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ELECTROMAGNETIC EMISSIONS COMPLIANCE REPORT





Applicant: FIH CO., LTD.

No.4, Minsheng St., Tu-Cheng Dist., New Taipei City 23679,

Taiwan

Manufacturer: FIH CO., LTD.

No.4, Minsheng St., Tu-Cheng Dist., New Taipei City 23679,

Taiwan

Product Name: Internet Gateway

Brand Name: FIH

Model No.: FSNO21VA

Model Difference: N/A

Report Number: ER/2022/30082

FCC ID RYQFSNO21VA

May 30, 2022 Issue Date:

Date of Test: April 7, 2022 ~ May 9, 2022

Date of EUT Received: March 30, 2022

Approved By Blue Yang

We hereby certify that:

The above equipment was tested by SGS Taiwan Ltd. Central RF Lab The test data, data evaluation, test procedures, and equipment configurations shown in this report were made in accordance with the procedures given in ANSI ANSI C63.26-2015 and the energy emitted by the sample EUT comply with FCC rule part 2, 22H & 24E & 27 C.

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

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only.

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Revision History								
Report Number	Revision	Description	Issue Date	Revised By	Remark			
ER/2022/30082	00	Original	May 30, 2022	Yuri Tsai				

Note:

1 . The remark "*" indicates modification of the report upon requests from certification body.

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1 GENERAL PRODUCT INFORMATION

1.1 Product Description

Product Name:	Internet Gateway
Brand Name:	FIH
Model No.:	FSNO21VA
Model Difference:	N/A
Hardware Version:	1.0
Firmware Version:	V0.15A_1KUS
EUT Series No.:	356405430000450
Power Supply:	12Vdc from AC/DC Adapter
Test Software (Name/Version)	default

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1.2 Operation Frequency Range

LTE Band 2							
BW (MHz)	Operation	Freque	ency (MHz)				
1.4	1850.7	-	1909.3				
3	1851.5	-	1908.5				
5	1852.5	-	1907.5				
10	1855.0	-	1905.0				
15	1857.5	-	1902.5				
20	1860.0	-	1900.0				
	LTE Bar	nd 5					
BW (MHz)	Operation	Freque	ency (MHz)				
1.4	824.7	-	848.3				
3	825.5	-	847.5				
5	826.5	-	846.5				
10	829.0	-	844.0				

LTE Band 13						
BW (MHz)	Operation Frequency (MHz)					
5	779.5	-	784.5			
10	782.0					
	LTE Ban	d 66				
BW (MHz)	Operation	Freque	ency (MHz)			
1.4	1710.7	-	1779.3			
3	1711.5	-	1778.5			
5	1712.5	=	1777.5			
10	1715.0	-	1775.0			
15	1717.5	-	1772.5			
20	1720.0	_	1770.0			

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1.3 **Antenna Designation**

Antenna Type	Antenna No.			
PIFA	Ant0			
Dipole	Ant1			
Monopole	Ant4			
Note : Transmission frequencies in this test report are only available by the above antenna(s).				

Modulation	Frequency			Peak Antenna Gain (dBi)			
modalation	(MHz)		Ant0	Ant1	Ant4		
LTE-Band 2	1850	~	1910		-0.07863		
LTE-Band 5	824	?	849	-2.41266			
LTE-Band 13	777	~	787			-2.98952	
LTE-Band 66	1710	?	1780		-0.89447		

Note: Antenna information is provided by the applicant.

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1.4 Type of Emission & Max ERP/EIRP Power Measurement Result:

LTE Band	BW	Frequ	iency	Modulation	ERP / EIR	P (dBm)	(W)	99%	Type of Emission
				QPSK	22.64	EIRP	0.184	1.0893	1M09G7D
		4050.7	40000	16QAM	21.87	EIRP	0.154	1.0934	1M09D7W
2	1.4	1850.7	1909.3	64QAM	20.79	EIRP	0.120	1.0884	1M09D7W
				256QAM	17.83	EIRP	0.061	1.0872	1M09D7W
				QPSK	22.53	EIRP	0.179	2.6964	2M70G7D
		4054.5	4000 5	16QAM	21.87	EIRP	0.154	2.7025	2M70D7W
2	3	1851.5	1908.5	64QAM	20.68	EIRP	0.117	2.7010	2M70D7W
				256QAM	17.87	EIRP	0.061	2.6980	2M70D7W
				QPSK	22.61	EIRP	0.183	4.4993	4M50G7D
	_	40505	4007.5	16QAM	21.82	EIRP	0.152	4.5040	4M50D7W
2	5	1852.5	1907.5	64QAM	20.82	EIRP	0.121	4.4967	4M50D7W
				256QAM	17.85	EIRP	0.061	4.5054	4M51D7W
				QPSK	22.69	EIRP	0.186	8.9928	8M99G7D
	10	4055.0	4005.0	16QAM	21.84	EIRP	0.153	8.9827	8M98D7W
2	10	1855.0	1905.0	64QAM	20.77	EIRP	0.119	8.9830	8M98D7W
				256QAM	17.83	EIRP	0.061	8.9795	8M98D7W
				QPSK	22.41	EIRP	0.174	13.457	13M5G7D
	45	40575	4000 5	16QAM	21.56	EIRP	0.143	13.463	13M5D7W
2	15	1857.5	1902.5	64QAM	20.50	EIRP	0.112	13.473	13M5D7W
				256QAM	17.71	EIRP	0.059	13.447	13M4D7W
				QPSK	22.81	EIRP	0.191	17.951	18M0G7D
		40100	40000	16QAM	21.73	EIRP	0.149	17.932	17M9D7W
2	20	1860.0	1900.0	64QAM	20.69	EIRP	0.117	17.923	17M9D7W
				256QAM	17.68	EIRP	0.059	17.958	18M0D7W
LTE	BW	Frequ	iency	Modulation	ERP / EIR	D (dRm)	(W)	99%	Type of
Band	DVV	Псч	acticy	WOULdidion	ERF / EIR	r (ubili)	(۷۷)	9970	Emission
				QPSK	17.34	ERP	0.054	1.0886	1M09G7D
5	1.4	824.7	848.3	16QAM	16.69	ERP	0.047	1.0913	1M09D7W
		021.7	0.10.0	64QAM	15.82	ERP	0.038	1.0901	1M09D7W
				256QAM	12.64	ERP	0.018	1.0883	1M09D7W
				QPSK	17.33	ERP	0.054	2.6979	2M70G7D
5	3	825.5	847.5	16QAM	16.54	ERP	0.045	2.7018	2M70D7W
3	,	023.3	047.5	64QAM	15.47	ERP	0.035	2.6971	2M70D7W
				256QAM	12.63	ERP	0.018	2.7005	2M70D7W
				QPSK	17.47	ERP	0.056	4.4941	4M49G7D
5	5	826.5	846.5	16QAM	16.72	ERP	0.047	4.4970	4M50D7W
ŭ		020.0	040.3	64QAM	15.58	ERP	0.036	4.4944	4M49D7W
				256QAM	12.68	ERP	0.019	4.4987	4M50D7W
				QPSK	17.54	ERP	0.057	8.9889	8M99G7D
5	10	829.0	844.0	16QAM	16.83	ERP	0.048	8.9975	9M00D7W
,	10	829.0	29.0 844.0	64QAM	15.64	ERP	0.037	8.9753	8M98D7W
				256QAM	12.65	ERP	0.018	8.9795	8M98D7W

LTE Band	BW	Frequ	iency	M odulation	ERP / EIR	P (dBm)	(W)	99%	Type of Emission
				QPSK	17.86	ERP	0.061	4.5023	4M50G7D
13	5	779.5	784.5	16QAM	17.33	ERP	0.054	4.5117	4M51D7W
13	3	119.5	777.5	64QAM	16.08	ERP	0.041	4.4978	4M50D7W
				256QAM	13.13	ERP	0.021	4.5052	4M51D7W
			.0 782.0	QPSK	17.94	ERP	0.062	8.9439	8M94G7D
12	13 10 782.0	702.0		16QAM	17.45	ERP	0.056	8.9336	8M93D7W
13		702.0	702.0	64QAM	15.71	ERP	0.037	8.9497	8M95D7W
				256QAM	13.07	ERP	0.020	8.9585	8M96D7W

LTE Band	BW	Frequ	iency	Modulation	ERP / EIR	P (dBm)	(W)	99%	Type of Emission
				QPSK	21.74	EIRP	0.149	1.0868	1M09G7D
		4740.7	4770.0	16QAM	20.98	EIRP	0.125	1.0900	1M09D7W
66	1.4	1710.7	1779.3	64QAM	19.83	EIRP	0.096	1.0891	1M09D7W
				256QAM	16.89	EIRP	0.049	1.0899	1M09D7W
				QPSK	21.64	EIRP	0.146	2.7027	2M70G7D
66	3	1711.5	1778.5	16QAM	20.98	EIRP	0.125	2.7014	2M70D7W
66	3	1/11.5	1778.5	64QAM	19.99	EIRP	0.100	2.6995	2M70D7W
				256QAM	16.93	EIRP	0.049	2.6989	2M70D7W
				QPSK	21.73	EIRP	0.149	4.5045	4M50G7D
66	5	1712.5	5 1777.5	16QAM	21.06	EIRP	0.128	4.5029	4M50D7W
00	5	1/12.5		64QAM	19.92	EIRP	0.098	4.5020	4M50D7W
				256QAM	16.93	EIRP	0.049	4.4960	4M50D7W
				QPSK	21.72	EIRP	0.148	9.0030	9M00G7D
66	10	1715.0	1775.0	16QAM	21.13	EIRP	0.130	8.9954	9M00D7W
00	10	1715.0		64QAM	19.76	EIRP	0.095	9.0047	9M00D7W
				256QAM	16.86	EIRP	0.048	8.9963	9M00D7W
				QPSK	21.50	EIRP	0.141	13.4700	13M5G7D
66	15	1717.5	1772.5	16QAM	20.79	EIRP	0.120	13.4650	13M5D7W
00	13	1717.3	1772.3	64QAM	19.89	EIRP	0.097	13.4660	13M5D7W
				256QAM	16.79	EIRP	0.048	13.4660	13M5D7W
				QPSK	21.80	EIRP	0.151	17.9340	17M9G7D
66	20	1720.0	1770.0	16QAM	20.83	EIRP	0.121	17.9620	18M0D7W
00	20	1720.0	1770.0	64QAM	19.91	EIRP	0.098	17.9330	17M9D7W
			256QAM	16.75	EIRP	0.047	17.9560	18M0D7W	

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1.5 Test Methodology of Applied Standards

FCC 47 CFR Part 2, 22H, 24E, 27C.
ANSI C63.26-2015
KDB971168 D01 Power Meas license Digital System v03r01
KDB412172 D01 Determining ERP and EIRP v01r01

1.6 Test Facility

Laboratory	Test Site Address	Test Site Name	FCC Designa- tion number	IC CAB identifier
		SAC 1		
		SAC 3		
		Conduction 1		
	No.134, Wu Kung Road, New Taipei	Conducted 1		
	Industrial Park, Wuku District, New	Conducted 2	TW0027	
	Taipei City, Taiwan.	Conducted 3		TW3702
		Conducted 4		
		Conducted 5		
SGS Taiwan Ltd.		Conducted 6		
Central RF Lab.		Conduction C		
(TAF code 3702)		SAC C		
(1A1 Code 3702)		SAC D		
		SAC G		
	No 2 Koji 1et Pd. Cujeban District	Conducted A		
	No.2, Keji 1st Rd., Guishan District, Taoyuan City, Taiwan 333	Conducted B	TW0028	
	laoyuan City, Taiwan 555	Conducted C		
		Conducted D		
		Conducted E		
		Conducted F		
		Conducted G		

Note: Test site name is remarked on the equipment list in each section of this report as an indication where measurements occurred in specific test site and address.

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1.7 **Special Accessories**

No special accessories were used during testing.

1.8 **Equipment Modifications**

There was no modifications incorporated into the EUT.

1.9 Radiated Emission Test Sites For Measurements From 9 kHz To 30 MHz

Radiated emission below 30MHz is measured in a 9m*6m*6m semi-anechoic chamber. the measurements correspond to those obtained at an open-field test site. There is a comparison data of both open-field test site and semi-Anechoic chamber, and the result came out very similar.

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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

The EUT is placed on a 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)

The EUT is placed on a 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.

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.

Note:

The spectrum analyzer offset is derived from RF cable loss and attenuator factor. Following shows an offset computation in physical test.

Frequency	RF Cable loss (dB)	Attenuation (dB)	Offset (dB)
LB(1GHz below)	4.96	10	14.96
LB(1GHz below)	4.48	10	14.48
MB(1GHz - 2GHz)	4.02	10	14.02

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2.5 Final Amplifier Voltage and Current Information:

LTE Band 2

Test mode	AC voltage (V)	AC current (mA)
LTE Band 2_20M QPSK	120	71

LTE Band 5

Test mode	AC voltage (V)	AC current (mA)
LTE Band 5_10M QPSK	120	68

LTE Band 13

Test mode	AC voltage (V)	AC current (mA)
LTE Band 13_10M QPSK	120	69

LTE Band 66

Test mode	AC voltage (V)	AC current (mA)
LTE Band 66_20M QPSK	120	67

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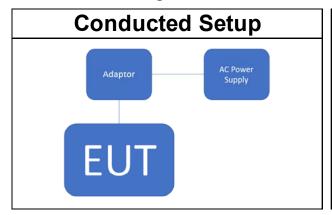
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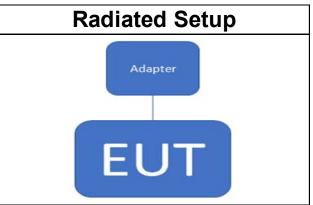
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2.6 Test Configuration





Note: Radio Communication Analyzer is placed in remote side for radiated test.

2.7 Control Unit(s)

Conducted Emission Test Site: Conducted 3												
EQUIPMENT TYPE MFR MODEL NUMBER SERIAL NUMBER LAST CAL. CAL DUE.												
Test Software	SGS	Radio Test Software	Ver. 21	N.C.R	N.C.R							
Switching Adapter	Jiangxi JianAohaiTechnology	A929-120300W-US1	N/A	N/A	N/A							
		Radiated Emission Tes	t Site: SAC 1									
EQUIPMENT TYPE	MFR	MODEL NUMBER	SERIAL NUMBER	LAST CAL.	CAL DUE.							
SWITCHING ADAPTER	Jiangxi JianAohai Technology Co.,Ltd	A929-120300W-US1	N/A	N/A	N/A							
Test Software	Audix	e3	Ver. 9.210322	N.C.R	N.C.R							

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SUMMARY OF TEST RESULTS

FCC Rules	Description Of Test	Result
§2.1046(a)	RF Power Output	Compliant
§22.913(a)(5) §24.232(c) §27.50(b)(9) §27.50(d)(4)	ERP/ EIRP measurement	Compliant
§2.1049(h)	99% & 26dB Occupied Band- width	Compliant
§2.1051 §22.917(a)(b) §24.238(a) §27.53(c) §27.53(h)	Out of Band Emissions at An- tenna Terminals and Band Edge / Emission mask re- quirements	Compliant
§2.1053 §22.917(a) §24.238(a) §27.53(c)(f)) §27.53(h)	Field Strength of Spurious Radiation	Compliant
§24.232(d) §27.50(a)(1)(B)	Peak to Average Ratio	Compliant
§2.1055(a)(1) §22.355 §24.235 §27.54	Frequency Stability	Compliant

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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 scenario from all possible combinations among available modulations, data rates and antenna ports, the worst case configurations listed below for the final test.
- 3. The field strength of radiated emission was measured as the EUT positioned in different orthogonal planes (E1/E2/H) based on actual usage of the EUT to pre-scan the emissions for determining the worst case scenario.

4.2 **Measurement Configuration**

	Test Ite	ms			Max. Output Power											
	Te	st Chan	nel		E	Bandwid	th (MHz)			Modu	lation		RB#		
Band	L	М	Н	1.4	3	5	10	15	20	QPSK	16QAM	64QAM	256QAM	1	Half	Full
2	٧	V	V	V	V	V	V	V	V	V	V	V	V	V	V	V
5	V	V	V	V	V	V	V	-	-	V	V	V	V	V	V	V
13	V	V	V	-	-	V	V	-	-	V	V	V	V	V	V	V
66	V	V	V	V	V	V	V	V	V	V	V	V	V	V	V	V
	Test Ite	ms							Freq	ency Sta	bility					
2	-	V	-	-	-	-	V	-	-	V	-	-	-	-	-	V
5	-	V	-	-	-	-	V	-	-	V	-	-	-	-	-	V
13	-	V	-	-	-	-	V	-	-	V	-	-	-	-	-	V
66	-	V	-	-	-	-	V	-	-	V	-	-	-	-	-	V
	Test Ite									dB and 9 Sandwidt	th					
Band	Te	st Chan	nel		E	Bandwid	th (MHz)			Modu	lation			RB#	
Dallu	L	М	Н	1.4	3	5	10	15	20	QPSK	16QAM	64QAM	256QAM	1	Half	Full
2	V	V	V	V	V	V	V	V	V	V	V	V	V	-	-	V
5	V	V	V	V	V	V	V	-	-	V	V	V	V	-	-	V
13	V	V	V	-	-	V	V	-	-	V	V	V	V	-	-	V
66	V	V	V	V	V	V	V	V	V	V	V	V	V	-	-	V
	Test Ite	ms							Peak-to	o-Av erage Ratio						
2	V	V	V	V	V	V	V	V	V	-	-	-	V	-	-	V
5	V	V	V	V	V	V	V	-	-	-	-	-	V	-	-	V
13	V	V	V	-	-	V	V	-	-	-	-	-	V	-	-	V
66	V	V	V	V	V	V	V	V	V	-	-	-	V	-	-	V
	Test Ite	ms							В	and Edg	je					
Band	Te	st Chan					th (MHz				Modu				RB#	
	L	М	Н	1.4	3	5	10	15	20	QPSK	16QAM	64QAM	256QAM	1	Half	Full
2	V	-	V	V	V	V	V	V	V	V	-	-	-	V	V	V
5	V	-	V	V	V	V	V	-	-	V	-	-	-	V	V	V
13 66	V	-	V	-	-	V	V	-	-	V	-	-	-	V	V V	V
00			ı v	V	V	V	V	V	V	I V		-	-	V	V	V
	Test Items Cond					Condu	ıcted En	nission								
2	V	V	V	-	i	-	-	-	V	V	-	-	-	V	-	-
5	V	V	V	-	-	-	V	-	-	V	-	-	-	V	-	-
13	V	V	V	-	-	-	V	-	-	V	-	-	-	V	-	-
66	V	V	V	-	-	-	-	-	V	V	-	-	-	V	-	-

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	Test Iter	ms		Radiated Emission												
Band	Tes	st Chani	nel		Bandwidth (MHz)					Modulation				RB#		
Dallu	L	М	Н	1.4	1.4 3 5 10 15 20			QPSK	16QAM	64QAM	256QAM	1	Half	Full		
2	V	V	V	-	-	-	-	-	V	V	-	-	-	V	-	-
5	V	V	V	-	-	-	V	-	-	V	-	-	-	V	-	-
13	V	V	V	-	-	-	V	-	-	V	-	1	-	V	-	-
66	٧	V	٧	-	-	-	-	-	٧	V	-	-	-	V	-	-

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MEASUREMENT UNCERTAINTY

Test Items	Und	Uncertainty		
RF Power Output	+/-	1	dB	
ERP/ EIRP measurement	+/-	3	dB	
ERP/ EIRP measurement	+/-	3	dB	
Emission Bandwidth	+/-	1.53	Hz	
Out of Band Emissions at Antenna Terminals and Band Edge	+/-	1.68	dB	
Peak to Average Ratio	+/-	1	dB	
Frequency Stability vs. Temperature	+/-	1.53	Hz	
Frequency Stability vs. Voltage	+/-	1.53	Hz	
Temperature	+/-	0.4	°C	
Humidity	+/-	3.5	%	
DC / AC Power Source	+/-	1	%	

Radiated Spurious Emission Measurement Uncertainty									
	+/-	2.57	dB	9kHz~30MHz					
Polarization: Vertical	+/-	4.85	dB	30MHz - 1000MHz					
Polarization. Vertical	+/-	4.45	dB	1GHz - 18GHz					
	+/-	4.24	dB	18GHz - 40GHz					
	+/-	2.57	dB	9kHz~30MHz					
 Polarization: Horizontal	+/-	4.37	dB	30MHz - 1000MHz					
Polarization: Horizontal	+/-	4.45	dB	1GHz - 18GHz					
	+/-	4.24	dB	18GHz - 40GHz					

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

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MEASUREMENT EQUIPMENT USED

6.1 **Conducted Measurement**

	Conducted Emission Test Site: Conducted 3												
EQUIPMENT TYPE	EQUIPMENT TYPE MFR MODEL NUMBER SERIAL NUMBER LAST CAL.												
EXA Spectrum Analyzer	Agilent	N9010A	MY54200716	10/13/2021	10/12/2022								
Radio Communication Analyer	Anritsu	MT8821C	6261786084	01/18/2022	01/17/2023								
Temperature Chamber	Giant Force	GTH-150-40-CP-AR	MAA0512-018	05/19/2021	05/18/2022								
AC Power Source	Gwinstek	APS-7050E	GEV171679	09/28/2021	09/27/2022								
Attenuator	Mini-Circuit	BW-S10W2+	4	12/14/2021	12/13/2022								
DC Block	Mini-Circuits	BLK-18-S+	1	12/14/2021	12/13/2022								
Power Divider	RF-LAMBAD	RFLT2W1G18G	11-JSPF412-020	12/14/2021	12/13/2022								

6.2 **Radiated Measurement**

	Radiated Emission Test Site: SAC 1											
EQUIPMENT TYPE	MFR	MODEL NUMBER	SERIAL NUMBER	LAST CAL.	CAL DUE.							
Bi-log Antenna	SCHWARZBECK	VULB9168	300	10/19/2021	10/18/2022							
Horn Antenna	SCHWARZBECK	BBHA9120D	D803	12/20/2021	12/19/2022							
Bi-log Antenna	TESEO	CBL 6112D	35242 & AT-N0555	01/03/2022	01/02/2023							
Horn Antenna	SCHWARZBECK	BBHA9120D	603	05/18/2021	05/17/2022							
Horn Antenna	SCHWARZBECK	BBHA9170	184	12/16/2021	12/15/2022							
Horn Antenna	SCHWARZBECK	BBHA9170	185	08/06/2021	08/05/2022							
Site Cal	SGS	SACI chamber	N/A	01/01/2022	12/31/2022							
EXA Spectrum Analyzer	KEYSIGHT	N9010B	MY59071541	07/14/2021	07/13/2022							
Signal Generator	R&S	SMBV100A	263084	01/11/2022	01/10/2023							
Radio Communication Analyer	Anritsu	MT8821C	6261786084	01/18/2022	01/17/2023							
Pre-Amplifier	EMC Instruments	EMC184045B	980135	10/27/2021	10/26/2022							
Pre-Amplifier	НР	8449B	3008A01973	12/16/2021	12/15/2022							
Pre-Amplifier	НР	8447D	2944A09469	12/16/2021	12/15/2022							
Bandreject Filter 800- 1000	Micro-Tronics	EWT	M1	12/14/2021	12/13/2022							
1.3G-15GHz High Pass Filter	WI	WHKX10-1066-80SS	19	12/14/2021	12/13/2022							
3.2GHz High Pass Filter	WI	WHKX10-2624-80SS	3	12/14/2021	12/13/2022							

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MAXIMUM OUTPUT POWER

7.1 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.

7.1.1 **ERP/EIRP LIMIT**

According to FCC §2.1046

FCC 22.913(a)

(5) mobile transmitters and auxiliary test transmitters must not exceed 7 watts.

FCC 24.232(c)

Mobile and portable stations are limited to 2 W EIRP.

FCC 27.50 (b)

(9) Control stations and mobile stations transmitting in the 746-757 MHz, 776-788 MHz, and 805-806 MHz bands are limited to 30 watts ERP.

FCC 27.50(d)

(4) Mobile, and portable (hand-held) stations operating in the 1710-1755 MHz, 1695-1710 MHz and 1755-1780 MHz bands are limited to 1W EIRP.

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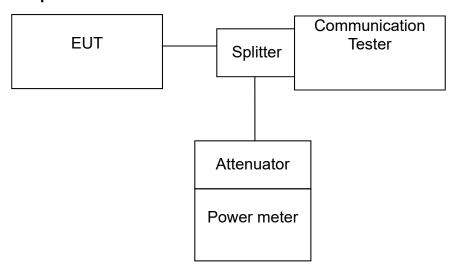
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7.2 **Test Set-up**



Note: Measurement setup for testing on Antenna connector

7.3 **Output Power Measurement Applicable Guideance**

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.

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.

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7.4 Determining ERP and/or EIRP from conducted RF output power measurements

According to KDB 412172 D01 Power Approach,

 $EIRP = P_T + G_T - L_C$

ERP= EIRP-2.15.

Where:

Lc

ERP or EIRP = effective radiated power or equivalent isotropically radiated power

> (expressed in the same units as PT, typically dBW, dBm, or power spectral density (PSD)2), relative to either a dipole antenna (ERP) or

an isotropic antenna (EIRP);

 P_{T} = transmitter output power, expressed in dBW, dBm, or PSD;

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

= signal attenuation in the connecting cable between the transmitter

and antenna, in dB.

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7.5 **Measurement Results:**

Antenna gain (dBi)

Antenna	gain (dBi)	-0.07863							
		l	LTE Band 2_Up	link frequ	iency bar	nd: 1850 to 191	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	22.75	22.67	33	-10.32863
	18607	1850.7	QPSK	1	5	22.71	22.63	33	
	10007	1030.7		3	2	22.76	22.68	33	-10.31863
				6	0	21.75	21.67	33	
				1	0	22.97	22.89	33	
1.4	18900	1880	QPSK	1	5	22.87	22.79	33	1
	10700	1000	Qi oit	3	2	22.93	22.85	33	
				6	0	21.91	21.83	33	
				1	0	22.60	22.52	33	
	19193	1909.3	QPSK	1	5	22.58	22.50	33	
				3	2	22.69	22.61	33	
				6	0	21.69	21.61	33	
				1	0	22.08	22.00	33	
	18607	1850.7	16QAM	1	5	21.83	21.75	33	
	10007	1000.7	10071111	3	2	21.81	21.73	33	
				6	0	20.72	20.64	33	-12.35863 -10.87863 -11.22863 -11.06863 -12.11863 -10.87863
				1	0	22.20	22.12	33	
1.4 189	18900	1880	16QAM	1	5	21.85	21.77	33	-11.22863
	10700	1000	10071111	3	2	22.01	21.93	33	(dB) -10.32863 -10.36863 -10.31863 -11.32863 -10.10863 -10.20863 -10.14863 -10.47863 -10.49863 -10.38863 -10.99863 -11.24863 -12.35863 -10.87863 -11.22863 -11.06863 -12.11863
				6	0	20.96	20.88	33	
				1	0	22.20	22.12	33	
	19193	1909.3	16QAM	1	5	21.86	21.78	33	
	17173		10071111	3	2	21.77	21.69	33	
				6	0	20.54	20.46	33	-12.53863
		1850.7	64QAM	1	0	21.12	21.04	33	
	18607			1	5	21.03	20.95	33	-12.04863
	10007			3	2	20.91	20.83	33	-12.16863
				6	0	19.88	19.80	33	-13.19863
				1	0	21.08	21.00	33	-11.99863
1.4	18900	1880	64QAM	1	5	20.82	20.74	33	
1.4	10700	1000	U4QAW	3	2	20.97	20.89	33	-12.10863
				6	0	19.86	19.78	33	-13.21863
				1	0	20.85	20.77	33	-12.22863
	19193	1909.3	64QAM	1	5	21.00	20.92	33	-12.07863
	17173	1707.3	04QAIVI	3	2	20.68	20.60	33	-12.39863
				6	0	19.78	19.70	33	-13.29863
				1	0	17.94	17.86	33	-15.13863
	10407	1850.7	256QAM	1	5	17.88	17.80	33	-15.19863
	18607	1650.7	230QAIVI	3	2	17.96	17.88	33	-15.11863
				6	0	17.81	17.73	33	-15.26863
				1	0	18.16	18.08	33	-14.91863
1 /	10000	1000	2540444	1	5	18.13	18.05	33	-14.94863
1.4	18900	1880	256QAM	3	2	18.04	17.96	33	-15.03863
				6	0	18.06	17.98	33	
				1	0	18.02	17.94	33	-15.05863
	10100	1000.0	25/0444	1	5	17.93	17.85	33	-15.14863
	19193	1909.3	256QAM	3	2	17.78	17.70	33	-15.29863
	1			6	0	17.76	17.68	33	-15.31863

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Antenna gain (dBi) -0.07863 LTE Band 2_Uplink frequency band: 1850 to 1910 MHz EIRP EIRP Conducted BW UL RB RB Frequency Margin Modulation Average Average Limit (MHz) Channel (MHz) Size Offset (dB) (dBm) (dBm) (dBm) 22.59 0 22.67 33 -10.40863 14 22.57 22.49 33 -10.50863 **QPSK** 18615 1851.5 8 4 21.83 21.75 33 -11.24863 15 21.81 0 21.73 33 -11.26863 0 22.86 22.78 33 -10.21863 14 22.78 33 -10.29863 1 22.70 3 18900 1880 **QPSK** 8 4 21.88 21.80 33 -11.19863 15 0 21.87 21.79 33 -11.20863 1 0 22.72 22.64 33 -10.35863 22.40 33 -10.59863 1 14 22.48 19185 1908.5 **QPSK** 8 4 21.70 21.62 33 -11.37863 15 0 21.72 21.64 33 -11.35863 1 0 21.93 21.85 33 -11.14863 21.95 21.87 33 1 14 -11.12863 1851 5 16QAM 18615 8 4 20.85 20.77 33 -12.22863 15 0 20.82 20.74 33 -12.25863 1 0 21.93 21.85 33 -11.14863 14 22.20 22.12 33 -10.87863 3 18900 1880 16QAM 8 4 20.97 20.89 33 -12.10863 15 0 20.92 20.84 33 -12.15863 21.95 0 22.03 33 -11.04863 14 21.37 21.29 33 -11.70863 19185 1908 5 16QAM 8 4 20.80 20.72 33 -12.27863 15 0 20.82 20.74 33 -12.25863 1 0 21.01 20.93 33 -12.06863 1 14 20.66 20.58 33 -12.41863 18615 1851.5 64QAM 8 4 19.84 19.76 33 -13.23863 15 0 19.80 19.72 33 -13.27863 1 0 20.91 20.83 33 -12.16863 -12.16863 1 14 20.91 20.83 33 3 1880 18900 64OAM 19.96 4 20.04 33 -13.03863 8 19.85 15 0 19.93 33 -13.14863 0 20.80 20.72 33 -12.27863 1 14 20.71 20.63 33 -12.36863 19185 1908.5 64QAM 8 4 19.76 19.68 33 -13.31863 15 0 19.69 19.61 33 -13.38863 0 18.12 18.04 33 -14.95863 14 17.98 17.90 33 -15.09863 1851.5 18615 2560AM 4 17.95 17.87 33 8 -15.12863 15 0 17.89 17.81 33 -15.18863 0 18.12 33 1 18.20 -14.87863 14 18.03 17.95 33 -15.04863 3 18900 1880 256QAM 17.93 33 8 4 18.01 -15.06863 17.95 17.87 33 15 0 -15.12863 1 0 17.91 17.83 33 -15.16863 1 14 17.74 17.66 33 -15.33863 19185 1908.5 256QAM 8 4 17.77 17.69 33 -15.30863 17.75 33 15 0 17.67 -15.32863

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18625

18900

19175

18625

18900

19175

5

5

1852.5

1880

1907.5

1852.5

1880

1907.5

-0.07863

Antenna gain (dBi)

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LTE Band 2_Uplink frequency band: 1850 to 1910 MHz EIRP EIRP Conducted BW UL RB RB Frequency Margin Modulation Average Average Limit (MHz) Channel (MHz) Size Offset (dB) (dBm) (dBm) (dBm) 0 22.74 22.66 33 -10.33863 24 22.76 22.68 33 -10.31863 **QPSK** 18625 1852.5 12 6 21.83 21.75 33 -11.24863 25 21.84 0 21.76 33 -11.23863 0 22.94 22.86 33 -10.13863 24 22.87 33 -10.20863 1 22.79 5 18900 1880 **QPSK** 12 21.86 21.78 33 -11.21863 6 25 0 21.93 21.85 33 -11.14863 1 0 22.70 22.62 33 -10.37863 22.58 33 -10.41863 1 24 22.66 19175 1907.5 **QPSK** 12 21.75 21.67 33 -11.32863 6 25 0 21.76 21.68 33 -11.31863 1 0 22.00 21.92 33 -11.07863 24 21.72 21.64 33 1 -11.35863 1852.5 16QAM 18625 12 20.92 20.84 33 6 -12.15863 25 0 20.84 20.76 33 -12.23863 1 0 22.04 21.96 33 -11.03863 24 22.10 22.02 33 -10.97863 5 18900 1880 16QAM 12 6 20.91 20.83 33 -12.16863 25 0 20.97 20.89 33 -12.10863 22.07 0 22.15 33 -10.92863 24 21.75 21.67 33 -11.32863 19175 1907 5 16QAM 12 6 20.78 20.70 33 -12.29863 25 0 20.81 20.73 33 -12.26863 1 0 20.82 20.74 33 -12.25863

1

12

25

1

1

12

25

1

12

25

12

25

1

12

25

1

1

12

25

64QAM

64OAM

64QAM

256OAM

256QAM

256QAM

24

6

0

0

24

6

0

0

24

6

0

0

24

6

0

0

24

6

0

0

24

6

0

20.93

19.90

19.84

21.15

20.46

20.01

19.87

20.87

20.67

19.89

19.74

18.02

18.10

17.94

17.87

18.18

18.11

18.02

17.94

18.00

17.98

17.89

17.80

20.85

19.82

19.76

21.07

20.38

19.93

19.79

20.79

20.59

19.81

19.66

17.94

18.02

17.86

17 79

18.10

18.03

17.94

17.86

17.92

17.90

17.81

17.72

33

33

33

33

33

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33

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33

33

33

33

33

33

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-12.14863

-13.17863

-13.23863

-11.92863

-12.61863

-13.06863

-13.20863

-12.20863

-12.40863

-13.18863

-13.33863

-15.05863

-14.97863

-15.13863

-15.20863

-14.89863

-14.96863

-15.05863

-15.13863

-15.07863

-15.09863

-15.18863

-15.27863

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Antenna	gain (dBi)	-0.07863							
		ĺ	LTE Band 2_Upl	ink frequ	iency bar	nd: 1850 to 191	0 MHz		
BW (MHz)	UL Channel	Frequency (MHz)	Modulation	RB Size	RB Offset	Conducted Average (dBm)	EIRP Average (dBm)	EIRP Limit (dBm)	Margin (dB)
	18650	1855	QPSK	1 1 25 50	0 49 12 0	22.74 22.70 21.83 21.82	22.66 22.62 21.75 21.74	33 33 33 33	-10.33863 -10.37863 -11.24863 -11.25863
10	18900	1880	QPSK	1 1 25	0 49 12	23.02 22.80 21.88	22.94 22.72 21.80	33 33 33	-10.05863 -10.27863 -11.19863
	19150	1905	QPSK	50 1 1 25 50	0 0 49 12 0	21.91 22.69 22.77 21.86 21.80	21.83 22.61 22.69 21.78 21.72	33 33 33 33 33	-11.16863 -10.38863 -10.30863 -11.21863 -11.27863
	18650	1855	16QAM	1 1 25 50	0 49 12 0	22.06 22.04 20.91 20.79	21.72 21.98 21.96 20.83 20.71	33 33 33 33	-11.01863 -11.03863 -12.16863 -12.28863
10	18900	1880	16QAM	1 1 25 50	0 49 12 0	22.17 21.99 20.92 20.91	22.09 21.91 20.84 20.83	33 33 33 33	-10.90863 -11.08863 -12.15863 -12.16863
	19150	1905	16QAM	1 1 25 50	0 49 12 0	21.62 21.76 20.85 20.75	21.54 21.68 20.77 20.67	33 33 33 33 33	-11.45863 -11.31863 -12.22863 -12.32863
	18650	1855	64QAM	1 1 25 50	0 49 12 0	20.93 20.83 19.84 19.77	20.85 20.75 19.76 19.69	33 33 33 33	-12.14863 -12.24863 -13.23863 -13.30863
10	18900	1880	64QAM	1 1 25 50	0 49 12 0	20.91 21.10 19.98 19.90	20.83 21.02 19.90 19.82	33 33 33 33	-12.16863 -11.97863 -13.09863 -13.17863
	19150	1905	64QAM	1 1 25 50	0 49 12 0	20.87 20.80 19.82	20.79 20.72 19.74	33 33 33 33 33	-12.20863 -12.27863 -13.25863
	18650	1855	256QAM	1 1 25 50	0 49 12 0	19.85 18.08 17.95 17.89 17.91	19.77 18.00 17.87 17.81 17.83	33 33 33 33	-13.22863 -14.99863 -15.12863 -15.18863 -15.16863
10	18900	1880	256QAM	1 1 25 50	0 49 12 0	18.16 18.05 17.97 17.99	17.83 18.08 17.97 17.89 17.91	33 33 33 33	-15.10803 -14.91863 -15.02863 -15.10863 -15.08863
	19150	1905	256QAM	1 1 25 50	0 49 12 0	17.77 18.05 17.85 17.82 17.79	17.71 17.97 17.77 17.74 17.71	33 33 33 33	-15.0863 -15.02863 -15.22863 -15.25863 -15.28863

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Report No.: ER/2022/30082

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Antenna gain (dBi) -0.07863 LTE Band 2_Uplink frequency band: 1850 to 1910 MHz EIRP EIRP Conducted BW UL RB RB Frequency Margin Modulation Average Average Limit (MHz) Channel (MHz) Size Offset (dB) (dBm) (dBm) (dBm) 0 22.59 22.51 33 -10.48863 74 22.66 22.58 33 -10.41863 **QPSK** 18675 1857.5 36 18 21.69 21.61 33 -11.38863 75 21.80 0 21.72 33 -11.27863 0 22.65 22 57 33 -10.42863 22.74 1 74 22.66 33 -10.33863 15 18900 1880 **QPSK** 36 18 21.79 21.71 33 -11.28863 75 0 21.77 21.69 33 -11.30863 1 0 22.55 22.47 33 -10.52863 22.39 22.31 33 1 74 -10.68863 19125 1902.5 **QPSK** 36 18 21.72 21.64 33 -11.35863 75 0 21.71 21.63 33 -11.36863 1 0 21.87 21.79 33 -11.20863 74 21.75 33 1 21.83 -11.24863 1857.5 16QAM 18675 36 18 20.77 20.69 33 -12.30863 -12.28863 75 0 20.79 20.71 33 1 0 21.86 21.78 33 -11.21863 74 21.89 21.81 33 -11.18863 15 18900 1880 16QAM 36 18 20.73 20.65 33 -12.34863 75 0 20.81 20.73 33 -12.26863 21.40 0 21.48 33 -11.59863 74 21.44 21.36 33 -11.63863 19125 1902.5 16QAM 36 18 20.74 20.66 33 -12.33863 75 0 20.74 20.66 33 -12.33863 1 0 20.73 20.65 33 -12.34863 1 74 20.83 20.75 33 -12.24863 18675 1857.5 64QAM 36 18 19.74 19.66 33 -13.33863 75 0 19.77 19.69 33 -13.30863 1 0 20.82 20.74 33 -12.25863 1 74 20.79 20.71 33 -12.28863 15 1880 18900 64OAM 36 18 19.76 19.68 33 -13.31863 75 0 19.80 19.72 33 -13.27863 0 20.58 20.50 33 -12.49863 1 74 20.65 20.57 33 -12.42863 19125 1902.5 64QAM 36 18 19.68 19.60 33 -13.39863 75 0 19.69 19.61 33 -13.38863 0 17.92 17.84 33 -15.15863 74 18.03 17.95 33 -15.04863 18675 1857.5 256OAM 36 17.76 33 18 17.68 -15.31863 75 33 0 17.75 17.67 -15.32863 18.04 0 17.96 33 1 -15.03863 74 18.01 17.93 33 -15.06863 15 18900 1880 256QAM 36 18 17.81 17.73 33 -15.26863 75 17.82 17.74 33 -15.25863 0

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256QAM

1

1

36

75

0

74

18

0

17.98

17.82

17.70

17.68

17.90

17.74

17.62

17.60

33

33

33

33

-15.09863

-15.25863

-15.37863

-15.39863

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Antenna gain (dBi) -0.07863

		l	LTE Band 2_Up	link frequ	iency bar	nd: 1850 to 191	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	23.14	23.06	33	-9.93863
	18700	1860	QPSK	1	99	22.75	22.67	33	-10.32863
	10700	1000	QFSK	50	25	21.79	21.71	33	-11.28863
				100	0	21.77	21.69	33	-11.30863
				1	0	22.63	22.55	33	-10.44863
20	18900	1880	QPSK	1	99	22.65	22.57	33	-10.42863
20	10700	1000	Q. O.	50	25	21.81	21.73	33	-11.26863
				100	0	21.76	21.68	33	-11.31863
				1	0	22.85	22.77	33	-10.22863
	19100	1900	QPSK	1	99	22.78	22.70	33	-10.29863
	.,	.,,,,	2. 5.1	50	25	21.76	21.68	33	-11.31863
				100	0	21.69	21.61	33	-11.38863
				1	0	21.86	21.78	33	-11.21863
	18700	1860	16QAM	1	99	21.76	21.68	33	-11.31863
	10700		10071111	50	25	20.81	20.73	33	-12.26863
				100	0	20.73	20.65	33	-12.34863
20 18900				1	0	22.06	21.98	33	-11.01863
	1880	16QAM	1	99	21.96	21.88	33	-11.11863	
			50	25	20.82	20.74	33	-12.25863	
				100	0	20.85	20.77	33	-12.22863
		1900		1	0	21.98	21.90	33	-11.09863
	19100		16QAM	1	99	20.86	20.78	33	-12.21863
		_	50	25	20.77	20.69	33	-12.30863	
				100	0	20.68	20.60	33	-12.39863
			64QAM	1	0	20.59	20.51	33	-12.48863
	18700	1860		1	99	20.80	20.72	33	-12.27863
	10700	1000		50	25	19.73	19.65	33	-13.34863
				100	0	19.76	19.68	33	-13.31863
		1880		1	0	20.94	20.86	33	-12.13863
20	18900		64QAM	1	99	21.02	20.94	33	-12.05863
	10700		0.0	50	25	19.81	19.73	33	-13.26863
				100	0	19.67	19.59	33	-13.40863
				1	0	20.64	20.56	33	-12.43863
	19100	1900	64QAM	1	99	20.55	20.47	33	-12.52863
				50	25	19.74	19.66	33	-13.33863
				100	0	19.73	19.65	33	-13.34863
				1	0	17.98	17.90	33	-15.09863
	18700	1860	256QAM	1	99	18.01	17.93	33	-15.06863
				50	25	17.79	17.71	33	-15.28863
				100	0	17.77	17.69	33	-15.30863
				1	0	17.94	17.86	33	-15.13863
20	18900	1880	256QAM	1	99	17.96	17.88	33	-15.11863
-				50	25	17.82	17.74	33	-15.25863
				100	0	17.85	17.77	33	-15.22863
				1	0	17.93	17.85	33	-15.14863
	19100	1900	256QAM	1	99	17.94	17.86	33	-15.13863
	17100	1,700	2000/11/1	50	25	17.76	17.68	33	-15.31863
			1	100	0	17.74	17.66	33	-15.33863

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Antenna gain (dBi) -2.41266 LTE Band 5_Uplink frequency band: 824 to 849 MHz ERP EIRP ERP Conducted BW UL RB RB Frequency Margin Modulation Limit Average Average Average (MHz) Channel (MHz) Size Offset (dB) (dBm) (dBm) (dBm) (dBm) 1 0 22.70 18.14 20.29 38.45 -20.31 5 22.71 18.15 20.30 38.45 -20.30 **QPSK** 20407 824.7 3 2 22.73 18.17 20.32 38.45 -20.28 0 6 21.78 17.22 19.37 38.45 -21.23 0 22.54 17.98 20.13 38.45 -20.47 22.63 18.07 20.22 1 5 38.45 -20.381.4 20525 836.5 **QPSK** 3 2 22.70 18.14 20.29 38.45 -20.31 0 21.73 17.17 19.32 38.45 -21.28 6 1 0 22.58 18.02 20.17 38.45 -20.43 22.52 17.96 38.45 1 5 20.11 -20.49 20643 848.3 **QPSK** 3 2 22.60 18.04 20.19 38.45 -20.41 6 0 21.54 16.98 19.13 38.45 -21.47 1 0 22.08 17.52 19.67 38.45 -20.9321.81 19.40 38.45 1 5 17.25 -21.20 20407 8247 16QAM 19.38 2 21.79 17.23 38.45 -21.22 3 -22.18 0 20.83 16.27 18.42 38.45 6 0 21.74 17.18 19.33 38.45 -21.27 -20.96 5 22.05 17.49 19.64 38.45 1.4 20525 836.5 16QAM 2 21.83 17.27 19.42 38.45 -21.18 0 20.67 16.11 18.26 38.45 -22.34 6 21.88 0 17.32 19.47 38.45 -21.13 5 21.76 17.20 19.35 38.45 -21.25 20643 848.3 16QAM 3 2 21.60 17.04 19.19 38.45 -21.41 6 0 20.63 16.07 18.22 38.45 -22.38 1 0 21.21 16.65 18.80 38.45 -21.80 1 5 20.74 16.18 18.33 38.45 -22.27 20407 824.7 64QAM 3 2 20.78 16.22 18.37 38.45 -22.23 6 0 19.70 15.14 17.29 38.45 -23.31 1 0 20.76 16.20 18.35 38.45 -22.25 1 5 20.71 16.15 18.30 38.45 -22.30 20525 1 4 836.5 64OAM 2 20.74 16.18 18.33 38.45 -22.27 3 6 0 19.71 15.15 17.30 38.45 -23.30 0 20.53 15.97 18.12 38.45 -22.48 1 5 20.62 16.06 18.21 38.45 -22.39 20643 848.3 64QAM 2 20.74 16.18 18.33 38.45 -22.27 6 0 19.64 15.08 17.23 38.45 -23.37 0 18.03 15.62 38.45 -24.98 5 17.96 13.40 15.55 38.45 -25.05 20407 824.7 256OAM 2 13.35 15.50 38.45 -25.10 3 17.91 6 0 17.84 13.28 15.43 38.45 -25.17 0 17.97 13.41 1 15.56 38.45 -25.04 5 17.90 13.34 15.49 38.45 -25.11 20525 836.5 256QAM 1.4 13.25 3 2 17.81 15.40 38.45 -25.20 17.79 13.23 15.38 38.45 6 0 -25.22 0 17.78 13.22 15.37 38.45 -25.23 1 1 5 17.85 13.29 15.44 38.45 -25.16

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17.69

17.63

13.13

13.07

15.28

15.22

38.45

38.45

-25.32

-25.38

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Antenna	gain (dBi)	-2.41266								
			LTE Ba	nd 5_Up	link frequ	ency band : 824	4 to 849 MHz			
BW (MHz)	UL Channel	Frequency (MHz)	Modulation	RB Size	RB Offset	Conducted Average (dBm)	ERP Average (dBm)	EIRP Average (dBm)	ERP Limit (dBm)	Margin (dB)
	20415	825.5	QPSK	1	0 14	22.60 22.72	18.04 18.16	20.19	38.45 38.45	-20.41 -20.29
	20415	623.3	QP3N	8 15	4 0	21.77 21.73	17.21 17.17	19.36 19.32	38.45 38.45	-21.24 -21.28
3	20525	836.5	QPSK	1 1 8	0 14 4	22.56 22.59 21.76	18.00 18.03 17.20	20.15 20.18 19.35	38.45 38.45 38.45	-20.45 -20.42 -21.25
				15 1 1	0 0 14	21.78 22.58 22.63	17.22 18.02 18.07	19.37 20.17 20.22	38.45 38.45	38.45 -21.23
	20635	847.5	QPSK	8 15	4 0	21.51 21.61	16.95 17.05	19.10 19.20	38.45 38.45	-21.50 -21.40
	20415	825.5	16QAM	1 1 8 15	0 14 4 0	21.93 21.89 20.84 20.70	17.37 17.33 16.28 16.14	19.52 19.48 18.43 18.29	38.45 38.45 38.45	-21.08 -21.12 -22.17 -22.31
3	20525	836.5	16QAM	1 1 8	0 14 4	21.81 21.86 20.59	17.25 17.30 16.03	19.40 19.45 18.18	38.45 38.45 38.45 38.45	-21.20 -21.15 -22.42
	20635	847.5	16QAM	15 1 1	0 0 14	20.70 21.87 21.74	16.14 17.31 17.18	18.29 19.46 19.33	38.45 38.45 38.45	-22.31 -21.14 -21.27
	20035	047.3	TOQAIVI	8 15 1	4 0 0	20.68 20.52 20.86	16.12 15.96 16.30	18.27 18.11 18.45	38.45 38.45 38.45	-22.33 -22.49 -22.15
	20415	825.5	.5 64QAM	1 8 15	14 4 0	20.80 19.88 19.78	16.24 15.32 15.22	18.39 17.47 17.37	38.45 38.45 38.45	-22.21 -23.13 -23.23
3	20525	836.5	64QAM	1 1 8	0 14 4	20.86 20.38 19.83	16.30 15.82 15.27	18.45 17.97 17.42	38.45 38.45 38.45	-22.15 -22.63 -23.18
				15 1	0	19.69 20.86	15.13 16.30	17.28 18.45	38.45 38.45	-23.32 -22.15
	20635	847.5	64QAM	1 8 15	14 4 0	20.42 19.60 19.64	15.86 15.04 15.08	18.01 17.19 17.23	38.45 38.45 38.45	-22.59 -23.41 -23.37
	20415	825.5	256QAM	1 1 8 15	0 14 4 0	17.95 18.02 17.88 17.77	13.39 13.46 13.32 13.21	15.54 15.61 15.47 15.36	38.45 38.45 38.45 38.45	-25.06 -24.99 -25.13 -25.24
3	20525	836.5	256QAM	1 1 8	0 14 4	17.77 17.91 17.98 17.83	13.21 13.35 13.42 13.27	15.50 15.57 15.42	38.45 38.45 38.45	-25.24 -25.10 -25.03 -25.18
				15 1 1	0 0 14	17.80 17.74 17.80	13.24 13.18 13.24	15.39 15.33 15.39	38.45 38.45 38.45	-25.21 -25.27 -25.21
	20635	847.5	256QAM	8	4 0	17.77 17.67	13.21 13.11	15.36 15.26	38.45 38.45	-25.24 -25.34

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Antenna	gain (dBi)	-2.41266								
			LTE Ba	nd 5_Up	link frequ	ency band : 824	4 to 849 MHz			
BW (MHz)	UL Channel	Frequency (MHz)	Modulation	RB Size	RB Offset	Conducted Average (dBm)	ERP Average (dBm)	EIRP Average (dBm)	ERP Limit (dBm)	Margin (dB)
	20425	826.5	QPSK	1 1 12	0 24 6	22.78 22.53 21.70	18.22 17.97 17.14	20.37 20.12 19.29	38.45 38.45 38.45	-20.23 -20.48 -21.31
5	20525	836.5	QPSK	25 1 1	0 0 24	21.89 22.72 22.86	17.33 18.16 18.30	19.48 20.31 20.45	38.45 38.45 38.45	-21.12 -20.29 -20.15
J	20023	030.3	Qi Six	12 25 1	6 0 0	21.61 21.52 22.69	17.05 16.96 18.13	19.20 19.11 20.28	38.45 38.45 38.45	-21.40 -21.49 -20.32
	20625	846.5	QPSK	1 12 25	24 6 0	22.67 21.70 21.64	18.11 17.14 17.08	20.26 19.29 19.23	38.45 38.45 38.45	-20.34 -21.31 -21.37
	20425	826.5	16QAM	1 1 12 25	0 24 6 0	22.11 22.11 20.90 20.82	17.55 17.55 16.34 16.26	19.70 19.70 18.49 18.41	38.45 38.45 38.45 38.45	-20.90 -20.90 -22.11 -22.19
5	20525	836.5	16QAM	1 1 12 25	0 24 6 0	21.59 21.94 20.71 20.77	17.03 17.38 16.15 16.21	19.18 19.53 18.30 18.36	38.45 38.45 38.45 38.45	-21.42 -21.07 -22.30 -22.24
	20625	846.5	16QAM	1 1 12	0 24 6	21.95 21.89 20.78	17.39 17.33 16.22	19.54 19.48 18.37	38.45 38.45 38.45	-21.06 -21.12 -22.23
	20425	826.5	64QAM	25 1 1 1 12	0 0 24 6	20.68 20.68 20.90 19.82	16.12 16.12 16.34 15.26	18.27 18.27 18.49 17.41	38.45 38.45 38.45 38.45	-22.33 -22.33 -22.11 -23.19
5	20525	836.5	64QAM	25 1 1 12	0 0 24 6	19.85 20.81 20.97 19.71	15.29 16.25 16.41 15.15	17.44 18.40 18.56 17.30	38.45 38.45 38.45 38.45	-23.16 -22.20 -22.04 -23.30
	20625	846.5	64QAM	25 1 1	0 0 24	19.82 20.82 20.88	15.26 16.26 16.32	17.41 18.41 18.47	38.45 38.45 38.45	-23.19 -22.19 -22.13
			25/044	12 25 1 1	6 0 0 24	19.65 19.66 18.03 18.01	15.09 15.10 13.47 13.45	17.24 17.25 15.62 15.60	38.45 38.45 38.45 38.45	-23.36 -23.35 -24.98 -25.00
	20425	826.5	256QAM	12 25 1	6 0 0	17.87 17.85 18.07	13.31 13.29 13.51	15.46 15.44 15.66	38.45 38.45 38.45	-25.14 -25.16 -24.94
5	20525	836.5	256QAM	1 12 25	24 6 0	18.01 17.76 17.81	13.45 13.20 13.25	15.60 15.35 15.40	38.45 38.45 38.45	-25.00 -25.25 -25.20
	20625	846.5	256QAM	1 1 12 25	0 24 6 0	17.93 17.87 17.71 17.70	13.37 13.31 13.15 13.14	15.52 15.46 15.30 15.29	38.45 38.45 38.45 38.45	-25.08 -25.14 -25.30 -25.31

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Antenna gain (dBi) -2.41266 LTE Band 5_Uplink frequency band: 824 to 849 MHz ERP EIRP ERP Conducted BW UL RB RB Frequency Margin Modulation Limit Average Average Average (MHz) Channel (MHz) Size Offset (dB) (dBm) (dBm) (dBm) (dBm) 20.52 1 0 22.93 18.37 38.45 -20.08 49 22.46 17.90 20.05 38.45 -20.55 20450 829 **QPSK** 25 12 21.89 17.33 19.48 38.45 -21.12 50 0 21.81 17.25 19.40 38.45 -21.200 22.74 18.18 20.33 38.45 -20.27 49 22.53 17.97 1 20.12 38.45 -20.4810 20525 836.5 **QPSK** 25 12 21.86 17.30 19.45 38.45 -21.15 50 0 21.81 17.25 19.40 38.45 -21.20 1 0 22.55 17.99 20.14 38.45 -20.46 18.05 38.45 1 49 22.61 20.20 -20.40 20600 844 **QPSK** 25 12 21.68 17.12 19.27 38.45 -21.33 50 0 21.71 17.15 19.30 38.45 -21.30 1 0 21.82 17.26 19.41 38.45 -21.19 49 19.81 38.45 1 22.22 17.66 -20.79 20450 829 16QAM 25 12 20.92 18.51 38.45 -22.09 16.36 -22.17 50 0 20.84 16.28 18.43 38.45 1 0 21.88 17.32 19.47 38.45 -21.13 49 21.25 16.69 18.84 38.45 -21.76 10 20525 836.5 16QAM 25 12 20.90 16.34 18.49 38.45 -22.11 50 0 20.84 16.28 18.43 38.45 -22.17 0 21.80 17.24 19.39 38.45 -21.21 1 49 21.84 17.28 19.43 38.45 -21.17 20600 844 16QAM 25 12 20.44 15.88 18.03 38.45 -22.57 18.22 50 0 20.63 16.07 38.45 -22.38 1 0 20.88 16.32 18.47 38.45 -22.13 1 49 20.86 16.30 18.45 38.45 -22.15 20450 829 64QAM 25 12 19.89 15.33 17.48 38.45 -23.12 50 0 19.85 15.29 17.44 38.45 -23.16 1 0 21.03 16.47 18.62 38.45 -21.98 1 49 20.67 16.11 18.26 38.45 -22.34 10 20525 836.5 64OAM 25 12 19.87 15.31 17.46 38.45 -23.14 -23.19 50 0 19.82 15.26 17.41 38.45 0 20.72 16.16 18.31 38.45 -22.29 1 49 20.59 16.03 18.18 38.45 -22.42 20600 844 64QAM 25 12 19.55 14.99 17.14 38.45 -23.46 50 0 19.73 15.17 17.32 38.45 -23.28 0 18.03 13.47 15.62 38.45 -24.98 49 17.99 13.43 15.58 38.45 -25.02 20450 829 256OAM 25 12 13.40 15.55 38.45 -25.05 17.96 50 15.49 0 17.90 13.34 38.45 -25.11 0 13.46 -24.99 1 18.02 15.61 38.45 49 18.04 13.48 15.63 38.45 -24.97 10 20525 836.5 256QAM 25 13.29 12 17.85 15.44 38.45 -25.16 17.89 13.33 15.48 38.45 50 0 -25.12 1 0 17.94 13.38 15.53 38.45 -25.07 1 49 17.86 13.30 15.45 38.45 -25.15 256QAM 20600 844 25 12 17.77 13.21 15.36 38.45 -25.24 50 17.76 15.35 38.45 0 13.20 -25.25

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Antenna gain (dBi) -2.98952 LTE Band 13_Uplink frequency band: 777 to 787 MHz ERP **EIRP ERP** Conducted BW UL RB RB Frequency Margin Modulation Limit Average Average Average (MHz) Channel (MHz) Size Offset (dB) (dBm) (dBm) (dBm) (dBm) 0 21.93 16.79 18.94 34.77 -17.98 24 21.88 16.74 18.89 34.77 -18.03 779.5 **QPSK** 23205 12 6 20.99 15.85 18.00 34.77 -18.92 25 20.92 17.93 -18.99 0 15.78 34.77 21.88 16.74 18.89 34.77 -18.03 0 24 18.91 34.77 -18.01 1 21.90 16.76 5 23230 782 **QPSK** 12 20.91 15.77 17.92 34.77 -19.00 6 25 0 20.84 15.70 17.85 34.77 -19.07 0 21.93 16.79 18.94 34.77 -17.98 21.92 18.93 34.77 -17.99 1 24 16.78 23255 784.5 **QPSK** 12 6 20.98 15.84 17.99 34.77 -18.93 25 0 20.88 15.74 17.89 34.77 -19.03 1 0 20.89 15.75 17.90 34.77 -19.02 1 24 20.87 15.73 17.88 34.77 -19.04 23205 779.5 16QAM 17.02 12 20.01 14.87 34.77 -19.90 6 25 0 19.99 14.85 17.00 34.77 -19.92 0 21.03 15.89 18.04 34.77 -18.88 21.09 24 15.95 18.10 34.77 -18.82 5 23230 782 16QAM 12 19.98 14.84 16.99 34.77 -19.93 6 25 0 19.92 14.78 16.93 34.77 -19.99 16.05 0 21.19 18.20 34.77 -18.7224 21.14 16.00 18.15 34.77 -18.77 23255 784 5 16QAM 12 6 19.97 14.83 16.98 34.77 -19.94 25 0 19.98 14.84 16.99 34.77 -19.93 0 19.90 14.76 16.91 1 34.77 -20.01 1 24 19.92 14.78 16.93 34.77 -19.99 23205 779.5 64QAM 12 6 19.01 13.87 16.02 34.77 -20.90 25 0 18.98 13.84 15.99 34.77 -20.93 1 0 19.74 14.60 16.75 34.77 -20.17 1 24 20.06 14.92 17.07 34.77 -19.85 5 23230 782 64OAM 18.89 13.75 15.90 -21.02 12 6 34.77 15.79 25 0 18.78 13.64 34.77 -21.13 0 20.05 14.91 17.06 34.77 -19.86 1 1 24 20.24 15.10 17.25 34.77 -19.67 23255 784.5 64QAM 12 6 18.98 13.84 15.99 34.77 -20.93 25 0 18.87 13.73 15.88 34.77 -21.04 0 16.97 11.83 13.98 34.77 -22.94 -22.83 24 17.08 11.94 14.09 34.77 23205 779.5 256OAM 11.90 12 17.04 14.05 34.77 -22.87 6 25 13.97 0 16.96 11.82 34.77 -22.95 1 0 16.97 11.83 13.98 34.77 -22.94 24 17.09 11.95 14.10 34.77 -22.82 5 23230 782 256QAM 12 16.92 11.78 13.93 34.77 -22.99 6 25 0 16.89 11.75 13.90 34.77 -23.02 1 0 17.09 11.95 14.10 34.77 -22.82 17.04 1 24 11.90 14.05 34.77 -22.8723255 256OAM 784.5 16.99 14.00 34.77 12 6 11.85 -22.92

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16.97

13.98

34.77

-22.94

11.83

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Antenna	gain (dBi)	-2.98952											
	BW UL Frequency Modulation RB RB Average Average Average Limit (MHz) Channel (MHz) Modulation Size Offset (APm) (A												
			Modulation										
				1	0	22.16	17.02	19.17	34.77	-17.75			
10	23230	782	QPSK	1	49	22.02	16.88	19.03	34.77	-17.89			
10	23230	702	QF3N	25	12	20.94	15.80	17.95	34.77	-18.97			
				50	0	20.93	15.79	17.94	34.77	-18.98			
			16QAM	1	0	21.19	16.05	18.20	34.77	-18.72			
10	23230	782		1	49	21.04	15.90	18.05	34.77	-18.87			
10	23230			25	12	19.94	14.80	16.95	34.77	-19.97			
				50	0	19.90	14.76	16.91	34.77 34.77 34.77 34.77 34.77 34.77 34.77 34.77 34.77 34.77 34.77 34.77	-20.01			
		30 782	64QAM	1	0	20.08	14.94	17.09	34.77	-19.83			
10	23230			1	49	20.08	14.94	17.09	34.77	-19.83			
	23230			25	12	19.07	13.93	16.08	34.77	-20.84			
				50	0	18.90	13.76	15.91	34.77	-21.01			
				1	0	17.11	11.97	14.12	34.77	-22.80			
10	23230	782	256QAM	1	49	17.20	12.06	14.21	34.77	-22.71			
10	23230	702	256QAM -	25	12	17.01	11.87	14.02	34.77	-22.90			
				50	0	17.09	11.95	14.10	34.77	-22.82			

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Antenna gain (dBi) -0.89447 LTE Band 66_Uplink frequency band: 1710 to 1780 MHz EIRP EIRP Conducted BW UL RB RB Frequency Margin Modulation Average Average Limit (MHz) Channel (MHz) Size Offset (dB) (dBm) (dBm) (dBm) 0 22.36 21.47 30 -8.53447 5 22.33 21.44 30 -8.56447 **QPSK** 131979 1710.7 2 3 22.36 21.47 30 -8.53447 0 21.34 20.45 30 -9.55447 6 0 22.54 21.65 30 -8.35447 5 22.53 30 1 21.64 -8.36447 1.4 132322 1745 **QPSK** 3 2 22.63 21.74 30 -8.26447 0 21.62 20.73 30 -9.27447 6 1 0 22.38 21.49 30 -8.51447 5 22.47 21.58 30 1 -8.42447 132665 1779.3 **QPSK** 3 2 22.48 21.59 30 -8.41447 6 0 21.59 20.70 30 -9.30447 1 0 21.50 20.61 30 -9.39447 21.79 20.90 30 1 5 -9.10447 131979 17107 16QAM 2 21.48 20.59 30 3 -9.41447 6 0 20.41 19.52 30 -10.48447 0 21.84 20.95 30 -9.05447 5 21.87 20.98 30 -9.02447 1.4 132322 1745 16QAM 2 21.71 20.82 30 -9.18447 3 6 0 20.65 19.76 30 -10.24447 20.50 30 0 21.39 -9.50447 5 21.69 20.80 30 -9.20447 132665 1779 3 16QAM 3 2 21.43 20.54 30 -9.46447 6 0 20.60 19.71 30 -10.29447 1 0 20.25 19.36 30 10.64447 1 5 20.27 19.38 30 -10.62447 131979 1710.7 64QAM 3 2 20.32 19.43 30 -10.57447 6 0 19.31 18.42 30 -11.58447 1 0 20.41 19.52 30 -10.48447 -10.29447 1 5 20.60 19.71 30 132322 1.4 1745 64OAM -10.17447 2 20.72 30 3 19.83 19.66 30 6 0 18.77 -11.23447 0 20.48 19.59 30 -10.41447 1 5 20.43 19.54 30 -10.46447 132665 1779.3 64QAM 2 20.59 19.70 30 -10.30447 6 0 19.50 18.61 30 -11.39447 0 17.55 16.66 30 -13.34447 5 17.56 16.67 30 -13.33447 131979 1710.7 2560AM 2 17.43 3 30 -13.46447 16.54 6 0 17.47 16.58 30 -13.42447 0 17.78 16.89 30 1 -13.11447 5 17.76 16.87 30 -13.13447 132322 1745 256QAM 1.4 2 30 3 17.72 16.83 -13.17447 17.61 16.72 30 -13.28447 6 0 0 17.75 16.86 30 -13.14447 1 1 5 17.65 16.76 30 -13.24447 1779.3 256QAM 132665 3 2 17.52 16.63 30 -13.37447 17.56 30 6 0 16.67 -13.33447

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Antenna gain (dBi) -0.89447 LTE Band 66_Uplink frequency band: 1710 to 1780 MHz EIRP EIRP Conducted BW UL RB RB Frequency Margin Modulation Average Average Limit (MHz) Channel (MHz) Size Offset (dB) (dBm) (dBm) (dBm) 0 22.22 21.33 30 -8.67447 14 22.32 21.43 30 -8.57447 **QPSK** 131987 1711.5 8 4 21.47 20.58 30 -9.42447 15 21.38 20.49 30 0 -9.51447 0 22.51 21.62 30 -8.38447 14 22.47 21.58 30 -8.42447 1 3 132322 1745 **QPSK** 8 4 21.70 20.81 30 -9.19447 15 0 21.50 20.61 30 -9.39447 1 0 22.53 21.64 30 -8.36447 30 -8.49447 1 14 22.40 21.51 132657 1778.5 **QPSK** 8 4 21.55 20.66 30 -9.34447 15 0 21.53 20.64 30 -9.36447 1 0 21.58 20.69 30 -9.31447 14 20.63 30 1 21.52 -9.37447 131987 17115 16QAM 8 4 20.41 19.52 30 -10.48447 15 0 20.39 19.50 30 -10.50447 1 0 21.87 20.98 30 -9.02447 14 21.58 20.69 30 -9.31447 3 132322 1745 16QAM 8 4 20.67 19.78 30 -10.22447 15 0 20.55 19.66 30 -10.34447 30 0 21.60 20.71 -9.29447 14 21.64 20.75 30 -9.25447 132657 1778 5 16QAM 8 4 20.43 19.54 30 -10.46447 15 0 20.53 19.64 30 -10.36447 1 0 20.02 19.13 30 -10.87447 1 14 20.71 19.82 30 -10.18447 131987 1711.5 64QAM 8 4 19.46 18.57 30 -11.43447 15 0 19.43 18.54 30 -11.46447 1 0 20.72 19.83 30 -10.17447 1 14 20.63 19.74 30 -10.26447 3 132322 1745 64OAM 4 19.68 18.79 30 -11.21447 8 30 15 0 19.57 18.68 -11.32447 0 20.88 19.99 30 -10.01447 1 14 20.66 19.77 30 -10.23447 132657 1778.5 64QAM 8 4 19.60 18.71 30 -11.29447 15 0 19.56 18.67 30 -11.33447 0 17.53 16.64 30 -13.36447 14 17.54 16.65 30 -13.35447 131987 1711.5 256OAM 4 17.46 30 -13.43447 8 16.57 15 0 17.40 16.51 30 -13.49447 0 30 -13.22447 1 17.67 16.78 14 17.82 16.93 30 -13.07447 3 132322 1745 256QAM 8 4 17.60 16.71 30 -13.29447 17.58 16.69 30 -13.31447 15 0 1 0 17.73 16.84 30 -13.16447 1 14 17.71 16.82 30 -13.18447 1778.5 256QAM 132657 8 4 17.51 16.62 30 -13.38447 -13.31447 15 17.58 30 0 16.69

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		L	TE Band 66_Up	link freq	uency ba	nd : 1710 to 178	BO 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	22.43	21.54	30	-8.46447
	101007	1710 5	ODCK	1	24	22.46	21.57	30	-8.43447
	131997	1712.5	QPSK	12	6	21.45	20.56	30	-9.44447
				25	0	21.45	20.56	30	-9.44447
				1	0	22.58	21.69	30	-8.31447
5	122222	1745	QPSK	1	24	22.62	21.73	30	-8.27447
5	132322	1745	UPSK	12	6	21.61	20.72	30	-9.28447
				25	0	21.53	20.64	30	-9.36447
				1	0	22.58	21.69	30	-8.31447
	122/47	1777 5	ODCK	1	24	22.53	21.64	30	-8.36447
	132647	1777.5	QPSK	12	6	21.55	20.66	30	-9.34447
				25	0	21.59	20.70	30	-9.30447
				1	0	21.47	20.58	30	-9.42447
	131997	1710 5	14000	1	24	21.56	20.67	30	-9.33447
	131997	1712.5	16QAM	12	6	20.42	19.53	30	-10.47447
				25	0	20.44	19.55	30	-10.45447
				1	0	21.95	21.06	30	-8.94447
5 132	132322	1745	16QAM	1	24	21.69	20.80	30	-9.20447
	132322	1745		12	6	20.56	19.67	30	-10.33447
				25	0	20.47	19.58	30	-10.42447
				1	0	21.79	20.90	30	-9.10447
	132647	1777.5	16QAM	1	24	21.76	20.87	30	-9.13447
	132047	1777.5	TOCAM	12	6	20.63	19.74	30	-10.26447
				25	0	20.61	19.72	30	-10.28447
		1712.5	64QAM	1	0	20.61	19.72	30	-10.28447
	131997			1	24	20.59	19.70	30	-10.30447
	131997			12	6	19.44	18.55	30	-11.45447
				25	0	19.46	18.57	30	-11.43447
				1	0	20.69	19.80	30	-10.20447
5	132322	1745	64QAM	1	24	20.52	19.63	30	-10.37447
J	132322			12	6	19.70	18.81	30	-11.19447
				25	0	19.48	18.59	30	-11.41447
				1	0	20.57	19.68	30	-10.32447
	132647	1777.5	64QAM	1	24	20.81	19.92	30	-10.08447
	132047	1777.5	U4QAW	12	6	19.55	18.66	30	-11.34447
				25	0	19.50	18.61	30	-11.39447
				1	0	17.54	16.65	30	-13.35447
	131997	1712.5	256QAM	1	24	17.53	16.64	30	-13.36447
	131771	1712.3	ZJUQAW	12	6	17.50	16.61	30	-13.39447
				25	0	17.44	16.55	30	-13.45447
				1	0	17.78	16.89	30	-13.11447
5	132322	1745	256QAM	1	24	17.82	16.93	30	-13.07447
J	132322	1743	ZJUQAIVI	12	6	17.63	16.74	30	-13.26447
				25	0	17.59	16.70	30	-13.30447
				1	0	17.67	16.78	30	-13.22447
	132647	1777.5	256QAM	1	24	17.61	16.72	30	-13.28447
	132047	1777.5	ZUCAW	12	6	17.52	16.63	30	-13.37447
				25	0	17.55	16.66	30	-13.34447

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Antenna	gain (dBi)	-0.89447							
		L	TE Band 66_Up	link freq	uency ba	nd : 1710 to 178	30 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	22.26	21.37	30	-8.63447
	132022	1715	QPSK	1	49	22.39	21.50	30	-8.50447
				25	12	21.49	20.60	30	-9.40447
				50	0	21.46	20.57	30	-9.43447
				1	0 49	22.46 22.61	21.57 21.72	30 30	-8.43447 -8.28447
10	132322	1745	QPSK	25	12	21.58	20.69	30	-9.31447
				50	0	21.58	20.69	30	-9.31447
				1	0	22.49	21.60	30	
				1	49	22.56	21.67	30	-8.33447
	132622	1775	QPSK	25	12	21.58	20.69	30	-9.31447
				50	0	21.58	20.69	30	-9.31447
				1	0	21.49	20.60	30	-9.40447
				1	49	21.86	20.97	30	-9.03447
	132022	1715	16QAM	25	12	20.47	19.58	30	-10.42447
				50	0	20.43	19.54	30	-10.46447
				1	0	21.69	20.80	30	-9.20447
				1	49	21.75	20.86	30	-9.14447
10	132322	1745	16QAM	25	12	20.52	19.63	30	-10.37447
				50	0	20.52	19.63	30	-10.37447
				1	0	21.93	21.04	30	-8.96447
	122/22	1775	16QAM	1	49	22.02	21.13	30	-8.87447
	132622	1775	TOQAM	25	12	20.59	19.70	30	-10.30447
				50	0	20.61	19.72	30	-10.28447
		1715	64QAM	1	0	20.22	19.33	30	-10.67447
	132022			1	49	20.50	19.61	30	-10.39447
	132022			25	12	19.45	18.56	30	-11.44447
				50	0	19.49	18.60	30	-11.40447
				1	0	20.64	19.75	30	-10.25447
10	132322	1745	64QAM	1	49	20.61	19.72	30	-10.28447
10	102022	1710	01271111	25	12	19.46	18.57	30	-11.43447
				50	0	19.57	18.68	30	-11.32447
				1	0	20.65	19.76	30	-10.24447
	132622	1775	64QAM	1	49	20.43	19.54	30	-10.46447
				25	12	19.57	18.68	30	-11.32447
				50	0	19.56	18.67	30	-11.33447
				1	0	17.59	16.70	30	-13.30447
	132022	1715	256QAM	1	49	17.60	16.71	30	-13.29447
				25	12	17.48	16.59	30	-13.41447
				50	0	17.47	16.58	30 30	-13.42447
				1		17.73	16.84	30	-13.16447
10	132322	1745	256QAM	25	49 12	17.75 17.61	16.86 16.72	30	-13.14447
			-		0			30	-13.28447
	<u> </u>			50 1	0	17.64 17.67	16.75 16.78	30	-13.25447 -13.22447
				1	49	17.65	16.76	30	-13.22447
	132622	1775	256QAM	25	12	17.64	16.75	30	-13.24447
				50	0	17.62	16.73	30	-13.25447
		İ		JU	U	17.02	10.73	30	-1J.Z/44/

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Antenna gain (dBi) -0.89447 LTE Band 66_Uplink frequency band: 1710 to 1780 MHz EIRP EIRP Conducted BW UL RB RB Frequency Margin Modulation Average Average Limit (MHz) Channel (MHz) Size Offset (dB) (dBm) (dBm) (dBm) 0 22.22 21.33 30 -8.67447 74 22.34 21.45 30 -8.55447 **QPSK** 132047 1717.5 36 18 21.29 20.40 30 -9.60447 75 21.32 20.43 30 0 -9.57447 0 22.33 21.44 30 -8.56447 1 74 22.38 21.49 30 -8.51447 15 132322 1745 **QPSK** 36 18 21.51 20.62 30 -9.38447 75 0 21.45 20.56 30 -9.44447 0 22.39 21.50 30 -8.50447 22.37 30 1 74 21.48 -8.52447 132597 1772.5 **QPSK** 36 18 21.51 20.62 30 -9.38447 75 0 21.52 20.63 30 -9.37447 1 0 21.30 20.41 30 -9.59447 74 30 1 21.42 20.53 -9.47447 132047 1717.5 16QAM 36 18 20.32 19.43 30 -10.57447 75 0 20.31 19.42 30 -10.58447 1 0 21.19 20.30 30 -9.70447 74 21.51 20.62 30 -9.38447 15 132322 1745 16QAM 36 18 20.49 19.60 30 -10.40447 75 0 20.38 19.49 30 -10.51447 0 21.65 30 20.76 -9.24447 74 21.68 20.79 30 -9.21447 132597 1772.5 16QAM 36 18 20.47 19.58 30 -10.42447 75 0 20.39 19.50 30 -10.50447 0 19.43 -10.57447 1 20.32 30 74 20.39 19.50 30 -10.50447 132047 1717.5 64QAM 36 18 19.38 18.49 30 -11.51447 75 0 19.29 18.40 30 -11.60447 1 0 20.46 19.57 30 -10.43447 1 74 20.63 19.74 30 -10.26447 15 132322 1745 64QAM 36 18 19.42 18.53 30 -11.47447 19.39 30 -11.50447 75 0 18.50 0 20.37 19.48 30 -10.52447 1 1 74 20.78 19.89 30 -10.11447 132597 1772.5 64QAM 36 18 19.48 18.59 30 -11.41447 75 0 19.53 18.64 30 -11.36447 0 17.47 16.58 30 -13.42447 74 17.50 16.61 30 -13.39447 132047 1717.5 2560AM 17.34 30 36 18 16.45 -13.55447 75 30 0 17.32 16.43 -13.57447 1 0 17.61 16.72 30 -13.28447 74 17.68 16.79 30 -13.21447 15 132322 1745 256QAM 36 18 17.50 16.61 30 -13.39447 75 0 17.42 16.53 30 -13.47447 1 0 17.66 16.77 30 -13.23447 30 1 74 17.62 16.73 -13.27447 132597 1772.5 256OAM 30 18 17.47 36 16.58 -13.42447 30 75 0 17.45 16.56 -13.44447

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Channel (MHz) Modulation Size Offset Average Average (dBm) (Antenna	gain (dBi)	-0.89447							
Channel (MHz)			L	TE Band 66_Up	link freq	uency ba	nd : 1710 to 178	BO MHz		
133072				Modulation			Average	Average	Limit	Margin (dB)
132322 1745 OPSK 1 00 22.39		132072	1720	QPSK	1	99	22.43	21.54	30	-8.20447 -8.46447
132322					100	0	21.30	20.41	30	-9.59447
132572 1770 QPSK 1 0 22.41 21.52 30 -8.4844 132572 1770 QPSK 1 99 22.35 21.46 30 -9.3444 100	20	132322	1745	QPSK	1 50	99 25	22.43 21.55	21.54 20.66	30 30	-8.46447 -9.34447
132072		132572	1770	QPSK	1	0 99	22.41 22.35	21.52 21.46	30 30	-8.48447 -8.54447 -9.34447
132072					100 1	0	21.45 21.41	20.56 20.52	30 30	-9.44447 -9.48447
132322		132072	1720	16QAM	50 100	25 0	20.35 20.30	19.46 19.41	30 30	-10.54447 -10.59447
132572 1770 16QAM 1 99 21.66 20.77 30 9.2344 30 10.3944 30 10.5144 30 10.00 0 20.50 19.61 30 10.5144 30 10.514	20	132322	1745	16QAM	1 50	99 25	21.65 20.47	20.76 19.58	30 30	-9.24447 -10.42447
132072 1720 64QAM 1 99 20.32 19.43 30 -10.5144 1 99 20.32 19.43 30 -10.5744 1 99 20.32 19.43 30 -10.5744 1 00 0 19.27 18.38 30 -11.6244 1 0 20.56 19.67 30 -10.2944 1 1 99 20.60 19.71 30 -10.2944 1 1 0 20.56 19.67 30 -11.5344 1 0 20.60 19.71 30 -10.2944 1 1 0 20.80 19.91 30 -10.0944 1 0 19.40 18.51 30 -11.4944 1 0 20.80 19.91 30 -10.0944 1 99 20.40 19.51 30 -11.3144 1 0 17.45 16.56 30 -11.3144 1 0 17.45 16.56 30 -13.3444 1 0 17.45 16.56 30 -13.3544 1 0 17.45 16.56 30 -13.3544 1 0 17.45 16.56 30 -13.3644 1 0 17.45 16.56 30 -13.3644 1 0 17.59 16.70 30 -13.3044 1 0 17.59 16.70 30 -13.3044 1 0 17.59 16.70 30 -13.3044 1 0 17.61 16.72 30 -13.2844 1 0 17.64 16.57 30 -13.2844 1 0 17.64 16.57 30 -13.2844 1 0 17.64 16.57 30 -13.2844 1 0 17.64 16.57 30 -13.2844 1 0 17.64 16.57 30 -13.2844 1 0 17.64 16.57 30 -13.2844		132572	1770	16QAM	1	0 99	21.72 21.66 20.53	20.83 20.77	30 30 30	-9.17447 -9.23447 -10.36447
20 132322 1745 64QAM 100 0 19.27 18.38 30 -11.6244 1 0 20.56 19.67 30 -10.3344 1 99 20.60 19.71 30 -10.2944 1 99 20.60 19.71 30 -11.5344 1 0 20.80 19.91 30 -11.4944 1 1 0 20.80 19.91 30 -10.0944 1 1 99 20.40 19.51 30 -10.0944 1 1 99 20.40 19.51 30 -10.4944 50 25 19.58 18.69 30 -11.3144 1 0 17.45 16.56 30 -13.4444 1 0 17.45 16.56 30 -13.4444 1 1 99 17.54 16.65 30 -13.4644 1 1 99 17.54 16.65 30 -13.4644 1 1 0 17.45 16.56 30 -13.4644 1 1 0 17.45 16.56 30 -13.4644 1 1 0 17.59 16.70 30 -13.3044 1 1 0 17.64 16.75 30 -13.4944 1 1 0 17.64 16.57 30 -13.4944 1 1 0 17.64 16.57 30 -13.4944 1 1 0 17.64 16.57 30 -13.4944 1 1 0 17.64 16.57 30 -13.4944 1 1 0 17.64 16.57 30 -13.4944 1 1 0 17.64 16.57 30 -13.4944 1 1 0 17.64 16.57 30 -13.4944 1 1 0 17.64 16.57 30 -13.4944		132072	1720	64QAM	1	0 99	20.38 20.32	19.49 19.43	30 30	-10.39447 -10.51447 -10.57447
132572 1745 64QAM 50 25 19.36 18.47 30 -11.5344 100 0 19.40 18.51 30 -10.0944 1 99 20.40 19.51 30 -10.4944 1 99 20.40 19.51 30 -10.4944 1 99 20.40 19.51 30 -10.4944 1 99 20.40 19.51 30 -11.3144 1 1 0 19.46 18.57 30 -11.3144 1 1 0 19.46 18.57 30 -11.4344 1 1 0 19.46 18.57 30 -13.3544 1 1 0 19.51 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1					100	0	19.27 20.56	18.38 19.67	30 30	-11.62447 -10.33447
132572 1770 64QAM 1 99 20.40 19.51 30 -10.4944 50 25 19.58 18.69 30 -11.3144 100 0 19.46 18.57 30 -11.4344 1 0 17.45 16.56 30 -13.4444 1 1 99 17.54 16.65 30 -13.4544 1 1 99 17.54 16.65 30 -13.4544 1 1 0 17.31 16.42 30 -13.5844 1 0 17.59 16.70 30 -13.3044 1 99 17.61 16.72 30 -13.2844 1 99 17.61 16.72 30 -13.2844 1 0 17.46 16.57 30 -13.4344 1 0 17.64 16.57 30 -13.4344 1 0 17.64 16.57 30 -13.4344 1 0 17.64 16.57 30 -13.4344 1 0 17.64 16.57 30 -13.4344	20	132322	1745	64QAM	50 100	25 0	19.36 19.40	18.47 18.51	30 30	-11.53447 -11.49447
132072 1720 256QAM 1 0 17.45 16.56 30 -13.4444 1 99 17.54 16.65 30 -13.3544 1 99 17.54 16.65 30 -13.3544 1 0 0 17.31 16.42 30 -13.4644 1 0 0 17.59 16.70 30 -13.3044 1 99 17.61 16.72 30 -13.2844 1 99 17.61 16.58 30 -13.4244 1 0 0 17.46 16.57 30 -13.4344 1 0 17.64 16.57 30 -13.4344 1 0 17.64 16.75 30 -13.2544		132572	1770	64QAM	1 50	99 25	20.40 19.58	19.51 18.69	30 30	-10.09447 -10.49447 -11.31447 -11.43447
20 132322 1745 256QAM 1 0 17.59 16.70 30 -13.3044 1 99 17.61 16.72 30 -13.2844 1 1 0 0 17.46 16.57 30 -13.4244 1 0 17.64 16.75 30 -13.2544 1 0 17.64 16.75 30 -13.2544 1 99 17.59 16.70 30 -13.3044 1 99 17.59 16.70 30 -13.3044 1 1 32572 1770 256QAM 1 99 17.59 16.70 30 -13.3044		132072	1720	256QAM	1 50	99 25	17.54 17.43	16.56 16.65 16.54	30 30 30	-13.44447 -13.35447 -13.46447 -13.58447
1 0 17.64 16.75 30 -13.2544 1 99 17.59 16.70 30 -13.3044	20	132322	1745	256QAM	1 1 50	0 99 25	17.59 17.61 17.47	16.70 16.72 16.58	30 30 30	-13.30447 -13.28447 -13.42447 -13.43447
100 0 17.48 16.59 30 -13.4144		132572	1770	256QAM	1 1 50	0 99 25	17.64 17.59 17.50	16.75 16.70 16.61	30 30 30	-13.25447 -13.30447 -13.39447 -13.41447

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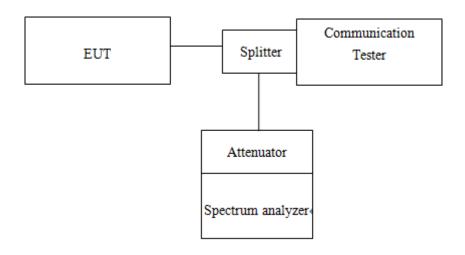
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OCCUPIED BANDWIDTH MEASUREMENT

8.1 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.

8.2 **Test Set-up**



8.3 **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%.

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f (886-2) 2298-0488



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Measurement Result 8.4

	LTE BAND 2 Channel bandwidth: 1.4MHz											
Freq.	СН		99% BW (MHz) 26 dB BW (MHz)									
(MHz)	СП	QPSK	DPSK 16QAM 64QAM 256QAM QPSK 16QAM 64QAM 256QA									
1850.7	18607	1.0862	1.0934	1.0860	1.0872	72 1.319 1.321 1.318 1.3						
1880.0	18900	1.0868	1.0882	1.0884	1.0865	1.316	1.326	1.320	1.307			
1909.3	19193	1.0893	1.0869	1.0884	1.0863	1.297	1.319	1.347	1.317			

	LTE BAND 2 Channel bandwidth: 5MHz										
Freq.	СН		99% BV	V (MHz)		26 dB BW (MHz)					
(MHz)	СП	QPSK	16QAM	64QAM	256QAM	QPSK	16QAM	64QAM	256QAM		
1852.5	18625	4.4993	4.5040	4.4926	4.5054	4 5.159 5.078 5.170 5					
1880.0	18900	4.4944	4.4952	4.4936	4.4862	5.045	5.055	5.119	5.047		
1907.5	19175	4.4980 4.4935 4.4967 4.4996 5.089 5.064 5.041 5.									

			LTE BANI	2 Channe	el bandwid	th: 15MHz					
Freq.	СН		99% BV	V (MHz)			26 dB B	W (MHz)			
(MHz)	СП	QPSK	16QAM	64QAM	256QAM	QPSK	16QAM	64QAM	256QAM		
1857.5	18675	13.457	13.450	13.473	13.446	14.76	14.76	14.69	14.79		
1880.0	18900	13.420	13.463	13.439	13.447	14.92	14.58	14.80	14.83		
1902.5	5 19125 13.448 13.433 13.445 13.443 14.77 14.57 14.78								14.77		
			LTE BAND) 5 Channe	el bandwidt	th: 1.4MHz					
Freq.	CH		99% BV	V (MHz)			26 dB B	W (MHz)			
(MHz)	CII	QPSK	16QAM	64QAM	256QAM	QPSK	16QAM	64QAM	256QAM		
824.7	20407	1.0877	1.0906	1.0900	1.0883	1.323	1.314	1.335	1.331		
836.5	20525	1.0857	1.0913	1.0901	1.0879	1.314	1.320	1.309	1.306		
848.3	20643	1.0886	1.0888	1.0880	1.0872	1.344	1.320	1.328	1.308		

	LTE BAND 5 Channel bandwidth: 5MHz											
Freq.			99% BV		CI Daria Wio	IUI. OIVII IZ	26 dB B	W (MHz)				
(MHz)	CH	QPSK	16QAM	64QAM	256QAM	QPSK	16QAM	64QAM	256QAM			
826.5	20425	4.4941	4.4935	4.4830	4.4981	5.073	5.115	5.055	5.064			
836.5	20525	4.4904	4.4934	4.4944	4.4934	5.124	5.044	5.033	5.040			
846.5	20625	4.4938	4.4970	4.4911	4.4987	5.112	5.066	5.119	5.040			
			LTE BAND 13 Channel bandwidth: 5MHz									
Freq.	СН		99% BV	V (MHz)			26 dB B	W (MHz)				
(MHz)	СП	QPSK	16QAM	64QAM	256QAM	QPSK	16QAM	64QAM	256QAM			
779.5	23205	4.4740	4.4793	4.4653	4.4788	5.029	5.026	4.985	5.000			
782.0	23230	4.5023	4.5117	4.4978	4.5052	5.124	5.142	5.147	5.158			
784.5	23255	4.4895	4.4811	4.4907	4.4879	5.058	5.092	5.071	5.070			
			LTE BAND	66 Chann	el bandwid	th: 1.4MHz						
Freq.	СН		99% BV	V (MHz)			26 dB B	W (MHz)				
(MHz)	СН	QPSK	16QAM	64QAM	256QAM	QPSK	16QAM	64QAM	256QAM			
1710.7	131979	1.0868	1.0900	1.0865	1.0899	1.314	1.314	1.319	1.311			
1745.0	132322	1.0836	1.0883	1.0863	1.0877	1.313	1.329	1.331	1.304			
1779.3	132665	1.0852	1.0886	1.0891	1.0868	1.324	1.323	1.322	1.315			

	LTE BAND 66 Channel bandwidth: 5MHz											
Freq.	СН		99% BW (MHz) 26 dB BW (MHz)									
(MHz)	СП	QPSK	PSK 16QAM 64QAM 256QAM QPSK 16QAM 64QAM 256Q									
1712.5	131997	4.4911	4.5029	4.5020	4.4845	5.160	5.102	5.064	5.045			
1745.0	132322	4.5045	4.4904	4.4873	4.4890	5.152	5.111	5.104	5.075			
1777.5	132647	4.4943	4.5005	4.4967	4.4960	5.115	5.085	5.091	5.070			

	LTE BAND 66 Channel bandwidth: 15MHz											
Freq.	СН		99% BV	V (MHz)			26 dB B	W (MHz)				
(MHz)	CII	QPSK	QPSK 16QAM 64QAM 256QAM QPSK 16QAM 64QAM 2									
1717.5	132047	13.470	13.465	13.453	13.452	14.94	14.84	14.81	14.75			
1745.0	132322	13.452	13.453	13.466	13.456	14.77	14.90	14.81	14.78			
1772.5	132597	13.458	13.458	13.440	13.466	14.78	14.66	14.86	14.88			

	LTE BAND 2 Channel bandwidth: 3MHz										
Freq.	СН		99% BV	V (MHz)			26 dB B	W (MHz)			
(MHz)	СП	QPSK	PSK 16QAM 64QAM 256QAM QPSK 16QAM 64QAM 256								
1851.5	18615	2.6962	2.7004	2.7010	2.6980	2.994	3.038	3.031	3.044		
1880.0	18900	2.6962	2.7025	2.6917	2.6908	3.024	3.025	3.017	2.986		
1908.5	19185	2.6964	2.6973	2.6928	2.6900	3.027	3.007	3.002	3.033		

	LTE BAND 2 Channel bandwidth: 10MHz											
Freq.	СН		99% BW (MHz) 26 dB BW (MHz)									
(MHz)	СП	QPSK	PSK 16QAM 64QAM 256QAM QPSK 16QAM 64QAM 256QA									
1855.0	18650	8.9840	8.9675	8.9805	8.9795	10.100	10.020	9.897	9.878			
1880.0	18900	8.9928	8.9763	8.9830	8.9755	10.020	9.927	9.974	9.889			
1905.0	19150	8.9844	8.9827	8.9575	8.9669	10.020	9.894	10.010	10.000			

			LTE BANI	2 Channe	el bandwid	th: 20MHz				
Freq.	CH		99% BV	V (MHz)			26 dB B	W (MHz)		
(MHz)	CII	QPSK	16QAM	64QAM	256QAM	QPSK	16QAM	64QAM	256QAM	
1860.0	18700	17.951	17.911	17.921	17.958	19.59	19.60	19.48	19.64	
1880.0	18900	17.943	17.932	17.900	19.68	19.47	19.60			
1900.0	19100	17.943	17.917	17.923	17.902	19.71	19.62	19.31	19.52	
			LTE BAN	D 5 Chann	el bandwid	Ith: 3MHz				
Freq.	СН		99% BV	V (MHz)		26 dB BW (MHz)				
(MHz)	СП	QPSK	16QAM	64QAM	256QAM	QPSK	16QAM	64QAM	256QAM	
825.5	20415	2.6966	2.7018	2.6971	2.6956	3.054	3.009	3.026	2.998	
836.5	20525	2.6979	2.7004	2.6932	2.6944	3.021	3.028	3.021	3.018	
847.5	20635	2.6954	2.6914	2.6943	2.7005	3.042	3.019	3.009	3.033	

	LTE BAND 5 Channel bandwidth: 10MHz											
Freq.	СН		99% BV	V (MHz)			26 dB B	W (MHz)				
(MHz)	СП	QPSK	16QAM	64QAM	256QAM	QPSK	16QAM	64QAM	256QAM			
829.0	20450	8.9711	11 8.9525 8.9599 8.9515 9.901 9.893 9.930 9.									
836.5	20525	8.9615	9615 8.9698 8.9722 8.9535 9.858 9.878 9.979									
844.0	20600	8.9889	8.9975	8.9753	8.9795	9.974	9.878	9.818	9.906			
			LTE BAND	13 Chann	el bandwid	Ith: 10MHz						
Freq.	CH		99% BV	V (MHz)			26 dB B	W (MHz)				
(MHz)	CH	QPSK	PSK 16QAM 64QAM 256QAM QPSK 16QAM 64QAM 256C									
782.0	23230	8.9439	8.9439 8.9336 8.9497 8.9585 9.796 9.906 9.877 9.84									

	LTE BAND 66 Channel bandwidth: 3MHz											
Freq. CH 99% BW (MHz) 26 dB BW (MHz)												
(MHz)	CII	QPSK 16QAM 64QAM 256QAM QPSK 16QAM 64QAM 256QAM										
1711.5	131987	2.6942	2.7014	2.6935	2.6989	2.995	3.023	2.977	3.040			
1745.0	132322	2.7027	2.6927	2.6995	2.6941	3.017	3.003	3.049	3.021			
1778.5	132657	2.7012	2.6979	2.6993	2.6972	3.010	3.015	3.051	3.011			

LTE BAND 66 Channel bandwidth: 10MHz											
Freq.	СН	99% BW (MHz)				26 dB BW (MHz)					
(MHz)		QPSK	16QAM	64QAM	256QAM	QPSK	16QAM	64QAM	256QAM		
1715.0	132022	8.9736	8.9796	8.9803	8.9611	10.090	9.928	9.960	9.943		
1745.0	132322	8.9881	8.9954	9.0047	8.9658	9.990	9.875	9.999	9.805		
1775.0	132622	9.0030	8.9823	8.9903	8.9963	10.040	10.060	9.960	9.982		

LTE BAND 66 Channel bandwidth: 20MHz											
Freq.	СН	99% BW (MHz)				26 dB BW (MHz)					
(MHz)		QPSK	16QAM	64QAM	256QAM	QPSK	16QAM	64QAM	256QAM		
1720.0	132072	17.924	17.962	17.933	17.956	19.61	19.59	19.66	19.57		
1745.0	132322	17.905	17.950	17.920	17.942	19.55	19.52	19.80	19.63		
1770.0	132572	17.934	17.929	17.930	17.924	19.60	19.61	19.44	19.48		

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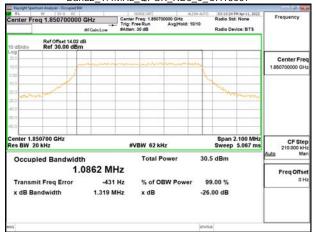
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Band2_1.4MHz_QPSK_RB6_0_CH18607



Band2_1.4MHz_QPSK_RB6_0_CH18900



Band2_1.4MHz_QPSK_RB6_0_CH19193



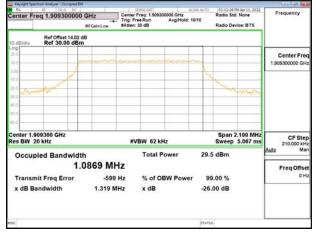
Band2_1.4MHz_16QAM_RB6_0_CH18607



Band2_1.4MHz_16QAM_RB6_0_CH18900



Band2_1.4MHz_16QAM_RB6_0_CH19193



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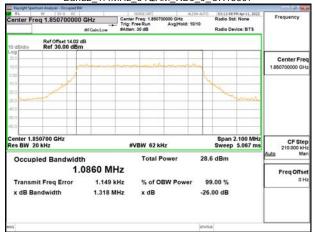
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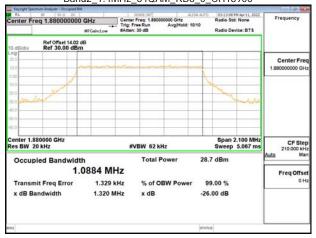


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Band2_1.4MHz_64QAM_RB6_0_CH18900



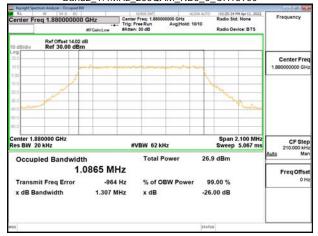
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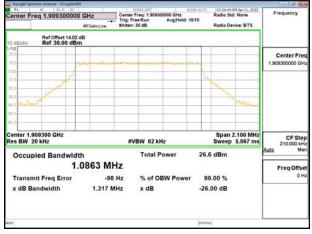
Band2_1.4MHz_256QAM_RB6_0_CH18607



Band2_1.4MHz_256QAM_RB6_0_CH18900



Band2_1.4MHz_256QAM_RB6_0_CH19193



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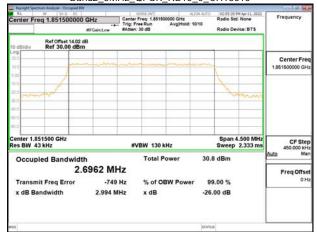
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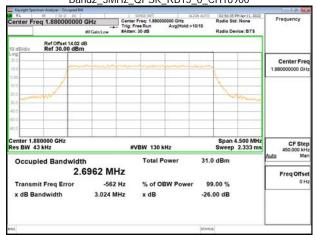


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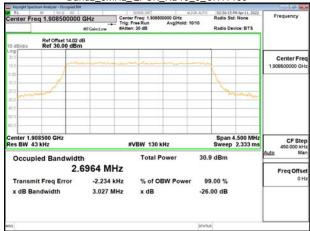
Band2_3MHz_QPSK_RB15_0_CH18615



Band2_3MHz_QPSK_RB15_0_CH18900



Band2 3MHz QPSK RB15 0 CH19185



Band2_3MHz_16QAM_RB15_0_CH18615



Band2_3MHz_16QAM_RB15_0_CH18900



Band2_3MHz_16QAM_RB15 0 CH19185



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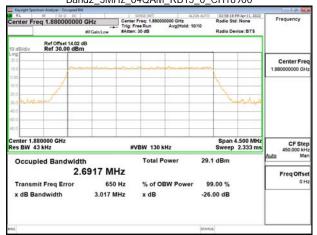


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Band2_3MHz_64QAM_RB15_0_CH18615



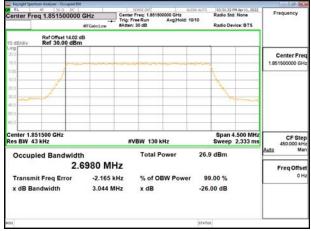
Band2_3MHz_64QAM_RB15_0_CH18900



Band2_3MHz_64QAM_RB15_0_CH19185



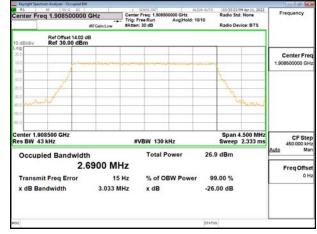
Band2_3MHz_256QAM_RB15_0_CH18615



Band2_3MHz_256QAM_RB15_0_CH18900



Band2_3MHz_256QAM_RB15_0_CH19185



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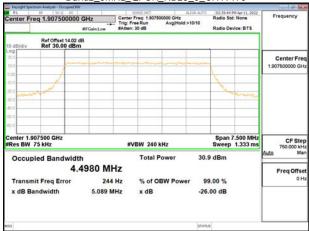
Band2 5MHz QPSK RB25 0 CH18625



Band2_5MHz_QPSK_RB25_0_CH18900



Band2_5MHz_QPSK_RB25_0_CH19175



Band2_5MHz_16QAM_RB25_0_CH18625



Band2_5MHz_16QAM_RB25_0_CH18900



Band2_5MHz_16QAM_RB25_0_CH19175



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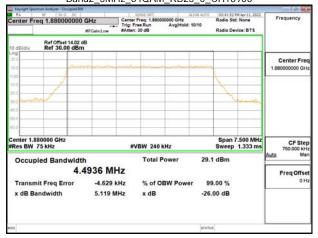


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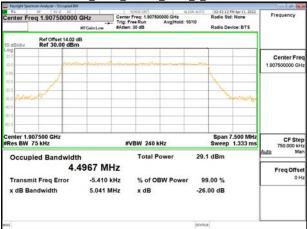
Band2_5MHz_64QAM_RB25_0_CH18625



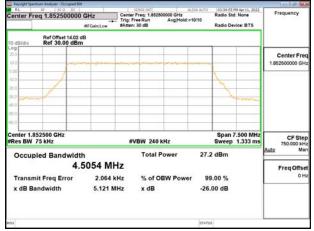
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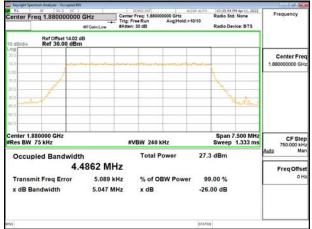
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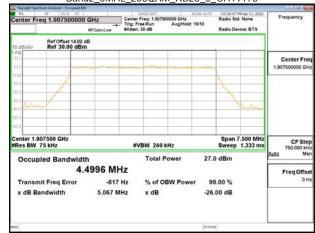
Band2_5MHz_256QAM_RB25_0_CH18625



Band2_5MHz_256QAM_RB25_0_CH18900



Band2 5MHz 256QAM RB25 0 CH19175



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Band2_10MHz_QPSK_RB50_0_CH18650



Band2_10MHz_QPSK_RB50_0_CH18900



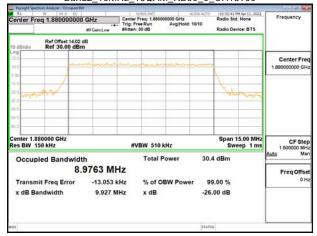
Band2 10MHz QPSK RB50 0 CH19150



Band2_10MHz_16QAM_RB50_0_CH18650



Band2_10MHz_16QAM_RB50_0_CH18900



Band2_10MHz_16QAM_RB50 0 CH19150



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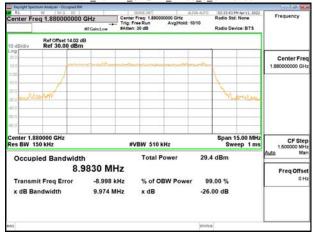


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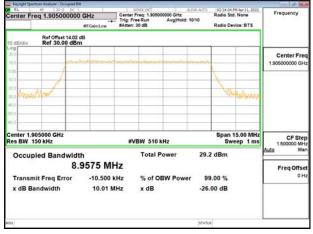
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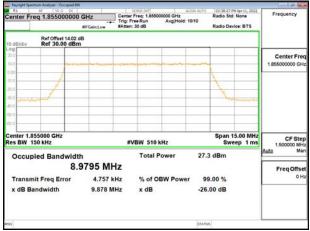
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Band2 10MHz 64QAM RB50 0 CH19150



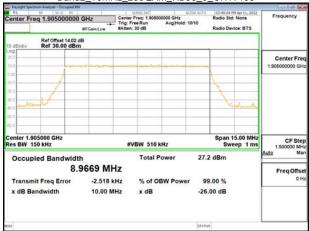
Band2_10MHz_256QAM_RB50_0_CH18650



Band2_10MHz_256QAM_RB50_0_CH18900



Band2 10MHz 256QAM RB50 0 CH19150



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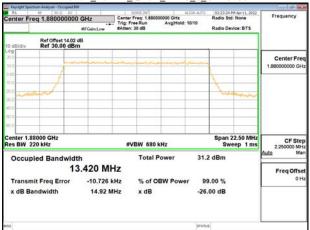


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Band2_15MHz_QPSK_RB75_0_CH18675



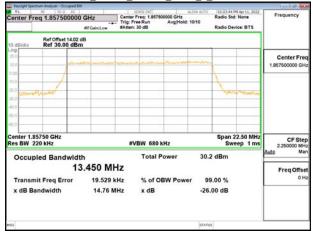
Band2_15MHz_QPSK_RB75_0_CH18900



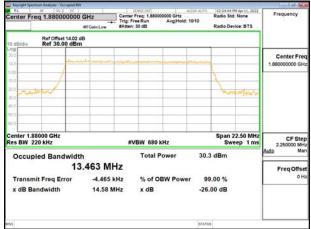
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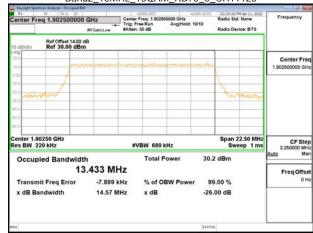
Band2_15MHz_16QAM_RB75_0_CH18675



Band2_15MHz_16QAM_RB75_0_CH18900



Band2 15MHz 16QAM RB75 0 CH19125



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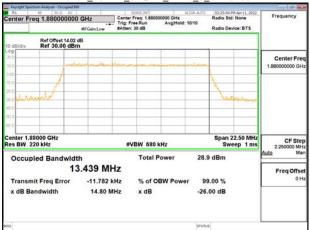


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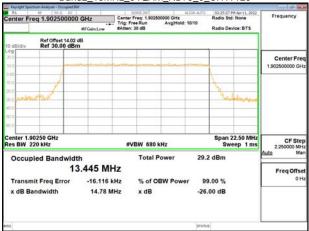
Band2 15MHz 64QAM RB75 0 CH18675



Band2_15MHz_64QAM_RB75_0_CH18900



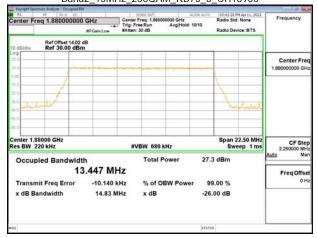
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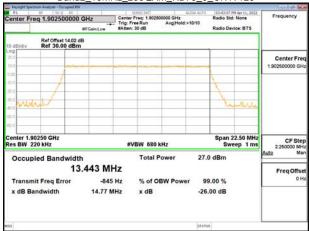
Band2_15MHz_256QAM_RB75_0_CH18675



Band2_15MHz_256QAM_RB75_0_CH18900



Band2 15MHz 256QAM RB75 0 CH19125



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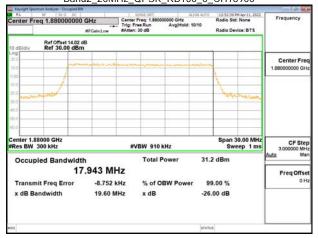


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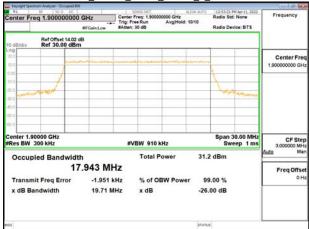
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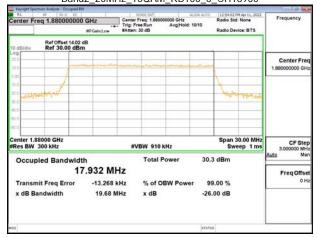
Band2_20MHz_QPSK_RB100_0_CH19100



Band2_20MHz_16QAM_RB100_0_CH18700



Band2_20MHz_16QAM_RB100_0_CH18900



Band2_20MHz_16QAM_RB100_0_CH19100



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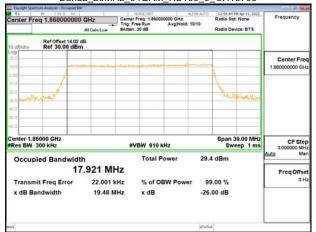
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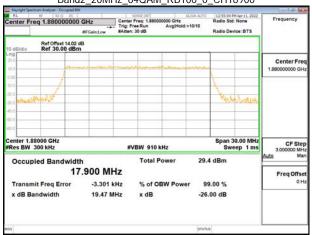


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Band2_20MHz_64QAM_RB100_0_CH18700



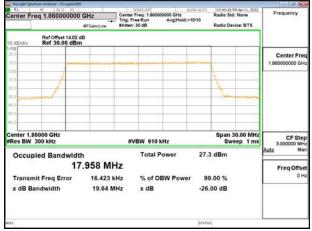
Band2_20MHz_64QAM_RB100_0_CH18900



Band2_20MHz_64QAM_RB100_0_CH19100



Band2_20MHz_256QAM_RB100_0_CH18700



Band2_20MHz_256QAM_RB100_0_CH18900



Band2_20MHz_256QAM_RB100_0_CH19100



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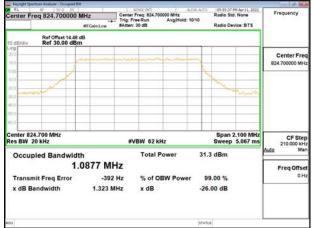
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Band5_1.4MHz_QPSK_RB6_0_CH20407



Band5_1.4MHz_QPSK_RB6_0_CH20525



Band5_1.4MHz_QPSK_RB6_0_CH20643



Band5_1.4MHz_16QAM_RB6_0_CH20407



Band5_1.4MHz_16QAM_RB6_0_CH20525



Band5_1.4MHz_16QAM_RB6_0_CH20643



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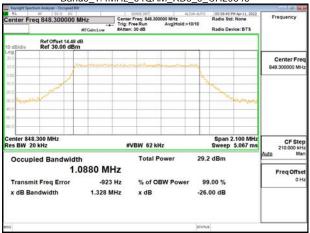
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Band5_1.4MHz_64QAM_RB6_0_CH20525



Band5 1.4MHz 64QAM RB6 0 CH20643



Band5_1.4MHz_256QAM_RB6_0_CH20407



Band5_1.4MHz_256QAM_RB6_0_CH20525



Band5 1.4MHz 256QAM RB6 0 CH20643



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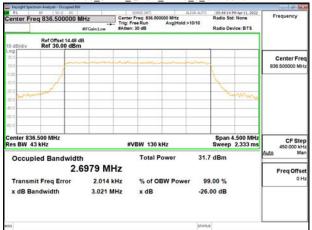


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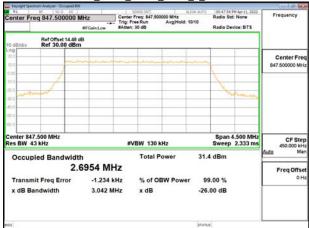
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Band5_3MHz_QPSK_RB15_0_CH20525



Band5_3MHz_QPSK_RB15_0_CH20635



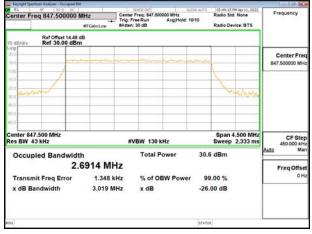
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Band5_3MHz_16QAM_RB15_0_CH20525



Band5_3MHz_16QAM_RB15_0_CH20635



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Band5_3MHz_64QAM_RB15_0_CH20415



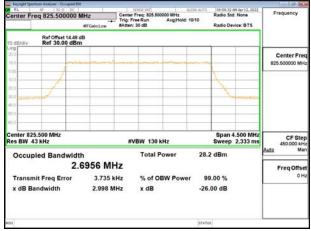
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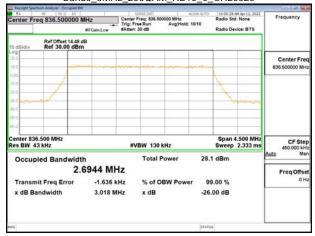
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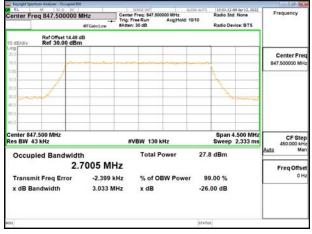
Band5_3MHz_256QAM_RB15_0_CH20415



Band5_3MHz_256QAM_RB15_0_CH20525



Band5_3MHz_256QAM_RB15_0_CH20635



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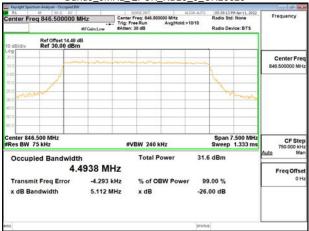
Band5 5MHz QPSK RB25 0 CH20425



Band5_5MHz_QPSK_RB25_0_CH20525



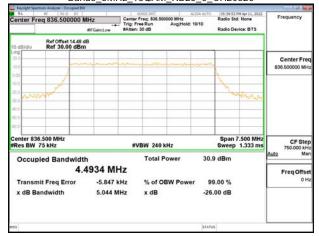
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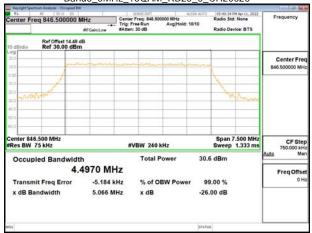
Band5_5MHz_16QAM_RB25_0_CH20425



Band5_5MHz_16QAM_RB25_0_CH20525



Band5_5MHz_16QAM_RB25_0_CH20625



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Band5_5MHz_64QAM_RB25_0_CH20425



Band5_5MHz_64QAM_RB25_0_CH20525



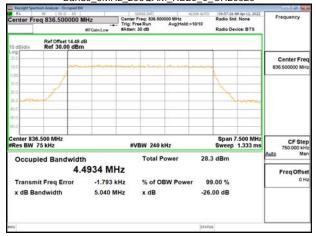
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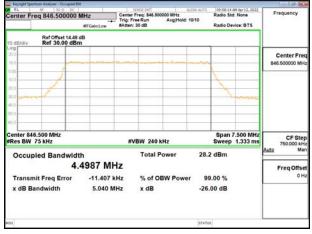
Band5_5MHz_256QAM_RB25_0_CH20425



Band5_5MHz_256QAM_RB25_0_CH20525



Band5_5MHz_256QAM_RB25_0_CH20625



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Band5_10MHz_QPSK_RB50_0_CH20450



Band5_10MHz_QPSK_RB50_0_CH20525



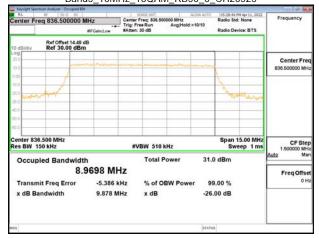
Band5_10MHz_QPSK_RB50_0_CH20600



Band5_10MHz_16QAM_RB50_0_CH20450



Band5_10MHz_16QAM_RB50_0_CH20525



Band5_10MHz_16QAM_RB50_0_CH20600



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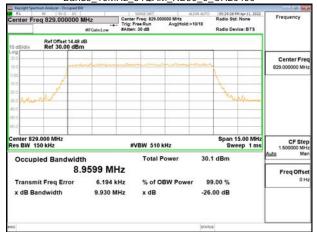
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Band5 10MHz 64QAM RB50 0 CH20450



Band5_10MHz_64QAM_RB50_0_CH20525



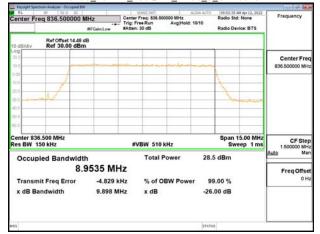
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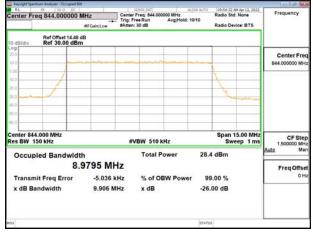
Band5_10MHz_256QAM_RB50_0_CH20450



Band5_10MHz_256QAM_RB50_0_CH20525



Band5 10MHz 256QAM RB50 0 CH20600



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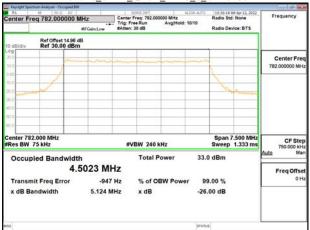


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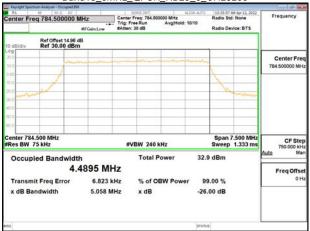
Band13_5MHz_QPSK_RB25_0_CH23205



Band13_5MHz_QPSK_RB25_0_CH23230



Band13_5MHz_QPSK_RB25_0_CH23255



Band13_5MHz_16QAM_RB25_0_CH23205



Band13_5MHz_16QAM_RB25_0_CH23230



Band13_5MHz_16QAM_RB25_0_CH23255



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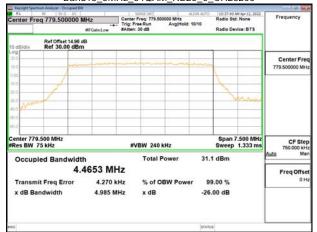
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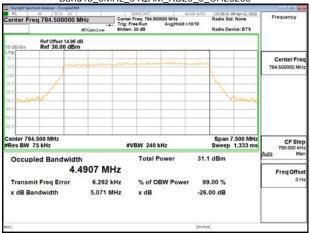
Band13 5MHz 64QAM RB25 0 CH23205



Band13_5MHz_64QAM_RB25_0_CH23230



Band13_5MHz_64QAM_RB25_0_CH23255



Band13_5MHz_256QAM_RB25_0_CH23205



Band13_5MHz_256QAM_RB25_0_CH23230



Band13 5MHz 256QAM RB25 0 CH23255



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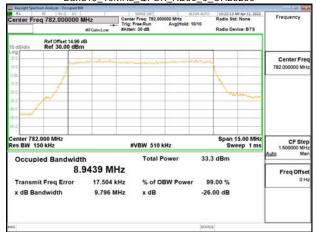
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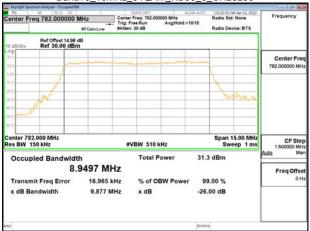
Band13_10MHz_QPSK_RB50_0_CH23230



Band13_10MHz_16QAM_RB50_0_CH23230



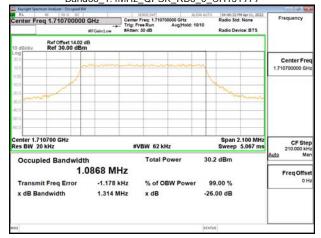
Band13 10MHz 64QAM RB50 0 CH23230



Band13_10MHz_256QAM_RB50_0_CH23230



Band66_1.4MHz_QPSK_RB6_0_CH131979



Band66 1.4MHz QPSK RB6 0 CH132322



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Band66_1.4MHz_QPSK_RB6_0_CH132665



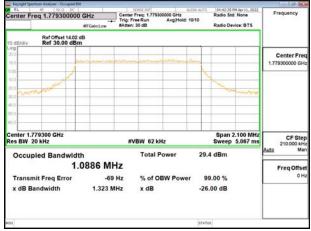
Band66_1.4MHz_16QAM_RB6_0_CH131979



Band66_1.4MHz_16QAM_RB6_0_CH132322



Band66_1.4MHz_16QAM_RB6_0_CH132665



Band66_1.4MHz_64QAM_RB6_0_CH131979



Band66_1.4MHz_64QAM_RB6_0_CH132322



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