EMC Test Report

Product Name: Wireless Modem

Model Number: E5836

Report No: SYBHZ(R)E021022010EB-1
FCC ID: QISE5836
IC ID: 6369A-E5836

Reliability Laboratory of Huawei Technologies Co., Ltd.

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Notice 2

Modification Information:

Table 1 Modification Information

Modification Information	1	
	2	
	3	Not Applicable!
	4	
	5	
	6	
	7	

REPORT ON	**EMC TEST OF Wireless Modem** **M/N: E5836**
REGULATION	**FCC CFR47 Part 15: Subpart B;** **CAN/CSA-CEI/IEC CISPR 22;** **FCC CFR47 Part 22：Subpart H；** **FCC CFR47 Part 24：Subpart E；** **RSS-132;** **RSS-133;**
START OF TEST	**Jan.04, 2010**
END OF TEST	**Jan.14, 2010**
Final Judgement:	**Pass**

Approver	**2010-03-08**	张兴海	
	Date	**Name**	**Signature**
Operator	**2010-03-08**	徐广义	徐广义
	Date	**Name**	**Signature**

REPORT BODY CONTENT

1 Status 6
1.1 Product Information 6
1.2 Applied Standard 6
1.3 Test Site 6
1.4 Test environment condition 6
2 Summary of Results 7
3 Equipment Specification 8
3.1 General Description 8
3.2 Sub-Assembly Identity 8
4 System Configuration during EMC Test 10
4.1 Cables Used during Test 10
4.2 Associated Equipment Used during Test 10
4.3 Test Configurations and Test Mode 10
4.4 Test conditions and test Connections 11
5 Electromagnetic Interference (EMI) 14
5.1 Radiated Disturbance 30MHz to 18GHz 14
5.2 Conducted Disturbance 0.15 MHz to 30MHz 15
5.3 Radiated Spurious Emissions 15
6 Receiver Spurious Emission (Radiated) 18
7 Main Test Instruments 19
8 System Measurement Uncertainty 20
9 Graph and Data of Emission Test 21
9.1 Radiated Disturbance 21
10 Conducted Disturbance 23
10.2 Radiated Spurious Emission 24
10.3 Receiver Spurious Emission 42

1 Status

1.1 Product Information

CLIENT:	Huawei Technologies Co., Ltd.
ADDRESS:	Bantian Longgang District Shenzhen, P.R. China
MANUFACTURING DESCRIPTION	Wireless Modem
MANUFACTURERS MODEL NUMBER	E5836

1.2 Applied Standard

APPLIED STANDARD	FCC CFR47 Part 15: Subpart B; ICES-003 ANSI C63.4 CAN/CSA-CEI/IEC CISPR 22 CISPR 22 RSS-Gen; FCC CFR47 Part 22：Subpart H； FCC CFR47 Part 24：Subpart E； RSS-132; RSS-133;

1.3 Test Site

Site 1:
EMC LABORATORY OF RELIABILITY LABORATORY OF HUAWEI TECHNOLOGIES CO., LTD

1.4 Test environment condition

Ambient temperature	20~25°C
Relative humidity	40%~52%
Atmospheric pressure	101kPa

2 Summary of Results

Table 2 below shows a brief summary of the results obtained.

Table 2 Summary of results

EUT Classification：Wireless Terminal				
Test Items	**Test Configuration &Test Mode**	**Required Performance Criteria**	**Result**	**Site**
Radiated Emissions Enclosure Port	TC1/TC2 (TM12-TM22)	N/A	Pass	Site1
Conducted Emissions	TC1 (TM1-TM22)	N/A	Pass	Site1
Radiated Spurious Emissions Enclosure Port	TC1 (TM1-TM11)	N/A	Pass	Site1
Receiver Spurious Emission	TC1 (TM1-TM11)	N/A	Pass	Site1
Note: 1, Measurement taken is within the measurement uncertainty of measurement system. 2, TC = Test configuration				

3 Equipment Specification

3.1 General Description

E5836 is a UMTS/GSM Wireless Modem. It can be used as a WiFi Access Point, Max to 5 WiFi stations can be associating with E5836 simultaneity. It also can be used as a USB modem by connecting with PC via USB cable. It supports wireless internet accessing function. The data service rate is HSUPA 5.75Mbps, and HSDPA 7.2Mbps.
For the E5836 the WCDMA frequency is BAND I, BAND II and BAND V. The GPRS/EDGE frequency is 850/900/1800/1900 MHz. The WiFi frequency is 2.4G.
But only GSM850/PCS1900MHz/WCDMA1900/850M and WiFi band test data included in this report.

3.1.1 Main Equipment Technical Data

Description:	Wireless Modem
Models:	E5836
Input Rated Voltage:	~ 230V
Rated Consumption Power:	Max 3.5 W
Maximum Emission Power:	Max 30dBm(E.R.P.)
Dimensions:	95.5(length)× 48.6(width)× 13.7(height)(mm^3)
Weight:	< 90g

Table 3 Sub-Assembly Identity

Mode		Work Frequency	
		Transmitt Frequency(MHz)	Receive Frequency (MHz)
GSM	GSM850	824 - 849	869 - 894
	PCS1900	1850-1910	1930-1990
WCDMA	WCDMA1900	1850-1910	1930-1990
	WCDMA850	824-849	869-894
WiFi	11b/g	2400~2483.5	2400~2483.5

3.2 Sub-Assembly Identity

Table 4 Sub-Assembly Identity

Board				
Model Name	Qty.	Hardware Version	Serial	Description
WLC1GCPU	1	VER.D	020QBJ2093000056	Main board
Accessory				
Name	Qty.	Manufacture	Serials number	Description
Adapter	1	Shen Zhen Huntkey Power Technology Co.,Ltd	HKY792700001	Adapter Model: CHG5365-3C voltage nominal: ~230V Input Voltage : 100-240V ~50/60Hz, 0.2A Output Voltage: ⎓ 5.3V 650mA Rated Power: 3.5W
Adapter	1	TECH-POWER INTERNATIONAL CO.,LTD	TD075032R-0206	Adapter Model:TPCA-053065VY voltage nominal: ~230V Input Voltage : 100-240V ~50/60Hz, 0.2A Output Voltage: ⎓ 5.3V 650mA

				Rated Power: 3.5W
Rechargeable Li-ion	1	Huawei Technologies Co., Ltd.	SAC9212H10338315	Battery Model: HB4F1 Rated capacity: 1500mAh Nominal Voltage: ⎓ +3.7V Charging Voltage: ⎓ +4.2V
Rechargeable Li-ion	1	Huawei Technologies Co., Ltd.	GAG9326XF1100418	Battery Model: HB4F1L Rated capacity: 1250mAh Nominal Voltage: ⎓ +3.7V Charging Voltage: ⎓ +4.2V

4 System Configuration during EMC Test

The Equipment under Test (EUT) was functioning correctly during all tests. The EUT was installed within the test site and was configured to simulate a typical user installation.

4.1 Cables Used during Test

Table 5 Cable Used during Test

Port	Length	Quantity	Type of Cable
AC Power Port	3m	1	Unshielded
USB	0.85m	1	Unshielded

4.2 Associated Equipment Used during Test

Table 6 Associated Equipment Used during Test

Name	Model	Manufacturer	S/N	Cal Date
Radio Communication Tester	CMU200	R&S	3608105673	2009-10-10
Notebook	HSTNN-I05C	HP	CNU5301HH0	NA

4.3 Test Configurations and Test Mode

4.3.1 Test Configuration.

The EUT will be connected to test system (Base Station Simulator) in order to simulate normal operating conditions (with reference to the guidance given in the standard for this type of equipment).

TC1:EUT powered with an adapter and connected to the test system (Base Station Simulator).
TC2:EUT connected to the notebook by USB port.

Table 7 Configuration table

TC1/TC2	TM1~TM22

4.3.2 Test Mode

There were 22 test Modes. TM1 to TM22 were shown in the diagrams below:
TM1: operate in traffic GPRS 850;
TM2: operate in traffic mode EGPRS 850;
TM3: operate in traffic GPRS 1900;
TM4: operate in traffic mode EGPRS 1900;
TM5: operate in traffic mode WCDMA 1900;
TM6: operate in traffic mode HSDPA 1900;
TM7: operate in traffic mode HSUPA 1900;
TM8: operate in traffic mode WCDMA 850;
TM9: operate in traffic mode HSDPA 850;
TM10: operate in traffic mode HSUPA 850;
TM11: operate in traffic mode WIFI;
TM12: operate in idle GPRS 850;
TM13: operate in idle mode EGPRS 850;
TM14: operate in idle GPRS 1900;
TM15: operate in idle mode EGPRS 1900;
TM16: operate in idle mode WCDMA 1900;

TM17: operate in idle mode HSDPA 1900;
TM18: operate in idle mode HSUPA 1900;
TM19: operate in idle mode WCDMA 850;
TM20: operate in idle mode HSDPA 850;
TM21: operate in idle mode HSUPA 850;
TM22: operate in idle mode WIFI;

The EUT will be connected to test system (Base Station Simulator) in order to simulate normal operating conditions (with reference to the guidance given in the standard for this type of equipment).

4.4 Test conditions and test Connections

4.4.1 Test Conditions

The EUT will be connected to test system (Base Station Simulator) in order to simulate normal operating conditions (with reference to the guidance given in the standard for this type of equipment).

4.4.2 Test Connections

For GSM, the following conditions shall also be met:
The EUT shall be commanded to operate at maximum transmit power;
The downlink RXQUAL shall be monitored.

. For WCDMA, the following conditions shall also be met:
Logical Test Interface for details regarding generic call set-up procedure and BER, BLER test loop scenarios:
set and send continuously up power control commands to the UE;
The DTX shall be disabled;
Inner Loop Power Control shall be enabled;
transmitting and/or receiving (UL/DL) bit rate for reference test channel shall be 12.2 kbit / s.
The EUT shall be commanded to operate at maximum transmit power;

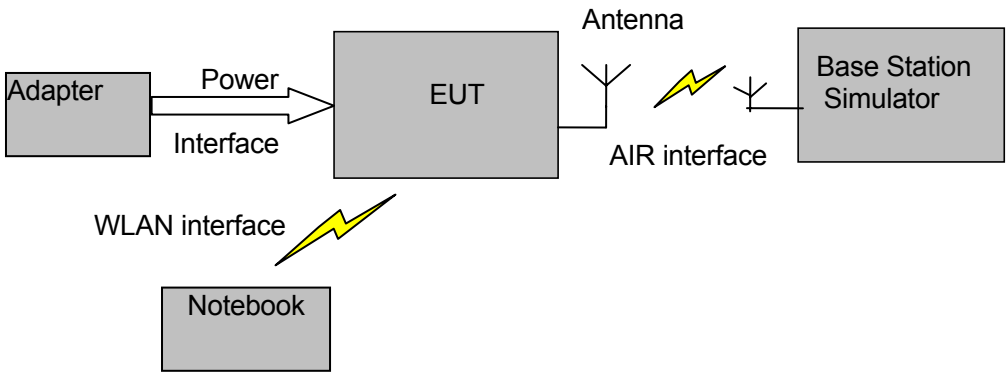


Figure 1.: Test Configuration

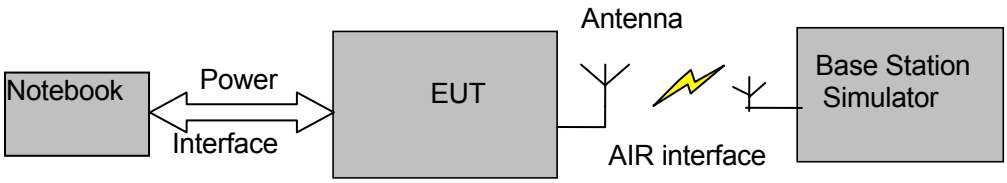


Figure 2. Test Configuration

Idle Mode:

The EUT is required to be in the idle mode:

For WCDMA, the following conditions shall be met:
UE shall be camped on a cell;
UE shall perform Location Registration (LR) before the test, but not during the test;
UE's neighbour cell list shall be empty;
Paging repetition period and DRX cycle shall be set to minimum (shortest possible time interval).

For GSM and DCS, the following conditions shall be met:
When the EUT is required to be in the idle mode, the test system shall simulate a Base Station (BS) with Broadcast Control Channel/Common Control Channel (BCCH/CCCH) on one carrier. The EUT shall be synchronized to the BCCH, listening to the CCCH and able to respond to paging messages. Periodic Location Updating shall be disabled.

Please refer to following figure:

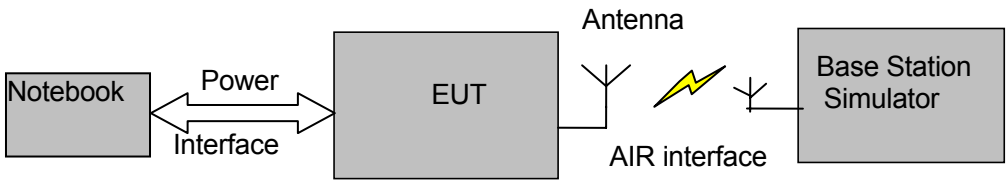


Figure 3. Test Configuration

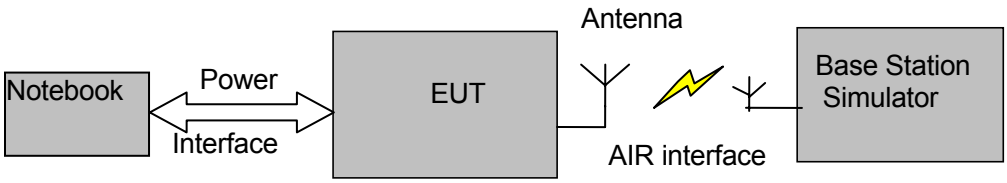


Figure 4. Test Configuration

5 Electromagnetic Interference (EMI)

5.1 Radiated Disturbance 30MHz to 18GHz

5.1.1 Test Procedure

The test site semi-anechoic chamber has met the requirement of NSA tolerance 4dB according to the standards: ANSI C63.4. The test distance was 3m.The set-up and test methods were according to ANSI 63.4 and CAN/CSA-CEI/IEC CISPR 22
A preliminary scan and a final scan of the emissions were made from 30 MHz to18 GHz by using test script of software; the emissions were measured using Quasi-Peak Detector (30MHz~1GHz) and AV detector (above 1GHz). The maximal emission value was acquired by adjusting the antenna height, polarisation and turntable azimuth in accordance with the software setup. Normally, the height range of antenna was 1m to 4m, the azimuth range of turntable was 0°to 360°, The receive antenna has two polarizations V and H.

EUT was configured in idle mode and the test performed at worst emission state.
Measurement bandwidth: 30 MHz – 1000 MHz: 120 k Hz
Measurement bandwidth: 1GHz – 18GHz: 1MHz

Test set up figure:

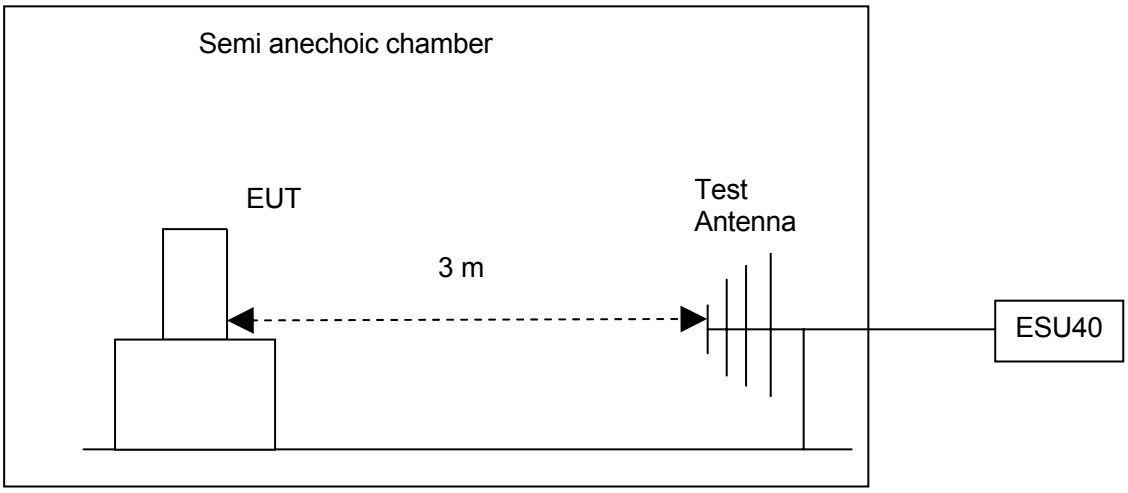


Figure 5. Test set-up

5.1.2 Test Results

The EUT has met the requirements for Radiated Emission of enclosure port.

Table 8 Test Limits

Frequency of Emission (MHz)	Radiated Limit	
	Unit(μv/m)	Unit(dBμV/m)
30-88	100	40
88-216	150	43.5
216-960	200	46
Above 960	500	54

5.2 Conducted Disturbance 0.15 MHz to 30MHz

5.2.1 Test Procedure

The Table-top EUT was placed upon a non-metallic table 0.8 m above the horizontal metal reference ground plane. EUT was connected to LISN and LISN was connected to reference Ground Plane. EUT was 80cm from LISN. The set-up and test methods were according to ANSI C63.4: 2003.

Conducted Disturbance at AC Port measurements were undertaken on the L and N Lines. The emissions were measured using a Quasi-Peak Detector and Average Detector.

Huawei Mobile Station was communicated with the BTS simulator through Air interface, the BTS simulator controls the Mobile Station to transmitter the maximum power which defined in specification of product. The Mobile Station operated on the typical channel.

Measurement bandwidth (RBW) for 150kz to 30 MHz: 9 kHz;

Test Set-up figure:

The Mobile Station was setup in the screened chamber and operated under nominal conditions.

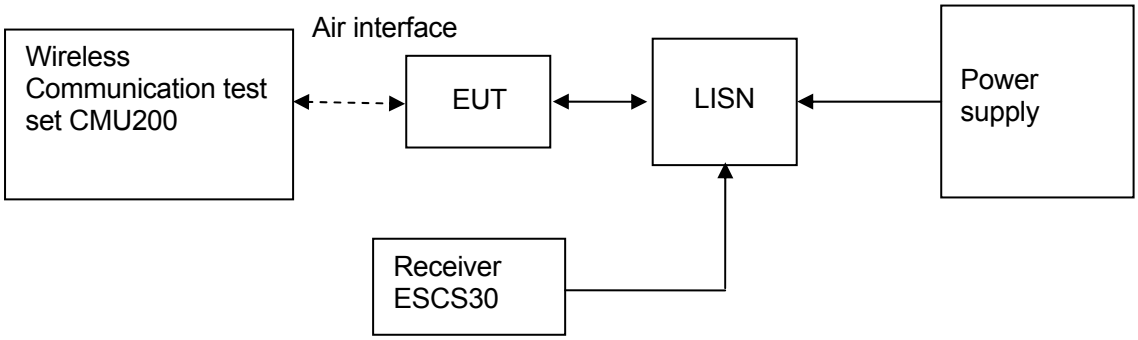


Figure 6. Test Set-up

5.2.2 Test Results

The EUT has met requirements for Conducted disturbance of power lines.

Table 9 Test Limit of DC&AC Power Port

Frequency range	150kHz~ 30MHz	
Classification	Class B	
Limit(Class B)	Voltage limits	
	QP	AV
0.15MHz~0.5MHz	66~56 dBμV	56~46 dBμV
0.5MHz~5MHz	56 dBμV	46 dBμV
5MHz~30MHz	60 dBμV	50 dBμV

5.3 Radiated Spurious Emissions

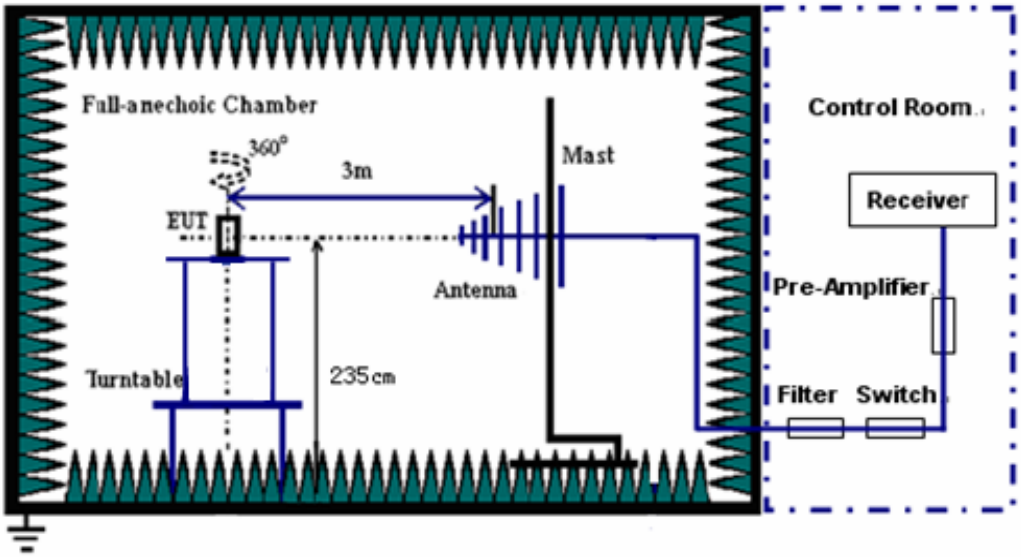
5.3.1 Test Procedure

A test site fulfilling the requirements of ITU-R Recommendation SM329-10 was used. The EUT was placed on a non-conducting support in the anechoic chamber and was operated from a power source via an RF filter to avoid radiation from the power leads.

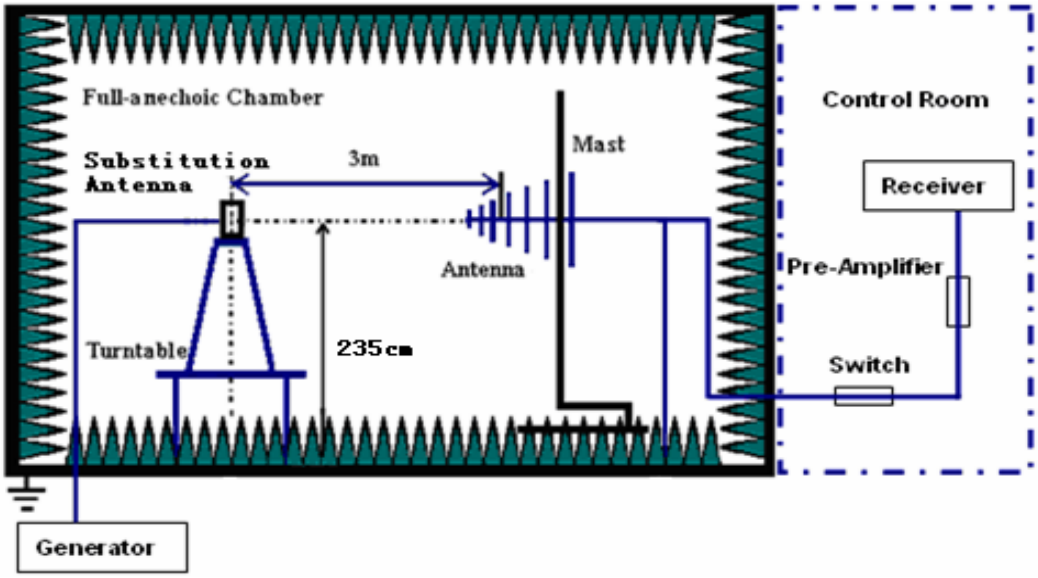
Step 1:

For transmitters other than single sideband, independent sideband and controlled carrier radiotelephone, EIRP shall be measured when the transmitter is adjusted in accordance with the tune-up procedure to give the values of current and voltage on the circuit elements specified in 2.1033(c)(8). Connect the EUT to the BTS simulator via the air interface.

Test the Radiated maximum output power by the Rohde and Schwarz ESIB26 Test Receiver from test antenna.



Step 2:
Use substitution method to verify the maximum output power. The EUT is substituted by a dipole antenna. The dipole is connected to a signal generator. And then adjust the output level of the signal generator to get the same received power recorded in step1 on ESIB26 Test Receiver, and record the power level of Signal Generator. Of course, the cable loss at the test frequency should be compensated.



According to part 22.917, the defined measurement bandwidth as following:

22.917(b) Measurement procedure: Compliance with these rules is based on the use of measurement instrumentation employing a resolution bandwidth of 100 kHz or greater.
Measurement bandwidth (RBW) for 9 kHz up to 150 kHz: 1 kHz;
Measurement bandwidth (RBW) for 150 kHz up to 30 MHz: 10 kHz;
Measurement bandwidth (RBW) for 30 MHz up to 1 GHz: 100 kHz;

Measurement bandwidth (RBW) for 1GHz up to 18 GHz: 1MHz;

According to RSS-132, the defined measurement bandwidth as following:
Measurement procedure: Compliance with these rules is based on the use of measurement instrumentation employing a resolution bandwidth of 100 kHz or greater.
Measurement bandwidth (RBW) for 30 MHz up to 1 GHz: 100 kHz;
Measurement bandwidth (RBW) for 1GHz up to 18 GHz: 1MHz;

Table 10 Radiated Spurious Emissions Limits

Frequency band	Minimum requirement (E.R.P) traffic mode
30MHz~18GHz	-13dBm

According to part 24.238, the defined measurement bandwidth as following:
24.238 (b) Measurement procedure: Compliance with these provisions is based on the use of measurement instrumentation employing a resolution bandwidth of 1 MHz or greater.
Measurement bandwidth (RBW) for 9 kHz up to 150 kHz: 1 kHz;
Measurement bandwidth (RBW) for 150 kHz up to 30 MHz: 10 kHz;
Measurement bandwidth (RBW) for 30 MHz up to 26.5 GHz: 1 MHz;

According to RSS-139, the defined measurement bandwidth as following:
RSS-139 Measurement procedure: Compliance with these provisions is based on the use of measurement instrumentation employing a resolution bandwidth of 1 MHz or greater.
Measurement bandwidth (RBW) for 30 MHz up to 26.5 GHz: 1 MHz;

Table 11 Radiated Spurious Emissions Limits

Frequency band	Minimum requirement (E.R.P) traffic mode
30MHz~26.5GHz	-13dBm

5.3.2 Test Results

The EUT has met the requirements of Part22/24/27/RSS-132/133/139 requirement.

6 Receiver Spurious Emission (Radiated)

6.1.1 Test Procedure

The EUT was connected to the Spectrum Analyzer or equivalent via one RF RX diversity connector, and other RF connectors were connected to match loads. The EUT was controlled to transmit maximum power and to be operated in the normal receive mode by Console Computer. Measure and record the Receiver Out-band Spurious Emissions of the EUT by the Spectrum Analyzer or equivalent.

According to IC RSS-Gen clause 4.10, the search for spurious emissions shall be from the lowest frequency internally generated or used in the receiver (e.g. local oscillator, intermediate or carrier frequency), or 30 MHz, whichever is the higher, to at least 3 times the highest tuneable or local oscillator frequency, whichever is the higher, without exceeding 40 GHz.

A preliminary scan and a final scan of the emissions were made from 30 MHz to18 GHz by using test script of software; the emissions were measured using Quasi-Peak Detector (30MHz~1GHz) and AV detector (above 1GHz). The maximal emission value was acquired by adjusting the antenna height, polarisation and turntable azimuth in accordance with the software setup. Normally, the height range of antenna was 1m to 4m, the azimuth range of turntable was 0°to 360°, The receive antenna has two polarizations V and H.

EUT was configured in idle mode and the test performed at worst emission state.
Measurement bandwidth: 30 MHz – 1000 MHz: 120 k Hz
Measurement bandwidth: 1GHz – 18GHz: 1MHz

Test set up figure:

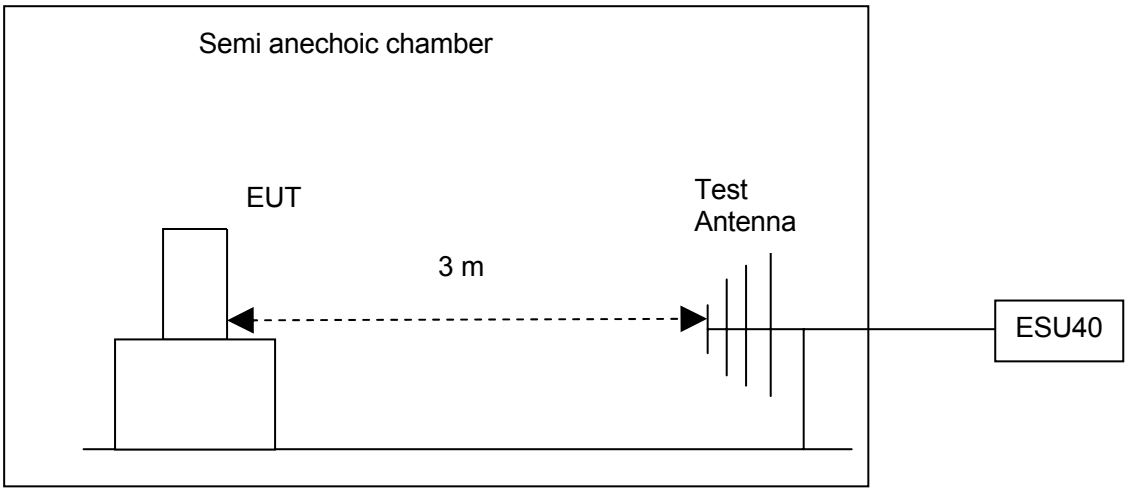


Figure 7. Test set-up

6.1.2 Test Results

The EUT has met the requirements for Radiated Emission of enclosure port.

Table 12 Test Limits

Frequency of Emission (MHz)	Radiated Limit	
	Unit(μv/m)	Unit(dBμV/m)
30-88	100	40
88-216	150	43.5
216-960	200	46
Above 960	500	54

7 Main Test Instruments

Table 13 Main Test Equipments

Test item	Test Instrument	Model	Manufacturer	Cal-Date	Cal Interval (month)
RE	EMI Test receiver	ESU26	R&S	Apr.23, 2009	12
	Broadband Antenna	CBL 6112B	SCHAFFNER	Jun.08, 2009	12
CE	EMI Test receiver	ESU40	R&S	April.22, 2009	12
	Artificial Mains Network	ENV216	R&S	Aug.12, 2009	12
RSE	EMI Test receiver	ESIB26	R&S	May.30, 2009	12
	Horn Antenna	3117	ETS-LINDGREN	Jul.16, 2009	12
	Broadband Antenna	CBL6112B	SCHAFFNER	Oct.17,2008	12
	Horn Antenna	3160	ETS-LINDGREN	Aug.03,2008	12

Software Information			
Test Item	Software Name	Manufacturer	Version
RE/CE	ES-K1	R&S	1.7.1
RSE	EMC32	R&S	V5.10.99

8 System Measurement Uncertainty

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

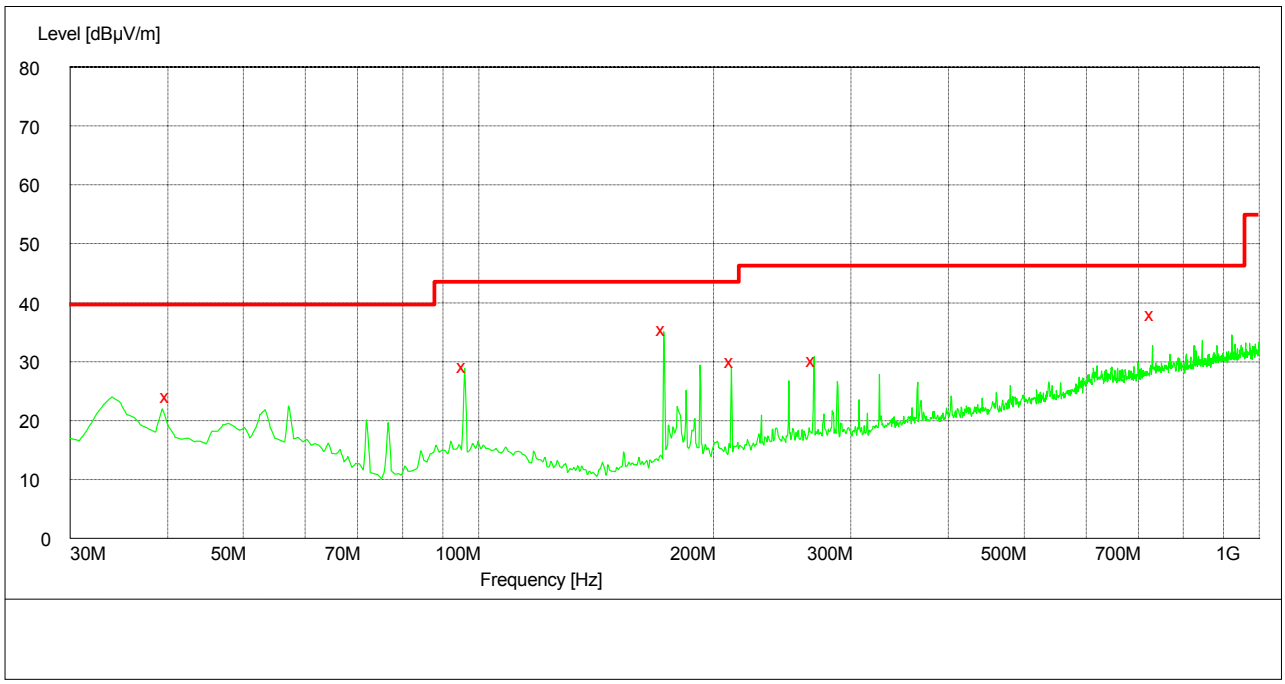
Table 14 System Measurement Uncertainty

Items		Extended Uncertainty
RE	Field strength (dBμV/m)	U=4.2dB; k=2(30MHz-1GHz)
RE	Field strength (dBμV/m)	U=3.6dB; k=2(1GHz-18GHz)
RSE	ERP (dBm)	U=2.2dB; k=2
CE	Disturbance Voltage (dBμV)	U=3.3dB; k=2

9 Graph and Data of Emission Test

9.1 Radiated Disturbance

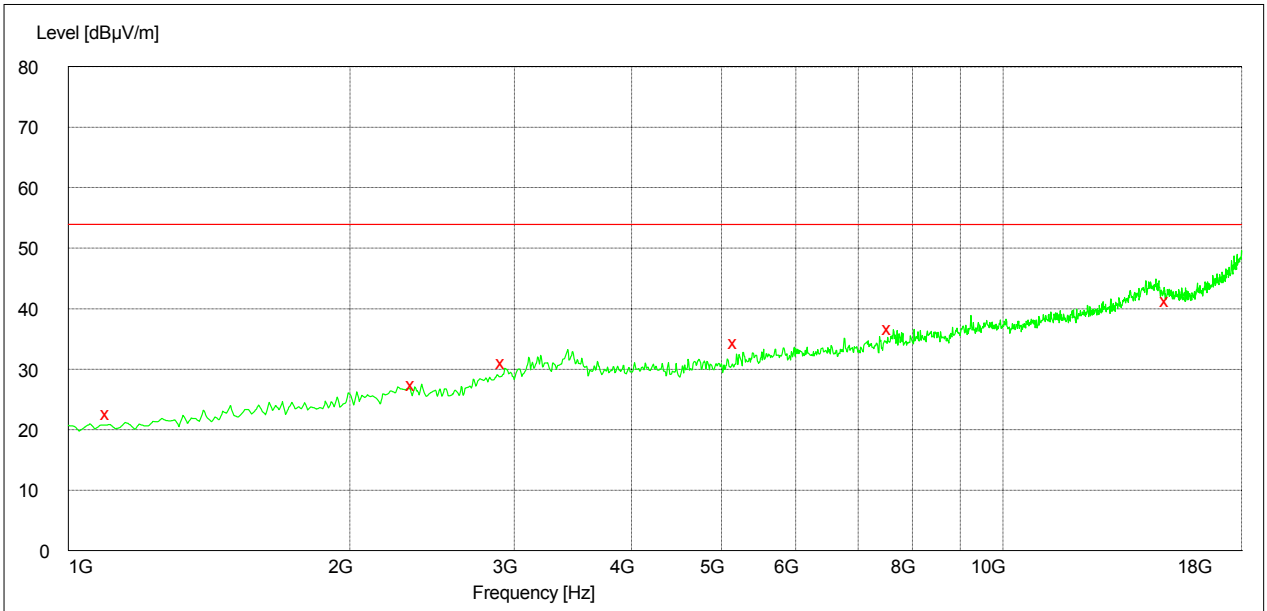
This test was carried out in all the test modes, Here only the worst test result was shown.
30MHz-1GHz



MEASUREMENT RESULT: QP Detector

Frequency MHz	Level dBµV/m	Transd dB	Limit dBµV/m	Margin dB	Height cm	Azimuth deg	Polarisation
40.020000	24.30	13.1	40.0	15.7	103.0	358.00	VERTICAL
96.000000	29.30	12.8	43.5	14.2	103.0	287.00	VERTICAL
172.800000	35.70	10.3	43.5	7.8	127.0	210.00	HORIZONTAL
211.200000	30.20	12.4	43.5	13.3	134.0	230.00	HORIZONTAL
268.800000	30.30	14.5	46.0	15.7	100.0	192.00	HORIZONTAL
729.600000	38.10	24.1	46.0	7.9	119.0	1.00	HORIZONTAL

1GHz-18GHz



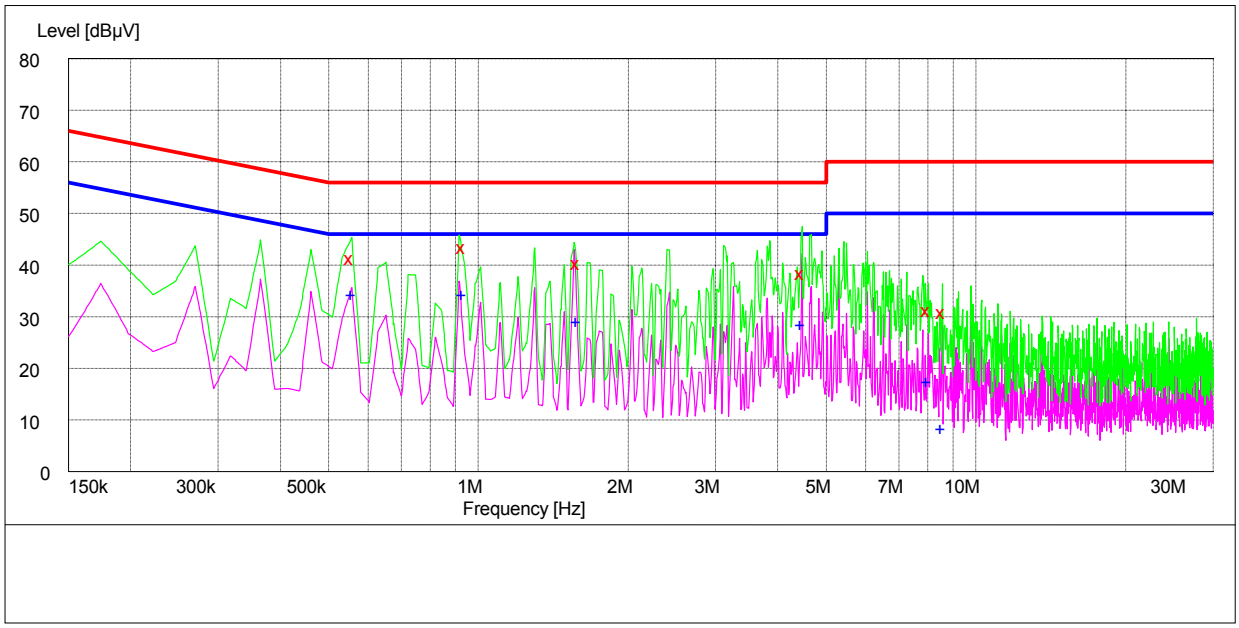
MEASUREMENT RESULT: AV Detector

Frequency MHz	Level dBµV/m	Transd dB	Limit dBµV/m	Margin dB	Height cm	Azimuth deg	Polarisation
1108.500000	21.90	-15.9	54.0	32.1	129.0	90.00	HORIZONTAL
2379.000000	28.80	-10.0	54.0	25.2	150.0	273.00	HORIZONTAL
2909.500000	30.50	-7.6	54.0	23.5	148.0	13.00	HORIZONTAL
5061.500000	33.00	-1.4	54.0	21	148.0	170.00	HORIZONTAL
7510.000000	37.40	4.1	54.0	16.6	139.0	224.00	VERTICAL
15995.500000	40.20	17.3	54.0	13.8	100.0	110.00	HORIZONTAL

10 Conducted Disturbance

This test was carried out in all the test modes, Here only the worst test result was shown.

10.1.1 AC Power Port Test Data



MEASUREMENT RESULT: QP Detector

Frequency MHz	Level dBµV	Transd dB	Limit dBµV	Margin dB	Line	PE
0.555000	41.70	10.1	56	14.3	N	FLO
0.933000	43.90	10.1	56	12.1	N	FLO
1.585500	40.80	10.1	56	15.2	N	FLO
4.479000	38.90	10.2	56	17.1	N	FLO
8.034000	31.70	10.2	60	28.3	N	FLO
8.592000	31.20	10.2	60	28.8	N	FLO

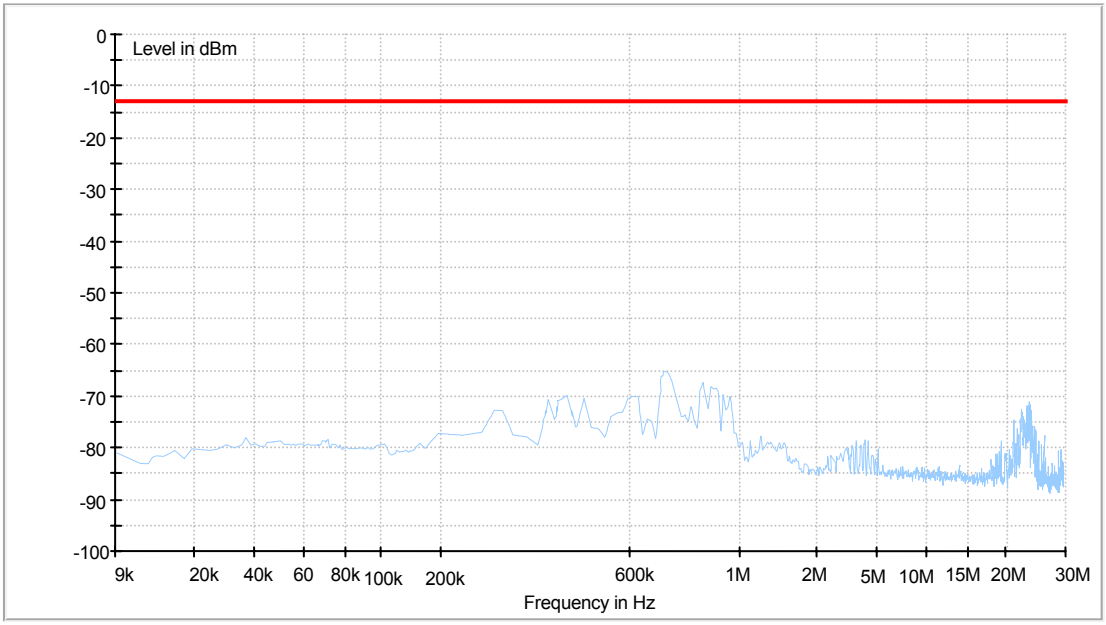
MEASUREMENT RESULT: AV Detector

Frequency MHz	Level dBµV	Transd dB	Limit dBµV	Margin dB	Line	PE
0.559500	34.50	10.1	46	11.5	N	FLO
0.933000	34.60	10.1	46	11.4	N	FLO
1.585500	29.40	10.1	46	16.6	N	FLO
4.483500	28.80	10.2	46	17.2	N	FLO
8.034000	17.80	10.2	50	32.2	N	FLO
8.583000	8.50	10.2	50	41.5	N	FLO

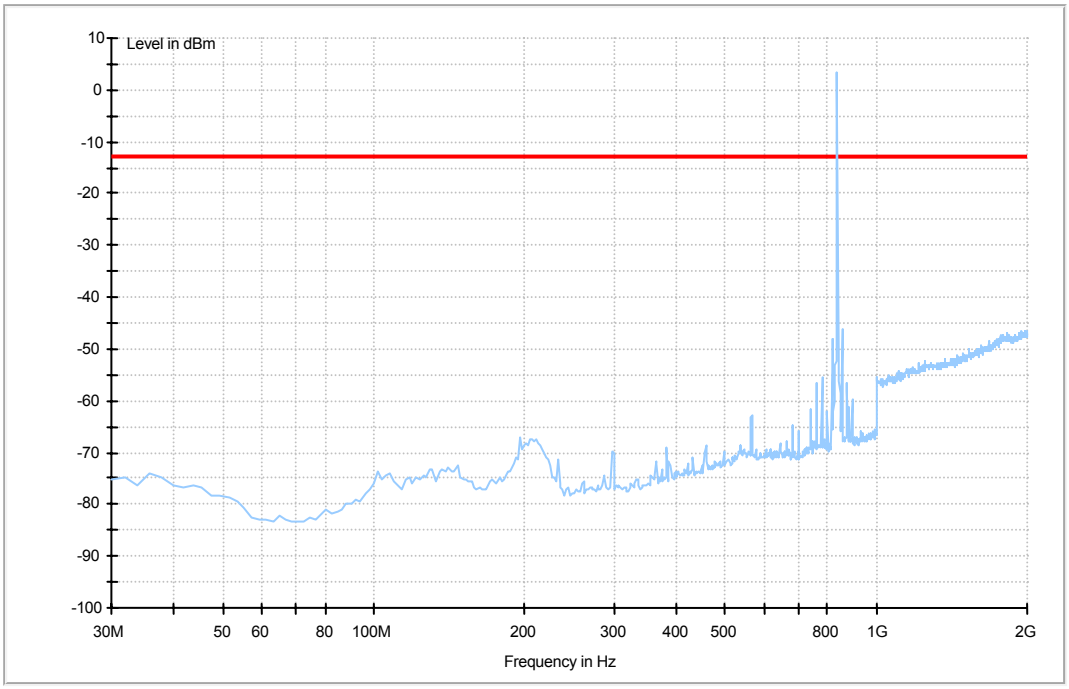
10.2 Radiated Spurious Emission

10.2.1 For GPRS 850

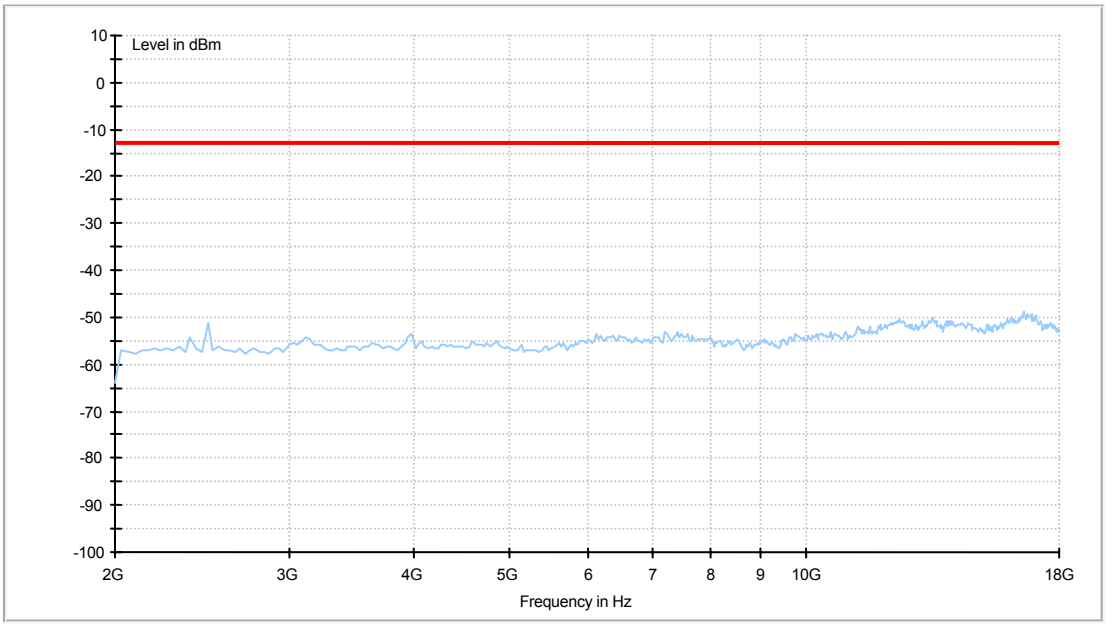
Traffic Mode (9kHz-30MHz)



Traffic Mode (30MHz-2GHz)

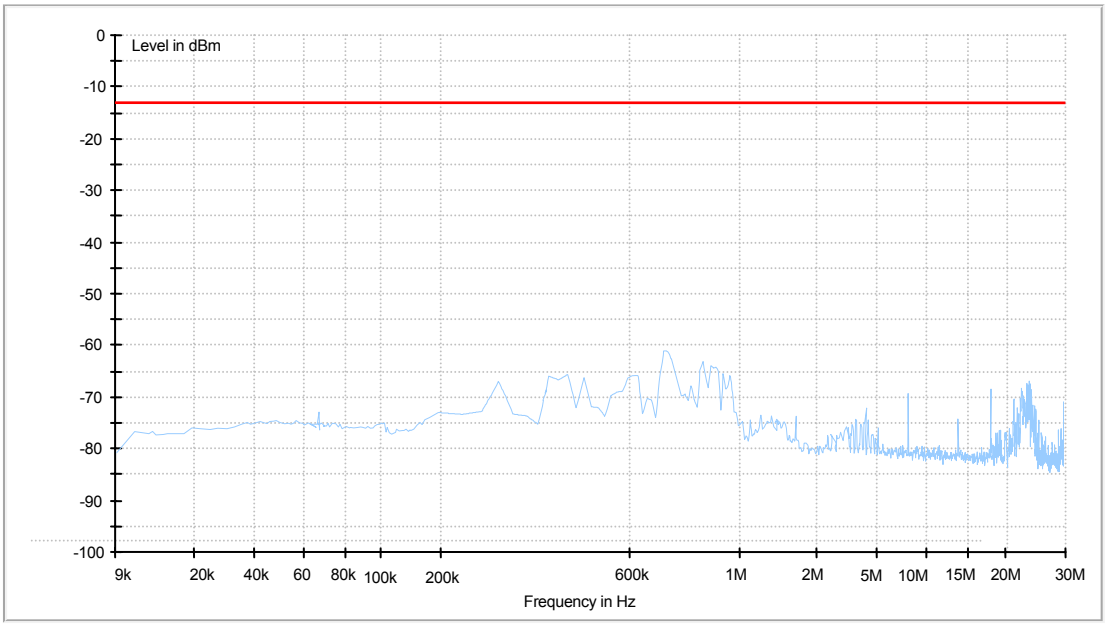


Traffic Mode (2GHz-18GHz)

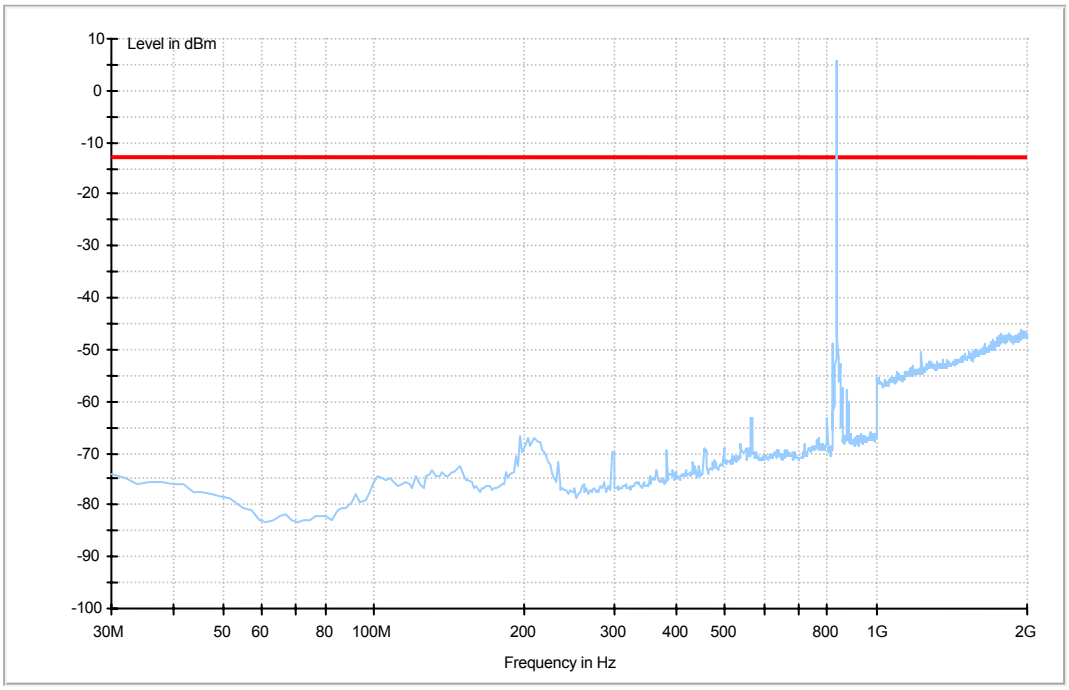


10.2.2 For EGPRS 850

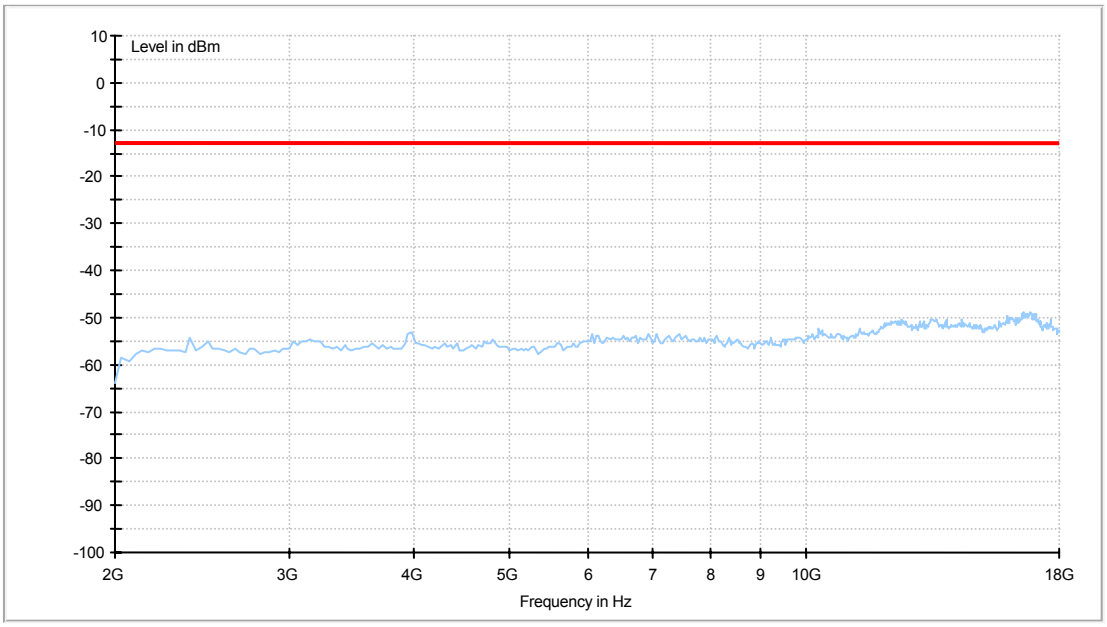
Traffic Mode (9kHz-30MHz)



Traffic Mode (30MHz-2GHz)

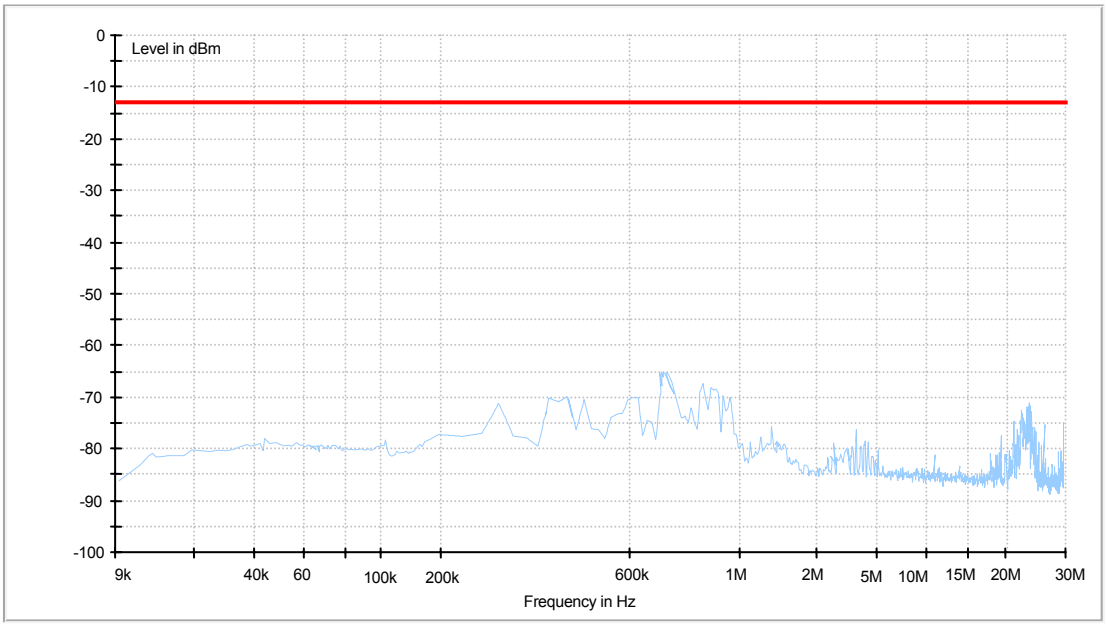


Traffic Mode (2GHz-18GHz)

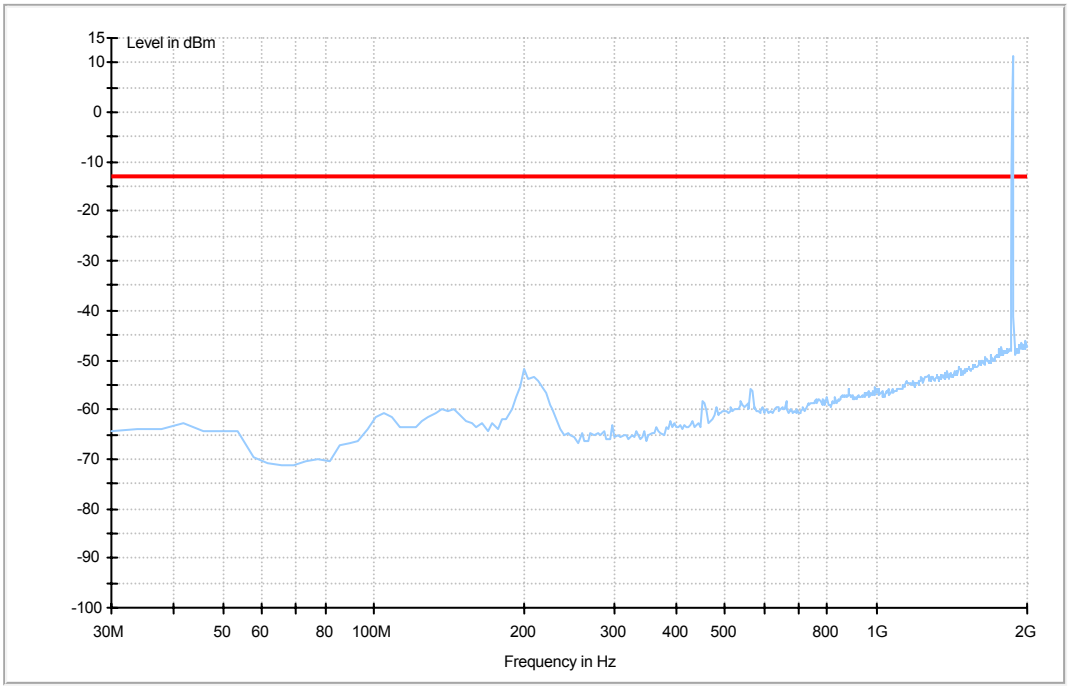


10.2.3 For GPRS 1900

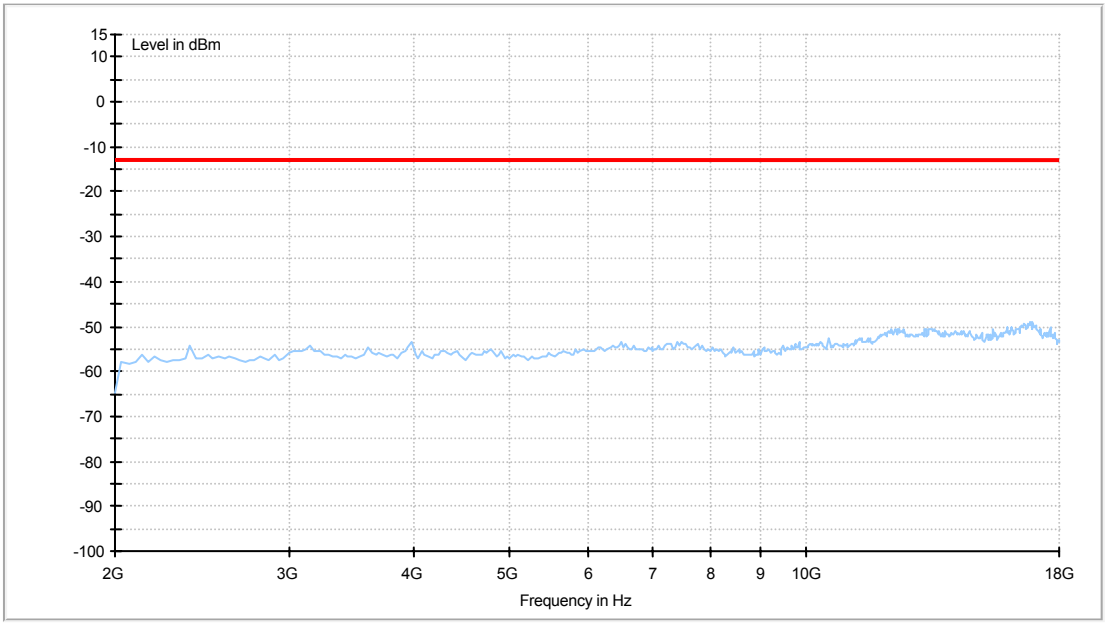
Traffic Mode (9kHz-30MHz)



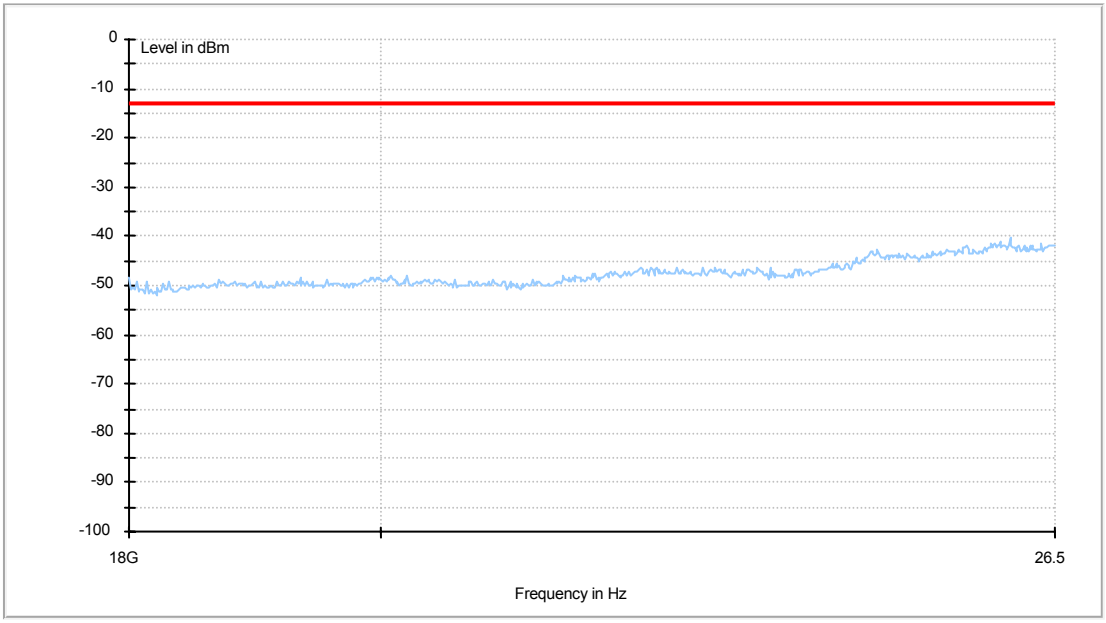
Traffic Mode (30MHz-2GHz)



Traffic Mode (2GHz-18GHz)

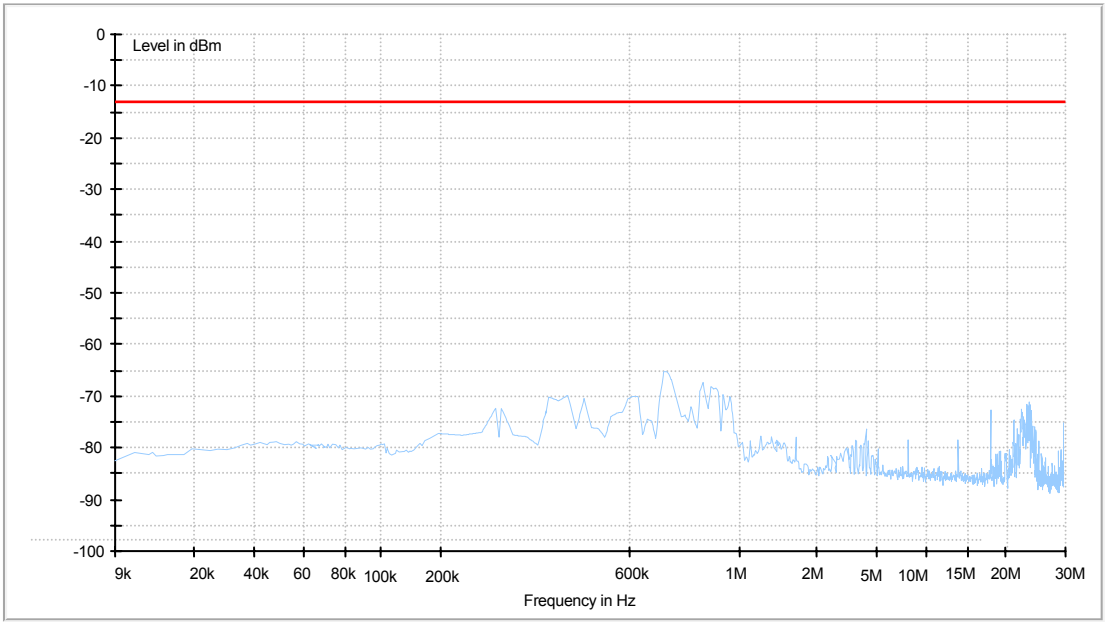


Traffic Mode (18GHz-26.5GHz)

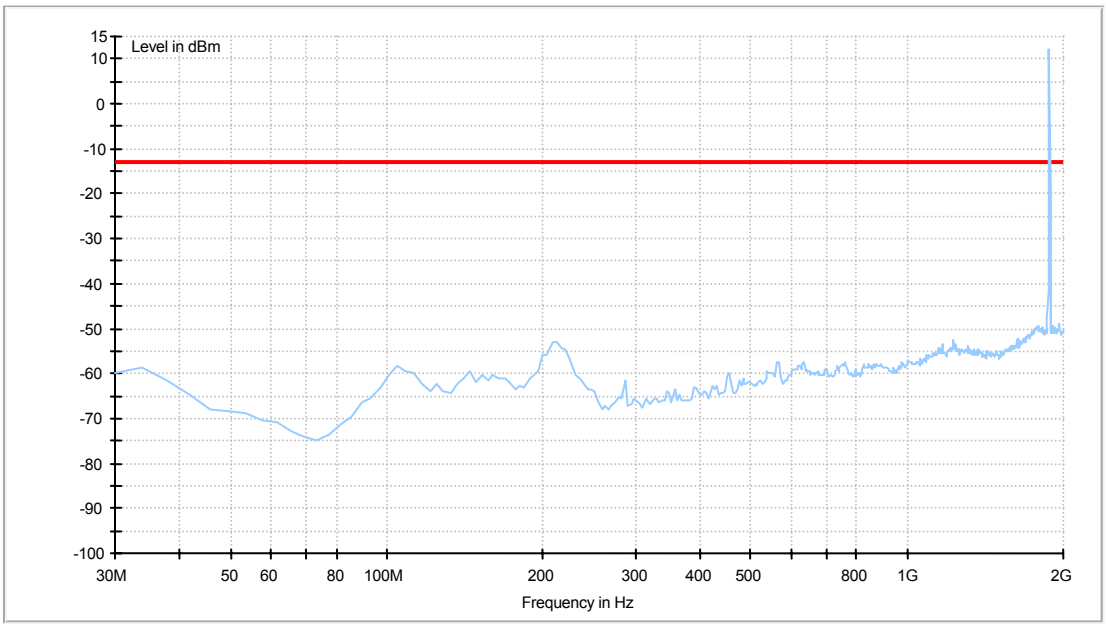


10.2.4 For EGPRS 1900

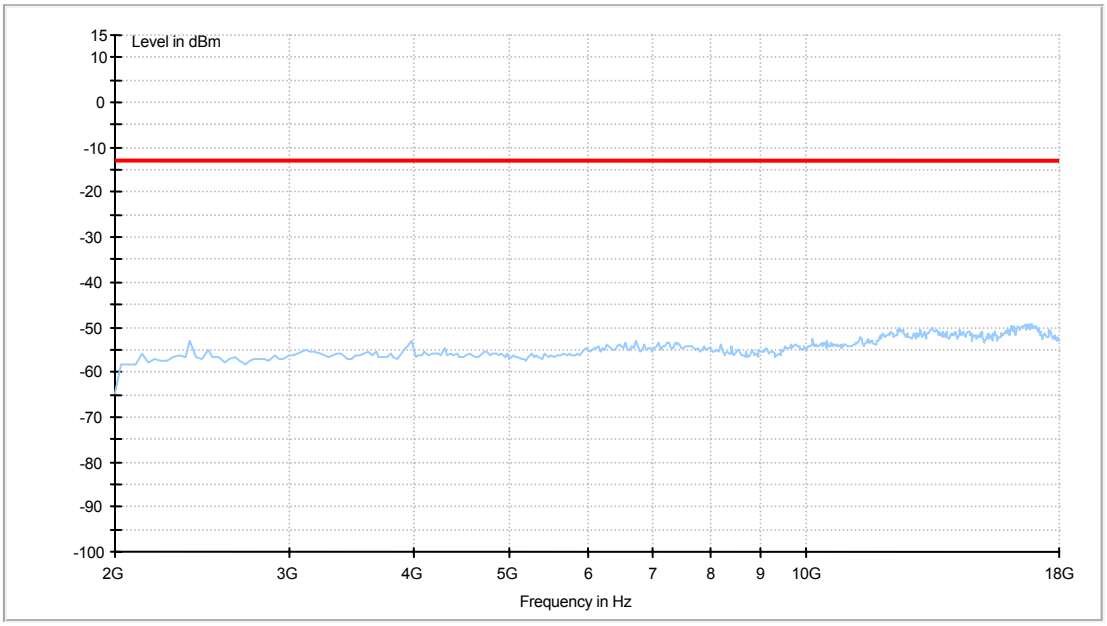
Traffic Mode (9kHz-30MHz)



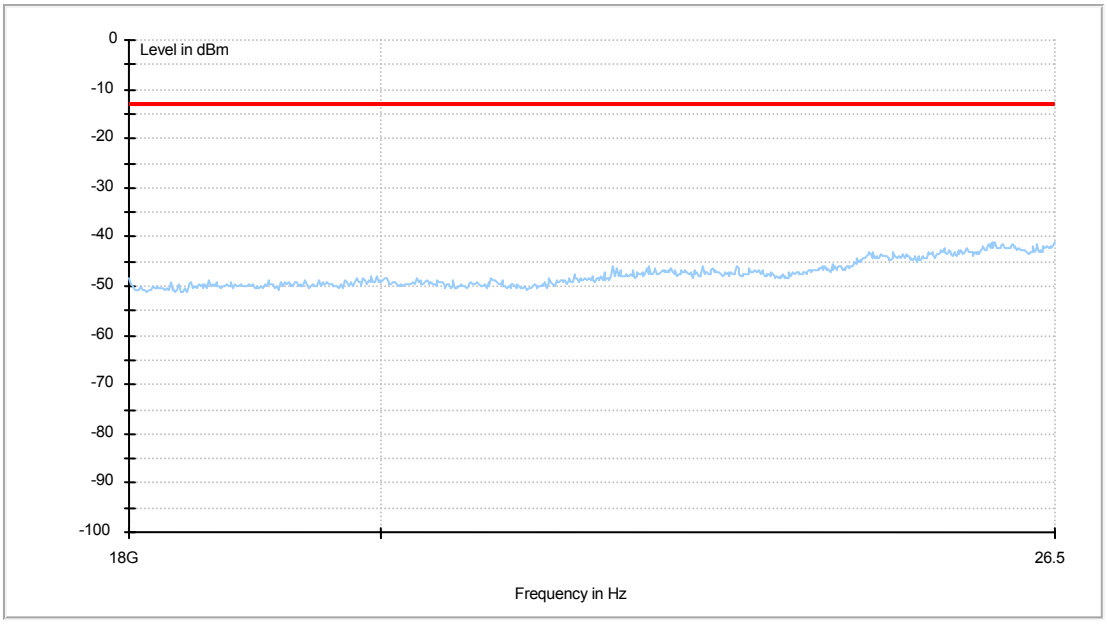
Traffic Mode (30MHz-2GHz)



Traffic Mode (2GHz-18GHz)

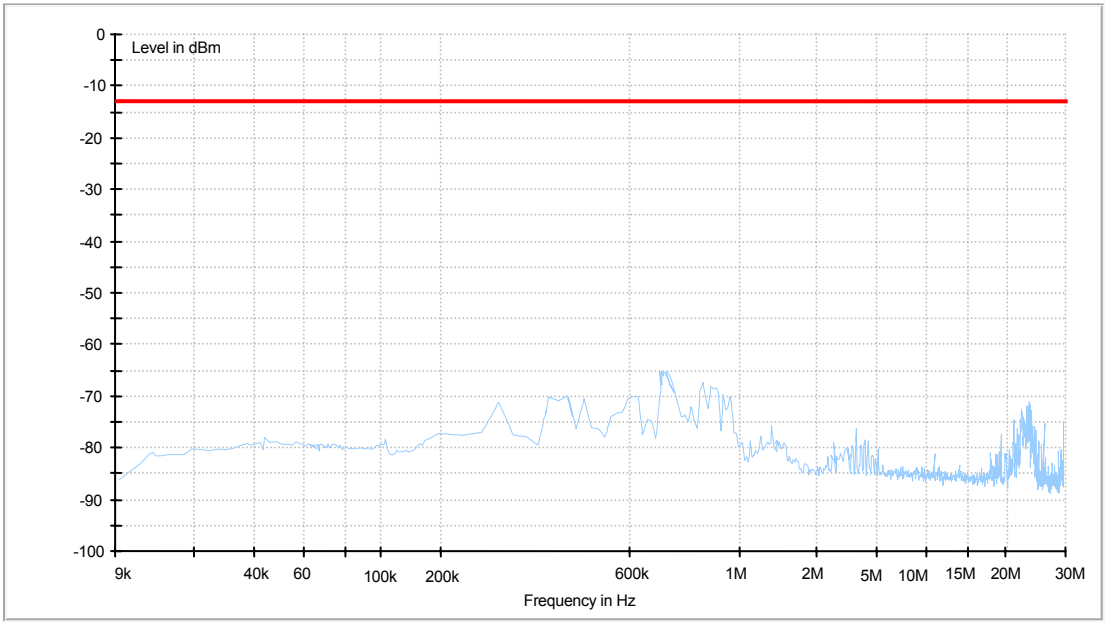


Traffic Mode (18GHz-26.5GHz)

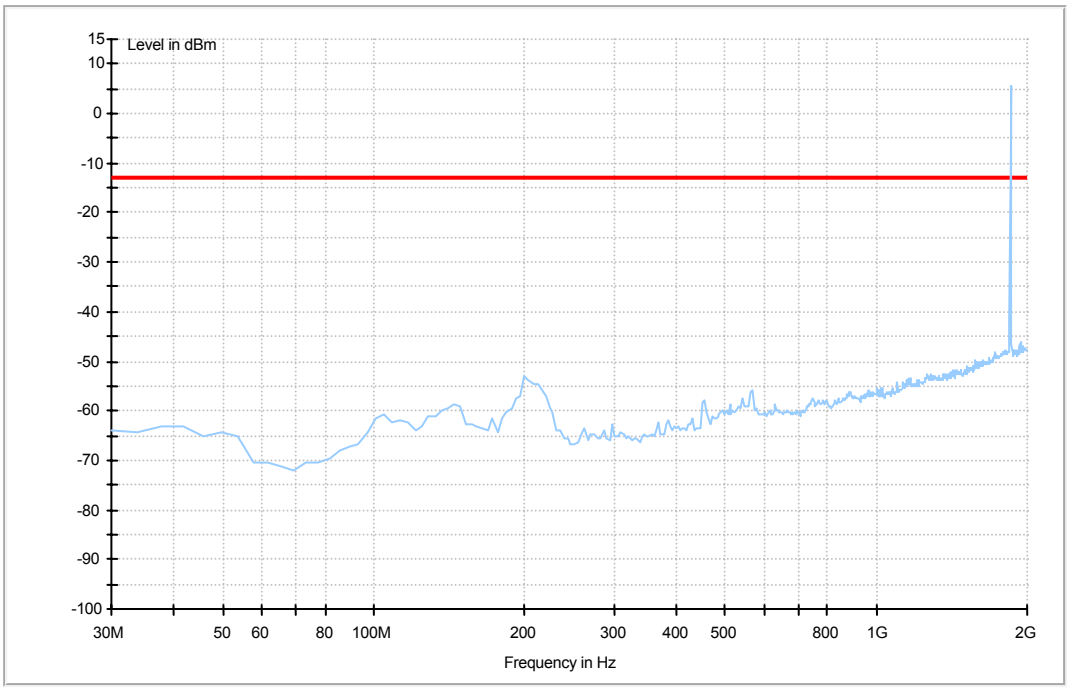


10.2.5 For WCDMA 1900

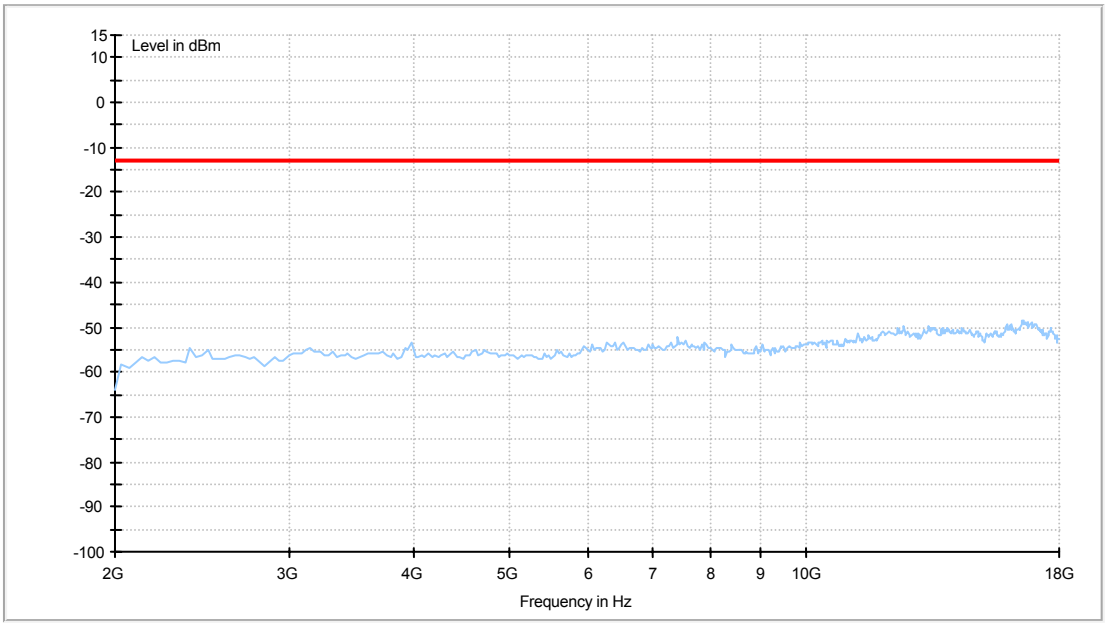
Traffic Mode (9kHz-30MHz)



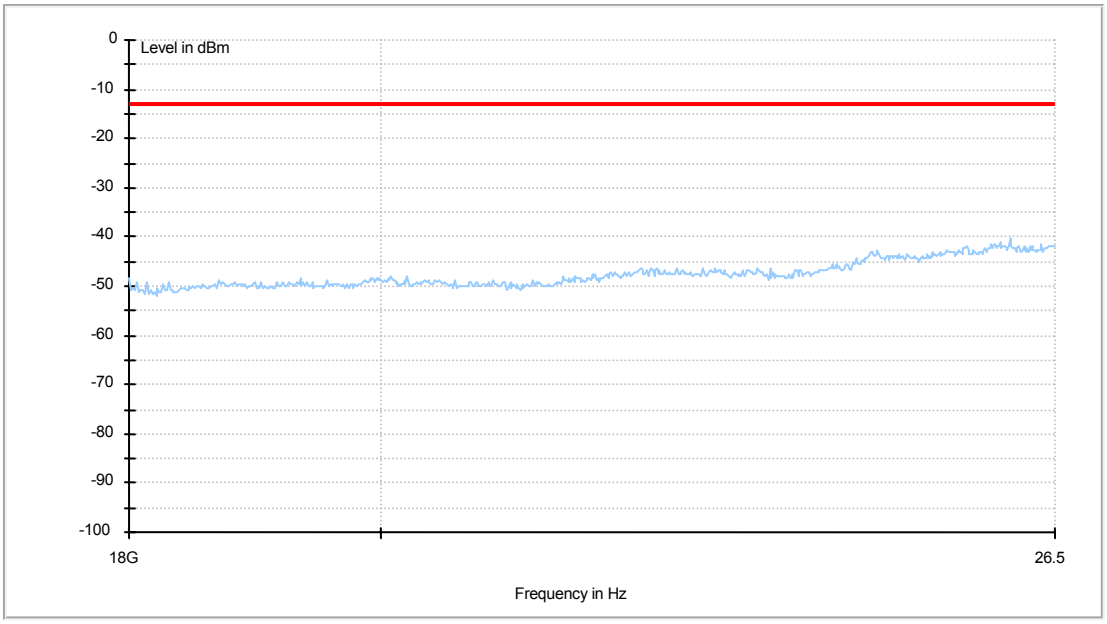
Traffic Mode (30MHz-2GHz)



Traffic Mode (2GHz-18GHz)

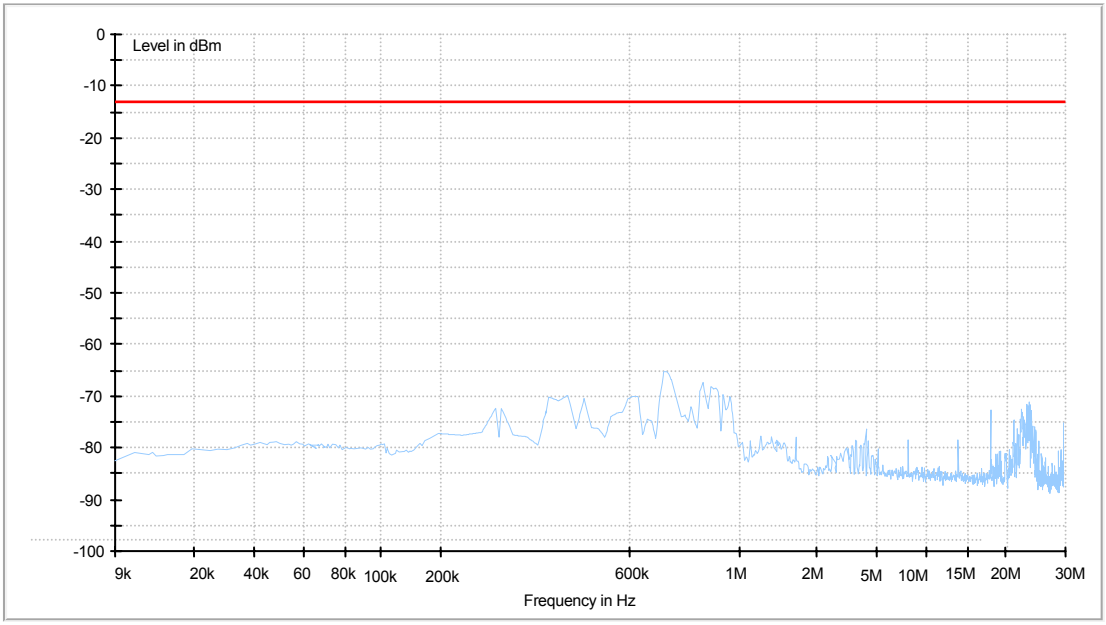


Traffic Mode (18GHz-26.5GHz)

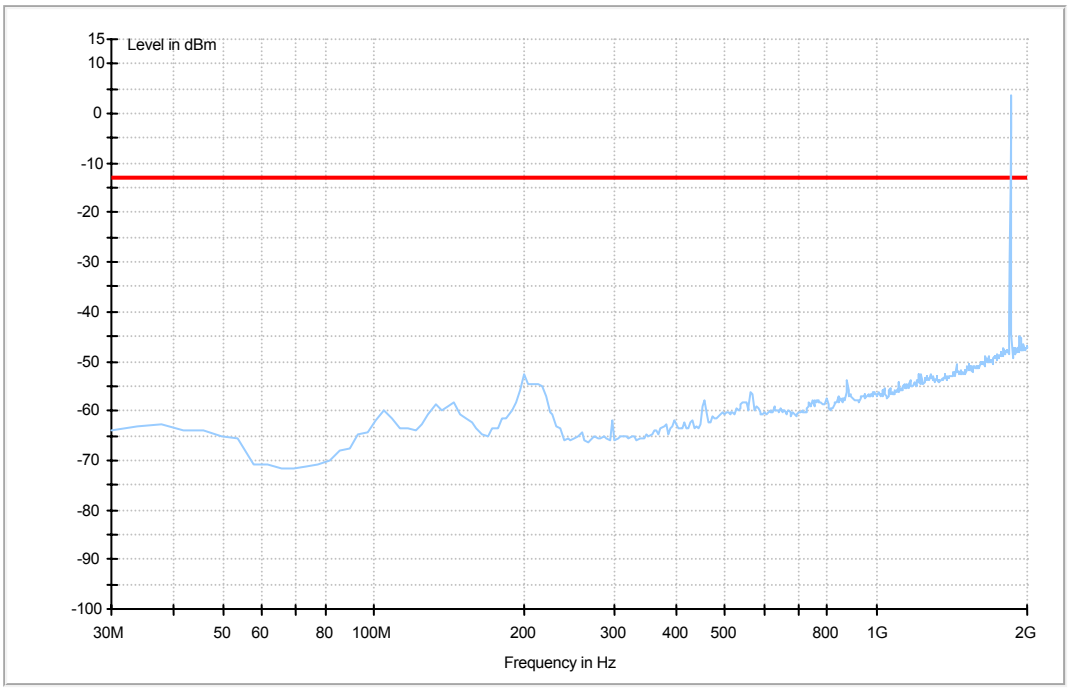


10.2.6 For HSDPA 1900

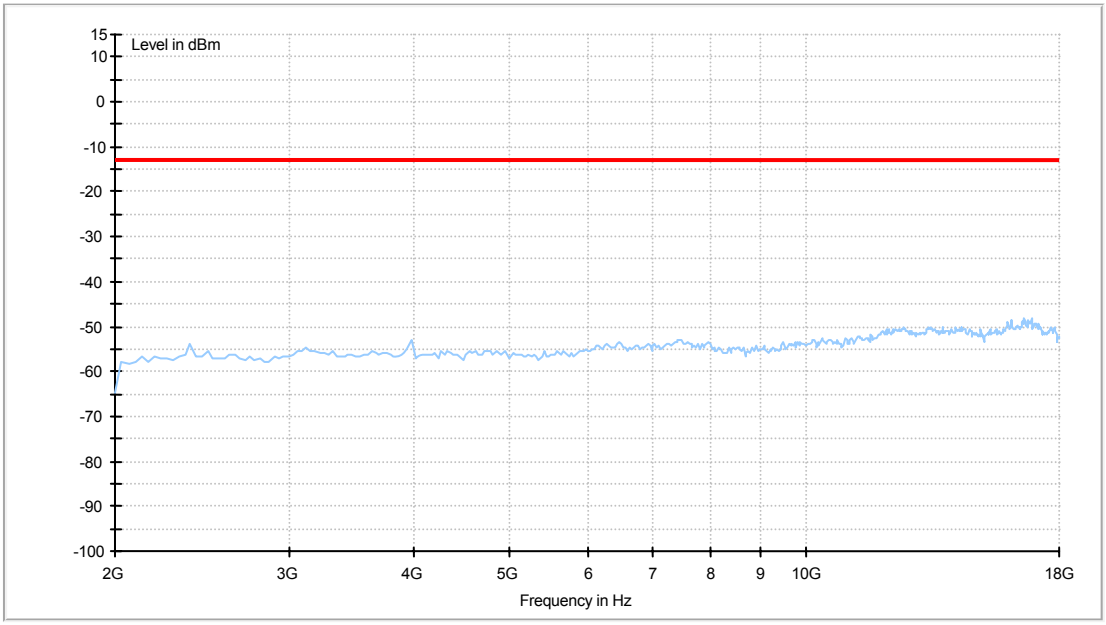
Traffic Mode (9kHz-30MHz)



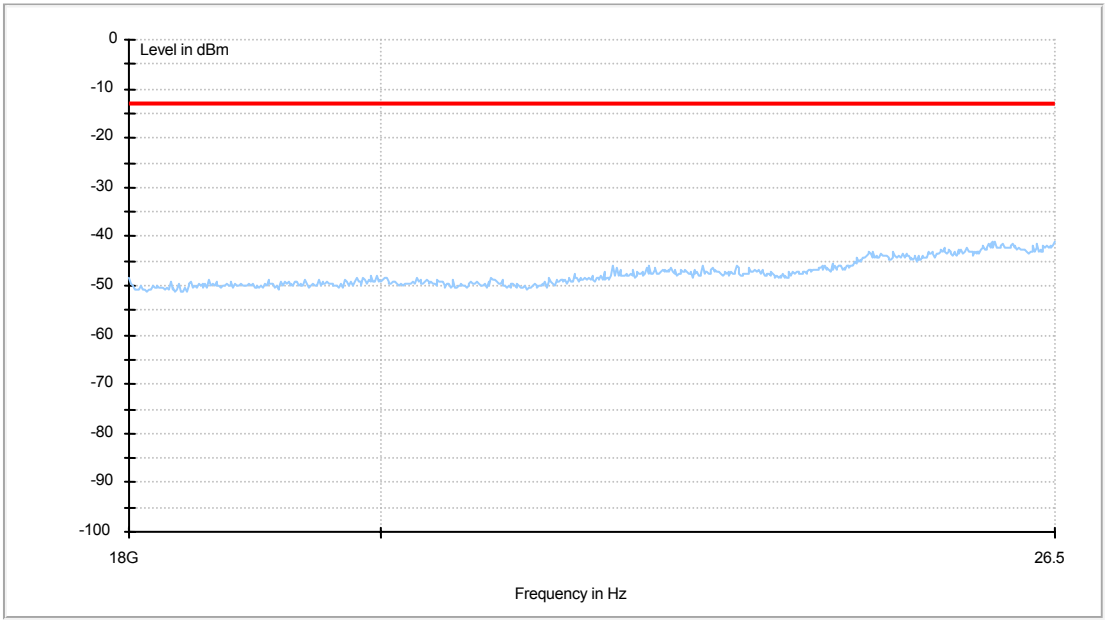
Traffic Mode (30MHz-2GHz)



Traffic Mode (2GHz-18GHz)

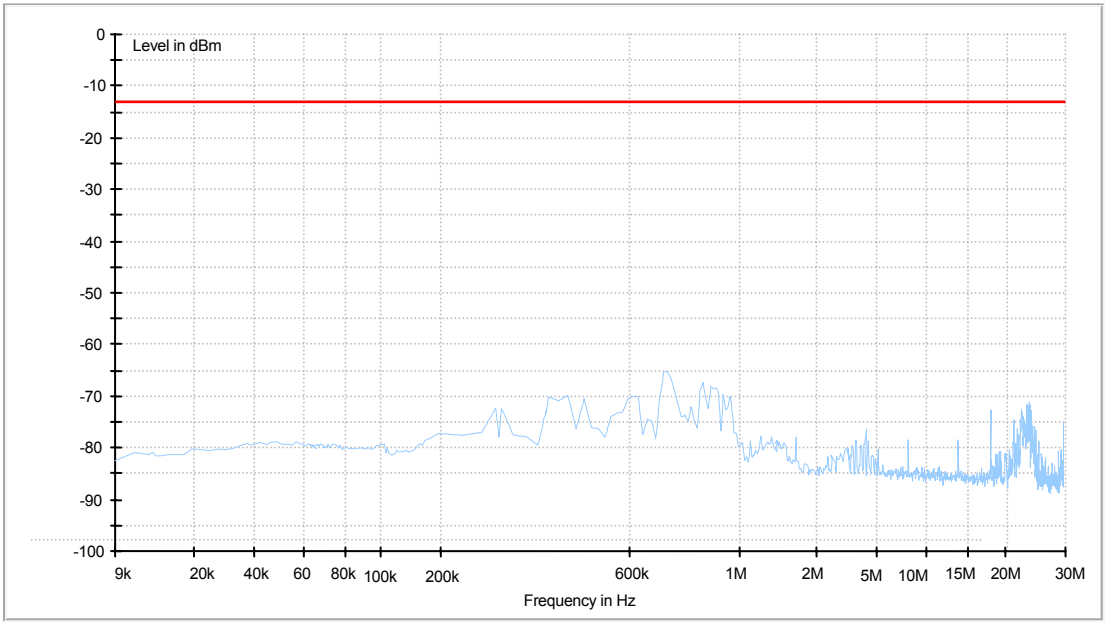


Traffic Mode (18GHz-26.5GHz)

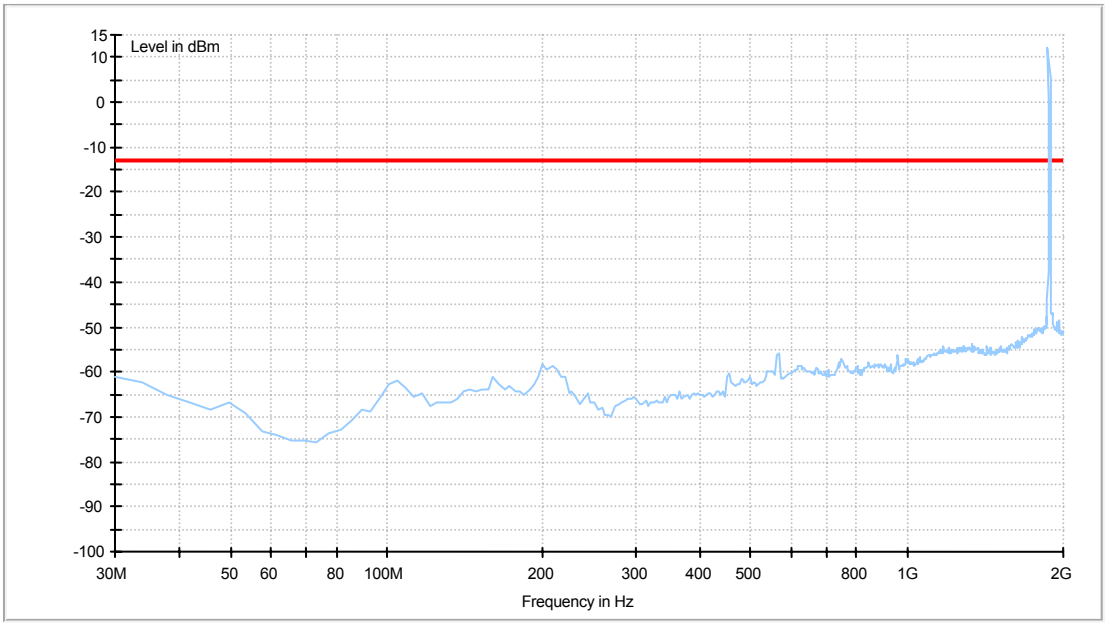


10.2.7 For HSUPA 1900

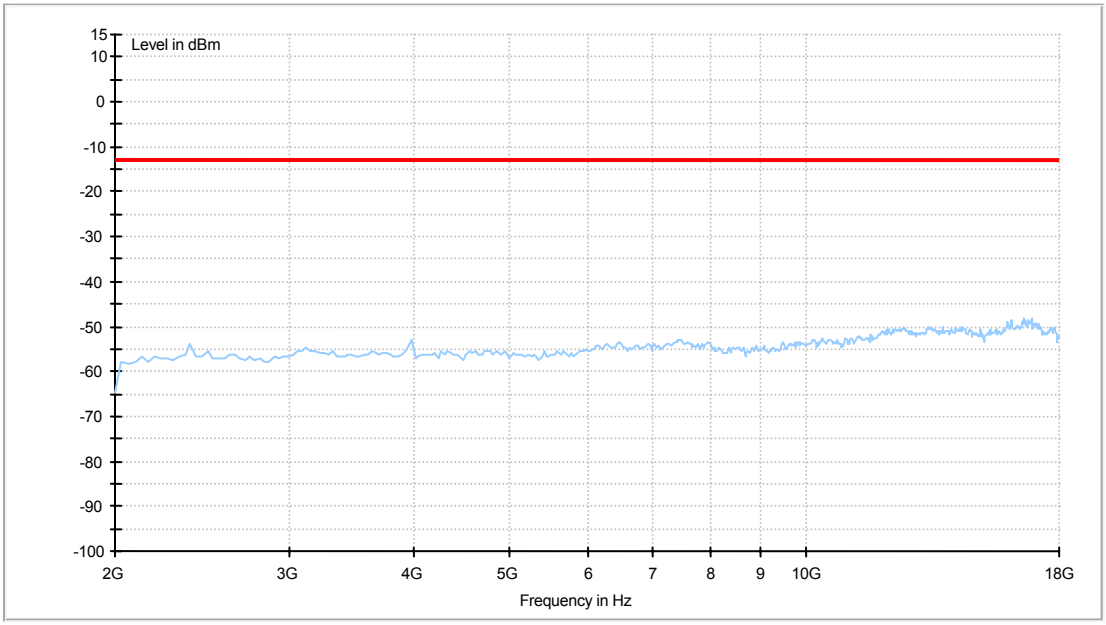
Traffic Mode (9kHz-30MHz)



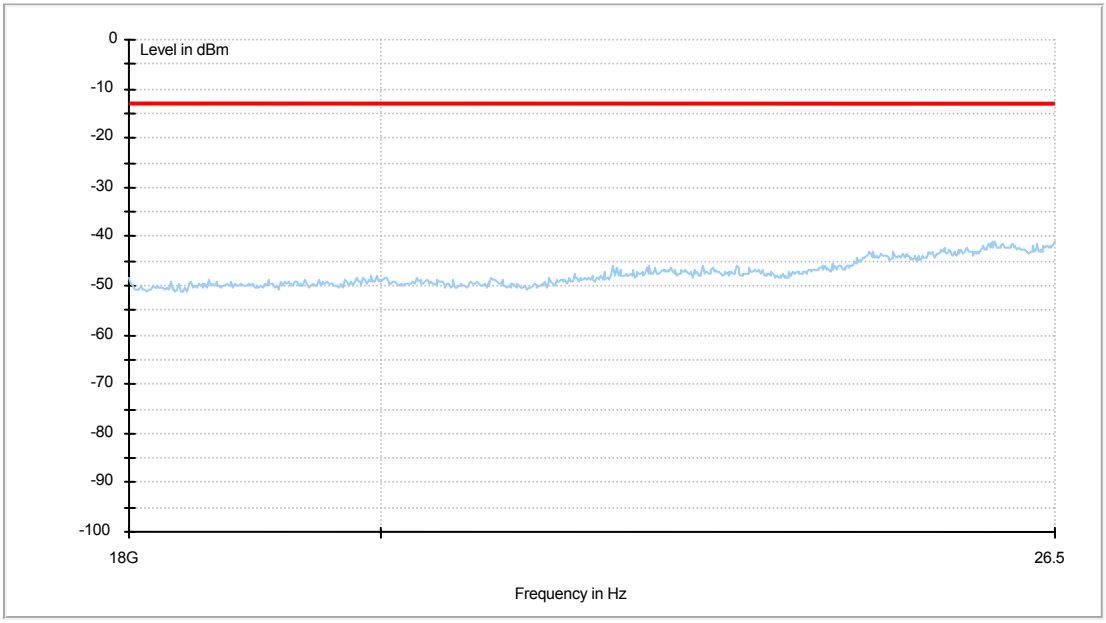
Traffic Mode (30MHz-2GHz)



Traffic Mode (2GHz-18GHz)

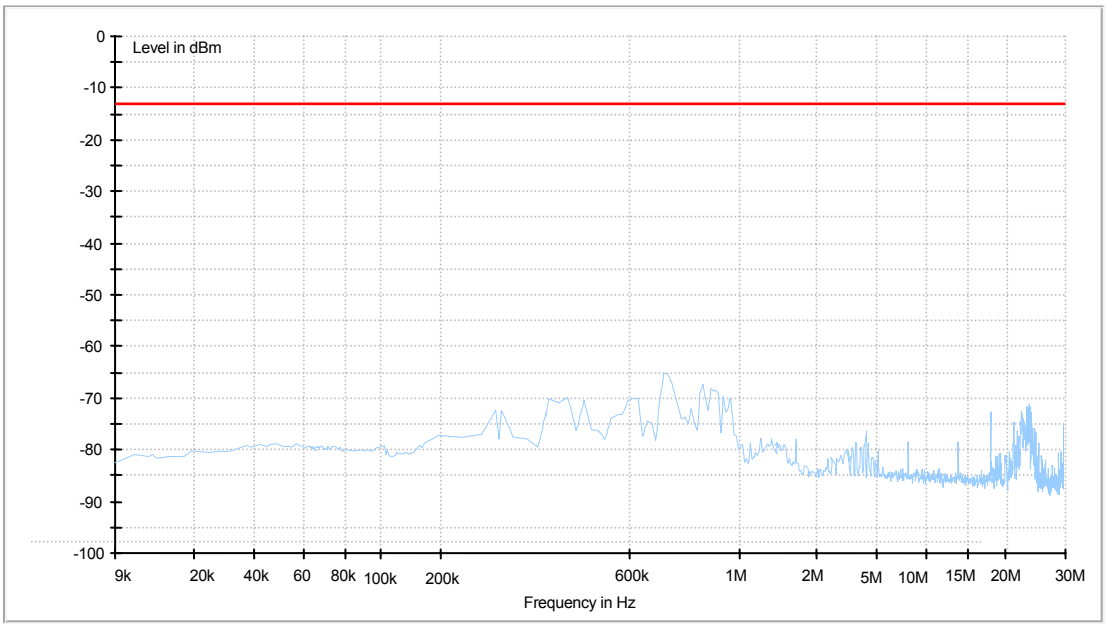


Traffic Mode (18GHz-26.5GHz)

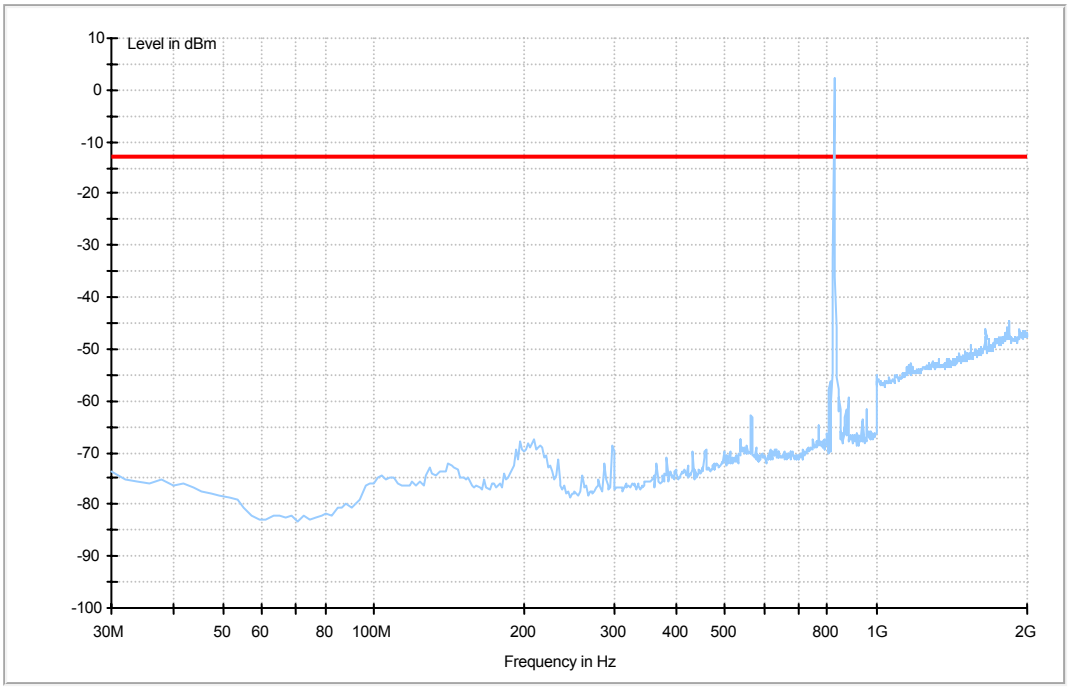


10.2.8 For WCDMA850

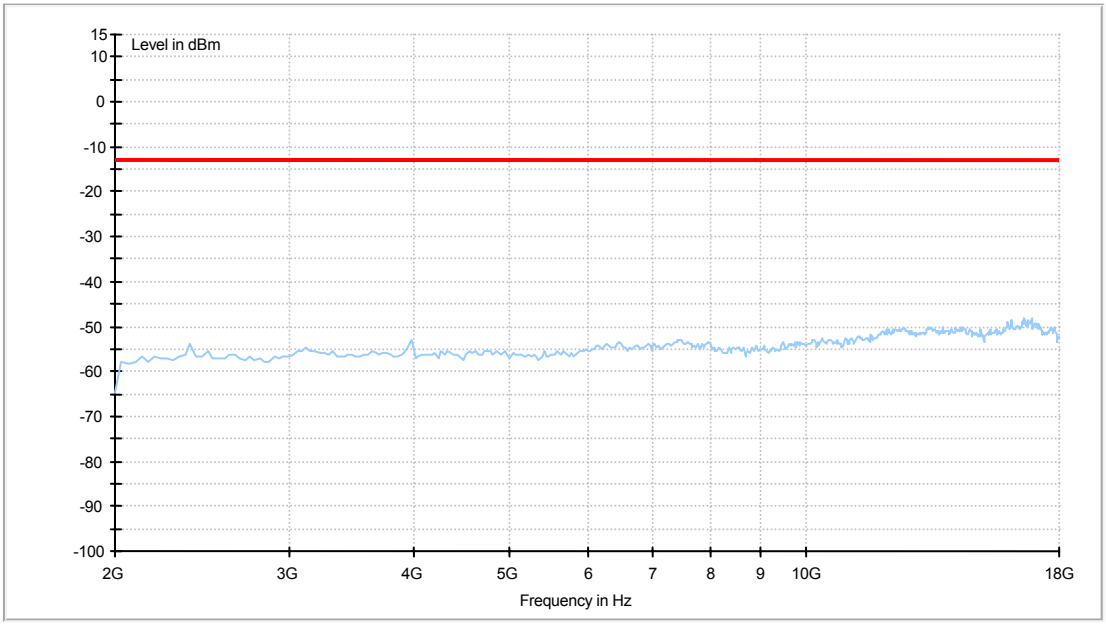
Traffic Mode (9kHz-30MHz)



Traffic Mode (30MHz-2GHz)

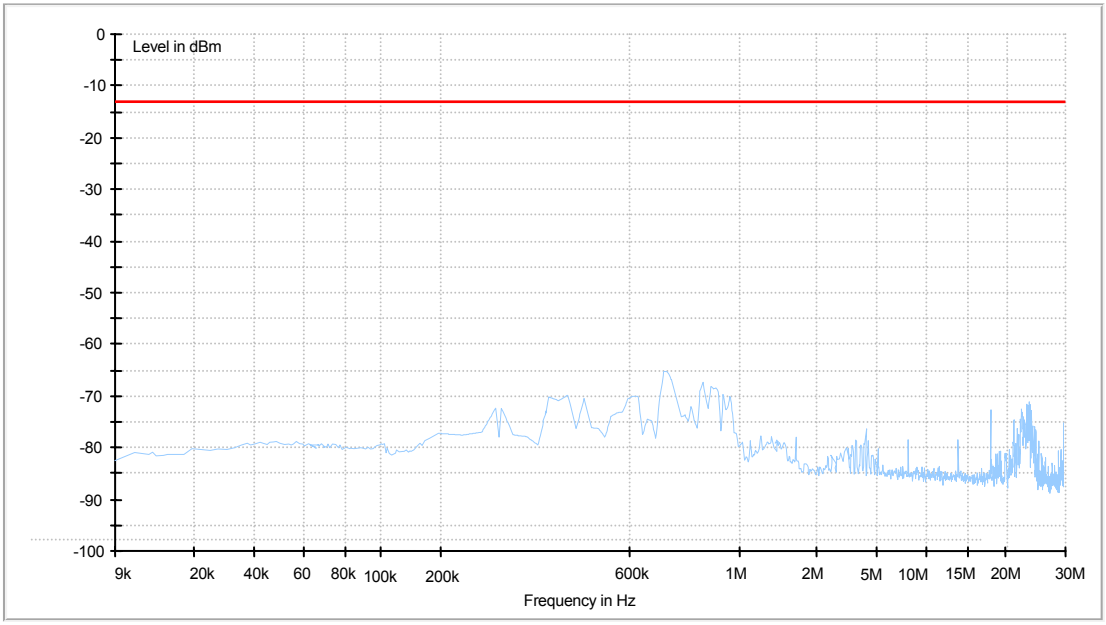


Traffic Mode (2GHz-18GHz)

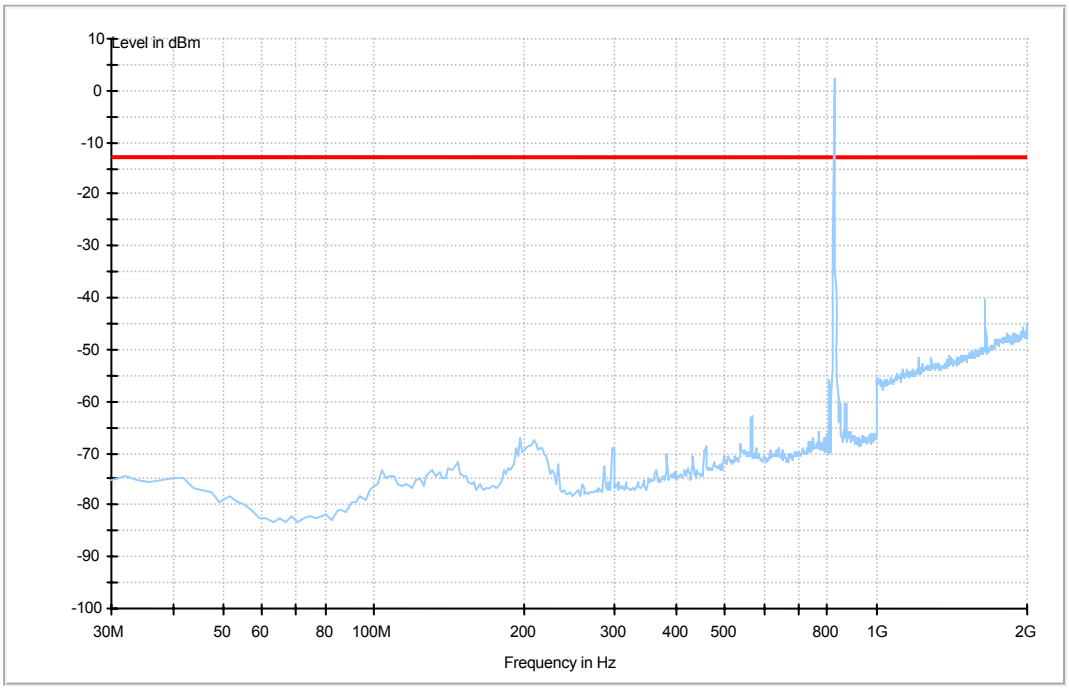


10.2.9 For HSDPA 850

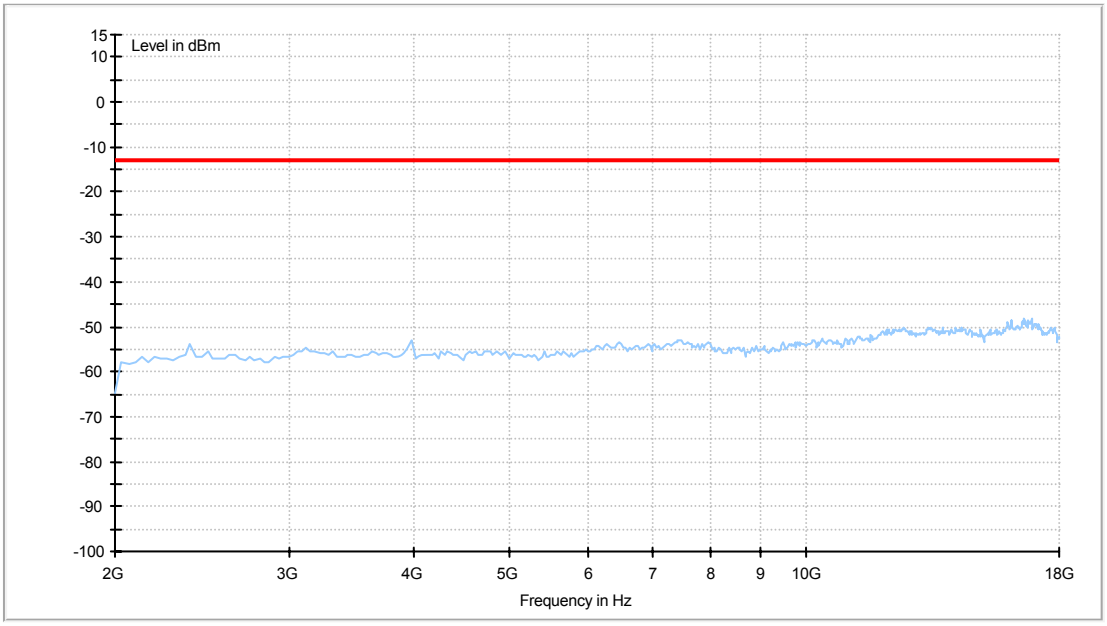
Traffic Mode (9kHz-30MHz)



Traffic Mode (30MHz-2GHz)

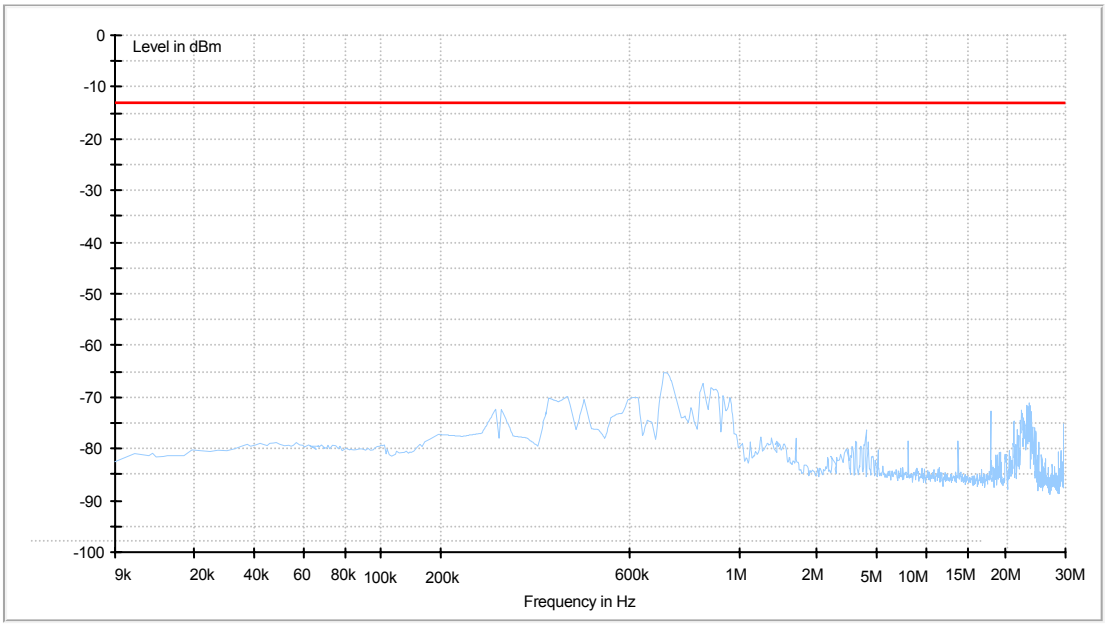


Traffic Mode (2GHz-18GHz)

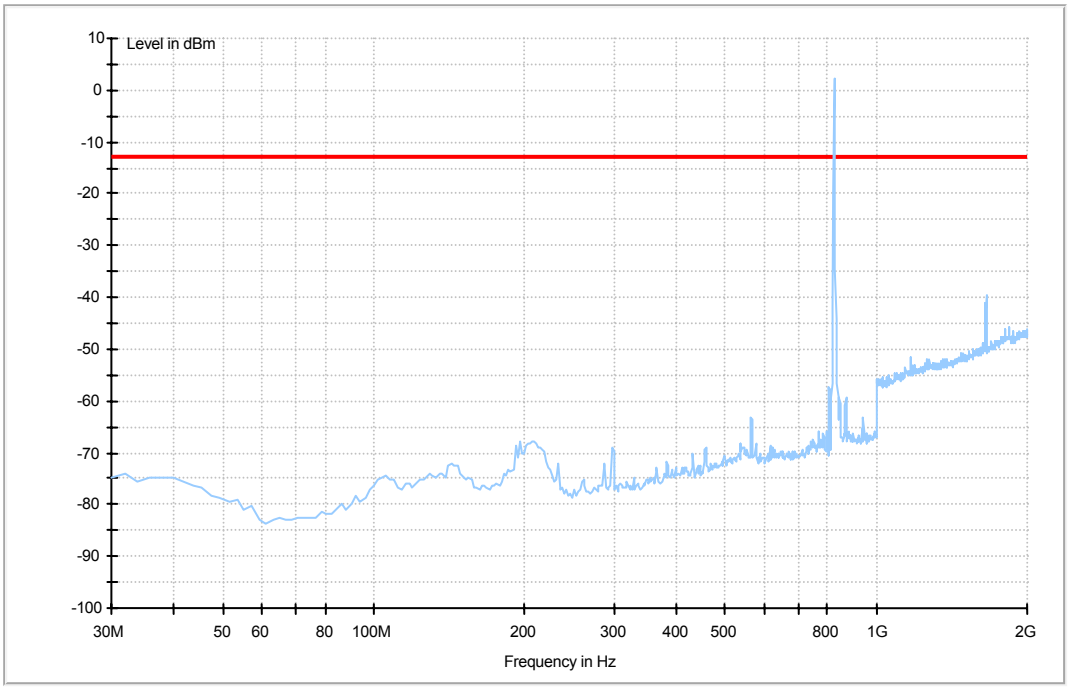


10.2.10 For HSUPA 850

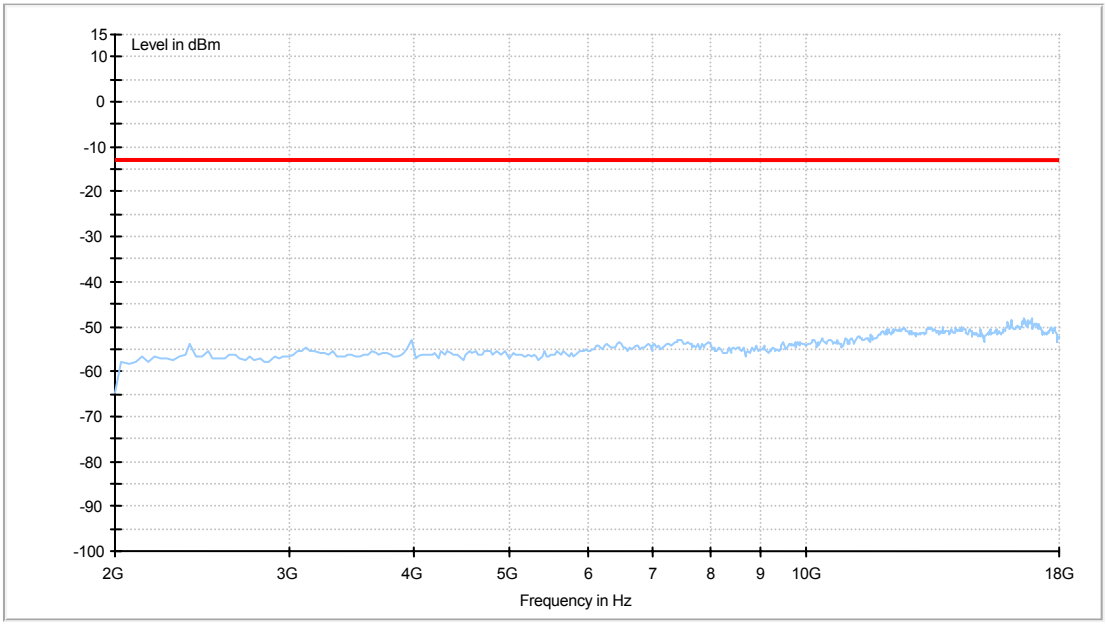
Traffic Mode (9kHz-30MHz)



Traffic Mode (30MHz-2GHz)



Traffic Mode (2GHz-18GHz)

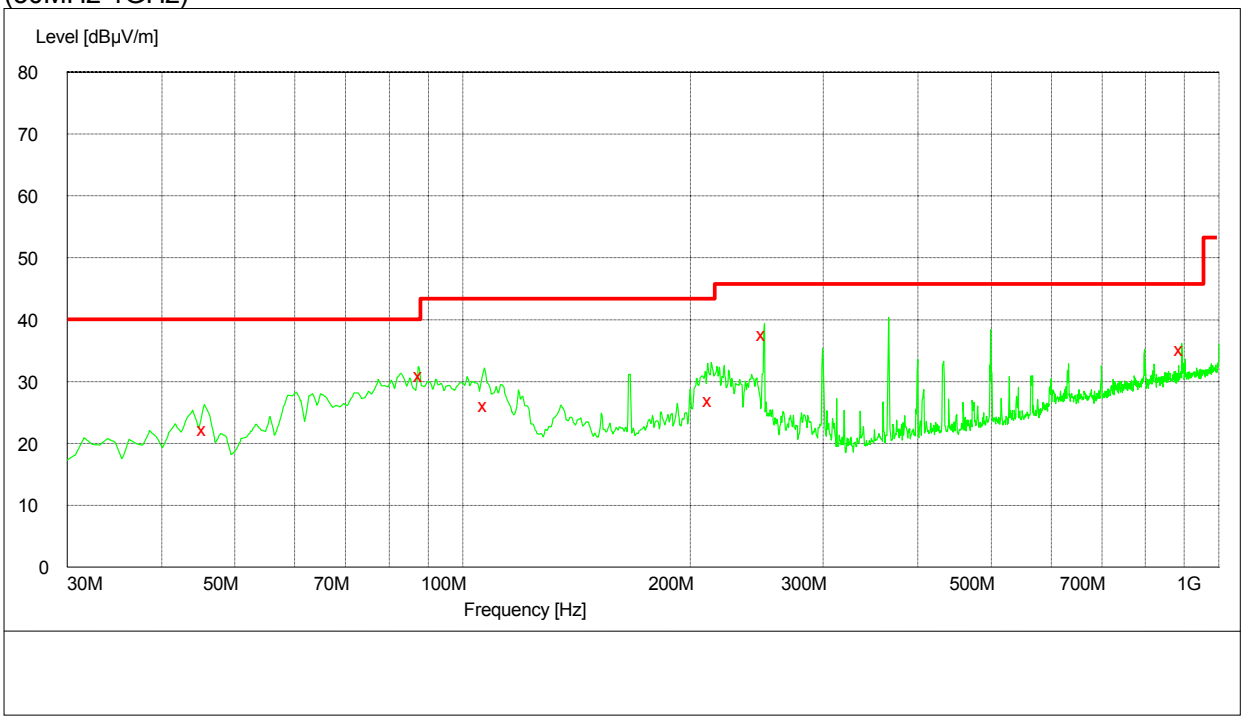


10.3 Receiver Spurious Emission

This test was carried out in all the test modes, but only the worst test result was given below. The test result belongs to GPRS1900

10.3.1 For GPRS 1900

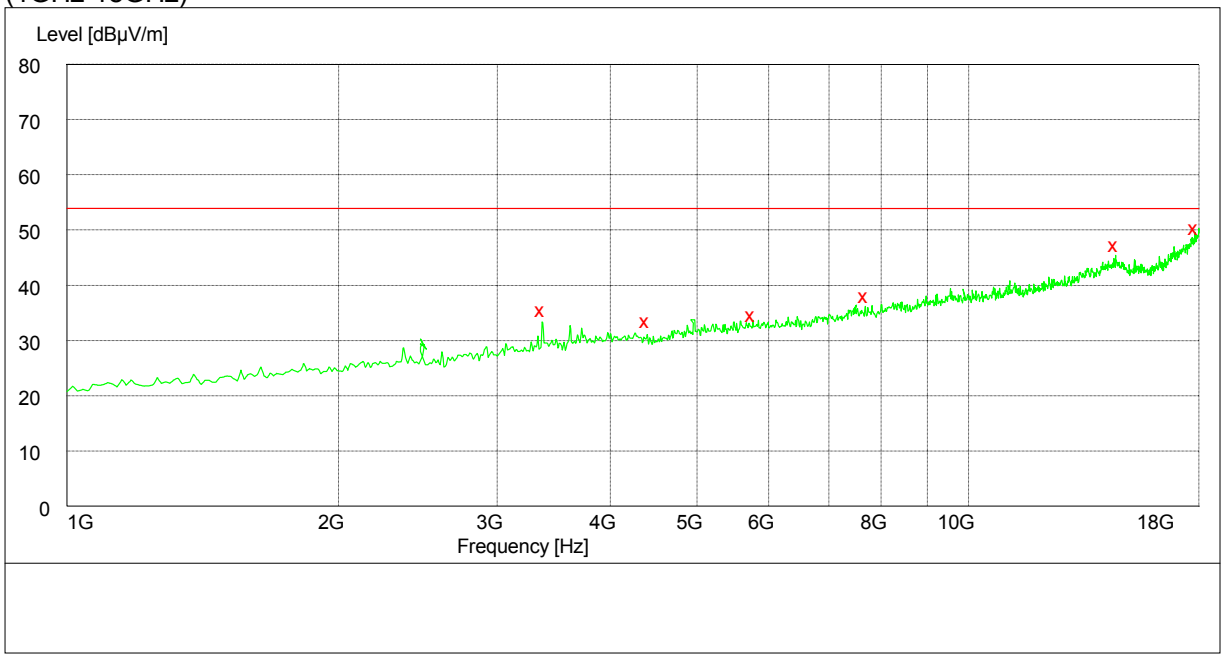
(30MHz-1GHz)



MEASUREMENT RESULT: QP Detector

Frequency MHz	Level dBµV/m	Transd dB	Limit dBµV/m	Margin dB	Height cm	Azimuth deg	Polarisation
45.540000	22.40	13.1	40.0	17.6	100.0	352.00	VERTICAL
87.960000	31.10	11.1	40.0	8.9	100.0	146.00	VERTICAL
107.220000	26.30	12.5	43.5	17.2	100.0	146.00	VERTICAL
212.340000	27.00	12.5	43.5	16.5	112.0	190.00	HORIZONTAL
250.020000	37.70	14.2	46.0	8.3	115.0	136.00	HORIZONTAL
893.580000	35.20	26.2	46.0	10.8	168.0	205.00	VERTICAL

(1GHz-18GHz)



Frequency MHz	Level dBµV/m	Transd dB	Limit dBµV/m	Margin dB	Height cm	Azimuth deg	Polarisation
3366.500000	35.40	-7.8	53.9	18.5	102.0	76.00	VERTICAL
4396.500000	32.10	-5.7	53.9	21.8	153.0	234.00	VERTICAL
5755.000000	33.80	-2.0	53.9	20.1	122.0	23.00	HORIZONTAL
7682.000000	37.60	1.7	53.9	16.3	102.0	45.00	VERTICAL
14548.500000	46.60	12.3	53.9	7.3	163.0	23.00	VERTICAL
17837.500000	50.80	16.2	53.9	3.1	154.0	330.00	VERTICAL

END