TEST REPORT

No.24T04N001247-001-EMC

for

HMD Global Oy

Mobile Phone

Model Name: TA-1689

With

Hardware Version: FF638-MB-V0.2

Software Version: 0.2420.17.00

FCC ID: 2AJOTTA-1689

Issued Date:2024-07-24

Designation Number: CN1210

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 SAICT.

Test Laboratory:

SAICT, Shenzhen Academy of Information and Communications Technology

Building G, Shenzhen International Innovation Center, No.1006 Shennan Road, Futian District, Shenzhen, Guangdong, P. R. China. 518000.

Tel:+86(0)755-33322000, Fax:+86(0)755-33322001

Email: yewu@caict.ac.cn. www.saict.ac.cn

REPORT HISTORY

Report Number	Revision	Description	Issue Date
24T04N001247-001-EMC	Rev.0	1st edition	2024-07-24

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

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1. SUMMARY OF TEST REPORT

1.1. Test Items

Description	Mobile Phone
Model Name	TA-1689
Applicant's name	HMD Global Oy
Manufacturer's Name	HMD Global Oy

1.2. Test Standards

FCC Part 15, Subpart B (10-1-2023 Edition); ANSI C63.4-2014.

1.3. Test Result

Total test 2 items, pass 2 items. Please refer to "6.2 Test Results".

1.4. Testing Location

Address: EMC Laboratory, Building G, Shenzhen International Innovation Center, No.1006 Shennan Road, Futian District, Shenzhen, Guangdong, China

1.5. Project data

Testing Start Date: 2024-06-04 Testing End Date: 2024-07-09

1.6. Signature

Huang Kaiyang
(Prepared this test report)

Huang Yuqing
(Reviewed this test report)

Cao Junfei
(Approved this test report)

2. CLIENT INFORMATION

2.1. Applicant Information

Company Name:	HMD Global Oy
Address:	Bertel Jungin aukio 9,02600 Espoo,Finland
Contact:	reza.serafat
E-mail	reza.serafat@hmdglobal.com
Tel:	+491735287964

2.2. Manufacturer Information

Company Name:	HMD Global Oy
Address:	Bertel Jungin aukio 9,02600 Espoo,Finland
Contact:	reza.serafat
E-mail	reza.serafat@hmdglobal.com
Tel:	+491735287964

3. EQUIPMENT UNDER TEST (EUT) AND ANCILLARY EQUIPMENT (AE)

3.1. About EUT

Description	Mobile Phone
Model Name	TA-1689
FCC ID	2AJOTTA-1689
Condition of EUT as received	No obvious damage in appearance

Note: Components list, please refer to documents of the manufacturer; it is also included in the original test record of Shenzhen Academy of Information and Communications Technology.

3.2. Internal Identification of EUT

EUT ID*	SN or IMEI	HW Version	SW Version	PA	Receive Date
UT12aa	351768880000952	FF638-MB-V0.2	0.2420.17.00	Mains supply	2024-06-04
UT13aa	351768880001513	FF638-MB-V0.2	0.2420.17.00	Mains supply	2024-06-04
UT16aa	351768880002198	FF638-MB-V0.2	0.2420.17.00	Second supply	2024-06-04
UT17aa	351768880002636	FF638-MB-V0.2	0.2420.17.00	Second supply	2024-06-04

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

3.3. Internal Identification of AE

AE ID*	Description
AE1	Battery
AE2	Charger
AE3	USB Cable
AE4	Headset

AE1-1

Model	BA-L4M
Manufacturer	SHENZHEN UTILITY ENERGY CO.,LTD.
Capacity	1450mAh
Nominal Voltage	3.8V

AE1-2

Model	BA-L4M
Manufacturer	Guangdong Fenghua New Energy Co.,Ltd.
Capacity	1450mAh
Nominal Voltage	3.8V

AE2-1

Model	AC-18E
Manufacturer	Shenzhen Baijunda Electronic Co.,Ltd.

Specification	Europe Standard Charger

AE2-2

Model	AC-18U
Manufacturer	Shenzhen Baijunda Electronic Co.,Ltd.
Specification	American Standard Charger

AE2-3

Model	AC-18A
Manufacturer	Shenzhen Baijunda Electronic Co.,Ltd.
Specification	Australian Standard Charger

AE2-4

Model	AC-18X
Manufacturer	Shenzhen Baijunda Electronic Co.,Ltd.
Specification	British Standard Charger

AE2-5

Model	AC-18T
Manufacturer	Shenzhen Baijunda Electronic Co.,Ltd.
Specification	Thai Standard Charger

AE2-6

Model	AC-18E
Manufacturer	Dayu Hongfa Electronics Co., Ltd
Specification	Europe Standard Charger

AE2-7

Model	AC-18X
Manufacturer	Dayu Hongfa Electronics Co., Ltd
Specification	British Standard Charger

AE3-1

Model	AC-1A
Manufacturer	saibao (jiangxi) industrial co., LTD

AE3-2

Model	AC-1A
Manufacturer	HUIZHOU JUWEI ELECTRONICS CO.,LTD

AE4

Model	JWEP1273-W27H
Manufacturer	HUIZHOU JUWEI ELECTRONICS CO.,LTD

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

AE: ancillary equipment.

AE2：Charger Equality Declaration

Material Name	AE ID	Remarks	Manufacturer
AC-18E	AE2-1	Except pins and appearance, the other parts are the same.	Shenzhen Baijunda Electronic Co.,Ltd.
AC-18U	AE2-2		
AC-18A	AE2-3		
AC-18X	AE2-4		
AC-18T	AE2-5		
AC-18E	AE2-6	Except pins and appearance, the other parts are the same.	Dayu Hongfa Electronics Co., Ltd
AC-18X	AE2-7		

3.4. EUT Set-ups

EUT set-up No.	Combination of EUT and AE	Remarks
Set.1	EUT+AE1-1+AE2-2+AE4	
Set.2	EUT+AE1-1+AE2-6+AE4	
Set.3	EUT+AE1-1+AE3-1+AE4+PC	

3.5. General Description

The Equipment Under Test (EUT) is a model of Mobile Phone with internal antenna.
Frequency Bands GSM850/900/1800/1900MHz, WCDMA Bands 1/2/4/5/8, LTE Bands 1/2/3/4/5/7/8/12/13/17/28/40/66.
It has MP3, Camera, FM receiver, USB memory and Bluetooth functions.
It consists of normal options: Battery, Charger, Headset and USB Cable.
Manual and specifications of the EUT were provided to fulfill the test.
Samples (EUT+AE) undergoing test were selected by the Client. Relevant information is provided by the client.

This report also serves as a record of TA-1689(second supply), the tables below show all the differences between TA-1689(Mains supply) and TA-1689(second supply).

Key material	TA-1689(second supply)		TA-1689(Mains supply)	
	Specification	Supplier	Specification	Supplier
LCD 2.4	LCD：2.4 inch, IPS, brightness value: 350~400 cd/㎡ IC:ST7789P3 glass: GVO24QVQ-N81-3QP0	Zhongxian	LCD：2.4 inch, IPS, brightness value: 350~400 cd/㎡ IC:ST7789P3 glass: GVO24QVQ-N81-3QP0	Yiou
Camera 2M	camera, FF, 200W, 3P IC: GC2145 YUV, lens: DL2164B35	Union Image	camera, FF, 200W, 3P IC: GC2145 YUV, lens: DL2164B35	Chengxiangtong
Battery	Capacity: 1450mAh	FengHua	Capacity: 1450mAh	UTILITY
Charger	Input 100-240v,Output 5v550mA,Wire Length1m ,	HGD	Input 100-240v,Output 5v550mA,Wire Length1m ,	Baijunda

	micro5pin/6.0 exposed, Core Micro LP3667 Solution_x005f_x000b_EU:AC-18E UK:AC-18X US:AC-18U IN:AC-18N3 AU:AC-18A;AC-18T with TYPE C		micro5pin/6.0 exposed, Core Micro LP3667 Solution_x005f_x000b_EU:AC-18E UK:AC-18X US:AC-18U IN:AC-18N3 AU:AC-18A;AC-18T with TYPE C	
SPK	speaker,1511 ,1W、two-in-one speaker	Senner Science	speaker,1511 ,1W、two-in-one speaker	GREAT SOUND
vibrator	direct 0827 with line, 12000 rpm, 3V	Jin Xin	direct 0827 with line, 12000 rpm, 3V	Zhongying
KEY FPC	key mat FPC with steely sheet	United Deli	key mat FPC with steely sheet	Bositeng
camera Lens	glass, black	Xianghui	glass, black	Ruijintai
inject Lens	PC + PMMA, CNC	Ling Hui	PC + PMMA, CNC	Taituoer
cable	Type-C, AC-1A	JUWEI	Type-C, AC-1A	Saibao
RF Switch	(P)(T)IC,bandwidth：0.4 GHz to 2.7 GHz,Vdd=2.8V,QFN-14,2.0x2.0x(0.55±0.05)mm,CR24108GM,Cenre	Xinruiwei	IC,0.1-3GHz SP8T Diversity Switch,3.3V VDD,QFN-14L,2.0x2.0x(0.55±0.05)mm,AW13418QNR,AWINIC	AWINIC
ANT Switch	(P)(T)IC,0.4-3.8GHz SP4T Antenna Tuning Switch,QFN(10pin),1.5x1.1x0.37mm,CR2114GLA,Cenre	Xinruiwei	(F)IC,0.4-3.8GHz SP4T Antenna Tuning Switch,VRF=45V,QFN-10,1.5x1.0x0.4mm,MXD8545A,Maxscend	AWINIC
FM LNA	(P)(T)IC,FM Low-Noise-Amplifier in Alliance with Internal Antenna,DFN-6L,1.5x1.0x(0.55±0.05)mm,SW6115,Siliconwave	Siliconwave	(T)IC,FM Low-Noise-Amplifier in Alliance with Internal Antenna,DFN-6L,1.5x1.0x(0.55±0.05)mm,AW5037DNR,AWINIC	AWINIC
Charging	(F)Resistors,0.068ohm,±1%,1/2W,TCR≤±	ROYALOHM	(F)metal alloy Resistor,0.068 ohm,±1%,1/2W,TCR≤±	YAGEO

resistance	75PPM/℃,0805,TL05W2F680MT5E,ROYALOHM		75PPM/℃,0805,T=0.55±0.15mm,PE0805FRM470R068L,YAGEO	
Coulombmeter resistance	(P)(T)Metal Foil Chip Resistor,0.01 ohm,±1%,1/2W,TCR≤±50PPM/℃,0805,MS05W2F100MT5E,ROYALOHM	ROYALOHM	(T)Metal Foil Chip Fixed Resistor,0.01 ohm,±1%,1/2W,TCR≤±50PPM/℃,0805,MFG05HR010FT,Fenghua	Fenghua
varistor	(N)Varistor(10pF18V0402),SDV1005H180C100NPTF,SUNLORD	SUNLORD	(N)Varistor,5.5V,0402,SDV1005E5R5C400NPTF,Sunlord	SUNLORD
MIC	(P)(T)MIC(SMT),ECM(Top-ported), attached dust film,-42±3dB,Φ4.0xT1.3(±0.1)mm,FJM4013BSCRT2	SANICO	(P)(T)MIC(SMT),Omnidirectional Electret Condenser MIC(Top-ported), black air filter, -42±1.5dB(V/Pa),Φ4.0xT1.3(±0.2)mm,SMD4013S-2A422-C10NR390,Ningbo Xinfengtai	Xinfengtai
BT Filter	(P) (T) Band Pass Filter, Band Pass Filter For 2400-2500 MHZ, 1.6 x0.8 x0.22 mm, SPFI182G4BPF3B12AB, ANUKI	ANUKI	Filter,BPF,2450MHz,1.6×0.8×0.6mm,MBPF18M2450-N86,MICROGATE	MICROGATE
Charging MOS	(P)(T) MOS FET,N-Channel Enhancement Mode MOSFET with PNP Transistor,DFN3020-8L,3.0x2.0x0.75mm,ML5812,Millersemi	Millersemi	MOS FET,N-Channel Enhancement Mode MOSFET with PNP Transistor,DFN3x2,3.0x2.0x0.8mm,SSC8P22AN3,AF	Afsemi
VCHGEOS	(P)(T)Power Transient Voltage Suppressor,Uni-direction,12V,5600W,SOD-123FL,JEU12D1FT,JIEJIE MICRO	JIEJIE MICRO	(P)(T)TVS,Power Transient Voltage Suppressor,Uni-direction,12V,5600W,SOD-123FL,PESDU1271D1F,PN-Silicon	PN-Silicon
VBATEOS	(P)(T)Power TVS,Uni-direction,4.5V,DFN2020-3L,2x2x(0.6±0.05)mm,PESDU4501P4-3M,PN-Silicon	PN-Silicon	(T)Transient Voltage Suppressor,Bi-directional,4.5V,400pF,DFN2020-3L,WS4.5P4N3-B,CYG WAYON	WAYON
TVS	(P)(T)TVS(Transient Voltage	PN-Silicon	(P)(T)TVS,Bi-directional,,Bi-directional,5V,15pF,DFN1006-2L	SSC

	Suppressor),Bi-directional,5V,15pF,DFN1006-2,1.0×0.6x0.5mm,PESDU0521P1T,PN-Silicon		,1.0x0.6x0.5(±0.05)mm,SSCE5V022N1,SSC	
TVS	(T)TVS (Transient Voltage Suppressor),Unidirectional,5V,0.5pF,DFN1006-2L,1.0x0.6mm,WE05DUCF,WAYON	WAYON	(T)ESD Protector,TVS,Unidirectional,5V,0.5pF,DFN1006-2L,1.0x0.6x0.6mmH,SSCE5V031N1,SSC	SSC
26M	(T)Crystal，26MHz，±10ppm，9pF，±10ppm@(-20~+70℃), 3225, 3.2x2.5x0.7mmH, 3S26000266，FAILONG	FAILONG	Crystal,26MHz,±10ppm,9pF,3225,3.2x2.5x0.6mm,2.3.3.260000908,MDH	MDH
PCB	PCB board,FF638-MB-V0.2, 6-layer 1 HDI,KeXiang	KeXiang	PCB board,FF638-MB-V0.2, 6-layer 1 HDI,HongGao	HongGao
Camera connector	(T)FPC CONNECTOR, front lock 21PIN,0.3PITCH, bottom contact,FPC thickness 0.2mm, black,7.8x3.2x1.0mmH,OK-F302-21115,Yaqi	Yaqi	FPC CONNECTOR (T), before the lock pin 21, 0.3 PITCH, contact, FPC thickness of 0.2 mm, all black, 7.8 x3.25 x1.0 mmH, CFPC0310B - 21 rl - TAG, Biying	Biying
Keypad connector	(P) (T),FPC CONNECTOR 15 pin, lock before 0.3 PITCH, contact, FPC thickness of 0.2 mm, all black, 6.0 x3.25 x1.0 mmH, CFPC0310B - 15 rl - TAG, Biying	Biying	(T)FPC CONNECTOR, front lock 21PIN,0.3PITCH, bottom contact,FPC thickness 0.2mm, black,7.8x3.2x1.0mmH,OK-F302-21115,Yaqi	Yaqi
RF base	(T) RF Switchable Receptacle, Generation III, four leg, shell plating silver, diameter 0.5, the diameter of 1.35, 2.1 x2.0 x0.9 mmH, 818011998, ECT	ECT	(P)(T)RF Switchable Receptacle, III Generation, four welding pin, silver plated shell, inner diameter 0.5, outer diameter 1.35,2.1x2.0x0.9mmH,RF3S-1B090FR0,Hongrida	Hongrida
Battery connector	P)(T)Battery Connector, shrapnel on board,2DIP+4SMT,3PIN,3.0 PITCH, improved shrapnel forward force,8.4x3.9x3.5mmH,B13-	Hongrida	(P) (T) 'Connector, plate shell type, 2 dip + 4 SMT, 3 pin, PITCH, 3.0 8.4 x3.9 x3.5 mmH, A - WKBT03 - B30001-04, Weikang	Weikang

	AB03F350,Hongrida			
Headphone socket	(S)Audio Jack(Φ3.5mm), sinking plate 1.2mmH, headless bevel,5Pin(6DIP),12.5x6.35x3.6mmH,PH10-4B05F35A, Hongrida	Hongrida	(P)(T)Audio Jack(Φ3.5mm), sinking plate 1.2mmH, headless bevel,5Pin(6DIP),12.6x6.35x3.6mmH,JAK35-061T3612-A01, Juda	Juda
SIM card holder	(T) NANO SIM Card Connector, ordinary bridge, with block, tin welding Angle, all SMT, 7 PIN, PIN with detection, 12.35 x9.8 x1.4 mmH, S126 b07f13a 0, Hongrida	Hongrida	(T)NANO SIM Card Connector, ordinary bridge, with stop, tin Angle internal welding, full SMT,7PIN, with detection PIN,12.35x9.8x1.35mmH,A-WKSM07-B25412-22,Weikang	Weikang
TF card holder	(P) (T) T - card Connector (T - FLASH gets stuck), short body, dangling, with the PIN, 9 PIN, PITCH, 1.1 11.4 x5.2 x2.45 mmH, T09 - BB09F250 Hongrida	Hongrida	(P) (T) T - card Connector (T - FLASH gets stuck), short body, dangling, with the PIN, 9 PIN, PITCH, 1.1, 11.4 x5.2 x2.45 mmH, A - WKTF09 - B11012-19, Weikang	Weikang
BB shield cover	(P) (T) Shielding Case (BB), irregular, local copper plating paint, material thickness 0.2 mm, 34 x28. 25 x1. 4 MMH, FF638, Chuangyagao	Chuangyagao	(P) (T) Shielding Case (BB), irregular, local copper plating paint, material thickness 0.2 mm, 34 x28. 25 x1. 4 MMH, FF638, ShenYouWei	ShenYouWei
RF shield cover	(P) (T) Shielding Case (RF), irregular, New York, cupronickel material thickness 0.2 mm, 31.2 x22.35 x1.4 mmH, FF638, Chuangyagao	Chuangyagao	(P) (T) Shielding Case (RF), irregular, New York, cupronickel material thickness 0.2 mm, 31.2 x22.35 x1.4 mmH, FF638, ShenYouWeiShenYouWei	ShenYouWei
Main antenna shrapnel	(S) Antenna spring (SMT), stainless steel plated, pad width 0.9, contact width 0.45, working range 1.0/1.75, best 1.4,3.4x0.9x1.8mmH,P-JS-IT-18,Zhonghangxinda	Zhonghangxinda	(P) (T) antenna shrapnel (SMT), stainless steel, gold plated contact area, 2.4 x0.8 bonding pad, contact width of 0.5, scope of work 1.25/1.75, 3.4 x0.9 x1.8 mmH, KSN - A18000101R - 0100, Huile	Huile
Diversity /BT antenna	(P) (T) antenna shrapnel (SMT), welding plate 1.0, wide contact 0.56, wide working range 1.15 1.25	Tonglingtongfeng	(T) antenna shrapnel (SMT), phosphor copper, solder width of 1.0, contact width of 0.4, working range 1.0 1.4 mm, 1.2	Zhonghangxinda

shrapnel	mm, 1.2 mm, best 1.9 x1.0 x1.75 mmH, AT17-110001-02, Tonglingtongfeng		mm, best 2.0 x1.0 x1.8 mmH, C - 1 sp18000441, Zhonghangxinda	

This report is based on the TA-1689(Mains supply) as the main test.

TA-1689(Second supply) the following tests need to be performed:

NO.	Test item	EUT ID	Operating mode
1	Conducted Emission	UT17aa	Video Player, FM receier
2	Radiated Emission	UT16aa	LTE receiver, FM receiver

Other results are cited from the initial model TA-1689(Mains supply).

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	(10-1-2023 Edition)
ANSI C63.4	Methods of Measurement of Radio-Noise Emissions from Low-Voltage Electrical and Electronic Equipment in the Range of 9 kHz to 40 GHz	2014

5. LABORATORY ENVIRONMENT

Anechoic chamber (FACT3-2.0) did not exceed following limits along the EMC testing:
9.10m×6.10m×5.60m (L×W×H)

Temperature	Min. = 15 ℃, Max. = 35 ℃
Relative humidity	Min. = 20 %, Max. = 75 %
Shielding effectiveness	0.014MHz-1MHz> 60 dB; 1MHz-18000MHz>90 dB
Electrical insulation	> 2MΩ
Ground system resistance	< 4Ω
Normalised site attenuation (NSA)	< ±4 dB, 3 m distance, from 30 to 1000 MHz
Voltage Standing Wave Ratio （VSWR）	≤ 6 dB, from 1 to 18 GHz，3 m distance
Uniformity of field strength	Between 0 and 6 dB, from 80 to 6000 MHz

Shield room did not exceed following limits along the EMC testing:

Temperature	Min. = 15 ℃, Max. = 35 ℃
Relative humidity	Min. =20 %, Max. = 75 %
Shielding effectiveness	0.014MHz-1MHz,>60dB; 1MHz-18000MHz,>90dB
Electrical insulation	>2MΩ
Ground system resistance	<4Ω

6. SUMMARY OF TEST RESULTS

6.1. Testing Environment

Normal Temperature: 15~35℃
Relative Humidity: 20~75%
Atmospheric pressure 86~106kPa

6.2. Summary of Measurement Results

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

Items	Test Name	Clause in FCC/IC rules	Section in this report	Verdict
1	Radiated Emission	15.109(a)/ Section 6.2	A.1	P
2	Conducted Emission	15.107(a)/ Section 6.1	A.2	P

6.3. Statement

6.3.1 Statements of conformity

This report takes measured values as criterion of test conclusion. The test conclusion meets the limit requirements.

7. MEASUREMENT UNCERTAINTY

Test item	Frequency ranges	Measurement uncertainty
Radiated Emission	30MHz-1GHz	4.80dB(*k*=2)
	1GHz-18GHz	4.62dB(*k*=2)
	18GHz-40GHz	2.36dB(*k*=2)
Conducted Emission	150kHz-30MHz	2.68dB(*k*=2)

8. MEASURING APPARATUS UTILIZED

No.	Name	Model	Serial Number	Manufacturer	Calibration Due date	Calibration Period
1.	Test Receiver	ESR7	101676	R&S	2024.11.22	1 year
2.	Test Receiver	ESCI	100702	R&S	2025.01.10	1 year
3.	Spectrum Analyzer	FSV40	101192	R&S	2025.01.10	1 year
4.	Hybrid antenna	VULB 9163	9163-330	Schwarzbeck	2027.04.21	3 years
5.	LISN	ENV216	102067	R&S	2024.10.07	1 year
6.	Horn Antenna	3117	00066577	ETS-Lindgren	2025.04.17	3 years
7.	Anechoic Chamber	FACT3-2.0	1285	ETS-Lindgren	2025.05.28	2 years
8.	Universal Radio Communication Tester	CMU200	114545	R&S	2025.01.10	1 year
9.	Universal Radio Communication Tester	CMW500	152499	R&S	2024.07.13	1 year
10.	Horn Antenna	QSH-SL-18-26-S-20	17013	Q-par	2026.02.01	3 years
11.	Horn Antenna	QSH-SL-8-26-40-K-20	17014	Q-par	2026.01.30	3 years

9. MEASURING ACCESSORY UTILIZED

No.	Name	Model	Serial Number	Manufacturer	Calibration Due date	Calibration Period
1.	PC	ThinkPad T480	PF-13LW0C	Lenovo	/	/
2.	Printer	P1008	VNF6C12491	HP	/	/
3.	Mouse	MOEUUOA	44NY517	Lenovo	/	/

10. MEASURING SOFTWARE

No.	Name	Manufacturer	Version
1	EMC32	Rohde & Schwarz	V10.50.40

ANNEX A: MEASUREMENT RESULTS

A.1 Radiated Emission (§15.109(a))

Reference

FCC: Part 15.109(a)

IC: ICES-003 section 6.2

A.1.1 Method of measurement

The field strength of radiated emissions from the unintentional radiator at a distance of 3 meters or 1 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. Below 18GHz the measurement antenna was placed at a distance of 3 meters from the EUT. Above 18GHz the measurement antenna was placed at a distance of 1 meters from the EUT. (According to Part 15.31(f)(1), 1m limit is calculated by extrapolation factor of 20 dB/decade) . 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:

Camera: At the beginning of measurement, the battery is completely discharged. The battery and charger are installed so that the EUT works well and keeping on taking photos.

Video Player: The EUT is connected to a charger for charging and keeping on playing mp3.

Data Transfer: The model of the PC is Lenovo ThinkPad T480, and the serial number of the PC is PF-13LW0C. The EUT is connected to a PC for transmitting data. The software is used to let the PC keep on copying data to EUT or TF Card, reading and erasing the data after copy action was finished.

FM receiver: The EUT is connected to a charger for charging. The EUT is synchronized to a FM signal generator. The EUT is keeping on demodulating the FM signal and outputting the audio signal through the headset.

GSM receiver: The EUT is connected to a charger for charging. The EUT is synchronized to System Simulator (SS), and able to respond to paging messages and incoming call. An established call has been released.

WCDMA receiver: The EUT is connected to a charger for charging. The EUT is synchronized to System Simulator (SS), and able to respond to paging messages and incoming call. An established call has been released.

LTE receiver: The EUT is connected to a charger for charging. The EUT is synchronized to System Simulator (SS), and able to respond to paging messages and incoming call. An established call has been released.

This device contains the receivers which tune and operate between 30MHz-960MHz in the following bands:

GSM850MHz, WCDMA Band5, WCDMA Band5, LTE Band 5, LTE Band 12, LTE Band 13.

The EUT was tested while operating in licensed band receiver mode. All licensed band receivers

that tune in the range of 30MHz-960MHz, as listed in Section 3.1, 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. For radiated measurement, pre-scanned in three orthogonal panels, X, Y, Z. The worst cases (Y plane) were recorded in this report.

A.1.3 Measurement Limit

Limit from Part 15.109(a)

Frequency range (MHz)	Field strength limit (μV/m)		
	Quasi-peak	Average	Peak
30-88	100		
88-216	150		
216-960	200		
960-1000	500		
>1000		500	5000

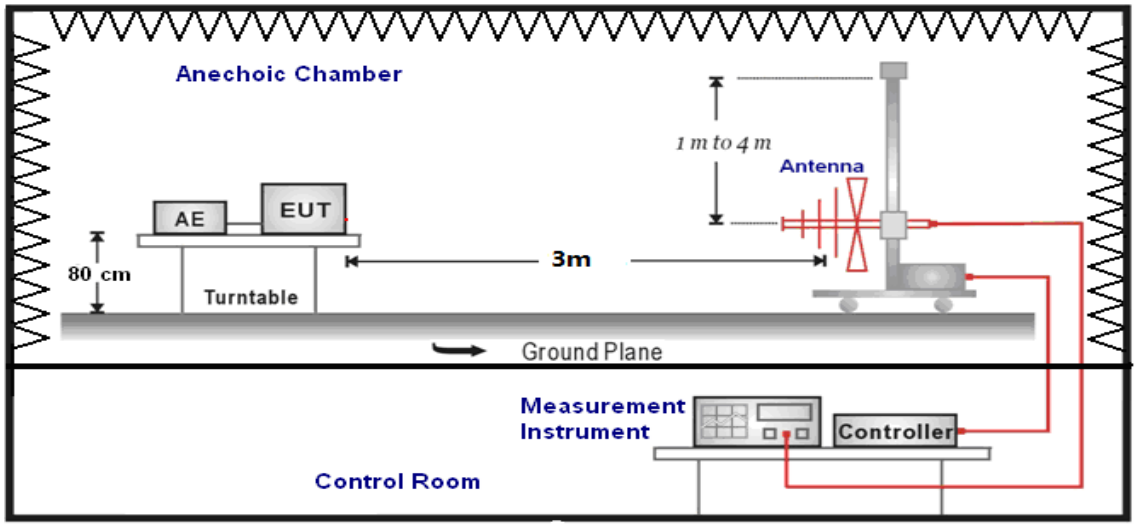
*Note: The original limit is defined at 10m test distance. This limit is calculated according to CISPR requirements.

A.1.4 Test Condition

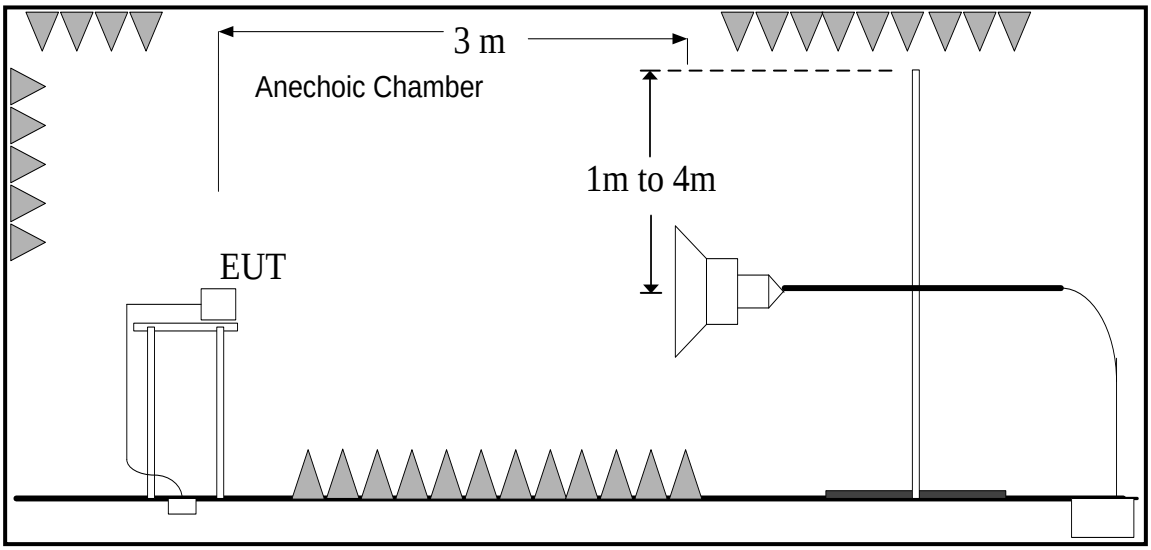
Frequency of emission (MHz)	RBW/VBW	Sweep Time(s)
30-1000	120kHz (IF bandwidth)	5
Above 1000	1MHz/3MHz	15

A.1.5 Test set-up:

30MHz-1GHz



1GHz-40GHz



A.1.6 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:

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

Where

G_A: Antenna factor of receive antenna

G_{PL}:PathLoss

P_{Mea}: Measurement result on receiver.

Result:Quasi-Peak(dBμV/m) /Average(dBμV/m)/Peak(dBμV/m)

Note: the result contains vertical part and Horizontal part

GSM receiver 850MHz

Frequency range (MHz)	Quasi-Peak Limit (dBμV/m)	Result (dBμV/m) UT12aa/Set.1	Conclusion
30-88	40.00	See Figure A.1.1.	P
88-216	43.52		
216-960	46.02		
960-1000	54.00		

Frequency range (MHz)	Average Limit (dBμV/m)	Peak Limit (dBμV/m)	Result (dBμV/m) UT12aa/Set.1	Conclusion
1000 to 18000	54.00	74.00	See Figure A.1.2.	P
18000 to 26500	63.54	83.54	See Figure A.1.3.	

GSM receiver 1900MHz

Frequency range (MHz)	Quasi-Peak Limit (dBμV/m)	Result (dBμV/m) UT12aa/Set.1	Conclusion
30-88	40.00	See Figure A.1.4.	P
88-216	43.52		
216-960	46.02		
960-1000	54.00		

Frequency range (MHz)	Average Limit (dBμV/m)	Peak Limit (dBμV/m)	Result (dBμV/m) UT12aa/Set.1	Conclusion
1000 to 18000	54.00	74.00	See Figure A.1.5.	P
18000 to 26500	63.54	83.54	See Figure A.1.6.	

Camera

Frequency range (MHz)	Quasi-Peak Limit (dBμV/m)	Result (dBμV/m) UT12aa/Set.1	Conclusion
30-88	40.00	See Figure A.1.7.	P
88-216	43.52		
216-960	46.02		
960-1000	54.00		

Frequency range (MHz)	Average Limit (dBμV/m)	Peak Limit (dBμV/m)	Result (dBμV/m) UT12aa/Set.1	Conclusion
1000 to 18000	54.00	74.00	See Figure A.1.8.	P
18000 to 26500	63.54	83.54	See Figure A.1.9.	

FM Receiver

Frequency range (MHz)	Quasi-Peak Limit (dBμV/m)	Result (dBμV/m) UT12aa/Set.1	Conclusion
30-88	40.00	See Figure A.1.10.	P
88-216	43.52		
216-960	46.02		
960-1000	54.00		

Frequency range (MHz)	Average Limit (dBμV/m)	Peak Limit (dBμV/m)	Result (dBμV/m) UT12aa/Set.1	Conclusion
1000 to 18000	54.00	74.00	See Figure A.1.11.	P
18000 to 26500	63.54	83.54	See Figure A.1.12.	

Video Player

Frequency range (MHz)	Quasi-Peak Limit (dBμV/m)	Result (dBμV/m) UT12aa/Set.1	Conclusion
30-88	40.00	See Figure A.1.13.	P
88-216	43.52		
216-960	46.02		
960-1000	54.00		

Frequency range (MHz)	Average Limit (dBμV/m)	Peak Limit (dBμV/m)	Result (dBμV/m) UT12aa/Set.1	Conclusion
1000 to 18000	54.00	74.00	See Figure A.1.14.	P
18000 to 26500	63.54	83.54	See Figure A.1.15.	

WCDMA receiver Band 2

Frequency range (MHz)	Quasi-Peak Limit (dBμV/m)	Result (dBμV/m) UT12aa/Set.1	Conclusion
30-88	40.00	See Figure A.1.16.	P
88-216	43.52		
216-960	46.02		
960-1000	54.00		

Frequency range (MHz)	Average Limit (dBμV/m)	Peak Limit (dBμV/m)	Result (dBμV/m) UT12aa/Set.1	Conclusion
1000 to 18000	54.00	74.00	See Figure A.1.17.	P
18000 to 26500	63.54	83.54	See Figure A.1.18.	

WCDMA receiver Band 4

Frequency range (MHz)	Quasi-Peak Limit (dBμV/m)	Result (dBμV/m) UT12aa/Set.1	Conclusion
30-88	40.00	See Figure A.1.19.	P
88-216	43.52		
216-960	46.02		
960-1000	54.00		

Frequency range (MHz)	Average Limit (dBμV/m)	Peak Limit (dBμV/m)	Result (dBμV/m) UT12aa/Set.1	Conclusion
1000 to 18000	54.00	74.00	See Figure A.1.20.	P
18000 to 26500	63.54	83.54	See Figure A.1.21.	

WCDMA receiver Band 5

Frequency range (MHz)	Quasi-Peak Limit (dBμV/m)	Result (dBμV/m) UT12aa/Set.1	Conclusion
30-88	40.00	See Figure A.1.22.	P
88-216	43.52		
216-960	46.02		
960-1000	54.00		

Frequency range (MHz)	Average Limit (dBμV/m)	Peak Limit (dBμV/m)	Result (dBμV/m) UT12aa/Set.1	Conclusion
1000 to 18000	54.00	74.00	See Figure A.1.23.	P
18000 to 26500	63.54	83.54	See Figure A.1.24.	

LTE receiver Band 2

Frequency range (MHz)	Quasi-Peak Limit (dBμV/m)	Result (dBμV/m) UT12aa/Set.1	Conclusion
30-88	40.00	See Figure A.1.25.	P
88-216	43.52		
216-960	46.02		
960-1000	54.00		

Frequency range (MHz)	Average Limit (dBμV/m)	Peak Limit (dBμV/m)	Result (dBμV/m) UT12aa/Set.1	Conclusion
1000 to 18000	54.00	74.00	See Figure A.1.26.	P
18000 to 26500	63.54	83.54	See Figure A.1.27.	

LTE receiver Band 4

Frequency range (MHz)	Quasi-Peak Limit (dBμV/m)	Result (dBμV/m) UT12aa/Set.1	Conclusion
30-88	40.00	See Figure A.1.28.	P
88-216	43.52		
216-960	46.02		
960-1000	54.00		

Frequency range (MHz)	Average Limit (dBμV/m)	Peak Limit (dBμV/m)	Result (dBμV/m) UT12aa/Set.1	Conclusion
1000 to 18000	54.00	74.00	See Figure A.1.29.	P
18000 to 26500	63.54	83.54	See Figure A.1.30.	

LTE receiver Band 5

Frequency range (MHz)	Quasi-Peak Limit (dBμV/m)	Result (dBμV/m) UT12aa/Set.1	Conclusion
30-88	40.00	See Figure A.1.31.	P
88-216	43.52		
216-960	46.02		
960-1000	54.00		

Frequency range (MHz)	Average Limit (dBμV/m)	Peak Limit (dBμV/m)	Result (dBμV/m) UT12aa/Set.1	Conclusion
1000 to 18000	54.00	74.00	See Figure A.1.32.	P
18000 to 26500	63.54	83.54	See Figure A.1.33.	

LTE receiver Band 7

Frequency range (MHz)	Quasi-Peak Limit (dBμV/m)	Result (dBμV/m) UT12aa/Set.1	Conclusion
30-88	40.00	See Figure A.1.34.	P
88-216	43.52		
216-960	46.02		
960-1000	54.00		

Frequency range (MHz)	Average Limit (dBμV/m)	Peak Limit (dBμV/m)	Result (dBμV/m) UT12aa/Set.1	Conclusion
1000 to 18000	54.00	74.00	See Figure A.1.35.	P
18000 to 26500	63.54	83.54	See Figure A.1.36.	

LTE receiver Band 12

Frequency range (MHz)	Quasi-Peak Limit (dBμV/m)	Result (dBμV/m) UT12aa/Set.1	Conclusion
30-88	40.00	See Figure A.1.37.	P
88-216	43.52		
216-960	46.02		
960-1000	54.00		

Frequency range (MHz)	Average Limit (dBμV/m)	Peak Limit (dBμV/m)	Result (dBμV/m) UT12aa/Set.1	Conclusion
1000 to 18000	54.00	74.00	See Figure A.1.38.	P
18000 to 26500	63.54	83.54	See Figure A.1.39.	

LTE receiver Band 13

Frequency range (MHz)	Quasi-Peak Limit (dBμV/m)	Result (dBμV/m) UT12aa/Set.1	Conclusion
30-88	40.00	See Figure A.1.40.	P
88-216	43.52		
216-960	46.02		
960-1000	54.00		

Frequency range (MHz)	Average Limit (dBμV/m)	Peak Limit (dBμV/m)	Result (dBμV/m) UT12aa/Set.1	Conclusion
1000 to 18000	54.00	74.00	See Figure A.1.41.	P
18000 to 26500	63.54	83.54	See Figure A.1.42.	

LTE receiver Band 17

Frequency range (MHz)	Quasi-Peak Limit (dBμV/m)	Result (dBμV/m) UT12aa/Set.1	Conclusion
30-88	40.00	See Figure A.1.43.	P
88-216	43.52		
216-960	46.02		
960-1000	54.00		

Frequency range (MHz)	Average Limit (dBμV/m)	Peak Limit (dBμV/m)	Result (dBμV/m) UT12aa/Set.1	Conclusion
1000 to 18000	54.00	74.00	See Figure A.1.44.	P
18000 to 26500	63.54	83.54	See Figure A.1.45.	

LTE receiver Band 66

Frequency range (MHz)	Quasi-Peak Limit (dBμV/m)	Result (dBμV/m) UT12aa/Set.1	Conclusion
30-88	40.00	See Figure A.1.46.	P
88-216	43.52		
216-960	46.02		
960-1000	54.00		

Frequency range (MHz)	Average Limit (dBμV/m)	Peak Limit (dBμV/m)	Result (dBμV/m) UT12aa/Set.1	Conclusion
1000 to 18000	54.00	74.00	See Figure A.1.47.	P
18000 to 26500	63.54	83.54	See Figure A.1.48.	

Data Transfer: PC TO TF

Frequency range (MHz)	Quasi-Peak Limit (dBμV/m)	Result (dBμV/m) UT12aa/Set.3	Conclusion
30-88	40.00	See Figure A.1.49.	P
88-216	43.52		
216-960	46.02		
960-1000	54.00		

Frequency range (MHz)	Average Limit (dBμV/m)	Peak Limit (dBμV/m)	Result (dBμV/m) UT12aa/Set.3	Conclusion
1000 to 18000	54.00	74.00	See Figure A.1.50.	P
18000 to 26500	63.54	83.54	See Figure A.1.51.	

Data Transfer: TF TO PC

Frequency range (MHz)	Quasi-Peak Limit (dBμV/m)	Result (dBμV/m) UT12aa/Set.3	Conclusion
30-88	40.00	See Figure A.1.52.	P
88-216	43.52		
216-960	46.02		
960-1000	54.00		

Frequency range (MHz)	Average Limit (dBμV/m)	Peak Limit (dBμV/m)	Result (dBμV/m) UT12aa/Set.3	Conclusion
1000 to 18000	54.00	74.00	See Figure A.1.53.	P
18000 to 26500	63.54	83.54	See Figure A.1.54.	

LTE receiver Band 5

Frequency range (MHz)	Quasi-Peak Limit (dBμV/m)	Result (dBμV/m) UT12aa/Set.2	Conclusion
30-88	40.00	See Figure A.1.55.	P
88-216	43.52		
216-960	46.02		
960-1000	54.00		

Frequency range (MHz)	Average Limit (dBμV/m)	Peak Limit (dBμV/m)	Result (dBμV/m) UT12aa/Set.2	Conclusion
1000 to 18000	54.00	74.00	See Figure A.1.56.	P
18000 to 26500	63.54	83.54	See Figure A.1.57.	

LTE receiver Band 5

Frequency range (MHz)	Quasi-Peak Limit (dBμV/m)	Result (dBμV/m) UT16aa /Set.1	Conclusion
30-88	40.00	See Figure A.1.58.	P
88-216	43.52		
216-960	46.02		
960-1000	54.00		

Frequency range (MHz)	Average Limit (dBμV/m)	Peak Limit (dBμV/m)	Result (dBμV/m) UT16aa /Set.1	Conclusion
1000 to 18000	54.00	74.00	See Figure A.1.59.	P
18000 to 26500	63.54	83.54	See Figure A.1.60.	

FM Receiver

Frequency range (MHz)	Quasi-Peak Limit (dBμV/m)	Result (dBμV/m) UT16aa/Set.1	Conclusion
30-88	40.00	See Figure A.1.61.	P
88-216	43.52		
216-960	46.02		
960-1000	54.00		

Frequency range (MHz)	Average Limit (dBμV/m)	Peak Limit (dBμV/m)	Result (dBμV/m) UT16aa /Set.1	Conclusion
1000 to 18000	54.00	74.00	See Figure A.1.62.	P
18000 to 26500	63.54	83.54	See Figure A.1.63.	

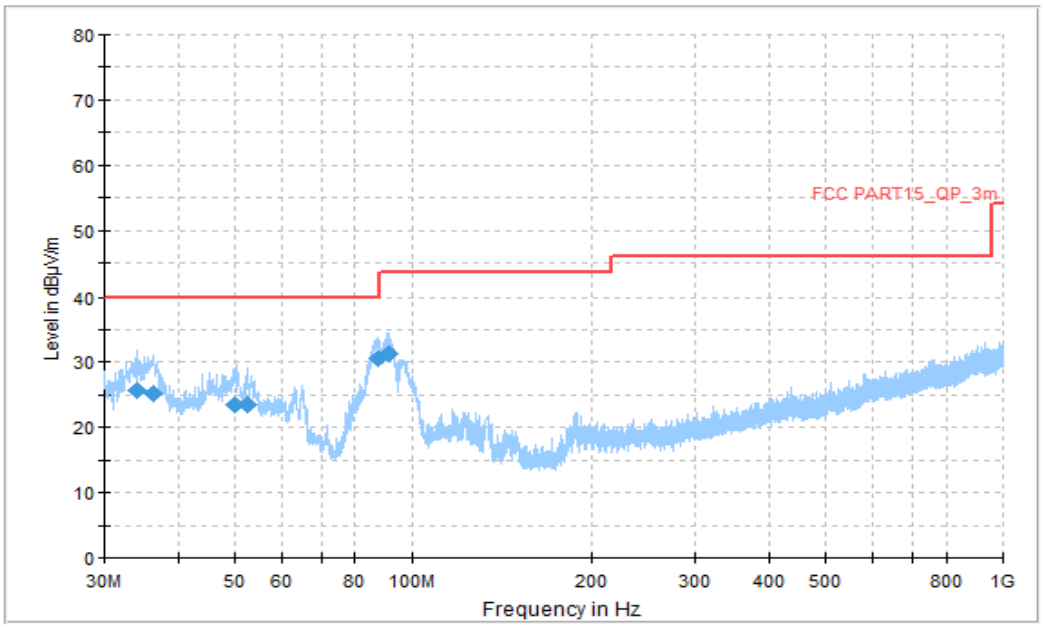


Figure A.1.1. Radiated Emission (GSM receiver 850MHz, 30MHz to 1GHz)

Final_Result

Frequency (MHz)	QuasiPeak (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Pol	ARpl (dB/m)	P_{Mea} (dBµV)
33.987778	25.67	40.00	14.33	V	-15	40.67
36.305000	25.28	40.00	14.72	V	-14	39.28
50.100556	23.42	40.00	16.58	V	-13	36.42
52.363889	23.60	40.00	16.40	V	-14	37.60
87.499444	30.66	40.00	9.34	V	-17	47.66
91.325556	31.41	43.52	12.11	V	-16	47.41

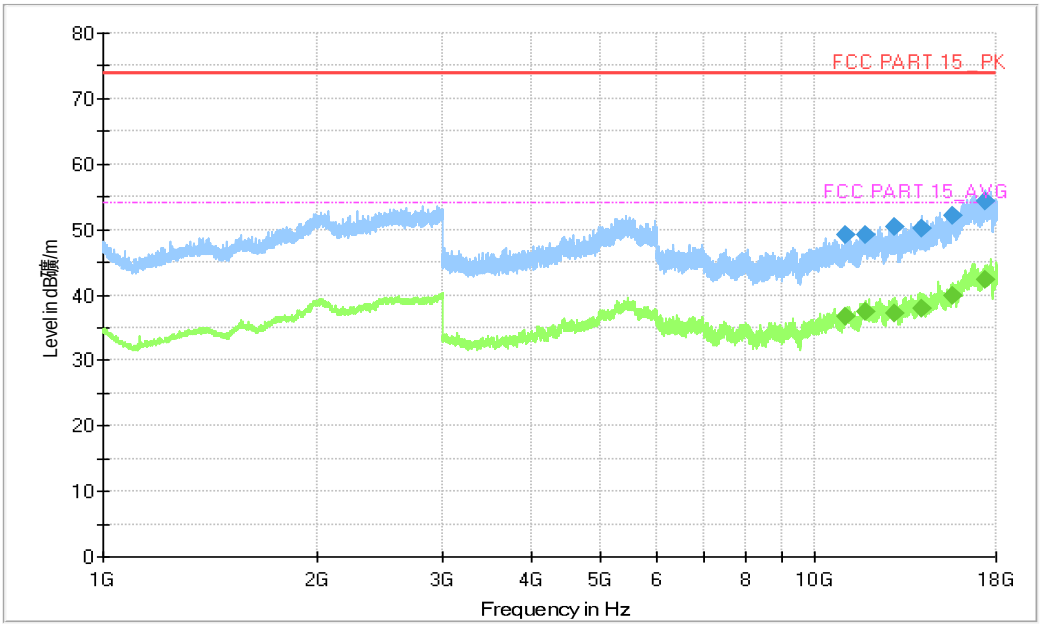


Figure A.1.2. Radiated Emission (GSM receiver 850MHz, 1GHz to 18GHz)

Final_Results_PK

Frequency(MHz)	Peak (dBµV/m)	Limit (dBµV/m)	Margin(dB)	Polarity	ARpl (dB/m)	P_{Mea} (dBµV)
11080.714286	49.27	74.00	24.73	V	11.0	38.27
11802.000000	49.17	74.00	24.83	H	12.3	36.87
12959.142857	50.28	74.00	23.72	H	12.9	37.38
14140.285714	50.10	74.00	23.90	H	13.2	36.90
15660.428571	52.03	74.00	21.97	V	14.1	37.93
17365.714286	54.26	74.00	19.74	V	19.7	34.56

Final_Results_AVG

Frequency(MHz)	Average (dBµV/m)	Limit (dBµV/m)	Margin(dB)	Polarity	ARpl (dB/m)	P_{Mea} (dBµV)
11080.714286	36.69	54.00	17.31	V	11.0	25.69
11802.000000	37.45	54.00	16.55	H	12.3	25.15
12959.142857	37.24	54.00	16.76	H	12.9	24.34
14140.285714	37.88	54.00	16.12	H	13.2	24.68
15660.428571	39.96	54.00	14.04	V	14.1	25.86
17365.714286	42.37	54.00	11.63	V	19.7	22.67

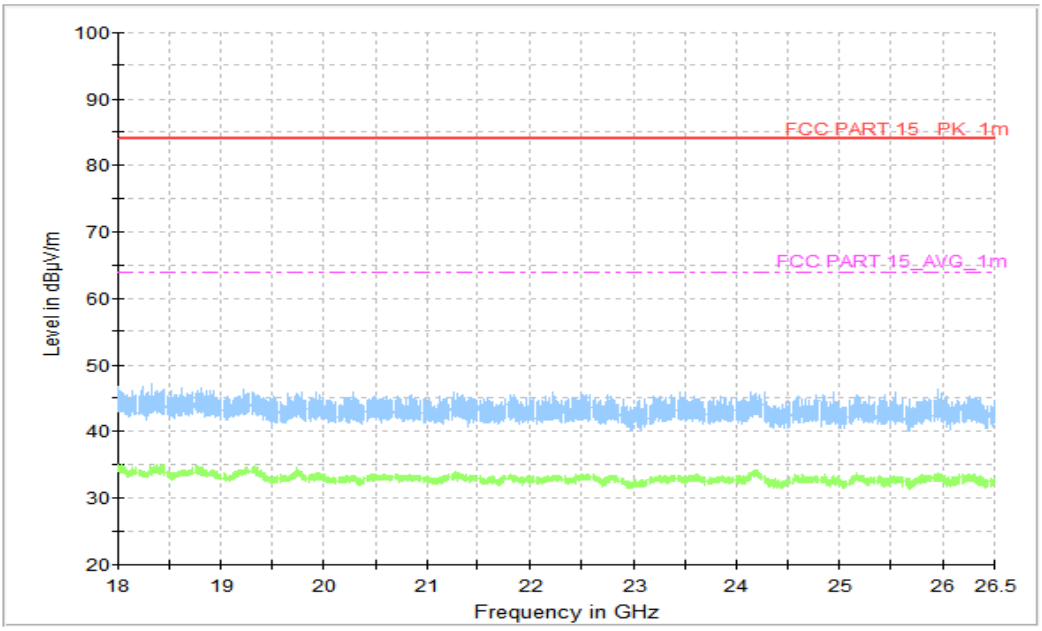


Figure A.1.3. Radiated Emission (GSM receiver 850MHz, 18GHz to 26.5GHz)

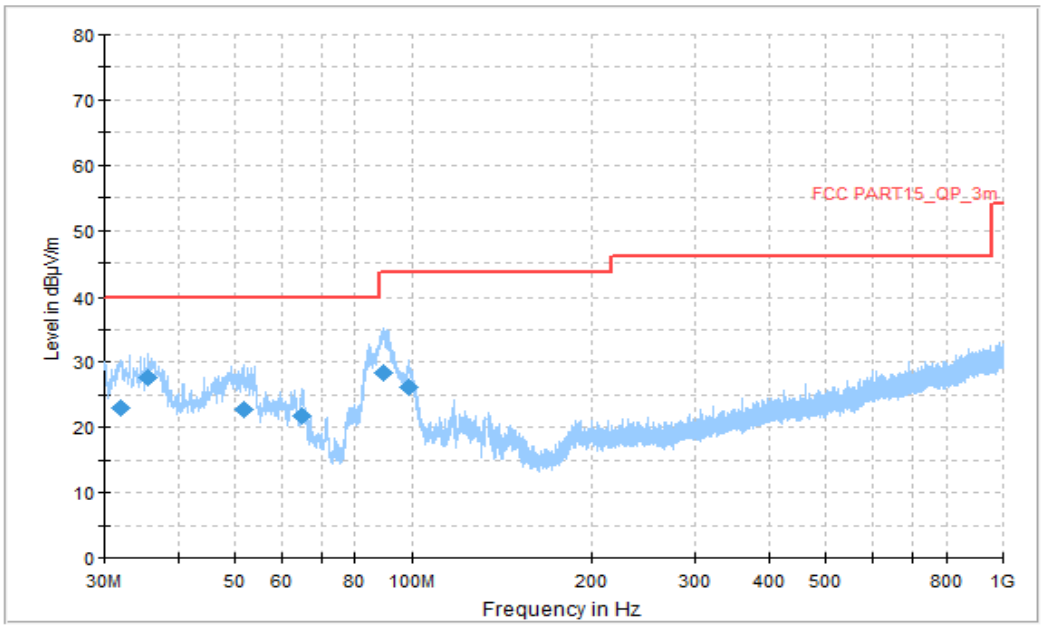


Figure A.1.4. Radiated Emission (GSM receiver 1900MHz, 30MHz to 1GHz)

Final_Result

Frequency (MHz)	QuasiPeak (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Pol	ARpl (dB/m)	P_{Mea} (dBµV)
31.886111	23.09	40.00	16.91	V	-15	38.09
35.658333	27.53	40.00	12.47	V	-14	41.53
51.825000	22.74	40.00	17.26	V	-14	36.74
65.135556	21.83	40.00	18.17	V	-15	36.83
89.008333	28.49	43.52	15.03	V	-17	45.49
98.816111	26.22	43.52	17.30	V	-15	41.22

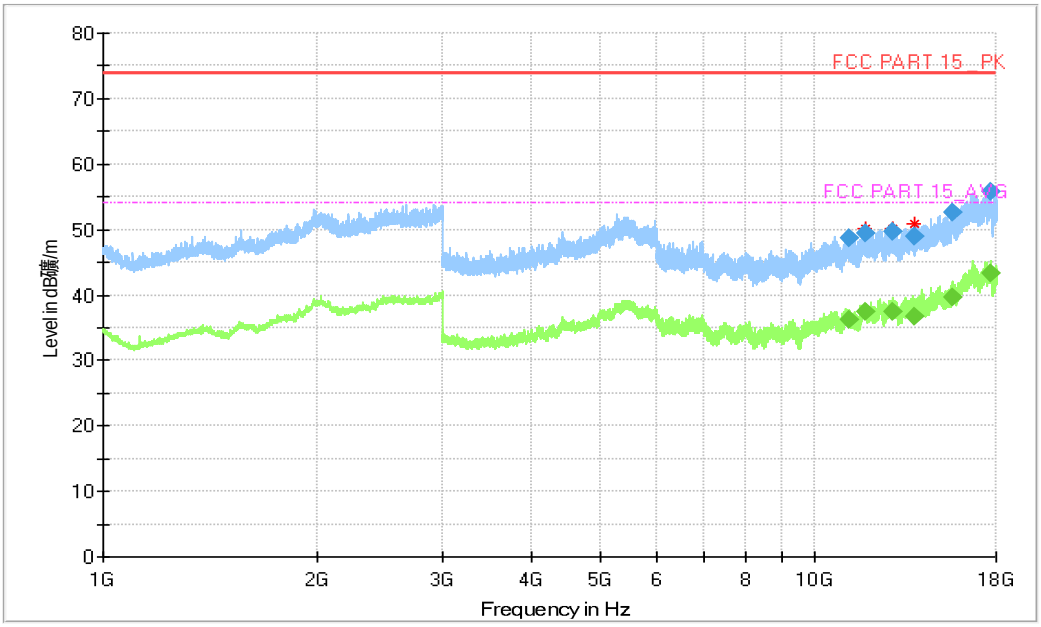


Figure A.1.5. Radiated Emission (GSM receiver 1900MHz, 1GHz to 18GHz)

Final_Results_PK

Frequency(MHz)	Peak (dBµV/m)	Limit (dBµV/m)	Margin(dB)	Polarity	ARpl (dB/m)	P_{Mea} (dBµV)
11160.857143	48.62	74.00	25.38	H	10.4	38.22
11798.142857	49.34	74.00	24.66	V	12.3	37.04
12875.571429	49.74	74.00	24.26	H	12.6	37.14
13850.571429	49.00	74.00	25.00	H	13.1	35.90
15630.000000	52.50	74.00	21.50	V	13.9	38.6
17688.857143	55.80	74.00	18.20	V	20.6	35.20

Final_Results_AVG

Frequency(MHz)	Average (dBµV/m)	Limit (dBµV/m)	Margin(dB)	Polarity	ARpl (dB/m)	P_{Mea} (dBµV)
11160.857143	36.11	54.00	17.89	H	10.4	25.71
11798.142857	37.38	54.00	16.62	V	12.3	25.08
12875.571429	37.37	54.00	16.63	H	12.6	24.77
13850.571429	36.71	54.00	17.29	H	13.1	23.61
15630.000000	39.65	54.00	14.35	V	13.9	25.75
17688.857143	43.28	54.00	10.72	V	20.6	22.68

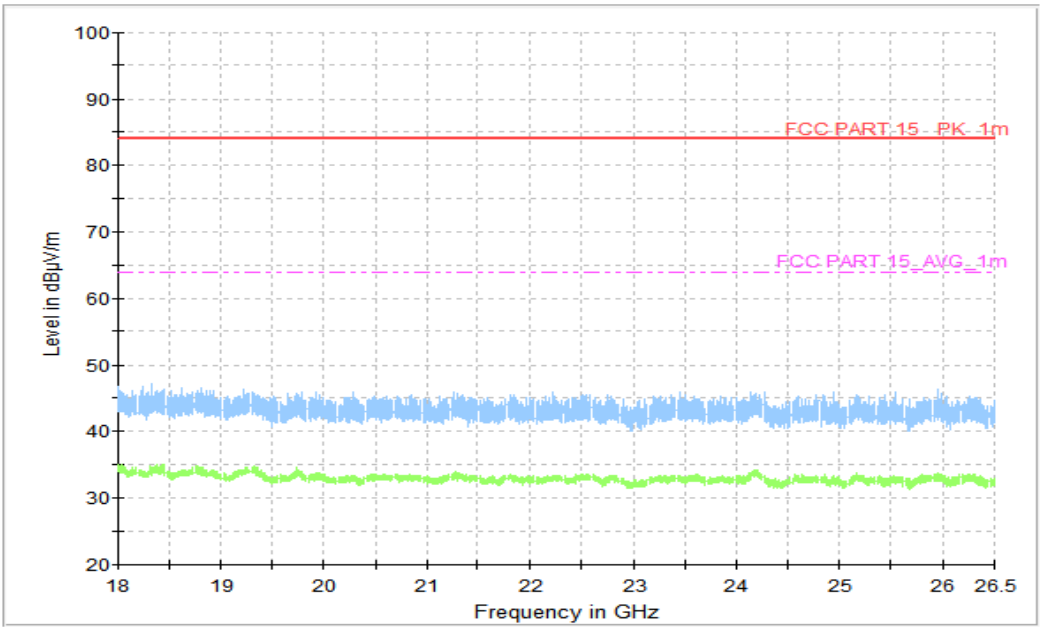


Figure A.1.6. Radiated Emission (GSM receiver 1900MHz, 18GHz to 26.5GHz)

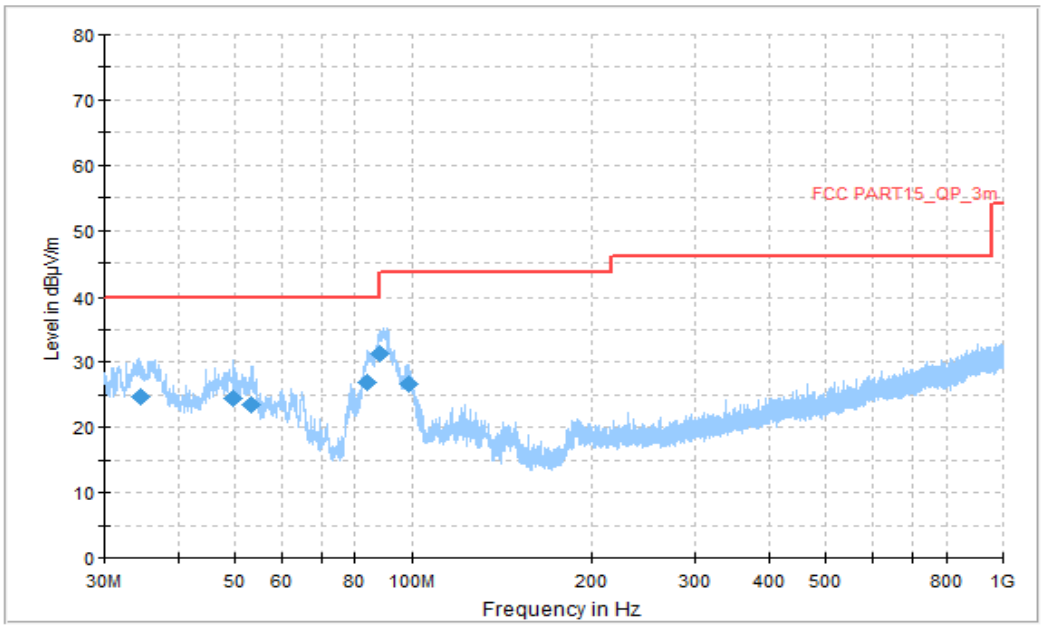


Figure A.1.7. Radiated Emission (Camera, 30MHz to 1GHz)

Final_Result

Frequency (MHz)	QuasiPeak (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Pol	ARpl (dB/m)	P_{Mea} (dBµV)
34.472778	24.66	40.00	15.34	V	-15	39.66
49.561667	24.40	40.00	15.60	V	-13	37.4
53.387778	23.37	40.00	16.63	V	-14	37.37
84.050556	26.90	40.00	13.10	V	-19	45.90
87.984444	31.33	40.00	8.67	V	-17	48.33
98.277222	26.76	43.52	16.76	V	-15	41.76

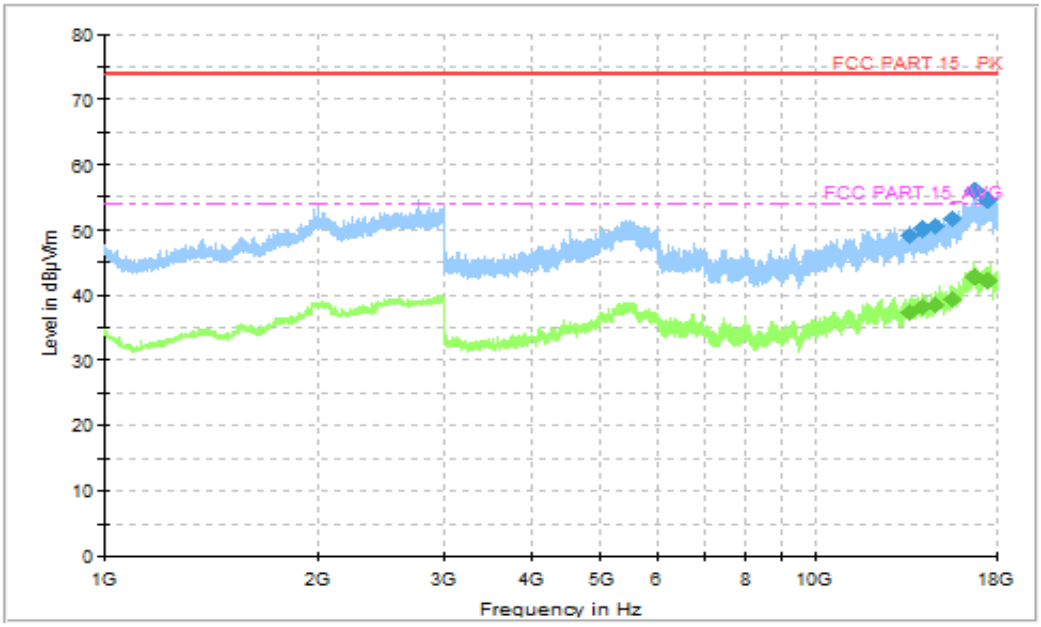


Figure A.1.8. Radiated Emission (Camera, 1GHz to 18GHz)

Final_Results_PK

Frequency(MHz)	Peak (dBµV/m)	Limit (dBµV/m)	Margin(dB)	Polarity	ARpl (dB/m)	P_{Mea} (dBµV)
13545.857143	49.23	74.00	24.77	H	13.0	36.23
14186.571429	50.05	74.00	23.95	H	13.3	36.75
14778.428572	50.60	74.00	23.40	V	14.2	36.40
15603.000000	51.69	74.00	22.31	H	13.8	37.89
16737.857143	56.05	74.00	17.95	H	18.8	37.25
17440.285714	54.55	74.00	19.45	H	20.0	34.55

Final_Results_AVG

Frequency(MHz)	Average (dBµV/m)	Limit (dBµV/m)	Margin(dB)	Polarity	ARpl (dB/m)	P_{Mea} (dBµV)
13545.857143	37.43	54.00	16.57	H	13.0	24.43
14186.571429	38.07	54.00	15.93	H	13.3	24.77
14778.428572	38.43	54.00	15.57	V	14.2	24.23
15603.000000	39.40	54.00	14.60	H	13.8	25.60
16737.857143	42.81	54.00	11.19	H	18.8	24.01
17440.285714	42.43	54.00	11.57	H	20.0	22.43

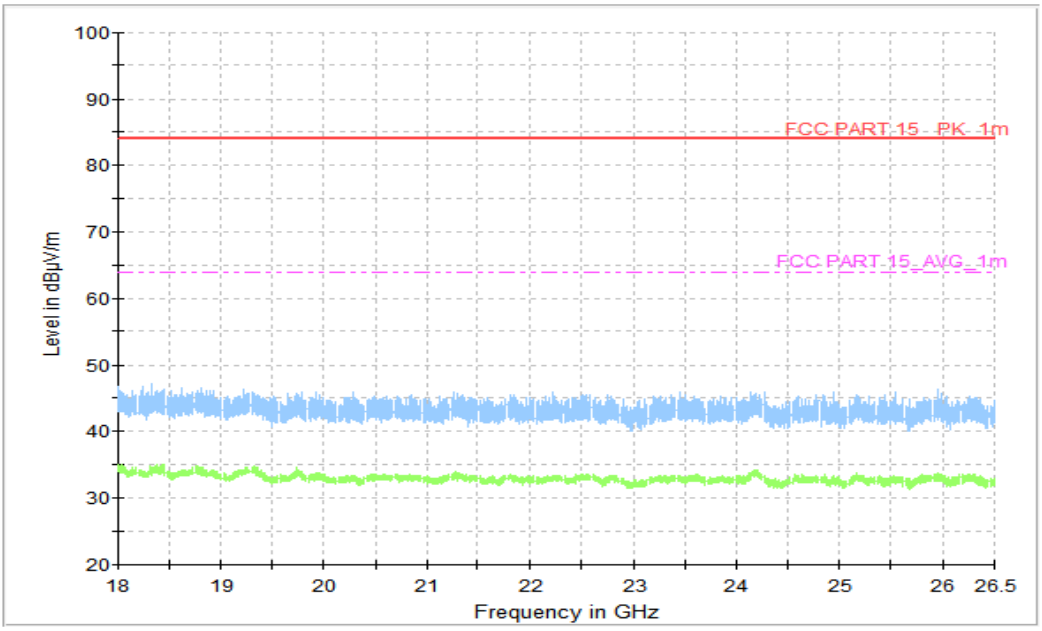


Figure A.1.9. Radiated Emission (Camera, 18GHz to 26.5GHz)

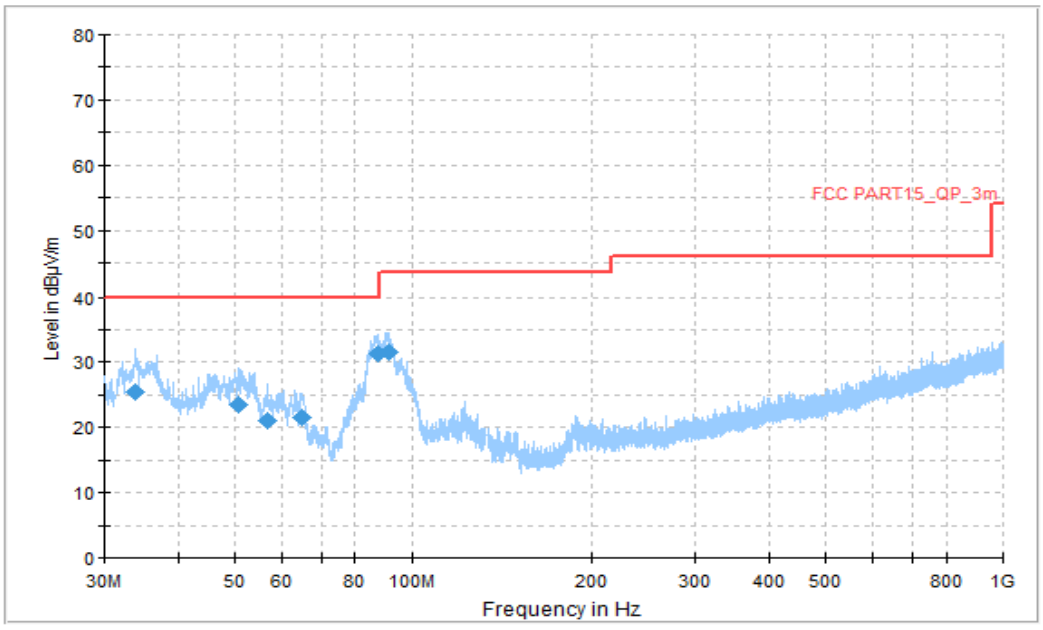


Figure A.1.10. Radiated Emission (FM Receiver, 30MHz to 1GHz)

Final_Result

Frequency (MHz)	QuasiPeak (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Pol	ARpl (dB/m)	P_{Mea} (dBµV)
33.880000	25.39	40.00	14.61	V	-15	40.39
50.693333	23.37	40.00	16.63	V	-13	36.37
56.782778	21.13	40.00	18.87	V	-13	34.13
65.027778	21.46	40.00	18.54	V	-15	36.46
87.283889	31.21	40.00	8.79	V	-18	49.21
91.379444	31.62	43.52	11.90	V	-16	47.62

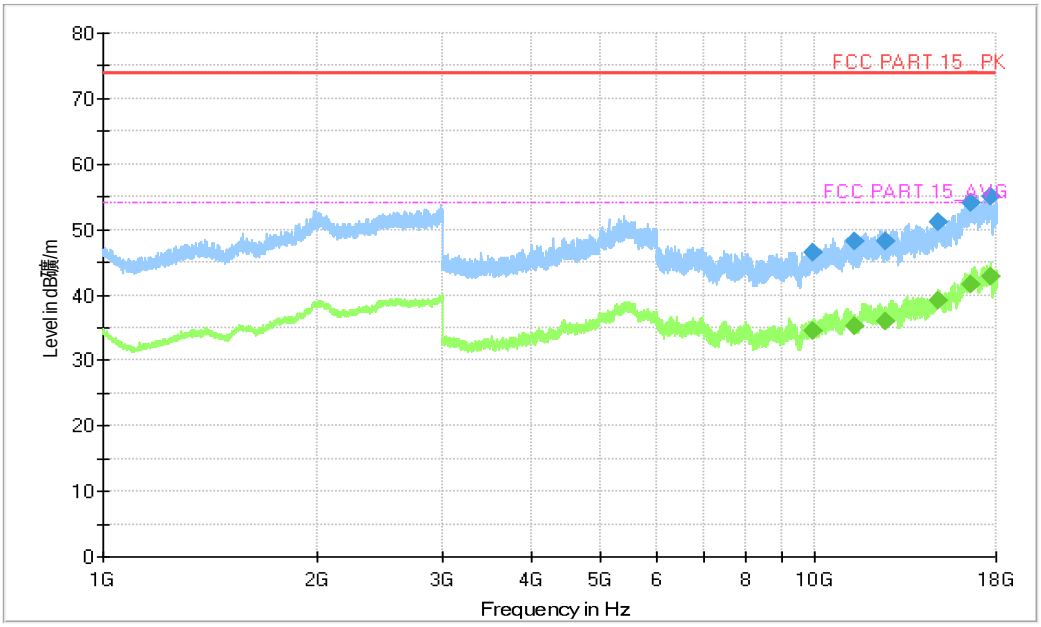


Figure A.1.11. Radiated Emission (FM Receiver, 1GHz to 18GHz)

Final_Results_PK

Frequency(MHz)	Peak (dBµV/m)	Limit (dBµV/m)	Margin(dB)	Polarity	ARpl (dB/m)	P_{Mea} (dBµV)
9957.857143	46.55	74.00	27.45	H	9.0	37.55
11408.571429	48.15	74.00	25.85	H	10.7	37.45
12614.571429	48.10	74.00	25.90	H	12.0	36.10
14952.000000	51.03	74.00	22.97	H	14.9	36.13
16621.714286	54.19	74.00	19.81	H	18.9	35.29
17719.285714	55.05	74.00	18.95	V	20.5	34.55

Final_Results_AVG

Frequency(MHz)	Average (dBµV/m)	Limit (dBµV/m)	Margin(dB)	Polarity	ARpl (dB/m)	P_{Mea} (dBµV)
9957.857143	34.47	54.00	19.53	H	9.0	25.47
11408.571429	35.26	54.00	18.74	H	10.7	24.56
12614.571429	36.03	54.00	17.97	H	12.0	24.03
14952.000000	39.14	54.00	14.86	H	14.9	24.24
16621.714286	41.70	54.00	12.30	H	18.9	22.8
17719.285714	42.73	54.00	11.27	V	20.5	22.23

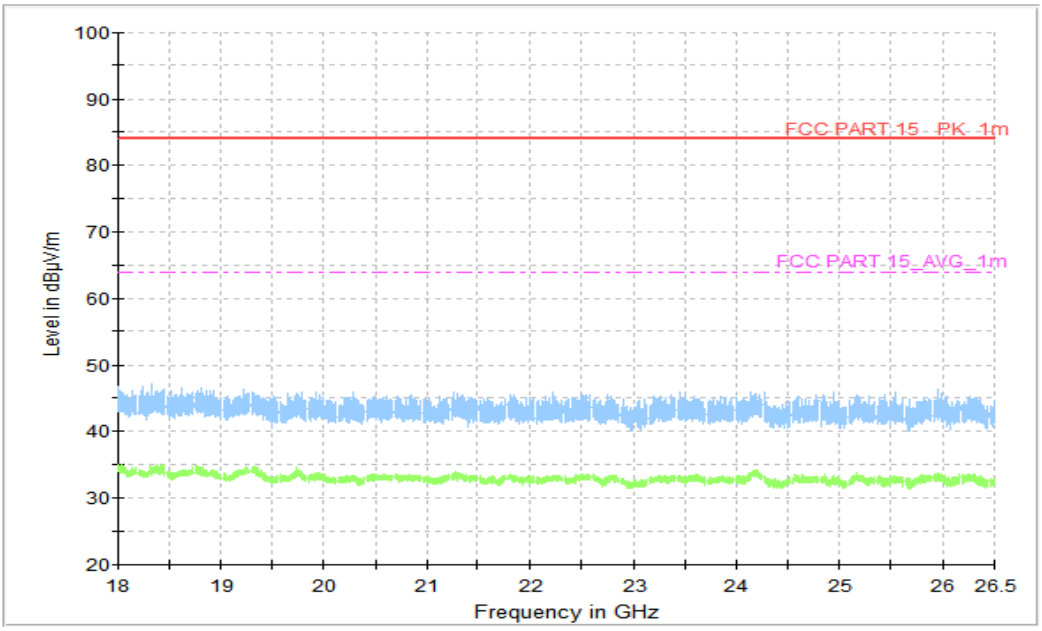


Figure A.1.12. Radiated Emission (FM Receiver, 18GHz to 26.5GHz)

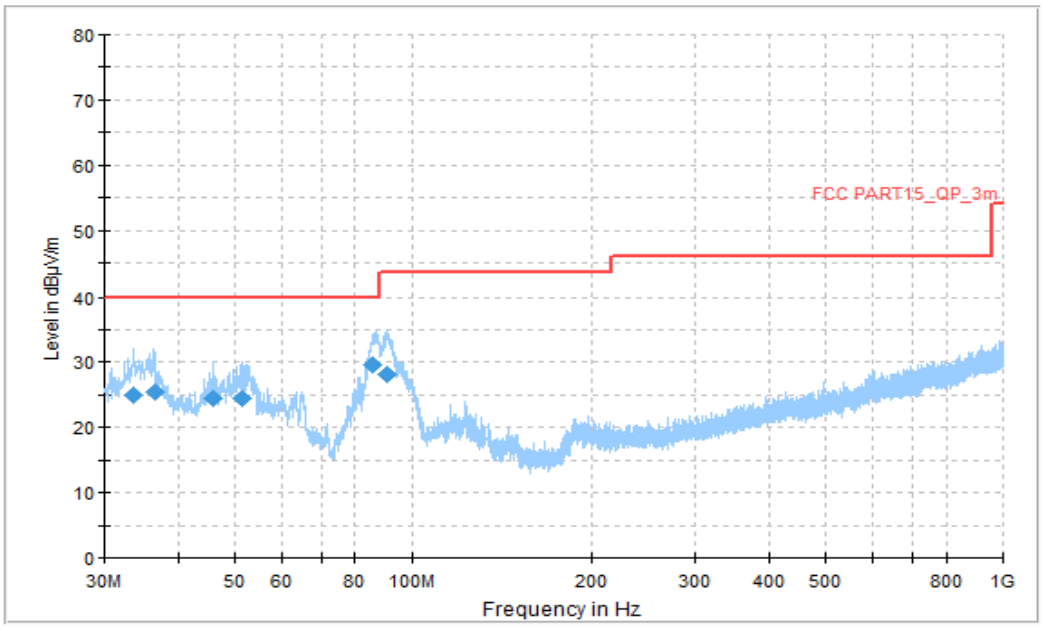


Figure A.1.13. Radiated Emission (Video Player, 30MHz to 1GHz)

Final_Result

Frequency (MHz)	QuasiPeak (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Pol	ARpl (dB/m)	P_{Mea} (dBµV)
33.610556	24.97	40.00	15.03	V	-15	39.97
36.466667	25.34	40.00	14.66	V	-14	39.34
45.789444	24.53	40.00	15.47	V	-13	37.53
51.340000	24.53	40.00	15.47	V	-14	38.53
85.882778	29.51	40.00	10.49	V	-18	47.51
90.409444	28.22	43.52	15.30	V	-17	45.22

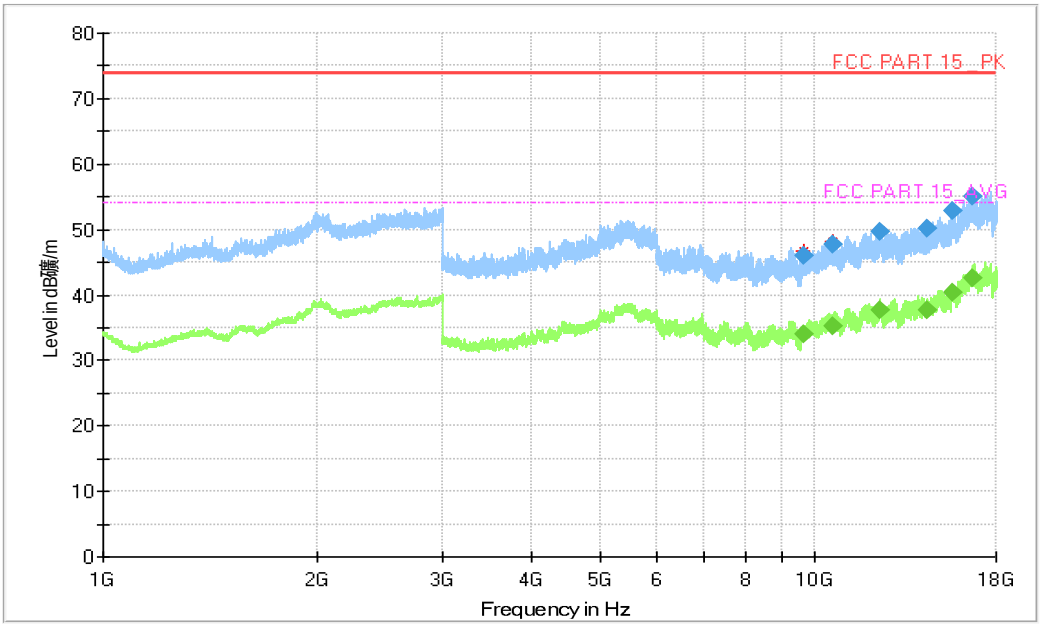


Figure A.1.14. Radiated Emission (Video Player, 1GHz to 18GHz)

Final_Results_PK

Frequency(MHz)	Peak (dBµV/m)	Limit (dBµV/m)	Margin(dB)	Polarity	ARpl (dB/m)	P_{Mea} (dBµV)
9677.571429	46.05	74.00	27.95	V	8.7	37.35
10630.714286	47.79	74.00	26.21	H	9.8	37.99
12351.000000	49.75	74.00	24.25	V	12.8	36.95
14400.428572	50.04	74.00	23.96	H	13.5	36.54
15648.000000	52.86	74.00	21.14	V	14.0	38.86
16674.857143	55.11	74.00	18.89	V	19.0	36.11

Final_Results_AVG

Frequency(MHz)	Average (dBµV/m)	Limit (dBµV/m)	Margin(dB)	Polarity	ARpl (dB/m)	P_{Mea} (dBµV)
9677.571429	34.06	54.00	19.94	V	8.7	25.36
10630.714286	35.32	54.00	18.68	H	9.8	25.52
12351.000000	37.60	54.00	16.40	V	12.8	24.80
14400.428572	37.74	54.00	16.26	H	13.5	24.24
15648.000000	40.29	54.00	13.71	V	14.0	26.29
16674.857143	42.58	54.00	11.42	V	19.0	23.58

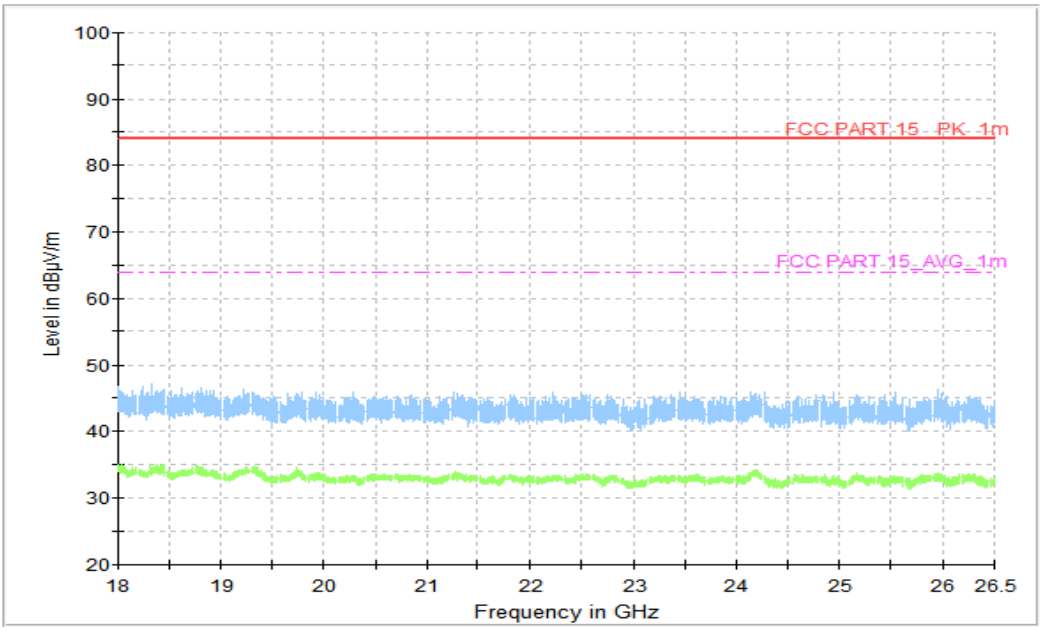


Figure A.1.15. Radiated Emission (Video Player, 18GHz to 26.5GHz)

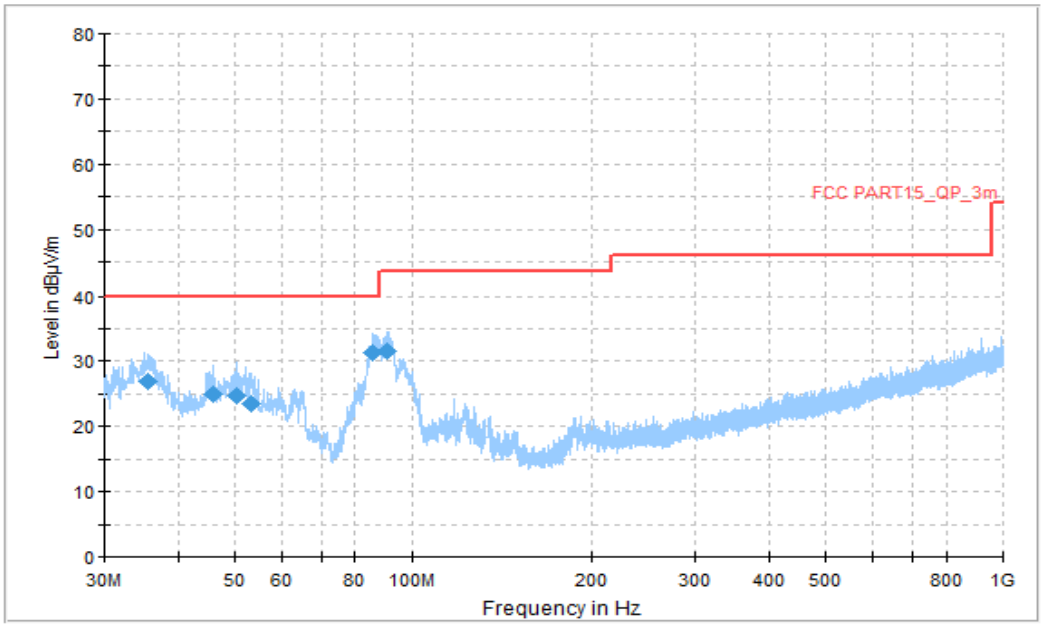


Figure A.1.16. Radiated Emission (WCDMA receiver Band 2, 30MHz to 1GHz)

Final_Result

Frequency (MHz)	QuasiPeak (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Pol	ARpl (dB/m)	PMea (dBµV)
35.658333	26.81	40.00	13.19	V	-14	40.81
45.735556	24.86	40.00	15.14	V	-13	37.86
50.154444	24.76	40.00	15.24	V	-13	37.76
53.172222	23.44	40.00	16.56	V	-14	37.44
85.882778	31.35	40.00	8.65	V	-18	49.35
90.840556	31.66	43.52	11.86	V	-16	47.66

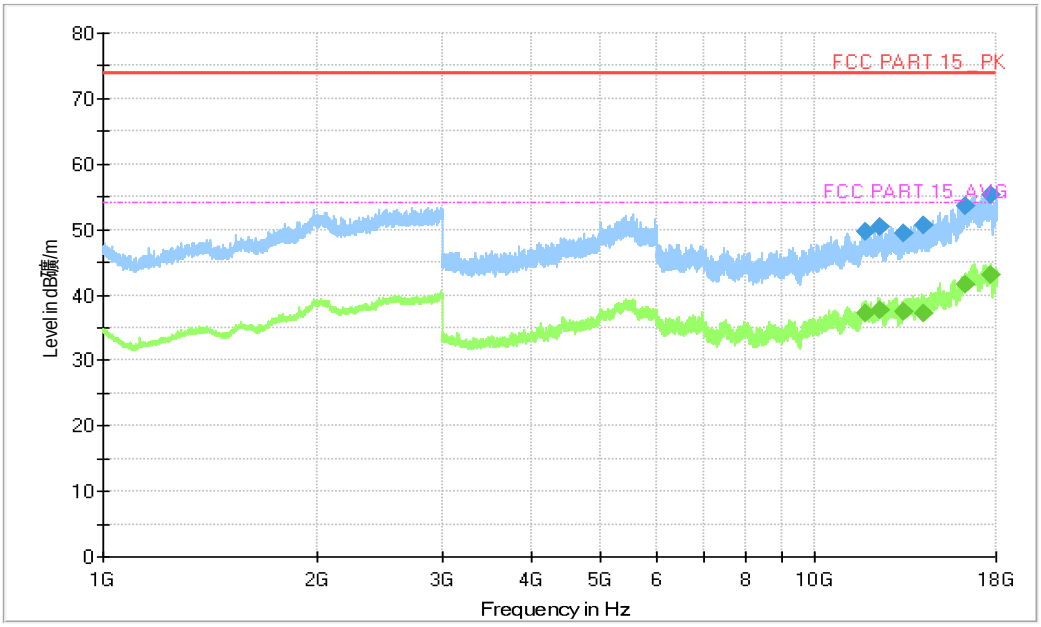


Figure A.1.17. Radiated Emission (WCDMA receiver Band 2, 1GHz to 18GHz)

Final_Results_PK

Frequency(MHz)	Peak (dBµV/m)	Limit (dBµV/m)	Margin(dB)	Polarity	ARpl (dB/m)	P_{Mea} (dBµV)
11813.571429	49.68	74.00	24.32	H	12.3	37.38
12342.000000	50.35	74.00	23.65	V	12.8	37.55
13334.571429	49.45	74.00	24.55	V	12.6	36.85
14209.714286	50.54	74.00	23.46	H	13.3	37.24
16280.142857	53.67	74.00	20.33	H	16.8	36.87
17679.000000	55.36	74.00	18.64	V	20.6	34.76

Final_Results_AVG

Frequency(MHz)	Average (dBµV/m)	Limit (dBµV/m)	Margin(dB)	Polarity	ARpl (dB/m)	P_{Mea} (dBµV)
11813.571429	37.14	54.00	16.86	H	12.3	24.84
12342.000000	37.73	54.00	16.27	V	12.8	24.93
13334.571429	37.34	54.00	16.66	V	12.6	24.74
14209.714286	37.20	54.00	16.80	H	13.3	23.90
16280.142857	41.48	54.00	12.52	H	16.8	24.68
17679.000000	43.16	54.00	10.84	V	20.6	22.56

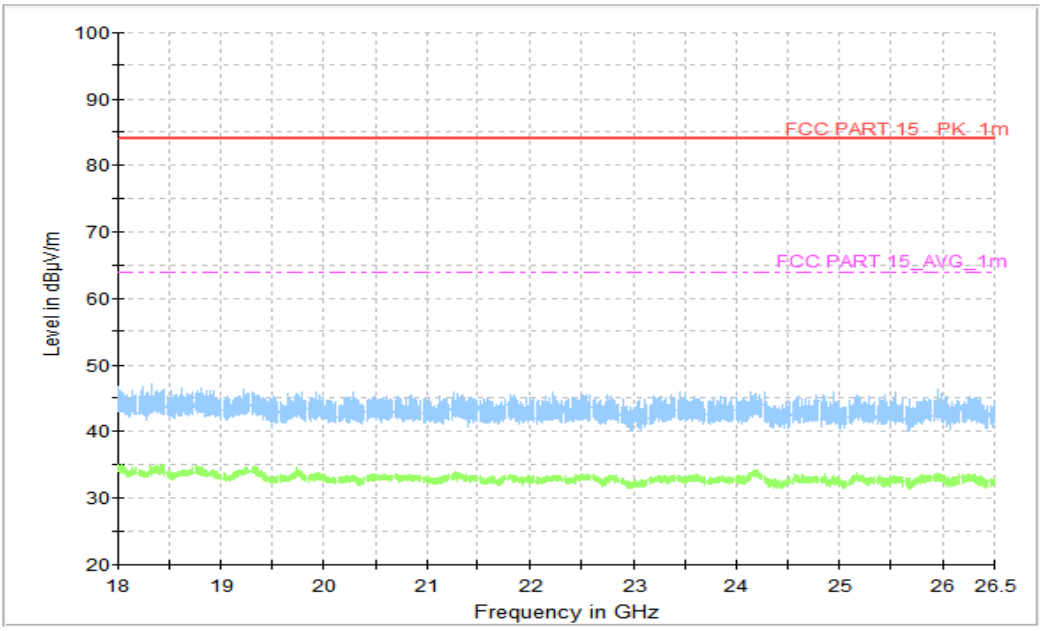


Figure A.1.18. Radiated Emission (WCDMA receiver Band 2, 18GHz to 26.5GHz)

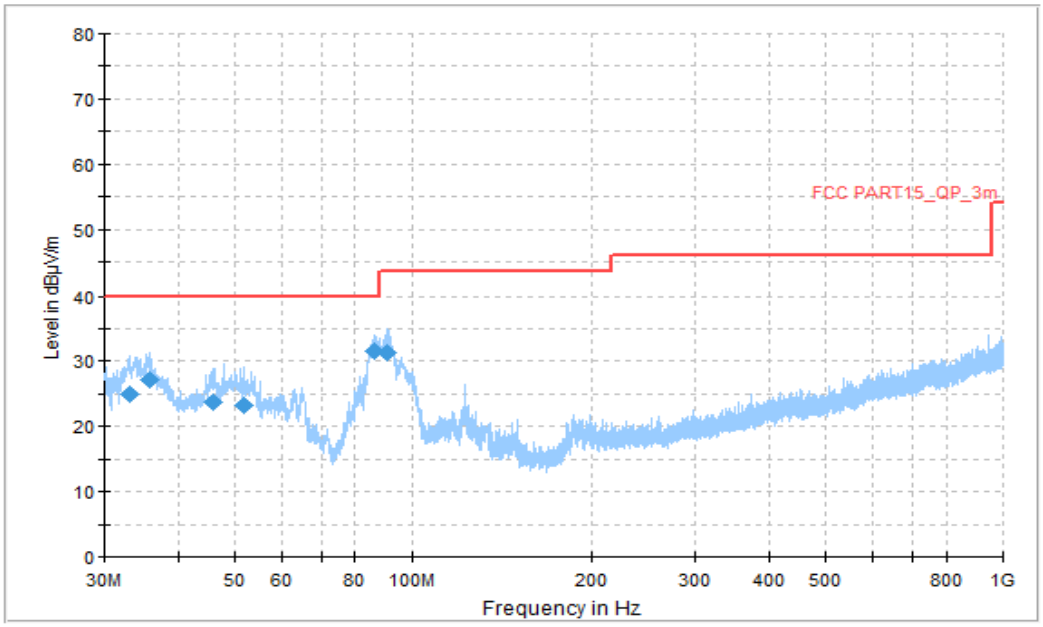


Figure A.1.19. Radiated Emission (WCDMA receiver Band 4, 30MHz to 1GHz)

Final_Result

Frequency (MHz)	QuasiPeak (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Pol	ARpl (dB/m)	P_{Mea} (dBµV)
33.071667	25.06	40.00	14.94	V	-15	40.06
35.927778	27.14	40.00	12.86	V	-14	41.14
45.897222	23.79	40.00	16.21	V	-13	36.79
51.663333	23.31	40.00	16.69	V	-14	37.31
86.313889	31.46	40.00	8.54	V	-18	49.46
90.678889	31.23	43.52	12.29	V	-16	47.23

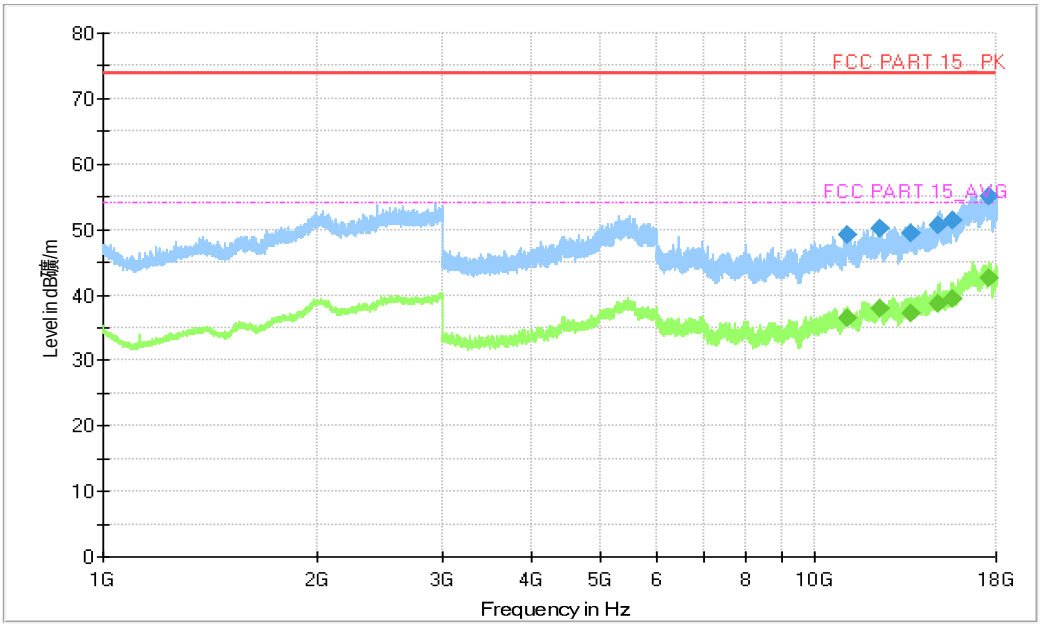


Figure A.1.20. Radiated Emission (WCDMA receiver Band 4, 1GHz to 18GHz)

Final_Results_PK

Frequency(MHz)	Peak (dBµV/m)	Limit (dBµV/m)	Margin(dB)	Polarity	ARpl (dB/m)	P_{Mea} (dBµV)
11092.285714	49.20	74.00	24.80	V	11.0	38.20
12353.142857	50.15	74.00	23.85	V	12.8	37.35
13656.428572	49.40	74.00	24.60	H	13.2	36.20
14924.142857	50.75	74.00	23.25	V	15.0	35.75
15587.142857	51.34	74.00	22.66	H	13.7	37.64
17566.285714	54.99	74.00	19.01	H	20.4	34.59

Final_Results_AVG

Frequency(MHz)	Average (dBµV/m)	Limit (dBµV/m)	Margin(dB)	Polarity	ARpl (dB/m)	P_{Mea} (dBµV)
11092.285714	36.54	54.00	17.46	V	11.0	25.54
12353.142857	37.91	54.00	16.09	V	12.8	25.11
13656.428572	37.08	54.00	16.92	H	13.2	23.88
14924.142857	38.68	54.00	15.32	V	15.0	23.68
15587.142857	39.48	54.00	14.52	H	13.7	25.78
17566.285714	42.69	54.00	11.31	H	20.4	22.29

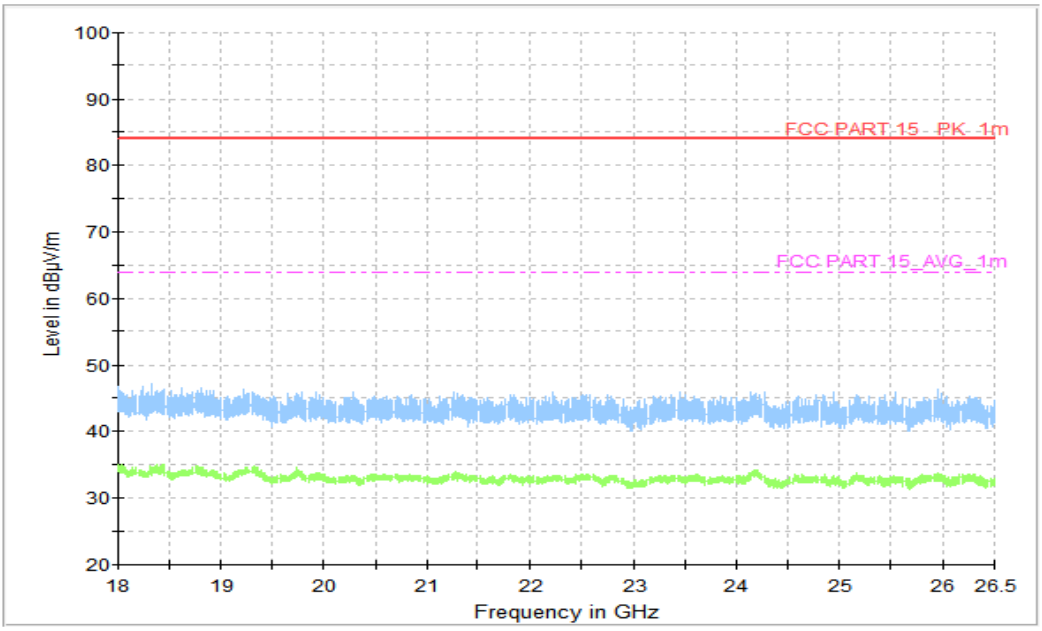


Figure A.1.21. Radiated Emission (WCDMA receiver Band 4, 18GHz to 26.5GHz)

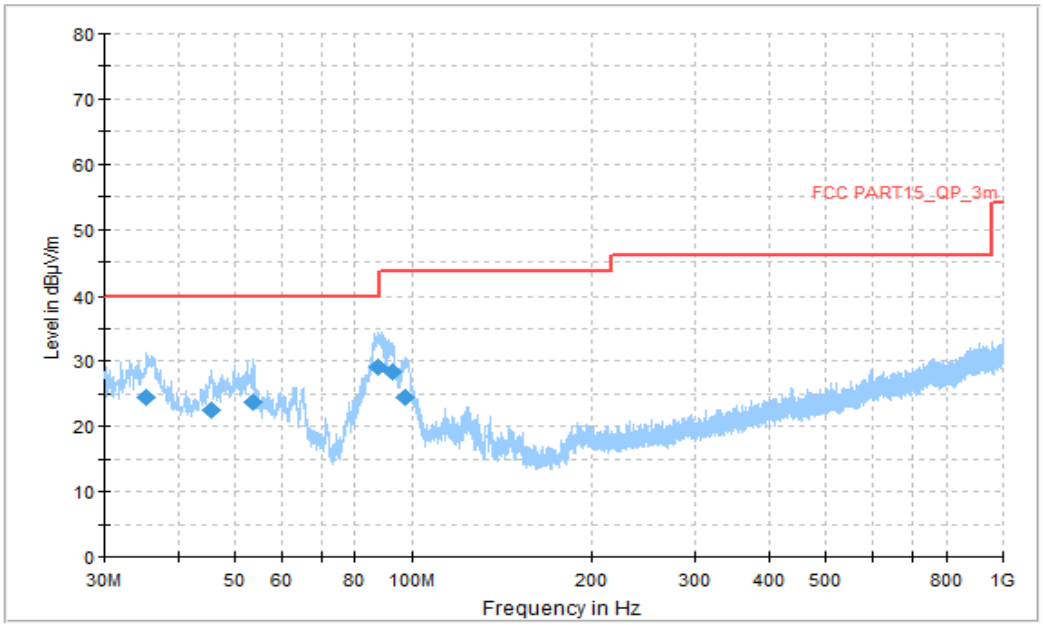


Figure A.1.22. Radiated Emission (WCDMA receiver Band 5, 30MHz to 1GHz)

Final_Result

Frequency (MHz)	QuasiPeak (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Pol	ARpl (dB/m)	P_{Mea} (dBµV)
35.388889	24.55	40.00	15.45	V	-14	38.55
45.627778	22.51	40.00	17.49	V	-13	35.51
53.657222	23.73	40.00	16.27	V	-14	37.73
87.715000	28.99	40.00	11.01	V	-17	45.99
92.457222	28.49	43.52	15.03	V	-16	44.49
97.468889	24.44	43.52	19.08	V	-15	39.44

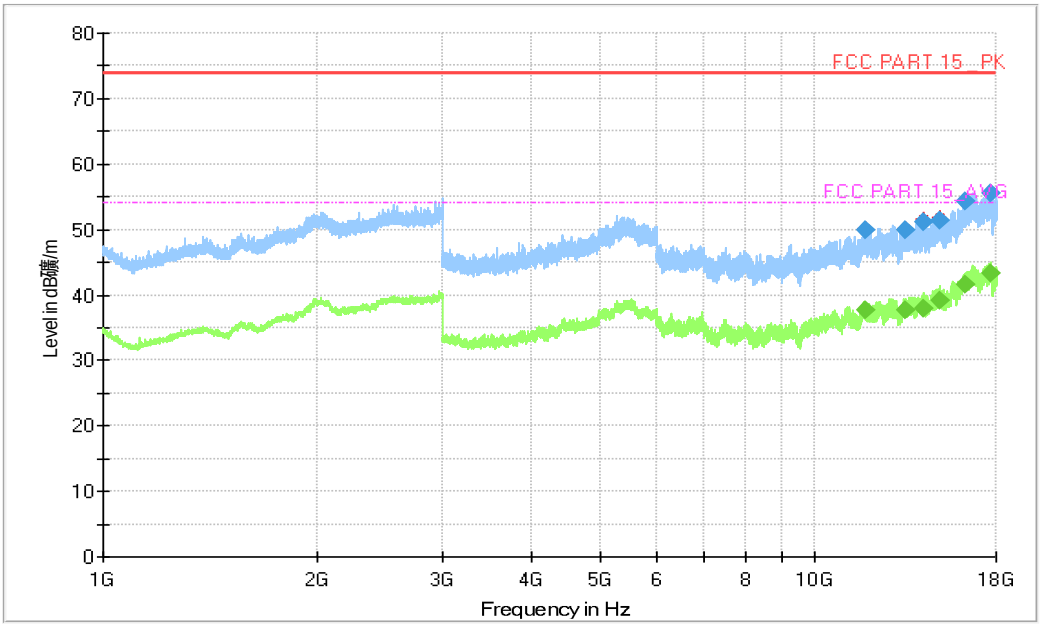


Figure A.1.23. Radiated Emission (WCDMA receiver Band 5, 1GHz to 18GHz)

Final_Results_PK

Frequency(MHz)	Peak (dBµV/m)	Limit (dBµV/m)	Margin(dB)	Polarity	ARpl (dB/m)	P_{Mea} (dBµV)
11804.142857	49.94	74.00	24.06	V	12.3	37.64
13383.857143	49.79	74.00	24.21	H	12.9	36.89
14193.000000	51.11	74.00	22.89	H	13.3	37.81
15006.428572	51.41	74.00	22.59	H	14.4	37.01
16249.285714	54.40	74.00	19.60	V	16.9	37.5
17699.571429	55.50	74.00	18.50	H	20.6	34.90

Final_Results_AVG

Frequency(MHz)	Average (dBµV/m)	Limit (dBµV/m)	Margin(dB)	Polarity	ARpl (dB/m)	P_{Mea} (dBµV)
11804.142857	37.58	54.00	16.42	V	12.3	25.28
13383.857143	37.69	54.00	16.31	H	12.9	24.79
14193.000000	37.91	54.00	16.09	H	13.3	24.61
15006.428572	39.06	54.00	14.94	H	14.4	24.66
16249.285714	41.55	54.00	12.45	V	16.9	24.65
17699.571429	43.31	54.00	10.69	H	20.6	22.71

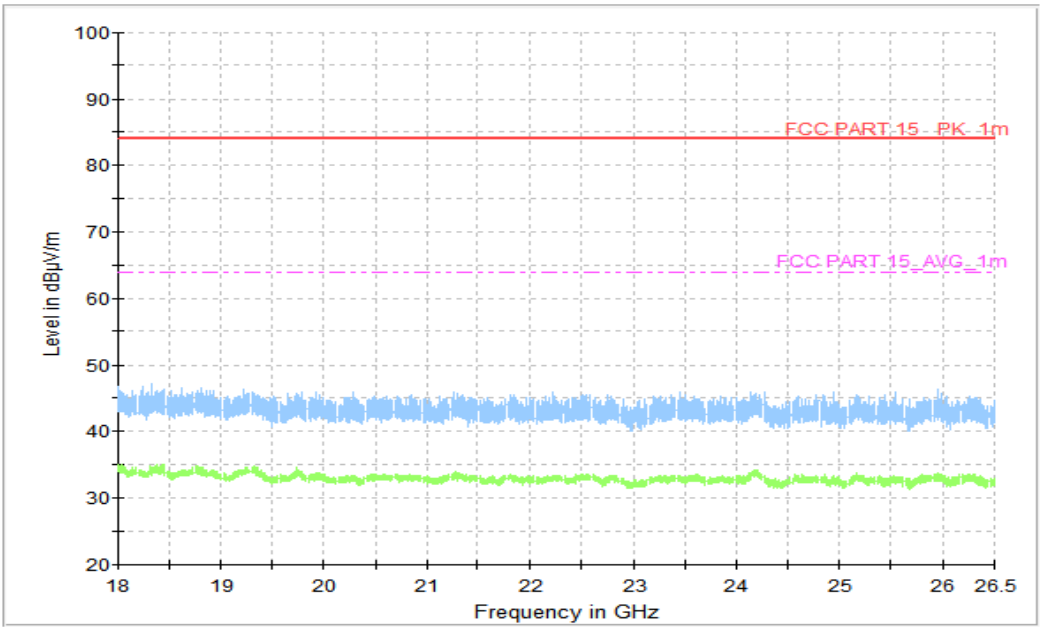


Figure A.1.24. Radiated Emission (WCDMA receiver Band 5, 18GHz to 26.5GHz)

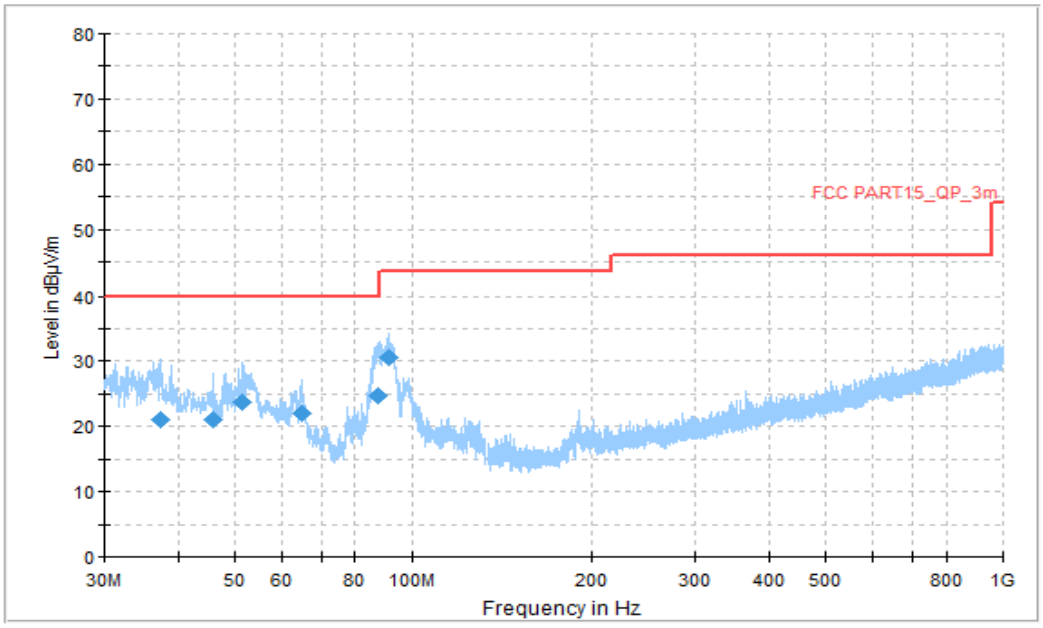


Figure A.1.25. Radiated Emission (LTE receiver Band 2, 30MHz to 1GHz)

Final_Result

Frequency (MHz)	QuasiPeak (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Pol	ARpl (dB/m)	P_{Mea} (dBµV)
37.275000	21.15	40.00	18.85	V	-14	35.15
45.789444	21.07	40.00	18.93	V	-13	34.07
51.555556	23.75	40.00	16.25	V	-14	37.75
64.704444	21.94	40.00	18.06	V	-15	36.94
87.715000	24.82	40.00	15.18	V	-17	41.82
91.163889	30.61	43.52	12.91	V	-16	46.61

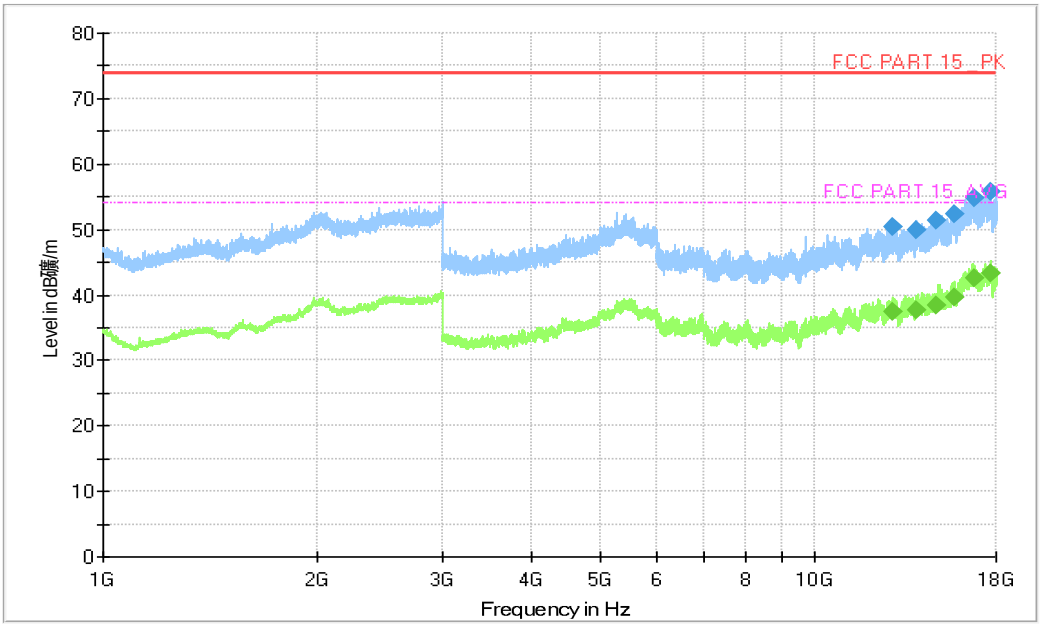


Figure A.1.26. Radiated Emission (LTE receiver Band 2, 1GHz to 18GHz)

Final_Results_PK

Frequency(MHz)	Peak (dBµV/m)	Limit (dBµV/m)	Margin(dB)	Polarity	ARpl (dB/m)	P_{Mea} (dBµV)
12873.000000	50.32	74.00	23.68	H	12.6	37.72
13919.571429	49.83	74.00	24.17	H	13.0	36.83
14802.000000	51.38	74.00	22.62	V	14.4	36.98
15716.142857	52.44	74.00	21.56	V	14.3	38.14
16743.857143	54.78	74.00	19.22	H	18.8	35.98
17687.571429	55.88	74.00	18.12	H	20.6	35.28

Final_Results_AVG

Frequency(MHz)	Average (dBµV/m)	Limit (dBµV/m)	Margin(dB)	Polarity	ARpl (dB/m)	P_{Mea} (dBµV)
12873.000000	37.54	54.00	16.46	H	12.6	24.94
13919.571429	37.68	54.00	16.32	H	13.0	24.68
14802.000000	38.51	54.00	15.49	V	14.4	24.11
15716.142857	39.73	54.00	14.27	V	14.3	25.43
16743.857143	42.57	54.00	11.43	H	18.8	23.77
17687.571429	43.28	54.00	10.72	H	20.6	22.68

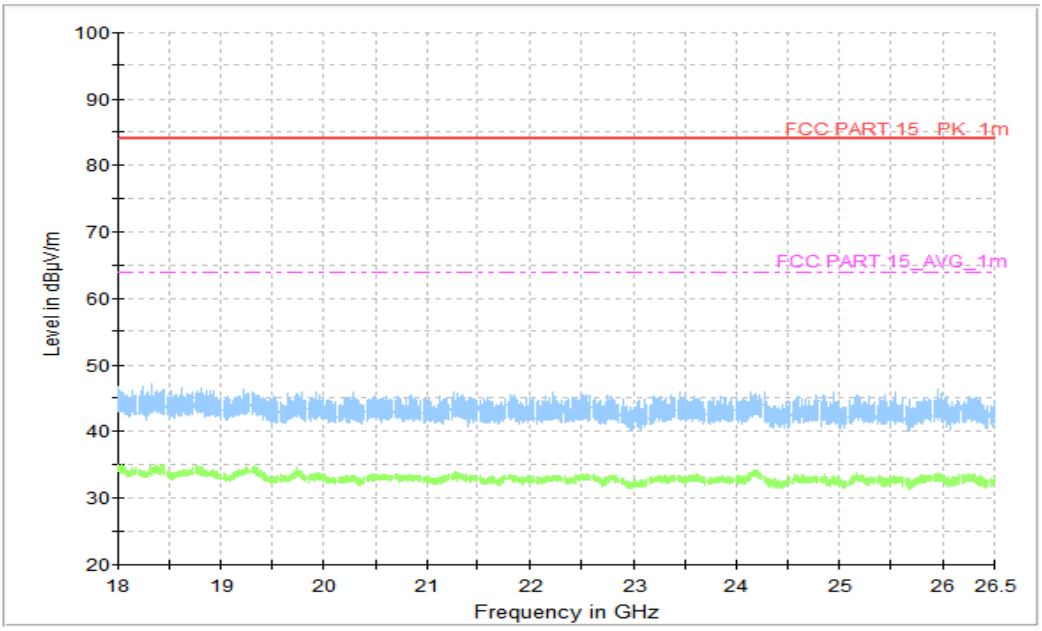


Figure A.1.27. Radiated Emission (LTE receiver Band 2, 18GHz to 26.5GHz)

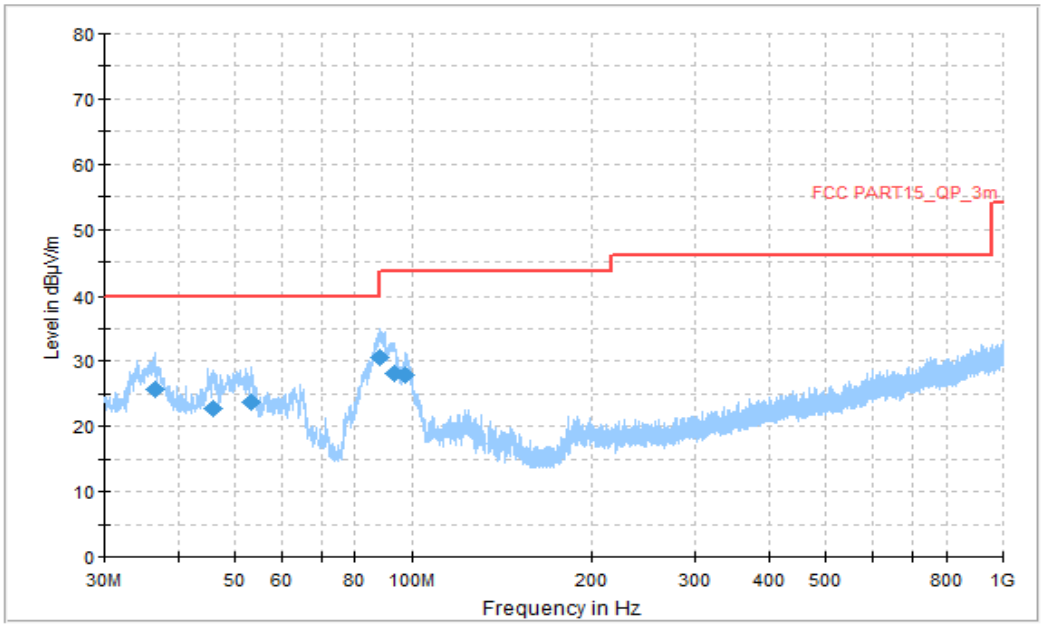


Figure A.1.28. Radiated Emission (LTE receiver Band 4, 30MHz to 1GHz)

Final_Result

Frequency (MHz)	QuasiPeak (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Pol	ARpl (dB/m)	P_{Mea} (dBµV)
36.628333	25.71	40.00	14.29	V	-14	39.71
45.735556	22.82	40.00	17.18	V	-13	35.82
53.280000	23.70	40.00	16.30	V	-14	37.70
87.930556	30.51	40.00	9.49	V	-17	47.51
93.319444	28.16	43.52	15.36	V	-16	44.16
97.307222	27.86	43.52	15.66	V	-15	42.86

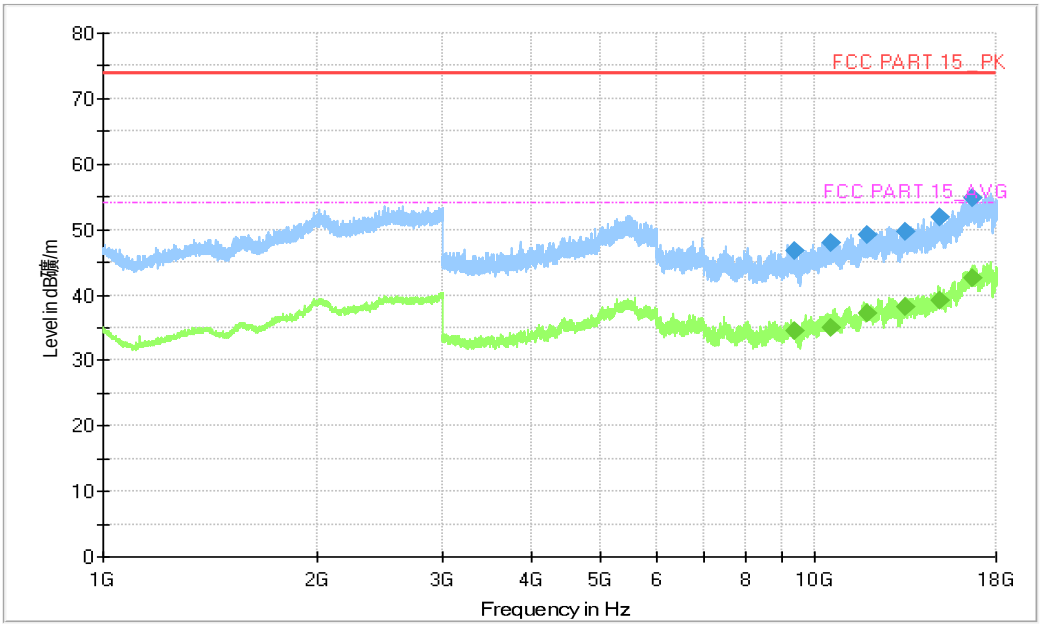


Figure A.1.29. Radiated Emission (LTE receiver Band 4, 1GHz to 18GHz)

Final_Results_PK

Frequency(MHz)	Peak (dBµV/m)	Limit (dBµV/m)	Margin(dB)	Polarity	ARpl (dB/m)	P_{Mea} (dBµV)
9369.428572	46.79	74.00	27.21	H	8.3	38.49
10564.714286	47.86	74.00	26.14	V	9.5	38.36
11844.857143	49.14	74.00	24.86	H	12.1	37.04
13412.571429	49.69	74.00	24.31	H	13.0	36.69
14991.000000	51.89	74.00	22.11	V	14.5	37.39
16715.142857	54.85	74.00	19.15	H	18.9	35.95

Final_Results_AVG

Frequency(MHz)	Average (dBµV/m)	Limit (dBµV/m)	Margin(dB)	Polarity	ARpl (dB/m)	P_{Mea} (dBµV)
9369.428572	34.54	54.00	19.46	H	8.3	26.24
10564.714286	35.10	54.00	18.90	V	9.5	25.6
11844.857143	37.10	54.00	16.90	H	12.1	25.00
13412.571429	38.10	54.00	15.90	H	13.0	25.10
14991.000000	39.24	54.00	14.76	V	14.5	24.74
16715.142857	42.69	54.00	11.31	H	18.9	23.79

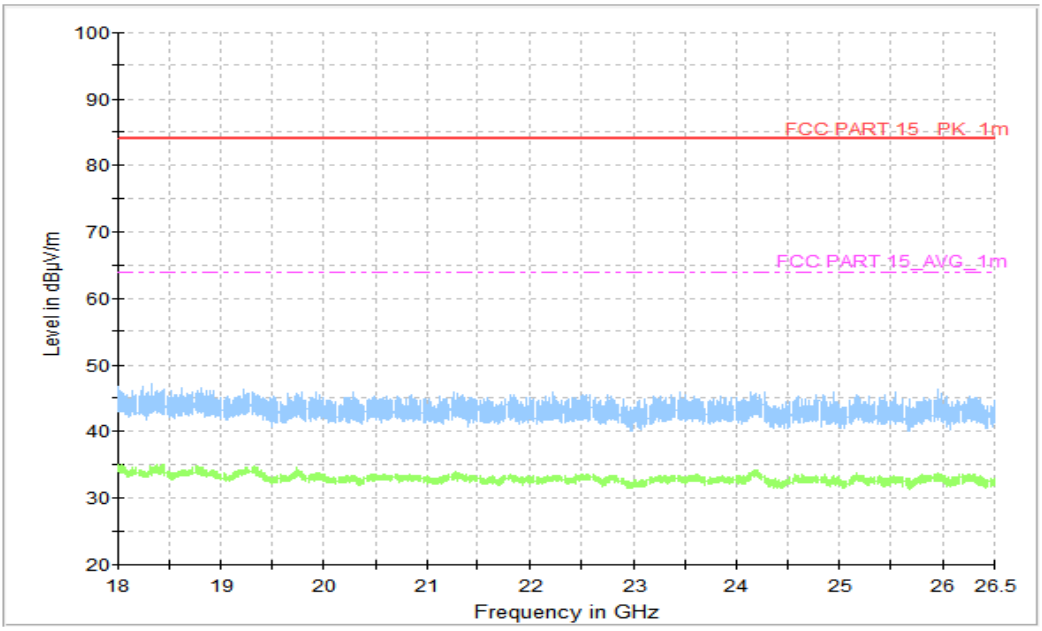


Figure A.1.30. Radiated Emission (LTE receiver Band 4, 18GHz to 26.5GHz)

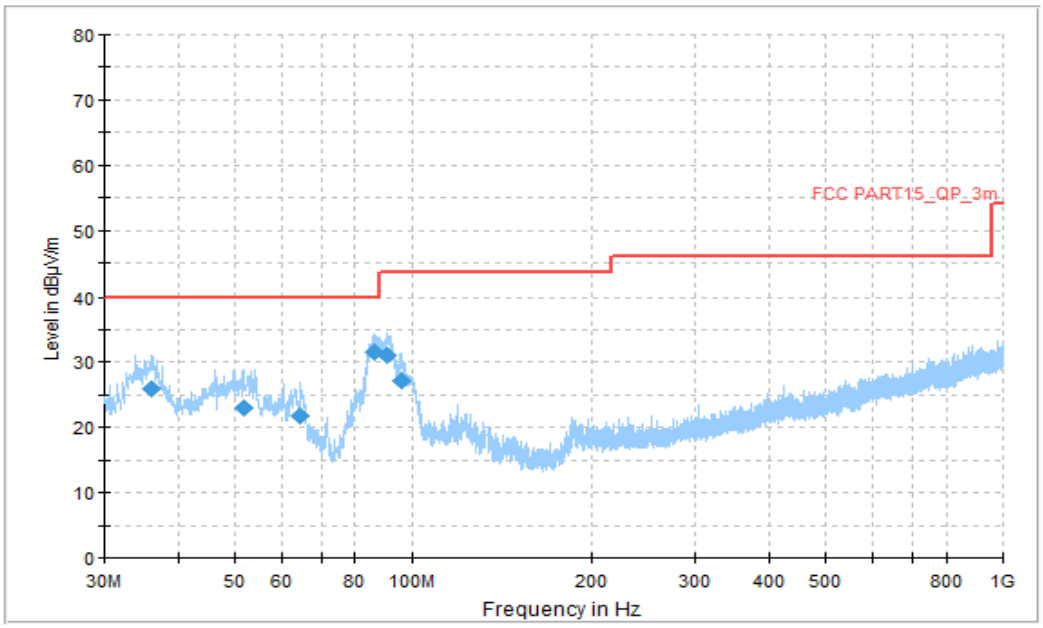


Figure A.1.31. Radiated Emission (LTE receiver Band 5, 30MHz to 1GHz)

Final_Result

Frequency (MHz)	QuasiPeak (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Pol	ARpl (dB/m)	P_{Mea} (dBµV)
36.143333	25.88	40.00	14.12	V	-14	39.88
51.663333	23.05	40.00	16.95	V	-14	37.05
64.650556	21.87	40.00	18.13	V	-15	36.87
86.313889	31.47	40.00	8.53	V	-18	49.47
90.732778	31.05	43.52	12.47	V	-16	47.05
95.906111	27.16	43.52	16.36	V	-15	42.16

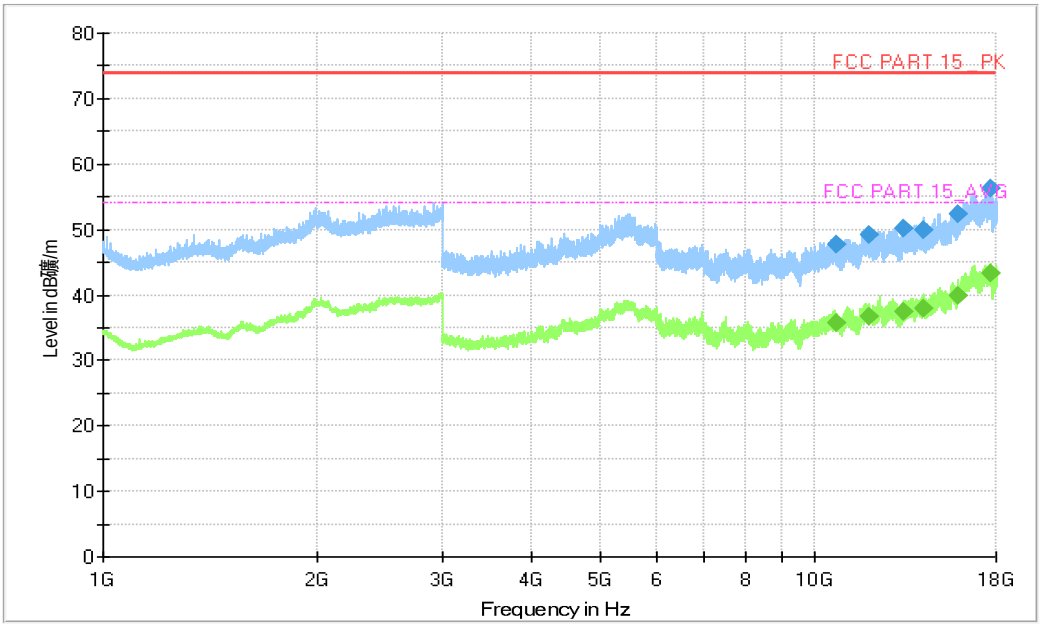


Figure A.1.32. Radiated Emission (LTE receiver Band 5, 1GHz to 18GHz)

Final_Results_PK

Frequency(MHz)	Peak (dBµV/m)	Limit (dBµV/m)	Margin(dB)	Polarity	ARpl (dB/m)	P_{Mea} (dBµV)
10713.428572	47.65	74.00	26.35	H	9.8	37.85
11943.000000	49.28	74.00	24.72	V	11.8	37.48
13338.857143	50.19	74.00	23.81	V	12.7	37.49
14227.285714	49.83	74.00	24.17	H	13.4	36.43
15946.285714	52.36	74.00	21.64	V	15.2	37.16
17685.000000	56.16	74.00	17.84	H	20.6	35.56

Final_Results_AVG

Frequency(MHz)	Average (dBµV/m)	Limit (dBµV/m)	Margin(dB)	Polarity	ARpl (dB/m)	P_{Mea} (dBµV)
10713.428572	35.76	54.00	18.24	H	9.8	25.96
11943.000000	36.79	54.00	17.21	V	11.8	24.99
13338.857143	37.52	54.00	16.48	V	12.7	24.82
14227.285714	37.82	54.00	16.18	H	13.4	24.42
15946.285714	39.96	54.00	14.04	V	15.2	24.76
17685.000000	43.30	54.00	10.70	H	20.6	22.70

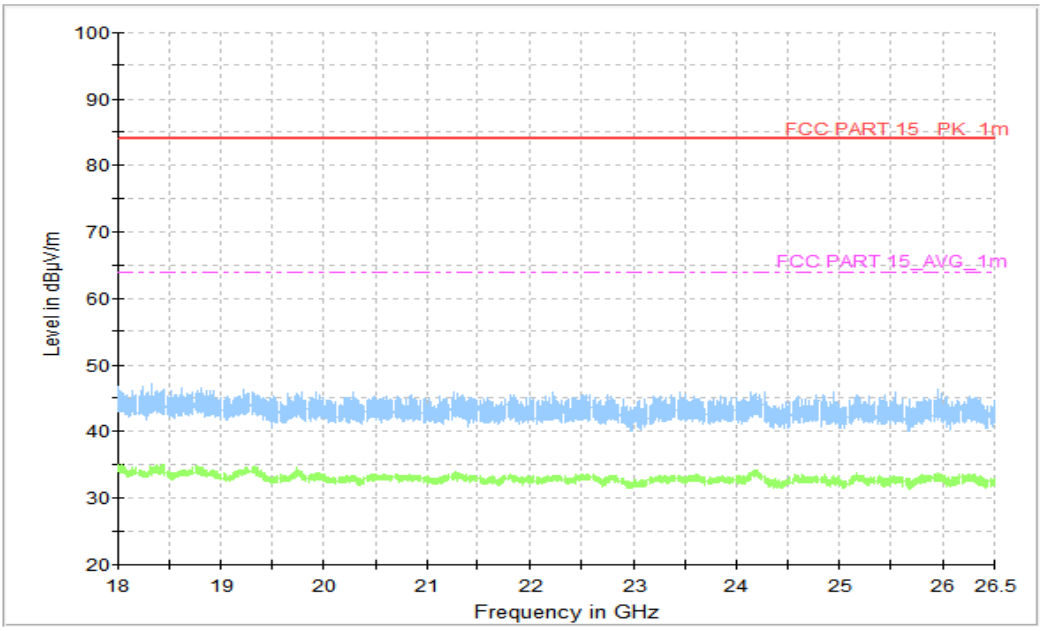


Figure A.1.33. Radiated Emission (LTE receiver Band 5, 18GHz to 26.5GHz)

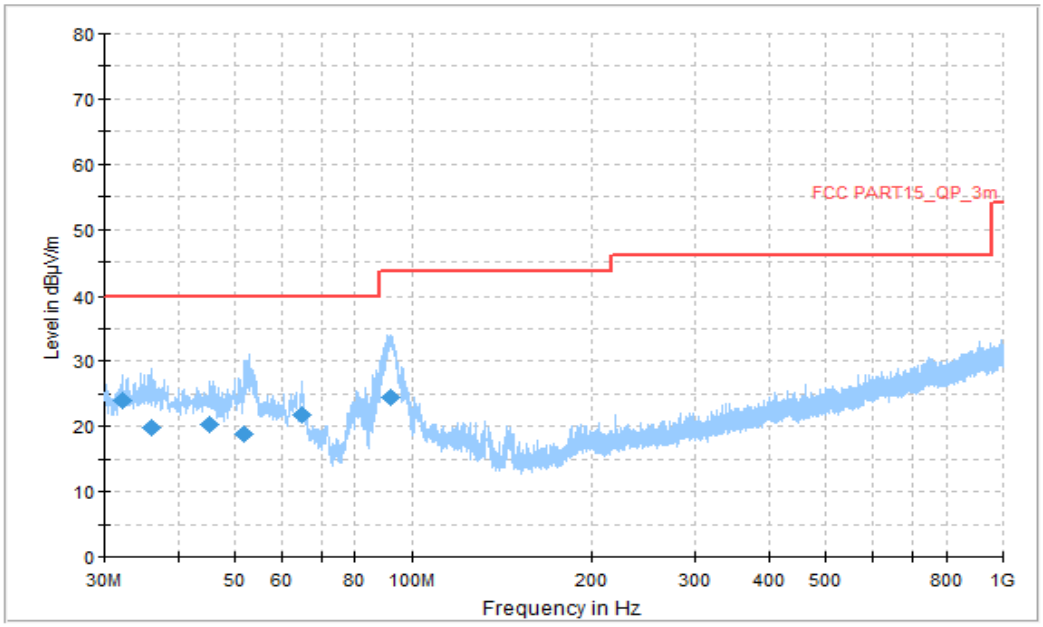


Figure A.1.34. Radiated Emission (LTE receiver Band 7, 30MHz to 1GHz)

Final_Result

Frequency (MHz)	QuasiPeak (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Pol	ARpl (dB/m)	P_{Mea} (dBµV)
32.155556	24.03	40.00	15.97	V	-15	39.03
36.143333	19.86	40.00	20.14	V	-14	33.86
45.250556	20.28	40.00	19.72	V	-13	33.28
51.932778	18.90	40.00	21.10	V	-14	32.90
64.812222	21.83	40.00	18.17	V	-15	36.83
91.972222	24.44	43.52	19.08	V	-16	40.44

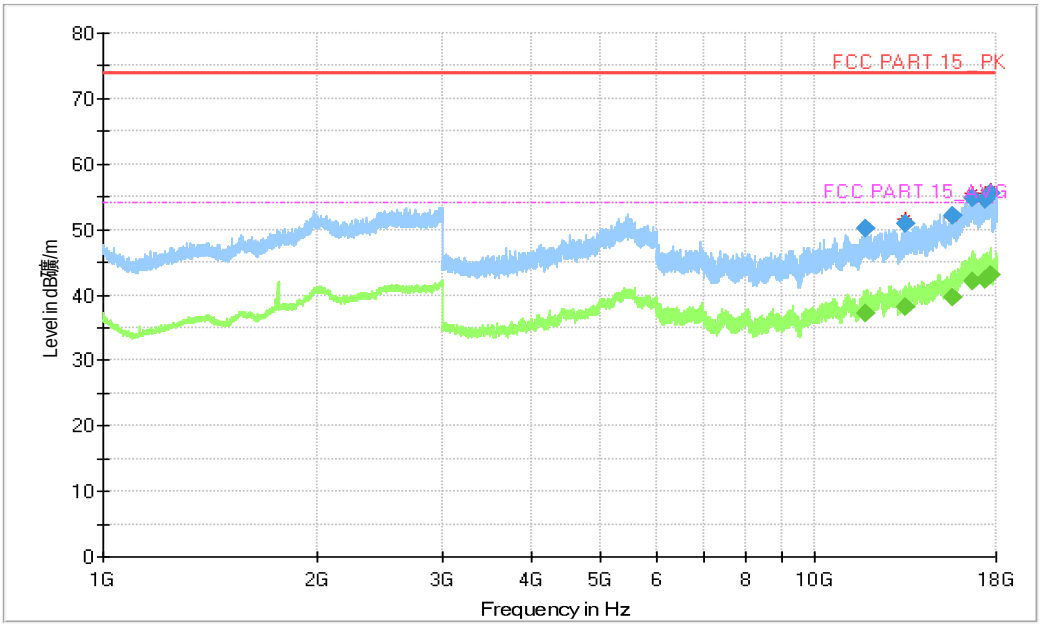


Figure A.1.35. Radiated Emission (LTE receiver Band 7, 1GHz to 18GHz)

Final_Results_PK

Frequency(MHz)	Peak (dBµV/m)	Limit (dBµV/m)	Margin(dB)	Polarity	ARpl (dB/m)	P_{Mea} (dBµV)
11803.285714	50.08	74.00	23.92	V	12.3	37.78
13416.000000	50.95	74.00	23.05	H	13.0	37.95
15594.428571	52.06	74.00	21.94	V	13.8	38.26
16689.428571	54.68	74.00	19.32	V	19.0	35.68
17332.285714	54.66	74.00	19.34	V	19.5	35.16
17662.285714	55.49	74.00	18.51	H	20.5	34.99

Final_Results_AVG

Frequency(MHz)	Average (dBµV/m)	Limit (dBµV/m)	Margin(dB)	Polarity	ARpl (dB/m)	P_{Mea} (dBµV)
11803.285714	37.25	54.00	16.75	V	12.3	24.95
13416.000000	38.06	54.00	15.94	H	13.0	25.06
15594.428571	39.62	54.00	14.38	V	13.8	25.82
16689.428571	42.20	54.00	11.80	V	19.0	23.20
17332.285714	42.37	54.00	11.63	V	19.5	22.87
17662.285714	43.09	54.00	10.91	H	20.5	22.59

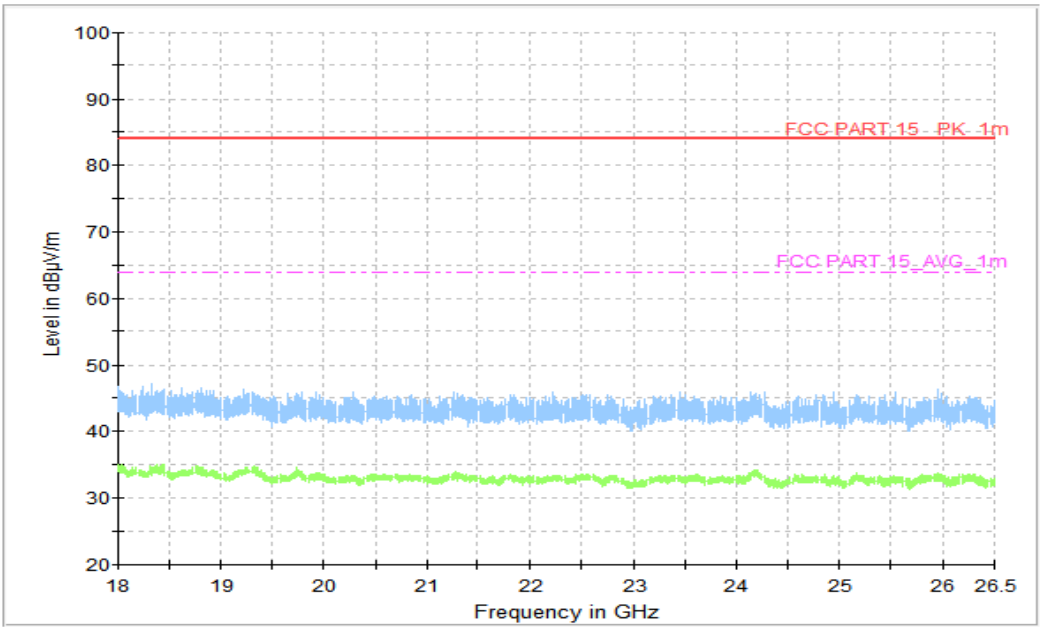


Figure A.1.36. Radiated Emission (LTE receiver Band 7, 18GHz to 26.5GHz)

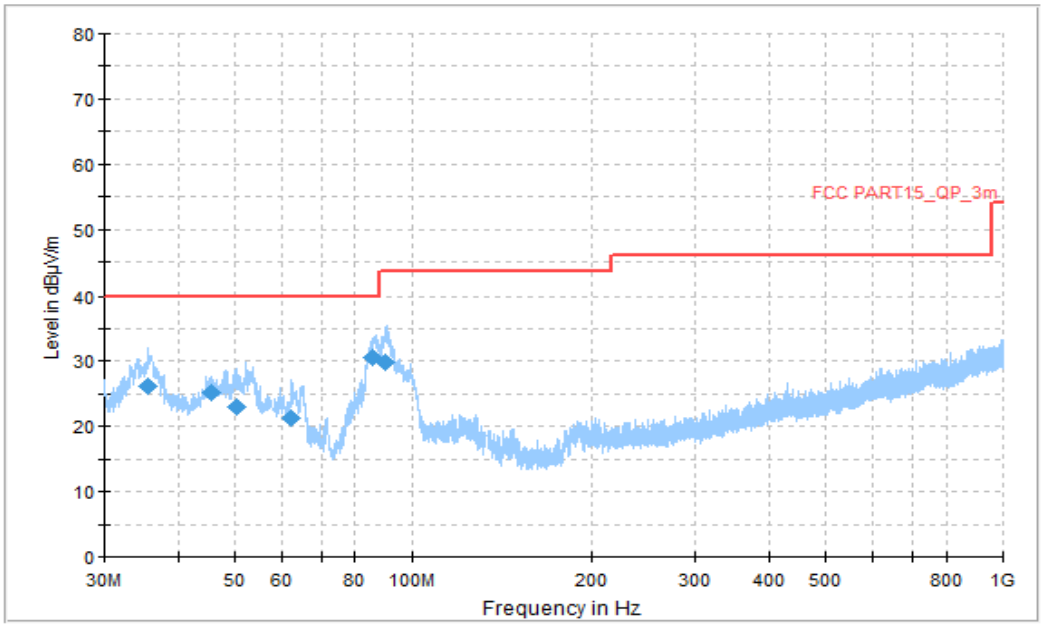


Figure A.1.37. Radiated Emission (LTE receiver Band 12, 30MHz to 1GHz)

Final_Result

Frequency (MHz)	QuasiPeak (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Pol	ARpl (dB/m)	P_{Mea} (dBµV)
35.550556	26.24	40.00	13.76	V	-14	40.24
45.681667	25.09	40.00	14.91	V	-13	38.09
50.154444	22.90	40.00	17.10	V	-13	35.90
62.171667	21.39	40.00	18.61	V	-14	35.39
85.505556	30.56	40.00	9.44	V	-18	48.56
89.924444	29.78	43.52	13.74	V	-17	46.78

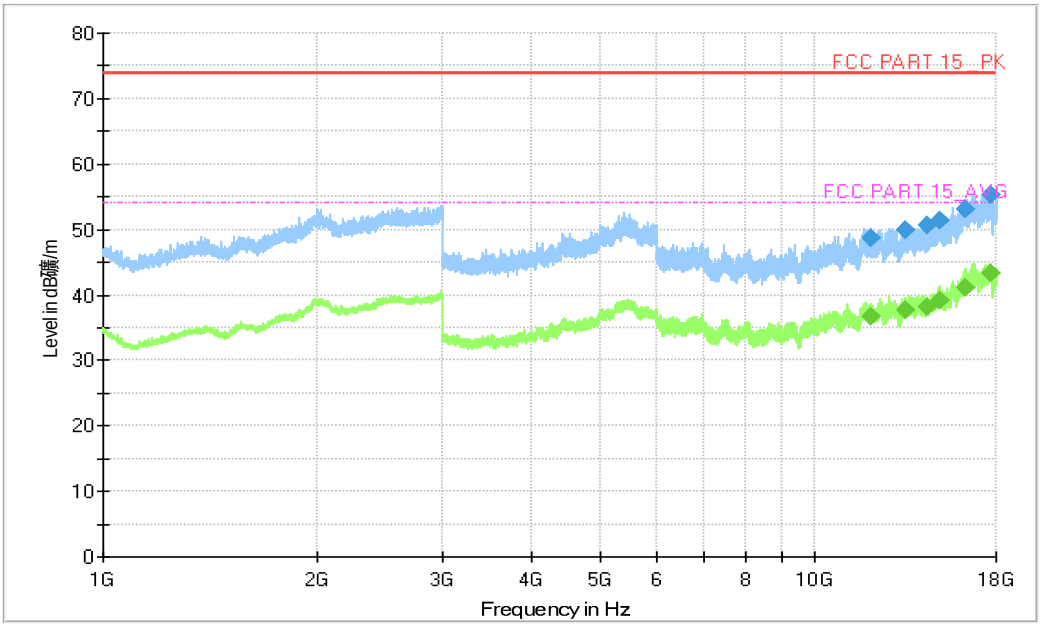


Figure A.1.38. Radiated Emission (LTE receiver Band 12, 1GHz to 18GHz)

Final_Results_PK

Frequency(MHz)	Peak (dBµV/m)	Limit (dBµV/m)	Margin(dB)	Polarity	ARpl (dB/m)	P_{Mea} (dBµV)
12024.857143	48.68	74.00	25.32	H	11.8	36.88
13398.000000	49.81	74.00	24.19	H	13.0	36.81
14357.571429	50.52	74.00	23.48	H	13.6	36.92
14997.857143	51.37	74.00	22.63	V	14.4	36.97
16292.571429	52.99	74.00	21.01	H	16.8	36.19
17694.428571	55.39	74.00	18.61	H	20.6	34.79

Final_Results_AVG

Frequency(MHz)	Average (dBµV/m)	Limit (dBµV/m)	Margin(dB)	Polarity	ARpl (dB/m)	P_{Mea} (dBµV)
12024.857143	36.58	54.00	17.42	H	11.8	24.78
13398.000000	37.58	54.00	16.42	H	13.0	24.58
14357.571429	38.25	54.00	15.75	H	13.6	24.65
14997.857143	39.15	54.00	14.85	V	14.4	24.75
16292.571429	41.17	54.00	12.83	H	16.8	24.37
17694.428571	43.35	54.00	10.65	H	20.6	22.75

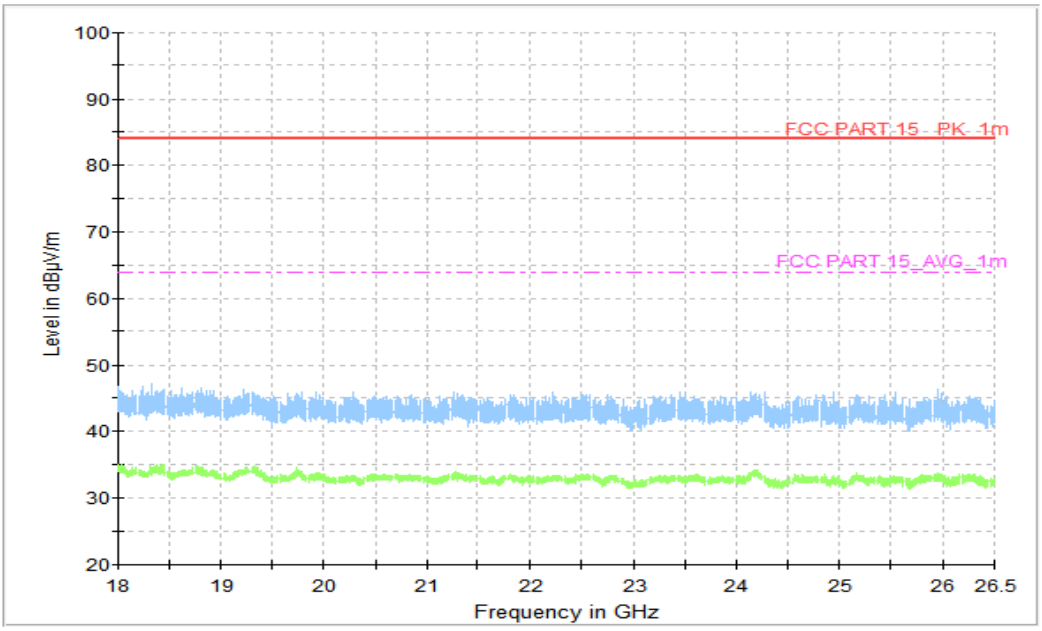


Figure A.1.39. Radiated Emission (LTE receiver Band 12, 18GHz to 26.5GHz)

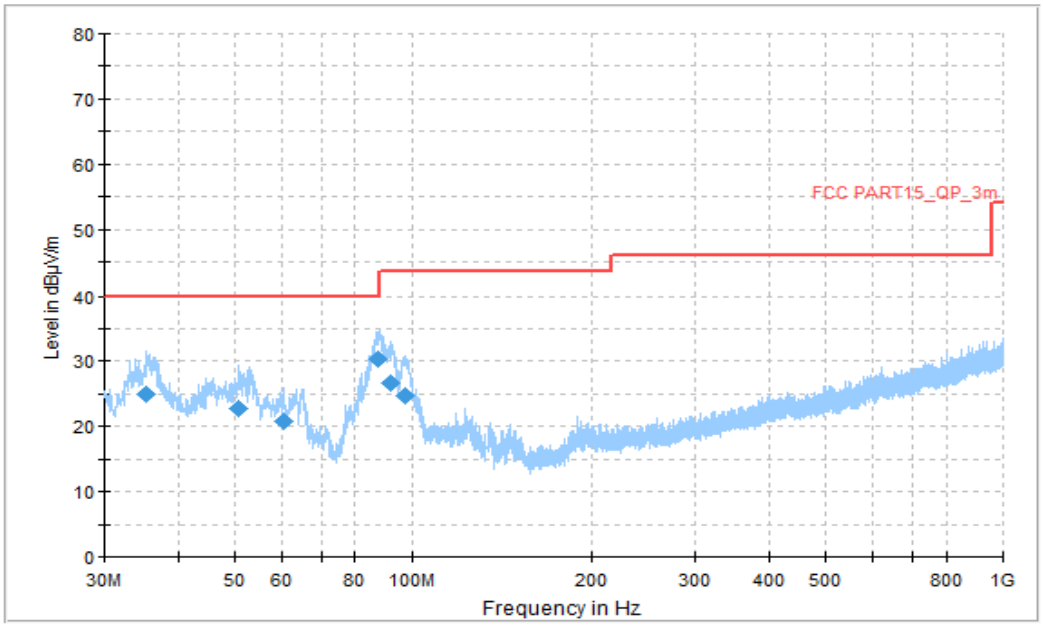


Figure A.1.40. Radiated Emission (LTE receiver Band 13, 30MHz to 1GHz)

Final_Result

Frequency (MHz)	QuasiPeak (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Pol	ARpl (dB/m)	P_{Mea} (dBµV)
35.388889	25.01	40.00	14.99	V	-14	39.01
50.747222	22.83	40.00	17.17	V	-13	35.83
60.555000	20.72	40.00	19.28	V	-14	34.72
87.499444	30.30	40.00	9.70	V	-17	47.30
92.026111	26.68	43.52	16.84	V	-16	42.68
97.145556	24.64	43.52	18.88	V	-15	39.64

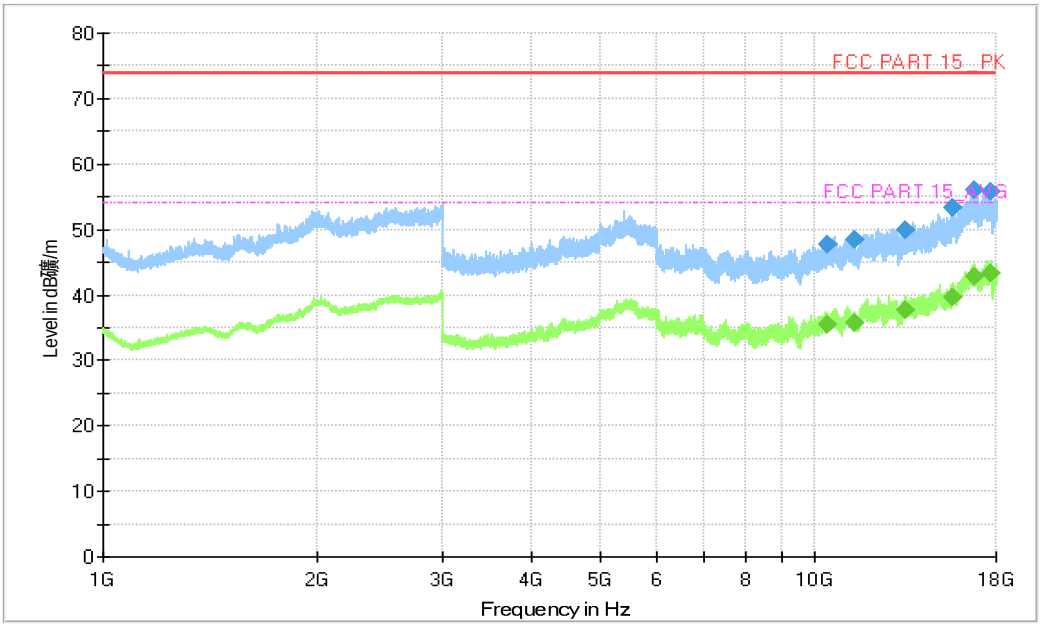


Figure A.1.41. Radiated Emission (LTE receiver Band 13, 1GHz to 18GHz)

Final_Results_PK

Frequency(MHz)	Peak (dBµV/m)	Limit (dBµV/m)	Margin(dB)	Polarity	ARpl (dB/m)	P_{Mea} (dBµV)
10437.000000	47.74	74.00	26.26	H	10.1	37.64
11386.285714	48.54	74.00	25.46	H	10.6	37.94
13428.000000	50.01	74.00	23.99	V	13.0	37.01
15627.000000	53.38	74.00	20.62	H	13.9	39.48
16728.000000	56.00	74.00	18.00	H	18.9	37.1
17702.571429	55.76	74.00	18.24	V	20.6	35.16

Final_Results_AVG

Frequency(MHz)	Average (dBµV/m)	Limit (dBµV/m)	Margin(dB)	Polarity	ARpl (dB/m)	P_{Mea} (dBµV)
10437.000000	35.51	54.00	18.49	H	10.1	25.41
11386.285714	35.61	54.00	18.39	H	10.6	25.01
13428.000000	37.78	54.00	16.22	V	13.0	24.78
15627.000000	39.68	54.00	14.32	H	13.9	25.78
16728.000000	42.83	54.00	11.17	H	18.9	23.93
17702.571429	43.35	54.00	10.65	V	20.6	22.75

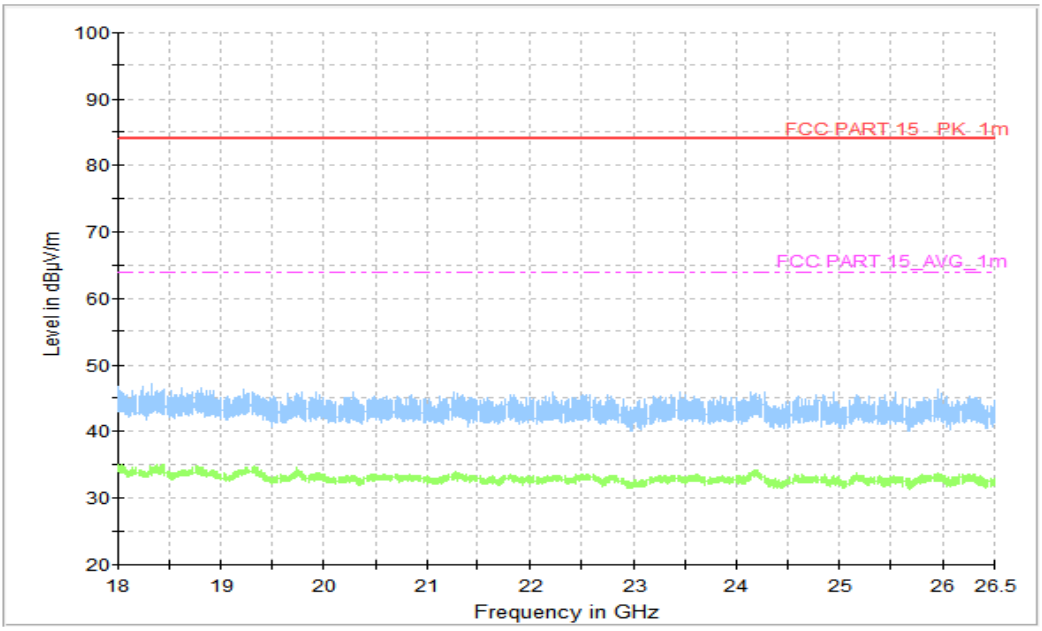


Figure A.1.42. Radiated Emission (LTE receiver Band 13, 18GHz to 26.5GHz)

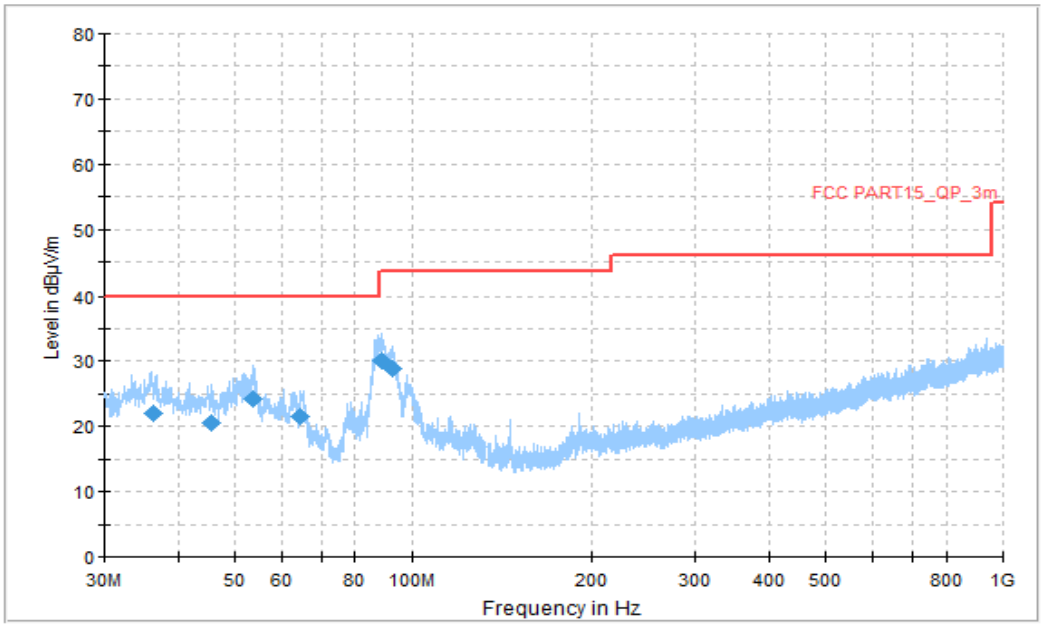


Figure A.1.43. Radiated Emission (LTE receiver Band 17, 30MHz to 1GHz)

Final_Result

Frequency (MHz)	QuasiPeak (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Pol	ARpl (dB/m)	P_{Mea} (dBµV)
36.251111	22.05	40.00	17.95	V	-14	36.05
45.681667	20.65	40.00	19.35	V	-13	33.65
53.711111	24.31	40.00	15.69	V	-14	38.31
64.596667	21.54	40.00	18.46	V	-15	36.54
88.577222	29.99	43.52	13.53	V	-17	46.99
92.726667	28.76	43.52	14.76	V	-16	44.76

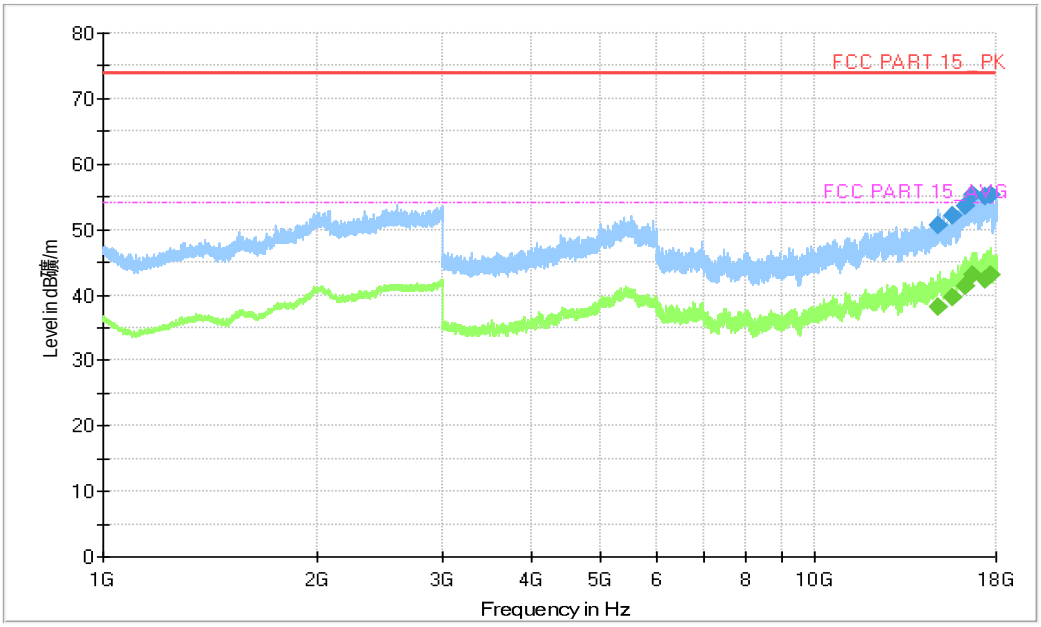


Figure A.1.44. Radiated Emission (LTE receiver Band 17, 1GHz to 18GHz)

Final_Results_PK

Frequency(MHz)	Peak (dBµV/m)	Limit (dBµV/m)	Margin(dB)	Polarity	ARpl (dB/m)	P_{Mea} (dBµV)
14875.714286	50.74	74.00	23.26	H	14.8	35.94
15616.714286	52.05	74.00	21.95	V	13.9	38.15
16275.000000	53.63	74.00	20.37	H	16.8	36.83
16699.285714	55.38	74.00	18.62	V	19.0	36.38
17367.857143	54.95	74.00	19.05	V	19.7	35.25
17715.857143	55.36	74.00	18.64	H	20.5	34.86

Final_Results_AVG

Frequency(MHz)	Average (dBµV/m)	Limit (dBµV/m)	Margin(dB)	Polarity	ARpl (dB/m)	P_{Mea} (dBµV)
14875.714286	38.25	54.00	15.75	H	14.8	23.45
15616.714286	39.63	54.00	14.37	V	13.9	25.73
16275.000000	41.31	54.00	12.69	H	16.8	24.51
16699.285714	42.96	54.00	11.04	V	19.0	23.96
17367.857143	42.23	54.00	11.77	V	19.7	22.53
17715.857143	42.95	54.00	11.05	H	20.5	22.45

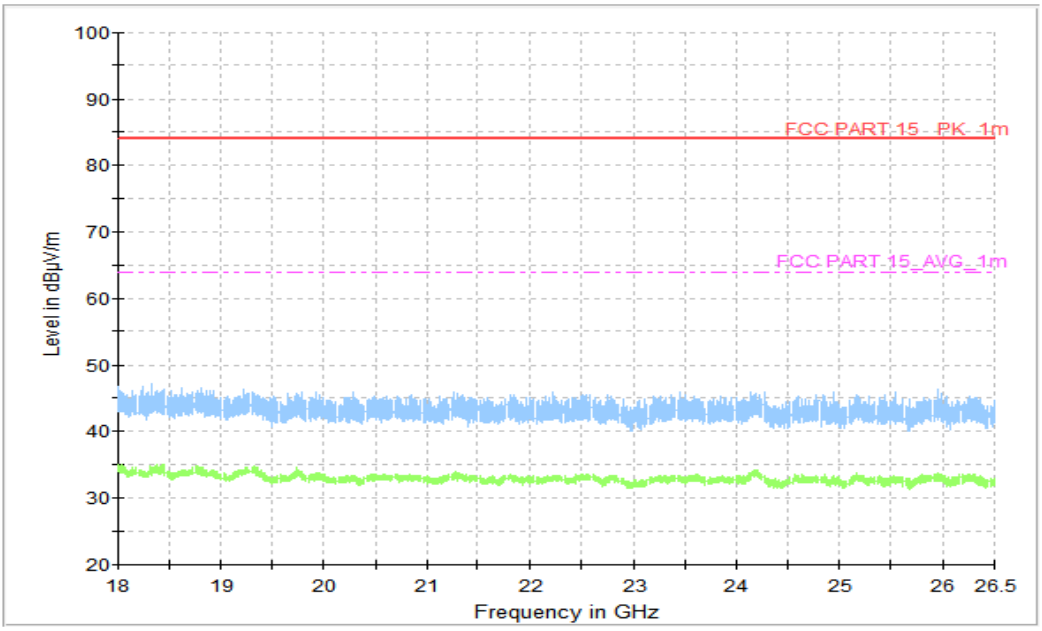


Figure A.1.45. Radiated Emission (LTE receiver Band 17, 18GHz to 26.5GHz)

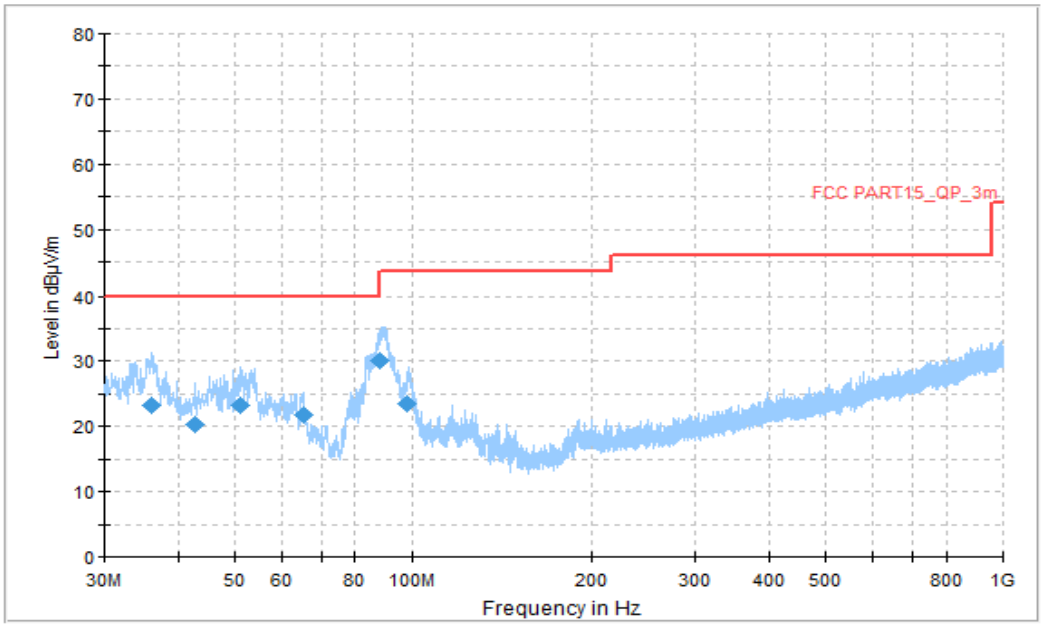


Figure A.1.46. Radiated Emission (LTE receiver Band 66, 30MHz to 1GHz)

Final_Result

Frequency (MHz)	QuasiPeak (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Pol	ARpl (dB/m)	P_{Mea} (dBµV)
36.143333	23.22	40.00	16.78	V	-14	37.22
42.717778	20.28	40.00	19.72	V	-13	33.28
51.070556	23.13	40.00	16.87	V	-13	36.13
65.243333	21.71	40.00	18.29	V	-15	36.71
88.092222	30.07	43.52	13.45	V	-17	47.07
98.115556	23.59	43.52	19.93	V	-15	38.59

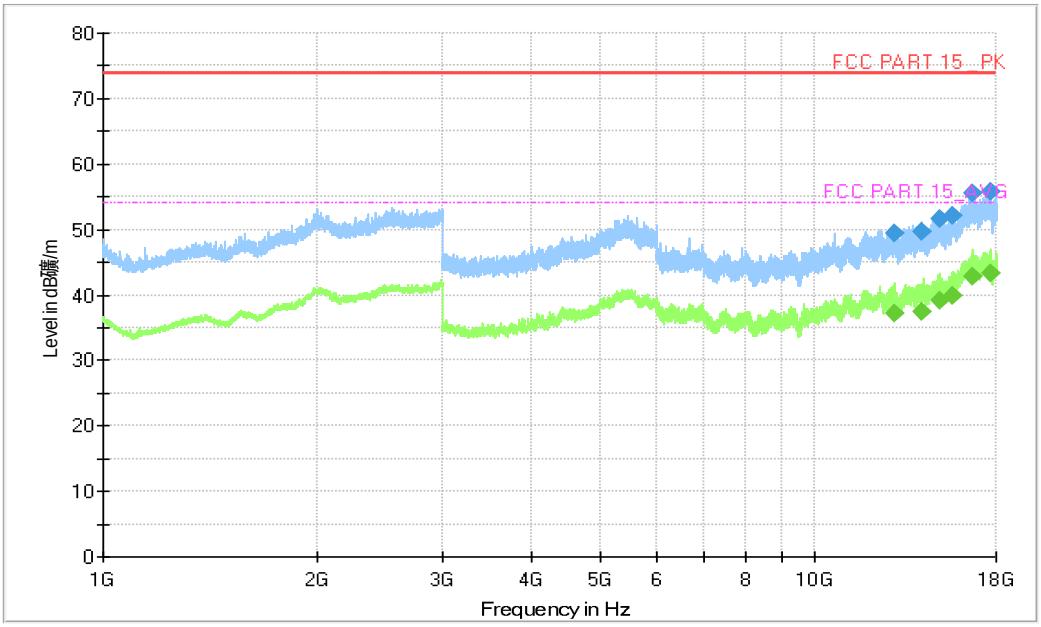


Figure A.1.47. Radiated Emission (LTE receiver Band 66, 1GHz to 18GHz)

Final_Results_PK

Frequency(MHz)	Peak (dBµV/m)	Limit (dBµV/m)	Margin(dB)	Polarity	ARpl (dB/m)	P_{Mea} (dBµV)
12965.571429	49.34	74.00	24.66	V	13.0	36.34
14175.000000	49.58	74.00	24.42	H	13.3	36.28
14996.571429	51.54	74.00	22.46	V	14.5	37.04
15642.428571	52.13	74.00	21.87	V	14.0	38.13
16720.285714	55.60	74.00	18.40	V	18.9	36.7
17697.428571	55.80	74.00	18.20	V	20.6	35.20

Final_Results_AVG

Frequency(MHz)	Average (dBµV/m)	Limit (dBµV/m)	Margin(dB)	Polarity	ARpl (dB/m)	P_{Mea} (dBµV)
12965.571429	37.28	54.00	16.72	V	13.0	24.28
14175.000000	37.49	54.00	16.51	H	13.3	24.19
14996.571429	39.03	54.00	14.97	V	14.5	24.53
15642.428571	39.76	54.00	14.24	V	14.0	25.76
16720.285714	42.91	54.00	11.09	V	18.9	24.01
17697.428571	43.22	54.00	10.78	V	20.6	22.62

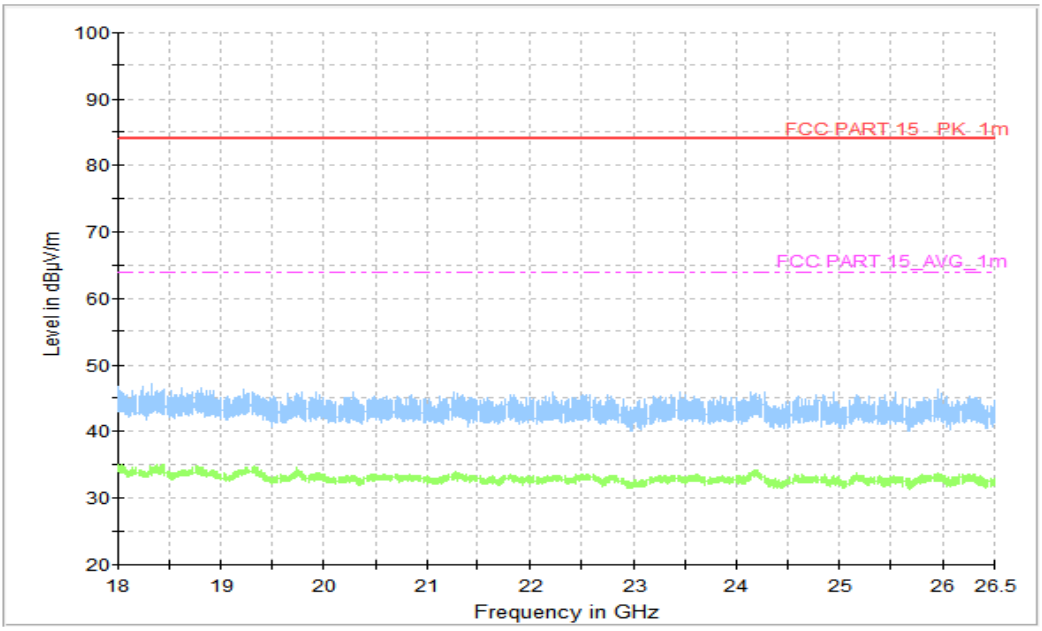


Figure A.1.48. Radiated Emission (LTE receiver Band 66, 18GHz to 26.5GHz)

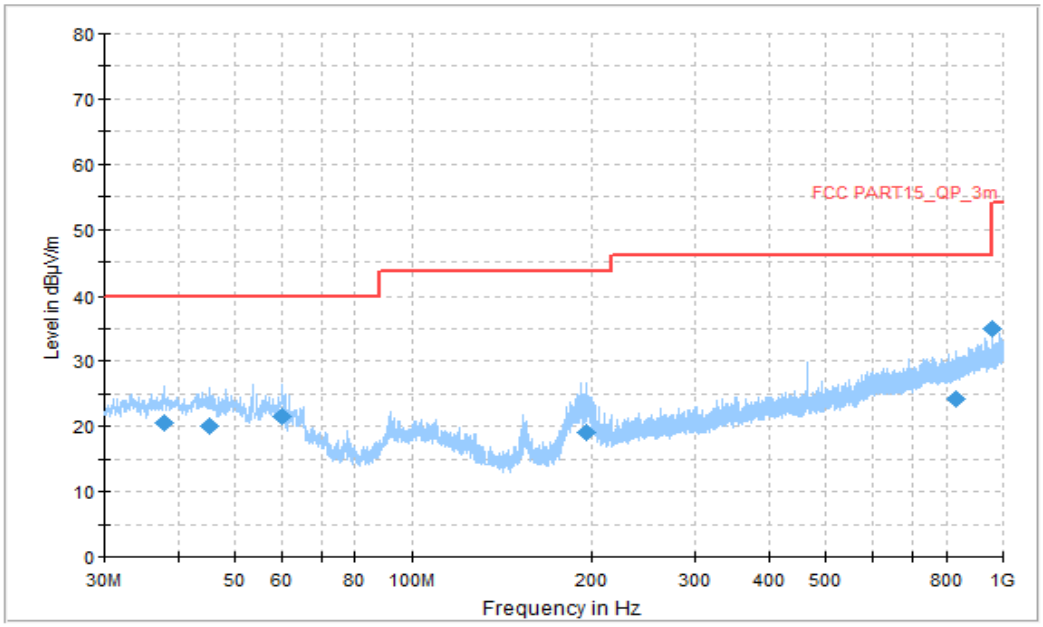


Figure A.1.49. Radiated Emission (Data Transfer: PC TO TF, 30MHz to 1GHz)

Final_Result

Frequency (MHz)	QuasiPeak (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Pol	ARpl (dB/m)	P_{Mea} (dBµV)
37.867778	20.54	40.00	19.46	V	-14	34.54
45.196667	20.15	40.00	19.85	V	-13	33.15
60.016111	21.48	40.00	18.52	V	-14	35.48
196.462778	19.10	43.52	24.42	V	-14	33.10
829.172222	24.20	46.02	21.82	H	-2	26.2
960.014444	35.03	53.98	18.95	H	0	35.03

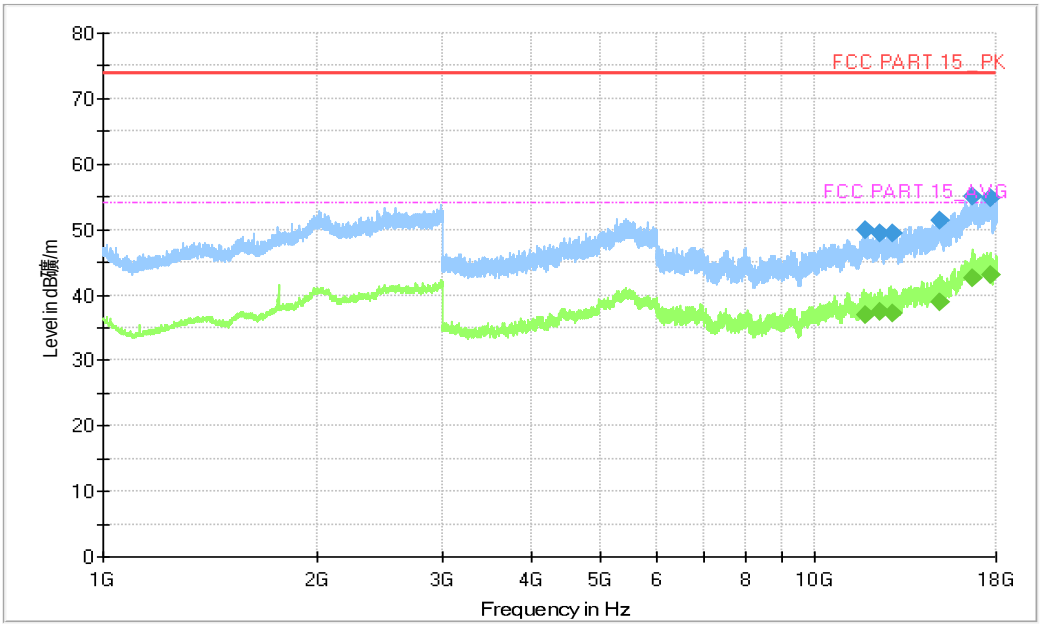


Figure A.1.50. Radiated Emission (Data Transfer: PC TO TF, 1GHz to 18GHz)

Final_Results_PK

Frequency(MHz)	Peak (dBµV/m)	Limit (dBµV/m)	Margin(dB)	Polarity	ARpl (dB/m)	P_{Mea} (dBµV)
11802.857143	49.97	74.00	24.03	H	12.3	37.67
12384.428572	49.53	74.00	24.47	H	12.7	36.83
12894.000000	49.46	74.00	24.54	V	12.7	36.76
14963.571429	51.39	74.00	22.61	V	14.8	36.59
16697.142857	55.12	74.00	18.88	V	19.0	36.12
17682.428571	54.88	74.00	19.12	H	20.6	34.28

Final_Results_AVG

Frequency(MHz)	Average (dBµV/m)	Limit (dBµV/m)	Margin(dB)	Polarity	ARpl (dB/m)	P_{Mea} (dBµV)
11802.857143	37.04	54.00	16.96	H	12.3	24.74
12384.428572	37.41	54.00	16.59	H	12.7	24.71
12894.000000	37.27	54.00	16.73	V	12.7	24.57
14963.571429	38.91	54.00	15.09	V	14.8	24.11
16697.142857	42.63	54.00	11.37	V	19.0	23.63
17682.428571	43.07	54.00	10.93	H	20.6	22.47

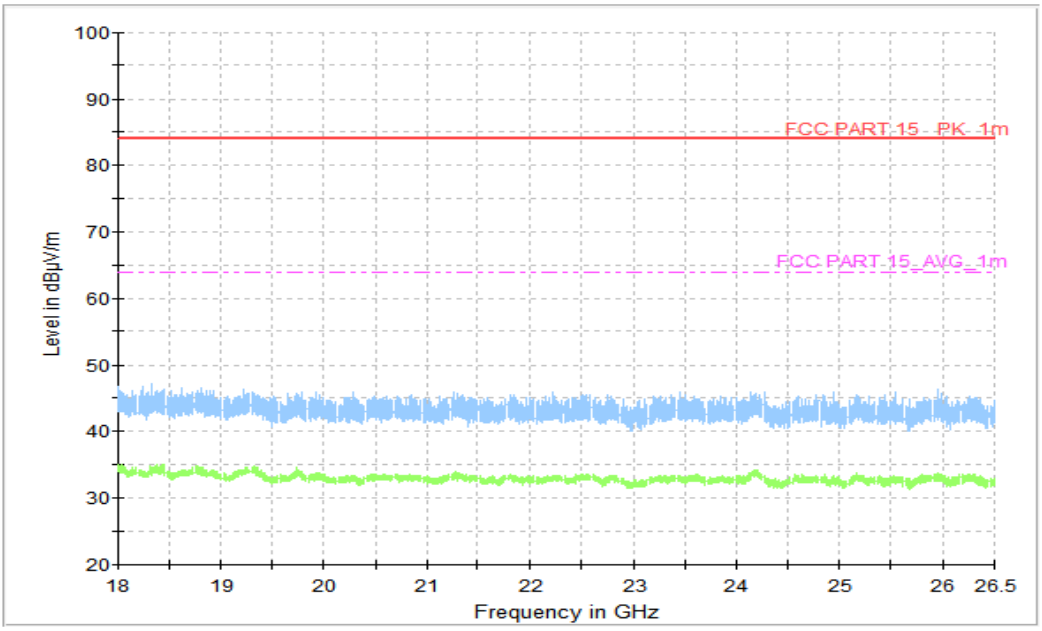


Figure A.1.51. Radiated Emission (Data Transfer: PC TO TF, 18GHz to 26.5GHz)

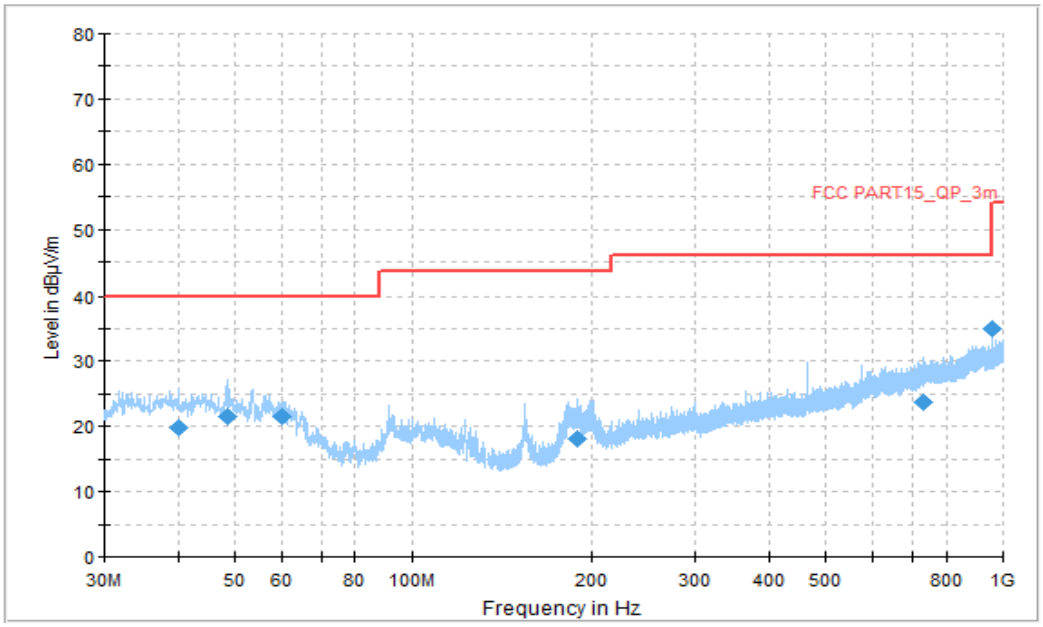


Figure A.1.52. Radiated Emission (Data Transfer: TF TO PC, 30MHz to 1GHz)

Final_Result

Frequency (MHz)	QuasiPeak (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Pol	ARpl (dB/m)	P_{Mea} (dBµV)
40.185000	19.80	40.00	20.20	H	-14	33.80
48.483889	21.54	40.00	18.46	V	-13	34.54
59.962222	21.47	40.00	18.53	V	-14	35.47
189.187778	18.16	43.52	25.36	V	-15	33.16
730.393889	23.74	46.02	22.28	H	-3	26.74
960.014444	34.89	53.98	19.09	H	0	34.89

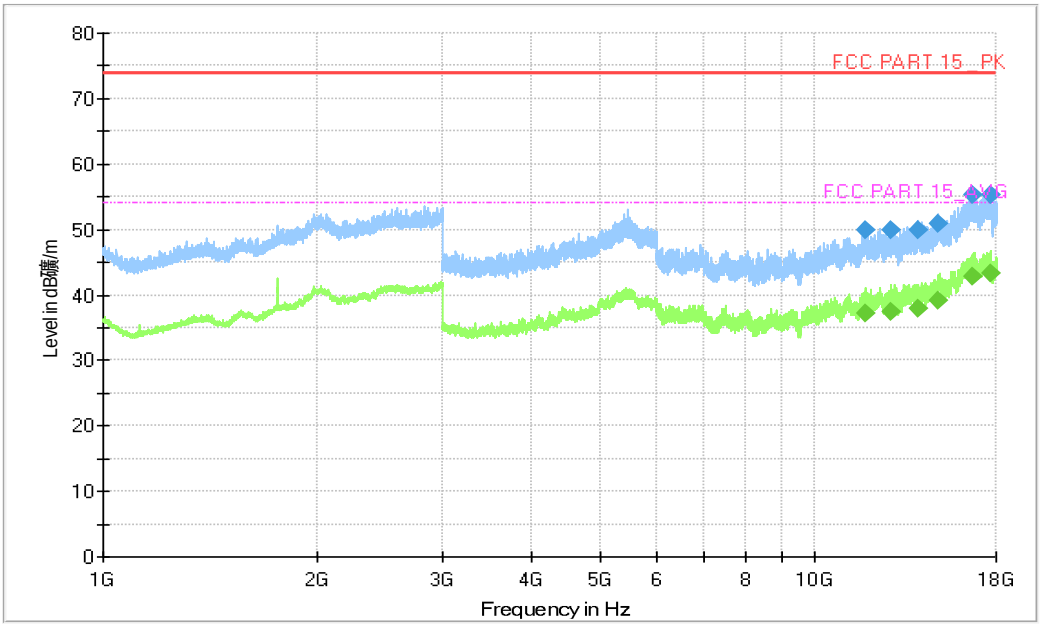


Figure A.1.53. Radiated Emission (Data Transfer: TF TO PC, 1GHz to 18GHz)

Final_Results_PK

Frequency(MHz)	Peak (dBµV/m)	Limit (dBµV/m)	Margin(dB)	Polarity	ARpl (dB/m)	P_{Mea} (dBµV)
11808.428572	49.95	74.00	24.05	H	12.3	37.65
12790.285714	49.82	74.00	24.18	H	12.8	37.02
13967.571429	49.87	74.00	24.13	V	13.0	36.87
14953.714286	50.88	74.00	23.12	H	14.9	35.98
16708.285714	55.36	74.00	18.64	V	18.9	36.46
17676.000000	55.28	74.00	18.72	H	20.6	34.68

Final_Results_AVG

Frequency(MHz)	Average (dBµV/m)	Limit (dBµV/m)	Margin(dB)	Polarity	ARpl (dB/m)	P_{Mea} (dBµV)
11808.428572	37.23	54.00	16.77	H	12.3	24.93
12790.285714	37.50	54.00	16.50	H	12.8	24.7
13967.571429	37.99	54.00	16.01	V	13.0	24.99
14953.714286	39.02	54.00	14.98	H	14.9	24.12
16708.285714	42.85	54.00	11.15	V	18.9	23.95
17676.000000	43.21	54.00	10.79	H	20.6	22.61

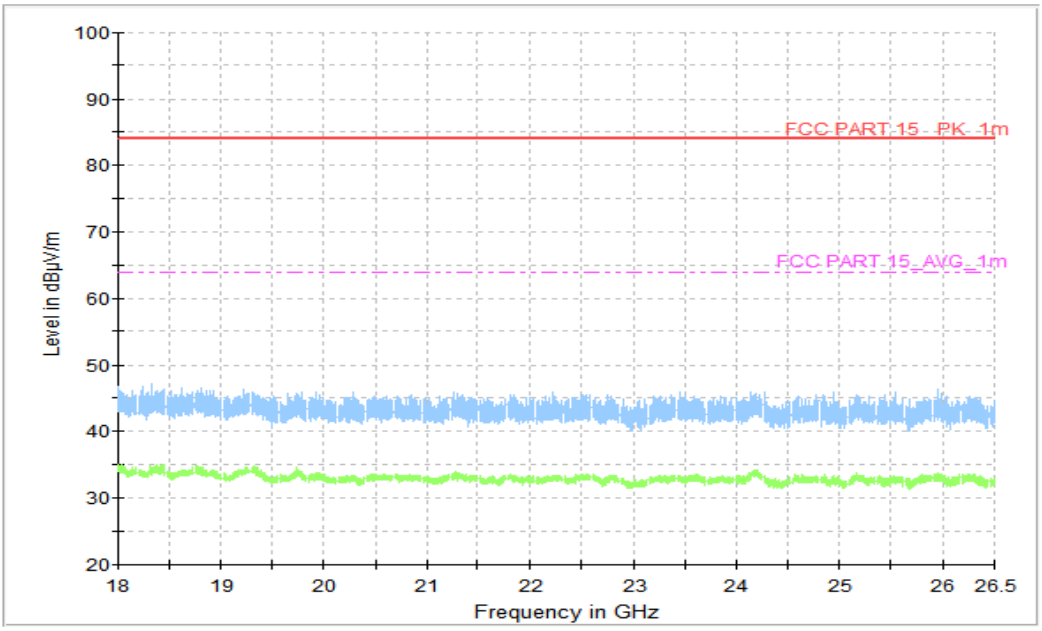


Figure A.1.54. Radiated Emission (Data Transfer: TF TO PC, 18GHz to 26.5GHz)

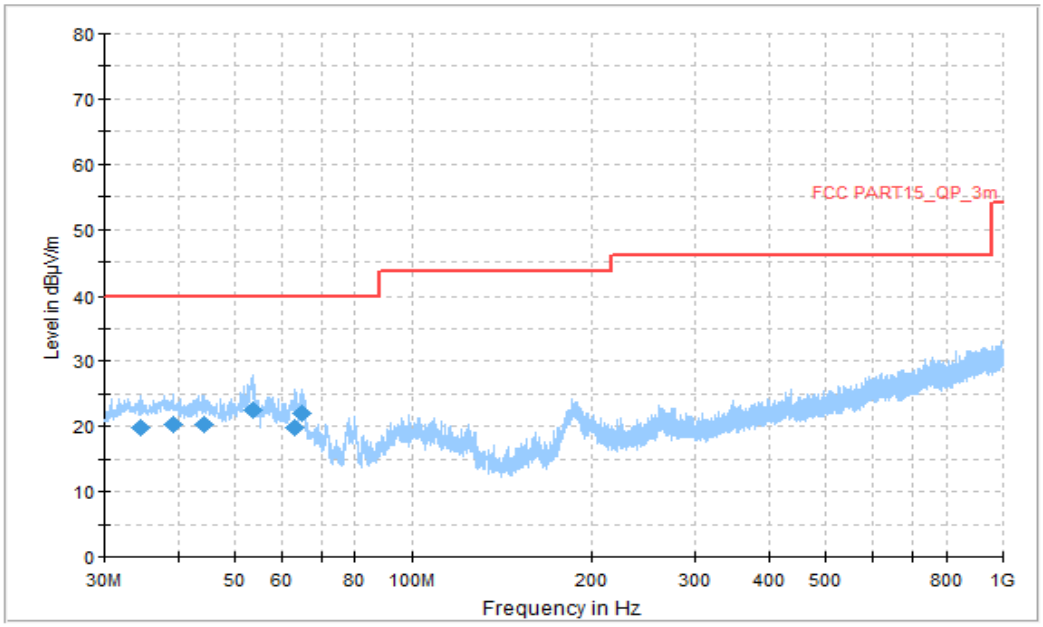


Figure A.1.55. Radiated Emission (LTE receiver Band 5, 30MHz to 1GHz)

Final_Result

Frequency (MHz)	QuasiPeak (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Pol	ARpl (dB/m)	P_{Mea} (dBµV)
34.472778	19.81	40.00	20.19	V	-15	34.81
39.161111	20.21	40.00	19.79	H	-14	34.21
44.334444	20.27	40.00	19.73	V	-13	33.27
53.549444	22.45	40.00	17.55	V	-14	36.45
63.141667	19.86	40.00	20.14	V	-15	34.86
65.135556	21.95	40.00	18.05	V	-15	36.95

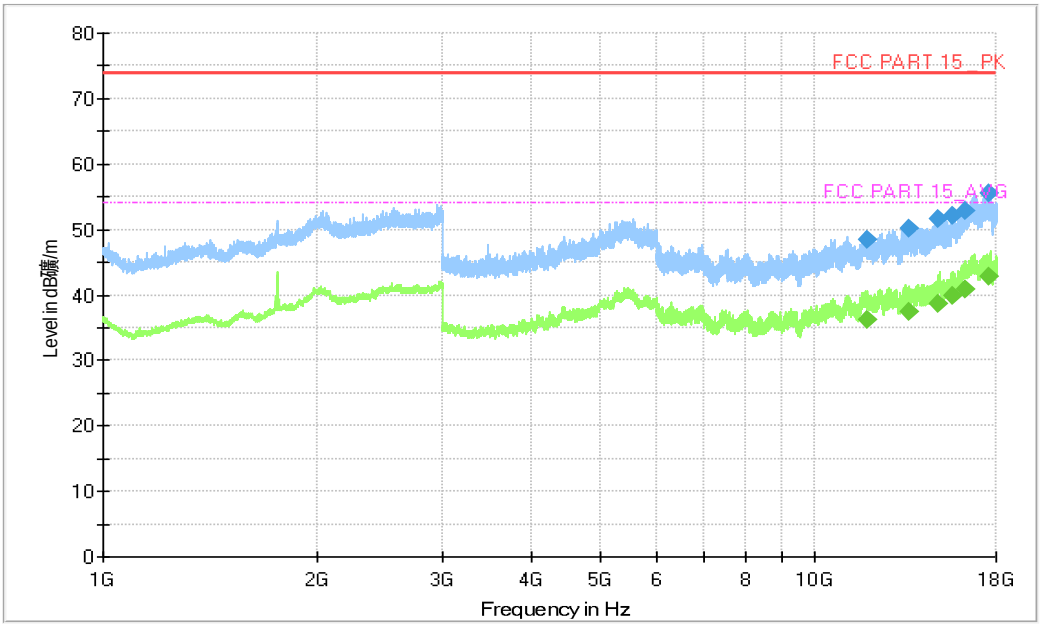


Figure A.1.56. Radiated Emission (LTE receiver Band 5, 1GHz to 18GHz)

Final_Results_PK

Frequency(MHz)	Peak (dBµV/m)	Limit (dBµV/m)	Margin(dB)	Polarity	ARpl (dB/m)	P_{Mea} (dBµV)
11862.000000	48.56	74.00	25.44	V	12.1	36.46
13553.142857	50.25	74.00	23.75	V	13.0	37.25
14912.571429	51.66	74.00	22.34	V	14.9	36.76
15631.285714	52.01	74.00	21.99	H	13.9	38.11
16297.714286	52.77	74.00	21.23	H	16.7	36.07
17532.000000	55.42	74.00	18.58	H	20.3	35.12

Final_Results_AVG

Frequency(MHz)	Average (dBµV/m)	Limit (dBµV/m)	Margin(dB)	Polarity	ARpl (dB/m)	P_{Mea} (dBµV)
11862.000000	36.27	54.00	17.73	V	12.1	24.17
13553.142857	37.39	54.00	16.61	V	13.0	24.39
14912.571429	38.72	54.00	15.28	V	14.9	23.82
15631.285714	39.89	54.00	14.11	H	13.9	25.99
16297.714286	40.76	54.00	13.24	H	16.7	24.06
17532.000000	42.70	54.00	11.30	H	20.3	22.40

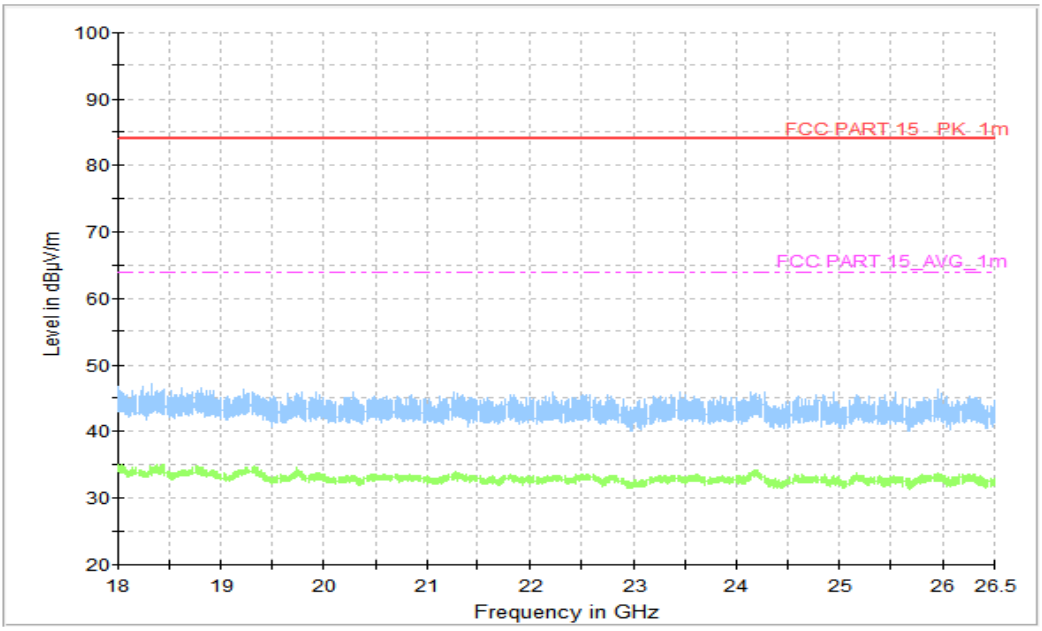


Figure A.1.57. Radiated Emission (LTE receiver Band 5, 18GHz to 26.5GHz)

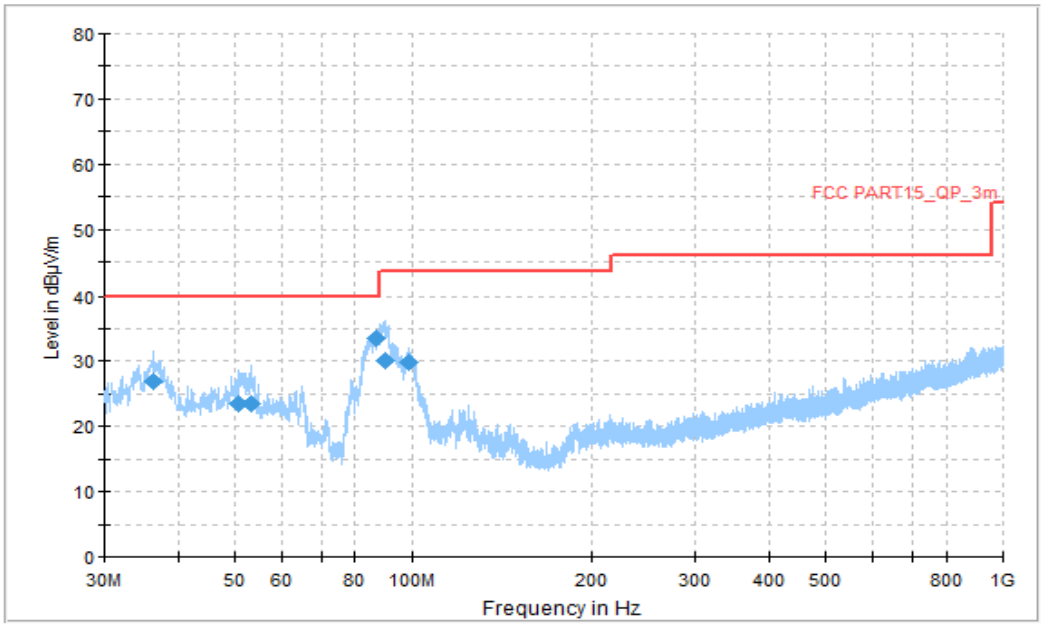


Figure A.1.58. Radiated Emission (LTE receiver Band 5, 30MHz to 1GHz)

Final_Result

Frequency (MHz)	QuasiPeak (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Pol	ARpl (dB/m)	P_{Mea} (dBµV)
36.305000	26.91	40.00	13.09	V	-14	40.91
50.585556	23.45	40.00	16.55	V	-13	36.45
53.172222	23.46	40.00	16.54	V	-14	37.46
86.745000	33.50	40.00	6.50	V	-18	51.50
90.193889	30.15	43.52	13.37	V	-17	47.15
98.492778	29.95	43.52	13.57	V	-15	44.95

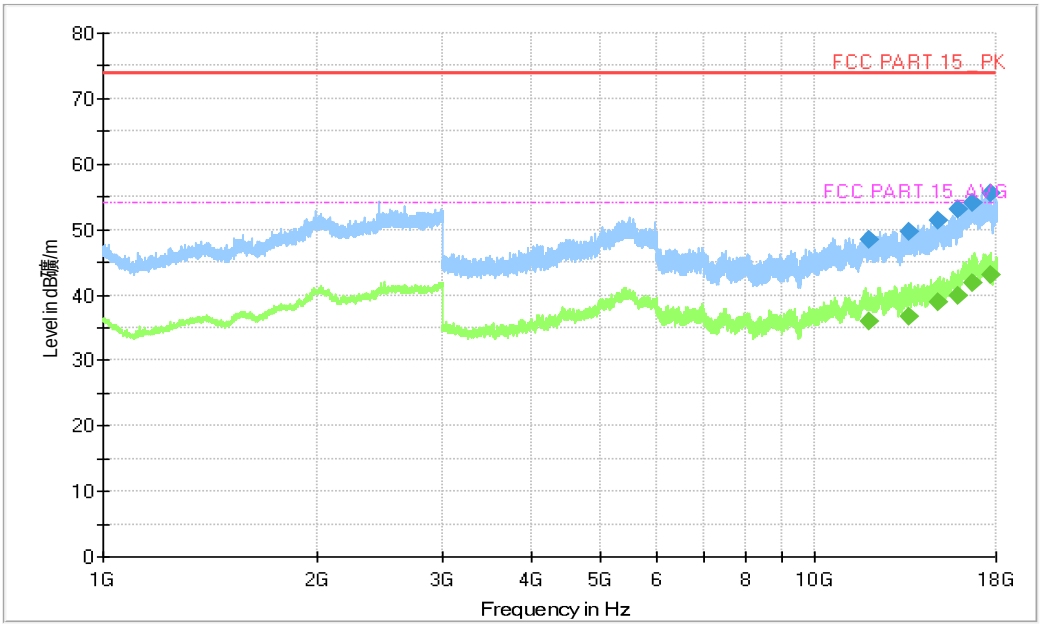


Figure A.1.59. Radiated Emission (LTE receiver Band 5, 1GHz to 18GHz)

Final_Results_PK

Frequency(MHz)	Peak (dBµV/m)	Limit (dBµV/m)	Margin(dB)	Polarity	ARpl (dB/m)	P_{Mea} (dBµV)
11960.571429	48.48	74.00	25.52	H	11.8	36.68
13590.857143	49.54	74.00	24.46	H	13.0	36.54
14949.428572	51.44	74.00	22.56	H	14.9	36.54
15917.571429	53.20	74.00	20.80	V	15.1	38.10
16639.714286	53.99	74.00	20.01	H	18.9	35.09
17695.285714	55.47	74.00	18.53	H	20.6	34.87

Final_Results_AVG

Frequency(MHz)	Average (dBµV/m)	Limit (dBµV/m)	Margin(dB)	Polarity	ARpl (dB/m)	P_{Mea} (dBµV)
11960.571429	35.98	54.00	18.02	H	11.8	24.18
13590.857143	36.78	54.00	17.22	H	13.0	23.78
14949.428572	38.85	54.00	15.15	H	14.9	23.95
15917.571429	39.76	54.00	14.24	V	15.1	24.66
16639.714286	41.87	54.00	12.13	H	18.9	22.97
17695.285714	43.17	54.00	10.83	H	20.6	22.57

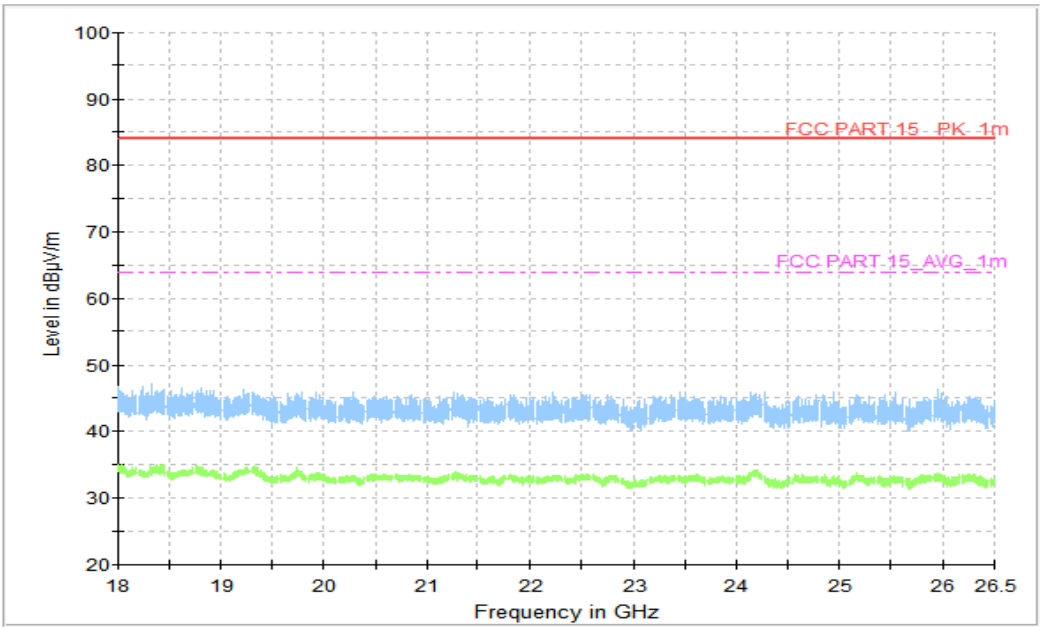


Figure A.1.60. Radiated Emission (LTE receiver Band 5, 18GHz to 26.5GHz)

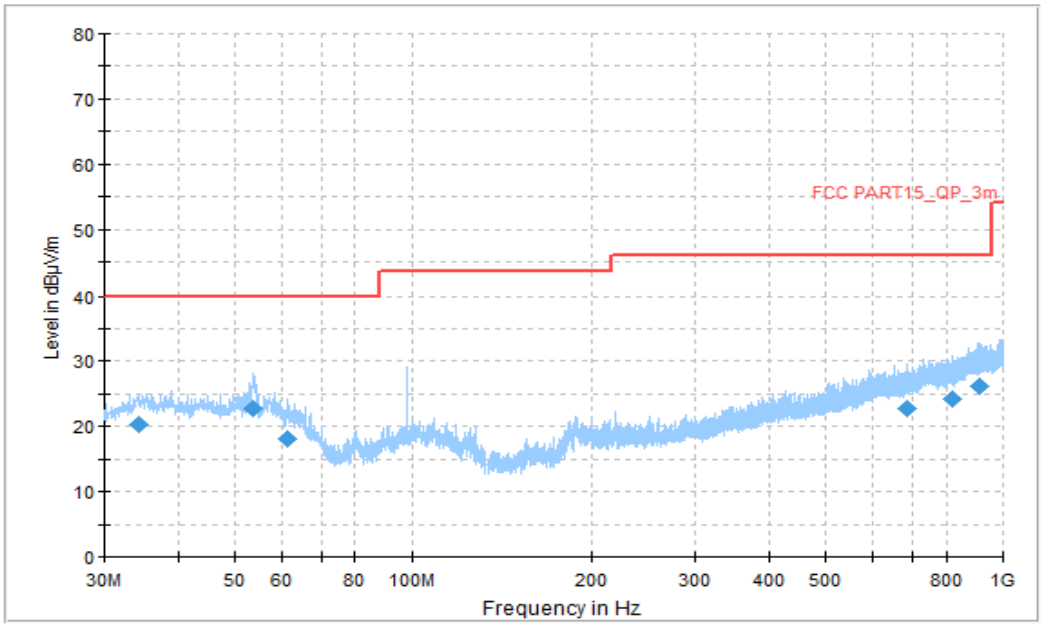


Figure A.1.61. Radiated Emission (FM Receiver, 30MHz to 1GHz)

Final_Result

Frequency (MHz)	QuasiPeak (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Pol	ARpl (dB/m)	P_{Mea} (dBµV)
34.257222	20.19	40.00	19.81	H	-14.7	34.89
53.603333	22.74	40.00	17.26	V	-14.2	36.94
61.201667	18.12	40.00	21.88	V	-14.1	32.22
685.127222	22.65	46.02	23.37	H	-3.6	26.25
818.717778	24.19	46.02	21.83	H	-1.9	26.09
915.017222	26.11	46.02	19.91	V	0.2	25.91

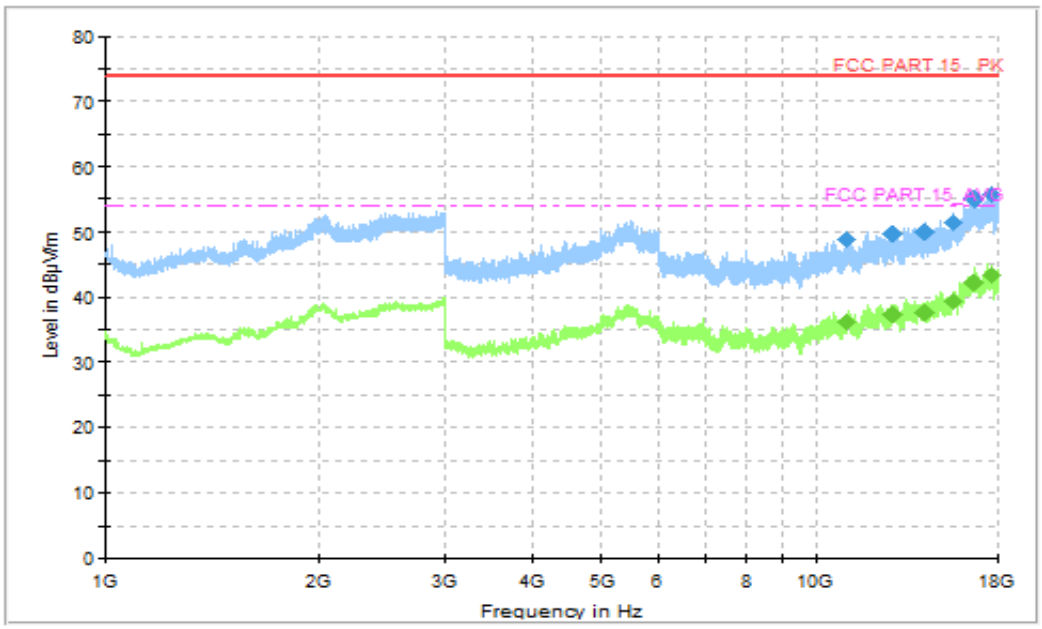


Figure A.1.62. Radiated Emission (FM Receiver, 1GHz to 18GHz)

Final_Results_PK

Frequency(MHz)	Peak (dBµV/m)	Limit (dBµV/m)	Margin(dB)	Polarity	ARpl (dB/m)	P_{Mea} (dBµV)
11072.142857	49.04	74.00	24.96	H	11.0	38.04
12766.285714	49.72	74.00	24.28	V	12.9	36.82
14189.142857	49.94	74.00	24.06	V	13.3	36.64
15596.142857	51.34	74.00	22.66	V	13.8	37.54
16668.857143	55.04	74.00	18.96	H	19.0	36.04
17677.285714	55.70	74.00	18.30	H	20.6	35.10

Final_Results_AVG

Frequency(MHz)	Average (dBµV/m)	Limit (dBµV/m)	Margin(dB)	Polarity	ARpl (dB/m)	P_{Mea} (dBµV)
11072.142857	36.14	54.00	17.86	H	11.0	25.14
12766.285714	37.31	54.00	16.69	V	12.9	24.41
14189.142857	37.78	54.00	16.22	V	13.3	24.48
15596.142857	39.36	54.00	14.64	V	13.8	25.56
16668.857143	42.30	54.00	11.70	H	19.0	23.3
17677.285714	43.40	54.00	10.60	H	20.6	22.80

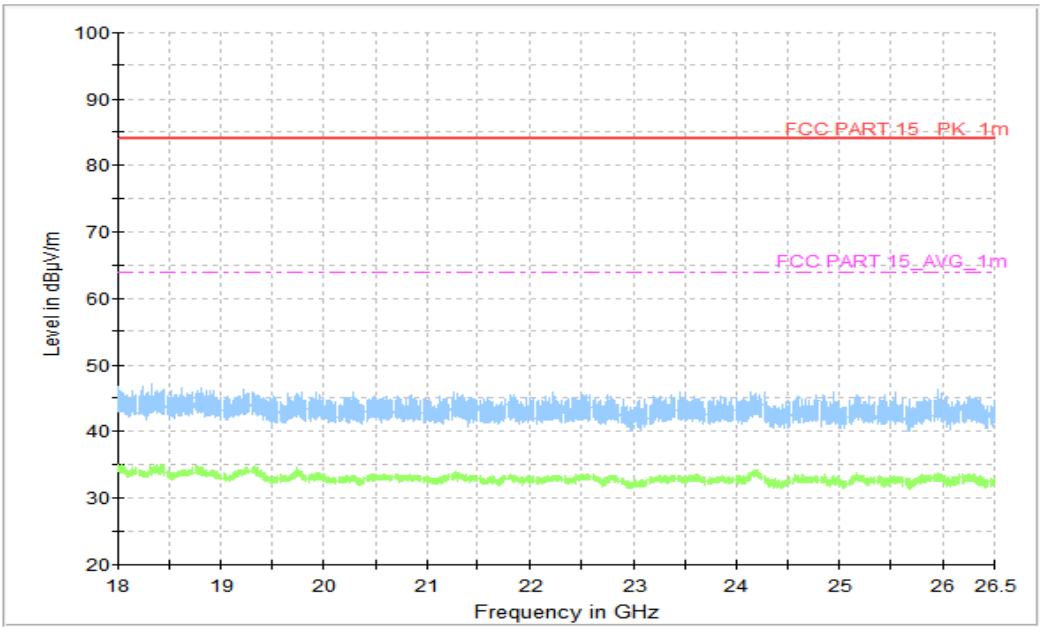


Figure A.1.63. Radiated Emission (FM Receiver, 18GHz to 26.5GHz)

A.2 Conducted Emission (§15.107(a))

Reference

FCC: Part 15.107(a)

IC: ICES-003 section 6.1.

A.2.1 Method of measurement

For equipment that is designed to be connected to the public utility (AC) power line, the radio frequency voltage that is conducted back onto the AC power line on any frequency or frequencies within the band 150kHz to 30MHz shall not exceed the limits. Tested in accordance with the procedures of ANSI C63.4 -2014, section 7.3.

A.2.2 EUT Operating Mode:

Camera: At the beginning of measurement, the battery is completely discharged. The battery and charger are installed so that the EUT works well and keeping on taking photos.

Video Player: The EUT is connected to a charger for charging and keeping on playing mp3.

Data Transfer: The model of the PC is Lenovo ThinkPad T480, and the serial number of the PC is PF-13LW0C. The EUT is connected to a PC for transmitting data. The software is used to let the PC keep on copying data to EUT or TF Card, reading and erasing the data after copy action was finished.

FM receiver: The EUT is connected to a charger for charging. The EUT is synchronized to a FM signal generator. The EUT is keeping on demodulating the FM signal and outputting the audio signal through the headset.

GSM receiver: The EUT is connected to a charger for charging. The EUT is synchronized to System Simulator (SS), and able to respond to paging messages and incoming call. An established call has been released.

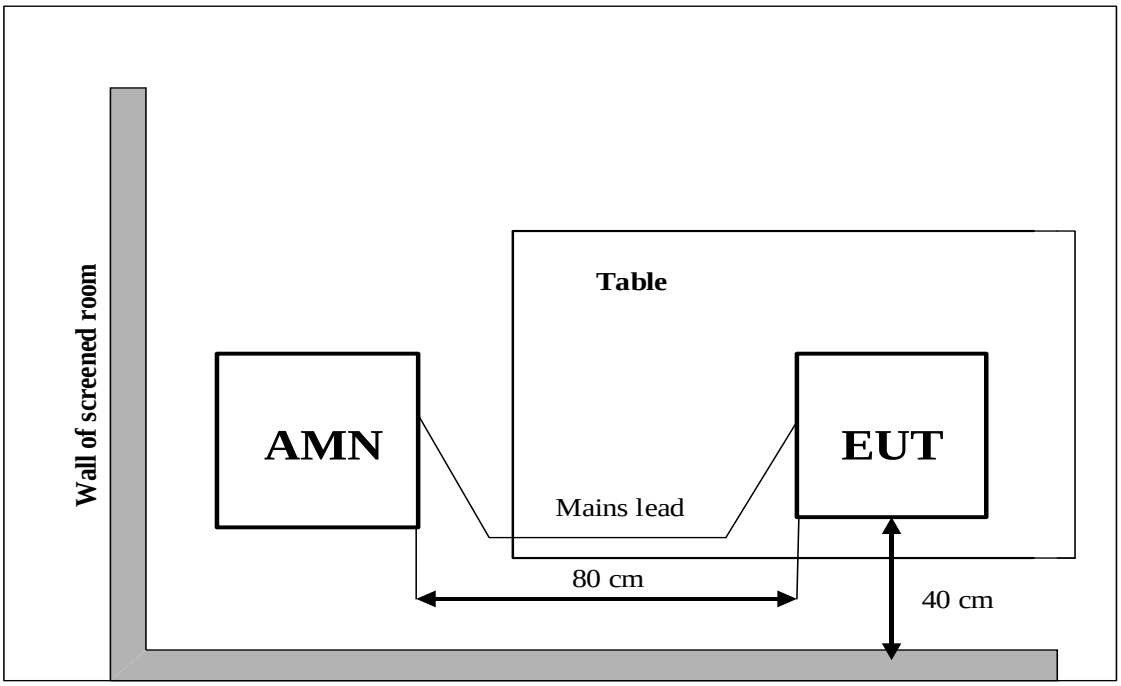
WCDMA receiver: The EUT is connected to a charger for charging. The EUT is synchronized to System Simulator (SS), and able to respond to paging messages and incoming call. An established call has been released.

LTE receiver: The EUT is connected to a charger for charging. The EUT is synchronized to System Simulator (SS), and able to respond to paging messages and incoming call. An established call has been released.

A.2.3 Measurement Limit

Frequency of emission (MHz)	Conducted limit (dBμV)	
	Quasi-peak	Average
0.15-0.5	66 to 56*	56 to 46*
0.5-5	56	46
5-30	60	50
*Decreases with the logarithm of the frequency		

A.2.4 Test set-up:



A.2.5 Test Condition in charging mode

Voltage（V）	Frequency（Hz）
120	60
240	60

RBW	Sweep Time(s)
9kHz	1

A.2.6 Measurement Results

QuasiPeak(dBμV) /Average(dBμV) =PMea+Corr

Where

Corr: PathLoss + Voltage Division Factor

PMea: Measurement result on receiver.

Camera

AC Input Port/ Voltage: 120V/60Hz

Frequency range (MHz)	Quasi-peak Limit (dBμV)	Average Limit (dBμV)	Result (dBμV) UT13aa/Set.1	Conclusion
0.15 to 0.5	66 to 56	56 to 46	See Figure A.2.1.	P
0.5 to 5	56	46		
5 to 30	60	50		
NOTE: The limit decreases linearly with the logarithm of the frequency in the range 0.15 MHz to 0.5 MHz.				

Camera

AC Input Port/ Voltage: 240V/60Hz

Frequency range (MHz)	Quasi-peak Limit (dBμV)	Average Limit (dBμV)	Result (dBμV) UT13aa/Set.1	Conclusion
0.15 to 0.5	66 to 56	56 to 46	See Figure A.2.2.	P
0.5 to 5	56	46		
5 to 30	60	50		
NOTE: The limit decreases linearly with the logarithm of the frequency in the range 0.15 MHz to 0.5 MHz.				

FM Receiver

AC Input Port/ Voltage: 120V/60Hz

Frequency range (MHz)	Quasi-peak Limit (dBμV)	Average Limit (dBμV)	Result (dBμV) UT13aa/Set.1	Conclusion
0.15 to 0.5	66 to 56	56 to 46	See Figure A.2.3.	P
0.5 to 5	56	46		
5 to 30	60	50		
NOTE: The limit decreases linearly with the logarithm of the frequency in the range 0.15 MHz to 0.5 MHz.				

FM Receiver

AC Input Port/ Voltage: 240V/60Hz

Frequency range (MHz)	Quasi-peak Limit (dBμV)	Average Limit (dBμV)	Result (dBμV) UT13aa/Set.1	Conclusion
0.15 to 0.5	66 to 56	56 to 46	See Figure A.2.4.	P
0.5 to 5	56	46		
5 to 30	60	50		
NOTE: The limit decreases linearly with the logarithm of the frequency in the range 0.15 MHz to 0.5 MHz.				

Video Player

AC Input Port/ Voltage: 120V/60Hz

Frequency range (MHz)	Quasi-peak Limit (dBμV)	Average Limit (dBμV)	Result (dBμV) UT13aa/Set.1	Conclusion
0.15 to 0.5	66 to 56	56 to 46	See Figure A.2.5.	P
0.5 to 5	56	46		
5 to 30	60	50		
NOTE: The limit decreases linearly with the logarithm of the frequency in the range 0.15 MHz to 0.5 MHz.				

Video Player

AC Input Port/ Voltage: 240V/60Hz

Frequency range (MHz)	Quasi-peak Limit (dBμV)	Average Limit (dBμV)	Result (dBμV) UT13aa/Set.1	Conclusion
0.15 to 0.5	66 to 56	56 to 46	See Figure A.2.6.	P
0.5 to 5	56	46		
5 to 30	60	50		
NOTE: The limit decreases linearly with the logarithm of the frequency in the range 0.15 MHz to 0.5 MHz.				

Data Transfer

AC Input Port/ Voltage: 120V/60Hz

Frequency range (MHz)	Quasi-peak Limit (dBμV)	Average Limit (dBμV)	Result (dBμV) UT13aa/Set.3	Conclusion
0.15 to 0.5	66 to 56	56 to 46	See Figure A.2.7.	P
0.5 to 5	56	46		
5 to 30	60	50		
NOTE: The limit decreases linearly with the logarithm of the frequency in the range 0.15 MHz to 0.5 MHz.				

Data Transfer

AC Input Port/ Voltage: 240V/60Hz

Frequency range (MHz)	Quasi-peak Limit (dBμV)	Average Limit (dBμV)	Result (dBμV) UT13aa /Set.3	Conclusion
0.15 to 0.5	66 to 56	56 to 46	See Figure A.2.8.	P
0.5 to 5	56	46		
5 to 30	60	50		
NOTE: The limit decreases linearly with the logarithm of the frequency in the range 0.15 MHz to 0.5 MHz.				

Video Player

AC Input Port/ Voltage: 120V/60Hz

Frequency range (MHz)	Quasi-peak Limit (dBμV)	Average Limit (dBμV)	Result (dBμV) UT13aa/Set.2	Conclusion
0.15 to 0.5	66 to 56	56 to 46	See Figure A.2.9.	P
0.5 to 5	56	46		
5 to 30	60	50		
NOTE: The limit decreases linearly with the logarithm of the frequency in the range 0.15 MHz to 0.5 MHz.				

Video Player

AC Input Port/ Voltage: 240V/60Hz

Frequency range (MHz)	Quasi-peak Limit (dBμV)	Average Limit (dBμV)	Result (dBμV) UT13aa /Set.2	Conclusion
0.15 to 0.5	66 to 56	56 to 46	See Figure A.2.10.	P
0.5 to 5	56	46		
5 to 30	60	50		
NOTE: The limit decreases linearly with the logarithm of the frequency in the range 0.15 MHz to 0.5 MHz.				

Video Player

AC Input Port/ Voltage: 120V/60Hz

Frequency range (MHz)	Quasi-peak Limit (dBμV)	Average Limit (dBμV)	Result (dBμV) UT17aa/Set.1	Conclusion
0.15 to 0.5	66 to 56	56 to 46	See Figure A.2.11.	P
0.5 to 5	56	46		
5 to 30	60	50		
NOTE: The limit decreases linearly with the logarithm of the frequency in the range 0.15 MHz to 0.5 MHz.				

Video Player

AC Input Port/ Voltage: 240V/60Hz

Frequency range (MHz)	Quasi-peak Limit (dBμV)	Average Limit (dBμV)	Result (dBμV) UT17aa /Set.1	Conclusion
0.15 to 0.5	66 to 56	56 to 46	See Figure A.2.12.	P
0.5 to 5	56	46		
5 to 30	60	50		
NOTE: The limit decreases linearly with the logarithm of the frequency in the range 0.15 MHz to 0.5 MHz.				

FM Receiver

AC Input Port/ Voltage: 120V/60Hz

Frequency range (MHz)	Quasi-peak Limit (dBμV)	Average Limit (dBμV)	Result (dBμV)	Conclusion
			UT17aa/Set.1	
0.15 to 0.5	66 to 56	56 to 46	See Figure A.2.13.	P
0.5 to 5	56	46		
5 to 30	60	50		
NOTE: The limit decreases linearly with the logarithm of the frequency in the range 0.15 MHz to 0.5 MHz.				

FM Receiver

AC Input Port/ Voltage: 240V/60Hz

Frequency range (MHz)	Quasi-peak Limit (dBμV)	Average Limit (dBμV)	Result (dBμV)	Conclusion
			UT17aa/Set.1	
0.15 to 0.5	66 to 56	56 to 46	See Figure A.2.14.	P
0.5 to 5	56	46		
5 to 30	60	50		
NOTE: The limit decreases linearly with the logarithm of the frequency in the range 0.15 MHz to 0.5 MHz.				

AC Input Port/ Voltage: 120V/60Hz

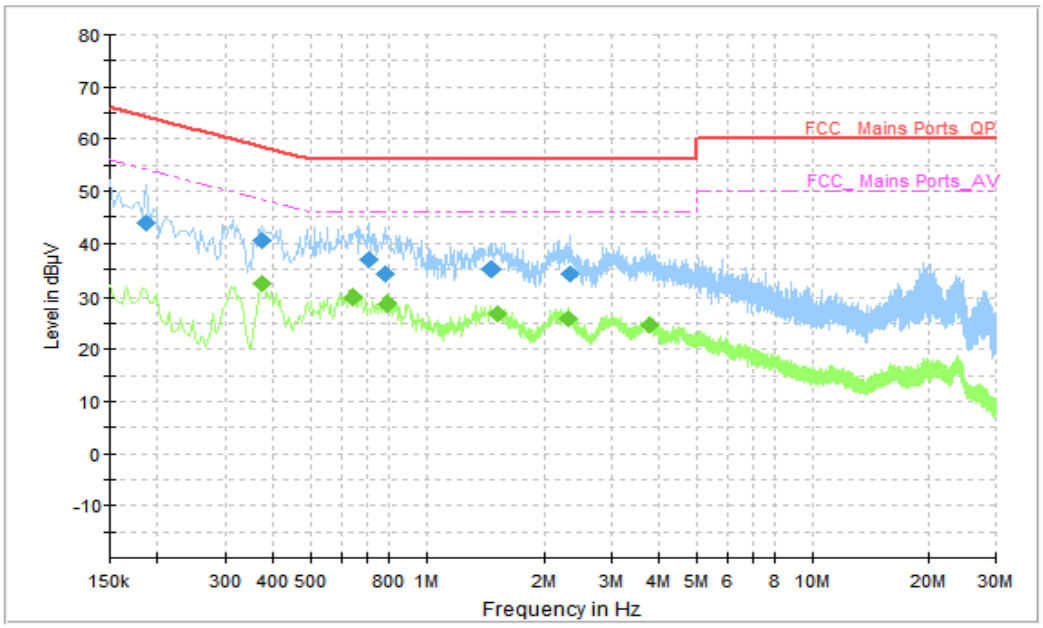


Figure A.2.1. Conducted Emission (Camera)

Final_Result_QPK

Frequency (MHz)	QuasiPeak (dBµV)	Limit (dBµV)	Margin (dB)	Line	Corr. (dB)	P_{Mea} (dBµV)
0.186000	43.82	64.21	20.39	L1	10	33.82
0.374000	40.40	58.41	18.01	N	10	30.4
0.706000	36.82	56.00	19.18	N	10	26.82
0.782000	34.23	56.00	21.77	L1	10	24.23
1.466000	35.16	56.00	20.84	N	10	25.16
2.346000	34.26	56.00	21.74	N	10	24.26

Final_Result_AVG

Frequency (MHz)	Average (dBµV)	Limit (dBµV)	Margin (dB)	Line	Corr. (dB)	P_{Mea} (dBµV)
0.374000	32.21	48.41	16.20	N	10	22.21
0.646000	29.73	46.00	16.27	N	10	19.73
0.786000	28.49	46.00	17.51	N	10	18.49
1.510000	26.75	46.00	19.25	N	10	16.75
2.326000	26.02	46.00	19.98	N	10	16.02
3.786000	24.64	46.00	21.36	N	10	14.64

AC Input Port/ Voltage: 240V/60Hz

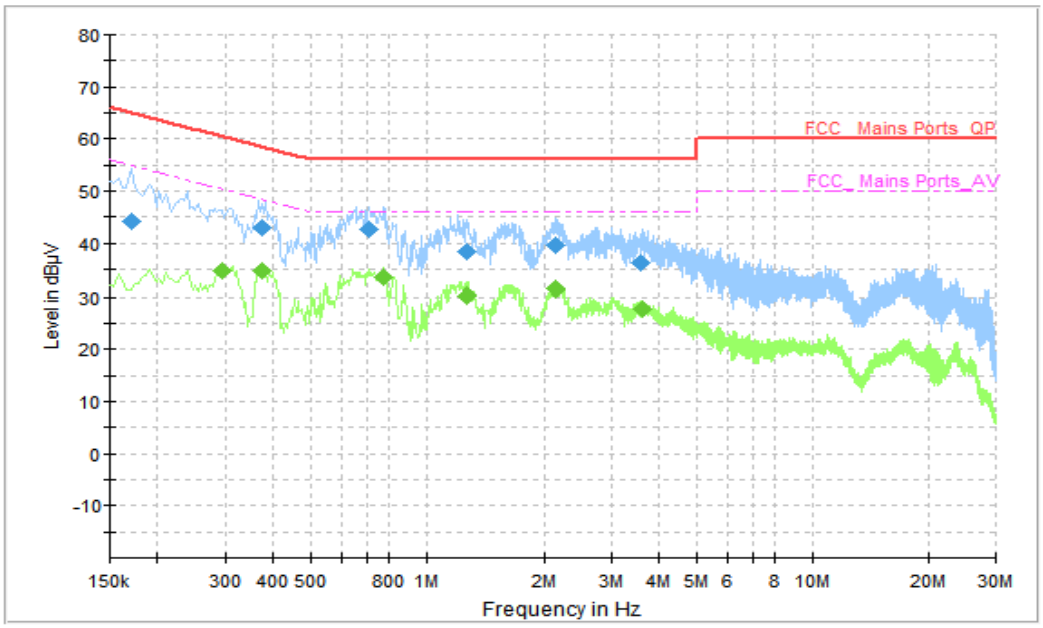


Figure A.2.2. Conducted Emission (Camera)

Final_Result_QPK

Frequency (MHz)	QuasiPeak (dBµV)	Limit (dBµV)	Margin (dB)	Line	Corr. (dB)	P_{Mea} (dBµV)
0.170000	44.09	64.96	20.87	L1	10	34.09
0.374000	42.97	58.41	15.44	N	10	32.97
0.706000	42.58	56.00	13.42	N	10	32.58
1.278000	38.32	56.00	17.68	N	10	28.32
2.150000	39.50	56.00	16.50	N	10	29.5
3.570000	36.34	56.00	19.66	N	10	26.34

Final_Result_AVG

Frequency (MHz)	Average (dBµV)	Limit (dBµV)	Margin (dB)	Line	Corr. (dB)	P_{Mea} (dBµV)
0.294000	34.61	50.41	15.80	N	10	24.61
0.374000	34.84	48.41	13.57	N	10	24.84
0.774000	33.40	46.00	12.60	N	10	23.40
1.278000	30.17	46.00	15.83	N	10	20.17
2.150000	31.28	46.00	14.72	N	10	21.28
3.614000	27.73	46.00	18.27	N	10	17.73

AC Input Port/ Voltage: 120V/60Hz

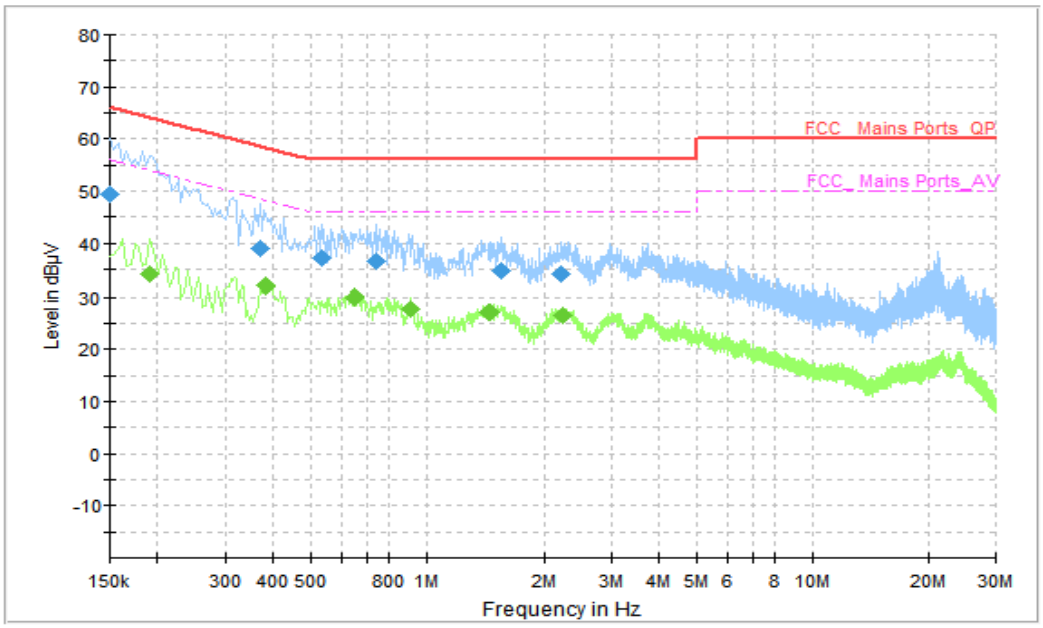


Figure A.2.3. Conducted Emission (FM Receiver)

Final_Result_QPK

Frequency (MHz)	QuasiPeak (dBµV)	Limit (dBµV)	Margin (dB)	Line	Corr. (dB)	P_{Mea} (dBµV)
0.150000	49.49	66.00	16.51	N	7	42.49
0.370000	39.04	58.50	19.46	L1	10	29.04
0.534000	37.20	56.00	18.80	N	10	27.20
0.738000	36.56	56.00	19.44	N	10	26.56
1.554000	34.79	56.00	21.21	N	10	24.79
2.210000	34.28	56.00	21.72	N	10	24.28

Final_Result_AVG

Frequency (MHz)	Average (dBµV)	Limit (dBµV)	Margin (dB)	Line	Corr. (dB)	P_{Mea} (dBµV)
0.190000	34.06	54.04	19.98	N	9	25.06
0.382000	32.00	48.24	16.24	N	10	22
0.650000	29.79	46.00	16.21	N	10	19.79
0.906000	27.86	46.00	18.14	N	10	17.86
1.450000	27.18	46.00	18.82	N	10	17.18
2.246000	26.59	46.00	19.41	N	10	16.59

AC Input Port/ Voltage: 240V/60Hz

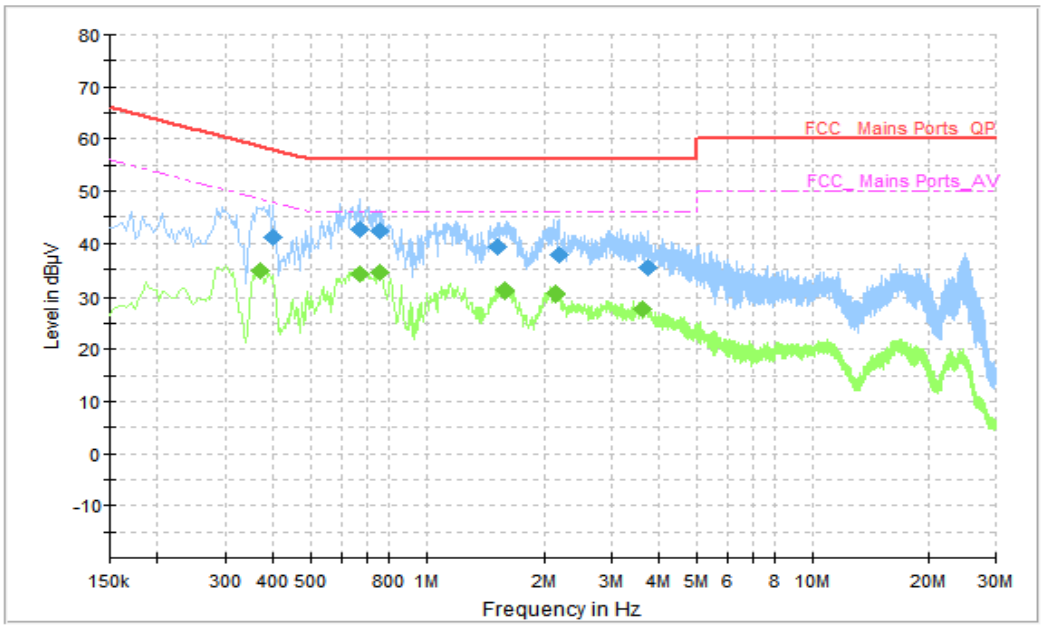


Figure A.2.4. Conducted Emission (FM Receiver)

Final_Result_QPK

Frequency (MHz)	QuasiPeak (dBµV)	Limit (dBµV)	Margin (dB)	Line	Corr. (dB)	P_{Mea} (dBµV)
0.398000	41.15	57.90	16.75	N	10	31.15
0.674000	42.84	56.00	13.16	N	10	32.84
0.758000	42.47	56.00	13.53	N	10	32.47
1.510000	39.29	56.00	16.71	N	10	29.29
2.182000	37.92	56.00	18.08	N	10	27.92
3.738000	35.48	56.00	20.52	N	10	25.48

Final_Result_AVG

Frequency (MHz)	Average (dBµV)	Limit (dBµV)	Margin (dB)	Line	Corr. (dB)	P_{Mea} (dBµV)
0.370000	34.82	48.50	13.68	N	10	24.82
0.674000	34.16	46.00	11.84	N	10	24.16
0.758000	34.36	46.00	11.64	N	10	24.36
1.582000	31.20	46.00	14.80	N	10	21.20
2.134000	30.33	46.00	15.67	N	10	20.33
3.626000	27.67	46.00	18.33	N	10	17.67

AC Input Port/ Voltage: 120V/60Hz

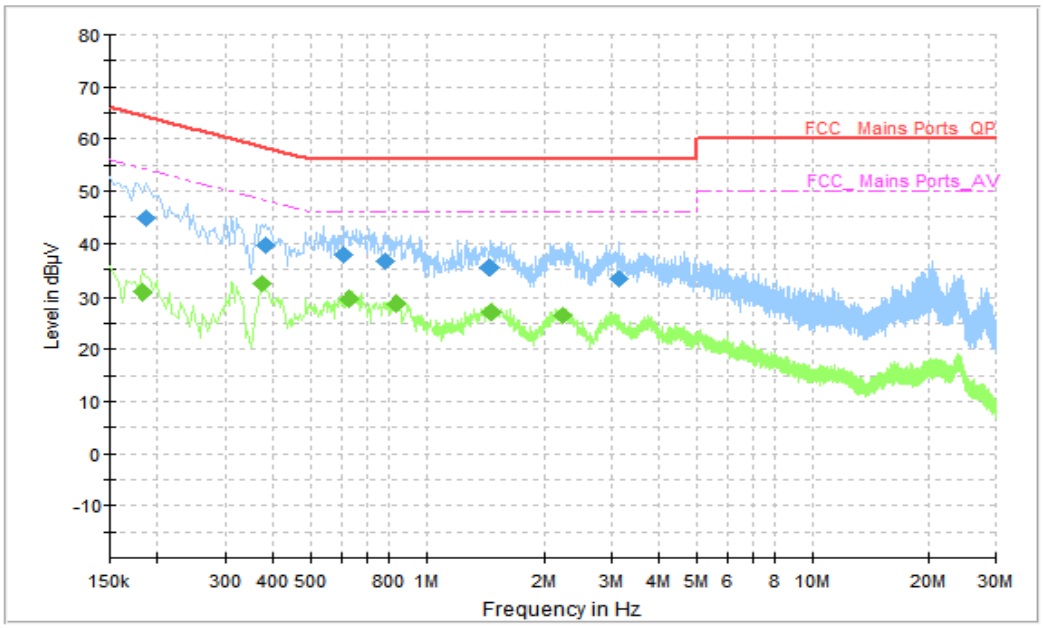


Figure A.2.5. Conducted Emission (Video Player)

Final_Result_QPK

Frequency (MHz)	QuasiPeak (dBµV)	Limit (dBµV)	Margin (dB)	Line	Corr. (dB)	P_{Mea} (dBµV)
0.186000	44.77	64.21	19.45	N	9	35.77
0.382000	39.69	58.24	18.55	N	10	29.69
0.610000	37.68	56.00	18.32	N	10	27.68
0.782000	36.64	56.00	19.36	N	10	26.64
1.458000	35.30	56.00	20.70	N	10	25.3
3.130000	33.18	56.00	22.82	N	10	23.18

Final_Result_AVG

Frequency (MHz)	Average (dBµV)	Limit (dBµV)	Margin (dB)	Line	Corr. (dB)	P_{Mea} (dBµV)
0.182000	30.84	54.39	23.56	N	9	21.84
0.374000	32.28	48.41	16.13	N	10	22.28
0.630000	29.60	46.00	16.40	N	10	19.60
0.838000	28.51	46.00	17.49	N	10	18.51
1.462000	27.03	46.00	18.97	N	10	17.03
2.230000	26.37	46.00	19.63	N	10	16.37

AC Input Port/ Voltage: 240V/60Hz

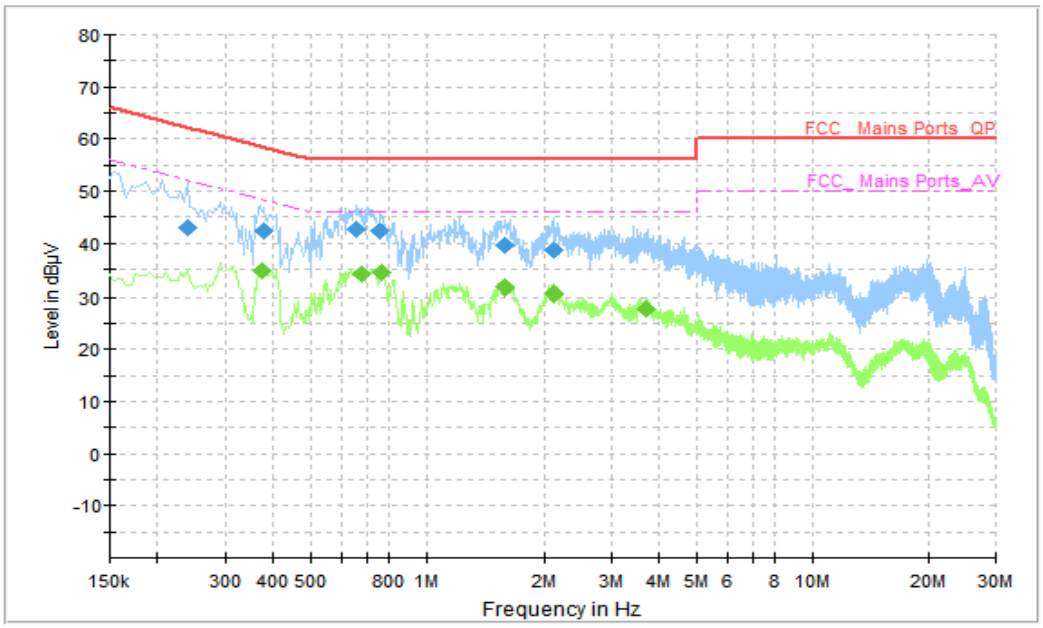


Figure A.2.6. Conducted Emission (Video Player)

Final_Result_QPK

Frequency (MHz)	QuasiPeak (dBµV)	Limit (dBµV)	Margin (dB)	Line	Corr. (dB)	P_{Mea} (dBµV)
0.238000	42.95	62.17	19.22	N	10	32.95
0.378000	42.24	58.32	16.08	N	10	32.24
0.658000	42.60	56.00	13.40	N	10	32.60
0.758000	42.38	56.00	13.62	N	10	32.38
1.582000	39.75	56.00	16.25	N	10	29.75
2.122000	38.59	56.00	17.41	N	10	28.59

Final_Result_AVG

Frequency (MHz)	Average (dBµV)	Limit (dBµV)	Margin (dB)	Line	Corr. (dB)	P_{Mea} (dBµV)
0.374000	34.77	48.41	13.64	N	10	24.77
0.682000	34.03	46.00	11.97	N	10	24.03
0.762000	34.35	46.00	11.65	N	10	24.35
1.590000	31.58	46.00	14.42	N	10	21.58
2.122000	30.45	46.00	15.55	N	10	20.45
3.710000	27.67	46.00	18.33	N	10	17.67

AC Input Port/ Voltage: 120V/60Hz

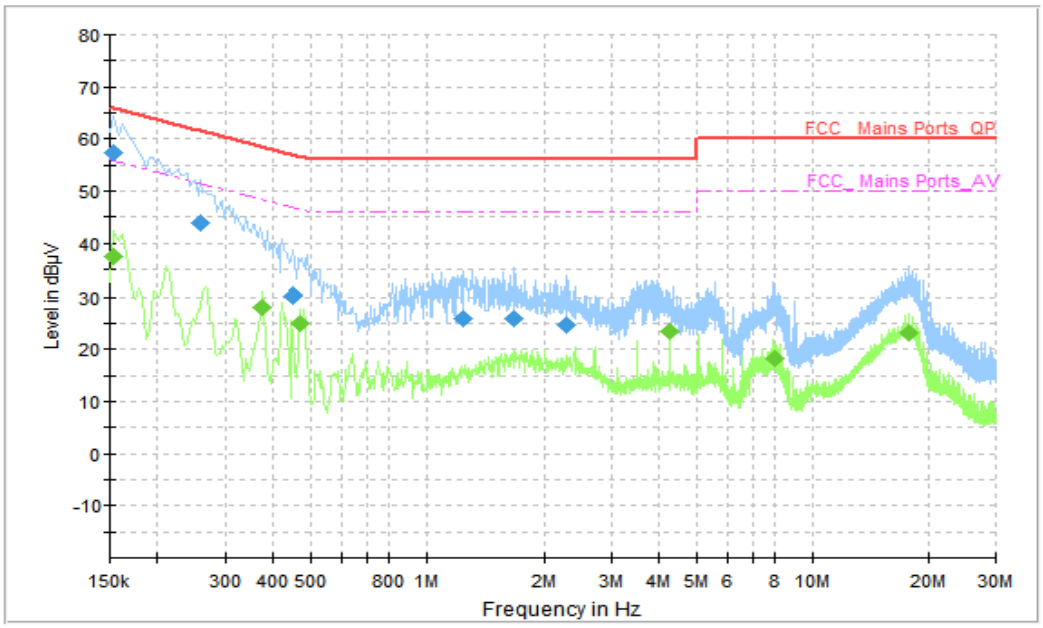


Figure A.2.7. Conducted Emission (Data Transfer)

Final_Result_QPK

Frequency (MHz)	QuasiPeak (dBµV)	Limit (dBµV)	Margin (dB)	Line	Corr. (dB)	P_{Mea} (dBµV)
0.154000	57.32	65.78	8.46	L1	10	47.32
0.258000	43.89	61.50	17.61	N	10	33.89
0.450000	30.30	56.88	26.58	N	10	20.30
1.246000	25.74	56.00	30.26	L1	10	15.74
1.678000	25.83	56.00	30.17	L1	10	15.83
2.282000	24.77	56.00	31.23	L1	10	14.77

Final_Result_AVG

Frequency (MHz)	Average (dBµV)	Limit (dBµV)	Margin (dB)	Line	Corr. (dB)	P_{Mea} (dBµV)
0.154000	37.41	55.78	18.37	L1	10	27.41
0.374000	27.89	48.41	20.52	L1	10	17.89
0.470000	25.08	46.51	21.43	L1	10	15.08
4.258000	23.56	46.00	22.44	N	10	13.56
7.974000	18.24	50.00	31.76	L1	10	8.24
17.818000	23.17	50.00	26.83	N	10	13.17

AC Input Port/ Voltage: 240V/60Hz

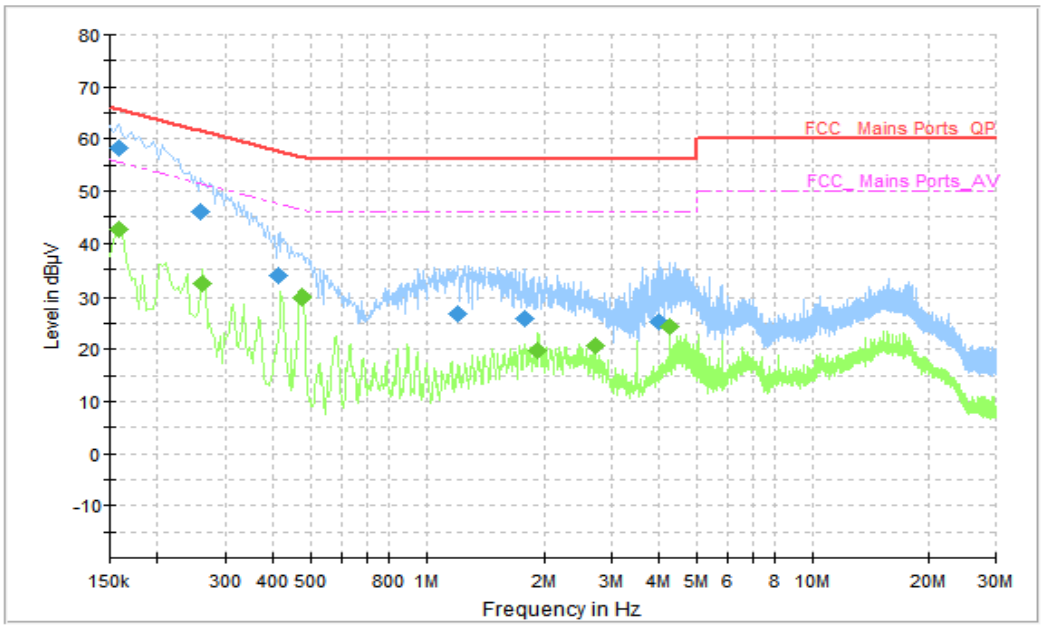


Figure A.2.8. Conducted Emission (Data Transfer)

Final_Result_QPK

Frequency (MHz)	QuasiPeak (dBµV)	Limit (dBµV)	Margin (dB)	Line	Corr. (dB)	P_{Mea} (dBµV)
0.158000	58.27	65.57	7.29	L1	10	48.27
0.258000	45.97	61.50	15.53	N	10	35.97
0.410000	33.79	57.65	23.86	N	10	23.79
1.206000	26.82	56.00	29.18	L1	10	16.82
1.782000	25.72	56.00	30.28	L1	10	15.72
3.978000	25.41	56.00	30.59	N	10	15.41

Final_Result_AVG

Frequency (MHz)	Average (dBµV)	Limit (dBµV)	Margin (dB)	Line	Corr. (dB)	P_{Mea} (dBµV)
0.158000	42.58	55.57	12.99	L1	10	32.58
0.262000	32.33	51.37	19.03	L1	10	22.33
0.474000	29.77	46.44	16.68	L1	10	19.77
1.934000	19.70	46.00	26.30	L1	10	9.70
2.710000	20.62	46.00	25.38	N	10	10.62
4.258000	24.20	46.00	21.80	N	10	14.20

AC Input Port/ Voltage: 120V/60Hz

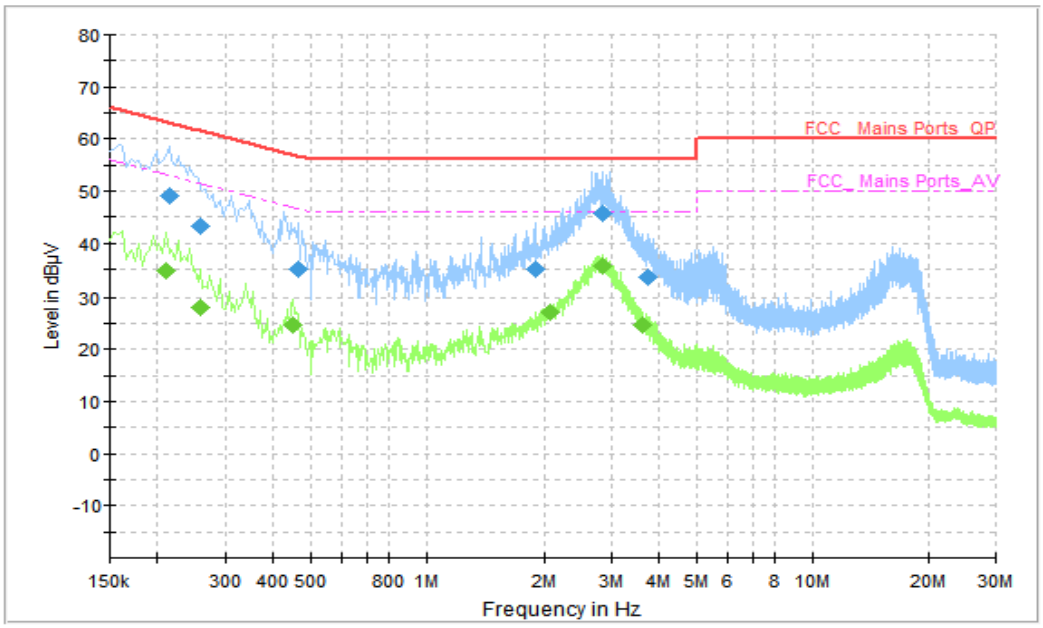


Figure A.2.9. Conducted Emission (Video Player)

Final_Result_QPK

Frequency (MHz)	QuasiPeak (dBµV)	Limit (dBµV)	Margin (dB)	Line	Corr. (dB)	P_{Mea} (dBµV)
0.210000	50.10	63.21	13.11	N	10	40.10
0.330000	40.01	59.45	19.44	L1	10	30.01
0.462000	35.72	56.66	20.94	N	10	25.72
2.114000	37.63	56.00	18.37	N	10	27.63
2.786000	45.93	56.00	10.07	N	10	35.93
3.626000	34.88	56.00	21.12	N	10	24.88

Final_Result_AVG

Frequency (MHz)	Average (dBµV)	Limit (dBµV)	Margin (dB)	Line	Corr. (dB)	P_{Mea} (dBµV)
0.238000	32.83	52.17	19.34	N	10	22.83
0.270000	28.05	51.12	23.06	N	10	18.05
0.462000	22.66	46.66	24.00	N	10	12.66
2.026000	26.80	46.00	19.20	N	10	16.80
2.870000	35.69	46.00	10.31	N	10	25.69
3.662000	24.83	46.00	21.17	N	10	14.83

AC Input Port/ Voltage: 240V/60Hz

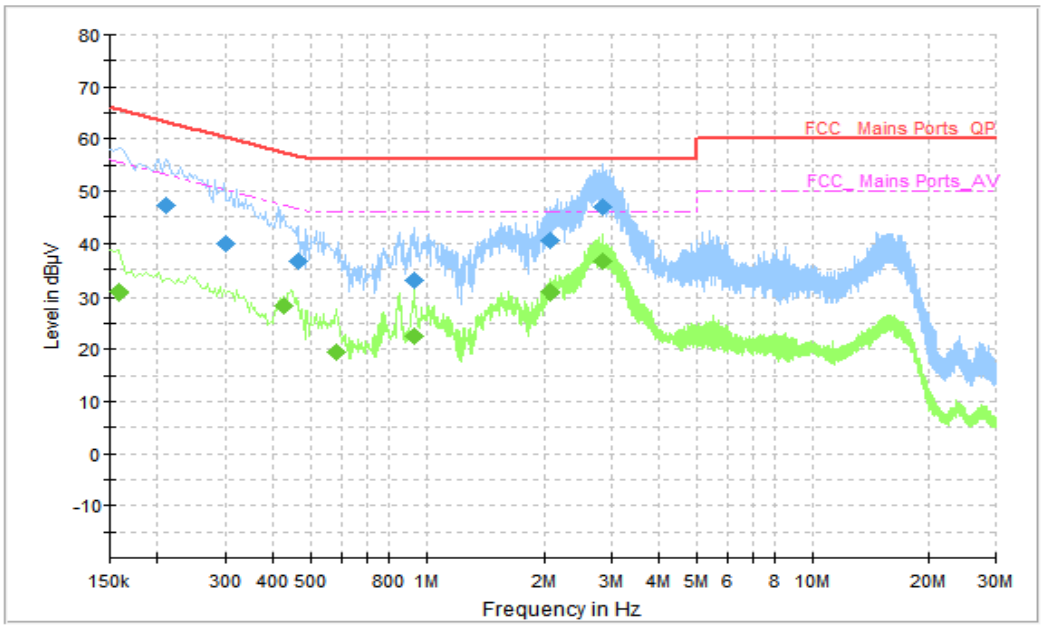


Figure A.2.10. Conducted Emission (Video Player)

Final_Result_QPK

Frequency (MHz)	QuasiPeak (dBµV)	Limit (dBµV)	Margin (dB)	Line	Corr. (dB)	P_{Mea} (dBµV)
0.210000	47.16	63.21	16.04	N	10	37.16
0.302000	39.79	60.19	20.40	N	10	29.79
0.466000	36.56	56.59	20.02	N	10	26.56
0.926000	32.80	56.00	23.20	N	10	22.80
2.086000	40.67	56.00	15.33	N	10	30.67
2.846000	46.95	56.00	9.05	N	10	36.95

Final_Result_AVG

Frequency (MHz)	Average (dBµV)	Limit (dBµV)	Margin (dB)	Line	Corr. (dB)	P_{Mea} (dBµV)
0.158000	30.67	55.57	24.90	L1	10	20.67
0.426000	28.41	47.33	18.92	N	10	18.41
0.582000	19.46	46.00	26.54	N	10	9.46
0.926000	22.39	46.00	23.61	N	10	12.39
2.086000	30.69	46.00	15.31	N	10	20.69
2.846000	36.44	46.00	9.56	N	10	26.44

AC Input Port/ Voltage: 120V/60Hz

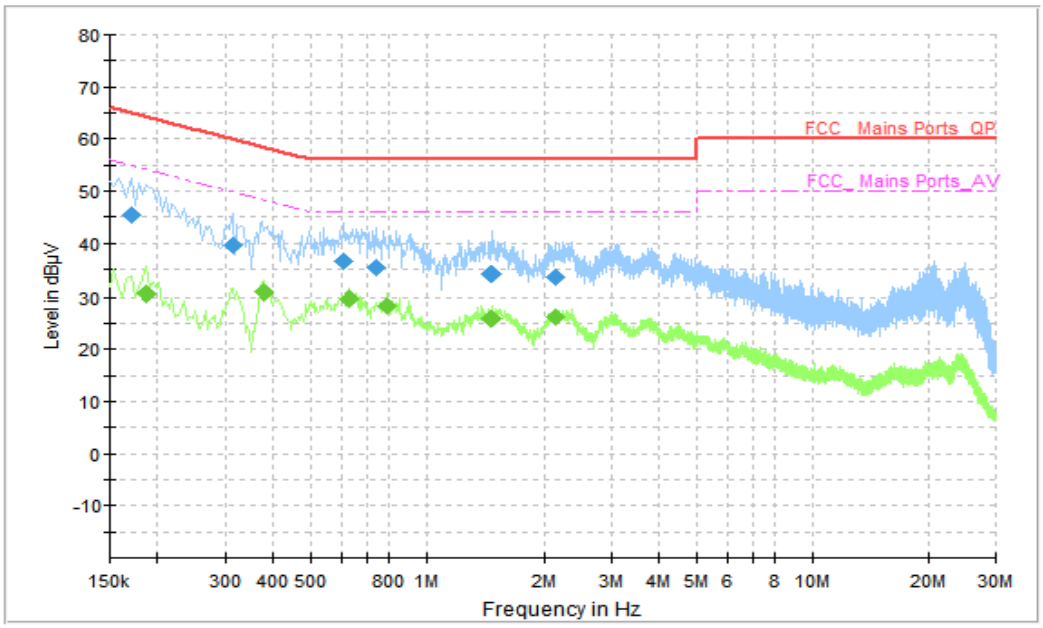


Figure A.2.11. Conducted Emission (Video Player)

Final_Result_QPK

Frequency (MHz)	QuasiPeak (dBµV)	Limit (dBµV)	Margin (dB)	Line	Corr. (dB)	P_{Mea} (dBµV)
0.170000	45.40	64.96	19.56	L1	10	35.40
0.314000	39.58	59.86	20.29	N	10	29.58
0.610000	36.67	56.00	19.33	N	10	26.67
0.738000	35.31	56.00	20.69	N	10	25.31
1.470000	34.14	56.00	21.86	N	10	24.14
2.138000	33.60	56.00	22.40	N	10	23.60

Final_Result_AVG

Frequency (MHz)	Average (dBµV)	Limit (dBµV)	Margin (dB)	Line	Corr. (dB)	P_{Mea} (dBµV)
0.186000	30.34	54.21	23.88	N	9	21.34
0.378000	30.75	48.32	17.58	N	10	20.75
0.626000	29.44	46.00	16.56	L1	10	19.44
0.786000	28.39	46.00	17.61	L1	10	18.39
1.474000	25.88	46.00	20.12	N	10	15.88
2.146000	26.03	46.00	19.97	L1	10	16.03

AC Input Port/ Voltage: 240V/60Hz

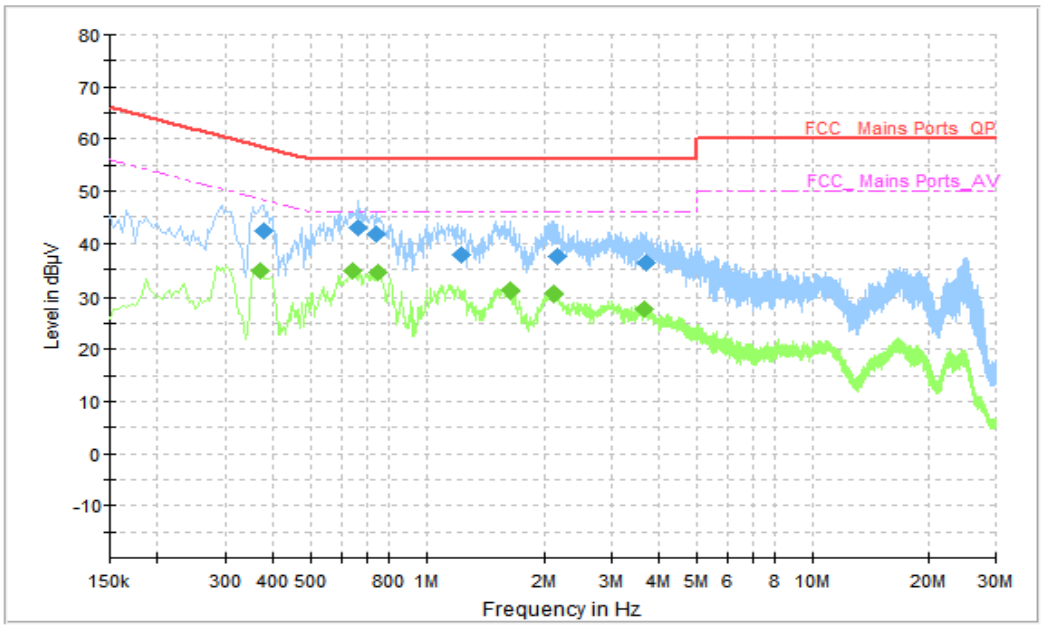


Figure A.2.12. Conducted Emission (Video Player)

Final_Result_QPK

Frequency (MHz)	QuasiPeak (dBµV)	Limit (dBµV)	Margin (dB)	Line	Corr. (dB)	P_{Mea} (dBµV)
0.378000	42.25	58.32	16.07	N	10	32.25
0.666000	43.08	56.00	12.92	N	10	33.08
0.742000	41.67	56.00	14.33	N	10	31.67
1.234000	37.66	56.00	18.34	N	10	27.66
2.166000	37.55	56.00	18.45	N	10	27.55
3.698000	36.15	56.00	19.85	N	10	26.15

Final_Result_AVG

Frequency (MHz)	Average (dBµV)	Limit (dBµV)	Margin (dB)	Line	Corr. (dB)	P_{Mea} (dBµV)
0.370000	34.79	48.50	13.71	N	10	24.79
0.642000	34.88	46.00	11.12	N	10	24.88
0.750000	34.35	46.00	11.65	N	10	24.35
1.626000	31.04	46.00	14.96	N	10	21.04
2.126000	30.50	46.00	15.50	N	10	20.5
3.638000	27.78	46.00	18.22	N	10	17.78

AC Input Port/ Voltage: 120V/60Hz

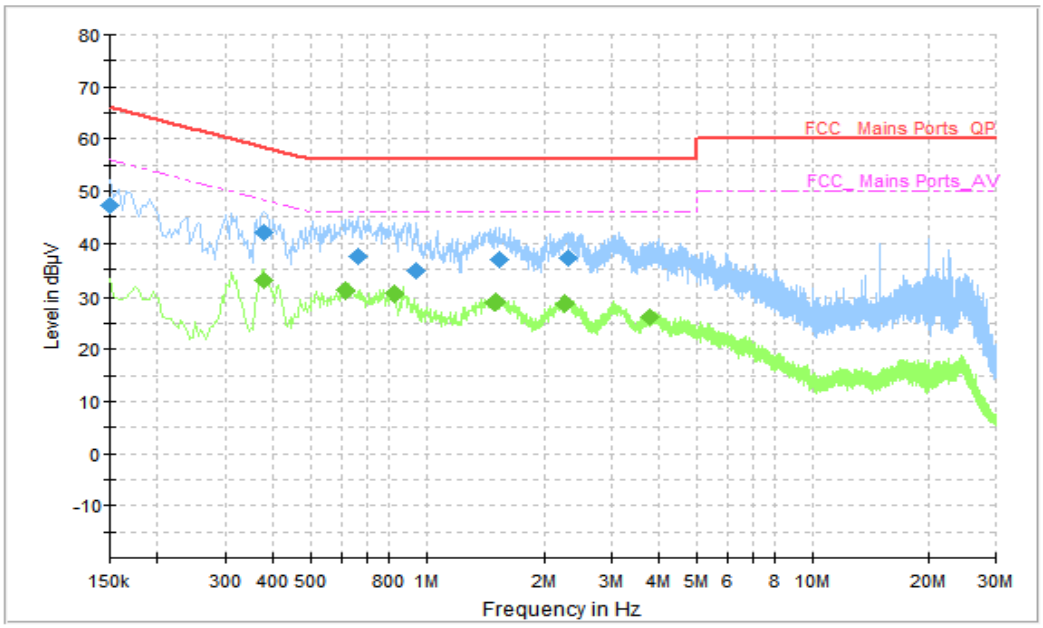


Figure A.2.13. Conducted Emission (FM Receiver)

Final_Result_QPK

Frequency (MHz)	QuasiPeak (dBµV)	Limit (dBµV)	Margin (dB)	Line	Corr. (dB)	P_{Mea} (dBµV)
0.150000	47.40	66.00	18.60	L1	10	37.40
0.378000	42.01	58.32	16.31	N	10	32.01
0.662000	37.46	56.00	18.54	L1	10	27.46
0.942000	34.83	56.00	21.17	L1	10	24.83
1.534000	36.97	56.00	19.03	N	10	26.97
2.302000	37.07	56.00	18.93	N	10	27.07

Final_Result_AVG

Frequency (MHz)	Average (dBµV)	Limit (dBµV)	Margin (dB)	Line	Corr. (dB)	P_{Mea} (dBµV)
0.378000	33.05	48.32	15.27	N	10	23.05
0.614000	30.94	46.00	15.06	N	10	20.94
0.822000	30.49	46.00	15.51	N	10	20.49
1.494000	28.89	46.00	17.11	N	10	18.89
2.262000	28.55	46.00	17.45	N	10	18.55
3.790000	26.17	46.00	19.83	N	10	16.17

AC Input Port/ Voltage: 240V/60Hz

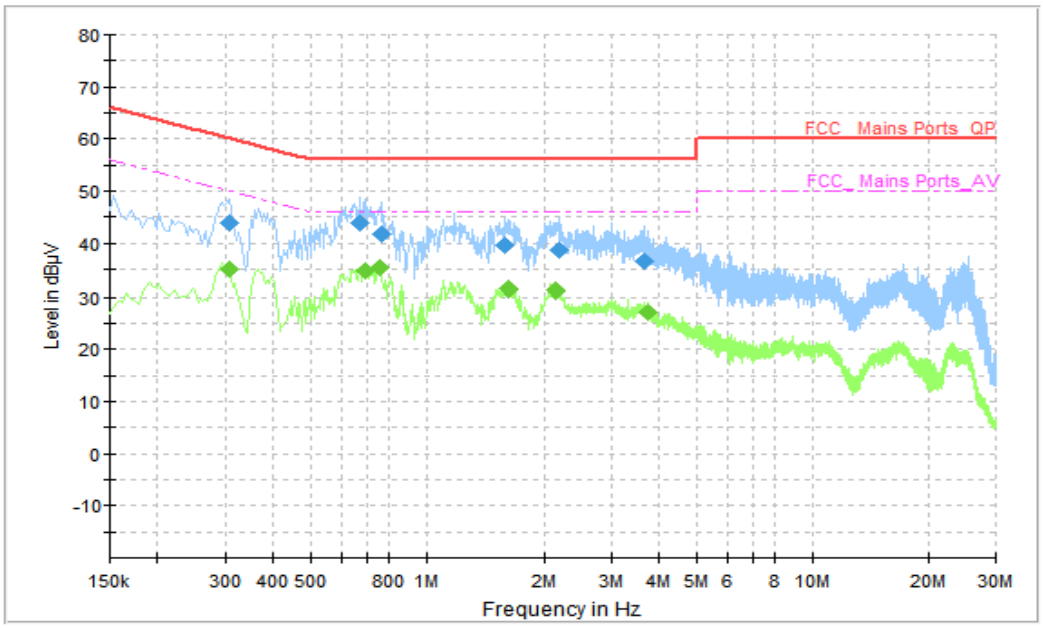


Figure A.2.14. Conducted Emission (FM Receiver)

Final_Result_QPK

Frequency (MHz)	QuasiPeak (dBµV)	Limit (dBµV)	Margin (dB)	Line	Corr. (dB)	P_{Mea} (dBµV)
0.306000	43.84	60.08	16.24	N	10	33.84
0.670000	43.92	56.00	12.08	N	10	33.92
0.762000	41.88	56.00	14.12	N	10	31.88
1.578000	39.53	56.00	16.47	N	10	29.53
2.190000	38.72	56.00	17.28	N	10	28.72
3.666000	36.54	56.00	19.46	N	10	26.54

Final_Result_AVG

Frequency (MHz)	Average (dBµV)	Limit (dBµV)	Margin (dB)	Line	Corr. (dB)	P_{Mea} (dBµV)
0.306000	34.97	50.08	15.10	N	10	24.97
0.694000	34.86	46.00	11.14	N	10	24.86
0.754000	35.24	46.00	10.76	N	10	25.24
1.614000	31.35	46.00	14.65	N	10	21.35
2.150000	31.00	46.00	15.00	N	10	21
3.746000	27.11	46.00	18.89	N	10	17.11

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