



# EMC Test Report

**Product Name:**  
**HSDPA/UMTS /GPRS/GSM/EDGE Mobile Phone with Bluetooth**

**Model Number: HUAWEI U8100-9/U8100-9/IVY**

**Report No: SYBHZ(R)E028032010EB-1**

**FCC ID: QISU8100-9**  
**IC ID: 6369A-U81009**

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## Notice 2

Modification Information:

Table 1 Modification Information

Modification Information	1	
	2	
	3	<i>Not Applicable!</i>
	4	
	5	
	6	
	7	

**REPORT ON** EMC TEST OF HSDPA/UMTS /GPRS/GSM/EDGE  
Mobile Phone with Bluetooth

**REGULATION** M/N: HUAWEI U8100-9/U8100-9/IVY  
FCC CFR47 Part 15: Subpart B;  
FCC CFR47 Part 22: Subpart H;  
FCC CFR47 Part 24: Subpart E;  
FCC CFR47 Part 27: Subpart C;  
CAN/CSA-CEI/IEC CISPR 22;  
RSS-132;  
RSS-133;  
RSS-139;

**START OF TEST** Mar.15, 2010

**END OF TEST** Mar.19, 2010

**Final Judgement:** Pass

Approver

2010-03-23  
Date

张兴海  
Name

Signature



Operator

2010-03-20  
Date

温剑锋  
Name

Signature



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## 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) .....	13
5.1	Radiated Disturbance 30MHz to 18GHz .....	13
5.2	Conducted Disturbance 0.15 MHz to 30MHz .....	14
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
9.2	Conducted Disturbance .....	23
9.3	Radiated Spurious Emission .....	24
9.4	Receiver Spurious Emission .....	38



## 1 Status

### 1.1 Product Information

CLIENT: Huawei Technologies Co., Ltd.  
 ADDRESS: Bantian Longgang District Shenzhen, P.R. China  
 MANUFACTURING DESCRIPTION: HSDPA/UMTS/GPRS/GSM/EDGE Mobile Phone  
 with Bluetooth  
 MANUFACTURERS MODEL NUMBER: HUAWEI U8100-9/U8100-9/IVY

### 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;  
 FCC CFR47 Part 27: Subpart C;  
 RSS-132;  
 RSS-133;  
 RSS-139;

### 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

<b>EUT Classification: Wireless Terminal</b>				
<b>Test Items</b>	<b>Test Configuration &amp; Test Mode</b>	<b>Required Performance Criteria</b>	<b>Result</b>	<b>Site</b>
<u>Radiated Emissions</u> Enclosure Port	TC1/TC2 (TM1-TM10)	N/A	Pass	Site1
<u>Conducted Emissions</u>	TC1 (TM1-TM20)	N/A	Pass	Site1
<u>Radiated Spurious Emissions</u> Enclosure Port	TC1 (TM11-TM20)	N/A	Pass	Site1
<u>Receiver Spurious Emissions</u> Enclosure Port	TC1 (TM11-TM20)	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

HSDPA/UMTS/GPRS/GSM/EDGE Mobile Phone with Bluetooth- HUAWEI U8100-9/  
 U8100-9/IVY is subscriber equipment in the WCDMA/GSM system. The HSDPA/UMTS frequency band is Band I and AWS, but only AWS band test data included in this report. The GSM/GPRS/EDGE frequency band includes GSM850 and GSM900 and DCS1800 and PCS1900, but only GSM850MHz and PCS1900MHz band test data included in this report. The Mobile Phone implements such functions as RF signal receiving/transmitting, HSDPA/UMTS and GSM/GPRS/EDGE protocol processing, voice, video, MMS service, GPS, and WIFI etc. Externally it provides micro SD card interface, earphone port(to provide voice service) and USIM card interface. It also provides Bluetooth module to synchronize data between a PC and the phone, or to use the built-in modem of the phone to access the Internet with a PC, or to exchange data with other Bluetooth devices.

#### 3.1.1 Main Equipment Technical Data

Description:	WCDMA/GPRS/GSM/EDGE Mobile Phone with Bluetooth
Models:	HUAWEI U8100-9/U8100-9
Input Rated Voltage	3.7V
Extreme Voltage	3.6V and 4.2V
Rated Power	Normal 3W ,Max 8 W
Dimensions	107.6mm (L)×57mm (W)×13.8mm (H)
Weight	<110g (with battery)

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	AWS	1710 - 1755	2110 - 2155
Bluetooth		2400-2483.5	
WIFI		2400-2483.5	

#### 3.2 Sub-Assembly Identity

Table 4 Sub-Assembly Identity

Board				
Model Name	Qt y.	Hardware Version	Serial	Description
HD3U811M	1	VER.A	H82BA11020600077	Main board of Mobile Phone
Accessory				
Name	Qt y.	Manufacture	Serials number	Description
Adapter	1	Huawei Technologies Co., Ltd.	HKA9B1519758	Adapter Model: HS-050040U5 voltage nominal: ~120V Input Voltage : ~100-240V 50/60Hz 0.2A Output Voltage: == 5.0V 400 mA Rated Power: 2W
Rechargeable Li-ion	1	Huawei Technologies Co., Ltd.	YAC9608HI2010203	Battery Model: HB5A2H Rated capacity: 1150mAh



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				Nominal Voltage:  +3.7V Charging Voltage:  +4.2V
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#### 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	1.5m	1	Unshielded
USB	0.85m	1	shielded
Earphone	1.10m	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~TM20
---------	----------

###### 4.3.2 Test Mode

There were sixteen test Modes. TM1 to TM20 were shown in the diagrams below:

- TM1: operate in idle GSM850;
- TM2: operate in idle GPRS850;
- TM3: operate in idle EDGE850;
- TM4: operate in idle GSM1900;
- TM5: operate in idle GPRS1900;
- TM6: operate in idle EDGE1900;
- TM7: operate in idle WCDMA AWS;
- TM8: operate in idle HSDPA AWS;
- TM9: operate in idle WIFI;
- TM10: operate in idle Bluetooth;
- TM11: operate in traffic GSM850;
- TM12: operate in traffic GPRS850;
- TM13: operate in traffic EDGE850;
- TM14: operate in traffic GSM1900;
- TM15: operate in traffic GPRS1900;

TM16: operate in traffic EDGE1900;  
 TM17: operate in traffic WCDMA AWS;  
 TM18: operate in traffic HSDPA AWS  
 TM19: operate in traffic WIFI;  
 TM20: operate in traffic Bluetooth

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

Traffic Mode:

The EUT is required to be in the traffic mode, a call is set up according to the generic call set up procedure and enter the EUT into loop back test mode. (WCDMA see 3GPP TS 34.121, GSM see ETSI TS 151.010).

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;

For EGSM and DCS, the following conditions shall also be met:

The EUT shall be commanded to operate at maximum transmit power;

The downlink RXQUAL shall be monitored.

Assign channel frequency to an appropriate channel number.

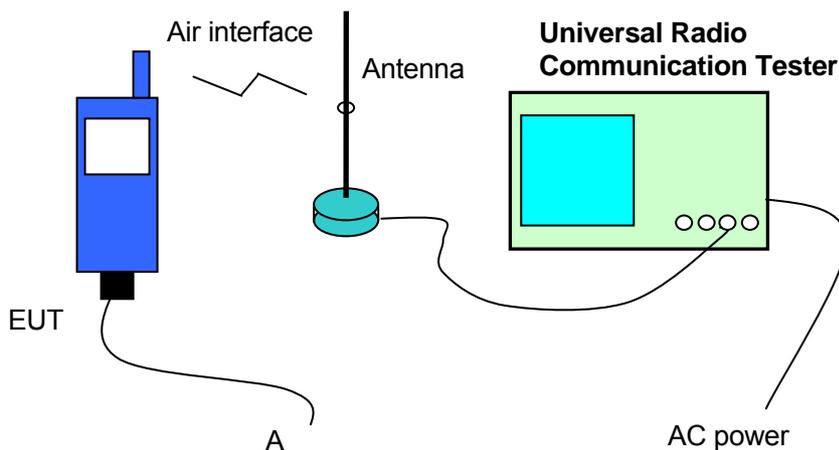


Figure 1.: Test Configuration

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;

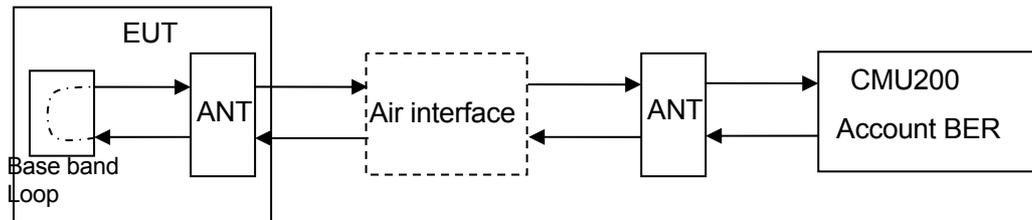
UE's neighbour cell list shall be empty;

Paging repetition period and DRX cycle shall be set to minimum (shortest possible time interval).

For GSM850 and PCS1900, 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:



ANT: Antenna  
BER: Bit Error Rate

Figure 2. 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 to 18 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:

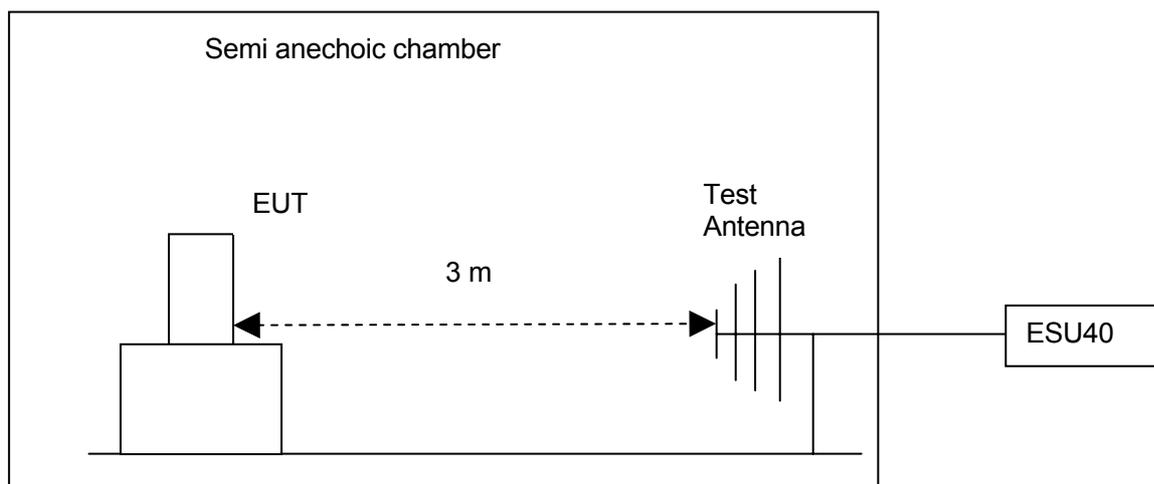


Figure 3. Test set-up

#### 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( $\mu\text{V}/\text{m}$ )	Unit( $\text{dB}\mu\text{V}/\text{m}$ )
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 150kHz to 30 MHz: 9 kHz;

Test Set-up figure:

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

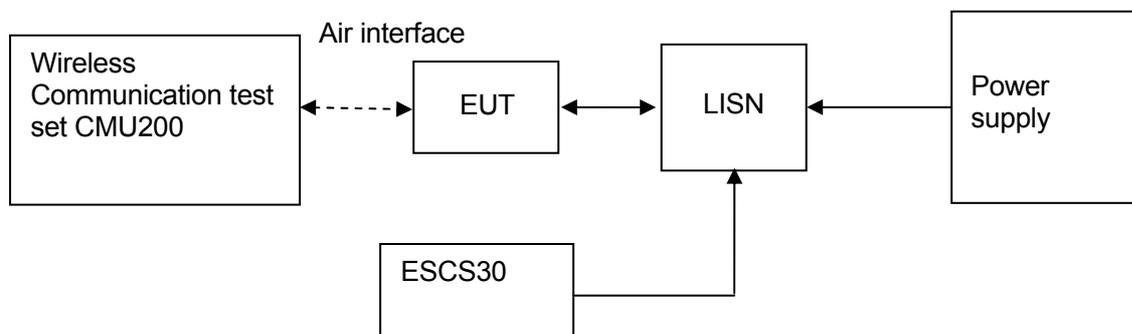


Figure 4. Test Set-up

### 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 dB $\mu$ V	56~46 dB $\mu$ V
0.5MHz~5MHz	56 dB $\mu$ V	46 dB $\mu$ V
5MHz~30MHz	60 dB $\mu$ V	50 dB $\mu$ V

## 5.3 Radiated Spurious Emissions

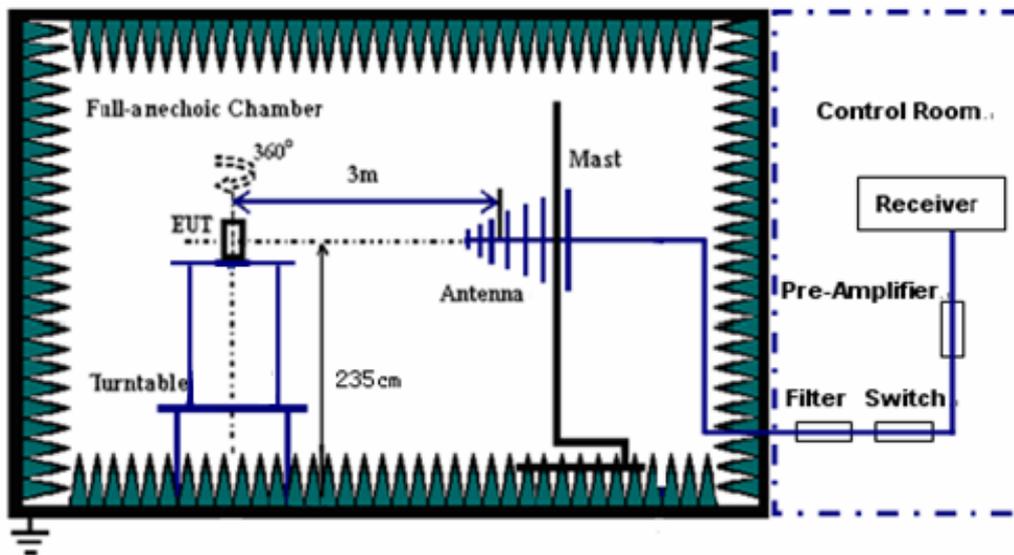
### 5.3.1 Test Procedure

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:

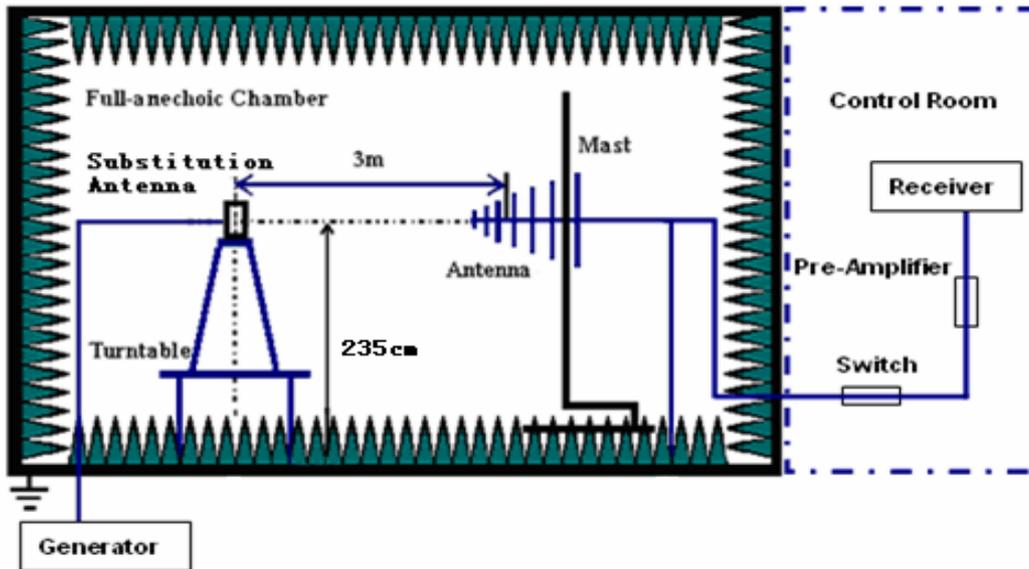
For transmitters other than single sideband, independent sideband and controlled carrier radiotelephone, EIRP shall be measured when the transmitter is adjusted in accordance with the tune-up procedure to give the values of current and voltage on the circuit elements specified in 2.1033(c)(8). Connect 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-133, the defined measurement bandwidth as following:  
 RSS-133 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

According to part 27.53, the defined measurement bandwidth as following:

27.53(g) 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-139, 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 12 Radiated Spurious Emissions Limits

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

No peak found in pre- test. All frequency points' margin is bigger than 20dB, so the substitution method isn't used.

Calculation Sample:

Table 13 Substitution Results

Freq. [MHz]	Measure ment Value [dBm]	Substitution Antenna Type	Gain [dBd]	Cable Loss [dB]	Signal Generator Level [dBm]	Substitution Level [dBm]	FCC limit [dBm]	Result

Note: For get the E.R.P. (Efficient Radiated Power) in substitution method, the following formula should take to calculate it,

$$E.R.P. [dBm] = SGP [dBm] - Cable Loss [dB] + Gain [dBd]$$

NOTE: SGP- Signal Generator Level

### 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 to 18 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:

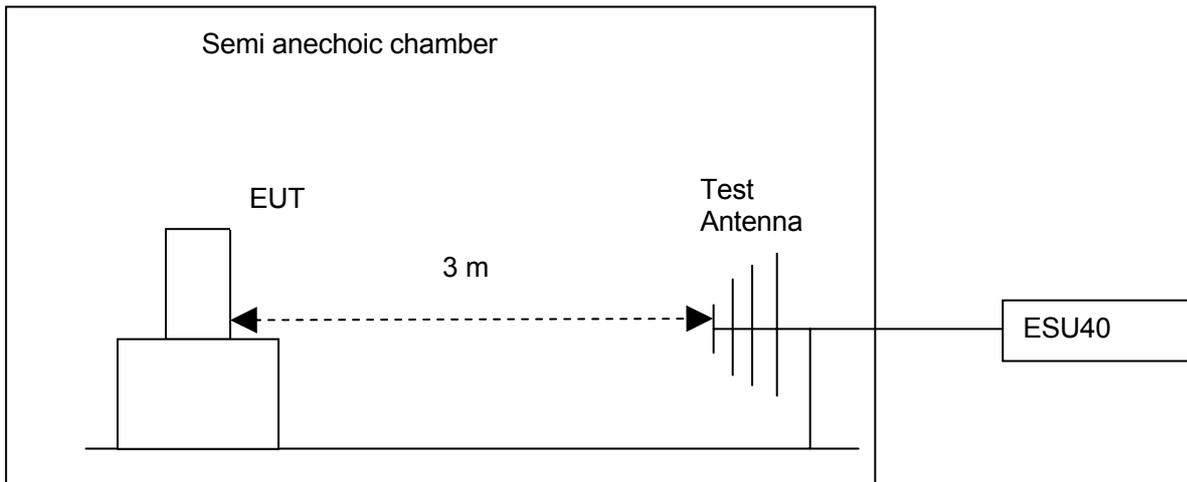


Figure 5. Test set-up

### 6.1.2 Test Results

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

Table 14 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 15 Main Test Equipments

Test item	Test Instrument	Model	Manufacturer	Cal-Date	Cal Interval (month)
RE	EMI Test receiver	ESU40	R&S	April.22, 2009	12
	Broadband Antenna	CBL 6112B	SCHAFFNER	Jun.08, 2009	12
	Horn Antenna	HF906	R&S	Mar.27, 2009	12
CE	EMI Test receiver	ESCS30	R&S	April.22, 2009	12
	Artificial Mains Network	ENV4200	R&S	May.12, 2009	12
RSE	EMI Test receiver	ESIB26	R&S	April.22, 2009	12
	Horn Antenna	3117	ETS-LINDGREN	Sep.11,2009	12
	Broadband Antenna	CBL 6112B	SCHAFFNER	Nov.30,2009	12
	Horn Antenna	3160	ETS-LINDGREN	Jun.19,2009	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 16 System Measurement Uncertainty

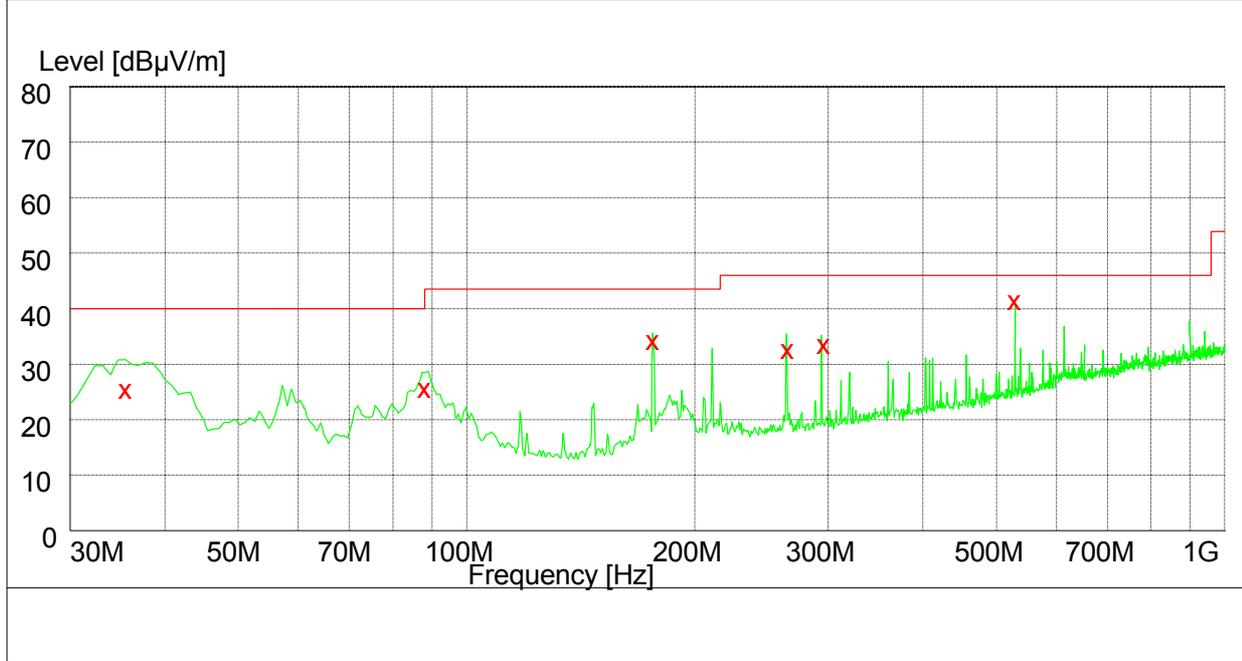
Items		Extended Uncertainty
RE	Field strength (dB $\mu$ V/m)	U=4.2dB; k=2(30MHz-1GHz)
RE	Field strength (dB $\mu$ V/m)	U=3.6dB; k=2(1GHz-18GHz)
RSE	ERP (dBm)	U=2.2dB; k=2
CE	Disturbance Voltage (dB $\mu$ V)	U=3.3dB; k=2

## 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.

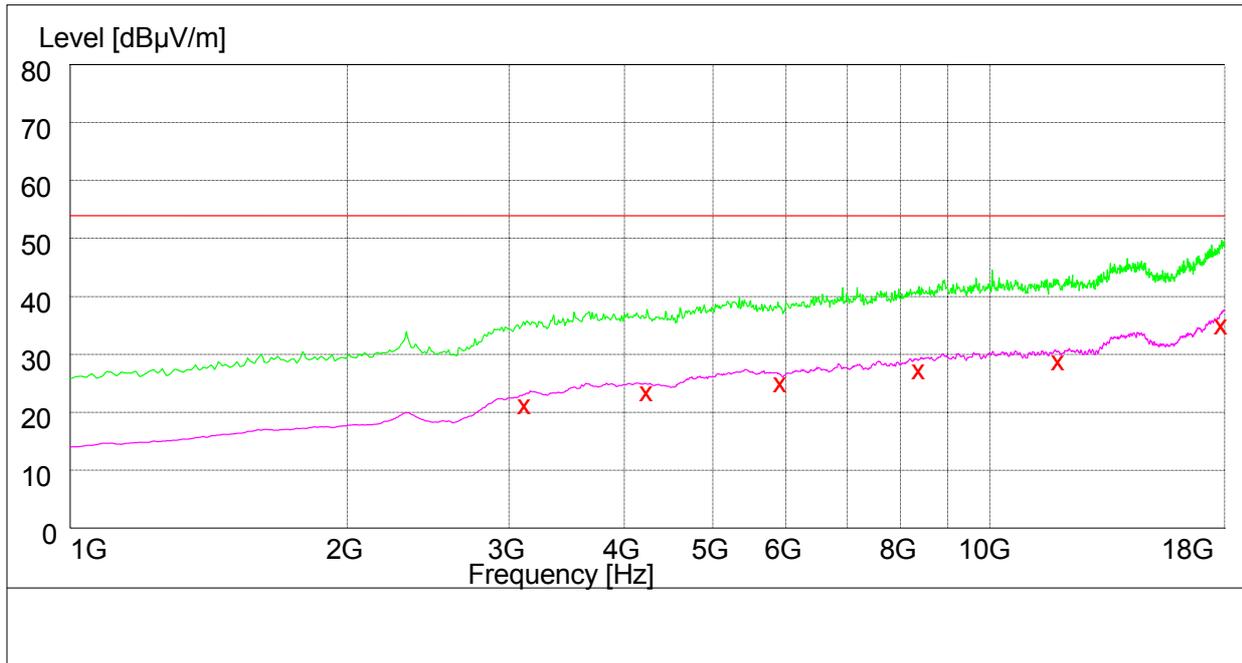
#### 30MHz-1GHz



#### MEASUREMENT RESULT: QP Detector

Frequency MHz	Level dBµV/m	Transd dB	Limit dBµV/m	Margin dB	Height cm	Azimuth deg	Polarisation
35.520000	25.00	11.9	40.0	15.0	104.0	244.00	VERTICAL
88.200000	25.10	11.2	40.0	14.9	130.0	94.00	VERTICAL
176.400000	34.90	10.6	43.5	8.6	122.0	78.00	HORIZONTAL
264.000000	32.50	14.3	46.0	13.5	104.0	224.00	HORIZONTAL
294.000000	33.70	15.4	46.0	12.3	100.0	225.00	HORIZONTAL
529.200000	40.60	20.7	46.0	5.4	104.0	360.00	VERTICAL

**1GHz-18GHz**



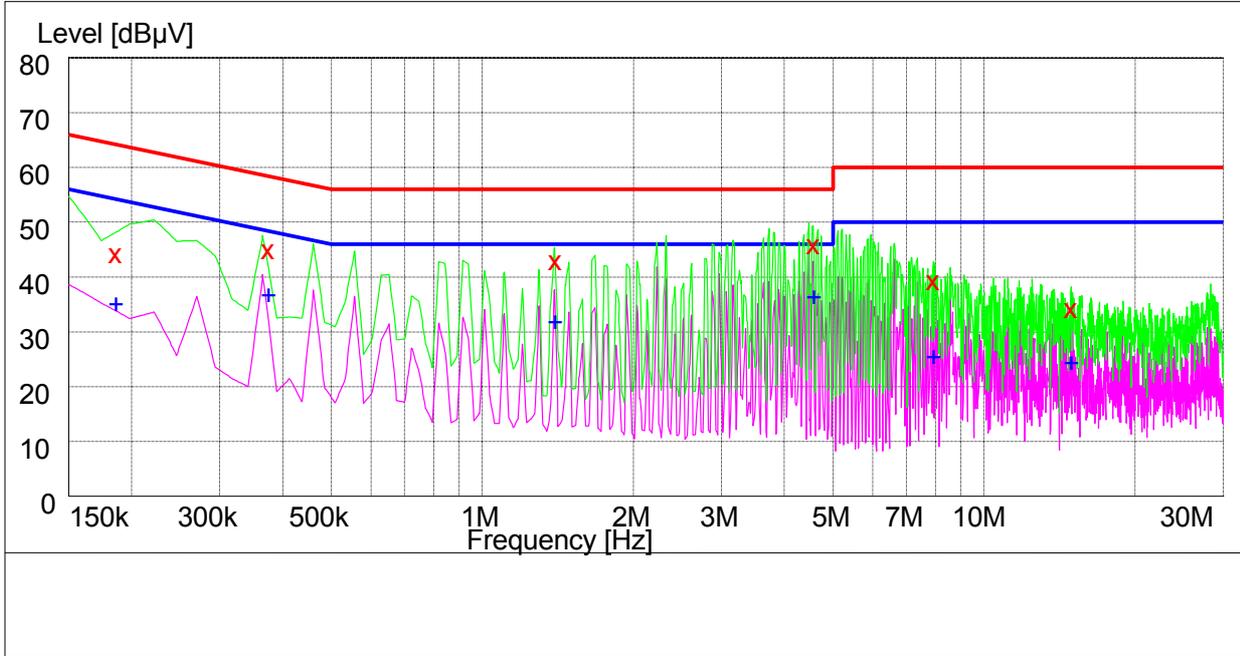
**MEASUREMENT RESULT: AV Detector**

Frequency MHz	Level dBµV/m	Transd dB	Limit dBµV/m	Margin dB	Height cm	Azimuth deg	Polarisation
3121.000000	22.40	-8.6	53.9	31.5	148.0	124.00	HORIZONTAL
4238.500000	24.70	-5.3	53.9	29.2	180.0	87.00	HORIZONTAL
5924.500000	26.20	-1.7	53.9	27.7	200.0	36.00	VERTICAL
8377.000000	28.60	2.9	53.9	25.3	150.0	0.00	HORIZONTAL
11875.000000	30.00	6.9	53.9	23.9	152.0	16.00	VERTICAL
17866.500000	36.30	16.4	53.9	17.6	200.0	201.00	VERTICAL

## 9.2 Conducted Disturbance

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

### AC Power Port Test Data



#### MEASUREMENT RESULT: QP Detector

Frequency MHz	Level dBµV	Transd dB	Limit dBµV	Margin dB	Line	PE
0.186000	45.50	10.1	64	18.5	N	FLO
0.375000	46.30	10.0	58	11.7	N	FLO
1.401000	44.30	10.1	56	11.7	N	FLO
4.578000	47.30	10.2	56	8.7	N	FLO
7.944000	40.80	10.2	60	19.2	N	FLO
14.937000	35.70	10.3	60	24.3	N	FLO

#### MEASUREMENT RESULT: AV Detector

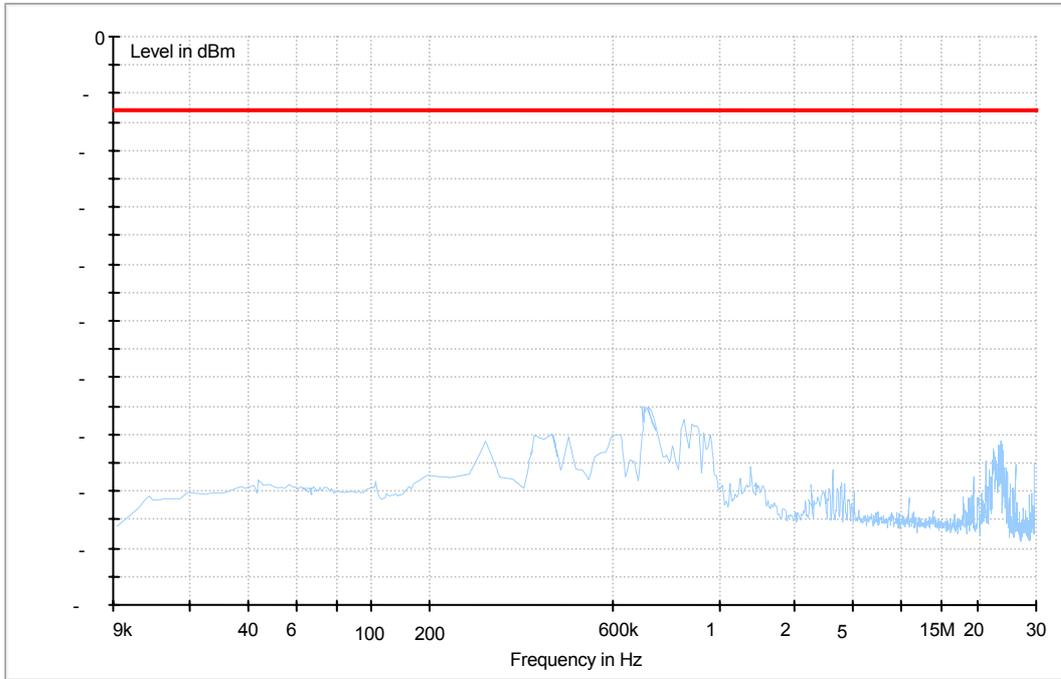
Frequency MHz	Level dBµV	Transd dB	Limit dBµV	Margin dB	Line	PE
0.186000	36.30	10.1	54	17.7	N	FLO
0.375000	38.00	10.0	48	10.0	N	FLO
1.396500	33.00	10.1	46	13.0	N	FLO
4.578000	37.70	10.2	46	8.3	N	FLO
7.944000	26.60	10.2	50	23.4	N	FLO
14.932500	25.90	10.3	50	24.1	N	FLO

### 9.3 Radiated Spurious Emission

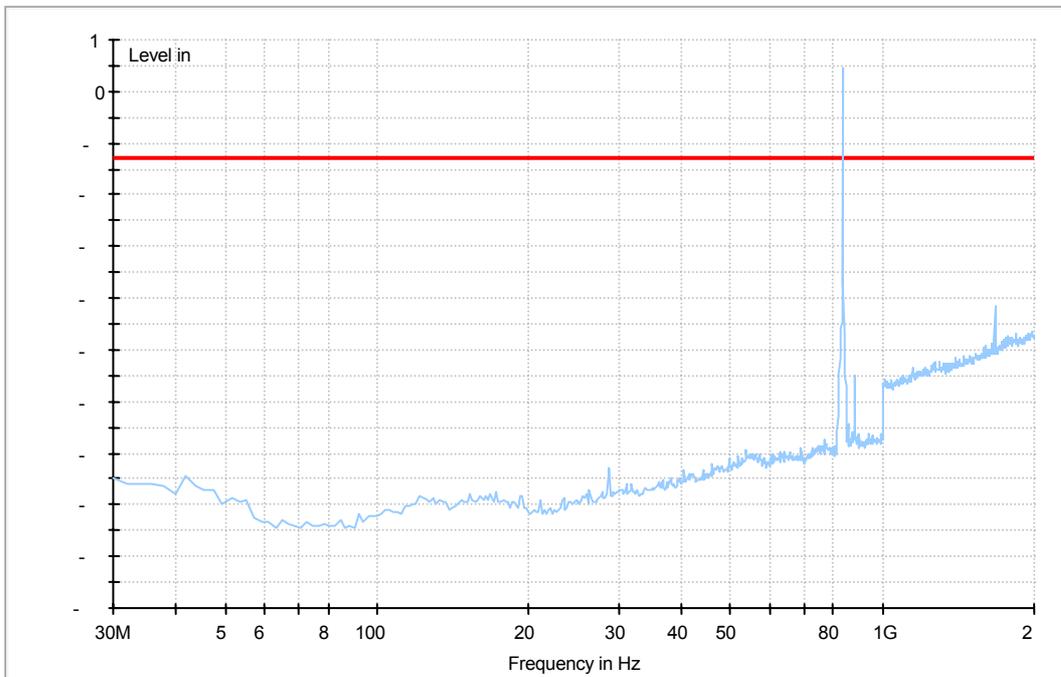
This test results are the maximum level of radiated spurious emissions in vertical and horizontal polarity.

#### 9.3.1 For GSM 850

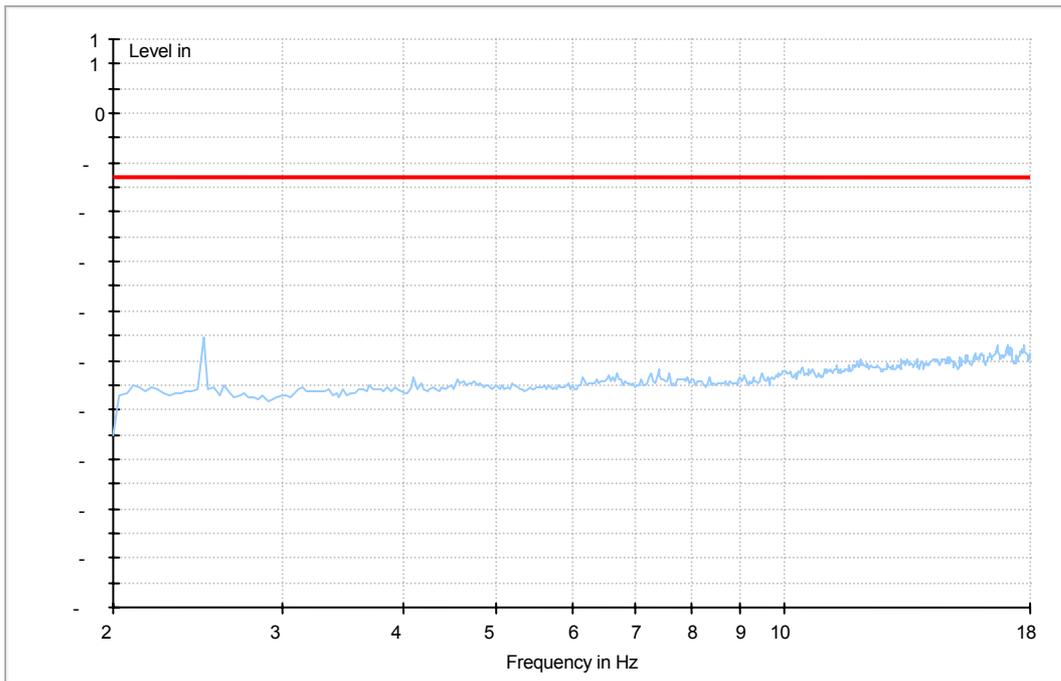
Traffic Mode (9kHz-30MHz)



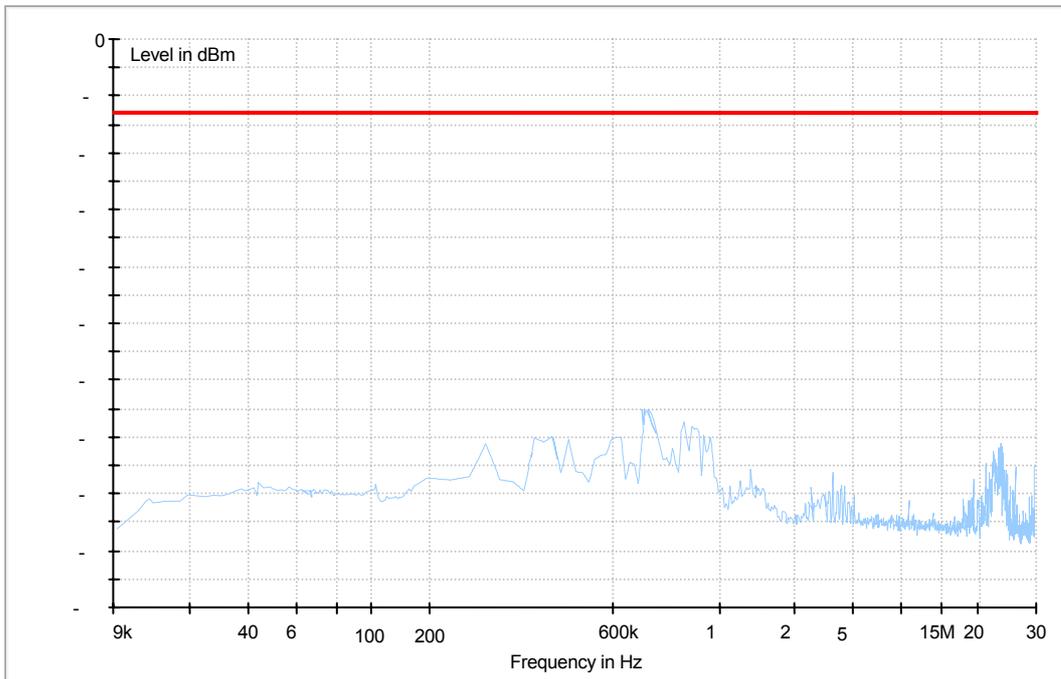
Traffic Mode (30MHz-2GHz)



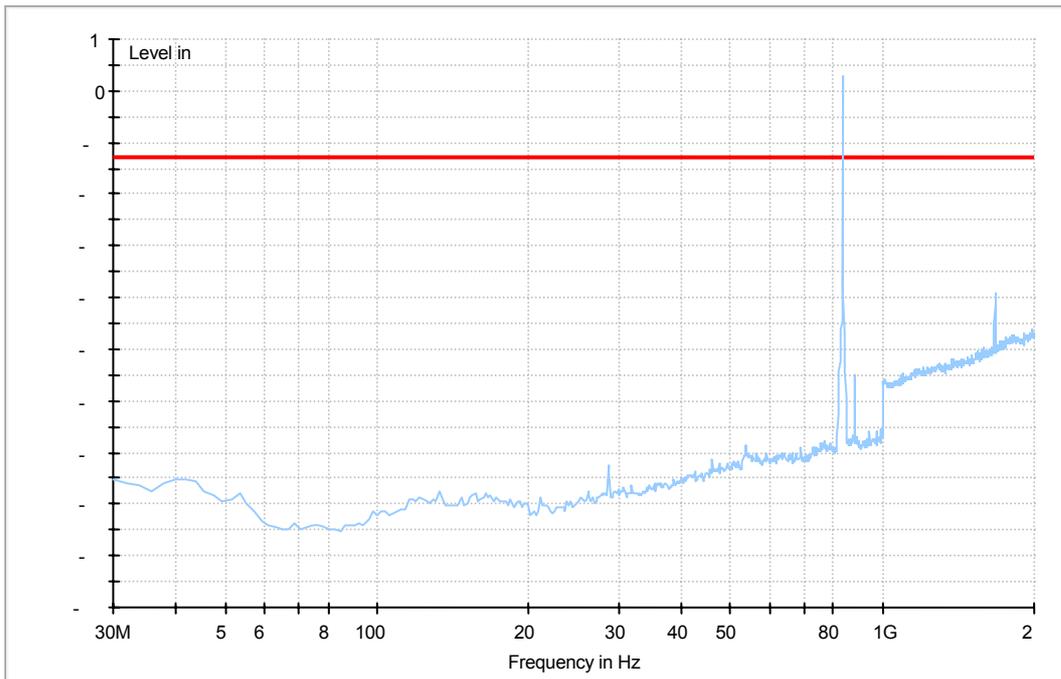
Traffic Mode (2GHz-18GHz)



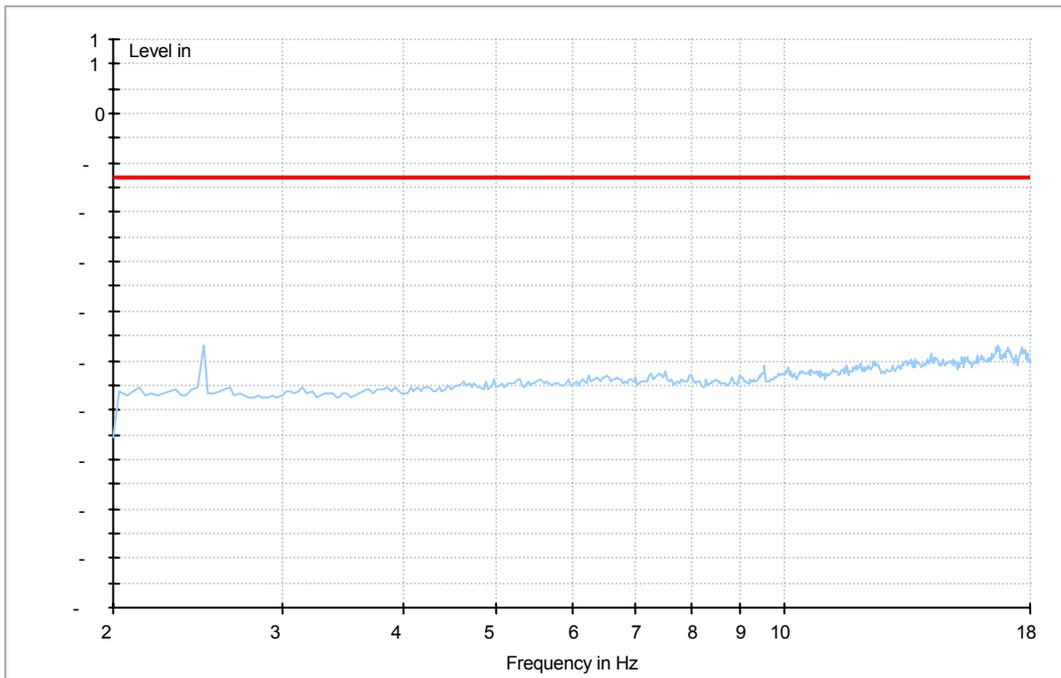
9.3.2 For GPRS 850  
Traffic Mode (9kHz-30MHz)



### Traffic Mode (30MHz-2GHz)

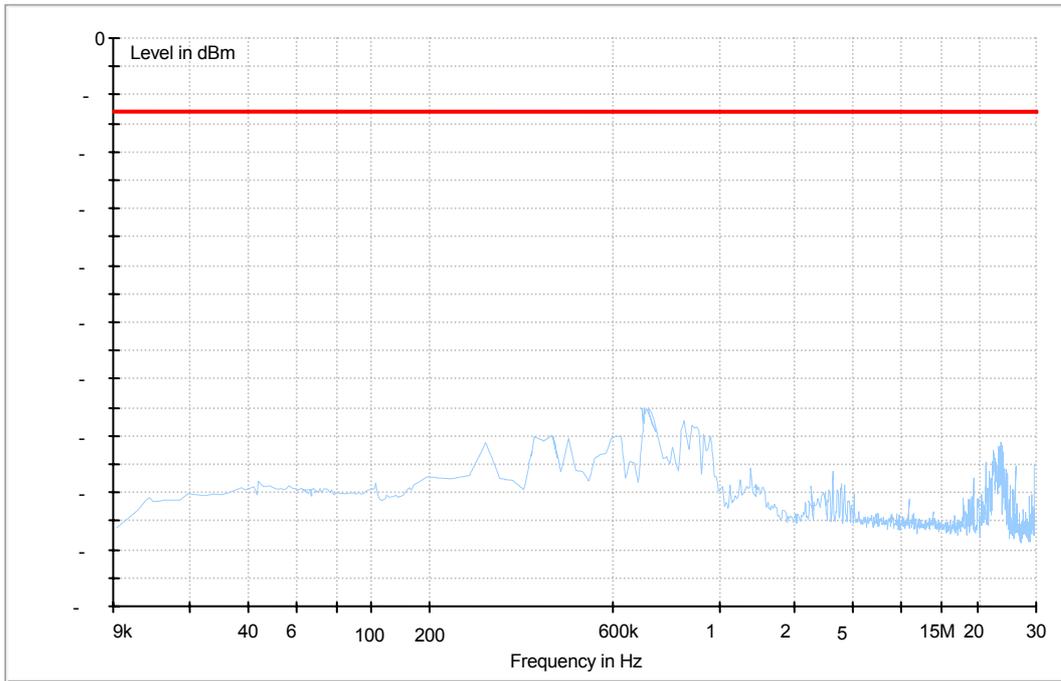


### Traffic Mode (2GHz-18GHz)

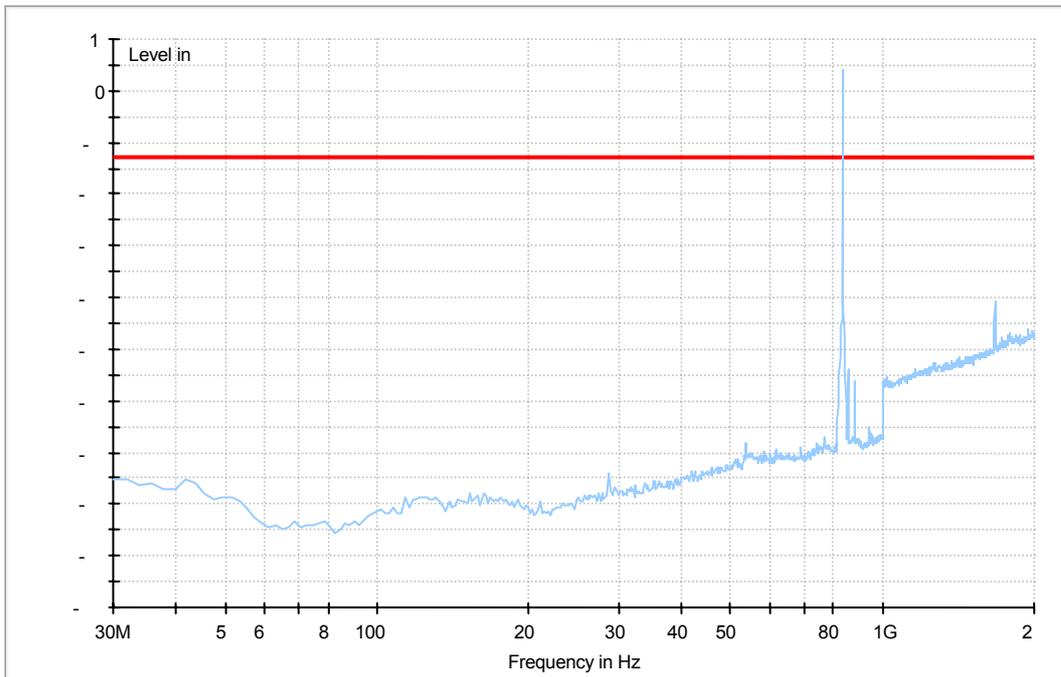


### 9.3.3 For EDGE 850

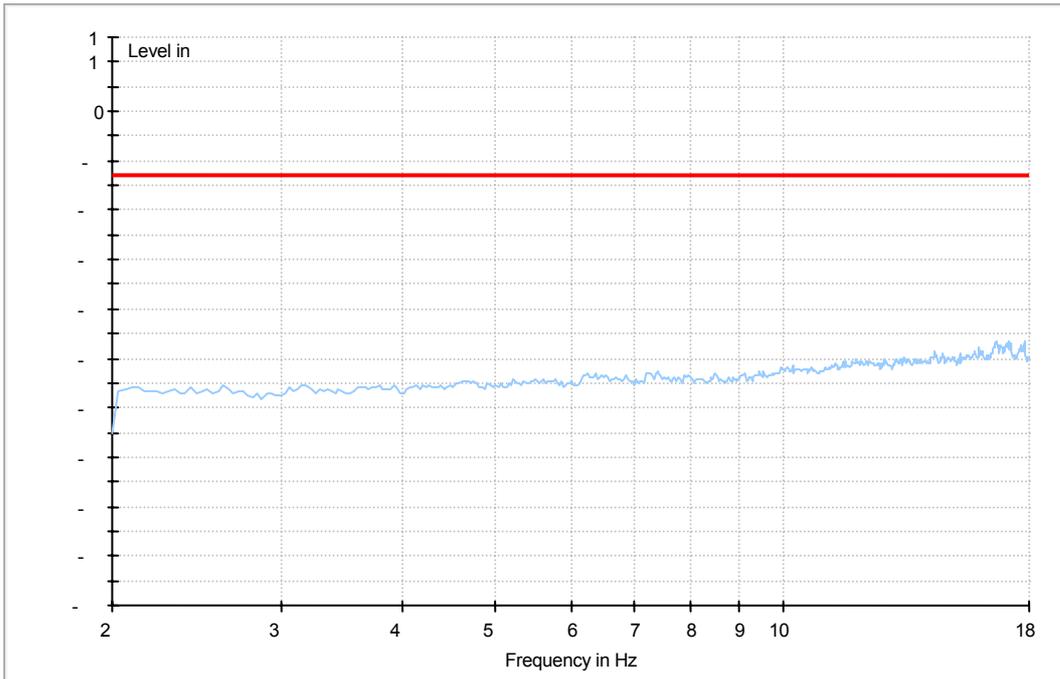
Traffic Mode (9kHz-30MHz)



Traffic Mode (30MHz-2GHz)

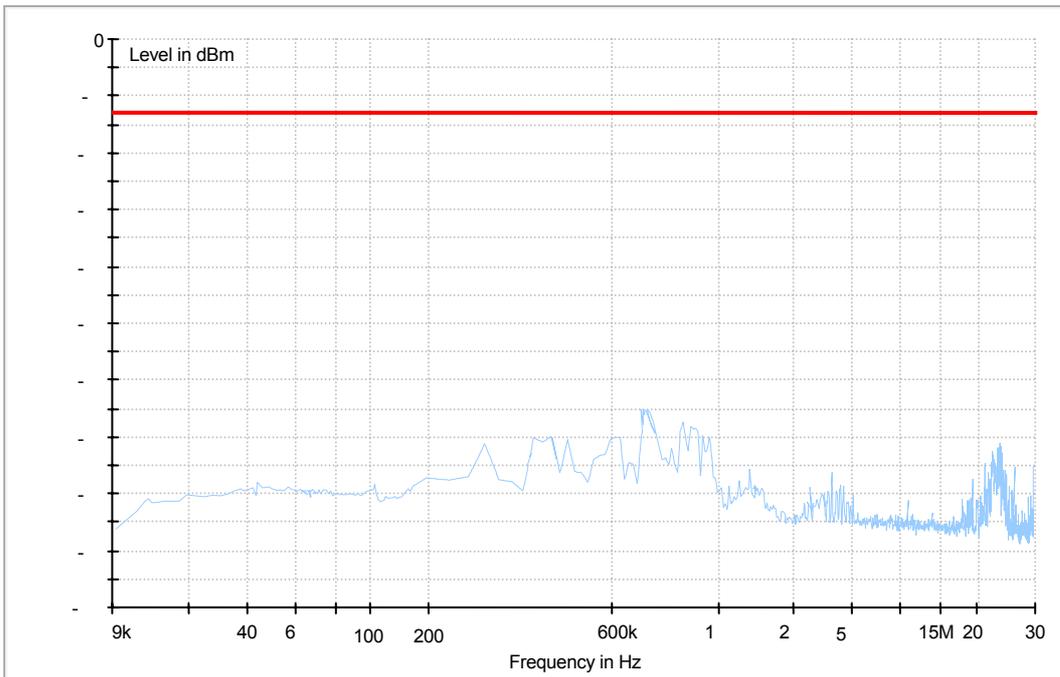


Traffic Mode (2GHz-18GHz)

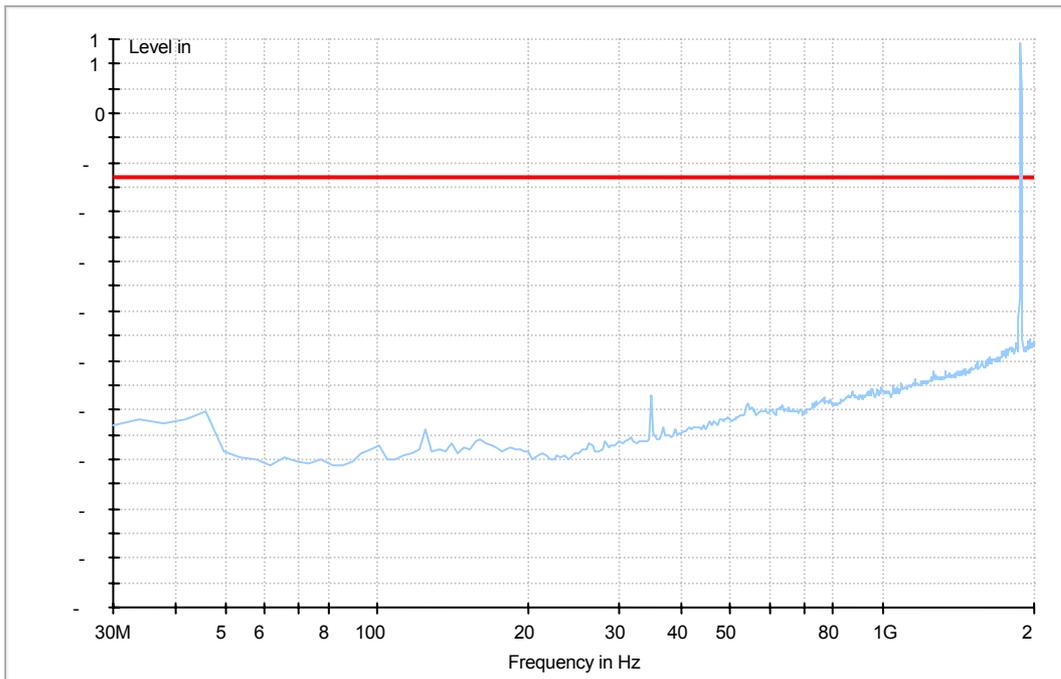


9.3.4 For PCS 1900

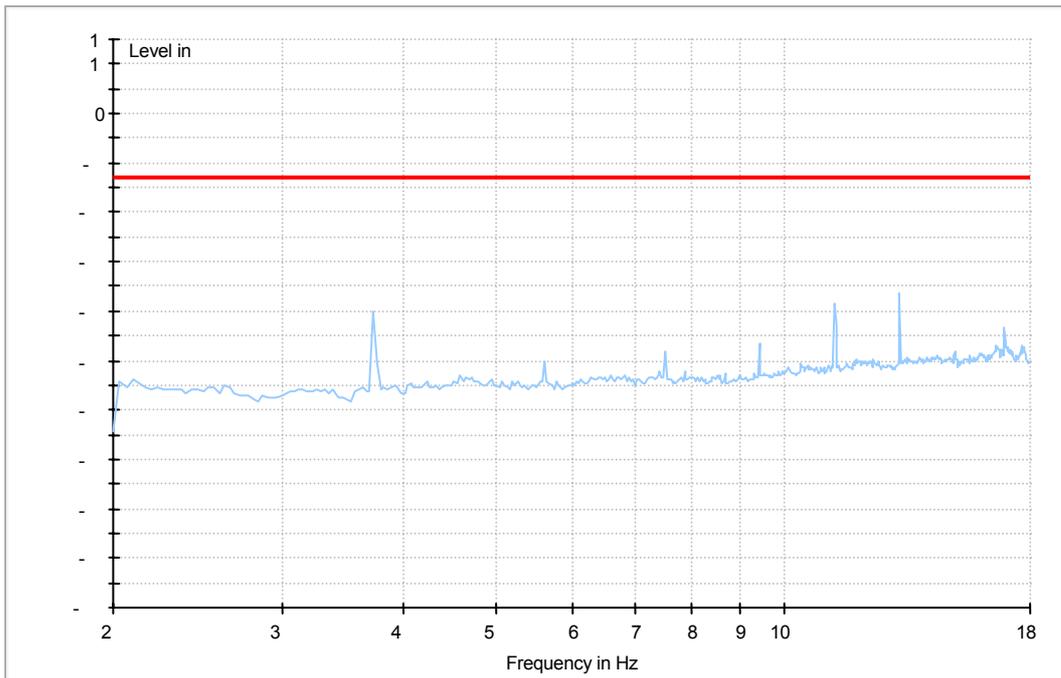
Traffic Mode (9kHz-30MHz)



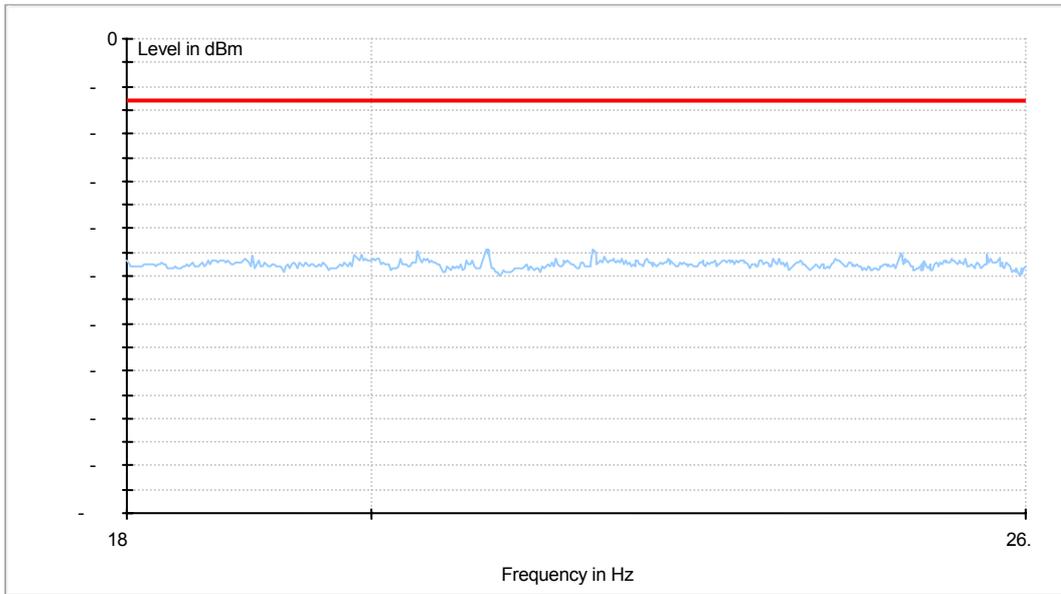
### Traffic Mode (30MHz-2GHz)



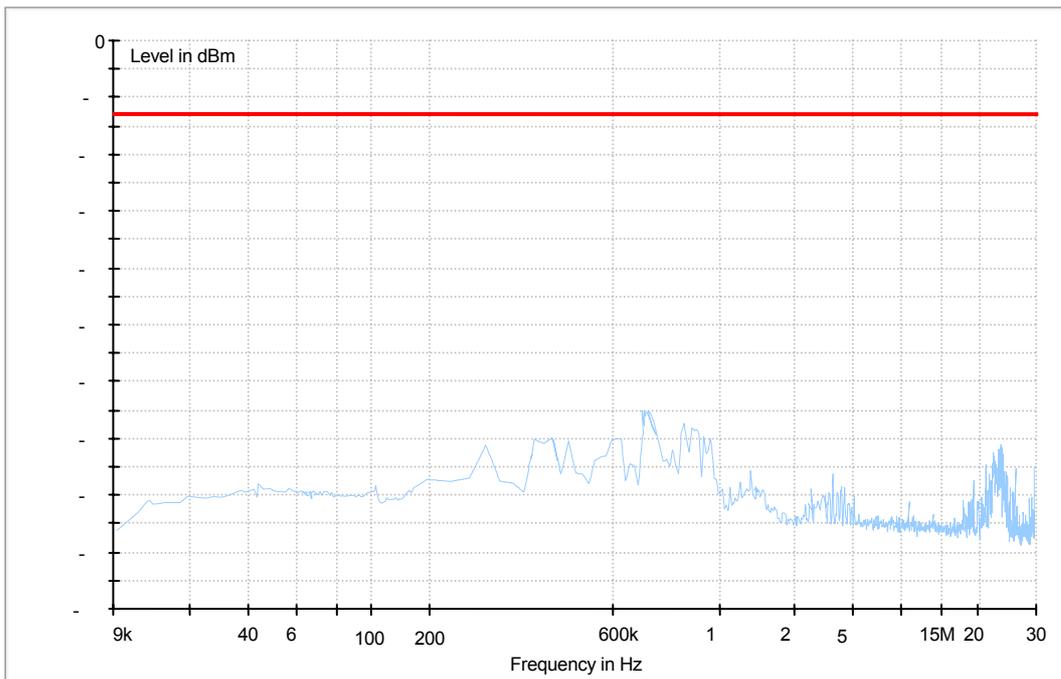
### Traffic Mode (2GHz-18GHz)



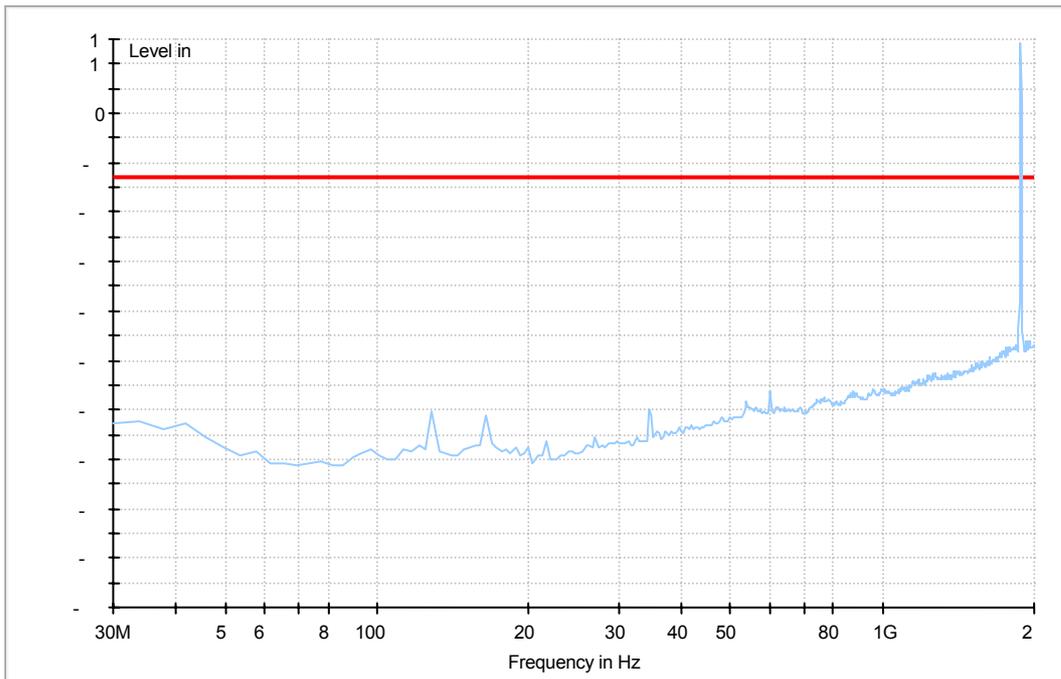
### Traffic Mode (18GHz-26.5GHz)



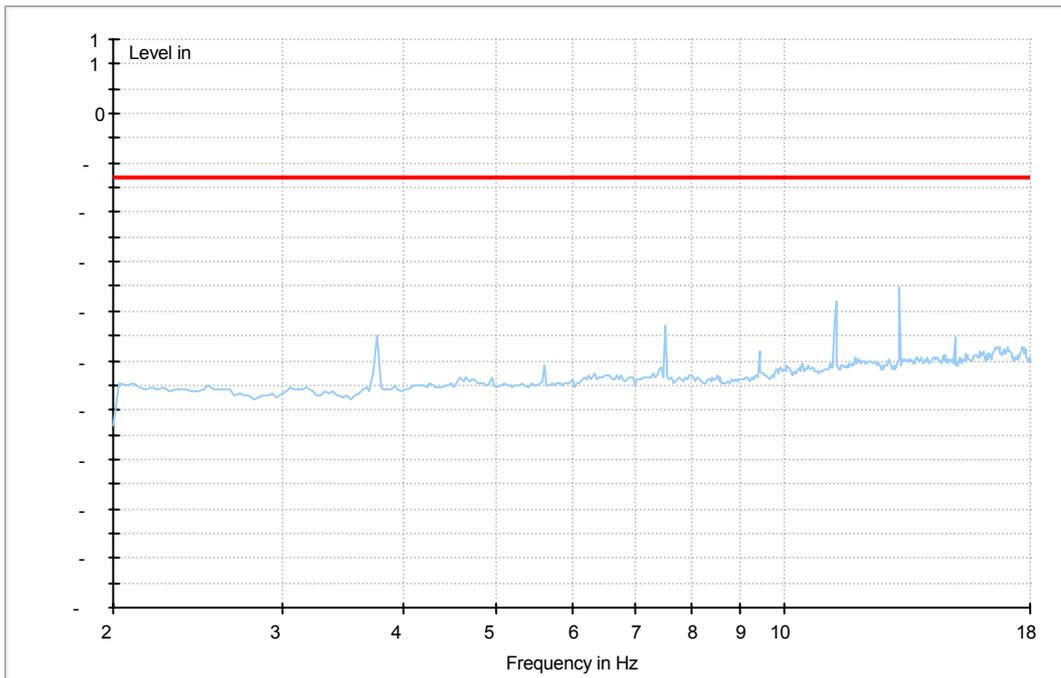
### 9.3.5 For GPRS 1900 Traffic Mode (9kHz-30MHz)



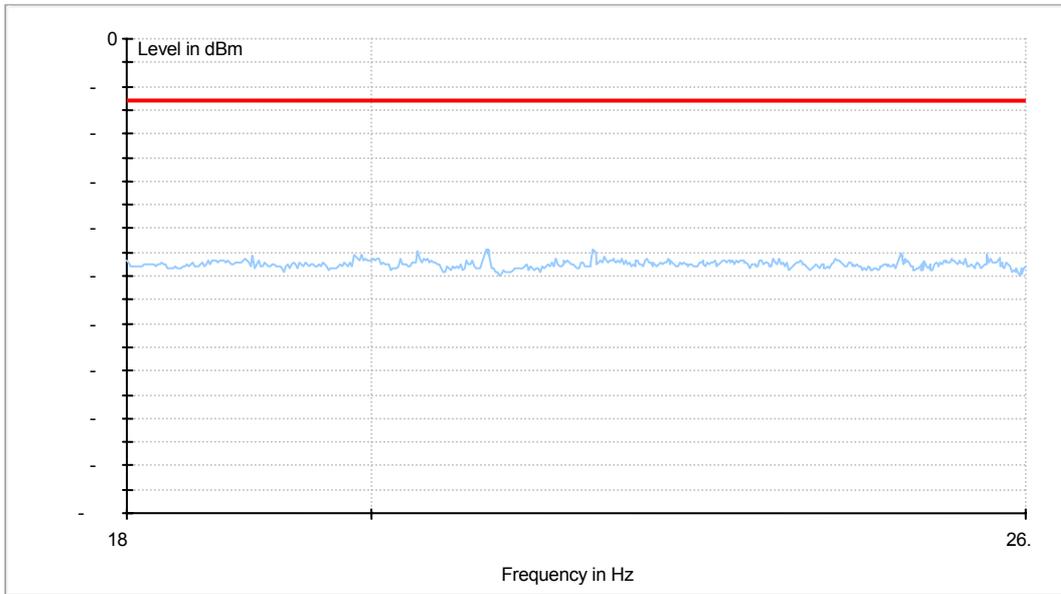
### Traffic Mode (30MHz-2GHz)



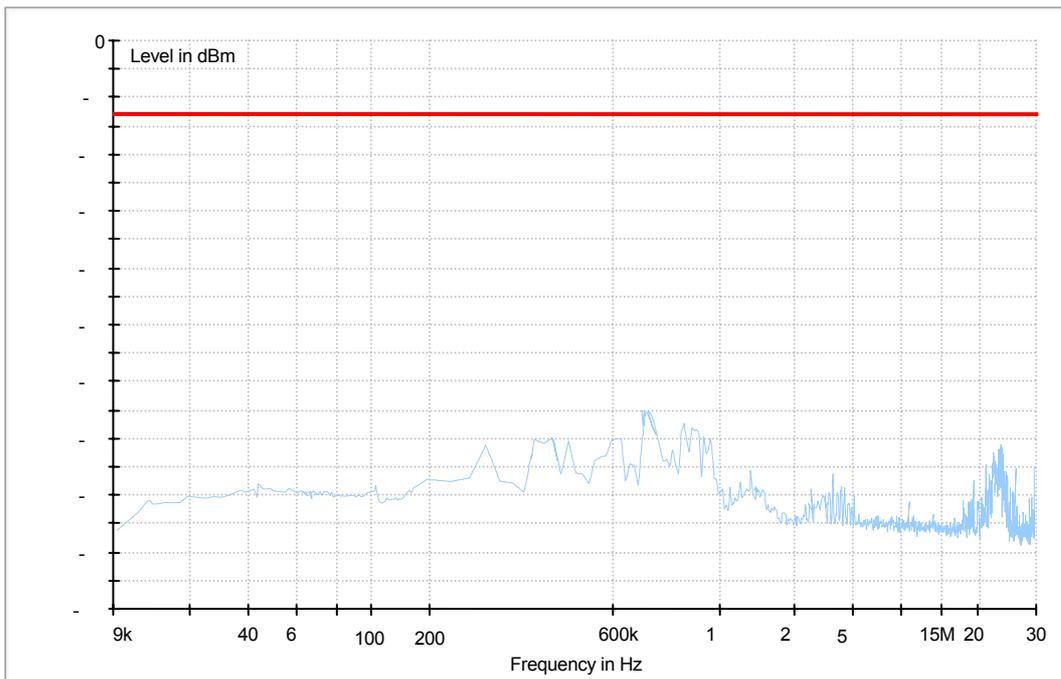
### Traffic Mode (2GHz-18GHz)



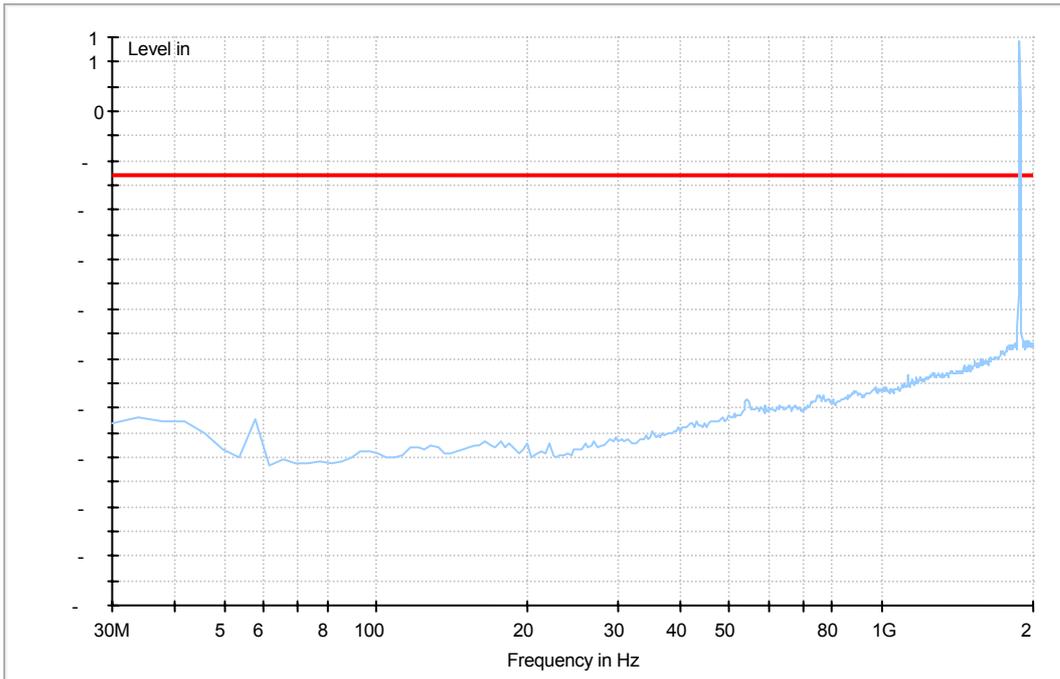
Traffic Mode (18GHz-26.5GHz)



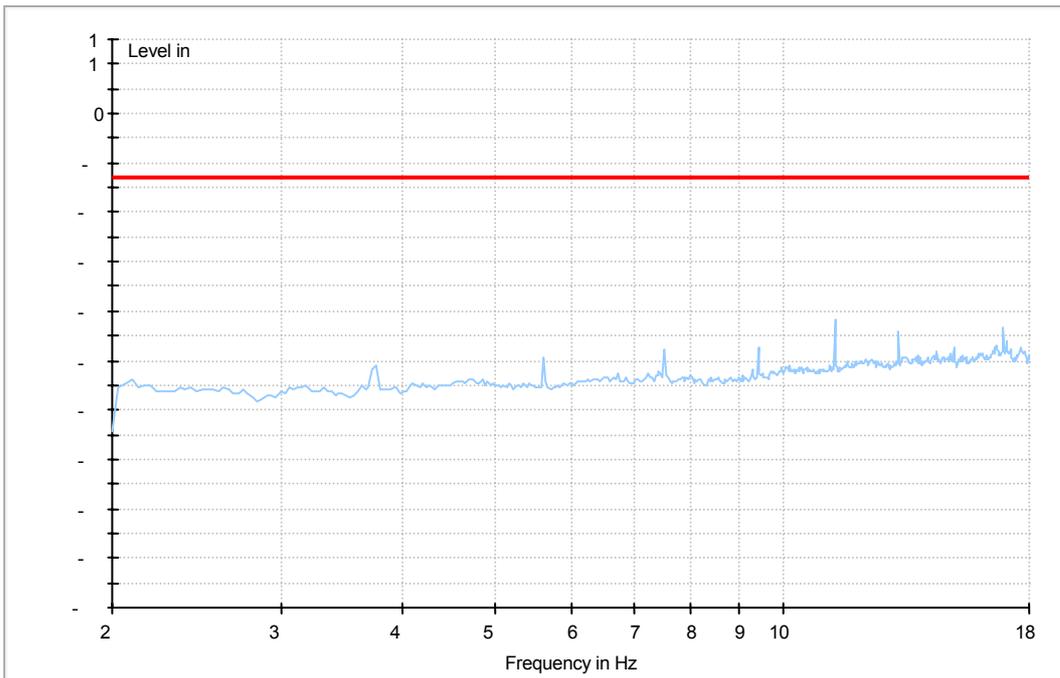
9.3.6 For EDGE 1900  
Traffic Mode (9kHz-30MHz)



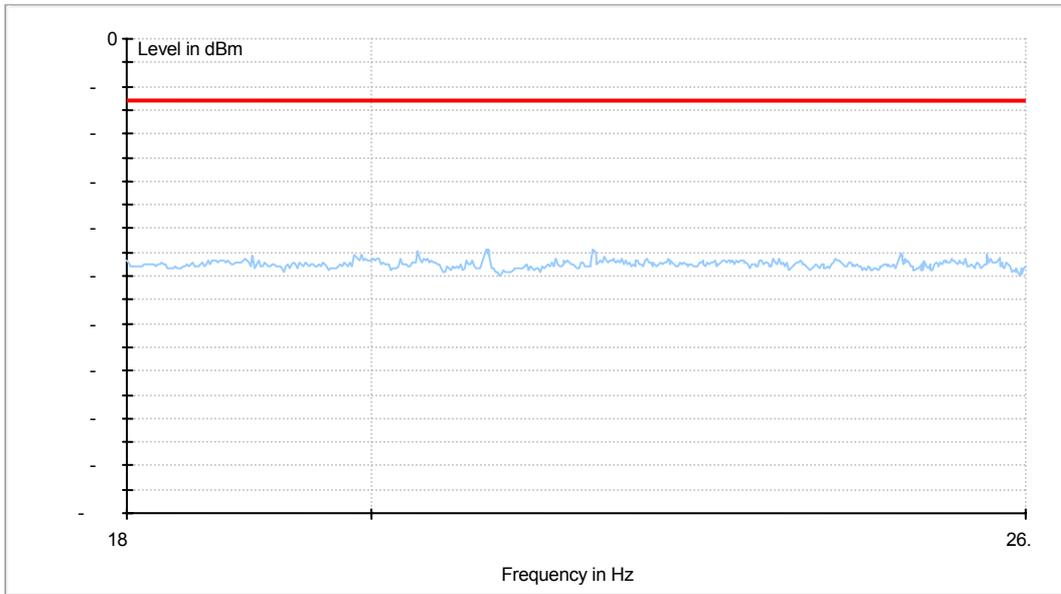
### Traffic Mode (30MHz-2GHz)



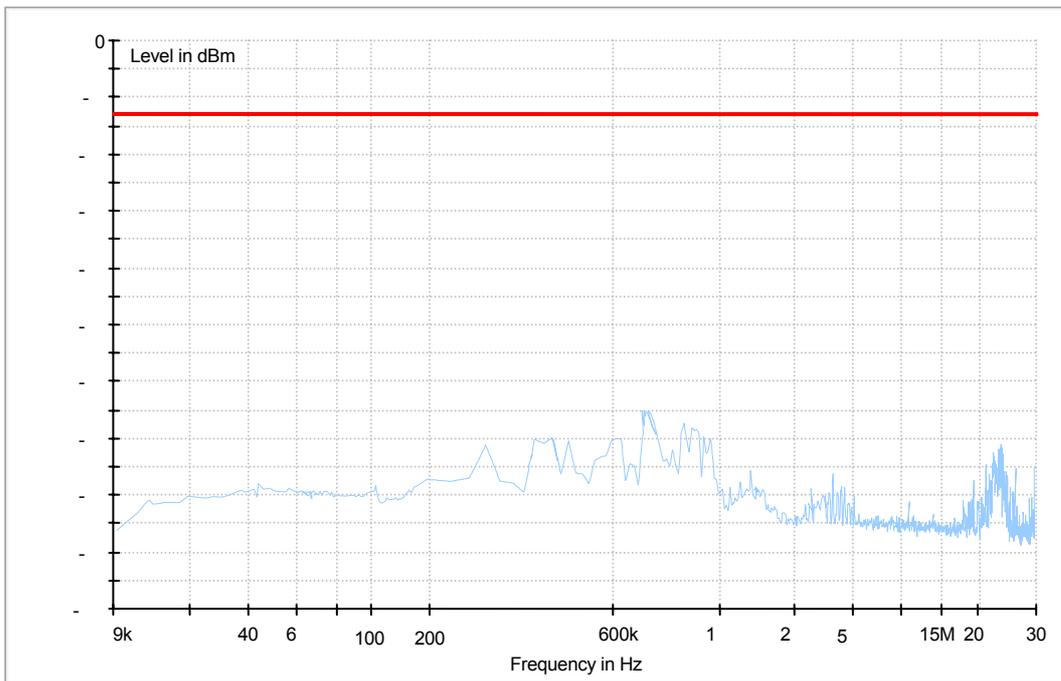
### Traffic Mode (2GHz-18GHz)



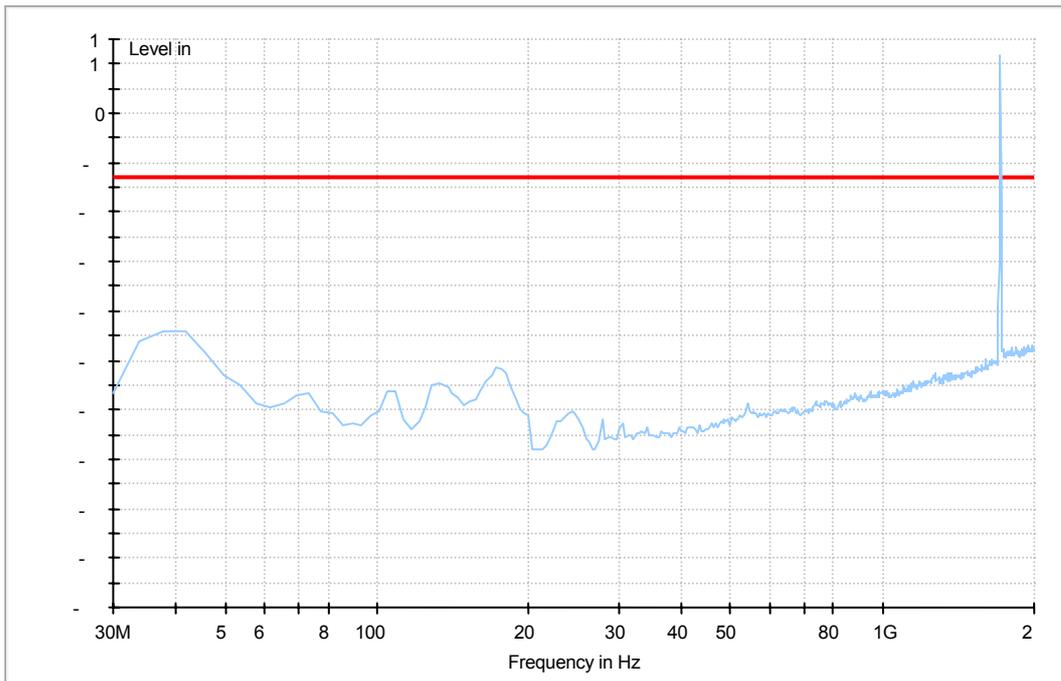
### Traffic Mode (18GHz-26.5GHz)



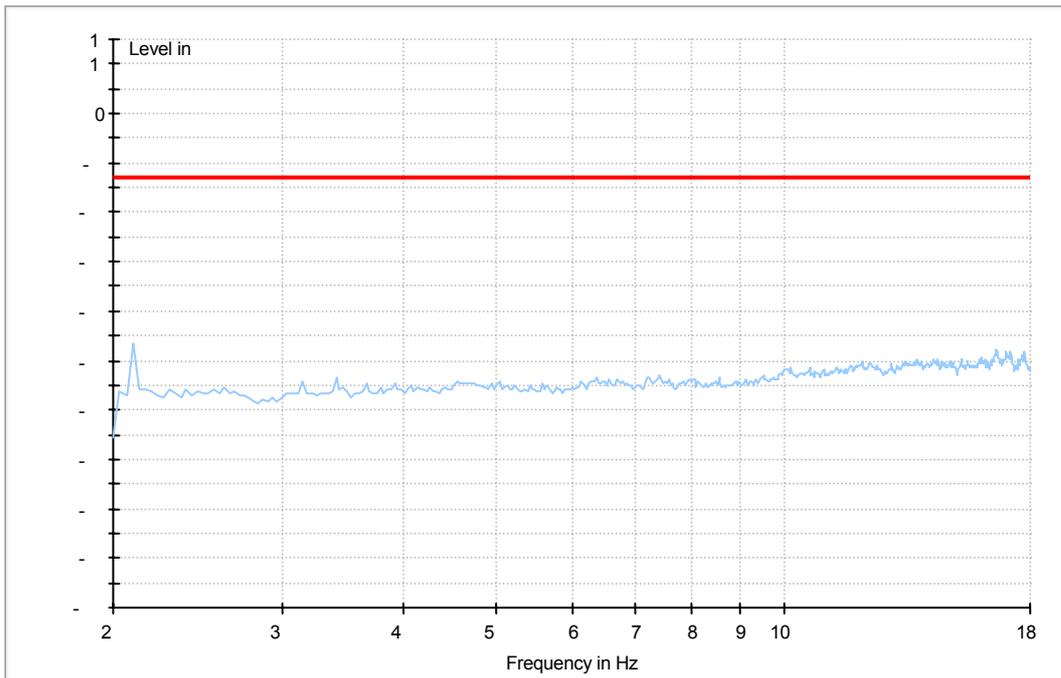
### 9.3.7 For WCDMA AWS Traffic Mode (9kHz-30MHz)



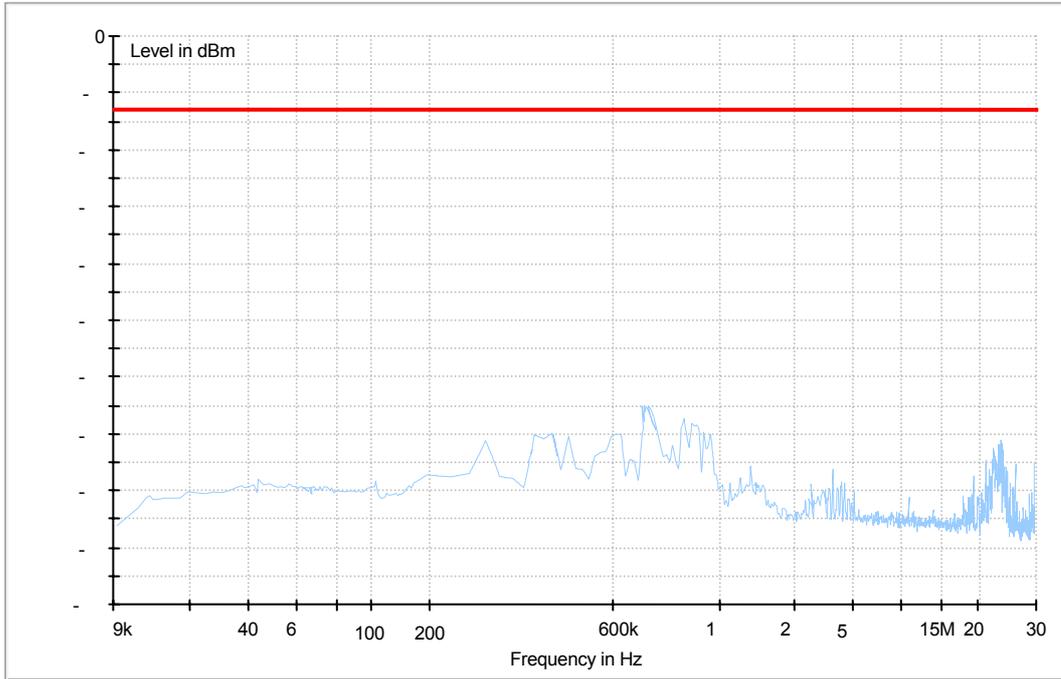
### Traffic Mode (30MHz-2GHz)



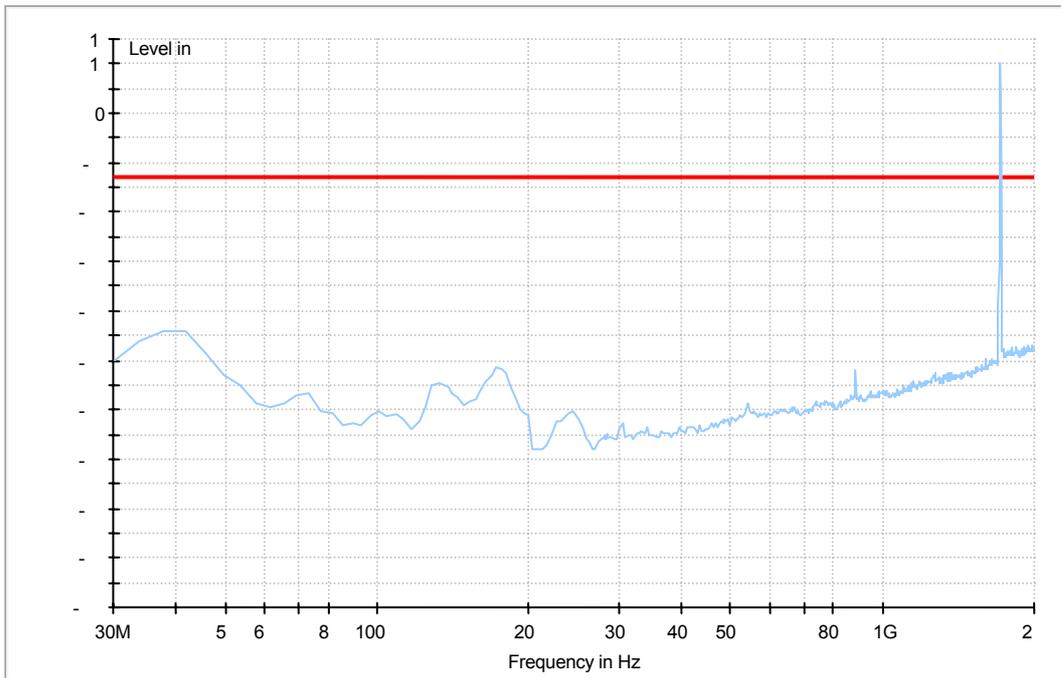
### Traffic Mode (2GHz-18GHz)



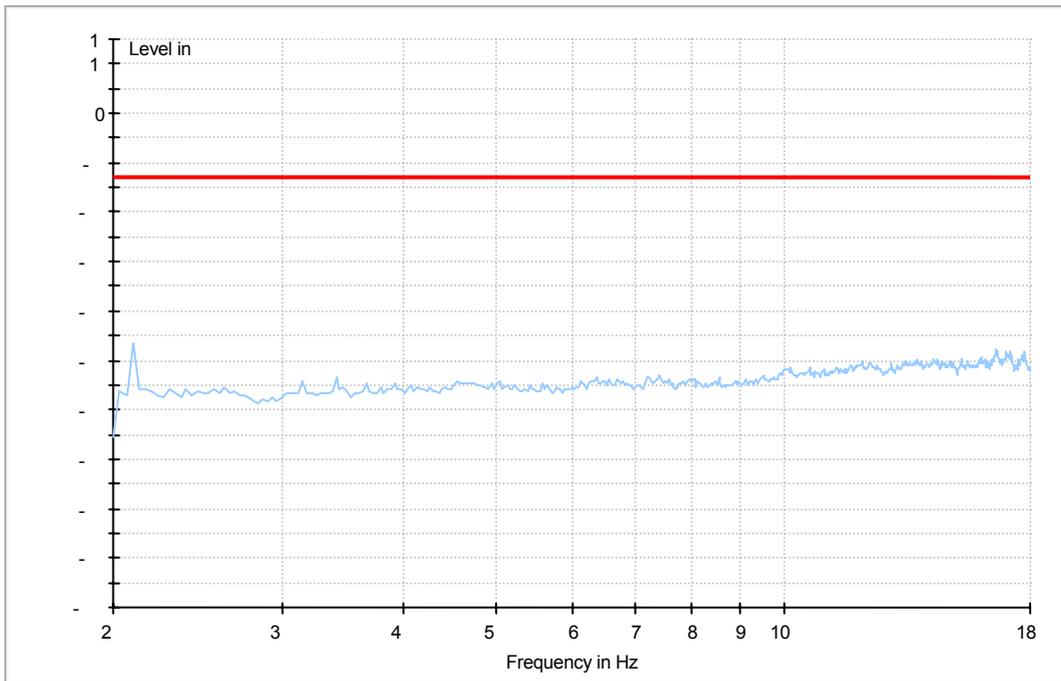
### 9.3.8 For HSDPA AWS Traffic Mode (9kHz-30MHz)



### Traffic Mode (30MHz-2GHz)



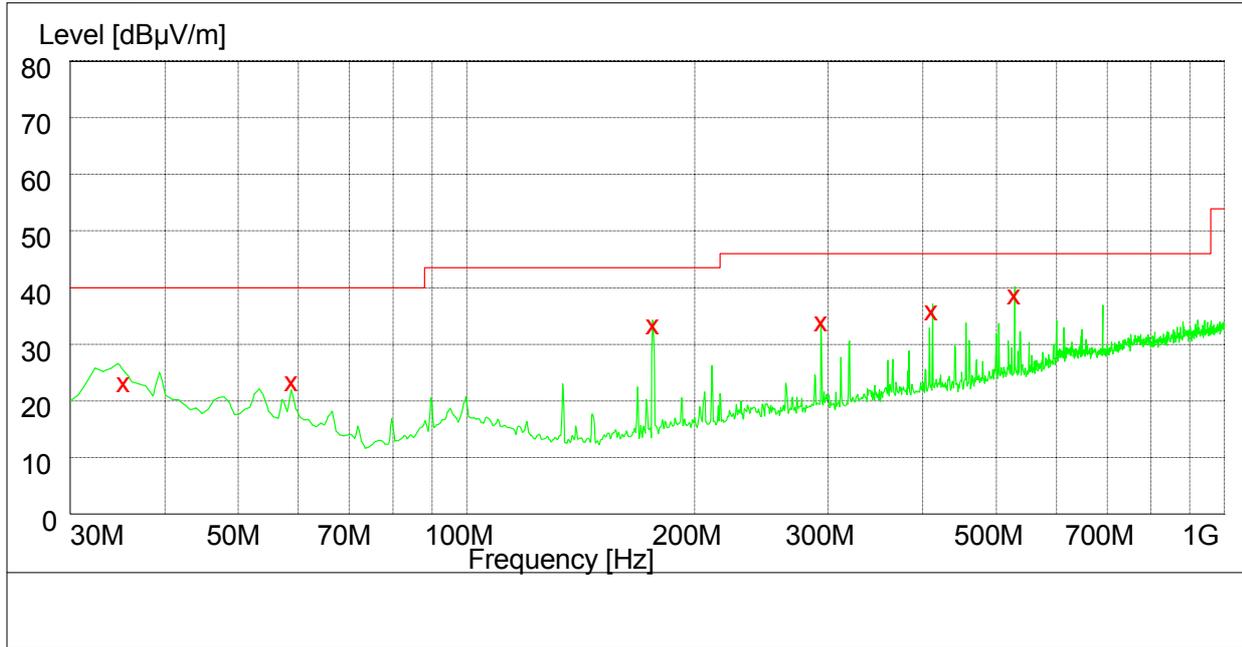
Traffic Mode (2GHz-18GHz)



### 9.4 Receiver Spurious Emission

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

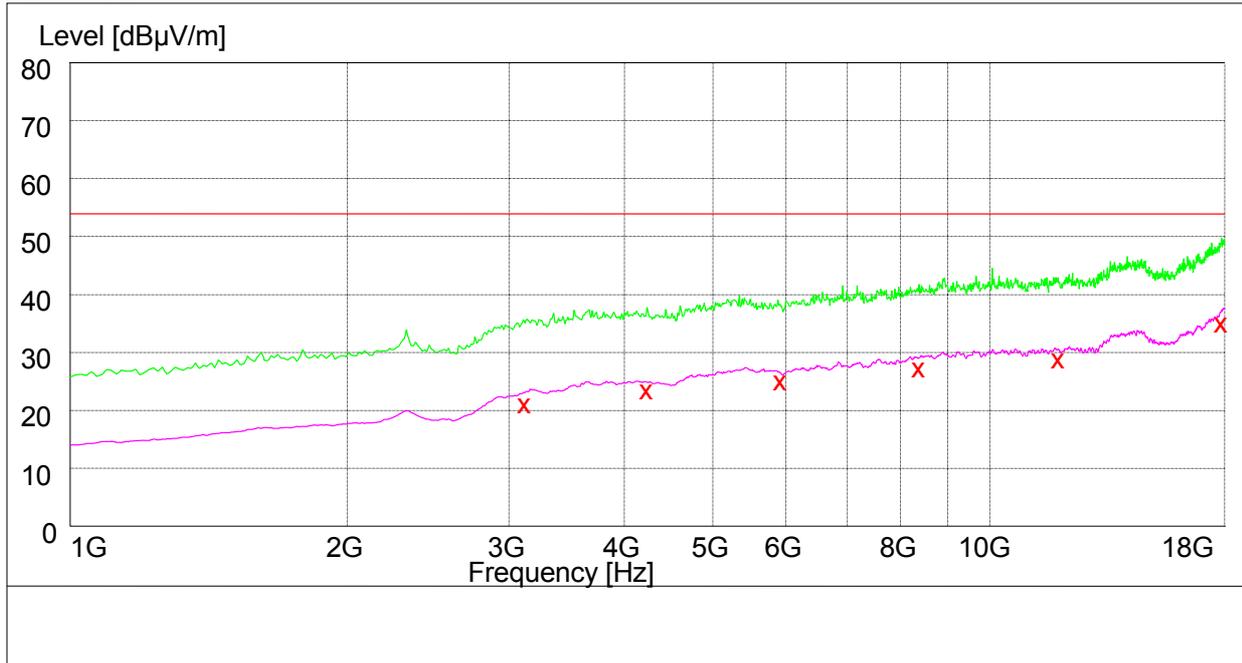
#### 30MHz-1GHz



#### MEASUREMENT RESULT: QP Detector

Frequency MHz	Level dBµV/m	Transd dB	Limit dBµV/m	Margin dB	Height cm	Azimuth deg	Polarisation
35.340000	23.50	11.8	40.0	16.5	114.0	147.00	VERTICAL
58.800000	23.20	12.4	40.0	16.8	291.0	67.00	VERTICAL
176.400000	33.50	10.6	40.0	6.5	100.0	129.00	VERTICAL
294.000000	33.70	15.4	47.0	13.3	100.0	225.00	HORIZONTAL
411.600000	37.10	18.5	47.0	9.9	100.0	318.00	HORIZONTAL
529.200000	39.60	20.7	47.0	7.4	100.0	360.00	VERTICAL

### 1GHz-18GHz



Frequency MHz	Level dBµV/m	Transd dB	Limit dBµV/m	Margin dB	Height cm	Azimuth deg	Polarisation
3121.000000	22.40	-8.6	53.9	31.5	148.0	124.00	HORIZONTAL
4238.500000	24.70	-5.3	53.9	29.2	180.0	87.00	HORIZONTAL
5924.500000	26.20	-1.7	53.9	27.7	200.0	36.00	VERTICAL
8377.000000	28.60	2.9	53.9	25.3	150.0	0.00	HORIZONTAL
11875.000000	30.00	6.9	53.9	23.9	152.0	16.00	VERTICAL
17866.500000	36.30	16.4	53.9	17.6	200.0	201.00	VERTICAL

-----**END**-----