FCC RADIO TEST REPORT

FCC ID	:	**IHDT56XM1**
Equipment	:	**Mobile Cellular Phone**
Brand Name	:	**Motorola**
Model Name	:	**XT2000-1**
Applicant	:	**Motorola Mobility, LLC** **222 W Merchandise Mart Plaza, Suite 1800, Chicago, IL 60654, United States**
Manufacturer	:	**Motorola Mobility, LLC** **222 W Merchandise Mart Plaza, Suite 1800, Chicago, IL 60654, United States**
Standard	:	**47 CFR Part 2, 22(H), 24(E)**

The product was received on Jan. 24, 2019 and testing was started from Feb. 04, 2019 and completed on Feb. 21, 2019. 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 report must not be used by the client to claim product certification, approval, or endorsement by TAF or any agency of government.

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

Jones Tsai

Approved by: Jones Tsai

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

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History of this test report

Report No.	Version	Description	Issued Date
FG912419A	01	Initial issue of report	Mar. 25, 2019
FG912419A	02	Remove watermark.	Mar. 29, 2019

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		
	§24.232 (c)	Equivalent Isotropic Radiated Power		
3.3	§24.232 (d)	Peak-to-Average Ratio	Pass	-
3.4	§2.1049 §22.917 (b) §24.238 (b)	Occupied Bandwidth	Pass	-
3.5	§2.1051 §22.917 (a) §24.238 (a)	Band Edge Measurement	Pass	-
3.6	§2.1051 §22.917 (a) §24.238 (a)	Conducted Emission	Pass	-
3.7	§2.1055 §22.355	Frequency Stability Temperature & Voltage	Pass	-
	§2.1055 §24.235			-
4.4	§2.1053 §22.917 (a) §24.238 (a)	Field Strength of Spurious Radiation	Pass	Under limit 34.88 dB at 7639.000 MHz

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: Natasha Hsieh

1 General Description

1.1 Product Feature of Equipment Under Test

Product Feature	
Equipment	Mobile Cellular Phone
Brand Name	Motorola
Model Name	XT2000-1
FCC ID	IHDT56XM1
IMEI Code	**Conducted :** IMEI: 355573090013332 **Radiation :** IMEI: 355573090013720
EUT supports Radios application	CDMA/EV-DO/GSM/EGPRS/WCDMA/HSPA/LTE/GNSS/NFC WLAN 11b/g/n HT20 WLAN 11a/n HT20/HT40 WLAN 11ac VHT20/VHT40/VHT80 Bluetooth BR/EDR/LE
HW Version	DVT3
EUT Stage	Identical Prototype

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

Accessory List	
AC Adapter	Brand Name : Motorola
	Model Name : SA18C45883
	Manufacturer : Salom
Battery 1	Brand Name : Motorola
	Model Name : KV40
	Manufacturer : Amperex
Battery 2	Brand Name : Motorola
	Model Name : KV30
	Manufacturer : Amperex
Headset Jack Adaptor	Brand Name : Motorola
	Model Name : SC18C45885
	Manufacturer : Luxshare
USB-C Data Cable	Brand Name : Motorola
	Model Name : SC18C45884
	Manufacturer : Luxshare
USB-C Headset 2	Brand Name : Motorola
	Model Name : SH38C48284
	Manufacturer : Grandsun

Supported Unit Used in Test Configuration and System	
USB-C Headset 1	Brand Name : Google
	Model Name : G019A
	Manufacturer : Grandsun

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 **WCDMA:** Band V: 826.4 MHz ~ 846.6 MHz Band II: 1852.4 MHz ~ 1907.6 MHz **CDMA2000** BC0 824.70 MHz ~ 848.31 MHz BC1 1851.25 MHz ~ 1908.75 MHz
Rx Frequency	**GSM/GPRS/EDGE:** 850: 869.2 MHz ~ 893.8 MHz 1900: 1930.2 MHz ~ 1989.8 MHz **WCDMA:** Band V: 871.4 MHz ~ 891.6 MHz Band II: 1932.4 MHz ~ 1987.6 MHz **CDMA2000** BC0 869.70 MHz ~ 893.31 MHz BC1 1931.25 MHz ~ 1988.75 MHz
Maximum Output Power to Antenna	**GSM/GPRS/EDGE:** 850: 33.35 dBm 1900: 29.78 dBm **WCDMA:** Band V: 23.30 dBm Band II: 23.19 dBm **CDMA2000** BC0 24.27 dBm BC1 24.09 dBm
Antenna Type	Fixed Internal Antenna and Dynamic Antenna
Antenna Gain	Cellular Band: -5.5 dBi PCS Band: -2.5 dBi
Type of Modulation	GSM: GMSK GPRS: GMSK EDGE: GMSK / 8PSK WCDMA: BPSK (Uplink) HSDPA: 64QAM (Downlink) HSUPA: QPSK (Uplink) CDMA2000 1xRTT: QPSK CDMA2000 1xEV-DO: QPSK/8PSK

1.3 Modification of EUT

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

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

FCC Rule	Frequency Range (MHz)	System	Type of Modulation	Maximum ERP/EIRP (W)	Frequency Tolerance (ppm)	Emission Designator
Part 22	824.2 ~848.8	GSM850 GSM	GMSK	0.3715	0.0215 ppm	244KGXW
Part 22	824.2 ~848.8	GSM850 EDGE class 8	8PSK	0.0838	0.0179 ppm	241KG7W
Part 22	826.4 ~846.6	WCDMA Band V RMC 12.2Kbps	BPSK	0.0367	0.0072 ppm	4M15F9W
Part 22	824.7 ~ 848.31	CDMA2000 BC0 1xRTT	QPSK	0.0459	0.0120 ppm	1M27F9W
Part 22	824.7 ~ 848.31	CDMA2000 BC0 1xEV-DO	QPSK	0.0458	0.0275 ppm	1M28F9W
Part 24	1850.2 ~1909.8	GSM1900 GPRS class 8	GMSK	0.5346	0.0096 ppm	244KGXW
Part 24	1850.2 ~1909.8	GSM1900 EDGE class 8	8PSK	0.2023	0.0069 ppm	245KG7W
Part 24	1852.4 ~ 1907.6	WCDMA Band II RMC 12.2Kbps	BPSK	0.1172	0.0048 ppm	4M14F9W
Part 24	1851.25 ~ 1908.75	CDMA2000 BC1 1xRTT	QPSK	0.1439	0.0085 ppm	1M28F9W
Part 24	1851.25 ~ 1908.75	CDMA2000 BC1 1xEV-DO	QPSK	0.1442	0.0074 ppm	1M28F9W

1.5 Testing Location

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

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

FCC Designation No.: TW1190

1.6 Applicable Standards

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

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

Remark:

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

2 Test Configuration of Equipment Under Test

2.1 Test Mode

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

For radiated measurement, pre-scanned in five orthogonal panels, X, Y, Z, Open mode and Close Mode. The worst cases (Y plane) were recorded in this report.

Radiated emissions were investigated as following frequency range:

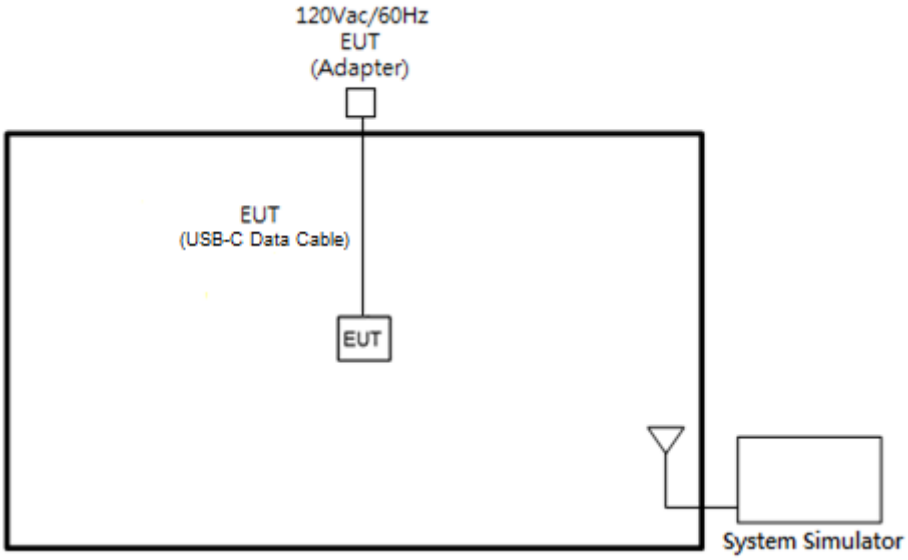
1. 30 MHz to 9000 MHz for GSM850 and WCDMA Band V and CDMA BC0.
2. 30 MHz to 19100 MHz for GSM1900 and WCDMA Band II and CDMA BC1.

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**
GSM 850	■ GSM Link ■ EDGE Class 8 Link	■ GSM Link ■ EDGE Class 8 Link
GSM 1900	■ GPRS Class 8 Link ■ EDGE Class 8 Link	■ GPRS Class 8 Link ■ EDGE Class 8 Link
WCDMA Band V	■ RMC 12.2Kbps Link	■ RMC 12.2Kbps Link
WCDMA Band II	■ RMC 12.2Kbps Link	■ RMC 12.2Kbps Link
CDMA BC0	■ 1xRTT Link ■ 1xEV-DO Link	■ 1xRTT Link ■ 1xEV-DO Link
CDMA BC1	■ 1xRTT Link ■ 1xEV-DO Link	■ 1xRTT Link ■ 1xEV-DO Link

2.2 Connection Diagram of Test System



2.3 Support Unit used in test configuration

Item	Equipment	Trade Name	Model No.	FCC ID	Data Cable	Power Cord
1.	System Simulator	R&S	CMU 200	N/A	N/A	Unshielded, 1.8 m
2.	System Simulator	Anritsu	8820C	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:

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

= 4.2 + 10 = 14.2 (dB)

2.5 Frequency List of Low/Middle/High Channels

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

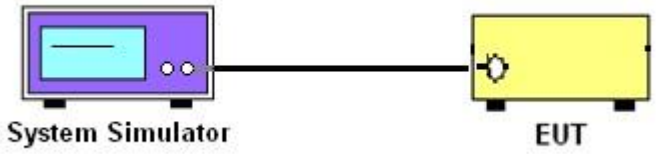
3 Conducted Test Result

3.1 Measuring Instruments

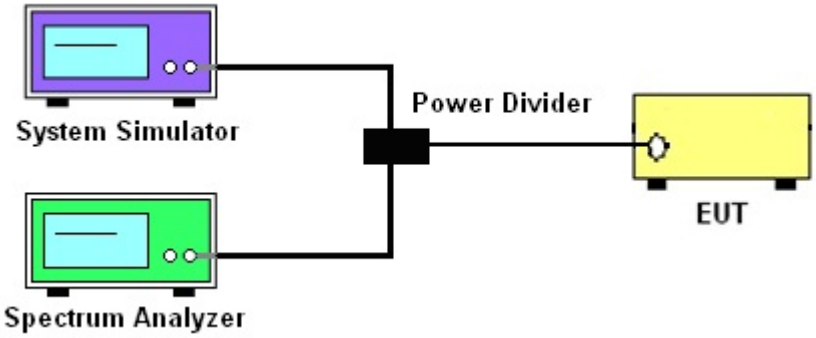
See list of measuring instruments of this test report.

3.1.1 Test Setup

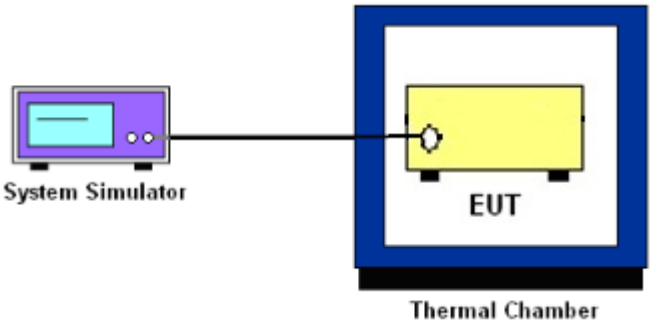
3.1.2 Conducted Output Power



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.

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 FCC KDB 971168 D01 v03r01 Section 5.7.1

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

3.4 99% Occupied Bandwidth and 26dB Bandwidth Measurement

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

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

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

3.4.2 Test Procedures

The testing follows FCC KDB 971168 D01 v03r01 Section 4.2

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

3.5 Conducted Band Edge

3.5.1 Description of Conducted Band Edge Measurement

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

3.5.2 Test Procedures

The testing follows FCC KDB 971168 D01 v03r01 Section 6.0.

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

3.6 Conducted Spurious Emission

3.6.1 Description of Conducted Spurious Emission Measurement

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

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

3.6.2 Test Procedures

The testing follows FCC KDB 971168 D01 v03r01 Section 6.0.

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

3.7 Frequency Stability

3.7.1 Description of Frequency Stability Measurement

22.355

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

24.235

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

3.7.2 Test Procedures for Temperature Variation

The testing follows FCC KDB 971168 D01 v03r01 Section 9.0.

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

3.7.3 Test Procedures for Voltage Variation

The testing follows FCC KDB 971168 D01 v03r01 Section 9.0.

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

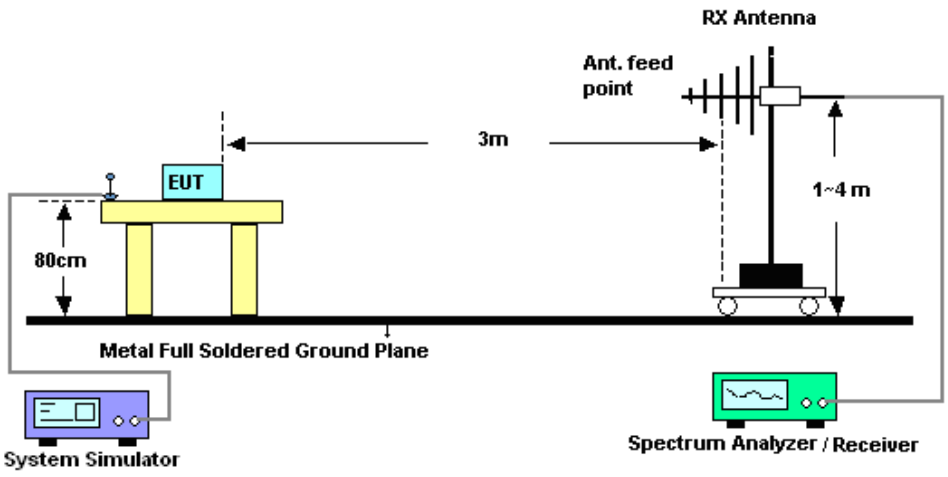
4 Radiated Test Items

4.1 Measuring Instruments

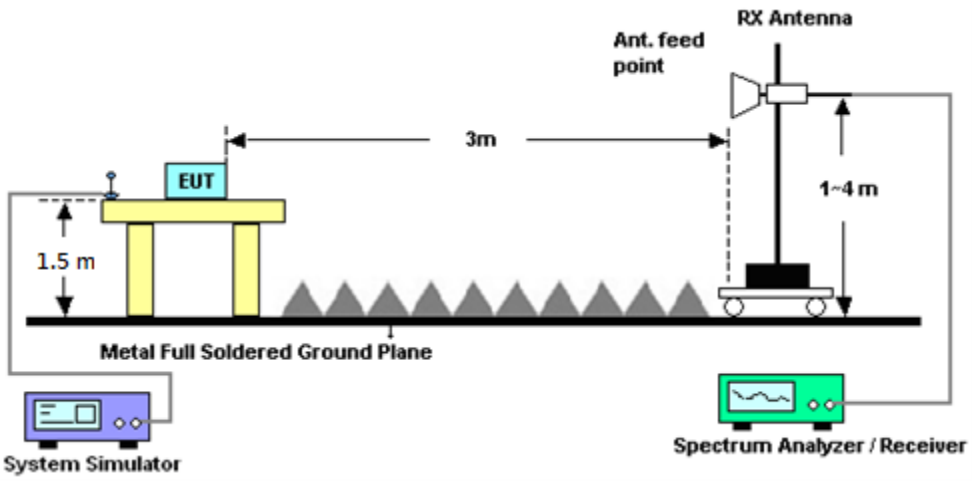
See list of measuring instruments of this test report.

4.2 Test Setup

For radiated test from 30MHz to 1GHz



For radiated test above 1GHz



4.3 Test Result of Radiated Test

Please refer to Appendix B.

4.4 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 5.8 and ANSI / TIA-603-E Section 2.2.12.

1. The EUT was placed on a rotatable wooden table 0.8 meters for frequency below 1GHz and 1.5 meter for frequency above 1GHz above the ground.
2. The EUT was set 3 meters from the receiving antenna, which was mounted on the antenna tower.
3. The table was rotated 360 degrees to determine the position of the highest spurious emission.
4. The height of the receiving antenna is varied between one meter and four meters to search for the maximum spurious emission for both horizontal and vertical polarizations.
5. Make the measurement with the spectrum analyzer's RBW = 1MHz, VBW = 3MHz, taking record of maximum spurious emission.
6. A horn antenna was substituted in place of the EUT and was driven by a signal generator.
7. Tune the output power of signal generator to the same emission level with EUT maximum spurious emission.
8. Taking the record of output power at antenna port.
9. Repeat step 7 to step 8 for another polarization.
10. EIRP (dBm) = S.G. Power – Tx Cable Loss + Tx Antenna Gain
11. ERP (dBm) = EIRP - 2.15
12. The RF fundamental frequency should be excluded against the limit line in the operating frequency band.
13. The limit line is derived from 43 + 10log(P) dB below the transmitter power P(Watts)

5 List of Measuring Equipment

Instrument	Manufacturer	Model No.	Serial No.	Characteristics	Calibration Date	Test Date	Due Date	Remark
Base Station (Measure)	Rohde & Schwarz	CMU200	117995	GSM / GPRS / WCDMA / CDMA	Aug. 10, 2018	Feb. 18, 2019~ Feb. 19, 2019	Aug. 09, 2019	Conducted (TH03-HY)
Spectrum Analyzer	Rohde & Schwarz	FSP30	101329	9kHz~30GHz	Jun. 29, 2018	Feb. 18, 2019~ Feb. 19, 2019	Jun. 28, 2019	Conducted (TH03-HY)
Temperature Chamber	ESPEC	SU-641	92013721	-30℃ ~70℃	Dec. 06, 2017	Feb. 18, 2019~ Feb. 19, 2019	Dec. 05, 2019	Conducted (TH03-HY)
Programmable Power Supply	GW Instek	PSS-2005	EL883644	Voltage:0~20V; Current:0~5A	Dec. 06, 2017	Feb. 18, 2019~ Feb. 19, 2019	Dec. 05, 2019	Conducted (TH03-HY)
Hygrometer	Testo	608-H1	34893241	N/A	Mar. 06, 2018	Feb. 18, 2019~ Feb. 19, 2019	Mar. 05, 2019	Conducted (TH03-HY)
Preamplifier	Agilent	8449B	3008A01917	1GHz~26.5GHz	Apr. 23, 2018	Feb. 04, 2019~ Feb. 21, 2019	Apr. 22, 2019	Radiation (03CH07-HY)
Bilog Antenna	TESEQ	CBL 6111D&00800N1D01N-06	35419&03	30MHz to 1GHz	Dec. 16, 2018	Feb. 04, 2019~ Feb. 21, 2019	Dec. 15, 2019	Radiation (03CH07-HY)
Double Ridge Horn Antenna	ESCO	3117	00075962	1GHz ~ 18GHz	Dec. 02, 2018	Feb. 04, 2019~ Feb. 21, 2019	Dec. 03, 2019	Radiation (03CH07-HY)
Hygrometer	TECPEL	HTC-2	1	N/A	May 12, 2018	Feb. 04, 2019~ Feb. 21, 2019	May 11, 2019	Radiation (03CH07-HY)
Loop Antenna	Rohde & Schwarz	HFH2-Z2	100315	9 kHz~30 MHz	May 15, 2017	Feb. 04, 2019~ Feb. 21, 2019	May 14, 2019	Radiation (03CH07-HY)
Preamplifier	MITEQ	AMF-7D-00101800-30-10P	1590075	1GHz ~ 18GHz	Apr. 25, 2018	Feb. 04, 2019~ Feb. 21, 2019	Apr. 24, 2019	Radiation (03CH07-HY)
Preamplifier	COM-POWER	PA-103A	161241	10MHz-1GHz	May 21, 2018	Feb. 04, 2019~ Feb. 21, 2019	May 20, 2019	Radiation (03CH07-HY)
RF Cable	HUBER + SUHNER	SUCOFLEX 104	MY28655/4, MY24971/4, MY15682/4	30MHz~1GHz	Feb. 27, 2018	Feb. 04, 2019~ Feb. 21, 2019	Feb. 26, 2019	Radiation (03CH07-HY)
RF Cable	HUBER + SUHNER	SUCOFLEX 104	MY28655/4, MY24971/4, MY15682/4	1GHz~18GHz	Feb. 27, 2018	Feb. 04, 2019~ Feb. 21, 2019	Feb. 26, 2019	Radiation (03CH07-HY)
RF Cable	HUBER + SUHNER	SF102/2*11SK252	MY4278/2	9kHz~40GHz	May 17, 2018	Feb. 04, 2019~ Feb. 21, 2019	May 16, 2019	Radiation (03CH07-HY)
Controller	ChainTek	Chaintek 3000	N/A	Control Turn table	N/A	Feb. 04, 2019~ Feb. 21, 2019	N/A	Radiation (03CH07-HY)
Controller	Max-Full	MF7802	MF780208368	Control Ant Mast	N/A	Feb. 04, 2019~ Feb. 21, 2019	N/A	Radiation (03CH07-HY)
Antenna Mast	Max-Full	MFA520BS	N/A	1m~4m	N/A	Feb. 04, 2019~ Feb. 21, 2019	N/A	Radiation (03CH07-HY)
Turn Table	ChainTek	Chaintek 3000	N/A	0~360 Degree	N/A	Feb. 04, 2019~ Feb. 21, 2019	N/A	Radiation (03CH07-HY)

Instrument	Manufacturer	Model No.	Serial No.	Characteristics	Calibration Date	Test Date	Due Date	Remark
Amplifier	MITEQ	TTA1840-35-HG	1871923	18GHz~40GHz, VSWR : 2.5:1 max	Jul. 16, 2018	Feb. 04, 2019~ Feb. 21, 2019	Jul. 15, 2019	Radiation (03CH07-HY)
Software	Audix	E3 6.2009-8-24	RK-001042	N/A	N/A	Feb. 04, 2019~ Feb. 21, 2019	N/A	Radiation (03CH07-HY)
SHF-EHF Horn Antenna	SCHWARZBECK	BBHA 9170	BBHA9170251	18GHz- 40GHz	Nov. 20, 2018	Feb. 04, 2019~ Feb. 21, 2019	Nov. 19, 2019	Radiation (03CH07-HY)
Spectrum Analyzer	Agilent	N9010A	MY53470118	10Hz~44GHz	Apr. 17, 2018	Feb. 04, 2019~ Feb. 21, 2019	Apr. 16, 2019	Radiation (03CH07-HY)
Filter	Microwave	H1G013G1	SN477215	1.0G High Pass	Nov. 02, 2018	Feb. 04, 2019~ Feb. 21, 2019	Nov. 01, 2019	Radiation (03CH07-HY)
Filter	Microwave	H3G018G1	SN477219	3.0G High Pass	Nov. 02, 2018	Feb. 04, 2019~ Feb. 21, 2019	Nov. 01, 2019	Radiation (03CH07-HY)

6 Uncertainty of Evaluation

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

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

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

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

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

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

Appendix A. Test Results of Conducted Test

Conducted Output Power(Average power)

Conducted Power (*Unit: dBm)						
Band	GSM850			GSM1900		
Channel	128	189	251	512	661	810
Frequency	824.2	836.4	848.8	1850.2	1880	1909.8
GSM	33.23	33.35	32.95	29.77	29.77	29.48
GPRS class 8	33.19	33.35	32.89	29.78	29.72	29.45
GPRS class 10	31.70	31.90	31.68	28.46	28.64	28.36
GPRS class 11	29.92	29.92	29.85	26.92	26.87	26.66
GPRS class 12	28.10	28.17	28.12	25.11	25.07	25.02
EGPRS class 8	26.83	26.88	26.87	25.56	25.55	25.50
EGPRS class 10	26.71	26.68	26.70	24.60	24.60	24.50
EGPRS class 11	24.00	23.96	23.76	22.82	22.75	22.75
EGPRS class 12	22.12	22.20	22.12	21.15	21.09	21.05

Conducted Power (*Unit: dBm)						
Band	WCDMA Band V			WCDMA Band II		
Channel	4132	4182	4233	9262	9400	9538
Frequency	826.4	836.4	846.6	1852.4	1880	1907.6
RMC 12.2K	23.30	23.21	23.12	23.12	23.02	23.19
HSDPA Subtest-1	22.12	22.20	22.10	21.92	21.92	22.09
HSDPA Subtest-2	22.34	22.19	22.14	21.90	21.93	22.06
HSDPA Subtest-3	21.85	21.74	21.65	21.78	21.94	22.05
HSDPA Subtest-4	21.84	21.74	21.65	21.77	21.92	22.04
HSUPA Subtest-1	22.30	22.31	22.12	22.13	22.00	22.17
HSUPA Subtest-2	20.30	20.22	20.11	20.11	20.00	20.18
HSUPA Subtest-3	21.30	21.21	21.12	21.09	21.01	21.17
HSUPA Subtest-4	20.29	20.20	20.08	20.08	20.03	20.16
HSUPA Subtest-5	22.31	22.24	22.11	22.11	22.01	22.20

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	24.26	24.25	24.16	23.94	24.02	23.99
1xRTT RC3 SO55	**24.27**	24.26	24.18	23.91	24.06	23.93
1xRTT RC3 SO32 (+ F-SCH)	24.24	24.22	24.18	24.07	24.07	23.96
1xRTT RC3 SO32 (+SCH)	24.24	24.23	24.22	24.06	**24.08**	23.95
1xEVDO RTAP 153.6Kbps	24.23	24.23	24.19	**24.09**	24.08	23.97
1xEVDO RETAP 4096Bits	**24.26**	**24.26**	24.19	24.08	24.07	23.97

A2. GSM

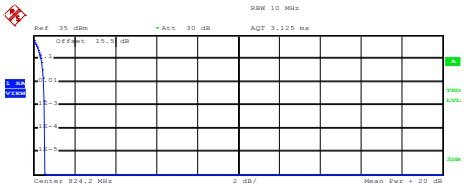
Peak-to-Average Ratio

Mode	GSM850	GSM850	Limit: 13dB
Mod.	GSM	EDGE class 8	Result
Lowest CH	0.52	3.60	PASS
Middle CH	0.56	3.56	
Highest CH	0.56	3.44	

Mode	GSM1900	GSM1900	Limit: 13dB
Mod.	GPRS class 8	EDGE class 8	Result
Lowest CH	0.52	3.48	PASS
Middle CH	0.56	3.64	
Highest CH	0.56	3.52	

GSM850 (GSM)

Lowest Channel



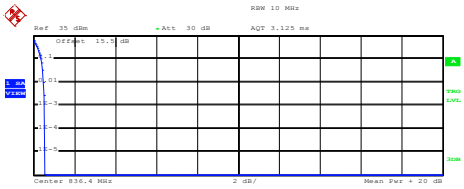
Complementary Cumulative Distribution Function (100000 samples)

Trace 1

Mean	31.24 dBm
Peak	31.77 dBm
Crest	0.52 dB
10 %	0.36 dB
1 %	0.48 dB
.1 %	0.52 dB
.01 %	0.56 dB

Date: 15.FEB.2019 14:47:39

Middle Channel



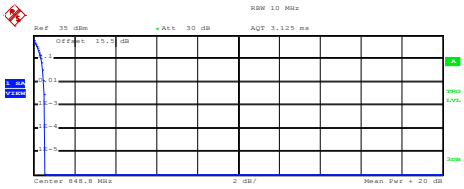
Complementary Cumulative Distribution Function (100000 samples)

Trace 1

Mean	31.45 dBm
Peak	31.98 dBm
Crest	0.53 dB
10 %	0.36 dB
1 %	0.48 dB
.1 %	0.56 dB
.01 %	0.56 dB

Date: 15.FEB.2019 14:48:04

Highest Channel



Complementary Cumulative Distribution Function (100000 samples)

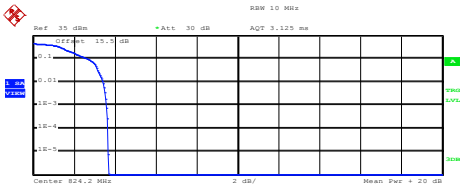
Trace 1

Mean	31.45 dBm
Peak	31.98 dBm
Crest	0.53 dB
10 %	0.36 dB
1 %	0.48 dB
.1 %	0.56 dB
.01 %	0.56 dB

Date: 15.FEB.2019 14:48:30

GSM850 (EDGE class 8)

Lowest Channel



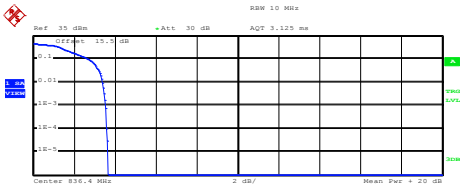
Complementary Cumulative Distribution Function (100000 samples)

Trace 1

Mean	24.99 dBm
Peak	28.66 dBm
Crest	3.67 dB
10 %	2.68 dB
1 %	3.44 dB
.1 %	3.60 dB
.01 %	3.68 dB

Date: 15.FEB.2019 15:01:31

Middle Channel



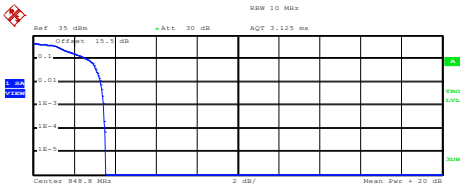
Complementary Cumulative Distribution Function (100000 samples)

Trace 1

Mean	25.28 dBm
Peak	28.95 dBm
Crest	3.67 dB
10 %	2.72 dB
1 %	3.40 dB
.1 %	3.56 dB
.01 %	3.60 dB

Date: 15.FEB.2019 15:01:49

Highest Channel



Complementary Cumulative Distribution Function (100000 samples)

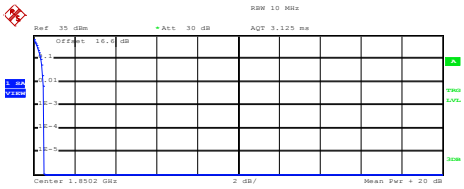
Trace 1

Mean	25.27 dBm
Peak	28.81 dBm
Crest	3.54 dB
10 %	2.68 dB
1 %	3.32 dB
.1 %	3.44 dB
.01 %	3.52 dB

Date: 15.FEB.2019 15:02:04

GSM1900 (GPRS class 8)

Lowest Channel



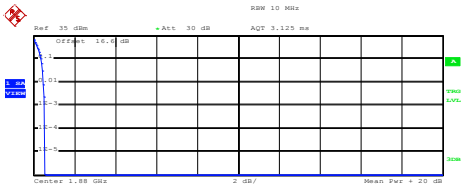
Complementary Cumulative Distribution Function (100000 samples)

Trace 1

Mean	28.15 dBm
Peak	28.66 dBm
Crest	0.52 dB
10 %	0.36 dB
1 %	0.48 dB
.1 %	0.52 dB
.01 %	0.52 dB

Date: 15.FEB.2019 17:05:52

Middle Channel



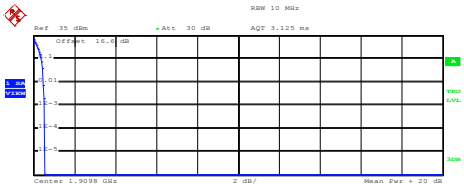
Complementary Cumulative Distribution Function (100000 samples)

Trace 1

Mean	27.92 dBm
Peak	28.45 dBm
Crest	0.54 dB
10 %	0.36 dB
1 %	0.48 dB
.1 %	0.56 dB
.01 %	0.56 dB

Date: 15.FEB.2019 17:06:19

Highest Channel



Complementary Cumulative Distribution Function (100000 samples)

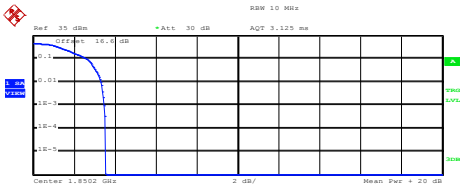
Trace 1

Mean	27.83 dBm
Peak	28.38 dBm
Crest	0.55 dB
10 %	0.36 dB
1 %	0.48 dB
.1 %	0.56 dB
.01 %	0.56 dB

Date: 15.FEB.2019 17:06:37

GSM1900 (EDGE class 8)

Lowest Channel



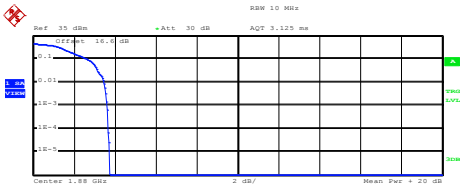
Complementary Cumulative Distribution Function (100000 samples)

Trace 1

Mean	24.21 dBm
Peak	27.75 dBm
Crest	3.53 dB
10 %	2.64 dB
1 %	3.32 dB
.1 %	3.48 dB
.01 %	3.56 dB

Date: 15.FEB.2019 17:20:31

Middle Channel



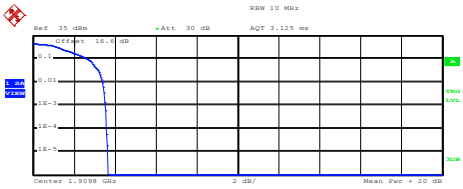
Complementary Cumulative Distribution Function (100000 samples)

Trace 1

Mean	23.80 dBm
Peak	27.54 dBm
Crest	3.74 dB
10 %	2.68 dB
1 %	3.48 dB
.1 %	3.64 dB
.01 %	3.68 dB

Date: 15.FEB.2019 17:20:50

Highest Channel



Complementary Cumulative Distribution Function (100000 samples)

Trace 1

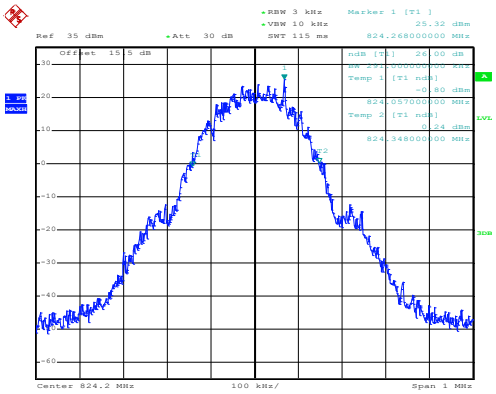
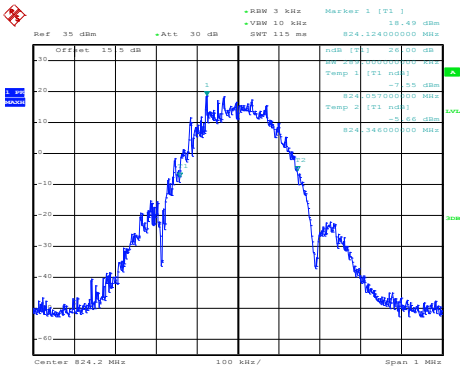
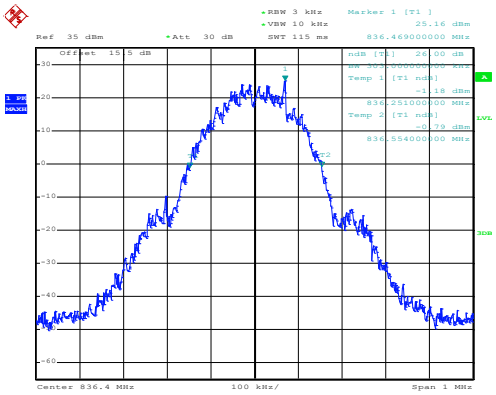
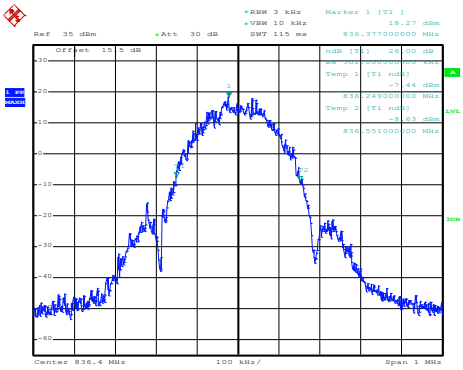
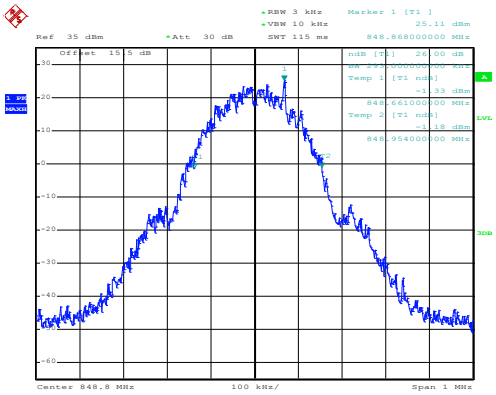
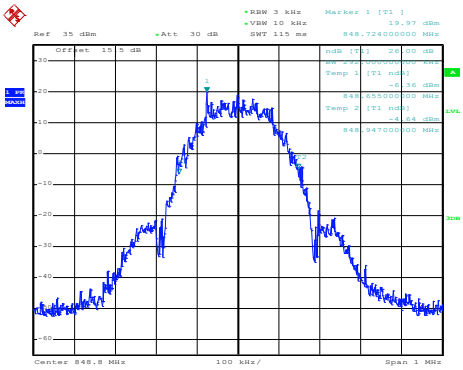
Mean	23.67 dBm
Peak	27.32 dBm
Crest	3.65 dB
10 %	2.68 dB
1 %	3.40 dB
.1 %	3.52 dB
.01 %	3.60 dB

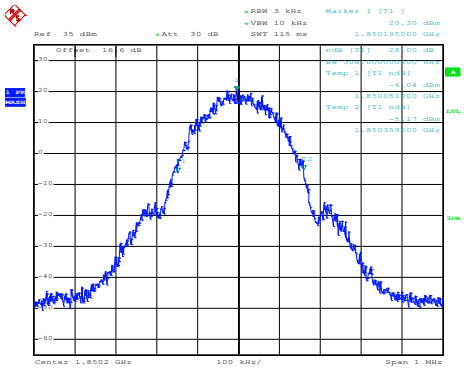
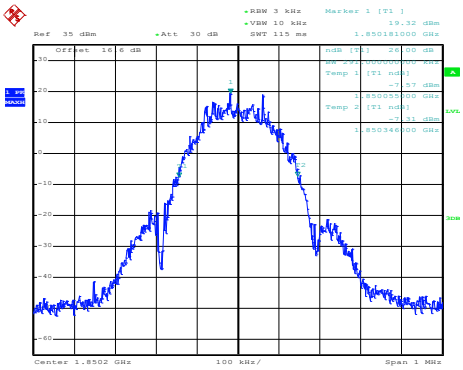
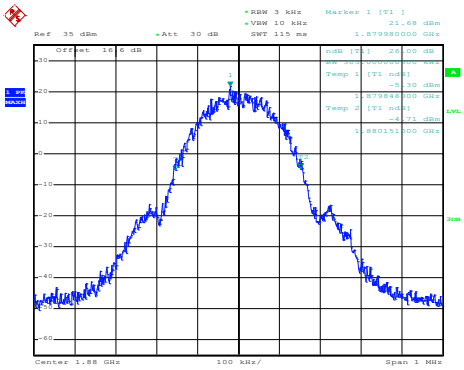
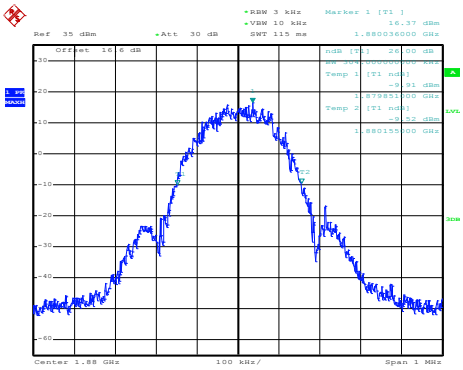
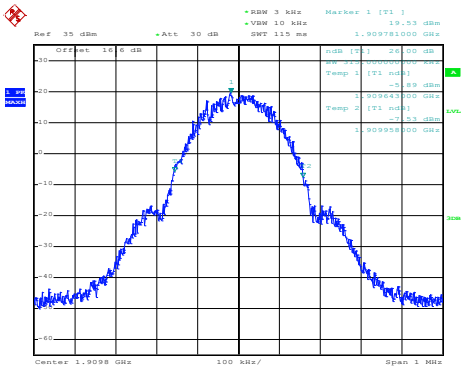
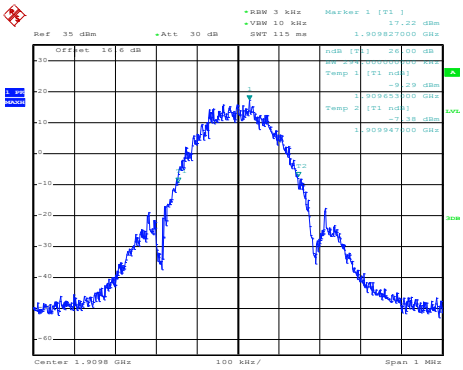
Date: 15.FEB.2019 17:21:14

26dB Bandwidth

Mode	GSM850 : 26dB BW(MHz)	
Mod.	GSM	EDGE class 8
Lowest CH	0.291	0.289
Middle CH	0.303	0.302
Highest CH	0.293	0.292

Mode	GSM1900 : 26dB BW(MHz)	
Mod.	GPRS class 8	EDGE class 8
Lowest CH	0.308	0.291
Middle CH	0.305	0.304
Highest CH	0.315	0.294

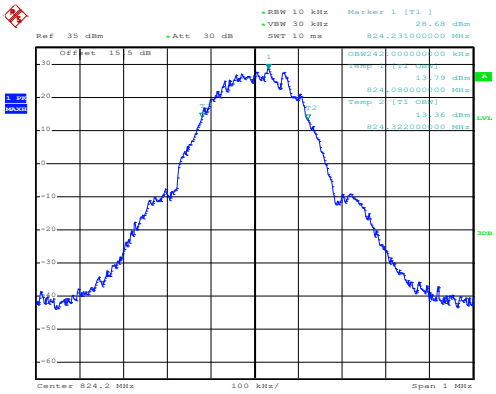
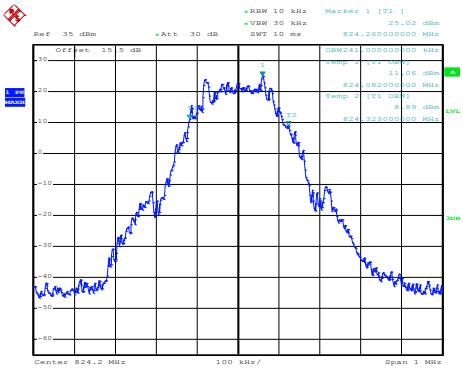
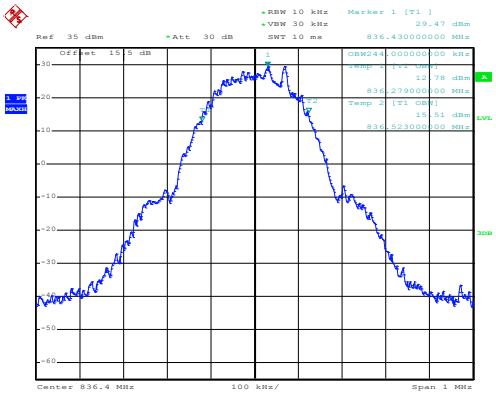
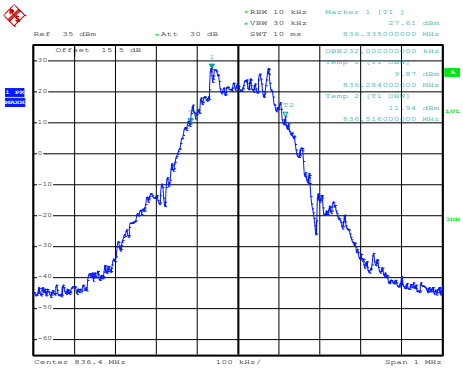
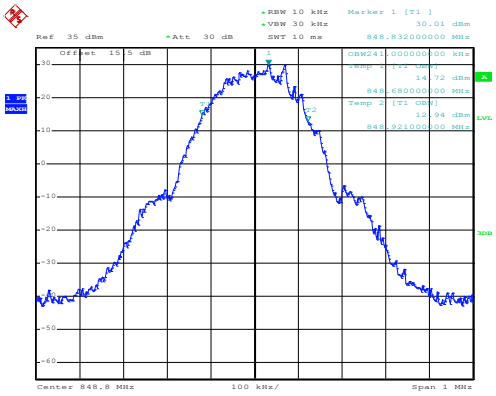
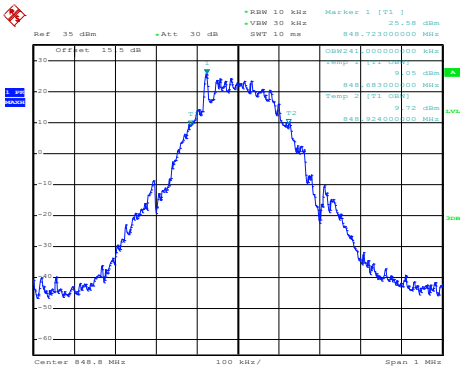
GSM850 (GSM)	GSM850 (EDGE class 8)
Lowest Channel	**Lowest Channel**
 Date: 15.FEB.2019 14:34:47	 Date: 15.FEB.2019 14:51:01
Middle Channel	**Middle Channel**
 Date: 15.FEB.2019 14:35:46	 Date: 15.FEB.2019 14:51:37
Highest Channel	**Highest Channel**
 Date: 15.FEB.2019 14:36:31	 Date: 15.FEB.2019 14:52:13

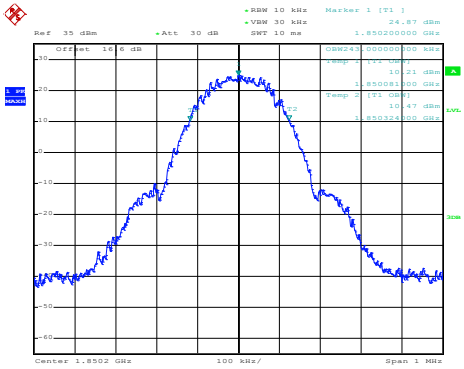
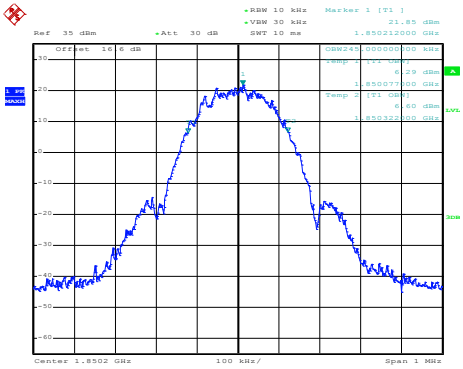
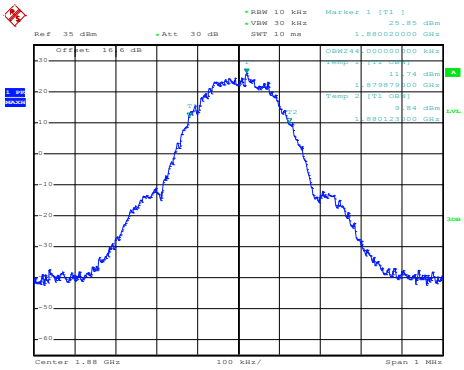
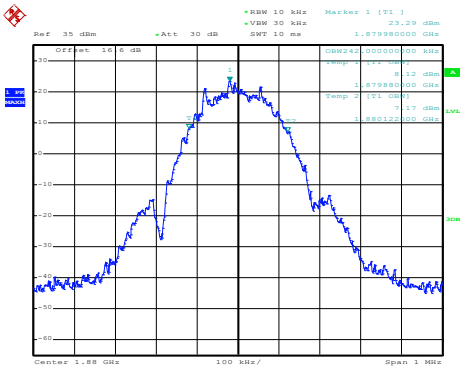
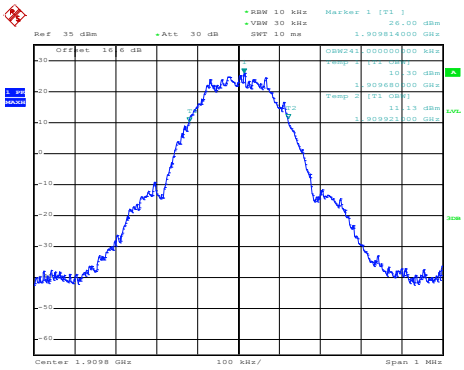
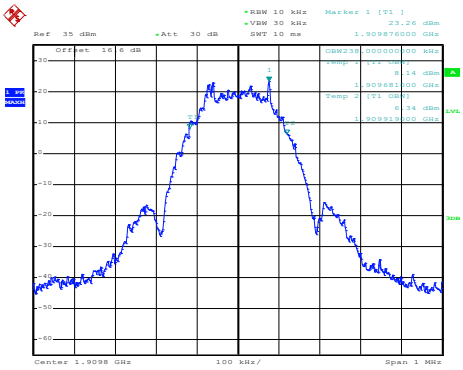
GSM1900 (GPRS class 8)	GSM1900 (EDGE class 8)
Lowest Channel	**Lowest Channel**
 Date: 15.FEB.2019 16:56:01	 Date: 15.FEB.2019 17:08:01
Middle Channel	**Middle Channel**
 Date: 15.FEB.2019 16:56:36	 Date: 15.FEB.2019 17:08:36
Highest Channel	**Highest Channel**
 Date: 15.FEB.2019 16:57:10	 Date: 15.FEB.2019 17:09:12

Occupied Bandwidth

Mode	GSM850 : 99% OBW(MHz)	
Mod.	GSM	EDGE class 8
Lowest CH	0.242	0.241
Middle CH	0.244	0.232
Highest CH	0.241	0.241

Mode	GSM1900 : 99% OBW(MHz)	
Mod.	GPRS class 8	EDGE class 8
Lowest CH	0.243	0.245
Middle CH	0.244	0.242
Highest CH	0.241	0.238

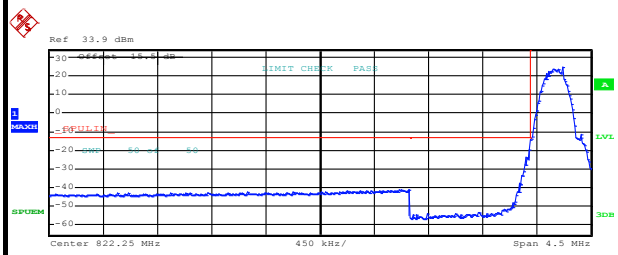
GSM850 (GSM)	GSM850 (EDGE class 8)
Lowest Channel	**Lowest Channel**
 Date: 15.FEB.2019 14:37:13	 Date: 15.FEB.2019 14:53:04
Middle Channel	**Middle Channel**
 Date: 15.FEB.2019 14:37:52	 Date: 15.FEB.2019 14:53:38
Highest Channel	**Highest Channel**
 Date: 15.FEB.2019 14:38:30	 Date: 15.FEB.2019 14:54:15

GSM1900 (GPRS class 8)	GSM1900 (EDGE class 8)
Lowest Channel	**Lowest Channel**
 Date: 15.FEB.2019 16:57:59	 Date: 15.FEB.2019 17:10:00
Middle Channel	**Middle Channel**
 Date: 15.FEB.2019 16:58:43	 Date: 15.FEB.2019 17:10:45
Highest Channel	**Highest Channel**
 Date: 15.FEB.2019 16:59:18	 Date: 15.FEB.2019 17:11:19

Conducted Band Edge

GSM850 (GSM)

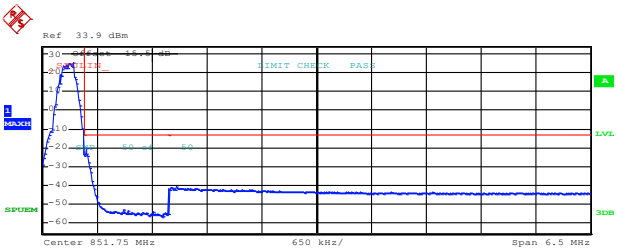
Lowest Band Edge



Start [Hz]	Stop [Hz]	RBW [Hz]	Freq [Hz]	PwrAbs [dBm]	ΔLimit [dB]
820.000 M	823.000 M	100.00 k	822.925000 M	-41.28	-28.28
823.000 M	824.000 M	3.00 k	823.996000 M	-21.44	-8.44
824.000 M	824.500 M	10.00 k	824.269000 M	25.13	-9.87

Date: 15.FEB.2019 14:40:07

Highest Band Edge

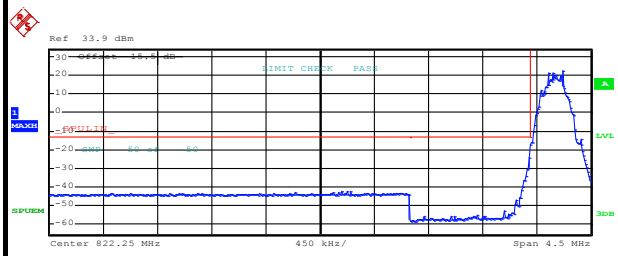


Start [Hz]	Stop [Hz]	RBW [Hz]	Freq [Hz]	PwrAbs [dBm]	ΔLimit [dB]
848.500 M	849.000 M	10.00 k	848.867000 M	25.49	-9.51
849.000 M	850.000 M	3.00 k	849.020000 M	-20.45	-7.45
850.000 M	855.000 M	100.00 k	850.075000 M	-40.72	-27.72

Date: 15.FEB.2019 14:43:01

GSM850 (EDGE class 8)

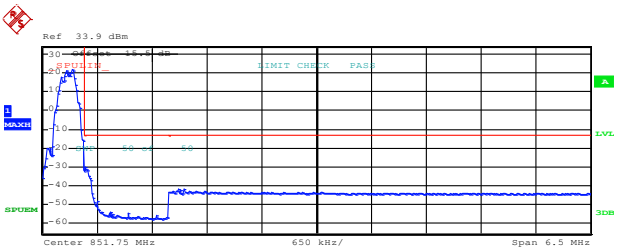
Lowest Band Edge



Start [Hz]	Stop [Hz]	RBW [Hz]	Freq [Hz]	PwrAbs [dBm]	ΔLimit [dB]
820.000 M	823.000 M	100.00 k	822.502000 M	-42.51	-29.51
823.000 M	824.000 M	3.00 k	823.992000 M	-24.34	-11.34
824.000 M	824.500 M	10.00 k	824.262500 M	22.29	-12.71

Date: 15.FEB.2019 14:55:58

Highest Band Edge

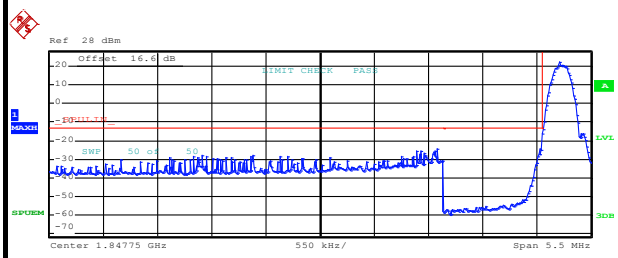


Start [Hz]	Stop [Hz]	RBW [Hz]	Freq [Hz]	PwrAbs [dBm]	ΔLimit [dB]
848.500 M	849.000 M	10.00 k	848.852500 M	22.04	-12.96
849.000 M	850.000 M	3.00 k	849.004000 M	-30.24	-17.24
850.000 M	855.000 M	100.00 k	850.110000 M	-41.74	-28.74

Date: 15.FEB.2019 14:57:56

GSM1900 (GPRS class 8)

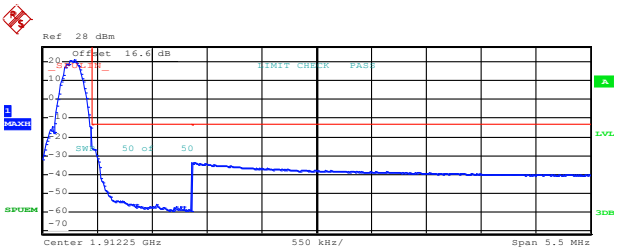
Lowest Band Edge



Start [Hz]	Stop [Hz]	RBW [Hz]	Freq [Hz]	PwrAbs [dBm]	ΔLimit [dB]
1.845 G	1.849 G	1.00 M	1.848932 G	-24.35	-11.35
1.849 G	1.850 G	3.00 k	1.849984 G	-24.56	-11.56
1.850 G	1.851 G	10.00 k	1.850182 G	22.29	-12.71

Date: 15.FEB.2019 17:00:53

Highest Band Edge

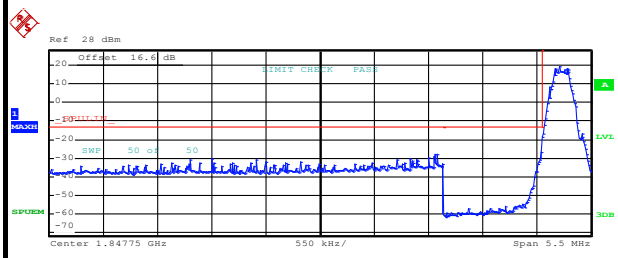


Start [Hz]	Stop [Hz]	RBW [Hz]	Freq [Hz]	PwrAbs [dBm]	ΔLimit [dB]
1.910 G	1.910 G	10.00 k	1.909814 G	21.08	-13.92
1.910 G	1.911 G	3.00 k	1.910024 G	-25.58	-12.58
1.911 G	1.915 G	1.00 M	1.911000 G	-33.63	-20.63

Date: 15.FEB.2019 17:02:28

GSM1900 (EDGE class 8)

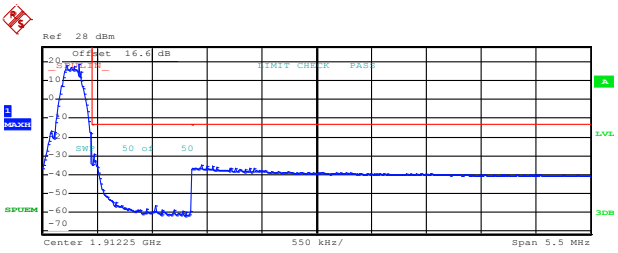
Lowest Band Edge



Start [Hz]	Stop [Hz]	RBW [Hz]	Freq [Hz]	PwrAbs [dBm]	ΔLimit [dB]
1.845 G	1.849 G	1.00 M	1.848912 G	-27.58	-14.58
1.849 G	1.850 G	3.00 k	1.849988 G	-26.60	-13.60
1.850 G	1.851 G	10.00 k	1.850178 G	19.44	-15.56

Date: 15.FEB.2019 17:12:57

Highest Band Edge



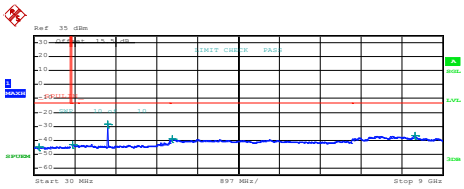
Start [Hz]	Stop [Hz]	RBW [Hz]	Freq [Hz]	PwrAbs [dBm]	ΔLimit [dB]
1.910 G	1.910 G	10.00 k	1.909858 G	18.76	-16.24
1.910 G	1.911 G	3.00 k	1.910008 G	-29.07	-16.07
1.911 G	1.915 G	1.00 M	1.911096 G	-34.71	-21.71

Date: 15.FEB.2019 17:14:31

Conducted Spurious Emission

GSM850 (GSM)

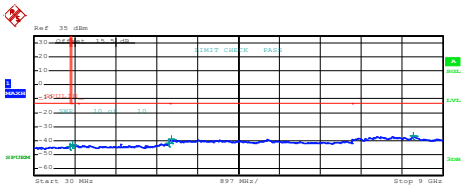
Lowest Channel



Start [Hz]	Stop [Hz]	RBW [Hz]	Freq [Hz]	PwrAbs [dBm]	ΔLimit [dB]
30.000 M	820.000 M	1.00 M	129.935000 M	-44.55	-31.55
855.000 M	1.000 G	1.00 M	873.813751 M	-43.05	-30.05
1.000 G	3.000 G	1.00 M	1.648500 G	-28.68	-15.68
3.000 G	7.000 G	1.00 M	3.057000 G	-39.24	-26.24
7.000 G	9.000 G	1.00 M	8.386500 G	-36.88	-23.88

Date: 15.FEB.2019 14:44:55

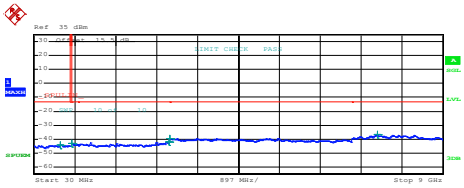
Middle Channel



Start [Hz]	Stop [Hz]	RBW [Hz]	Freq [Hz]	PwrAbs [dBm]	ΔLimit [dB]
30.000 M	820.000 M	1.00 M	812.100000 M	-44.25	-31.25
855.000 M	1.000 G	1.00 M	869.463751 M	-43.25	-30.25
1.000 G	3.000 G	1.00 M	2.992500 G	-42.02	-29.02
3.000 G	7.000 G	1.00 M	3.045000 G	-39.21	-26.21
7.000 G	9.000 G	1.00 M	8.356500 G	-36.59	-23.59

Date: 15.FEB.2019 14:45:49

Highest Channel

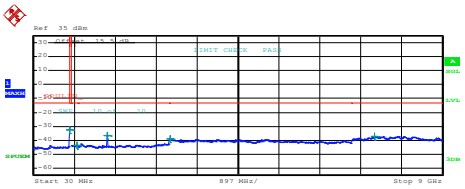


Start [Hz]	Stop [Hz]	RBW [Hz]	Freq [Hz]	PwrAbs [dBm]	ΔLimit [dB]
30.000 M	820.000 M	1.00 M	611.242500 M	-44.09	-31.09
855.000 M	1.000 G	1.00 M	857.900000 M	-42.91	-29.91
1.000 G	3.000 G	1.00 M	2.990500 G	-41.88	-28.88
3.000 G	7.000 G	1.00 M	3.004000 G	-39.44	-26.44
7.000 G	9.000 G	1.00 M	7.573000 G	-36.65	-23.65

Date: 15.FEB.2019 14:47:01

GSM850 (EDGE class 8)

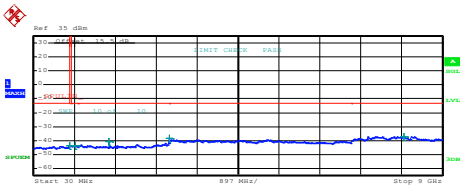
Lowest Channel



Start [Hz]	Stop [Hz]	RBW [Hz]	Freq [Hz]	PwrAbs [dBm]	ΔLimit [dB]
30.000 M	820.000 M	1.00 M	819.802500 M	-32.51	-19.51
855.000 M	1.000 G	1.00 M	973.791258 M	-43.63	-30.63
1.000 G	3.000 G	1.00 M	1.648500 G	-36.80	-23.80
3.000 G	7.000 G	1.00 M	3.030000 G	-39.04	-26.04
7.000 G	9.000 G	1.00 M	7.506500 G	-37.00	-24.00

Date: 15.FEB.2019 14:58:54

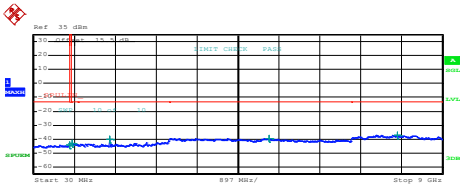
Middle Channel



Start [Hz]	Stop [Hz]	RBW [Hz]	Freq [Hz]	PwrAbs [dBm]	ΔLimit [dB]
30.000 M	820.000 M	1.00 M	812.100000 M	-43.68	-30.68
855.000 M	1.000 G	1.00 M	945.842506 M	-43.52	-30.52
1.000 G	3.000 G	1.00 M	1.673500 G	-40.69	-27.69
3.000 G	7.000 G	1.00 M	3.003000 G	-38.39	-25.39
7.000 G	9.000 G	1.00 M	8.158000 G	-37.05	-24.05

Date: 15.FEB.2019 14:59:47

Highest Channel

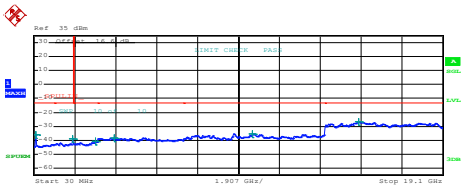


Start [Hz]	Stop [Hz]	RBW [Hz]	Freq [Hz]	PwrAbs [dBm]	ΔLimit [dB]
30.000 M	820.000 M	1.00 M	815.655000 M	-43.97	-30.97
855.000 M	1.000 G	1.00 M	866.636251 M	-43.13	-30.13
1.000 G	3.000 G	1.00 M	1.697500 G	-40.38	-27.38
3.000 G	7.000 G	1.00 M	5.194000 G	-39.34	-26.34
7.000 G	9.000 G	1.00 M	8.017500 G	-37.14	-24.14

Date: 15.FEB.2019 15:00:41

GSM1900 (GPRS class 8)

Lowest Channel

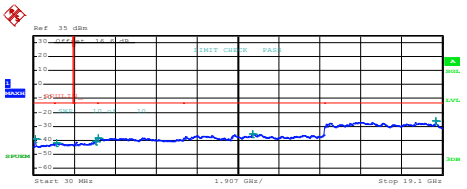


Start [Hz]	Stop [Hz]	RBW [Hz]	Freq [Hz]	PwrAbs [dBm]	ΔLimit [dB]
30.000 M	1.000 G	1.00 M	111.965000 M	-36.08	-23.08
1.000 G	1.845 G	1.00 M	1.838663 G	-39.19	-26.19
1.915 G	3.000 G	1.00 M	2.883363 G	-40.96	-27.96
3.000 G	7.000 G	1.00 M	3.771000 G	-38.38	-25.38
7.000 G	13.600 G	1.00 M	10.213375 G	-35.42	-22.42
13.600 G	19.100 G	1.00 M	15.164063 G	-26.77	-13.77

Date: 15.FEB.2019 17:03:28

GSM1900 (EDGE class 8)

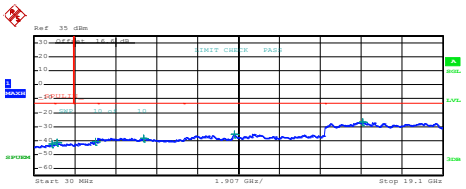
Lowest Channel



Start [Hz]	Stop [Hz]	RBW [Hz]	Freq [Hz]	PwrAbs [dBm]	ΔLimit [dB]
30.000 M	1.000 G	1.00 M	111.965000 M	-38.85	-25.85
1.000 G	1.845 G	1.00 M	1.091049 G	-41.82	-28.82
1.915 G	3.000 G	1.00 M	2.920795 G	-40.82	-27.82
3.000 G	7.000 G	1.00 M	3.046000 G	-38.14	-25.14
7.000 G	13.600 G	1.00 M	10.236475 G	-35.23	-22.23
13.600 G	19.100 G	1.00 M	18.786500 G	-26.32	-13.32

Date: 15.FEB.2019 17:16:44

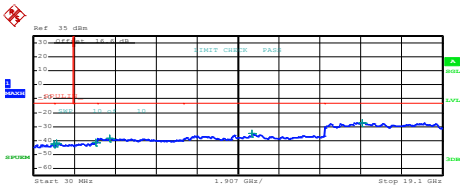
Middle Channel



Start [Hz]	Stop [Hz]	RBW [Hz]	Freq [Hz]	PwrAbs [dBm]	ΔLimit [dB]
30.000 M	1.000 G	1.00 M	868.080000 M	-42.30	-29.30
1.000 G	1.845 G	1.00 M	1.097598 G	-41.45	-28.45
1.915 G	3.000 G	1.00 M	2.877395 G	-40.80	-27.80
3.000 G	7.000 G	1.00 M	5.144000 G	-38.38	-25.38
7.000 G	13.600 G	1.00 M	9.392500 G	-35.58	-22.58
13.600 G	19.100 G	1.00 M	15.374438 G	-26.94	-13.94

Date: 15.FEB.2019 17:04:20

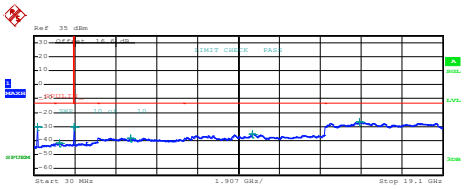
Middle Channel



Start [Hz]	Stop [Hz]	RBW [Hz]	Freq [Hz]	PwrAbs [dBm]	ΔLimit [dB]
30.000 M	1.000 G	1.00 M	990.057500 M	-42.52	-29.52
1.000 G	1.845 G	1.00 M	1.101822 G	-42.01	-29.01
1.915 G	3.000 G	1.00 M	2.929204 G	-41.09	-28.09
3.000 G	7.000 G	1.00 M	3.584000 G	-38.46	-25.46
7.000 G	13.600 G	1.00 M	10.230700 G	-35.16	-22.16
13.600 G	19.100 G	1.00 M	15.355875 G	-27.05	-14.05

Date: 15.FEB.2019 17:17:38

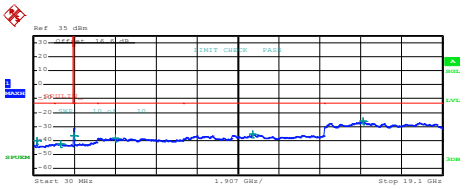
Highest Channel



Start [Hz]	Stop [Hz]	RBW [Hz]	Freq [Hz]	PwrAbs [dBm]	ΔLimit [dB]
30.000 M	1.000 G	1.00 M	171.620000 M	-30.47	-17.47
1.000 G	1.845 G	1.00 M	1.195406 G	-42.03	-29.03
1.915 G	3.000 G	1.00 M	1.915271 G	-30.11	-17.11
3.000 G	7.000 G	1.00 M	4.533000 G	-38.20	-25.20
7.000 G	13.600 G	1.00 M	10.221625 G	-35.63	-22.63
13.600 G	19.100 G	1.00 M	15.225250 G	-26.56	-13.56

Date: 15.FEB.2019 17:05:10

Highest Channel



Start [Hz]	Stop [Hz]	RBW [Hz]	Freq [Hz]	PwrAbs [dBm]	ΔLimit [dB]
30.000 M	1.000 G	1.00 M	171.862500 M	-40.12	-27.12
1.000 G	1.845 G	1.00 M	1.277583 G	-42.26	-29.26
1.915 G	3.000 G	1.00 M	1.915271 G	-36.53	-23.53
3.000 G	7.000 G	1.00 M	3.840000 G	-38.20	-25.20
7.000 G	13.600 G	1.00 M	10.246375 G	-35.61	-22.61
13.600 G	19.100 G	1.00 M	15.386813 G	-26.11	-13.11

Date: 15.FEB.2019 17:18:37

Frequency Stability

Test Conditions	Middle Channel	GSM850 (GSM)	GSM850 (EDGE class 8)	Limit 2.5ppm
Temperature (°C)	Voltage (Volt)	Deviation (ppm)		Result
50	Normal Voltage	0.0012	0.0036	PASS
40	Normal Voltage	0.0048	0.0012	
30	Normal Voltage	0.0024	0.0036	
20(Ref.)	Normal Voltage	0.0000	0.0000	
10	Normal Voltage	0.0024	0.0000	
0	Normal Voltage	0.0072	0.0024	
-10	Normal Voltage	0.0132	0.0048	
-20	Normal Voltage	0.0155	0.0132	
-30	Normal Voltage	0.0215	0.0179	
20	Maximum Voltage	0.0024	0.0036	
20	Normal Voltage	0.0000	0.0000	
20	Battery End Point	0.0060	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	0.0021	0.0032	PASS
40	Normal Voltage	0.0043	0.0016	
30	Normal Voltage	0.0032	0.0043	
20(Ref.)	Normal Voltage	0.0000	0.0000	
10	Normal Voltage	0.0037	0.0000	
0	Normal Voltage	0.0021	0.0021	
-10	Normal Voltage	0.0043	0.0043	
-20	Normal Voltage	0.0069	0.0069	
-30	Normal Voltage	0.0096	0.0059	
20	Maximum Voltage	0.0016	0.0011	
20	Normal Voltage	0.0000	0.0000	
20	Battery End Point	0.0021	0.0043	

Note:

1. Normal Voltage = 3.9V. ；Battery End Point (BEP) = 3.4 V.；Maximum Voltage =4.35 V

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

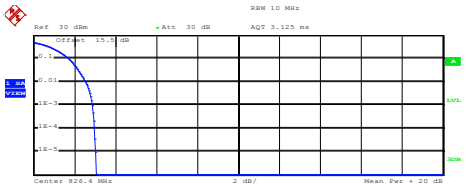
A3. WCDMA

Peak-to-Average Ratio

Mode	WCDMA Band V	WCDMA Band II	Limit: 13dB
Mod.	RMC 12.2Kbps	RMC 12.2Kbps	Result
Lowest CH	2.88	3.08	PASS
Middle CH	3.08	2.88	
Highest CH	3.12	3.08	

WCDMA Band V (RMC 12.2Kbps)

Lowest Channel



Complementary Cumulative Distribution Function (100000 samples)

Trace 1

Mean	22.15 dBm
Peak	25.22 dBm
Crest	3.07 dB
10 %	1.72 dB
1 %	2.56 dB
.1 %	2.88 dB
.01 %	3.00 dB

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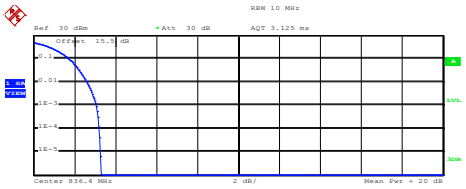
Middle Channel



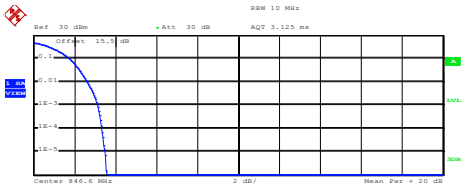
Complementary Cumulative Distribution Function (100000 samples)

Trace 1

Mean	22.11 dBm
Peak	25.43 dBm
Crest	3.32 dB
10 %	1.72 dB
1 %	2.60 dB
.1 %	3.08 dB
.01 %	3.20 dB

Date: 15.FEB.2019 16:26:19

Highest Channel



Complementary Cumulative Distribution Function (100000 samples)

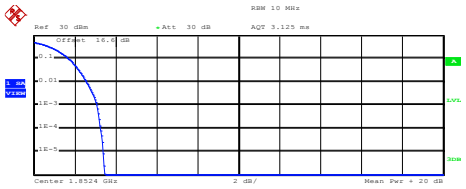
Trace 1

Mean	22.01 dBm
Peak	25.57 dBm
Crest	3.56 dB
10 %	1.76 dB
1 %	2.60 dB
.1 %	3.12 dB
.01 %	3.36 dB

Date: 15.FEB.2019 16:26:37

WCDMA Band II (RMC 12.2Kbps)

Lowest Channel



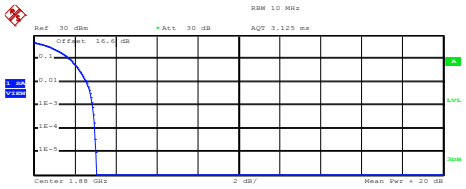
Complementary Cumulative Distribution Function (100000 samples)

Trace 1

Mean	21.69 dBm
Peak	25.15 dBm
Crest	3.45 dB
10 %	1.68 dB
1 %	2.56 dB
.1 %	3.08 dB
.01 %	3.28 dB

Date: 15.FEB.2019 16:51:51

Middle Channel



Complementary Cumulative Distribution Function (100000 samples)

Trace 1

Mean	21.68 dBm
Peak	24.72 dBm
Crest	3.05 dB
10 %	1.76 dB
1 %	2.56 dB
.1 %	2.88 dB
.01 %	3.00 dB

Date: 15.FEB.2019 16:52:12

Highest Channel

Complementary Cumulative Distribution Function (100000 samples)

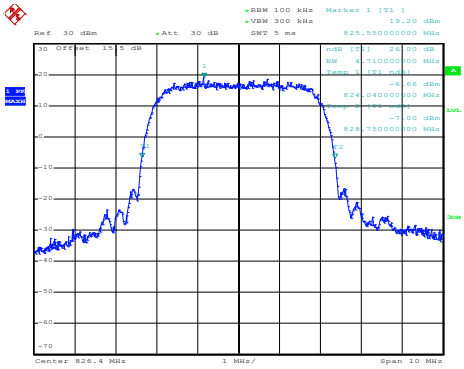
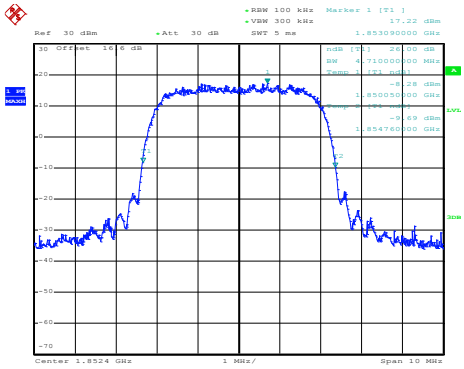
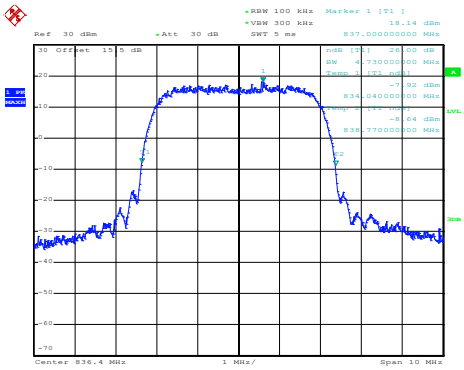
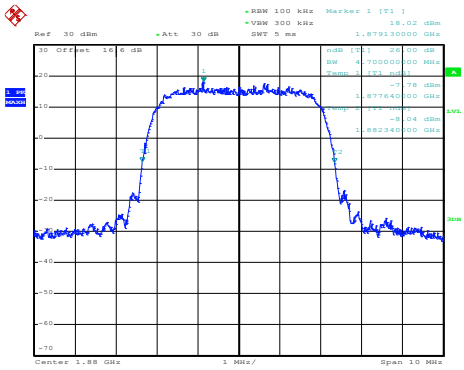
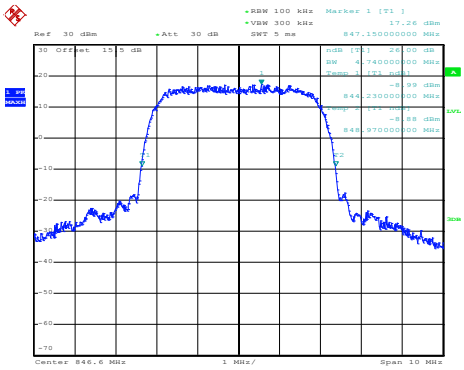
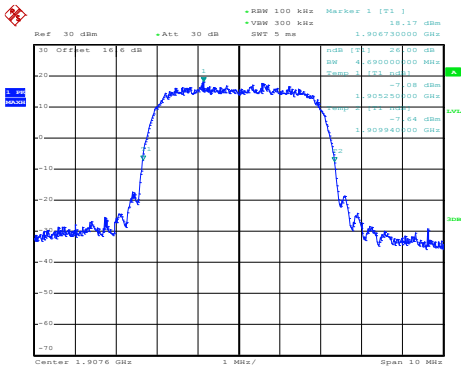
Trace 1

Mean	21.77 dBm
Peak	25.15 dBm
Crest	3.37 dB
10 %	1.72 dB
1 %	2.60 dB
.1 %	3.08 dB
.01 %	3.24 dB

Date: 15.FEB.2019 16:52:29

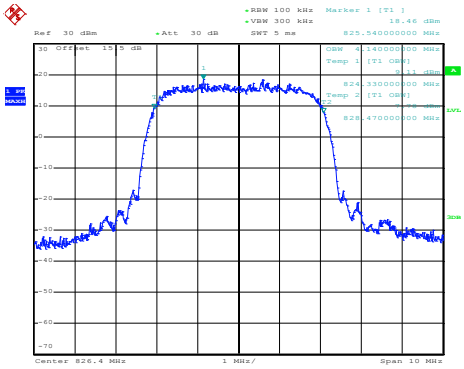
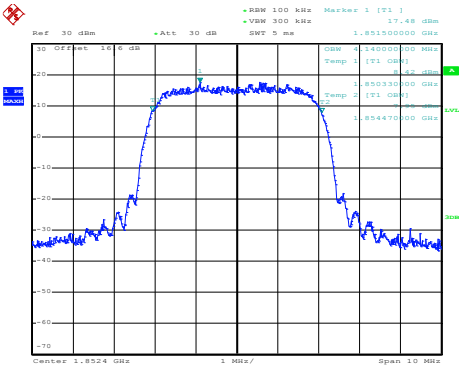
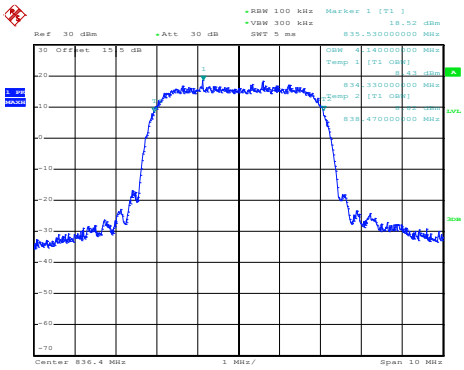
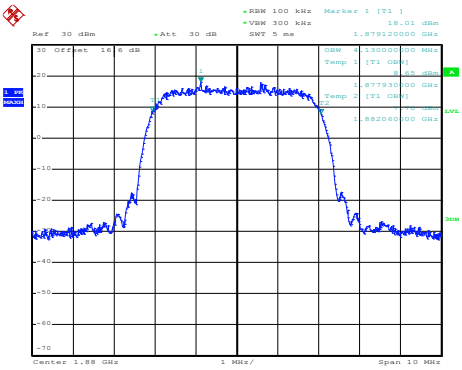
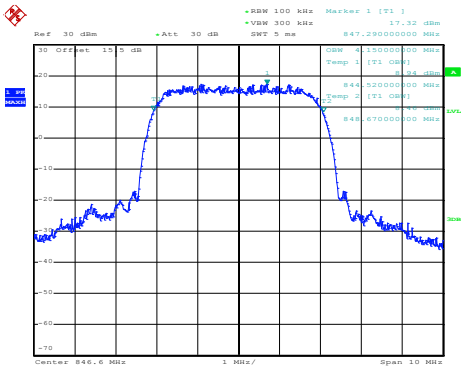
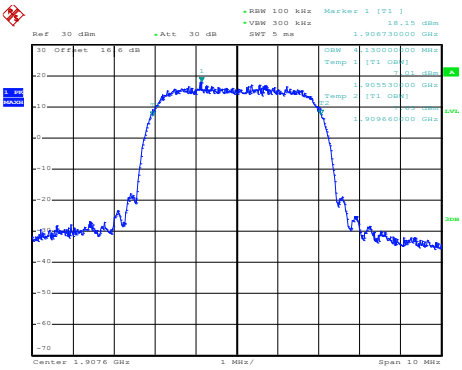
26dB Bandwidth

Mode	WCDMA Band V 26dB BW(MHz)	WCDMA Band II 26dB BW(MHz)
Mod.	RMC 12.2Kbps	RMC 12.2Kbps
Lowest CH	4.71	4.71
Middle CH	4.73	4.70
Highest CH	4.74	4.69

WCDMA Band V (RMC 12.2Kbps)	WCDMA Band II (RMC 12.2Kbps)
Lowest Channel	**Lowest Channel**
 Date: 15.FEB.2019 16:10:07	 Date: 15.FEB.2019 16:31:54
Middle Channel	**Middle Channel**
 Date: 15.FEB.2019 16:10:41	 Date: 15.FEB.2019 16:32:30
Highest Channel	**Highest Channel**
 Date: 15.FEB.2019 16:11:16	 Date: 15.FEB.2019 16:33:13

Occupied Bandwidth

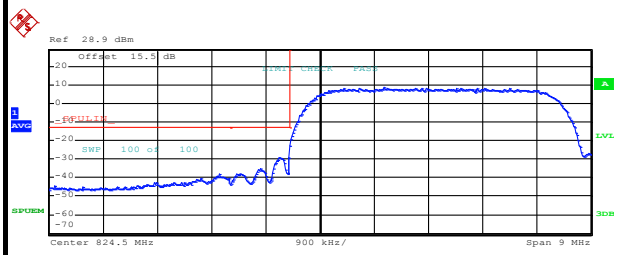
Mode	WCDMA Band V 99% OBW(MHz)	WCDMA Band II 99% OBW(MHz)
Mod.	RMC 12.2Kbps	RMC 12.2Kbps
Lowest CH	4.14	4.14
Middle CH	4.14	4.13
Highest CH	4.15	4.13

WCDMA Band V (RMC 12.2Kbps)	WCDMA Band II (RMC 12.2Kbps)
Lowest Channel	**Lowest Channel**
 Date: 15.FEB.2019 16:11:59	 Date: 15.FEB.2019 16:33:58
Middle Channel	**Middle Channel**
 Date: 15.FEB.2019 16:12:38	 Date: 15.FEB.2019 16:34:34
Highest Channel	**Highest Channel**
 Date: 15.FEB.2019 16:13:37	 Date: 15.FEB.2019 16:35:11

Conducted Band Edge

WCDMA Band V (RMC 12.2Kbps)

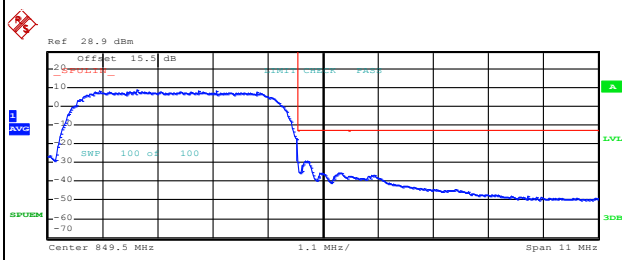
Lowest Band Edge



Start [Hz]	Stop [Hz]	RBW [Hz]	Freq [Hz]	PwrAbs [dBm]	ΔLimit [dB]
820.000 M	823.000 M	100.00 k	822.832000 M	-38.15	-25.15
823.000 M	824.000 M	50.00 k	823.820000 M	-29.41	-16.41
824.000 M	829.000 M	100.00 k	825.550000 M	8.67	-26.33

Date: 15.FEB.2019 16:16:32

Highest Band Edge

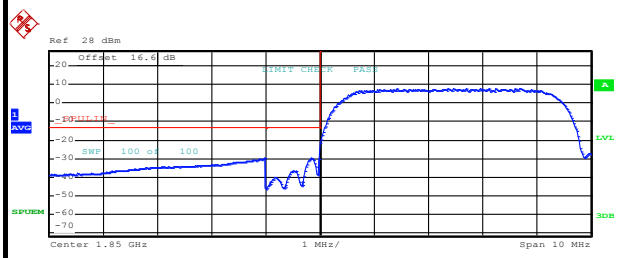


Start [Hz]	Stop [Hz]	RBW [Hz]	Freq [Hz]	PwrAbs [dBm]	ΔLimit [dB]
844.000 M	849.000 M	100.00 k	845.785000 M	8.46	-26.54
849.000 M	850.000 M	50.00 k	849.180000 M	-29.31	-16.31
850.000 M	855.000 M	100.00 k	850.510000 M	-36.75	-23.75

Date: 15.FEB.2019 16:20:06

WCDMA Band II (RMC 12.2Kbps)

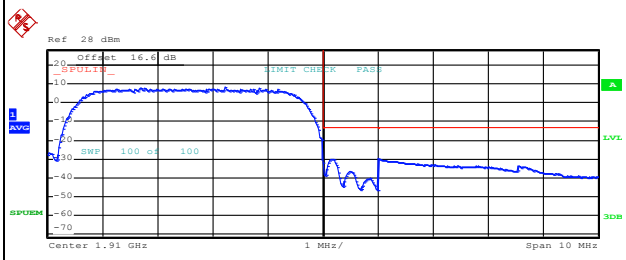
Lowest Band Edge



Start [Hz]	Stop [Hz]	RBW [Hz]	Freq [Hz]	PwrAbs [dBm]	ΔLimit [dB]
1.845 G	1.849 G	1.00 M	1.848992 G	-29.49	-16.49
1.849 G	1.850 G	50.00 k	1.849844 G	-29.89	-16.89
1.850 G	1.855 G	100.00 k	1.852700 G	8.02	-26.98

Date: 15.FEB.2019 16:45:44

Highest Band Edge



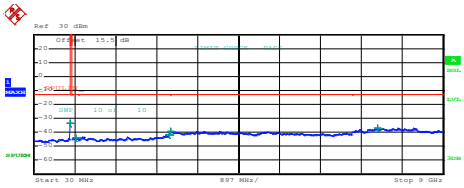
Start [Hz]	Stop [Hz]	RBW [Hz]	Freq [Hz]	PwrAbs [dBm]	ΔLimit [dB]
1.905 G	1.910 G	100.00 k	1.908225 G	8.36	-26.64
1.910 G	1.911 G	50.00 k	1.910136 G	-30.00	-17.00
1.911 G	1.915 G	1.00 M	1.911000 G	-29.57	-16.57

Date: 15.FEB.2019 16:48:35

Conducted Spurious Emission

WCDMA Band V (RMC 12.2Kbps)

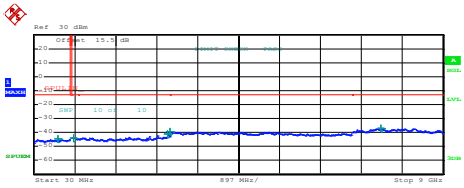
Lowest Channel



Start [Hz]	Stop [Hz]	RBW [Hz]	Freq [Hz]	PwrAbs [dBm]	ΔLimit [dB]
30.000 M	820.000 M	1.00 M	819.802500 M	-33.53	-20.53
855.000 M	1.000 G	1.00 M	951.243757 M	-43.82	-30.82
1.000 G	3.000 G	1.00 M	2.999000 G	-41.87	-28.87
3.000 G	7.000 G	1.00 M	3.022000 G	-39.10	-26.10
7.000 G	9.000 G	1.00 M	7.573000 G	-37.03	-24.03

Date: 15.FEB.2019 16:23:43

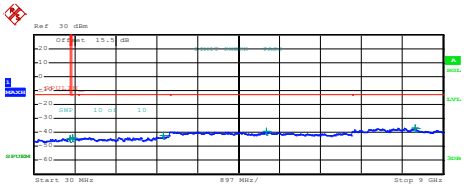
Middle Channel



Start [Hz]	Stop [Hz]	RBW [Hz]	Freq [Hz]	PwrAbs [dBm]	ΔLimit [dB]
30.000 M	820.000 M	1.00 M	544.290000 M	-44.81	-31.81
855.000 M	1.000 G	1.00 M	886.972502 M	-43.69	-30.69
1.000 G	3.000 G	1.00 M	2.963000 G	-41.31	-28.31
3.000 G	7.000 G	1.00 M	3.008000 G	-39.32	-26.32
7.000 G	9.000 G	1.00 M	7.633000 G	-37.11	-24.11

Date: 15.FEB.2019 16:24:44

Highest Channel

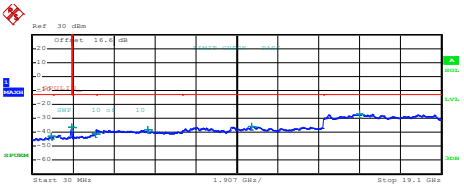


Start [Hz]	Stop [Hz]	RBW [Hz]	Freq [Hz]	PwrAbs [dBm]	ΔLimit [dB]
30.000 M	820.000 M	1.00 M	817.235000 M	-44.67	-31.67
855.000 M	1.000 G	1.00 M	875.046251 M	-43.89	-30.89
1.000 G	3.000 G	1.00 M	2.856500 G	-42.24	-29.24
3.000 G	7.000 G	1.00 M	5.129000 G	-39.54	-26.54
7.000 G	9.000 G	1.00 M	8.394500 G	-36.95	-23.95

Date: 15.FEB.2019 16:25:42

WCDMA Band II (RMC 12.2Kbps)

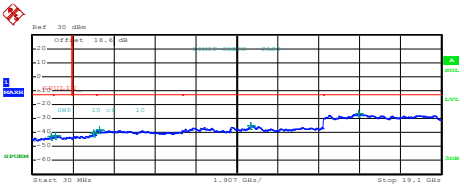
Lowest Channel



Start [Hz]	Stop [Hz]	RBW [Hz]	Freq [Hz]	PwrAbs [dBm]	ΔLimit [dB]
30.000 M	1.000 G	1.00 M	913.670000 M	-42.91	-29.91
1.000 G	1.845 G	1.00 M	1.843944 G	-36.40	-23.40
1.915 G	3.000 G	1.00 M	2.985352 G	-40.88	-27.88
3.000 G	7.000 G	1.00 M	5.394000 G	-38.01	-25.01
7.000 G	13.600 G	1.00 M	10.246375 G	-35.79	-22.79
13.600 G	19.100 G	1.00 M	15.288500 G	-26.76	-13.76

Date: 15.FEB.2019 16:49:37

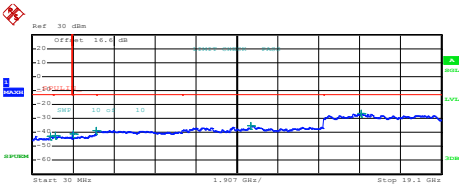
Middle Channel



Start [Hz]	Stop [Hz]	RBW [Hz]	Freq [Hz]	PwrAbs [dBm]	ΔLimit [dB]
30.000 M	1.000 G	1.00 M	890.632500 M	-43.04	-30.04
1.000 G	1.845 G	1.00 M	1.084500 G	-42.09	-29.09
1.915 G	3.000 G	1.00 M	2.907233 G	-40.61	-27.61
3.000 G	7.000 G	1.00 M	3.175000 G	-38.34	-25.34
7.000 G	13.600 G	1.00 M	10.224925 G	-35.33	-22.33
13.600 G	19.100 G	1.00 M	15.252062 G	-26.44	-13.44

Date: 15.FEB.2019 16:50:33

Highest Channel



Start [Hz]	Stop [Hz]	RBW [Hz]	Freq [Hz]	PwrAbs [dBm]	ΔLimit [dB]
30.000 M	1.000 G	1.00 M	878.750000 M	-42.97	-29.97
1.000 G	1.845 G	1.00 M	1.081543 G	-42.09	-29.09
1.915 G	3.000 G	1.00 M	1.917984 G	-41.31	-28.31
3.000 G	7.000 G	1.00 M	3.006000 G	-38.81	-25.81
7.000 G	13.600 G	1.00 M	10.224925 G	-35.31	-22.31
13.600 G	19.100 G	1.00 M	15.352438 G	-26.72	-13.72

Date: 15.FEB.2019 16:51:28

Frequency Stability

Test Conditions	Middle Channel	WCDMA Band V (RMC 12.2Kbps)	Limit 2.5ppm
Temperature (°C)	Voltage (Volt)	Deviation (ppm)	Result
50	Normal Voltage	0.0036	PASS
40	Normal Voltage	0.0012	
30	Normal Voltage	0.0012	
20(Ref.)	Normal Voltage	0.0000	
10	Normal Voltage	0.0036	
0	Normal Voltage	0.0036	
-10	Normal Voltage	0.0012	
-20	Normal Voltage	0.0024	
-30	Normal Voltage	0.0072	
20	Maximum Voltage	0.0048	
20	Normal Voltage	0.0000	
20	Battery End Point	0.0036	

Test Conditions	Middle Channel	WCDMA Band II (RMC 12.2Kbps)	Limit Note 2.
Temperature (°C)	Voltage (Volt)	Deviation (ppm)	Result
50	Normal Voltage	0.0005	PASS
40	Normal Voltage	0.0016	
30	Normal Voltage	0.0011	
20(Ref.)	Normal Voltage	0.0000	
10	Normal Voltage	0.0011	
0	Normal Voltage	0.0027	
-10	Normal Voltage	0.0048	
-20	Normal Voltage	0.0043	
-30	Normal Voltage	0.0043	
20	Maximum Voltage	0.0016	
20	Normal Voltage	0.0000	
20	Battery End Point	0.0021	

Note:

1. Normal Voltage = 3.9V. ；Battery End Point (BEP) = 3.4 V.；Maximum Voltage =4.35 V

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

A4. CDMA

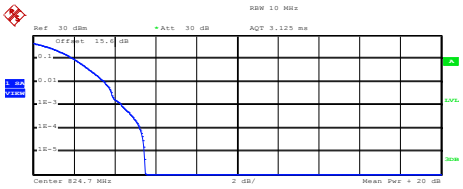
Peak-to-Average Ratio

Mode	CDMA BC0	CDMA BC1	Limit: 13dB
Mod.	1xRTT	1xRTT	Result
Lowest CH	4.32	3.68	PASS
Middle CH	4.08	3.72	
Highest CH	4.20	3.84	

Mode	CDMA BC0	CDMA BC1	Limit: 13dB
Mod.	1xEV-DO Rev. A	1xEV-DO Rev. 0	Result
Lowest CH	4.08	3.52	PASS
Middle CH	4.20	3.72	
Highest CH	4.12	4.08	

CDMA BC0 (1xRTT)

Lowest Channel



Complementary Cumulative Distribution Function (100000 samples)

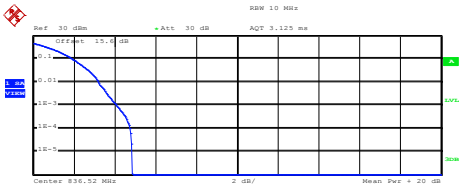
Trace 1

Mean 22.06 dBm
Peak 27.54 dBm
Crest 5.49 dB

10 % 2.00 dB
1 % 3.48 dB
.1 % 4.32 dB
.01 % 5.24 dB

Date: 18.FEB.2019 15:04:27

Middle Channel



Complementary Cumulative Distribution Function (100000 samples)

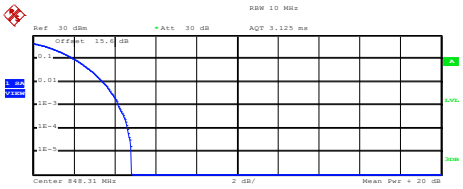
Trace 1

Mean 22.83 dBm
Peak 27.69 dBm
Crest 4.85 dB

10 % 1.96 dB
1 % 3.20 dB
.1 % 4.08 dB
.01 % 4.76 dB

Date: 18.FEB.2019 15:04:47

Highest Channel



Complementary Cumulative Distribution Function (100000 samples)

Trace 1

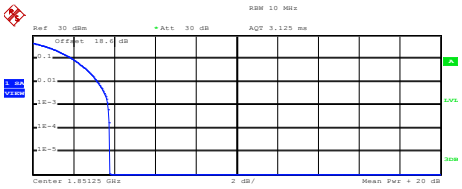
Mean 22.64 dBm
Peak 27.47 dBm
Crest 4.83 dB

10 % 2.04 dB
1 % 3.44 dB
.1 % 4.20 dB
.01 % 4.64 dB

Date: 18.FEB.2019 15:05:02

CDMA BC1 (1xRTT)

Lowest Channel



Complementary Cumulative Distribution Function (100000 samples)

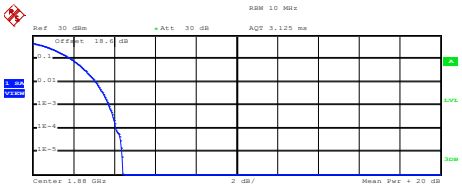
Trace 1

Mean 20.60 dBm
Peak 24.37 dBm
Crest 3.77 dB

10 % 1.96 dB
1 % 3.20 dB
.1 % 3.68 dB
.01 % 3.76 dB

Date: 18.FEB.2019 17:35:54

Middle Channel



Complementary Cumulative Distribution Function (100000 samples)

Trace 1

Mean 20.92 dBm
Peak 25.36 dBm
Crest 4.43 dB

10 % 1.88 dB
1 % 3.12 dB
.1 % 3.72 dB
.01 % 4.08 dB

Date: 18.FEB.2019 17:35:02

Highest Channel

Complementary Cumulative Distribution Function (100000 samples)

Trace 1

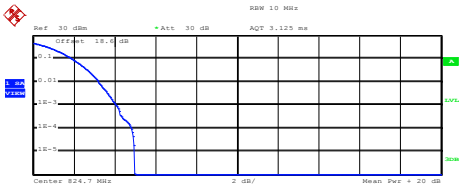
Mean 21.11 dBm
Peak 25.50 dBm
Crest 4.39 dB

10 % 1.92 dB
1 % 3.16 dB
.1 % 3.84 dB
.01 % 4.24 dB

Date: 18.FEB.2019 17:35:19

CDMA BC0 (1xEV-DO Rev. A)

Lowest Channel



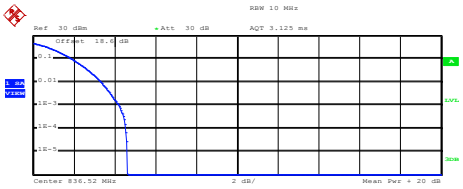
Complementary Cumulative Distribution Function (100000 samples)

Trace 1
Mean 22.78 dBm
Peak 27.76 dBm
Crest 4.98 dB

10 % 1.92 dB
1 % 3.20 dB
.1 % 4.08 dB
.01 % 4.84 dB

Date: 19.FEB.2019 09:42:51

Middle Channel



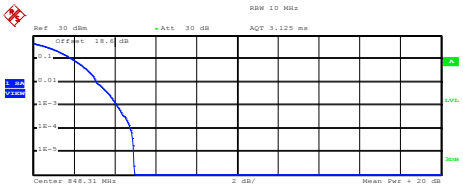
Complementary Cumulative Distribution Function (100000 samples)

Trace 1
Mean 23.35 dBm
Peak 27.97 dBm
Crest 4.62 dB

10 % 1.92 dB
1 % 3.32 dB
.1 % 4.20 dB
.01 % 4.56 dB

Date: 19.FEB.2019 09:43:06

Highest Channel



Complementary Cumulative Distribution Function (100000 samples)

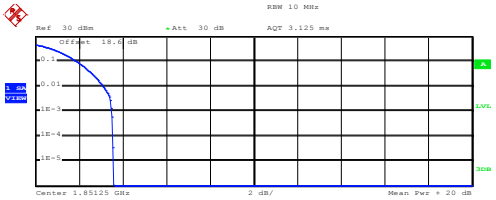
Trace 1
Mean 22.66 dBm
Peak 27.62 dBm
Crest 4.96 dB

10 % 1.96 dB
1 % 3.12 dB
.1 % 4.12 dB
.01 % 4.76 dB

Date: 19.FEB.2019 09:43:42

CDMA BC1 (1xEV-DO Rev. 0)

Lowest Channel



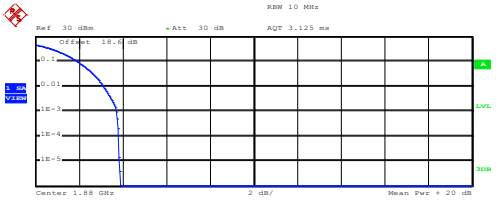
Complementary Cumulative Distribution Function (100000 samples)

Trace 1
Mean 21.17 dBm
Peak 24.72 dBm
Crest 3.56 dB

10 % 1.92 dB
1 % 3.12 dB
.1 % 3.52 dB
.01 % 3.56 dB

Date: 19.FEB.2019 10:00:34

Middle Channel



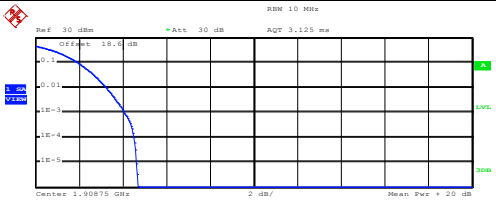
Complementary Cumulative Distribution Function (100000 samples)

Trace 1
Mean 21.61 dBm
Peak 25.50 dBm
Crest 3.89 dB

10 % 1.96 dB
1 % 3.12 dB
.1 % 3.72 dB
.01 % 3.84 dB

Date: 19.FEB.2019 10:01:25

Highest Channel



Complementary Cumulative Distribution Function (100000 samples)

Trace 1
Mean 21.30 dBm
Peak 25.99 dBm
Crest 4.70 dB

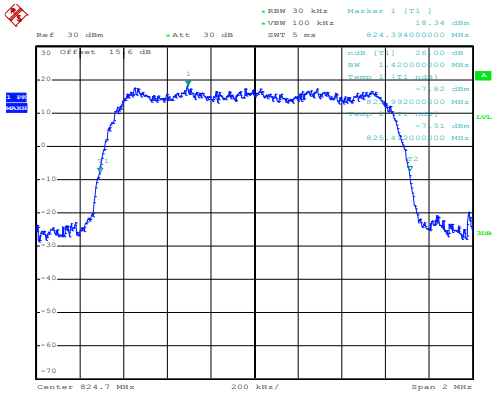
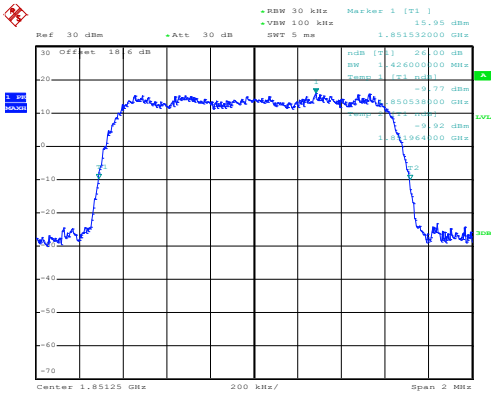
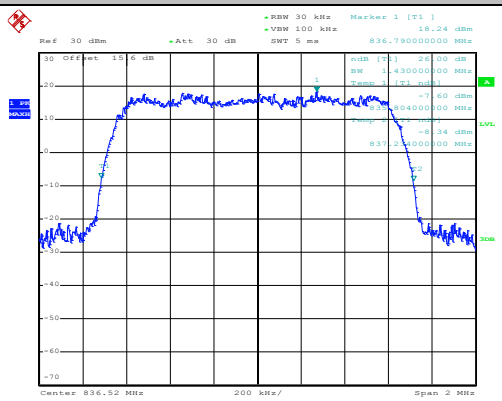
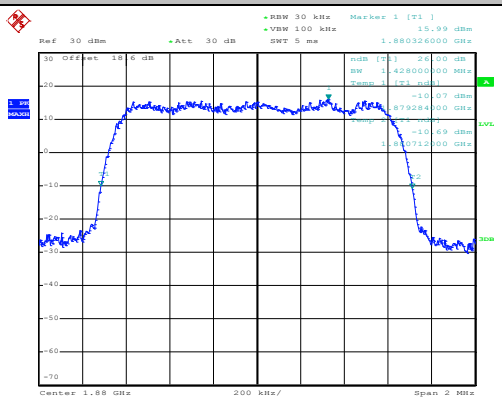
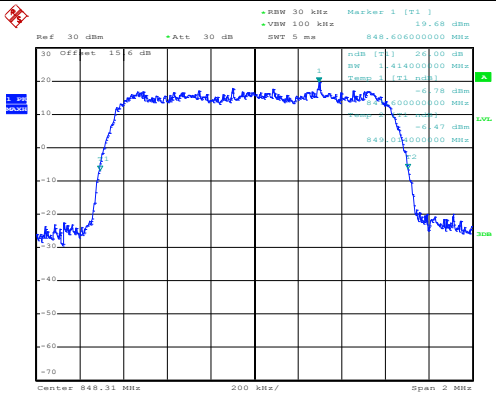
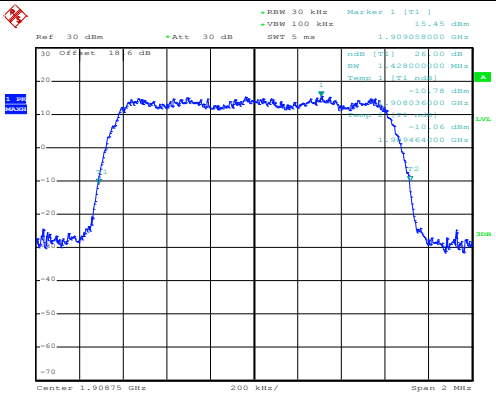
10 % 1.96 dB
1 % 3.24 dB
.1 % 4.08 dB
.01 % 4.52 dB

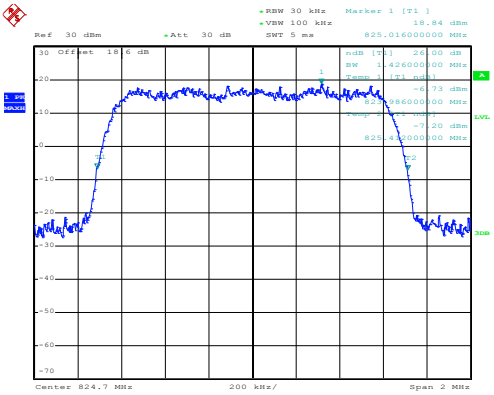
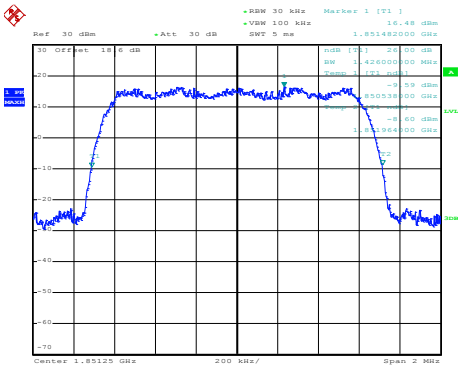
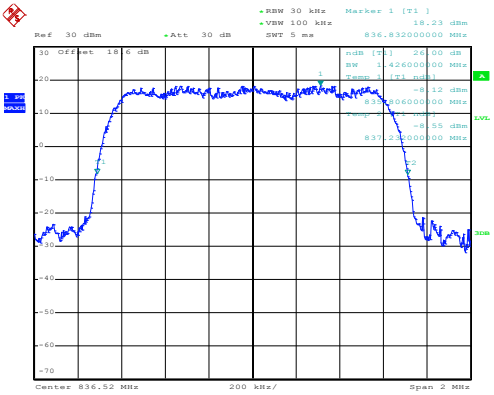
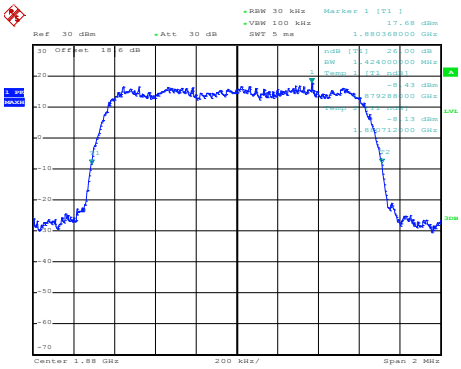
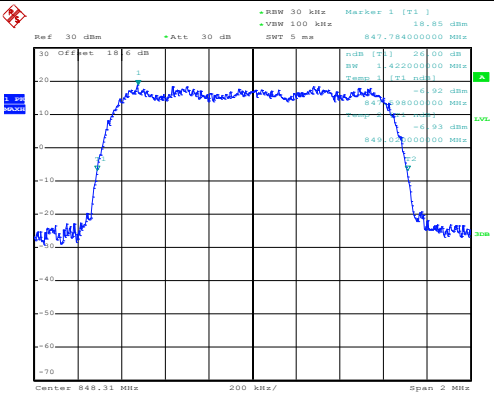
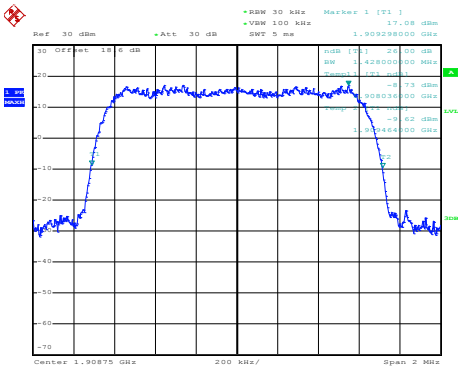
Date: 19.FEB.2019 10:01:41

26dB Bandwidth

Mode	CDMA BC0 26dB BW(MHz)	CDMA BC1 26dB BW(MHz)
Mod.	1xRTT	1xRTT
Lowest CH	1.42	1.426
Middle CH	1.43	1.428
Highest CH	1.414	1.428

Mode	CDMA BC0 26dB BW(MHz)	CDMA BC1 26dB BW(MHz)
Mod.	1xEV-DO Rev. A	1xEV-DO Rev. 0
Lowest CH	1.426	1.426
Middle CH	1.426	1.424
Highest CH	1.422	1.428

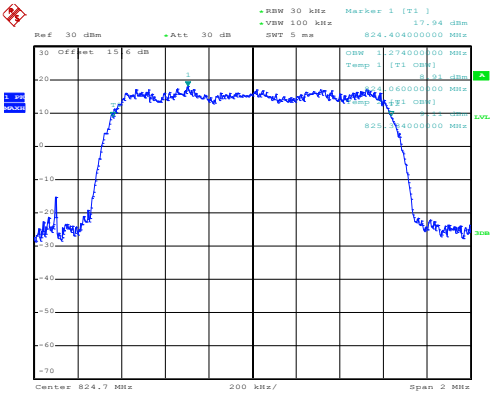
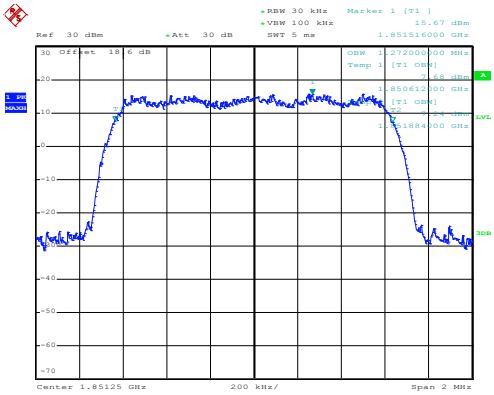
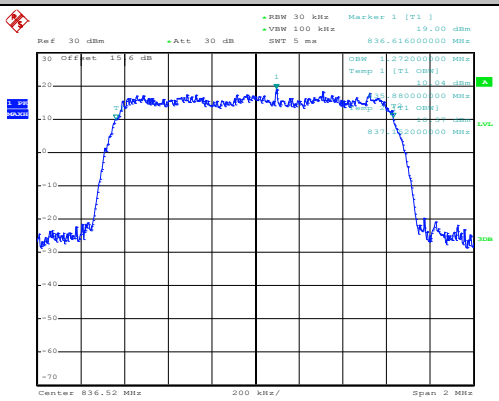
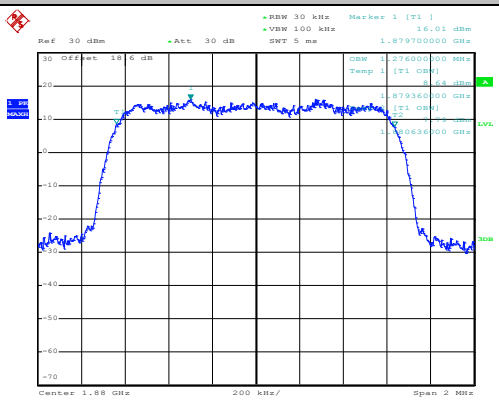
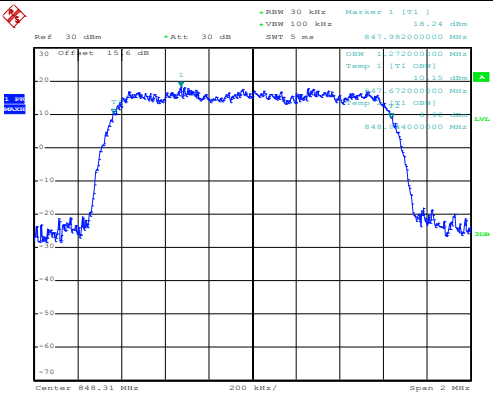
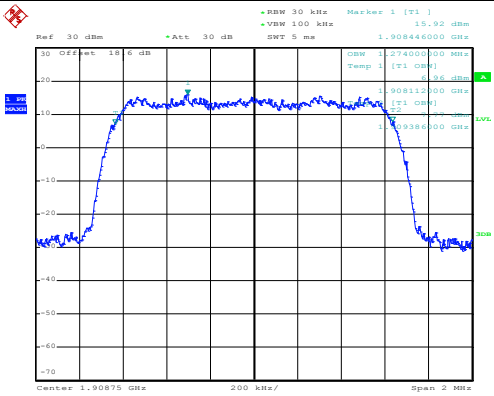
CDMA BC0 (1xRTT)	CDMA BC1 (1xRTT)
Lowest Channel	**Lowest Channel**
	
Date: 18.FEB.2019 14:50:52	Date: 18.FEB.2019 16:45:05
Middle Channel	**Middle Channel**
	
Date: 18.FEB.2019 14:51:34	Date: 18.FEB.2019 16:45:55
Highest Channel	**Highest Channel**
	
Date: 18.FEB.2019 14:52:31	Date: 18.FEB.2019 16:46:30

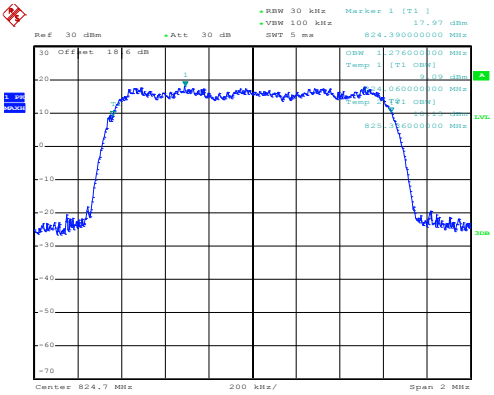
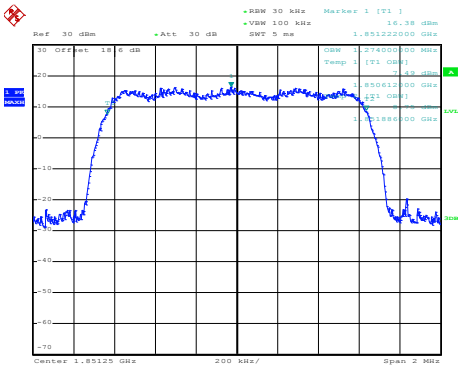
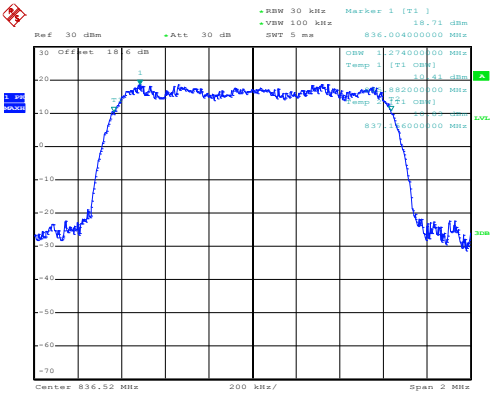
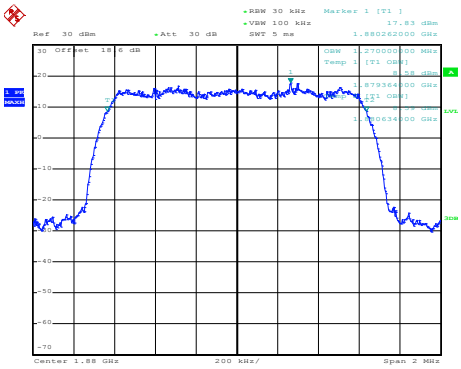
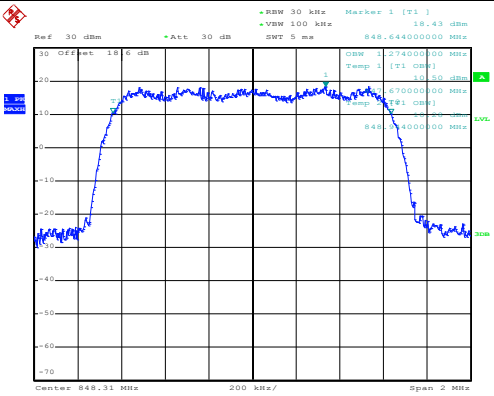
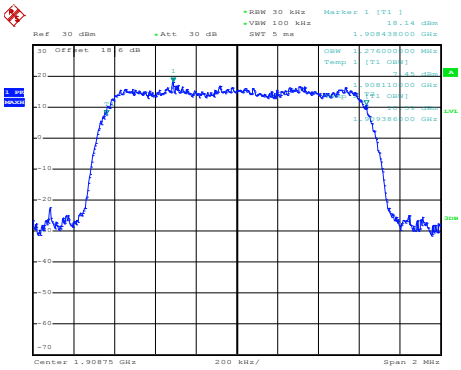
CDMA BC0 (1xEV-DO Rev. A)	CDMA BC1 (1xEV-DO Rev. 0)
Lowest Channel	**Lowest Channel**
 Date: 19.FEB.2019 09:31:04	 Date: 19.FEB.2019 09:45:56
Middle Channel	**Middle Channel**
 Date: 19.FEB.2019 09:31:40	 Date: 19.FEB.2019 09:46:35
Highest Channel	**Highest Channel**
 Date: 19.FEB.2019 09:32:14	 Date: 19.FEB.2019 09:47:27

Occupied Bandwidth

Mode	CDMA BC0 99% OBW(MHz)	CDMA BC1 99% OBW(MHz)
Mod.	1xRTT	1xRTT
Lowest CH	1.274	1.272
Middle CH	1.272	1.276
Highest CH	1.272	1.274

Mode	CDMA BC0 99% OBW(MHz)	CDMA BC1 99% OBW(MHz)
Mod.	1xEV-DO Rev. A	1xEV-DO Rev. 0
Lowest CH	1.276	1.274
Middle CH	1.274	1.27
Highest CH	1.274	1.276

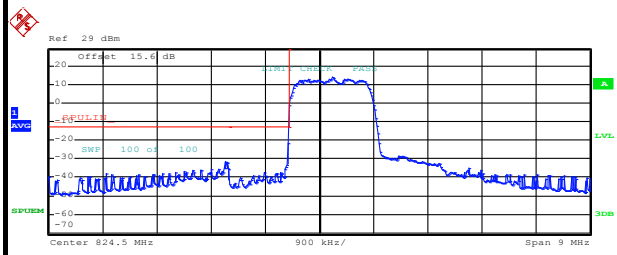
CDMA BC0 (1xRTT)	CDMA BC1 (1xRTT)
Lowest Channel	**Lowest Channel**
	
Date: 18.FEB.2019 14:53:23	Date: 18.FEB.2019 16:47:16
Middle Channel	**Middle Channel**
	
Date: 18.FEB.2019 14:53:59	Date: 18.FEB.2019 16:48:26
Highest Channel	**Highest Channel**
	
Date: 18.FEB.2019 14:55:02	Date: 18.FEB.2019 16:49:23

CDMA BC0 (1xEV-DO Rev. A)	CDMA BC1 (1xEV-DO Rev. 0)
Lowest Channel	**Lowest Channel**
 Date: 19.FEB.2019 09:32:54	 Date: 19.FEB.2019 09:48:08
Middle Channel	**Middle Channel**
 Date: 19.FEB.2019 09:33:28	 Date: 19.FEB.2019 09:48:59
Highest Channel	**Highest Channel**
 Date: 19.FEB.2019 09:34:06	 Date: 19.FEB.2019 09:49:38

Conducted Band Edge

CDMA BC0 (1xRTT)

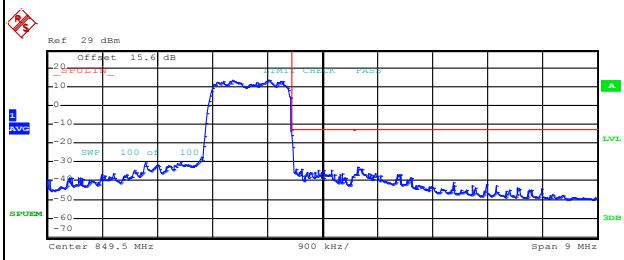
Lowest Band Edge



Start [Hz]	Stop [Hz]	RBW [Hz]	Freq [Hz]	PwrAbs [dBm]	ΔLimit [dB]
820.000 M	823.000 M	100.00 k	822.934000 M	-31.76	-18.76
823.000 M	824.000 M	14.00 k	823.996000 M	-22.14	-9.14
824.000 M	829.000 M	100.00 k	824.715000 M	13.81	-21.19

Date: 18.FEB.2019 14:58:25

Highest Band Edge

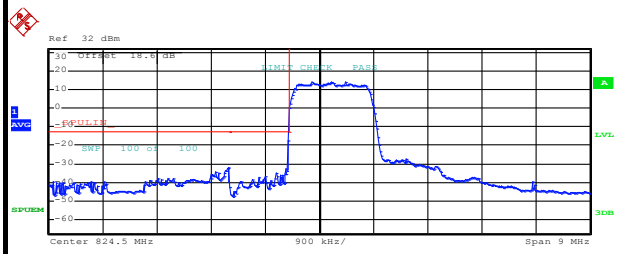


Start [Hz]	Stop [Hz]	RBW [Hz]	Freq [Hz]	PwrAbs [dBm]	ΔLimit [dB]
845.000 M	849.000 M	100.00 k	848.620000 M	13.46	-21.54
849.000 M	850.000 M	14.00 k	849.004000 M	-16.15	-3.15
850.000 M	854.000 M	100.00 k	850.080000 M	-32.98	-19.98

Date: 18.FEB.2019 15:01:17

CDMA BC0 (1xEV-DO Rev. A)

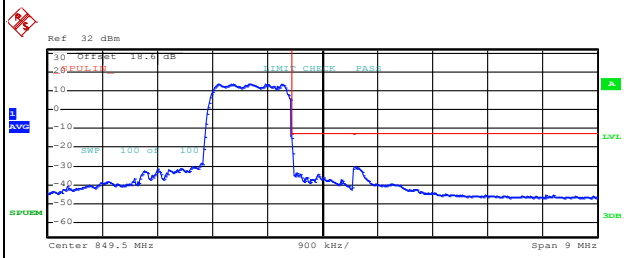
Lowest Band Edge



Start [Hz]	Stop [Hz]	RBW [Hz]	Freq [Hz]	PwrAbs [dBm]	ΔLimit [dB]
820.000 M	823.000 M	100.00 k	822.994000 M	-32.18	-19.18
823.000 M	824.000 M	14.00 k	823.996000 M	-20.23	-7.23
824.000 M	829.000 M	100.00 k	824.935000 M	14.08	-20.92

Date: 19.FEB.2019 09:36:58

Highest Band Edge

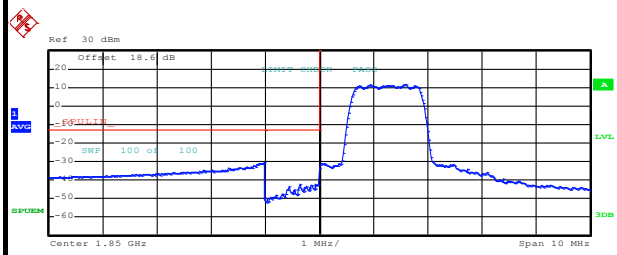


Start [Hz]	Stop [Hz]	RBW [Hz]	Freq [Hz]	PwrAbs [dBm]	ΔLimit [dB]
845.000 M	849.000 M	100.00 k	848.328000 M	13.85	-21.15
849.000 M	850.000 M	14.00 k	849.004000 M	-15.31	-2.31
850.000 M	854.000 M	100.00 k	850.020000 M	-30.43	-17.43

Date: 19.FEB.2019 09:40:02

CDMA BC1 (1xRTT)

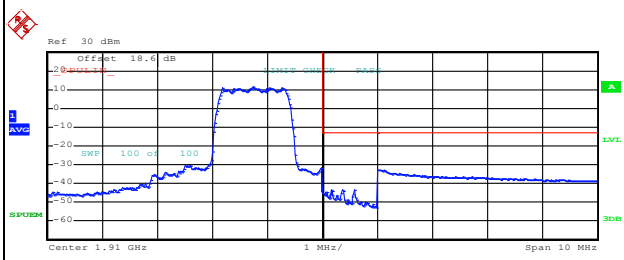
Lowest Band Edge



Start [Hz]	Stop [Hz]	RBW [Hz]	Freq [Hz]	PwrAbs [dBm]	ΔLimit [dB]
1.845 G	1.849 G	1.00 M	1.849000 G	-30.29	-17.29
1.849 G	1.850 G	14.00 k	1.849644 G	-42.04	-29.04
1.850 G	1.855 G	100.00 k	1.851565 G	11.53	-23.47

Date: 18.FEB.2019 16:52:15

Highest Band Edge

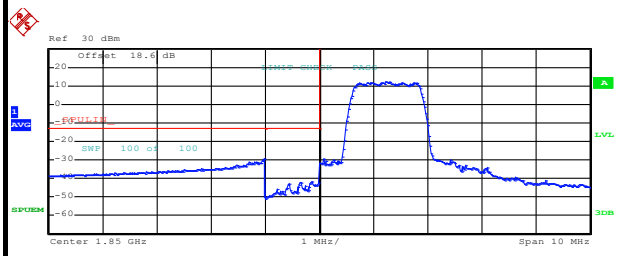


Start [Hz]	Stop [Hz]	RBW [Hz]	Freq [Hz]	PwrAbs [dBm]	ΔLimit [dB]
1.905 G	1.910 G	100.00 k	1.908745 G	11.67	-23.33
1.910 G	1.911 G	14.00 k	1.910364 G	-43.31	-30.31
1.911 G	1.915 G	1.00 M	1.911024 G	-32.68	-19.68

Date: 18.FEB.2019 17:02:07

CDMA BC1 (1xEV-DO Rev. 0)

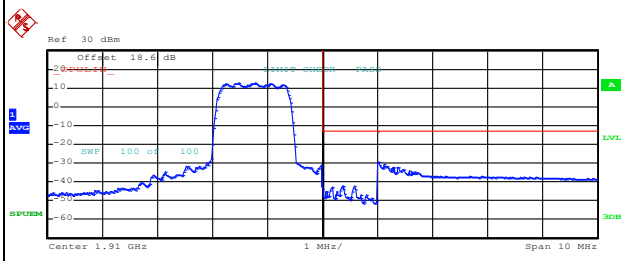
Lowest Band Edge



Start [Hz]	Stop [Hz]	RBW [Hz]	Freq [Hz]	PwrAbs [dBm]	ΔLimit [dB]
1.845 G	1.849 G	1.00 M	1.848972 G	-29.56	-16.56
1.849 G	1.850 G	14.00 k	1.849852 G	-41.70	-28.70
1.850 G	1.855 G	100.00 k	1.851225 G	12.32	-22.68

Date: 19.FEB.2019 09:52:28

Highest Band Edge



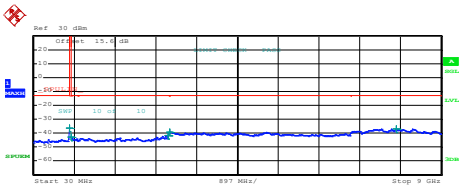
Start [Hz]	Stop [Hz]	RBW [Hz]	Freq [Hz]	PwrAbs [dBm]	ΔLimit [dB]
1.905 G	1.910 G	100.00 k	1.908775 G	12.75	-22.25
1.910 G	1.911 G	14.00 k	1.910372 G	-42.12	-29.12
1.911 G	1.915 G	1.00 M	1.911008 G	-29.56	-16.56

Date: 19.FEB.2019 09:55:18

Conducted Spurious Emission

CDMA BC0 (1xRTT)

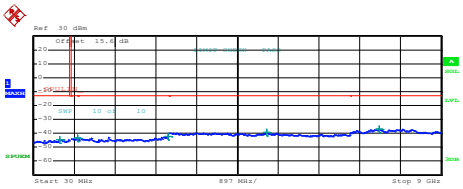
Lowest Channel



Start [Hz]	Stop [Hz]	RBW [Hz]	Freq [Hz]	PwrAbs [dBm]	ΔLimit [dB]
30.000 M	820.000 M	1.00 M	819.802500 M	-36.62	-23.62
855.000 M	1.000 G	1.00 M	859.313750 M	-42.59	-29.59
1.000 G	3.000 G	1.00 M	2.986500 G	-41.78	-28.78
3.000 G	7.000 G	1.00 M	3.023000 G	-39.43	-26.43
7.000 G	9.000 G	1.00 M	8.016500 G	-36.76	-23.76

Date: 18.FEB.2019 15:02:13

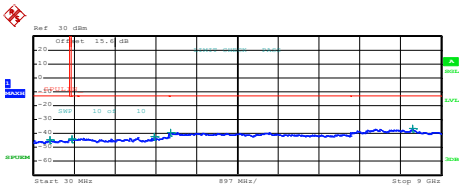
Middle Channel



Start [Hz]	Stop [Hz]	RBW [Hz]	Freq [Hz]	PwrAbs [dBm]	ΔLimit [dB]
30.000 M	820.000 M	1.00 M	611.242500 M	-44.29	-31.29
855.000 M	1.000 G	1.00 M	998.078760 M	-43.30	-30.30
1.000 G	3.000 G	1.00 M	2.984500 G	-42.35	-29.35
3.000 G	7.000 G	1.00 M	5.161000 G	-39.56	-26.56
7.000 G	9.000 G	1.00 M	7.633500 G	-36.80	-23.80

Date: 18.FEB.2019 15:03:08

Highest Channel

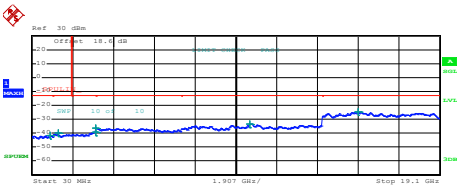


Start [Hz]	Stop [Hz]	RBW [Hz]	Freq [Hz]	PwrAbs [dBm]	ΔLimit [dB]
30.000 M	820.000 M	1.00 M	394.585000 M	-44.35	-31.35
855.000 M	1.000 G	1.00 M	868.448751 M	-44.07	-31.07
1.000 G	3.000 G	1.00 M	2.688000 G	-42.13	-29.13
3.000 G	7.000 G	1.00 M	3.046000 G	-39.34	-26.34
7.000 G	9.000 G	1.00 M	8.371000 G	-36.66	-23.66

Date: 18.FEB.2019 15:04:00

CDMA BC1 (1xRTT)

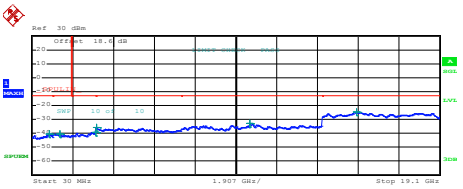
Lowest Channel



Start [Hz]	Stop [Hz]	RBW [Hz]	Freq [Hz]	PwrAbs [dBm]	ΔLimit [dB]
30.000 M	1.000 G	1.00 M	877.780000 M	-41.40	-28.40
1.000 G	1.845 G	1.00 M	1.266809 G	-40.09	-27.09
1.915 G	3.000 G	1.00 M	2.989421 G	-39.48	-26.48
3.000 G	7.000 G	1.00 M	3.003000 G	-36.57	-23.57
7.000 G	13.600 G	1.00 M	10.223275 G	-33.24	-20.24
13.600 G	19.100 G	1.00 M	15.283000 G	-24.90	-11.90

Date: 18.FEB.2019 17:08:25

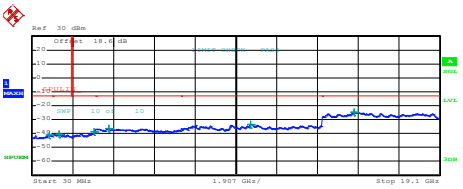
Middle Channel



Start [Hz]	Stop [Hz]	RBW [Hz]	Freq [Hz]	PwrAbs [dBm]	ΔLimit [dB]
30.000 M	1.000 G	1.00 M	821.762500 M	-40.72	-27.72
1.000 G	1.845 G	1.00 M	1.318354 G	-40.30	-27.30
1.915 G	3.000 G	1.00 M	2.997830 G	-39.47	-26.47
3.000 G	7.000 G	1.00 M	3.050000 G	-35.91	-22.91
7.000 G	13.600 G	1.00 M	10.213375 G	-33.06	-20.06
13.600 G	19.100 G	1.00 M	15.214250 G	-24.82	-11.82

Date: 18.FEB.2019 17:09:19

Highest Channel

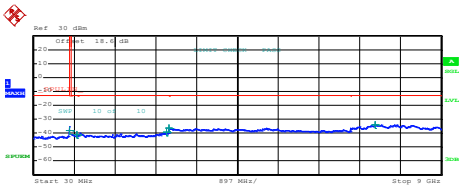


Start [Hz]	Stop [Hz]	RBW [Hz]	Freq [Hz]	PwrAbs [dBm]	ΔLimit [dB]
30.000 M	1.000 G	1.00 M	827.825000 M	-41.16	-28.16
1.000 G	1.845 G	1.00 M	1.295116 G	-40.32	-27.32
1.915 G	3.000 G	1.00 M	2.940054 G	-38.94	-25.94
3.000 G	7.000 G	1.00 M	3.608000 G	-36.34	-23.34
7.000 G	13.600 G	1.00 M	10.239775 G	-33.34	-20.34
13.600 G	19.100 G	1.00 M	15.077438 G	-24.80	-11.80

Date: 18.FEB.2019 17:10:19

CDMA BC0 (1xEV-DO Rev. A)

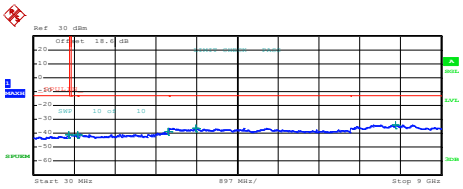
Lowest Channel



Start [Hz]	Stop [Hz]	RBW [Hz]	Freq [Hz]	PwrAbs [dBm]	ΔLimit [dB]
30.000 M	820.000 M	1.00 M	819.802500 M	-38.04	-25.04
855.000 M	1.000 G	1.00 M	975.096258 M	-41.17	-28.17
1.000 G	3.000 G	1.00 M	2.950000 G	-39.18	-26.18
3.000 G	7.000 G	1.00 M	3.004000 G	-36.48	-23.48
7.000 G	9.000 G	1.00 M	7.544000 G	-33.97	-20.97

Date: 19.FEB.2019 09:41:05

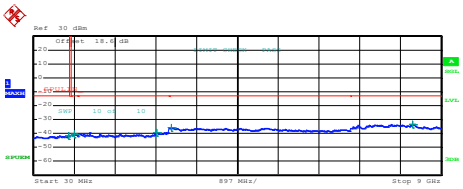
Middle Channel



Start [Hz]	Stop [Hz]	RBW [Hz]	Freq [Hz]	PwrAbs [dBm]	ΔLimit [dB]
30.000 M	820.000 M	1.00 M	803.410000 M	-41.12	-28.12
855.000 M	1.000 G	1.00 M	997.426260 M	-41.05	-28.05
1.000 G	3.000 G	1.00 M	2.987000 G	-38.90	-25.90
3.000 G	7.000 G	1.00 M	3.594000 G	-36.41	-23.41
7.000 G	9.000 G	1.00 M	7.996000 G	-33.75	-20.75

Date: 19.FEB.2019 09:41:58

Highest Channel

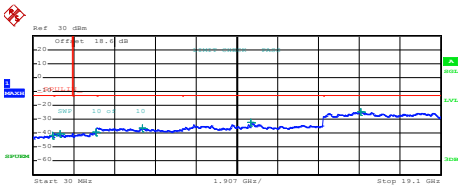


Start [Hz]	Stop [Hz]	RBW [Hz]	Freq [Hz]	PwrAbs [dBm]	ΔLimit [dB]
30.000 M	820.000 M	1.00 M	796.300000 M	-41.72	-28.72
855.000 M	1.000 G	1.00 M	921.265005 M	-40.73	-27.73
1.000 G	3.000 G	1.00 M	2.738000 G	-39.19	-26.19
3.000 G	7.000 G	1.00 M	3.053000 G	-36.00	-23.00
7.000 G	9.000 G	1.00 M	8.375000 G	-33.58	-20.58

Date: 19.FEB.2019 09:43:28

CDMA BC1 (1xEV-DO Rev. 0)

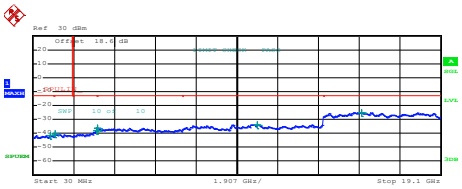
Lowest Channel



Start [Hz]	Stop [Hz]	RBW [Hz]	Freq [Hz]	PwrAbs [dBm]	ΔLimit [dB]
30.000 M	1.000 G	1.00 M	937.435000 M	-41.50	-28.50
1.000 G	1.845 G	1.00 M	1.305679 G	-40.29	-27.29
1.915 G	3.000 G	1.00 M	2.965280 G	-39.43	-26.43
3.000 G	7.000 G	1.00 M	5.154000 G	-36.13	-23.13
7.000 G	13.600 G	1.00 M	10.210075 G	-32.38	-19.38
13.600 G	19.100 G	1.00 M	15.351062 G	-24.63	-11.63

Date: 19.FEB.2019 09:58:42

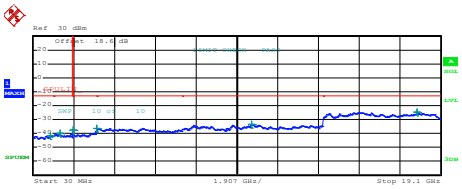
Middle Channel



Start [Hz]	Stop [Hz]	RBW [Hz]	Freq [Hz]	PwrAbs [dBm]	ΔLimit [dB]
30.000 M	1.000 G	1.00 M	816.427500 M	-41.49	-28.49
1.000 G	1.845 G	1.00 M	1.042672 G	-40.23	-27.23
1.915 G	3.000 G	1.00 M	2.989692 G	-38.22	-25.22
3.000 G	7.000 G	1.00 M	3.030000 G	-36.46	-23.46
7.000 G	13.600 G	1.00 M	10.525225 G	-33.77	-20.77
13.600 G	19.100 G	1.00 M	15.387500 G	-25.11	-12.11

Date: 19.FEB.2019 09:59:49

Highest Channel



Start [Hz]	Stop [Hz]	RBW [Hz]	Freq [Hz]	PwrAbs [dBm]	ΔLimit [dB]
30.000 M	1.000 G	1.00 M	836.312500 M	-41.74	-28.74
1.000 G	1.845 G	1.00 M	1.274836 G	-40.09	-27.09
1.915 G	3.000 G	1.00 M	1.915542 G	-37.75	-24.75
3.000 G	7.000 G	1.00 M	3.012000 G	-36.36	-23.36
7.000 G	13.600 G	1.00 M	10.240600 G	-33.57	-20.57
13.600 G	19.100 G	1.00 M	17.986250 G	-24.87	-11.87

Date: 19.FEB.2019 10:00:46

Frequency Stability

Test Conditions	Middle Channel	CDMA BC0 (1xRTT)	Limit 2.5ppm
Temperature (°C)	Voltage (Volt)	Deviation (ppm)	Result
50	Normal Voltage	0.0036	PASS
40	Normal Voltage	0.0012	
30	Normal Voltage	0.0024	
20(Ref.)	Normal Voltage	0.0000	
10	Normal Voltage	0.0048	
0	Normal Voltage	0.0072	
-10	Normal Voltage	0.0120	
-20	Normal Voltage	0.0048	
-30	Normal Voltage	0.0060	
20	Maximum Voltage	0.0048	
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	0.0085	PASS
40	Normal Voltage	0.0069	
30	Normal Voltage	0.0043	
20(Ref.)	Normal Voltage	0.0000	
10	Normal Voltage	0.0005	
0	Normal Voltage	0.0011	
-10	Normal Voltage	0.0037	
-20	Normal Voltage	0.0021	
-30	Normal Voltage	0.0069	
20	Maximum Voltage	0.0032	
20	Normal Voltage	0.0000	
20	Battery End Point	0.0016	

Note:

1. Normal Voltage = 3.9V. ；Battery End Point (BEP) = 3.4 V.；Maximum Voltage =4.35 V

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

Test Conditions	Middle Channel	CDMA BC0 (1xEV-DO Rev. A)	Limit Note 2.
Temperature (°C)	Voltage (Volt)	Deviation (ppm)	Result
50	Normal Voltage	0.0072	PASS
40	Normal Voltage	0.0096	
30	Normal Voltage	0.0024	
20(Ref.)	Normal Voltage	0.0000	
10	Normal Voltage	0.0072	
0	Normal Voltage	0.0108	
-10	Normal Voltage	0.0084	
-20	Normal Voltage	0.0179	
-30	Normal Voltage	0.0275	
20	Maximum Voltage	0.0108	
20	Normal Voltage	0.0000	
20	Battery End Point	0.0036	

Test Conditions	Middle Channel	CDMA BC1 (1xEV-DO Rev. 0)	Limit Note 2.
Temperature (°C)	Voltage (Volt)	Deviation (ppm)	Result
50	Normal Voltage	0.0053	PASS
40	Normal Voltage	0.0011	
30	Normal Voltage	0.0027	
20(Ref.)	Normal Voltage	0.0000	
10	Normal Voltage	0.0027	
0	Normal Voltage	0.0016	
-10	Normal Voltage	0.0043	
-20	Normal Voltage	0.0064	
-30	Normal Voltage	0.0074	
20	Maximum Voltage	0.0021	
20	Normal Voltage	0.0000	
20	Battery End Point	0.0027	

Note:

1. Normal Voltage = 3.9V. ；Battery End Point (BEP) = 3.4 V.；Maximum Voltage =4.35 V

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

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

ERP/EIRP

Channel	Mode	Conducted		ERP	
		Power (dBm)	Power (Watts)	ERP(dBm)	ERP(W)
Lowest	GSM850	33.23	2.1038	25.58	0.3614
Middle	GSM	33.35	2.1627	25.70	0.3715
Highest	(GT - LC = -5.5 dB)	32.95	1.9724	25.30	0.3388
Lowest	GSM850	26.83	0.4819	19.18	0.0828
Middle	EDGE class 8	26.88	0.4875	19.23	0.0838
Highest	(GT - LC = -5.5 dB)	26.87	0.4864	19.22	0.0836
Lowest	WCDMA Band V	23.30	0.2138	15.65	0.0367
Middle	RMC 12.2Kbps	23.21	0.2094	15.56	0.0360
Highest	(GT - LC = -5.5 dB)	23.12	0.2051	15.47	0.0352
Lowest	CDMA BC0	24.27	0.2673	16.62	0.0459
Middle	1xRTT	24.26	0.2667	16.61	0.0458
Highest	(GT - LC = -5.5 dB)	24.18	0.2618	16.53	0.0450
Lowest	CDMA BC0	24.26	0.2667	16.61	0.0458
Middle	1xEV-DO	24.26	0.2667	16.61	0.0458
Highest	(GT - LC = -5.5 dB)	24.19	0.2624	16.54	0.0451
Limit	ERP < 7W	Result		PASS	

Channel	Mode	Conducted		EIRP	
		Power (dBm)	Power (Watts)	EIRP(dBm)	EIRP(W)
Lowest	GSM1900	29.78	0.9506	27.28	0.5346
Middle	GPRS class 8	29.72	0.9376	27.22	0.5272
Highest	(GT - LC = -2.5 dB)	29.45	0.8810	26.95	0.4955
Lowest	GSM1900	25.56	0.3597	23.06	0.2023
Middle	EDGE class 8	25.55	0.3589	23.05	0.2018
Highest	(GT - LC = -2.5 dB)	25.50	0.3548	23.00	0.1995
Lowest	WCDMA Band II	23.12	0.2051	20.62	0.1153
Middle	RMC 12.2Kbps	23.02	0.2004	20.52	0.1127
Highest	(GT - LC = -2.5 dB)	23.19	0.2084	20.69	0.1172
Lowest	CDMA BC1	24.06	0.2547	21.56	0.1432
Middle	1xRTT	24.08	0.2559	21.58	0.1439
Highest	(GT - LC = -2.5 dB)	23.95	0.2483	21.45	0.1396
Lowest	CDMA BC1	24.09	0.2564	21.59	0.1442
Middle	1xEV-DO	24.08	0.2559	21.58	0.1439
Highest	(GT - LC = -2.5 dB)	23.97	0.2495	21.47	0.1403
Limit	EIRP < 2W	Result		PASS	

Radiated Spurious Emission

<Open Mode>

GSM850

GSM 850									
Channel	Frequency (MHz)	ERP (dBm)	Limit (dBm)	Over Limit (dB)	SPA Reading (dBm)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)
Lowest	1648	-60.37	-13	-47.37	-72.84	-62.13	0.98	4.89	H
	2472	-59.64	-13	-46.64	-77.55	-61.52	1.28	5.32	H
	3296	-58.47	-13	-45.47	-78.88	-61.88	1.54	7.10	H
									H
									H
									H
	1648	-61.48	-13	-48.48	-74.36	-63.24	0.98	4.89	V
	2472	-58.75	-13	-45.75	-77.11	-60.63	1.28	5.32	V
	3296	-58.18	-13	-45.18	-78.8	-61.59	1.54	7.10	V
									V
									V
									V
Middle	1672	-62.44	-13	-49.44	-75.22	-64.12	0.99	4.82	H
	2512	-58.45	-13	-45.45	-76.44	-60.42	1.29	5.41	H
	3344	-58.44	-13	-45.44	-79.11	-62.05	1.56	7.31	H
									H
									H
									H
	1672	-62.34	-13	-49.34	-75.57	-64.02	0.99	4.82	V
	2512	-58.79	-13	-45.79	-77.37	-60.76	1.29	5.41	V
	3344	-57.87	-13	-44.87	-78.81	-61.48	1.56	7.31	V
									V
									V
									V

Highest	1696	-63.26	-13	-50.26	-76.24	-64.86	1.00	4.75	H
	2544	-50.96	-13	-37.96	-68.97	-52.94	1.30	5.44	H
	3392	-58.25	-13	-45.25	-79.19	-62.05	1.57	7.52	H
									H
									H
									H
									H
	1696	-63.07	-13	-50.07	-76.43	-64.67	1.00	4.75	V
	2544	-55.17	-13	-42.17	-73.73	-57.15	1.30	5.44	V
	3392	-57.42	-13	-44.42	-78.43	-61.22	1.57	7.52	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	1649	-59.54	-13	-46.54	-72.01	-61.29	0.98	4.88	H
	2474	-59.55	-13	-46.55	-77.47	-61.44	1.28	5.32	H
	3298	-58.50	-13	-45.50	-78.9	-61.92	1.54	7.11	H
									H
									H
									H
									H
	1649	-58.37	-13	-45.37	-71.31	-60.12	0.98	4.88	V
	2474	-59.21	-13	-46.21	-77.57	-61.1	1.28	5.32	V
	3298	-58.13	-13	-45.13	-78.86	-61.55	1.54	7.11	V
									V
									V
									V
									V
Middle	1672	-61.61	-13	-48.61	-74.37	-63.29	0.99	4.82	H
	2509	-59.73	-13	-46.73	-77.75	-61.69	1.29	5.41	H
	3345	-58.30	-13	-45.30	-78.97	-61.91	1.56	7.32	H
									H
									H
									H
									H
	1672	-61.88	-13	-48.88	-75.1	-63.56	0.99	4.82	V
	2509	-59.21	-13	-46.21	-77.69	-61.17	1.29	5.41	V
	3345	-58.12	-13	-45.12	-79	-61.73	1.56	7.32	V
									V
									V
									V
									V

Highest	1696	-62.52	-13	-49.52	-75.44	-64.12	1.00	4.75	H
	2544	-52.94	-13	-39.94	-71.01	-54.92	1.30	5.44	H
	3393	-58.05	-13	-45.05	-78.99	-61.86	1.57	7.53	H
									H
									H
									H
									H
	1696	-62.99	-13	-49.99	-76.35	-64.59	1.00	4.75	V
	2544	-52.69	-13	-39.69	-71.26	-54.67	1.30	5.44	V
	3393	-57.39	-13	-44.39	-78.42	-61.2	1.57	7.53	V
									V
									V
									V
									V

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

WCDMA 850

WCDMA 850									
Channel	Frequency (MHz)	ERP (dBm)	Limit (dBm)	Over Limit (dB)	SPA Reading (dBm)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)
Lowest	1652	-63.45	-13	-50.45	-75.93	-65.19	0.98	4.87	H
	2479	-59.88	-13	-46.88	-77.8	-61.78	1.28	5.34	H
	3305	-58.17	-13	-45.17	-78.66	-61.62	1.54	7.14	H
									H
									H
									H
									H
	1652	-62.87	-13	-49.87	-75.82	-64.61	0.98	4.87	V
	2479	-59.27	-13	-46.27	-77.63	-61.17	1.28	5.34	V
	3305	-57.85	-13	-44.85	-78.62	-61.3	1.54	7.14	V
									V
									V
									V
									V
Middle	1672	-63.40	-13	-50.40	-76.16	-65.08	0.99	4.82	H
	2509	-59.44	-13	-46.44	-77.46	-61.4	1.29	5.41	H
	3345	-58.39	-13	-45.39	-79.06	-62	1.56	7.32	H
									H
									H
									H
									H
	1672	-63.01	-13	-50.01	-76.23	-64.69	0.99	4.82	V
	2509	-59.03	-13	-46.03	-77.51	-60.99	1.29	5.41	V
	3345	-58.06	-13	-45.06	-78.94	-61.67	1.56	7.32	V
									V
									V
									V
									V

Highest	1693	-63.59	-13	-50.59	-76.51	-65.2	1.00	4.76	H
	2539	-59.40	-13	-46.40	-77.46	-61.38	1.30	5.43	H
	3386	-58.20	-13	-45.20	-79.06	-61.98	1.57	7.50	H
									H
									H
									H
									H
	1693	-62.98	-13	-49.98	-76.34	-64.59	1.00	4.76	V
	2539	-59.29	-13	-46.29	-77.85	-61.27	1.30	5.43	V
	3386	-57.87	-13	-44.87	-78.86	-61.65	1.57	7.50	V
									V
									V
									V
									V

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

CDMA2000 (BC0 1xRTT)

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	-63.11	-13	-50.11	-75.31	-64.86	0.98	4.88	H
	2474	-59.64	-13	-46.64	-77.3	-61.53	1.28	5.32	H
	3298	-59.20	-13	-46.20	-78.1	-62.62	1.54	7.11	H
									H
									H
									H
									H
	1649	-62.98	-13	-49.98	-75.7	-64.73	0.98	4.88	V
	2474	-59.17	-13	-46.17	-77.24	-61.06	1.28	5.32	V
	3298	-57.74	-13	-44.74	-78.27	-61.16	1.54	7.11	V
									V
									V
									V
									V
Middle	1672	-63.45	-13	-50.45	-76.05	-65.13	0.99	4.82	H
	2509	-59.25	-13	-46.25	-77.09	-61.21	1.29	5.41	H
	3345	-58.31	-13	-45.31	-78.72	-61.92	1.56	7.32	H
									H
									H
									H
									H
	1672	-63.05	-13	-50.05	-76.01	-64.73	0.99	4.82	V
	2509	-59.01	-13	-46.01	-77.22	-60.97	1.29	5.41	V
	3345	-58.02	-13	-45.02	-78.75	-61.63	1.56	7.32	V
									V
									V
									V
									V

Highest	1696	-63.55	-13	-50.55	-76.2	-65.15	1.00	4.75	H
	2544	-59.71	-13	-46.71	-77.56	-61.69	1.30	5.44	H
	3393	-57.93	-13	-44.93	-78.6	-61.74	1.57	7.53	H
									H
									H
									H
									H
	1696	-63.03	-13	-50.03	-76.1	-64.63	1.00	4.75	V
	2544	-59.31	-13	-46.31	-77.52	-61.29	1.30	5.44	V
	3393	-57.77	-13	-44.77	-78.52	-61.58	1.57	7.53	V
									V
									V
									V
									V

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

CDMA2000 (BC0 1xEVDO)

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	1648	-64.76	-13	-51.76	-77.32	-66.52	0.98	4.89	H
	2472	-60.55	-13	-47.55	-78.57	-62.43	1.28	5.32	H
	3296	-59.12	-13	-46.12	-79.43	-62.53	1.54	7.10	H
									H
									H
									H
									H
	1648	-64.32	-13	-51.32	-77.25	-66.08	0.98	4.89	V
	2472	-60.17	-13	-47.17	-78.53	-62.05	1.28	5.32	V
	3296	-58.61	-13	-45.61	-79.26	-62.02	1.54	7.10	V
									V
									V
									V
									V
Middle	1672	-64.57	-13	-51.57	-77.34	-66.25	0.99	4.82	H
	2512	-60.65	-13	-47.65	-78.69	-62.62	1.29	5.41	H
	3344	-59.25	-13	-46.25	-79.97	-62.86	1.56	7.31	H
									H
									H
									H
									H
	1672	-64.34	-13	-51.34	-77.58	-66.02	0.99	4.82	V
	2512	-60.22	-13	-47.22	-78.67	-62.19	1.29	5.41	V
	3344	-58.92	-13	-45.92	-79.77	-62.53	1.56	7.31	V
									V
									V
									V
									V

Highest	1696	-65.02	-13	-52.02	-77.94	-66.62	1.00	4.75	H
	2544	-60.86	-13	-47.86	-78.91	-62.84	1.30	5.44	H
	3392	-58.74	-13	-45.74	-79.66	-62.54	1.57	7.52	H
									H
									H
									H
									H
	1696	-64.77	-13	-51.77	-78.13	-66.37	1.00	4.75	V
	2544	-60.33	-13	-47.33	-78.87	-62.31	1.30	5.44	V
	3392	-58.95	-13	-45.95	-79.98	-62.75	1.57	7.52	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	-56.44	-13	-43.44	-78.13	-63.01	1.67	8.24	H
	5550	-51.44	-13	-38.44	-77.75	-58.51	2.65	9.72	H
	7400	-50.67	-13	-37.67	-79.18	-59.81	2.46	11.60	H
									H
									H
									H
									H
	3700	-56.77	-13	-43.77	-78.45	-63.34	1.67	8.24	V
	5550	-51.88	-13	-38.88	-78.08	-58.95	2.65	9.72	V
	7400	-50.55	-13	-37.55	-79.24	-59.69	2.46	11.60	V
									V
									V
									V
									V
Middle	3760	-56.60	-13	-43.60	-78.43	-63.23	1.69	8.31	H
	5640	-51.21	-13	-38.21	-77.92	-58.26	2.71	9.76	H
	7520	-49.68	-13	-36.68	-78.52	-59.07	2.42	11.81	H
									H
									H
									H
									H
	3760	-55.85	-13	-42.85	-77.7	-62.48	1.69	8.31	V
	5640	-51.93	-13	-38.93	-78.62	-58.98	2.71	9.76	V
	7520	-49.45	-13	-36.45	-78.54	-58.84	2.42	11.81	V
									V
									V
									V
									V

Highest	3819	-52.15	-13	-39.15	-73.94	-58.83	1.70	8.38	H
	5729	-51.29	-13	-38.29	-78.22	-58.32	2.76	9.79	H
	7639	-47.98	-13	-34.98	-77.15	-57.48	2.38	11.88	H
									H
									H
									H
									H
	3819	-56.39	-13	-43.39	-78.25	-63.07	1.70	8.38	V
	5729	-51.33	-13	-38.33	-78.25	-58.36	2.76	9.79	V
	7639	-47.93	-13	-34.93	-77.37	-57.43	2.38	11.88	V
									V
									V
									V
									V

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

EDGE1900

EDGE 1900									
Channel	Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Over Limit (dB)	SPA Reading (dBm)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)
Lowest	3700	-56.53	-13	-43.53	-78.41	-63.10	1.67	8.24	H
	5550	-51.81	-13	-38.81	-78.3	-58.88	2.65	9.72	H
	7400	-50.11	-13	-37.11	-78.8	-59.25	2.46	11.60	H
									H
									H
									H
									H
	3700	-56.37	-13	-43.37	-78.24	-62.94	1.67	8.24	V
	5550	-51.68	-13	-38.68	-78.14	-58.75	2.65	9.72	V
	7400	-49.79	-13	-36.79	-78.69	-58.93	2.46	11.60	V
									V
									V
									V
									V
Middle	3600	-56.39	-13	-43.39	-78.35	-62.87	1.64	8.12	H
	5400	-52.63	-13	-39.63	-78.73	-59.76	2.57	9.70	H
	7200	-49.42	-13	-36.42	-77.99	-58.09	2.53	11.20	H
									H
									H
									H
									H
	3600	-56.28	-13	-43.28	-78.15	-62.76	1.64	8.12	V
	5400	-53.08	-13	-40.08	-79.12	-60.21	2.57	9.70	V
	7200	-50.05	-13	-37.05	-78.75	-58.72	2.53	11.20	V
									V
									V
									V
									V

Highest	3819	-57.16	-13	-44.16	-78.95	-63.84	1.70	8.38	H
	5729	-51.39	-13	-38.39	-78.32	-58.42	2.76	9.79	H
	7639	-48.40	-13	-35.40	-77.57	-57.90	2.38	11.88	H
									H
									H
									H
									H
	3819	-52.49	-13	-39.49	-74.35	-59.17	1.70	8.38	V
	5729	-50.86	-13	-37.86	-77.78	-57.89	2.76	9.79	V
	7639	-47.88	-13	-34.88	-77.32	-57.38	2.38	11.88	V
									V
									V
									V
									V

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

WCDMA 1900

WCDMA 1900									
Channel	Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Over Limit (dB)	SPA Reading (dBm)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)
Lowest	3702	-55.42	-13	-42.42	-77.12	-61.99	1.67	8.24	H
	5557	-51.75	-13	-38.75	-78.06	-58.81	2.66	9.72	H
	7410	-49.99	-13	-36.99	-78.47	-59.15	2.46	11.62	H
									H
									H
									H
									H
	3702	-55.36	-13	-42.36	-77.02	-61.93	1.67	8.24	V
	5557	-51.98	-13	-38.98	-78.17	-59.04	2.66	9.72	V
	7410	-49.98	-13	-36.98	-78.69	-59.14	2.46	11.62	V
									V
									V
									V
									V
Middle	3762	-56.66	-13	-43.66	-78.31	-63.29	1.69	8.31	H
	5640	-51.59	-13	-38.59	-78.06	-58.64	2.71	9.76	H
	7520	-49.77	-13	-36.77	-78.37	-59.16	2.42	11.81	H
									H
									H
									H
									H
	3762	-56.95	-13	-43.95	-78.48	-63.58	1.69	8.31	V
	5640	-51.37	-13	-38.37	-77.89	-58.42	2.71	9.76	V
	7520	-49.12	-13	-36.12	-78.02	-58.51	2.42	11.81	V
									V
									V
									V
									V

Highest	3816	-56.58	-13	-43.58	-78.14	-63.26	1.70	8.38	H
	5722	-51.29	-13	-38.29	-78	-58.33	2.75	9.79	H
	7630	-48.35	-13	-35.35	-77.26	-57.84	2.39	11.88	H
									H
									H
									H
									H
	3816	-55.85	-13	-42.85	-77.4	-62.53	1.70	8.38	V
	5722	-51.48	-13	-38.48	-78.14	-58.52	2.75	9.79	V
	7630	-48.38	-13	-35.38	-77.57	-57.87	2.39	11.88	V
									V
									V
									V
									V

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

CDMA2000 (BC1 1xRTT)

CDMA2000 BC1									
Channel	Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Over Limit (dB)	SPA Reading (dBm)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)
Lowest	3702	-55.29	-13	-42.29	-77.19	-61.86	1.67	8.24	H
	5556	-53.05	-13	-40.05	-79.51	-60.12	2.66	9.72	H
	7404	-51.36	-13	-38.36	-80.06	-60.51	2.46	11.61	H
									H
									H
									H
									H
	3702	-55.48	-13	-42.48	-77.38	-62.05	1.67	8.24	V
	5556	-53.37	-13	-40.37	-79.77	-60.44	2.66	9.72	V
	7404	-51.03	-13	-38.03	-79.94	-60.18	2.46	11.61	V
									V
									V
									V
									V
Middle	3762	-56.42	-13	-43.42	-78.32	-63.05	1.69	8.31	H
	5640	-52.33	-13	-39.33	-79.01	-59.38	2.71	9.76	H
	7518	-51.08	-13	-38.08	-79.84	-60.47	2.42	11.81	H
									H
									H
									H
									H
	3762	-57.19	-13	-44.19	-78.99	-63.82	1.69	8.31	V
	5640	-52.93	-13	-39.93	-79.54	-59.98	2.71	9.76	V
	7518	-50.75	-13	-37.75	-79.91	-60.14	2.42	11.81	V
									V
									V
									V
									V

Highest	3816	-57.32	-13	-44.32	-79.07	-64	1.70	8.38	H
	5724	-52.34	-13	-39.34	-79.24	-59.38	2.75	9.79	H
	7632	-49.02	-13	-36.02	-78.16	-58.51	2.39	11.88	H
									H
									H
									H
									H
	3816	-56.93	-13	-43.93	-78.76	-63.61	1.70	8.38	V
	5724	-52.31	-13	-39.31	-79.15	-59.35	2.75	9.79	V
	7632	-48.73	-13	-35.73	-78.22	-58.22	2.39	11.88	V
									V
									V
									V
									V

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

CDMA2000 (BC1 1xEVDO)

CDMA2000 BC1									
Channel	Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Over Limit (dB)	SPA Reading (dBm)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)
Lowest	3702	-55.75	-13	-42.75	-77.6	-62.32	1.67	8.24	H
	5556	-53.02	-13	-40.02	-79.56	-60.09	2.66	9.72	H
	7404	-51.52	-13	-38.52	-80.1	-60.67	2.46	11.61	H
									H
									H
									H
									H
	3702	-56.02	-13	-43.02	-78	-62.59	1.67	8.24	V
	5556	-52.93	-13	-39.93	-79.39	-60	2.66	9.72	V
	7404	-51.14	-13	-38.14	-80	-60.29	2.46	11.61	V
									V
									V
									V
									V
Middle	3762	-56.76	-13	-43.76	-78.58	-63.39	1.69	8.31	H
	5640	-52.56	-13	-39.56	-79.32	-59.61	2.71	9.76	H
	7518	-51.05	-13	-38.05	-79.85	-60.44	2.42	11.81	H
									H
									H
									H
									H
	3762	-55.72	-13	-42.72	-77.55	-62.35	1.69	8.31	V
	5640	-52.53	-13	-39.53	-79.11	-59.58	2.71	9.76	V
	7518	-50.62	-13	-37.62	-79.64	-60.01	2.42	11.81	V
									V
									V
									V
									V

Highest	3816	-57.01	-13	-44.01	-78.86	-63.69	1.70	8.38	H
	5724	-52.04	-13	-39.04	-78.97	-59.08	2.75	9.79	H
	7632	-48.84	-13	-35.84	-77.93	-58.33	2.39	11.88	H
									H
									H
									H
									H
	3816	-56.71	-13	-43.71	-78.56	-63.39	1.70	8.38	V
	5724	-52.24	-13	-39.24	-79.06	-59.28	2.75	9.79	V
	7632	-48.92	-13	-35.92	-78.28	-58.41	2.39	11.88	V
									V
									V
									V
									V

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

<Close Mode>

EDGE1900

EDGE 1900									
Channel	Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Over Limit (dB)	SPA Reading (dBm)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)
Highest	3819	-57.67	-13	-44.67	-79.44	-64.35	1.71	8.39	H
	5729	-52.88	-13	-39.88	-79.48	-59.91	2.76	9.79	H
	7639	-48.06	-13	-35.06	-77.83	-57.56	2.38	11.88	H
									H
									H
									H
									H
	3819	-58.05	-13	-45.05	-79.86	-64.73	1.71	8.39	V
	5729	-52.88	-13	-39.88	-79.48	-59.91	2.76	9.79	V
	7639	-48.34	-13	-35.34	-78.39	-57.84	2.38	11.88	V
									V
									V
									V
									V

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

———THE END———