
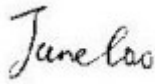
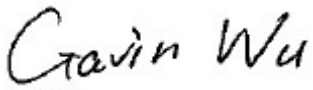




TEST REPORT

Report No.:	EM201400864-2	Application No.:	ZJ00053634-1
Client:	Stonex Srl		
Address:	Via Zucchi 1,20900 Monza(MB),Italy		
Sample Description:	Multi-Frequency GNSS Receiver		
Model:	S9III Plus GNSS		
Adding Model:	S9IIIN Plus GNSS, S8 Plus GNSS, S8N Plus GNSS		
FCC ID	Y44-S9P		
Test Specification:	FCC Part 2,22,24		
Test Date:	2014-11-18 to 2014-12-05		
Issue Date:	2014-12-25		
Test Result:	<i>Pass.</i>		
Prepared By:	Reviewed By:	Approved By:	
Lynn xiao/ Test Engineer	Jane Cao / Technical Manager	Gavin Wu / Manager	
			
Date:2014-12-25	Date:2014-12-25	Date:2014-12-25	
Other Aspects:			
/			
Abbreviations: ok / P = passed; fail / F = failed; n.a. / N = not applicable			
The test result in this test report refers exclusively to the presented test sample. This report shall not be reproduced except in full, without the written approval of GRGT.			

DIRECTIONS OF TEST

1. This station carries out test task according to the national regulation of verifications which can be traced to National Primary Standards and BIPM.
2. The test report merely corresponds to the test sample. It is not permitted to copy extracts of these test result without the written permission of the test laboratory.
3. If there is any objection concerning the test, the client should inform the laboratory within 15 days from the date of receiving the test report.

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1. TEST RESULT SUMMARY

FCC Part 2,22,24			
Standard	Item	Limit / Severity	Result
FCC Part 2,22,24	Effective Radiated Power	Section 22.913(a)(2)	PASS
	Equivalent Isotropic Radiated Power	Section 24.232(c)	PASS
	Occupied Bandwidth	Section 2.1049 Section 22.917(a) Section 24.238(a)	PASS
	Band Edges Measurement	Section 2.1051 Section 22.917(a) Section 24.238(a)	PASS
	Conducted Emission	Section 2.1051 Section 22.917(a) Section 24.238(a)	PASS
	Field Strength of Spurious Radiation	Section 2.1053 Section 22.917(a) Section 24.238(a)	PASS
	Frequency Stability for Temperature & Voltage	Section 2.1055 Section 22.355 Section 24.235	PASS

2. GENERAL DESCRIPTION OF EUT

2.1 APPLICANT

Name: Stonex Srl
Address: Via Zucchi 1,20900 Monza(MB),Italy

2.2 MANUFACTURER

Name: Stonex Srl
Address: Via Zucchi 1,20900 Monza(MB),Italy

2.3 BASIC DESCRIPTION OF EQUIPMENT UNDER TEST

Equipment: Multi-Frequency GNSS Receiver
Model No.: S9III Plus GNSS
Trade Name: STONEX
EUT Power Supply: Battery:BT-S9374
DC 7.4V 2500mAh 18.5Wh
Power supply: AC Adapter: PSA18R-120P
INPUT:AC100-240V 0.5A 50-60Hz 40-60VA
OUTPUT:DC 12V 1.5A
Battery Charger:CH-S932X84
INPUT: DC 12V 1.5A max
OUTPUT:2*8.4V DC 400mA max

	BAND	TX band	RX band
	GSM850	824 MHz ~ 849 MHz	869 MHz ~ 894 MHz
Frequency Range	GSM1900	1850 MHz ~ 1910 MHz	1930 MHz ~ 1990 MHz
	WCDMA Band V	824 MHz ~ 849 MHz	869 MHz ~ 894 MHz
	WCDMA Band II	1850 MHz ~ 1910 MHz	1930 MHz ~ 1990 MHz
Type of Modulation	GSM / GPRS : GMSK EDGE : 8PSK WCDMA : QPSK HSDPA : QPSK / 16QAM		
Antenna Type	Fixed External Antenna		
Max Antenna gain	850MHz: 2.2dBd 1900MHz: 3dBi		

3. LABORATORY AND ACCREDITATIONS

3.1 LABORATORY

The tests and measurements refer to this report were performed by Guangzhou GRG Metrology and Test CO., LTD.

Add. : 163 Pingyun Rd, West of Huangpu Ave, Guangzhou, 510656, P. R. China

Telephone: +86-20-38699959, 38699960, 38699961

Fax : +86-20-38695185

3.2 ACCREDITATIONS

Our laboratories are accredited and approved by the following approval agencies according to ISO/IEC 17025.

USA	FCC Listed Lab (No. 688188)
China	CNAS (No.L0446)
China	DILAC (No.DL175)
Canada	Registration No.:8355A-1

3.3 MEASUREMENT UNCERTAINTY

Where relevant, the following measurement uncertainty levels have been estimated for tests performed on the EUT as specified in CISPR 16-4-2:

Measurement		Frequency	Uncertainty
Radiated Emission	Horizontal	30MHz~1000MHz	4.2dB
		1GHz~26.5GHz	4.2dB
	Vertical	30MHz~1000MHz	4.4dB
		1GHz~26.5GHz	4.4dB
Conducted Emission		9kHz~30MHz	3.1dB

This uncertainty represents an expanded uncertainty factor of $k=2$.

3.4 LIST OF USED TEST EQUIPMENT AT GRGT

Name of Equipment	Manufacturer	Model	Serial Number	Calibration Due
Conducted Output Power				
Radio Communication Analyzer MT8820C	Anritsu	MT8820C	6201041397	2015-03-10
Effective Radiated Power/ Equivalent Isotropic Radiated Power				
Receiver	R&S	ESU40	100106	2015-01-26
Biconical Log-periodic Antenna	ETS.LINDGREN	3142C	00075971	2016-04-17
Signal Generator	Agilent	N5183A-540	50142096	2015-09-28
Biconical antenna	ELECTRO-METRICS	BIA-30S	166	2016-04-17
log-periodical antenna	ELECTRO-METRICS	LPA-30	383	2016-04-17
Horn antenna	ETS.LINDGREN	3117C	00075824	2015-08-02
Horn antenna	SCHWARZBECK	BBHA9120D	752	2016-04-17
Per-Amplifier (0.1-26.5GHz)	Compliance Directions systems Inc.	PAP-0126	25002	2015-01-04
Radio Communication Analyzer MT8820C	Anritsu	MT8820C	6201041397	2015-03-10
Semi-anechoic chamber	ETS	966(RFD-F/A-100)	3730	2015-03-11
Occupied Bandwidth				
Receiver	R&S	ESU40	100106	2015-01-26
Radio Communication Analyzer MT8820C	Anritsu	MT8820C	6201041397	2015-03-10
Band Edges Measurement				
Receiver	R&S	ESU40	100106	2015-01-26
Radio Communication Analyzer MT8820C	Anritsu	MT8820C	6201041397	2015-03-10
Conducted Emission				
Receiver	R&S	ESU40	100106	2015-01-26
Radio Communication Analyzer MT8820C	Anritsu	MT8820C	6201041397	2015-03-10
Field Strength of Spurious Radiation				
Receiver	R&S	ESU40	100106	2015-01-26

Biconical Log-periodic Antenna	ETS.LINDGREN	3142C	00075971	2016-04-17
Signal Generator	Agilent	N5183A-540	50142096	2015-09-28
Biconical antenna	ELECTRO-METRICS	BIA-30S	166	2016-04-17
log-periodical antenna	ELECTRO-METRICS	LPA-30	383	2016-04-17
Horn antenna	ETS.LINDGREN	3117C	00075824	2015-08-02
Horn antenna	SCHWARZBECK	BBHA9120D	752	2016-04-17
Per-Amplifier (0.1-26.5GHz)	Compliance Directions systems Inc.	PAP-0126	25002	2015-01-04
Radio Communication Analyzer MT8820C	Anritsu	MT8820C	6201041397	2015-03-10
Semi-anechoic chamber	ETS	966(RFD-F/A-100)	3730	2015-03-11
Frequency Stability for Temperature & Voltage				
Receiver	R&S	ESU40	100106	2015-01-26
DC power supply	LONGWEI	TPR-6420D	2011090901	2015-09-11
Temperature & humidity chamber	CEPREI	CEEC-MSJ-60BE	11015	2015-04-20
Radio Communication Analyzer MT8820C	Anritsu	MT8820C	6201041397	2015-03-10

4. TEST RESULTS

4.1 EFFECTIVE RADIATED POWER AND EFFECTIVE ISOTROPIC RADIATED POWER MEASUREMENT

4.1.1 LIMITS

ERP/EIRP is measured by substitution method according to ANSI / TIA / EIA-603-C-2004. The ERP of mobile transmitters must not exceed 7 Watts and the EIRP of mobile transmitters are limited to 2 Watts.

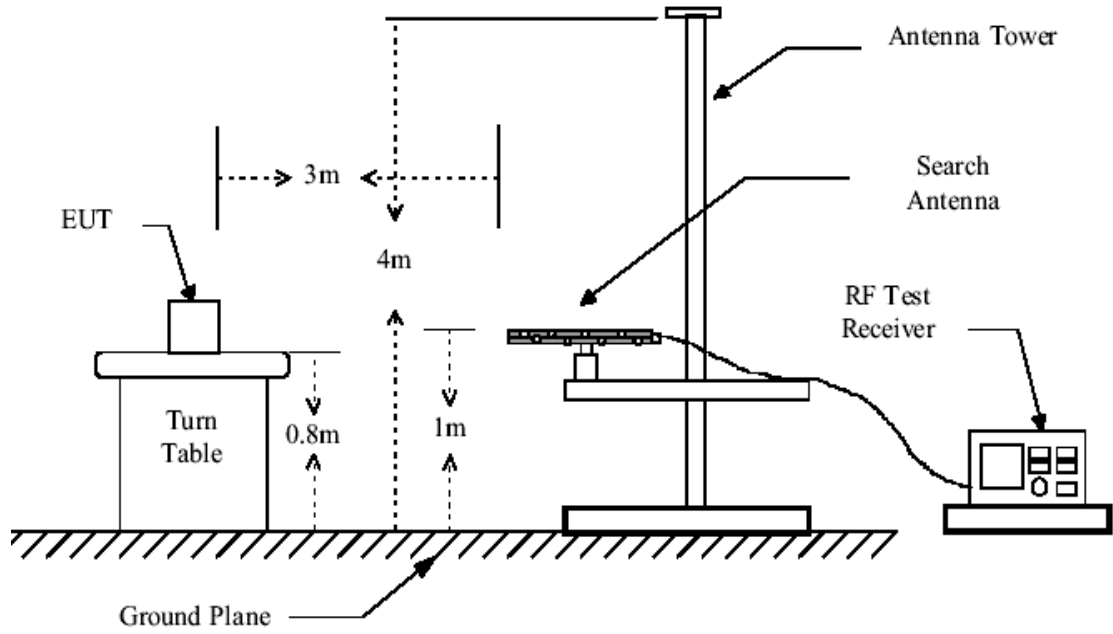
4.1.2 TEST PROCEDURES

1. The EUT was placed on a turntable with 1.0 meter height in a fully anechoic chamber.
2. The EUT was set at 3 meters from the receiving antenna, which was mounted on the antenna tower.
3. The table was rotated 360 degrees to determine the position of the highest radiated power.
4. The height of the receiving antenna is adjusted to look for the maximum ERP/EIRP.
5. Taking the record of maximum ERP/EIRP.
6. A dipole antenna was substituted in place of the EUT and was driven by a signal generator.
7. The conducted power at the terminal of the dipole antenna is measured.
8. Repeat step 3 to step 5 to get the maximum ERP/EIRP of the substitution antenna.
9. $ERP/EIRP = P_g \text{ (dBm)} - \text{cable loss (dB)} + \text{antenna gain (dBi)}$. P_g is the generator output power

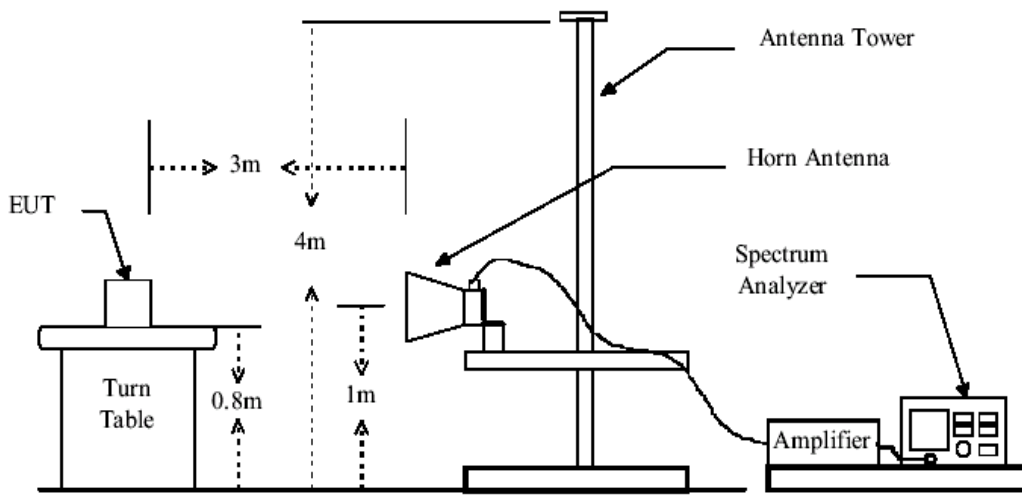
Remark:

The maximum power levels are GPRS multi-slot class 8 mode for GMSK link, EDGE multi-slot class 12 mode for 8PSK link for GSM850, EDGE multi-slot class 12 mode for 8PSK link for GSM1900, RMC 12.2Kbps mode for WCDMA Band V and WCDMA Band II, only these modes were used for all tests.

4.1.3 TEST SETUP



Below 1GHz



Above 1GHz

4.1.4 TEST RESULTS

ERP For GSM850: GPRS 8

No.	Frequency (MHz)	Reading (dBm)	Correct Factor(dB)	Result (dBm)	Limit (dBm)	Margin (dB)	Remark
1	824.2	-15.95	43.16	27.21	38.45	-11.24	Vertical
2	836.4	-16.02	43.25	27.23	38.45	-11.22	Vertical
3	848.8	-16.23	43.39	27.16	38.45	-11.29	Vertical
1	824.2	-16.73	43.16	26.43	38.45	-12.02	Horizontal
2	836.4	-17	43.25	26.25	38.45	-12.20	Horizontal
3	848.8	-17.17	43.39	26.22	38.45	-12.23	Horizontal

EIRP For GSM1900: GPRS 8

No.	Frequency (MHz)	Reading (dBm)	Correct Factor(dB)	Result (dBm)	Limit (dBm)	Margin (dB)	Remark
1	1850.2	-5.26	27.90	22.64	33.00	-10.36	Vertical
2	1880.0	-5.52	28.13	22.61	33.00	-10.39	Vertical
3	1909.8	-5.83	28.35	22.52	33.00	-10.48	Vertical
1	1850.2	-5.74	27.90	22.16	33.00	-10.84	Horizontal
2	1880.0	-5.96	28.13	22.17	33.00	-10.83	Horizontal
3	1909.8	-6.22	28.35	22.13	33.00	-10.87	Horizontal

ERP For GSM850: EGPRS 12

No.	Frequency (MHz)	Reading (dBm)	Correct Factor(dB)	Result (dBm)	Limit (dBm)	Margin (dB)	Remark
1	824.2	-15.63	43.16	27.53	38.45	-10.92	Vertical
2	836.4	-15.9	43.25	27.35	38.45	-11.10	Vertical
3	848.8	-16.01	43.39	27.38	38.45	-11.07	Vertical
1	824.2	-16.53	43.16	26.63	38.45	-11.82	Horizontal
2	836.4	-16.57	43.25	26.68	38.45	-11.77	Horizontal
3	848.8	-16.92	43.39	26.47	38.45	-11.98	Horizontal

EIRP For GSM1900: EGPRS 12

No.	Frequency (MHz)	Reading (dBm)	Correct Factor(dB)	Result (dBm)	Limit (dBm)	Margin (dB)	Remark
1	1850.2	-5.17	27.90	22.73	33.00	-10.27	Vertical
2	1880.0	-5.34	28.13	22.79	33.00	-10.21	Vertical
3	1909.8	-5.64	28.35	22.71	33.00	-10.29	Vertical
1	1850.2	-5.69	27.90	22.21	33.00	-10.79	Horizontal
2	1880.0	-5.99	28.13	22.14	33.00	-10.86	Horizontal
3	1909.8	-6.2	28.35	22.15	33.00	-10.85	Horizontal

ERP For WCDMA Band V: RMC 12.2K

No.	Frequency (MHz)	Reading (dBm)	Correct Factor(dB)	Result (dBm)	Limit (dBm)	Margin (dB)	Remark
1	826.4	-24.47	43.14	18.67	38.45	-19.78	Vertical
2	836.4	-24.66	43.25	18.59	38.45	-19.86	Vertical
3	846.6	-24.74	43.36	18.62	38.45	-19.83	Vertical
1	826.4	-25.09	43.14	18.05	38.45	-20.40	Horizontal
2	836.4	-25.1	43.25	18.15	38.45	-20.30	Horizontal
3	846.6	-25.4	43.36	17.96	38.45	-20.49	Horizontal

EIRP For WCDMA Band II: RMC 12.2K

No.	Frequency (MHz)	Reading (dBm)	Correct Factor(dB)	Result (dBm)	Limit (dBm)	Margin (dB)	Remark
1	1852.4	-13.23	27.92	14.69	33.00	-18.31	Vertical
2	1880.0	-14.3	28.13	13.83	33.00	-19.17	Vertical
3	1907.6	-14.39	28.33	13.94	33.00	-19.06	Vertical
1	1852.4	-14.15	27.92	13.77	33.00	-19.23	Horizontal
2	1880.0	-14.52	28.13	13.61	33.00	-19.39	Horizontal
3	1907.6	-14.74	28.33	13.59	33.00	-19.41	Horizontal

Test result: The unit does meet the FCC requirements.

4.2 OCCUPIED BANDWIDTH

4.2.1 LIMITS

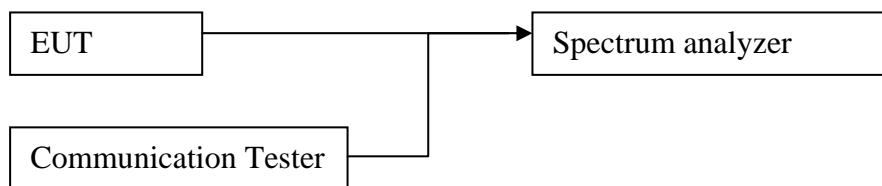
The emission bandwidth is defined as the width of the signal between two points, located at the 2 sides of the carrier frequency, outside of which all emissions are attenuated at least 26 dB below the transmitter power.

4.2.2 TEST PROCEDURES

1. Remove the antenna from the EUT and then connect a low RF cable from the antenna port to the spectrum and the ;
2. Set the spectrum analyzer: Span = approximately 2 to 3 times the 26dB bandwidth, centre on a hopping channel;
3. Set the spectrum analyzer: RBW \geq 1% of the 26dB Bandwidth. VBW \geq RBW. Sweep = auto; Detector Function = Peak. Trace = Max Hold.
4. Mark the peak frequency and -26dB bandwidth.
5. Bandwidth value is OBW value.

Remark:

4.2.3 TEST SETUP



4.2.4 TEST RESULTS

For GSM850: GPRS 8

Frequency (MHz)	Test Channel	bandwidth
836.4	Middle	316kHz

For GSM850: EGPRS 12

Frequency (MHz)	Test Channel	bandwidth
2.441	Middle	312kHz

For GSM1900: GPRS 8

Frequency (MHz)	Test Channel	bandwidth
1880.0	Middle	312kHz

For GSM1900: EGPRS 12

Frequency (MHz)	Test Channel	bandwidth
1880.0	Middle	316kHz

For WCDMA Band V: RMC 12.2K

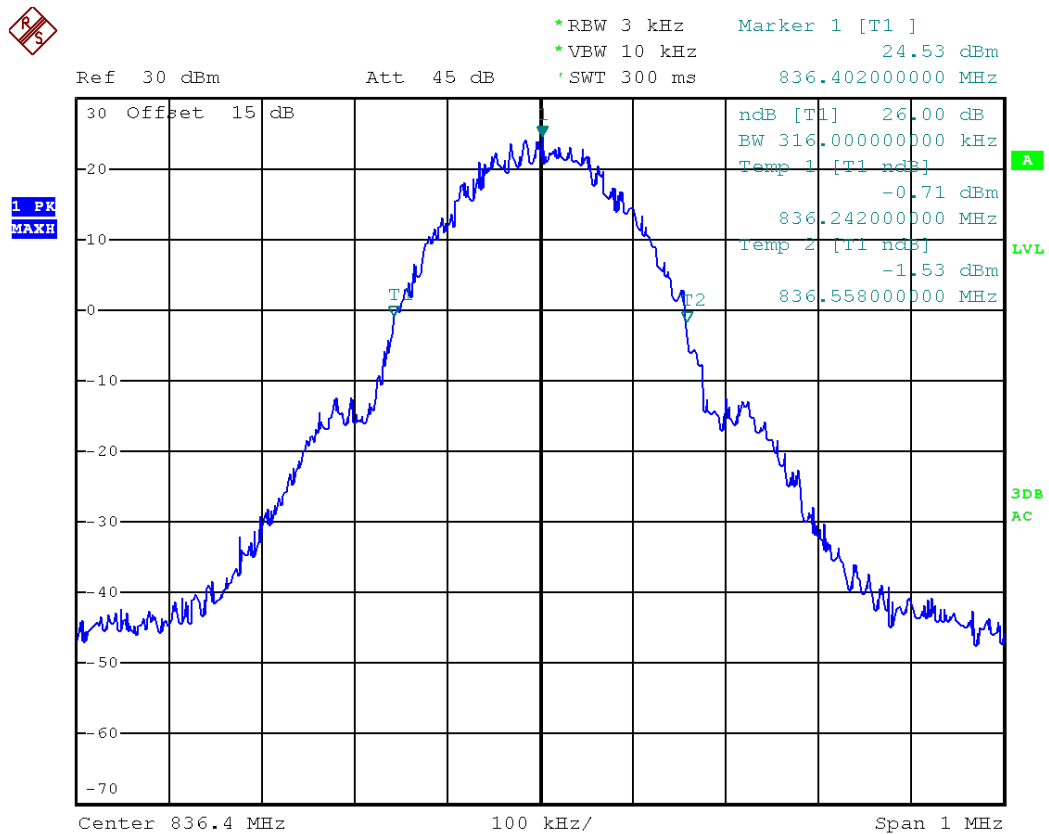
Frequency (MHz)	Test Channel	bandwidth
836.4	Middle	4.68MHz

For WCDMA Band II: RMC 12.2K

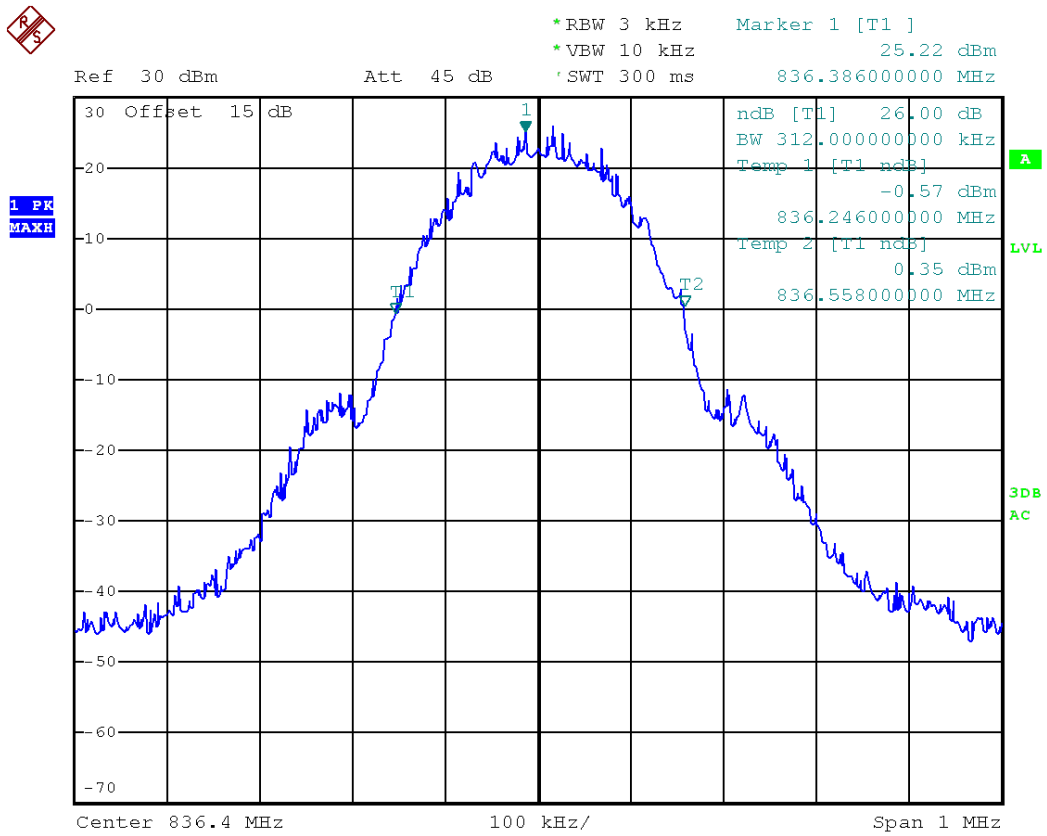
Frequency (MHz)	Test Channel	bandwidth
1880.0	Middle	4.68MHz

Result plot as follows:

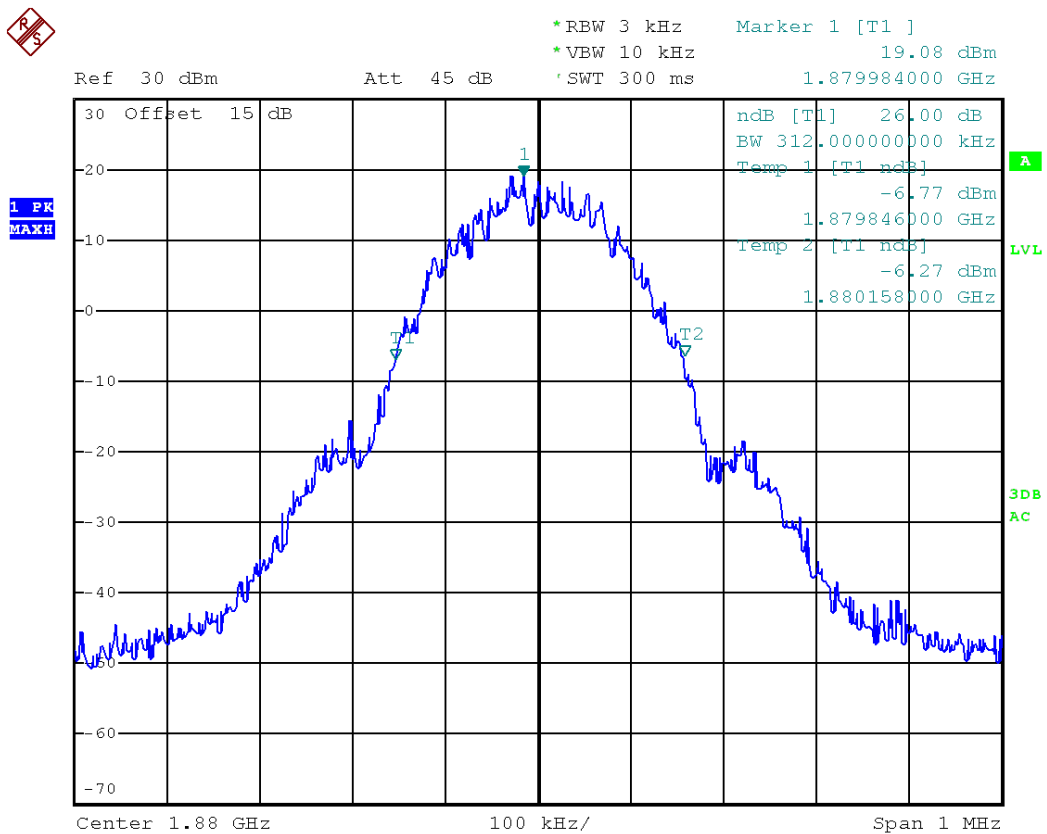
GSM850: GPRS 8 Middle channel



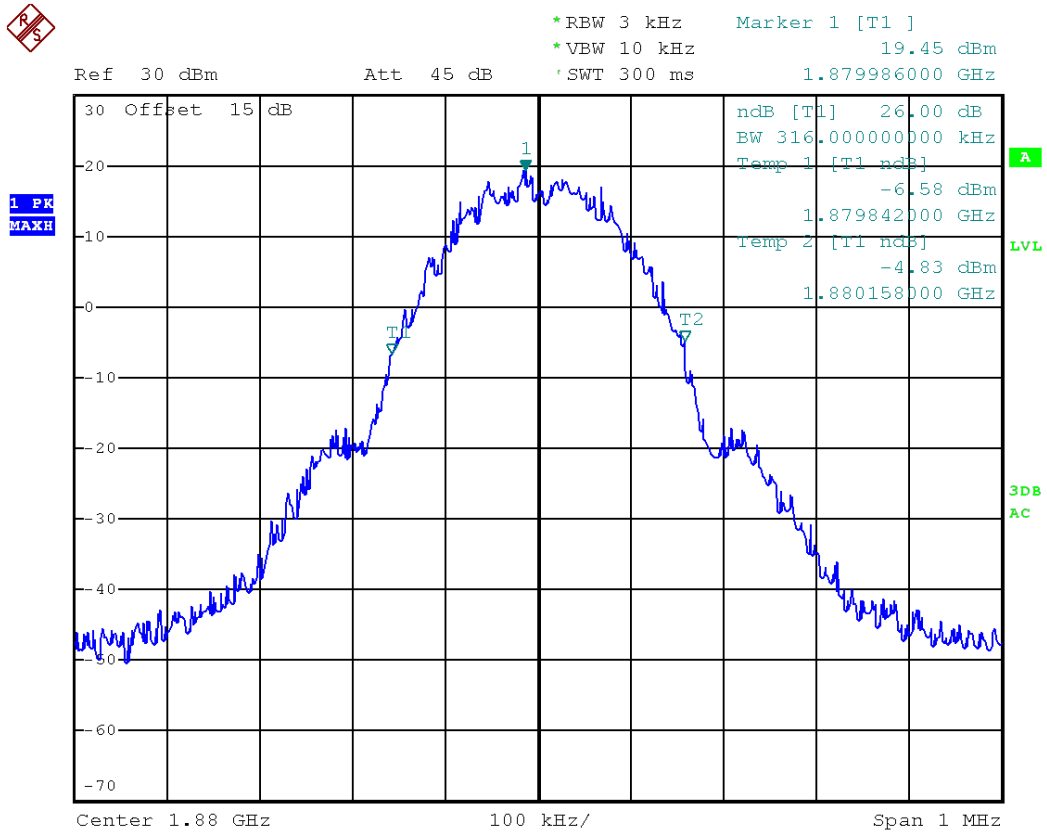
GSM850: EGPRS 12 Middle channel



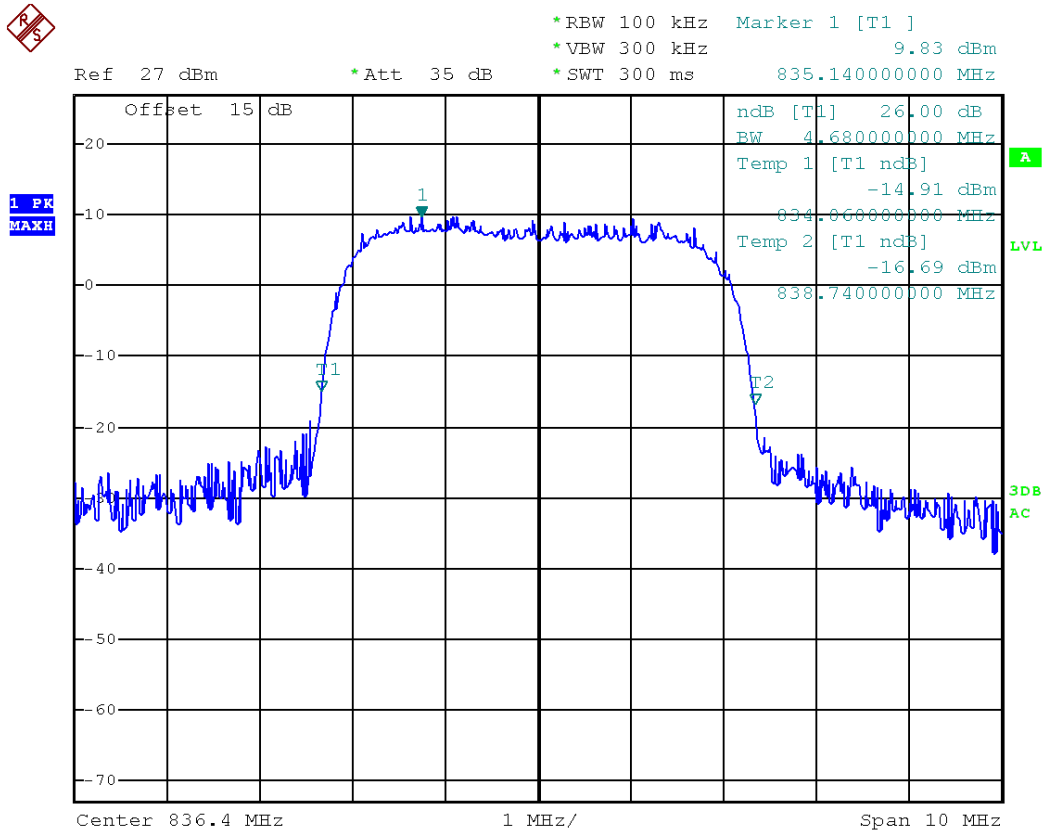
GSM1900: GPRS 8 Middle channel



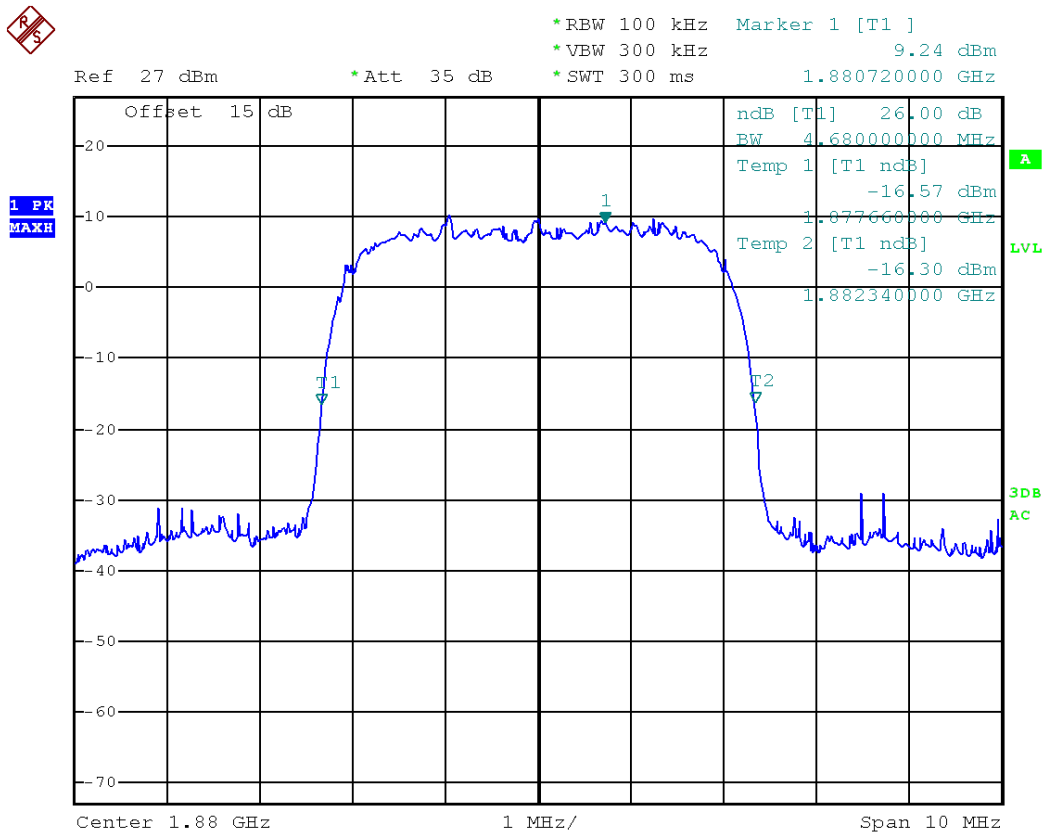
GSM1900: EGPRS 12 Middle channel



WCDMA Band V: RMC 12.2K Middle channel



WCDMA Band II: RMC 12.2K Middle channel



4.3 BAND EDGES REQUIREMENT

4.3.1 LIMITS

The power of any emission outside of the authorized operating frequency ranges must be attenuated below the transmitting power (P) by a factor of at least $43 + 10 \log(P)$ dB.

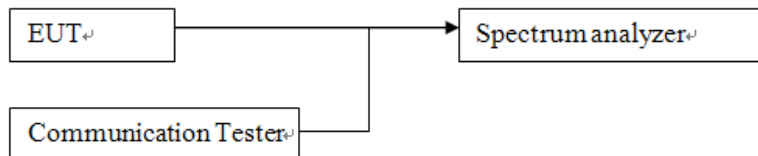
4.3.2 TEST PROCEDURES

1. Check the calibration of the measuring instrument using either an internal calibrator or a known signal from an external generator.
2. Position the EUT without connection to measurement instrument. Turn on the EUT and connect its antenna terminal to measurement instrument via a low loss cable. Then set it to any one measured frequency within its operating range, and make sure the instrument is operated in its linear range.
3. Measure the highest amplitude appearing on spectral display and set it as a reference level. Plot the graph with marking the highest point and edge frequency. Repeat above procedures until all measured frequencies were complete.

Set RBW ≥ 1 % of the 26dB Bandwidth, VBW \geq RBW, Sweep = auto, Detector function = avg, Trace = max hold.

Allow the trace to stabilize. Set the marker on the emission at the band edge, or on the highest modulation product outside of the band, if this level is greater than that at the band edge.

4.3.3 TEST SETUP



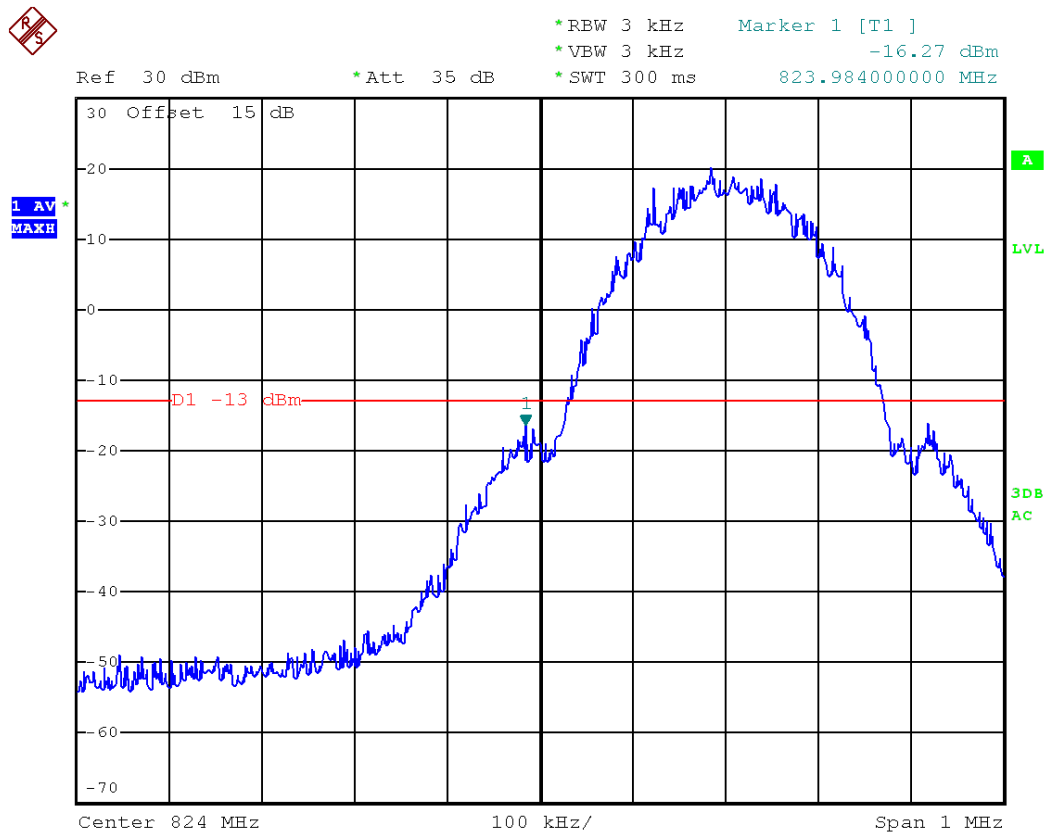
4.3.4 TEST RESULTS

The unit does meet the FCC requirements.

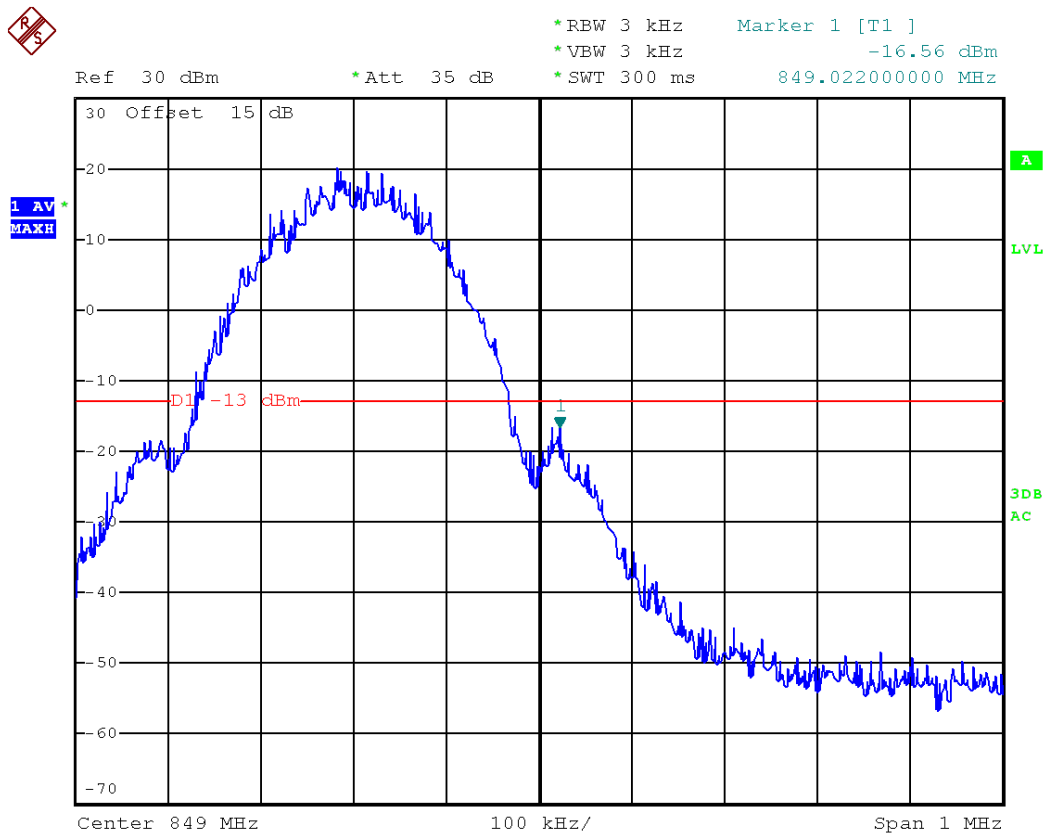
Test result plot as follows:

For GSM850: GPRS 8

Lowest Channel

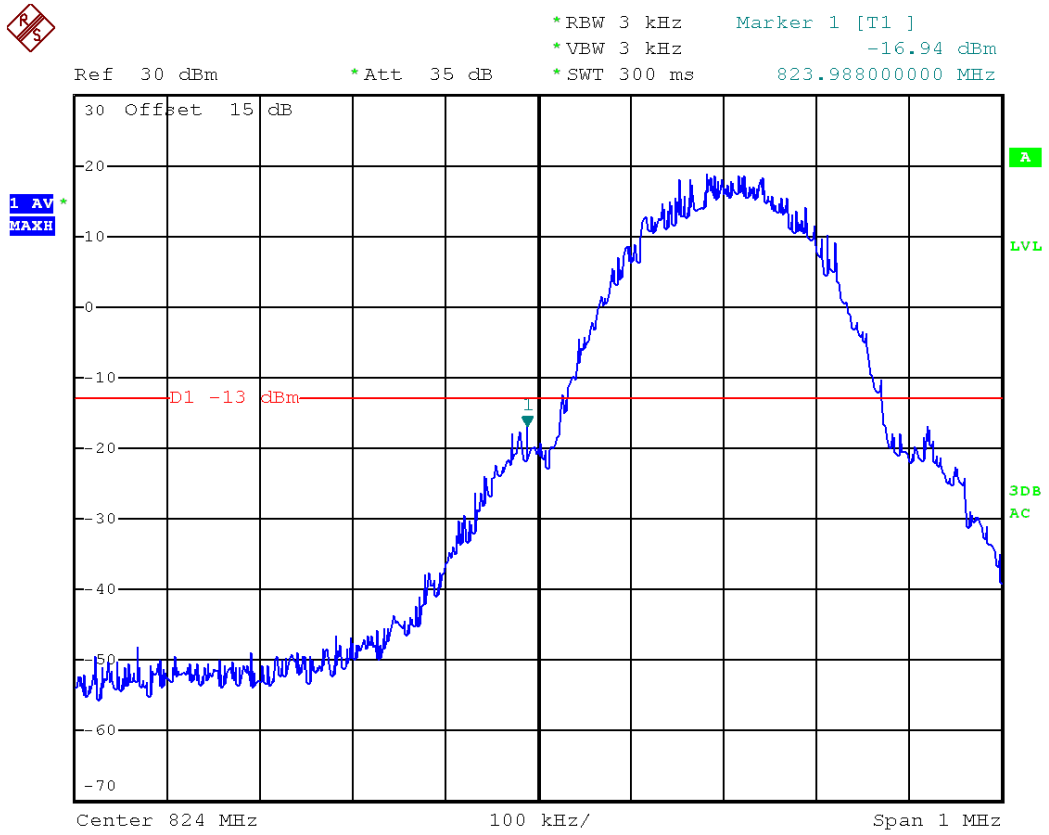


Highest Channel

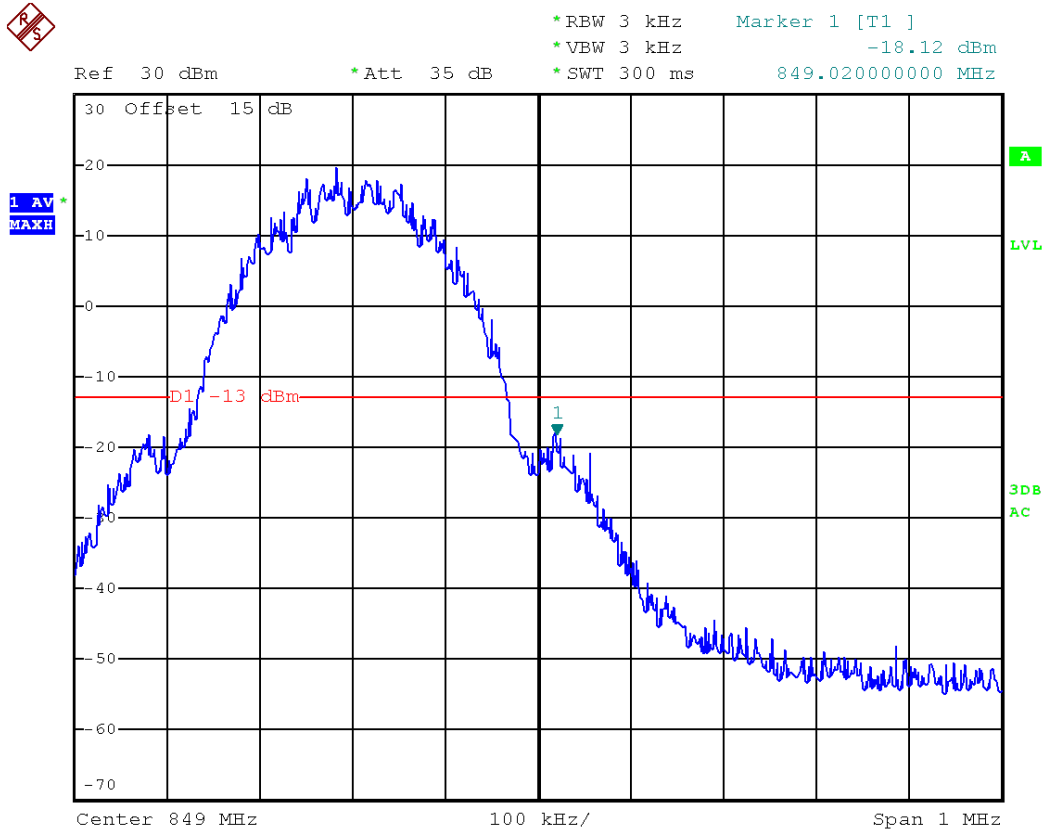


For GSM850: EGPRS 12

Lowest Channel



Highest Channel

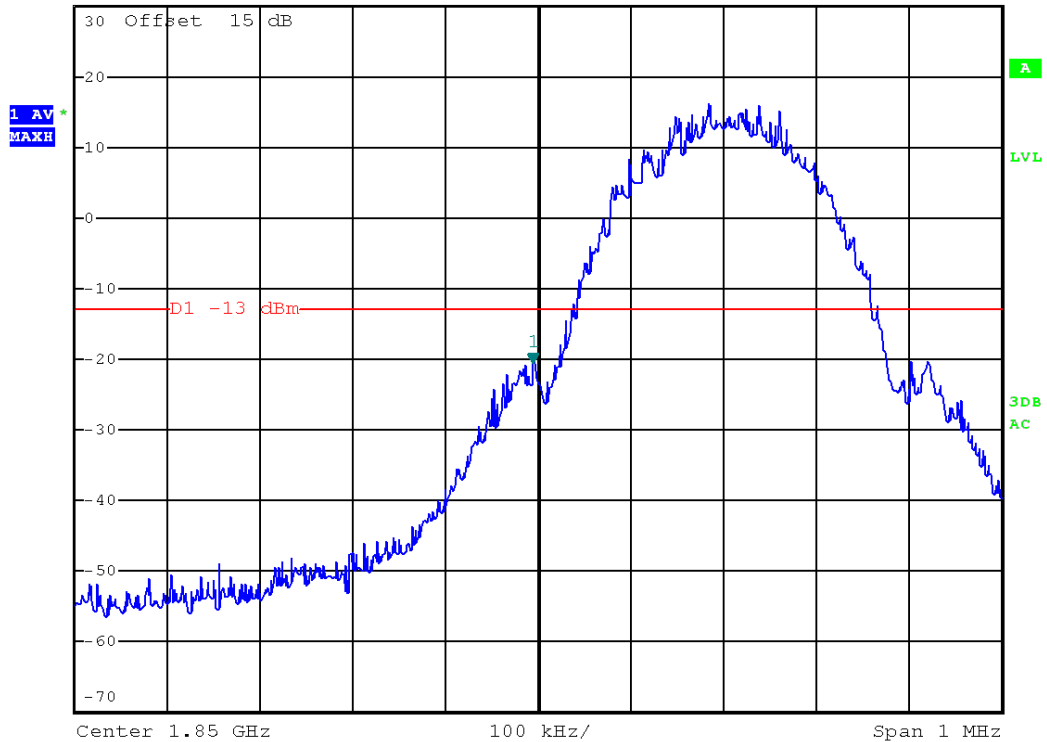


For GSM1900: GPRS 8

Lowest Channel



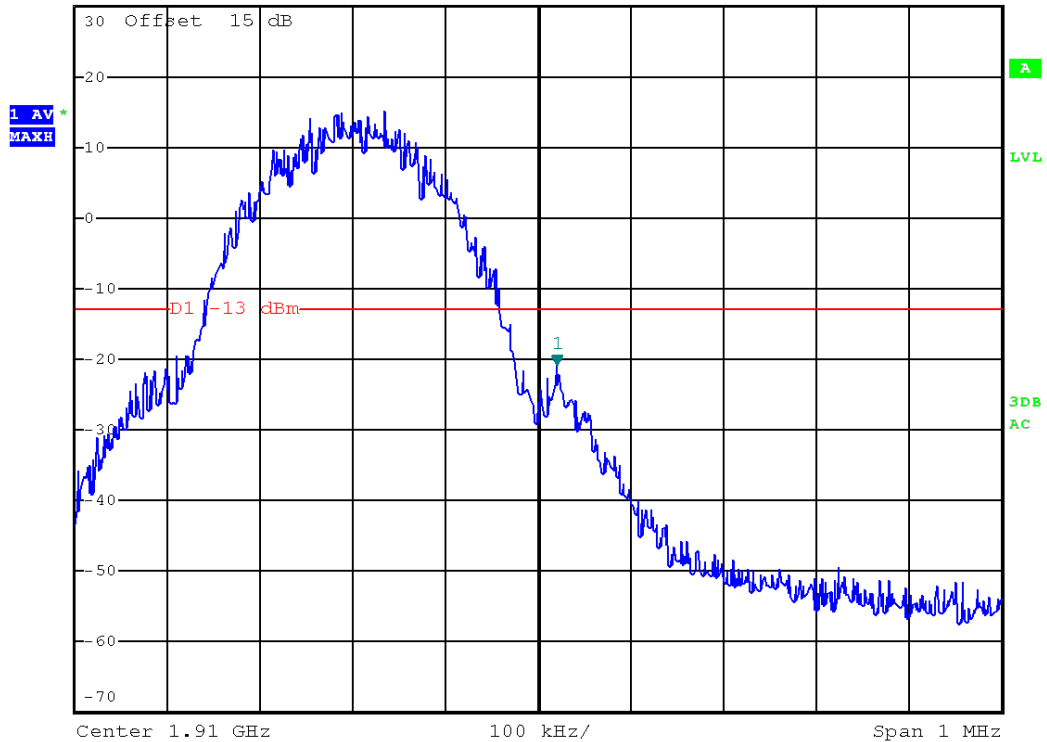
Ref 30 dBm *Att 35 dB *RBW 3 kHz Marker 1 [T1]
*VBW 3 kHz -20.48 dBm
*SWT 300 ms 1.849994000 GHz



Highest Channel



Ref 30 dBm *Att 35 dB *RBW 3 kHz Marker 1 [T1]
*VBW 3 kHz -20.80 dBm
*SWT 300 ms 1.910020000 GHz

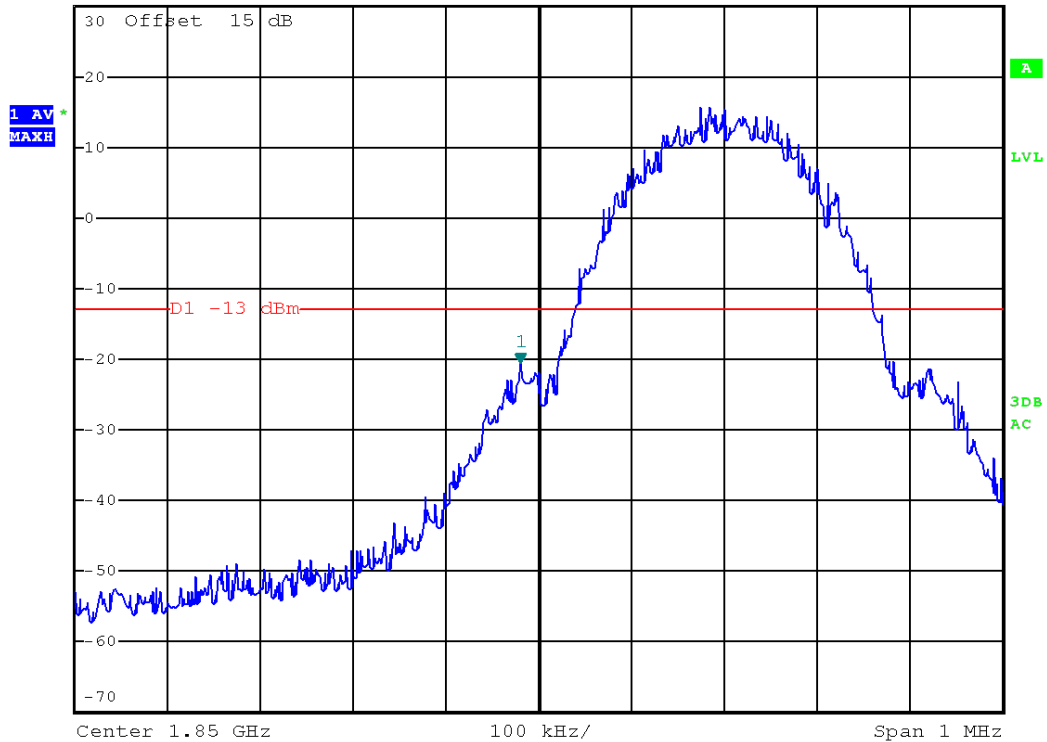


For GSM1900: EGPRS 12

Lowest Channel



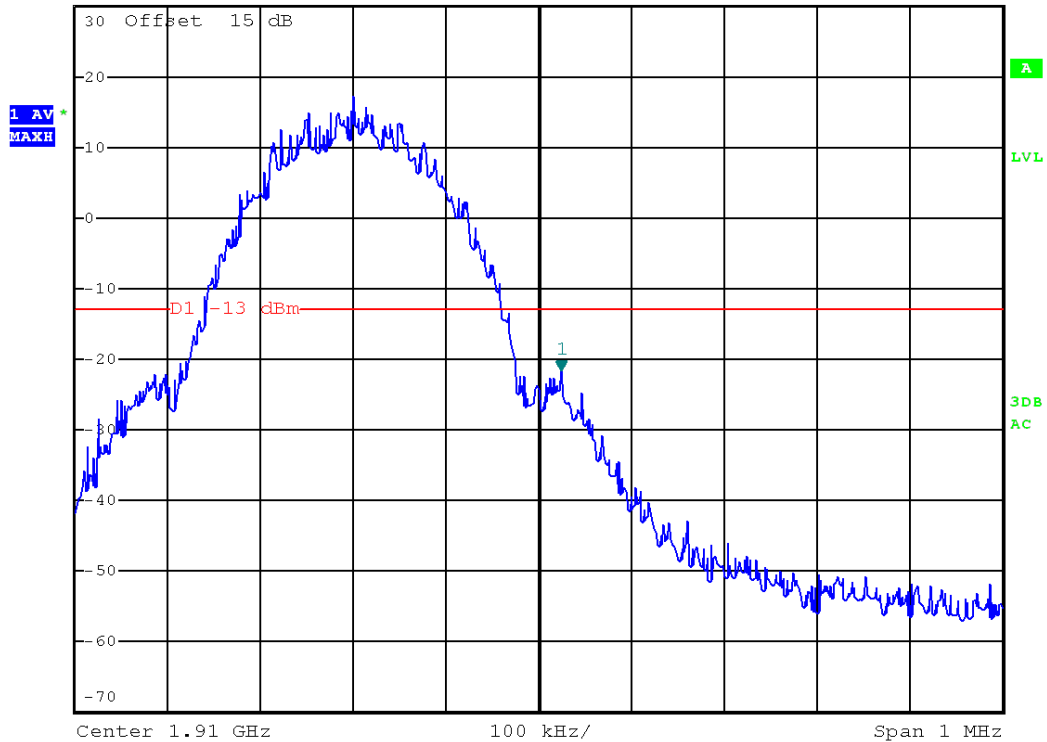
Ref 30 dBm *Att 35 dB *RBW 3 kHz Marker 1 [T1]
*VBW 3 kHz -20.40 dBm
*SWT 300 ms 1.84998000 GHz



Highest Channel



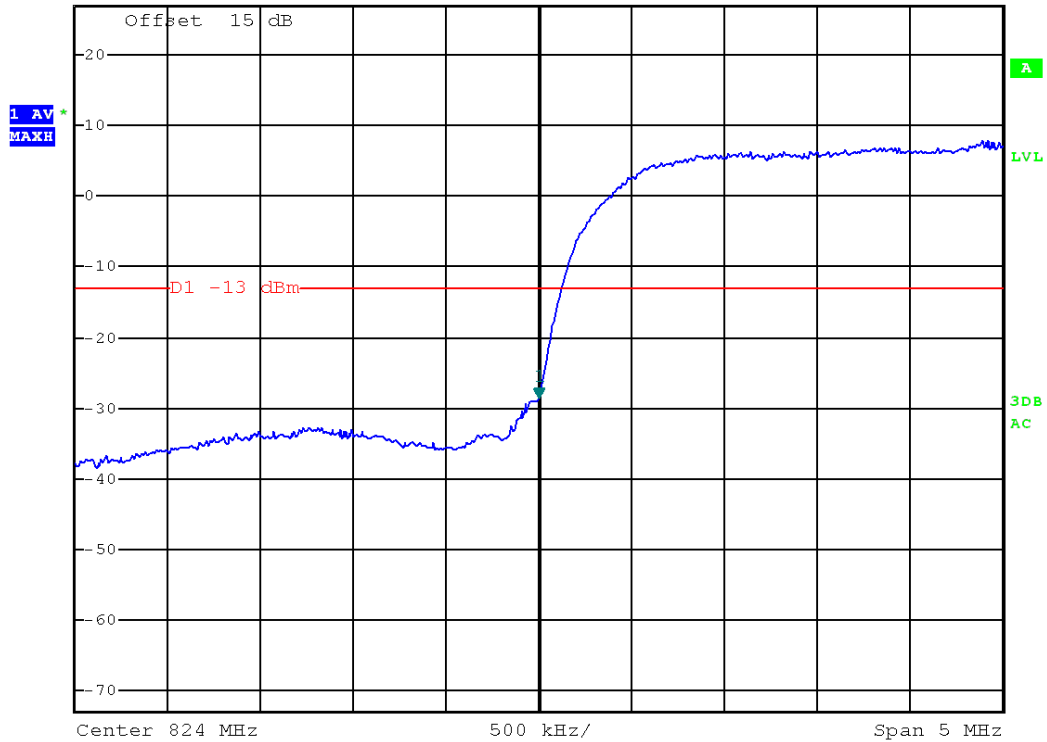
Ref 30 dBm *Att 35 dB *RBW 3 kHz Marker 1 [T1]
*VBW 3 kHz -21.66 dBm
*SWT 300 ms 1.910024000 GHz



For WCDMA Band V: RMC 12.2K
Lowest Channel



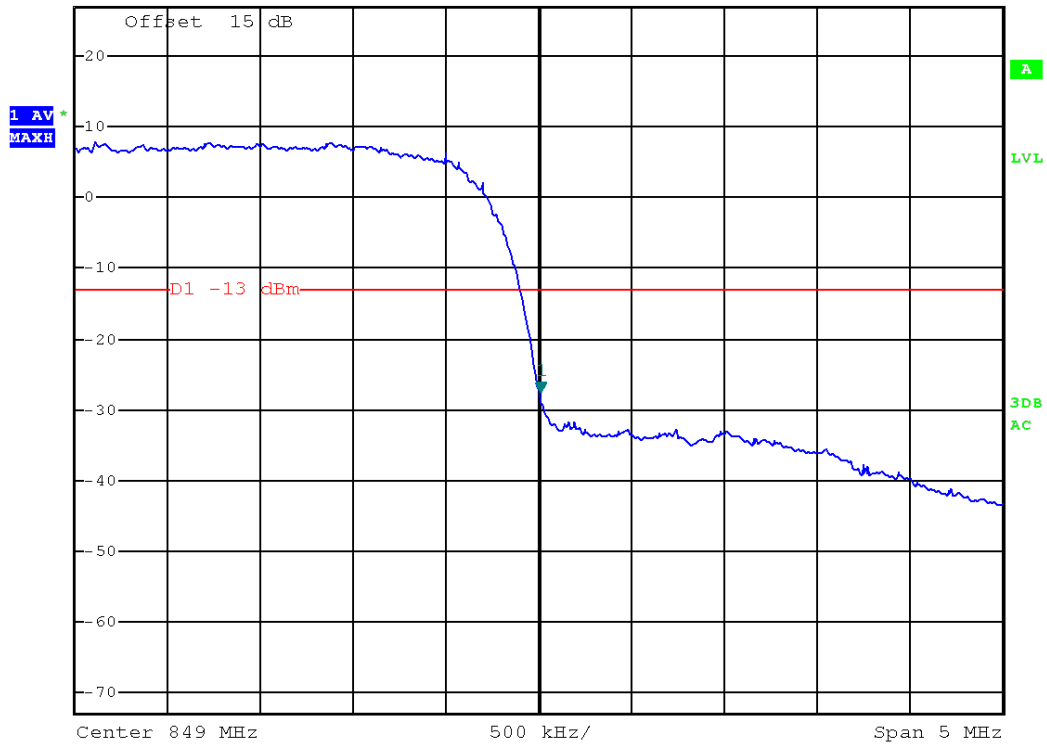
Ref 27 dBm *Att 35 dB *RBW 100 kHz Marker 1 [T1]
*VBW 100 kHz -28.43 dBm
*SWT 300 ms 824.000000000 MHz



Highest Channel



Ref 27 dBm *Att 35 dB *RBW 100 kHz Marker 1 [T1]
*VBW 100 kHz -27.44 dBm
*SWT 300 ms 849.010000000 MHz

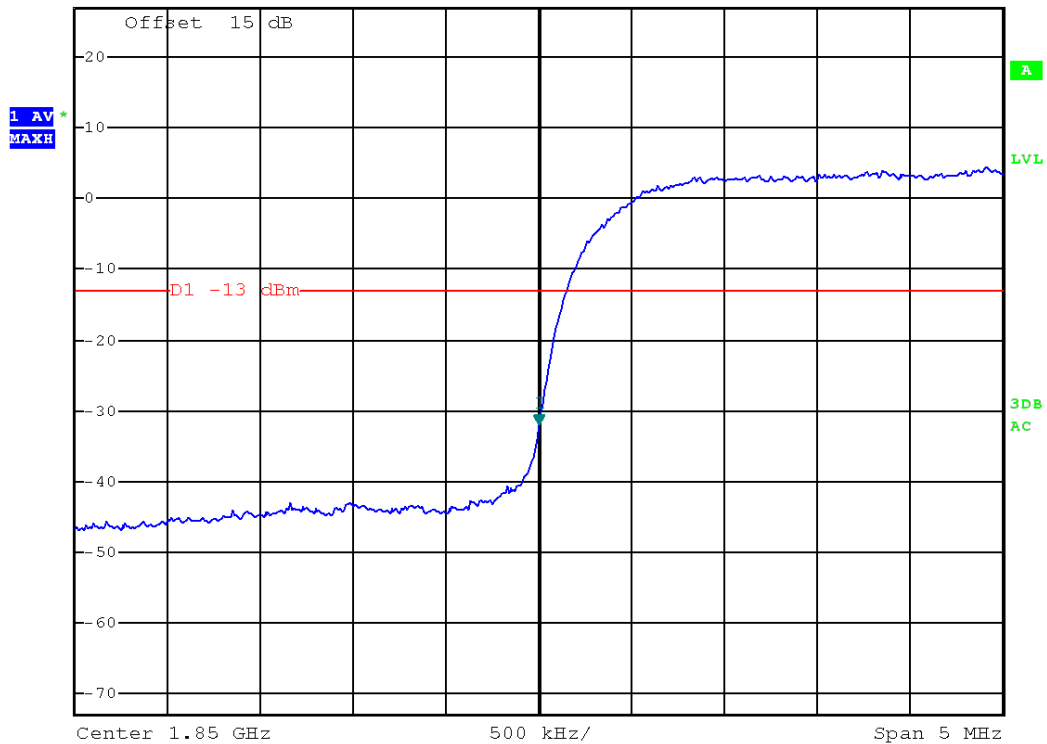


For WCDMA Band II: RMC 12.2K

Lowest Channel



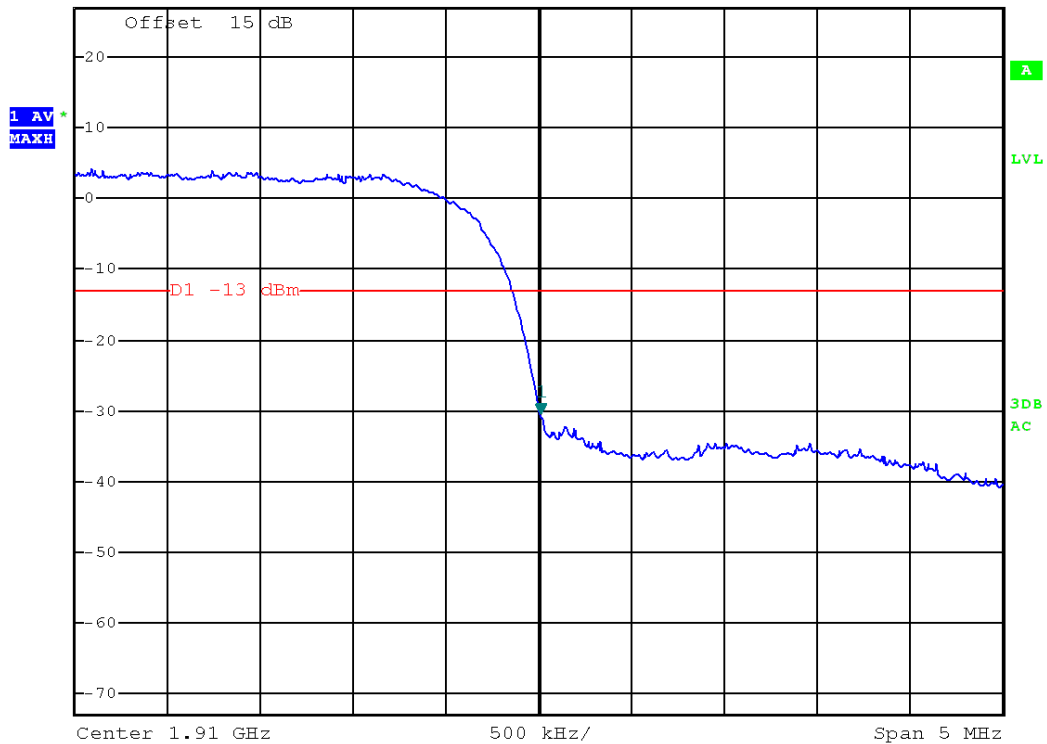
Ref 27 dBm *Att 35 dB *RBW 100 kHz Marker 1 [T1]
*VBW 100 kHz -31.92 dBm
*SWT 300 ms 1.85000000 GHz



Highest Channel



Ref 27 dBm *Att 35 dB *RBW 100 kHz Marker 1 [T1]
*VBW 100 kHz -30.29 dBm
*SWT 300 ms 1.910010000 GHz



4.4 CONDUCTED EMISSION MEASUREMENT

4.4.1 LIMITS

The power of any emission outside of the authorized operating frequency ranges must be attenuated below the transmitter power (P) by a factor of at least $43 + 10 \log (P)$ dB.

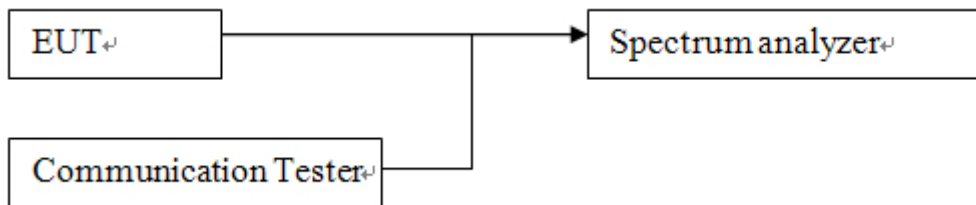
It is measured by means of a calibrated spectrum analyzer and scanned from 30 MHz up to a frequency including its 10th harmonic.

4.4.2 TEST PROCEDURES

Remove the antenna from the EUT and then connect a low attenuation cable from the antenna port to the spectrum.

Set the spectrum analyzer: RBW =1MHz VBW >= RBW, Span = enough to catch the trace. Sweep = auto; Detector Function = Peak. Trace = Max, hold.

4.4.3 TEST SETUP

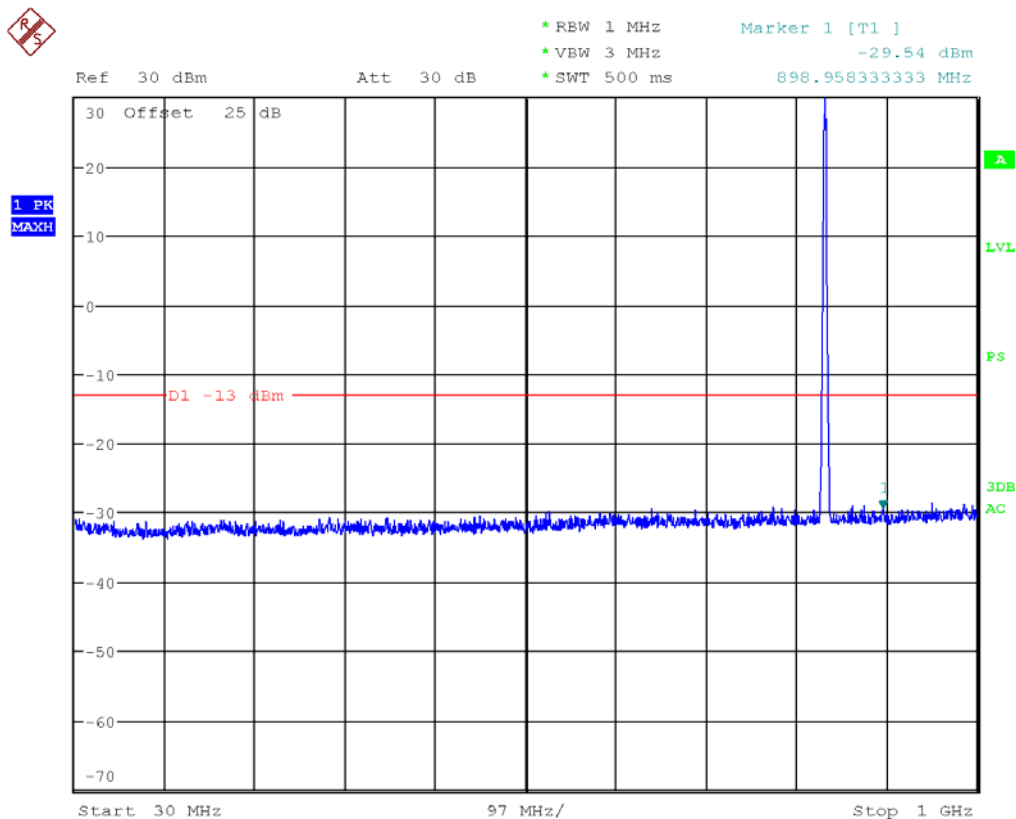


4.4.4 TEST RESULTS

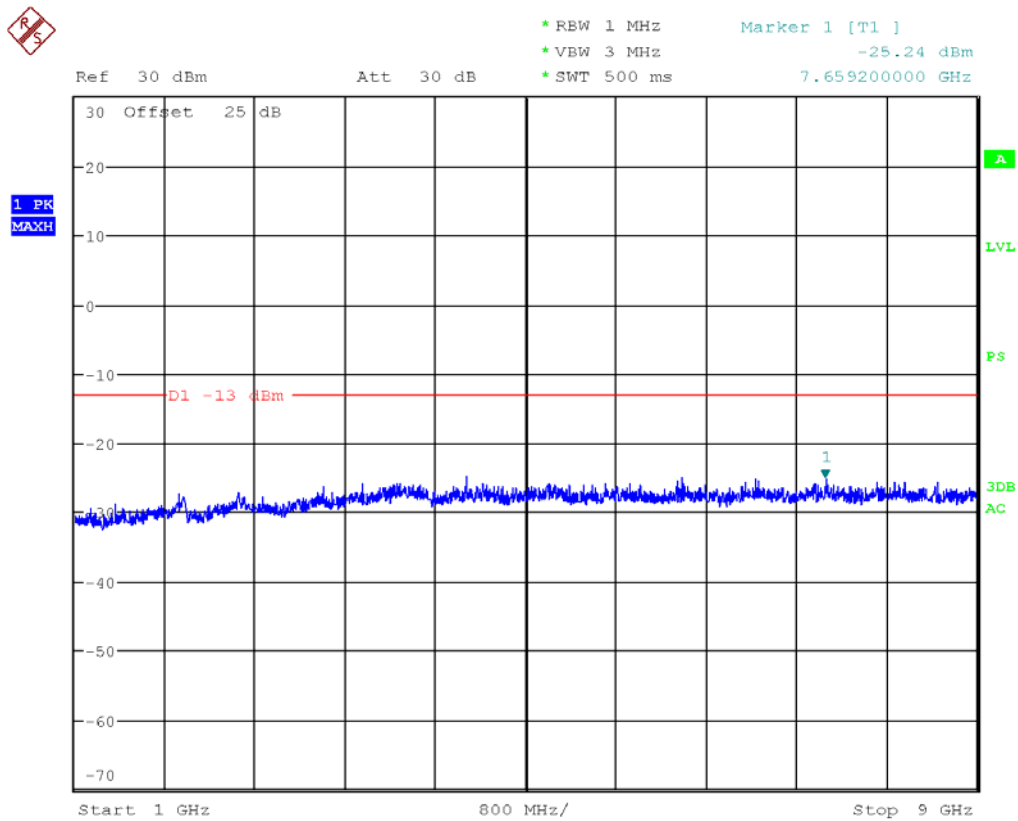
For GSM850: GPRS 8

Middle Channel:

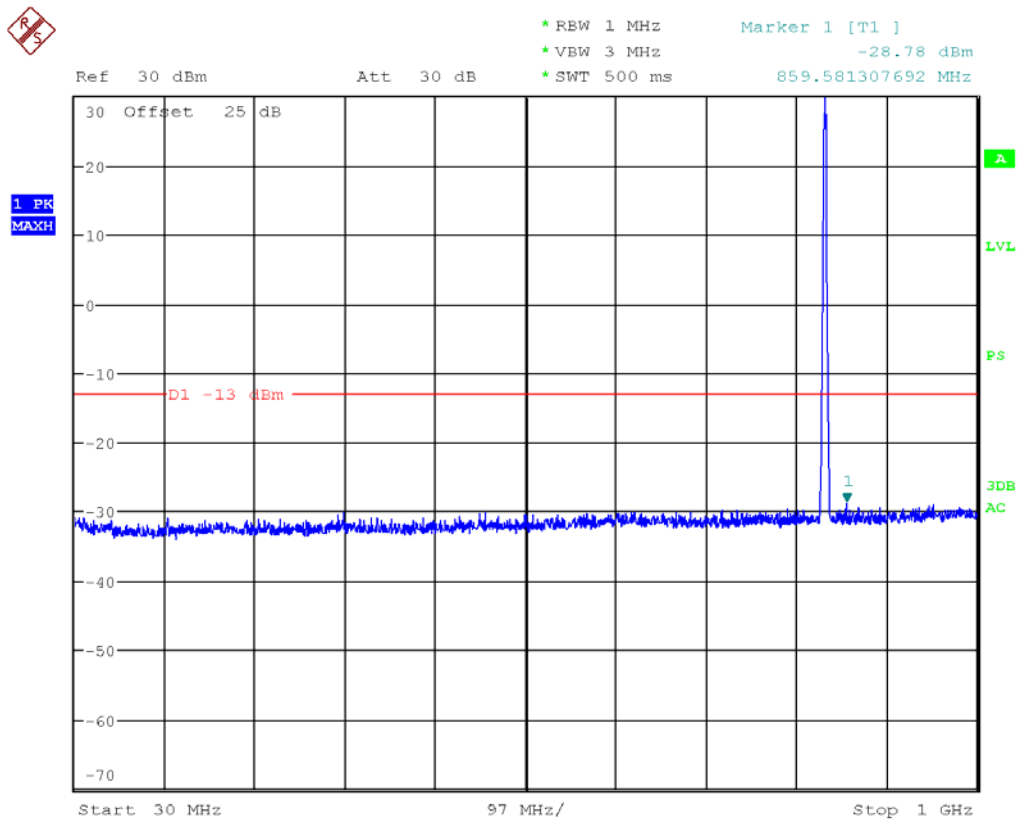
30M to 1GHz



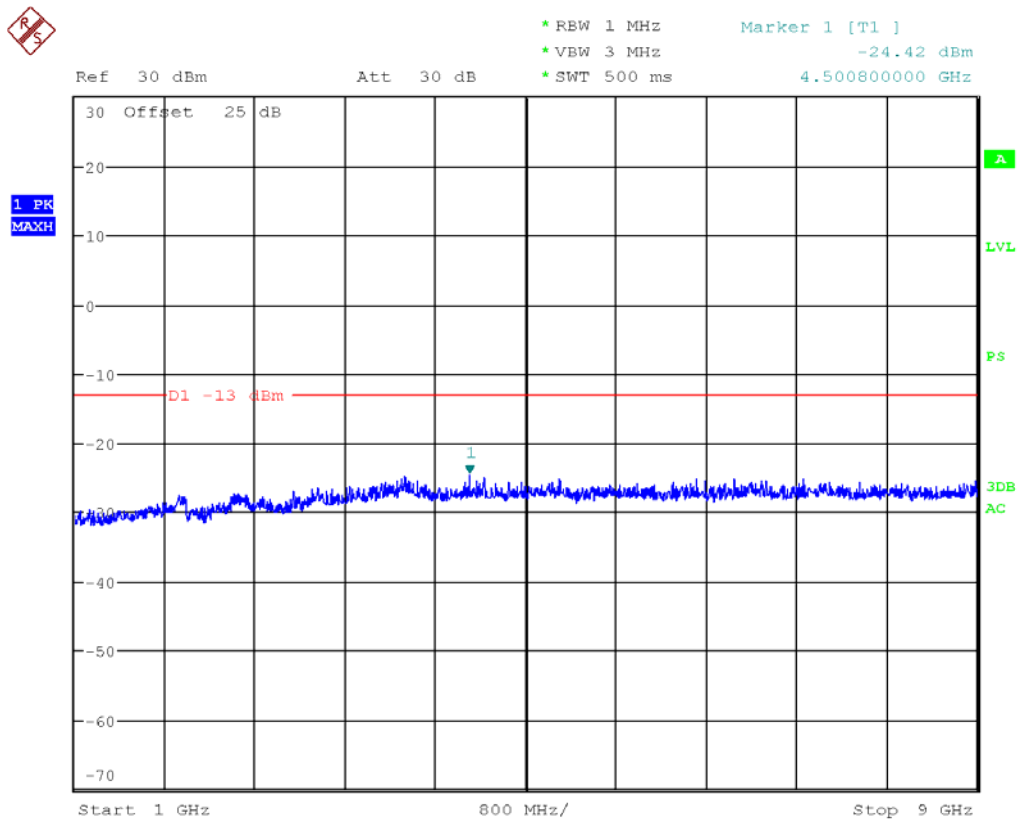
1G to 9GHz



For GSM850: EGPRS 12
Middle Channel:
30M to 1GHz



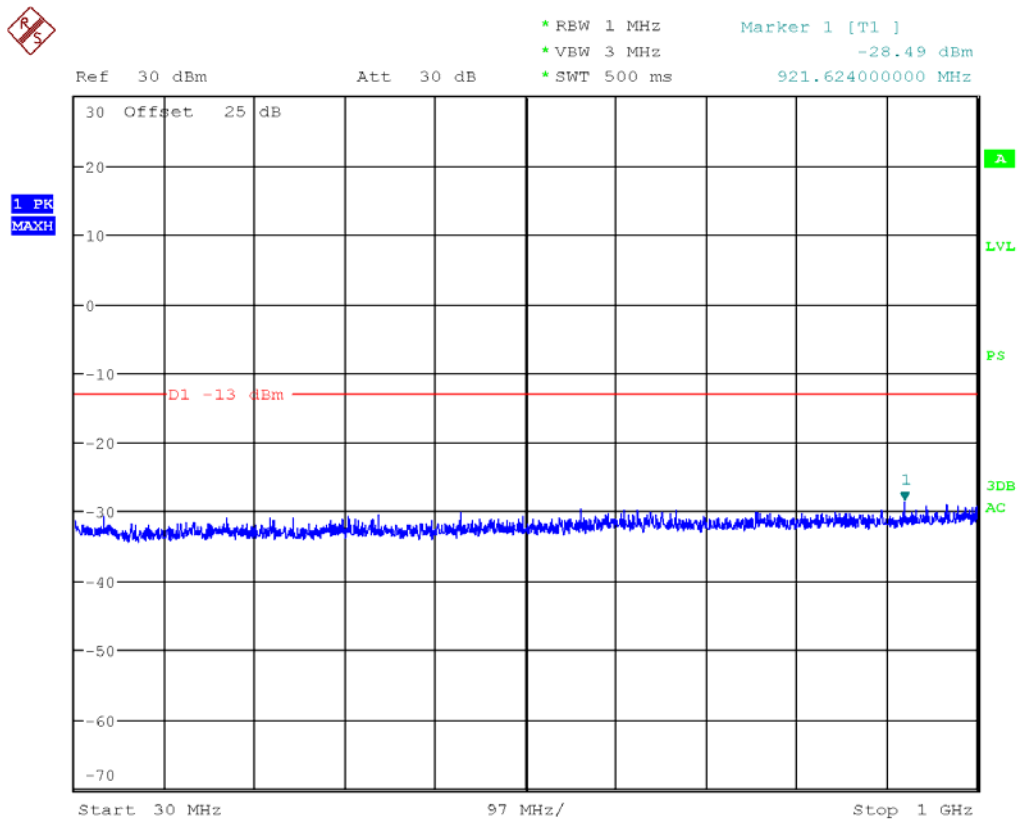
1G to 9GHz



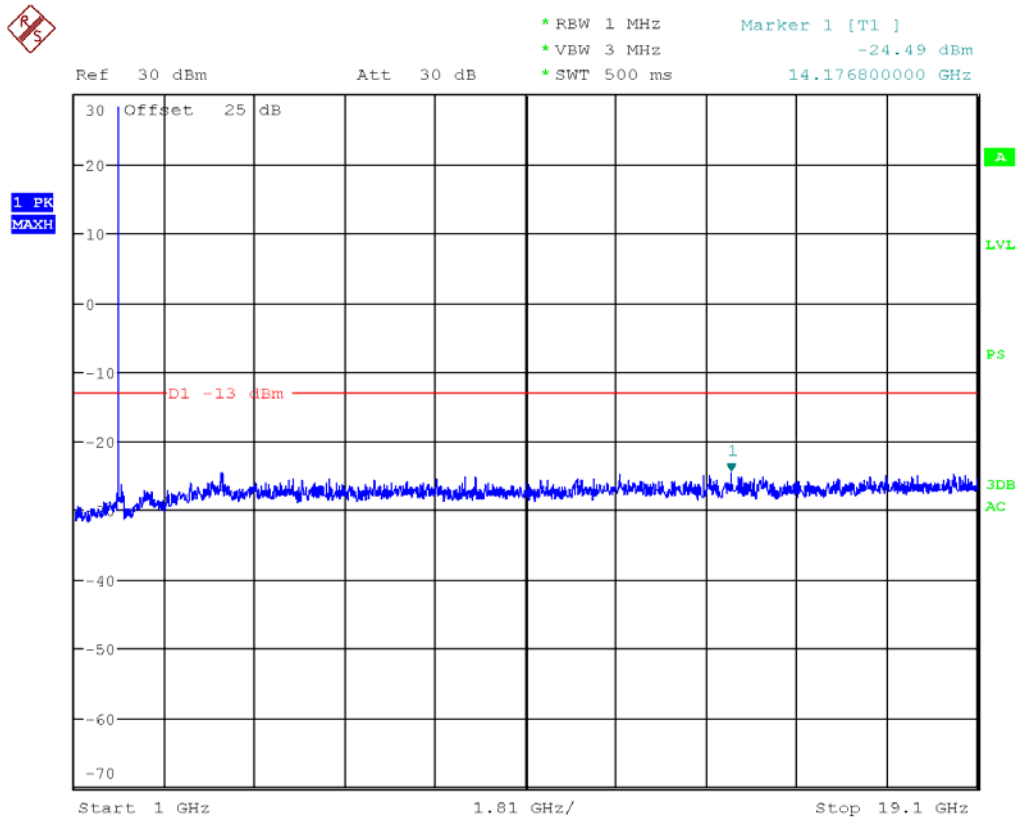
For GSM1900: GPRS 8

Middle Channel:

30M to 1GHz



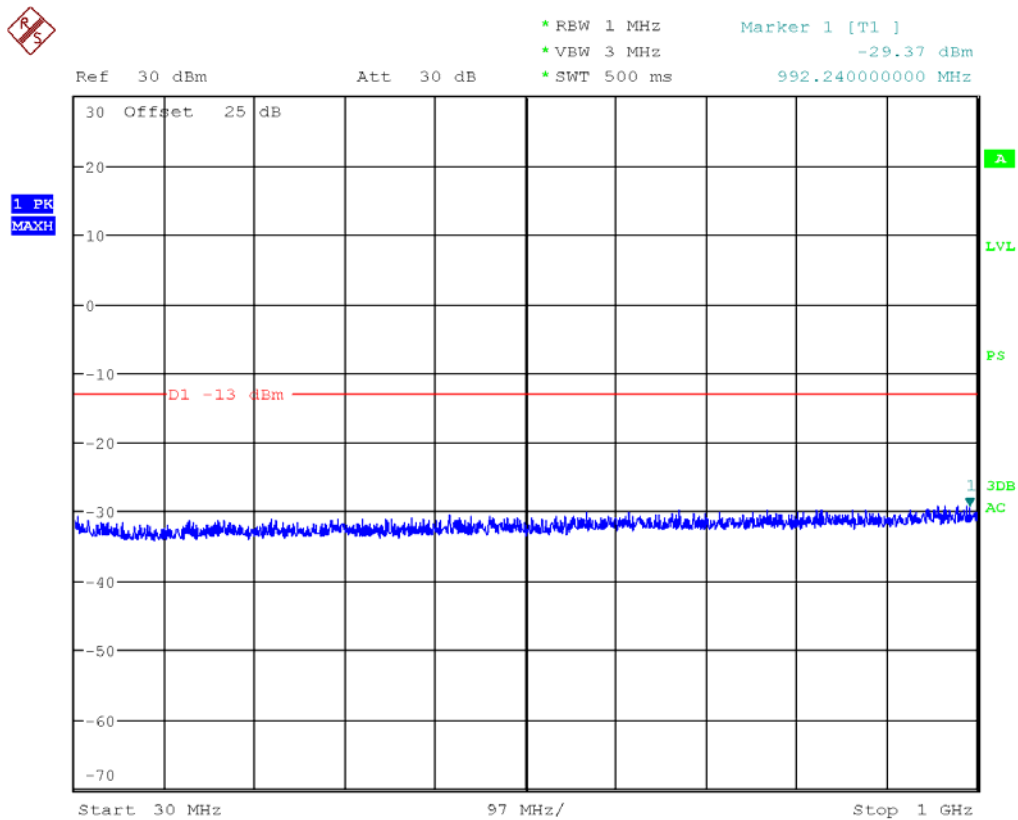
1G to 19GHz



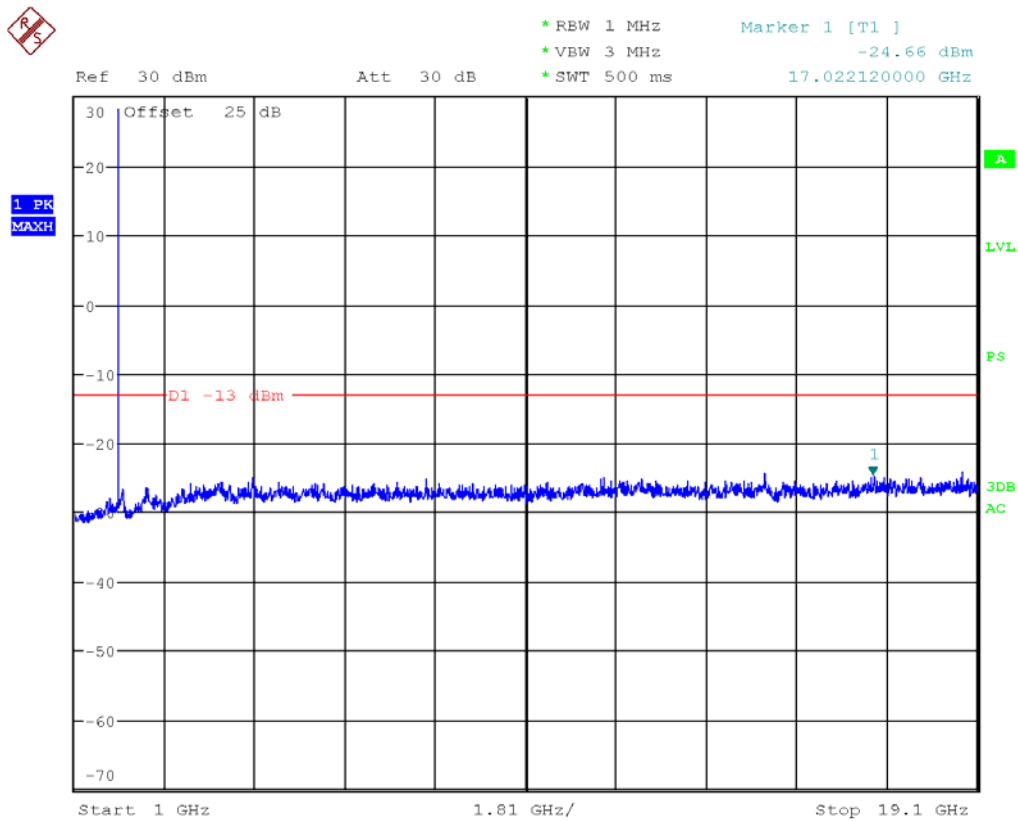
For GSM1900: EGPRS 12

Middle Channel:

30M to 1GHz



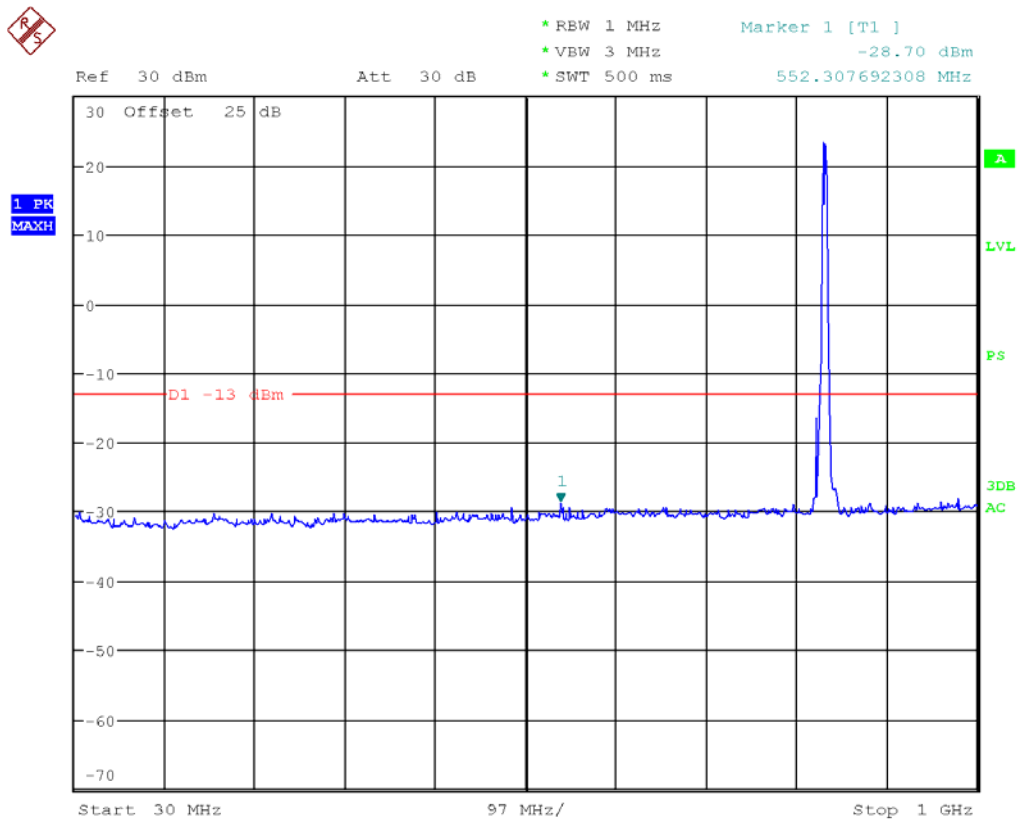
1G to 19GHz



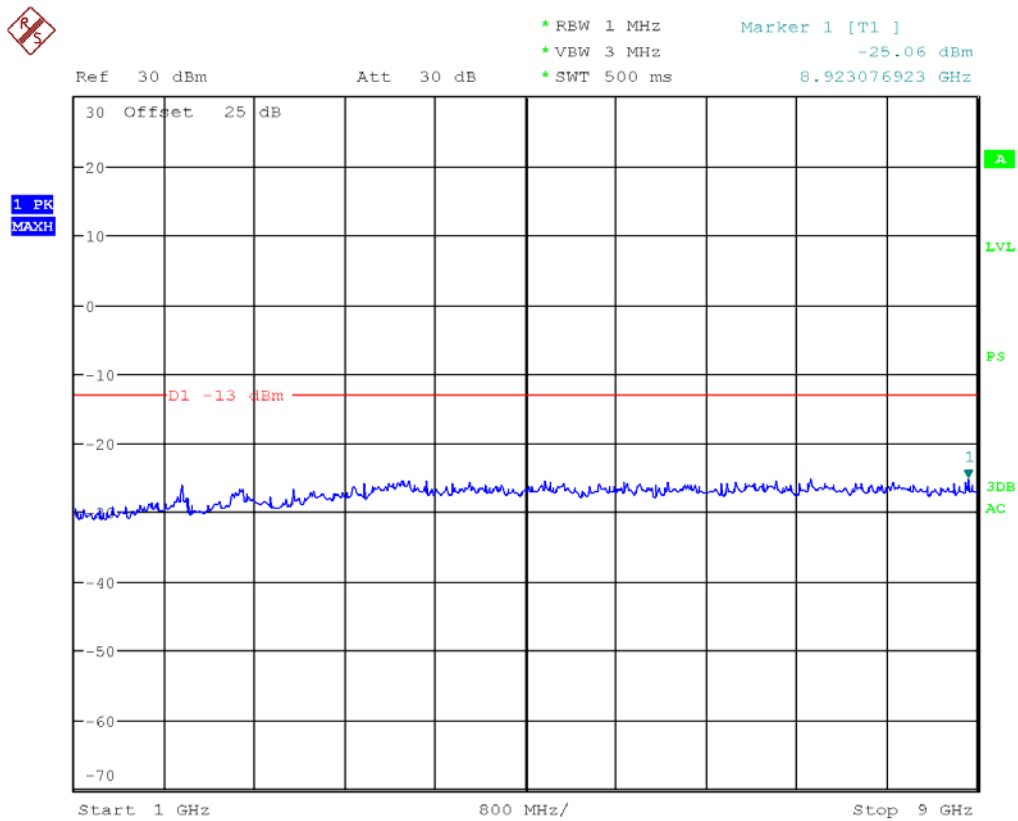
For WCDMA Band V: RMC 12.2K

Middle Channel:

30M to 1GHz



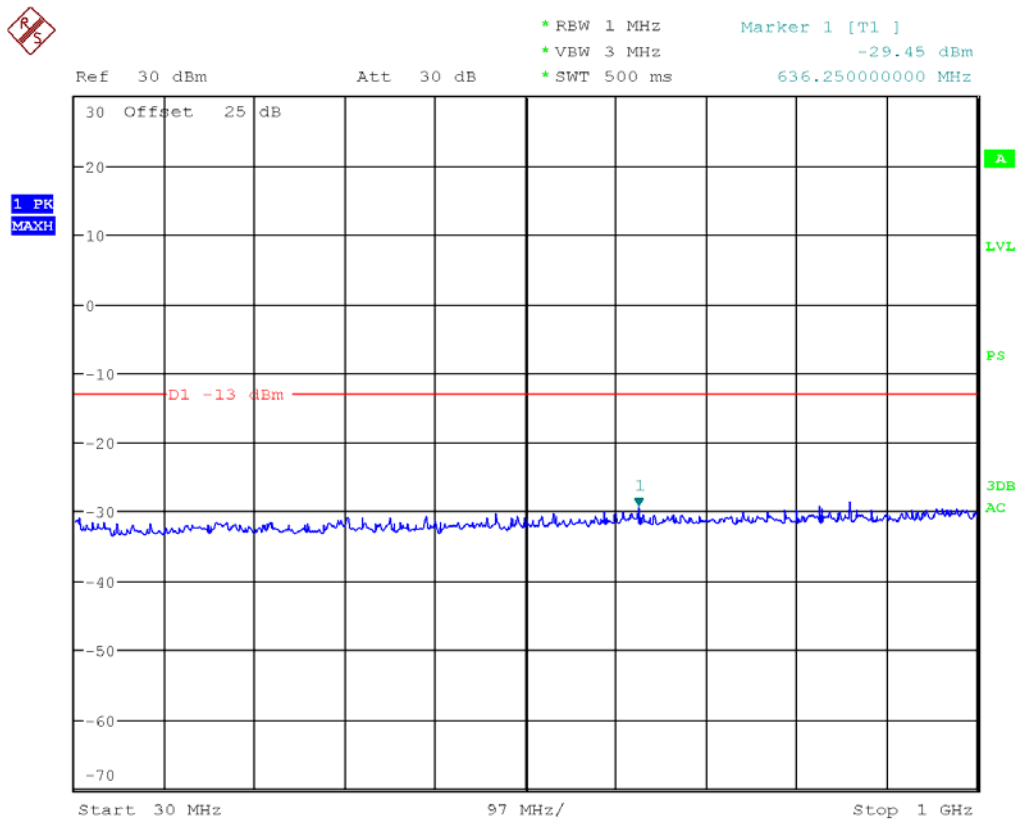
1G to 9GHz



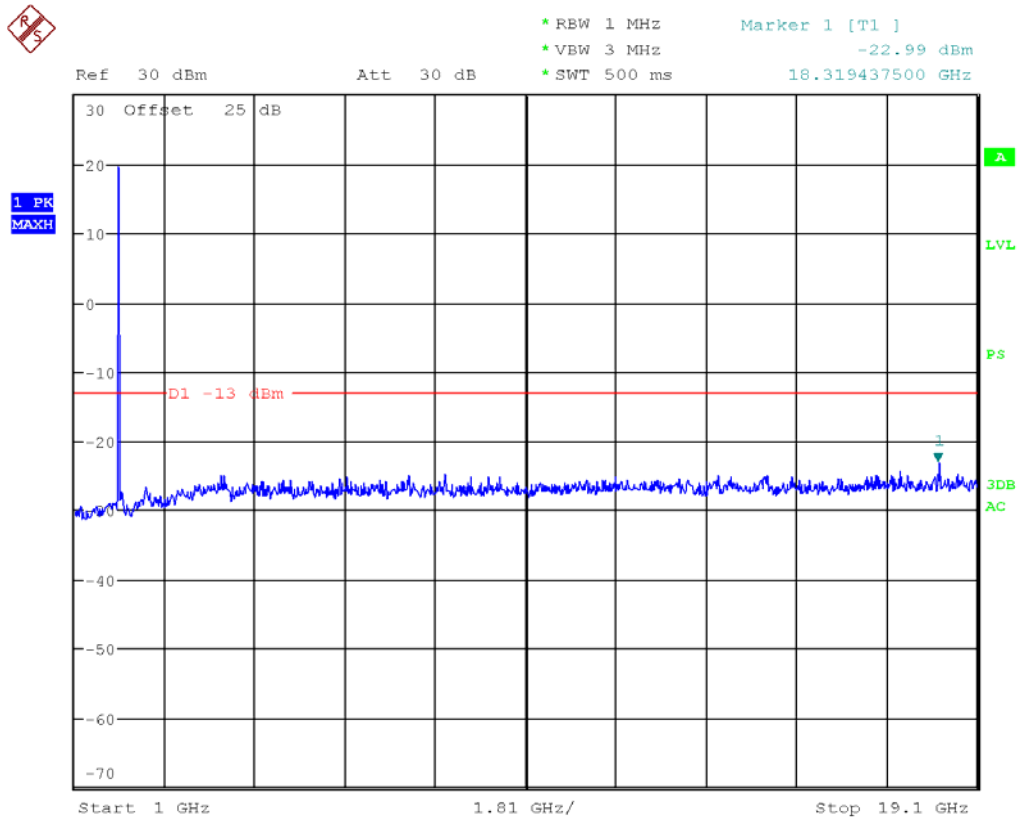
For WCDMA Band II: RMC 12.2K

Middle Channel:

30M to 1GHz



1G to 19GHz



4.5 FIELD STRENGTH OF SPURIOUS RADIATION

4.5.1 LIMITS

The power of any emission outside of the authorized operating frequency ranges must be attenuated below the transmitter power (P) by a factor of at least $43 + 10 \log (P)$ dB. The spectrum is scanned from 30 MHz up to a frequency including its 10th harmonic.

4.5.2 TEST PROCEDURES

Procedure

1. The EUT was placed on a turntable with 1.0 meter height in a fully anechoic chamber.
2. The EUT was set at 3 meters from the receiving antenna, which was mounted on the antenna tower.
3. The table was rotated 360 degrees to determine the position of the highest radiated power.
4. The height of the receiving antenna is adjusted to look for the maximum ERP/EIRP.
5. Taking the record of maximum ERP/EIRP.
6. A dipole antenna was substituted in place of the EUT and was driven by a signal generator.
7. The conducted power at the terminal of the dipole antenna is measured.
8. Repeat step 3 to step 5 to get the maximum ERP/EIRP of the substitution antenna.
9. $ERP/EIRP = P_g \text{ (dBm)} - \text{cable loss (dB)} + \text{antenna gain (dBi)}$. P_g is the generator output power

Remark:

The maximum power levels are GPRS multi-slot class 8 mode for GMSK link, EDGE multi-slot class 12 mode for 8PSK link for GSM850, EDGE multi-slot class 12 mode for 8PSK link for GSM1900, RMC 12.2Kbps mode for WCDMA Band V and WCDMA Band II, only these modes were used for all tests.

Below 1GHz Set the spectrum analyzer: RBW =100KHz VBW \geq RBW , Span = enough to catch the trace. Sweep = auto; Detector Function = Peak. Trace = Max,hold.

Above 1GHz Set the spectrum analyzer: RBW =1MHz VBW \geq RBW , Span = enough to catch the trace. Sweep = auto; Detector Function = Peak. Trace = Max,hold.

The worst case emissions were reported.

4.5.3 TEST SETUP

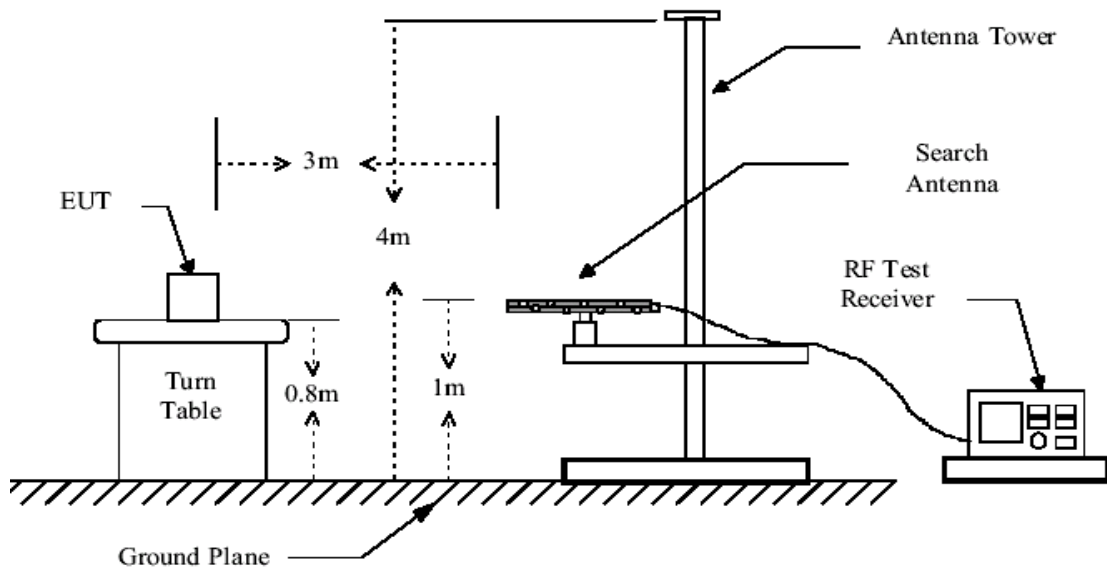


Figure 1. 30MHz to 1GHz radiated emissions test configuration

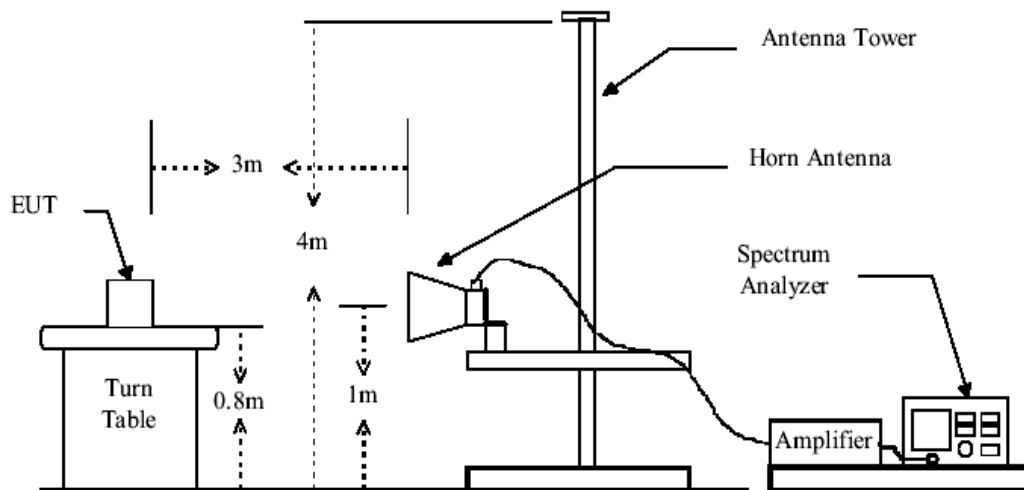


Figure 2. Above 1GHz radiated emissions test configuration

4.5.4 TEST RESULTS

Project No.:	ZJ00053634	Polarziation:	Vertical				
Standard:	FCC PART 22 24 27	Power Source:	DC 7.4V				
Test item:	Radiation Test	Date:	2014-11-20				
Temp./Hum.(%RH):	23.5/56%RH	Time:	11:05:07				
EUT:	S9III Plus GNSS	Distance:	3m				
Model:	MULTI-FREQUENCY GNSS RECEIVER	Test Result:	Pass				
Note: GPRS850 class 8 channel 189							
No.	Frequency (MHz)	Reading (dBm)	Correct Factor(dB)	Result (dBm)	Limit (dBm)	Margin (dB)	Remark
1	151.3521	-79.69	31.45	-48.24	-13.00	-35.24	peak
2	224.2973	-81.26	36.38	-44.88	-13.00	-31.88	peak
3	445.2115	-88.95	42.88	-46.07	-13.00	-33.07	peak
4	721.8555	-81.75	42.53	-39.22	-13.00	-26.22	peak
5	898.7322	-79.27	43.33	-35.94	-13.00	-22.94	peak
6	956.0397	-79.70	43.39	-36.31	-13.00	-23.31	peak

Project No.:	ZJ00053634	Polarziation:	Vertical				
Standard:	FCC PART 22 24 27	Power Source:	DC 7.4V				
Test item:	Radiation Test	Date:	2014-12-1				
Temp./Hum.(%RH):	23.5/56%RH	Time:	14:24:04				
EUT:	S9III Plus GNSS	Distance:	3m				
Model:	MULTI-FREQUENCY GNSS RECEIVER	Test Result:	Pass				
Note: GPRS850 class 8 channel 189							
No.	Frequency (MHz)	Reading (dBm)	Correct Factor(dB)	Result (dBm)	Limit (dBm)	Margin (dB)	Remark
1	1845.384	-69.22	27.86	-41.36	-13.00	-28.36	peak
2	2169.860	-70.62	29.52	-41.10	-13.00	-28.10	peak
3	3140.518	-69.87	33.19	-36.68	-13.00	-23.68	peak
4	4061.023	-70.51	34.59	-35.92	-13.00	-22.92	peak
5	6109.796	-70.66	39.38	-31.28	-13.00	-18.28	peak
6	8069.307	-69.99	40.43	-29.56	-13.00	-16.56	peak

Project No.:	ZJ00053634	Polarziation:	Horizontal				
Standard:	FCC PART 22 24 27	Power Source:	DC 7.4V				
Test item:	Radiation Test	Date:	2014-11-20				
Temp./Hum.(%RH):	23.5/56%RH	Time:	11:09:17				
EUT:	S9III Plus GNSS	Distance:	3m				
Model:	MULTI-FREQUENCY GNSS RECEIVER	Test Result:	Pass				
Note: GPRS850 class 8 channel 189							
No.	Frequency (MHz)	Reading (dBm)	Correct Factor(dB)	Result (dBm)	Limit (dBm)	Margin (dB)	Remark
1	221.7906	-77.53	36.29	-41.24	-13.00	-28.24	peak
2	266.9806	-88.65	37.92	-50.73	-13.00	-37.73	peak
3	455.3322	-89.54	43.16	-46.38	-13.00	-33.38	peak
4	620.2354	-88.19	45.55	-42.64	-13.00	-29.64	peak
5	656.0874	-87.66	45.29	-42.37	-13.00	-29.37	peak
6	898.7322	-77.70	43.33	-34.37	-13.00	-21.37	peak

Project No.:	ZJ00053634	Polarziation:	Horizontal				
Standard:	FCC PART 22 24 27	Power Source:	DC 7.4V				
Test item:	Radiation Test	Date:	2014-12-1				
Temp./Hum.(%RH):	23.5/56%RH	Time:	14:28:13				
EUT:	S9III Plus GNSS	Distance:	3m				
Model:	MULTI-FREQUENCY GNSS RECEIVER	Test Result:	Pass				
Note: GPRS850 class 8 channel 189							
No.	Frequency (MHz)	Reading (dBm)	Correct Factor(dB)	Result (dBm)	Limit (dBm)	Margin (dB)	Remark
1	1832.434	-70.15	27.75	-42.40	-13.00	-29.40	peak
2	2087.421	-70.84	29.29	-41.55	-13.00	-28.55	peak
3	3196.300	-69.56	33.32	-36.24	-13.00	-23.24	peak
4	3502.737	-70.47	34.05	-36.42	-13.00	-23.42	peak
5	6601.914	-70.52	40.14	-30.38	-13.00	-17.38	peak
6	7058.709	-71.29	40.20	-31.09	-13.00	-18.09	peak

Project No.:	ZJ00053634	Polarziation:	Vertical				
Standard:	FCC PART 22 24 27	Power Source:	DC 7.4V				
Test item:	Radiation Test	Date:	2014-11-20				
Temp./Hum.(%RH):	23.5/56%RH	Time:	11:19:24				
EUT:	S9III Plus GNSS	Distance:	3m				
Model:	MULTI-FREQUENCY GNSS RECEIVER E	Test Result:	Pass				
Note: EGPRS850 class 12 channel 189							
No.	Frequency (MHz)	Reading (dBm)	Correct Factor(dB)	Result (dBm)	Limit (dBm)	Margin (dB)	Remark
1	151.3521	-78.04	31.45	-46.59	-13.00	-33.59	peak
2	224.2973	-79.49	36.38	-43.11	-13.00	-30.11	peak
3	393.4370	-82.36	36.49	-45.87	-13.00	-32.87	peak
4	620.2354	-88.59	45.55	-43.04	-13.00	-30.04	peak
5	721.8555	-82.26	42.53	-39.73	-13.00	-26.73	peak
6	956.0397	-79.43	43.39	-36.04	-13.00	-23.04	peak

Project No.:	ZJ00053634	Polarziation:	Vertical				
Standard:	FCC PART 22 24 27	Power Source:	DC 7.4V				
Test item:	Radiation Test	Date:	2014-12-1				
Temp./Hum.(%RH):	23.5/56%RH	Time:	14:36:32				
EUT:	S9III Plus GNSS	Distance:	3m				
Model:	MULTI-FREQUENCY GNSS RECEIVER	Test Result:	Pass				
Note: EGPRS850 class 12 channel 189							
No.	Frequency (MHz)	Reading (dBm)	Correct Factor(dB)	Result (dBm)	Limit (dBm)	Margin (dB)	Remark
1	1904.803	-69.53	28.31	-41.22	-13.00	-28.22	peak
2	3140.518	-69.76	33.19	-36.57	-13.00	-23.57	peak
3	4046.749	-71.15	34.55	-36.60	-13.00	-23.60	peak
4	5016.370	-70.64	36.41	-34.23	-13.00	-21.23	peak
5	6814.484	-69.46	40.16	-29.30	-13.00	-16.30	peak
6	8597.307	-70.87	41.03	-29.84	-13.00	-16.84	peak

Project No.:	ZJ00053634	Polarziation:	Horizontal				
Standard:	FCC PART 22 24 27	Power Source:	DC 7.4V				
Test item:	Radiation Test	Date:	2014-11-20				
Temp./Hum.(%RH):	23.5/56%RH	Time:	11:14:49				
EUT:	S9III Plus GNSS	Distance:	3m				
Model:	MULTI-FREQUENCY GNSS RECEIVER E	Test Result:	Pass				
Note:	EGPRS850 class 12 channel 189						
No.	Frequency (MHz)	Reading (dBm)	Correct Factor(dB)	Result (dBm)	Limit (dBm)	Margin (dB)	Remark
1	223.0404	-77.96	36.34	-41.62	-13.00	-28.62	peak
2	332.3990	-86.53	35.29	-51.24	-13.00	-38.24	peak
3	450.2434	-90.11	43.66	-46.45	-13.00	-33.45	peak
4	616.7597	-87.70	45.18	-42.52	-13.00	-29.52	peak
5	864.0656	-82.02	43.03	-38.99	-13.00	-25.99	peak
6	898.7322	-82.69	43.33	-39.36	-13.00	-26.36	peak

Project No.:	ZJ00053634	Polarziation:	Horizontal				
Standard:	FCC PART 22 24 27	Power Source:	DC 7.4V				
Test item:	Radiation Test	Date:	2014-12-1				
Temp./Hum.(%RH):	23.5/56%RH	Time:	14:32:23				
EUT:	S9III Plus GNSS	Distance:	3m				
Model:	MULTI-FREQUENCY GNSS RECEIVER	Test Result:	Pass				
Note:	EGPRS850 class 12 channel 189						
No.	Frequency (MHz)	Reading (dBm)	Correct Factor(dB)	Result (dBm)	Limit (dBm)	Margin (dB)	Remark
1	1945.474	-70.19	28.63	-41.56	-13.00	-28.56	peak
2	3140.518	-69.29	33.19	-36.10	-13.00	-23.10	peak
3	3357.815	-69.45	33.70	-35.75	-13.00	-22.75	peak
4	5634.486	-70.50	37.55	-32.95	-13.00	-19.95	peak
5	6306.520	-70.40	39.76	-30.64	-13.00	-17.64	peak
6	7708.257	-70.66	40.34	-30.32	-13.00	-17.32	peak

Project No.:	ZJ00053634	Polarziation:	Vertical				
Standard:	FCC PART 22 24 27	Power Source:	DC 7.4V				
Test item:	Radiation Test	Date:	2014-11-20				
Temp./Hum.(%RH):	23.5/56%RH	Time:	11:31:46				
EUT:	S9III Plus GNSS	Distance:	3m				
Model:	MULTI-FREQUENCY GNSS RECEIVER	Test Result:	Pass				
Note:	GPRS1900 class 8 channel 661						
No.	Frequency (MHz)	Reading (dBm)	Correct Factor(dB)	Result (dBm)	Limit (dBm)	Margin (dB)	Remark
1	90.7613	-80.02	22.52	-57.50	-13.00	-44.50	peak
2	151.3521	-80.83	31.45	-49.38	-13.00	-36.38	peak
3	224.2973	-83.21	36.38	-46.83	-13.00	-33.83	peak
4	450.2434	-90.40	43.66	-46.74	-13.00	-33.74	peak
5	656.0874	-87.35	45.29	-42.06	-13.00	-29.06	peak
6	776.5634	-87.56	43.42	-44.14	-13.00	-31.14	peak

Project No.:	ZJ00053634	Polarziation:	Vertical				
Standard:	FCC PART 22 24 27	Power Source:	DC 7.4V				
Test item:	Radiation Test	Date:	2014-12-1				
Temp./Hum.(%RH):	23.5/56%RH	Time:	14:47:40				
EUT:	S9III Plus GNSS	Distance:	3m				
Model:	MULTI-FREQUENCY GNSS RECEIVER	Test Result:	Pass				
Note:	GPRS1900 class 8 channel 661						
No.	Frequency (MHz)	Reading (dBm)	Correct Factor(dB)	Result (dBm)	Limit (dBm)	Margin (dB)	Remark
1	2474.359	-67.71	30.38	-37.33	-13.00	-24.33	peak
2	3541.671	-69.14	34.08	-35.06	-13.00	-22.06	peak
3	6921.603	-70.25	40.18	-30.07	-13.00	-17.07	peak
4	10385.925	-69.75	43.45	-26.30	-13.00	-13.30	peak
5	11852.914	-70.10	45.95	-24.15	-13.00	-11.15	peak
6	17954.040	-71.20	51.30	-19.90	-13.00	-6.90	peak

Project No.:	ZJ00053634	Polarziation:	Horizontal				
Standard:	FCC PART 22 24 27	Power Source:	DC 7.4V				
Test item:	Radiation Test	Date:	2014-11-20				
Temp./Hum.(%RH):	23.5/56%RH	Time:	11:41:23				
EUT:	S9III Plus GNSS	Distance:	3m				
Model:	MULTI-FREQUENCY GNSS RECEIVER	Test Result:	Pass				
Note:	GPRS1900 class 8 channel 661						
No.	Frequency (MHz)	Reading (dBm)	Correct Factor(dB)	Result (dBm)	Limit (dBm)	Margin (dB)	Remark
1	224.2973	-80.60	36.38	-44.22	-13.00	-31.22	peak
2	265.4846	-88.94	37.87	-51.07	-13.00	-38.07	peak
3	457.8983	-88.94	42.91	-46.03	-13.00	-33.03	peak
4	634.3348	-87.77	45.78	-41.99	-13.00	-28.99	peak
5	659.7844	-87.66	45.27	-42.39	-13.00	-29.39	peak
6	798.6924	-88.27	44.37	-43.90	-13.00	-30.90	peak

Project No.:	ZJ00053634	Polarziation:	Horizontal				
Standard:	FCC PART 22 24 27	Power Source:	DC 7.4V				
Test item:	Radiation Test	Date:	2014-12-1				
Temp./Hum.(%RH):	23.5/56%RH	Time:	14:42:04				
EUT:	S9III Plus GNSS	Distance:	3m				
Model:	MULTI-FREQUENCY GNSS RECEIVER	Test Result:	Pass				
Note:	GPRS1900 class 8 channel 661						
No.	Frequency (MHz)	Reading (dBm)	Correct Factor(dB)	Result (dBm)	Limit (dBm)	Margin (dB)	Remark
1	2147.752	-69.44	29.46	-39.98	-13.00	-26.98	peak
2	4656.577	-70.06	36.02	-34.04	-13.00	-21.04	peak
3	7642.609	-69.85	40.33	-29.52	-13.00	-16.52	peak
4	12078.758	-70.13	46.28	-23.85	-13.00	-10.85	peak
5	16965.660	-70.21	47.44	-22.77	-13.00	-9.77	peak
6	18382.671	-70.91	51.20	-19.71	-13.00	-6.71	peak

Project No.:	ZJ00053634	Polarziation:	Vertical				
Standard:	FCC PART 22 24 27	Power Source:	DC 7.4V				
Test item:	Radiation Test	Date:	2014-11-20				
Temp./Hum.(%RH):	23.5/56%RH	Time:	11:26:50				
EUT:	S9III Plus GNSS	Distance:	3m				
Model:	MULTI-FREQUENCY GNSS RECEIVER E	Test Result:	Pass				
Note: EGPRS1900 class 12 channel 661							
No.	Frequency (MHz)	Reading (dBm)	Correct Factor(dB)	Result (dBm)	Limit (dBm)	Margin (dB)	Remark
1	111.1118	-84.64	26.48	-58.16	-13.00	-45.16	peak
2	151.3521	-79.21	31.45	-47.76	-13.00	-34.76	peak
3	224.2973	-81.30	36.38	-44.92	-13.00	-31.92	peak
4	269.9982	-88.43	38.03	-50.40	-13.00	-37.40	peak
5	452.7807	-89.49	43.41	-46.08	-13.00	-33.08	peak
6	663.5027	-87.50	45.24	-42.26	-13.00	-29.26	peak

Project No.:	ZJ00053634	Polarziation:	Vertical				
Standard:	FCC PART 22 24 27	Power Source:	DC 7.4V				
Test item:	Radiation Test	Date:	2014-12-1				
Temp./Hum.(%RH):	23.5/56%RH	Time:	14:56:24				
EUT:	S9III Plus GNSS	Distance:	3m				
Model:	MULTI-FREQUENCY GNSS RECEIVER E	Test Result:	Pass				
Note: EGPRS1900 class 12 channel 661							
No.	Frequency (MHz)	Reading (dBm)	Correct Factor(dB)	Result (dBm)	Limit (dBm)	Margin (dB)	Remark
1	2283.625	-69.53	29.84	-39.69	-13.00	-26.69	peak
2	3475.451	-69.66	34.00	-35.66	-13.00	-22.66	peak
3	6036.392	-69.93	39.23	-30.70	-13.00	-17.70	peak
4	6954.341	-70.19	40.18	-30.01	-13.00	-17.01	peak
5	14936.199	-70.21	46.92	-23.29	-13.00	-10.29	peak
6	18469.617	-71.35	51.00	-20.35	-13.00	-7.35	peak

Project No.:	ZJ00053634	Polarziation:	Horizontal				
Standard:	FCC PART 22 24 27	Power Source:	DC 7.4V				
Test item:	Radiation Test	Date:	2014-11-20				
Temp./Hum.(%RH):	23.5/56%RH	Time:	11:35:49				
EUT:	S9III Plus GNSS	Distance:	3m				
Model:	MULTI-FREQUENCY GNSS RECEIVER E	Test Result:	Pass				
Note: EGPRS1900 class 12 channel 661							
No.	Frequency (MHz)	Reading (dBm)	Correct Factor(dB)	Result (dBm)	Limit (dBm)	Margin (dB)	Remark
1	224.2973	-80.87	36.38	-44.49	-13.00	-31.49	peak
2	256.6825	-88.53	37.56	-50.97	-13.00	-37.97	peak
3	336.1560	-87.66	34.93	-52.73	-13.00	-39.73	peak
4	457.8983	-89.25	42.91	-46.34	-13.00	-33.34	peak
5	637.9094	-88.47	45.68	-42.79	-13.00	-29.79	peak
6	785.3405	-88.36	43.80	-44.56	-13.00	-31.56	peak

Project No.:	ZJ00053634	Polarziation:	Horizontal				
Standard:	FCC PART 22 24 27	Power Source:	DC 7.4V				
Test item:	Radiation Test	Date:	2014-12-1				
Temp./Hum.(%RH):	23.5/56%RH	Time:	14:52:21				
EUT:	S9III Plus GNSS	Distance:	3m				
Model:	MULTI-FREQUENCY GNSS RECEIVERE	Test Result:	Pass				
Note:	EGPRS1900 class 12 channel 661						
No.	Frequency (MHz)	Reading (dBm)	Correct Factor(dB)	Result (dBm)	Limit (dBm)	Margin (dB)	Remark
1	2497.820	-68.41	30.46	-37.95	-13.00	-24.95	peak
2	3346.701	-68.00	33.69	-34.31	-13.00	-21.31	peak
3	9361.833	-68.82	42.42	-26.40	-13.00	-13.40	peak
4	12078.758	-69.42	46.28	-23.14	-13.00	-10.14	peak
5	15881.108	-69.16	46.75	-22.41	-13.00	-9.41	peak
6	18644.746	-69.47	50.61	-18.86	-13.00	-5.86	peak

Project No.:	ZJ00053634	Polarziation:	Vertical				
Standard:	FCC PART 22 24 27	Power Source:	DC 7.4V				
Test item:	Radiation Test	Date:	2014-11-20				
Temp./Hum.(%RH):	23.5/56%RH	Time:	19:12:17				
EUT:	S9III Plus GNSS	Distance:	3m				
Model:	MULTI-FREQUENCY GNSS RECEIVER	Test Result:	Pass				
Note:	WCDMA band V RMC12.2 Channel 4182						
No.	Frequency (MHz)	Reading (dBm)	Correct Factor(dB)	Result (dBm)	Limit (dBm)	Margin (dB)	Remark
1	151.3521	-84.68	31.45	-53.23	-13.00	-40.23	peak
2	221.7906	-82.67	36.29	-46.38	-13.00	-33.38	peak
3	268.4852	-88.29	37.98	-50.31	-13.00	-37.31	peak
4	455.3322	-89.21	43.16	-46.05	-13.00	-33.05	peak
5	645.1195	-88.35	45.48	-42.87	-13.00	-29.87	peak
6	883.7078	-78.79	42.97	-35.82	-13.00	-22.82	peak

Project No.:	ZJ00053634	Polarziation:	Vertical				
Standard:	FCC PART 22 24 27	Power Source:	DC 7.4V				
Test item:	Radiation Test	Date:	2014-12-1				
Temp./Hum.(%RH):	23.5/56%RH	Time:	14:20:55				
EUT:	S9III Plus GNSS	Distance:	3m				
Model:	MULTI-FREQUENCY GNSS RECEIVER	Test Result:	Pass				
Note:	WCDMA band V RMC12.2 Channel 4182						
No.	Frequency (MHz)	Reading (dBm)	Correct Factor(dB)	Result (dBm)	Limit (dBm)	Margin (dB)	Remark
1	1787.820	-70.63	27.39	-43.24	-13.00	-30.24	peak
2	2756.891	-69.95	31.60	-38.35	-13.00	-25.35	peak
3	3564.953	-70.43	34.10	-36.33	-13.00	-23.33	peak
4	4251.239	-70.85	35.13	-35.72	-13.00	-22.72	peak
5	6328.766	-70.41	39.79	-30.62	-13.00	-17.62	peak
6	7845.170	-70.96	40.35	-30.61	-13.00	-17.61	peak

Project No.:	ZJ00053634	Polarziation:	Horizontal				
Standard:	FCC PART 22 24 27	Power Source:	DC 7.4V				
Test item:	Radiation Test	Date:	2014-11-20				
Temp./Hum.(%RH):	23.5/56%RH	Time:	19:18:00				
EUT:	S9III Plus GNSS	Distance:	3m				
Model:	MULTI-FREQUENCY GNSS RECEIVER	Test Result:	Pass				
Note:	WCDMA band V RMC12.2 Channel 4182						
No.	Frequency (MHz)	Reading (dBm)	Correct Factor(dB)	Result (dBm)	Limit (dBm)	Margin (dB)	Remark
1	224.2973	-80.79	36.38	-44.41	-13.00	-31.41	peak
2	262.5176	-88.95	37.77	-51.18	-13.00	-38.18	peak
3	455.3322	-89.82	43.16	-46.66	-13.00	-33.66	peak
4	623.7305	-89.34	45.92	-43.42	-13.00	-30.42	peak
5	671.0018	-89.13	45.19	-43.94	-13.00	-30.94	peak
6	883.7078	-81.92	42.97	-38.95	-13.00	-25.95	peak

Project No.:	ZJ00053634	Polarziation:	Horizontal				
Standard:	FCC PART 22 24 27	Power Source:	DC 7.4V				
Test item:	Radiation Test	Date:	2014-12-1				
Temp./Hum.(%RH):	23.5/56%RH	Time:	14:15:46				
EUT:	S9III Plus GNSS	Distance:	3m				
Model:	MULTI-FREQUENCY GNSS RECEIVER	Test Result:	Pass				
Note:	WCDMA band V RMC12.2 Channel 4182						
No.	Frequency (MHz)	Reading (dBm)	Correct Factor(dB)	Result (dBm)	Limit (dBm)	Margin (dB)	Remark
1	1750.444	-70.54	27.02	-43.52	-13.00	-30.52	peak
2	2008.115	-70.06	29.07	-40.99	-13.00	-27.99	peak
3	3465.931	-69.14	33.97	-35.17	-13.00	-22.17	peak
4	4928.824	-70.71	36.30	-34.41	-13.00	-21.41	peak
5	6555.584	-71.28	40.14	-31.14	-13.00	-18.14	peak
6	7735.447	-70.91	40.33	-30.58	-13.00	-17.58	peak

Project No.:	ZJ00053634	Polarziation:	Vertical				
Standard:	FCC PART 22 24 27	Power Source:	DC 7.4V				
Test item:	Radiation Test	Date:	2014-11-20				
Temp./Hum.(%RH):	23.5/56%RH	Time:	19:01:11				
EUT:	S9III Plus GNSS	Distance:	3m				
Model:	MULTI-FREQUENCY GNSS RECEIVER	Test Result:	Pass				
Note:	WCDMA band II RMC12.2 Channel 9400						
No.	Frequency (MHz)	Reading (dBm)	Correct Factor(dB)	Result (dBm)	Limit (dBm)	Margin (dB)	Remark
1	152.2050	-85.39	31.50	-53.89	-13.00	-40.89	peak
2	220.5475	-82.31	36.25	-46.06	-13.00	-33.06	peak
3	276.1360	-89.97	37.99	-51.98	-13.00	-38.98	peak
4	450.2434	-90.31	43.66	-46.65	-13.00	-33.65	peak
5	637.9094	-89.09	45.68	-43.41	-13.00	-30.41	peak
6	798.6924	-88.97	44.37	-44.60	-13.00	-31.60	peak

Project No.:	ZJ00053634	Polarziation:	Vertical				
Standard:	FCC PART 22 24 27	Power Source:	DC 7.4V				
Test item:	Radiation Test	Date:	2014-11-27				
Temp./Hum.(%RH):	23.5/56%RH	Time:	10:53:24				
EUT:	S9III Plus GNSS	Distance:	3m				
Model:	MULTI-FREQUENCY GNSS RECEIVER	Test Result:	Pass				
Note:	WCDMA band II RMC12.2 Channel 9400						
No.	Frequency (MHz)	Reading (dBm)	Correct Factor(dB)	Result (dBm)	Limit (dBm)	Margin (dB)	Remark
1	1745.081	-54.85	13.65	-41.20	-13.00	-28.20	peak
2	4745.303	-57.57	25.90	-31.67	-13.00	-18.67	peak
3	5867.887	-56.68	27.40	-29.28	-13.00	-16.28	peak
4	9015.019	-61.17	34.23	-26.94	-13.00	-13.94	peak
5	14047.511	-61.89	40.14	-21.75	-13.00	-8.75	peak
6	15731.938	-60.66	40.65	-20.01	-13.00	-7.01	peak

Project No.:	ZJ00053634	Polarziation:	Horizontal				
Standard:	FCC PART 22 24 27	Power Source:	DC 7.4V				
Test item:	Radiation Test	Date:	2014-11-20				
Temp./Hum.(%RH):	23.5/56%RH	Time:	19:05:13				
EUT:	S9III Plus GNSS	Distance:	3m				
Model:	MULTI-FREQUENCY GNSS RECEIVER	Test Result:	Pass				
Note:	WCDMA band II RMC12.2 Channel 9400						
No.	Frequency (MHz)	Reading (dBm)	Correct Factor(dB)	Result (dBm)	Limit (dBm)	Margin (dB)	Remark
1	224.2973	-80.01	36.38	-43.63	-13.00	-30.63	peak
2	277.6920	-88.90	37.68	-51.22	-13.00	-38.22	peak
3	455.3322	-88.79	43.16	-45.63	-13.00	-32.63	peak
4	630.7803	-88.86	45.88	-42.98	-13.00	-29.98	peak
5	659.7844	-87.50	45.27	-42.23	-13.00	-29.23	peak
6	794.2168	-88.44	44.19	-44.25	-13.00	-31.25	peak

Project No.:	ZJ00053634	Polarziation:	Horizontal				
Standard:	FCC PART 22 24 27	Power Source:	DC 7.4V				
Test item:	Radiation Test	Date:	2014-11-27				
Temp./Hum.(%RH):	23.5/56%RH	Time:	10:42:21				
EUT:	S9III Plus GNSS	Distance:	3m				
Model:	MULTI-FREQUENCY GNSS RECEIVER	Test Result:	Pass				
Note:	WCDMA band II RMC12.2 Channel 9400						
No.	Frequency (MHz)	Reading (dBm)	Correct Factor(dB)	Result (dBm)	Limit (dBm)	Margin (dB)	Remark
1	1795.194	-55.35	13.78	-41.57	-13.00	-28.57	peak
2	3045.308	-58.80	21.68	-37.12	-13.00	-24.12	peak
3	3346.701	-56.50	21.86	-34.64	-13.00	-21.64	peak
4	7499.711	-59.67	31.52	-28.15	-13.00	-15.15	peak
5	10191.733	-62.30	35.28	-27.02	-13.00	-14.02	peak
6	15881.108	-62.66	40.96	-21.70	-13.00	-8.70	peak

4.6 FREQUENCY STABILITY FOR TEMPERATURE & VOLTAGE

4.6.1 LIMITS

FCC part22 § 22.355 The frequency stability shall be measured by variation of ambient temperature and variation of primary supply voltage to ensure that the fundamental emission stays within the authorized frequency block. The frequency stability of the transmitter shall be maintained within $\pm 0.00025\%$ ($\pm 2.5\text{ppm}$) of the center frequency.

FCC part24 § 24.235 The frequency stability shall be sufficient to ensure that the fundamental emission stays within the authorized frequency block.

4.6.2 TEST PROCEDURES

Test Procedures for Temperature Variation

1. The EUT was set up in the thermal chamber and remove the antenna from the EUT, then connect a low RF cable from the antenna port to the spectrum.
2. With power OFF, the temperature was decreased to -30°C and the EUT was stabilized for three hours. Power was applied and the maximum change in frequency was recorded within one minute.
3. With power OFF, the temperature was raised in 10°C step up to 50°C . The EUT was stabilized at each step for at least half an hour. Power was applied and the maximum frequency change was recorded within one minute.

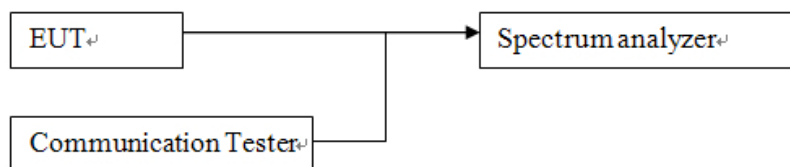
Test Procedures for Voltage Variation

1. The EUT was placed in a temperature chamber at normal temperature and remove the antenna from the EUT, then connect a low RF cable from the antenna port to the spectrum.
2. The power supply voltage to the EUT was varied from primary supply voltage to the battery operating end point. The maximum frequency change was recorded within one minute.

Remark :

The variation in frequency was measured for the worst case.

4.6.3 TEST SETUP



4.6.4 TEST RESULTS

For GSM850: GPRS 8

Channel 189: 836.4MHz

Test Condition		Frequency Stability		Limit (ppm)	Result
Voltage (Vdc)	Temperature (°C)	Freq. Dev. (Hz)	Deviation (ppm)		
Frequency vs. Temperature					
7.4	-30	24	0.03	±2.5	Pass
7.4	-20	-14	-0.02		
7.4	-10	-17	-0.02		
7.4	0	-19	-0.02		
7.4	10	-26	-0.03		
7.4	20	-20	-0.02		
7.4	30	-23	-0.03		
7.4	40	16	0.02		
7.4	50	18	0.02		
Frequency vs. Voltage					
5.7	20	-14	-0.02	±2.5	Pass

For GSM850: EGPRS 12

Channel 189: 836.4MHz

Test Condition		Frequency Stability		Limit (ppm)	Result
Voltage (Vdc)	Temperature (°C)	Freq. Dev. (Hz)	Deviation (ppm)		
Frequency vs. Temperature					
7.4	-30	-17	-0.02	±2.5	Pass
7.4	-20	-14	-0.02		
7.4	-10	-13	-0.02		
7.4	0	11	0.01		
7.4	10	-17	-0.02		
7.4	20	-23	-0.03		
7.4	30	20	0.02		
7.4	40	-24	-0.03		
7.4	50	-19	-0.02		
Frequency vs. Voltage					
5.7	20	15	0.02	±2.5	Pass

For WCDMA Band V: RMC 12.2K

Channel 4182: 836.4MHz

Test Condition		Frequency Stability		Limit (ppm)	Result
Voltage (Vdc)	Temperature (°C)	Freq. Dev. (Hz)	Deviation (ppm)		
Frequency vs. Temperature					
7.4	-30	11	0.01	±2.5	Pass
7.4	-20	13	0.02		
7.4	-10	-10	-0.01		
7.4	0	7	0.01		
7.4	10	9	0.01		
7.4	20	7	0.01		
7.4	30	4	0.00		
7.4	40	6	0.01		
7.4	50	-5	-0.01		
Frequency vs. Voltage					
5.7	20	-6	-0.01	±2.5	Pass

For GSM1900: GPRS 8

Channel 661: 1880.0MHz

Test Condition		Frequency Stability		Limit	Result
Voltage (Vdc)	Temperature (°C)	Freq. Dev. (Hz)	Frequency (MHz)		
Frequency vs. Temperature					
7.4	-30	46	1880.000046	with in 1870-1885 MHz	Pass
7.4	-20	48	1880.000048		
7.4	-10	-42	1879.000058		
7.4	0	44	1880.000044		
7.4	10	43	1880.000043		
7.4	20	-41	1879.000059		
7.4	30	46	1880.000046		
7.4	40	40	1880.000040		
7.4	50	-38	1879.000062		
Frequency vs. Voltage					
5.7	20	-47	1879.000053	with in 1870-1885 MHz	Pass

For GSM1900: EGPRS 12

Channel 661: 1880.0MHz

Test Condition		Frequency Stability		Limit	Result
Voltage (Vdc)	Temperature (°C)	Freq. Dev. (Hz)	Frequency (MHz)		
Frequency vs. Temperature					
7.4	-30	-43	1879.000057	with in 1870-1885 MHz	Pass
7.4	-20	-41	1879.000059		
7.4	-10	49	1880.000049		
7.4	0	-38	1879.000062		
7.4	10	-45	1879.000055		
7.4	20	-46	1879.000054		
7.4	30	49	1880.000049		
7.4	40	-42	1879.000058		
7.4	50	46	1880.000046		
Frequency vs. Voltage					
5.7	20	53	1880.000053	with in 1870-1885 MHz	Pass

For WCDMA Band II: RMC 12.2K

Middle Channel 9400: 1880.0MHz

Test Condition		Frequency Stability		Limit	Result
Voltage (Vdc)	Temperature (°C)	Freq. Dev. (Hz)	Frequency (MHz)		
Frequency vs. Temperature					
7.4	-30	-16	1879.000084	with in 1870-1885 MHz	Pass
7.4	-20	-14	1879.000086		
7.4	-10	-11	1879.000089		
7.4	0	-16	1879.000084		
7.4	10	-14	1879.000086		
7.4	20	13	1880.000013		
7.4	30	13	1880.000013		
7.4	40	-17	1879.000083		
7.4	50	-19	1879.000081		
Frequency vs. Voltage					
5.7	20	15	1880.000015	with in 1870-1885 MHz	Pass

APPENDIX A: PHOTOGRAPH OF THE TEST ARRANGEMENT

Field Strength of Spurious Radiation

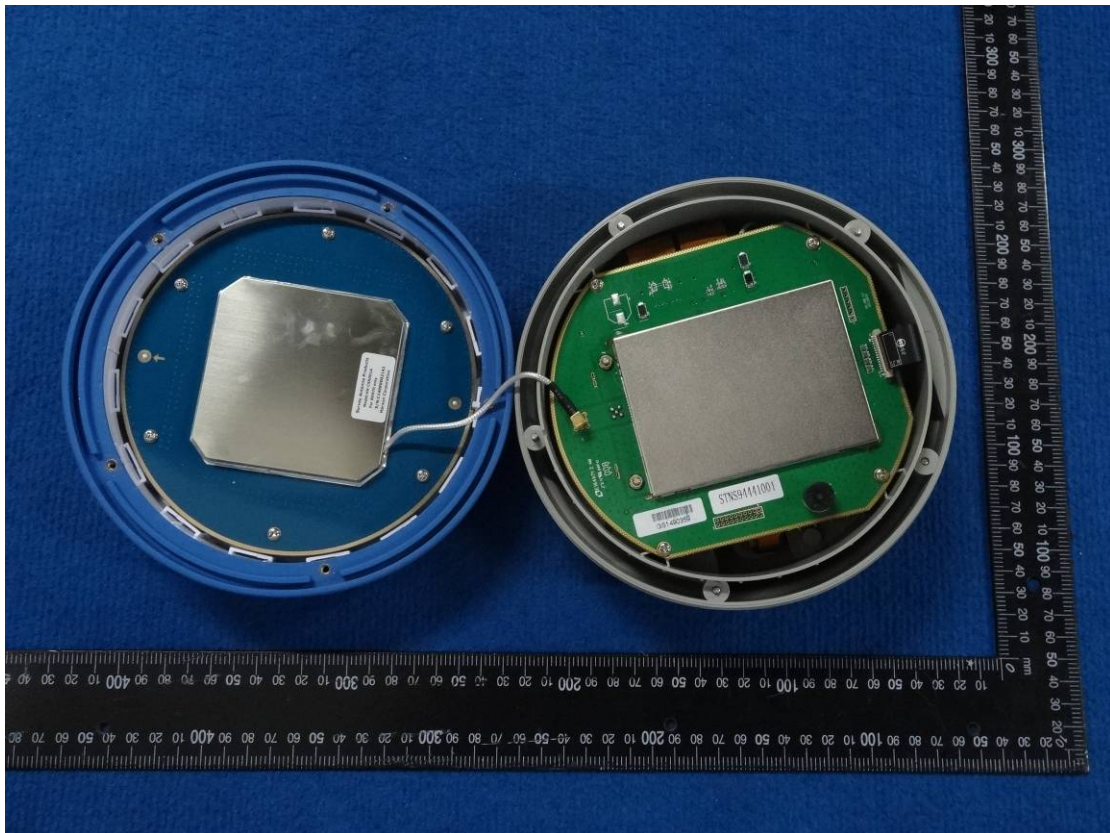
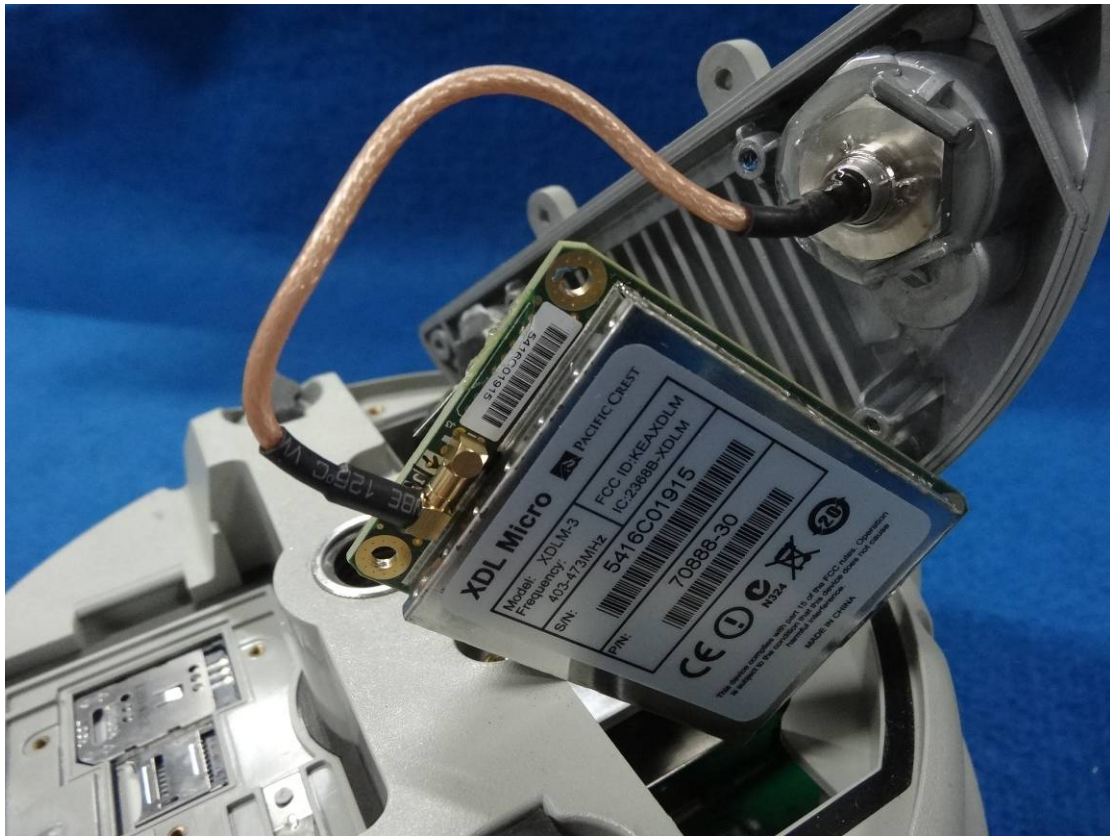


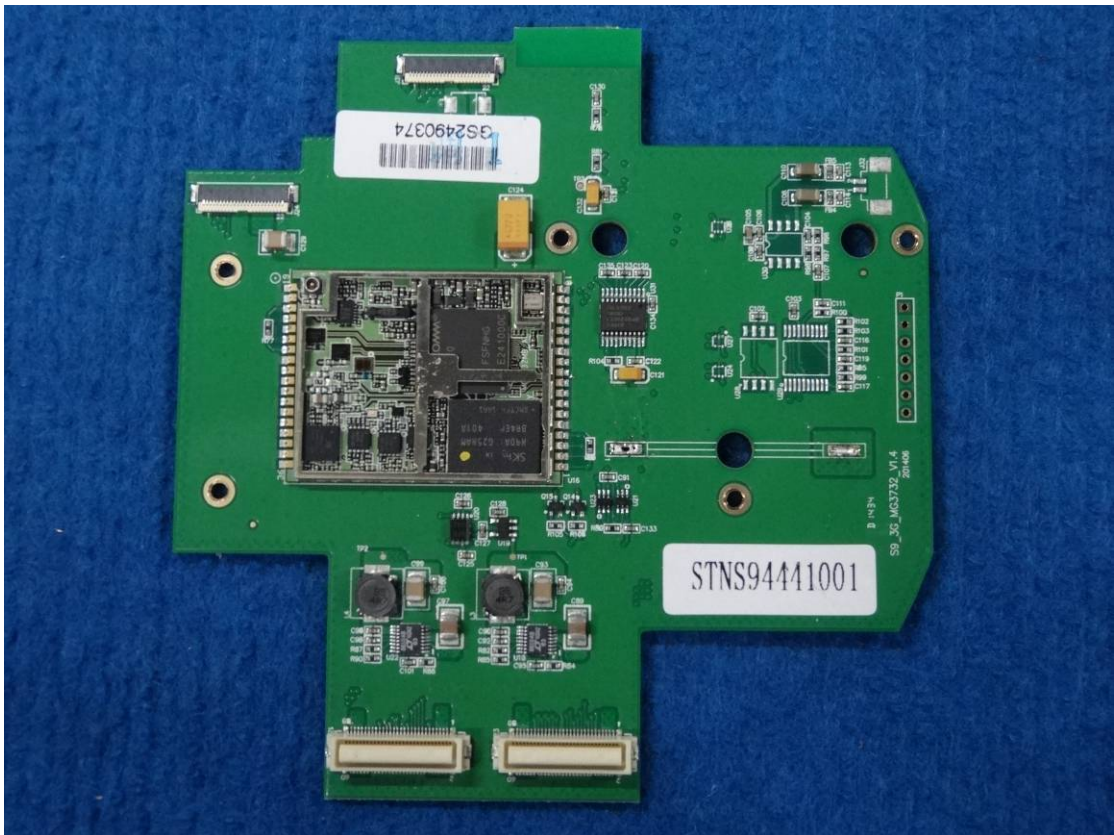
APPENDIX B: PHOTOGRAPH OF THE EUT











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