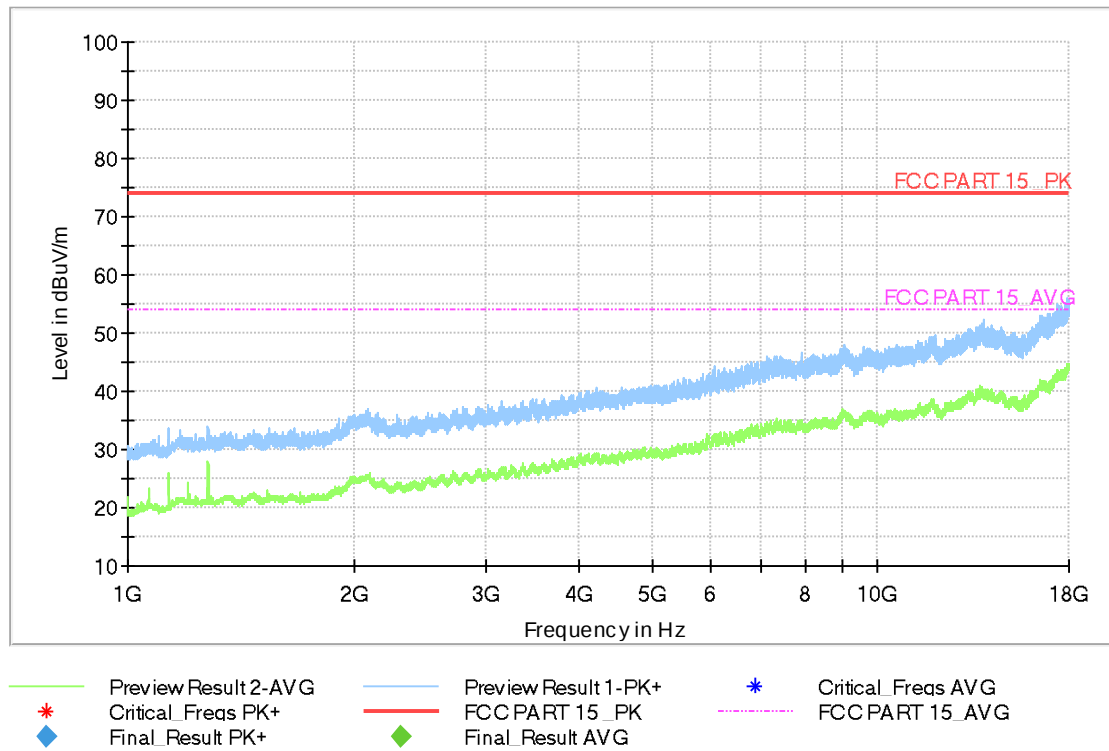


Fig A.2 Radiated Emission from 1GHz to 18GHz

Measurement results for Set.2-2:

Full Spectrum

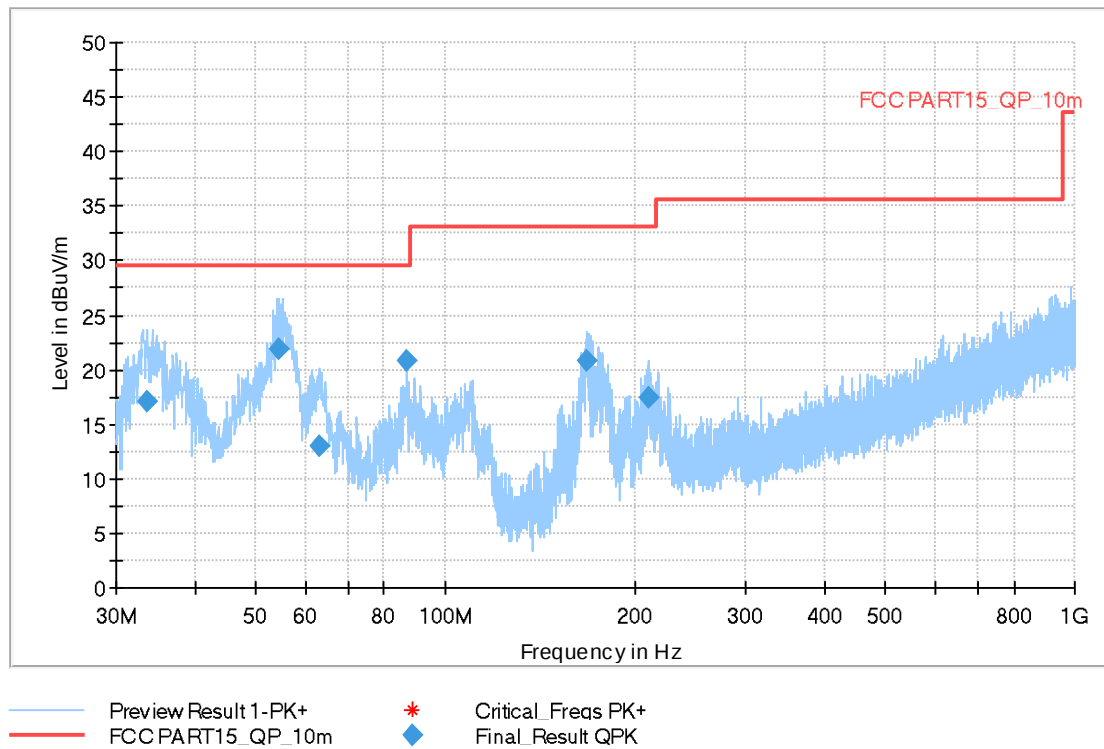


Fig A.3 Radiated Emission from 30MHz to 1GHz

Final Result 1

Frequency (MHz)	QuasiPeak (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)
33.589000	17.09	29.54	12.45	120.000	325.0	V	315.0
54.298500	21.80	29.54	7.74	120.000	107.0	V	-35.0
63.028500	12.97	29.54	16.57	120.000	325.0	V	299.0
86.842000	20.77	29.54	8.77	120.000	175.0	V	20.0
168.322000	20.90	33.06	12.16	120.000	125.0	V	-15.0
210.323000	17.36	33.06	15.70	120.000	100.0	V	143.0

Full Spectrum

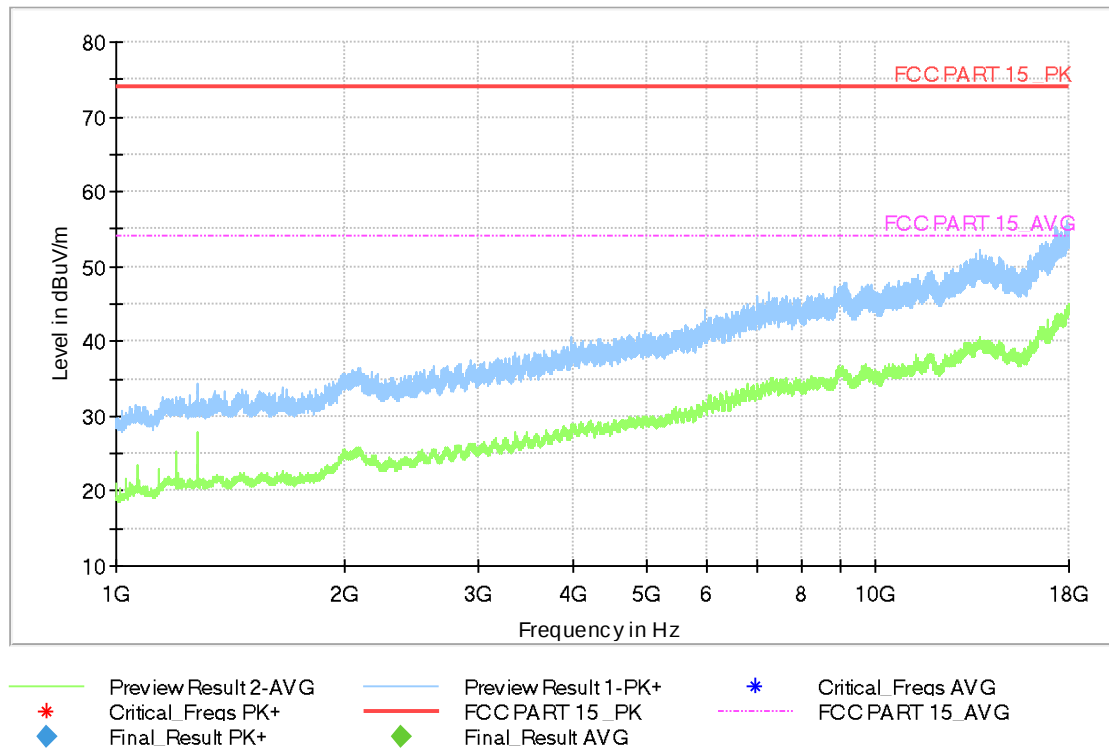


Fig A.4 Radiated Emission from 1GHz to 18GHz

Measurement results for Set.2-3:

Full Spectrum

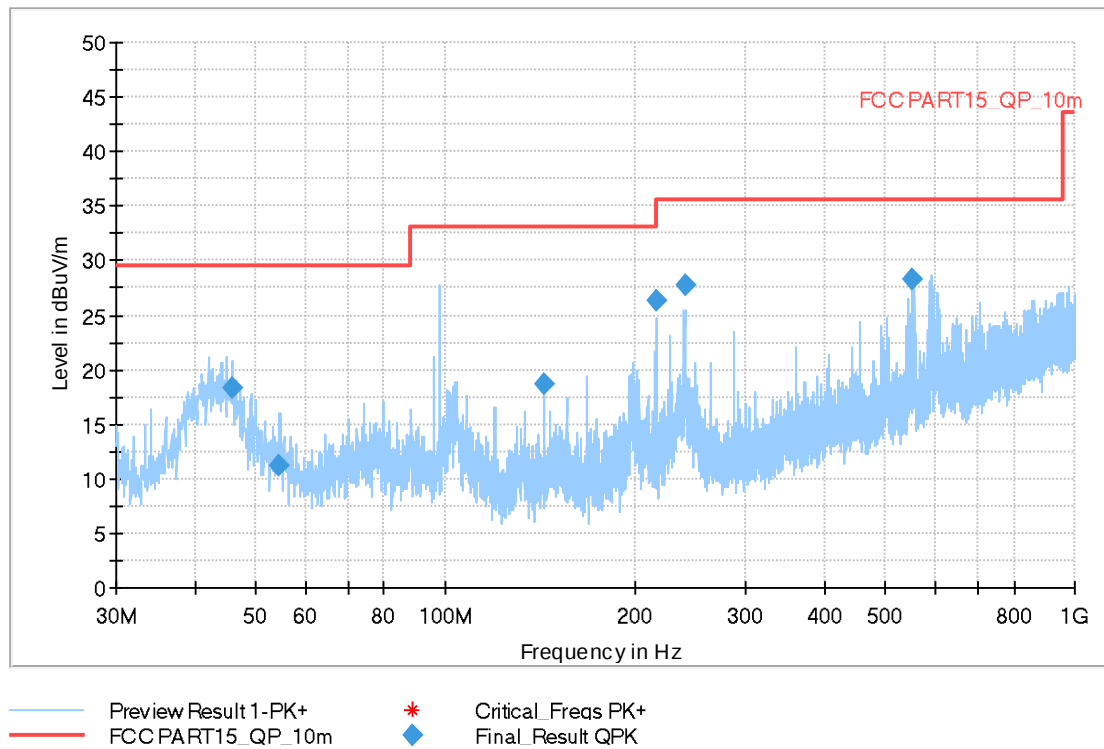


Fig A.5 Radiated Emission from 30MHz to 1GHz

Final Result 1

Frequency (MHz)	QuasiPeak (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)
45.859500	18.28	29.54	11.26	120.000	100.0	V	135.0
54.541000	11.22	29.54	18.32	120.000	325.0	V	159.0
143.829500	18.64	33.06	14.42	120.000	213.0	V	136.0
215.997500	26.34	33.06	6.72	120.000	325.0	H	150.0
240.005000	27.78	35.56	7.78	120.000	306.0	H	286.0
550.211000	28.33	35.56	7.23	120.000	217.0	V	-38.0

Full Spectrum

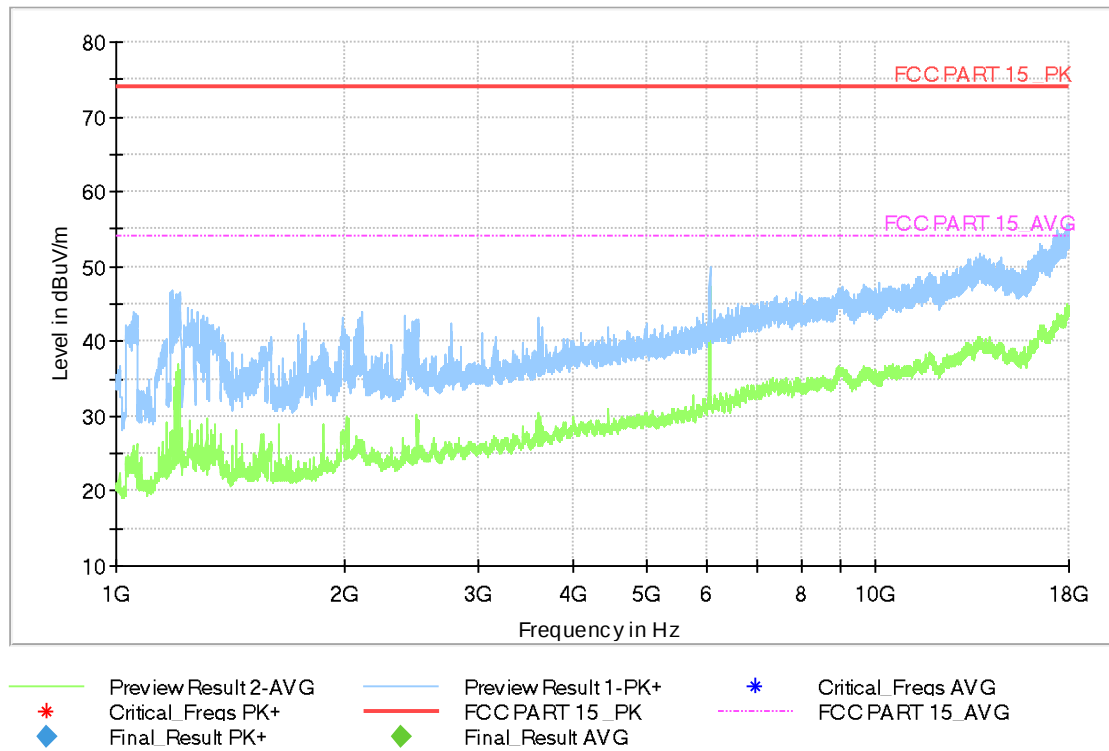


Fig A.6 Radiated Emission from 1GHz to 18GHz

Measurement results for Set.2-4:

Full Spectrum

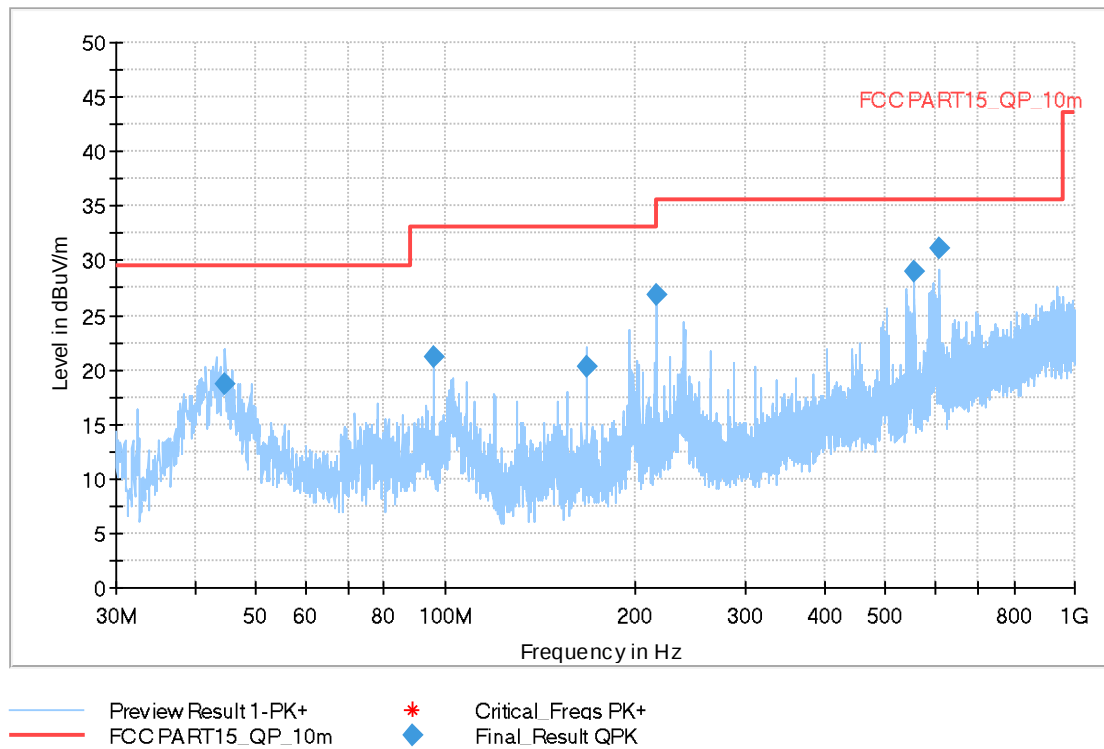


Fig A.7 Radiated Emission from 30MHz to 1GHz

Final Result 1

Frequency (MHz)	QuasiPeak (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)
44.744000	18.71	29.54	10.83	120.000	193.0	V	135.0
95.863000	21.19	33.06	11.87	120.000	275.0	V	9.0
167.740000	20.20	33.06	12.86	120.000	325.0	H	225.0
215.997500	26.87	33.06	6.19	120.000	283.0	H	162.0
557.098000	29.06	35.56	6.50	120.000	225.0	V	-44.0
607.974500	31.16	35.56	4.40	120.000	225.0	V	315.0

Full Spectrum

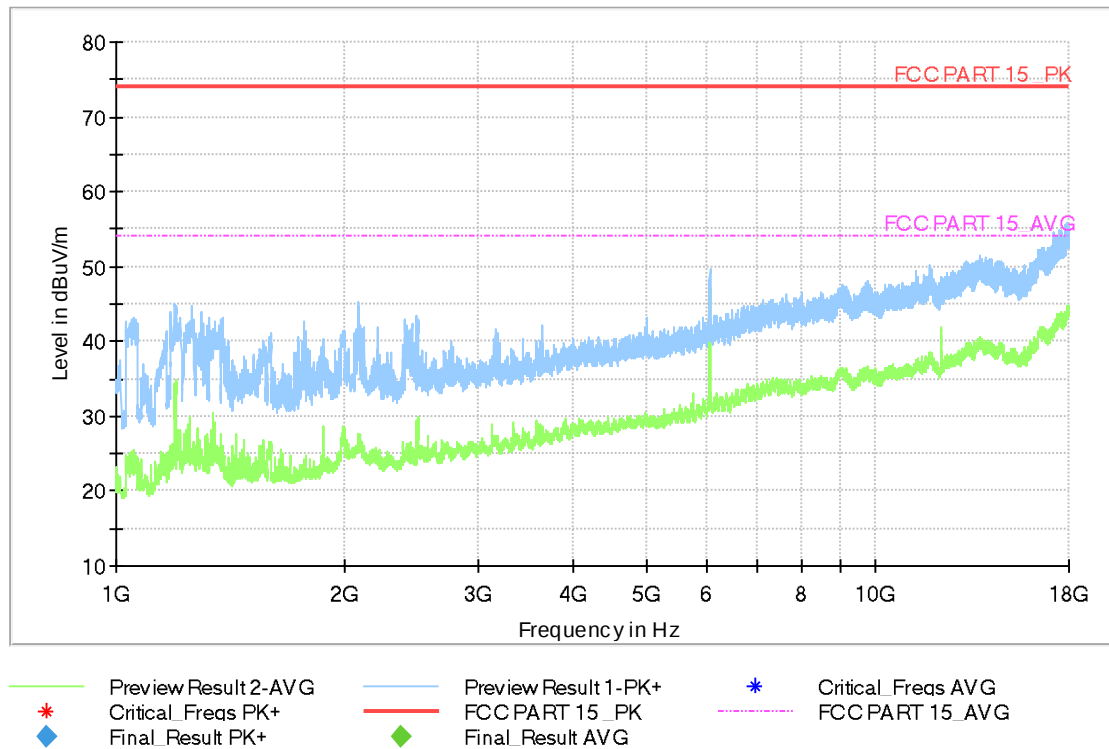


Fig A.8 Radiated Emission from 1GHz to 18GHz

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