



# TEST REPORT

**No. I15D00070-RFG**

*For*

**Client : Shanghai SIMCom Wireless Solutions  
Co.,Ltd.**

**Production : GSM/GPRS+GPS Module**

**Model Name : SIM808**

**Hardware Version: V2.01**

**Software Version: SIM800 R14.18**

**Issued date: 2015-06-26**

**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 ECIT Shanghai.

**Test Laboratory:**

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**Revision Version**

<b>Report Number</b>	<b>Revision</b>	<b>Date</b>	<b>Memo</b>
I15D00070-RFG	00	2015-06-26	Initial creation of test report

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## 1. Test Laboratory

### 1.1. Testing Location

Company Name:	ECIT Shanghai, East China Institute of Telecommunications
Address:	7-8F, G Area, No. 668, Beijing East Road, Huangpu District, Shanghai, P. R. China
Postal Code:	200001
Telephone:	(+86)-021-63843300
Fax:	(+86)-021-63843301

### 1.2. Testing Environment

Normal Temperature:	15-35°C
Relative Humidity:	20-75%

### 1.3. Project Data

Project Leader:	Chen Kan
Testing Start Date:	2015-06-01
Testing End Date:	2015-06-26


### 1.4. Signature



**Wang Daming**  
(Prepared this test report)



**Liu Jianquan**  
(Reviewed this test report)



**Zheng Zhongbin**  
Director of the laboratory  
(Approved this test report)

## 2. Client Information

### 2.1. Applicant Information

Company Name: Shanghai SIMCom Wireless Solutions Co.,Ltd.  
Address: Building A,SIM Technology Building,No.633,Jinzhong  
Road,Changning District,Shanghai R.R.China  
Telephone: 86-021-32523300  
Postcode: 200335

### 2.2. Manufacturer Information

Company Name: Shenyang Simcom Technology Ltd.  
Address: No.37, Shenbei Rd, Shenbei New Aear, Shenyang,P.R.China  
Telephone: 86-024-88922222  
Postcode: N/A

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

#### 3.1. About EUT

EUT Description	GSM/GPRS+GPS Module
Model name	SIM808
UMTS Frequency Band	N/A
GSM Frequency Band	GSM900/GSM1800 /GSM850/GSM1900
E-UTRA Frequency Band	N/A
Type of modulation	GMSK/8PSK
Power Class	GSM900:4, DCS1800:1,
GPRS Multislot Class	12
EGPRS Multislot Class	N/A
Extreme Temperature	-10/+55°C
Nominal Voltage	3.8V
Extreme High Voltage	4.2V
Extreme Low Voltage	3.4V

Note: Photographs of EUT are shown in ANNEX A of this test report.

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

EUT ID*	SN or IMEI	HW Version	SW Version	Date of receipt
N03	865067020389345	V2.01	SIM800 R14.18	2015-06-02

\*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	RF cable	---
AE2	Dummy Battery	---

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

## 4. Reference Documents

### 4.1. Documents supplied by applicant

PICS/PIXIT, referring to Annex B for detailed information, is supplied by the client or manufacturer, which is the basis of testing.

### 4.2. Reference Documents for testing

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

Reference	Title	Version
3GPP TS 51.010-1	3rd Generation Partnership Project; Technical Specification Group GSM/EDGE Radio Access Network Digital cellular telecommunications system (Phase 2+); Mobile Station (MS) conformance specification; Part 1: Conformance specification	V11.0.0
3GPP TS 51.010-2	3rd Generation Partnership Project; Technical Specification Group GSM/EDGE Radio Access Network; Digital cellular telecommunications system; Mobile Station (MS) conformance specification; Part 2: Protocol Implementation Conformance Statement (PICS) proforma specification	V11.0.0
ETSI EN 301 511	Global System for Mobile communications (GSM); Harmonized EN for mobile stations in the GSM 900 and GSM 1800 bands covering essential requirements under article 3.2 of the R&TTE directive (1999/5/EC)	V9.0.2



## 5. Test Results

### 5.1. Summary of Test Results

	<b>GSM900</b>	<b>GSM1800</b>
<b>Pass</b>	27	27
<b>Fail</b>	0	0
<b>Inc</b>	0	0
<b>Declare</b>	0	0
<b>BR</b>	0	0
<b>total</b>	27	27

Note: please refer to Annex C in this test report for the detailed test results.

The following terms are used in the above table.

<b>Pass</b>	Amount of test cases with pass results in the given frequency band.
<b>Fail</b>	Amount of test cases with fail results in the given frequency band.
<b>Inc</b>	Amount of test cases with ambiguous results in the given frequency band.
<b>BR</b>	Amount of test cases with pass result for the initial model.
<b>Declare</b>	Amount of test cases with conformity declaration from the client in the given frequency band.

### 5.2. Statements

The product name SIM808, supporting GPRS, manufactured by Shenyang Simcom Technology Ltd. is a new product for testing.

ECIT has verified that the compliance of the tested device specified in section 3 of this test report is successfully evaluated according to the procedure and test methods as defined in type certification requirement listed in section 4 of this test report.

## 6. Test Equipments Utilized

### 6.1. RS TS8950G

TP5-RS TS8950G-GSM/GPRS/AMR/EGPRS RF test system						
Hardware						
No.	Name	Type	SN	Qty	Manufacture	Cal.Due Date
1	Power Sensor	NRV-Z1	100107	1	R&S	2015/7/6
2	Power Sensor	NRV-Z1	100288	1	R&S	2015/7/6
3	Spectrum Analyzer	FSU26	200001	1	R&S	2015/7/6
4	Signal Generator	SMP02	100240	1	R&S	2015/7/6
5	Universal Radio Communication Tester	CRTU-RU	100513	1	R&S	2015/7/6
6	Baseband Fading Simulator	ABFS	100168	1	R&S	2015/12/21
7	Power Supply	NGSM32	100141	1	R&S	2015/7/6
8	Dual Channel Power Meter	NRVD	101216	1	R&S	2015/7/6
9	Vector Signal Generator(1)	SMIQ03B	102466	1	R&S	2015/7/6
10	Vector Signal Generator(2)	SMIQ03B	102465	1	R&S	2015/7/6
11	Vector Signal Generator(3)	SMIQ03B	102467	1	R&S	2015/7/6
12	Vector Signal Generator(4)	SMIQ03B	102468	1	R&S	2015/7/6
13	Vector Signal Generator(5)	SMIQ03B	102478	1	R&S	2015/7/6
14	Vector Signal Generator(6)	SMIQ03B	102477	1	R&S	2015/7/6
15	Rubidium Frequency Standard	CS-RUB5	100055	1	Symmetricom	2018/1/6
16	RF distribution	6502	S/N	1	Symmetricom	n/a
17	Advanced Switching Control Unit	ASCU850	100040	1	R&S	n/a
18	Advanced Switching Control Unit	ASCU900	100047	1	R&S	n/a
19	Advanced Switching Control Unit	ASCU1800	100046	1	R&S	n/a
20	Advanced Switching Control Unit	ASCU1900	100047	1	R&S	n/a
21	Switching and Signal Conditioning Unit	SSCU-GW	100058	1	R&S	n/a

22	System control computer	PSL	100092	1	R&S	n/a
23	Power Sensor	NRV-Z1	100107	1	R&S	2015/7/6
24	Power Sensor	NRV-Z1	100288	1	R&S	2015/7/6

## 6.2. RSE Test System

RSE test system						
Hardware						
No.	Name	Type	SN	Qty	Manufacture	Cal.Due Date
1	EMI test receiver	ESU40	100307	1	Rohde & Schwarz	2015-07-24
2	Trilog super broadband test antenna	SWB-VULB916 3	19-162515	1	SCHWARZBECK	2017-11-04
3	Double ridged guide antenna	ETS-3117	135885	1	ETS-LINDGREN	2017-05-05
4	Universal Radio Communication tester	CMU200	123102	1	Rohde & Schwarz	2015-08-29

## 6.3. Climate Chamber

Climate Chamber						
No.	Name	Type	SN	Qty	Manufacture	Cal.Due Date
1	Climate Chamber	CTP4003	TST20121 30	1	TST	2015-08-04

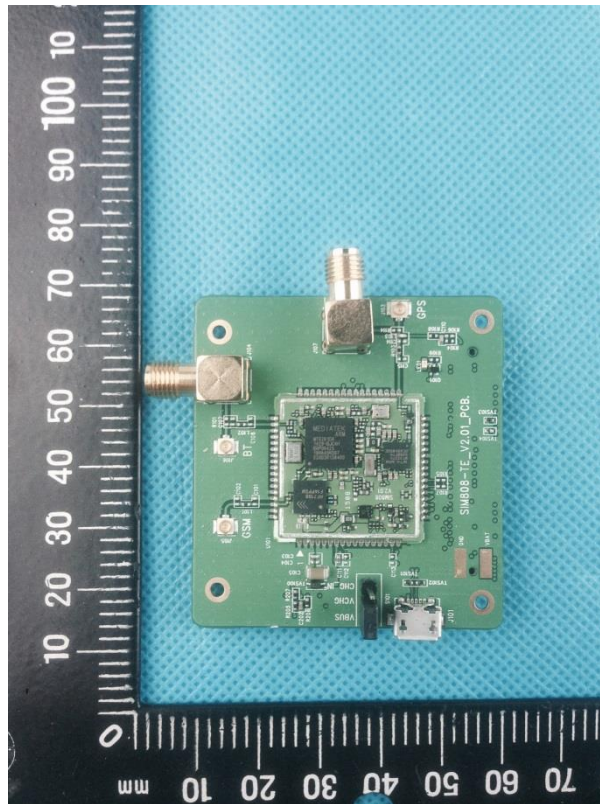
## 6.4. Vibration table

Vibration table						
No.	Name	Type	SN	Qty	Manufacture	Cal.Due Date
1	vibration table	ESS-050	D1205136	1	Dongling	2015-08-11

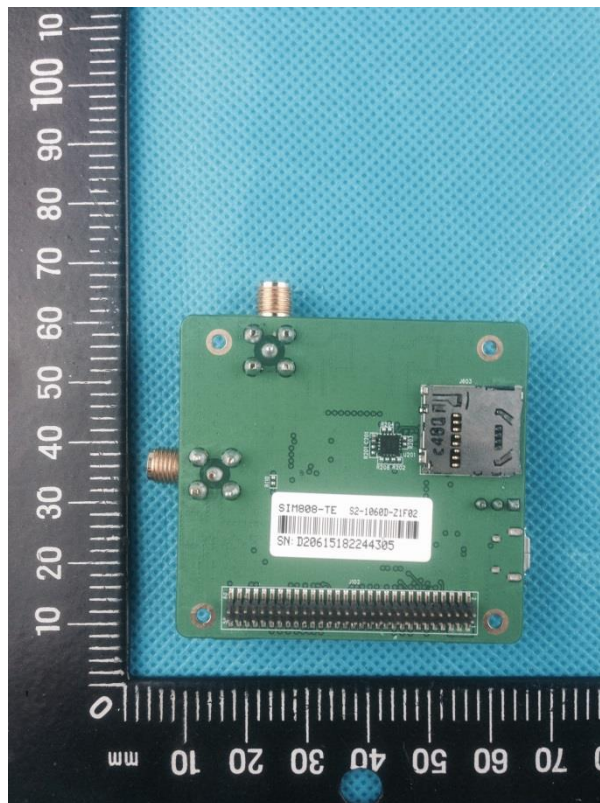
## 7. Measurement Uncertainty

Measurement uncertainty for all the testing in this report are within the limit specified in 3GPP TS 51.010-1 Annex 5 .The detailed measurement uncertainty is defined in ECIT documents.

ANNEX A. EUT photograph



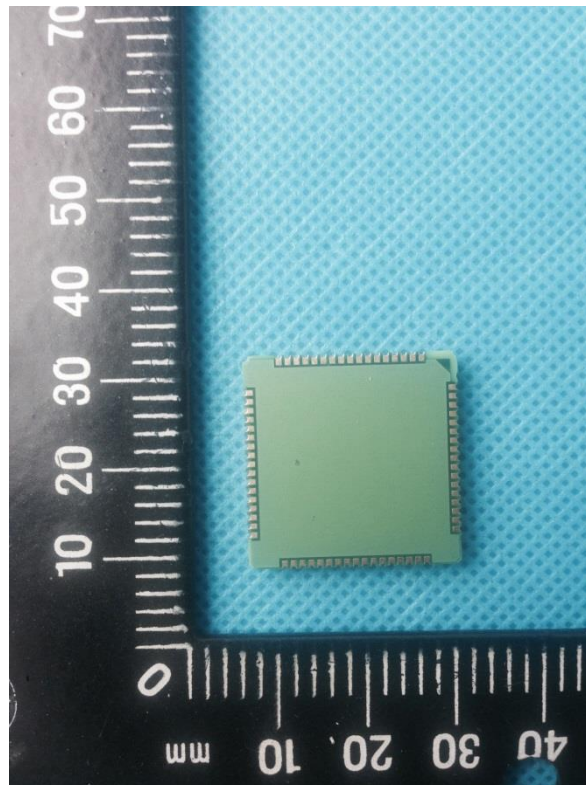
Pic A-1 EUT + test AE



Pic A-2 EUT + test AE



Pic A-3 EUT



Pic A-4 EUT

**ANNEX B. PICS/PIXIT information**

Item	Type of Mobile Station	Support	Mnemonic
1	HSCSD Multislot MS	No	Type_HSCSD_Multislot
2	R-GSM MS	Yes	Type_R-GSM
3	Support of GPRS Multislot class on the uplink	Yes	Type_GPRS_Multislot_uplink
4	EGPRS	No	Type_EGPRS
5	EGPRS capable of 8PSK in Uplink, of all Multislot classes	No	Type_EGPRS_8PSK_uplink
Item	Additional Information	Support	Mnemonic
1	Telephony.	Yes	TSPC_Serv_TS11
2	Permanent Antenna Connector.	Yes	TSPC_AddInfo_PermAntenna

**ANNEX C. Detailed Test Results**

**ANNEX C.1. Main Terms**

Verdict	Verdict of each test cases.
Test cases	Test cases identification number and description in 3GPP test specification and ETSI specification.

**ANNEX C.2. Terms used in Condition column**

NTC	Normal voltage, Normal Temperature
HV	High voltage, Normal Temperature
LV	Low voltage, Normal Temperature
HTHV	High voltage, High Temperature
LTHV	High voltage, Low Temperature
HTLV	Low voltage, High Temperature
LTLV	Low voltage, Low Temperature
Vib	Vibration

**ANNEX C.3. Terms used in Verdict column**

Pass	This test cases has been tested, and EUT is conformant to the applied standards in the given frequency band.
Fail	This test cases has been tested, but EUT is not conformant to the applied standards in the given frequency band.
N/A	This test case is either not required/not applicable in the specified band or is not applicable according to the specific PICS/PIXIT for the EUT.
Inc	Test case result is ambiguous in the given frequency band.
Decl	Declaration is received from the client to demonstrate the conformity to the relevant specification in the given frequency band.
BR	This test cases is not tested in the given frequency band, but this testcases was tested with pass result for the initial model in the given frequency band.

**ANNEX C.4. Terms used in Note column**

EUT ID	EUT ID (e.g N01, N02.....) is used to identify the EUT tested used for each test cases as specified in section 3 of this test report.
Lab Code	Lab code is used to identify the subcontracted lab if this test cases is performed in the subcontracted lab.

Subcontracted test lab code: N/A



**ANNEX C.5. Test cases list**

Item	Test case description	Test Condition	GSM900 result		GSM1800 result	
			Verdict	EUT	Verdict	EUT
12.2.1	Radiated spurious emissions - MS allocated a channel	NTC	Pass	N03	Pass	N03
12.2.2	Radiated spurious emissions - MS in idle mode	NTC	Pass	N03	Pass	N03
13.16.1	Frequency error and phase error in GPRS multislots configuration	NTC	Pass	N03	Pass	N03
13.16.1	Frequency error and phase error in GPRS multislots configuration	THVH	Pass	N03	Pass	N03
13.16.1	Frequency error and phase error in GPRS multislots configuration	THVL	Pass	N03	Pass	N03
13.16.1	Frequency error and phase error in GPRS multislots configuration	TLVH	Pass	N03	Pass	N03
13.16.1	Frequency error and phase error in GPRS multislots configuration	TLVL	Pass	N03	Pass	N03
13.16.1	Frequency error and phase error in GPRS multislots configuration	Vib-x	Pass	N03	Pass	N03
13.16.1	Frequency error and phase error in GPRS multislots configuration	Vib-y	Pass	N03	Pass	N03
13.16.1	Frequency error and phase error in GPRS multislots configuration	Vib-z	Pass	N03	Pass	N03
13.16.2-1	Transmitter output power in GPRS multislots configuration - MS with permanent antenna connector	NTC	Pass	N03	Pass	N03
13.16.2-1	Transmitter output power in GPRS multislots configuration - MS with permanent antenna connector	THVH	Pass	N03	Pass	N03

Item	Test case description	Test Condition	GSM900 result		GSM1800 result	
			Verdict	EUT	Verdict	EUT
13.16.2-1	Transmitter output power in GPRS multislots configuration - MS with permanent antenna connector	THVL	Pass	N03	Pass	N03
13.16.2-1	Transmitter output power in GPRS multislots configuration - MS with permanent antenna connector	TLVH	Pass	N03	Pass	N03
13.16.2-1	Transmitter output power in GPRS multislots configuration - MS with permanent antenna connector	TLVL	Pass	N03	Pass	N03
13.16.3	Output RF spectrum in GPRS multislots configuration	modulation , normal	Pass	N03	Pass	N03
13.16.3	Output RF spectrum in GPRS multislots configuration	modulation , detailed	Pass	N03	Pass	N03
13.16.3	Output RF spectrum in GPRS multislots configuration	spurious	Pass	N03	Pass	N03
13.16.3	Output RF spectrum in GPRS multislots configuration	switching, normal	Pass	N03	Pass	N03
13.16.3	Output RF spectrum in GPRS multislots configuration	THVH, modulation	Pass	N03	Pass	N03
13.16.3	Output RF spectrum in GPRS multislots configuration	THVH, switching	Pass	N03	Pass	N03
13.16.3	Output RF spectrum in GPRS multislots configuration	THVL, modulation	Pass	N03	Pass	N03
13.16.3	Output RF spectrum in GPRS multislots configuration	THVL, switching	Pass	N03	Pass	N03
13.16.3	Output RF spectrum in GPRS multislots configuration	TLVH, modulation	Pass	N03	Pass	N03
13.16.3	Output RF spectrum in GPRS multislots configuration	TLVH, switching	Pass	N03	Pass	N03
13.16.3	Output RF spectrum in GPRS multislots configuration	TLVL, modulation	Pass	N03	Pass	N03
13.16.3	Output RF spectrum in GPRS multislots configuration	TLVL, switching	Pass	N03	Pass	N03

**ANNEX D. Conducted Maximum Output Power**

Type	GSM900(dBm)	GSM1800(dBm)
GPRS	28.10	25.86

## ANNEX E. Spurious emissions results

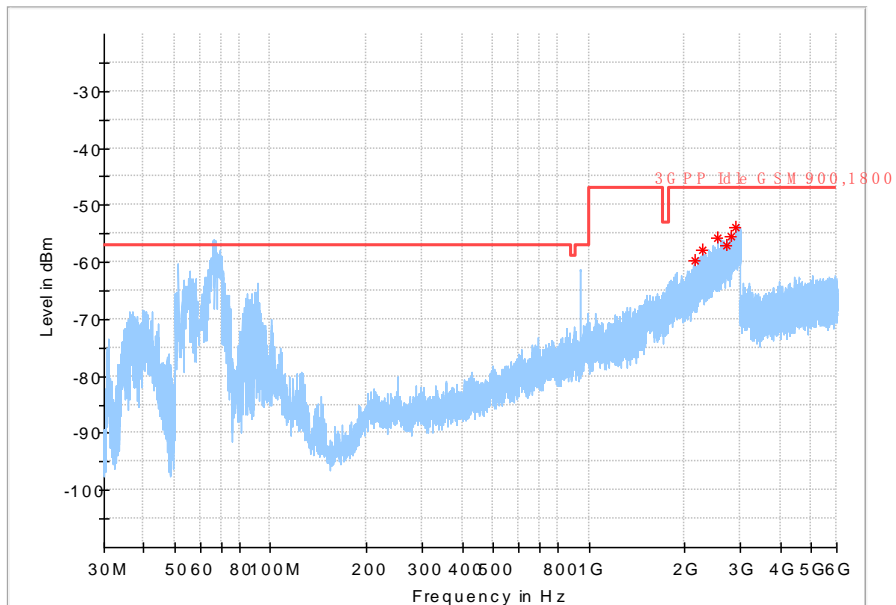


Fig1 Radiated Spurious emissions (900MHz , Horizontal/Vertical, Idle mode, Normal voltage)

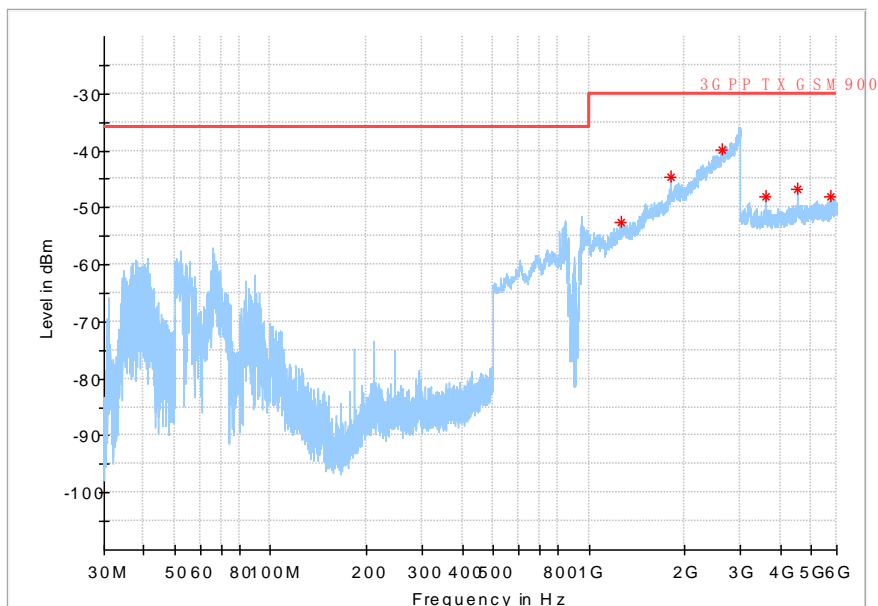


Fig2 Radiated Spurious emissions (900MHz, Horizontal/Vertical , Traffic mode, Normal voltage)

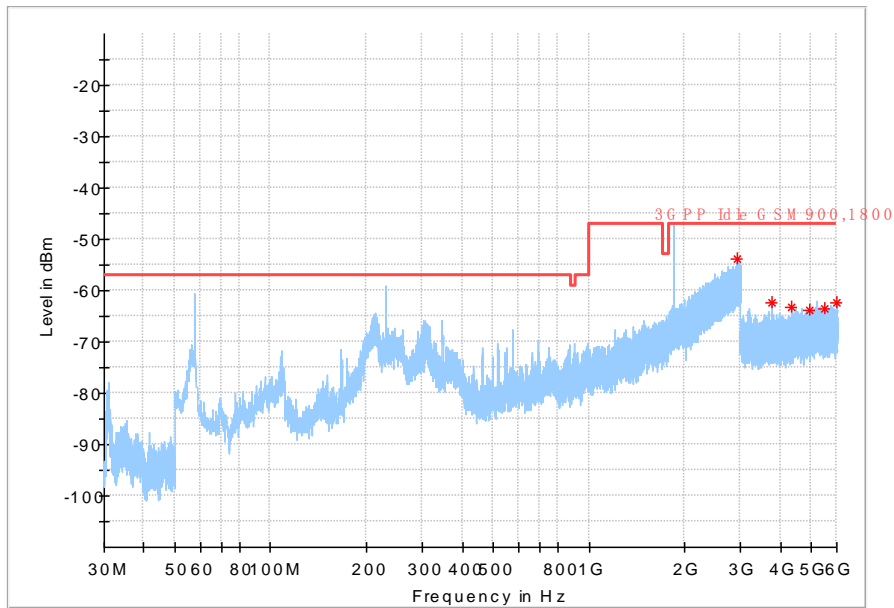


Fig3 Radiated Spurious emissions (1800MHz, Horizontal/Vertical , Idle mode, Normal voltage)

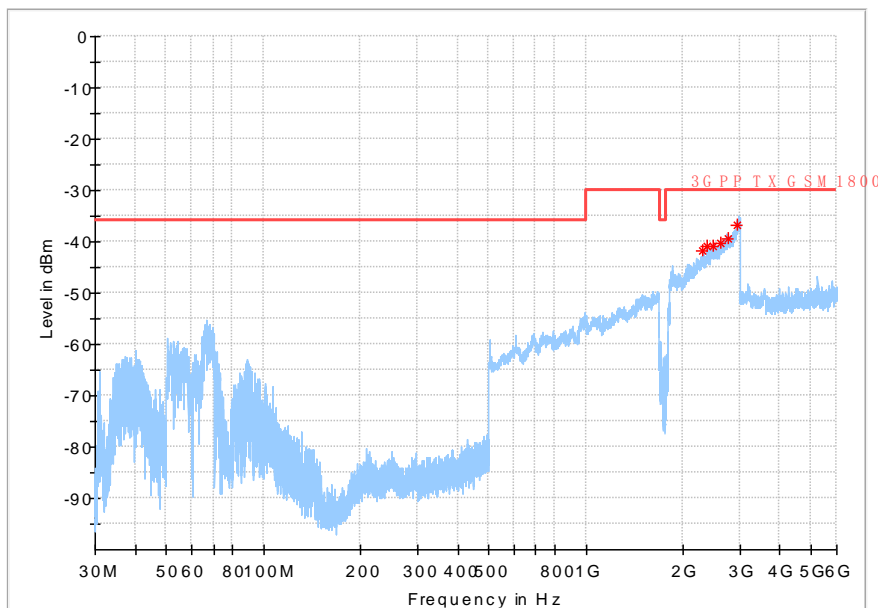


Fig4 Radiated Spurious emissions (1800MHz, Horizontal/Vertical , Traffic mode, Normal voltage)

\*\*\*\*\*End The Report\*\*\*\*\*