
FCC Test Report

Report No.: AGC02X120801-5F2

FCC ID : OPJWCR101
PRODUCT DESIGNATION : CDMA+PCS Repeater
BRAND NAME : N/A
MODEL NAME : WCR-101
CLIENT : Luxonus Inc.
DATE OF ISSUE : Aug. 17 , 2012
STANDARD(S) : FCC Part 22H & 24E Rules

Attestation of Global Compliance Co., Ltd.

CAUTION: This report shall not be reproduced except in full without the written permission of the test laboratory and shall not be quoted out of context.

VERIFICATION OF COMPLIANCE

Applicant:	Luxonus Inc.
	611 Mason St. Suite 508, San Francisco, CA 9410
Manufacturer:	Qixiang Electron Science & Technology Co., Ltd.
	Qixiang Building, Tangxi Industrial Zone, Luojiang District, Quanzhou 362011, Fujian Province, China
Product Description:	CDMA+PCS Repeater
Brand Name:	N/A
Model Name:	WCR-101
FCC ID:	OPJWCR101
Report Number:	AGC02X120801-5F2
Date of Test:	Aug.13~Aug.15, 2012

We hereby certify that:

The above equipment was tested by Attestation of Global Compliance Co., Ltd. The data evaluation, test procedures, and equipment configurations shown in this report were made in accordance with the procedures given in ANSI C 63.4:2003 and TIA/EIA 603. The sample tested as described in this report is in compliance with the FCC Rules Part 22H and 24E

The test results of this report relate only to the tested sample identified in this report.

Tested By :



Bart Xie

Aug.17, 2012

Reviewed By :



Forrest Lei

Aug.17, 2012

Approved By:



Solger Zhang

Aug.17, 2012

TABLE OF CONTENTS

1. GENERAL INFORMATION	4
1.1 PRODUCT DESCRIPTION	4
1.2 RELATED SUBMITTAL(S) / GRANT (S)	4
1.3 TEST METHODOLOGY	4
1.4 TEST FACILITY	5
1.5 MEASUREMENT INSTRUMENTS	5
1.6 SPECIAL ACCESSORIES	5
1.7 EQUIPMENT MODIFICATIONS	5
2. SYSTEM TEST CONFIGURATION	6
2.1 EUT CONFIGURATION	6
2.2 EUT EXERCISE	6
2.3 GENERAL TECHNICAL REQUIREMENTS	6
2.4 CONFIGURATION OF EUT SYSTEM	7
3. SUMMARY OF TEST RESULTS	8
4. OUTPUT POWER	9
4.1 MEASUREMENT METHOD	9
4.2 PROVISIONS APPLICABLE	9
4.3 MEASUREMENT RESULT	9
5 SPURIOUS EMISSION	11
5.1 CONDUCTED SPURIOUS EMISSION	11
5.2 Radiated Spurious Emission	12
6. MAINS CONDUCTED EMISSION	15
6.1 MEASUREMENT METHOD	15
6.2 PROVISIONS APPLICABLE	15
6.3 MEASUREMENT RESULT	15

7. OCCUPIED BANDWIDTH	18
7.1 MEASUREMENT METHOD	18
7.2 PROVISIONS APPLICABLE.....	18
7.3 MEASUREMENT RESULT	18
8. EMISSION BANDWIDTH.....	20
8.1 MEASUREMENT METHOD	20
8.2 PROVISIONS APPLICABLE.....	20
8.3 MEASUREMENT RESULT	20
9. BAND EDGE.....	22
9.1 MEASUREMENT METHOD	22
9.2 PROVISIONS APPLICABLE.....	22
9.3 MEASUREMENT RESULT	22
APPENDIX I.....	23
TEST PLOTS FOR CONDUCTED SPURIOUS EMISSION.....	23
APPENDIX II.....	38
TEST PLOTS FOR OCCUPIED BANDWIDTH (99%)	38
EMISSION BANDWIDTH (-26DBC)	38
APPENDIX III.....	47
TEST PLOTS FOR BAND EDGES.....	47
APPENDIX IV	52
PHOTOGRAPHS OF TEST SETUP	52
APPENDIX V	54
PHOTOGRAPHS OF EUT	54

1. GENERAL INFORMATION

1.1 PRODUCT DESCRIPTION

A major technical description of EUT is described as following:

Product Designation:	CDMA+PCS Repeater
Frequency Bands:	GSM 850: 824.8- 848.2MHz uplink 869.8-893.2MHz downlink PCS 1900: 1850.2-1909.8MHz uplink 1930.2-1989.8MHz downlink
Power Supply:	AC100V~220V
Output Power:	11.27dBm Maximum Conducted Power for GSM 850 11.31dBm Maximum Conducted Power for GSM 1900

1.2 RELATED SUBMITTAL(S) / GRANT (S)

This submittal(s) (test report) is intended for **FCC ID:OPJWCR101** filing to comply with the FCC Part 22H and 24E requirements.

1.3 TEST METHODOLOGY

The radiated emission testing was performed according to the procedures of ANSI C 63.4: 2003; TIA/EIA 603 and FCC CFR 47 Rules of 2.1046, 2.1047, 2.1049, 2.1051, 2.1053, 2.1055, 2.1057.

1.4 TEST FACILITY

The test site used to collect the radiated data is located at:

Attestation of Global Compliance Co., Ltd.

1F., No.2 Building, Huafeng No.1 Technical Industrial Park, Sanwei, Xixiang, Baoan District, Shenzhen

The test site is constructed and calibrated to meet the FCC requirements in documents ANSI C63.4: 2003.

FCC register No.: 259865

1.5 MEASUREMENT INSTRUMENTS

NAME OF EQUIPMENT	MANUFACTURER	MODEL	SERIAL NUMBER	NEXT CAL. DATE
SPECTRUM ANALYZER	AGILENT	E4440A	US44300399	2013.7.17
TEST RECEIVER	R&S	ESCI	A0304218	2013.7.17
COMMUNICATION TESTER	AGILENT	8960	3104A03367	2013.7.17
COMMUNICATION TESTER	R&S	CMU200	A0304247	2013.7.17
SIGNAL GENERATOR	Agilent	E4421B	A0304230	2013.7.17
SIGNAL GENERATOR	Agilent	E4432B	GB4005174	2013.7.17
LISN	R&S	ESH3-Z5	A0304233	2013.7.17
LOOP ANTENNA	A.H.	SAS-526B	A0304220	2013.7.17
BROADBAND ANT.	A.H.	SAS-521-4	A0304224	2013.7.17
HORN ANT.	EM	EM-AH-10180	100150	2013.7.17

1.6 SPECIAL ACCESSORIES

No special accessories were used as accessories

1.7 EQUIPMENT MODIFICATIONS

Not available for this EUT intended for grant.

2. SYSTEM TEST CONFIGURATION

2.1 EUT CONFIGURATION

The EUT configuration for testing is installed on RF field strength measurement to meet the Commission's requirement and operating in a manner which intends to maximize its emission characteristics in a continuous normal application.

2.2 EUT EXERCISE

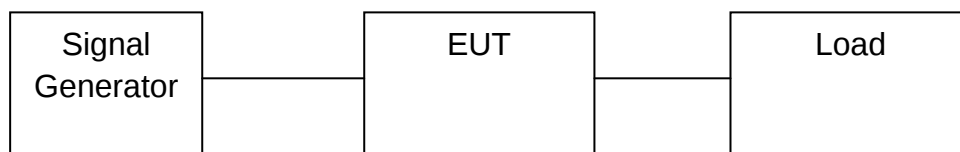
The Transmitter was operated in the maximum output power mode through Communication Tester. The TX frequency was fixed which was for the purpose of the measurements.

2.3 GENERAL TECHNICAL REQUIREMENTS

Item Number	Item Description	FCC Rules
1	RF Output Power	22.913(a) / 24.232 (b)
2	Spurious Emission	2.1051 / 22.917 / 24.238
3	Mains Conducted Emission	15.107 / 15.207
4	Frequency Stability	2.1055 / 24.235
5	Occupied Bandwidth	2.1049 (h)(i)
6	Emission Bandwidth	22.917(b) / 24.238 (b)
7	Band Edge	22.917(b) / 24.238 (b)

2.4 CONFIGURATION OF EUT SYSTEM

Fig. 2-1 Configuration of EUT System



3. SUMMARY OF TEST RESULTS

Item Number	Item Description	FCC Rules	Result
1	RF Output Power	22.913(a) / 24.232 (b)	PASS
2	Spurious Emission	2.1051 / 22.917 / 24.238	PASS
3	Mains Conducted Emission	15.107 / 15.207	PASS
4	Frequency Stability	2.1055 /24.235	N/A
5	Occupied Bandwidth	2.1049 (h)(i)	PASS
6	Emission Bandwidth	22.917(b) / 24.238 (b)	PASS
7	Band Edge	22.917(b) / 24.238 (b)	PASS

Note: N/A means the test item it's not applicable.

The testing refers to the KDB 935210 and 670583.

4. OUTPUT POWER

4.1 MEASUREMENT METHOD

The RF output of the transmitter was connected to the signal generator and the spectrum analyzer through sufficient attenuation and make sure the EUT work at maximum output power.

4.2 PROVISIONS APPLICABLE

According to FCC §22.913 (a), the maximum effective radiated power (ERP) of base transmitters and cellular repeaters must not exceed 500 Watts.

According to §24.232 , Mobile/portable stations are limited to 2 watts EIRP peak power and the equipment must employ means to limit the power to the minimum necessary for successful communications.

4.3 MEASUREMENT RESULT

Mode	Channel	Frequency (MHz)	Output Power (dBm)
850 Uplink	Low	824.8	9.13
	Middle	836.5	9.95
	High	848.2	9.87
850 Downlink	Low	869.8	11.23
	Middle	881.5	11.15
	High	893.2	11.27

Mode	Channel	Frequency (MHz)	Output Power (dBm)
1900 Uplink	Low	1850.2	9.20
	Middle	1880	9.21
	High	1909.8	9.53
1900 Downlink	Low	1930.2	11.14
	Middle	1960.0	11.26
	High	1989.8	11.31

5 SPURIOUS EMISSION

5.1 CONDUCTED SPURIOUS EMISSION

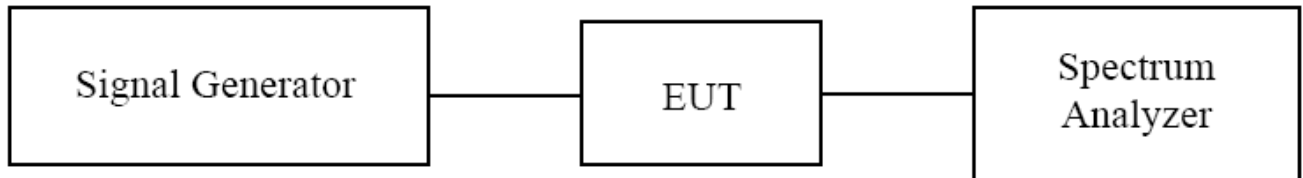
5.1.1 PROVISIONS APPLICABLE

The spectrum was to be investigated to the tenth harmonics of the highest fundamental frequency as specified in § 2.1051.

5.1.2 TEST METHOD

The RF output of the transceiver was connected to a spectrum analyzer and simulator through appropriate attenuation. The resolution bandwidth of the spectrum analyzer was set at 100 kHz. Sufficient scans were taken to show any out of band emissions up to 10th harmonic.

5.1.3 TEST SETUP



5.1.4 MEASUREMENT RESULT

PASS

Please see APPENDIX I test plot.

5.2 Radiated Spurious Emission

5.2.1 MEASUREMENT METHOD

The transmitter was placed on a wooden turntable, and it was transmitting into a non-radiating load which was also placed on the turntable.

The measurement antenna was placed at a distance of 3 meters from the EUT. During the tests, the antenna height and polarization as well as EUT azimuth were varied in order to identify the maximum level of emissions from the EUT. The test was performed by placing the EUT on 3-orthogonal axis.

The frequency range up to tenth harmonic of the fundamental frequency was investigated.

Remove the EUT and replace it with substitution antenna. A signal generator was connected to the substitution antenna by a non-radiating cable. The absolute levels of the spurious emissions were measured by the substitution.

5.2.2 PROVISIONS APPLICABLE

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

5.2.3 MEASUREMENT RESULT

The Worst Test Results for 850 band low channel					
Frequency(MHz)	Power(dBm)	A _{Rpl} (dBm)	P _{Mea} (dBm)	Limit (dBm)	Polarity
1643.00	-36.83	-4.08	-40.91	-13.00	Horizontal
1977.72	-36.68	-3.09	-39.77	-13.00	Vertical
2723.49	-36.79	2.46	-34.33	-13.00	Horizontal
9345.33	-39.16	2.7	-36.46	-13.00	Horizontal

The Worst Test Results for 850 band middle channel					
Frequency(MHz)	Power(dBm)	A _{Rpl} (dBm)	P _{Mea} (dBm)	Limit (dBm)	Polarity
1675.00	-42.10	-3.14	-45.24	-13.00	Horizontal
2114.00	-38.64	-0.71	-39.35	-13.00	Vertical
9147.02	-40.30	3.05	-37.25	-13.00	Vertical

The Worst Test Results for 850 band high channel					
Frequency(MHz)	Power(dBm)	A _{Rpl} (dBm)	P _{Mea} (dBm)	Limit (dBm)	Polarity
1657.00	-39.47	-2.73	-42.20	-13.00	Horizontal
2037.28	-40.97	-3.73	-44.71	-13.00	Vertical
23924.51	-46.04	-1.94	-47.98	-13.00	Vertical
9182.42	-38.44	8.56	-29.88	-13.00	Horizontal

The Worst Test Results for 1900 band low channel					
Frequency(MHz)	Power(dBm)	A _{Rpl} (dBm)	P _{Mea} (dBm)	Limit (dBm)	Polarity
1954.00	-41.48	9.27	-32.20	-13.00	Horizontal
3893.47	-38.27	7.39	-30.88	-13.00	Horizontal
14120.90	-37.89	12.31	-25.57	-13.00	Vertical
19325.57	-41.63	17.85	-23.77	-13.00	Vertical

The Worst Test Results for 1900 band middle channel					
Frequency(MHz)	Power(dBm)	A _{Rpl} (dBm)	P _{Mea} (dBm)	Limit (dBm)	Polarity
2013.42	-43.88	8.78	-35.10	-13.00	Vertical
9543.11	-38.36	11.01	-27.35	-13.00	Vertical
14328.43	-37.05	14.56	-22.49	-13.00	Horizontal
15264.74	-39.87	14.61	-25.26	-13.00	Vertical
18531.52	-44.04	20.31	-23.73	-13.00	Horizontal
The Worst Test Results for 1900 band high channel					
Frequency(MHz)	Power(dBm)	A _{Rpl} (dBm)	P _{Mea} (dBm)	Limit (dBm)	Polarity
2014.27	-36.48	9.90	-26.58	-13.00	Vertical
9760.39	-32.95	10.33	-22.62	-13.00	Horizontal
14518.43	-41.77	11.31	-30.46	-13.00	Horizontal
16471.33	-37.45	15.62	-21.83	-13.00	Vertical
17543.75	-38.37	19.30	-19.07	-13.00	Horizontal

Note: Below 1GHz emission is very low and at least have 20dB margin. no recorded in the test report.

6. MAINS CONDUCTED EMISSION

6.1 MEASUREMENT METHOD

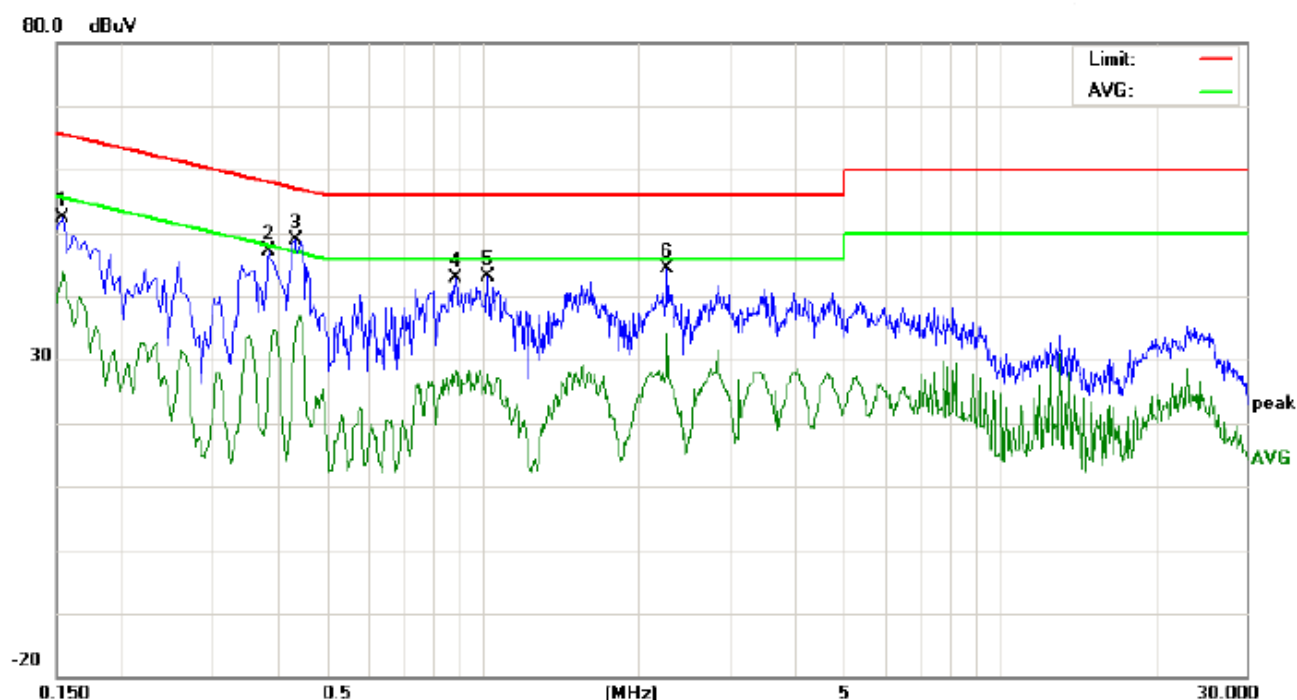
The measurement procedure specified in ANSI C63.4-2003 was used for testing. Conducted Emission was measured

6.2 PROVISIONS APPLICABLE

Frequency of Emission (MHz)	Conducted Limit(dBuV)	
	Quasi-Peak	Average
0.15 – 0.5	66 to 56 *	56 to 46 *
0.5 – 5	56	46
5 – 30	60	50
* Decreases with the logarithm of the frequency.		

6.3 MEASUREMENT RESULT

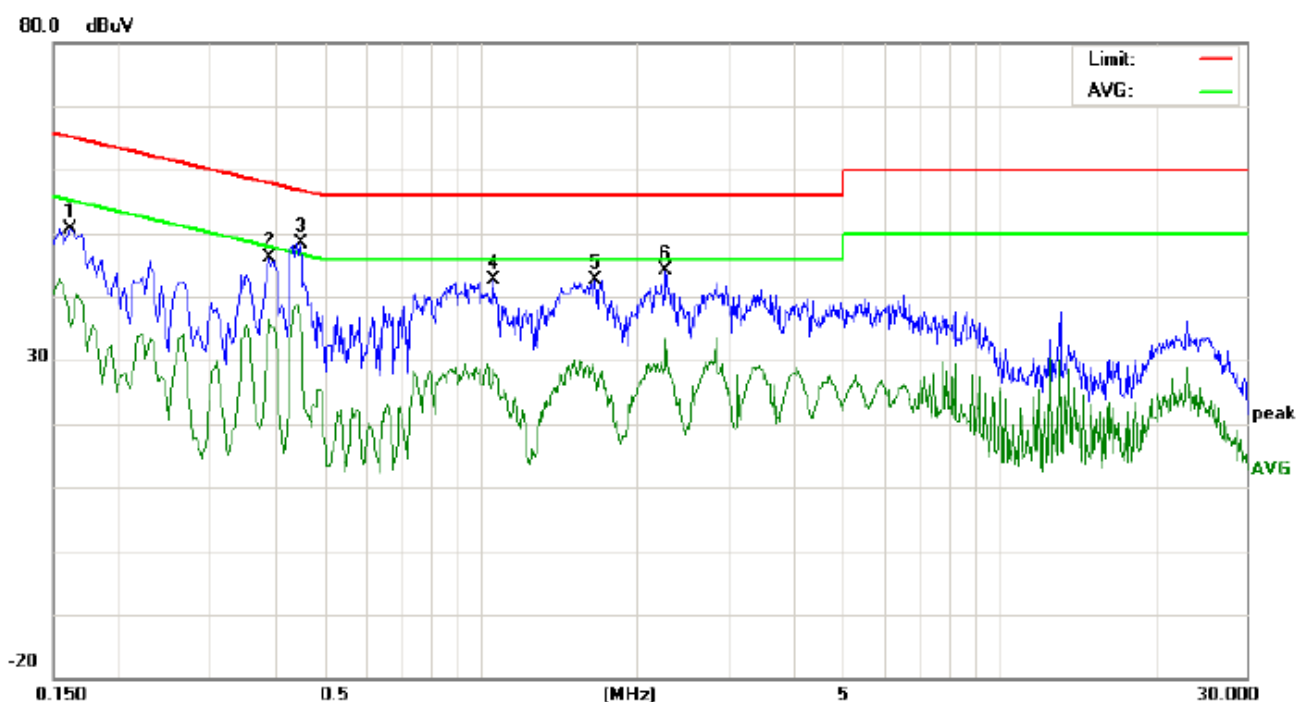
LINE CONDUCTED EMISSION - L Conducted Emission Measurement



Site: Conduction Phase: **L1** Temperature: 26
Limit: FCC Class B Conduction(QP) Power: Humidity: 60 %
EUT: CDMA+PCS Repeater
M/N: WCR-101
Mode: Normal
Note:

No.	Freq. (MHz)	Reading_Level (dBuV)			Correct Factor	Measurement (dBuV)			Limit (dBuV)		Margin (dB)		P/F	Comment
		Peak	QP	AVG		Peak	QP	AVG	QP	AVG	QP	AVG		
1	0.1539	42.34		33.70	10.16	52.50		43.86	65.78	55.78	-13.28	-11.92	P	
2	0.3860	36.72		18.73	10.32	47.04		29.05	58.15	48.15	-11.11	-19.10	P	
3	0.4340	38.63		25.11	10.35	48.98		35.46	57.18	47.18	-8.20	-11.72	P	
4	0.8860	32.42		18.00	10.39	42.81		28.39	56.00	46.00	-13.19	-17.61	P	
5	1.0220	32.63		17.20	10.37	43.00		27.57	56.00	46.00	-13.00	-18.43	P	
6	2.2820	34.00		23.86	10.34	44.34		34.20	56.00	46.00	-11.66	-11.80	P	

LINE CONDUCTED EMISSION - N Conducted Emission Measurement



Site: Conduction
Limit: FCC Class B Conduction(QP)
EUT: CDMA+PCS Repeater
M/N: WCR-101
Mode: Normal
Note:

Phase: **N**
Power:
Temperature: 26
Humidity: 60 %

No.	Freq. (MHz)	Reading_Level (dBuV)			Correct Factor dB	Measurement (dBuV)			Limit (dBuV)		Margin (dB)		P/F	Comment
		Peak	QP	AVG		Peak	QP	AVG	QP	AVG	QP	AVG		
1	0.1620	40.53		25.09	10.17	50.70		35.26	65.36	55.36	-14.66	-20.10	P	
2	0.3899	35.82		26.10	10.33	46.15		36.43	58.06	48.06	-11.91	-11.63	P	
3	0.4500	38.04		25.87	10.37	48.41		36.24	56.87	46.87	-8.46	-10.63	P	
4	1.0580	32.28		16.03	10.37	42.65		26.40	56.00	46.00	-13.35	-19.60	P	
5	1.6660	32.42		17.74	10.33	42.75		28.07	56.00	46.00	-13.25	-17.93	P	
6	2.2820	33.74		23.11	10.34	44.08		33.45	56.00	46.00	-11.92	-12.55	P	

7. OCCUPIED BANDWIDTH

7.1 MEASUREMENT METHOD

The test set up and general procedure is similar to conducted peak output power test. Only different for setting the measurement configuration of the measuring instrument of Spectrum Analyzer.

7.2 PROVISIONS APPLICABLE

FCC §2.1049, §22.917, §22.905, §24.238

7.3 MEASUREMENT RESULT

Occupied Bandwidth (99%) for GSM 850 MHz			
Signal	Mode	Frequency(MHz)	Occupied Bandwidth (99%)(kHz)
Input Uplink	Low Channel	824.8	249
	Middle Channel	836.5	250
	High Channel	848.2	250
Input Downlink	Low Channel	869.8	248
	Middle Channel	881.5	248
	High Channel	893.2	247
Output Uplink	Low Channel	824.8	250
	Middle Channel	836.5	250
	High Channel	848.2	249
Output Downlink	Low Channel	869.8	248
	Middle Channel	881.5	248
	High Channel	893.2	247

Note: only worst case have test plot.

Occupied Bandwidth (99%) for GSM 1900 MHz			
Signal	Mode	Frequency(MHz)	Occupied Bandwidth (99%)(kHz)
Input Uplink	Low Channel	1850.2	249
	Middle Channel	1880	250
	High Channel	1909.8	250
Input Downlink	Low Channel	1930.2	248
	Middle Channel	1960	248
	High Channel	1989.8	247
Output Uplink	Low Channel	1850.2	250
	Middle Channel	1880	252
	High Channel	1909.8	250
Output Downlink	Low Channel	1930.2	248
	Middle Channel	1960	248
	High Channel	1989.8	247

Note: only worst case have test plot.

8. EMISSION BANDWIDTH

8.1 MEASUREMENT METHOD

The test set up and general procedure is similar to conducted peak output power test. Only different for setting the measurement configuration of the measuring instrument of Spectrum Analyzer.

8.2 PROVISIONS APPLICABLE

The emission bandwidth is defined as two points, one below the carrier center frequency and one above the carrier center frequency, outside of which all emissions are attenuated at least 26dB below the transmitter power

8.3 MEASUREMENT RESULT

Occupied Bandwidth (-26dBc) for GSM 850 MHz			
Signal	Mode	Frequency(MHz)	Occupied Bandwidth (99%)(kHz)
Input Uplink	Low Channel	824.8	336
	Middle Channel	836.5	338
	High Channel	848.2	338
Input Downlink	Low Channel	869.8	333
	Middle Channel	881.5	334
	High Channel	893.2	334
Output Uplink	Low Channel	824.8	337
	Middle Channel	836.5	338
	High Channel	848.2	338
Output Downlink	Low Channel	869.8	331
	Middle Channel	881.5	332
	High Channel	893.2	331

Note: only worst case have test plot.

Occupied Bandwidth (-26dBc) for GSM 1900 MHz			
Signal	Mode	Frequency(MHz)	Occupied Bandwidth (99%)(kHz)
Input Uplink	Low Channel	1850.2	338
	Middle Channel	1880	338
	High Channel	1909.8	336
Input Downlink	Low Channel	1930.2	330
	Middle Channel	1960	332
	High Channel	1989.8	332
Output Uplink	Low Channel	1850.2	339
	Middle Channel	1880	340
	High Channel	1909.8	340
Output Downlink	Low Channel	1930.2	332
	Middle Channel	1960	334
	High Channel	1989.8	334

Note: only worst case have test plot.

9. BAND EDGE

9.1 MEASUREMENT METHOD

The test set up and general procedure is similar to conducted peak output power test. Only different for setting the measurement configuration of the measuring instrument of Spectrum Analyzer.

9.2 PROVISIONS APPLICABLE

as Specified in FCC rules of 22.917(b) and 24.238(b)

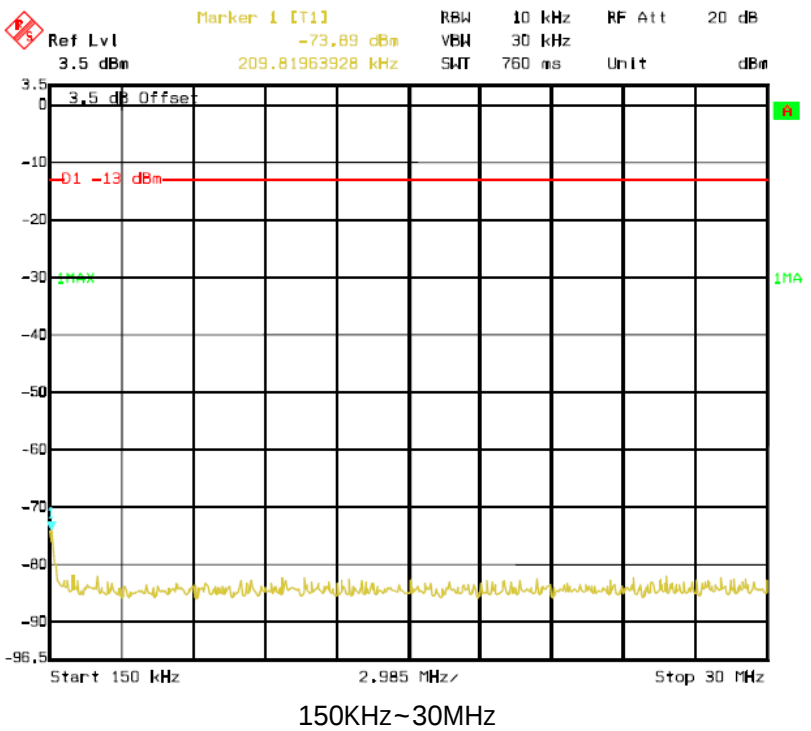
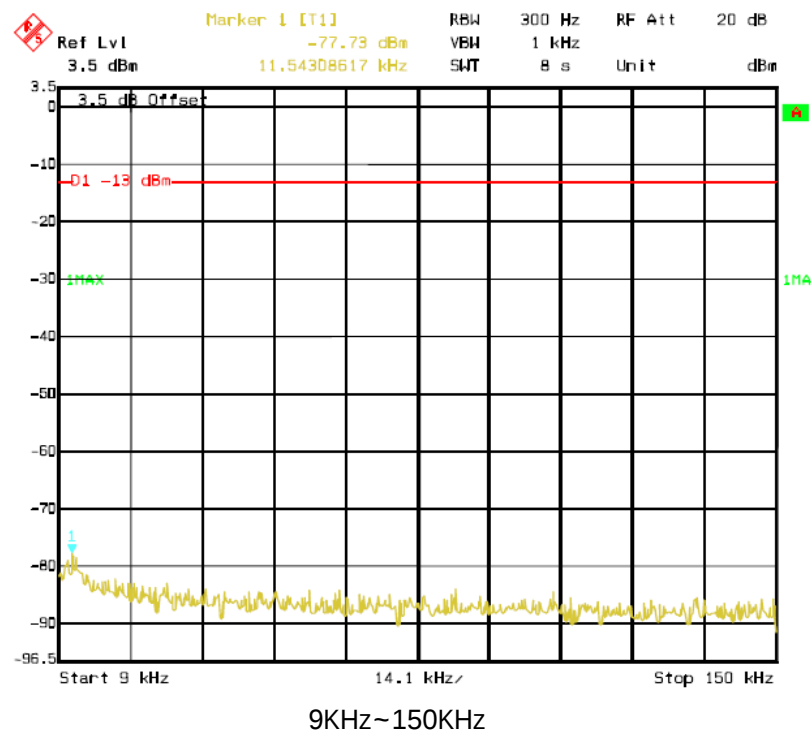
9.3 MEASUREMENT RESULT

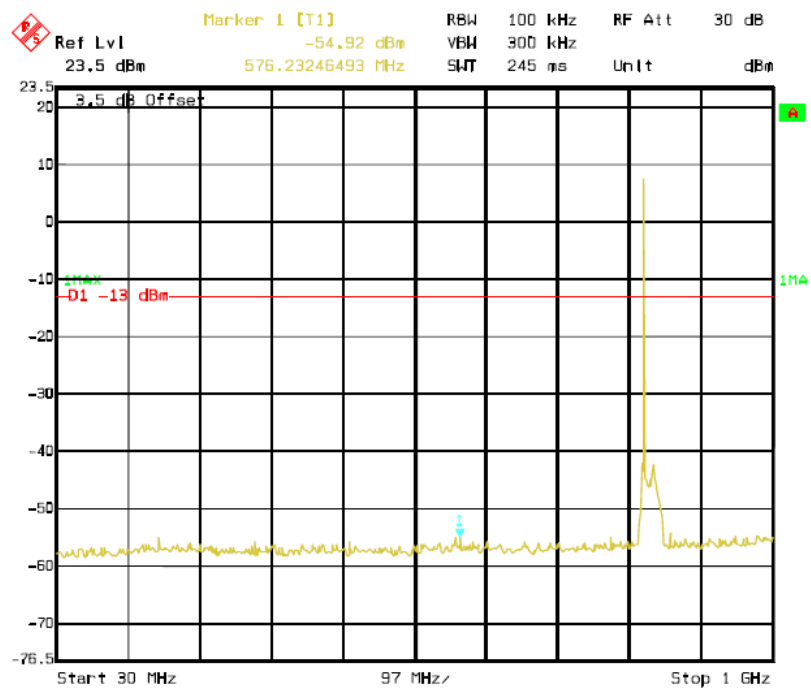
Please refers to Appendix III for compliance test plots for band edges

APPENDIX I

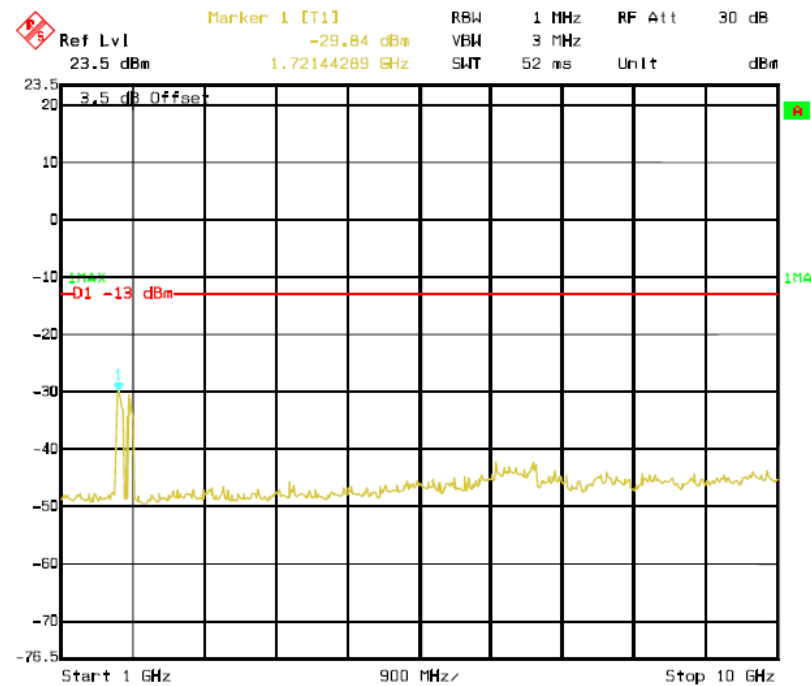
TEST PLOTS FOR CONDUCTED SPURIOUS EMISSION

CONDUCTED EMISSION IN GSM BAND850 Uplink for low channel (worst case)

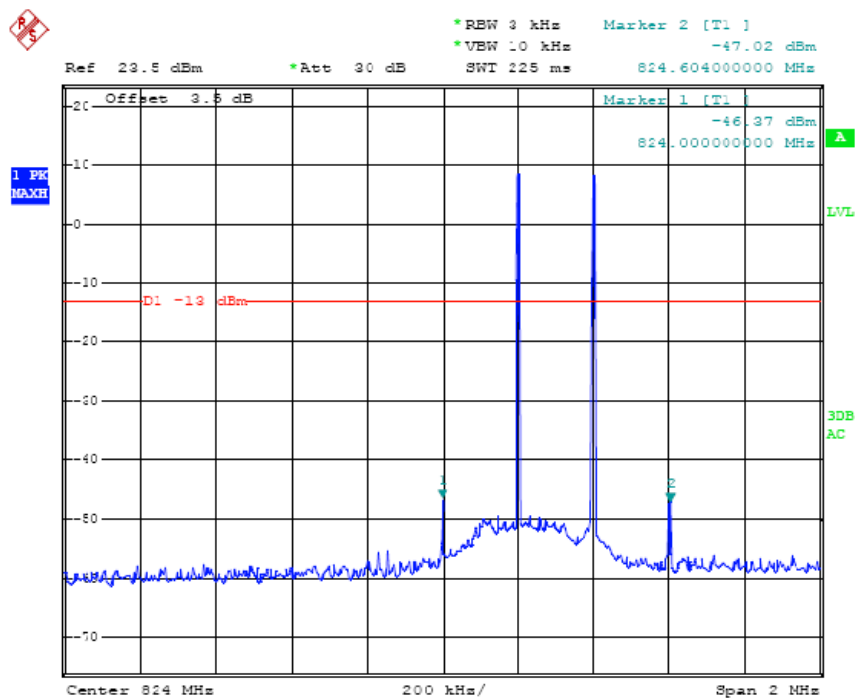




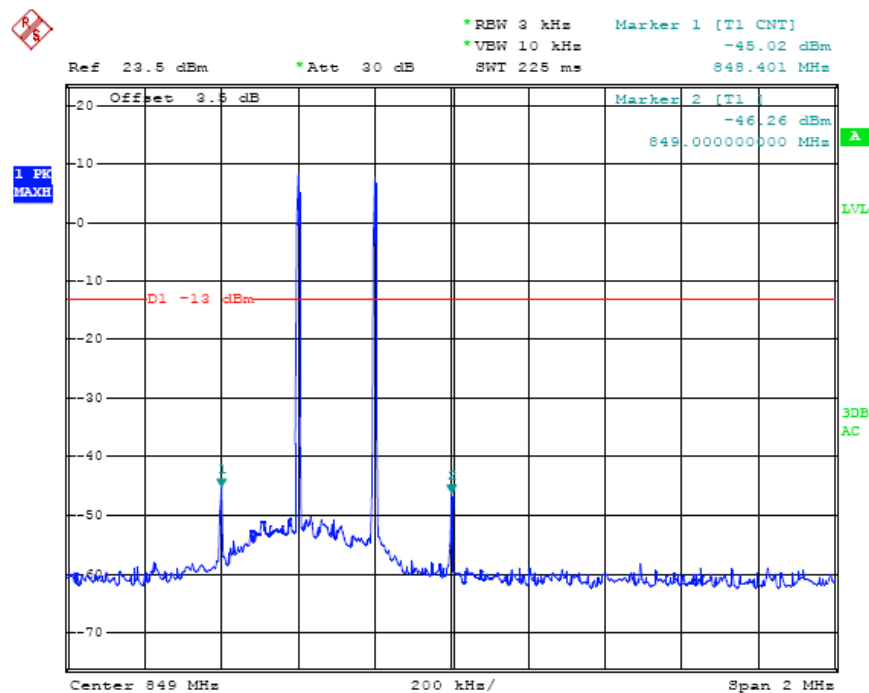
30MHz~1GHz



1GHz~10GHz

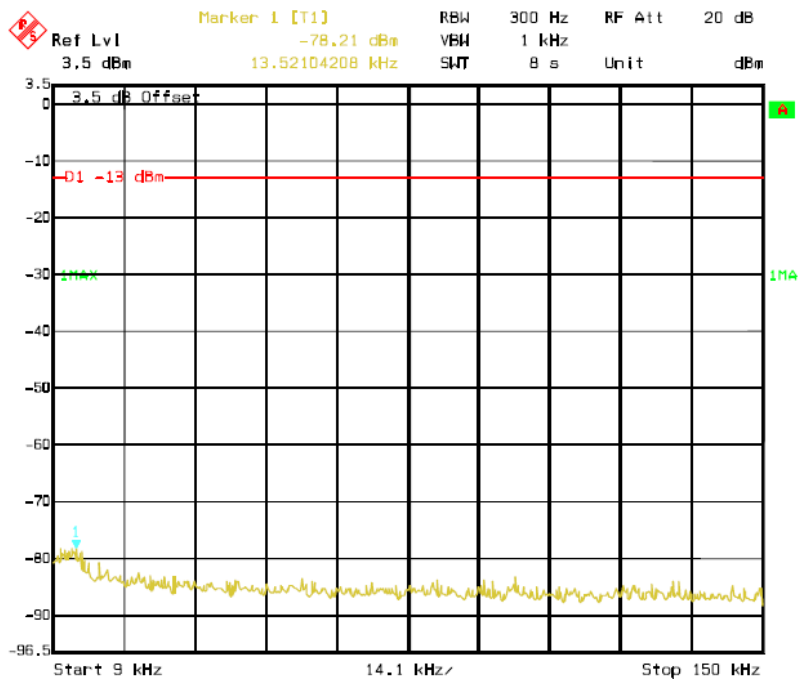


Two tone intermodulation (Low band edge),unmodulated

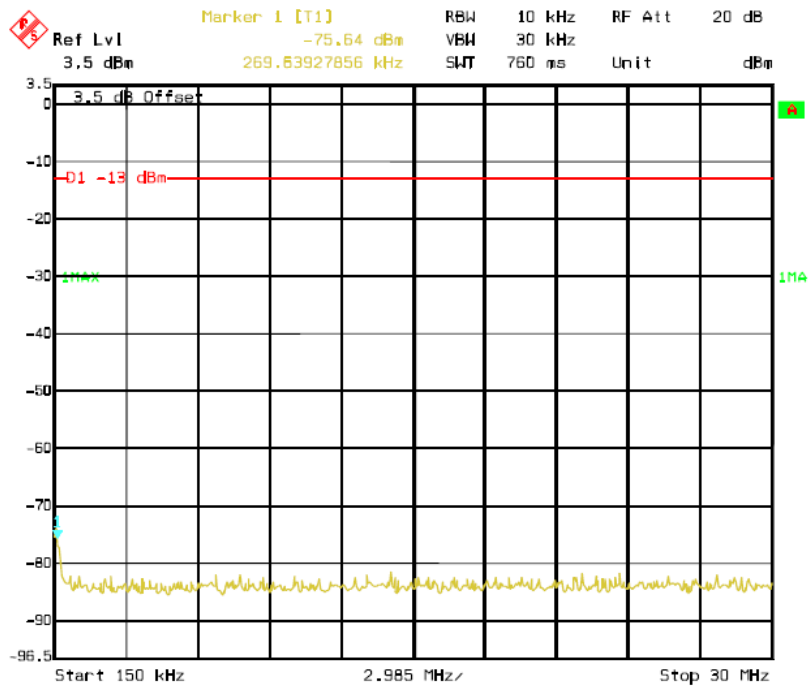


Two tone intermodulation(High band edge),unmodulated

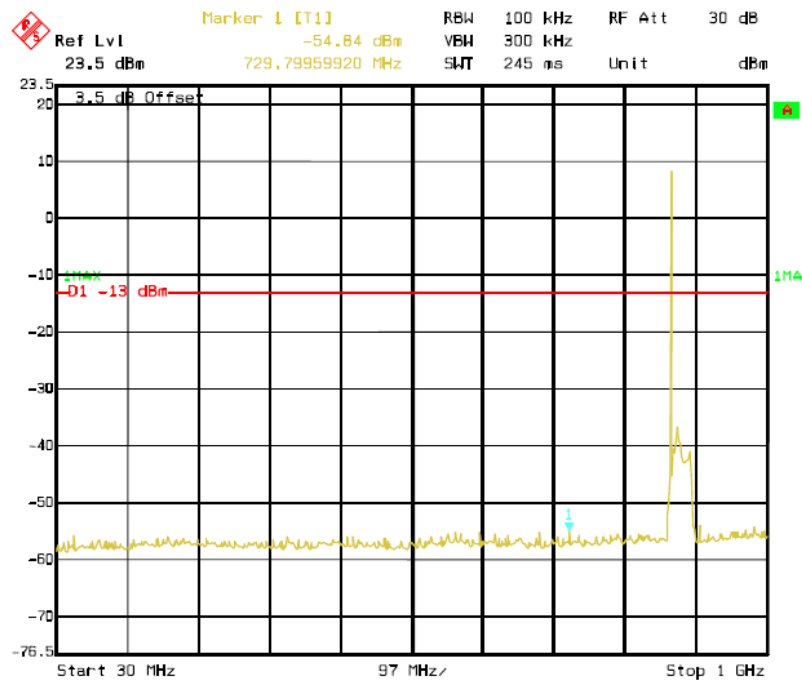
CONDUCTED EMISSION IN GSM BAND850 Downlink for low channel (worst case)



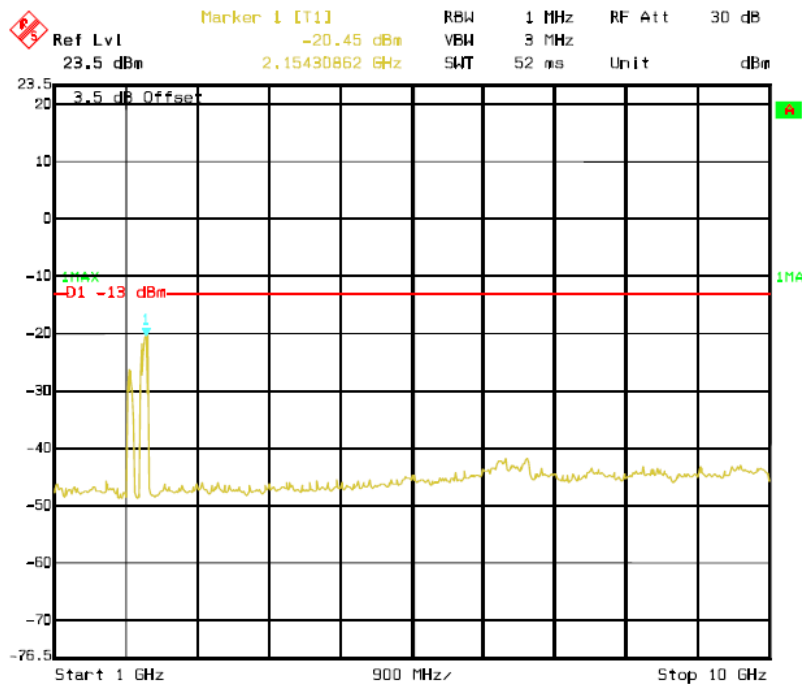
9KHz~150KHz



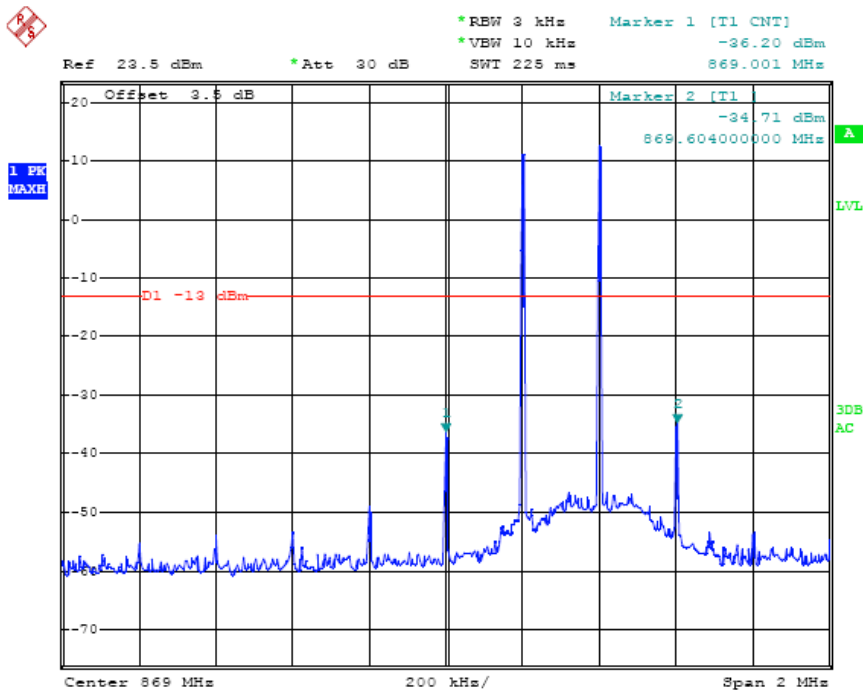
150KHz~30MHz



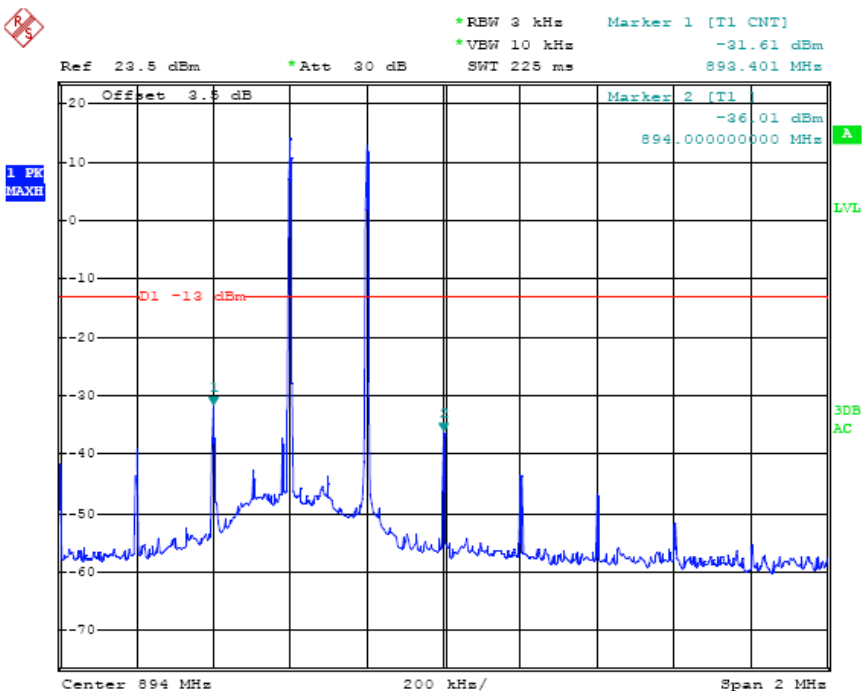
30MHz~1GHz



1GHz~10GHz

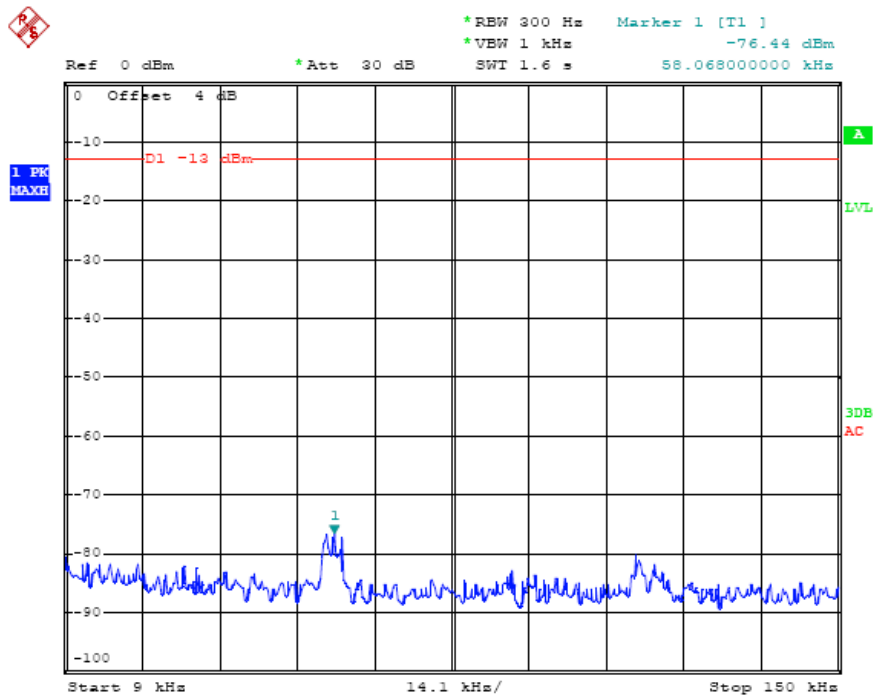


Two tone intermodulation (Low band edge),unmodulated

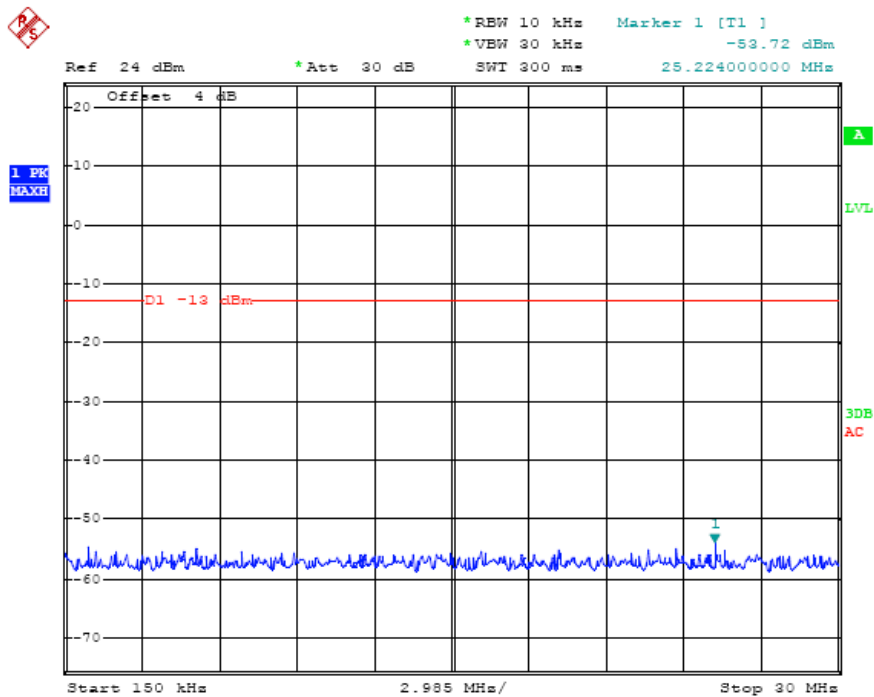


Two tone intermodulation(High band edge),unmodulated

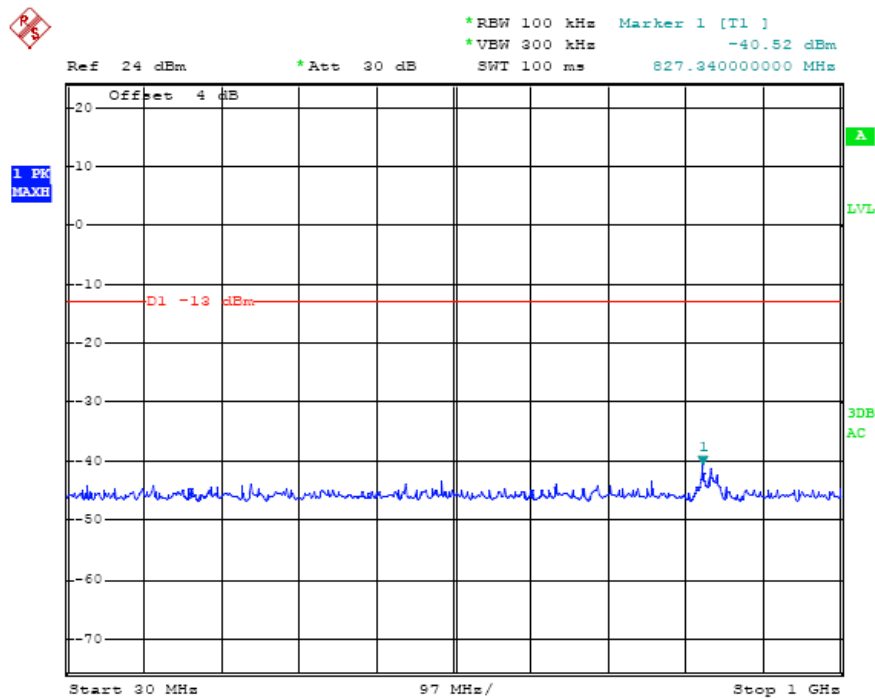
CONDUCTED EMISSION IN GSM BAND1900 Uplink for low channel (worst case)



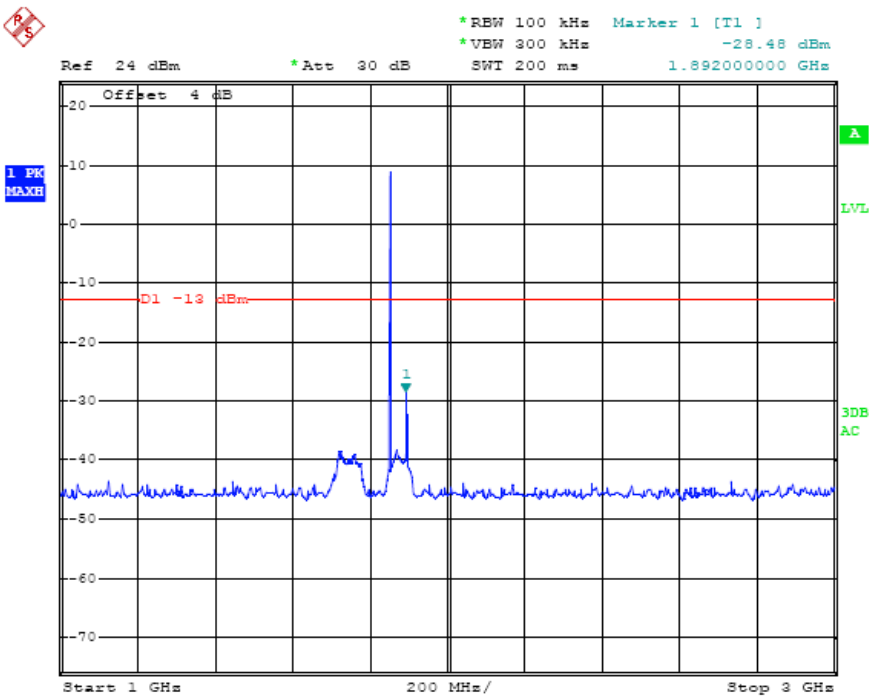
9kHz~150kHz



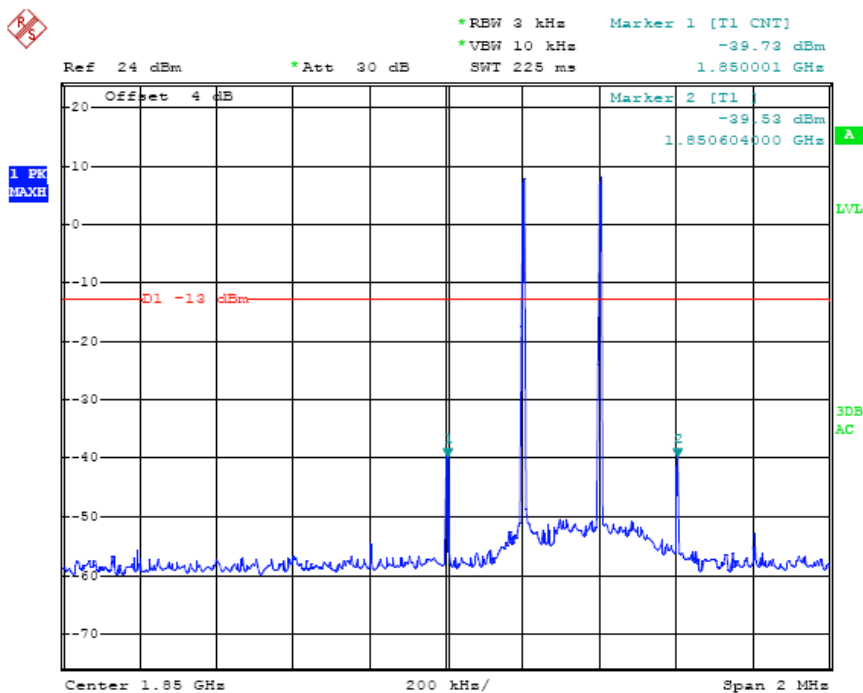
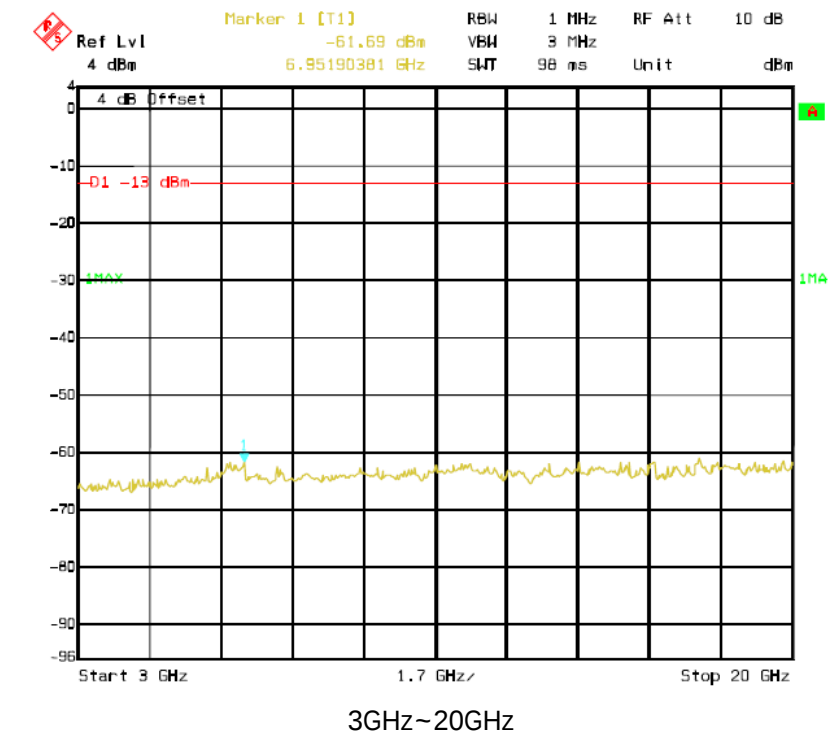
150kHz~30MHz

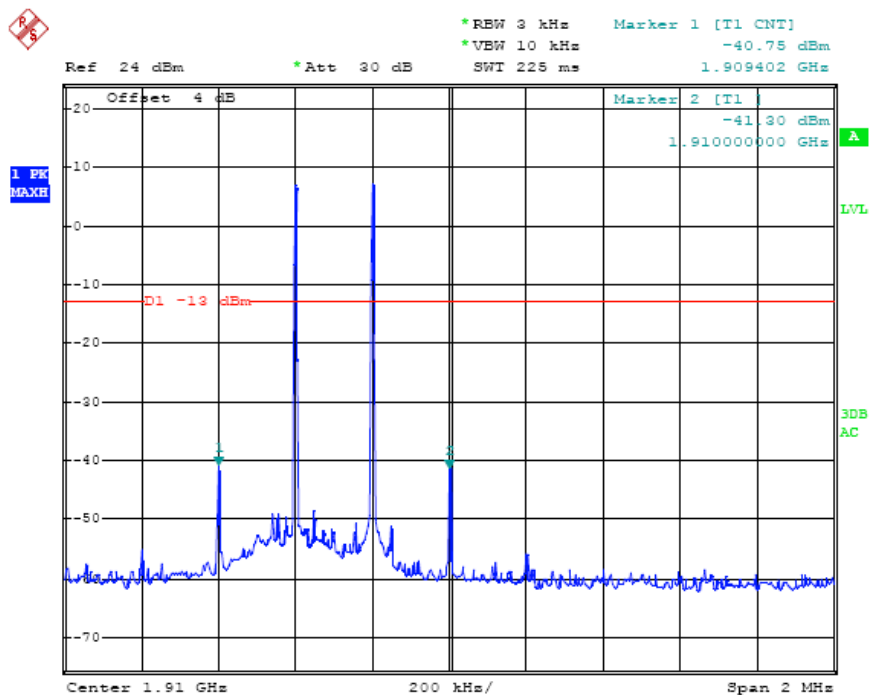


30MHz~1GHz



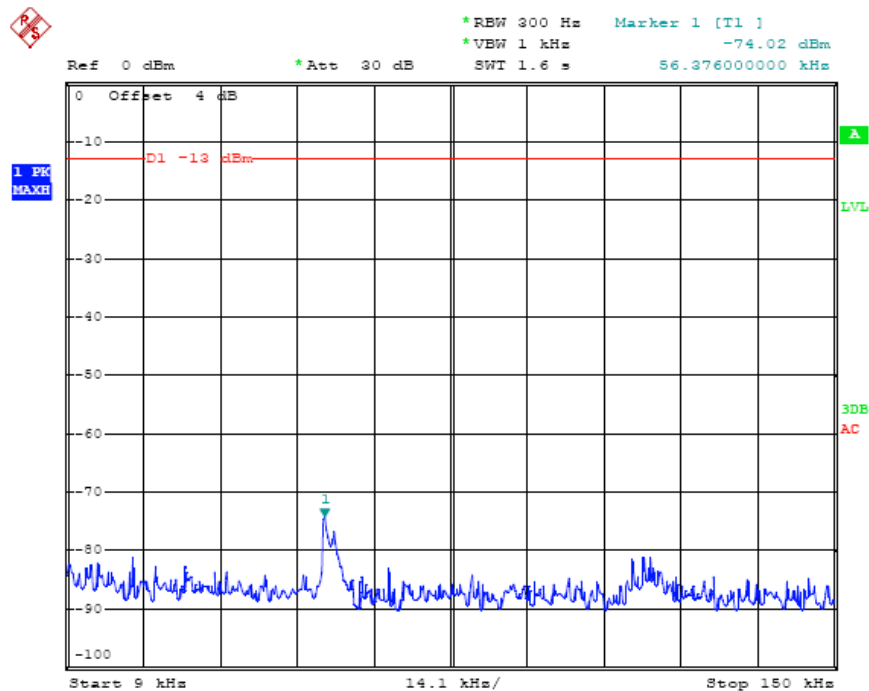
1GHz~3GHz



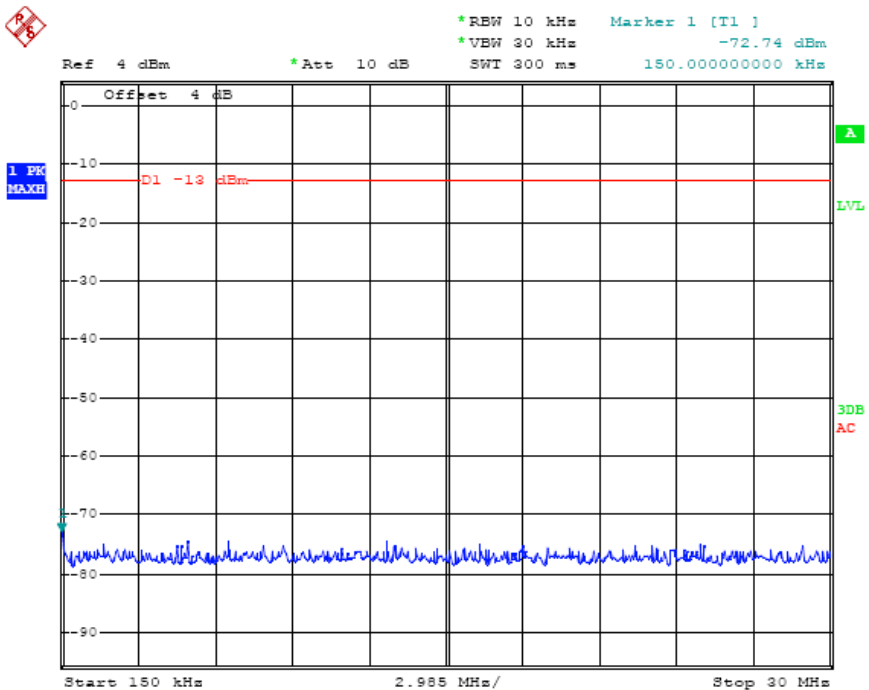


Two tone intermodulation (High band edge),unmodulated

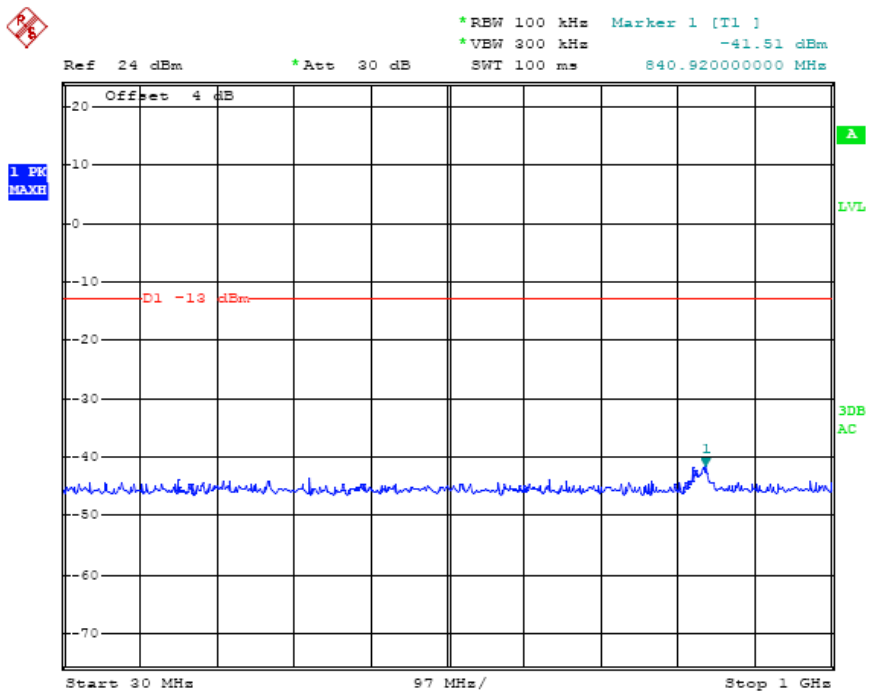
CONDUCTED EMISSION IN GSM BAND1900 Downlink for low channel (worst case)



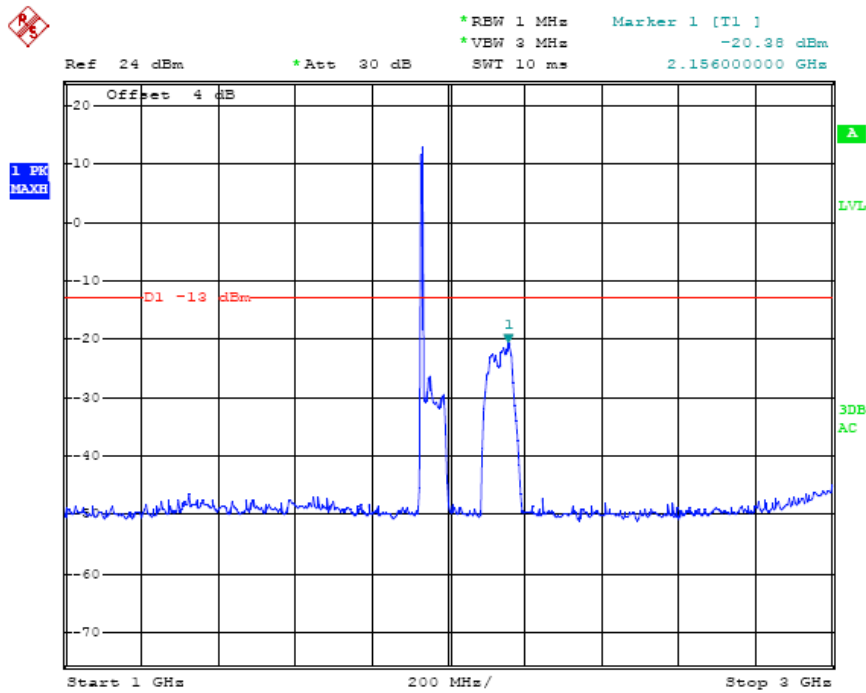
9KHz~150KHz



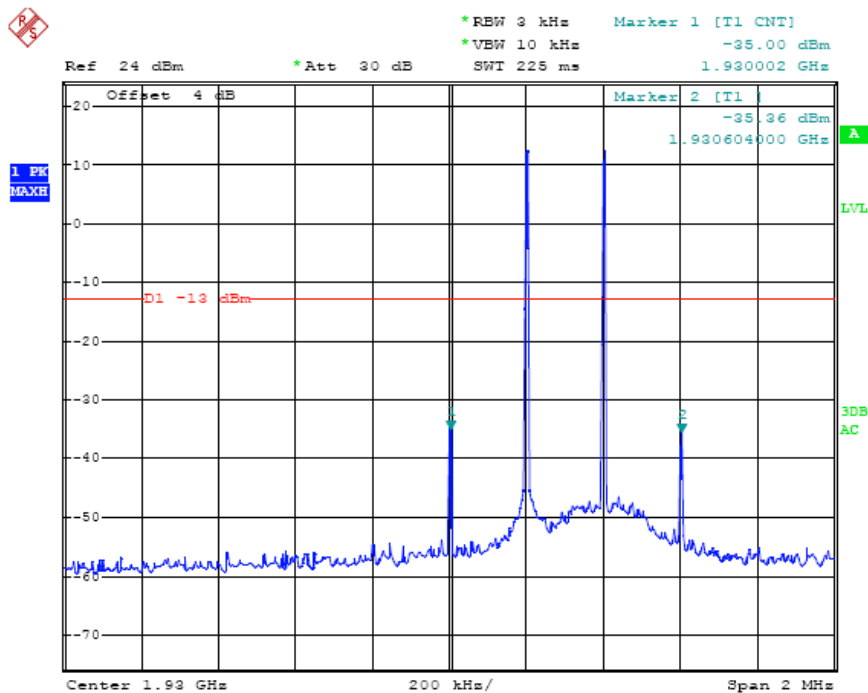
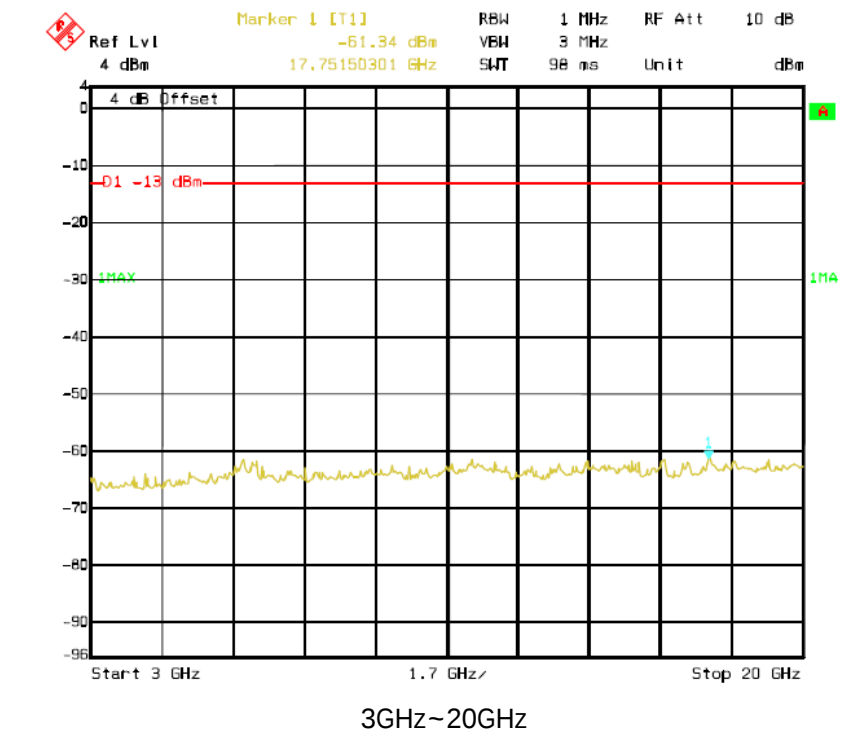
150KHz~30MHz



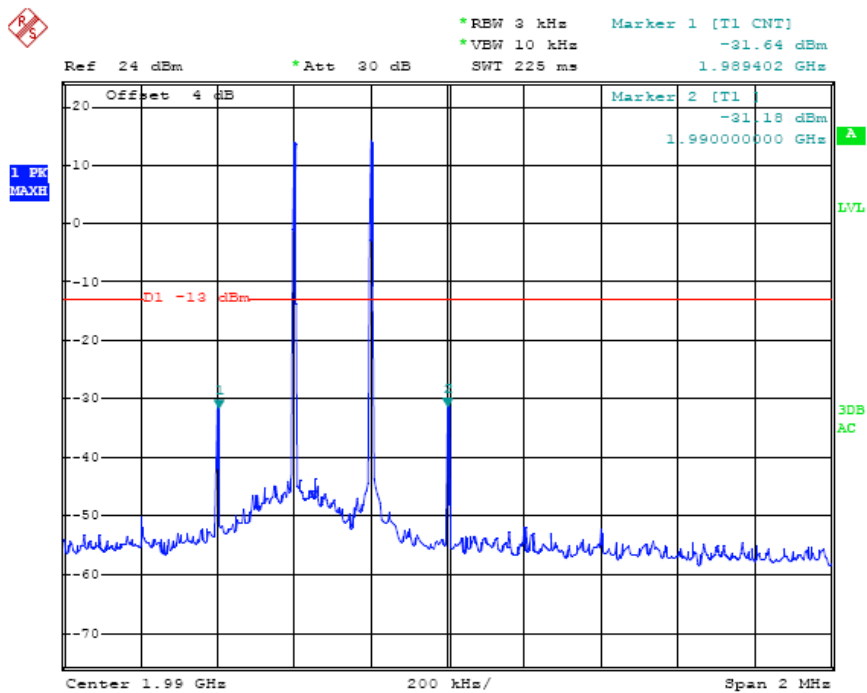
30MHz~1GHz



1GHz~3GHz



Two tone intermodulation (Low band edge),unmodulated

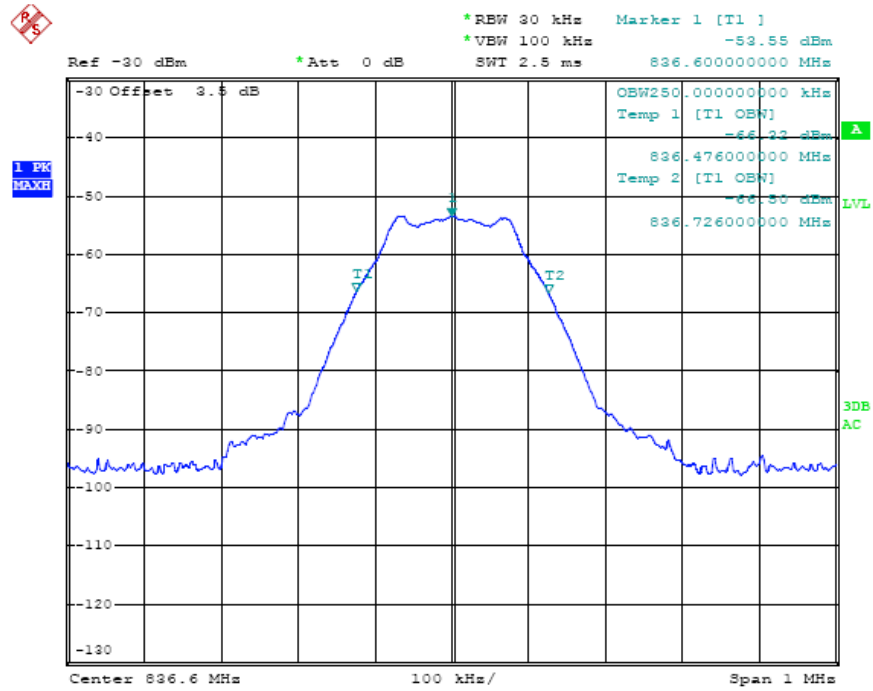


Two tone intermodulation (High band edge),unmodulated

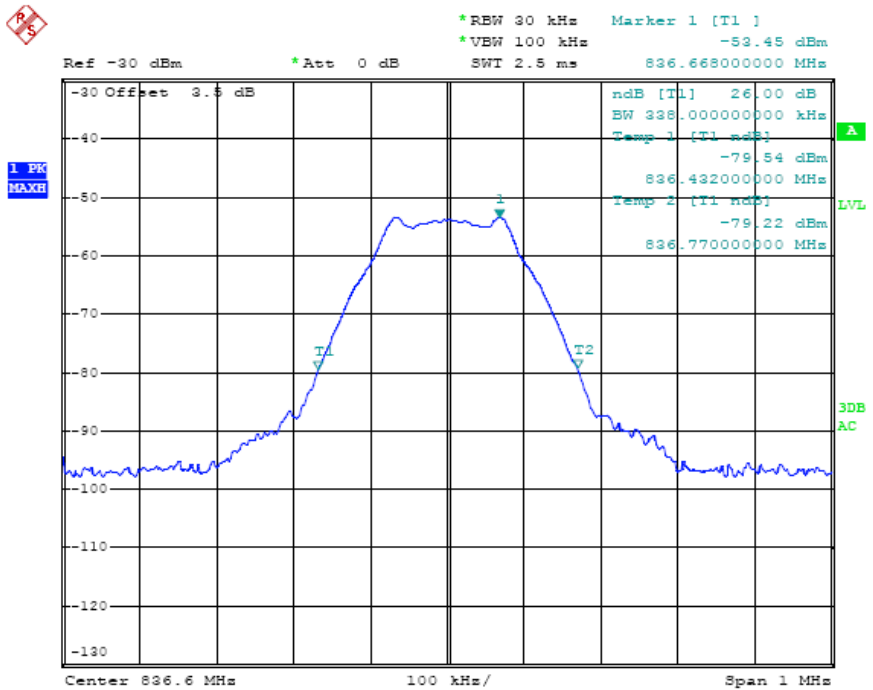
APPENDIX II

TEST PLOTS FOR OCCUPIED BANDWIDTH (99%) EMISSION BANDWIDTH (-26dBC)

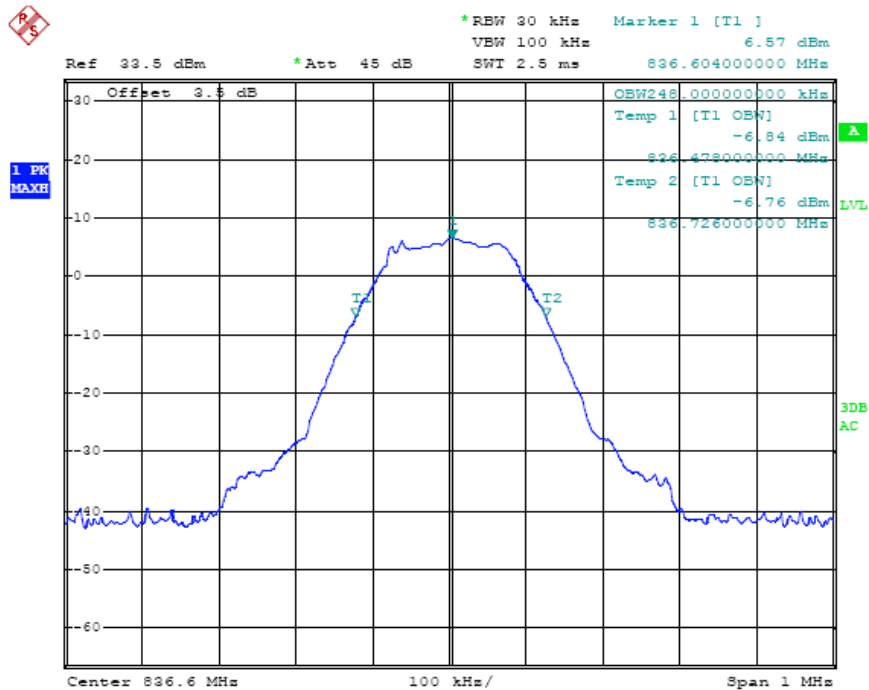
Input Signal(worst case)
Occupied Bandwidth (99%) GSM 850 Middle Channel Uplink



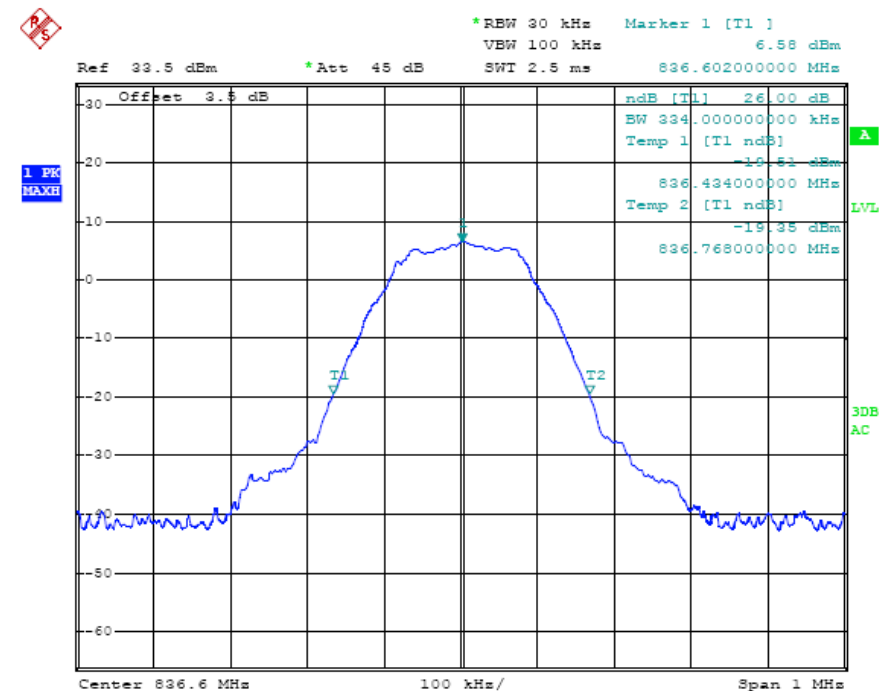
Occupied Bandwidth (26dB) GSM 850 Middle Channel Uplink



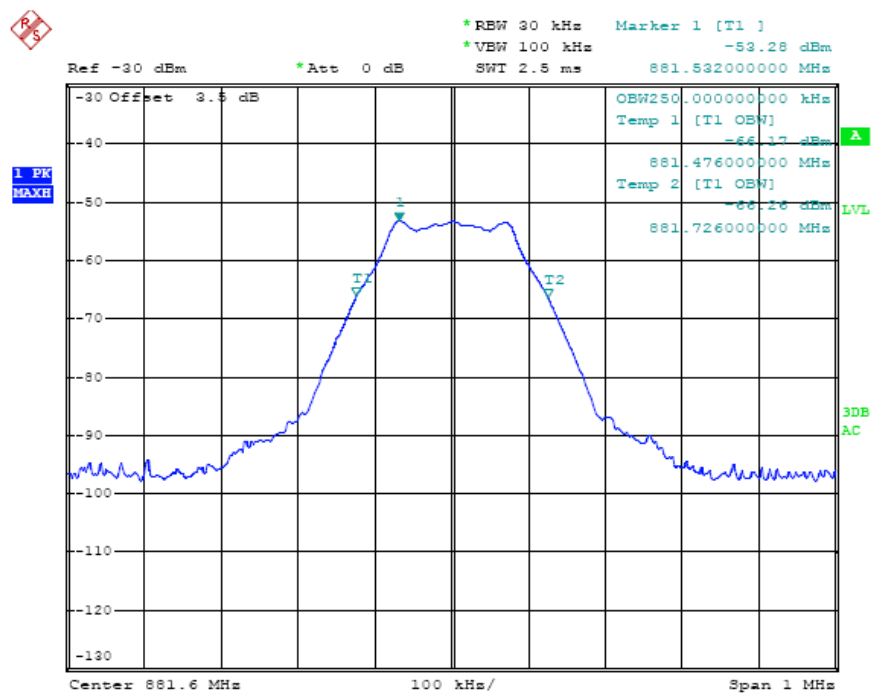
Occupied Bandwidth (99%) GSM 850 Middle Channel Downlink



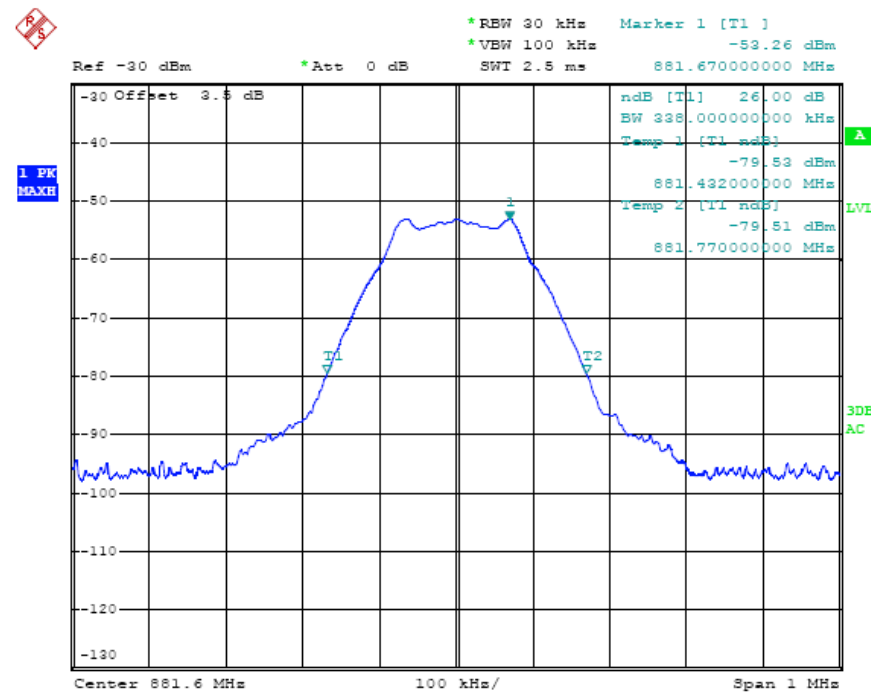
Occupied Bandwidth (26dB) GSM 850 Middle Channel Downlink



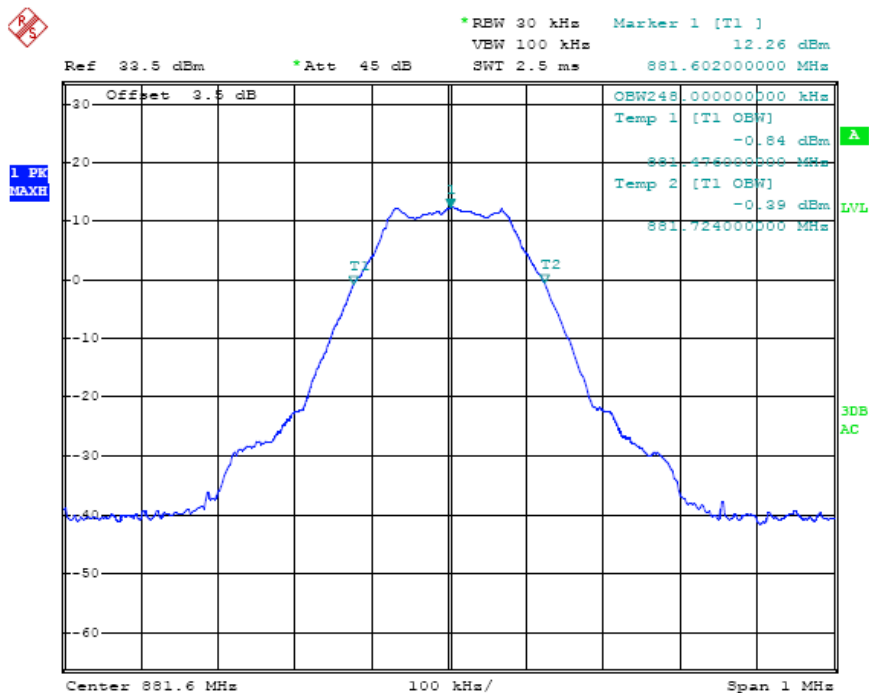
Output Signal (worst case)
Occupied Bandwidth (99%) GSM 850 Middle Channel Uplink



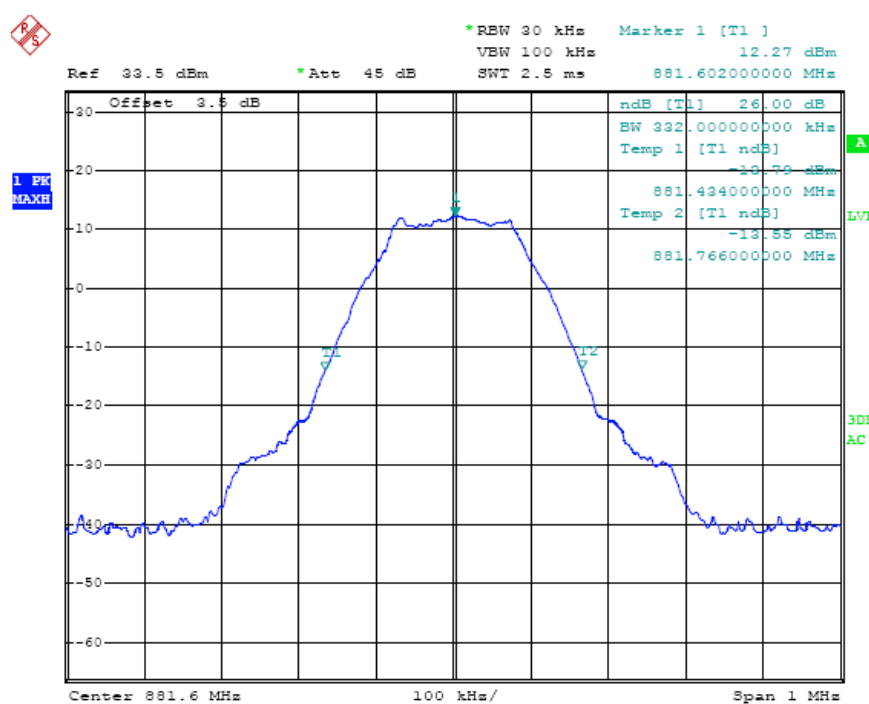
Occupied Bandwidth (26dB) GSM 850 Middle Channel Uplink



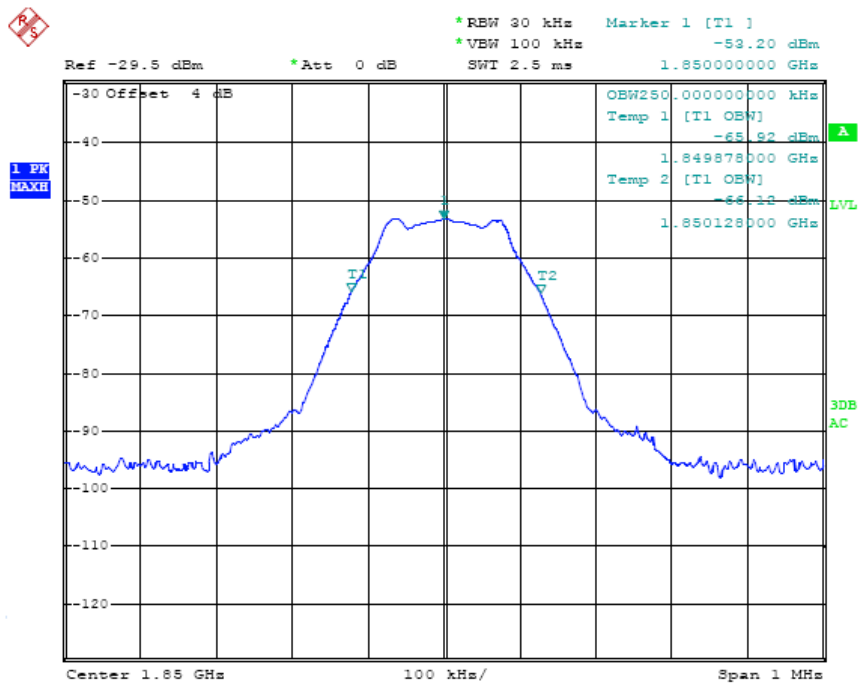
Occupied Bandwidth (99%) GSM 850 Middle Channel Downlink



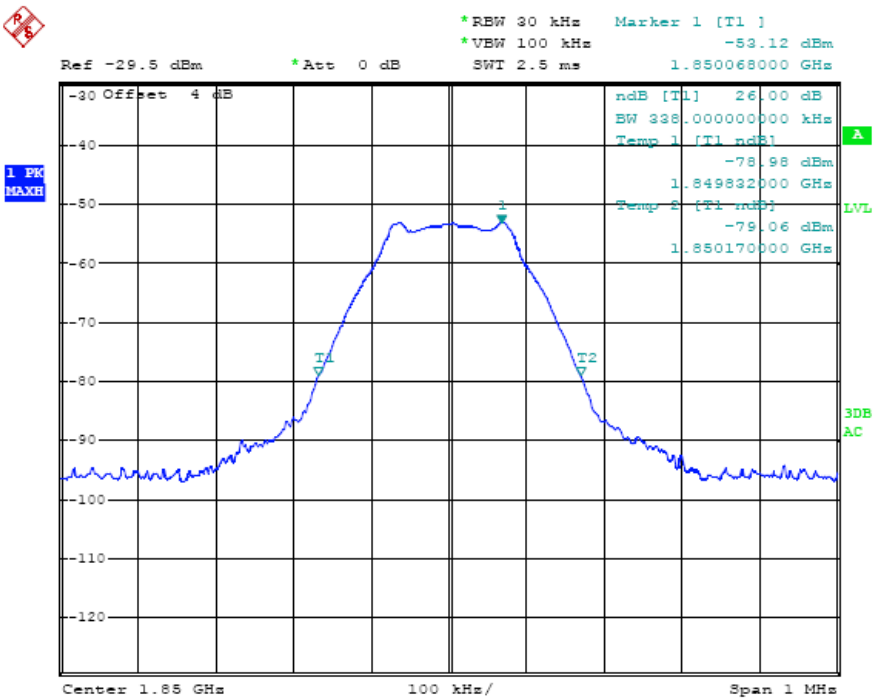
Occupied Bandwidth (26dB) GSM 850 Middle Channel Downlink



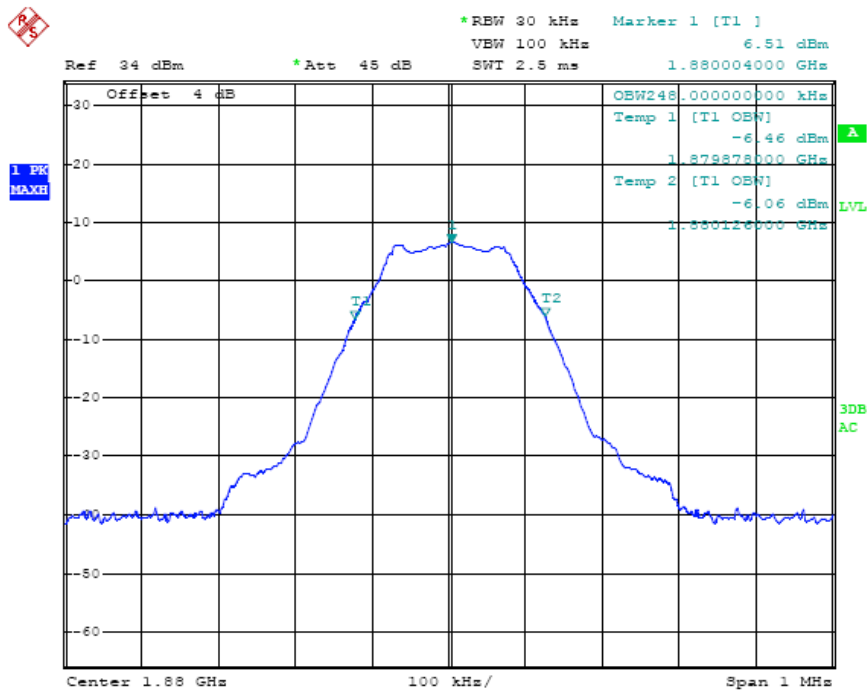
Input Signal(worst case)
Occupied Bandwidth (99%) GSM 1900 Middle Channel Uplink



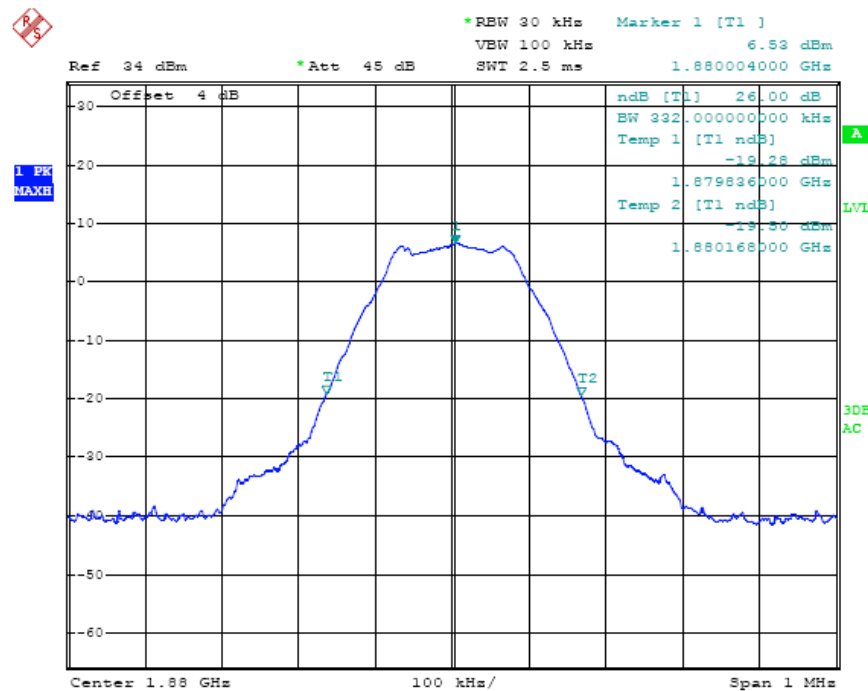
Occupied Bandwidth (26dB) GSM 1900 Middle Channel Uplink



Occupied Bandwidth (99%) GSM 1900 Middle Channel Downlink

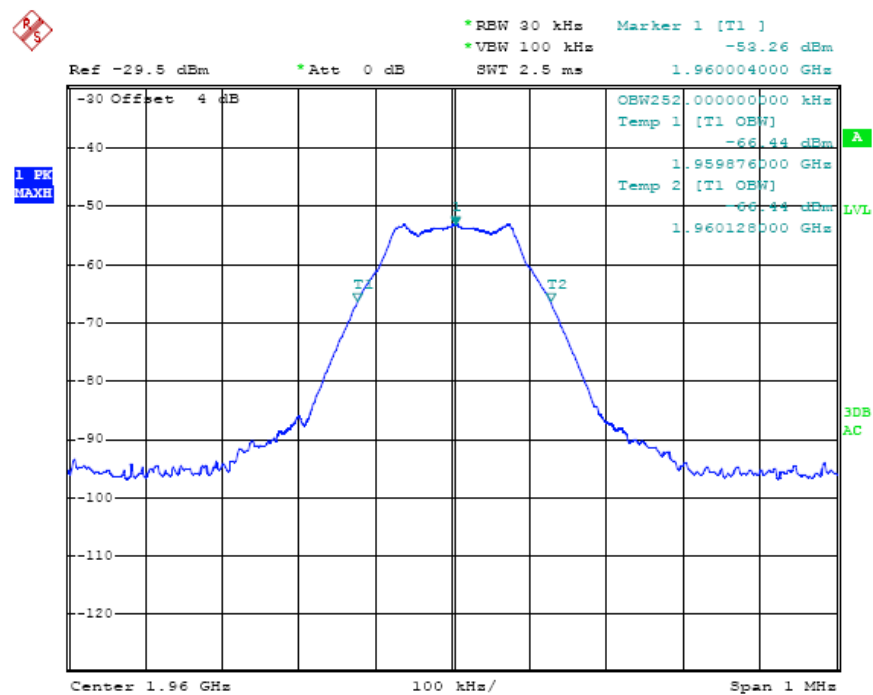


Occupied Bandwidth (26dB) GSM 1900 Middle Channel Downlink

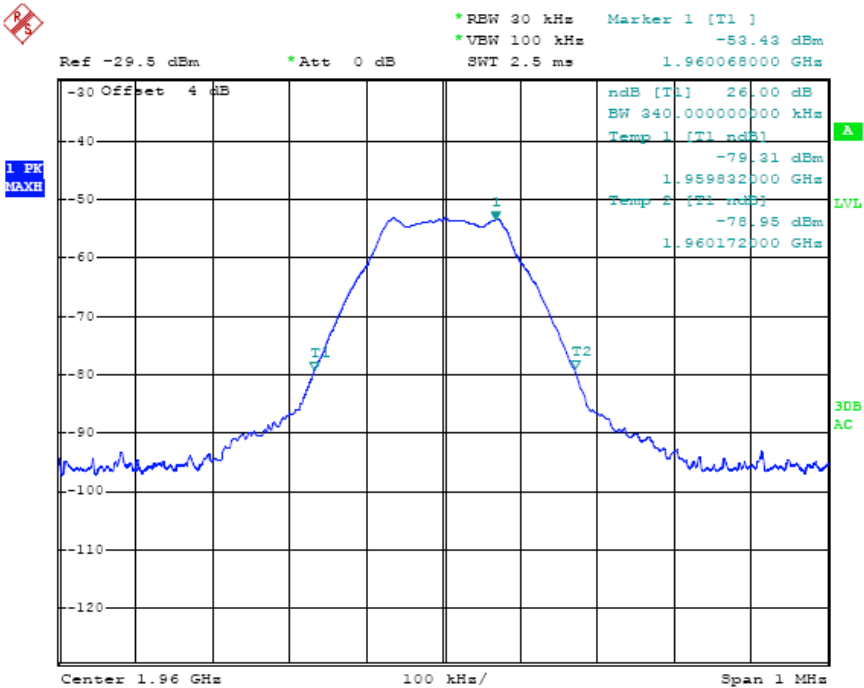


Output signal(worst case)

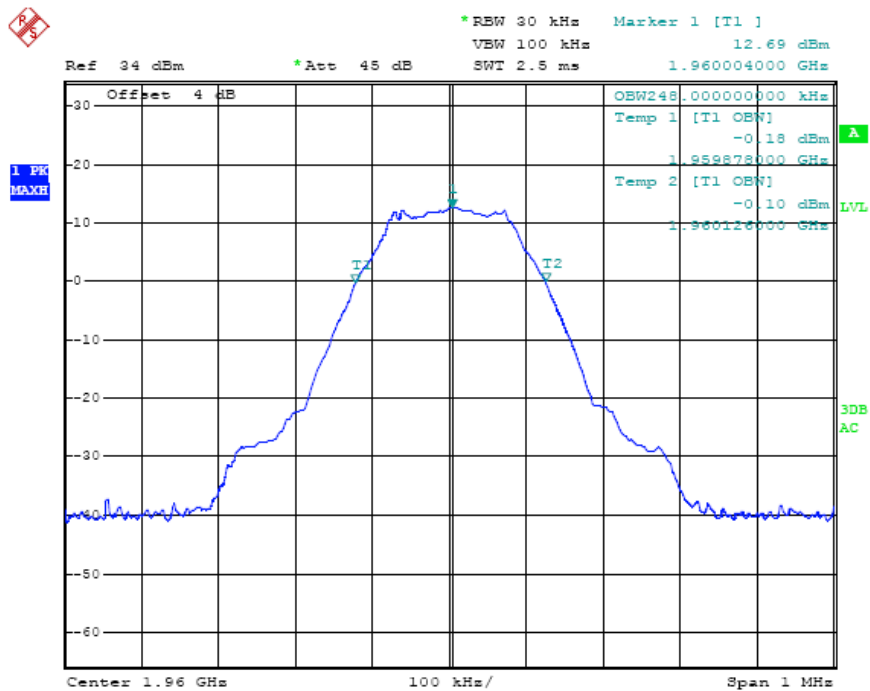
Occupied Bandwidth (99%) GSM 1900 Middle Channel Uplink



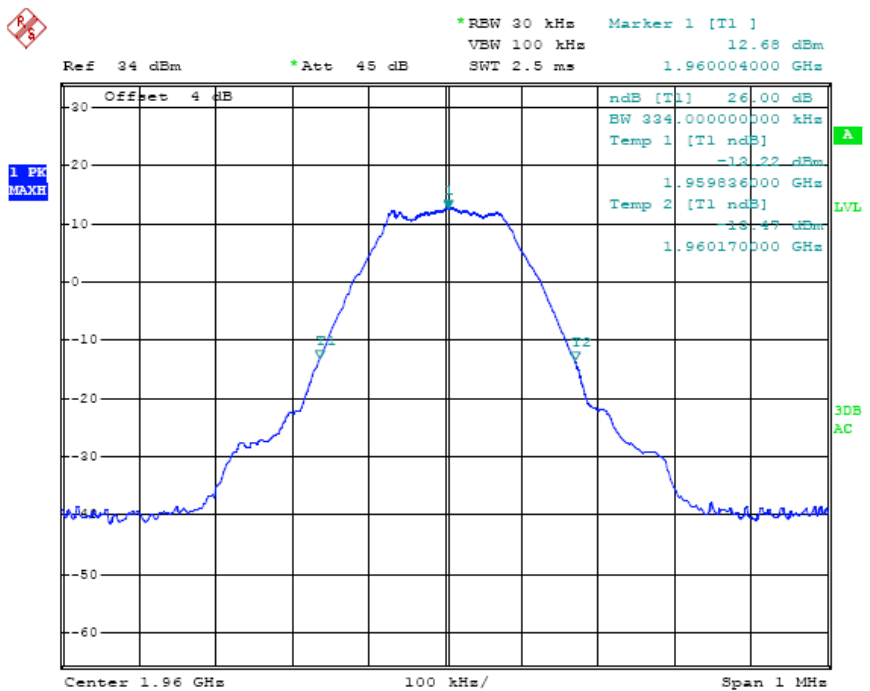
Occupied Bandwidth (26dB) GSM 1900 Middle Channel Uplink



Occupied Bandwidth (99%) GSM 1900 Middle Channel Downlink



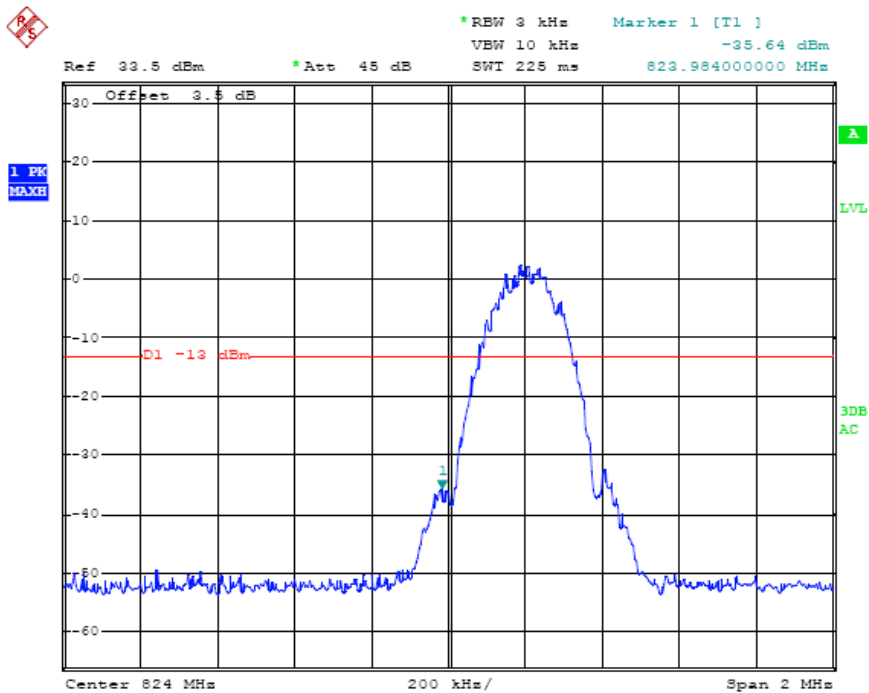
Occupied Bandwidth (26dB) GSM 1900 Middle Channel Downlink



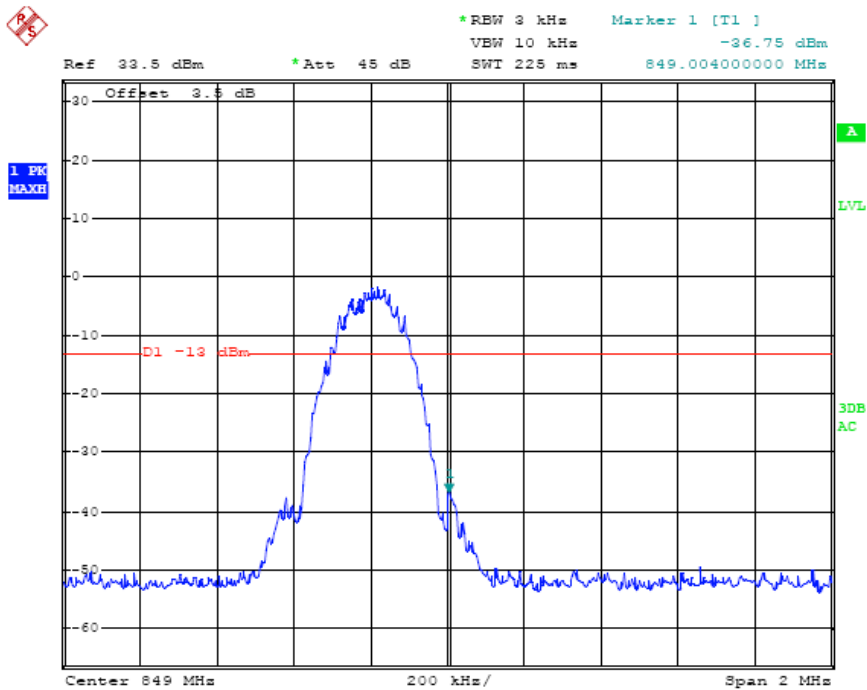
APPENDIX III

TEST PLOTS FOR BAND EDGES

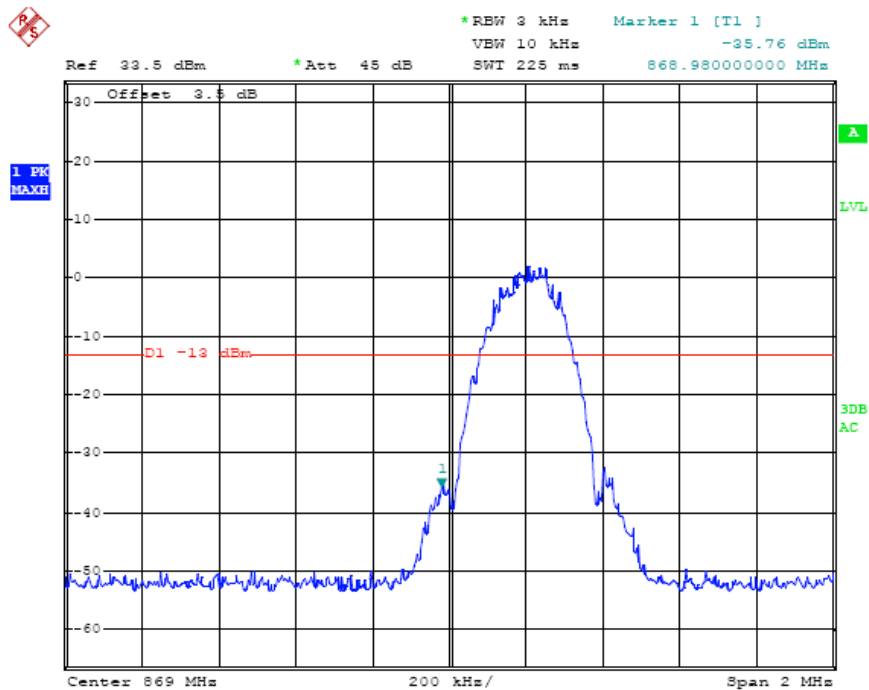
Low Band Edge GSM 850 BAND Uplink



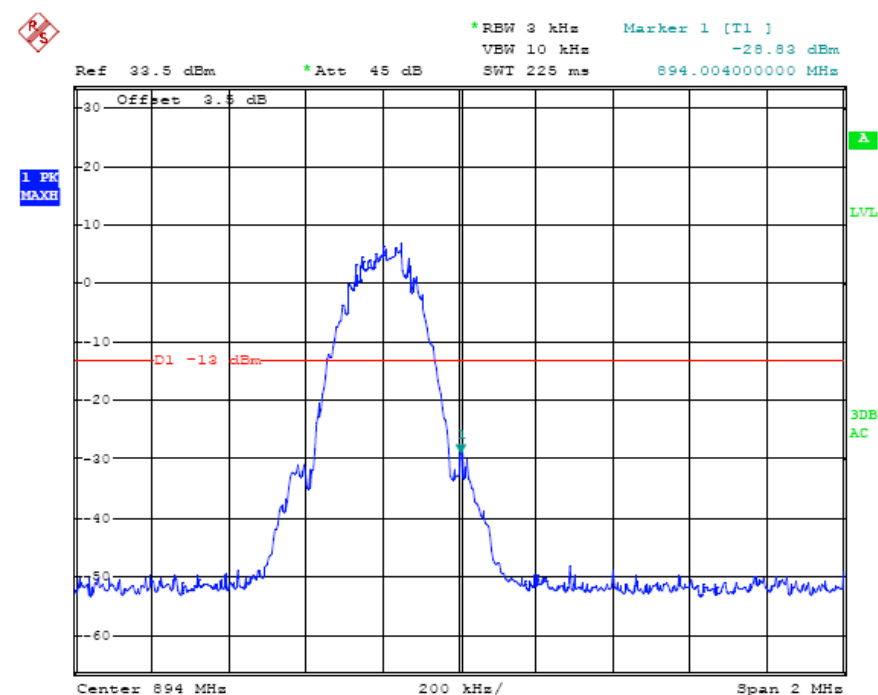
High Band Edge GSM 850 BAND Uplink



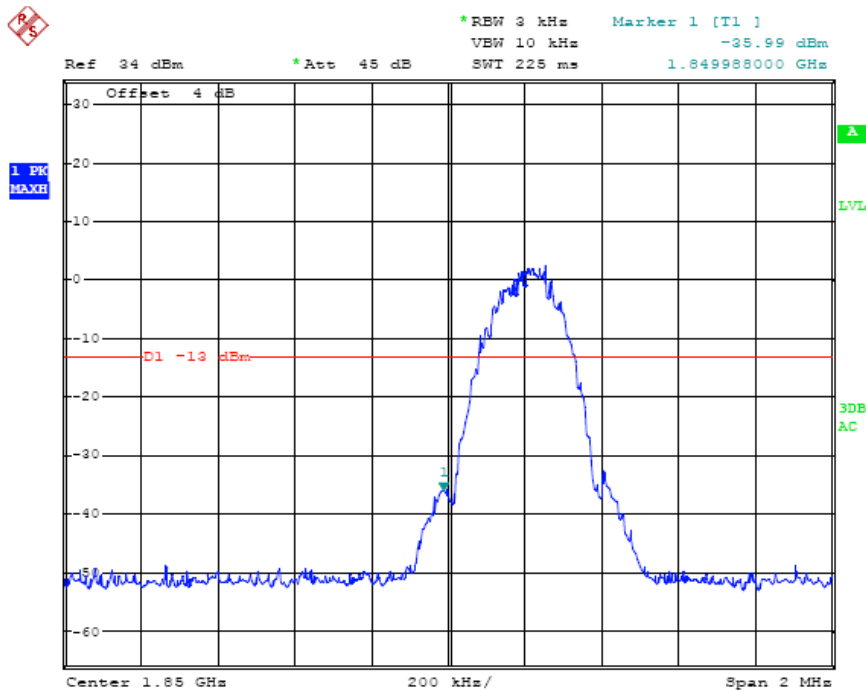
Low Band Edge GSM 850 BAND Downlink



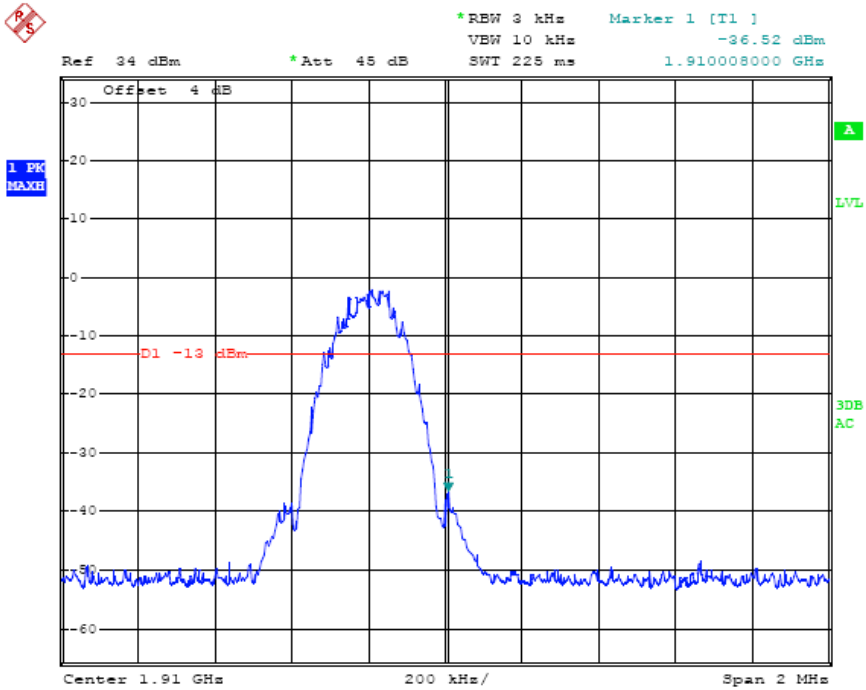
High Band Edge GSM 850 BAND Downlink



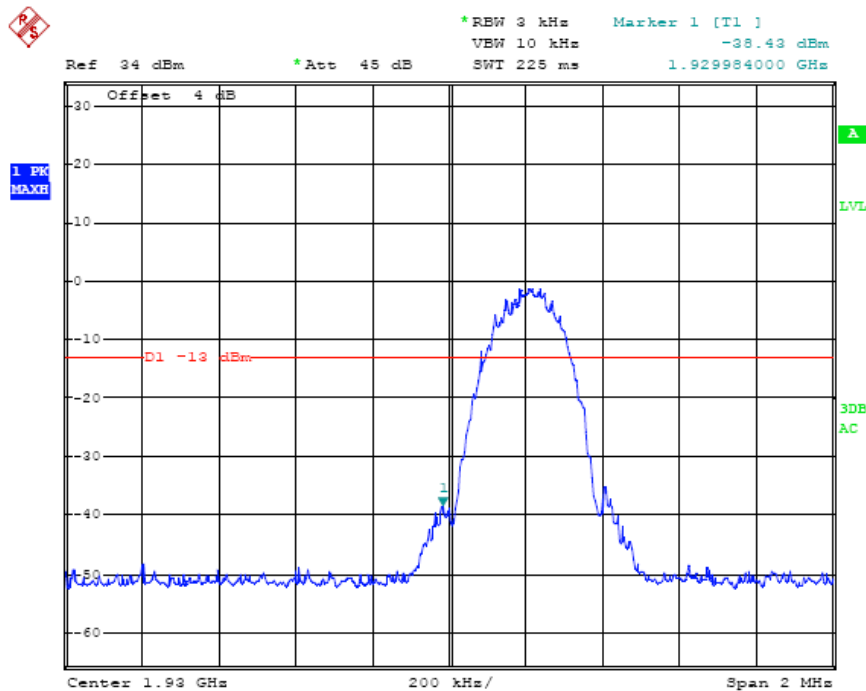
Low Band Edge PCS 1900 BAND Uplink



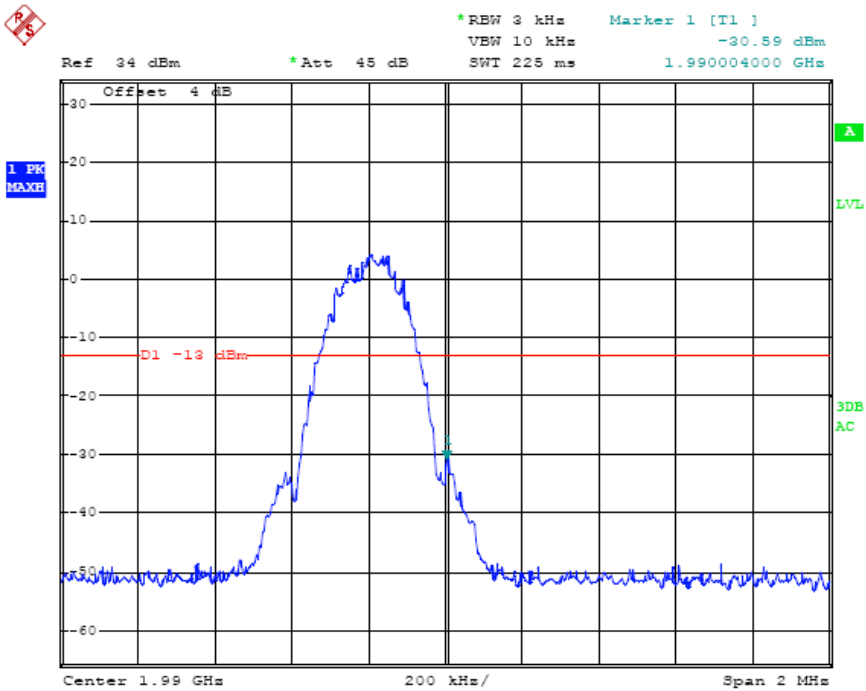
High Band Edge PCS 1900 BAND Uplink



Low Band Edge PCS 1900 BAND Downlink



High Band Edge PCS 1900 BAND Downlink



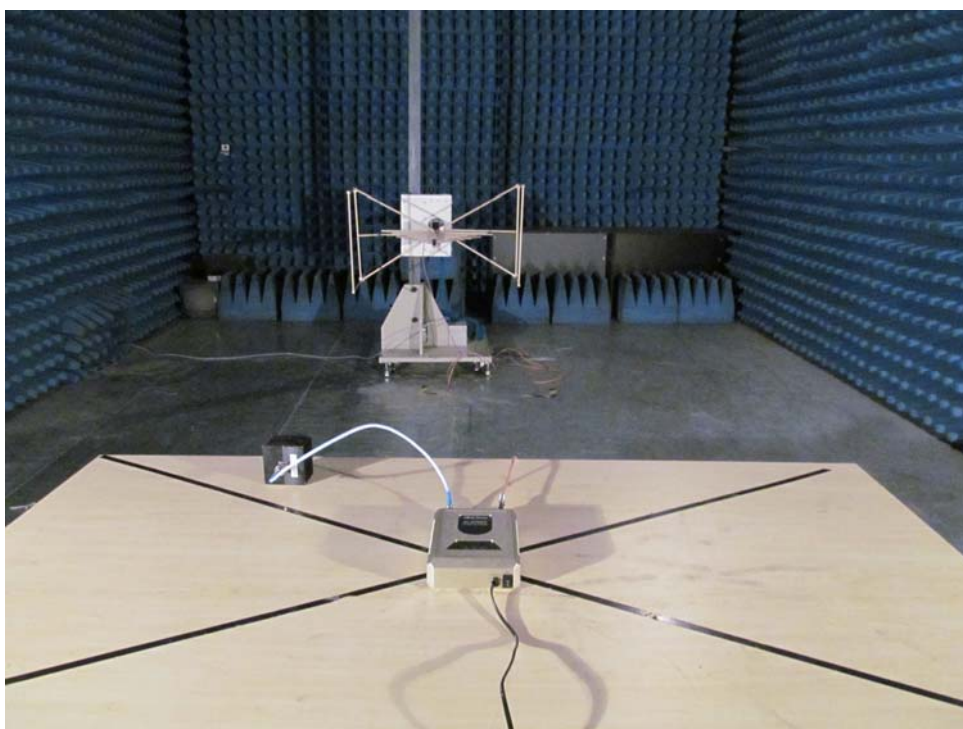
APPENDIX IV

PHOTOGRAPHS OF TEST SETUP

CONDUCTED EMISSION



RADIATED SPURIOUS EMISSION



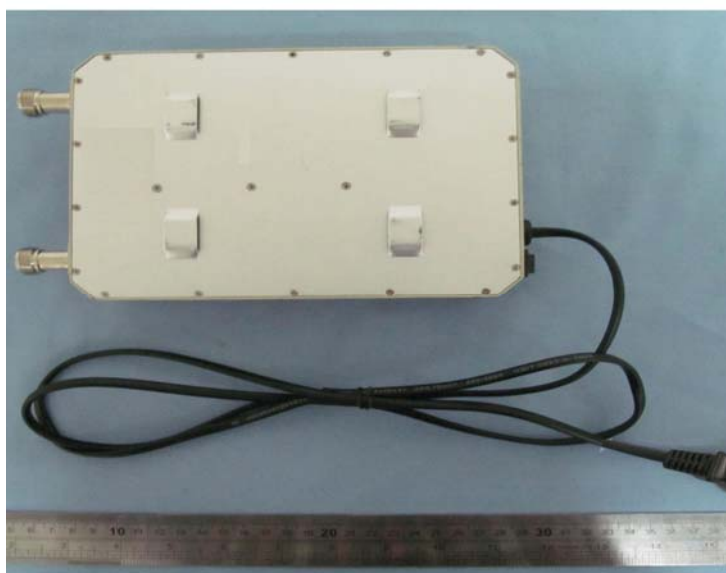
APPENDIX V

PHOTOGRAPHS OF EUT

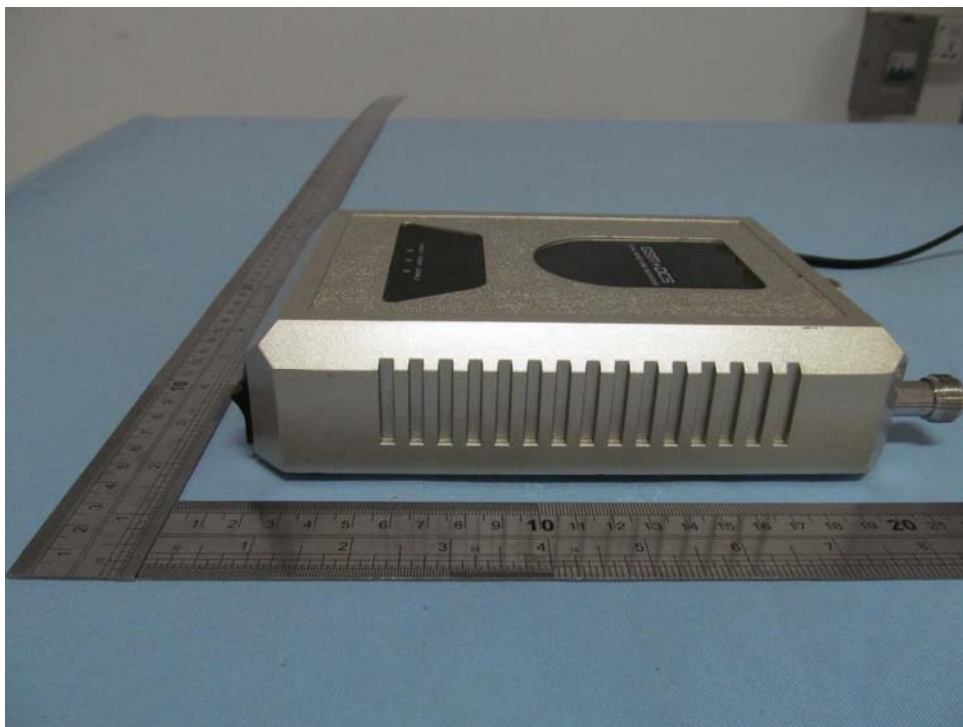
TOP VIEW OF SAMPLE



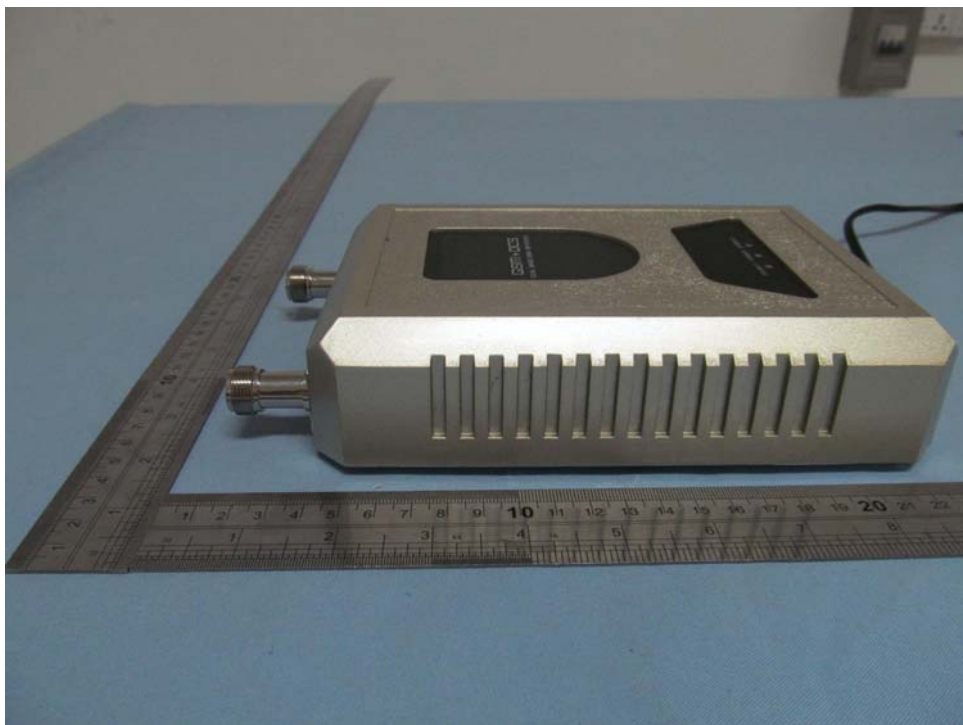
BOTTOM VIEW OF SAMPLE



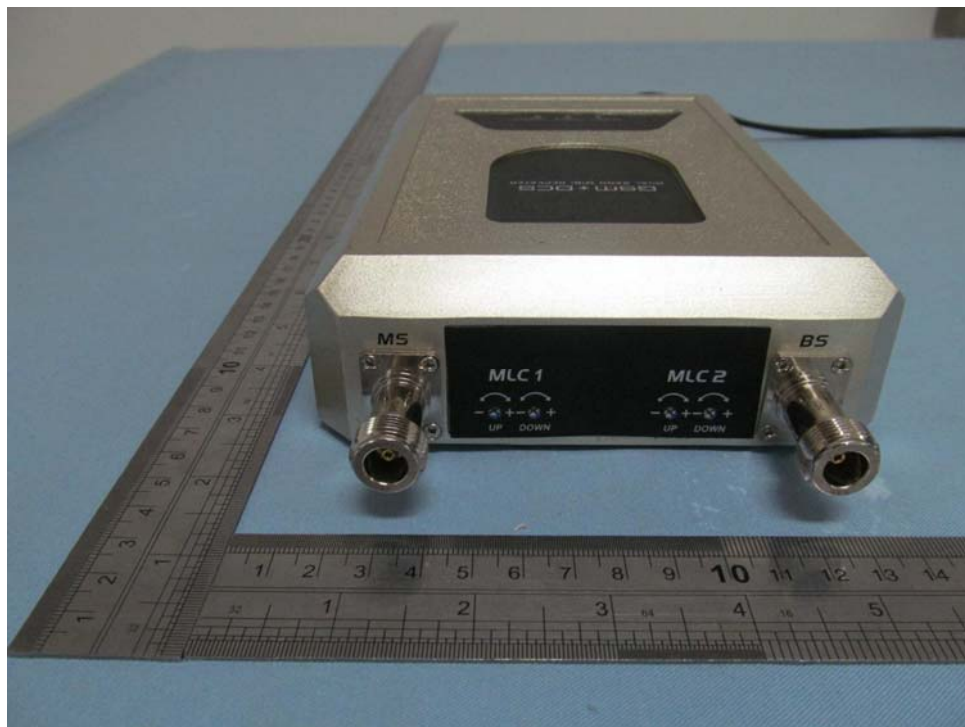
LEFT VIEW OF SAMPLE



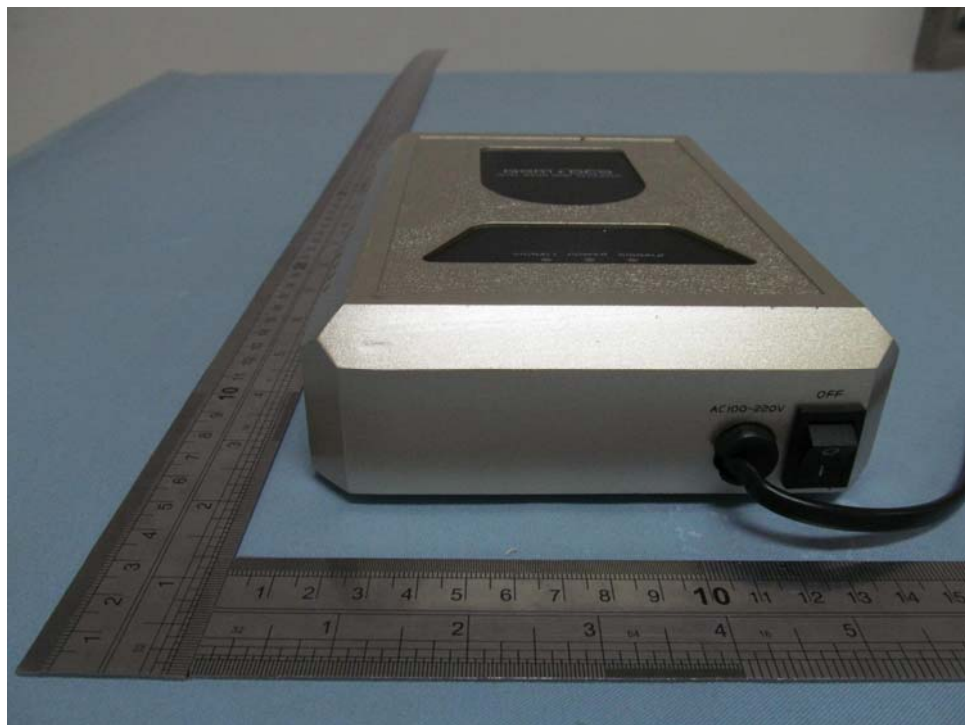
RIGHT VIEW OF SAMPLE



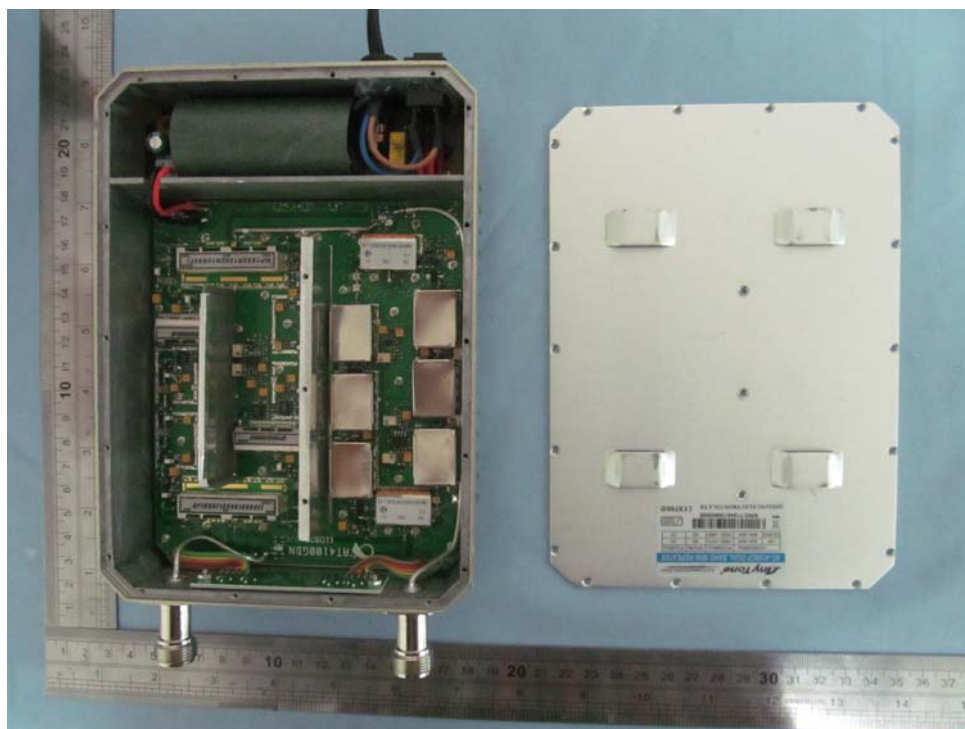
FRONT VIEW OF SAMPLE



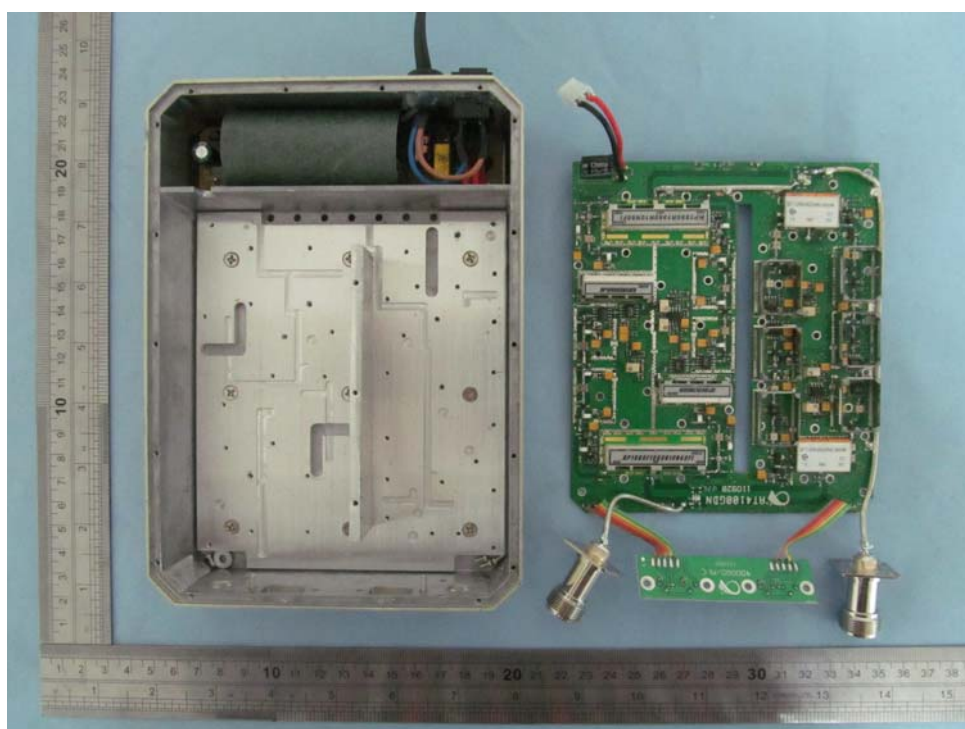
BACK VIEW OF SAMPLE



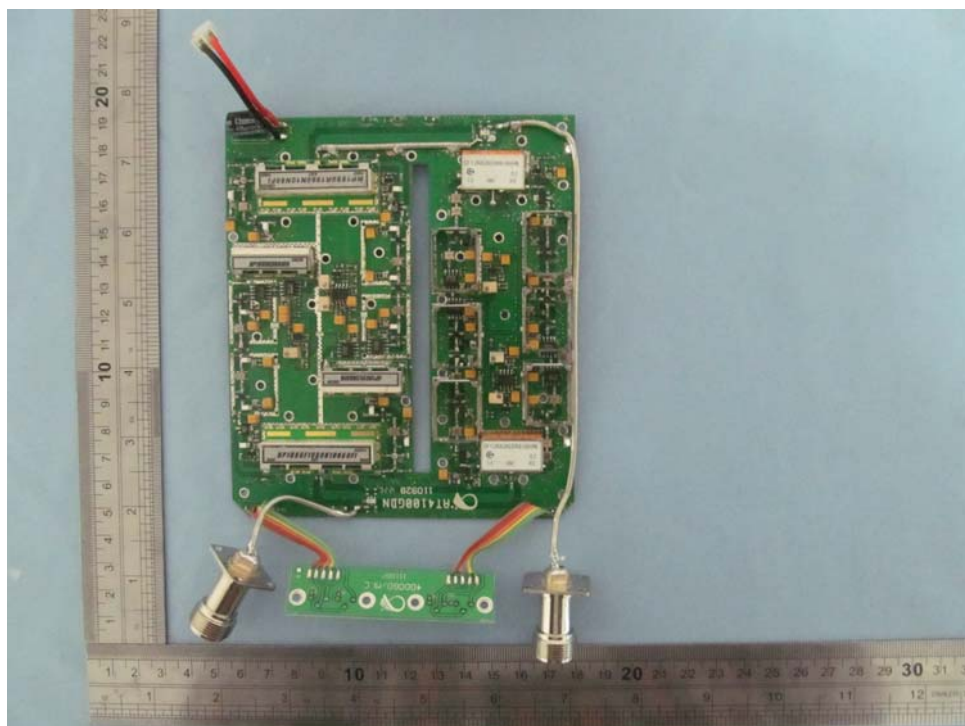
OPEN VIEW OF SAMPLE-1



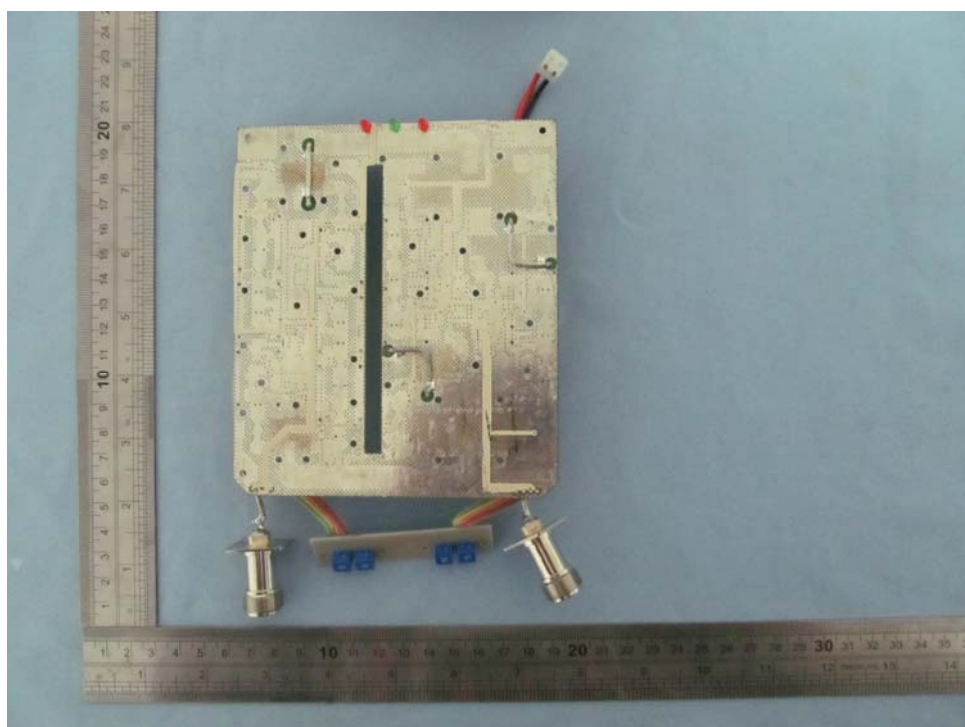
OPEN VIEW OF SAMPLE-2



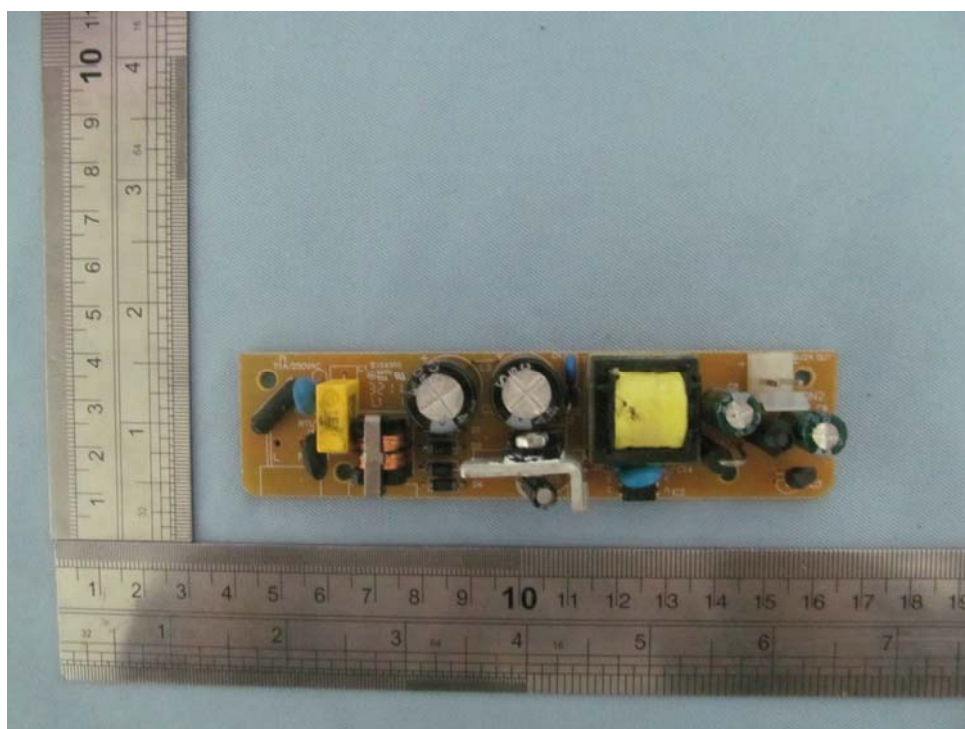
INTERNAL VIEW OF SAMPLE – 1



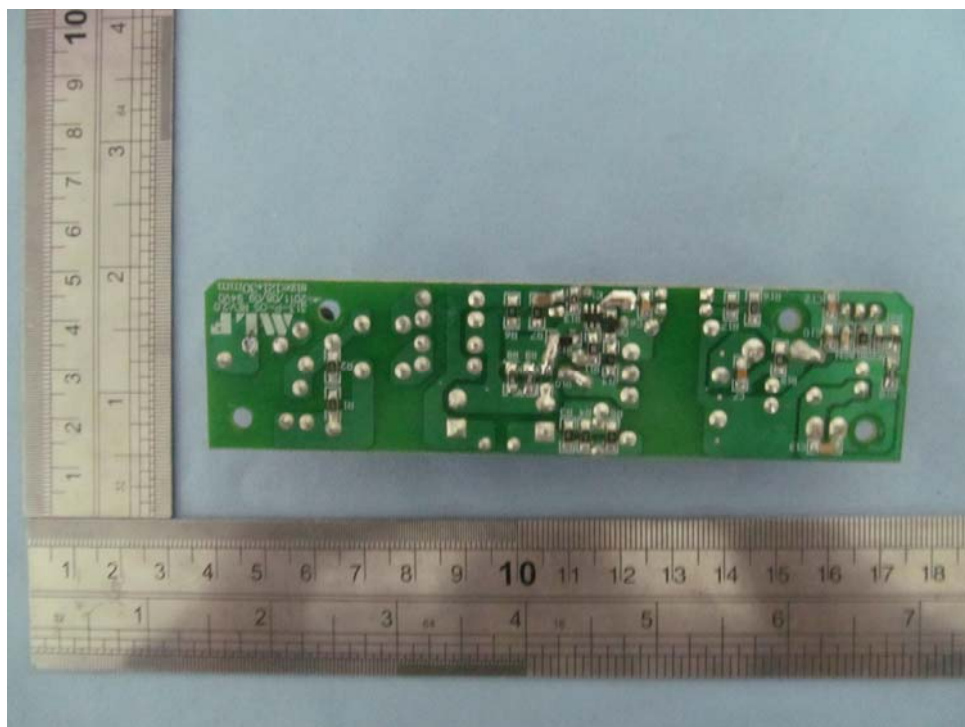
INTERNAL VIEW OF SAMPLE – 2



INTERNAL VIEW OF SAMPLE – 3



INTERNAL VIEW OF SAMPLE – 4



-----END OF REPORT-----