



FCC RF Test Report

APPLICANT : i.am.plus electronics inc
EQUIPMENT : SmartWatch
BRAND NAME : iampplus
MODEL NAME : IAM1110
MARKETING NAME : PULS
FCC ID : 2AB2S-IAM1110
STANDARD : FCC 47 CFR Part 2, 22(H), 24(E)
CLASSIFICATION : PCS Licensed Transmitter (PCB)

The product was received on Jul. 17, 2015 and testing was completed on Jul. 31, 2015. 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-C-2004 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 : 2AB2S-IAM1110

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REVISION HISTORY

REPORT NO.	VERSION	DESCRIPTION	ISSUED DATE
FG571759	Rev. 01	Initial issue of report	Apr. 08, 2016



SUMMARY OF TEST RESULT

Report Section	FCC Rule	Description	Limit	Result	Remark
3.4	§2.1046	Conducted Output Power	Reporting Only	PASS	-
3.5	§24.232(d)	Peak-to-Average Ratio	< 13 dB	PASS	-
3.6	§2.1049 §22.917(b) §24.238(b)	Occupied Bandwidth	Reporting Only	PASS	-
3.7	§2.1051 §22.917(a) §24.238(a)	Band Edge Measurement	< 43+10log10(P[Watts])	PASS	-
3.8	§2.1051 §22.917(a) §24.238(a)	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		Within Authorized Band		
4.4	§22.913(a)(2)	Effective Radiated Power	< 7 Watts	PASS	-
	§24.232(c)	Equivalent Isotropic Radiated Power	< 2 Watts	PASS	-
4.5	§2.1053 §22.917(a) §24.238(a)	Field Strength of Spurious Radiation	< 43+10log10(P[Watts])	PASS	Under limit 11.64 dB at 1696.000 MHz



1 General Description

1.1 Applicant

i.am.plus electronics inc

10960 Wilshire Blvd., 5th Floor Los Angeles, CA 90024

1.2 Manufacturer

FIH Mobile Limited

No. 4, Mingsheng St., Tu-Cheng Dist., New Taipei City 23679, Taiwan

1.3 Product Feature of Equipment Under Test

Product Feature	
Equipment	SmartWatch
Brand Name	iampius
Model Name	IAM1110
Marketing Name	PULS
FCC ID	2AB2S-IAM1110
EUT supports Radios application	GSM/EGPRS/WCDMA/HSPA WLAN 11b/g/n HT20 Bluetooth v4.0 EDR/LE
HW Version	PR4
SW Version	IP2_1C0C_1_210
EUT Stage	Production Unit

Remark: The above EUT's information was declared by manufacturer. Please refer to the specifications or user's manual for more detailed description.

1.4 Product Specification subjective to this standard

Product Specification subjective to this standard	
Tx Frequency	GSM/GPRS/EDGE: 850: 824.2 MHz ~ 848.8 MHz 1900: 1850.2 MHz ~ 1909.8MHz WCDMA: Band V: 826.4 MHz ~ 846.6 MHz Band II: 1852.4 MHz ~ 1907.6 MHz
Rx Frequency	GSM/GPRS/EDGE: 850: 869.2 MHz ~ 893.8 MHz 1900: 1930.2 MHz ~ 1989.8 MHz WCDMA: Band V: 871.4 MHz ~ 891.6 MHz Band II: 1932.4 MHz ~ 1987.6 MHz
Maximum Output Power to Antenna	GSM/GPRS/EDGE: 850: 31.73 dBm 1900: 29.24 dBm WCDMA: Band V: 23.61 dBm Band II: 20.82 dBm
Antenna Type	Dipole Antenna
Type of Modulation	GSM: GMSK GPRS: GMSK EDGE: GMSK / 8PSK WCDMA: QPSK (Uplink) HSDPA: 64QAM (Downlink) HSUPA: QPSK (Uplink)

1.5 Modification of EUT

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

1.6 Maximum ERP/EIRP Power, Frequency Tolerance, and Emission Designator

FCC Rule	System	Type of Modulation	Maximum ERP/EIRP (W)	Frequency Tolerance (ppm)	Emission Designator
Part 22	GSM850 GPRS class 8	GMSK	0.4920	0.0418 ppm	245KGXW
Part 22	GSM850 EDGE class 8	8PSK	0.1340	0.0275 ppm	244KG7W
Part 22	WCDMA Band V RMC 12.2Kbps	QPSK	0.0741	0.0179 ppm	4M19F9W
Part 24	GSM1900 GPRS class 8	GMSK	0.8072	0.0367 ppm	248KGXW
Part 24	GSM1900 EDGE class 8	8PSK	0.3715	0.0340 ppm	242KG7W
Part 24	WCDMA Band II RMC 12.2Kbps	QPSK	0.2410	0.0043 ppm	4M18F9W

1.7 Testing Location

Sporton Lab is accredited to ISO 17025 by Taiwan Accreditation Foundation (TAF code : 1190) and the FCC designation No. TW1022 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.
Test Site Location	No.58, Aly. 75, Ln. 564, Wenhua 3rd Rd. Guishan Dist, Taoyuan City, Taiwan (R.O.C.) TEL: +886-3-327-0868 FAX: +886-3-327-0855
Test Site No.	Sporton Site No. 03CH10-HY



1.8 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)
- ♦ ANSI / TIA / EIA-603-C-2004
- ♦ FCC KDB 971168 D01 Power Meas. License Digital Systems v02r02

Remark:

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

2 Test Configuration of Equipment Under Test

2.1 Test Mode

Antenna port conducted and radiated test items were performed according to KDB 971168 D01 Power Meas. License Digital Systems v02r02 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:

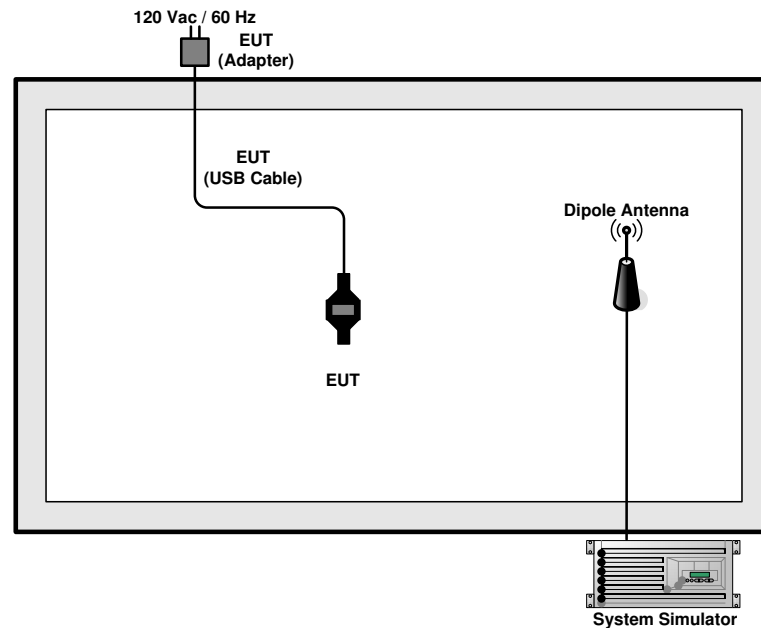
1. 30 MHz to 9000 MHz for GSM850 and WCDMA Band V.
2. 30 MHz to 19000 MHz for GSM1900 and WCDMA Band II.

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

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 :

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

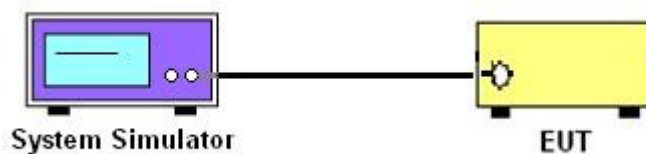
3 Conducted Test Result

3.1 Measuring Instruments

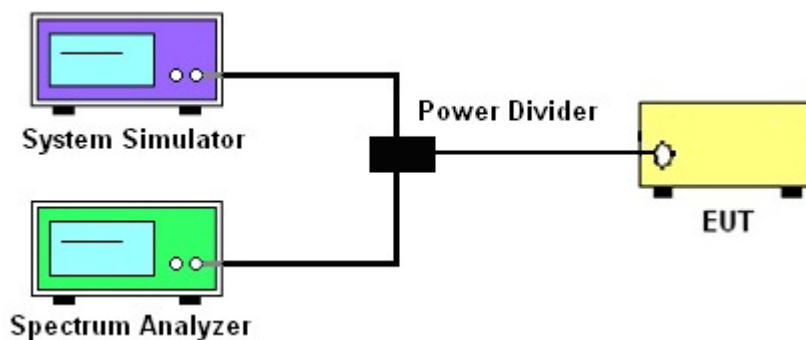
See list of measuring instruments of this test report.

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

3.4.1 Description of the Conducted Output Power

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

3.4.2 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 EUT was connected to spectrum analyzer and system simulator via a power divider.
2. Set EUT to transmit at maximum output power.
3. When the duty cycle is less than 98%, then signal gating will be implemented on the spectrum analyzer by triggering from the system simulator.
4. Set the CCDF (Complementary Cumulative Distribution Function) option of the spectrum analyzer.
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 99% 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 emission bandwidth is defined as the width of the signal between two points, located at the two sides of the carrier frequency, outside of which all emissions are attenuated at least 26 dB below the transmitter power.

3.6.2 Test Procedures

1. The testing follows FCC KDB 971168 D01 v02r02 Section 4.2.
2. The EUT was connected to the spectrum analyzer and system simulator via a power divider.
3. The RF output of the EUT was connected to the spectrum analyzer by RF cable and attenuator. The path loss was compensated to the results for each measurement.
4. The 99% occupied bandwidth were measured, set RBW= 1% of span, VBW= 3*RBW, sample detector, trace maximum hold.
5. The 26dB bandwidth were measured, set RBW= 1% of EBW, VBW= 3*RBW, peak detector, trace maximum hold.

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 v02r02 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)
 $= P(W) - [43 + 10\log(P)] \text{ (dB)}$
 $= [30 + 10\log(P)] \text{ (dBm)} - [43 + 10\log(P)] \text{ (dB)}$
 $= -13\text{dBm}.$

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 v02r02 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)
= $P(W) - [43 + 10\log(P)]$ (dB)
= $[30 + 10\log(P)]$ (dBm) - $[43 + 10\log(P)]$ (dB)
= -13dBm.

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 v02r02 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 v02r02 Section 9.0.
2. The EUT was placed in a temperature chamber at $25\pm 5^{\circ}\text{C}$ 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

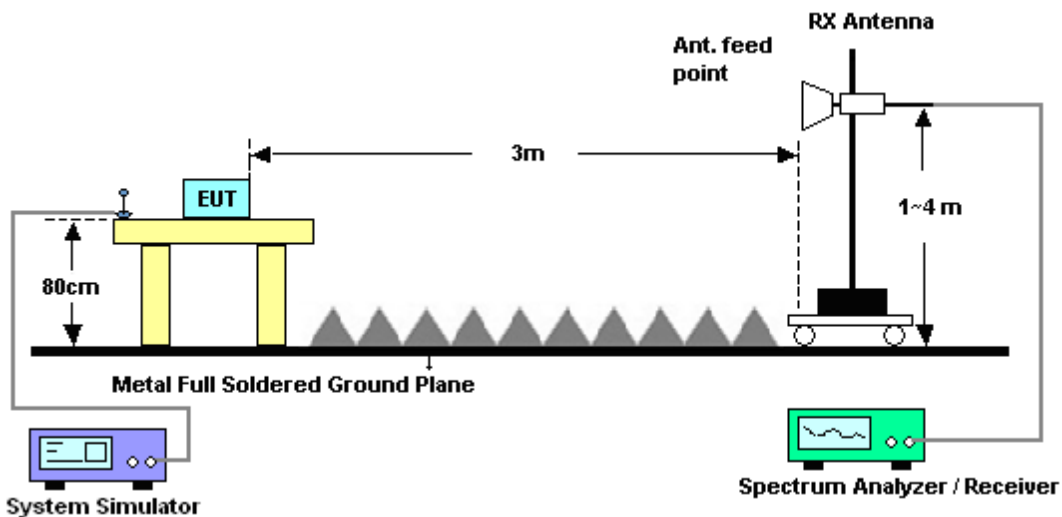
See list of measuring instruments of this test report.

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 Effective Radiated Power and Effective Isotropic Radiated Power Measurement

4.4.1 Description of the ERP/EIRP Measurement

The substitution method, in ANSI / TIA / EIA-603-C-2004, was used for ERP/EIRP measurement, and the spectrum analyzer configuration follows KDB 971168 D01 Power Meas. License Digital Systems v02r02. The ERP of mobile transmitters must not exceed 7 Watts and the EIRP of mobile transmitters are limited to 2 Watts.

4.4.2 Test Procedures

1. The testing follows FCC KDB 971168 D01 v02r02 Section 5.2.1. (for CDMA/WCDMA), Section 5.2.2.2 (for GSM/GPRS/EDGE) and ANSI / TIA-603-C-2004 Section 2.2.17.
2. The EUT was placed on a non-conductive rotating platform 0.8 meters high in a semi-anechoic chamber. The radiated emission at the fundamental frequency was measured at 3 m with a test antenna and a spectrum analyzer with RMS detector per section 5. of KDB 971168 D01.
3. During the measurement, the system simulator parameters were set to force the EUT transmitting at maximum output power. The maximum emission was recorded from analyzer power level (LVL) from the 360 degrees rotation of the turntable and the test antenna raised and lowered over a range from 1 to 4 meters in both horizontally and vertically polarized orientations.
4. Effective Isotropic Radiated Power (EIRP) was measured by substitution method according to TIA/EIA-603-C. The EUT was replaced by the substitution antenna at same location, and then tune the output power of signal generator to the same level as maximum output power of EUT. Take the record of the output power at substitution antenna.

4.5 Field Strength of Spurious Radiation Measurement

4.5.1 Description of Field Strength of Spurious Radiated Measurement

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

4.5.2 Test Procedures

1. The testing follows FCC KDB 971168 D01 v02r02 Section 5.8 and ANSI / TIA-603-C-2004 Section 2.2.12.
2. The EUT was placed on a rotatable wooden table 0.8 meters 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)
 $= P(W) - [43 + 10\log(P)] \text{ (dB)}$
 $= [30 + 10\log(P)] \text{ (dBm)} - [43 + 10\log(P)] \text{ (dB)}$
 $= -13\text{dBm}.$



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. 24, 2015	Jul. 23, 2015	Jun. 23, 2016	Conducted (TH03-HY)
Programmable Power Supply	GW Instek	PSS-2005	EL883644	Voltage:0~20V; Current:0~5A	Dec. 01, 2014	Jul. 23, 2015	Nov. 30, 2015	Conducted (TH03-HY)
Temperature Chamber	ESPEC	SU-641	92013721	-30℃~70℃	Dec. 01, 2014	Jul. 23, 2015	Nov. 30, 2015	Conducted (TH03-HY)
SHF-EHF Horn Antenna	SCHWARZBECK	BBHA 9170	BBHA9170251	18GHz- 40GHz	Oct. 02, 2014	Jul. 26, 2015 ~ Jul. 31, 2015	Oct. 01, 2015	Radiation (03CH10-HY)
Preamplifier	MITEQ	JS44-18004000-33-8P	1840917	18GHz ~40GHz	Jun. 02, 2015	Jul. 26, 2015 ~ Jul. 31, 2015	Jun. 01, 2016	Radiation (03CH10-HY)
Amplifier	SONOMA	310N	187311	9kHz~1GHz	Nov. 24, 2014	Jul. 26, 2015 ~ Jul. 31, 2015	Nov. 23, 2015	Radiation (03CH10-HY)
Bilog Antenna	TESEQ	CBL 6111D	35413	30MHz~1GHz	Oct. 24, 2014	Jul. 26, 2015 ~ Jul. 31, 2015	Oct. 23, 2015	Radiation (03CH10-HY)
EMI Test Receiver	Keysight	N9038A	MY54130085	20Hz ~ 8.4GHz	Nov. 05, 2014	Jul. 26, 2015 ~ Jul. 31, 2015	Nov. 04, 2015	Radiation (03CH10-HY)
Horn Antenna	SCHWARZBECK	BBHA 9120 D	9120D-1325	1GHz ~ 18GHz	Oct. 03, 2014	Jul. 26, 2015 ~ Jul. 31, 2015	Oct. 02, 2015	Radiation (03CH10-HY)
Preamplifier	Keysight	83017A	MY53270078	1GHz~26.5GHz	Nov. 20, 2014	Jul. 26, 2015 ~ Jul. 31, 2015	Nov. 19, 2015	Radiation (03CH10-HY)
Spectrum Analyzer	Keysight	N9010A	MY54200485	10Hz ~ 44GHZ	Oct. 14, 2014	Jul. 26, 2015 ~ Jul. 31, 2015	Oct. 13, 2015	Radiation (03CH10-HY)
Antenna Mast	EMEC	AM-BS-4500-B	N/A	1~4m	N/A	Jul. 26, 2015 ~ Jul. 31, 2015	N/A	Radiation (03CH10-HY)
Turn Table	EMEC	TT 2200	N/A	0-360 degree	N/A	Jul. 26, 2015 ~ Jul. 31, 2015	N/A	Radiation (03CH10-HY)



6 Uncertainty of Evaluation

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

Measuring Uncertainty for a Level of Confidence of 95% ($U = 2Uc(y)$)	4.9
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Appendix A. Test Results of Conducted Test

Conducted Output Power(Average power)

Conducted Power (*Unit: dBm)						
Band	GSM850			GSM1900		
Channel	128	189	251	512	661	810
Frequency	824.2	836.4	848.8	1850.2	1880.0	1909.8
GSM	31.71	31.43	31.72	29.22	29.11	29.20
GPRS class 8	31.72	31.44	31.73	29.24	29.12	29.21
GPRS class 10	29.32	29.24	29.24	26.99	26.98	26.85
EGPRS class 8	26.47	26.51	26.58	25.26	25.17	25.10
EGPRS class 10	23.58	23.44	23.54	21.98	21.90	21.96

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	23.58	23.59	23.61	20.82	20.55	20.70
HSDPA Subtest-1	22.58	22.69	22.62	19.60	19.48	19.36
HSDPA Subtest-2	22.58	22.60	22.60	19.52	19.22	19.30
HSDPA Subtest-3	22.19	22.12	22.11	19.04	19.00	18.82
HSDPA Subtest-4	22.18	22.21	21.76	19.03	18.99	18.81
HSUPA Subtest-1	21.94	21.87	21.89	19.58	18.67	19.07
HSUPA Subtest-2	21.65	21.44	21.56	18.44	18.13	18.34
HSUPA Subtest-3	21.16	21.17	21.36	18.01	18.05	18.08
HSUPA Subtest-4	21.86	21.43	21.53	18.75	18.24	18.27
HSUPA Subtest-5	22.50	22.40	22.60	19.70	19.30	19.40

A1. GSM

Peak-to-Average Ratio

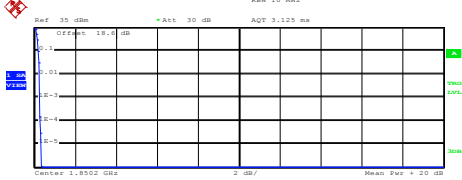
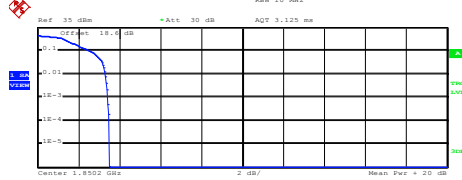
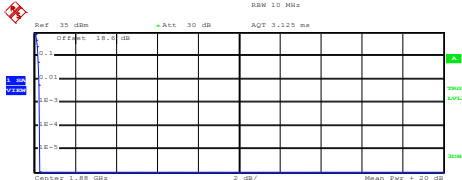
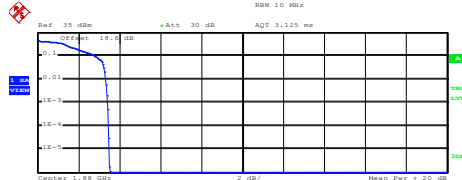
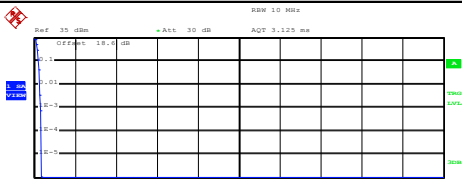
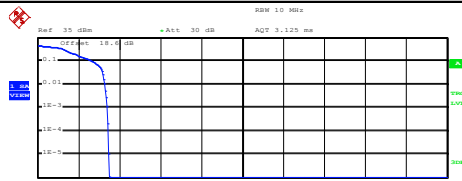
Mode	GSM850		Limit: 13dB
Mod.	GPRS class 8	EDGE class 8	Result
Lowest CH	0.24	3.36	PASS
Middle CH	0.24	3.32	
Highest CH	0.24	3.28	

Mode	GSM1900		Limit: 13dB
Mod.	GPRS class 8	EDGE class 8	Result
Lowest CH	0.28	3.44	PASS
Middle CH	0.28	3.44	
Highest CH	0.32	3.40	



GSM850 (GPRS class 8)		GSM850 (EDGE class 8)	
Lowest Channel		Lowest Channel	
Ref: 35 dBm, Att: 30 dB, AGT: 3.125 ms, RSSW: 10 MHz, Center: 824.2 MHz, 2 dB/ Complementary Cumulative Distribution Function (100000 samples) Trace 1 Mean 29.18 dBm Peak 29.47 dBm Crest 0.29 dB 10 % 0.20 dB 1 % 0.24 dB .1 % 0.24 dB .01 % 0.24 dB Date: 23.JUL.2015 15:47:17		Ref: 35 dBm, Att: 30 dB, AGT: 3.125 ms, RSSW: 10 MHz, Center: 824.2 MHz, 2 dB/ Complementary Cumulative Distribution Function (100000 samples) Trace 1 Mean 23.24 dBm Peak 26.65 dBm Crest 3.40 dB 10 % 2.72 dB 1 % 3.24 dB .1 % 3.36 dB .01 % 3.40 dB Date: 23.JUL.2015 15:59:30	
Middle Channel		Middle Channel	
Ref: 35 dBm, Att: 30 dB, AGT: 3.125 ms, RSSW: 10 MHz, Center: 835.4 MHz, 2 dB/ Complementary Cumulative Distribution Function (100000 samples) Trace 1 Mean 29.23 dBm Peak 29.54 dBm Crest 0.31 dB 10 % 0.20 dB 1 % 0.24 dB .1 % 0.24 dB .01 % 0.24 dB Date: 23.JUL.2015 15:47:28		Ref: 35 dBm, Att: 30 dB, AGT: 3.125 ms, RSSW: 10 MHz, Center: 835.4 MHz, 2 dB/ Complementary Cumulative Distribution Function (100000 samples) Trace 1 Mean 23.25 dBm Peak 26.72 dBm Crest 3.47 dB 10 % 2.68 dB 1 % 3.24 dB .1 % 3.32 dB .01 % 3.40 dB Date: 23.JUL.2015 15:59:42	
Highest Channel		Highest Channel	
Ref: 35 dBm, Att: 30 dB, AGT: 3.125 ms, RSSW: 10 MHz, Center: 848.8 MHz, 2 dB/ Complementary Cumulative Distribution Function (100000 samples) Trace 1 Mean 29.53 dBm Peak 29.82 dBm Crest 0.29 dB 10 % 0.20 dB 1 % 0.24 dB .1 % 0.24 dB .01 % 0.28 dB Date: 23.JUL.2015 15:47:41		Ref: 35 dBm, Att: 30 dB, AGT: 3.125 ms, RSSW: 10 MHz, Center: 848.8 MHz, 2 dB/ Complementary Cumulative Distribution Function (100000 samples) Trace 1 Mean 23.53 dBm Peak 26.86 dBm Crest 3.33 dB 10 % 2.68 dB 1 % 3.20 dB .1 % 3.28 dB .01 % 3.32 dB Date: 23.JUL.2015 15:59:54	

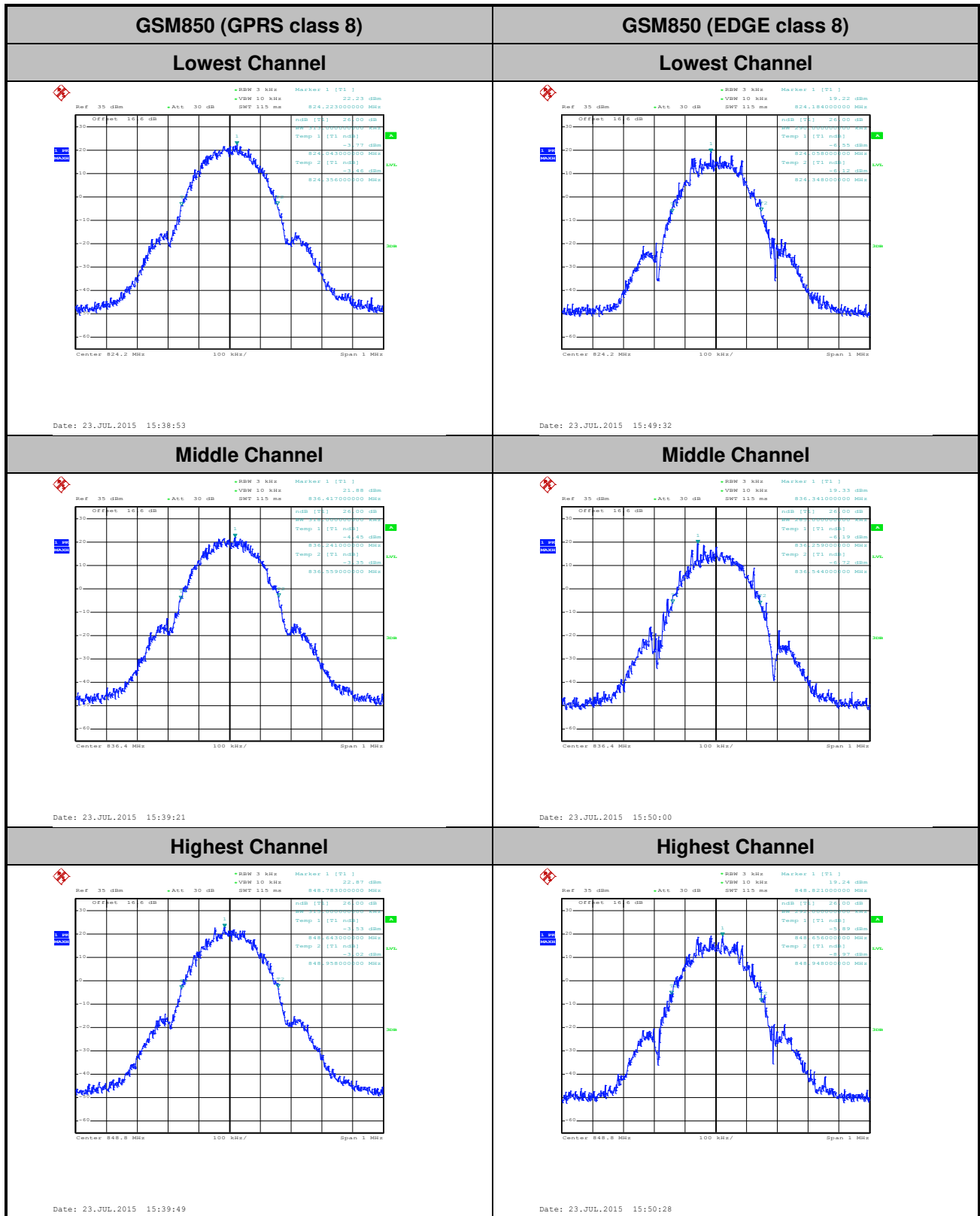


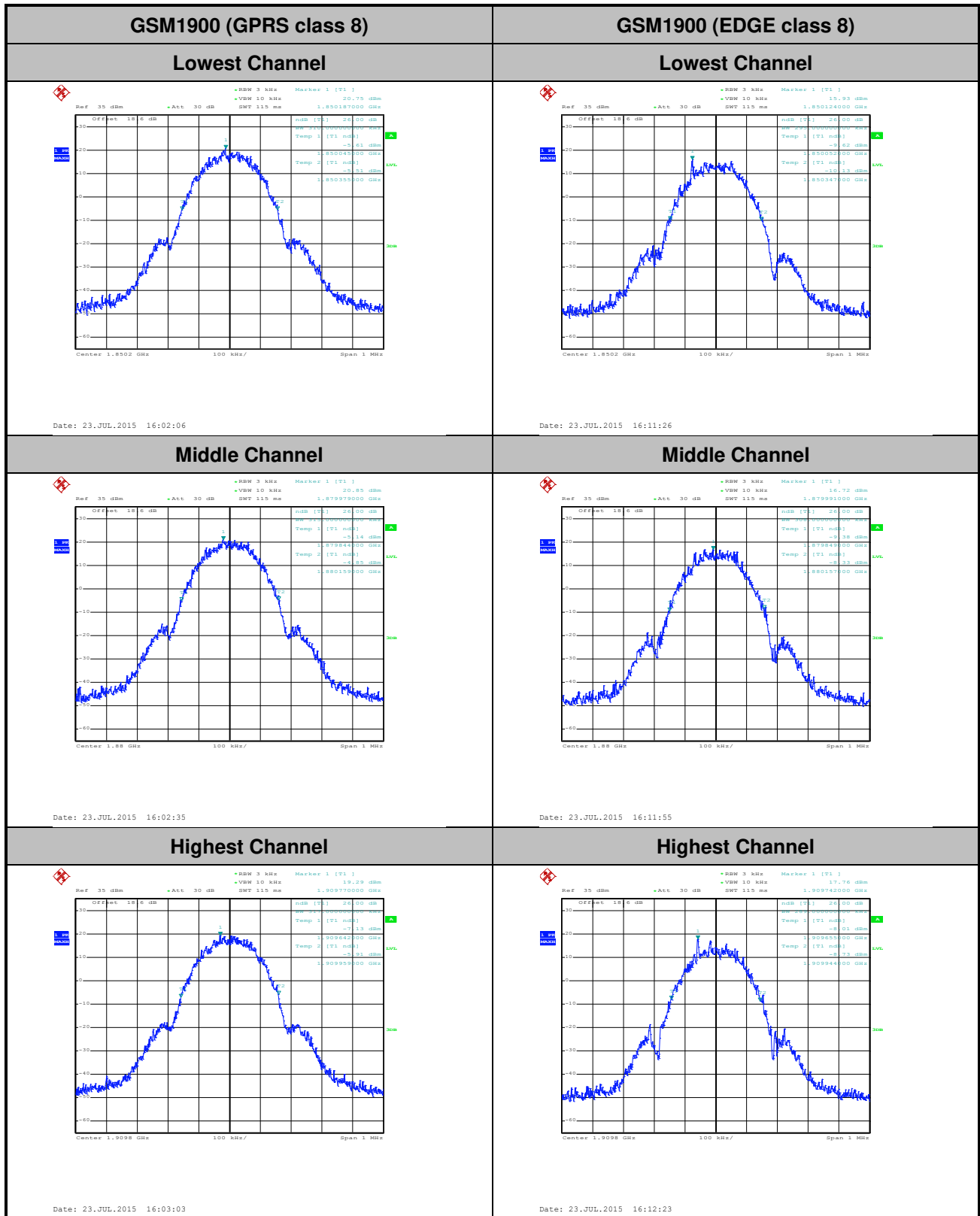
GSM1900 (GPRS class 8)		GSM1900 (EDGE class 8)	
Lowest Channel		Lowest Channel	
 Ref: 35 dBm Att: 30 dB AQT: 3.125 ms Center 1.8502 GHz 2 dB/ Mean Per: +20 dB Complementary Cumulative Distribution Function (100000 samples) Trace 1 Mean 27.16 dBm Peak 27.49 dBm Crest 0.33 dB 10 % 0.20 dB 1 % 0.28 dB .1 % 0.28 dB .01 % 0.28 dB Date: 23.JUL.2015 16:09:38		 Ref: 35 dBm Att: 30 dB AQT: 3.125 ms Center 1.8502 GHz 2 dB/ Mean Per: +20 dB Complementary Cumulative Distribution Function (100000 samples) Trace 1 Mean 22.30 dBm Peak 25.80 dBm Crest 3.50 dB 10 % 2.60 dB 1 % 3.32 dB .1 % 3.44 dB .01 % 3.48 dB Date: 23.JUL.2015 16:20:21	
Middle Channel		Middle Channel	
 Ref: 35 dBm Att: 30 dB AQT: 3.125 ms Center 1.85 GHz 2 dB/ Mean Per: +20 dB Complementary Cumulative Distribution Function (100000 samples) Trace 1 Mean 28.41 dBm Peak 28.69 dBm Crest 0.28 dB 10 % 0.20 dB 1 % 0.24 dB .1 % 0.28 dB .01 % 0.28 dB Date: 23.JUL.2015 16:09:49		 Ref: 35 dBm Att: 30 dB AQT: 3.125 ms Center 1.85 GHz 2 dB/ Mean Per: +20 dB Complementary Cumulative Distribution Function (100000 samples) Trace 1 Mean 23.41 dBm Peak 26.93 dBm Crest 3.52 dB 10 % 2.80 dB 1 % 3.32 dB .1 % 3.44 dB .01 % 3.48 dB Date: 23.JUL.2015 16:20:32	
Highest Channel		Highest Channel	
 Ref: 35 dBm Att: 30 dB AQT: 3.125 ms Center 1.9098 GHz 2 dB/ Mean Per: +20 dB Complementary Cumulative Distribution Function (100000 samples) Trace 1 Mean 26.88 dBm Peak 27.21 dBm Crest 0.33 dB 10 % 0.20 dB 1 % 0.28 dB .1 % 0.32 dB .01 % 0.36 dB Date: 23.JUL.2015 16:10:02		 Ref: 35 dBm Att: 30 dB AQT: 3.125 ms Center 1.9098 GHz 2 dB/ Mean Per: +20 dB Complementary Cumulative Distribution Function (100000 samples) Trace 1 Mean 21.93 dBm Peak 25.45 dBm Crest 3.51 dB 10 % 2.68 dB 1 % 3.28 dB .1 % 3.40 dB .01 % 3.48 dB Date: 23.JUL.2015 16:20:59	

**26dB Bandwidth**

Mode	GSM850	
Mod.	GPRS class 8	EDGE class 8
Lowest CH	0.313	0.290
Middle CH	0.318	0.285
Highest CH	0.315	0.292

Mode	GSM1900	
Mod.	GPRS class 8	EDGE class 8
Lowest CH	0.310	0.295
Middle CH	0.315	0.308
Highest CH	0.317	0.289

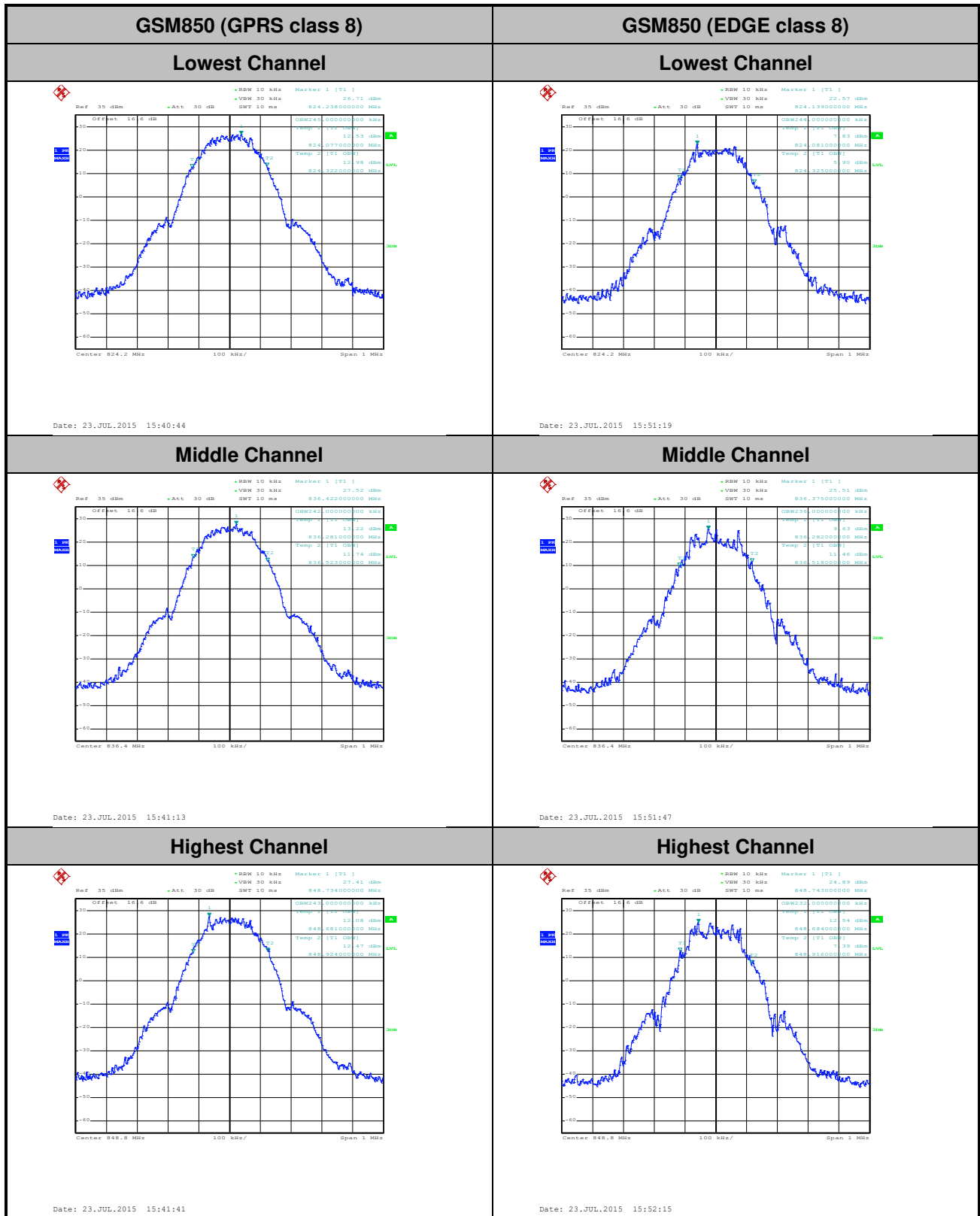


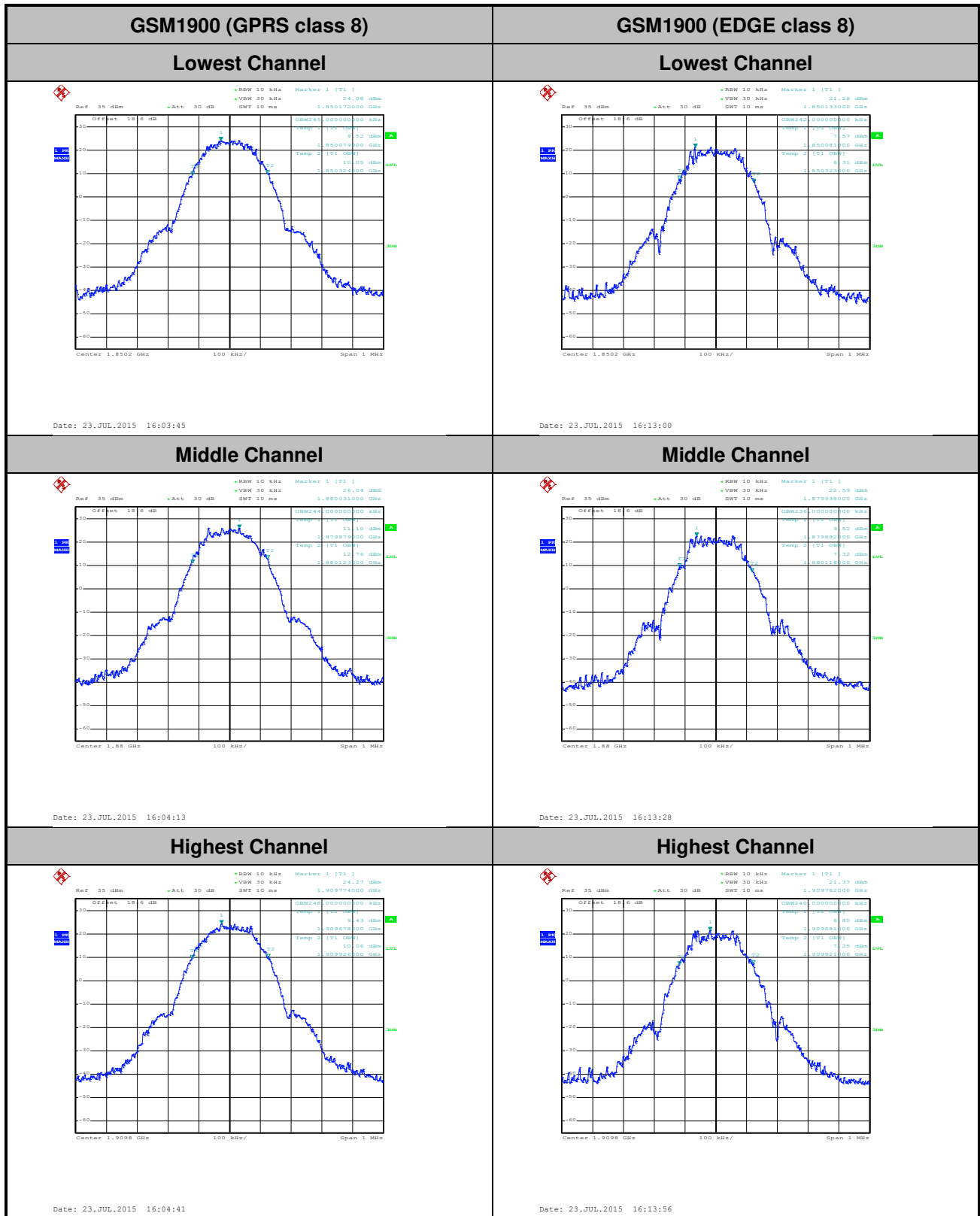


**Occupied Bandwidth**

Mode	GSM850	
Mod.	GPRS class 8	EDGE class 8
Lowest CH	0.245	0.244
Middle CH	0.242	0.236
Highest CH	0.243	0.232

Mode	GSM1900	
Mod.	GPRS class 8	EDGE class 8
Lowest CH	0.245	0.242
Middle CH	0.244	0.236
Highest CH	0.248	0.240





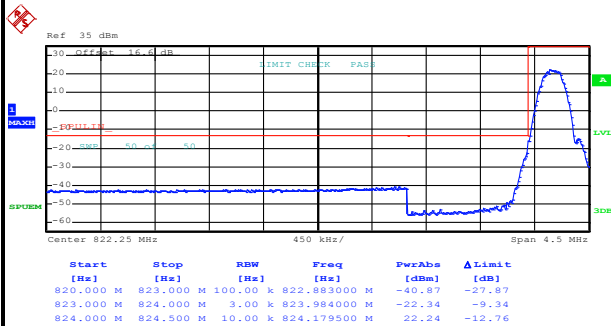


Conducted Band Edge



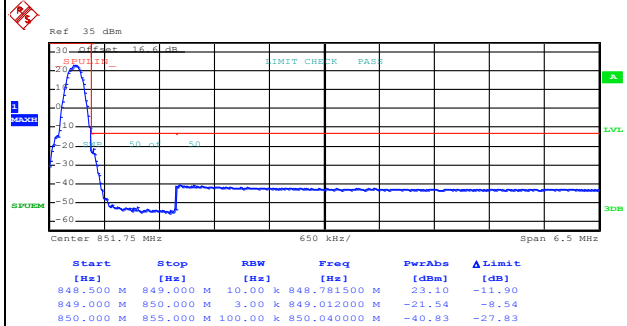
GSM850 (GPRS class 8)

Lowest Band Edge



Date: 23.JUL.2015 15:43:30

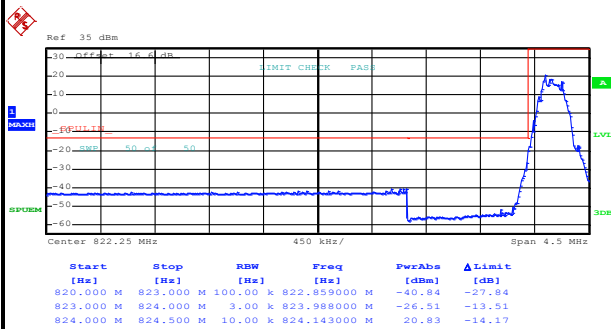
Highest Band Edge



Date: 23.JUL.2015 15:44:57

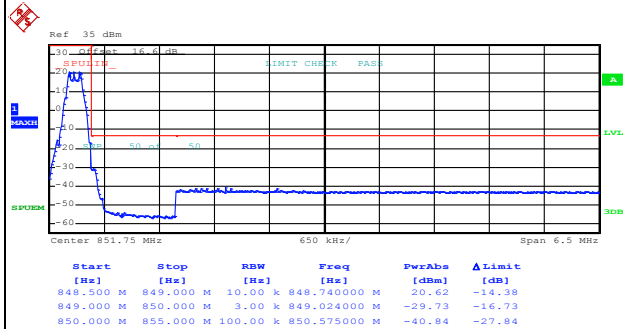
GSM850 (EDGE class 8)

Lowest Band Edge



Date: 23.JUL.2015 15:54:05

Highest Band Edge

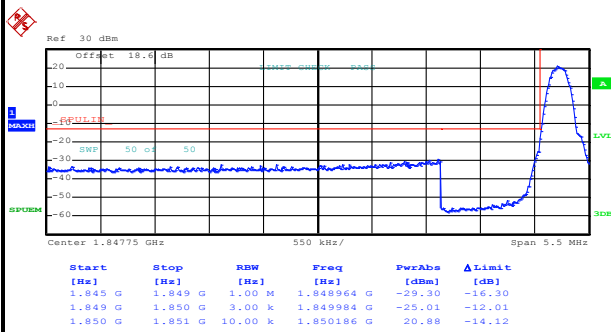


Date: 23.JUL.2015 15:55:33



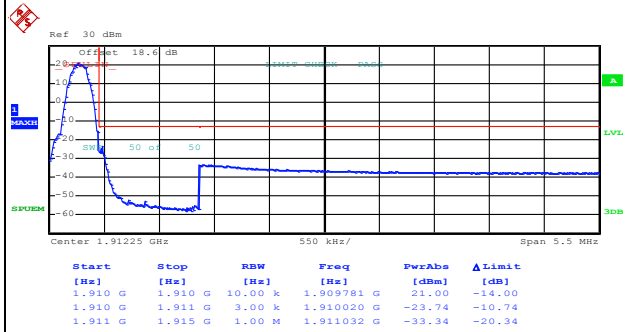
GSM1900 (GPRS class 8)

Lowest Band Edge



Date: 23.JUL.2015 16:06:13

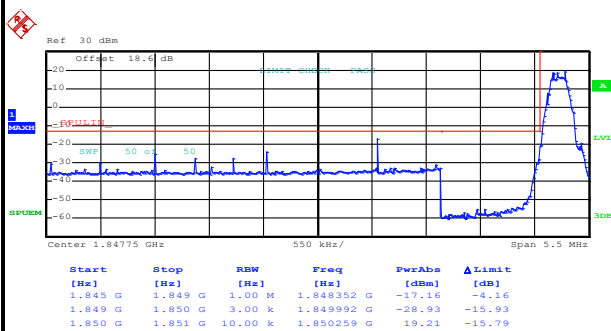
Highest Band Edge



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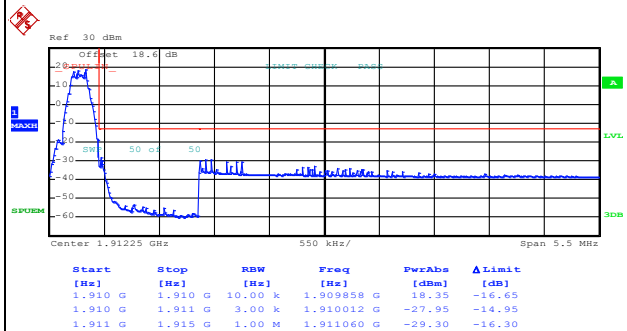
GSM1900 (EDGE class 8)

Lowest Band Edge



Date: 23.JUL.2015 16:15:36

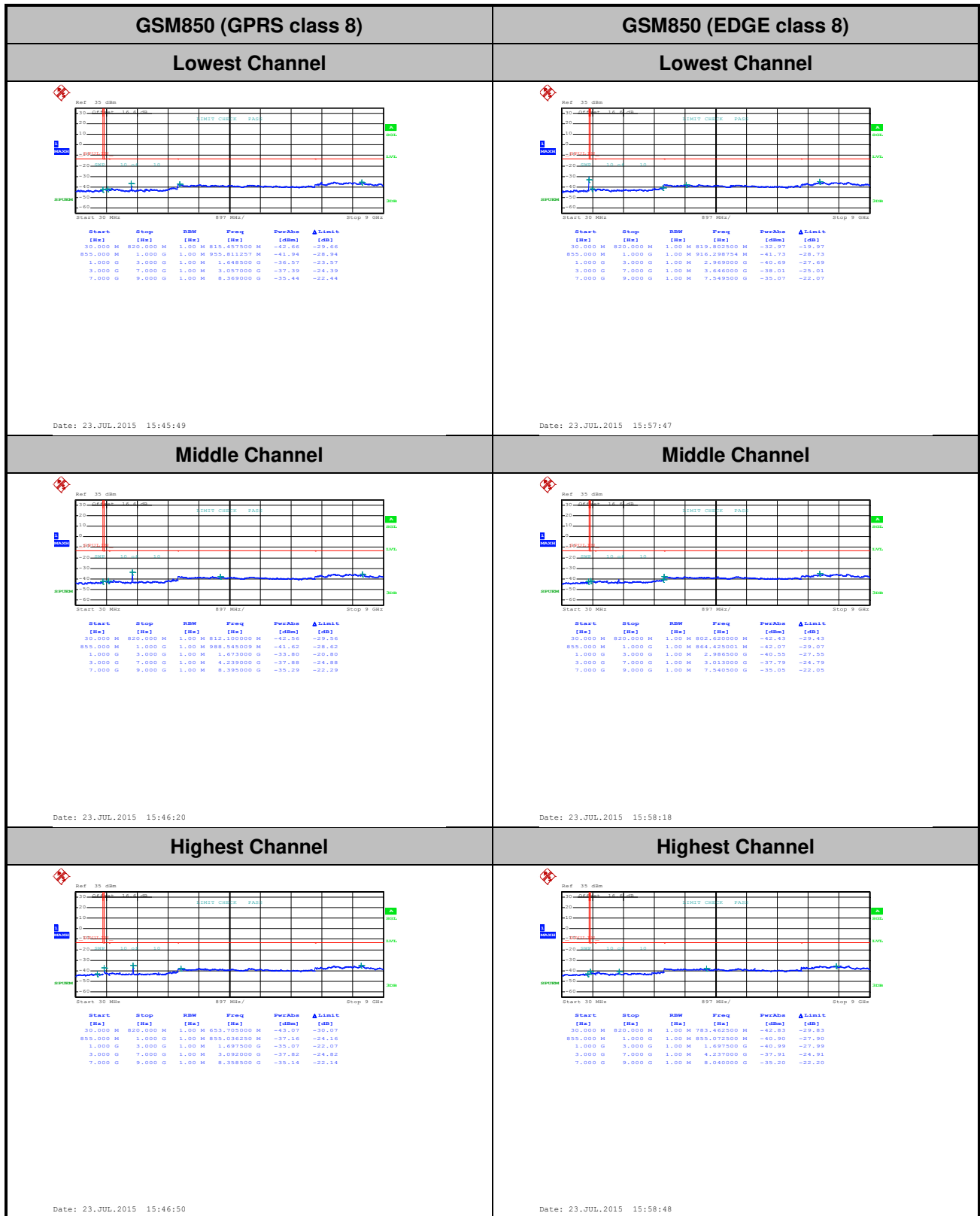
Highest Band Edge

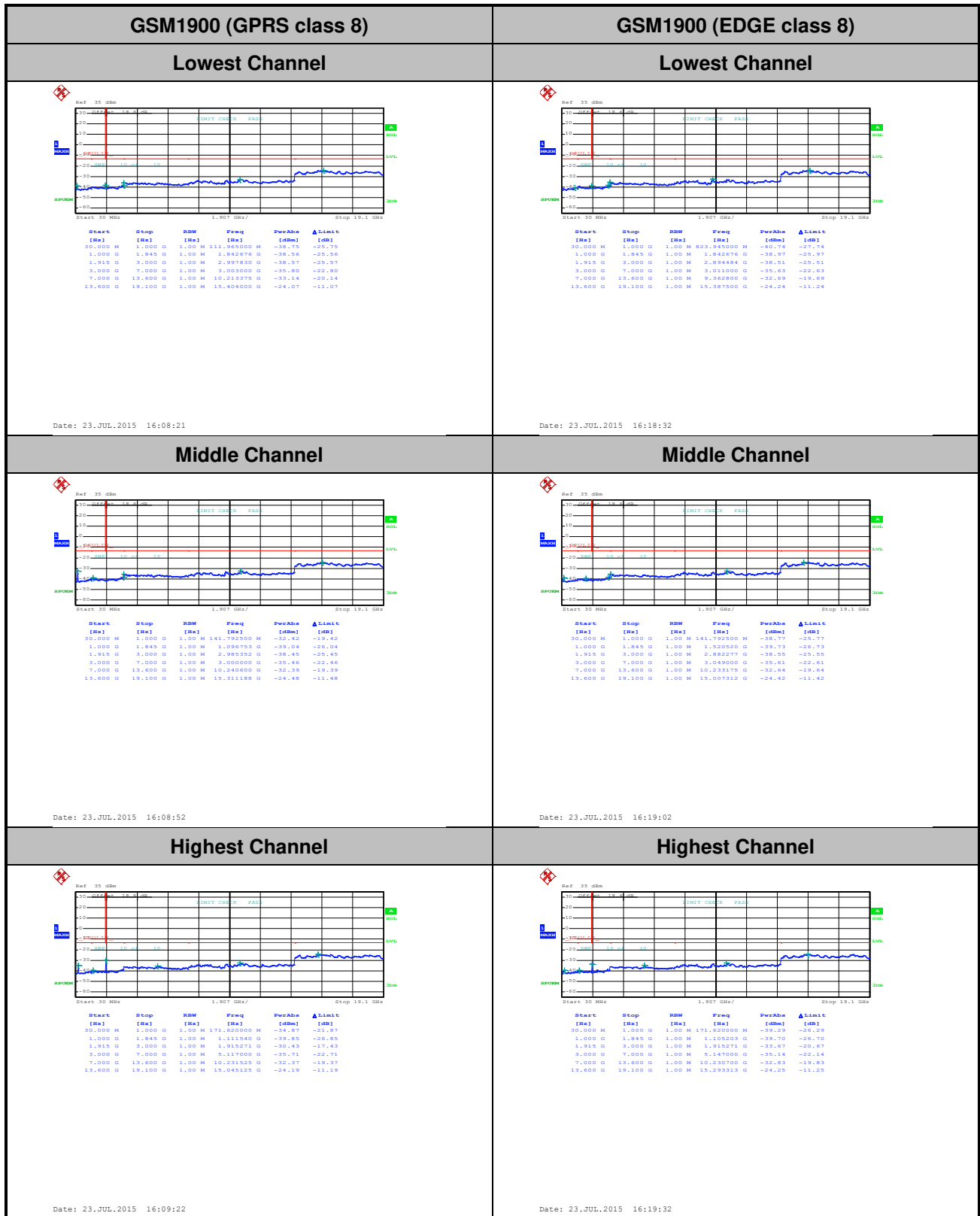


Date: 23.JUL.2015 16:17:03



Conducted Spurious Emission





Frequency Stability

Test Conditions	Middle Channel	GSM850 (GPRS class 8)	GSM850 (EDGE class 8)	Limit 2.5ppm
Temperature (°C)	Voltage (Volt)	Deviation (ppm)		Result
50	Normal Voltage	0.0012	0.0012	PASS
40	Normal Voltage	0.0060	0.0275	
30	Normal Voltage	0.0024	0.0024	
20(Ref.)	Normal Voltage	0.0000	0.0000	
10	Normal Voltage	0.0418	0.0060	
0	Normal Voltage	0.0048	0.0036	
-10	Normal Voltage	0.0012	0.0048	
-20	Normal Voltage	0.0072	0.0012	
-30	Normal Voltage	0.0024	0.0024	
20	Maximum Voltage	0.0036	0.0072	
20	Normal Voltage	0.0072	0.0060	
20	Battery End Point	0.0036	0.0024	

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	0.0223	PASS
40	Normal Voltage	0.0027	0.0234	
30	Normal Voltage	0.0011	0.0245	
20(Ref.)	Normal Voltage	0.0000	0.0000	
10	Normal Voltage	0.0367	0.0027	
0	Normal Voltage	0.0016	0.0011	
-10	Normal Voltage	0.0005	0.0261	
-20	Normal Voltage	0.0064	0.0340	
-30	Normal Voltage	0.0043	0.0309	
20	Maximum Voltage	0.0032	0.0239	
20	Normal Voltage	0.0021	0.0255	
20	Battery End Point	0.0005	0.0229	

Note:

1. Normal Voltage = 3.8V. ; Battery End Point (BEP) = 3.6 V. ; Maximum Voltage =4.2 V
2. The frequency fundamental emissions stay within the authorized frequency block based on the frequency deviation measured is small.

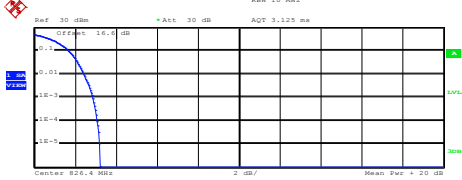
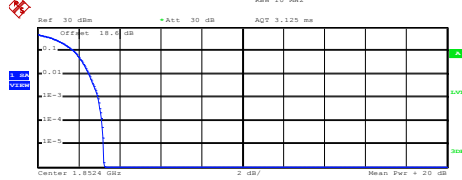
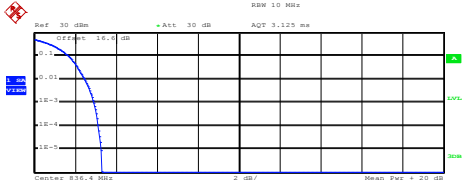
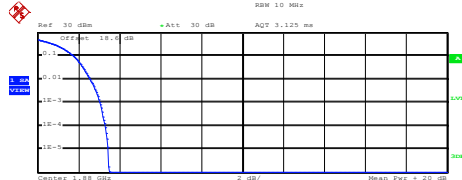
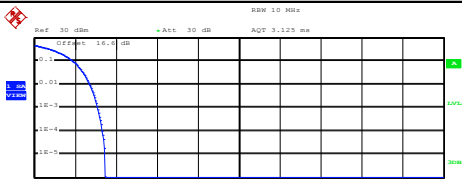
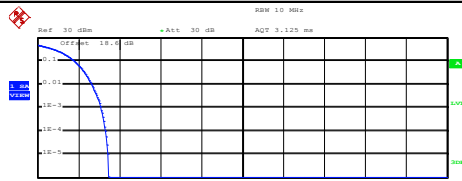


A2. WCDMA

Peak-to-Average Ratio

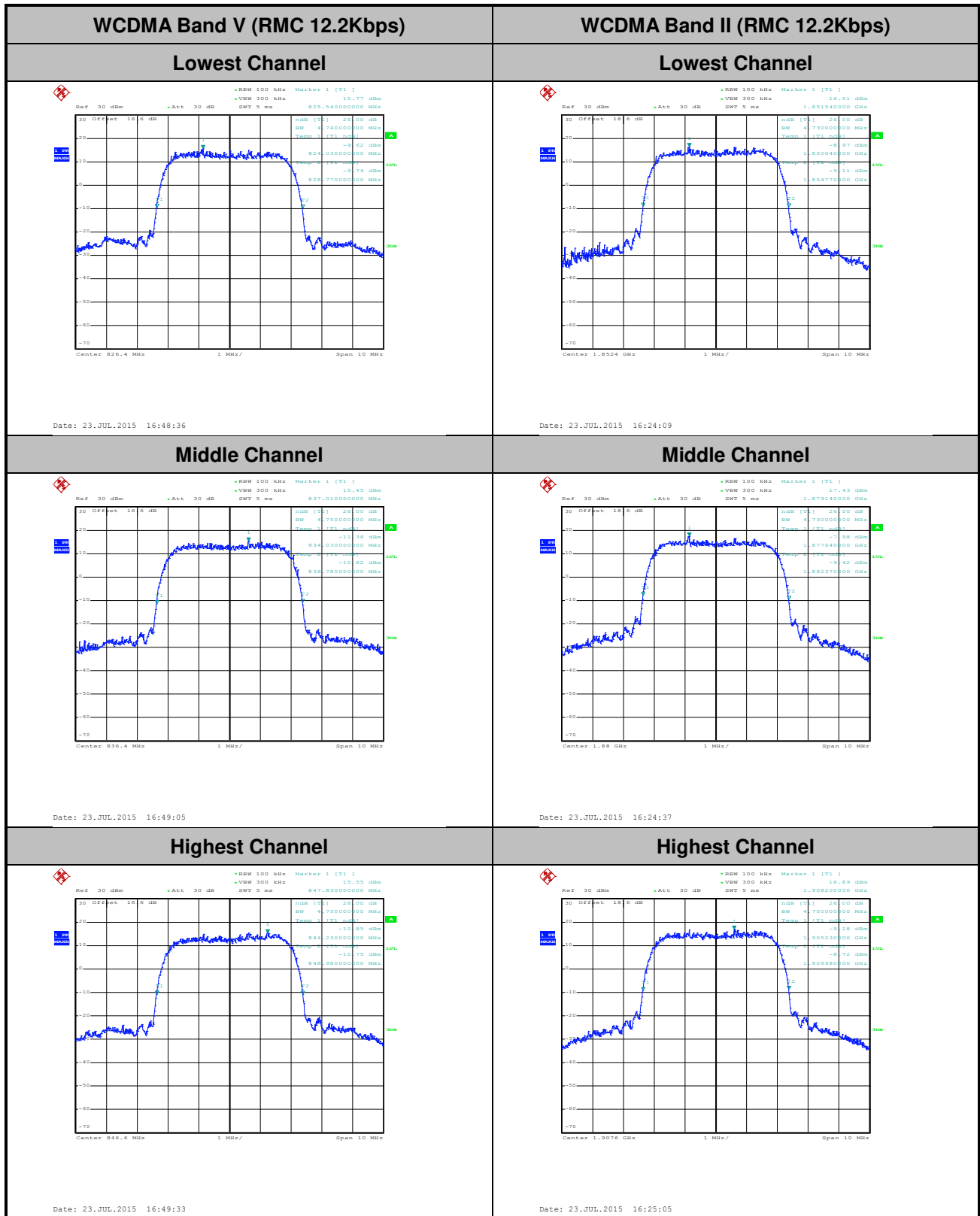
Mode	WCDMA Band V	WCDMA Band II	Limit: 13dB
Mod.	RMC 12.2Kbps	RMC 12.2Kbps	Result
Lowest CH	2.88	2.96	PASS
Middle CH	2.92	3.04	
Highest CH	3.12	3.12	



WCDMA Band V (RMC 12.2Kbps)	WCDMA Band II (RMC 12.2Kbps)																
Lowest Channel	Lowest Channel																
 Ref: 30 dBm Att: 30 dB AQT: 3.125 ms Center: 826.4 MHz 2 dB/ Mean: Per + 20 dB Complementary Cumulative Distribution Function (100000 samples) Trace 1 Mean: 19.49 dBm Peak: 22.70 dBm Crest: 3.21 dB <table><tr><td>10 %</td><td>1.68 dB</td></tr><tr><td>1 %</td><td>2.44 dB</td></tr><tr><td>.1 %</td><td>2.88 dB</td></tr><tr><td>.01 %</td><td>3.08 dB</td></tr></table> Date: 23.JUL.2015 16:58:32	10 %	1.68 dB	1 %	2.44 dB	.1 %	2.88 dB	.01 %	3.08 dB	 Ref: 30 dBm Att: 30 dB AQT: 3.125 ms Center: 1.8524 GHz 2 dB/ Mean: Per + 20 dB Complementary Cumulative Distribution Function (100000 samples) Trace 1 Mean: 21.30 dBm Peak: 24.54 dBm Crest: 3.24 dB <table><tr><td>10 %</td><td>1.76 dB</td></tr><tr><td>1 %</td><td>2.52 dB</td></tr><tr><td>.1 %</td><td>2.96 dB</td></tr><tr><td>.01 %</td><td>3.12 dB</td></tr></table> Date: 23.JUL.2015 16:47:13	10 %	1.76 dB	1 %	2.52 dB	.1 %	2.96 dB	.01 %	3.12 dB
10 %	1.68 dB																
1 %	2.44 dB																
.1 %	2.88 dB																
.01 %	3.08 dB																
10 %	1.76 dB																
1 %	2.52 dB																
.1 %	2.96 dB																
.01 %	3.12 dB																
Middle Channel	Middle Channel																
 Ref: 30 dBm Att: 30 dB AQT: 3.125 ms Center: 830.4 MHz 2 dB/ Mean: Per + 20 dB Complementary Cumulative Distribution Function (100000 samples) Trace 1 Mean: 19.75 dBm Peak: 23.06 dBm Crest: 3.30 dB <table><tr><td>10 %</td><td>1.68 dB</td></tr><tr><td>1 %</td><td>2.48 dB</td></tr><tr><td>.1 %</td><td>2.92 dB</td></tr><tr><td>.01 %</td><td>3.12 dB</td></tr></table> Date: 23.JUL.2015 16:58:40	10 %	1.68 dB	1 %	2.48 dB	.1 %	2.92 dB	.01 %	3.12 dB	 Ref: 30 dBm Att: 30 dB AQT: 3.125 ms Center: 1.85 GHz 2 dB/ Mean: Per + 20 dB Complementary Cumulative Distribution Function (100000 samples) Trace 1 Mean: 20.64 dBm Peak: 24.12 dBm Crest: 3.48 dB <table><tr><td>10 %</td><td>1.76 dB</td></tr><tr><td>1 %</td><td>2.56 dB</td></tr><tr><td>.1 %</td><td>3.04 dB</td></tr><tr><td>.01 %</td><td>3.32 dB</td></tr></table> Date: 23.JUL.2015 16:47:21	10 %	1.76 dB	1 %	2.56 dB	.1 %	3.04 dB	.01 %	3.32 dB
10 %	1.68 dB																
1 %	2.48 dB																
.1 %	2.92 dB																
.01 %	3.12 dB																
10 %	1.76 dB																
1 %	2.56 dB																
.1 %	3.04 dB																
.01 %	3.32 dB																
Highest Channel	Highest Channel																
 Ref: 30 dBm Att: 30 dB AQT: 3.125 ms Center: 846.6 MHz 2 dB/ Mean: Per + 20 dB Complementary Cumulative Distribution Function (100000 samples) Trace 1 Mean: 19.46 dBm Peak: 22.92 dBm Crest: 3.46 dB <table><tr><td>10 %</td><td>1.88 dB</td></tr><tr><td>1 %</td><td>2.72 dB</td></tr><tr><td>.1 %</td><td>3.12 dB</td></tr><tr><td>.01 %</td><td>3.32 dB</td></tr></table> Date: 23.JUL.2015 16:58:49	10 %	1.88 dB	1 %	2.72 dB	.1 %	3.12 dB	.01 %	3.32 dB	 Ref: 30 dBm Att: 30 dB AQT: 3.125 ms Center: 1.9076 GHz 2 dB/ Mean: Per + 20 dB Complementary Cumulative Distribution Function (100000 samples) Trace 1 Mean: 21.14 dBm Peak: 24.61 dBm Crest: 3.47 dB <table><tr><td>10 %</td><td>1.80 dB</td></tr><tr><td>1 %</td><td>2.64 dB</td></tr><tr><td>.1 %</td><td>3.12 dB</td></tr><tr><td>.01 %</td><td>3.32 dB</td></tr></table> Date: 23.JUL.2015 16:47:30	10 %	1.80 dB	1 %	2.64 dB	.1 %	3.12 dB	.01 %	3.32 dB
10 %	1.88 dB																
1 %	2.72 dB																
.1 %	3.12 dB																
.01 %	3.32 dB																
10 %	1.80 dB																
1 %	2.64 dB																
.1 %	3.12 dB																
.01 %	3.32 dB																

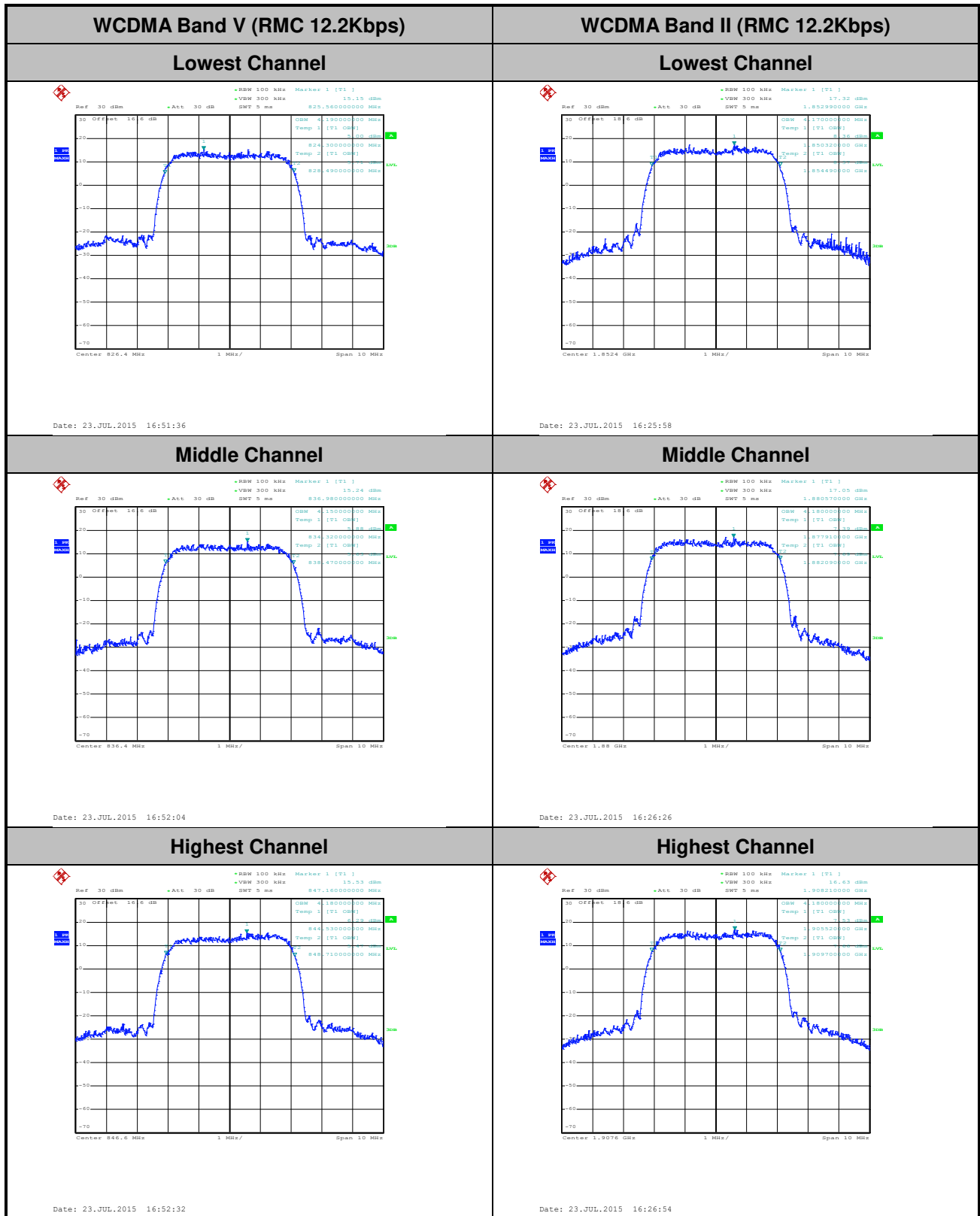
**26dB Bandwidth**

Mode	WCDMA Band V	WCDMA Band II
Mod.	RMC 12.2Kbps	RMC 12.2Kbps
Lowest CH	4.74	4.73
Middle CH	4.75	4.73
Highest CH	4.75	4.75



**Occupied Bandwidth**

Mode	WCDMA Band V	WCDMA Band II
Mod.	RMC 12.2Kbps	RMC 12.2Kbps
Lowest CH	4.19	4.17
Middle CH	4.15	4.18
Highest CH	4.18	4.18



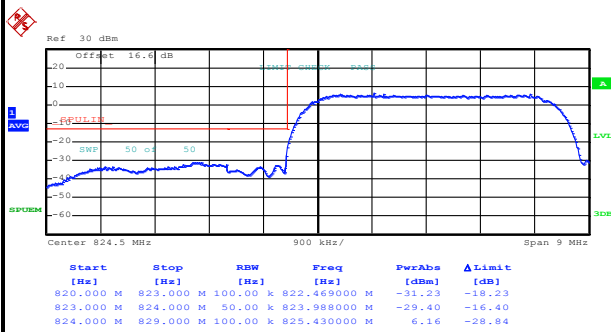


Conducted Band Edge



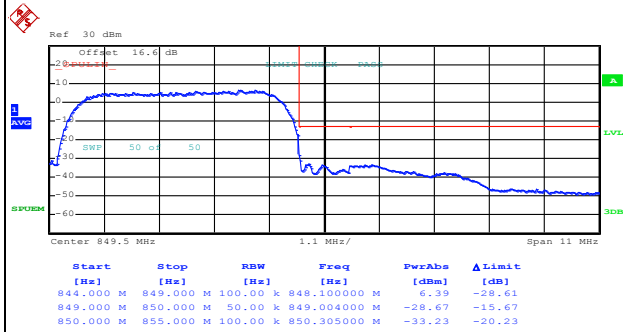
WCDMA Band V (RMC 12.2Kbps)

Lowest Band Edge



Date: 23.JUL.2015 16:54:13

Highest Band Edge

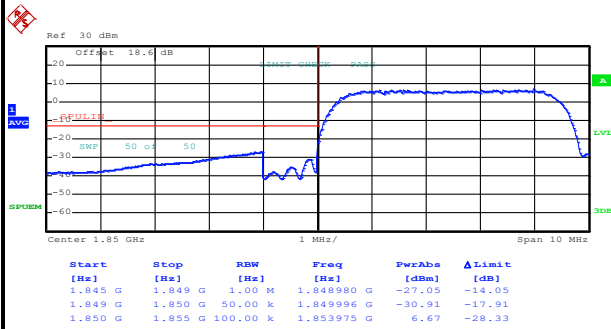


Date: 23.JUL.2015 16:55:40



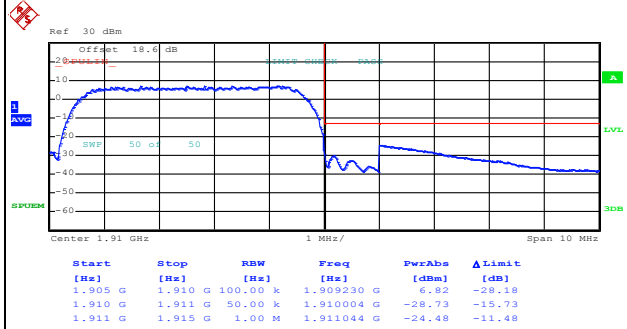
WCDMA Band II (RMC 12.2Kbps)

Lowest Band Edge



Date: 23.JUL.2015 16:29:22

Highest Band Edge



Date: 23.JUL.2015 16:30:49

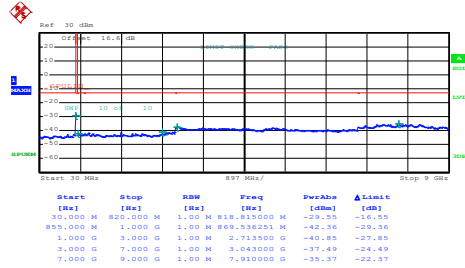


Conducted Spurious Emission



WCDMA Band V (RMC 12.2Kbps)

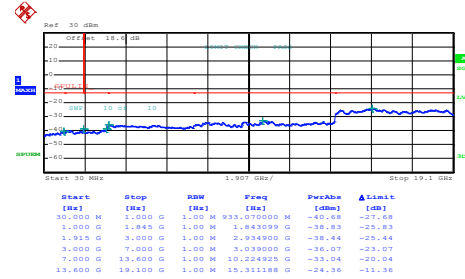
Lowest Channel



Date: 23.JUL.2015 16:57:12

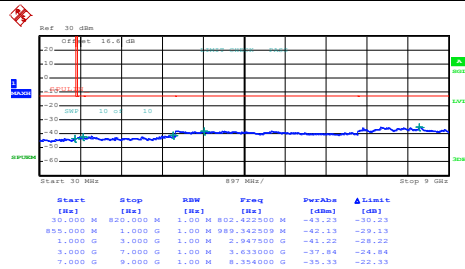
WCDMA Band II (RMC 12.2Kbps)

Lowest Channel



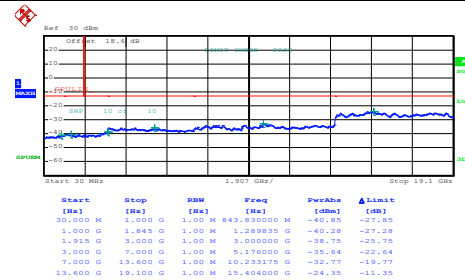
Date: 23.JUL.2015 16:31:49

Middle Channel



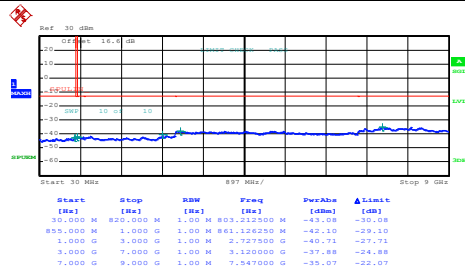
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Middle Channel



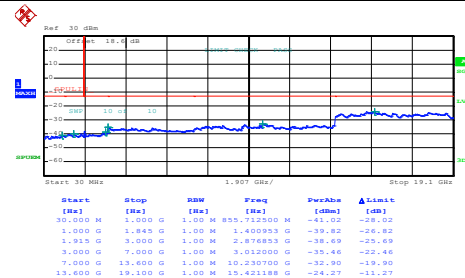
Date: 23.JUL.2015 16:32:19

Highest Channel



Date: 23.JUL.2015 16:58:12

Highest Channel



Date: 23.JUL.2015 16:32:49

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	0.0036	PASS
40	Normal Voltage	0.0024	
30	Normal Voltage	0.0108	
20(Ref.)	Normal Voltage	0.0000	
10	Normal Voltage	0.0048	
0	Normal Voltage	0.0132	
-10	Normal Voltage	0.0060	
-20	Normal Voltage	0.0155	
-30	Normal Voltage	0.0179	
20	Maximum Voltage	0.0167	
20	Normal Voltage	0.0120	
20	Battery End Point	0.0143	

Test Conditions	Middle Channel	WCDMA Band II (RMC 12.2Kbps)	Limit Note 2.
Temperature (°C)	Voltage (Volt)	Deviation (ppm)	Result
50	Normal Voltage	0.0011	PASS
40	Normal Voltage	0.0037	
30	Normal Voltage	0.0021	
20(Ref.)	Normal Voltage	0.0000	
10	Normal Voltage	0.0032	
0	Normal Voltage	0.0016	
-10	Normal Voltage	0.0005	
-20	Normal Voltage	0.0027	
-30	Normal Voltage	0.0021	
20	Maximum Voltage	0.0043	
20	Normal Voltage	0.0032	
20	Battery End Point	0.0027	

Note:

1. Normal Voltage = 3.8V. ; Battery End Point (BEP) = 3.6 V. ; Maximum Voltage =4.2 V
2. The frequency fundamental emissions stay within the authorized frequency block based on the frequency deviation measured is small.



Appendix B. Test Results of Radiated Test

ERP/EIRP

Channel	Mode	Horizontal		Vertical	
		ERP(dBm)	ERP(W)	ERP(dBm)	ERP(W)
Lowest	GSM850 GPRS class 8	26.92	0.4920	25.61	0.3639
Middle		26.76	0.4742	25.73	0.3741
Highest		26.60	0.4571	25.58	0.3614
Lowest	GSM850 EDGE class 8	21.20	0.1318	19.94	0.0986
Middle		21.17	0.1309	20.24	0.1057
Highest		21.27	0.1340	20.59	0.1146
Lowest	WCDMA Band V RMC 12.2Kbps	18.44	0.0698	17.28	0.0535
Middle		18.38	0.0689	17.46	0.0557
Highest		18.70	0.0741	17.59	0.0574
Limit	ERP < 7W	Result		PASS	

Channel	Mode	Horizontal		Vertical	
		EIRP(dBm)	EIRP(W)	EIRP(dBm)	EIRP(W)
Lowest	GSM1900 GPRS class 8	28.46	0.7015	28.95	0.7852
Middle		27.70	0.5888	29.07	0.8072
Highest		27.13	0.5164	28.31	0.6776
Lowest	GSM1900 EDGE class 8	25.19	0.3304	25.70	0.3715
Middle		24.41	0.2761	25.00	0.3162
Highest		24.29	0.2685	24.42	0.2767
Lowest	WCDMA Band II RMC 12.2Kbps	23.48	0.2228	23.82	0.2410
Middle		22.80	0.1905	23.34	0.2158
Highest		22.22	0.1667	22.91	0.1954
Limit	EIRP < 2W	Result		PASS	

**Radiated Spurious Emission****GSM850 (GPRS class 8)**

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	-29.49	-13	-16.49	-39.07	-31.25	0.98	4.89	H
	2472	-36.76	-13	-23.76	-50.08	-38.64	1.28	5.32	H
	3296	-44.01	-13	-31.01	-60.65	-47.42	1.54	7.10	H
	4120	-48.47	-13	-35.47	-69.89	-53.11	1.83	8.62	H
									H
									H
	1648	-35.26	-13	-22.26	-42.61	-37.02	0.98	4.89	V
	2472	-31.66	-13	-18.66	-47.14	-33.54	1.28	5.32	V
	3296	-46.78	-13	-33.78	-61.83	-50.19	1.54	7.10	V
	4120	-45.67	-13	-32.67	-65.97	-50.31	1.83	8.62	V
									V
									V
Middle	1672	-26.56	-13	-13.56	-35.62	-28.24	0.99	4.82	H
	2512	-30.71	-13	-17.71	-44.28	-32.68	1.29	5.41	H
	3344	-45.54	-13	-32.54	-61.81	-49.15	1.56	7.31	H
	4184	-46.60	-13	-33.60	-67.64	-51.22	1.87	8.64	H
									H
									H
	1672	-33.74	-13	-20.74	-40.88	-35.42	0.99	4.82	V
	2512	-34.71	-13	-21.71	-49.83	-36.68	1.29	5.41	V
	3344	-43.50	-13	-30.50	-58.59	-47.11	1.56	7.31	V
	4184	-46.68	-13	-33.68	-66.68	-51.3	1.87	8.64	V
									V
									V
Highest	1696	-24.64	-13	-11.64	-34.07	-26.24	1.00	4.75	H
	2544	-35.37	-13	-22.37	-51.01	-37.35	1.30	5.44	H
	3400	-42.08	-13	-29.08	-58.26	-45.92	1.57	7.56	H
	4248	-49.04	-13	-36.04	-70.52	-53.64	1.90	8.65	H
									H
									H
	1696	-33.09	-13	-20.09	-40.83	-34.69	1.00	4.75	V
	2544	-34.02	-13	-21.02	-49.4	-36	1.30	5.44	V
	3392	-43.30	-13	-30.30	-58.86	-47.1	1.57	7.52	V
	4248	-49.28	-13	-36.28	-69.2	-53.88	1.90	8.65	V
									V
									V

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



GSM850 (EDGE class 8)

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	-28.39	-13	-15.39	-38	-30.15	0.98	4.89	H
	2472	-40.95	-13	-27.95	-53.97	-42.83	1.28	5.32	H
	3296	-45.01	-13	-32.01	-61.55	-48.42	1.54	7.10	H
	4120	-49.59	-13	-36.59	-70.63	-54.23	1.83	8.62	H
									H
									H
	1648	-34.16	-13	-21.16	-41.47	-35.92	0.98	4.89	V
	2472	-38.17	-13	-25.17	-53.05	-40.05	1.28	5.32	V
	3296	-50.27	-13	-37.27	-65.5	-53.68	1.54	7.10	V
	4120	-46.16	-13	-33.16	-66.23	-50.8	1.83	8.62	V
									V
									V
Middle	1672	-29.57	-13	-16.57	-38.83	-31.25	0.99	4.82	H
	2512	-34.43	-13	-21.43	-47.69	-36.4	1.29	5.41	H
	3344	-41.01	-13	-28.01	-61.15	-44.62	1.56	7.31	H
	4184	-50.40	-13	-37.40	-71.42	-55.02	1.87	8.64	H
									H
									H
	1672	-34.15	-13	-21.15	-41.26	-35.83	0.99	4.82	V
	2512	-32.42	-13	-19.42	-47.68	-34.39	1.29	5.41	V
	3344	-44.38	-13	-31.38	-59.59	-47.99	1.56	7.31	V
	4184	-45.79	-13	-32.79	-65.79	-50.41	1.87	8.64	V
									V
									V
Highest	1696	-29.45	-13	-16.45	-38.74	-31.05	1.00	4.75	H
	2544	-41.54	-13	-28.54	-55.22	-43.52	1.30	5.44	H
	3392	-38.51	-13	-25.51	-54.96	-42.31	1.57	7.52	H
	4248	-46.98	-13	-33.98	-68.72	-51.58	1.90	8.65	H
									H
									H
	1696	-26.12	-13	-13.12	-33.69	-27.72	1.00	4.75	V
	2544	-35.07	-13	-22.07	-50.54	-39.2	1.30	5.44	V
	3392	-41.66	-13	-28.66	-57.19	-47.61	1.57	7.52	V
	4248	-48.17	-13	-35.17	-68.03	-54.92	1.90	8.65	V
									V
									V

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



GSM1900 (GPRS class 8)									
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	3700	-29.17	-13	-16.17	-47.87	-35.74	1.67	8.24	H
	5548	-44.02	-13	-31.02	-67.69	-51.09	2.65	9.72	H
	7403	-45.71	-13	-32.71	-74.55	-54.86	2.46	11.61	H
	9251	-43.01	-13	-30.01	-73.9	-53.07	2.54	12.60	H
									H
									H
	3700	-29.25	-13	-16.25	-47.74	-35.82	1.67	8.24	V
	5548	-45.24	-13	-32.24	-67.36	-52.31	2.65	9.72	V
	7403	-44.95	-13	-31.95	-73.03	-54.1	2.46	11.61	V
	9251	-43.90	-13	-30.90	-74.18	-53.96	2.54	12.60	V
									V
									V
Middle	3760	-36.72	-13	-23.72	-55.77	-43.35	1.69	8.31	H
	5640	-45.49	-13	-32.49	-69.25	-52.54	2.71	9.76	H
	7520	-49.24	-13	-36.24	-77.93	-58.63	2.42	11.81	H
	9404	-45.65	-13	-32.65	-76.99	-55.62	2.57	12.54	H
									H
									H
	3760	-34.74	-13	-21.74	-53.37	-41.37	1.69	8.31	V
	5640	-46.50	-13	-33.50	-68.81	-53.55	2.71	9.76	V
	7520	-47.36	-13	-34.36	-75.66	-56.75	2.42	11.81	V
	9404	-46.24	-13	-33.24	-75.51	-56.21	2.57	12.54	V
									V
									V
Highest	3819	-35.34	-13	-22.34	-54.93	-42.02	1.70	8.38	H
	5730	-41.65	-13	-28.65	-65.8	-48.68	2.76	9.79	H
	7641	-41.22	-13	-28.22	-69.7	-50.72	2.38	11.88	H
	9552	-43.49	-13	-30.49	-75.01	-53.36	2.60	12.47	H
									H
									H
	3819	-36.01	-13	-23.01	-54.71	-42.69	1.70	8.38	V
	5730	-43.97	-13	-30.97	-67.09	-51	2.76	9.79	V
	7641	-43.53	-13	-30.53	-71.44	-53.03	2.38	11.88	V
	9552	-44.26	-13	-31.26	-73.86	-54.13	2.60	12.47	V
									V
									V

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



GSM1900 (EDGE class 8)									
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	3700	-36.54	-13	-23.54	-55.56	-43.11	1.67	8.24	H
	5548	-47.18	-13	-34.18	-70.87	-54.25	2.65	9.72	H
	7403	-47.44	-13	-34.44	-76.57	-56.59	2.46	11.61	H
	9251	-46.28	-13	-33.28	-77.17	-56.34	2.54	12.60	H
									H
									H
	3700	-34.55	-13	-21.55	-53.19	-41.12	1.67	8.24	V
	5548	-46.57	-13	-33.57	-68.82	-53.64	2.65	9.72	V
	7403	-47.69	-13	-34.69	-75.86	-56.84	2.46	11.61	V
	9251	-46.19	-13	-33.19	-76.09	-56.25	2.54	12.60	V
									V
									V
Middle	3763	-36.52	-13	-23.52	-56.01	-43.15	1.69	8.32	H
	5639	-46.19	-13	-33.19	-69.79	-53.24	2.71	9.76	H
	7522	-46.92	-13	-33.92	-75.49	-56.31	2.42	11.81	H
	9398	-45.17	-13	-32.17	-76.3	-55.14	2.57	12.54	H
									H
									H
	3763	-38.89	-13	-25.89	-57.53	-45.52	1.69	8.32	V
	5639	-47.15	-13	-34.15	-69.22	-54.2	2.71	9.76	V
	7522	-46.99	-13	-33.99	-75.18	-56.38	2.42	11.81	V
	9398	-47.89	-13	-34.89	-77.17	-57.86	2.57	12.54	V
									V
									V
Highest	3819	-39.56	-13	-26.56	-59.14	-46.24	1.70	8.38	H
	5730	-46.19	-13	-33.19	-70.27	-53.22	2.76	9.79	H
	7641	-47.33	-13	-34.33	-75.66	-56.83	2.38	11.88	H
	9552	-45.18	-13	-32.18	-76.97	-55.05	2.60	12.47	H
									H
									H
	3819	-40.21	-13	-27.21	-58.74	-46.89	1.70	8.38	V
	5730	-48.53	-13	-35.53	-71.74	-55.56	2.76	9.79	V
	7641	-47.81	-13	-34.81	-75.75	-57.31	2.38	11.88	V
	9552	-47.99	-13	-34.99	-77.04	-57.86	2.60	12.47	V
									V
									V

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



WCDMA Band V(RMC 12.2Kbps)									
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	-49.39	-13	-36.39	-58.73	-51.15	0.98	4.89	H
	2480	-57.13	-13	-44.13	-69.98	-59.04	1.28	5.34	H
	3304	-59.80	-13	-46.80	-76.23	-63.24	1.54	7.14	H
	4136	-54.17	-13	-41.17	-75.26	-58.81	1.84	8.63	H
									H
									H
	1656	-49.61	-13	-36.61	-57.3	-51.34	0.98	4.86	V
	2480	-56.60	-13	-43.60	-71.91	-58.51	1.28	5.34	V
	3304	-60.98	-13	-47.98	-76.11	-64.42	1.54	7.14	V
	4136	-55.51	-13	-42.51	-75.46	-60.15	1.84	8.63	V
									V
									V
Middle	1672	-43.33	-13	-30.33	-52.35	-45.01	0.99	4.82	H
	2504	-57.55	-13	-44.55	-70.49	-59.51	1.29	5.40	H
	3344	-59.25	-13	-46.25	-75.42	-62.86	1.56	7.31	H
	4184	-54.16	-13	-41.16	-75.42	-58.78	1.87	8.64	H
									H
									H
	1672	-50.00	-13	-37.00	-57.15	-51.68	0.99	4.82	V
	2504	-56.38	-13	-43.38	-71.55	-58.34	1.29	5.40	V
	3344	-60.39	-13	-47.39	-75.54	-64	1.56	7.31	V
	4184	-55.53	-13	-42.53	-75.58	-60.15	1.87	8.64	V
									V
									V
Highest	1696	-44.01	-13	-31.01	-53.45	-45.61	1.00	4.75	H
	2544	-57.06	-13	-44.06	-70.53	-59.04	1.30	5.44	H
	3384	-59.23	-13	-46.23	-75.58	-63	1.57	7.49	H
	4232	-53.45	-13	-40.45	-74.48	-58.05	1.89	8.65	H
									H
									H
	1696	-49.01	-13	-36.01	-56.93	-50.61	1.00	4.75	V
	2544	-54.36	-13	-41.36	-69.68	-56.34	1.30	5.44	V
	3384	-59.91	-13	-46.91	-75.5	-63.68	1.57	7.49	V
	4232	-54.30	-13	-41.30	-74.36	-58.9	1.89	8.65	V
									V
									V

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



WCDMA Band II(RMC 12.2Kbps)									
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	3707	-40.23	-13	-27.23	-59.27	-46.81	1.67	8.25	H
	5562	-52.23	-13	-39.23	-76.38	-59.29	2.66	9.72	H
	7410	-47.69	-13	-34.69	-76.67	-56.85	2.46	11.62	H
	9265	-44.61	-13	-31.61	-75.7	-54.66	2.54	12.59	H
									H
									H
	3700	-39.25	-13	-26.25	-57.9	-45.82	1.67	8.24	V
	5555	-54.28	-13	-41.28	-76.32	-61.35	2.66	9.72	V
	7410	-48.83	-13	-35.83	-76.89	-57.99	2.46	11.62	V
	9265	-45.66	-13	-32.66	-76.38	-55.71	2.54	12.59	V
									V
									V
Middle	3763	-40.72	-13	-27.72	-59.81	-47.35	1.69	8.32	H
	5639	-52.36	-13	-39.36	-76.26	-59.41	2.71	9.76	H
	7522	-47.91	-13	-34.91	-76.54	-57.3	2.42	11.81	H
	9398	-44.85	-13	-31.85	-75.9	-54.82	2.57	12.54	H
									H
									H
	3763	-37.19	-13	-24.19	-55.94	-43.82	1.69	8.32	V
	5639	-54.64	-13	-41.64	-76.69	-61.69	2.71	9.76	V
	7522	-48.61	-13	-35.61	-76.75	-58	2.42	11.81	V
	9398	-47.61	-13	-34.61	-76.94	-57.58	2.57	12.54	V
									V
									V
Highest	3819	-38.67	-13	-25.67	-58.15	-45.35	1.70	8.38	H
	5723	-48.57	-13	-35.57	-72.54	-55.61	2.75	9.79	H
	7627	-48.11	-13	-35.11	-76.33	-57.6	2.39	11.88	H
	9538	-45.33	-13	-32.33	-76.78	-55.21	2.60	12.48	H
									H
									H
	3819	-39.24	-13	-26.24	-57.714	-45.92	1.70	8.38	V
	5723	-50.31	-13	-37.31	-73.24	-57.35	2.75	9.79	V
	7627	-48.12	-13	-35.12	-76.08	-57.61	2.39	11.88	V
	9538	-47.57	-13	-34.57	-76.88	-57.45	2.60	12.48	V
									V
									V

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