



TEST REPORT

No. 2013RG02091

For

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

**Production : GSM/GPRS(850/900/1800/1900MHz)+
BT Wireless Data Module**

Model Name : SIM800

Hardware Version: V2.01

Software Version: SIM800 R13.08

Issued date: 2014-01-16



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:

ECIT Shanghai, East China Institute of Telecommunications

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1. Testing 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%

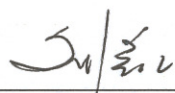
1.3. Project Data

Project Leader:	Gong Yujuan
Testing Start Date:	2013-12-27
Testing End Date:	2013-12-29

1.4. Signature



Yang Yujie
(Prepared this test report)



Liu Kai
(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
Fax: 86-021-32523020

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
Fax: 86-024-88922225

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

3.1. About EUT

EUT Description	GSM/GPRS(850/900/1800/1900MHz)+BT Wireless Data Module
Model name	SIM800
UMTS Frequency Band	N/A
GSM Frequency Band	GSM900/GSM1800 /GSM1900/GSM850
E-UTRA Frequency Band	N/A
Type of modulation	GMSK
Power Class	GSM900:4, DCS1800:1,
GPRS Multislot Class	12
EGPRS Multislot Class	NA
Extreme Temperature	-10/+55℃
Nominal Voltage	3.8V
Extreme High Voltage	4.2V
Extreme Low Voltage	3.6V

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
N04	862951020006830	V2.01	SIM800 R13.08	2013-12-25

*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	V11.3.0
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	V11.3.0
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. Different Type of Test Report

Full Test Report:	In this type of test report, annex C contains all the test cases referred the according R&TTE directive in section 4.2.
Partial Test Report:	In this type of test report, annex C contains the test cases only by the applicant.

5.2. Summary of Test Results

	GSM900	GSM1800
Pass	64	64
Fail	0	0
Inc	0	0
Declare	0	0
BR	0	0
total	64	64

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

The following terms are used in the above table.

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

5.3. Statements

The SIM800, supporting GPRS/GSM and BT, 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	2014/8/30
2	Power Sensor	NRV-Z1	100288	1	R&S	2014/8/30
3	Spectrum Analyzer	FSU26	200001	1	R&S	2014/8/30
4	Signal Generator	SMP02	100240	1	R&S	2014/8/30
5	Universal Radio Communication Tester	CRTU-RU	100513	1	R&S	2014/8/30
6	Baseband Fading Simulator	ABFS	100168	1	R&S	2015/1/7
7	Power Supply	NGSM32	100141	1	R&S	2014/8/30
8	Dual Channel Power Meter	NRVD	101216	1	R&S	2014/8/30
9	Vector Signal Generator(1)	SMIQ03B	102466	1	R&S	2014/8/30
10	Vector Signal Generator(2)	SMIQ03B	102465	1	R&S	2014/8/30
11	Vector Signal Generator(3)	SMIQ03B	102467	1	R&S	2014/8/30
12	Vector Signal Generator(4)	SMIQ03B	102468	1	R&S	2014/8/30
13	Vector Signal Generator(5)	SMIQ03B	102478	1	R&S	2014/8/30
14	Vector Signal Generator(6)	SMIQ03B	102477	1	R&S	2014/8/30
15	Rubidium Frequency Standard	CS-RUB5	100055	1	Symmetricom	2015/3/13
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
21	Power Sensor	NRV-Z1	100107	1	R&S	2014/8/30
22	Power Sensor	NRV-Z1	100288	1	R&S	2014/8/30

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	2014-10-29
2	Trilog super broadband test antenna	SWB-VULB9163	19-162515	1	SCHWARZBECK	2014-11-11
3	Double ridged guide antenna	ETS-3117	135885	1	ETS-LINDGREN	2014-04-28
4	Universal Radio Communication tester	CMU200	123102	1	Rohde & Schwarz	2014-08-30

6.3. Climate Chamber

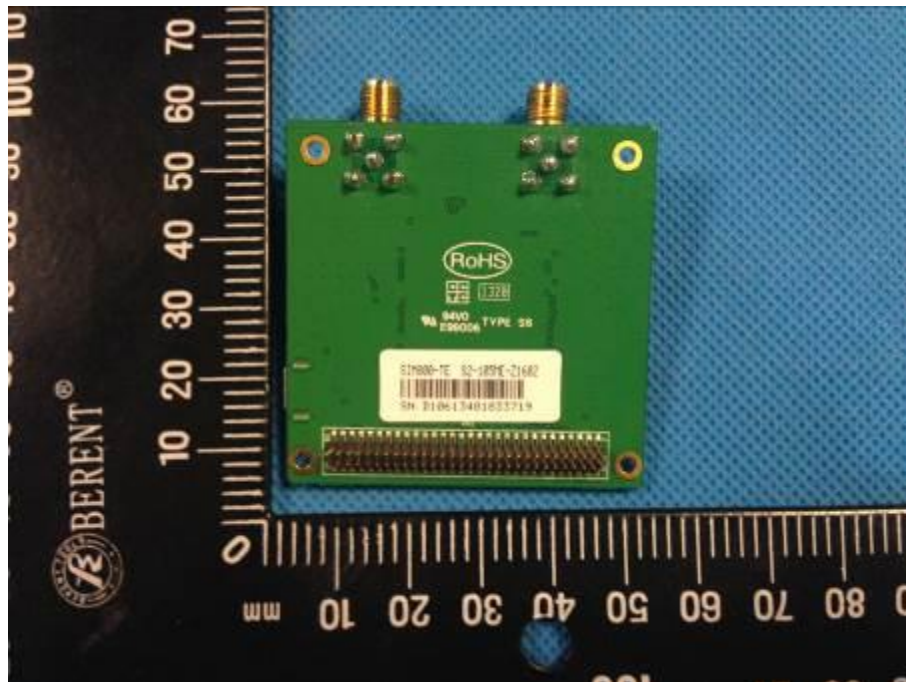
Climate Chamber						
No.	Name	Type	SN	Qty	Manufacture	Cal.Due Date
1	Climate Chamber	CTP4003	TST2012130	1	TST	2014-8-5

6.4. Vibration table

Vibration table						
No.	Name	Type	SN	Qty	Manufacture	Cal.Due Date
1	vibration table	ESS-050	D1205136	1	Dongling	2014-8-12

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 Data Module****Pic A-2 Data Module**

ANNEX B: PICS/PIXIT information

Item	Type of Mobile Station	Support	Mnemonic
1	HSCSD Multislot MS	No	Type_HSCSD_Multislot
2	R-GSM MS	No	Type_R-GSM
3	Support of GPRS Multislot class on the uplink	Yes	Type_GPRS_Multislot_uplink
4	EGPRS	N0	Type_EGPRS
5	EGPRS capable of 8PSK in Uplink, of all Multislot classes	N0	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
12.1.1	Conducted spurious emissions - MS allocated a channel	NTC	Pass	N04	Pass	N04
12.1.1	Conducted spurious emissions - MS allocated a channel	VH	Pass	N04	Pass	N04
12.1.1	Conducted spurious emissions - MS allocated a channel	VL	Pass	N04	Pass	N04
12.1.2	Conducted spurious emissions - MS in idle mode	NTC	Pass	N04	Pass	N04
12.1.2	Conducted spurious emissions - MS in idle mode	VH	Pass	N04	Pass	N04
12.1.2	Conducted spurious emissions - MS in idle mode	VL	Pass	N04	Pass	N04
12.2.1	Radiated spurious emissions - MS allocated a channel	NTC	Pass	N04	Pass	N04
12.2.2	Radiated spurious emissions - MS in idle mode	NTC	Pass	N04	Pass	N04
13.1	Transmitter – Frequency error and phase error	NTC	Pass	N04	Pass	N04
13.1	Transmitter – Frequency error and phase error	THVH	Pass	N04	Pass	N04
13.1	Transmitter – Frequency error and phase error	THVL	Pass	N04	Pass	N04
13.1	Transmitter – Frequency error and phase error	TLVH	Pass	N04	Pass	N04
13.1	Transmitter – Frequency error and phase error	TLVL	Pass	N04	Pass	N04
13.1	Transmitter – Frequency error and phase error	Vib-x	Pass	N04	Pass	N04
13.1	Transmitter – Frequency error and phase error	Vib-y	Pass	N04	Pass	N04
13.1	Transmitter – Frequency error and phase error	Vib-z	Pass	N04	Pass	N04
13.2	Transmitter – Frequency error under multipath and interference conditions	NTC	Pass	N04	Pass	N04
13.2	Transmitter – Frequency error under multipath and	THVH	Pass	N04	Pass	N04

Item	Test case description	Test Condition	GSM900 result		GSM1800 result	
			Verdict	EUT	Verdict	EUT
	interference conditions					
13.2	Transmitter – Frequency error under multipath and interference conditions	THVL	Pass	N04	Pass	N04
13.2	Transmitter – Frequency error under multipath and interference conditions	TLVH	Pass	N04	Pass	N04
13.2	Transmitter – Frequency error under multipath and interference conditions	TLVL	Pass	N04	Pass	N04
13.3.4.1	Transmitter output power and burst timing - MS with permanent antenna	NTC	Pass	N04	Pass	N04
13.3.4.1	Transmitter output power and burst timing - MS with permanent antenna	THVH	Pass	N04	Pass	N04
13.3.4.1	Transmitter output power and burst timing - MS with permanent antenna	THVL	Pass	N04	Pass	N04
13.3.4.1	Transmitter output power and burst timing - MS with permanent antenna	TLVH	Pass	N04	Pass	N04
13.3.4.1	Transmitter output power and burst timing - MS with permanent antenna	TLVL	Pass	N04	Pass	N04
13.4	Transmitter - Output RF spectrum	modulation , normal	Pass	N04	Pass	N04
13.4	Transmitter - Output RF spectrum	modulation , detailed	Pass	N04	Pass	N04
13.4	Transmitter - Output RF spectrum	spurious	Pass	N04	Pass	N04
13.4	Transmitter - Output RF spectrum	switching, normal	Pass	N04	Pass	N04
13.4	Transmitter - Output RF spectrum	THVH, modulation	Pass	N04	Pass	N04
13.4	Transmitter - Output RF spectrum	THVH, switching	Pass	N04	Pass	N04

Item	Test case description	Test Condition	GSM900 result		GSM1800 result	
			Verdict	EUT	Verdict	EUT
13.4	Transmitter - Output RF spectrum	THVL, modulation	Pass	N04	Pass	N04
13.4	Transmitter - Output RF spectrum	THVL, switching	Pass	N04	Pass	N04
13.4	Transmitter - Output RF spectrum	TLVH, modulation	Pass	N04	Pass	N04
13.4	Transmitter - Output RF spectrum	TLVH, switching	Pass	N04	Pass	N04
13.4	Transmitter - Output RF spectrum	TLVL, modulation	Pass	N04	Pass	N04
13.4	Transmitter - Output RF spectrum	TLVL, switching	Pass	N04	Pass	N04
13.16.1	Frequency error and phase error in GPRS multislots configuration	NTC	Pass	N04	Pass	N04
13.16.1	Frequency error and phase error in GPRS multislots configuration	THVH	Pass	N04	Pass	N04
13.16.1	Frequency error and phase error in GPRS multislots configuration	THVL	Pass	N04	Pass	N04
13.16.1	Frequency error and phase error in GPRS multislots configuration	TLVH	Pass	N04	Pass	N04
13.16.1	Frequency error and phase error in GPRS multislots configuration	TLVL	Pass	N04	Pass	N04
13.16.1	Frequency error and phase error in GPRS multislots configuration	Vib-x	Pass	N04	Pass	N04
13.16.1	Frequency error and phase error in GPRS multislots configuration	Vib-y	Pass	N04	Pass	N04
13.16.1	Frequency error and phase error in GPRS multislots configuration	Vib-z	Pass	N04	Pass	N04
13.16.2-1	Transmitter output power in GPRS multislots configuration - MS with permanent antenna	NTC	Pass	N04	Pass	N04

Item	Test case description	Test Condition	GSM900 result		GSM1800 result	
			Verdict	EUT	Verdict	EUT
	connector					
13.16.2-1	Transmitter output power in GPRS multislot configuration - MS with permanent antenna connector	THVH	Pass	N04	Pass	N04
13.16.2-1	Transmitter output power in GPRS multislot configuration - MS with permanent antenna connector	THVL	Pass	N04	Pass	N04
13.16.2-1	Transmitter output power in GPRS multislot configuration - MS with permanent antenna connector	TLVH	Pass	N04	Pass	N04
13.16.2-1	Transmitter output power in GPRS multislot configuration - MS with permanent antenna connector	TLVL	Pass	N04	Pass	N04
13.16.3	Output RF spectrum in GPRS multislot configuration	modulation , normal	Pass	N04	Pass	N04
13.16.3	Output RF spectrum in GPRS multislot configuration	modulation , detailed	Pass	N04	Pass	N04
13.16.3	Output RF spectrum in GPRS multislot configuration	spurious	Pass	N04	Pass	N04
13.16.3	Output RF spectrum in GPRS multislot configuration	switching, normal	Pass	N04	Pass	N04
13.16.3	Output RF spectrum in GPRS multislot configuration	THVH, modulation	Pass	N04	Pass	N04
13.16.3	Output RF spectrum in GPRS multislot configuration	THVH, switching	Pass	N04	Pass	N04
13.16.3	Output RF spectrum in GPRS multislot configuration	THVL, modulation	Pass	N04	Pass	N04
13.16.3	Output RF spectrum in GPRS multislot configuration	THVL, switching	Pass	N04	Pass	N04
13.16.3	Output RF spectrum in GPRS multislot configuration	TLVH, modulation	Pass	N04	Pass	N04
13.16.3	Output RF spectrum in GPRS multislot configuration	TLVH, switching	Pass	N04	Pass	N04

Item	Test case description	Test Condition	GSM900 result		GSM1800 result	
			Verdict	EUT	Verdict	EUT
13.16.3	Output RF spectrum in GPRS multislot configuration	TLVL, modulation	Pass	N04	Pass	N04
13.16.3	Output RF spectrum in GPRS multislot configuration	TLVL, switching	Pass	N04	Pass	N04
14.7.1	Blocking and spurious response - TCH/FS	NTC	Pass	N04	Pass	N04

ANNEX D: Conducted Maximum Output Power

Type	GSM900(dBm)	GSM1800(dBm)
GSM	33.1	29.9
GPRS	32.3	28.9

ANNEX E: Spurious emissions results

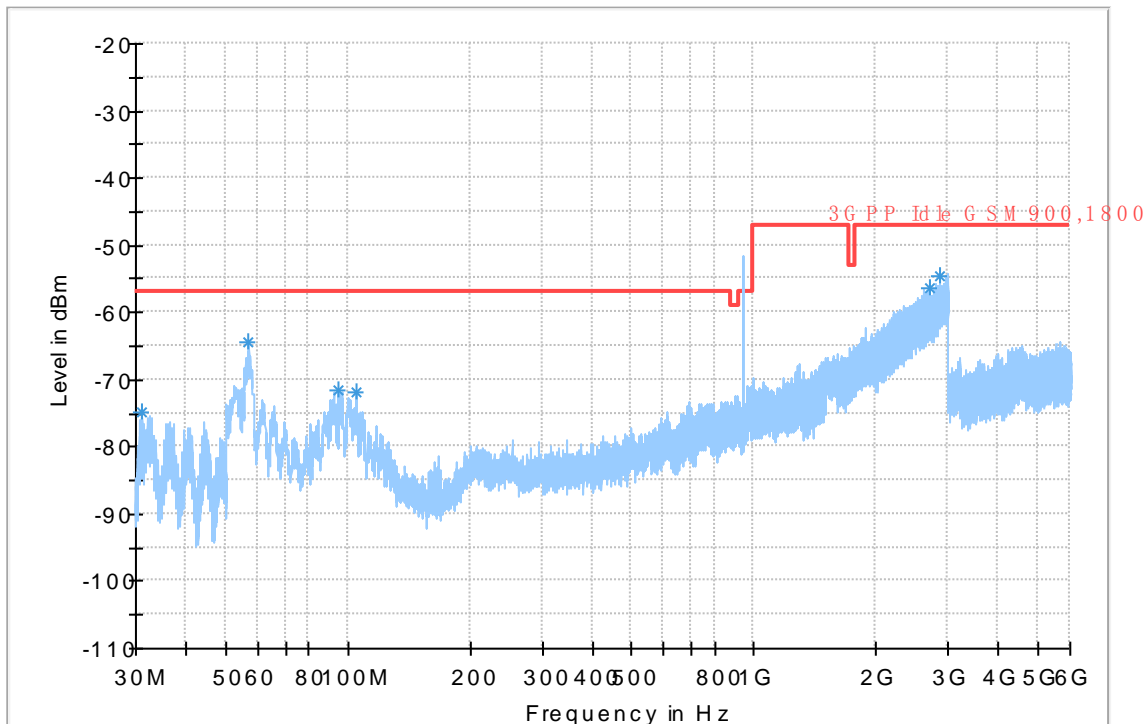


Fig1 Radiated Spurious emissions (900MHz , Horizontal/Vertical, Idle mode, Normal voltage)

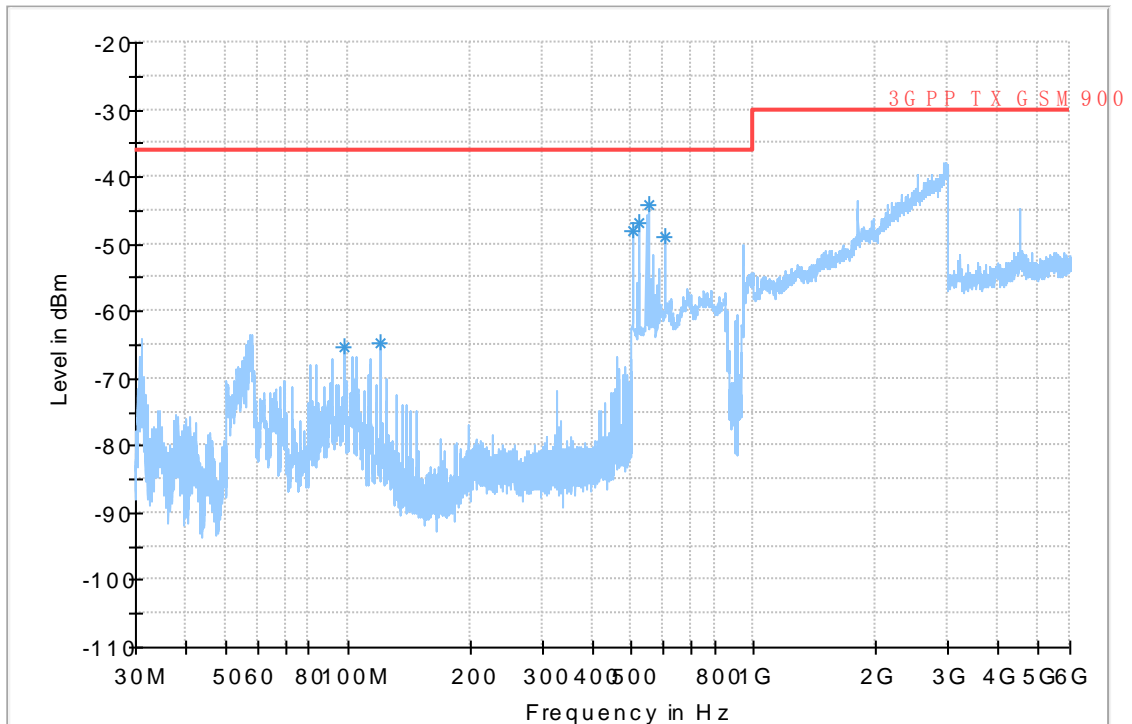


Fig2 Radiated Spurious emissions (900MHz, Horizontal/Vertical , Traffic mode, Normal voltage)

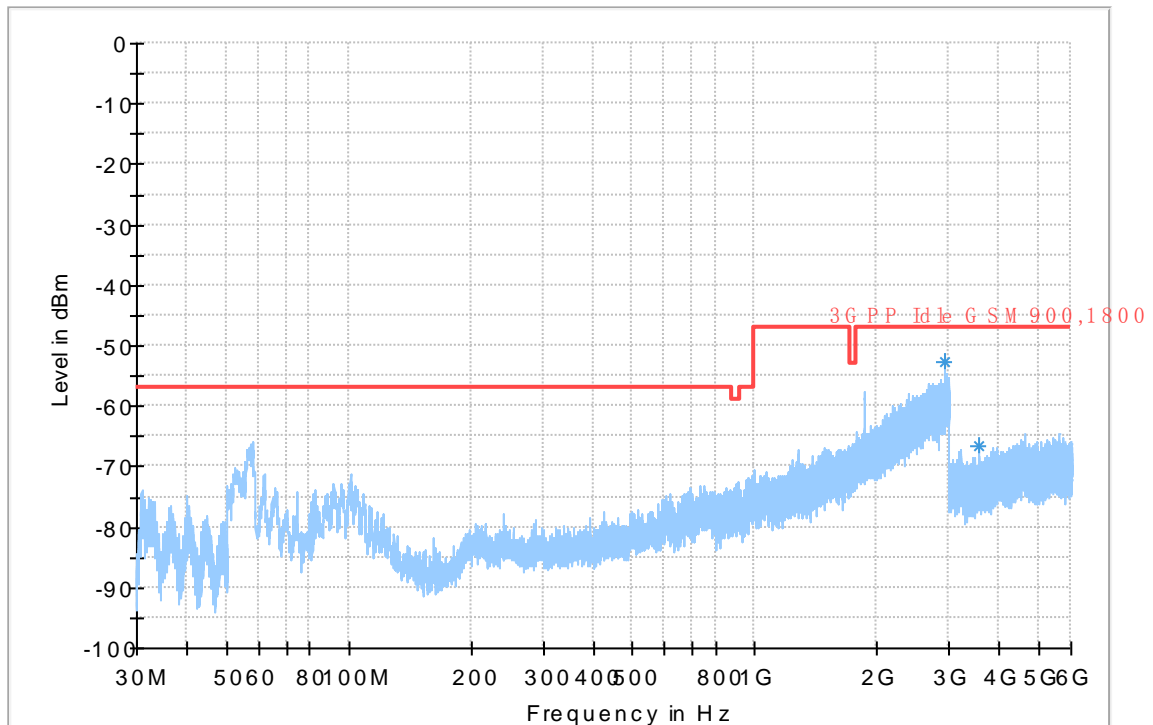


Fig3 Radiated Spurious emissions (1800MHz, Horizontal/Vertical, Idle mode, Normal voltage)

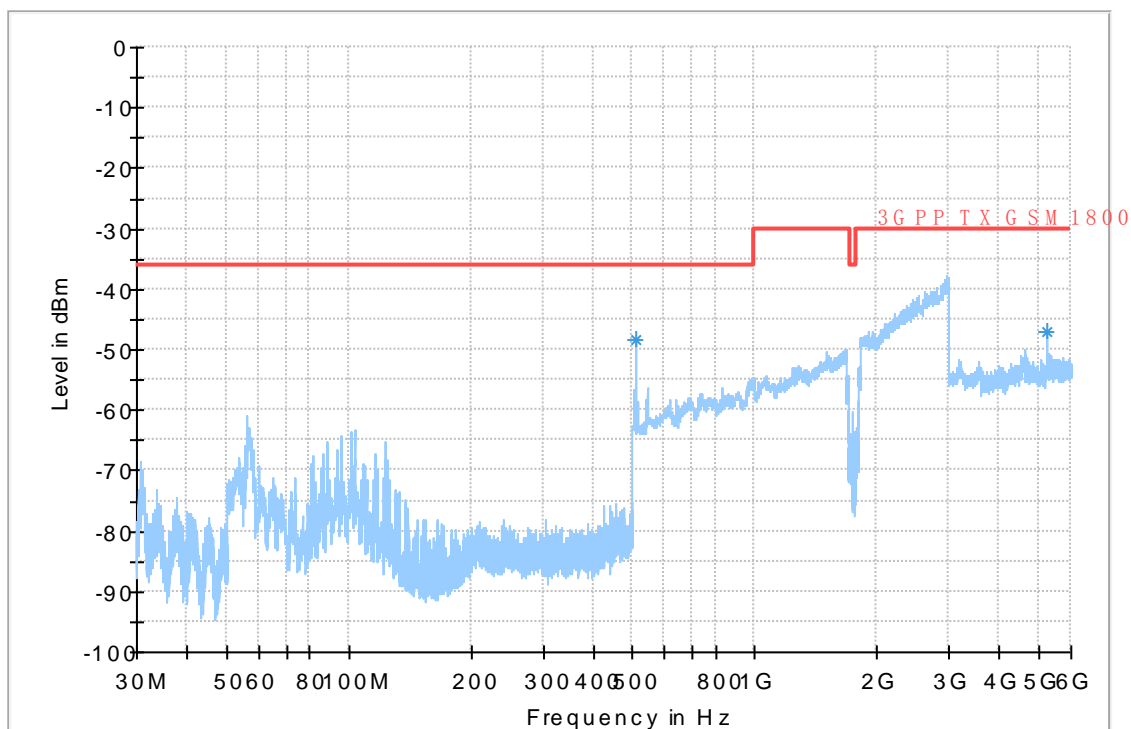


Fig4 Radiated Spurious emissions (1800MHz, Horizontal/Vertical, Traffic mode, Normal voltage)

*****End the Report*****