

ELECTROMAGNETIC EMISSIONS COMPLIANCE REPORT



Applicant:	Laipac Technology Inc 25 Valleywood Drive Unit11, Markham, Ontario, Canada, L3R 5L9
Product Name:	Lola HT 2
Brand Name:	LAIPAC
Model No.:	Lola HT 2-N
Model Difference:	N/A
Report Number:	ER/2021/40008
FCC ID	TET-LOLAHT2
IC:	11280A-LOLAHT2
Issue Date:	May. 21, 2021
Date of Test:	Apr. 13, 2021~May. 14, 2021
Date of EUT Received:	Apr. 13, 2021

Approved By

JJ Chen

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 and ISED RSS-Gen, 130, 132, 133, 139.

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		
ER/2021/40008	Rev.00	Original.	May 21, 2021	Yi-Shan Tsai		

Note:

1 · Antenna information is provided by the applicant, test results of this report are applicable to the sample EUT received.

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Contents

1	GENERAL PRODUCT INFORMATION	4
2	SYSTEM TEST CONFIGURATION	11
3	SUMMARY OF TEST RESULTS	14
4	DESCRIPTION OF TEST MODES	15
5	MEASUREMENT UNCERTAINTY	19
6	MAXMUM OUTPUT POWER	20
7	OCCUPIED BANDWIDTH MEASUREMENT	40
8	OUT OF BAND EMISSION AT ANTENNA TERMINALS	81
9	FIELD STRENGTH OF SPURIOUS RADIATION MEASUREMENT	125
10	FREQUENCY STABILITY MEASUREMENT	. 191
11	PEAK TO AVERAGE RATIO	. 197

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Report No.: ER/2021/40008 Page: 4 of 218



GENERAL PRODUCT INFORMATION 1

1.1 **Product Description**

Product Name:	Lola HT 2
Brand Name:	LAIPAC
Model No.:	Lola HT 2-N
Model Difference:	N/A
Hardware Version:	V2.0
Firmware Version:	V1.14.02
EUT Series No.:	862632041426130 (Conducted) 866258042625407 (Radiated)
Power Supply:	Bettery 3.7Vdc

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Report No.: ER/2021/40008 Page: 5 of 218

1.2 **Operation 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	826.4	-	846.6		

LTE Band 2					
BW (MHz)	Operation F	Operation Frequency (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 Band 4					
BW (MHz)	Operation F	Operation Frequency (MHz)			
1.4	1710.7	-	1754.3		
3	1711.5	-	1753.5		
5	1712.5	-	1752.5		
10	1715.0	-	1750.0		
15	1717.5	-	1747.5		
20	1720.0	-	1745.0		

LTE Band 5					
BW (MHz)	BW (MHz) Operation Frequency (MHz)				
1.4	824.7	-	848.3		
3	825.5	-	847.5		
5	826.5	-	846.5		
10	829.0	-	844.0		

LTE Band 12					
BW (MHz)	(MHz) Operation Frequency (MHz)				
1.4	699.7	-	715.3		
3	700.5	-	714.5		
5	701.5	-	713.5		
10	704.0	-	711.0		

LTE Band 13				
BW (MHz)	Operation F	requ	uency (MHz)	
5	779.5	-	784.5	
10	782.0			

Note: Operation frequency 814~824MHz is diabled in Canada.

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1.3 **Antenna Designation**

Туре	Modulation	Frequency (MHz)		•	Peak Antenna Gain (dBi)
	WCDMA / HSPA Band II	1852.4	~	1907.6	-2.07
	WCDMA / HSPA Band IV	1712.4	~	1752.6	-2.35
	WCDMA / HSPA Band V	826.4	~	846.6	-1.04
Dinala	LTE Band 2	1850	~	1910	-2.07
Dipole	LTE Band 4	1710		1755	-2.35
	LTE Band 5	824		849	-1.04
	LTE Band 12	699		716	-5.28
	LTE Band 13	777		787	-4.91

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

	ERP / EIR	P (dBm)	W	99%	Type of Emission
WCDMA Band II	21.10	EIRP	0.129	4.7140	4M71F9W
HSDPA Band II	20.06	EIRP	0.101	4.1232	4M12F9W
HSUPA Band II	18.87	EIRP	0.077	4.1284	4M13F9W
WCDMA Band IV	20.83	EIRP	0.121	4.1312	4M13F9W
HSDPA Band IV	19.91	EIRP	0.098	4.1197	4M12F9W
HSUPA Band IV	19.88	EIRP	0.097	4.1133	4M11F9W
WCDMA Band V	20.27	ERP	0.106	4.1345	4M13F9W
HSDPA Band V	19.65	ERP	0.092	4.1541	4M15F9W
HSUPA Band V	19.65	ERP	0.092	4.1534	4M15F9W

LTE Band	BW	Modula- tion	ERP / E	EIRP (dBm)	(W)	99%	Type of Emission	Frequency Tolerance (Hz)
2	1.4	QPSK	20.82	EIRP	0.121	1.0869	1M09G7D	11
2	1.4	16QAM	19.48	EIRP	0.089	0.2577	0M26KD7W	11
0	0	QPSK	20.92	EIRP	0.124	2.6886	2M69G7D	11
2	2 3	16QAM	19.49	EIRP	0.089	0.3270	0M33KD7W	11
2	5	QPSK	20.65	EIRP	0.116	4.4900	4M49G7D	11
2	5	16QAM	19.56	EIRP	0.090	0.4628	0M46KD7W	11
2	10	QPSK	21.12	EIRP	0.129	8.9679	8M97G7D	11
2	10	16QAM	19.41	EIRP	0.087	0.6658	0M67KD7W	11
2	15	QPSK	21.10	EIRP	0.129	13.428	13M4G7D	11
2	15	16QAM	19.58	EIRP	0.091	1.028	1M03D7W	11
2	20	QPSK	20.71	EIRP	0.118	17.867	17M9G7D	11
2	20	16QAM	19.34	EIRP	0.086	1.224	1M22D7W	11

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LTE Band BW Modular tion ERP / EIRP (dBm) (W) 99% Type of Links Trigetarios Tolerance (Hz) 4 1.4 QPSK 21.10 EIRP 0.129 1.0872 1M09G7D 11 4 3 QPSK 20.19 EIRP 0.093 0.2557 0M26KD7W 11 4 3 QPSK 20.19 EIRP 0.104 2.6858 2M69G7D 11 4 16QAM 19.70 EIRP 0.104 4.4861 4M49G7D 11 4 10 QPSK 20.56 EIRP 0.114 8.9560 8M96G7D 11 4 10 QPSK 20.56 EIRP 0.084 0.6629 0M66KD7W 11 4 16QAM 19.25 EIRP 0.137 17.8530 17M9G7D 11 4 20 QPSK 21.37 EIRP 0.091 1.249 140207W 11 5 1.4 QPSK 19.47	LTE		Modula-					Type of Emis-	Frequency
$ \begin{array}{c c c c c c c c c c c c c c c c c c c $		BW		ERP / E	IRP (dBm)	(W)	99%		Frequency Tolerance (Hz)
$ \begin{array}{ c c c c c c c } \hline \begin{tabular}{ c c c c c c c } \hline \begin{tabular}{ c c c c c c c c c c c c c c c c c c c$	4	1 /	QPSK	21.10	EIRP	0.129	1.0872	1M09G7D	11
$ \begin{array}{c c c c c c c c c c c c c c c c c c c $	4	1.4	16QAM	19.70	EIRP	0.093	0.2557	0M26KD7W	11
$ \begin{array}{ c c c c c c c } \hline \begin{tabular}{ c c c c c c c } \hline \begin{tabular}{ c c c c c c c c c c c c c c c c c c c$	4	2	QPSK	20.19	EIRP	0.104	2.6858	2M69G7D	11
$ \begin{array}{c c c c c c c c c c c c c c c c c c c $	4	3	16QAM	19.70	EIRP	0.093	0.3142	0M31KD7W	11
$ \begin{array}{ c c c c c c c } \hline \begin{tabular}{ c c c c c c c } \hline \begin{tabular}{ c c c c c c c c c c c c c c c c c c c$	4	Б	QPSK	20.18	EIRP	0.104	4.4861	4M49G7D	11
$ \begin{array}{c c c c c c c c c c c c c c c c c c c $	4	5	16QAM	19.46	EIRP	0.088	0.4839	0M48KD7W	11
$ \begin{array}{c c c c c c c c c c c c c c c c c c c $	4	10	QPSK	20.56	EIRP	0.114	8.9560	8M96G7D	11
$ \begin{array}{c c c c c c c c c c c c c c c c c c c $	4	10	16QAM	19.25	EIRP	0.084	0.6629	0M66KD7W	11
$ \begin{array}{ c c c c c c } \hline \begin{tabular}{ c c c c } \hline \begin{tabular}{ c c c c c c c } \hline \begin{tabular}{ c c c c c c c } \hline \begin{tabular}{ c c c c c c c c c c c c c c c c c c c$	4	15	QPSK	21.08	EIRP	0.128	13.4310	13M4G7D	11
$ \begin{array}{c c c c c c c c c c c c c c c c c c c $	4	15	16QAM	19.70	EIRP	0.093	1.0138	1M01D7W	11
$ \begin{array}{ c c c c c c c } \hline 16QAM & 19.60 & EIRP & 0.091 & 1.2449 & 1M24D7W & 11 \\ \hline 1100 & 1100 $	4	20	QPSK	21.37	EIRP	0.137	17.8530	17M9G7D	11
$ \begin{array}{c c c c c c c c c c c c c c c c c c c $	4	20	16QAM	19.60	EIRP	0.091	1.2449	1M24D7W	11
$ \begin{array}{c c c c c c c c c c c c c c c c c c c $		-		T					
5 1.4 16QAM 18.79 ERP 0.076 0.2496 0M25KD7W 11 5 3 QPSK 19.57 ERP 0.091 2.6849 2M68G7D 11 5 3 IGQAM 18.39 ERP 0.069 0.4915 0M49KD7W 11 5 3 QPSK 19.62 ERP 0.092 4.4816 4M48G7D 11 5 16QAM 18.76 ERP 0.075 0.4915 0M49KD7W 11 5 10 QPSK 19.69 ERP 0.093 8.9538 8M95G7D 11 5 10 QPSK 19.69 ERP 0.074 0.6347 0M63KD7W 11 5 Modula- tion ERP / EIRP (dBm) (W) 99% Type of Emis- sion Frequency Tolerance (Hz) 12 1.4 QPSK 15.52 ERP 0.028 0.2539 0M25KD7W 9 12 3 QPSK 15.15 ER		BW		, <i>,</i> ,		(W)	99%		
$ \begin{array}{c c c c c c c c c c c c c c c c c c c $	5	1 /	QPSK	19.41	ERP	0.087	1.0862	1M09G7D	11
$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$	5	5 1.4	16QAM	18.79	ERP	0.076	0.2496	0M25KD7W	11
$ \begin{array}{c c c c c c c c c c c c c c c c c c c $	5	2	QPSK	19.57	ERP	0.091	2.6849	2M68G7D	11
5 5 16QAM 18.76 ERP 0.075 0.4915 0M49KD7W 11 5 10 QPSK 19.69 ERP 0.093 8.9538 8M95G7D 11 5 10 16QAM 18.72 ERP 0.074 0.6347 0M63KD7W 11 5 16QAM 18.72 ERP 0.074 0.6347 0M63KD7W 11 6 Modula- tion ERP / EIRP (dBm) (W) 99% Type of Emis- sion Frequency Tolerance (Hz) 12 1.4 QPSK 15.52 ERP 0.036 1.0863 1M09G7D 9 12 1.4 QPSK 15.52 ERP 0.028 0.2539 0M25KD7W 9 12 3 QPSK 15.15 ERP 0.033 2.6838 2M68G7D 9 12 3 QPSK 15.07 ERP 0.026 0.3248 0M32KD7W 9 12 5 QPSK 15.07 ER	5	5	16QAM	18.39	ERP	0.069	0.4915	0M49KD7W	11
$ \begin{array}{c c c c c c c c c c c c c c c c c c c $	5	Б	QPSK	19.62	ERP	0.092	4.4816	4M48G7D	11
$ \begin{array}{c c c c c c c c c c c c c c c c c c c $	5	5	16QAM	18.76	ERP	0.075	0.4915	0M49KD7W	11
LTE Band BW Modula- tion ERP / EIRP (dBm) (W) 99% Type of Emis- sion Frequency Tolerance (Hz) 12 1.4 QPSK 15.52 ERP 0.036 1.0863 1M09G7D 9 12 1.4 QPSK 15.52 ERP 0.028 0.2539 0M25KD7W 9 12 3 QPSK 15.15 ERP 0.028 0.2539 0M25KD7W 9 12 3 QPSK 15.15 ERP 0.028 0.2539 0M25KD7W 9 12 3 QPSK 15.15 ERP 0.033 2.6838 2M68G7D 9 12 3 QPSK 15.07 ERP 0.026 0.3248 0M32KD7W 9 12 5 QPSK 15.07 ERP 0.025 0.4979 0M50KD7W 9 12 10 QPSK 15.18 ERP 0.033 8.9610 8M96G7D 9	5	10	QPSK	19.69	ERP	0.093	8.9538	8M95G7D	11
$ \begin{array}{c c c c c c c c c c c c c c c c c c c $	5	10	16QAM	18.72	ERP	0.074	0.6347	0M63KD7W	11
$ \begin{array}{c c c c c c c c c c c c c c c c c c c $			1	1			1	I	
$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$		BW		ERP / E	IRP (dBm)	(W)	99%	•••	
$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$	10	1 /	QPSK	15.52	ERP	0.036	1.0863	1M09G7D	9
$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$	12	1.4	16QAM	14.48	ERP	0.028	0.2539	0M25KD7W	9
$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$	10	2	QPSK	15.15	ERP	0.033	2.6838	2M68G7D	9
12 5 16QAM 14.02 ERP 0.025 0.4979 0M50KD7W 9 12 10 QPSK 15.18 ERP 0.033 8.9610 8M96G7D 9	12	3	16QAM	14.07	ERP	0.026	0.3248	0M32KD7W	9
16QAM 14.02 ERP 0.025 0.4979 0M50KD7W 9 12 10 QPSK 15.18 ERP 0.033 8.9610 8M96G7D 9	10	5	QPSK	15.07	ERP	0.032	4.4807	4M48G7D	9
	12	э	16QAM	14.02	ERP	0.025	0.4979	0M50KD7W	9
¹² 10 16QAM 14.51 ERP 0.028 0.6709 0M67KD7W 9	10	10	QPSK	15.18	ERP	0.033	8.9610	8M96G7D	9
	12	10	16QAM	14.51	ERP	0.028	0.6709	0M67KD7W	9

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Report No.: ER/2021/40008 Page: 9 of 218

LTE Band	BW	Modula- tion	ERP / E	EIRP (dBm)	P (dBm) (W)		Type of Emis- sion	Frequency Tolerance (Hz)
13	5	QPSK	15.65	ERP	0.037	4.4867	4M49G7D	10
13	5	16QAM	15.00	ERP	0.032	0.5064	0M51KD7W	10
13	10	QPSK	15.51	ERP	0.036	8.9580	8M96G7D	10
15	10	16QAM	14.96	ERP	0.031	0.6847	0M68KD7W	10

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1.5 Test Methodology of Applied Standards

FCC 47 CFR Part 2, 22H, 24E, 27C.

ISED RSS-130 Issue 2 Feb. 2019,

ISED RSS-132 Issue 3 Jan. 2013

ISED RSS-133 Issue 6, Amendment 1 Jan. 18, 2018, ISED RSS-139 Issue 3 July 16, 2015

ANSI C63.26-2015

KDB971168 D01 Power Meas license Digital System v03r01

KDB412172 D01 Determining ERP and EIRP v01r01

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

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		
		Conducted 4		
		Conducted 5		 TW3702
SGS Taiwan Ltd.		Conducted 6		
Central RF Lab.		Conduction A		
(TAF code 3702)		SAC C		
(1A1 COUE 5702)		SAC D		
		SAC G		
	No 2 Kaji 1at Rd. Cujahan District	Conducted A		
	No.2, Keji 1st Rd., Guishan District, Taoyuan City, Taiwan 333	Conducted B	TW0028	
	Tabydan City, Taiwan 555	Conducted C		
		Conducted D		
		Conducted E		
		Conducted F		
		Conducted G		

tion where measurements occurred in specific test site and address.

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*9m*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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(株分分気の) し祝き感味(調力病心(kong 真) 「何可以依の理解 回知人 や本様寺永庭本なづき面前子) 小う守防視表。 This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <u>http://www.sgs.com.tw/Terms-and-Conditions</u> and for electronic format documents, subject to Terms and Conditions for Electronic Documents at <u>http://www.sgs.com.tw/Terms-and-Conditions</u>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. SGS Taiwan Ltd. No.134,Wu Kung Road, New Taipei Industrial Park, Wuku District, New Taipei City, Taiwan/新北市五股區新北產業園區五工路 134 號

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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.

i eneming eneme an eneer ee			
	RF cable loss (dB)	Attenuation factor(dB)	offset(dB)
LB(1GHz below)	4.13	10	14.13
MB(1GHz - 2GHz)	4.52	10	14.52
MB(2GHz - 3GHz)	4.8	10	14.8

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2.5 **Final Amplifier Voltage and Current Information:**

Test Mode	DC voltage (V)	DC current (mA)
WCDMA B2		834
HSUPA B2		768
HSDPA B2		792
WCDMA B4		813
HSUPA B4		736
HSDPA B4		850
WCDMA B5	3.7	822
HSUPA B5	3.7	776
HSDPA B5		798
LTE Band 2_20M QPSK		835
LTE Band 4_20M QPSK		788
LTE Band 5_10M QPSK		806
LTE Band 5_10M QPSK]	870
LTE Band 13_10M QPSK		786

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2.6 **Configuration of Tested System**

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

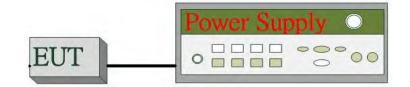


Fig. 2-2 Configuration of Tested System (Fixed Channel-Radiated)



Table 2-1 Equipment Used in

ltem	Equipment	Equipment Mfr/Brand Type No		Series No.	Data Cable	Power Cord	
1.	Radio Communication Analyer	Anritsu	MT8815B	6200711454	shielded	Un-shielded	
2.	Radio Communication Analyer	Anritsu	MT8820C	6200995019	shielded	Un-shielded	
3.	DC Power Supply	Agilent	E3640A	MY52410006	N/A	N/A	

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SUMMARY OF TEST RESULTS 3

FCC Rules	IC Rules	Description Of Test	Result
§2.1046(a)	RSS-GEN §6.12	RF Power Output	Compliant
§22.913(a)(5) §24.232(c) §27.50(b)(10) §27.50(c)(10) §27.50(d)(4)	RSS-130 §4.6 RSS-132 §5.4 RSS-133 §6.4 RSS-139 §6.5	ERP/ EIRP measurement	Compliant
§2.1049(h)	RSS-GEN §6.7	99% & 26dB Occupied Bandwidth	Compliant
§2.1051 §22.917(a)(b) §24.238(a) §27.53(c) §27.53(g) §27.53(h)	RSS-GEN §6.13 RSS-130 §4.7 RSS-132 §5.5 RSS-133 §6.5 RSS-139 §6.6	Out of Band Emissions at Antenna Terminals and Band Edge / Emission mask requirements	Compliant
§2.1053 §22.917(a) §24.238(a) §27.53(c) §27.53(f) §27.53(g) §27.53(h)	RSS-GEN §6.13 RSS-130 §4.7 RSS-132 §5.5 RSS-133 §6.5 RSS-139 §6.6	Field Strength of Spurious Radiation	Compliant
§24.232(d) §27.50(B)	RSS-130 §4.6.1 RSS-132 §5.4 RSS-133 §6.4 RSS-139 §6.4	Peak to Average Ratio	Compliant
§2.1055(a)(1) §22.355 §24.235 §27.54	RSS-130 §4.5 RSS-132 §5.3 RSS-133 §6.3 RSS-139 §6.5	Frequency Stability	Compliant

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DESCRIPTION OF TEST MODES 4

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	H PLAN	E1 PLAN	E2 PLAN
WCDMA/HSPA Band II			V
WCDMA/HSPA Band IV			V
WCDMA/HSPA Band V			V
LTE Band 2			V
LTE Band 4			V
LTE Band 5			V
LTE Band 12			V
LTE Band 13			V

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4.2 **Measurement Configuration**

Tast lásma	WCDMA/HSPA	Tes	t Chai	nnel
Test Items	Bands	L	М	Н
ERP	Band V	V	V	V
EIRP	Bnad II	V	V	v
EIRF	Band IV	V	V	v
	Bnad II	-	V	-
FREQUENCY STABILITY	Band IV	-	V	-
	Band V	-	V	-
	Bnad II	V	V	V
OCCUPIED BANDWIDTH	Band IV	V	V	V
	Band V	V	V	V
	Bnad II	V	٧	V
PEAK TO AVERAGE RATIO	Band IV	V	V	V
	Band V	V	V	V
	Bnad II	Bnad IIvvBand IVvvBand VvvBnad IIvvBand IVvvBand IVvvBand IIv-Band IIv-Band IVv-Band IVv-Band IVv-Band IVv-Band IIvvVv-Band IIvv	v	
BAND EDGE	Band IV	v	-	v
	Band V	V	-	V
	Bnad II	V	V	٧
CONDCUDETED EMISSION	Band IV	V	V	V
	Band V	V	V	V
	Bnad II	V	V	V
RADIATED EMISSION	Band IV	V	V	V
	Band V	V	V	٧

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QPSK

T (1)	_	Tes	st Chan	nel		E	Bandwid	th (MHz)		Modul	Modul RB #		
Test Items	Band	L	М	Н	1.4	3	5	10	15	20	QPSK	1	Half	Full
	2	٧	v	v	v	v	v	v	v	V	v	٧	v	٧
Max Output	4	۷	V	V	v	V	v	٧	٧	V	v	٧	v	V
Max. Output Power	5	٧	v	v	v	v	v	v	-	-	v	٧	v	٧
ruwei	12	٧	V	V	v	V	v	٧	-	-	v	٧	v	٧
	13	٧	v	v	-	-	v	v	-	-	v	٧	v	V
	2	-	V	-	-	-	-	٧	-	-	v	-	-	V
Fregency	4	-	V	-	-	-	-	۷	-	-	v	-	-	٧
Stability	5	-	V	-	-	-	-	V	-	-	v	-	-	V
otasiity	12	-	V	-	-	-	-	V	-	-	v	-	-	V
	13	-	V	-	-	-	-	۷	-	-	v	-	-	۷
Test Items	Band	Tes	st Chan	nel		E	Bandwid	th (MHz)		Modul		RB #	
restrients	Dallu	L	М	Н	1.4	3	5	10	15	20	QPSK	1	Half	Full
	2	٧	v	v	v	v	v	v	v	V	v	-	-	V
26dB and	4	٧	V	V	v	V	v	٧	V	V	v	-	-	V
99%	5	٧	V	V	v	V	v	٧	-	-	v	-	-	V
Bandwidth	12	٧	v	v	v	v	v	v	-	-	v	-	-	V
	13	٧	v	v	-	-	v	v	-	-	v	-	-	٧
Peak-to-Av	2	۷	v	v	v	v	v	v	v	v	-	-	-	-
	4	۷	v	v	v	v	v	v	v	v	-	-	-	-
erage Ratio	5	٧	v	v	v	v	v	v	-	-	-	-	-	-
erage Natio	12	٧	v	v	v	v	v	v	-	-	-	-	-	-
	13	۷	٧	۷	-	-	v	۷	-	-	-	-	-	-
Test Items	Band	Te	st Chan	nel	Bandwidth (MHz)									
restriems	Бапи	L	М	Н	1.4	3	5	10	15	20	QPSK	1	Half	Full
	2	٧	-	V	v	V	v	٧	٧	V	v	٧	v	٧
	4	٧	-	V	v	V	v	٧	٧	V	v	٧	v	٧
Band Edge	5	٧	-	v	v	v	v	v	-	-	v	٧	v	٧
	12	٧	-	V	v	V	v	٧	-	-	v	V	v	٧
	13	٧	-	v	-	-	v	v	-	-	v	٧		٧
	2	۷	V	V	-	-	-	٧	-	-	v	۷	-	-
Conducted	4	۷	V	V	-	-	-	-	-	V	v	۷	-	-
Emission	5	٧	v	v	-	-	-	v	-	-	v	٧	-	-
Linission	12	۷	v	v	v	-	-	-	-	-	v	۷	-	-
	13	٧	V	V	-	-	v	-	-	-	v	۷	-	-
Test Items	Band	Te	st Chan	nel		E	Bandwid	th (MHz)		Modul		RB #	
rest items	Бапи	L	М	Н	1.4	3	5	10	15	20	QPSK	1	Half	Full
	2	۷	V	V				٧			V	V		
Radiated	4	٧	V	V						V	V	V		
Emission	5	۷	V	V				V	-	-	V	V		
LINISSION	12	٧	V	V	V				-	-	V	V		
	13	٧	v	v	-	-	v		-	-	v	٧		

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16QAM

Test literes	_	Tes	st Chan	nel		E	Bandwid	th (MHz)		Modul		RB #	
Test Items	Band	L	М	Н	1.4	3	5	10	, 15	20	16QAM	1	Half	Full
	2	V	V	V	v	v	v	٧	V	V	v	V	v	-
	4	v	v	v	v	v	v	v	v	V	v	٧	v	-
Max. Output	5	٧	V	V	v	v	v	٧	-	-	v	٧	v	-
Power	12	٧	V	V	V	V	v	٧	-	-	v	V	v	-
	13	٧	V	V	-	-	v	٧	-	-	v	٧	v	-
	2	-	-	-	-	-	-	-	-	-	-	-	-	-
Freqency	4	-	-	-	-	-	-	•	-	-	-	-	-	-
Stability	5	-	-	-	-	-	-	•	-	-	-	-	-	-
Otability	12	-	-	-	-	-	-	-	-	-	-	-	-	-
	13	-	-	-	-	-	-	-	-	-	-	-	-	-
Test Items	Band	Tes	st Chan	nel		E	Bandwid	th (MHz)		Modul		RB #	
restriems	Danu	L	М	Н	1.4	3	5	10	15	20	16QAM	1	Half	Full
	2	٧	V	V	V	V	v	٧	٧	V	v	-	-	٧
26dB and	4	٧	V	V	V	V	v	٧	٧	V	v	-	-	٧
99%	5	٧	V	V	V	V	v	٧	-	-	v	-	-	۷
Bandwidth	12	٧	V	V	V	V	v	٧	-	-	v	-	-	٧
	13	۷	V	V	-	-	v	۷	-	-	v	-	-	۷
Peak-to-Av	2	v	v	v	v	v	v	v	V	V	v	۷	-	-
	4	۷	V	V	V	V	v	۷	V	V	v	V	-	-
erage Ratio	5	۷	V	V	V	V	v	۷	-	-	v	V	-	-
oragoriano	12	V	v	v	v	v	v	V	-	-	v	V	-	-
	13	۷	V	V	-	-	v	۷	-	-	V	۷	-	-
Test Items	Band	Tes	Test Channel			Bandwidth (MHz)					Modul RB #			
	Duna	L	М	Н	1.4	3	5	10	15	20	16QAM	1	Half	Full
	2	V	-	V	V	V	v	۷	V	V	-	-	-	-
	4	V	-	V	v	V	v	V	V	V	-	-	-	-
Band Edge	5	۷	-	V	V	V	v	۷	-	-	-	-	-	-
	12	V	-	V	V	V	v	V	-	-	-	-	-	-
	13	V	-	V	-	-	V	۷	-	-	-	-	-	-
	2	V	V	V	-	-	-	V	-	-	-	۷	-	-
Conducted	4	۷	V	V	-	-	-	-	-	V	-	۷	-	-
Emission	5	V	V	V	-	-	-	V	-	-	-	V	-	-
	12	۷	V	V	V	-	-	-	-	-	-	V	-	-
	13	V	V	V	-	-	V	-	-	-	-	V	-	-
Test Items	Band	Tes	st Chan	-		-	Bandwid				Modul	-	RB #	
		L	М	Н	1.4	3	5	10	15	20	16QAM	1	Half	Full
	2	۷	V	V				V				V		
Radiated	4	۷	V	V						V		V		
Emission	5	۷	V	V				V	-	-		V		
	12	۷	V	V	V				-	-		V		
	13	V	V	V	-	-	V		-	-		V		

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MEASUREMENT UNCERTAINTY 5

Test Items	Une	certair	nty
RF Power Output	+/-	1	dB
ERP/ EIRP measurement	+/-	3	dB
	+/-	3	dB
Emission Bandwidth	+/-	1.53	Hz
Out of Band Emissions at Antenna Terminals and Band Edge	+/-	1.69	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 Spurio	us Ei	missior	n Meas	surement Uncertainty
	+/-	2.64	dB	9kHz~30MHz
Polarization: Vertical	+/-	4.93	dB	30MHz - 1000MHz
	+/-	4.81	dB	1GHz - 18GHz
	+/-	4.52	dB	18GHz - 40GHz
	+/-	2.64	dB	9kHz~30MHz
Delerization, Herizontel	+/-	4.45	dB	30MHz - 1000MHz
Polarization: Horizontal	+/-	4.81	dB	1GHz - 18GHz
	+/-	4.52	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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MAXMUM OUTPUT POWER 6

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 6.1.1

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)

(10) Portable stations (hand-held devices) transmitting in the 746-757 MHz, 776-788 MHz, and 805-806 MHz bands are limited to 3 watts ERP.

FCC 27.50(c)

(10) Portable stations (hand-held devices) are limited to 3 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.

RSS-130 §4.6

The e.r.p. shall not exceed 3 watts for portable equipment and indoor fixed subscriber equipment operating in 698-756 and 777-787 MHz.

RSS-132 §5.4

The equivalent isotropically radiated power (e.i.r.p.) for mobile equipment in operating in the Bands 824-849 and 869-894MHz shall not exceed 11.5 watts.

RSS-133 §6.4

The equivalent isotropically radiated power (e.i.r.p.) for transmitters shall not exceed the limits given in SRSP-510.

According to section 5.1.2 of SRSP-510, Mobile stations and hand-held portables are limited to 2 watts maximum e.i.r.p. The equipment shall employ means to limit the power to the minimum necessary for successful communication.

RSS-139 §6.5

The equivalent isotropically radiated power (e.i.r.p.) for mobile and portable transmitters in the Bands 1710-1780MHz shall not exceed one watt.

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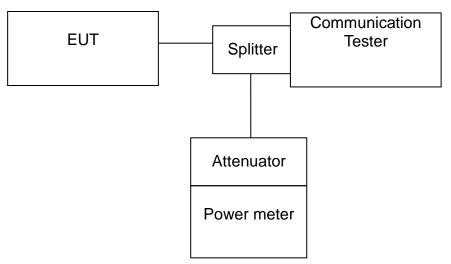
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6.2 Test Set-up



Note: Measurement setup for testing on Antenna connector

6.3 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. TS 151 010-1 is reference to conduct the test measurement of output power.

The Procedure of KDB941225 (SAR Measurement Procedures for 3G devices, (WCDMA/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.

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6.4 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:

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); = transmitter output power, expressed in dBW, dBm, or PSD;
Ρτ Gτ	= transmitter output power, expressed in dBw, dBm, of PSD; = gain of the transmitting antenna, in dBd (ERP) or dBi (EIRP);
Lc	 = gain of the transmitting antenna, in dBd (EKP) of dBi (EKP), = signal attenuation in the connecting cable between the transmitter and antenna, in dB.

6.5 **Measurement Equipment Used**

	Conducted	Emission Test	Site: Conducte	d 4	
EQUIPMENT TYPE	MFR	MODEL NUM- BER	SERIAL NUM- BER	LAST CAL.	CAL DUE.
DC Power Supply	Agilent	E3640A	MY52410006	12/17/2020	12/16/2021
EXA Spectrum Ana- lyzer	KEYSIGHT	N9010A	MY51440113	07/23/2020	07/22/2021
Radio Communication Analyer	Anritsu	MT8815B	6200711454	04/07/2021	04/06/2022
Attenuator	Mini-Circuit	BW-S10W2+	2	12/16/2020	12/15/2021
DC Block	Mini-Circuits	BLK-18-S+	1	12/16/2020	12/15/2021
Power Divider	RF-LAMBAD	RFLT2W1G18G	11-JSPF412- 020	12/16/2020	12/15/2021

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6.6 WCDMA & HSPA Measurement Results:

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

EUT Mode	Freq. (MHz)	СН	Conducted Avg. Power (dBm)	Antenna Gain (dBi)	ERP (dBm)	EIRP (dBm)	Limit (dBm)	Margin (dB)
	1852.4	9262	23.17	-2.07	18.95	21.10	33.00	-11.90
WCDMA	1880.0	9400	23.10	-2.07	18.88	21.03	33.00	-11.97
	1907.6	9538	23.06	-2.07	18.84	20.99	33.00	-12.01
	1852.4	9262	22.13	-2.07	17.91	20.06	33.00	-12.94
HSDPA	1880.0	9400	21.99	-2.07	17.77	19.92	33.00	-13.08
	1907.6	9538	21.58	-2.07	17.36	19.51	33.00	-13.49
	1852.4	9262	20.94	-2.07	16.72	18.87	33.00	-14.13
HSUPA	1880.0	9400	20.78	-2.07	16.56	18.71	33.00	-14.29
	1907.6	9538	20.68	-2.07	16.46	18.61	33.00	-14.39

WCDMA/HSUPA/HSDPA Band II Result:

WCDMA/HSUPA/HSDPA Band IV Result:

EUT Mode	Freq. (MHz)	СН	Conducted Avg. Power (dBm)	Antenna Gain (dBi)	ERP (dBm)	EIRP (dBm)	Limit (dBm)	Margin (dB)
	1712.4	1312	23.18	-2.35	18.68	20.83	30.00	-9.17
WCDMA	1732.6	1413	23.03	-2.35	18.53	20.68	30.00	-9.32
	1752.6	1513	22.87	-2.35	18.37	20.52	30.00	-9.48
	1712.4	1312	22.19	-2.35	17.69	19.84	30.00	-10.16
HSDPA	1732.6	1413	22.26	-2.35	17.76	19.91	30.00	-10.09
	1752.6	1513	22.26	-2.35	17.76	19.91	30.00	-10.09
	1712.4	1312	22.23	-2.35	17.73	19.88	30.00	-10.12
HSUPA	1732.6	1413	22.13	-2.35	17.63	19.78	30.00	-10.22
	1752.6	1513	22.02	-2.35	17.52	19.67	30.00	-10.33

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WCDMA/HSUPA/HSDPA Band V Result:

EUT Mode	Freq. (MHz)	СН	Conducted Avg. Power (dBm)	Antenna Gain (dBi)	ERP (dBm)	EIRP (dBm)	Limit (dBm)	Margin (dB)
	826.4	4132	23.42	-1.04	20.23	22.38	38.50	-16.12
WCDMA	836.6	4183	23.45	-1.04	20.26	22.41	38.50	-16.09
	846.6	4233	23.46	-1.04	20.27	22.42	38.50	-16.08
	826.4	4132	22.35	-1.04	19.16	21.31	38.50	-17.19
HSDPA	836.6	4183	22.76	-1.04	19.57	21.72	38.50	-16.78
	846.6	4233	22.84	-1.04	19.65	21.80	38.50	-16.70
	826.4	4132	22.60	-1.04	19.41	21.56	38.50	-16.94
HSUPA	836.6	4183	22.72	-1.04	19.53	21.68	38.50	-16.82
	846.6	4233	22.84	-1.04	19.65	21.80	38.50	-16.70

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6.6.1 HSPA (HSDPA & HSUPA) Release 6:

The following 4 Sub-Tests were completed according to the test requirements outlined in section 5.2A of the 3GPP TS34.121-1 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. RMC 12.2kps is used for this testing.

6.6.2 **HSDPA SUB-TEST Setting**

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

Sub-test	βc	βa	β₀ (SF)	βσ/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.

	Sub	Avg. Power (dBm)						
Mode	test	Channel						
		9262.00	9400.00	9538.00				
	1	22.13	21.99	21.58				
HSDPA II	2	21.89	21.65	21.22				
	3	21.47	21.12	20.64				
	4	21.46	21.01	20.58				
	Cub	Av	g. Power (dB	Sm)				
Mode	Sub test	Av	g. Power (dE Channel	Sm)				
Mode	Sub test	Av 1312.00	•	8m) 1513.00				
Mode			Channel	,				
	test	1312.00	Channel 1413.00	1513.00				
Mode HSDPA IV	test 1	1312.00 22.19	Channel 1413.00 22.26	1513.00 22.26				

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Mode	Sub test	Sub test					
	test		4183.00	4233.00			
	1	22.35	22.76	22.84			
HSDPA V	2	22.23	22.75	22.80			
ngupa v	3	21.79	22.29	22.31			
	4	21.83	22.13	22.34			

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6.6.3 **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	βc	βa	β₀ (SF)	βс∕βа	βнs	βес	βed	β _{ed} (SF)	β _{ed} (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 _{ed} 1: 47/15 β _{ed} 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.

Mada	Sub	Avg. Power (dBm) b Channel					
Mode	test						
		9262.00	9400.00	9538.00			
	1	20.94	20.78	20.68			
	2	20.60	20.34	20.32			
HSUPA II	3	21.03	20.81	20.59			
	4	21.21	20.95	20.81			
	5	21.10	20.71	20.62			
	Curl	Av	/g. Power (dB	m)			
Mode	Sub test	Αν	/g. Power (dBi Channel	m)			
Mode	Sub test	Av 1312.00	•	m) 1513.00			
Mode			Channel	<i>.</i>			
Mode	test	1312.00	Channel 1413.00	1513.00			
Mode HSUPA IV	test 1	1312.00 22.23	Channel 1413.00 22.13	1513.00 22.02			
	test 1 2	1312.00 22.23 21.76	Channel 1413.00 22.13 21.66	1513.00 22.02 21.54			

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Mode	Sub test	Avg. Power (dBm) Channel						
		4132.00	4183.00	4233.00				
	1	22.60	22.72	22.84				
	2	22.14	22.17	22.38				
HSUPA V	3	22.64	22.68	22.89				
	4	22.66	22.73	22.93				
	5	22.50	22.64	22.85				

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

The EUT output power was controlled by simulator and enter max rated power 24dBm. The EUT is going to be set to max output power to 24dBm then record the read. 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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LTE Measurement Results: 6.7

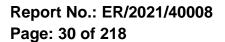
Antenna	gain (dBi)	-2.07							
		LTE	Band 2_Uplin	k frequ	ency ba	ind : 1850 to 1	910 MHz		
BW (MHz)	UL Channel	Frequency (MHz)	Modulation	RB Size	RB Offset	Conducted Average (dBm)	EIRP Average (dBm)	EIRP Limit (dBm)	Margin (dB)
				1	0	22.89	20.82	33	-12.18
	18607	1850.7	QPSK	1	5	22.61	20.54	33	-12.46
	10007	1030.7	QFOR	3	2	22.66	20.59	33	-12.41
				6	0	21.69	19.62	33	-13.38
				1	0	22.43	20.36	33	-12.64
1.4	18900	1880	QPSK	1	5	22.38	20.31	33	-12.69
1.4	10900	1000	QPSK	3	2	22.65	20.58	33	-12.42
				6	0	21.59	19.52	33	-13.48
				1	0	22.51	20.44	33	-12.56
	40402	4000.0	0.001/	1	5	22.55	20.48	33	-12.52
	19193 1909.3	1909.5	QPSK	3	2	22.32	20.25	33	-12.75
				6	0	21.22	19.15	33	-13.85
	40007	4050.7	160 MM	1	0	21.55	19.48	33	-13.52
1.4	18607	1850.7	16QAM	1	5	21.41	19.34	33	-13.66
Antenna	gain (dBi)	-2.07							
		LTE	Band 2_Uplin	k frequ	ency ba	ind : 1850 to 1	910 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	22.99	20.92	33	-12.08
	18615	1851.5	QPSK	1	14	22.83	20.76	33	-12.24
	10015	1031.3	QFOR	8	4	21.86	19.79	33	-13.21
				15	0	21.80	19.73	33	-13.27
				1	0	22.74	20.67	33	-12.33
2	10000	1000	ODek	1	14	22.83	20.76	33	-12.24
3	18900	1880	QPSK	8	4	21.65	19.58	33	-13.42
				15	0	21.60	19.53	33	-13.47
				1	0	22.60	20.53	33	-12.47
	10105	1009 E		1	14	22.72	20.65	33	-12.35
	19185 1908.5	QPSK	8	4	21.57	19.50	33	-13.5	
				15	0	21.35	19.28	33	-13.72
2	10015	10515	160 444	1	0	21.45	19.38	33	-13.62
3	18615	1851.5	16QAM	1	14	21.56	19.49	33	-13.51

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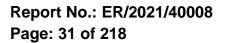
Antenna	gain (dBi)	-2.07							
		LTE	Band 2_Uplin	k frequ	ency ba	ind : 1850 to 1	910 MHz	•	
BW (MHz)	UL Channel	Frequency (MHz)	Modulation	RB Size	RB Offset	Conducted Average (dBm)	EIRP Average (dBm)	EIRP Limit (dBm)	Margin (dB)
				1	0	22.66	20.59	33	-12.41
	19605	1050 5	QPSK	1	24	22.50	20.43	33	-12.57
	18625	1852.5		12	6	21.53	19.46	33	-13.54
				25	0	21.61	19.54	33	-13.46
				1	0	22.60	20.53	33	-12.47
F	18900	1000		1	24	22.72	20.65	33	-12.35
5	18900	1880	QPSK	12	6	21.53	19.46	33	-13.54
				25	0	21.59	19.52	33	-13.48
				1	0	22.45	20.38	33	-12.62
	40475	4007 5	0001/	1	24	22.52	20.45	33	-12.55
	19175 1907.5	QPSK	12	6	21.51	19.44	33	-13.56	
			25	0	21.53	19.46	33	-13.54	
~	40005	4050 F	100 414	1	0	21.63	19.56	33	-13.44
5	18625	1852.5	16QAM	1	24	21.56	19.49	33	-13.51
Antenna	, gain (dBi)	-2.07							
		LTE	Band 2_Uplin	ık frequ	ency ba	ind : 1850 to 1	910 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	21.12	33	-11.88
	18650	1855	QPSK	1	49	23.01	20.94	33	-12.06
	10000	1000		25	12	21.90	19.83	33	-13.17
				50	0	22.02	19.95	33	-13.05
				1	0	22.79	20.72	33	-12.28
10	18900	1880	QPSK	1	49	23.01	20.94	33	-12.06
10	10900	1000		25	12	21.94	19.87	33	-13.13
				50	0	21.85	19.78	33	-13.22
				1	0	23.00	20.93	33	-12.07
	19150	1905	QPSK	1	49	22.73	20.66	33	-12.34
	19100	1900	ULOV	25	12	21.69	19.62	33	-13.38
				50	0	21.61	19.54	33	-13.46
10	18650	1855	16QAM	1	0	21.31	19.24	33	-13.76
10	10000	1000	IUQAW	1	49	21.48	19.41	33	-13.59

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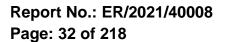
Antenna	gain (dBi)	-2.07							
		LTE	Band 2_Uplin	k frequ	ency ba	nd : 1850 to '	1910 MHz	·	
BW (MHz)	UL Channel	Frequency (MHz)	Modulation	RB Size	RB Offset	Conducted Average (dBm)	EIRP Average (dBm)	EIRP Limit (dBm)	Margin (dB)
				1	0	23.17	21.10	33	-11.9
	18675	1057 E		1	74	22.89	20.82	33	-12.18
	10075	1857.5	QPSK	36	18	21.95	19.88	33	-13.12
				75	0	22.09	20.02	33	-12.98
				1	0	22.87	20.80	33	-12.2
15	18900	1880	QPSK	1	74	22.97	20.90	33	-12.1
15	10900	1000	QPSK	36	18	21.98	19.91	33	-13.09
				75	0	21.89	19.82	33	-13.18
				1	0	22.22	20.15	33	-12.85
	10105	1000 F		1	74	22.83	20.76	33	-12.24
	19125 1902.5	QPSK	36	18	21.94	19.87	33	-13.13	
				75	0	22.00	19.93	33	-13.07
15	10675	10575	160 414	1	0	21.65	19.58	33	-13.42
15	18675	1857.5	16QAM	1	74	21.13	19.06	33	-13.94
Antenna	gain (dBi)	-2.07							
		LTE	Band 2_Uplin	ık frequ	ency ba	nd : 1850 to ²	1910 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	22.78	20.71	33	-12.29
	18700	1860	QPSK	1	99	22.37	20.30	33	-12.7
	10700	1000	QFON	50	25	21.37	19.30	33	-13.7
				100	0	21.32	19.25	33	-13.75
				1	0	22.51	20.44	33	-12.56
20	18900	1880	QPSK	1	99	22.54	20.47	33	-12.53
20	10900	1000	ULOV	50	25	21.32	19.25	33	-13.75
				100	0	21.36	19.29	33	-13.71
				1	0	22.43	20.36	33	-12.64
	10100	1900	QPSK	1	99	22.22	20.15	33	-12.85
	19100	1900	ULOV	50	25	21.28	19.21	33	-13.79
				100	0	21.36	19.29	33	-13.71
20	18700	1060	160 ^	1	0	21.41	19.34	33	-13.66
20	10/00	1860	16QAM	1	99	20.98	18.91	33	-14.09

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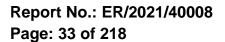




Antenna	gain (dBi)	-2.35							
		LTE	Band 4_Uplin	k frequ	ency ba	ind : 1710 to '	1755 MHz	·	
BW (MHz)	UL Channel	Frequency (MHz)	Modulation	RB Size	RB Offset	Conducted Average (dBm)	EIRP Average (dBm)	EIRP Limit (dBm)	Margin (dB)
				1	0	23.32	20.97	30	-9.03
	19957	1710.7	QPSK	1	5	23.45	21.10	30	-8.9
	19957	1/10./		3	2	23.44	21.09	30	-8.91
				6	0	22.27	19.92	30	-10.08
				1	0	23.37	21.02	30	-8.98
1.4	20175	1732.5	QPSK	1	5	23.24	20.89	30	-9.11
1.4	20175	1/32.3	QPSK	3	2	23.37	21.02	30	-8.98
				6	0	22.19	19.84	30	-10.16
				1	0	23.25	20.90	30	-9.1
	20202	1754.3	QPSK	1	5	23.18	20.83	30	-9.17
	20393	1/04.0	QPSK	3	2	23.26	20.91	30	-9.09
			6	0	22.16	19.81	30	-10.19	
1 /	10057	1710 7	100 004	1	0	22.05	19.70	30	-10.3
1.4	19957	1710.7	16QAM	1	5	22.03	19.68	30	-10.32
Antenna	gain (dBi)	-2.35							
		LTE	Band 4_Uplin	ık frequ	ency ba	ind : 1710 to ²	1755 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	22.48	20.13	30	-9.87
	19965	1711.5	QPSK	1	14	22.44	20.09	30	-9.91
	19900	1/11.3	ULOV	8	4	21.39	19.04	30	-10.96
				15	0	21.36	19.01	30	-10.99
				1	0	22.54	20.19	30	-9.81
3	20175	1732.5	QPSK	1	14	22.35	20.00	30	-10
5	20175	1752.5	QFOR	8	4	21.33	18.98	30	-11.02
				15	0	21.30	18.95	30	-11.05
				1	0	22.24	19.89	30	-10.11
	20385	1753.5	QPSK	1	14	22.20	19.85	30	-10.15
	20303	1755.5	QF3N	8	4	21.22	18.87	30	-11.13
				15	0	21.26	18.91	30	-11.09
3	19965	1711.5	16QAM	1	0	22.05	19.70	30	-10.3
5	13303	1711.5		1	14	21.40	19.05	30	-10.95

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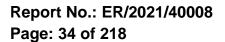


Antenna	gain (dBi)	-2.35							
		LTE	Band 4_Uplin	k frequ	ency ba	ind : 1710 to '	1755 MHz	-	-
BW (MHz)	UL Channel	Frequency (MHz)	Modulation	RB Size	RB Offset	Conducted Average (dBm)	EIRP Average (dBm)	EIRP Limit (dBm)	Margin (dB)
				1	0	22.53	20.18	30	-9.82
	19975	1712.5	QPSK	1	24	22.39	20.04	30	-9.96
	19975	C.2111	QPSK	12	6	21.36	19.01	30	-10.99
				25	0	21.38	19.03	30	-10.97
				1	0	22.09	19.74	30	-10.26
F	20175	1732.5	QPSK	1	24	22.17	19.82	30	-10.18
5	20175	1732.3	QPSK	12	6	21.28	18.93	30	-11.07
				25	0	21.38	19.03	30	-10.97
				1	0	22.14	19.79	30	-10.21
	00275	4750 F		1	24	22.39	20.04	30	-9.96
	20375	1752.5	QPSK	12	6	21.38	19.03	30	-10.97
				25	0	21.31	18.96	30	-11.04
F	10075	4740 5	100 414	1	0	21.81	19.46	30	-10.54
5	19975	1712.5	16QAM	1	24	21.67	19.32	30	-10.68
Antenna	gain (dBi)	-2.35							
		LTE	Band 4_Uplin	ık frequ	ency ba	ind : 1710 to ²	1755 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	22.91	20.56	30	-9.44
	20000	1715	QPSK	1	49	22.58	20.23	30	-9.77
	20000	1715	QFON	25	12	21.59	19.24	30	-10.76
				50	0	21.52	19.17	30	-10.83
				1	0	22.71	20.36	30	-9.64
10	20175	1732.5	QPSK	1	49	22.55	20.20	30	-9.8
10	20175	1752.0		25	12	21.50	19.15	30	-10.85
				50	0	21.48	19.13	30	-10.87
				1	0	22.54	20.19	30	-9.81
	20350	1750	QPSK	1	49	22.61	20.26	30	-9.74
	20000	1750		25	12	21.26	18.91	30	-11.09
				50	0	21.41	19.06	30	-10.94
10	20000	1715	16QAM	1	0	21.51	19.16	30	-10.84
ĨŬ	20000	1115		1	49	21.60	19.25	30	-10.75

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Antenna	gain (dBi)	-2.35							
		LTE	Band 4_Uplin	k frequ	ency ba	ind : 1710 to '	1755 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	23.43	21.08	30	-8.92
	20025	1717.5	QPSK	1	74	21.90	19.55	30	-10.45
	20025	1/1/.J	QLOIV	36	18	21.95	19.60	30	-10.4
				75	0	21.93	19.58	30	-10.42
				1	0	22.94	20.59	30	-9.41
15	20175	1732.5	QPSK	1	74	22.83	20.48	30	-9.52
10	20175	1752.5	QFON	36	18	21.74	19.39	30	-10.61
				75	0	21.82	19.47	30	-10.53
				1	0	23.37	21.02	30	-8.98
	20325 1747.5	17175	QPSK	1	74	23.19	20.84	30	-9.16
		QPSK	36	18	21.82	19.47	30	-10.53	
			75	0	21.93	19.58	30	-10.42	
15	20025	1717.5	16QAM	1	0	22.05	19.70	30	-10.3
10	20025	1/17.5	TOQAM	1	74	21.69	19.34	30	-10.66
Antenna	gain (dBi)	-2.35							
		LTE	Band 4_Uplin	ık frequ	ency ba	nd : 1710 to ²	1755 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	21.27	30	-8.73
	20050	1720	QPSK	1	99	23.32	20.97	30	-9.03
	20030	1120		50	25	22.42	20.07	30	-9.93
				100	0	22.31	19.96	30	-10.04
				1	0	23.54	21.19	30	-8.81
20	20175	1732.5	QPSK	1	99	23.28	20.93	30	-9.07
20	20173	1102.0		50	25	22.46	20.11	30	-9.89
				100	0	22.39	20.04	30	-9.96
				1	0	23.72	21.37	30	-8.63
	20300	1745	QPSK	1	99	23.34	20.99	30	-9.01
	20300	1740	QF'ON	50	25	22.18	19.83	30	-10.17
				100	0	22.21	19.86	30	-10.14
20	20050	1720	16QAM	1	0	21.89	19.54	30	-10.46
20	20030	1720		1	99	21.95	19.60	30	-10.4

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Report No.: ER/2021/40008 Page: 35 of 218

Antenna	gain (dBi)	-1.04								
		1	LTE Band	5_Uplii	nk frequ	ency band : 8	324 to 849 MH	Iz		
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)
				1	0	22.57	19.38	21.53	38.45	-19.07
	20407	0047	QPSK	1	5	22.60	19.41	21.56	38.45	-19.04
	20407	824.7	QPSK	3	2	22.54	19.35	21.50	38.45	-19.10
				6	0	21.43	18.24	20.39	38.45	-20.21
				1	0	22.56	19.37	21.52	38.45	-19.08
1.4	20525	836.5	QPSK	1	5	22.51	19.32	21.47	38.45	-19.13
1.4	20020	030.3	QFON	3	2	22.49	19.30	21.45	38.45	-19.15
				6	0	21.50	18.31	20.46	38.45	-20.14
		848.3		1	0	22.48	19.29	21.44	38.45	-19.16
	20643		QPSK	1	5	22.48	19.29	21.44	38.45	-19.16
	20043 040.3	QFSK	3	2	22.46	19.27	21.42	38.45	-19.18	
				6	0	21.29	18.10	20.25	38.45	-20.35
1.4	20407	824.7	160 444	1	0	21.98	18.79	20.94	38.45	-19.66
1.4	20407	024.7	16QAM	1	5	21.77	18.58	20.73	38.45	-19.87
Antenna	gain (dBi)	-1.04								
		I	LTE Band	5_Uplii	nk frequ	ency band : 8	324 to 849 MH	z		
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)
				1	0	22.60	19.41	21.56	38.45	-19.04
	20415	825.5	QPSK	1	14	22.74	19.55	21.70	38.45	-18.90
	20410	020.0	QUON	8	4	21.40	18.21	20.36	38.45	-20.24
				15	0	21.39	18.20	20.35	38.45	-20.25
				1	0	22.56	19.37	21.52	38.45	-19.08
3	20525	836.5	QPSK	1	14	22.62	19.43	21.58	38.45	-19.02
5	20020	000.0		8	4	21.49	18.30	20.45	38.45	-20.15
				15	0	21.39	18.20	20.35	38.45	-20.25
				1	0	22.76	19.57	21.72	38.45	-18.88
	20635	847.5	OPSK	1	14	22.64	19.45	21.60	38.45	-19.00
	20035	047.0	QPSK -	8	4	21.47	18.28	20.43	38.45	-20.17
			15	0	21.45	18.26	20.41	38.45	-20.19	
3	20415	825.5	16QAM	1	0	21.57	18.38	20.53	38.45	-20.07
5	20413	020.0		1	14	21.58	18.39	20.54	38.45	-20.06

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Report No.: ER/2021/40008 Page: 36 of 218



Antenna	gain (dBi)	-1.04										
			LTE Band	5_Uplir	nk frequ	ency band : 8	24 to 849 MH	z	· · · · · · · · · · · · · · · · · · ·			
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)		
				1	0	22.63	19.44	21.59	38.45	-19.01		
	00405	000 5	0.001/	1	24	22.81	19.62	21.77	38.45	-18.83		
	20425	826.5	QPSK	12	6	21.46	18.27	20.42	38.45	-20.18		
				25	0	21.46	18.27	20.42	38.45	-20.18		
				1	0	22.50	19.31	21.46	38.45	-19.14		
F	20525	926 F	ODOK	1	24	22.36	19.17	21.32	38.45	-19.28		
5	20525	836.5	QPSK	12	6	21.42	18.23	20.38	38.45	-20.22		
				25	0	21.41	18.22	20.37	38.45	-20.23		
				1	0	22.58	19.39	21.54	38.45	-19.06		
	20625	946 E	QPSK	1	24	22.42	19.23	21.38	38.45	-19.22		
	20020	040.0	040.3	846.5	QPSK	12	6	21.43	18.24	20.39	38.45	-20.21
			25	0	21.52	18.33	20.48	38.45	-20.12			
F	20425	906 F	16QAM	1	0	21.95	18.76	20.91	38.45	-19.69		
5	20425	826.5		1	24	21.61	18.42	20.57	38.45	-20.03		
Antenna	gain (dBi)	-1.04										
		·	LTE Band	5_Upli	nk frequ	ency band :	824 to 849 MH	łz				
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)		
				1	0	22.84	19.65	21.80	38.45	-18.80		
	20450	829	QPSK	1	49	22.86	19.67	21.82	38.45	-18.78		
	20430	025	GION	25	12	21.66	18.47	20.62	38.45	-19.98		
				50	0	21.54	18.35	20.50	38.45	-20.10		
				1	0	22.88	19.69	21.84	38.45	-18.76		
10	20525	836.5	QPSK	1	49	22.69	19.50	21.65	38.45	-18.95		
10		000.0		25	12	21.63	18.44	20.59	38.45	-20.01		
				50	0	21.57	18.38	20.53	38.45	-20.07		
				1	0	22.77	19.58	21.73	38.45	-18.87		
	20600	844	QPSK	1	49	21.73	18.54	20.69	38.45	-19.91		
			GION	25	12	21.56	18.37	20.52	38.45	-20.08		
			50	0	21.62	18.43	20.58	38.45	-20.02			
10	20450	829	16QAM	1	0	21.91	18.72	20.87	38.45	-19.73		
				1	49	21.62	18.43	20.58	38.45	-20.02		

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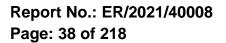
Antenna	gain (dBi)	-5.28								
		•	LTE Band	12_Upli	nk frequ	ency band :	699 to 716 MI	Hz		
BW (MHz)	UL Channel	Frequency (MHz)	Modulation	RB Size	RB Offset	Conducted Average (dBm)	ERP Average (dBm)	EIRP Average (dBm)	ERP Limit (dBm)	Margin (dB)
				1	0	22.95	15.52	17.67	34.77	-19.25
	23017	COO 7	0001/	1	5	22.78	15.35	17.50	34.77	-19.42
	23017	699.7	QPSK	3	2	22.70	15.27	17.42	34.77	-19.50
				6	0	21.67	14.24	16.39	34.77	-20.53
				1	0	22.75	15.32	17.47	34.77	-19.45
1 1	22005	707.5	QPSK	1	5	22.61	15.18	17.33	34.77	-19.59
1.4	23095	707.5	QPSK	3	2	22.65	15.22	17.37	34.77	-19.55
				6	0	21.53	14.10	16.25	34.77	-20.67
				1	0	22.50	15.07	17.22	34.77	-19.70
	00470	745 5		1	5	22.49	15.06	17.21	34.77	-19.71
	23173	715.5	QPSK	3	2	22.43	15.00	17.15	34.77	-19.77
				6	0	21.34	13.91	16.06	34.77	-20.86
4.4	02047	COO 7	400 414	1	0	21.91	14.48	16.63	34.77	-20.29
1.4	23017	699.7	16QAM	1	5	21.89	14.46	16.61	34.77	-20.31
Antenna	gain (dBi)	-5.28								
		I	LTE Band	12_Upli	nk frequ	uency band :	699 to 716 MI	Ηz		
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)
				1	0	22.51	15.08	17.23	34.77	-19.69
	23025	700.5	QPSK	1	14	22.32	14.89	17.04	34.77	-19.88
	20020	100.0	Gron	8	4	21.35	13.92	16.07	34.77	-20.85
				15	0	21.39	13.96	16.11	34.77	-20.81
				1	0	22.58	15.15	17.30	34.77	-19.62
3	23095	707.5	QPSK	1	14	22.43	15.00	17.15	34.77	-19.77
5	20090	101.5	QF UN	8	4	21.48	14.05	16.20	34.77	-20.72
			15	0	21.44	14.01	16.16	34.77	-20.76	
				1	0	22.47	15.04	17.19	34.77	-19.73
	23165	714.5	QPSK	1	14	22.36	14.93	17.08	34.77	-19.84
	23103	7 14.3	UT ON	8	4	21.33	13.90	16.05	34.77	-20.87
				15	0	21.23	13.80	15.95	34.77	-20.97
3	23025	700.5	16QAM	1	0	21.32	13.89	16.04	34.77	-20.88
3	23023	700.5	IUQAW	1	14	21.50	14.07	16.22	34.77	-20.70

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Antenna	gain (dBi)	-5.28								
			LTE Band	12_Upli	nk frequ	uency band :	699 to 716 MI	łz	3	-
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)
				1	0	22.47	15.04	17.19	34.77	-19.73
	00005	704 5	0.001/	1	24	22.50	15.07	17.22	34.77	-19.70
	23035	701.5	QPSK	12	6	21.30	13.87	16.02	34.77	-20.90
				25	0	21.31	13.88	16.03	34.77	-20.89
				1	0	22.43	15.00	17.15	34.77	-19.77
5	23095	707.5	QPSK	1	24	22.32	14.89	17.04	34.77	-19.88
5	23095	101.5	QFON	12	6	21.45	14.02	16.17	34.77	-20.75
				25	0	21.40	13.97	16.12	34.77	-20.80
				1	0	22.47	15.04	17.19	34.77	-19.73
	23155	713.5	QPSK	1	24	22.24	14.81	16.96	34.77	-19.96
	23100	715.5	QFON	12	6	21.34	13.91	16.06	34.77	-20.86
			25	0	21.29	13.86	16.01	34.77	-20.91	
5	23035	701.5	16QAM	1	0	21.33	13.90	16.05	34.77	-20.87
5	23035	701.5	TOQAM	1	24	21.45	14.02	16.17	34.77	-20.75
Antenna	gain (dBi)	-5.28								
			LTE Band	12_Upli	nk frequ	uency band :	699 to 716 MI	łz		
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)
				1	0	22.60	15.17	17.32	34.77	-19.60
	22060	704	QPSK	1	49	21.88	14.45	16.60	34.77	-20.32
	23060	704	QPSK	25	12	21.62	14.19	16.34	34.77	-20.58
				50	0	21.51	14.08	16.23	34.77	-20.69
				1	0	22.48	15.05	17.20	34.77	-19.72
10	23095	707.5	QPSK	1	49	22.57	15.14	17.29	34.77	-19.63
10	23095	101.5	QFOR	25	12	21.51	14.08	16.23	34.77	-20.69
			50	0	21.44	14.01	16.16	34.77	-20.76	
	23130			1	0	22.61	15.18	17.33	34.77	-19.59
		711	QPSK	1	49	21.54	14.11	16.26	34.77	-20.66
	20100		QFON	25	12	21.52	14.09	16.24	34.77	-20.68
				50	0	21.39	13.96	16.11	34.77	-20.81
10	23060	704	16QAM	1	0	21.94	14.51	16.66	34.77	-20.26
10	23000	104	TUQAW	1	49	21.78	14.35	16.50	34.77	-20.42

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Report No.: ER/2021/40008 Page: 39 of 218

			•							
Antenna	gain (dBi)	-4.91								
			LTE Band	13_Upli	nk frequ	ency band :	777 to 787 MI	Hz	·	·
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)
				1	0	22.64	15.58	17.73	34.77	-19.19
	22205	779.5	QPSK	1	24	22.65	15.59	17.74	34.77	-19.18
	23205	119.5	QPSK	12	6	21.57	14.51	16.66	34.77	-20.26
				25	0	21.63	14.57	16.72	34.77	-20.20
				1	0	22.31	15.25	17.40	34.77	-19.52
5	23230	782	QPSK	1	24	22.71	15.65	17.80	34.77	-19.12
Э	23230	/ 62	QPSK	12	6	21.56	14.50	16.65	34.77	-20.27
				25	0	21.44	14.38	16.53	34.77	-20.39
	00055 3045		1	0	22.66	15.60	17.75	34.77	-19.17	
		704 5		1	24	22.58	15.52	17.67	34.77	-19.25
	23255	784.5	QPSK	12	6	21.47	14.41	16.56	34.77	-20.36
				25	0	21.39	14.33	16.48	34.77	-20.44
5	23205	779.5	16QAM	1	0	21.83	14.77	16.92	34.77	-20.00
5	23205	119.5	IOQAW	1	24	22.06	15.00	17.15	34.77	-19.77
Antenna	gain (dBi)	-4.91								
		Ι	LTE Band '	13_Upli	nk frequ	ency band :	777 to 787 MI	łz		
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)
				1	0	22.57	15.51	17.66	34.77	-19.26
10	23230	782	QPSK	1	49	22.56	15.50	17.65	34.77	-19.27
10	20200	102		25	12	21.59	14.53	16.68	34.77	-20.24
				50	0	21.43	14.37	16.52	34.77	-20.40
10	23230	782	16QAM	1	0	22.02	14.96	17.11	34.77	-19.81
10	20200	102		1	49	21.91	14.85	17.00	34.77	-19.92

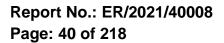
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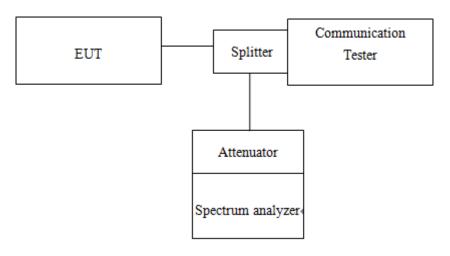


OCCUPIED BANDWIDTH MEASUREMENT 7

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. Set 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 Test Site: Conducted 4									
EQUIPMENT TYPE	MFR	MODEL NUM- BER	SERIAL NUM- BER	LAST CAL.	CAL DUE.					
EXA Spectrum Ana- lyzer	KEYSIGHT	N9010A	MY51440113	07/23/2020	07/22/2021					
Radio Communication Analyer	Anritsu	MT8815B	6200711454	04/07/2021	04/06/2022					
Attenuator	Mini-Circuit	BW-S10W2+	2	12/16/2020	12/15/2021					
DC Block	Mini-Circuits	BLK-18-S+	1	12/16/2020	12/15/2021					
Power Divider	RF-LAMBAD	RFLT2W1G18G	11-JSPF412- 020	12/16/2020	12/15/2021					
Temperature Chamber	TERCHY	MHG-120LF	911009	05/20/2020	05/19/2021					
DC Power Supply	Agilent	E3640A	MY52410006	12/17/2020	12/16/2021					

7.5 Measurement Result

F ara a		9	9% BW (MH	z)	26	dB BW (Mł	lz)
Freq.	СН	WCDMA	HSDPA	HSUPA	WCDMA	HSDPA	HSUPA
(MHz)		Ш	Π	П	П	Ш	П
1852.40	9262	4.71400	4.11630	4.11380	4.127	4.673	4.672
1880.00	9400	4.12600	4.12320	4.12840	4.710	4.670	4.667
1907.60	9538	4.12600	4.11490	4.12420	4.722	4.666	4.668
Гиса		9	9% BW (MH	z)	26	dB BW (Mł	lz)
Freq. (MHz)	СН	WCDMA	HSDPA	HSUPA	WCDMA	HSDPA	HSUPA
		IV	IV	IV	IV	IV	IV
1712.40	1312	4.13120	4.11970	4.11260	4.710	4.658	4.666
1732.60	1413	4.12460	4.11710	4.09860	4.705	4.673	4.666
1752.60	1513	4.12400	4.11320	4.11330	4.721	4.665	4.659
Гиса		9	9% BW (MH	z)	26	dB BW (Mł	lz)
Freq.	СН	WCDMA	HSDPA	HSUPA	WCDMA	HSDPA	HSUPA
(MHz)		V	V	V	V	V	V
826.40	4132	4.13330	4.14760	4.14420	4.727	4.983	5.026
836.60	4183	4.12670	4.15410	4.15340	4.720	5.125	5.085
846.60	4233	4.13450	4.15030	4.14320	4.728	4.997	4.977

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Report No.: ER/2021/40008 Page: 42 of 218

		D 2 Channe	- boodwidth			-		ID 2 Chapr	nel bandwidt		
			el bandwidth		\A/ /\A _ \						\A/ /NALI_\
Freq. (MHz)	CH	QPSK	N (MHz) 16QAM	20 0B B QPSK	W (MHz) 16QAM	Freq. (MHz)	CH	QPSK	N (MHz) 16QAM	QPSK	W (MHz) 16QAM
1850.7	18607	1.0865	0.25767	1.266	0.3637	(IVITIZ) 1851.5	18615	2.6823	0.327	2.950	0.5104
1880.0	18900	1.0869	0.25419	1.266	0.3658	1880.0	18900	2.6833	0.25419	2.935	0.466
1909.3	19193	1.0855	0.25219	1.271	0.4709	1908.5	19185	2.6886	0.30146	2.977	0.4905
		ID 2 Chapr	el bandwidi					D 2 Chann	el bandwidt		
Frog					W (MHz)	Eroa					W (MHz)
Freq.	CH	QPSK	N (MHz)	QPSK	_ ` <i>`</i> /	Freq.	CH	QPSK	W (MHz)	QPSK	
(MHz)	40005		16QAM		16QAM	(MHz)	10050		16QAM		16QAM
1852.5	18625	4.4776	0.45558	4.966	0.7063	1855.0	18650	8.9521	0.66577	9.700	0.9886
1880.0	18900	4.4862	0.46275	4.957	0.7092	1880.0	18900	8.9679	0.65853	9.707	0.8705
1907.5	19175	4.4900	0.45549	4.964	0.6682	1905.0	19150	8.9420	0.64229	9.788	0.8826
	LTE BAN		el bandwidt				LTE BAN		el bandwidt		
Freq.	СН		N (MHz)		W (MHz)	Freq.	СН		W (MHz)		W (MHz)
(MHz)		QPSK	16QAM	QPSK	16QAM	(MHz)		QPSK	16QAM	QPSK	16QAM
1857.5	18675	13.380	1.0243	14.50	1.44	1860.0	18700	17.831	1.22	19.25	1.71
1880.0	18900	13.428	1.0245	14.50	1.45	1880.0	18900	17.867	1.21	19.21	1.78
1902.5	19125	13.395	1.0277	14.53	1.39	1900.0	19100	17.817	1.21	19.18	1.74
	LTE BAN	D 4 Channe	el bandwidth	n: 1.4MHz		-	LTE BAN	D 4 Chanr	nel bandwidt	h: 3MHz	
Freq.	СН	99% B\	N (MHz)	26 dB B	W (MHz)	Freq.	СЦ	99% B	W (MHz)	26 dB B	W (MHz)
(MHz)	Сп	QPSK	16QAM	QPSK	16QAM	(MHz)	CH	QPSK	16QAM	QPSK	16QAM
1710.7	19957	1.0855	0.25216	1.250	0.3951	1711.5	19965	2.6852	0.30843	2.945	0.5079
1732.5	20175	1.0872	0.25241	1.267	0.4103	1732.5	20175	2.6858	0.31054	2.959	0.4688
1754.3	20393	1.0870	0.25568	1.269	0.421	1753.5	20385	2.6850	0.31422	2.937	0.5032
	LTE BAN	ID 4 Chanr	el bandwidt	th: 5MHz			LTE BAN	D 4 Chann	el bandwidt	h: 10MHz	
Freq.	СН	99% B\	N (MHz)	26 dB B	W (MHz)	Freq.	СН	99% B	W (MHz)	26 dB B	W (MHz)
(MHz)	СП	QPSK	16QAM	QPSK	16QAM	(MHz)	СП	QPSK	16QAM	QPSK	16QAM
1712.5	19975	4.4861	0.45764	5.009	0.6806	1715.0	20000	8.9560	0.64855	9.778	0.9189
1732.5	20175	4.4846	0.48391	4.944	0.6858	1732.5	20175	8.9412	0.64172	9.732	0.8993
1752.5	20375	4.4808	0.48263	4.981	0.7332	1750.0	20350	8.9419	0.66293	9.739	0.9411
	LTE BAND 4 Channel bandwidth: 15MHz				LTE BAN	D 4 Chann	el bandwidt	h: 20MHz			
Freq.	СН	99% B	N (MHz)	26 dB B	W (MHz)	Freq.	СН	99% B	W (MHz)	26 dB B	W (MHz)
(MHz)		QPSK	16QAM	QPSK	16QAM	(MHz)		QPSK	16QAM	QPSK	16QAM
1717.5	20025	13.431	0.9763	14.43	1.46	1720.0	20050	17.853	1.209	19.30	1.71
1732.5	20175	13.396	1.014	14.53	1.33	1732.5	20175	17.834	1.245	19.20	1.69
1747.5	20325	13.380	1.009	14.50	1.45	1745.0	20300	17.793	1.223	19.23	1.73

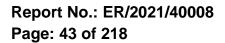
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	LTE BAN	D 5 Channe	el bandwidt	n: 1.4MHz			LTE BAN	ID 5 Chanr	nel bandwid	th: 3MHz	
Freq.	СН	99% B	W (MHz)	26 dB B	W (MHz)	Freq.	СН	99% B	W (MHz)	26 dB B	W (MHz)
(MHz)	Сп	QPSK	16QAM	QPSK	16QAM	(MHz)		QPSK	16QAM	QPSK	16QAM
824.7	20407	1.0854	0.24695	1.264	0.4015	825.5	20415	2.6827	0.49152	2.951	0.7222
836.5	20525	1.0862	0.24748	1.275	0.3682	836.5	20525	2.6847	0.47214	2.946	0.6867
848.3	20643	1.0850	0.24962	1.257	0.4662	847.5	20635	2.6849	0.47778	2.954	0.6726
	LTE BAN	ID 5 Chanr	nel bandwid	th: 5MHz			LTE BAN	D 5 Chann	el bandwidt	h: 10MHz	
Freq.	СН	99% B	W (MHz)	26 dB B	W (MHz)	Freq.	СН	99% B	W (MHz)	26 dB B	W (MHz)
(MHz)	On	QPSK	16QAM	QPSK	16QAM	(MHz)		QPSK	16QAM	QPSK	16QAM
826.5	20425	4.4810	0.49152	4.978	0.7222	829.0	20450	8.9445	0.63466	9.845	0.8805
836.5	20525	4.4816	0.47214	4.975	0.6867	836.5	20525	8.9471	0.62056	9.688	0.9193
846.5	20625	4.4808	0.47778	4.938	0.6726	844.0	20600	8.9538	0.6247	9.755	0.9372
	LTE BAND 12 Channel bandwidth: 1.4MHz				LTE BAND 12 Channel bandwidth: 3MHz						
Freq.	СН	99% B	99% BW (MHz) 26 dB BW (MHz)		Freq.	СН	99% BW (MH		26 dB B	W (MHz)	
(MHz)	UI	QPSK	16QAM	QPSK	16QAM	(MHz)	OIT	QPSK	16QAM	QPSK	16QAM
699.7	23017	1.0854	0.25305	1.261	0.4056	700.5	23025	2.6820	0.3248	2.938	0.521
707.5	23095	1.0863	0.25224	1.271	0.4077	707.5	23095	2.6838	0.3134	2.930	0.495
715.3	23173	1.0851	0.2539	1.279	0.409	714.5	23165	2.6831	0.31394	2.951	0.4986
	LTE BAN	D 12 Chan	nel bandwid	lth: 5MHz			LTE BAN	D 12 Chanr	nel bandwid	th: 10MHz	
Freq.	СН	99% B	W (MHz)	26 dB B	W (MHz)	Freq.	СН	99% B'	W (MHz)	26 dB B	W (MHz)
(MHz)	01	QPSK	16QAM	QPSK	16QAM	(MHz)	OIT	QPSK	16QAM	QPSK	16QAM
701.5	23035	4.4788	0.49787	4.986	0.7297	704.0	23060	8.9610	0.66717	9.789	0.9618
707.5	23095	4.4807	0.49124	4.986	0.671	707.5	23095	8.9597	0.67087	9.819	0.955
713.5	23155	4.4764	0.49251	4.968	0.6566	711.0	23130	8.9394	0.65509	9.744	0.9441
	LTE BAND 13 Channel bandwidth: 5MHz				LTE BAND	D 13 Chanr	nel bandwid	th: 10MHz			
Freq.	СН	99% B	W (MHz)	26 dB B	W (MHz)	Freq.	СН	99% B	W (MHz)	26 dB B	W (MHz)
(MHz)		QPSK	16QAM	QPSK	16QAM	(MHz)		QPSK	16QAM	QPSK	16QAM
779.5	23205	4.4718	0.50639	4.961	0.7005	782.0	23230	8.9580	0.68466	9.740	0.9613
782.0	23230	4.4867	0.48366	5.004	0.7078						
784.5	23255	4.4724	0.49348	4.969	0.6912						

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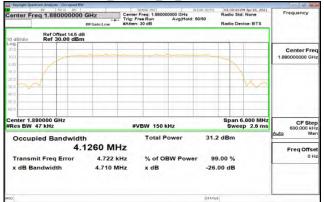


Report No.: ER/2021/40008 Page: 44 of 218

OBW 99%_WCDMA_B2_LowCH9262-1852.4



OBW 99% WCDMA B2 MidCH9400-1880

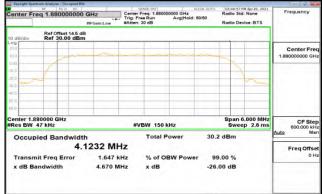


OBW 99%_WCDMA_B2_HighCH9538-1907.6

1	M 50 0 DC	GHz C	enter Freg: 1.9076	00000 GHz	Radio	34 PM Apr 20, 2021 Std: None	Frequency	
		#FGain:Low	rig: Free Run Atten: 30 dB	Avg Hold: 50		Device: BTS		
10 dB/div	Ref Offset 14.5 dB Ref 30.00 dBm							
20.0					~		Center Freq	
0.00	1					X		
30.0	1					has		
-40 0 -50 0								
-60.0								
Center 1.90 #Res BW 4			#VBW 150	kHz		n 6.000 MHz veep 2.6 ms	CF Step 600.000 kHz	
Occup	ied Bandwidt	h	Total F	ower	31.0 dBm		Auto Man	
	4.	1260 MHz					Freq Offset	
Transm	it Freq Error	-3.531 kHa	% of 0	BW Power	99.00 %		0 Hz	
x dB Ba	ndwidth	4.722 MHz	x dB		-26.00 dB			
M9G					STATUS			

OBW 99% HSDPA B2 LowCH9262-1852.4 ter Freq 1.852400000 GHz Center Freq: 1 Trig: Free Run ce: BTS Ref Offset 14.5 dB Ref 30.00 dBm Center Fre r 1.852400 Span 6.000 M Sweep 2.6 CF Ste 600.000 kH #VBW 150 kHz 30.4 dB **Occupied Bandwidth** 4.1163 MHz Freq Offs Transmit Freg Error 187 Hz % of OBW Power 99.00 % 4.673 MHz -26.00 dE x dB

OBW 99% HSDPA B2 MidCH9400-1880



OBW 99%_HSDPA_B2_HighCH9538-1907.6

Keynight Spec	strum Analyzer - Occupied BV	V.				-		
Center Fr	eq 1.907600000	Trig	SERVECTIVI ALTON AUTO Center Freq: 1.907600000 GHz Trig: Free Run Avg Hold: 50/50 #Atten: 30 dB			Radio Device: BTS		Frequency
10 dB/div	Ref Offset 14.5 di Ref 30.00 dBn							
20.0			فممهم			~		Center Fre 1.907600000 GH
9.00 10.0 20.0							1 m	
30.0 ////							~~	
50.0 60.0		_						
Center 1.9 #Res BW	07600 GHz 47 kHz		#VBW 150	kHz			5.000 MHz p 2.6 ms	CF Ste 600.000 kH
Occup	ied Bandwidt	h	Total F	Power	29.6	dBm		Auto Ma
	4.	1149 MHz						Freq Offse
Transm	nit Freq Error	-16.500 kHz	% of O	BW Powe	r 99	.00 %		OH
x dB Ba	andwidth	4.666 MHz	x dB		-26.	00 dB		
190					STATU			

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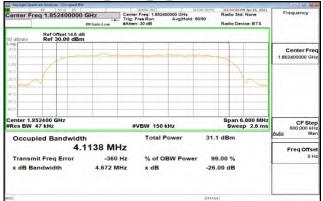
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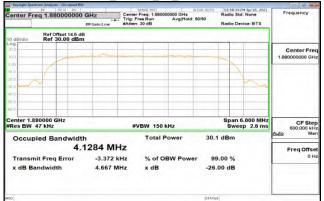


Report No.: ER/2021/40008 Page: 45 of 218

OBW 99%_HSUPA_B2_LowCH9262-1852.4



OBW 99% HSUPA B2 MidCH9400-1880



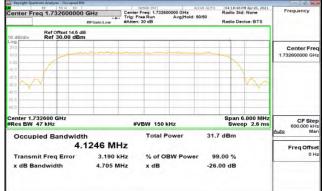
OBW 99%_HSUPA_B2_HighCH9538-1907.6

Center Fre	eq 1.9076000	00 GHz	Center Trig: F	Center Freq: 1.907600000 GHz Trig: Free Run Avg Hold:>50/50			04:00:59 PM Apr 20, 2021 Radio Std: None		Frequency	
		#FGain:Low	#Atten	30 dB			Radio Dev	ice: BTS		
10 dB/div	Ref Offset 14. Ref 30.00 d	5 dB Bm								
00 200	-								Center Free	
0.00	1						1	-		
0.0	~			-				m		
0.0										
50.0										
Res BW	07600 GHz 47 kHz		#\	/BW 150 P	kHz			.000 MHz p 2.6 ms	CF Ster 600.000 kH	
Occup	ied Bandwi	dth		Total P	ower	30.	2 dBm		Auto Ma	
		4.1242 MI	Ηz						Freq Offse	
Transm	nit Freq Error	-8.450	Hz	% of O	BW Power	91	9.00 %		0 H	
x dB Ba	andwidth	4.668 N	IHz	x dB		-26	00 dB			
8						STATU	8			

OBW 99% WCDMA B4 LowCH1312-1712.4 ter Freq 1.712400000 GHz Center Trig: F e: BTS Ref Offset 14.5 dB Ref 30.00 dBm Center Fre

Center 1.712400 GHz Span 6.000 MHz #Res BW 47 kHz #VBW 150 kHz Sweep 2.6 ms					
Occupied Bandwidth 4.13	12 MHz	Total Power	32.5 dBm	Auto Man Freq Offset	
Transmit Freq Error x dB Bandwidth	3.958 kHz 4.710 MHz	% of OBW Power x dB	99.00 % -26.00 dB	0 Hz	

OBW 99% WCDMA B4 MidCH1413-1732.6



OBW 99%_WCDMA_B4_HighCH1513-1752.6

Keynight Spec	trum Analyzer - Occupied BW	· · · · · · · · · · · · · · · · · · ·			
Center Fr	eq 1.752600000	#FGain:Low #Atte	streat 1.752600000 GHz Free Run Avg Hold: 5 n: 30 dB	Radio Std: None Radio Device: BTS	Frequency
10 dB/div	Ref Offset 14.5 dE Ref 30.00 dBm				
20.0 10.0				~	Center Free 1,752600000 GH
20.0					
30.0. 40.0 40.0					
-60.0	52600 GHz			Span 6.000 MHz	
#Res BW			VBW 150 kHz	Sweep 2.6 ms	600.000 kH
Occup	ied Bandwidt	1	Total Power	31.9 dBm	Auto Mar
	4.	1240 MHz			Freq Offse
Transm	nit Freq Error	-7.389 kHz	% of OBW Power	99.00 %	0 H
x dB Ba	andwidth	4.721 MHz	x dB	-26.00 dB	
M9G				STATUS	

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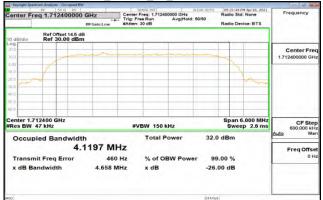
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Report No.: ER/2021/40008 Page: 46 of 218

OBW 99%_HSDPA_B4_LowCH1312-1712.4



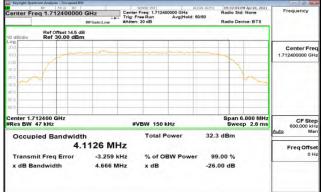
OBW 99% HSDPA B4 MidCH1413-1732.6



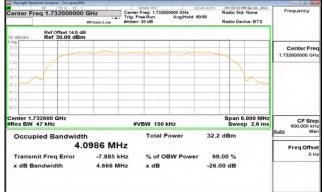
OBW 99%_HSDPA_B4_HighCH1513-1752.6

			Center	Freq: 1.75260	00000 GHz	SO/50	Rac	dio Std	N Apr 20, 2021	Frequer	icy
							Rac	dio Dev	rice: BTS		
		mm			mmin		-				
1								3			
4							-		n n		
52600 GHz 47 kHz	-		#\	/BW 150 P	(Hz	_					F Step
ied Band				Total Power 31			1.3 dBm			Auto Mar	
	4.1	132 MF	łz							Freq	Offset
nit Freq Errandwidth	or			% of O x dB	BW Powe						0 Hz
						STAT					
	Ref 00%et Ref 30.01 52600 GHz 47 kHz led Band	Ref 0154600000 C 8 Ref 0154145.08 Ref 30.00 dBm 652600 CH2 47 kHz Ied Bandwidth 4.1 it Freq Error	Ref 01.00 GHz Ref 01.00 dbm Ref 01	Ref 01.00 dBm Ref 00.00 dBm Ref 00.00 dBm S26000 GHz 47 kHz shi s26000 GHz 47 kHz shi s40 shi	eq 1.75260000 GHz arGalins.com Ref 06.00 dBm Ref 06.00 dBm Ref 06.00 dBm S2600 GHz 47 kHz 52600 GHz 47 kHz 52600 GHz 47 kHz 52600 GHz 47 kHz 52600 GHz 52600 GHZ	Ref J.25280000 GHz BirGalnick Conference 1, 12580000 GHz BirGalnick Conference 1, 12580000 GHz BirGalnick Conference 1, 1259000 GHz Ref J.C.00 dBm Ref J.C.00 dBm S2600 GHz 47 kHz BirGalnick Conference 1, 1259 kHz S2600 GHz 47 kHz BirGalnick Conference 1, 1559 kHz % of OBW Power	end 1.752600000 GHz #FGala.Low BrGALA.Low BrGALA.Low B	Ref 0.00 GHz Breat 14.5 dB Ref 30.00 dBm Ref 30.00 dBm S25000 GHz 4.1132 MHz the freq L7.2360000 GHz Breat 14.5 dB Ref 30.00 dBm S25000 GHz 4.1132 MHz S2600 GHz 4.1132 MHz S2600 GHz S2600 GHz S2	Ref 0.00 GHz BrGatzer Ref 30.00 dBm Ref 30.00 dB	Ref 36.000 GHz Ref 36.000 GHz Ref 36.000 dBm Ref 36.000 dBm Ref 36.000 dBm Ref 36.000 dBm Ref 36.000 dBm Ref 36.000 dBm S25000 GHz Ref 36.000 dBm S25000 GHz S2500 GHz Ref 36.000 dBm S25000 GHz S2500 GHz	Ref 0.000 GHz Ref 0.

OBW 99% HSUPA B4 LowCH1312-1712.4



OBW 99% HSUPA B4 MidCH1413-1732.6



OBW 99%_HSUPA_B4_HighCH1513-1752.6

- Keynight Speet	trum Analyzer - Occupied Bi	V.						
Center Fre	eq 1.752600000	T OTTAL	enter Freq: 1.7526 rig: Free Run Atten: 30 dB		Radio Std:		Frequency	
Ref Offset 14.5 dB 10 dB/div Ref 30.00 dBm								
20.0 10.0 9.00	-				~		Center Free 1.752600000 GH	
20.0						~		
40 D 90 0								
Center 1.7	52600 GHz		#VBW 150	kH2		.000 MHz	CF Ste	
	ied Bandwidt	h	Total		32.4 dBm		600.000 kH Auto Ma	
	4.	1133 MHz					Freq Offse	
	it Freq Error Indwidth	-12.238 kHz 4.659 MHz		BW Power	99.00 % -26.00 dB		0 H	
90					STATUS			

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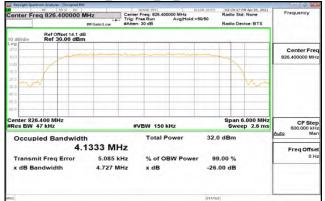
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Report No.: ER/2021/40008 Page: 47 of 218

OBW 99%_WCDMA_B5_LowCH4132-826.4



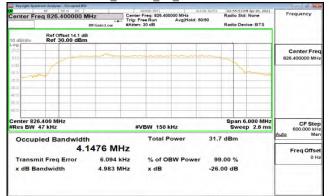
OBW 99% WCDMA B5 MidCH4183-836.6



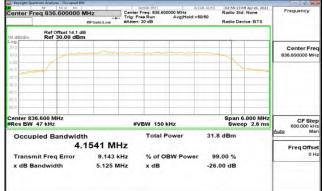
OBW 99%_WCDMA_B5_HighCH4233-846.6

Center Fre	eq 846.600000 N	IHz	Center F	req: 846,600		LIGN ALITO	Radio Sto	PN Apr 20, 2021 d: None	Frequency
		#FGain:Low	#Atten: 3	0 dB	Avginioid.		Radio De	vice: BTS	
10 dB/div	Ref Offset 14.1 dB Ref 30.00 dBm								
20.0. 10.0		mina			a				Center Freq 846.600000 MHz
0.00 -10.0	1								
-30.0	~							m	
-50.0									
Center 846 #Res BW			#VE	3W 150 H	dHz	-		6.000 MHz ep 2.6 ms	CF Step
Occup	Occupied Bandwidth			Total Power 32.			0 dBm		Auto Man
	4.1345 MHz Transmit Freq Error 2.625 kHz x dB Bandwidth 4.728 MHz		Hz				99.00 % -26.00 dB		Freq Offset 0 Hz
A UB Ba	indwidth	4.726 M	m 2	XUB		-20.	.00 dB		
Dew						STATU	8		

OBW 99%_HSDPA_B5_LowCH4132-826.4



OBW 99% HSDPA B5 MidCH4183-836.6



OBW 99%_HSDPA_B5_HighCH4233-846.6

	Nr 50 D DC			NSE-INT		ALIGN ALITO	03:04:	LB PM Apr 20, 2021		
Center Fre	Center Freq 846.600000 MHz				Center Freq: 846.600000 MHz Trig: Free Run Avg Hold: 50/50 #Atten: 30 dB			Std: None Device: BTS	Frequency	
Ref Offset 14.1 dB 10 dB/div Ref 30.00 dBm										
20.0 10.0 0.00	1		~~						Center Free 846.600000 MHz	
20.0	-	_						-		
30.0 40.0										
60.0										
Center 846 #Res BW			#VI	BW 150 H	Hz			n 6.000 MHz eep 2.6 ms	CF Step 600.000 kH	
Occup	ied Bandwidt		6.00				1 dBm		Auto Mar	
		1503 MH							Freq Offse	
	it Freq Error Indwidth	8.174 k 4.997 M		% of Of x dB	BW Powe		9.00 % .00 dB			
190						STATU	5			

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OBW 99%_HSUPA_B5_LowCH4132-826.4

1011101 1104 020.400000 milit			enter Freq: 826.400000 fig: Free Run A Atten: 30 dB	MHz vg Hold: 50/50	C3-08:33 PM Apr 20, 2021 Radio Std: None Radio Device: BTS	Frequency		
10 dB/div Ref 30.00 dBm								
				~~~~~~		Center Fred 826.400000 MH		
enter 820 Res BW	6.400 MHz		#VBW 150 kHz		Span 6.000 MHz Sweep 2.6 ms	CF Step		
Occup		600.000 kH Auto Mar Freq Offse						
	nit Freq Error andwidth	5.319 kHz 5.026 MHz			9.00 % 5.00 dB	OH		

## OBW 99% HSUPA B5 MidCH4183-836.6

Center Fr	eq 836.600000 I	Trig	Hz Hold:>50/50	Radio Std: None	Frequency			
		an dameon	en: 30 dB		Radio Device: BTS			
10 dB/div	Ref Offset 14.1 di Ref 30.00 dBn							
20.0		- m				Center Free		
0.0						836.600000 MHz		
0.00 ND D	T				1 mm			
20.0				1				
30.0		_	_			-		
4/3 13			_	_		-		
50 0								
1	A							
	enter 836.600 MHz Span 6.000 MHz Res BW 47 kHz #VBW 150 kHz Sweep 2.6 ms							
Occup	ied Bandwidt	h	Total Powe	r 32	4 dBm	Auto Man		
		1534 MHz				Freg Offset		
Transm	nit Freq Error	12.535 kHz	% of OBW	Power 9	9.00 %	0 Hz		
	andwidth	5.085 MHz	x dB		.00 dB	-		
						_		
80				STAT	us			

## OBW 99%_HSUPA_B5_HighCH4233-846.6

Center Fro	eq 846.600000 N	Tris	SENSE: INT ALIGN AUTO Center Freq: 846,600000 MHz Trig: Free Run Avg Hold: 50/50 #Atten: 30 dB			Radio Std: None Radio Device: BTS		Frequency	
10 dB/div	Ref Offset 14.1 dE Ref 30.00 dBm								
.eg 20.0 10.0								Center Free 846.600000 MH	
nn no	-					-	~~~		
0.0. 8.0			_						
sn n so.a							_		
enter 846 Res BW	5.600 MHz 47 kHz		#VBW 150	kHz		Span 6.00 Sweep	2.6 ms	CF Ste 600.000 ki	
Occup	led Bandwidtl 4.	h 1432 MHz	Total Power 32.3 d					Auto Ma	
	ransmit Freq Error 2.961 ki dB Bandwidth 4.977 Mi					99.00 % -26.00 dB		он	
0					STATU	5			

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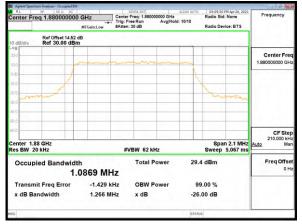


# Report No.: ER/2021/40008 Page: 49 of 218

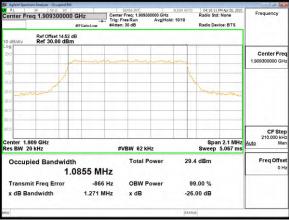
## OBW Band2 1.4MHz QPSK RB6 0 CH18607

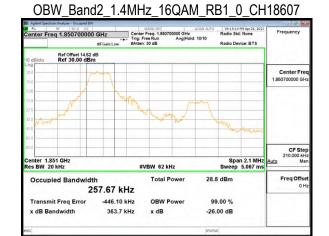


### OBW Band2 1.4MHz QPSK RB6 0 CH18900

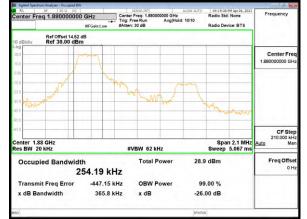


#### OBW Band2 1.4MHz QPSK RB6 0 CH19193

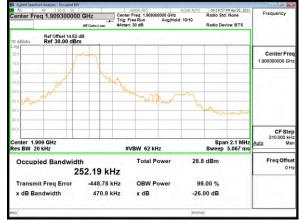




### OBW Band2 1.4MHz 16QAM RB1 0 CH18900



### OBW Band2 1.4MHz 16QAM RB1 0 CH19193



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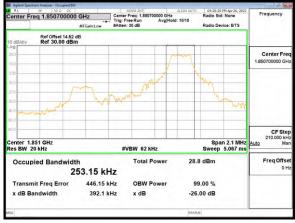
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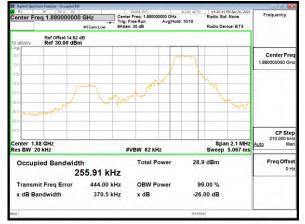
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## OBW Band2 1.4MHz 16QAM RB1 5 CH18607



### OBW Band2 1.4MHz 16QAM RB1 5 CH18900

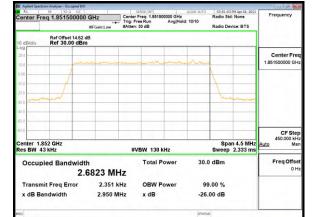


### OBW Band2 1.4MHz 16QAM RB1 5 CH19193

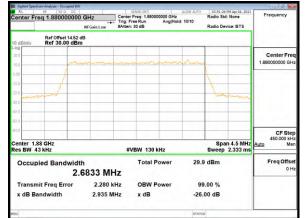


# Report No.: ER/2021/40008 Page: 50 of 218

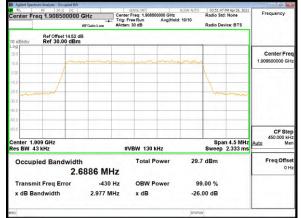
### OBW Band2 3MHz QPSK RB15 0 CH18615



### OBW Band2 3MHz QPSK RB15 0 CH18900



### OBW Band2 3MHz QPSK RB15 0 CH19185



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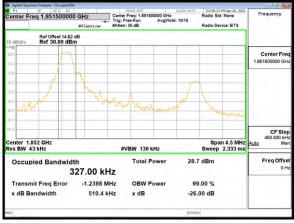
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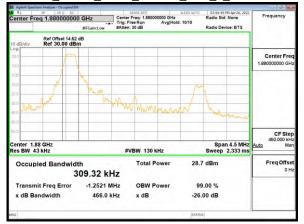


# Report No.: ER/2021/40008 Page: 51 of 218

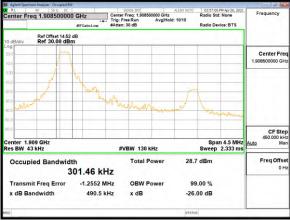
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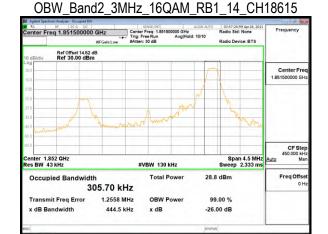


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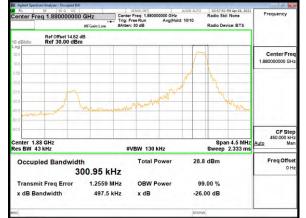


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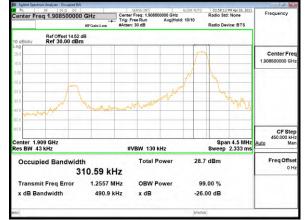




### OBW Band2 3MHz 16QAM RB1 14 CH18900



### OBW Band2 3MHz 16QAM RB1 14 CH19185



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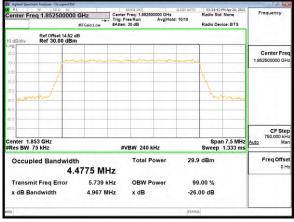
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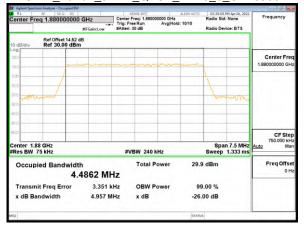


# Report No.: ER/2021/40008 Page: 52 of 218

## OBW_Band2_5MHz_QPSK_RB25_0_CH18625



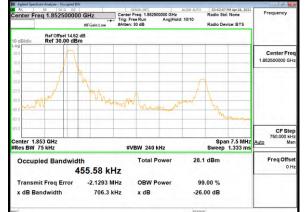
OBW_Band2_5MHz_QPSK_RB25 0 CH18900



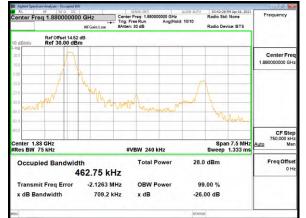
## OBW_Band2_5MHz_QPSK_RB25_0_CH19175

	m Analyzer - Occupied BW				and the state of the	9 6 8			
Center Free	RF 50 Ω DC q 1.907500000	-+- T	SENSE:INT enter Freq: 1.9075 rig: Free Run Atten: 30 dB	ALIGN 00000 GHz Avg Hold: 10/10	Radio Std: None	Frequency			
10 dB/div	Ref Offset 14.52 d Ref 30.00 dBm								
200	, em	mining	mann	unnorm		Center Freq 1.907500000 GHz			
0.00	1					-			
-10.0	mont				howard	~			
-43.0									
-50.0						CF Step			
Center 1.90 #Res BW 7			#VBW 240	kHz	Span 7.5 M Sweep 1.333 r	Hz Auto Man			
Occupie	Occupied Bandwidth Total Power 29.8 dBm 4.4900 MHz								
Transmit	t Freq Error	176 Hz		ower	99.00 %				
x dB Bar	ndwidth	4.964 MHz	x dB		-26.00 dB				
MSG					STATUS				

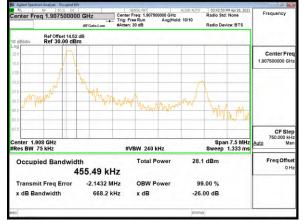
## OBW_Band2_5MHz_16QAM_RB1_0_CH18625



### OBW_Band2_5MHz_16QAM_RB1_0_CH18900



### OBW_Band2_5MHz_16QAM_RB1_0_CH19175



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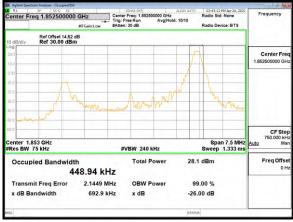
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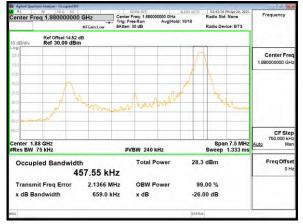
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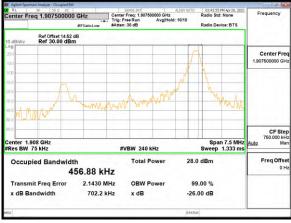
## OBW Band2 5MHz 16QAM RB1 24 CH18625



### OBW Band2 5MHz 16QAM RB1 24 CH18900

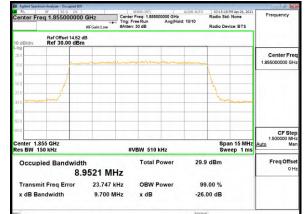


### OBW Band2 5MHz 16QAM RB1 24 CH19175

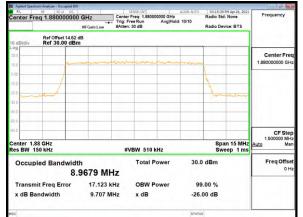


# Report No.: ER/2021/40008 Page: 53 of 218

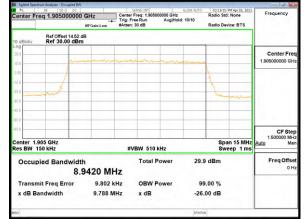
### OBW Band2 10MHz QPSK RB50 0 CH18650



### OBW Band2 10MHz QPSK RB50 0 CH18900



### OBW Band2 10MHz QPSK RB50 0 CH19150



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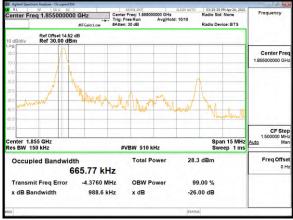
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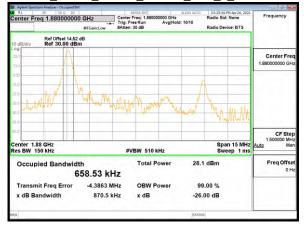


# Report No.: ER/2021/40008 Page: 54 of 218

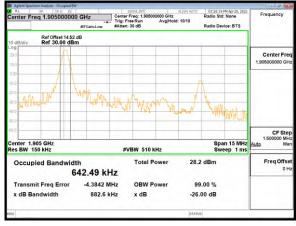
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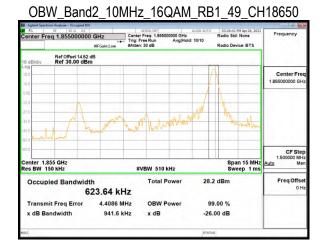


OBW Band2 10MHz 16QAM RB1 0 CH18900

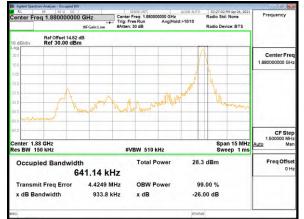


OBW Band2 10MHz 16QAM RB1 0 CH19150

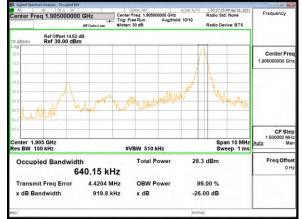




OBW Band2 10MHz 16QAM RB1 49 CH18900



## OBW Band2 10MHz 16QAM RB1 49 CH19150



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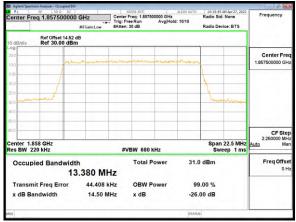
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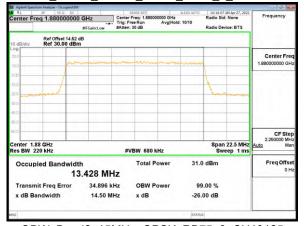


# Report No.: ER/2021/40008 Page: 55 of 218

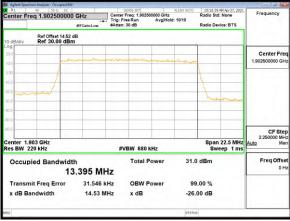
### OBW Band2 15MHz QPSK RB75 0 CH18675



### OBW Band2 15MHz QPSK RB75 0 CH18900

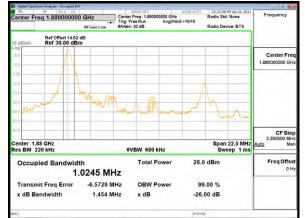


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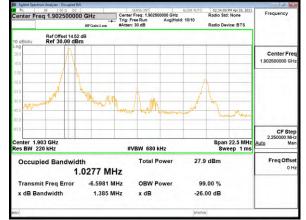


### OBW Band2 15MHz 16QAM RB1 0 CH18675 02:33:11 PM Apr. ter Freq 1.857500000 GHz Radio Device: BTS Ref Offset 14.52 di Ref 30.00 dBm Center Fre CF Step 2.250000 MH: Mai Span 22.5 MH Sween enter 1.858 GH #VBW 680 kHz Total Powe 28.0 dBm Freq Offs Occupied Bandwidth 01 1.0243 MHz -6.5894 MHz OBW Powe Transmit Freg Error 99.00 % x dB Bandwidth 1.440 MHz x dB -26.00 dB

### OBW Band2 15MHz 16QAM RB1 0 CH18900



### OBW Band2 15MHz 16QAM RB1 0 CH19125



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