FCC RADIO TEST REPORT

FCC ID	:	**IHDT56XP1**
Equipment	:	**Mobile Cellular Phone**
Brand Name	:	**Motorola**
Model Name	:	**XT1962-1**
Applicant	:	**Motorola Mobility LLC** **222 W,Merchandise Mart Plaza, Chicago IL 60654 USA**
Manufacturer	:	**Motorola Mobility LLC** **222 W,Merchandise Mart Plaza, Chicago IL 60654 USA**
Standard	:	**47 CFR Part 2, 22(H), 24(E), 27(L)**

The product was received on Sep. 08, 208 and testing was started from Sep. 22, 2018 and completed on Oct. 02, 2018. We, SPORTON INTERNATIONAL INC., would like to declare that the tested sample has been evaluated in accordance with the test procedures given in ANSI / TIA-603-E and has been in compliance with the applicable technical standards.

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

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

Approved by: Joseph Lin

SPORTON INTERNATIONAL INC. EMC & Wireless Communications Laboratory
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History of this test report

Report No.	Version	Description	Issued Date
FG890804A	01	Initial issue of report	Oct. 12, 2018

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		
	§27.50 (d)(4)	Equivalent Isotropic Radiated Power		
3.3	§24.232 (d)	Peak-to-Average Ratio	Pass	-
3.4	§2.1049 §22.917 (b) §24.238 (b) §27.53 (g)	Occupied Bandwidth	Pass	-
3.5	§2.1051 §22.917 (a) §24.238 (a) §27.53 (g)	Band Edge Measurement	Pass	-
3.6	§2.1051 §22.917 (a) §24.238 (a) §27.53 (g)	Conducted Emission	Pass	-
3.7	§2.1055 §22.355	Frequency Stability Temperature & Voltage	Pass	-
	§2.1055 §24.235 §27.54			-
4.4	§2.1053 §22.917 (a) §24.238 (a) §27.53 (h)	Field Strength of Spurious Radiation	Pass	Under limit 21.82 dB at 2512.000 MHz

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	XT1962-1
FCC ID	IHDT56XP1
IMEI Code	**Conducted :** IMEI : 355569090014734 **Radiation :** IMEI : 355569090016853
EUT supports Radios application	CDMA/EV-DO/GSM/EGPRS/WCDMA/HSPA/LTE/GNSS/FM WLAN 11b/g/n HT20 WLAN 11a/n HT20/HT40 Bluetooth BR/EDR/LE
HW Version	DVT1-B
EUT Stage	Identical Prototype

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

Accessory List	
AC Adapter 1	Brand Name : Motorola
	Model Name : SC-51
	Manufacturer : Salom
AC Adapter 2	Brand Name : Motorola
	Model Name : SC-51
	Manufacturer : Chenyang
Battery	Brand Name : Motorola
	Model Name : JG30
	Manufacturer : Amperex
Earphone	Brand Name : Motorola
	Model Name : SH38C37773
	Manufacturer : Lyand
USB Cable 1	Brand Name : Cabletech
	Model Name : SKN6473A
USB Cable 2	Brand Name : Saibao
	Model Name : SKN6473A
USB Cable 3	Brand Name : Luxshare
	Model Name : SKN6473A

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 Band IV: 1712.4 MHz ~ 1752.6 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 Band IV: 2112.4 MHz ~ 2152.6 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: 33.33 dBm 1900: 29.80 dBm **WCDMA:** Band V: 23.26 dBm Band II: 23.10 dBm Band IV: 23.15 dBm **CDMA2000** BC0 24.26 dBm BC1 24.08 dBm
Antenna Type	Fixed Internal Antenna and Dipole Antenna
Antenna Gain	Cellular Band: 0 dBi PCS Band: 2 dBi AWS Band: 2 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	1.3122	0.0048 ppm	248KGXW
Part 22	824.2 ~848.8	GSM850 EDGE class 8	8PSK	0.2938	0.0084 ppm	246KG7W
Part 22	826.4 ~846.6	WCDMA Band V RMC 12.2Kbps	BPSK	0.1253	0.0143 ppm	4M14F9W
Part 22	824.7 ~ 848.31	CDMA2000 BC0 1xRTT	QPSK	0.1622	0.0239 ppm	1M28F9W
Part 22	824.7 ~ 848.31	CDMA2000 BC0 1xEV-DO	QPSK	0.1626	0.0239 ppm	1M27F9W
Part 24	1850.2 ~1909.8	GSM1900 GSM	GMSK	1.5136	0.0213 ppm	246KGXW
Part 24	1850.2 ~1909.8	GSM1900 EDGE class 8	8PSK	0.6194	0.0037 ppm	246KG7W
Part 24	1852.4 ~ 1907.6	WCDMA Band II RMC 12.2Kbps	BPSK	0.3236	0.0069 ppm	4M15F9W
Part 24	1851.25 ~ 1908.75	CDMA2000 BC1 1xRTT	QPSK	0.4046	0.0032 ppm	1M28F9W
Part 24	1851.25 ~ 1908.75	CDMA2000 BC1 1xEV-DO	QPSK	0.4055	0.0032 ppm	1M28F9W
Part 27	1712.4 ~ 1752.6	WCDMA Band IV RMC 12.2Kbps	BPSK	0.3273	0.0115 ppm	4M14F9W

1.5 Testing Location

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

Test Site	SPORTON INTERNATIONAL INC.
Test Site Location	No.52, 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

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

Test Site	SPORTON INTERNATIONAL INC.
Test Site Location	No.58, Aly. 75, Ln. 564, Wenhua 3rd, Rd., Guishan Dist., Taoyuan City, Taiwan (R.O.C.) TEL: +886-3-327-0868 FAX: +886-3-327-0855
Test Site No.	**Sporton Site No.**
	03CH15-HY

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

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), 27(L)
- FCC KDB 971168 D01 Power Meas. License Digital Systems v03r01
- FCC KDB 412172 D01 Determining ERP and EIRP v01r01

Remark:

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

2 Test Configuration of Equipment Under Test

2.1 Test Mode

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

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

Radiated emissions were investigated as following frequency range:

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

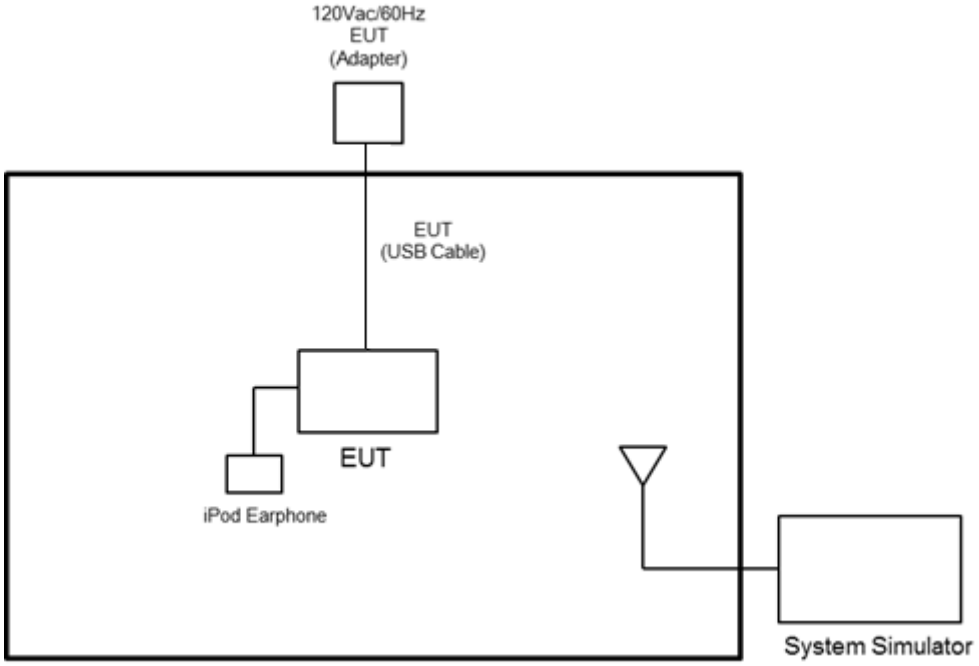
All modes and data rates and positions were investigated.

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

Test Modes		
Band	**Radiated TCs**	**Conducted TCs**
GSM 850	■ GSM Link ■ EDGE Class 8 Link	■ GSM Link ■ EDGE Class 8 Link
GSM 1900	■ GSM Link ■ EDGE Class 8 Link	■ GSM Link ■ EDGE Class 8 Link
WCDMA Band V	■ RMC 12.2Kbps Link	■ RMC 12.2Kbps Link
WCDMA Band II	■ RMC 12.2Kbps Link	■ RMC 12.2Kbps Link
WCDMA Band IV	■ RMC 12.2Kbps Link	■ RMC 12.2Kbps Link
CDMA BC0	■ 1xRTT Link ■ 1xEV-DO Link	■ 1xRTT Link ■ 1xEV-DO Link
CDMA BC1	■ 1xRTT Link ■ 1xEV-DO Link	■ 1xRTT Link ■ 1xEV-DO Link

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

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	Anritsu	MT8820C	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
WCDMA Band IV	Channel	1312	1413	1513
	Frequency	1712.4	1732.6	1752.6
CDMA2000 BC0	Channel	1013	384	777
	Frequency	824.7	836.52	848.31
CDMA2000 BC1	Channel	25	600	1175
	Frequency	1851.25	1880.0	1908.75

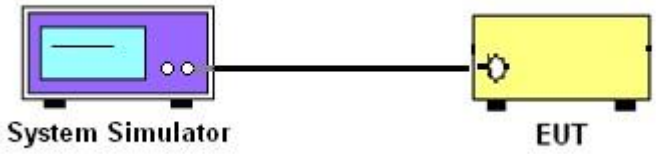
3 Conducted Test Result

3.1 Measuring Instruments

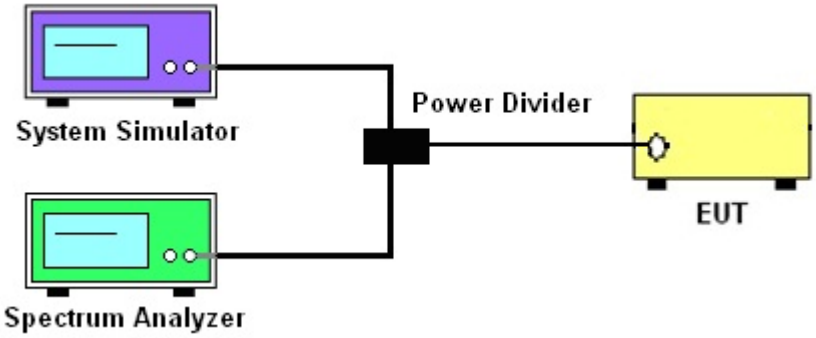
See list of measuring instruments of this test report.

3.1.1 Test Setup

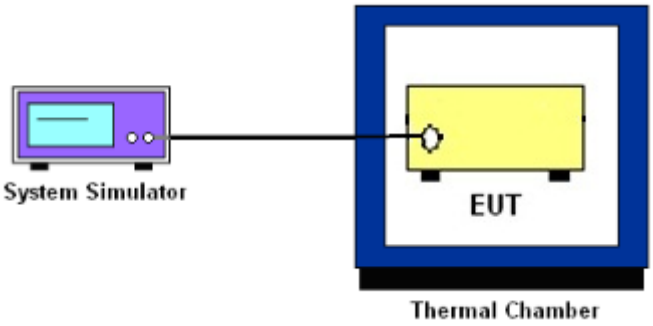
3.1.2 Conducted Output Power



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



3.1.4 Frequency Stability



3.1.5 Test Result of Conducted Test

Please refer to Appendix A.

3.2 Conducted Output Power and ERP/EIRP

3.2.1 Description of the Conducted Output Power and ERP/EIRP

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

The ERP of mobile transmitters must not exceed 7 Watts for GSM850 and WCDMA Band V and CDMA BC0.

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

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

According to KDB 412172 D01 Power Approach,

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

P_T = transmitter output power in dBm

G_T = gain of the transmitting antenna in dBi

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

3.2.2 Test Procedures

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

3.3 Peak-to-Average Ratio

3.3.1 Description of the PAR Measurement

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

3.3.2 Test Procedures

The testing follows 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 & 27.54

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

3.7.2 Test Procedures for Temperature Variation

The testing follows FCC KDB 971168 D01 v03r01 Section 9.0.

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

3.7.3 Test Procedures for Voltage Variation

The testing follows FCC KDB 971168 D01 v03r01 Section 9.0.

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

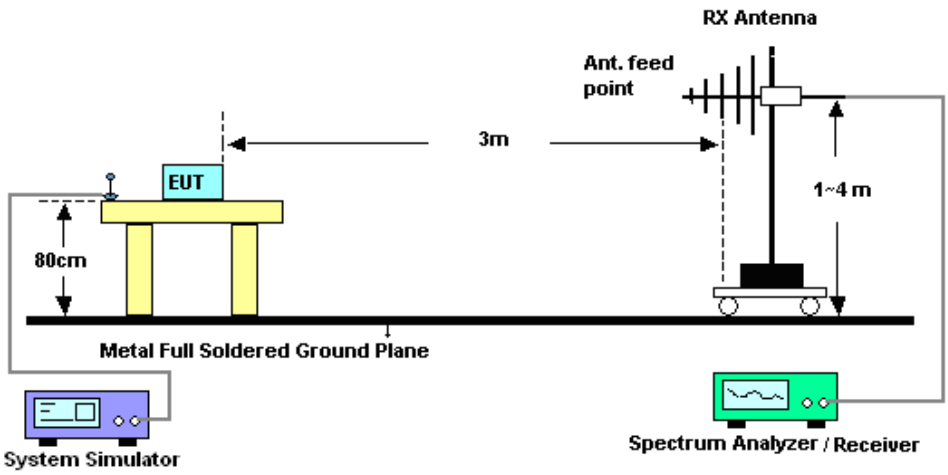
4 Radiated Test Items

4.1 Measuring Instruments

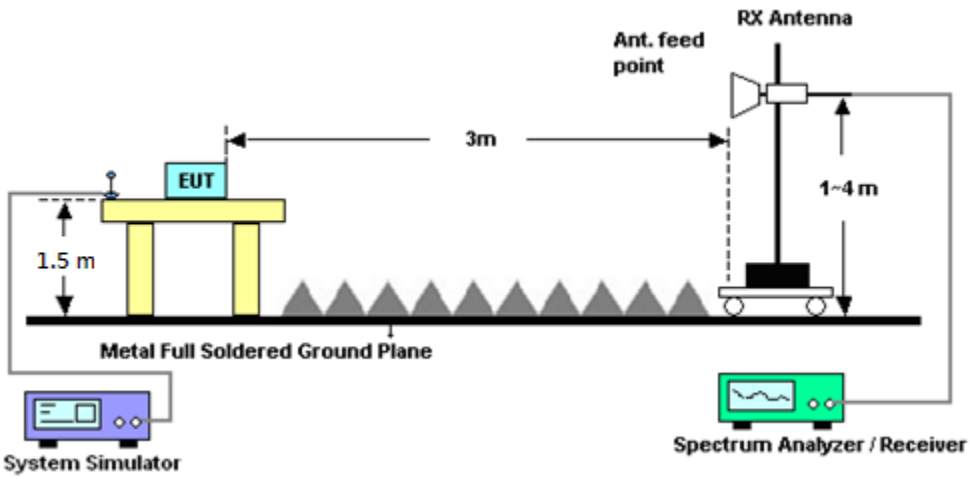
See list of measuring instruments of this test report.

4.2 Test Setup

For radiated test from 30MHz to 1GHz



For radiated test above 1GHz



4.3 Test Result of Radiated Test

Please refer to Appendix B.

4.4 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
Spectrum Analyzer	Rohde & Schwarz	FSP30	101329	9kHz~30GHz	Jun. 29, 2018	Sep. 22, 2018~ Oct. 02, 2018	Jun. 28, 2019	Conducted (TH03-HY)
Temperature Chamber	ESPEC	SU-641	92013721	-30℃ ~70℃	Dec. 06, 2017	Sep. 22, 2018~ Oct. 02, 2018	Dec. 05, 2019	Conducted (TH03-HY)
Programmable Power Supply	GW Instek	PSS-2005	EL883644	Voltage:0~20V; Current:0~5A	Dec. 06, 2017	Sep. 22, 2018~ Oct. 02, 2018	Dec. 05, 2019	Conducted (TH03-HY)
Base Station (Measure)	Rohde & Schwarz	CMU200	117995	GSM / GPRS / WCDMA / CDMA	Aug. 10, 2018	Sep. 22, 2018~ Oct. 02, 2018	Aug. 09, 2019	Conducted (TH03-HY)
Bilog Antenna	TESEQ	CBL6111D&00800N1D01N-06	41912&05	30MHz to 1GHz	Jan. 10, 2018	Sep. 24, 2018~ Sep. 28, 2018	Jan. 09, 2019	Radiation (03CH15-HY)
Horn Antenna	SCHWARZBECK	BBHA 9120D	9120D-1620	1G~18GHz	Oct. 03, 2017	Sep. 24, 2018~ Sep. 28, 2018	Oct. 02, 2018	Radiation (03CH15-HY)
Horn Antenna	SCHWARZBECK	BBHA 9120 D	9120D-1522	1G~18GHz	May. 10, 2018	Sep. 24, 2018~ Sep. 28, 2018	May. 09, 2019	Radiation (03CH15-HY)
Loop Antenna	Rohde & Schwarz	HFH2-Z2	100488	9 kHz~30 MHz	Nov. 23, 2017	Sep. 24, 2018~ Sep. 28, 2018	Nov. 22, 2018	Radiation (03CH15-HY)
Preamplifier	Keysight	83017A	MY53270195	1GHz~26.5GHz	Aug. 23, 2018	Sep. 24, 2018~ Sep. 28, 2018	Aug. 22, 2019	Radiation (03CH15-HY)
Preamplifier	EMEC	EM18G40G	060715	18GHz ~ 40GHz	Dec. 05, 2017	Sep. 24, 2018~ Sep. 28, 2018	Dec. 04, 2018	Radiation (03CH15-HY)
Amplifier	SONOMA	310N	363440	9kHz~1GHz	Dec. 26, 2017	Sep. 24, 2018~ Sep. 28, 2018	Dec. 25, 2018	Radiation (03CH15-HY)
Spectrum Analyzer	Agilent	E4446A	MY50180136	3Hz~44GHz	Apr. 25, 2018	Sep. 24, 2018~ Sep. 28, 2018	Apr. 24, 2019	Radiation (03CH15-HY)
RF Cable	HUBER + SUHNER	SUCOFLEX 104	MY2859/2	30MHz-40GHz	Mar. 04, 2018	Sep. 24, 2018~ Sep. 28, 2018	Mar. 03, 2019	Radiation (03CH15-HY)
RF Cable	HUBER + SUHNER	SUCOFLEX 102	MY4274/2	30MHz-40GHz	Mar. 14, 2018	Sep. 24, 2018~ Sep. 28, 2018	Mar. 13, 2019	Radiation (03CH15-HY)
Controller	ChainTek	3000-1	N/A	Control Turn table & Ant Mast	N/A	Sep. 24, 2018~ Sep. 28, 2018	N/A	Radiation (03CH15-HY)
Antenna Mast	ChainTek	MBS-520-1	N/A	1m~4m	N/A	Sep. 24, 2018~ Sep. 28, 2018	N/A	Radiation (03CH15-HY)
Turn Table	ChainTek	T-200-S-1	N/A	0~360 Degree	N/A	Sep. 24, 2018~ Sep. 28, 2018	N/A	Radiation (03CH15-HY)

Instrument	Manufacturer	Model No.	Serial No.	Characteristics	Calibration Date	Test Date	Due Date	Remark
SHF-EHF Horn Antenna	SCHWARZBECK	BBHA 9170	BBHA9170576	18GHz ~ 40GHz	May 08, 2018	Sep. 24, 2018~ Sep. 28, 2018	May 07, 2019	Radiation (03CH15-HY)
Signal Generator	Rohde & Schwarz	SMF100A	101107	100kHz~40GHz	May. 21, 2018	Sep. 24, 2018~ Sep. 28, 2018	May. 20, 2019	Radiation (03CH15-HY)
Software	Audix	E3 6.2009-8-24(K5)	ARD-SPR-000185	N/A	N/A	Sep. 24, 2018~ Sep. 28, 2018	N/A	Radiation (03CH15-HY)
Filter	Wainwright	WLK4-1000-1530-8000-40SS	SN11	1G Low Pass	Sep. 16, 2018	Sep. 24, 2018~ Sep. 28, 2018	Sep. 15, 2019	Radiation (03CH15-HY)
Filter	Wainwright	WHKX12-2700-3000-18000-60ST	SN2	3 GHz Highpass	Jul. 15, 2018	Sep. 24, 2018~ Sep. 28, 2018	Jul. 14, 2019	Radiation (03CH15-HY)
Notch Filter	Wainwright	WRCT800/960-0.2/40-8SSK	SN22	GSM850	Nov. 03, 2017	Sep. 24, 2018~ Sep. 28, 2018	Nov. 02, 2018	Radiation (03CH15-HY)
Notch Filter	Wainwright	WRCT1747.5-0.4/40-8SS	SN2	DCS 1800	Aug. 22, 2018	Sep. 24, 2018~ Sep. 28, 2018	Aug. 21, 2019	Radiation (03CH15-HY)
Notch Filter	Wainwright	WRCT2500/2570-10/40-10SSK	SN1 R	LTE Band7	Aug. 22, 2018	Sep. 24, 2018~ Sep. 28, 2018	Aug. 21, 2019	Radiation (03CH15-HY)
Notch Filter	Wainwright	WRCT698/798-10/40 8SSK	SN1	AWS Band	Nov. 08, 2017	Sep. 24, 2018~ Sep. 28, 2018	Nov. 07, 2018	Radiation (03CH15-HY)

6 Uncertainty of Evaluation

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

Measuring Uncertainty for a Level of Confidence of 95% (U = 2Uc(y))	3.37

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

Measuring Uncertainty for a Level of Confidence of 95% (U = 2Uc(y))	3.67

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

Measuring Uncertainty for a Level of Confidence of 95% (U = 2Uc(y))	4.03

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	33.33	32.87	32.90	29.67	29.80	29.67
GPRS class 8	33.31	32.85	32.88	29.65	29.78	29.66
GPRS class 10	30.06	29.96	29.75	26.54	26.68	26.61
GPRS class 11	27.95	27.85	27.89	24.61	24.74	24.80
GPRS class 12	26.53	26.39	26.23	23.22	23.24	23.26
EGPRS class 8	26.83	26.80	26.77	25.69	25.92	25.89
EGPRS class 10	26.54	26.60	26.60	25.57	25.70	25.73
EGPRS class 11	25.68	25.68	25.68	24.03	24.24	24.25
EGPRS class 12	24.17	24.18	24.18	22.57	22.72	22.72

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	23.26	23.09	23.13	22.96	22.89	23.10
HSDPA Subtest-1	22.93	22.80	22.76	22.72	22.68	22.70
HSDPA Subtest-2	22.96	22.78	22.75	22.74	22.63	22.65
HSDPA Subtest-3	22.48	22.28	22.25	22.26	22.16	22.17
HSDPA Subtest-4	22.49	22.29	22.23	22.22	22.14	22.20
HSUPA Subtest-1	22.47	22.29	22.26	22.20	22.15	22.13
HSUPA Subtest-2	20.98	20.77	20.75	20.82	20.61	20.63
HSUPA Subtest-3	21.99	21.80	21.73	21.73	21.61	21.45
HSUPA Subtest-4	20.98	20.78	20.68	20.73	20.64	20.48
HSUPA Subtest-5	23.00	22.80	22.80	22.80	22.60	22.60

Conducted Power (*Unit: dBm)			
Band	WCDMA Band IV		
Channel	1312	1413	1513
Frequency	1712.4	1732.6	1752.6
RMC 12.2K	22.91	**23.15**	22.91
HSDPA Subtest-1	22.82	22.68	22.67
HSDPA Subtest-2	22.80	22.68	22.60
HSDPA Subtest-3	22.36	22.16	22.17
HSDPA Subtest-4	22.35	22.16	22.20
HSUPA Subtest-1	22.15	22.20	22.13
HSUPA Subtest-2	20.95	20.65	20.63
HSUPA Subtest-3	21.95	21.61	21.56
HSUPA Subtest-4	20.45	20.64	20.48
HSUPA Subtest-5	22.70	22.50	22.60

Conducted Power (*Unit: dBm)						
Band	CDMA 2000 BC0			CDMA 2000 BC1		
Channel	1013	384	777	25	600	1175
Frequency	824.7	836.52	848.31	1851.25	1880	1908.75
1xRTT RC1 SO55	24.16	24.17	24.23	24.03	24.03	23.84
1xRTT RC3 SO55	24.15	24.16	**24.25**	24.05	24.04	23.88
1xRTT RC3 SO32 (+ F-SCH)	24.15	24.16	24.24	24.05	**24.07**	23.87
1xRTT RC3 SO32 (+SCH)	24.17	24.18	**24.25**	24.06	**24.07**	23.86
1xEVDO RTAP 153.6Kbps	24.19	24.18	**24.26**	24.03	**24.08**	23.89
1xEVDO RETAP 4096Bits	23.84	23.81	23.89	23.64	23.68	23.60

A2. GSM

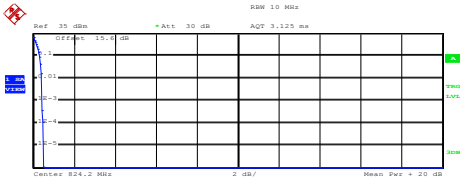
Peak-to-Average Ratio

Mode	GSM850	GSM850	Limit: 13dB
Mod.	GSM	EDGE class 8	Result
Lowest CH	0.44	3.52	PASS
Middle CH	0.48	3.36	
Highest CH	0.44	3.20	

Mode	GSM1900	GSM1900	Limit: 13dB
Mod.	GSM	EDGE class 8	Result
Lowest CH	0.36	3.48	PASS
Middle CH	0.36	3.28	
Highest CH	0.36	3.52	

GSM850 (GSM)

Lowest Channel



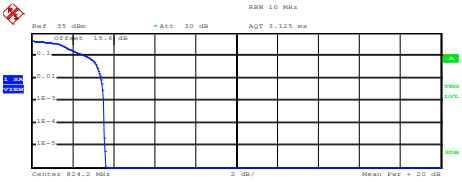
Complementary Cumulative Distribution Function (100000 samples)

	Trace 1
Mean	31.86 dBm
Peak	32.36 dBm
Crest	0.50 dB
10 %	0.32 dB
1 %	0.40 dB
.1 %	0.44 dB
.01 %	0.48 dB

Date: 22.SEP.2018 15:51:53

GSM850 (EDGE class 8)

Lowest Channel

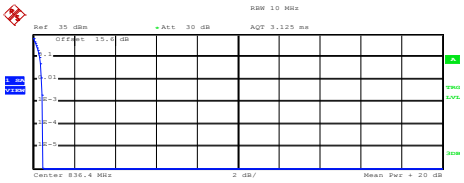


Complementary Cumulative Distribution Function (100000 samples)

	Trace 1
Mean	26.14 dBm
Peak	29.75 dBm
Crest	3.61 dB
10 %	2.68 dB
1 %	3.40 dB
.1 %	3.52 dB
.01 %	3.56 dB

Date: 22.SEP.2018 13:09:30

Middle Channel

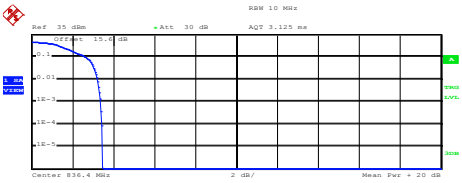


Complementary Cumulative Distribution Function (100000 samples)

	Trace 1
Mean	31.88 dBm
Peak	32.36 dBm
Crest	0.48 dB
10 %	0.32 dB
1 %	0.40 dB
.1 %	0.48 dB
.01 %	0.48 dB

Date: 22.SEP.2018 15:52:04

Middle Channel

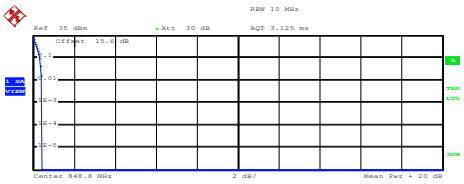


Complementary Cumulative Distribution Function (100000 samples)

	Trace 1
Mean	26.42 dBm
Peak	29.89 dBm
Crest	3.47 dB
10 %	2.64 dB
1 %	3.24 dB
.1 %	3.36 dB
.01 %	3.44 dB

Date: 22.SEP.2018 13:09:49

Highest Channel

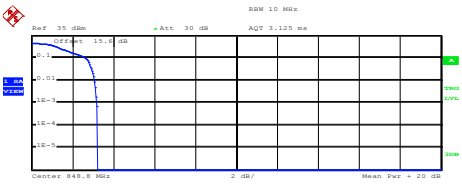


Complementary Cumulative Distribution Function (100000 samples)

	Trace 1
Mean	31.94 dBm
Peak	32.36 dBm
Crest	0.42 dB
10 %	0.32 dB
1 %	0.40 dB
.1 %	0.44 dB
.01 %	0.44 dB

Date: 22.SEP.2018 15:52:16

Highest Channel



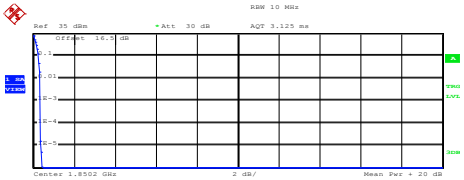
Complementary Cumulative Distribution Function (100000 samples)

	Trace 1
Mean	26.59 dBm
Peak	29.82 dBm
Crest	3.23 dB
10 %	2.64 dB
1 %	3.08 dB
.1 %	3.20 dB
.01 %	3.24 dB

Date: 22.SEP.2018 13:10:16

GSM1900 (GSM)

Lowest Channel

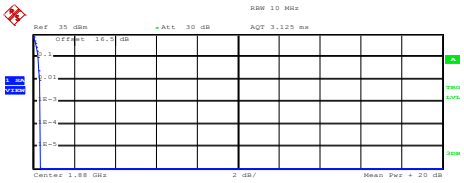


Complementary Cumulative Distribution Function (100000 samples)

	Trace 1
Mean	28.41 dBm
Peak	28.83 dBm
Crest	0.42 dB
10 %	0.24 dB
1 %	0.32 dB
.1 %	0.36 dB
.01 %	0.36 dB

Date: 22.SEP.2018 15:26:39

Middle Channel

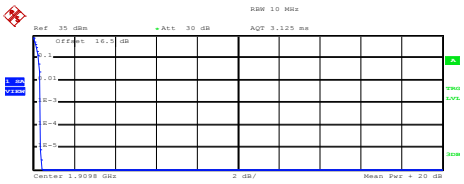


Complementary Cumulative Distribution Function (100000 samples)

	Trace 1
Mean	28.70 dBm
Peak	29.04 dBm
Crest	0.34 dB
10 %	0.24 dB
1 %	0.32 dB
.1 %	0.36 dB
.01 %	0.36 dB

Date: 22.SEP.2018 15:26:54

Highest Channel



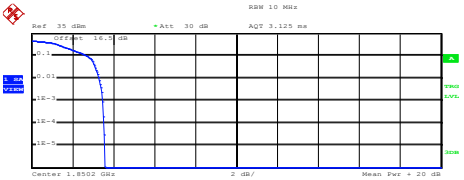
Complementary Cumulative Distribution Function (100000 samples)

	Trace 1
Mean	28.27 dBm
Peak	28.69 dBm
Crest	0.42 dB
10 %	0.24 dB
1 %	0.36 dB
.1 %	0.36 dB
.01 %	0.36 dB

Date: 22.SEP.2018 15:27:10

GSM1900 (EDGE class 8)

Lowest Channel

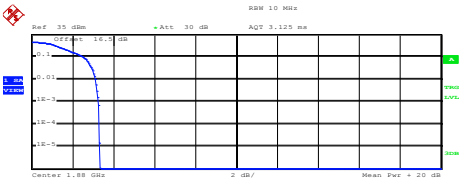


Complementary Cumulative Distribution Function (100000 samples)

	Trace 1
Mean	22.59 dBm
Peak	26.15 dBm
Crest	3.56 dB
10 %	2.72 dB
1 %	3.28 dB
.1 %	3.48 dB
.01 %	3.56 dB

Date: 22.SEP.2018 12:54:18

Middle Channel

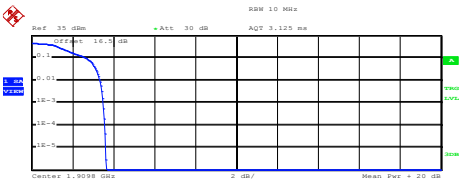


Complementary Cumulative Distribution Function (100000 samples)

	Trace 1
Mean	23.12 dBm
Peak	26.43 dBm
Crest	3.31 dB
10 %	2.52 dB
1 %	3.12 dB
.1 %	3.28 dB
.01 %	3.32 dB

Date: 22.SEP.2018 12:54:30

Highest Channel



Complementary Cumulative Distribution Function (100000 samples)

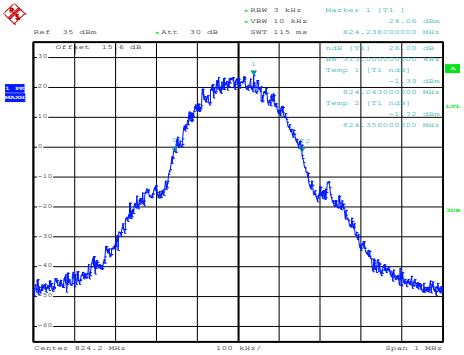
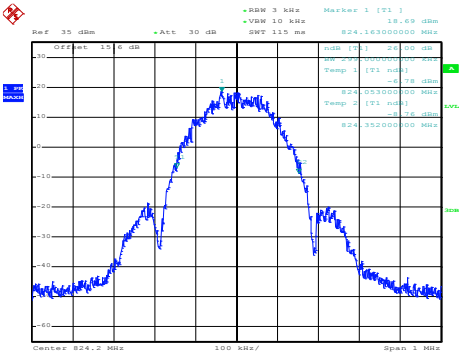
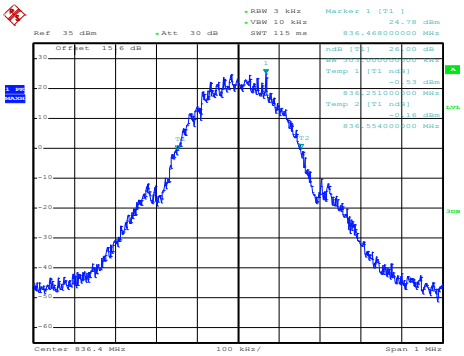
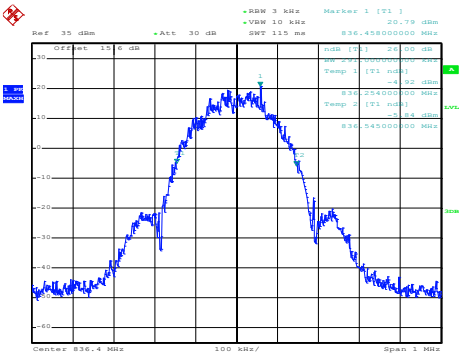
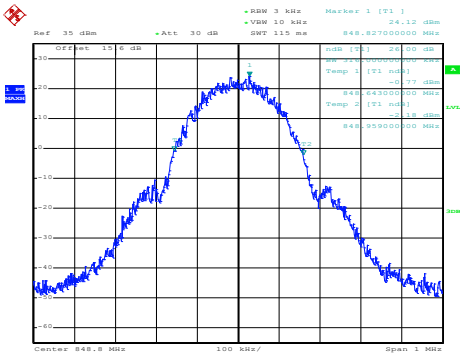
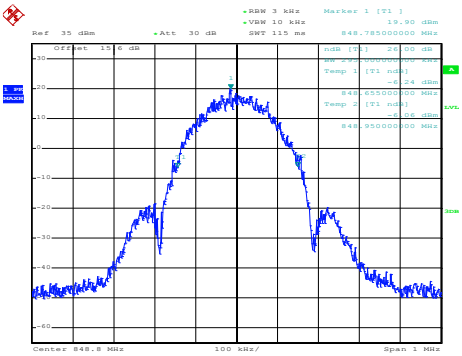
	Trace 1
Mean	22.52 dBm
Peak	26.15 dBm
Crest	3.64 dB
10 %	2.68 dB
1 %	3.36 dB
.1 %	3.52 dB
.01 %	3.60 dB

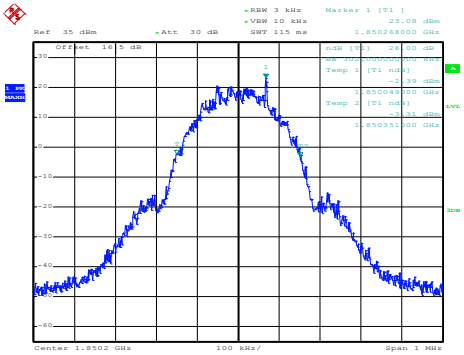
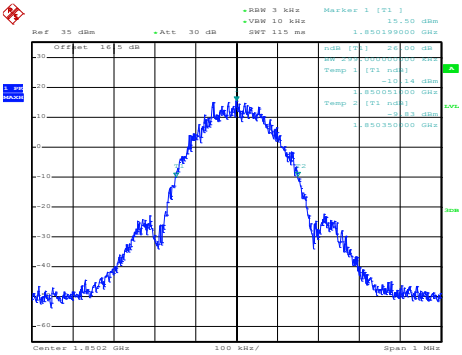
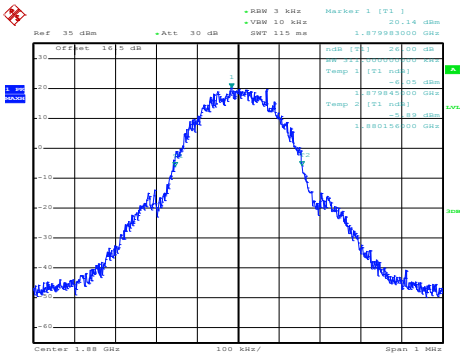
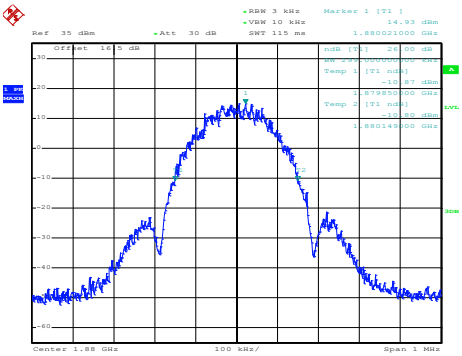
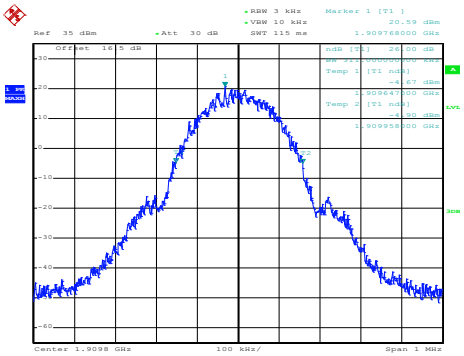
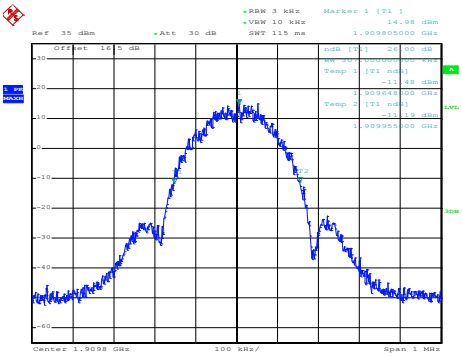
Date: 22.SEP.2018 12:54:44

26dB Bandwidth

Mode	GSM850 : 26dB BW(MHz)	
Mod.	GSM	EDGE class 8
Lowest CH	0.313	0.299
Middle CH	0.303	0.291
Highest CH	0.316	0.295

Mode	GSM1900 : 26dB BW(MHz)	
Mod.	GSM	EDGE class 8
Lowest CH	0.302	0.299
Middle CH	0.311	0.299
Highest CH	0.311	0.307

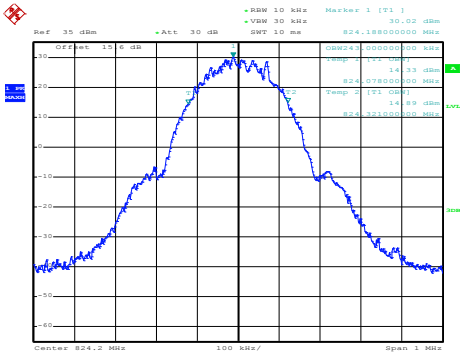
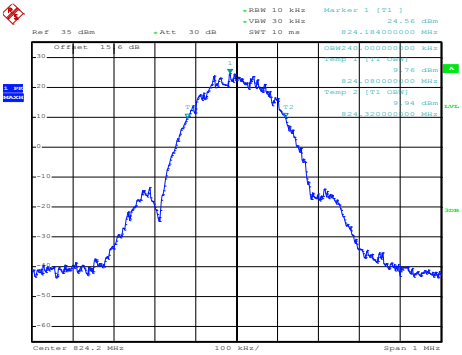
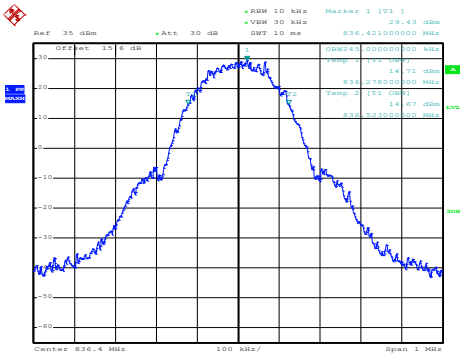
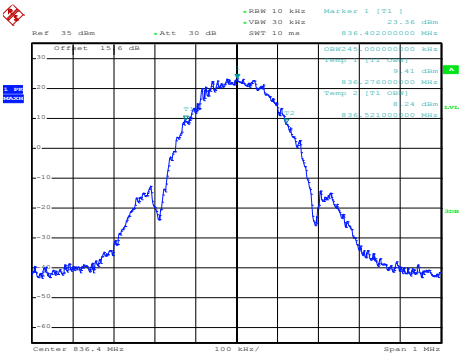
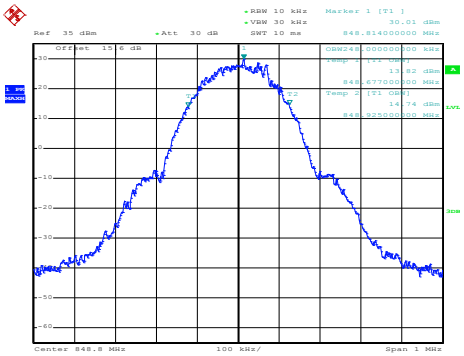
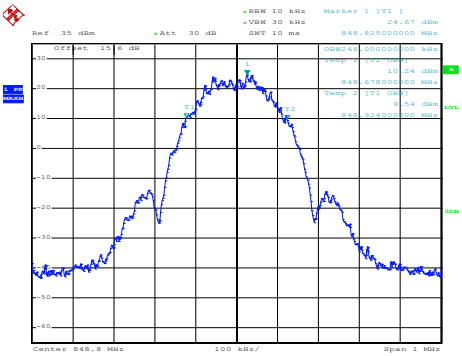
GSM850 (GSM)	GSM850 (EDGE class 8)
Lowest Channel	**Lowest Channel**
 Date: 22.SEP.2018 15:46:39	 Date: 22.SEP.2018 12:59:49
Middle Channel	**Middle Channel**
 Date: 22.SEP.2018 15:47:10	 Date: 22.SEP.2018 13:00:21
Highest Channel	**Highest Channel**
 Date: 22.SEP.2018 15:47:39	 Date: 22.SEP.2018 13:00:53

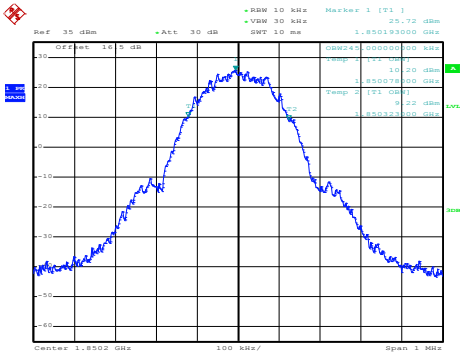
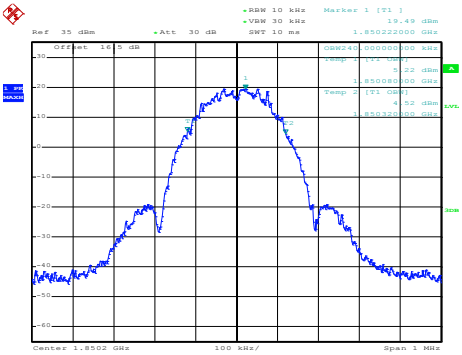
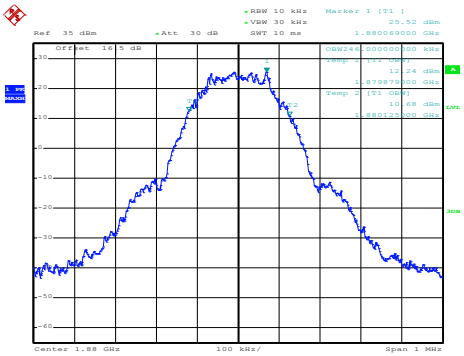
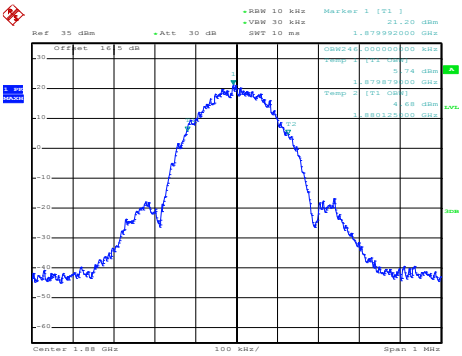
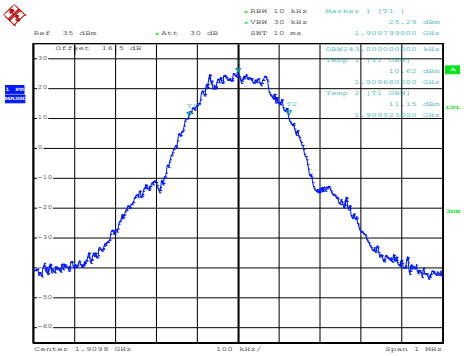
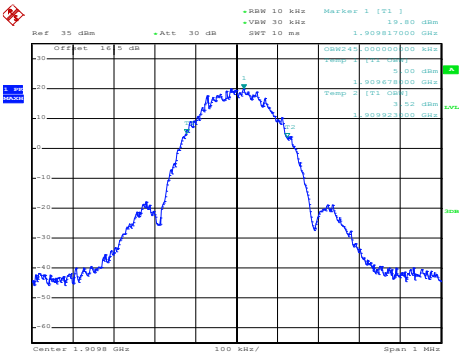
GSM1900 (GSM)	GSM1900 (EDGE class 8)
Lowest Channel	**Lowest Channel**
 Date: 22.SEP.2018 15:14:20	 Date: 22.SEP.2018 12:43:28
Middle Channel	**Middle Channel**
 Date: 22.SEP.2018 15:14:53	 Date: 22.SEP.2018 12:44:02
Highest Channel	**Highest Channel**
 Date: 22.SEP.2018 15:15:29	 Date: 22.SEP.2018 12:44:58

Occupied Bandwidth

Mode	GSM850 : 99% OBW(MHz)	
Mod.	GSM	EDGE class 8
Lowest CH	0.243	0.240
Middle CH	0.245	0.245
Highest CH	0.248	0.246

Mode	GSM1900 : 99% OBW(MHz)	
Mod.	GSM	EDGE class 8
Lowest CH	0.245	0.240
Middle CH	0.246	0.246
Highest CH	0.243	0.245

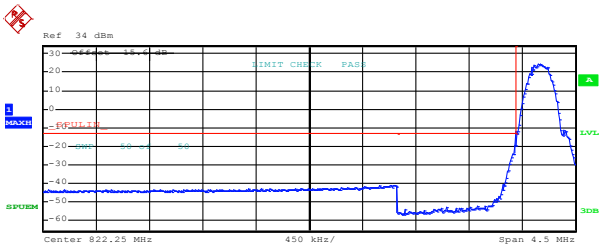
GSM850 (GSM)	GSM850 (EDGE class 8)
Lowest Channel	**Lowest Channel**
 Date: 22.SEP.2018 15:48:15	 Date: 22.SEP.2018 13:01:38
Middle Channel	**Middle Channel**
 Date: 22.SEP.2018 15:48:46	 Date: 22.SEP.2018 13:02:12
Highest Channel	**Highest Channel**
 Date: 22.SEP.2018 15:49:16	 Date: 22.SEP.2018 13:02:44

GSM1900 (GSM)	GSM1900 (EDGE class 8)
Lowest Channel	**Lowest Channel**
 Date: 22.SEP.2018 15:16:07	 Date: 22.SEP.2018 12:45:47
Middle Channel	**Middle Channel**
 Date: 22.SEP.2018 15:16:46	 Date: 22.SEP.2018 12:46:53
Highest Channel	**Highest Channel**
 Date: 22.SEP.2018 15:17:20	 Date: 22.SEP.2018 12:47:44

Conducted Band Edge

GSM850 (GSM)

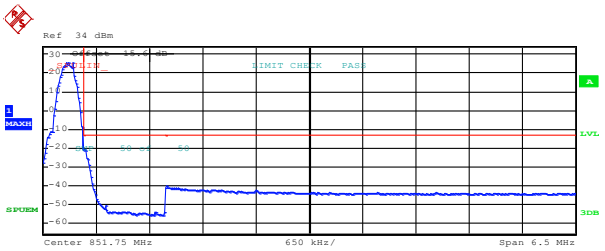
Lowest Band Edge



Start [Hz]	Stop [Hz]	RBW [Hz]	Freq [Hz]	PwrAbs [dBm]	ΔLimit [dB]
820.000 M	823.000 M	100.00 k	822.976000 M	-40.88	-27.88
823.000 M	824.000 M	3.00 k	823.988000 M	-21.59	-8.59
824.000 M	824.500 M	10.00 k	824.186000 M	24.50	-10.50

Date: 22.SEP.2018 15:53:46

Highest Band Edge

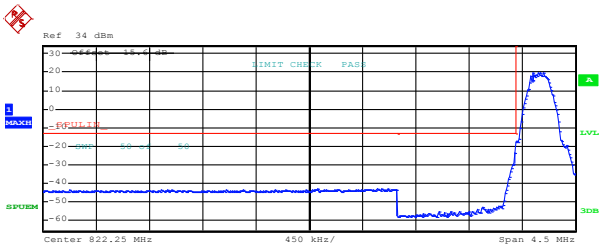


Start [Hz]	Stop [Hz]	RBW [Hz]	Freq [Hz]	PwrAbs [dBm]	ΔLimit [dB]
848.500 M	849.000 M	10.00 k	848.791000 M	25.78	-9.22
849.000 M	850.000 M	3.00 k	849.016000 M	-19.41	-6.41
850.000 M	855.000 M	100.00 k	850.005000 M	-40.23	-27.23

Date: 22.SEP.2018 15:55:17

GSM850 (EDGE class 8)

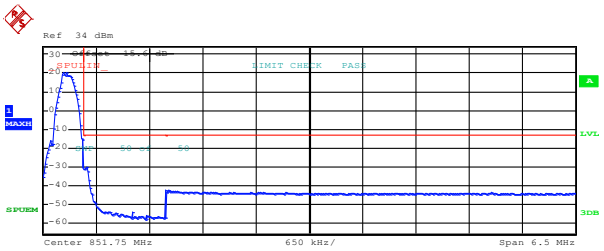
Lowest Band Edge



Start [Hz]	Stop [Hz]	RBW [Hz]	Freq [Hz]	PwrAbs [dBm]	Δ Limit [dB]
820.000 M	823.000 M	100.00 k	822.856000 M	-42.81	-29.81
823.000 M	824.000 M	3.00 k	823.988000 M	-23.48	-10.48
824.000 M	824.500 M	10.00 k	824.183000 M	19.91	-15.09

Date: 22.SEP.2018 13:04:39

Highest Band Edge

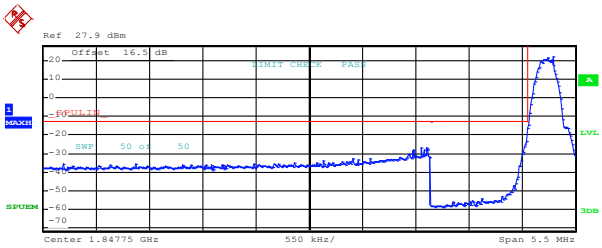


Start [Hz]	Stop [Hz]	RBW [Hz]	Freq [Hz]	PwrAbs [dBm]	Δ Limit [dB]
848.500 M	849.000 M	10.00 k	848.792000 M	20.45	-14.55
849.000 M	850.000 M	3.00 k	849.032000 M	-29.77	-16.77
850.000 M	855.000 M	100.00 k	850.025000 M	-42.29	-29.29

Date: 22.SEP.2018 13:06:20

GSM1900 (GSM)

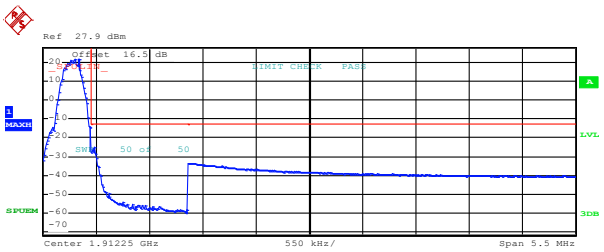
Lowest Band Edge



Start [Hz]	Stop [Hz]	RBW [Hz]	Freq [Hz]	PwrAbs [dBm]	Δ Limit [dB]
1.845 G	1.849 G	1.00 M	1.848952 G	-26.93	-13.93
1.849 G	1.850 G	3.00 k	1.849984 G	-24.74	-11.74
1.850 G	1.851 G	10.00 k	1.850268 G	22.37	-12.63

Date: 22.SEP.2018 15:18:57

Highest Band Edge

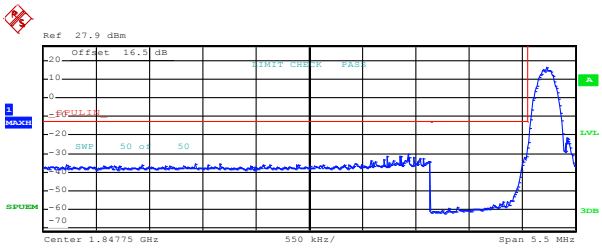


Start [Hz]	Stop [Hz]	RBW [Hz]	Freq [Hz]	PwrAbs [dBm]	Δ Limit [dB]
1.910 G	1.910 G	10.00 k	1.909868 G	21.56	-13.44
1.910 G	1.911 G	3.00 k	1.910020 G	-24.87	-11.87
1.911 G	1.915 G	1.00 M	1.911000 G	-33.57	-20.57

Date: 22.SEP.2018 15:21:08

GSM1900 (EDGE class 8)

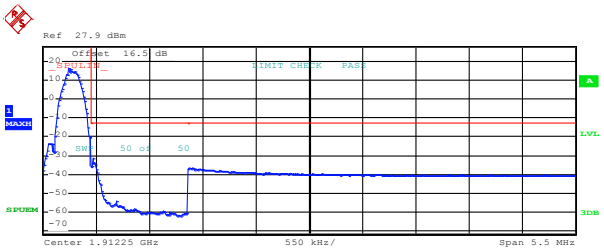
Lowest Band Edge



Start [Hz]	Stop [Hz]	RBW [Hz]	Freq [Hz]	PwrAbs [dBm]	Δ Limit [dB]
1.845 G	1.849 G	1.00 M	1.848764 G	-30.30	-17.30
1.849 G	1.850 G	3.00 k	1.849988 G	-31.67	-18.67
1.850 G	1.851 G	10.00 k	1.850199 G	16.23	-18.77

Date: 22.SEP.2018 12:49:19

Highest Band Edge



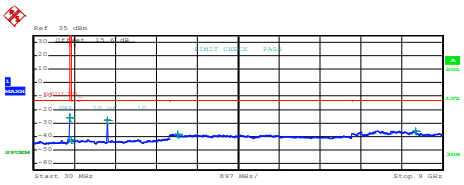
Start [Hz]	Stop [Hz]	RBW [Hz]	Freq [Hz]	PwrAbs [dBm]	Δ Limit [dB]
1.910 G	1.910 G	10.00 k	1.909766 G	16.26	-18.74
1.910 G	1.911 G	3.00 k	1.910008 G	-31.71	-18.71
1.911 G	1.915 G	1.00 M	1.911004 G	-36.63	-23.63

Date: 22.SEP.2018 12:50:57

Conducted Spurious Emission

GSM850 (GSM)

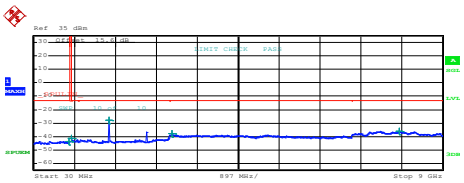
Lowest Channel



Start [Hz]	Stop [Hz]	RBW [Hz]	Freq [Hz]	PwrAbs [dBm]	ΔLimit [dB]
30.000 M	820.000 M	1.00 M	819.802500 M	-26.21	-13.21
855.000 M	1.000 G	1.00 M	863.083751 M	-42.72	-29.72
1.000 G	3.000 G	1.00 M	1.648500 G	-27.72	-14.72
3.000 G	7.000 G	1.00 M	3.191000 G	-38.57	-25.57
7.000 G	9.000 G	1.00 M	8.402000 G	-35.90	-22.90

Date: 22.SEP.2018 15:50:05

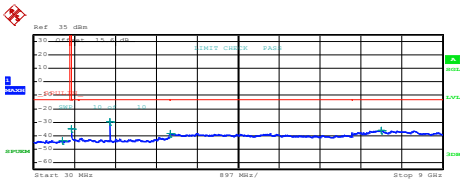
Middle Channel



Start [Hz]	Stop [Hz]	RBW [Hz]	Freq [Hz]	PwrAbs [dBm]	ΔLimit [dB]
30.000 M	820.000 M	1.00 M	807.557500 M	-43.52	-30.52
855.000 M	1.000 G	1.00 M	855.435000 M	-41.31	-28.31
1.000 G	3.000 G	1.00 M	1.673000 G	-27.76	-14.76
3.000 G	7.000 G	1.00 M	3.067000 G	-37.84	-24.84
7.000 G	9.000 G	1.00 M	8.056000 G	-36.10	-23.10

Date: 22.SEP.2018 15:50:52

Highest Channel

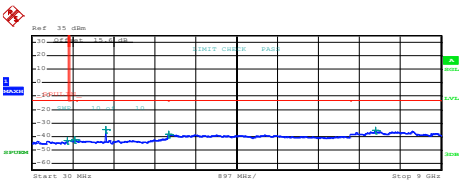


Start [Hz]	Stop [Hz]	RBW [Hz]	Freq [Hz]	PwrAbs [dBm]	ΔLimit [dB]
30.000 M	820.000 M	1.00 M	651.137500 M	-43.57	-30.57
855.000 M	1.000 G	1.00 M	855.036250 M	-35.08	-22.08
1.000 G	3.000 G	1.00 M	1.698000 G	-29.53	-16.53
3.000 G	7.000 G	1.00 M	3.026000 G	-38.26	-25.26
7.000 G	9.000 G	1.00 M	7.659500 G	-36.00	-23.00

Date: 22.SEP.2018 15:51:39

GSM850 (EDGE class 8)

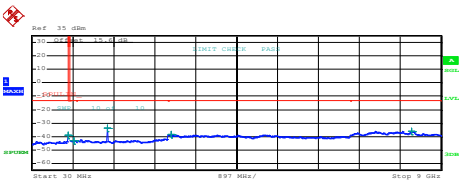
Lowest Channel



Start [Hz]	Stop [Hz]	RBW [Hz]	Freq [Hz]	PwrAbs [dBm]	ΔLimit [dB]
30.000 M	820.000 M	1.00 M	796.892500 M	-42.97	-29.97
855.000 M	1.000 G	1.00 M	957.333757 M	-42.65	-29.65
1.000 G	3.000 G	1.00 M	1.648500 G	-34.60	-21.60
3.000 G	7.000 G	1.00 M	3.029000 G	-38.48	-25.48
7.000 G	9.000 G	1.00 M	7.560000 G	-35.31	-22.31

Date: 22.SEP.2018 13:07:16

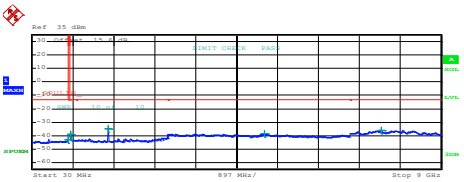
Middle Channel



Start [Hz]	Stop [Hz]	RBW [Hz]	Freq [Hz]	PwrAbs [dBm]	ΔLimit [dB]
30.000 M	820.000 M	1.00 M	817.235000 M	-38.72	-25.72
855.000 M	1.000 G	1.00 M	952.730007 M	-42.88	-29.88
1.000 G	3.000 G	1.00 M	1.673000 G	-33.92	-20.92
3.000 G	7.000 G	1.00 M	3.080000 G	-38.64	-25.64
7.000 G	9.000 G	1.00 M	8.352000 G	-36.03	-23.03

Date: 22.SEP.2018 13:08:04

Highest Channel

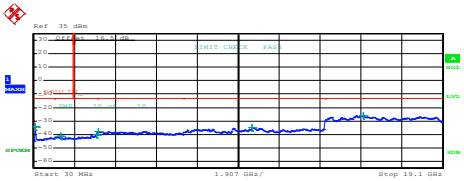


Start [Hz]	Stop [Hz]	RBW [Hz]	Freq [Hz]	PwrAbs [dBm]	ΔLimit [dB]
30.000 M	820.000 M	1.00 M	813.482500 M	-43.04	-30.04
855.000 M	1.000 G	1.00 M	868.050001 M	-38.95	-25.95
1.000 G	3.000 G	1.00 M	1.697500 G	-34.72	-21.72
3.000 G	7.000 G	1.00 M	5.133000 G	-38.68	-25.68
7.000 G	9.000 G	1.00 M	7.682500 G	-35.82	-22.82

Date: 22.SEP.2018 13:08:54

GSM1900 (GSM)

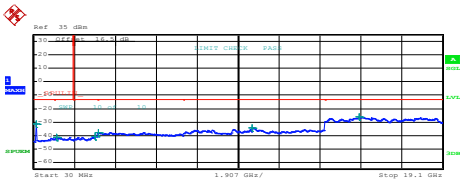
Lowest Channel



Start [Hz]	Stop [Hz]	RBW [Hz]	Freq [Hz]	PwrAbs [dBm]	ΔLimit [dB]
30.000 M	1.000 G	1.00 M	111.965000 M	-34.11	-21.11
1.000 G	1.845 G	1.00 M	1.301243 G	-41.46	-28.46
1.915 G	3.000 G	1.00 M	2.962296 G	-39.95	-26.95
3.000 G	7.000 G	1.00 M	3.062000 G	-37.57	-24.57
7.000 G	13.600 G	1.00 M	10.215025 G	-34.84	-21.84
13.600 G	19.100 G	1.00 M	15.397813 G	-26.07	-13.07

Date: 22.SEP.2018 15:24:26

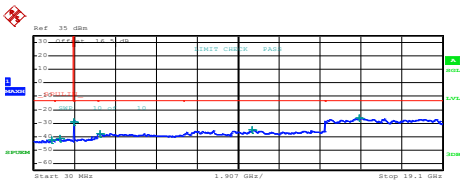
Middle Channel



Start [Hz]	Stop [Hz]	RBW [Hz]	Freq [Hz]	PwrAbs [dBm]	ΔLimit [dB]
30.000 M	1.000 G	1.00 M	141.792500 M	-31.32	-18.32
1.000 G	1.845 G	1.00 M	1.099076 G	-41.51	-28.51
1.915 G	3.000 G	1.00 M	2.885533 G	-40.47	-27.47
3.000 G	7.000 G	1.00 M	3.034000 G	-37.64	-24.64
7.000 G	13.600 G	1.00 M	10.212550 G	-34.46	-21.46
13.600 G	19.100 G	1.00 M	15.221125 G	-26.27	-13.27

Date: 22.SEP.2018 15:25:17

Highest Channel

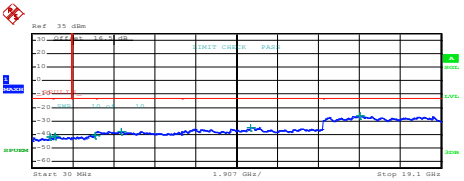


Start [Hz]	Stop [Hz]	RBW [Hz]	Freq [Hz]	PwrAbs [dBm]	ΔLimit [dB]
30.000 M	1.000 G	1.00 M	856.197500 M	-42.39	-29.39
1.000 G	1.845 G	1.00 M	1.257936 G	-41.09	-28.09
1.915 G	3.000 G	1.00 M	1.915271 G	-29.26	-16.26
3.000 G	7.000 G	1.00 M	3.122000 G	-37.85	-24.85
7.000 G	13.600 G	1.00 M	10.225750 G	-34.74	-21.74
13.600 G	19.100 G	1.00 M	15.208063 G	-26.07	-13.07

Date: 22.SEP.2018 15:26:07

GSM1900 (EDGE class 8)

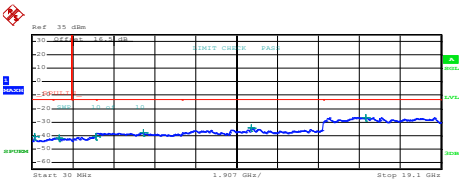
Lowest Channel



Start [Hz]	Stop [Hz]	RBW [Hz]	Freq [Hz]	PwrAbs [dBm]	ΔLimit [dB]
30.000 M	1.000 G	1.00 M	877.052500 M	-42.09	-29.09
1.000 G	1.845 G	1.00 M	1.103301 G	-41.27	-28.27
1.915 G	3.000 G	1.00 M	2.983996 G	-40.80	-27.80
3.000 G	7.000 G	1.00 M	4.183000 G	-37.89	-24.89
7.000 G	13.600 G	1.00 M	10.212550 G	-34.90	-21.90
13.600 G	19.100 G	1.00 M	15.326313 G	-26.11	-13.11

Date: 22.SEP.2018 12:51:57

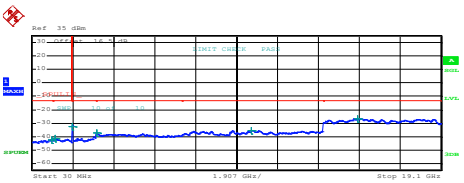
Middle Channel



Start [Hz]	Stop [Hz]	RBW [Hz]	Freq [Hz]	PwrAbs [dBm]	ΔLimit [dB]
30.000 M	1.000 G	1.00 M	141.792500 M	-40.74	-27.74
1.000 G	1.845 G	1.00 M	1.273780 G	-41.88	-28.88
1.915 G	3.000 G	1.00 M	2.995931 G	-40.70	-27.70
3.000 G	7.000 G	1.00 M	5.202000 G	-37.99	-24.99
7.000 G	13.600 G	1.00 M	10.236475 G	-34.22	-21.22
13.600 G	19.100 G	1.00 M	15.583438 G	-26.44	-13.44

Date: 22.SEP.2018 12:52:51

Highest Channel



Start [Hz]	Stop [Hz]	RBW [Hz]	Freq [Hz]	PwrAbs [dBm]	ΔLimit [dB]
30.000 M	1.000 G	1.00 M	949.317500 M	-42.37	-29.37
1.000 G	1.845 G	1.00 M	1.101189 G	-41.42	-28.42
1.915 G	3.000 G	1.00 M	1.915271 G	-32.46	-19.46
3.000 G	7.000 G	1.00 M	3.041000 G	-37.07	-24.07
7.000 G	13.600 G	1.00 M	10.240600 G	-35.22	-22.22
13.600 G	19.100 G	1.00 M	15.206687 G	-26.49	-13.49

Date: 22.SEP.2018 12:53:41

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	0.0048	0.0036	PASS
40	Normal Voltage	0.0048	0.0024	
30	Normal Voltage	0.0000	0.0060	
20(Ref.)	Normal Voltage	0.0000	0.0000	
10	Normal Voltage	0.0000	0.0000	
0	Normal Voltage	0.0000	0.0024	
-10	Normal Voltage	0.0000	0.0012	
-20	Normal Voltage	0.0000	0.0060	
-30	Normal Voltage	0.0000	0.0084	
20	Maximum Voltage	0.0036	0.0036	
20	Normal Voltage	0.0000	0.0000	
20	Battery End Point	0.0012	0.0012	

Test Conditions	Middle Channel	GSM1900 (GSM)	GSM1900 (EDGE class 8)	Limit Note 2.
Temperature (°C)	Voltage (Volt)	Deviation (ppm)		Result
50	Normal Voltage	0.0027	0.0037	PASS
40	Normal Voltage	0.0032	0.0027	
30	Normal Voltage	0.0021	0.0005	
20(Ref.)	Normal Voltage	0.0000	0.0000	
10	Normal Voltage	0.0032	0.0027	
0	Normal Voltage	0.0037	0.0011	
-10	Normal Voltage	0.0059	0.0027	
-20	Normal Voltage	0.0053	0.0037	
-30	Normal Voltage	0.0213	0.0027	
20	Maximum Voltage	0.0011	0.0011	
20	Normal Voltage	0.0000	0.0000	
20	Battery End Point	0.0005	0.0011	

Note:

1. Normal Voltage = 3.8V. ；Battery End Point (BEP) = 3.4 V.；Maximum Voltage =4.35 V

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

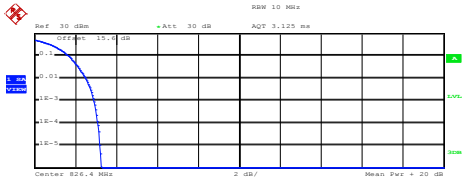
A3. WCDMA

Peak-to-Average Ratio

Mode	WCDMA Band V	WCDMA Band II	WCDMA Band IV	Limit: 13dB
Mod.	RMC 12.2Kbps	RMC 12.2Kbps	RMC 12.2Kbps	Result
Lowest CH	2.92	2.84	2.92	PASS
Middle CH	3.28	3.00	2.84	
Highest CH	3.32	3.00	3.12	

WCDMA Band V (RMC 12.2Kbps)

Lowest Channel

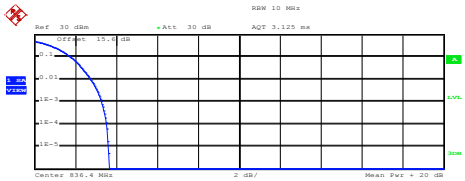


Complementary Cumulative Distribution Function (100000 samples)

	Trace 1
Mean	22.97 dBm
Peak	26.23 dBm
Crest	3.26 dB
10 %	1.68 dB
1 %	2.52 dB
.1 %	2.92 dB
.01 %	3.12 dB

Date: 22.SEP.2018 15:04:02

Middle Channel

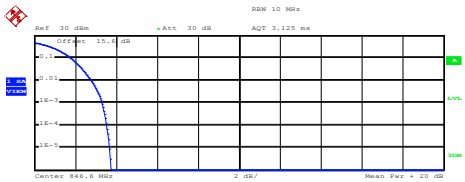


Complementary Cumulative Distribution Function (100000 samples)

	Trace 1
Mean	22.98 dBm
Peak	26.65 dBm
Crest	3.67 dB
10 %	1.76 dB
1 %	2.76 dB
.1 %	3.28 dB
.01 %	3.52 dB

Date: 22.SEP.2018 15:04:16

Highest Channel



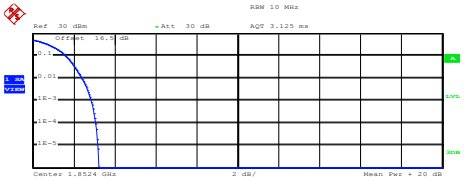
Complementary Cumulative Distribution Function (100000 samples)

	Trace 1
Mean	22.99 dBm
Peak	26.72 dBm
Crest	3.74 dB
10 %	1.80 dB
1 %	2.76 dB
.1 %	3.32 dB
.01 %	3.52 dB

Date: 22.SEP.2018 15:04:29

WCDMA Band II (RMC 12.2Kbps)

Lowest Channel

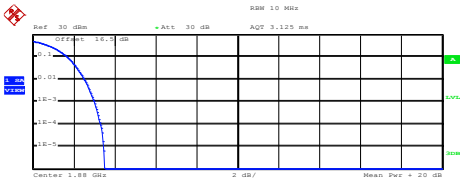


Complementary Cumulative Distribution Function (100000 samples)

	Trace 1
Mean	21.81 dBm
Peak	25.03 dBm
Crest	3.22 dB
10 %	1.60 dB
1 %	2.40 dB
.1 %	2.84 dB
.01 %	3.08 dB

Date: 22.SEP.2018 13:31:54

Middle Channel

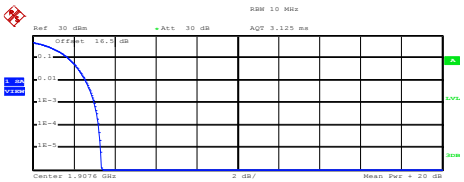


Complementary Cumulative Distribution Function (100000 samples)

	Trace 1
Mean	21.89 dBm
Peak	25.38 dBm
Crest	3.50 dB
10 %	1.68 dB
1 %	2.52 dB
.1 %	3.00 dB
.01 %	3.32 dB

Date: 22.SEP.2018 13:32:08

Highest Channel



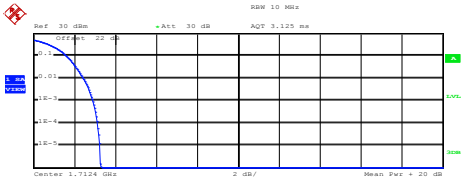
Complementary Cumulative Distribution Function (100000 samples)

	Trace 1
Mean	21.74 dBm
Peak	25.10 dBm
Crest	3.36 dB
10 %	1.72 dB
1 %	2.56 dB
.1 %	3.00 dB
.01 %	3.20 dB

Date: 22.SEP.2018 13:32:22

WCDMA Band IV (RMC 12.2Kbps)

Lowest Channel



Complementary Cumulative Distribution Function (100000 samples)

Trace 1

Mean	22.41 dBm
Peak	25.69 dBm
Crest	3.28 dB
10 %	1.60 dB
1 %	2.44 dB
.1 %	2.92 dB
.01 %	3.12 dB

Date: 29.SEP.2018 09:31:52

Middle Channel

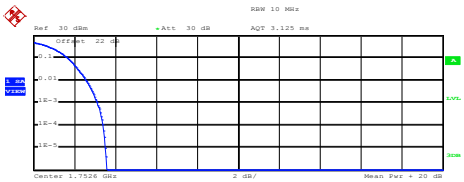
Complementary Cumulative Distribution Function (100000 samples)

Trace 1

Mean	22.67 dBm
Peak	25.90 dBm
Crest	3.23 dB
10 %	1.60 dB
1 %	2.44 dB
.1 %	2.84 dB
.01 %	3.04 dB

Date: 29.SEP.2018 09:32:06

Highest Channel



Complementary Cumulative Distribution Function (100000 samples)

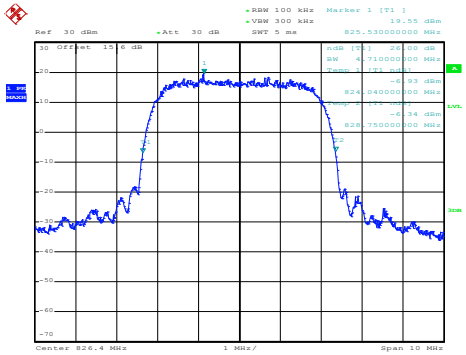
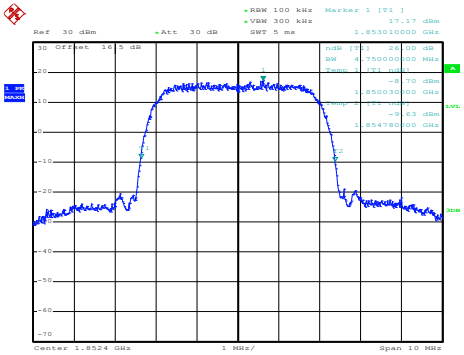
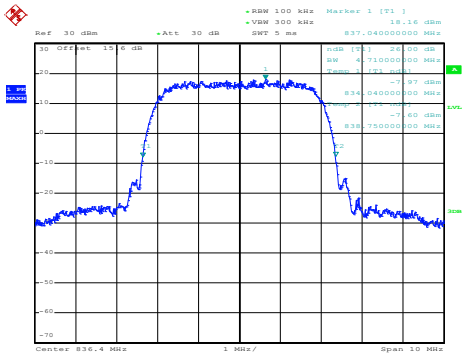
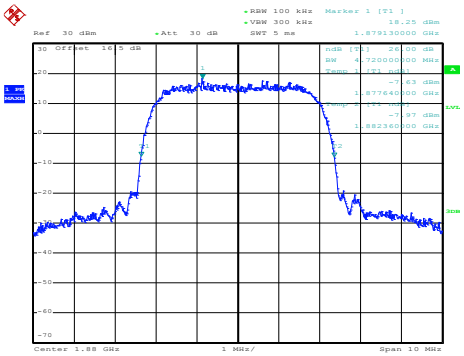
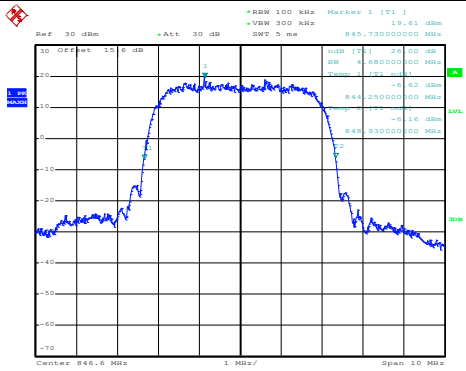
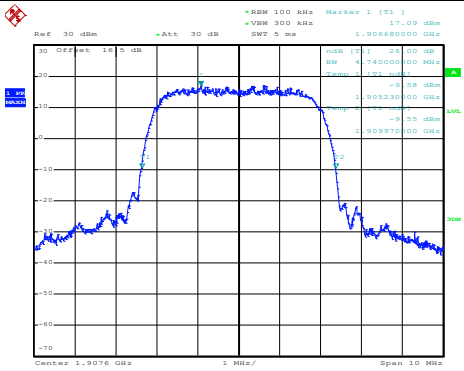
Trace 1

Mean	22.46 dBm
Peak	26.04 dBm
Crest	3.58 dB
10 %	1.68 dB
1 %	2.60 dB
.1 %	3.12 dB
.01 %	3.40 dB

Date: 29.SEP.2018 09:32:20

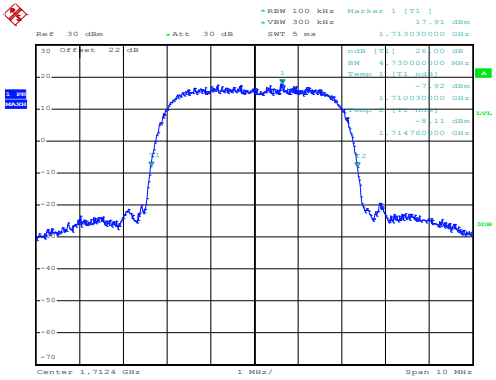
26dB Bandwidth

Mode	WCDMA Band V 26dB BW(MHz)	WCDMA Band II 26dB BW(MHz)	WCDMA Band IV 26dB BW(MHz)
Mod.	RMC 12.2Kbps	RMC 12.2Kbps	RMC 12.2Kbps
Lowest CH	4.71	4.75	4.73
Middle CH	4.71	4.72	4.72
Highest CH	4.68	4.74	4.71

WCDMA Band V (RMC 12.2Kbps)	WCDMA Band II (RMC 12.2Kbps)
Lowest Channel	**Lowest Channel**
 Date: 22.SEP.2018 14:49:19	 Date: 22.SEP.2018 13:16:02
Middle Channel	**Middle Channel**
 Date: 22.SEP.2018 14:49:52	 Date: 22.SEP.2018 13:16:42
Highest Channel	**Highest Channel**
 Date: 22.SEP.2018 14:50:27	 Date: 22.SEP.2018 13:18:03

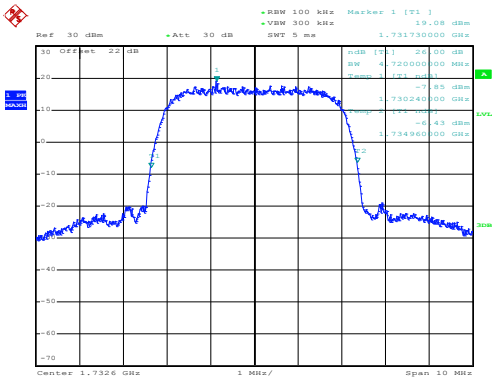
WCDMA Band IV (RMC 12.2Kbps)

Lowest Channel



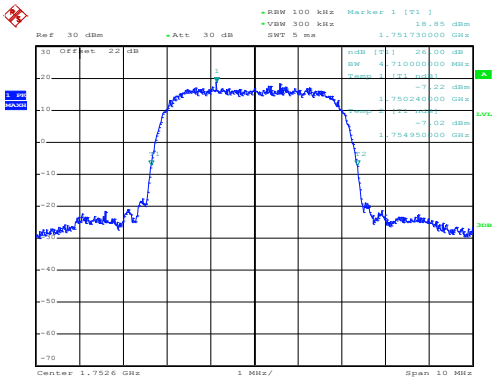
Date: 29.SEP.2018 09:25:43

Middle Channel



Date: 29.SEP.2018 09:26:24

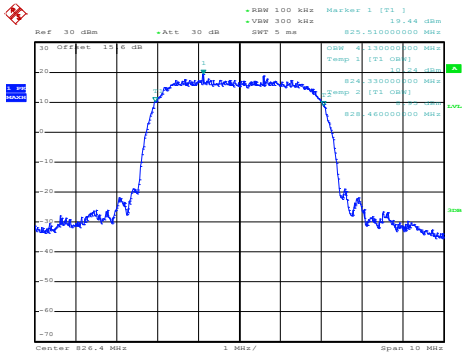
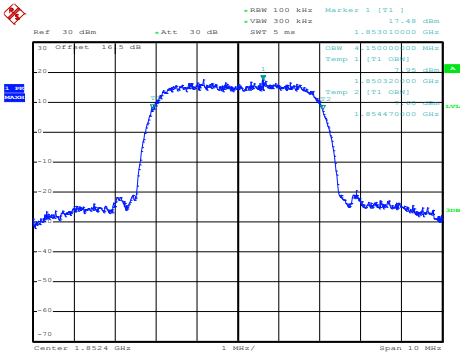
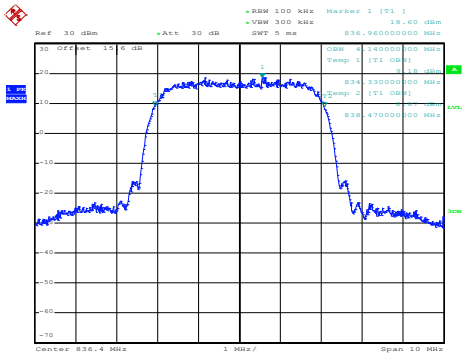
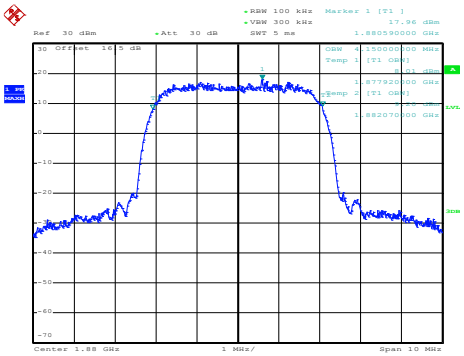
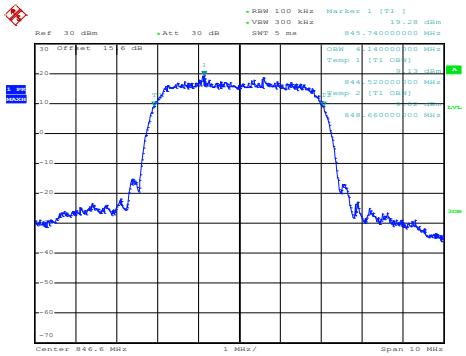
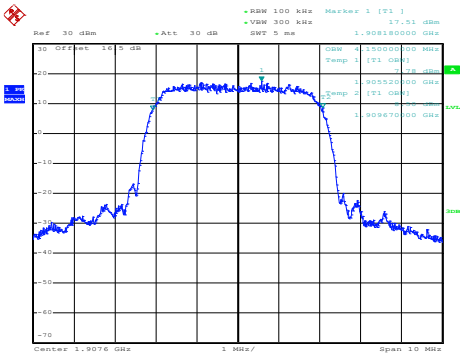
Highest Channel



Date: 29.SEP.2018 09:26:57

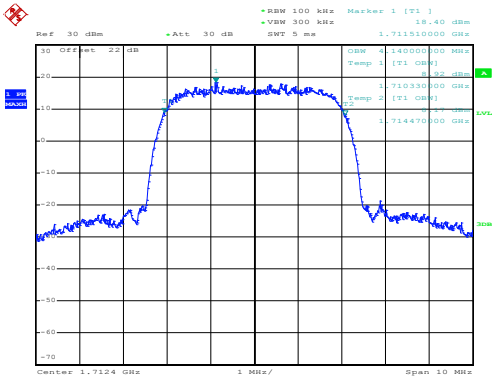
Occupied Bandwidth

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

WCDMA Band V (RMC 12.2Kbps)	WCDMA Band II (RMC 12.2Kbps)
Lowest Channel	**Lowest Channel**
 Date: 22.SEP.2018 14:53:38	 Date: 22.SEP.2018 13:18:42
Middle Channel	**Middle Channel**
 Date: 22.SEP.2018 14:54:35	 Date: 22.SEP.2018 13:19:15
Highest Channel	**Highest Channel**
 Date: 22.SEP.2018 14:55:22	 Date: 22.SEP.2018 13:19:48

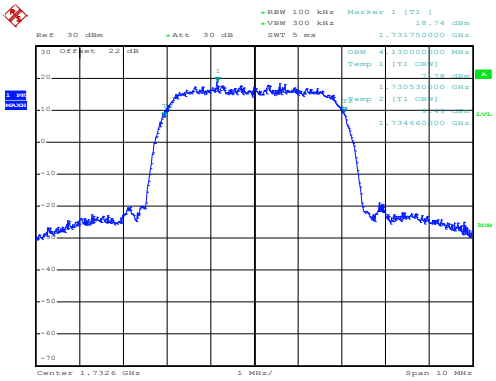
WCDMA Band IV (RMC 12.2Kbps)

Lowest Channel



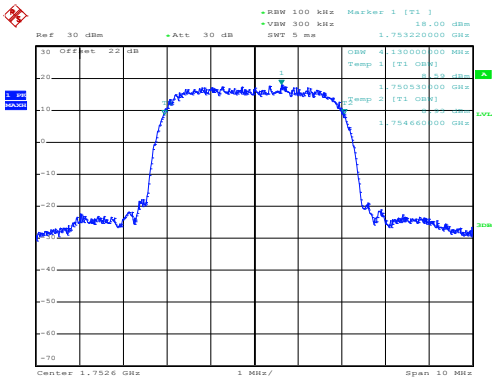
Date: 29.SEP.2018 09:27:51

Middle Channel



Date: 29.SEP.2018 09:28:25

Highest Channel

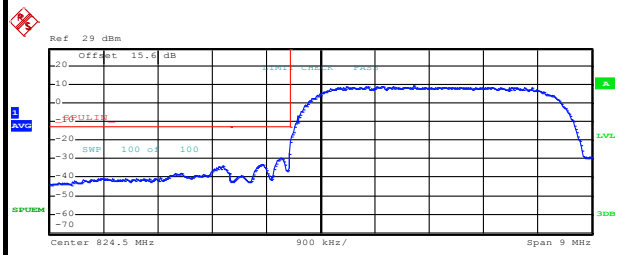


Date: 29.SEP.2018 09:28:58

Conducted Band Edge

WCDMA Band V (RMC 12.2Kbps)

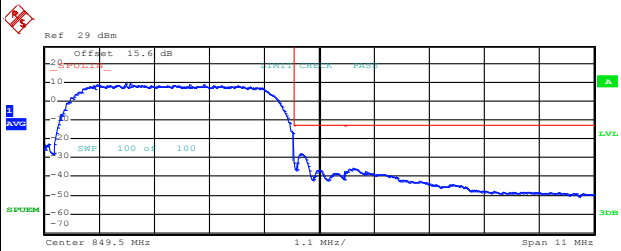
Lowest Band Edge



Start [Hz]	Stop [Hz]	RBW [Hz]	Freq [Hz]	PwrAbs [dBm]	ΔLimit [dB]
820.000 M	823.000 M	100.00 k	822.874000 M	-34.11	-21.11
823.000 M	824.000 M	50.00 k	823.996000 M	-28.25	-15.25
824.000 M	829.000 M	100.00 k	826.045000 M	9.27	-25.73

Date: 22.SEP.2018 14:58:14

Highest Band Edge

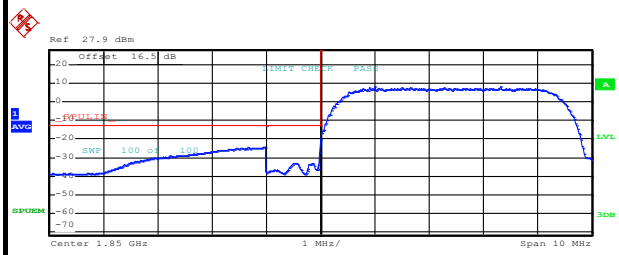


Start [Hz]	Stop [Hz]	RBW [Hz]	Freq [Hz]	PwrAbs [dBm]	ΔLimit [dB]
844.000 M	849.000 M	100.00 k	845.630000 M	9.48	-25.52
849.000 M	850.000 M	50.00 k	849.128000 M	-28.14	-15.14
850.000 M	855.000 M	100.00 k	850.170000 M	-35.51	-22.51

Date: 22.SEP.2018 15:01:01

WCDMA Band II (RMC 12.2Kbps)

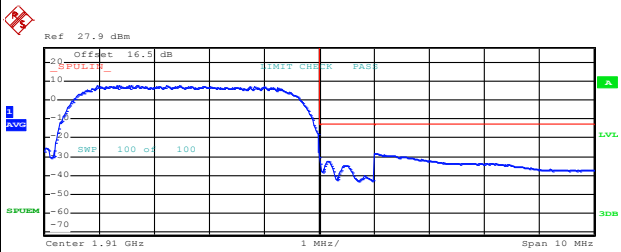
Lowest Band Edge



Start [Hz]	Stop [Hz]	RBW [Hz]	Freq [Hz]	PwrAbs [dBm]	ΔLimit [dB]
1.845 G	1.849 G	1.00 M	1.848984 G	-24.36	-11.36
1.849 G	1.850 G	50.00 k	1.849996 G	-27.89	-14.89
1.850 G	1.855 G	100.00 k	1.853325 G	8.08	-26.92

Date: 22.SEP.2018 13:22:41

Highest Band Edge

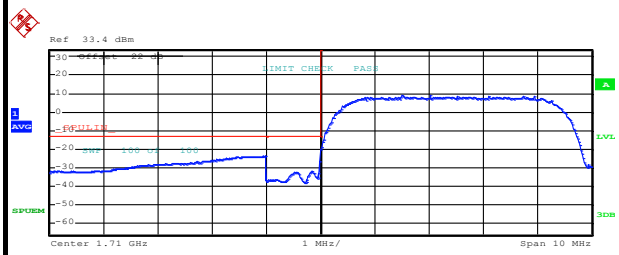


Start [Hz]	Stop [Hz]	RBW [Hz]	Freq [Hz]	PwrAbs [dBm]	ΔLimit [dB]
1.905 G	1.910 G	100.00 k	1.906700 G	8.00	-27.00
1.910 G	1.911 G	50.00 k	1.910004 G	-28.54	-15.54
1.911 G	1.915 G	1.00 M	1.911028 G	-28.40	-15.40

Date: 22.SEP.2018 13:26:24

WCDMA Band IV (RMC 12.2Kbps)

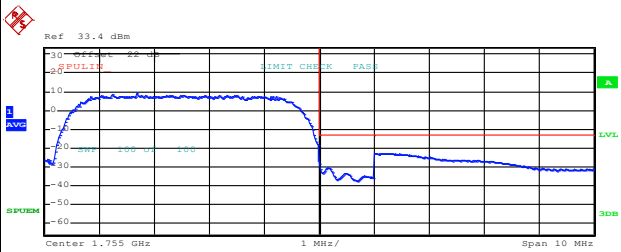
Lowest Band Edge



Start [Hz]	Stop [Hz]	RBW [Hz]	Freq [Hz]	PwrAbs [dBm]	ΔLimit [dB]
1.705 G	1.709 G	1.00 M	1.708988 G	-23.66	-10.66
1.709 G	1.710 G	50.00 k	1.709996 G	-27.39	-14.39
1.710 G	1.715 G	100.00 k	1.712025 G	9.06	-25.94

Date: 29.SEP.2018 09:35:08

Highest Band Edge



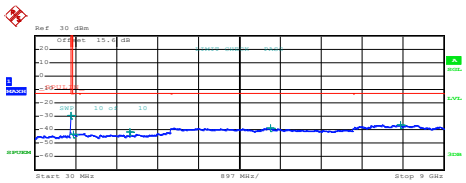
Start [Hz]	Stop [Hz]	RBW [Hz]	Freq [Hz]	PwrAbs [dBm]	ΔLimit [dB]
1.750 G	1.755 G	100.00 k	1.751670 G	8.91	-26.09
1.755 G	1.756 G	50.00 k	1.755004 G	-28.62	-15.62
1.756 G	1.760 G	1.00 M	1.756204 G	-22.87	-9.87

Date: 29.SEP.2018 09:41:08

Conducted Spurious Emission

WCDMA Band V (RMC 12.2Kbps)

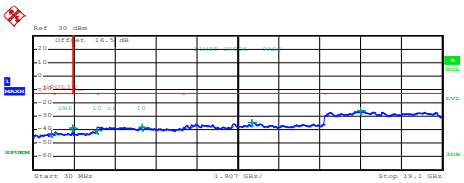
Lowest Channel



Start [Hz]	Stop [Hz]	RBW [Hz]	Freq [Hz]	PwrAbs [dBm]	ΔLimit [dB]
30.000 M	820.000 M	1.00 M	819.407500 M	-29.43	-16.43
855.000 M	1.000 G	1.00 M	867.361251 M	-43.24	-30.24
1.000 G	3.000 G	1.00 M	2.117500 G	-41.69	-28.69
3.000 G	7.000 G	1.00 M	5.193000 G	-38.62	-25.62
7.000 G	9.000 G	1.00 M	8.057500 G	-36.44	-23.44

Date: 22.SEP.2018 15:02:01

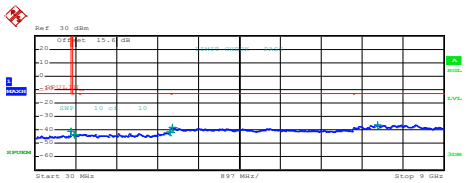
Lowest Channel



Start [Hz]	Stop [Hz]	RBW [Hz]	Freq [Hz]	PwrAbs [dBm]	ΔLimit [dB]
30.000 M	1.000 G	1.00 M	877.295000 M	-42.94	-29.94
1.000 G	1.845 G	1.00 M	1.844366 G	-38.74	-25.74
1.915 G	3.000 G	1.00 M	2.990778 G	-40.75	-27.75
3.000 G	7.000 G	1.00 M	5.109000 G	-38.11	-25.11
7.000 G	13.600 G	1.00 M	10.209250 G	-34.71	-21.71
13.600 G	19.100 G	1.00 M	15.278875 G	-26.01	-13.01

Date: 22.SEP.2018 13:29:57

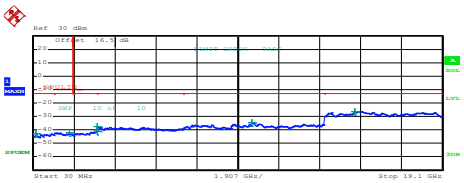
Middle Channel



Start [Hz]	Stop [Hz]	RBW [Hz]	Freq [Hz]	PwrAbs [dBm]	ΔLimit [dB]
30.000 M	820.000 M	1.00 M	818.222500 M	-41.13	-28.13
855.000 M	1.000 G	1.00 M	894.403753 M	-43.46	-30.46
1.000 G	3.000 G	1.00 M	2.986500 G	-41.75	-28.75
3.000 G	7.000 G	1.00 M	3.047000 G	-38.39	-25.39
7.000 G	9.000 G	1.00 M	7.544000 G	-36.38	-23.38

Date: 22.SEP.2018 15:02:54

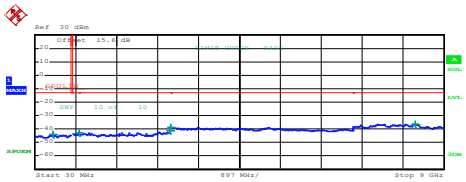
Middle Channel



Start [Hz]	Stop [Hz]	RBW [Hz]	Freq [Hz]	PwrAbs [dBm]	ΔLimit [dB]
30.000 M	1.000 G	1.00 M	142.762500 M	-42.79	-29.79
1.000 G	1.845 G	1.00 M	1.709166 G	-41.99	-28.99
1.915 G	3.000 G	1.00 M	2.989692 G	-40.90	-27.90
3.000 G	7.000 G	1.00 M	3.016000 G	-37.52	-24.52
7.000 G	13.600 G	1.00 M	10.224925 G	-34.84	-21.84
13.600 G	19.100 G	1.00 M	15.013500 G	-26.23	-13.23

Date: 22.SEP.2018 13:30:47

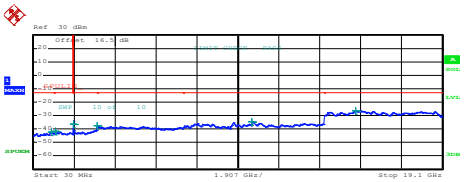
Highest Channel



Start [Hz]	Stop [Hz]	RBW [Hz]	Freq [Hz]	PwrAbs [dBm]	ΔLimit [dB]
30.000 M	820.000 M	1.00 M	423.815000 M	-44.23	-31.23
855.000 M	1.000 G	1.00 M	990.720009 M	-42.98	-29.98
1.000 G	3.000 G	1.00 M	2.991500 G	-41.33	-28.33
3.000 G	7.000 G	1.00 M	3.011000 G	-38.43	-25.43
7.000 G	9.000 G	1.00 M	8.379500 G	-36.25	-23.25

Date: 22.SEP.2018 15:03:45

Highest Channel

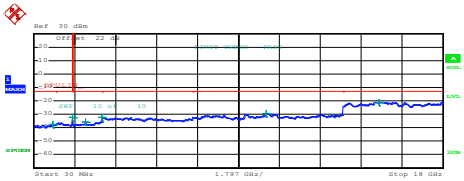


Start [Hz]	Stop [Hz]	RBW [Hz]	Freq [Hz]	PwrAbs [dBm]	ΔLimit [dB]
30.000 M	1.000 G	1.00 M	877.052500 M	-42.31	-29.31
1.000 G	1.845 G	1.00 M	1.063375 G	-41.87	-28.87
1.915 G	3.000 G	1.00 M	1.915542 G	-36.44	-23.44
3.000 G	7.000 G	1.00 M	3.003000 G	-37.39	-24.39
7.000 G	13.600 G	1.00 M	10.224925 G	-34.73	-21.73
13.600 G	19.100 G	1.00 M	15.068500 G	-26.48	-13.48

Date: 22.SEP.2018 13:31:39

WCDMA Band IV (RMC 12.2Kbps)

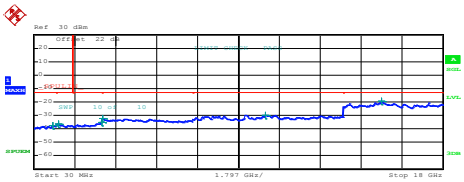
Lowest Channel



Start [Hz]	Stop [Hz]	RBW [Hz]	Freq [Hz]	PwrAbs [dBm]	ΔLimit [dB]
30.000 M	1.000 G	1.00 M	873.415000 M	-37.73	-24.73
1.000 G	1.705 G	1.00 M	1.704824 G	-31.99	-18.99
1.760 G	3.000 G	1.00 M	2.303120 G	-35.65	-22.65
3.000 G	7.000 G	1.00 M	3.020000 G	-32.22	-19.22
7.000 G	13.600 G	1.00 M	10.219150 G	-29.27	-16.27
13.600 G	18.000 G	1.00 M	15.187850 G	-20.90	-7.90

Date: 29.SEP.2018 09:29:50

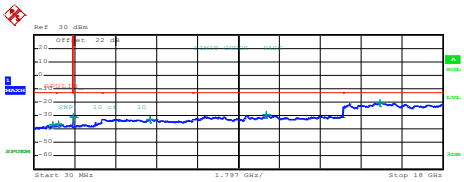
Middle Channel



Start [Hz]	Stop [Hz]	RBW [Hz]	Freq [Hz]	PwrAbs [dBm]	ΔLimit [dB]
30.000 M	1.000 G	1.00 M	862.502500 M	-37.83	-24.83
1.000 G	1.705 G	1.00 M	1.090593 G	-36.45	-23.45
1.760 G	3.000 G	1.00 M	2.996590 G	-35.40	-22.40
3.000 G	7.000 G	1.00 M	3.059000 G	-32.27	-19.27
7.000 G	13.600 G	1.00 M	10.215025 G	-29.87	-16.87
13.600 G	18.000 G	1.00 M	15.294000 G	-19.50	-6.50

Date: 29.SEP.2018 09:30:44

Highest Channel



Start [Hz]	Stop [Hz]	RBW [Hz]	Freq [Hz]	PwrAbs [dBm]	ΔLimit [dB]
30.000 M	1.000 G	1.00 M	845.770000 M	-37.14	-24.14
1.000 G	1.705 G	1.00 M	1.098876 G	-36.54	-23.54
1.760 G	3.000 G	1.00 M	1.760310 G	-31.40	-18.40
3.000 G	7.000 G	1.00 M	5.148000 G	-32.67	-19.67
7.000 G	13.600 G	1.00 M	10.229050 G	-29.58	-16.58
13.600 G	18.000 G	1.00 M	15.218100 G	-20.52	-7.52

Date: 29.SEP.2018 09:31:34

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	0.0143	PASS
40	Normal Voltage	0.0143	
30	Normal Voltage	0.0000	
20(Ref.)	Normal Voltage	0.0000	
10	Normal Voltage	0.0000	
0	Normal Voltage	0.0000	
-10	Normal Voltage	0.0000	
-20	Normal Voltage	0.0012	
-30	Normal Voltage	0.0012	
20	Maximum Voltage	0.0000	
20	Normal Voltage	0.0000	
20	Battery End Point	0.0012	

Test Conditions	Middle Channel	WCDMA Band II (RMC 12.2Kbps)	Limit Note 2.
Temperature (°C)	Voltage (Volt)	Deviation (ppm)	Result
50	Normal Voltage	0.0005	PASS
40	Normal Voltage	0.0011	
30	Normal Voltage	0.0005	
20(Ref.)	Normal Voltage	0.0000	
10	Normal Voltage	0.0064	
0	Normal Voltage	0.0069	
-10	Normal Voltage	0.0069	
-20	Normal Voltage	0.0069	
-30	Normal Voltage	0.0069	
20	Maximum Voltage	0.0005	
20	Normal Voltage	0.0000	
20	Battery End Point	0.0005	

Test Conditions	Middle Channel	WCDMA Band IV (RMC 12.2Kbps)	Limit Note 2.
Temperature (°C)	Voltage (Volt)	Deviation (ppm)	Result
50	Normal Voltage	0.0115	PASS
40	Normal Voltage	0.0110	
30	Normal Voltage	0.0012	
20(Ref.)	Normal Voltage	0.0000	
10	Normal Voltage	0.0000	
0	Normal Voltage	0.0087	
-10	Normal Voltage	0.0092	
-20	Normal Voltage	0.0000	
-30	Normal Voltage	0.0092	
20	Maximum Voltage	0.0006	
20	Normal Voltage	0.0000	
20	Battery End Point	0.0000	

Note:

1. Normal Voltage = 3.8V. ；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

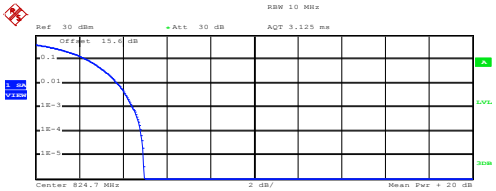
Peak-to-Average Ratio

Mode	CDMA BC0	CDMA BC1	Limit: 13dB
Mod.	1xRTT	1xRTT	Result
Lowest CH	4.44	4.52	PASS
Middle CH	4.84	4.32	
Highest CH	4.24	4.08	

Mode	CDMA BC0	CDMA BC1	Limit: 13dB
Mod.	1xEV-DO Rev. 0	1xEV-DO Rev. 0	Result
Lowest CH	3.72	3.92	PASS
Middle CH	4.64	3.44	
Highest CH	4.04	3.84	

CDMA BC0 (1xRTT)

Lowest Channel



Complementary Cumulative Distribution Function (100000 samples)

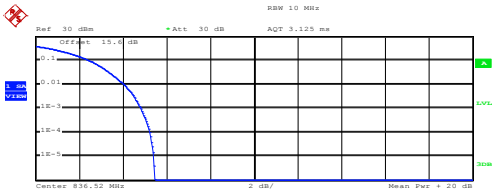
Trace 1

Mean 22.19 dBm
Peak 27.15 dBm
Crest 4.96 dB

10 % 2.36 dB
1 % 3.76 dB
.1 % 4.44 dB
.01 % 4.80 dB

Date: 2.OCT.2018 18:50:49

Middle Channel



Complementary Cumulative Distribution Function (100000 samples)

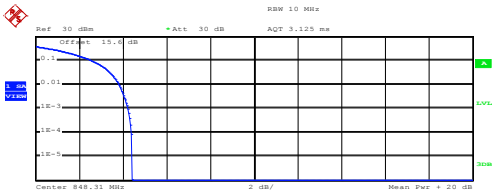
Trace 1

Mean 22.13 dBm
Peak 27.57 dBm
Crest 5.44 dB

10 % 2.52 dB
1 % 4.04 dB
.1 % 4.84 dB
.01 % 5.24 dB

Date: 2.OCT.2018 18:51:07

Highest Channel



Complementary Cumulative Distribution Function (100000 samples)

Trace 1

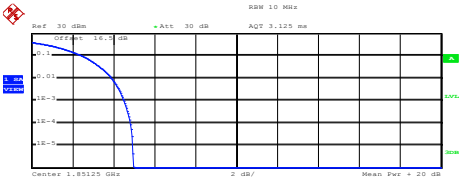
Mean 23.35 dBm
Peak 27.78 dBm
Crest 4.43 dB

10 % 2.64 dB
1 % 3.84 dB
.1 % 4.24 dB
.01 % 4.40 dB

Date: 2.OCT.2018 18:51:24

CDMA BC1 (1xRTT)

Lowest Channel



Complementary Cumulative Distribution Function (100000 samples)

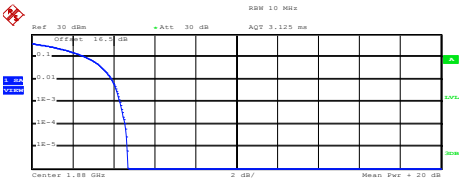
Trace 1

Mean 21.20 dBm
Peak 26.16 dBm
Crest 4.96 dB

10 % 2.48 dB
1 % 3.92 dB
.1 % 4.52 dB
.01 % 4.84 dB

Date: 2.OCT.2018 18:59:50

Middle Channel



Complementary Cumulative Distribution Function (100000 samples)

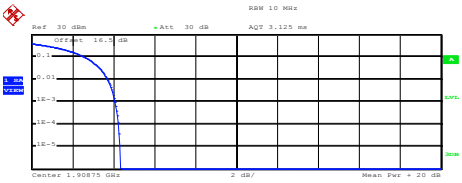
Trace 1

Mean 22.53 dBm
Peak 27.22 dBm
Crest 4.68 dB

10 % 2.68 dB
1 % 3.92 dB
.1 % 4.32 dB
.01 % 4.56 dB

Date: 2.OCT.2018 19:00:04

Highest Channel



Complementary Cumulative Distribution Function (100000 samples)

Trace 1

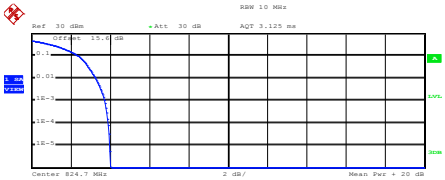
Mean 21.88 dBm
Peak 26.23 dBm
Crest 4.35 dB

10 % 2.64 dB
1 % 3.72 dB
.1 % 4.08 dB
.01 % 4.24 dB

Date: 2.OCT.2018 19:00:18

CDMA BC0 (1xEV-DO Rev. 0)

Lowest Channel

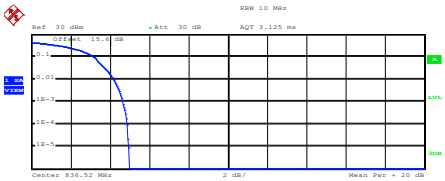


Complementary Cumulative Distribution Function (100000 samples)

	Trace 1
Mean	23.71 dBm
Peak	27.71 dBm
Crest	4.00 dB
10 %	2.40 dB
1 %	3.28 dB
.1 %	3.72 dB
.01 %	3.92 dB

Date: 2.OCT.2018 20:37:38

Middle Channel

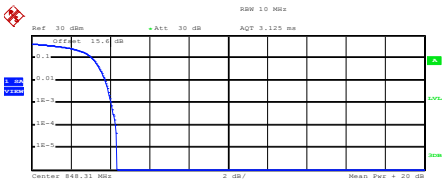


Complementary Cumulative Distribution Function (100000 samples)

	Trace 1
Mean	23.43 dBm
Peak	28.42 dBm
Crest	4.98 dB
10 %	3.20 dB
1 %	4.16 dB
.1 %	4.64 dB
.01 %	4.88 dB

Date: 2.OCT.2018 20:37:51

Highest Channel



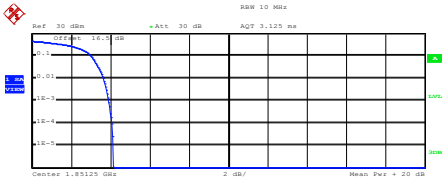
Complementary Cumulative Distribution Function (100000 samples)

	Trace 1
Mean	23.50 dBm
Peak	27.85 dBm
Crest	4.35 dB
10 %	3.08 dB
1 %	3.76 dB
.1 %	4.04 dB
.01 %	4.28 dB

Date: 2.OCT.2018 20:38:04

CDMA BC1 (1xEV-DO Rev. 0)

Lowest Channel

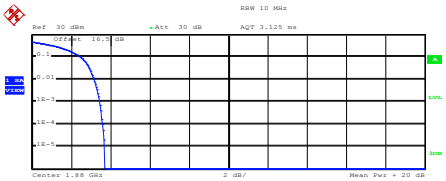


Complementary Cumulative Distribution Function (100000 samples)

	Trace 1
Mean	22.74 dBm
Peak	26.86 dBm
Crest	4.13 dB
10 %	3.00 dB
1 %	3.64 dB
.1 %	3.92 dB
.01 %	4.08 dB

Date: 2.OCT.2018 20:46:09

Middle Channel

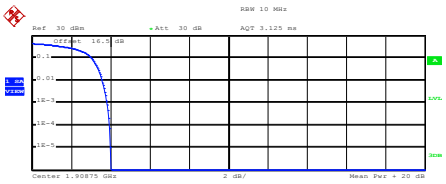


Complementary Cumulative Distribution Function (100000 samples)

	Trace 1
Mean	23.24 dBm
Peak	26.93 dBm
Crest	3.70 dB
10 %	2.48 dB
1 %	3.16 dB
.1 %	3.44 dB
.01 %	3.60 dB

Date: 2.OCT.2018 20:46:21

Highest Channel



Complementary Cumulative Distribution Function (100000 samples)

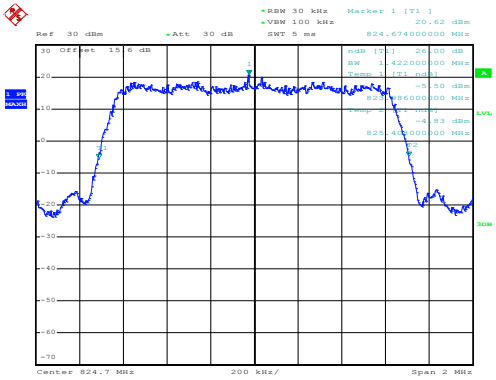
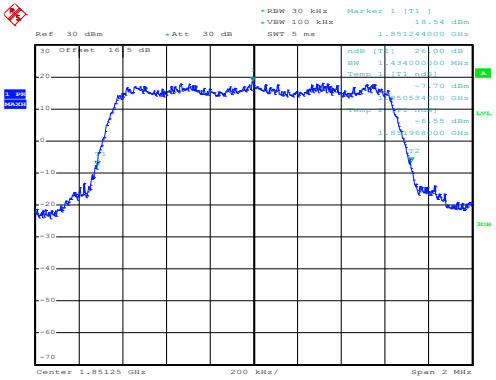
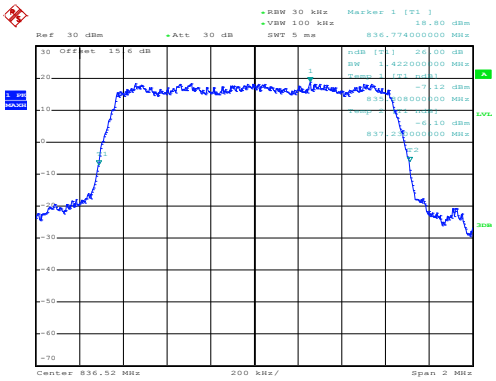
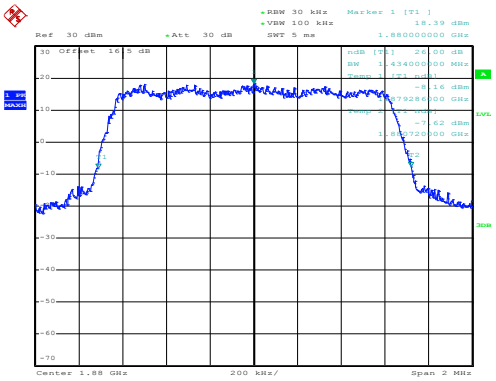
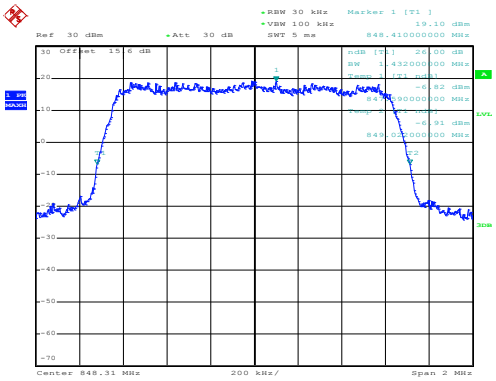
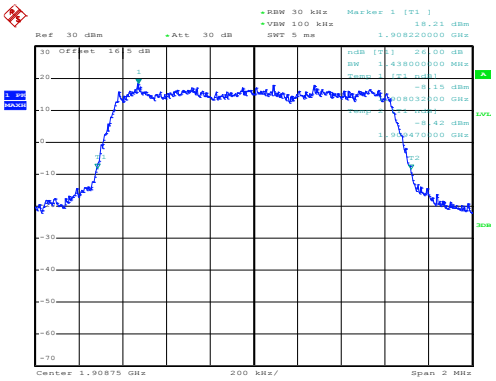
	Trace 1
Mean	22.23 dBm
Peak	26.23 dBm
Crest	4.00 dB
10 %	3.04 dB
1 %	3.60 dB
.1 %	3.84 dB
.01 %	3.96 dB

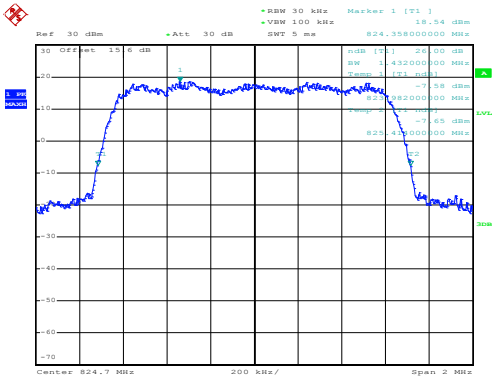
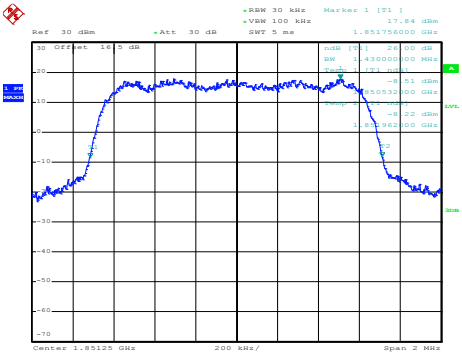
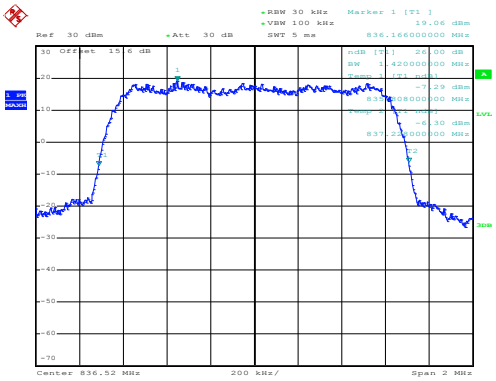
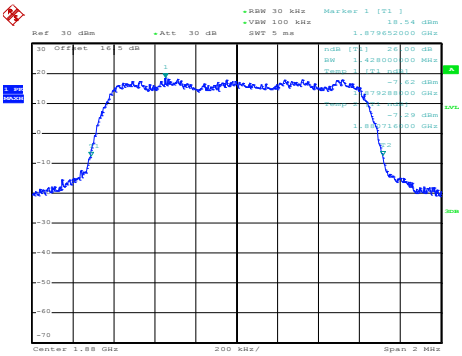
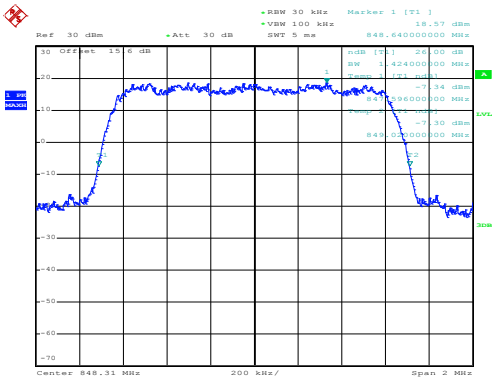
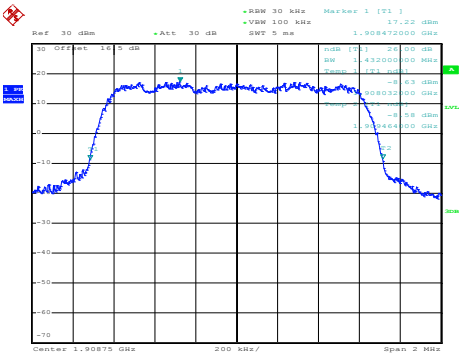
Date: 2.OCT.2018 20:46:30

26dB Bandwidth

Mode	CDMA BC0 26dB BW(MHz)	CDMA BC1 26dB BW(MHz)
Mod.	1xRTT	1xRTT
Lowest CH	1.42	1.43
Middle CH	1.42	1.43
Highest CH	1.43	1.44

Mode	CDMA BC0 26dB BW(MHz)	CDMA BC1 26dB BW(MHz)
Mod.	1xEV-DO Rev. 0	1xEV-DO Rev. 0
Lowest CH	1.43	1.43
Middle CH	1.42	1.43
Highest CH	1.42	1.43

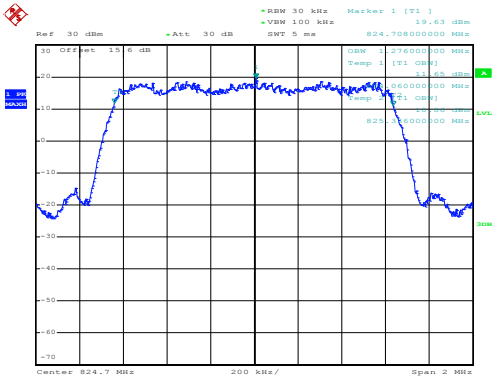
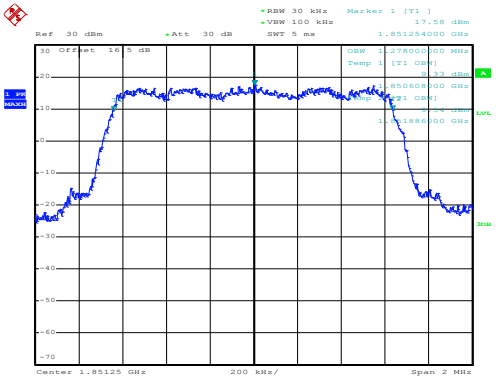
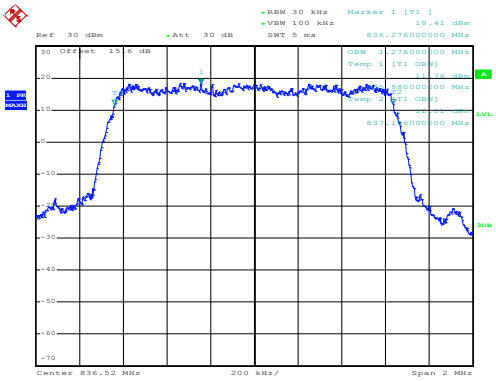
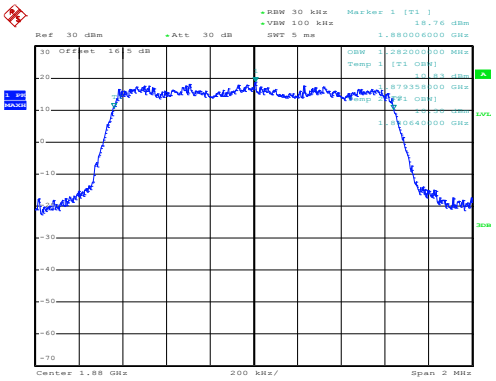
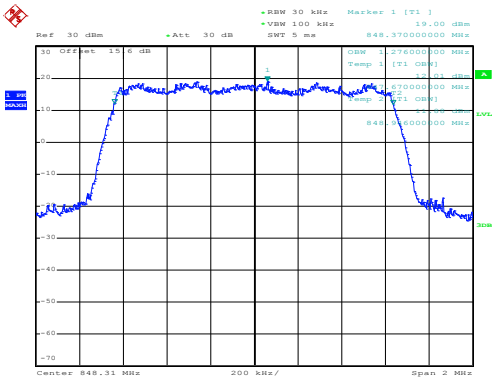
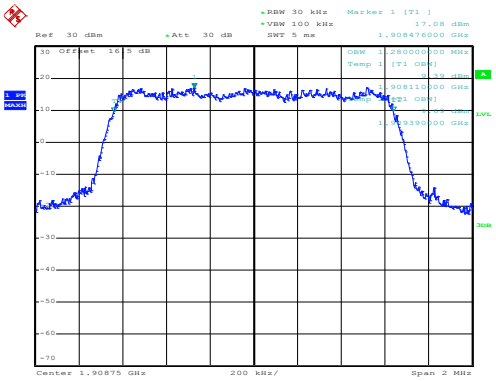
CDMA BC0 (1xRTT)	CDMA BC1 (1xRTT)
Lowest Channel	**Lowest Channel**
 Date: 2.OCT.2018 18:32:14	 Date: 2.OCT.2018 18:53:39
Middle Channel	**Middle Channel**
 Date: 2.OCT.2018 18:33:06	 Date: 2.OCT.2018 18:54:26
Highest Channel	**Highest Channel**
 Date: 2.OCT.2018 18:33:39	 Date: 2.OCT.2018 18:55:00

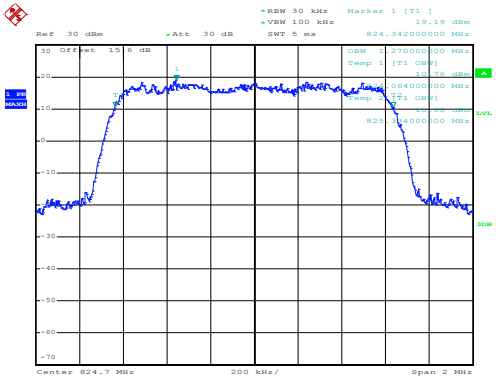
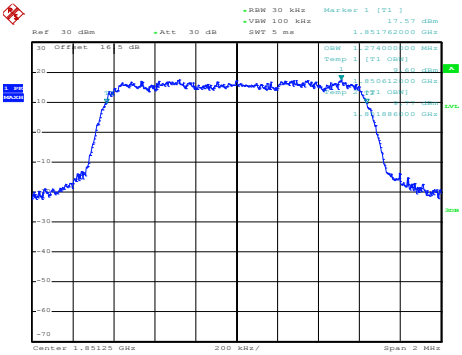
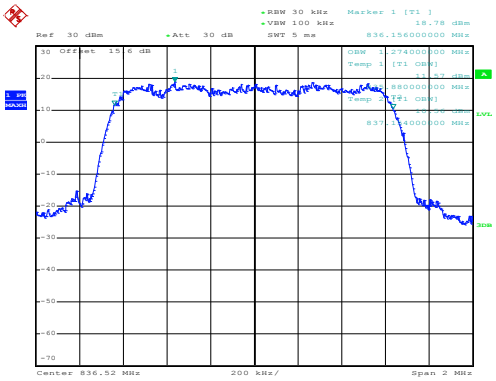
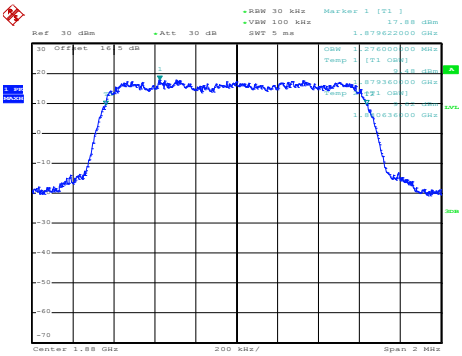
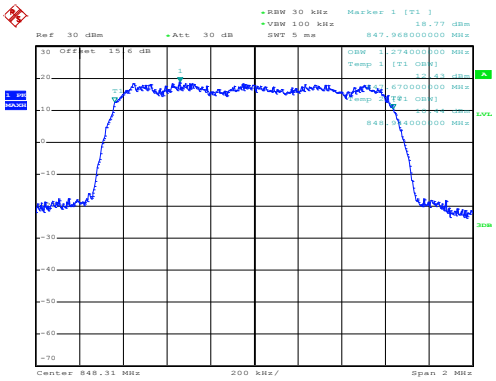
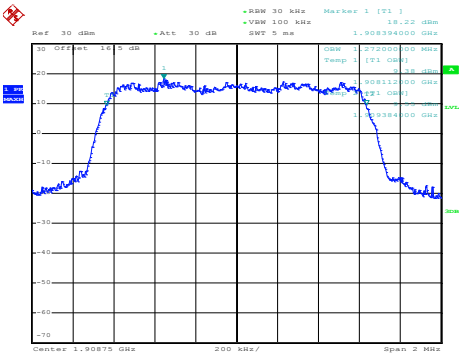
CDMA BC0 (1xEV-DO Rev. 0)	CDMA BC1 (1xEV-DO Rev. 0)
Lowest Channel	**Lowest Channel**
 Date: 2.OCT.2018 20:30:58	 Date: 2.OCT.2018 20:40:05
Middle Channel	**Middle Channel**
 Date: 2.OCT.2018 20:31:35	 Date: 2.OCT.2018 20:40:40
Highest Channel	**Highest Channel**
 Date: 2.OCT.2018 20:32:10	 Date: 2.OCT.2018 20:41:18

Occupied Bandwidth

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

Mode	CDMA BC0 99% OBW(MHz)	CDMA BC1 99% OBW(MHz)
Mod.	1xEV-DO Rev. 0	1xEV-DO Rev. 0
Lowest CH	1.27	1.27
Middle CH	1.27	1.28
Highest CH	1.27	1.27

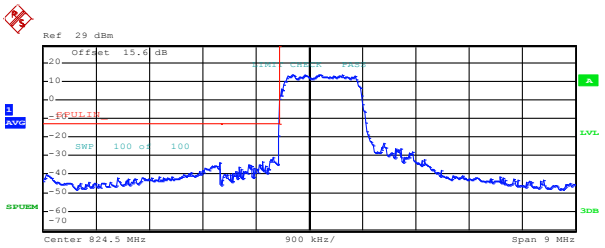
CDMA BC0 (1xRTT)	CDMA BC1 (1xRTT)
Lowest Channel	**Lowest Channel**
 Date: 2.OCT.2018 18:34:30	 Date: 2.OCT.2018 18:55:48
Middle Channel	**Middle Channel**
 Date: 2.OCT.2018 18:35:03	 Date: 2.OCT.2018 18:56:20
Highest Channel	**Highest Channel**
 Date: 2.OCT.2018 18:35:38	 Date: 2.OCT.2018 18:56:52

CDMA BC0 (1xEV-DO Rev. 0)	CDMA BC1 (1xEV-DO Rev. 0)
Lowest Channel	**Lowest Channel**
 Date: 2.OCT.2018 20:32:51	 Date: 2.OCT.2018 20:42:05
Middle Channel	**Middle Channel**
 Date: 2.OCT.2018 20:33:23	 Date: 2.OCT.2018 20:42:39
Highest Channel	**Highest Channel**
 Date: 2.OCT.2018 20:33:55	 Date: 2.OCT.2018 20:43:12

Conducted Band Edge

CDMA BC0 (1xRTT)

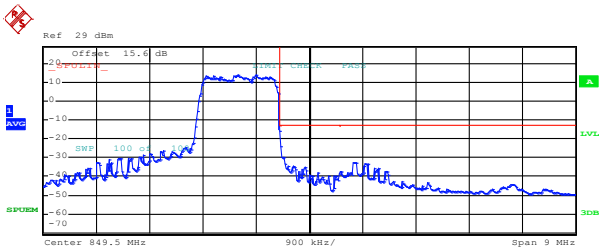
Lowest Band Edge



Start [Hz]	Stop [Hz]	RBW [Hz]	Freq [Hz]	PwrAbs [dBm]	ΔLimit [dB]
820.000 M	823.000 M	100.00 k	823.000000 M	-33.69	-20.69
823.000 M	824.000 M	14.00 k	823.996000 M	-19.31	-6.31
824.000 M	829.000 M	100.00 k	824.425000 M	13.61	-21.39

Date: 2.OCT.2018 18:47:32

Highest Band Edge

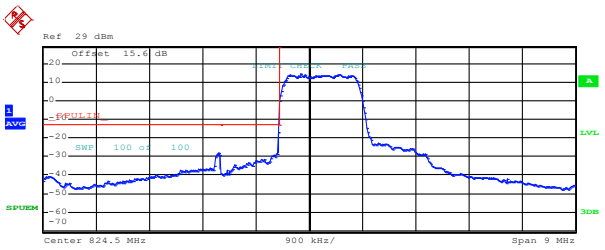


Start [Hz]	Stop [Hz]	RBW [Hz]	Freq [Hz]	PwrAbs [dBm]	ΔLimit [dB]
845.000 M	849.000 M	100.00 k	848.288000 M	14.37	-20.63
849.000 M	850.000 M	14.00 k	849.008000 M	-16.26	-3.26
850.000 M	854.000 M	100.00 k	850.244000 M	-32.53	-19.53

Date: 2.OCT.2018 18:50:20

CDMA BC0 (1xEV-DO Rev. 0)

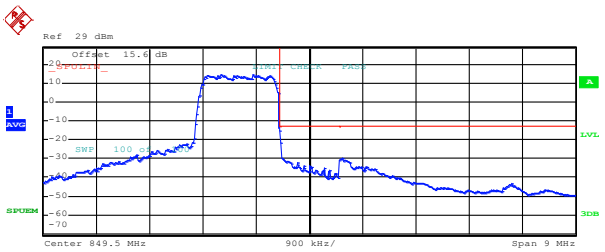
Lowest Band Edge



Start [Hz]	Stop [Hz]	RBW [Hz]	Freq [Hz]	PwrAbs [dBm]	ΔLimit [dB]
820.000 M	823.000 M	100.00 k	822.961000 M	-28.20	-15.20
823.000 M	824.000 M	14.00 k	823.996000 M	-19.77	-6.77
824.000 M	829.000 M	100.00 k	824.350000 M	14.60	-20.40

Date: 22.SEP.2018 16:24:09

Highest Band Edge

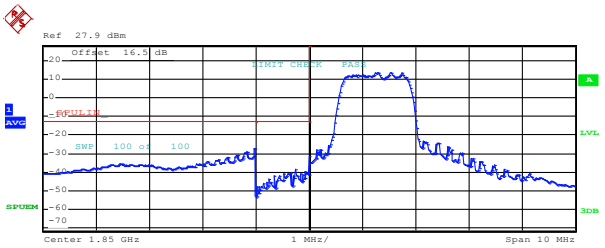


Start [Hz]	Stop [Hz]	RBW [Hz]	Freq [Hz]	PwrAbs [dBm]	ΔLimit [dB]
845.000 M	849.000 M	100.00 k	847.996000 M	14.67	-20.33
849.000 M	850.000 M	14.00 k	849.004000 M	-15.53	-2.53
850.000 M	854.000 M	100.00 k	850.048000 M	-29.57	-16.57

Date: 22.SEP.2018 16:27:10

CDMA BC1 (1xRTT)

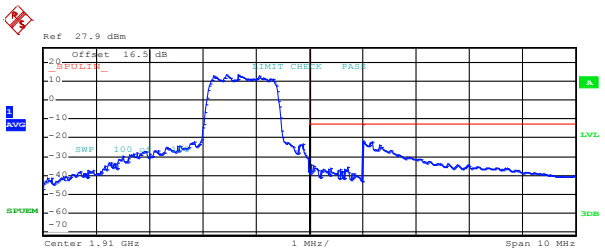
Lowest Band Edge



Start [Hz]	Stop [Hz]	RBW [Hz]	Freq [Hz]	PwrAbs [dBm]	Δ Limit [dB]
1.845 G	1.849 G	1.00 M	1.848956 G	-27.26	-14.26
1.849 G	1.850 G	14.00 k	1.849740 G	-38.39	-25.39
1.850 G	1.855 G	100.00 k	1.851245 G	13.76	-21.24

Date: 2.OCT.2018 19:03:13

Highest Band Edge

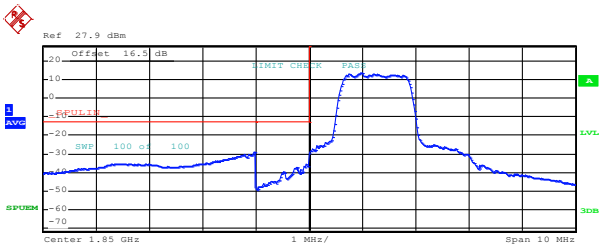


Start [Hz]	Stop [Hz]	RBW [Hz]	Freq [Hz]	PwrAbs [dBm]	Δ Limit [dB]
1.905 G	1.910 G	100.00 k	1.908440 G	13.71	-21.29
1.910 G	1.911 G	14.00 k	1.910028 G	-34.40	-21.40
1.911 G	1.915 G	1.00 M	1.911000 G	-21.30	-8.30

Date: 2.OCT.2018 19:06:00

CDMA BC1 (1xEV-DO Rev. 0)

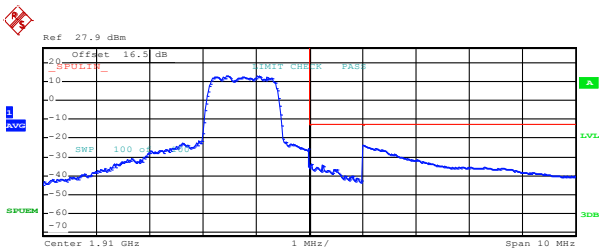
Lowest Band Edge



Start [Hz]	Stop [Hz]	RBW [Hz]	Freq [Hz]	PwrAbs [dBm]	Δ Limit [dB]
1.845 G	1.849 G	1.00 M	1.848956 G	-29.16	-16.16
1.849 G	1.850 G	14.00 k	1.849940 G	-35.43	-22.43
1.850 G	1.855 G	100.00 k	1.851005 G	13.61	-21.39

Date: 22.SEP.2018 16:38:00

Highest Band Edge



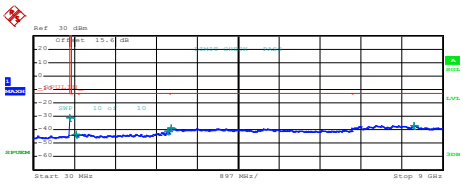
Start [Hz]	Stop [Hz]	RBW [Hz]	Freq [Hz]	PwrAbs [dBm]	Δ Limit [dB]
1.905 G	1.910 G	100.00 k	1.909025 G	13.24	-21.76
1.910 G	1.911 G	14.00 k	1.910036 G	-33.79	-20.79
1.911 G	1.915 G	1.00 M	1.911000 G	-23.58	-10.58

Date: 22.SEP.2018 16:40:49

Conducted Spurious Emission

CDMA BC0 (1xRTT)

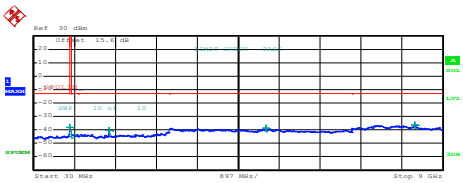
Lowest Channel



Start [Hz]	Stop [Hz]	RBW [Hz]	Freq [Hz]	PwrAbs [dBm]	ΔLimit [dB]
30.000 M	820.000 M	1.00 M	814.075000 M	-30.95	-17.95
855.000 M	1.000 G	1.00 M	968.426258 M	-43.42	-30.42
1.000 G	3.000 G	1.00 M	2.975000 G	-41.34	-28.34
3.000 G	7.000 G	1.00 M	3.044000 G	-38.85	-25.85
7.000 G	9.000 G	1.00 M	8.367000 G	-36.67	-23.67

Date: 2.OCT.2018 18:42:43

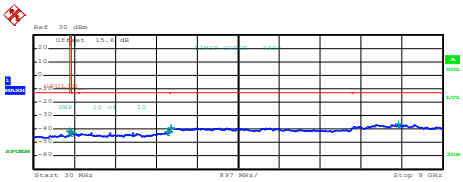
Middle Channel



Start [Hz]	Stop [Hz]	RBW [Hz]	Freq [Hz]	PwrAbs [dBm]	ΔLimit [dB]
30.000 M	820.000 M	1.00 M	813.680000 M	-38.22	-25.22
855.000 M	1.000 G	1.00 M	858.081250 M	-43.19	-30.19
1.000 G	3.000 G	1.00 M	1.672500 G	-40.53	-27.53
3.000 G	7.000 G	1.00 M	5.128000 G	-38.66	-25.66
7.000 G	9.000 G	1.00 M	8.387000 G	-36.57	-23.57

Date: 2.OCT.2018 18:43:33

Highest Channel

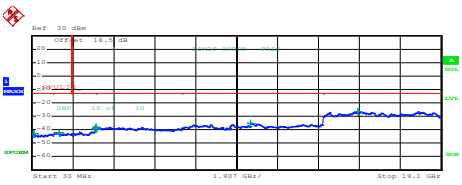


Start [Hz]	Stop [Hz]	RBW [Hz]	Freq [Hz]	PwrAbs [dBm]	ΔLimit [dB]
30.000 M	820.000 M	1.00 M	817.235000 M	-41.91	-28.91
855.000 M	1.000 G	1.00 M	855.290000 M	-42.82	-29.82
1.000 G	3.000 G	1.00 M	2.975000 G	-42.43	-29.43
3.000 G	7.000 G	1.00 M	3.051000 G	-39.13	-26.13
7.000 G	9.000 G	1.00 M	8.028500 G	-36.58	-23.58

Date: 2.OCT.2018 18:44:34

CDMA BC1 (1xRTT)

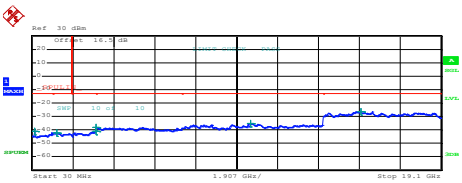
Lowest Channel



Start [Hz]	Stop [Hz]	RBW [Hz]	Freq [Hz]	PwrAbs [dBm]	ΔLimit [dB]
30.000 M	1.000 G	1.00 M	113.177500 M	-43.09	-30.09
1.000 G	1.845 G	1.00 M	1.280751 G	-41.95	-28.95
1.915 G	3.000 G	1.00 M	2.949548 G	-39.59	-26.59
3.000 G	7.000 G	1.00 M	3.001000 G	-38.02	-25.02
7.000 G	13.600 G	1.00 M	10.224925 G	-35.19	-22.19
13.600 G	19.100 G	1.00 M	15.206000 G	-26.51	-13.51

Date: 2.OCT.2018 18:57:48

Middle Channel



Start [Hz]	Stop [Hz]	RBW [Hz]	Freq [Hz]	PwrAbs [dBm]	ΔLimit [dB]
30.000 M	1.000 G	1.00 M	141.792500 M	-40.91	-27.91
1.000 G	1.845 G	1.00 M	1.179774 G	-42.36	-29.36
1.915 G	3.000 G	1.00 M	2.987251 G	-40.94	-27.94
3.000 G	7.000 G	1.00 M	3.003000 G	-37.89	-24.89
7.000 G	13.600 G	1.00 M	10.210075 G	-35.26	-22.26
13.600 G	19.100 G	1.00 M	15.348313 G	-26.22	-13.22

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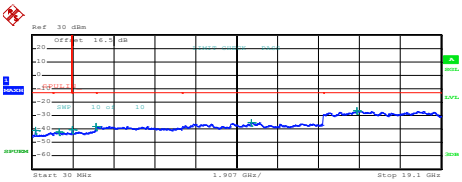
Highest Channel



Start [Hz]	Stop [Hz]	RBW [Hz]	Freq [Hz]	PwrAbs [dBm]	ΔLimit [dB]
30.000 M	1.000 G	1.00 M	170.650000 M	-40.85	-27.85
1.000 G	1.845 G	1.00 M	1.281808 G	-42.06	-29.06
1.915 G	3.000 G	1.00 M	1.915271 G	-40.65	-27.65
3.000 G	7.000 G	1.00 M	3.012000 G	-38.11	-25.11
7.000 G	13.600 G	1.00 M	10.239775 G	-35.01	-22.01
13.600 G	19.100 G	1.00 M	15.184688 G	-26.43	-13.43

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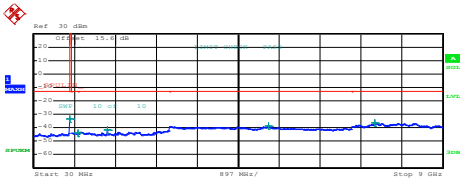
CDMA BC0 (1xEV-DO Rev. 0)

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	-33.39	-20.39
855.000 M	1.000 G	1.00 M	996.447510 M	-43.79	-30.79
1.000 G	3.000 G	1.00 M	1.650000 G	-41.79	-28.79
3.000 G	7.000 G	1.00 M	5.170000 G	-38.73	-25.73
7.000 G	9.000 G	1.00 M	7.513000 G	-36.11	-23.11

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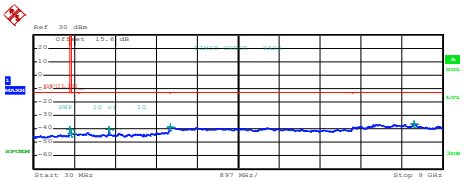
Middle Channel



Start [Hz]	Stop [Hz]	RBW [Hz]	Freq [Hz]	PwrAbs [dBm]	ΔLimit [dB]
30.000 M	820.000 M	1.00 M	817.630000 M	-40.73	-27.73
855.000 M	1.000 G	1.00 M	855.761250 M	-43.35	-30.35
1.000 G	3.000 G	1.00 M	1.673000 G	-40.35	-27.35
3.000 G	7.000 G	1.00 M	3.023000 G	-38.91	-25.91
7.000 G	9.000 G	1.00 M	8.375000 G	-36.48	-23.48

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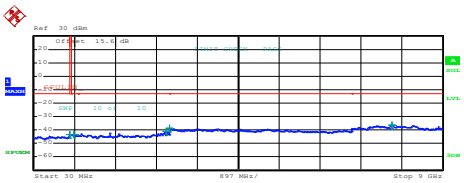
Highest Channel



Start [Hz]	Stop [Hz]	RBW [Hz]	Freq [Hz]	PwrAbs [dBm]	ΔLimit [dB]
30.000 M	820.000 M	1.00 M	815.062500 M	-43.27	-30.27
855.000 M	1.000 G	1.00 M	902.161253 M	-43.65	-30.65
1.000 G	3.000 G	1.00 M	2.936500 G	-41.22	-28.22
3.000 G	7.000 G	1.00 M	3.000000 G	-39.00	-26.00
7.000 G	9.000 G	1.00 M	7.889000 G	-36.48	-23.48

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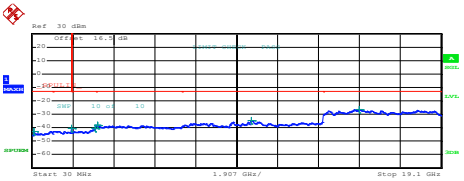
CDMA BC1 (1xEV-DO Rev. 0)

Lowest Channel



Start [Hz]	Stop [Hz]	RBW [Hz]	Freq [Hz]	PwrAbs [dBm]	ΔLimit [dB]
30.000 M	1.000 G	1.00 M	112.692500 M	-42.87	-29.87
1.000 G	1.845 G	1.00 M	1.844578 G	-40.67	-27.67
1.915 G	3.000 G	1.00 M	2.979114 G	-40.75	-27.75
3.000 G	7.000 G	1.00 M	3.086000 G	-38.29	-25.29
7.000 G	13.600 G	1.00 M	10.241425 G	-34.45	-21.45
13.600 G	19.100 G	1.00 M	15.296063 G	-26.58	-13.58

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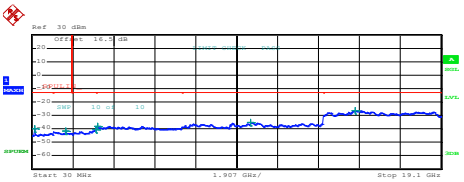
Middle Channel



Start [Hz]	Stop [Hz]	RBW [Hz]	Freq [Hz]	PwrAbs [dBm]	ΔLimit [dB]
30.000 M	1.000 G	1.00 M	142.035000 M	-39.76	-26.76
1.000 G	1.845 G	1.00 M	1.590444 G	-41.54	-28.54
1.915 G	3.000 G	1.00 M	2.992134 G	-40.22	-27.22
3.000 G	7.000 G	1.00 M	3.065000 G	-38.09	-25.09
7.000 G	13.600 G	1.00 M	10.207600 G	-35.12	-22.12
13.600 G	19.100 G	1.00 M	15.092563 G	-26.32	-13.32

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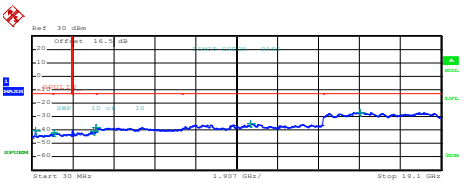
Highest Channel



Start [Hz]	Stop [Hz]	RBW [Hz]	Freq [Hz]	PwrAbs [dBm]	ΔLimit [dB]
30.000 M	1.000 G	1.00 M	170.407500 M	-40.21	-27.21
1.000 G	1.845 G	1.00 M	1.046475 G	-42.43	-29.43
1.915 G	3.000 G	1.00 M	2.899366 G	-41.04	-28.04
3.000 G	7.000 G	1.00 M	3.022000 G	-38.17	-25.17
7.000 G	13.600 G	1.00 M	10.208425 G	-35.45	-22.45
13.600 G	19.100 G	1.00 M	15.327688 G	-26.81	-13.81

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Frequency Stability

Test Conditions	Middle Channel	CDMA BC0 (1xRTT)	Limit 2.5ppm
Temperature (°C)	Voltage (Volt)	Deviation (ppm)	Result
50	Normal Voltage	0.0239	PASS
40	Normal Voltage	0.0215	
30	Normal Voltage	0.0000	
20(Ref.)	Normal Voltage	0.0000	
10	Normal Voltage	0.0215	
0	Normal Voltage	0.0024	
-10	Normal Voltage	0.0012	
-20	Normal Voltage	0.0048	
-30	Normal Voltage	0.0024	
20	Maximum Voltage	0.0024	
20	Normal Voltage	0.0215	
20	Battery End Point	0.0000	

Test Conditions	Middle Channel	CDMA BC1 (1xRTT)	Limit Note 2.
Temperature (°C)	Voltage (Volt)	Deviation (ppm)	Result
50	Normal Voltage	0.0032	PASS
40	Normal Voltage	0.0011	
30	Normal Voltage	0.0005	
20(Ref.)	Normal Voltage	0.0000	
10	Normal Voltage	0.0005	
0	Normal Voltage	0.0005	
-10	Normal Voltage	0.0011	
-20	Normal Voltage	0.0000	
-30	Normal Voltage	0.0011	
20	Maximum Voltage	0.0000	
20	Normal Voltage	0.0000	
20	Battery End Point	0.0011	

Test Conditions	Middle Channel	CDMA BC0 (1xEV-DO Rev. 0)	Limit 2.5ppm
Temperature (°C)	Voltage (Volt)	Deviation (ppm)	Result
50	Normal Voltage	0.0239	PASS
40	Normal Voltage	0.0215	
30	Normal Voltage	0.0000	
20(Ref.)	Normal Voltage	0.0000	
10	Normal Voltage	0.0215	
0	Normal Voltage	0.0024	
-10	Normal Voltage	0.0012	
-20	Normal Voltage	0.0048	
-30	Normal Voltage	0.0024	
20	Maximum Voltage	0.0024	
20	Normal Voltage	0.0215	
20	Battery End Point	0.0000	

Test Conditions	Middle Channel	CDMA BC1 (1xEV-DO Rev. 0)	Limit Note 2.
Temperature (°C)	Voltage (Volt)	Deviation (ppm)	Result
50	Normal Voltage	0.0032	PASS
40	Normal Voltage	0.0011	
30	Normal Voltage	0.0005	
20(Ref.)	Normal Voltage	0.0000	
10	Normal Voltage	0.0005	
0	Normal Voltage	0.0005	
-10	Normal Voltage	0.0011	
-20	Normal Voltage	0.0000	
-30	Normal Voltage	0.0011	
20	Maximum Voltage	0.0000	
20	Normal Voltage	0.0000	
20	Battery End Point	0.0011	

Note:

1. Normal Voltage = 3.8V. ；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	33.33	2.1528	31.18	1.3122
Middle	GSM	32.87	1.9364	30.72	1.1803
Highest	(GT - LC = 0 dB)	32.90	1.9498	30.75	1.1885
Lowest	GSM850	26.83	0.4819	24.68	0.2938
Middle	EDGE class 8	26.80	0.4786	24.65	0.2917
Highest	(GT - LC = 0 dB)	26.77	0.4753	24.62	0.2897
Lowest	WCDMA Band V	23.26	0.2118	21.11	0.1205
Middle	RMC 12.2Kbps	23.09	0.2037	20.94	0.1242
Highest	(GT - LC = 0 dB)	23.13	0.2056	20.98	0.1253
Lowest	CDMA BC0	24.15	0.2600	22.00	0.1585
Middle	1xRTT	24.16	0.2606	22.01	0.1589
Highest	(GT - LC = 0 dB)	24.25	0.2661	22.10	0.1622
Lowest	CDMA BC0	24.19	0.2624	22.04	0.1600
Middle	1xEV-DO	24.18	0.2618	22.03	0.1596
Highest	(GT - LC = 0 dB)	24.26	0.2667	22.11	0.1626
Limit	ERP < 7W	Result		PASS	

Channel	Mode	Conducted		EIRP	
		Power (dBm)	Power (Watts)	EIRP(dBm)	EIRP(W)
Lowest	GSM1900	29.67	0.9268	31.67	1.4689
Middle	GSM	29.80	0.9550	31.80	1.5136
Highest	(GT - LC = 2 dB)	29.67	0.9268	31.67	1.4689
Lowest	GSM1900	25.69	0.3707	27.69	0.5875
Middle	EDGE class 8	25.92	0.3908	27.92	0.6194
Highest	(GT - LC = 2 dB)	25.89	0.3882	27.89	0.6152
Lowest	WCDMA Band II	22.96	0.1977	24.96	0.3133
Middle	RMC 12.2Kbps	22.89	0.1945	24.89	0.3083
Highest	(GT - LC = 2 dB)	23.10	0.2042	25.10	0.3236
Lowest	CDMA BC1	24.05	0.2541	26.05	0.4027
Middle	1xRTT	24.07	0.2553	26.07	0.4046
Highest	(GT - LC = 2 dB)	23.87	0.2438	25.87	0.3864
Lowest	CDMA BC1	24.03	0.2529	26.03	0.4009
Middle	1xEV-DO	24.08	0.2559	26.08	0.4055
Highest	(GT - LC = 2 dB)	23.89	0.2449	25.89	0.3882
Limit	EIRP < 2W	Result		PASS	

Channel	Mode	Conducted		EIRP	
		Power (dBm)	Power (Watts)	EIRP(dBm)	EIRP(W)
Lowest	WCDMA Band IV	22.91	0.1954	24.91	0.3097
Middle	RMC 12.2Kbps	23.15	0.2065	25.15	0.3273
Highest	(GT - LC = 2 dB)	22.91	0.1954	24.91	0.3097
Limit	EIRP < 1W	Result		PASS	

Radiated Spurious Emission

GSM850

GSM 850									
Channel	Frequency (MHz)	ERP (dBm)	Limit (dBm)	Over Limit (dB)	SPA Reading (dBm)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)
Lowest	1648	-53.94	-13	-40.94	-65.03	-59.79	0.69	8.69	H
	2472	-37.27	-13	-24.27	-53.24	-44.93	0.95	10.76	H
	3296	-56.30	-13	-43.30	-74.46	-64.80	1.20	11.85	H
	4120	-53.21	-13	-40.21	-74.18	-62.02	1.71	12.68	H
									H
									H
									H
	1648	-50.24	-13	-37.24	-61.21	-56.09	0.69	8.69	V
	2472	-41.51	-13	-28.51	-57.48	-49.17	0.95	10.76	V
	3296	-52.77	-13	-39.77	-70.77	-61.27	1.20	11.85	V
	4120	-51.05	-13	-38.05	-72.15	-59.86	1.71	12.68	V
									V
									V
									V
Middle	1672	-48.13	-13	-35.13	-59.34	-54.06	0.71	8.79	H
	2512	-34.82	-13	-21.82	-50.79	-42.53	0.95	10.81	H
	3344	-56.57	-13	-43.57	-74.59	-65.16	1.21	11.96	H
	4184	-54.51	-13	-41.51	-75.65	-63.30	1.73	12.66	H
									H
									H
									H
	1672	-46.52	-13	-33.52	-57.64	-52.45	0.71	8.79	V
	2512	-37.60	-13	-24.60	-53.62	-45.31	0.95	10.81	V
	3344	-52.25	-13	-39.25	-69.97	-60.84	1.21	11.96	V
	4184	-52.54	-13	-39.54	-73.75	-61.33	1.73	12.66	V
									V
									V
									V

Highest	1696	-49.14	-13	-36.14	-60.49	-55.15	0.72	8.88	H
	2544	-35.16	-13	-22.16	-51.19	-42.88	0.97	10.84	H
	3392	-55.82	-13	-42.82	-73.71	-64.51	1.22	12.06	H
									H
									H
									H
									H
	1696	-44.54	-13	-31.54	-55.82	-50.55	0.72	8.88	V
	2544	-38.70	-13	-25.70	-55.05	-46.42	0.97	10.84	V
	3392	-53.17	-13	-40.17	-70.62	-61.86	1.22	12.06	V
									V
									V
									V
									V

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

EDGE 850

EDGE 850									
Channel	Frequency (MHz)	ERP (dBm)	Limit (dBm)	Over Limit (dB)	SPA Reading (dBm)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)
Lowest	1648	-60.38	-13	-47.38	-71.47	-66.23	0.69	8.69	H
	2472	-48.53	-13	-35.53	-64.5	-56.19	0.95	10.76	H
	3296	-57.76	-13	-44.76	-75.92	-66.26	1.20	11.85	H
									H
									H
									H
									H
	1648	-57.04	-13	-44.04	-68.01	-62.89	0.69	8.69	V
	2472	-49.33	-13	-36.33	-65.3	-56.99	0.95	10.76	V
	3296	-57.01	-13	-44.01	-75.01	-65.51	1.20	11.85	V
									V
									V
									V
									V
Middle	1672	-60.49	-13	-47.49	-71.7	-66.42	0.71	8.79	H
	2509	-43.35	-13	-30.35	-59.32	-51.05	0.95	10.81	H
	3345	-57.60	-13	-44.60	-75.62	-66.20	1.21	11.96	H
									H
									H
									H
									H
	1672	-55.72	-13	-42.72	-66.84	-61.65	0.71	8.79	V
	2509	-47.41	-13	-34.41	-63.43	-55.11	0.95	10.81	V
	3345	-57.03	-13	-44.03	-74.75	-65.63	1.21	11.96	V
									V
									V
									V
									V

Highest	1696	-59.41	-13	-46.41	-70.76	-65.42	0.72	8.88	H
	2544	-44.42	-13	-31.42	-60.45	-52.14	0.97	10.84	H
	3393	-58.44	-13	-45.44	-76.33	-67.13	1.22	12.06	H
									H
									H
									H
									H
	1696	-55.70	-13	-42.70	-66.98	-61.71	0.72	8.88	V
	2544	-47.78	-13	-34.78	-64.13	-55.50	0.97	10.84	V
	3393	-58.67	-13	-45.67	-76.12	-67.36	1.22	12.06	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	1656	-63.11	-13	-50.11	-74.26	-68.99	0.70	8.72	H
	2480	-56.05	-13	-43.05	-72.01	-63.72	0.95	10.77	H
	3305	-57.93	-13	-44.93	-76.05	-66.45	1.20	11.87	H
									H
									H
									H
									H
	1656	-63.45	-13	-50.45	-74.49	-69.33	0.70	8.72	V
	2480	-57.90	-13	-44.90	-73.85	-65.57	0.95	10.77	V
	3305	-58.09	-13	-45.09	-76.03	-66.61	1.20	11.87	V
									V
									V
									V
									V
Middle	1672	-63.35	-13	-50.35	-74.56	-69.28	0.71	8.79	H
	2509	-54.76	-13	-41.76	-70.72	-62.46	0.95	10.81	H
	3345	-57.59	-13	-44.59	-75.61	-66.19	1.21	11.96	H
									H
									H
									H
									H
	1672	-63.22	-13	-50.22	-74.34	-69.15	0.71	8.79	V
	2509	-53.45	-13	-40.45	-69.39	-61.15	0.95	10.81	V
	3345	-58.02	-13	-45.02	-75.74	-66.62	1.21	11.96	V
									V
									V
									V
									V

Highest	1696	-63.33	-13	-50.33	-74.68	-69.34	0.72	8.88	H
	2539	-55.87	-13	-42.87	-71.88	-63.59	0.96	10.83	H
	3386	-58.27	-13	-45.27	-76.18	-66.95	1.22	12.05	H
									H
									H
									H
									H
	1696	-63.10	-13	-50.10	-74.38	-69.11	0.72	8.88	V
	2539	-57.76	-13	-44.76	-74.05	-65.48	0.96	10.83	V
	3386	-58.98	-13	-45.98	-76.47	-67.66	1.22	12.05	V
									V
									V
									V
									V

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

CDMA 850 1xRTT

CDMA 850 1xRTT									
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	-63.48	-13	-50.48	-74.57	-69.33	0.69	8.70	H
	2472	-42.29	-13	-29.29	-58.26	-49.95	0.95	10.76	H
	3299	-57.90	-13	-44.90	-76.05	-66.41	1.20	11.86	H
									H
									H
									H
									H
	1649	-63.71	-13	-50.71	-74.68	-69.56	0.69	8.70	V
	2472	-45.64	-13	-32.64	-61.61	-53.30	0.95	10.76	V
	3299	-57.97	-13	-44.97	-75.96	-66.48	1.20	11.86	V
									V
									V
									V
									V
Middle	1672	-63.47	-13	-50.47	-74.68	-69.40	0.71	8.79	H
	2512	-41.98	-13	-28.98	-57.95	-49.69	0.95	10.81	H
	3346	-57.83	-13	-44.83	-75.84	-66.43	1.21	11.96	H
									H
									H
									H
									H
	1672	-63.77	-13	-50.77	-74.89	-69.70	0.71	8.79	V
	2512	-46.75	-13	-33.75	-62.77	-54.46	0.95	10.81	V
	3346	-58.11	-13	-45.11	-75.82	-66.71	1.21	11.96	V
									V
									V
									V
									V

Highest	1697	-63.19	-13	-50.19	-74.54	-69.21	0.72	8.89	H
	2544	-40.77	-13	-27.77	-56.8	-48.49	0.97	10.84	H
	3393	-58.51	-13	-45.51	-76.4	-67.20	1.22	12.06	H
									H
									H
									H
									H
	1697	-63.43	-13	-50.43	-74.41	-69.45	0.72	8.89	V
	2544	-46.39	-13	-33.39	-62.74	-54.11	0.97	10.84	V
	3393	-59.17	-13	-46.17	-76.61	-67.86	1.22	12.06	V
									V
									V
									V
									V

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

CDMA 850 1xEVDO

CDMA 850 1xEVDO									
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	-63.56	-13	-50.56	-74.65	-69.41	0.69	8.70	H
	2472	-43.86	-13	-30.86	-59.83	-51.52	0.95	10.76	H
	3299	-57.95	-13	-44.95	-76.1	-66.46	1.20	11.86	H
									H
									H
									H
									H
	1649	-63.33	-13	-50.33	-74.3	-69.18	0.69	8.70	V
	2472	-45.95	-13	-32.95	-61.92	-53.61	0.95	10.76	V
	3299	-57.85	-13	-44.85	-75.84	-66.36	1.20	11.86	V
									V
									V
									V
									V
Middle	1672	-63.16	-13	-50.16	-74.37	-69.09	0.71	8.79	H
	2512	-43.71	-13	-30.71	-59.68	-51.42	0.95	10.81	H
	3346	-57.49	-13	-44.49	-75.5	-66.09	1.21	11.96	H
									H
									H
									H
									H
	1672	-63.43	-13	-50.43	-74.55	-69.36	0.71	8.79	V
	2512	-45.98	-13	-32.98	-62	-53.69	0.95	10.81	V
	3346	-58.21	-13	-45.21	-75.92	-66.81	1.21	11.96	V
									V
									V
									V
									V

Highest	1697	-63.17	-13	-50.17	-74.52	-69.19	0.72	8.89	H
	2544	-42.48	-13	-29.48	-58.51	-50.20	0.97	10.84	H
	3393	-58.56	-13	-45.56	-76.45	-67.25	1.22	12.06	H
									H
									H
									H
									H
	1697	-63.29	-13	-50.29	-74.57	-69.31	0.72	8.89	V
	2544	-47.14	-13	-34.14	-63.49	-54.86	0.97	10.84	V
	3393	-59.25	-13	-46.25	-76.69	-67.94	1.22	12.06	V
									V
									V
									V
									V

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

WCDMA 1700

WCDMA 1700									
Channel	Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Over Limit (dB)	SPA Reading (dBm)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)
Lowest	3427	-52.07	-13	-39.07	-70.91	-62.98	1.23	12.14	H
	5142	-48.60	-13	-35.60	-72.47	-59.50	1.97	12.87	H
	6586	-51.28	-13	-38.28	-75.02	-59.46	2.30	10.48	H
									H
									H
									H
									H
	3427	-54.69	-13	-41.69	-73.15	-65.60	1.23	12.14	V
	5142	-48.85	-13	-35.85	-72.44	-59.75	1.97	12.87	V
	6586	-52.30	-13	-39.30	-76.39	-60.48	2.30	10.48	V
									V
									V
									V
									V
Middle	3469	-49.02	-13	-36.02	-68.35	-60.01	1.24	12.23	H
	5198	-48.87	-13	-35.87	-72.9	-59.83	1.97	12.94	H
	6930	-50.30	-13	-37.30	-76.09	-59.52	2.36	11.58	H
									H
									H
									H
									H
	3469	-52.14	-13	-39.14	-71.12	-63.13	1.24	12.23	V
	5198	-47.62	-13	-34.62	-71.21	-58.58	1.97	12.94	V
	6930	-50.26	-13	-37.26	-76.17	-59.48	2.36	11.58	V
									V
									V
									V
									V

Highest	3504	-51.63	-13	-38.63	-71.33	-62.68	1.25	12.30	H
	5254	-46.83	-13	-33.83	-70.85	-57.85	1.98	13.00	H
	7008	-48.78	-13	-35.78	-75.28	-58.21	2.37	11.79	H
									H
									H
									H
									H
	3504	-53.57	-13	-40.57	-73.11	-64.62	1.25	12.30	V
	5254	-46.48	-13	-33.48	-70.19	-57.50	1.98	13.00	V
	7008	-48.59	-13	-35.59	-75.39	-58.02	2.37	11.79	V
									V
									V
									V
									V

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

GSM 1900

GSM 1900									
Channel	Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Over Limit (dB)	SPA Reading (dBm)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)
Lowest	3700	-45.03	-13	-32.03	-65.58	-56.06	1.43	12.46	H
	5550	-39.40	-13	-26.40	-63.37	-50.68	2.01	13.29	H
	7400	-48.45	-13	-35.45	-76.34	-57.64	2.21	11.40	H
									H
									H
									H
									H
	3700	-46.44	-13	-33.44	-66.68	-57.47	1.43	12.46	V
	5550	-40.39	-13	-27.39	-64.56	-51.67	2.01	13.29	V
	7400	-48.75	-13	-35.75	-76.19	-57.94	2.21	11.40	V
									V
									V
									V
									V
Middle	3760	-43.97	-13	-30.97	-64.65	-55.00	1.48	12.51	H
	5640	-36.45	-13	-23.45	-60.44	-47.72	2.00	13.27	H
	7520	-48.64	-13	-35.64	-76.45	-57.75	2.18	11.30	H
									H
									H
									H
									H
	3760	-45.35	-13	-32.35	-65.77	-56.38	1.48	12.51	V
	5640	-38.92	-13	-25.92	-63.21	-50.19	2.00	13.27	V
	7520	-48.31	-13	-35.31	-76.27	-57.42	2.18	11.30	V
									V
									V
									V
									V

Highest	3819	-47.35	-13	-34.35	-68.14	-58.37	1.53	12.56	H
	5730	-38.40	-13	-25.40	-62.49	-49.66	1.99	13.25	H
	7639	-48.11	-13	-35.11	-75.43	-57.11	2.27	11.27	H
									H
									H
									H
									H
	3819	-47.36	-13	-34.36	-67.98	-58.38	1.53	12.56	V
	5730	-39.75	-13	-26.75	-64.1	-51.01	1.99	13.25	V
	7639	-48.14	-13	-35.14	-75.67	-57.14	2.27	11.27	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	-43.83	-13	-30.83	-64.38	-54.86	1.43	12.46	H
	5548	-37.86	-13	-24.86	-61.83	-49.14	2.01	13.29	H
	7400	-48.20	-13	-35.20	-76.09	-57.39	2.21	11.40	H
									H
									H
									H
									H
	3700	-51.95	-13	-38.95	-72.19	-62.98	1.43	12.46	V
	5548	-39.15	-13	-26.15	-63.32	-50.43	2.01	13.29	V
	7400	-48.94	-13	-35.94	-76.35	-58.13	2.21	11.40	V
									V
									V
									V
									V
Middle	3756	-39.28	-13	-26.28	-59.96	-50.31	1.48	12.50	H
	5639	-41.00	-13	-28.00	-64.99	-52.27	2.00	13.27	H
	7520	-48.15	-13	-35.15	-75.97	-57.26	2.18	11.30	H
									H
									H
									H
									H
	3756	-47.70	-13	-34.70	-68.12	-58.73	1.48	12.50	V
	5639	-39.69	-13	-26.69	-63.98	-50.96	2.00	13.27	V
	7520	-48.69	-13	-35.69	-76.67	-57.80	2.18	11.30	V
									V
									V
									V
									V

Highest	3819	-36.36	-13	-23.36	-57.15	-47.38	1.53	12.56	H
	5730	-40.44	-13	-27.44	-64.53	-51.70	1.99	13.25	H
	7639	-48.41	-13	-35.41	-75.73	-57.41	2.27	11.27	H
									H
									H
									H
									H
	3819	-43.53	-13	-30.53	-64.15	-54.55	1.53	12.56	V
	5730	-37.49	-13	-24.49	-61.84	-48.75	1.99	13.25	V
	7639	-48.39	-13	-35.39	-75.92	-57.39	2.27	11.27	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	3707	-50.17	-13	-37.17	-70.74	-61.20	1.43	12.47	H
	5555	-52.47	-13	-39.47	-76.44	-63.75	2.01	13.29	H
	7410	-48.41	-13	-35.41	-76.32	-57.59	2.21	11.39	H
									H
									H
									H
									H
	3707	-54.47	-13	-41.47	-74.74	-65.50	1.43	12.47	V
	5555	-51.13	-13	-38.13	-75.3	-62.41	2.01	13.29	V
	7410	-48.91	-13	-35.91	-76.4	-58.09	2.21	11.39	V
									V
									V
									V
									V
Middle	3760	-51.20	-13	-38.20	-71.87	-62.23	1.48	12.51	H
	5640	-52.63	-13	-39.63	-76.63	-63.90	2.00	13.27	H
	7520	-48.67	-13	-35.67	-76.49	-57.78	2.18	11.30	H
									H
									H
									H
									H
	3760	-54.21	-13	-41.21	-74.63	-65.24	1.48	12.51	V
	5640	-50.53	-13	-37.53	-74.82	-61.80	2.00	13.27	V
	7520	-48.60	-13	-35.60	-76.58	-57.71	2.18	11.30	V
									V
									V
									V
									V

Highest	3815	-52.73	-13	-39.73	-73.51	-63.75	1.53	12.55	H
	5722	-52.38	-13	-39.38	-76.46	-63.64	1.99	13.26	H
	7630	-48.36	-13	-35.36	-75.68	-57.37	2.26	11.27	H
									H
									H
									H
									H
	3815	-55.00	-13	-42.00	-75.61	-66.02	1.53	12.55	V
	5722	-52.41	-13	-39.41	-76.75	-63.67	1.99	13.26	V
	7630	-48.04	-13	-35.04	-75.58	-57.05	2.26	11.27	V
									V
									V
									V
									V

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

CDMA 1900 1xRTT

CDMA 1900 1xRTT									
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	-53.34	-13	-40.34	-73.89	-64.37	1.43	12.46	H
	5555	-47.41	-13	-34.41	-71.38	-58.69	2.01	13.29	H
	7405	-48.46	-13	-35.46	-76.36	-57.65	2.21	11.40	H
									H
									H
									H
									H
	3700	-54.64	-13	-41.64	-74.88	-65.67	1.43	12.46	V
	5555	-48.92	-13	-35.92	-73.09	-60.20	2.01	13.29	V
	7405	-49.09	-13	-36.09	-76.54	-58.28	2.21	11.40	V
									V
									V
									V
									V
Middle	3763	-52.73	-13	-39.73	-73.41	-63.76	1.48	12.51	H
	5639	-44.54	-13	-31.54	-68.53	-55.81	2.00	13.27	H
	7520	-48.32	-13	-35.32	-76.14	-57.43	2.18	11.30	H
									H
									H
									H
									H
	3763	-54.62	-13	-41.62	-75.05	-65.65	1.48	12.51	V
	5639	-46.89	-13	-33.89	-71.18	-58.16	2.00	13.27	V
	7520	-48.34	-13	-35.34	-76.32	-57.45	2.18	11.30	V
									V
									V
									V
									V

Highest	3819	-52.95	-13	-39.95	-73.74	-63.97	1.53	12.56	H
	5723	-50.46	-13	-37.46	-74.54	-61.72	1.99	13.26	H
	7635	-48.36	-13	-35.36	-75.68	-57.37	2.26	11.27	H
									H
									H
									H
									H
	3819	-54.50	-13	-41.50	-75.12	-65.52	1.53	12.56	V
	5723	-51.26	-13	-38.26	-75.6	-62.52	1.99	13.26	V
	7635	-47.94	-13	-34.94	-75.47	-56.95	2.26	11.27	V
									V
									V
									V
									V

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

CDMA 1900 1xEVDO

CDMA 1900 1xEVDO									
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	-51.15	-13	-38.15	-71.7	-62.18	1.43	12.46	H
	5555	-44.15	-13	-31.15	-68.12	-55.43	2.01	13.29	H
	7405	-48.41	-13	-35.41	-76.31	-57.60	2.21	11.40	H
									H
									H
									H
									H
	3700	-54.47	-13	-41.47	-74.71	-65.50	1.43	12.46	V
	5555	-46.94	-13	-33.94	-71.11	-58.22	2.01	13.29	V
	7405	-48.99	-13	-35.99	-76.44	-58.18	2.21	11.40	V
									V
									V
									V
									V
Middle	3763	-51.18	-13	-38.18	-71.86	-62.21	1.48	12.51	H
	5639	-46.42	-13	-33.42	-70.41	-57.69	2.00	13.27	H
	7522	-48.74	-13	-35.74	-76.55	-57.85	2.19	11.30	H
									H
									H
									H
									H
	3763	-54.28	-13	-41.28	-74.71	-65.31	1.48	12.51	V
	5639	-46.00	-13	-33.00	-70.29	-57.27	2.00	13.27	V
	7522	-48.39	-13	-35.39	-76.37	-57.50	2.19	11.30	V
									V
									V
									V
									V

Highest	3819	-52.37	-13	-39.37	-73.16	-63.39	1.53	12.56	H
	5723	-48.63	-13	-35.63	-72.71	-59.89	1.99	13.26	H
	7634	-48.26	-13	-35.26	-75.58	-57.27	2.26	11.27	H
									H
									H
									H
									H
	3819	-54.71	-13	-41.71	-75.33	-65.73	1.53	12.56	V
	5723	-49.01	-13	-36.01	-73.35	-60.27	1.99	13.26	V
	7634	-48.06	-13	-35.06	-75.59	-57.07	2.26	11.27	V
									V
									V
									V
									V

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