



FCC RADIO TEST REPORT

FCC ID : A4RG6QU3
Equipment : Phone
Model Name : G6QU3
Applicant : Google LLC
1600 Amphitheatre Parkway,
Mountain View, California, 94043 USA
Standard : FCC 47 CFR Part 2, 22(H), 24(E), 27(L)

The product was received on Jun. 04, 2020 and testing was started from Jun. 19, 2020 and completed on Aug. 03, 2020. We, SPORTON INTERNATIONAL INC. EMC & Wireless Communications Laboratory, would like to declare that the tested sample has been evaluated in accordance with the test procedures given in ANSI / TIA-603-E and has been in compliance with the applicable technical standards.

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

Louis Wu

Approved by: Louis Wu

SPORTON INTERNATIONAL INC. EMC & Wireless Communications Laboratory

No. 52, Huaya 1st Rd., Guishan Dist., Taoyuan City, Taiwan (R.O.C.)



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History of this test report

Report No.	Version	Description	Issued Date
FG050515A	01	Initial issue of report	Aug. 04, 2020

Summary of Test Result

Report Clause	Ref Std. Clause	Test Items	Result (PASS/FAIL)	Remark
3.2	§2.1046	Conducted Output Power	Pass	-
	§22.913 (a)(2)	Effective Radiated Power (GSM850) (WCDMA Band V) (CDMA BC0)		
	§24.232 (c)	Equivalent Isotropic Radiated Power (GSM1900) (WCDMA Band II) (CDMA BC1)		
	§27.50 (d)(4)	Equivalent Isotropic Radiated Power (WCDMA Band IV)		
3.3	§24.232 (d)	Peak-to-Average Ratio	Pass	
3.4	§2.1049	Occupied Bandwidth (GSM850) (WCDMA Band V) (CDMA BC0) (GSM1900) (WCDMA Band II) (CDMA BC1) (WCDMA Band IV)	Pass	-
	§22.917 (b)			
	§24.238 (b)			
	§27.53 (g)			
3.5	§2.1051	Band Edge Measurement (GSM850) (WCDMA Band V) (CDMA BC0) (GSM1900) (WCDMA Band II) (CDMA BC1) (WCDMA Band IV)	Pass	-
	§22.917 (a)			
	§24.238 (a)			
	§27.53 (g)			
3.6	§2.1051	Conducted Emission (GSM850) (WCDMA Band V) (CDMA BC0) (GSM1900) (WCDMA Band II) (CDMA BC1) (WCDMA Band IV)	Pass	-
	§22.917 (a)			
	§24.238 (a)			
	§27.53 (g)			
3.7	§2.1055	Frequency Stability Temperature & Voltage	Pass	-
	§22.355			
	§24.235			
	§27.54			
4.4	§2.1053	Field Strength of Spurious Radiation (GSM850) (WCDMA Band V) (CDMA BC0) (GSM1900) (WCDMA Band II) (CDMA BC1) (WCDMA Band IV)	Pass	Under limit 25.23 dB at 3704.800 MHz for Primary Antenna Under limit 25.2 dB at 7520.000 MHz for ASDIV Antenna
	§22.917 (a)			
	§24.238 (a)			
	§27.53 (h)			

Declaration of Conformity:

The test results with all measurement uncertainty excluded are presented in accordance with the regulation limits or requirements declared by manufacturers.

Comments and Explanations:

The declared of product specification for EUT presented in the report are provided by the manufacturer, and the manufacturer takes all the responsibilities for the accuracy of product specification.

Reviewed by: Wii Chang

Report Producer: Vivian Hsu

1 General Description

1.1 Product Feature of Equipment Under Test

Product Feature	
Equipment	Phone
Model Name	G6QU3
FCC ID	A4RG6QU3
EUT supports Radios application	CDMA/EV-DO/GSM/EGPRS/WCDMA/HSPA/LTE/5G NR/ NFC/GNSS WLAN 11b/g/n HT20 WLAN 11a/n HT20/HT40 WLAN 11ac VHT20/VHT40/VHT80 Bluetooth BR/EDR/LE

Remark: The above EUT's information was declared by manufacturer.

EUT Information List	
S/N	Performed Test Item
05211FQCB00031	Conducted Measurement ERP/EIRP
05151FQCB00174	Radiated Spurious Emission

1.2 Product Specification of Equipment Under Test

Standards-related Product Specification	
Tx Frequency	GSM/GPRS/EDGE: 850: 824.2 MHz ~ 848.8 MHz 1900: 1850.2 MHz ~ 1909.8 MHz CDMA/EV-DO BC0 824.70 MHz ~ 848.31 MHz BC1: 1851.25 MHz ~ 1908.75 MHz WCDMA: Band V: 826.4 MHz ~ 846.6 MHz Band II: 1852.4 MHz ~ 1907.6 MHz Band IV: 1712.4 MHz ~ 1752.6 MHz
Rx Frequency	GSM/GPRS/EDGE: 850: 869.2 MHz ~ 893.8 MHz 1900: 1930.2 MHz ~ 1989.8 MHz CDMA/EV-DO BC0 869.70 MHz ~ 893.31 MHz BC1: 1931.25 MHz ~ 1988.75 MHz WCDMA: Band V: 871.4 MHz ~ 891.6 MHz Band II: 1932.4 MHz ~ 1987.6 MHz Band IV: 2112.4 MHz ~ 2152.6 MHz

Standards-related Product Specification	
Maximum Output Power to Antenna	<Primary Antenna> GSM/GPRS/EDGE: 850: 33.01 dBm 1900: 30.11 dBm CDMA/EV-DO BC0 24.50 dBm BC1: 24.90 dBm WCDMA: Band V: 24.37 dBm Band II: 25.08 dBm Band IV: 24.96 dBm <ASDIV Antenna> GSM/GPRS/EDGE: 850: 32.79 dBm 1900: 29.77 dBm CDMA/EV-DO BC0 24.47 dBm BC1: 24.70 dBm WCDMA: Band V: 24.36 dBm Band II: 25.02 dBm Band IV: 24.67 dBm
Antenna Type	<Primary Antenna>: <Ant. 0>: PIFA Antenna type <Ant. 2>: Monopole Antenna type <ASDIV Antenna>: <Ant. 0>: PIFA Antenna type <Ant. 1>: PIFA Antenna type
Type of Modulation	GSM / GPRS: GMSK EDGE(MCS 0-4): GMSK / (MCS 5-9): 8PSK WCDMA: QPSK (Uplink) HSDPA: 64QAM (Downlink) HSUPA: QPSK (Uplink) CDMA2000: QPSK CDMA2000 1xEV-DO: QPSK/8PSK

<Primary Antenna>

Radio Tech	Band Number	Antenna name	Gain
GSM	850	Ant 0	-3.6
GSM	1900	Ant 2	1.5
CDMA	BC0	Ant 0	-3.6
CDMA	BC1	Ant 2	1.5
WCDMA	B2	Ant 2	1.5
WCDMA	B4	Ant 2	1
WCDMA	B5	Ant 0	-3.6

<ASDIV Antenna>

Radio Tech	Band Number	Antenna name	Gain
GSM	850	Ant 1	-4.6
GSM	1900	Ant 0	0.4
CDMA	BC0	Ant 1	-4.6
CDMA	BC1	Ant 0	0.4
WCDMA	B2	Ant 0	0.4
WCDMA	B4	Ant 0	0
WCDMA	B5	Ant 1	-4.6

1.3 Modification of EUT

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

1.4 Testing Location

Test Site	SPORTON INTERNATIONAL INC. EMC & Wireless Communications Laboratory
Test Site Location	No.52, Huaya 1st Rd., Guishan Dist., Taoyuan City, Taiwan (R.O.C.) TEL: +886-3-327-3456 FAX: +886-3-328-4978
Test Site No.	Sporton Site No. TH03-HY
Test Engineer	Louis Chung
Temperature	21~24°C
Relative Humidity	51~55%

Test Site	SPORTON INTERNATIONAL INC. EMC & Wireless Communications Laboratory
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. 03CH15-HY
Test Engineer	Leo Lee, Mancy Chou, and Bigshow Wang
Temperature	22.5~23.8℃
Relative Humidity	48.4~53.9%

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

FCC Designation No.: TW1190 and TW0007

1.5 Applicable Standards

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

- ♦ ANSI C63.26-2015
- ♦ ANSI / TIA-603-E
- ♦ FCC 47 CFR Part 2, 22(H), 24(E), 27(L)
- ♦ FCC KDB 971168 D01 Power Meas. License Digital Systems v03r01
- ♦ FCC KDB 412172 D01 Determining ERP and EIRP v01r01
- ♦ FCC KDB 414788 D01 Radiated Test Site v01r01

Remark:

1. All test items were verified and recorded according to the standards and without any deviation during the test.
2. This EUT has also been tested and complied with the requirements of FCC Part 15, Subpart B, recorded in a separate test report.
3. The TAF code is not including all the FCC KDB listed without accreditation.



2 Test Configuration of Equipment Under Test

2.1 Test Mode

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

For radiated measurement, pre-scanned in three orthogonal panels, X, Y, Z. The worst cases (Primary Antenna: Z Plane for Cellular Band, X Plane for PCS Band and AWS Band; ASDIV Antenna: X Plane for PCS Band, Z Plane for Cellular Band and AWS Band) were recorded in this report.

Radiated emissions were investigated as following frequency range:

1. 30 MHz to 9000 MHz for GSM850 and WCDMA Band V and CDMA BC0
2. 30 MHz to 18000 MHz for WCDMA Band IV
3. 30 MHz to 19100 MHz for GSM1900 and WCDMA Band II and CDMA BC1

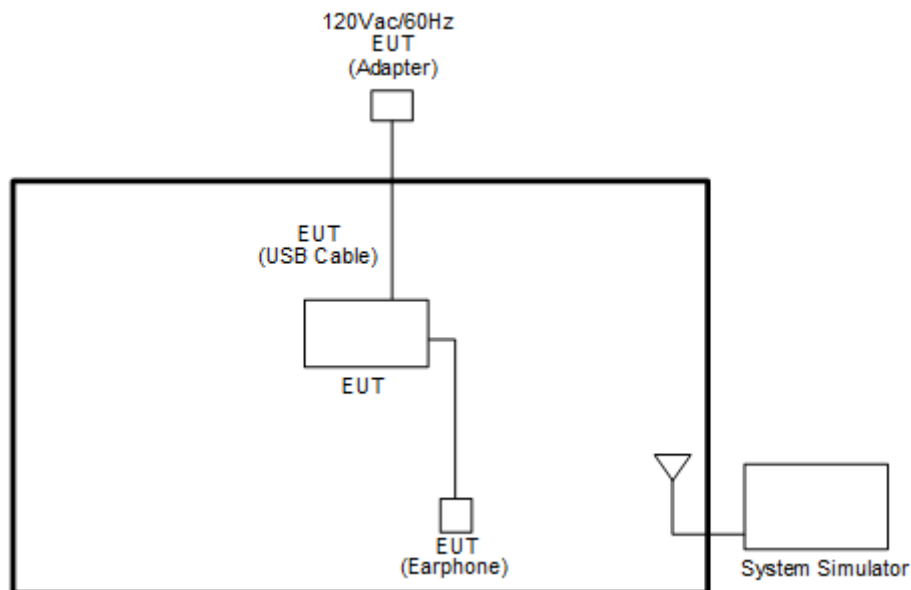
All modes and data rates and positions were investigated.

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

Test Modes		
Band	Radiated TCs	Conducted TCs
GSM850	■ GPRS Class 8 Link ■ EDGE Class 8 Link	■ GPRS Class 8 Link ■ EDGE Class 8 Link
GSM1900	■ 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
CDMA BC0	■ 1xRTT Link	■ 1xRTT Link ■ 1xEV-DO Link
CDMA BC1	■ 1xRTT Link	■ 1xRTT Link ■ 1xEV-DO Link

Remark: All the radiated test cases were performed with Adapter 1 and USB Cable 1.

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
CDMA2000 BC0	Channel	1013	384	777
	Frequency	824.7	836.52	848.31
CDMA2000 BC1	Channel	25	600	1175
	Frequency	1851.25	1880.0	1908.75

3 Conducted Test Result

3.1 Measuring Instruments

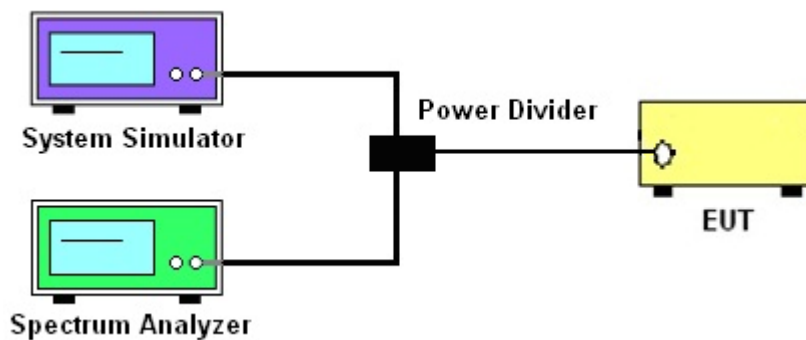
See list of measuring instruments of this test report.

3.1.1 Test Setup

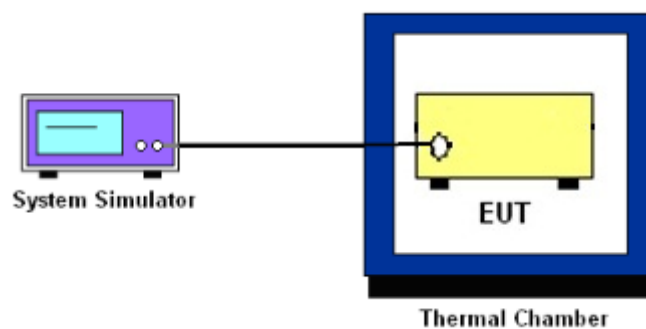
3.1.2 Conducted Output Power



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



3.1.4 Frequency Stability



3.1.5 Test Result of Conducted Test

Please refer to Appendix A.



3.2 Conducted Output Power and ERP/EIRP

3.2.1 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 and CDMA BC0

The EIRP of mobile transmitters must not exceed 2 Watts for GSM1900 and WCDMA Band II and CDMA BC1

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

3.2.2 Test Procedures

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



3.3 Peak-to-Average Ratio

3.3.1 Description of the PAR Measurement

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

3.3.2 Test Procedures

The testing follows ANSI C63.26-2015 Section 5.2.6

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

3.4 99% Occupied Bandwidth and 26dB Bandwidth Measurement

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

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

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

3.4.2 Test Procedures

The testing follows ANSI C63.26-2015 Section 5.4.3 (26dB) and Section 5.4.4 (99OB)

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



3.5 Conducted Band Edge

3.5.1 Description of Conducted Band Edge Measurement

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

3.5.2 Test Procedures

The testing follows FCC KDB 971168 D01 v03r01 Section 6.1.

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



3.6 Conducted Spurious Emission

3.6.1 Description of Conducted Spurious Emission Measurement

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

It is measured by means of a calibrated spectrum analyzer and scanned from 30 MHz up to a frequency including its 10th harmonic.

3.6.2 Test Procedures

The testing follows FCC KDB 971168 D01 v03r01 Section 6.1.

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

3.7 Frequency Stability

3.7.1 Description of Frequency Stability Measurement

22.355

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

24.235 & 27.54

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

3.7.2 Test Procedures for Temperature Variation

The testing follows FCC KDB 971168 D01 v03r01 Section 9.0.

1. The EUT was set up in the thermal chamber and connected with the system simulator.
2. With power OFF, the temperature was decreased to -30°C and the EUT was stabilized before testing. Power was applied and the maximum change in frequency was recorded within one minute.
3. With power OFF, the temperature was raised in 10°C steps up to 50°C . The EUT was stabilized at each step for at least half an hour. Power was applied and the maximum frequency change was recorded within one minute.

3.7.3 Test Procedures for Voltage Variation

The testing follows FCC KDB 971168 D01 v03r01 Section 9.0.

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

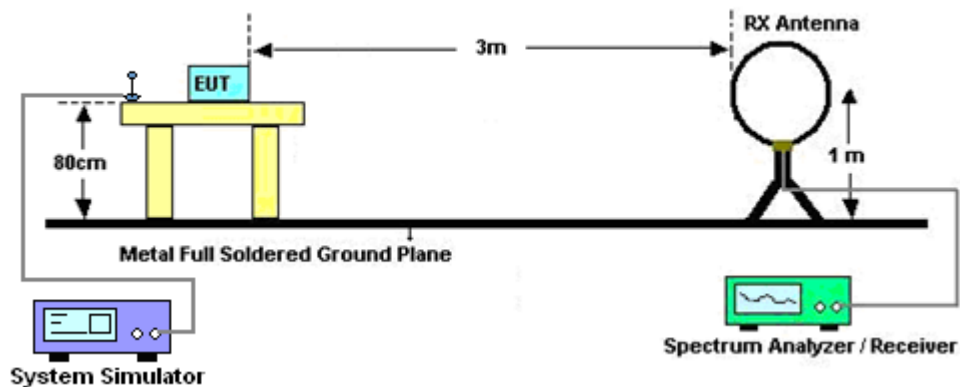
4 Radiated Test Items

4.1 Measuring Instruments

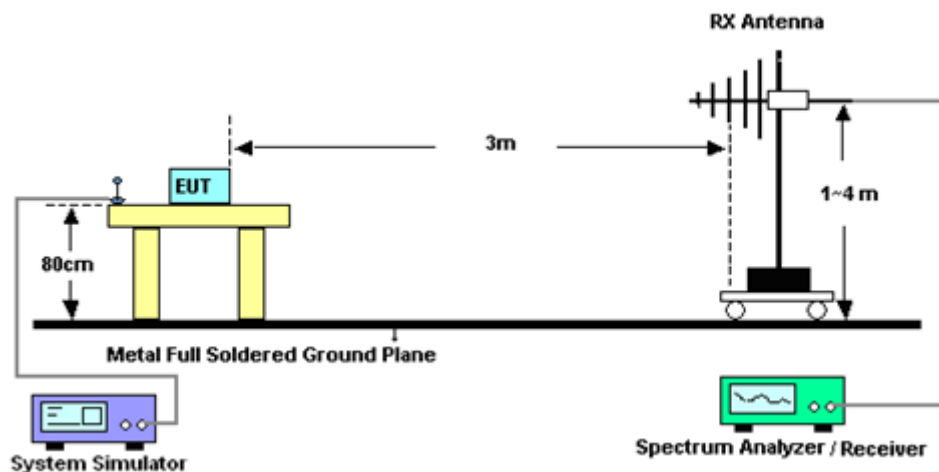
See list of measuring instruments of this test report.

4.2 Test Setup

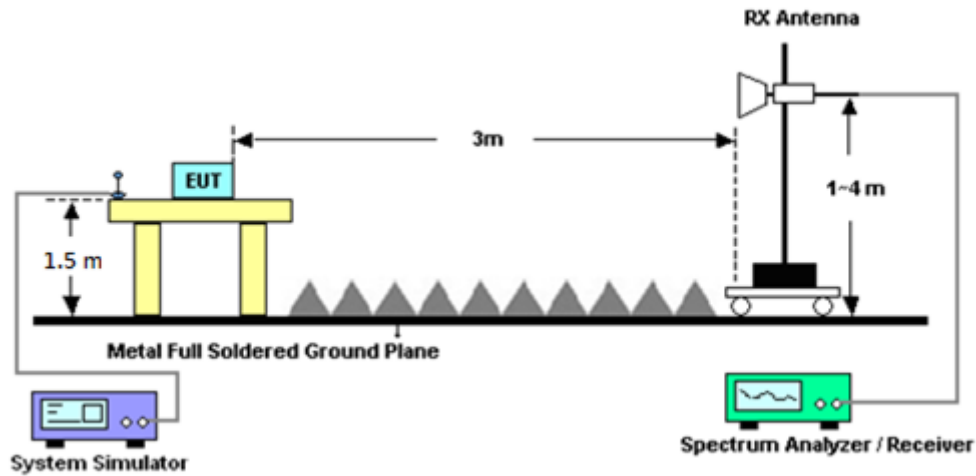
For radiated emissions below 30MHz



For radiated test from 30MHz to 1GHz



For radiated test above 1GHz



4.3 Test Result of Radiated Test

Please refer to Appendix B.

Note:

The low frequency, which started from 9 kHz to 30MHz, was pre-scanned and the result which was 20dB lower than the limit line was not reported.

There is a comparison data of both open-field test site and alternative test site - semi-Anechoic chamber according to 414788 D01 Radiated Test Site v01r01, and the result came out very similar.



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

The testing follows FCC KDB 971168 D01 v03r01 Section 7 and ANSI / TIA-603-E Section 2.2.12.

1. The EUT was placed on a rotatable wooden table 0.8 meters for frequency below 1GHz and 1.5 meter for frequency above 1GHz above the ground.
2. The EUT was set 3 meters from the receiving antenna, which was mounted on the antenna tower.
3. The table was rotated 360 degrees to determine the position of the highest spurious emission.
4. The height of the receiving antenna is varied between one meter and four meters to search for the maximum spurious emission for both horizontal and vertical polarizations.
5. Make the measurement with the spectrum analyzer's RBW = 1MHz, VBW = 3MHz, taking record of maximum spurious emission.
6. A horn antenna was substituted in place of the EUT and was driven by a signal generator.
7. Tune the output power of signal generator to the same emission level with EUT maximum spurious emission.
8. Taking the record of output power at antenna port.
9. Repeat step 7 to step 8 for another polarization.
10. $EIRP \text{ (dBm)} = S.G. \text{ Power} - Tx \text{ Cable Loss} + Tx \text{ Antenna Gain}$
11. $ERP \text{ (dBm)} = EIRP - 2.15$
12. The RF fundamental frequency should be excluded against the limit line in the operating frequency band.
13. The limit line is derived from $43 + 10\log(P)$ 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
Hygrometer	Testo	608-H1	34893241	N/A	Mar. 26, 2020	Jun. 22, 2020~ Aug. 03, 2020	Mar. 25, 2021	Conducted (TH03-HY)
Spectrum Analyzer	Rohde & Schwarz	FSP30	101329	9kHz~30GHz	Sep. 04, 2019	Jun. 22, 2020~ Aug. 03, 2020	Sep. 03, 2020	Conducted (TH03-HY)
Temperature Chamber	ESPEC	SU-641	92013721	-30℃ ~70℃	Nov. 26, 2019	Jun. 22, 2020~ Aug. 03, 2020	Nov. 25, 2020	Conducted (TH03-HY)
Programmable Power Supply	GW Instek	PSS-2005	EL890001	1V~20V 0.5A~4A	Oct. 09, 2019	Jun. 22, 2020~ Aug. 03, 2020	Oct. 08, 2020	Conducted (TH03-HY)
Base Station (Measure)	Rohde & Schwarz	CMU200	117995	GSM / GPRS / WCDMA / CDMA	Aug. 23, 2019	Jun. 22, 2020~ Aug. 03, 2020	Aug. 22, 2020	Conducted (TH03-HY)
Power Divider	Warison	WCOU-0.4-26.5S-20	#A	N/A	Nov. 06, 2019	Jun. 22, 2020~ Aug. 03, 2020	Nov. 05, 2020	Conducted (TH03-HY)
Loop Antenna	Rohde & Schwarz	HFH2-Z2	100488	9 kHz~30 MHz	Jan. 09, 2020	Jun. 19, 2020~ Jul. 15, 2020	Jan. 08, 2021	Radiation (03CH15-HY)
Bilog Antenna	TESEQ	CBL6111D&00800N1D01N-06	41912&05	30MHz to 1GHz	Feb. 09, 2020	Jun. 19, 2020~ Jul. 15, 2020	Feb. 08, 2021	Radiation (03CH15-HY)
Horn Antenna	SCHWARZBECK	BBHA 9120 D	9120D-2114	1-18GHz	Jul. 31, 2019	Jun. 19, 2020~ Jul. 15, 2020	Jul. 30, 2020	Radiation (03CH15-HY)
Horn Antenna	SCHWARZBECK	BBHA 9120D	9120D-1522	1GHz ~ 18GHz	Sep. 19, 2019	Jun. 19, 2020~ Jul. 15, 2020	Sep. 18, 2020	Radiation (03CH15-HY)
SHF-EHF Horn Antenna	SCHWARZBECK	BBHA 9170	BBHA9170584	18GHz- 40GHz	Dec. 10, 2019	Jun. 19, 2020~ Jul. 15, 2020	Dec. 09, 2020	Radiation (03CH15-HY)
SHF-EHF Horn Antenna	SCHWARZBECK	BBHA 9170	BBHA9170980	18GHz ~ 40GHz	Jan. 10, 2019	Jun. 19, 2020~ Jul. 15, 2020	Jan. 9, 2021	Radiation (03CH15-HY)
Preamplifier	Jet-Power	JPA0118-55-303	1710001800055007	1GHz~18GHz	Mar. 31, 2020	Jun. 19, 2020~ Jul. 15, 2020	Mar. 30, 2021	Radiation (03CH15-HY)
Preamplifier	Keysight	83017A	MY53270195	1GHz~26.5GHz	Aug. 23, 2019	Jun. 19, 2020~ Jul. 15, 2020	Aug. 22, 2020	Radiation (03CH15-HY)
Preamplifier	EMEC	EM18G40G	060715	18GHz ~ 40GHz	Dec. 13, 2019	Jun. 19, 2020~ Jul. 15, 2020	Dec. 12, 2020	Radiation (03CH15-HY)
Amplifier	SONOMA	310N	363440	9kHz~1GHz	Dec. 27, 2019	Jun. 19, 2020~ Jul. 15, 2020	Dec. 26, 2020	Radiation (03CH15-HY)
EMI Test Receiver	Keysight	N9038A(MXE)	MY54130085	20MHz~8.4GHz	Nov. 01, 2019	Jun. 19, 2020~ Jul. 15, 2020	Oct. 31, 2020	Radiation (03CH15-HY)
EMI Test Receiver	Rohde & Schwarz	ESU26	100390	20Hz~26.5GHz	Feb. 25, 2020	Jun. 19, 2020~ Jul. 15, 2020	Feb. 24, 2021	Radiation (03CH15-HY)
Signal Generator	Rohde & Schwarz	SMF100A	101107	100kHz~40GHz	Aug. 27, 2019	Jun. 19, 2020~ Jul. 15, 2020	Aug. 26, 2020	Radiation (03CH15-HY)
Hygrometer	TECPEL	DTM-302	SN1	N/A	Aug. 12, 2019	Jun. 19, 2020~ Jul. 15, 2020	Aug. 11, 2020	Radiation (03CH15-HY)
Antenna Mast	ChainTek	MBS-520-1	N/A	1m~4m	N/A	Jun. 19, 2020~ Jul. 15, 2020	N/A	Radiation (03CH15-HY)
Turn Table	ChainTek	T-200-S-1	N/A	0~360 Degree	N/A	Jun. 19, 2020~ Jul. 15, 2020	N/A	Radiation (03CH15-HY)
Software	Audix	E3 6.2009-8-24 (k5)	RK-000451	N/A	N/A	Jun. 19, 2020~ Jul. 15, 2020	N/A	Radiation (03CH15-HY)
Controller	ChainTek	3000-1	N/A	Control Turn table & Ant Mast	N/A	Jun. 19, 2020~ Jul. 15, 2020	N/A	Radiation (03CH15-HY)
RF Cable	HUBER + SUHNER	SUCOFLEX 104	MY36980/4	30M-18G	Apr. 14, 2020	Jun. 19, 2020~ Jul. 15, 2020	Apr. 13, 2021	Radiation (03CH15-HY)
RF Cable	HUBER + SUHNER	SUCOFLEX 102	505134/2	30MHz-40GHz	Feb. 25, 2020	Jun. 19, 2020~ Jul. 15, 2020	Feb. 24, 2021	Radiation (03CH15-HY)
RF Cable	HUBER + SUHNER	SUCOFLEX 102	800740/2	30MHz-40GHz	Feb. 25, 2020	Jun. 19, 2020~ Jul. 15, 2020	Feb. 24, 2021	Radiation (03CH15-HY)

6 Uncertainty of Evaluation

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

Measuring Uncertainty for a Level of Confidence of 95% ($U = 2Uc(y)$)	3.06
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Uncertainty of Radiated Emission Measurement (1 GHz ~ 18 GHz)

Measuring Uncertainty for a Level of Confidence of 95% ($U = 2Uc(y)$)	3.63
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Uncertainty of Radiated Emission Measurement (18 GHz ~ 40 GHz)

Measuring Uncertainty for a Level of Confidence of 95% ($U = 2Uc(y)$)	4.16
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Appendix A. Test Results of Conducted Test

Conducted Output Power(Average power)

<Primary 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	33.00	32.95	32.66	29.42	30.08	29.96
GPRS class 8	33.01	32.96	32.68	29.43	30.11	29.99
GPRS class 10	32.05	31.81	31.55	29.01	29.38	29.20
GPRS class 11	29.98	29.68	29.38	27.03	27.74	27.61
GPRS class 12	28.49	28.19	27.90	25.99	26.75	26.32
EGPRS class 8	26.76	26.50	26.18	25.82	26.18	26.02
EGPRS class 10	26.36	26.15	25.74	25.41	25.61	25.39
EGPRS class 11	24.51	24.25	24.10	24.44	24.47	24.22
EGPRS class 12	22.36	22.51	21.92	23.08	23.62	22.53

Conducted Power (*Unit: dBm)						
Band	WCDMA Band V			WCDMA Band II		
Channel	4132	4182	4233	9262	9400	9538
Frequency	826.4	836.4	846.6	1852.4	1880	1907.6
RMC 12.2K	24.33	24.37	24.33	24.76	24.95	25.08
HSDPA Subtest-1	23.38	23.37	23.33	24.19	23.99	24.03
HSDPA Subtest-2	23.07	23.39	23.39	24.16	24.00	24.06
HSDPA Subtest-3	22.84	22.91	22.80	23.64	23.48	23.55
HSDPA Subtest-4	22.79	22.84	22.88	23.70	23.52	23.54
HSUPA Subtest-1	23.32	23.35	23.31	23.80	23.98	24.01
HSUPA Subtest-2	21.29	21.29	21.28	21.81	21.61	21.69
HSUPA Subtest-3	22.22	22.37	22.23	22.76	22.58	22.64
HSUPA Subtest-4	21.35	21.35	21.32	21.82	21.59	21.66
HSUPA Subtest-5	23.30	23.40	23.22	23.80	23.55	23.65



Conducted Power (*Unit: dBm)			
Band	WCDMA Band IV		
Channel	1312	1413	1513
Frequency	1712.4	1732.6	1752.6
RMC 12.2K	24.80	24.93	24.96
HSDPA Subtest-1	23.85	23.91	23.95
HSDPA Subtest-2	23.85	23.91	23.93
HSDPA Subtest-3	23.38	23.38	23.46
HSDPA Subtest-4	23.35	23.39	23.46
HSUPA Subtest-1	23.97	23.95	24.03
HSUPA Subtest-2	21.45	21.48	21.61
HSUPA Subtest-3	22.50	22.58	22.63
HSUPA Subtest-4	21.52	21.50	21.60
HSUPA Subtest-5	23.50	24.00	23.60

Conducted Power (*Unit: dBm)						
Band	CDMA 2000 BC0			CDMA 2000 BC1		
Channel	1013	384	777	25	600	1175
Frequency	824.7	836.52	848.31	1851.25	1880	1908.75
1xRTT RC1 SO55	24.40	24.41	23.62	24.61	24.72	24.80
1xRTT RC3 SO55	24.41	24.48	23.64	24.66	24.76	24.90
1xRTT RC3 SO32 (+ F-SCH)	24.39	24.42	23.61	24.65	24.71	24.77
1xRTT RC3 SO32 (+SCH)	24.36	24.41	23.65	24.65	24.73	24.86
1xEVDO RTAP 153.6Kbps	24.34	24.50	23.62	24.63	24.72	24.82
1xEVDO RETAP 4096Bits	24.40	24.44	23.66	24.64	24.73	24.83



<ASDIV 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	32.78	32.70	32.44	29.39	29.75	29.46
GPRS class 8	32.79	32.71	32.45	29.40	29.77	29.47
GPRS class 10	31.93	31.65	31.36	28.79	29.00	28.76
GPRS class 11	30.01	29.62	29.22	27.24	27.48	27.24
GPRS class 12	28.60	28.17	27.76	26.14	26.20	25.61
EGPRS class 8	26.86	26.44	26.01	25.56	25.65	25.47
EGPRS class 10	26.33	26.10	25.60	25.25	25.11	24.91
EGPRS class 11	24.44	24.06	23.92	24.00	23.73	23.58
EGPRS class 12	22.24	22.33	21.73	22.87	23.11	22.03

Conducted Power (*Unit: dBm)						
Band	WCDMA Band V			WCDMA Band II		
Channel	4132	4182	4233	9262	9400	9538
Frequency	826.4	836.4	846.6	1852.4	1880	1907.6
RMC 12.2K	24.34	24.36	24.35	24.84	24.97	25.02
HSDPA Subtest-1	23.35	23.39	23.37	24.04	24.14	24.23
HSDPA Subtest-2	23.37	23.41	23.38	24.04	24.12	24.22
HSDPA Subtest-3	22.86	22.91	22.85	23.51	23.61	23.68
HSDPA Subtest-4	22.84	22.92	22.86	23.54	23.61	23.71
HSUPA Subtest-1	23.34	23.35	23.27	23.70	24.09	24.17
HSUPA Subtest-2	21.32	21.36	21.27	21.73	21.77	21.89
HSUPA Subtest-3	22.34	22.36	22.33	22.77	22.83	22.88
HSUPA Subtest-4	21.34	21.36	21.32	21.73	21.79	21.91
HSUPA Subtest-5	23.30	23.40	23.30	23.80	23.80	23.90



Conducted Power (*Unit: dBm)			
Band	WCDMA Band IV		
Channel	1312	1413	1513
Frequency	1712.4	1732.6	1752.6
RMC 12.2K	24.60	24.59	24.67
HSDPA Subtest-1	23.73	23.76	23.82
HSDPA Subtest-2	23.76	23.74	23.83
HSDPA Subtest-3	23.25	23.22	23.35
HSDPA Subtest-4	23.21	23.28	23.35
HSUPA Subtest-1	23.74	23.79	23.86
HSUPA Subtest-2	21.44	21.44	21.54
HSUPA Subtest-3	22.53	22.47	22.46
HSUPA Subtest-4	21.50	21.50	21.60
HSUPA Subtest-5	23.50	23.50	23.60

Conducted Power (*Unit: dBm)						
Band	CDMA 2000 BC0			CDMA 2000 BC1		
Channel	1013	384	777	25	600	1175
Frequency	824.7	836.52	848.31	1851.25	1880	1908.75
1xRTT RC1 SO55	24.40	24.42	24.06	24.55	24.63	24.69
1xRTT RC3 SO55	24.42	24.47	24.04	24.58	24.64	24.70
1xRTT RC3 SO32 (+ F-SCH)	24.40	24.46	24.00	24.52	24.60	24.66
1xRTT RC3 SO32 (+SCH)	24.39	24.45	24.03	24.55	24.59	24.62
1xEVDO RTAP 153.6Kbps	24.44	24.45	24.02	24.53	24.65	24.69
1xEVDO RETAP 4096Bits	24.41	24.40	24.03	24.49	24.61	24.63



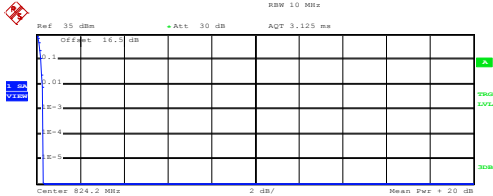
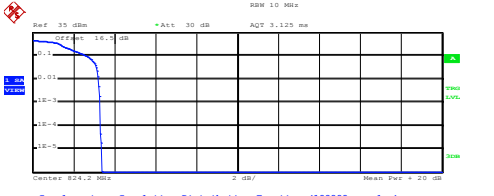
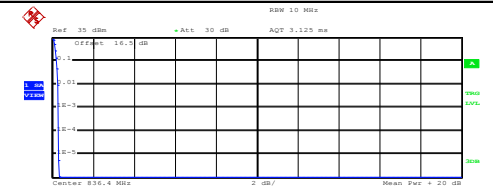
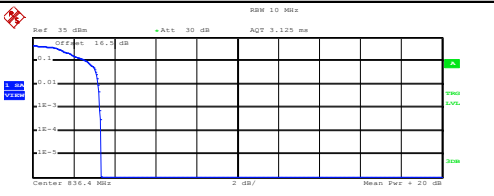
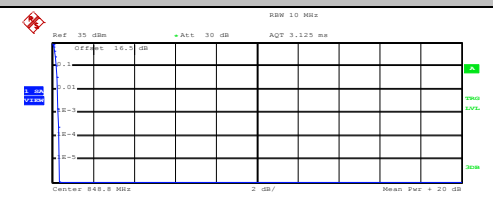
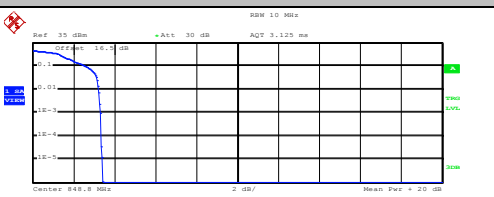
A2. GSM

Peak-to-Average Ratio

Mode	GSM850		Limit: 13dB
Mod.	GPRS class 8	EDGE class 8	Result
Lowest CH	0.32	3.28	PASS
Middle CH	0.32	3.28	
Highest CH	0.28	3.32	

Mode	GSM1900		Limit: 13dB
Mod.	GPRS class 8	EDGE class 8	Result
Lowest CH	0.28	3.00	PASS
Middle CH	0.28	3.24	
Highest CH	0.36	3.04	



GSM850 (GPRS class 8)		GSM850 (EDGE class 8)	
Lowest Channel		Lowest Channel	
 Center 824.2 MHz Complementary Cumulative Distribution Function (100000 samples) Trace 1 Mean 32.13 dBm Peak 32.43 dBm Crest 0.30 dB 10 % 0.20 dB 1 % 0.28 dB .1 % 0.32 dB .01 % 0.32 dB Date: 22.JUN.2020 17:26:23		 Center 824.2 MHz Complementary Cumulative Distribution Function (100000 samples) Trace 1 Mean 25.81 dBm Peak 29.19 dBm Crest 3.38 dB 10 % 2.64 dB 1 % 3.20 dB .1 % 3.28 dB .01 % 3.32 dB Date: 23.JUN.2020 09:51:36	
Middle Channel		Middle Channel	
 Center 836.4 MHz Complementary Cumulative Distribution Function (100000 samples) Trace 1 Mean 32.14 dBm Peak 32.50 dBm Crest 0.36 dB 10 % 0.20 dB 1 % 0.28 dB .1 % 0.32 dB .01 % 0.32 dB Date: 22.JUN.2020 17:35:50		 Center 836.4 MHz Complementary Cumulative Distribution Function (100000 samples) Trace 1 Mean 25.84 dBm Peak 29.19 dBm Crest 3.34 dB 10 % 2.64 dB 1 % 3.20 dB .1 % 3.28 dB .01 % 3.36 dB Date: 23.JUN.2020 09:52:17	
Highest Channel		Highest Channel	
 Center 848.8 MHz Complementary Cumulative Distribution Function (100000 samples) Trace 1 Mean 31.89 dBm Peak 32.22 dBm Crest 0.33 dB 10 % 0.20 dB 1 % 0.28 dB .1 % 0.28 dB .01 % 0.36 dB Date: 22.JUN.2020 17:42:43		 Center 848.8 MHz Complementary Cumulative Distribution Function (100000 samples) Trace 1 Mean 25.49 dBm Peak 28.90 dBm Crest 3.42 dB 10 % 2.64 dB 1 % 3.24 dB .1 % 3.32 dB .01 % 3.36 dB Date: 23.JUN.2020 09:54:46	

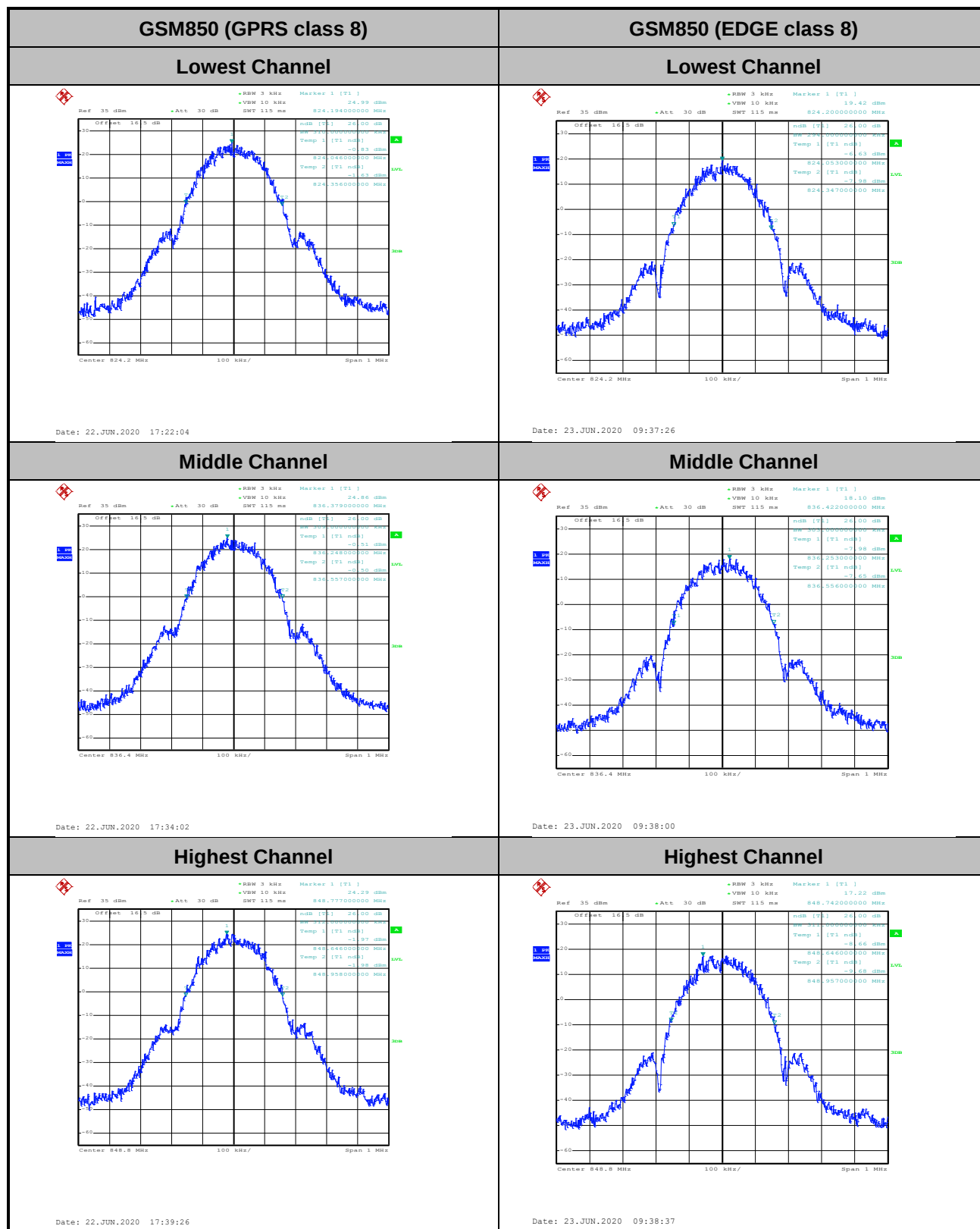


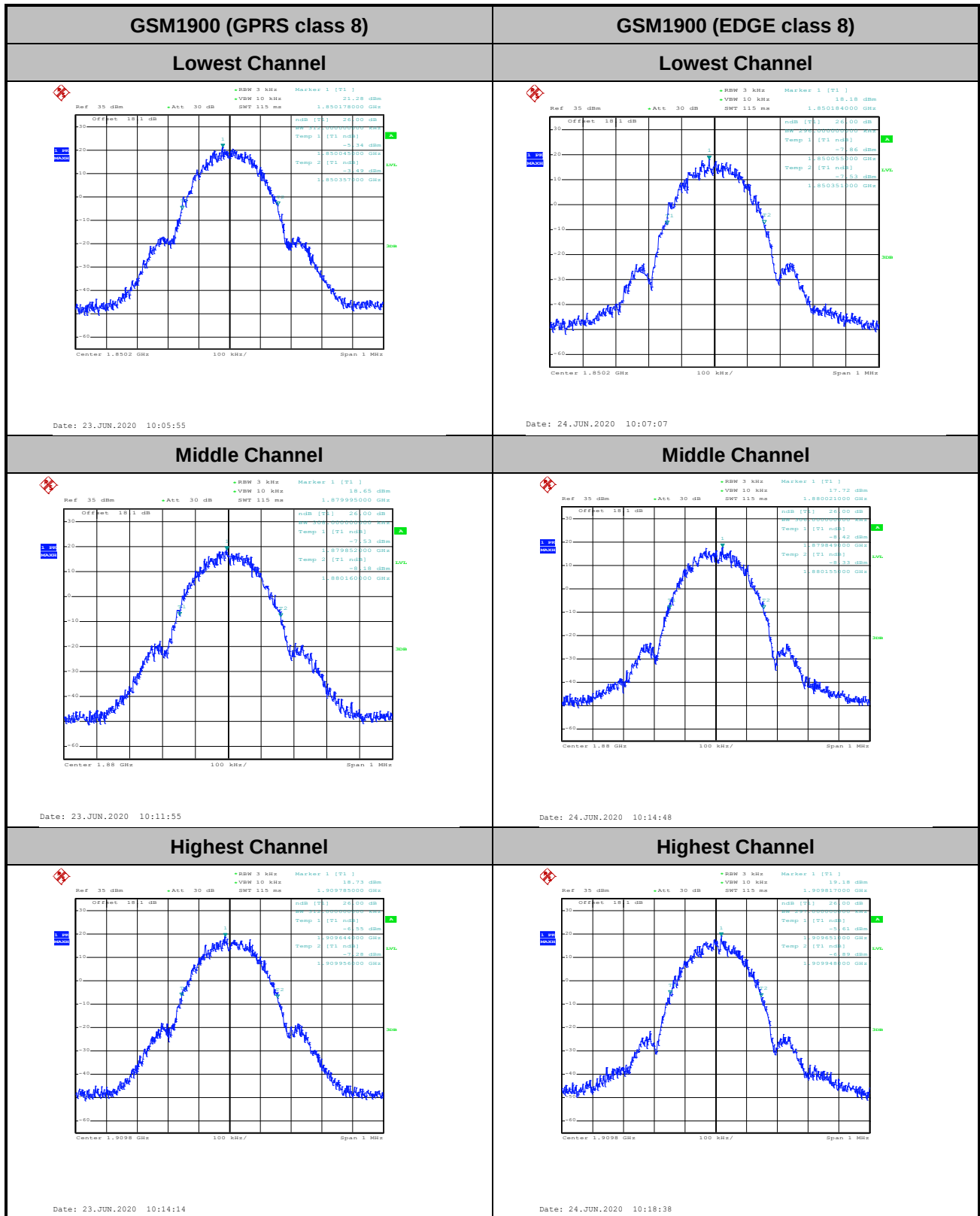
GSM1900 (GPRS class 8)		GSM1900 (EDGE class 8)	
Lowest Channel		Lowest Channel	
Ref: 35 dBm, Att: 30 dB, AGT: 3.125 ms, RSW: 10 MHz, Center: 1.8502 GHz, 2 dB, Mean: 28.57 dBm, Peak: 28.90 dBm, Crest: 0.33 dB Complementary Cumulative Distribution Function (100000 samples) Trace 1 Mean 28.57 dBm Peak 28.90 dBm Crest 0.33 dB 10 % 0.20 dB 1 % 0.24 dB .1 % 0.28 dB .01 % 0.28 dB Date: 23.JUN.2020 10:10:43		Ref: 35 dBm, Att: 30 dB, AGT: 3.125 ms, RSW: 10 MHz, Center: 1.8502 GHz, 2 dB, Mean: 25.45 dBm, Peak: 28.55 dBm, Crest: 3.10 dB Complementary Cumulative Distribution Function (100000 samples) Trace 1 Mean 25.45 dBm Peak 28.55 dBm Crest 3.10 dB 10 % 2.52 dB 1 % 2.88 dB .1 % 3.00 dB .01 % 3.04 dB Date: 24.JUN.2020 10:10:24	
Middle Channel		Middle Channel	
Ref: 35 dBm, Att: 30 dB, AGT: 3.125 ms, RSW: 10 MHz, Center: 1.85 GHz, 2 dB, Mean: 26.59 dBm, Peak: 26.93 dBm, Crest: 0.33 dB Complementary Cumulative Distribution Function (100000 samples) Trace 1 Mean 26.59 dBm Peak 26.93 dBm Crest 0.33 dB 10 % 0.20 dB 1 % 0.28 dB .1 % 0.28 dB .01 % 0.28 dB Date: 23.JUN.2020 10:13:43		Ref: 35 dBm, Att: 30 dB, AGT: 3.125 ms, RSW: 10 MHz, Center: 1.85 GHz, 2 dB, Mean: 25.23 dBm, Peak: 28.55 dBm, Crest: 3.32 dB Complementary Cumulative Distribution Function (100000 samples) Trace 1 Mean 25.23 dBm Peak 28.55 dBm Crest 3.32 dB 10 % 2.60 dB 1 % 3.16 dB .1 % 3.24 dB .01 % 3.28 dB Date: 24.JUN.2020 10:17:46	
Highest Channel		Highest Channel	
Ref: 35 dBm, Att: 30 dB, AGT: 3.125 ms, RSW: 10 MHz, Center: 1.9098 GHz, 2 dB, Mean: 26.02 dBm, Peak: 26.36 dBm, Crest: 0.34 dB Complementary Cumulative Distribution Function (100000 samples) Trace 1 Mean 26.02 dBm Peak 26.36 dBm Crest 0.34 dB 10 % 0.20 dB 1 % 0.28 dB .1 % 0.36 dB .01 % 0.36 dB Date: 23.JUN.2020 10:17:31		Ref: 35 dBm, Att: 30 dB, AGT: 3.125 ms, RSW: 10 MHz, Center: 1.9098 GHz, 2 dB, Mean: 25.32 dBm, Peak: 28.41 dBm, Crest: 3.09 dB Complementary Cumulative Distribution Function (100000 samples) Trace 1 Mean 25.32 dBm Peak 28.41 dBm Crest 3.09 dB 10 % 2.52 dB 1 % 2.96 dB .1 % 3.04 dB .01 % 3.08 dB Date: 24.JUN.2020 10:14:17	

26dB Bandwidth

Mode	GSM850: 26dB BW(MHz)	
Mod.	GPRS class 8	EDGE class 8
Lowest CH	0.310	0.294
Middle CH	0.309	0.303
Highest CH	0.312	0.311

Mode	GSM1900: 26dB BW(MHz)	
Mod.	GPRS class 8	EDGE class 8
Lowest CH	0.312	0.296
Middle CH	0.308	0.306
Highest CH	0.312	0.297

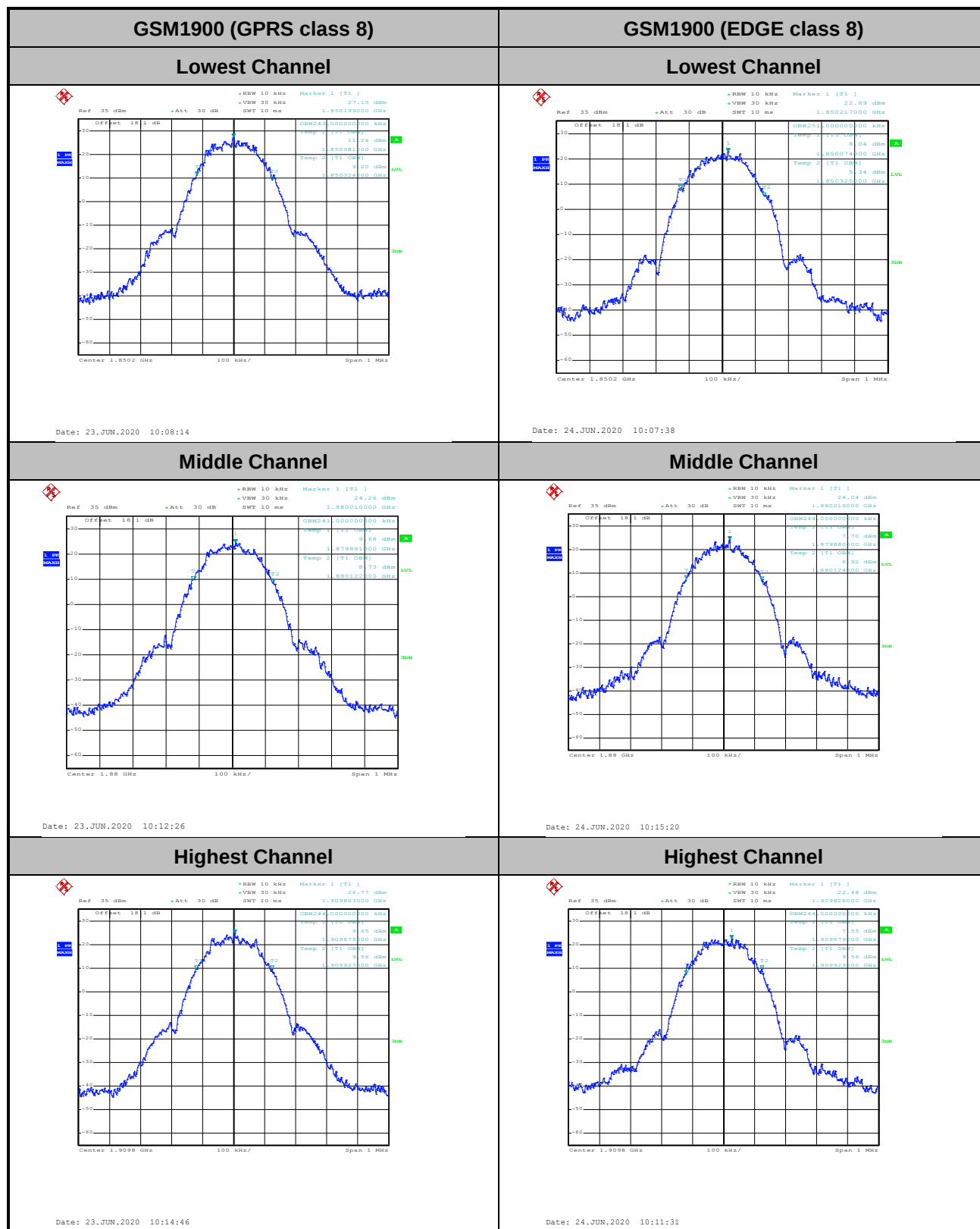




Occupied Bandwidth

Mode	GSM850: 99% OBW (MHz)	
Mod.	GPRS class 8	EDGE class 8
Lowest CH	0.244	0.246
Middle CH	0.244	0.246
Highest CH	0.244	0.247

Mode	GSM1900: 99% OBW (MHz)	
Mod.	GPRS class 8	EDGE class 8
Lowest CH	0.243	0.251
Middle CH	0.241	0.244
Highest CH	0.244	0.244

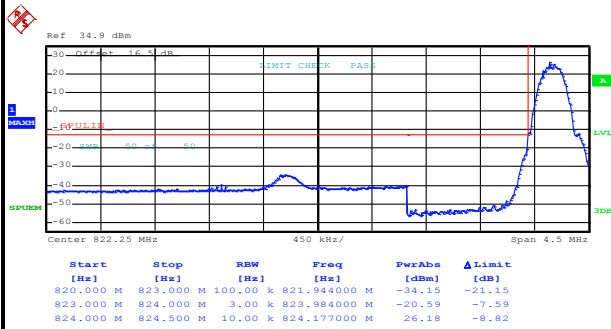




Conducted Band Edge

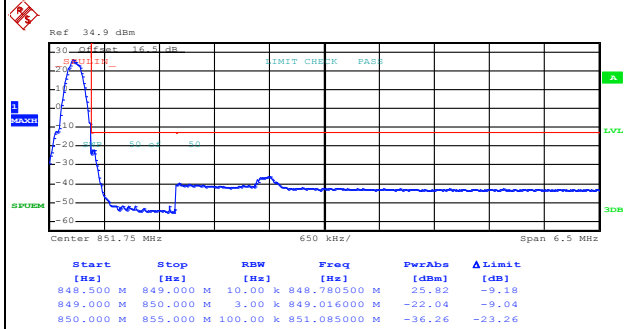
GSM850 (GPRS class 8)

Lowest Band Edge



Date: 22.JUN.2020 17:25:55

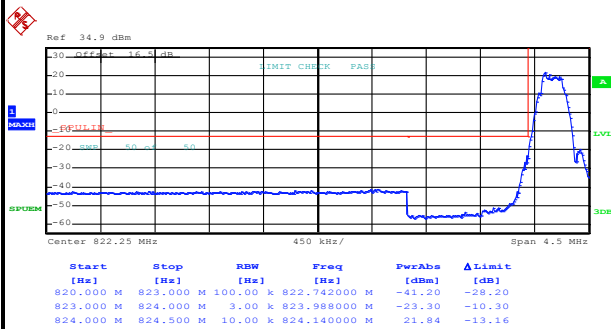
Highest Band Edge



Date: 22.JUN.2020 17:41:26

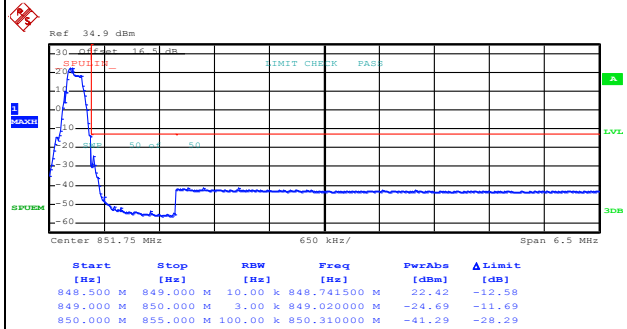
GSM850 (EDGE class 8)

Lowest Band Edge



Date: 23.JUN.2020 09:50:07

Highest Band Edge

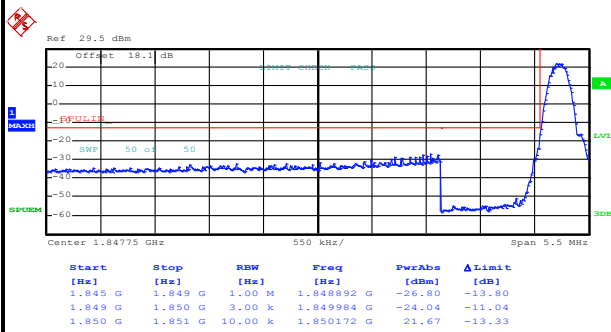


Date: 23.JUN.2020 09:56:18



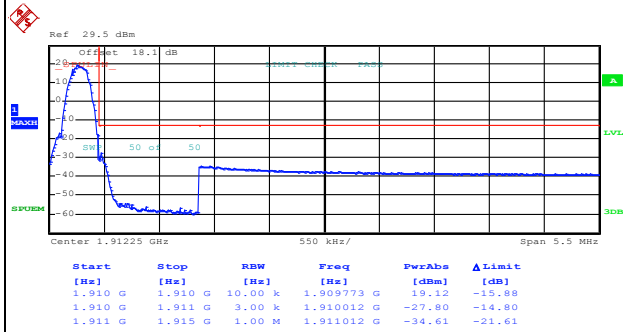
GSM1900 (GPRS class 8)

Lowest Band Edge



Date: 23.JUN.2020 10:10:08

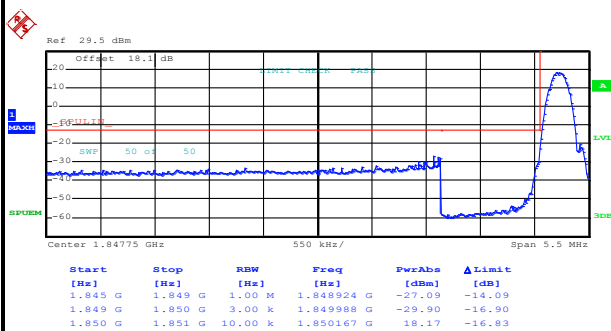
Highest Band Edge



Date: 23.JUN.2020 10:16:14

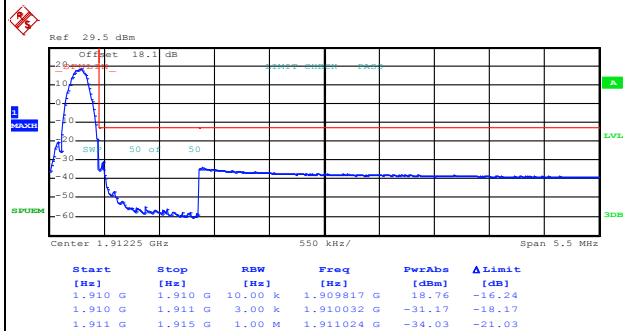
GSM1900 (EDGE class 8)

Lowest Band Edge



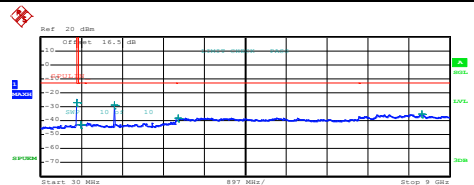
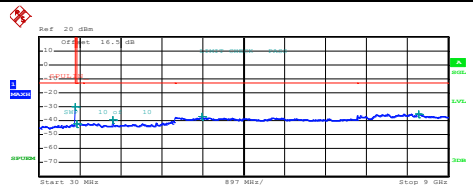
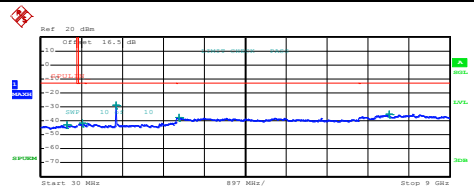
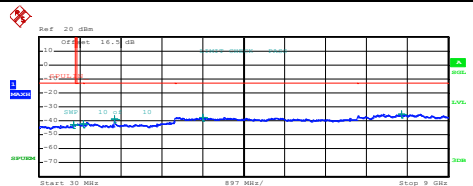
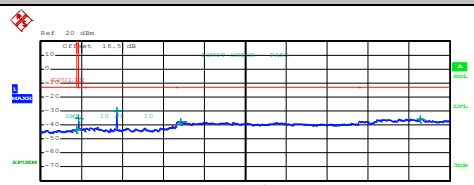
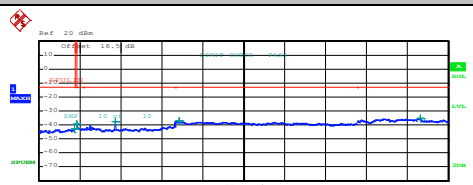
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Highest Band Edge



Date: 24.JUN.2020 10:13:00

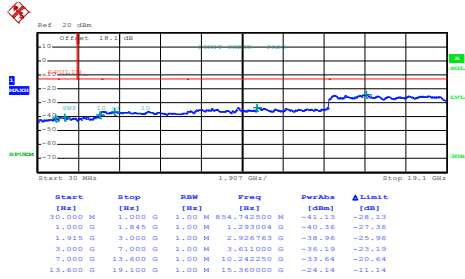
**Conducted Spurious Emission**

GSM850 (GPRS class 8)		GSM850 (EDGE class 8)																																																																																					
Lowest Channel		Lowest Channel																																																																																					
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1,000 G	3,000 G	1,000 M	1,697500 G	-29.76	-16.76																																																																																		
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GSM1900 (GPRS class 8)

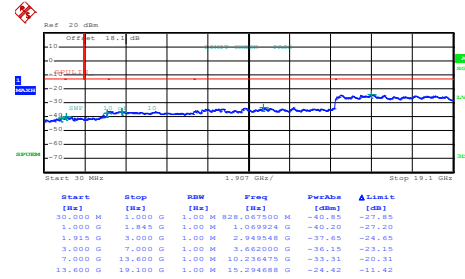
Lowest Channel



Date: 23.JUN.2020 10:06:51

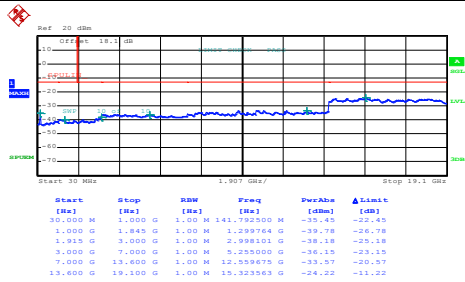
GSM1900 (EDGE class 8)

Lowest Channel



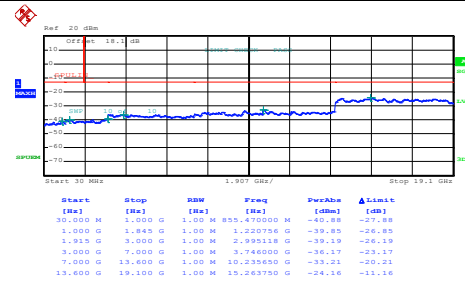
Date: 24.JUN.2020 10:09:56

Middle Channel



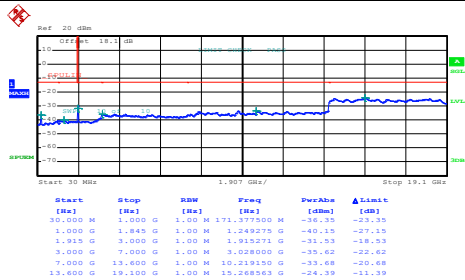
Date: 23.JUN.2020 10:13:15

Middle Channel



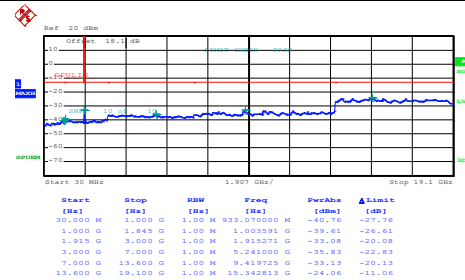
Date: 24.JUN.2020 10:16:09

Highest Channel



Date: 23.JUN.2020 10:17:03

Highest Channel



Date: 24.JUN.2020 10:13:49

**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	0.0167	0.0120	PASS
40	Normal Voltage	0.0132	0.0143	
30	Normal Voltage	0.0072	0.0036	
20(Ref.)	Normal Voltage	0.0000	0.0000	
10	Normal Voltage	0.0036	0.0048	
0	Normal Voltage	0.0048	0.0036	
-10	Normal Voltage	0.0072	0.0060	
-20	Normal Voltage	0.0096	0.0084	
-30	Normal Voltage	0.0167	0.0120	
20	Maximum Voltage	0.0024	0.0012	
20	Normal Voltage	0.0000	0.0000	
20	Battery End Point	0.0048	0.0012	

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	0.0027	0.0032	PASS
40	Normal Voltage	0.0016	0.0027	
30	Normal Voltage	0.0021	0.0005	
20(Ref.)	Normal Voltage	0.0000	0.0000	
10	Normal Voltage	0.0032	0.0027	
0	Normal Voltage	0.0362	0.0016	
-10	Normal Voltage	0.0367	0.0005	
-20	Normal Voltage	0.0367	0.0021	
-30	Normal Voltage	0.0367	0.0021	
20	Maximum Voltage	0.0016	0.0000	
20	Normal Voltage	0.0000	0.0000	
20	Battery End Point	0.0005	0.0005	

Note:

1. Normal Voltage = 3.87V. ; Battery End Point (BEP) = 3.6 V. ; Maximum Voltage =4.45 V
2. The frequency fundamental emissions stay within the authorized frequency block.

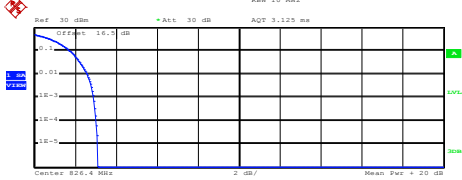
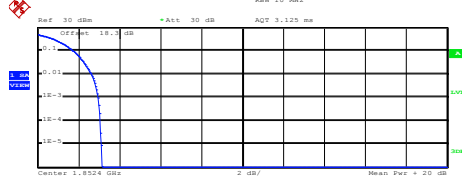
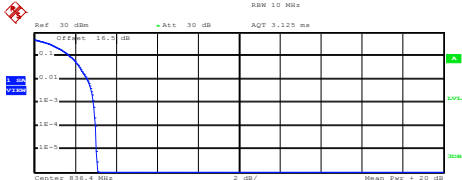
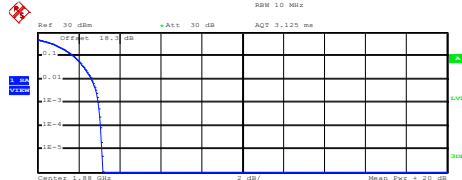
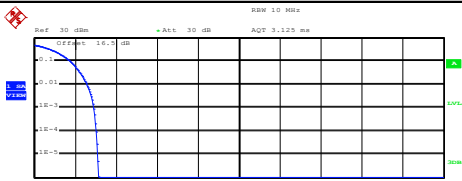
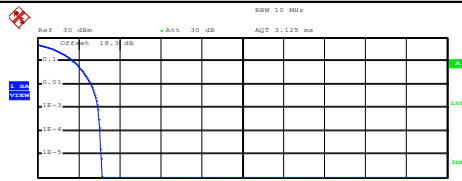


A3. WCDMA

Peak-to-Average Ratio

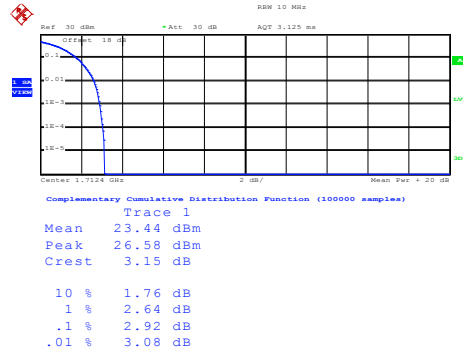
Mode	WCDMA Band V	WCDMA Band II	WCDMA Band IV	Limit: 13dB
Mod.	RMC 12.2Kbps	RMC 12.2Kbps	RMC 12.2Kbps	Result
Lowest CH	2.88	2.96	2.92	PASS
Middle CH	2.88	2.96	2.88	
Highest CH	2.92	2.96	2.88	



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: 23.83 dBm Peak: 26.94 dBm Crest: 3.11 dB <table><tr><td>10 %</td><td>1.76 dB</td></tr><tr><td>1 %</td><td>2.60 dB</td></tr><tr><td>.1 %</td><td>2.88 dB</td></tr><tr><td>.01 %</td><td>3.04 dB</td></tr></table> Date: 24.JUN.2020 11:10:14	10 %	1.76 dB	1 %	2.60 dB	.1 %	2.88 dB	.01 %	3.04 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: 22.54 dBm Peak: 25.67 dBm Crest: 3.13 dB <table><tr><td>10 %</td><td>1.76 dB</td></tr><tr><td>1 %</td><td>2.64 dB</td></tr><tr><td>.1 %</td><td>2.96 dB</td></tr><tr><td>.01 %</td><td>3.08 dB</td></tr></table> Date: 23.JUN.2020 11:07:17	10 %	1.76 dB	1 %	2.64 dB	.1 %	2.96 dB	.01 %	3.08 dB
10 %	1.76 dB																
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.01 %	3.08 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: 23.84 dBm Peak: 26.94 dBm Crest: 3.09 dB <table><tr><td>10 %</td><td>1.76 dB</td></tr><tr><td>1 %</td><td>2.60 dB</td></tr><tr><td>.1 %</td><td>2.88 dB</td></tr><tr><td>.01 %</td><td>3.00 dB</td></tr></table> Date: 24.JUN.2020 11:10:31	10 %	1.76 dB	1 %	2.60 dB	.1 %	2.88 dB	.01 %	3.00 dB	 Ref: 30 dBm Att: 30 dB AQT: 3.125 ms Center: 1.88 GHz 2 dB/ Mean: Per + 20 dB Complementary Cumulative Distribution Function (100000 samples) Trace 1 Mean: 22.41 dBm Peak: 25.60 dBm Crest: 3.19 dB <table><tr><td>10 %</td><td>1.76 dB</td></tr><tr><td>1 %</td><td>2.64 dB</td></tr><tr><td>.1 %</td><td>2.96 dB</td></tr><tr><td>.01 %</td><td>3.08 dB</td></tr></table> Date: 23.JUN.2020 11:07:29	10 %	1.76 dB	1 %	2.64 dB	.1 %	2.96 dB	.01 %	3.08 dB
10 %	1.76 dB																
1 %	2.60 dB																
.1 %	2.88 dB																
.01 %	3.00 dB																
10 %	1.76 dB																
1 %	2.64 dB																
.1 %	2.96 dB																
.01 %	3.08 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: 23.74 dBm Peak: 26.87 dBm Crest: 3.12 dB <table><tr><td>10 %</td><td>1.76 dB</td></tr><tr><td>1 %</td><td>2.60 dB</td></tr><tr><td>.1 %</td><td>2.92 dB</td></tr><tr><td>.01 %</td><td>3.04 dB</td></tr></table> Date: 24.JUN.2020 11:10:42	10 %	1.76 dB	1 %	2.60 dB	.1 %	2.92 dB	.01 %	3.04 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: 22.53 dBm Peak: 25.67 dBm Crest: 3.14 dB <table><tr><td>10 %</td><td>1.76 dB</td></tr><tr><td>1 %</td><td>2.60 dB</td></tr><tr><td>.1 %</td><td>2.96 dB</td></tr><tr><td>.01 %</td><td>3.04 dB</td></tr></table> Date: 23.JUN.2020 11:07:39	10 %	1.76 dB	1 %	2.60 dB	.1 %	2.96 dB	.01 %	3.04 dB
10 %	1.76 dB																
1 %	2.60 dB																
.1 %	2.92 dB																
.01 %	3.04 dB																
10 %	1.76 dB																
1 %	2.60 dB																
.1 %	2.96 dB																
.01 %	3.04 dB																

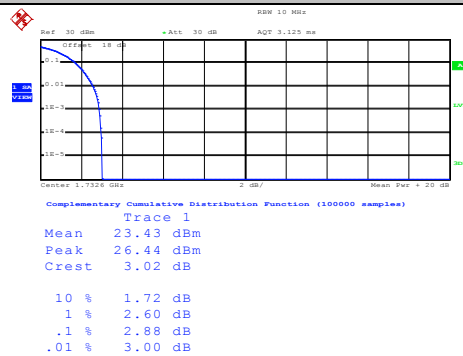
WCDMA Band IV (RMC 12.2Kbps)

Lowest Channel



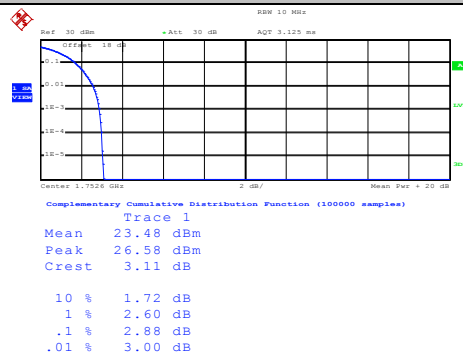
Date: 24.JUN.2020 11:14:20

Middle Channel



Date: 24.JUN.2020 11:14:32

Highest Channel



Date: 24.JUN.2020 11:15:04

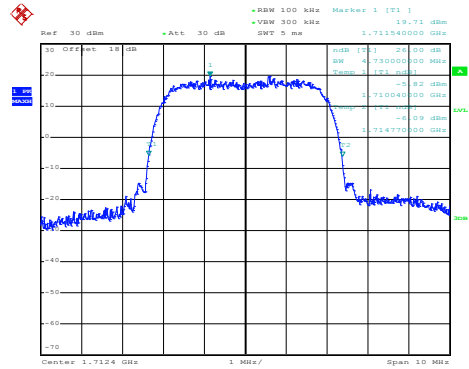
**26dB Bandwidth**

Mode	WCDMA Band V: 26dB BW(MHz)	WCDMA Band II: 26dB BW(MHz)	WCDMA Band IV: 26dB BW(MHz)
Mod.	RMC 12.2Kbps	RMC 12.2Kbps	RMC 12.2Kbps
Lowest CH	4.71	4.71	4.73
Middle CH	4.71	4.72	4.73
Highest CH	4.71	4.71	4.71



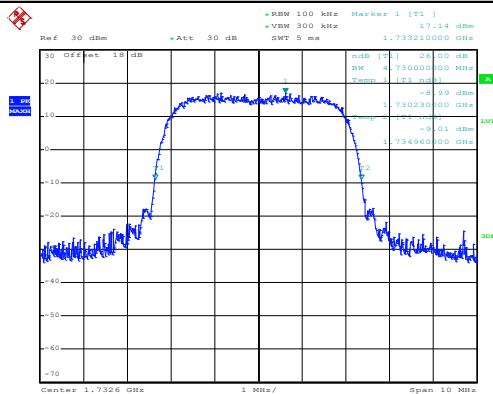
WCDMA Band IV (RMC 12.2Kbps)

Lowest Channel



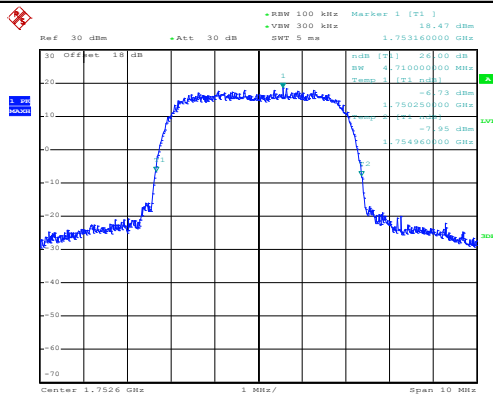
Date: 23.JUN.2020 11:37:27

Middle Channel



Date: 23.JUN.2020 11:51:50

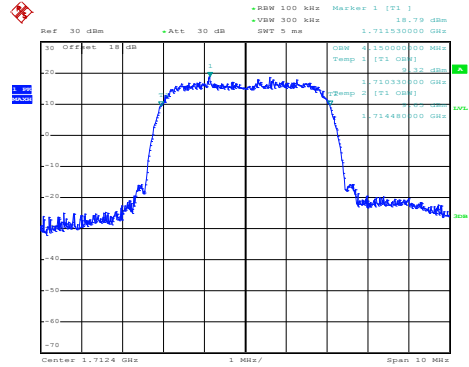
Highest Channel



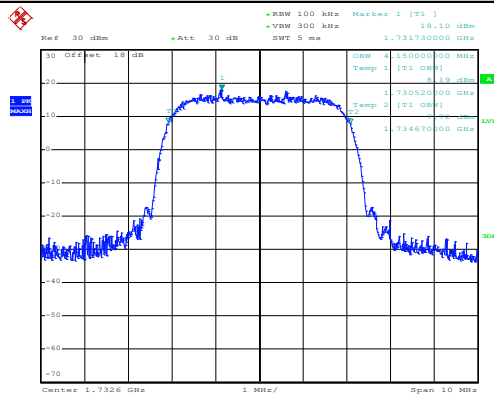
Date: 3.AUG.2020 11:04:23

**Occupied Bandwidth**

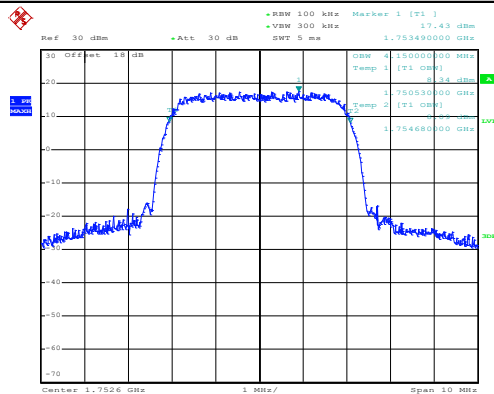
Mode	WCDMA Band V: 99% OBW(MHz)	WCDMA Band II: 99% OBW(MHz)	WCDMA Band IV: 99% OBW(MHz)
Mod.	RMC 12.2Kbps	RMC 12.2Kbps	RMC 12.2Kbps
Lowest CH	4.15	4.14	4.15
Middle CH	4.15	4.15	4.15
Highest CH	4.16	4.15	4.15

WCDMA Band IV (RMC 12.2Kbps)
Lowest Channel


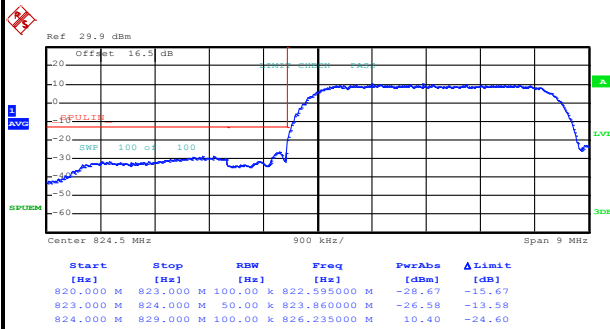
Date: 23.JUN.2020 11:48:16

Middle Channel


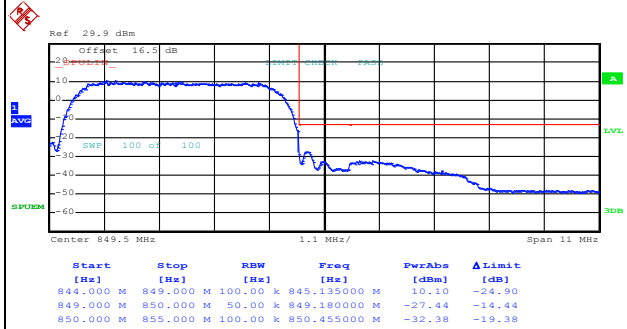
Date: 23.JUN.2020 11:52:21

Highest Channel


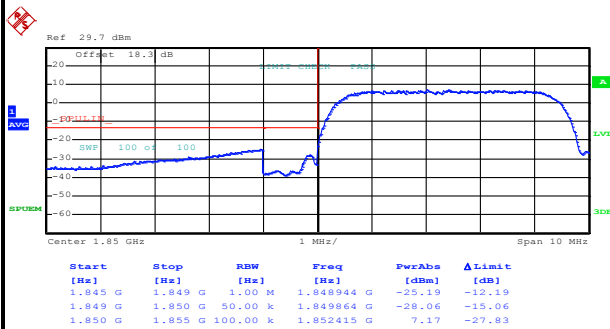
Date: 3.AUG.2020 11:16:21

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

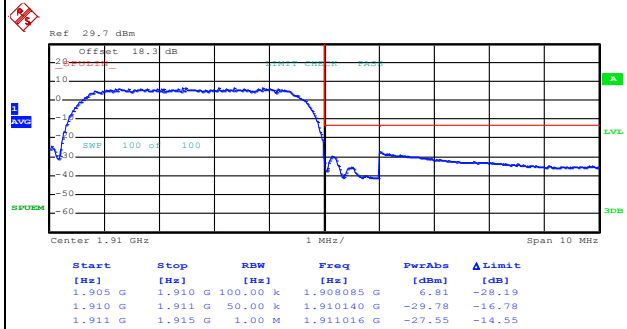
Date: 24.JUN.2020 10:58:34

Highest Band Edge

Date: 24.JUN.2020 11:04:47

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

Date: 23.JUN.2020 10:47:21

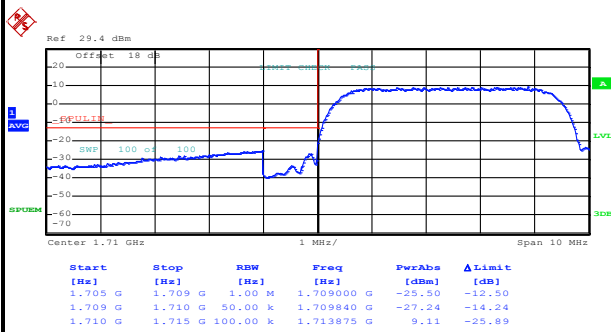
Highest Band Edge

Date: 23.JUN.2020 10:53:33



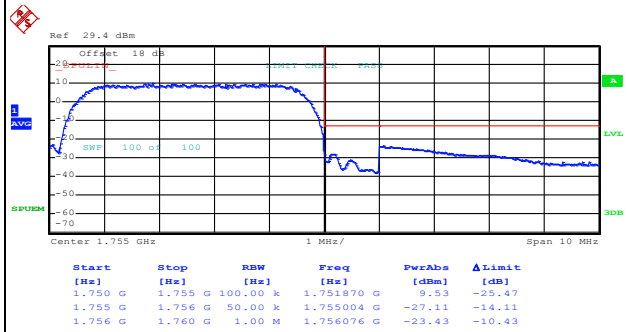
WCDMA Band IV (RMC 12.2Kbps)

Lowest Band Edge

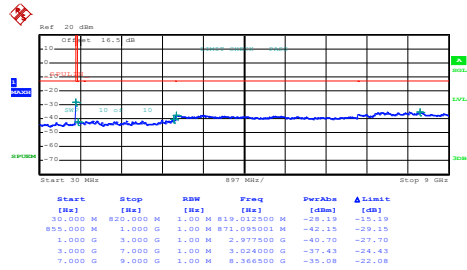


Date: 23.JUN.2020 11:51:01

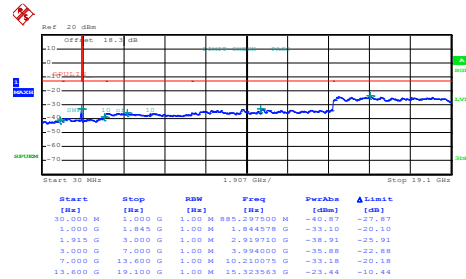
Highest Band Edge



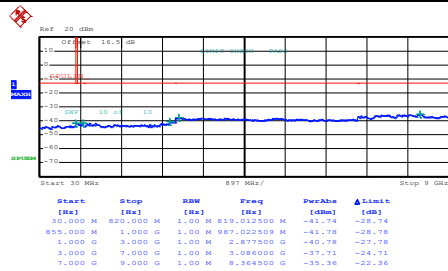
Date: 3.AUG.2020 11:12:43

**Conducted Spurious Emission****WCDMA Band V (RMC 12.2Kbps)****Lowest Channel**

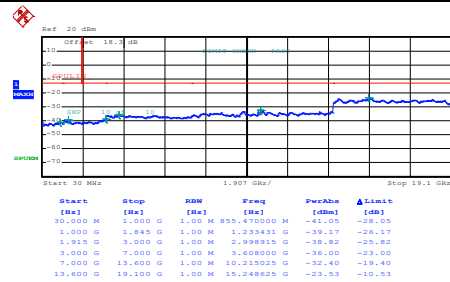
Date: 24.JUN.2020 10:53:41

WCDMA Band II (RMC 12.2Kbps)**Lowest Channel**

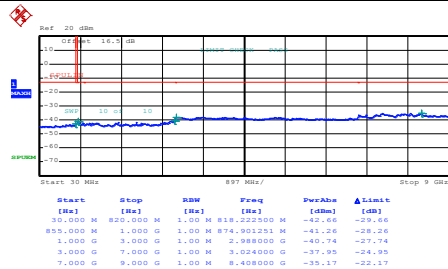
Date: 23.JUN.2020 10:43:07

Middle Channel

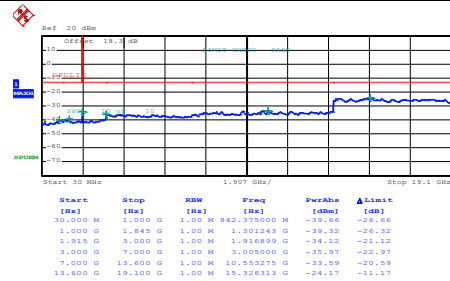
Date: 24.JUN.2020 11:00:43

Middle Channel

Date: 23.JUN.2020 10:49:29

Highest Channel

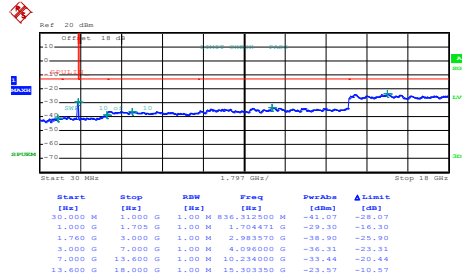
Date: 24.JUN.2020 11:05:35

Highest Channel

Date: 23.JUN.2020 10:54:21

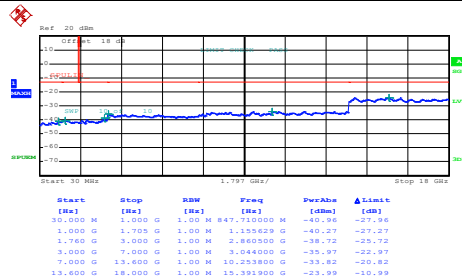
WCDMA Band IV (RMC 12.2Kbps)

Lowest Channel



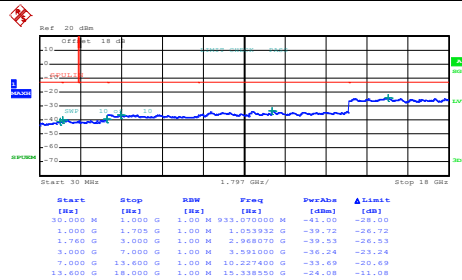
Date: 23.JUN.2020 11:40:54

Middle Channel



Date: 23.JUN.2020 11:53:10

Highest Channel



Date: 23.JUN.2020 11:58:07

**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	0.0012	
30	Normal Voltage	0.0000	
20(Ref.)	Normal Voltage	0.0000	
10	Normal Voltage	0.0000	
0	Normal Voltage	0.0012	
-10	Normal Voltage	0.0167	
-20	Normal Voltage	0.0179	
-30	Normal Voltage	0.0191	
20	Maximum Voltage	0.0000	
20	Normal Voltage	0.0000	
20	Battery End Point	0.0000	

Test Conditions	Middle Channel	WCDMA Band II (RMC 12.2Kbps)	Limit Note 2.
Temperature (°C)	Voltage (Volt)	Deviation (ppm)	Result
50	Normal Voltage	0.0000	PASS
40	Normal Voltage	0.0000	
30	Normal Voltage	0.0000	
20(Ref.)	Normal Voltage	0.0000	
10	Normal Voltage	0.0005	
0	Normal Voltage	0.0005	
-10	Normal Voltage	0.0011	
-20	Normal Voltage	0.0000	
-30	Normal Voltage	0.0000	
20	Maximum Voltage	0.0000	
20	Normal Voltage	0.0000	
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	0.0012	
30	Normal Voltage	0.0000	
20(Ref.)	Normal Voltage	0.0000	
10	Normal Voltage	0.0000	
0	Normal Voltage	0.0225	
-10	Normal Voltage	0.0231	
-20	Normal Voltage	0.0214	
-30	Normal Voltage	0.0219	
20	Maximum Voltage	0.0000	
20	Normal Voltage	0.0000	
20	Battery End Point	0.0012	

Note:

1. Normal Voltage = 3.87V. ; Battery End Point (BEP) = 3.6 V. ; Maximum Voltage =4.45 V
2. The frequency fundamental emissions stay within the authorized frequency block.

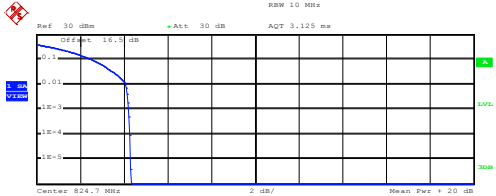
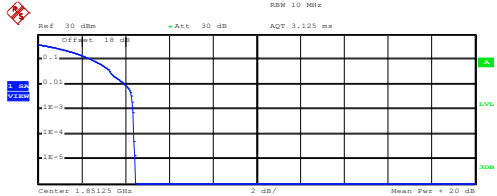
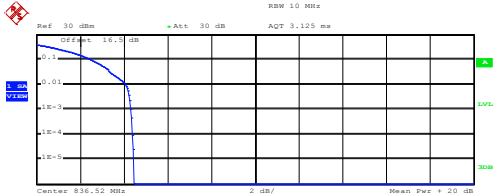
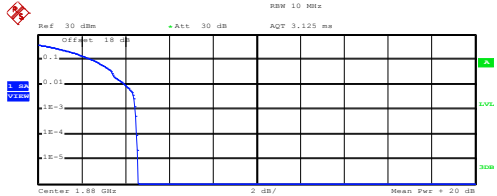
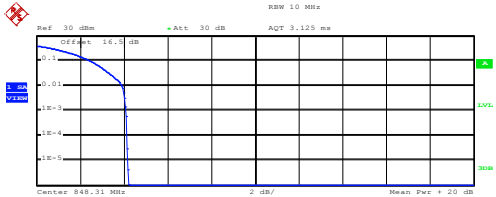
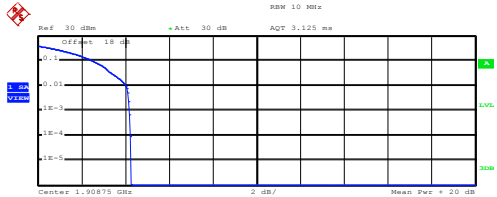


A4. CDMA

Peak-to-Average Ratio

Mode	CDMA BC0	CDMA BC1	Limit: 13dB
Mod.	1xRTT	1xRTT	Result
Lowest CH	4.24	4.36	PASS
Middle CH	4.32	4.44	
Highest CH	4.12	4.20	



CDMA BC0 (1xRTT)	CDMA BC1 (1xRTT)																												
Lowest Channel	Lowest Channel																												
 Center 824.7 MHz Complementary Cumulative Distribution Function (100000 samples) Trace 1 <table><tr><td>Mean</td><td>23.33 dBm</td></tr><tr><td>Peak</td><td>27.64 dBm</td></tr><tr><td>Crest</td><td>4.31 dB</td></tr></table><table><tr><td>10 %</td><td>2.56 dB</td></tr><tr><td>1 %</td><td>4.08 dB</td></tr><tr><td>.1 %</td><td>4.24 dB</td></tr><tr><td>.01 %</td><td>4.28 dB</td></tr></table> Date: 24.JUN.2020 13:45:51	Mean	23.33 dBm	Peak	27.64 dBm	Crest	4.31 dB	10 %	2.56 dB	1 %	4.08 dB	.1 %	4.24 dB	.01 %	4.28 dB	 Center 1.85125 GHz Complementary Cumulative Distribution Function (100000 samples) Trace 1 <table><tr><td>Mean</td><td>22.14 dBm</td></tr><tr><td>Peak</td><td>26.58 dBm</td></tr><tr><td>Crest</td><td>4.45 dB</td></tr></table><table><tr><td>10 %</td><td>2.52 dB</td></tr><tr><td>1 %</td><td>4.00 dB</td></tr><tr><td>.1 %</td><td>4.36 dB</td></tr><tr><td>.01 %</td><td>4.40 dB</td></tr></table> Date: 24.JUN.2020 13:57:52	Mean	22.14 dBm	Peak	26.58 dBm	Crest	4.45 dB	10 %	2.52 dB	1 %	4.00 dB	.1 %	4.36 dB	.01 %	4.40 dB
Mean	23.33 dBm																												
Peak	27.64 dBm																												
Crest	4.31 dB																												
10 %	2.56 dB																												
1 %	4.08 dB																												
.1 %	4.24 dB																												
.01 %	4.28 dB																												
Mean	22.14 dBm																												
Peak	26.58 dBm																												
Crest	4.45 dB																												
10 %	2.52 dB																												
1 %	4.00 dB																												
.1 %	4.36 dB																												
.01 %	4.40 dB																												
Middle Channel	Middle Channel																												
 Center 836.52 MHz Complementary Cumulative Distribution Function (100000 samples) Trace 1 <table><tr><td>Mean</td><td>23.69 dBm</td></tr><tr><td>Peak</td><td>28.14 dBm</td></tr><tr><td>Crest</td><td>4.45 dB</td></tr></table><table><tr><td>10 %</td><td>2.56 dB</td></tr><tr><td>1 %</td><td>4.08 dB</td></tr><tr><td>.1 %</td><td>4.32 dB</td></tr><tr><td>.01 %</td><td>4.40 dB</td></tr></table> Date: 24.JUN.2020 13:46:16	Mean	23.69 dBm	Peak	28.14 dBm	Crest	4.45 dB	10 %	2.56 dB	1 %	4.08 dB	.1 %	4.32 dB	.01 %	4.40 dB	 Center 1.88 GHz Complementary Cumulative Distribution Function (100000 samples) Trace 1 <table><tr><td>Mean</td><td>22.99 dBm</td></tr><tr><td>Peak</td><td>27.57 dBm</td></tr><tr><td>Crest</td><td>4.59 dB</td></tr></table><table><tr><td>10 %</td><td>2.52 dB</td></tr><tr><td>1 %</td><td>4.00 dB</td></tr><tr><td>.1 %</td><td>4.44 dB</td></tr><tr><td>.01 %</td><td>4.52 dB</td></tr></table> Date: 24.JUN.2020 13:58:38	Mean	22.99 dBm	Peak	27.57 dBm	Crest	4.59 dB	10 %	2.52 dB	1 %	4.00 dB	.1 %	4.44 dB	.01 %	4.52 dB
Mean	23.69 dBm																												
Peak	28.14 dBm																												
Crest	4.45 dB																												
10 %	2.56 dB																												
1 %	4.08 dB																												
.1 %	4.32 dB																												
.01 %	4.40 dB																												
Mean	22.99 dBm																												
Peak	27.57 dBm																												
Crest	4.59 dB																												
10 %	2.52 dB																												
1 %	4.00 dB																												
.1 %	4.44 dB																												
.01 %	4.52 dB																												
Highest Channel	Highest Channel																												
 Center 849.31 MHz Complementary Cumulative Distribution Function (100000 samples) Trace 1 <table><tr><td>Mean</td><td>23.14 dBm</td></tr><tr><td>Peak</td><td>27.36 dBm</td></tr><tr><td>Crest</td><td>4.22 dB</td></tr></table><table><tr><td>10 %</td><td>2.48 dB</td></tr><tr><td>1 %</td><td>3.92 dB</td></tr><tr><td>.1 %</td><td>4.12 dB</td></tr><tr><td>.01 %</td><td>4.16 dB</td></tr></table> Date: 24.JUN.2020 13:46:53	Mean	23.14 dBm	Peak	27.36 dBm	Crest	4.22 dB	10 %	2.48 dB	1 %	3.92 dB	.1 %	4.12 dB	.01 %	4.16 dB	 Center 1.90875 GHz Complementary Cumulative Distribution Function (100000 samples) Trace 1 <table><tr><td>Mean</td><td>22.49 dBm</td></tr><tr><td>Peak</td><td>26.73 dBm</td></tr><tr><td>Crest</td><td>4.24 dB</td></tr></table><table><tr><td>10 %</td><td>2.56 dB</td></tr><tr><td>1 %</td><td>4.04 dB</td></tr><tr><td>.1 %</td><td>4.20 dB</td></tr><tr><td>.01 %</td><td>4.24 dB</td></tr></table> Date: 24.JUN.2020 13:59:02	Mean	22.49 dBm	Peak	26.73 dBm	Crest	4.24 dB	10 %	2.56 dB	1 %	4.04 dB	.1 %	4.20 dB	.01 %	4.24 dB
Mean	23.14 dBm																												
Peak	27.36 dBm																												
Crest	4.22 dB																												
10 %	2.48 dB																												
1 %	3.92 dB																												
.1 %	4.12 dB																												
.01 %	4.16 dB																												
Mean	22.49 dBm																												
Peak	26.73 dBm																												
Crest	4.24 dB																												
10 %	2.56 dB																												
1 %	4.04 dB																												
.1 %	4.20 dB																												
.01 %	4.24 dB																												



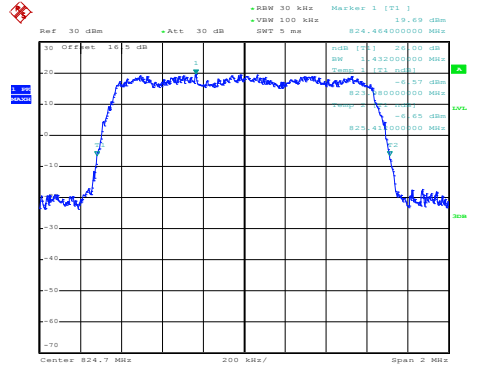
26dB Bandwidth

Mode	CDMA BC0: 26dB BW(MHz)	CDMA BC1: 26dB BW(MHz)
Mod.	1xRTT	1xRTT
Lowest CH	1.43	1.43
Middle CH	1.43	1.43
Highest CH	1.43	1.43



CDMA BC0 (1xRTT)

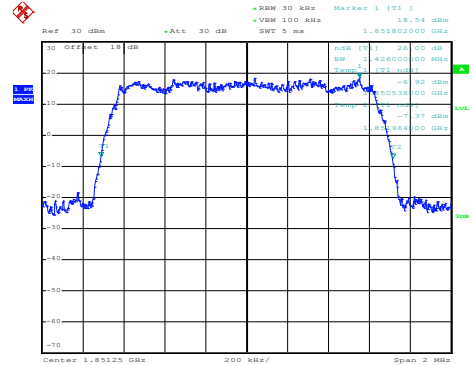
Lowest Channel



Date: 24.JUN.2020 11:36:23

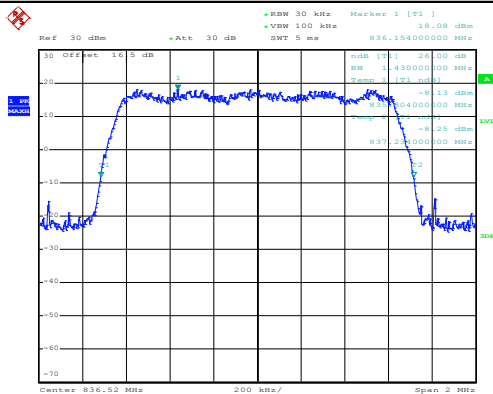
CDMA BC1 (1xRTT)

Lowest Channel



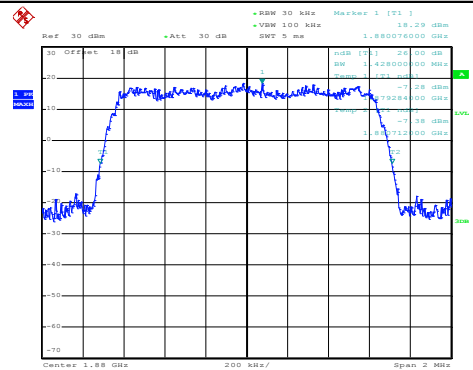
Date: 24.JUN.2020 14:13:28

Middle Channel



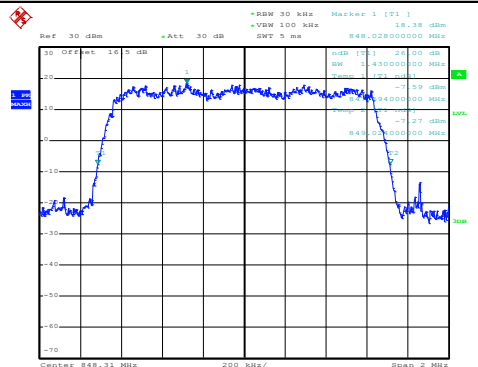
Date: 24.JUN.2020 11:44:31

Middle Channel



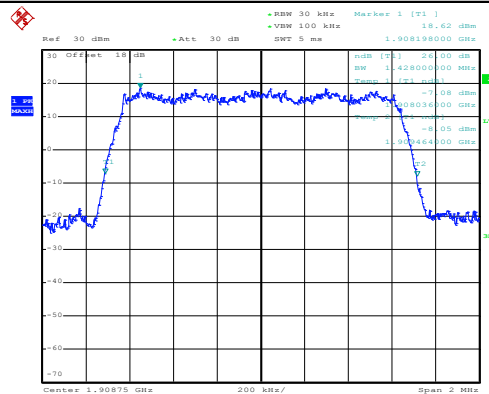
Date: 24.JUN.2020 14:06:45

Highest Channel



Date: 24.JUN.2020 11:46:39

Highest Channel



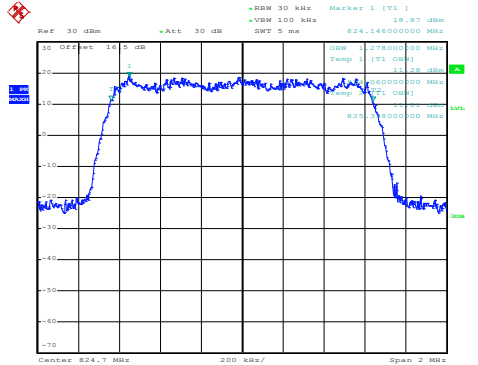
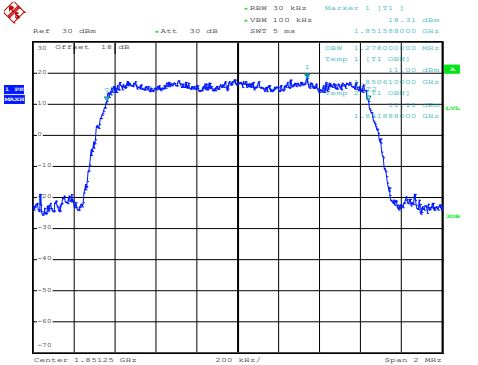
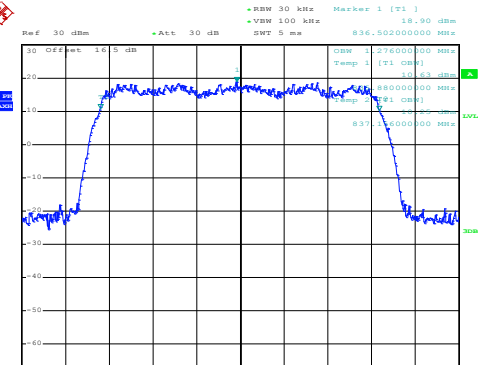
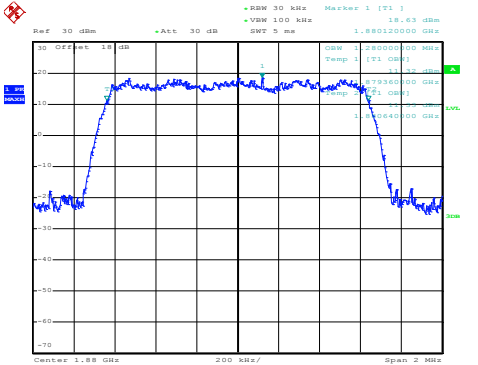
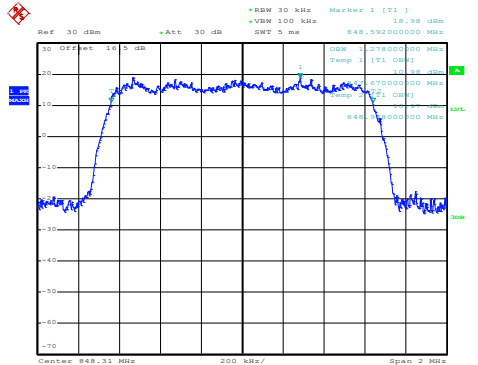
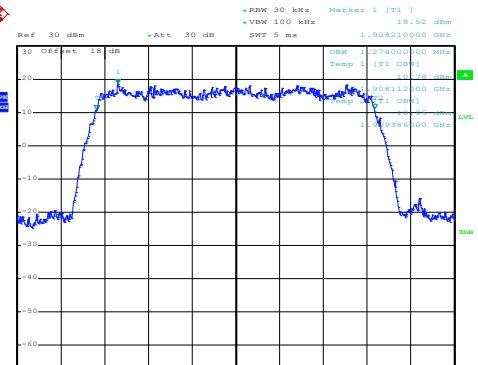
Date: 24.JUN.2020 14:02:12

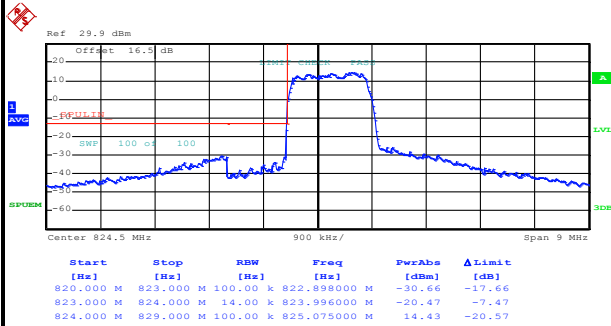


Occupied Bandwidth

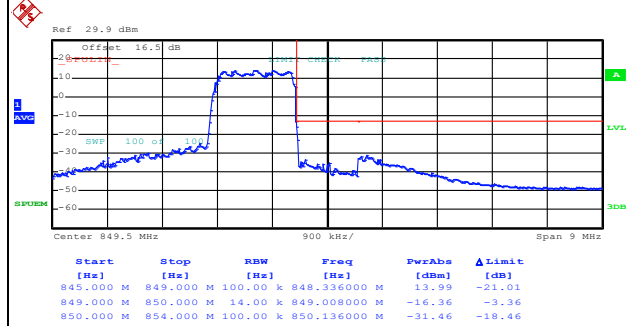
Mode	CDMA BC0: 99% OBW(MHz)	CDMA BC1: 99% OBW(MHz)
Mod.	1xRTT	1xRTT
Lowest CH	1.28	1.28
Middle CH	1.28	1.28
Highest CH	1.28	1.27



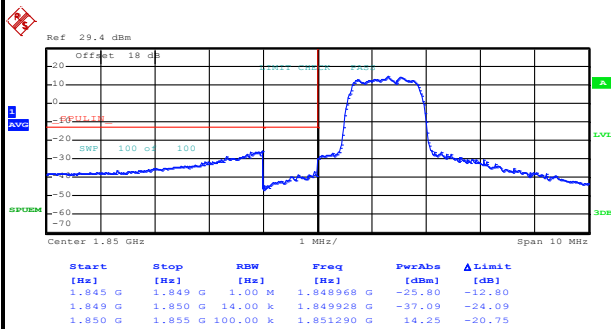
CDMA BC0 (1xRTT)	CDMA BC1 (1xRTT)
Lowest Channel	Lowest Channel
 Ref: 30 dBm Att: 30 dB BW: 30 kHz Marker 1 [T1] 18.87 dBm VSW: 100 kHz SWT: 5 ms Center: 824.7 MHz Span: 2 MHz Date: 24.JUN.2020 11:40:58	 Ref: 30 dBm Att: 30 dB BW: 30 kHz Marker 1 [T1] 18.31 dBm VSW: 100 kHz SWT: 5 ms Center: 1.85125 GHz Span: 2 MHz Date: 24.JUN.2020 14:14:03
Middle Channel	Middle Channel
 Ref: 30 dBm Att: 30 dB BW: 30 kHz Marker 1 [T1] 18.90 dBm VSW: 100 kHz SWT: 5 ms Center: 836.52 MHz Span: 2 MHz Date: 24.JUN.2020 11:45:02	 Ref: 30 dBm Att: 30 dB BW: 30 kHz Marker 1 [T1] 18.63 dBm VSW: 100 kHz SWT: 5 ms Center: 1.88 GHz Span: 2 MHz Date: 24.JUN.2020 14:07:16
Highest Channel	Highest Channel
 Ref: 30 dBm Att: 30 dB BW: 30 kHz Marker 1 [T1] 18.98 dBm VSW: 100 kHz SWT: 5 ms Center: 848.31 MHz Span: 2 MHz Date: 24.JUN.2020 11:47:10	 Ref: 30 dBm Att: 30 dB BW: 30 kHz Marker 1 [T1] 18.52 dBm VSW: 100 kHz SWT: 5 ms Center: 1.90875 GHz Span: 2 MHz Date: 24.JUN.2020 14:02:43

**Conducted Band Edge****CDMA BC0 (1xRTT)****Lowest Band Edge**

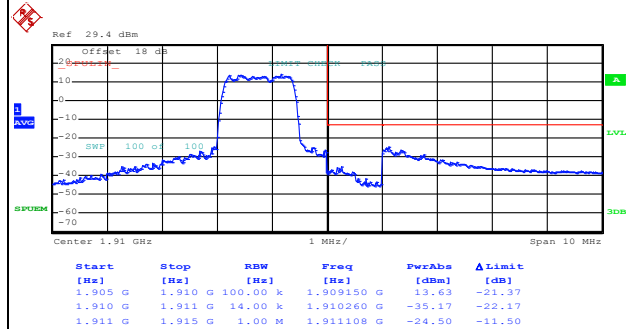
Date: 24.JUN.2020 11:43:42

Highest Band Edge

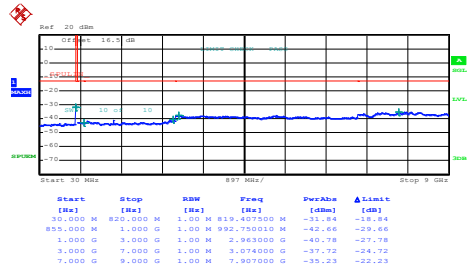
Date: 24.JUN.2020 11:49:54

CDMA BC1 (1xRTT)**Lowest Band Edge**

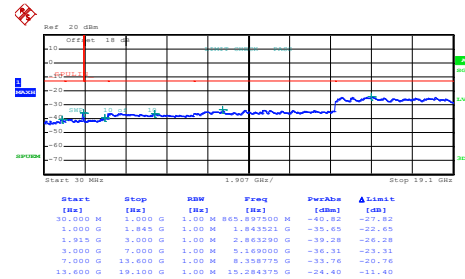
Date: 24.JUN.2020 14:11:55

Highest Band Edge

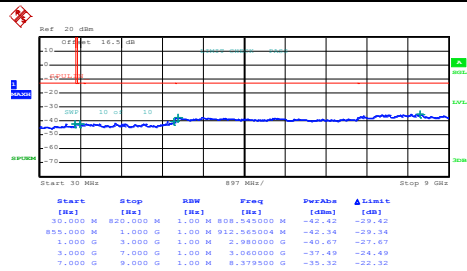
Date: 24.JUN.2020 14:05:26

**Conducted Spurious Emission****CDMA BC0 (1xRTT)****Lowest Channel**

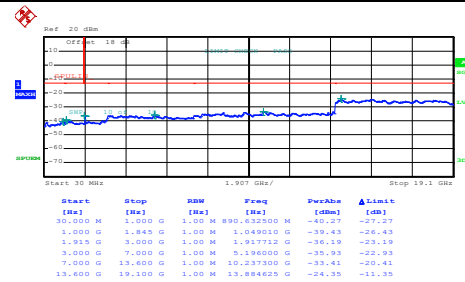
Date: 24.JUN.2020 11:37:22

CDMA BC1 (1xRTT)**Lowest Channel**

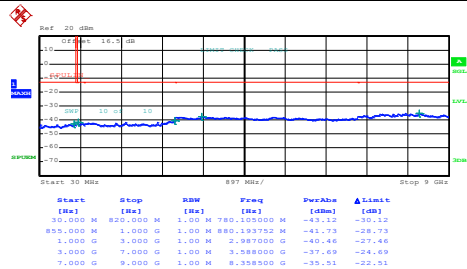
Date: 24.JUN.2020 14:12:43

Middle Channel

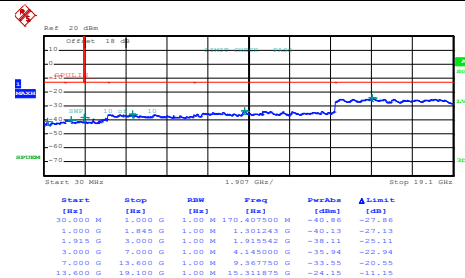
Date: 24.JUN.2020 11:45:50

Middle Channel

Date: 24.JUN.2020 14:08:05

Highest Channel

Date: 24.JUN.2020 11:50:42

Highest Channel

Date: 24.JUN.2020 14:06:14

**Frequency Stability**

Test Conditions	Middle Channel	CDMA BC0 (1xRTT)	Limit 2.5ppm
Temperature (°C)	Voltage (Volt)	Deviation (ppm)	Result
50	Normal Voltage	0.0048	PASS
40	Normal Voltage	0.0024	
30	Normal Voltage	0.0012	
20(Ref.)	Normal Voltage	0.0000	
10	Normal Voltage	0.0024	
0	Normal Voltage	0.0574	
-10	Normal Voltage	0.0502	
-20	Normal Voltage	0.0526	
-30	Normal Voltage	0.0514	
20	Maximum Voltage	0.0024	
20	Normal Voltage	0.0000	
20	Battery End Point	0.0012	

Test Conditions	Middle Channel	CDMA BC1 (1xRTT)	Limit Note 2.
Temperature (°C)	Voltage (Volt)	Deviation (ppm)	Result
50	Normal Voltage	0.0053	PASS
40	Normal Voltage	0.0011	
30	Normal Voltage	0.0016	
20(Ref.)	Normal Voltage	0.0000	
10	Normal Voltage	0.0021	
0	Normal Voltage	0.0351	
-10	Normal Voltage	0.0340	
-20	Normal Voltage	0.0362	
-30	Normal Voltage	0.0367	
20	Maximum Voltage	0.0005	
20	Normal Voltage	0.0000	
20	Battery End Point	0.0000	

Note:

1. Normal Voltage = 3.87V. ; Battery End Point (BEP) = 3.6 V. ; Maximum Voltage =4.45 V
1. The frequency fundamental emissions stay within the authorized frequency block.

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

Channel	Mode	Conducted		ERP	
		Power (dBm)	Power (Watts)	ERP(dBm)	ERP(W)
Lowest	GSM850	33.01	1.9999	27.26	0.5321
Middle	GPRS class 8	32.96	1.9770	27.21	0.5260
Highest	(GT - LC = -3.6 dB)	32.68	1.8535	26.93	0.4932
Lowest	GSM850	26.76	0.4742	21.01	0.1262
Middle	EDGE class 8	26.50	0.4467	20.75	0.1189
Highest	(GT - LC = -3.6 dB)	26.18	0.4150	20.43	0.1104
Lowest	WCDMA Band V	24.33	0.2710	18.58	0.0721
Middle	RMC 12.2Kbps	24.37	0.2735	18.62	0.0728
Highest	(GT - LC = -3.6 dB)	24.33	0.2710	18.58	0.0721
Lowest	CDMA BC0	24.41	0.2761	18.66	0.0735
Middle	1xRTT	24.48	0.2805	18.73	0.0746
Highest	(GT - LC = -3.6 dB)	23.64	0.2312	17.89	0.0615
Lowest	CDMA BC0	24.34	0.2716	18.59	0.0723
Middle	1xEV-DO	24.50	0.2818	18.75	0.0750
Highest	(GT - LC = -3.6 dB)	23.62	0.2301	17.87	0.0612
Limit	ERP < 7W	Result		PASS	

Channel	Mode	Conducted		EIRP	
		Power (dBm)	Power (Watts)	EIRP(dBm)	EIRP(W)
Lowest	GSM1900	29.43	0.8770	30.93	1.2388
Middle	GPRS class 8	30.11	1.0257	31.61	1.4488
Highest	(GT - LC = 1.5 dB)	29.99	0.9977	31.49	1.4093
Lowest	GSM1900	25.82	0.3819	27.32	0.5395
Middle	EDGE class 8	26.18	0.4150	27.68	0.5861
Highest	(GT - LC = 1.5 dB)	26.02	0.3999	27.52	0.5649
Lowest	WCDMA Band II	24.76	0.2992	26.26	0.4227
Middle	RMC 12.2Kbps	24.95	0.3126	26.45	0.4416
Highest	(GT - LC = 1.5 dB)	25.08	0.3221	26.58	0.4550
Lowest	CDMA BC1	24.66	0.2924	26.16	0.4130
Middle	1xRTT	24.76	0.2992	26.26	0.4227
Highest	(GT - LC = 1.5 dB)	24.90	0.3090	26.40	0.4365
Lowest	CDMA BC1	24.64	0.2911	26.14	0.4111
Middle	1xEV-DO	24.73	0.2972	26.23	0.4198
Highest	(GT - LC = 1.5 dB)	24.83	0.3041	26.33	0.4295
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 = 1 dB)	24.80	0.3020	25.80	0.3802
Middle		24.93	0.3112	25.93	0.3917
Highest		24.96	0.3133	25.96	0.3945
Limit	EIRP < 1W	Result		PASS	

**Appendix B. Test Results of ERP/EIRP and Radiated Test****ERP/EIRP****<Primary Antenna>**

Channel	Mode	Conducted		ERP	
		Power (dBm)	Power (Watts)	ERP(dBm)	ERP(W)
Lowest	GSM850	33.01	1.9999	27.26	0.5321
Middle	GPRS class 8	32.96	1.9770	27.21	0.5260
Highest	(GT - LC = -3.6 dB)	32.68	1.8535	26.93	0.4932
Lowest	GSM850	26.76	0.4742	21.01	0.1262
Middle	EDGE class 8	26.50	0.4467	20.75	0.1189
Highest	(GT - LC = -3.6 dB)	26.18	0.4150	20.43	0.1104
Lowest	WCDMA Band V	24.33	0.2710	18.58	0.0721
Middle	RMC 12.2Kbps	24.37	0.2735	18.62	0.0728
Highest	(GT - LC = -3.6 dB)	24.33	0.2710	18.58	0.0721
Lowest	CDMA BC0	24.41	0.2761	18.66	0.0735
Middle	1xRTT	24.48	0.2805	18.73	0.0746
Highest	(GT - LC = -3.6 dB)	23.64	0.2312	17.89	0.0615
Lowest	CDMA BC0	24.34	0.2716	18.59	0.0723
Middle	1xEV-DO	24.50	0.2818	18.75	0.0750
Highest	(GT - LC = -3.6 dB)	23.62	0.2301	17.87	0.0612
Limit	ERP < 7W	Result		PASS	

Channel	Mode	Conducted		EIRP	
		Power (dBm)	Power (Watts)	EIRP(dBm)	EIRP(W)
Lowest	GSM1900	29.43	0.8770	30.93	1.2388
Middle	GPRS class 8	30.11	1.0257	31.61	1.4488
Highest	(GT - LC = 1.5 dB)	29.99	0.9977	31.49	1.4093
Lowest	GSM1900	25.82	0.3819	27.32	0.5395
Middle	EDGE class 8	26.18	0.4150	27.68	0.5861
Highest	(GT - LC = 1.5 dB)	26.02	0.3999	27.52	0.5649
Lowest	WCDMA Band II	24.76	0.2992	26.26	0.4227
Middle	RMC 12.2Kbps	24.95	0.3126	26.45	0.4416
Highest	(GT - LC = 1.5 dB)	25.08	0.3221	26.58	0.4550
Lowest	CDMA BC1	24.66	0.2924	26.16	0.4130
Middle	1xRTT	24.76	0.2992	26.26	0.4227
Highest	(GT - LC = 1.5 dB)	24.90	0.3090	26.40	0.4365
Lowest	CDMA BC1	24.64	0.2911	26.14	0.4111
Middle	1xEV-DO	24.73	0.2972	26.23	0.4198
Highest	(GT - LC = 1.5 dB)	24.83	0.3041	26.33	0.4295
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 = 1 dB)	24.80	0.3020	25.80	0.3802
Middle		24.93	0.3112	25.93	0.3917
Highest		24.96	0.3133	25.96	0.3945
Limit	EIRP < 1W	Result		PASS	


<ASDIV Antenna>

Channel	Mode	Conducted		ERP	
		Power (dBm)	Power (Watts)	ERP(dBm)	ERP(W)
Lowest	GSM850	32.79	1.9011	26.04	0.4018
Middle	GPRS class 8	32.71	1.8664	25.96	0.3945
Highest	(GT - LC = -4.6 dB)	32.45	1.7579	25.70	0.3715
Lowest	GSM850	26.86	0.4853	20.11	0.1026
Middle	EDGE class 8	26.44	0.4406	19.69	0.0931
Highest	(GT - LC = -4.6 dB)	26.01	0.3990	19.26	0.0843
Lowest	WCDMA Band V	24.34	0.2716	17.59	0.0574
Middle	RMC 12.2Kbps	24.36	0.2729	17.61	0.0577
Highest	(GT - LC = -4.6 dB)	24.35	0.2723	17.60	0.0575
Lowest	CDMA BC0	24.42	0.2767	17.67	0.0585
Middle	1xRTT	24.47	0.2799	17.72	0.0592
Highest	(GT - LC = -4.6 dB)	24.04	0.2535	17.29	0.0536
Lowest	CDMA BC0	24.44	0.2780	17.69	0.0587
Middle	1xEV-DO	24.45	0.2786	17.70	0.0589
Highest	(GT - LC = -4.6 dB)	24.02	0.2523	17.27	0.0533
Limit	ERP < 7W	Result		PASS	

Channel	Mode	Conducted		EIRP	
		Power (dBm)	Power (Watts)	EIRP(dBm)	EIRP(W)
Lowest	GSM1900	29.40	0.8710	29.80	0.9550
Middle	GPRS class 8	29.77	0.9484	30.17	1.0399
Highest	(GT - LC = 0.4 dB)	29.47	0.8851	29.87	0.9705
Lowest	GSM1900	25.56	0.3597	25.96	0.3945
Middle	EDGE class 8	25.65	0.3673	26.05	0.4027
Highest	(GT - LC = 0.4 dB)	25.47	0.3524	25.87	0.3864
Lowest	WCDMA Band II	24.84	0.3048	25.24	0.3342
Middle	RMC 12.2Kbps	24.97	0.3141	25.37	0.3443
Highest	(GT - LC = 0.4 dB)	25.02	0.3177	25.42	0.3483
Lowest	CDMA BC1	24.58	0.2871	24.98	0.3148
Middle	1xRTT	24.64	0.2911	25.04	0.3192
Highest	(GT - LC = 0.4 dB)	24.70	0.2951	25.10	0.3236
Lowest	CDMA BC1	24.53	0.2838	24.93	0.3112
Middle	1xEV-DO	24.65	0.2917	25.05	0.3199
Highest	(GT - LC = 0.4 dB)	24.69	0.2944	25.09	0.3228
Limit	EIRP < 2W	Result		PASS	

Channel	Mode	Conducted		EIRP	
		Power (dBm)	Power (Watts)	EIRP(dBm)	EIRP(W)
Lowest	WCDMA Band IV	24.60	0.2884	24.60	0.2884
Middle	RMC 12.2Kbps	24.59	0.2877	24.59	0.2877
Highest	(GT - LC = 0 dB)	24.67	0.2931	24.67	0.2931
Limit	EIRP < 1W	Result		PASS	

**Radiated Spurious Emission**

<Primary Antenna>

<Ant. 0>

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	-54.27	-13	-41.27	-65.08	-60.12	0.69	8.69	H
	2472	-47.12	-13	-34.12	-62.81	-54.78	0.95	10.76	H
	3296	-48.66	-13	-35.66	-66.58	-57.16	1.20	11.85	H
									H
									H
									H
	1648	-53.86	-13	-40.86	-64.55	-59.71	0.69	8.69	V
	2472	-46.53	-13	-33.53	-64.22	-54.19	0.95	10.76	V
	3296	-48.79	-13	-35.79	-66.55	-57.29	1.20	11.85	V
									V
									V
									V
Middle	1672	-53.75	-13	-40.75	-64.68	-59.68	0.71	8.79	H
	2512	-47.79	-13	-34.79	-63.48	-55.50	0.95	10.81	H
	3345	-48.31	-13	-35.31	-66.09	-56.91	1.21	11.96	H
									H
									H
									H
	1672	-52.69	-13	-39.69	-63.53	-58.62	0.71	8.79	V
	2512	-46.93	-13	-33.93	-62.67	-54.64	0.95	10.81	V
	3345	-48.74	-13	-35.74	-66.22	-57.34	1.21	11.96	V
									V
									V
									V



Highest	1697	-53.22	-13	-40.22	-64.29	-59.24	0.72	8.89	H
	2546	-49.84	-13	-36.84	-65.6	-57.56	0.97	10.84	H
	3392	-49.46	-13	-36.46	-67.11	-58.15	1.22	12.06	H
									H
									H
									H
									H
	1697	-53.90	-13	-40.90	-64.9	-59.92	0.72	8.89	V
	2544	-48.42	-13	-35.42	-64.49	-56.14	0.97	10.84	V
	3392	-49.04	-13	-36.04	-66.25	-57.73	1.22	12.06	V
									V
									V
									V
									V

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

**EDGE 850**

EDGE 850									
Channel	Frequency (MHz)	ERP (dBm)	Limit (dBm)	Over Limit (dB)	SPA Reading (dBm)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)
Lowest	1648	-52.41	-13	-39.41	-63.22	-58.26	0.69	8.69	H
	2472	-50.40	-13	-37.40	-66.09	-58.06	0.95	10.76	H
	3296	-48.73	-13	-35.73	-66.65	-57.23	1.20	11.85	H
									H
									H
									H
									H
	1648	-53.00	-13	-40.00	-63.69	-58.85	0.69	8.69	V
	2472	-49.27	-13	-36.27	-64.96	-56.93	0.95	10.76	V
	3296	-47.03	-13	-34.03	-64.79	-55.53	1.20	11.85	V
									V
									V
									V
									V
Middle	1672	-52.65	-13	-39.65	-63.58	-58.58	0.71	8.79	H
	2512	-49.12	-13	-36.12	-64.81	-56.83	0.95	10.81	H
	3345	-49.13	-13	-36.13	-66.91	-57.73	1.21	11.96	H
									H
									H
									H
									H
	1672	-53.97	-13	-40.97	-64.81	-59.90	0.71	8.79	V
	2512	-49.40	-13	-36.40	-65.14	-57.11	0.95	10.81	V
	3345	-48.07	-13	-35.07	-65.55	-56.67	1.21	11.96	V
									V
									V
									V
									V



Highest	1696	-53.85	-13	-40.85	-64.91	-59.86	0.72	8.88	H
	2544	-49.25	-13	-36.25	-65	-56.97	0.97	10.84	H
	3393	-49.10	-13	-36.10	-66.75	-57.79	1.22	12.06	H
									H
									H
									H
									H
	1696	-52.36	-13	-39.36	-63.35	-58.37	0.72	8.88	V
	2544	-47.76	-13	-34.76	-63.83	-55.48	0.97	10.84	V
	3393	-49.55	-13	-36.55	-66.75	-58.24	1.22	12.06	V
									V
									V
									V
									V

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

**WCDMA Band V**

WCDMA Band V									
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	1672	-54.20	-13	-41.20	-65.13	-60.13	0.71	8.79	H
	2512	-47.34	-13	-34.34	-63.03	-55.05	0.95	10.81	H
	3345	-48.65	-13	-35.65	-66.43	-57.25	1.21	11.96	H
									H
									H
									H
									H
	1672	-53.64	-13	-40.64	-64.48	-59.57	0.71	8.79	V
	2509	-49.18	-13	-36.18	-64.89	-56.88	0.95	10.81	V
	3345	-48.80	-13	-35.80	-66.28	-57.40	1.21	11.96	V
									V
									V
									V
									V
Middle	1672	-54.23	-13	-41.23	-65.16	-60.16	0.71	8.79	H
	2509	-49.17	-13	-36.17	-64.86	-56.87	0.95	10.81	H
	3344	-48.44	-13	-35.44	-66.22	-57.03	1.21	11.96	H
									H
									H
									H
									H
	1672	-53.74	-13	-40.74	-55.23	-59.67	0.71	8.79	V
	2509	-47.83	-13	-34.83	-50.17	-55.53	0.95	10.81	V
	3345	-48.56	-13	-35.56	-49.44	-57.16	1.21	11.96	V
									V
									V
									V
									V



Highest	1696	-53.59	-13	-40.59	-64.74	-59.60	0.72	8.88	H
	2544	-49.62	-13	-36.62	-65.37	-57.34	0.97	10.84	H
	3393	-49.65	-13	-36.65	-67.3	-58.34	1.22	12.06	H
									H
									H
									H
									H
	1696	-53.75	-13	-40.75	-64.74	-59.76	0.72	8.88	V
	2544	-49.44	-13	-36.44	-65.51	-57.16	0.97	10.84	V
	3393	-50.07	-13	-37.07	-67.27	-58.76	1.22	12.06	V
									V
									V
									V
									V

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

**CDMA2000 BC0**

CDMA2000 BC0									
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	1649	-53.47	-13	-40.47	-64.28	-59.32	0.69	8.70	H
	2474	-49.62	-13	-36.62	-65.31	-57.29	0.95	10.76	H
	3298	-48.59	-13	-35.59	-66.5	-57.09	1.20	11.86	H
									H
									H
									H
									H
	1649	-51.37	-13	-38.37	-62.06	-57.22	0.69	8.70	V
	2474	-49.85	-13	-36.85	-65.54	-57.52	0.95	10.76	V
	3298	-47.09	-13	-34.09	-64.84	-55.59	1.20	11.86	V
									V
									V
									V
									V
Middle	1672	-53.55	-13	-40.55	-64.49	-59.48	0.71	8.79	H
	2509	-48.69	-13	-35.69	-64.38	-56.39	0.95	10.81	H
	3346	-48.19	-13	-35.19	-65.97	-56.79	1.21	11.96	H
									H
									H
									H
									H
	1672	-51.05	-13	-38.05	-61.89	-56.98	0.71	8.79	V
	2509	-49.79	-13	-36.79	-65.5	-57.49	0.95	10.81	V
	3346	-48.23	-13	-35.23	-65.7	-56.83	1.21	11.96	V
									V
									V
									V
									V



Highest	1696	-53.48	-13	-40.48	-64.54	-59.49	0.72	8.88	H
	2544	-44.76	-13	-31.76	-60.51	-52.48	0.97	10.84	H
	3393	-49.30	-13	-36.30	-66.95	-57.99	1.22	12.06	H
									H
									H
									H
									H
	1696	-50.66	-13	-37.66	-61.65	-56.67	0.72	8.88	V
	2544	-49.42	-13	-36.42	-65.49	-57.14	0.97	10.84	V
	3393	-48.86	-13	-35.86	-66.06	-57.55	1.22	12.06	V
									V
									V
									V
									V

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



<Ant. 2>

WCDMA Band IV

WCDMA Band IV									
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	3427	-48.10	-13	-35.10	-66.84	-59.01	1.23	12.14	H
	5137	-43.42	-13	-30.42	-67.06	-54.32	1.97	12.86	H
	6850	-42.12	-13	-29.12	-67.11	-51.10	2.34	11.32	H
									H
									H
									H
	3427	-48.66	-13	-35.66	-66.97	-59.57	1.23	12.14	V
	5137	-44.64	-13	-31.64	-68.02	-55.54	1.97	12.86	V
	6850	-42.32	-13	-29.32	-67.2	-51.30	2.34	11.32	V
									V
									V
									V
Middle	3462	-48.03	-13	-35.03	-67.14	-59.01	1.24	12.22	H
	5197	-44.27	-13	-31.27	-68.11	-55.23	1.97	12.94	H
	6930	-40.61	-13	-27.61	-66.33	-49.83	2.36	11.58	H
									H
									H
									H
	3462	-47.98	-13	-34.98	-66.86	-58.96	1.24	12.22	V
	5197	-44.85	-13	-31.85	-68.25	-55.81	1.97	12.94	V
	6930	-40.48	-13	-27.48	-66.28	-49.70	2.36	11.58	V
									V
									V
									V



Highest	3504	-45.97	-13	-32.97	-65.5	-57.02	1.25	12.30	H
	5257	-43.81	-13	-30.81	-67.61	-54.84	1.98	13.01	H
	7010	-40.17	-13	-27.17	-66.57	-49.59	2.37	11.79	H
									H
									H
									H
									H
	3504	-48.09	-13	-35.09	-67.47	-59.14	1.25	12.30	V
	5257	-43.08	-13	-30.08	-66.58	-54.11	1.98	13.01	V
	7010	-39.04	-13	-26.04	-65.74	-48.46	2.37	11.79	V
									V
									V
									V
									V

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

**GPRS 1900**

GPRS 1900									
Channel	Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Over Limit (dB)	SPA Reading (dBm)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)
Lowest	3700	-39.46	-13	-26.46	-59.72	-50.49	1.43	12.46	H
	5550	-42.08	-13	-29.08	-65.78	-53.36	2.01	13.29	H
	7400	-38.94	-13	-25.94	-66.67	-48.13	2.21	11.40	H
									H
									H
									H
									H
	3700	-39.89	-13	-26.89	-59.84	-50.92	1.43	12.46	V
	5550	-43.28	-13	-30.28	-67.17	-54.56	2.01	13.29	V
	7400	-39.56	-13	-26.56	-66.83	-48.75	2.21	11.40	V
									V
									V
									V
									V
Middle	3760	-39.81	-13	-26.81	-60.18	-50.84	1.48	12.51	H
	5640	-43.72	-13	-30.72	-67.41	-54.99	2.00	13.27	H
	7520	-39.77	-13	-26.77	-67.38	-48.88	2.18	11.30	H
									H
									H
									H
									H
	3760	-41.60	-13	-28.60	-61.73	-52.63	1.48	12.51	V
	5640	-43.00	-13	-30.00	-66.98	-54.27	2.00	13.27	V
	7520	-69.72	-13	-56.72	-67.47	-78.83	2.18	11.30	V
									V
									V
									V
									V



Highest	3819	-38.91	-13	-25.91	-59.39	-49.93	1.53	12.56	H
	5729	-42.80	-13	-29.80	-66.59	-54.06	1.99	13.25	H
	7639	-39.03	-13	-26.03	-66.09	-48.03	2.27	11.27	H
									H
									H
									H
									H
	3819	-42.64	-13	-29.64	-62.95	-53.66	1.53	12.56	V
	5729	-42.16	-13	-29.16	-66.2	-53.42	1.99	13.25	V
	7639	-39.21	-13	-26.21	-66.48	-48.21	2.27	11.27	V
									V
									V
									V
									V

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

**EDGE 1900**

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	3700	-41.95	-13	-28.95	-62.21	-52.98	1.43	12.46	H
	5550	-42.28	-13	-29.28	-65.98	-53.56	2.01	13.29	H
	7400	-39.29	-13	-26.29	-67.02	-48.48	2.21	11.40	H
									H
									H
									H
									H
	3700	-42.61	-13	-29.61	-62.56	-53.64	1.43	12.46	V
	5550	-42.11	-13	-29.11	-66	-53.39	2.01	13.29	V
	7400	-39.23	-13	-26.23	-66.48	-48.42	2.21	11.40	V
									V
									V
									V
									V
Middle	3760	-45.35	-13	-32.35	-65.74	-56.38	1.48	12.51	H
	5640	-43.62	-13	-30.62	-67.31	-54.89	2.00	13.27	H
	7520	-38.71	-13	-25.71	-66.32	-47.82	2.18	11.30	H
									H
									H
									H
									H
	3760	-45.40	-13	-32.40	-65.53	-56.43	1.48	12.51	V
	5640	-43.73	-13	-30.73	-67.71	-55.00	2.00	13.27	V
	7520	-39.11	-13	-26.11	-66.86	-48.22	2.18	11.30	V
									V
									V
									V
									V



Highest	3819	-43.85	-13	-30.85	-64.33	-54.87	1.53	12.56	H
	5729	-43.69	-13	-30.69	-67.48	-54.95	1.99	13.25	H
	7639	-39.42	-13	-26.42	-66.48	-48.42	2.27	11.27	H
									H
									H
									H
									H
	3819	-45.21	-13	-32.21	-65.52	-56.23	1.53	12.56	V
	5729	-42.92	-13	-29.92	-66.96	-54.18	1.99	13.25	V
	7639	-38.43	-13	-25.43	-65.7	-47.43	2.27	11.27	V
									V
									V
									V
									V

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

**WCDMA Band II**

WCDMA Band II									
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	3704	-43.90	-13	-30.90	-64.17	-54.93	1.43	12.46	H
	5557	-44.02	-13	-31.02	-67.71	-55.30	2.01	13.29	H
	7409	-39.06	-13	-26.06	-66.8	-48.24	2.21	11.39	H
									H
									H
									H
									H
	3704	-44.94	-13	-31.94	-64.9	-55.97	1.43	12.46	V
	5557	-43.73	-13	-30.73	-67.63	-55.01	2.01	13.29	V
	7409	-39.57	-13	-26.57	-66.89	-48.75	2.21	11.39	V
									V
									V
									V
									V
Middle	3760	-44.47	-13	-31.47	-64.86	-55.50	1.48	12.51	H
	5640	-43.58	-13	-30.58	-67.27	-54.85	2.00	13.27	H
	7520	-39.72	-13	-26.72	-67.33	-48.83	2.18	11.30	H
									H
									H
									H
									H
	3760	-46.27	-13	-33.27	-66.41	-57.30	1.48	12.51	V
	5640	-43.20	-13	-30.20	-67.18	-54.47	2.00	13.27	V
	7520	-39.42	-13	-26.42	-67.19	-48.53	2.18	11.30	V
									V
									V
									V
									V



Highest	3812	-45.33	-13	-32.33	-65.8	-56.36	1.52	12.55	H
	5722	-43.13	-13	-30.13	-66.91	-54.39	1.99	13.26	H
	7630	-39.14	-13	-26.14	-66.19	-48.15	2.26	11.27	H
									H
									H
									H
									H
	3812	-47.17	-13	-34.17	-67.47	-58.20	1.52	12.55	V
	5722	-43.36	-13	-30.36	-67.4	-54.62	1.99	13.26	V
	7630	-39.63	-13	-26.63	-66.9	-48.64	2.26	11.27	V
									V
									V
									V
									V

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

**CDMA2000 BC1**

CDMA2000 BC1									
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	3704.8	-38.23	-13	-25.23	-58.49	-49.26	1.43	12.46	H
	5557.2	-42.79	-13	-29.79	-66.49	-54.07	2.01	13.29	H
	7409.6	-39.33	-13	-26.33	-67.06	-48.51	2.21	11.39	H
									H
									H
									H
									H
	3704.8	-41.20	-13	-28.20	-61.15	-52.23	1.43	12.46	V
	5557.2	-42.60	-13	-29.60	-66.5	-53.88	2.01	13.29	V
	7409.6	-39.72	-13	-26.72	-66.99	-48.90	2.21	11.39	V
									V
									V
									V
									V
Middle	3760	-41.08	-13	-28.08	-61.47	-52.11	1.48	12.51	H
	5640	-43.72	-13	-30.72	-67.41	-54.99	2.00	13.27	H
	7520	-39.09	-13	-26.09	-66.7	-48.20	2.18	11.30	H
									H
									H
									H
									H
	3760	-44.87	-13	-31.87	-65	-55.90	1.48	12.51	V
	5640	-43.02	-13	-30.02	-67	-54.29	2.00	13.27	V
	7520	-39.14	-13	-26.14	-66.89	-48.25	2.18	11.30	V
									V
									V
									V
									V



Highest	3819	-42.90	-13	-29.90	-63.38	-53.92	1.53	12.56	H
	5726	-42.46	-13	-29.46	-66.25	-53.72	1.99	13.25	H
	7635	-39.21	-13	-26.21	-66.27	-48.22	2.26	11.27	H
									H
									H
									H
									H
	3819	-45.03	-13	-32.03	-65.34	-56.05	1.53	12.56	V
	5726	-43.28	-13	-30.28	-67.32	-54.54	1.99	13.25	V
	7635	-39.18	-13	-26.18	-66.45	-48.19	2.26	11.27	V
									V
									V
									V
									V

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



<ASDIV Antenna>

<Ant. 1>

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	-53.64	-13	-40.64	-64.45	-59.49	0.69	8.69	H
	2472	-45.92	-13	-32.92	-61.61	-53.58	0.95	10.76	H
	3296	-47.94	-13	-34.94	-65.86	-56.44	1.20	11.85	H
									H
									H
									H
	1648	-53.73	-13	-40.73	-64.42	-59.58	0.69	8.69	V
	2472	-41.93	-13	-28.93	-57.62	-49.59	0.95	10.76	V
	3296	-48.57	-13	-35.57	-66.33	-57.07	1.20	11.85	V
									V
									V
									V
Middle	1672	-51.11	-13	-38.11	-62.04	-57.04	0.71	8.79	H
	1209	-45.17	-13	-32.17	-60.86	-49.37	0.53	6.88	H
	3344	-48.51	-13	-35.51	-66.29	-57.10	1.21	11.96	H
									H
									H
									H
	1672	-52.09	-13	-39.09	-62.93	-58.02	0.71	8.79	V
	1209	-42.95	-13	-29.95	-58.66	-47.15	0.53	6.88	V
	3344	-48.80	-13	-35.80	-66.28	-57.39	1.21	11.96	V
									V
									V
									V



Highest	1697	-53.25	-13	-40.25	-64.32	-59.27	0.72	8.89	H
	2544	-40.95	-13	-27.95	-56.7	-48.67	0.97	10.84	H
	3395	-49.19	-13	-36.19	-66.84	-57.88	1.22	12.07	H
									H
									H
									H
									H
	1697	-54.10	-13	-41.10	-65.1	-60.12	0.72	8.89	V
	2544	-42.49	-13	-29.49	-58.56	-50.21	0.97	10.84	V
	3395	-49.45	-13	-36.45	-66.64	-58.14	1.22	12.07	V
									V
									V
									V
									V

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

**EDGE 850**

EDGE 850									
Channel	Frequency (MHz)	ERP (dBm)	Limit (dBm)	Over Limit (dB)	SPA Reading (dBm)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)
Lowest	1648	-53.69	-13	-40.69	-64.5	-59.54	0.69	8.69	H
	2472	-49.39	-13	-36.39	-65.08	-57.05	0.95	10.76	H
	3296	-48.09	-13	-35.09	-66.01	-56.59	1.20	11.85	H
									H
									H
									H
									H
	1648	-54.24	-13	-41.24	-64.93	-60.09	0.69	8.69	V
	2472	-48.79	-13	-35.79	-64.48	-56.45	0.95	10.76	V
	3296	-48.06	-13	-35.06	-65.82	-56.56	1.20	11.85	V
									V
									V
									V
									V
Middle	1672	-53.42	-13	-40.42	-64.35	-59.35	0.71	8.79	H
	2509	-48.86	-13	-35.86	-64.55	-56.56	0.95	10.81	H
	3345	-48.93	-13	-35.93	-66.71	-57.53	1.21	11.96	H
									H
									H
									H
									H
	1672	-54.04	-13	-41.04	-64.88	-59.97	0.71	8.79	V
	2509	-48.97	-13	-35.97	-64.68	-56.67	0.95	10.81	V
	3345	-49.15	-13	-36.15	-66.63	-57.75	1.21	11.96	V
									V
									V
									V
									V



Highest	1696	-54.04	-13	-41.04	-65.1	-60.05	0.72	8.88	H
	2546	-50.18	-13	-37.18	-65.94	-57.90	0.97	10.84	H
	3395	-48.80	-13	-35.80	-66.45	-57.49	1.22	12.07	H
									H
									H
									H
									H
	1696	-52.95	-13	-39.95	-63.94	-58.96	0.72	8.88	V
	2546	-49.12	-13	-36.12	-65.21	-56.84	0.97	10.84	V
	3395	-49.78	-13	-36.78	-66.97	-58.47	1.22	12.07	V
									V
									V
									V
									V

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

**WCDMA Band V**

WCDMA Band V									
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	1652	-54.02	-13	-41.02	-64.86	-59.88	0.70	8.71	H
	2479	-49.89	-13	-36.89	-65.57	-57.56	0.95	10.77	H
	3304	-47.10	-13	-34.10	-64.98	-55.62	1.20	11.87	H
									H
									H
									H
									H
	1652	-53.65	-13	-40.65	-64.39	-59.51	0.70	8.71	V
	2479	-48.93	-13	-35.93	-64.6	-56.60	0.95	10.77	V
	3304	-48.63	-13	-35.63	-66.33	-57.15	1.20	11.87	V
									V
									V
									V
									V
Middle	1672	-54.23	-13	-41.23	-65.16	-60.16	0.71	8.79	H
	2509	-49.17	-13	-36.17	-64.86	-56.87	0.95	10.81	H
	3344	-48.44	-13	-35.44	-66.22	-57.03	1.21	11.96	H
									H
									H
									H
									H
	1672	-53.74	-13	-40.74	-64.58	-59.67	0.71	8.79	V
	2509	-47.83	-13	-34.83	-63.54	-55.53	0.95	10.81	V
	3345	-48.56	-13	-35.56	-66.04	-57.16	1.21	11.96	V
									V
									V
									V
									V



Highest	1696	-54.22	-13	-41.22	-65.28	-60.23	0.72	8.88	H
	2539	-49.96	-13	-36.96	-65.71	-57.68	0.96	10.83	H
	3386	-48.01	-13	-35.01	-65.67	-56.69	1.22	12.05	H
									H
									H
									H
									H
	1696	-53.95	-13	-40.95	-64.94	-59.96	0.72	8.88	V
	2539	-49.66	-13	-36.66	-65.69	-57.38	0.96	10.83	V
	3386	-49.52	-13	-36.52	-66.75	-58.20	1.22	12.05	V
									V
									V
									V
									V

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

**CDMA2000 BC0**

CDMA2000 BC0									
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	1649	-52.51	-13	-39.51	-63.32	-58.36	0.69	8.70	H
	2474	-45.98	-13	-32.98	-61.67	-53.65	0.95	10.76	H
	3298	-48.22	-13	-35.22	-66.13	-56.72	1.20	11.86	H
									H
									H
									H
									H
	1649	-53.35	-13	-40.35	-64.04	-59.20	0.69	8.70	V
	2474	-46.41	-13	-33.41	-62.1	-54.08	0.95	10.76	V
	3298	-48.56	-13	-35.56	-66.31	-57.06	1.20	11.86	V
									V
									V
									V
									V
Middle	1672	-54.15	-13	-41.15	-65.08	-60.08	0.71	8.79	H
	2509	-49.60	-13	-36.60	-65.29	-57.30	0.95	10.81	H
	3345	-48.76	-13	-35.76	-66.53	-57.36	1.21	11.96	H
									H
									H
									H
									H
	1672	-53.40	-13	-40.40	-64.24	-59.33	0.71	8.79	V
	2509	-49.92	-13	-36.92	-65.63	-57.62	0.95	10.81	V
	3345	-49.31	-13	-36.31	-66.78	-57.91	1.21	11.96	V
									V
									V
									V
									V



Highest	1696	-53.77	-13	-40.77	-64.83	-59.78	0.72	8.88	H
	2544	-49.90	-13	-36.90	-65.65	-57.62	0.97	10.84	H
	3393	-48.11	-13	-35.11	-65.76	-56.80	1.22	12.06	H
									H
									H
									H
									H
	1696	-52.40	-13	-39.40	-63.39	-58.41	0.72	8.88	V
	2544	-49.53	-13	-36.53	-65.6	-57.25	0.97	10.84	V
	3393	-49.97	-13	-36.97	-67.17	-58.66	1.22	12.06	V
									V
									V
									V
									V

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



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WCDMA Band IV

WCDMA Band IV									
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	3427	-47.25	-13	-34.25	-65.99	-58.16	1.23	12.14	H
	5137	-44.11	-13	-31.11	-67.75	-55.01	1.97	12.86	H
	6849	-42.34	-13	-29.34	-67.33	-51.31	2.34	11.32	H
									H
									H
									H
									H
	3427	-47.92	-13	-34.92	-66.28	-58.83	1.23	12.14	V
	5137	-44.00	-13	-31.00	-67.38	-54.90	1.97	12.86	V
	6849	-41.42	-13	-28.42	-66.3	-50.39	2.34	11.32	V
									V
									V
									V
									V
Middle	3462	-47.93	-13	-34.93	-67.04	-58.91	1.24	12.22	H
	5197	-44.23	-13	-31.23	-68.07	-55.19	1.97	12.94	H
	6930	-39.63	-13	-26.63	-65.35	-48.85	2.36	11.58	H
									H
									H
									H
									H
	3462	-48.25	-13	-35.25	-67.09	-59.23	1.24	12.22	V
	5197	-44.28	-13	-31.28	-67.68	-55.24	1.97	12.94	V
	6930	-39.28	-13	-26.28	-65.12	-48.50	2.36	11.58	V
									V
									V
									V
									V



Highest	3504	-48.06	-13	-35.06	-67.59	-59.11	1.25	12.30	H
	5257	-43.39	-13	-30.39	-67.19	-54.42	1.98	13.01	H
	7010	-39.66	-13	-26.66	-66.06	-49.08	2.37	11.79	H
									H
									H
									H
									H
	3504	-47.79	-13	-34.79	-67.16	-58.84	1.25	12.30	V
	5257	-44.04	-13	-31.04	-67.54	-55.07	1.98	13.01	V
	7010	-39.31	-13	-26.31	-66.01	-48.73	2.37	11.79	V
									V
									V
									V
									V

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

**GPRS 1900**

GPRS 1900									
Channel	Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Over Limit (dB)	SPA Reading (dBm)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)
Lowest	3700	-46.18	-13	-33.18	-66.44	-57.21	1.43	12.46	H
	5550	-43.34	-13	-30.34	-67.04	-54.62	2.01	13.29	H
	7400	-39.38	-13	-26.38	-67.11	-48.57	2.21	11.40	H
									H
									H
									H
									H
	3700	-46.64	-13	-33.64	-66.59	-57.67	1.43	12.46	V
	5550	-43.85	-13	-30.85	-67.74	-55.13	2.01	13.29	V
	7400	-40.14	-13	-27.14	-67.41	-49.33	2.21	11.40	V
									V
									V
									V
									V
Middle	3760	-45.65	-13	-32.65	-66.04	-56.68	1.48	12.51	H
	5640	-43.37	-13	-30.37	-67.06	-54.64	2.00	13.27	H
	7520	-39.72	-13	-26.72	-67.33	-48.83	2.18	11.30	H
									H
									H
									H
									H
	3760	-46.13	-13	-33.13	-66.26	-57.16	1.48	12.51	V
	5640	-42.97	-13	-29.97	-66.95	-54.24	2.00	13.27	V
	7520	-39.25	-13	-26.25	-67	-48.36	2.18	11.30	V
									V
									V
									V
									V



Highest	3812	-46.14	-13	-33.14	-66.61	-57.17	1.52	12.55	H
	5722	-43.03	-13	-30.03	-66.81	-54.29	1.99	13.26	H
	7630	-38.35	-13	-25.35	-65.4	-47.36	2.26	11.27	H
									H
									H
									H
									H
	3812	-46.48	-13	-33.48	-66.77	-57.51	1.52	12.55	V
	5722	-42.82	-13	-29.82	-66.86	-54.08	1.99	13.26	V
	7630	-38.46	-13	-25.46	-65.73	-47.47	2.26	11.27	V
									V
									V
									V
									V

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

**EDGE 1900**

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	3700	-46.70	-13	-33.70	-66.96	-57.73	1.43	12.46	H
	5550	-43.84	-13	-30.84	-67.54	-55.12	2.01	13.29	H
	7400	-40.11	-13	-27.11	-67.84	-49.30	2.21	11.40	H
									H
									H
									H
									H
	3700	-46.71	-13	-33.71	-66.66	-57.74	1.43	12.46	V
	5550	-43.34	-13	-30.34	-67.23	-54.62	2.01	13.29	V
	7400	-39.32	-13	-26.32	-66.59	-48.51	2.21	11.40	V
									V
									V
									V
									V
Middle	3760	-45.99	-13	-32.99	-66.38	-57.02	1.48	12.51	H
	5640	-43.55	-13	-30.55	-67.24	-54.82	2.00	13.27	H
	7520	-39.93	-13	-26.93	-67.54	-49.04	2.18	11.30	H
									H
									H
									H
									H
	3760	-46.19	-13	-33.19	-66.32	-57.22	1.48	12.51	V
	5640	-42.72	-13	-29.72	-66.7	-53.99	2.00	13.27	V
	7520	-38.20	-13	-25.20	-65.95	-47.31	2.18	11.30	V
									V
									V
									V
									V



Highest	3819	-46.30	-13	-33.30	-66.78	-57.32	1.53	12.56	H
	5729	-43.57	-13	-30.57	-67.36	-54.83	1.99	13.25	H
	7639	-38.30	-13	-25.30	-65.36	-47.30	2.27	11.27	H
									H
									H
									H
									H
	3819	-46.70	-13	-33.70	-67.01	-57.72	1.53	12.56	V
	5729	-43.01	-13	-30.01	-67.05	-54.27	1.99	13.25	V
	7641	-39.29	-13	-26.29	-66.56	-48.29	2.27	11.27	V
									V
									V
									V
									V

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

**WCDMA Band II**

WCDMA Band II									
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	-45.75	-13	-32.75	-66.02	-56.78	1.43	12.47	H
	5557	-43.17	-13	-30.17	-66.86	-54.45	2.01	13.29	H
	7409	-39.61	-13	-26.61	-67.35	-48.79	2.21	11.39	H
									H
									H
									H
									H
	3707	-45.55	-13	-32.55	-65.51	-56.58	1.43	12.47	V
	5557	-43.26	-13	-30.26	-67.16	-54.54	2.01	13.29	V
	7409	-39.02	-13	-26.02	-66.34	-48.20	2.21	11.39	V
									V
									V
									V
									V
Middle	3760	-46.07	-13	-33.07	-66.46	-57.10	1.48	12.51	H
	5640	-43.82	-13	-30.82	-67.51	-55.09	2.00	13.27	H
	7520	-39.68	-13	-26.68	-67.29	-48.79	2.18	11.30	H
									H
									H
									H
									H
	3760	-46.14	-13	-33.14	-66.27	-57.17	1.48	12.51	V
	5640	-43.83	-13	-30.83	-67.81	-55.10	2.00	13.27	V
	7520	-38.96	-13	-25.96	-66.71	-48.07	2.18	11.30	V
									V
									V
									V
									V



Highest	3812	-46.14	-13	-33.14	-66.61	-57.17	1.52	12.55	H
	5722	-43.03	-13	-30.03	-66.81	-54.29	1.99	13.26	H
	7630	-38.35	-13	-25.35	-65.4	-47.36	2.26	11.27	H
									H
									H
									H
									H
	3812	-46.48	-13	-33.48	-66.77	-57.51	1.52	12.55	V
	5722	-42.82	-13	-29.82	-66.86	-54.08	1.99	13.26	V
	7630	-38.46	-13	-25.46	-65.73	-47.47	2.26	11.27	V
									V
									V
									V
									V

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

**CDMA2000 BC1**

CDMA2000 BC1									
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	3700	-46.23	-13	-33.23	-66.49	-57.26	1.43	12.46	H
	5553	-43.59	-13	-30.59	-67.29	-54.87	2.01	13.29	H
	7405	-38.99	-13	-25.99	-66.72	-48.18	2.21	11.40	H
									H
									H
									H
									H
	3700	-46.93	-13	-33.93	-66.88	-57.96	1.43	12.46	V
	5553	-43.37	-13	-30.37	-67.27	-54.65	2.01	13.29	V
	7405	-39.38	-13	-26.38	-66.66	-48.57	2.21	11.40	V
									V
									V
									V
									V
Middle	3760	-44.70	-13	-31.70	-65.09	-55.73	1.48	12.51	H
	5640	-43.31	-13	-30.31	-67	-54.58	2.00	13.27	H
	7520	-39.43	-13	-26.43	-67.04	-48.54	2.18	11.30	H
									H
									H
									H
									H
	3760	-45.64	-13	-32.64	-65.77	-56.67	1.48	12.51	V
	5640	-42.54	-13	-29.54	-66.52	-53.81	2.00	13.27	V
	7520	-38.50	-13	-25.50	-66.25	-47.61	2.18	11.30	V
									V
									V
									V
									V



Highest	3819	-46.54	-13	-33.54	-67.02	-57.56	1.53	12.56	H
	5726	-43.66	-13	-30.66	-67.45	-54.92	1.99	13.25	H
	7635	-39.23	-13	-26.23	-66.29	-48.24	2.26	11.27	H
									H
									H
									H
									H
	3819	-46.63	-13	-33.63	-66.94	-57.65	1.53	12.56	V
	5726	-42.99	-13	-29.99	-67.03	-54.25	1.99	13.25	V
	7635	-38.97	-13	-25.97	-66.24	-47.98	2.26	11.27	V
									V
									V
									V
									V

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

————THE END————