

TEST REPORT

Applicant: Jiangsu Niu Electric Technology Co., Ltd.
Address: No.387.ChangtingRd,WEZ,Wujin,Changzhou,Jiangsu Province.China
Equipment Type: Smart Central Controller
Model Name: V51A
Brand Name: NIU
FCC ID: 2AZ6G-V51A
Test Standard: 47 CFR Part 2
(Others refer to chapter 3.1)
Sample Arrival Date: Nov. 13, 2024
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ISSUED BY:

Shanghai Tejet Communications Technology Co., Ltd. Testing Center



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Revision History

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<u>Rev. 01</u>	<u>Dec 12, 2024</u>	<u>Initial Issue</u>
<u>Rev. 02</u>	<u>Jan.15, 2025</u>	<u>Update FCC ID.</u> <u>The original report is invalid.</u>

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1 GENERAL INFORMATION

1.1 Test Laboratory

Name	Shanghai Tejet Communications Technology Co., Ltd. Testing Center
Address	1-2/F., Building 1, No.222, Xuanlan Road, Xuanqiao, Pudong New District, Shanghai, China

1.2 Test Location

Name	Shanghai Tejet Communications Technology Co., Ltd. Testing Center
Location	1-2/F., Building 1, No.222, Xuanlan Road, Xuanqiao, Pudong New District, Shanghai, China
Accreditation Certificate	The laboratory is a testing organization accredited by FCC as a accredited testing laboratory.The designation number is CN1352

2 PRODUCT INFORMATION

2.1 Applicant Information

Applicant	Jiangsu Niu Electric Technology Co., Ltd.
Address	No.387.ChangtingRd,WEZ,Wujin,Changzhou,Jiangsu Province.China

2.2 Manufacturer Information

Manufacturer	Jiangsu Niu Electric Technology Co., Ltd.
Address	No.387.ChangtingRd,WEZ,Wujin,Changzhou,Jiangsu Province.China

2.3 Factory Information

Factory	N/A
Address	N/A

2.4 General Description for Equipment under Test (EUT)

EUT Name	Smart Central Controller
Model Name Under Test	V51A
Series Model Name	N/A
Description of Model name differentiation	N/A
Sample No	SC-SH2490068-S02
Hardware Version	V0.2
Software Version	V5A01A29+V1Q02V01
Dimensions (Approx.)	N/A
Weight (Approx.)	N/A

2.5 Technical Information

All Network and Wireless connectivity for EUT	3G Network WCDMA/HSDPA/HSUPA Band 2/4/5 4G Network LTE FDD Band 2/4/12 GPS, GLONASS
About the Product	The equipment is Smart Central Controller Terminal, intended for used with information technology equipment.

The following is the technical information of the EUT tested frequency bands in this report.

Operating Bands		WCDMA/HSDPA/HSUPA Band 2/4/5 FDD LTE Band 2/4/12	
		WCDMA	QPSK
		HSDPA /HSUPA	QPSK
			16QAM
		LTE	QPSK/16QAM
Antenna Type		PIFA Antenna	
Antenna Gain		WCDMA/HSDPA/HSUPA Band 2: 1.0 dBi WCDMA/HSDPA/HSUPA Band 4: 1.0 dBi WCDMA/HSDPA/HSUPA Band 5: 2.0 dBi FDD LTE Band 2: 1.0 dBi FDD LTE Band 4: 1.0 dBi FDD LTE Band 12: 0.5 dBi	
The Max RF Output Power (EIRP/ERP)		WCDMA/HSDPA/HSUPA Band 2: 24.17 dBm WCDMA/HSDPA/HSUPA Band 4: 24.44 dBm WCDMA/HSDPA/HSUPA Band 5: 22.98 dBm FDD LTE Band 2: 24.47 dBm FDD LTE Band 4: 24.35 dBm FDD LTE Band 12: 21.69 dBm	
Band	Power Class	Tx Frequency Range	Rx Frequency Range
WCDMA B2	3	1850 MHz ~ 1910 MHz	1930 MHz ~ 1990 MHz
WCDMA B4	3	1710 MHz ~ 1755 MHz	2110 MHz ~ 2155 MHz
WCDMA B5	3	824 MHz ~ 849 MHz	869 MHz ~ 894 MHz
LTE B2	3	1850 MHz ~ 1910 MHz	1930 MHz ~ 1990 MHz
LTE B4	3	1710 MHz ~ 1755 MHz	2110 MHz ~ 2155 MHz
LTE B12	3	699 MHz ~ 716 MHz	729 MHz ~ 746 MHz

Note1: The EUT information provided by the applicant, except for The Max RF Conducted Power. For more detailed band specifications and features description, please refer to the manufacturer's specifications or user's manual.

3 SUMMARY OF TEST RESULTS

3.1 Test Standards

No.	Identity	Document Title
1	47 CFR Part 2	Frequency Allocations and Radio Treaty Matters; General Rules and Regulations
2	47 CFR Part 22 Subpart H	Cellular Radiotelephone Service
3	47 CFR Part 24 Subpart E	Broadband PCS
4	47 CFR Part 27	Miscellaneous Wireless Communications Services
5	ANSI C63.26-2015	American National Standard for Compliance Testing of Transmitters Used in Licensed Radio Services
6	KDB 971168 D01 v03	Measurement Guidance for Certification of Licensed Digital Transmitters

3.2 Test Verdict

No.	Test Description	FCC Part No.	Test Result	Test Verdict
1	Conducted RF Output Power	2.1046	Reporting only (ANNEX A.1)	Pass
2	Effective (Isotropic) Radiated Power	2.1046 22.913 24.232 27.50	ANNEX A.1	Pass
3	Peak to Average Ratio	2.1046 22.913(d) 24.232(d) 27.50(d)	ANNEX A.2	Pass
4	Occupied Bandwidth	2.1049 22.917 24.238 27.53	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	ANNEX A.5	Pass
7	Band Edge	2.1051 22.917 24.238 27.53	ANNEX A.6	Pass
8	Field Strength of Spurious Radiation	2.1053 22.917 24.238 27.53	ANNEX A.7	Pass

Note 1: The RF module installed in the EUT is electronically and mechanically identical to the original certified module in the test report PKS160908001-00A, RTWK160705001-00, which was issued by Bay Area Compliance Laboratories Corp(Taiwan). on Sep.08,2016 and July.01, 2016, so just Maximum Output Power and Radiated Spurious Emissions were retested in this report. Other test items please refer to the No. of test reports is PKS160908001-00A, RTWK160705001-00, and it issued by Bay Area Compliance Laboratories Corp(Taiwan).

3.3 Decision Rule

☐ No Need

☒ Use General conformity decision rule (Consider uncertainty or not ☒ No ☐ Yes)

☐ Use Special Conformity Decision Rule (Consider uncertainty or not ☐ No ☐ Yes)

4 GENERAL TEST CONFIGURATIONS

4.1 Test Environments

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

Relative Humidity		25% to 75%
Atmospheric Pressure		98 kPa to 102 kPa
Test Voltage of the EUT	NV (Normal Voltage)	48 V
	LV (Low Voltage)	40 V
	HV (High Voltage)	72 V
Test Temperature of the EUT	NT (Normal Temperature)	15 °C to 35 °C
	LT (Low Temperature)	-10°C
	HT (High Temperature)	55°C

4.2 Test Equipment List

Description	Manufacturer	Model	Equipment No.	Software /Firmware Version	Cal. Date	Cal. Due
BL410 2G/3G/4G RF Test System						
Wideband Radio Communication Tester	R&S	CMW 500	BH-EMC-L09 4	V3.7.172	2024/2/22	2025/2/21
Spectrum Analyzer	Agilent	E4440A	BH-EMC-L02 7	A.11.21	2024/2/21	2025/2/20
Spectrum Analyzer	Keysight	N9020A	BH-EMC-L06 6	A.17.05	2024/2/22	2025/2/21
Temperature Chamber	ESPEC	ECT	BH-EMC-L06 8	NA	2024/4/18	2025/4/17
DC Power Supply	ITECH	IT6863A	BH-EMC-L11 3	NA	2024/2/22	2025/2/21
Vector Signal Generator	Agilent	E4438C	BH-EMC-L02 8	C.05.76	2024/2/22	2025/2/21
Analog Signal Generator	Keysight	N5173B	BH-EMC-L07 4	B.01.90	2024/2/19	2025/2/18
Test Software	BALUN	BL410R	NA	V3.0.1.539	N/A	N/A
Radiated Test System						
Test Antenna-Bi-Log	SCHWARZB ECK	VULB 9163	BH-EMC-L00 8	NA	2024/3/11	2027/3/10
Test Antenna-Horn	Schwarzbeck	BBHA 9120D	BH-EMC-L04 4	NA	2024/3/11	2027/3/10

Anechoic Chamber	YIHENG	9m*6m*6m	BH-EMC-L001	NA	2024/4/14	2027/4/13
EMI Receiver	KEYSIGHT	N9038A	BH-EMC-L015	A.21.06	2024/2/21	2025/2/20
Wideband Radio Communication Tester	R&S	CMW 500	BH-EMC-L094	V3.7.172	2024/2/22	2025/2/21
Test Software	BALUN	BL410-E	NA	V21.919	N/A	N/A

4.3 Test Configurations

Test Items	Test Mode	Test Channel		
		LCH	MCH	HCH
Effective (Isotropic) Radiated Power	WCDMA Band 2	v	v	v
	WCDMA Band 4	v	v	v
	WCDMA Band 5	v	v	v
	HSDPA Band 2	v	v	v
	HSDPA Band 4	v	v	v
	HSDPA Band 5	v	v	v
	HSUPA Band 2	v	v	v
	HSUPA Band 4	v	v	v
	HSUPA Band 5	v	v	v
Peak to Average Ratio	WCDMA Band 2	v	v	v
	WCDMA Band 4	v	v	v
	WCDMA Band 5	v	v	v
Occupied Bandwidth	WCDMA Band 2	v	v	v
	WCDMA Band 4	v	v	v
	WCDMA Band 5	v	v	v
Frequency Stability	WCDMA Band 2	v	v	v
	WCDMA Band 4	v	v	v
	WCDMA Band 5	v	v	v
Spurious Emission at Antenna Terminals	WCDMA Band 2	v	v	v
	WCDMA Band 4	v	v	v
	WCDMA Band 5	v	v	v
Band Edge	WCDMA Band 2	v	--	v
	WCDMA Band 4	v	--	v
	WCDMA Band 5	v	--	v
Field Strength of Spurious Radiation	WCDMA Band 2	v	v	v
	WCDMA Band 4	v	v	v
	WCDMA Band 5	v	v	v
Note 1: The mark “v” means that this configuration is chosen for testing.				

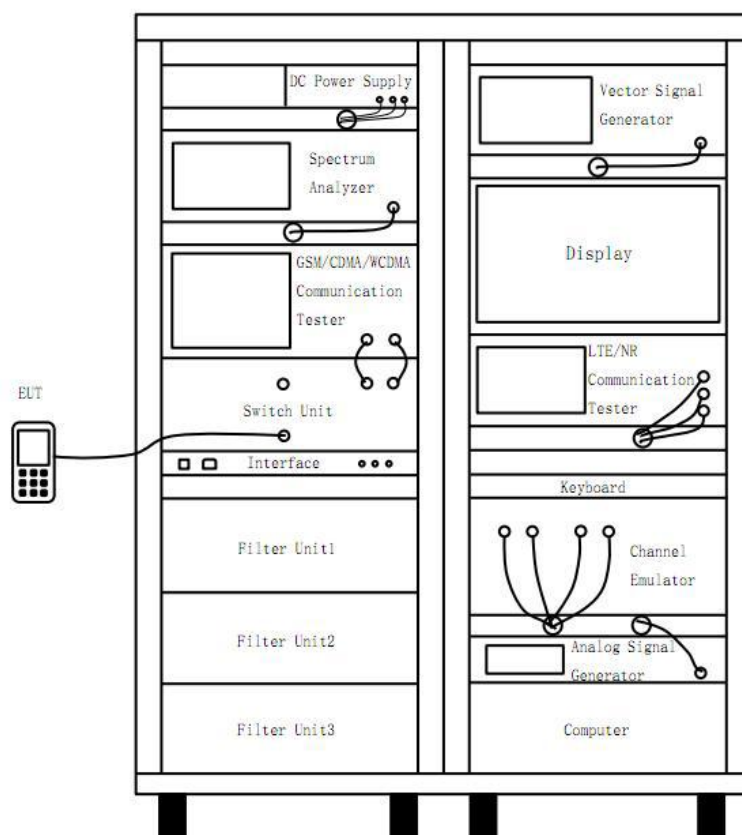
Test Mode	UL Channel	UL Channel No.	UL Frequency (MHz)
WCDMA Band 2	Low Channel	9262	1852.4
	Middle Channel	9400	1880.0
	High Channel	9538	1907.6
WCDMA Band 4	Low Channel	1312	1712.4
	Middle Channel	1412	1732.4
	High Channel	1513	1752.6
WCDMA Band 5	Low Channel	4132	826.4
	Middle Channel	4182	836.4
	High Channel	4233	846.6

LTE Band	Bandwidth (MHz)						Modulation Type		RB#			Test Channel		
	1.4	3	5	10	15	20	QPSK	16-QAM	1	Half	Full	LCH	MCH	HCH
Effective (Isotropic) Radiated Power														
2	v	v	v	v	v	v	v	v	v	v	v	v	v	v
4	v	v	v	v	v	v	v	v	v	v	v	v	v	v
12	v	v	v	v	n	n	v	v	v	v	v	v	v	v
Peak to Average Ratio														
2	--	--	--	--	--	v	v	v	v	--	v	v	v	v
4	--	--	--	--	--	v	v	v	v	--	v	v	v	v
12	--	--	--	v	n	n	v	v	v	--	v	v	v	v
Occupied Bandwidth														
2	v	v	v	v	v	v	v	v	--	--	v	--	v	--
4	v	v	v	v	v	v	v	v	--	--	v	--	v	--
12	v	v	v	v	n	n	v	v	--	--	v	--	v	--
Frequency Stability														
2	--	--	--	v	--	--	v	v	--	--	v	--	v	--
4	--	--	--	v	--	--	v	v	--	--	v	--	v	--
12	--	--	--	v	n	n	v	v	--	--	v	--	v	--
Spurious Emission at Antenna Terminals														
2	v	v	v	v	v	v	v	v	v	--	--	--	v	--
4	v	v	v	v	v	v	v	v	v	--	--	--	v	--
12	v	v	v	v	n	n	v	v	v	--	--	--	v	--
Band Edge														
2	v	v	v	v	v	v	v	v	v	--	v	v	--	v
4	v	v	v	v	v	v	v	v	v	--	v	v	--	v
12	v	v	v	v	n	n	v	v	v	--	v	v	--	v
Field Strength of Spurious Radiation														
2	Worst case													
4	Worst case													
12	Worst case													
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	UL Channel	Channel Bandwidth (MHz)	UL Channel No.	UL 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
	Middle 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 4	Low Range	1.4	19957	1710.7
		3	19965	1711.5
		5	19975	1712.5
		10	20000	1715
		15	20025	1717.5
		20	20050	1720
	Middle Range	1.4/3/5/10/15/20	20175	1732.5
	High Range	1.4	20393	1754.3
		3	20385	1753.5
		5	20375	1752.5
		10	20350	1750
		15	20325	1747.5
		20	20300	1745
LTE Band 12	Low Range	1.4	23017	699.7
		3	23025	700.5
		5	23035	701.5
		10	23060	704
	Middle Range	1.4/3/5/10	23095	707.5
	High Range	1.4	23173	715.3
		3	23165	714.5
		5	23155	713.5
		10	23130	711

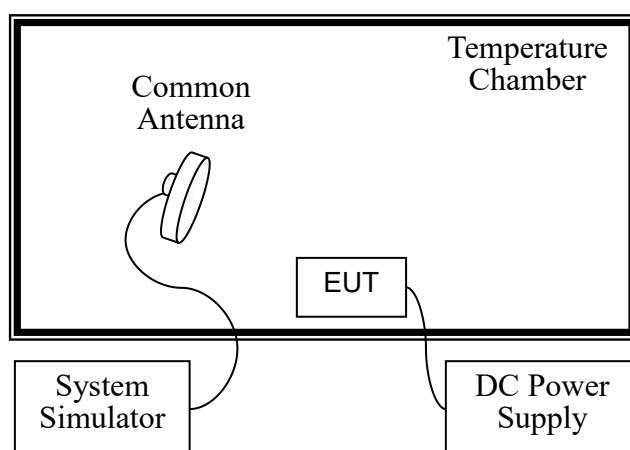
4.4 Test Setup

4.4.1 For Antenna Port Test



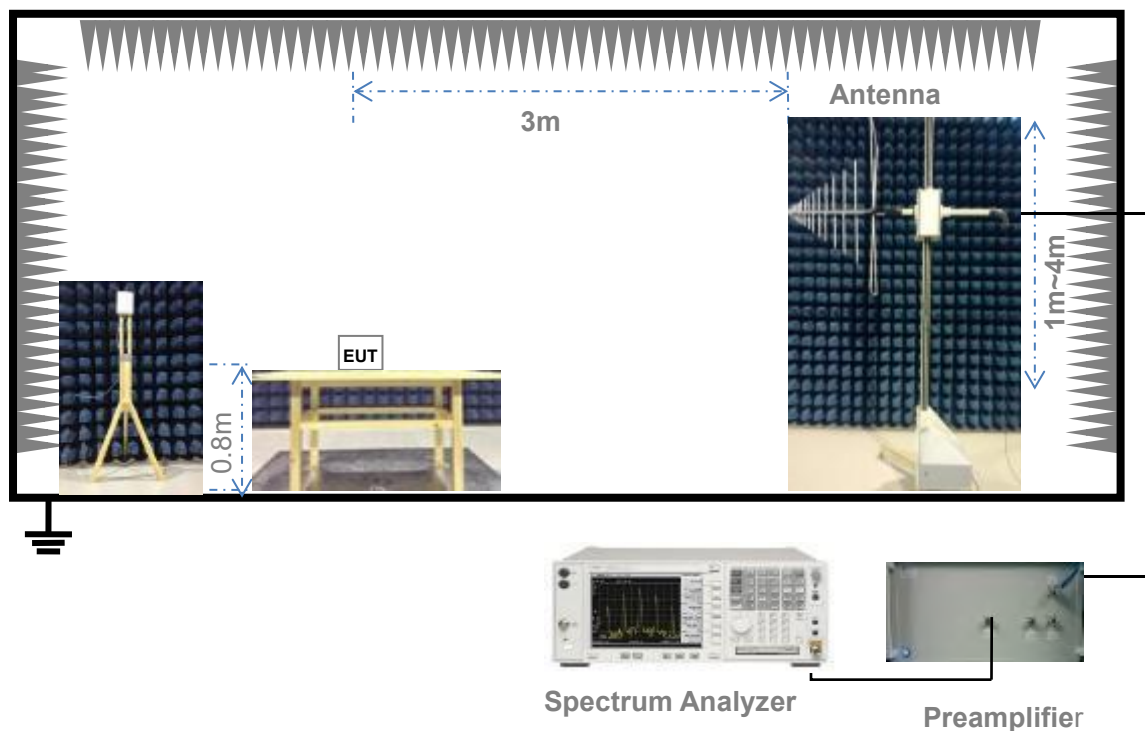
(Diagram 1)

4.4.2 For Frequency Stability Test



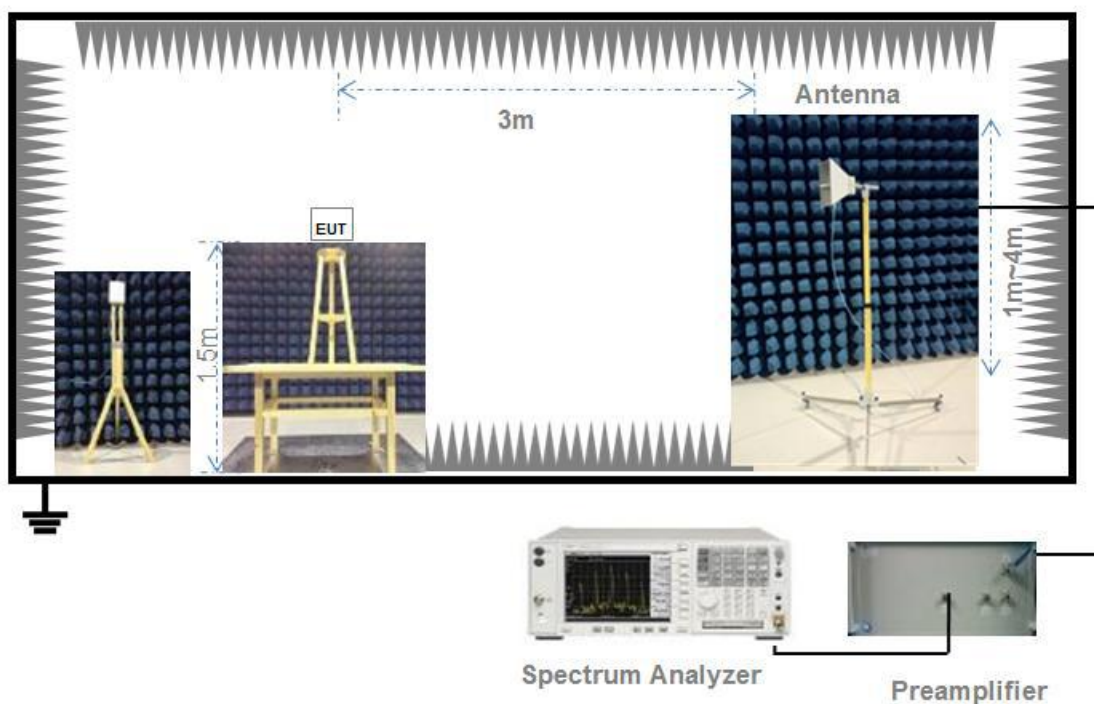
(Diagram 2)

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 & 22.913(a) & 24.232(c) & 27.50(c)

According to FCC section 22.913(a) (5), the Effective Radiated Power (ERP) of mobile transmitters and auxiliary test transmitters must not exceed 7 watts.

According to FCC section 24.232(c), 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(c) (10), portable stations (hand-held devices) in the 600MHz uplink band and the 698-746MHz band, and fixed and mobile stations in the 600MHz uplink band are limited to 3 watts ERP.

5.1.2 Test Setup

The section 4.4.1 (Diagram 1) test setup description is used for conducted test, and the section 4.4.3 and 4.4.4 (Diagram 3, 4) test setup description is used for radiated test. The photo of test setup please refer to ANNEX B.

5.1.3 Test Procedure

Description of the Conducted Output Power Measurement

The EUT is coupled to the SS with attenuator through power splitter; the RF load attached to EUT antenna terminal is 50Ohm; the path loss as the factor is calibrated to correct the reading. A system simulator is used to establish communication with the EUT, and its parameters are 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.

The relevant equation for determining the conducted measured value is:

Conducted Output Power Value (dBm) = Measured Value (dBm) + Path Loss (dB)

where:

Conducted Output Power Value = final conducted measured value in the conducted power test, in dBm;
Measured Value = measured conducted power received by spectrum analyzer or power meter, in dBm;
Path Loss = signal attenuation in the connecting cable between the transmitter and spectrum analyzer or power meter, including external cable loss, in dB;

During the test, the data of Path Loss (dB) is added in the spectrum analyzer or power meter, so Measured Value (dBm) is the final values which contains the data of Path Loss (dB).

For example:

In the conducted output power test, when measured value for GSM850 is 24.7 dBm, and path loss is 8.5 dB, then final conducted output power value is:

$$\text{Conducted Output Power Value (dBm)} = 24.7 \text{ dBm} + 8.5 \text{ dB} = 33.2 \text{ dBm}$$

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).

Final measurement calculation as below:

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

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

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 (EIRP) -2.15 dB

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.

For example:

In the EIRP test, when P_{Meas} value for GSM1900 is 30.2 dBm, LC is 0.6 dB, and GT is -3.4 dB, then final EIRP value is:

$$\text{EIRP for GSM1900} = 30.2 \text{ dBm} - 3.4 \text{ dBi} - 0.6 \text{ dB} = 26.2 \text{ dBm}$$

The relevant equation for determining the ERP/EIRP from the radiated RF output power is:

$$\text{ERP/EIRP (dBm)} = \text{SA Read Value (dBm)} + \text{Correction Factor (dB)}$$

where:

ERP/EIRP = effective or equivalent radiated power, in dBm;

SA Read Value = measured transmitter power received by EMI receiver or spectrum analyzer, in dBm;

Correction Factor = total correction factor including cable loss, in dB;

During the test, the data of Correction Factor (dB) is added in the EMI receiver or spectrum analyzer, so SA Read Value (dBm) is the final values which contains the data of Correction Factor (dB).

For example:

In the ERP test, when SA read value for GSM850 is 21dBm, and correction factor is 8dB, then final ERP value for GSM850 is:

$$\text{ERP (dBm)} = 21\text{dBm} + 8\text{dB} = 29\text{dBm}$$

5.1.4 Test Result

Please refer to ANNEX A.1.

5.2 Peak to Average Ratio

5.2.1 Limit

FCC § 2.1046 & 22.913(d) & 24.232(d) & 27.50(d) & 27.50(j) & 27.50(k)

In addition, when the transmitter power is measured in terms of average value, 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.

According to 22.913(d), Measurement of the ERP of Cellular base transmitters and repeaters must be made using an average power measurement technique. The peak-to-average ratio (PAR) of the transmission must not exceed 13 dB.

According to FCC section 24.232(d), 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.

FCC section 24.232(e), 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.

According to FCC section 27.50(d) (5) & 27.50(j) & 27.50(k), in measuring transmissions in this band using an average power technique, the peak-to-average ratio (PAR) of the transmission may not exceed 13dB.

5.2.2 Test Setup

The section 4.4.1 (Diagram 1) test setup description is 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.

According to KDB 971168 D01, there is CCDF procedure for PAPR:

- 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%.

Alternate procedure for PAPR:

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

$$PAPR (dB) = P_{PK} (dBm) - P_{Avg} (dBm).$$

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.

Many of the individual rule parts specify a relative OBW in lieu of the 99% OBW. In such cases, the OBW is defined as the width of the signal between two points, one below the carrier center frequency and on above the carrier center frequency, outside of which all emissions are attenuated by at least X dB below the transmitter power, where the value of X is typically specified as 26.

5.3.2 Test Setup

The section 4.4.1 (Diagram 1) test setup description is 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 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 anticipated 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 10log (OBW / RBW) below the reference level.
- d) NOTE—Steps a) through c) may require iteration to adjust within the specified tolerances.
- e) For -26 dB OBW, the dynamic range of the spectrum analyzer at the selected RBW shall be at least 10dB below the target “-X dB down” requirement, e.g. -26 dB OBW, the spectrum analyzer noise floor at the selected RBW shall be 36dB below the reference value.
- f) Set the detection mode to peak, and the trace mode to max hold.
- g) For 99% OBW, use the 99 % power bandwidth function of the spectrum analyzer (if available) and report the measured bandwidth.

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) For -26 dB OBW, determine the reference value: Set the EUT to transmit a modulated signal. Allow the trace to stabilize. Set the spectrum analyzer marker to the highest level of the displayed trace (this is the reference value).

Determine the “-X dB down amplitude” as equal to (reference value -X). Alternatively, this calculation can be performed by the analyzer by using the marker-delta function.

Place two markers, one at the lowest and the other at the highest frequency of the envelope of the spectral display such that each marker is at or slightly below “-X dB down amplitude” determined in step g). If a marker is below this “-X dB down amplitude” value it shall be placed as close as possible to this value. The OBW is the positive frequency difference between the two markers.

i) 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).

j) Change variable modulations, coding, or channel bandwidth settings, then repeat above test procedures.

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

FCC § 2.1055

The frequency stability shall be measured with variation of ambient temperature as follows:

- (1) The temperature is varied from -30°C to +50°C.
- (2) Frequency measurements shall be made at the extremes of the specified temperature range and at intervals of not more than 10°C through the range.

The frequency stability shall be measured with variation of primary supply voltage as follows:

- (1) Vary primary supply voltage from 85 to 115 percent of the nominal value for other than carried battery equipment.
- (2) For hand carried, battery powered equipment, reduce primary supply voltage to the battery operating and point which shall be specified by the manufacture.
- (3) 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.

FCC § 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

FCC § 24.235

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

FCC § 27.54

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

5.4.2 Test Setup

The section 4.4.2 (Diagram 2) test setup description is used for this test. The photo of test setup please refer to ANNEX B.

5.4.3 Test Procedure

1. The EUT is placed in a temperature chamber.
2. The temperature is set to 25°C and allowed to stabilize. After sufficient soak time, the transmitting frequency error is measured.
3. The temperature is increased by not more than 10 degrees, allowed to stabilize and soak, and then repeat the frequency error measurement.
4. Repeat procedure 3 until +50°C and -30°C is reached.
5. Change supply voltage, and repeat measurement until extreme voltage is reached.

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(g)

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 emissions are attenuated at least 26 dB below the transmitter power.

FCC § 22.917(a) & 24.238(a)

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 $43 + 10 \cdot \log(P)$ dB. This is calculated to be -13 dBm.

FCC § 27.53(g)

For operations in the 600MHz band and the 698-746MHz band, the power of any emission outside a licensee's frequency band(s) of operation shall be attenuated below the transmitter power (P) within the licensed band(s) of operation, measured in watts, by at least $43 + 10 \cdot \log(P)$ dB. Compliance with this provision is based on the use of measurement instrumentation employing a resolution bandwidth of 100 kHz bands immediately outside and adjacent to a licensee's frequency block, a resolution bandwidth of at least 30 kHz may be employed.

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 blocks 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 emissions are attenuated at least 26 dB below the transmitter power.

1. The EUT is coupled to the system simulator and spectrum analyzer; the RF load attached to EUT antenna terminal is 50Ohm; the path loss as the factor is calibrated to correct the reading.
2. Base Station is used to establish communication with the EUT, and its parameters are set to force the EUT transmitting at maximum output power.
3. The RF output of the transmitter is connected to the input of the spectrum analyzer through sufficient attenuation.
4. Spurious emissions are tested with 0.001MHz RBW for frequency less than 150kHz, 0.01MHz RBW for frequency less than 30MHz, 0.1MHz RBW for frequency less than 1GHz, and 1MHz RBW for frequency above 1GHz. And sweep point number are at least 401, referring to following formula.

Sweep point number = Span/RBW

VBW=3*RBW

Detector Mode=mean or average power

5. Record the frequencies and levels of spurious emissions.

5.5.4 Test Result

Please refer to ANNEX A.5.

5.6 Band Edge

5.6.1 Limit

FCC § 2.1051 & 22.917(a) & 24.238(a) & 27.53(g)

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 emissions are attenuated at least 26 dB below the transmitter power.

FCC § 22.917(a) & 24.238(a)

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 is calculated to be -13 dBm.

FCC § 27.53(g)

For operations in the 600MHz band and the 698-746MHz band, the power of any emission outside a licensee's frequency band(s) of operation shall be attenuated below the transmitter power (P) within the licensed band(s) of operation, measured in watts, by at least $43+10*\log(P)$ dB. Compliance with this provision is based on the use of measurement instrumentation employing a resolution bandwidth of 100 kHz bands immediately outside and adjacent to a licensee's frequency block, a resolution bandwidth of at least 30 kHz may be employed.

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 EUT is coupled to the system simulator and spectrum analyzer; the RF load attached to EUT antenna terminal is 50 Ohm; the path loss as the factor is calibrated to correct the reading.

2. Base Station is used to establish communication with the EUT, and its parameters are set to force the EUT transmitting at maximum output power.

3. The RF output of the transmitter is connected to the input of the spectrum analyzer through sufficient attenuation.

4. The center of the spectrum analyzer was set to block edge frequency.
5. Band edge are tested with 1%*cBW (RBW), and sweep point number referred to following formula.

$$\text{Sweep point number} = 2 * \text{Span} / \text{RBW}$$

$$\text{VBW} = 3 \text{RBW}$$

6. Record the frequencies and levels of spurious emissions.

For mobile and portable stations, on all frequencies between 763–775 MHz and 793–805 MHz, by a factor not less than $65 + 10 \log (P)$ dB in a 6.25 kHz band segment. Since it was not possible to set the resolution bandwidth to 6.25 kHz with the available equipment, a bandwidth of 10 kHz was used instead to show compliance. By using a 10 kHz bandwidth on the spectrum analyzer.

$$10 * \log(10 \text{ kHz} / 6.25 \text{ kHz}) = 2.04 \text{ dB}$$

$$\text{Limit Line} = -35 \text{ dBm} + 2.04 \text{ dB} = -32.96 \text{ dBm}$$

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(a) & 24.238(a) & 27.53(g)

FCC § 22.917(a) & 24.238(a)

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 is calculated to be -13 dBm.

FCC § 27.53(g)

For operations in the 600MHz band and the 698-746MHz band, the power of any emission outside a licensee's frequency band(s) of operation shall be attenuated below the transmitter power (P) within the licensed band(s) of operation, measured in watts, by at least $43+10*\log(P)$ dB. Compliance with this provision is based on the use of measurement instrumentation employing a resolution bandwidth of 100 kHz bands immediately outside and adjacent to a licensee's frequency block, a resolution bandwidth of at least 30 kHz may be employed.

5.7.2 Test Setup

The section 4.4.3 and 4.4.4 (Diagram 3, 4) 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 received, 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.

Final measurement calculation as below:

The relevant equation for determining the ERP/EIRP from the radiated RF output power is:

$$\text{ERP/EIRP (dBm)} = \text{SA Read Value (dBm)} + \text{Correction Factor (dB)}$$

where:

ERP/EIRP = effective or equivalent radiated power, in dBm;

SA Read Value = measured transmitter power received by EMI receiver or spectrum analyzer, in dBm;

Correction Factor = total correction factor including cable loss, in dB;

During the test, the data of Correction Factor (dB) is added in the EMI receiver or spectrum analyzer, so SA Read Value (dBm) is the final values which contains the data of Correction Factor (dB).

For example:

In the ERP test, when SA read value for GSM850 is 21dBm, and correction factor is 8dB, then final ERP

value for GSM850 is:

$$\text{ERP (dBm)} = 21\text{dBm} + 8\text{dB} = 29\text{dBm}$$

5.7.4 Test Result

Please refer to ANNEX A.7.

ANNEX A TEST RESULTS

A.1 Transmitter Radiated Power (EIRP/ERP)

WCDMA Mode Test Data

Test Band	Test Channel	Conducted Output AV Power (dBm)	Antenna Gain (dBi)	EIRP (dBm)	EIRP (W)	Limit (W)	Verdict
WCDMA Band 2	LCH	23.06	1	24.06	0.255	2.000	Pass
	MCH	23.17	1	24.17	0.261	2.000	Pass
	HCH	23.12	1	24.12	0.258	2.000	Pass
HSDPA Band 2	LCH	22.28	1	23.28	0.213	2.000	Pass
	MCH	22.41	1	23.41	0.219	2.000	Pass
	HCH	22.26	1	23.26	0.212	2.000	Pass
HSUPA Band 2	LCH	22.08	1	23.08	0.203	2.000	Pass
	MCH	22.27	1	23.27	0.212	2.000	Pass
	HCH	22.12	1	23.12	0.205	2.000	Pass

Test Band	Test Channel	Conducted Output AV Power (dBm)	Antenna Gain (dBi)	EIRP (dBm)	EIRP (W)	Limit (W)	Verdict
WCDMA Band 4	LCH	23.44	1	24.44	0.278	1.000	Pass
	MCH	23.36	1	24.36	0.273	1.000	Pass
	HCH	23.41	1	24.41	0.276	1.000	Pass
HSDPA Band 4	LCH	22.46	1	23.46	0.222	1.000	Pass
	MCH	22.43	1	23.43	0.220	1.000	Pass
	HCH	22.40	1	23.40	0.219	1.000	Pass
HSUPA Band 4	LCH	22.51	1	23.51	0.224	1.000	Pass
	MCH	22.39	1	23.39	0.218	1.000	Pass
	HCH	22.20	1	23.20	0.209	1.000	Pass

Test Band	Test Channel	Conducted Output AV Power (dBm)	Antenna Gain (dBi)	Antenna Gain (dBd)	ERP (dBm)	ERP (W)	Limit (W)	Verdict
WCDMA Band 5	LCH	22.99	2	-0.15	22.84	0.192	7.000	Pass
	MCH	23.13	2	-0.15	22.98	0.199	7.000	Pass
	HCH	23.05	2	-0.15	22.90	0.195	7.000	Pass
HSDPA Band 5	LCH	22.18	2	-0.15	22.03	0.160	7.000	Pass
	MCH	22.30	2	-0.15	22.15	0.164	7.000	Pass
	HCH	22.12	2	-0.15	21.97	0.157	7.000	Pass
HSUPA Band 5	LCH	21.98	2	-0.15	21.83	0.152	7.000	Pass
	MCH	22.04	2	-0.15	21.89	0.155	7.000	Pass
	HCH	21.99	2	-0.15	21.84	0.153	7.000	Pass

Note 1: For the HSDPA and HSUPA mode, all subtests were tested and just the worst data were recorded 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

Conducted Output Power		EIRP (dBm)			EIRP (W)		
Band	Configuration	LCH	MCH	HCH	LCH	MCH	HCH
HSDPA B2	Subtest 1	22.17	22.26	22.15	0.165	0.168	0.164
	Subtest 2	22.28	22.41	22.26	0.169	0.174	0.168
	Subtest 3	21.9	21.93	21.81	0.155	0.156	0.152
	Subtest 4	21.86	21.91	21.79	0.153	0.155	0.151
HSDPA B4	Subtest 1	22.46	22.31	22.35	0.176	0.170	0.172
	Subtest 2	22.43	22.43	22.4	0.175	0.175	0.174
	Subtest 3	22.05	21.96	21.89	0.160	0.157	0.155
	Subtest 4	22.03	21.95	21.82	0.160	0.157	0.152
Conducted Output Power		ERP (dBm)			ERP (W)		
Band	Configuration	LCH	MCH	HCH	LCH	MCH	HCH
HSDPA B5	Subtest 1	22	22.15	22.03	0.158	0.164	0.160
	Subtest 2	22.18	22.3	22.12	0.165	0.170	0.163
	Subtest 3	21.67	21.8	21.62	0.147	0.151	0.145
	Subtest 4	21.67	21.8	21.62	0.147	0.151	0.145

HSUPA Conducted Output Power

Conducted Output Power		EIRP (dBm)			EIRP (W)		
Band	Configuration	LCH	MCH	HCH	LCH	MCH	HCH
HSUPA B2	Subtest 1	21.97	21.57	21.91	0.157	0.144	0.155
	Subtest 2	20.85	21.26	21.38	0.122	0.134	0.137
	Subtest 3	21.22	20.84	21.19	0.132	0.121	0.132
	Subtest 4	21.73	21.43	21.77	0.149	0.139	0.150
	Subtest 5	22.08	22.27	22.12	0.161	0.169	0.163
HSUPA B4	Subtest 1	22.51	22.39	22.2	0.178	0.173	0.166
	Subtest 2	21.38	21.2	20.92	0.137	0.132	0.124
	Subtest 3	21.59	21.45	20.55	0.144	0.140	0.114
	Subtest 4	21.44	21.43	21.93	0.139	0.139	0.156
	Subtest 5	22.34	22.21	22.18	0.171	0.166	0.165
Conducted Output Power		ERP (dBm)			ERP (W)		
Band	Configuration	LCH	MCH	HCH	LCH	MCH	HCH
HSUPA B5	Subtest 1	21.82	21.38	21.43	0.152	0.137	0.139
	Subtest 2	20.66	20.79	20.93	0.116	0.120	0.124
	Subtest 3	21.04	20.98	20.63	0.127	0.125	0.116
	Subtest 4	21.62	21.09	21.23	0.145	0.129	0.133
	Subtest 5	21.98	22.04	21.99	0.158	0.160	0.158

LTE Mode Test Data

Test BW	Test Channel	Test Mode	Test RB (Size#Offset)	Conducted Output AV Power (dBm)	Antenna Gain (dBi)	EIRP (dBm)	EIRP (W)	Limit (W)	Verdict
LTE BAND 2									
1.4 MHz	LCH	QPSK	RB1#Low	22.98	1	23.98	0.250	2.000	Pass
			RB1#Mid	23.15	1	24.15	0.260	2.000	Pass
			RB1#High	23	1	24.00	0.251	2.000	Pass
			RB3#Low	22.89	1	23.89	0.245	2.000	Pass
			RB3#Mid	22.93	1	23.93	0.247	2.000	Pass
			RB3#High	22.95	1	23.95	0.248	2.000	Pass
			RB6#Low	21.98	1	22.98	0.199	2.000	Pass
		16-QAM	RB1#Low	21.77	1	22.77	0.189	2.000	Pass
			RB1#Mid	21.92	1	22.92	0.196	2.000	Pass
			RB1#High	21.85	1	22.85	0.193	2.000	Pass
			RB3#Low	21.92	1	22.92	0.196	2.000	Pass
			RB3#Mid	21.95	1	22.95	0.197	2.000	Pass
			RB3#High	22	1	23.00	0.200	2.000	Pass
			RB6#Low	20.98	1	21.98	0.158	2.000	Pass
	MCH	QPSK	RB1#Low	22.86	1	23.86	0.243	2.000	Pass
			RB1#Mid	23.08	1	24.08	0.256	2.000	Pass
			RB1#High	22.96	1	23.96	0.249	2.000	Pass
			RB3#Low	22.99	1	23.99	0.251	2.000	Pass
			RB3#Mid	23.06	1	24.06	0.255	2.000	Pass
			RB3#High	23	1	24.00	0.251	2.000	Pass
			RB6#Low	22.03	1	23.03	0.201	2.000	Pass
		16-QAM	RB1#Low	21.57	1	22.57	0.181	2.000	Pass
			RB1#Mid	21.81	1	22.81	0.191	2.000	Pass
			RB1#High	21.64	1	22.64	0.184	2.000	Pass
			RB3#Low	21.93	1	22.93	0.196	2.000	Pass
			RB3#Mid	22.07	1	23.07	0.203	2.000	Pass
			RB3#High	22.13	1	23.13	0.206	2.000	Pass
			RB6#Low	20.99	1	21.99	0.158	2.000	Pass
	HCH	QPSK	RB1#Low	23.14	1	24.14	0.259	2.000	Pass
			RB1#Mid	23.25	1	24.25	0.266	2.000	Pass
			RB1#High	23.12	1	24.12	0.258	2.000	Pass
			RB3#Low	23.07	1	24.07	0.255	2.000	Pass
			RB3#Mid	23.06	1	24.06	0.255	2.000	Pass
			RB3#High	23.03	1	24.03	0.253	2.000	Pass
			RB6#Low	22.05	1	23.05	0.202	2.000	Pass
		16-QAM	RB1#Low	21.76	1	22.76	0.189	2.000	Pass
			RB1#Mid	22.21	1	23.21	0.209	2.000	Pass

Test BW	Test Channel	Test Mode	Test RB (Size#Offset)	Conducted Output AV Power (dBm)	Antenna Gain (dBi)	EIRP (dBm)	EIRP (W)	Limit (W)	Verdict
LTE BAND 2									
3 MHz	LCH	QPSK	RB1#High	21.94	1	22.94	0.197	2.000	Pass
			RB3#Low	22.1	1	23.10	0.204	2.000	Pass
			RB3#Mid	22.06	1	23.06	0.202	2.000	Pass
			RB3#High	22.11	1	23.11	0.205	2.000	Pass
			RB6#Low	20.99	1	21.99	0.158	2.000	Pass
			RB1#Low	23.04	1	24.04	0.254	2.000	Pass
			RB1#Mid	22.99	1	23.99	0.251	2.000	Pass
			RB1#High	23.05	1	24.05	0.254	2.000	Pass
		16-QAM	RB8#Low	22.12	1	23.12	0.205	2.000	Pass
			RB8#Mid	22.14	1	23.14	0.206	2.000	Pass
			RB8#High	22.09	1	23.09	0.204	2.000	Pass
			RB15#Low	22.1	1	23.10	0.204	2.000	Pass
			RB1#Low	22.01	1	23.01	0.200	2.000	Pass
			RB1#Mid	21.9	1	22.90	0.195	2.000	Pass
			RB1#High	22.11	1	23.11	0.205	2.000	Pass
			RB8#Low	21.15	1	22.15	0.164	2.000	Pass
			RB8#Mid	21.02	1	22.02	0.159	2.000	Pass
			RB8#High	21.04	1	22.04	0.160	2.000	Pass
			RB15#Low	21.06	1	22.06	0.161	2.000	Pass
	MCH	QPSK	RB1#Low	23.07	1	24.07	0.255	2.000	Pass
			RB1#Mid	23.1	1	24.10	0.257	2.000	Pass
			RB1#High	23.11	1	24.11	0.258	2.000	Pass
			RB8#Low	22.12	1	23.12	0.205	2.000	Pass
			RB8#Mid	22.16	1	23.16	0.207	2.000	Pass
			RB8#High	22.17	1	23.17	0.207	2.000	Pass
			RB15#Low	22.12	1	23.12	0.205	2.000	Pass
		16-QAM	RB1#Low	21.82	1	22.82	0.191	2.000	Pass
			RB1#Mid	21.91	1	22.91	0.195	2.000	Pass
			RB1#High	21.77	1	22.77	0.189	2.000	Pass
			RB8#Low	21.03	1	22.03	0.160	2.000	Pass
			RB8#Mid	21.11	1	22.11	0.163	2.000	Pass
			RB8#High	21.11	1	22.11	0.163	2.000	Pass
			RB15#Low	21.11	1	22.11	0.163	2.000	Pass
	HCH	QPSK	RB1#Low	23.26	1	24.26	0.267	2.000	Pass
			RB1#Mid	23.11	1	24.11	0.258	2.000	Pass
			RB1#High	23.28	1	24.28	0.268	2.000	Pass
			RB8#Low	22.17	1	23.17	0.207	2.000	Pass
			RB8#Mid	22.11	1	23.11	0.205	2.000	Pass

Test BW	Test Channel	Test Mode	Test RB (Size#Offset)	Conducted Output AV Power (dBm)	Antenna Gain (dBi)	EIRP (dBm)	EIRP (W)	Limit (W)	Verdict
LTE BAND 2									
			RB8#High	22.22	1	23.22	0.210	2.000	Pass
			RB15#Low	22.08	1	23.08	0.203	2.000	Pass
		16-QAM	RB1#Low	22.07	1	23.07	0.203	2.000	Pass
			RB1#Mid	21.92	1	22.92	0.196	2.000	Pass
			RB1#High	22.11	1	23.11	0.205	2.000	Pass
			RB8#Low	21.12	1	22.12	0.163	2.000	Pass
			RB8#Mid	21.04	1	22.04	0.160	2.000	Pass
			RB8#High	21.07	1	22.07	0.161	2.000	Pass
			RB15#Low	21.07	1	22.07	0.161	2.000	Pass
5 MHz	LCH	QPSK	RB1#Low	23.01	1	24.01	0.252	2.000	Pass
			RB1#Mid	22.99	1	23.99	0.251	2.000	Pass
			RB1#High	23.19	1	24.19	0.262	2.000	Pass
			RB12#Low	22.15	1	23.15	0.207	2.000	Pass
			RB12#Mid	22.16	1	23.16	0.207	2.000	Pass
			RB12#High	22.24	1	23.24	0.211	2.000	Pass
			RB25#Low	22.19	1	23.19	0.208	2.000	Pass
		16-QAM	RB1#Low	21.81	1	22.81	0.191	2.000	Pass
			RB1#Mid	21.77	1	22.77	0.189	2.000	Pass
			RB1#High	21.62	1	22.62	0.183	2.000	Pass
			RB12#Low	20.98	1	21.98	0.158	2.000	Pass
			RB12#Mid	21.16	1	22.16	0.164	2.000	Pass
			RB12#High	21.31	1	22.31	0.170	2.000	Pass
			RB25#Low	21.26	1	22.26	0.168	2.000	Pass
	MCH	QPSK	RB1#Low	23.01	1	24.01	0.252	2.000	Pass
			RB1#Mid	23.04	1	24.04	0.254	2.000	Pass
			RB1#High	23.06	1	24.06	0.255	2.000	Pass
			RB12#Low	22.14	1	23.14	0.206	2.000	Pass
			RB12#Mid	22.12	1	23.12	0.205	2.000	Pass
			RB12#High	22.18	1	23.18	0.208	2.000	Pass
			RB25#Low	22.16	1	23.16	0.207	2.000	Pass
		16-QAM	RB1#Low	22.3	1	23.30	0.214	2.000	Pass
			RB1#Mid	22.18	1	23.18	0.208	2.000	Pass
			RB1#High	22.11	1	23.11	0.205	2.000	Pass
			RB12#Low	21.02	1	22.02	0.159	2.000	Pass
			RB12#Mid	21.04	1	22.04	0.160	2.000	Pass
			RB12#High	21.03	1	22.03	0.160	2.000	Pass
			RB25#Low	21.15	1	22.15	0.164	2.000	Pass
	HCH	QPSK	RB1#Low	22.99	1	23.99	0.251	2.000	Pass

Test BW	Test Channel	Test Mode	Test RB (Size#Offset)	Conducted Output AV Power (dBm)	Antenna Gain (dBi)	EIRP (dBm)	EIRP (W)	Limit (W)	Verdict
LTE BAND 2									
			RB1#Mid	23.06	1	24.06	0.255	2.000	Pass
			RB1#High	23.15	1	24.15	0.260	2.000	Pass
			RB12#Low	22.12	1	23.12	0.205	2.000	Pass
			RB12#Mid	22.12	1	23.12	0.205	2.000	Pass
			RB12#High	22.19	1	23.19	0.208	2.000	Pass
			RB25#Low	22.14	1	23.14	0.206	2.000	Pass
		16-QAM	RB1#Low	21.93	1	22.93	0.196	2.000	Pass
			RB1#Mid	21.68	1	22.68	0.185	2.000	Pass
			RB1#High	21.68	1	22.68	0.185	2.000	Pass
			RB12#Low	20.81	1	21.81	0.152	2.000	Pass
			RB12#Mid	20.94	1	21.94	0.156	2.000	Pass
			RB12#High	21.02	1	22.02	0.159	2.000	Pass
			RB25#Low	21	1	22.00	0.158	2.000	Pass
10 MHz	LCH	QPSK	RB1#Low	23.05	1	24.05	0.254	2.000	Pass
			RB1#Mid	23.32	1	24.32	0.270	2.000	Pass
			RB1#High	23.23	1	24.23	0.265	2.000	Pass
			RB25#Low	22.21	1	23.21	0.209	2.000	Pass
			RB25#Mid	22.3	1	23.30	0.214	2.000	Pass
			RB25#High	22.24	1	23.24	0.211	2.000	Pass
		16-QAM	RB50#Low	22.19	1	23.19	0.208	2.000	Pass
			RB1#Low	22.17	1	23.17	0.207	2.000	Pass
			RB1#Mid	22.59	1	23.59	0.229	2.000	Pass
			RB1#High	21.97	1	22.97	0.198	2.000	Pass
			RB25#Low	21.18	1	22.18	0.165	2.000	Pass
			RB25#Mid	21.3	1	22.30	0.170	2.000	Pass
			RB25#High	21.34	1	22.34	0.171	2.000	Pass
			RB50#Low	21.09	1	22.09	0.162	2.000	Pass
	MCH	QPSK	RB1#Low	23.3	1	24.30	0.269	2.000	Pass
			RB1#Mid	23.47	1	24.47	0.280	2.000	Pass
			RB1#High	23.21	1	24.21	0.264	2.000	Pass
			RB25#Low	22.07	1	23.07	0.203	2.000	Pass
			RB25#Mid	22.16	1	23.16	0.207	2.000	Pass
			RB25#High	22.15	1	23.15	0.207	2.000	Pass
			RB50#Low	22.11	1	23.11	0.205	2.000	Pass
		16-QAM	RB1#Low	22.13	1	23.13	0.206	2.000	Pass
			RB1#Mid	21.9	1	22.90	0.195	2.000	Pass
			RB1#High	21.94	1	22.94	0.197	2.000	Pass
			RB25#Low	21.07	1	22.07	0.161	2.000	Pass

Test BW	Test Channel	Test Mode	Test RB (Size#Offset)	Conducted Output AV Power (dBm)	Antenna Gain (dBi)	EIRP (dBm)	EIRP (W)	Limit (W)	Verdict
LTE BAND 2									
15 MHz	HCH		RB25#Mid	21.06	1	22.06	0.161	2.000	Pass
			RB25#High	21.14	1	22.14	0.164	2.000	Pass
			RB50#Low	21.01	1	22.01	0.159	2.000	Pass
		QPSK	RB1#Low	23.18	1	24.18	0.262	2.000	Pass
			RB1#Mid	22.8	1	23.80	0.240	2.000	Pass
			RB1#High	22.86	1	23.86	0.243	2.000	Pass
			RB25#Low	22.08	1	23.08	0.203	2.000	Pass
			RB25#Mid	21.97	1	22.97	0.198	2.000	Pass
			RB25#High	22	1	23.00	0.200	2.000	Pass
			RB50#Low	22.12	1	23.12	0.205	2.000	Pass
		16-QAM	RB1#Low	21.93	1	22.93	0.196	2.000	Pass
			RB1#Mid	21.87	1	22.87	0.194	2.000	Pass
			RB1#High	22.01	1	23.01	0.200	2.000	Pass
			RB25#Low	20.91	1	21.91	0.155	2.000	Pass
			RB25#Mid	20.92	1	21.92	0.156	2.000	Pass
			RB25#High	20.95	1	21.95	0.157	2.000	Pass
			RB50#Low	20.94	1	21.94	0.156	2.000	Pass
15 MHz	LCH	QPSK	RB1#Low	23.08	1	24.08	0.256	2.000	Pass
			RB1#Mid	23.05	1	24.05	0.254	2.000	Pass
			RB1#High	23.16	1	24.16	0.261	2.000	Pass
			RB36#Low	22.11	1	23.11	0.205	2.000	Pass
			RB36#Mid	22.17	1	23.17	0.207	2.000	Pass
			RB36#High	22.16	1	23.16	0.207	2.000	Pass
			RB75#Low	22.16	1	23.16	0.207	2.000	Pass
		16-QAM	RB1#Low	22.08	1	23.08	0.203	2.000	Pass
			RB1#Mid	21.96	1	22.96	0.198	2.000	Pass
			RB1#High	22.07	1	23.07	0.203	2.000	Pass
			RB36#Low	21.11	1	22.11	0.163	2.000	Pass
			RB36#Mid	21.07	1	22.07	0.161	2.000	Pass
			RB36#High	21.06	1	22.06	0.161	2.000	Pass
			RB75#Low	21.11	1	22.11	0.163	2.000	Pass
	MCH	QPSK	RB1#Low	23	1	24.00	0.251	2.000	Pass
			RB1#Mid	22.91	1	23.91	0.246	2.000	Pass
			RB1#High	23.1	1	24.10	0.257	2.000	Pass
			RB36#Low	22.01	1	23.01	0.200	2.000	Pass
			RB36#Mid	22.07	1	23.07	0.203	2.000	Pass
			RB36#High	22.1	1	23.10	0.204	2.000	Pass
			RB75#Low	21.97	1	22.97	0.198	2.000	Pass

Test BW	Test Channel	Test Mode	Test RB (Size#Offset)	Conducted Output AV Power (dBm)	Antenna Gain (dBi)	EIRP (dBm)	EIRP (W)	Limit (W)	Verdict
LTE BAND 2									
20 MHz	HCH	16-QAM	RB1#Low	22.37	1	23.37	0.217	2.000	Pass
			RB1#Mid	21.91	1	22.91	0.195	2.000	Pass
			RB1#High	21.78	1	22.78	0.190	2.000	Pass
			RB36#Low	21.04	1	22.04	0.160	2.000	Pass
			RB36#Mid	21.08	1	22.08	0.161	2.000	Pass
			RB36#High	21.1	1	22.10	0.162	2.000	Pass
			RB75#Low	20.98	1	21.98	0.158	2.000	Pass
		QPSK	RB1#Low	22.85	1	23.85	0.243	2.000	Pass
			RB1#Mid	22.51	1	23.51	0.224	2.000	Pass
			RB1#High	22.62	1	23.62	0.230	2.000	Pass
			RB36#Low	21.95	1	22.95	0.197	2.000	Pass
			RB36#Mid	21.85	1	22.85	0.193	2.000	Pass
			RB36#High	21.68	1	22.68	0.185	2.000	Pass
			RB75#Low	21.85	1	22.85	0.193	2.000	Pass
		16-QAM	RB1#Low	22.07	1	23.07	0.203	2.000	Pass
			RB1#Mid	21.89	1	22.89	0.195	2.000	Pass
			RB1#High	22.08	1	23.08	0.203	2.000	Pass
			RB36#Low	20.85	1	21.85	0.153	2.000	Pass
			RB36#Mid	20.65	1	21.65	0.146	2.000	Pass
			RB36#High	20.64	1	21.64	0.146	2.000	Pass
			RB75#Low	20.84	1	21.84	0.153	2.000	Pass
20 MHz	LCH	QPSK	RB1#Low	22.9	1	23.90	0.245	2.000	Pass
			RB1#Mid	23.1	1	24.10	0.257	2.000	Pass
			RB1#High	22.84	1	23.84	0.242	2.000	Pass
			RB50#Low	22.03	1	23.03	0.201	2.000	Pass
			RB50#Mid	22.1	1	23.10	0.204	2.000	Pass
			RB50#High	21.95	1	22.95	0.197	2.000	Pass
			RB100#Low	22.01	1	23.01	0.200	2.000	Pass
		16-QAM	RB1#Low	22.09	1	23.09	0.204	2.000	Pass
			RB1#Mid	22.2	1	23.20	0.209	2.000	Pass
			RB1#High	21.72	1	22.72	0.187	2.000	Pass
			RB50#Low	20.96	1	21.96	0.157	2.000	Pass
			RB50#Mid	21.02	1	22.02	0.159	2.000	Pass
			RB50#High	20.88	1	21.88	0.154	2.000	Pass
			RB100#Low	21.04	1	22.04	0.160	2.000	Pass
	MCH	QPSK	RB1#Low	23.14	1	24.14	0.259	2.000	Pass
			RB1#Mid	23.14	1	24.14	0.259	2.000	Pass
			RB1#High	23.32	1	24.32	0.270	2.000	Pass

Test BW	Test Channel	Test Mode	Test RB (Size#Offset)	Conducted Output AV Power (dBm)	Antenna Gain (dBi)	EIRP (dBm)	EIRP (W)	Limit (W)	Verdict
LTE BAND 2									
			RB50#Low	21.94	1	22.94	0.197	2.000	Pass
			RB50#Mid	22.11	1	23.11	0.205	2.000	Pass
			RB50#High	22.04	1	23.04	0.201	2.000	Pass
			RB100#Low	21.93	1	22.93	0.196	2.000	Pass
		16-QAM	RB1#Low	22.08	1	23.08	0.203	2.000	Pass
			RB1#Mid	21.75	1	22.75	0.188	2.000	Pass
			RB1#High	21.75	1	22.75	0.188	2.000	Pass
			RB50#Low	20.85	1	21.85	0.153	2.000	Pass
			RB50#Mid	20.91	1	21.91	0.155	2.000	Pass
			RB50#High	20.92	1	21.92	0.156	2.000	Pass
			RB100#Low	20.9	1	21.90	0.155	2.000	Pass
	HCH	QPSK	RB1#Low	22.69	1	23.69	0.234	2.000	Pass
			RB1#Mid	22.64	1	23.64	0.231	2.000	Pass
			RB1#High	22.64	1	23.64	0.231	2.000	Pass
			RB50#Low	21.89	1	22.89	0.195	2.000	Pass
			RB50#Mid	21.74	1	22.74	0.188	2.000	Pass
			RB50#High	21.67	1	22.67	0.185	2.000	Pass
			RB100#Low	21.84	1	22.84	0.192	2.000	Pass
		16-QAM	RB1#Low	21.4	1	22.40	0.174	2.000	Pass
			RB1#Mid	21.71	1	22.71	0.187	2.000	Pass
			RB1#High	21.37	1	22.37	0.173	2.000	Pass
			RB50#Low	20.79	1	21.79	0.151	2.000	Pass
			RB50#Mid	20.68	1	21.68	0.147	2.000	Pass
			RB50#High	20.67	1	21.67	0.147	2.000	Pass
			RB100#Low	20.9	1	21.90	0.155	2.000	Pass

Test BW	Test Channel	Test Mode	Test RB (Size#Offset)	Conducted Output AV Power (dBm)	Antenna Gain (dBi)	EIRP (dBm)	EIRP (W)	Limit (W)	Verdict
LTE BAND 4									
1.4 MHz	LCH	QPSK	RB1#Low	23.21	1	24.21	0.264	1.000	Pass
			RB1#Mid	23.2	1	24.20	0.263	1.000	Pass
			RB1#High	23.04	1	24.04	0.254	1.000	Pass
			RB3#Low	23.15	1	24.15	0.260	1.000	Pass
			RB3#Mid	23.08	1	24.08	0.256	1.000	Pass
			RB3#High	23.12	1	24.12	0.258	1.000	Pass
			RB6#Low	22.1	1	23.10	0.204	1.000	Pass
		16-QAM	RB1#Low	22.21	1	23.21	0.209	1.000	Pass
			RB1#Mid	22.25	1	23.25	0.211	1.000	Pass
			RB1#High	22.1	1	23.10	0.204	1.000	Pass
			RB3#Low	22.06	1	23.06	0.202	1.000	Pass
			RB3#Mid	22	1	23.00	0.200	1.000	Pass
			RB3#High	21.96	1	22.96	0.198	1.000	Pass
			RB6#Low	21.13	1	22.13	0.163	1.000	Pass
	MCH	QPSK	RB1#Low	22.74	1	23.74	0.237	1.000	Pass
			RB1#Mid	22.74	1	23.74	0.237	1.000	Pass
			RB1#High	22.62	1	23.62	0.230	1.000	Pass
			RB3#Low	22.82	1	23.82	0.241	1.000	Pass
			RB3#Mid	22.92	1	23.92	0.247	1.000	Pass
			RB3#High	22.78	1	23.78	0.239	1.000	Pass
			RB6#Low	21.95	1	22.95	0.197	1.000	Pass
		16-QAM	RB1#Low	21.82	1	22.82	0.191	1.000	Pass
			RB1#Mid	21.73	1	22.73	0.187	1.000	Pass
			RB1#High	21.64	1	22.64	0.184	1.000	Pass
			RB3#Low	21.55	1	22.55	0.180	1.000	Pass
			RB3#Mid	21.64	1	22.64	0.184	1.000	Pass
			RB3#High	21.4	1	22.40	0.174	1.000	Pass
			RB6#Low	20.68	1	21.68	0.147	1.000	Pass
	HCH	QPSK	RB1#Low	22.89	1	23.89	0.245	1.000	Pass
			RB1#Mid	22.99	1	23.99	0.251	1.000	Pass
			RB1#High	23.05	1	24.05	0.254	1.000	Pass
			RB3#Low	22.99	1	23.99	0.251	1.000	Pass
			RB3#Mid	22.98	1	23.98	0.250	1.000	Pass
			RB3#High	22.95	1	23.95	0.248	1.000	Pass
			RB6#Low	22.07	1	23.07	0.203	1.000	Pass
		16-QAM	RB1#Low	21.91	1	22.91	0.195	1.000	Pass
			RB1#Mid	22.12	1	23.12	0.205	1.000	Pass

Test BW	Test Channel	Test Mode	Test RB (Size#Offset)	Conducted Output AV Power (dBm)	Antenna Gain (dBi)	EIRP (dBm)	EIRP (W)	Limit (W)	Verdict
LTE BAND 4									
3 MHz			RB1#High	22.03	1	23.03	0.201	1.000	Pass
			RB3#Low	22.25	1	23.25	0.211	1.000	Pass
			RB3#Mid	22.25	1	23.25	0.211	1.000	Pass
			RB3#High	22.11	1	23.11	0.205	1.000	Pass
			RB6#Low	21.11	1	22.11	0.163	1.000	Pass
			RB1#Low	23.08	1	24.08	0.256	1.000	Pass
			RB1#Mid	22.89	1	23.89	0.245	1.000	Pass
	LCH	QPSK	RB1#High	22.96	1	23.96	0.249	1.000	Pass
			RB8#Low	22.15	1	23.15	0.207	1.000	Pass
			RB8#Mid	22.16	1	23.16	0.207	1.000	Pass
			RB8#High	22.11	1	23.11	0.205	1.000	Pass
			RB15#Low	22.13	1	23.13	0.206	1.000	Pass
		16-QAM	RB1#Low	22.1	1	23.10	0.204	1.000	Pass
			RB1#Mid	21.77	1	22.77	0.189	1.000	Pass
			RB1#High	21.94	1	22.94	0.197	1.000	Pass
			RB8#Low	20.93	1	21.93	0.156	1.000	Pass
			RB8#Mid	20.93	1	21.93	0.156	1.000	Pass
			RB8#High	20.89	1	21.89	0.155	1.000	Pass
			RB15#Low	21.04	1	22.04	0.160	1.000	Pass
	MCH	QPSK	RB1#Low	22.91	1	23.91	0.246	1.000	Pass
			RB1#Mid	22.76	1	23.76	0.238	1.000	Pass
			RB1#High	22.9	1	23.90	0.245	1.000	Pass
			RB8#Low	21.96	1	22.96	0.198	1.000	Pass
			RB8#Mid	22.01	1	23.01	0.200	1.000	Pass
			RB8#High	21.94	1	22.94	0.197	1.000	Pass
			RB15#Low	21.96	1	22.96	0.198	1.000	Pass
		16-QAM	RB1#Low	21.79	1	22.79	0.190	1.000	Pass
			RB1#Mid	21.68	1	22.68	0.185	1.000	Pass
			RB1#High	21.8	1	22.80	0.191	1.000	Pass
			RB8#Low	20.89	1	21.89	0.155	1.000	Pass
			RB8#Mid	20.92	1	21.92	0.156	1.000	Pass
			RB8#High	20.84	1	21.84	0.153	1.000	Pass
			RB15#Low	21.03	1	22.03	0.160	1.000	Pass
	HCH	QPSK	RB1#Low	22.89	1	23.89	0.245	1.000	Pass
			RB1#Mid	22.82	1	23.82	0.241	1.000	Pass
			RB1#High	22.84	1	23.84	0.242	1.000	Pass
			RB8#Low	21.95	1	22.95	0.197	1.000	Pass
			RB8#Mid	21.98	1	22.98	0.199	1.000	Pass

Test BW	Test Channel	Test Mode	Test RB (Size#Offset)	Conducted Output AV Power (dBm)	Antenna Gain (dBi)	EIRP (dBm)	EIRP (W)	Limit (W)	Verdict
LTE BAND 4									
			RB8#High	22.08	1	23.08	0.203	1.000	Pass
			RB15#Low	22.03	1	23.03	0.201	1.000	Pass
		16-QAM	RB1#Low	21.85	1	22.85	0.193	1.000	Pass
			RB1#Mid	21.45	1	22.45	0.176	1.000	Pass
			RB1#High	21.5	1	22.50	0.178	1.000	Pass
			RB8#Low	20.82	1	21.82	0.152	1.000	Pass
			RB8#Mid	20.84	1	21.84	0.153	1.000	Pass
			RB8#High	20.86	1	21.86	0.153	1.000	Pass
			RB15#Low	20.81	1	21.81	0.152	1.000	Pass
5 MHz	LCH	QPSK	RB1#Low	23.01	1	24.01	0.252	1.000	Pass
			RB1#Mid	22.94	1	23.94	0.248	1.000	Pass
			RB1#High	22.7	1	23.70	0.234	1.000	Pass
			RB12#Low	22.13	1	23.13	0.206	1.000	Pass
			RB12#Mid	22.04	1	23.04	0.201	1.000	Pass
			RB12#High	22.11	1	23.11	0.205	1.000	Pass
			RB25#Low	22.21	1	23.21	0.209	1.000	Pass
		16-QAM	RB1#Low	21.77	1	22.77	0.189	1.000	Pass
			RB1#Mid	21.47	1	22.47	0.177	1.000	Pass
			RB1#High	21.45	1	22.45	0.176	1.000	Pass
			RB12#Low	21.26	1	22.26	0.168	1.000	Pass
			RB12#Mid	20.98	1	21.98	0.158	1.000	Pass
			RB12#High	21.03	1	22.03	0.160	1.000	Pass
			RB25#Low	21.2	1	22.20	0.166	1.000	Pass
	MCH	QPSK	RB1#Low	22.68	1	23.68	0.233	1.000	Pass
			RB1#Mid	22.71	1	23.71	0.235	1.000	Pass
			RB1#High	22.89	1	23.89	0.245	1.000	Pass
			RB12#Low	21.93	1	22.93	0.196	1.000	Pass
			RB12#Mid	22.01	1	23.01	0.200	1.000	Pass
			RB12#High	21.89	1	22.89	0.195	1.000	Pass
			RB25#Low	21.97	1	22.97	0.198	1.000	Pass
		16-QAM	RB1#Low	22.06	1	23.06	0.202	1.000	Pass
			RB1#Mid	22.03	1	23.03	0.201	1.000	Pass
			RB1#High	21.91	1	22.91	0.195	1.000	Pass
			RB12#Low	20.81	1	21.81	0.152	1.000	Pass
			RB12#Mid	20.98	1	21.98	0.158	1.000	Pass
			RB12#High	20.86	1	21.86	0.153	1.000	Pass
			RB25#Low	20.98	1	21.98	0.158	1.000	Pass
	HCH	QPSK	RB1#Low	22.9	1	23.90	0.245	1.000	Pass

Test BW	Test Channel	Test Mode	Test RB (Size#Offset)	Conducted Output AV Power (dBm)	Antenna Gain (dBi)	EIRP (dBm)	EIRP (W)	Limit (W)	Verdict
LTE BAND 4									
			RB1#Mid	22.84	1	23.84	0.242	1.000	Pass
			RB1#High	22.89	1	23.89	0.245	1.000	Pass
			RB12#Low	22.05	1	23.05	0.202	1.000	Pass
			RB12#Mid	22.08	1	23.08	0.203	1.000	Pass
			RB12#High	22.06	1	23.06	0.202	1.000	Pass
			RB25#Low	22.17	1	23.17	0.207	1.000	Pass
		16-QAM	RB1#Low	21.82	1	22.82	0.191	1.000	Pass
			RB1#Mid	21.67	1	22.67	0.185	1.000	Pass
			RB1#High	21.75	1	22.75	0.188	1.000	Pass
			RB12#Low	20.92	1	21.92	0.156	1.000	Pass
			RB12#Mid	21.15	1	22.15	0.164	1.000	Pass
			RB12#High	21.14	1	22.14	0.164	1.000	Pass
			RB25#Low	21.15	1	22.15	0.164	1.000	Pass
10 MHz	LCH	QPSK	RB1#Low	23.3	1	24.30	0.269	1.000	Pass
			RB1#Mid	22.89	1	23.89	0.245	1.000	Pass
			RB1#High	23.05	1	24.05	0.254	1.000	Pass
			RB25#Low	22.24	1	23.24	0.211	1.000	Pass
			RB25#Mid	22.09	1	23.09	0.204	1.000	Pass
			RB25#High	22.11	1	23.11	0.205	1.000	Pass
			RB50#Low	22.17	1	23.17	0.207	1.000	Pass
		16-QAM	RB1#Low	22.13	1	23.13	0.206	1.000	Pass
			RB1#Mid	21.86	1	22.86	0.193	1.000	Pass
			RB1#High	21.97	1	22.97	0.198	1.000	Pass
			RB25#Low	21.01	1	22.01	0.159	1.000	Pass
			RB25#Mid	20.98	1	21.98	0.158	1.000	Pass
			RB25#High	21.07	1	22.07	0.161	1.000	Pass
			RB50#Low	21.21	1	22.21	0.166	1.000	Pass
	MCH	QPSK	RB1#Low	22.92	1	23.92	0.247	1.000	Pass
			RB1#Mid	23.35	1	24.35	0.272	1.000	Pass
			RB1#High	22.97	1	23.97	0.249	1.000	Pass
			RB25#Low	21.96	1	22.96	0.198	1.000	Pass
			RB25#Mid	21.99	1	22.99	0.199	1.000	Pass
			RB25#High	22.01	1	23.01	0.200	1.000	Pass
			RB50#Low	21.94	1	22.94	0.197	1.000	Pass
		16-QAM	RB1#Low	21.71	1	22.71	0.187	1.000	Pass
			RB1#Mid	21.65	1	22.65	0.184	1.000	Pass
			RB1#High	21.58	1	22.58	0.181	1.000	Pass
			RB25#Low	20.94	1	21.94	0.156	1.000	Pass

Test BW	Test Channel	Test Mode	Test RB (Size#Offset)	Conducted Output AV Power (dBm)	Antenna Gain (dBi)	EIRP (dBm)	EIRP (W)	Limit (W)	Verdict
LTE BAND 4									
15 MHz	HCH		RB25#Mid	21.07	1	22.07	0.161	1.000	Pass
			RB25#High	21	1	22.00	0.158	1.000	Pass
			RB50#Low	20.91	1	21.91	0.155	1.000	Pass
		QPSK	RB1#Low	22.87	1	23.87	0.244	1.000	Pass
			RB1#Mid	23.15	1	24.15	0.260	1.000	Pass
			RB1#High	23.12	1	24.12	0.258	1.000	Pass
			RB25#Low	22.03	1	23.03	0.201	1.000	Pass
			RB25#Mid	22.09	1	23.09	0.204	1.000	Pass
			RB25#High	22.14	1	23.14	0.206	1.000	Pass
			RB50#Low	22.03	1	23.03	0.201	1.000	Pass
		16-QAM	RB1#Low	21.84	1	22.84	0.192	1.000	Pass
			RB1#Mid	21.95	1	22.95	0.197	1.000	Pass
			RB1#High	22.14	1	23.14	0.206	1.000	Pass
			RB25#Low	21.16	1	22.16	0.164	1.000	Pass
			RB25#Mid	21.19	1	22.19	0.166	1.000	Pass
			RB25#High	21.15	1	22.15	0.164	1.000	Pass
			RB50#Low	20.9	1	21.90	0.155	1.000	Pass
15 MHz	LCH	QPSK	RB1#Low	23.08	1	24.08	0.256	1.000	Pass
			RB1#Mid	22.99	1	23.99	0.251	1.000	Pass
			RB1#High	23.18	1	24.18	0.262	1.000	Pass
			RB36#Low	22.07	1	23.07	0.203	1.000	Pass
			RB36#Mid	21.96	1	22.96	0.198	1.000	Pass
			RB36#High	22.09	1	23.09	0.204	1.000	Pass
			RB75#Low	22.13	1	23.13	0.206	1.000	Pass
		16-QAM	RB1#Low	22.11	1	23.11	0.205	1.000	Pass
			RB1#Mid	21.96	1	22.96	0.198	1.000	Pass
			RB1#High	22.24	1	23.24	0.211	1.000	Pass
			RB36#Low	21.01	1	22.01	0.159	1.000	Pass
			RB36#Mid	21	1	22.00	0.158	1.000	Pass
			RB36#High	21.13	1	22.13	0.163	1.000	Pass
			RB75#Low	21.09	1	22.09	0.162	1.000	Pass
	MCH	QPSK	RB1#Low	22.9	1	23.90	0.245	1.000	Pass
			RB1#Mid	22.85	1	23.85	0.243	1.000	Pass
			RB1#High	22.83	1	23.83	0.242	1.000	Pass
			RB36#Low	21.86	1	22.86	0.193	1.000	Pass
			RB36#Mid	21.95	1	22.95	0.197	1.000	Pass
			RB36#High	21.83	1	22.83	0.192	1.000	Pass
			RB75#Low	21.82	1	22.82	0.191	1.000	Pass

Test BW	Test Channel	Test Mode	Test RB (Size#Offset)	Conducted Output AV Power (dBm)	Antenna Gain (dBi)	EIRP (dBm)	EIRP (W)	Limit (W)	Verdict
LTE BAND 4									
20 MHz	HCH	16-QAM	RB1#Low	22	1	23.00	0.200	1.000	Pass
			RB1#Mid	21.76	1	22.76	0.189	1.000	Pass
			RB1#High	21.72	1	22.72	0.187	1.000	Pass
			RB36#Low	20.87	1	21.87	0.154	1.000	Pass
			RB36#Mid	20.96	1	21.96	0.157	1.000	Pass
			RB36#High	21.01	1	22.01	0.159	1.000	Pass
			RB75#Low	21	1	22.00	0.158	1.000	Pass
		QPSK	RB1#Low	23.13	1	24.13	0.259	1.000	Pass
			RB1#Mid	22.81	1	23.81	0.240	1.000	Pass
			RB1#High	22.82	1	23.82	0.241	1.000	Pass
			RB36#Low	21.93	1	22.93	0.196	1.000	Pass
			RB36#Mid	21.96	1	22.96	0.198	1.000	Pass
			RB36#High	22	1	23.00	0.200	1.000	Pass
			RB75#Low	22.01	1	23.01	0.200	1.000	Pass
		16-QAM	RB1#Low	22.56	1	23.56	0.227	1.000	Pass
			RB1#Mid	22.4	1	23.40	0.219	1.000	Pass
			RB1#High	22.68	1	23.68	0.233	1.000	Pass
			RB36#Low	21.04	1	22.04	0.160	1.000	Pass
			RB36#Mid	20.99	1	21.99	0.158	1.000	Pass
			RB36#High	21.01	1	22.01	0.159	1.000	Pass
			RB75#Low	20.96	1	21.96	0.157	1.000	Pass
20 MHz	LCH	QPSK	RB1#Low	22.77	1	23.77	0.238	1.000	Pass
			RB1#Mid	22.86	1	23.86	0.243	1.000	Pass
			RB1#High	23.1	1	24.10	0.257	1.000	Pass
			RB50#Low	22.02	1	23.02	0.200	1.000	Pass
			RB50#Mid	22.12	1	23.12	0.205	1.000	Pass
			RB50#High	22.24	1	23.24	0.211	1.000	Pass
			RB100#Low	22.06	1	23.06	0.202	1.000	Pass
		16-QAM	RB1#Low	22.06	1	23.06	0.202	1.000	Pass
			RB1#Mid	21.79	1	22.79	0.190	1.000	Pass
			RB1#High	22.01	1	23.01	0.200	1.000	Pass
			RB50#Low	21.06	1	22.06	0.161	1.000	Pass
			RB50#Mid	21.1	1	22.10	0.162	1.000	Pass
			RB50#High	21.3	1	22.30	0.170	1.000	Pass
			RB100#Low	21.02	1	22.02	0.159	1.000	Pass
	MCH	QPSK	RB1#Low	23.16	1	24.16	0.261	1.000	Pass
			RB1#Mid	23.07	1	24.07	0.255	1.000	Pass
			RB1#High	22.9	1	23.90	0.245	1.000	Pass

Test BW	Test Channel	Test Mode	Test RB (Size#Offset)	Conducted Output AV Power (dBm)	Antenna Gain (dBi)	EIRP (dBm)	EIRP (W)	Limit (W)	Verdict
LTE BAND 4									
			RB50#Low	21.73	1	22.73	0.187	1.000	Pass
			RB50#Mid	21.86	1	22.86	0.193	1.000	Pass
			RB50#High	21.76	1	22.76	0.189	1.000	Pass
			RB100#Low	21.83	1	22.83	0.192	1.000	Pass
		16-QAM	RB1#Low	21.82	1	22.82	0.191	1.000	Pass
			RB1#Mid	21.72	1	22.72	0.187	1.000	Pass
			RB1#High	21.33	1	22.33	0.171	1.000	Pass
			RB50#Low	20.71	1	21.71	0.148	1.000	Pass
			RB50#Mid	20.88	1	21.88	0.154	1.000	Pass
			RB50#High	20.7	1	21.70	0.148	1.000	Pass
			RB100#Low	20.82	1	21.82	0.152	1.000	Pass
	HCH	QPSK	RB1#Low	22.75	1	23.75	0.237	1.000	Pass
			RB1#Mid	22.78	1	23.78	0.239	1.000	Pass
			RB1#High	22.85	1	23.85	0.243	1.000	Pass
			RB50#Low	21.99	1	22.99	0.199	1.000	Pass
			RB50#Mid	21.89	1	22.89	0.195	1.000	Pass
			RB50#High	21.78	1	22.78	0.190	1.000	Pass
			RB100#Low	21.9	1	22.90	0.195	1.000	Pass
		16-QAM	RB1#Low	21.47	1	22.47	0.177	1.000	Pass
			RB1#Mid	21.25	1	22.25	0.168	1.000	Pass
			RB1#High	21.8	1	22.80	0.191	1.000	Pass
			RB50#Low	20.91	1	21.91	0.155	1.000	Pass
			RB50#Mid	20.81	1	21.81	0.152	1.000	Pass
			RB50#High	20.7	1	21.70	0.148	1.000	Pass
			RB100#Low	20.96	1	21.96	0.157	1.000	Pass

Test BW	Test Channel	Test Mode	Test RB (Size#Offset)	Conducted Output AV Power (dBm)	Antenna Gain (dBi)	Antenna Gain (dBd)	ERP (dBm)	ERP (W)	Limit (W)	Verdict
LTE BAND 12										
1.4 MHz	LCH	QPSK	RB1#Low	22.71	0.5	-1.65	21.06	0.128	3.000	Pass
			RB1#Mid	23.1	0.5	-1.65	21.45	0.140	3.000	Pass
			RB1#High	22.98	0.5	-1.65	21.33	0.136	3.000	Pass
			RB3#Low	22.84	0.5	-1.65	21.19	0.132	3.000	Pass
			RB3#Mid	22.96	0.5	-1.65	21.31	0.135	3.000	Pass
			RB3#High	22.94	0.5	-1.65	21.29	0.135	3.000	Pass
			RB6#Low	21.82	0.5	-1.65	20.17	0.104	3.000	Pass
		16-QAM	RB1#Low	21.69	0.5	-1.65	20.04	0.101	3.000	Pass
			RB1#Mid	22.14	0.5	-1.65	20.49	0.112	3.000	Pass
			RB1#High	22.05	0.5	-1.65	20.40	0.110	3.000	Pass
			RB3#Low	21.82	0.5	-1.65	20.17	0.104	3.000	Pass
			RB3#Mid	21.95	0.5	-1.65	20.30	0.107	3.000	Pass
			RB3#High	21.94	0.5	-1.65	20.29	0.107	3.000	Pass
			RB6#Low	21	0.5	-1.65	19.35	0.086	3.000	Pass
	MCH	QPSK	RB1#Low	22.67	0.5	-1.65	21.02	0.126	3.000	Pass
			RB1#Mid	22.88	0.5	-1.65	21.23	0.133	3.000	Pass
			RB1#High	22.86	0.5	-1.65	21.21	0.132	3.000	Pass
			RB3#Low	22.94	0.5	-1.65	21.29	0.135	3.000	Pass
			RB3#Mid	23.04	0.5	-1.65	21.39	0.138	3.000	Pass
			RB3#High	23.01	0.5	-1.65	21.36	0.137	3.000	Pass
			RB6#Low	22.03	0.5	-1.65	20.38	0.109	3.000	Pass
		16-QAM	RB1#Low	21.76	0.5	-1.65	20.11	0.103	3.000	Pass
			RB1#Mid	21.84	0.5	-1.65	20.19	0.104	3.000	Pass
			RB1#High	21.72	0.5	-1.65	20.07	0.102	3.000	Pass
			RB3#Low	21.66	0.5	-1.65	20.01	0.100	3.000	Pass
			RB3#Mid	21.74	0.5	-1.65	20.09	0.102	3.000	Pass
			RB3#High	21.7	0.5	-1.65	20.05	0.101	3.000	Pass
			RB6#Low	20.86	0.5	-1.65	19.21	0.083	3.000	Pass
	HCH	QPSK	RB1#Low	22.94	0.5	-1.65	21.29	0.135	3.000	Pass
			RB1#Mid	23.23	0.5	-1.65	21.58	0.144	3.000	Pass
			RB1#High	23.09	0.5	-1.65	21.44	0.139	3.000	Pass
			RB3#Low	22.91	0.5	-1.65	21.26	0.134	3.000	Pass
			RB3#Mid	23.13	0.5	-1.65	21.48	0.141	3.000	Pass
			RB3#High	23.15	0.5	-1.65	21.50	0.141	3.000	Pass
			RB6#Low	21.99	0.5	-1.65	20.34	0.108	3.000	Pass

Test BW	Test Channel	Test Mode	Test RB (Size#Offset)	Conducted Output AV Power (dBm)	Antenna Gain (dBi)	Antenna Gain (dBd)	ERP (dBm)	ERP (W)	Limit (W)	Verdict
LTE BAND 12										
3 MHz		16-QAM	RB1#Low	21.77	0.5	-1.65	20.12	0.103	3.000	Pass
			RB1#Mid	22.08	0.5	-1.65	20.43	0.110	3.000	Pass
			RB1#High	22.09	0.5	-1.65	20.44	0.111	3.000	Pass
			RB3#Low	21.86	0.5	-1.65	20.21	0.105	3.000	Pass
			RB3#Mid	22.2	0.5	-1.65	20.55	0.114	3.000	Pass
			RB3#High	22.5	0.5	-1.65	20.85	0.122	3.000	Pass
			RB6#Low	21.01	0.5	-1.65	19.36	0.086	3.000	Pass
	LCH	QPSK	RB1#Low	22.87	0.5	-1.65	21.22	0.132	3.000	Pass
			RB1#Mid	23.01	0.5	-1.65	21.36	0.137	3.000	Pass
			RB1#High	22.99	0.5	-1.65	21.34	0.136	3.000	Pass
			RB8#Low	22.01	0.5	-1.65	20.36	0.109	3.000	Pass
			RB8#Mid	22.01	0.5	-1.65	20.36	0.109	3.000	Pass
			RB8#High	21.97	0.5	-1.65	20.32	0.108	3.000	Pass
			RB15#Low	21.91	0.5	-1.65	20.26	0.106	3.000	Pass
		16-QAM	RB1#Low	21.79	0.5	-1.65	20.14	0.103	3.000	Pass
			RB1#Mid	21.76	0.5	-1.65	20.11	0.103	3.000	Pass
			RB1#High	21.74	0.5	-1.65	20.09	0.102	3.000	Pass
			RB8#Low	20.92	0.5	-1.65	19.27	0.085	3.000	Pass
			RB8#Mid	21.14	0.5	-1.65	19.49	0.089	3.000	Pass
			RB8#High	21.11	0.5	-1.65	19.46	0.088	3.000	Pass
			RB15#Low	21.12	0.5	-1.65	19.47	0.089	3.000	Pass
	MCH	QPSK	RB1#Low	22.86	0.5	-1.65	21.21	0.132	3.000	Pass
			RB1#Mid	23.02	0.5	-1.65	21.37	0.137	3.000	Pass
			RB1#High	22.99	0.5	-1.65	21.34	0.136	3.000	Pass
			RB8#Low	22.05	0.5	-1.65	20.40	0.110	3.000	Pass
			RB8#Mid	22.09	0.5	-1.65	20.44	0.111	3.000	Pass
			RB8#High	22.03	0.5	-1.65	20.38	0.109	3.000	Pass
			RB15#Low	22.04	0.5	-1.65	20.39	0.109	3.000	Pass
		16-QAM	RB1#Low	21.7	0.5	-1.65	20.05	0.101	3.000	Pass
			RB1#Mid	21.65	0.5	-1.65	20.00	0.100	3.000	Pass
			RB1#High	21.61	0.5	-1.65	19.96	0.099	3.000	Pass
			RB8#Low	20.76	0.5	-1.65	19.11	0.081	3.000	Pass
			RB8#Mid	20.91	0.5	-1.65	19.26	0.084	3.000	Pass
			RB8#High	20.94	0.5	-1.65	19.29	0.085	3.000	Pass
			RB15#Low	21	0.5	-1.65	19.35	0.086	3.000	Pass
	HCH	QPSK	RB1#Low	22.85	0.5	-1.65	21.20	0.132	3.000	Pass

Test BW	Test Channel	Test Mode	Test RB (Size#Offset)	Conducted Output AV Power (dBm)	Antenna Gain (dBi)	Antenna Gain (dBd)	ERP (dBm)	ERP (W)	Limit (W)	Verdict
LTE BAND 12										
			RB1#Mid	22.74	0.5	-1.65	21.09	0.129	3.000	Pass
			RB1#High	23.34	0.5	-1.65	21.69	0.148	3.000	Pass
			RB8#Low	22.01	0.5	-1.65	20.36	0.109	3.000	Pass
			RB8#Mid	22.02	0.5	-1.65	20.37	0.109	3.000	Pass
			RB8#High	22.05	0.5	-1.65	20.40	0.110	3.000	Pass
			RB15#Low	21.98	0.5	-1.65	20.33	0.108	3.000	Pass
		16-QAM	RB1#Low	21.89	0.5	-1.65	20.24	0.106	3.000	Pass
			RB1#Mid	21.79	0.5	-1.65	20.14	0.103	3.000	Pass
			RB1#High	22.06	0.5	-1.65	20.41	0.110	3.000	Pass
			RB8#Low	20.7	0.5	-1.65	19.05	0.080	3.000	Pass
			RB8#Mid	20.82	0.5	-1.65	19.17	0.083	3.000	Pass
			RB8#High	20.9	0.5	-1.65	19.25	0.084	3.000	Pass
			RB15#Low	20.66	0.5	-1.65	19.01	0.080	3.000	Pass
5 MHz	LCH	QPSK	RB1#Low	22.66	0.5	-1.65	21.01	0.126	3.000	Pass
			RB1#Mid	22.82	0.5	-1.65	21.17	0.131	3.000	Pass
			RB1#High	22.83	0.5	-1.65	21.18	0.131	3.000	Pass
			RB12#Low	21.91	0.5	-1.65	20.26	0.106	3.000	Pass
			RB12#Mid	21.87	0.5	-1.65	20.22	0.105	3.000	Pass
			RB12#High	21.86	0.5	-1.65	20.21	0.105	3.000	Pass
			RB25#Low	21.88	0.5	-1.65	20.23	0.105	3.000	Pass
		16-QAM	RB1#Low	21.48	0.5	-1.65	19.83	0.096	3.000	Pass
			RB1#Mid	21.55	0.5	-1.65	19.90	0.098	3.000	Pass
			RB1#High	21.28	0.5	-1.65	19.63	0.092	3.000	Pass
			RB12#Low	20.6	0.5	-1.65	18.95	0.079	3.000	Pass
			RB12#Mid	20.58	0.5	-1.65	18.93	0.078	3.000	Pass
			RB12#High	20.56	0.5	-1.65	18.91	0.078	3.000	Pass
			RB25#Low	20.95	0.5	-1.65	19.30	0.085	3.000	Pass
	MCH	QPSK	RB1#Low	22.74	0.5	-1.65	21.09	0.129	3.000	Pass
			RB1#Mid	22.98	0.5	-1.65	21.33	0.136	3.000	Pass
			RB1#High	23.06	0.5	-1.65	21.41	0.138	3.000	Pass
			RB12#Low	21.86	0.5	-1.65	20.21	0.105	3.000	Pass
			RB12#Mid	22.09	0.5	-1.65	20.44	0.111	3.000	Pass
			RB12#High	21.99	0.5	-1.65	20.34	0.108	3.000	Pass
			RB25#Low	21.94	0.5	-1.65	20.29	0.107	3.000	Pass
		16-QAM	RB1#Low	21.91	0.5	-1.65	20.26	0.106	3.000	Pass
			RB1#Mid	22.04	0.5	-1.65	20.39	0.109	3.000	Pass

Test BW	Test Channel	Test Mode	Test RB (Size#Offset)	Conducted Output AV Power (dBm)	Antenna Gain (dBi)	Antenna Gain (dBd)	ERP (dBm)	ERP (W)	Limit (W)	Verdict
LTE BAND 12										
	HCH		RB1#High	21.89	0.5	-1.65	20.24	0.106	3.000	Pass
			RB12#Low	20.61	0.5	-1.65	18.96	0.079	3.000	Pass
			RB12#Mid	20.96	0.5	-1.65	19.31	0.085	3.000	Pass
			RB12#High	20.87	0.5	-1.65	19.22	0.084	3.000	Pass
			RB25#Low	20.92	0.5	-1.65	19.27	0.085	3.000	Pass
		QPSK	RB1#Low	22.9	0.5	-1.65	21.25	0.133	3.000	Pass
			RB1#Mid	22.91	0.5	-1.65	21.26	0.134	3.000	Pass
			RB1#High	23.12	0.5	-1.65	21.47	0.140	3.000	Pass
			RB12#Low	21.82	0.5	-1.65	20.17	0.104	3.000	Pass
			RB12#Mid	21.87	0.5	-1.65	20.22	0.105	3.000	Pass
			RB12#High	21.93	0.5	-1.65	20.28	0.107	3.000	Pass
			RB25#Low	21.83	0.5	-1.65	20.18	0.104	3.000	Pass
		16-QAM	RB1#Low	21.61	0.5	-1.65	19.96	0.099	3.000	Pass
			RB1#Mid	21.27	0.5	-1.65	19.62	0.092	3.000	Pass
			RB1#High	21.9	0.5	-1.65	20.25	0.106	3.000	Pass
			RB12#Low	20.72	0.5	-1.65	19.07	0.081	3.000	Pass
			RB12#Mid	20.87	0.5	-1.65	19.22	0.084	3.000	Pass
			RB12#High	20.93	0.5	-1.65	19.28	0.085	3.000	Pass
			RB25#Low	20.64	0.5	-1.65	18.99	0.079	3.000	Pass
10 MHz	LCH	QPSK	RB1#Low	22.75	0.5	-1.65	21.10	0.129	3.000	Pass
			RB1#Mid	23.02	0.5	-1.65	21.37	0.137	3.000	Pass
			RB1#High	22.79	0.5	-1.65	21.14	0.130	3.000	Pass
			RB25#Low	21.86	0.5	-1.65	20.21	0.105	3.000	Pass
			RB25#Mid	21.93	0.5	-1.65	20.28	0.107	3.000	Pass
			RB25#High	22	0.5	-1.65	20.35	0.108	3.000	Pass
			RB50#Low	21.9	0.5	-1.65	20.25	0.106	3.000	Pass
		16-QAM	RB1#Low	21.62	0.5	-1.65	19.97	0.099	3.000	Pass
			RB1#Mid	21.99	0.5	-1.65	20.34	0.108	3.000	Pass
			RB1#High	21.75	0.5	-1.65	20.10	0.102	3.000	Pass
			RB25#Low	20.73	0.5	-1.65	19.08	0.081	3.000	Pass
			RB25#Mid	20.75	0.5	-1.65	19.10	0.081	3.000	Pass
			RB25#High	20.84	0.5	-1.65	19.19	0.083	3.000	Pass
			RB50#Low	20.82	0.5	-1.65	19.17	0.083	3.000	Pass
	MCH	QPSK	RB1#Low	22.68	0.5	-1.65	21.03	0.127	3.000	Pass
			RB1#Mid	23	0.5	-1.65	21.35	0.136	3.000	Pass
			RB1#High	22.66	0.5	-1.65	21.01	0.126	3.000	Pass

Test BW	Test Channel	Test Mode	Test RB (Size#Offset)	Conducted Output AV Power (dBm)	Antenna Gain (dBi)	Antenna Gain (dBd)	ERP (dBm)	ERP (W)	Limit (W)	Verdict
LTE BAND 12										
			RB25#Low	21.87	0.5	-1.65	20.22	0.105	3.000	Pass
			RB25#Mid	21.94	0.5	-1.65	20.29	0.107	3.000	Pass
			RB25#High	21.97	0.5	-1.65	20.32	0.108	3.000	Pass
			RB50#Low	21.89	0.5	-1.65	20.24	0.106	3.000	Pass
		16-QAM	RB1#Low	21.63	0.5	-1.65	19.98	0.100	3.000	Pass
			RB1#Mid	21.93	0.5	-1.65	20.28	0.107	3.000	Pass
			RB1#High	21.72	0.5	-1.65	20.07	0.102	3.000	Pass
			RB25#Low	20.95	0.5	-1.65	19.30	0.085	3.000	Pass
			RB25#Mid	20.91	0.5	-1.65	19.26	0.084	3.000	Pass
			RB25#High	20.94	0.5	-1.65	19.29	0.085	3.000	Pass
			RB50#Low	20.85	0.5	-1.65	19.20	0.083	3.000	Pass
	HCH	QPSK	RB1#Low	22.74	0.5	-1.65	21.09	0.129	3.000	Pass
			RB1#Mid	23.1	0.5	-1.65	21.45	0.140	3.000	Pass
			RB1#High	22.76	0.5	-1.65	21.11	0.129	3.000	Pass
			RB25#Low	22.03	0.5	-1.65	20.38	0.109	3.000	Pass
			RB25#Mid	22.04	0.5	-1.65	20.39	0.109	3.000	Pass
			RB25#High	21.87	0.5	-1.65	20.22	0.105	3.000	Pass
			RB50#Low	22.03	0.5	-1.65	20.38	0.109	3.000	Pass
		16-QAM	RB1#Low	21.69	0.5	-1.65	20.04	0.101	3.000	Pass
			RB1#Mid	21.96	0.5	-1.65	20.31	0.107	3.000	Pass
			RB1#High	21.75	0.5	-1.65	20.10	0.102	3.000	Pass
			RB25#Low	20.94	0.5	-1.65	19.29	0.085	3.000	Pass
			RB25#Mid	20.98	0.5	-1.65	19.33	0.086	3.000	Pass
			RB25#High	20.84	0.5	-1.65	19.19	0.083	3.000	Pass
			RB50#Low	20.9	0.5	-1.65	19.25	0.084	3.000	Pass

A.2 Peak to Average Ratio

Note : The Peak to Average Ratio please refer to the report No.PKS160908001-00A, RTWK160705001-00, which issued by Bay Area Compliance Laboratories Corp(Taiwan). on Sep.08,2016 and July.01, 2016.

A.3 Occupied Bandwidth

Note : The Occupied Bandwidth please refer to the report No.PKS160908001-00A, RTWK160705001-00, which issued by Bay Area Compliance Laboratories Corp(Taiwan). on Sep.08,2016 and July.01, 2016.

A.4 Frequency Stability

Note : The Frequency Stability please refer to the report No.PKS160908001-00A, RTWK160705001-00, which issued by Bay Area Compliance Laboratories Corp(Taiwan). on Sep.08,2016 and July.01, 2016.

A.5 Spurious Emission at Antenna Terminals

Note : The Spurious Emission at Antenna Terminals please refer to the report No.PKS160908001-00A, RTWK160705001-00, which issued by Bay Area Compliance Laboratories Corp(Taiwan). on Sep.08,2016 and July.01, 2016.

A.6 Band Edge

Note :The Band Edge please refer to the report No.PKS160908001-00A, RTWK160705001-00, which issued by Bay Area Compliance Laboratories Corp(Taiwan). on Sep.08,2016 and July.01, 2016.

A.7 Field Strength of Spurious Radiation

Note 1: All modes have been tested, and only the worst case data are shown here.

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

Note 3: Test plots please refer to the document "Annex No.: BL-SH24B0860-501 Data Part 1.pdf".

Note 4: The disturbance above 26.5GHz was very low, and the above harmonics were the highest point could be found when testing, so only the worst case data displayed in this report.

WCDMA Mode Test Verdict

Test Band	Test Channel	Refer to Plot ^{Note3}	Verdict
WCDMA Band 2	LCH	1.1	Pass
	MCH		Pass
	HCH		Pass
WCDMA Band 4	LCH	1.2	Pass
	MCH		Pass
	HCH		Pass
WCDMA Band 5	LCH	1.3	Pass
	MCH		Pass
	HCH		Pass

LTE Mode Test Verdict

Test Band	Test Bandwidth	Test Channel	Refer to Plot ^{Note3}	Verdict
Band 2	10 MHz	LCH	2.1	Pass
Band 4	10 MHz	LCH	2.2	Pass
Band 12	3 MHz	HCH	2.3	Pass

ANNEX B TEST SETUP PHOTOS

Please refer to the document “BL-SH24B0860-AR RF.PDF”.

ANNEX C EUT EXTERNAL PHOTOS

Please refer to the document “BL-SH24B0860-AW.PDF”.

ANNEX D EUT INTERNAL PHOTOS

Please refer to the document “BL-SH24B0860-AI.PDF”.

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--END OF REPORT--