

FCC RF Test Report

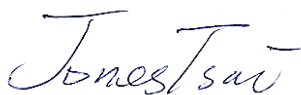
APPLICANT : Huawei Technologies Co., Ltd
EQUIPMENT : smart phone
BRAND NAME : honor
MODEL NAME : BKL-L04
FCC ID : QISBKL-L04
STANDARD : FCC 47 CFR Part 2, 22(H), 24(E), 27(L)
CLASSIFICATION : PCS Licensed Transmitter Held to Ear (PCE)

The product was received on Jan. 30, 2018 and testing was completed on Feb. 11, 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 / EIA-603-D-2010 and has been in compliance with the applicable technical standards.

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



Reviewed by: Joseph Lin / Supervisor



Approved by: Jones Tsai / Manager



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FCC ID : QISBKL-L04

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TABLE OF CONTENTS

REVISION HISTORY.....	3
SUMMARY OF TEST RESULT	4
1 GENERAL DESCRIPTION	5
1.1 Applicant.....	5
1.2 Manufacturer	5
1.3 Product Feature of Equipment Under Test	5
1.4 Modification of EUT	5
1.5 Testing Location	6
1.6 Applicable Standards	6
2 TEST CONFIGURATION OF EQUIPMENT UNDER TEST	7
2.1 Test Mode.....	7
2.2 Connection Diagram of Test System	8
2.3 Support Unit used in test configuration	8
2.4 Measurement Results Explanation Example	8
2.5 Frequency List of Low/Middle/High Channels.....	9
3 CONDUCTED TEST RESULT.....	10
3.1 Measuring Instruments.....	10
3.2 Test Setup	10
3.3 Test Result of Conducted Test.....	10
3.4 Conducted Output Power and ERP/EIRP	11
3.5 Peak-to-Average Ratio	12
3.6 99% Occupied Bandwidth and 26dB Bandwidth Measurement.....	13
3.7 Conducted Band Edge	14
3.8 Conducted Spurious Emission	15
3.9 Frequency Stability	16
4 RADIATED TEST ITEMS	17
4.1 Measuring Instruments.....	17
4.2 Test Setup	17
4.3 Test Result of Radiated Test.....	17
4.4 Field Strength of Spurious Radiation Measurement	18
5 LIST OF MEASURING EQUIPMENT	19
6 UNCERTAINTY OF EVALUATION	20
APPENDIX A. TEST RESULTS OF CONDUCTED TEST	
APPENDIX B. TEST RESULTS OF RADIATED TEST	
APPENDIX C. TEST SETUP PHOTOGRAPHS	



REVISION HISTORY

REPORT NO.	VERSION	DESCRIPTION	ISSUED DATE
FG813035A	Rev. 01	Initial issue of report	Mar. 02, 2018

SUMMARY OF TEST RESULT

Report Section	FCC Rule	Description	Limit	Result	Remark
3.4	§2.1046	Conducted Output Power	Reporting Only	PASS	-
	§22.913(a)(2)	Effective Radiated Power	< 7 Watts	PASS	-
	§24.232(c)	Equivalent Isotropic Radiated Power	< 2 Watts	PASS	-
	§27.50(d)(4)	Equivalent Isotropic Radiated Power	< 1 Watts	PASS	-
3.5	§24.232(d)	Peak-to-Average Ratio	< 13 dB	PASS	-
3.6	§2.1049 §22.917(b) §24.238(b) §27.53(g) §90.209	Occupied Bandwidth	Reporting Only	PASS	-
3.7	§2.1051 §22.917(a) §24.238(a) §27.53(h) §90.691	Band Edge Measurement	< 43+10log10(P[Watts])	PASS	-
3.8	§2.1051 §22.917(a) §24.238(a) §27.53(h) §90.691	Conducted Emission	< 43+10log10(P[Watts])	PASS	-
3.9	§2.1055 §22.355	Frequency Stability for Temperature & Voltage	< 2.5 ppm for Part 22	PASS	-
	§2.1055 §24.235 §27.54		Within Authorized Band		
4.4	§2.1053 §22.917(a) §24.238(a) §27.53(h) §90.691	Field Strength of Spurious Radiation	< 43+10log10(P[Watts])	PASS	Under limit 16.48 dB at 2504.000 MHz



1 General Description

1.1 Applicant

Huawei Technologies Co., Ltd

Administration Building, Headquarters of Huawei Technologies Co., Ltd.,
Bantian, Longgang District, Shenzhen, 518129, P.R.C

1.2 Manufacturer

Huawei Technologies Co., Ltd

Administration Building, Headquarters of Huawei Technologies Co., Ltd.,
Bantian, Longgang District, Shenzhen, 518129, P.R.C

1.3 Product Feature of Equipment Under Test

GSM/WCDMA/LTE, Bluetooth, Wi-Fi 2.4GHz 802.11b/g/n, Wi-Fi 5GHz 802.11a/n/ac, NFC, and GNSS.

Product Specification subjective to this standard	
Antenna Type	WWAN: <Up Ant.>: PIFA Antenna <Down Ant.>: PIFA Antenna WLAN: Left-hand Type Antenna Bluetooth: Left-hand Type Antenna GPS / Glonass / Galileo / BDS: Left-hand Type Antenna NFC: Loop Antenna

1.4 Modification of EUT

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

1.5 Testing Location

Sporton Lab is accredited to ISO 17025 by Taiwan Accreditation Foundation (TAF code : 1190) and the FCC designation No. TW1190 and TW0007 under the FCC 2.948(e) by Mutual Recognition Agreement (MRA) in FCC Test.

Test Site	SPORTON INTERNATIONAL INC.
Test Site Location	No. 52, Hwa Ya 1 st Rd., Hwa Ya Technology Park, Kwei-Shan District, Tao Yuan City, Taiwan, R.O.C. TEL: +886-3-327-3456 FAX: +886-3-328-4978
Test Site No.	Sporton Site No.
	TH03-HY

Test Site	SPORTON INTERNATIONAL INC.
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Test Site No.	Sporton Site No.
	03CH11-HY

1.6 Applicable Standards

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

- 47 CFR Part 2, 22(H), 24(E), 27(L)
- ANSI / TIA-603-E
- FCC KDB 971168 D01 Power Meas. License Digital Systems v03
- FCC KDB 412172 D01 Determining ERP and EIRP v01r01

Remark: All test items were verified and recorded according to the standards and without any deviation during the test.

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 v03 with maximum output power.

Radiated measurements were performed with rotating EUT in different three orthogonal test planes to find the maximum emission.

Radiated emissions were investigated as following frequency range:

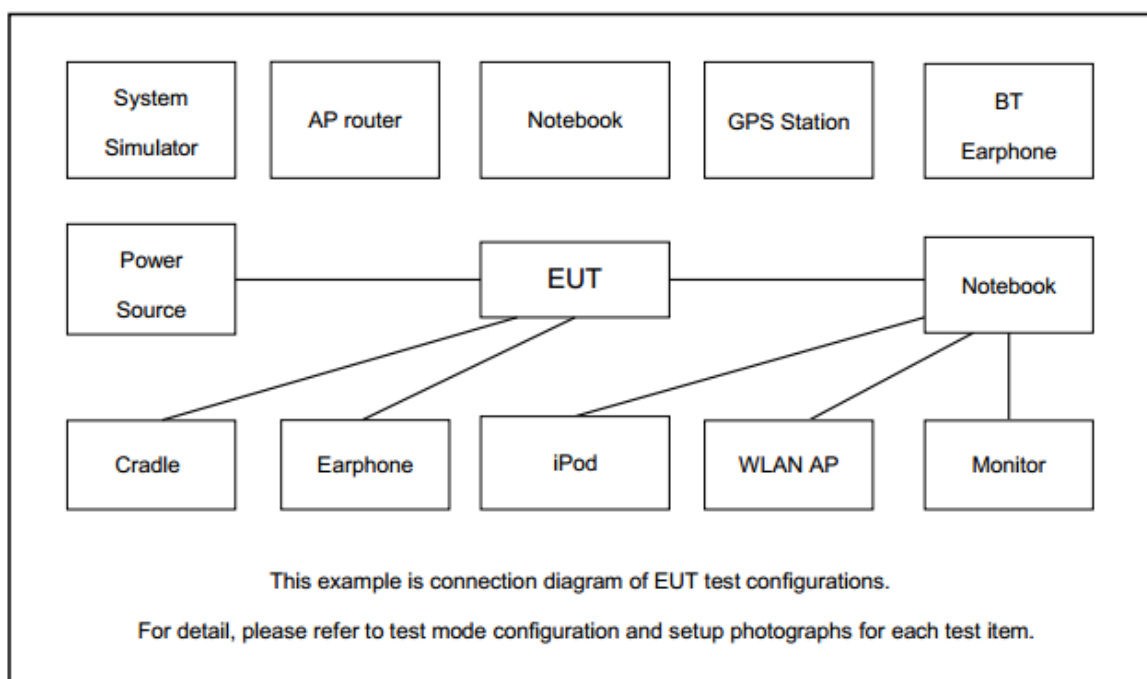
1. 30 MHz to 9000 MHz for GSM850 and WCDMA Band V.
2. 30 MHz to 18000 MHz for WCDMA Band IV.
3. 30 MHz to 19100 MHz for GSM1900 and WCDMA Band II.

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

2.4 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 :

$$\begin{aligned}
 \text{Offset(dB)} &= \text{RF cable loss(dB)} + \text{attenuator factor(dB)}. \\
 &= 4.2 + 10 = 14.2 \text{ (dB)}
 \end{aligned}$$



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
	Frequency	817.9	820.5	823.1

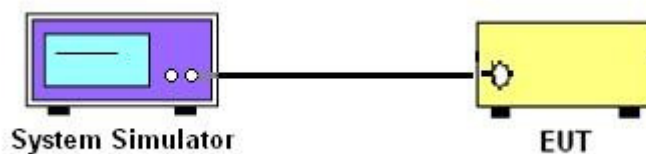
3 Conducted Test Result

3.1 Measuring Instruments

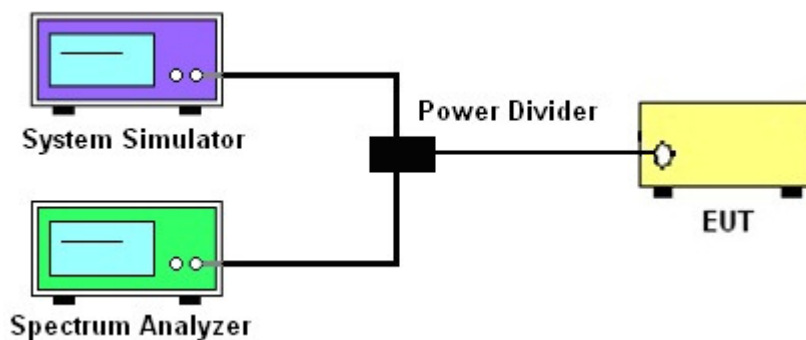
See list of measuring instruments of this test report.

3.2 Test Setup

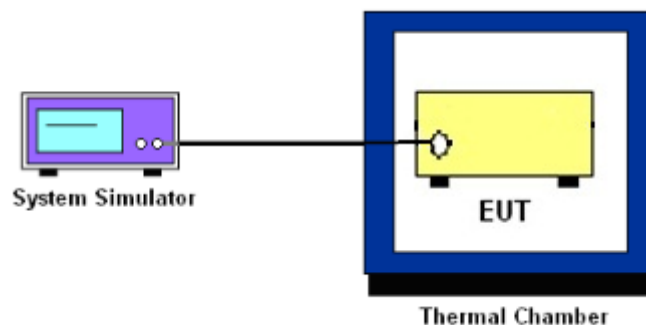
3.2.1 Conducted Output Power



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



3.2.3 Frequency Stability



3.3 Test Result of Conducted Test

Please refer to Appendix A.

3.4 Conducted Output Power and ERP/EIRP

3.4.1 Description of the Conducted Output Power and ERP/EIRP

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.

The ERP of mobile transmitters must not exceed 7 Watts for GSM850 and WCDMA Band V.

The EIRP of mobile transmitters must not exceed 2 Watts for GSM1900 and WCDMA Band II.

The EIRP of mobile transmitters must not exceed 1 Watts for WCDMA Band IV.

According to KDB 412172 D01 Power Approach,

$EIRP = P_T + G_T - L_C$, $ERP = EIRP - 2.15$, where

P_T = transmitter output power in dBm

G_T = gain of the transmitting antenna in dBi

L_C = signal attenuation in the connecting cable between the transmitter and antenna in dB

3.4.2 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.



3.5 Peak-to-Average Ratio

3.5.1 Description of the PAR Measurement

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

3.5.2 Test Procedures

1. The testing follows FCC KDB 971168 D01 v03 Section 5.7.1.
2. The EUT was connected to spectrum analyzer and system simulator via a power divider.
3. Set EUT to transmit at maximum output power.
4. When the duty cycle is less than 98%, then signal gating will be implemented on the spectrum analyzer by triggering from the system simulator.
5. Set the CCDF (Complementary Cumulative Distribution Function) option of the spectrum analyzer.
Record the maximum PAPR level associated with a probability of 0.1%.

3.6 99% Occupied Bandwidth and 26dB Bandwidth Measurement

3.6.1 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.

3.6.2 Test Procedures

1. The testing follows FCC KDB 971168 v03 Section 4.2.
2. The EUT was connected to spectrum analyzer and system simulator via a power divider.
3. 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.
4. 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.
5. Set the detection mode to peak, and the trace mode to max hold.
6. 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)
7. Determine the “-26 dB down amplitude” as equal to (Reference Value – X).
8. 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.
9. Use the 99 % power bandwidth function of the spectrum analyzer and report the measured bandwidth.



3.7 Conducted Band Edge

3.7.1 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.

3.7.2 Test Procedures

1. The testing follows FCC KDB 971168 D01 v03 Section 6.0.
2. The EUT was connected to the spectrum analyzer and system simulator via a power divider.
3. 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.
4. The band edges of low and high channels for the highest RF powers were measured.
5. The RF fundamental frequency should be excluded against the limit line in the operating frequency band.
6. The limit line is derived from $43 + 10\log(P)$ dB below the transmitter power P(Watts)

3.8 Conducted Spurious Emission

3.8.1 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 10th harmonic.

3.8.2 Test Procedures

1. The testing follows FCC KDB 971168 D01 v03 Section 6.0.
2. The EUT was connected to the spectrum analyzer and system simulator via a power divider.
3. 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.
4. The middle channel for the highest RF power within the transmitting frequency was measured.
5. The conducted spurious emission for the whole frequency range was taken.
6. The RF fundamental frequency should be excluded against the limit line in the operating frequency band.
7. The limit line is derived from $43 + 10\log(P)$ dB below the transmitter power P(Watts)

3.9 Frequency Stability

3.9.1 Description of Frequency Stability Measurement

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

3.9.2 Test Procedures for Temperature Variation

1. The testing follows FCC KDB 971168 D01 v03 Section 9.0.
2. The EUT was set up in the thermal chamber and connected with the system simulator.
3. 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.
4. 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.

3.9.3 Test Procedures for Voltage Variation

1. The testing follows FCC KDB 971168 D01 v03 Section 9.0.
2. The EUT was placed in a temperature chamber at $20 \pm 5^{\circ}\text{C}$ and connected with the system simulator.
3. The power supply voltage to the EUT was varied from 85% to 115% of the nominal value measured at the input to the EUT.
4. The variation in frequency was measured for the worst case.

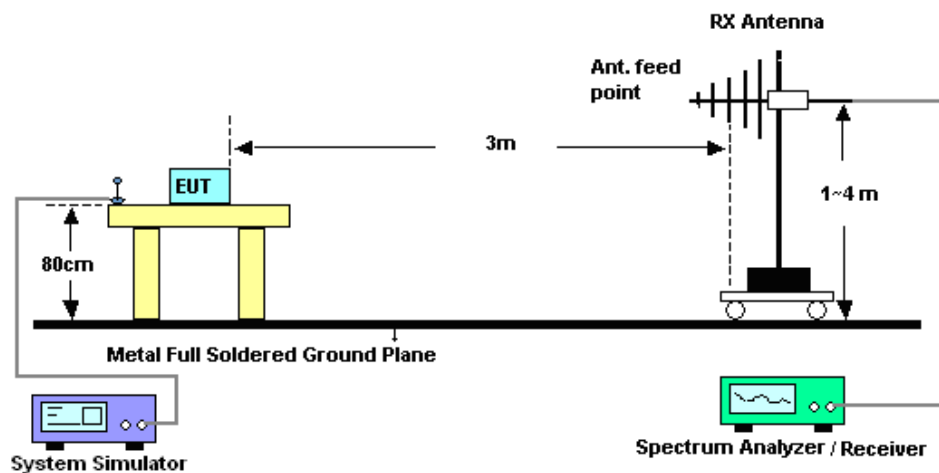
4 Radiated Test Items

4.1 Measuring Instruments

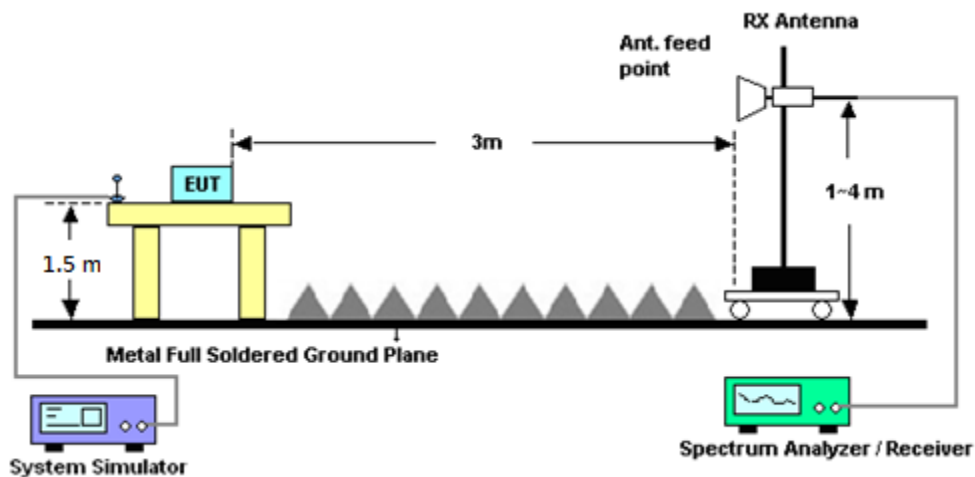
See list of measuring instruments of this test report.

4.2 Test Setup

4.2.1 For radiated test from 30MHz to 1GHz



4.2.2 For radiated test above 1GHz



4.3 Test Result of Radiated Test

Please refer to Appendix B.

4.4 Field Strength of Spurious Radiation Measurement

4.4.1 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.

4.4.2 Test Procedures

1. The testing follows FCC KDB 971168 D01 v03 Section 5.8 and ANSI / TIA-603-D-2010 Section 2.2.12.
2. 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.
3. The EUT was set 3 meters from the receiving antenna, which was mounted on the antenna tower.
4. The table was rotated 360 degrees to determine the position of the highest spurious emission.
5. 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.
6. Make the measurement with the spectrum analyzer's RBW = 1MHz, VBW = 3MHz, taking record of maximum spurious emission.
7. A horn antenna was substituted in place of the EUT and was driven by a signal generator.
8. Tune the output power of signal generator to the same emission level with EUT maximum spurious emission.
9. Taking the record of output power at antenna port.
10. Repeat step 7 to step 8 for another polarization.
11. $EIRP \text{ (dBm)} = S.G. \text{ Power} - Tx \text{ Cable Loss} + Tx \text{ Antenna Gain}$
12. $ERP \text{ (dBm)} = EIRP - 2.15$
13. The RF fundamental frequency should be excluded against the limit line in the operating frequency band.
14. The limit line is derived from $43 + 10\log(P)$ 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. 26, 2017	Feb 08, 2018	Jun. 25, 2018	Conducted (TH03-HY)
Temperature Chamber	ESPEC	SU-641	92013721	-30℃ ~70℃	Nov. 16, 2016	Feb 08, 2018	Nov. 15, 2018	Conducted (TH03-HY)
Programmable Power Supply	GW Instek	PSS-2005	EL883644	Voltage:0~20V;Current:0~5A	Nov. 22, 2016	Feb 08, 2018	Nov. 21, 2018	Conducted (TH03-HY)
Base Station (Measure)	Rohde & Schwarz	CMU200	117995	GSM / GPRS / WCDMA / CDMA	Aug. 09, 2017	Feb 08, 2018	Aug. 08, 2018	Conducted (TH03-HY)
Amplifier	MITEQ	TTA1840-35-HG	1871923	18GHz~40GHz, VSWR : 2.5:1 max	Jul. 18, 2017	Feb. 08, 2018~Feb. 11, 2018	Jul. 17, 2018	Radiation (03CH11-HY)
Amplifier	SONOMA	310N	187312	9kHz~1GHz	Nov. 10, 2016	Feb. 08, 2018~Feb. 11, 2018	Nov. 09, 2018	Radiation (03CH11-HY)
Bilog Antenna	TESEQ	CBL 6111D&N-6	35414&AT-N0602	30MHz~1GHz	Oct. 14, 2017	Feb. 08, 2018~Feb. 11, 2018	Oct. 13, 2018	Radiation (03CH11-HY)
Horn Antenna	SCHWARZBECK	BBHA 9120D	9120D-1326	1GHz ~ 18GHz	Oct. 16, 2017	Feb. 08, 2018~Feb. 11, 2018	Oct. 15, 2018	Radiation (03CH11-HY)
Horn Antenna	SCHWARZBECK	BBHA 9120D	9120D-1522	1GHz ~ 18GHz	Mar. 17, 2017	Feb. 08, 2018~Feb. 11, 2018	Mar. 16, 2018	Radiation (03CH11-HY)
Loop Antenna	Rohde & Schwarz	HFH2-Z2	100488	9 kHz~30 MHz	Nov. 23, 2017	Feb. 08, 2018~Feb. 11, 2018	Nov. 22, 2019	Radiation (03CH11-HY)
Preamplifier	Keysight	83017A	MY53270080	1GHz~26.5GHz	Nov. 10, 2016	Feb. 08, 2018~Feb. 11, 2018	Nov. 09, 2018	Radiation (03CH11-HY)
Spectrum Analyzer	Keysight	N9010A	MY54200486	10Hz ~ 44GHz	Oct. 19, 2017	Feb. 08, 2018~Feb. 11, 2018	Oct. 18, 2018	Radiation (03CH11-HY)
Filter	Wainwright	WHKX12-1080-1200-150	SN2	1.2G High Pass	Sep. 18, 2017	Feb. 08, 2018~Feb. 11, 2018	Sep. 17, 2018	Radiation (03CH11-HY)
Filter	Wainwright	WHKX12-2700-3000-180	SN3	2.7G High Pass	Sep. 18, 2017	Feb. 08, 2018~Feb. 11, 2018	Sep. 17, 2018	Radiation (03CH11-HY)
Antenna Mast	EMEC	AM-BS-4500-B	N/A	1~4m	N/A	Feb. 08, 2018~Feb. 11, 2018	N/A	Radiation (03CH11-HY)
Turn Table	EMEC	TT 2000	N/A	0~360 Degree	N/A	Feb. 08, 2018~Feb. 11, 2018	N/A	Radiation (03CH11-HY)
EMI Test Receiver	Keysight	N9038A(MXE)	MY57290111	3Hz~26.5GHz	Nov. 02, 2017	Feb. 08, 2018~Feb. 11, 2018	Nov. 01, 2018	Radiation (03CH11-HY)
SHF-EHF Horn Antenna	SCHWARZBECK	BBHA 9170	BBHA9170576	18GHz- 40GHz	Apr. 27, 2017	Feb. 08, 2018~Feb. 11, 2018	Apr. 26, 2018	Radiation (03CH11-HY)
SHF-EHF Horn Antenna	SCHWARZBECK	BBHA 9170	BBHA9170584	18GHz- 40GHz	Nov. 27, 2017	Feb. 08, 2018~Feb. 11, 2018	Nov. 26, 2018	Radiation (03CH11-HY)



6 Uncertainty of Evaluation

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

Measuring Uncertainty for a Level of Confidence of 95% ($U = 2Uc(y)$)	5.20
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Uncertainty of Radiated Emission Measurement (1 GHz ~ 18 GHz)

Measuring Uncertainty for a Level of Confidence of 95% ($U = 2Uc(y)$)	5.50
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Uncertainty of Radiated Emission Measurement (18 GHz ~ 40 GHz)

Measuring Uncertainty for a Level of Confidence of 95% ($U = 2Uc(y)$)	5.20
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Appendix A. Test Results of Conducted Test

Conducted Output Power(Average power)

<For Up Antenna>

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
GSM	31.36	31.32	31.35	29.42	29.46	29.47
GPRS class 8	31.35	31.30	31.33	29.40	29.45	29.46
GPRS class 10	28.38	28.34	28.41	26.11	25.95	26.02
GPRS class 11	26.66	26.63	26.68	24.16	24.01	24.07
GPRS class 12	25.48	25.47	25.50	22.95	22.80	22.85
EGPRS class 8	26.52	26.44	26.58	24.93	24.68	25.55
EGPRS class 10	23.47	23.47	23.51	21.61	21.40	21.69
EGPRS class 11	21.46	21.54	21.62	19.70	19.40	19.68
EGPRS class 12	20.17	20.10	20.28	18.32	18.24	18.43

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	23.31	23.24	23.23	22.73	22.84	22.82
HSDPA Subtest-1	22.73	22.66	22.59	22.07	22.22	22.10
HSDPA Subtest-2	22.22	22.17	22.16	21.26	21.46	21.35
HSDPA Subtest-3	21.85	21.74	21.74	20.74	20.95	20.78
HSDPA Subtest-4	21.78	21.75	21.75	20.79	20.95	20.78
HSUPA Subtest-1	22.50	21.90	22.39	20.50	20.71	20.51
HSUPA Subtest-2	19.76	19.91	19.76	18.55	18.16	17.68
HSUPA Subtest-3	20.54	20.89	20.51	19.19	18.85	19.19
HSUPA Subtest-4	19.46	20.00	19.63	18.25	18.77	18.40
HSUPA Subtest-5	23.20	23.10	23.20	22.60	22.60	22.50

Conducted Power (*Unit: dBm)			
Band	WCDMA Band IV		
Channel	1312	1413	1513
Frequency	1712.4	1732.6	1752.6
RMC 12.2K	22.98	22.94	22.97
HSDPA Subtest-1	22.14	22.33	22.36
HSDPA Subtest-2	21.38	21.52	21.61
HSDPA Subtest-3	20.92	21.00	21.07
HSDPA Subtest-4	20.85	21.01	21.08
HSUPA Subtest-1	20.52	20.83	21.11
HSUPA Subtest-2	18.33	18.75	18.39
HSUPA Subtest-3	19.14	19.52	19.10
HSUPA Subtest-4	18.19	18.63	18.10
HSUPA Subtest-5	22.60	22.80	22.80



<For Down Antenna>

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
GSM	31.73	31.74	31.82	30.03	30.11	30.35
GPRS class 8	31.72	31.73	31.81	30.02	30.10	30.34
GPRS class 10	28.85	28.66	28.88	26.85	26.87	26.94
GPRS class 11	27.00	26.98	27.02	24.63	24.75	24.90
GPRS class 12	25.86	25.82	25.89	23.45	23.61	23.74
EGPRS class 8	26.16	26.13	26.03	25.06	25.24	25.40
EGPRS class 10	23.24	23.01	23.06	21.92	22.00	22.09
EGPRS class 11	21.26	21.15	21.05	19.90	20.08	20.25
EGPRS class 12	19.96	19.85	19.65	18.62	18.80	18.84

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	23.37	23.30	23.31	24.01	24.02	24.00
HSDPA Subtest-1	22.75	22.70	22.71	23.22	23.30	23.30
HSDPA Subtest-2	22.29	22.23	22.24	22.47	22.51	22.50
HSDPA Subtest-3	21.89	21.83	21.82	21.93	21.99	21.99
HSDPA Subtest-4	21.90	21.86	21.82	21.99	21.97	22.01
HSUPA Subtest-1	22.09	22.17	22.12	21.84	22.00	21.97
HSUPA Subtest-2	19.77	19.21	19.28	19.19	19.26	19.13
HSUPA Subtest-3	20.14	20.86	20.27	20.67	20.70	20.66
HSUPA Subtest-4	19.29	19.90	19.39	19.85	19.90	19.64
HSUPA Subtest-5	23.30	23.20	23.20	23.70	23.80	23.80

Conducted Power (*Unit: dBm)			
Band	WCDMA Band IV		
Channel	1312	1413	1513
Frequency	1712.4	1732.6	1752.6
RMC 12.2K	23.37	23.35	23.30
HSDPA Subtest-1	22.45	22.43	22.45
HSDPA Subtest-2	21.69	21.65	21.67
HSDPA Subtest-3	21.17	21.10	21.17
HSDPA Subtest-4	21.18	21.13	21.17
HSUPA Subtest-1	21.05	21.30	21.27
HSUPA Subtest-2	19.00	18.56	18.53
HSUPA Subtest-3	19.68	19.28	19.31
HSUPA Subtest-4	18.79	18.33	18.38
HSUPA Subtest-5	23.00	23.00	22.90

A2. GSM

<For Up Antenna>

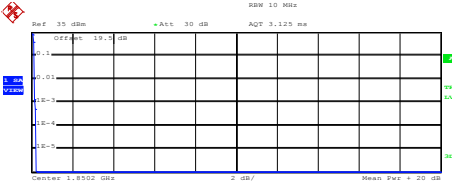
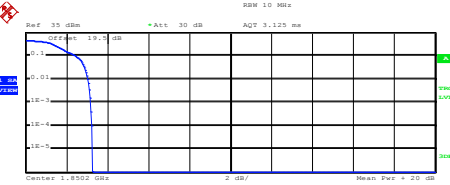
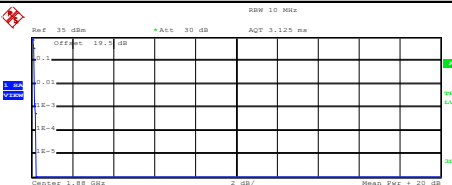
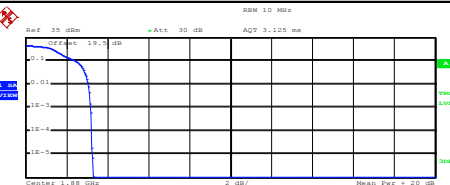
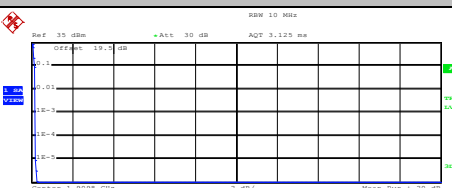
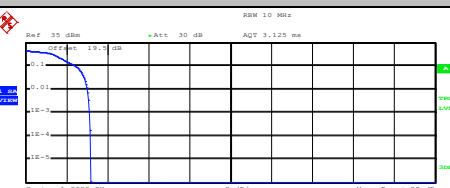
Peak-to-Average Ratio

Mode	GSM850		Limit: 13dB
Mod.	GSM	EDGE class 8	Result
Lowest CH	0.20	3.36	PASS
Middle CH	0.20	3.40	
Highest CH	0.20	3.24	

Mode	GSM1900		Limit: 13dB
Mod.	GSM	EDGE class 8	Result
Lowest CH	0.16	3.20	PASS
Middle CH	0.20	3.20	
Highest CH	0.20	3.12	



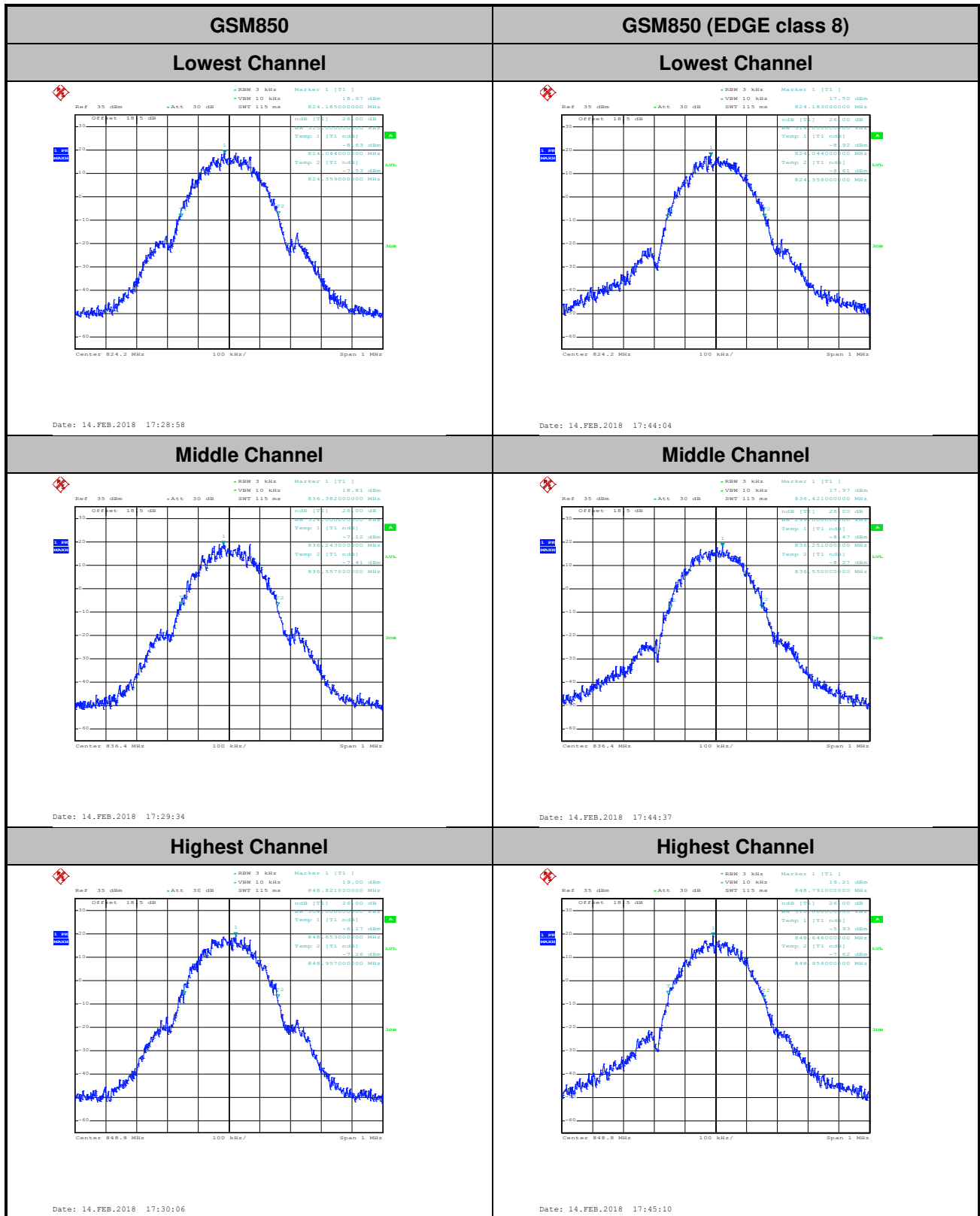
GSM850		GSM850 (EDGE class 8)	
Lowest Channel		Lowest Channel	
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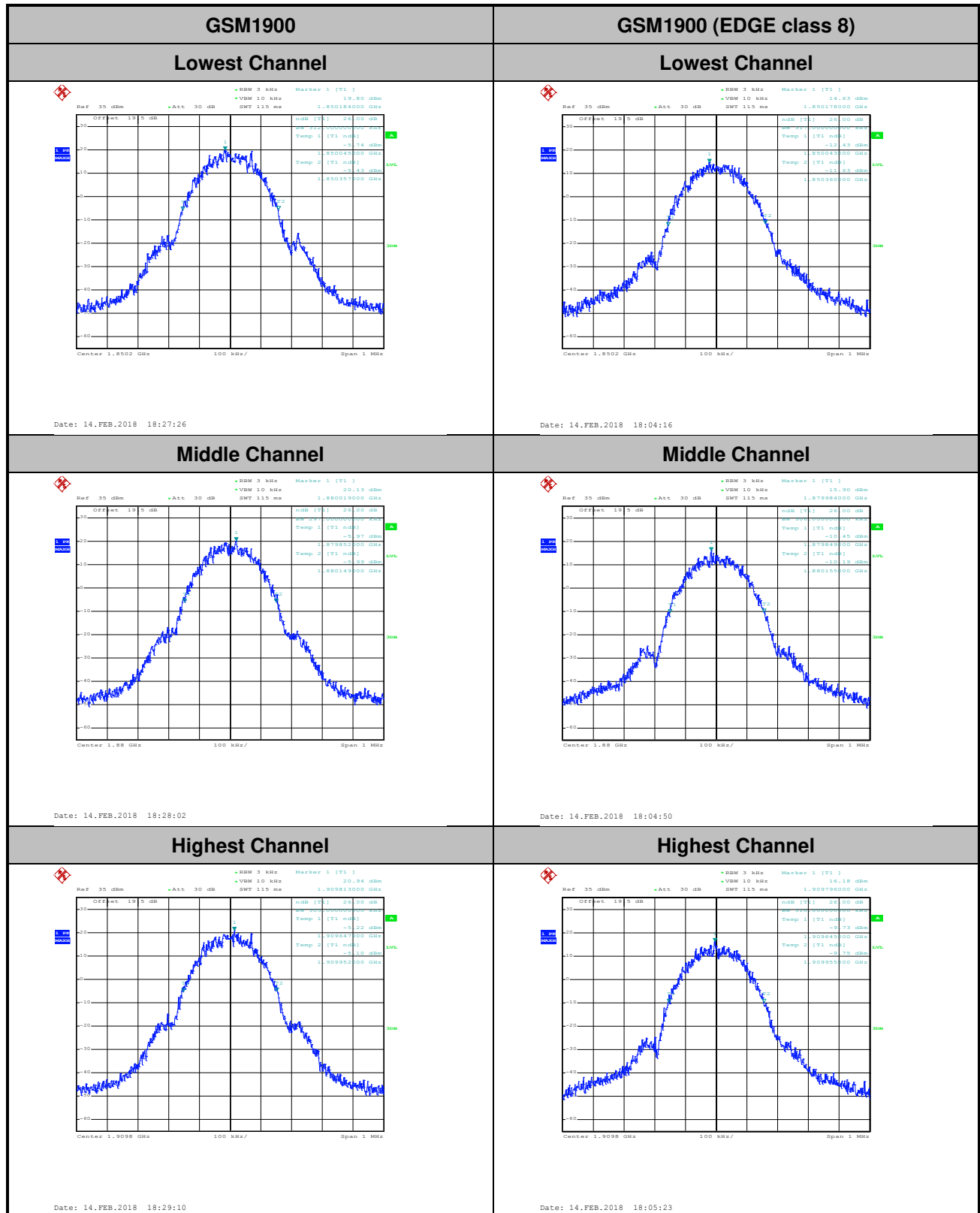
GSM1900	GSM1900 (EDGE class 8)																												
Lowest Channel	Lowest Channel																												
 Ref: 35 dBm Att: 30 dB AQT: 3.125 ms Center: 1.8502 GHz 2 dB/ Mean Pwr: +20 dB Complementary Cumulative Distribution Function (100000 samples) Trace 1 <table border="1"> <tr><td>Mean</td><td>27.38 dBm</td></tr> <tr><td>Peak</td><td>27.60 dBm</td></tr> <tr><td>Crest</td><td>0.22 dB</td></tr> </table> <table border="1"> <tr><td>10 %</td><td>0.16 dB</td></tr> <tr><td>1 %</td><td>0.16 dB</td></tr> <tr><td>.1 %</td><td>0.16 dB</td></tr> <tr><td>.01 %</td><td>0.24 dB</td></tr> </table> Date: 14.FEB.2018 18:25:37	Mean	27.38 dBm	Peak	27.60 dBm	Crest	0.22 dB	10 %	0.16 dB	1 %	0.16 dB	.1 %	0.16 dB	.01 %	0.24 dB	 Ref: 35 dBm Att: 30 dB AQT: 3.125 ms Center: 1.8502 GHz 2 dB/ Mean Pwr: +20 dB Complementary Cumulative Distribution Function (100000 samples) Trace 1 <table border="1"> <tr><td>Mean</td><td>22.45 dBm</td></tr> <tr><td>Peak</td><td>25.70 dBm</td></tr> <tr><td>Crest</td><td>3.25 dB</td></tr> </table> <table border="1"> <tr><td>10 %</td><td>2.44 dB</td></tr> <tr><td>1 %</td><td>3.04 dB</td></tr> <tr><td>.1 %</td><td>3.20 dB</td></tr> <tr><td>.01 %</td><td>3.24 dB</td></tr> </table> Date: 14.FEB.2018 18:02:58	Mean	22.45 dBm	Peak	25.70 dBm	Crest	3.25 dB	10 %	2.44 dB	1 %	3.04 dB	.1 %	3.20 dB	.01 %	3.24 dB
Mean	27.38 dBm																												
Peak	27.60 dBm																												
Crest	0.22 dB																												
10 %	0.16 dB																												
1 %	0.16 dB																												
.1 %	0.16 dB																												
.01 %	0.24 dB																												
Mean	22.45 dBm																												
Peak	25.70 dBm																												
Crest	3.25 dB																												
10 %	2.44 dB																												
1 %	3.04 dB																												
.1 %	3.20 dB																												
.01 %	3.24 dB																												
Middle Channel	Middle Channel																												
 Ref: 35 dBm Att: 30 dB AQT: 3.125 ms Center: 1.85 GHz 2 dB/ Mean Pwr: +20 dB Complementary Cumulative Distribution Function (100000 samples) Trace 1 <table border="1"> <tr><td>Mean</td><td>27.17 dBm</td></tr> <tr><td>Peak</td><td>27.39 dBm</td></tr> <tr><td>Crest</td><td>0.22 dB</td></tr> </table> <table border="1"> <tr><td>10 %</td><td>0.16 dB</td></tr> <tr><td>1 %</td><td>0.16 dB</td></tr> <tr><td>.1 %</td><td>0.20 dB</td></tr> <tr><td>.01 %</td><td>0.24 dB</td></tr> </table> Date: 14.FEB.2018 18:26:21	Mean	27.17 dBm	Peak	27.39 dBm	Crest	0.22 dB	10 %	0.16 dB	1 %	0.16 dB	.1 %	0.20 dB	.01 %	0.24 dB	 Ref: 35 dBm Att: 30 dB AQT: 3.125 ms Center: 1.85 GHz 2 dB/ Mean Pwr: +20 dB Complementary Cumulative Distribution Function (100000 samples) Trace 1 <table border="1"> <tr><td>Mean</td><td>22.47 dBm</td></tr> <tr><td>Peak</td><td>25.77 dBm</td></tr> <tr><td>Crest</td><td>3.30 dB</td></tr> </table> <table border="1"> <tr><td>10 %</td><td>2.44 dB</td></tr> <tr><td>1 %</td><td>3.08 dB</td></tr> <tr><td>.1 %</td><td>3.20 dB</td></tr> <tr><td>.01 %</td><td>3.24 dB</td></tr> </table> Date: 14.FEB.2018 18:03:15	Mean	22.47 dBm	Peak	25.77 dBm	Crest	3.30 dB	10 %	2.44 dB	1 %	3.08 dB	.1 %	3.20 dB	.01 %	3.24 dB
Mean	27.17 dBm																												
Peak	27.39 dBm																												
Crest	0.22 dB																												
10 %	0.16 dB																												
1 %	0.16 dB																												
.1 %	0.20 dB																												
.01 %	0.24 dB																												
Mean	22.47 dBm																												
Peak	25.77 dBm																												
Crest	3.30 dB																												
10 %	2.44 dB																												
1 %	3.08 dB																												
.1 %	3.20 dB																												
.01 %	3.24 dB																												
Highest Channel	Highest Channel																												
 Ref: 35 dBm Att: 30 dB AQT: 3.125 ms Center: 1.9098 GHz 2 dB/ Mean Pwr: +20 dB Complementary Cumulative Distribution Function (100000 samples) Trace 1 <table border="1"> <tr><td>Mean</td><td>27.77 dBm</td></tr> <tr><td>Peak</td><td>28.03 dBm</td></tr> <tr><td>Crest</td><td>0.26 dB</td></tr> </table> <table border="1"> <tr><td>10 %</td><td>0.16 dB</td></tr> <tr><td>1 %</td><td>0.20 dB</td></tr> <tr><td>.1 %</td><td>0.20 dB</td></tr> <tr><td>.01 %</td><td>0.20 dB</td></tr> </table> Date: 14.FEB.2018 18:26:44	Mean	27.77 dBm	Peak	28.03 dBm	Crest	0.26 dB	10 %	0.16 dB	1 %	0.20 dB	.1 %	0.20 dB	.01 %	0.20 dB	 Ref: 35 dBm Att: 30 dB AQT: 3.125 ms Center: 1.9098 GHz 2 dB/ Mean Pwr: +20 dB Complementary Cumulative Distribution Function (100000 samples) Trace 1 <table border="1"> <tr><td>Mean</td><td>22.68 dBm</td></tr> <tr><td>Peak</td><td>25.84 dBm</td></tr> <tr><td>Crest</td><td>3.16 dB</td></tr> </table> <table border="1"> <tr><td>10 %</td><td>2.44 dB</td></tr> <tr><td>1 %</td><td>3.00 dB</td></tr> <tr><td>.1 %</td><td>3.12 dB</td></tr> <tr><td>.01 %</td><td>3.16 dB</td></tr> </table> Date: 14.FEB.2018 18:03:33	Mean	22.68 dBm	Peak	25.84 dBm	Crest	3.16 dB	10 %	2.44 dB	1 %	3.00 dB	.1 %	3.12 dB	.01 %	3.16 dB
Mean	27.77 dBm																												
Peak	28.03 dBm																												
Crest	0.26 dB																												
10 %	0.16 dB																												
1 %	0.20 dB																												
.1 %	0.20 dB																												
.01 %	0.20 dB																												
Mean	22.68 dBm																												
Peak	25.84 dBm																												
Crest	3.16 dB																												
10 %	2.44 dB																												
1 %	3.00 dB																												
.1 %	3.12 dB																												
.01 %	3.16 dB																												

**26dB Bandwidth**

Mode	GSM850	
Mod.	GSM	EDGE class 8
Lowest CH	0.315	0.314
Middle CH	0.314	0.299
Highest CH	0.304	0.310

Mode	GSM1900	
Mod.	GSM	EDGE class 8
Lowest CH	0.312	0.317
Middle CH	0.297	0.306
Highest CH	0.305	0.310

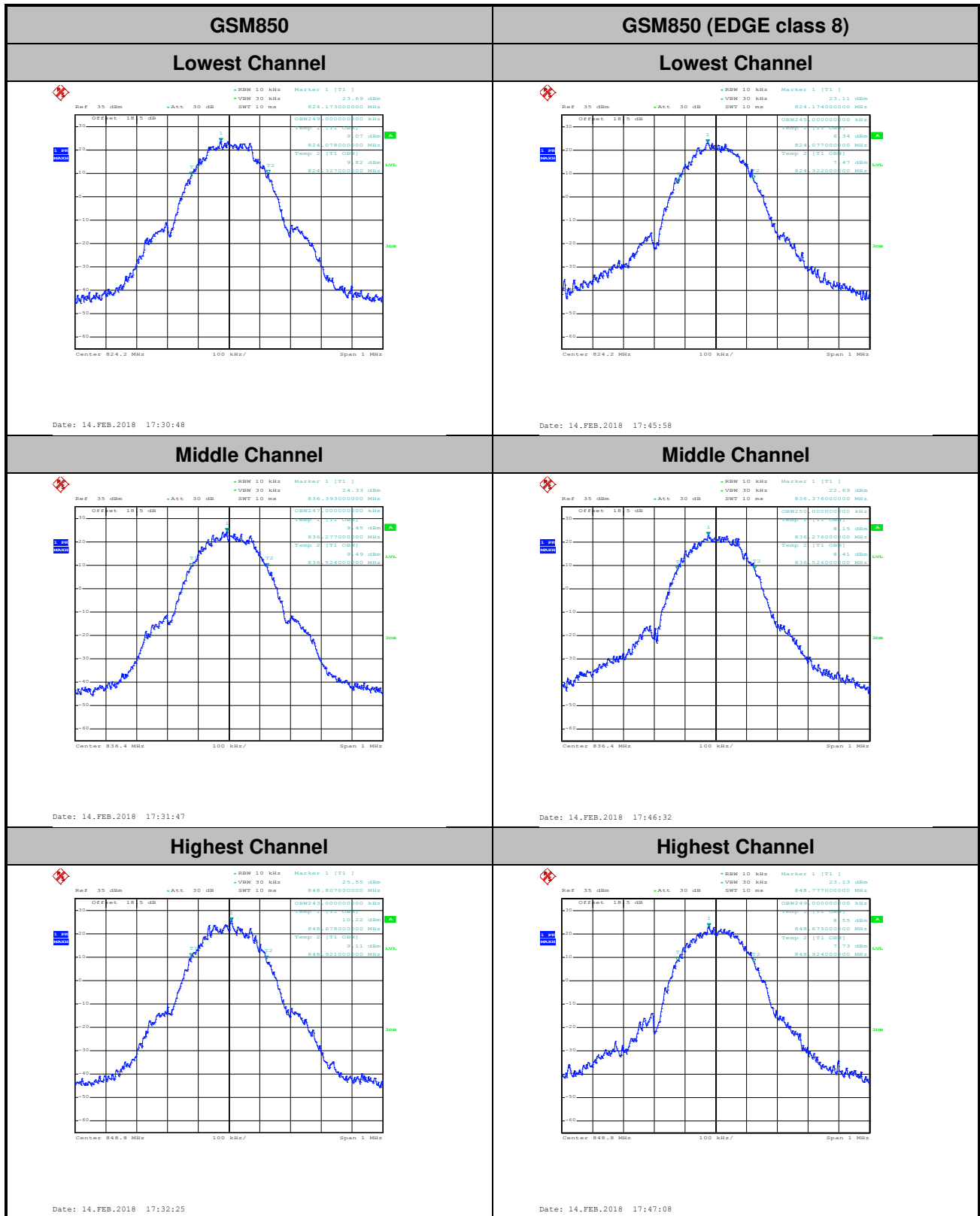


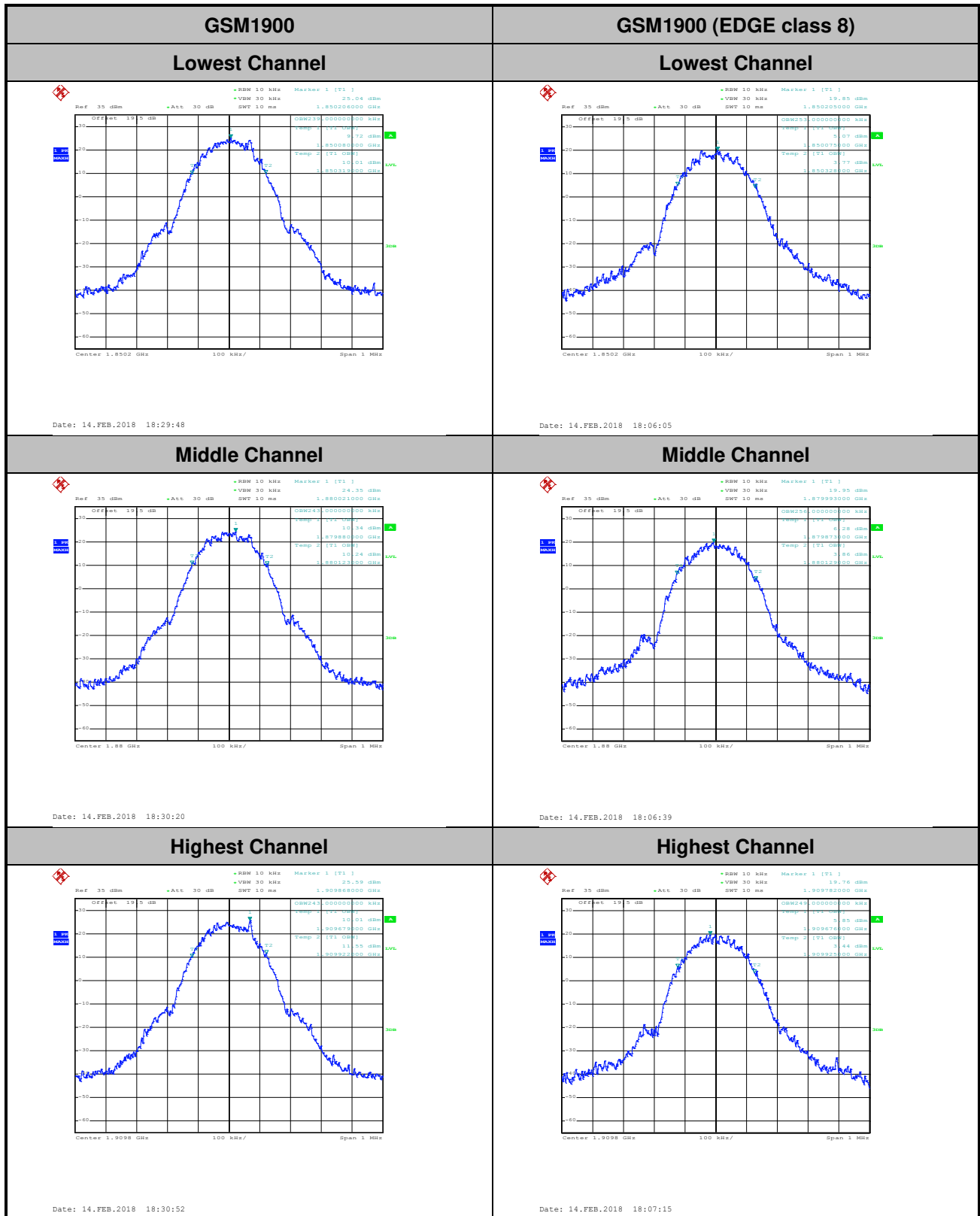


Occupied Bandwidth

Mode	GSM850	
Mod.	GSM	EDGE class 8
Lowest CH	0.249	0.245
Middle CH	0.247	0.250
Highest CH	0.243	0.249

Mode	GSM1900	
Mod.	GSM	EDGE class 8
Lowest CH	0.239	0.253
Middle CH	0.243	0.256
Highest CH	0.243	0.249





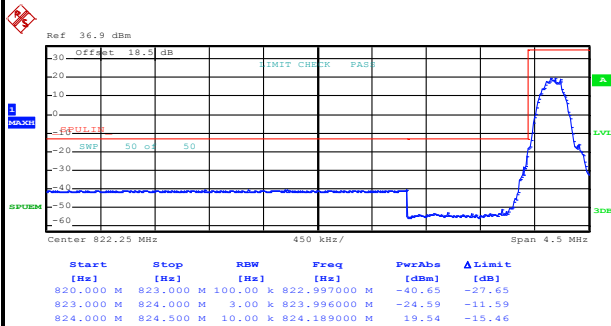


Conducted Band Edge



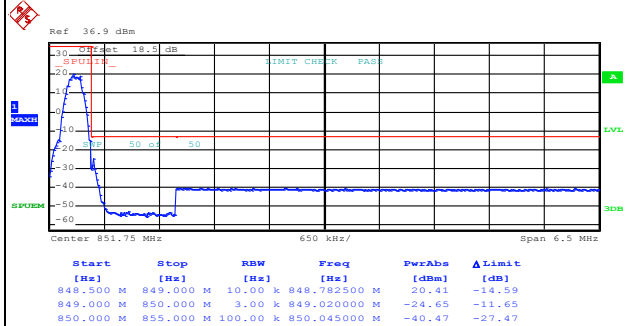
GSM850

Lowest Band Edge



Date: 14.FEB.2018 18:58:45

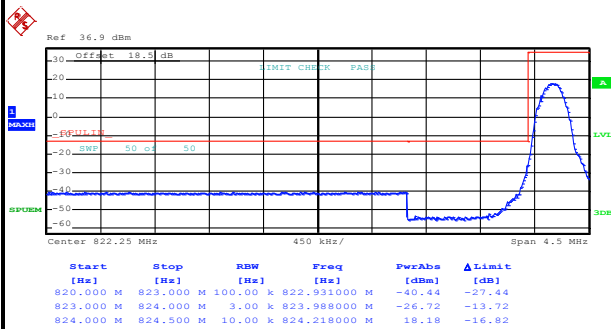
Highest Band Edge



Date: 14.FEB.2018 19:00:17

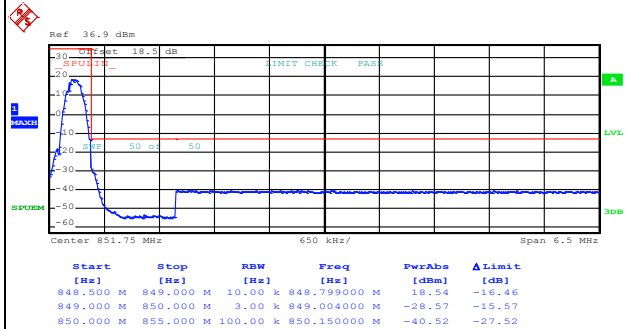
GSM850 (EDGE class 8)

Lowest Band Edge



Date: 14.FEB.2018 17:48:57

Highest Band Edge

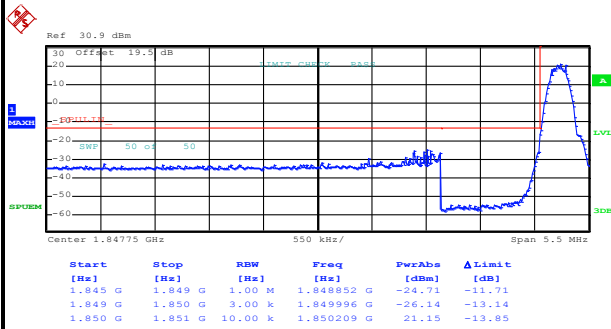


Date: 14.FEB.2018 17:50:31



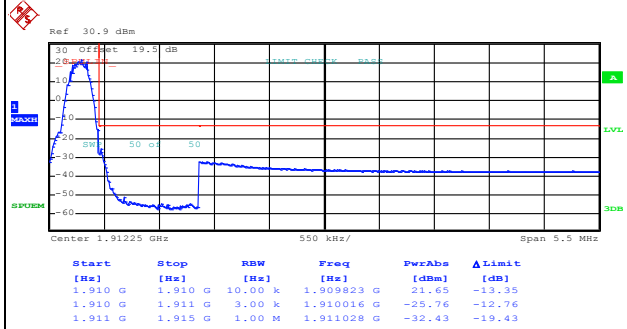
GSM1900

Lowest Band Edge



Date: 14.FEB.2018 18:32:25

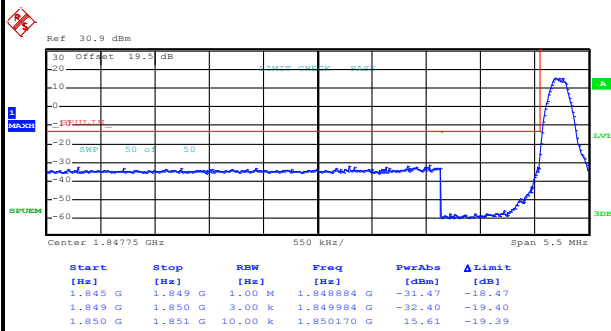
Highest Band Edge



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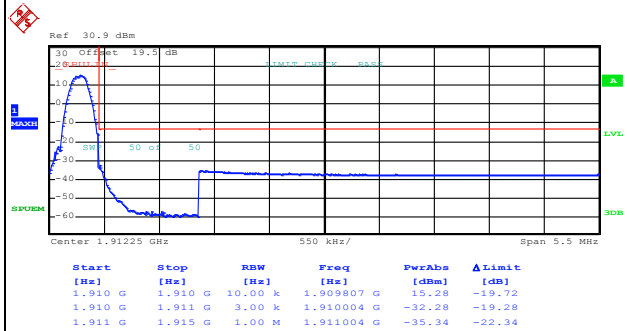
GSM1900 (EDGE class 8)

Lowest Band Edge



Date: 14.FEB.2018 18:15:13

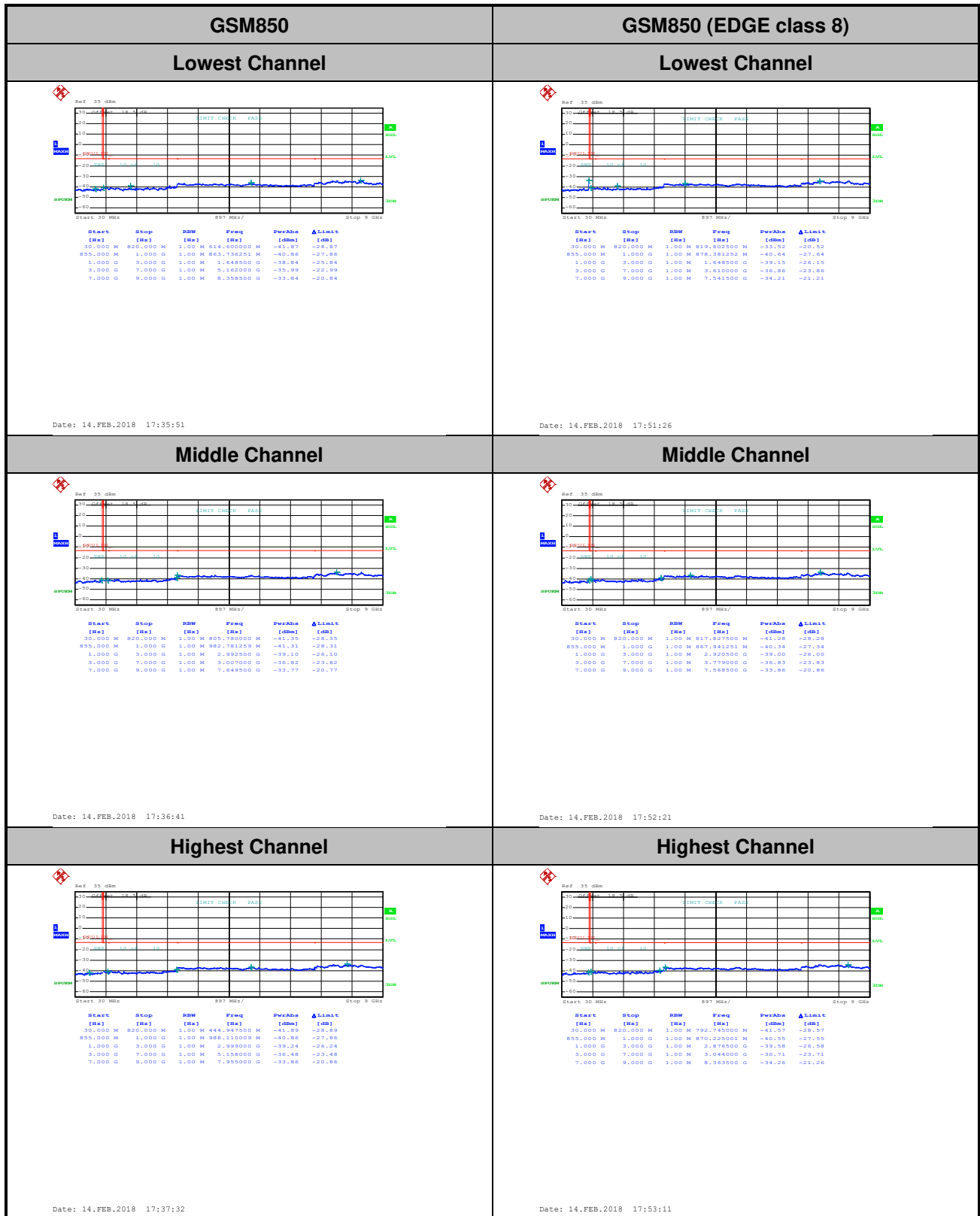
Highest Band Edge

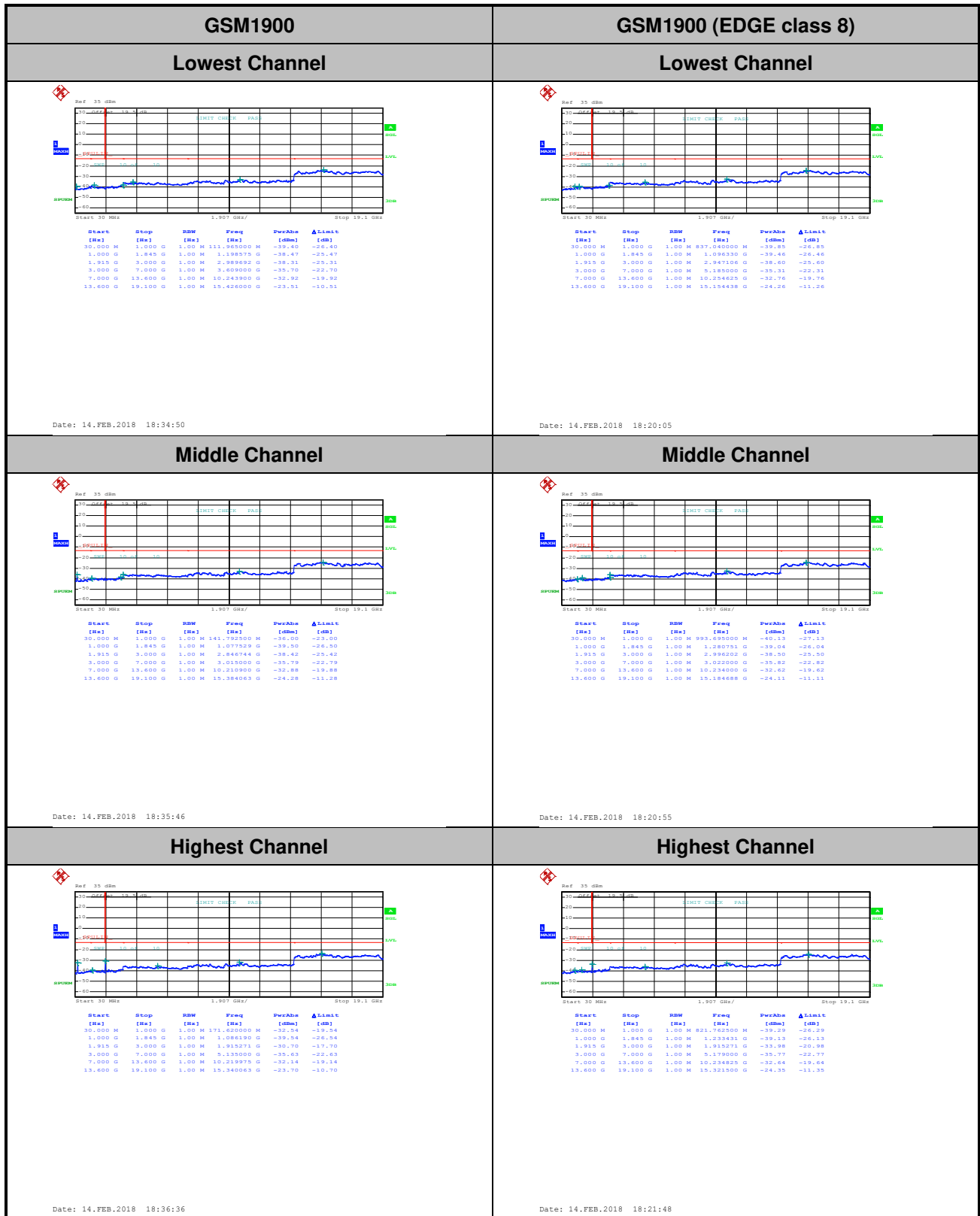


Date: 14.FEB.2018 18:17:22



Conducted Spurious Emission





**Frequency Stability**

Test Conditions	Middle Channel	GSM850 (GSM)	GSM850 (EDGE class 8)	Limit 2.5ppm
Temperature (°C)	Voltage (Volt)	Deviation (ppm)		Result
50	Normal Voltage	0.0072	0.0132	PASS
40	Normal Voltage	0.0048	0.0096	
30	Normal Voltage	0.0060	0.0072	
20(Ref.)	Normal Voltage	0.0000	0.0000	
10	Normal Voltage	0.0502	0.0060	
0	Normal Voltage	0.0454	0.0000	
-10	Normal Voltage	0.0454	0.0012	
-20	Normal Voltage	0.0418	0.0048	
-30	Normal Voltage	0.0466	0.0048	
20	Maximum Voltage	0.0012	0.0096	
20	Normal Voltage	0.0024	0.0000	
20	Battery End Point	0.0036	0.0108	



Test Conditions	Middle Channel	GSM1900 (GSM)	GSM1900 (EDGE class 8)	Limit Note 2.
Temperature (°C)	Voltage (Volt)	Deviation (ppm)		Result
50	Normal Voltage	0.0059	0.0096	PASS
40	Normal Voltage	0.0090	0.0011	
30	Normal Voltage	0.0069	0.0011	
20(Ref.)	Normal Voltage	0.0000	0.0000	
10	Normal Voltage	0.0005	0.0059	
0	Normal Voltage	0.0059	0.0043	
-10	Normal Voltage	0.0037	0.0021	
-20	Normal Voltage	0.0043	0.0064	
-30	Normal Voltage	0.0064	0.0069	
20	Maximum Voltage	0.0426	0.0027	
20	Normal Voltage	0.0032	0.0005	
20	Battery End Point	0.0096	0.0027	

Note:

1. Normal Voltage = 3.82 V. ; Battery End Point (BEP) = 3.6 V. ; Maximum Voltage =4.4 V
2. The frequency fundamental emissions stay within the authorized frequency block based on the frequency deviation measured is small.



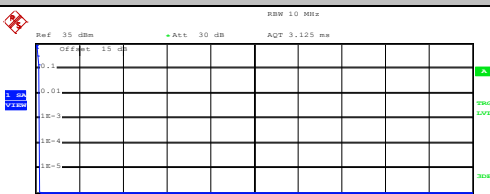
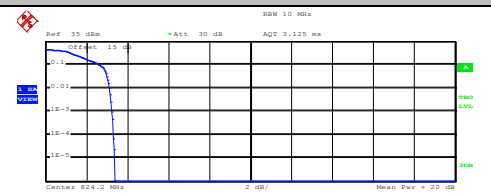
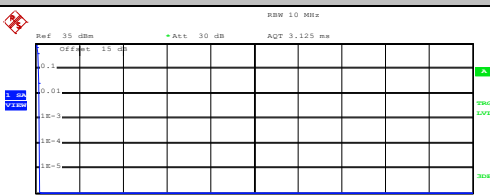
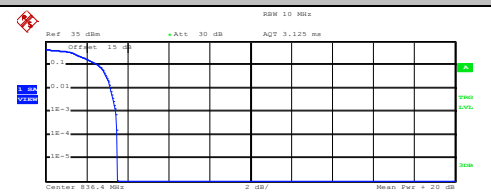
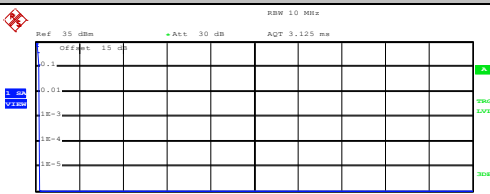
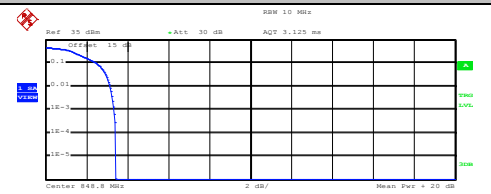


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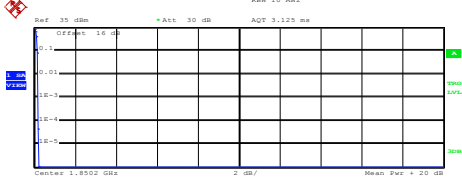
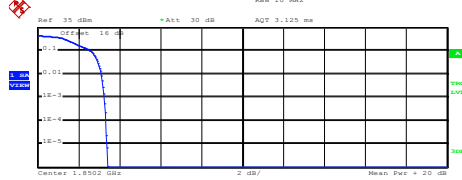
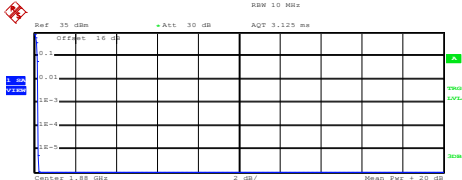
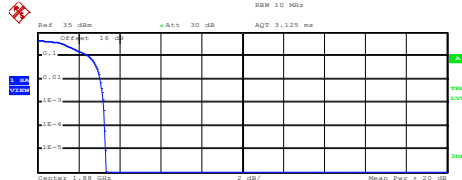
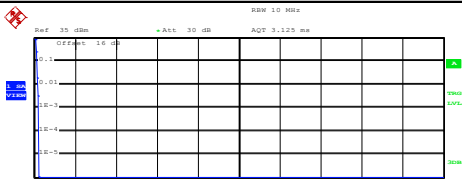
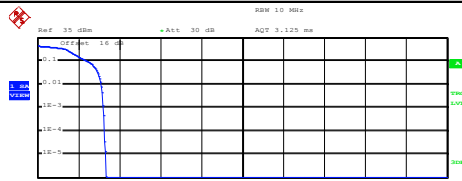
Peak-to-Average Ratio

Mode	GSM850		Limit: 13dB
Mod.	GPRS class 8	EDGE class 8	Result
Lowest CH	0.20	3.24	PASS
Middle CH	0.20	3.44	
Highest CH	0.20	3.36	

Mode	GSM1900		Limit: 13dB
Mod.	GPRS class 8	EDGE class 8	Result
Lowest CH	0.20	3.28	PASS
Middle CH	0.20	3.20	
Highest CH	0.24	3.20	

GSM850 (GPRS class 8)	GSM850 (EDGE class 8)
Lowest Channel	Lowest Channel
 Ref 35 dBm Att 30 dB AQT 3.125 ms Center 824.2 MHz 2 dB/ Mean Pwr + 20 dB Complementary Cumulative Distribution Function (100000 samples) Trace 1 Mean 30.38 dBm Peak 30.57 dBm Crest 0.19 dB 10 % 0.16 dB 1 % 0.20 dB .1 % 0.20 dB .01 % 0.20 dB Date: 8.FEB.2018 14:24:10	 Ref 35 dBm Att 30 dB AQT 3.125 ms Center 824.2 MHz 2 dB/ Mean Pwr + 20 dB Complementary Cumulative Distribution Function (100000 samples) Trace 1 Mean 25.08 dBm Peak 28.45 dBm Crest 3.38 dB 10 % 2.64 dB 1 % 3.12 dB .1 % 3.24 dB .01 % 3.32 dB Date: 8.FEB.2018 15:04:19
Middle Channel	Middle Channel
 Ref 35 dBm Att 30 dB AQT 3.125 ms Center 836.4 MHz 2 dB/ Mean Pwr + 20 dB Complementary Cumulative Distribution Function (100000 samples) Trace 1 Mean 30.41 dBm Peak 30.57 dBm Crest 0.16 dB 10 % 0.16 dB 1 % 0.20 dB .1 % 0.20 dB .01 % 0.20 dB Date: 8.FEB.2018 14:24:31	 Ref 35 dBm Att 30 dB AQT 3.125 ms Center 836.4 MHz 2 dB/ Mean Pwr + 20 dB Complementary Cumulative Distribution Function (100000 samples) Trace 1 Mean 24.62 dBm Peak 28.10 dBm Crest 3.48 dB 10 % 2.56 dB 1 % 3.16 dB .1 % 3.44 dB .01 % 3.48 dB Date: 8.FEB.2018 15:04:35
Highest Channel	Highest Channel
 Ref 35 dBm Att 30 dB AQT 3.125 ms Center 848.8 MHz 2 dB/ Mean Pwr + 20 dB Complementary Cumulative Distribution Function (100000 samples) Trace 1 Mean 30.46 dBm Peak 30.64 dBm Crest 0.18 dB 10 % 0.16 dB 1 % 0.20 dB .1 % 0.20 dB .01 % 0.20 dB Date: 8.FEB.2018 14:24:49	 Ref 35 dBm Att 30 dB AQT 3.125 ms Center 848.8 MHz 2 dB/ Mean Pwr + 20 dB Complementary Cumulative Distribution Function (100000 samples) Trace 1 Mean 24.67 dBm Peak 28.10 dBm Crest 3.43 dB 10 % 2.48 dB 1 % 3.16 dB .1 % 3.36 dB .01 % 3.44 dB Date: 8.FEB.2018 15:04:54

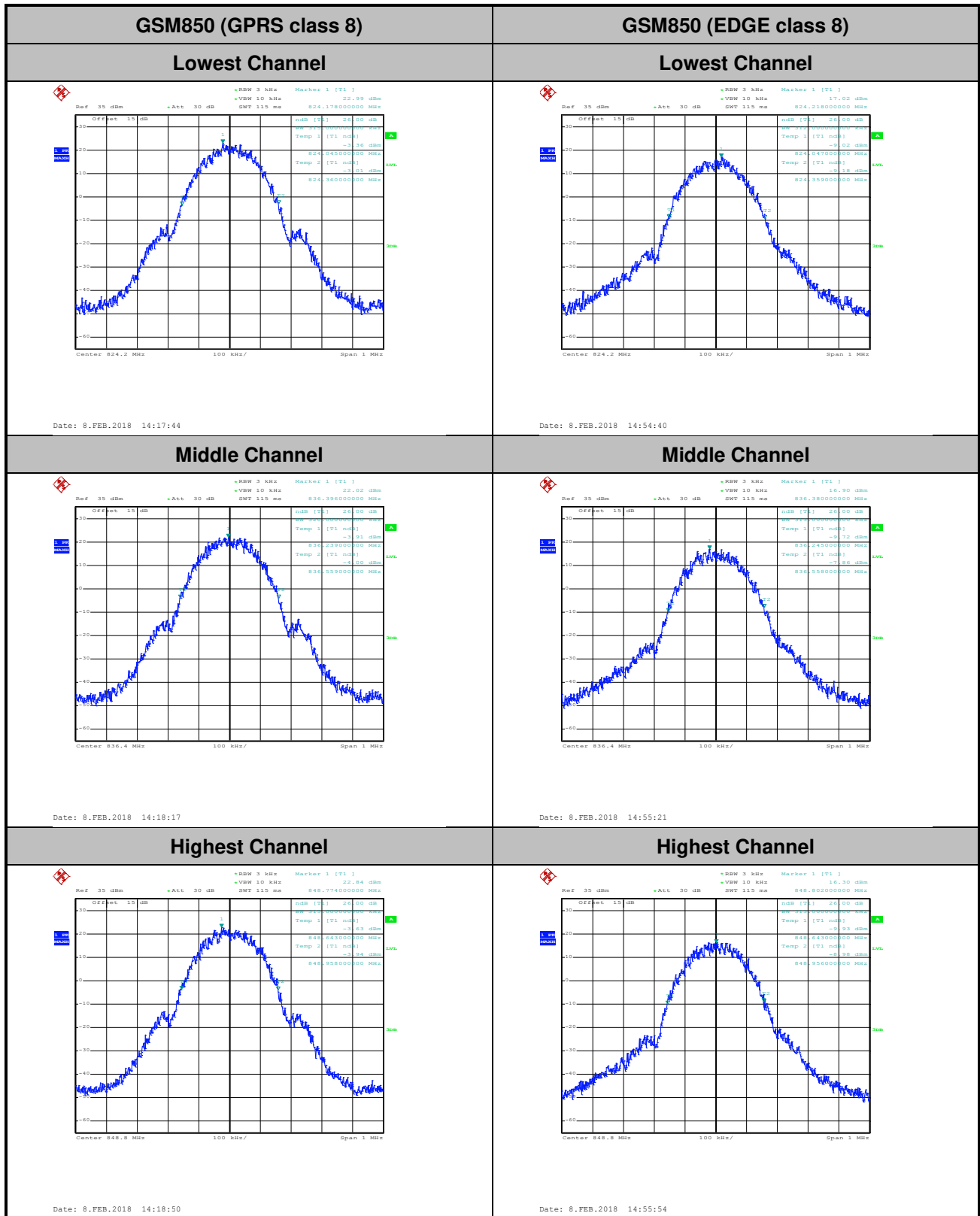


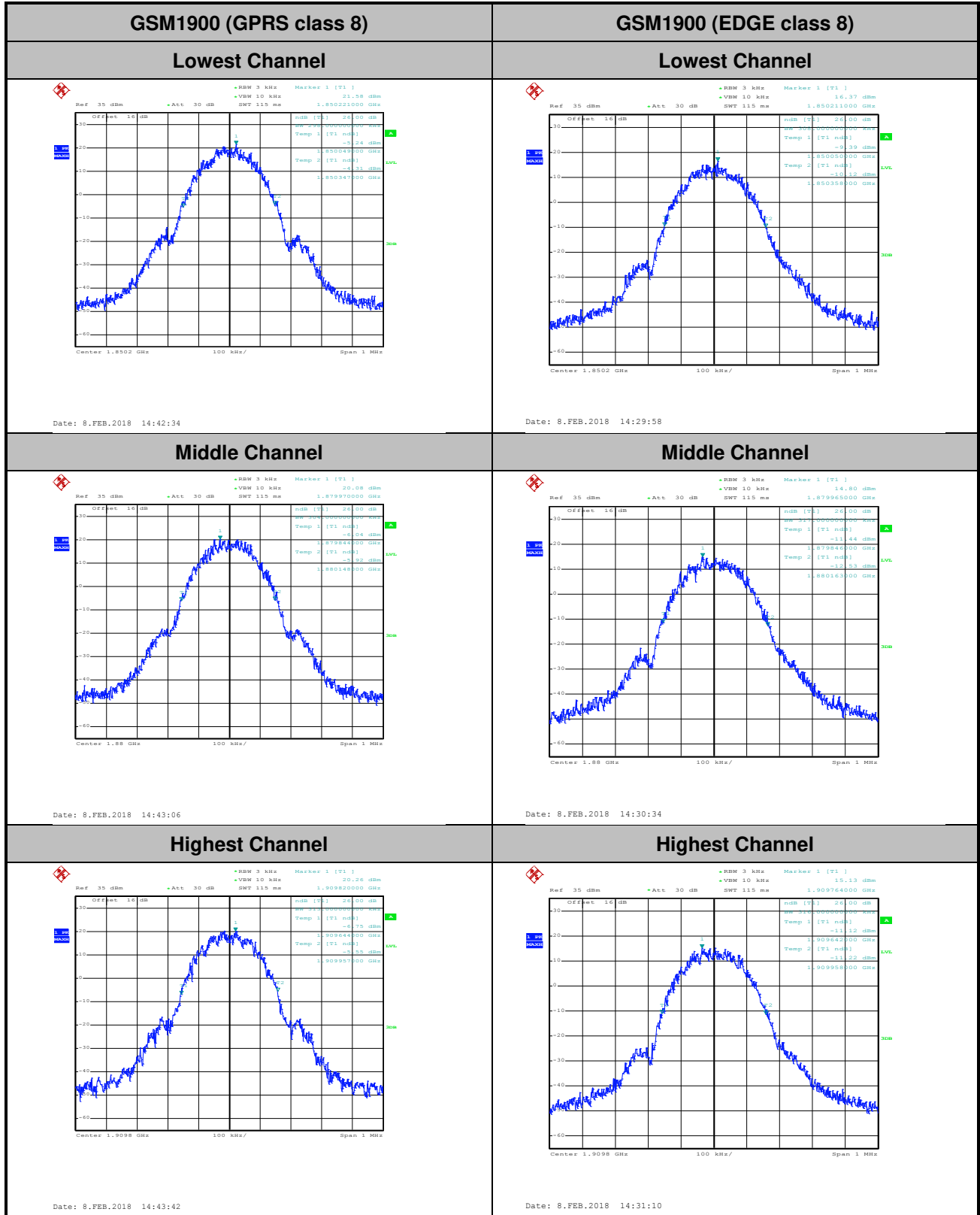
GSM1900 (GPRS class 8)		GSM1900 (EDGE class 8)	
Lowest Channel		Lowest Channel	
 Ref: 35 dBm Att: 30 dB AGT: 3.125 ms Center: 1.8502 GHz 2 dB/ Mean: Per: +20 dB Complementary Cumulative Distribution Function (100000 samples) Trace 1 Mean: 28.14 dBm Peak: 28.38 dBm Crest: 0.24 dB 10 %: 0.16 dB 1 %: 0.20 dB .1 %: 0.20 dB .01 %: 0.20 dB Date: 8.FEB.2018 14:51:41		 Ref: 35 dBm Att: 30 dB AGT: 3.125 ms Center: 1.8502 GHz 2 dB/ Mean: Per: +20 dB Complementary Cumulative Distribution Function (100000 samples) Trace 1 Mean: 23.21 dBm Peak: 26.62 dBm Crest: 3.41 dB 10 %: 2.60 dB 1 %: 3.12 dB .1 %: 3.28 dB .01 %: 3.36 dB Date: 8.FEB.2018 14:39:11	
Middle Channel		Middle Channel	
 Ref: 35 dBm Att: 30 dB AGT: 3.125 ms Center: 1.85 GHz 2 dB/ Mean: Per: +20 dB Complementary Cumulative Distribution Function (100000 samples) Trace 1 Mean: 28.00 dBm Peak: 28.24 dBm Crest: 0.24 dB 10 %: 0.16 dB 1 %: 0.20 dB .1 %: 0.20 dB .01 %: 0.20 dB Date: 8.FEB.2018 14:52:25		 Ref: 35 dBm Att: 30 dB AGT: 3.125 ms Center: 1.85 GHz 2 dB/ Mean: Per: +20 dB Complementary Cumulative Distribution Function (100000 samples) Trace 1 Mean: 23.09 dBm Peak: 26.41 dBm Crest: 3.32 dB 10 %: 2.48 dB 1 %: 3.04 dB .1 %: 3.20 dB .01 %: 3.28 dB Date: 8.FEB.2018 14:39:30	
Highest Channel		Highest Channel	
 Ref: 35 dBm Att: 30 dB AGT: 3.125 ms Center: 1.9098 GHz 2 dB/ Mean: Per: +20 dB Complementary Cumulative Distribution Function (100000 samples) Trace 1 Mean: 28.39 dBm Peak: 28.60 dBm Crest: 0.21 dB 10 %: 0.16 dB 1 %: 0.20 dB .1 %: 0.24 dB .01 %: 0.24 dB Date: 8.FEB.2018 14:52:49		 Ref: 35 dBm Att: 30 dB AGT: 3.125 ms Center: 1.9098 GHz 2 dB/ Mean: Per: +20 dB Complementary Cumulative Distribution Function (100000 samples) Trace 1 Mean: 23.56 dBm Peak: 26.90 dBm Crest: 3.34 dB 10 %: 2.48 dB 1 %: 3.12 dB .1 %: 3.20 dB .01 %: 3.28 dB Date: 8.FEB.2018 14:39:47	

**26dB Bandwidth**

Mode	GSM850	
Mod.	GPRS class 8	EDGE class 8
Lowest CH	0.315	0.312
Middle CH	0.320	0.313
Highest CH	0.315	0.313

Mode	GSM1900	
Mod.	GPRS class 8	EDGE class 8
Lowest CH	0.298	0.308
Middle CH	0.304	0.317
Highest CH	0.313	0.316

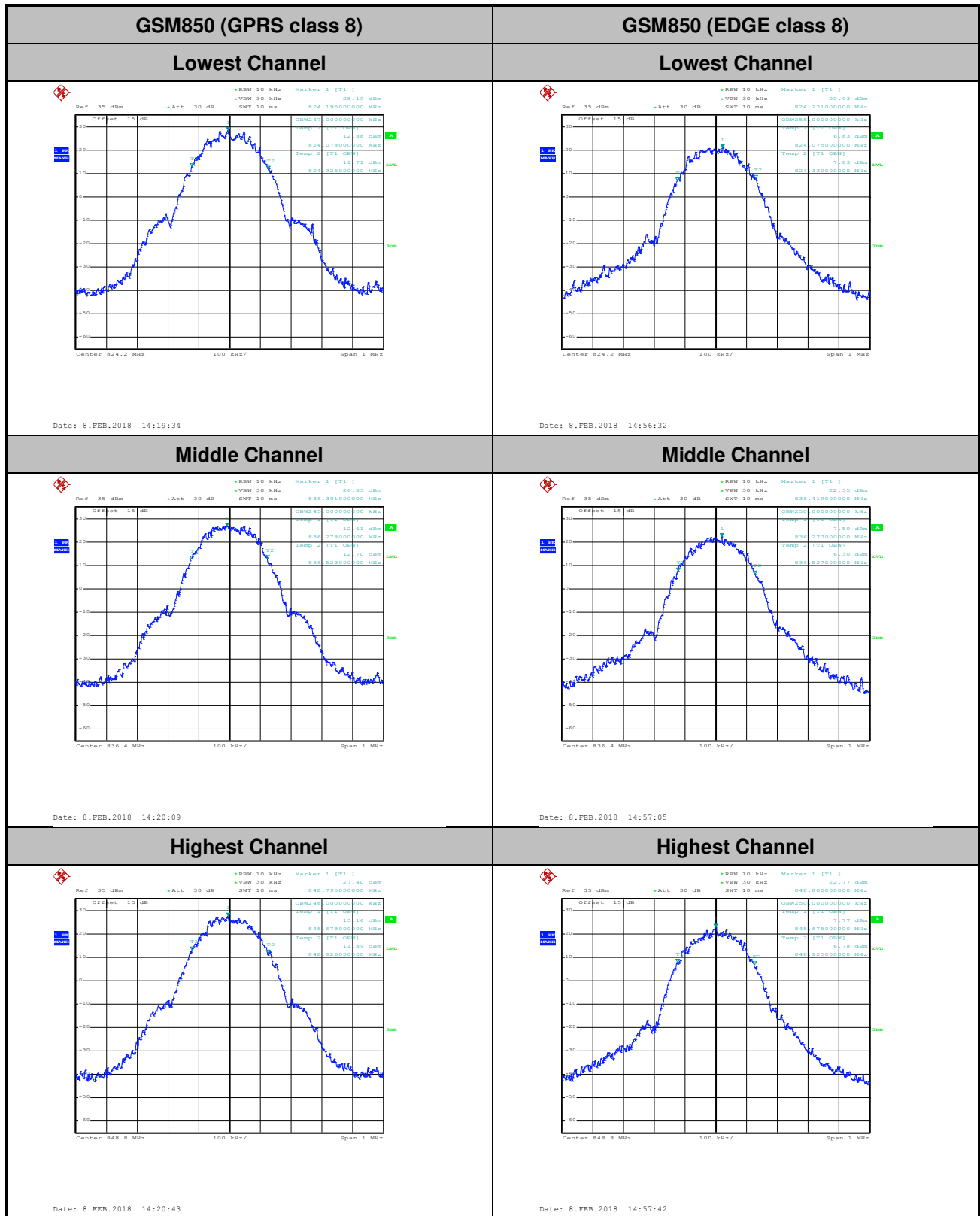


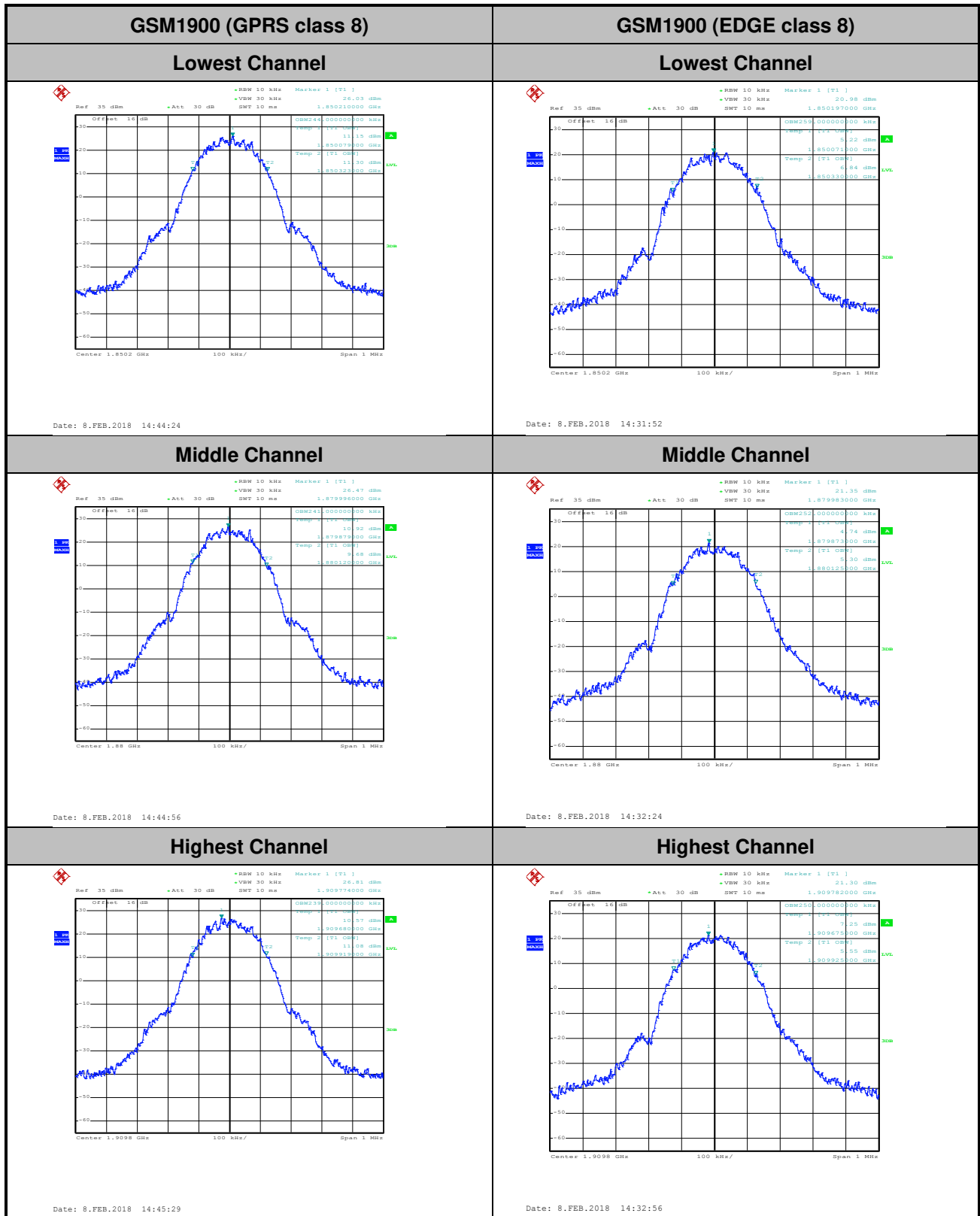


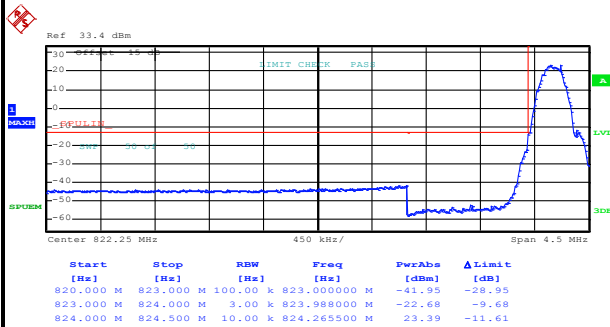
Occupied Bandwidth

Mode	GSM850	
Mod.	GPRS class 8	EDGE class 8
Lowest CH	0.247	0.255
Middle CH	0.245	0.250
Highest CH	0.248	0.250

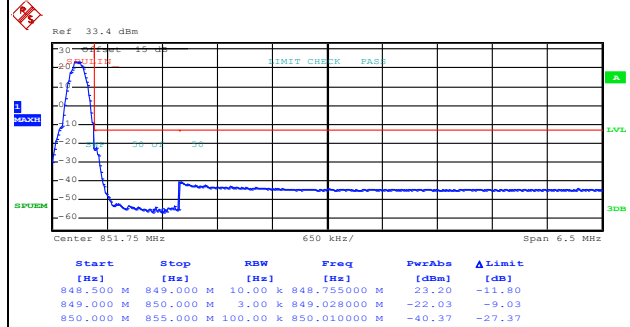
Mode	GSM1900	
Mod.	GPRS class 8	EDGE class 8
Lowest CH	0.244	0.259
Middle CH	0.241	0.252
Highest CH	0.239	0.250



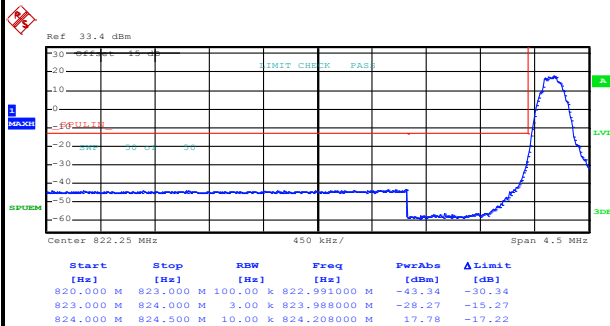


**Conducted Band Edge****GSM850 (GPRS class 8)****Lowest Band Edge**

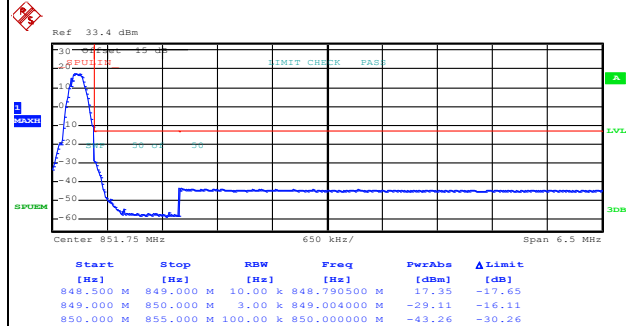
Date: 8.FEB.2018 14:22:17

Highest Band Edge

Date: 8.FEB.2018 14:23:50

GSM850 (EDGE class 8)**Lowest Band Edge**

Date: 8.FEB.2018 14:59:14

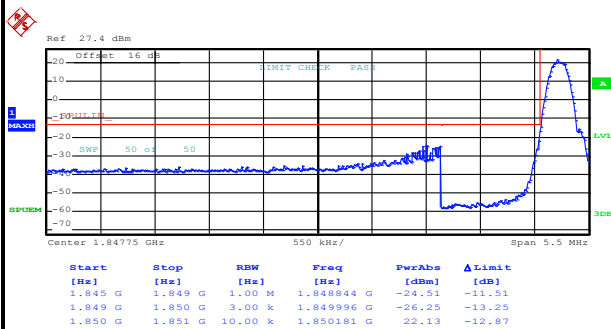
Highest Band Edge

Date: 8.FEB.2018 15:00:45



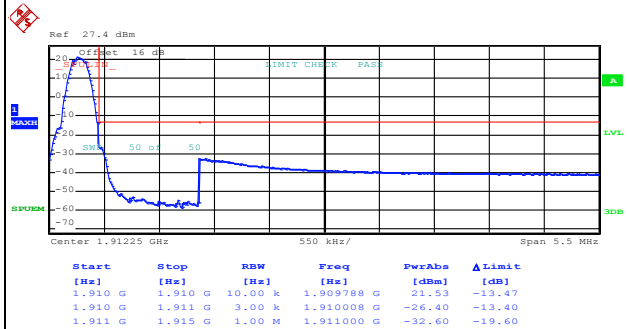
GSM1900 (GPRS class 8)

Lowest Band Edge



Date: 8.FEB.2018 14:47:15

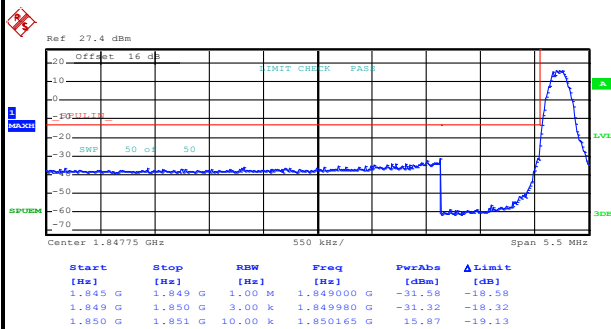
Highest Band Edge



Date: 8.FEB.2018 14:48:46

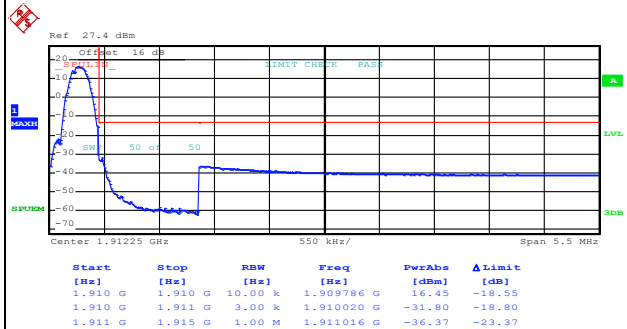
GSM1900 (EDGE class 8)

Lowest Band Edge



Date: 8.FEB.2018 14:34:27

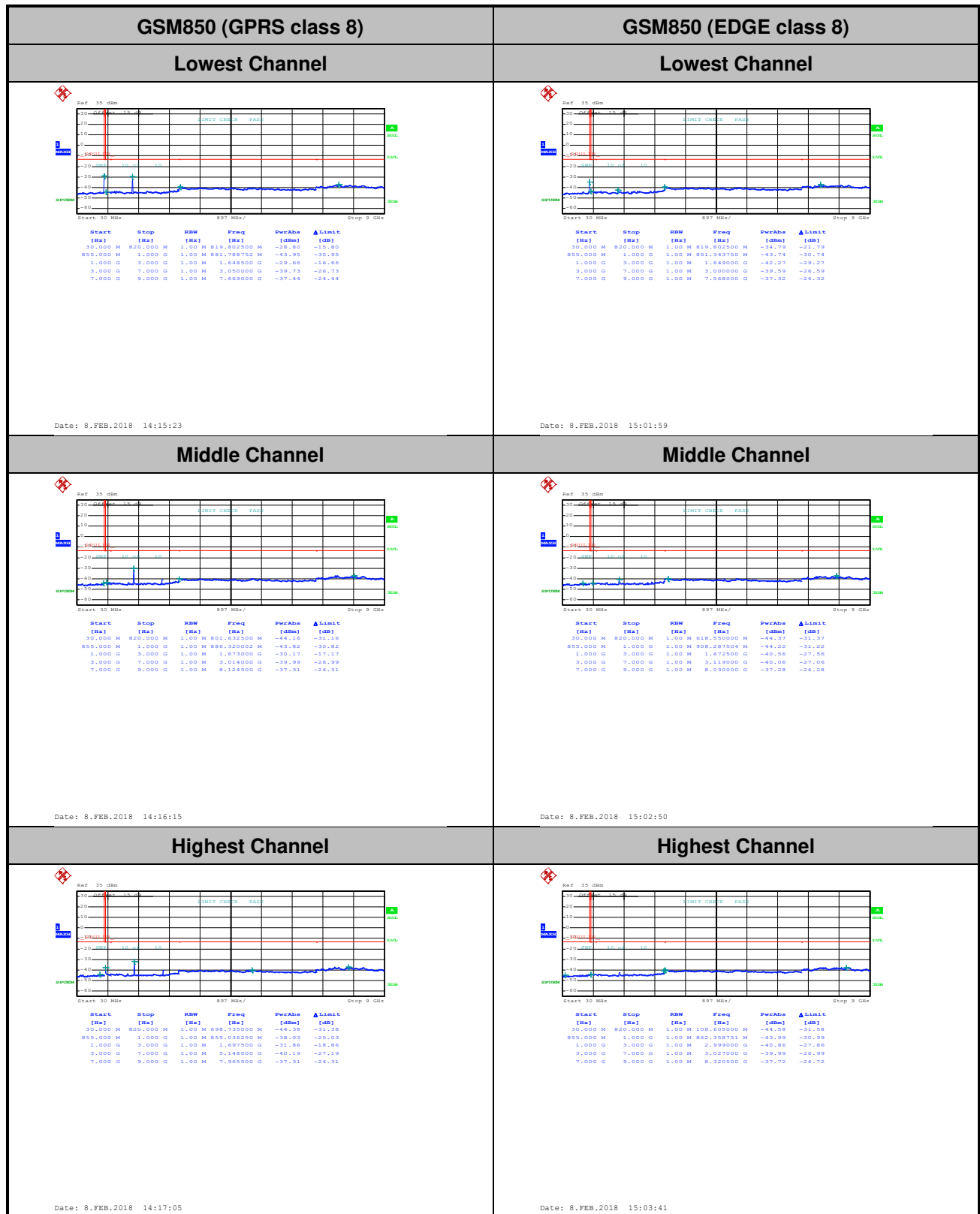
Highest Band Edge



Date: 8.FEB.2018 14:36:04



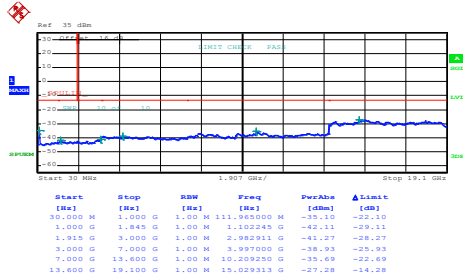
Conducted Spurious Emission





GSM1900 (GPRS class 8)

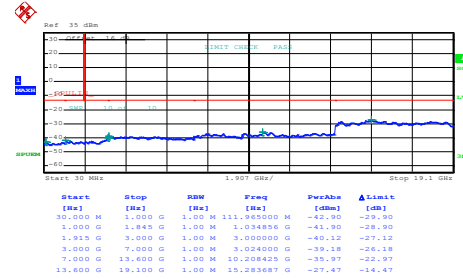
Lowest Channel



Date: 8.FEB.2018 14:49:41

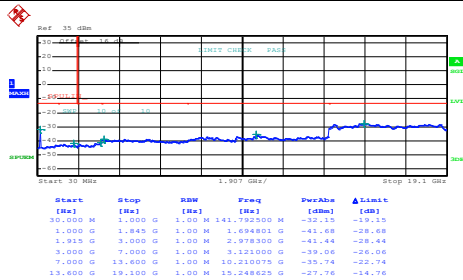
GSM1900 (EDGE class 8)

Lowest Channel



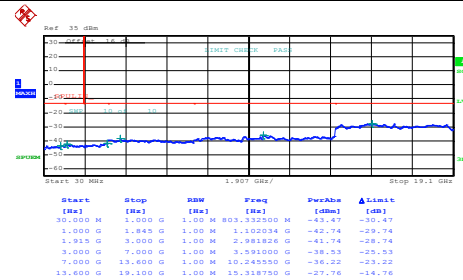
Date: 8.FEB.2018 14:37:10

Middle Channel



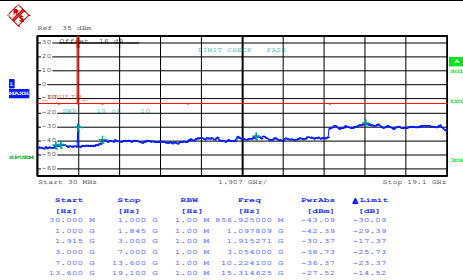
Date: 8.FEB.2018 14:50:30

Middle Channel



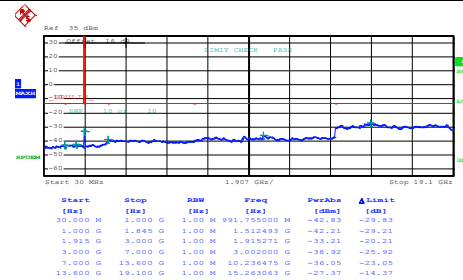
Date: 8.FEB.2018 14:38:00

Highest Channel



Date: 8.FEB.2018 14:51:22

Highest Channel



Date: 8.FEB.2018 14:38:49

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	0.0024	0.0143	PASS
40	Normal Voltage	0.0024	0.0108	
30	Normal Voltage	0.0084	0.0072	
20(Ref.)	Normal Voltage	0.0000	0.0000	
10	Normal Voltage	0.0490	0.0060	
0	Normal Voltage	0.0454	0.0096	
-10	Normal Voltage	0.0478	0.0036	
-20	Normal Voltage	0.0478	0.0048	
-30	Normal Voltage	0.0502	0.0072	
20	Maximum Voltage	0.0012	0.0072	
20	Normal Voltage	0.0000	0.0000	
20	Battery End Point	0.0036	0.0108	

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	0.0011	0.0064	PASS
40	Normal Voltage	0.0032	0.0027	
30	Normal Voltage	0.0011	0.0005	
20(Ref.)	Normal Voltage	0.0000	0.0000	
10	Normal Voltage	0.0043	0.0048	
0	Normal Voltage	0.0016	0.0053	
-10	Normal Voltage	0.0048	0.0005	
-20	Normal Voltage	0.0011	0.0027	
-30	Normal Voltage	0.0037	0.0069	
20	Maximum Voltage	0.0383	0.0053	
20	Normal Voltage	0.0000	0.0000	
20	Battery End Point	0.0032	0.0016	

Note:

1. Normal Voltage = 3.82V. ; Battery End Point (BEP) = 3.6 V. ; Maximum Voltage =4.4 V
2. The frequency fundamental emissions stay within the authorized frequency block based on the frequency deviation measured is small.

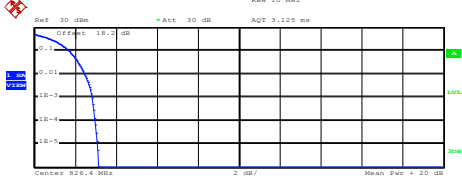
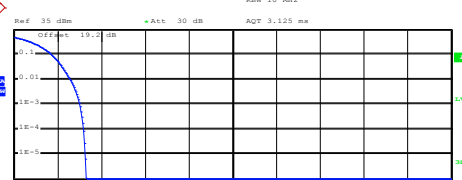
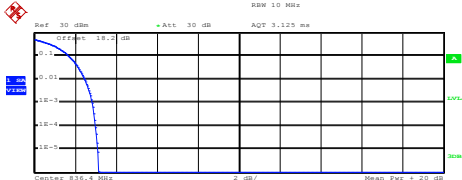
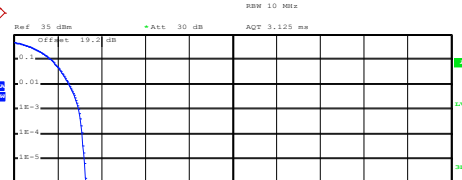
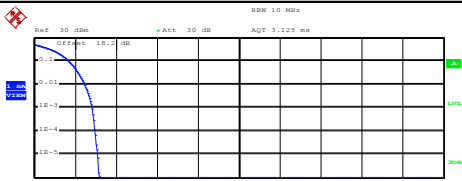
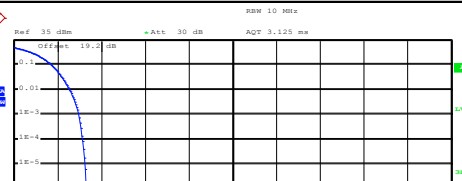


A3. WCDMA

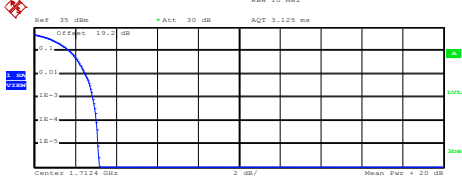
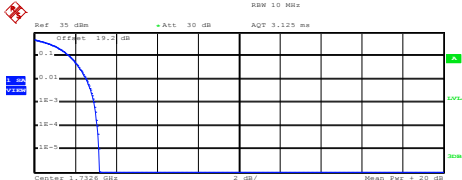
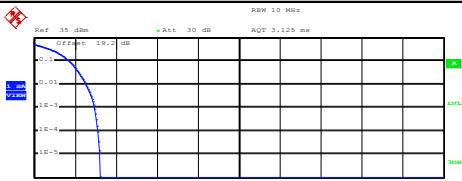
<For Up Antenna>

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	2.84	3.04	2.88	PASS
Middle CH	2.84	2.96	2.92	
Highest CH	2.84	2.96	2.96	

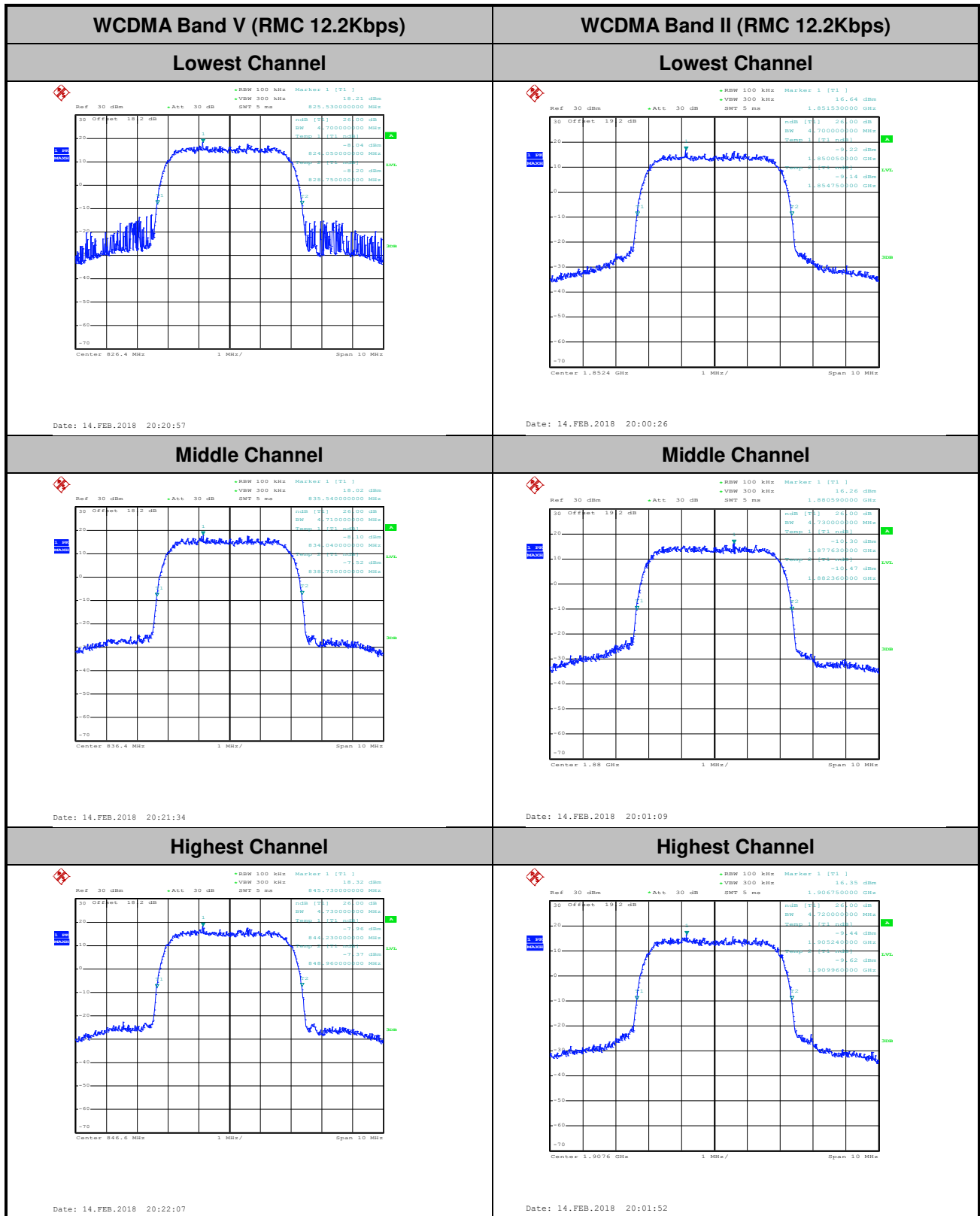
WCDMA Band V (RMC 12.2Kbps)	WCDMA Band II (RMC 12.2Kbps)
Lowest Channel	Lowest Channel
 Center 826.4 MHz Complementary Cumulative Distribution Function (100000 samples) Trace 1 Mean 21.85 dBm Peak 25.00 dBm Crest 3.15 dB 10 % 1.72 dB 1 % 2.48 dB .1 % 2.84 dB .01 % 2.96 dB Date: 14.FEB.2018 20:14:38	 Center 1.8524 GHz Complementary Cumulative Distribution Function (100000 samples) Trace 1 Mean 20.37 dBm Peak 23.65 dBm Crest 3.28 dB 10 % 1.72 dB 1 % 2.56 dB .1 % 3.04 dB .01 % 3.20 dB Date: 14.FEB.2018 19:58:23
Middle Channel	Middle Channel
 Center 836.4 MHz Complementary Cumulative Distribution Function (100000 samples) Trace 1 Mean 21.79 dBm Peak 24.93 dBm Crest 3.14 dB 10 % 1.68 dB 1 % 2.48 dB .1 % 2.84 dB .01 % 3.00 dB Date: 14.FEB.2018 20:14:55	 Center 1.88 GHz Complementary Cumulative Distribution Function (100000 samples) Trace 1 Mean 20.44 dBm Peak 23.72 dBm Crest 3.29 dB 10 % 1.72 dB 1 % 2.52 dB .1 % 2.96 dB .01 % 3.12 dB Date: 14.FEB.2018 19:59:23
Highest Channel	Highest Channel
 Center 846.6 MHz Complementary Cumulative Distribution Function (100000 samples) Trace 1 Mean 21.84 dBm Peak 25.00 dBm Crest 3.17 dB 10 % 1.68 dB 1 % 2.48 dB .1 % 2.84 dB .01 % 2.96 dB Date: 14.FEB.2018 20:15:11	 Center 1.9076 GHz Complementary Cumulative Distribution Function (100000 samples) Trace 1 Mean 20.26 dBm Peak 23.58 dBm Crest 3.32 dB 10 % 1.72 dB 1 % 2.56 dB .1 % 2.96 dB .01 % 3.16 dB Date: 14.FEB.2018 19:59:45

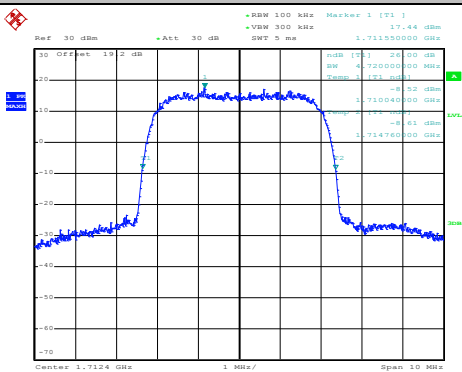
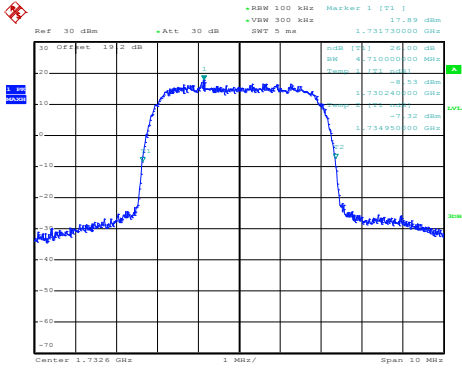
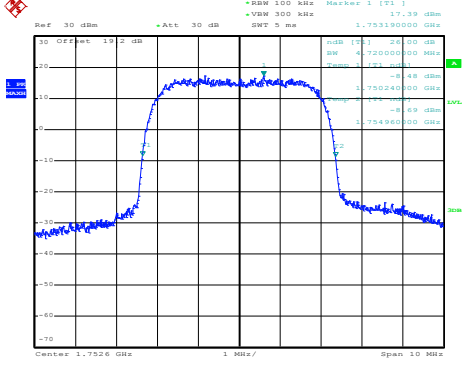


WCDMA Band IV (RMC 12.2Kbps)	
Lowest Channel	
 Ref: 35 dBm Att: 30 dB AQT: 3.125 ms Center: 1.7124 GHz 2 MHz Mean Pwr: -15 dBm Complementary Cumulative Distribution Function (100000 samples) Trace 1 Mean: 21.54 dBm Peak: 24.71 dBm Crest: 3.17 dB 10 %: 1.72 dB 1 %: 2.48 dB .1 %: 2.88 dB .01 %: 3.04 dB Date: 14.FEB.2018 21:37:23	
Middle Channel	
 Ref: 35 dBm Att: 30 dB AQT: 3.125 ms Center: 1.7326 GHz 2 MHz Mean Pwr: -15 dBm Complementary Cumulative Distribution Function (100000 samples) Trace 1 Mean: 21.62 dBm Peak: 24.78 dBm Crest: 3.17 dB 10 %: 1.72 dB 1 %: 2.56 dB .1 %: 2.92 dB .01 %: 3.08 dB Date: 14.FEB.2018 21:37:38	
Highest Channel	
 Ref: 35 dBm Att: 30 dB AQT: 3.125 ms Center: 1.7526 GHz 2 MHz Mean Pwr: -15 dBm Complementary Cumulative Distribution Function (100000 samples) Trace 1 Mean: 21.63 dBm Peak: 24.85 dBm Crest: 3.22 dB 10 %: 1.72 dB 1 %: 2.52 dB .1 %: 2.96 dB .01 %: 3.12 dB Date: 14.FEB.2018 21:38:04	

**26dB Bandwidth**

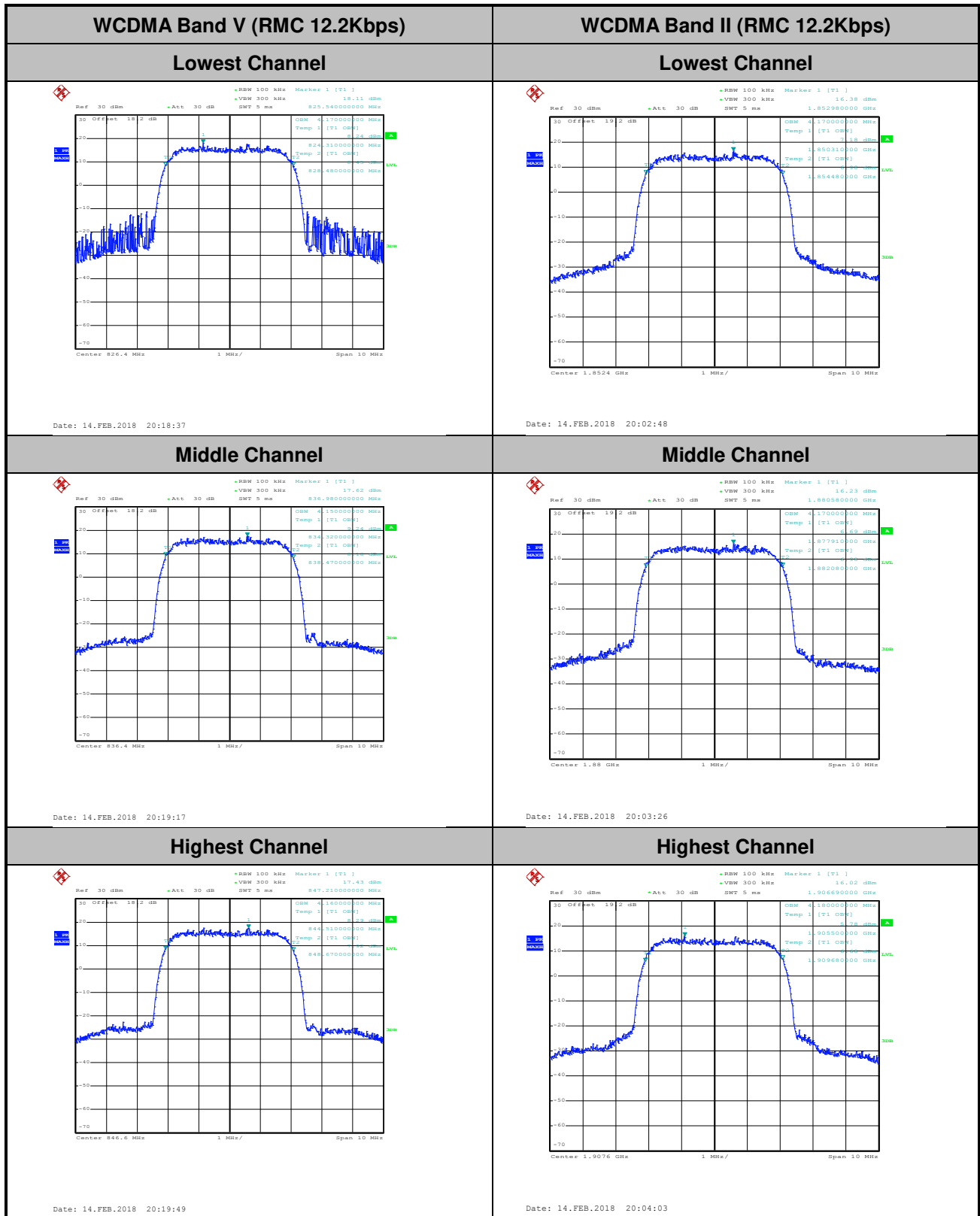
Mode	WCDMA Band V	WCDMA Band II	WCDMA Band IV
Mod.	RMC 12.2Kbps	RMC 12.2Kbps	RMC 12.2Kbps
Lowest CH	4.70	4.70	4.72
Middle CH	4.71	4.73	4.71
Highest CH	4.73	4.72	4.72

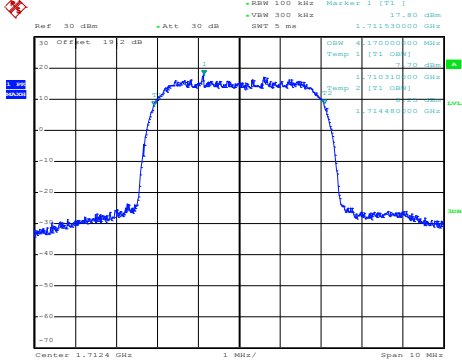
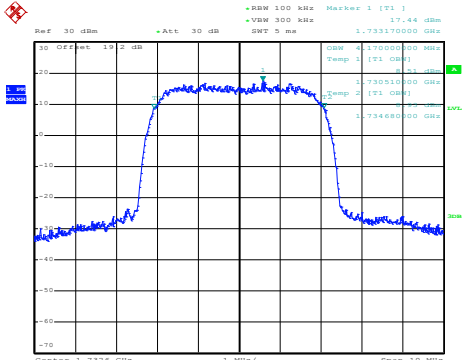
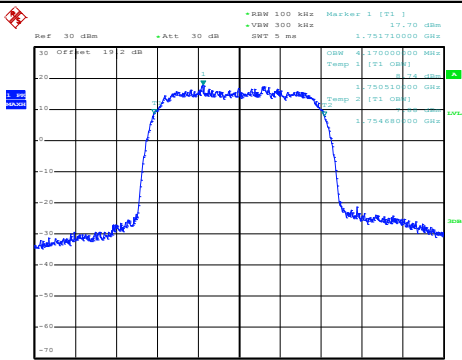


WCDMA Band IV (RMC 12.2Kbps)	
Lowest Channel	
 Date: 14.FEB.2018 21:39:17	
Middle Channel	
 Date: 14.FEB.2018 21:39:51	
Highest Channel	
 Date: 14.FEB.2018 21:40:35	

Occupied Bandwidth

Mode	WCDMA Band V	WCDMA Band II	WCDMA Band IV
Mod.	RMC 12.2Kbps	RMC 12.2Kbps	RMC 12.2Kbps
Lowest CH	4.17	4.17	4.17
Middle CH	4.15	4.17	4.17
Highest CH	4.16	4.18	4.17



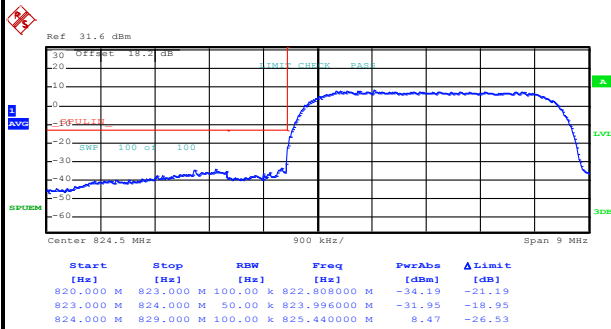
WCDMA Band IV (RMC 12.2Kbps)	
Lowest Channel	
 Ref: 30 dBm Att: 30 dB SWF: 5 ms Marker 1 [T1] 17.80 dBm +RBW 100 kHz +VBW 300 kHz Center 1.7324 GHz 1 MHz Span 10 MHz Date: 14.FEB.2018 21:41:10	
Middle Channel	
 Ref: 30 dBm Att: 30 dB SWF: 5 ms Marker 1 [T1] 17.44 dBm +RBW 100 kHz +VBW 300 kHz Center 1.7326 GHz 1 MHz Span 10 MHz Date: 14.FEB.2018 21:41:43	
Highest Channel	
 Ref: 30 dBm Att: 30 dB SWF: 5 ms Marker 1 [T1] 17.70 dBm +RBW 100 kHz +VBW 300 kHz Center 1.7328 GHz 1 MHz Span 10 MHz Date: 14.FEB.2018 21:42:15	



Conducted Band Edge

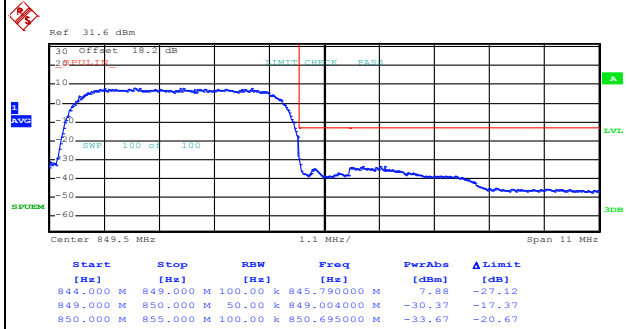
WCDMA Band V (RMC 12.2Kbps)

Lowest Band Edge



Date: 14.FEB.2018 20:24:52

Highest Band Edge

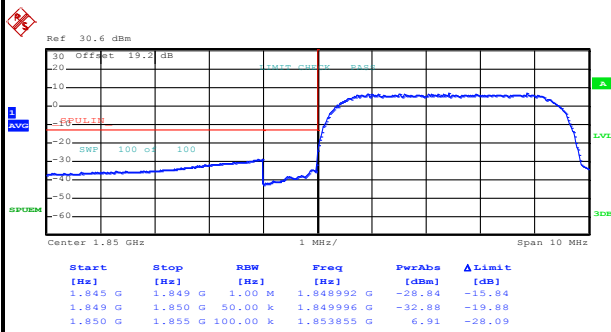


Date: 14.FEB.2018 20:27:40



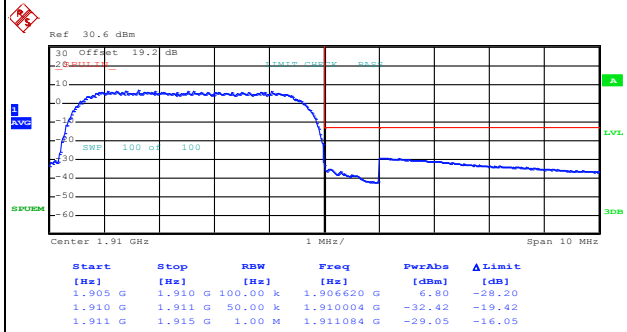
WCDMA Band II (RMC 12.2Kbps)

Lowest Band Edge



Date: 14.FEB.2018 20:07:01

Highest Band Edge

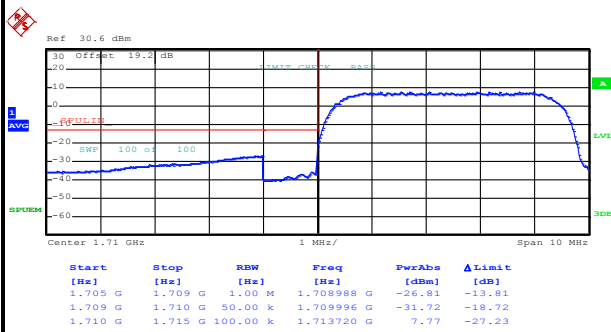


Date: 14.FEB.2018 20:09:52



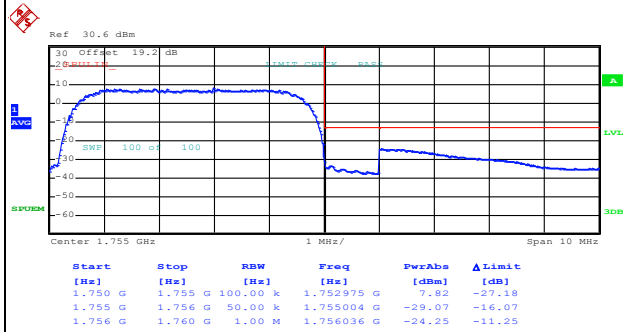
WCDMA Band IV (RMC 12.2Kbps)

Lowest Band Edge



Date: 14.FEB.2018 21:45:02

Highest Band Edge



Date: 14.FEB.2018 21:47:48

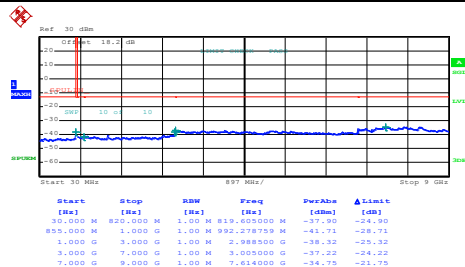


Conducted Spurious Emission



WCDMA Band V (RMC 12.2Kbps)

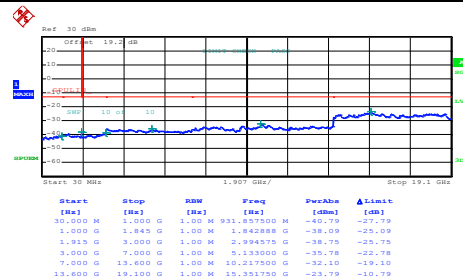
Lowest Channel



Date: 14.FEB.2018 20:28:37

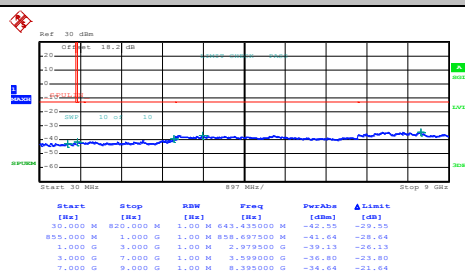
WCDMA Band II (RMC 12.2Kbps)

Lowest Channel



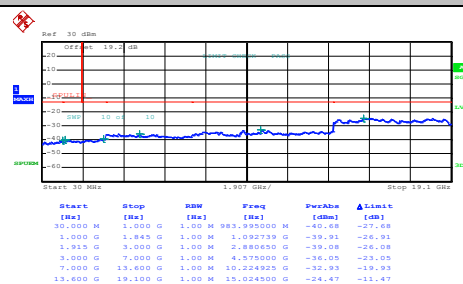
Date: 14.FEB.2018 20:10:54

Middle Channel



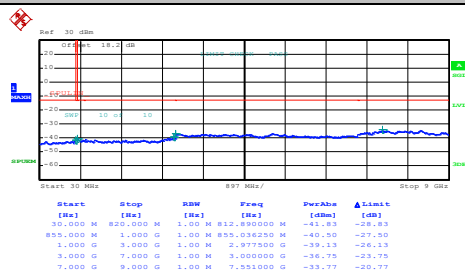
Date: 14.FEB.2018 20:29:31

Middle Channel



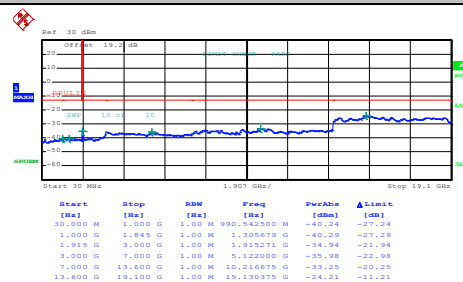
Date: 14.FEB.2018 20:11:45

Highest Channel



Date: 14.FEB.2018 20:30:25

Highest Channel

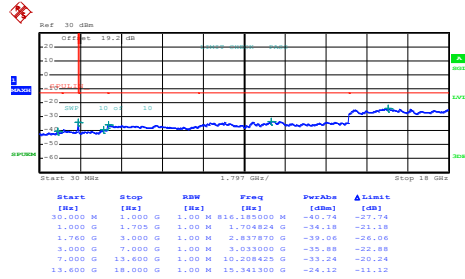


Date: 14.FEB.2018 20:13:02



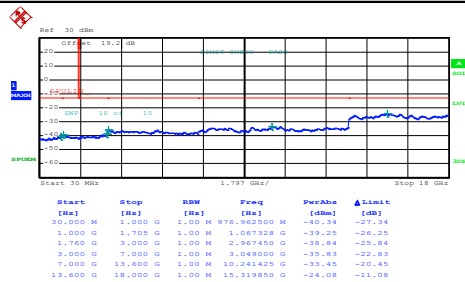
WCDMA Band IV (RMC 12.2Kbps)

Lowest Channel



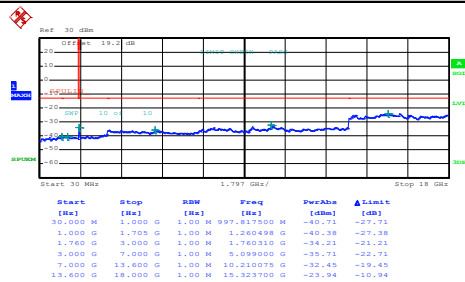
Date: 14.FEB.2018 21:48:44

Middle Channel



Date: 14.FEB.2018 21:49:34

Highest Channel



Date: 14.FEB.2018 21:50:26

**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	0.0000	PASS
40	Normal Voltage	0.0024	
30	Normal Voltage	0.0048	
20(Ref.)	Normal Voltage	0.0000	
10	Normal Voltage	0.0024	
0	Normal Voltage	0.0084	
-10	Normal Voltage	0.0179	
-20	Normal Voltage	0.0024	
-30	Normal Voltage	0.0036	
20	Maximum Voltage	0.0024	
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	0.0005	PASS
40	Normal Voltage	0.0016	
30	Normal Voltage	0.0016	
20(Ref.)	Normal Voltage	0.0000	
10	Normal Voltage	0.0133	
0	Normal Voltage	0.0011	
-10	Normal Voltage	0.0027	
-20	Normal Voltage	0.0016	
-30	Normal Voltage	0.0016	
20	Maximum Voltage	0.0032	
20	Normal Voltage	0.0027	
20	Battery End Point	0.0000	



Test Conditions	Middle Channel	WCDMA Band IV (RMC 12.2Kbps)	Limit Note 2.
Temperature (°C)	Voltage (Volt)	Deviation (ppm)	Result
50	Normal Voltage	0.0017	PASS
40	Normal Voltage	0.0040	
30	Normal Voltage	0.0023	
20(Ref.)	Normal Voltage	0.0000	
10	Normal Voltage	0.0035	
0	Normal Voltage	0.0006	
-10	Normal Voltage	0.0012	
-20	Normal Voltage	0.0029	
-30	Normal Voltage	0.0017	
20	Maximum Voltage	0.0012	
20	Normal Voltage	0.0006	
20	Battery End Point	0.0012	

Note:

1. Normal Voltage = 3.82 V. ; Battery End Point (BEP) = 3.6 V. ; Maximum Voltage =4.4 V
2. The frequency fundamental emissions stay within the authorized frequency block based on the frequency deviation measured is small.

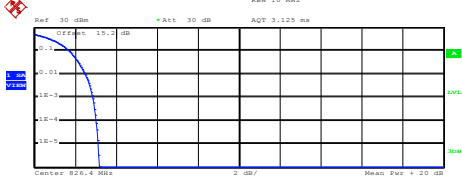
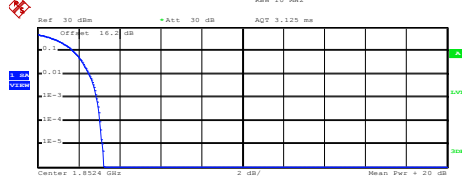
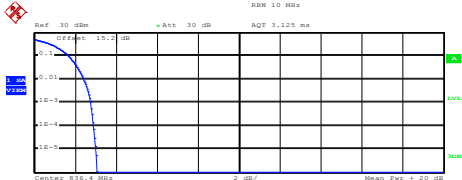
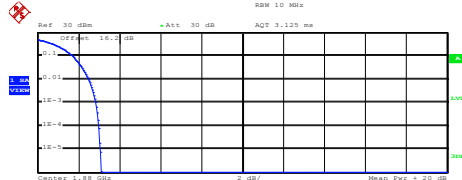
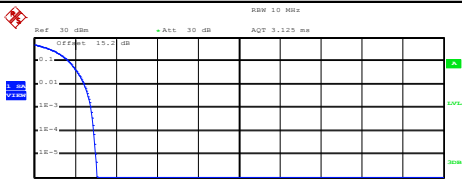
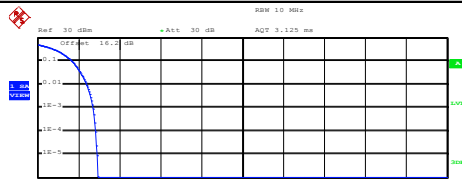


<For Down Antenna>

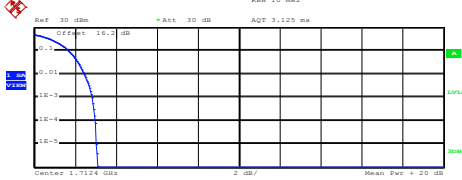
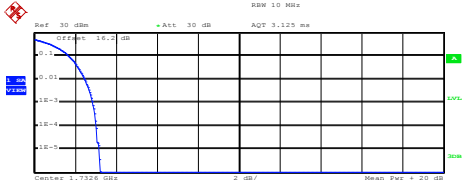
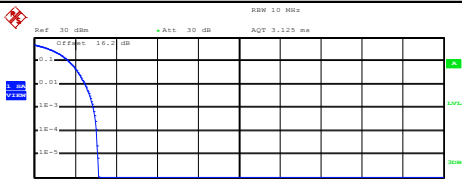
Peak-to-Average Ratio

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	2.88	2.88	2.84	PASS
Middle CH	2.76	2.84	2.84	
Highest CH	2.76	2.72	2.88	



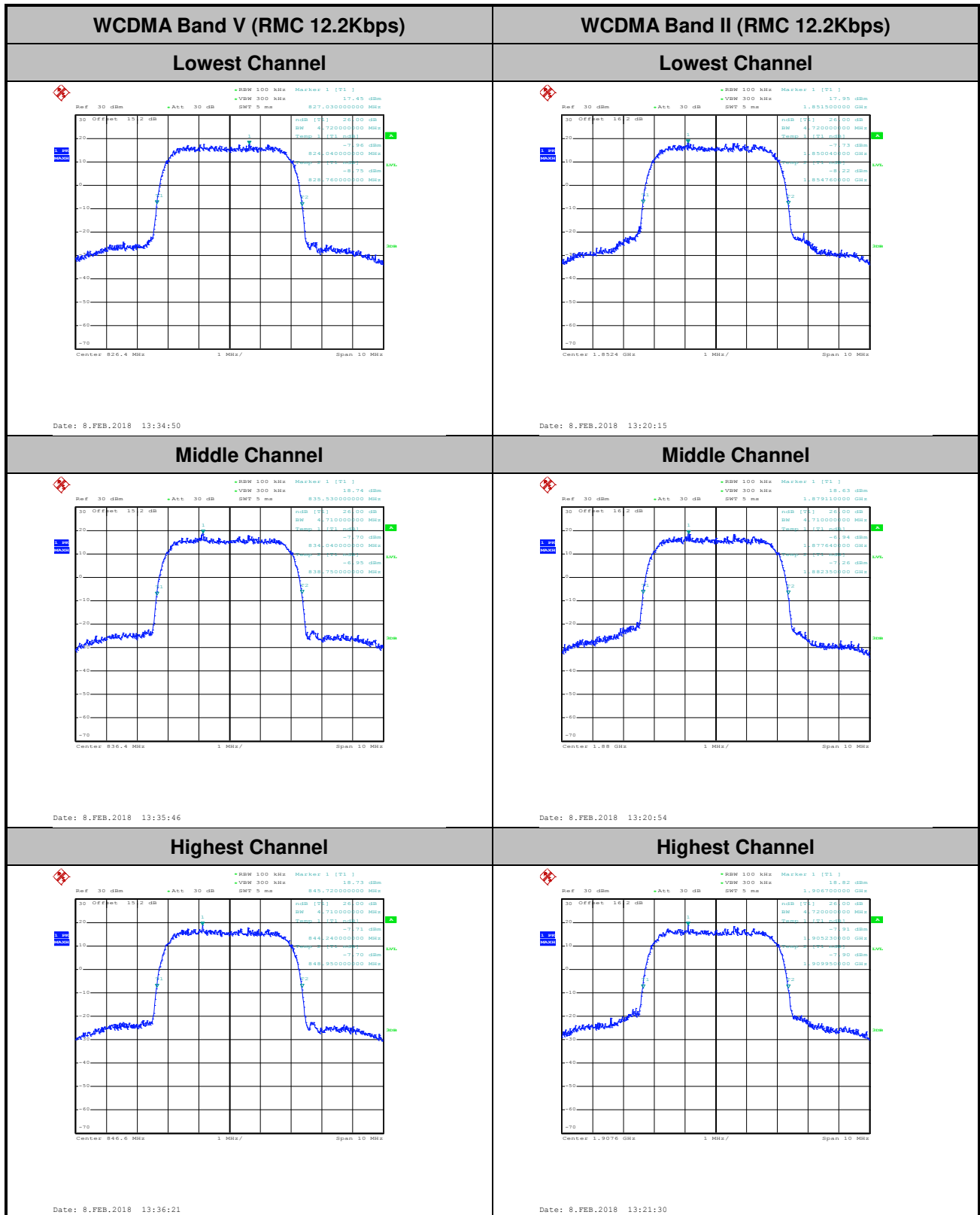
WCDMA Band V (RMC 12.2Kbps)	WCDMA Band II (RMC 12.2Kbps)
Lowest Channel	Lowest Channel
 Center 826.4 MHz Ref 30 dBm Att 30 dB AQT 3.125 ms Complementary Cumulative Distribution Function (100000 samples) Trace 1 Mean 22.33 dBm Peak 25.50 dBm Crest 3.17 dB 10 % 1.72 dB 1 % 2.52 dB .1 % 2.88 dB .01 % 3.04 dB Date: 8.FEB.2018 13:52:12	 Center 1.8524 GHz Ref 30 dBm Att 30 dB AQT 3.125 ms Complementary Cumulative Distribution Function (100000 samples) Trace 1 Mean 22.41 dBm Peak 25.64 dBm Crest 3.23 dB 10 % 1.72 dB 1 % 2.52 dB .1 % 2.88 dB .01 % 3.04 dB Date: 8.FEB.2018 13:32:38
Middle Channel	Middle Channel
 Center 830.4 MHz Ref 30 dBm Att 30 dB AQT 3.125 ms Complementary Cumulative Distribution Function (100000 samples) Trace 1 Mean 22.28 dBm Peak 25.36 dBm Crest 3.07 dB 10 % 1.68 dB 1 % 2.44 dB .1 % 2.76 dB .01 % 2.92 dB Date: 8.FEB.2018 13:54:16	 Center 1.88 GHz Ref 30 dBm Att 30 dB AQT 3.125 ms Complementary Cumulative Distribution Function (100000 samples) Trace 1 Mean 22.47 dBm Peak 25.57 dBm Crest 3.10 dB 10 % 1.72 dB 1 % 2.48 dB .1 % 2.84 dB .01 % 3.00 dB Date: 8.FEB.2018 13:32:55
Highest Channel	Highest Channel
 Center 846.6 MHz Ref 30 dBm Att 30 dB AQT 3.125 ms Complementary Cumulative Distribution Function (100000 samples) Trace 1 Mean 22.29 dBm Peak 25.36 dBm Crest 3.07 dB 10 % 1.68 dB 1 % 2.44 dB .1 % 2.76 dB .01 % 2.92 dB Date: 8.FEB.2018 13:54:43	 Center 1.9076 GHz Ref 30 dBm Att 30 dB AQT 3.125 ms Complementary Cumulative Distribution Function (100000 samples) Trace 1 Mean 22.55 dBm Peak 25.50 dBm Crest 2.95 dB 10 % 1.68 dB 1 % 2.40 dB .1 % 2.72 dB .01 % 2.84 dB Date: 8.FEB.2018 13:33:15

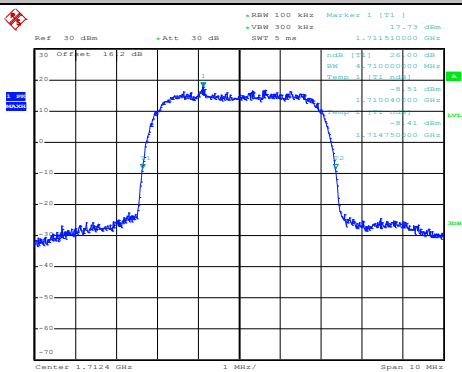
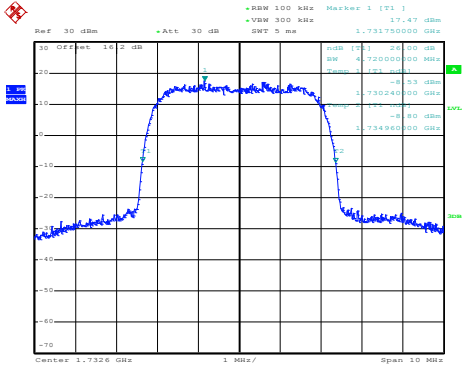
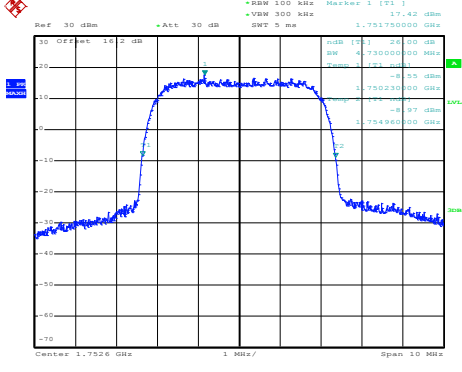


WCDMA Band IV (RMC 12.2Kbps)	
Lowest Channel	
 Complementary Cumulative Distribution Function (100000 samples) Trace 1 Mean 21.62 dBm Peak 24.72 dBm Crest 3.10 dB 10 % 1.68 dB 1 % 2.44 dB .1 % 2.84 dB .01 % 3.00 dB Date: 8.FEB.2018 13:16:36	
Middle Channel	
 Complementary Cumulative Distribution Function (100000 samples) Trace 1 Mean 21.59 dBm Peak 24.79 dBm Crest 3.21 dB 10 % 1.68 dB 1 % 2.48 dB .1 % 2.84 dB .01 % 3.04 dB Date: 8.FEB.2018 13:16:55	
Highest Channel	
 Complementary Cumulative Distribution Function (100000 samples) Trace 1 Mean 21.52 dBm Peak 24.65 dBm Crest 3.13 dB 10 % 1.68 dB 1 % 2.48 dB .1 % 2.88 dB .01 % 3.04 dB Date: 8.FEB.2018 13:17:14	

**26dB Bandwidth**

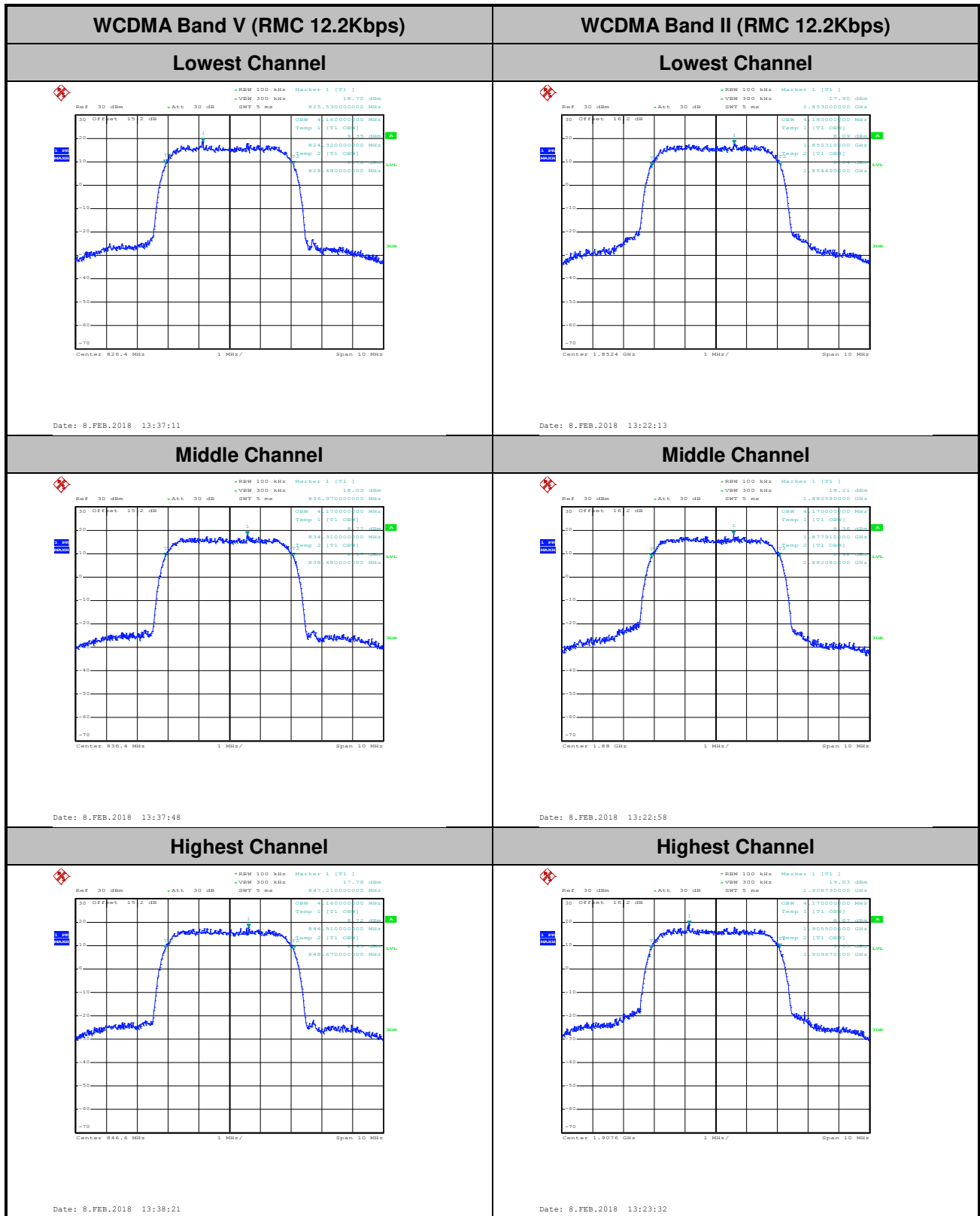
Mode	WCDMA Band V	WCDMA Band II	WCDMA Band IV
Mod.	RMC 12.2Kbps	RMC 12.2Kbps	RMC 12.2Kbps
Lowest CH	4.72	4.72	4.71
Middle CH	4.71	4.71	4.72
Highest CH	4.71	4.72	4.73



WCDMA Band IV (RMC 12.2Kbps)	
Lowest Channel	
 Date: 8.FEB.2018 11:48:10	
Middle Channel	
 Date: 8.FEB.2018 11:48:45	
Highest Channel	
 Date: 8.FEB.2018 11:49:47	

**Occupied Bandwidth**

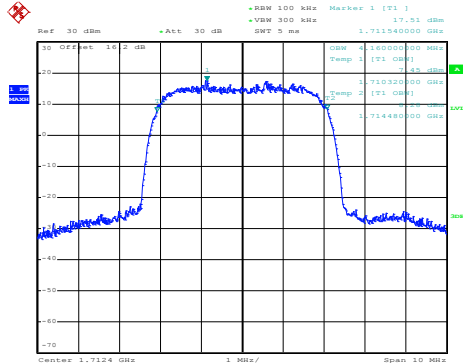
Mode	WCDMA Band V	WCDMA Band II	WCDMA Band IV
Mod.	RMC 12.2Kbps	RMC 12.2Kbps	RMC 12.2Kbps
Lowest CH	4.16	4.18	4.16
Middle CH	4.17	4.17	4.17
Highest CH	4.16	4.17	4.17





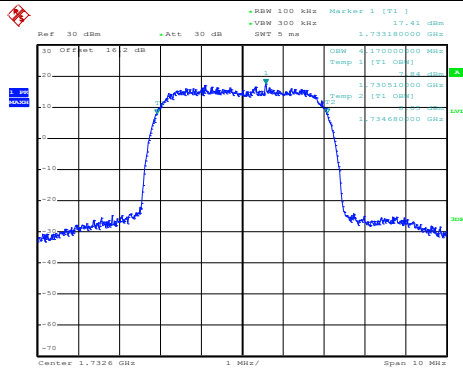
WCDMA Band IV (RMC 12.2Kbps)

Lowest Channel



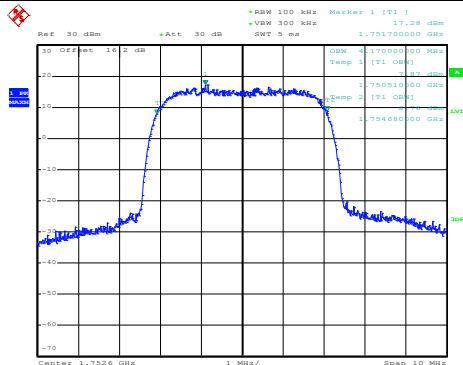
Date: 8.FEB.2018 11:50:52

Middle Channel



Date: 8.FEB.2018 11:52:17

Highest Channel



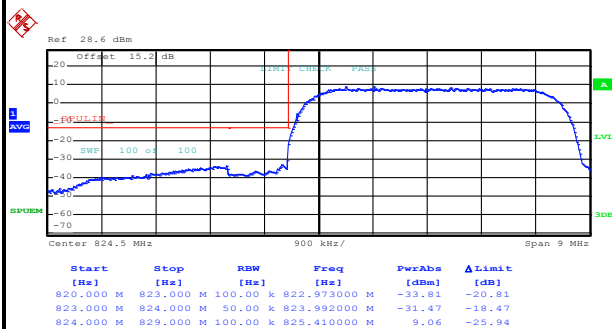
Date: 8.FEB.2018 11:52:50



Conducted Band Edge

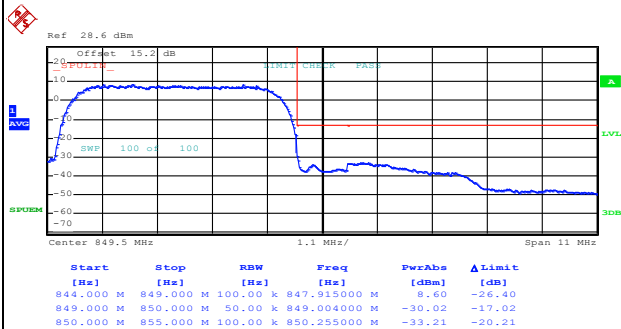
WCDMA Band V (RMC 12.2Kbps)

Lowest Band Edge



Date: 8.FEB.2018 13:41:11

Highest Band Edge

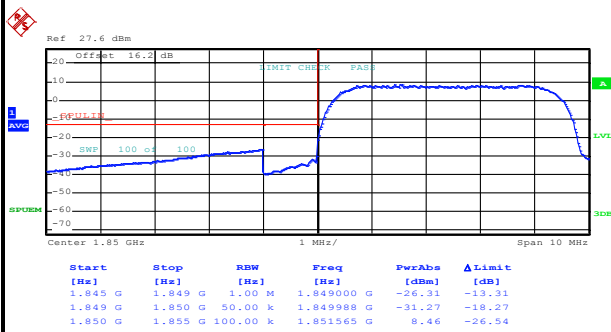


Date: 8.FEB.2018 13:46:13



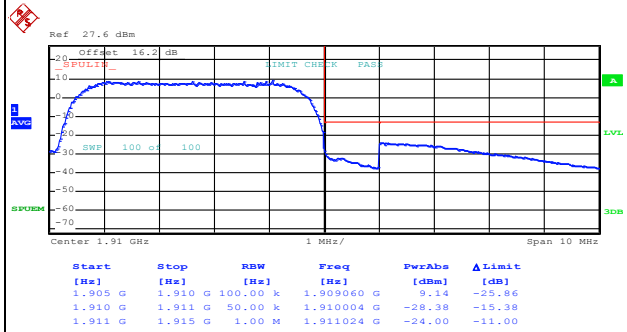
WCDMA Band II (RMC 12.2Kbps)

Lowest Band Edge



Date: 8.FEB.2018 13:26:38

Highest Band Edge

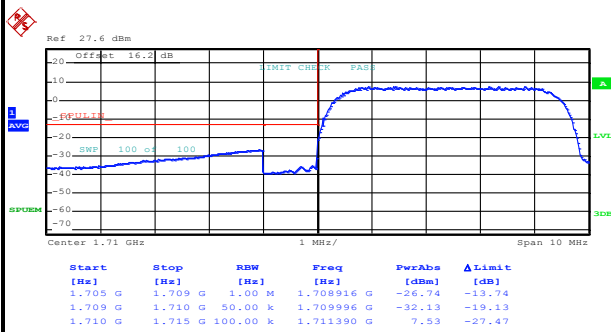


Date: 8.FEB.2018 13:29:32



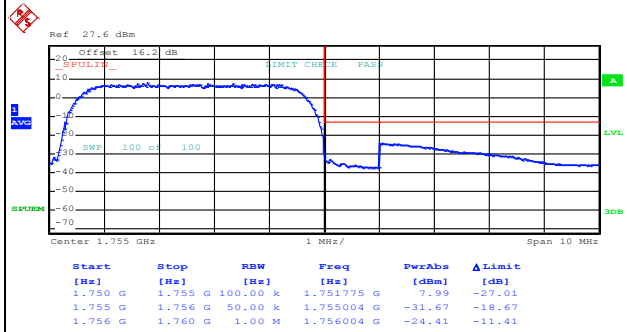
WCDMA Band IV (RMC 12.2Kbps)

Lowest Band Edge



Date: 8.FEB.2018 11:55:55

Highest Band Edge



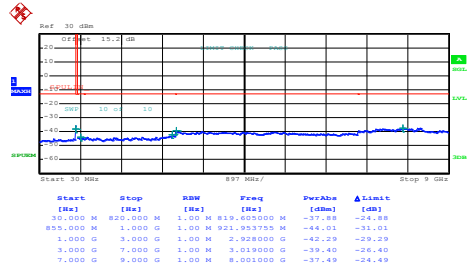
Date: 8.FEB.2018 11:58:42



Conducted Spurious Emission

WCDMA Band V (RMC 12.2Kbps)

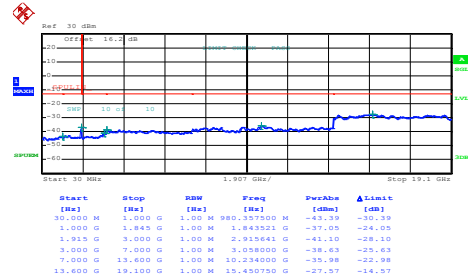
Lowest Channel



Date: 8.FEB.2018 13:47:10

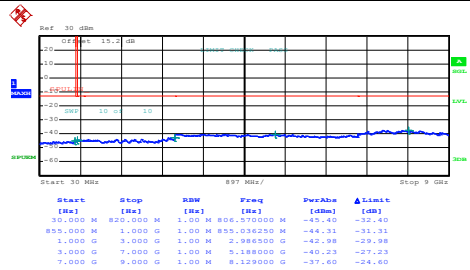
WCDMA Band II (RMC 12.2Kbps)

Lowest Channel



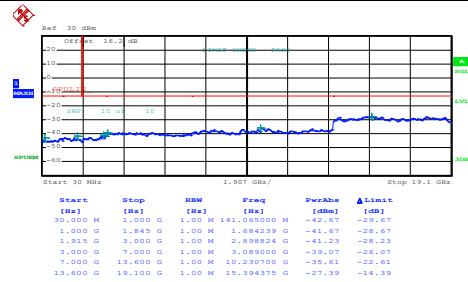
Date: 8.FEB.2018 13:30:29

Middle Channel



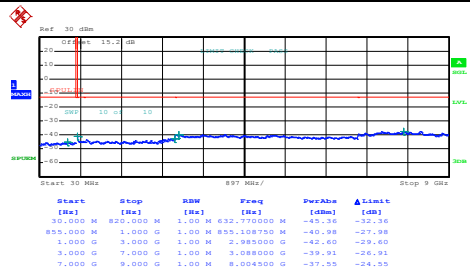
Date: 8.FEB.2018 13:49:08

Middle Channel



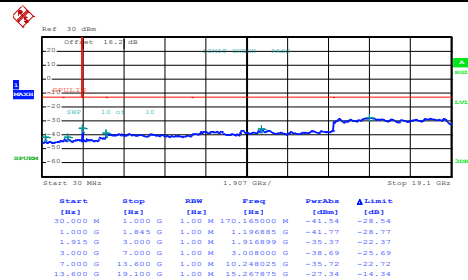
Date: 8.FEB.2018 13:31:21

Highest Channel



Date: 8.FEB.2018 13:51:41

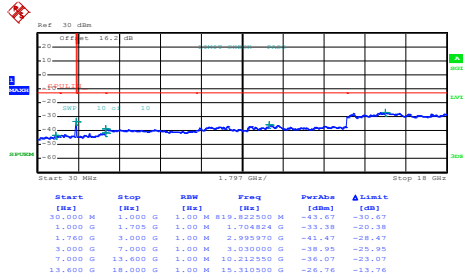
Highest Channel



Date: 8.FEB.2018 13:32:20

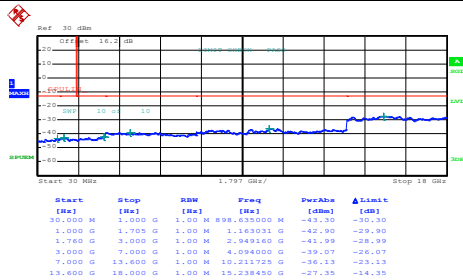
WCDMA Band IV (RMC 12.2Kbps)

Lowest Channel



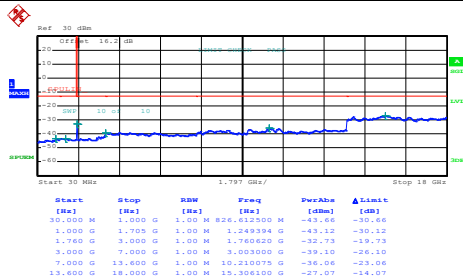
Date: 8.FEB.2018 13:14:25

Middle Channel



Date: 8.FEB.2018 13:15:17

Highest Channel



Date: 8.FEB.2018 13:16:15

**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	0.0012	PASS
40	Normal Voltage	0.0024	
30	Normal Voltage	0.0036	
20(Ref.)	Normal Voltage	0.0000	
10	Normal Voltage	0.0036	
0	Normal Voltage	0.0084	
-10	Normal Voltage	0.0143	
-20	Normal Voltage	0.0048	
-30	Normal Voltage	0.0084	
20	Maximum Voltage	0.0024	
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	0.0016	PASS
40	Normal Voltage	0.0000	
30	Normal Voltage	0.0005	
20(Ref.)	Normal Voltage	0.0000	
10	Normal Voltage	0.0011	
0	Normal Voltage	0.0005	
-10	Normal Voltage	0.0000	
-20	Normal Voltage	0.0016	
-30	Normal Voltage	0.0005	
20	Maximum Voltage	0.0048	
20	Normal Voltage	0.0000	
20	Battery End Point	0.0037	



Test Conditions	Middle Channel	WCDMA Band IV (RMC 12.2Kbps)	Limit Note 2.
Temperature (°C)	Voltage (Volt)	Deviation (ppm)	Result
50	Normal Voltage	0.0017	PASS
40	Normal Voltage	0.0035	
30	Normal Voltage	0.0029	
20(Ref.)	Normal Voltage	0.0000	
10	Normal Voltage	0.0006	
0	Normal Voltage	0.0023	
-10	Normal Voltage	0.0012	
-20	Normal Voltage	0.0029	
-30	Normal Voltage	0.0052	
20	Maximum Voltage	0.0012	
20	Normal Voltage	0.0000	
20	Battery End Point	0.0012	

Note:

3. Normal Voltage = 3.82V. ; Battery End Point (BEP) = 3.6 V. ; Maximum Voltage =4.4 V
4. The frequency fundamental emissions stay within the authorized frequency block based on the frequency deviation measured is small.



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

ERP/EIRP

<For Up Antenna>

Channel	Mode	Conducted		ERP	
		Power (dBm)	Power (Watts)	ERP(dBm)	ERP(W)
Lowest	GSM850 GSM (GT - LC = -4.2 dB)	31.36	1.3677	25.01	0.3170
Middle		31.32	1.3552	24.97	0.3141
Highest		31.35	1.3646	25.00	0.3162
Lowest	GSM850 EDGE class 8 (GT - LC = -4.2 dB)	26.52	0.4487	20.17	0.1040
Middle		26.44	0.4406	20.09	0.1021
Highest		26.58	0.4550	20.23	0.1054
Lowest	WCDMA Band V RMC 12.2Kbps (GT - LC = -4.2 dB)	23.31	0.2143	16.96	0.0497
Middle		23.24	0.2109	16.89	0.0489
Highest		23.23	0.2104	16.88	0.0488
Limit	ERP < 7W	Result		PASS	

Channel	Mode	Conducted		EIRP	
		Power (dBm)	Power (Watts)	EIRP(dBm)	EIRP(W)
Lowest	GSM1900 GSM (GT - LC = -1 dB)	29.42	0.8750	28.42	0.6950
Middle		29.46	0.8831	28.46	0.7015
Highest		29.47	0.8851	28.47	0.7031
Lowest	GSM1900 EDGE class 8 (GT - LC = -1 dB)	24.93	0.3112	23.93	0.2472
Middle		24.68	0.2938	23.68	0.2333
Highest		25.55	0.3589	24.55	0.2851
Lowest	WCDMA Band II RMC 12.2Kbps (GT - LC = -1 dB)	22.73	0.1875	21.73	0.1489
Middle		22.84	0.1923	21.84	0.1528
Highest		22.82	0.1914	21.82	0.1521
Limit	EIRP < 2W	Result		PASS	

Channel	Mode	Conducted		EIRP	
		Power (dBm)	Power (Watts)	EIRP(dBm)	EIRP(W)
Lowest	WCDMA Band IV RMC 12.2Kbps (GT - LC = -3.2 dB)	22.98	0.1986	19.78	0.0951
Middle		22.94	0.1968	19.74	0.0942
Highest		22.97	0.1982	19.77	0.0948
Limit	EIRP < 1W	Result		PASS	



<For Down Antenna>

Channel	Mode	Conducted		ERP	
		Power (dBm)	Power (Watts)	ERP(dBm)	ERP(W)
Lowest	GSM850	31.73	1.4894	25.98	0.3963
Middle	GSM	31.74	1.4928	25.99	0.3972
Highest	(GT - LC = -3.6 dB)	31.82	1.5205	26.07	0.4046
Lowest	GSM850	26.16	0.4130	20.41	0.1099
Middle	EDGE class 8	26.13	0.4102	20.38	0.1091
Highest	(GT - LC = -3.6 dB)	26.03	0.4009	20.28	0.1067
Lowest	WCDMA Band V	23.37	0.2173	17.62	0.0578
Middle	RMC 12.2Kbps	23.30	0.2138	17.55	0.0569
Highest	(GT - LC = -3.6 dB)	23.31	0.2143	17.56	0.0570
Limit	ERP < 7W	Result		PASS	

Channel	Mode	Conducted		EIRP	
		Power (dBm)	Power (Watts)	EIRP(dBm)	EIRP(W)
Lowest	GSM1900	30.03	1.0069	27.53	0.5662
Middle	GSM	30.11	1.0257	27.61	0.5768
Highest	(GT - LC = -2.5 dB)	30.35	1.0839	27.85	0.6095
Lowest	GSM1900	25.06	0.3206	22.56	0.1803
Middle	EDGE class 8	25.24	0.3342	22.74	0.1879
Highest	(GT - LC = -2.5 dB)	25.40	0.3467	22.90	0.1950
Lowest	WCDMA Band II	24.01	0.2518	21.51	0.1416
Middle	RMC 12.2Kbps	24.02	0.2523	21.52	0.1419
Highest	(GT - LC = -2.5 dB)	24.00	0.2512	21.50	0.1413
Limit	EIRP < 2W	Result		PASS	

Channel	Mode	Conducted		EIRP	
		Power (dBm)	Power (Watts)	EIRP(dBm)	EIRP(W)
Lowest	WCDMA Band IV	23.37	0.2173	21.27	0.1340
Middle	RMC 12.2Kbps	23.35	0.2163	21.25	0.1334
Highest	(GT - LC = -2.1 dB)	23.30	0.2138	21.20	0.1318
Limit	EIRP < 1W	Result		PASS	

Radiated Spurious Emission

<For Up Antenna>

GPRS 850

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	-50.15	-13	-37.15	-60.04	-57.1	0.53	9.63	H
	2472	-57.92	-13	-44.92	-71.26	-65.9	0.65	10.78	H
	3296	-59.02	-13	-46.02	-74.61	-68.1	0.76	11.99	H
	1648	-60.85	-13	-47.85	-70.31	-67.8	0.53	9.63	V
	2472	-56.12	-13	-43.12	-69.62	-64.1	0.65	10.78	V
	3296	-59.12	-13	-46.12	-74.82	-68.2	0.76	11.99	V
Middle	1672	-52.60	-13	-39.60	-62.26	-59.6	0.53	9.68	H
	2512	-58.60	-13	-45.60	-71.8	-66.6	0.66	10.81	H
	3344	-58.28	-13	-45.28	-74.44	-67.5	0.76	12.13	H
	1672	-58.90	-13	-45.90	-68.56	-65.9	0.53	9.68	V
	2512	-58.80	-13	-45.80	-72.69	-66.8	0.66	10.81	V
	3344	-59.58	-13	-46.58	-75.04	-68.8	0.76	12.13	V
Highest	1696	-46.75	-13	-33.75	-56.27	-53.8	0.53	9.73	H
	2544	-56.79	-13	-43.79	-69.8	-64.8	0.67	10.83	H
	3400	-59.12	-13	-46.12	-75.01	-68.5	0.77	12.30	H
	1696	-52.55	-13	-39.55	-61.63	-59.6	0.53	9.73	V
	2544	-57.19	-13	-44.19	-70.81	-65.2	0.67	10.83	V
	3400	-58.92	-13	-45.92	-74.53	-68.3	0.77	12.30	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	-58.45	-13	-45.45	-68.14	-65.4	0.53	9.63	H
	2472	-60.42	-13	-47.42	-73.75	-68.4	0.65	10.78	H
	3296	-59.42	-13	-46.42	-74.77	-68.5	0.76	11.99	H
	1648	-63.25	-13	-50.25	-72.79	-70.2	0.53	9.63	V
	2472	-58.49	-13	-45.49	-72.31	-66.47	0.65	10.78	V
	3296	-59.35	-13	-46.35	-74.67	-68.43	0.76	11.99	V
Middle	1672	-53.20	-13	-40.20	-63.14	-60.2	0.53	9.68	H
	2512	-60.60	-13	-47.60	-73.99	-68.6	0.66	10.81	H
	3344	-58.68	-13	-45.68	-74.58	-67.9	0.76	12.13	H
	1672	-61.80	-13	-48.80	-71.46	-68.8	0.53	9.68	V
	2512	-60.40	-13	-47.40	-73.92	-68.4	0.66	10.81	V
	3344	-58.98	-13	-45.98	-74.63	-68.2	0.76	12.13	V
Highest	1696	-52.15	-13	-39.15	-62.1	-59.2	0.53	9.73	H
	2544	-60.89	-13	-47.89	-73.89	-68.9	0.67	10.83	H
	3400	-58.82	-13	-45.82	-74.89	-68.2	0.77	12.30	H
	1696	-56.15	-13	-43.15	-65.41	-63.2	0.53	9.73	V
	2544	-60.19	-13	-47.19	-73.68	-68.2	0.67	10.83	V
	3400	-59.32	-13	-46.32	-74.99	-68.7	0.77	12.30	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	-63.23	-13	-50.23	-72.93	-70.2	0.53	9.64	H
	2480	-60.52	-13	-47.52	-73.7	-68.5	0.65	10.78	H
	3312	-59.07	-13	-46.07	-74.77	-68.2	0.76	12.04	H
	1656	-63.83	-13	-50.83	-73.2	-70.8	0.53	9.64	V
	2480	-60.42	-13	-47.42	-73.97	-68.4	0.65	10.78	V
	3312	-58.87	-13	-45.87	-74.41	-68	0.76	12.04	V
Middle	1672	-59.60	-13	-46.60	-62.29	-66.6	0.53	9.68	H
	2512	-60.50	-13	-47.50	-73.91	-68.5	0.66	10.81	H
	3344	-58.18	-13	-45.18	-74.06	-67.4	0.76	12.13	H
	1672	-62.60	-13	-49.60	-72.61	-69.6	0.53	9.68	V
	2512	-60.50	-13	-47.50	-73.93	-68.5	0.66	10.81	V
	3344	-59.48	-13	-46.48	-75.04	-68.7	0.76	12.13	V
Highest	1696	-57.65	-13	-44.65	-67.54	-64.7	0.53	9.73	H
	2540	-60.79	-13	-47.79	-73.88	-68.8	0.67	10.82	H
	3392	-59.14	-13	-46.14	-75.03	-68.5	0.77	12.28	H
	1696	-63.35	-13	-50.35	-72.51	-70.4	0.53	9.73	V
	2540	-60.19	-13	-47.19	-73.8	-68.2	0.67	10.82	V
	3392	-59.24	-13	-46.24	-74.68	-68.6	0.77	12.28	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	3425	-57.90	-13	-44.90	-75.12	-69.5	0.77	12.38	H
	5138	-56.00	-13	-43.00	-76.42	-67.5	0.97	12.48	H
	6850	-53.50	-13	-40.50	-77.01	-64.3	0.83	11.63	H
	3425	-57.90	-13	-44.90	-45.89	-69.5	0.77	12.38	V
	5138	-55.70	-13	-42.70	-43.52	-67.2	0.97	12.48	V
	6850	-53.00	-13	-40.00	-40.6	-63.8	0.83	11.63	V
Middle	3465	-57.78	-13	-44.78	-74.73	-69.5	0.78	12.50	H
	5198	-55.59	-13	-42.59	-76.25	-67.2	0.99	12.60	H
	6930	-52.85	-13	-39.85	-76.62	-63.3	1.01	11.45	H
	3465	-57.88	-13	-44.88	-74.88	-69.6	0.78	12.50	V
	5198	-55.89	-13	-42.89	-76.61	-67.5	0.99	12.60	V
	6930	-51.95	-13	-38.95	-76.09	-62.4	1.01	11.45	V
Highest	3505	-57.78	-13	-44.78	-74.84	-69.6	0.78	12.60	H
	5258	-56.50	-13	-43.50	-77.01	-68.2	1.01	12.72	H
	7010	-52.08	-13	-39.08	-75.9	-62.2	1.17	11.28	H
	3505	-56.98	-13	-43.98	-75.02	-68.8	0.78	12.60	V
	5258	-56.50	-13	-43.50	-77.16	-68.2	1.01	12.72	V
	7010	-51.78	-13	-38.78	-75.94	-61.9	1.17	11.28	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	-53.81	-13	-40.81	-70.8	-65.6	0.72	12.52	H
	5550	-48.30	-13	-35.30	-70.16	-60.47	1.00	13.17	H
	7404	-51.63	-13	-38.63	-76.74	-61.02	1.18	10.57	H
	3702	-51.69	-13	-38.69	-69.85	-63.48	0.72	12.52	V
	5550	-47.19	-13	-34.19	-69.14	-59.36	1.00	13.17	V
	7404	-51.72	-13	-38.72	-76.62	-61.11	1.18	10.57	V
Middle	3762	-54.52	-13	-41.52	-71.67	-66.33	0.69	12.50	H
	5640	-49.34	-13	-36.34	-71.06	-61.47	0.98	13.12	H
	7524	-51.46	-13	-38.46	-76.38	-60.75	1.18	10.47	H
	3762	-53.30	-13	-40.30	-71.66	-65.11	0.69	12.50	V
	5640	-49.02	-13	-36.02	-70.91	-61.15	0.98	13.12	V
	7524	-51.47	-13	-38.47	-76.44	-60.76	1.18	10.47	V
Highest	3820	-54.45	-13	-41.45	-71.72	-66.23	0.69	12.47	H
	5730	-51.81	-13	-38.81	-73.55	-63.88	0.99	13.06	H
	7640	-50.83	-13	-37.83	-76.01	-60.44	1.18	10.79	H
	3820	-54.51	-13	-41.51	-73	-66.29	0.69	12.47	V
	5730	-50.42	-13	-37.42	-72.37	-62.49	0.99	13.06	V
	7640	-51.17	-13	-38.17	-76.1	-60.78	1.18	10.79	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	-55.41	-13	-42.41	-72.23	-67.2	0.72	12.52	H
	5550	-54.13	-13	-41.13	-75.7	-66.3	1.00	13.17	H
	7404	-52.01	-13	-39.01	-76.71	-61.4	1.18	10.57	H
	3702	-51.41	-13	-38.41	-69.23	-63.2	0.72	12.52	V
	5550	-53.93	-13	-40.93	-75.62	-66.1	1.00	13.17	V
	7404	-52.01	-13	-39.01	-76.74	-61.4	1.18	10.57	V
Middle	3762	-55.69	-13	-42.69	-72.73	-67.5	0.69	12.50	H
	5640	-53.97	-13	-40.97	-75.21	-66.1	0.98	13.12	H
	7524	-51.01	-13	-38.01	-75.91	-60.3	1.18	10.47	H
	3762	-51.69	-13	-38.69	-69.89	-63.5	0.69	12.50	V
	5640	-53.67	-13	-40.67	-75.54	-65.8	0.98	13.12	V
	7524	-51.51	-13	-38.51	-76.17	-60.8	1.18	10.47	V
Highest	3820	-54.12	-13	-41.12	-71.26	-65.9	0.69	12.47	H
	5730	-54.53	-13	-41.53	-76	-66.6	0.99	13.06	H
	7640	-51.19	-13	-38.19	-76.18	-60.8	1.18	10.79	H
	3820	-45.82	-13	-32.82	-64.07	-57.6	0.69	12.47	V
	5730	-54.03	-13	-41.03	-75.83	-66.1	0.99	13.06	V
	7640	-51.49	-13	-38.49	-76.28	-61.1	1.18	10.79	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	3705	-57.81	-13	-44.81	-74.65	-69.6	0.72	12.52	H
	5557	-54.93	-13	-41.93	-76.04	-67.1	1.00	13.17	H
	7410	-52.32	-13	-39.32	-76.98	-61.7	1.18	10.56	H
	3705	-56.41	-13	-43.41	-74.52	-68.2	0.72	12.52	V
	5557	-54.63	-13	-41.63	-76.25	-66.8	1.00	13.17	V
	7410	-52.42	-13	-39.42	-76.99	-61.8	1.18	10.56	V
Middle	3762	-57.69	-13	-44.69	-74.38	-69.5	0.69	12.50	H
	5640	-54.47	-13	-41.47	-75.81	-66.6	0.98	13.12	H
	7524	-51.51	-13	-38.51	-76.38	-60.8	1.18	10.47	H
	3762	-55.89	-13	-42.89	-74.25	-67.7	0.69	12.50	V
	5640	-54.47	-13	-41.47	-76.04	-66.6	0.98	13.12	V
	7524	-51.61	-13	-38.61	-76.48	-60.9	1.18	10.47	V
Highest	3816	-57.81	-13	-44.81	-74.46	-69.6	0.69	12.47	H
	5723	-54.53	-13	-41.53	-75.82	-66.6	0.99	13.07	H
	7630	-49.72	-13	-36.72	-75.97	-59.3	1.18	10.76	H
	3816	-56.21	-13	-43.21	-74.61	-68	0.69	12.47	V
	5723	-54.53	-13	-41.53	-76.21	-66.6	0.99	13.07	V
	7630	-52.02	-13	-39.02	-76.42	-61.6	1.18	10.76	V

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

<For Down Antenna>

GSM850

GSM 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	-53.92	-13	-40.92	-63.83	-60.87	0.53	9.63	H
	2472	-48.82	-13	-35.82	-62.26	-56.8	0.65	10.78	H
	3296	-58.73	-13	-45.73	-74.87	-67.81	0.76	11.99	H
	4120	-54.89	-13	-41.89	-72.28	-64.23	0.86	12.35	H
	1648	-52.84	-13	-39.84	-62.46	-59.79	0.53	9.63	V
	2472	-47.65	-13	-34.65	-61.58	-55.63	0.65	10.78	V
	3296	-58.49	-13	-45.49	-74.6	-67.57	0.76	11.99	V
	4120	-56.45	-13	-43.45	-75.02	-65.79	0.86	12.35	V
Middle	1672	-52.83	-13	-39.83	-62.92	-59.83	0.53	9.68	H
	2512	-49.38	-13	-36.38	-62.8	-57.38	0.66	10.81	H
	3352	-58.20	-13	-45.20	-74.43	-67.44	0.76	12.16	H
	4184	-56.97	-13	-43.97	-74.41	-66.31	0.84	12.33	H
	1672	-51.76	-13	-38.76	-61.45	-58.76	0.53	9.68	V
	2512	-48.05	-13	-35.05	-61.88	-56.05	0.66	10.81	V
	3352	-58.51	-13	-45.51	-74.48	-67.75	0.76	12.16	V
	4184	-55.48	-13	-42.48	-74.15	-64.82	0.84	12.33	V
Highest	1696	-49.25	-13	-36.25	-59.63	-56.3	0.53	9.73	H
	2544	-50.89	-13	-37.89	-64.37	-58.9	0.67	10.83	H
	3392	-58.14	-13	-45.14	-74.45	-67.5	0.77	12.28	H
	4272	-56.50	-13	-43.50	-74.15	-65.8	0.84	12.29	H
	1696	-48.68	-13	-35.68	-58.44	-55.73	0.53	9.73	V
	2544	-51.13	-13	-38.13	-64.98	-59.14	0.67	10.83	V
	3392	-58.53	-13	-45.53	-74.43	-67.89	0.77	12.28	V
	4272	-56.11	-13	-43.11	-75.04	-65.41	0.84	12.29	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	-49.72	-13	-36.72	-59.63	-56.67	0.53	9.63	H
	2472	-55.77	-13	-42.77	-69.21	-63.75	0.65	10.78	H
	3296	-58.59	-13	-45.59	-74.73	-67.67	0.76	11.99	H
	1648	-47.95	-13	-34.95	-57.57	-54.9	0.53	9.63	V
	2472	-53.11	-13	-40.11	-67.04	-61.09	0.65	10.78	V
	3296	-58.67	-13	-45.67	-74.78	-67.75	0.76	11.99	V
Middle	1672	-49.99	-13	-36.99	-60.08	-56.99	0.53	9.68	H
	2512	-54.45	-13	-41.45	-67.87	-62.45	0.66	10.81	H
	3344	-58.08	-13	-45.08	-74.28	-67.3	0.76	12.13	H
	1672	-47.92	-13	-34.92	-57.61	-54.92	0.53	9.68	V
	2512	-53.64	-13	-40.64	-67.47	-61.64	0.66	10.81	V
	3344	-58.50	-13	-45.50	-74.51	-67.72	0.76	12.13	V
Highest	1696	-46.15	-13	-33.15	-56.53	-53.2	0.53	9.73	H
	2544	-54.72	-13	-41.72	-68.2	-62.73	0.67	10.83	H
	3392	-58.15	-13	-45.15	-74.46	-67.51	0.77	12.28	H
	1696	-45.90	-13	-32.90	-55.66	-52.95	0.53	9.73	V
	2544	-54.02	-13	-41.02	-67.87	-62.03	0.67	10.83	V
	3392	-58.76	-13	-45.76	-74.66	-68.12	0.77	12.28	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	-58.63	-13	-45.63	-68.58	-65.6	0.53	9.64	H
	2480	-36.24	-13	-23.24	-49.68	-44.22	0.65	10.78	H
	3304	-58.69	-13	-45.69	-74.82	-67.79	0.76	12.01	H
	4136	-56.50	-13	-43.50	-73.9	-65.84	0.85	12.35	H
	1656	-58.16	-13	-45.16	-67.78	-65.13	0.53	9.64	V
	2480	-40.51	-13	-27.51	-54.44	-48.49	0.65	10.78	V
	3304	-58.14	-13	-45.14	-74.24	-67.24	0.76	12.01	V
	4136	-56.61	-13	-43.61	-75.19	-65.95	0.85	12.35	V
Middle	1672	-51.16	-13	-38.16	-61.25	-58.16	0.53	9.68	H
	2504	-29.48	-13	-16.48	-42.91	-37.48	0.66	10.80	H
	3336	-58.38	-13	-45.38	-74.59	-67.58	0.76	12.11	H
	4176	-54.38	-13	-41.38	-71.82	-63.72	0.84	12.33	H
	1672	-48.77	-13	-35.77	-58.46	-55.77	0.53	9.68	V
	2504	-31.51	-13	-18.51	-45.35	-39.51	0.66	10.80	V
	3336	-58.29	-13	-45.29	-74.31	-67.49	0.76	12.11	V
	4176	-52.92	-13	-39.92	-71.59	-62.26	0.84	12.33	V
Highest	1696	-56.36	-13	-43.36	-66.74	-63.41	0.53	9.73	H
	2536	-30.35	-13	-17.35	-43.8	-38.36	0.66	10.82	H
	3384	-58.34	-13	-45.34	-74.64	-67.67	0.77	12.25	H
	4232	-55.27	-13	-42.27	-72.83	-64.59	0.84	12.31	H
	1696	-57.91	-13	-44.91	-67.67	-64.96	0.53	9.73	V
	2536	-38.24	-13	-25.24	-52.07	-46.25	0.66	10.82	V
	3384	-58.80	-13	-45.80	-74.69	-68.13	0.77	12.25	V
	4232	-56.57	-13	-43.57	-75.39	-65.89	0.84	12.31	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	3426	-57.38	-13	-44.38	-74.54	-68.98	0.77	12.38	H
	5136	-55.30	-13	-42.30	-76	-66.8	0.97	12.47	H
	6852	-53.50	-13	-40.50	-77.23	-64.29	0.83	11.63	H
	3426	-57.97	-13	-44.97	-74.94	-69.57	0.77	12.38	V
	5136	-55.33	-13	-42.33	-76.2	-66.83	0.97	12.47	V
	6852	-53.15	-13	-40.15	-77.33	-63.94	0.83	11.63	V
Middle	3468	-57.82	-13	-44.82	-75.02	-69.55	0.78	12.50	H
	5196	-55.52	-13	-42.52	-76.31	-67.12	0.99	12.59	H
	6930	-52.62	-13	-39.62	-76.49	-63.07	1.01	11.45	H
	3468	-57.30	-13	-44.30	-74.89	-69.03	0.78	12.50	V
	5196	-55.33	-13	-42.33	-76.28	-66.93	0.99	12.59	V
	6930	-52.44	-13	-39.44	-76.69	-62.89	1.01	11.45	V
Highest	3504	-58.02	-13	-45.02	-75.27	-69.84	0.78	12.60	H
	5256	-56.37	-13	-43.37	-77.34	-68.07	1.01	12.71	H
	7008	-51.96	-13	-38.96	-75.99	-62.08	1.17	11.29	H
	3504	-56.96	-13	-43.96	-75.18	-68.78	0.78	12.60	V
	5256	-56.02	-13	-43.02	-77.13	-67.72	1.01	12.71	V
	7008	-51.70	-13	-38.70	-76.03	-61.82	1.17	11.29	V

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



GSM 1900

GSM 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	-56.77	-13	-43.77	-73.76	-68.56	0.72	12.52	H
	5550	-51.26	-13	-38.26	-73.12	-63.43	1.00	13.17	H
	7398	-52.19	-13	-39.19	-77.31	-61.59	1.18	10.58	H
	3702	-55.45	-13	-42.45	-73.61	-67.24	0.72	12.52	V
	5550	-51.91	-13	-38.91	-73.86	-64.08	1.00	13.17	V
	7398	-51.99	-13	-38.99	-76.9	-61.39	1.18	10.58	V
Middle	3762	-55.47	-13	-42.47	-72.62	-67.28	0.69	12.50	H
	5640	-52.69	-13	-39.69	-74.41	-64.82	0.98	13.12	H
	7518	-51.97	-13	-38.97	-76.88	-61.24	1.18	10.45	H
	3762	-55.24	-13	-42.24	-73.6	-67.05	0.69	12.50	V
	5640	-51.38	-13	-38.38	-73.27	-63.51	0.98	13.12	V
	7518	-51.71	-13	-38.71	-76.67	-60.98	1.18	10.45	V
Highest	3822	-55.84	-13	-42.84	-73.11	-67.62	0.69	12.47	H
	5730	-52.68	-13	-39.68	-74.42	-64.75	0.99	13.06	H
	7638	-51.32	-13	-38.32	-76.5	-60.92	1.18	10.79	H
	3822	-55.55	-13	-42.55	-74.04	-67.33	0.69	12.47	V
	5730	-52.09	-13	-39.09	-74.04	-64.16	0.99	13.06	V
	7638	-51.54	-13	-38.54	-76.47	-61.14	1.18	10.79	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	-57.18	-13	-44.18	-74.17	-68.97	0.72	12.52	H
	5550	-54.39	-13	-41.39	-76.25	-66.56	1.00	13.17	H
	7398	-52.17	-13	-39.17	-77.29	-61.57	1.18	10.58	H
	3702	-56.16	-13	-43.16	-74.32	-67.95	0.72	12.52	V
	5550	-54.36	-13	-41.36	-76.31	-66.53	1.00	13.17	V
	7398	-52.51	-13	-39.51	-77.42	-61.91	1.18	10.58	V
Middle	3762	-57.24	-13	-44.24	-74.39	-69.05	0.69	12.50	H
	5640	-54.41	-13	-41.41	-76.13	-66.54	0.98	13.12	H
	7518	-52.09	-13	-39.09	-77	-61.36	1.18	10.45	H
	3762	-55.91	-13	-42.91	-74.27	-67.72	0.69	12.50	V
	5640	-54.35	-13	-41.35	-76.24	-66.48	0.98	13.12	V
	7518	-51.94	-13	-38.94	-76.9	-61.21	1.18	10.45	V
Highest	3822	-56.76	-13	-43.76	-74.03	-68.54	0.69	12.47	H
	5730	-54.87	-13	-41.87	-76.61	-66.94	0.99	13.06	H
	7638	-51.25	-13	-38.25	-76.43	-60.85	1.18	10.79	H
	3822	-55.98	-13	-42.98	-74.47	-67.76	0.69	12.47	V
	5730	-54.29	-13	-41.29	-76.24	-66.36	0.99	13.06	V
	7638	-51.73	-13	-38.73	-76.66	-61.33	1.18	10.79	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	-57.39	-13	-44.39	-74.43	-69.19	0.72	12.52	H
	5562	-54.64	-13	-41.64	-76.45	-66.81	1.00	13.16	H
	7416	-51.50	-13	-38.50	-76.56	-60.87	1.18	10.55	H
	3708	-56.02	-13	-43.02	-74.23	-67.82	0.72	12.52	V
	5562	-54.64	-13	-41.64	-76.57	-66.81	1.00	13.16	V
	7416	-52.23	-13	-39.23	-77.14	-61.6	1.18	10.55	V
Middle	3762	-57.28	-13	-44.28	-74.43	-69.09	0.69	12.50	H
	5640	-54.25	-13	-41.25	-75.97	-66.38	0.98	13.12	H
	7518	-51.86	-13	-38.86	-76.77	-61.13	1.18	10.45	H
	3762	-55.90	-13	-42.90	-74.26	-67.71	0.69	12.50	V
	5640	-54.20	-13	-41.20	-76.09	-66.33	0.98	13.12	V
	7518	-51.88	-13	-38.88	-76.84	-61.15	1.18	10.45	V
Highest	3816	-57.24	-13	-44.24	-74.51	-69.03	0.69	12.47	H
	5724	-54.44	-13	-41.44	-76.19	-66.51	0.99	13.07	H
	7632	-51.50	-13	-38.50	-76.68	-61.09	1.18	10.77	H
	3816	-56.05	-13	-43.05	-74.54	-67.84	0.69	12.47	V
	5724	-54.48	-13	-41.48	-76.44	-66.55	0.99	13.07	V
	7632	-51.61	-13	-38.61	-76.54	-61.2	1.18	10.77	V

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