

FCC

RF

TEST REPORT

ISSUED BY
Shenzhen BALUN Technology Co., Ltd.



FOR
4G LTE Cat.4 CPE

ISSUED TO
Observa Telecom

c/ Monte Esquinza, 28 1 Drcha Madrid P.C.28010 SPAIN



Tested by:

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Date

Jan. 23, 2016

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Date

Jan. 23, 2016

Report No.: BL-SZ15B0251-501

EUT Type: 4G LTE Cat.4 CPE

Model Name: RT880

Brand Name: Observa Mobile

Test Standard: 47 CFR Part 2 (10-1-14 Edition)

FCC ID: 2AFTXRT880

Test conclusion: Pass

Test Date: Dec. 1, 2015 ~ Dec. 7, 2015

Date of Issue: Jan. 23, 2016

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Revision History

Version	Issue Date	Revisions
Rev. 01	Jan. 13, 2016	Initial Issue
Rev. 02	Jan. 21, 2016	Update page 7 and 47, update A2 , A.4, A.5 and A.7
Rev. 03	Jan. 23, 2016	<u>Update antenna state at page 8;</u> <u>annex A.1 ERP data at page 27 to</u> <u>54 and annex A.7 at 167.</u>

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1 ADMINISTRATIVE DATA (GENERAL INFORMATION)

1.1 Identification of the Testing Laboratory

Company Name	Shenzhen BALUN Technology Co., Ltd.
Address	Block B, 1st FL, Baisha Science and Technology Park, Shahe Xi Road, Nanshan District, Shenzhen, Guangdong Province, P. R. China
Phone Number	+86 755 6685 0100
Fax Number	+86 755 6182 4271

1.2 Identification of the Responsible Testing Location

Test Location	Shenzhen BALUN Technology Co., Ltd.
Address	Block B, 1st FL, Baisha Science and Technology Park, Shahe Xi Road, Nanshan District, Shenzhen, Guangdong Province, P. R. China
Accreditation Certificate	<p>The laboratory has been listed by Industry Canada to perform electromagnetic emission measurements. The recognition numbers of test site are 11524A-1.</p> <p>The laboratory has been listed by US Federal Communications Commission to perform electromagnetic emission measurements. The recognition numbers of test site are 832625.</p> <p>The laboratory has met the requirements of the IAS Accreditation Criteria for Testing Laboratories (AC89), has demonstrated compliance with ISO/IEC Standard 17025:2005. The accreditation certificate number is TL-588.</p> <p>The laboratory is a testing organization accredited by China National Accreditation Service for Conformity Assessment (CNAS) according to ISO/IEC 17025. The accreditation certificate number is L6791.</p>
Description	All measurement facilities used to collect the measurement data are located at Block B, FL 1, Baisha Science and Technology Park, Shahe Xi Road, Nanshan District, Shenzhen, Guangdong Province, P. R. China 518055

1.3 Announce

- (1) The test report reference to the report template version v1.0.
- (2) The test report is invalid if not marked with the signatures of the persons responsible for preparing and approving the test report.
- (3) The test report is invalid if there is any evidence and/or falsification.
- (4) The results documented in this report apply only to the tested sample, under the conditions and modes of operation as described herein.
- (5) This document may not be altered or revised in any way unless done so by BALUN and all revisions are duly noted in the revisions section.
- (6) Content of the test report, in part or in full, cannot be used for publicity and/or promotional purposes without prior written approval from the laboratory.

2 PRODUCT INFORMATION

2.1 Applicant

Applicant	Observa Telecom
Address	c/ Monte Esquinza, 28 1 Drcha Madrid P.C.28010 SPAIN

2.2 Manufacturer

Manufacturer	Observa Telecom
Address	c/ Monte Esquinza, 28 1 Drcha Madrid P.C.28010 SPAIN

2.3 Factory

Factory	N/A
Address	N/A

2.4 General Description for Equipment under Test (EUT)

EUT Type	4G LTE Cat.4 CPE
Model Name	RT880
Hardware Version	v1.0
Software Version	N/A
Network and Wireless connectivity	GSM Network: GPRS/EDGE 850/900/1800/1900 WCDMA Network: HSDPA/HSUPA/HSPA+ 1/2/5/8 FDD-LTE Network Band: 2/7/28 WIFI 802.11b, 802.11g, 802.11n(20/40)

2.5 Ancillary Equipment

Ancillary Equipment 1	Charger	
	Brand Name	MINGXIN
	Model No.	MX18W1-0503000V
	Rated Input	100-240 V~, 0.5 A, 50/60 Hz
	Rated Output	5 V=, 3A
Ancillary Equipment 2	RJ11 Cable	
	Length (Approx.)	1.50 m
Ancillary Equipment 3	RJ45 Cable	
	Length (Approx.)	1.84 m

2.6 Technical Information

Frequency Bands	GSM/GPRS/EGPRS 850/1900 WCDMA/HSDPA/HSUPA Band 2/Band 5 LTE FDD Band 2/Band 7	
Modulation Type	GSM	GMSK
	GPRS	GMSK
	EGPRS	8PSK
	WCDMA	QPSK

	HSDPA	QPSK
		16QAM
	HSUPA	QPSK
		16QAM
	LTE	QPSK
		16QAM
TX Frequency Range	GSM/GPRS/EGPRS 850: 824.20 - 848.80 MHz GSM/GPRS/EGPRS 1900: 1850.20 - 1909.80 MHz WCDMA/HSDPA/HSUPA Band 2: 1852.4 - 1907.6 MHz WCDMA/HSDPA/HSUPA Band 5: 826.4 - 846.6 MHz LTE Band 2: 1850 - 1910 MHz LTE Band 7: 2500 - 2570 MHz	
Rx Frequency Range	GSM/GPRS/EGPRS 850: 869.20 - 893.80 MHz GSM/GPRS/EGPRS 1900: 1930.20 - 1989.80 MHz WCDMA/HSDPA/HSUPA Band 2: 1932.4 - 1987.6 MHz WCDMA/HSDPA/HSUPA Band 5: 871.4 - 891.6 MHz LTE Band 2: 1930 - 1990 MHz LTE Band 7: 2620 - 2690 MHz	
Power Class	GSM/GPRS 850: 4 GSM/GPRS 1900: 1 EGPRS 850: E2 EGPRS 1900: E2 WCDMA/HSDPA/HSUPA Band 2: 3 WCDMA/HSDPA/HSUPA Band 5: 3 LTE Band 2: 3 LTE Band 7: 3	
Multislot Class	GPRS: 33, EGPRS: 33	
Antenna Type	ANT 0	PIFA Antenna
	ANT 1	Dipole
Antenna Gain	ANT 0	GSM/GPRS/EGPRS 850: 0.8 dBi GSM/GPRS/EGPRS 1900: 5.0 dBi WCDMA/HSDPA/HSUPA Band 2: 5.0 dBi WCDMA/HSDPA/HSUPA Band 5: 0.8 dBi LTE Band 2: 5.0 dBi LTE Band 7: 3.8 dBi
	ANT 1	GSM/GPRS/EGPRS 850: 2.8 dBi GSM/GPRS/EGPRS 1900: 3.2 dBi WCDMA/HSDPA/HSUPA Band 2: 3.2 dBi WCDMA/HSDPA/HSUPA Band 5: 2.8 dBi LTE Band 2: 3.2 dBi LTE Band 7: 2.0 dBi
About the Product	The equipment is 4G LTE Cat.4 CPE, intended for used with information technology equipment.	

Note 1: The above EUT information in section 2.4 and 2.6 was declared by manufacturer and for more detailed

features description, please refer to the manufacturer's specifications or user's manual.

Note 2: There are two main antennas and two diversity antennas for WWAN. Two diversity antennas only support receiving signal. Two main antennas have only one RF port, supporting transceiving, and can switch. But main antennas can't transmit simultaneously. Details please refer to internal photos.

3 SUMMARY OF TEST RESULTS

3.1 Test Standards

No.	Identity	Document Title
1	47 CFR Part 2 (10-1-14 Edition)	Frequency Allocations and Radio Treaty Matters; General Rules and Regulations
2	47 CFR Part 22 (10-1-14 Edition)	Public Mobile Services
3	47 CFR Part 24 (10-1-14 Edition)	Personal Communications Services
4	47 CFR Part 27 (10-1-14 Edition)	Miscellaneous Wireless Communications Services
5	TIA/EIA 603.D-2010	Land Mobile FM or PM Communications Equipment Measurement and Performance Standards
6	KDB 971168 D01 v02r02	Measurement Guidance For Certification of Licensed Digital Transmitters

3.2 Verdict

No.	Description	FCC Part No.	Test Result	Verdict
1	Conducted RF Output Power	2.1046	Reporting only (Show in ANNEX A.1)	Pass
2	Effective (Isotropic) Radiated Power	2.1046 22.913 24.232 27.50(d) 27.50(h)	ANNEX A.1	Pass
3	Peak to average ratio	2.0146 24.232 27.50(d)	ANNEX A.2	Pass
4	Occupied Bandwidth	2.1049 22.917 24.238 27.53(h) 27.53(m)	ANNEX A.3	Pass
5	Frequency Stability	2.1055 22.355 24.235 27.54	ANNEX A.4	Pass
6	Spurious Emission at Antenna Terminals	2.1051 22.917 24.238 27.53(h) 27.53(m)	ANNEX A.5	Pass
7	Band Edge	2.1051 22.917 24.238 27.53(h) 27.53(m)	ANNEX A.6	Pass
8	Field Strength of Spurious Radiation	2.1053 22.917 24.238 27.53(h) 27.53(m)	ANNEX A.7	Pass

4 GENERAL TEST CONFIGURATIONS

4.1 Test Environments

During the measurement, the normal environmental conditions were within the listed ranges:

Relative Humidity	40% - 48%	
Atmospheric Pressure	100 kPa -102 kPa	
Temperature	NT (Normal Temperature)	+24.3 to +25.4°C
Working Voltage of the EUT	NV (Normal Voltage)	120 V
	LV (Low Voltage)	100 V
	HV (High Voltage)	130 V

4.2 Test Equipment List

Description	Manufacturer	Model	Serial No.	Cal. Date	Cal. Due
Spectrum Analyzer	ROHDE&SCHWARZ	FSV-30	103118	2015.07.16	2016.07.15
Spectrum Analyzer	AGILENT	E4440A	MY45304434	2015.10.15	2016.10.14
Universal Radio Communication Tester	ROHDE&SCHWARZ	CMU 200	123666	2015.10.15	2016.10.14
Wireless Communications Test Set	ROHDE&SCHWARZ	CMW 500	138884	2015.07.16	2016.07.15
EMI Receiver	ROHDE&SCHWARZ	ESRP	101036	2015.07.14	2016.07.13
Power Sensor	ROHDE&SCHWARZ	NRP-Z21	103971	2015.07.21	2016.07.20
DC Power Supply	ROHDE&SCHWARZ	IT6863A	60001401068 7210020	2015.07.17	2016.07.16
Temperature Chamber	ANGELANTIONI SCIENCE	SP20	1412	2015.08.07	2016.08.06
Test Antenna-Loop(9 kHz-30 MHz)	SCHWARZBECK	FMZB 1519	1519-037	2015.07.22	2017.07.21
Test Antenna-Bi-Log(30 MHz-3 GHz)	SCHWARZBECK	VULB 9163	9163-624	2015.07.22	2017.07.21
Test Antenna-Horn(1-18 GHz)	SCHWARZBECK	BBHA 9120D	9120D-1148	2015.07.22	2017.07.21
Test Antenna-Horn(15-26.5 GHz)	SCHWARZBECK	BBHA 9170	9170-305	2015.07.22	2017.07.21
Anechoic Chamber	RAINFORD	9m*6m*6m	N/A	2015.02.28	2016.02.27
Shielded Enclosure	ChangNing	CN-130701	130703	--	--

4.3 Test Configurations

Test Items	Test Mode	Test Channel		
		LCH	MCH	HCH
E.R.P/E.I.R.P	GSM 850	v	v	v
	GSM 1900	v	v	v
	GPRS 850	v	v	v
	GPRS 1900	v	v	v
	EGPRS 850	v	v	v
	EGPRS 1900	v	v	v
	WCDMA Band 2	v	v	v
	WCDMA Band 5	v	v	v
	HSUPA Band 2	v	v	v
	HSUPA Band 5	v	v	v
	HSDPA Band 2	v	v	v
	HSDPA Band 5	v	v	v
Peak to Average Ratio	WCDMA Band 2	v	v	v
Occupied Bandwidth	GSM 850	v	v	v
	GSM 1900	v	v	v
	EGPRS 850	v	v	v
	EGPRS 1900	v	v	v
	WCDMA Band 2	v	v	v
	WCDMA Band 5	v	v	v
Frequency Stability	GSM 850	v	v	v
	GSM 1900	v	v	v
	GPRS 850	v	v	v
	GPRS 1900	v	v	v
	EGPRS 850	v	v	v
	EGPRS 1900	v	v	v
	WCDMA Band 2	v	v	v
	WCDMA Band 5	v	v	v
Spurious Emission at Antenna Terminals	GSM 850	v	v	v
	EDGE 850	v	v	v
	GSM 1900	v	v	v
	EDGE 1900	v	v	v
	EGPRS 850	v	v	v
	EGPRS 1900	v	v	v
	WCDMA Band 2	v	v	v
	WCDMA Band 5	v	v	v
Band Edge	GSM 850	v	--	v
	GSM 1900	v	--	v
	GPRS 850	v	--	v
	GPRS 1900	v	--	v
	EGPRS 850	v	--	v

Test Items	Test Mode	Test Channel		
		LCH	MCH	HCH
	EGPRS 1900	v	--	v
	WCDMA Band 2	v	--	v
	WCDMA Band 5	v	--	v
Field Strength of Spurious Radiation	GSM 850	v	v	v
	EDGE 850	v	v	v
	GSM 1900	v	v	v
	EDGE 1900	v	v	v
	GPRS 850	v	v	v
	GPRS 1900	v	v	v
	EGPRS 850	v	v	v
	EGPRS 1900	v	v	v
	WCDMA Band 2	v	v	v
	WCDMA Band 5	v	v	v

Note 1: The mark "v" means that this configuration is chosen for testing.

Test Items	LTE Band	Bandwidth (MHz)						Modulation		RB#			Test Channel		
		1.4	3	5	10	15	20	QPSK	16-QAM	1	Half	Full	LCH	MC H	HC H
E.R.P/E.I.R .P	2	v	v	v	v	v	v	v	v	v	v	v	v	v	v
	7	n	n	v	v	v	v	v	v	v	v	v	v	v	v
Peak to Average Ratio	2	--	--	--	--	--	v	v	v	v	--	v	v	v	v
	7	n	n	--	--	--	v	v	v	v	--	v	v	v	v
Occupied Bandwidth	2	--	--	--	--	--	v	v	v	--	--	v	--	v	--
	7	n	n	--	--	--	v	v	v	--	--	v	--	v	--
Frequency Stability	2	--	--	--	v	--	--	v	v	--	--	v	--	v	--
	7	n	n	--	v	--	--	v	v	--	--	v	--	v	--
Spurious Emission at Antenna Terminals	2	v	v	v	v	v	v	v	v	v	--	--	v	v	v
	7	n	n	v	v	v	v	v	v	v	--	--	v	v	v
Band Edge	2	v	v	v	v	v	v	v	v	v	--	v	v	--	v
	7	n	n	v	v	v	v	v	v	v	--	v	v	--	v
Field Strength of Spurious Radiation	2	v	v	v	v	v	v	v	--	v	--	--	--	v	--
	7	n	n	v	v	v	v	v	--	v	--	--	--	v	--

Note 1: The mark "v" means that this configuration is chosen for testing.

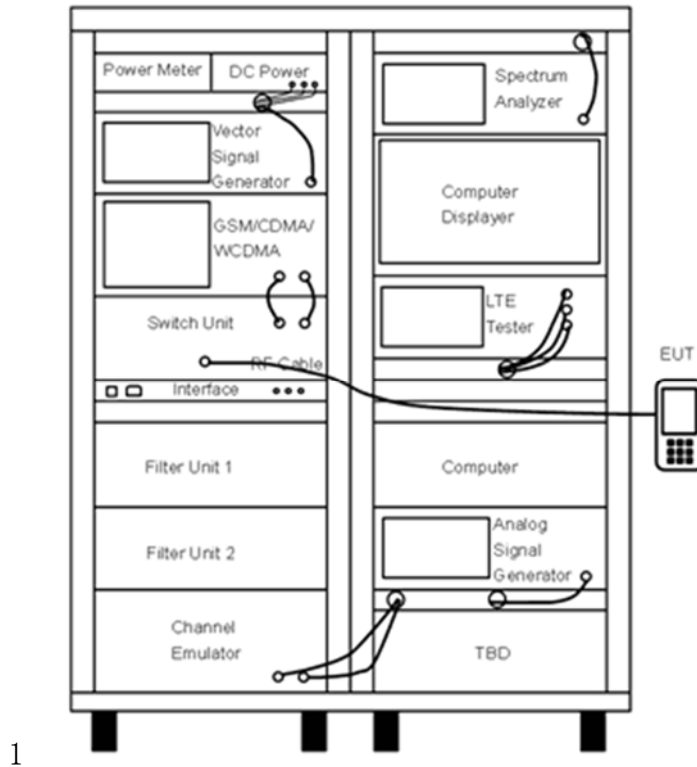
Note 2: The mark "n" means that this bandwidth is not supported.

Test Mode	Channel	ARFCN	Frequency (MHz)
GSM/GPRS/EGPRS 850	LCH	128	824.2
	MCH	190	836.6
	HCH	251	848.8
GSM/GPRS/EGPRS 1900	LCH	512	1850.2
	MCH	661	1880
	HCH	810	1909.8
WCDMA Band 2	LCH	9262	1852.4
	MCH	9400	1880
	HCH	9538	1907.6
WCDMA Band 5	LCH	4132	826.4
	MCH	4182	836.4
	HCH	4233	846.6

Test Mode	Test Frequency ID	Bandwidth (MHz)	ARFCN	Frequency (MHz)
LTE Band 2	Low Range	1.4	18607	1850.7
		3	18615	1851.5
		5	18625	1852.5
		10	18650	1855
		15	18675	1857.5
		20	18700	1860
	Mid Range	1.4/3/5/10/15/20	18900	1880
	High Range	1.4	19193	1909.3
		3	19185	1908.5
		5	19175	1907.5
		10	19150	1905
		15	19125	1902.5
20		19100	1900	
LTE Band 7	Low Rang	5	20775	2502.5
		10	20800	2505
		15	20825	2507.5
		20	20850	2510
	Mid Range	5/10/15/20	21100	2535
	High Range	5	21425	2567.5
		10	21400	2565
		15	21375	2562.5
		20	21350	2560

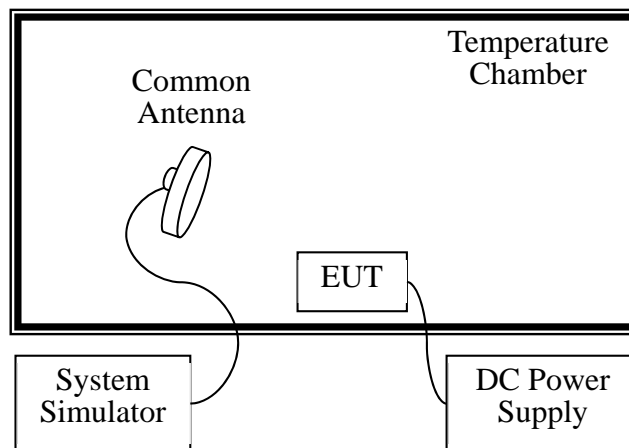
4.4 Description of Test Setup

4.4.1 For Antenna Port Test



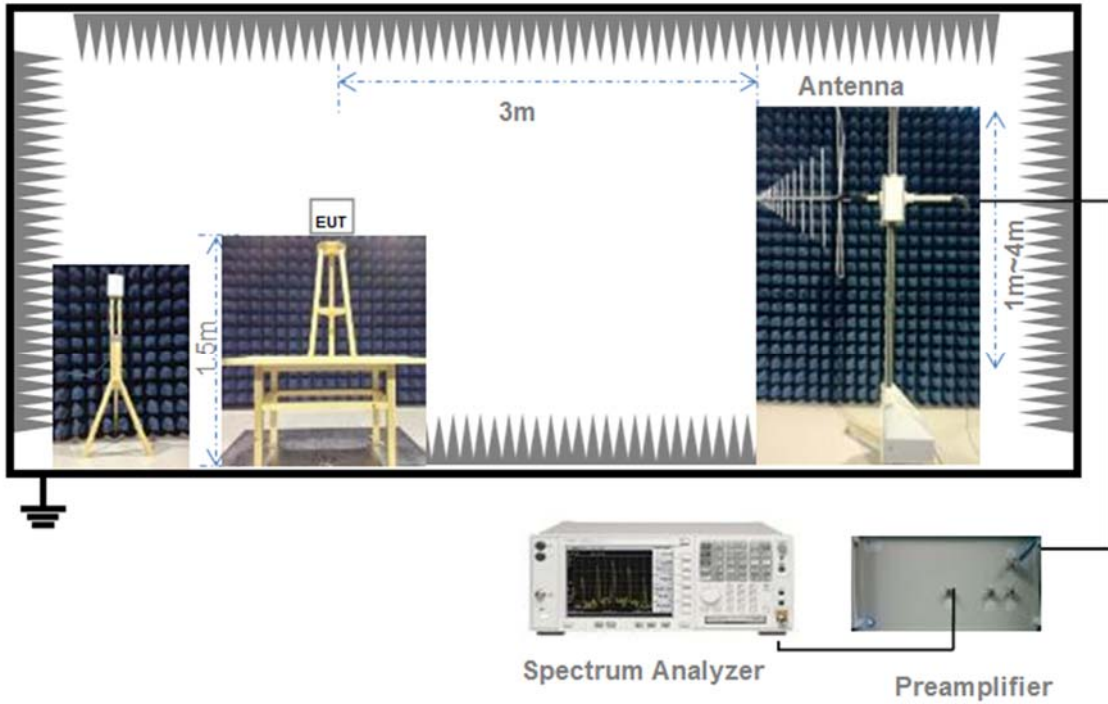
(Diagram 1)

4.4.2 For Frequency Stability Test



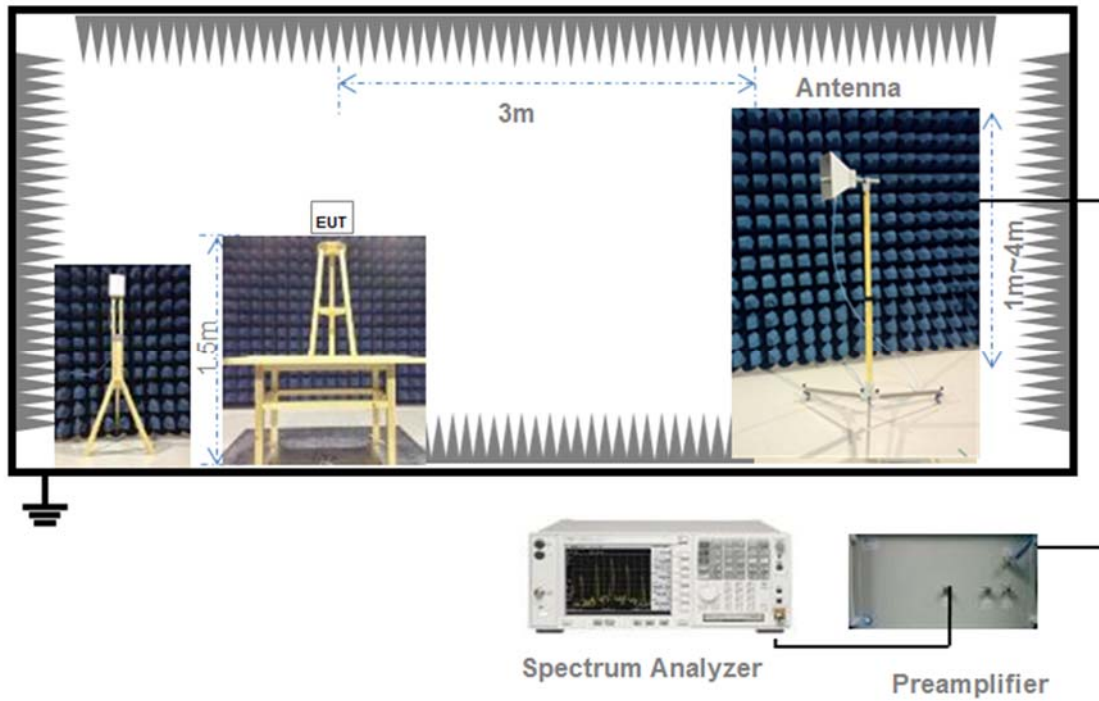
(Diagram 2)

4.4.3 For Radiated Test (30 MHz-1 GHz)



(Diagram 3)

4.4.4 For Radiated Test (Above 1 GHz)



(Diagram 4)

5 TEST ITEMS

5.1 Transmitter Radiated Power (EIRP/ERP)

5.1.1 Limit

FCC §2.1046(a) & 22.913 & 24.232 & 27.50(d) & 27.50(h)

According to FCC section 22.913, the Effective Radiated Power (ERP) of mobile transmitters and auxiliary test transmitters must not exceed 7 Watts, FCC section 24.232, Mobile and portable stations are limited to 2 watts EIRP and the equipment must employ a means for limiting power to the minimum necessary for successful communications.

FCC section 27.50(d), Fixed, mobile, and portable (hand-held) stations operating in the 1710-1755 MHz band and mobile and portable stations operating in the 1695-1710 MHz and 1755-1780 MHz bands are limited to 1 watt EIRP. Fixed stations operating in the 1710-1755 MHz band are limited to a maximum antenna height of 10 meters above ground. Mobile and portable stations operating in these bands must employ a means for limiting power to the minimum necessary for successful communications, and FCC section 27.50(h) Mobile and other user stations. Mobile stations are limited to 2.0 watts EIRP. All user stations are limited to 2.0 watts transmitter output power.

5.1.2 Test Setup

The section 4.4.1 (Diagram 1) test setup description was used for this test. The photo of test setup please refer to ANNEX B.

5.1.3 Test Procedure

Description of the Conducted Output Power Measurement

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

Note: Reference test setup 4.4.1 (Diagram 1)

Description of the Transmitter Radiated Power Measurement

In many cases, the RF output power limits for licensed digital transmission devices is specified in terms of effective radiated power (ERP) or equivalent isotropic radiated power (EIRP). Typically, ERP is specified when the operating frequency is less than or equal to 1 GHz and EIRP is specified when the operating frequency is greater than 1 GHz. Both are determined by adding the transmit antenna gain to the conducted RF output power with the primary difference between the two being that when determining the ERP, the transmit antenna gain is referenced to a dipole antenna (i.e., dBd) whereas when determining the EIRP, the transmit antenna gain is referenced to an isotropic antenna (dBi).

The relevant equation for determining the ERP or EIRP from the conducted RF output power measured using the guidance provided above is:

$$\text{ERP/EIRP} = \text{PMeas} + \text{GT} - \text{LC}$$

where:

ERP/EIRP = effective or equivalent radiated power, respectively (expressed in the same units as P_{Meas}, typically dBW or dBm);

P_{Meas} = measured transmitter output power or PSD, in dBm or dBW;

GT = gain of the transmitting antenna, in dBd (ERP) or dBi (EIRP);

dBd (ERP)=dBi-2.15

LC = signal attenuation in the connecting cable between the transmitter and antenna, in dB.

For devices utilizing multiple antennas, KDB 662911 provides guidance for determining the effective array transmit antenna gain term to be used in the above equation.

Note: Reference test setup 4.4.3 and 4.4.4 (Diagram 3, 4)

5.1.4 Test Result

Please refer to ANNEX A.1.

5.2 Peak to average ratio

5.2.1 Limit

FCC § 2.1046 & 24.232 & 27.50(d)

In addition, the peak-to-average power ratio (PAPR) of the transmitter shall not exceed 13 dB for more than 0.1% of the time using a signal corresponding to the highest PAPR during periods of continuous transmission.

Power measurements for transmissions by stations authorized under this section may be made either in accordance with a Commission-approved average power technique or in compliance with 24.232 (e) of this section. In both instances, equipment employed must be authorized in accordance with the provisions of § 24.51. In measuring transmissions in this band using an average power technique, the peak-to-average ratio (PAR) of the transmission may not exceed 13 dB.

Peak transmit power must be measured over any interval of continuous transmission using instrumentation calibrated in terms of an rms equivalent voltage. The measurement results shall be properly adjusted for any instrument limitations, such as detector response times, limited resolution bandwidth capability when compared to the emission bandwidth, sensitivity, etc., so as to obtain a true peak measurement for the emission in question over the full bandwidth of the channel.

5.2.2 Test Setup

The section 4.4.1 (Diagram 1) test setup description was used for this test. The photo of test setup please refer to ANNEX B.

5.2.3 Test Procedure

Here the lowest, middle and highest channels are selected to perform testing to verify the peak-to-average ratio.

Test procedures:

- a) Refer to instrument's analyzer instruction manual for details on how to use the power statistics/CCDF function;
- b) Set resolution/measurement bandwidth \geq signal's occupied bandwidth;
- c) Set the number of counts to a value that stabilizes the measured CCDF curve;
- d) Set the measurement interval as follows:
 - 1) for continuous transmissions, set to 1 ms,
 - 2) for burst transmissions, employ an external trigger that is synchronized with the EUT burst timing sequence, or use the internal burst trigger with a trigger level that allows the burst to stabilize and set the measurement interval to a time that is less than or equal to the burst duration.
- e) Record the maximum PAPR level associated with a probability of 0.1%.

Use one of the procedures presented in 4.1 to measure the total peak power and record as PPK. Use one of the applicable procedures presented 4.2 to measure the total average power and record as PAvg. Both the peak and average power levels must be expressed in the same logarithmic units (e.g., dBm). Determine the PAPR from:

$$\text{PAPR (dB)} = \text{PPk (dBm)} - \text{PAvg (dBm)}.$$

Note: Reference test setup 4.4.1 (Diagram 1).

5.2.4 Test Result

Please refer to ANNEX A.2.

5.3 Occupied Bandwidth

5.3.1 Limit

FCC § 2.1049

The occupied bandwidth is the frequency bandwidth such that, below its lower and above its upper frequency limits, the mean powers radiated are each equal to 0.5 percent of the total mean power radiated by a given emission.

Occupied bandwidth is also known as the 99% emission bandwidth

5.3.2 Test Setup

The section 4.4.1 (Diagram 1) test setup description was used for this test. The photo of test setup please refer to ANNEX B.

5.3.3 Test Procedure

The following procedure shall be used for measuring (99 %) power bandwidth

- a) The spectrum analyzer center frequency is set to the nominal EUT channel center frequency. The frequency span for the spectrum analyzer shall be set wide enough to capture all modulation products including the emission skirts (i.e., two to five times the OBW).
- b) The nominal IF filter bandwidth (3 dB 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.
- c) Set the reference level of the instrument as required to keep the signal from exceeding the maximum input mixer level for linear operation. In general, the peak of the spectral envelope must be at least $10\log(\text{OBW} / \text{RBW})$ below the reference level.
- d) NOTE—Steps a) through c) may require iteration to adjust within the specified tolerances.
- e) Set the detection mode to peak, and the trace mode to max hold..
- f) Use the 99 % power bandwidth function of the spectrum analyzer (if available) and report the measured bandwidth.
- g) If the instrument does not have a 99 % power bandwidth function, the trace data points are to be recovered and directly summed in linear power terms. The recovered amplitude data points, beginning at the lowest frequency, are placed in a running sum until 0.5 % of the total is reached; that frequency is recorded as the lower frequency. The process is repeated until 99.5 % of the total is reached; that frequency is recorded as the upper frequency. The 99 % power bandwidth is the difference between these two frequencies.
- h) The OBW shall be reported by providing plot(s) of the measuring instrument display. The frequency and amplitude axes and scale shall be clearly labeled. Tabular data may be reported in addition to the plot(s).

Note: Reference test setup 4.4.1 (Diagram 1).

5.3.4 Test Result

Please refer to ANNEX A.3.

5.4 Frequency Stability

5.4.1 Limit

FCC § 2.1055 & 22.355 & 24.235 & 27.54

§ 22.355

Except as otherwise provided in this part, the carrier frequency of each transmitter in the Public Mobile Services must be maintained within the tolerances given in Table C-1 of this section.

Table C-1—Frequency Tolerance for Transmitters in the Public Mobile Services

Frequency range (MHz)	Base, fixed (ppm)	Mobile > 3 watts (ppm)	Mobile ≤ 3 watts (ppm)
25 to 50	20.0	20.0	50.0
50 to 450	5.0	5.0	50.0
450 to 512	2.5	5.0	5.0
821 to 896	1.5	2.5	2.5
928 to 929	5.0	n/a	n/a
929 to 960	1.5	n/a	n/a
2110 to 2220	10.0	n/a	n/a

& 24.235

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

& 27.54

The frequency stability shall be sufficient to ensure that the fundamental emissions stay within the authorized bands of operation.

The test conditions are:

- (a) The temperature is varied from -30°C to +50°C at intervals of not more than 10°C.
- (b) For hand carried battery powered equipment, the primary supply voltage is reduced to the battery operating end point which shall be specified by the manufacture. The supply voltage shall be measured at the input to the cable normally provided with the equipment, or at the power supply terminals if cables are not normally provided.

5.4.2 Test Setup

The section 4.4.1 (Diagram 1) test setup description was used for this test. The photo of test setup please refer to ANNEX B.

5.4.3 Test Procedure

1. The test is performed in a Temperature Chamber.
2. The EUT is configured as MS + DC Power Supply.

Note: Reference test setup 4.4.2 (Diagram 2).

5.4.4 Test Result

Please refer to ANNEX A.4.

5.5 Spurious Emission at Antenna Terminals

5.5.1 Limit

FCC §2.1051 & 22.917(a) & 24.238(a) & 27.53(h) & 27.53(m)

The power of any emission outside of the authorized operating frequency ranges must be attenuated below the transmitting power (P) by a factor of at least $43+10*\log(P)$ dB. This calculated to be -13 dBm.

Except as otherwise specified below, for operations in the 1695-1710 MHz, 1710-1755 MHz, 1755-1780 MHz, 1915-1920 MHz, 1995-2000 MHz, 2000-2020 MHz, 2110-2155 MHz, 2155-2180 MHz, and 2180-2200 bands, the power of any emission outside a licensee's frequency block shall be attenuated below the transmitter power (P) in watts by at least $43 + 10 \log_{10} (P)$ dB.

FCC § 27.53(m)

For mobile digital stations, the attenuation factor shall be not less than:

- $40+10\log P$ dB (-10 dBm, 100 nW) on all frequencies between the channel edge and 5 MHz from the channel edge.
- $43+10\log P$ dB (-13 dBm, 50 nW) on all frequencies between 5 MHz and X MHz from the channel edge,
- $55+10\log P$ dB (-25 dBm, 3 nW) on all frequencies more than X MHz from the channel edge, where X is the greater of 6 MHz or the actual emission bandwidth (26 dB).

5.5.2 Test Setup

The section 4.4.1 (Diagram 1) test setup description was used for this test. The photo of test setup please refer to ANNEX B.

5.5.3 Test Procedure

The level of the carrier and the various conducted spurious and harmonic frequencies is measured by means of a calibrated spectrum analyzer. The spectrum is scanned from the lowest frequency generated in the equipment up to a frequency including its 10th harmonic. On any frequency outside a licensee's frequency block, the power of any emission shall be attenuated below the transmitter power (P) by at least $43 + 10 \log(P)$ dB. Compliance with these provisions is based on the use of measurement instrumentation employing a resolution bandwidth of 1 MHz or greater. However, in the 1 MHz bands immediately outside and adjacent to the frequency block a resolution bandwidth of at least one percent of the emission bandwidth of the fundamental emission of the transmitter may be employed. The emission bandwidth is defined as the width of the signal between two points, one below the carrier center frequency and one above the carrier center frequency, outside of which all emission are attenuated at least 26 dB below the transmitter power.

Note: Reference test setup 4.4.1 (Diagram 1).

5.5.4 Test Result

Please refer to ANNEX A.5.

5.6 Band Edge

5.6.1 Limit

FCC § 2.1051 & 22.917(b) & 24.238(b) & 27.53(h) & 27.53(m)

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

In the 1 MHz bands immediately outside and adjacent to the frequency block a resolution bandwidth of at least one percent of the emission bandwidth (26 dB emission bandwidth) of the fundamental emission of the transmitter may be employed.

For mobile digital stations, the attenuation factor shall be not less than $40 + 10 \log (P)$ dB on all frequencies between the channel edge and 5 megahertz from the channel edge, $43 + 10 \log (P)$ dB on all frequencies between 5 megahertz and X megahertz from the channel edge, and $55 + 10 \log (P)$ dB on all frequencies more than X megahertz from the channel edge, where X is the greater of 6 megahertz or the actual emission bandwidth as defined in paragraph (m)(6) of this section. In addition, the attenuation factor shall not be less than $43 + 10 \log (P)$ dB on all frequencies between 2490.5 MHz and 2496 MHz and $55 + 10 \log (P)$ dB at or below 2490.5 MHz. Mobile Satellite Service licensees operating on frequencies below 2495 MHz may also submit a documented interference complaint against BRS licensees operating on channel BRS Channel 1 on the same terms and conditions as adjacent channel BRS or EBS licensees.

5.6.2 Test Setup

The section 4.4.1 (Diagram 1) test setup description was used for this test. The photo of test setup please refer to ANNEX B.

5.6.3 Test Procedure

The EUT, which is powered by the Battery, is coupled to the Spectrum Analyzer (SA) and the System Simulator (SS) with Attenuators through the Power Splitter; the RF load attached to the EUT antenna terminal is 50 Ohm; the path loss as the factor is calibrated to correct the reading.

1. The RF output of the transmitter was connected to the input of the spectrum analyzer through sufficient attenuation.
2. The center of the spectrum analyzer was set to block edge frequency.

Note: Reference test setup 4.4.1 (Diagram 1).

5.6.4 Test Result

Please refer to ANNEX A.6.

5.7 Field Strength of Spurious Radiation

5.7.1 Limit

FCC § 2.1053 & 22.917 & 24.238 & 27.53(h) & 27.53(m)

The power of any emission outside of the authorized operating frequency ranges must be attenuated below the transmitting power (P) by a factor of at least $43+10\log(P)$ dB. This calculated to be -13 dBm.

FCC § 27.53(h)

(1) General protection levels. Except as otherwise specified below, for operations in the 1695-1710 MHz, 1710-1755 MHz, 1755-1780 MHz, 1915-1920 MHz, 1995-2000 MHz, 2000-2020 MHz, 2110-2155 MHz, 2155-2180 MHz, and 2180-2200 bands, the power of any emission outside a licensee's frequency block shall be attenuated below the transmitter power (P) in watts by at least $43 + 10 \log_{10}(P)$ dB.

(2) Additional protection levels. Notwithstanding the foregoing paragraph (h)(1) of this section:

(i) Operations in the 2180-2200 MHz band are subject to the out-of-band emission requirements set forth in § 27.1134 for the protection of federal government operations operating in the 2200-2290 MHz band.

(ii) For operations in the 2000-2020 MHz band, the power of any emissions below 2000 MHz shall be attenuated below the transmitter power (P) in watts by at least $70 + 10 \log_{10}(P)$ dB.

(iii) For operations in the 1915-1920 MHz band, the power of any emission between 1930-1995 MHz shall be attenuated below the transmitter power (P) in watts by at least $70 + 10 \log_{10}(P)$ dB.

(iv) For operations in the 1995-2000 MHz band, the power of any emission between 2005-2020 MHz shall be attenuated below the transmitter power (P) in watts by at least $70 + 10 \log_{10}(P)$ dB.

FCC § 27.53(m)

For mobile digital stations, the attenuation factor shall be not less than:

- $40+10\log P$ dB (-10 dBm, 100 nW) on all frequencies between the channel edge and 5 MHz from the channel edge.
- $43+10\log P$ dB (-13 dBm, 50 nW) on all frequencies between 5 MHz and X MHz from the channel edge,
- $55+10\log P$ dB (-25 dBm, 3 nW) on all frequencies more than X MHz from the channel edge, where X is the greater of 6 MHz or the actual emission bandwidth (26 dB).

5.7.2 Test Setup

The section 4.4.1 (Diagram 1) test setup description was used for this test. The photo of test setup please refer to ANNEX B.

5.7.3 Test Procedure

1. On a test site, the EUT shall be placed at 80cm height on a turn table, and in the position close to normal use as declared by the applicant.
2. The test antenna shall be oriented initially for vertical polarization located 3 m from EUT to correspond to the fundamental frequency of the transmitter.

3. The output of the test antenna shall be connected to the measuring receiver and the peak detector is used for the measurement.
4. During the measurement of the EUT, the resolution bandwidth was to 1 MHz and the average bandwidth was set to 1 MHz.
5. The transmitter shall be switched on; the measuring receiver shall be tuned to the frequency of the transmitter under test.
6. The test antenna shall be raised and lowered through the specified range of height until the maximum signal level is detected by the measuring receiver.
7. The transmitter shall be rotated through 360° in the horizontal plane, until the maximum signal level is detected by the measuring receiver.
8. The test antenna shall be raised and lowered again through the specified range of height until the maximum signal level is detected by the measuring receiver.
9. The maximum signal level detected by the measuring receiver shall be noted.
10. The EUT was replaced by half-wave dipole (824 ~ 849 MHz) or horn antenna (1 850 ~ 1 910 MHz) connected to a signal generator.
11. In necessary, the input attenuator setting on the measuring receiver shall be adjusted in order to increase the sensitivity of the measuring receiver.
12. The test antenna shall be raised and lowered through the specified range of height to ensure that the maximum signal is received.
13. The input signal to the substitution antenna shall be adjusted to the level that produces a level detected by the measuring receiver, which is equal to the level noted while the transmitter radiated power was measured, corrected for the change of input attenuator setting of the measuring receiver.
14. The input level to the substitution antenna shall be recorded as power level in dBm, corrected for any change of input attenuator setting of the measuring receiver.
15. The measurement shall be repeated with the test antenna and the substitution antenna orientated for horizontal polarization.

Note: Reference test setup 4.4.3 and 4.4.4 (Diagram 3, 4)

5.7.4 Test Result

Please refer to ANNEX A.7.

ANNEX A TEST RESULT

A.1 Transmitter Radiated Power (EIRP/ERP)

GSM Mode Test Data

ANT 0

Test Band	Test Channel	Conducted Output Peak Power (dBm)	Antenna Gain (dBi)	Antenna Gain (dBd)	ERP (dBm)	ERP (W)	Limit (W)	Verdict
GSM 850	LCH	33.27	0.8	-1.35	31.92	1.56	7.00	Pass
	MCH	33.28	0.8	-1.35	31.93	1.56	7.00	Pass
	HCH	33.18	0.8	-1.35	31.83	1.52	7.00	Pass
GPRS 850	LCH	34.18	0.8	-1.35	32.83	1.92	7.00	Pass
	MCH	34.21	0.8	-1.35	32.86	1.93	7.00	Pass
	HCH	34.25	0.8	-1.35	32.90	1.95	7.00	Pass
EGPRS 850	LCH	31.64	0.8	-1.35	30.29	1.07	7.00	Pass
	MCH	31.70	0.8	-1.35	30.35	1.08	7.00	Pass
	HCH	31.67	0.8	-1.35	30.32	1.08	7.00	Pass

Test Band	Test Channel	Conducted Output Peak Power (dBm)	Antenna Gain (dBi)	EIRP (dBm)	EIRP (W)	Limit (W)	Verdict
GSM 1900	LCH	27.30	5.0	32.30	1.70	2.00	Pass
	MCH	27.12	5.0	32.12	1.63	2.00	Pass
	HCH	27.21	5.0	32.21	1.66	2.00	Pass
GPRS 1900	LCH	27.59	5.0	32.59	1.82	2.00	Pass
	MCH	27.48	5.0	32.48	1.77	2.00	Pass
	HCH	27.39	5.0	32.39	1.73	2.00	Pass
EGPRS 1900	LCH	27.85	5.0	32.85	1.93	2.00	Pass
	MCH	27.38	5.0	32.38	1.73	2.00	Pass
	HCH	27.66	5.0	32.66	1.85	2.00	Pass

ANT 1

Test Band	Test Channel	Conducted Output Peak Power (dBm)	Antenna Gain (dBi)	Antenna Gain (dBd)	ERP (dBm)	ERP (W)	Limit (W)	Verdict
GSM 850	LCH	33.27	2.8	0.65	33.92	2.47	7.00	Pass
	MCH	33.28	2.8	0.65	33.93	2.47	7.00	Pass
	HCH	33.18	2.8	0.65	33.83	2.42	7.00	Pass
GPRS 850	LCH	34.18	2.8	0.65	34.83	3.04	7.00	Pass
	MCH	34.21	2.8	0.65	34.86	3.06	7.00	Pass
	HCH	34.25	2.8	0.65	34.90	3.09	7.00	Pass
EGPRS 850	LCH	31.64	2.8	0.65	32.29	1.69	7.00	Pass
	MCH	31.70	2.8	0.65	32.35	1.72	7.00	Pass
	HCH	31.67	2.8	0.65	32.32	1.71	7.00	Pass

Test Band	Test Channel	Conducted Output Peak Power (dBm)	Antenna Gain (dBi)	EIRP (dBm)	EIRP (W)	Limit (W)	Verdict
GSM 1900	LCH	27.30	3.2	30.50	1.12	2.00	Pass
	MCH	27.12	3.2	30.32	1.08	2.00	Pass
	HCH	27.21	3.2	30.41	1.10	2.00	Pass
GPRS 1900	LCH	27.59	3.2	30.79	1.20	2.00	Pass
	MCH	27.48	3.2	30.68	1.17	2.00	Pass
	HCH	27.39	3.2	30.59	1.15	2.00	Pass
EGPRS 1900	LCH	27.85	3.2	31.05	1.27	2.00	Pass
	MCH	27.38	3.2	30.58	1.14	2.00	Pass
	HCH	27.66	3.2	30.86	1.22	2.00	Pass

Note 1: For the GPRS and EGPRS mode, all the slots were tested and just the worst data was record in this table.

Note 2: $ERP/EIRP = P_{Meas} + GT - LC$

ERP/EIRP = effective or equivalent radiated power, respectively (expressed in the same units as P_{Meas}, typically dBW or dBm);

P_{Meas} = measured transmitter output power or PSD, in dBm or dBW;

GT = gain of the transmitting antenna, in dBd (ERP) or dBi (EIRP);

LC = signal attenuation in the connecting cable between the transmitter and antenna, in dB.

$ERP = EIRP - 2.15$; where ERP and EIRP are expressed in consistent units.

GPRS Conducted output power

Band	Channel	Conducted Output Peak Power							
		Slot 1 (dBm)	Slot 1 (W)	Slot 2 (dBm)	Slot 2 (W)	Slot 3 (dBm)	Slot 3 (W)	Slot 4 (dBm)	Slot 4 (W)
GPRS 850	LCH	34.18	2.62	31.88	1.54	30.73	1.18	29.62	0.92
	MCH	34.21	2.64	31.90	1.55	30.78	1.20	29.72	0.94
	HCH	34.25	2.66	31.95	1.57	30.81	1.20	29.80	0.95
GPRS 1900	LCH	27.59	0.57	27.44	0.55	27.30	0.54	26.20	0.42
	MCH	27.48	0.56	27.32	0.54	27.17	0.52	26.02	0.40
	HCH	27.39	0.55	27.23	0.53	27.09	0.51	25.96	0.39

EGPRS Conducted output power

Band	Channel	Conducted Output Peak Power							
		Slot 1 (dBm)	Slot 1 (W)	Slot 2 (dBm)	Slot 2 (W)	Slot 3 (dBm)	Slot 3 (W)	Slot 4 (dBm)	Slot 4 (W)
EGPRS 850	LCH	31.64	1.46	29.73	0.94	28.52	0.71	27.56	0.57
	MCH	31.70	1.48	29.71	0.93	28.55	0.72	27.62	0.58
	HCH	31.67	1.47	29.66	0.92	28.53	0.71	27.55	0.57
EGPRS 1900	LCH	27.85	0.61	27.82	0.61	26.82	0.48	25.62	0.37
	MCH	27.38	0.55	27.64	0.58	26.41	0.44	25.36	0.34
	HCH	27.66	0.58	27.69	0.59	26.53	0.45	25.45	0.35

WCDMA Mode Test data:
ANT 0

Test Band	Test Channel	Conducted Output Average Power (dBm)	Antenna Gain (dBi)	EIRP (dBm)	EIRP (W)	Limit (W)	Verdict
WCDMA Band 2	LCH	22.06	5.0	27.06	0.51	2.00	Pass
	MCH	21.97	5.0	26.97	0.50	2.00	Pass
	HCH	22.52	5.0	27.52	0.56	2.00	Pass
HSDPA Band 2	LCH	20.96	5.0	25.96	0.39	2.00	Pass
	MCH	20.97	5.0	25.97	0.40	2.00	Pass
	HCH	21.62	5.0	26.62	0.46	2.00	Pass
HSUPA Band 2	LCH	20.97	5.0	25.97	0.40	2.00	Pass
	MCH	20.81	5.0	25.81	0.38	2.00	Pass
	HCH	21.16	5.0	26.16	0.41	2.00	Pass

Test Band	Test Channel	Conducted Output Average Power (dBm)	Antenna Gain (dBi)	Antenna Gain (dBd)	ERP (dBm)	ERP (W)	Limit (W)	Verdict
WCDMA Band 5	LCH	22.22	0.8	-1.35	20.87	0.12	7.00	Pass
	MCH	22.22	0.8	-1.35	20.87	0.12	7.00	Pass
	HCH	22.15	0.8	-1.35	20.80	0.12	7.00	Pass
HSDPA Band 5	LCH	21.17	0.8	-1.35	19.82	0.10	7.00	Pass
	MCH	21.22	0.8	-1.35	19.87	0.10	7.00	Pass
	HCH	21.12	0.8	-1.35	19.77	0.09	7.00	Pass
HSUPA Band 5	LCH	21.02	0.8	-1.35	19.67	0.09	7.00	Pass
	MCH	21.18	0.8	-1.35	19.83	0.10	7.00	Pass
	HCH	21.32	0.8	-1.35	19.97	0.10	7.00	Pass

ANT 1

Test Band	Test Channel	Conducted Output Average Power (dBm)	Antenna Gain (dBi)	EIRP (dBm)	EIRP (W)	Limit (W)	Verdict
WCDMA Band 2	LCH	22.06	3.2	25.26	0.34	2.00	Pass
	MCH	21.97	3.2	25.17	0.33	2.00	Pass
	HCH	22.52	3.2	25.72	0.37	2.00	Pass
HSDPA Band 2	LCH	20.96	3.2	24.16	0.26	2.00	Pass
	MCH	20.97	3.2	24.17	0.26	2.00	Pass
	HCH	21.62	3.2	24.82	0.30	2.00	Pass
HSUPA Band 2	LCH	20.97	3.2	24.17	0.26	2.00	Pass
	MCH	20.81	3.2	24.01	0.25	2.00	Pass
	HCH	21.16	3.2	24.36	0.27	2.00	Pass

Test Band	Test Channel	Conducted Output Average Power (dBm)	Antenna Gain (dBi)	Antenna Gain (dBd)	ERP (dBm)	ERP (W)	Limit (W)	Verdict
WCDMA Band 5	LCH	22.22	2.8	0.65	22.87	0.19	7.00	Pass
	MCH	22.22	2.8	0.65	22.87	0.19	7.00	Pass
	HCH	22.15	2.8	0.65	22.80	0.19	7.00	Pass
HSDPA Band 5	LCH	21.17	2.8	0.65	21.82	0.15	7.00	Pass
	MCH	21.22	2.8	0.65	21.87	0.15	7.00	Pass
	HCH	21.12	2.8	0.65	21.77	0.15	7.00	Pass
HSUPA Band 5	LCH	21.02	2.8	0.65	21.67	0.15	7.00	Pass
	MCH	21.18	2.8	0.65	21.83	0.15	7.00	Pass
	HCH	21.32	2.8	0.65	21.97	0.16	7.00	Pass

Note 2: For the HSDPA and HSUPA mode, all the subtests were tested and just the worst data was record in this table.

Note 2: $ERP/EIRP = P_{Meas} + GT - LC$

ERP/EIRP = effective or equivalent radiated power, respectively (expressed in the same units as P_{Meas} , typically dBW or dBm);

P_{Meas} = measured transmitter output power or PSD, in dBm or dBW;

GT = gain of the transmitting antenna, in dBd (ERP) or dBi (EIRP);

LC = signal attenuation in the connecting cable between the transmitter and antenna, in dB.

$ERP = EIRP - 2.15$; where ERP and EIRP are expressed in consistent units.

HSDPA Conducted output power

Band	Channel	Conducted Output Average Power (dBm)							
		Subtest 1(dBm)	Subtest 1(W)	Subtest 2(dBm)	Subtest 2(W)	Subtest 3(dBm)	Subtest 3(W)	Subtest 4(dBm)	Subtest 4(W)
HSDPA Band 2	LCH	20.96	0.12	20.92	0.12	20.38	0.11	20.35	0.11
	MCH	20.97	0.13	20.89	0.12	20.33	0.11	20.39	0.11
	HCH	21.62	0.15	21.36	0.14	20.84	0.12	20.77	0.12
HSDPA Band 5	LCH	21.17	0.13	21.10	0.13	20.55	0.11	20.52	0.11
	MCH	21.22	0.13	21.13	0.13	20.59	0.11	20.54	0.11
	HCH	21.12	0.13	21.19	0.13	20.54	0.11	20.5	0.11

HSUPA Conducted output power

Band	Channel	Conducted Output Average Power									
		Subtest 1(dBm)	Subtest 1(W)	Subtest 2(dBm)	Subtest 2(W)	Subtest 3(dBm)	Subtest 3(W)	Subtest 4(dBm)	Subtest 4(W)	Subtest 5(dBm)	Subtest 5(W)
HSUPA Band 2	LCH	20.87	0.12	19.35	0.09	19.18	0.08	19.84	0.10	20.97	0.13
	MCH	20.40	0.11	19.27	0.08	19.64	0.09	20.2	0.10	20.81	0.12
	HCH	21.62	0.15	20.16	0.10	19.78	0.10	20.41	0.11	21.16	0.13
HSUPA Band 5	LCH	21.19	0.13	19.69	0.09	19.93	0.10	20.06	0.10	21.02	0.13
	MCH	21.23	0.13	20.00	0.10	20.00	0.10	20.14	0.10	21.18	0.13
	HCH	20.76	0.12	19.53	0.09	19.97	0.10	20.59	0.11	21.32	0.14

LTE Mode Test data:

ANT 0

Tes Band	Test Model	Test Bandwidth	Test Channel	Test RB (Size#Offset)	Conducted Output Average Power (dBm)	ANT 0 (dBi)	EIRP (dBm)	EIRP (W)	Limit (W)	Verdict
Band 2	QPSK	1.4 MHz	LCH	RB1#0	22.15	5.0	27.15	0.52	2.00	Pass
				RB1#3	22.09	5.0	27.09	0.51	2.00	Pass
				RB1#5	22.16	5.0	27.16	0.52	2.00	Pass
				RB3#0	22.20	5.0	27.20	0.52	2.00	Pass
				RB3#2	22.19	5.0	27.19	0.52	2.00	Pass
				RB3#3	22.21	5.0	27.21	0.53	2.00	Pass
			RB6#0	21.22	5.0	26.22	0.42	2.00	Pass	
			MCH	RB1#0	22.51	5.0	27.51	0.56	2.00	Pass
				RB1#3	22.45	5.0	27.45	0.56	2.00	Pass
				RB1#5	22.44	5.0	27.44	0.55	2.00	Pass
				RB3#0	22.42	5.0	27.42	0.55	2.00	Pass
				RB3#2	22.37	5.0	27.37	0.55	2.00	Pass
				RB3#3	22.37	5.0	27.37	0.55	2.00	Pass
			RB6#0	21.41	5.0	26.41	0.44	2.00	Pass	
			HCH	RB1#0	23.10	5.0	28.10	0.65	2.00	Pass
				RB1#3	23.13	5.0	28.13	0.65	2.00	Pass
				RB1#5	23.12	5.0	28.12	0.65	2.00	Pass
				RB3#0	22.96	5.0	27.96	0.63	2.00	Pass
		RB3#2		23.05	5.0	28.05	0.64	2.00	Pass	
		RB3#3		23.16	5.0	28.16	0.65	2.00	Pass	
		RB6#0	21.99	5.0	26.99	0.50	2.00	Pass		
		3 MHz	LCH	RB1#0	22.30	5.0	27.30	0.54	2.00	Pass
				RB1#7	22.21	5.0	27.21	0.53	2.00	Pass
				RB1#14	22.25	5.0	27.25	0.53	2.00	Pass
				RB8#0	21.14	5.0	26.14	0.41	2.00	Pass
				RB8#4	21.13	5.0	26.13	0.41	2.00	Pass
				RB8#7	21.14	5.0	26.14	0.41	2.00	Pass
			RB15#0	21.22	5.0	26.22	0.42	2.00	Pass	
			MCH	RB1#0	22.39	5.0	27.39	0.55	2.00	Pass
				RB1#7	22.34	5.0	27.34	0.54	2.00	Pass
RB1#14	22.51			5.0	27.51	0.56	2.00	Pass		
RB8#0	21.33			5.0	26.33	0.43	2.00	Pass		
RB8#4	21.26			5.0	26.26	0.42	2.00	Pass		
RB8#7	21.29	5.0		26.29	0.43	2.00	Pass			
RB15#0	21.33	5.0	26.33	0.43	2.00	Pass				
HCH	RB1#0	22.96	5.0	27.96	0.63	2.00	Pass			

Tes Band	Test Model	Test Bandwidth	Test Channel	Test RB (Size#Offset)	Conducted Output Average Power (dBm)	ANT 0 (dBi)	EIRP (dBm)	EIRP (W)	Limit (W)	Verdict
		15 MHz		RB25#25	21.43	5.0	26.43	0.44	2.00	Pass
				RB50#0	21.29	5.0	26.29	0.43	2.00	Pass
			HCH	RB1#0	22.93	5.0	27.93	0.62	2.00	Pass
				RB1#25	23.08	5.0	28.08	0.64	2.00	Pass
				RB1#49	23.06	5.0	28.06	0.64	2.00	Pass
				RB25#0	21.89	5.0	26.89	0.49	2.00	Pass
				RB25#13	21.92	5.0	26.92	0.49	2.00	Pass
				RB25#25	21.94	5.0	26.94	0.49	2.00	Pass
			RB50#0	21.88	5.0	26.88	0.49	2.00	Pass	
			LCH	RB1#0	22.20	5.0	27.20	0.52	2.00	Pass
				RB1#38	22.58	5.0	27.58	0.57	2.00	Pass
				RB1#74	22.60	5.0	27.60	0.58	2.00	Pass
				RB36#0	21.39	5.0	26.39	0.44	2.00	Pass
				RB36#19	21.61	5.0	26.61	0.46	2.00	Pass
		RB36#39		21.54	5.0	26.54	0.45	2.00	Pass	
		RB75#0		21.66	5.0	26.66	0.46	2.00	Pass	
		MCH	RB1#0	22.29	5.0	27.29	0.54	2.00	Pass	
			RB1#38	22.31	5.0	27.31	0.54	2.00	Pass	
			RB1#74	22.40	5.0	27.40	0.55	2.00	Pass	
			RB36#0	21.37	5.0	26.37	0.43	2.00	Pass	
			RB36#19	21.27	5.0	26.27	0.42	2.00	Pass	
			RB36#39	21.34	5.0	26.34	0.43	2.00	Pass	
		HCH	RB75#0	21.34	5.0	26.34	0.43	2.00	Pass	
			RB1#0	22.76	5.0	27.76	0.60	2.00	Pass	
			RB1#38	22.80	5.0	27.80	0.60	2.00	Pass	
			RB1#74	22.86	5.0	27.86	0.61	2.00	Pass	
			RB36#0	21.76	5.0	26.76	0.47	2.00	Pass	
			RB36#19	21.79	5.0	26.79	0.48	2.00	Pass	
			RB36#39	21.82	5.0	26.82	0.48	2.00	Pass	
		RB75#0	21.89	5.0	26.89	0.49	2.00	Pass		
		20 MHz	LCH	RB1#0	22.12	5.0	27.12	0.52	2.00	Pass
				RB1#50	22.43	5.0	27.43	0.55	2.00	Pass
				RB1#99	22.35	5.0	27.35	0.54	2.00	Pass
				RB50#0	21.38	5.0	26.38	0.43	2.00	Pass
				RB50#25	21.55	5.0	26.55	0.45	2.00	Pass
				RB50#50	21.55	5.0	26.55	0.45	2.00	Pass
				RB100#0	21.47	5.0	26.47	0.44	2.00	Pass
			MCH	RB1#0	22.25	5.0	27.25	0.53	2.00	Pass
				RB1#50	22.34	5.0	27.34	0.54	2.00	Pass

Tes Band	Test Model	Test Bandwidth	Test Channel	Test RB (Size#Offset)	Conducted Output Average Power (dBm)	ANT 0 (dBi)	EIRP (dBm)	EIRP (W)	Limit (W)	Verdict		
				RB1#99	22.38	5.0	27.38	0.55	2.00	Pass		
				RB50#0	21.28	5.0	26.28	0.42	2.00	Pass		
				RB50#25	21.36	5.0	26.36	0.43	2.00	Pass		
				RB50#50	21.45	5.0	26.45	0.44	2.00	Pass		
				RB100#0	21.40	5.0	26.40	0.44	2.00	Pass		
			HCH	RB1#0	22.25	5.0	27.25	0.53	2.00	Pass		
				RB1#50	22.67	5.0	27.67	0.58	2.00	Pass		
				RB1#99	22.73	5.0	27.73	0.59	2.00	Pass		
				RB50#0	22.98	5.0	27.98	0.63	2.00	Pass		
				RB50#25	21.74	5.0	26.74	0.47	2.00	Pass		
				RB50#50	21.72	5.0	26.72	0.47	2.00	Pass		
			RB100#0	21.84	5.0	26.84	0.48	2.00	Pass			
			16-QAM	1.4 MHz	LCH	RB1#0	21.31	5.0	26.31	0.43	2.00	Pass
						RB1#3	21.18	5.0	26.18	0.41	2.00	Pass
	RB1#5	21.16				5.0	26.16	0.41	2.00	Pass		
	RB3#0	21.11				5.0	26.11	0.41	2.00	Pass		
	RB3#2	21.14				5.0	26.14	0.41	2.00	Pass		
	RB3#3	21.16				5.0	26.16	0.41	2.00	Pass		
	RB6#0	20.23				5.0	25.23	0.33	2.00	Pass		
	MCH	RB1#0			21.64	5.0	26.64	0.46	2.00	Pass		
		RB1#3			21.46	5.0	26.46	0.44	2.00	Pass		
		RB1#5			21.59	5.0	26.59	0.46	2.00	Pass		
		RB3#0			21.32	5.0	26.32	0.43	2.00	Pass		
		RB3#2			21.22	5.0	26.22	0.42	2.00	Pass		
		RB3#3			21.29	5.0	26.29	0.43	2.00	Pass		
	HCH	RB6#0			20.18	5.0	25.18	0.33	2.00	Pass		
		RB1#0			21.91	5.0	26.91	0.49	2.00	Pass		
		RB1#3			21.93	5.0	26.93	0.49	2.00	Pass		
		RB1#5	21.93	5.0	26.93	0.49	2.00	Pass				
		RB3#0	22.21	5.0	27.21	0.53	2.00	Pass				
RB3#2		22.08	5.0	27.08	0.51	2.00	Pass					
RB3#3		22.23	5.0	27.23	0.53	2.00	Pass					
3 MHz	LCH	RB6#0	21.07	5.0	26.07	0.40	2.00	Pass				
		RB1#0	21.00	5.0	26.00	0.40	2.00	Pass				
		RB1#7	20.84	5.0	25.84	0.38	2.00	Pass				
		RB1#14	21.02	5.0	26.02	0.40	2.00	Pass				
		RB8#0	20.13	5.0	25.13	0.33	2.00	Pass				
		RB8#4	20.22	5.0	25.22	0.33	2.00	Pass				
RB8#7	20.16	5.0	25.16	0.33	2.00	Pass						

Tes Band	Test Model	Test Bandwidth	Test Channel	Test RB (Size#Offset)	Conducted Output Average Power (dBm)	ANT 0 (dBi)	EIRP (dBm)	EIRP (W)	Limit (W)	Verdict	
		5 MHz	MCH	RB15#0	20.17	5.0	25.17	0.33	2.00	Pass	
				RB1#0	21.53	5.0	26.53	0.45	2.00	Pass	
				RB1#7	21.49	5.0	26.49	0.45	2.00	Pass	
				RB1#14	21.54	5.0	26.54	0.45	2.00	Pass	
				RB8#0	20.30	5.0	25.30	0.34	2.00	Pass	
				RB8#4	20.27	5.0	25.27	0.34	2.00	Pass	
				RB8#7	20.28	5.0	25.28	0.34	2.00	Pass	
				RB15#0	20.24	5.0	25.24	0.33	2.00	Pass	
				HCH	RB1#0	21.77	5.0	26.77	0.48	2.00	Pass
					RB1#7	21.78	5.0	26.78	0.48	2.00	Pass
					RB1#14	21.82	5.0	26.82	0.48	2.00	Pass
					RB8#0	20.86	5.0	25.86	0.39	2.00	Pass
					RB8#4	20.81	5.0	25.81	0.38	2.00	Pass
					RB8#7	20.97	5.0	25.97	0.40	2.00	Pass
		5 MHz	LCH	5 MHz	RB1#0	21.28	5.0	26.28	0.42	2.00	Pass
					RB1#13	21.23	5.0	26.23	0.42	2.00	Pass
					RB1#24	21.49	5.0	26.49	0.45	2.00	Pass
					RB12#0	20.20	5.0	25.20	0.33	2.00	Pass
					RB12#6	20.28	5.0	25.28	0.34	2.00	Pass
					RB12#13	20.29	5.0	25.29	0.34	2.00	Pass
					RB25#0	20.24	5.0	25.24	0.33	2.00	Pass
				MCH	RB1#0	21.22	5.0	26.22	0.42	2.00	Pass
					RB1#13	21.26	5.0	26.26	0.42	2.00	Pass
					RB1#24	21.36	5.0	26.36	0.43	2.00	Pass
					RB12#0	20.33	5.0	25.33	0.34	2.00	Pass
					RB12#6	20.30	5.0	25.30	0.34	2.00	Pass
					RB12#13	20.30	5.0	25.30	0.34	2.00	Pass
					RB25#0	20.34	5.0	25.34	0.34	2.00	Pass
		HCH	RB1#0	21.64	5.0	26.64	0.46	2.00	Pass		
			RB1#13	21.72	5.0	26.72	0.47	2.00	Pass		
			RB1#24	21.84	5.0	26.84	0.48	2.00	Pass		
			RB12#0	20.89	5.0	25.89	0.39	2.00	Pass		
			RB12#6	20.86	5.0	25.86	0.39	2.00	Pass		
			RB12#13	20.91	5.0	25.91	0.39	2.00	Pass		
			RB25#0	21.01	5.0	26.01	0.40	2.00	Pass		
		10 MHz	LCH	RB1#0	21.04	5.0	26.04	0.40	2.00	Pass	
				RB1#25	21.23	5.0	26.23	0.42	2.00	Pass	
				RB1#49	21.35	5.0	26.35	0.43	2.00	Pass	

Tes Band	Test Model	Test Bandwidth	Test Channel	Test RB (Size#Offset)	Conducted Output Average Power (dBm)	ANT 0 (dBi)	EIRP (dBm)	EIRP (W)	Limit (W)	Verdict	
				RB25#0	20.22	5.0	25.22	0.33	2.00	Pass	
				RB25#13	20.56	5.0	25.56	0.36	2.00	Pass	
				RB25#25	20.45	5.0	25.45	0.35	2.00	Pass	
				RB50#0	20.32	5.0	25.32	0.34	2.00	Pass	
			MCH	RB1#0	21.45	5.0	26.45	0.44	2.00	Pass	
				RB1#25	21.38	5.0	26.38	0.43	2.00	Pass	
				RB1#49	21.66	5.0	26.66	0.46	2.00	Pass	
				RB25#0	20.29	5.0	25.29	0.34	2.00	Pass	
				RB25#13	20.26	5.0	25.26	0.34	2.00	Pass	
				RB25#25	20.32	5.0	25.32	0.34	2.00	Pass	
				RB50#0	20.23	5.0	25.23	0.33	2.00	Pass	
			HCH	RB1#0	21.58	5.0	26.58	0.45	2.00	Pass	
				RB1#25	21.76	5.0	26.76	0.47	2.00	Pass	
				RB1#49	21.82	5.0	26.82	0.48	2.00	Pass	
				RB25#0	20.76	5.0	25.76	0.38	2.00	Pass	
				RB25#13	20.80	5.0	25.80	0.38	2.00	Pass	
				RB25#25	20.84	5.0	25.84	0.38	2.00	Pass	
				RB50#0	20.80	5.0	25.80	0.38	2.00	Pass	
			15 MHz	LCH	RB1#0	21.00	5.0	26.00	0.40	2.00	Pass
					RB1#38	21.35	5.0	26.35	0.43	2.00	Pass
					RB1#74	21.41	5.0	26.41	0.44	2.00	Pass
		RB36#0			20.31	5.0	25.31	0.34	2.00	Pass	
		RB36#19			20.44	5.0	25.44	0.35	2.00	Pass	
		RB36#39			20.48	5.0	25.48	0.35	2.00	Pass	
		RB75#0			20.53	5.0	25.53	0.36	2.00	Pass	
		MCH		RB1#0	21.51	5.0	26.51	0.45	2.00	Pass	
				RB1#38	21.45	5.0	26.45	0.44	2.00	Pass	
				RB1#74	21.58	5.0	26.58	0.45	2.00	Pass	
				RB36#0	20.31	5.0	25.31	0.34	2.00	Pass	
				RB36#19	20.22	5.0	25.22	0.33	2.00	Pass	
				RB36#39	20.30	5.0	25.30	0.34	2.00	Pass	
				RB75#0	20.30	5.0	25.30	0.34	2.00	Pass	
		HCH		RB1#0	22.10	5.0	27.10	0.51	2.00	Pass	
				RB1#38	22.13	5.0	27.13	0.52	2.00	Pass	
				RB1#74	22.41	5.0	27.41	0.55	2.00	Pass	
				RB36#0	20.59	5.0	25.59	0.36	2.00	Pass	
				RB36#19	20.69	5.0	25.69	0.37	2.00	Pass	
				RB36#39	20.77	5.0	25.77	0.38	2.00	Pass	
				RB75#0	20.73	5.0	25.73	0.37	2.00	Pass	

Tes Band	Test Model	Test Bandwidth	Test Channel	Test RB (Size#Offset)	Conducted Output Average Power (dBm)	ANT 0 (dBi)	EIRP (dBm)	EIRP (W)	Limit (W)	Verdict
		20 MHz	LCH	RB1#0	21.20	5.0	26.20	0.42	2.00	Pass
				RB1#50	21.55	5.0	26.55	0.45	2.00	Pass
				RB1#99	21.51	5.0	26.51	0.45	2.00	Pass
				RB50#0	20.42	5.0	25.42	0.35	2.00	Pass
				RB50#25	20.45	5.0	25.45	0.35	2.00	Pass
				RB50#50	20.46	5.0	25.46	0.35	2.00	Pass
				RB100#0	20.49	5.0	25.49	0.35	2.00	Pass
			MCH	RB1#0	21.46	5.0	26.46	0.44	2.00	Pass
				RB1#50	21.41	5.0	26.41	0.44	2.00	Pass
				RB1#99	21.60	5.0	26.60	0.46	2.00	Pass
				RB50#0	20.28	5.0	25.28	0.34	2.00	Pass
				RB50#25	20.31	5.0	25.31	0.34	2.00	Pass
				RB50#50	20.43	5.0	25.43	0.35	2.00	Pass
				RB100#0	20.29	5.0	25.29	0.34	2.00	Pass
			HCH	RB1#0	21.69	5.0	26.69	0.47	2.00	Pass
				RB1#50	21.72	5.0	26.72	0.47	2.00	Pass
				RB1#99	21.99	5.0	26.99	0.50	2.00	Pass
				RB50#0	20.68	5.0	25.68	0.37	2.00	Pass
				RB50#25	20.65	5.0	25.65	0.37	2.00	Pass
				RB50#50	20.76	5.0	25.76	0.38	2.00	Pass
				RB100#0	20.66	5.0	25.66	0.37	2.00	Pass
Band 7	QPSK	5 MHz	LCH	RB1#0	21.16	3.8	24.96	0.31	2.00	Pass
				RB1#13	21.11	3.8	24.91	0.31	2.00	Pass
				RB1#24	21.22	3.8	25.02	0.32	2.00	Pass
				RB12#0	20.19	3.8	23.99	0.25	2.00	Pass
				RB12#6	20.11	3.8	23.91	0.25	2.00	Pass
				RB12#13	20.16	3.8	23.96	0.25	2.00	Pass
				RB25#0	20.06	3.8	23.86	0.24	2.00	Pass
			MCH	RB1#0	21.34	3.8	25.14	0.33	2.00	Pass
				RB1#13	21.23	3.8	25.03	0.32	2.00	Pass
				RB1#24	21.42	3.8	25.22	0.33	2.00	Pass
				RB12#0	20.25	3.8	24.05	0.25	2.00	Pass
				RB12#6	20.31	3.8	24.11	0.26	2.00	Pass
				RB12#13	20.36	3.8	24.16	0.26	2.00	Pass
				RB25#0	20.31	3.8	24.11	0.26	2.00	Pass
HCH	RB1#0	21.15	3.8	24.95	0.31	2.00	Pass			
	RB1#13	20.95	3.8	24.75	0.30	2.00	Pass			
	RB1#24	20.93	3.8	24.73	0.30	2.00	Pass			
	RB12#0	20.14	3.8	23.94	0.25	2.00	Pass			

Tes Band	Test Model	Test Bandwidth	Test Channel	Test RB (Size#Offset)	Conducted Output Average Power (dBm)	ANT 0 (dBi)	EIRP (dBm)	EIRP (W)	Limit (W)	Verdict
		10 MHz		RB12#6	20.00	3.8	23.80	0.24	2.00	Pass
				RB12#13	19.95	3.8	23.75	0.24	2.00	Pass
				RB25#0	20.00	3.8	23.80	0.24	2.00	Pass
			LCH	RB1#0	20.88	3.8	24.68	0.29	2.00	Pass
				RB1#25	20.98	3.8	24.78	0.30	2.00	Pass
				RB1#49	20.93	3.8	24.73	0.30	2.00	Pass
				RB25#0	19.80	3.8	23.60	0.23	2.00	Pass
				RB25#13	19.81	3.8	23.61	0.23	2.00	Pass
				RB25#25	19.79	3.8	23.59	0.23	2.00	Pass
		RB50#0		19.81	3.8	23.61	0.23	2.00	Pass	
		MCH	RB1#0	21.29	3.8	25.09	0.32	2.00	Pass	
			RB1#25	21.31	3.8	25.11	0.32	2.00	Pass	
			RB1#49	21.37	3.8	25.17	0.33	2.00	Pass	
			RB25#0	20.14	3.8	23.94	0.25	2.00	Pass	
			RB25#13	20.21	3.8	24.01	0.25	2.00	Pass	
			RB25#25	20.22	3.8	24.02	0.25	2.00	Pass	
		HCH	RB50#0	20.15	3.8	23.95	0.25	2.00	Pass	
			RB1#0	20.91	3.8	24.71	0.30	2.00	Pass	
			RB1#25	20.97	3.8	24.77	0.30	2.00	Pass	
			RB1#49	20.61	3.8	24.41	0.28	2.00	Pass	
			RB25#0	19.75	3.8	23.55	0.23	2.00	Pass	
			RB25#13	19.81	3.8	23.61	0.23	2.00	Pass	
		15 MHz	LCH	RB25#25	19.79	3.8	23.59	0.23	2.00	Pass
				RB50#0	19.86	3.8	23.66	0.23	2.00	Pass
				RB1#0	20.73	3.8	24.53	0.28	2.00	Pass
				RB1#38	20.79	3.8	24.59	0.29	2.00	Pass
				RB1#74	20.84	3.8	24.64	0.29	2.00	Pass
				RB36#0	19.68	3.8	23.48	0.22	2.00	Pass
				RB36#19	19.63	3.8	23.43	0.22	2.00	Pass
			MCH	RB36#39	19.72	3.8	23.52	0.22	2.00	Pass
				RB75#0	19.67	3.8	23.47	0.22	2.00	Pass
				RB1#0	21.27	3.8	25.07	0.32	2.00	Pass
				RB1#38	21.38	3.8	25.18	0.33	2.00	Pass
				RB1#74	21.36	3.8	25.16	0.33	2.00	Pass
				RB36#0	20.16	3.8	23.96	0.25	2.00	Pass
				RB36#19	20.19	3.8	23.99	0.25	2.00	Pass
			HCH	RB36#39	20.32	3.8	24.12	0.26	2.00	Pass
		RB75#0	20.19	3.8	23.99	0.25	2.00	Pass		
		HCH	RB1#0	20.97	3.8	24.77	0.30	2.00	Pass	

Tes Band	Test Model	Test Bandwidth	Test Channel	Test RB (Size#Offset)	Conducted Output Average Power (dBm)	ANT 0 (dBi)	EIRP (dBm)	EIRP (W)	Limit (W)	Verdict
				RB1#38	21.03	3.8	24.83	0.30	2.00	Pass
				RB1#74	20.79	3.8	24.59	0.29	2.00	Pass
				RB36#0	19.82	3.8	23.62	0.23	2.00	Pass
				RB36#19	19.80	3.8	23.60	0.23	2.00	Pass
				RB36#39	19.84	3.8	23.64	0.23	2.00	Pass
				RB75#0	19.93	3.8	23.73	0.24	2.00	Pass
		20 MHz	LCH	RB1#0	20.72	3.8	24.52	0.28	2.00	Pass
				RB1#50	20.74	3.8	24.54	0.28	2.00	Pass
				RB1#99	20.84	3.8	24.64	0.29	2.00	Pass
				RB50#0	19.70	3.8	23.50	0.22	2.00	Pass
				RB50#25	19.67	3.8	23.47	0.22	2.00	Pass
				RB50#50	19.67	3.8	23.47	0.22	2.00	Pass
			MCH	RB100#0	19.70	3.8	23.50	0.22	2.00	Pass
				RB1#0	21.05	3.8	24.85	0.31	2.00	Pass
				RB1#50	21.24	3.8	25.04	0.32	2.00	Pass
				RB1#99	21.07	3.8	24.87	0.31	2.00	Pass
				RB50#0	20.10	3.8	23.90	0.25	2.00	Pass
				RB50#25	20.08	3.8	23.88	0.24	2.00	Pass
	HCH	RB50#50	20.14	3.8	23.94	0.25	2.00	Pass		
		RB100#0	20.08	3.8	23.88	0.24	2.00	Pass		
		RB1#0	21.14	3.8	24.94	0.31	2.00	Pass		
		RB1#50	21.26	3.8	25.06	0.32	2.00	Pass		
		RB1#99	21.16	3.8	24.96	0.31	2.00	Pass		
		RB50#0	20.20	3.8	24.00	0.25	2.00	Pass		
	16-QAM	5 MHz	LCH	RB50#25	20.20	3.8	24.00	0.25	2.00	Pass
				RB50#50	20.25	3.8	24.05	0.25	2.00	Pass
				RB100#0	20.17	3.8	23.97	0.25	2.00	Pass
			MCH	RB1#0	20.21	3.8	24.01	0.25	2.00	Pass
				RB1#13	20.10	3.8	23.90	0.25	2.00	Pass
				RB1#24	20.11	3.8	23.91	0.25	2.00	Pass
				RB12#0	19.06	3.8	22.86	0.19	2.00	Pass
				RB12#6	18.98	3.8	22.78	0.19	2.00	Pass
				RB12#13	19.09	3.8	22.89	0.19	2.00	Pass
		LCH	RB25#0	19.06	3.8	22.86	0.19	2.00	Pass	
			RB1#0	20.46	3.8	24.26	0.27	2.00	Pass	
			RB1#13	20.42	3.8	24.22	0.26	2.00	Pass	
		MCH	RB1#24	20.47	3.8	24.27	0.27	2.00	Pass	
			RB12#0	19.25	3.8	23.05	0.20	2.00	Pass	
			RB12#6	19.31	3.8	23.11	0.20	2.00	Pass	

Tes Band	Test Model	Test Bandwidth	Test Channel	Test RB (Size#Offset)	Conducted Output Average Power (dBm)	ANT 0 (dBi)	EIRP (dBm)	EIRP (W)	Limit (W)	Verdict
				RB12#13	19.32	3.8	23.12	0.21	2.00	Pass
				RB25#0	19.27	3.8	23.07	0.20	2.00	Pass
			HCH	RB1#0	20.03	3.8	23.83	0.24	2.00	Pass
				RB1#13	19.84	3.8	23.64	0.23	2.00	Pass
				RB1#24	19.72	3.8	23.52	0.22	2.00	Pass
				RB12#0	18.85	3.8	22.65	0.18	2.00	Pass
				RB12#6	18.73	3.8	22.53	0.18	2.00	Pass
				RB12#13	18.74	3.8	22.54	0.18	2.00	Pass
			RB25#0	18.77	3.8	22.57	0.18	2.00	Pass	
			LCH	RB1#0	19.63	3.8	23.43	0.22	2.00	Pass
				RB1#25	19.58	3.8	23.38	0.22	2.00	Pass
				RB1#49	19.66	3.8	23.46	0.22	2.00	Pass
				RB25#0	18.65	3.8	22.45	0.18	2.00	Pass
				RB25#13	18.66	3.8	22.46	0.18	2.00	Pass
		RB25#25		18.73	3.8	22.53	0.18	2.00	Pass	
		RB50#0		18.66	3.8	22.46	0.18	2.00	Pass	
		MCH	RB1#0	20.20	3.8	24.00	0.25	2.00	Pass	
			RB1#25	20.33	3.8	24.13	0.26	2.00	Pass	
			RB1#49	20.30	3.8	24.10	0.26	2.00	Pass	
			RB25#0	19.03	3.8	22.83	0.19	2.00	Pass	
			RB25#13	19.08	3.8	22.88	0.19	2.00	Pass	
			RB25#25	19.15	3.8	22.95	0.20	2.00	Pass	
		HCH	RB50#0	19.08	3.8	22.88	0.19	2.00	Pass	
			RB1#0	19.65	3.8	23.45	0.22	2.00	Pass	
			RB1#25	19.60	3.8	23.40	0.22	2.00	Pass	
			RB1#49	19.45	3.8	23.25	0.21	2.00	Pass	
			RB25#0	18.64	3.8	22.44	0.18	2.00	Pass	
			RB25#13	18.75	3.8	22.55	0.18	2.00	Pass	
			RB25#25	18.71	3.8	22.51	0.18	2.00	Pass	
		RB50#0	18.63	3.8	22.43	0.17	2.00	Pass		
		15 MHz	LCH	RB1#0	19.56	3.8	23.36	0.22	2.00	Pass
				RB1#38	19.45	3.8	23.25	0.21	2.00	Pass
				RB1#74	19.55	3.8	23.35	0.22	2.00	Pass
				RB36#0	18.42	3.8	22.22	0.17	2.00	Pass
				RB36#19	18.56	3.8	22.36	0.17	2.00	Pass
				RB36#39	18.58	3.8	22.38	0.17	2.00	Pass
			RB75#0	18.52	3.8	22.32	0.17	2.00	Pass	
			MCH	RB1#0	20.40	3.8	24.20	0.26	2.00	Pass
				RB1#38	20.53	3.8	24.33	0.27	2.00	Pass

Tes Band	Test Model	Test Bandwidth	Test Channel	Test RB (Size#Offset)	Conducted Output Average Power (dBm)	ANT 0 (dBi)	EIRP (dBm)	EIRP (W)	Limit (W)	Verdict
		20 MHz		RB1#74	20.55	3.8	24.35	0.27	2.00	Pass
				RB36#0	18.97	3.8	22.77	0.19	2.00	Pass
				RB36#19	19.05	3.8	22.85	0.19	2.00	Pass
				RB36#39	19.17	3.8	22.97	0.20	2.00	Pass
				RB75#0	19.14	3.8	22.94	0.20	2.00	Pass
			HCH	RB1#0	19.99	3.8	23.79	0.24	2.00	Pass
				RB1#38	20.14	3.8	23.94	0.25	2.00	Pass
				RB1#74	19.88	3.8	23.68	0.23	2.00	Pass
				RB36#0	18.96	3.8	22.76	0.19	2.00	Pass
				RB36#19	18.95	3.8	22.75	0.19	2.00	Pass
				RB36#39	19.00	3.8	22.80	0.19	2.00	Pass
			LCH	RB75#0	18.98	3.8	22.78	0.19	2.00	Pass
				RB1#0	19.64	3.8	23.44	0.22	2.00	Pass
				RB1#50	19.72	3.8	23.52	0.22	2.00	Pass
				RB1#99	19.86	3.8	23.66	0.23	2.00	Pass
				RB50#0	18.57	3.8	22.37	0.17	2.00	Pass
		RB50#25		18.57	3.8	22.37	0.17	2.00	Pass	
		RB50#50		18.64	3.8	22.44	0.18	2.00	Pass	
		MCH	RB100#0	18.61	3.8	22.41	0.17	2.00	Pass	
			RB1#0	20.02	3.8	23.82	0.24	2.00	Pass	
			RB1#50	20.14	3.8	23.94	0.25	2.00	Pass	
			RB1#99	19.95	3.8	23.75	0.24	2.00	Pass	
			RB50#0	18.99	3.8	22.79	0.19	2.00	Pass	
			RB50#25	19.08	3.8	22.88	0.19	2.00	Pass	
			RB50#50	19.07	3.8	22.87	0.19	2.00	Pass	
		HCH	RB100#0	19.04	3.8	22.84	0.19	2.00	Pass	
			RB1#0	20.23	3.8	24.03	0.25	2.00	Pass	
			RB1#50	20.27	3.8	24.07	0.26	2.00	Pass	
			RB1#99	20.26	3.8	24.06	0.25	2.00	Pass	
			RB50#0	19.19	3.8	22.99	0.20	2.00	Pass	
			RB50#25	19.22	3.8	23.02	0.20	2.00	Pass	
			RB50#50	19.21	3.8	23.01	0.20	2.00	Pass	
RB100#0	19.23	3.8	23.03	0.20	2.00	Pass				

ANT1

Tes Band	Test Model	Test Bandwidth	Test Channel	Test RB (Size#Offset)	Conducted Output Average Power (dBm)	ANT 1 (dBi)	EIRP (dBm)	EIRP (W)	Limit (W)	Verdict
Band 2	QPSK	1.4 MHz	LCH	RB1#0	22.15	3.2	25.35	0.34	2.00	Pass
				RB1#3	22.09	3.2	25.29	0.34	2.00	Pass
				RB1#5	22.16	3.2	25.36	0.34	2.00	Pass
				RB3#0	22.20	3.2	25.40	0.35	2.00	Pass
				RB3#2	22.19	3.2	25.39	0.35	2.00	Pass
				RB3#3	22.21	3.2	25.41	0.35	2.00	Pass
			RB6#0	21.22	3.2	24.42	0.28	2.00	Pass	
			MCH	RB1#0	22.51	3.2	25.71	0.37	2.00	Pass
				RB1#3	22.45	3.2	25.65	0.37	2.00	Pass
				RB1#5	22.44	3.2	25.64	0.37	2.00	Pass
				RB3#0	22.42	3.2	25.62	0.36	2.00	Pass
				RB3#2	22.37	3.2	25.57	0.36	2.00	Pass
				RB3#3	22.37	3.2	25.57	0.36	2.00	Pass
			RB6#0	21.41	3.2	24.61	0.29	2.00	Pass	
			HCH	RB1#0	23.10	3.2	26.30	0.43	2.00	Pass
				RB1#3	23.13	3.2	26.33	0.43	2.00	Pass
				RB1#5	23.12	3.2	26.32	0.43	2.00	Pass
				RB3#0	22.96	3.2	26.16	0.41	2.00	Pass
		RB3#2		23.05	3.2	26.25	0.42	2.00	Pass	
		RB3#3		23.16	3.2	26.36	0.43	2.00	Pass	
		RB6#0	21.99	3.2	25.19	0.33	2.00	Pass		
		3 MHz	LCH	RB1#0	22.30	3.2	25.50	0.35	2.00	Pass
				RB1#7	22.21	3.2	25.41	0.35	2.00	Pass
				RB1#14	22.25	3.2	25.45	0.35	2.00	Pass
				RB8#0	21.14	3.2	24.34	0.27	2.00	Pass
				RB8#4	21.13	3.2	24.33	0.27	2.00	Pass
				RB8#7	21.14	3.2	24.34	0.27	2.00	Pass
				RB15#0	21.22	3.2	24.42	0.28	2.00	Pass
			MCH	RB1#0	22.39	3.2	25.59	0.36	2.00	Pass
				RB1#7	22.34	3.2	25.54	0.36	2.00	Pass
				RB1#14	22.51	3.2	25.71	0.37	2.00	Pass
				RB8#0	21.33	3.2	24.53	0.28	2.00	Pass
				RB8#4	21.26	3.2	24.46	0.28	2.00	Pass
				RB8#7	21.29	3.2	24.49	0.28	2.00	Pass
				RB15#0	21.33	3.2	24.53	0.28	2.00	Pass
			HCH	RB1#0	22.96	3.2	26.16	0.41	2.00	Pass
RB1#7	22.93			3.2	26.13	0.41	2.00	Pass		
RB1#14	23.04			3.2	26.24	0.42	2.00	Pass		

Tes Band	Test Model	Test Bandwidth	Test Channel	Test RB (Size#Offset)	Conducted Output Average Power (dBm)	ANT 1 (dBi)	EIRP (dBm)	EIRP (W)	Limit (W)	Verdict
				RB8#0	21.89	3.2	25.09	0.32	2.00	Pass
				RB8#4	21.98	3.2	25.18	0.33	2.00	Pass
				RB8#7	22.03	3.2	25.23	0.33	2.00	Pass
				RB15#0	22.03	3.2	25.23	0.33	2.00	Pass
		5 MHz	LCH	RB1#0	22.17	3.2	25.37	0.34	2.00	Pass
				RB1#13	22.24	3.2	25.44	0.35	2.00	Pass
				RB1#24	22.39	3.2	25.59	0.36	2.00	Pass
				RB12#0	21.16	3.2	24.36	0.27	2.00	Pass
				RB12#6	21.17	3.2	24.37	0.27	2.00	Pass
				RB12#13	21.30	3.2	24.50	0.28	2.00	Pass
				RB25#0	21.20	3.2	24.40	0.28	2.00	Pass
			MCH	RB1#0	22.27	3.2	25.47	0.35	2.00	Pass
				RB1#13	22.29	3.2	25.49	0.35	2.00	Pass
				RB1#24	22.46	3.2	25.66	0.37	2.00	Pass
				RB12#0	21.42	3.2	24.62	0.29	2.00	Pass
				RB12#6	21.46	3.2	24.66	0.29	2.00	Pass
				RB12#13	21.41	3.2	24.61	0.29	2.00	Pass
				RB25#0	21.44	3.2	24.64	0.29	2.00	Pass
			HCH	RB1#0	23.09	3.2	26.29	0.43	2.00	Pass
				RB1#13	23.09	3.2	26.29	0.43	2.00	Pass
				RB1#24	23.15	3.2	26.35	0.43	2.00	Pass
				RB12#0	21.97	3.2	25.17	0.33	2.00	Pass
				RB12#6	22.04	3.2	25.24	0.33	2.00	Pass
				RB12#13	22.07	3.2	25.27	0.34	2.00	Pass
		RB25#0		22.07	3.2	25.27	0.34	2.00	Pass	
		10 MHz	LCH	RB1#0	22.24	3.2	25.44	0.35	2.00	Pass
				RB1#25	22.58	3.2	25.78	0.38	2.00	Pass
				RB1#49	22.64	3.2	25.84	0.38	2.00	Pass
				RB25#0	21.29	3.2	24.49	0.28	2.00	Pass
				RB25#13	21.42	3.2	24.62	0.29	2.00	Pass
				RB25#25	21.53	3.2	24.73	0.30	2.00	Pass
				RB50#0	21.41	3.2	24.61	0.29	2.00	Pass
			MCH	RB1#0	22.28	3.2	25.48	0.35	2.00	Pass
				RB1#25	22.36	3.2	25.56	0.36	2.00	Pass
RB1#49	22.56			3.2	25.76	0.38	2.00	Pass		
RB25#0	21.35			3.2	24.55	0.29	2.00	Pass		
RB25#13	21.35			3.2	24.55	0.29	2.00	Pass		
RB25#25	21.43			3.2	24.63	0.29	2.00	Pass		
				RB50#0	21.29	3.2	24.29	0.27	2.00	Pass

Tes Band	Test Model	Test Bandwidth	Test Channel	Test RB (Size#Offset)	Conducted Output Average Power (dBm)	ANT 1 (dBi)	EIRP (dBm)	EIRP (W)	Limit (W)	Verdict
		15 MHz	HCH	RB1#0	22.93	3.2	26.13	0.41	2.00	Pass
				RB1#25	23.08	3.2	26.28	0.42	2.00	Pass
				RB1#49	23.06	3.2	26.26	0.42	2.00	Pass
				RB25#0	21.89	3.2	25.09	0.32	2.00	Pass
				RB25#13	21.92	3.2	25.12	0.33	2.00	Pass
				RB25#25	21.94	3.2	25.14	0.33	2.00	Pass
				RB50#0	21.88	3.2	25.08	0.32	2.00	Pass
		15 MHz	LCH	RB1#0	22.20	3.2	25.40	0.35	2.00	Pass
				RB1#38	22.58	3.2	25.78	0.38	2.00	Pass
				RB1#74	22.60	3.2	25.80	0.38	2.00	Pass
				RB36#0	21.39	3.2	24.59	0.29	2.00	Pass
				RB36#19	21.61	3.2	24.81	0.30	2.00	Pass
				RB36#39	21.54	3.2	24.74	0.30	2.00	Pass
				RB75#0	21.66	3.2	24.86	0.31	2.00	Pass
			MCH	RB1#0	22.29	3.2	25.49	0.35	2.00	Pass
				RB1#38	22.31	3.2	25.51	0.36	2.00	Pass
				RB1#74	22.40	3.2	25.60	0.36	2.00	Pass
				RB36#0	21.37	3.2	24.57	0.29	2.00	Pass
				RB36#19	21.27	3.2	24.47	0.28	2.00	Pass
				RB36#39	21.34	3.2	24.54	0.28	2.00	Pass
				RB75#0	21.34	3.2	24.54	0.28	2.00	Pass
		HCH	RB1#0	22.76	3.2	25.96	0.39	2.00	Pass	
			RB1#38	22.80	3.2	26.00	0.40	2.00	Pass	
			RB1#74	22.86	3.2	26.06	0.40	2.00	Pass	
			RB36#0	21.76	3.2	24.96	0.31	2.00	Pass	
			RB36#19	21.79	3.2	24.99	0.32	2.00	Pass	
			RB36#39	21.82	3.2	25.02	0.32	2.00	Pass	
			RB75#0	21.89	3.2	25.09	0.32	2.00	Pass	
		20 MHz	LCH	RB1#0	22.12	3.2	25.32	0.34	2.00	Pass
				RB1#50	22.43	3.2	25.63	0.37	2.00	Pass
				RB1#99	22.35	3.2	25.55	0.36	2.00	Pass
				RB50#0	21.38	3.2	24.58	0.29	2.00	Pass
				RB50#25	21.55	3.2	24.75	0.30	2.00	Pass
				RB50#50	21.55	3.2	24.75	0.30	2.00	Pass
				RB100#0	21.47	3.2	24.67	0.29	2.00	Pass
			MCH	RB1#0	22.25	3.2	25.45	0.35	2.00	Pass
RB1#50	22.34			3.2	25.54	0.36	2.00	Pass		
RB1#99	22.38			3.2	25.58	0.36	2.00	Pass		
RB50#0	21.28			3.2	24.28	0.27	2.00	Pass		

Tes Band	Test Model	Test Bandwidth	Test Channel	Test RB (Size#Offset)	Conducted Output Average Power (dBm)	ANT 1 (dBi)	EIRP (dBm)	EIRP (W)	Limit (W)	Verdict
				RB50#25	21.36	3.2	24.56	0.29	2.00	Pass
				RB50#50	21.45	3.2	24.65	0.29	2.00	Pass
				RB100#0	21.40	3.2	24.60	0.29	2.00	Pass
			HCH	RB1#0	22.25	3.2	25.45	0.35	2.00	Pass
				RB1#50	22.67	3.2	25.87	0.39	2.00	Pass
				RB1#99	22.73	3.2	25.93	0.39	2.00	Pass
				RB50#0	22.98	3.2	26.18	0.41	2.00	Pass
				RB50#25	21.74	3.2	24.94	0.31	2.00	Pass
				RB50#50	21.72	3.2	24.92	0.31	2.00	Pass
				RB100#0	21.84	3.2	25.04	0.32	2.00	Pass
	16-QAM	1.4 MHz	LCH	RB1#0	21.31	3.2	24.51	0.28	2.00	Pass
				RB1#3	21.18	3.2	24.38	0.27	2.00	Pass
				RB1#5	21.16	3.2	24.36	0.27	2.00	Pass
				RB3#0	21.11	3.2	24.31	0.27	2.00	Pass
				RB3#2	21.14	3.2	24.34	0.27	2.00	Pass
				RB3#3	21.16	3.2	24.36	0.27	2.00	Pass
			MCH	RB6#0	20.23	3.2	23.43	0.22	2.00	Pass
				RB1#0	21.64	3.2	24.84	0.30	2.00	Pass
				RB1#3	21.46	3.2	24.66	0.29	2.00	Pass
				RB1#5	21.59	3.2	24.79	0.30	2.00	Pass
				RB3#0	21.32	3.2	24.52	0.28	2.00	Pass
				RB3#2	21.22	3.2	24.42	0.28	2.00	Pass
			HCH	RB3#3	21.29	3.2	24.49	0.28	2.00	Pass
				RB6#0	20.18	3.2	23.38	0.22	2.00	Pass
				RB1#0	21.91	3.2	25.11	0.32	2.00	Pass
				RB1#3	21.93	3.2	25.13	0.33	2.00	Pass
				RB1#5	21.93	3.2	25.13	0.33	2.00	Pass
				RB3#0	22.21	3.2	25.41	0.35	2.00	Pass
	3 MHz	LCH	RB3#2	22.08	3.2	25.28	0.34	2.00	Pass	
			RB3#3	22.23	3.2	25.43	0.35	2.00	Pass	
			RB6#0	21.07	3.2	24.27	0.27	2.00	Pass	
			RB1#0	21.00	3.2	24.20	0.26	2.00	Pass	
			RB1#7	20.84	3.2	24.04	0.25	2.00	Pass	
RB1#14			21.02	3.2	24.22	0.26	2.00	Pass		
RB8#0			20.13	3.2	23.33	0.22	2.00	Pass		
RB8#4		20.22	3.2	23.42	0.22	2.00	Pass			
MCH	RB8#7	20.16	3.2	23.36	0.22	2.00	Pass			
	RB15#0	20.17	3.2	23.37	0.22	2.00	Pass			
			MCH	RB1#0	21.53	3.2	24.53	0.28	2.00	Pass

Tes Band	Test Model	Test Bandwidth	Test Channel	Test RB (Size#Offset)	Conducted Output Average Power (dBm)	ANT 1 (dBi)	EIRP (dBm)	EIRP (W)	Limit (W)	Verdict		
		5 MHz		RB1#7	21.49	3.2	24.69	0.29	2.00	Pass		
				RB1#14	21.54	3.2	24.74	0.30	2.00	Pass		
				RB8#0	20.30	3.2	23.50	0.22	2.00	Pass		
				RB8#4	20.27	3.2	23.47	0.22	2.00	Pass		
				RB8#7	20.28	3.2	23.48	0.22	2.00	Pass		
				RB15#0	20.24	3.2	23.44	0.22	2.00	Pass		
			HCH	RB1#0	21.77	3.2	24.97	0.31	2.00	Pass		
				RB1#7	21.78	3.2	24.98	0.31	2.00	Pass		
				RB1#14	21.82	3.2	25.02	0.32	2.00	Pass		
				RB8#0	20.86	3.2	24.06	0.25	2.00	Pass		
				RB8#4	20.81	3.2	24.01	0.25	2.00	Pass		
				RB8#7	20.97	3.2	24.17	0.26	2.00	Pass		
			10 MHz	LCH	RB1#0	21.28	3.2	24.48	0.28	2.00	Pass	
					RB1#13	21.23	3.2	24.43	0.28	2.00	Pass	
		RB1#24			21.49	3.2	24.69	0.29	2.00	Pass		
		RB12#0			20.20	3.2	23.40	0.22	2.00	Pass		
		RB12#6			20.28	3.2	23.48	0.22	2.00	Pass		
		RB12#13			20.29	3.2	23.49	0.22	2.00	Pass		
		MCH		RB25#0	20.24	3.2	23.44	0.22	2.00	Pass		
				RB1#0	21.22	3.2	24.42	0.28	2.00	Pass		
				RB1#13	21.26	3.2	24.46	0.28	2.00	Pass		
				RB1#24	21.36	3.2	24.56	0.29	2.00	Pass		
				RB12#0	20.33	3.2	23.53	0.23	2.00	Pass		
				RB12#6	20.30	3.2	23.50	0.22	2.00	Pass		
				RB12#13	20.30	3.2	23.50	0.22	2.00	Pass		
		HCH		RB25#0	20.34	3.2	23.54	0.23	2.00	Pass		
			RB1#0	21.64	3.2	24.84	0.30	2.00	Pass			
			RB1#13	21.72	3.2	24.92	0.31	2.00	Pass			
			RB1#24	21.84	3.2	25.04	0.32	2.00	Pass			
			RB12#0	20.89	3.2	24.09	0.26	2.00	Pass			
		LCH	RB12#6	20.86	3.2	24.06	0.25	2.00	Pass			
			RB12#13	20.91	3.2	24.11	0.26	2.00	Pass			
			RB25#0	21.01	3.2	24.21	0.26	2.00	Pass			
			RB1#0	21.04	3.2	24.24	0.27	2.00	Pass			
			RB1#25	21.23	3.2	24.43	0.28	2.00	Pass			
						RB1#49	21.35	3.2	24.55	0.29	2.00	Pass
						RB25#0	20.22	3.2	23.42	0.22	2.00	Pass
						RB25#13	20.56	3.2	23.56	0.23	2.00	Pass

Tes Band	Test Model	Test Bandwidth	Test Channel	Test RB (Size#Offset)	Conducted Output Average Power (dBm)	ANT 1 (dBi)	EIRP (dBm)	EIRP (W)	Limit (W)	Verdict		
		15 MHz		RB25#25	20.45	3.2	23.65	0.23	2.00	Pass		
				RB50#0	20.32	3.2	23.52	0.22	2.00	Pass		
			MCH	RB1#0	21.45	3.2	24.65	0.29	2.00	Pass		
				RB1#25	21.38	3.2	24.58	0.29	2.00	Pass		
				RB1#49	21.66	3.2	24.86	0.31	2.00	Pass		
				RB25#0	20.29	3.2	23.49	0.22	2.00	Pass		
				RB25#13	20.26	3.2	23.46	0.22	2.00	Pass		
				RB25#25	20.32	3.2	23.52	0.22	2.00	Pass		
			HCH	RB50#0	20.23	3.2	23.43	0.22	2.00	Pass		
				RB1#0	21.58	3.2	24.78	0.30	2.00	Pass		
				RB1#25	21.76	3.2	24.96	0.31	2.00	Pass		
				RB1#49	21.82	3.2	25.02	0.32	2.00	Pass		
				RB25#0	20.76	3.2	23.96	0.25	2.00	Pass		
				RB25#13	20.80	3.2	24.00	0.25	2.00	Pass		
			20 MHz	LCH	RB25#25	20.84	3.2	24.04	0.25	2.00	Pass	
					RB50#0	20.80	3.2	24.00	0.25	2.00	Pass	
		RB1#0			21.00	3.2	24.20	0.26	2.00	Pass		
		RB1#38			21.35	3.2	24.55	0.29	2.00	Pass		
		RB1#74			21.41	3.2	24.61	0.29	2.00	Pass		
		RB36#0			20.31	3.2	23.51	0.22	2.00	Pass		
		RB36#19			20.44	3.2	23.64	0.23	2.00	Pass		
		MCH		RB36#39	20.48	3.2	23.68	0.23	2.00	Pass		
				RB75#0	20.53	3.2	23.73	0.24	2.00	Pass		
				RB1#0	21.51	3.2	24.71	0.30	2.00	Pass		
				RB1#38	21.45	3.2	24.65	0.29	2.00	Pass		
				RB1#74	21.58	3.2	24.78	0.30	2.00	Pass		
				RB36#0	20.31	3.2	23.51	0.22	2.00	Pass		
				RB36#19	20.22	3.2	23.42	0.22	2.00	Pass		
		HCH	RB36#39	20.30	3.2	23.50	0.22	2.00	Pass			
			RB75#0	20.30	3.2	23.50	0.22	2.00	Pass			
			RB1#0	22.10	3.2	25.30	0.34	2.00	Pass			
			RB1#38	22.13	3.2	25.33	0.34	2.00	Pass			
			RB1#74	22.41	3.2	25.61	0.36	2.00	Pass			
			RB36#0	20.59	3.2	23.79	0.24	2.00	Pass			
			RB36#19	20.69	3.2	23.89	0.24	2.00	Pass			
		LCH	RB36#39	20.77	3.2	23.97	0.25	2.00	Pass			
			RB75#0	20.73	3.2	23.93	0.25	2.00	Pass			
				20 MHz	LCH	RB1#0	21.20	3.2	24.40	0.28	2.00	Pass
						RB1#50	21.55	3.2	24.55	0.29	2.00	Pass

Tes Band	Test Model	Test Bandwidth	Test Channel	Test RB (Size#Offset)	Conducted Output Average Power (dBm)	ANT 1 (dBi)	EIRP (dBm)	EIRP (W)	Limit (W)	Verdict			
				RB1#99	21.51	3.2	24.71	0.30	2.00	Pass			
				RB50#0	20.42	3.2	23.62	0.23	2.00	Pass			
				RB50#25	20.45	3.2	23.65	0.23	2.00	Pass			
				RB50#50	20.46	3.2	23.66	0.23	2.00	Pass			
				RB100#0	20.49	3.2	23.69	0.23	2.00	Pass			
			MCH	RB1#0	21.46	3.2	24.66	0.29	2.00	Pass			
				RB1#50	21.41	3.2	24.61	0.29	2.00	Pass			
				RB1#99	21.60	3.2	24.80	0.30	2.00	Pass			
				RB50#0	20.28	3.2	23.48	0.22	2.00	Pass			
				RB50#25	20.31	3.2	23.51	0.22	2.00	Pass			
				RB50#50	20.43	3.2	23.63	0.23	2.00	Pass			
				RB100#0	20.29	3.2	23.49	0.22	2.00	Pass			
			HCH	RB1#0	21.69	3.2	24.89	0.31	2.00	Pass			
				RB1#50	21.72	3.2	24.92	0.31	2.00	Pass			
				RB1#99	21.99	3.2	25.19	0.33	2.00	Pass			
				RB50#0	20.68	3.2	23.88	0.24	2.00	Pass			
				RB50#25	20.65	3.2	23.85	0.24	2.00	Pass			
				RB50#50	20.76	3.2	23.96	0.25	2.00	Pass			
				RB100#0	20.66	3.2	23.86	0.24	2.00	Pass			
			Band 7	QPSK	5 MHz	LCH	RB1#0	21.16	2.0	23.16	0.21	2.00	Pass
							RB1#13	21.11	2.0	23.11	0.20	2.00	Pass
RB1#24	21.22	2.0					23.22	0.21	2.00	Pass			
RB12#0	20.19	2.0					22.19	0.17	2.00	Pass			
RB12#6	20.11	2.0					22.11	0.16	2.00	Pass			
RB12#13	20.16	2.0					22.16	0.16	2.00	Pass			
RB25#0	20.06	2.0					22.06	0.16	2.00	Pass			
MCH	RB1#0	21.34				2.0	23.34	0.22	2.00	Pass			
	RB1#13	21.23				2.0	23.23	0.21	2.00	Pass			
	RB1#24	21.42				2.0	23.42	0.22	2.00	Pass			
	RB12#0	20.25				2.0	22.25	0.17	2.00	Pass			
	RB12#6	20.31				2.0	22.31	0.17	2.00	Pass			
	RB12#13	20.36				2.0	22.36	0.17	2.00	Pass			
	RB25#0	20.31				2.0	22.31	0.17	2.00	Pass			
HCH	RB1#0	21.15				2.0	23.15	0.21	2.00	Pass			
	RB1#13	20.95				2.0	22.95	0.20	2.00	Pass			
	RB1#24	20.93				2.0	22.93	0.20	2.00	Pass			
	RB12#0	20.14				2.0	22.14	0.16	2.00	Pass			
	RB12#6	20.00				2.0	22.00	0.16	2.00	Pass			
	RB12#13	19.95				2.0	21.95	0.16	2.00	Pass			

Tes Band	Test Model	Test Bandwidth	Test Channel	Test RB (Size#Offset)	Conducted Output Average Power (dBm)	ANT 1 (dBi)	EIRP (dBm)	EIRP (W)	Limit (W)	Verdict
				RB25#0	20.00	2.0	22.00	0.16	2.00	Pass
		10 MHz	LCH	RB1#0	20.88	2.0	22.88	0.19	2.00	Pass
				RB1#25	20.98	2.0	22.98	0.20	2.00	Pass
				RB1#49	20.93	2.0	22.93	0.20	2.00	Pass
				RB25#0	19.80	2.0	21.80	0.15	2.00	Pass
				RB25#13	19.81	2.0	21.81	0.15	2.00	Pass
				RB25#25	19.79	2.0	21.79	0.15	2.00	Pass
				RB50#0	19.81	2.0	21.81	0.15	2.00	Pass
			MCH	RB1#0	21.29	2.0	23.29	0.21	2.00	Pass
				RB1#25	21.31	2.0	23.31	0.21	2.00	Pass
				RB1#49	21.37	2.0	23.37	0.22	2.00	Pass
				RB25#0	20.14	2.0	22.14	0.16	2.00	Pass
				RB25#13	20.21	2.0	22.21	0.17	2.00	Pass
				RB25#25	20.22	2.0	22.22	0.17	2.00	Pass
				RB50#0	20.15	2.0	22.15	0.16	2.00	Pass
		HCH	RB1#0	20.91	2.0	22.91	0.20	2.00	Pass	
			RB1#25	20.97	2.0	22.97	0.20	2.00	Pass	
			RB1#49	20.61	2.0	22.61	0.18	2.00	Pass	
			RB25#0	19.75	2.0	21.75	0.15	2.00	Pass	
			RB25#13	19.81	2.0	21.81	0.15	2.00	Pass	
			RB25#25	19.79	2.0	21.79	0.15	2.00	Pass	
			RB50#0	19.86	2.0	21.86	0.15	2.00	Pass	
		15 MHz	LCH	RB1#0	20.73	2.0	22.73	0.19	2.00	Pass
				RB1#38	20.79	2.0	22.79	0.19	2.00	Pass
				RB1#74	20.84	2.0	22.84	0.19	2.00	Pass
				RB36#0	19.68	2.0	21.68	0.15	2.00	Pass
				RB36#19	19.63	2.0	21.63	0.15	2.00	Pass
				RB36#39	19.72	2.0	21.72	0.15	2.00	Pass
				RB75#0	19.67	2.0	21.67	0.15	2.00	Pass
			MCH	RB1#0	21.27	2.0	23.27	0.21	2.00	Pass
				RB1#38	21.38	2.0	23.38	0.22	2.00	Pass
				RB1#74	21.36	2.0	23.36	0.22	2.00	Pass
				RB36#0	20.16	2.0	22.16	0.16	2.00	Pass
				RB36#19	20.19	2.0	22.19	0.17	2.00	Pass
				RB36#39	20.32	2.0	22.32	0.17	2.00	Pass
				RB75#0	20.19	2.0	22.19	0.17	2.00	Pass
			HCH	RB1#0	20.97	2.0	22.97	0.20	2.00	Pass
		RB1#38		21.03	2.0	23.03	0.20	2.00	Pass	
		RB1#74		20.79	2.0	22.79	0.19	2.00	Pass	

Tes Band	Test Model	Test Bandwidth	Test Channel	Test RB (Size#Offset)	Conducted Output Average Power (dBm)	ANT 1 (dBi)	EIRP (dBm)	EIRP (W)	Limit (W)	Verdict	
				RB36#0	19.82	2.0	21.82	0.15	2.00	Pass	
				RB36#19	19.80	2.0	21.80	0.15	2.00	Pass	
				RB36#39	19.84	2.0	21.84	0.15	2.00	Pass	
				RB75#0	19.93	2.0	21.93	0.16	2.00	Pass	
				LCH	RB1#0	20.72	2.0	22.72	0.19	2.00	Pass
					RB1#50	20.74	2.0	22.74	0.19	2.00	Pass
					RB1#99	20.84	2.0	22.84	0.19	2.00	Pass
					RB50#0	19.70	2.0	21.70	0.15	2.00	Pass
		RB50#25	19.67		2.0	21.67	0.15	2.00	Pass		
		RB50#50	19.67		2.0	21.67	0.15	2.00	Pass		
		RB100#0	19.70		2.0	21.70	0.15	2.00	Pass		
		MCH	RB1#0		21.05	2.0	23.05	0.20	2.00	Pass	
			RB1#50	21.24	2.0	23.24	0.21	2.00	Pass		
			RB1#99	21.07	2.0	23.07	0.20	2.00	Pass		
			RB50#0	20.10	2.0	22.10	0.16	2.00	Pass		
			RB50#25	20.08	2.0	22.08	0.16	2.00	Pass		
	RB50#50		20.14	2.0	22.14	0.16	2.00	Pass			
	RB100#0		20.08	2.0	22.08	0.16	2.00	Pass			
	HCH	RB1#0	21.14	2.0	23.14	0.21	2.00	Pass			
		RB1#50	21.26	2.0	23.26	0.21	2.00	Pass			
		RB1#99	21.16	2.0	23.16	0.21	2.00	Pass			
		RB50#0	20.20	2.0	22.20	0.17	2.00	Pass			
		RB50#25	20.20	2.0	22.20	0.17	2.00	Pass			
		RB50#50	20.25	2.0	22.25	0.17	2.00	Pass			
		RB100#0	20.17	2.0	22.17	0.16	2.00	Pass			
	16-QAM	5 MHz	LCH	RB1#0	20.21	2.0	22.21	0.17	2.00	Pass	
				RB1#13	20.10	2.0	22.10	0.16	2.00	Pass	
				RB1#24	20.11	2.0	22.11	0.16	2.00	Pass	
				RB12#0	19.06	2.0	21.06	0.13	2.00	Pass	
				RB12#6	18.98	2.0	20.98	0.13	2.00	Pass	
				RB12#13	19.09	2.0	21.09	0.13	2.00	Pass	
				RB25#0	19.06	2.0	21.06	0.13	2.00	Pass	
MCH				RB1#0	20.46	2.0	22.46	0.18	2.00	Pass	
			RB1#13	20.42	2.0	22.42	0.17	2.00	Pass		
			RB1#24	20.47	2.0	22.47	0.18	2.00	Pass		
			RB12#0	19.25	2.0	21.25	0.13	2.00	Pass		
			RB12#6	19.31	2.0	21.31	0.14	2.00	Pass		
			RB12#13	19.32	2.0	21.32	0.14	2.00	Pass		
			RB25#0	19.27	2.0	21.27	0.13	2.00	Pass		

Tes Band	Test Model	Test Bandwidth	Test Channel	Test RB (Size#Offset)	Conducted Output Average Power (dBm)	ANT 1 (dBi)	EIRP (dBm)	EIRP (W)	Limit (W)	Verdict
			HCH	RB1#0	20.03	2.0	22.03	0.16	2.00	Pass
				RB1#13	19.84	2.0	21.84	0.15	2.00	Pass
				RB1#24	19.72	2.0	21.72	0.15	2.00	Pass
				RB12#0	18.85	2.0	20.85	0.12	2.00	Pass
				RB12#6	18.73	2.0	20.73	0.12	2.00	Pass
				RB12#13	18.74	2.0	20.74	0.12	2.00	Pass
				RB25#0	18.77	2.0	20.77	0.12	2.00	Pass
		10 MHz	LCH	RB1#0	19.63	2.0	21.63	0.15	2.00	Pass
				RB1#25	19.58	2.0	21.58	0.14	2.00	Pass
				RB1#49	19.66	2.0	21.66	0.15	2.00	Pass
				RB25#0	18.65	2.0	20.65	0.12	2.00	Pass
				RB25#13	18.66	2.0	20.66	0.12	2.00	Pass
				RB25#25	18.73	2.0	20.73	0.12	2.00	Pass
				RB50#0	18.66	2.0	20.66	0.12	2.00	Pass
			MCH	RB1#0	20.20	2.0	22.20	0.17	2.00	Pass
				RB1#25	20.33	2.0	22.33	0.17	2.00	Pass
				RB1#49	20.30	2.0	22.30	0.17	2.00	Pass
				RB25#0	19.03	2.0	21.03	0.13	2.00	Pass
				RB25#13	19.08	2.0	21.08	0.13	2.00	Pass
				RB25#25	19.15	2.0	21.15	0.13	2.00	Pass
				RB50#0	19.08	2.0	21.08	0.13	2.00	Pass
			HCH	RB1#0	19.65	2.0	21.65	0.15	2.00	Pass
				RB1#25	19.60	2.0	21.60	0.14	2.00	Pass
				RB1#49	19.45	2.0	21.45	0.14	2.00	Pass
				RB25#0	18.64	2.0	20.64	0.12	2.00	Pass
				RB25#13	18.75	2.0	20.75	0.12	2.00	Pass
				RB25#25	18.71	2.0	20.71	0.12	2.00	Pass
				RB50#0	18.63	2.0	20.63	0.12	2.00	Pass
		15 MHz	LCH	RB1#0	19.56	2.0	21.56	0.14	2.00	Pass
				RB1#38	19.45	2.0	21.45	0.14	2.00	Pass
				RB1#74	19.55	2.0	21.55	0.14	2.00	Pass
				RB36#0	18.42	2.0	20.42	0.11	2.00	Pass
				RB36#19	18.56	2.0	20.56	0.11	2.00	Pass
				RB36#39	18.58	2.0	20.58	0.11	2.00	Pass
				RB75#0	18.52	2.0	20.52	0.11	2.00	Pass
			MCH	RB1#0	20.40	2.0	22.40	0.17	2.00	Pass
RB1#38	20.53			2.0	22.53	0.18	2.00	Pass		
RB1#74	20.55			2.0	22.55	0.18	2.00	Pass		
RB36#0	18.97			2.0	20.97	0.13	2.00	Pass		

Tes Band	Test Model	Test Bandwidth	Test Channel	Test RB (Size#Offset)	Conducted Output Average Power (dBm)	ANT 1 (dBi)	EIRP (dBm)	EIRP (W)	Limit (W)	Verdict	
				RB36#19	19.05	2.0	21.05	0.13	2.00	Pass	
				RB36#39	19.17	2.0	21.17	0.13	2.00	Pass	
				RB75#0	19.14	2.0	21.14	0.13	2.00	Pass	
			HCH	RB1#0	19.99	2.0	21.99	0.16	2.00	Pass	
				RB1#38	20.14	2.0	22.14	0.16	2.00	Pass	
				RB1#74	19.88	2.0	21.88	0.15	2.00	Pass	
				RB36#0	18.96	2.0	20.96	0.12	2.00	Pass	
				RB36#19	18.95	2.0	20.95	0.12	2.00	Pass	
				RB36#39	19.00	2.0	21.00	0.13	2.00	Pass	
			RB75#0	18.98	2.0	20.98	0.13	2.00	Pass		
			20 MHz	LCH	RB1#0	19.64	2.0	21.64	0.15	2.00	Pass
					RB1#50	19.72	2.0	21.72	0.15	2.00	Pass
					RB1#99	19.86	2.0	21.86	0.15	2.00	Pass
					RB50#0	18.57	2.0	20.57	0.11	2.00	Pass
					RB50#25	18.57	2.0	20.57	0.11	2.00	Pass
		RB50#50			18.64	2.0	20.64	0.12	2.00	Pass	
		RB100#0		18.61	2.0	20.61	0.12	2.00	Pass		
		MCH		RB1#0	20.02	2.0	22.02	0.16	2.00	Pass	
				RB1#50	20.14	2.0	22.14	0.16	2.00	Pass	
				RB1#99	19.95	2.0	21.95	0.16	2.00	Pass	
				RB50#0	18.99	2.0	20.99	0.13	2.00	Pass	
				RB50#25	19.08	2.0	21.08	0.13	2.00	Pass	
				RB50#50	19.07	2.0	21.07	0.13	2.00	Pass	
		RB100#0		19.04	2.0	21.04	0.13	2.00	Pass		
		HCH		RB1#0	20.23	2.0	22.23	0.17	2.00	Pass	
			RB1#50	20.27	2.0	22.27	0.17	2.00	Pass		
			RB1#99	20.26	2.0	22.26	0.17	2.00	Pass		
			RB50#0	19.19	2.0	21.19	0.13	2.00	Pass		
			RB50#25	19.22	2.0	21.22	0.13	2.00	Pass		
			RB50#50	19.21	2.0	21.21	0.13	2.00	Pass		
RB100#0	19.23	2.0	21.23	0.13	2.00	Pass					

A.2 Peak to Average Ratio

Note: In measuring transmissions in this band using an average power technique, the peak-to-average ratio (PAR) of the transmission may not exceed 13 dB. For GSM 1900, GPRS 1900 and EGPRS 1900 were used peak power to demonstrate compliance, a PAPR measurement is not required.

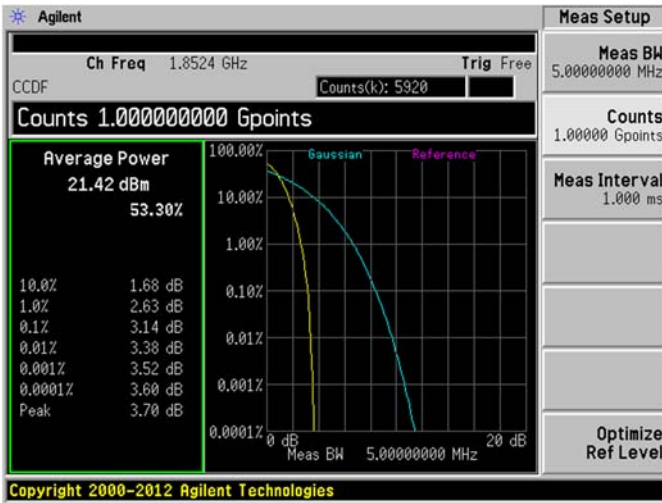
WCDMA Test Data

Test Band	Test Channel	Peak to Average ratio (dBm)	Limit (dBm)	Verdict
Band 2	LCH	3.14	13	Pass
	MCH	3.12	13	Pass
	HCH	3.01	13	Pass

Test Band	Test Model	Test Bandwidth	Test Channel	Test RB(Size#Offset)	Peak to Average ratio (dBm)	Limit (dBm)	Verdict
LTE Band 2	16-QAM	20 MHz	LCH	RB1#0	6.43	13	Pass
				RB100#0	6.09	13	Pass
			MCH	RB1#0	5.25	13	Pass
				RB100#0	5.97	13	Pass
			HCH	RB1#0	6.20	13	Pass
				RB100#0	5.86	13	Pass
	QPSK	20 MHz	LCH	RB1#0	5.42	13	Pass
				RB100#0	5.01	13	Pass
			MCH	RB1#0	4.29	13	Pass
				RB100#0	4.01	13	Pass
			HCH	RB1#0	4.07	13	Pass
				RB100#0	4.78	13	Pass
LTE Band 7	16-QAM	20 MHz	LCH	RB1#0	5.10	13	Pass
				RB100#0	5.19	13	Pass
			MCH	RB1#0	4.29	13	Pass
				RB100#0	5.77	13	Pass
			HCH	RB1#0	4.23	13	Pass
				RB100#0	5.19	13	Pass
	QPSK	20 MHz	LCH	RB1#0	3.94	13	Pass
				RB100#0	4.12	13	Pass
			MCH	RB1#0	3.25	13	Pass
				RB100#0	4.61	13	Pass
			HCH	RB1#0	2.93	13	Pass
				RB100#0	4.06	13	Pass

Test Plots

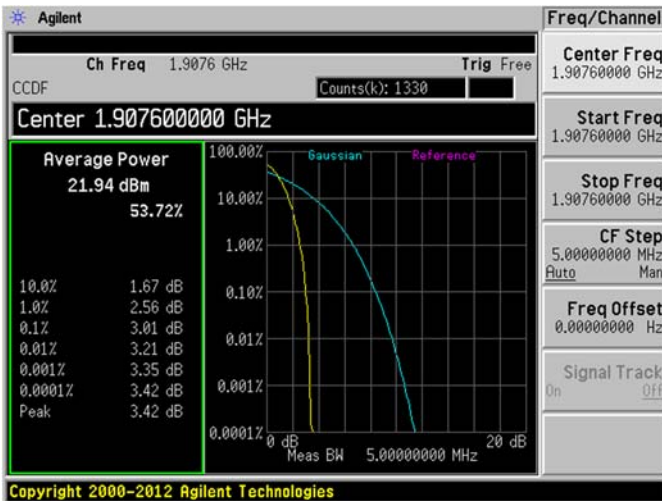
WCDMA Band 2 LCH



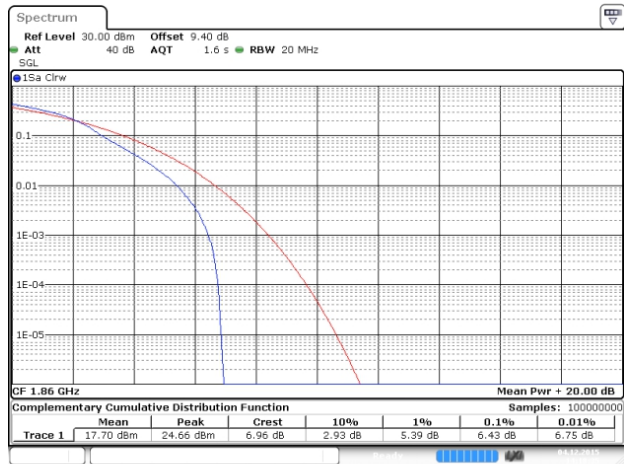
WCDMA Band 2 MCH



WCDMA Band 2 HCH

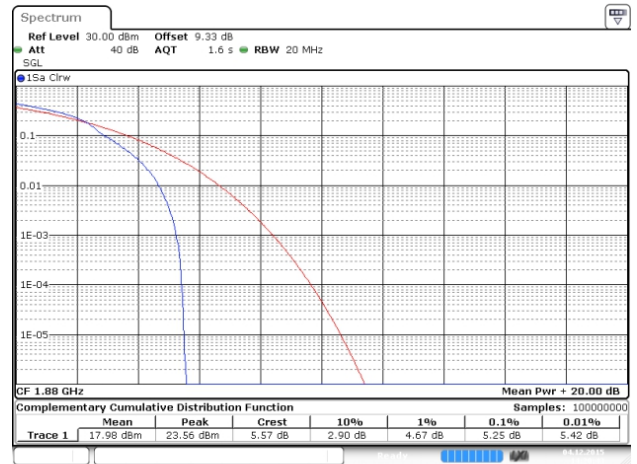


LTE Band 2 16-QAM 20 MHz LCH RB1#0



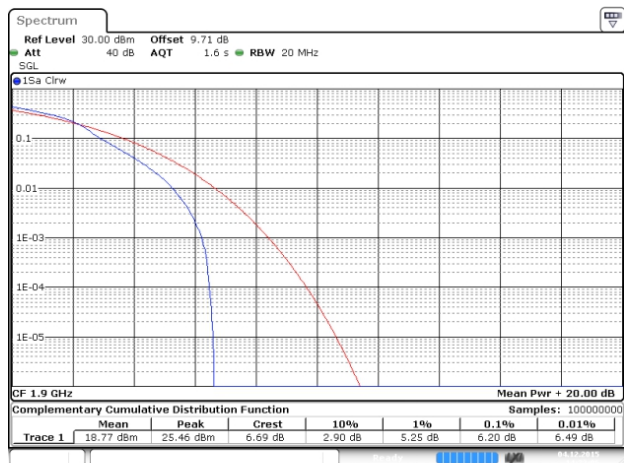
Date: 4 DEC.2015 14:18:35

LTE Band 2 16-QAM 20 MHz MCH RB1#0



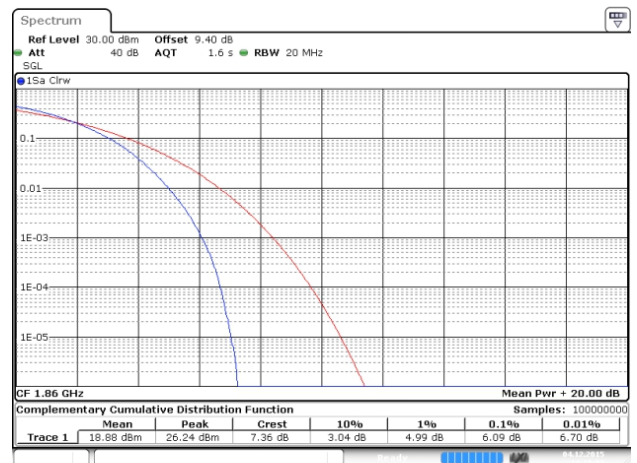
Date: 4 DEC.2015 14:20:44

LTE Band 2 16-QAM 20 MHz HCH RB1#0



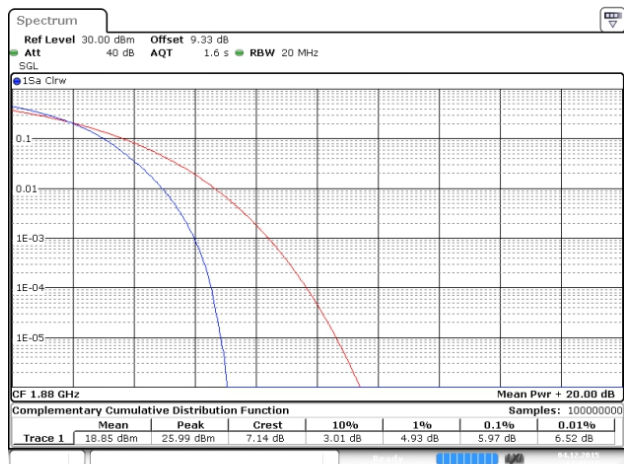
Date: 4 DEC.2015 14:23:07

LTE Band 2 16-QAM 20 MHz LCH RB100#0



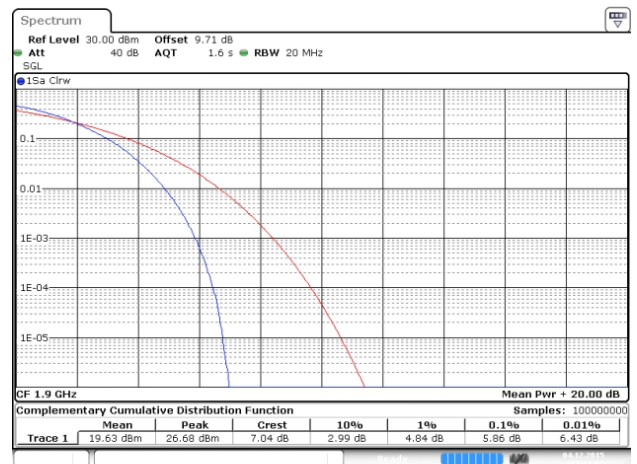
Date: 4 DEC.2015 14:18:09

LTE Band 2 16-QAM 20 MHz MCH RB100#0



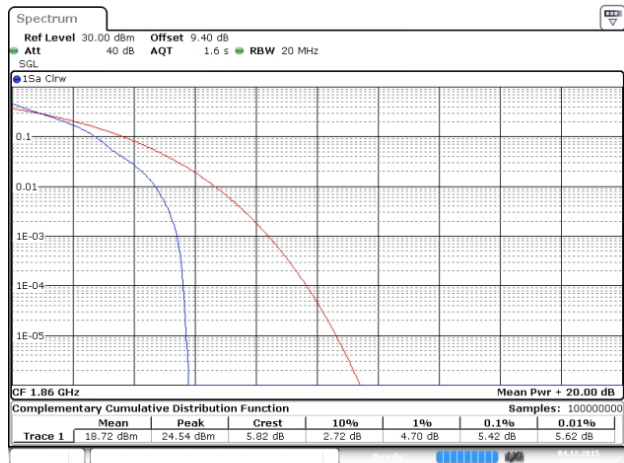
Date: 4 DEC.2015 14:20:18

LTE Band 2 16-QAM 20 MHz HCH RB100#0



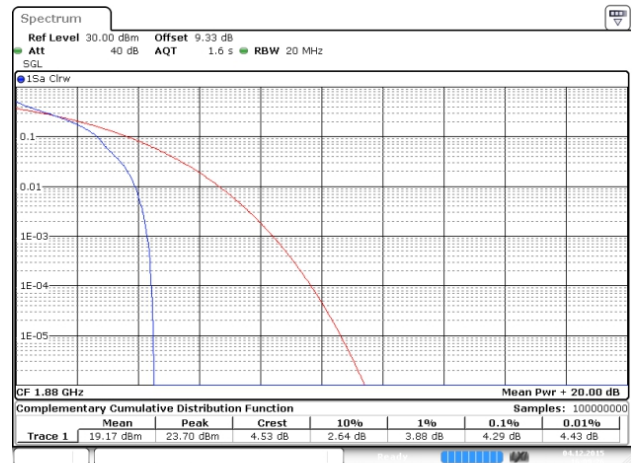
Date: 4 DEC.2015 14:21:53

LTE Band 2 QPSK 20 MHz LCH RB1#0



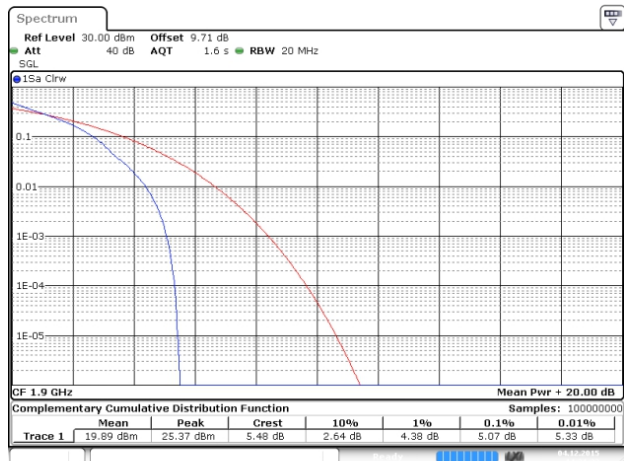
Date: 4 DEC.2015 14:17:50

LTE Band 2 QPSK 20 MHz MCH RB1#0



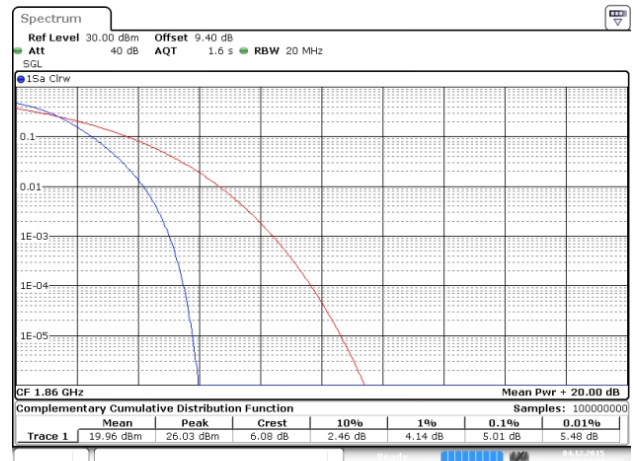
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LTE Band 2 QPSK 20 MHz HCH RB1#0



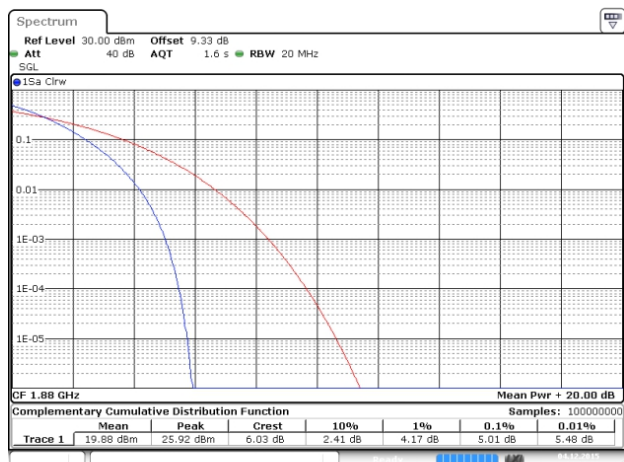
Date: 4 DEC.2015 14:21:34

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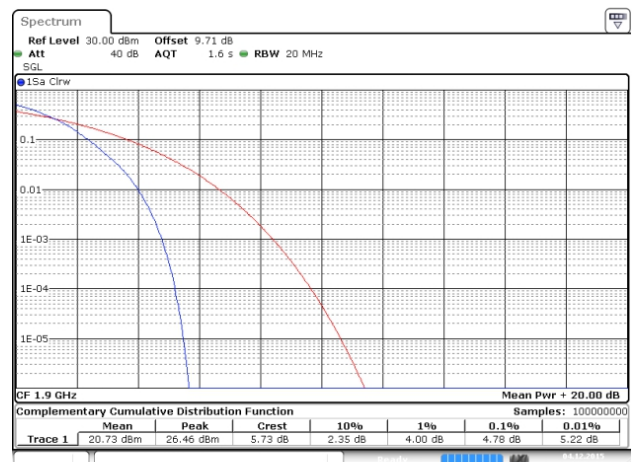
Date: 4 DEC.2015 14:17:24

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Date: 4 DEC.2015 14:18:59

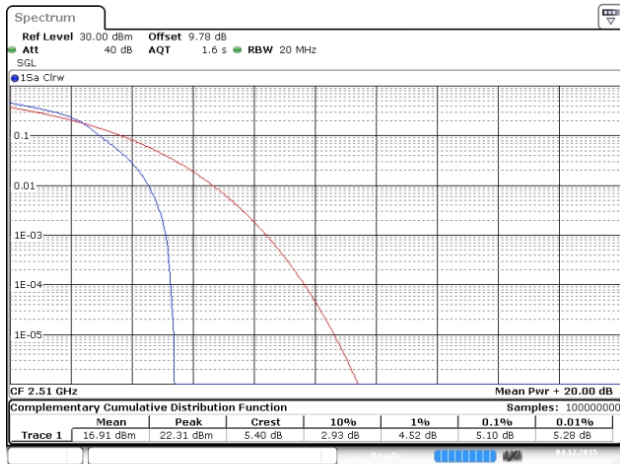
LTE Band 2 QPSK 20 MHz HCH RB100#0



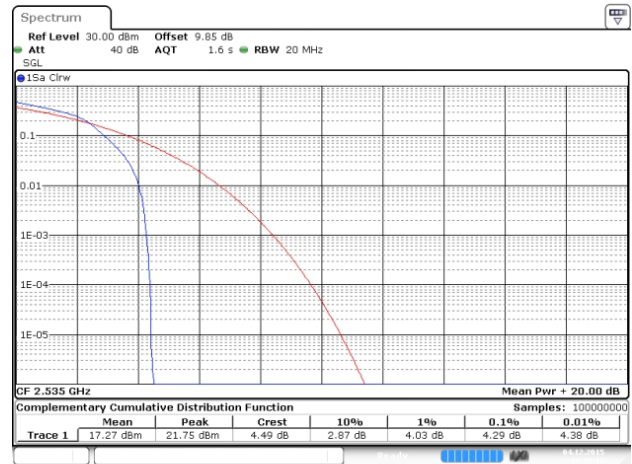
Date: 4 DEC.2015 14:21:08

LTE Band 7 QPSK 20 MHz LCH RB1#0

LTE Band 7 QPSK 20 MHz MCH RB1#0



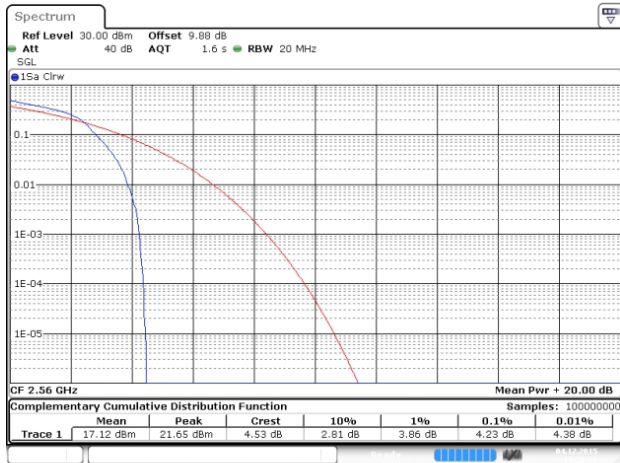
Date: 4 DEC.2015 13:26:29



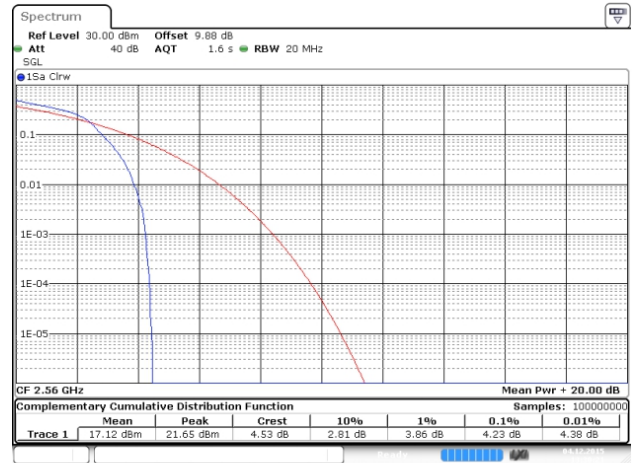
Date: 4 DEC.2015 15:39:17

LTE Band 7 16-QAM 20 MHz HCH RB1#0

LTE Band 7 16-QAM 20 MHz LCH RB100#0



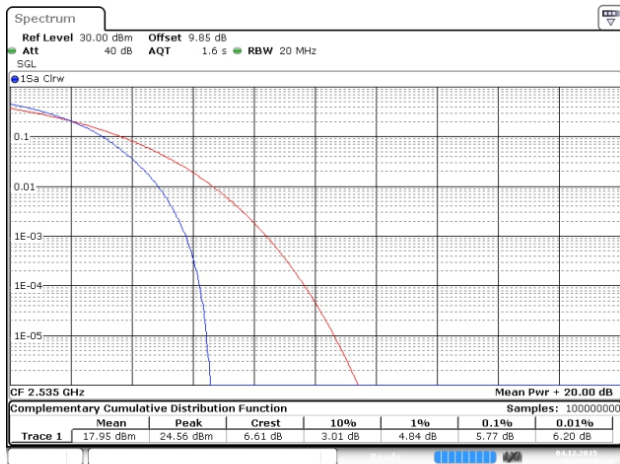
Date: 4 DEC.2015 13:30:21



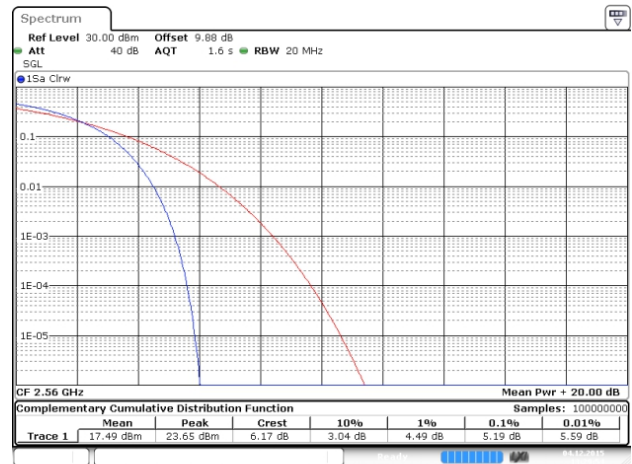
Date: 4 DEC.2015 13:30:21

LTE Band 7 16-QAM 20 MHz MCH RB100#0

LTE Band 7 16-QAM 20 MHz HCH RB100#0

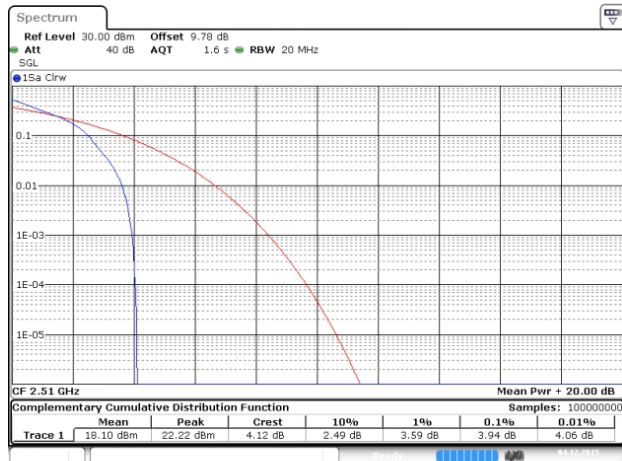


Date: 4 DEC.2015 13:27:38



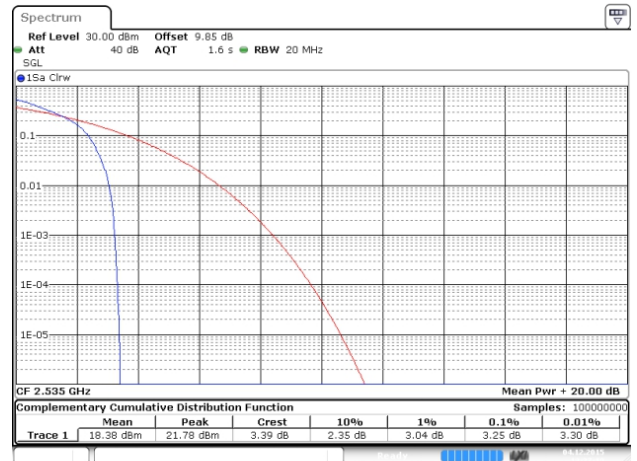
Date: 4 DEC.2015 13:29:55

LTE Band 7 QPSK 20 MHz LCH RB1#0



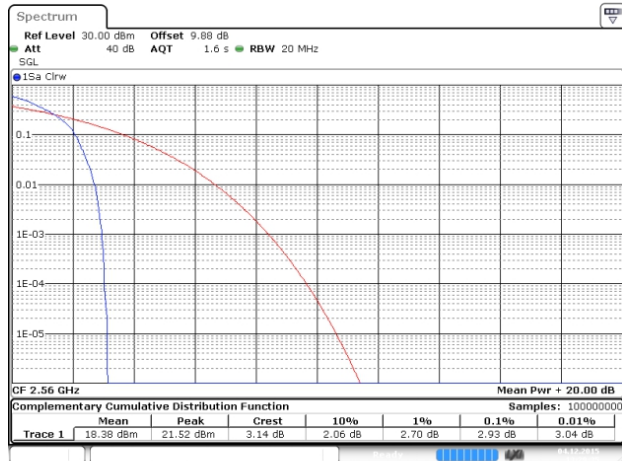
Date: 4 DEC.2015 13:25:04

LTE Band 7 QPSK 20 MHz MCH RB1#0



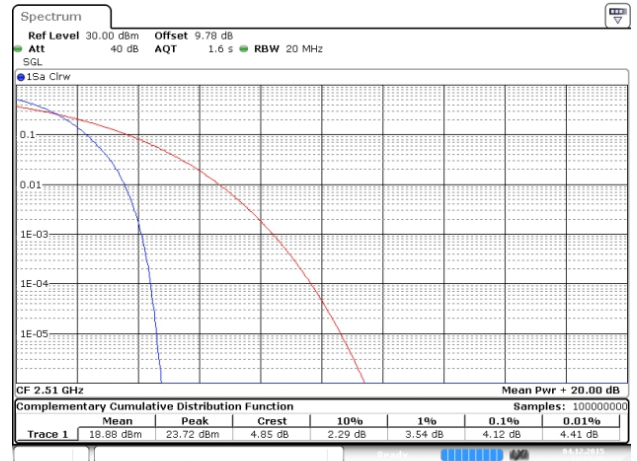
Date: 4 DEC.2015 13:27:19

LTE Band 7 QPSK 20 MHz HCH RB1#0



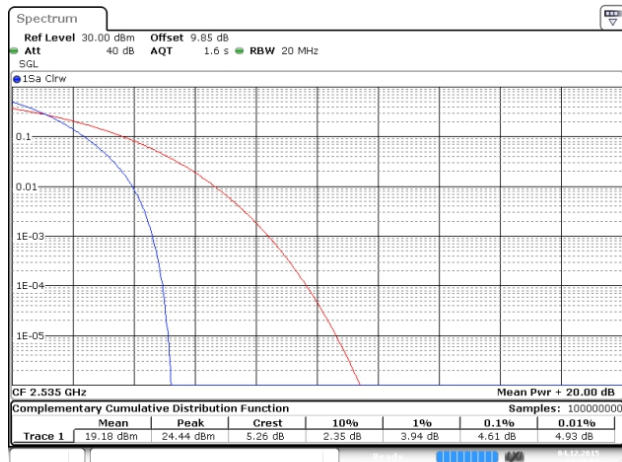
Date: 4 DEC.2015 13:29:35

LTE Band 7 QPSK 20 MHz LCH RB100#0



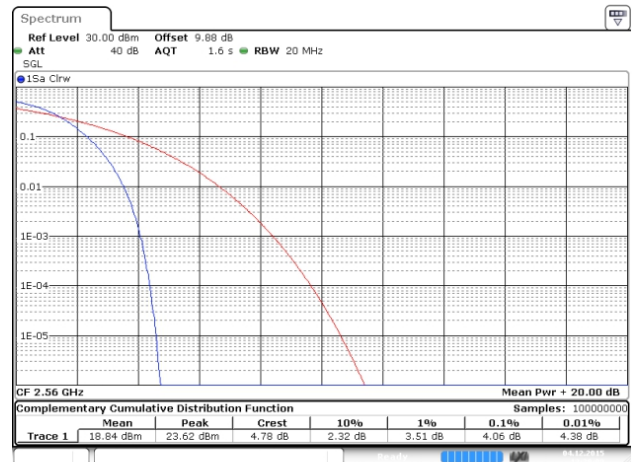
Date: 4 DEC.2015 13:24:38

LTE Band 7 QPSK 20 MHz MCH RB100#0



Date: 4 DEC.2015 13:26:53

LTE Band 7 QPSK 20 MHz HCH RB100#0



Date: 4 DEC.2015 13:29:09

A.3 Occupied Bandwidth

Note: All of the mode were tested, but only the typical data was reported in this report. The other test data please refer the document "BL-SZ15B0251-OBW".

GSM Mode Test Data

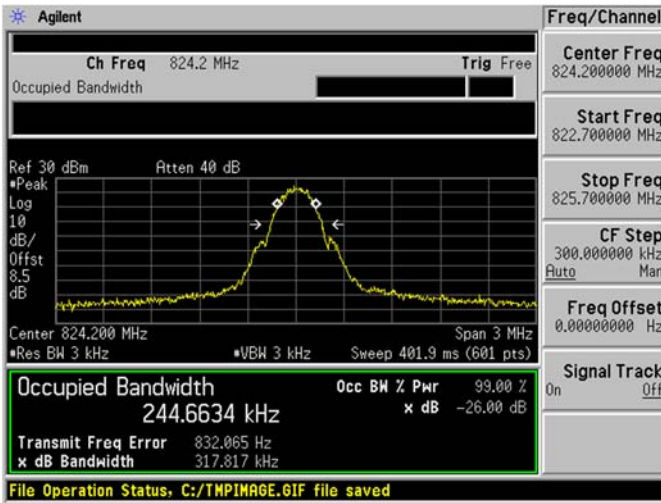
Test Band	Test Channel	Measured 99% Occupied Bandwidth (kHz)	Measured -26 dB Occupied Bandwidth (kHz)
GSM 850	LCH	244.6634	317.817
	MCH	244.7111	320.372
	HCH	245.6623	316.363
GSM 1900	LCH	241.2012	315.281
	MCH	246.3578	318.479
	HCH	246.3485	313.071
EGPRS 850	LCH	234.8639	305.409
	MCH	230.5588	295.415
	HCH	242.5593	301.503
EGPRS 1900	LCH	248.8079	308.192
	MCH	255.2291	311.599
	HCH	245.4973	311.724
WCDMA 850	LCH	4143.2	4630
	MCH	4156.2	4623
	HCH	4145.1	4626
WCDMA 1900	LCH	4151.8	4633
	MCH	4136.5	4638
	HCH	4140.3	4644

LTE Mode Test Data

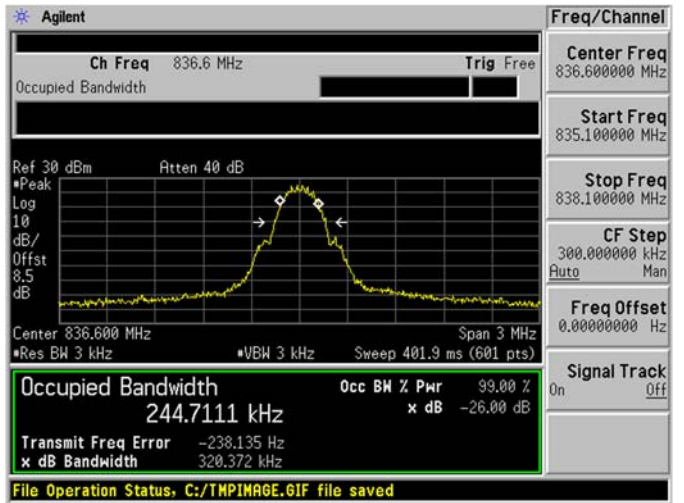
Test Band	Test Mode	Test Bandwidth	Test Channel	Test RB(Size#Offset)	Measured 99% Occupied Bandwidth (MHz)	Measured -26 dB Occupied Bandwidth (MHz)
Band 2	QPSK	20 MHz	MCH	RB100#0	17.82	18.43
	16-QAM	20 MHz	MCH	RB100#0	17.82	18.43
Band 7	QPSK	20 MHz	MCH	RB100#0	17.80	18.37
	16-QAM	20 MHz	MCH	RB100#0	17.80	18.33

GSM Mode Test Plots

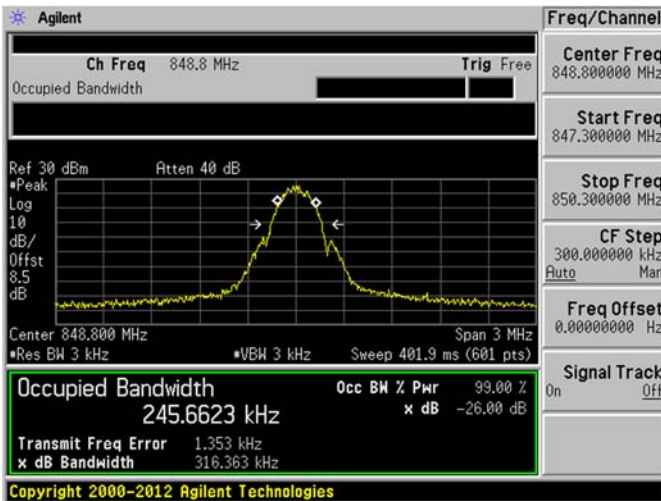
GSM 850 MHz LCH



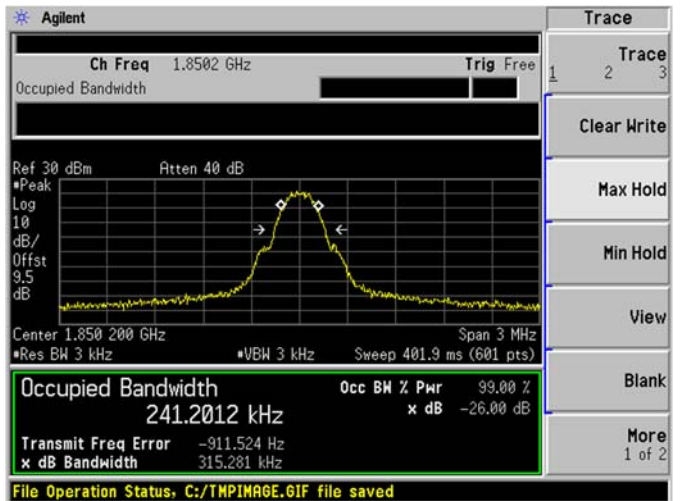
GSM 850 MHz MCH



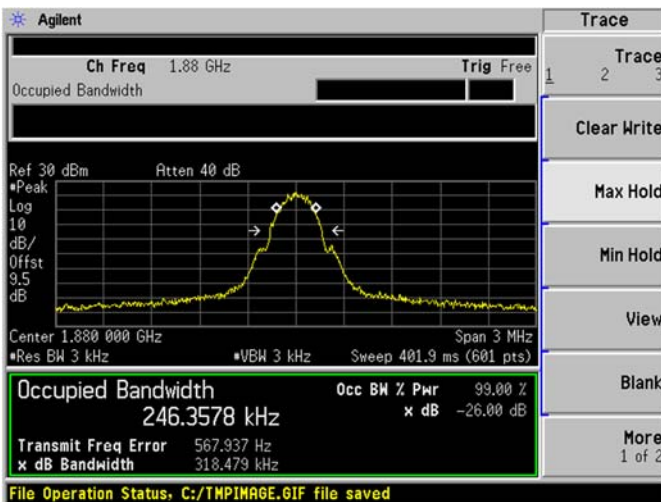
GSM 850 MHz HCH



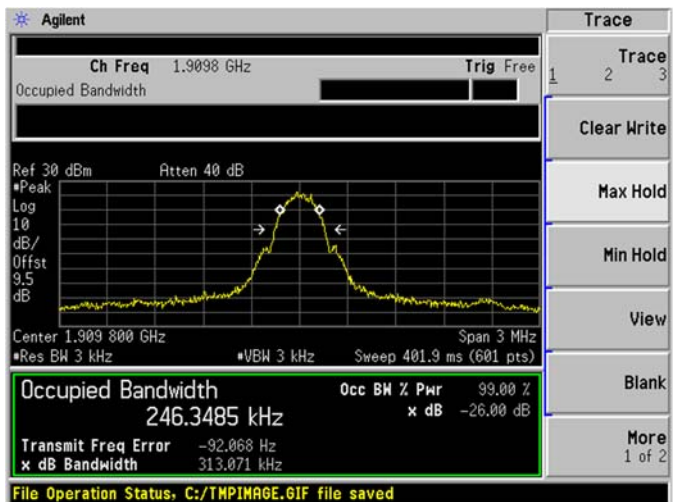
GSM 1900 MHz LCH



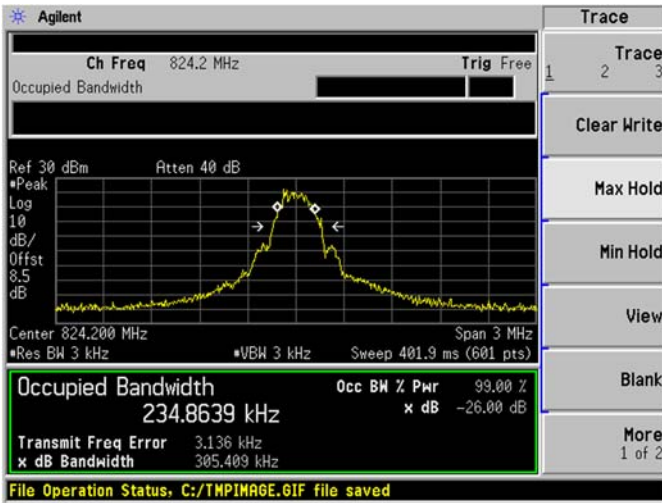
GSM 1900 MHz MCH



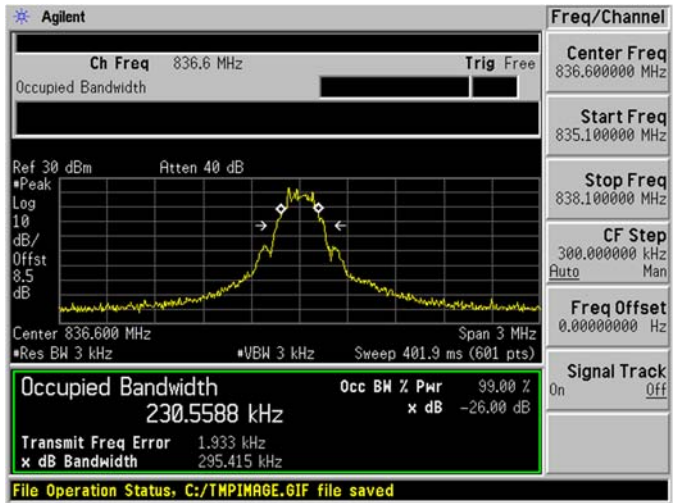
GSM 1900 MHz HCH



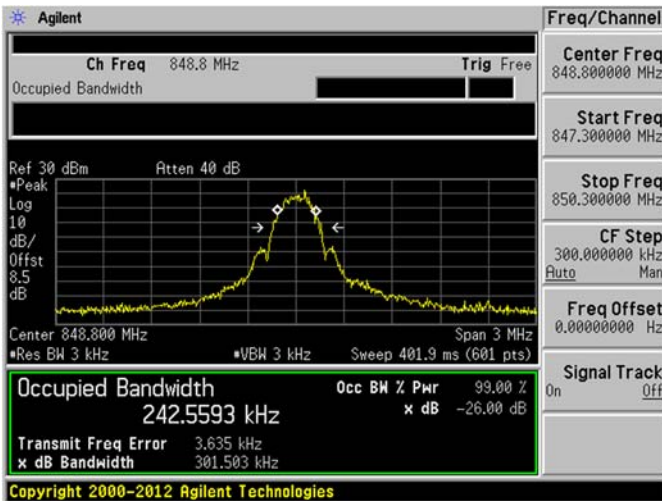
EGPRS 850 MHz LCH



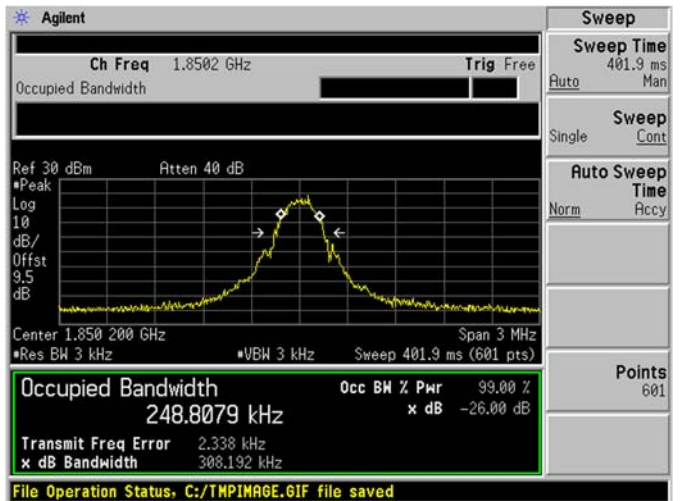
EGPRS 850 MHz MCH



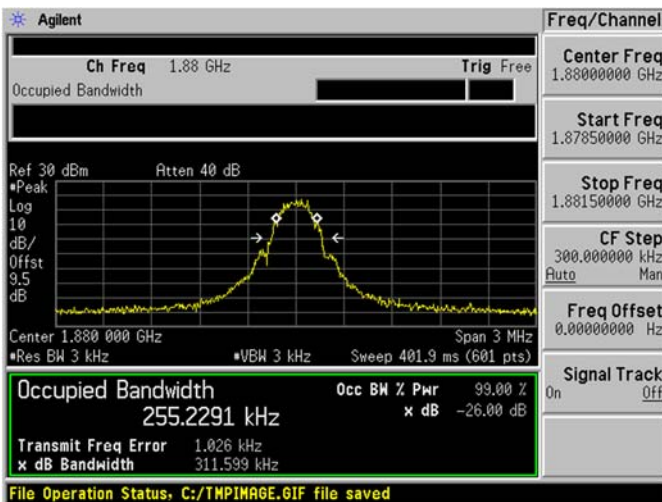
EGPRS 850 MHz HCH



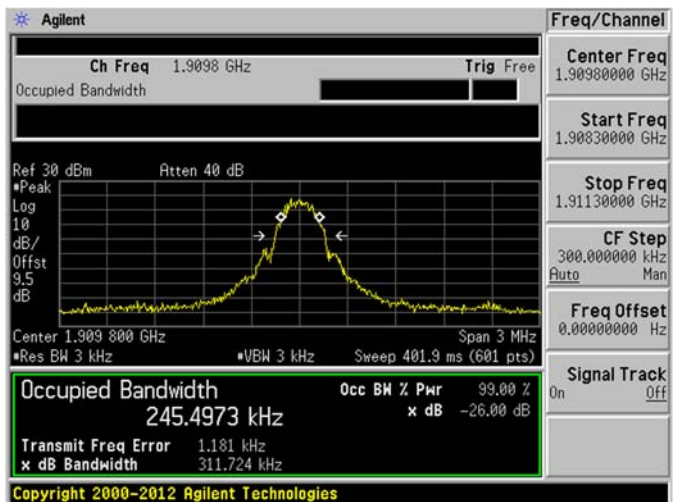
EGPRS 1900 MHz LCH



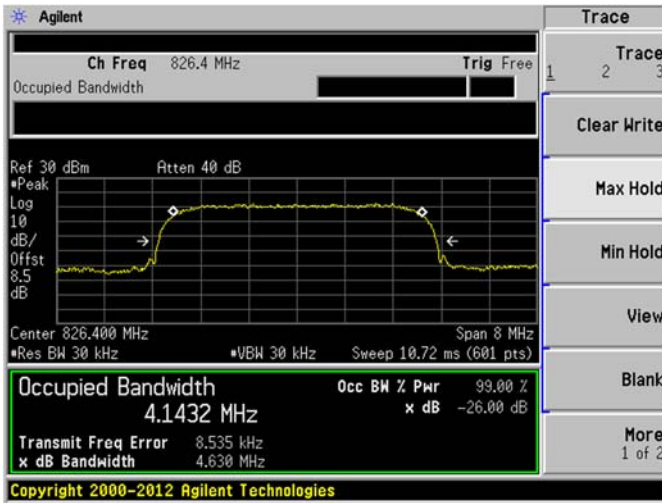
EGPRS 1900 MHz MCH



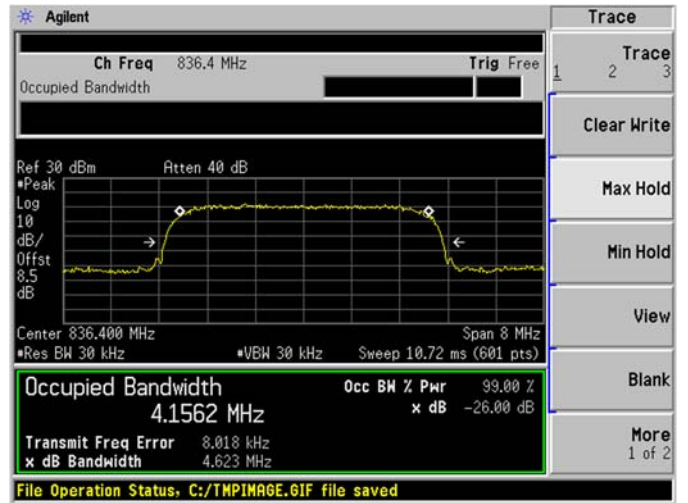
EGPRS 1900 MHz HCH



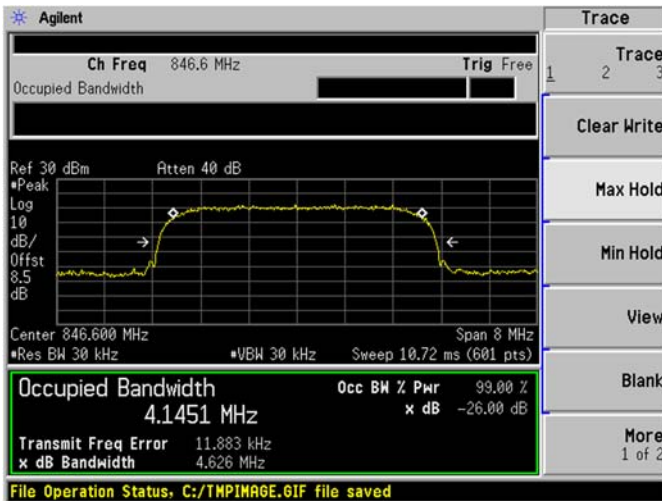
WCDMA 850 MHz LCH



WCDMA 850 MHz MCH



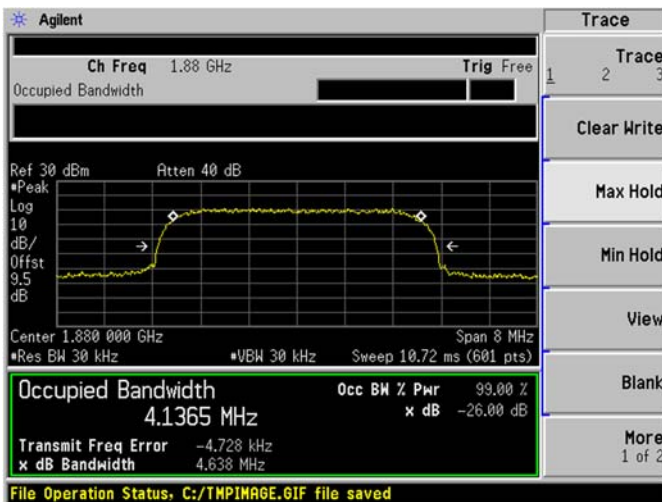
WCDMA 850 MHz HCH



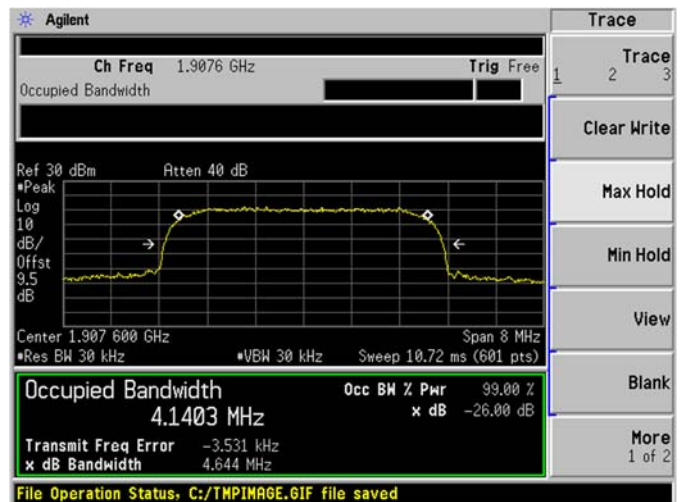
WCDMA 1900 MHz LCH



WCDMA 1900 MHz MCH

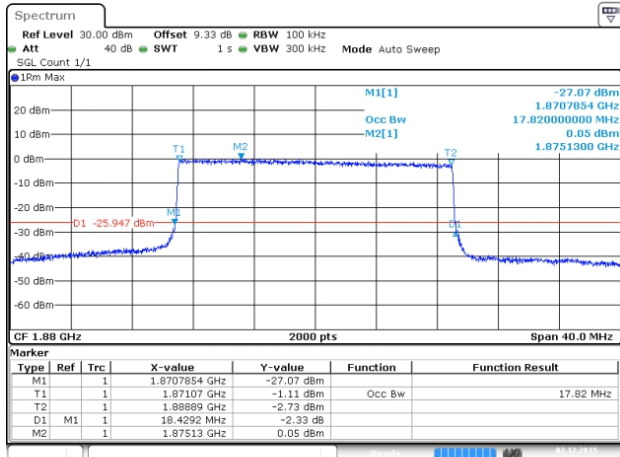


WCDMA 1900 MHz HCH



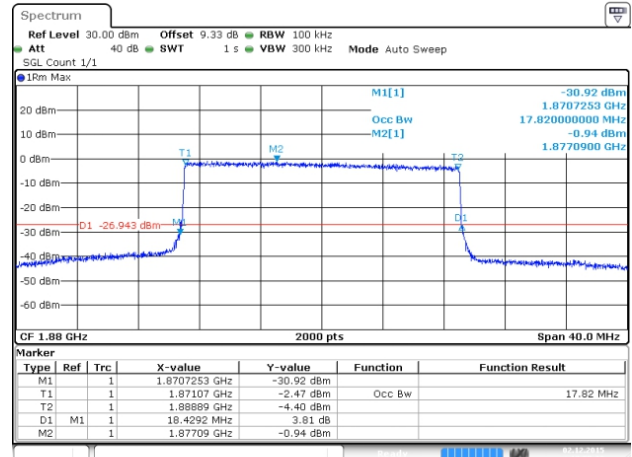
LTE Mode Test Plots

Band 2 QPSK 20 MHz Bandwidth RB100#0 MCH



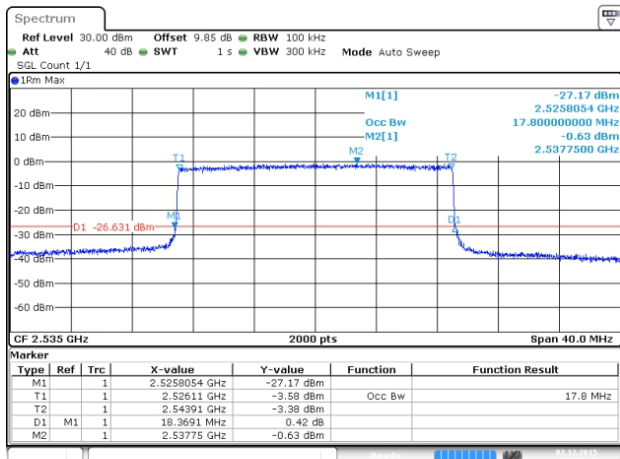
Date: 2 DEC.2015 17:55:13

Band 2 16-QAM 20 MHz Bandwidth RB100#0 MCH



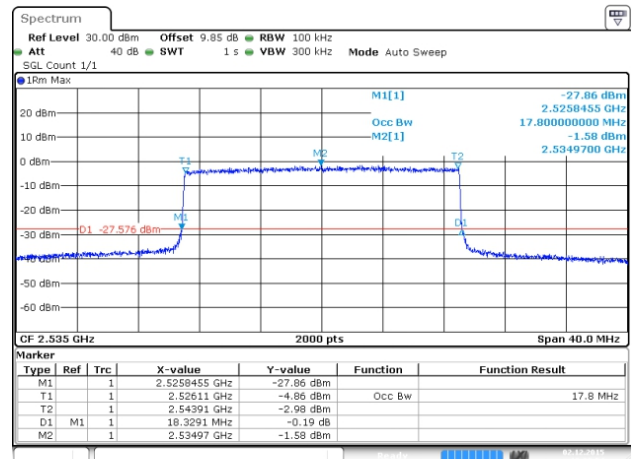
Date: 2 DEC.2015 17:55:20

Band 7 QPSK 20 MHz Bandwidth RB25#0 MCH



Date: 2 DEC.2015 18:09:47

Band 7 16-QAM 20 MHz Bandwidth RB 25#0 MCH



Date: 2 DEC.2015 18:09:54

A.4 Frequency Stability

GSM 850 MHz

Test Conditions		Frequency Deviation						Verdict
Power (VDC)	Temperature (°C)	LCH 824.2 MHz		MCH 836.6 MHz		HCH 848.8 MHz		
		Value (Hz)	Limits (Hz)	Value (Hz)	Limits (Hz)	Value (Hz)	Limits (Hz)	
120	-30	44.85	±2060.5	-49.26	±2091.5	49.67	±2122	Pass
	-20	-35.32		17.68		-23.05		
	-10	46.32		-5.02		2.57		
	0	-13.50		6.48		-49.01		
	+10	14.44		15.54		-9.47		
	+20	0.53		44.74		-38.63		
	+30	-16.85		-0.87		-14.94		
	+40	-42.57		-30.04		48.82		
	+50	37.77		-19.83		-4.88		
138	+25	12.54	-7.84	-15.58				
102	+25	35.15	-10.56	-5.69				

GSM 1900 MHz

Test Conditions		Frequency Deviation						Verdict
Power (VDC)	Temperature (°C)	LCH 1850.2 MHz		MCH 1880 MHz		HCH 1909.8 MHz		
		Value (Hz)	Limits (Hz)	Value (Hz)	Limits (Hz)	Value (Hz)	Limits (Hz)	
120	-30	32.59	±4625.5	-48.71	±4700.0	7.05	±4774.5	Pass
	-20	-36.30		37.40		-34.62		
	-10	-26.20		-24.41		0.53		
	0	27.33		2.14		-12.88		
	+10	46.65		-2.57		-38.03		
	+20	-19.04		-38.55		-22.50		
	+30	-11.10		30.64		-43.34		
	+40	26.40		-6.12		-2.79		
	+50	11.44		22.23		-22.24		
138	+25	-8.11	-15.32	-0.93				
102	+25	-1.98	2.79	-16.28				

GPRS 850 MHz

Test Conditions		Frequency Deviation						Verdict
Power (VDC)	Temperature (°C)	LCH 824.2 MHz		MCH 836.6 MHz		HCH 848.8 MHz		
		Value (Hz)	Limits (Hz)	Value (Hz)	Limits (Hz)	Value (Hz)	Limits (Hz)	
120	-30	4.52	±2060.5	44.18	±2091.5	-2.72	±2122	Pass
	-20	-30.74		22.92		-31.51		
	-10	48.90		-9.16		2.78		
	0	14.51		17.50		37.00		
	+10	25.67		-3.40		27.76		
	+20	13.39		-17.56		-5.15		
	+30	11.99		4.81		35.59		
	+40	30.40		33.68		-24.71		
+50	15.63	-21.06	-20.96					
138	+25	-3.49	-6.93	-14.66				
102	+25	-12.11	-10.72	-5.02				

GPRS 1900 MHz

Test Conditions		Frequency Deviation						Verdict
Power (VDC)	Temperature (°C)	LCH 1850.2 MHz		MCH 1880 MHz		HCH 1909.8 MHz		
		Value (Hz)	Limits (Hz)	Value (Hz)	Limits (Hz)	Value (Hz)	Limits (Hz)	
120	-30	37.57	±4625.5	-24.21	±4700.0	-4.00	±4774.5	Pass
	-20	-2.12		-45.32		-7.65		
	-10	-5.64		16.84		36.14		
	0	-4.26		-12.65		24.52		
	+10	-0.01		-3.01		27.16		
	+20	-46.18		43.07		9.19		
	+30	46.88		-32.86		-12.51		
	+40	2.27		0.45		7.21		
+50	-26.04	-10.63	-28.03					
138	+25	-0.60	21.88	-1.53				
102	+25	-17.50	17.62	-6.03				

EGPRS 850 MHz

Test Conditions		Frequency Deviation						Verdict
Power (VDC)	Temperature (°C)	LCH 824.2 MHz		MCH 836.6 MHz		HCH 848.8 MHz		
		Value (Hz)	Limits (Hz)	Value (Hz)	Limits (Hz)	Value (Hz)	Limits (Hz)	
120	-30	20.73	±2060.5	-37.73	±2091.5	-8.31	±2122	Pass
	-20	-30.72		-40.56		2.84		
	-10	-47.12		-19.65		10.10		
	0	-26.82		-30.24		8.72		
	+10	-13.01		-21.61		0.10		
	+20	45.99		-16.78		-25.83		
	+30	21.34		-11.50		-40.00		
	+40	-1.29		19.45		13.02		
	+50	-7.22		45.89		-34.35		
138	+25	9.99	10.10	14.47				
102	+25	35.96	51.32	-2.21				

EGPRS 1900 MHz

Test Conditions		Frequency Deviation						Verdict
Power (VDC)	Temperature (°C)	LCH 1850.2 MHz		MCH 1880 MHz		HCH 1909.8 MHz		
		Value (Hz)	Limits (Hz)	Value (Hz)	Limits (Hz)	Value (Hz)	Limits (Hz)	
120	-30	30.75	±4625.5	48.69	±4700.0	-19.75	±4774.5	Pass
	-20	-11.12		-11.29		39.82		
	-10	-37.56		19.96		11.62		
	0	-5.91		33.82		6.10		
	+10	-7.10		-16.64		-10.71		
	+20	-9.59		-17.54		-39.86		
	+30	8.93		12.29		-4.45		
	+40	34.08		-44.56		-31.82		
	+50	16.87		-46.89		-1.30		
138	+25	39.06	32.16	53.81				
102	+25	48.73	19.61	18.77				

WCDMA 850 MHz

Test Conditions		Frequency Deviation						Verdict
Power (VDC)	Temperature (°C)	LCH 826.4 MHz		MCH 836.4 MHz		HCH 846.6 MHz		
		Value (Hz)	Limits (Hz)	Value (Hz)	Limits (Hz)	Value (Hz)	Limits (Hz)	
120	-30	-35.35	±2066	46.84	±2091	21.83	±2116.5	Pass
	-20	-49.53		22.23		21.63		
	-10	33.17		40.32		-35.08		
	0	43.05		-49.20		20.80		
	+10	-47.94		-22.63		-47.39		
	+20	44.84		9.07		43.00		
	+30	-5.39		-7.48		-10.04		
	+40	33.21		-19.03		-38.11		
	+50	-45.32		-4.72		48.70		
138	+25	15.01		-0.56		23.51		
102	+25	0.50		19.71		39.43		

WCDMA 1900 MHz

Test Conditions		Frequency Deviation						Verdict
Power (VDC)	Temperature (°C)	LCH 1852.4 MHz		MCH 1880 MHz		HCH 1907.6 MHz		
		Value (Hz)	Limits (Hz)	Value (Hz)	Limits (Hz)	Value (Hz)	Limits (Hz)	
120	-30	38.85	±4631	17.45	±4700	-32.22	±4769	Pass
	-20	-48.01		38.11		-13.03		
	-10	-40.89		27.70		-1.83		
	0	-21.99		-21.55		-9.49		
	+10	35.10		21.01		-30.54		
	+20	-7.10		-21.65		39.05		
	+30	40.74		-39.16		-23.50		
	+40	29.97		47.06		-40.44		
	+50	25.40		-5.89		48.38		
138	+25	39.04		38.33		17.81		
102	+25	37.00		19.75		42.53		

LTE Band 2 QPSK 10 MHz

Test Conditions		Frequency Deviation		Verdict
Power (VDC)	Temperature (°C)	MCH 1880 MHz		
		Value (Hz)	Limits (Hz)	
120	-30	-41.34	±4700	Pass
	-20	-16.04		
	-10	-43.24		
	0	4.36		
	+10	42.98		
	+20	46.44		
	+30	11.38		
	+40	25.06		
	+50	19.84		
138	+25	32.86		
102	+25	4.44		

LTE Band 2 16-QAM 10 MHz

Test Conditions		Frequency Deviation		Verdict
Power (VDC)	Temperature (°C)	MCH 1880 MHz		
		Value (Hz)	Limits (Hz)	
120	-30	49.95	±4700	Pass
	-20	-23.14		
	-10	-29.57		
	0	17.28		
	+10	-14.32		
	+20	-26.20		
	+30	15.63		
	+40	-49.15		
	+50	-36.91		
138	+25	52.20		
102	+25	53.04		

LTE Band 7 QPSK 10 MHz

Test Conditions		Frequency Deviation		Verdict
Power (VDC)	Temperature (°C)	MCH 2535 MHz		
		Value (Hz)	Limits (Hz)	
120	-30	-25.24	±6337.5	Pass
	-20	-46.34		
	-10	-19.17		
	0	5.02		
	+10	-43.86		
	+20	16.23		
	+30	18.07		
	+40	36.04		
138	+50	-48.44		
138	+25	-15.04		
102	+25	-6.86		

LTE Band 7 16-QAM 10 MHz

Test Conditions		Frequency Deviation		Verdict
Power (VDC)	Temperature (°C)	MCH 2535 MHz		
		Value (Hz)	Limits (Hz)	
120	-30	-35.32	±6337.5	Pass
	-20	16.36		
	-10	27.58		
	0	-10.41		
	+10	45.25		
	+20	-37.47		
	+30	-44.33		
	+40	-46.74		
138	+50	39.63		
138	+25	-17.60		
102	+25	-8.44		

A.5 Spurious Emission at Antenna Terminals

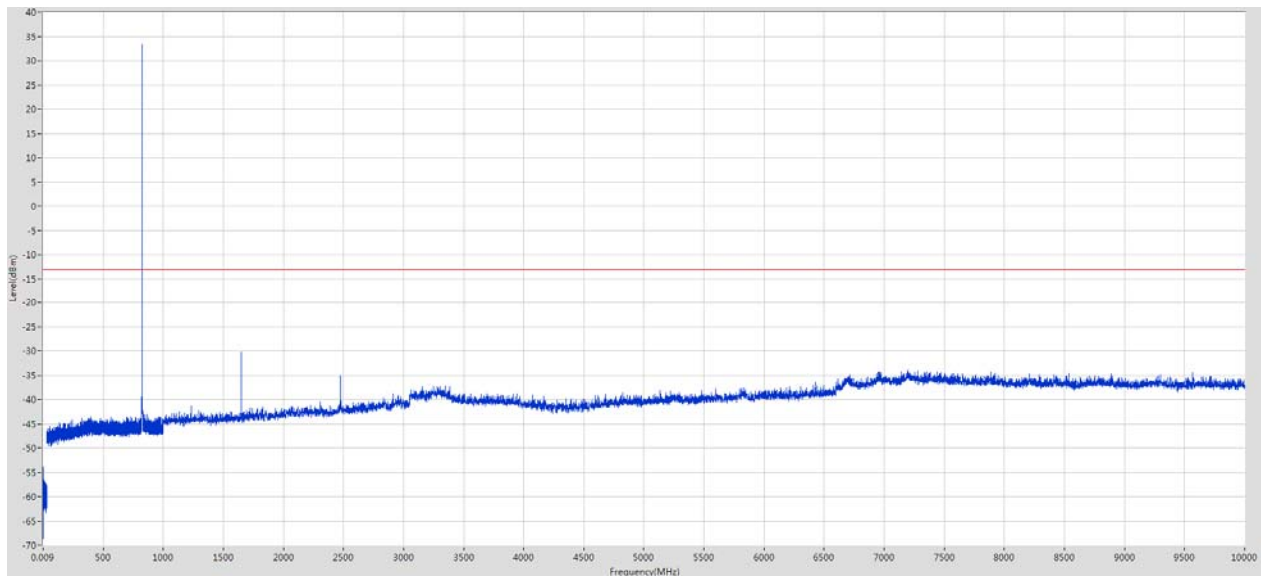
Note 1: GSM and EGPRS modes have been verified, only the worst data with different data bandwidth show here.

Note 2: The frequency of verdict which mark by "N/A" should be ignored because they are MS carrier frequency.

Test Data

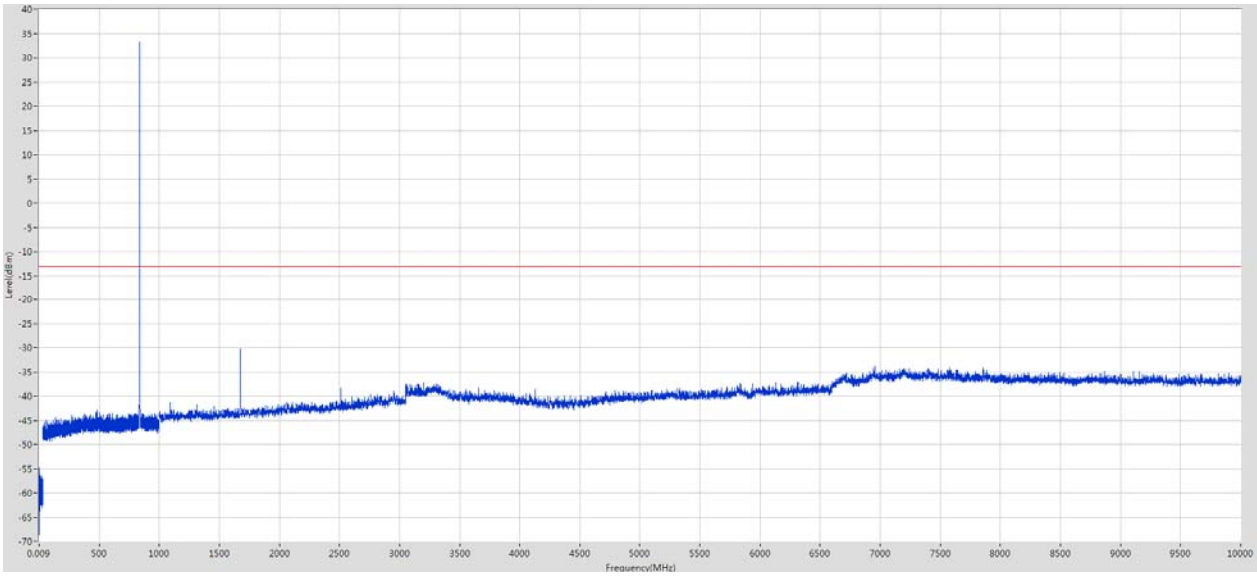
GSM 850 MHz LCH

Start Frequency [MHz]	Stop Frequency [MHz]	RBW [MHz]	Detector	Frequency [Hz]	Emission [dBm]	Limit [dBm]	Verdict	Sweep Point
0.009	0.15	0.001	Peak	9.705	-56.02	-13	Pass	601
0.15	30	0.01	Peak	370.074	-53.9	-13	Pass	2985
30	500	0.1	Peak	393.9774 42	-43.53	-13	Pass	4700
500	1000	0.1	Peak	824.1648 33	33.33	-13	--	5000
1000	10000	1	Peak	1648.079 111	-30.3	-13	Pass	9000



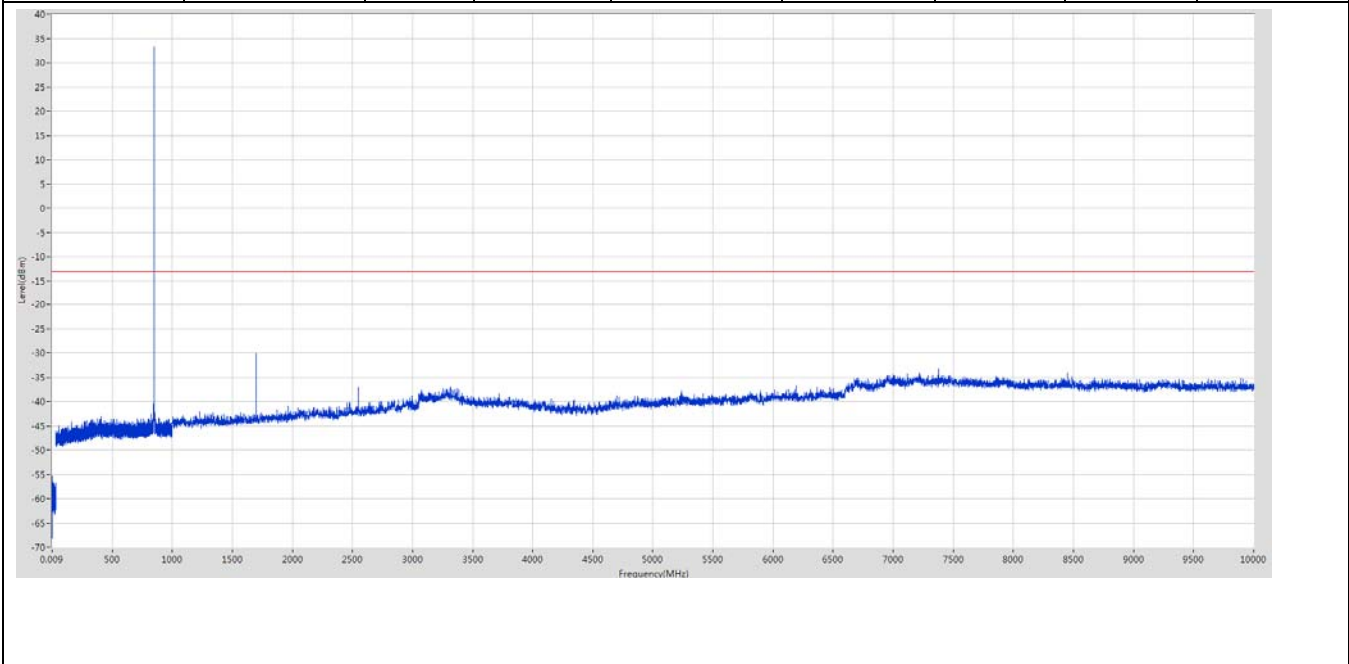
GSM 850 MHz MCH

Start Frequency [MHz]	Stop Frequency [MHz]	RBW [MHz]	Detect or	Frequency [Hz]	Emission [dBm]	Limit [dBm]	Verdict	Sweep Point
0.009	0.15	0.001	Peak	9.47	-55.89	-13	Pass	601
0.15	30	0.01	Peak	320.057	-54.73	-13	Pass	2985
30	500	0.1	Peak	484.39668	-42.91	-13	Pass	4700
500	1000	0.1	Peak	836.567313	33.29	-13	--	5000
1000	10000	1	Peak	1673.082163	-30.24	-13	Pass	9000



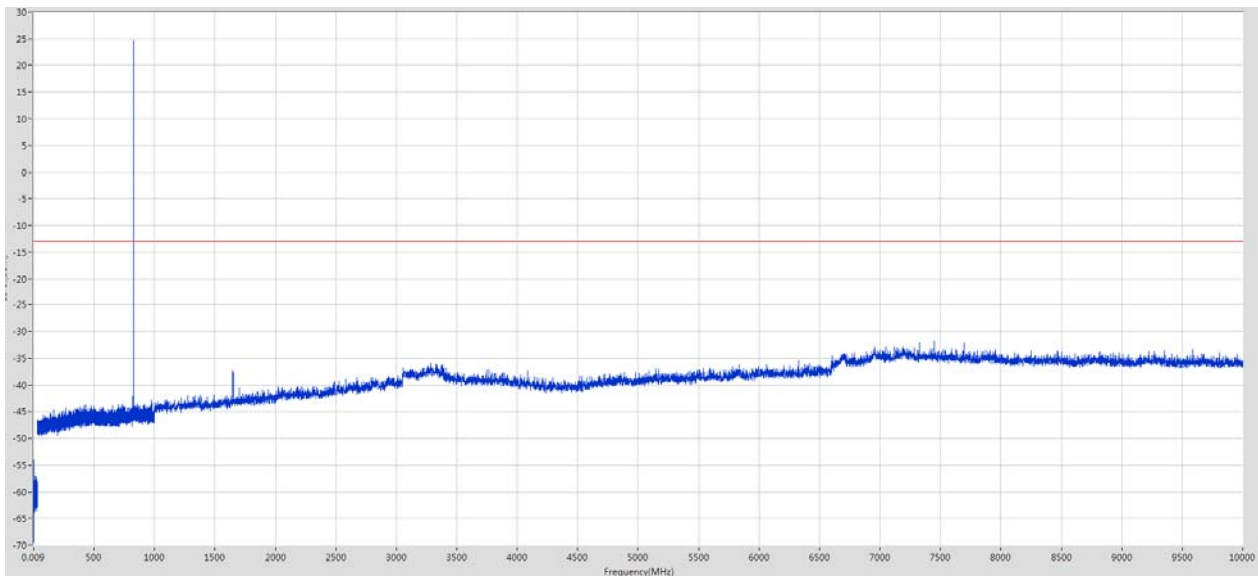
GSM 850 MHz HCH

Start Frequency [MHz]	Stop Frequency [MHz]	RBW [MHz]	Detector	Frequency [Hz]	Emission [dBm]	Limit [dBm]	Verdict	Sweep Point
0.009	0.15	0.001	Peak	10.175	-57.74	-13	Pass	601
0.15	30	0.01	Peak	370.074	-55.39	-13	Pass	2985
30	500	0.1	Peak	412.181315	-43.12	-13	Pass	4700
500	1000	0.1	Peak	848.769754	33.25	-13	--	5000
1000	10000	1	Peak	1698.085215	-30.1	-13	Pass	9000



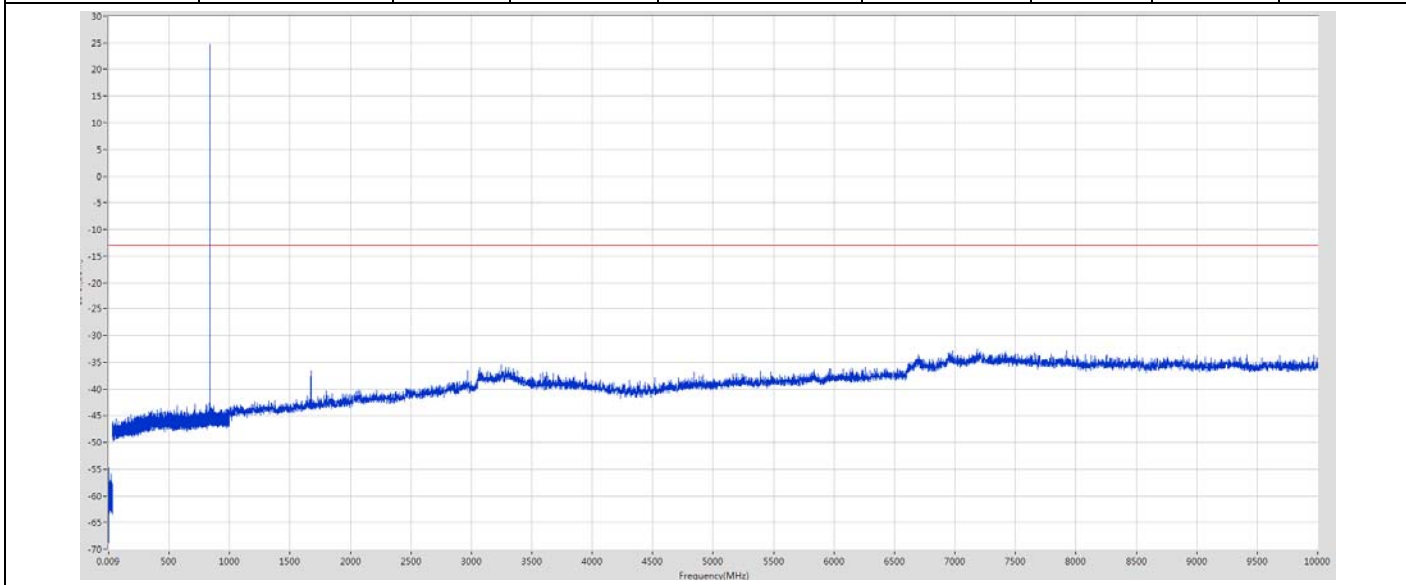
EDGE 850 MHz LCH

Start Frequency [MHz]	Stop Frequency [MHz]	RBW [MHz]	Detector	Frequency [Hz]	Emission [dBm]	Limit [dBm]	Verdict	Sweep Point
0.009	0.15	0.001	Peak	9.235 k	-57.86	-13	Pass	601
0.15	30	0.01	Peak	240.03 k	-54.06	-13	Pass	2985
30	500	0.1	Peak	429.384976 M	-43.71	-13	Pass	4700
500	1000	0.1	Peak	824.264853 M	24.65	-13	---	5000
1000	10000	1	Peak	7450.78745 M	-31.81	-13	Pass	9000



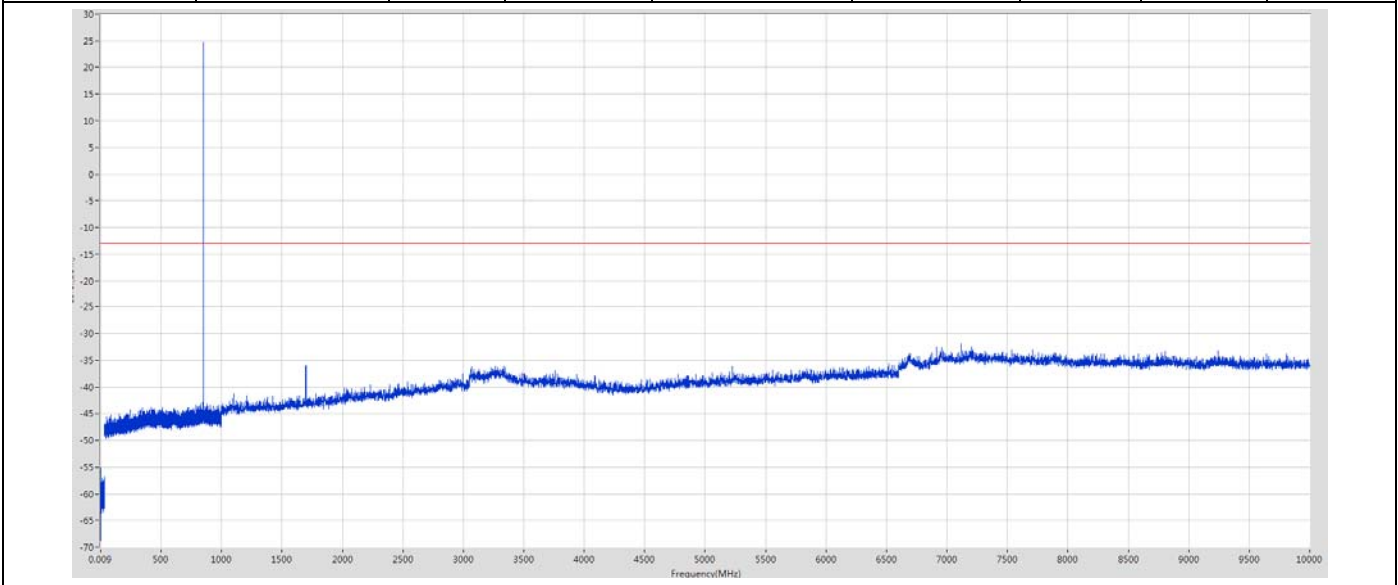
EDGE 850 MHz MCH

Start Frequency [MHz]	Stop Frequency [MHz]	RBW [MHz]	Detector	Frequency [Hz]	Emission [dBm]	Limit [dBm]	Verdict	Sweep Point
0.009	0.15	0.001	Peak	9 k	-57.16	-13	Pass	601
0.15	30	0.01	Peak	350.067 k	-54.73	-13	Pass	2985
30	500	0.1	Peak	428.684827 M	-43.72	-13	Pass	4700
500	1000	0.1	Peak	836.667333 M	24.71	-13	---	5000
1000	10000	1	Peak	7181.754609 M	-32.56	-13	Pass	9000



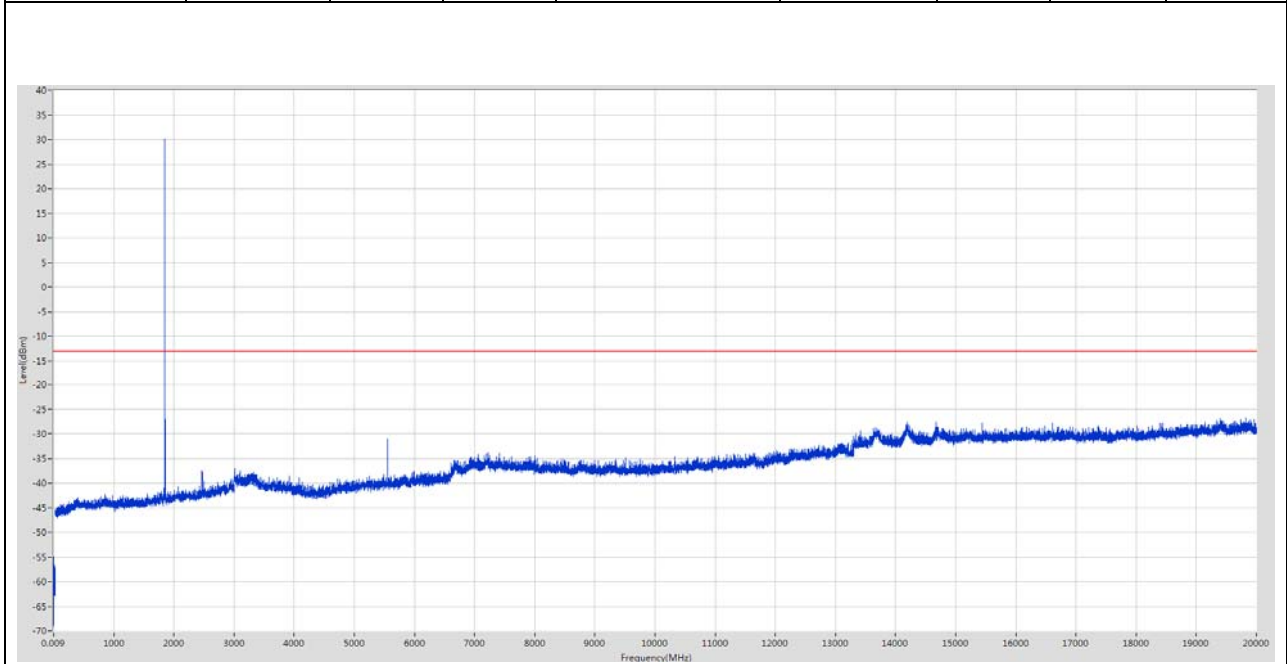
EDGE 850 MHz HCH

Start Frequency [MHz]	Stop Frequency [MHz]	RBW [MHz]	Detector	Frequency [Hz]	Emission [dBm]	Limit [dBm]	Verdict	Sweep Point
0.009	0.15	0.001	Peak	9.47 k	-57.21	-13	Pass	601
0.15	30	0.01	Peak	530.127 k	-55.23	-13	Pass	2985
30	500	0.1	Peak	421.483294 M	-43.86	-13	Pass	4700
500	1000	0.1	Peak	848.769754 M	24.63	-13	---	5000
1000	10000	1	Peak	7117.746795 M	-31.97	-13	Pass	9000



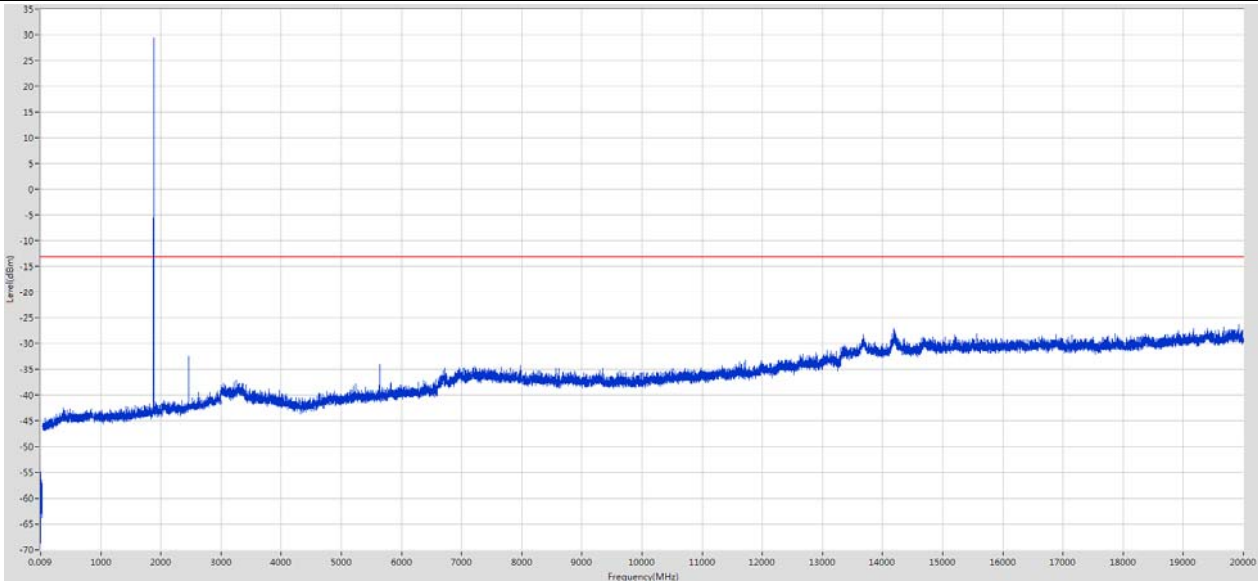
GSM 1900 MHz LCH

Start Frequency [MHz]	Stop Frequency [MHz]	RBW [MHz]	Detect or	Frequency [Hz]	Emission [dBm]	Limit [dBm]	Verdict	Sweep Point
0.009	0.15	0.001	Peak	12.525	-57.33	-13	Pass	601
0.15	30	0.01	Peak	340.064	-55	-13	Pass	2985
30	1000	1	Peak	854.850361	-42.38	-13	Pass	970
1000	3000	1	Peak	1850.425213	27.36	-13	--	2000
3000	20000	1	Peak	19826.718699	-26.82	-13	Pass	17000



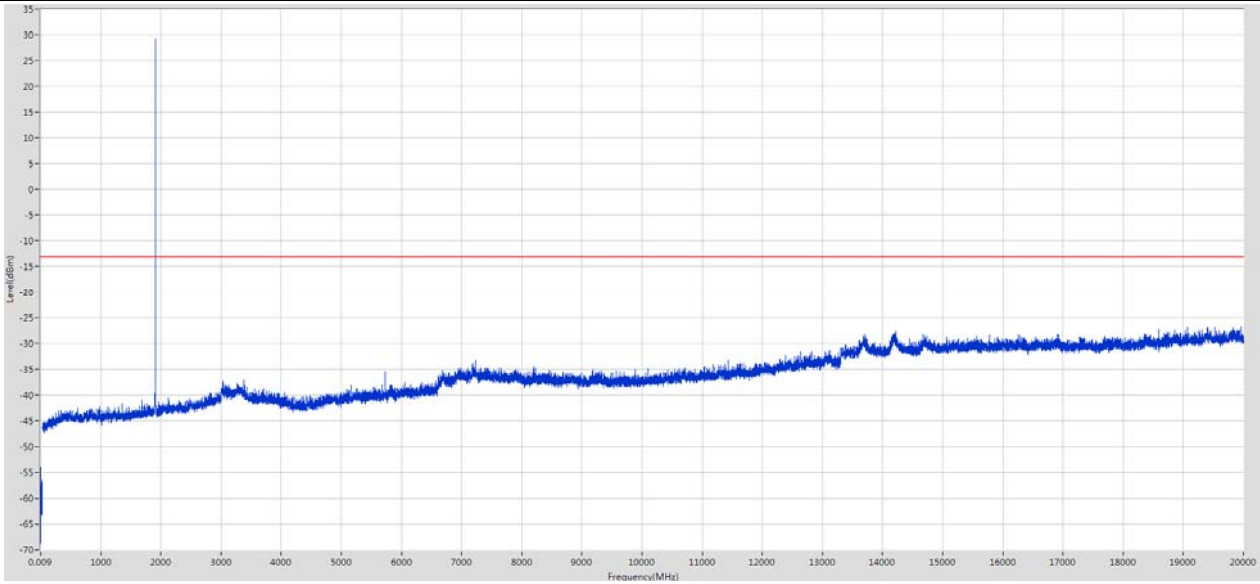
GSM 1900 MHz MCH

Start Frequency [MHz]	Stop Frequency [MHz]	RBW [MHz]	Detector	Frequency [Hz]	Emission [dBm]	Limit [dBm]	Verdict	Sweep Point
0.009	0.15	0.001	Peak	10.175	-55.74	-13	Pass	601
0.15	30	0.01	Peak	160.003	-54.87	-13	Pass	2985
30	1000	1	Peak	379.360165	-42.54	-13	Pass	970
1000	3000	1	Peak	1879.43972	27.47	-13	--	2000
3000	20000	1	Peak	19924.878049	-26.4	-13	Pass	17000



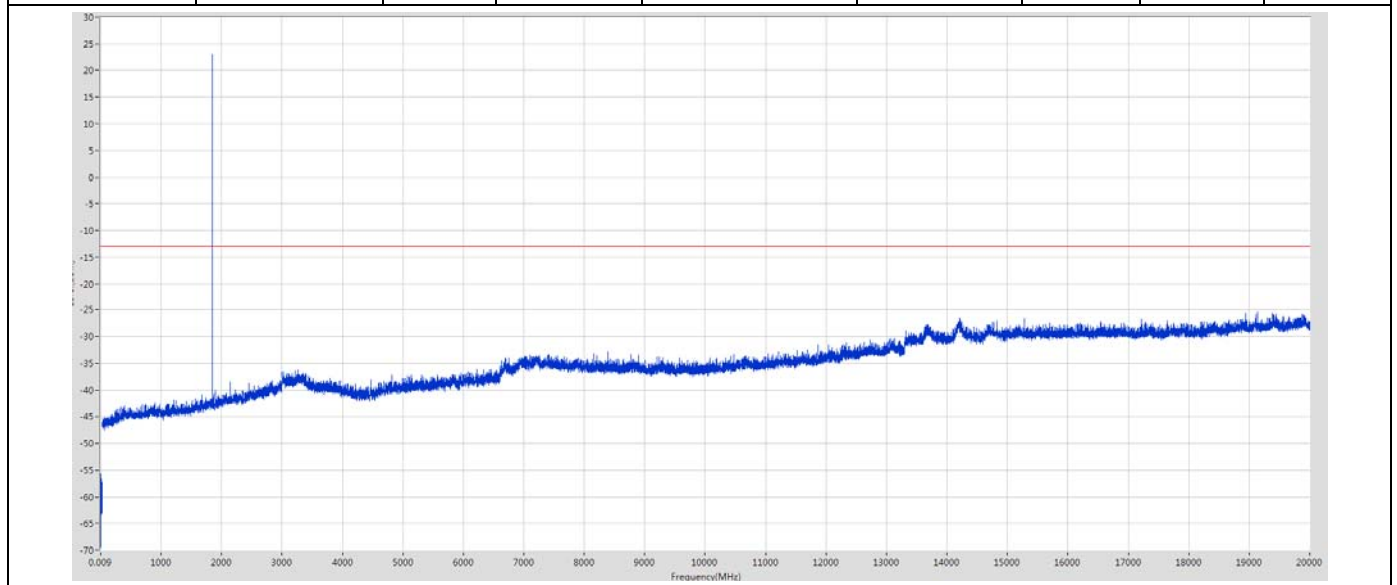
GSM 1900 MHz HCH

Start Frequency [MHz]	Stop Frequency [MHz]	RBW [MHz]	Detector	Frequency [Hz]	Emission [dBm]	Limit [dBm]	Verdict	Sweep Point
0.009	0.15	0.001	Peak	9.47	-55.04	-13	Pass	601
0.15	30	0.01	Peak	220.023	-53.93	-13	Pass	2985
30	1000	1	Peak	973.973168	-42.17	-13	Pass	970
1000	3000	1	Peak	1910.455228	29.27	-13	--	2000
3000	20000	1	Peak	19964.943089	-26.78	-13	Pass	17000



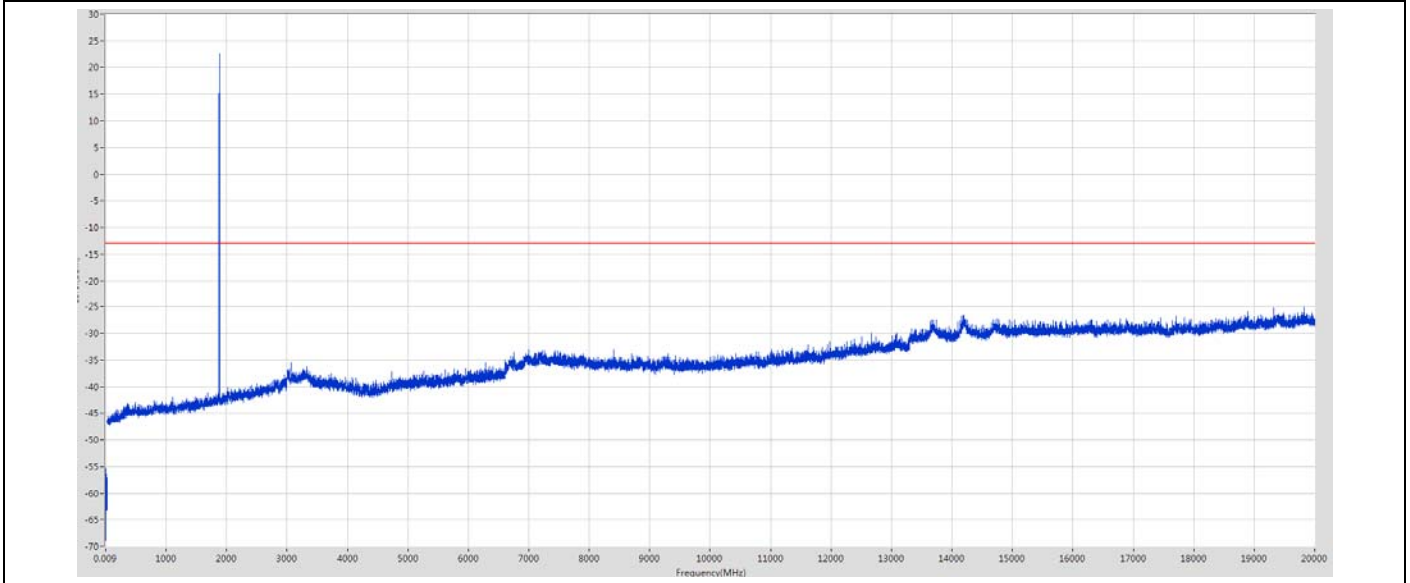
EDGE 1900 MHz LCH

Start Frequency [MHz]	Stop Frequency [MHz]	RBW [MHz]	Detector	Frequency [Hz]	Emission [dBm]	Limit [dBm]	Verdict	Sweep Point
0.009	0.15	0.001	Peak	9 k	-57.71	-13	Pass	601
0.15	30	0.01	Peak	470.107 k	-55.76	-13	Pass	2985
30	1000	1	Peak	899.896801 M	-42.43	-13	Pass	970
1000	3000	1	Peak	1850.425213 M	22.97	-13	---	2000
3000	20000	1	Peak	19132.969357 M	-25.33	-13	Pass	17000



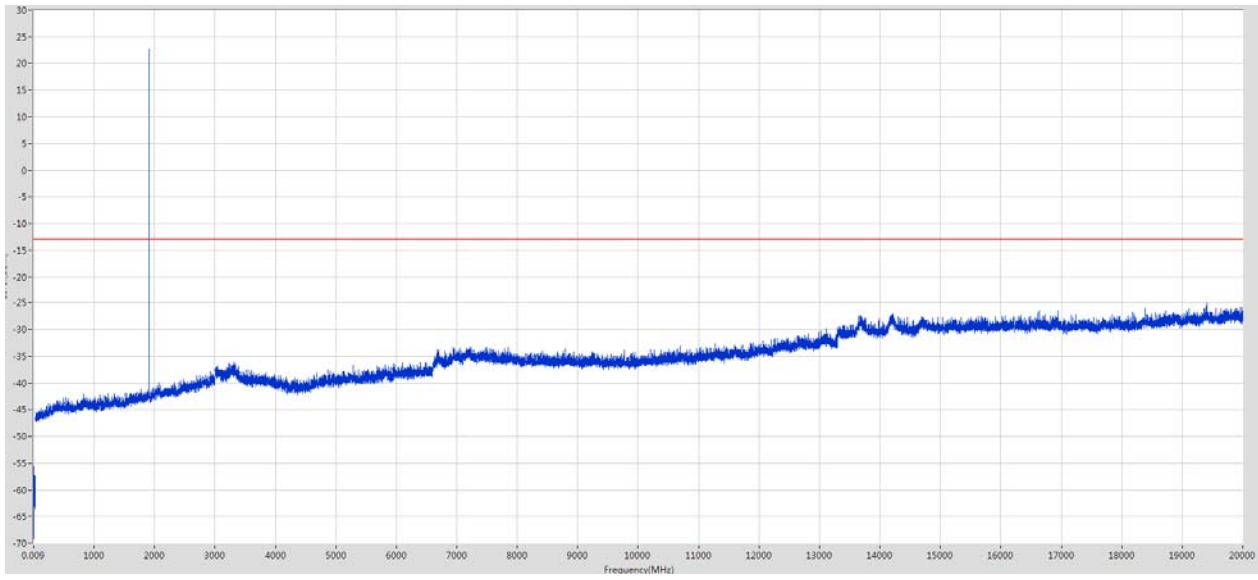
EDGE 1900 MHz MCH

Start Frequency [MHz]	Stop Frequency [MHz]	RBW [MHz]	Detector	Frequency [Hz]	Emission [dBm]	Limit [dBm]	Verdict	Sweep Point
0.009	0.15	0.001	Peak	9.705 k	-56.76	-13	Pass	601
0.15	30	0.01	Peak	330.06 k	-55.31	-13	Pass	2985
30	1000	1	Peak	805.799794 M	-42.61	-13	Pass	970
1000	3000	1	Peak	1879.43972 M	22.59	-13	---	2000
3000	20000	1	Peak	19826.718699 M	-25.11	-13	Pass	17000



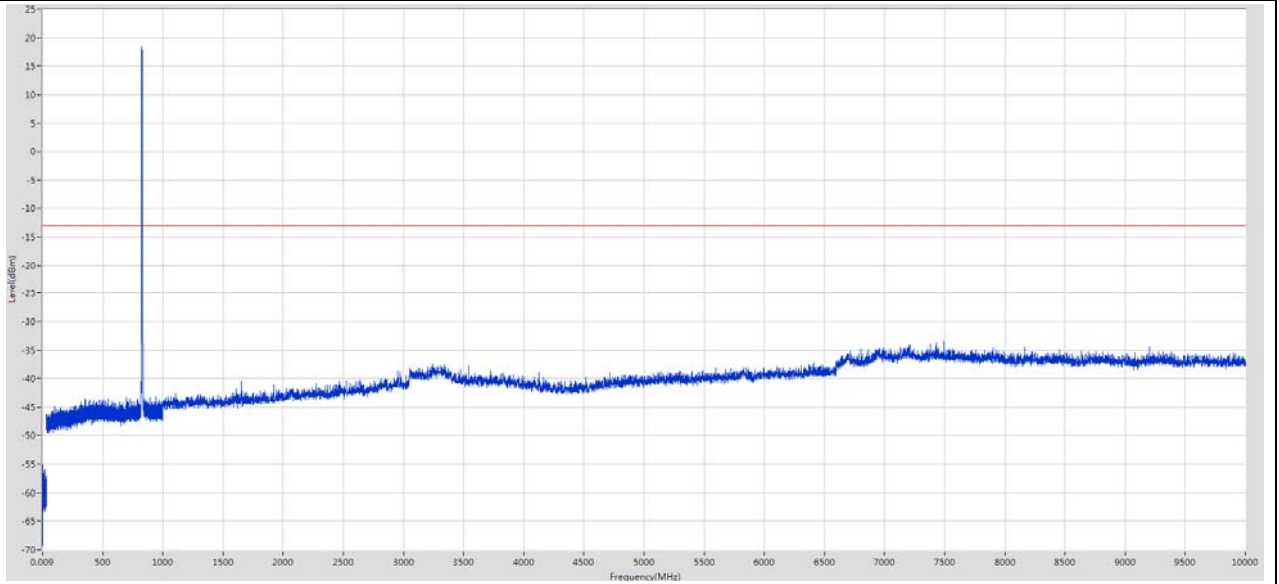
EDGE 1900 MHz HCH

Start Frequency [MHz]	Stop Frequency [MHz]	RBW [MHz]	Detector	Frequency [Hz]	Emission [dBm]	Limit [dBm]	Verdict	Sweep Point
0.009	0.15	0.001	Peak	10.175 k	-56.48	-13	Pass	601
0.15	30	0.01	Peak	170.007 k	-55.54	-13	Pass	2985
30	1000	1	Peak	830.825593 M	-42.17	-13	Pass	970
1000	3000	1	Peak	1909.454727 M	22.67	-13	---	2000
3000	20000	1	Peak	19403.030894 M	-25.17	-13	Pass	17000



WCDMA 850 MHz LCH

Start Frequency [MHz]	Stop Frequency [MHz]	RBW [MHz]	Detector	Frequency [Hz]	Emission [dBm]	Limit [dBm]	Verdict	Sweep Point
0.009	0.15	0.001	Peak	10.41	-55.11	-13	Pass	601
0.15	30	0.01	Peak	160.003	-55.15	-13	Pass	2985
30	500	0.1	Peak	351.268355	-43.54	-13	Pass	4700
500	1000	0.1	Peak	825.565113	18.33	-13	--	5000
1000	10000	1	Peak	7491.792455	-33.46	-13	Pass	9000



WCDMA 850 MHz MCH

Start Frequency [MHz]	Stop Frequency [MHz]	RBW [MHz]	Detector	Frequency [Hz]	Emission [dBm]	Limit [dBm]	Verdict	Sweep Point
0.009	0.15	0.001	Peak	9.47	-56.96	-13	Pass	601
0.15	30	0.01	Peak	220.023	-54.02	-13	Pass	2985
30	500	0.1	Peak	405.879974	-43.21	-13	Pass	4700
500	1000	0.1	Peak	836.967393	17.27	-13	--	5000
1000	10000	1	Peak	7184.754975	-33.57	-13	Pass	9000

