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Report No.: SZEM120700427301  
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## FCC REPORT

**Application No:** SZEM1207004273RF  
**Applicant:** Laipac Technology Inc.  
**Manufacturer:** Laipac Technology Inc.  
**Product Name:** S911 Lola  
**Mode No.(EUT):** S911 Lola  
**FCC ID:** TET-S911LOLA  
**Standards:** 47 CFR Part 2(2011)  
47 CFR Part 22 subpart H(2011)  
47 CFR Part 24 subpart E(2011)  
**Date of Receipt:** 2012-09-19  
**Date of Test:** 2012-10-10 to 2012-11-21  
**Date of Issue:** 2012-12-05

<b>Test Result:</b>	<b>PASS *</b>
---------------------	---------------

\* In the configuration tested, the EUT complied with the standards specified above.

Authorized Signature:



Jack Zhang  
EMC Laboratory Manager

The manufacturer should ensure that all products in series production are in conformity with the product sample detailed in this report. If the product in this report is used in any configuration other than that detailed in the report, the manufacturer must ensure the new system complies with all relevant standards. Any mention of SGS International Electrical Approvals or testing done by SGS International Electrical Approvals in connection with, distribution or use of the product described in this report must be approved by SGS International Electrical Approvals in writing.

The report must not be used by the client to claim product certification, approval, or endorsement by NVLAP, NIST, or any agency of the federal government. All test results in this report can be traceable to National or International Standards.

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## 2 Test Summary

Test Item	FCC Requirement	Test method	Result
<b>850</b>			
<b>Conducted output power</b>	Part 2.1046(a)/Part 22.913(a)	TIA-603-C-2004 Clause 2.2.1	PASS
<b>Effective Radiated Power of Transmitter(ERP)</b>	Part 2.1046(a)/Part 22.913(a)	TIA-603-C-2004 Clause 2.2.17	PASS
<b>99% Occupied Bandwidth</b>	Part 2.1049(h) Part 22.917(b)	RSS-Gen clause 4.6.1	PASS
<b>Band Edge at antenna terminals</b>	Part 2.1051 Part 22.917(a)(b)	RSS-132 clause 4.5	PASS
<b>Spurious emissions at antenna terminals</b>	Part 2.1051 Part 2.1057 Part 22.917(a)(b) TIA-603-C-2004	RSS-132 clause 4.5 RSS-Gen clause 4.9	PASS
<b>Field strength of spurious radiation</b>	Part 2.1053/ Part 2.1057/ Part 22.917(a)(b)	TIA-603-C-2004 Clause 2.2.12	PASS
<b>Frequency stability</b>	Part 2.1055 Part 22.355 TIA-603-C-2004	RSS-132 clause 4.3 RSS-Gen clause 4.7	PASS
<b>1900</b>			
<b>Conducted output power</b>	Part 2.1046(a) /Part 24.232(c)	TIA-603-C-2004 Clause 2.2.1	PASS
<b>Effective Radiated Power of Transmitter(EIRP)</b>	Part 2.1046(a) / Part 24.232(c)	TIA-603-C-2004 Clause 2.2.17	PASS
<b>99% Occupied Bandwidth</b>	Part 2.1049(h) Part 24.238(b)	RSS-Gen clause 4.6.1	PASS
<b>Band Edge at antenna terminals</b>	Part 2.1051 Part 24.238(a)(b)	RSS-133 clause 6.5	PASS
<b>Spurious emissions at antenna terminals</b>	Part 2.1051/ Part 2.1057/ Part 24.238(a)(b) TIA-603-C-2004	RSS-133 clause 6.5 RSS-Gen clause 4.9	PASS
<b>Field strength of spurious radiation</b>	Part 2.1053 /Part 2.1057 / Part 24.238(a)(b)	TIA-603-C-2004 Clause 2.2.12	PASS
<b>Frequency stability</b>	Part 2.1055/Part 24.235	TIA-603-C-2004 Clause 2.2.2	PASS

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## 4 General Information

### 4.1 Client Information

Applicant:	Laipac Technology Inc.
Address of Applicant:	20 Mural Street, Unit 5, Richmond Hill, Ontario, L4B 1K3 - Canada
Manufacturer:	Laipac Technology Inc.
Address of Manufacturer:	20 Mural Street, Unit 5, Richmond Hill, Ontario, L4B 1K3 - Canada

### 4.2 General Description of EUT

Name:	S911 Lola	
Model No.:	S911 Lola	
Hardware Version:	V2	
Software Version:	01.10.14	
IMEI:	354660042275852	
Test Power Grade:	GSM/GPRS 850MHz 33dBm GSM/GPRS 1900MHz 30dBm	
Frequency Band:	GSM/GPRS 850/1900	
Type of Emission:	GSM/GPRS(GMSK): 250KGXW	
GPRS Class	Class 10	
Modulation Type:	GSM/GPRS Mode with GMSK Modulation	
Sample Type:	Portable production	
Antenna Type:	Integral	
Antenna Gain:	1.0dBi	
Power Supply:	Battery	3.7V recharge battery
	AC adapter	AC/DC Adapter Model:PS0512J-PA14J Input: AC 100-240V 0.5A 50/60Hz Output: DC 5.0V1000mA
Test Voltage:	Normal voltage: 3.7V High voltage : 4.2V Low voltage: 3.0V	



### 4.3 Test Environment and Mode

Operating Environment:	
Temperature:	25.0 °C
Humidity:	52 % RH
Atmospheric Pressure:	1010 mbar

### 4.4 Description of Support Units

The EUT has been tested independent unit.

### 4.5 Test Location

All tests were performed at:

SGS-CSTC Standards Technical Services Co., Ltd., Shenzhen Branch E&E Lab,  
No. 1 Workshop, M-10, Middle Section, Science & Technology Park, Shenzhen, Guangdong, China.  
518057.

Tel: +86 755 2601 2053 Fax: +86 755 2671 0594

No tests were sub-contracted.



## 4.6 Test Facility

The test facility is recognized, certified, or accredited by the following organizations:

- **CNAS (No. CNAS L2929)**  
CNAS has accredited SGS-CSTC Standards Technical Services Co., Ltd. Shenzhen Branch EMC Lab to ISO/IEC 17025:2005 General Requirements for the Competence of Testing and Calibration Laboratories (CNAS-CL01 Accreditation Criteria for the Competence of Testing and Calibration Laboratories) for the competence in the field of testing.
- **VCCI**  
The 3m Semi-anechoic chamber, Full-anechoic Chamber and Shielded Room (7.5m x 4.0m x 3.0m) of SGS-CSTC Standards Technical Services Co., Ltd. have been registered in accordance with the Regulations for Voluntary Control Measures with Registration No.: R-2197, G-416, T-1153 and C-2383 respectively.
- **FCC – Registration No.: 556682**  
SGS-CSTC Standards Technical Services Co., Ltd., Shenzhen EMC Laboratory has been registered and fully described in a report filed with the (FCC) Federal Communications Commission. The acceptance letter from the FCC is maintained in our files. Registration No.: 556682.
- **Industry Canada (IC)**  
The 3m Semi-anechoic chamber of SGS-CSTC Standards Technical Services Co., Ltd. has been registered by Certification and Engineering Bureau of Industry Canada for radio equipment testing with Registration No.: 4620C-1.

## 4.7 Deviation from Standards

None.

## 4.8 Abnormalities from Standard Conditions

None.

## 4.9 Other Information Requested by the Customer

None.

#### 4.10 Equipment List

RE in Chamber					
Item	Test Equipment	Manufacturer	Model No.	Inventory No.	Cal.Due date (yyyy-mm-dd)
1	3m Semi-Anechoic Chamber	ETS-LINDGREN	N/A	SEL0017	2013-06-10
2	EMI Test Receiver	Rohde & Schwarz	ESIB26	SEL0023	2013-05-17
3	EMI Test software	AUDIX	E3	SEL0050	N/A
4	BiConiLog Antenna (26-3000MHz)	ETS-LINDGREN	3142C	SEL0015	2013-10-24
5	Double-ridged horn (1-18GHz)	ETS-LINDGREN	3117	SEL0006	2013-10-24
6	Horn Antenna (18-26GHz)	ETS-LINDGREN	3160	SEL0076	2013-10-24
7	Pre-amplifier (0.1-1300MHz)	Agilent Technologies	8447D	SEL0053	2013-05-17
8	Pre-Amplifier (0.1-26.5GHz)	Compliance Directions Systems Inc.	PAP-0126	SEL0168	2013-10-24
9	Coaxial cable	SGS	N/A	SEL0027	2013-05-29
10	Coaxial cable	SGS	N/A	SEL0189	2013-05-29
11	Coaxial cable	SGS	N/A	SEL0121	2013-06-12
12	Coaxial cable	SGS	N/A	SEL0178	2013-05-29
13	Band filter	Amindeon	82346	SEL0094	2013-05-17
14	Barometer	Chang Chun	DYM3	SEL0088	2013-05-24
15	Universal radio communication tester	Rohde & Schwarz	CMU200	SEL0091	2013-10-24
16	Universal radio communication tester	Rohde & Schwarz	CMU200	SEL0194	2013-10-24
17	Signal Generator (10M-27GHz)	Rohde & Schwarz	SMR27	SEL0067	2013-05-17
18	Signal Generator	Rohde & Schwarz	SMY01	SEL0155	22013-10-24
19	Humidity/ Temperature Indicator	Shanghai Qixiang	ZJ1-2B	SEL0103	2013-10-24
20	DC Power Supply	Zhao Xin	RXN-305D	SEL0117	2013-10-24



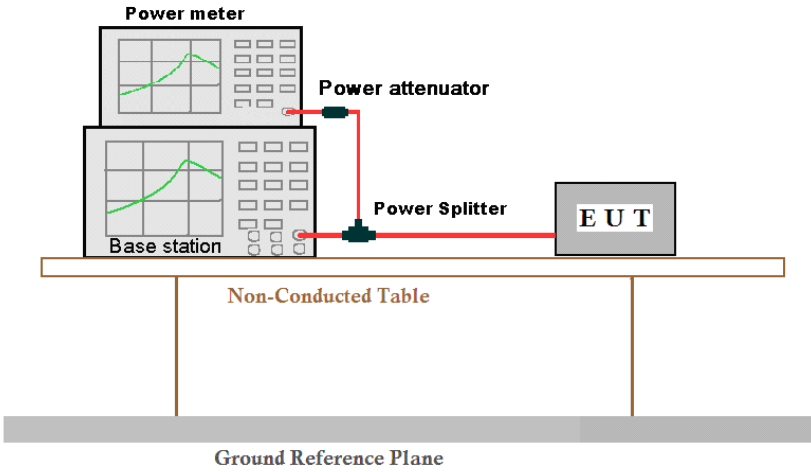
RF connected test					
Item	Test Equipment	Manufacturer	Model No.	Inventory No.	Cal.Due date (yyyy-mm-dd)
1	DC Power Supply	Zhao Xin	RXN-305D	SEL0117	2013-10-24
2	Humidity/ Temperature Indicator	HYGRO	ZJ1-2B	SEL0033	2013-10-24
3	Spectrum Analyzer	Rohde & Schwarz	FSP	SEL0154	2013-10-24
4	Coaxial cable	SGS	N/A	SEL0178	2013-05-29
5	Coaxial cable	SGS	N/A	SEL0179	2013-05-29
6	Barometer	ChangChun	DYM3	SEL0088	2013-05-24
7	Signal Generator	Rohde & Schwarz	SML03	SEL0068	2013-05-17
8	Band filter	amideon	82346	SEL0094	2013-05-17
9	Power Divider(splitter)	Agilent Technologies	11636B	SEL0130	2013-10-24
10	POWER METER	R & S	NRVS	SEL0144	2013-10-24
11	Universal radio communication tester	Rohde & Schwarz	CMU200	SEL0091	2013-10-24
12	Universal radio communication tester	Rohde & Schwarz	CMU200	SEL0194	2013-10-24
13	Attenuator	Beijin feihang taida	TST-2-6dB	SEL0205	2013-05-17
14	POWERMETER	Agilent	E4416A	SEM096	2013-3-15

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## 5 Test results and Measurement Data

### 5.1 Conducted Output Power

Test Requirement:	Part 2.1046(a)		
Test Method:	TIA-603- C-2004 Clause 2.2.1		
Test Setup:			
Limit:	Mode	GSM 850/WCDMA/HSDPA /HSUPA 850 Band V	GSM 1900/WCDMA/HSDPA /HSUPA 1900 Band V
	Frequency	824 – 849MHz	1850 – 1910MHz
	Limit	38.45dBm (ERP)	33.01dBm (EIRP)
Measurement Procedure:	<p>The transmitter output was connected to a calibrated coaxial cable, attenuator and power meter, the other end of which was connected to a Base Station Simulator. The Base Station Simulator was set to force the EUT to its maximum power setting. The power output at the transmitter antenna port was determined by adding the value of the cable insertion loss to the power reading. The tests were performed at three frequencies (low channel, middle channel and high channel) and on the highest power levels, which can be setup on the transmitters.</p>		
Instruments Used:	Refer to section 4.10 for details		
Test Results:	Pass		



Measurement results:

GSM

850				
Channel/fc(MHz)	Peak power (dBm)	AV power (dBm)	Limit (dBm)	Result
128/824.2	31.78	31.75	38.45	Pass
190/836.6	31.57	31.54	38.45	Pass
251/848.8	31.59	31.55	38.45	Pass

1900				
Channel/fc(MHz)	Peak power (dBm)	AV power (dBm)	Limit (dBm)	Result
512/1850.2	29.38	29.34	33.01	Pass
661/1880.0	29.00	28.85	33.01	Pass
810/1909.8	28.87	28.85	33.01	Pass

GPRS:

850				
Channel/fc(MHz)	Peak power (dBm)	AV power (dBm)	Limit (dBm)	Result
128/824.2	31.67	31.62	38.45	Pass
190/836.6	31.48	31.46	38.45	Pass
251/848.8	31.54	31.50	38.45	Pass

1900				
Channel/fc(MHz)	Peak power (dBm)	AV power (dBm)	Limit (dBm)	Result
512/1850.2	29.35	29.30	33.01	Pass
661/1880.0	28.96	28.91	33.01	Pass
810/1909.8	28.75	28.70	33.01	Pass

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### 5.2 Effective Radiated Power of Transmitter (ERP/EIRP)

Test Requirement:	Part 2.1046(a)				
Test Method:	TIA-603- C-2004 Clause 2.2.17				
Receiver Setup:	Frequency	Detector	RBW	VBW	Remark
	30MHz-1GHz	peak	100 kHz	300kHz	Peak
	Above 1GHz	Peak	1MHz	3MHz	Peak
Test Setup:					

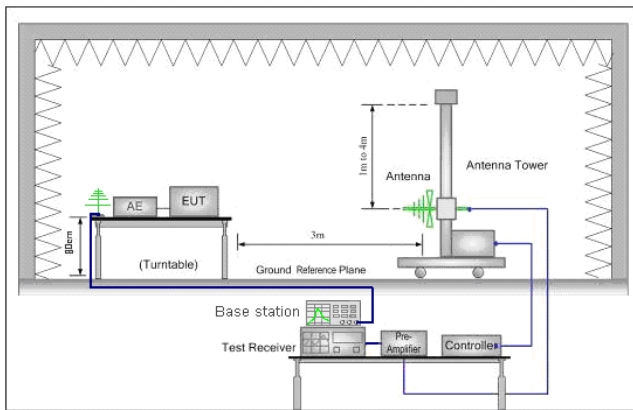


Figure 1. 30MHz to 1GHz

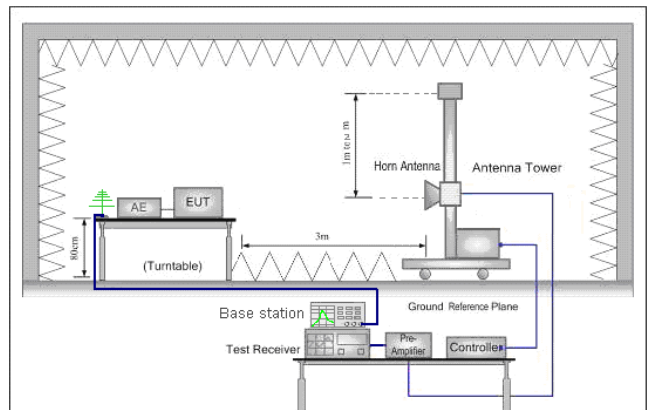


Figure 2. above 1GHz

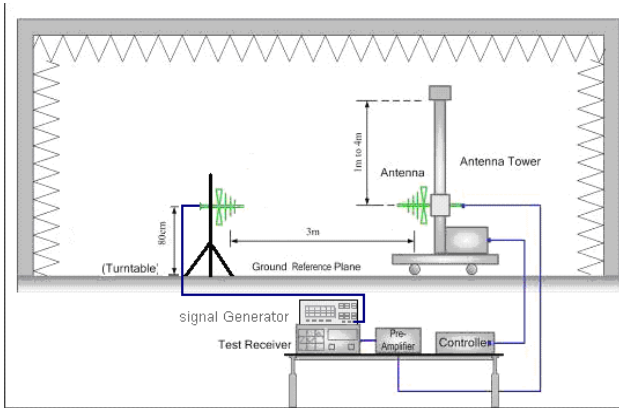


Figure 1. 30MHz to 1GHz

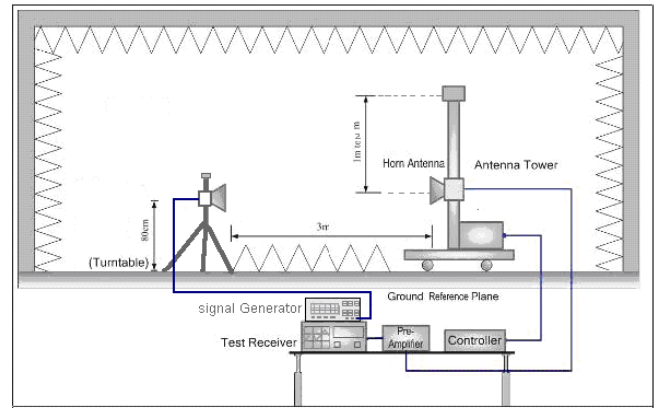


Figure 2. above 1GHz

Limit:	Mode	GSM 850/WCDMA/HSDPA /HSUPA 850 Band V	GSM 1900/WCDMA/HSDPA /HSUPA 1900 Band V
	Frequency	824 – 849MHz	1850 – 1910MHz
	Limit	38.45dBm (7W)	33.01dBm (2W)

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Measurement Procedure:	<p><b>Below 1GHz test procedure as below:</b></p> <ol style="list-style-type: none"> <li>1). The EUT was powered ON and placed on a 0.8m high table in the chamber. The antenna of the transmitter was extended to its maximum length.</li> <li>2). The disturbance of the transmitter was maximized on the test receiver display by raising and lowering from 1m to 4m the receive antenna and by rotating through 360° the turntable. After the fundamental emission was maximized, a field strength measurement was made.</li> <li>3). Steps 1) and 2) were performed with the EUT and the receive antenna in both vertical and horizontal polarization.</li> <li>4). The transmitter was then removed and replaced with another antenna. The center of the antenna was approximately at the same location as the center of the transmitter.</li> <li>5). A signal at the disturbance was fed to the substitution antenna by means of a non-radiating cable. With both the substitution and the receive antennas horizontally polarized, the receive antenna was raised and lowered to obtain a maximum reading at the test receiver. The level of the signal generator was adjusted until the measured field strength level in step 2) is obtained for this set of conditions.</li> <li>6). The output power into the substitution antenna was then measured.</li> <li>7). Steps 5) and 6) were repeated with both antennas polarized.</li> <li>8). Calculate power in dBm by the following formula:  <math display="block">\text{EIRP(dBm)} = \text{Pg(dBm)} - \text{cable loss (dB)} + \text{antenna gain (dBi)}</math> <math display="block">\text{EIRP} = \text{ERP} + 2.15\text{dB}</math>                     where:                      Pg is the generator output power into the substitution antenna.</li> </ol> <p><b>Above 1GHz test procedure as below:</b></p> <ol style="list-style-type: none"> <li>1). Different between above is the test site, change from Semi- Anechoic Chamber to fully Anechoic Chamber</li> <li>2). Calculate power in dBm by the following formula:  <math display="block">\text{EIRP(dBm)} = \text{Pg(dBm)} - \text{cable loss (dB)} + \text{antenna gain (dBi)}</math> <math display="block">\text{EIRP} = \text{ERP} + 2.15\text{dB}</math>                     where:                      Pg is the generator output power into the substitution antenna.</li> <li>3). Test the EUT in the lowest channel, the middle channel the Highest channel</li> <li>4). The radiation measurements are performed in X, Y, Z axis positioning. And found the X axis positioning which it is worse case, Only the test worst case mode is recorded in the report.</li> <li>5). Repeat above procedures until all frequencies measured was complete.</li> </ol>
Instruments Used:	Refer to section 4.10 for details
Test Results:	Pass





**Measurement Data**

GSM 850									
Channel/ fc (MHz)	EUT Pol.	Antenna Pol.	S.G Output (dBm)	Antenna Gain(dBi)	Cable Loss(dB)	EIRP (dBm)	ERP (dBm)	Limit (dBm)	Result
128/824.2	H	H	28.87	5.40	3.31	30.96	28.81	38.45	Pass
		V	29.40	5.40	3.31	31.49	29.34	38.45	Pass
190/836.6	H	H	29.48	4.60	3.35	30.73	28.58	38.45	Pass
		V	30.20	4.60	3.35	31.45	29.30	38.45	Pass
251/848.8	H	H	29.27	4.80	3.41	30.66	28.51	38.45	Pass
		V	29.98	4.80	3.41	31.37	29.22	38.45	Pass
GPRS 850									
Channel/ fc (MHz)	EUT Pol.	Antenna Pol.	S.G Output (dBm)	Antenna Gain(dBi)	Cable Loss(dB)	EIRP (dBm)	ERP (dBm)	Limit (dBm)	Result
128/824.2	H	H	28.77	5.40	3.31	30.86	28.71	38.45	Pass
		V	28.09	5.40	3.31	30.18	28.03	38.45	Pass
190/836.6	H	H	28.17	4.60	3.35	29.42	27.27	38.45	Pass
		V	28.89	4.60	3.35	30.14	27.99	38.45	Pass
251/848.8	H	H	27.96	4.80	3.41	29.35	27.20	38.45	Pass
		V	28.67	4.80	3.41	30.06	27.91	38.45	Pass

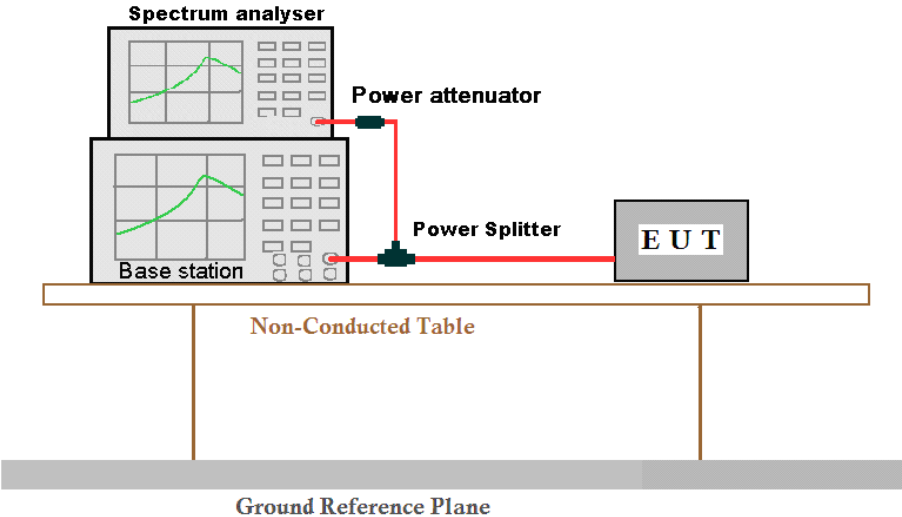
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GSM 1900								
Channel/ fc (MHz)	EUT Pol.	Antenna Pol.	S.G Output (dBm)	Antenna Gain(dBi)	Cable Loss(dB)	EIRP (dBm)	Limit (dBm)	Result
512/1850.2	H	H	23.88	8.40	5.42	26.86	33.01	Pass
		V	24.64	8.40	5.42	27.62	33.01	Pass
661/1880.0	H	H	23.89	8.80	5.56	27.13	33.01	Pass
		V	24.46	8.80	5.56	27.70	33.01	Pass
810/1909.8	H	H	23.16	9.20	5.50	26.86	33.01	Pass
		V	24.50	9.20	5.50	28.20	33.01	Pass
GPRS 1900								
Channel/ fc (MHz)	EUT Pol.	Antenna Pol.	S.G Output (dBm)	Antenna Gain(dBi)	Cable Loss(dB)	EIRP (dBm)	Limit (dBm)	Result
512/1850.2	H	H	25.67	8.40	5.42	26.50	33.01	Pass
		V	26.43	8.40	5.42	27.26	33.01	Pass
661/1880.0	H	H	25.68	8.80	5.56	26.77	33.01	Pass
		V	26.25	8.80	5.56	27.34	33.01	Pass
810/1909.8	H	H	24.95	9.20	5.50	26.50	33.01	Pass
		V	26.29	9.20	5.50	27.84	33.01	Pass

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### 5.3 99%Occupied Bandwidth

Test Requirement:	Part 2.1049(h) and RSS-Gen 4.6.1
Test Method:	Part 22.917(b)/Part 24.238(b) and RSS-Gen 4.6.1
Test Setup:	
Limit:	N/A
Measurement Procedure:	<p>The transmitter output was connected to a calibrated coaxial cable, attenuator and Spectrum analyser, the other end of which was connected to a Base Station Simulator. The Base Station Simulator was set to force the EUT to its maximum power setting. The tests were performed at three frequencies (low channel, middle channel and high channel).the resolution bandwidth of the analyser is set to 100kHz or 1% of the emission bandwidth, the EUT emission bandwidth is measured as the width of the signal between two points, outside of which all emission are attenuated at least 26dB below the transmitter power. The video bandwidth of the spectrum analyzer was set at thrice the resolution bandwidth. Detector Mode was set to peak or peak hold power.</p>
Instruments Used:	Refer to section 4.10 for details
Test Results:	Pass



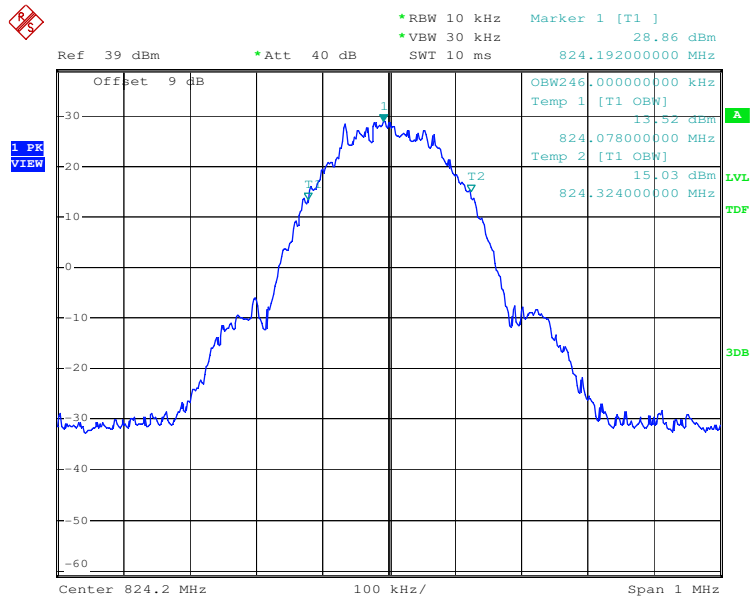
**Measurement Data**

GSM:

850			
Test channel	Frequency (MHz)	99% Emission Bandwidth	Result
Lowest/128	824.2	246kHz	Pass
Middle/190	836.6	240kHz	Pass
Highest/251	848.8	240kHz	Pass
1900			
Test channel	Frequency (MHz)	99% Emission Bandwidth	Result
Lowest/512	1850.2	246kHz	Pass
Middle/661	1880.0	248kHz	Pass
Highest/810	1909.8	238kHz	Pass

**Test plot as follows:**

Test mode:	GSM850	Test channel:	Lowest/128	Operation Frequency	824.2MHz
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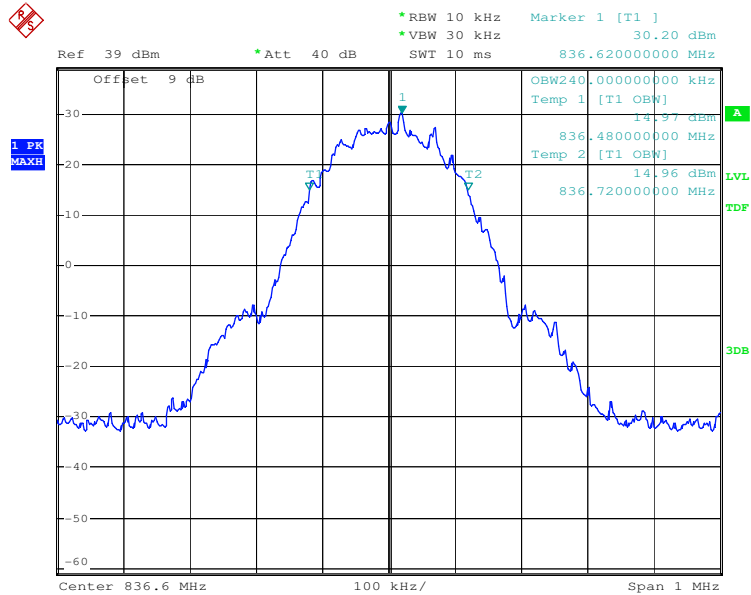


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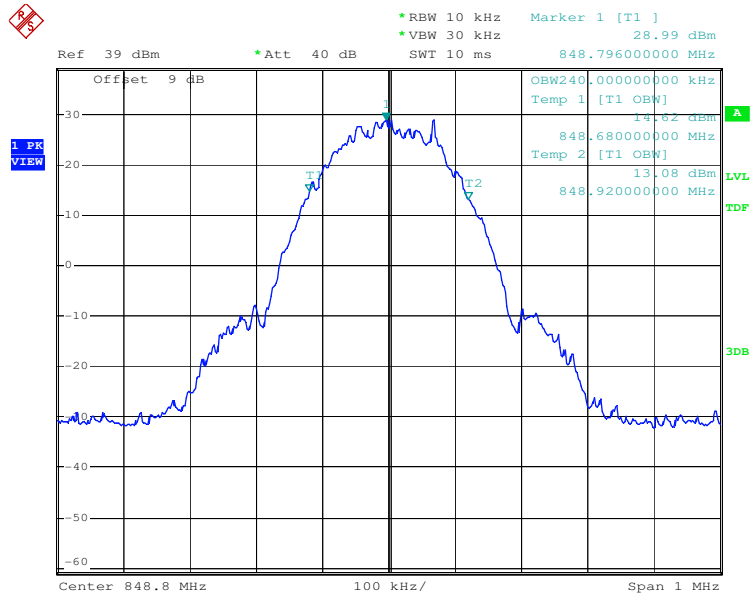




Test mode:	GSM850	Test channel:	Middle/190	Operation Frequency	836.6MHz
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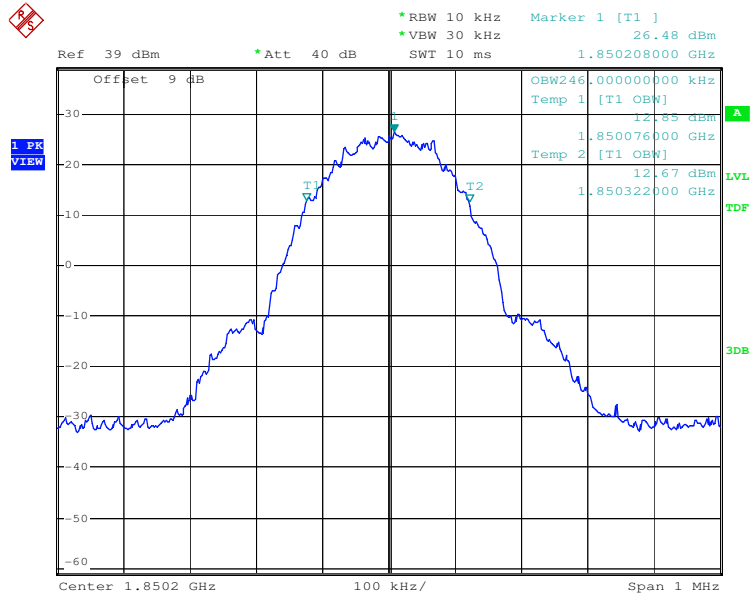
Test mode:	GSM850	Test channel:	High/251	Operation Frequency	848.8MHz
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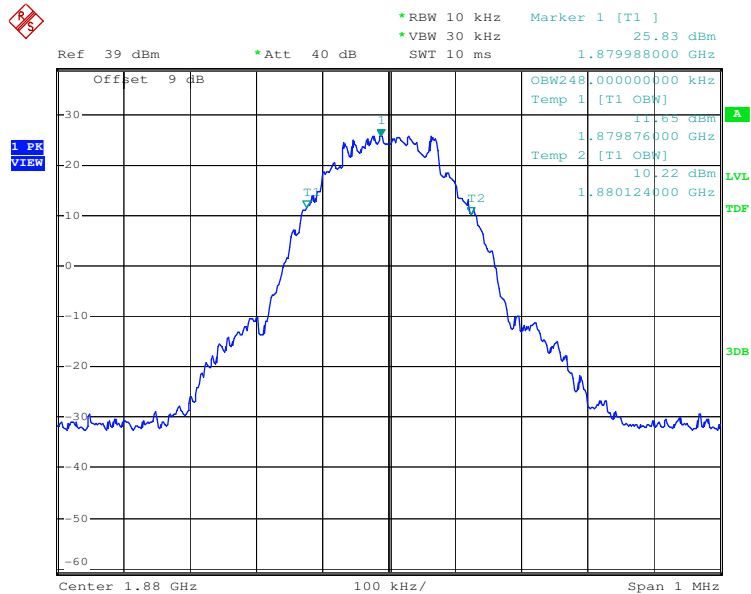
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Test mode:	GSM1900	Test channel:	Lowest/512	Operation Frequency	1850.2MHz
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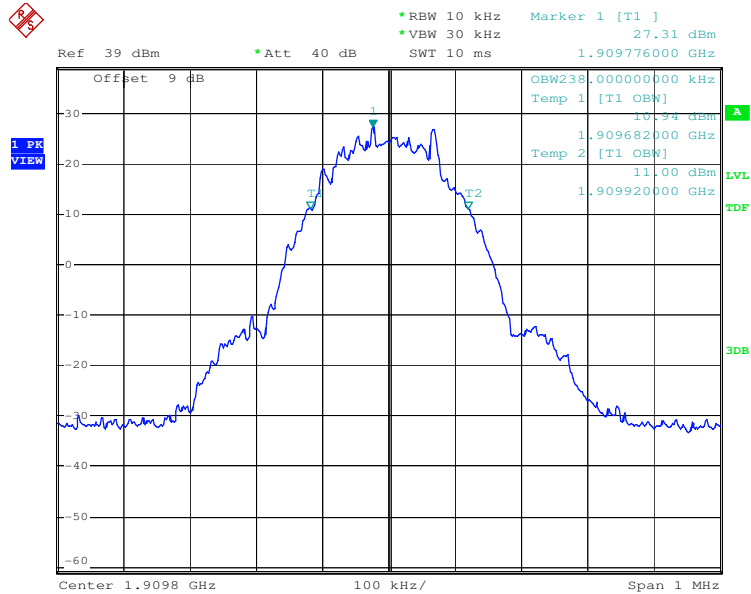


Test mode:	GSM1900	Test channel:	Middle/661	Operation Frequency	1880.0MHz
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Test mode:	GSM1900	Test channel:	High/810	Operation Frequency	1909.8MHz
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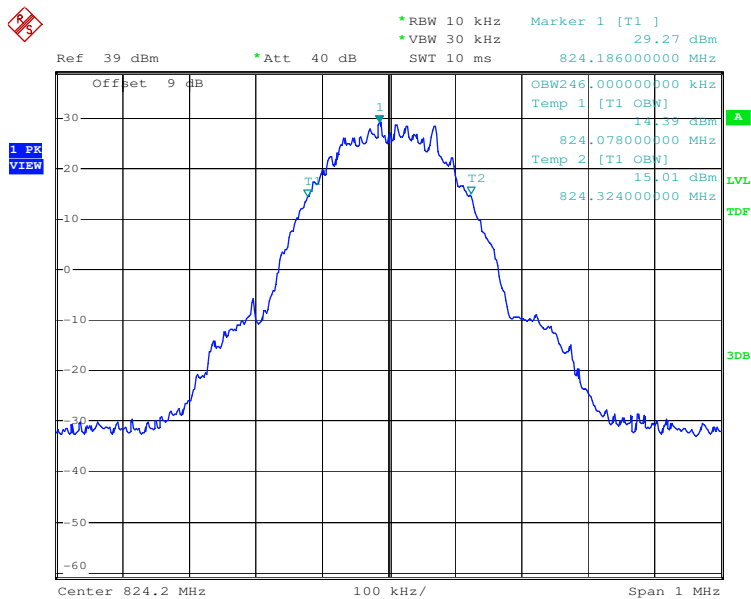


GPRS:

850			
Test channel	Frequency (MHz)	99% Emission Bandwidth	Result
Lowest/128	824.2	246kHz	Pass
Middle/190	836.6	244kHz	Pass
Highest/251	848.8	242kHz	Pass
1900			
Test channel	Frequency (MHz)	99% Emission Bandwidth	Result
Lowest/512	1850.2	248kHz	Pass
Middle/661	1880.0	246kHz	Pass
Highest/810	1909.8	246kHz	Pass

Test plot as follows:

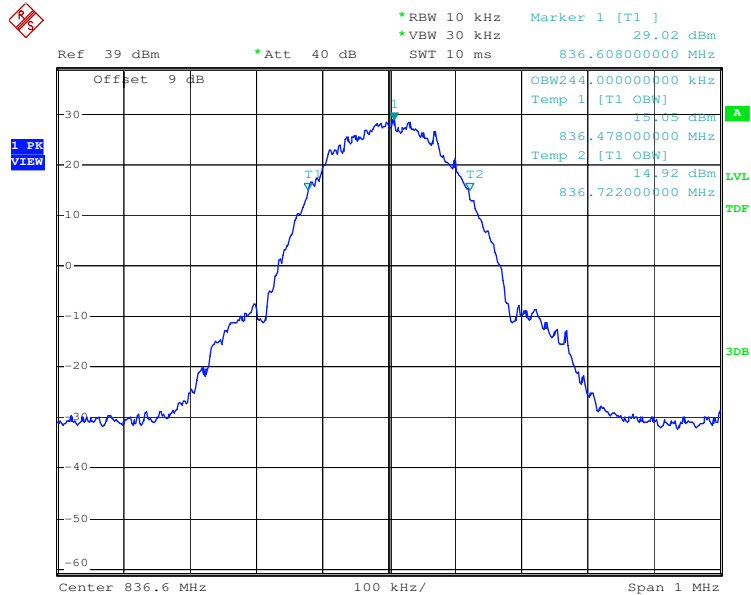
Test mode:	GPRS 850	Test channel:	Lowest/128	Operation Frequency	824.2MHz
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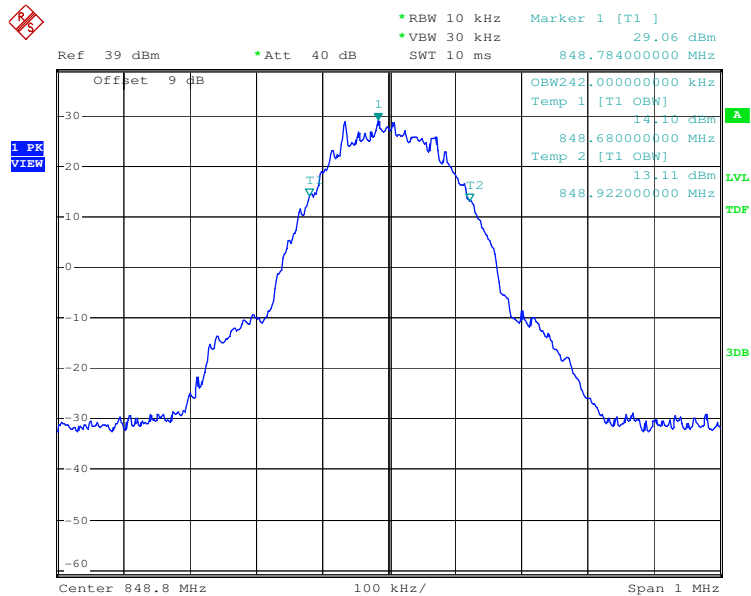
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Test mode:	GPRS 850	Test channel:	Middle/190	Operation Frequency	836.6MHz
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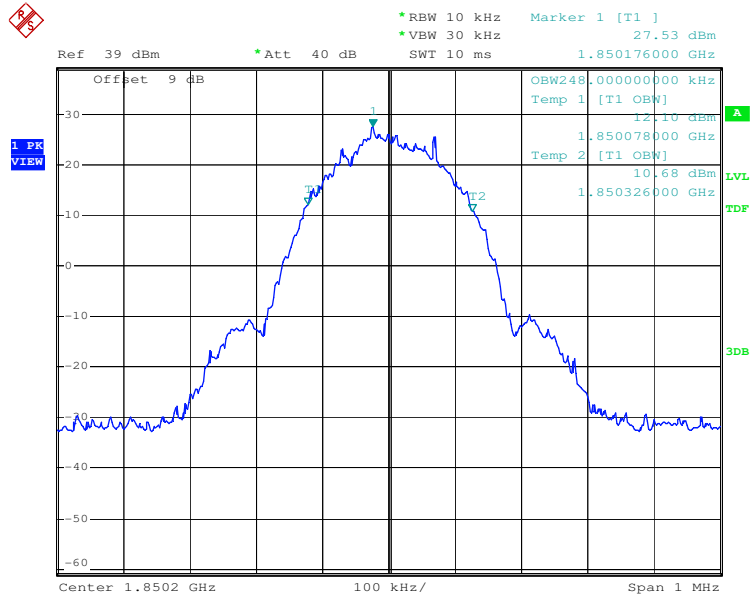
Test mode:	GPRS 850	Test channel:	High/251	Operation Frequency	848.8MHz
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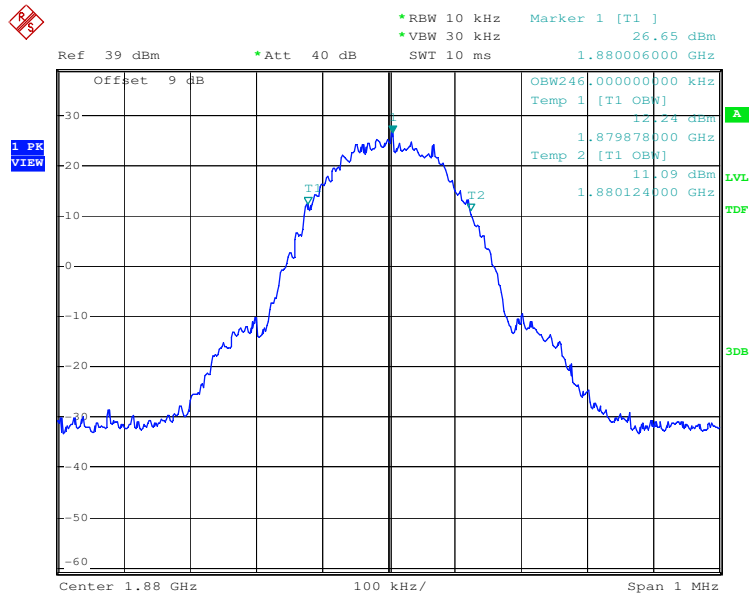
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Test mode:	GPRS 1900	Test channel:	Lowest/512	Operation Frequency	1850.2MHz
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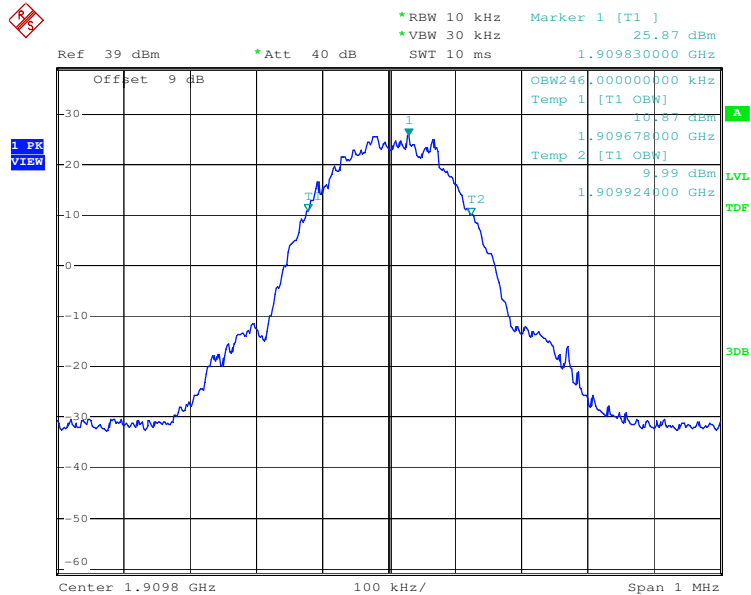
Test mode:	GPRS 1900	Test channel:	Middle/661	Operation Frequency	1880.0MHz
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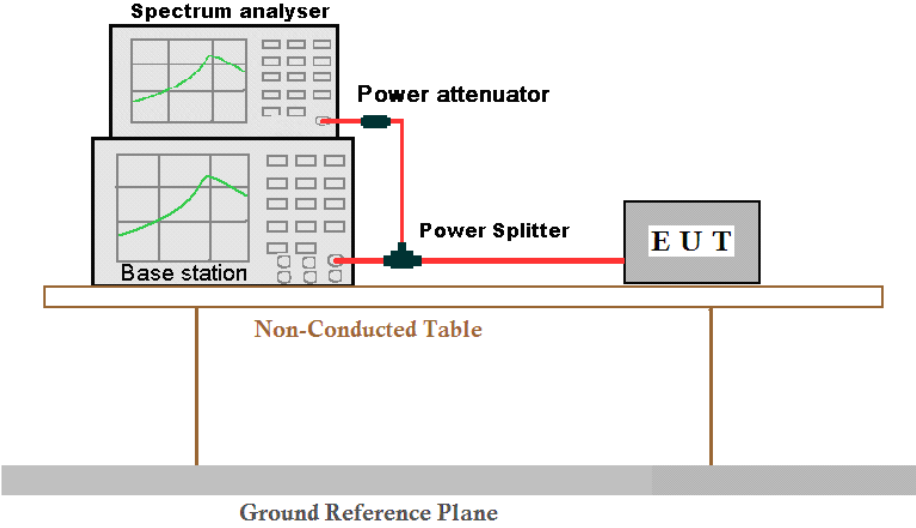


Test mode:	GPRS 1900	Test channel:	High/810	Operation Frequency	1909.8MHz
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### 5.4 Band Edge at antenna terminals

Test Requirement:	Part 2.1051 and RSS-132 Clause 4.5/RSS-133 Clause 6.5		
Test Method:	Part 22.917(b)/Part 24.238(b) and RSS-132 Clause 4.5/RSS-133 Clause 6.5		
Test Setup:	 <p>The diagram illustrates the test setup. A Spectrum analyser and a Base station are connected to a Power attenuator and a Power Splitter. The Power Splitter is connected to the Base station and the EUT (Equipment Under Test). The entire setup is placed on a Non-Conducted Table, which is supported by a Ground Reference Plane.</p>		
Measurement Procedure:	<p>The transmitter output was connected to a calibrated coaxial cable, attenuator and Spectrum analyser, the other end of which was connected to a Base Station Simulator. The Base Station Simulator was set to force the EUT to its maximum power setting. The tests were performed at three frequencies (low channel and high channel) in the 1MHz bands immediately outside and adjacent to the frequency block a resolution bandwidth of 100kHz or 1% of the emission bandwidth of the fundamental emission of the transmitter may be employed. The EUT emission bandwidth is measured as the width of the signal between two points, outside of which all emission are attenuated at least 26dB below the transmitter power. The video bandwidth of the spectrum analyzer was set at thrice the resolution bandwidth. Detector Mode was set to peak or peak hold power.</p>		
Limit:	Operation Band	Frequency Range (MHz)	Limit
	GSM/GPRS/EDGE/WCDMA 850	Below 824 and above 849	Attenuated at least 43+10log(P)
	GSM/GPRS/EDGE/WCDMA 1900	Below 1850 and above 1910	Attenuated at least 43+10log(P)
Instruments Used:	Refer to section 4.10 for details		
Test Results:	Pass		

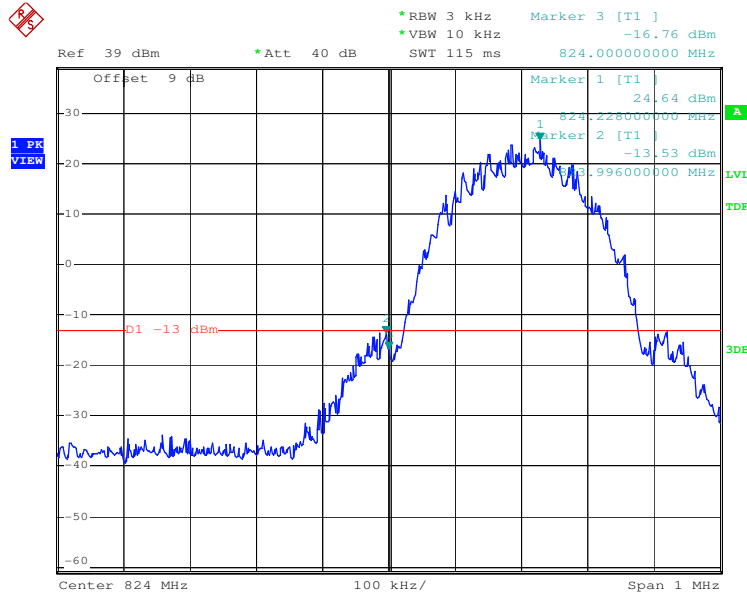




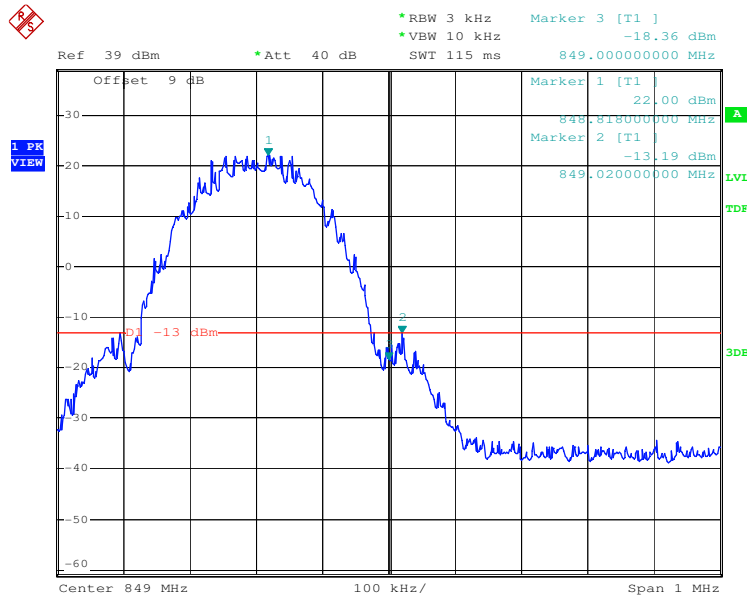
Measurement Data

GSM:

850		
Test channel	Frequency (MHz)	Result
Lowest/128	824.2	Pass



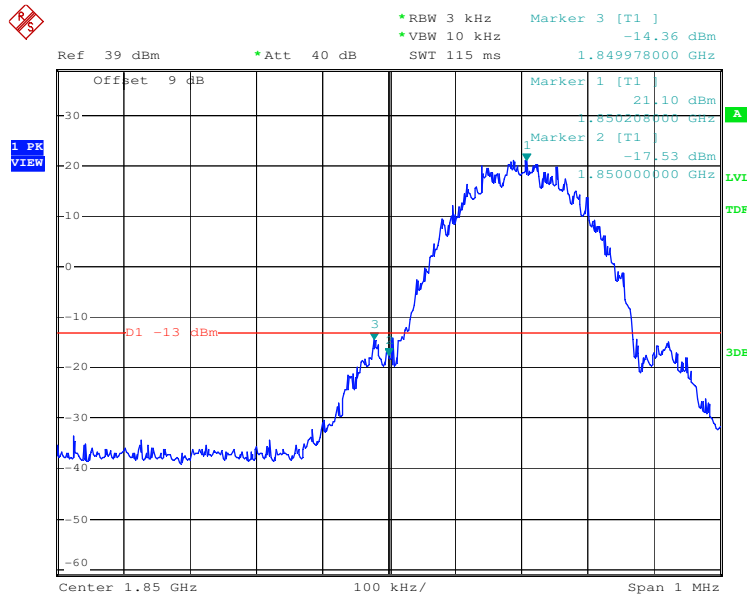
Test channel	Frequency (MHz)	Result
Highest/251	848.8	Pass



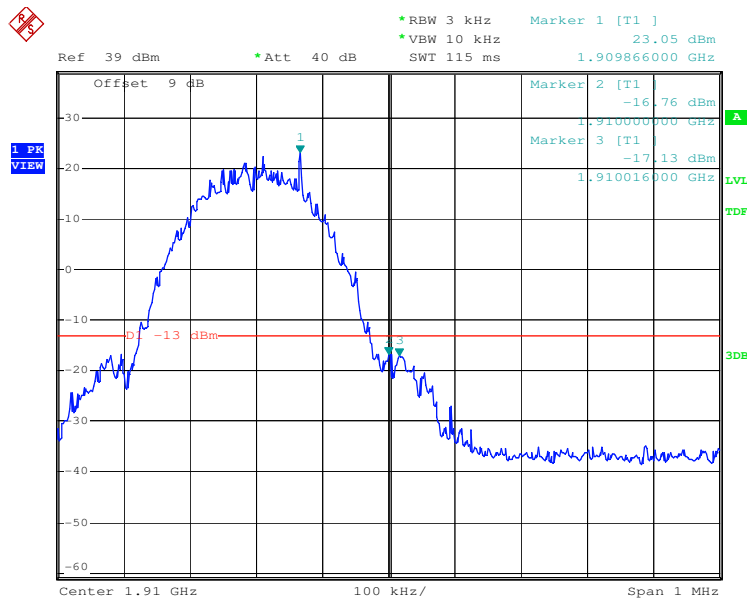
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1900		
Test channel	Frequency (MHz)	Result
Lowest/512	1850.2	Pass



Test channel	Frequency (MHz)	Result
Highest/810	1909.8	Pass

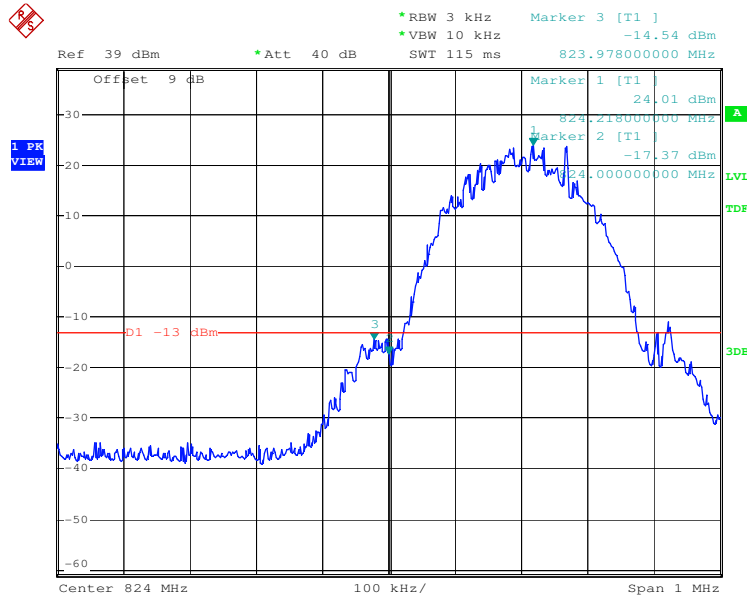


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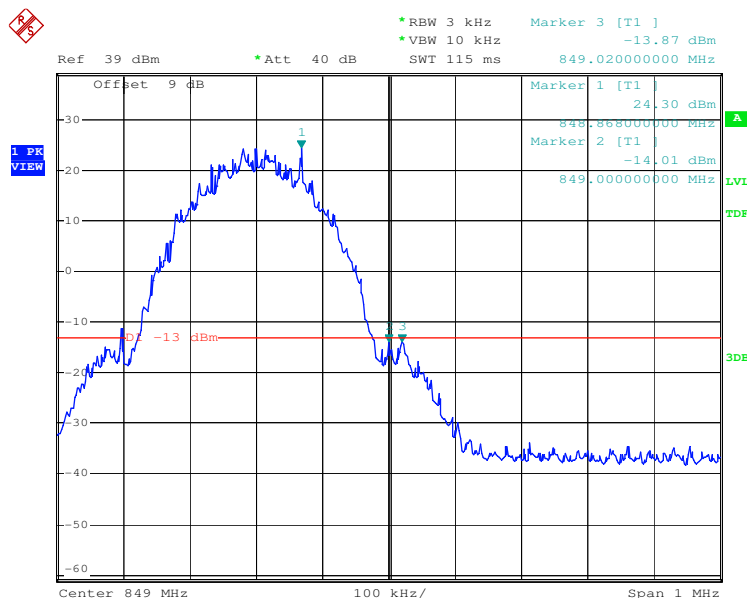


GPRS:

850		
Test channel	Frequency (MHz)	Result
Lowest/128	824.2	Pass



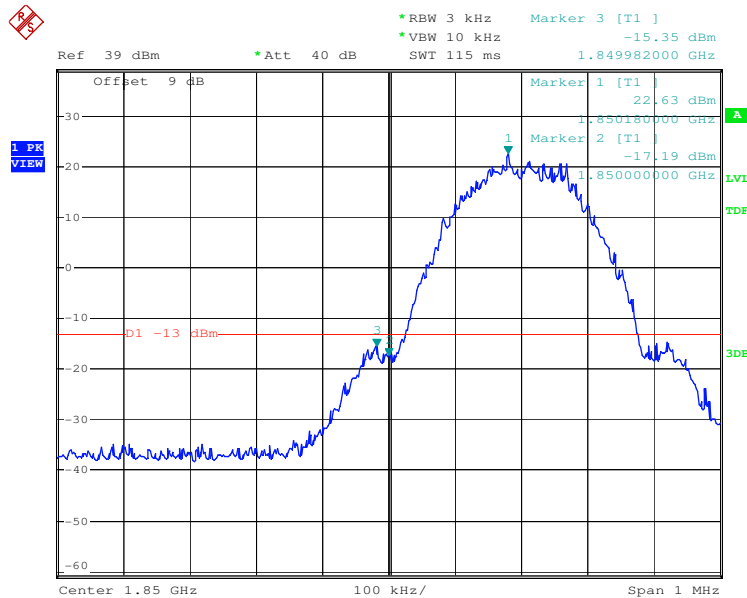
Test channel	Frequency (MHz)	Result
Highest/251	848.8	Pass



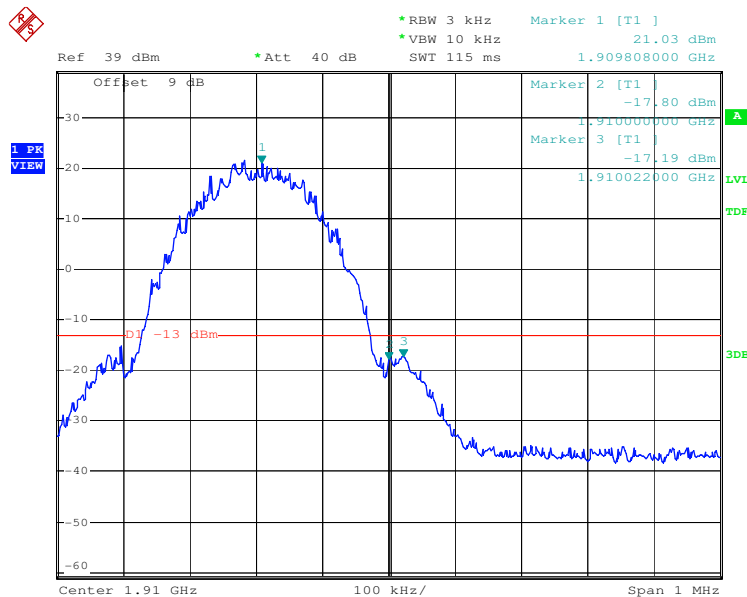
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1900		
Test channel	Frequency (MHz)	Result
Lowest/512	1850.2	Pass

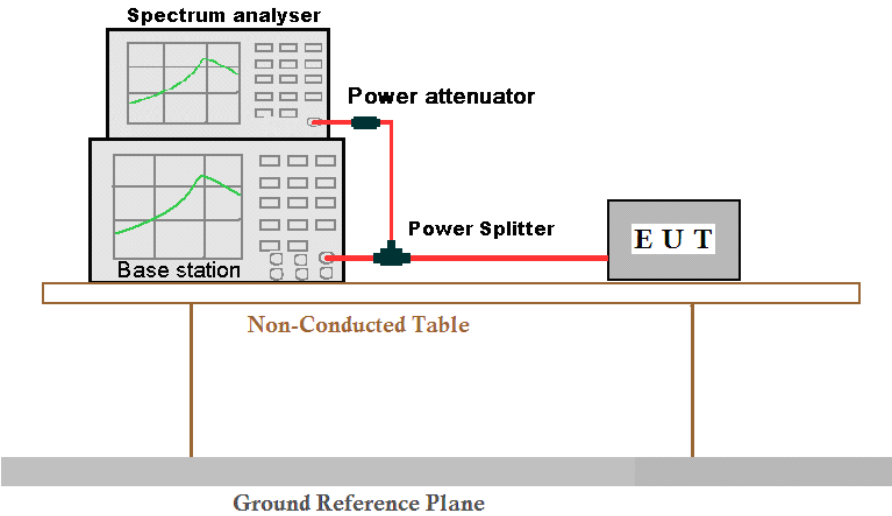


Test channel	Frequency (MHz)	Result
Highest/810	1909.8	Pass



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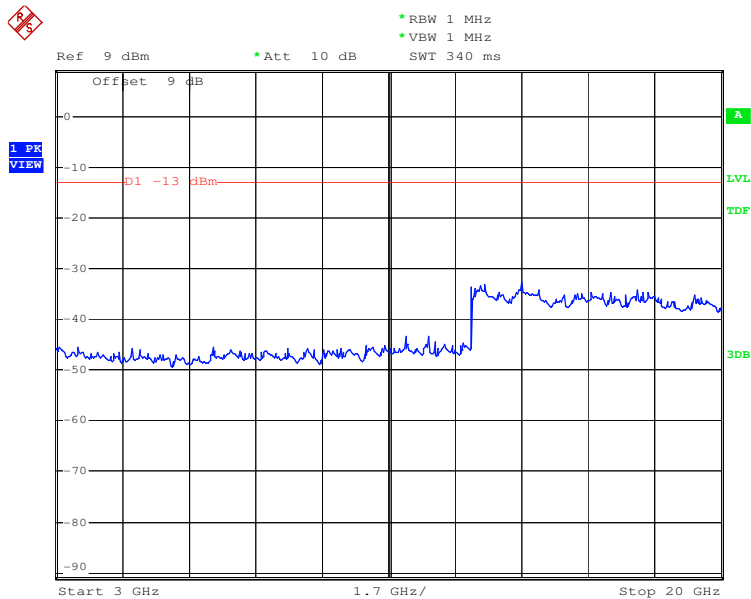
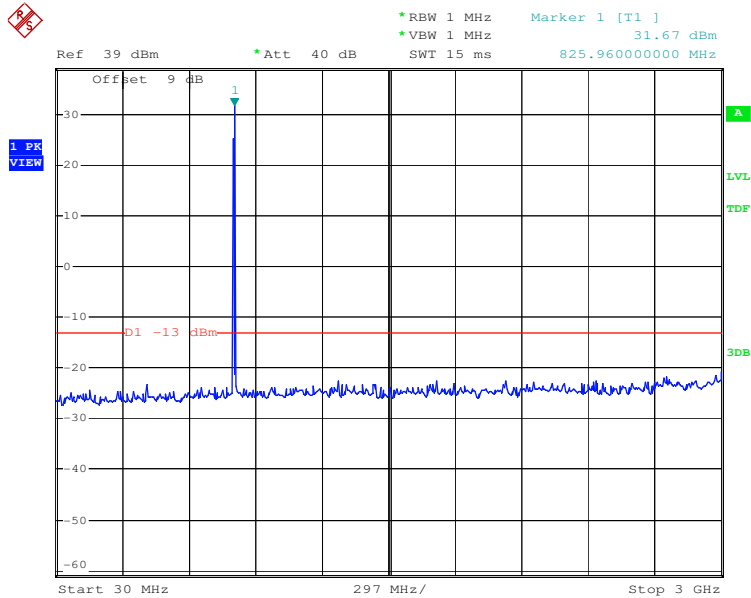
### 5.5 Spurious emissions at antenna terminals

Test Requirement:	Part 2.1051/Part 2.1057 and RSS-132 Clause 4.5/RSS-133 Clause 6.5
Test Method:	TIA-603- C-2004 Clause 2.2.13 and RSS-Gen Clause 4.9
Test Setup:	 <p>The diagram illustrates the test setup. A Spectrum analyser is connected to a Power attenuator, which is connected to a Power Splitter. The Power Splitter is connected to a Base station and an EUT (Equipment Under Test). The entire setup is on a Non-Conducted Table above a Ground Reference Plane.</p>
Measurement Procedure:	The transmitter output was connected to a calibrated coaxial cable, attenuator and Spectrum analyzer, the other end of which was connected to a Base Station Simulator. The Base Station Simulator was set to force the EUT to its maximum power setting. The tests were performed at three frequencies (low channel and high channel).the equipment operates below 10GHz: to the tenth harmonic of the highest fundamental frequency or to 40GHz.whichever is lower, the resolution bandwidth of the spectrum analyzer was set at 100kHz for spurious emissions below 1 GHz, and 1 MHz for spurious emissions above 1GHz.the video bandwidth of the spectrum analyzer was set at thrice the resolution bandwidth. Detector Mode was set to mean or average power.
Instruments Used:	Refer to section 4.10 for details
Limit:	Attenuated at least $43+10\log(P)$
Test Results:	Pass



Test plot as follows:

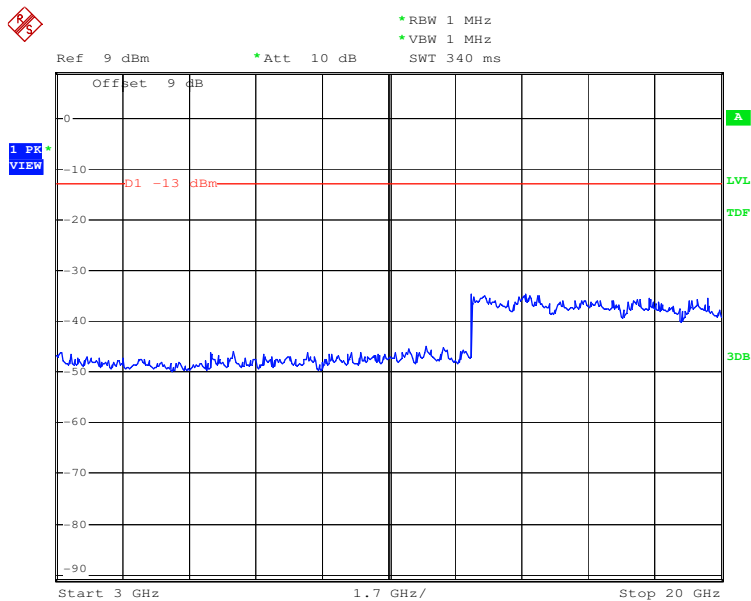
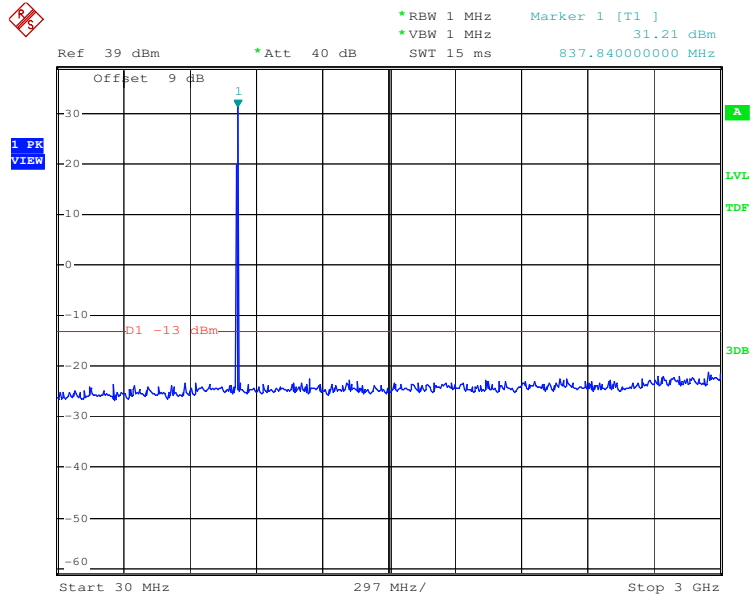
Test mode:	GSM 850	Test channel:	Lowest/128	Operation Frequency	824.2MHz
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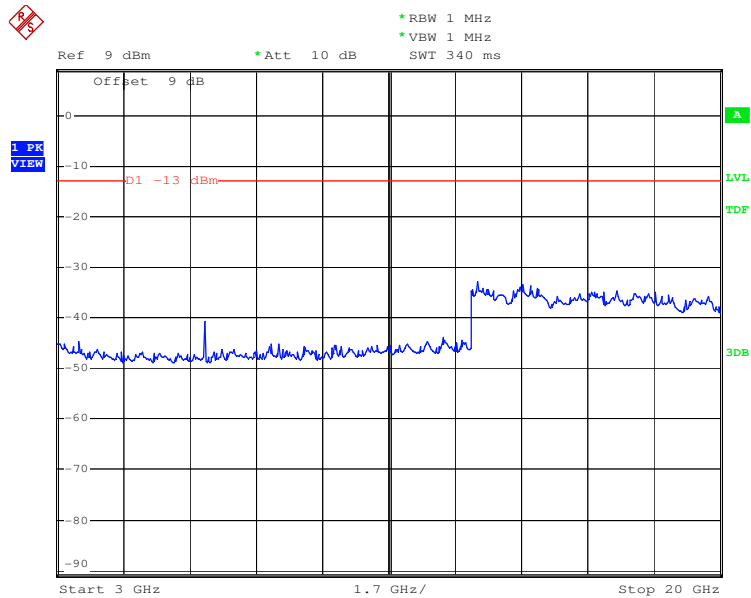
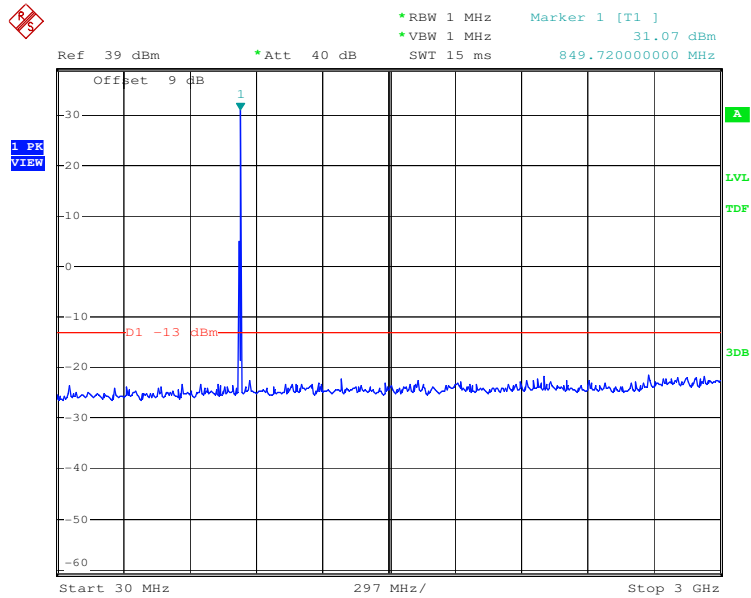
Test mode:	GSM 850	Test channel:	Middle/190	Operation Frequency	836.6MHz
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Test mode:	GSM 850	Test channel:	High/251	Operation Frequency	848.8MHz
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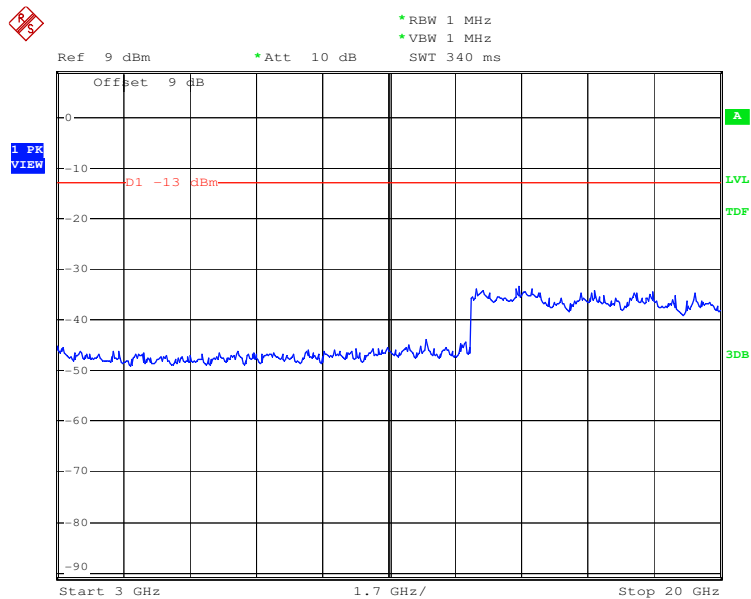
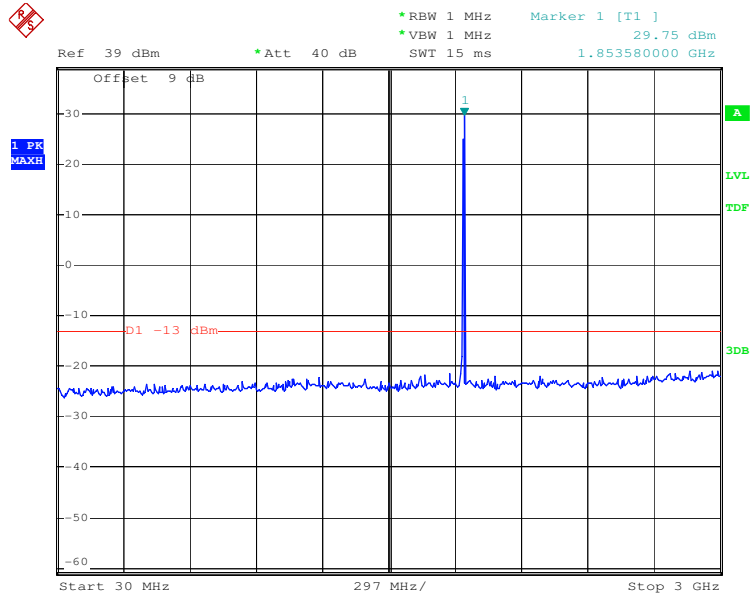


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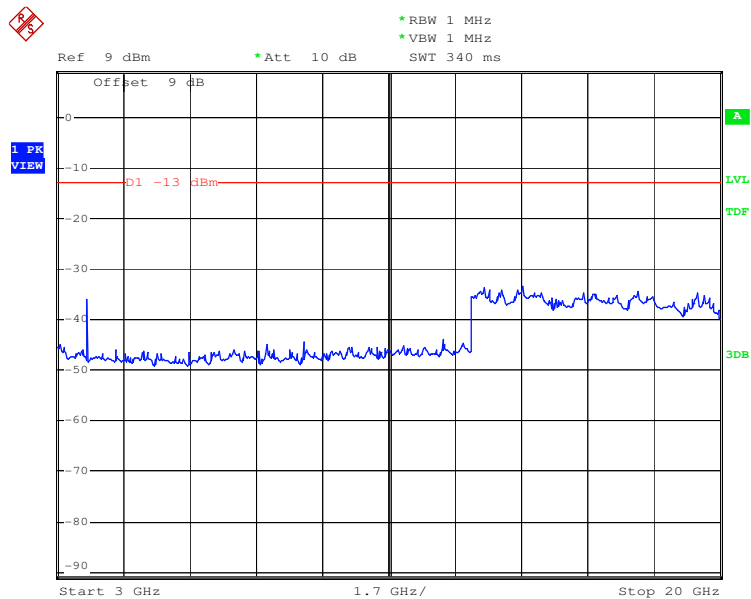
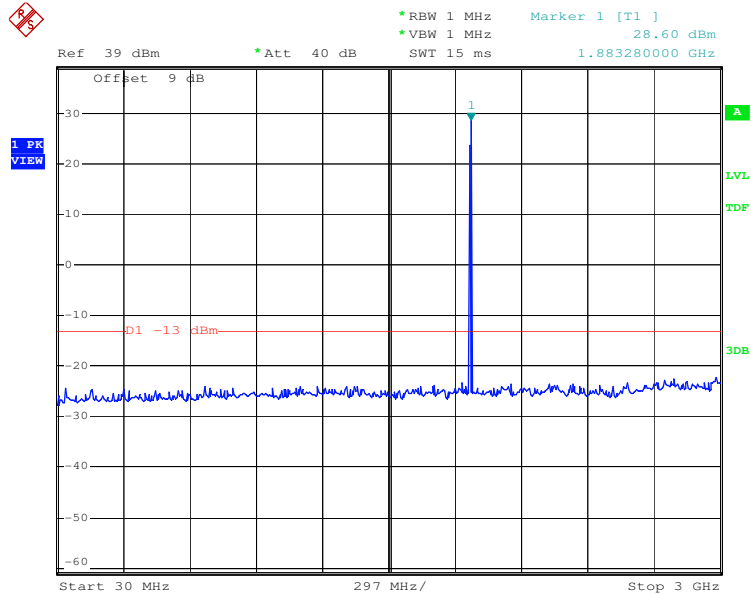
Test mode:	GSM 1900	Test channel:	Lowest/512	Operation Frequency	1850.2MHz
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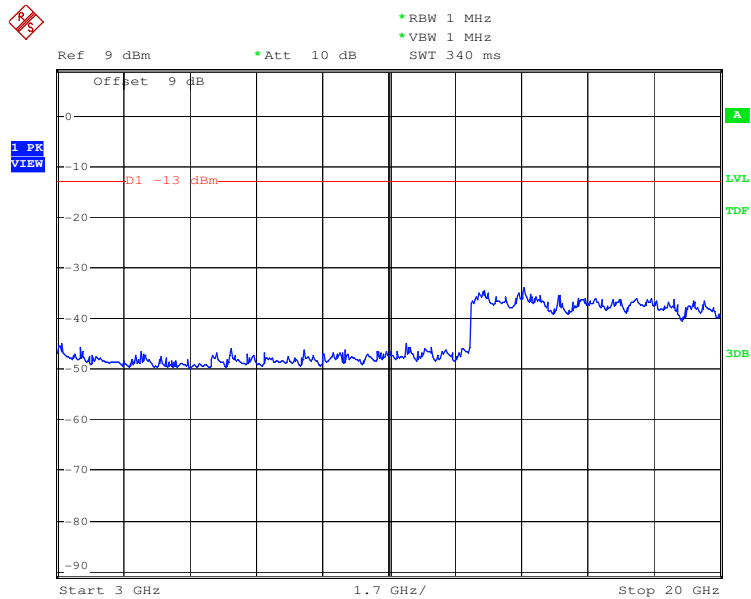
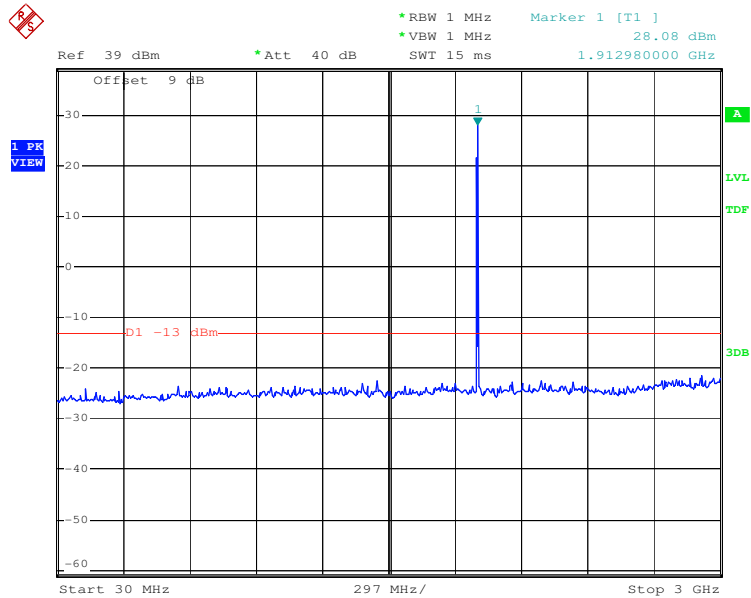
Test mode:	GSM 1900	Test channel:	Middle/661	Operation Frequency	1880.0MHz
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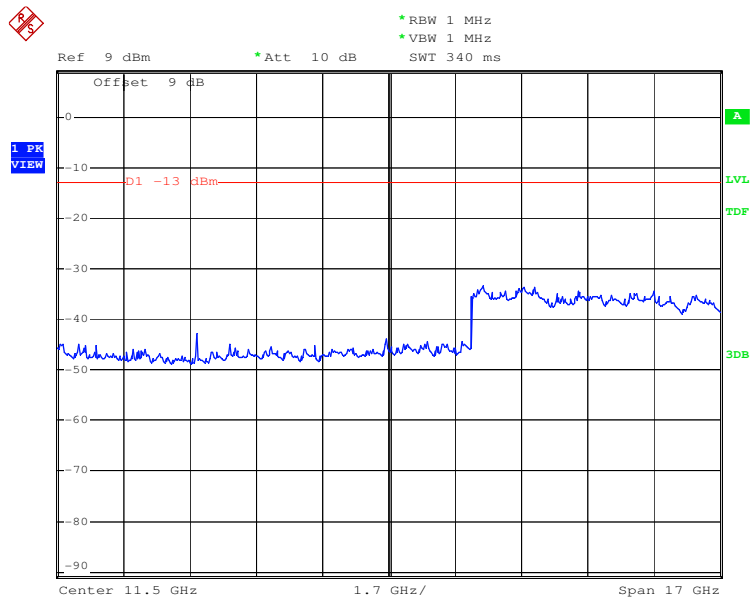
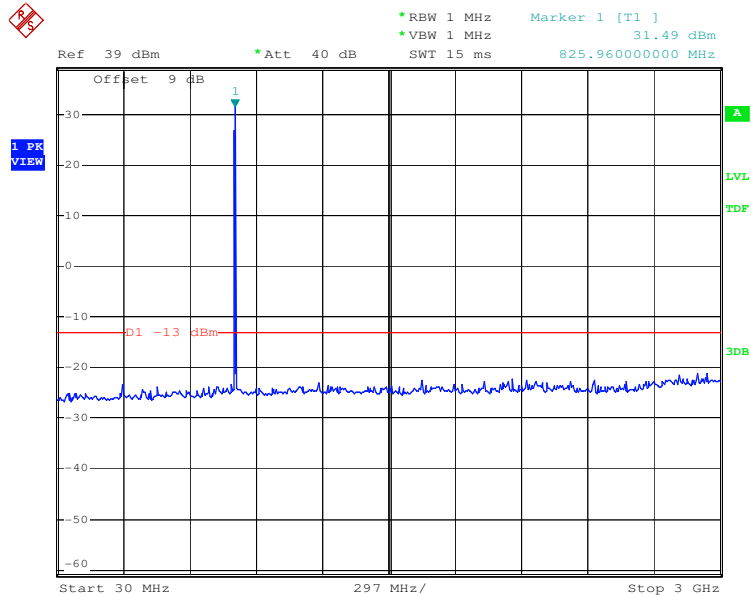
Test mode:	GSM 1900	Test channel:	High/810	Operation Frequency	1909.8MHz
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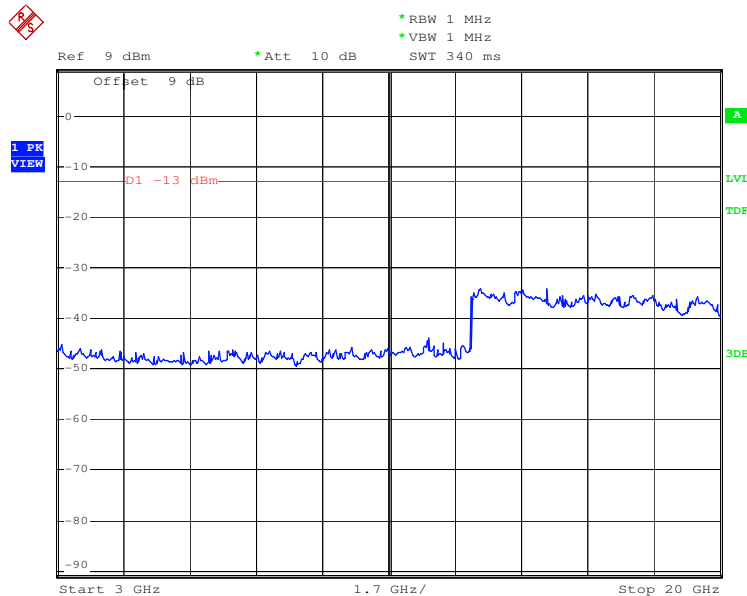
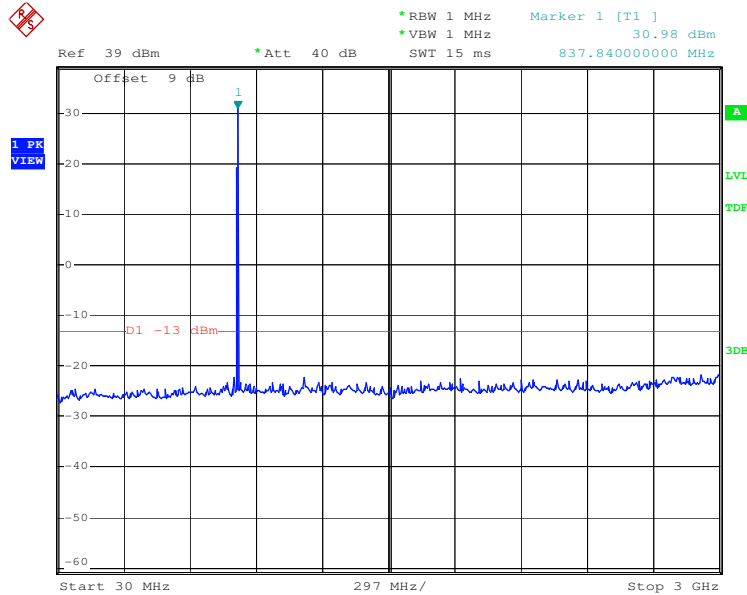
Test mode:	GPRS 850	Test channel:	Lowest/128	Operation Frequency	824.2MHz
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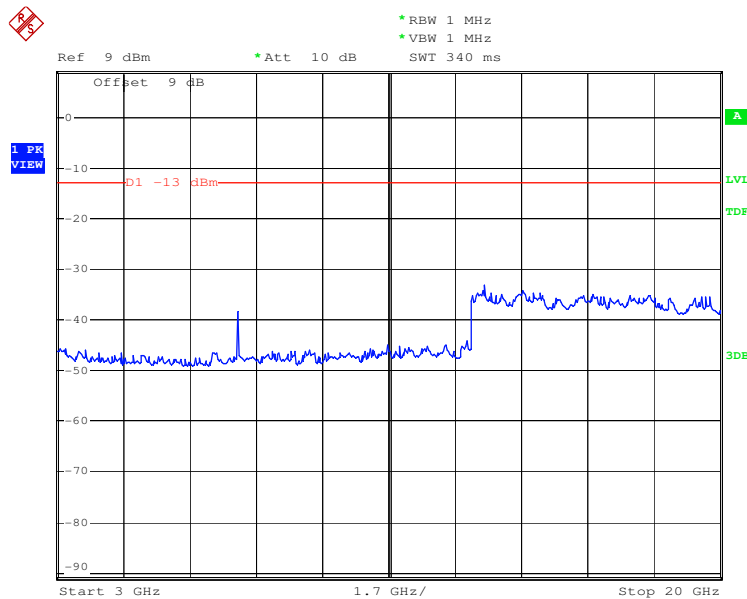
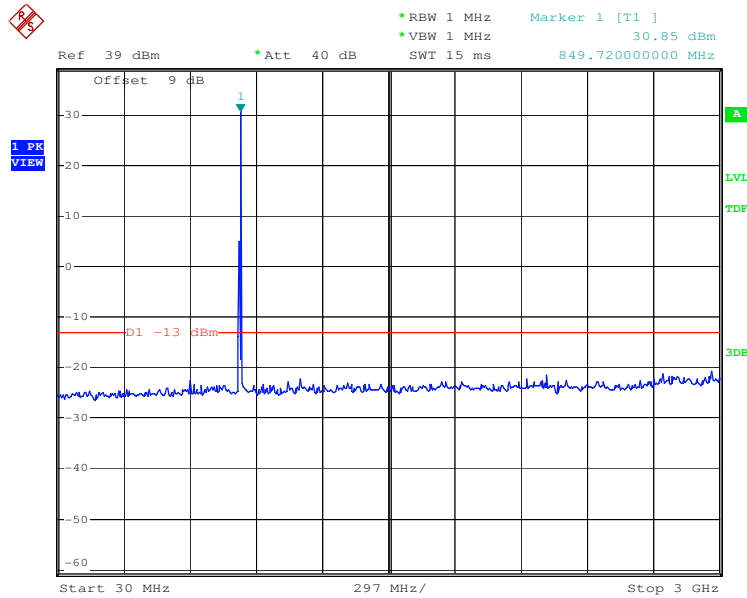
Test mode:	GPRS 850	Test channel:	Middle/190	Operation Frequency	836.6MHz
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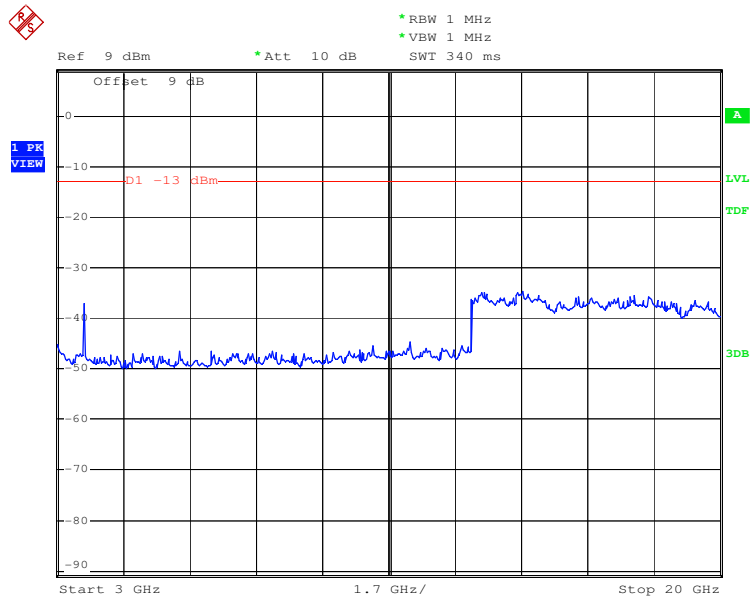
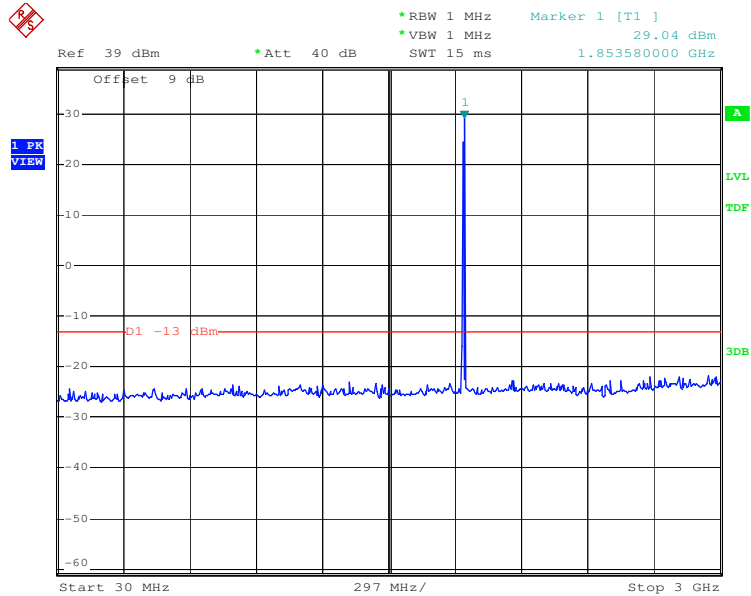
Test mode:	GPRS 850	Test channel:	High/251	Operation Frequency	848.8MHz
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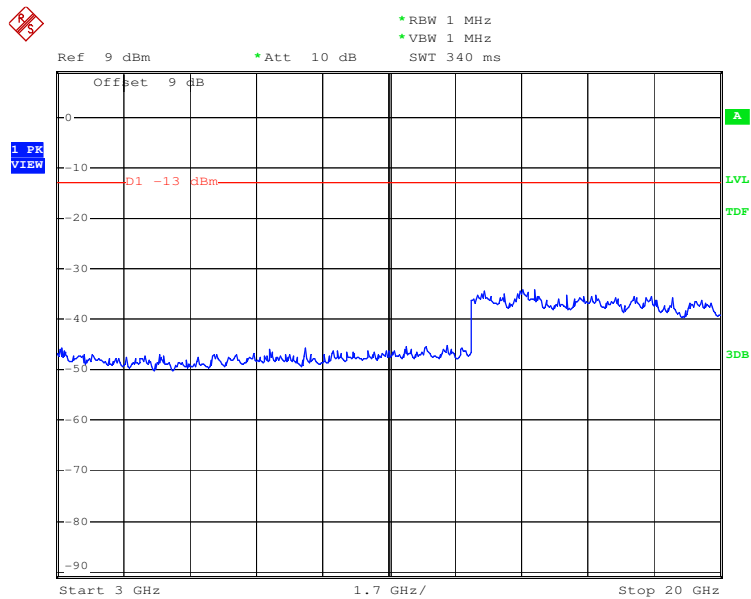
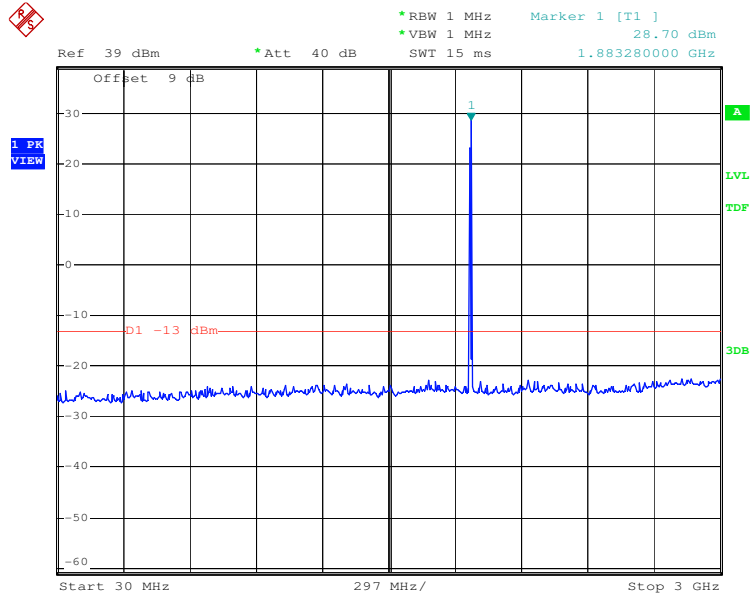
Test mode:	GPRS 1900	Test channel:	Lowest/512	Operation Frequency	1850.2MHz
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Test mode:	GPRS 1900	Test channel:	Middle/661	Operation Frequency	1880.0MHz
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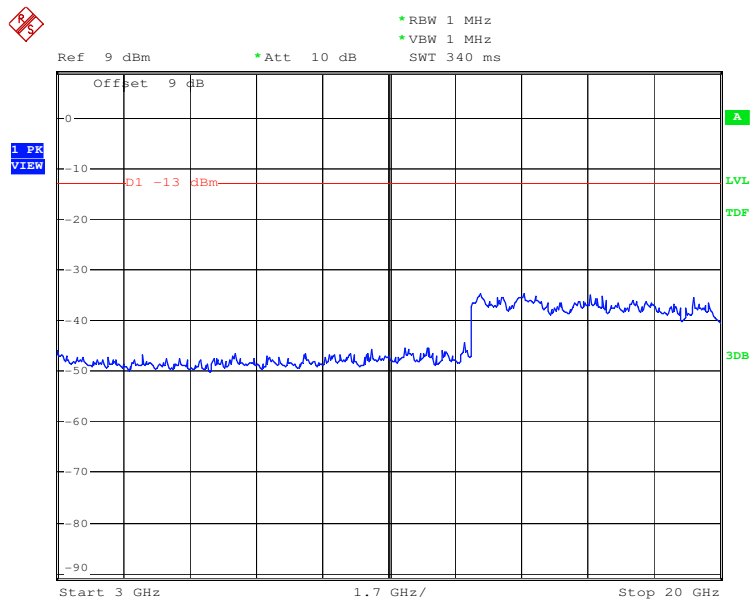
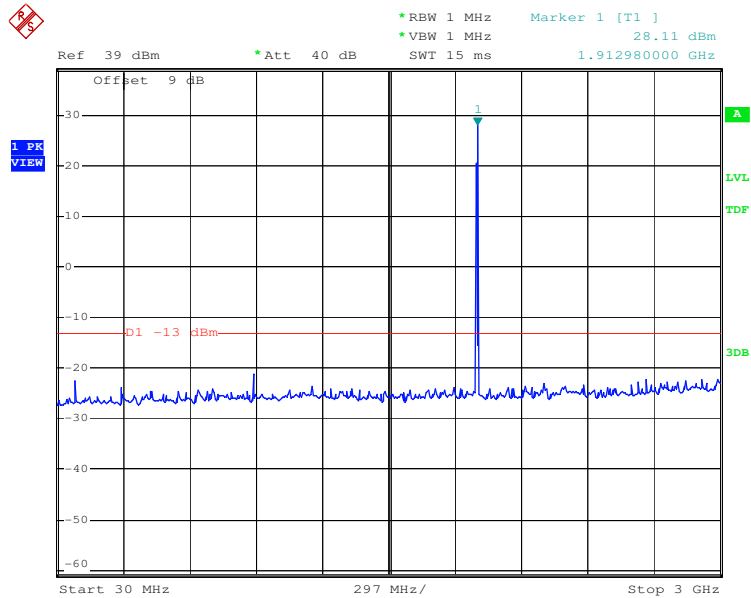


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Test mode:	GPRS 1900	Test channel:	High/810	Operation Frequency	1909.8MHz
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### 5.6 Field strength of spurious radiation

Test Requirement:	Part 2.1053 and Part 2.1057				
Test Method:	TIA-603- C-2004 Clause 2.2.12				
Receiver Setup:	Frequency	Detector	RBW	VBW	Remark
	0.009MHz-30MHz	Peak	10kHz	30kHz	Peak
	30MHz-1GHz	Peak	100kHz	300kHz	Peak
	Above 1GHz	Peak	1MHz	3MHz	Peak
Test Setup:					

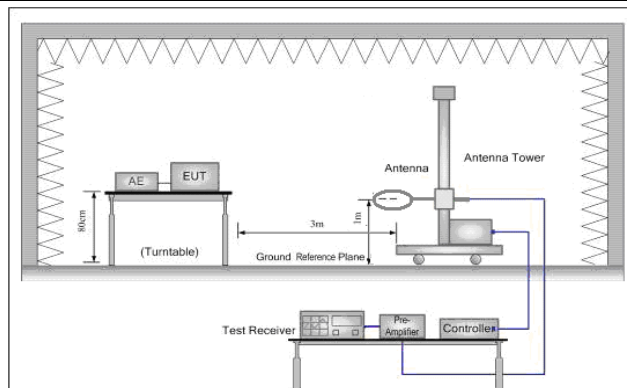


Figure 1. Below 30MHz

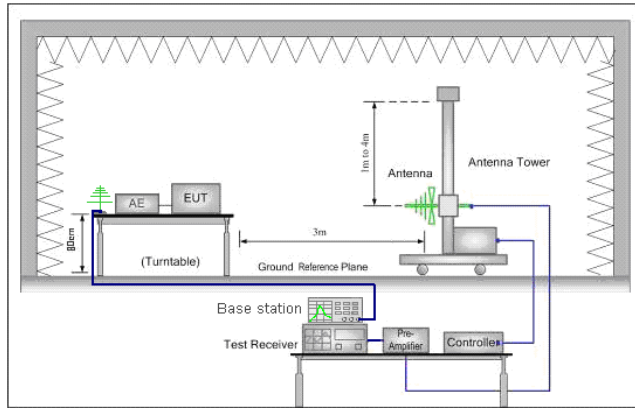


Figure 2. 30MHz to 1GHz

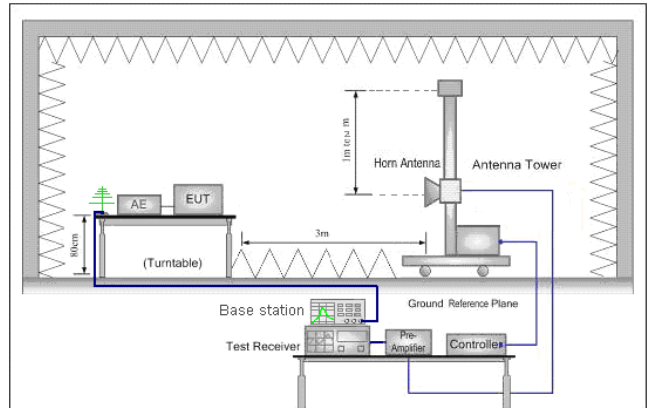


Figure 3. above 1GHz



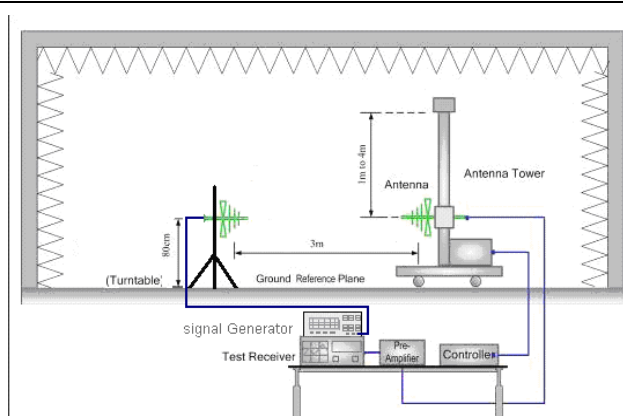


Figure 2. 30MHz to 1GHz

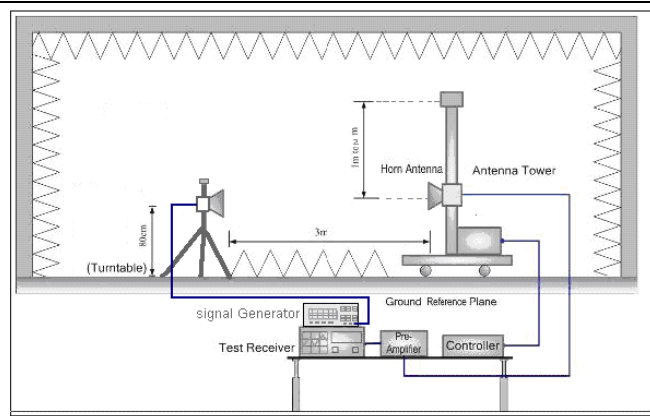


Figure 3. above 1GHz

Measurement Procedure:

**Below 1GHz test procedure as below:**

- 1). The EUT was powered ON and placed on a 1.70m high table in the chamber. The antenna of the transmitter was extended to its maximum length.
- 2). The disturbance of the transmitter was maximized on the test receiver display by raising and lowering from 1m to 4m (for the test frequency of below 30MHz, the antenna was tuned to heights 1 meter) the receive antenna and by rotating through 360° the turntable. After the fundamental emission was maximized, a field strength measurement was made.
- 3). Steps 1) and 2) were performed with the EUT and the receive antenna in both vertical and horizontal polarization.
- 4). The transmitter was then removed and replaced with another antenna. The center of the antenna was approximately at the same location as the center of the transmitter.
- 5). A signal at the disturbance was fed to the substitution antenna by means of a non-radiating cable. With both the substitution and the receive antennas horizontally polarized, the receive antenna was raised and lowered to obtain a maximum reading at the test receiver. The level of the signal generator was adjusted until the measured field strength level in step 2) is obtained for this set of conditions.
- 6). The output power into the substitution antenna was then measured.
- 7). Steps 5) and 6) were repeated with both antennas polarized.
- 8) Calculate power in dBm by the following formula:

$$\text{EIRP(dBm)} = \text{Pg(dBm)} - \text{cable loss (dB)} + \text{antenna gain (dBi)}$$

$$\text{EIRP} = \text{ERP} + 2.15\text{dB}$$

where:

Pg is the generator output power into the substitution antenna.

**Above 1GHz test procedure as below:**

- 1) Different between above is the test site, change from Semi- Anechoic Chamber to fully Anechoic Chamber
- 2) Calculate power in dBm by the following formula:

$$\text{EIRP(dBm)} = \text{Pg(dBm)} - \text{cable loss (dB)} + \text{antenna gain (dBi)}$$

$$\text{EIRP} = \text{ERP} + 2.15\text{dB}$$

where:

Pg is the generator output power into the substitution antenna.

3. Test the EUT in the lowest channel, the middle channel the Highest channel



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	4. The radiation measurements are performed in X, Y, Z axis positioning. And found the X axis positioning which it is worse case, Only the test worst case mode is recorded in the report. 5. Repeat above procedures until all frequencies measured was complete.
Instruments Used:	Refer to section 4.10 for details
Limit:	Attenuated at least 43+10log(P)
Test Results:	Pass

Below 1GHz

GPRS 850 128 channel/824.2 MHz(lower channel)									
Frequency (MHz)	Antenna Pol.	S.G Output (dBm)	Antenna Gain(dBi)	Cable Loss(dB)	EIRP (dBm)	ERP (dBm)	Limit (dBm)	Over Limit (dB)	Result
40.670	H	-55.14	-8.89	0.61	-64.64	-66.79	-13.00	-53.79	Pass
47.460	H	-65.58	-1.49	0.76	-67.83	-69.98	-13.00	-56.98	Pass
102.750	H	-66.13	2.52	1.21	-64.82	-66.97	-13.00	-53.97	Pass
139.610	H	-63.25	5.49	1.30	-59.06	-61.21	-13.00	-48.21	Pass
163.860	H	-68.23	5.55	1.34	-64.02	-66.17	-13.00	-53.17	Pass
229.820	H	-75.62	7.54	1.57	-69.65	-71.80	-13.00	-58.80	Pass
47.460	V	-73.20	-1.49	0.76	-75.45	-77.60	-13.00	-64.60	Pass
102.750	V	-74.29	2.52	1.21	-72.98	-75.13	-13.00	-62.13	Pass
132.820	V	-69.35	5.36	1.29	-65.28	-67.43	-13.00	-54.43	Pass
152.220	V	-70.22	5.31	1.32	-66.23	-68.38	-13.00	-55.38	Pass
218.180	V	-75.12	8.56	1.51	-68.07	-70.22	-13.00	-57.22	Pass
532.460	V	-71.76	5.93	2.63	-68.46	-70.61	-13.00	-57.61	Pass

GPRS 850 190 channel/836.6MHz (middle channel)									
Frequency (MHz)	Antenna Pol.	S.G Output (dBm)	Antenna Gain(dBi)	Cable Loss(dB)	EIRP (dBm)	ERP (dBm)	Limit (dBm)	Over Limit (dB)	Result
40.670	H	-55.43	-8.89	0.61	-64.93	-67.08	-13.00	-54.08	Pass
47.460	H	-65.27	-1.49	0.76	-67.52	-69.67	-13.00	-56.67	Pass
102.750	H	-63.74	2.52	1.21	-62.43	-64.58	-13.00	-51.58	Pass
137.670	H	-65.57	5.45	1.30	-61.42	-63.57	-13.00	-50.57	Pass
171.620	H	-72.68	6.09	1.36	-67.95	-70.10	-13.00	-57.10	Pass
245.340	H	-78.90	7.10	1.65	-73.45	-75.60	-13.00	-62.60	Pass
47.460	V	-73.87	-1.49	0.76	-76.12	-78.27	-13.00	-65.27	Pass
102.750	V	-69.03	2.52	1.21	-67.72	-69.87	-13.00	-56.87	Pass
152.220	V	-65.16	5.31	1.32	-61.17	-63.32	-13.00	-50.32	Pass
171.620	V	-65.59	6.09	1.36	-60.86	-63.01	-13.00	-50.01	Pass
229.820	V	-76.95	7.54	1.57	-70.98	-73.13	-13.00	-60.13	Pass
528.580	V	-72.69	6.31	2.63	-69.01	-71.16	-13.00	-58.16	Pass

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GPRS 850 251 channel/848.8MHz(highest channel)									
Frequency (MHz)	Antenna Pol.	S.G Output (dBm)	Antenna Gain(dBi)	Cable Loss(dB)	EIRP (dBm)	ERP (dBm)	Limit (dBm)	Over Limit (dB)	Result
40.670	H	-56.33	-8.89	0.61	-65.83	-67.98	-13.00	-54.98	Pass
102.750	H	-62.49	2.52	1.21	-61.18	-63.33	-13.00	-50.33	Pass
141.550	H	-64.03	5.50	1.30	-59.83	-61.98	-13.00	-48.98	Pass
171.620	H	-69.34	6.09	1.36	-64.61	-66.76	-13.00	-53.76	Pass
367.560	H	-79.09	7.84	2.11	-73.36	-75.51	-13.00	-62.51	Pass
541.190	H	-71.74	5.33	2.64	-69.05	-71.20	-13.00	-58.20	Pass
40.670	V	-66.80	-8.89	0.61	-76.30	-78.45	-13.00	-65.45	Pass
132.820	V	-68.36	5.36	1.29	-64.29	-66.44	-13.00	-53.44	Pass
140.580	V	-67.03	5.50	1.30	-62.83	-64.98	-13.00	-51.98	Pass
172.590	V	-70.77	6.27	1.36	-65.86	-68.01	-13.00	-55.01	Pass
215.270	V	-75.15	8.51	1.49	-68.13	-70.28	-13.00	-57.28	Pass
525.670	V	-73.67	6.75	2.63	-69.55	-71.70	-13.00	-58.70	Pass

GPRS 1900 512 channel/1850.2MHz(lower channel)								
Frequency (MHz)	Antenna Pol.	S.G Output (dBm)	Antenna Gain(dBi)	Cable Loss(dB)	EIRP (dBm)	Limit (dBm)	Over Limit (dB)	Result
47.460	H	-75.00	-1.49	0.76	-77.25	-13.00	-64.25	Pass
102.750	H	-78.15	2.52	1.21	-76.84	-13.00	-63.84	Pass
140.580	H	-74.23	5.50	1.30	-70.03	-13.00	-57.03	Pass
163.860	H	-75.27	5.55	1.34	-71.06	-13.00	-58.06	Pass
225.940	H	-74.86	8.39	1.55	-68.02	-13.00	-55.02	Pass
369.500	H	-79.77	7.73	2.12	-74.16	-13.00	-61.16	Pass
40.670	V	-59.26	-8.89	0.61	-68.76	-13.00	-55.76	Pass
70.740	V	-76.91	3.02	0.83	-74.72	-13.00	-61.72	Pass
102.750	V	-71.99	2.52	1.21	-70.68	-13.00	-57.68	Pass
140.580	V	-62.45	5.50	1.30	-58.25	-13.00	-45.25	Pass
163.860	V	-67.64	5.55	1.34	-63.43	-13.00	-50.43	Pass
238.550	V	-80.06	7.06	1.62	-74.62	-13.00	-61.62	Pass

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GPRS 1900 661 channel/1880.0MHz(middle channel)								
Frequency (MHz)	Antenna Pol.	S.G Output (dBm)	Antenna Gain(dBi)	Cable Loss(dB)	EIRP (dBm)	Limit (dBm)	Over Limit (dB)	Result
47.460	H	-75.77	-1.49	0.76	-78.02	-13.00	-65.02	Pass
71.710	H	-83.93	3.03	0.85	-81.75	-13.00	-68.75	Pass
102.750	H	-77.74	2.52	1.21	-76.43	-13.00	-63.43	Pass
140.580	H	-74.11	5.50	1.30	-69.91	-13.00	-56.91	Pass
160.950	H	-77.09	5.44	1.34	-72.99	-13.00	-59.99	Pass
225.940	H	-74.22	8.39	1.55	-67.38	-13.00	-54.38	Pass
40.670	V	-60.84	-8.89	0.61	-70.34	-13.00	-57.34	Pass
102.750	V	-68.85	2.52	1.21	-67.54	-13.00	-54.54	Pass
140.580	V	-62.88	5.50	1.30	-58.68	-13.00	-45.68	Pass
163.860	V	-67.98	5.55	1.34	-63.77	-13.00	-50.77	Pass
229.820	V	-77.10	7.54	1.57	-71.13	-13.00	-58.13	Pass
471.350	V	-80.32	8.45	2.49	-74.36	-13.00	-61.36	Pass

GPRS 1900 810 channel/1909.8MHz(highest channel)								
Frequency (MHz)	Antenna Pol.	S.G Output (dBm)	Antenna Gain(dBi)	Cable Loss(dB)	EIRP (dBm)	Limit (dBm)	Over Limit (dB)	Result
47.460	H	-74.85	-1.49	0.76	-77.10	-13.00	-64.10	Pass
102.750	H	-74.22	2.52	1.21	-72.91	-13.00	-59.91	Pass
140.580	H	-73.92	5.50	1.30	-69.72	-13.00	-56.72	Pass
164.830	H	-76.87	5.59	1.35	-72.63	-13.00	-59.63	Pass
224.970	H	-75.03	8.60	1.55	-67.98	-13.00	-54.98	Pass
536.340	H	-73.89	5.65	2.64	-70.88	-13.00	-57.88	Pass
40.670	V	-60.17	-8.89	0.61	-69.67	-13.00	-56.67	Pass
47.460	V	-69.92	-1.49	0.76	-72.17	-13.00	-59.17	Pass
102.750	V	-67.36	2.52	1.21	-66.05	-13.00	-53.05	Pass
140.580	V	-63.10	5.50	1.30	-58.90	-13.00	-45.90	Pass
163.860	V	-67.90	5.55	1.34	-63.69	-13.00	-50.69	Pass
241.460	V	-80.30	7.03	1.63	-74.90	-13.00	-61.90	Pass

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GSM 850 128 channel/824.2 MHz(lower channel)									
Frequency (MHz)	Antenna Pol.	S.G Output (dBm)	Antenna Gain(dBi)	Cable Loss(dB)	EIRP (dBm)	ERP (dBm)	Limit (dBm)	Over Limit (dB)	Result
40.670	H	-54.18	-8.89	0.61	-63.68	-65.83	-13.00	-52.83	Pass
79.470	H	-71.97	3.19	1.08	-69.86	-72.01	-13.00	-59.01	Pass
102.750	H	-68.34	2.52	1.21	-67.03	-69.18	-13.00	-56.18	Pass
141.550	H	-60.63	5.50	1.30	-56.43	-58.58	-13.00	-45.58	Pass
163.860	H	-66.65	5.55	1.34	-62.44	-64.59	-13.00	-51.59	Pass
242.430	H	-77.24	7.05	1.64	-71.83	-73.98	-13.00	-60.98	Pass
47.460	V	-73.67	-1.49	0.76	-75.92	-78.07	-13.00	-65.07	Pass
132.820	V	-68.21	5.36	1.29	-64.14	-66.29	-13.00	-53.29	Pass
141.550	V	-66.08	5.50	1.30	-61.88	-64.03	-13.00	-51.03	Pass
171.620	V	-70.12	6.09	1.36	-65.39	-67.54	-13.00	-54.54	Pass
215.270	V	-76.57	8.51	1.49	-69.55	-71.70	-13.00	-58.70	Pass
408.300	V	-76.33	5.22	2.24	-73.35	-75.50	-13.00	-62.50	Pass

GSM 850 190 channel/836.6MHz (middle channel)									
Frequency (MHz)	Antenna Pol.	S.G Output (dBm)	Antenna Gain(dBi)	Cable Loss(dB)	EIRP (dBm)	ERP (dBm)	Limit (dBm)	Over Limit (dB)	Result
40.670	H	-57.46	-8.89	0.61	-66.96	-69.11	-13.00	-56.11	Pass
79.470	H	-72.21	3.19	1.08	-70.10	-72.25	-13.00	-59.25	Pass
102.750	H	-69.27	2.52	1.21	-67.96	-70.11	-13.00	-57.11	Pass
141.550	H	-60.37	5.50	1.30	-56.17	-58.32	-13.00	-45.32	Pass
164.830	H	-66.59	5.59	1.35	-62.35	-64.50	-13.00	-51.50	Pass
245.340	H	-77.39	7.10	1.65	-71.94	-74.09	-13.00	-61.09	Pass
40.670	V	-60.50	-8.89	0.61	-70.00	-72.15	-13.00	-59.15	Pass
82.380	V	-74.70	3.10	1.10	-72.70	-74.85	-13.00	-61.85	Pass
102.750	V	-66.50	2.52	1.21	-65.19	-67.34	-13.00	-54.34	Pass
141.550	V	-62.58	5.50	1.30	-58.38	-60.53	-13.00	-47.53	Pass
172.590	V	-69.18	6.27	1.36	-64.27	-66.42	-13.00	-53.42	Pass
246.310	V	-77.69	7.10	1.66	-72.25	-74.40	-13.00	-61.40	Pass

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GSM 850 251 channel/848.8MHz(highest channel)									
Frequency (MHz)	Antenna Pol.	S.G Output (dBm)	Antenna Gain(dBi)	Cable Loss(dB)	EIRP (dBm)	ERP (dBm)	Limit (dBm)	Over Limit (dB)	Result
47.460	H	-73.55	-1.49	0.76	-75.80	-77.95	-13.00	-64.95	Pass
102.750	H	-74.30	2.52	1.21	-72.99	-75.14	-13.00	-62.14	Pass
141.550	H	-66.39	5.50	1.30	-62.19	-64.34	-13.00	-51.34	Pass
168.710	H	-67.39	5.75	1.35	-62.99	-65.14	-13.00	-52.14	Pass
238.550	H	-74.39	7.06	1.62	-68.95	-71.10	-13.00	-58.10	Pass
419.940	H	-75.52	5.60	2.29	-72.21	-74.36	-13.00	-61.36	Pass
40.670	V	-57.52	-8.89	0.61	-67.02	-69.17	-13.00	-56.17	Pass
47.460	V	-66.98	-1.49	0.76	-69.23	-71.38	-13.00	-58.38	Pass
102.750	V	-62.99	2.52	1.21	-61.68	-63.83	-13.00	-50.83	Pass
140.580	V	-65.38	5.50	1.30	-61.18	-63.33	-13.00	-50.33	Pass
246.310	V	-79.37	7.10	1.66	-73.93	-76.08	-13.00	-63.08	Pass
358.830	V	-80.02	8.39	2.09	-73.72	-75.87	-13.00	-62.87	Pass

GSM 1900 512 channel/1850.2MHz(lower channel)								
Frequency (MHz)	Antenna Pol.	S.G Output (dBm)	Antenna Gain(dBi)	Cable Loss(dB)	EIRP (dBm)	Limit (dBm)	Over Limit (dB)	Result
48.430	H	-72.28	-0.76	0.78	-73.82	-13.00	-60.82	Pass
102.750	H	-77.67	2.52	1.21	-76.36	-13.00	-63.36	Pass
140.580	H	-74.37	5.50	1.30	-70.17	-13.00	-57.17	Pass
163.860	H	-76.11	5.55	1.34	-71.90	-13.00	-58.90	Pass
223.030	H	-74.58	8.60	1.54	-67.52	-13.00	-54.52	Pass
587.750	H	-74.00	5.96	2.69	-70.73	-13.00	-57.73	Pass
40.670	V	-59.88	-8.89	0.61	-69.38	-13.00	-56.38	Pass
102.750	V	-68.52	2.52	1.21	-67.21	-13.00	-54.21	Pass
141.550	V	-62.65	5.50	1.30	-58.45	-13.00	-45.45	Pass
163.860	V	-67.38	5.55	1.34	-63.17	-13.00	-50.17	Pass
238.550	V	-80.84	7.06	1.62	-75.40	-13.00	-62.40	Pass
788.540	V	-72.91	7.79	3.17	-68.29	-13.00	-55.29	Pass

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GSM 1900 661 channel/1880.0MHz(middle channel)								
Frequency (MHz)	Antenna Pol.	S.G Output (dBm)	Antenna Gain(dBi)	Cable Loss(dB)	EIRP (dBm)	Limit (dBm)	Over Limit (dB)	Result
47.460	H	-74.25	-1.49	0.76	-76.50	-13.00	-63.50	Pass
102.750	H	-77.22	2.52	1.21	-75.91	-13.00	-62.91	Pass
140.580	H	-74.66	5.50	1.30	-70.46	-13.00	-57.46	Pass
160.950	H	-75.14	5.44	1.34	-71.04	-13.00	-58.04	Pass
223.030	H	-74.00	8.60	1.54	-66.94	-13.00	-53.94	Pass
528.580	H	-75.14	6.31	2.63	-71.46	-13.00	-58.46	Pass
40.670	V	-61.64	-8.89	0.61	-71.14	-13.00	-58.14	Pass
102.750	V	-68.97	2.52	1.21	-67.66	-13.00	-54.66	Pass
140.580	V	-61.90	5.50	1.30	-57.70	-13.00	-44.70	Pass
163.860	V	-67.62	5.55	1.34	-63.41	-13.00	-50.41	Pass
365.620	V	-80.09	7.96	2.11	-74.24	-13.00	-61.24	Pass
695.420	V	-69.30	4.26	2.89	-67.93	-13.00	-54.93	Pass

GSM 1900 810 channel/1909.8MHz(highest channel)								
Frequency (MHz)	Antenna Pol.	S.G Output (dBm)	Antenna Gain(dBi)	Cable Loss(dB)	EIRP (dBm)	Limit (dBm)	Over Limit (dB)	Result
47.460	H	-74.56	-1.49	0.76	-76.81	-13.00	-63.81	Pass
102.750	H	-76.29	2.52	1.21	-74.98	-13.00	-61.98	Pass
141.550	H	-75.46	5.50	1.30	-71.26	-13.00	-58.26	Pass
223.030	H	-74.70	8.60	1.54	-67.64	-13.00	-54.64	Pass
358.830	H	-81.34	8.39	2.09	-75.04	-13.00	-62.04	Pass
789.510	H	-72.50	7.66	3.17	-68.01	-13.00	-55.01	Pass
40.670	V	-59.63	-8.89	0.61	-69.13	-13.00	-56.13	Pass
102.750	V	-66.92	2.52	1.21	-65.61	-13.00	-52.61	Pass
141.550	V	-62.37	5.50	1.30	-58.17	-13.00	-45.17	Pass
163.860	V	-67.44	5.55	1.34	-63.23	-13.00	-50.23	Pass
219.150	V	-77.08	8.58	1.51	-70.01	-13.00	-57.01	Pass
490.750	V	-80.16	9.31	2.56	-73.41	-13.00	-60.41	Pass

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Above 1GHz

GPRS 850 128 channel/824.2 MHz(lower channel)									
Frequency (MHz)	Antenna Pol.	S.G Output (dBm)	Antenna Gain(dBi)	Cable Loss(dB)	EIRP (dBm)	ERP (dBm)	Limit (dBm)	Over Limit (dB)	Result
2192.132	H	7.61	1.02	-56.57	-49.98	-52.13	-13.00	-39.13	Pass
3115.135	H	6.60	1.60	-44.30	-39.30	-41.45	-13.00	-28.45	Pass
4460.967	H	9.20	1.76	-46.99	-39.55	-41.70	-13.00	-28.70	Pass
6454.117	H	13.06	1.89	-50.48	-39.31	-41.46	-13.00	-28.46	Pass
8668.427	H	12.86	1.89	-46.97	-36.00	-38.15	-13.00	-25.15	Pass
10110.600	H	13.23	2.17	-41.10	-30.04	-32.19	-13.00	-19.19	Pass
1343.085	V	8.21	1.23	-54.17	-47.19	-49.34	-13.00	-36.34	Pass
4109.441	V	7.28	1.29	-50.30	-44.31	-46.46	-13.00	-33.46	Pass
6503.972	V	6.60	1.64	-47.70	-42.74	-44.89	-13.00	-31.89	Pass
8319.883	V	9.30	1.77	-47.84	-40.31	-42.46	-13.00	-29.46	Pass
10320.210	V	13.47	1.92	-51.00	-39.45	-41.60	-13.00	-28.60	Pass
12037.190	V	13.15	1.86	-48.84	-37.55	-39.70	-13.00	-26.70	Pass

GPRS 850 190 channel/836.6MHz (middle channel)									
Frequency (MHz)	Antenna Pol.	S.G Output (dBm)	Antenna Gain(dBi)	Cable Loss(dB)	EIRP (dBm)	ERP (dBm)	Limit (dBm)	Over Limit (dB)	Result
1958.182	H	9.14	1.21	-56.04	-48.11	-50.26	-13.00	-37.26	Pass
2869.662	H	7.03	1.25	-52.39	-46.61	-48.76	-13.00	-35.76	Pass
4183.891	H	6.60	1.61	-46.63	-41.64	-43.79	-13.00	-30.79	Pass
5648.222	H	7.66	1.76	-47.17	-41.27	-43.42	-13.00	-30.42	Pass
7743.313	H	11.66	1.82	-50.04	-40.20	-42.35	-13.00	-29.35	Pass
10534.160	H	12.57	1.93	-46.68	-36.04	-38.19	-13.00	-25.19	Pass
1993.658	V	9.19	1.22	-56.88	-48.91	-51.06	-13.00	-38.06	Pass
3044.047	V	7.17	1.26	-52.23	-46.32	-48.47	-13.00	-35.47	Pass
4098.915	V	6.60	1.60	-48.30	-43.30	-45.45	-13.00	-32.45	Pass
5421.116	V	6.43	1.75	-45.25	-40.57	-42.72	-13.00	-29.72	Pass
6520.675	V	9.22	1.76	-48.12	-40.66	-42.81	-13.00	-29.81	Pass
8067.703	V	12.69	1.86	-51.15	-40.32	-42.47	-13.00	-29.47	Pass

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GPRS 850 251 channel/848.8MHz(highest channel)									
Frequency (MHz)	Antenna Pol.	S.G Output (dBm)	Antenna Gain(dBi)	Cable Loss(dB)	EIRP (dBm)	ERP (dBm)	Limit (dBm)	Over Limit (dB)	Result
1790.050	H	8.89	1.15	-56.96	-49.22	-51.37	-13.00	-38.37	Pass
4237.894	H	6.60	1.61	-47.17	-42.18	-44.33	-13.00	-31.33	Pass
5519.329	H	6.71	1.75	-46.54	-41.58	-43.73	-13.00	-30.73	Pass
7006.208	H	9.70	1.75	-49.38	-41.43	-43.58	-13.00	-30.58	Pass
9313.882	H	13.92	1.92	-51.66	-39.66	-41.81	-13.00	-28.81	Pass
10670.130	H	12.43	1.95	-45.99	-35.51	-37.66	-13.00	-24.66	Pass
2103.990	V	8.65	1.22	-54.98	-47.55	-49.70	-13.00	-36.70	Pass
2921.651	V	7.06	1.25	-51.83	-46.02	-48.17	-13.00	-35.17	Pass
5032.506	V	5.59	1.72	-47.13	-43.26	-45.41	-13.00	-32.41	Pass
7823.167	V	11.95	1.83	-50.74	-40.62	-42.77	-13.00	-29.77	Pass
9981.762	V	13.34	1.84	-50.47	-38.97	-41.12	-13.00	-28.12	Pass
10534.160	V	12.57	1.93	-46.25	-35.61	-37.76	-13.00	-24.76	Pass

GPRS 1900 512 channel/1850.2MHz(lower channel)								
Frequency (MHz)	Antenna Pol.	S.G Output (dBm)	Antenna Gain(dBi)	Cable Loss(dB)	EIRP (dBm)	Limit (dBm)	Over Limit (dB)	Result
2747.221	H	6.96	1.24	-54.10	-48.38	-13.00	-35.38	Pass
3699.228	H	7.29	1.48	-41.14	-35.33	-13.00	-22.33	Pass
5365.780	H	6.31	1.74	-47.15	-42.58	-13.00	-29.58	Pass
8405.683	H	13.18	1.90	-52.70	-41.42	-13.00	-28.42	Pass
9704.067	H	13.72	1.88	-52.05	-40.21	-13.00	-27.21	Pass
11464.630	H	11.06	2.08	-45.54	-36.56	-13.00	-23.56	Pass
3115.135	V	7.28	1.29	-52.05	-46.06	-13.00	-33.06	Pass
3699.228	V	7.29	1.48	-49.11	-43.30	-13.00	-30.30	Pass
5590.569	V	7.24	1.76	-47.93	-42.45	-13.00	-29.45	Pass
7006.208	V	9.70	1.75	-49.03	-41.08	-13.00	-28.08	Pass
9148.146	V	13.86	1.94	-52.30	-40.38	-13.00	-27.38	Pass
10346.710	V	12.82	1.90	-48.62	-37.70	-13.00	-24.70	Pass

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GPRS 1900 661 channel/1880.0MHz(middle channel)								
Frequency (MHz)	Antenna Pol.	S.G Output (dBm)	Antenna Gain(dBi)	Cable Loss(dB)	EIRP (dBm)	Limit (dBm)	Over Limit (dB)	Result
1339.644	H	7.59	1.02	-59.26	-52.69	-13.00	-39.69	Pass
2740.184	H	6.95	1.24	-53.95	-48.24	-13.00	-35.24	Pass
3746.975	H	7.18	1.50	-40.45	-34.77	-13.00	-21.77	Pass
5648.222	H	7.66	1.76	-47.87	-41.97	-13.00	-28.97	Pass
9409.932	H	13.96	1.91	-44.26	-32.21	-13.00	-19.21	Pass
12037.190	H	13.23	2.17	-43.85	-32.79	-13.00	-19.79	Pass
2460.334	V	6.97	1.23	-53.34	-47.60	-13.00	-34.60	Pass
3746.975	V	7.18	1.50	-47.62	-41.94	-13.00	-28.94	Pass
5045.431	V	5.62	1.72	-48.01	-44.11	-13.00	-31.11	Pass
6503.972	V	9.20	1.76	-49.07	-41.63	-13.00	-28.63	Pass
9409.932	V	13.96	1.91	-44.78	-32.73	-13.00	-19.73	Pass
11582.860	V	11.41	2.10	-45.09	-35.78	-13.00	-22.78	Pass

GPRS 1900 810 channel/1909.8MHz(highest channel)								
Frequency (MHz)	Antenna Pol.	S.G Output (dBm)	Antenna Gain(dBi)	Cable Loss(dB)	EIRP (dBm)	Limit (dBm)	Over Limit (dB)	Result
1410.160	H	7.96	1.04	-59.56	-52.64	-13.00	-39.64	Pass
3179.717	H	7.37	1.31	-53.03	-46.97	-13.00	-33.97	Pass
3814.858	H	7.02	1.52	-39.90	-34.40	-13.00	-21.40	Pass
6571.045	H	9.27	1.76	-49.55	-42.04	-13.00	-29.04	Pass
9506.973	H	14.00	1.90	-51.85	-39.75	-13.00	-26.75	Pass
12068.100	H	13.15	2.17	-44.72	-33.74	-13.00	-20.74	Pass
1353.460	V	7.67	1.02	-58.38	-51.73	-13.00	-38.73	Pass
3179.717	V	7.37	1.31	-51.93	-45.87	-13.00	-32.87	Pass
3814.858	V	7.02	1.52	-49.58	-44.08	-13.00	-31.08	Pass
6503.972	V	9.20	1.76	-49.59	-42.15	-13.00	-29.15	Pass
8492.367	V	13.30	1.90	-51.96	-40.56	-13.00	-27.56	Pass
11464.630	V	11.06	2.08	-44.59	-35.61	-13.00	-22.61	Pass



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GSM 850 128 channel/824.2 MHz(lower channel)									
Frequency (MHz)	Antenna Pol.	S.G Output (dBm)	Antenna Gain(dBi)	Cable Loss(dB)	EIRP (dBm)	ERP (dBm)	Limit (dBm)	Over Limit (dB)	Result
1644.769	H	8.66	1.11	-51.63	-44.08	-46.23	-13.00	-33.23	Pass
2460.334	H	6.97	1.23	-50.83	-45.09	-47.24	-13.00	-34.24	Pass
4109.441	H	6.60	1.60	-45.88	-40.88	-43.03	-13.00	-30.03	Pass
6037.738	H	10.14	1.78	-48.70	-40.34	-42.49	-13.00	-29.49	Pass
7743.313	H	11.66	1.82	-48.74	-38.90	-41.05	-13.00	-28.05	Pass
10480.260	H	12.64	1.92	-46.41	-35.69	-37.84	-13.00	-24.84	Pass
1813.155	V	8.93	1.17	-55.57	-47.81	-49.96	-13.00	-36.96	Pass
3204.279	V	7.40	1.32	-49.58	-43.50	-45.65	-13.00	-32.65	Pass
4541.785	V	6.49	1.65	-45.59	-40.75	-42.90	-13.00	-29.90	Pass
6323.030	V	9.55	1.77	-45.59	-37.81	-39.96	-13.00	-26.96	Pass
9054.769	V	13.82	1.95	-50.01	-38.14	-40.29	-13.00	-27.29	Pass
11203.010	V	11.65	2.04	-43.55	-33.94	-36.09	-13.00	-23.09	Pass

GSM 850 190 channel/836.6MHz (middle channel)									
Frequency (MHz)	Antenna Pol.	S.G Output (dBm)	Antenna Gain(dBi)	Cable Loss(dB)	EIRP (dBm)	ERP (dBm)	Limit (dBm)	Over Limit (dB)	Result
1665.999	H	8.69	1.12	-53.91	-46.34	-48.49	-13.00	-35.49	Pass
2435.221	H	7.08	1.23	-47.53	-41.68	-43.83	-13.00	-30.83	Pass
4183.891	H	6.60	1.61	-46.02	-41.03	-43.18	-13.00	-30.18	Pass
6388.237	H	9.43	1.77	-47.41	-39.75	-41.90	-13.00	-28.90	Pass
8962.343	H	13.76	1.96	-49.23	-37.43	-39.58	-13.00	-26.58	Pass
11231.780	H	11.58	2.04	-42.85	-33.31	-35.46	-13.00	-22.46	Pass
1753.693	V	8.84	1.14	-56.05	-48.35	-50.50	-13.00	-37.50	Pass
2454.032	V	6.99	1.23	-45.14	-39.38	-41.53	-13.00	-28.53	Pass
4194.637	V	6.60	1.61	-46.40	-41.41	-43.56	-13.00	-30.56	Pass
5648.222	V	7.66	1.76	-45.92	-40.02	-42.17	-13.00	-29.17	Pass
8405.683	V	13.18	1.90	-50.19	-38.91	-41.06	-13.00	-28.06	Pass
11117.130	V	11.84	2.02	-43.02	-33.20	-35.35	-13.00	-22.35	Pass

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GSM 850 251 channel/848.8MHz(highest channel)									
Frequency (MHz)	Antenna Pol.	S.G Output (dBm)	Antenna Gain(dBi)	Cable Loss(dB)	EIRP (dBm)	ERP (dBm)	Limit (dBm)	Over Limit (dB)	Result
1356.936	H	7.68	1.02	-56.31	-49.65	-51.80	-13.00	-38.80	Pass
2537.239	H	6.83	1.24	-50.22	-44.63	-46.78	-13.00	-33.78	Pass
4237.894	H	6.60	1.61	-45.85	-40.86	-43.01	-13.00	-30.01	Pass
6454.117	H	9.30	1.77	-46.28	-38.75	-40.90	-13.00	-27.90	Pass
7451.053	H	10.68	1.80	-47.81	-38.93	-41.08	-13.00	-28.08	Pass
11553.190	H	11.27	2.10	-41.86	-32.69	-34.84	-13.00	-21.84	Pass
1381.519	V	7.81	1.03	-55.34	-48.56	-50.71	-13.00	-37.71	Pass
2266.459	V	7.85	1.23	-54.16	-47.54	-49.69	-13.00	-36.69	Pass
4109.441	V	6.60	1.60	-46.66	-41.66	-43.81	-13.00	-30.81	Pass
5765.318	V	8.51	1.77	-47.33	-40.59	-42.74	-13.00	-29.74	Pass
7299.718	V	10.35	1.78	-47.18	-38.61	-40.76	-13.00	-27.76	Pass
11003.660	V	12.10	2.00	-45.25	-35.15	-37.30	-13.00	-24.30	Pass

GSM 1900 512 channel/1850.2MHz(lower channel)								
Frequency (MHz)	Antenna Pol.	S.G Output (dBm)	Antenna Gain(dBi)	Cable Loss(dB)	EIRP (dBm)	Limit (dBm)	Over Limit (dB)	Result
1315.806	H	7.46	1.01	-58.67	-52.22	-13.00	-39.22	Pass
3012.976	H	7.12	1.25	-52.74	-46.87	-13.00	-33.87	Pass
3699.228	H	7.29	1.48	-40.28	-34.47	-13.00	-21.47	Pass
6323.030	H	9.55	1.77	-49.29	-41.51	-13.00	-28.51	Pass
8668.427	H	13.47	1.92	-52.70	-41.15	-13.00	-28.15	Pass
11553.190	H	11.27	2.10	-44.97	-35.80	-13.00	-22.80	Pass
1178.399	V	6.67	0.97	-59.29	-53.59	-13.00	-40.59	Pass
2989.880	V	7.10	1.25	-53.54	-47.69	-13.00	-34.69	Pass
3699.228	V	7.29	1.48	-50.62	-44.81	-13.00	-31.81	Pass
6258.489	V	9.68	1.77	-50.80	-42.89	-13.00	-29.89	Pass
8939.385	V	13.73	1.95	-53.47	-41.69	-13.00	-28.69	Pass
11792.710	V	12.35	2.13	-45.55	-35.33	-13.00	-22.33	Pass

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GSM 1900 661 channel/1880.0MHz(middle channel)								
Frequency (MHz)	Antenna Pol.	S.G Output (dBm)	Antenna Gain(dBi)	Cable Loss(dB)	EIRP (dBm)	Limit (dBm)	Over Limit (dB)	Result
1175.380	H	6.66	0.97	-59.10	-53.41	-13.00	-40.41	Pass
2891.829	H	7.04	1.25	-54.12	-48.33	-13.00	-35.33	Pass
3746.975	H	7.18	1.50	-39.73	-34.05	-13.00	-21.05	Pass
5648.222	H	7.66	1.76	-48.54	-42.64	-13.00	-29.64	Pass
7451.053	H	10.68	1.80	-50.74	-41.86	-13.00	-28.86	Pass
9409.932	H	13.96	1.91	-44.26	-32.21	-13.00	-19.21	Pass
1139.754	V	6.44	0.96	-58.35	-52.87	-13.00	-39.87	Pass
1370.929	V	7.76	1.03	-58.60	-51.87	-13.00	-38.87	Pass
2862.311	V	7.02	1.25	-53.56	-47.79	-13.00	-34.79	Pass
3699.228	V	7.29	1.48	-51.26	-45.45	-13.00	-32.45	Pass
5691.852	V	7.98	1.76	-48.91	-42.69	-13.00	-29.69	Pass
9409.932	V	13.96	1.91	-44.16	-32.11	-13.00	-19.11	Pass

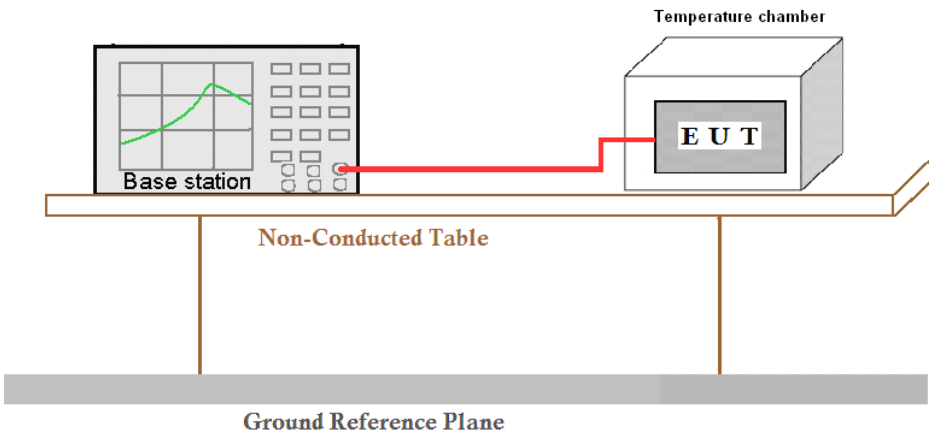
GSM 1900 810 channel/1909.8MHz(highest channel)								
Frequency (MHz)	Antenna Pol.	S.G Output (dBm)	Antenna Gain(dBi)	Cable Loss(dB)	EIRP (dBm)	Limit (dBm)	Over Limit (dB)	Result
1356.936	H	7.68	1.02	-59.82	-53.16	-13.00	-40.16	Pass
2811.377	H	6.99	1.24	-53.79	-48.04	-13.00	-35.04	Pass
3814.858	H	7.02	1.52	-39.18	-33.68	-13.00	-20.68	Pass
5869.768	H	9.25	1.77	-50.16	-42.68	-13.00	-29.68	Pass
7508.609	H	10.80	1.80	-50.63	-41.63	-13.00	-28.63	Pass
11376.750	H	11.26	2.07	-45.98	-36.79	-13.00	-23.79	Pass
1367.417	V	7.74	1.03	-59.07	-52.36	-13.00	-39.36	Pass
3699.228	V	7.29	1.48	-50.50	-44.69	-13.00	-31.69	Pass
5189.812	V	5.93	1.73	-47.71	-43.51	-13.00	-30.51	Pass
6846.325	V	9.54	1.75	-49.79	-42.00	-13.00	-29.00	Pass
10670.130	V	12.43	1.95	-48.52	-38.04	-13.00	-25.04	Pass
11944.920	V	13.03	2.16	-44.89	-34.02	-13.00	-21.02	Pass

NOTE:

- 1) The disturbance above 13GHz and below 30MHz was very low, and the above harmonics were the highest point could be found when testing, so only the above harmonics had been displayed.
- 2)  $EIRP = S.G. \text{ output(dBm)} + \text{Antenna Gain(dBi)} - \text{Cable Loss(dB)}$   
 $EIRP = ERP + 2.15dB$

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### 5.7 Frequency stability

Test Requirement:	Part 2.1055 and RSS-132 Clause 4.3/RSS-133 Clause 6.3							
Test Method:	TIA-603- C-2004 Clause 2.2.2 and RSS-Gen Clause 4.7							
Test Setup:								
Measurement Procedure:	<p>The transmitter output was connected to a calibrated coaxial cable and a Base Station Simulator. The Base Station Simulator was set to force the EUT to its maximum power setting. The tests were performed at three frequencies (low channel and high channel). The EUT was placed in the temperature chamber, the DC leads and RF output cable exited the chamber through an opening made for that purpose. After operating the equipment in standby conditions for 15 minutes before proceeding. The temperature was varied from -30°C to +50°C at intervals of not more than 10°C. The frequency stability was read from the base station at 25°C. The input voltage was varied +/-15%, the frequency stability and input voltage were recorded.</p>							
Instruments Used:	Refer to section 4.10 for details							
Limit:	<table border="1"> <thead> <tr> <th>Operation Band</th> <th>Frequency stability Limit(ppm)</th> </tr> </thead> <tbody> <tr> <td>GSM/GPRS/EDGE/WCDMA 850</td> <td>±2.5ppm</td> </tr> <tr> <td>GSM/GPRS/EDGE/WCDMA 1900</td> <td>---</td> </tr> </tbody> </table>	Operation Band	Frequency stability Limit(ppm)	GSM/GPRS/EDGE/WCDMA 850	±2.5ppm	GSM/GPRS/EDGE/WCDMA 1900	---	
Operation Band	Frequency stability Limit(ppm)							
GSM/GPRS/EDGE/WCDMA 850	±2.5ppm							
GSM/GPRS/EDGE/WCDMA 1900	---							
Test Results:	Pass							





GSM:

Reference Frequency: Low channel 824.2MHz@ 25 degree

Limit: +/- 2.5ppm = 2060.5Hz

Power Supply	Environment	Frequency	Delta	Limit
Vdc	Temperature(degree)	(MHz)	(Hz)	(Hz)
3.7	-20	824.199975	25	2060.5
3.7	-10	824.199948	52	2060.5
3.7	10	824.199938	62	2060.5
3.7	20	824.199926	74	2060.5
3.7	30	824.199958	42	2060.5
3.7	40	824.199949	51	2060.5
3.7	50	824.199938	62	2060.5

Reference Frequency: Mid channel 836.6MHz@ 25 degree

Limit: +/- 2.5ppm = 2091.5Hz

Power Supply	Environment	Frequency	Delta	Limit
Vdc	Temperature(degree)	(MHz)	(Hz)	(Hz)
3.7	-20	836.599973	27	2091.5
3.7	-10	836.599959	41	2091.5
3.7	10	836.599968	32	2091.5
3.7	20	836.599946	54	2091.5
3.7	30	836.599955	45	2091.5
3.7	40	836.599932	68	2091.5
3.7	50	836.599978	22	2091.5

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Reference Frequency: High channel 848.8MHz@ 25 degree

Limit: +/- 2.5ppm = 2122Hz

Power Supply	Environment	Frequency	Delta	Limit
Vdc	Temperature(degree)	(MHz)	(Hz)	(Hz)
3.7	-20	848.799975	25	2122
3.7	-10	848.799962	38	2122
3.7	10	848.799971	29	2122
3.7	20	848.799974	26	2122
3.7	30	848.799966	34	2122
3.7	40	848.799982	18	2122
3.7	50	848.799954	46	2122

Reference Frequency: Low channel 1850.2MHz@ 25 degree

Power Supply	Environment	Frequency	Delta	Limit
Vdc	Temperature(degree)	(MHz)	(Hz)	(Hz)
3.7	-20	1850.199974	26	N/A
3.7	-10	1850.199956	44	N/A
3.7	10	1850.199983	17	N/A
3.7	20	1850.199970	30	N/A
3.7	30	1850.199939	61	N/A
3.7	40	1850.199957	43	N/A
3.7	50	1850.199964	36	N/A



Reference Frequency: Mid channel 1880MHz@ 25 degree

Power Supply	Environment	Frequency	Delta	Limit
Vdc	Temperature(degree)	(MHz)	(Hz)	(Hz)
3.7	-20	1879.999957	43	N/A
3.7	-10	1879.999949	51	N/A
3.7	10	1879.999938	62	N/A
3.7	20	1879.999965	35	N/A
3.7	30	1879.999975	25	N/A
3.7	40	1879.999951	49	N/A
3.7	50	1879.999939	61	N/A

Reference Frequency: High channel 1909.8MHz@ 25 degree

Power Supply	Environment	Frequency	Delta	Limit
Vdc	Temperature(degree)	(MHz)	(Hz)	(Hz)
3.7	-20	1909.799953	47	N/A
3.7	-10	1909.799959	41	N/A
3.7	10	1909.799978	22	N/A
3.7	20	1909.799965	35	N/A
3.7	30	1909.799961	39	N/A
3.7	40	1909.799937	63	N/A
3.7	50	1909.799941	59	N/A



Reference Frequency: Low channel 824.2MHz				
Limit: +/- 2.5ppm = 2060.5Hz				
Power Supply	Environment	Frequency	Delta	Limit
Vdc	Temperature(degree)	(MHz)	(Hz)	(Hz)
4.2	25	824.200059	59	2060.5
3.7	25	824.200023	23	2060.5
3.0 (Endpoint)	25	824.200041	41	2060.5

Reference Frequency: Mid channel 836.6MHz				
Limit: +/- 2.5ppm = 2091.5Hz				
Power Supply	Environment	Frequency	Delta	Limit
Vdc	Temperature(degree)	(MHz)	(Hz)	(Hz)
4.2	25	836.600016	16	2091.5
3.7	25	836.600071	71	2091.5
3.0 (Endpoint)	25	836.600023	23	2091.5

Reference Frequency: High channel 848.8MHz				
Limit: +/- 2.5ppm = 2122Hz				
Power Supply	Environment	Frequency	Delta	Limit
Vdc	Temperature(degree)	(MHz)	(Hz)	(Hz)
4.2	25	848.800049	49	2122
3.7	25	848.800033	33	2122
3.0 (Endpoint)	25	848.800056	56	2122

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Reference Frequency: Low channel 1850.2MHz				
Power Supply	Environment	Frequency	Delta	Limit
Vdc	Temperature(degree)	(MHz)	(Hz)	(Hz)
4.2	25	1850.200018	18	N/A
3.7	25	1850.200026	26	N/A
3.0 (Endpoint)	25	1850.200037	37	N/A

Reference Frequency: Mid channel 1880MHz				
Power Supply	Environment	Frequency	Delta	Limit
Vdc	Temperature(degree)	(MHz)	(Hz)	(Hz)
4.2	25	1880.000024	24	N/A
3.7	25	1880.000053	53	N/A
3.0 (Endpoint)	25	1880.000061	61	N/A

Reference Frequency: High channel 1909.8MHz				
Power Supply	Environment	Frequency	Delta	Limit
Vdc	Temperature(degree)	(MHz)	(Hz)	(Hz)
4.2	25	1909.800046	46	N/A
3.7	25	1909.800038	38	N/A
3.0 (Endpoint)	25	1909.800057	57	N/A

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GPRS:

**Reference Frequency: Low channel 824.2MHz@ 25 degree**

**Limit: +/- 2.5ppm = 2060.5Hz**

Power Supply	Environment	Frequency	Delta (Hz)	Limit (Hz)
Vdc	Temperature(degree)	(MHz)		
3.7	-20	824.199954	46	2060.5
3.7	-10	824.199967	33	2060.5
3.7	10	824.199951	49	2060.5
3.7	20	824.199968	32	2060.5
3.7	30	824.199944	56	2060.5
3.7	40	824.199937	63	2060.5
3.7	50	824.199951	49	2060.5

**Reference Frequency: Mid channel 836.6MHz@ 25 degree**

**Limit: +/- 2.5ppm = 2091.5Hz**

Power Supply	Environment	Frequency	Delta (Hz)	Limit (Hz)
Vdc	Temperature(degree)	(MHz)		
3.7	-20	836.599936	64	2091.5
3.7	-10	836.599949	51	2091.5
3.7	10	836.599953	47	2091.5
3.7	20	836.599968	32	2091.5
3.7	30	836.599961	39	2091.5
3.7	40	836.599956	44	2091.5
3.7	50	836.599928	72	2091.5



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Reference Frequency: High channel 848.8MHz@ 25 degree

Limit: +/- 2.5ppm = 2122Hz

Power Supply	Environment	Frequency	Delta	Limit
Vdc	Temperature(degree)	(MHz)	(Hz)	(Hz)
3.7	-20	848.799957	43	2122
3.7	-10	848.799939	61	2122
3.7	10	848.799948	52	2122
3.7	20	848.799969	31	2122
3.7	30	848.799950	50	2122
3.7	40	848.799938	62	2122
3.7	50	848.799948	52	2122

Reference Frequency: Low channel 1850.2MHz@ 25 degree

Power Supply	Environment	Frequency	Delta	Limit
Vdc	Temperature(degree)	(MHz)	(Hz)	(Hz)
3.7	-20	1850.199962	38	N/A
3.7	-10	1850.199950	50	N/A
3.7	10	1850.199937	63	N/A
3.7	20	1850.199949	51	N/A
3.7	30	1850.199976	24	N/A
3.7	40	1850.199952	48	N/A
3.7	50	1850.199948	52	N/A



Reference Frequency: Mid channel 1880MHz@ 25 degree

Power Supply	Environment	Frequency	Delta	Limit
Vdc	Temperature(degree)	(MHz)	(Hz)	(Hz)
3.7	-20	1879.999969	31	N/A
3.7	-10	1879.999937	63	N/A
3.7	10	1879.999944	56	N/A
3.7	20	1879.999956	44	N/A
3.7	30	1879.999940	60	N/A
3.7	40	1879.999961	39	N/A
3.7	50	1879.999938	62	N/A

Reference Frequency: High channel 1909.8MHz@ 25 degree

Power Supply	Environment	Frequency	Delta	Limit
Vdc	Temperature(degree)	(MHz)	(Hz)	(Hz)
3.7	-20	1909.799940	60	N/A
3.7	-10	1909.799923	77	N/A
3.7	10	1909.799957	43	N/A
3.7	20	1909.799942	58	N/A
3.7	30	1909.799938	62	N/A
3.7	40	1909.799958	42	N/A
3.7	50	1909.799947	53	N/A





Reference Frequency: Low channel 824.2MHz				
Limit: +/- 2.5ppm = 2060.5Hz				
Power Supply	Environment	Frequency	Delta	Limit
Vdc	Temperature(degree)	(MHz)	(Hz)	(Hz)
4.2	25	824.200043	57	2060.5
3.7	25	824.200060	40	2060.5
3.0 (Endpoint)	25	824.200055	45	2060.5

Reference Frequency: Mid channel 836.6MHz				
Limit: +/- 2.5ppm = 2091.5Hz				
Power Supply	Environment	Frequency	Delta	Limit
Vdc	Temperature(degree)	(MHz)	(Hz)	(Hz)
4.2	25	836.600038	62	2091.5
3.7	25	836.600057	43	2091.5
3.0 (Endpoint)	25	836.600042	58	2091.5

Reference Frequency: High channel 848.8MHz				
Limit: +/- 2.5ppm = 2122Hz				
Power Supply	Environment	Frequency	Delta	Limit
Vdc	Temperature(degree)	(MHz)	(Hz)	(Hz)
4.2	25	848.800038	62	2122
3.7	25	848.800042	58	2122
3.0 (Endpoint)	25	848.800059	41	2122

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Reference Frequency: Low channel 1850.2MHz				
Power Supply	Environment	Frequency	Delta	Limit
Vdc	Temperature(degree)	(MHz)	(Hz)	(Hz)
4.2	25	1850.200062	38	N/A
3.7	25	1850.200071	29	N/A
3.0 (Endpoint)	25	1850.200058	42	N/A

Reference Frequency: Mid channel 1880MHz				
Power Supply	Environment	Frequency	Delta	Limit
Vdc	Temperature(degree)	(MHz)	(Hz)	(Hz)
4.2	25	1880.000068	32	N/A
3.7	25	1880.000038	62	N/A
3.0 (Endpoint)	25	1880.000071	29	N/A

Reference Frequency: High channel 1909.8MHz				
Power Supply	Environment	Frequency	Delta	Limit
Vdc	Temperature(degree)	(MHz)	(Hz)	(Hz)
4.2	25	1909.800035	65	N/A
3.7	25	1909.800063	37	N/A
3.0 (Endpoint)	25	1909.800047	53	N/A