



# TEST REPORT

No. 2010TAR292

for

**TCT Mobile Limited**

**GSM/GPRS/EDGE 850/1800/1900 Tri-band mobile phone**

**Model Name: Yippee A/Yippee Yahoo A**

**Marketing Name: OT-802A/OT-802YA**

**FCC ID: RAD133**

with

**Hardware Version: PIO**

**Software Version: V859**

**Issued Date: 2010-08-04**

**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 TMC Beijing.

**Test Laboratory:**

**DAR accreditation (DIN EN ISO/IEC 17025): No. DGA-PL-114/01-02**

**FCC 2.948 Listed: No.733176**

**IC O.A.T.S listed: No.6629A-1**

TMC Beijing, Telecommunication Metrology Center of Ministry of Industry and Information Technology

Shouxiang Science Building, No 51, Xueyuan Road, Haidian District, Beijing, P.R.China 100191

Tel:+86(0)10-62304633-2678, Fax:+86(0)10-62304793 Email:welcom@emcite.com. [www.emcite.com](http://www.emcite.com)

©Copyright. All rights reserved by TMC Beijing.

## **CONTENTS**

<b>1. TEST LABORATORY .....</b>	<b>3</b>
<b>1.1. TESTING LOCATION .....</b>	<b>3</b>
<b>1.2. TESTING ENVIRONMENT .....</b>	<b>3</b>
<b>1.3. PROJECT DATA .....</b>	<b>3</b>
<b>1.4. SIGNATURE .....</b>	<b>3</b>
<b>2. CLIENT INFORMATION.....</b>	<b>4</b>
<b>2.1. APPLICANT INFORMATION.....</b>	<b>4</b>
<b>2.2. MANUFACTURER INFORMATION.....</b>	<b>4</b>
<b>3. EQUIPMENT UNDER TEST (EUT) AND ANCILLARY EQUIPMENT (AE) .....</b>	<b>5</b>
<b>3.1. ABOUT EUT .....</b>	<b>5</b>
<b>3.2. INTERNAL IDENTIFICATION OF EUT USED DURING THE TEST .....</b>	<b>5</b>
<b>3.3. INTERNAL IDENTIFICATION OF AE USED DURING THE TEST .....</b>	<b>5</b>
<b>3.4. GENERAL DESCRIPTION .....</b>	<b>6</b>
<b>4. REFERENCE DOCUMENTS .....</b>	<b>6</b>
<b>4.1. REFERENCE DOCUMENTS FOR TESTING.....</b>	<b>6</b>
<b>5. LABORATORY ENVIRONMENT .....</b>	<b>7</b>
<b>6. SUMMARY OF TEST RESULTS .....</b>	<b>8</b>
<b>7. TEST EQUIPMENTS UTILIZED .....</b>	<b>9</b>
<b>ANNEX A: MEASUREMENT RESULTS.....</b>	<b>10</b>
<b>A.1 OUTPUT POWER.....</b>	<b>10</b>
<b>A.2 EMISSION LIMIT .....</b>	<b>15</b>

## 1. Test Laboratory

### 1.1. Testing Location

Company Name: TMC Beijing, Telecommunication Metrology Center of MIIT  
Address: Shouxiang Science Building, No 51, Xueyuan Road, Haidian District,  
Beijing, P.R.China  
Postal Code: 100191  
Telephone: 00861062304633  
Fax: 00861062304793

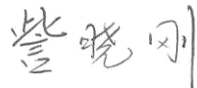
### 1.2. Testing Environment

Normal Temperature: 15-35℃  
Relative Humidity: 20-75%

### 1.3. Project data

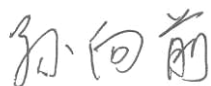
Testing Start Date: 2010-07-08  
Testing End Date: 2010-08-03

### 1.4. Signature



---

**Zi Xiaogang**  
**(Prepared this test report)**



---

**Sun Xiangqian**  
**(Reviewed this test report)**



---

**Lu Bingsong**  
**Deputy Director of the laboratory**  
**(Approved this test report)**

## **2. Client Information**

### **2.1. Applicant Information**

Company Name: TCT Mobile Limited  
Address /Post: 4/F, South Building, No.2966, Jinke Road, Zhangjiang High-Tech Park,  
Pudong, Shanghai, 201203, P.R.China  
Contact: Gong Zhizhou  
Email: zhizhou.gong@jrdcom.com  
Telephone: 0086-21-61460890  
Fax: 0086-21-61460602

### **2.2. Manufacturer Information**

Company Name: TCT Mobile Limited  
Address /Post: 4/F, South Building, No.2966, Jinke Road, Zhangjiang High-Tech Park,  
Pudong, Shanghai, 201203, P.R.China  
Contact: Gong Zhizhou  
Email: zhizhou.gong@jrdcom.com  
Telephone: 0086-21-61460890  
Fax: 0086-21-61460602

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

#### **3.1. About EUT**

Description	GSM/GPRS/EDGE 850/1800/1900 Tri-band mobile phone
Model Name	Yippee A/Yippee Yahoo A
Marketing Name	OT-802A/OT-802YA
FCC ID	RAD133
Frequency	GSM 850MHz; PCS 1900MHz;DCS1800MHz
Antenna	Internal
Power supply	Battery or Charger(AC Adaptor)
Output power	28.64 dBm maximum ERP measured for GSM850
Extreme vol. Limits	3.5VDC to 4.2VDC (nominal: 3.8VDC)
Extreme temp. Tolerance	-30°C to +50°C

Note: Components list, please refer to documents of the manufacturer; it is also included in the original test record of Telecommunication Metrology Center of MIIT of People's Republic of China.

#### **3.2. Internal Identification of EUT used during the test**

EUT ID*	SN or IMEI	HW Version	SW Version
N03	/	PIO	V859

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

#### **3.3. Internal Identification of AE used during the test**

AE ID*	Description	SN
AE1	Battery	/
AE2	Charger	/
AE3	Charger	/

##### AE1

Model	CAB30P0000C1
Manufacturer	BYD
Capacitance	850mAh
Nominal Voltage	3.7V

##### AE2

Model	CBA30Y0AG0C1
Manufacturer	BYD
Length of DC line	120cm

##### AE3

Model	CBA30Y0AG0C2
Manufacturer	TENPAO
Length of DC line	120cm

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

### **3.4. General Description**

The Equipment Under Test (EUT) is a model of GSM/GPRS/EDGE 850/1800/1900 Tri-band mobile phone with integrated antenna. It consists of Hand Telephone Set and normal options: lithium battery, charger.

Manual and specifications of the EUT were provided to fulfil the test.

Samples under test were selected by the Client.

## **4. Reference Documents**

### **4.1. Reference Documents for testing**

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

<b>Reference</b>	<b>Title</b>	<b>Version</b>
FCC Part 24	PERSONAL COMMUNICATIONS SERVICES	V 10.1.09
FCC Part 22	PUBLIC MOBILE SERVICES	V 10.1.09
ANSI/TIA-603-C	Land Mobile FM or PM Communications Equipment Measurement and Performance Standards	2004
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	2003

## 5. LABORATORY ENVIRONMENT

**Semi-anechoic chamber** (23 meters×17meters×10meters) did not exceed following limits along the EMC testing:

Temperature	Min. = 15 °C, Max. = 30 °C
Relative humidity	Min. = 30 %, Max. = 60 %
Shielding effectiveness	> 110 dB
Electrical insulation	> 10 kΩ
Ground system resistance	< 0.5 Ω
Normalised site attenuation (NSA)	< ±3.2 dB, 10 m distance, from 30 to 1000 MHz
Uniformity of field strength	Between 0 and 6 dB, from 80 to 2000 MHz

**Control room** did not exceed following limits along the EMC testing:

Temperature	Min. = 15 °C, Max. = 35 °C
Relative humidity	Min. =30 %, Max. = 60 %
Shielding effectiveness	> 110 dB
Electrical insulation	> 10 kΩ
Ground system resistance	< 0.5 Ω

**Conducted chamber** did not exceed following limits along the EMC testing:

Temperature	Min. = 15 °C, Max. = 30 °C
Relative humidity	Min. = 30 %, Max. = 60 %
Shielding effectiveness	> 110 dB
Electrical insulation	> 10 kΩ
Ground system resistance	< 0.5 Ω

**Fully-anechoic chamber** (6.8 meters×3.08 meters×3.53 meters) did not exceed following limits along the EMC testing:

Temperature	Min. = 15 °C, Max. = 30 °C
Relative humidity	Min. = 30 %, Max. = 60 %
Shielding effectiveness	> 110 dB
Electrical insulation	> 10 kΩ
Ground system resistance	< 0.5 Ω
Uniformity of field strength	Between 0 and 6 dB, from 80 to 2000 MHz

## 6. SUMMARY OF TEST RESULTS

Items	List	Clause in FCC rules	Verdict
1	Output Power	22.913(a)/24.232(b)	P
2	Emission Limit	2.1051/22.917/24.238	P



## 7. Test Equipments Utilized

NO.	NAME	TYPE	SERIES NUMBER	PRODUCER	CAL DUE DATE
1	Test Receiver	ESS	847151/015	R&S	2010-10-30
2	Test Receiver	ESI40	831564/002	R&S	2011-2-10
3	BiLog Antenna	3142B	9908-1403	EMCO	2011-1-15
4	BiLog Antenna	3142B	9908-1405	EMCO	2010-9-19
5	Signal Generator	SMT06	831285/005	R&S	2010-12-25
6	Signal Generator	SMP04	100070	R&S	2011-4-19
7	LISN	ESH2-Z5	829991/012	R&S	2010-8
8	Spectrum Analyzer	FSU26	200030	R&S	2011-6-17
9	Universal Radio Communication Tester	CMU200	100680	R&S	2010-8-23
10	Dual-Ridge Waveguide Horn Antenna	3115	9906-5827	EMCO	2011-3
11	Dual-Ridge Waveguide Horn Antenna	3115	9906-5831	EMCO	2011-3
12	Dual-Ridge Waveguide Horn Antenna	3116	2663	EMCO	2011-3
13	Dual-Ridge Waveguide Horn Antenna	3116	2661	EMCO	2011-3
14	Climatic chamber	PL-2G	343074	ESPEC	2011-5-15

## **ANNEX A: MEASUREMENT RESULTS**

### **A.1 OUTPUT POWER**

#### **A.1.1 Summary**

During the process of testing, the EUT was controlled via Rhode & Schwarz Digital Radio Communication tester (CMU-200) to ensure max power transmission and proper modulation.

This result contains peak output power and EIRP measurements for the EUT.

In all cases, output power is within the specified limits.

#### **A.1.2 Conducted**

##### **A.1.2.1 Method of Measurements**

The EUT was set up for the max output power with pseudo random data modulation.

The power was measured with Rhode & Schwarz Spectrum Analyzer FSU (peak)

These measurements were done at 3 frequencies, 1850.2 MHz, 1880.0MHz and 1909.8MHz for PCS1900 band;824.4MHz, 836.6MHz and 848.8MHz for GSM850 band. (bottom, middle and top of operational frequency range).

#### **GSM850**

##### **Limit**

	Power step	Nominal Peak output power (dBm)	Tolerance (dB)	Target (dB)
GSM	5	33dBm(2W)	± 2	33±1
GPRS	3	33dBm(2W)	± 2	33±1
EGPRS	6	27dBm(0.5W)	± 2	25±1

#### **Measurement result**

##### **GSM**

Frequency(MHz)	Power Step	Peak output power(dBm)
824.2	5	32.42
836.6	5	32.54
848.8	5	32.46

##### **GPRS**

Frequency(MHz)	Power Step	Peak output power(dBm)
824.2	3	31.57
836.6	3	31.49
848.8	3	31.41

##### **EGPRS**

Frequency(MHz)	Power Step	Peak output power(dBm)
824.2	6	25.73
836.6	6	26.31
848.8	6	26.49

**PCS1900**

**Limit**

	Power step	Nominal Peak output power (dBm)	Tolerance (dB)	Target (dB)
GSM	0	30dBm(1W)	± 2	30±1
GPRS	3	30dBm(1W)	±2	30±1
EGPRS	5	26 dBm(0.4W)	±2	24±1

**Measurement result**

**GSM**

Frequency(MHz)	Power Step	Peak output power(dBm)
1850.2	0	29.39
1880.0	0	29.51
1909.8	0	29.46

**GPRS**

Frequency(MHz)	Power Step	Peak output power(dBm)
1850.2	3	28.35
1880.0	3	27.47
1909.8	3	27.44

**EGPRS**

Frequency(MHz)	Power Step	Peak output power(dBm)
1850.2	5	25.20
1880.0	5	24.31
1909.8	5	24.41

### A.1.3 Radiated

#### A.1.3.1 Description

This is the test for the maximum radiated power from the EUT.

Rule Part 24.232(b) specifies, "Mobile/portable stations are limited to 2 watts e.i.r.p. Peak power" and 24.232(c) specifies that "Peak transmit power must be measured over any interval of continuous transmission using instrumentation calibrated in terms of an rms-equivalent voltage."

Rule Part 22.913(a) specifies "Maximum ERP. The effective radiated power (ERP) of base transmitters and cellular repeaters must not exceed 500 Watts. The ERP of mobile transmitters and auxiliary test transmitters must not exceed 7 Watts."

#### A.1.3.2 Method of Measurement

The measurements procedures in TIA-603C-2004 are used.

1. In an anechoic antenna test chamber, a half-wave dipole antenna for the frequency band of interest is placed at the reference centre of the chamber. An RF Signal source for the frequency band of interest is connected to the dipole with a cable that has been constructed to not interfere with the radiation pattern of the antenna. A known (measured) power ( $P_{in}$ ) is applied to the input of the dipole, and the power received ( $P_r$ ) at the chamber's probe antenna is recorded.
2. The substitution method is used. Substitution values at each frequency are measured before and saved to the test software. A "reference path loss" is established as  $A_{Rpl}=P_{in} - P_r$ . The  $A_{Rpl}$  is the attenuation of "reference path loss", and including the gain of receive antenna, the cable loss and the air loss.

The measurement results are obtained as described below:

$$\text{Power(EIRP)}=P_{\text{Mea}}+A_{\text{Rpl}}$$

3. The EUT is substituted for the dipole at the reference centre of the chamber and a scan is performed to obtain the radiation pattern.
4. From the radiation pattern, the co-ordinates where the maximum antenna gain occurs are identified.
5. The EUT is then put into continuously transmitting mode at its maximum power level.
6. Power mode measurements are performed with the receiving antenna placed at the coordinates determined in Step 3 to determine the output power as defined in Rule 24.232 (b) and (c). The "reference path loss" from Step1 is added to this result.
7. This value is EIRP since the measurement is calibrated using a half-wave dipole antenna of known gain (2.15 dBi) and known input power ( $P_{in}$ ).
8. ERP can be calculated from EIRP by subtracting the gain of the dipole,  $ERP = EIRP - 2.15\text{dBi}$ .
9. The test system should be checked before test by a standard comb signal source. The signal source put on the position, instead of the EUT. The test result should be compared with the test result before. If the test result is similar with the initial one, then the test system can work stably.

**GSM 850-ERP 22.913(a)**

**Limits**

	Power Step	Burst Peak ERP (dBm)
GSM	5	≤38.45dBm (7W)
GPRS	3	≤38.45dBm (7W)
EGPRS	6	≤38.45dBm (7W)

**Measurement result**

**GSM**

Frequency(MHz)	Power Step	Peak ERP(dBm)	A <sub>Rpl</sub> (dBm)	Correction (dBm)	P <sub>Mea</sub> (dBm)	Polarization
824.2	5	27.91	45.95	2.15	-15.89	Horizontal
836.6	5	28.32	45.98	2.15	-15.51	Horizontal
848.8	5	<b>28.61</b>	45.82	2.15	-15.06	Horizontal

**GPRS**

Frequency(MHz)	Power Step	Peak ERP(dBm)	A <sub>Rpl</sub> (dBm)	Correction (dBm)	P <sub>Mea</sub> (dBm)	Polarization
824.2	3	27.92	45.95	2.15	-15.88	Horizontal
836.6	3	28.32	45.98	2.15	-15.51	Horizontal
848.8	3	<b>28.64</b>	45.82	2.15	-15.03	Horizontal

**EGPRS**

Frequency(MHz)	Power Step	Peak ERP(dBm)	A <sub>Rpl</sub> (dBm)	Correction (dBm)	P <sub>Mea</sub> (dBm)	Polarization
824.2	6	20.18	45.95	2.15	-23.62	Horizontal
836.6	6	<b>21.63</b>	45.98	2.15	-22.2	Horizontal
848.8	6	21.5	45.82	2.15	-22.17	Horizontal

Frequency: 848.8MHz

Peak ERP(dBm)= P<sub>Mea</sub>(-15.03dBm)+ A<sub>Rpl</sub>(45.82dBm)-2.15dBm= 28.64 dBm

**ANALYZER SETTINGS: RBW = VBW = 3MHz**

PCS1900-EIRP 24.232(b)

Limits

	Power Step	Burst Peak EIRP (dBm)
GSM	0	≤33dBm (2W)
GPRS	3	≤33dBm (2W)
EGPRS	5	≤33dBm (2W)

Measurement result

GSM

Frequency(MHz)	Power Step	Peak EIRP(dBm)	A <sub>Rpl</sub> (dBm)	P <sub>Mea</sub> (dBm)	Polarization
1850.2	0	26.24	47.11	-21.99	Horizontal
1880.0	0	26.5	47.37	-21.77	Horizontal
1909.8	0	<b>27.52</b>	47.54	-21.15	Horizontal

GPRS

Frequency(MHz)	Power Step	Peak EIRP(dBm)	A <sub>Rpl</sub> (dBm)	P <sub>Mea</sub> (dBm)	Polarization
1850.2	3	25.15	47.11	-21.96	Horizontal
1880.0	3	25.62	47.37	-21.75	Horizontal
1909.8	3	<b>26.41</b>	47.54	-21.13	Horizontal

EGPRS

Frequency(MHz)	Power Step	Peak EIRP(dBm)	A <sub>Rpl</sub> (dBm)	P <sub>Mea</sub> (dBm)	Polarization
1850.2	5	20.21	47.11	-26.9	Horizontal
1880.0	5	21.01	47.37	-26.36	Horizontal
1909.8	5	<b>22.43</b>	47.54	-25.11	Horizontal

Frequency: 1909.8MHz

Peak EIRP(dBm)= P<sub>Mea</sub>(-21.13dBm)+ A<sub>Rpl</sub>(47.54dBm) = 26.41 dBm

**ANALYZER SETTINGS: RBW = VBW = 3MHz**

## A.2 EMISSION LIMIT

### A.2.1 Measurement Method

The measurements procedures in TIA-603C-2004 are used.

The spectrum was scanned from 30 MHz to the 10th harmonic of the highest frequency generated within the equipment, which is the transmitted carrier that can be as high as 1910 MHz. The resolution bandwidth is set 1MHz as outlined in Part 24.238. The spectrum was scanned with the mobile station transmitting at carrier frequencies that pertain to low, mid and high channels of the PCS1900 band ,GSM850 band.

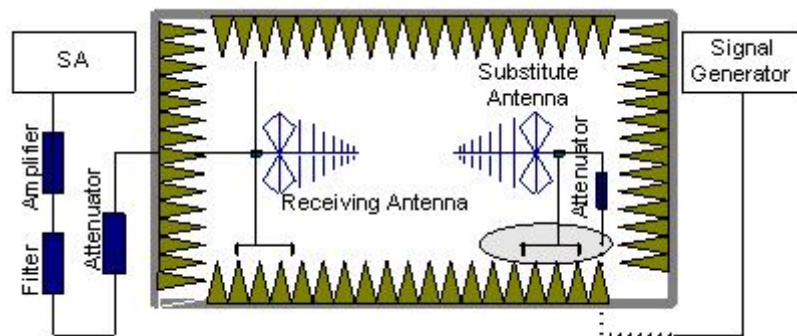
**The procedure of radiated spurious emissions is as follows:**

a) Pre-calibration

With pre-calibration method, the Radiated Spurious Emissions(RSE) is calculated as,  

$$RSE = R_x \text{ (dBuV)} + CL \text{ (dB)} + SA \text{ (dB)} + Gain \text{ (dBi)} - 107 \text{ (dBuV to dBm)}$$

The SA is calibrated using following setup.

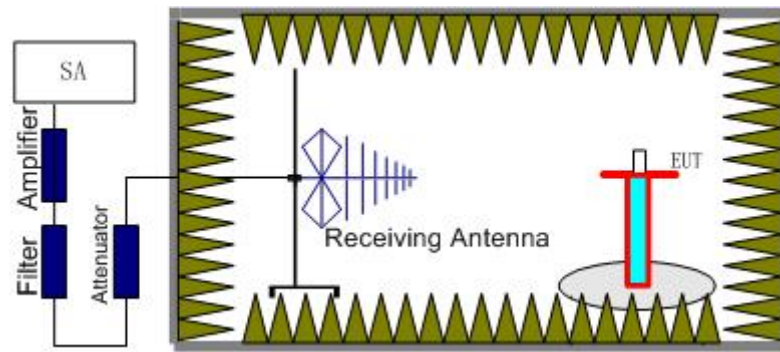


b) System check

The test system was checked before test by a standard comb signal source. The signal source put on the position, instead of the EUT. The test result should be compared with the test result before. If the test result is similar with the initial one, then the test system can work stably.

c) EUT test

EUT was placed on a 1.5 meter high non-conductive stand at a 3 meter test distance from the receive antenna. A receiving antenna was placed on the antenna mast 3 meters from the test item for emission measurements. The height of receiving antenna is 1.5m. The test setup refers to figure below. Detected emissions were maximized at each frequency by rotating the test item and adjusting the receiving antenna polarization. The radiated emission measurements of all non-harmonic and harmonics of the transmit frequency through the 10th harmonic were measured with peak detector and 1MHz bandwidth.



### A.2.2 Measurement Limit

Sec. 24.238 Emission Limits.

(a) On any frequency outside a licensee's frequency block (e.g. A, D, B, etc.) within the USPCS spectrum, the power of any emission shall be attenuated below the transmitter power ( $P$ , in Watts) by at least  $43+10\text{Log}(P)$  dB. The specification that emissions shall be attenuated below the transmitter power ( $P$ ) by at least  $43 + 10 \log (P)$  dB, translates in the relevant power range (1 to 0.001 W) to -13 dBm. At 1 W the specified minimum attenuation becomes 43 dB and relative to a 30 dBm (1 W) carrier becomes a limit of -13 dBm. At 0.001 W (0 dBm) the minimum attenuation is 13 dB, which again yields a limit of -13 dBm. In this way a translation of the specification from relative to absolute terms is carried out.

### A.2.3 Measurement Results

Radiated emissions measurements were made only at the upper, middle, and lower carrier frequencies of the PCS band (1850.2 MHz, 1880 MHz and 1909.8 MHz), GSM850 band (824.2MHz, 836.6MHz, 848.8MHz). It was decided that measurements at these three carrier frequencies would be sufficient to demonstrate compliance with emissions limits because it was seen that all the significant spurs occur well outside the band and no radiation was seen from a carrier in one block of the PCS1900, GSM850 into any of the other blocks. The equipment must still, however, meet emissions requirements with the carrier at all frequencies over which it is capable of operating and it is the manufacturer's responsibility to verify this.

The substitution method is used. Substitution values at each frequency are measured before and saved to the test software. A "reference path loss" is established and the  $A_{Rpl}$  is the attenuation of "reference path loss", and including the gain of receive antenna, the gain of the preamplifier, the cable loss and the air loss.

The measurement results are obtained as described below:

$$\text{Power} = P_{\text{Mea}} + A_{\text{Rpl}}$$



**A.2.4 Sweep Table**

Working Frequency	Subrange (GHz)	RBW	VBW	Sweep time (s)
850MHz	0.03~1	100KHz	300KHz	10
	1-2	1 MHz	3 MHz	2
	2~5	1 MHz	3 MHz	3
	5~8	1 MHz	3 MHz	3
	8~10	1 MHz	3 MHz	3
1900MHz	0.03~1	100KHz	300KHz	10
	1-2	1 MHz	3 MHz	2
	2~5	1 MHz	3 MHz	3
	5~8	1 MHz	3 MHz	3
	8~11	1 MHz	3 MHz	3
	11~14	1 MHz	3 MHz	3
	14~18	1 MHz	3 MHz	3
	18~20	1 MHz	3 MHz	2

**GSM Mode Channel 128/824.2MHz**

Frequency(MHz)	Power(dBm)	A <sub>Rpl</sub> (dBm)	P <sub>Mea</sub> (dBm)	Limit (dBm)	Polarity
1647.75	-55.93	-2.95	-52.98	-13	Horizontal
2472.45	-50.27	0.65	-50.92	-13	Vertical
7418.2	-42.95	6.85	-49.80	-13	Horizontal
8042.8	-48.70	7.25	-55.95	-13	Horizontal
9901.6	-46.45	10.75	-57.20	-13	Vertical

**GSM Mode Channel 190/836.6MHz**

Frequency(MHz)	Power(dBm)	A <sub>Rpl</sub> (dBm)	P <sub>Mea</sub> (dBm)	Limit (dBm)	Polarity
1672.65	-53.06	-2.55	-50.51	-13	Vertical
1673.55	-52.54	-2.55	-49.99	-13	Vertical
2509.65	-52.95	-0.25	-52.70	-13	Horizontal
7528.6	-43.65	8.15	-51.80	-13	Vertical
8047.3	-48.41	7.25	-55.66	-13	Horizontal
9764.2	-45.76	10.05	-55.81	-13	Vertical

**GSM Mode Channel 251/848.8MHz**

Frequency(MHz)	Power(dBm)	A <sub>Rpl</sub> (dBm)	P <sub>Mea</sub> (dBm)	Limit (dBm)	Polarity
1697.55	-47.88	-2.25	-45.63	-13	Horizontal
7638.4	-45.32	6.25	-51.57	-13	Horizontal
8019.4	-48.34	7.45	-55.79	-13	Horizontal
9786.4	-46.71	10.05	-56.76	-13	Vertical

**GSM Mode Channel 512/1850.2MHz**

Frequency(MHz)	Power(dBm)	A <sub>Rpl</sub> (dBm)	P <sub>Mea</sub> (dBm)	Limit (dBm)	Polarity
2002.3	-47.40	9.8	-57.20	-13	Vertical
3701	-49.34	3.1	-52.44	-13	Vertical
7400.6	-41.23	8.6	-49.83	-13	Vertical
9677.9	-46.61	12.6	-59.21	-13	Vertical
14802.4	-38.07	15.2	-53.27	-13	Vertical
15673.6	-39.01	13.2	-52.21	-13	Horizontal

**GSM Mode Channel 661/1880.0MHz**

Frequency(MHz)	Power(dBm)	A <sub>Rpl</sub> (dBm)	P <sub>Mea</sub> (dBm)	Limit (dBm)	Polarity
2002.3	-47.32	9.8	-57.12	-13	Vertical
3760.4	-50.31	3.3	-53.61	-13	Horizontal
7520.6	-47.75	10.1	-57.85	-13	Horizontal
9400.1	-46.70	11.8	-58.50	-13	Vertical
9909.2	-46.21	12.9	-59.11	-13	Horizontal
15039.2	-36.66	14.9	-51.56	-13	Horizontal

**GSM Mode Channel 810/1909.8MHz**

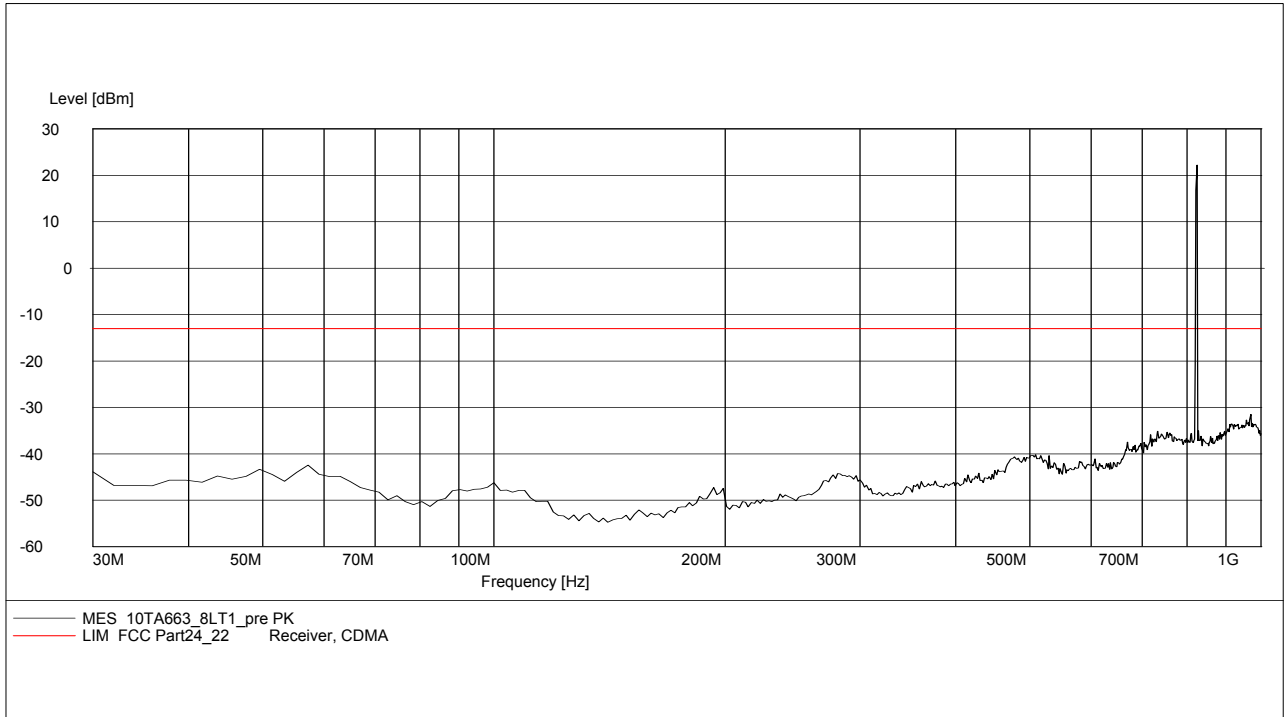
Frequency(MHz)	Power(dBm)	A <sub>Rpl</sub> (dBm)	P <sub>Mea</sub> (dBm)	Limit (dBm)	Polarity
2000.7	-47.11	9.6	-56.71	-13	Horizontal
3819.4	-45.67	3.5	-49.17	-13	Horizontal
7827.2	-47.09	9.4	-56.49	-13	Horizontal
9953.6	-46.85	12.5	-59.35	-13	Horizontal
15278	-37.76	14.8	-52.56	-13	Vertical
17759.2	-32.74	17	-49.74	-13	Vertical

**GSM 850**

**A.2.3.1 RADIATED SPURIOUS EMISSIONS-Channel 128: 30MHz –1GHz**

Radiated spurious emission limit :-13dBm.

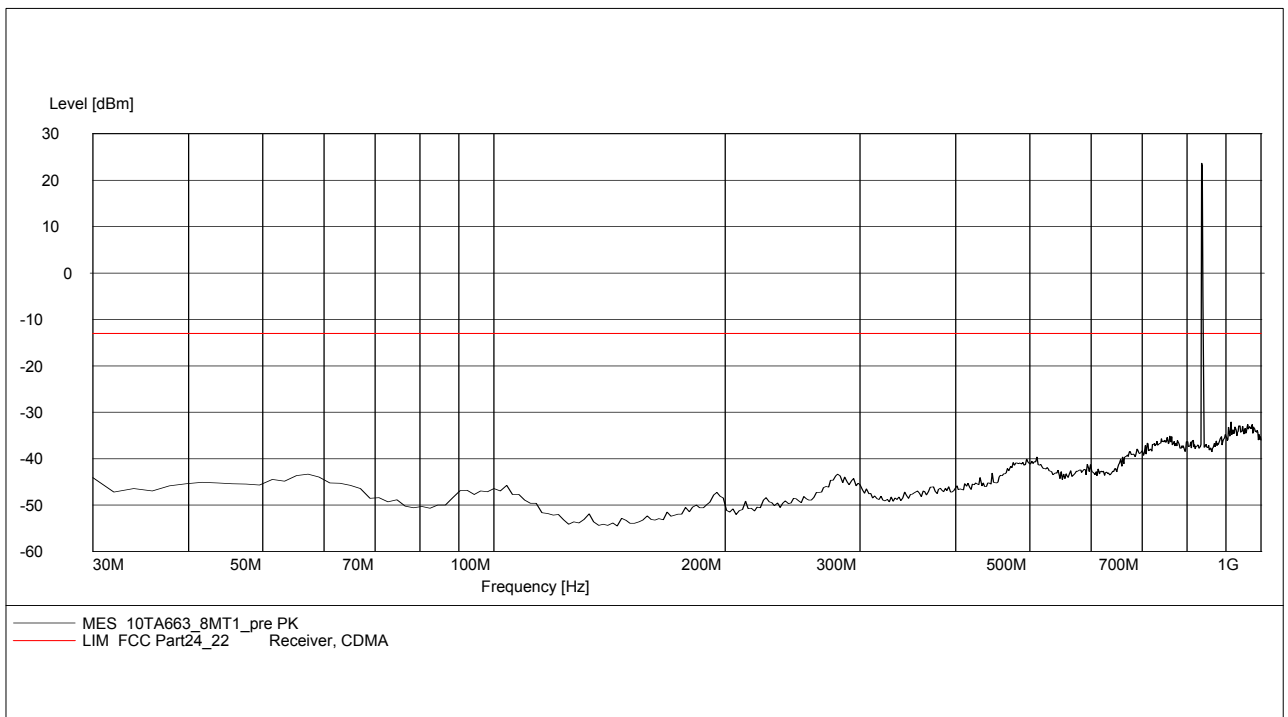
**NOTE: peak above the limit line is the Carrier frequency @ ch-128**



**A.2.3.2 RADIATED SPURIOUS EMISSIONS-Channel 190: 30MHz – 1GHz**

Radiated spurious emission limit :-13dBm.

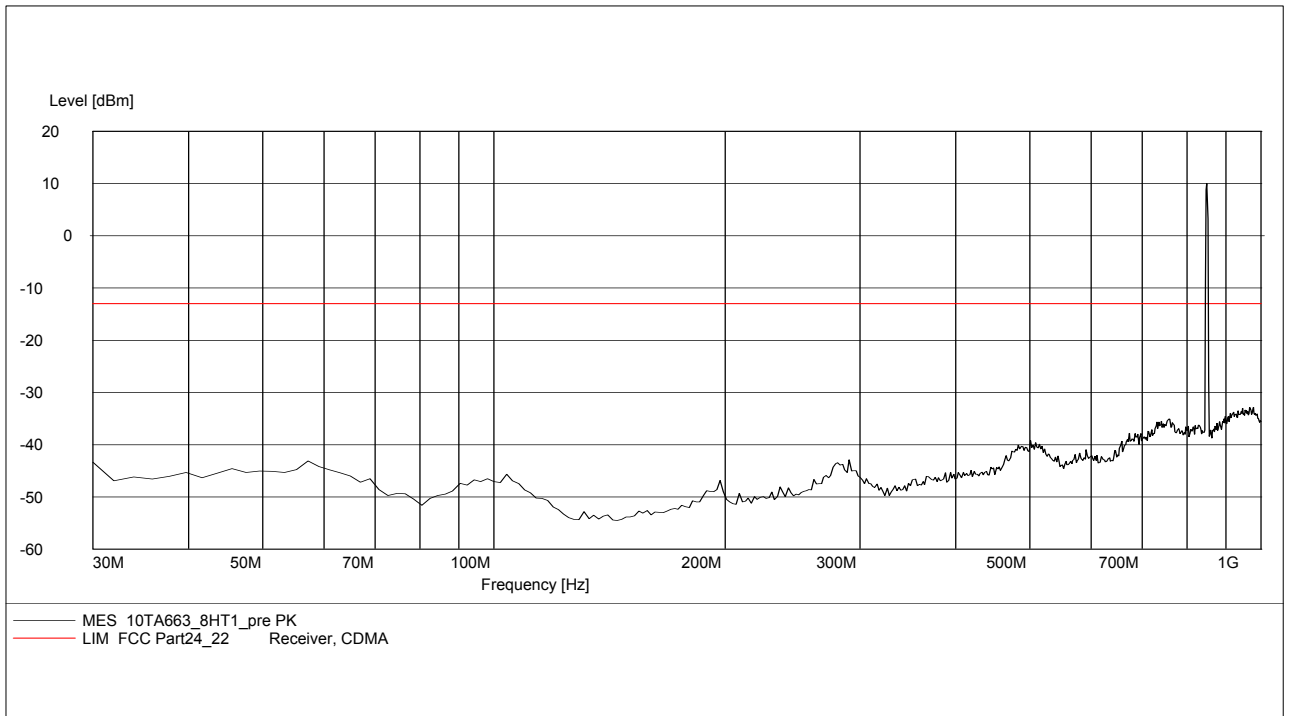
**NOTE: peak above the limit line is the Carrier frequency @ ch-190**



**A.2.3.3 RADIATED SPURIOUS EMISSIONS-Channel 251: 30MHz – 1GHz**

Radiated spurious emission limit :-13dBm.

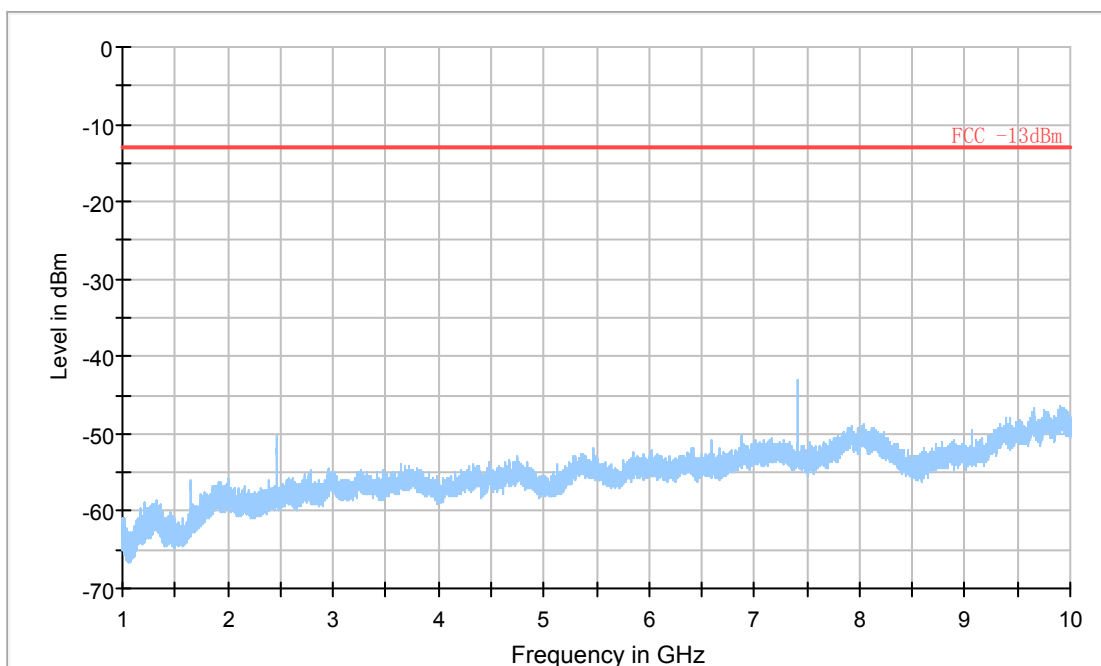
NOTE: peak above the limit line is the Carrier frequency @ ch-251



**A.2.3.4 RADIATED SPURIOUS EMISSIONS-Channel 128: 1GHz – 10GHz**

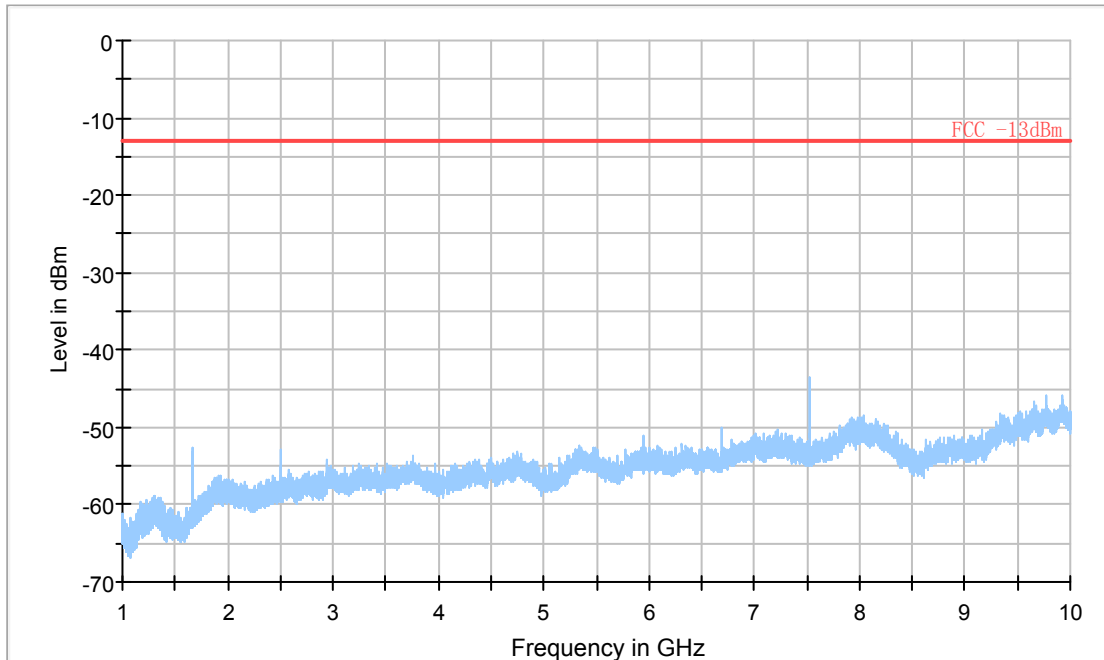
Radiated spurious emission limit :-13dBm.

FCC22 1-10 GHz



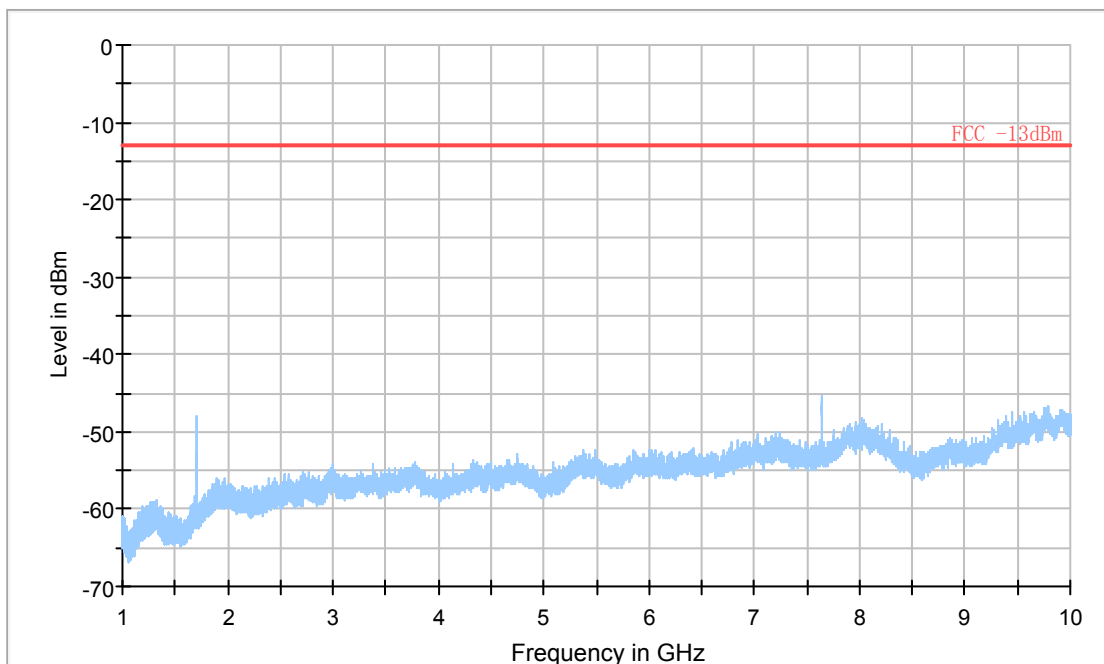
**A.2.3.5 RADIATED SPURIOUS EMISSIONS-Channel 190: 1GHz – 10GHz**  
Radiated spurious emission limit :-13dBm.

FCC22 1-10 GHz

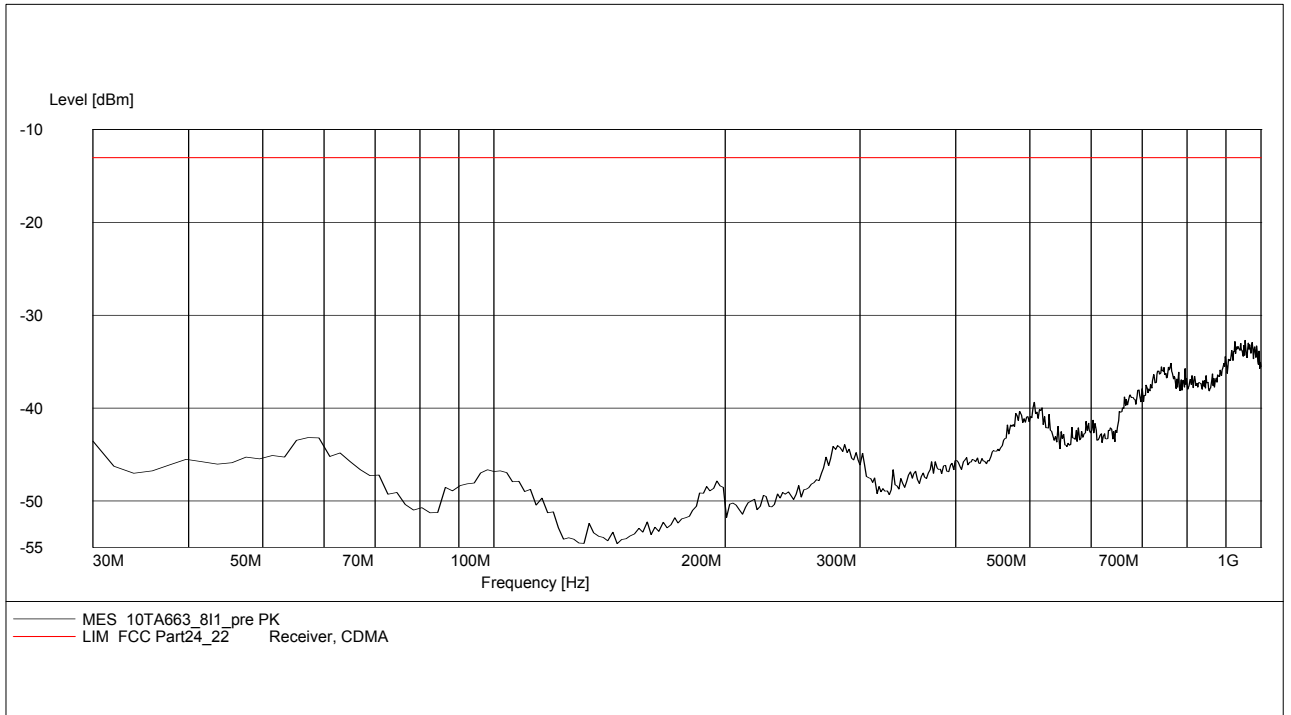


**A.2.3.6 RADIATED SPURIOUS EMISSIONS-Channel 251: 1GHz – 10GHz**  
Radiated spurious emission limit :-13dBm.

FCC22 1-10 GHz

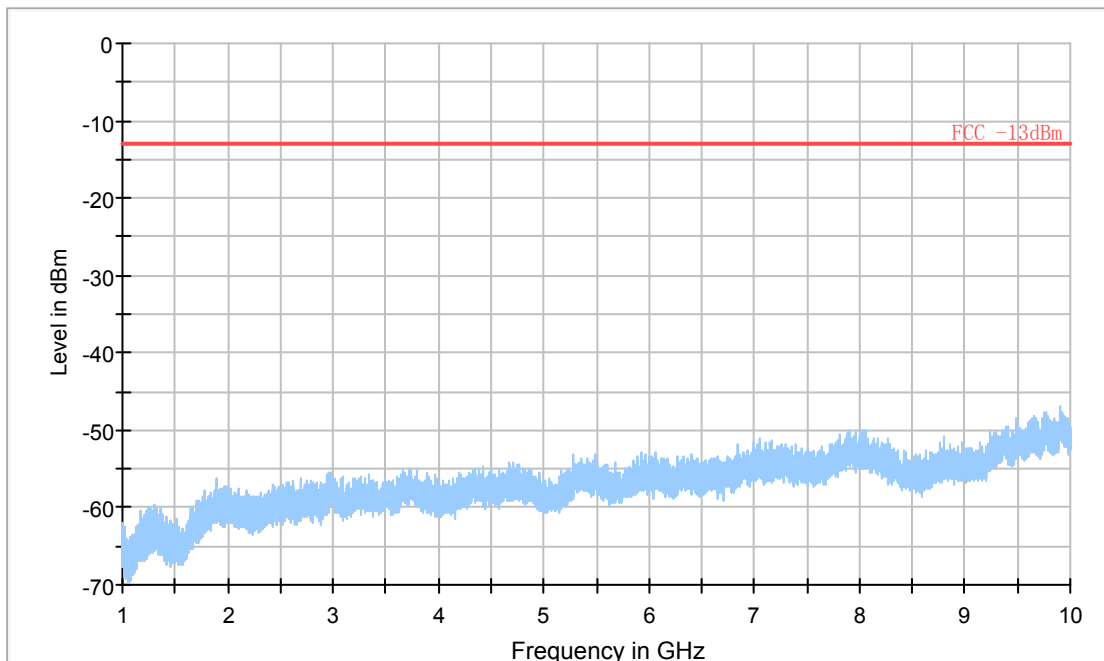


**A.2.3.7 RADIATED SPURIOUS EMISSIONS-EUT in Idle Mode: 30MHz – 1GHz**  
Radiated spurious emission limit :-13dBm.



**A.2.3.8 RADIATED SPURIOUS EMISSIONS-EUT in Idle Mode: 1GHz – 10GHz**  
Radiated spurious emission limit :-13dBm.

FCC22 1-10 GHz

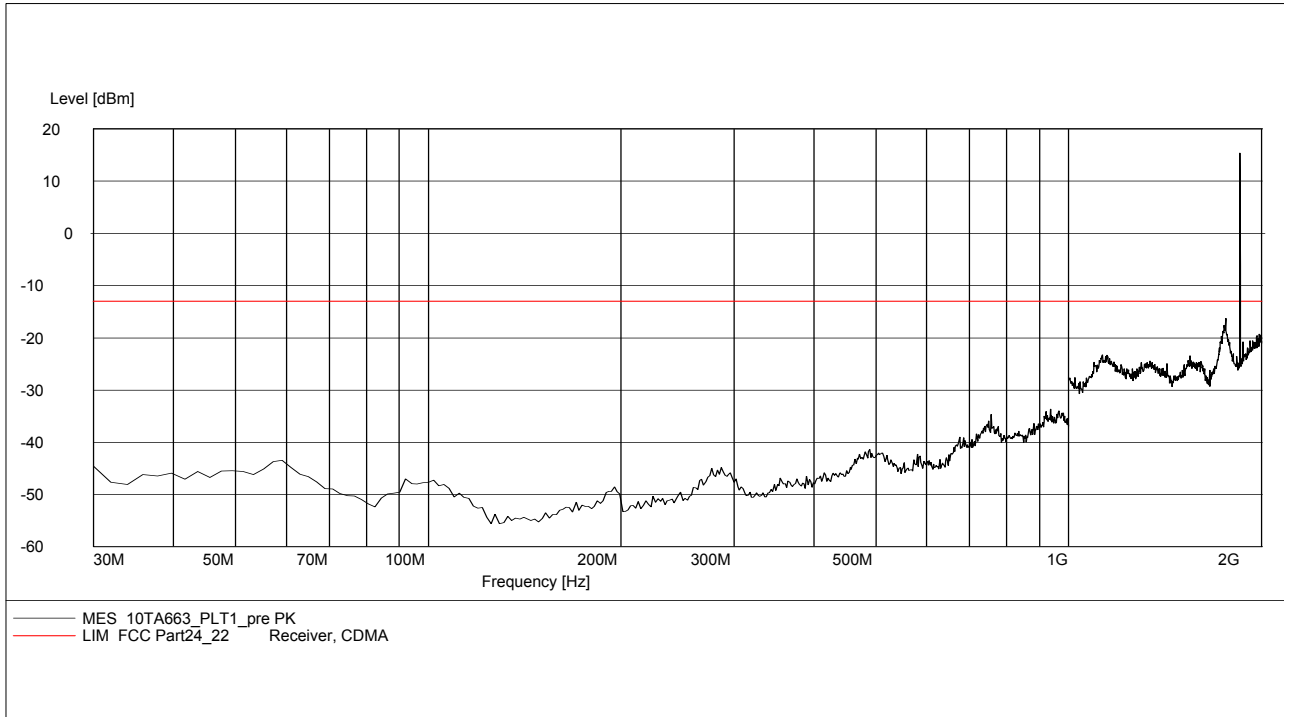


**PCS 1900**

**A.2.3.9 RADIATED SPURIOUS EMISSIONS-Channel 512: 30MHz – 2GHz**

Radiated spurious emission limit :-13dBm.

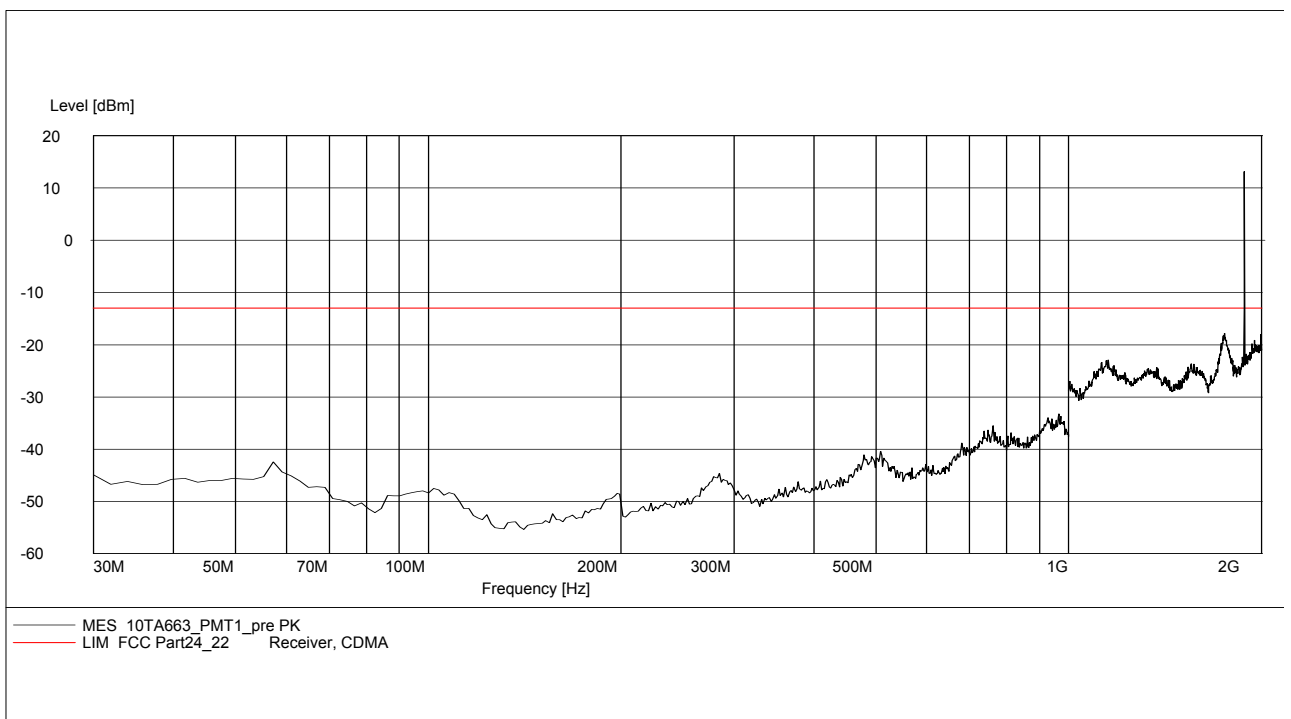
**NOTE: peak above the limit line is the Carrier frequency @ ch-512**



**A.2.3.10 RADIATED SPURIOUS EMISSIONS-Channel 661: 30MHz – 2GHz**

Radiated spurious emission limit :-13dBm.

**NOTE: peak above the limit line is the Carrier frequency @ ch-661**

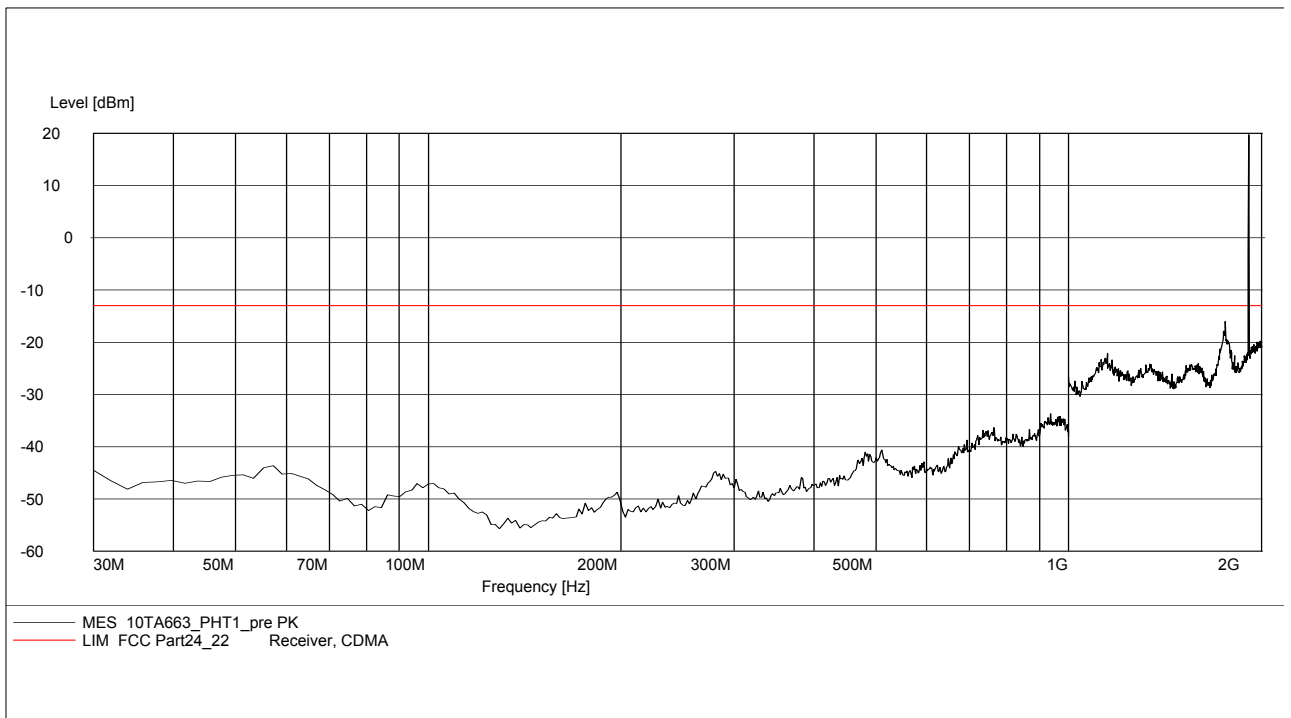




**A.2.3.11 RADIATED SPURIOUS EMISSIONS-Channel 810: 30MHz – 2GHz**

Radiated spurious emission limit :-13dBm.

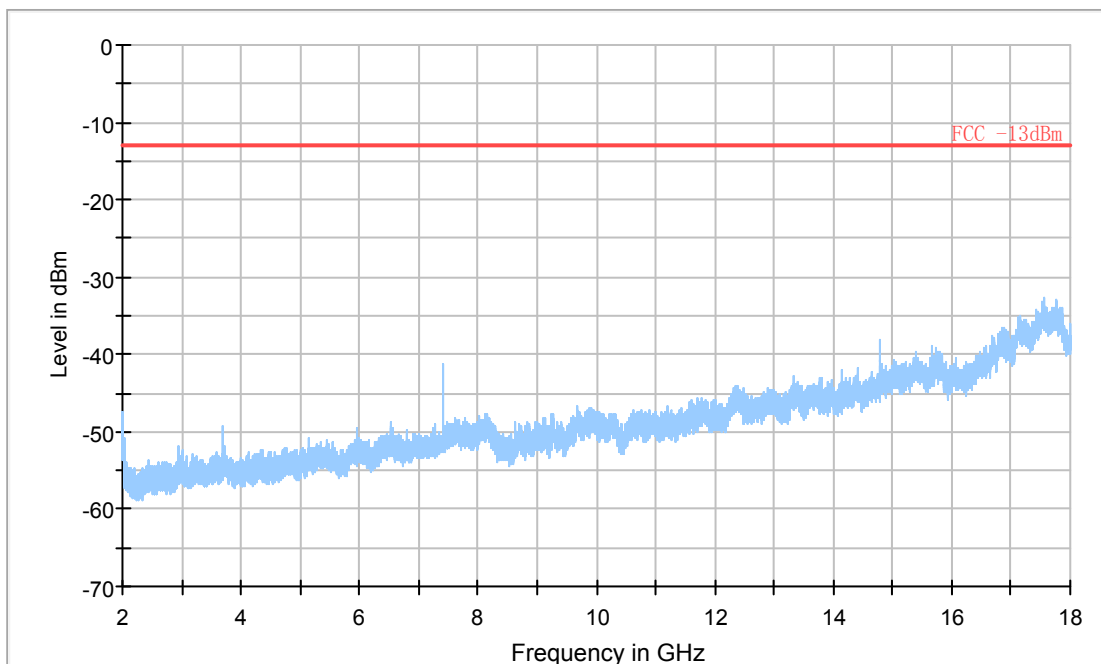
NOTE: peak above the limit line is the Carrier frequency @ ch-810



**A.2.3.12 RADIATED SPURIOUS EMISSIONS-Channel 512: 2GHz – 18GHz**

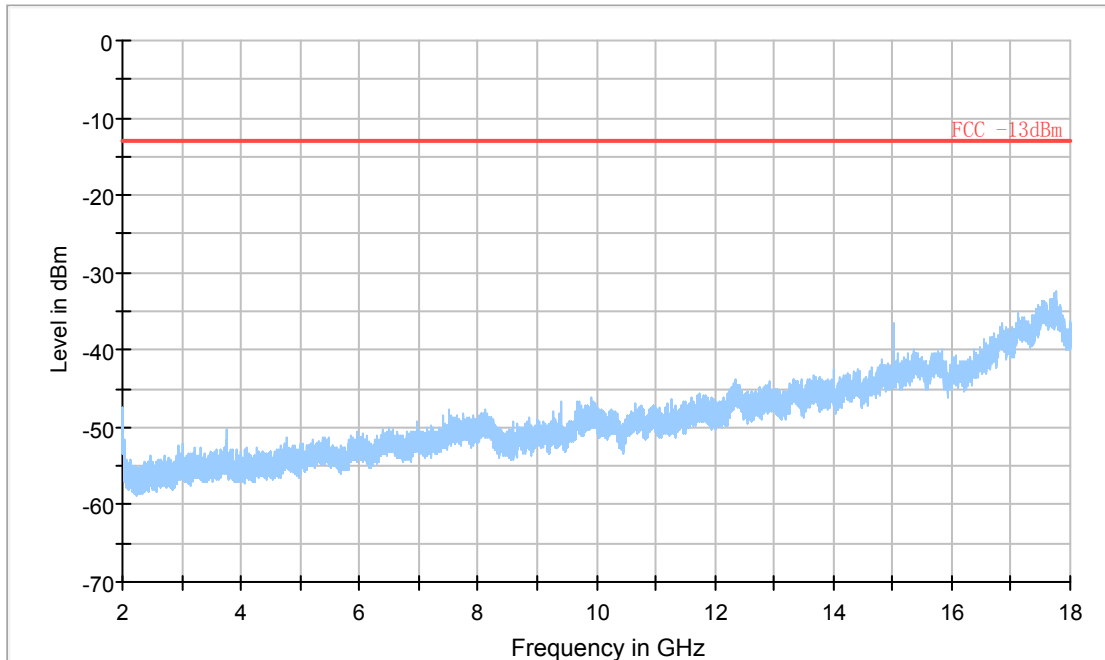
Radiated spurious emission limit :-13dBm.

FCC24 2-18 GHz



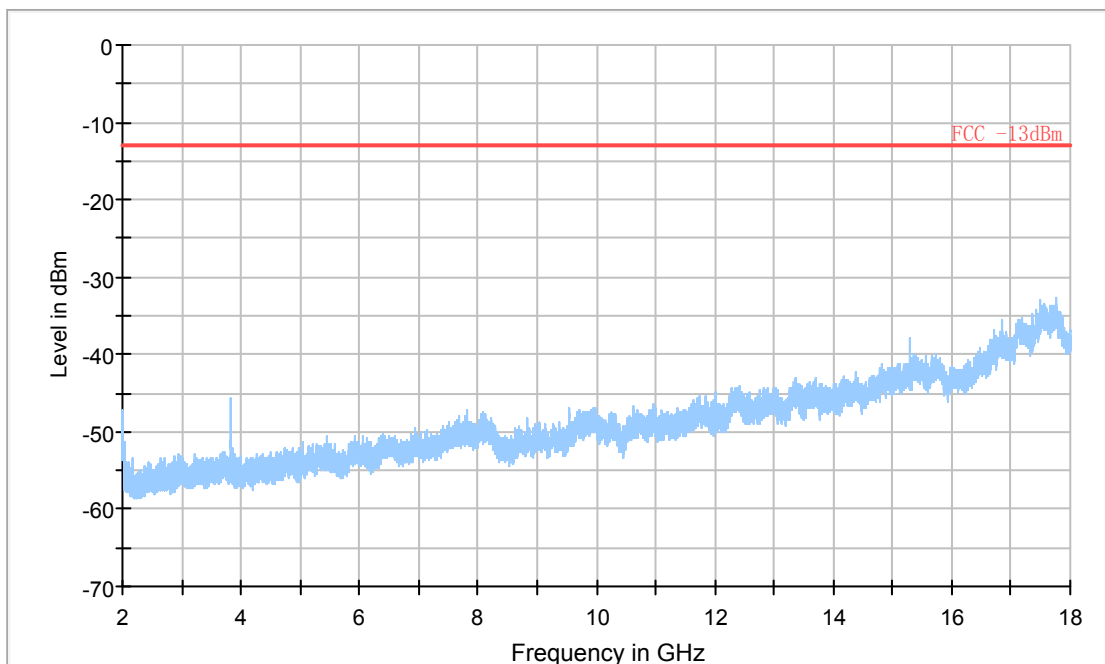
**A.2.3.13 RADIATED SPURIOUS EMISSIONS-Channel 661: 2GHz – 18GHz**  
Radiated spurious emission limit :-13dBm.

FCC24 2-18 GHz



**A.2.3.14 RADIATED SPURIOUS EMISSIONS-Channel 810: 2GHz – 18GHz**  
Radiated spurious emission limit :-13dBm.

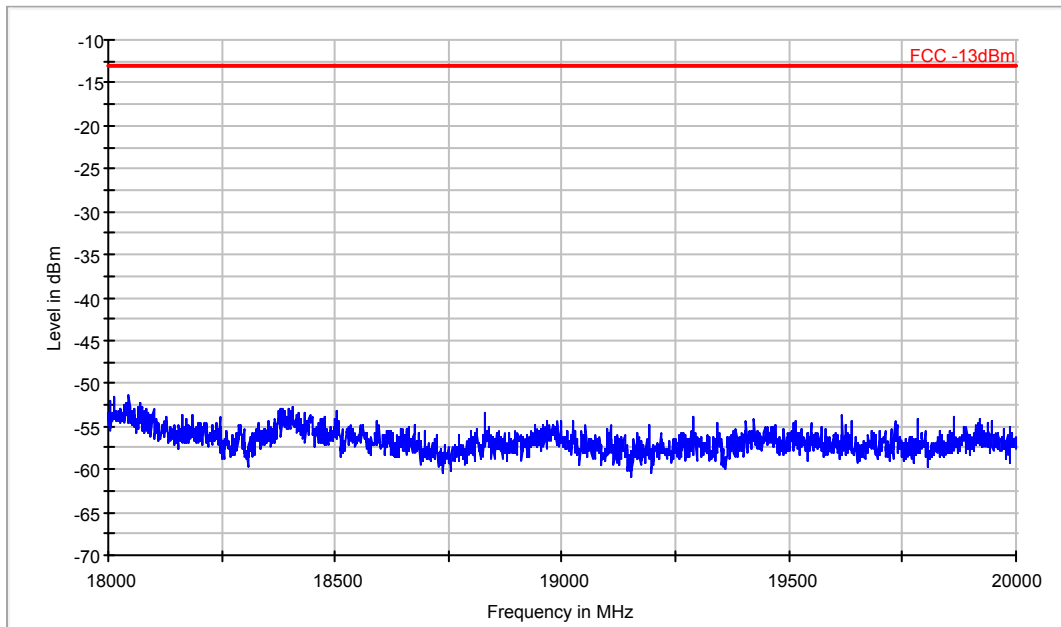
FCC24 2-18 GHz



**A.2.3.15 Radiated spurious emission (18GHz-20GHz)**

Radiated spurious emission limit :-13dBm.

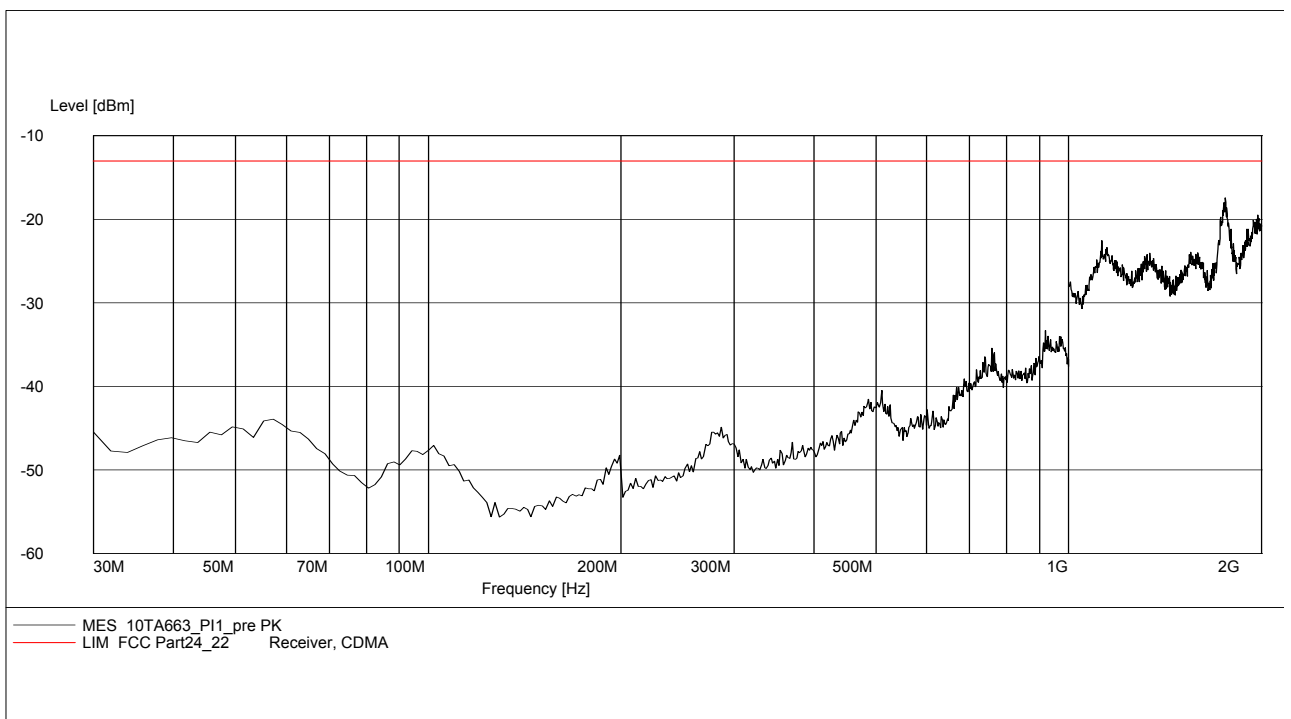
Note: This plot is valid for low, mid & high channels. It is same as the floor noise.



— Preview Measurement Detector 1      — FCC -13dBm

**A.2.3.16 RADIATED SPURIOUS EMISSIONS-EUT in Idle Mode: 30MHz – 2GHz**

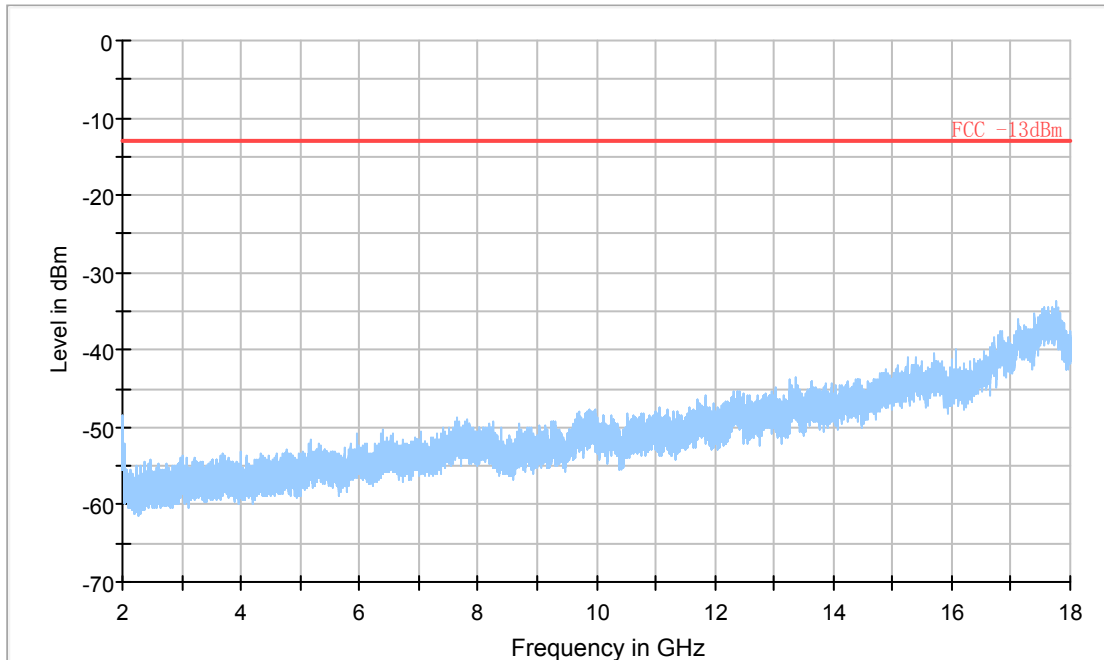
Radiated spurious emission limit :-13dBm.



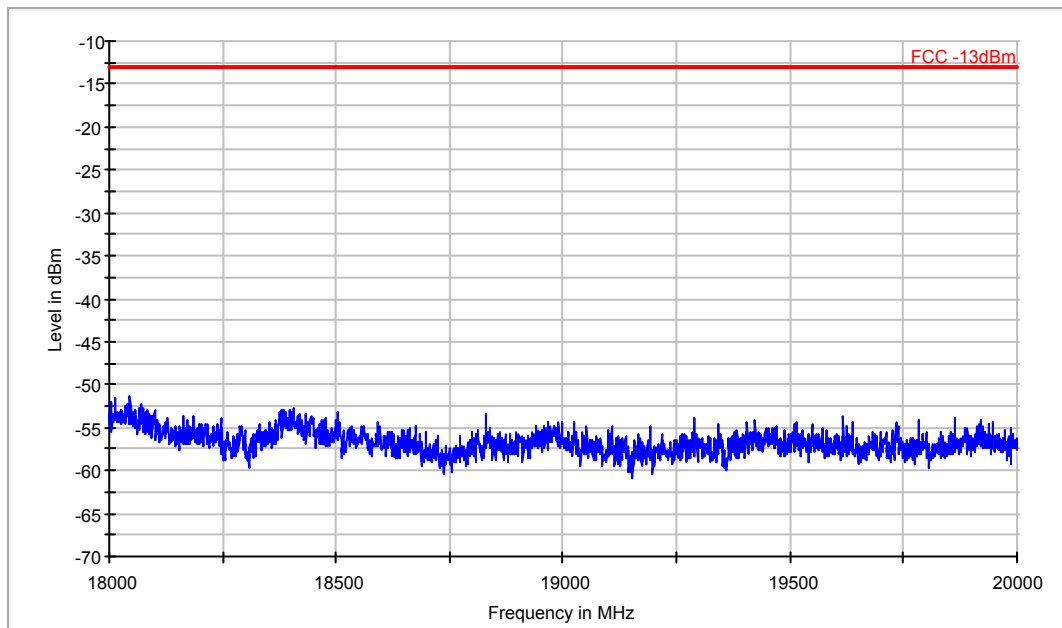
— MES 10TA663\_P11\_pre PK  
— LIM FCC Part24\_22 Receiver, CDMA

**A.2.3.17 RADIATED SPURIOUS EMISSIONS-EUT in Idle Mode: 2GHz – 18GHz**  
Radiated spurious emission limit :-13dBm.

FCC24 2-18 GHz



**A.2.3.18 RADIATED SPURIOUS EMISSIONS-EUT in Idle Mode: 18GHz – 20GHz**  
Radiated spurious emission limit :-13dBm.  
Note: It is same as the floor noise.



— Preview Measurement Detector 1      — FCC -13dBm

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