



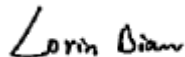
FCC PART 20.21, PART 22H MEASUREMENT AND TEST REPORT

For

Phonetone Technology (Shenzhen) Co., Ltd.

Room 404, Building 12, Qianlong Garden, Minzhi Street, Bao'an District, Shenzhen,
China

FCC ID: YYOPTENC60

Report Type: Original Report	Product Name: Cell Phone Signal Booster
Test Engineer: <u>Lorin Bian</u>	
Report Number: <u>RDG160930002</u>	
Report Date: <u>2016-10-31</u>	
Reviewed By: <u>Henry Ding</u>	
Test Laboratory:	Bay Area Compliance Laboratories Corp. (Chengdu) 5040, HuiLongWan Plaza, No. 1, ShaWan Road, JinNiu District, ChengDu, China Tel: 028-65523123, Fax: 028-65525125 www.baclcorp.com

Note: This test report was prepared for the customer shown above and for the device described herein. It may not be duplicated or used in part without prior written consent from Bay Area Compliance Laboratories Corp. (Chengdu). Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. This report was valid only with a valid digital signature.

TABLE OF CONTENTS

GENERAL INFORMATION	3
PRODUCT DESCRIPTION FOR EQUIPMENT UNDER TEST (EUT)	3
OBJECTIVE	3
RELATED SUBMITTAL(S)/GRANT(S).....	3
TEST METHODOLOGY	4
TEST FACILITY.....	4
SYSTEM TEST CONFIGURATION.....	5
JUSTIFICATION.....	5
EQUIPMENT MODIFICATIONS	5
SUPPORT EQUIPMENT LIST AND DETAILS	5
EXTERNAL I/O CABLE	5
BLOCK DIAGRAM OF TEST SETUP	6
SUMMARY OF TEST RESULTS.....	7
§2.1046 & §22.913-MEAN OUTPUT POWER AND AMPLIFIER GAIN	8
APPLICABLE STANDARD	8
TEST PROCEDURE	8
TEST EQUIPMENT LIST AND DETAILS	9
TEST DATA.....	9
KDB 935210 D02-OUT-OF-BAND REJECTION	10
APPLICABLE STANDARD	10
TEST PROCEDURE	10
TEST EQUIPMENT LIST AND DETAILS	10
TEST DATA.....	10
§2.1049 & KDB 935210 D02-OCCUPIED BANDWIDTH AND INPUT-VERSUS-OUTPUT SIGNAL COMPARISON	13
APPLICABLE STANDARD	13
TEST PROCEDURE	13
TEST EQUIPMENT LIST AND DETAILS	14
TEST DATA.....	14
§2.1051, §22.917 & KDB 935210 D02-OUT-OF-BAND/BLOCK EMISSIONS(INCLUDING INTERNODULATION PRODUCTS).....	23
APPLICABLE STANDARDS	23
TEST PROCEDURE	23
TEST EQUIPMENT LIST AND DETAILS	24
TEST DATA.....	24
§2.1051 & §22.917-SPURIOUS EMISSIONS AT ANTENNA TERMINALS.....	41
APPLICABLE STANDARDS	41
TEST PROCEDURE	41
TEST EQUIPMENT LIST AND DETAILS	42
TEST DATA.....	42
§2.1053 & §22.917-RADIATED SPURIOUS EMISSIONS.....	61
APPLICABLE STANDARDS	61
TEST PROCEDURE	61
TEST EQUIPMENT LIST AND DETAILS	61
TEST DATA.....	62

GENERAL INFORMATION

Product Description for Equipment under Test (EUT)

The **Phonetone Technology (Shenzhen) Co., Ltd.**'s product, model number: **PTE-C70 (FCC ID: YYOPTENC60)** or the "EUT" as referred to in this report was the **Cell Phone Signal Booster**,

Radio System Type	CMRS Industrial Signal Booster
Frequency Bands	Cellular: 824-849MHz (Uplink), 869-894MHz(Downlink)
Max. Gain	Uplink:60dB+/-2dB Downlink: 60dB+/-2dB
Max. Output Power (Antenna Port)	Uplink: 20dBm+/-2dB Downlink: 20dBm+/-2dB
Max.Antenna Gain:	Uplink: 9.0dBi Down Link: 7.0dBi
Nominal Power Supply:	DC 5V~24V from adapter
External Dimension	15.8 cm (L) x 11.0 cm (W) x 2.4 cm (H)
Temperature Range	-25°C to 55°C

Adapter Information:

MODEL: GFP121U-050200B-1

I/P: AC 100-240V 50-60Hz 0.36A

O/P: DC 5V, 2A

**All measurement and test data in this report was gathered from final production sample, serial number: 160930002 (assigned by the BACL, Chengdu). It may have deviation from any other sample. The EUT supplied by the applicant was received on 2016-09-30, and EUT conformed to test requirement.*

Objective

This type approval report is prepared on behalf of **Phonetone Technology (Shenzhen) Co., Ltd.** in accordance with Part 2, Part 20, Part 22 of the Federal Communication Commissions rules, and KDB 935210 D02 Signal Boosters Certification v03r02.

Related Submittal(s)/Grant(s)

No related submittal(s).

Test Methodology

All tests and measurements indicated in this document were performed in accordance with the Code of Federal Regulations Title 47 Part 2, Sub-part J as well as the following parts:

Applicable Standards: TIA-1037, TIA/EIA 603-D. KDB 935210 D05 Indus Booster Basic Meas v01r01.

All emissions measurement was performed and Bay Area Compliance Laboratories Corp. (Chengdu). The radiated testing was performed at an antenna-to-EUT distance of 3 meters.

The uncertainty of any RF tests which use conducted method measurement is ± 3.17 dB, the uncertainty of any radiation on emissions measurement is:

30M~200MHz: ± 4.7 dB;

200M~1GHz: ± 6.0 dB;

1G-6GHz: ± 5.13 dB;

6G~25GHz: ± 5.47 dB;

And the uncertainty will not be taken into consideration for all test data recorded in the report.

Test Facility

The test site used by BACL to collect test data is located in the 5040, HuiLongWan Plaza, No. 1, ShaWan Road, JinNiu District, ChengDu, China

Test site at BACL has been fully described in reports submitted to the Federal Communication Commission (FCC). The details of these reports have been found to be in compliance with the requirements of Section 2.948 of the FCC Rules on April 24, 2015. The facility also complies with the radiated and AC line conducted test site criteria set forth in ANSI C63.4-2014.

The Federal Communications Commission has the reports on file and is listed under FCC Registration No.: 560332. The test site has been approved by the FCC for public use and is listed in the FCC Public Access Link (PAL) database.

SYSTEM TEST CONFIGURATION

Justification

The EUT was configured for testing according to TIA/EIA-603-D.

The final qualification test was performed with the EUT operating at normal mode.

Equipment Modifications

No modifications were made to the EUT.

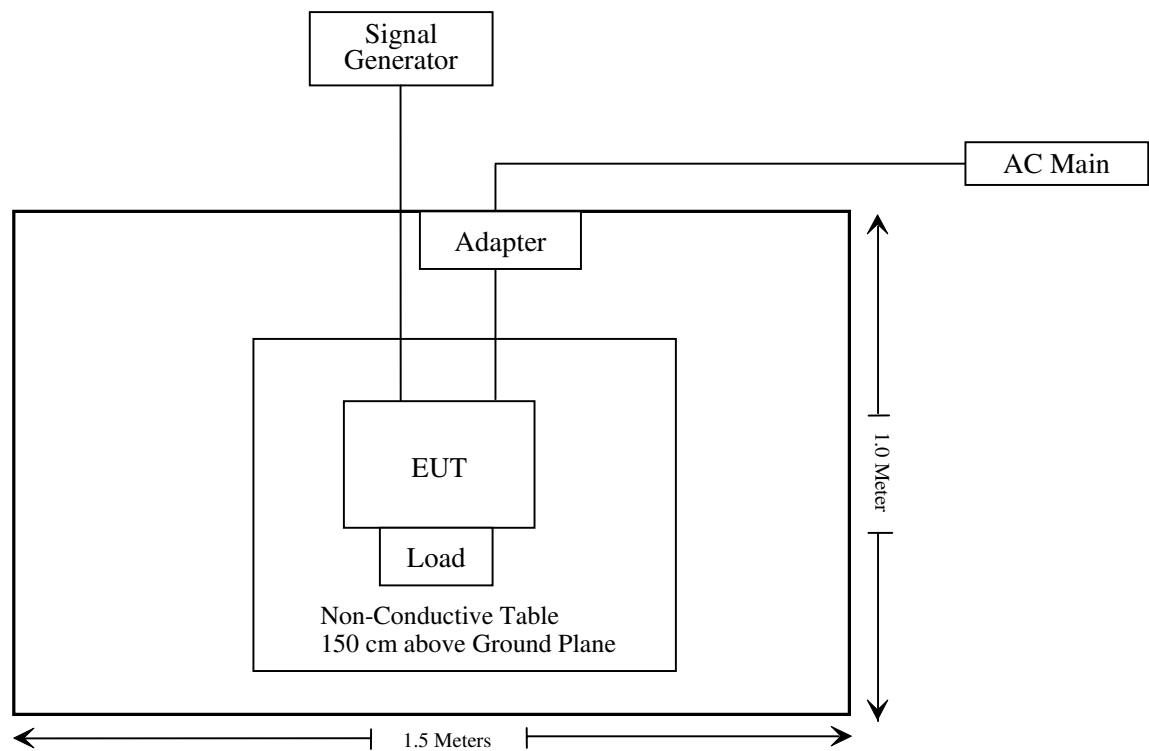
Support Equipment List and Details

Manufacturer	Description	Model	Serial Number
Agilent	MXG Vector Signal Generator	N5182B	MY513501224
/	Load(1 W)	/	/

External I/O Cable

Cable Description	Length (m)	From	To
DC power Cable	1.0	Adapter	EUT

Block Diagram of Test Setup



SUMMARY OF TEST RESULTS

FCC Rules	Description of Test	Result
§2.1047, §22.913, KDB 935210 D02	Mean output power and amplifier gain	Compliant
KDB 935210 D02	Out-of-band rejection	Compliant
§2.1049, KDB 935210 D02	Occupied bandwidth and Input-versus-output signal comparison	Compliant
§2.1051, §22.917, KDB 935210 D02	Out-of-band/block (including intermodulation) emissions	Compliant
§2.1051&§22.917	Spurious emissions at antenna terminals	Compliant
§2.1053&§22.917	Radiated spurious emissions	Compliant
§2.1055&§22.355	Frequency tolerance	Not Applicable*

Not Applicable*: the device is a booster does not alter the input signal.

§2.1046

Test Equipment List and Details

Manufacturer	Description	Model	Serial Number	Calibration Date	Calibration Due Date
Rohde & Schwarz	Signal Analyzer	FSIQ26	831929/005	2016-09-21	2017-09-20
R & S	Wideband Radio Communication Tester	CMW500	149216	2016-10-07	2017-10-06

* **Statement of Traceability:** BACL (Chengdu) attested that all calibrations have been performed, traceable to National Primary Standards and International System of Units (SI).

Test Data

Environmental Conditions

Temperature:	24.3°C
Relative Humidity:	45%
ATM Pressure:	100.2 kPa

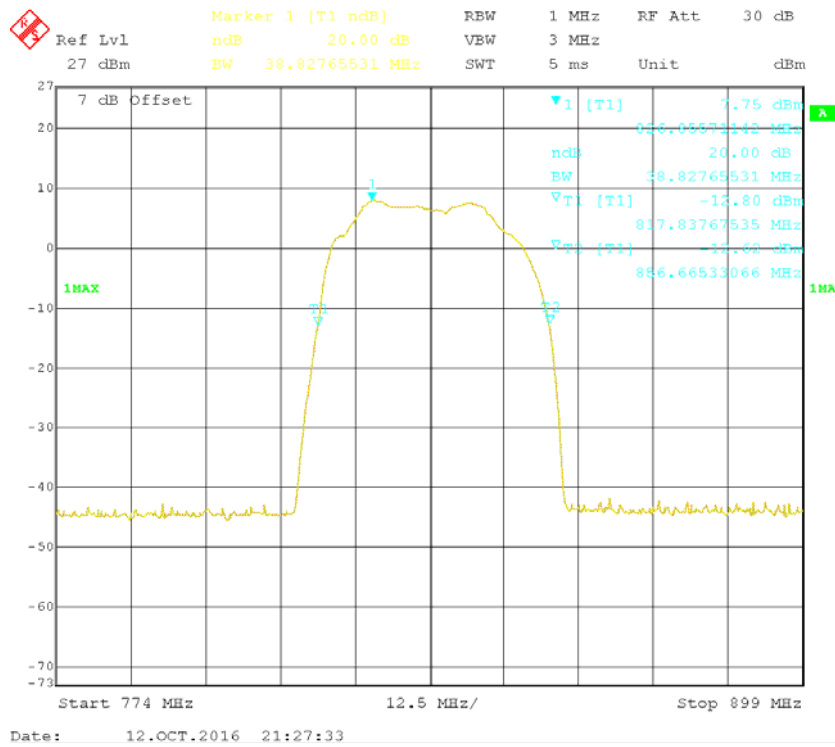
The testing was performed by Lorin Bian on 2016-10-26.

Test Result: Compliance. Please refer to the following table.

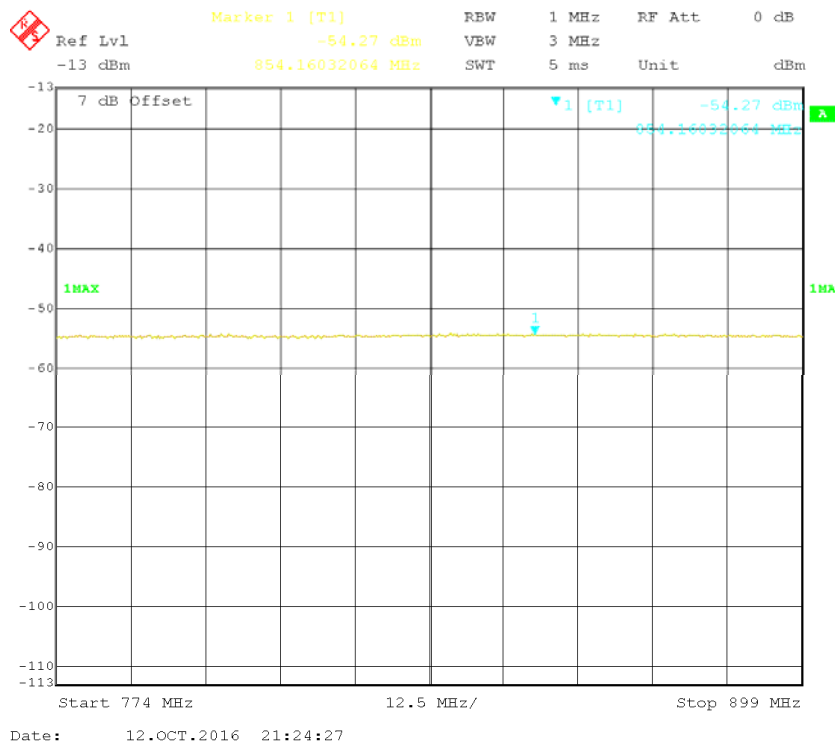
Mode	Operation Bands	Frequency (MHz)	Signal Type	Signal Level	Input Power (dBm)	Output Power (dBm)	Gain (dB)
Uplink	Cellular	826.8557	AWGN	Pre-AGC	-42	19.16	61.16
				3dB above AGC	-39	20.96	59.96
			GSM	Pre-AGC	-42	19.08	61.08
				3dB above AGC	-39	21.41	60.41
Downlink	Cellular	877.1162	AWGN	Pre-AGC	-43	18.44	61.44
				3dB above AGC	-40	20.40	60.4
			GSM	Pre-AGC	-43	18.61	61.61
				3dB above AGC	-40	18.55	58.55

KDB 935210 D02

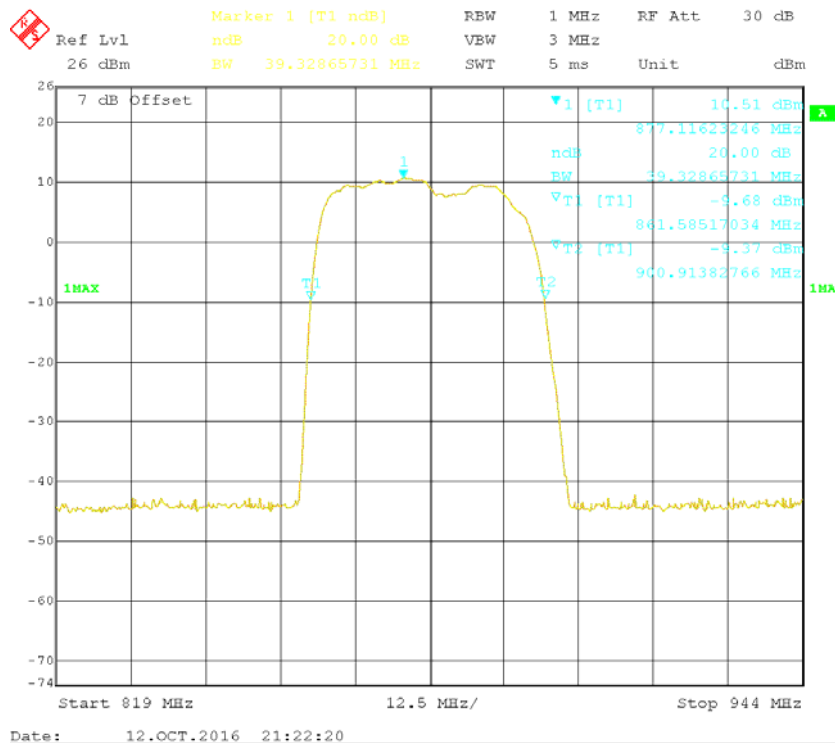
Cellular Band Uplink Output



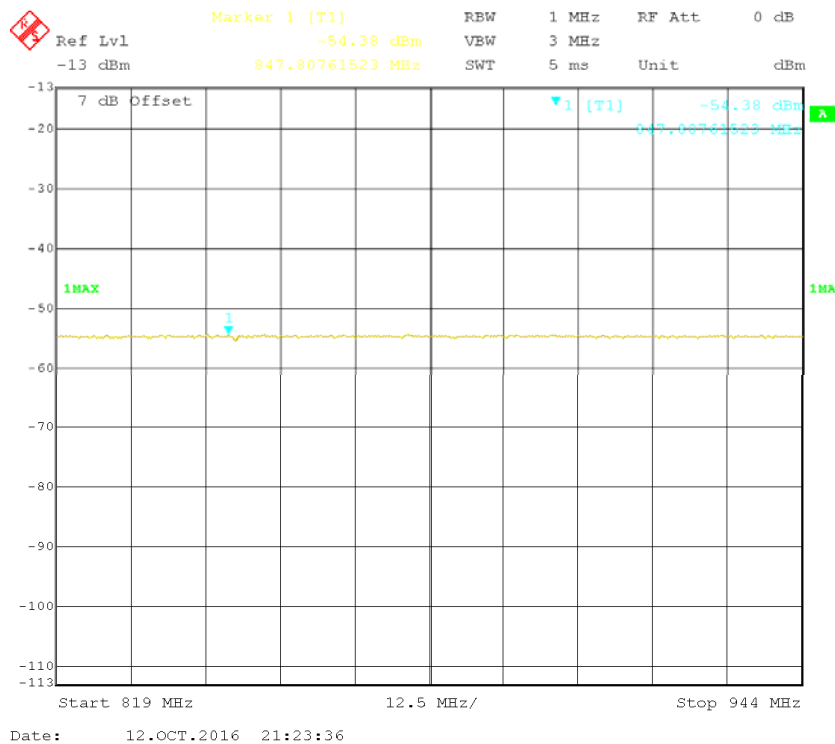
Cellular Band Uplink Input



Cellular Band Downlink Output



Cellular Band Downlink Input



§2.1049

(determined from step l) to affirm that they are similar (in passband and rolloff characteristic features and relative spectral locations), and include plot(s) and descriptions in test report.

- o) Repeat steps a) to n) with the signal generator set to the narrowband signal.
- p) Repeat the procedure for both test signals with the input signal amplitude set 3 dB above the AGC threshold.
- q) Repeat for all frequency bands authorized for use by the EUT.

Test Equipment List and Details

Manufacturer	Description	Model	Serial Number	Calibration Date	Calibration Due Date
Rohde & Schwarz	Signal Analyzer	FSIQ26	831929/005	2016-09-21	2017-09-20
R & S	Wideband Radio Communication Tester	CMW500	149216	2016-10-07	2017-10-06

* **Statement of Traceability:** BACL (Chengdu) attested that all calibrations have been performed, traceable to National Primary Standards and International System of Units (SI).

Test Data

Environmental Conditions

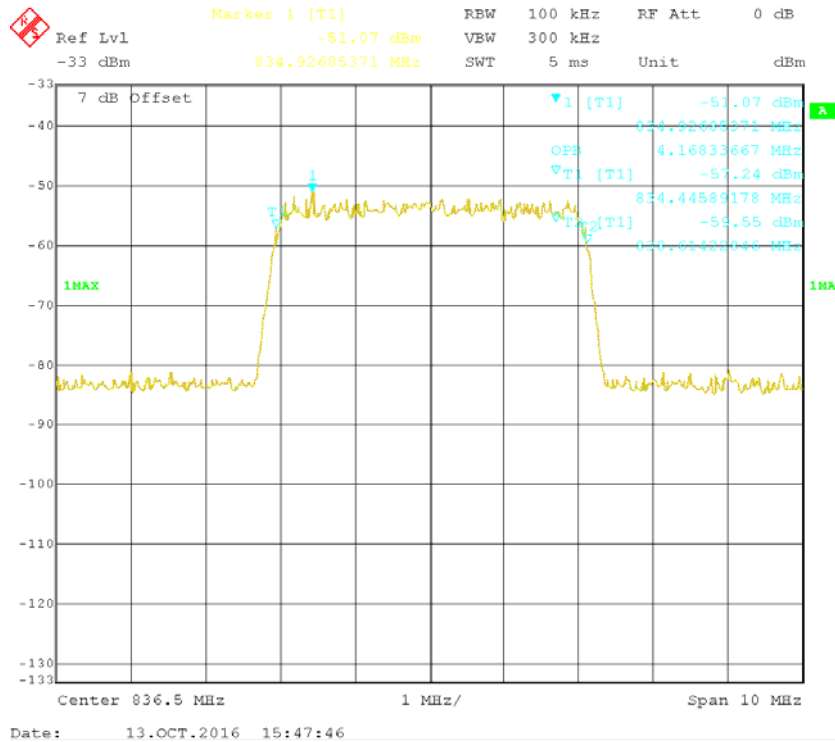
Temperature:	26.4 °C
Relative Humidity:	33 %
ATM Pressure:	100.8 kPa

The testing was performed by Lorin Bian on 2016-10-13.

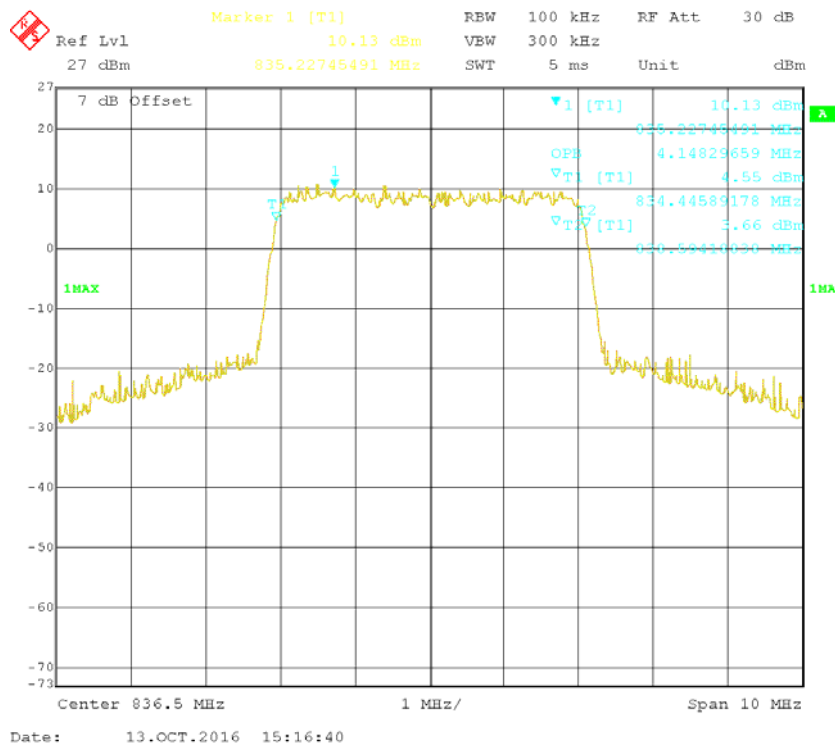
Test Result: Compliance. Please refer to the following plots.

AWGN Signal:

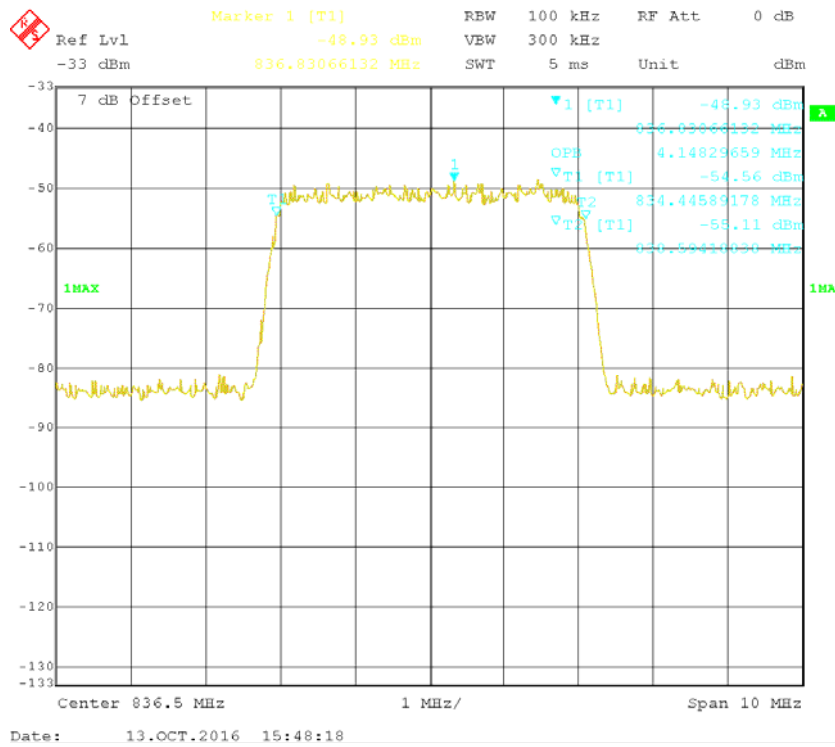
Cellular Band Uplink Pre-AGC Input



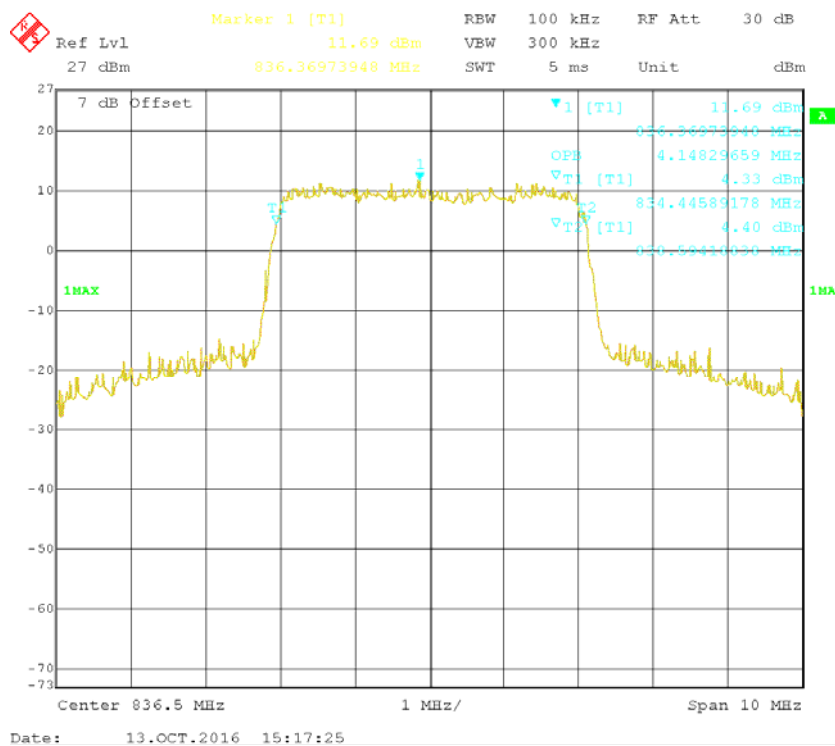
Cellular Band Uplink Pre-AGC Output



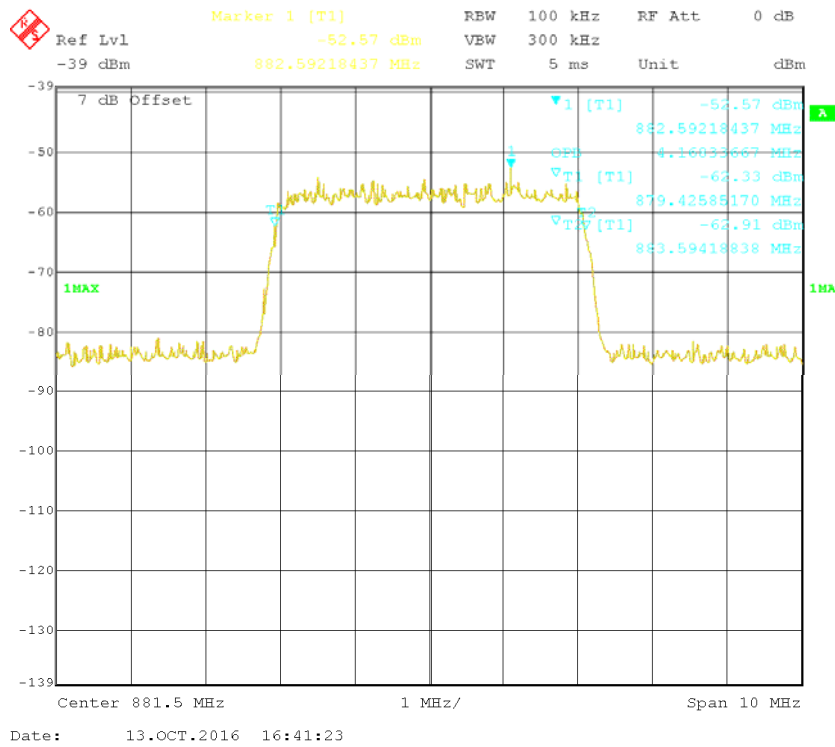
Cellular Band Uplink 3dB above AGC Input



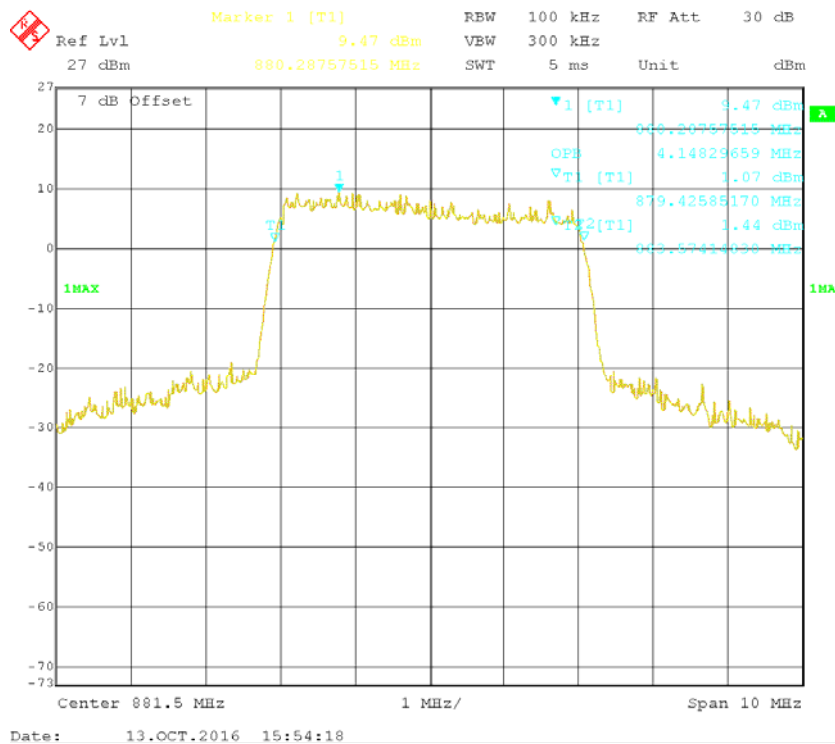
Cellular Band Uplink 3dB above AGC Output



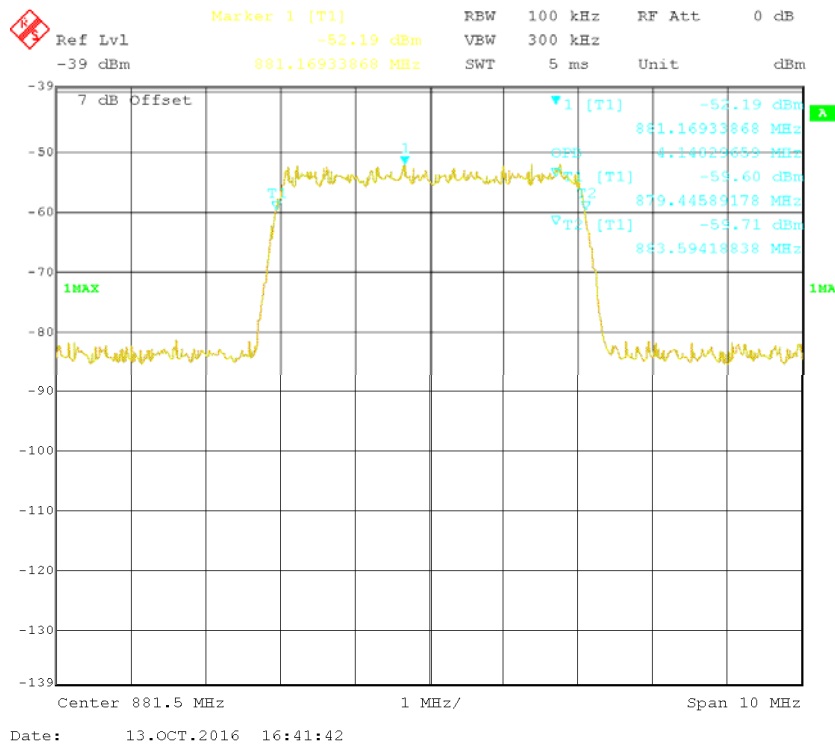
Cellular Band Downlink Pre-AGC Input



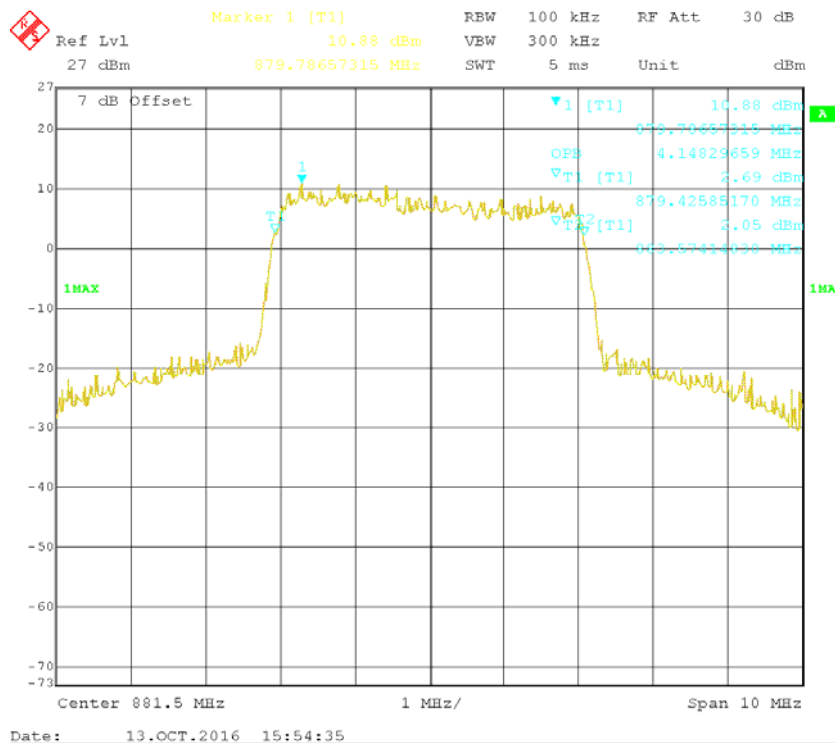
Cellular Band Downlink Pre-AGC Output



Cellular Band Downlink 3dB above AGC Input

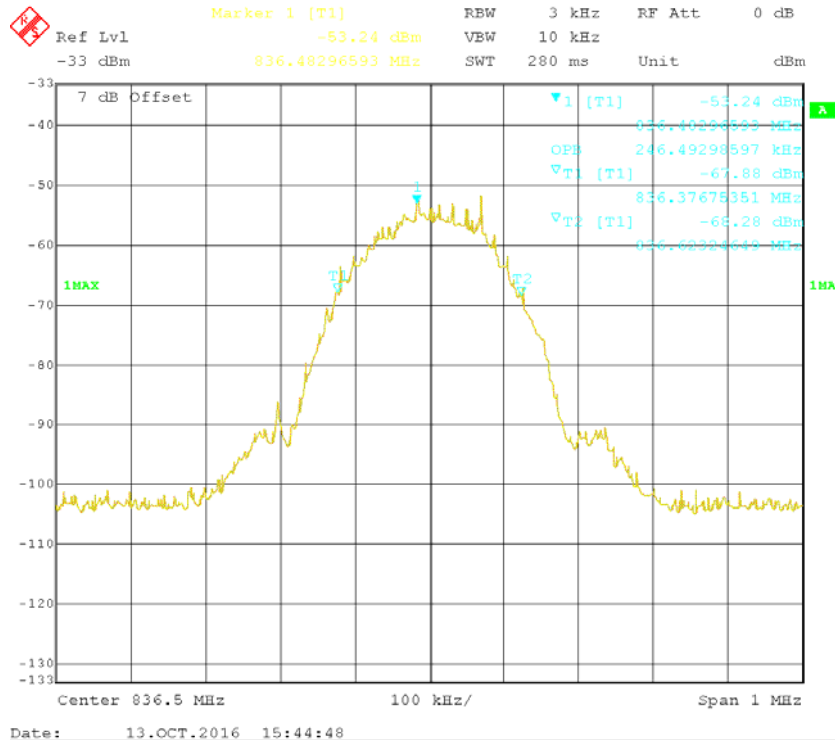


Cellular Band Downlink 3dB above AGC Output

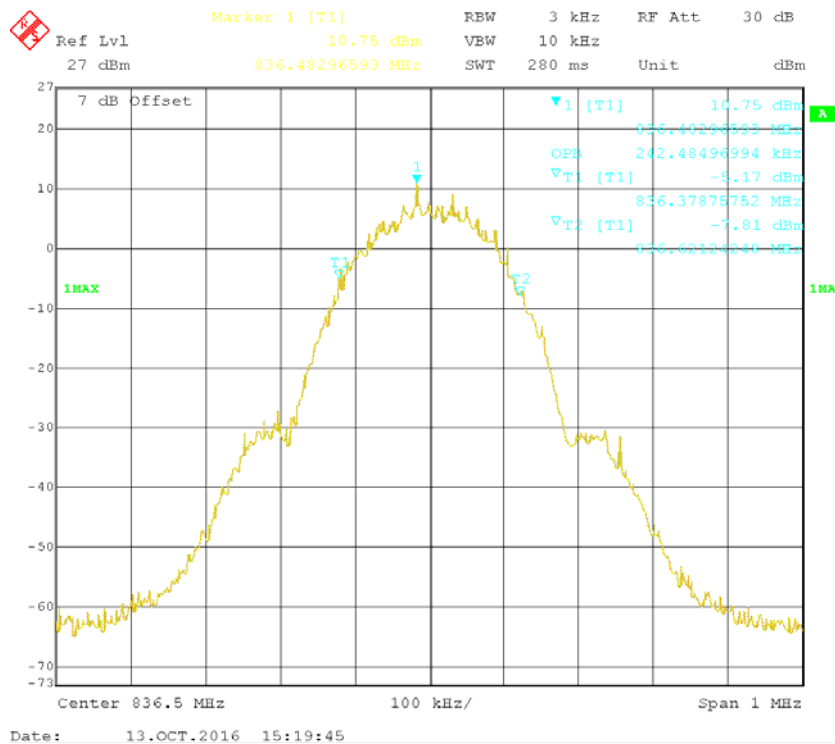


GSM Signal:

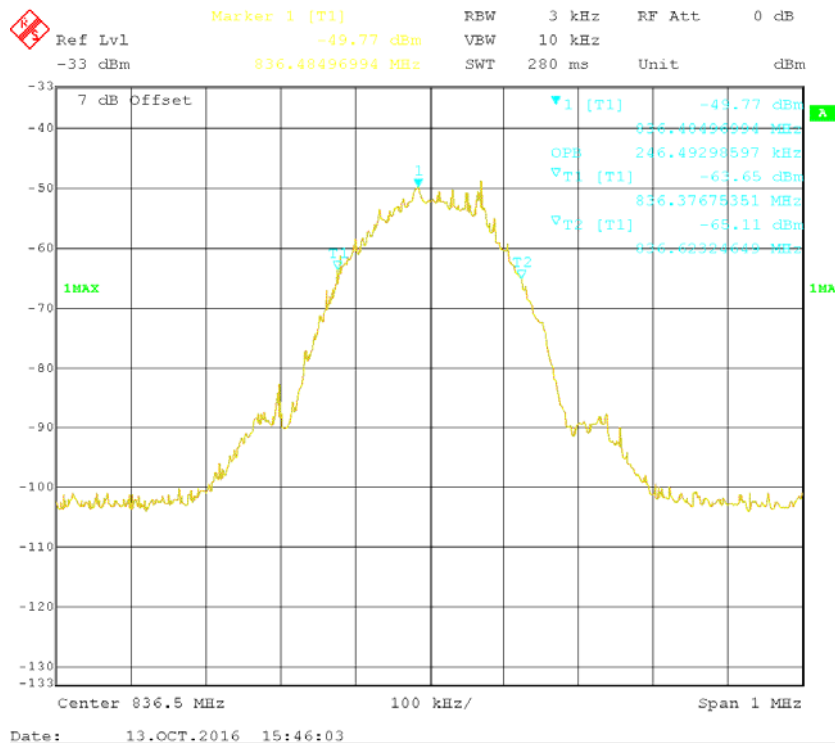
Cellular Band Uplink Pre-AGC Input



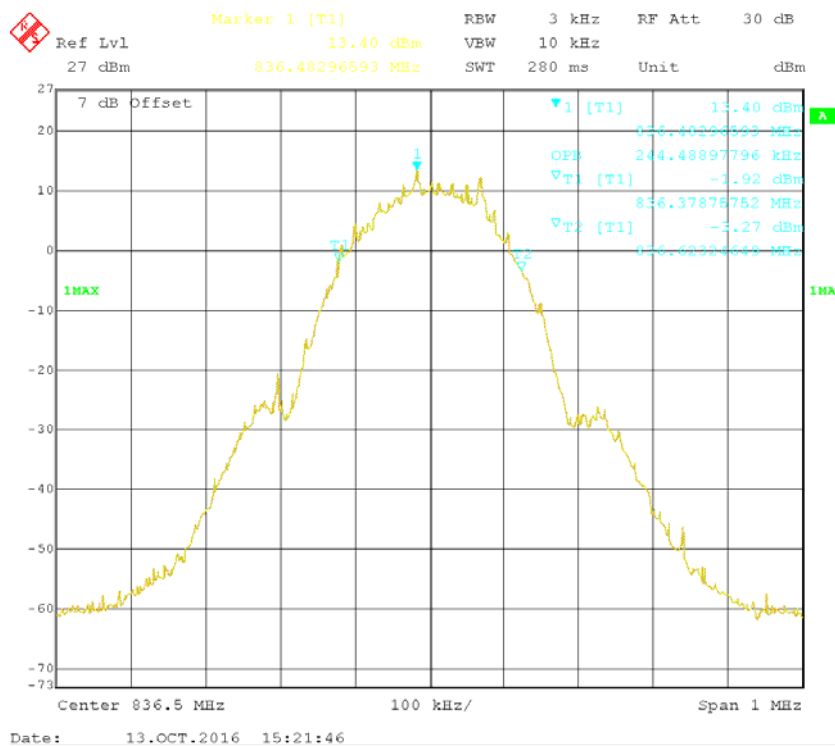
Cellular Band Uplink Pre-AGC Output



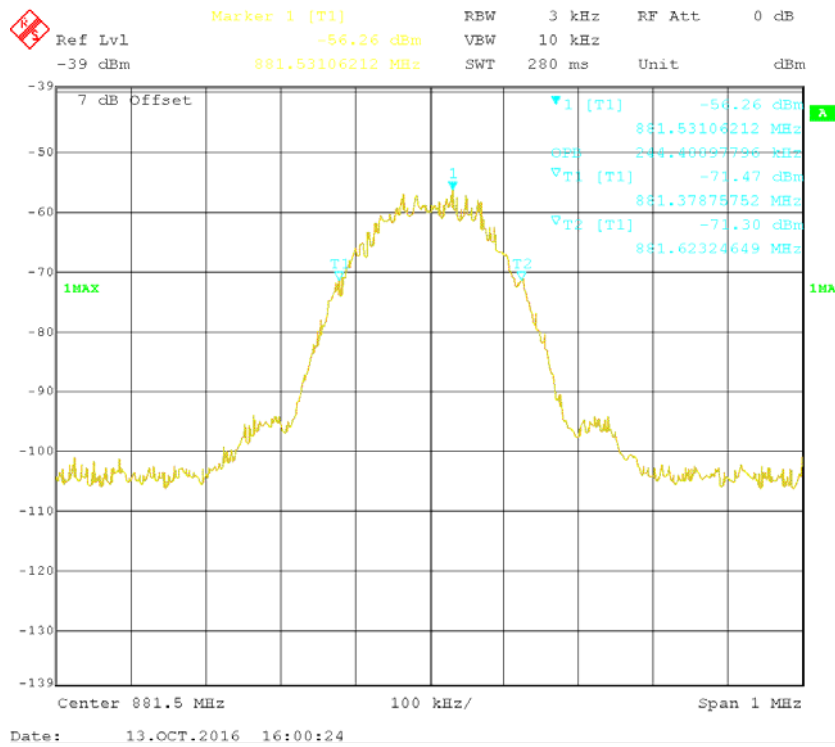
Cellular Band Uplink 3dB above AGC Input



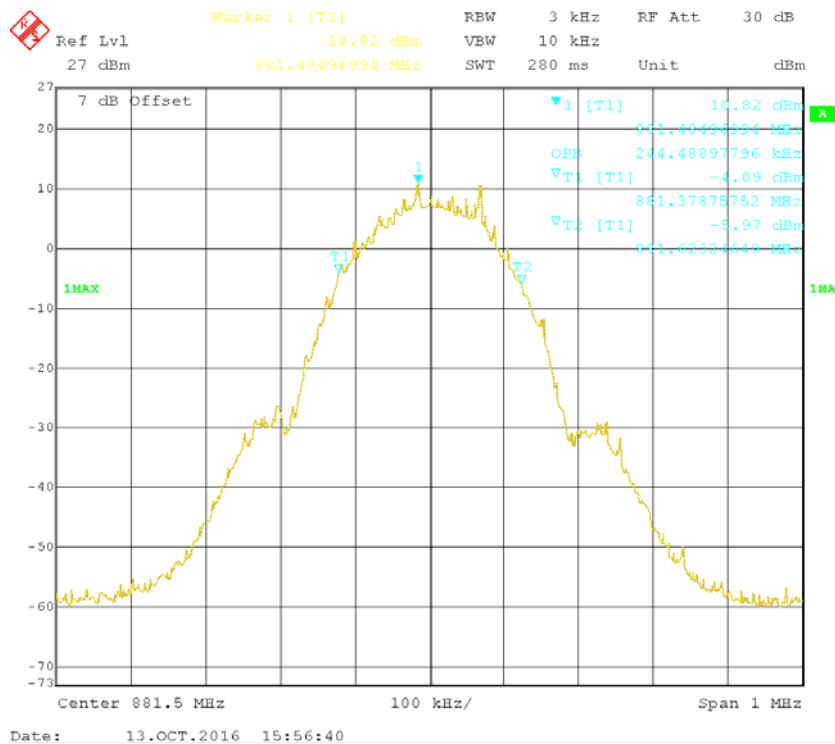
Cellular Band Uplink 3dB above AGC Output



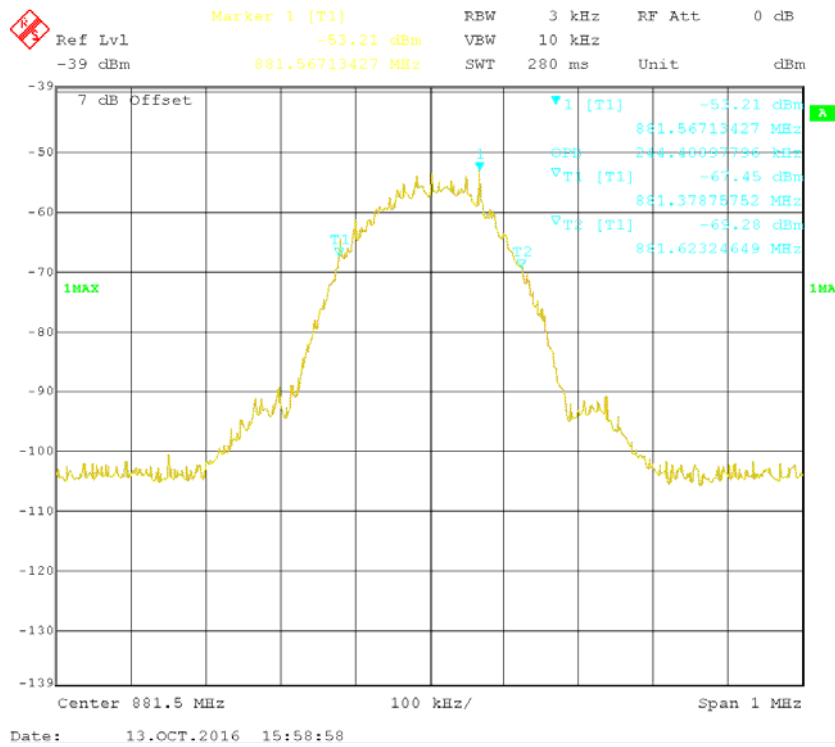
Cellular Band Downlink Pre-AGC Input



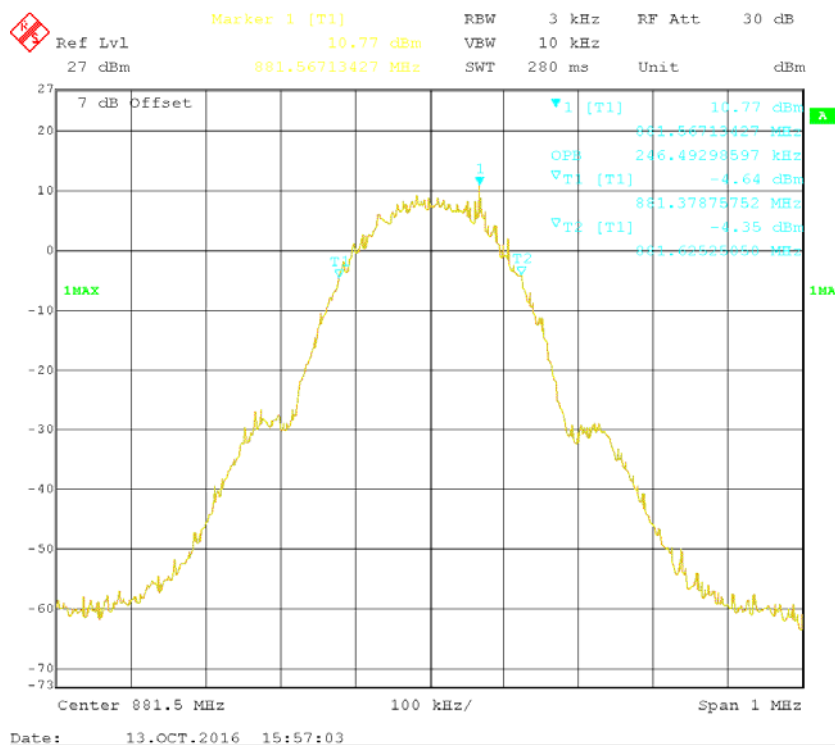
Cellular Band Downlink Pre-AGC Output



Cellular Band Downlink 3dB above AGC Input



Cellular Band Downlink 3dB above AGC Output



§2.1051

- m) Capture the spectrum analyzer trace of the power level for inclusion in the test report.
n) Repeat the procedure with the composite input power level set to 3 dB above the AGC threshold.
o) Reset the input signals frequencies to the lower edge of the frequency block or band under examination.
p) Reset the spectrum analyzer start frequency to the lower block edge frequency minus 300 kHz, or 3 MHz (for frequencies below and above 1 GHz, respectively), and the stop frequency to the lower band or block edge frequency.
q) Repeat steps k) to n).
r) Repeat steps a) to q) with the signal generator configured for a single test signal tuned as close as possible to the block edges.
s) Repeat steps a) to r) with the narrowband test signal.
t) Repeat steps a) to s) for all authorized frequency bands or blocks used by the EUT.

Test Equipment List and Details

Manufacturer	Description	Model	Serial Number	Calibration Date	Calibration Due Date
Rohde & Schwarz	Signal Analyzer	FSIQ26	831929/005	2016-09-21	2017-09-20
R & S	Wideband Radio Communication Tester	CMW500	149216	2016-10-07	2017-10-06
Agilent	MXG Vector Signal Generator	N5182B	MY51350122 4	2016-05-10	2017-05-09

* **Statement of Traceability:** BACL (Chengdu) attested that all calibrations have been performed, traceable to National Primary Standards and International System of Units (SI).

Test Data

Environmental Conditions

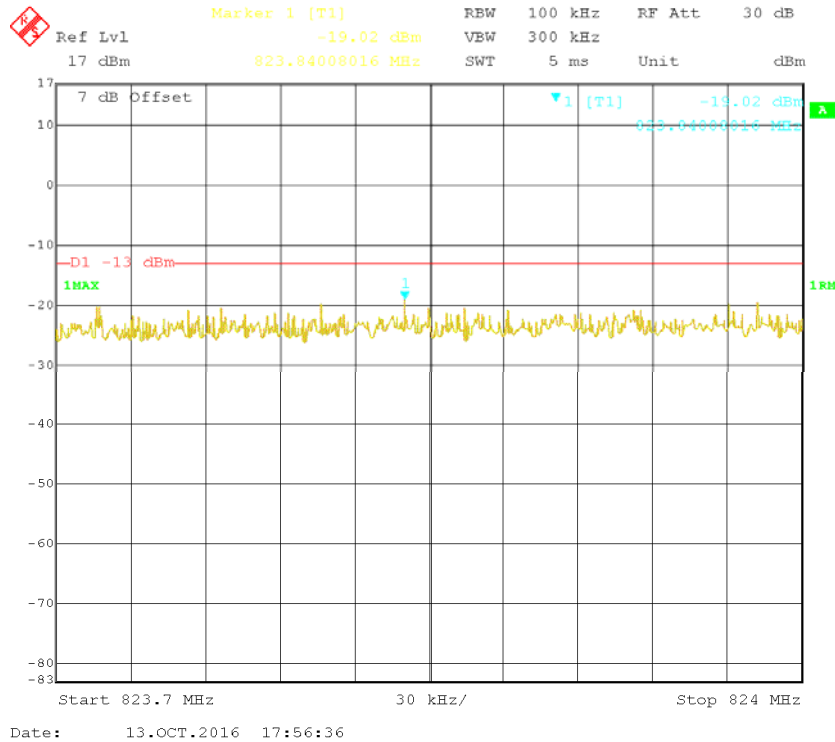
Temperature:	26.4 °C
Relative Humidity:	33 %
ATM Pressure:	100.8 kPa

The testing was performed by Lorin Bian on 2016-10-13.

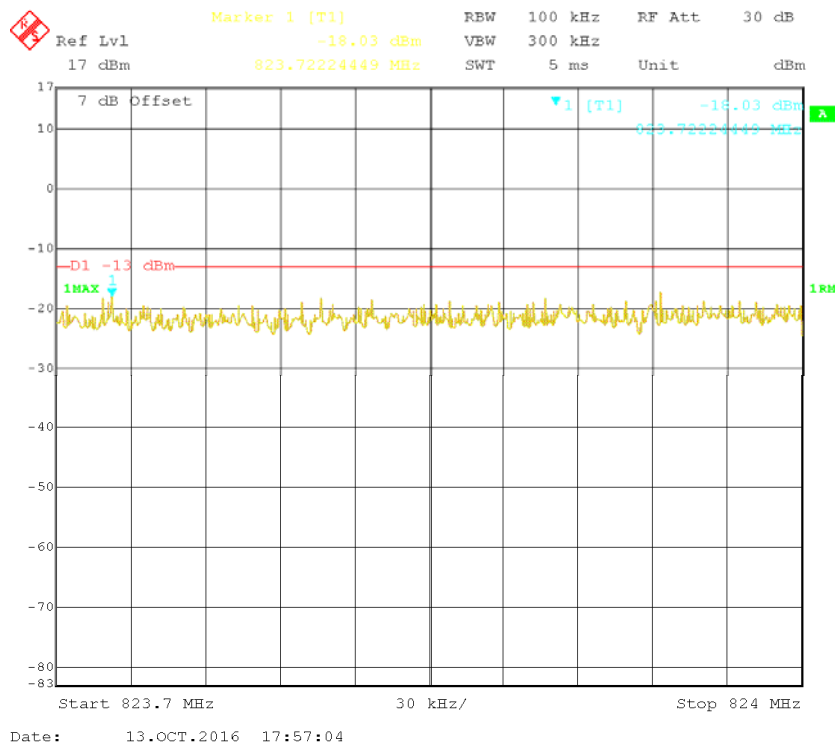
Please refer to the following plots.

Single channel:
Uplink:

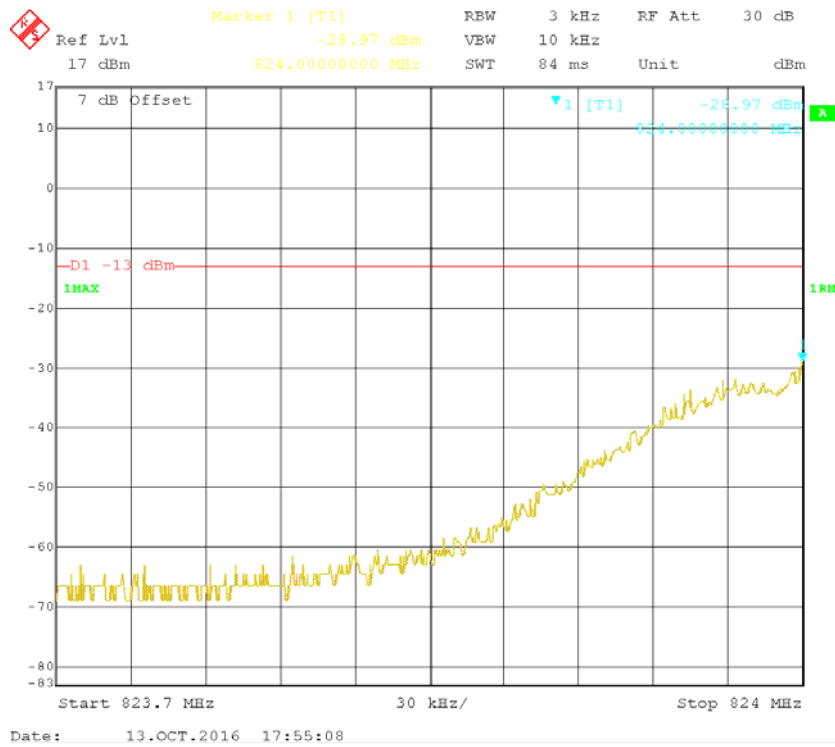
Cellular Band AWGN Left Side Pre-AGC



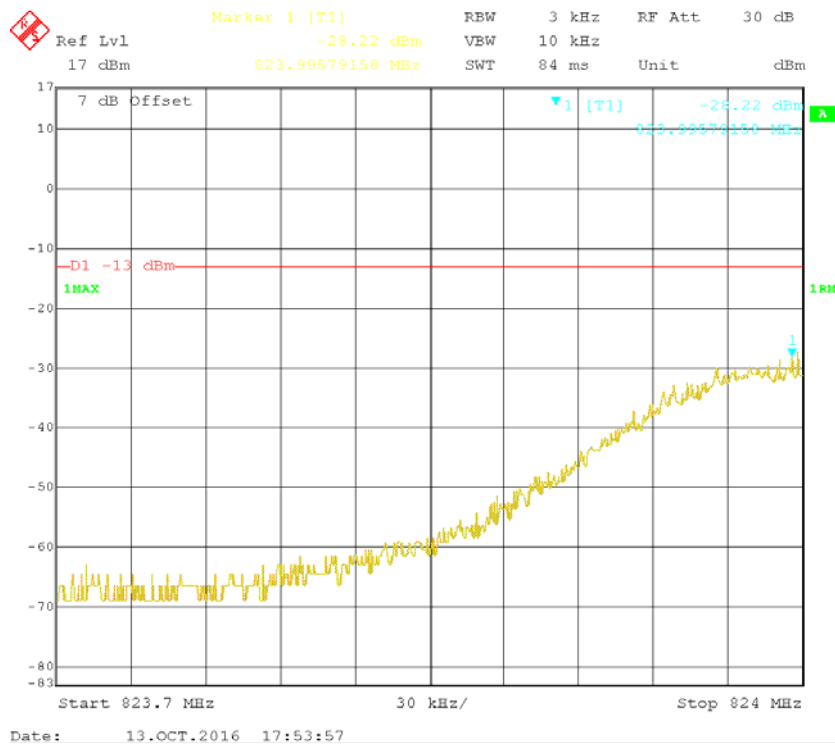
Cellular Band AWGN Left Side 3dB Above AGG



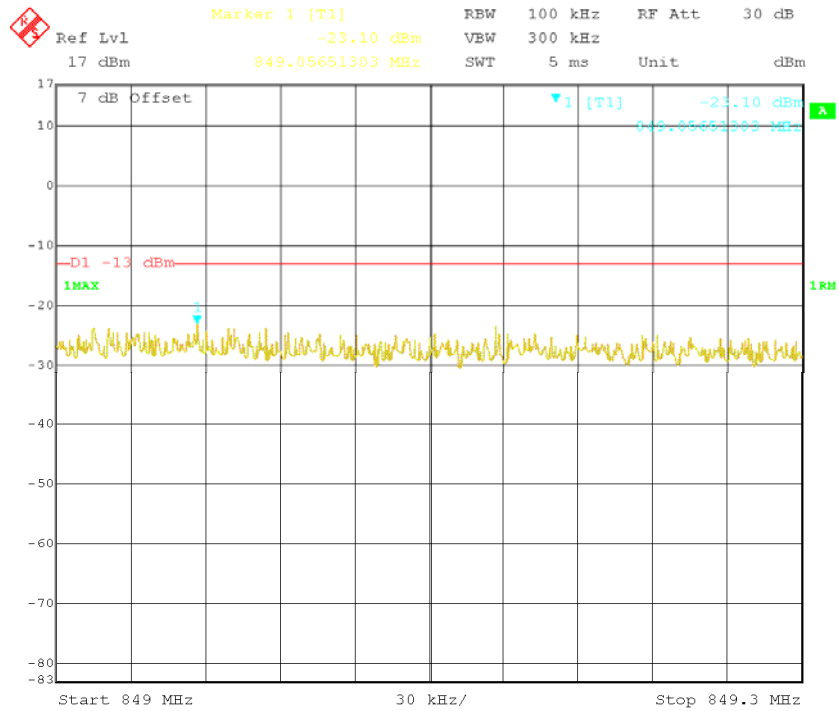
Cellular Band GSM Left Side Pre-AGC



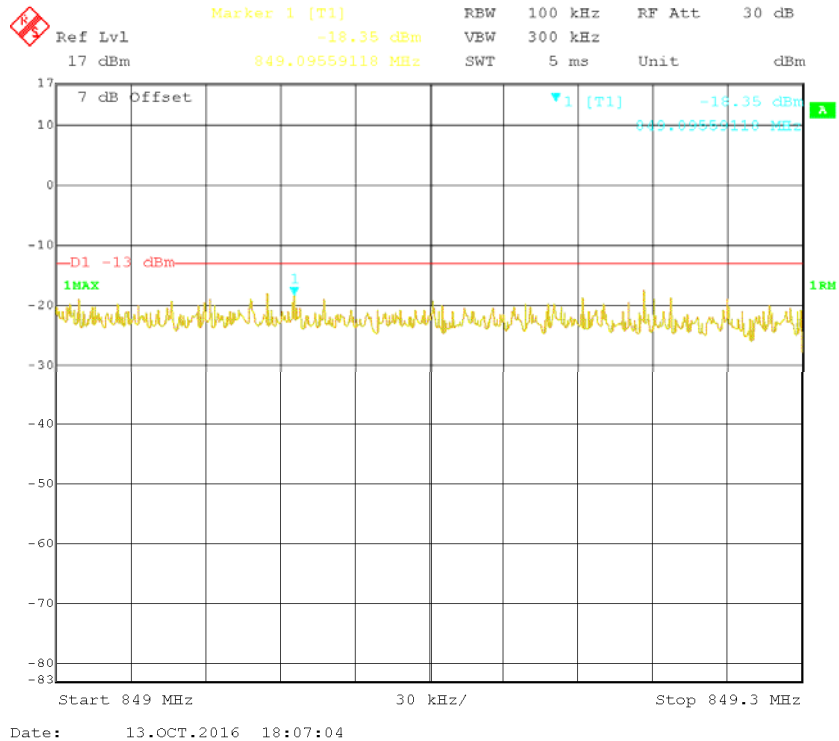
Cellular Band GSM Left Side 3dB Above AGC



Cellular Band AWGN Right Side Pre-AGC

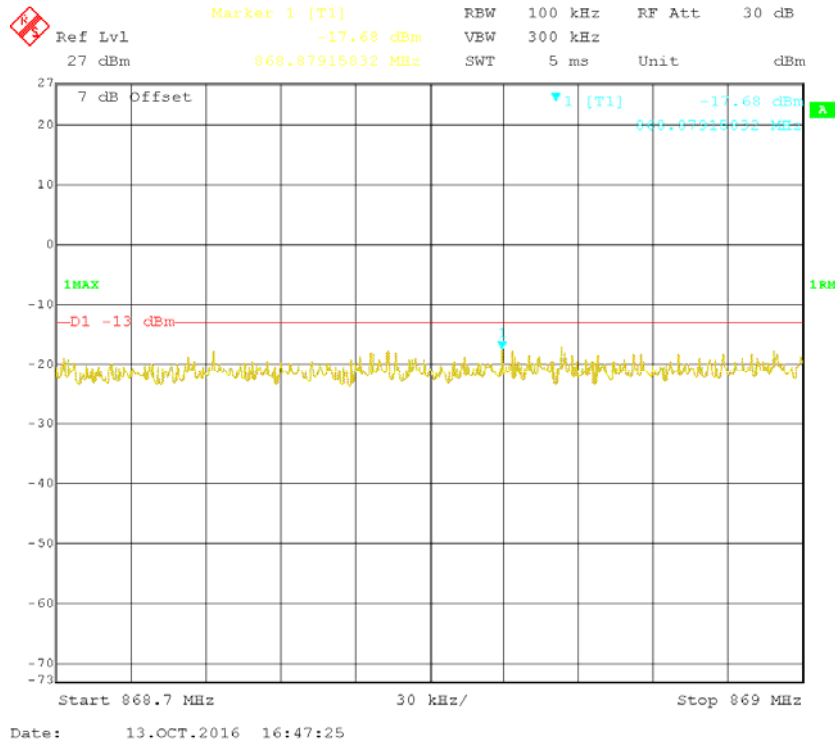


Cellular Band AWGN Right Side 3dB Above AGG

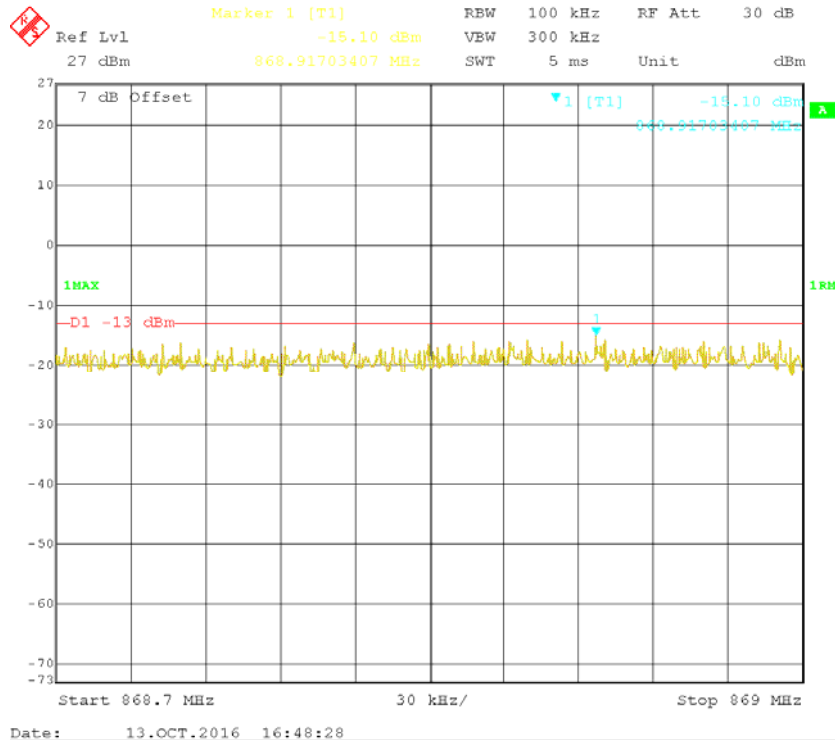


Downlink

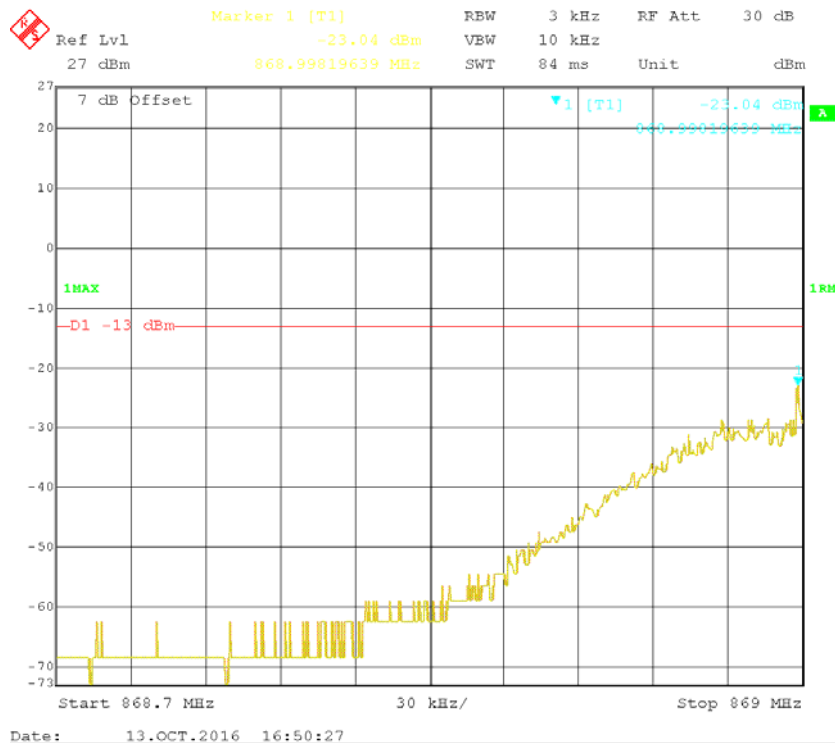
Cellular Band AWGN Left Side Pre-AGC



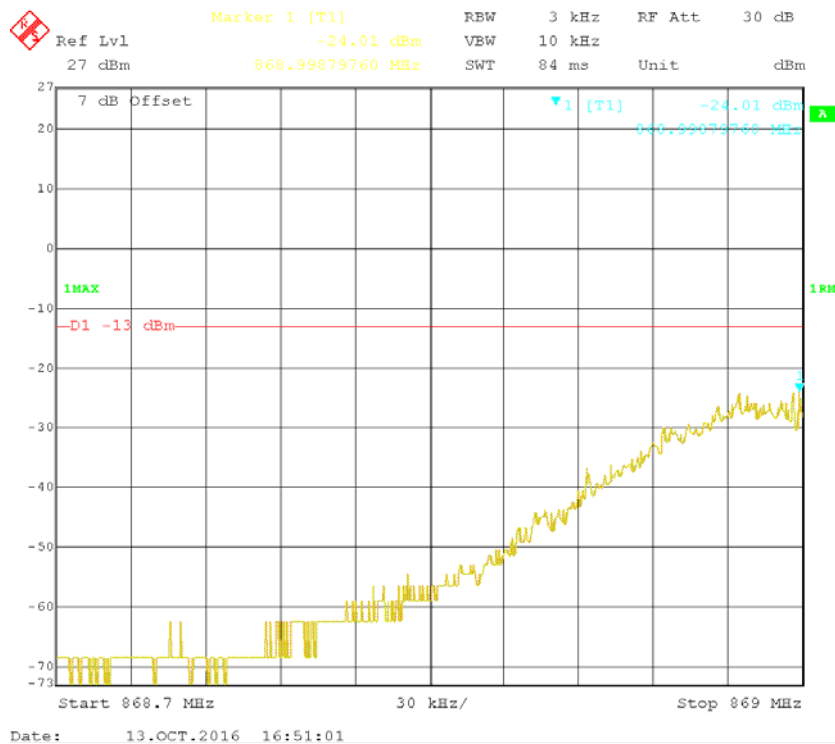
Cellular Band AWGN Left Side 3dB Above AGG



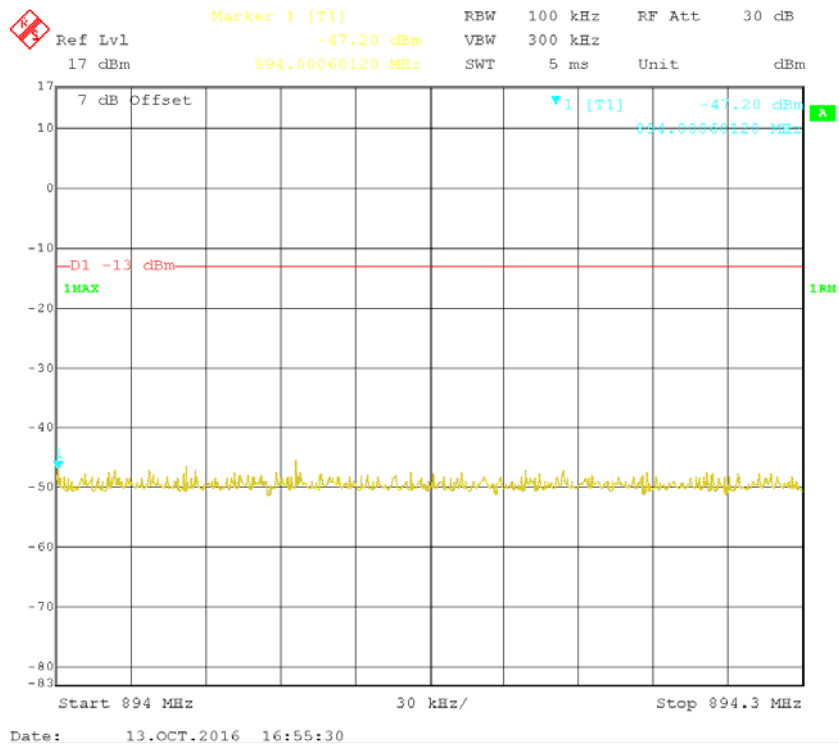
Cellular Band GSM Left Side Pre-AGC



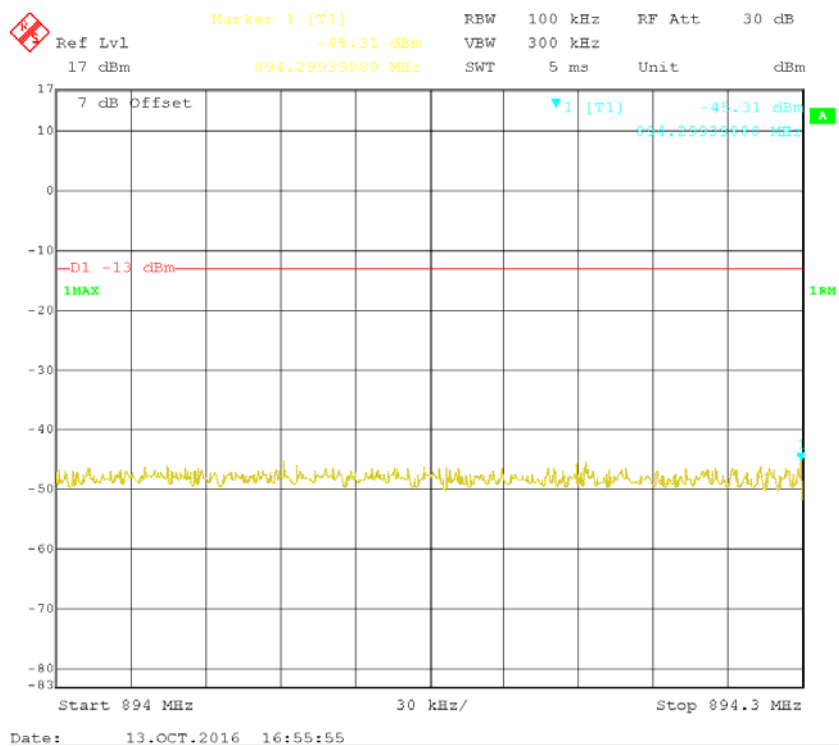
Cellular Band GSM Left Side 3dB Above AGC



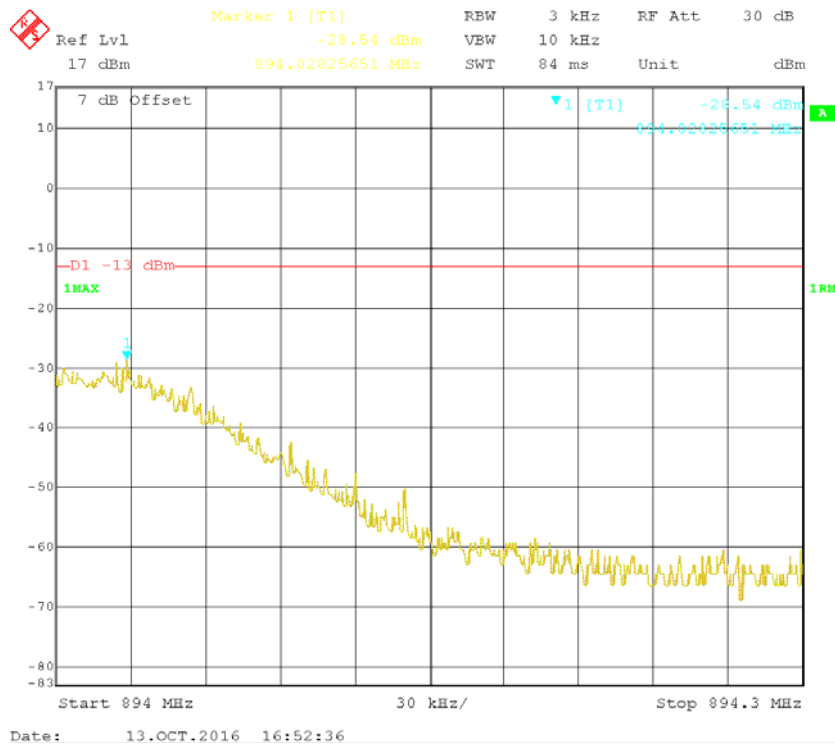
Cellular Band AWGN Right Side Pre-AGC



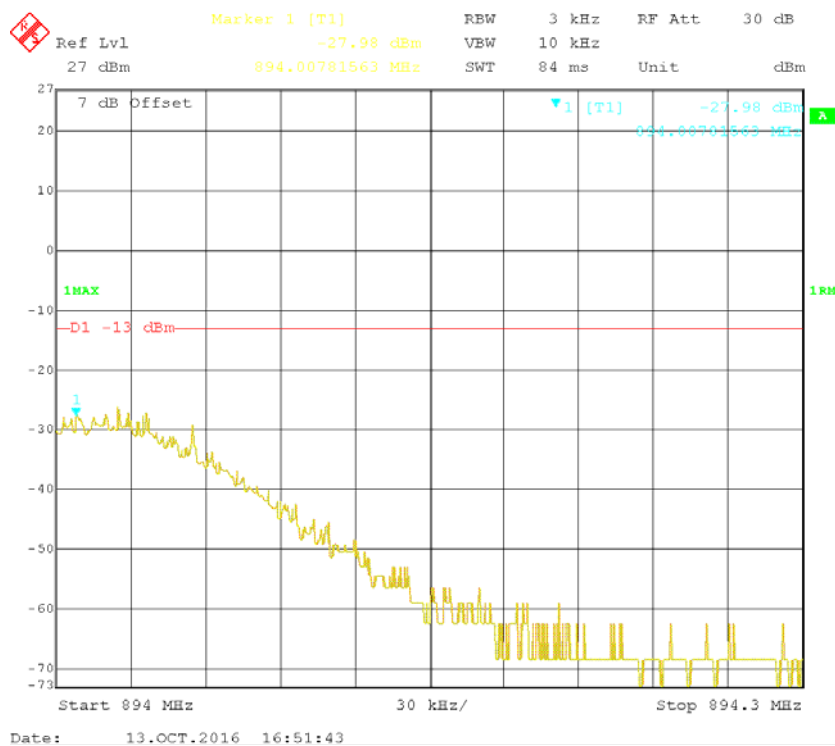
Cellular Band AWGN Right Side 3dB Above AGG



Cellular Band GSM Right Side Pre-AGC

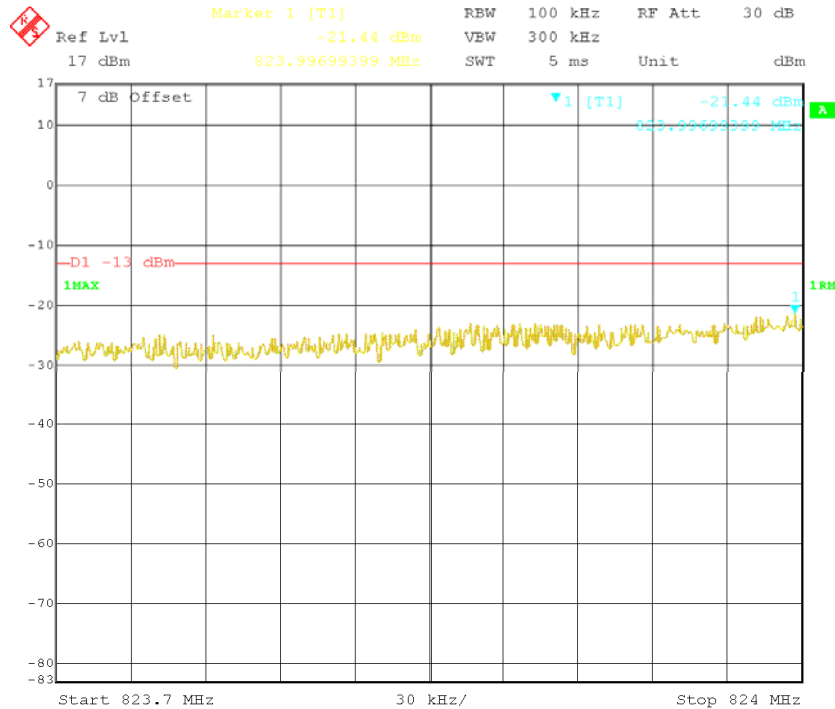


Cellular Band GSM Right Side 3dB Above AGC



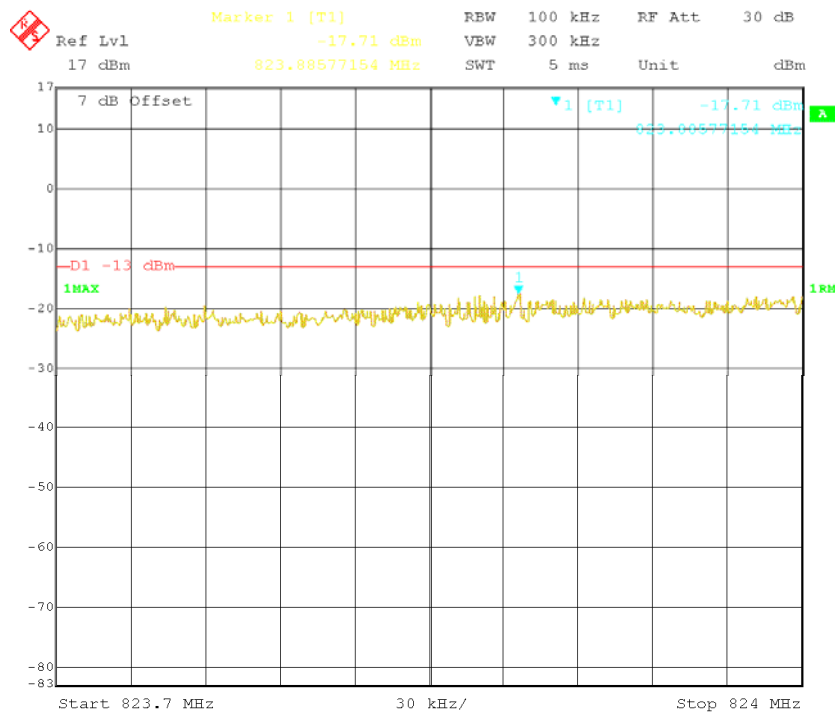
Two adjacent channels:
Uplink:

Cellular Band AWGN Left Side Pre-AGC



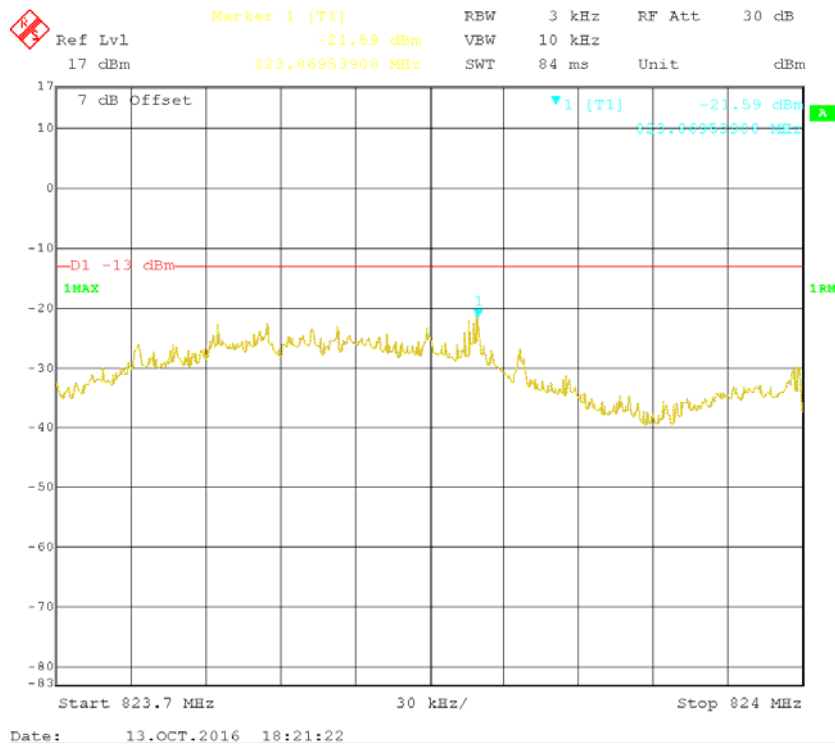
Date: 13.OCT.2016 18:20:09

Cellular Band AWGN Left Side 3dB Above AGG

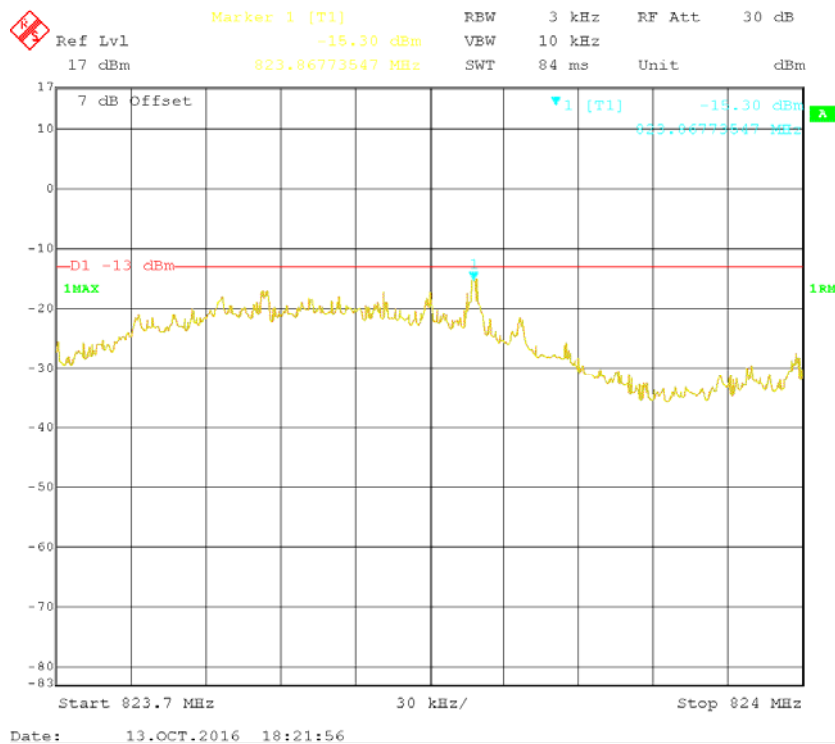


Date: 13.OCT.2016 18:20:41

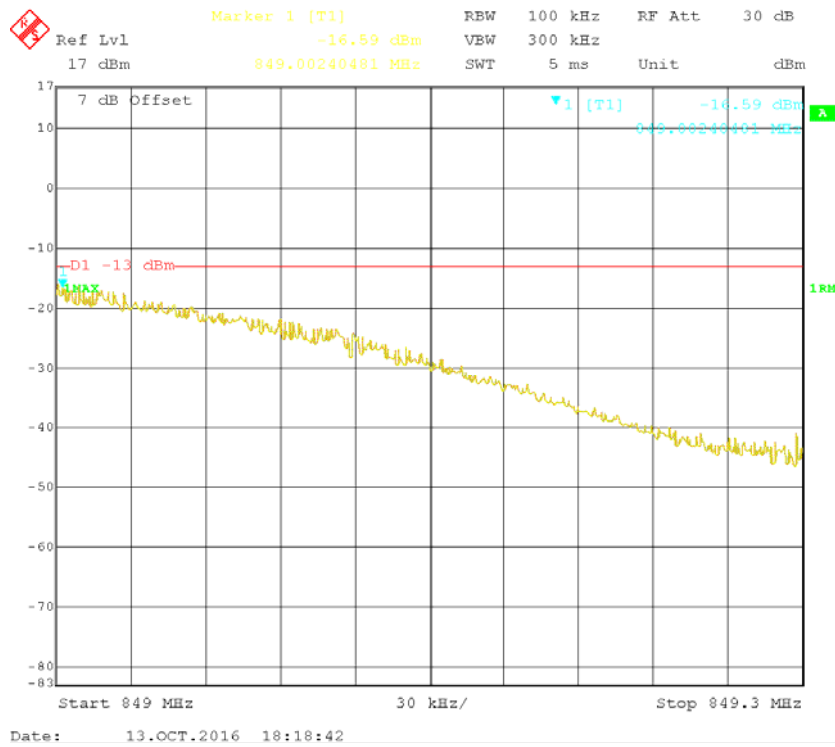
Cellular Band GSM Left Side Pre-AGC



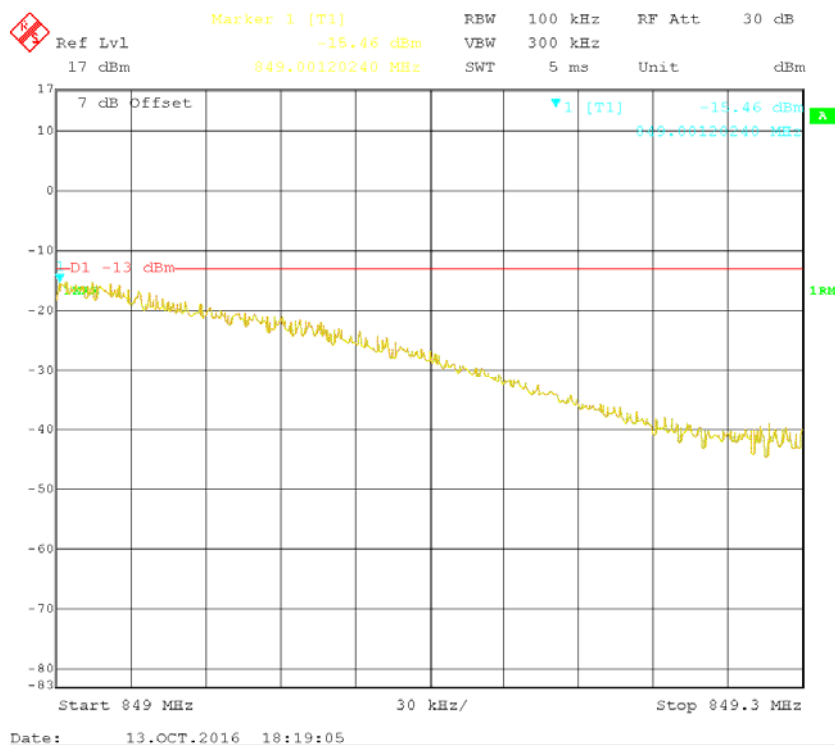
Cellular Band GSM Left Side 3dB Above AGC



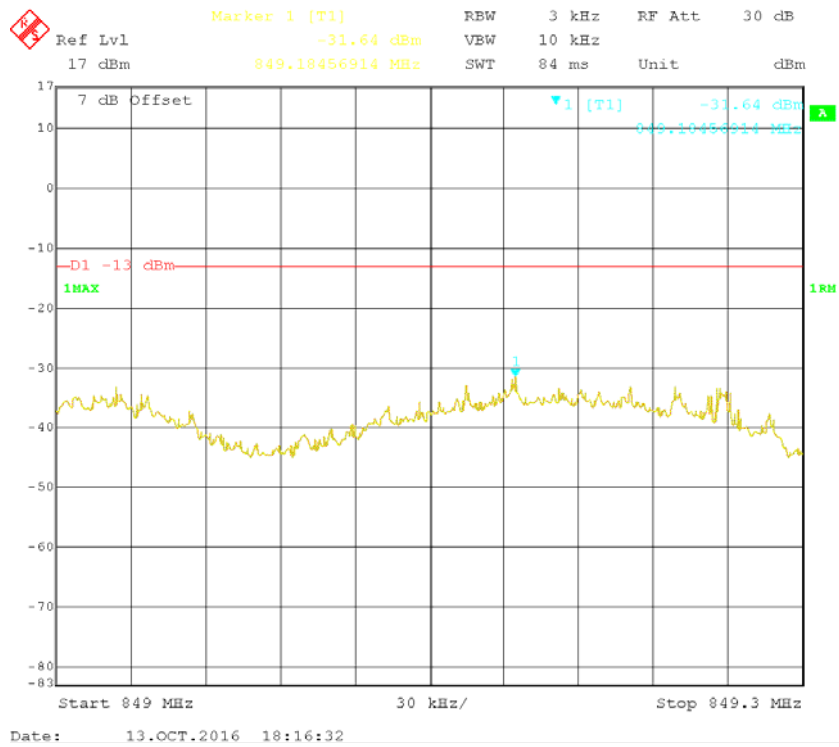
Cellular Band AWGN Right Side Pre-AGC



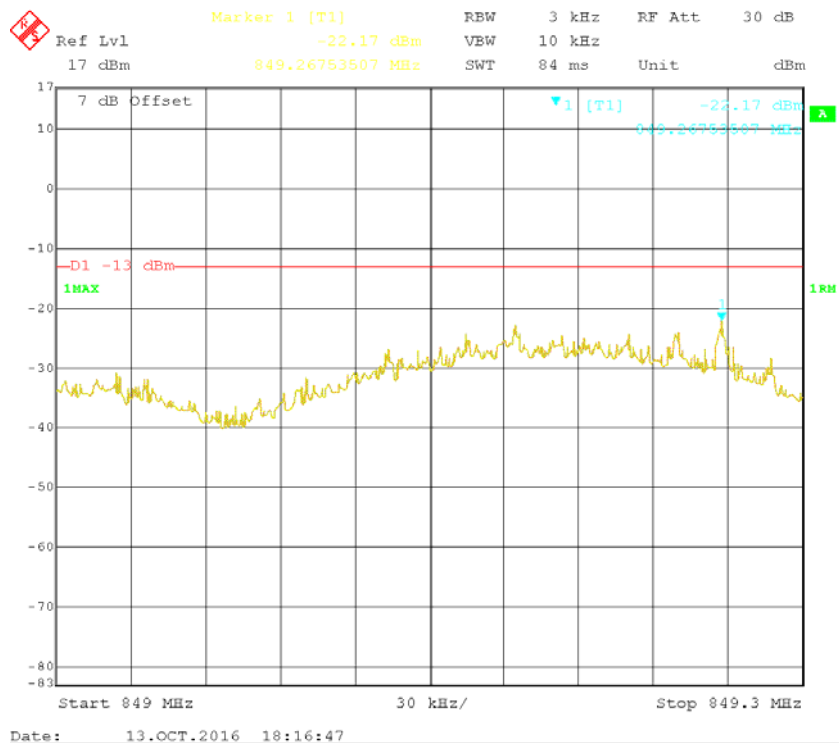
Cellular Band AWGN Right Side 3dB Above AGG



Cellular Band GSM Right Side Pre-AGC

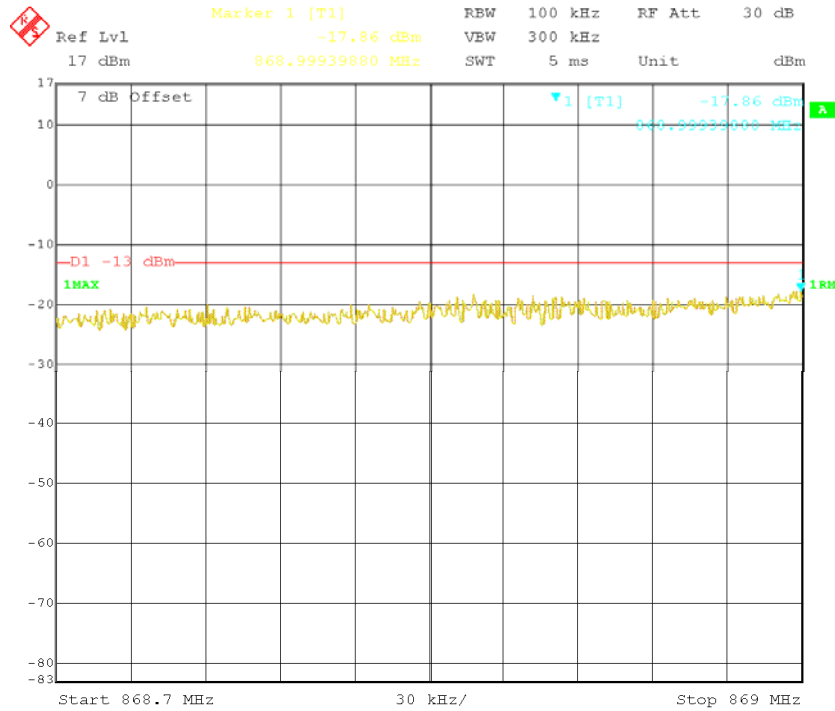


Cellular Band GSM Right Side 3dB Above AGC



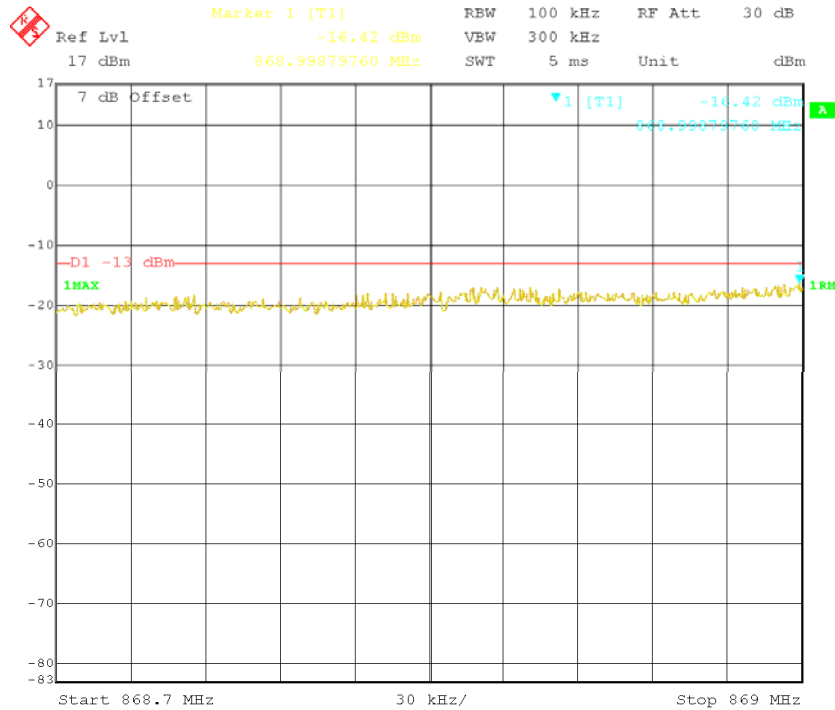
Downlink

Cellular Band AWGN Left Side Pre-AGC



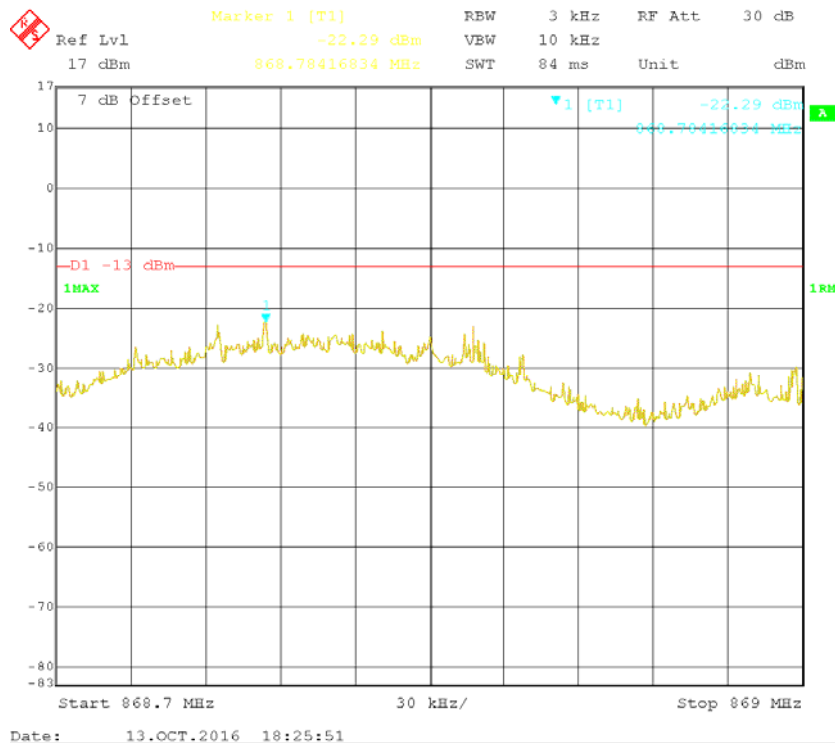
Date: 13.OCT.2016 18:27:14

Cellular Band AWGN Left Side 3dB Above AGG

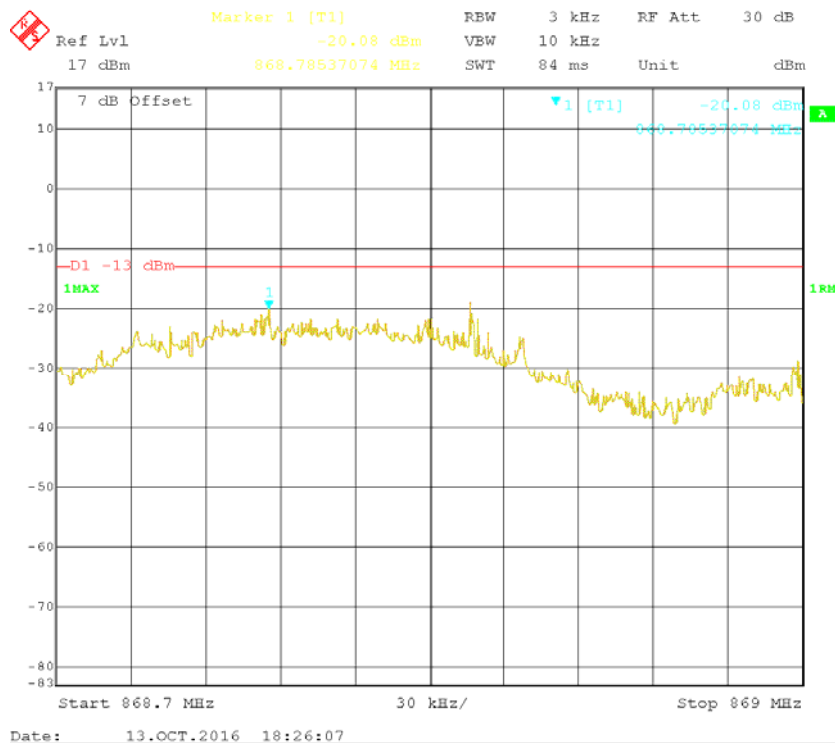


Date: 13.OCT.2016 18:27:36

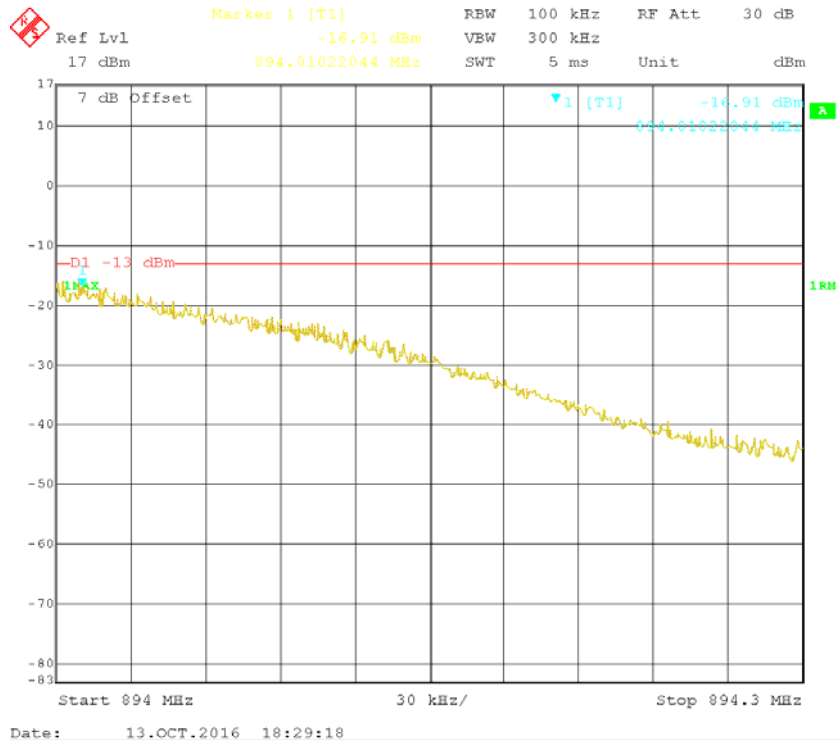
Cellular Band GSM Left Side Pre-AGC



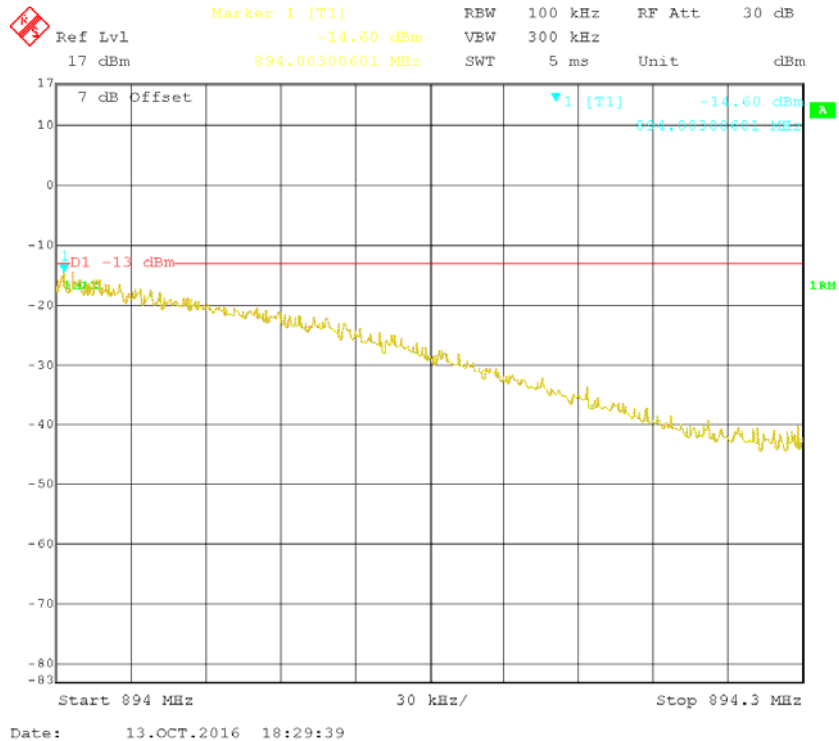
Cellular Band GSM Left Side 3dB Above AGC



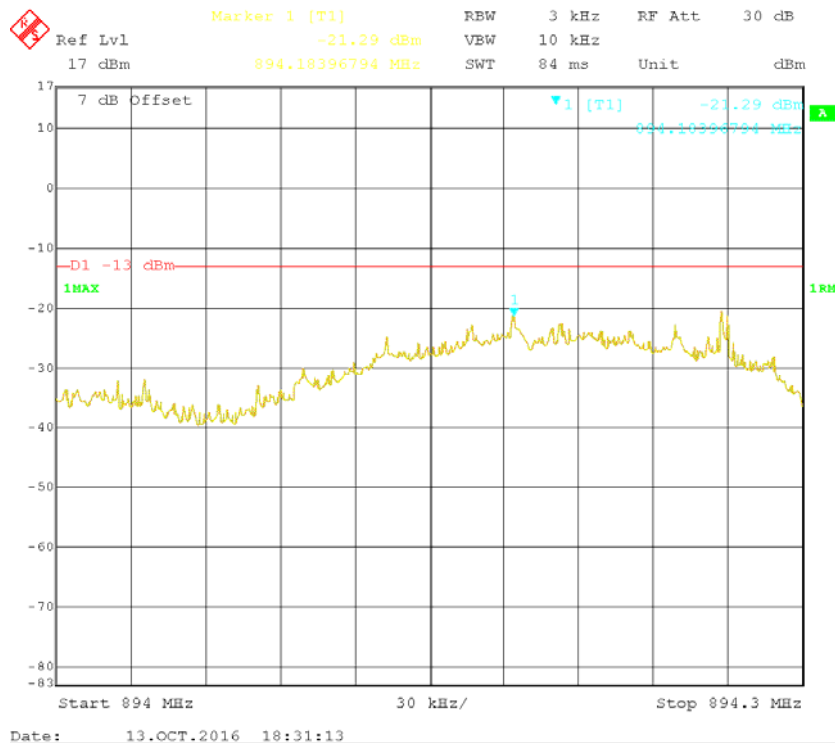
Cellular Band AWGN Right Side Pre-AGC



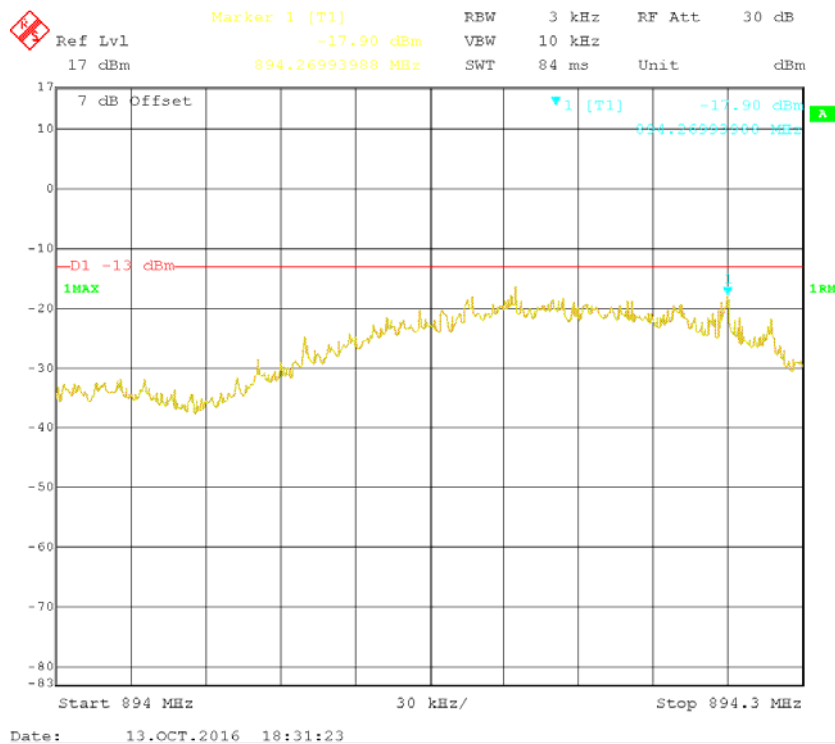
Cellular Band AWGN Right Side 3dB Above AGG



Cellular Band GSM Right Side Pre-AGC



Cellular Band GSM Right Side 3dB Above AGC



§2.1051 & §22.917-SPURIOUS EMISSIONS AT ANTENNA TERMINALS

Applicable Standards

According to §2.1051 *Measurements required: Spurious emissions at antenna terminals.*

According to §22.917(a) *Out of band emissions.* 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.

Test Procedure

- a) Connect a signal generator to the input of the EUT.
- b) Set the signal generator to produce the broadband test signal as previously described (e.g., 4.1 MHz OBW AWGN).
- c) Set the center frequency of the test signal to the lowest available channel within the frequency band or block.
- d) Set the EUT input power to a level that is just below the AGC threshold (see 3.2), but not more than 0.5 dB below.
- e) Connect a spectrum analyzer to the output of the EUT using appropriate attenuation as necessary.
- f) Set the RBW = reference bandwidth in the applicable rule section for the supported frequency band of operation (e.g., reference bandwidth is typically 100 kHz or 1 MHz).
- g) Set the VBW $\geq 3 \times$ RBW.
- h) Set the Sweep time = auto-couple.
- i) Set the analyzer start frequency to the lowest radio frequency signal generated in the equipment, without going below 9 kHz, and the stop frequency to the lower band/block edge frequency minus 100 kHz or 1 MHz, as specified in the applicable rule part.
NOTE—The number of measurement points in each sweep must be $\geq (2 \times \text{span}/\text{RBW})$ which may require that the measurement range defined by the start and stop frequencies be subdivided, depending on the available number of measurement points provided by the spectrum analyzer.
- j) Select the power averaging (rms) detector function.
- k) Trace average at least 10 traces in power averaging (i.e., rms) mode.
- l) Use the peak marker function to identify the highest amplitude level over each measured frequency range. Record the frequency and amplitude and capture a plot for inclusion in the test report.
- m) Reset the analyzer start frequency to the upper band/block edge frequency plus 100 kHz or 1 MHz, as specified in the applicable rule part, and the analyzer stop frequency to 10 times the highest frequency of the fundamental emission (see §2.1057). Note that the number of measurement points in each sweep must be $\geq (2 \times \text{span}/\text{RBW})$ which may require that the measurement range defined by the start and stop frequencies be subdivided, depending on the available number of measurement points provided by the spectrum analyzer.
- n) Trace average at least 10 traces in power averaging (i.e., rms) mode.
- o) Use the peak marker function to identify the highest amplitude level over each of the measured frequency ranges. Record the frequency and amplitude and capture a plot for inclusion in the test report and provide tabular data, if required.
- p) Repeat the procedure with the input test signals tuned to a middle band/block frequency/channel and then a high band/block frequency/channel.

- q) Repeat entire procedure with the narrowband test signal.
r) Repeat for all authorized frequency bands/blocks used by the EUT.

Test Equipment List and Details

Manufacturer	Description	Model	Serial Number	Calibration Date	Calibration Due Date
Rohde & Schwarz	Signal Analyzer	FSIQ26	831929/005	2016-09-21	2017-09-20
R & S	Wideband Radio Communication Tester	CMW500	149216	2016-10-07	2017-10-06
Agilent	MXG Vector Signal Generator	N5182B	MY51350122 4	2016-05-10	2017-05-09

* **Statement of Traceability:** BACL (Chengdu) attested that all calibrations have been performed, traceable to National Primary Standards and International System of Units (SI).

Test Data

Environmental Conditions

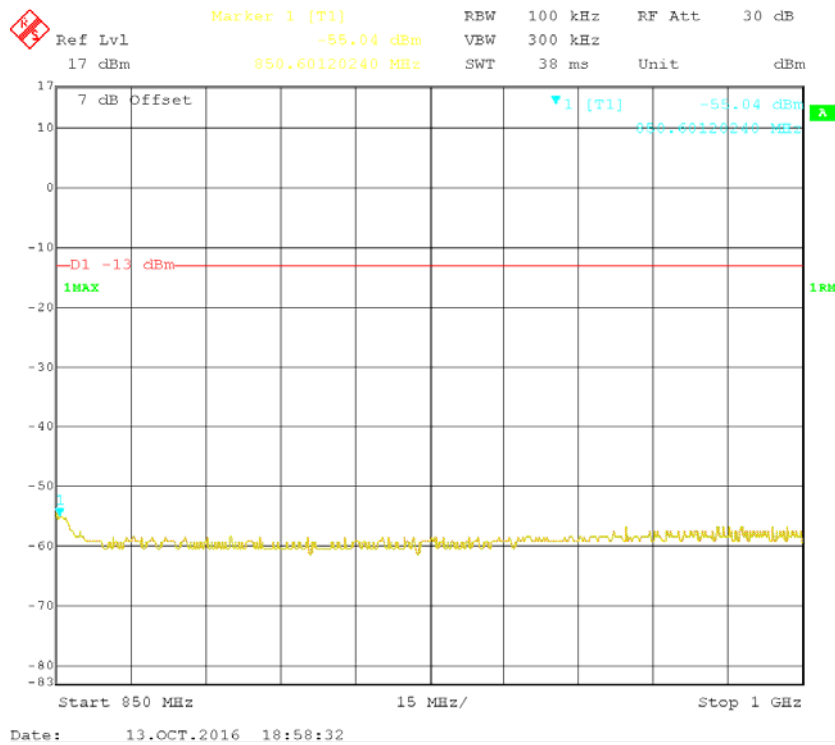
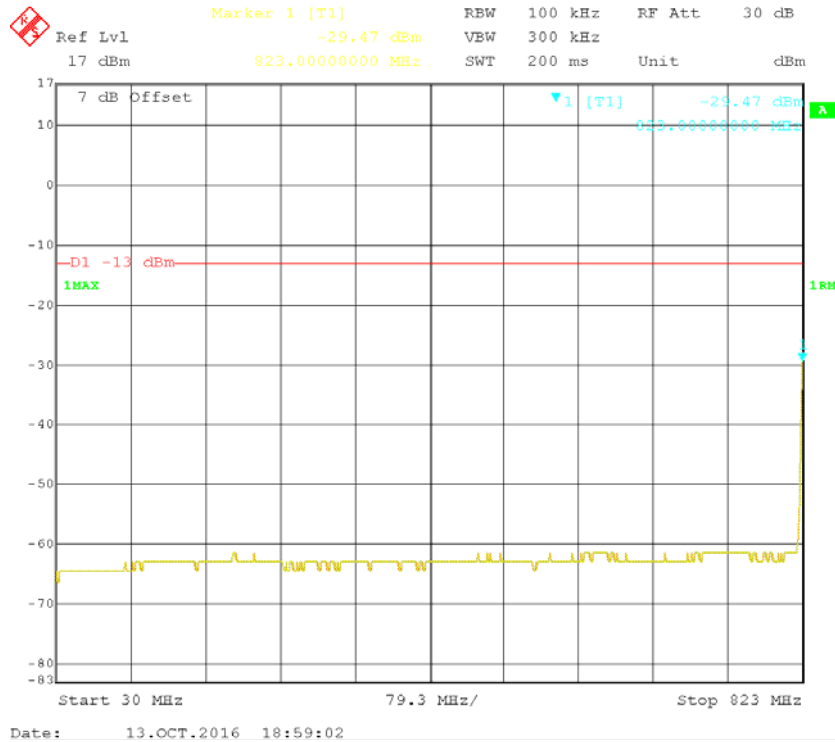
Temperature:	26.4 °C
Relative Humidity:	33 %
ATM Pressure:	100.8 kPa

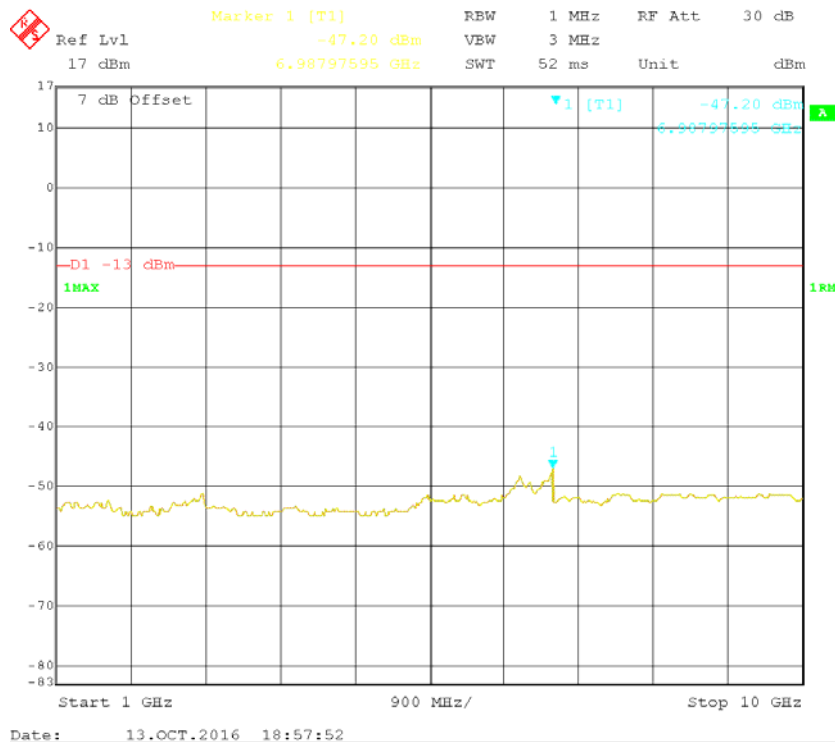
The testing was performed by Lorin Bian on 2016-10-13.

Please refer to the following plots.

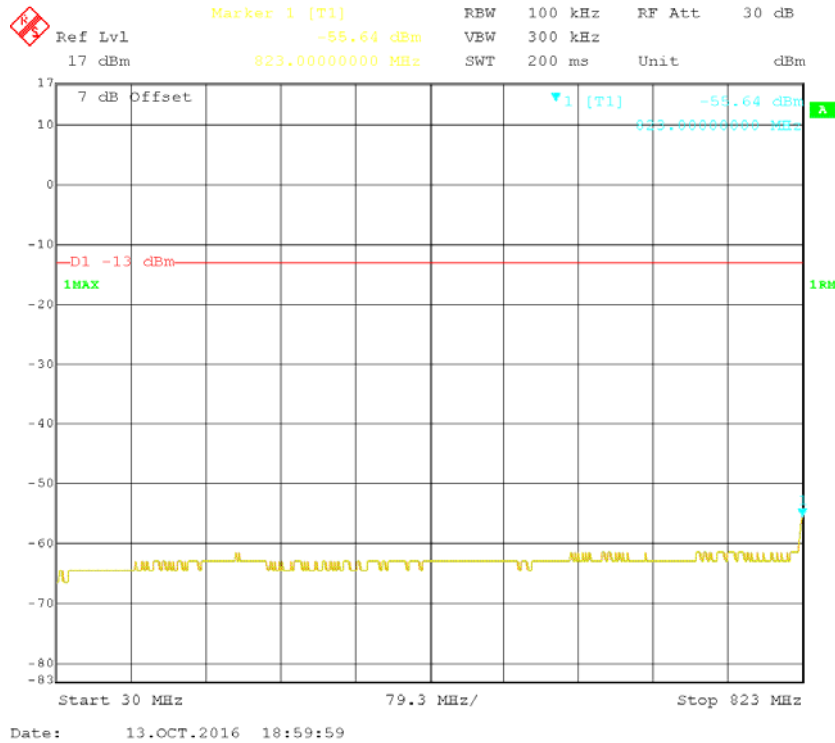
Uplink:

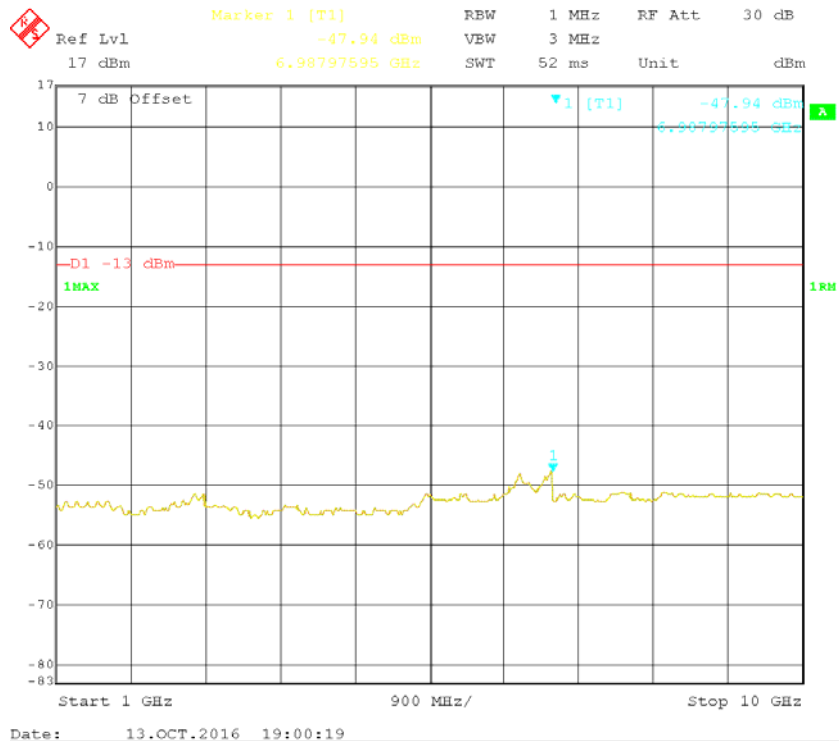
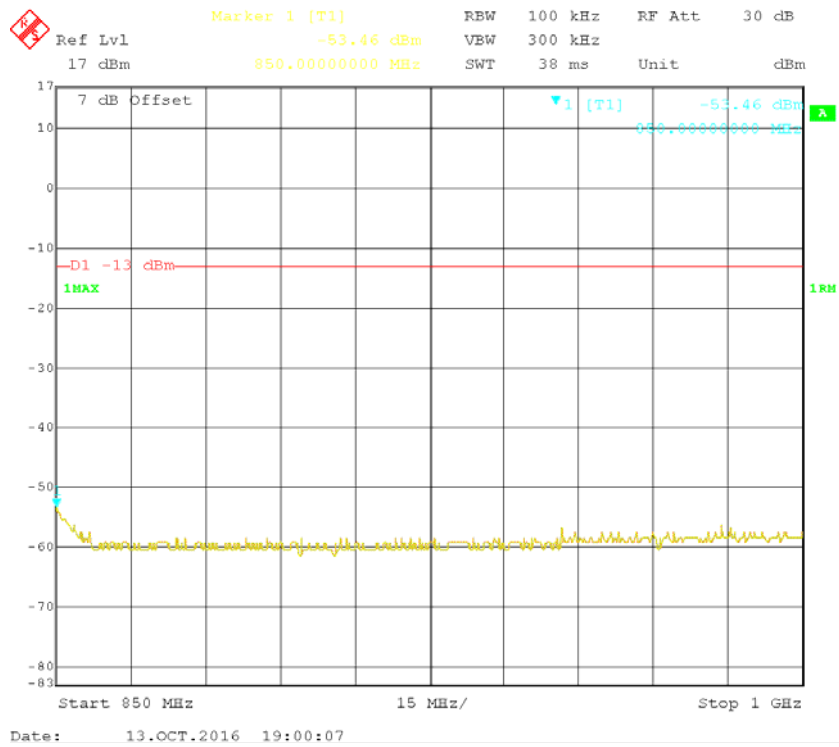
Cellular Band Lower Channel AWGN



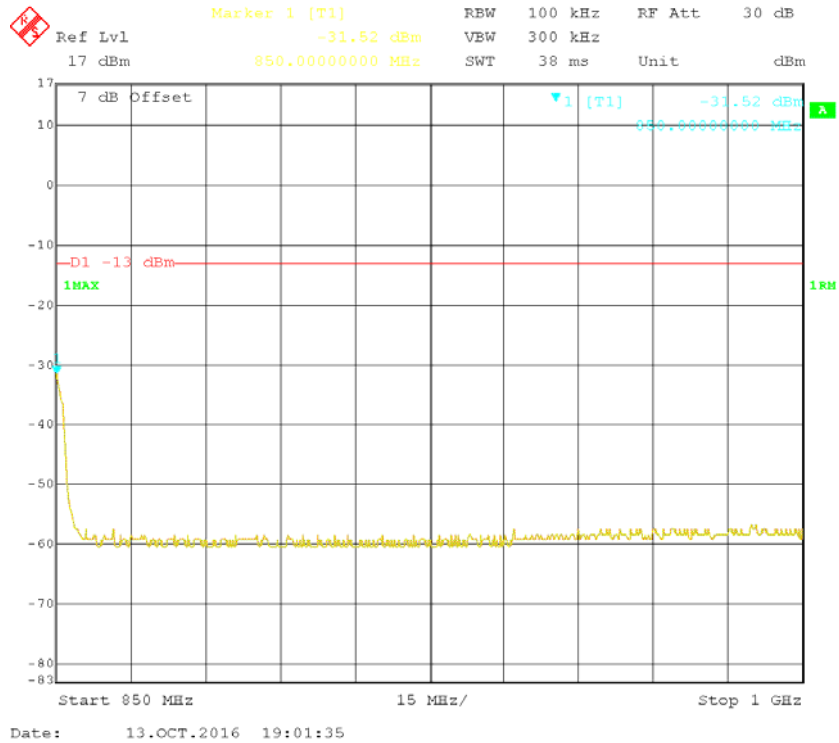
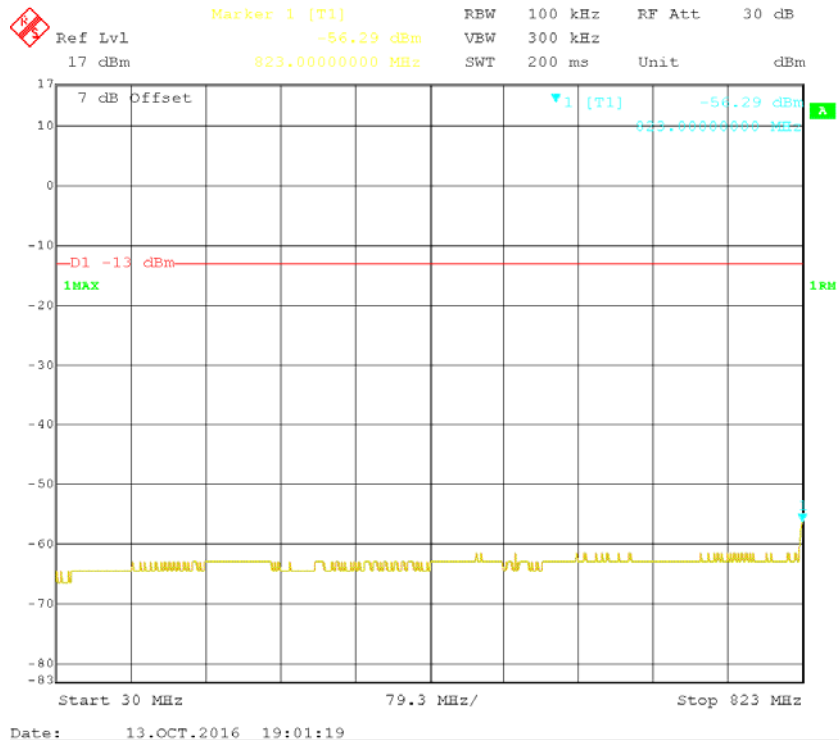


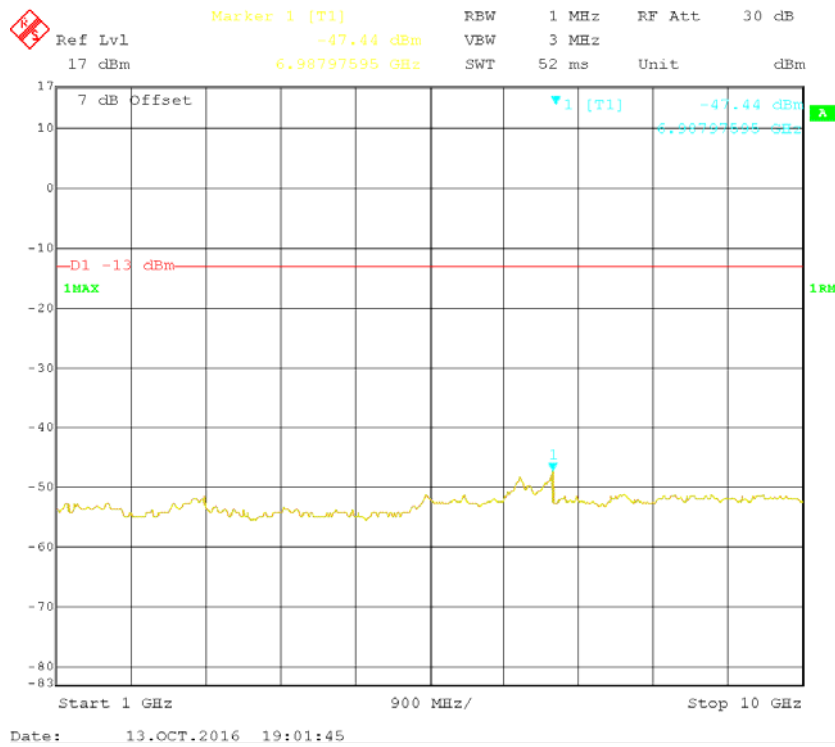
Cellular Band Middle Channel AWGN



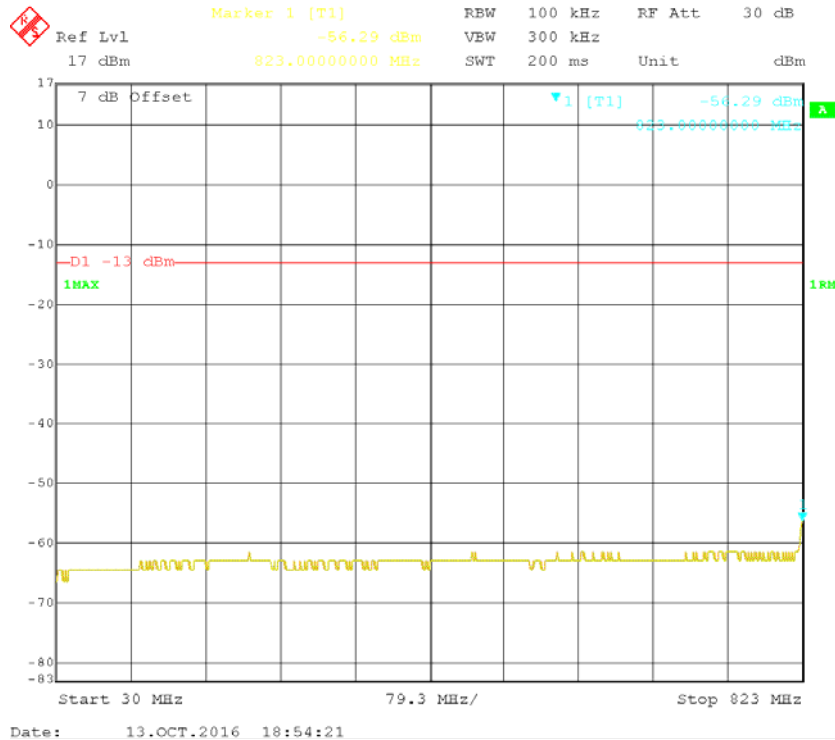


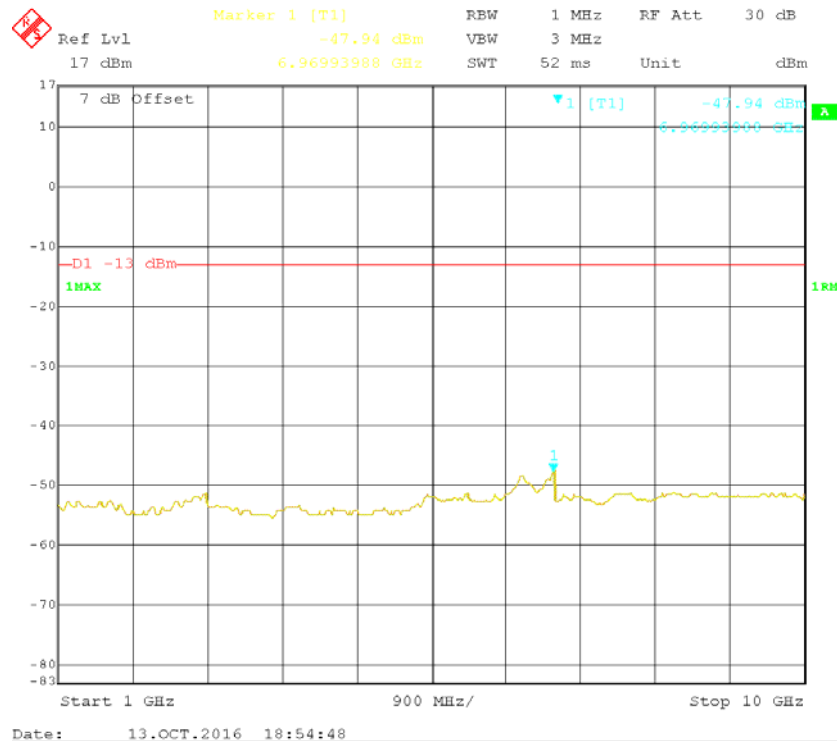
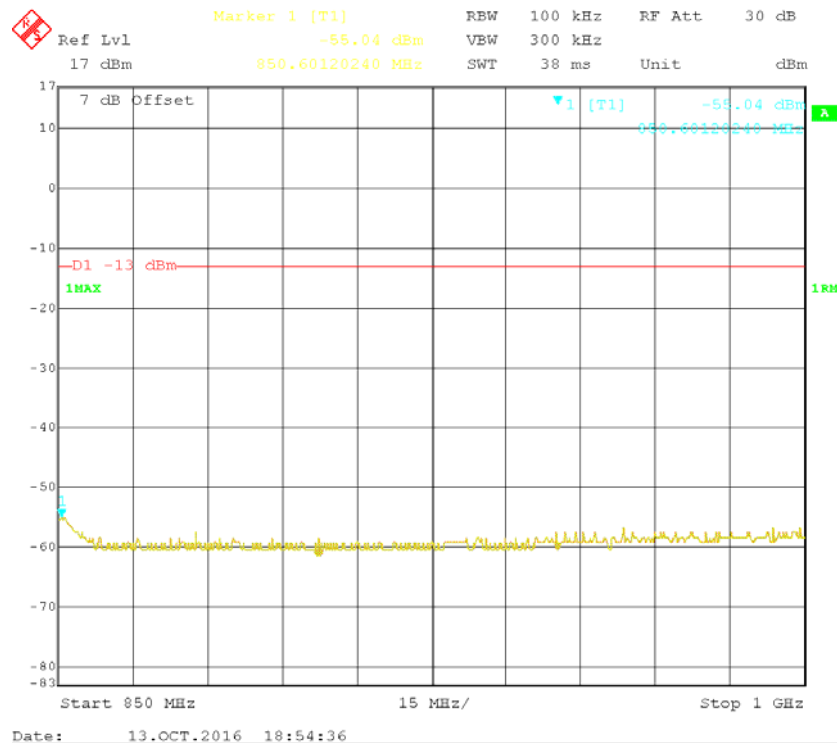
Cellular Band High Channel AWGN



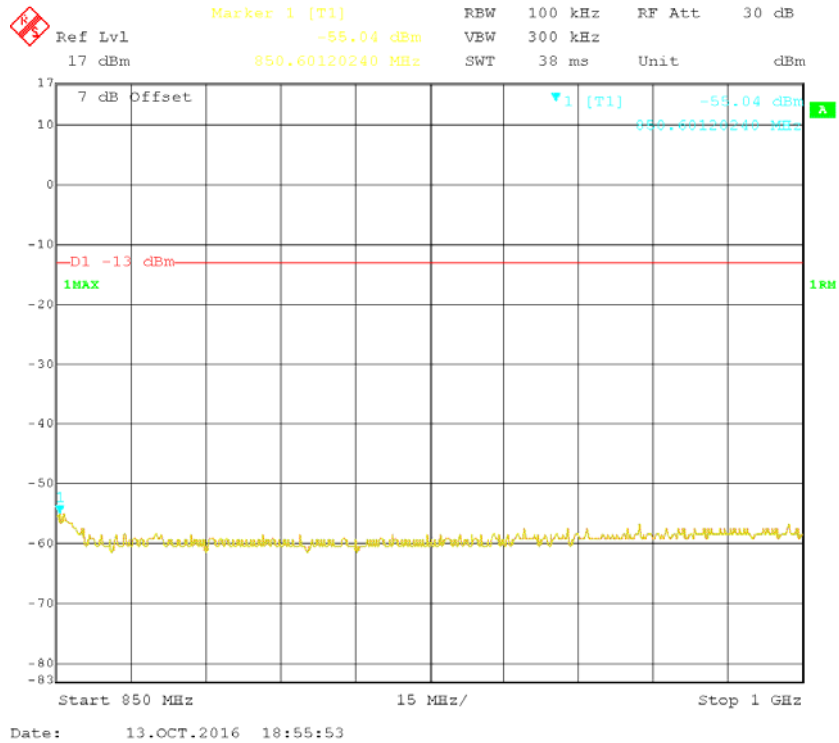
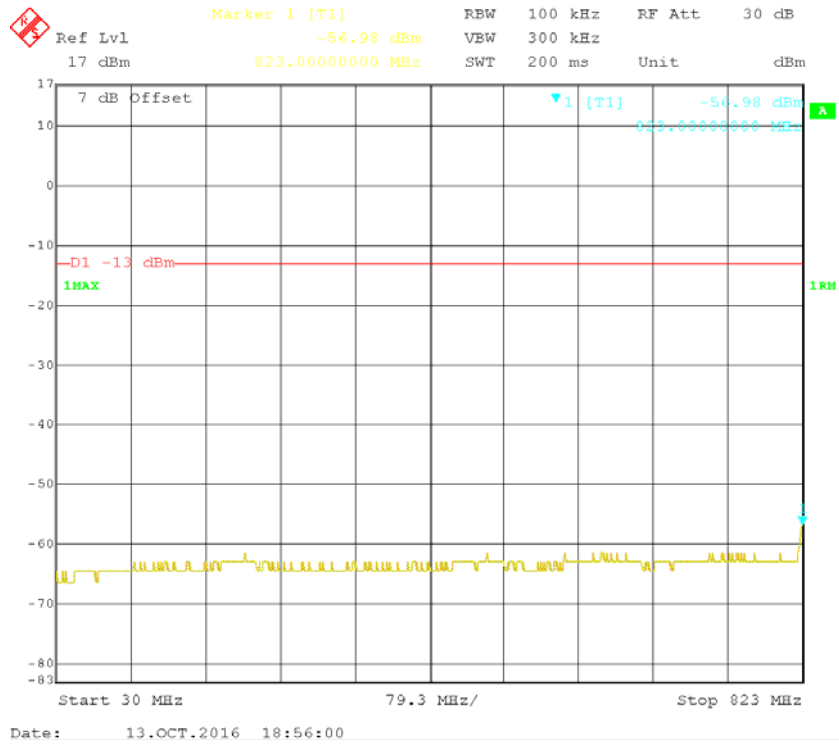


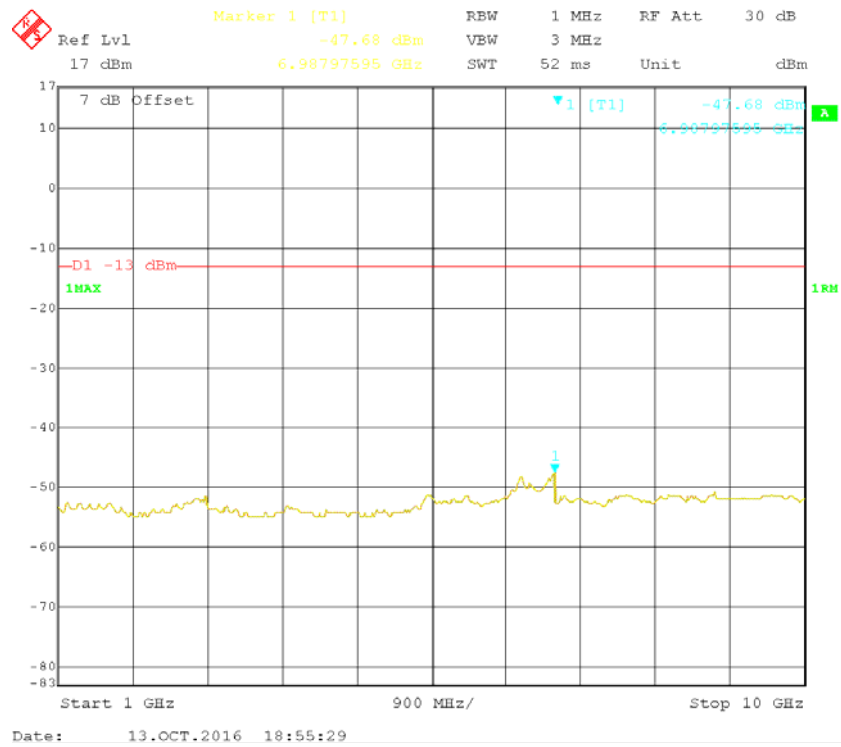
Cellular Band Lower Channel GSM



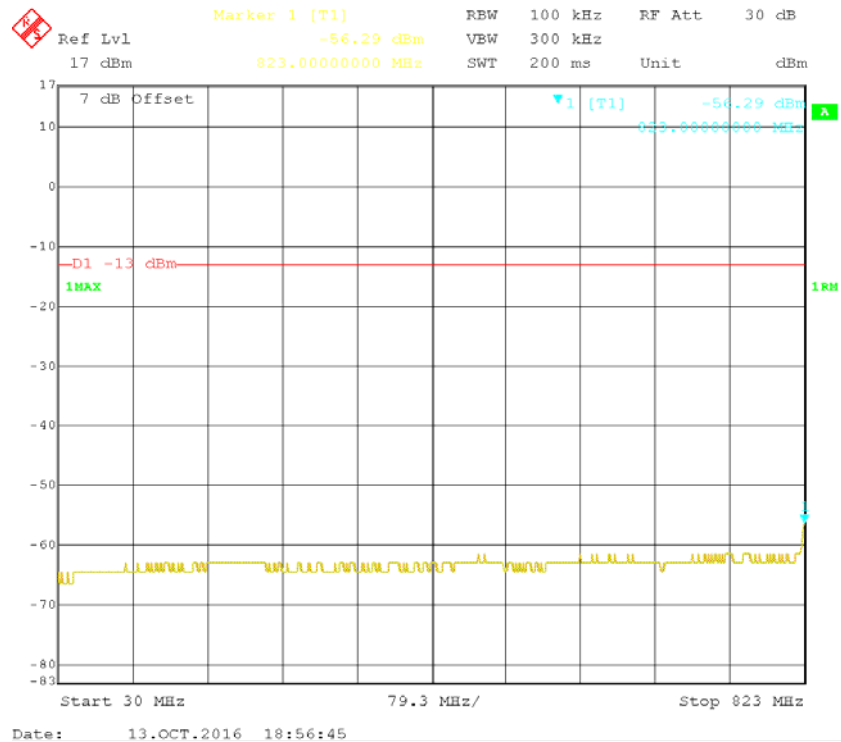


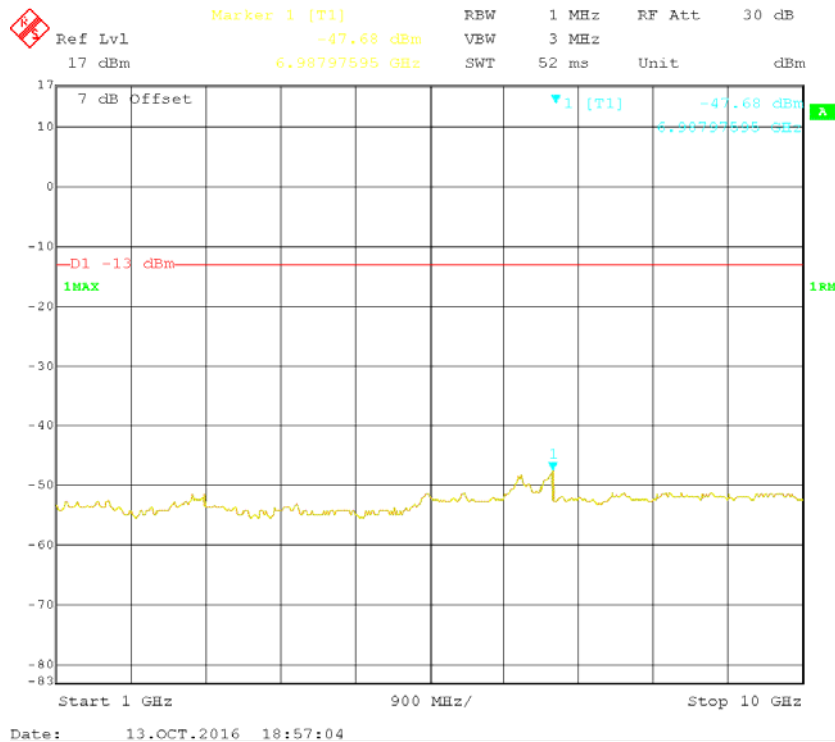
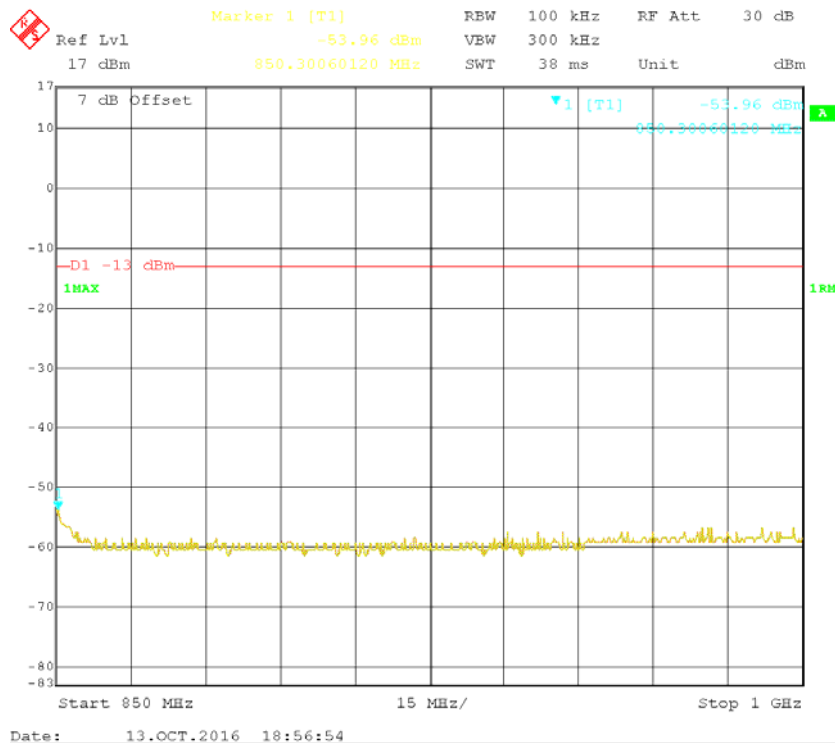
Cellular Band Middle Channel GSM





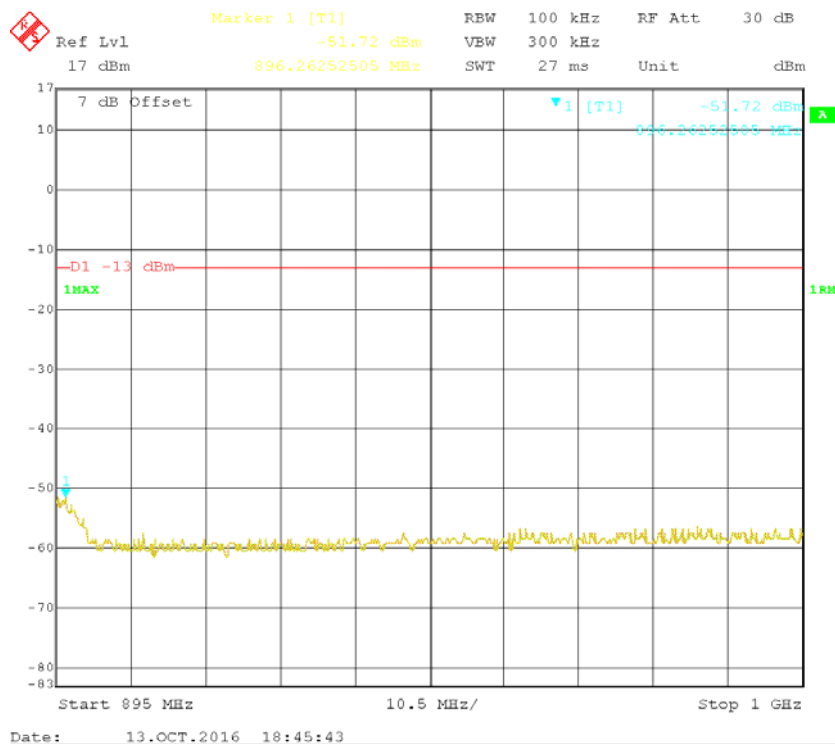
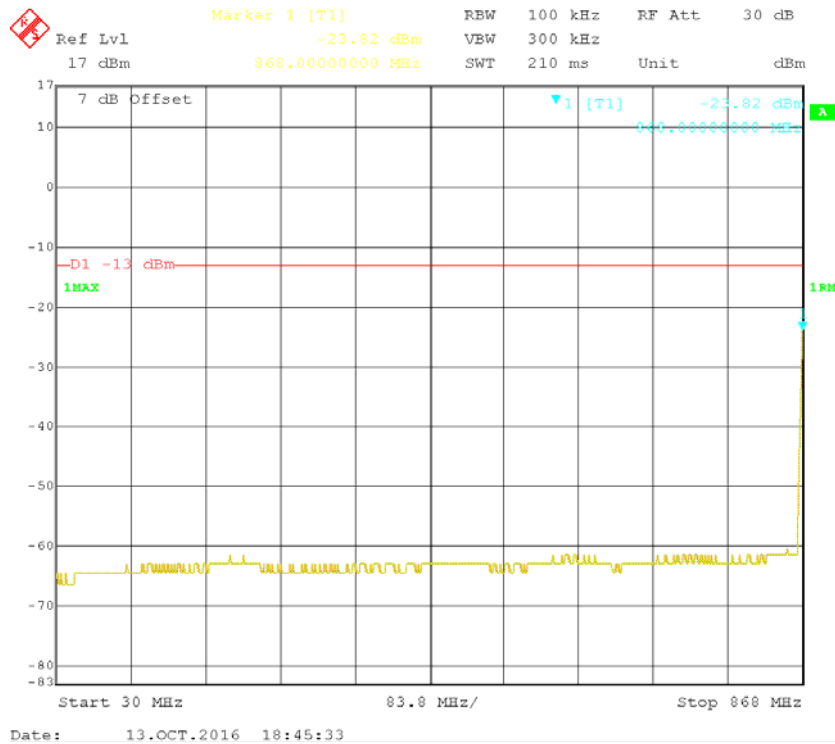
Cellular Band High Channel GSM

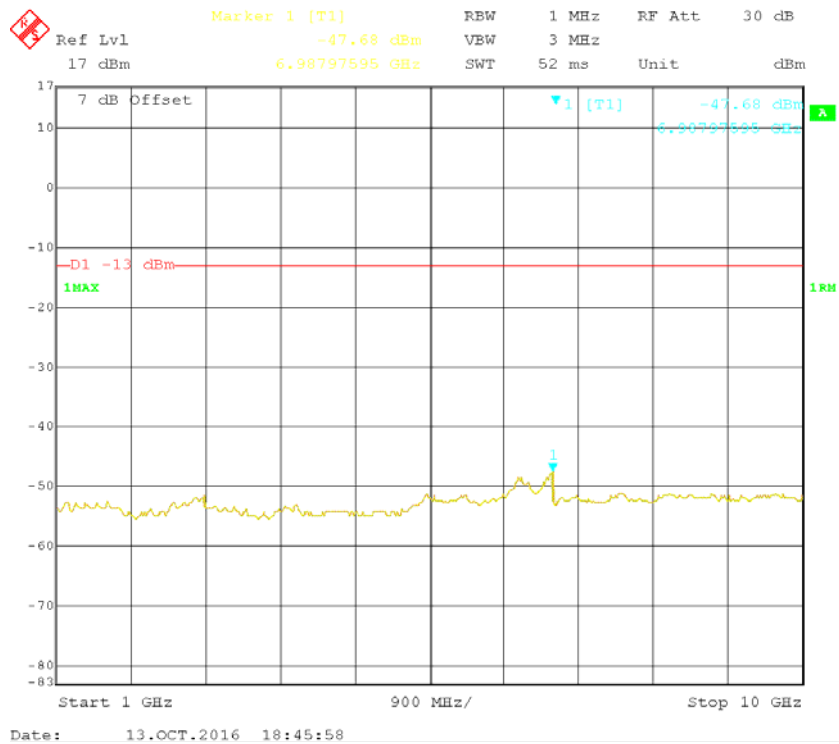




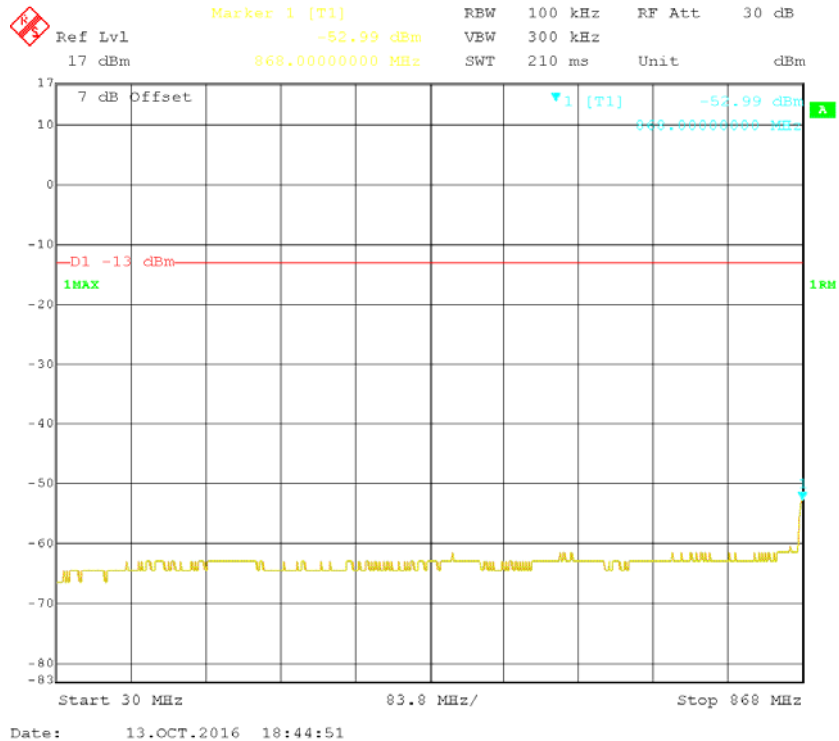
Downlink

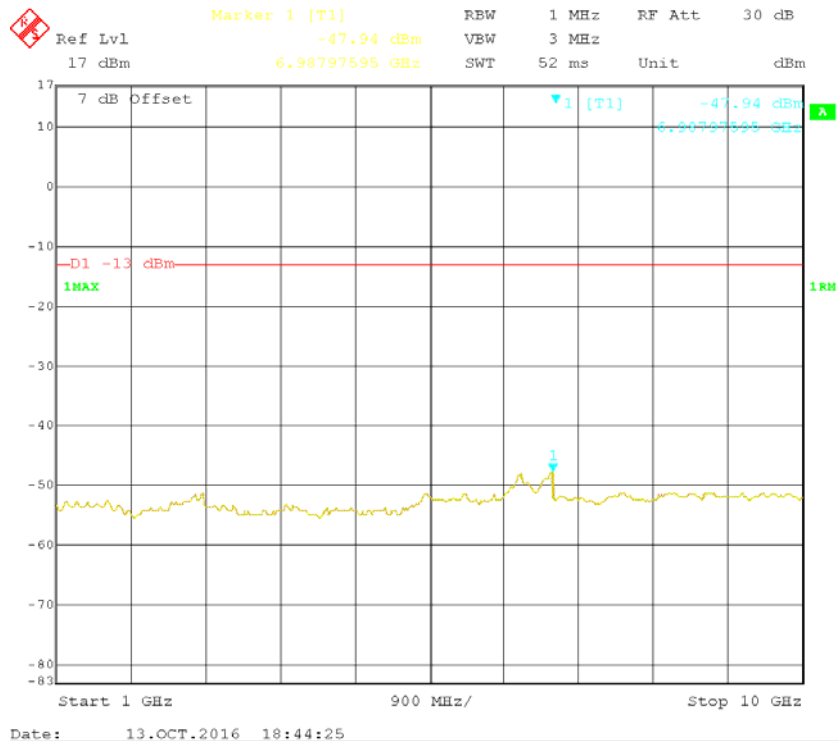
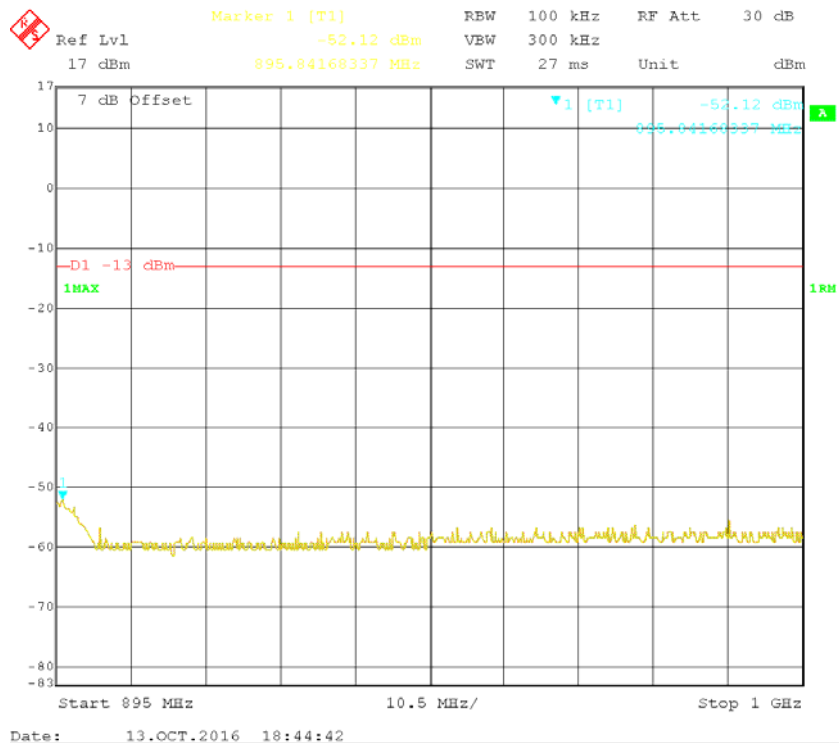
Cellular Band Lower Channel AWGN



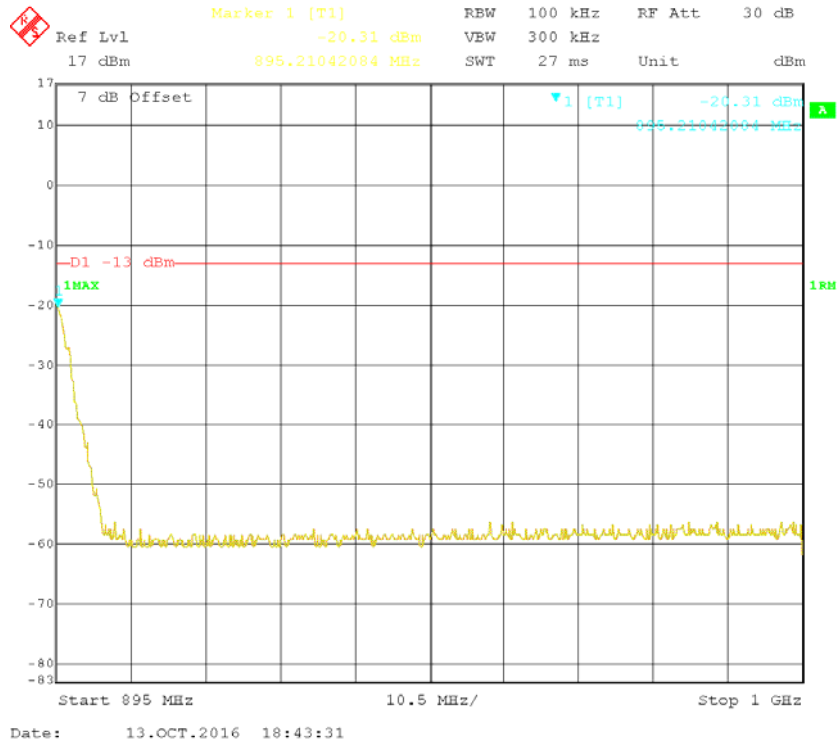
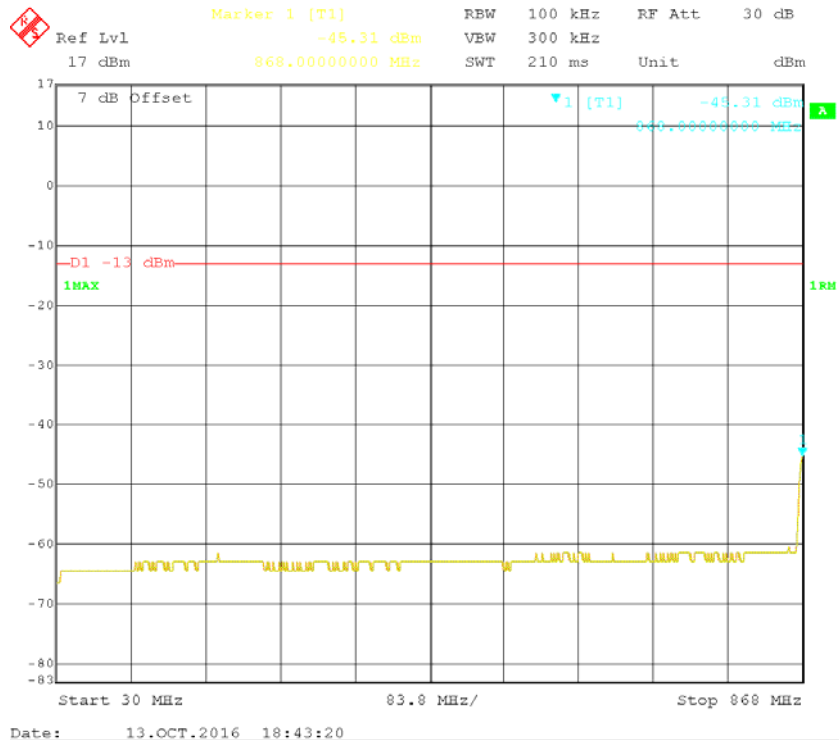


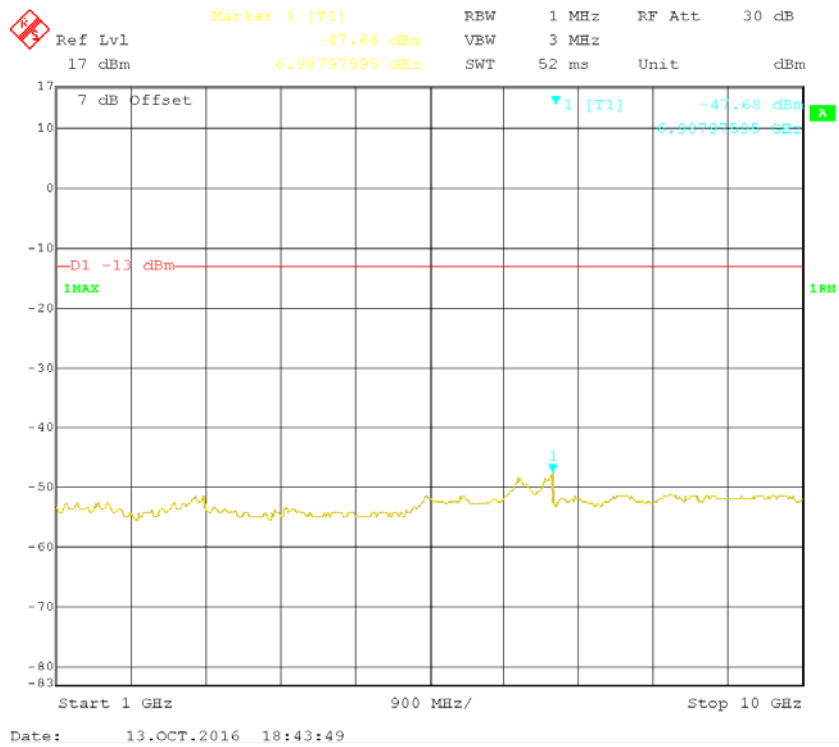
Cellular Band Middle Channel AWGN



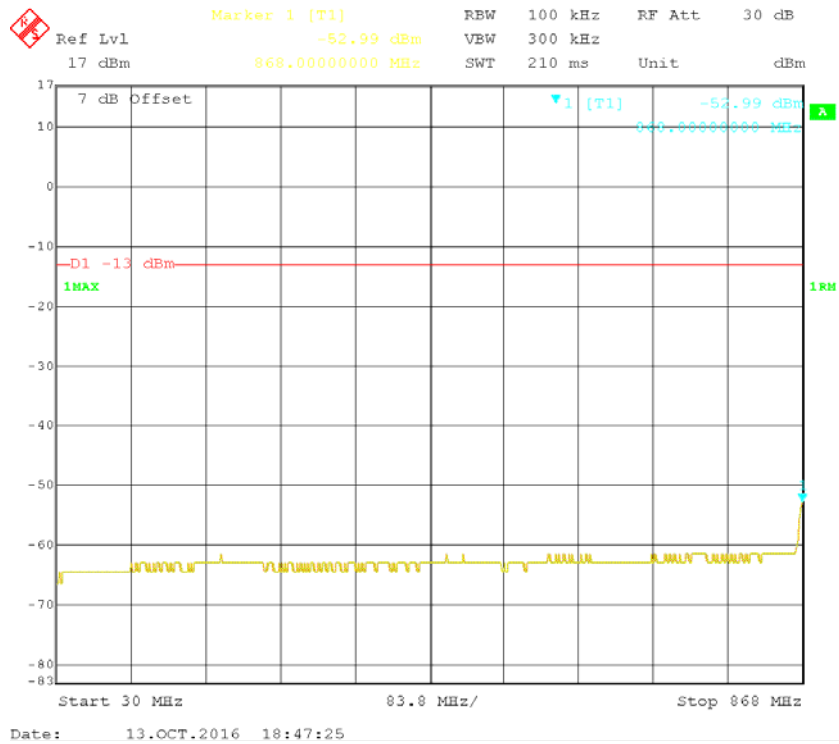


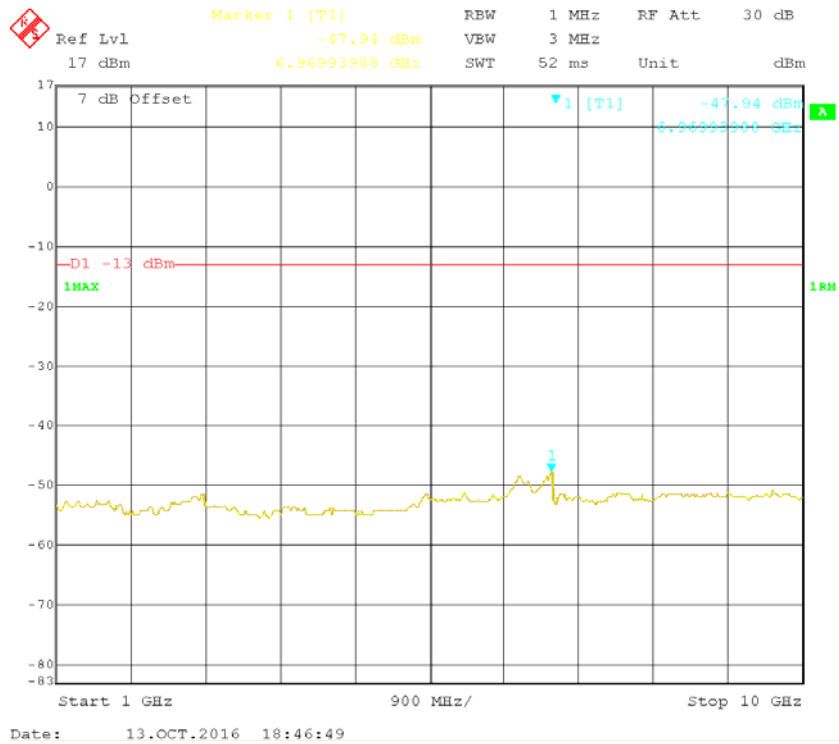
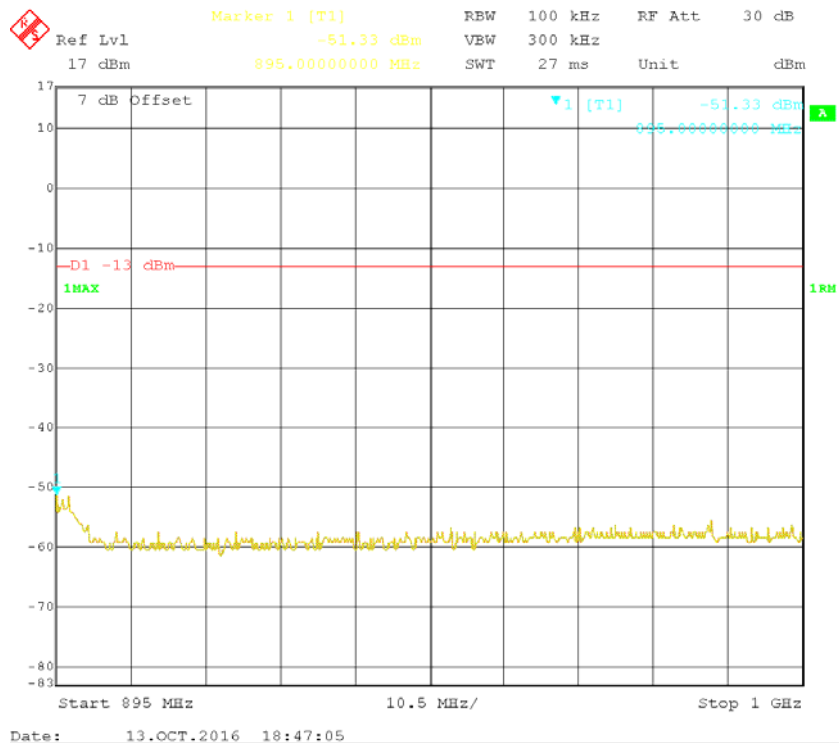
Cellular Band High Channel AWGN



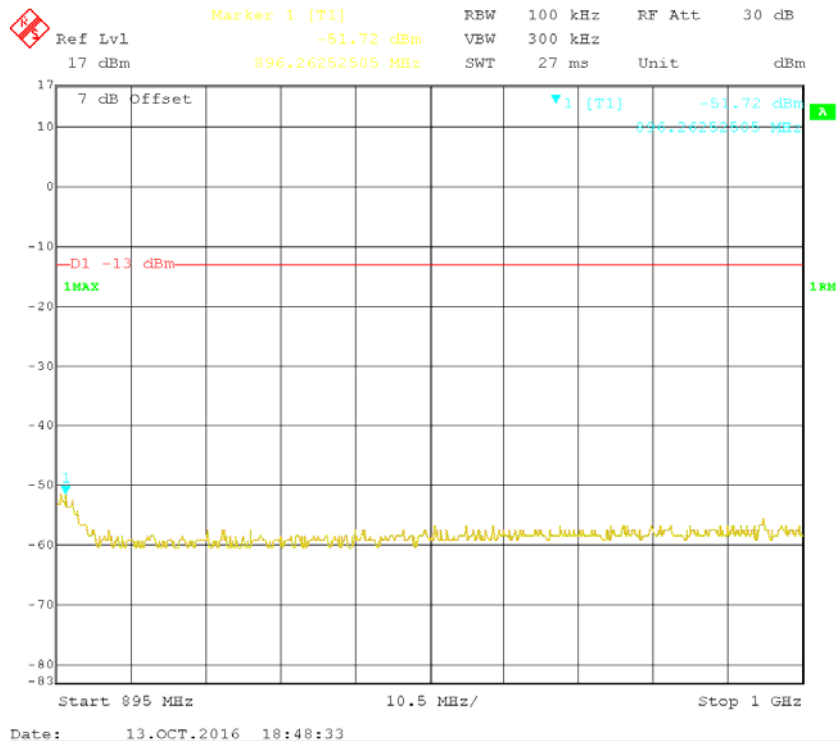
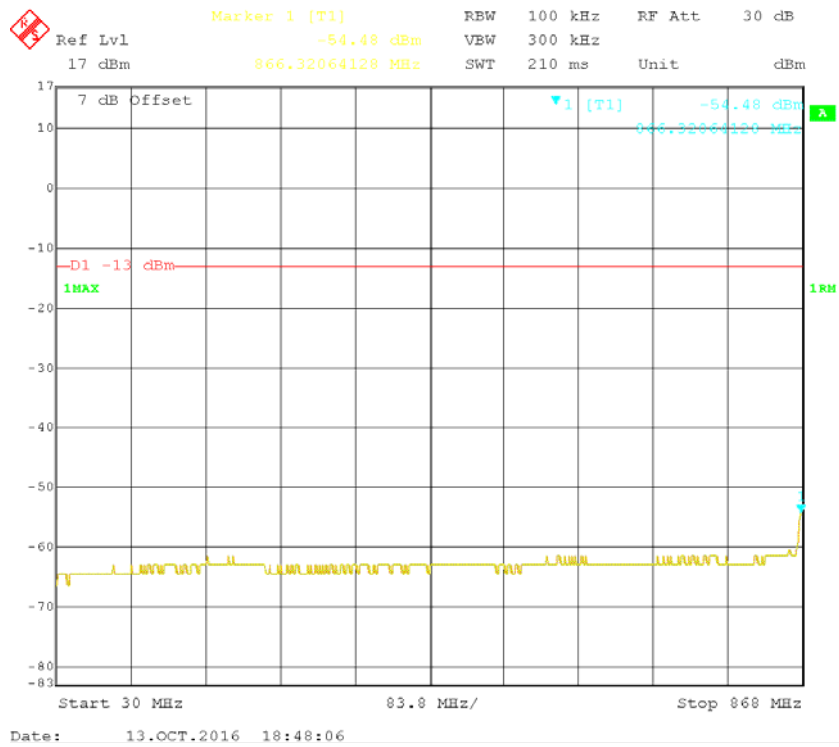


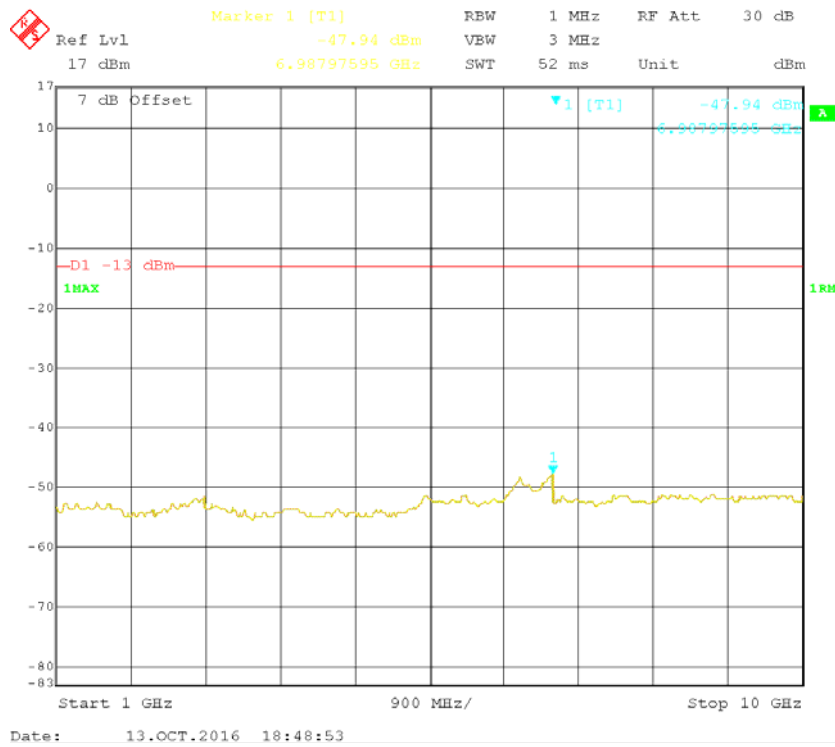
Cellular Band Low Channel GSM



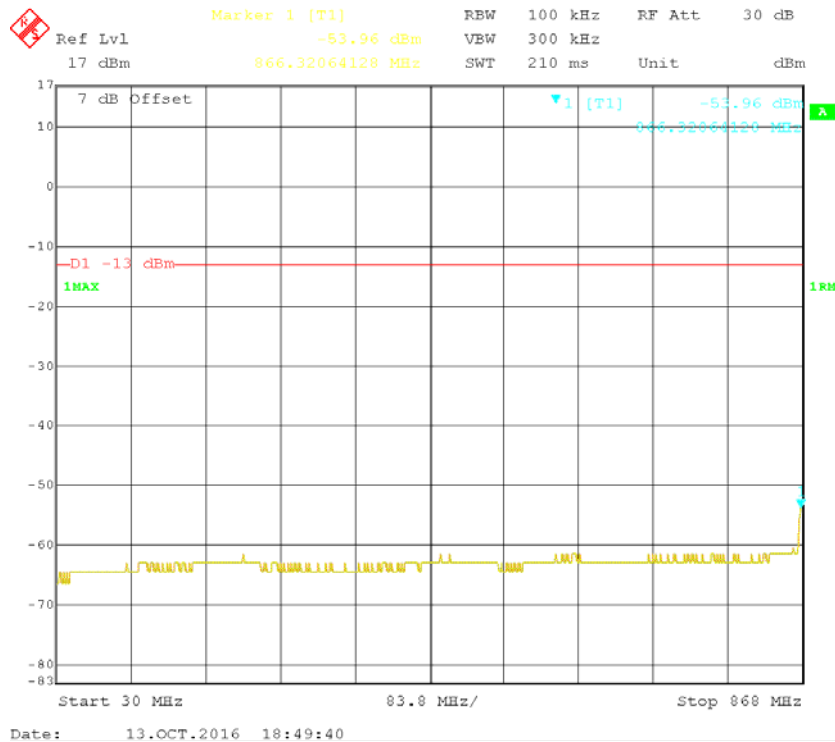


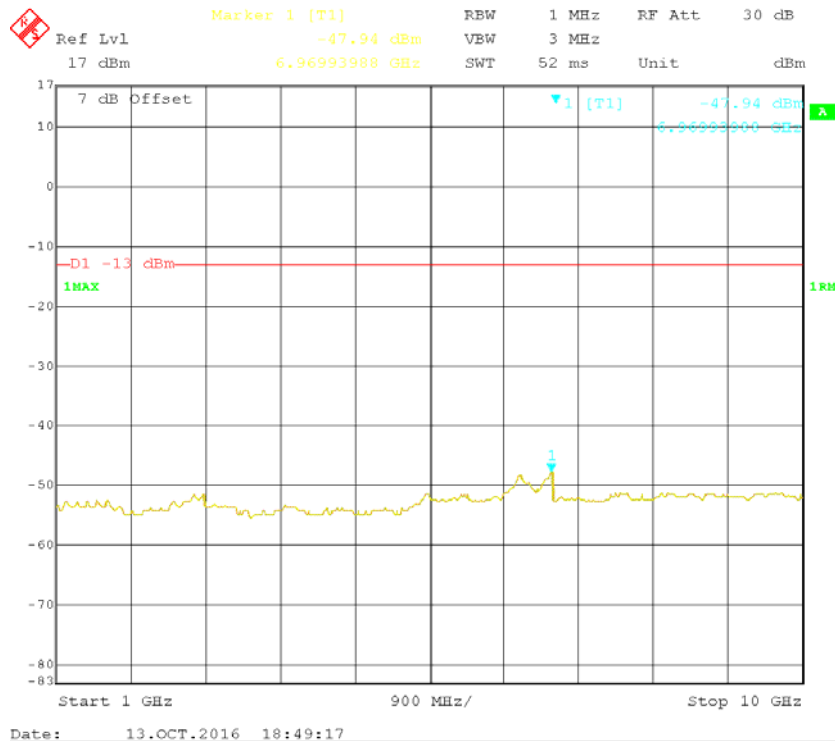
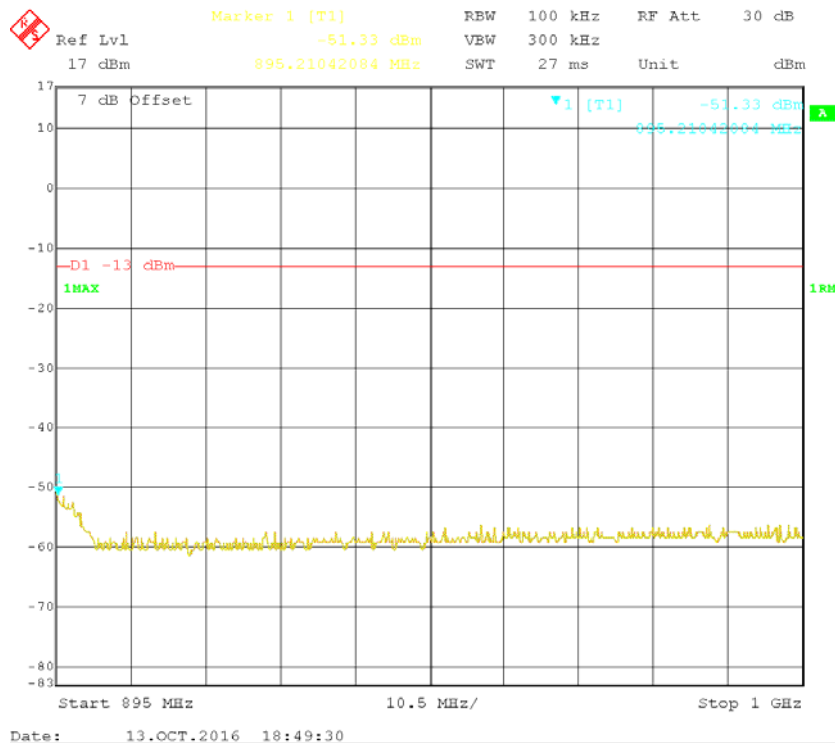
Cellular Band Middle Channel GSM





Cellular Band High Channel GSM





§2.1053 & §22.917-RADIATED SPURIOUS EMISSIONS

Applicable Standards

According to §2.1053 Measurements required: Field strength of spurious radiation.

According to §22.917(a) *Out of band emissions*. 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.

Test Procedure

The transmitter was placed on a 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 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.

Test Equipment List and Details

Manufacturer	Description	Model Number	Serial Number	Calibration Date	Calibration Due Date
Agilent	Amplifier	8447D	2944A10442	2015-12-02	2016-12-01
Rohde & Schwarz	EMI Test Receiver	ESCI	100028	2015-12-02	2016-12-01
Sunol Sciences	Broadband Antenna	JB3	A101808	2016-04-10	2019-04-09
Rohde & Schwarz	Spectrum Analyzer	FSEM30	100018	2015-12-02	2016-12-01
EM TEST	Horn Antenna	3115	003-6076	2015-12-02	2016-12-01
EM TEST	Horn Antenna	3115	000 527 35	2015-12-02	2016-12-01
EMCO	Adjustable Dipole Antenna	3121C	9109-753	N/A	N/A
HP	Signal Generator	8648A	3426A00831	2015-11-06	2016-11-05
Agilent	Signal Generator	E8247C	MY43321350	2016-10-16	2017-10-15
Mini-circuits	Amplifier	ZVA-213-S+	771001215	2016-05-20	2017-05-19
EMCT	Semi-Anechoic Chamber	966	N/A	2015-04-24	2018-04-23
N/A	RF Cable (below 1GHz)	NO.1	N/A	2015-11-10	2016-11-09
N/A	RF Cable (below 1GHz)	NO.4	N/A	2015-11-10	2016-11-09
N/A	RF Cable (above 1GHz)	NO.2	N/A	2015-11-10	2016-11-09

* **Statement of Traceability:** BACL (Chengdu) attested that all calibrations have been performed, traceable to National Primary Standards and International System of Units (SI).

Test Data

Environmental Conditions

Temperature:	23.4℃
Relative Humidity:	40 %
ATM Pressure:	100.5 kPa

The testing was performed by Lorin Bian on 2016-10-26.

Test mode: Transmitting

Frequency (MHz)	Polar (H/V)	Receiver Reading (dBμV)	Substituted Method			Absolute Level (dBm)	Limit (dBm)	Margin (dB)
			S.G. Level (dBm)	Antenna Gain (dBd/dBi)	Cable Loss (dB)			
Uplink, Test Frequency 836.500MHz								
1673	H	44.23	-58.9	7.9	0.8	-51.8	-13.0	38.8
1673	V	39.35	-62	7.9	0.8	-54.9	-13.0	41.9
2509.5	H	34.25	-65.5	8.9	1.3	-57.9	-13.0	44.9
2509.5	V	33.98	-63.6	8.9	1.3	-56.0	-13.0	43.0
583	H	26.05	-81.9	0.0	0.4	-82.3	-13.0	69.3
583	V	25.61	-79.2	0.0	0.4	-79.6	-13.0	66.6
Downlink, Test Frequency 881.500MHz								
1763	H	45.46	-55.9	8.0	0.9	-48.8	-13.0	35.8
1763	V	42.16	-57.9	8.0	0.9	-50.8	-13.0	37.8
2644.5	H	34.77	-64.6	8.8	1.2	-57.0	-13.0	44.0
2644.5	V	24.49	-73.5	8.8	1.2	-65.9	-13.0	52.9
646	H	23.37	-83	0.0	0.5	-83.5	-13.0	70.5
646	V	25.03	-80.3	0.0	0.5	-80.8	-13.0	67.8

Note:

- 1) Absolute Level = SG Level - Cable loss + Antenna Gain
- 2) Margin = Limit- Absolute Level

***** **END OF REPORT** *****