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## **ELECTROMAGNETIC EMISSIONS COMPLIANCE REPORT**

# INTENTIONAL RADIATOR CERTIFICATION TO FCC PART 22 SUBPART H, PART 24 SUBPART E and PART 27 SUBPART B, C & SUBPART L and PART 90S REQUIREMENT

OF

Applicant: HP Inc.

3390 East Harmony Road Fort Collins, Colorado 80528 United

**Product Name: Notebook Computer** 

**Brand Name:** HP

Model No.: HSN-I20C

**Model Difference:** N/A

FCC ID: B94HNI20CPK **Report Number:** E2/2018/70055

**FCC Rule Part:** 2, 22H & 24E & 27B, C & L & 90S

**Issue Date:** Sep. 06, 2018 Aug. 27, 2018 Date of Test: Date of EUT Received: Jul. 09, 2018

#### We hereby certify that:

The above equipment was tested by SGS Taiwan Ltd. Electronics & Communication Laboratory The test data, data evaluation, test procedures, and equipment configurations shown in this report were made in accordance with the procedures given in ANSI C63.26-2015 and the energy emitted by the sample EUT tested as described in this report is in compliance with conducted and radiated emission limits.

The test results of this report relate only to the tested sample identified in this report.

Tested By:

Aken Huang / Enigneer

Approved By:

Jim Chang / Manager





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# **Revision History**

Report Number	Revision	Description	Effected Page	Issue Date	Revised By
E2/2018/70055	Rev.00	Initial creation of docu- ment	All	Sep. 06, 2018	Stefanie Yu

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## 1. GENERAL PRODUCT INFORMATION

## 1.1. Product Description

#### General:

Product Name:	Notebook Computer
Brand Name:	HP
Model No.:	HSN-I20C
Model Difference:	N/A
Hardware Version:	N/A
Software Version:	N/A
WWAN Module:	Model No.: L860-GL, Supplier: Fibocom Wireless Inc.
Power Supply:	7.7Vdc from Rechargeable Li-polymer Battery or 5 / 9 / 10 / 12 / 15 / 20Vdc from AC/DC Adapter  Battery: Model No.: HSTNN-DB8M, Supplier: N/A.  1. Model No.: TPN-CA06,
	Adapter: Supplier: CHICONY POWER TECHNOLOGY (CHONG-QING) CO, LTD.  2. Model No.: TPN-AA03, Supplier: Acbel Electronic (Wuhan) Co., Ltd.
IMEI:	867921030096110

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## 1.2. WCDMA / LTE: Cellular Phone Standards Frequency Range

Operating Frequency (MHz)								
WCDMA / HSPA+ Band II 1852.4 - 1907.6								
WCDMA//HSPA+ Band IV 1712.4 - 1752.6								
WCDMA / HSPA+ Band V	WCDMA / HSPA+ Band V 826.4 - 846.6							

LTE Band	BW (MHz)	Operation F	requ	ency (MHz)	LTE Band	BW (MHz)	Operation I	requ	ency (MHz)
	1.4	1850.7	-	1909.3	14	5	790.5	-	795.5
	3	1851.5	-	1908.5	14	10		793	
2	5	1852.5	-	1907.5	17	5	706.5	-	713.5
2	10	1855.0	-	1905.0	17	10	709.0	-	711.0
	15	1857.5	-	1902.5		1.4	1850.7	-	1914.3
	20	1860.0	-	1900.0		3	1851.5	-	1913.5
	1.4	1710.7	-	1754.3	- 25 - 26	5	1852.5	-	1912.5
	3	1711.5	-	1753.5		10	1855.0	-	1910.0
4	5	1712.5	-	1752.5		15	1857.5	-	1907.5
4	10	1715.0	-	1780.0		20	1860.0	-	1905.0
	15	1717.5	-	1747.5		1.4	824.7	-	848.3
	20	1720.0	-	1745.0		3	825.5	-	847.5
	1.4	824.7	-	848.3		5	826.5	-	846.5
E	3	825.5	-	847.5		10	829.0	-	844.0
5	5	826.5	-	846.5		15	831.5	-	841.5
	10	829.0	-	844.0		1.4	814.7	-	823.3
	5	2502.5	-	2567.5	06 Davi00	3	815.5	-	822.5
7	10	2505.0	-	2565.0	26 Part90	5	816.5	-	821.5
7	15	2507.5	-	2562.5		10		819.0	
	20	2510.0	-	2560.0	20	5	2307.5	-	2312.5
	1.4	699.7	-	715.3	30	10	2	2310.0	)
12	3	700.5	-	714.5		5	2572.5	-	2617.5
IΖ	5	701.5	-	713.5	20	10	2575.0	-	2615.0
	10	704.0	-	711.0	38	15	2577.5	-	2612.5
12	5	779.5	-	784.5		20	2580.0	-	2610.0
13	10		782			•	-		

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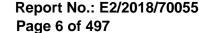
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LTE Band	BW (MHz)	Operation Frequency (MHz)		LTE Band	BW (MHz)	Operation F	requ	ency (MHz)	
	5	2498.5	-	2687.5		1.4	1710.7	-	1779.3
41	10	2501.0	-	2685.0		3	1711.5	-	1778.5
41	15	2503.5	-	2682.5	66	5	1712.5	-	1777.5
	20	2506.0	-	2680.0	00	10	1715.0	-	1775.0
			-			15	1717.5	-	1772.5
			-			20	1720.0	-	1770.0

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## **Antenna Designation**

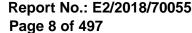
Vendor	Туре	Main /	Antenna	Modulation	Frequency	Peak Antenna
Vendoi	туре	Aux	Part No.	Modulation	(MHz)	Gain (dBi)
				WCDMA / HSPA Band II	1852.4 ~ 1907.6	-5.17
				WCDMA / HSPA Band IV	1712.4 ~ 1752.6	-4.69
				WCDMA / HSPA Band V	826.4 ~ 846.6	-3.61
				LTE Band 2	1850 ~ 1910	-5.17
				LTE Band 4	1710 ~ 1755	-4.69
				LTE Band 5	824 ~ 849	-3.61
				LTE Band 7	2503 ~ 2560	-4.62
				LTE Band 12	699 ~ 716	-5.57
	Couple	Main	6036B0215701(WA-P-LTE12-02-	LTE Band 13	777 ~ 787	-5.71
	Couple	IVIAIII	008)	LTE Band 14	788 ~ 798	N/A
				LTE Band 17	704 ~ 716	-5.57
				LTE Band 25	1850 ~ 1915	-5.17
				LTE Band 26	824 ~ 849	-3.61
				LTE Band 26	814 ~ 824	-3.61
				LTE Band 30	2305 ~ 2315	-4.11
				LTE Band 38	2570 ~ 2620	-4.57
				LTE Band 41	2496 ~ 2690	-4.57
INPAQ				LTE Band 66	1710 ~ 1780	-4.69
Corporation				WCDMA / HSPA Band II	1852.4 ~ 1907.6	-8.26
Corporation				WCDMA / HSPA Band IV	1712.4 ~ 1752.6	N/A
				WCDMA / HSPA Band V	826.4 ~ 846.6	N/A
				LTE Band 2	1850 ~ 1910	-8.26
				LTE Band 4	1710 ~ 1755	N/A
				LTE Band 5	824 ~ 849	N/A
				LTE Band 7	2503 ~ 2560	N/A
				LTE Band 12	699 ~ 716	N/A
			6036B0215801(WA-P-LTE8-02-	LTE Band 13	777 ~ 787	N/A
	Couple	Aux	024)	LTE Band 14	788 ~ 798	-5.58
			U2 <del>4</del> )	LTE Band 17	704 ~ 716	N/A
				LTE Band 25	1850 ~ 1915	N/A
				LTE Band 26	824 ~ 849	N/A
				LTE Band 26	814 ~ 824	E 66
				(Part 90S)	014 ~ 824	-5.66
				LTE Band 30	2305 ~ 2315	N/A
				LTE Band 38	2570 ~ 2620	-5
				LTE Band 41	2496 ~ 2690	-6.08
				LTE Band 66	1710 ~ 1780	N/A

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## 1.3. Type of Emission & Max ERP/EIRP Power Measurement Result:

ERP / EIRP (d	dBm)	(W)	Type of Emission						
18.63	EIRP	0.07	4M08F9W						
17.96	EIRP	0.06	4M08F9W						
17.41	EIRP	0.06	4M07F9W						
18.81	EIRP	0.08	4M09F9W						
18.37	EIRP	0.07	4M09F9W						
17.84	EIRP	0.06	4M09F9W						
20.37	ERP	0.11	4M10F9W						
20.22	ERP	0.11	4M09F9W						
19.04	ERP	0.08	4M10F9W						
	18.63 17.96 17.41 18.81 18.37 17.84 20.37 20.22	17.96 EIRP 17.41 EIRP 18.81 EIRP 18.37 EIRP 17.84 EIRP 20.37 ERP 20.22 ERP	18.63         EIRP         0.07           17.96         EIRP         0.06           17.41         EIRP         0.06           18.81         EIRP         0.08           18.37         EIRP         0.07           17.84         EIRP         0.06           20.37         ERP         0.11           20.22         ERP         0.11						

LTE Band	BW (MHz)	Modulation	ERP / EIRP (dBm)		(W)	Type of Emission
	1.4	QPSK	18.37	EIRP	0.069	1M12G7D
	1.4	16QAM	17.38	EIRP	0.055	1M11D7W
	3	QPSK	18.36	EIRP	0.069	2M74G7D
	3	16QAM	17.66	EIRP	0.058	2M74D7W
	5	QPSK	18.39	EIRP	0.069	4M54G7D
2	5	16QAM	17.75	EIRP	0.060	4M52D7W
2	10	QPSK	18.54	EIRP	0.071	9M08G7D
	10	16QAM	17.78	EIRP	0.060	9M09D7W
	15	QPSK	18.32	EIRP	0.068	13M6G7D
	15	16QAM	17.73	EIRP	0.059	13M5D7W
	20	QPSK	18.53	EIRP	0.071	18M1G7D
	20	16QAM	17.58	EIRP	0.057	18M0D7W

LTE Band	BW (MHz)	Modulation		P/EIRP dBm)	(W)	Type of Emission
	1.4	QPSK	18.95	EIRP	0.079	1M11G7D
	1.4	16QAM	18.25	EIRP	0.067	1M11D7W
	3	QPSK	18.78	EIRP	0.076	2M74G7D
	3	16QAM	18.19	EIRP	0.066	2M73D7W
	5	QPSK	18.85	EIRP	0.077	4M54G7D
4	5	16QAM	18.26	EIRP	0.067	4M52D7W
4	10	QPSK	18.88	EIRP	0.077	9M08G7D
	10	16QAM	18.25	EIRP	0.067	9M11D7W
	15	QPSK	18.83	EIRP	0.076	13M6G7D
	15	16QAM	18.26	EIRP	0.067	13M6D7W
	20	QPSK	18.96	EIRP	0.079	18M1G7D
	20	16QAM	18.09	EIRP	0.064	18M1D7W

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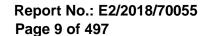
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LTE	BW		FRP /	'EIRP	4	Type of
Band	(MHz)	Modulation		3m)	(W)	Emission
	1.4	QPSK	21.05	ERP	0.127	1M11G7D
	1.4	16QAM	20.23	ERP	0.105	1M11D7W
	3	QPSK	21.02	ERP	0.126	2M72G7D
5	3	16QAM	20.2	ERP	0.105	2M73D7W
5	5	QPSK	21.31	ERP	0.135	4M54G7D
	5	16QAM	20.33	ERP	0.108	4M52D7W
	10	QPSK	21.08	ERP	0.128	9M09G7D
	10	16QAM	20.38	ERP	0.109	8M08D7W
	5	QPSK	19.26	EIRP	0.084	4M53G7D
	5	16QAM	18.22	EIRP	0.066	4M53D7W
	10	QPSK	19.07	EIRP	0.081	9M11G7D
7	10	16QAM	18.34	EIRP	0.068	9M10D7W
'	15	QPSK	19.35	EIRP	0.086	13M58G7D
	15	16QAM	18.2	EIRP	0.066	13M58D7W
	20	QPSK	19.36	EIRP	0.086	18M06G7D
	20	16QAM	18.33	EIRP	0.068	18M12D7W
	1.4	QPSK	18.43	ERP	0.07	1M11G7D
	1.4	16QAM	17.38	ERP	0.055	1M11D7W
	3	QPSK	18.14	ERP	0.065	2M73G7D
12	3	16QAM	17.16	ERP	0.052	2M73D7W
12	5	QPSK	18.39	ERP	0.069	4M55G7D
	5	16QAM	17.4	ERP	0.055	4M54D7W
	10	QPSK	18.26	ERP	0.067	9M17G7D
	10	16QAM	17.42	ERP	0.055	9M16D7W
	5	QPSK	18.17	ERP	0.066	4M55G7D
13	5	16QAM	17.26	ERP	0.053	4M54D7W
10	10	QPSK	18.06	ERP	0.064	9M02G7D
	10	16QAM	16.99	ERP	0.050	9M02D7W

LTE	BW		ER			Type of
Band	(MHz)	Modulation	Modulation EIRP (dBm)		(W)	Emission
	5	QPSK	17.95	ERP	0.062	4M53G7D
14	5	16QAM	17.21	ERP	0.053	4M55D7W
14	10	QPSK	18.26	ERP	0.067	9M06G7D
	10	16QAM	17.27	ERP	0.053	9M06D7W
	5	QPSK	18.39	ERP	0.069	4M54G7D
17	5	16QAM	17.4	ERP	0.055	4M53D7W
17	10	QPSK	18.41	ERP	0.069	9M12G7D
	10	16QAM	17.33	ERP	0.054	9M13D7W
	1.4	QPSK	23.95	EIRP	0.248	1M11G7D
	1.4	16QAM	22.98	EIRP	0.199	1M11D7W
	3	QPSK	23.94	EIRP	0.248	2M73G7D
	3	16QAM	22.92	EIRP	0.196	2M73D7W
	5	QPSK	23.95	EIRP	0.248	4M54G7D
25	5	16QAM	22.99	EIRP	0.199	4M52D7W
20	10	QPSK	23.9	EIRP	0.245	9M09G7D
	10	16QAM	22.98	EIRP	0.199	9M11D7W
	15	QPSK	23.94	EIRP	0.248	13M6G7D
	15	16QAM	22.95	EIRP	0.197	13M5D7W
	20	QPSK	23.96	EIRP	0.249	18M0G7D
	20	16QAM	22.88	EIRP	0.194	18M0D7W
	1.4	QPSK	20.53	ERP	0.113	1M11G7D
	1.4	16QAM	19.91	ERP	0.098	1M11D7W
	3	QPSK	20.57	ERP	0.114	2M73G7D
	3	16QAM	20.03	ERP	0.101	2M73D7W
26	5	QPSK	20.56	ERP	0.114	4M53G7D
20	5	16QAM	20.15	ERP	0.104	4M52D7W
	10	QPSK	20.72	_	0.118	9M07G7D
	10	16QAM	19.9	ERP	0.098	9M07D7W
	15	QPSK	20.83	ERP	0.121	13M6G7D
	15	16QAM	20.12	ERP	0.103	13M6D7W

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LTE Band	BW (MHz)	Modulation	ERP /	EIRP Bm)	(W)	Type of Emission
Danu	1.4	QPSK	20.72	ERP	0.118	1M11G7D
	1.4	16QAM	19.96		0.099	1M11D7W
		•				
	3	QPSK	20.76		0.119	2M72G7D
26	3	16QAM	20.28	ERP	0.107	2M72D7W
Part90	5	QPSK	20.6	ERP	0.115	4M53G7D
	5	16QAM	20.2	ERP	0.105	4M52D7W
	10	QPSK	20.62	ERP	0.115	9M08G7D
	10	16QAM	19.98	ERP	0.100	9M11D7W
	5	QPSK	19.31	EIRP	0.085	4M53G7D
30	5	16QAM	18.16	EIRP	0.065	4M53D7W
30	10	QPSK	19.43	EIRP	0.088	9M05G7D
	10	16QAM	18.69	EIRP	0.074	9M05D7W
	5	QPSK	19.34	EIRP	0.086	4M54G7D
	5	16QAM	18.37	EIRP	0.069	4M54D7W
	10	QPSK	19.38	EIRP	0.087	9M07G7D
38	10	16QAM	18.36	EIRP	0.069	9M05D7W
30	15	QPSK	19.40	EIRP	0.087	13M56G7D
	15	16QAM	18.28	EIRP	0.067	13M56D7W
	20	QPSK	19.41	EIRP	0.087	18M06G7D
	20	16QAM	18.37	EIRP	0.069	18M04D7W

LTE Band	BW (MHz)	Modulation		EIRP Bm)	(W)	Type of Emission
	5	QPSK	20.21	EIRP	0.105	4M52G7D
	5	16QAM	19.24	EIRP	0.084	4M52D7W
	10	QPSK	20.11	EIRP	0.103	9M12G7D
41	10	16QAM	19.36	EIRP	0.086	9M08D7W
41	15	QPSK	20.21	EIRP	0.105	13M5G7D
	15	16QAM	19.38	EIRP	0.087	13M6D7W
	20	QPSK	20.27	EIRP	0.106	18M0G7D
	20	16QAM	19.38	EIRP	0.087	18M1D7W
	1.4	QPSK	18.61	EIRP	0.073	1M11G7D
	1.4	16QAM	18.05	EIRP	0.064	1M11D7W
	3	QPSK	18.61	EIRP	0.073	2M73G7D
	3	16QAM	17.93	EIRP	0.062	2M73D7W
	5	QPSK	18.8	EIRP	0.076	4M53G7D
66	5	16QAM	18.28	EIRP	0.067	4M53D7W
00	10	QPSK	18.85	EIRP	0.077	9M11G7D
	10	16QAM	18.1	EIRP	0.065	9M10D7W
	15	QPSK	18.76	EIRP	0.075	13M6G7D
	15	16QAM	18.12	EIRP	0.065	13M6D7W
	20	QPSK	18.94	EIRP	0.078	18M1G7D
	20	16QAM	18.18	EIRP	0.066	18M1D7W

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## 1.4. Test Methodology of Applied Standards

CC 47 CFR Part 2, 22, 24, 27, Part 90S.

ANSI C63.26-2015

KDB971168 D01 Power Meas license Digital System v03

KDB941225 D01 SAR test for 3G devices v03r01 (SAR Measurement Procedures for 3G Devices, WCDMA / HSPA) was used for EUT and Base station setting.

TS 151 010-1 is used to set, and measure the output power.

Note: All test items have been performed and record as per the above standards.

## 1.5. Test Facility

SGS Taiwan Ltd. Electronics & Communication Laboratory No.2, Keji 1st Rd., Guishan District, Taoyuan City, Taiwan 333 code 0513)

FCC Registration Numbers are: 735305 / TW0002

## 1.6. Special Accessories

No special accessories were used during testing.

### 1.7. Equipment Modifications

There were no modifications incorporated into the EUT.

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## 2. SYSTEM TEST CONFIGURATION

## 2.1. EUT Configuration

The EUT configuration for testing is installed on RF field strength measurement to meet the Commissions requirement and operating in a manner which intends to maximize its emission characteristics in a continuous normal application.

#### 2.2. EUT Exercise

The EUT (Transmitter) was operated in the continuous transmission mode employed with the simulator of the Base Station that fixates at test default channels to fix the Tx frequency which was for the purpose of the measurements.

#### 2.3. Test Procedure

#### 2.3.1 Conducted Measurement at Antenna Port

According to measurement procured ANSI C63.26-2015, the EUT is placed on a turn table which is 0.8 m above ground plane. A low loss of RF cable was used to connect the antenna port of EUT to measurement equipment.

## 2.3.2 Radiated Emissions (ERP/EIRP)

According to measurement procured ANSI C63.26-2015, The EUT is a placed on as turn table, for emission measurements below 1 GHz is 0.8 m above ground plane, for emission measurements above 1 GHz, the table height shall be 1.5 m. The turn table shall rotate 360 degrees to determine the position of maximum emission level. EUT is set 3m away from the receiving antenna which varied from 1m to 4m to find out the highest emission. And also, each emission was to be maximized by changing the polarization of receiving antenna both Horizontal and Vertical. In order to find out the max. emission, the relative positions of this hand-held transmitter (EUT) was rotated through three orthogonal axes and measurement procedures for electric field radiated emissions above 1 GHz the EUT measurement is to be made "while keeping the antenna in the 'cone of radiation' from that area and pointed at the area both in azimuth and elevation, with polarization oriented for maximum response." is still within the 3dB illumination BW of the measurement antenna according to the requirements in Section 8 and 13.

## 2.4. Measurement Results Explanation Example

#### For all conducted test items:

The offset level is set in the spectrum analyzer to compensate the RF cable loss and attenuation factor between EUT conducted port and spectrum analyzer. With the offset compensation, the spectrum analyzer reading level is exactly EUT RF output level.

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#### Note:

The spectrum analyzer offset is derived from RF cable loss and attenuator factor.

Following shows an offset computation in physical test.

	RF cable loss (dB)	Attenuation factor(dB)	offset(dB)
Low Band (Below 1GHz)	3.6	10	13.6
High Band (Above 1 GHz)	3.9	10	13.9

## 2.5. Final Amplifier Voltage and Current Information:

Test Mode	DC voltage (V)	DC current (mA)
WCDMA B2		0.717
WCDMA B4		0.715
WCDMA B5		0.674
LTE Band 2		0.858
LTE Band 4		0.857
LTE Band 5		0.708
LTE Band 7		0.680
LTE Band 12		0.687
LTE Band 13	7.7	0.723
LTE Band 14	1.1	0.785
LTE Band 17		0.677
LTE Band 25		0.670
LTE Band 26		0.697
LTE Band 26 (Part 90S)		0.685
LTE Band 30	-	0.849
LTE Band 38		0.660
LTE Band 41		0.845
LTE Band 66		0.836

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## 2.6. Configuration of Tested System

Fig. 2-1 Configuration of Tested System (Fixed Channel-Conducted)

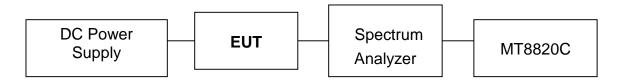


Fig. 2-2 Configuration of Tested System (Fixed Channel-Radiated)

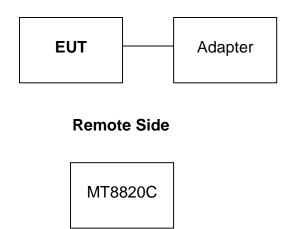


Table 2-1 Equipment Used in

Item	Equipment	Mfr/Brand	Model/ Type No.	Series No.	Data Cable	Power Cord
1.	Universal Radio Communication Tester	Anritsu	MT8820C	6200307563	shielded	Un-shielded

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## 3. SUMMARY OF TEST RESULTS

FCC Rules	Description Of Test	Result
§2.1046(a)	RF Power Output	Compliant
§2.1046(a) §22.913(a)(5) §24.232(c) §27.50(a)(3) §27.50(c)(10) §27.50(d)(4) §90.635	ERP/ EIRP measurement	Compliant
§2.1049(h)	99% & 26dB Occuupied Bandwidth	Compliant
§2.1051 §22.917(a) §24.238(a) §27.53(g) §27.50(c)(5) §27.53(h) §27.53(m)(4)(6) §90.691	Out of Band Emissions at Antenna Ter- minals and Band Edge / Emission mask requirements	Compliant
§2.1053 §22.917(a) §24.238(a) §27.53(c)(2),(4) §27.50(c)(5) §27.53(f) §27.53(g) §27.53(h) §27.53(m)(4) §90.691(a)(1)(2)	Field Strength of Spurious Radiation	Compliant
§24.232(d) §27.53(d) (5) §27.50(i) (B)	Peak to Average Ratio	Compliant
§2.1055(a)(1) §22.355 §24.235 §27.54 §90.213	Frequency Stability	Compliant

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## 4. DESCRIPTION OF TEST MODES

#### 4.1. The Worst Test Modes and Channel Details

- 1. The EUT has been tested under operating condition.
- 2. Pre-Scan has been conducted to determine the worst-case mode from all possible combinations between available modulations, data rates, X(E1)Y(E2)Z(H) axis and antenna ports. The worst case was found as listed below. Following channel(s) was (were) selected for the final test as listed below:

BAND	ERP/EIRP	RADIATED EMISSION
WCDMA/HSPA Band II	E2-plan	E2-plan
WCDMA/HSPA Band V	E2-plan	E2-plan
LTE Band 2	E2-plan	E2-plan
LTE Band 4	E2-plan	E2-plan
LTE Band 5	E2-plan	E2-plan
LTE Band 12	E2-plan	E2-plan
LTE Band 13	E2-plan	E2-plan
LTE Band 14	E2-plan	E2-plan
LTE Band 17	E2-plan	E2-plan
LTE Band 25	E2-plan	E2-plan
LTE Band 26	E2-plan	E2-plan
LTE Band 26 (Part 90S)	E2-plan	E2-plan
LTE Band 30	E2-plan	E2-plan
LTE Band 38	E2-plan	E2-plan
LTE Band 41	E2-plan	E2-plan
LTE Band 66	E2-plan	E2-plan

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#### WCDMA/HSPA MODE

TEST ITEM	AVAILABLE CHANNEL	TESTED CHANNEL	MODE
ERP	4132 to 4233	4132, 4183, 4233	WCDMA/HSPA Band V
EIRP	9262 to 9538	9262, 9400, 9538	WCDMA/HSPA Band II
FREQUENCY	4132 to 4233	4183	WCDMA Band II
STABILITY	9262 to 9538	9400	WCDMA Band V
OCCUPIED	4132 to 4233	4132, 4183, 4233	WCDMA/HSPA Band II
BANDWIDTH	9262 to 9538	9262, 9400, 9538	WCDMA/HSPA Band V
PEAK TO AVERAGE	4132 to 4233	4132, 4183, 4233	WCDMA/HSPA Band II
RATIO	9262 to 9538	9262, 9400, 9538	WCDMA/HSPA Band V
BAND EDGE	4132 to 4233	4132, 4233	WCDMA Band II
BAND EDGE	9262 to 9538	9262, 9538	WCDMA Band V
CONDCUDETED	4132 to 4233	4132, 4183, 4233	WCDMA Band II
EMISSION	9262 to 9538	9262, 9400, 9538	WCDMA Band V
RADIATED EMISSION	4132 to 4233	4132, 4183, 4233	WCDMA Band II
KADIATED EMISSION	9262 to 9538	9262, 9400, 9538	WCDMA Band V

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### LTE Band 2 MODE

	LIE Ballu Z WODE							
TEST ITEM	AVAILABLE CHANNEL	TESTED CHANNEL	CHANNEL BANDWIDTH	MODULATION	MODE			
	18607 to 19193	18607, 18900, 19193	1.4MHz	QPSK, 16QAM	1 RB/ 0,5 RB Offest			
	18615 to 19185	18615, 18900, 19185	3MHz	QPSK, 16QAM	1 RB/ 0,14 RB Offest			
[	18625 to 19175	18625, 18900, 19175	5MHz	QPSK, 16QAM	1 RB/ 0,24 RB Offest			
EIRP	18650 to 19150	18650, 18900, 19150	10MHz	QPSK, 16QAM	1 RB/ 0,49 RB Offest			
	18675 to 19125	18675, 18900, 19125	15MHz	QPSK, 16QAM	1 RB/ 0,74 RB Offest			
	18700 to 19100	18700, 18900, 19100	20MHz	QPSK, 16QAM	1 RB/ 0,99 RB Offest			
FREQUENCY STA- BILITY	18650 to 19150	18900	10MHz	QPSK,	Full RB			
	18607 to 19193	18607, 18900, 19193	1.4MHz	QPSK, 16QAM	Full RB			
	18615 to 19185	18615, 18900, 19185	3MHz	QPSK, 16QAM	Full RB			
OCCUPIED BAND-	18625 to 19175	18625, 18900, 19175	5MHz	QPSK, 16QAM	Full RB			
WIDTH	18650 to 19150	18650, 18900, 19150	10MHz	QPSK, 16QAM	Full RB			
	18675 to 19125	18675, 18900, 19125	15MHz	QPSK, 16QAM	Full RB			
	18700 to 19100	18700, 18900, 19100	20MHz	QPSK, 16QAM	Full RB			
	18607 to 19193	18607, 18900, 19193	1.4MHz	16QAM	Full RB			
	18615 to 19185	18615, 18900, 19185	3MHz	16QAM	Full RB			
PEAK TO AVERAGE	18625 to 19175	18625, 18900, 19175	5MHz	16QAM	Full RB			
RATIO	18650 to 19150	18650, 18900, 19150	10MHz	16QAM	Full RB			
	18675 to 19125	18675, 18900, 19125	15MHz	16QAM	Full RB			
	18700 to 19100	18700, 18900, 19100	20MHz	16QAM	Full RB			
	18607 to 19193	18607, 19193	1.4MHz	QPSK,	1 RB/ 0,5 RB Offes Full RB			
	18615 to 19185	18615, 19185	3MHz	QPSK,	1 RB/ 0,14 RB Offest Full RB			
	18625 to 19175	18625, 19175	5MHz	QPSK,	1 RB/ 0,24 RB Offest Full RB			
BAND EDGE	18650 to 19150	18650, 19150	10MHz	QPSK,	1 RB/ 0,49 RB Offest Full RB			
	18675 to 19125	18675, 19125	15MHz	QPSK,	1 RB/ 0,74 RB Offest Full RB			
	18700 to 19100	18700, 19100	20MHz	QPSK,	1 RB/ 0,99 RB Offest Full RB			
	18607 to 19193	18607, 18900, 19193	1.4MHz	QPSK,	1 RB, 0 RB Offest			
	18615 to 19185	18615, 18900, 19185	3MHz	QPSK,	1 RB, 0 RB Offest			
CONDCUDETED	18625 to 19175	18625, 18900, 19175	5MHz	QPSK,	1 RB, 0 RB Offest			
EMISSION	18650 to 19150	18650, 18900, 19150	10MHz	QPSK,	1 RB, 0 RB Offest			
	18675 to 19125	18675, 18900, 19125	15MHz	QPSK,	1 RB, 0 RB Offest			
	18700 to 19100	18700, 18900, 19100	20MHz	QPSK,	1 RB, 0 RB Offest			
RADIATED EMIS- SION	18625 to 19175	18625, 18900, 19175	10MHz	QPSK	1 RB, 0 RB Offest			

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### LTE Band 4 MODE

TEST ITEM	AVAILABLE CHANNEL	TESTED CHANNEL	CHANNEL BANDWIDTH	MODULATION	MODE
	19957 to 19393	19957, 20175, 19393	1.4MHz	QPSK, 16QAM	1 RB/ 0,5 RB Offest
	19965 to 22385	19965, 20175, 22385	3MHz	QPSK, 16QAM	1 RB/ 0,14 RB Offest
EIDD	19975 to 20375	19975, 20175, 20375	5MHz	QPSK, 16QAM	1 RB/ 0,24 RB Offest
EIRP	20000 to 20350	20000, 20175, 20350	10MHz	QPSK, 16QAM	1 RB/ 0,49 RB Offest
	20025 to 20325	20025, 20175, 20325	15MHz	QPSK, 16QAM	1 RB/ 0,74 RB Offest
	20050 to 20300	20050, 20175, 20300	20MHz	QPSK, 16QAM	1 RB/ 0,99 RB Offest
FREQUENCY STA- BILITY	20000 to 20350	20175	10MHz	QPSK,	Full RB
	19957 to 19393	19957, 20175, 19393	1.4MHz	QPSK, 16QAM	Full RB
	19965 to 22385	19965, 20175, 22385	3MHz	QPSK, 16QAM,	Full RB
OCCUPIED BAND-	19975 to 20375	19975, 20175, 20375	5MHz	QPSK, 16QAM,	Full RB
WIDTH	20000 to 20350	20000, 20175, 20350	10MHz	QPSK, 16QAM,	Full RB
	20025 to 20325	20025, 20175, 20325	15MHz	QPSK, 16QAM,	Full RB
	20050 to 20300	20050, 20175, 20300	20MHz	QPSK, 16QAM,	Full RB
	19957 to 19393	19957, 20175, 19393	1.4MHz	16QAM	Full RB
	19965 to 22385	19965, 20175, 22385	3MHz	16QAM	Full RB
PEAK TO AVERAGE	19975 to 20375	19975, 20175, 20375	5MHz	16QAM	Full RB
RATIO	20000 to 20350	20000, 20175, 20350	10MHz	16QAM	Full RB
	20025 to 20325	20025, 20175, 20325	15MHz	16QAM	Full RB
	20050 to 20300	20050, 20175, 20300	20MHz	16QAM	Full RB
	19957 to 19393	19957, 19393	1.4MHz	QPSK,	1 RB/ 0,5 RB Offes Full RB
	19965 to 22385	19965, 22385	3MHz	QPSK,	1 RB/ 0,14 RB Offest Full RB
	19975 to 20375	19975, 20375	5MHz	QPSK,	1 RB/ 0,24 RB Offest Full RB
BAND EDGE	20000 to 20350	20000, 20350	10MHz	QPSK,	1 RB/ 0,49 RB Offest Full RB
	20025 to 20325	20025, 20325	15MHz	QPSK,	1 RB/ 0,74 RB Offest Full RB
	20050 to 20300	20050, 20300	20MHz	QPSK,	1 RB/ 0,99 RB Offest Full RB
	19957 to 19393	19957, 20175, 19393	1.4MHz	QPSK,	1 RB, 0 RB Offest
[	19965 to 22385	19965, 20175, 22385	3MHz	QPSK,	1 RB, 0 RB Offest
CONDCUDETED	19975 to 20375	19975, 20175, 20375	5MHz	QPSK,	1 RB, 0 RB Offest
EMISSION	20000 to 20350	20000, 20175, 20350	10MHz	QPSK,	1 RB, 0 RB Offest
	20025 to 20325	20025, 20175, 20325	15MHz	QPSK,	1 RB, 0 RB Offest
	20050 to 20300	20050, 20175, 20300	20MHz	QPSK,	1 RB, 0 RB Offest
RADIATED EMIS- SION	20000 to 20350	20000, 20175, 20350	20MHz	QPSK,	1 RB, 99 RB Offest

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### LTE Band 5 MODE

TEST ITEM	AVAILABLE CHANNEL	TESTED CHANNEL	CHANNEL BANDWIDTH	MODULATION	MODE
ERP	20470 to 20643	20470, 20525, 20643	1.4MHz	QPSK, 16QAM,	1 RB/ 0,5 RB Offest
	20415 to 20635	20415, 20525, 20635	3MHz	QPSK, 16QAM,	1 RB/ 0,14 RB Offest
	20425 to 20625	20425, 20525, 20625	5MHz	QPSK, 16QAM,	1 RB/ 0,24 RB Offest
	20450 to 20600	20450, 20525, 20600	10MHz	QPSK, 16QAM,	1 RB/ 0,49 RB Offest
FREQUENCY STA- BILITY	20450 to 20600	20525	10MHz	QPSK,	Full RB
	20470 to 20643	20470, 20525, 20643	1.4MHz	QPSK, 16QAM,	Full RB
OCCUPIED BAND-	20415 to 20635	20415, 20525, 20635	3MHz	QPSK, 16QAM,	Full RB
WIDTH	20425 to 20625	20425, 20525, 20625	5MHz	QPSK, 16QAM,	Full RB
	20450 to 20600	20450, 20525, 20600	10MHz	QPSK, 16QAM,	Full RB
	20470 to 20643	20470, 20525, 20643	1.4MHz	16QAM	Full RB
PEAK TO AVERAGE	20415 to 20635	20415, 20525, 20635	3MHz	16QAM	Full RB
RATIO	20425 to 20625	20425, 20525, 20625	5MHz	16QAM	Full RB
	20450 to 20600	20450, 20525, 20600	10MHz	16QAM	Full RB
	20470 to 20643	20470, 20643	1.4MHz	QPSK,	1 RB/ 0,5 RB Offes Full RB
DAND FDOE	20415 to 20635	20415, 20635	3MHz	QPSK,	1 RB/ 0,14 RB Offest Full RB
BAND EDGE	20425 to 20625	20425, 20625	5MHz	QPSK,	1 RB/ 0,24 RB Offest Full RB
	20450 to 20600	20450, 20600	10MHz	QPSK,	1 RB/ 0,49 RB Offest Full RB
	20470 to 20643	20470, 20525, 20643	1.4MHz	QPSK,	1 RB, 0 RB Offest
CONDCUDETED	20415 to 20635	20415, 20525, 20635	3MHz	QPSK,	1 RB, 0 RB Offest
EMISSION	20425 to 20625	20425, 20525, 20625	5MHz	QPSK,	1 RB, 0 RB Offest
	20450 to 20600	20450, 20525, 20600	10MHz	QPSK,	1 RB, 0 RB Offest
RADIATED EMIS- SION	20450 to 20600	20450, 20525, 20600	5MHz	QPSK,	1 RB, 24 RB Offest

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### LTE Band 7 MODE

TEST ITEM	AVAILABLE CHANNEL	TESTED CHANNEL	CHANNEL BANDWIDTH	MODULATION	MODE
	20775 to 21425	20775, 21100, 21425	5MHz	QPSK, 16QAM	1 RB/ 0,24 RB Offest
EIRP	20800 to 21400	20800, 21100, 21400	10MHz	QPSK, 16QAM	1 RB/ 0,49 RB Offest
EIRP	20850 to 21375	20850, 21100, 21375	15MHz	QPSK, 16QAM	1 RB/ 0,74 RB Offest
	20850 to 21350	20850, 21100, 21350	20MHz	QPSK, 16QAM	1 RB/ 0,99 RB Offest
FREQUENCY STABILITY	20800 to 21400	21100	10MHz	QPSK	Full RB
	20775 to 21425	20775, 21100, 21425	5MHz	QPSK, 16QAM	Full RB
OCCUPIED BAND-	20800 to 21400	20800, 21100, 21400	10MHz	QPSK, 16QAM	Full RB
WIDTH	20850 to 21375	20850, 21100, 21375	15MHz	QPSK, 16QAM	Full RB
	20850 to 21350	20850, 21100, 21350	20MHz	QPSK, 16QAM	Full RB
	20775 to 21425	20775, 21100, 21425	5MHz	16QAM	Full RB
PEAK TO AVERAGE	20800 to 21400	20800, 21100, 21400	10MHz	16QAM	Full RB
RATIO	20850 to 21375	20850, 21100, 21375	15MHz	16QAM	Full RB
	20850 to 21350	20850, 21100, 21350	20MHz	16QAM	Full RB
	20775 to 21425	20775, 21100, 21425	5MHz	QPSK	1 RB/ 0,24 RB Offest Full RB
DAND EDGE	20800 to 21400	20800, 21100, 21400	10MHz	QPSK	1 RB/ 0,49 RB Offest Full RB
BAND EDGE	20850 to 21375	20850, 21100, 21375	15MHz	QPSK	1 RB/ 0,74 RB Offest Full RB
	20850 to 21350	20850, 21100, 21350	20MHz	QPSK	1 RB/ 0,99 RB Offest Full RB
	20775 to 21425	20775, 21100, 21425	5MHz	QPSK	1 RB, 0 RB Offest
CONDCUDETED	20800 to 21400	20800, 21100, 21400	10MHz	QPSK	1 RB, 0 RB Offest
EMISSION	20850 to 21375	20850, 21100, 21375	15MHz	QPSK	1 RB, 0 RB Offest
	20850 to 21350	20850, 21100, 21350	20MHz	QPSK	1 RB, 0 RB Offest
RADIATED EMISSION	20800 to 21400	20800, 21100, 21400	20MHz	16QAM	1 RB, 0 RB Offest
	20775 to 21425	20775, 21100, 21425	5MHz	QPSK	1 RB/ 0,24 RB Offest 25 RB/ 0 Offset
EMICOLONI MA OK	20800 to 21400	20800, 21100, 21400	10MHz	QPSK	1 RB/ 0,49 RB Offest 50 RB/ 0 Offset
EMISSION MASK	20850 to 21375	20850, 21100, 21375	15MHz	QPSK	1 RB/ 0,74 RB Offest 75 RB/ 0 Offset
	20850 to 21350	20850, 21100, 21350	20MHz	QPSK	1 RB/ 0,99 RB Offest 100 RB/ 0 Offset

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#### LTE Band 12 MODE

TEST ITEM	AVAILABLE CHANNEL	TESTED CHANNEL	CHANNEL BANDWIDTH	MODULATION	MODE
	23017 to 23173	23017, 23095, 23173	1.4MHz	QPSK, 16QAM,	1 RB/ 0,5 RB Offest
ERP	23025 to 23165	23025, 23095, 23165	3MHz	QPSK, 16QAM,	1 RB/ 0,14 RB Offest
ERP	23035 to 23155	23035, 23095, 23155	5MHz	QPSK, 16QAM,	1 RB/ 0,24 RB Offest
	23060 to 23130	23060, 23095, 23130	10MHz	QPSK, 16QAM,	1 RB/ 0,49 RB Offest
FREQUENCY STABILITY	23060 to 23130	23095	10MHz	QPSK,	Full RB
	23017 to 23173	23017, 23095, 23173	1.4MHz	QPSK, 16QAM,	Full RB
OCCUPIED	23025 to 23165	23025, 23095, 23165	3MHz	QPSK, 16QAM,	Full RB
BANDWIDTH	23035 to 23155	23035, 23095, 23155	5MHz	QPSK, 16QAM,	Full RB
	23060 to 23130	23060, 23095, 23130	10MHz	QPSK, 16QAM,	Full RB
	23017 to 23173	23017, 23095, 23173	1.4MHz	16QAM	Full RB
PEAK TO AV-	23025 to 23165	23025, 23095, 23165	3MHz	16QAM	Full RB
ERAGE RATIO	23035 to 23155	23035, 23095, 23155	5MHz	16QAM	Full RB
	23060 to 23130	23060, 23095, 23130	10MHz	16QAM	Full RB
	23017 to 23173	23017, 23095, 23173	1.4MHz	QPSK,	1 RB/ 0,5 RB Offes Full RB
	23025 to 23165	23025, 23095, 23165	3MHz	QPSK,	1 RB/ 0,14 RB Offest Full RB
BAND EDGE	23035 to 23155	23035, 23095, 23155	5MHz	QPSK,	1 RB/ 0,24 RB Offest Full RB
	23060 to 23130	23060, 23095, 23130	10MHz	QPSK,	1 RB/ 0,49 RB Offest Full RB
CONDCU-	23017 to 23173	23017, 23095, 23173	1.4MHz	QPSK,	1 RB, 0 RB Offest
DETED EMIS-	23025 to 23165	23025, 23095, 23165	3MHz	QPSK,	1 RB, 0 RB Offest
	23035 to 23155	23035, 23095, 23155	5MHz	QPSK,	1 RB, 0 RB Offest
SION	23060 to 23130	23060, 23095, 23130	10MHz	QPSK,	1 RB, 0 RB Offest
RADIATED EMISSION	23035 to 23155	23035, 23095, 23155	5MHz	QPSK	1 RB, 0 RB Offest

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### LTE Band 13 MODE

TEST ITEM	AVAILABLE CHANNEL	TESTED Channel	CHANNEL BANDWIDTH	MODULATION	MODE	
ERP	23205 to 23255	23205, 23230, 23255	5MHz	QPSK, 16QAM,	1 RB/ 0,24 RB Offest	
ERF	23230	23230	10MHz	QPSK, 16QAM,	1 RB/ 0,49 RB Offest	
FREQUENCY STA- BILITY	23230	23230	10MHz	QPSK,	Full RB	
OCCUPIED BAND-	23205 to 23255	23205, 23230, 23255	5MHz	QPSK, 16QAM,	Full RB	
WIDTH	23230	23230	10MHz	QPSK, 16QAM,	Full RB	
PEAK TO AVERAGE	23205 to 23255	23205, 23230, 23255	5MHz	16QAM	Full RB	
RATIO	23230	23230	10MHz	16QAM	Full RB	
DAND FDCF	23205 to 23255	23205, 23255	5MHz	QPSK,	1 RB/ 0,24 RB Offest Full RB	
BAND EDGE	23230	23230	10MHz	QPSK,	1 RB/ 0,49 RB Offest Full RB	
CONDCUDETED	23205 to 23255	23205, 23230, 23255	5MHz	QPSK,	1 RB, 0 RB Offest	
EMISSION	23230	23230	10MHz	QPSK,	1 RB, 0 RB Offest	
RADIATED EMIS- SION	23205 to 23255	23205, 23230, 23255	10MHz	QPSK,	1 RB/ 25 RB Offest	

#### LTE Band 14 MODE

ETE BAIR 14 MODE						
TEST ITEM	AVAILABLE CHANNEL	TESTED CHANNEL	CHANNEL BANDWIDTH	MODULATION	MODE	
ERP	23305 to 23355	23305,23330,23355	5MHz	QPSK, 16QAM,	1 RB/ 0,24 RB Offest	
ERP	23330	23330	10MHz	QPSK, 16QAM,	1 RB/ 0,49 RB Offest	
FREQUENCY STA- BILITY	23330	23330	10MHz	QPSK,	Full RB	
OCCUPIED BAND-	23305 to 23355	23305,23330,23355	5MHz	QPSK, 16QAM,	Full RB	
WIDTH	23330	23330	10MHz	QPSK, 16QAM,	Full RB	
PEAK TO AVERAGE	23305 to 23355	23305,23330,23355	5MHz	16QAM	Full RB	
RATIO	23330	23330	10MHz	16QAM	Full RB	
DAND EDGE	23305 to 23355	23305, 23355	5MHz	QPSK,	1 RB/ 0,24 RB Offest Full RB	
BAND EDGE	23330	23330	10MHz	QPSK,	1 RB/ 0,49 RB Offest Full RB	
CONDCUDETED	23305 to 23355	23305,23330,23355	5MHz	QPSK,	1 RB, 0 RB Offest	
EMISSION	23330	23330	10MHz	QPSK,	1 RB, 0 RB Offest	
RADIATED EMIS- SION	23305 to 23355	23305,23330,23355	10MHz	QPSK,	1 RB/ 0 RB Offest	

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#### LTF Band 17 MODE

LTE BANG 17 MODE							
TEST ITEM	AVAILABLE CHANNEL	TESTED Channel	CHANNEL BANDWIDTH	MODULATION	MODE		
ERP	23755 to 23825	23755, 23790, 23825	5MHz	QPSK, 16QAM,	1 RB/ 0,24 RB Offest		
ERF	23780 to 23800	23780, 23790, 23800	10MHz	QPSK, 16QAM,	1 RB/ 0,49 RB Offest		
FREQUENCY STA- BILITY	23780 to 23800	23790	10MHz	QPSK,	Full RB		
OCCUPIED BAND-	23755 to 23825	23755, 23790, 23825	5MHz	QPSK, 16QAM,	Full RB		
WIDTH	23780 to 23800	23780, 23790, 23800	10MHz	QPSK, 16QAM,	Full RB		
PEAK TO AVERAGE	23755 to 23825	23755, 23790, 23825	5MHz	16QAM	Full RB		
RATIO	23780 to 23800	23780, 23790, 23800	10MHz	16QAM	Full RB		
BAND EDGE	23755 to 23825	23755, 23825	5MHz	QPSK,	1 RB/ 0,24 RB Offest Full RB		
DANU EDGE	23780 to 23800	23780, 23800	10MHz	QPSK,	1 RB/ 0,49 RB Offest Full RB		
CONDCUDETED	23755 to 23825	23755, 23790, 23825	5MHz	QPSK,	1 RB, 0 RB Offest		
EMISSION	23780 to 23800	23780, 23790, 23800	10MHz	QPSK,	1 RB, 0 RB Offest		
RADIATED EMIS- SION	23755 to 23825	23755, 23790, 23825	10MHz	QPSK,	1 RB/ 0 RB Offest		

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TEST ITEM	AVAILABLE CHANNEL	TESTED CHANNEL	CHANNEL BANDWIDTH	MODULATION	MODE
	26047 to 26683	26047,26365,26683	1.4MHz	QPSK, 16QAM	1 RB/ 0,5 RB Offest
	26055 to 26365	26055, 26365,26675	3MHz	QPSK, 16QAM	1 RB/ 0,14 RB Offest
- FIDD	26065 to 26665	26065,26365,26665	5MHz	QPSK, 16QAM	1 RB/ 0,24 RB Offest
EIRP	26090 to 26640	26090,26365,26640	10MHz	QPSK, 16QAM	1 RB/ 0,49 RB Offest
	26115 to 26615	26115,26365,26615	15MHz	QPSK, 16QAM	1 RB/ 0,74 RB Offest
	26140 to 26590	26140,26365,26590	20MHz	QPSK, 16QAM	1 RB/ 0,99 RB Offest
FREQUENCY STA- BILITY	26140 to 26590	26365	20MHz	QPSK,	Full RB
	26047 to 26683	26047,26365,26683	1.4MHz	QPSK, 16QAM	Full RB
	26055 to 26365	26055, 26365,26675	3MHz	QPSK, 16QAM,	Full RB
OCCUPIED BAND-	26065 to 26665	26065,26365,26665	5MHz	QPSK, 16QAM,	Full RB
WIDTH	26090 to 26640	26090,26365,26640	10MHz	QPSK, 16QAM,	Full RB
	26115 to 26615	26115,26365,26615	15MHz	QPSK, 16QAM,	Full RB
	26140 to 26590	26140,26365,26590	20MHz	QPSK, 16QAM,	Full RB
	26047 to 26683	26047,26365,26683	1.4MHz	16QAM	Full RB
	26055 to 26365	26055, 26365,26675	3MHz	16QAM	Full RB
PEAK TO AVERAGE	26065 to 26665	26065,26365,26665	5MHz	16QAM	Full RB
PEAK TO AVERAGE RATIO	26090 to 26640	26090,26365,26640	10MHz	16QAM	Full RB
	26115 to 26615	26115,26365,26615	15MHz	16QAM	Full RB
	26140 to 26590	26140,26365,26590	20MHz	16QAM	Full RB
	26047 to 26683	26047,26683	1.4MHz	QPSK,	1 RB/ 0,5 RB Offes Full RB
	26055 to 26365	26055,26675	3MHz	QPSK,	1 RB/ 0,14 RB Offest Full RB
	26065 to 26665	26065,26665	5MHz	QPSK,	1 RB/ 0,24 RB Offest Full RB
BAND EDGE	26090 to 26640	26090,26640	10MHz	QPSK,	1 RB/ 0,49 RB Offest Full RB
	26115 to 26615	26115,26615	15MHz	QPSK,	1 RB/ 0,74 RB Offest Full RB
	26140 to 26590	26140,26590	20MHz	QPSK,	1 RB/ 0,99 RB Offest Full RB
	26047 to 26683	26047,26365,26683	1.4MHz	QPSK,	1 RB, 0 RB Offest
	26055 to 26365	26055, 26365,26675	3MHz	QPSK,	1 RB, 0 RB Offest
CONDCUDETED	26065 to 26665	26065,26365,26665	5MHz	QPSK,	1 RB, 0 RB Offest
EMISSION	26090 to 26640	26090,26365,26640	10MHz	QPSK,	1 RB, 0 RB Offest
	26115 to 26615	26115,26365,26615	15MHz	QPSK,	1 RB, 0 RB Offest
	26140 to 26590	26140,26365,26590	20MHz	QPSK,	1 RB, 0 RB Offest
RADIATED EMIS- SION	26047 to 26683	26047,26365,26683	20MHz	QPSK,	1 RB, 0 RB Offest

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#### LTE Band 26 MODE

LIE BANG 26 WODE						
TEST ITEM	AVAILABLE CHANNEL	TESTED CHANNEL	CHANNEL BANDWIDTH	MODULATION	MODE	
		26697, 26865, 27033	1.4MHz	QPSK, 16QAM,	1 RB/ 0,5 RB Offest	
		26705, 26865, 27025	3MHz	QPSK, 16QAM,	1 RB/ 0,14 RB Offest	
ERP	26715 to 27015	26815, 26865, 27015	5MHz	QPSK, 16QAM,	1 RB/ 0,24 RB Offest	
	26750 to 26990	26750, 26865, 26990	10MHz	QPSK, 16QAM,	1 RB/ 0,49 RB Offest	
	26775 to 26965	26775, 26865, 26965	15MHz	QPSK, 16QAM,	1 RB/ 0,74 RB Offest	
FREQUENCY STABILITY	26775 to 26965	26865	15MHz	QPSK,	Full RB	
	26697 to 27033	26697, 26865, 27033	1.4MHz	QPSK, 16QAM,	Full RB	
OCCUPIED	26705 to 27025	26705, 26865, 27025	3MHz	QPSK, 16QAM,	Full RB	
	26715 to 27015	26815, 26865, 27015	5MHz	QPSK, 16QAM,	Full RB	
BANDWIDTH	26750 to 26990	26750, 26865, 26990	10MHz	QPSK, 16QAM,	Full RB	
	26775 to 26965	26775, 26865, 26965	15MHz	QPSK, 16QAM,	Full RB	
	26697 to 27033	26697, 26865, 27033	1.4MHz	16QAM	Full RB	
PEAK TO AV-	26705 to 27025	26705, 26865, 27025	3MHz	16QAM	Full RB	
ERAGE RATIO	26715 to 27015	26815, 26865, 27015	5MHz	16QAM	Full RB	
ERAGE RATIO	26750 to 26990	26750, 26865, 26990	10MHz	16QAM	Full RB	
	26775 to 26965	26775, 26865, 26965	15MHz	16QAM	Full RB	
	26697 to 27033	26697, 27033	1.4MHz	QPSK,	1 RB/ 0,5 RB Offes Full RB	
	26705 to 27025	26705, 27025	3MHz	QPSK,	1 RB/ 0,14 RB Offest Full RB	
BAND EDGE	26715 to 27015	26715, 27015	5MHz	QPSK,	1 RB/ 0,24 RB Offest Full RB	
	26750 to 26990	26750, 26990	10MHz	QPSK,	1 RB/ 0,49 RB Offest Full RB	
	26775 to 26965	26775, 26965	15MHz	QPSK	1 RB/ 0,74 RB Offest	
	26697 to 27033	26697, 26865, 27033	1.4MHz	QPSK,	1 RB, 0 RB Offest	
CONDCUDETED EMISSION	26705 to 27025	26705, 26865, 27025	3MHz	QPSK,	1 RB, 0 RB Offest	
	26715 to 27015	26815, 26865, 27015	5MHz	QPSK,	1 RB, 0 RB Offest	
	26750 to 26990	26750, 26865, 26990	10MHz	QPSK,	1 RB, 0 RB Offest	
	26775 to 26965	26775, 26865, 26965	15MHz	QPSK	1 RB, 0 RB Offest	
RADIATED EMISSION	26775 to 26965	26775, 26865, 26965	15MHz	QPSK,	1 RB, 0 RB Offest	

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### LTE Band 26 for 90S MODE

TEST ITEM	AVAILABLE	TESTED	CHANNEL	MODULATION	MODE
1 LOT TI LIVI	CHANNEL	CHANNEL	BANDWIDTH	MODULATION	MODE
	26697 to 26783	26697, 26740, 26783	1.4MHz	QPSK, 16QAM,	1 RB/ 0,5 RB Offest
ERP	26705 to 26775	26705, 26740, 26775	3MHz	QPSK, 16QAM,	1 RB/ 0,14 RB Offest
LIXE	26715 to 26765	26715, 26740, 26765	5MHz	QPSK, 16QAM,	1 RB/ 0,24 RB Offest
	26740	26740	10MHz	QPSK, 16QAM,	1 RB/ 0,49 RB Offest
FREQUENCY STABILITY	26697 to 26783	26740	1.4MHz	QPSK,	Full RB
	26697 to 26783	26697, 26740, 26783	1.4MHz	QPSK, 16QAM,	Full RB
OCCUPIED	26705 to 26775	26705, 26740, 26775	3MHz	QPSK, 16QAM,	Full RB
BANDWIDTH	26715 to 26765	26715, 26740, 26765	5MHz	QPSK, 16QAM,	Full RB
	26740	26740	10MHz	QPSK, 16QAM,	Full RB
	26697 to 26783	26697, 26740, 26783	1.4MHz	16QAM	Full RB
PEAK TO AV-	26705 to 26775	26705, 26740, 26775	3MHz	16QAM	Full RB
ERAGE RATIO	26715 to 26765	26715, 26740, 26765	5MHz	16QAM	Full RB
	26740	26740	10MHz	16QAM	Full RB
	26697 to 26783	26697, 26740, 26783	1.4MHz	QPSK,	1 RB/ 0,5 RB Offes Full RB
EMISSION	26705 to 26775	26705, 26740, 26775	3MHz	QPSK,	1 RB/ 0,14 RB Offest Full RB
MASK	26715 to 26765	26715, 26740, 26765	5MHz	QPSK,	1 RB/ 0,24 RB Offest Full RB
	26740	26740	10MHz	QPSK,	1 RB/ 0,49 RB Offest Full RB
	26697 to 26783	26697, 26740, 26783	1.4MHz	QPSK,	1 RB, 0 RB Offest
CONDCUDETED	26705 to 26775	26705, 26740, 26775	3MHz	QPSK,	1 RB, 0 RB Offest
EMISSION		26715, 26740, 26765	5MHz	QPSK,	1 RB, 0 RB Offest
	26740	26740	10MHz	QPSK,	1 RB, 0 RB Offest
RADIATED EMISSION	26740	26740	3MHz	QPSK,	1 RB, 0 RB Offest

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#### LTE Band 30 MODE

LIE Baild 30 MODE						
TEST ITEM	AVAILABLE CHANNEL	TESTED Channel	CHANNEL BANDWIDTH	MODULATION	MODE	
ERP	27685 to 27735	27685, 27710, 27735	5MHz	QPSK, 16QAM,	1 RB/ 0,24 RB Offest	
ERF	27710	27710	10MHz	QPSK, 16QAM,	1 RB/ 0,49 RB Offest	
FREQUENCY STA- BILITY	27710	27710	10MHz	QPSK,	Full RB	
OCCUPIED BAND-	27685 to 27735	27685, 27710, 27735	5MHz	QPSK, 16QAM,	Full RB	
WIDTH	27710	27710	10MHz	QPSK, 16QAM,	Full RB	
PEAK TO AVERAGE	27685 to 27735	27685, 27710, 27735	5MHz	16QAM	Full RB	
RATIO	27710	27710	10MHz	16QAM	Full RB	
BAND EDGE	27685 to 27735	27685, 27710, 27735	5MHz	QPSK,	1 RB/ 0,24 RB Offest Full RB	
BAND EDGE	27710	27710	10MHz	QPSK,	1 RB/ 0,49 RB Offest Full RB	
CONDCUDETED	27685 to 27735	27685, 27710, 27735	5MHz	QPSK,	1 RB, 0 RB Offest	
EMISSION	27710	27710	10MHz	QPSK,	1 RB, 0 RB Offest	
RADIATED EMIS- SION	27685 to 27735	27685, 27710, 27735	10MHz	QPSK	1 RB/ 49 RB Offest	

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### LTE Band 38 MODE

TEST ITEM	AVAILABLE CHANNEL	TESTED CHANNEL	CHANNEL BANDWIDTH	MODULATION	MODE
	37775 to 38225	37775,38000,38225	5MHz	QPSK, 16QAM,	1 RB/ 0,24 RB Offest
FIDD	37800 to 38200	37800,38000,38200	10MHz	QPSK, 16QAM,	1 RB/ 0,49 RB Offest
EIRP	37825 to 38175	37825,38000,38175	15MHz	QPSK, 16QAM,	1 RB/ 0,74 RB Offest
	37850 to 38150	37850,38000,38150	20MHz	QPSK, 16QAM,	1 RB/ 0,99 RB Offest
FREQUENCY STABILITY	37800 to 38200	37800,38000,38200	10MHz	QPSK,	Full RB
	37775 to 38225	37775,38000,38225	5MHz	QPSK, 16QAM,	Full RB
OCCUPIED BAND-	37800 to 38200	37800,38000,38200	10MHz	QPSK, 16QAM,	Full RB
WIDTH	37825 to 38175	37825,38000,38175	15MHz	QPSK, 16QAM,	Full RB
	37850 to 38150	37850,38000,38150	20MHz	BANDWIDTH         MODULATION           5MHz         QPSK, 16QAM,           10MHz         QPSK, 16QAM,           15MHz         QPSK, 16QAM,           20MHz         QPSK, 16QAM,           10MHz         QPSK,           5MHz         QPSK, 16QAM,           10MHz         QPSK, 16QAM,           15MHz         QPSK, 16QAM,           15MHz         QPSK, 16QAM,	Full RB
	37775 to 38225	37775,38000,38225	5MHz	16QAM	Full RB
PEAK TO AVERAGE	37800 to 38200	37800,38000,38200	10MHz	16QAM	Full RB
RATIO	37825 to 38175	37825,38000,38175	15MHz	16QAM	Full RB
	37850 to 38150	37850,38000,38150	20MHz	16QAM	Full RB
	37775 to 38225	37775,38000,38225	5MHz	QPSK,	1 RB/ 0,24 RB Offest Full RB
BAND EDGE	37800 to 38200	37800,38000,38200	10MHz	QPSK,	1 RB/ 0,49 RB Offest Full RB
BAND EDGE	37825 to 38175	37825,38000,38175	15MHz	QPSK,	1 RB/ 0,74 RB Offest Full RB
	37850 to 38150	37850,38000,38150	25 5MHz QPSK, 00 10MHz QPSK, 75 15MHz QPSK, 60 20MHz QPSK,	1 RB/ 0,99 RB Offest Full RB	
	37775 to 38225	37775,38000,38225	5MHz		1 RB, 0 RB Offest
CONDCUDETED EMIS-	37800 to 38200	37800,38000,38200	10MHz	QPSK,	1 RB, 0 RB Offest
SION	37825 to 38175	37825,38000,38175	15MHz	QPSK,	1 RB, 0 RB Offest
	37850 to 38150	37850,38000,38150	20MHz	QPSK,	1 RB, 0 RB Offest
	37775 to 38225	37775,38000,38225	5MHz	QPSK,	1 RB/ 0,24 RB Offest 25 RB/ 0 Offset
EMICOLON MACK	37800 to 38200	37800,38000,38200	10MHz	QPSK,	1 RB/ 0,49 RB Offest 50 RB/ 0 Offset
EMISSION MASK	37825 to 38175	37825,38000,38175	15MHz	QPSK,	1 RB/ 0,74 RB Offest 75 RB/ 0 Offset
	37850 to 38150	37850,38000,38150	20MHz	QPSK,	1 RB/ 0,99 RB Offest 100 RB/ 0 Offset
RADIATED EMISSION	37775 to 38225	37775,38000,38225	5MHz	QPSK,	1 RB, 0 RB Offest

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#### LTE Band 41 MODE

TEST ITEM	AVAILABLE CHANNEL	TESTED CHANNEL	CHANNEL BANDWIDTH	MODULATION	MODE
	39675 to 41565	39675, 40620, 41565	5MHz	QPSK, 16QAM,	1 RB/ 0,24 RB Offest
EIRP	39700 to 41540	39700, 40620, 41540	10MHz	QPSK, 16QAM,	1 RB/ 0,49 RB Offest
EIRP	39725 to 41515	39725, 40620, 41515	15MHz	QPSK, 16QAM,	1 RB/ 0,74 RB Offest
	39750 to 41490	39750, 40620, 41490	20MHz	QPSK, 16QAM,	1 RB/ 0,99 RB Offest
FREQUENCY STABILITY	39700 to 41540	39700, 40620, 41540	10MHz	QPSK,	Full RB
	39675 to 41565	39675, 40620, 41565	5MHz	QPSK, 16QAM,	Full RB
OCCUPIED BAND-	39700 to 41540	39700, 40620, 41540	10MHz	QPSK, 16QAM,	Full RB
WIDTH	39725 to 41515	39725, 40620, 41515	15MHz	QPSK, 16QAM,	Full RB
	39750 to 41490	39750, 40620, 41490	20MHz	MODULATION           5MHz         QPSK, 16QAM,           10MHz         QPSK, 16QAM,           15MHz         QPSK, 16QAM,           20MHz         QPSK, 16QAM,           10MHz         QPSK,           5MHz         QPSK, 16QAM,           10MHz         QPSK, 16QAM,           15MHz         QPSK, 16QAM,           15MHz         QPSK, 16QAM,	Full RB
	39675 to 41565	39675, 40620, 41565	5MHz	16QAM	Full RB
PEAK TO AVERAGE	39700 to 41540	39700, 40620, 41540	10MHz	16QAM	Full RB
RATIO	39725 to 41515	39725, 40620, 41515	15MHz	16QAM	Full RB
	39750 to 41490	39750, 40620, 41490	20MHz	16QAM	Full RB
	39675 to 41565	39675, 41565	5MHz	QPSK,	1 RB/ 0,24 RB Offest Full RB
DAND EDGE	39700 to 41540	39700, 41540	10MHz	QPSK,	1 RB/ 0,49 RB Offest Full RB
BAND EDGE	39725 to 41515	39725, 41515	15MHz	QPSK,	1 RB/ 0,74 RB Offest Full RB
	39750 to 41490	39750, 41490	20MHz	•	1 RB/ 0,99 RB Offest Full RB
	39675 to 41565	39675, 40620, 41565		,	1 RB, 0 RB Offest
CONDCUDETED EMIS-	39700 to 41540	39700, 40620, 41540		,	1 RB, 0 RB Offest
SION	39725 to 41515	39725, 40620, 41515	15MHz	QPSK,	1 RB, 0 RB Offest
	39750 to 41490	39750, 40620, 41490	20MHz	QPSK,	1 RB, 0 RB Offest
	39675 to 41565	39675, 40620, 41565	5MHz	QPSK,	1 RB/ 0,24 RB Offest 25 RB/ 0 Offset
EMISSION MASK	39700 to 41540	39700, 40620, 41540	10MHz	QPSK,	1 RB/ 0,49 RB Offest 50 RB/ 0 Offset
	39725 to 41515	39725, 40620, 41515	15MHz	QPSK,	1 RB/ 0,74 RB Offest 75 RB/ 0 Offset
	39750 to 41490	39750, 40620, 41490	20MHz	QPSK,	1 RB/ 0,99 RB Offest 100 RB/ 0 Offset
RADIATED EMISSION	39750 to 41490	39750, 40620, 41490	20MHz	QPSK,	1 RB, 99 RB Offest

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#### LTE Band 66 MODE

TEST ITEM	AVAILABLE CHANNEL	TESTED CHANNEL	CHANNEL BANDWIDTH	MODULATION	MODE
	131979 to 132665	131979, 132322, 132665	1.4MHz	QPSK, 16QAM,	1 RB/ 0,5 RB Offest
	131987 to 132657	131987, 132322, 132657	3MHz	QPSK, 16QAM,	1 RB/ 0,14 RB Offest
FIDD	131997 to 132647	131997, 132322, 132647	5MHz	QPSK, 16QAM,	1 RB/ 0,24 RB Offest
EIRP	132022 to 132622	132022, 132322, 132622	10MHz	QPSK, 16QAM,	1 RB/ 0,49 RB Offest
	132047 to 132597	132047, 132322, 132597	15MHz	QPSK, 16QAM,	1 RB/ 0,74 RB Offest
	132072 to 132572	132072, 132322, 132572	20MHz	QPSK, 16QAM,	1 RB/ 0,99 RB Offest
FREQUENCY STA- BILITY	18650 to 19150	18900	10MHz	QPSK,	Full RB
		131979, 132322, 132665	1.4MHz	QPSK, 16QAM,	Full RB
	131987 to 132657	131987, 132322, 132657	3MHz	QPSK, 16QAM,	Full RB
OCCUPIED BAND-	131997 to 132647	131997, 132322, 132647	5MHz	QPSK, 16QAM,	Full RB
WIDTH	132022 to 132622	132022, 132322, 132622	10MHz	QPSK, 16QAM,	Full RB
	132047 to 132597	132047, 132322, 132597	15MHz	QPSK, 16QAM,	Full RB
	132072 to 132572	132072, 132322, 132572	20MHz	QPSK, 16QAM,	Full RB
	131979 to 132665	131979, 132322, 132665	1.4MHz	16QAM	Full RB
	131987 to 132657	131987, 132322, 132657	3MHz	16QAM	Full RB
PEAK TO AVERAGE	131997 to 132647	131997, 132322, 132647	5MHz	16QAM	Full RB
RATIO	132022 to 132622	132022, 132322, 132622	10MHz	16QAM	Full RB
	132047 to 132597	132047, 132322, 132597	15MHz	16QAM	Full RB
	132072 to 132572	132072, 132322, 132572	20MHz	16QAM	Full RB
	18607 to 19193	18607, 19193	1.4MHz	QPSK,	1 RB/ 0,5 RB Offes Full RB
	18615 to 19185	18615, 19185	3MHz	QPSK,	1 RB/ 0,14 RB Offest Full RB
BAND EDGE	18625 to 19175	18625, 19175	5MHz	QPSK,	1 RB/ 0,24 RB Offest Full RB
DAND EDGE	18650 to 19150	18650, 19150	10MHz	QPSK,	1 RB/ 0,49 RB Offest Full RB
	18675 to 19125	18675, 19125	15MHz	QPSK,	1 RB/ 0,74 RB Offest Full RB
	18700 to 19100	18700, 19100	20MHz	QPSK,	1 RB/ 0,99 RB Offest Full RB
	18607 to 19193	18607, 18900, 19193	1.4MHz	QPSK,	1 RB, 0 RB Offest
	18615 to 19185	18615, 18900, 19185	3MHz	QPSK,	1 RB, 0 RB Offest
CONDCUDETED	18625 to 19175	18625, 18900, 19175	5MHz	QPSK,	1 RB, 0 RB Offest
EMISSION	18650 to 19150	18650, 18900, 19150	10MHz	QPSK,	1 RB, 0 RB Offest
	18675 to 19125	18675, 18900, 19125	15MHz	QPSK,	1 RB, 0 RB Offest
	18700 to 19100	18700, 18900, 19100	20MHz	QPSK,	1 RB, 0 RB Offest
RADIATED EMISSION	18700 to 19100	18700, 18900, 19100	20MHz	QPSK,	1 RB, 0 RB Offest

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### 5. MEASUREMENT UNCERTAINTY

Test Items	Uncertainty		
RF Power Output	+/- 1.10 dB		
ERP/ EIRP measurement	Vertical Polarization = +/- 4.74dB Horizontal Polarization =+/- 4.62dB		
99% Occupied Bandwidth	+/- 5.19 Hz		
Out of Band Emissions at Antenna Terminals and Band Edge	+/- 0.70 dB		
Peak to Average Ratio	+/- 0.70 dB		
Frequency Stability vs. Temperature	+/- 5.19 Hz		
Frequency Stability vs. Voltage	+/- 5.19 Hz		
Temperature	+/- 0.65 °C		
Humidity	+/- 4.6 %		
DC / AC Power Source	DC= +/- 0.13%, AC=+/- 0.2%		

### Radiated Spurious Emission:

Measurement uncertainty (Polarization : <b>Vertical</b> )	9kHz – 30MHz: +/- 2.87 dB		
	30MHz - 180MHz: +/- 3.37dB		
	180MHz -417MHz: +/- 3.19dB		
	0.417GHz-1GHz: +/- 3.19dB		
	1GHz - 18GHz: +/- 4.04dB		
	18GHz - 40GHz: +/- 4.04dB		

Measurement uncertainty (Polarization : <b>Horizontal</b> )	9kHz – 30MHz: +/- 2.87 dB		
	30MHz - 167MHz: +/- 4.22dB		
	167MHz -500MHz: +/- 3.44dB		
	0.5GHz-1GHz: +/- 3.39dB		
	1GHz - 18GHz: +/- 4.08dB		
	18GHz - 40GHz: +/- 4.08dB		

This uncertainty represents an expanded uncertainty expressed at approximately the 95% confidence level using a coverage factor of k=2.

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#### 6. MAXMUM OUTPUT POWER

## 6.1. Standard Applicable

A base station simulator was used to establish communication with the EUT. Its parameters were set to transmit the maximum power on the EUT. The measured power in the radio frequency on the transmitter output terminals.

#### **ERP/EIRP LIMIT**

According to FCC §2.1046

FCC 22.913(a) Mobile station is limited to 7W ERP.

FCC 24.232(b) Mobile and portable stations are limited to 2 W EIRP.

FCC 27.50(a)(3) Mobile and portable stations (hand-held devices) are limited to 250 mW/ 5MHz EIRP.

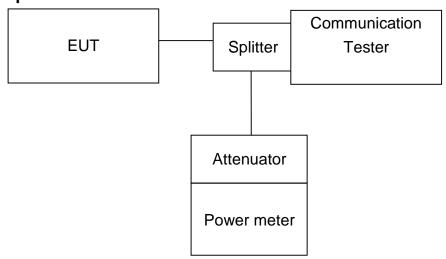
FCC 27.50(c)(10) Portable stations (hand-held devices) are limited to 3 watts ERP.

FCC 27.50(d)(4) Fixed, mobile, and portable (hand-held) stations are limited to 1W EIRP.

FCC 27, 50(h)(2) Mobile and other user stations. Mobile stations are limited to 2 W EIRP

FCC 90.635(b) Mobile station is limited to 100W ERP

### 6.2. Test Set-up



Note: Measurement setup for testing on Antenna connector

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## 6.3. Measurement Procedure

The transmitter output was connected to a calibrated attenuator, the other end of which was connected to a power meter. Transmitter output was read off the power meter in dBm. The power output at the transmitter antenna port was determined by adding the value of the attenuator to the power meter reading. TS 151 010-1 is reference to conduct the test measurement of output power.

The Procedure of KDB941225 (SAR Measurement Procedures for 3G devices, (WCD-MA/HSPA) was used for EUT and Base station setting. RMC 12.2kps is used for this testing, and KDB 971168 D01 Power Meas License Digital System as the supplemental test methodology to adjust the proper setting obtaining the measurement results

All LTE bands conducted average power is obtained from the simulator telecommunication test set.

The following tests were conducted according to the test requirements outlined in section 6.2 of the 3GPP.

#### TEST PROCEDURE:

ANSI C63.26:2015 KDB 971168 Section 5.6

ERP/EIRP = PMeas + GT-LC

where: ERP/EIRP = effective or equivalent radiated power, respectively (expressed in the same units as PMeas, typically dBW or dBm);

PMeas = 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.2 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.

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## 6.4. Measurement Equipment Used

Conducted Emission (measured at antenna port) Test Site							
EQUIPMENT TYPE	MFR	MODEL NUMBER	SERIAL NUMBER	LAST CAL.	CAL DUE.		
Spectrum Analyzer	Agilent	N9010A	MY51440113	2018/06/20	2019/06/19		
Radio Communica- tion Analyer	Anritsu	MT8820C	6201107337	2018/06/15	2019/06/14		
DC Power Supply	Agilent	E3640A	MY53130054	2017/09/04	2018/09/03		
Attenuator	Marvelous	MVE2213-10	RF30	2017/12/26	2018/12/25		
Splitter	Woken	DOM35LW1A2	RF36	2017/12/26	2018/12/25		

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#### 6.5. Measurement Result

## **RF Conducted Output Power**

#### WCDMA MODE:

The following tests were completed according to the test requirements outlined in section 5.2 of the 3GPP TS34.121-1 V8.4.0 specification. The EUT supports power Class 3, which has a nominal maximum output power of 24 dBm (+1.7/-3.7). RMC 12.2kps is used for this testing.

#### Results:

#### WCDMA/HSUPA/HSDPA Band II Result:

EUT Mode	Freq. (MHz)	СН	Conducted Avg. Power (dBm)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Margin (dB)
WCDMA	1852.4	9262	23.73	-5.17	18.56	33.00	-14.44
	1880.0	9400	23.69	-5.17	18.52	33.00	-14.48
	1907.6	9538	23.80	-5.17	18.63	33.00	-14.37
HSDPA	1852.4	9262	22.82	-5.17	17.65	33.00	-15.35
	1880.0	9400	23.13	-5.17	17.96	33.00	-15.04
	1907.6	9538	22.92	-5.17	17.75	33.00	-15.25
HSUPA	1852.4	9262	22.26	-5.17	17.09	33.00	-15.91
	1880.0	9400	22.58	-5.17	17.41	33.00	-15.59
	1907.6	9538	22.43	-5.17	17.26	33.00	-15.74

#### WCDMA/HSUPA/HSDPA Band IV Result:

EUT Mode	Freq. (MHz)	СН	Conducted Avg. Power (dBm)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Margin (dB)
WCDMA	1712.4	1312	23.27	-4.69	18.58	30.00	-11.42
	1732.6	1413	23.50	-4.69	18.81	30.00	-11.19
	1752.6	1513	23.21	-4.69	18.52	30.00	-11.48
HSDPA	1712.4	1312	22.73	-4.69	18.04	30.00	-11.96
	1732.6	1413	23.06	-4.69	18.37	30.00	-11.63
	1752.6	1513	22.82	-4.69	18.13	30.00	-11.87
HSUPA	1712.4	1312	22.18	-4.69	17.49	30.00	-12.51
	1732.6	1413	22.53	-4.69	17.84	30.00	-12.16
	1752.6	1513	22.31	-4.69	17.62	30.00	-12.38

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# WCDMA/HSUPA/HSDPA Band V Result:

EUT Mode	Freq. (MHz)	СН	Conducted Avg. Power (dBm)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Margin (dB)
	826.4	4132	23.98	-3.61	20.37	38.50	-18.13
WCDMA	836.6	4183	23.90	-3.61	20.29	38.50	-18.21
	846.6	4233	23.93	-3.61	20.32	38.50	-18.18
	826.4	4132	23.83	-3.61	20.22	38.50	-18.28
HSDPA	836.6	4183	23.66	-3.61	20.05	38.50	-18.45
	846.6	4233	23.65	-3.61	20.04	38.50	-18.46
	826.4	4132	22.65	-3.61	19.04	38.50	-19.46
HSUPA	836.6	4183	22.65	-3.61	19.04	38.50	-19.46
	846.6	4233	22.59	-3.61	18.98	38.50	-19.52

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### **HSDPA Release 6 MODE:**

The following 4 Sub-Tests were completed according to the test requirements outlined in section 5.2A of the 3GPP TS34.121-1 V8.4.0 specification. All TX RMS power requirements for Power Class 3 were met according to table 5.2AA.5 and 5.2B.5 All UE channels and power ratio's are set according to table C10.1.4 & C11.1.3 in the 3GPP TS34.121-1 V8.4.0. RMC 12.2kps is used for this testing.

### **HSDPA SUB-TEST Setting**

Table C.10.1.4: β values for transmitter characteristics tests with HS-DPCCH(FOR HSDPA)

Sub-test	βς	βa	β <sub>d</sub> ( <b>SF</b> )	βε/βα	βнs (Note1, Note 2)	CM (dB) (Note 3)	MPR (dB) (Note 3)	RMC (Kbps)
1	2/15	15/15	64	2/15	4/15	0.0	0.0	12.2
2	12/15 (Note 4)	15/15 (Note 4)	64	12/15 (Note 4)	24/15	1.0	0.0	12.2
3	15/15	8/15	64	15/8	30/15	1.5	0.5	12.2
4	15/15	4/15	64	15/4	30/15	1.5	0.5	12.2

Note: The recommended HSDPA MPRs are implemented as per following sub-tests.

# HSPA (HSDPA & HSUPA) Release 6 MODE

The following 5 Sub-Tests were completed according to the test requirements outlined in section 5.2A of the 3GPP TS34.121-1 V8.4.0 specification. All TX RMS power requirements for Power Class 3 were met according to table 5.2AA.5 and 5.2B.5 All UE channels and power ratio's are set according to table C11.1.3 in the 3GPP TS34.121-1 V8.4.0. RMC 12.2kps is used for this testing

## **HSPA SUB-TEST Setting**

Table C.11.1.3: β values for transmitter characteristics tests with HS-DPCCH and E-DCH(FOR HSUPA)

Sub- test	βα	βa	β <sub>d</sub> (SF)	βс∕βа	βнs	βес	$eta_{ ext{ed}}$	β <sub>ed</sub> (SF)	β <sub>ed</sub> (Code s)	CM (dB)	MPR (dB)	AG Index	E-TFCI	RMC (Kbps
1	11/15 (Note 3)	15/15 (Note 3)	64	11/15 (Note 3)	22/15	209/22 5	1309/225	4	1	1.0	0.0	20	75	12.2
2	6/15	15/15	64	6/15	12/15	12/15	94/75	4	1	3.0	2.0	12	67	12.2
3	15/15	9/15	64	15/9	30/15	30/15	β <sub>ed</sub> 1: 47/15 β <sub>ed</sub> 2: 47/15	4 4	2	2.0	1.0	15	92	12.2
4	2/15	15/15	64	2/15	4/15	2/15	56/75	4	1	3.0	2.0	17	71	12.2
5	15/15 (Note 4)	15/15 (Note 4)	64	15/15 (Note 4)	30/15	24/15	134/15	4	1	1.0	0.0	21	81	12.2

Note: The recommended HSUPA MPRs are implemented as per following sub-tests.

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### Results:

Mode	Sub	Channel		Suh I		Power Class 3 Limitation (dBm)	Comments
	icsi	9262.00	9400.00	9538.00	Ellilitation (abili)		
	1	22.82	23.13	22.92	20.3dBm – 25.7dBm	Pass	
HSDPA II	2	21.77	22.03	21.92	20.3dBm – 25.7dBm	Pass	
H NOUPA II	3	21.20	21.52	21.39	19.8dBm – 25.7dBm	Pass	
	4	21.02	21.27	21.15	19.8dBm – 25.7dBm	Pass	

Mode	Sub test Avg. Power Chann		g. Power (dl Channel	3m)	Power Class 3 Limitation (dBm)	Comments	
	1031	1312.00	1413.00	1513.00	Limitation (abin)		
	1 22.73 23.06		22.82	20.3dBm – 25.7dBm	Pass		
HSDPA IV	2	21.76	22.01	21.82	20.3dBm – 25.7dBm	Pass	
HODPA IV	3	21.28	21.59	21.32	19.8dBm – 25.7dBm	Pass	
	4	21.06	21.24	21.11	19.8dBm – 25.7dBm	Pass	

Mode Sub		Avç	g. Power (dl Channel	Bm)	Power Class 3 Limitation (dBm)	Comments	
	icsi	4132.00	4183.00	4233.00	Limitation (abin)		
	1	<b>1</b> 23.83 23.66 23.65 20.3		20.3dBm – 25.7dBm	Pass		
HSDPA V	2	22.69	69 22.64 22.55 20.3dBm – 25.7dB		20.3dBm – 25.7dBm	Pass	
IIODFAV	3		22.05	21.90	19.8dBm – 25.7dBm	Pass	
	4	21.87	21.98	21.82	19.8dBm – 25.7dBm	Pass	

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Mode	Avg. Power (dBm) Sub test Channel		Power Class 3 Limitation (dBm)	Comments		
	1031	9262.00	9400.00	9538.00	Ellination (abin)	
	1	22.26	22.58	22.43	18.8dBm – 25.7dBm	Pass
	2	22.83	23.12	22.93	16.8dBm – 25.7dBm	Pass
HSUPA II	3	21.22	21.52	21.43	17.8dBm – 25.7dBm	Pass
	4	22.84	23.11	23.01	16.8dBm – 25.7dBm	Pass
	5	21.74	22.04	21.91	18.8dBm – 25.7dBm	Pass

Mode	Avg. Power (dBm) Channel		Power Class 3 Limitation (dBm)	Comments			
	1031	1312.00	1413.00	1513.00	Elilitation (abili)		
	1	22.18	22.53	22.31	20.3dBm – 25.7dBm	Pass	
	2	22.69	23.02	22.84	20.3dBm – 25.7dBm	Pass	
HSDPA IV	3	21.22	21.53	21.33	19.8dBm – 25.7dBm	Pass	
	4	22.74	23.03	22.83	19.8dBm – 25.7dBm	Pass	
	5	21.71	22.01	21.85	19.8dBm – 25.7dBm	Pass	

Mode Sub		Av	g. Power (dE Channel	Bm)	Power Class 3 Limitation (dBm)	Comments	
	iesi	4132.00	4183.00	4233.00	Elilitation (abili)		
	1	22.65	22.65	22.59	18.8dBm – 25.7dBm	Pass	
	2	20.36	20.28	20.25	16.8dBm – 25.7dBm	Pass	
HSUPA V	3	21.08	20.98	20.96	17.8dBm – 25.7dBm	Pass	
	4	20.61	20.49	20.47	16.8dBm – 25.7dBm	Pass	
	5	22.73	22.67	22.52	18.8dBm – 25.7dBm	Pass	

# WCDMA/HSDPA/HSUPA band II, IV, V

The EUT output power was controlled by simulator. Set Communication Tester MT8820C function key "UE Power Control" and enter max rated power 24dBm. The EUT is going to be set to max output power to 24dBm. Then record the read (see page 15 for measurement data). The min. power was measures by a function key "minimum power" then record the read. It is -52.3dBm. The power variation can be 0.1dB step by setting.

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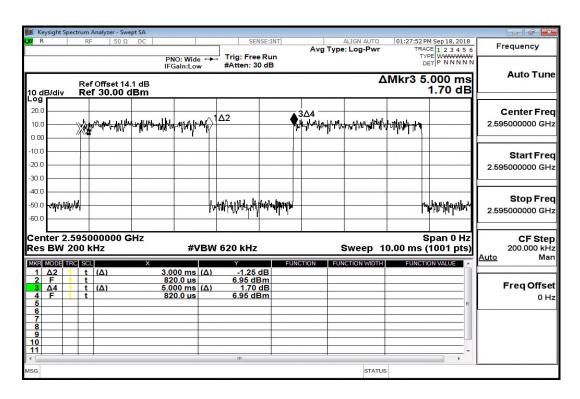


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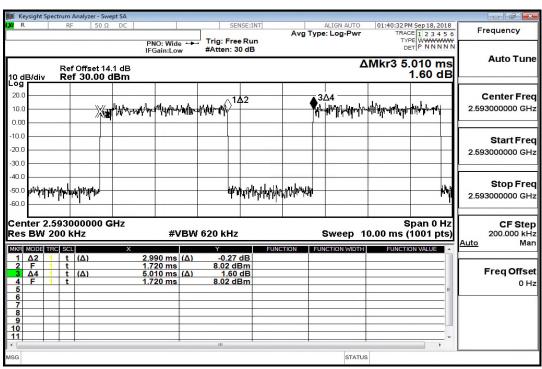
# **Duty Cycle:**

	Δ1		Δ2		Duty Cy-	%
					cle	
Band38 10M Mid Channel	3.0000	ms	5.0000	ms	0.600	60.0 %
Band41 10M Mid Channel	2.9900	ms	5.0100	ms	0.597	59.7 %

### Band38



#### Band41



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### LTE Result:

Antenna gain (dBi) \_\_\_\_5 17

Antenna	ntenna gain (dBi) -5.17								
		LTE Ba	nd 2_Uplink	freque	ncy bar	nd : 1850 to 1910 N			
BW (MHz)	UL Channel	Frequency (MHz)	Modulation	RB Size	RB Offset	Conducted Average (dBm)	EIRP Average (dBm)	EIRP Limit (dBm)	Margin (dB)
			ODOK	1	0	23.41	18.24	33	-14.76
	18607	1850.7		1	5	23.43	18.26	33	-14.74
	10007	1000.7	QPSK	3	2	23.33	18.16	33	-14.84
				6	0	22.39	17.22	33	-15.78
				1	0	23.49	18.32	33	-14.68
	18900	1880	QPSK	1	5	23.54	18.37	33	-14.63
	10300	1000	QF 5IX	3	2	23.34	18.17	33	-14.83
	19193 1909.3			6	0	22.50	17.33	33	-15.67
			QPSK	1	0	23.41	18.24	33	-14.76
		1909.3		1	5	23.34	18.17	33	-14.83
				3	2	23.14	17.97	33	-15.03
1.4				6	0	22.28	17.11	33	-15.89
1.4				1	0	22.17	17.00	33	-16
	18607	1850.7	16QAM	1	5	22.53	17.36	33	-15.64
	10007	1000.7	TOQAW	3	2	22.34	17.17	33	-15.83
				6	0	21.28	16.11	33	-16.89
				1	0	22.21	17.04	33	-15.96
	18900	1880	16QAM	1	5	22.30	17.13	33	-15.87
		1000	100/1111	3	2	22.55	17.38	33	-15.62
				6	0	21.40	16.23	33	-16.77
				1	0	22.10	16.93	33	-16.07
		1909.3	16QAM	1	5	22.43	17.26	33	-15.74
		1909.5	IUQAWI	3	2	22.19	17.02	33	-15.98
				6	0	21.29	16.12	33	-16.88

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-5.17 Antenna gain (dBi) LTE Band 2\_Uplink frequency band : 1850 to 1910 MHz Conducted **EIRP EIRP** UL Frequency RB RB BW Margin Modulation Average Average Limit (MHz) Size Offset (MHz) Channel (dB) (dBm) (dBm) (dBm) 23.24 0 18.07 33 -14.931 33 1 14 23.37 18.20 -14.818615 1851.5 **QPSK** 4 8 22.56 17.39 33 -15.61 15 0 22.52 17.35 33 -15.650 23.33 18.16 33 -14.84 1 33 14 23.34 18.17 -14.831 18900 1880 **QPSK** 8 4 22.39 17.22 33 -15.7815 0 22.47 17.30 33 -15.7 -14.64 0 23.53 33 1 18.36 14 33 -15.06 1 23.11 17.94 1908.5 **QPSK** 19185 8 22.38 33 4 17.21 -15.7915 0 22.42 17.25 33 -15.75 3 1 0 22.73 17.56 33 -15.441 14 22.54 17.37 33 -15.63 18615 1851.5 16QAM 8 4 21.52 16.35 33 -16.6515 0 33 21.44 16.27 -16.730 22.51 17.34 33 -15.661 14 22.83 17.66 33 1 -15.3418900 1880 16QAM 8 4 21.49 16.32 33 -16.68 33 15 0 21.54 16.37 -16.63 0 22.61 33 1 17.44 -15.561 14 22.30 17.13 33 -15.87 19185 1908.5 16QAM

8

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21.32

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33

33

-16.85

-16.83

16.15

16.17



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Antenna gain	(dBi)	-5.17
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Antenna	gair (abi)	LTE Ba	nd 2_Uplink	freque	ncy ban	id : 1850 to 1910 M	lHz		
BW (MHz)	UL Channel	Frequency (MHz)	Modulation	RB Size	RB Offset	Conducted Average (dBm)	EIRP Average (dBm)	EIRP Limit (dBm)	Margin (dB)
				1	0	23.40	18.23	33	-14.77
	18625	1852.5	QPSK	1	24	23.27	18.10	33	-14.9
	10023	1002.0	QFSN	12	6	22.48	17.31	33	-15.69
				25	0	22.44	17.27	33	-15.73
				1	0	23.56	18.39	33	-14.61
	18900	1880	QPSK	1	24	23.41	18.24	33	-14.76
		1880	QI OIX	12	6	22.67	17.50	33	-15.5
				25	0	22.52	17.35	33	-15.65
	19175	1907.5	QPSK	1	0	23.50	18.33	33	-14.67
				1	24	23.34	18.17	33	-14.83
				12	6	22.65	17.48	33	-15.52
5				25	0	22.66	17.49	33	-15.51
3		1852.5	16QAM	1	0	22.21	17.04	33	-15.96
	18625			1	24	22.63	17.46	33	-15.54
	10025			12	6	21.78	16.61	33	-16.39
				25	0	21.75	16.58	33	-16.42
				1	0	22.69	17.52	33	-15.48
	18900	1880	16QAM	1	24	22.64	17.47	33	-15.53
	10300	1000	TOQAW	12	6	21.63	16.46	33	-16.54
				25	0	21.58	16.41	33	-16.59
				1	0	22.92	17.75	33	-15.25
	19175	1907.5	16QAM	1	24	22.40	17.23	33	-15.77
	13170	1007.0	100/1111	12	6	21.56	16.39	33	-16.61
				25	0	21.63	16.46	33	-16.54

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Antenna gain (dBi) -5.17

7 tintorina	gain (dbi)	LTE Ba	nd 2_Uplink	freque	ncy ban	nd : 1850 to 1910 N	lHz		
BW (MHz)	UL Channel	Frequency (MHz)	Modulation	RB Size	RB Offset	Conducted Average (dBm)	EIRP Average (dBm)	EIRP Limit (dBm)	Margin (dB)
				1	0	23.53	18.36	33	-14.64
	18650	1855	QPSK	1	49	23.43	18.26	33	-14.74
	10030	1000	QFSN	25	12	22.39	17.22	33	-15.78
				50	0	22.45	17.28	33	-15.72
				1	0	23.71	18.54	33	-14.46
	18900	1880	QPSK	1	49	23.45	18.28	33	-14.72
		1880	QFSN	25	12	22.56	17.39	33	-15.61
				50	0	22.41	17.24	33	-15.76
	19150	1905	QPSK	1	0	23.49	18.32	33	-14.68
				1	49	22.95	17.78	33	-15.22
				25	12	22.55	17.38	33	-15.62
10				50	0	22.54	17.37	33	-15.63
10		1855	16QAM	1	0	22.95	17.78	33	-15.22
	18650			1	49	22.63	17.46	33	-15.54
	10030			25	12	21.49	16.32	33	-16.68
				50	0	21.44	16.27	33	-16.73
				1	0	22.66	17.49	33	-15.51
	18900	1880	16QAM	1	49	22.66	17.49	33	-15.51
	10900	1000	IOQAIVI	25	12	21.71	16.54	33	-16.46
				50	0	21.57	16.40	33	-16.6
				1	0	22.76	17.59	33	-15.41
	19150	1905	16QAM	1	49	22.39	17.22	33	-15.78
	19130	1905	ToQAM	25	12	21.69	16.52	33	-16.48
				50	0	21.58	16.41	33	-16.59

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Antenna	gair (abi)	LTE Ba	nd 2_Uplink	freque	ncy ban	id : 1850 to 1910 M	lHz		
BW (MHz)	UL Channel	Frequency (MHz)	Modulation	RB Size	RB Offset	Conducted Average (dBm)	EIRP Average (dBm)	EIRP Limit (dBm)	Margin (dB)
				1	0	23.46	18.29	33	-14.71
	18675	1857.5	QPSK	1	74	23.49	18.32	33	-14.68
	10075	1007.0	QFSN	36	18	22.47	17.30	33	-15.7
				75	0	22.48	17.31	33	-15.69
				1	0	23.38	18.21	33	-14.79
	18900	1880	QPSK	1	74	23.42	18.25	33	-14.75
		1880	QFSN	36	18	22.54	17.37	33	-15.63
				75	0	22.51	17.34	33	-15.66
	19125	1902.5	QPSK	1	0	23.49	18.32	33	-14.68
				1	74	23.22	18.05	33	-14.95
	13123			36	18	22.62	17.45	33	-15.55
15				75	0	22.64	17.47	33	-15.53
15		1857.5	16QAM	1	0	22.81	17.64	33	-15.36
	18675			1	74	22.85	17.68	33	-15.32
	10073			36	18	21.58	16.41	33	-16.59
				75	0	21.59	16.42	33	-16.58
				1	0	22.59	17.42	33	-15.58
	18900	1880	16QAM	1	74	22.90	17.73	33	-15.27
	10900	1000	TOQAW	36	18	21.50	16.33	33	-16.67
				75	0	21.38	16.21	33	-16.79
				1	0	22.50	17.33	33	-15.67
	19125	1902.5	16QAM	1	74	22.83	17.66	33	-15.34
	13123	1902.5	IUQAIVI	36	18	21.64	16.47	33	-16.53
				75	0	21.72	16.55	33	-16.45

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Antenna gain	(dBi)	-5.17
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7 tintorina	gain (dbi)	LTE Ba	nd 2_Uplink	freque	ncy bar	nd : 1850 to 1910 N	lHz		
BW (MHz)	UL Channel	Frequency (MHz)	Modulation	RB Size	RB Offset	Conducted Average (dBm)	EIRP Average (dBm)	EIRP Limit (dBm)	Margin (dB)
				1	0	23.70	18.53	33	-14.47
	18700	1860	QPSK	1	99	23.56	18.39	33	-14.61
	10700	1000	QFSN	50	25	22.47	17.30	33	-15.7
				100	0	22.52	17.35	33	-15.65
				1	0	23.66	18.49	33	-14.51
	18900	1880	QPSK	1	99	23.54	18.37	33	-14.63
		1880	QF SIX	50	25	22.56	17.39	33	-15.61
				100	0	22.62	17.45	33	-15.55
		1900	QPSK	1	0	23.50	18.33	33	-14.67
	19100			1	99	23.34	18.17	33	-14.83
				50	25	22.57	17.40	33	-15.6
20				100	0	22.71	17.54	33	-15.46
20		1860	16QAM	1	0	22.47	17.30	33	-15.7
	18700			1	99	22.75	17.58	33	-15.42
	10700			50	25	21.50	16.33	33	-16.67
				100	0	21.42	16.25	33	-16.75
				1	0	22.67	17.50	33	-15.5
	18900	1880	16QAM	1	99	22.45	17.28	33	-15.72
	10300	1000	TOQAW	50	25	21.48	16.31	33	-16.69
				100	0	21.62	16.45	33	-16.55
				1	0	22.51	17.34	33	-15.66
	19100	1900	16QAM	1	99	22.40	17.23	33	-15.77
	13100	1000	100/1111	50	25	21.59	16.42	33	-16.58
				100	0	21.66	16.49	33	-16.51

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Antenna gain (dBi) -4.69

	gam (abi)	LTE Band	4_Uplink fre	quenc	y band :	1710 to 175	5 MHz		
BW (MHz)	UL Channel	Frequency (MHz)	Modulation	RB Size	RB Offset	Conducted Average (dBm)	EIRP Average (dBm)	EIRP Limit (dBm)	Margin (dB)
				1	0	23.41	18.72	30	-11.28
	19957	1710.7	QPSK	1	5	23.31	18.62	30	-11.38
	19907	17 10.7	QF SIX	3	2	23.21	18.52	30	-11.48
				6	0	22.29	17.60	30	-12.4
				1	0	23.34	18.65	30	-11.35
	20175	1732.5	QPSK	1	5	23.51	18.82	30	-11.18
	20175	1702.0	QI OIX	3	2	23.34	18.65	30	-11.35
				6	0	22.39	17.70	30	-12.3
	20393	1754.3	QPSK	1	0	23.60	18.91	30	-11.09
				1	5	23.64	18.95	30	-11.05
				3	2	23.64	18.95	30	-11.05
1.4				6	0	22.64	17.95	30	-12.05
1.4		1710.7	16QAM	1	0	22.94	18.25	30	-11.75
	19957			1	5	22.53	17.84	30	-12.16
	13337			3	2	22.33	17.64	30	-12.36
				6	0	21.55	16.86	30	-13.14
				1	0	22.32	17.63	30	-12.37
	20175	1732.5	16QAM	1	5	22.30	17.61	30	-12.39
	20173	1702.0	TOQAW	3	2	22.49	17.80	30	-12.2
				6	0	21.43	16.74	30	-13.26
				1	0	22.53	17.84	30	-12.16
	20393	1754.3	16QAM	1	5	22.51	17.82	30	-12.18
	20393	1/54.3	IUQAW	3	2	22.81	18.12	30	-11.88
				6	0	21.72	17.03	30	-12.97

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Antenna gain	(dBi)	-4.69
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Antenna	ga (4.2.)	LTE Band	4_Uplink fre	quenc	y band :	1710 to 175	5 MHz		
BW (MHz)	UL Channel	Frequency (MHz)	Modulation	RB Size	RB Offset	Conducted Average (dBm)	EIRP Average (dBm)	EIRP Limit (dBm)	Margin (dB)
				1	0	23.19	18.50	30	-11.5
	19965	1711.5	QPSK	1	14	23.25	18.56	30	-11.44
	19903	1711.5	QFOR	8	4	22.17	17.48	30	-12.52
				15	0	22.25	17.56	30	-12.44
				1	0	23.26	18.57	30	-11.43
	20175	1732.5	QPSK	1	14	23.34	18.65	30	-11.35
	20175	1732.3	QI SIX	8	4	22.26	17.57	30	-12.43
				15	0	22.25	17.56	30	-12.44
	20385	1753.5	QPSK	1	0	23.47	18.78	30	-11.22
				1	14	23.44	18.75	30	-11.25
				8	4	22.56	17.87	30	-12.13
3				15	0	22.48	17.79	30	-12.21
3		1711.5	16QAM	1	0	22.32	17.63	30	-12.37
	19965			1	14	22.87	18.18	30	-11.82
	19903			8	4	21.29	16.60	30	-13.4
				15	0	21.25	16.56	30	-13.44
				1	0	22.86	18.17	30	-11.83
	20175	1732.5	16QAM	1	14	22.48	17.79	30	-12.21
	20173	1732.3	IOQAIVI	8	4	21.29	16.60	30	-13.4
				15	0	21.34	16.65	30	-13.35
				1	0	22.83	18.14	30	-11.86
	20385	1753.5	16QAM	1	14	22.88	18.19	30	-11.81
	20000	1700.0	IUQAIVI	8	4	21.68	16.99	30	-13.01
				15	0	21.58	16.89	30	-13.11

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Antenna gain	(dBi	-4.69
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	gairi (abi)	LTE Band	4_Uplink fre	quenc	y band :	1710 to 175	5 MHz		
BW (MHz)	UL Channel	Frequency (MHz)	Modulation	RB Size	RB Offset	Conducted Average (dBm)	EIRP Average (dBm)	EIRP Limit (dBm)	Margin (dB)
				1	0	23.42	18.73	30	-11.27
	19975	1712.5	QPSK	1	24	23.47	18.78	30	-11.22
	19913	17 12.5	QF SIX	12	6	22.45	17.76	30	-12.24
				25	0	22.51	17.82	30	-12.18
				1	0	23.46	18.77	30	-11.23
	20175	1732.5	QPSK	1	24	23.54	18.85	30	-11.15
	20175	1732.3	QF SIX	12	6	22.44	17.75	30	-12.25
				25	0	22.50	17.81	30	-12.19
	20375	1752.5	QPSK	1	0	23.49	18.80	30	-11.2
				1	24	23.53	18.84	30	-11.16
				12	6	22.63	17.94	30	-12.06
5				25	0	22.57	17.88	30	-12.12
		1712.5	16QAM	1	0	22.68	17.99	30	-12.01
	19975			1	24	22.95	18.26	30	-11.74
	13373			12	6	21.71	17.02	30	-12.98
				25	0	21.67	16.98	30	-13.02
				1	0	22.58	17.89	30	-12.11
	20175	1732.5	16QAM	1	24	22.69	18.00	30	-12
	20173	1732.3	IOQAIVI	12	6	21.55	16.86	30	-13.14
				25	0	21.49	16.80	30	-13.2
				1	0	22.53	17.84	30	-12.16
	20375	1752.5	16QAM	1	24	22.70	18.01	30	-11.99
	20373	1732.0	IUQAWI	12	6	21.73	17.04	30	-12.96
				25	0	21.67	16.98	30	-13.02

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Antenna gain (dBi)

20175

20375

20000

20175

20375

10

-4.69

1732.5

1750

1715

1732.5

1750

**QPSK** 

**QPSK** 

16QAM

16QAM

16QAM

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LTE Band 4_Uplink frequency band : 1710 to 1755 MHz												
BW IHz)	UL Channel	Frequency (MHz)	Modulation	RB Size	RB Offset	Conducted Average (dBm)	EIRP Average (dBm)	EIRP Limit (dBm)	Margin (dB)			
			QPSK	1	0	23.32	18.63	30	-11.37			
	20000 1715	1715		1	49	23.42	18.73	30	-11.27			
		1713	QFSN	25	12	22.45	17.76	30	-12.24			
			50	0	22.48	17.79	30	-12.21				
				1	0	23.51	18.82	30	-11.18			
	00475	4700 5	00014	1	49	23.53	18.84	30	-11.16			

25

50

1

1

25

50

1

1

25

50

1

1

25

50

1

1

25

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12

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49

12

0

22.43

22.42

23.57

23.52

22.60

22.59

22.94

22.73

21.53

21.52

22.64

22.46

21.55

21.46

22.89

22.75

21.81

21.64

17.74

17.73

18.88

18.83

17.91

17.90

18.25

18.04

16.84

16.83

17.95

17.77

16.86

16.77

18.20

18.06

17.12

16.95

30

30

30

30

30

30

30

30

30

30

30

30

30

30

30

30

30

30

-12.26

-12.27

-11.12

-11.17

-12.09

-12.1

-11.75

-11.96

-13.16

-13.17

-12.05

-12.23

-13.14

-13.23

-11.8

-11.94

-12.88

-13.05

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Antenna gain	(dBi)	-4.69
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	gairi (ubi)	LTE Band	4_Uplink fre	quenc	y band :	1710 to 175	5 MHz		
BW (MHz)	UL Channel	Frequency (MHz)	Modulation	RB Size	RB Offset	Conducted Average (dBm)	EIRP Average (dBm)	EIRP Limit (dBm)	Margin (dB)
	20025	1717.5		1	0	23.36	18.67	30	-11.33
			QPSK	1	74	23.49	18.80	30	-11.2
	20025	1717.5	QF3N	36	18	22.42	17.73	30	-12.27
				75	0	22.46	17.77	30	-12.23
			QPSK	1	0	23.45	18.76	30	-11.24
	20175	1732.5		1	74	23.41	18.72	30	-11.28
	20173	1732.3		36	18	22.39	17.70	30	-12.3
				75	0	22.43	17.74	30	-12.26
	20325	1747.5	QPSK	1	0	23.44	18.75	30	-11.25
				1	74	23.52	18.83	30	-11.17
				36	18	22.62	17.93	30	-12.07
15				75	0	22.59	17.90	30	-12.1
13		1717.5	16QAM	1	0	22.42	17.73	30	-12.27
	20025			1	74	22.69	18.00	30	-12
	20023		IOQAIVI	36	18	21.50	16.81	30	-13.19
				75	0	21.53	16.84	30	-13.16
				1	0	22.80	18.11	30	-11.89
	20175	1732.5	16QAM	1	74	22.81	18.12	30	-11.88
	20173	1732.3	IOQAIVI	36	18	21.55	16.86	30	-13.14
				75	0	21.55	16.86	30	-13.14
				1	0	22.95	18.26	30	-11.74
	20325	1747.5	16QAM	1	74	22.66	17.97	30	-12.03
	20020	1747.5	IUQAIVI	36	18	21.60	16.91	30	-13.09
				75	0	21.60	16.91	30	-13.09

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Antenna gain	(dBi)	-4.69
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Antenna	ga (4.2.)	LTE Band	4_Uplink fre	quenc	y band :	1710 to 175	5 MHz		
BW (MHz)	UL Channel	Frequency (MHz)	Modulation	RB Size	RB Offset	Conducted Average (dBm)	EIRP Average (dBm)	EIRP Limit (dBm)	Margin (dB)
				1	0	23.34	18.65	30	-11.35
	20050	1720	QPSK	1	99	23.22	18.53	30	-11.47
	20030	1720	QFOR	50	25	22.31	17.62	30	-12.38
				100	0	22.30	17.61	30	-12.39
			QPSK	1	0	23.17	18.48	30	-11.52
2017	20175	1732.5		1	99	23.65	18.96	30	-11.04
	20173	1732.3		50	25	22.38	17.69	30	-12.31
				100	0	22.39	17.70	30	-12.3
	20300	1745	QPSK	1	0	23.50	18.81	30	-11.19
				1	99	23.56	18.87	30	-11.13
				50	25	22.46	17.77	30	-12.23
20				100	0	22.49	17.80	30	-12.2
20		1720	16QAM	1	0	22.61	17.92	30	-12.08
	20050			1	99	22.57	17.88	30	-12.12
	20030			50	25	21.29	16.60	30	-13.4
				100	0	21.32	16.63	30	-13.37
				1	0	22.74	18.05	30	-11.95
	20175	1732.5	16QAM	1	99	22.54	17.85	30	-12.15
	20173	1732.3	IOQAIVI	50	25	21.39	16.70	30	-13.3
				100	0	21.50	16.81	30	-13.19
				1	0	22.78	18.09	30	-11.91
	20300	1745	16QAM	1	99	22.61	17.92	30	-12.08
	20000	1140	IUQAIVI	50	25	21.55	16.86	30	-13.14
				100	0	21.56	16.87	30	-13.13

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Antenna gain (dBi)	-3.61
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, a restrict	gairi (ubi)	LTE B	and 5_Uplink	c frequ	ency ba	ınd : 824 to 849 MF	łz		
BW (MHz)	UL Channel	Frequency (MHz)	Modulation	RB Size	RB Offset	Conducted Average (dBm)	EIRP Average (dBm)	EIRP Limit (dBm)	Margin (dB)
				1	0	24.62	21.01	38.45	-17.44
	20407	824.7	QPSK	1	5	24.54	20.93	38.45	-17.52
	20407	024.7	QFSN	3	2	24.61	21.00	38.45	-17.45
				6	0	23.65	20.04	38.45	-18.41
			QPSK	1	0	24.66	21.05	38.45	-17.4
	20525	836.5		1	5	24.50	20.89	38.45	-17.56
	20020	030.3		3	2	24.60	20.99	38.45	-17.46
				6	0	23.57	19.96	38.45	-18.49
		848.3	QPSK	1	0	24.33	20.72	38.45	-17.73
	20643			1	5	24.05	20.44	38.45	-18.01
	20043			3	2	24.22	20.61	38.45	-17.84
1.4				6	0	23.36	19.75	38.45	-18.7
1.4		824.7	16QAM	1	0	23.56	19.95	38.45	-18.5
	20407			1	5	23.81	20.20	38.45	-18.25
	20407	024.1		3	2	23.76	20.15	38.45	-18.3
				6	0	22.67	19.06	38.45	-19.39
				1	0	23.59	19.98	38.45	-18.47
	20525	836.5	16QAM	1	5	23.64	20.03	38.45	-18.42
	20020	000.0	IOQAW	3	2	23.64	20.03	38.45	-18.42
				6	0	22.62	19.01	38.45	-19.44
				1	0	23.56	19.95	38.45	-18.5
	20643	848.3	16QAM	1	5	23.84	20.23	38.45	-18.22
	20070	0.0	IOQAWI	3	2	23.47	19.86	38.45	-18.59
				6	0	22.17	18.56	38.45	-19.89

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Antenna gain (dBi) -361

7 tintorina y	gain (dbi)	-3.01	and 5_Uplink	( frequ	ency ba	nd : 824 to 849 MF	łz		
BW (MHz)	UL Channel	Frequency (MHz)	Modulation	RB Size	RB Offset	Conducted Average (dBm)	EIRP Average (dBm)	EIRP Limit (dBm)	Margin (dB)
				1	0	24.57	20.96	38.45	-17.49
	20415	825.5	QPSK	1	14	24.54	20.93	38.45	-17.52
	20413	023.3	QFSN	8	4	23.67	20.06	38.45	-18.39
				15	0	23.61	20.00	38.45	-18.45
			QPSK	1	0	24.63	21.02	38.45	-17.43
	20525	836.5		1	14	24.63	21.02	38.45	-17.43
	20020	030.3	QFSN	8	4	23.72	20.11	38.45	-18.34
				15	0	23.64	20.03	38.45	-18.42
		847.5	QPSK	1	0	24.38	20.77	38.45	-17.68
	20635			1	14	24.42	20.81	38.45	-17.64
	20033			8	4	23.36	19.75	38.45	-18.7
3				15	0	23.52	19.91	38.45	-18.54
3		825.5	16QAM	1	0	23.80	20.19	38.45	-18.26
	20415			1	14	23.81	20.20	38.45	-18.25
	20413			8	4	22.67	19.06	38.45	-19.39
				15	0	22.71	19.10	38.45	-19.35
				1	0	23.76	20.15	38.45	-18.3
	20525	836.5	16QAM	1	14	23.54	19.93	38.45	-18.52
	20020	030.5	IOQAIVI	8	4	22.54	18.93	38.45	-19.52
				15	0	22.68	19.07	38.45	-19.38
				1	0	23.52	19.91	38.45	-18.54
	20635	847.5	16QAM	1	14	23.39	19.78	38.45	-18.67
	20033	δ4 <i>1</i> .5	IOQAM	8	4	22.36	18.75	38.45	-19.7
				15	0	22.41	18.80	38.45	-19.65

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Antenna gain	(dBi)	-3.6
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7 titterina ;	gain (dbi)	-3.01	and 5_Uplink	( frequ	ency ba	nd : 824 to 849 MF	łz		
BW (MHz)	UL Channel	Frequency (MHz)	Modulation	RB Size	RB Offset	Conducted Average (dBm)	EIRP Average (dBm)	EIRP Limit (dBm)	Margin (dB)
				1	0	24.73	21.12	38.45	-17.33
	20425	826.5	QPSK	1	24	24.92	21.31	38.45	-17.14
	20425	020.5	QFSN	12	6	23.78	20.17	38.45	-18.28
				25	0	23.80	20.19	38.45	-18.26
			QPSK	1	0	24.57	20.96	38.45	-17.49
	20525	836.5		1	24	24.61	21.00	38.45	-17.45
	20020	630.5		12	6	23.83	20.22	38.45	-18.23
				25	0	23.83	20.22	38.45	-18.23
		846.5	QPSK	1	0	24.34	20.73	38.45	-17.72
	20625			1	24	24.32	20.71	38.45	-17.74
	20023			12	6	23.57	19.96	38.45	-18.49
5				25	0	23.59	19.98	38.45	-18.47
3			16QAM	1	0	23.76	20.15	38.45	-18.3
	20425	826.5		1	24	23.18	19.57	38.45	-18.88
	20423	020.3		12	6	22.79	19.18	38.45	-19.27
				25	0	22.71	19.10	38.45	-19.35
				1	0	23.33	19.72	38.45	-18.73
	20525	836.5	16QAM	1	24	23.94	20.33	38.45	-18.12
	20020	030.3	IOQAIVI	12	6	22.94	19.33	38.45	-19.12
				25	0	22.85	19.24	38.45	-19.21
				1	0	23.64	20.03	38.45	-18.42
	20625	846.5	16QAM	1	24	23.52	19.91	38.45	-18.54
	20023	846.5	IUQAIVI	12	6	22.73	19.12	38.45	-19.33
				25	0	22.69	19.08	38.45	-19.37

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Antenna gain	(dBi)	-3.6
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7 titterina ;	gain (dbi)	-3.01	and 5_Uplink	frequ	ency ba	nd : 824 to 849 MF	łz		
BW (MHz)	UL Channel	Frequency (MHz)	Modulation	RB Size	RB Offset	Conducted Average (dBm)	EIRP Average (dBm)	EIRP Limit (dBm)	Margin (dB)
				1	0	24.67	21.06	38.45	-17.39
	20450	829	QPSK	1	49	24.69	21.08	38.45	-17.37
	20430	029	QFSN	25	12	23.71	20.10	38.45	-18.35
				50	0	23.70	20.09	38.45	-18.36
			QPSK	1	0	24.62	21.01	38.45	-17.44
	20525	836.5		1	49	24.66	21.05	38.45	-17.4
	20020	030.5		25	12	23.78	20.17	38.45	-18.28
				50	0	23.78	20.17	38.45	-18.28
		844	QPSK	1	0	24.35	20.74	38.45	-17.71
	20600			1	49	24.57	20.96	38.45	-17.49
	20000			25	12	23.57	19.96	38.45	-18.49
10				50	0	23.63	20.02	38.45	-18.43
10		829	16QAM	1	0	23.99	20.38	38.45	-18.07
	20450			1	49	23.73	20.12	38.45	-18.33
	20430			25	12	22.86	19.25	38.45	-19.2
				50	0	22.69	19.08	38.45	-19.37
				1	0	23.94	20.33	38.45	-18.12
	20525	836.5	16QAM	1	49	23.89	20.28	38.45	-18.17
	20020	000.0	IOQAIVI	25	12	22.73	19.12	38.45	-19.33
				50	0	22.73	19.12	38.45	-19.33
				1	0	23.42	19.81	38.45	-18.64
	20600	844	16QAM	1	49	23.88	20.27	38.45	-18.18
	20000	0-7-7	IUQAIVI	25	12	22.61	19.00	38.45	-19.45
				50	0	22.68	19.07	38.45	-19.38

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Antenna	Antenna gain (dBi) -4.62								
		LTE Band	7_Uplink fre	quenc	y band :	2500 to 257	0 MHz		
BW (MHz)	UL Channel	Frequency (MHz)	Modulation	RB Size	RB Offset	Conducted Average (dBm)	EIRP Average (dBm)	EIRP Limit (dBm)	Margin (dB)
	20775	0500.5		1	0	23.88	19.26	33	-13.74
			QPSK	1	24	23.80	19.18	33	-13.82
	20775	2502.5	QPSK	12	6	22.96	18.34	33	-14.66
				25	0	22.73	18.11	33	-14.89
				1	0	23.31	18.69	33	-14.31
	21100	2535	QPSK	1	24	23.16	18.54	33	-14.46
		2555		12	6	22.16	17.54	33	-15.46
				25	0	22.15	17.53	33	-15.47
	21375	2567.5	QPSK	1	0	23.69	19.07	33	-13.93
				1	24	23.49	18.87	33	-14.13
				12	6	22.55	17.93	33	-15.07
5				25	0	22.57	17.95	33	-15.05
				1	0	22.70	18.08	33	-14.92
	20775	2502.5	16QAM	1	24	22.28	17.66	33	-15.34
	20113	2002.0	TOQAM	12	6	21.96	17.34	33	-15.66
				25	0	21.91	17.29	33	-15.71
				1	0	22.19	17.57	33	-15.43
	21100	2535	16QAM	1	24	22.35	17.73	33	-15.27
	21100	2000	100/11/1	12	6	21.11	16.49	33	-16.51
				25	0	21.18	16.56	33	-16.44
				1	0	22.84	18.22	33	-14.78
	21375	2567.5	16QAM	1	24	22.02	17.40	33	-15.6
	21010	2001.0	1000/1111	12	6	21.61	16.99	33	-16.01
				25	0	21.53	16.91	33	-16.09

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Antenna gain	(dBi)	-4.62
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7 untorina	LTE Band 7_Uplink frequency band : 2500 to 2570 MHz								
BW (MHz)	UL Channel	Frequency (MHz)	Modulation	RB Size	RB Offset	Conducted Average (dBm)	EIRP Average (dBm)	EIRP Limit (dBm)	Margin (dB)
				1	0	23.67	19.05	33	-13.95
	20800	2505	QPSK	1	49	23.69	19.07	33	-13.93
	20000	2303	QF SIX	25	12	22.14	17.52	33	-15.48
				50	0	22.18	17.56	33	-15.44
			1	0	23.22	18.60	33	-14.4	
	21100	2535	QPSK	1	49	23.24	18.62	33	-14.38
	21100	2000	QF SIX	25	12	22.37	17.75	33	-15.25
				50	0	22.34	17.72	33	-15.28
	21350	2565	QPSK	1	0	23.47	18.85	33	-14.15
				1	49	23.52	18.90	33	-14.1
	21330			25	12	22.76	18.14	33	-14.86
10				50	0	22.75	18.13	33	-14.87
10				1	0	22.81	18.19	33	-14.81
	20800	2505	16QAM	1	49	22.33	17.71	33	-15.29
	20000	2505		25	12	21.25	16.63	33	-16.37
				50	0	21.10	16.48	33	-16.52
				1	0	22.55	17.93	33	-15.07
	21100	2535	16QAM	1	49	22.66	18.04	33	-14.96
	21100	2000	IOQAW	25	12	21.43	16.81	33	-16.19
				50	0	21.44	16.82	33	-16.18
				1	0	22.96	18.34	33	-14.66
	21350	2565	16QAM	1	49	22.86	18.24	33	-14.76
	21000	2000	IUQAW	25	12	21.78	17.16	33	-15.84
				50	0	21.74	17.12	33	-15.88

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Antenna gain	(dBi)	-4.62
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	gairi (abi)	LTE Band	7_Uplink fre	quenc	y band :	2500 to 257	0 MHz		
BW (MHz)	UL Channel	Frequency (MHz)	Modulation	RB Size	RB Offset	Conducted Average (dBm)	EIRP Average (dBm)	EIRP Limit (dBm)	Margin (dB)
				1	0	23.97	19.35	33	-13.65
	20825	2507.5	QPSK	1	74	23.70	19.08	33	-13.92
	20023	2507.5	QI OIX	36	18	22.21	17.59	33	-15.41
				75	0	22.25	17.63	33	-15.37
				1	0	23.22	18.60	33	-14.4
	21100	2535	QPSK	1	74	23.50	18.88	33	-14.12
	21100	2000	QI OIX	36	18	22.45	17.83	33	-15.17
				75	0	22.43	17.81	33	-15.19
	21375	2562.5	QPSK	1	0	23.87	19.25	33	-13.75
				1	74	23.61	18.99	33	-14.01
	21070			36	18	22.84	18.22	33	-14.78
15				75	0	22.88	18.26	33	-14.74
15				1	0	22.82	18.20	33	-14.8
	20825	2507.5	16QAM	1	74	22.46	17.84	33	-15.16
	20023	2007.0		36	18	21.19	16.57	33	-16.43
				75	0	21.22	16.60	33	-16.4
				1	0	22.30	17.68	33	-15.32
	21100	2535	16QAM	1	74	22.71	18.09	33	-14.91
	21100	2000	IOQAW	36	18	21.54	16.92	33	-16.08
				75	0	21.44	16.82	33	-16.18
				1	0	22.20	17.58	33	-15.42
	21375	2562.5	16QAM	1	74	22.22	17.60	33	-15.4
	21373	2002.0	IUQAWI	36	18	21.80	17.18	33	-15.82
				75	0	21.83	17.21	33	-15.79

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Antenna gain	(dBi)	-4.62
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7 untorina	LTE Band 7_Uplink frequency band : 2500 to 2570 MHz								
BW (MHz)	UL Channel	Frequency (MHz)	Modulation	RB Size	RB Offset	Conducted Average (dBm)	EIRP Average (dBm)	EIRP Limit (dBm)	Margin (dB)
				1	0	23.79	19.17	33	-13.83
	20850	2510	QPSK	1	99	23.36	18.74	33	-14.26
	20030	2310	QF SIX	50	25	22.95	18.33	33	-14.67
				100	0	22.52	17.90	33	-15.1
				1	0	23.14	18.52	33	-14.48
	21100	2535	QPSK	1	99	23.42	18.80	33	-14.2
	21100	2000	QI SIN	50	25	22.45	17.83	33	-15.17
				100	0	22.48	17.86	33	-15.14
		2560	QPSK	1	0	23.98	19.36	33	-13.64
	21350			1	99	23.85	19.23	33	-13.77
	21000			50	25	22.95	18.33	33	-14.67
20				100	0	22.56	17.94	33	-15.06
20				1	0	22.95	18.33	33	-14.67
	20850	2510	16QAM	1	99	22.36	17.74	33	-15.26
	20030			50	25	21.97	17.35	33	-15.65
				100	0	21.12	16.50	33	-16.5
				1	0	22.50	17.88	33	-15.12
	21100	2535	16QAM	1	99	22.95	18.33	33	-14.67
	21100	2000	TOQAW	50	25	21.53	16.91	33	-16.09
				100	0	21.57	16.95	33	-16.05
				1	0	22.02	17.40	33	-15.6
	21350	2560	16QAM	1	99	22.73	18.11	33	-14.89
	21000	2000	IOQAIVI	50	25	21.94	17.32	33	-15.68
				100	0	21.01	16.39	33	-16.61

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Antenna	LTE Band 12_Uplink frequency band : 699 to 716 MHz								
BW (MHz)	UL Channel	Frequency (MHz)	Modulation	RB Size	RB Offset	Conducted Average (dBm)	EIRP Average (dBm)	EIRP Limit (dBm)	Margin (dB)
				1	0	23.31	17.74	34.77	-17.03
	23017	699.7	QPSK	1	5	23.43	17.86	34.77	-16.91
	23017	099.7	QFSN	3	2	23.32	17.75	34.77	-17.02
				6	0	22.35	16.78	34.77	-17.99
				1	0	23.92	18.35	34.77	-16.42
	23095	707.5	QPSK	1	5	23.75	18.18	34.77	-16.59
	23093	101.5	QF SIX	3	2	23.73	18.16	34.77	-16.61
				6	0	22.78	17.21	34.77	-17.56
	23173 715.5		QPSK	1	0	23.92	18.35	34.77	-16.42
		715.5		1	5	23.65	18.08	34.77	-16.69
		7 13.3		3	2	24.00	18.43	34.77	-16.34
1.4				6	0	22.64	17.07	34.77	-17.7
1.4				1	0	22.56	16.99	34.77	-17.78
	23017	699.7	16QAM	1	5	22.63	17.06	34.77	-17.71
	23017	099.1		3	2	22.31	16.74	34.77	-18.03
				6	0	21.32	15.75	34.77	-19.02
				1	0	22.89	17.32	34.77	-17.45
	23095	707.5	16QAM	1	5	22.95	17.38	34.77	-17.39
	23033	101.5	IOQAW	3	2	22.77	17.20	34.77	-17.57
				6	0	21.70	16.13	34.77	-18.64
				1	0	22.83	17.26	34.77	-17.51
	23173	715.5	16QAM	1	5	22.41	16.84	34.77	-17.93
	20170	7 10.0	IOQAWI	3	2	22.92	17.35	34.77	-17.42
				6	0	21.43	15.86	34.77	-18.91

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Antenna gain	(dBi	-5.57
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7 titterina ;	LTE Band 12_Uplink frequency band : 699 to 716 MHz								
BW (MHz)	UL Channel	Frequency (MHz)	Modulation	RB Size	RB Offset	Conducted Average (dBm)	EIRP Average (dBm)	EIRP Limit (dBm)	Margin (dB)
				1	0	23.24	17.67	34.77	-17.1
	23025	700.5	QPSK	1	14	23.41	17.84	34.77	-16.93
	23023	700.5	QFSN	8	4	22.38	16.81	34.77	-17.96
				15	0	22.37	16.80	34.77	-17.97
			1	0	23.60	18.03	34.77	-16.74	
	23095	707.5	QPSK	1	14	23.70	18.13	34.77	-16.64
	23095 707.5	101.5	QFSN	8	4	22.68	17.11	34.77	-17.66
				15	0	22.80	17.23	34.77	-17.54
	23165 714.5			1	0	23.67	18.10	34.77	-16.67
		7145	QPSK	1	14	23.71	18.14	34.77	-16.63
		7 14.5		8	4	22.52	16.95	34.77	-17.82
3				15	0	22.57	17.00	34.77	-17.77
3				1	0	22.45	16.88	34.77	-17.89
	23025	700.5	16QAM	1	14	22.36	16.79	34.77	-17.98
	23023	700.5	IOQAW	8	4	21.49	15.92	34.77	-18.85
				15	0	21.40	15.83	34.77	-18.94
				1	0	22.73	17.16	34.77	-17.61
	23095	707.5	16QAM	1	14	22.47	16.90	34.77	-17.87
	23033	707.5	IOQAW	8	4	21.82	16.25	34.77	-18.52
				15	0	21.86	16.29	34.77	-18.48
				1	0	22.41	16.84	34.77	-17.93
	23165	714.5	16QAM	1	14	22.34	16.77	34.77	-18
	20100	7 17.5	IOQAWI	8	4	21.42	15.85	34.77	-18.92
				15	0	21.96	16.39	34.77	-18.38

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Antenna gain (dBi) -5 57

Antenna	LTE Band 12_Uplink frequency band : 699 to 716 MHz								
BW (MHz)	UL Channel	Frequency (MHz)	Modulation	RB Size	RB Offset	Conducted Average (dBm)	EIRP Average (dBm)	EIRP Limit (dBm)	Margin (dB)
				1	0	23.21	17.64	34.77	-17.13
	02025	704.5	ODOK	1	24	23.72	18.15	34.77	-16.62
	23035	701.5	QPSK	12	6	22.61	17.04	34.77	-17.73
				25	0	22.70	17.13	34.77	-17.64
				1	0	23.72	18.15	34.77	-16.62
	23095	707.5	QPSK	1	24	23.85	18.28	34.77	-16.49
	23093	707.3	QF3N	12	6	22.89	17.32	34.77	-17.45
				25	0	22.89	17.32	34.77	-17.45
	23155	713.5	QPSK	1	0	23.96	18.39	34.77	-16.38
				1	24	23.54	17.97	34.77	-16.8
	23133			12	6	22.86	17.29	34.77	-17.48
5				25	0	22.65	17.08	34.77	-17.69
3		701.5		1	0	22.37	16.80	34.77	-17.97
	23035		16QAM	1	24	22.90	17.33	34.77	-17.44
	23033			12	6	21.75	16.18	34.77	-18.59
				25	0	21.73	16.16	34.77	-18.61
				1	0	22.61	17.04	34.77	-17.73
	23095	707.5	16QAM	1	24	22.97	17.40	34.77	-17.37
	23033	707.5	IOQAIVI	12	6	22.00	16.43	34.77	-18.34
				25	0	21.88	16.31	34.77	-18.46
				1	0	22.45	16.88	34.77	-17.89
	23155	713.5	16QAM	1	24	22.31	16.74	34.77	-18.03
	20100	7 10.0	100/1111	12	6	21.53	15.96	34.77	-18.81
				25	0	21.68	16.11	34.77	-18.66

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Antenna gain	(dBi)	-5.57
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	gairi (ubi)	LTE Ba	and 12_Uplin	k frequ	uency b	and : 699 to 716 M	Hz		
BW (MHz)	UL Channel	Frequency (MHz)	Modulation	RB Size	RB Offset	Conducted Average (dBm)	EIRP Average (dBm)	EIRP Limit (dBm)	Margin (dB)
				1	0	23.58	18.01	34.77	-16.76
	23060	704	QPSK	1	49	23.83	18.26	34.77	-16.51
	23000	704	QFSN	25	12	22.87	17.30	34.77	-17.47
				50	0	22.90	17.33	34.77	-17.44
				1	0	23.59	18.02	34.77	-16.75
	23095	707.5	QPSK	1	49	23.61	18.04	34.77	-16.73
	23033	707.5	QI OIX	25	12	22.87	17.30	34.77	-17.47
				50	0	22.85	17.28	34.77	-17.49
	23130	711	QPSK	1	0	23.68	18.11	34.77	-16.66
				1	49	23.42	17.85	34.77	-16.92
	20100			25	12	22.75	17.18	34.77	-17.59
10				50	0	22.62	17.05	34.77	-17.72
10		704	16QAM	1	0	22.80	17.23	34.77	-17.54
	23060			1	49	22.46	16.89	34.77	-17.88
	20000			25	12	21.81	16.24	34.77	-18.53
				50	0	21.85	16.28	34.77	-18.49
				1	0	22.73	17.16	34.77	-17.61
	23095	707.5	16QAM	1	49	22.99	17.42	34.77	-17.35
	20000	707.5	TOQAW	25	12	21.92	16.35	34.77	-18.42
				50	0	21.94	16.37	34.77	-18.4
				1	0	22.75	17.18	34.77	-17.59
	23130	711	16QAM	1	49	22.61	17.04	34.77	-17.73
	20100	, , , ,	1000/1111	25	12	21.22	15.65	34.77	-19.12
				50	0	21.72	16.15	34.77	-18.62

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Antenna gain (d	dBi)	-5.71
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,	gairi (abi)	LTE Band	13_Uplink fi	requer	cy band	d : 777 to 787	MHz		
BW (MHz)	UL Channel	Frequency (MHz)	Modulation	RB Size	RB Offset	Conducted Average (dBm)	EIRP Average (dBm)	EIRP Limit (dBm)	Margin (dB)
				1	0	23.61	17.90	34.77	-16.87
	23205	779.5	QPSK	1	24	23.83	18.12	34.77	-16.65
	23203	113.5	QF SIX	12	6	22.60	16.89	34.77	-17.88
				25	0	22.66	16.95	34.77	-17.82
				1	0	23.58	17.87	34.77	-16.9
	23230	782	QPSK	1	24	23.71	18.00	34.77	-16.77
	20200	102	QI SIN	12	6	22.68	16.97	34.77	-17.8
				25	0	22.71	17.00	34.77	-17.77
	23255	784.5	QPSK	1	0	23.81	18.10	34.77	-16.67
				1	24	23.88	18.17	34.77	-16.6
				12	6	22.82	17.11	34.77	-17.66
5				25	0	22.82	17.11	34.77	-17.66
3		779.5	16QAM	1	0	22.97	17.26	34.77	-17.51
	23205			1	24	22.93	17.22	34.77	-17.55
	20200			12	6	21.69	15.98	34.77	-18.79
				25	0	21.63	15.92	34.77	-18.85
				1	0	22.81	17.10	34.77	-17.67
	23230	782	16QAM	1	24	22.36	16.65	34.77	-18.12
	20200	102	TOQAW	12	6	21.67	15.96	34.77	-18.81
				25	0	21.76	16.05	34.77	-18.72
				1	0	22.78	17.07	34.77	-17.7
	23255	784.5	16QAM	1	24	22.42	16.71	34.77	-18.06
	23255	784.5	IOQAWI	12	6	21.89	16.18	34.77	-18.59
				25	0	21.89	16.18	34.77	-18.59

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Antenna gain	(dBi	)	-5.7	<u>71</u>
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		LTE Band	l 13_Uplink fı	requer	cy band	d : 777 to 787	MHz		
BW (MHz)	UL Channel	Frequency (MHz)	Modulation	RB Size	RB Offset	Conducted Average (dBm)	EIRP Average (dBm)	EIRP Limit (dBm)	Margin (dB)
				1	0	23.77	18.06	34.77	-16.71
	23230	782	QPSK	1	49	23.45	17.74	34.77	-17.03
				25	12	22.95	17.24	34.77	-17.53
10				50	0	22.97	17.26	34.77	-17.51
10		782		1	0	22.45	16.74	34.77	-18.03
	23230		16QAM	1	49	22.70	16.99	34.77	-17.78
	23230		IOQAW	25	12	21.52	15.81	34.77	-18.96
				50	0	21.99	16.28	34.77	-18.49

Antenna	Antenna gain (dBi) -5.58								
		LTE Band	14_Uplink fı	requer	cy band	d : 788 to 798	MHz		
BW (MHz)	UL Channel	Frequency (MHz)	Modulation	RB Size	RB Offset	Conducted Average (dBm)	EIRP Average (dBm)	EIRP Limit (dBm)	Margin (dB)
				1	0	23.62	17.91	34.77	-16.86
	23305	790.5	QPSK	1	24	23.66	17.95	34.77	-16.82
	23305	790.5	QPSK	12	6	22.52	16.81	34.77	-17.96
				25	0	22.69	16.98	34.77	-17.79
				1	0	23.52	17.81	34.77	-16.96
	23330	793	QPSK	1	24	23.51	17.80	34.77	-16.97
	23330	793	QPSK	12	6	22.63	16.92	34.77	-17.85
				25	0	22.72	17.01	34.77	-17.76
	23355	795.5	QPSK	1	0	23.47	17.76	34.77	-17.01
				1	24	22.58	16.87	34.77	-17.9
				12	6	22.60	16.89	34.77	-17.88
5				25	0	22.81	17.10	34.77	-17.67
		790.5	16QAM	1	0	22.72	17.01	34.77	-17.76
	23305			1	24	22.84	17.13	34.77	-17.64
	20000	7 30.3	TOQAW	12	6	21.54	15.83	34.77	-18.94
				25	0	21.65	15.94	34.77	-18.83
				1	0	22.92	17.21	34.77	-17.56
	23330	793	16QAM	1	24	22.81	17.10	34.77	-17.67
	23330	7 9 3	IOQAW	12	6	21.83	16.12	34.77	-18.65
				25	0	21.69	15.98	34.77	-18.79
				1	0	22.64	16.93	34.77	-17.84
	23355	795.5	16QAM	1	24	21.61	15.90	34.77	-18.87
	20000	7 55.5	IOQAW	12	6	21.54	15.83	34.77	-18.94
				25	0	21.73	16.02	34.77	-18.75

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Antenna	gain (dBi)	-5.58							
		LTE Band	l 14_Uplink fı	requer	ncy band	d : 788 to 798	3 MHz		
BW (MHz)	UL Channel	Frequency (MHz)	Modulation	RB Size	RB Offset	Conducted Average (dBm)	EIRP Average (dBm)	EIRP Limit (dBm)	Margin (dB)
	23330	793	QPSK	1	0	23.97	18.26	34.77	-16.51
				1	49	23.61	17.90	34.77	-16.87
				25	12	22.76	17.05	34.77	-17.72
10				50	0	22.77	17.06	34.77	-17.71
10		793	16QAM	1	0	22.98	17.27	34.77	-17.5
	23330			1	49	22.49	16.78	34.77	-17.99
				25	12	21.75	16.04	34.77	-18.73
				50	0	21.73	16.02	34.77	-18.75

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7 antonna y	gain (dBi)	-5.57 LTE Ba	nd 17 Uplin	k frea:	uency ba	and : 704 to 716 M	Hz		
BW (MHz)	UL Channel	Frequency (MHz)	Modulation	RB Size	RB Offset	Conducted Average (dBm)	EIRP Average (dBm)	EIRP Limit (dBm)	Margin (dB)
				1	0	23.57	18.00	34.77	-16.77
	23755	706.5	QPSK	1	24	23.74	18.17	34.77	-16.6
	23/33	700.5	QPSK	12	6	22.73	17.16	34.77	-17.61
				25	0	22.82	17.25	34.77	-17.52
				1	0	23.96	18.39	34.77	-16.38
	23790	710	QPSK	1	24	23.81	18.24	34.77	-16.53
	23790	710	QFSN	12	6	22.70	17.13	34.77	-17.64
				25	0	22.41	16.84	34.77	-17.93
	23825	713.5	QPSK	1	0	23.69	18.12	34.77	-16.65
				1	24	22.91	17.34	34.77	-17.43
				12	6	22.87	17.30	34.77	-17.47
5				25	0	22.67	17.10	34.77	-17.67
3		706.5	16QAM	1	0	22.54	16.97	34.77	-17.8
	23755			1	24	22.97	17.40	34.77	-17.37
	23755			12	6	21.99	16.42	34.77	-18.35
				25	0	21.63	16.06	34.77	-18.71
				1	0	22.37	16.80	34.77	-17.97
	23790	710	16QAM	1	24	22.43	16.86	34.77	-17.91
	23130	710	IOQAIVI	12	6	21.52	15.95	34.77	-18.82
				25	0	21.77	16.20	34.77	-18.57
				1	0	22.84	17.27	34.77	-17.5
	23825	713.5	16QAM	1	24	21.78	16.21	34.77	-18.56
	23825	/13.5	ToQAM	12	6	21.84	16.27	34.77	-18.5
				25	0	21.45	15.88	34.77	-18.89

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Antenna gain	(dBi)	-5.57
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Antenna	Antenna gain (dBi) -5.57  LTE Band 17_Uplink frequency band : 704 to 716 MHz												
		LIED	iliu 17_upiin	k ireqi	dency Da			CIDD					
BW (MHz)	UL Channel	Frequency (MHz)	Modulation	RB Size	RB Offset	Conducted Average (dBm)	EIRP Average (dBm)	EIRP Limit (dBm)	Margin (dB)				
				1	0	23.69	18.12	34.77	-16.65				
	23780	709	QPSK	1	49	23.84	18.27	34.77	-16.5				
	23700	709	QFSN	25	12	22.90	17.33	34.77	-17.44				
				50	0	22.75	17.18	34.77	-17.59				
				1	0	23.66	18.09	34.77	-16.68				
	23790	710	QPSK	1	49	23.77	18.20	34.77	-16.57				
	23130	710	QF SIX	25	12	22.38	16.81	34.77	-17.96				
				50	0	22.85	17.28	34.77	-17.49				
	23800	711	QPSK	1	0	23.98	18.41	34.77	-16.36				
				1	49	22.84	17.27	34.77	-17.5				
	23000			25	12	22.47	16.90	34.77	-17.87				
10				50	0	22.97	17.40	34.77	-17.37				
10		709	16QAM	1	0	22.80	17.23	34.77	-17.54				
	23780			1	49	22.58	17.01	34.77	-17.76				
	23700			25	12	21.83	16.26	34.77	-18.51				
				50	0	21.75	16.18	34.77	-18.59				
				1	0	22.84	17.27	34.77	-17.5				
	23790	710	16QAM	1	49	22.64	17.07	34.77	-17.7				
	23130	710	IOQAIVI	25	12	21.77	16.20	34.77	-18.57				
				50	0	21.42	15.85	34.77	-18.92				
				1	0	22.90	17.33	34.77	-17.44				
	23800	711	16QAM	1	49	21.86	16.29	34.77	-18.48				
	20000	, , , ,	IOQAWI	25	12	21.56	15.99	34.77	-18.78				
				50	0	21.64	16.07	34.77	-18.7				

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Antenna g	ain (dBi)	-5.17							
		LTE Band	d 25_Uplink fr	equenc	y band :	1850 to 1915	MHz		
BW (MHz)	UL Channel	Frequency (MHz)	Modulation	RB Size	RB Offset	Conducted Average (dBm)	EIRP Average (dBm)	EIRP Limit (dBm)	Margin (dB)
				1	0	23.85	18.68	33	-14.32
	26047	1850.7	QPSK	1	5	23.83	18.66	33	-14.34
20047	20047	1030.7	QFOR	3	2	23.90	18.73	33	-14.27
				6	0	22.94	17.77	33	-15.23
				1	0	23.95	18.78	33	-14.22
	26365	1882.5	QPSK	1	5	23.95	18.78	33	-14.22
	20303	1882.5	QFOR	3	2	23.92	18.75	33	-14.25
				6	0	22.96	17.79	33	-15.21
	26683	1914.3	QPSK	1	0	23.83	18.66	33	-14.34
				1	5	23.87	18.70	33	-14.3
				3	2	23.79	18.62	33	-14.38
1.4				6	0	22.92	17.75	33	-15.25
1.4		1850.7	16QAM	1	0	22.93	17.76	33	-15.24
	26047			1	5	22.88	17.71	33	-15.29
	20047			3	2	22.93	17.76	33	-15.24
				6	0	21.89	16.72	33	-16.28
				1	0	22.81	17.64	33	-15.36
	26365	1882.5	16QAM	1	5	22.87	17.70	33	-15.3
	20000	1002.0	100/111	3	2	22.83	17.66	33	-15.34
				6	0	21.81	16.64	33	-16.36
				1	0	22.94	17.77	33	-15.23
	26683	1914.3	16QAM	1	5	22.91	17.74	33	-15.26
	20003	1011.0	100/11	3	2	22.98	17.81	33	-15.19
				6	0	21.84	16.67	33	-16.33

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Antenna gain (dBi)		-5.17							
LTE Band 25_Uplink frequency band : 1850 to 1915 MHz									
BW (MHz)	UL Channel	Frequency (MHz)	Modulation	RB Size	RB Offset	Conducted Average (dBm)	EIRP Average (dBm)	EIRP Limit (dBm)	Margin (dB)
3	26055	1851.5	QPSK	1	0	23.83	18.66	33	-14.34
				1	14	23.87	18.70	33	-14.3
				8	4	22.90	17.73	33	-15.27
				15	0	22.96	17.79	33	-15.21
	26365	1882.5	QPSK	1	0	23.94	18.77	33	-14.23
				1	14	23.90	18.73	33	-14.27
				8	4	22.80	17.63	33	-15.37
				15	0	22.85	17.68	33	-15.32
	26675	1913.5	QPSK	1	0	23.87	18.70	33	-14.3
				1	14	23.88	18.71	33	-14.29
				8	4	22.85	17.68	33	-15.32
				15	0	22.84	17.67	33	-15.33
	26055	1851.5	16QAM	1	0	22.79	17.62	33	-15.38
				1	14	22.92	17.75	33	-15.25
				8	4	21.85	16.68	33	-16.32
				15	0	21.85	16.68	33	-16.32
	26365	1882.5	16QAM	1	0	22.92	17.75	33	-15.25
				1	14	22.85	17.68	33	-15.32
				8	4	21.94	16.77	33	-16.23
				15	0	21.90	16.73	33	-16.27
	26675	1913.5	16QAM	1	0	22.91	17.74	33	-15.26
				1	14	22.85	17.68	33	-15.32
				8	4	21.81	16.64	33	-16.36
				15	0	21.99	16.82	33	-16.18

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Antenna g	ain (dBi)	-5.17							
		LTE Band	d 25_Uplink fr	equenc	y band :	1850 to 1915	MHz		
BW (MHz)	UL Channel	Frequency (MHz)	Modulation	RB Size	RB Offset	Conducted Average (dBm)	EIRP Average (dBm)	EIRP Limit (dBm)	Margin (dB)
			QPSK	1	0	23.95	18.78	33	-14.22
	26065	1852.5		1	24	23.90	18.73	33	-14.27
	20003	1002.0		12	6	22.92	17.75	33	-15.25
				25	0	22.90	17.73	33	-15.27
				1	0	23.91	18.74	33	-14.26
	26365 1882.5		QPSK	1	24	23.92	18.75	33	-14.25
	20000 1002.3	QI OIX	12	6	22.98	17.81	33	-15.19	
				25	0	22.84	17.67	33	-15.33
	26665			1	0	23.90	18.73	33	-14.27
		1912.5	QPSK	1	24	23.87	18.70	33	-14.3
				12	6	22.89	17.72	33	-15.28
5				25	0	22.79	17.62	33	-15.38
				1	0	22.89	17.72	33	-15.28
	26065	1852.5	16QAM	1	24	22.99	17.82	33	-15.18
	20000	1002.0	100/11	12	6	21.88	16.71	33	-16.29
				25	0	21.88	16.71	33	-16.29
				1	0	22.92	17.75	33	-15.25
	26365	1882.5	16QAM	1	24	22.80	17.63	33	-15.37
	20000	1002.0	100/11	12	6	21.91	16.74	33	-16.26
				25	0	21.92	16.75	33	-16.25
				1	0	22.80	17.63	33	-15.37
	26665	1912.5	16QAM	1	24	22.94	17.77	33	-15.23
	2000	1012.0	100/11	12	6	21.92	16.75	33	-16.25
				25	0	21.95	16.78	33	-16.22

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Antenna g	ain (dBi)	-5.17							
		LTE Band	d 25_Uplink fr	equenc	y band :	1850 to 1915	MHz		
BW (MHz)	UL Channel	Frequency (MHz)	Modulation	RB Size	RB Offset	Conducted Average (dBm)	EIRP Average (dBm)	EIRP Limit (dBm)	Margin (dB)
		1855		1	0	23.84	18.67	33	-14.33
	26090		QPSK	1	49	23.84	18.67	33	-14.33
	20030	1000	QI OIX	25	12	22.94	17.77	33	-15.23
				50	0	22.89	17.72	33	-15.28
				1	0	23.84	18.67	33	-14.33
	26365	1882.5	QPSK	1	49	23.90	18.73	33	-14.27
	20000 1002.3	QI OIL	25	12	22.93	17.76	33	-15.24	
				50	0	22.83	17.66	33	-15.34
	26640		QPSK	1	0	23.84	18.67	33	-14.33
		1910		1	49	23.90	18.73	33	-14.27
				25	12	22.97	17.80	33	-15.2
10				50	0	22.94	17.77	33	-15.23
10				1	0	22.81	17.64	33	-15.36
	26090	1855	16QAM	1	49	22.84	17.67	33	-15.33
	20000	1000	100/11	25	12	21.80	16.63	33	-16.37
				50	0	21.84	16.67	33	-16.33
				1	0	22.83	17.66	33	-15.34
	26365	1882.5	16QAM	1	49	22.98	17.81	33	-15.19
	20000	1002.0	100/11	25	12	21.83	16.66	33	-16.34
				50	0	21.87	16.70	33	-16.3
				1	0	22.83	17.66	33	-15.34
	26640	1910	16QAM	1	49	22.90	17.73	33	-15.27
	20010	1010	100/11	25	12	21.88	16.71	33	-16.29
				50	0	21.95	16.78	33	-16.22

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Antenna g	ain (dBi)	-5.17							
		LTE Band	d 25_Uplink fr	equenc	y band :	1850 to 1915	MHz		
BW (MHz)	UL Channel	Frequency (MHz)	Modulation	RB Size	RB Offset	Conducted Average (dBm)	EIRP Average (dBm)	EIRP Limit (dBm)	Margin (dB)
			QPSK	1	0	23.83	18.66	33	-14.34
	26115	1857.5		1	74	23.94	18.77	33	-14.23
	20113	1007.0	QFOR	36	18	22.96	17.79	33	-15.21
		75 0 1 0 1 74	22.88	17.71	33	-15.29			
				1	0	23.93	18.76	33	-14.24
	26365	1882.5	QPSK	1	74	23.92	18.75	33	-14.25
	26365 1882.5	1002.5	QI OIX	36	18	22.94	17.77	33	-15.23
				75	0	22.87	17.70	33	-15.3
	26615			1	0	23.88	18.71	33	-14.29
		1907.5	QPSK	1	74	23.93	18.76	33	-14.24
				36	18	22.83	17.66	33	-15.34
15				75	0	22.79	17.62	33	-15.38
				1	0	22.93	17.76	33	-15.24
	26115	1857.5	16QAM	1	74	22.88	17.71	33	-15.29
	20113	1007.0	TOQAW	36	18	21.97	16.80	33	-16.2
				75	0	21.89	16.72	33	-16.28
				1	0	22.89	17.72	33	-15.28
	26365	1882 5	16QAM	1	74	22.92	17.75	33	-15.25
	26365 1882.5	1002.5	TOQAW	36	18	21.98	16.81	33	-16.19
				75	0	21.82	16.65	33	-16.35
				1	0	22.92	17.75	33	-15.25
	26615	1907.5	16QAM	1	74	22.95	17.78	33	-15.22
				36	18	21.80	16.63	33	-16.37
				75	0	21.92	16.75	33	-16.25

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Antenna g	ain (dBi)	-5.17							
		LTE Band	d 25_Uplink fr	equenc	y band :	1850 to 1915	MHz		
BW (MHz)	UL Channel	Frequency (MHz)	Modulation	RB Size	RB Offset	Conducted Average (dBm)	EIRP Average (dBm)	EIRP Limit (dBm)	Margin (dB)
		1860	QPSK	1	0	23.95	18.78	33	-14.22
	26140			1	99	23.84	18.67	33	-14.33
	20140	1000	QI OIX	50	25	22.87	17.70	33	-15.3
				100	0	22.96	17.79	33	-15.21
				1	0	23.96	18.79	33	-14.21
	26365	1882.5	QPSK	1	99	23.83	18.66	33	-14.34
	20000 1002.3	QI OIX	50	25	22.94	17.77	33	-15.23	
				100	0	22.92	17.75	33	-15.25
	26590		QPSK	1	0	23.79	18.62	33	-14.38
		1905		1	99	23.83	18.66	33	-14.34
				50	25	22.93	17.76	33	-15.24
20				100	0	22.80	17.63	33	-15.37
20				1	0	22.88	17.71	33	-15.29
	26140	1860	16QAM	1	99	22.87	17.70	33	-15.3
	20110	1000	100/11	50	25	21.93	16.76	33	-16.24
				100	0	21.80	16.63	33	-16.37
				1	0	22.87	17.70	33	-15.3
	26365	1882.5	16QAM	1	99	22.80	17.63	33	-15.37
	20000	1002.5	TOQAW	50	25	21.93	16.76	33	-16.24
				100	0	21.80	16.63	33	-16.37
		_	_	1	0	22.83	17.66	33	-15.34
	26590	1905	16QAM	1	99	22.80	17.63	33	-15.37
	20090	1300	IUQAWI	50	25	21.81	16.64	33	-16.36
				100	0	21.81	16.64	33	-16.36

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Antenna gain (dBi)

27033

26797

26915

27033

1.4

-3.61

848.3

824.7

836.5

848.3

**QPSK** 

16QAM

16QAM

16QAM

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		LTE Ba	and 26_Uplin	k freqı	uency b	and : 824 to 849 M	Hz		
BW (MHz)	UL Channel	Frequency (MHz)	Modulation	RB Size	RB Offset	Conducted Average (dBm)	EIRP Average (dBm)	EIRP Limit (dBm)	Margin (dB)
				1	0	23.89	20.28	38.45	-18.17
	26797	824.7	QPSK	1	5	23.95	20.34	38.45	-18.11
	20191	024.7	QP5K	3	2	23.86	20.25	38.45	-18.2
				6	0	22.80	19.19	38.45	-19.26
				1	0	24.14	20.53	38.45	-17.92
	26915	836.5	QPSK	1	5	24.08	20.47	38.45	-17.98
	20915	030.5	QFSN	3	2	24.03	20.42	38.45	-18.03
				6	0	23.06	19.45	38.45	-19
			1	0	24.04	20.43	38.45	-18.02	
	07022	040.0	ODOK	1	5	23.88	20.27	38.45	-18.18

3

6

1

1

3

6

1

1

3

6

1

1

3

6

2

0

0

5

2

0

0

5

2

0

0

5

2

0

24.04

23.12

23.10

23.26

23.04

21.99

23.52

23.33

23.26

22.25

23.28

23.12

23.01

22.11

20.43

19.51

19.49

19.65

19.43

18.38

19.91

19.72

19.65

18.64

19.67

19.51

19.40

18.50

38.45

38.45

38.45

38.45

38.45

38.45

38.45

38.45

38.45

38.45

38.45

38.45

38.45

38.45

-18.02

-18.94

-18.96

-18.8

-19.02

-20.07

-18.54

-18.73

-18.8

-19.81 -18.78

-18.94

-19.05

-19.95

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Antenna gain	(dBi)	-3.6
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Antenna	ntenna gain (dBi) -3.61  LTE Band 26_Uplink frequency band : 824 to 849 MHz										
	BW III Frequency RB RB Conducted EIRP EIRP Margin										
BW (MHz)	UL Channel	Frequency (MHz)	Modulation	RB Size	RB Offset	Average (dBm)	Average (dBm)	Limit (dBm)	Margin (dB)		
			QPSK	1	0	24.05	20.44	38.45	-18.01		
	26805	825.5		1	14	23.88	20.27	38.45	-18.18		
	20003	023.3	QFSN	8	4	23.08	19.47	38.45	-18.98		
				15	0	23.08	19.47	38.45	-18.98		
				1	0	24.18	20.57	38.45	-17.88		
	26015	6915 836.5	QPSK	1	14	24.06	20.45	38.45	-18		
	20913		QF SIX	8	4	23.15	19.54	38.45	-18.91		
				15	0	23.13	19.52	38.45	-18.93		
	27025	847.5	QPSK	1	0	23.93	20.32	38.45	-18.13		
				1	14	23.72	20.11	38.45	-18.34		
	21023			8	4	23.06	19.45	38.45	-19		
3				15	0	23.14	19.53	38.45	-18.92		
3			16QAM	1	0	23.41	19.80	38.45	-18.65		
	26805	825.5		1	14	23.11	19.50	38.45	-18.95		
	20003	020.0	IOQAIVI	8	4	22.10	18.49	38.45	-19.96		
				15	0	22.05	18.44	38.45	-20.01		
				1	0	23.24	19.63	38.45	-18.82		
	26915	836.5	16QAM	1	14	23.64	20.03	38.45	-18.42		
	20313	000.0	IOQAIVI	8	4	22.10	18.49	38.45	-19.96		
				15	0	21.95	18.34	38.45	-20.11		
				1	0	23.44	19.83	38.45	-18.62		
	27025	847.5	16QAM	1	14	23.01	19.40	38.45	-19.05		
	21020	0-77.5	IOQAWI	8	4	22.26	18.65	38.45	-19.8		
				15	0	22.14	18.53	38.45	-19.92		

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Antenna gain	(dBi)	-3.6
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Antenna	LTE Band 26_Uplink frequency band : 824 to 849 MHz										
BW (MHz)	UL Channel	Frequency (MHz)	Modulation	RB Size	RB Offset	Conducted Average (dBm)	EIRP Average (dBm)	EIRP Limit (dBm)	Margin (dB)		
				1	0	23.86	20.25	38.45	-18.2		
	22245	222 -		1	24	23.84	20.23	38.45	-18.22		
	26815	826.5	QPSK	12	6	22.81	19.20	38.45	-19.25		
				25	0	23.03	19.42	38.45	-19.03		
				1	0	23.97	20.36	38.45	-18.09		
	26915	15 836.5	QPSK	1	24	24.17	20.56	38.45	-17.89		
	20915		QPSN	12	6	23.12	19.51	38.45	-18.94		
				25	0	23.11	19.50	38.45	-18.95		
		846.5	QPSK	1	0	24.15	20.54	38.45	-17.91		
	27015			1	24	23.77	20.16	38.45	-18.29		
	27013			12	6	23.15	19.54	38.45	-18.91		
5				25	0	23.12	19.51	38.45	-18.94		
3			16QAM	1	0	23.41	19.80	38.45	-18.65		
	26815	826.5		1	24	23.76	20.15	38.45	-18.3		
	20013	020.5	IOQAIVI	12	6	21.99	18.38	38.45	-20.07		
				25	0	22.14	18.53	38.45	-19.92		
				1	0	23.62	20.01	38.45	-18.44		
	26915	836.5	16QAM	1	24	23.57	19.96	38.45	-18.49		
	20313	000.0	IOQAIVI	12	6	22.36	18.75	38.45	-19.7		
				25	0	22.23	18.62	38.45	-19.83		
				1	0	23.14	19.53	38.45	-18.92		
	27015	846.5	16QAM	1	24	23.21	19.60	38.45	-18.85		
	21010	0-10.0	IOQAWI	12	6	22.09	18.48	38.45	-19.97		
				25	0	22.34	18.73	38.45	-19.72		

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Antenna gain	(dBi)	-3.61
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	LTE Band 26_Uplink frequency band : 824 to 849 MHz										
BW (MHz)	UL Channel	Frequency (MHz)	Modulation	RB Size	RB Offset	Conducted Average (dBm)	EIRP Average (dBm)	EIRP Limit (dBm)	Margin (dB)		
				1	0	23.90	20.29	38.45	-18.16		
	26840	829	QPSK	1	49	24.06	20.45	38.45	-18		
	20040	029	QFSN	25	12	23.08	19.47	38.45	-18.98		
				50	0	23.07	19.46	38.45	-18.99		
				1	0	23.86	20.25	38.45	-18.2		
	26915	836.5	QPSK	1	49	24.28	20.67	38.45	-17.78		
	20913	030.3	QF SIX	25	12	23.13	19.52	38.45	-18.93		
				50	0	23.12	19.51	38.45	-18.94		
	26990	844	QPSK	1	0	24.33	20.72	38.45	-17.73		
				1	49	24.33	20.72	38.45	-17.73		
	20990			25	12	23.15	19.54	38.45	-18.91		
10				50	0	23.18	19.57	38.45	-18.88		
10			16QAM	1	0	23.09	19.48	38.45	-18.97		
	26840	829		1	49	23.43	19.82	38.45	-18.63		
	20040	029	IOQAIVI	25	12	22.02	18.41	38.45	-20.04		
				50	0	22.19	18.58	38.45	-19.87		
				1	0	23.48	19.87	38.45	-18.58		
	26915	836.5	16QAM	1	49	23.51	19.90	38.45	-18.55		
	20313	000.0	IOQAW	25	12	22.23	18.62	38.45	-19.83		
				50	0	22.16	18.55	38.45	-19.9		
				1	0	23.34	19.73	38.45	-18.72		
	26990	844	16QAM	1	49	23.42	19.81	38.45	-18.64		
	20000	VTT	IOQAWI	25	12	22.20	18.59	38.45	-19.86		
				50	0	22.15	18.54	38.45	-19.91		

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Antenna gain (dBi) -361

7 tintorina y	LTE Band 26_Uplink frequency band : 824 to 849 MHz											
BW (MHz)	UL Channel	Frequency (MHz)	Modulation	RB Size	RB Offset	Conducted Average (dBm)	EIRP Average (dBm)	EIRP Limit (dBm)	Margin (dB)			
				1	0	24.16	20.55	38.45	-17.9			
	26865	831.5	QPSK	1	74	24.41	20.80	38.45	-17.65			
	20003	031.3	QFSN	36	18	23.21	19.60	38.45	-18.85			
				75	0	23.26	19.65	38.45	-18.8			
				1	0	24.02	20.41	38.45	-18.04			
	26915	836.5	QPSK	1	74	24.02	20.41	38.45	-18.04			
	20913 030.3	QI OIX	36	18	23.16	19.55	38.45	-18.9				
				75	0	23.21	19.60	38.45	-18.85			
	26965			1	0	24.44	20.83	38.45	-17.62			
		841.5	QPSK	1	74	24.04	20.43	38.45	-18.02			
				36	18	23.13	19.52	38.45	-18.93			
15				75	0	23.24	19.63	38.45	-18.82			
13			16QAM	1	0	23.21	19.60	38.45	-18.85			
	26865	831.5		1	74	23.73	20.12	38.45	-18.33			
	20003	001.0		36	18	22.27	18.66	38.45	-19.79			
				75	0	22.31	18.70	38.45	-19.75			
				1	0	23.30	19.69	38.45	-18.76			
	26915	836.5	16QAM	1	74	23.30	19.69	38.45	-18.76			
	20313	000.0	IOQAW	36	18	22.17	18.56	38.45	-19.89			
				75	0	22.16	18.55	38.45	-19.9			
				1	0	23.42	19.81	38.45	-18.64			
	26965	841.5	16QAM	1	74	23.56	19.95	38.45	-18.5			
	20300	071.0	IOQAWI	36	18	22.20	18.59	38.45	-19.86			
				75	0	22.21	18.60	38.45	-19.85			

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Antenna gain (dBi) -3.61

Antonia	Part 90S LTE Band 26 Uplink frequency band : 814 to 824 MHz										
BW (MHz)	UL Channel	Frequency (MHz)	Modulation	RB Size	RB Offset	Conducted Average (dBm)	EIRP Average (dBm)	EIRP Limit (dBm)	Margin (dB)		
				1	0	23.92	20.31	50	-29.69		
	26697	814.7	QPSK	1	5	24.06	20.45	50	-29.55		
	20097	014.7	QPSK	3	2	24.10	20.49	50	-29.51		
				6	0	22.81	19.20	50	-30.8		
				1	0	23.95	20.34	50	-29.66		
	26740	819	QPSK	1	5	24.33	20.72	50	-29.28		
	20740	019	QF SIX	3	2	23.88	20.27	50	-29.73		
				6	0	23.02	19.41	50	-30.59		
			QPSK	1	0	23.86	20.25	50	-29.75		
	26783	823.3		1	5	23.79	20.18	50	-29.82		
	20703			3	2	24.27	20.66	50	-29.34		
1.4				6	0	23.14	19.53	50	-30.47		
1.4				1	0	22.93	19.32	50	-30.68		
	26697	814.7	16QAM	1	5	23.33	19.72	50	-30.28		
	20091	014.7	IOQAIVI	3	2	22.85	19.24	50	-30.76		
				6	0	21.95	18.34	50	-31.66		
				1	0	23.57	19.96	50	-30.04		
	26740	819	16QAM	1	5	23.40	19.79	50	-30.21		
	20740	019	IOQAIVI	3	2	23.47	19.86	50	-30.14		
				6	0	22.23	18.62	50	-31.38		
				1	0	23.33	19.72	50	-30.28		
	26783	823.3	16QAM	1	5	23.01	19.40	50	-30.6		
	20700	020.0	16QAM <b>-</b>	3	2	23.24	19.63	50	-30.37		
				6	0	22.28	18.67	50	-31.33		

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Antenna gain (dBi)	-3.61
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Antenna		art 90S_LTE	Band 26_Upl	ink fre	quency	band : 814 to	o 824 MHz		
BW (MHz)	UL Channel	Frequency (MHz)	Modulation	RB Size	RB Offset	Conducted Average (dBm)	EIRP Average (dBm)	EIRP Limit (dBm)	Margin (dB)
				1	0	23.96	20.35	50	-29.65
	26705	815.5	QPSK	1	14	23.88	20.27	50	-29.73
	20703	010.0	QFSN	8	4	23.13	19.52	50	-30.48
				15	0	22.84	19.23	50	-30.77
				1	0	24.37	20.76	50	-29.24
	26740	819	QPSK	1	14	23.86	20.25	50	-29.75
	20740	019	QF SIX	8	4	23.38	19.77	50	-30.23
	26775			15	0	23.19	19.58	50	-30.42
		822.5	QPSK	1	0	23.85	20.24	50	-29.76
				1	14	23.49	19.88	50	-30.12
	20113			8	4	23.15	19.54	50	-30.46
3				15	0	22.90	19.29	50	-30.71
3				1	0	23.47	19.86	50	-30.14
	26705	815.5	16QAM	1	14	23.07	19.46	50	-30.54
	20703	013.3	IOQAW	8	4	21.96	18.35	50	-31.65
				15	0	22.06	18.45	50	-31.55
				1	0	23.08	19.47	50	-30.53
	26740	819	16QAM	1	14	23.89	20.28	50	-29.72
	20740	013	IOQAW	8	4	22.06	18.45	50	-31.55
				15	0	22.04	18.43	50	-31.57
				1	0	23.32	19.71	50	-30.29
	26775	775 822.5	16QAM	1	14	23.23	19.62	50	-30.38
	26775		16QAM	8	4	22.49	18.88	50	-31.12
				15	0	22.00	18.39	50	-31.61

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Antenna gain (dBi) -361

Antenna		-3.01 art 90S_LTE	Band 26_Upl	ink fre	quency	band : 814 t	o 824 MHz		
BW (MHz)	UL Channel	Frequency (MHz)	Modulation	RB Size	RB Offset	Conducted Average (dBm)	EIRP Average (dBm)	EIRP Limit (dBm)	Margin (dB)
				1	0	23.83	20.22	50	-29.78
	26715	816.5	QPSK	1	24	24.04	20.43	50	-29.57
	20713	010.5	QF SIX	12	6	22.75	19.14	50	-30.86
				25	0	22.83	19.22	50	-30.78
				1	0	23.91	20.30	50	-29.7
	26740	819	QPSK	1	24	24.21	20.60	50	-29.4
	20740	019	QI OIX	12	6	23.11	19.50	50	-30.5
	26765 82			25	0	23.00	19.39	50	-30.61
			821.5 QPSK	1	0	24.13	20.52	50	-29.48
		5 821.5		1	24	23.98	20.37	50	-29.63
	20703			12	6	23.33	19.72	50	-30.28
5				25	0	23.31	19.70	50	-30.3
3				1	0	23.56	19.95	50	-30.05
	26715	816.5	16QAM	1	24	23.81	20.20	50	-29.8
	20713	010.5	IOQAW	12	6	21.92	18.31	50	-31.69
				25	0	22.13	18.52	50	-31.48
				1	0	23.68	20.07	50	-29.93
	26740	819	16QAM	1	24	23.59	19.98	50	-30.02
	20140	013	TOQAW	12	6	22.30	18.69	50	-31.31
				25	0	22.40	18.79	50	-31.21
	26765			1	0	23.38	19.77	50	-30.23
		821.5	16QAM	1	24	23.27	19.66	50	-30.34
	20100		16QAM =	12	6	22.11	18.50	50	-31.5
				25	0	22.17	18.56	50	-31.44

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-3.61 Antenna gain (dBi)

7 untorma	Part 90S_LTE Band 26_Uplink frequency band : 814 to 824 MHz											
BW (MHz)	UL Channel	Frequency (MHz)	Modulation	RB Size	RB Offset	Conducted Average (dBm)	EIRP Average (dBm)	EIRP Limit (dBm)	Margin (dB)			
	26740	819	QPSK	1	0	23.66	20.05	50	-29.95			
				1	49	24.23	20.62	50	-29.38			
	20740			25	12	23.09	19.48	50	-30.52			
10				50	0	23.37	19.76	50	-30.24			
10				1	0	23.36	19.75	50	-30.25			
	26740	819	16QAM	1	49	23.59	19.98	50	-30.02			
	26740	819	IUQAW	25	12	22.20	18.59	50	-31.41			
				50	0	21.99	18.38	50	-31.62			

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Antenna	gain (dBi)	-4.11							
		LTE Bar	nd 30_Uplink	frequ	ency ba	nd : 2305 to 2315 <mark>I</mark>	ИHz		
BW (MHz)	UL Channel	Frequency (MHz)	Modulation	RB Size	RB Offset	Conducted Average (dBm)	EIRP Average (dBm)	EIRP Limit (dBm)	Margin (dB)
				1	0	23.05	18.94	24	-5.06
	27685	2307.5	QPSK	1	24	23.04	18.93	24	-5.07
	2/000	2307.5	QPSK	12	6	22.03	17.92	24	-6.08
				25	0	22.04	17.93	24	-6.07
				1	0	23.07	18.96	24	-5.04
	27710	2310	QPSK	1	24	23.23	19.12	24	-4.88
	21710	2310	QFSN	12	6	22.05	17.94	24	-6.06
				25	0	22.08	17.97	24	-6.03
	27735	2312.5	QPSK	1	0	23.18	19.07	24	-4.93
				1	24	23.42	19.31	24	-4.69
				12	6	22.11	18.00	24	-6
5				25	0	22.20	18.09	24	-5.91
				1	0	22.21	18.10	24	-5.9
	27685	2307.5	16QAM	1	24	22.21	18.10	24	-5.9
	27003	2307.3	IOQAW	12	6	21.81	17.70	24	-6.3
				25	0	21.73	17.62	24	-6.38
				1	0	22.25	18.14	24	-5.86
	27710	2310	16QAM	1	24	22.27	18.16	24	-5.84
	21110	2310	IOQAW	12	6	21.74	17.63	24	-6.37
				25	0	21.68	17.57	24	-6.43
				1	0	22.04	17.93	24	-6.07
	27735	2312.5	16QAM	1	24	22.05	17.94	24	-6.06
	27735		IUQAW	12	6	21.53	17.42	24	-6.58

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-4.11 Antenna gain (dBi)

	LTE Band 30_Uplink frequency band : 2305 to 2315 MHz											
BW (MHz)	UL Channel	Frequency (MHz)	Modulation	RB Size	RB Offset	Conducted Average (dBm)	EIRP Average (dBm)	EIRP Limit (dBm)	Margin (dB)			
	27710	2310	QPSK	1	0	23.11	19.00	24	-5			
				1	49	23.54	19.43	24	-4.57			
				25	12	22.24	18.13	24	-5.87			
10				50	0	22.25	18.14	24	-5.86			
10				1	0	22.54	18.43	24	-5.57			
	27710	2310	16QAM	1	49	22.80	18.69	24	-5.31			
	21110	2310	TOQAM	25	12	21.26	17.15	24	-6.85			
				50	0	21.34	17.23	24	-6.77			

	LTE Band 30_Uplink frequency band : 2305 to 2315 MHz										
BW (MHz)	UL Channel	Frequency (MHz)	Modulation	RB Size	RB Offset	Conducted Average (dBm/5MHz)	EIRP Average (dBm/5MH z)	EIRP Limit (dBm/5 MHZ)	Margin (dB)		
				1	0	19.87	15.76	24	-8.24		
	27710	2310	QPSK	1	49	20.22	16.11	24	-7.89		
	27710			25	12	19.21	15.10	24	-8.9		
10				50	0	19.20	15.09	24	-8.91		
10				1	0	19.04	14.93	24	-9.07		
	27710	2310	16QAM	1	49	19.21	15.10	24	-8.9		
	21110	2310	16QAW	25	12	18.14	14.03	24	-9.97		
				50	0	18.31	14.20	24	-9.8		

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Antenna g	ain (dBi)	-4.57							
		LTE Band	d 38_Uplink fr	equenc	y band :	2570 to 2620	MHz		
BW (MHz)	UL Channel	Frequency (MHz)	Modulation	RB Size	RB Offset	Conducted Average (dBm)	EIRP Average (dBm)	EIRP Limit (dBm)	Margin (dB)
				1	0	23.90	19.33	33	-13.67
	37775	2572.5	QPSK	1	24	23.82	19.25	33	-13.75
	31113	2312.3	QFOR	12	6	22.88	18.31	33	-14.69
				25	0	22.86	18.29	33	-14.71
				1	0	23.80	19.23	33	-13.77
	38000	2595	QPSK	1	24	23.89	19.32	33	-13.68
	30000	2595	QI OIX	12	6	22.79	18.22	33	-14.78
				25	0	22.80	18.23	33	-14.77
				1	0	23.81	19.24	33	-13.76
	38225 2617.5	QPSK	1	24	23.91	19.34	33	-13.66	
	00220	2017.5	QI OIX	12	6	22.85	18.28	33	-14.72
5				25	0	22.86	18.29	33	-14.71
				1	0	22.78	18.21	33	-14.79
	37775	2572.5	16QAM	1	24	22.94	18.37	33	-14.63
	01110	2012.0	10Q/W	12	6	21.83	17.26	33	-15.74
				25	0	21.87	17.30	33	-15.7
				1	0	22.87	18.30	33	-14.7
	38000	2595	16QAM	1	24	22.86	18.29	33	-14.71
	38000	2000	10Q/W	12	6	21.80	17.23	33	-15.77
				25	0	21.87	17.30	33	-15.7
				1	0	22.81	18.24	33	-14.76
	38225	2617.5	16QAM	1	24	22.83	18.26	33	-14.74
	00220	25 2617.5	16QAW <b>-</b>	12	6	21.86	17.29	33	-15.71
				25	0	21.94	17.37	33	-15.63

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Antenna g	ain (dBi)	-4.57							
		LTE Band	d 38_Uplink fr	equenc	y band :	2570 to 2620	MHz		
BW (MHz)	UL Channel	Frequency (MHz)	Modulation	RB Size	RB Offset	Conducted Average (dBm)	EIRP Average (dBm)	EIRP Limit (dBm)	Margin (dB)
				1	0	23.95	19.38	33	-13.62
	37800	2575	QPSK	1	49	23.92	19.35	33	-13.65
	37000	2313	QF3N	25	12	22.84	18.27	33	-14.73
				50	0	22.78	18.21	33	-14.79
				1	0	23.94	19.37	33	-13.63
	38000	38000 2595	QPSK	1	49	23.92	19.35	33	-13.65
	30000 2393	2000	QI OIX	25	12	22.90	18.33	33	-14.67
				50	0	22.83	18.26	33	-14.74
			QPSK	1	0	23.91	19.34	33	-13.66
	38200	2615		1	49	23.95	19.38	33	-13.62
	30200			25	12	22.89	18.32	33	-14.68
10				50	0	22.93	18.36	33	-14.64
10				1	0	22.93	18.36	33	-14.64
	37800	2575	16QAM	1	49	22.93	18.36	33	-14.64
	07000	2010	100/111	25	12	21.89	17.32	33	-15.68
				50	0	21.83	17.26	33	-15.74
				1	0	22.79	18.22	33	-14.78
	38000	2595	16QAM	1	49	22.85	18.28	33	-14.72
	00000	2000	100/11	25	12	21.95	17.38	33	-15.62
				50	0	21.87	17.30	33	-15.7
				1	0	22.88	18.31	33	-14.69
	38200	2615	16QAM	1	49	22.79	18.22	33	-14.78
	00200	38200 2615	16QAW =	25	12	21.90	17.33	33	-15.67
				50	0	21.85	17.28	33	-15.72

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Antenna g	ain (dBi)	-4.57							
		LTE Band	d 38_Uplink fr	equenc	y band :	2570 to 2620	MHz		
BW (MHz)	UL Channel	Frequency (MHz)	Modulation	RB Size	RB Offset	Conducted Average (dBm)	EIRP Average (dBm)	EIRP Limit (dBm)	Margin (dB)
				1	0	23.97	19.40	33	-13.6
	37825	2577.5	QPSK	1	74	23.87	19.30	33	-13.7
	37023	2511.5	QI OIX	36	19	22.82	18.25	33	-14.75
				75	0	22.78	18.21	33	-14.79
				1	0	23.86	19.29	33	-13.71
	38000	2595	QPSK	1	74	23.82	19.25	33	-13.75
	2090	QI OIX	36	19	22.92	18.35	33	-14.65	
				75	0	22.93	18.36	33	-14.64
			QPSK	1	0	23.81	19.24	33	-13.76
	38175 2612.5	2612.5		1	74	23.96	19.39	33	-13.61
	00170	2012.0		36	19	22.88	18.31	33	-14.69
15				75	0	22.78	18.21	33	-14.79
				1	0	22.85	18.28	33	-14.72
	37825	2577.5	16QAM	1	74	22.85	18.28	33	-14.72
	07020	2011.0	100/11	36	19	21.85	17.28	33	-15.72
				75	0	21.80	17.23	33	-15.77
				1	0	22.77	18.20	33	-14.8
	38000	2595	16QAM	1	74	22.85	18.28	33	-14.72
	38000	2000	100/11	36	19	21.95	17.38	33	-15.62
				75	0	21.91	17.34	33	-15.66
				1	0	22.85	18.28	33	-14.72
	38175	2612.5	16QAM	1	74	22.83	18.26	33	-14.74
	33173	2612.5	IOQAWI	36	19	21.93	17.36	33	-15.64
				75	0	21.81	17.24	33	-15.76

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Antenna g	ain (dBi)	-4.57							
		LTE Band	d 38_Uplink fr	equenc	y band :	2570 to 2620	MHz		
BW (MHz)	UL Channel	Frequency (MHz)	Modulation	RB Size	RB Offset	Conducted Average (dBm)	EIRP Average (dBm)	EIRP Limit (dBm)	Margin (dB)
				1	0	23.95	19.38	33	-13.62
	37850	2580	QPSK	1	99	23.77	19.20	33	-13.8
	37000	2000	QI OIX	50	25	22.92	18.35	33	-14.65
				100	0	22.78	18.21	33	-14.79
				1	0	23.98	19.41	33	-13.59
	38000	38000 2595	QPSK	1	99	23.87	19.30	33	-13.7
	2333	QI OIT	50	25	22.86	18.29	33	-14.71	
				100	0	22.89	18.32	33	-14.68
			QPSK	1	0	23.94	19.37	33	-13.63
	38150	2610		1	99	23.79	19.22	33	-13.78
	00100			50	25	22.82	18.25	33	-14.75
20				100	0	22.83	18.26	33	-14.74
20				1	0	22.93	18.36	33	-14.64
	37850	2580	16QAM	1	99	22.78	18.21	33	-14.79
	07000	2000	100/11	50	25	21.90	17.33	33	-15.67
				100	0	21.79	17.22	33	-15.78
				1	0	22.86	18.29	33	-14.71
	38000	2595	16QAM	1	99	22.84	18.27	33	-14.73
	00000	2000	100/11	50	25	21.84	17.27	33	-15.73
				100	0	21.83	17.26	33	-15.74
				1	0	22.94	18.37	33	-14.63
	38150	2610	16QAM	1	99	22.85	18.28	33	-14.72
	00100	38150 2610	16QAW	50	25	21.94	17.37	33	-15.63
				100	0	21.78	17.21	33	-15.79

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Antenna gain	(dBi)	-4.57
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7 (Interinal)	LTE Band 41_Uplink frequency band : 2496 to 2690 MHz											
BW (MHz)	UL Channel	Frequency (MHz)	Modulation	RB Size	RB Offset	Conducted Average (dBm)	EIRP Average (dBm)	EIRP Limit (dBm)	Margin (dB)			
				1	0	24.44	19.87	33	-13.13			
	39675	2498.5	QPSK	1	24	24.47	19.90	33	-13.1			
	39073	2490.0	QF3N	12	6	23.54	18.97	33	-14.03			
				25	0	23.55	18.98	33	-14.02			
				1	0	24.78	20.21	33	-12.79			
	40620	2593	QPSK	1	24	24.66	20.09	33	-12.91			
	40020	2090	QFSN	12	6	23.43	18.86	33	-14.14			
				25	0	23.46	18.89	33	-14.11			
	41565 2687.5		QPSK	1	0	24.47	19.90	33	-13.1			
		2687.5		1	24	24.52	19.95	33	-13.05			
	41000			12	6	23.55	18.98	33	-14.02			
5				25	0	23.57	19.00	33	-14			
3				1	0	23.71	19.14	33	-13.86			
	39675	2498.5	16QAM	1	24	23.69	19.12	33	-13.88			
	39073	2490.0	IOQAW	12	6	22.68	18.11	33	-14.89			
				25	0	22.66	18.09	33	-14.91			
				1	0	23.70	19.13	33	-13.87			
	40620	2593	16QAM	1	24	23.81	19.24	33	-13.76			
	40020	2000	IOQAIVI	12	6	22.54	17.97	33	-15.03			
				25	0	22.45	17.88	33	-15.12			
				1	0	23.47	18.90	33	-14.1			
	41565	2687.5	16QAM	1	24	23.63	19.06	33	-13.94			
	71000	2007.0	IOQAWI	12	6	22.64	18.07	33	-14.93			
				25	0	22.56	17.99	33	-15.01			

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Antenna gain (dBi) -4.5
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Antenna	ge (4.2.)	LTE Bar	nd 41_Uplink	frequ	ency ba	nd : 2496 to 2690 l	ИHz		
BW (MHz)	UL Channel	Frequency (MHz)	Modulation	RB Size	RB Offset	Conducted Average (dBm)	EIRP Average (dBm)	EIRP Limit (dBm)	Margin (dB)
				1	0	24.46	19.89	33	-13.11
	39700	2501	QPSK	1	49	24.56	19.99	33	-13.01
	39700	2301	QFSN	25	12	23.62	19.05	33	-13.95
				50	0	23.61	19.04	33	-13.96
				1	0	24.43	19.86	33	-13.14
	40620	2593	QPSK	1	49	24.68	20.11	33	-12.89
	40020	2090	QF SIX	25	12	23.48	18.91	33	-14.09
				50	0	23.45	18.88	33	-14.12
	41540 2685		QPSK	1	0	24.52	19.95	33	-13.05
		2685		1	49	24.59	20.02	33	-12.98
	41040			25	12	23.58	19.01	33	-13.99
10				50	0	23.52	18.95	33	-14.05
10				1	0	23.89	19.32	33	-13.68
	39700	2501	16QAM	1	49	23.66	19.09	33	-13.91
	39700	2301		25	12	22.72	18.15	33	-14.85
				50	0	22.65	18.08	33	-14.92
				1	0	23.66	19.09	33	-13.91
	40620	2593	16QAM	1	49	23.93	19.36	33	-13.64
	40020	2000	IOQAW	25	12	22.48	17.91	33	-15.09
				50	0	22.55	17.98	33	-15.02
				1	0	23.44	18.87	33	-14.13
	41540	2685	16QAM	1	49	23.66	19.09	33	-13.91
	71070	2000	IOQAWI	25	12	22.69	18.12	33	-14.88
				50	0	22.56	17.99	33	-15.01

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Antenna gain	(dBi)	-4.57
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Antenna	gairi (abi)	LTE Bar	nd 41_Uplink	frequ	ency ba	nd : 2496 to 2690 N	ИHz		
BW (MHz)	UL Channel	Frequency (MHz)	Modulation	RB Size	RB Offset	Conducted Average (dBm)	EIRP Average (dBm)	EIRP Limit (dBm)	Margin (dB)
				1	0	24.78	20.21	33	-12.79
	39725	2503.5	QPSK	1	74	24.48	19.91	33	-13.09
	39723	2505.5	QFSN	36	18	23.61	19.04	33	-13.96
				75	0	23.56	18.99	33	-14.01
				1	0	24.54	19.97	33	-13.03
	40620	2593	QPSK	1	74	24.58	20.01	33	-12.99
	40020	2093	QFSN	36	18	23.57	19.00	33	-14
			75	0	23.76	19.19	33	-13.81	
	41515 2682.5		QPSK	1	0	24.44	19.87	33	-13.13
		2682.5		1	74	24.47	19.90	33	-13.1
	41313			36	18	23.53	18.96	33	-14.04
15				75	0	23.50	18.93	33	-14.07
15				1	0	23.76	19.19	33	-13.81
	39725	2503.5	16QAM	1	74	23.95	19.38	33	-13.62
	39123	2503.5	TOQAM	36	18	22.67	18.10	33	-14.9
				75	0	22.64	18.07	33	-14.93
				1	0	23.84	19.27	33	-13.73
	40620	2593	16QAM	1	74	23.58	19.01	33	-13.99
	40020	2090	TOQAW	36	18	22.69	18.12	33	-14.88
				75	0	22.63	18.06	33	-14.94
				1	0	23.41	18.84	33	-14.16
	41515	2682.5	16QAM	1	74	23.68	19.11	33	-13.89
	41010	2002.3	IUQAIVI	36	18	22.58	18.01	33	-14.99
				75	0	22.48	17.91	33	-15.09

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Antenna gain (dBi) -4.5
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Antenna	gairi (abi)	LTE Bar	nd 41_Uplink	frequ	ency ba	nd : 2496 to 2690 N	ИHz		
BW (MHz)	UL Channel	Frequency (MHz)	Modulation	RB Size	RB Offset	Conducted Average (dBm)	EIRP Average (dBm)	EIRP Limit (dBm)	Margin (dB)
				1	0	24.09	19.52	33	-13.48
	39750	2506	QPSK	1	99	23.68	19.11	33	-13.89
	39730	2500	QFSN	50	25	22.86	18.29	33	-14.71
				100	0	22.88	18.31	33	-14.69
				1	0	24.00	19.43	33	-13.57
	40620	2593	QPSK	1	99	24.07	19.50	33	-13.5
	40020	2000	QI OIX	50	25	22.98	18.41	33	-14.59
			100	0	22.97	18.40	33	-14.6	
	41490 26			1	0	24.84	20.27	33	-12.73
		2680	QPSK	1	99	24.82	20.25	33	-12.75
	41430			50	25	23.39	18.82	33	-14.18
20				100	0	23.32	18.75	33	-14.25
20				1	0	23.71	19.14	33	-13.86
	39750	2506	16QAM	1	99	23.95	19.38	33	-13.62
	33730	2300	TOQAM	50	25	22.59	18.02	33	-14.98
				100	0	22.57	18.00	33	-15
				1	0	23.91	19.34	33	-13.66
	40620	2593	16QAM	1	99	23.81	19.24	33	-13.76
	40020	2000	TOQAW	50	25	22.54	17.97	33	-15.03
				100	0	22.49	17.92	33	-15.08
				1	0	23.52	18.95	33	-14.05
	41490	2680	16QAM	1	99	23.76	19.19	33	-13.81
	71700	2000	100/1111	50	25	22.57	18.00	33	-15
				100	0	22.45	17.88	33	-15.12

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Antenna	gain (dBi)	-4.69							
		LTE Band (	66_Uplink fre	quenc	y band	: 1710 to 178	0 MHz		
BW (MHz)	UL Channel	Frequency (MHz)	Modulation	RB Size	RB Offset	Conducted Average (dBm)	EIRP Average (dBm)	EIRP Limit (dBm)	Margin (dB)
				1	0	23.11	18.42	30	-11.58
	131979	1710.7	QPSK	1	5	22.99	18.30	30	-11.7
	131979	17 10.7	QFSN	3	2	22.96	18.27	30	-11.73
				6	0	22.09	17.40	30	-12.6
				1	0	23.21	18.52	30	-11.48
	132322	1745	QPSK	1	5	23.30	18.61	30	-11.39
	102022	1740	QI OIX	3	2	23.20	18.51	30	-11.49
				6	0	22.31	17.62	30	-12.38
		1779.3	QPSK	1	0	22.92	18.23	30	-11.77
	132665			1	5	22.94	18.25	30	-11.75
	102000	1110.0		3	2	22.88	18.19	30	-11.81
1.4				6	0	21.98	17.29	30	-12.71
1.4				1	0	22.27	17.58	30	-12.42
	131979	1710.7	16QAM	1	5	22.74	18.05	30	-11.95
	101070	17 10.7	IUQAW	3	2	22.24	17.55	30	-12.45
				6	0	21.31	16.62	30	-13.38
				1	0	22.72	18.03	30	-11.97
	132322	1745	16QAM	1	5	22.31	17.62	30	-12.38
	.02022	11.10	1000	3	2	22.31	17.62	30	-12.38
				6	0	21.35	16.66	30	-13.34
				1	0	22.56	17.87	30	-12.13
	132665	1779.3	16QAM	1	5	22.43	17.74	30	-12.26
				3	2	22.39	17.70	30	-12.3
				6	0	21.08	16.39	30	-13.61

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Antenna gain (dBi) -4.69
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Antenna	LTE Band 66_Uplink frequency band : 1710 to 1780 MHz									
BW (MHz)	UL Channel	Frequency (MHz)	Modulation	RB Size	RB Offset	Conducted Average (dBm)	EIRP Average (dBm)	EIRP Limit (dBm)	Margin (dB)	
				1	0	23.17	18.48	30	-11.52	
	131987	1711.5	QPSK	1	14	23.30	18.61	30	-11.39	
	131901	1711.5	QFSN	8	4	22.32	17.63	30	-12.37	
				15	0	22.37	17.68	30	-12.32	
				1	0	23.26	18.57	30	-11.43	
	132322	1745	QPSK	1	14	23.30	18.61	30	-11.39	
	102022	1740	QI SIX	8	4	22.43	17.74	30	-12.26	
				15	0	22.40	17.71	30	-12.29	
	132657 1778.5		QPSK	1	0	22.98	18.29	30	-11.71	
		1778 5		1	14	23.08	18.39	30	-11.61	
		1770.5		8	4	22.14	17.45	30	-12.55	
3				15	0	22.18	17.49	30	-12.51	
3				1	0	22.60	17.91	30	-12.09	
	131987	1711.5	16QAM	1	14	22.42	17.73	30	-12.27	
	131301	1711.5	TOQAIVI	8	4	21.43	16.74	30	-13.26	
				15	0	21.32	16.63	30	-13.37	
				1	0	22.44	17.75	30	-12.25	
	132322	1745	16QAM	1	14	22.62	17.93	30	-12.07	
	102022	1740	IOQAIVI	8	4	21.48	16.79	30	-13.21	
				15	0	21.45	16.76	30	-13.24	
				1	0	22.47	17.78	30	-12.22	
	132657	1778.5	16QAM	1	14	22.19	17.50	30	-12.5	
	102001	1110.5	IUQAIVI	8	4	21.33	16.64	30	-13.36	
				15	0	21.22	16.53	30	-13.47	

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Antenna gain	(dBi	-4.69
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	gairi (abi)	LTE Band (	66_Uplink fre	quenc	y band	: 1710 to 178	0 MHz		
BW (MHz)	UL Channel	Frequency (MHz)	Modulation	RB Size	RB Offset	Conducted Average (dBm)	EIRP Average (dBm)	EIRP Limit (dBm)	Margin (dB)
			1	0	23.36	18.67	30	-11.33	
	131997	1712.5	QPSK	1	24	23.22	18.53	30	-11.47
	131331	17 12.5	QF SIX	12	6	22.37	17.68	30	-12.32
				25	0	22.31	17.62	30	-12.38
				1	0	23.24	18.55	30	-11.45
	132322	1745	QPSK	1	24	23.50	18.81	30	-11.19 -12.31 -12.36 -11.44
132322	1745	QFSN	12	6	22.38	17.69	30	-12.31	
				25	0	22.33	17.64	30	-12.36
				1	0	23.25	18.56	30	-11.44
	132647	1777.5	QPSK	1	24	22.97	18.28	30	-11.72
	102041	1777.5	QFSN	12	6	22.13	17.44	30	(dB) -11.33 -11.47 -12.32 -12.38 -11.45 -11.19 -12.31 -12.36 -11.44 -11.72 -12.56 -12.51 -12.59 -11.96 -13.28 -13.31 -12.04 -11.72 -13.15 -13.31 -11.98 -12.3
5				25	0	22.18	17.49	30	-12.51
5				1	0	22.10	17.41	30	-12.59
	131997	1712.5	16QAM	1	24	22.73	18.04	30	-11.96
	131991	17 12.5	TOQAW	12	6	21.41	16.72	30	-11.45 -11.19 -12.36 -11.44 -11.72 -12.56 -12.51 -12.59 -11.96 -13.28 -13.31 -12.04 -11.72 -13.15 -13.31 -11.98
				25	0	21.38	16.69	30	-13.31
				1	0	22.65	17.96	30	-12.04
	132322	1745	16QAM	1	24	22.97	18.28	30	-11.72
	132322	1745	IOQAW	12	6	21.54	16.85	30	-13.15
				25	0	21.38	16.69	30	-13.31
				1	0	22.71	18.02	30	-11.98
	132647	1777.5	16QAM	1	24	22.39	17.70	30	-12.3
	132041	1111.5	IUQAWI	12	6	21.33	16.64	30	-13.36
				25	0	21.28	16.59	30	-13.41

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Antenna gain	(dBi	-4.69
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		LTE Band (	66_Uplink fre	quenc	y band	: 1710 to 178	0 MHz		
BW (MHz)	UL Channel	Frequency (MHz)	Modulation	RB Size	RB Offset	Conducted Average (dBm)	EIRP Average (dBm)	EIRP Limit (dBm)	Margin (dB)
	132022			1	0	23.46	18.77	30	-11.23
		1715	QPSK	1	49	23.09	18.40	30	-11.6
	132022	1713	QF SIX	25	12	22.00	17.31	30	(dB) -11.23
				50	0	22.22	17.53	30	-12.47
				1	0	23.24	18.55	30	-11.45
	132322	1745	QPSK	1	49	23.40	18.71	30	Margin (dB)  -11.23  -11.6  -12.69  -12.47  -11.45  -11.29  -12.31  -12.29  -11.15  -11.5  -12.41  -12.43  -12.03  -11.94  -13.43  -11.94  -13.23  -13.28  -11.9  -13.23
	102022	1740	QI SIN	25	12	22.38	17.69	30	-12.31
				50	0	22.40	17.71	30	-12.29
				1	0	23.54	18.85	30	-11.15
	132622	1775	QPSK	1	49	23.19	18.50	30	-12.29 -11.15 -11.5 -12.41 -12.43 -12.03
	102022	1775	QI OIX	25	12	22.28	17.59	30	-12.41
10				50	0	22.26	17.57	30	(dB) -11.23 -11.6 -12.69 -12.47 -11.45 -11.29 -12.31 -12.29 -11.15 -11.5 -12.41 -12.43 -12.03 -11.94 -13.44 -13.43 -11.94 -11.9 -13.23 -13.28 -11.9 -12.17
10				1	0	22.66	17.97	30	-12.03
	132022	1715	16QAM	1	49	22.75	18.06	30	-11.94
	102022	1710	TOQAW	25	12	21.25	16.56	30	-13.44
				50	0	21.26	16.57	30	-13.43
				1	0	22.75	18.06	30	-11.94
	132322	1745	16QAM	1	49	22.79	18.10	30	-11.9
	102022	1740	TOQAW	25	12	21.46	16.77	30	-13.23
				50	0	21.41	16.72	30	-13.28
				1	0	22.79	18.10	30	-11.9
	132622	1775	16QAM	1	49	22.52	17.83	30	-12.17
	102022	1775	IOQAWI	25	12	21.35	16.66	30	-13.34
				50	0	21.27	16.58	30	-13.42

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Antenna gain	(dBi	-4.69
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	gairi (ubi)	LTE Band (	66_Uplink fre	quenc	y band	: 1710 to 178	0 MHz		
BW (MHz)	UL Channel	Frequency (MHz)	Modulation	RB Size	RB Offset	Conducted Average (dBm)	EIRP Average (dBm)	EIRP Limit (dBm)	Margin (dB)
				1	0	23.15	18.46	30	-11.54
	132047	1717.5	QPSK	1	74	23.45	18.76	30	-11.24
	132041	1717.5	QP3N	36	18	22.05	17.36	30	-12.64
				75	0	22.08	17.39	30	-12.61
				1	0	23.39	18.70	30	-11.3
	132322	1745	QPSK	1	74	23.36	18.67	30	-12.64 -12.61 -13.0 -11.33 -12.32 -12.27 -11.39 -12.29 -12.26 -12.27 -12.26 -12.27
	132322	1745	QF SIX	36	18	22.37	17.68	30	-12.32
				75	0	22.42	17.73	30	-12.27
				1	0	23.30	18.61	30	-11.39
	132597	1772.5	QPSK	1	74	23.10	18.41	30	-11.59
	102001	1772.5	QI OIX	36	18	22.40	17.71	30	-11.24 -12.64 -12.61 -11.3 -11.33 -12.32 -12.27 -11.59 -12.29 -12.26 -12.27 -12.13 -13.45 -13.37 -11.88 -12.03 -13.27 -13.18
15				75	0	22.43	17.74	30	-12.26
13				1	0	22.42	17.73	30	-12.27
	132047	1717.5	16QAM	1	74	22.56	17.87	30	-12.13
	132041	1717.5	IOQAW	36	18	21.24	16.55	30	-13.45
				75	0	21.32	16.63	30	-13.37
				1	0	22.81	18.12	30	-11.88
	132322	1745	16QAM	1	74	22.66	17.97	30	-11.24 -12.64 -12.61 -11.3 -11.33 -12.32 -12.27 -11.59 -12.29 -12.26 -12.27 -12.13 -13.45 -13.37 -11.88 -12.03 -13.27 -13.18 -11.99 -12.44
	102022	1740	IOQAIVI	36	18	21.42	16.73	30	-13.27
				75	0	21.51	16.82	30	-13.18
				1	0	22.70	18.01	30	-11.99
	132597	1772.5	16QAM	1	74	22.25	17.56	30	-12.44
	102031	1112.5	IOQAIVI	36	18	21.39	16.70	30	-11.24 -12.64 -12.61 -11.3 -11.33 -12.32 -12.27 -11.59 -12.26 -12.27 -12.13 -13.45 -13.37 -11.88 -12.03 -13.27 -13.18 -11.99
				75	0	21.41	16.72	30	-13.28

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Antenna	( <i></i> .)	LTE Band (	66_Uplink fre	quenc	y band	: 1710 to 178	0 MHz		
BW (MHz)	UL Channel	Frequency (MHz)	Modulation	RB Size	RB Offset	Conducted Average (dBm)	EIRP Average (dBm)	EIRP Limit (dBm)	Margin (dB)
	132072			1	0	23.36	18.67	30	-11.33
		1720	QPSK	1	99	23.18	18.49	30	(dB) -11.33 -11.51 -12.48 -12.39 -11.12 -11.11 -12.38 -12.34 -11.06 -11.52 -12.36 -12.22 -12.25 -12.17 -13.43 -13.41 -11.82 -11.9 -13.32 -12.09 -12.18
	132072	1720	QI OIX	50	25	22.21	17.52	30	-12.48
				100	0	22.30	17.61	30	-12.39
				1	0	23.57	18.88	Limit (dBm) (dB) (dB) (dB) (dB) (dB) (dB) (dB) (dB	-11.12
13	132322	1745	QPSK	1	99	23.58	18.89		-11.11
	102022	1740	QI SIX	50	25	22.31	17.62	30	-12.38
				100	0	22.35	17.66	30	-12.34
				1	0	23.63	18.94	30	-11.06
	132572	1770	QPSK	1	99	23.17	18.48	30	-11.52
	102012	1770	QFOR	50	25	22.33	17.64	30	-11.33 -11.51 -12.48 -12.39 -11.12 -11.11 -12.38 -12.34 -11.06 -11.52 -12.36 -12.22 -12.25 -12.17 -13.43 -13.41 -11.82 -11.9 -13.32 -13.32 -12.09 -12.18
20				100	0	22.47	17.78	30	
20				1	0	22.44	17.75	30	-12.25
	132072	1720	16QAM	1	99	22.52	17.83	30	-12.17
	132072	1720	IOQAIVI	50	25	21.26	16.57	30	-13.43
				100	0	21.28	16.59	30	-13.41
				1	0	22.87	18.18	30	-11.82
	132322	1745	16QAM	1	99	22.79	18.10	30	-11.9
	102022	1740	IOQAIVI	50	25	21.37	16.68	30	-13.32
				100	0	21.37	16.68	30	-13.32
				1	0	22.60	17.91	30	-12.09
	132572	1770	16QAM	1	99	22.51	17.82	30	-12.18
	102012	1770	IUQAIVI	50	25	21.53	16.84	30	-13.16
				100	0	21.57	16.88	30	-13.12

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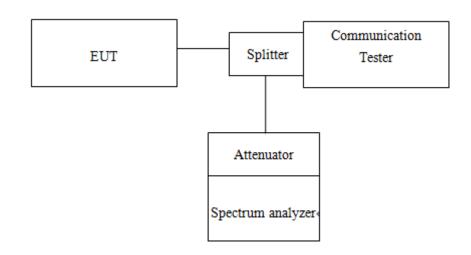
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## OCCUPIED BANDWIDTH MEASUREMENT

## 7.1. Standard Applicable

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.

## 7.2. Test Set-up



#### 7.3. Measurement Procedure

#### 99% &26dB Bandwidth with detector peak

The EUT's output RF connector was connected with a short cable to the spectrum analyzer. RBW was set to about 1% of emission BW, VBW= 3 times RBW, -26dBc display line was placed on the screen (or 26dB bandwidth), the occupied bandwidth is the delta frequency between the two points where the display line intersects the signal trace. Then set RBW to 99% bandwidth, RBW= 1%, VBW= 3 RBW, with span > 2 \* Signal BW, set % Power = 99%.

### 99% Bandwidth with detector sample

The EUT's output RF connector was connected with a short cable to the spectrum analyzer, RBW was set to about 1% ~ 5% of emission BW, VBW= 3 times RBW, -20dBc display line was placed on the screen (or 20dB bandwidth). Set RBW to 99% bandwidth, RBW= 1% ~ 5%, VBW= 3 RBW, with span > 2 \* Signal BW, set % Power = 99%.

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# 7.4. Measurement Equipment Used

• •										
Conducted Emission (measured at antenna port) Test Site										
EQUIPMENT	MFR	SERIAL	LAST	CAL DUE.						
TYPE		NUMBER	NUMBER	CAL.						
Spectrum Analyzer	Agilent	N9010A	MY51440113	2018/06/20	2019/06/19					
Radio Communication Analyer	Anritsu	MT8820C	6201107337	2018/06/15	2019/06/14					
DC Power Supply	Agilent	E3640A	MY53130054	2017/09/04	2018/09/03					
Attenuator	Marvelous	MVE2213-10	RF30	2017/12/26	2018/12/25					
Splitter	Woken	DOM35LW1A2	RF36	2017/12/26	2018/12/25					

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#### 7.5. Measurement Result

Eroa		999	% BW (MH	Hz) 26 dB BW (MHz)			łz)
Freq. (MHz)	СН	WCDMA II	HSDPA II	HSUPA II	WCDMA II	HSDPA II	HSUPA II
1852.40	9262	4.05650	4.06520	4.05760	4.60350	4.59780	4.60750
1880.00	9400	4.07560	4.07160	4.06560	4.68960	4.64640	4.65000
1907.60	9538	4.07390	4.08100	4.07370	4.63680	4.63340	4.65370

Freq. (MHz)		99%	% BW (MH	z)	26 dB BW (MHz)			
		WCDMA	HSDPA	HSUPA	WCDMA	HSDPA	HSUPA	
(141112)		IV	IV	IV	IV	IV	IV	
1712.40	1312	4.06420	4.06640	4.07000	4.66300	4.61400	4.62000	
1732.60	1413	4.09390	4.09380	4.09290	4.74200	4.70800	4.74100	
1752.60	1513	4.06330	4.06690	4.06230	4.63400	4.59900	4.62800	

Eroa		99%	% BW (MH	z)	26 dB BW (MHz)			
Freq. CH		WCDMA	HSDPA	HSUPA	WCDMA	HSDPA	HSUPA	
(IVITIZ)		V	V	V	V	V	V	
826.40	4132	4.08400	4.08550	4.08130	4.68640	4.66110	4.66250	
836.60	4183	4.06950	4.06770	4.05980	4.64930	4.62920	4.61600	
846.60	4233	4.10310	4.09130	4.10300	4.66080	4.67280	4.68990	

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L	LTE BAND 2 Channel bandwidth: 1.4MHz									
Freq.	СН	99% B\	N (MHz)	26 dB BW (MHz)						
(MHz)	5	QPSK	16QAM	QPSK	16QAM					
1850.7	18607	1.1076	1.1103	1.2610	1.2554					
1880.0	18900	1.1032	1.1075	1.2531	1.2522					
1909.3	19193	1.1186	1.1125	1.3313	1.2668					

	LTE BAND 2 Channel bandwidth: 3MHz								
Freq.	СН	99% BV	V (MHz)	26 dB BV	V (MHz)				
(MHz)	CII	QPSK	16QAM	QPSK	16QAM				
1851.5	18615	2.7331	2.7273	3.0288	3.0238				
1880.0	18900	2.7275	2.7188	3.0085	3.0154				
1908.5	19185	2.7376	2.7366	3.2554	3.0235				

LTE BAND 2 Channel bandwidth: 5MHz								
Freq. (MHz)	СН	99% B\	N (MHz)	26 dB B	W (MHz)			
(MHz)	GII	QPSK	16QAM	QPSK	16QAM			
1852.5	18625	4.5398	4.5240	5.1854	4.9436			
1880.0	18900	4.5202	4.5114	4.9962	4.9473			
1907.5	19175	4.5374	4.5231	5.6242	4.9847			

	LTE BAND 2 Channel bandwidth: 10MHz								
Freq.	СН	99% BV	V (MHz)	26 dB BV	V (MHz)				
(MHz)	GH	QPSK	16QAM	QPSK	16QAM				
1855.0	18650	9.0790	9.0943	10.493	10.551				
1880.0	18900	9.0585	9.0583	10.481	10.553				
1905.0	19150	9.0401	9.0293	10.490	10.455				

L	LTE BAND 2 Channel bandwidth: 15MHz								
Freq.	СН	99% B\	N (MHz)	26 dB B	W (MHz)				
(MHz)	CH	QPSK	16QAM	QPSK	16QAM				
1857.5	18675	13.550	13.537	15.915	15.678				
1880.0	18900	13.548	13.547	15.867	15.853				
1902.5	19125	13.484	13.502	15.631	15.442				

LTE BAND 2 Channel bandwidth: 20MHz							
Freq.	СН	99% BV	V (MHz)	26 dB BW (MHz)			
(MHz)	GH	QPSK	16QAM	QPSK	16QAM		
1860.0	18700	18.055	18.019	20.195	20.116		
1880.0	18900	17.966	18.013	20.064	20.012		
1900.0	19100	17.963	17.966	19.981	20.076		

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	LTE BAND 4 Channel bandwidth: 1.4MHz								
Freq.	СН	99% BV	V (MHz)	26 dB B	W (MHz)				
(MHz)	Gii	QPSK	16QAM	QPSK	16QAM				
1710.7	19957	1.1146	1.1067	1.2683	1.2549				
1732.5	20175	1.1096	1.1090	1.2575	1.2618				
1754.3	20393	1.1094	1.1071	1.2511	1.2616				

	LTE BAND 4 Channel bandwidth: 3MHz								
Freq.	СН	99% BV	99% BW (MHz)		26 dB BW (MHz)				
(MHz)	CII	QPSK	16QAM	QPSK	16QAM				
1711.5	19965	2.7339	2.7277	3.0167	3.0106				
1732.5	20175	2.7246	2.7173	3.0172	3.0120				
1753.5	20385	2.7398	2.7268	2.9981	3.0195				

	LTE BAND 4 Channel bandwidth: 5MHz								
Freq.	СН	99% BV	V (MHz)	26 dB B	W (MHz)				
(MHz)	CH	QPSK	16QAM	QPSK	16QAM				
1712.5	19957	4.5262	4.5163	4.9972	4.9693				
1732.5	20175	4.5175	4.5141	5.0450	4.9907				
1752.5	20375	4.5130	4.5173	5.0592	4.9703				

LTE BAND 4 Channel bandwidth: 10MHz							
Freq.	СН	99% BV	/ (MHz)	26 dB BV	V (MHz)		
(MHz)	GH	QPSK	16QAM	QPSK	16QAM		
1715.0	20000	9.0392	9.0610	10.464	10.362		
1732.5	20175	9.0772	9.1064	10.585	10.583		
1750.0	20350	9.0724	9.1031	10.490	10.476		

	LTE BAND 4 Channel bandwidth: 15MHz								
Freq.	СН	99% BV	V (MHz)	26 dB B	W (MHz)				
(MHz)	CH	QPSK	16QAM	QPSK	16QAM				
1717.5	20025	13.510	13.494	15.535	15.334				
1732.5	20175	13.573	13.568	15.741	15.778				
1747.5	20325	13.595	13.568	16.069	15.719				

	LTE BAND 4 Channel bandwidth: 20MHz							
Freq.	СН	99% BV	V (MHz)	26 dB BV	V (MHz)			
(MHz)	GH	QPSK	16QAM	QPSK	16QAM			
1720.0	20050	17.909	17.899	19.811	19.915			
1732.5	20175	18.030	18.026	20.242	20.106			
1745.0	20300	18.110	18.105	20.179	20.166			

L	LTE BAND 5 Channel bandwidth: 1.4MHz								
Freq. (MHz)	СН	99% B\	N (MHz)	26 dB B	W (MHz)				
(MHz)	G	QPSK	16QAM	QPSK	16QAM				
824.7	20407	1.1036	1.1039	1.2600	1.2579				
836.5	20525	1.0995	1.1081	1.2519	1.2606				
848.3	20643	1.1069	1.1108	1.2580	1.2610				

LTE BAND 5 Channel bandwidth: 3MHz								
Freq.	СН	99% BV	V (MHz)	26 dB BV	V (MHz)			
(MHz)	CH	QPSK	QPSK 16QAM		16QAM			
825.5	20415	2.7234	2.7246	3.0000	3.0133			
836.5	20525	2.7192	2.7204	3.0162	3.0206			
847.5	20635	2.7238	2.7284	3.0026	3.0330			

	LTE BAND 5 Channel bandwidth: 5MHz							
Freq.	СН	99% B\	N (MHz)	26 dB B	W (MHz)			
(MHz)	CH	QPSK	16QAM	QPSK	16QAM			
826.5	20425	4.5406	4.5121	4.9920	4.9469			
836.5	20525	4.5312	4.5183	4.9850	4.9539			
846.5	20625	4.5283	4.5222	5.0195	4.9648			

LTE BAND 5 Channel bandwidth: 10MHz								
Freq.	СН	99% BV	V (MHz)	26 dB BV	V (MHz)			
(MHz)	CH	QPSK	16QAM	QPSK	16QAM			
829.0	20450	9.0741	9.0716	10.458	10.535			
836.5	20525	9.0941	9.0751	10.585	10.574			
844.0	20600	9.0443	9.0539	10.509	10.458			

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	LTE BAND 7 Channel bandwidth: 5MHz								
Freq.	СН	99% BV	V (MHz)	26 dB B	W (MHz)				
(MHz)	CIT	QPSK	16QAM	QPSK	16QAM				
2502.5	20775	4.5285	4.5047	5.0686	4.9543				
2535.0	21100	4.5301	4.5225	5.0180	4.9660				
2567.5	21425	4.5331	4.5252	5.0839	5.0010				

LTE BAND 7 Channel bandwidth: 10MHz								
Freq.	СН	99% BV	V (MHz)	26 dB BV	V (MHz)			
(MHz)	GH	QPSK	16QAM	QPSK	16QAM			
2505.0	20800	9.0742	9.0981	10.607	10.587			
2535.0	21100	9.1090	9.0568	10.523	10.652			
2565.0	21400	9.0836	9.0836	10.520	10.512			

LTE BAND 7 Channel bandwidth: 15MHz							
Freq.	СН	99% BV	V (MHz)	26 dB B	W (MHz)		
(MHz)	CH	QPSK	16QAM	QPSK	16QAM		
2507.5	20825	13.577	13.572	15.938	15.888		
2535.0	21100	13.565	13.562	15.674	15.805		
2562.5	21375	13.560	13.583	16.029	15.895		

LTE BAND 7 Channel bandwidth: 20MHz								
Freq.	СН	99% BV	V (MHz)	26 dB BV	V (MHz)			
(MHz)	CH	QPSK	16QAM	QPSK	16QAM			
2510.0	20850	18.035	18.120	20.471	20.499			
2535.0	21100	17.992	18.030	20.187	20.454			
2560.0	21350	18.064	18.052	20.193	20.194			

LTE BAND 12 Channel bandwidth: 1.4MHz								
Freq. CH		99% B\	N (MHz)	26 dB B	W (MHz)			
(MHz)	G	QPSK	16QAM	QPSK	16QAM			
699.7	23017	1.1094	1.1087	1.2539	1.2674			
707.5	23095	1.1079	1.1098	1.2604	1.2612			
715.3	23173	1.1090	1.1104	1.2671	1.2648			

LTE BAND 12 Channel bandwidth: 3MHz								
Freq.	СН	99% BV	99% BW (MHz)		26 dB BW (MHz)			
(MHz)	CH	QPSK	16QAM	QPSK	16QAM			
700.5	23025	2.7290	2.7198	3.0115	3.0159			
707.5	23095	2.7226	2.7277	3.0184	3.0186			
714.5	23165	2.7275	2.7269	3.0881	3.0951			

L	LTE BAND 12 Channel bandwidth: 5MHz								
Freq.	СН	99% B\	99% BW (MHz)		26 dB BW (MHz)				
(MHz)	CH	QPSK	16QAM	QPSK	16QAM				
701.5	23035	4.5154	4.4901	5.0206	4.9506				
707.5	23095	4.5533	4.5417	5.0244	4.9972				
713.5	23155	4.5132	4.5040	5.0114	4.9277				

LTE BAND 12 Channel bandwidth: 10MHz								
Freq.	СН	99% BV	V (MHz)	26 dB BV	V (MHz)			
(MHz)	CH	QPSK	16QAM	QPSK	16QAM			
704.0	23060	9.0616	9.0522	10.415	10.382			
707.5	23095	9.1718	9.1585	10.690	10.688			
711.0	23130	9.0305	9.0196	10.424	10.362			

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L	LTE BAND 12 Channel bandwidth: 1.4MHz								
Freq.	СН	99% B\	N (MHz)	26 dB B	W (MHz)				
(MHz)	G	QPSK	QPSK 16QAM		16QAM				
699.7	23017	1.1094	1.1087	1.2539	1.2674				
707.5	23095	1.1079	1.1098	1.2604	1.2612				
715.3	23173	1.1090	1.1104	1.2671	1.2648				

LTE BAND 12 Channel bandwidth: 3MHz							
Freq.	Freq. CH		99% BW (MHz)		26 dB BW (MHz)		
(MHz)	СП	QPSK	16QAM	QPSK	16QAM		
700.5	23025	2.7290	2.7198	3.0115	3.0159		
707.5	23095	2.7226	2.7277	3.0184	3.0186		
714.5	23165	2.7275	2.7269	3.0881	3.0951		

ľ	LTE BAND 12 Channel bandwidth: 5MHz							
	Freq. CH	99% BW (MHz)		26 dB BW (MHz)				
	(MHz)	GH	QPSK	16QAM	QPSK	16QAM		
ĺ	701.5	23035	4.5154	4.4901	5.0206	4.9506		
ĺ	707.5	23095	4.5533	4.5417	5.0244	4.9972		
	713.5	23155	4.5132	4.5040	5.0114	4.9277		

LTE BAND 12 Channel bandwidth: 10MHz							
Freq.	СН	99% BW (MHz)		26 dB BW (MHz)			
(MHz)	CH	QPSK	16QAM	QPSK	16QAM		
704.0	23060	9.0616	9.0522	10.415	10.382		
707.5	23095	9.1718	9.1585	10.690	10.688		
711.0	23130	9.0305	9.0196	10.424	10.362		

	LTE BAND 13 Channel bandwidth: 5MHz								
Ī	Freq. CH	99% BW (MHz)		26 dB BW (MHz)					
	(MHz)	СП	QPSK	16QAM	QPSK	16QAM			
	779.5	23205	4.5321	4.5360	5.6209	6.2759			
	782.0	23230	4.5144	4.5176	5.1118	4.9843			
Ī	784.5	23255	4.5478	4.5224	5.1096	4.9827			

LTE BAND 13 Channel bandwidth: 10MHz							
Freq. (MHz)	СН	99% BW (MHz)		26 dB BW (MHz)			
		QPSK	16QAM	QPSK	16QAM		
782.0	23230	9.015	9.019	10.417	10.460		

LTE BAND 14 Channel bandwidth: 5MHz							
Freq.	СН	99% BW (MHz)		26 dB BW (MHz)			
(MHz)	CH	QPSK	16QAM	QPSK	16QAM		
790.5	23305	4.4960	4.5148	4.9440	5.1830		
793.0	23330	4.5061	4.5453	4.9510	4.9410		
795.5	23355	4.5269	4.5260	4.9540	4.9830		

LTE BAND 14 Channel bandwidth: 10MHz							
Freq. (MHz)	CI	99% BW (MHz)		26 dB BW (MHz)			
	QPSK	16QAM	QPSK	16QAM			
793.0	23330	9.061	9.063	10.460	10.390		

LTE BAND 17 Channel bandwidth: 5MHz							
Freq.		99% BW (MHz)		26 dB BW (MHz)			
(MHz)	CH	QPSK	16QAM	QPSK	16QAM		
706.5	23755	4.5408	4.5285	5.0120	4.9650		
710.0	23790	4.5257	4.5194	4.9750	4.9520		
713.5	23825	4.5201	4.4996	5.0000	4.9310		

LTE BAND 17 Channel bandwidth: 10MHz							
Freq. CH	99% BW (MHz)		26 dB BW (MHz)				
(MHz)	CH	QPSK	16QAM	QPSK	16QAM		
709.0	23780	9.1189	9.1272	10.520	10.490		
710.0	23790	9.0786	9.0672	10.400	10.470		
711.0	23800	9.0438	9.0229	10.470	10.360		

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LTE BAND 25 Channel bandwidth: 1.4MHz								
Freq.	СН	99% B\	N (MHz)	26 dB B	W (MHz)			
(MHz)	С	QPSK	16QAM	QPSK	16QAM			
1850.7	26047	1.1095	1.1094	1.259	1.260			
1882.5	26365	1.1100	1.1023	1.264	1.255			
1914.3	26683	1.1135	1.1079	1.253	1.258			

LTE BAND 25 Channel bandwidth: 3MHz								
Freq.	СН	99% BV	V (MHz)	26 dB BV	V (MHz)			
(MHz)	СП	QPSK	16QAM	QPSK	16QAM			
1851.5	26055	2.7163	2.7188	3.004	3.020			
1882.5	26365	2.7255	2.7292	3.015	3.009			
1913.5	26675	2.7169	2.7223	3.018	3.004			

LTE BAND 25 Channel bandwidth: 5MHz								
Freq.	СН	99% B\	N (MHz)	26 dB B	W (MHz)			
(MHz)	СП	QPSK	16QAM	QPSK	16QAM			
1852.5	26065	4.5305	4.5181	4.968	4.936			
1882.5	26365	4.5165	4.5200	4.997	4.988			
1912.5	26665	4.5431	4.5160	5.028	4.972			

	LTE BAND 25 Channel bandwidth: 10MHz							
Freq.	Freq. CH		99% BW (MHz)		26 dB BW (MHz)			
(MHz)	СП	QPSK	16QAM	QPSK	16QAM			
1855.0	26090	9.0939	9.0444	10.580	10.400			
1882.5	26365	9.0506	9.0379	10.540	10.470			
1910.0	26640	9.0947	9.1099	10.580	10.550			

L	LTE BAND 25 Channel bandwidth: 15MHz								
Freq.	СН	99% B\	W (MHz)	26 dB B	W (MHz)				
(MHz)	СП	QPSK	16QAM	QPSK	16QAM				
1857.5	26115	13.508	13.524	15.57	15.55				
1882.5	26365	13.500	13.512	15.55	15.35				
1907.5	26615	13.564	13.535	15.87	15.73				

LTE BAND 25 Channel bandwidth: 20MHz									
Freq.	СН	99% BV	V (MHz)	26 dB BV	V (MHz)				
(MHz)	CH	QPSK	16QAM	QPSK	16QAM				
1860.0	26140	17.9970	17.9730	19.910	19.940				
1882.5	26365	17.9680	17.9630	20.110	20.200				
1905.0	26590	18.0340	18.0170	20.280	21.220				

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LTE BAND 26 Channel bandwidth: 1.4MHz								
Freq.	СН	99% B\	N (MHz)	26 dB B	W (MHz)			
(MHz)	G	QPSK	16QAM	QPSK	16QAM			
814.7	26697	1.1053	1.1083	1.2650	1.2640			
831.5	26865	1.1033	1.1033	1.2550	1.2550			
848.3	27033	1.1113	1.1070	1.2610	1.2610			

LTE BAND 26 Channel bandwidth: 3MHz							
Freq.	СН	99% BV	V (MHz)	26 dB B	W (MHz)		
(MHz)	CH	QPSK	16QAM	QPSK	16QAM		
815.5	26705	2.7198	2.7172	3.0160	3.0100		
831.5	26865	2.7220	2.7218	2.9990	3.0160		
847.5	27025	2.7326	2.7251	3.0170	3.0060		

LTE BAND 26 Channel bandwidth: 5MHz							
Freq.	СН	99% B\	N (MHz)	26 dB B	W (MHz)		
(MHz)	CIT	QPSK	16QAM	QPSK	16QAM		
816.5	26715	4.5302	4.5150	4.9690	4.9410		
831.5	26865	4.5066	4.5147	4.9820	4.9570		
846.5	27015	4.5180	4.5139	4.9640	4.9720		

LTE BAND 26 Channel bandwidth: 10MHz							
Freq.	СН	99% BV	V (MHz)	26 dB B	W (MHz)		
(MHz)	CII	QPSK	16QAM	QPSK	16QAM		
820.0	26800	9.0730	9.0747	10.560	10.520		
831.5	26865	9.0580	9.0733	10.520	10.500		
844.0	26990	9.0615	9.0463	10.490	10.440		

LTE BAND 26 Channel bandwidth: 15MHz								
Freq.	СН	99% B\	N (MHz)	26 dB B	W (MHz)			
(MHz)	CII	QPSK	16QAM	QPSK	16QAM			
822.5	26825	13.575	13.575	16.010	15.650			
831.5	26865	13.528	13.553	15.530	15.610			
841.5	26965	13.529	13.547	16.160	15.740			

LTE BAND 26 for part 90S Channel bandwidth: 1.4MHz								
Freq.	СН	99% B\	N (MHz)	26 dB B	W (MHz)			
(MHz)	CH	QPSK	16QAM	QPSK	16QAM			
814.7	26697	1.1075	1.1068	1.2600	1.2620			
819.0	26740	1.1088	1.1051	1.2590	1.2610			
823.3	26783	1.1039	1.1140	1.2580	1.2590			

LTE BAND 26 for part 90S Channel bandwidth: 3MHz								
Freq.	СН	99% B\	V (MHz)	26 dB B	W (MHz)			
(MHz)	CH	QPSK	16QAM	QPSK	16QAM			
815.5	26705	2.7197	2.7157	3.0060	3.0110			
819.0	26740	2.7148	2.7196	3.0120	3.0160			
822.5	26775	2.7227	2.7163	3.0040	3.0110			

LTE BAND 26 for part 90S Channel bandwidth: 5MHz								
Freq.	СН	99% B\	N (MHz)	26 dB B	W (MHz)			
(MHz)	CH	QPSK	16QAM	QPSK	16QAM			
816.5	26715	4.5301	4.5100	4.9380	4.9880			
819.0	26740	4.5144	4.5194	4.9420	4.9320			
821.5	26765	4.5234	4.5223	4.9780	4.9710			

LTE BAND 26 for part 90S Channel bandwidth: 10MHz						
Freq.	СН	99% BW (MHz)		26 dB BW (MHz)		
(MHz)	СП	QPSK	16QAM	QPSK	16QAM	
819.0	26740	9.0750	9.1125	10.570	10.570	

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LTE BAND 30 Channel bandwidth: 5MHz								
Freq.	СН	99% B\	N (MHz)	26 dB B	W (MHz)			
(MHz)	СП	QPSK	16QAM	QPSK	16QAM			
2307.5	27685	4.5252	4.5180	4.9570	4.9540			
2310.0	27710	4.5086	4.5051	4.9380	4.9850			
2312.5	27735	4.5243	4.5294	4.9490	4.9820			

LTE BAND 30 Channel bandwidth: 10MHz						
Freq.	СН	99% BV	V (MHz)	26 dB B	W (MHz)	
(MHz)	СП	QPSK	16QAM	16QAM	QPSK	
2310.0	27710	9.0498	9.0462	10.5000	10.4800	

LTE BAND 38 Channel bandwidth: 5MHz							
Freq.	СН	99% BV	V (MHz)	26 dB B\	W (MHz)		
(MHz)	СП	QPSK	16QAM	QPSK	16QAM		
2572.5	37775	4.5371	4.5399	4.9860	5.1330		
2595.0	38000	4.5263	4.5012	5.3770	4.9520		
2617.5	38225	4.5308	4.5306	5.0070	4.9270		

LTE BAND 38 Channel bandwidth: 10MHz							
Freq.	Freq. CH 99% BW (MHz)		26 dB BV	V (MHz)			
(MHz)	СП	QPSK	16QAM	QPSK	16QAM		
2575.0	37800	9.0677	9.0415	10.340	10.620		
2595.0	38000	9.0613	9.0455	10.480	10.460		
2615.0	38200	9.0735	9.0445	10.500	10.520		

LTE BAND 38 Channel bandwidth: 15MHz							
Freq.	СН	99% BV	V (MHz)	26 dB B	W (MHz)		
(MHz)	CH	QPSK	16QAM	QPSK	16QAM		
2577.5	37825	13.552	13.555	15.890	15.770		
2595.0	38000	13.543	13.551	15.830	15.770		
2612.5	38175	13.563	13.555	16.230	15.710		

LTE BAND 38 Channel bandwidth: 20MHz								
Freq.	q. CH	99% BW (MHz)		26 dB BW (MHz)				
(MHz)	CH	QPSK	16QAM	QPSK	16QAM			
2580.0	37850	18.022	18.026	19.980	20.490			
2595.0	38000	17.996	18.035	20.030	20.050			
2610.0	38150	18.055	18.030	20.760	22.820			

LTE BAND 41 Channel bandwidth: 5MHz								
Freq.	СН	99% B\	N (MHz)	26 dB B	W (MHz)			
(MHz)	Сп	QPSK	16QAM	QPSK	16QAM			
2498.5	39675	4.5124	4.5110	5.1200	4.9690			
2593.0	40620	4.5203	4.5171	5.0290	5.0920			
2687.5	41565	4.5151	4.5089	5.0590	5.0610			

LTE BAND 41 Channel bandwidth: 10MHz								
Freq.	СН	99% BV	V (MHz)	26 dB B	W (MHz)			
(MHz)	СП	QPSK	16QAM	QPSK	16QAM			
2501.0	39700	9.0672	9.0629	10.420	10.480			
2593.0	40620	9.0732	9.0778	10.470	10.750			
2685.0	41540	9.1163	9.0408	10.670	10.400			

LTE BAND 41 Channel bandwidth: 15MHz							
Freq.	СН	99% B\	N (MHz)	26 dB B	W (MHz)		
(MHz)	CF	QPSK	16QAM	QPSK	16QAM		
2503.5	39725	13.536	13.535	15.840	16.000		
2593.0	40620	13.531	13.578	15.980	15.680		
2682.5	41515	13.527	13.563	15.680	15.640		

LTE BAND 41 Channel bandwidth: 20MHz							
Freq.	СН	99% BW (MHz)		26 dB BW (MHz)			
(MHz)	СП	QPSK	16QAM	QPSK	16QAM		
2506.0	39750	18.043	18.006	20.560	21.060		
2593.0	40620	18.019	18.051	20.110	20.130		
2680.0	41490	18.012	18.032	20.570	20.210		

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LTE BAND 66 Channel bandwidth: 1.4MHz							
Freq.	СН	99% BW (MHz)		26 dB BW (MHz)			
(MHz)	СП	QPSK	16QAM	QPSK	16QAM		
1710.7	131979	1.1087	1.1109	1.2690	1.2620		
1745.0	132322	1.1086	1.1118	1.2520	1.2640		
1779.3	132665	1.1126	1.1091	1.2590	1.2610		

LTE BAND 66 Channel bandwidth: 3MHz							
Freq.	СН	99% BW (MHz)		26 dB BW (MHz)			
(MHz)	CIT	QPSK	16QAM	QPSK	16QAM		
1711.5	131987	2.7261	2.7175	3.0170	3.0240		
1745.0	132322	2.7217	2.7277	3.0070	3.0180		
1778.5	132657	2.7229	2.7125	3.0140	3.0330		

LTE BAND 66 Channel bandwidth: 5MHz							
Freq. (MHz)	СН	99% BW (MHz)		26 dB BW (MHz)			
(MHz)	СП	QPSK	16QAM	QPSK	16QAM		
1712.5	131997	4.5343	4.5265	4.9650	4.9480		
1745.0	132322	4.5201	4.5196	4.9550	4.9540		
1777.5	132647	4.5099	4.5129	4.9730	5.0900		

LTE BAND 66 Channel bandwidth: 10MHz							
Freq.	СН	99% BW (MHz)		26 dB BW (MHz)			
(MHz)	СП	QPSK	16QAM	QPSK	16QAM		
1715.0	132022	9.0614	9.0811	10.5200	10.5000		
1745.0	132322	9.1116	9.0998	10.5700	10.4900		
1775.0	132622	9.0878	9.0854	10.5900	10.6200		

LTE BAND 66 Channel bandwidth: 15MHz							
Freq.	СН	99% BW (MHz)		26 dB BW (MHz)			
(MHz)	CII	QPSK	16QAM	QPSK	16QAM		
1717.5	132047	13.5210	13.5130	15.3800	15.3600		
1745.0	132322	13.5840	13.5490	16.1800	15.7000		
1772.5	132597	13.5990	13.5690	16.1300	15.6600		

LTE BAND 66 Channel bandwidth: 20MHz							
Freq.	СН	99% BW (MHz)		26 dB BW (MHz)			
(MHz)	CII	QPSK	16QAM	QPSK	16QAM		
1720.0	132072	17.9510	17.8900	19.9300	19.9100		
1745.0	132322	18.0590	18.0830	20.4400	20.3500		
1770.0	132572	18.0270	18.0280	20.1100	19.9600		

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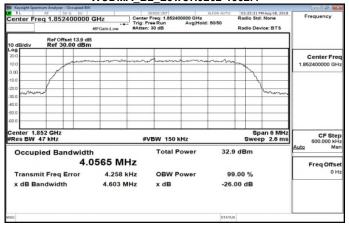
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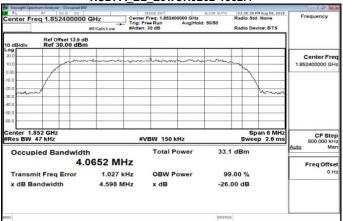


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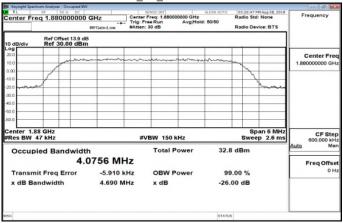
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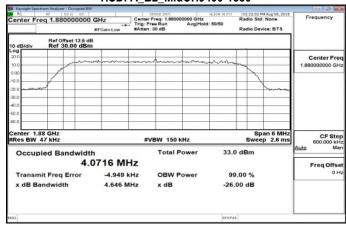
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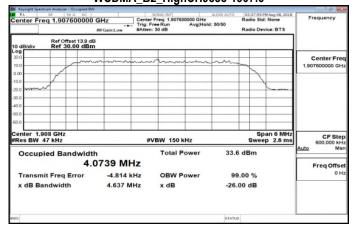
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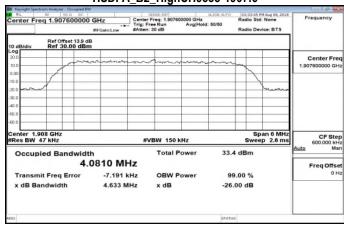
### HSDPA B2 MidCH9400-1880



# WCDMA\_B2\_HighCH9538-1907.6



# HSDPA\_B2\_HighCH9538-1907.6



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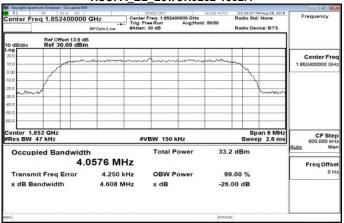
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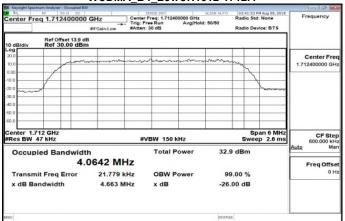


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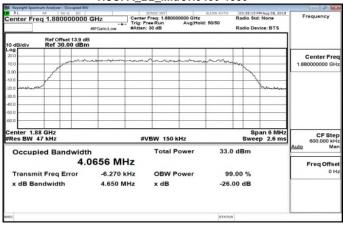
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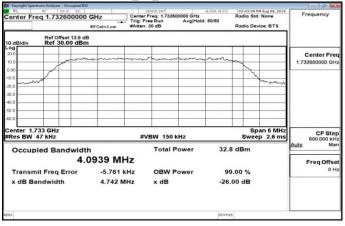
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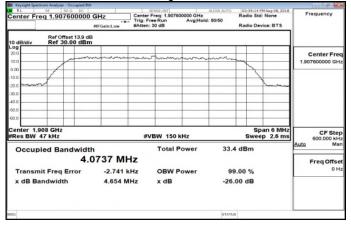
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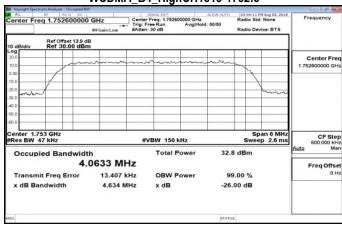
## WCDMA B4 MidCH1413-1732.6



## HSUPA\_B2\_HighCH9538-1907.6



# WCDMA\_B4\_HighCH1513-1752.6



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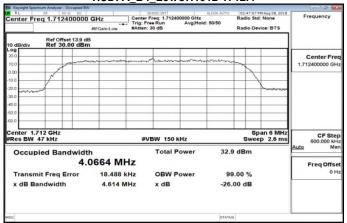
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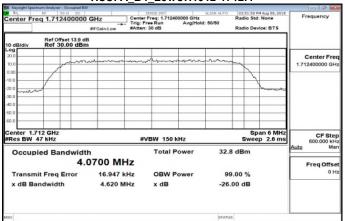


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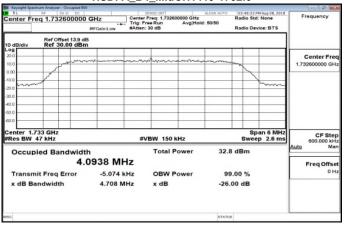
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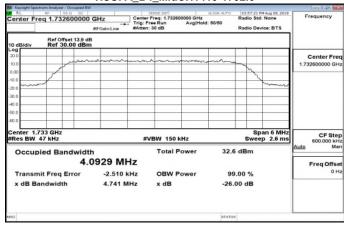
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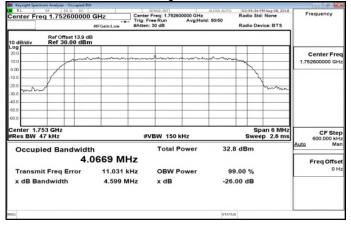
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## HSUPA B4 MidCH1413-1732.6



## HSDPA\_B4\_HighCH1513-1752.6



## HSUPA\_B4\_HighCH1513-1752.6



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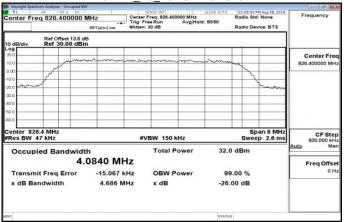
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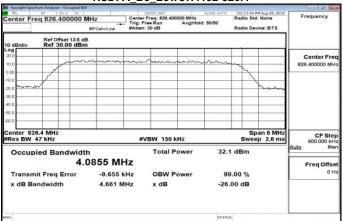


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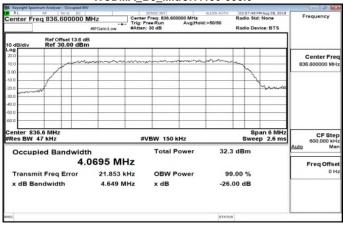
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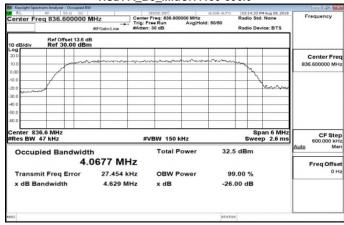
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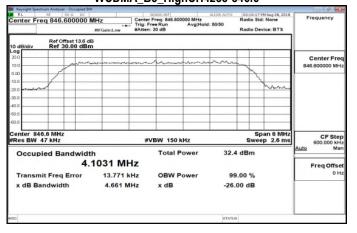
### WCDMA B5 MidCH4183-836.6



## HSDPA B5 MidCH4183-836.6



# WCDMA\_B5\_HighCH4233-846.6



# HSDPA\_B5\_HighCH4233-846.6



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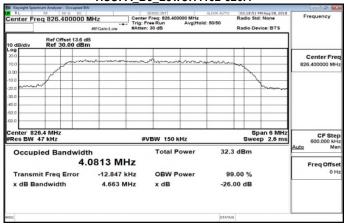
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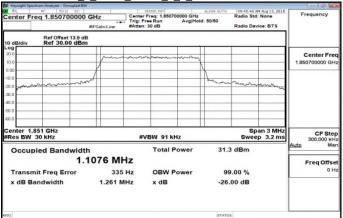
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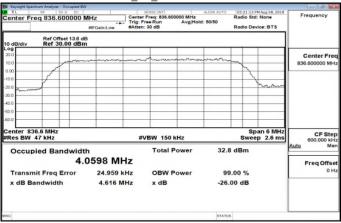
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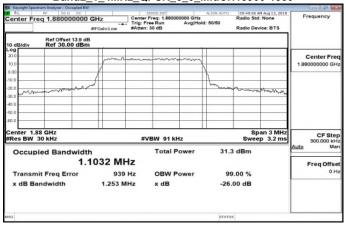
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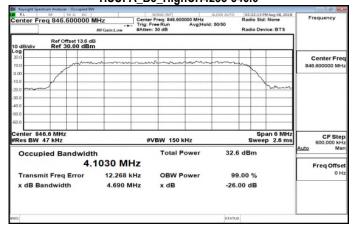
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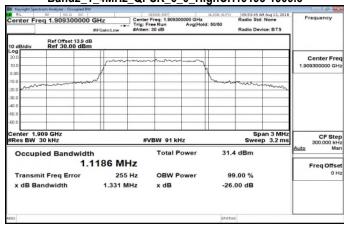
### Band2 1 4MHz QPSK 6 0 MidCH18900-1880



# HSUPA\_B5\_HighCH4233-846.6



Band2\_1\_4MHz\_QPSK\_6\_0\_HighCH19193-1909.3



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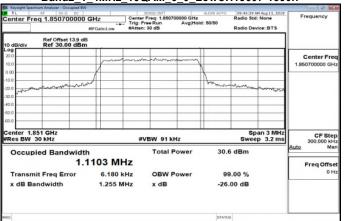
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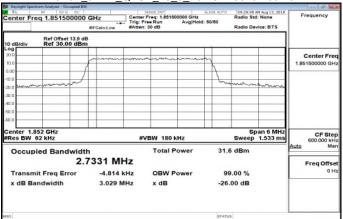


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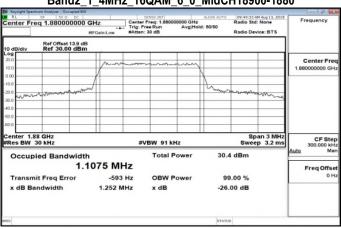
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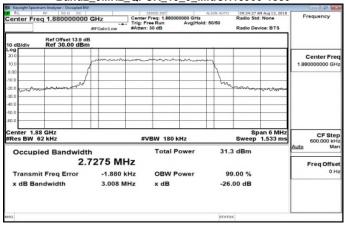
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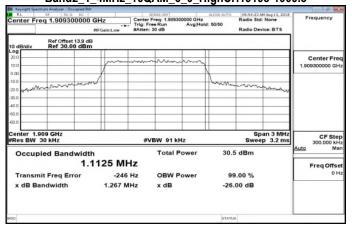
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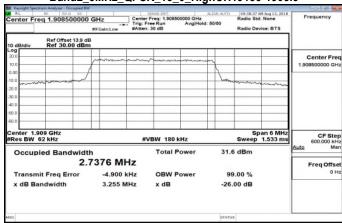
### Band2 3MHz QPSK 15 0 MidCH18900-1880



# Band2\_1\_4MHz\_16QAM\_6\_0\_HighCH19193-1909.3



# Band2\_3MHz\_QPSK\_15\_0\_HighCH19185-1908.5



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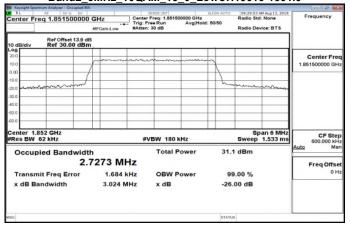
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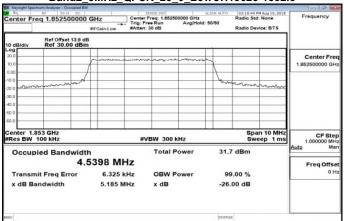


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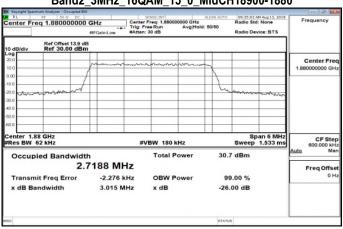
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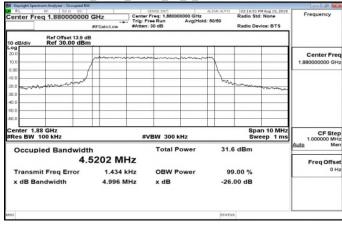
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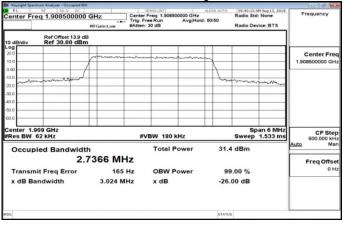
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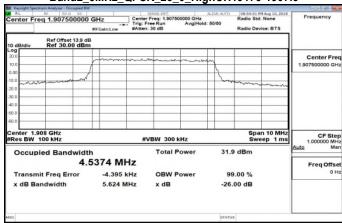
# Band2 5MHz QPSK 25 0 MidCH18900-1880



# Band2\_3MHz\_16QAM\_15\_0\_HighCH19185-1908.5



# Band2\_5MHz\_QPSK\_25\_0\_HighCH19175-1907.5



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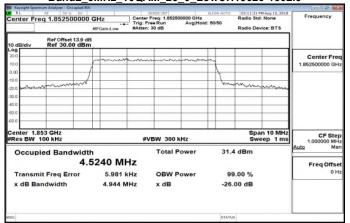
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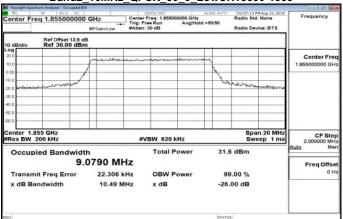


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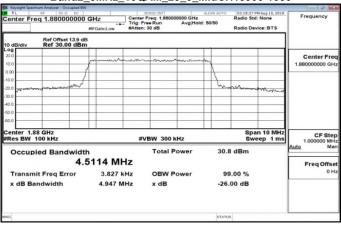
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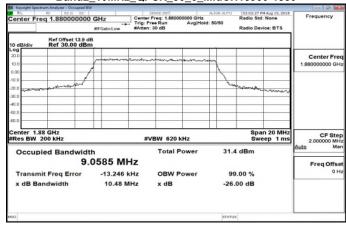
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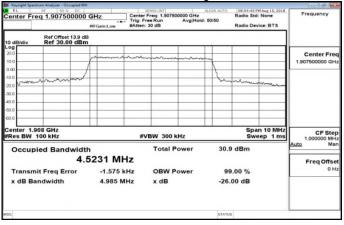
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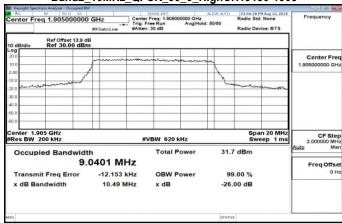
### Band2 10MHz QPSK 50 0 MidCH18900-1880



# Band2\_5MHz\_16QAM\_25\_0\_HighCH19175-1907.5



## Band2\_10MHz\_QPSK\_50\_0\_HighCH19150-1905



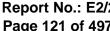
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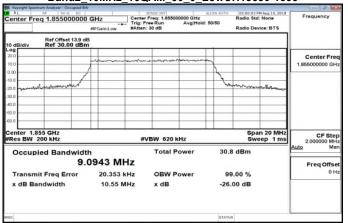
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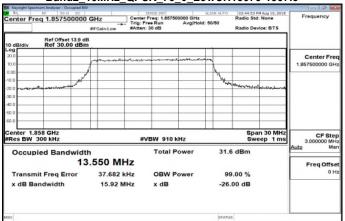
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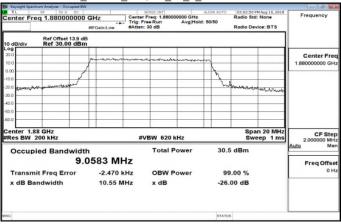
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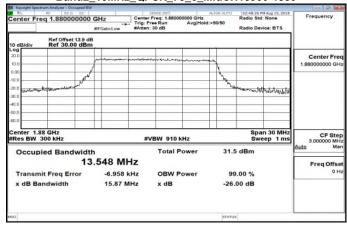
### Band2 15MHz QPSK 75 0 LowCH18675-1857.5



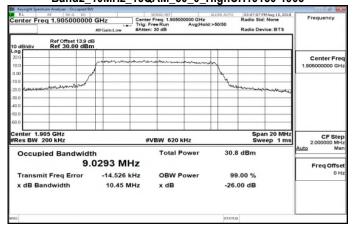
# Band2 10MHz 16QAM 50 0 MidCH18900-1880



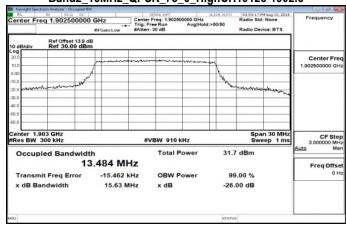
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# Band2\_10MHz\_16QAM\_50\_0\_HighCH19150-1905



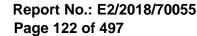
# Band2\_15MHz\_QPSK\_75\_0\_HighCH19125-1902.5



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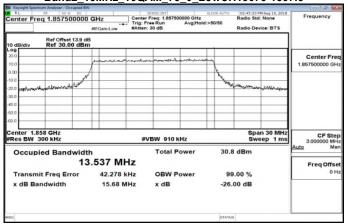
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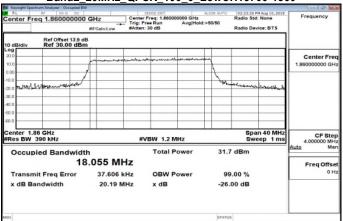




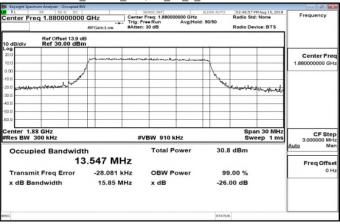
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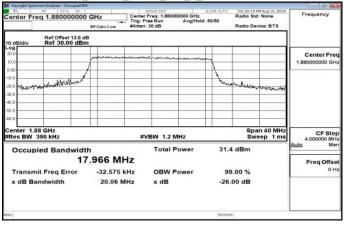
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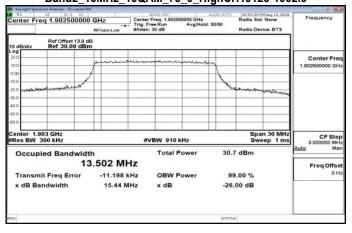
# Band2 15MHz 16QAM 75 0 MidCH18900-1880



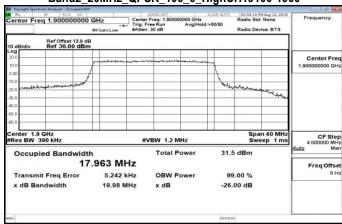
# Band2 20MHz QPSK 100 0 MidCH18900-1880



# Band2\_15MHz\_16QAM\_75\_0\_HighCH19125-1902.5



# Band2\_20MHz\_QPSK\_100\_0\_HighCH19100-1900



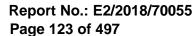
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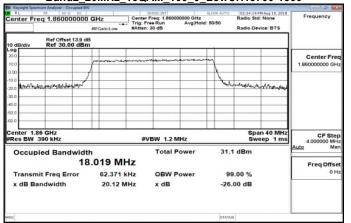
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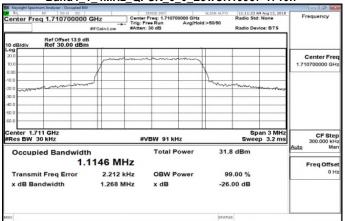
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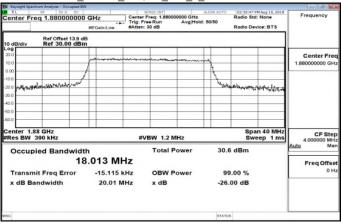
Band2 20MHz 16QAM 100 0 LowCH18700-1860



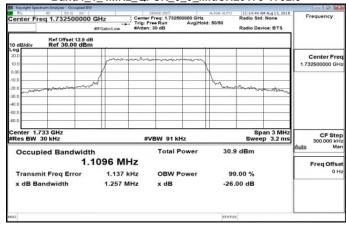
# Band4\_1\_4MHz\_QPSK\_6\_0\_LowCH19957-1710.7



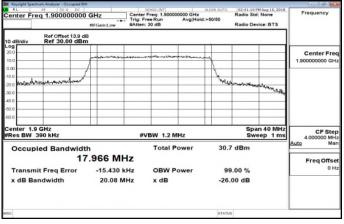
# Band2 20MHz 16QAM 100 0 MidCH18900-1880



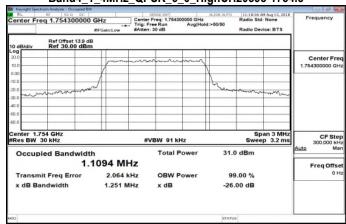
### Band4 1 4MHz QPSK 6 0 MidCH20175-1732.5



# Band2\_20MHz\_16QAM\_100\_0\_HighCH19100-1900



# Band4\_1\_4MHz\_QPSK\_6\_0\_HighCH20393-1754.3



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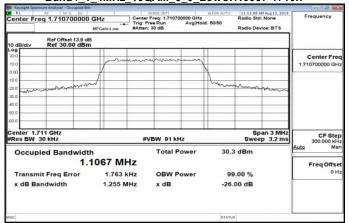
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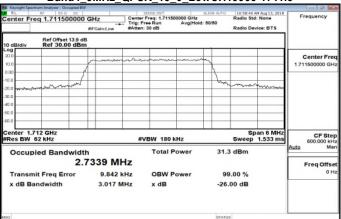


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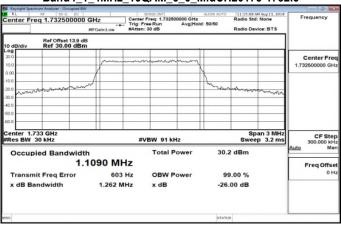
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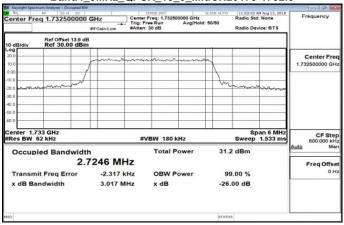
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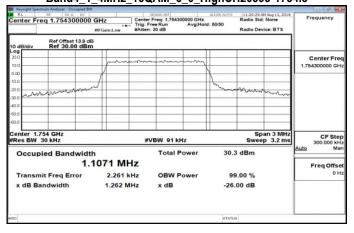
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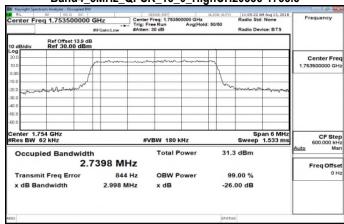
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# Band4\_1\_4MHz\_16QAM\_6\_0\_HighCH20393-1754.3



# Band4\_3MHz\_QPSK\_15\_0\_HighCH20385-1753.5



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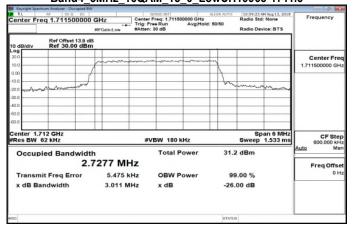
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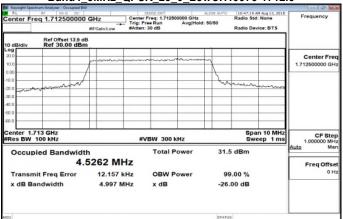


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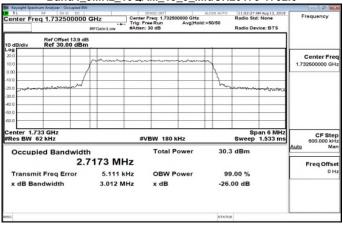
Band4 3MHz 16QAM 15 0 LowCH19965-1711.5



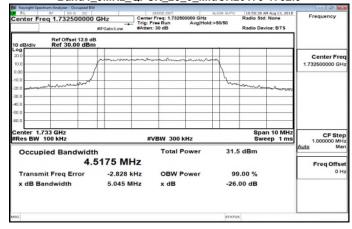
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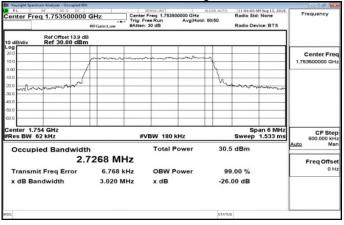
### Band4 3MHz 16QAM 15 0 MidCH20175-1732.5



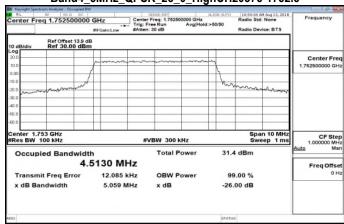
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# Band4\_3MHz\_16QAM\_15\_0\_HighCH20385-1753.5



# Band4\_5MHz\_QPSK\_25\_0\_HighCH20375-1752.5



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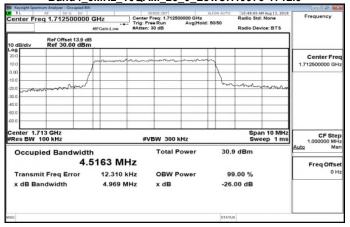
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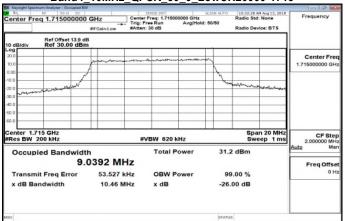


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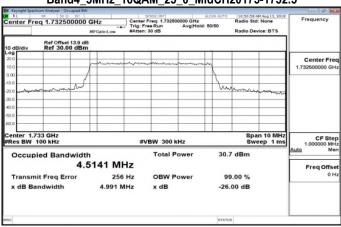
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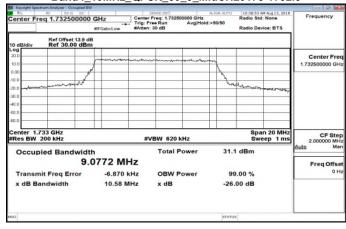
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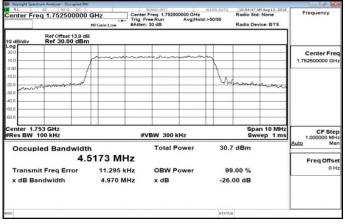
### Band4 5MHz 16QAM 25 0 MidCH20175-1732.5



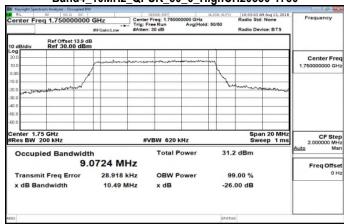
### Band4 10MHz QPSK 50 0 MidCH20175-1732.5



# Band4\_5MHz\_16QAM\_25\_0\_HighCH20375-1752.5



## Band4\_10MHz\_QPSK\_50\_0\_HighCH20350-1750



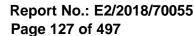
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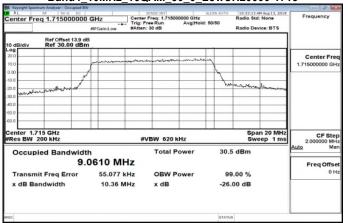
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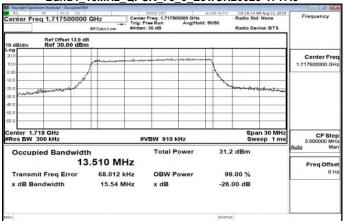




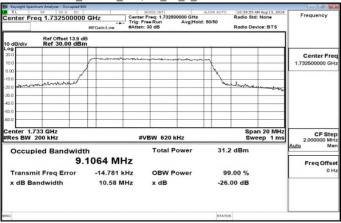
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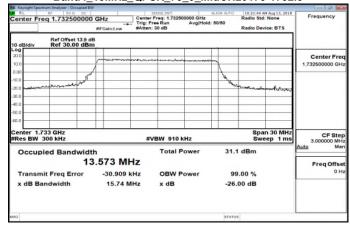
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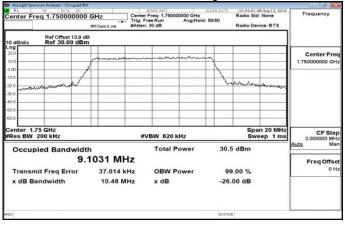
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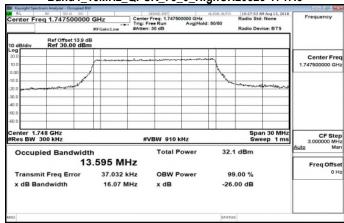
### Band4 15MHz QPSK 75 0 MidCH20175-1732.5



## Band4\_10MHz\_16QAM\_50\_0\_HighCH20350-1750



# Band4\_15MHz\_QPSK\_75\_0\_HighCH20325-1747.5



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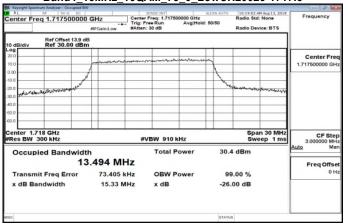
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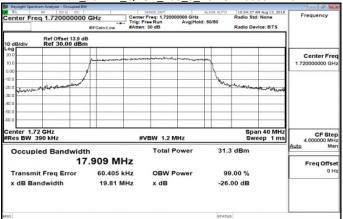


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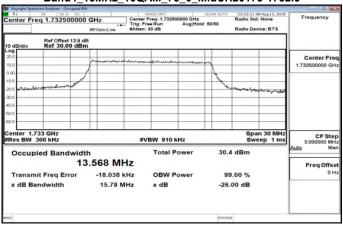
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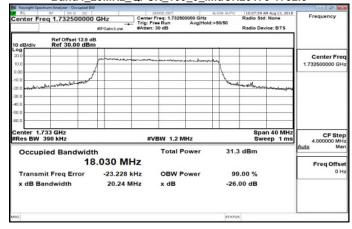
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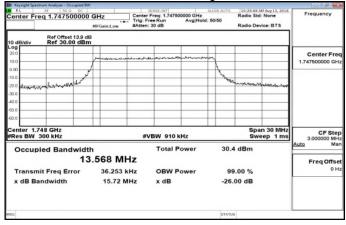
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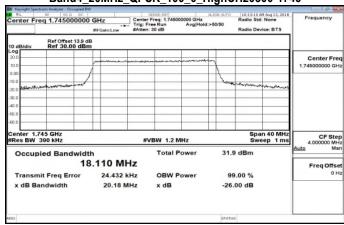
### Band4 20MHz QPSK 100 0 MidCH20175-1732.5



# Band4\_15MHz\_16QAM\_75\_0\_HighCH20325-1747.5



# Band4\_20MHz\_QPSK\_100\_0\_HighCH20300-1745



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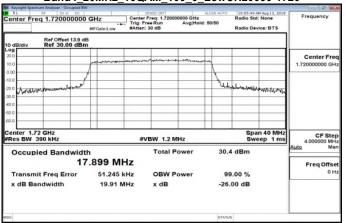
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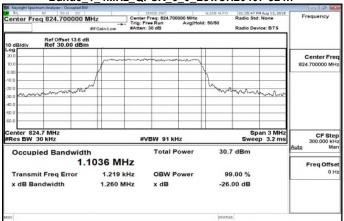
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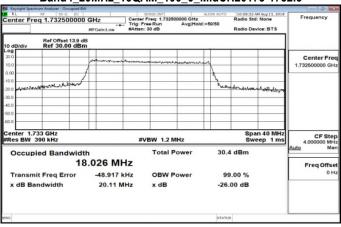
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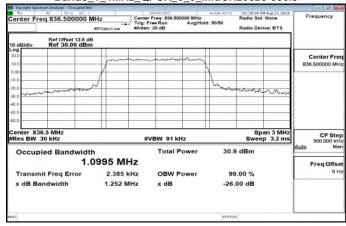
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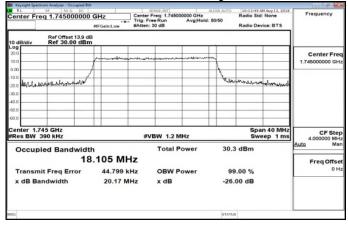
### Band4 20MHz 16QAM 100 0 MidCH20175-1732.5



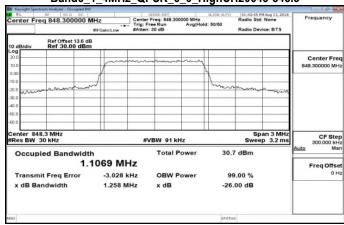
### Band5 1 4MHz QPSK 6 0 MidCH20525-836.5



# Band4\_20MHz\_16QAM\_100\_0\_HighCH20300-1745



# Band5\_1\_4MHz\_QPSK\_6\_0\_HighCH20643-848.3



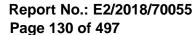
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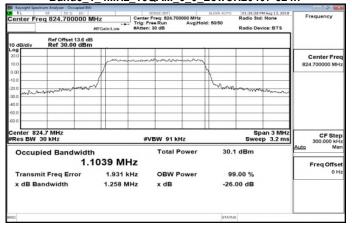
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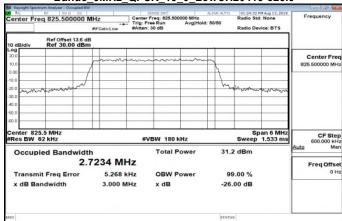




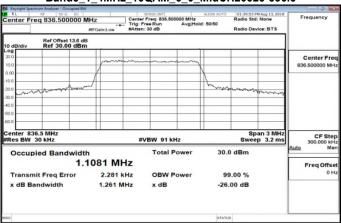
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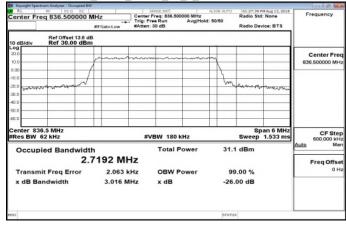
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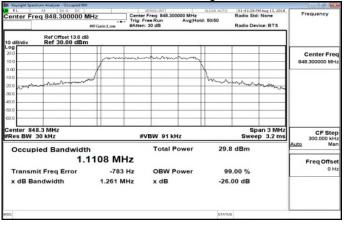
### Band5 1 4MHz 16QAM 6 0 MidCH20525-836.5



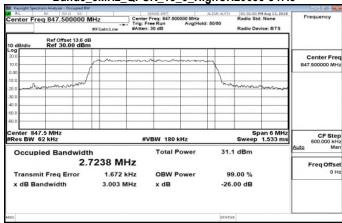
# Band5 3MHz QPSK 15 0 MidCH20525-836.5



# Band5\_1\_4MHz\_16QAM\_6\_0\_HighCH20643-848.3



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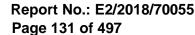


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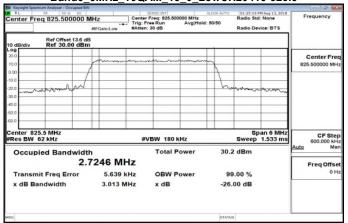
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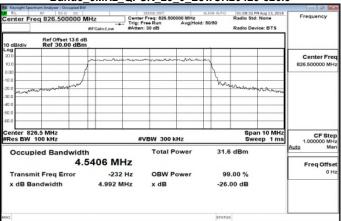




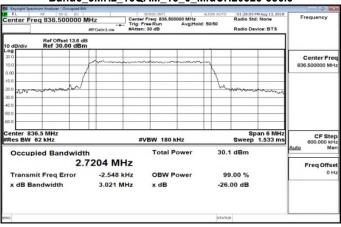
### Band5 3MHz 16QAM 15 0 LowCH20415-825.5



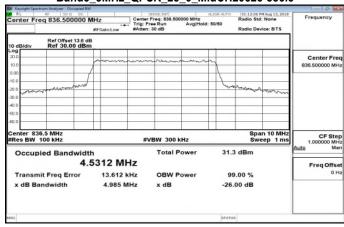
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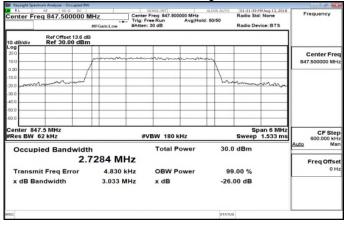
### Band5 3MHz 16QAM 15 0 MidCH20525-836.5



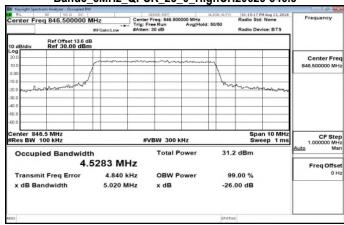
### Band5 5MHz QPSK 25 0 MidCH20525-836.5



# Band5\_3MHz\_16QAM\_15\_0\_HighCH20635-847.5



# Band5\_5MHz\_QPSK\_25\_0\_HighCH20625-846.5



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