FCC RADIO TEST REPORT

FCC ID	**:**	**LHJ-WT50NA01**
Equipment	**:**	**WT50NA01**
Brand Name	**:**	**WT50NA01**
Model Name	**:**	**WT50NA01**
Applicant	**:**	**Continental Automotive Systems, Inc. 21440 W Lake Cook Rd.**
Manufacturer	**:**	**Continental Automotive Systems, Inc. 21440 W Lake Cook Rd.**
Standard	**:**	**47 CFR Part 2, 22(H), 24(E), 27(L)**

The product was received on Jun. 21, 2018 and testing was started from Jul. 06, 2018 and completed on Aug. 10, 2018. We, SPORTON INTERNATIONAL INC., would like to declare that the tested sample has been evaluated in accordance with the test procedures given in ANSI / TIA-603-E and has been in compliance with the applicable technical standards.

The report must not be used by the client to claim product certification, approval, or endorsement by TAF or any agency of government.

The test results in this report apply exclusively to the tested model / sample. Without written approval of SPORTON INTERNATIONAL INC. EMC & Wireless Communications Laboratory, the test report shall not be reproduced except in full.

Approved by: Jones Tsai

SPORTON INTERNATIONAL INC. EMC & Wireless Communications Laboratory
No. 52, Huaya 1st Rd., Guishan Dist., Taoyuan City, Taiwan (R.O.C.)

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History of this test report

Report No.	Version	Description	Issued Date
FG862137A	01	Initial issue of report	Aug. 10, 2018
FG862137A	02	Updated the information in section 2.3	Aug. 31, 2018

Summary of Test Result

Report Clause	Ref Std. Clause	Test Items	Result (PASS/FAIL)	Remark
3.2	§2.1046	Conducted Output Power	Pass	-
3.3	§24.232 (d)	Peak-to-Average Ratio	Pass	-
3.4	§2.1049 §22.917 (b) §24.238 (b) §27.53 (g)	Occupied Bandwidth	Pass	-
3.5	§2.1051 §22.917 (a) §24.238 (a) §27.53 (g)	Band Edge Measurement	Pass	-
3.6	§2.1051 §22.917 (a) §24.238 (a) §27.53 (g)	Conducted Emission	Pass	-
3.7	§2.1055 §22.355	Frequency Stability Temperature & Voltage	Pass	-
	§2.1055 §24.235 §27.54			-
4.4	§22.913 (a)(2)	Equivalent Radiated Power	Pass	-
	§24.232 (c)	Equivalent Isotropic Radiated Power		
	§27.50 (d)(4)	Equivalent Isotropic Radiated Power		
4.5	§2.1053 §22.917 (a) §24.238 (a) §27.53 (h)	Field Strength of Spurious Radiation	Pass	Under limit 23.78 dB at 2472.000 MHz

Reviewed by: Joseph Lin

Report Producer: Maggie Chiang

1 General Description

1.1 Product Feature of Equipment Under Test

GSM/WCDMA/LTE and GNSS

Product Specification subjective to this standard	
Antenna Type	WWAN: Fixed External Antenna GPS/Glonass/BDS/Galileo/SBAS: Fixed External Antenna

1.2 Modification of EUT

No modifications are made to the EUT during all test items.

1.3 Testing Location

Sporton Lab is accredited to ISO 17025 by Taiwan Accreditation Foundation (TAF code : 1190) and the FCC designation No. TW1190 under the FCC 2.948(e) by Mutual Recognition Agreement (MRA) in FCC Test.

Test Site	SPORTON INTERNATIONAL INC.	
Test Site Location	No.52, Huaya 1st Rd., Guishan Dist., Taoyuan City, Taiwan (R.O.C.) TEL: +886-3-327-3456 FAX: +886-3-328-4978	
Test Site No.	**Sporton Site No.**	
	TH03-HY	03CH07-HY

Note: The test site complies with ANSI C63.4 2014 requirement.

1.4 Applicable Standards

According to the specifications of the manufacturer, the EUT must comply with the requirements of the following standards:

- ANSI C63.26-2015
- ANSI / TIA-603-E
- 47 CFR Part 2, 22(H), 24(E), 27(L)
- FCC KDB 971168 D01 Power Meas. License Digital Systems v03r01
- FCC KDB 412172 D01 Determining ERP and EIRP v01r01

Remark:

1. All test items were verified and recorded according to the standards and without any deviation during the test.
2. This EUT has also been tested and complied with the requirements of FCC Part 15, Subpart B, recorded in a separate test report.

2 Test Configuration of Equipment Under Test

2.1 Test Mode

Antenna port conducted and radiated test items were performed according to KDB 971168 D01 Power Meas. License Digital Systems v03r01 with maximum output power.

For radiated measurement, pre-scanned in three orthogonal panels, X, Y, Z. The worst cases (X Plane with ant. 0 degree; X Plane with ant. 90 degree) were recorded in this report.

Radiated emissions were investigated as following frequency range:

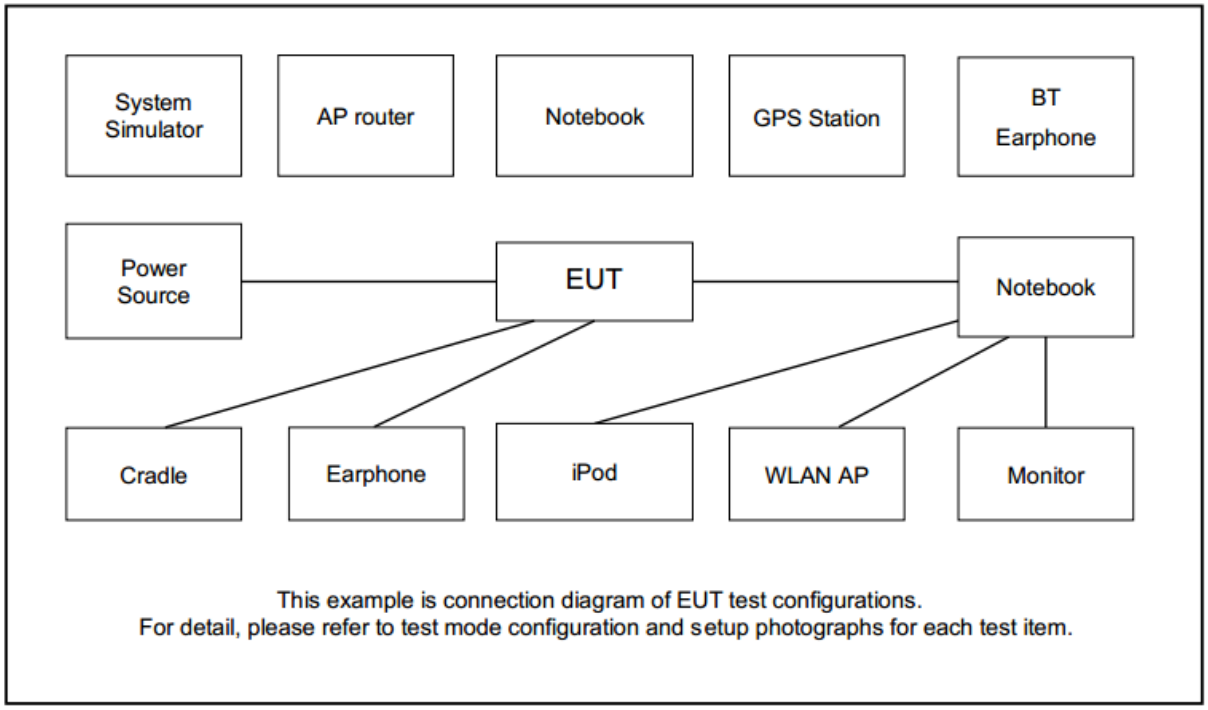
1. 30 MHz to 9000 MHz for GSM850 and WCDMA Band V.
2. 30 MHz to 18000 MHz for WCDMA Band IV.
3. 30 MHz to 19100 MHz for GSM1900 and WCDMA Band II.

All modes and data rates and positions were investigated.

Test modes are chosen to be reported as the worst case configuration below:

Test Modes		
Band	**Radiated TCs**	**Conducted TCs**
GSM 850	■ GPRS Class 8 Link ■ EDGE Class 8 Link	■ GPRS Class 8 Link ■ EDGE Class 8 Link
GSM 1900	■ GPRS Class 8 Link ■ EDGE Class 8 Link	■ GPRS Class 8 Link ■ EDGE Class 8 Link
WCDMA Band V	■ RMC 12.2Kbps Link	■ RMC 12.2Kbps Link
WCDMA Band II	■ RMC 12.2Kbps Link	■ RMC 12.2Kbps Link
WCDMA Band IV	■ RMC 12.2Kbps Link	■ RMC 12.2Kbps Link

2.2 Connection Diagram of Test System



2.3 Support Unit used in test configuration

Item	Equipment	Trade Name	Model No.	FCC ID	Data Cable	Power Cord
1.	System Simulator	R&S	CMU 200	N/A	N/A	Unshielded, 1.8 m
2.	Antenna	N/A	N/A	N/A	N/A	N/A
3.	Evaluation Board	Continental	BL28XX	N/A	N/A	N/A

2.4 Measurement Results Explanation Example

For all conducted test items:

The offset level is set in the spectrum analyzer to compensate the RF cable loss and attenuator factor between RF conducted output port and spectrum analyzer. With the offset compensation, the spectrum analyzer reading level will be exactly the RF output level.

The spectrum analyzer offset is derived from RF cable loss and attenuator factor.

Offset = RF cable loss + attenuator factor.

The following shows an offset computation example with RF cable loss 4.2 dB and a 10dB attenuator.

Example:

Offset(dB) = RF cable loss(dB) + attenuator factor(dB).

= 4.2 + 10 = 14.2 (dB)

2.5 Frequency List of Low/Middle/High Channels

Frequency List				
Band	**Channel/Frequency(MHz)**	**Lowest**	**Middle**	**Highest**
GSM850	Channel	128	189	251
	Frequency	824.2	836.4	848.8
WCDMA Band V	Channel	4132	4182	4233
	Frequency	826.4	836.4	846.6
GSM1900	Channel	512	661	810
	Frequency	1850.2	1880.0	1909.8
WCDMA Band II	Channel	9262	9400	9538
	Frequency	1852.4	1880.0	1907.6
WCDMA Band IV	Channel	1312	1413	1513
	Frequency	1712.4	1732.6	1752.6

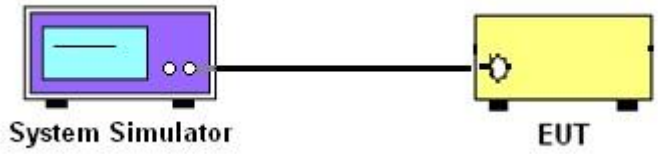
3 Conducted Test Result

3.1 Measuring Instruments

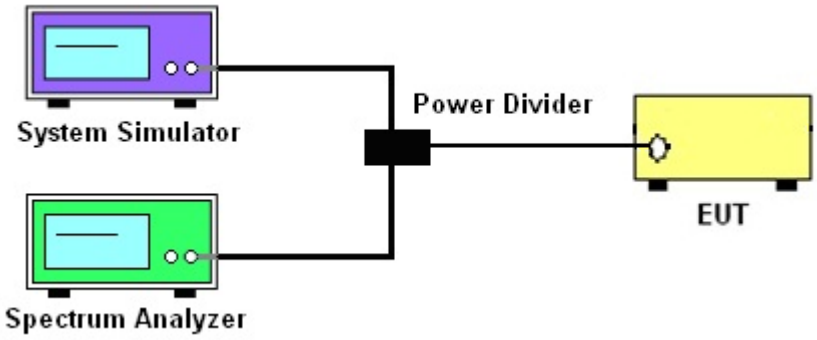
See list of measuring instruments of this test report.

3.1.1 Test Setup

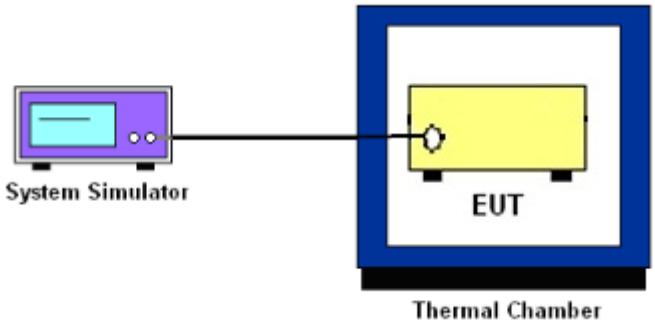
3.1.2 Conducted Output Power



3.1.3 Peak-to-Average Ratio, Occupied Bandwidth, Conducted Band-Edge and Conducted Spurious Emission



3.1.4 Frequency Stability



3.1.5 Test Result of Conducted Test

Please refer to Appendix A.

3.2 Conducted Output Power

3.2.1 Description of the Conducted Output Power

A system simulator was used to establish communication with the EUT. Its parameters were set to enforce EUT transmitting at the maximum power. The measured power in the radio frequency on the transmitter output terminals shall be reported.

3.2.2 Test Procedures

1. The transmitter output port was connected to the system simulator.
2. Set EUT at maximum power through system simulator.
3. Select lowest, middle, and highest channels for each band and different modulation.
4. Measure the maximum burst average power for GSM and maximum average power for other modulation signal.

3.3 Peak-to-Average Ratio

3.3.1 Description of the PAR Measurement

The peak-to-average ratio (PAR) of the transmission may not exceed 13 dB.

3.3.2 Test Procedures

The testing follows FCC KDB 971168 D01 v03r01 Section 5.7.1

1. The EUT was connected to spectrum analyzer and system simulator via a power divider.
2. Set EUT to transmit at maximum output power.
3. When the duty cycle is less than 98%, then signal gating will be implemented on the spectrum analyzer by triggering from the system simulator.
4. Set the CCDF (Complementary Cumulative Distribution Function) option of the spectrum analyzer.
5. Record the maximum PAPR level associated with a probability of 0.1%.

3.4 99% Occupied Bandwidth and 26dB Bandwidth Measurement

3.4.1 Description of 99% Occupied Bandwidth and 26dB Bandwidth Measurement

The occupied bandwidth is the width of a frequency band such that, below the lower and above the upper frequency limits, the mean powers emitted are each equal to a specified percentage 0.5% of the total mean transmitted power.

The 26 dB emission bandwidth is defined as the frequency range between two points, one above and one below the carrier frequency, at which the spectral density of the emission is attenuated 26 dB below the maximum in-band spectral density of the modulated signal. Spectral density (power per unit bandwidth) is to be measured with a detector of resolution bandwidth equal to approximately 1.0% of the emission bandwidth.

3.4.2 Test Procedures

The testing follows FCC KDB 971168 D01 v03r01 Section 4.2

1. The EUT was connected to spectrum analyzer and system simulator via a power divider.
2. The spectrum analyzer center frequency is set to the nominal EUT channel center frequency. The span range for the spectrum analyzer shall be between two and five times the anticipated OBW.
3. The nominal resolution bandwidth (RBW) shall be in the range of 1 to 5 % of the anticipated OBW, and the VBW shall be at least 3 times the RBW.
4. Set the detection mode to peak, and the trace mode to max hold.
5. Determine the reference value: Set the EUT to transmit a modulated signal. Allow the trace to stabilize. Set the spectrum analyzer marker to the highest level of the displayed trace. (this is the reference value)
6. Determine the “-26 dB down amplitude” as equal to (Reference Value – X).
7. Place two markers, one at the lowest and the other at the highest frequency of the envelope of the spectral display such that each marker is at or slightly below the “–X dB down amplitude” determined in step 6. If a marker is below this “-X dB down amplitude” value it shall be placed as close as possible to this value. The OBW is the positive frequency difference between the two markers.
8. Use the 99 % power bandwidth function of the spectrum analyzer and report the measured bandwidth.

3.5 Conducted Band Edge

3.5.1 Description of Conducted Band Edge Measurement

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

3.5.2 Test Procedures

The testing follows FCC KDB 971168 D01 v03r01 Section 6.0.

1. The EUT was connected to the spectrum analyzer and system simulator via a power divider.
2. The RF output of EUT was connected to the spectrum analyzer by an RF cable and attenuator. The path loss was compensated to the results for each measurement.
3. The band edges of low and high channels for the highest RF powers were measured.
4. The RF fundamental frequency should be excluded against the limit line in the operating frequency band.
5. The limit line is derived from 43 + 10log(P) dB below the transmitter power P(Watts)

3.6 Conducted Spurious Emission

3.6.1 Description of Conducted Spurious Emission Measurement

The power of any emission outside of the authorized operating frequency ranges must be lower than 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 10^{th} harmonic.

3.6.2 Test Procedures

The testing follows FCC KDB 971168 D01 v03r01 Section 6.0.

1. The EUT was connected to the spectrum analyzer and system simulator via a power divider.
2. The RF output of EUT was connected to the spectrum analyzer by an RF cable and attenuator. The path loss was compensated to the results for each measurement.
3. The middle channel for the highest RF power within the transmitting frequency was measured.
4. The conducted spurious emission for the whole frequency range was taken.
5. The RF fundamental frequency should be excluded against the limit line in the operating frequency band.
6. The limit line is derived from 43 + 10log(P) dB below the transmitter power P(Watts)

3.7 Frequency Stability

3.7.1 Description of Frequency Stability Measurement

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 ±0.00025% (±2.5ppm) of the center frequency.

24.235 & 27.54

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

3.7.2 Test Procedures for Temperature Variation

The testing follows FCC KDB 971168 D01 v03r01 Section 9.0.

1. The EUT was set up in the thermal chamber and connected with the system simulator.
2. With power OFF, the temperature was decreased to -30°C and the EUT was stabilized before testing. 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 steps 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.

3.7.3 Test Procedures for Voltage Variation

The testing follows FCC KDB 971168 D01 v03r01 Section 9.0.

1. The EUT was placed in a temperature chamber at 20±5° C and connected with the system simulator.
2. The power supply voltage to the EUT was varied from 85% to 115% of the nominal value measured at the input to the EUT.
3. The variation in frequency was measured for the worst case.

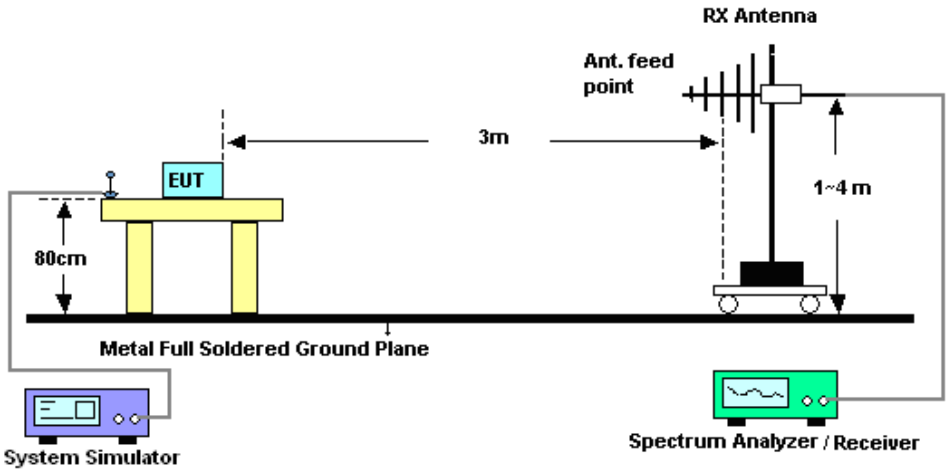
4 Radiated Test Items

4.1 Measuring Instruments

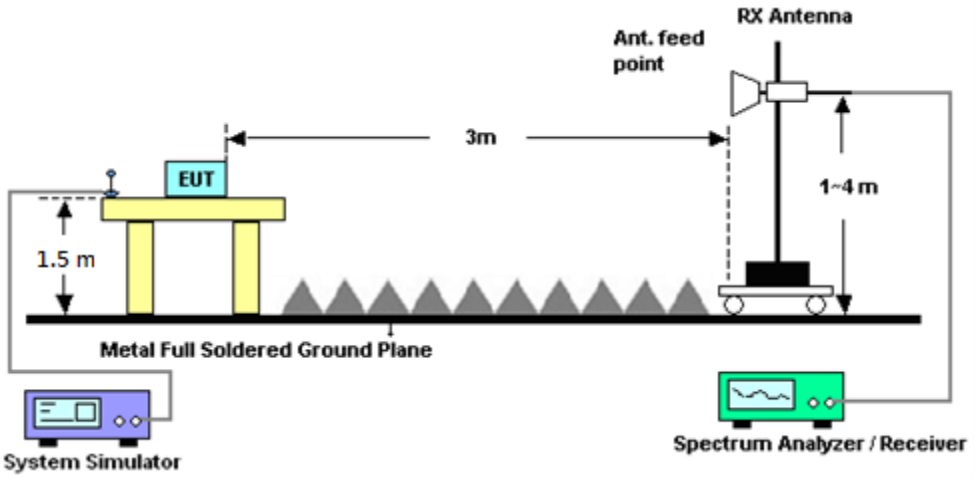
See list of measuring instruments of this test report.

4.2 Test Setup

For radiated test from 30MHz to 1GHz



For radiated test above 1GHz



4.3 Test Result of Radiated Test

Please refer to Appendix B.

4.4 Effective Radiated Power and Effective Isotropic Radiated Power Measurement

4.4.1 Description of the ERP/EIRP Measurement

The substitution method, in ANSI / TIA-603-E, was used for ERP/EIRP measurement, and the spectrum analyzer configuration follows KDB 971168 D01 Power Meas. License Digital Systems v03r01. The ERP of mobile transmitters must not exceed 7 Watts (Cellular Band) and the EIRP of mobile transmitters are limited to 2 Watts (PCS Band) and 1 Watts (AWS Band).

4.4.2 Test Procedures

1. The testing follows FCC KDB 971168 D01 v03r01 Section 5.2.1. (for CDMA/WCDMA), Section 5.2.2.2 (for GSM/GPRS/EDGE) and ANSI / TIA-603-E Section 2.2.17.
2. The EUT was placed on a non-conductive rotating platform (0.8 meters for frequency below 1GHz and 1.5 meter for frequency above 1GHz) in a semi-anechoic chamber. The radiated emission at the fundamental frequency was measured at 3 m with a test antenna and a spectrum analyzer with RMS detector per section 5. of KDB 971168 D01.
3. During the measurement, the system simulator parameters were set to force the EUT transmitting at maximum output power. The maximum emission was recorded from analyzer power level (LVL) from the 360 degrees rotation of the turntable and the test antenna raised and lowered over a range from 1 to 4 meters in both horizontally and vertically polarized orientations.
4. Effective Isotropic Radiated Power (EIRP) was measured by substitution method according to TIA/EIA-603-D. The EUT was replaced by the substitution antenna at same location, and then a known power from S.G. was applied into the dipole antenna through a Tx cable, and then recorded the maximum Analyzer reading through raised and lowered the test antenna. The correction factor (in dB) = S.G. - Tx Cable loss + Substitution antenna gain - Analyzer reading. Then the EUT's EIRP was calculated with the correction factor, EIRP = LVL + Correction factor and ERP = EIRP - 2.15. Take the record of the output power at substitution antenna.

	GSM/GPRS/EDGE	WCDMA/HSPA
SPAN	500kHz	10MHz
RBW	10kHz	100kHz
VBW	30kHz	300kHz
Detector	RMS	RMS
Trace	Average	Average
Average Type	Power	Power
Sweep Count	100	100

4.5 Field Strength of Spurious Radiation Measurement

4.5.1 Description of Field Strength of Spurious Radiated Measurement

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

The testing follows FCC KDB 971168 D01 v03r01 Section 5.8 and ANSI / TIA-603-E Section 2.2.12.

1. The EUT was placed on a rotatable wooden table 0.8 meters for frequency below 1GHz and 1.5 meter for frequency above 1GHz above the ground.
2. The EUT was set 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 spurious emission.
4. The height of the receiving antenna is varied between one meter and four meters to search for the maximum spurious emission for both horizontal and vertical polarizations.
5. Make the measurement with the spectrum analyzer's RBW = 1MHz, VBW = 3MHz, taking record of maximum spurious emission.
6. A horn antenna was substituted in place of the EUT and was driven by a signal generator.
7. Tune the output power of signal generator to the same emission level with EUT maximum spurious emission.
8. Taking the record of output power at antenna port.
9. Repeat step 7 to step 8 for another polarization.
10. EIRP (dBm) = S.G. Power – Tx Cable Loss + Tx Antenna Gain
11. ERP (dBm) = EIRP - 2.15
12. The RF fundamental frequency should be excluded against the limit line in the operating frequency band.
13. The limit line is derived from 43 + 10log(P) dB below the transmitter power P(Watts)

5 List of Measuring Equipment

Instrument	Manufacturer	Model No.	Serial No.	Characteristics	Calibration Date	Test Date	Due Date	Remark
Spectrum Analyzer	Rohde & Schwarz	FSP30	101329	9kHz~30GHz	Jun. 25, 2018	Jul. 06, 2018~ Aug. 10, 2018	Jun. 24, 2019	Conducted (TH03-HY)
Temperature Chamber	ESPEC	SU-641	92013721	-30℃ ~70℃	Dec. 06, 2017	Jul. 06, 2018~ Aug. 10, 2018	Dec. 05, 2019	Conducted (TH03-HY)
Programmable Power Supply	GW Instek	PSS-2005	EL883644	Voltage:0~20V; Current:0~5A	Dec. 06, 2017	Jul. 06, 2018~ Aug. 10, 2018	Dec. 05, 2019	Conducted (TH03-HY)
Base Station (Measure)	Rohde & Schwarz	CMU200	117995	GSM / GPRS / WCDMA / CDMA	Aug. 20, 2017	Jul. 06, 2018~ Aug. 10, 2018	Aug. 19, 2018	Conducted (TH03-HY)
Bilog Antenna	TESEQ	CBL 6111D&00800 N1D01N-06	35419&03	30MHz to 1GHz	Dec. 18, 2017	Jul. 12, 2018~ Jul. 14, 2018	Dec. 17, 2018	Radiation (03CH07-HY)
Double Ridge Horn Antenna	ESCO	3117	00075962	1GHz ~ 18GHz	Aug. 23, 2017	Jul. 12, 2018~ Jul. 14, 2018	Aug. 22, 2018	Radiation (03CH07-HY)
Preamplifier	COM-POWER	PA-103A	161241	10MHz-1GHz	May 21, 2018	Jul. 12, 2018~ Jul. 14, 2018	May 20, 2019	Radiation (03CH07-HY)
Preamplifier	Agilent	8449B	3008A02362	1GHz~ 26.5GHz	Oct. 30, 2017	Jul. 12, 2018~ Jul. 14, 2018	Oct. 29, 2018	Radiation (03CH07-HY)
Spectrum Analyzer	Agilent	N9010A	MY53470118	10Hz~44GHz	Apr. 17, 2018	Jul. 12, 2018~ Jul. 14, 2018	Apr. 16, 2019	Radiation (03CH07-HY)
Filter	Microwave	H1G013G1	SN477215	1.0G High Pass	Dec. 07, 2017	Jul. 12, 2018~ Jul. 14, 2018	Dec. 06, 2018	Radiation (03CH07-HY)
Filter	Wainwright	WLKS1200-8SS	SN3	1.2G Low Pass	Nov. 21, 2017	Jul. 12, 2018~ Jul. 14, 2018	Nov. 20, 2018	Radiation (03CH07-HY)
RF Cable	HUBER + SUHNER	SUCOFLEX 104	MY28655/4, MY24971/4, MY15682/4	30MHz~1GHz	Feb. 27, 2018	Jul. 12, 2018~ Jul. 14, 2018	Feb. 26, 2019	Radiation (03CH07-HY)
RF Cable	HUBER + SUHNER	SUCOFLEX 104	MY28655/4, MY24971/4, MY15682/4	1GHz~18GHz	Feb. 27, 2018	Jul. 12, 2018~ Jul. 14, 2018	Feb. 26, 2019	Radiation (03CH07-HY)
Antenna Mast	Max-Full	MFA520BS	N/A	1m~4m	N/A	Jul. 12, 2018~ Jul. 14, 2018	N/A	Radiation (03CH07-HY)
Turn Table	ChainTek	Chaintek 3000	N/A	0~360 Degree	N/A	Jul. 12, 2018~ Jul. 14, 2018	N/A	Radiation (03CH07-HY)
SHF-EHF Horn Antenna	SCHWARZBECK	BBHA 9170	BBHA9170251	18GHz- 40GHz	Nov. 10, 2017	Jul. 12, 2018~ Jul. 14, 2018	Nov. 09, 2018	Radiation (03CH07-HY)
Filter	Microwave	H3G018G1	SN477220	3.0G High Pass	Aug. 24, 2017	Jul. 12, 2018~ Jul. 14, 2018	Aug. 23, 2018	Radiation (03CH07-HY)
RF Cable	HUBER + SUHNER	SUCOFLEX 102	MY2858/2	18GHz~40GHz	Feb. 27, 2018	Jul. 12, 2018~ Jul. 14, 2018	Feb. 26, 2019	Radiation (03CH07-HY)
EMI Test Receiver	Agilent	N9038A(MXE)	MY53290053	20Hz to 26.5GHz	Jan. 16, 2018	Jul. 12, 2018~ Jul. 14, 2018	Jan. 15, 2019	Radiation (03CH07-HY)
Software	Audix	E3 6.2009-8-24	80504004656H	N/A	N/A	Jul. 12, 2018~ Jul. 14, 2018	N/A	Radiation (03CH07-HY)
Signal Generator	Anritsu	MG3694C	163401	0.1Hz~40GHz	Jan. 15, 2018	Jul. 12, 2018~ Jul. 14, 2018	Jan. 14, 2019	Radiation (03CH07-HY)
Notch Filter	Wainwright	WRCG1710/1755-1690/1755-45/7SS	SN2	AWS Band	Nov. 08, 2017	Jul. 12, 2018~ Jul. 14, 2018	Nov. 07, 2018	Radiation (03CH07-HY)
Notch Filter	Wainwright	WRCG824/849-40/8SS	SN35	CDMA 850	Nov. 08, 2017	Jul. 12, 2018~ Jul. 14, 2018	Nov. 07, 2018	Radiation (03CH07-HY)
Notch Filter	Wainwright	WRCT1850/1910-40/8SS	SN21	1900	Nov. 08, 2017	Jul. 12, 2018~ Jul. 14, 2018	Nov. 07, 2018	Radiation (03CH07-HY)
Notch Filter	Wainwright	WRCT800/960-0.2/40-8SSK	SN22	LTE Band 26	Nov. 03, 2017	Jul. 12, 2018~ Jul. 14, 2018	Nov. 02, 2018	Radiation (03CH07-HY)
Horn Antenna	SCHWARZBECK	BBHA 9120 D	BBHA 9120 D 1212	1GHz ~ 18GHz	May 10, 2018	Jul. 12, 2018~ Jul. 14, 2018	May 09, 2019	Radiation (03CH07-HY)

6 Uncertainty of Evaluation

Uncertainty of Radiated Emission Measurement (30 MHz ~ 1000 MHz)

Measuring Uncertainty for a Level of Confidence of 95% (U = 2Uc(y))	**3.05**

Uncertainty of Radiated Emission Measurement (1 GHz ~ 18 GHz)

Measuring Uncertainty for a Level of Confidence of 95% (U = 2Uc(y))	**3.44**

Uncertainty of Radiated Emission Measurement (18 GHz ~ 40 GHz)

Measuring Uncertainty for a Level of Confidence of 95% (U = 2Uc(y))	**3.95**

Appendix A. Test Results of Conducted Test

Conducted Output Power(Average power)

Conducted Power (*Unit: dBm)						
Band	GSM850			GSM1900		
Channel	128	189	251	512	661	810
Frequency	824.2	836.4	848.8	1850.2	1880	1909.8
GPRS class 8	33.14	33.13	**33.15**	30.27	**30.52**	30.32
GPRS class 10	33.02	33.06	33.08	30.07	30.37	30.24
GPRS class 11	32.80	32.76	32.76	29.89	30.22	30.11
GPRS class 12	32.60	32.57	32.58	29.69	30.07	30.03
EGPRS class 8	**26.75**	26.54	26.67	25.72	26.21	**26.51**
EGPRS class 10	26.57	26.37	26.52	25.51	26.02	26.33
EGPRS class 11	26.38	26.15	26.25	25.34	25.83	26.08
EGPRS class 12	26.14	25.93	26.06	25.10	25.66	25.90

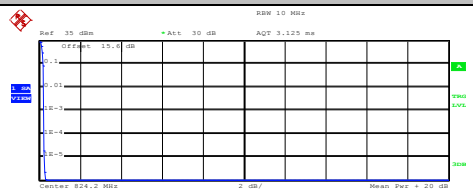
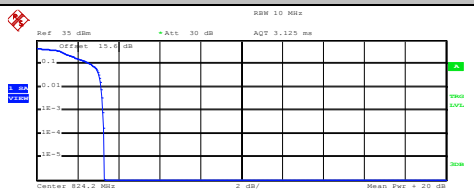
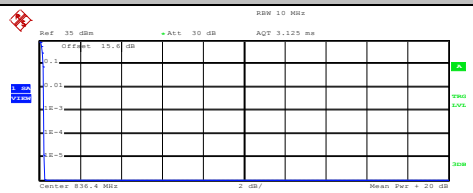
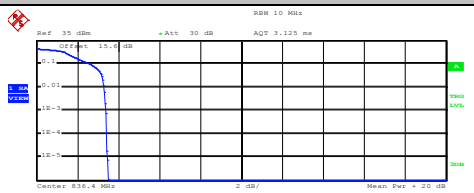
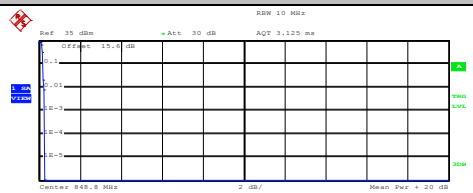
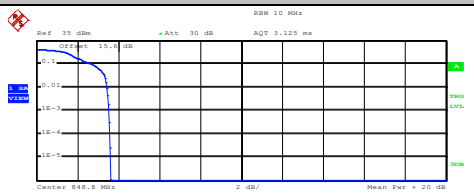
Conducted Power (*Unit: dBm)						
Band	WCDMA Band V			WCDMA Band II		
Channel	4132	4182	4233	9262	9400	9538
Frequency	826.4	836.4	846.6	1852.4	1880	1907.6
RMC 12.2K	**24.11**	24.01	23.78	24.08	24.15	**24.18**
HSDPA Subtest-1	23.09	22.99	23.04	22.85	23.24	23.09
HSDPA Subtest-2	23.06	23.05	22.95	22.81	23.18	23.04
HSDPA Subtest-3	22.55	22.42	22.46	22.30	22.78	22.53
HSDPA Subtest-4	22.61	22.60	22.51	22.29	22.63	22.52
HSUPA Subtest-1	23.18	23.02	23.04	22.85	23.22	23.02
HSUPA Subtest-2	21.06	20.90	20.94	21.02	21.13	21.10
HSUPA Subtest-3	21.99	21.89	22.00	21.79	22.32	22.00
HSUPA Subtest-4	21.10	21.01	21.03	20.87	21.24	21.16
HSUPA Subtest-5	23.04	22.90	22.86	22.70	22.98	22.85

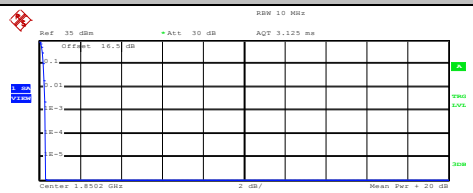
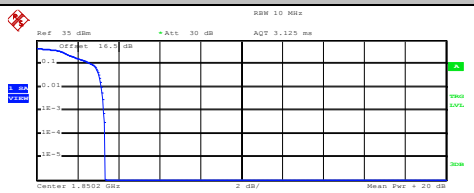
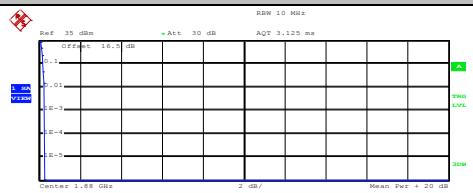
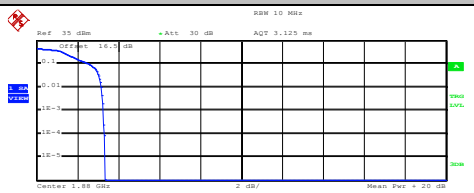
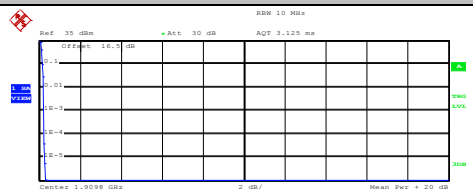
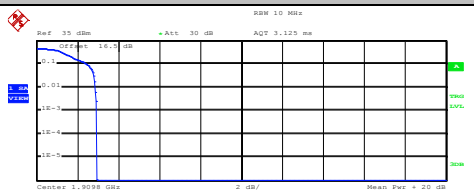
Conducted Power (*Unit: dBm)			
Band	**WCDMA Band IV**		
Channel	**1312**	**1413**	**1513**
Frequency	**1712.4**	**1732.6**	**1752.6**
RMC 12.2K	24.02	**24.17**	24.15
HSDPA Subtest-1	22.96	23.24	23.21
HSDPA Subtest-2	23.00	23.22	23.12
HSDPA Subtest-3	22.40	22.58	22.64
HSDPA Subtest-4	22.47	22.65	22.54
HSUPA Subtest-1	23.08	23.22	23.10
HSUPA Subtest-2	20.99	21.20	20.92
HSUPA Subtest-3	22.09	22.27	22.09
HSUPA Subtest-4	21.09	21.30	20.95
HSUPA Subtest-5	22.90	22.98	23.28

A2. GSM

Peak-to-Average Ratio

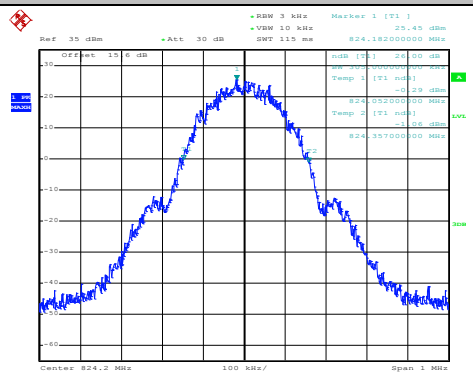
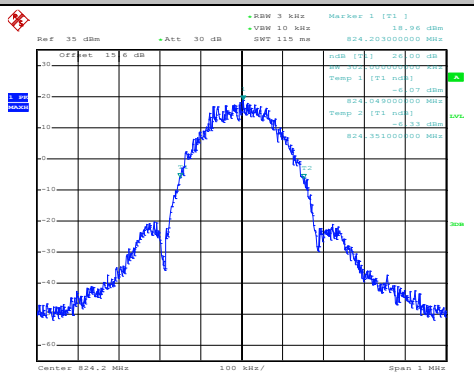
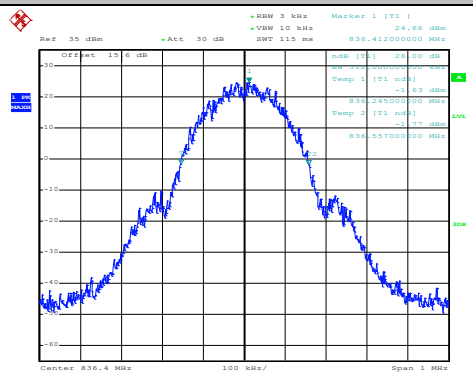
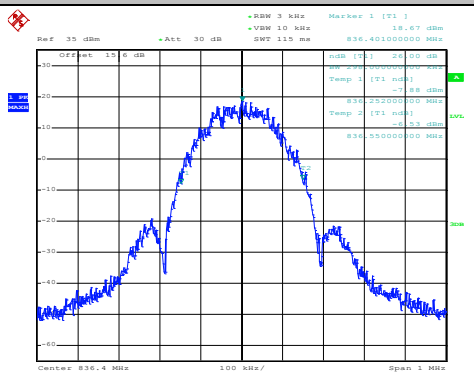
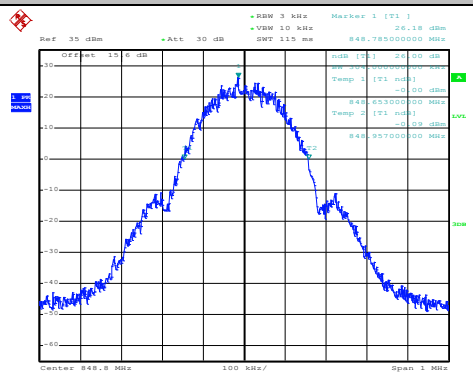
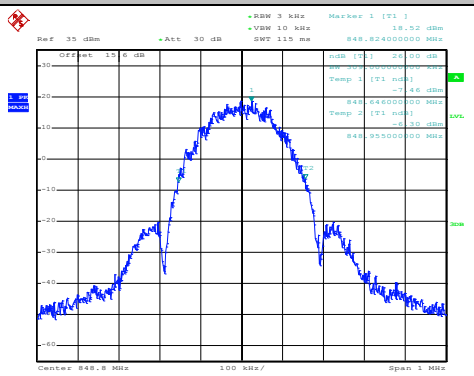
Mode	GSM850		Limit: 13dB
Mod.	GPRS class 8	EDGE class 8	Result
Lowest CH	0.24	3.24	PASS
Middle CH	0.24	3.40	
Highest CH	0.28	3.56	
Mode	GSM1900		Limit: 13dB
Mod.	GPRS class 8	EDGE class 8	Result
Lowest CH	0.32	3.28	PASS
Middle CH	0.28	3.28	
Highest CH	0.24	2.96	

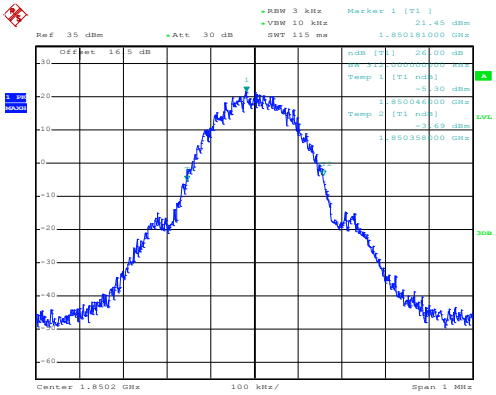
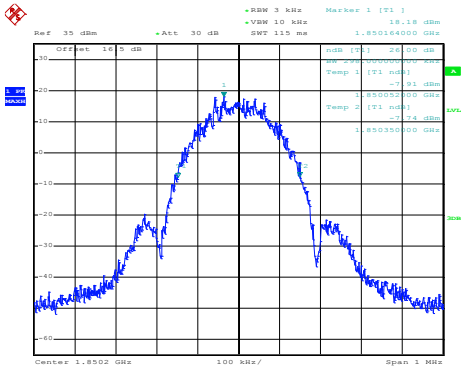
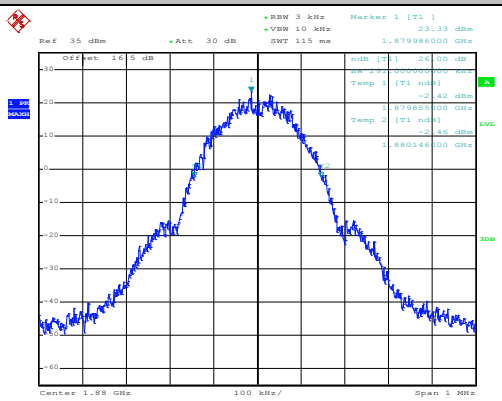
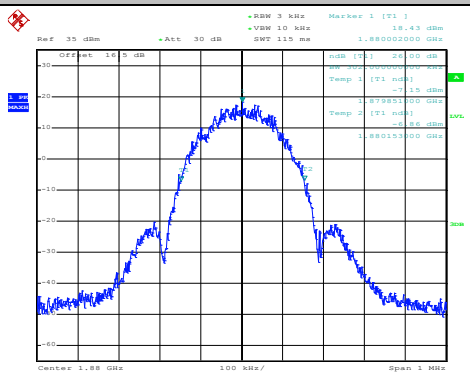
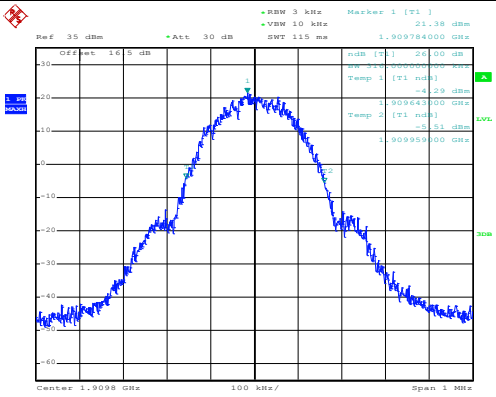
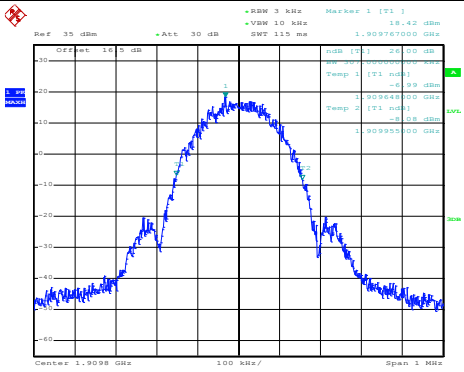
GSM850 (GPRS class 8)	GSM850 (EDGE class 8)
Lowest Channel	**Lowest Channel**
	
Complementary Cumulative Distribution Function (100000 samples) Trace 1 Mean 32.71 dBm Peak 33.00 dBm Crest 0.28 dB 10 % 0.20 dB 1 % 0.24 dB .1 % 0.24 dB .01 % 0.24 dB	Complementary Cumulative Distribution Function (100000 samples) Trace 1 Mean 26.33 dBm Peak 29.61 dBm Crest 3.28 dB 10 % 2.64 dB 1 % 3.16 dB .1 % 3.24 dB .01 % 3.28 dB
Date: 6.JUL.2018 11:03:44	Date: 6.JUL.2018 11:36:40
Middle Channel	**Middle Channel**
	
Complementary Cumulative Distribution Function (100000 samples) Trace 1 Mean 32.64 dBm Peak 32.93 dBm Crest 0.28 dB 10 % 0.20 dB 1 % 0.24 dB .1 % 0.24 dB .01 % 0.24 dB	Complementary Cumulative Distribution Function (100000 samples) Trace 1 Mean 26.04 dBm Peak 29.54 dBm Crest 3.50 dB 10 % 2.64 dB 1 % 3.28 dB .1 % 3.40 dB .01 % 3.44 dB
Date: 6.JUL.2018 11:04:04	Date: 6.JUL.2018 11:36:59
Highest Channel	**Highest Channel**
	
Complementary Cumulative Distribution Function (100000 samples) Trace 1 Mean 32.66 dBm Peak 32.93 dBm Crest 0.26 dB 10 % 0.20 dB 1 % 0.24 dB .1 % 0.28 dB .01 % 0.28 dB	Complementary Cumulative Distribution Function (100000 samples) Trace 1 Mean 26.05 dBm Peak 29.68 dBm Crest 3.63 dB 10 % 2.72 dB 1 % 3.44 dB .1 % 3.56 dB .01 % 3.60 dB
Date: 6.JUL.2018 11:04:22	Date: 6.JUL.2018 11:37:17

GSM1900 (GPRS class 8)	GSM1900 (EDGE class 8)
Lowest Channel	**Lowest Channel**
	
Complementary Cumulative Distribution Function (100000 samples) Trace 1 Mean 29.32 dBm Peak 29.61 dBm Crest 0.29 dB 10 % 0.20 dB 1 % 0.28 dB .1 % 0.32 dB .01 % 0.32 dB	Complementary Cumulative Distribution Function (100000 samples) Trace 1 Mean 25.07 dBm Peak 28.41 dBm Crest 3.34 dB 10 % 2.68 dB 1 % 3.16 dB .1 % 3.28 dB .01 % 3.36 dB
Date: 6.JUL.2018 10:52:07	Date: 6.JUL.2018 11:17:07
Middle Channel	**Middle Channel**
	
Complementary Cumulative Distribution Function (100000 samples) Trace 1 Mean 29.49 dBm Peak 29.75 dBm Crest 0.26 dB 10 % 0.20 dB 1 % 0.24 dB .1 % 0.28 dB .01 % 0.28 dB	Complementary Cumulative Distribution Function (100000 samples) Trace 1 Mean 25.43 dBm Peak 28.76 dBm Crest 3.33 dB 10 % 2.60 dB 1 % 3.16 dB .1 % 3.28 dB .01 % 3.32 dB
Date: 6.JUL.2018 10:52:25	Date: 6.JUL.2018 11:17:28
Highest Channel	**Highest Channel**
	
Complementary Cumulative Distribution Function (100000 samples) Trace 1 Mean 29.32 dBm Peak 29.61 dBm Crest 0.29 dB 10 % 0.16 dB 1 % 0.24 dB .1 % 0.24 dB .01 % 0.24 dB	Complementary Cumulative Distribution Function (100000 samples) Trace 1 Mean 25.96 dBm Peak 28.90 dBm Crest 2.94 dB 10 % 2.44 dB 1 % 2.88 dB .1 % 2.96 dB .01 % 2.96 dB
Date: 6.JUL.2018 10:52:41	Date: 6.JUL.2018 11:17:57

26dB Bandwidth

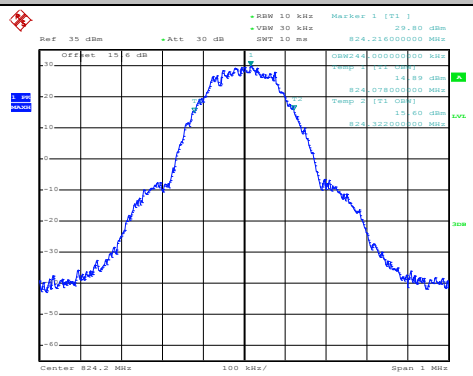
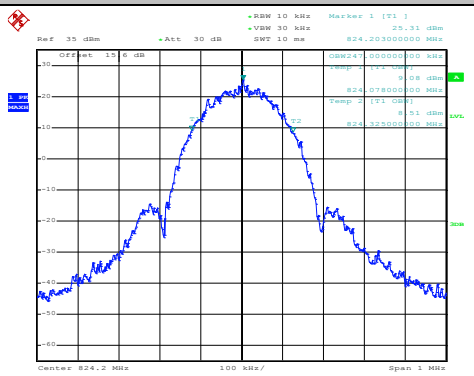
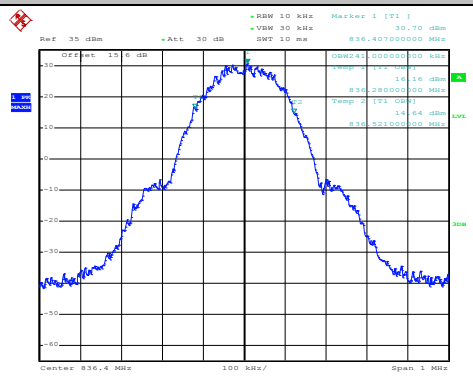
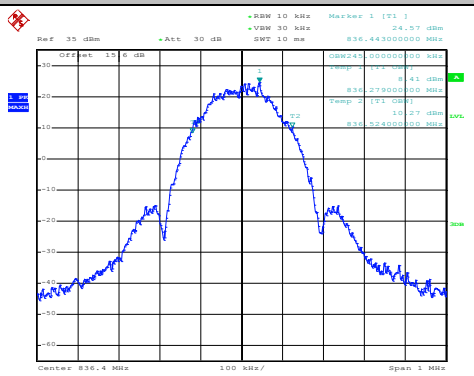
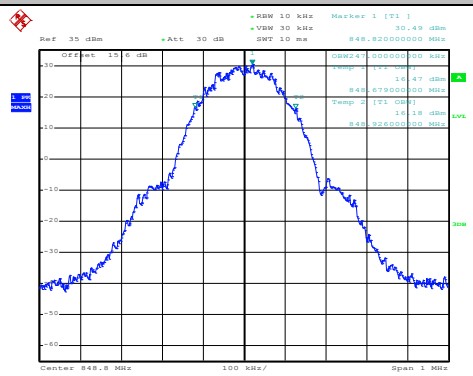
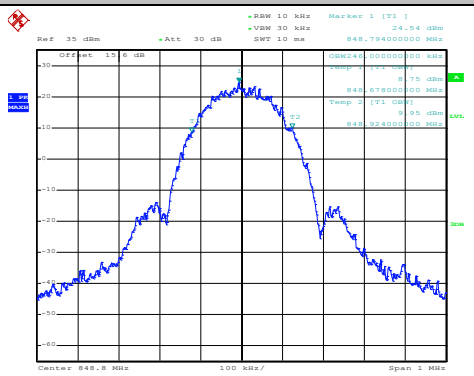
Mode	GSM850	
Mod.	GPRS class 8	EDGE class 8
Lowest CH	0.305	0.302
Middle CH	0.312	0.298
Highest CH	0.304	0.309
Mode	GSM1900	
Mod.	GPRS class 8	EDGE class 8
Lowest CH	0.312	0.298
Middle CH	0.291	0.302
Highest CH	0.316	0.307

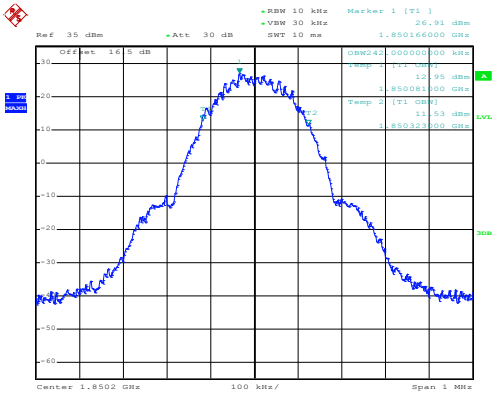
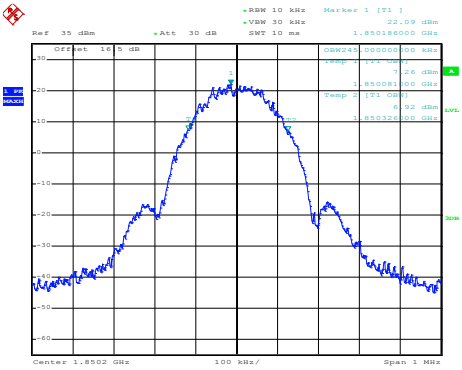
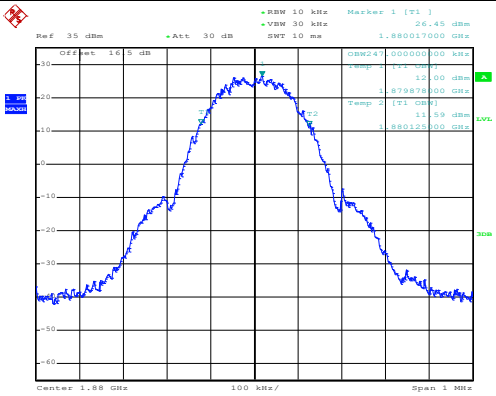
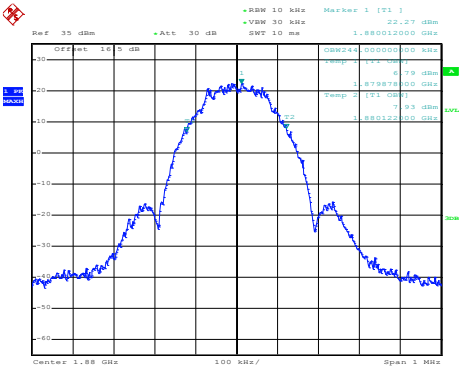
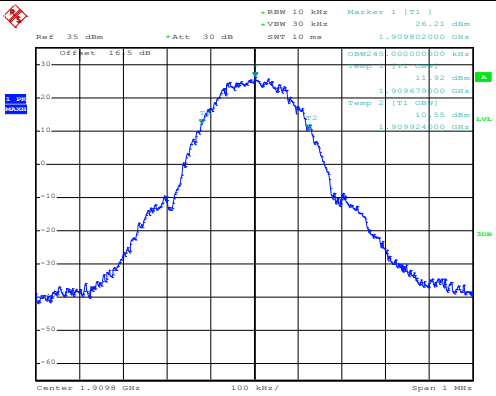
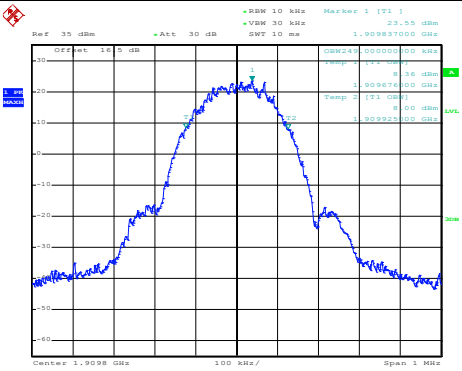
GSM850 (GPRS class 8)	GSM850 (EDGE class 8)
Lowest Channel	**Lowest Channel**
	
Date: 6.JUL.2018 10:54:17	Date: 6.JUL.2018 11:26:18
Middle Channel	**Middle Channel**
	
Date: 6.JUL.2018 10:54:55	Date: 6.JUL.2018 11:27:13
Highest Channel	**Highest Channel**
	
Date: 6.JUL.2018 10:55:29	Date: 6.JUL.2018 11:27:46

GSM1900 (GPRS class 8)	GSM1900 (EDGE class 8)
Lowest Channel	**Lowest Channel**
	
Date: 6.JUL.2018 10:42:14	Date: 6.JUL.2018 11:07:27
Middle Channel	**Middle Channel**
	
Date: 6.JUL.2018 10:42:48	Date: 6.JUL.2018 11:08:04
Highest Channel	**Highest Channel**
	
Date: 6.JUL.2018 10:43:21	Date: 6.JUL.2018 11:08:38

Occupied Bandwidth

Mode	GSM850	
Mod.	GPRS class 8	EDGE class 8
Lowest CH	0.244	0.247
Middle CH	0.241	0.245
Highest CH	0.247	0.246
Mode	GSM1900	
Mod.	GPRS class 8	EDGE class 8
Lowest CH	0.242	0.245
Middle CH	0.247	0.244
Highest CH	0.245	0.249

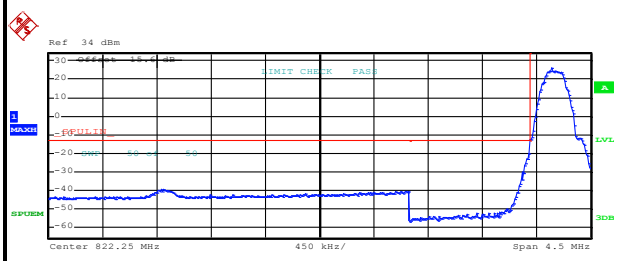
GSM850 (GPRS class 8)	GSM850 (EDGE class 8)
Lowest Channel	**Lowest Channel**
	
Date: 6.JUL.2018 10:56:09	Date: 6.JUL.2018 11:28:32
Middle Channel	**Middle Channel**
	
Date: 6.JUL.2018 10:56:43	Date: 6.JUL.2018 11:29:06
Highest Channel	**Highest Channel**
	
Date: 6.JUL.2018 10:57:17	Date: 6.JUL.2018 11:29:41

GSM1900 (GPRS class 8)	GSM1900 (EDGE class 8)
Lowest Channel	**Lowest Channel**
	
Date: 6.JUL.2018 10:44:02	Date: 6.JUL.2018 11:09:24
Middle Channel	**Middle Channel**
	
Date: 6.JUL.2018 10:44:57	Date: 6.JUL.2018 11:10:02
Highest Channel	**Highest Channel**
	
Date: 6.JUL.2018 10:45:40	Date: 6.JUL.2018 11:10:37

Conducted Band Edge

GSM850 (GPRS class 8)

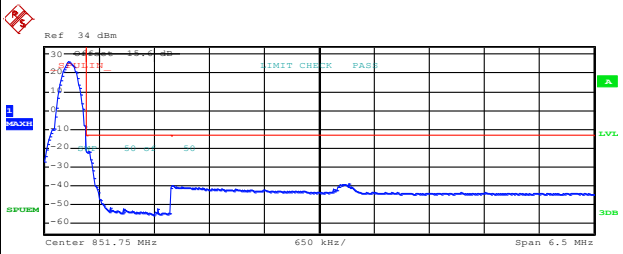
Lowest Band Edge



Start [Hz]	Stop [Hz]	RBW [Hz]	Freq [Hz]	PwrAbs [dBm]	ΔLimit [dB]
820.000 M	823.000 M	100.00 k	820.954000 M	-39.54	-26.54
823.000 M	824.000 M	3.00 k	823.984000 M	-20.83	-7.83
824.000 M	824.500 M	10.00 k	824.173000 M	25.87	-9.13

Date: 6.JUL.2018 10:59:03

Highest Band Edge

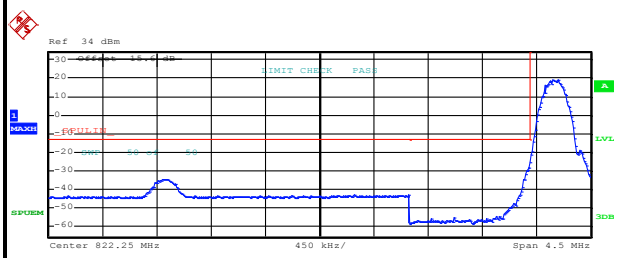


Start [Hz]	Stop [Hz]	RBW [Hz]	Freq [Hz]	PwrAbs [dBm]	ΔLimit [dB]
848.500 M	849.000 M	10.00 k	848.784500 M	26.25	-8.75
849.000 M	850.000 M	3.00 k	849.024000 M	-21.21	-8.21
850.000 M	855.000 M	100.00 k	852.095000 M	-39.04	-26.04

Date: 6.JUL.2018 11:00:36

GSM850 (EDGE class 8)

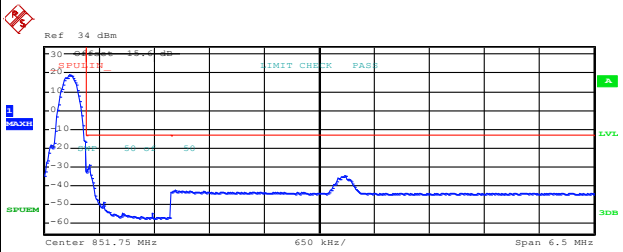
Lowest Band Edge



Start [Hz]	Stop [Hz]	RBW [Hz]	Freq [Hz]	PwrAbs [dBm]	ΔLimit [dB]
820.000 M	823.000 M	100.00 k	820.969000 M	-34.50	-21.50
823.000 M	824.000 M	3.00 k	823.992000 M	-28.26	-15.26
824.000 M	824.500 M	10.00 k	824.230000 M	19.28	-15.72

Date: 6.JUL.2018 11:31:51

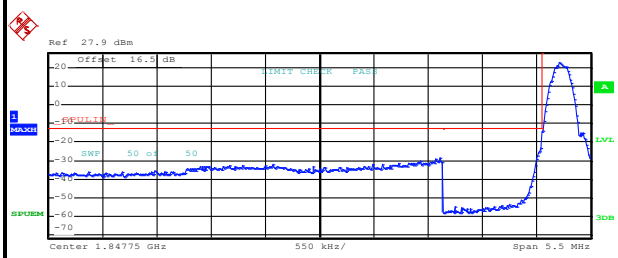
Highest Band Edge



Start [Hz]	Stop [Hz]	RBW [Hz]	Freq [Hz]	PwrAbs [dBm]	ΔLimit [dB]
848.500 M	849.000 M	10.00 k	848.801000 M	19.32	-15.68
849.000 M	850.000 M	3.00 k	849.032000 M	-28.79	-15.79
850.000 M	855.000 M	100.00 k	852.045000 M	-34.59	-21.59

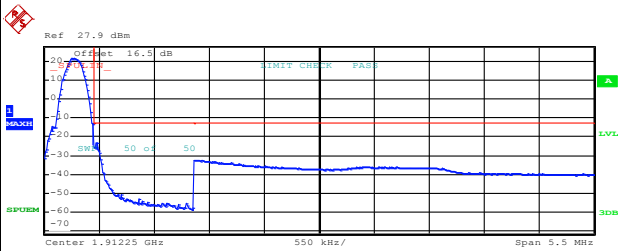
Date: 6.JUL.2018 11:33:26

GSM1900 (GPRS class 8)	
Lowest Band Edge	**Highest Band Edge**



Start [Hz]	Stop [Hz]	RBW [Hz]	Freq [Hz]	PwrAbs [dBm]	ΔLimit [dB]
1.845 G	1.849 G	1.00 M	1.848964 G	-28.74	-15.74
1.849 G	1.850 G	3.00 k	1.849988 G	-23.14	-10.14
1.850 G	1.851 G	10.00 k	1.850178 G	22.96	-12.04

Date: 6.JUL.2018 10:47:16

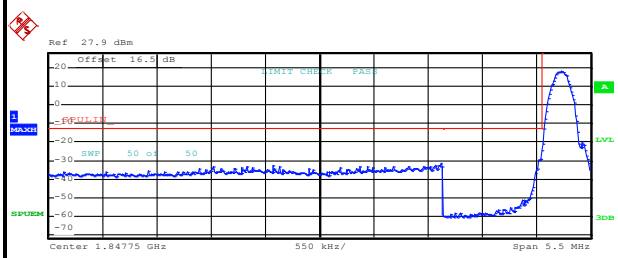


Start [Hz]	Stop [Hz]	RBW [Hz]	Freq [Hz]	PwrAbs [dBm]	ΔLimit [dB]
1.910 G	1.910 G	10.00 k	1.909778 G	21.89	-13.11
1.910 G	1.911 G	3.00 k	1.910012 G	-23.11	-10.11
1.911 G	1.915 G	1.00 M	1.911004 G	-32.46	-19.46

Date: 6.JUL.2018 10:48:49

GSM1900 (EDGE class 8)

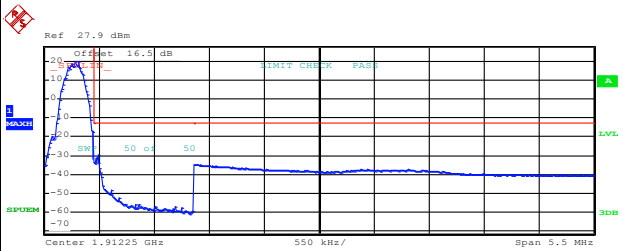
Lowest Band Edge



Start [Hz]	Stop [Hz]	RBW [Hz]	Freq [Hz]	PwrAbs [dBm]	ΔLimit [dB]
1.845 G	1.849 G	1.00 M	1.848980 G	-31.42	-18.42
1.849 G	1.850 G	3.00 k	1.849988 G	-29.27	-16.27
1.850 G	1.851 G	10.00 k	1.850202 G	18.17	-16.83

Date: 6.JUL.2018 11:12:16

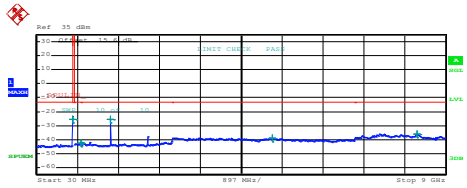
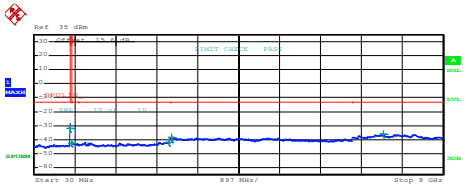
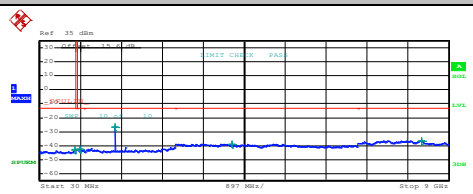
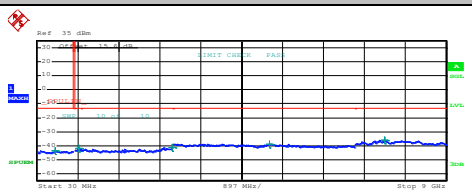
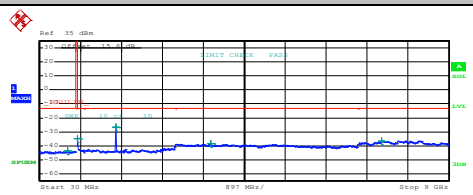
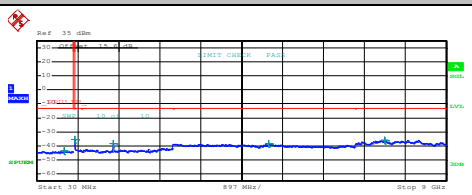
Highest Band Edge

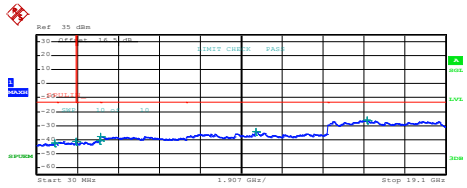
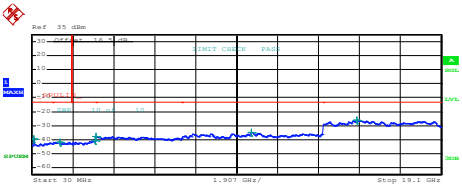
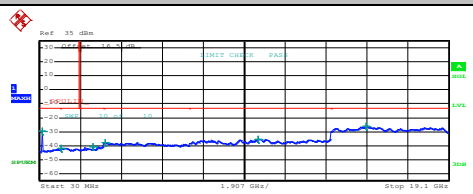
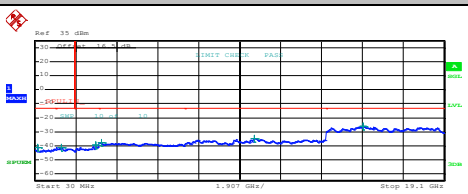
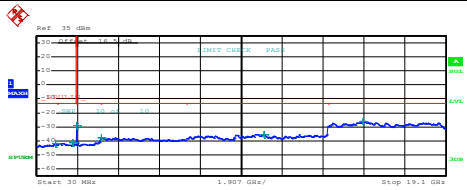
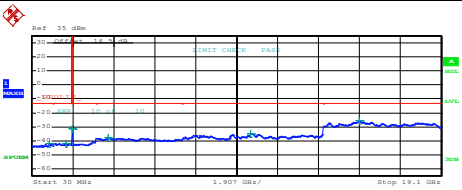


Start [Hz]	Stop [Hz]	RBW [Hz]	Freq [Hz]	PwrAbs [dBm]	ΔLimit [dB]
1.910 G	1.910 G	10.00 k	1.909837 G	20.05	-14.95
1.910 G	1.911 G	3.00 k	1.910036 G	-29.75	-16.75
1.911 G	1.915 G	1.00 M	1.911016 G	-34.93	-21.93

Date: 6.JUL.2018 11:13:48

Conducted Spurious Emission

GSM850 (GPRS class 8)	GSM850 (EDGE class 8)
Lowest Channel	**Lowest Channel**
	
Date: 6.JUL.2018 11:01:36	Date: 6.JUL.2018 11:34:31
Middle Channel	**Middle Channel**
	
Date: 6.JUL.2018 11:02:29	Date: 6.JUL.2018 11:35:25
Highest Channel	**Highest Channel**
	
Date: 6.JUL.2018 11:03:22	Date: 6.JUL.2018 11:36:18

GSM1900 (GPRS class 8)	GSM1900 (EDGE class 8)
Lowest Channel	**Lowest Channel**
	
Start [Hz] / Stop [Hz] / RBW [Hz] / Freq [Hz] / PwrAbs [dBm] / ΔLimit [dB] 30.000 M / 1.000 G / 1.00 M / 872.930000 M / -42.24 / -29.24 1.000 G / 1.845 G / 1.00 M / 1.843944 G / -41.24 / -28.24 1.915 G / 3.000 G / 1.00 M / 2.983996 G / -40.71 / -27.71 3.000 G / 7.000 G / 1.00 M / 3.021000 G / -37.82 / -24.82 7.000 G / 13.600 G / 1.00 M / 10.235650 G / -34.55 / -21.55 13.600 G / 19.100 G / 1.00 M / 15.427375 G / -26.24 / -13.24	Start [Hz] / Stop [Hz] / RBW [Hz] / Freq [Hz] / PwrAbs [dBm] / ΔLimit [dB] 30.000 M / 1.000 G / 1.00 M / 112.207500 M / -39.30 / -26.30 1.000 G / 1.845 G / 1.00 M / 1.314129 G / -41.71 / -28.71 1.915 G / 3.000 G / 1.00 M / 2.983996 G / -40.76 / -27.76 3.000 G / 7.000 G / 1.00 M / 3.010000 G / -37.60 / -24.60 7.000 G / 13.600 G / 1.00 M / 10.244725 G / -34.90 / -21.90 13.600 G / 19.100 G / 1.00 M / 15.174375 G / -26.04 / -13.04
Date: 6.JUL.2018 10:49:53	Date: 6.JUL.2018 11:14:53
Middle Channel	**Middle Channel**
	
Start [Hz] / Stop [Hz] / RBW [Hz] / Freq [Hz] / PwrAbs [dBm] / ΔLimit [dB] 30.000 M / 1.000 G / 1.00 M / 141.792500 M / -29.72 / -16.72 1.000 G / 1.845 G / 1.00 M / 1.027462 G / -41.77 / -28.77 1.915 G / 3.000 G / 1.00 M / 2.519074 G / -40.63 / -27.63 3.000 G / 7.000 G / 1.00 M / 3.097000 G / -37.76 / -24.76 7.000 G / 13.600 G / 1.00 M / 10.230700 G / -35.23 / -22.23 13.600 G / 19.100 G / 1.00 M / 15.230063 G / -26.01 / -13.01	Start [Hz] / Stop [Hz] / RBW [Hz] / Freq [Hz] / PwrAbs [dBm] / ΔLimit [dB] 30.000 M / 1.000 G / 1.00 M / 141.307500 M / -41.57 / -28.57 1.000 G / 1.845 G / 1.00 M / 1.237234 G / -41.40 / -28.40 1.915 G / 3.000 G / 1.00 M / 2.847286 G / -39.77 / -26.77 3.000 G / 7.000 G / 1.00 M / 3.121000 G / -37.61 / -24.61 7.000 G / 13.600 G / 1.00 M / 10.233175 G / -34.99 / -21.99 13.600 G / 19.100 G / 1.00 M / 15.311188 G / -26.40 / -13.40
Date: 6.JUL.2018 10:50:46	Date: 6.JUL.2018 11:15:45
Highest Channel	**Highest Channel**
	
Start [Hz] / Stop [Hz] / RBW [Hz] / Freq [Hz] / PwrAbs [dBm] / ΔLimit [dB] 30.000 M / 1.000 G / 1.00 M / 906.395000 M / -41.95 / -28.95 1.000 G / 1.845 G / 1.00 M / 1.722898 G / -41.59 / -28.59 1.915 G / 3.000 G / 1.00 M / 1.915271 G / -28.90 / -15.90 3.000 G / 7.000 G / 1.00 M / 3.041000 G / -37.59 / -24.59 7.000 G / 13.600 G / 1.00 M / 10.648975 G / -35.25 / -22.25 13.600 G / 19.100 G / 1.00 M / 15.243125 G / -26.14 / -13.14	Start [Hz] / Stop [Hz] / RBW [Hz] / Freq [Hz] / PwrAbs [dBm] / ΔLimit [dB] 30.000 M / 1.000 G / 1.00 M / 827.582500 M / -42.18 / -29.18 1.000 G / 1.845 G / 1.00 M / 1.581149 G / -41.72 / -28.72 1.915 G / 3.000 G / 1.00 M / 1.915271 G / -31.53 / -18.53 3.000 G / 7.000 G / 1.00 M / 3.579000 G / -37.61 / -24.61 7.000 G / 13.600 G / 1.00 M / 10.210900 G / -35.02 / -22.02 13.600 G / 19.100 G / 1.00 M / 15.293313 G / -25.75 / -12.75
Date: 6.JUL.2018 10:51:37	Date: 6.JUL.2018 11:16:37

Frequency Stability

Test Conditions	Middle Channel	GSM850 (GPRS class 8)	GSM850 (EDGE class 8)	Limit 2.5ppm
Temperature (°C)	Voltage (Volt)	Deviation (ppm)		Result
50	Normal Voltage	0.0012	0.0036	PASS
40	Normal Voltage	0.0012	0.0024	
30	Normal Voltage	0.0000	0.0012	
20(Ref.)	Normal Voltage	0.0000	0.0000	
10	Normal Voltage	0.0024	0.0024	
0	Normal Voltage	0.0036	0.0012	
-10	Normal Voltage	0.0048	0.0036	
-20	Normal Voltage	0.0048	0.0060	
-30	Normal Voltage	0.0036	0.0012	
20	Maximum Voltage	0.0012	0.0000	
20	Normal Voltage	0.0000	0.0000	
20	Battery End Point	0.0012	0.0311	

Test Conditions	Middle Channel	GSM1900 (GPRS class 8)	GSM1900 (EDGE class 8)	Limit Note 2.
Temperature (°C)	Voltage (Volt)	Deviation (ppm)		Result
50	Normal Voltage	0.0000	0.0027	PASS
40	Normal Voltage	0.0000	0.0027	
30	Normal Voltage	0.0000	0.0011	
20(Ref.)	Normal Voltage	0.0000	0.0000	
10	Normal Voltage	0.0021	0.0005	
0	Normal Voltage	0.0005	0.0176	
-10	Normal Voltage	0.0021	0.0250	
-20	Normal Voltage	0.0011	0.0037	
-30	Normal Voltage	0.0032	0.0053	
20	Maximum Voltage	0.0016	0.0005	
20	Normal Voltage	0.0000	0.0000	
20	Battery End Point	0.0011	0.0011	

Note:

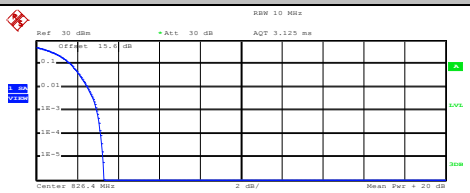
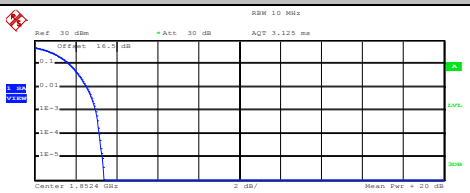
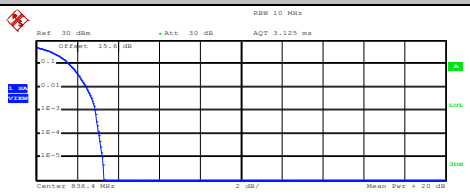
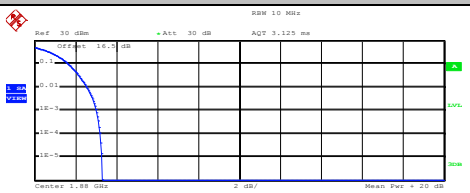
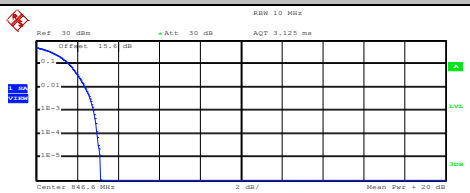
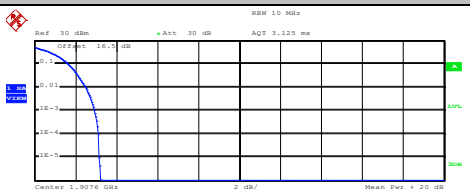
1. Normal Voltage = 12V. ；Battery End Point (BEP) = 10.2 V.；Maximum Voltage =13.8 V

2. The frequency fundamental emissions stay within the authorized frequency block.

A3. WCDMA

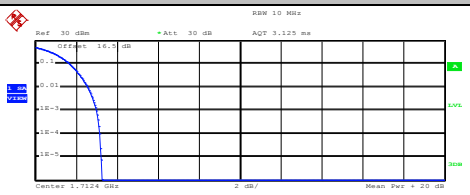
Peak-to-Average Ratio

Mode	WCDMA Band V	WCDMA Band II	WCDMA Band IV	Limit: 13dB
Mod.	RMC 12.2Kbps	RMC 12.2Kbps	RMC 12.2Kbps	Result
Lowest CH	2.96	3.00	3.00	PASS
Middle CH	2.88	3.04	3.08	
Highest CH	2.80	2.92	2.88	

WCDMA Band V (RMC 12.2Kbps)	WCDMA Band II (RMC 12.2Kbps)
Lowest Channel	**Lowest Channel**
	
Complementary Cumulative Distribution Function (100000 samples) Trace 1 Mean 23.34 dBm Peak 26.66 dBm Crest 3.32 dB 10 % 1.68 dB 1 % 2.52 dB .1 % 2.96 dB .01 % 3.16 dB	Complementary Cumulative Distribution Function (100000 samples) Trace 1 Mean 21.93 dBm Peak 25.32 dBm Crest 3.38 dB 10 % 1.68 dB 1 % 2.56 dB .1 % 3.00 dB .01 % 3.16 dB
Date: 6.JUL.2018 13:59:06	Date: 6.JUL.2018 12:06:54
Middle Channel	**Middle Channel**
	
Complementary Cumulative Distribution Function (100000 samples) Trace 1 Mean 23.21 dBm Peak 26.51 dBm Crest 3.31 dB 10 % 1.60 dB 1 % 2.44 dB .1 % 2.88 dB .01 % 3.08 dB	Complementary Cumulative Distribution Function (100000 samples) Trace 1 Mean 22.37 dBm Peak 25.67 dBm Crest 3.30 dB 10 % 1.64 dB 1 % 2.56 dB .1 % 3.04 dB .01 % 3.20 dB
Date: 6.JUL.2018 13:59:24	Date: 6.JUL.2018 12:07:12
Highest Channel	**Highest Channel**
	
Complementary Cumulative Distribution Function (100000 samples) Trace 1 Mean 23.15 dBm Peak 26.30 dBm Crest 3.16 dB 10 % 1.60 dB 1 % 2.40 dB .1 % 2.80 dB .01 % 3.00 dB	Complementary Cumulative Distribution Function (100000 samples) Trace 1 Mean 22.23 dBm Peak 25.46 dBm Crest 3.22 dB 10 % 1.64 dB 1 % 2.48 dB .1 % 2.92 dB .01 % 3.12 dB
Date: 6.JUL.2018 13:59:38	Date: 6.JUL.2018 12:07:34

WCDMA Band IV (RMC 12.2Kbps)

Lowest Channel



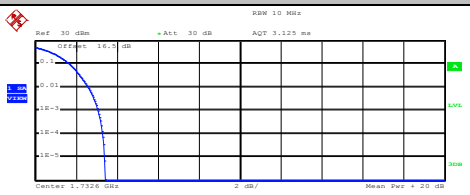
Complementary Cumulative Distribution Function (100000 samples)

Trace 1

Mean	22.20 dBm
Peak	25.46 dBm
Crest	3.25 dB
10 %	1.68 dB
1 %	2.56 dB
.1 %	3.00 dB
.01 %	3.16 dB

Date: 6.JUL.2018 13:45:03

Middle Channel



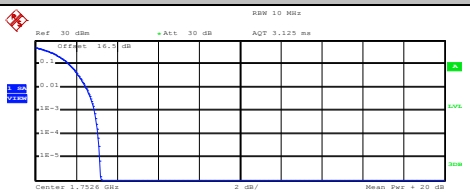
Complementary Cumulative Distribution Function (100000 samples)

Trace 1

Mean	22.41 dBm
Peak	25.81 dBm
Crest	3.40 dB
10 %	1.68 dB
1 %	2.60 dB
.1 %	3.08 dB
.01 %	3.32 dB

Date: 6.JUL.2018 13:45:18

Highest Channel



Complementary Cumulative Distribution Function (100000 samples)

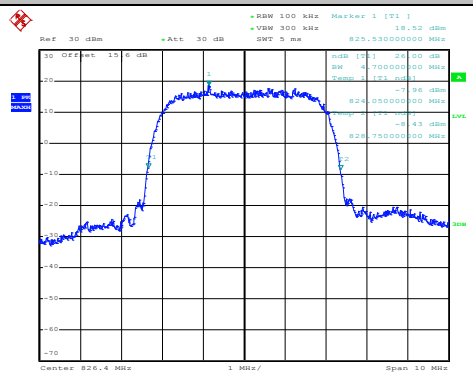
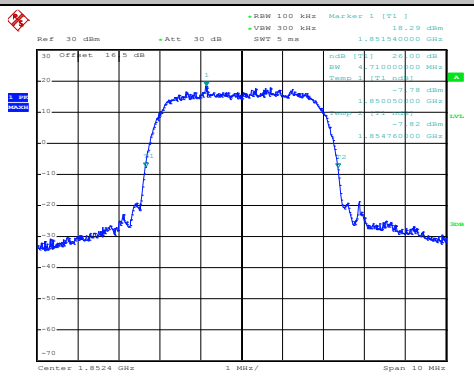
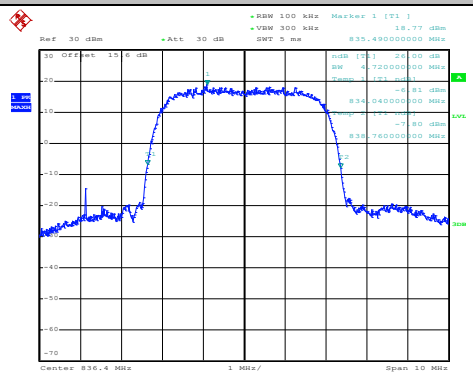
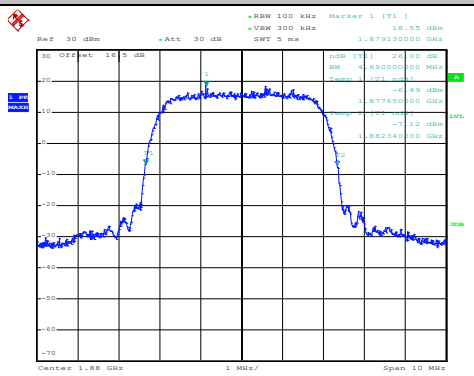
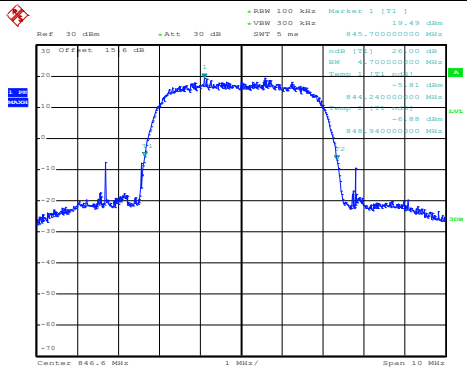
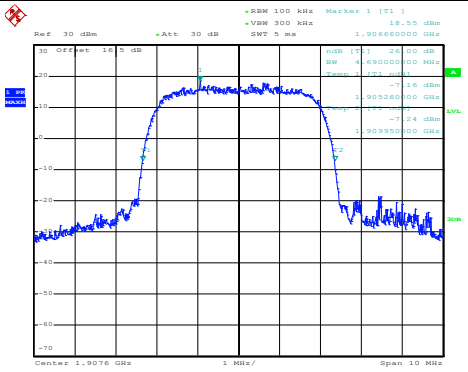
Trace 1

Mean	22.18 dBm
Peak	25.39 dBm
Crest	3.20 dB
10 %	1.64 dB
1 %	2.48 dB
.1 %	2.88 dB
.01 %	3.08 dB

Date: 6.JUL.2018 13:45:34

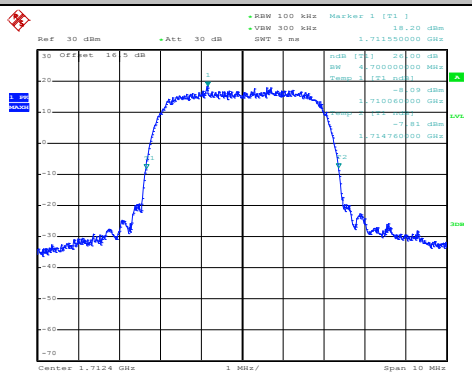
26dB Bandwidth

Mode	WCDMA Band V	WCDMA Band II	WCDMA Band IV
Mod.	RMC 12.2Kbps	RMC 12.2Kbps	RMC 12.2Kbps
Lowest CH	4.70	4.71	4.70
Middle CH	4.72	4.69	4.68
Highest CH	4.70	4.69	4.72

WCDMA Band V (RMC 12.2Kbps)	WCDMA Band II (RMC 12.2Kbps)
Lowest Channel	**Lowest Channel**
	
Date: 6.JUL.2018 13:47:16	Date: 6.JUL.2018 11:41:39
Middle Channel	**Middle Channel**
	
Date: 6.JUL.2018 13:47:50	Date: 6.JUL.2018 11:44:00
Highest Channel	**Highest Channel**
	
Date: 6.JUL.2018 13:48:27	Date: 6.JUL.2018 11:44:59

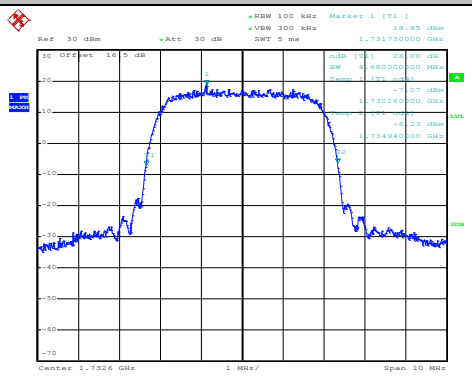
WCDMA Band IV (RMC 12.2Kbps)

Lowest Channel



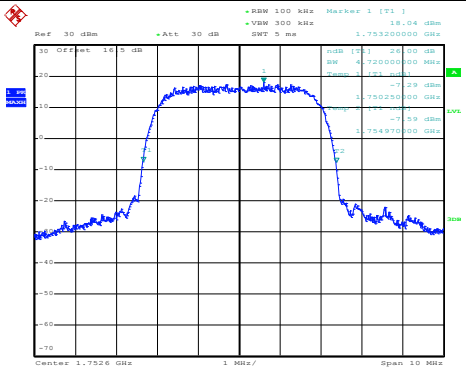
Date: 6.JUL.2018 13:32:52

Middle Channel



Date: 6.JUL.2018 13:33:27

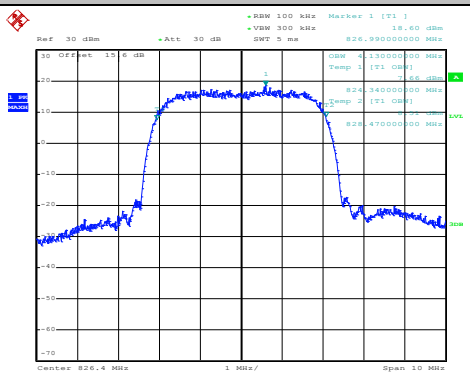
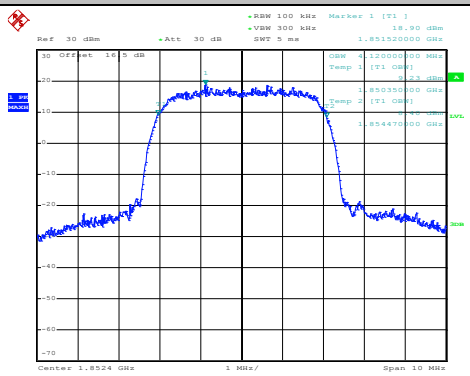
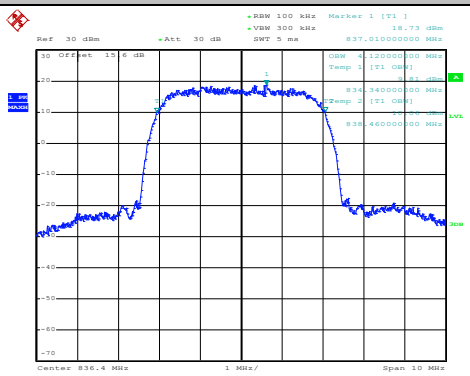
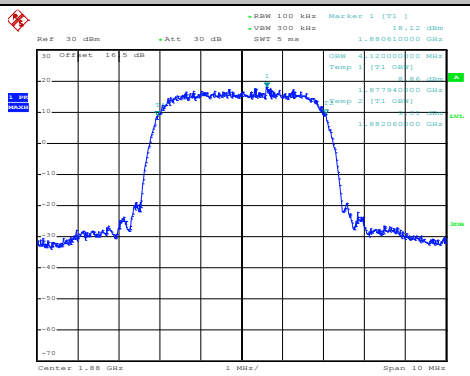
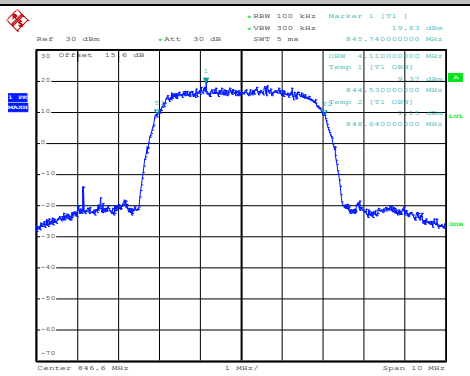
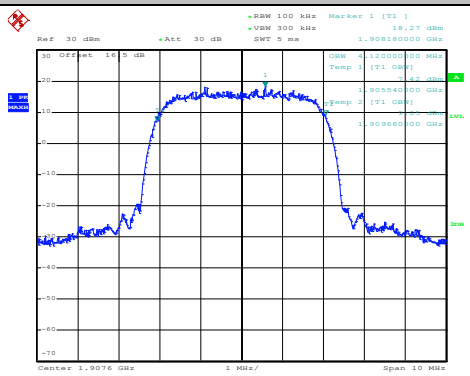
Highest Channel



Date: 6.JUL.2018 13:34:05

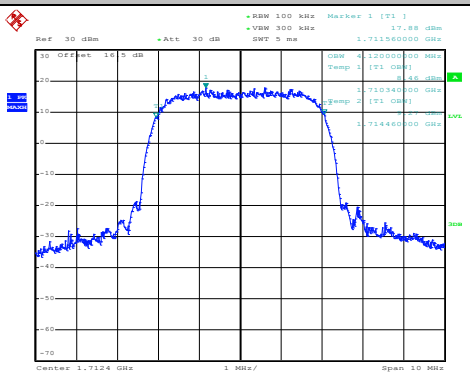
Occupied Bandwidth

Mode	WCDMA Band V	WCDMA Band II	WCDMA Band IV
Mod.	RMC 12.2Kbps	RMC 12.2Kbps	RMC 12.2Kbps
Lowest CH	4.13	4.12	4.12
Middle CH	4.13	4.12	4.12
Highest CH	4.11	4.12	4.14

WCDMA Band V (RMC 12.2Kbps)	WCDMA Band II (RMC 12.2Kbps)
Lowest Channel	**Lowest Channel**
	
Date: 6.JUL.2018 13:49:10	Date: 6.JUL.2018 11:45:59
Middle Channel	**Middle Channel**
	
Date: 6.JUL.2018 13:49:45	Date: 6.JUL.2018 11:46:34
Highest Channel	**Highest Channel**
	
Date: 6.JUL.2018 13:50:19	Date: 6.JUL.2018 11:47:14

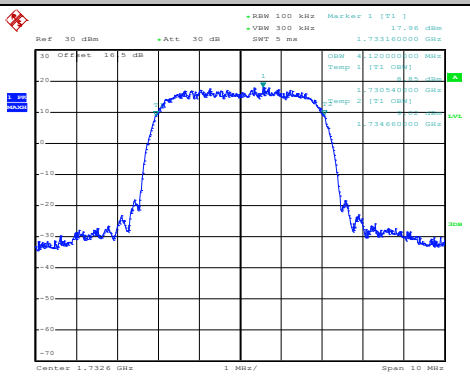
WCDMA Band IV (RMC 12.2Kbps)

Lowest Channel



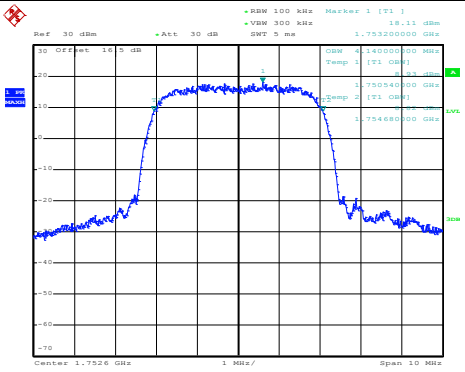
Date: 6.JUL.2018 13:34:45

Middle Channel



Date: 6.JUL.2018 13:35:35

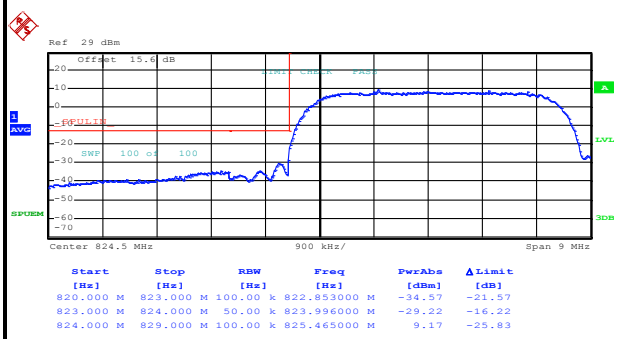
Highest Channel



Date: 6.JUL.2018 13:36:08

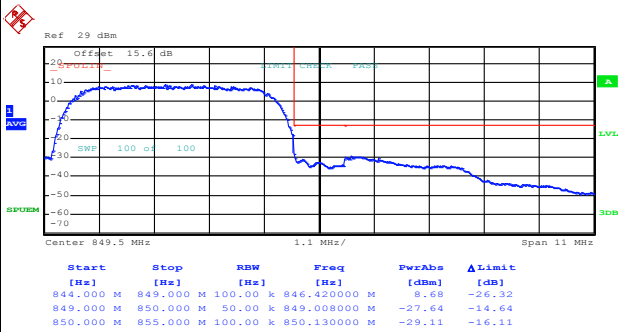
Conducted Band Edge

WCDMA Band V (RMC 12.2Kbps)	
Lowest Band Edge	**Highest Band Edge**



Start [Hz]	Stop [Hz]	RBW [Hz]	Freq [Hz]	PwrAbs [dBm]	ΔLimit [dB]
820.000 M	823.000 M	100.00 k	822.853000 M	-34.57	-21.57
823.000 M	824.000 M	50.00 k	823.996000 M	-29.22	-16.22
824.000 M	829.000 M	100.00 k	825.465000 M	9.17	-25.83

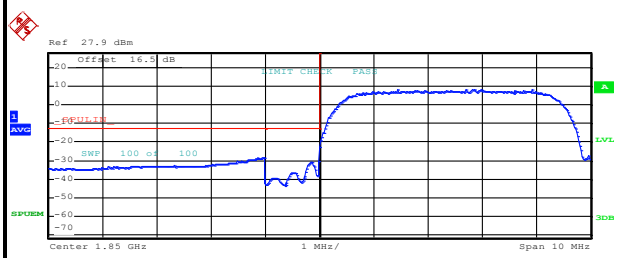
Date: 6.JUL.2018 13:53:09



Start [Hz]	Stop [Hz]	RBW [Hz]	Freq [Hz]	PwrAbs [dBm]	ΔLimit [dB]
844.000 M	849.000 M	100.00 k	846.420000 M	8.68	-26.32
849.000 M	850.000 M	50.00 k	849.008000 M	-27.64	-14.64
850.000 M	855.000 M	100.00 k	850.130000 M	-29.11	-16.11

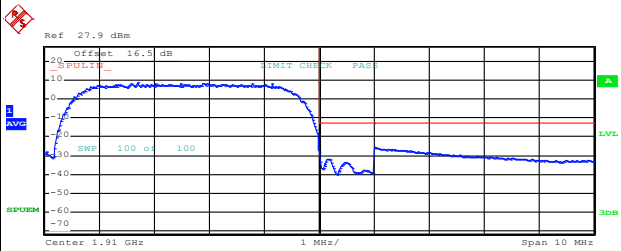
Date: 6.JUL.2018 13:55:57

WCDMA Band II (RMC 12.2Kbps)	
Lowest Band Edge	**Highest Band Edge**



Start [Hz]	Stop [Hz]	RBW [Hz]	Freq [Hz]	PwrAbs [dBm]	ΔLimit [dB]
1.845 G	1.849 G	1.00 M	1.848940 G	-28.50	-15.50
1.849 G	1.850 G	50.00 k	1.849996 G	-30.90	-17.90
1.850 G	1.855 G	100.00 k	1.851435 G	8.36	-26.64

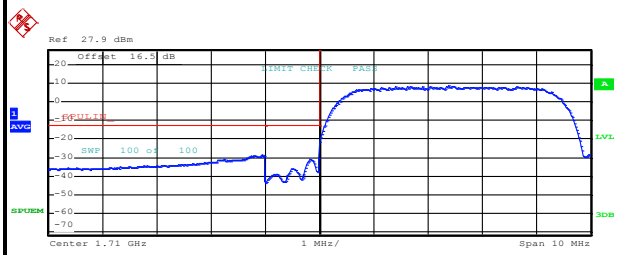
Date: 6.JUL.2018 12:00:34



Start [Hz]	Stop [Hz]	RBW [Hz]	Freq [Hz]	PwrAbs [dBm]	ΔLimit [dB]
1.905 G	1.910 G	100.00 k	1.906690 G	8.70	-26.30
1.910 G	1.911 G	50.00 k	1.910008 G	-28.06	-15.06
1.911 G	1.915 G	1.00 M	1.911016 G	-25.89	-12.89

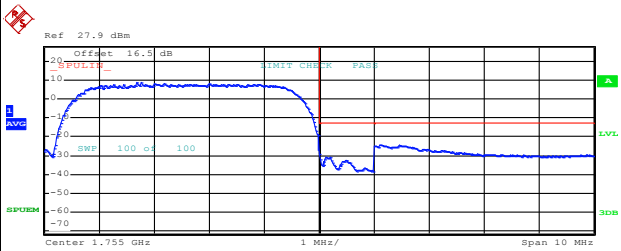
Date: 6.JUL.2018 12:03:26

WCDMA Band IV (RMC 12.2Kbps)	
Lowest Band Edge	**Highest Band Edge**



Start [Hz]	Stop [Hz]	RBW [Hz]	Freq [Hz]	PwrAbs [dBm]	ΔLimit [dB]
1.705 G	1.709 G	1.00 M	1.708940 G	-28.79	-15.79
1.709 G	1.710 G	50.00 k	1.709996 G	-30.61	-17.61
1.710 G	1.715 G	100.00 k	1.712370 G	8.62	-26.38

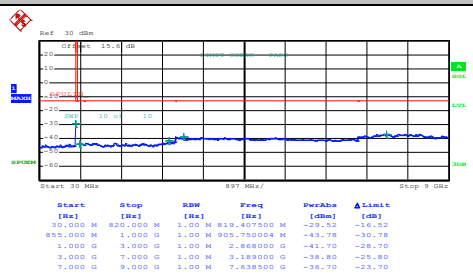
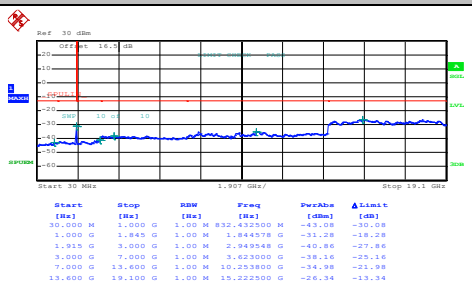
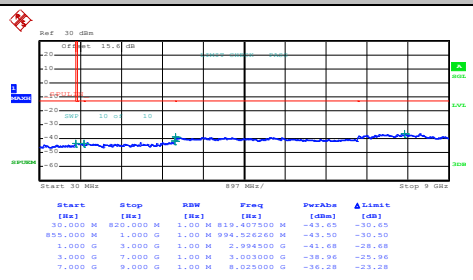
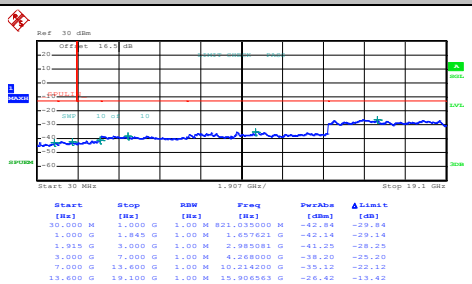
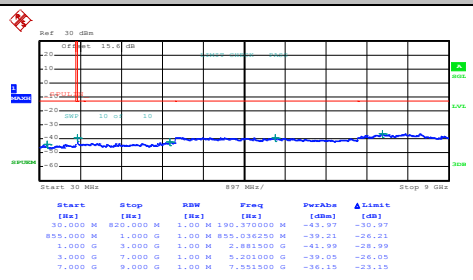
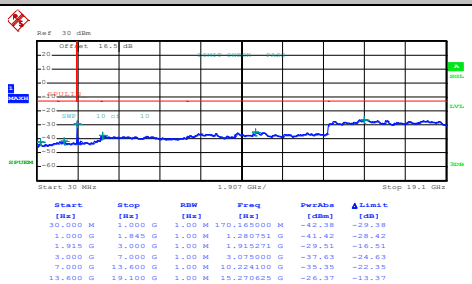
Date: 6.JUL.2018 13:39:04



Start [Hz]	Stop [Hz]	RBW [Hz]	Freq [Hz]	PwrAbs [dBm]	ΔLimit [dB]
1.750 G	1.755 G	100.00 k	1.751675 G	8.97	-26.03
1.755 G	1.756 G	50.00 k	1.755004 G	-28.39	-15.39
1.756 G	1.760 G	1.00 M	1.756460 G	-24.36	-11.36

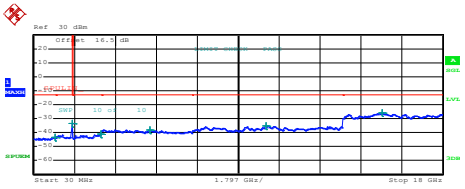
Date: 6.JUL.2018 13:41:54

Conducted Spurious Emission

WCDMA Band V (RMC 12.2Kbps)	WCDMA Band II (RMC 12.2Kbps)
Lowest Channel	**Lowest Channel**
	
Date: 6.JUL.2018 13:56:54	Date: 6.JUL.2018 12:04:29
Middle Channel	**Middle Channel**
	
Date: 6.JUL.2018 13:57:48	Date: 6.JUL.2018 12:05:24
Highest Channel	**Highest Channel**
	
Date: 6.JUL.2018 13:58:41	Date: 6.JUL.2018 12:06:19

WCDMA Band IV (RMC 12.2Kbps)

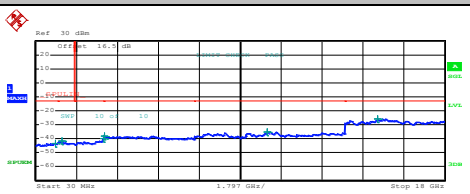
Lowest Channel



Start [Hz]	Stop [Hz]	RBW [Hz]	Freq [Hz]	PwrAbs [dBm]	ΔLimit [dB]
30.000 M	1.000 G	1.00 M	980.600000 M	-43.18	-30.18
1.000 G	1.705 G	1.00 M	1.704648 G	-33.42	-20.42
1.760 G	3.000 G	1.00 M	2.990700 G	-41.34	-28.34
3.000 G	7.000 G	1.00 M	5.140000 G	-37.85	-24.85
7.000 G	13.600 G	1.00 M	10.224100 G	-35.02	-22.02
13.600 G	18.000 G	1.00 M	15.347350 G	-25.66	-12.66

Date: 6.JUL.2018 13:42:50

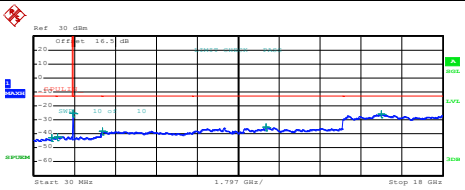
Middle Channel



Start [Hz]	Stop [Hz]	RBW [Hz]	Freq [Hz]	PwrAbs [dBm]	ΔLimit [dB]
30.000 M	1.000 G	1.00 M	896.452500 M	-43.15	-30.15
1.000 G	1.705 G	1.00 M	1.186825 G	-41.75	-28.75
1.760 G	3.000 G	1.00 M	2.997520 G	-40.13	-27.13
3.000 G	7.000 G	1.00 M	3.031000 G	-38.12	-25.12
7.000 G	13.600 G	1.00 M	10.209250 G	-35.15	-22.15
13.600 G	18.000 G	1.00 M	15.069600 G	-25.95	-12.95

Date: 6.JUL.2018 13:43:42

Highest Channel



Start [Hz]	Stop [Hz]	RBW [Hz]	Freq [Hz]	PwrAbs [dBm]	ΔLimit [dB]
30.000 M	1.000 G	1.00 M	826.612500 M	-42.85	-29.85
1.000 G	1.705 G	1.00 M	1.083895 G	-42.04	-29.04
1.760 G	3.000 G	1.00 M	1.760620 G	-25.47	-12.47
3.000 G	7.000 G	1.00 M	3.037000 G	-37.94	-24.94
7.000 G	13.600 G	1.00 M	10.231525 G	-35.40	-22.40
13.600 G	18.000 G	1.00 M	15.313250 G	-25.82	-12.82

Date: 6.JUL.2018 13:44:40

Frequency Stability

Test Conditions	Middle Channel	WCDMA Band V (RMC 12.2Kbps)	Limit 2.5ppm
Temperature (°C)	Voltage (Volt)	Deviation (ppm)	Result
50	Normal Voltage	0.0024	PASS
40	Normal Voltage	0.0024	
30	Normal Voltage	0.0012	
20(Ref.)	Normal Voltage	0.0000	
10	Normal Voltage	0.0000	
0	Normal Voltage	0.0012	
-10	Normal Voltage	0.0012	
-20	Normal Voltage	0.0036	
-30	Normal Voltage	0.0000	
20	Maximum Voltage	0.0012	
20	Normal Voltage	0.0000	
20	Battery End Point	0.0012	

Test Conditions	Middle Channel	WCDMA Band II (RMC 12.2Kbps)	Limit Note 2.
Temperature (°C)	Voltage (Volt)	Deviation (ppm)	Result
50	Normal Voltage	0.0021	PASS
40	Normal Voltage	0.0011	
30	Normal Voltage	0.0011	
20(Ref.)	Normal Voltage	0.0000	
10	Normal Voltage	0.0011	
0	Normal Voltage	0.0016	
-10	Normal Voltage	0.0165	
-20	Normal Voltage	0.0011	
-30	Normal Voltage	0.0037	
20	Maximum Voltage	0.0005	
20	Normal Voltage	0.0000	
20	Battery End Point	0.0005	

Test Conditions	Middle Channel	WCDMA Band IV (RMC 12.2Kbps)	Limit Note 2.
Temperature (°C)	Voltage (Volt)	Deviation (ppm)	Result
50	Normal Voltage	0.0110	PASS
40	Normal Voltage	0.0104	
30	Normal Voltage	0.0017	
20(Ref.)	Normal Voltage	0.0000	
10	Normal Voltage	0.0000	
0	Normal Voltage	0.0000	
-10	Normal Voltage	0.0006	
-20	Normal Voltage	0.0052	
-30	Normal Voltage	0.0098	
20	Maximum Voltage	0.0000	
20	Normal Voltage	0.0000	
20	Battery End Point	0.0000	

Note:

1. Normal Voltage = 12V. ；Battery End Point (BEP) = 10.2 V.；Maximum Voltage =13.8 V

2. The frequency fundamental emissions stay within the authorized frequency block.

Appendix B. Test Results of ERP/EIRP and Radiated Test

ERP/EIRP

Channel	Mode	Horizontal		Vertical	
		ERP(dBm)	ERP(W)	ERP(dBm)	ERP(W)
Lowest	GSM850 GPRS class 8	30.55	1.1350	30.48	1.1169
Middle		31.09	1.2853	31.01	1.2618
Highest		31.44	1.3932	31.25	1.3335
Lowest	GSM850 EDGE class 8	24.35	0.2723	24.77	0.2999
Middle		24.33	0.2710	24.19	0.2624
Highest		25.19	0.3304	24.59	0.2877
Lowest	WCDMA Band V RMC 12.2Kbps	23.29	0.2133	22.95	0.1972
Middle		23.07	0.2028	23.11	0.2046
Highest		23.24	0.2109	22.95	0.1972
Limit	ERP < 7W	Result		PASS	

Channel	Mode	Horizontal		Vertical	
		EIRP(dBm)	EIRP(W)	EIRP(dBm)	EIRP(W)
Lowest	GSM1900 GPRS class 8	30.52	1.1272	30.35	1.0839
Middle		30.96	1.2474	30.82	1.2078
Highest		32.10	1.6218	30.80	1.2023
Lowest	GSM1900 EDGE class 8	25.73	0.3741	25.29	0.3381
Middle		26.70	0.4677	25.90	0.3890
Highest		27.39	0.5483	27.68	0.5861
Lowest	WCDMA Band II RMC 12.2Kbps	26.17	0.4140	25.54	0.3581
Middle		26.74	0.4721	26.15	0.4121
Highest		26.30	0.4266	26.32	0.4285
Limit	EIRP < 2W	Result		PASS	

Channel	Mode	Horizontal		Vertical	
		EIRP(dBm)	EIRP(W)	EIRP(dBm)	EIRP(W)
Lowest	WCDMA Band IV RMC 12.2Kbps	27.50	0.5623	27.82	0.6053
Middle		27.39	0.5483	27.47	0.5585
Highest		27.87	0.6124	26.63	0.4603
Limit	EIRP < 1W	Result		PASS	

Radiated Spurious Emission

GPRS850

GPRS 850									
Channel	Frequency (MHz)	ERP (dBm)	Limit (dBm)	Over Limit (dB)	SPA Reading (dBm)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)
Lowest	1648	-57.52	-13	-44.52	-69.86	-63.11	0.92	8.66	H
	2472	-36.78	-13	-23.78	-54.37	-44.15	1.14	10.66	H
	4120	-48.68	-13	-35.68	-69.47	-57.84	1.47	12.78	H
									H
	1648	-56.02	-13	-43.02	-68.87	-61.61	0.92	8.66	V
	2472	-45.02	-13	-32.02	-63.1	-52.39	1.14	10.66	V
	4120	-52.69	-13	-39.69	-73.41	-61.85	1.47	12.78	V
									V
Middle	1672	-58.85	-13	-45.85	-71.6	-64.53	0.93	8.75	H
	2512	-48.58	-13	-35.58	-66.17	-55.99	1.15	10.71	H
	4184	-51.48	-13	-38.48	-72.17	-60.63	1.46	12.76	H
									H
	1672	-62.13	-13	-49.13	-75.11	-67.81	0.93	8.75	V
	2512	-50.64	-13	-37.64	-68.75	-58.05	1.15	10.71	V
	4184	-54.21	-13	-41.21	-75.21	-63.36	1.46	12.76	V
									V
Highest	1696	-61.52	-13	-48.52	-74.27	-67.28	0.94	8.84	H
	2544	-47.12	-13	-34.12	-64.67	-54.56	1.16	10.75	H
	4248	-53.78	-13	-40.78	-74.97	-62.93	1.45	12.75	H
									H
	1696	-61.92	-13	-48.92	-75.15	-67.68	0.94	8.84	V
	2544	-50.97	-13	-37.97	-69.06	-58.41	1.16	10.75	V
	4248	-52.16	-13	-39.16	-73.44	-61.31	1.45	12.75	V
									V

Remark: Spurious emissions within 30-1000MHz were found more than 20dB below limit line.

EDGE 850

EDGE 850									
Channel	Frequency (MHz)	ERP (dBm)	Limit (dBm)	Over Limit (dB)	SPA Reading (dBm)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)
Lowest	1648	-63.36	-13	-50.36	-75.7	-68.95	0.92	8.66	H
	2472	-58.11	-13	-45.11	-75.66	-65.48	1.14	10.66	H
	3296	-59.05	-13	-46.05	-78.79	-67.59	1.32	12.01	H
									H
	1648	-62.32	-13	-49.32	-75.18	-67.91	0.92	8.66	V
	2472	-59.68	-13	-46.68	-77.7	-67.05	1.14	10.66	V
	3296	-58.52	-13	-45.52	-78.47	-67.06	1.32	12.01	V
									V
Middle	1672	-63.29	-13	-50.29	-75.94	-68.97	0.93	8.75	H
	2512	-60.47	-13	-47.47	-77.93	-67.88	1.15	10.71	H
	3344	-59.52	-13	-46.52	-79.36	-68.16	1.33	12.13	H
									H
	1672	-63.43	-13	-50.43	-76.53	-69.11	0.93	8.75	V
	2512	-59.92	-13	-46.92	-77.98	-67.33	1.15	10.71	V
	3344	-59.17	-13	-46.17	-79.22	-67.81	1.33	12.13	V
									V
Highest	1696	-64.32	-13	-51.32	-77.09	-70.08	0.94	8.84	H
	2544	-60.42	-13	-47.42	-78.05	-67.86	1.16	10.75	H
	3392	-58.83	-13	-45.83	-79.05	-67.58	1.34	12.24	H
									H
	1696	-63.53	-13	-50.53	-76.71	-69.29	0.94	8.84	V
	2544	-59.74	-13	-46.74	-77.94	-67.18	1.16	10.75	V
	3392	-58.48	-13	-45.48	-78.69	-67.23	1.34	12.24	V
									V

Remark: Spurious emissions within 30-1000MHz were found more than 20dB below limit line.

WCDMA 850

WCDMA 850									
Channel	Frequency (MHz)	ERP (dBm)	Limit (dBm)	Over Limit (dB)	SPA Reading (dBm)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)
Lowest	1656	-62.39	-13	-49.39	-74.86	-68.01	0.92	8.69	H
	2480	-60.08	-13	-47.08	-77.6	-67.46	1.15	10.67	H
	3304	-58.88	-13	-45.88	-78.64	-67.43	1.32	12.03	H
									H
	1656	-63.04	-13	-50.04	-76.01	-68.66	0.92	8.69	V
	2480	-59.94	-13	-46.94	-77.91	-67.32	1.15	10.67	V
	3304	-58.57	-13	-45.57	-78.52	-67.12	1.32	12.03	V
									V
Middle	1672	-62.88	-13	-49.88	-75.46	-68.56	0.93	8.75	H
	2512	-60.54	-13	-47.54	-78.15	-67.95	1.15	10.71	H
	3344	-59.38	-13	-46.38	-79.2	-68.02	1.33	12.13	H
									H
	1672	-63.14	-13	-50.14	-76.19	-68.82	0.93	8.75	V
	2512	-62.18	-13	-49.18	-78.16	-69.59	1.15	10.71	V
	3344	-58.89	-13	-45.89	-78.92	-67.53	1.33	12.13	V
									V
Highest	1696	-63.95	-13	-50.95	-76.72	-69.71	0.94	8.84	H
	2536	-60.51	-13	-47.51	-78.13	-67.94	1.16	10.74	H
	3384	-58.75	-13	-45.75	-78.79	-67.48	1.34	12.22	H
									H
	1696	-63.39	-13	-50.39	-76.6	-69.15	0.94	8.84	V
	2536	-60.04	-13	-47.04	-78.15	-67.47	1.16	10.74	V
	3384	-58.66	-13	-45.66	-78.83	-67.39	1.34	12.22	V
									V

Remark: Spurious emissions within 30-1000MHz were found more than 20dB below limit line.

WCDMA 1700

WCDMA 1700									
Channel	Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Over Limit (dB)	SPA Reading (dBm)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)
Lowest	3424	-57.74	-13	-44.74	-78.31	-68.71	1.35	12.32	H
	5137	-54.79	-13	-41.79	-78.75	-65.94	1.65	12.79	H
	6849	-51.96	-13	-38.96	-78.54	-62.33	1.74	12.11	H
									H
	3424	-56.76	-13	-43.76	-77.31	-67.73	1.35	12.32	V
	5137	-54.61	-13	-41.61	-78.41	-65.76	1.65	12.79	V
	6849	-51.98	-13	-38.98	-78.55	-62.35	1.74	12.11	V
									V
Middle	3465	-57.39	-13	-44.39	-78.13	-68.45	1.35	12.42	H
	5197	-53.96	-13	-40.96	-78.09	-65.17	1.66	12.88	H
	6930	-51.81	-13	-38.81	-78.44	-62.08	1.73	12.00	H
									H
	3465	-56.97	-13	-43.97	-77.65	-68.03	1.35	12.42	V
	5197	-53.86	-13	-40.86	-77.87	-65.07	1.66	12.88	V
	6930	-51.88	-13	-38.88	-78.53	-62.15	1.73	12.00	V
									V
Highest	3505	-56.88	-13	-43.88	-77.78	-68.02	1.36	12.50	H
	5257	-53.86	-13	-40.86	-78.12	-65.14	1.68	12.96	H
	7010	-51.32	-13	-38.32	-78.04	-61.48	1.73	11.88	H
									H
	3505	-56.67	-13	-43.67	-77.42	-67.81	1.36	12.50	V
	5257	-54.24	-13	-41.24	-78.39	-65.52	1.68	12.96	V
	7010	-50.78	-13	-37.78	-77.59	-60.94	1.73	11.88	V
									V

Remark: Spurious emissions within 30-1000MHz were found more than 20dB below limit line.

GPRS 1900

GPRS 1900									
Channel	Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Over Limit (dB)	SPA Reading (dBm)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)
Lowest	3702	-53.31	-13	-40.31	-73.99	-64.52	1.41	12.62	H
	5550	-53.11	-13	-40.11	-78.14	-64.67	1.74	13.30	H
	7400	-51.66	-13	-38.66	-78.56	-60.98	1.94	11.26	H
									H
	3702	-49.11	-13	-36.11	-69.82	-60.32	1.41	12.62	V
	5550	-52.38	-13	-39.38	-77.39	-63.94	1.74	13.30	V
	7400	-50.99	-13	-37.99	-78.12	-60.31	1.94	11.26	V
									V
Middle	3762	-51.44	-13	-38.44	-72.06	-62.67	1.43	12.66	H
	5640	-53.36	-13	-40.36	-78.57	-64.93	1.73	13.30	H
	7520	-51.31	-13	-38.31	-78.37	-60.42	1.99	11.10	H
									H
	3762	-48.56	-13	-35.56	-69.2	-59.79	1.43	12.66	V
	5640	-51.77	-13	-38.77	-76.93	-63.34	1.73	13.30	V
	7520	-50.98	-13	-37.98	-78.28	-60.09	1.99	11.10	V
									V
Highest	3822	-52.37	-13	-39.37	-73.16	-63.62	1.44	12.69	H
	5730	-50.57	-13	-37.57	-76.4	-62.14	1.73	13.30	H
	7638	-49.75	-13	-36.75	-77.25	-58.87	2.01	11.13	H
									H
	3822	-49.04	-13	-36.04	-69.98	-60.29	1.44	12.69	V
	5730	-50.37	-13	-37.37	-76.09	-61.94	1.73	13.30	V
	7638	-49.23	-13	-36.23	-77	-58.35	2.01	11.13	V
									V

Remark: Spurious emissions within 30-1000MHz were found more than 20dB below limit line.

EDGE1900

EDGE 1900									
Channel	Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Over Limit (dB)	SPA Reading (dBm)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)
Lowest	3702	-56.68	-13	-43.68	-77.58	-67.89	1.41	12.62	H
	5550	-53.56	-13	-40.56	-78.88	-65.12	1.74	13.30	H
	7398	-51.35	-13	-38.35	-78.37	-60.68	1.93	11.26	H
									H
	3702	-53.15	-13	-40.15	-74.21	-64.36	1.41	12.62	V
	5550	-53.58	-13	-40.58	-78.97	-65.14	1.74	13.30	V
	7398	-50.99	-13	-37.99	-78.34	-60.32	1.93	11.26	V
									V
Middle	3762	-57.06	-13	-44.06	-78	-68.29	1.43	12.66	H
	5640	-53.02	-13	-40.02	-78.52	-64.59	1.73	13.30	H
	7518	-50.95	-13	-37.95	-78.22	-60.06	1.99	11.10	H
									H
	3762	-53.88	-13	-40.88	-74.81	-65.11	1.43	12.66	V
	5640	-52.86	-13	-39.86	-78.46	-64.43	1.73	13.30	V
	7518	-50.31	-13	-37.31	-77.8	-59.42	1.99	11.10	V
									V
Highest	3822	-56.96	-13	-43.96	-77.77	-68.21	1.44	12.69	H
	5730	-52.45	-13	-39.45	-78.14	-64.02	1.73	13.30	H
	7638	-50.75	-13	-37.75	-77.36	-59.87	2.01	11.13	H
									H
	3822	-54.71	-13	-41.71	-75.8	-65.96	1.44	12.69	V
	5730	-51.71	-13	-38.71	-77.33	-63.28	1.73	13.30	V
	7638	-49.34	-13	-36.34	-77.11	-58.46	2.01	11.13	V
									V

Remark: Spurious emissions within 30-1000MHz were found more than 20dB below limit line.

WCDMA 1900

WCDMA 1900									
Channel	Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Over Limit (dB)	SPA Reading (dBm)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)
Lowest	3708	-56.82	-13	-43.82	-77.77	-68.03	1.41	12.62	H
	5562	-53.27	-13	-40.27	-78.45	-64.83	1.74	13.30	H
	7416	-51.42	-13	-38.42	-78.6	-60.71	1.94	11.23	H
									H
	3708	-54.58	-13	-41.58	-75.46	-65.79	1.41	12.62	V
	5562	-53.26	-13	-40.26	-78.55	-64.82	1.74	13.30	V
	7416	-51.47	-13	-38.47	-78.78	-60.76	1.94	11.23	V
									V
Middle	3762	-57.54	-13	-44.54	-78.34	-68.77	1.43	12.66	H
	5640	-53.17	-13	-40.17	-78.67	-64.74	1.73	13.30	H
	7518	-51.08	-13	-38.08	-78.29	-60.19	1.99	11.10	H
									H
	3762	-54.56	-13	-41.56	-75.41	-65.79	1.43	12.66	V
	5640	-52.54	-13	-39.54	-78.06	-64.11	1.73	13.30	V
	7520	-50.58	-13	-37.58	-78.06	-59.69	1.99	11.10	V
									V
Highest	3816	-57.52	-13	-44.52	-78.39	-68.77	1.44	12.69	H
	5724	-52.32	-13	-39.32	-78.04	-63.89	1.73	13.30	H
	7632	-49.85	-13	-36.85	-77.3	-58.97	2.01	11.13	H
									H
	3816	-54.03	-13	-41.03	-75	-65.28	1.44	12.69	V
	5724	-51.41	-13	-38.41	-77.05	-62.98	1.73	13.30	V
	7632	-49.39	-13	-36.39	-77.18	-58.51	2.01	11.13	V
									V

Remark: Spurious emissions within 30-1000MHz were found more than 20dB below limit line.