

ELECTROMAGNETIC EMISSIONS COMPLIANCE REPORT

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FCC Applicant:	Compal Electronics, Inc No.581 & 581-1, Ruiguang Rd., Neihu District, Taipei, (114) Taiwan
Product Name:	5G M.2 Module
Brand Name:	Compal
Model No.:	RXM-G1
Model Difference:	N/A
Report Number:	E2/2019/A0033
FCC ID	GKRRXMG1
FCC Rule Part:	2 , 22H & 24E & 27 C
Issue Date:	Jun. 04, 2020
Date of Test:	Feb. 27, 2020 ~ May 20, 2020
Date of EUT Received:	Oct. 31, 2019

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 C63.26-2015 and the energy emitted by the sample EUT tested as described in this report is in compliance with conducted and radiated emission limits.

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

Approved By:

Men Lay

Blue Yang / Asst. Manager



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.

除非另有說明,此報告結果僅對測試之樣品負責,同時此樣品僅保留90天。本報告未經本公司書面許可,不可部份複製。

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Revision History						
Report Number	Revision	Description	Issue Date	Remark		
E2/2019/A0033	Rev.00	Original.	Jun. 04, 2020	Revised By: Karen Huang		

Note:

1 · Disclaimer

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

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GENERAL PRODUCT INFORMATION 1

1.1 **Product Description**

General:

Product Name:	5G M.2 Module
Brand Name:	Compal
Model No.:	RXM-G1
Model Difference:	N/A
Hardware Version:	DVT-1
Software Version:	RXMG1.00.00.036
Power Supply:	DC 3.3V
IMEI:	359047100009060

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1.2 Operation Frequency Range

20 5 Low 1860 826.5 Mid 1880 836.5 486.5 20 10 Mid 1880 836.5 20 10 Mid 1880 836.5 20 15 Mid 1880 836.5 20 16 Mid 1880 836.5 20 16 Mid 1880 836.5 20 20 Mid 1880 2592.99 20 20 Mid 1880 2592.99 20 40 Mid 1880 2592.99 20 40 Mid 1880 2592.99 20 60 Mid 1880 2592.99 20 60 Mid 1880 2592.99 20 60	20			1000	
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20 10 Mid 1880 836.5 20 15 Mid 1900 844 20 15 Mid 1860 831.5 20 15 Mid 1880 836.5 High 1900 834 5 20 20 Mid 1880 836.5 High 1900 833 5 Eandwidth NR Bandwidth Channel LTE Freuguncy (MHZ) NR Frequency (N 20 20 Mid 1880 2592.99 20 20 Mid 1880 2592.99 20 40 Mid 1880 2592.99 20 40 Mid 1880 2592.99 20 40 Mid 1880 2592.99 20 60 Mid 1880 2592.99 20 60 Mid 1880 2592.99 20 60 Mid 1880 2592.99 20 60 </td <td></td> <td></td> <td>High</td> <td>1900</td> <td>846.5</td>			High	1900	846.5
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20 15 Low 1860 831.5 20 15 Mid 1880 836.5 20 20 Mid 1880 834.5 20 20 Mid 1880 834.5 20 20 Mid 1880 836.5 20 20 Mid 1880 839.5 20 20 Mid 1880 2506.02 20 20 Mid 1880 2592.99 4 High 1900 2670.99 20 40 Mid 1880 2592.99 4 High 1900 2670 20 50 Mid 1880 2592.99 4 High 1900 2659.28 20 60 Mid 1880 2592.99 4 High 1900 2659.28 20 80 Mid 1880 2592.99 4 Low 1860 2592.99	20	10	Mid	1880	836.5
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20 10 Mid 1880 680.5 High 1900 693 20 15 Low 1860 670.5 Mid 1880 680.5 High 1900 693 20 15 Mid 1880 680.5 High 1900 690.5 20 20 20 Mid 1880 680.5 High 1900 688 20 20 Mid 1880 680.5 High 1900 688 DC_5A_n2A Chnnal List For SCS 15KHz E E E Low 829 1852.5 10 5 Mid 836.5 1880 High 844 1907.5					
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20 15 Low 1860 670.5 Mid 1880 680.5 680.5 High 1900 690.5 20 20 Low 1860 673 20 20 Mid 1880 680.5 High 1900 688 680.5 DC_5A_n2A Chnnal List For SCS 15KHz E E Bandwidth NR Bandwidth Channel LTE Freuquncy (MHZ) NR Frequency (M 10 5 Mid 836.5 1880 High 844 1907.5 1907.5	20	10		1880	680.5
20 15 Mid 1880 680.5 High 1900 690.5 1900 690.5 20 20 20 Mid 1860 673 20 20 Mid 1880 680.5 High 1900 688 DC_5A_n2A Chnnal List For SCS 15KHz E Bandwidth NR Bandwidth Channel LTE Freuquncy (MHZ) NR Frequency (M 10 5 Mid 836.5 1880 High 844 1907.5			High	1900	693
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20 20 Mid 1880 680.5 High 1900 688 DC_5A_n2A Chnnal List For SCS 15KHz E Bandwidth NR Bandwidth Channel LTE Freuquncy (MHZ) NR Frequency (M 10 5 Mid 836.5 1880 High 844 1907.5			High	1900	690.5
High 1900 688 DC_5A_n2A Chnnal List For SCS 15KHz E Bandwidth NR Bandwidth Channel LTE Freuquncy (MHZ) NR Frequency (M 10 5 Low 829 1852.5 10 5 Mid 836.5 1880 High 844 1907.5			Low	1860	673
DC_5A_n2A Chnnal List For SCS 15KHz E Bandwidth NR Bandwidth Channel LTE Freuguncy (MHZ) NR Frequency (M 10 5 Low 829 1852.5 10 5 Mid 836.5 1880 High 844 1907.5	20	20	Mid	1880	680.5
Bandwidth NR Bandwidth Channel LTE Freuguncy (MHZ) NR Frequency (M 10 5 Low 829 1852.5 10 5 Mid 836.5 1880 High 844 1907.5			High	1900	688
Bandwidth NR Bandwidth Channel LTE Freuguncy (MHZ) NR Frequency (M 10 5 Low 829 1852.5 10 5 Mid 836.5 1880 High 844 1907.5		DC 5A	n2A Chnn	al List For SCS 15KHz	
10 5 Low 829 1852.5 Mid 836.5 1880 High 844 1907.5	Bandwidth				NR Frequency (MH)
10 5 Mid 836.5 1880 High 844 1907.5					
High 844 1907.5	10	5			
	• =	-			
OW 829 1855			Low	829	1855
10 10 Mid 836.5 1880	10	10			
	10	10			
High 844 1905					
Low 829 1857.5	10	15			
10 15 Mid 836.5 1880	10	15			
High 844 1902.5					
Low 829 1860					
	15	20		000 5	1000
High 844 1900	10	20			

	th NR Bandwidth		LTE Freuquncy (MHZ)	
10	_	Low	829	1712.5
	5	Mid	836.5	1745
		High	844	1777.5
		Low	829	1715
10	10	Mid	836.5	1745
		High	844	1775
		Low	829	1717.5
10	15	Mid	836.5	1745
		High	844	1722.5
		Low	829	1720
10	20	Mid	836.5	1745
	-	High	844	1770
	DC 12A		nal List For SCS 15KHz	
TF Bandwid			LTE Freuguncy (MHZ)	
ETE Banama	an in Danamatin	Low	704	1852.5
10	5	Mid	707.5	1880
10	5	High	707.5	1907.5
	_	Low	704	1855
10	10	Mid	707.5	1880
10	10		707.5	
		High		1905
40	45	Low	704	1857.5
10	15	Mid	707.5	1880
		High	711	1902.5
		Low	704	1860
10	20	Mid	707.5	1880
		High	711	1900
	DC 12A	n66A Chr	inal List For SCS 15KH	Z
TE Bandwid		Channel	LTE Freuquncy (MHZ)	NR Frequency (MI
TE Bandwid			LTE Freuquncy (MHZ) 704	
<u>TE Bandwid</u> _		Channel		NR Frequency (MI 1712.5 1745
	th NR Bandwidth	Channel Low	704	NR Frequency (MI 1712.5
	th NR Bandwidth	Channel Low Mid	704 707.5	NR Frequency (MI 1712.5 1745
	th NR Bandwidth	Channel Low Mid High	704 707.5 711	NR Frequency (MH 1712.5 1745 1777.5
10	th NR Bandwidth	Channel Low Mid High Low Mid	704 707.5 711 704 707.5	NR Frequency (MH 1712.5 1745 1777.5 1777.5 1715 1745
10	th NR Bandwidth	Channel Low Mid High Low	704 707.5 711 704	NR Frequency (MH 1712.5 1745 1777.5 1715
10	th NR Bandwidth	Channel Low Mid High Low Mid High Low	704 707.5 711 704 707.5 711 704	NR Frequency (Mł 1712.5 1745 1777.5 1715 1745 1775 1775 1717.5
10 10	th NR Bandwidth 5 10	Channel Low Mid High Low Mid Low Mid	704 707.5 711 704 707.5 711	NR Frequency (Mł 1712.5 1745 1777.5 1715 1745 1775 1775 1717.5 1745
10 10	th NR Bandwidth 5 10	Channel Low Mid Low Mid High Low Mid High	704 707.5 711 704 707.5 711 704 707.5 711	NR Frequency (Mł 1712.5 1745 1777.5 1715 1745 1775 1717.5 1745 1745 1745 1745
10 10 10	th NR Bandwidth 5 10 15	Channel Low Mid High Low Mid Low Mid High Low	704 707.5 711 704 707.5 711 704 707.5 711 704 707.5 711 704 707.5 711 704 707.5 711 704	NR Frequency (Mł 1712.5 1745 1777.5 1715 1745 1775 1717.5 1745 1745 1722.5 1720
10 10	th NR Bandwidth 5 10	Channel Low Mid Low Mid High Low Mid High Low Mid	704 707.5 711 704 707.5 711 704 707.5 711 704 707.5 711 704 707.5 711 704 704 707.5	NR Frequency (Mł 1712.5 1745 1777.5 1715 1745 1775 1717.5 1745 1722.5 1720 1745
10 10 10	th NR Bandwidth 5 10 15 20	Channel Low Mid High Low Mid High Low Mid High Low Mid High	704 707.5 711 704 707.5 711 704 707.5 711 704 707.5 711 704 707.5 711 704 707.5 711 704 707.5 711	NR Frequency (MH 1712.5 1745 1777.5 1715 1745 1775 1717.5 1745 1722.5 1720 1745 1720 1745
10 10 10 10	th NR Bandwidth 5 10 15 20 DC_13A_	Channel Low Mid High Low Mid High Low Mid High Low Mid High n66A Chn	704 707.5 711 704 707.5 711 704 707.5 711 704 707.5 711 704 707.5 711 nal List For SCS 15KHz	NR Frequency (MH 1712.5 1745 1777.5 1715 1745 1775 1717.5 1745 1722.5 1720 1745 1720 1745
10 10 10 10	th NR Bandwidth 5 10 15 20 DC_13A_	Channel Low Mid High Mid High Low Mid High Low Mid High Mid High Channel	704 707.5 711 704 707.5 711 704 707.5 711 704 707.5 711 704 707.5 711 nal List For SCS 15KHz LTE Freuquncy (MHZ)	NR Frequency (Mł 1712.5 1745 1777.5 1715 1745 1775 1775 1745 1722.5 1720 1745 1720 1745 1720 1745 1720 1745 1770 NR Frequency (MH
10 10 10 10 .TE Bandwid	th NR Bandwidth 5 10 15 20 DC_13A_ th NR Bandwidth	Channel Low Mid High Low Mid High Low Mid High Low Mid High n66A Chn Channel Low	704 707.5 711 704 707.5 711 704 707.5 711 704 707.5 711 nal List For SCS 15KHz LTE Freuguncy (MHZ) 782	NR Frequency (Mł 1712.5 1745 1775 1715 1745 1775 1775 1775 1745 1722.5 1720 1745 1720 1745 1770 1770 NR Frequency (Mł 1712.5
10 10 10 10	th NR Bandwidth 5 10 15 20 DC_13A_	Channel Low Mid High Low Mid High Low Mid High Low Mid High n66A Cha High n66A Cha Mid	704 707.5 711 704 707.5 711 704 707.5 711 704 707.5 711 704 707.5 711 nal List For SCS 15KHz LTE Freuquncy (MHZ) 782 782	NR Frequency (Mł 1712.5 1745 1775 1775 1775 1775 1775 1775 1775 1745 1722.5 1720 1745 1720 1745 1770 1775 1775 1725 1720 1745 1775 1775 1720 1745 1775 1725 1720 1745 1775 1745 1725 1745 1725 1745 1725 1745 1775 1745 1775
10 10 10 10 .TE Bandwidt	th NR Bandwidth 5 10 15 20 DC_13A_ th NR Bandwidth	Channel Low Mid High Low Mid High Low Mid High Low Mid High n66A Chn Channel Low	704 707.5 711 704 707.5 711 704 707.5 711 704 707.5 711 704 707.5 711 nal List For SCS 15KHz LTE Freuquncy (MHZ) 782 782 782	NR Frequency (Mł 1712.5 1745 1775 1715 1745 1775 1745 1745 1745 1722.5 1720 1745 1720 1745 1720 1745 1775 1775 1775 1745 1775 1775 1775 1745 1775 1745 1775 1775 1745 1775 1775 1745 1775 1745 1775 1745 1775 1745 1775 1775 1745 1775 1745 1775 1775 1745 1745 1775 1745 1745 1775 1745 1775 1745 1775 1745 1775 1745 1775 1745 1775 1745 1775
10 10 10 10 .TE Bandwid 10	th NR Bandwidth 5 10 15 20 DC_13A_ th NR Bandwidth 5	Channel Low Mid High Low Mid High Low Mid High n66A Chn Channel Low Mid High Low	704 707.5 711 704 707.5 711 704 707.5 711 704 707.5 711 704 707.5 711 nal List For SCS 15KHz LTE Freuquncy (MHZ) 782 782 782 782	NR Frequency (MH 1712.5 1745 1775.5 1715 1745 1775 1745 1745 1745 1745 1722.5 1720 1745 1720 1745 1770 NR Frequency (MH 1712.5 1745 1775.5 1745 1775.5 1745 1775.5 1715
10 10 10 10 .TE Bandwid	th NR Bandwidth 5 10 15 20 DC_13A_ th NR Bandwidth	Channel Low Mid High Low Mid High Low Mid High Channel Low Mid High	704 707.5 711 704 707.5 711 704 707.5 711 704 707.5 711 704 707.5 711 nal List For SCS 15KHz LTE Freuquncy (MHZ) 782 782 782	NR Frequency (Mł 1712.5 1745 1775 1715 1745 1775 1745 1745 1722.5 1720 1745 1720 1745 1720 1745 1770 2 NR Frequency (Mł 1712.5 1745 1745 1775 1745 1775
10 10 10 10 .TE Bandwid 10	th NR Bandwidth 5 10 15 20 DC_13A_ th NR Bandwidth 5	Channel Low Mid High Low Mid High Low Mid High n66A Chn Channel Low Mid High Low	704 707.5 711 704 707.5 711 704 707.5 711 704 707.5 711 704 707.5 711 nal List For SCS 15KHz LTE Freuquncy (MHZ) 782 782 782 782	NR Frequency (MH 1712.5 1745 1775.5 1715 1745 1775 1745 1745 1745 1745 1745 1745 1745 1745 1720.5 1745 1770 NR Frequency (MH 1712.5 1745 1775.5 1745 1775.5 1745 1775.5 1755.5 1755
10 10 10 10 .TE Bandwid 10	th NR Bandwidth 5 10 15 20 DC_13A_ th NR Bandwidth 5	Channel Low Mid High Low Mid High Low Mid High Channel Low Mid High Low Mid High	704 707.5 711 704 707.5 711 704 707.5 711 704 707.5 711 704 707.5 711 nal List For SCS 15KHz LTE Freuquncy (MHZ) 782 782 782 782 782	NR Frequency (MH 1712.5 1745 1775 1715 1745 1775 1745 1745 1745 1745 1722.5 1720 1745 1720 1745 1720 1745 1770 NR Frequency (MH 1712.5 1745 1775 1745 1775 1745
10 10 10 10 .TE Bandwid 10	th NR Bandwidth 5 10 15 20 DC_13A_ th NR Bandwidth 5	Channel Low Mid High Low Mid High Low Mid High Channel Low Mid High Low Mid High Low	704 707.5 711 704 707.5 711 704 707.5 711 704 707.5 711 nal List For SCS 15KHz LTE Freuquncy (MHZ) 782 782 782 782 782 782 782 782 782 782	NR Frequency (Mł 1712.5 1745 1777.5 1715 1745 1775 1745 1775 1745 1722.5 1720 1745 1770 NR Frequency (MH 1712.5 1775 1775 1745 1775 1745 1775 1715 1745 1775
10 10 10 10 .TE Bandwid 10 10	th NR Bandwidth 5 10 15 20 DC_13A_ th NR Bandwidth 5 10	Channel Low Mid High Low Mid High Low Mid High Channel Low Mid High Low Mid High Low Mid High Low Mid	704 707.5 711 704 707.5 711 704 707.5 711 704 707.5 711 nal List For SCS 15KHz TE Freuquncy (MHZ) 782 782 782 782 782 782 782 782 782 782	NR Frequency (Mł 1712.5 1745 1775 1715 1775 1775 1775 1775 1745 1722.5 1720 1745 1720 1745 1770 NR Frequency (Mł 1712.5 1745 1775 1715 1745 1775 1775 1715 1745 1775 1717.5 1745
10 10 10 10 .TE Bandwid 10 10	th NR Bandwidth 5 10 15 20 DC_13A_ th NR Bandwidth 5 10	Channel Low Mid High Low Mid High Low Mid High Channel Low Mid High Low Mid High Low Mid High	704 707.5 711 704 707.5 711 704 707.5 711 704 707.5 711 704 707.5 711 nal List For SCS 15KHz TE Freuquncy (MHZ) 782 782 782 782 782 782 782 782 782 782	NR Frequency (Mł 1712.5 1745 1775 1775 1775 1775 1775 1775 1775 1745 1720 1745 1770 NR Frequency (Mł 1712.5 1745 1775 1745 1775 1745 1775 1745 1775 1745 1775 1745 1775 1745 1745 1745 1745
10 10 10 10 .TE Bandwid 10 10	th NR Bandwidth 5 10 15 20 DC_13A_ th NR Bandwidth 5 10	Channel Low Mid High Low Mid High Low Mid High Channel Low Mid High Low Mid High Low Mid High Low Mid	704 707.5 711 704 707.5 711 704 707.5 711 704 707.5 711 nal List For SCS 15KHz TE Freuquncy (MHZ) 782 782 782 782 782 782 782 782 782 782	NR Frequency (Mł 1712.5 1745 1775 1715 1775 1775 1775 1775 1745 1722.5 1720 1745 1720 1745 1770 NR Frequency (Mł 1712.5 1745 1775 1715 1745 1775 1775 1715 1745 1775 1717.5 1745

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. 1	n41A Chnnal	List For	SCS 30KH	

IE Bandwidth	NR Bandwidth			
		Low	1860	2506.02
20	20	Mid	1882.5	2592.99
		High	1905	2679.99
		Low	1860	2516.01
20	40	Mid	1882.5	2592.99
		High	1905	2670
		Low	1860	2521.02
20	50	Mid	1882.5	2592.99
		High	1905	2664.99
		Low	1860	2526
20	60	Mid	1882.5	2592.99
		High	1905	2659.98
		Low	1860	2536.02
20	80	Mid	1882.5	2592.99
		High	1905	2649.99
		Low	1860	2541
20	90	Mid	1882.5	2592.99
20	50	High	1905	2644.98
		Low	1860	2546.01
20	100			
20	100	Mid	1882.5	2592.99
		High	1905	2640
			nal List For SCS 30KHz	
TE Bandwidth	NR Bandwidth		LTE Freuquncy (MHZ)	
		Low	831.5	2506.02
15	20	Mid	836.5	2592.99
		High	841.5	2679.99
		Low	831.5	2516.01
15	40	Mid	836.5	2592.99
		High	841.5	2670
		Low	831.5	2521.02
15	50	Mid	836.5	2592.99
		High	841.5	2664.99
		Low	831.5	2526
15	60	Mid	836.5	2592.99
		High	841.5	2659.98
		Low	831.5	2536.02
15	80	Mid	836.5	2592.99
-		High	841.5	2649.99
		Low	831.5	2541
15	90	Mid	836.5	2592.99
		High	841.5	2644.98
		Low	831.5	2546.01
15	100	Mid		
10	100		836.5	2592.99
		High	841.5	2640
TE Dan shud III			al List For SCS 15KHz	
IE Bandwidth	NR Bandwidth			
10	_	Low	2310	826.5
10	5	Mid	2310	836.5

		Low	2310	826.5
10	5	Mid	2310	836.5
		High	2310	846.5
		Low	2310	829
10	10	Mid	2310	836.5
		High	2310	844
	15	Low	2310	831.5
10		Mid	2310	836.5
		High	2310	841.5
10	20	Low	2310	834
		Mid	2310	836.5
		High	2310	839

			nal List For SCS 15KHz	
LTE Bandwidth	NR Bandwidth	Channel	LTE Freuquncy (MHZ)	NR Frequency (MHZ)
		Low	3560	826.5
20	5	Mid	3625	836.5
		High	3690	846.5
		Low	3560	829
20	10	Mid	3625	836.5
		High	3690	844
		Low	3560	831.5
20	15	Mid	3625	836.5
		High	3690	841.5
		Low	3560	834
20	20	Mid	3625	836.5
		High	3690	839
			nal List For SCS 15KHz	
LTE Bandwidth	NR Bandwidth	Channel	LTE Freuquncy (MHZ)	
		Low	3560	1712.5
20	5	Mid	3625	1745
		High	3690	1777.5
		Low	3560	1715
20	10	Mid	3625	1745
		High	3690	1775
		Low	3560	1717.5
20	15	Mid	3625	1745
		High	3690	1722.5
		Low	3560	1720
20	20	Mid	3625	1745
		High	3690	1770
			nal List For SCS 15KHz	
LTE Bandwidth	NR Bandwidth	Channel	LTE Freuquncy (MHZ)	NR Frequency (MHZ)
		Low	1720	826.5
20	5	Mid	1745	836.5
		High	1770	846.5
		Low	1720	829
20	10	Mid	1745	836.5
		High	1770	844
		Low	1720	831.5
20	15	Mid	1745	836.5
		High	1770	841.5
		Low	1720	834
20	20	Mid	1745	836.5
		High	1770	839
	DC_66A_	n41A Chn	nal List For SCS 30KHz	7
LTE Bandwidth			LTE Freuquncy (MHZ)	
		Low	1720	2506.02
20	20	Mid	1745	2592.99
-	-	High	1770	2679.99
		Low	1720	2516.01
20	40	Mid	1745	2592.99
		High	1770	2670
		Low	1720	2521.02
20	50	Mid	1745	2592.99
20	50	High	1770	2664.99
		Low	1720	2526
20	60	Mid	1720	2592.99
20	60			
		High	1770	2659.98
00	00	Low	1720	2536.02
20	80	Mid	1745	2592.99
		High	1770	2649.99
00	6.2	Low	1720	2541
20	90	Mid	1745	2592.99
		High	1770	2644.98
		Low	1720	2546.01

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Mid

High

1745

1770

2592.99

2640



DC_66A_n71A Chnnal List For SCS 15KHz

LTE Bandwidth	NR Bandwidth	Channel	LTE Freuguncy (MHZ)	NR Frequency (MHZ)	
		Low	1720	665.5	
20	5	Mid	1745	680.5	
		High	1770	695.5	
		Low	1720	668	
20	10	Mid	1745	680.5	
		High	1770	693	
		Low	1720	670.5	
20	15	Mid	1745	680.5	
		High	1770	690.5	
		Low	1720	673	
20	20	Mid	1745	680.5	
		High	1770	688	

1.3 Antenna Designation

Vendo	or	Туре	Model Name	Band	Fn	equen (MHz)	'	Peak Antenna Gain (dBi)	
				NR Band 2	1850	~	1910	4	
		PIFA		NR Band 5	824	~	849	2.9	
Pulse			PIFA	PIFA	ANT0	NR Band 41	2496	~	2690
				NR Band 66	1710	~	1780	4.5	
				NR Band 71	663	~	698	2.6	

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1.4 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

1.5 Test Facility

SGS Taiwan Ltd. Central RF Lab (TAF code 3702) No.2, Keji 1st Rd., Guishan District, Taoyuan City, Taiwan 333

FCC Designation number: TW0028

1.6 Special Accessories

No special accessories were used during testing.

1.7 Equipment Modifications

There was no modifications incorporated into the EUT.

1.8 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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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 according to the requirements in Section 8 and 13.

2.4 Measurement Results Explanation Example

For all conducted test items:

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

Note:

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

owing shows an onset computation in physical test.								
	RF cable loss (dB)	Attenuation factor(dB)	offset(dB)					
Low Band (Below 1GHz)	3.6	10	13.6					
High Band (Above 1 GHz)	3.8	10	13.8					

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2.5 Final Amplifier Voltage and Current Information:

5G NR Band	DC voltage (V)	DC current (mA)
n2		470
n5		460
n41	3.3	460
n66		470
n71		470

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2.6 Configuration of Tested System

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

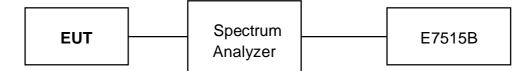
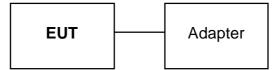


Fig. 2-2 Configuration of Tested System (Fixed Channel-Radiated)



Remote Side



Table 2-1 Equipment Used in

lte	em	Equipment	Mfr/Brand	Model/ Type No.	Series No.	Data Cable	Power Cord	
	1.	UXM 5G Wireless Test Platform	KEYSIGHT	E7515B	MY59321566	shielded	Un-shielded	

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3 SUMMARY OF TEST RESULTS

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

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4 DESCRIPTION OF TEST MODES

4.1 The Worst Test Modes and Channel Details

- 1. The EUT has been tested under operating condition.
- 2. The EUT only supports with below SCS and Bandwidth in each 5G NR Band.

5G NR BAND	SCS (kHz)	Bandwidth (MHz)
n2	15	5, 10, 15, 20
n5	15	5, 10, 15, 20
n41	30	20, 40, 50, 60, 80, 90, 100
n66	15	5, 10, 15, 20
n71	15	5, 10, 15, 20

- 3. Due to each single LTE Band transmission gernerates higher power than the LTE transmission in ENDC mode, the test results of each single LTE band transmission are demonstrated in the test report E2/2019/A0029 as the worst case senarios.
- 4. 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:

5G NR BAND	H PLAN	E1 PLAN	E2 PLAN
n2			V
n5			V
n41			V
n66			V
n71			V

5. The worst case scenarios are determined by the ENDC combinations that generate the highest output power, the occupied bandwidth, peak to average ratio and unwanted emission test results are only be presented with the ENDC combinations of the worst case.

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4.2 Measurement Configuration

	Test Band width								Modulatio	m					RB #											
Test Items	Band	L		н	5	10	15	20				80	90	100	DFT-S-OF DM Pi/2 BPSK	DFT-S-OFDM QPSK	DFT-S-OFDM 16QAM	DFT-S-OFDM 64QAM	DFT-S-OFDM 256QAM	CP-OF DM QPSK	CP-OFDM 16QAM	CP-OFDM 64QAM	CP-OFDM 256QAM	1RB Left	1RB Right	Full
	L5 + n2A			۷	۷	۷	۷	۷	•	-	-	-	•	-	v	v	v	v	v	v	v	v	v	٧	v	v
	L12 + n2A	۷		v	۷	۷	٧	٧	-	-	-	-	-	-	v	v	v	v	v	v	v	v	v	v	v	v
	L2 + n5A			v	٧	۷	v	٧	-	-	-	-	-	-	v	v	v	v	v	v	v	v	v	v	v	v
	L30 + n5A		۷	۷	۷	۷	v	۷	-	-	-	-	-	-	v	v	v	v	v	v	v	v	v	v	v	v
	L48 + n5A			V.	۷	۷	v	v	-	- ·	-	-	-	-	v	v	v	v	v	v	v	v	v	v	v	v
	L66 + n5A			۷	۷	v	v	۷	-	-	-	-	•	-	v	v	v	v	v	v	v	v	v	v	v	v
Max.	L2 + n41A			v	-	•	· ·	v	V	V	۷	۷	V	v v	v	V	V V	v v	v v	v v	V	V V	V	v	v v	v
Output	L25 + n41A L26 + n41A		-	v	-	•	-	v v	v	v	v	v	V	v	v v	v v	v	v	v v	v	v v	v	v v	v v	v	v v
Power	L66 + n41A	v		v	-		t÷.	v	Ť	v	v	v	v	v	v	v	v	v	v	v	v	v	v	v	v	v
	L5 + n66A			v	v	v	v	v	÷.	<u> </u>	<u> </u>	-	-	<u> </u>	v	v	v	v	v	v	v	v	v	v	v	v
	L12+ n66A	v	v	v	v	v	v	v	-	- I	-	-	-	-	v	v	v	v	v	v	v	v	v	v	v	v
	L13+ n66A	v	٧	v	v	v	v	v	-	-	-	-	-	-	v	v	v	v	v	v	v	v	v	v	v	v
	L48+ n66A	۷	۷	٧	۷	۷	۷	۷	-	-	-	-	-	-	v	v	v	v	v	v	v	v	v	v	v	v
	L2 + n71A	۷	٧	٧	٧	۷	٧	۷	-	-	-	-		-	v	v	v	v	v	v	v	v	v	v	v	v
	L66 + n71A	v	٧	v	v	v	v	v	-	-	-	-	-	-	v	v	v	v	v	v	v	v	v	v	v	v
	L5 + n2A	-	٧	-	-	-	-	v	-	-	-	-	-	-	-	-	-	v	-	-	-			-	-	v
	L66 + n5A	-	۷	•	•	-	-	v	•	•	•	•	•	-	-	-	v	-	-	-	•	-	-	-	-	v
DC current	L26 + n41A	-	v	•	-	-	-	•	•	•	-	•	•	v		-	-	-	-	-	v	•	•	-	-	v
	L48+ n66A	-	v	•	-	-	-	V	•	•	-	-	•		V	-	-	-	-		•	•	-		-	V
	L66 + n71A		V	•	-	-	<u> </u>	v		•	-	<u> </u>	•	-		-	-	- Mardada (-	· ·	· ·	v	-			v
Test Items	Band		Test				-	1		<u>nd wi</u>				-				Modulatio							RB #	
Test tients		L		Η	5	10	15	20	40	50	60	80	90	100	DFT-S-OF DM Pi/2 BPSK	DFT-S-OFDM QPSK	DFT-S-OFDM 16QAM	DFT-S-OFDM 64QAM	DFT-S-OFDM 256QAM	CP-OFDM QPSK	CP-OF DM 16QAM	CP-OFDM 64QAM	CP-OFDM 256QAM	IRB Lef	IRB Righ	
	L5 + n2A		-	۷	۷	v	v	v	•	•	-	-	•	-	v	v	v	v	v	v	v	v	v	-	-	v
26dB and	L66 + n5A	۷		v	۷	۷	v	۷	-	-	-	-	-	-	v	v	v	v	v	v	v	v	v	-	-	v
99%	L26 + n41A			V	-	-	•	v	v	v	v	v	v	v	v	V	v	V	v	v	v	v	v	-	-	v
	L48+ n66A L66 + n71A			v v	۷	v v	v	V	-	-	-	-	-	-	v	v	V	v	v v	V	v v	v v	v v	-		v v
	L5 + n2A		v	v	۷	v	V	v	-	<u> </u>	-	-	-	-	- V	v -	- V	- V	- V	v -	- V	- V	v		•	v
	L66 + n5A	v	v	v	-	-		, v	-				-	-	-		-	-					v	-	-	v
Peak-to-Av	L00 + n3A			v				Ť.		T.	t÷.			v	-	-	-	-					v			v
erage Ratio	L48+ n66A		v		-	-	•	v	-		-	-	-	-	-	-	-	-	-	-	-	-	v	-	-	v
	L66 + n71A			v	-	-	-	٧	-	-	-	-		-	-	-	-	-	-	-	-	-	v	-	-	v
			Test						Bar	nd wi	dth							Modulatio	n		_		_		RB #	
Test Items	Band	1	м	н	5	10	15	20	40	50	60	80	90	100	DFT-S-OFDM Pi/2	DFT-S-OFDM	DFT-S-OFDM	DFT-S-OFDM	DFT-S-OFDM	CP-OF DM	CP-OFDM	CP-OFDM	CP-OFDM	1RB Lef	IRB Righ	Full
		-			3	10	13	20	40	50	00		30	100	BPSK	QPSK	16QAM	64QAM	256QAM	QPSK	16QAM	64QAM	256QAM		IND Righ	
	L5 + n2A	۷	-	۷	-	•	•	۷	-	-	-	-	-	-	-	-	-	v	-	-	•	•	•	v	v	v
	L66 + n5A	۷	-	۷	-	-	•	v	-	-	-	-	-	-	•	-	v	-	-	-	-	-	•	v	v	v
Band Edge	L26 + n41A	v	-	V	-	•	ŀ	÷	· ·	÷	· ·	-	•	v		-	-	-	-	-	v	•	•	v	v	v
	L48+ n66A L66 + n71A	v v	-	V	-	-	· ·	v v	-	+ ·	<u> </u>	-	-	-	- V				-		<u>:</u>	- V	-	v v	v	V
	L5 + n2A	v	_	v v		-	-	v	-	<u> </u>		-	-	-										- V	v	V
	L5 + n2A L66 + n5A		_	v		÷	1÷	v	÷	÷.	H÷.		÷		•		- V	v -			· ·					v v
Conducted	L26 + n41A	v	v	v				t.		1.				v	-		-	-			v					v
Emission	L48+ n66A	·	_	v		-	-	v		•		•		L .	v	-	-	-	-	-		-			-	v
	L66 + n71A			۷	•	-	-	v	•		•	•	-	-	-	-	-	-	-	-	-	v	-	-	-	v
			Test						Bar	nd wi	dth							Modulatio	n						RB #	
Test Items	Band	L	м	н	5	10	15	20				80	90	100	DFT-S-OF DM Pi/2 BPSK	DFT-S-OFDM QPSK	DFT-S-OFDM 16QAM	DFT-S-OFDM 64QAM	DFT-S-OFDM 256QAM	CP-OFDM QPSK	CP-OFDM 16QAM	CP-OFDM 64QAM	CP-OFDM 256QAM	1RB Lef	IRB Righ	Full
	L5 + n2A	v	v	v			1.	v	1.					1 .			-	V	-	uran.		-	-			v
	L12 + n2A	v	v	v				v	1.						v		-	-								v
	L12 + 112A		v	v		-		v	1.	T.	1.		•		-			v	-	-					-	v
	L30 + n5A		_	v	•	-	•	v		-	-	-		-	-	-	v	-	-	-		-	-	-	-	v
	L48 + n5A					-		v						-	_	-	v	_	-	-			-		-	v
	L66 + n5A	۷	٧	v	•	-	-				-	•	•	-	-		v	-		-		-	-		-	v
	L2 + n41A					•	-	-	v	-	-	-		-	-	-	v	-	-	-	-			-	-	v
Radiated	L25 + n41A					-	-	-		-	-	-	٧	-	-	v	-	-	-	-		-	-	-	-	v
Emission	L26 + n41A									_	-	-	•	v	-	-	-	-	-	-	v	-	•	-	-	v
	L66 + n41A									_	-	-	•	v	-	-	-	v	-	-	· ·	•	-	•	-	v
	L5 + n66A					-		v		ŀ	· ·	•	•	-	V	-	-	-	-	-	•	•	•	-	v	-
	L12+ n66A L13+ n66A							V		÷	-	•	-	•	v	-	-	-	-	-	<u>·</u>			•	V	-
								v		_	<u> </u>	-	•	-	v	-		-						-	- V	- V
	1 187 ~ ~ ~ ~ ~ ~																									
	L48+ n66A										_	÷			v					<u> </u>	<u> </u>	- V	<u>.</u>			
	<u>L48+ n66A</u> L2 + n71A L66 + n71A	٧	٧	٧	•		-	v v v	-	_	_		•	· ·	- -		· ·			· ·	· ·	- V V			-	v v

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Note: List of frequency bands mentioned in the measurement configuration, for comparison w	vith
3GPP, please refer to the following table.	

Band	3GPP inter-EN-DC configuration in FR1
L5 + n2A	DC_5A_n2A
L12 + n2A	DC_12A_n2A
L2 + n5A	DC_2A_n5A
L30 + n5A	DC_30A_n5A
L48 + n5A	DC_48A_n5A
L66 + n5A	DC_66A_n5A
L2 + n41A	DC_2A_n41A
L25 + n41A	DC_25A_n41A
L26 + n41A	DC_26A_n41A
L66 + n41A	DC_66A_n41A
L5 + n66A	DC_5A_n66A
L12+ n66A	DC_12A_n66A
L13+ n66A	DC_13A_n66A
L48+ n66A	DC_48A_n66A
L2 + n71A	DC_2A_n71A
L66+n71A	DC_66A_n71A

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5 MEASUREMENT UNCERTAINTY

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

Radiated Spurious Emission:

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

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

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

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6 MAXMUM OUTPUT POWER

6.1 Standard Applicable

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

6.1.1 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(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.

FCC 27, 50(h)

(2) Mobile and other user stations transmitting in the BRS and EBS bands are limited to 2 W EIRP.

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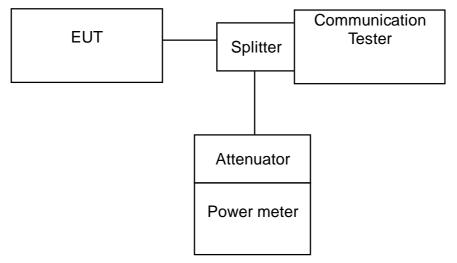
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6.2 Test Set-up



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.

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

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

6.5 Measurement Equipment Used

Conduc	ted Emission (m	neasured at a	antenna port)	Test Site	
EQUIPMENT TYPE	MFR MODE		SERIAL NUMBER	LAST CAL.	CAL DUE.
Spectrum Analyzer	KEYSIGHT	N9010A	MY51440113	07/15/2019	07/14/2020
UXM 5G Wireless Test Platform	KEYSIGHT	E7515B	MY59321566	12/17/2019	12/16/2020
DC Block	PASTERNACK	PE8210	RF32	11/20/2019	11/19/2020
Splitter	Woken	DOM35LW1 A2	RF83	11/20/2019	11/19/2020
Splitter	Woken	DOM35LW1 E1	RF01	11/20/2019	11/19/2020
Coaxial Cables	Woken	00100A1F1A 185C	RF229	11/20/2019	11/19/2020
Coaxial Cables	Woken	00100A1F1A 185C	RF230	11/20/2019	11/19/2020
Coaxial Cables	Woken	00100A1F1A 185C	RF231	11/20/2019	11/19/2020

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6.6 Measurement Results:

Observation has been done on each modulation with the widest bandwidth and Full RB to determine the worst case modulation for further evaluations that conducted on each bandwidth and the Lowest and Highest 1 RB configurations.

Antenna Gain : 2.9

9										
	L2 + n5A		NR		Freq.		NR		EIRP	Margin
	Modulation	Band width	RB	Channel	(MHz)	LTE Power	Power (dBm/10MHz)	EIRP	Limit	(dBm)
[DFT-S-OFDM Pi/2 BPSK	LTE 20 + NR 20	FULL	167300	836.5	24.05	20.98	23.88	38.45	-14.57
	DFT-S-OFDM QPSK	LTE 20 + NR 20	FULL	167300	836.5	24.1	21.51	24.41	38.45	-14.04
	DFT-S-OFDM 16QAM	LTE 20 + NR 20	FULL	167300	836.5	24.04	21.51	24.41	38.45	-14.04
[DFT-S-OFDM 64QAM	LTE 20 + NR 20	FULL	167300	836.5	24.04	21.56	24.46	38.45	-13.99
- [DFT-S-OFDM P256QAM	LTE 20 + NR 20	FULL	167300	836.5	24.07	20.62	23.52	38.45	-14.93
	CP-OFDM QPSK	LTE 20 + NR 20	FULL	167300	836.5	24.12	21.55	24.45	38.45	-14.00
	CP-OFDM 16QAM	LTE 20 + NR 20	FULL	167300	836.5	24.13	21.52	24.42	38.45	-14.03
	CP-OFDM 64QAM	LTE 20 + NR 20	FULL	167300	836.5	24.53	22.39	25.29	38.45	-13.16
	CP-OFDM 256QAM	LTE 20 + NR 20	FULL	167300	836.5	24.56	18.44	21.34	38.45	-17.11
	CP-OFDM 64QAM	LTE 20 + NR 20	1RB Left	167300	836.5	24.01	19.95	22.85	38.45	-15.60
	CP-OFDM 64QAM	LTE 20 + NR 20	1RB Right	167300	836.5	24.01	21.12	24.02	38.45	-14.43
	CP-OFDM 64QAM	LTE 20 + NR 15	FULL	167300	836.5	24.03	21.62	24.52	38.45	-13.93
	CP-OFDM 64QAM	LTE 20 + NR 10	FULL	167300	836.5	24.06	21.65	24.55	38.45	-13.90
	CP-OFDM 64QAM	LTE 20 + NR 5	FULL	167300	836.5	24.03	21.20	24.10	38.45	-14.35
[CP-OFDM 64QAM	LTE 20 + NR 20	FULL	166800	834	24.07	22.20	25.10	38.45	-13.35
	CP-OFDM 64QAM	LTE 20 + NR 20	FULL	167800	839	24.11	22.31	25.21	38.45	-13.24

Antenna Gain : 3.4

ſ	L2 + n41A			_		NR				
	Modulation	Band width	RB	NR Channel	Freq. (MHz)	LTE Power	Power (dBm/10MHz)	EIRP	EIRP Limit	Margin (dBm)
ĺ	DFT-S-OFDM Pi/2 BPSK	LTE 20 + NR 100	FULL	509202	2546.01	22.43	20.48	23.88	33	-9.12
	DFT-S-OFDM QPSK	LTE 20 + NR 100	FULL	518598	2592.99	22.41	20.47	23.87	33	-9.13
ĺ	DFT-S-OFDM 16QAM	LTE 20 + NR 100	FULL	518598	2592.99	22.37	20.51	23.91	33	-9.09
ſ	DFT-S-OFDM 64QAM	LTE 20 + NR 100	FULL	518598	2592.99	22.34	20.50	23.90	33	-9.10
ſ	DFT-S-OFDM P256QAM	LTE 20 + NR 100	FULL	518598	2592.99	22.4	20.42	23.82	33	-9.18
	CP-OFDM QPSK	LTE 20 + NR 100	FULL	518598	2592.99	22.54	20.44	23.84	33	-9.16
ľ	CP-OFDM 16QAM	LTE 20 + NR 100	FULL	518598	2592.99	22.47	20.36	23.76	33	-9.24
ſ	CP-OFDM 64QAM	LTE 20 + NR 100	FULL	518598	2592.99	22.48	20.33	23.73	33	-9.27
ſ	CP-OFDM 256QAM	LTE 20 + NR 100	FULL	518598	2592.99	22.33	18.34	21.74	33	-11.26
ľ	DFT-S-OFDM 16QAM	LTE 20 + NR 100	1RB Left	518598	2592.99	22.5	19.04	22.44	33	-10.56
ſ	DFT-S-OFDM 16QAM	LTE 20 + NR 100	1RB Right	518598	2592.99	22.32	17.97	21.37	33	-11.63
ſ	DFT-S-OFDM 16QAM	LTE 20 + NR 90	FULL	518598	2592.99	22.47	20.61	24.01	33	-8.99
ſ	DFT-S-OFDM 16QAM	LTE 20 + NR 80	FULL	518598	2592.99	22.89	20.47	23.87	33	-9.13
ſ	DFT-S-OFDM 16QAM	LTE 20 + NR 60	FULL	518598	2592.99	22.99	20.48	23.88	33	-9.12
ĺ	DFT-S-OFDM 16QAM	LTE 20 + NR 50	FULL	518598	2592.99	21.74	20.19	23.59	33	-9.41
ſ	DFT-S-OFDM 16QAM	LTE 20 + NR 40	FULL	518598	2592.99	22.48	20.75	24.15	33	-8.85
ĺ	DFT-S-OFDM 16QAM	LTE 20 + NR 20	FULL	518598	2592.99	21.74	20.46	23.86	33	-9.14
ĺ	DFT-S-OFDM 16QAM	LTE 20 + NR 40	FULL	509202	2546.01	22.73	20.69	24.09	33	-8.91
	DFT-S-OFDM 16QAM	LTE 20 + NR 40	FULL	528000	2640	22.54	20.33	23.73	33	-9.27

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Antenna Gain : 2.6

2.0										
	L2 + n71A			NR	Freq.		NR		EIRP	Margin
	Modulation	Band width	RB	Channel	(MHz)	LTE Power	Power (dBm/10MHz)	EIRP	Limit	(dBm)
	DFT-S-OFDM Pi/2 BPSK	LTE 20 + NR 20	FULL	136100	680.5	24.14	23.67	26.27	38.45	-12.18
	DFT-S-OFDM QPSK	LTE 20 + NR 20	FULL	136100	680.5	24.08	23.49	26.09	38.45	-12.36
	DFT-S-OFDM 16QAM	LTE 20 + NR 20	FULL	136100	680.5	24.07	23.19	25.79	38.45	-12.66
	DFT-S-OFDM 64QAM	LTE 20 + NR 20	FULL	136100	680.5	23.7	23.20	25.80	38.45	-12.65
	DFT-S-OFDM P256QAM	LTE 20 + NR 20	FULL	136100	680.5	24.22	22.64	25.24	38.45	-13.21
	CP-OFDM QPSK	LTE 20 + NR 20	FULL	136100	680.5	24.23	23.59	26.19	38.45	-12.26
	CP-OFDM 16QAM	LTE 20 + NR 20	FULL	136100	680.5	24.31	23.58	26.18	38.45	-12.27
	CP-OFDM 64QAM	LTE 20 + NR 20	FULL	136100	680.5	24.19	23.99	26.59	38.45	-11.86
	CP-OFDM 256QAM	LTE 20 + NR 20	FULL	136100	680.5	24.16	21.32	23.92	38.45	-14.53
	CP-OFDM 64QAM	LTE 20 + NR 20	1RB Left	136100	680.5	24.08	20.09	22.69	38.45	-15.76
	CP-OFDM 64QAM	LTE 20 + NR 20	1RB Right	136100	680.5	24.26	21.02	23.62	38.45	-14.83
	CP-OFDM 64QAM	LTE 20 + NR 15	FULL	136100	680.5	24.21	20.81	23.41	38.45	-15.04
	CP-OFDM 64QAM	LTE 20 + NR 15	FULL	136100	680.5	24.18	20.82	23.42	38.45	-15.03
	CP-OFDM 64QAM	LTE 20 + NR 10	FULL	136100	680.5	24.12	20.66	23.26	38.45	-15.19
	CP-OFDM 64QAM	LTE 20 + NR 5	FULL	136100	680.5	24.08	20.64	23.24	38.45	-15.21
	CP-OFDM 64QAM	LTE 20 + NR 20	FULL	134600	673	24.24	20.25	22.85	38.45	-15.60
	CP-OFDM 64QAM	LTE 20 + NR 20	FULL	137600	688	24.21	21.14	23.74	38.45	-14.71

Antenna Gain : 4

L5 + n2A		Freq.		NR		EIRP	Margin		
Modulation	Band width	RB	NR Channel	(MHz)	LTE Power	Power (dBm/10MHz)	EIRP	Limit	(dBm)
DFT-S-OFDM Pi/2 BPSK	LTE 10 + NR 20	FULL	376000	1880	22.72	23.17	27.17	33.00	-5.83
DFT-S-OFDM QPSK	LTE 10 + NR 20	FULL	376000	1880	22.8	23.14	27.14	33.00	-5.86
DFT-S-OFDM 16QAM	LTE 10 + NR 20	FULL	376000	1880	22.85	23.10	27.10	33.00	-5.90
DFT-S-OFDM 64QAM	LTE 10 + NR 20	FULL	376000	1880	22.79	23.38	27.38	33.00	-5.62
DFT-S-OFDM P256QAM	LTE 10 + NR 20	FULL	376000	1880	22.48	22.32	26.32	33.00	-6.68
CP-OFDM QPSK	LTE 10 + NR 20	FULL	376000	1880	22.52	23.03	27.03	33.00	-5.97
CP-OFDM 16QAM	LTE 10 + NR 20	FULL	376000	1880	22.49	22.22	26.22	33.00	-6.78
CP-OFDM 64QAM	LTE 10 + NR 20	FULL	376000	1880	22.64	22.84	26.84	33.00	-6.16
CP-OFDM 256QAM	LTE 10 + NR 20	FULL	376000	1880	22.6	20.34	24.34	33.00	-8.66
DFT-S-OFDM 64QAM	LTE 10 + NR 20	1RB Left	376000	1880	22.68	22.87	26.87	33.00	-6.13
DFT-S-OFDM 64QAM	LTE 10 + NR 20	1RB Right	376000	1880	22.8	22.84	26.84	33.00	-6.16
DFT-S-OFDM 64QAM	LTE 10 + NR 15	FULL	376000	1880	22.57	23.31	27.31	33.00	-5.69
DFT-S-OFDM 64QAM	LTE 10 + NR 10	FULL	376000	1880	22.64	23.19	27.19	33.00	-5.81
DFT-S-OFDM 64QAM	LTE 10 + NR 5	FULL	376000	1880	22.52	23.00	27.00	33.00	-6.00
DFT-S-OFDM 64QAM	LTE 10 + NR 20	FULL	372000	1860	22.81	21.41	25.41	33.00	-7.59
DFT-S-OFDM 64QAM	LTE 10 + NR 20	FULL	380000	1900	22.48	21.79	25.79	33.00	-7.21

Antenna Gain : 4.5

L5 + n66A			NR	Frog		NR		EIRP	Margin
Modulation	Band width	RB	Channel	Freq. (MHz)	LTE Power	Power (dBm/10MHz)	EIRP	Limit	Margin (dBm)
DFT-S-OFDM Pi/2 BPSK	LTE 10 + NR 20	FULL	351000	1755	23.56	19.24	23.74	30.00	-6.26
DFT-S-OFDM QPSK	LTE 10 + NR 20	FULL	351000	1755	23.51	19.23	23.73	30.00	-6.27
DFT-S-OFDM 16QAM	LTE 10 + NR 20	FULL	351000	1755	23.58	19.09	23.59	30.00	-6.41
DFT-S-OFDM 64QAM	LTE 10 + NR 20	FULL	351000	1755	23.62	19.16	23.66	30.00	-6.34
DFT-S-OFDM P256QAM	LTE 10 + NR 20	FULL	351000	1755	23.59	19.07	23.57	30.00	-6.43
CP-OFDM QPSK	LTE 10 + NR 20	FULL	351000	1755	23.58	18.97	23.47	30.00	-6.53
CP-OFDM 16QAM	LTE 10 + NR 20	FULL	351000	1755	23.6	18.98	23.48	30.00	-6.52
CP-OFDM 64QAM	LTE 10 + NR 20	FULL	351000	1755	23.54	19.07	23.57	30.00	-6.43
CP-OFDM 256QAM	LTE 10 + NR 20	FULL	351000	1755	23.5	18.20	22.70	30.00	-7.30
DFT-S-OFDM Pi/2 BPSK	LTE 10 + NR 20	1RB Left	351000	1755	23.7	19.01	23.51	30.00	-6.49
DFT-S-OFDM Pi/2 BPSK	LTE 10 + NR 20	1RB Right	351000	1755	23.67	19.34	23.84	30.00	-6.16
DFT-S-OFDM Pi/2 BPSK	LTE 10 + NR 15	FULL	351000	1755	23.61	19.29	23.79	30.00	-6.21
DFT-S-OFDM Pi/2 BPSK	LTE 10 + NR 10	FULL	351000	1755	23.54	19.19	23.69	30.00	-6.31
DFT-S-OFDM Pi/2 BPSK	LTE 10 + NR 5	FULL	351000	1755	22.17	19.27	23.77	30.00	-6.23
DFT-S-OFDM Pi/2 BPSK	LTE 10 + NR 20	FULL	344000	1720	23.69	18.69	23.19	30.00	-6.81
DFT-S-OFDM Pi/2 BPSK	LTE 10 + NR 20	FULL	358000	1790	22.02	19.19	23.69	30.00	-6.31

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Antenna	Gain :	4

	L12 + n2A			NR	Freq.		NR			
	Modulation	Band width	RB	Channel	Freq. (MHz)	LTE Power	Power (dBm/10MHz)	EIRP	EIRP Limit	Margin (dBm)
	DFT-S-OFDM Pi/2 BPSK	LTE 10 + NR 20	FULL	376000	1880	21.55	22.98	26.98	33.00	-6.02
	DFT-S-OFDM QPSK	LTE 10 + NR 20	FULL	376000	1880	21.52	22.96	26.96	33.00	-6.04
	DFT-S-OFDM 16QAM	LTE 10 + NR 20	FULL	376000	1880	21.51	22.95	26.95	33.00	-6.05
	DFT-S-OFDM 64QAM	LTE 10 + NR 20	FULL	376000	1880	21.49	22.51	26.51	33.00	-6.49
	DFT-S-OFDM P256QAM	LTE 10 + NR 20	FULL	376000	1880	21.32	20.38	24.38	33.00	-8.62
	CP-OFDM QPSK	LTE 10 + NR 20	FULL	376000	1880	21.56	21.40	25.40	33.00	-7.60
	CP-OFDM 16QAM	LTE 10 + NR 20	FULL	376000	1880	21.47	21.45	25.45	33.00	-7.55
	CP-OFDM 64QAM	LTE 10 + NR 20	FULL	376000	1880	21.39	21.03	25.03	33.00	-7.97
	CP-OFDM 256QAM	LTE 10 + NR 20	FULL	376000	1880	21.42	18.53	22.53	33.00	-10.47
	DFT-S-OFDM Pi/2 BPSK	LTE 10 + NR 20	1RB Left	376000	1880	21.59	22.38	26.38	33.00	-6.62
	DFT-S-OFDM Pi/2 BPSK	LTE 10 + NR 20	1RB Right	376000	1880	21.57	21.36	25.36	33.00	-7.64
	DFT-S-OFDM Pi/2 BPSK	LTE 10 + NR 15	FULL	376000	1880	21.4	22.97	26.97	33.00	-6.03
	DFT-S-OFDM Pi/2 BPSK	LTE 10 + NR 10	FULL	376000	1880	21.51	22.78	26.78	33.00	-6.22
	DFT-S-OFDM Pi/2 BPSK	LTE 10 + NR 5	FULL	376000	1880	21.43	22.28	26.28		-6.72
	DFT-S-OFDM Pi/2 BPSK	LTE 10 + NR 20	FULL	372000	1860	21.34	20.59	24.59	33.00	-8.41
	DFT-S-OFDM Pi/2 BPSK	LTE 10 + NR 20	FULL	380000	1900	21.57	21.22	25.22	33.00	-7.78
Antenna Gain : 4.5										
				ND		NR			FIRP	Margin
	L12 + n66A			NR	Freq				FIRP	Margin
			RB	NR Channel	Freq. (MHz)	LTE	Power	FIRP	EIRP Limit	Margin (dBm)
	Modulation	Band width		Channel	(MHz)	Power	Power (dBm/10MHz)	EIRP	Limit	(dBm)
	Modulation DFT-S-OFDM Pi/2 BPSK	Band width LTE 10 + NR 20	FULL	Channel 351000	(MHz) 1755	Power 23.83	Power (dBm/10MHz) 21.54	26.04	Limit 30.00	(dBm) -3.96
	Modulation DFT-S-OFDM Pi/2 BPSK DFT-S-OFDM QPSK	Band width LTE 10 + NR 20 LTE 10 + NR 20	FULL FULL	Channel 351000 351000	(MHz) 1755 1755	Power 23.83 23.74	Power (dBm/10MHz) 21.54 21.60	26.04 26.10	Limit 30.00 30.00	(dBm) -3.96 -3.90
	Modulation DFT-S-OFDM Pi/2 BPSK DFT-S-OFDM QPSK DFT-S-OFDM 16QAM	Band width LTE 10 + NR 20 LTE 10 + NR 20 LTE 10 + NR 20	FULL FULL FULL	Channel 351000 351000 351000	(MHz) 1755 1755 1755	Power 23.83 23.74 23.74	Power (dBm/10MHz) 21.54 21.60 21.52	26.04 26.10 26.02	Limit 30.00 30.00 30.00	(dBm) -3.96 -3.90 -3.98
	Modulation DFT-S-OFDM Pi/2 BPSK DFT-S-OFDM QPSK DFT-S-OFDM 16QAM DFT-S-OFDM 64QAM	Band width LTE 10 + NR 20 LTE 10 + NR 20 LTE 10 + NR 20 LTE 10 + NR 20	FULL FULL FULL FULL	Channel 351000 351000 351000 351000 351000	(MHz) 1755 1755 1755 1755	Power 23.83 23.74 23.74 23.84	Power (dBm/10MHz) 21.54 21.60 21.52 20.93	26.04 26.10 26.02 25.43	Limit 30.00 30.00 30.00 30.00	(dBm) -3.96 -3.90 -3.98 -4.57
	Modulation DFT-S-OFDM Pi/2 BPSK DFT-S-OFDM QPSK DFT-S-OFDM 16QAM DFT-S-OFDM 64QAM DFT-S-OFDM P256QAM	Band width LTE 10 + NR 20	FULL FULL FULL FULL FULL	Channel 351000 351000 351000 351000 351000 351000	(MHz) 1755 1755 1755 1755 1755	Power 23.83 23.74 23.74 23.84 23.87	Power (dBm/10MHz) 21.54 21.60 21.52 20.93 19.93	26.04 26.10 26.02 25.43 24.43	Limit 30.00 30.00 30.00 30.00 30.00	(dBm) -3.96 -3.90 -3.98 -4.57 -5.57
	Modulation DFT-S-OFDM Pi/2 BPSK DFT-S-OFDM QPSK DFT-S-OFDM 16QAM DFT-S-OFDM 64QAM DFT-S-OFDM P256QAM CP-OFDM QPSK	Band width LTE 10 + NR 20	FULL FULL FULL FULL FULL FULL	Channel 351000 351000 351000 351000 351000 351000 351000	(MHz) 1755 1755 1755 1755 1755 1755 1755	Power 23.83 23.74 23.74 23.84 23.87 23.74	Power (dBm/10MHz) 21.54 21.60 21.52 20.93 19.93 20.71	26.04 26.10 26.02 25.43 24.43 25.21	Limit 30.00 30.00 30.00 30.00 30.00	(dBm) -3.96 -3.90 -3.98 -4.57 -5.57 -4.79
	Modulation DFT-S-OFDM Pi/2 BPSK DFT-S-OFDM QPSK DFT-S-OFDM 16QAM DFT-S-OFDM 64QAM DFT-S-OFDM P256QAM CP-OFDM QPSK CP-OFDM 16QAM	Band width LTE 10 + NR 20	FULL FULL FULL FULL FULL FULL	Channel 351000 351000 351000 351000 351000 351000 351000 351000 351000	(MHz) 1755 1755 1755 1755 1755 1755 1755 175	Power 23.83 23.74 23.74 23.84 23.87 23.74 23.76	Power (dBm/10MHz) 21.54 21.60 21.52 20.93 19.93 20.71 20.69	26.04 26.10 25.43 24.43 25.21 25.19	Limit 30.00 30.00 30.00 30.00 30.00 30.00	(dBm) -3.96 -3.90 -3.98 -4.57 -5.57 -4.79 -4.81
	Modulation DFT-S-OFDM Pi/2 BPSK DFT-S-OFDM QPSK DFT-S-OFDM 16QAM DFT-S-OFDM 64QAM CP-OFDM QPSK CP-OFDM 16QAM CP-OFDM 16QAM	Band width LTE 10 + NR 20	FULL FULL FULL FULL FULL FULL FULL	Channel 351000 351000 351000 351000 351000 351000 351000 351000	(MHz) 1755 1755 1755 1755 1755 1755 1755 175	Power 23.83 23.74 23.74 23.84 23.87 23.74 23.87 23.74 23.74	Power (dBm/10MHz) 21.54 21.60 21.52 20.93 19.93 20.71 20.69 20.33	26.04 26.02 25.43 24.43 25.21 25.19 24.83	Limit 30.00 30.00 30.00 30.00 30.00 30.00 30.00 30.00	(dBm) -3.96 -3.90 -3.98 -4.57 -5.57 -4.79 -4.81 -5.17
	Modulation DFT-S-OFDM Pi/2 BPSK DFT-S-OFDM QPSK DFT-S-OFDM 16QAM DFT-S-OFDM 64QAM DFT-S-OFDM 256QAM CP-OFDM 04QAM CP-OFDM 64QAM CP-OFDM 64QAM	Band width LTE 10 + NR 20	FULL FULL	Channel 351000 351000 351000 351000 351000 351000 351000 351000 351000 351000 351000 351000 351000 351000	(MHz) 1755 1755 1755 1755 1755 1755 1755 175	Power 23.83 23.74 23.74 23.84 23.87 23.74 23.74 23.74 23.74 23.74 23.74 23.74 23.74 23.74 23.91 23.94	Power (dBm/10MHz) 21.54 21.60 21.52 20.93 19.93 20.71 20.69 20.33 19.01	26.04 26.02 25.43 24.43 25.21 25.19 24.83 23.51	Limit 30.00 30.00 30.00 30.00 30.00 30.00 30.00 30.00 30.00	(dBm) -3.96 -3.90 -3.98 -4.57 -5.57 -4.79 -4.81 -5.17 -6.49
	Modulation DFT-S-OFDM Pi/2 BPSK DFT-S-OFDM QPSK DFT-S-OFDM 16QAM DFT-S-OFDM 64QAM DFT-S-OFDM 256QAM CP-OFDM 16QAM CP-OFDM 16QAM CP-OFDM 64QAM CP-OFDM 256QAM DFT-S-OFDM Pi/2 BPSK	Band width LTE 10 + NR 20	FULL FULL FULL FULL FULL FULL FULL FULL	Channel 351000 351000 351000 351000 351000 351000 351000 351000 351000 351000 351000 351000 351000 351000 351000 351000	(MHz) 1755 1755 1755 1755 1755 1755 1755 175	Power 23.83 23.74 23.74 23.84 23.87 23.74 23.76 23.91 23.94 23.82	Power (dBm/10MHz) 21.54 21.60 21.52 20.93 19.93 20.71 20.69 20.33 19.01 21.43	26.04 26.02 25.43 24.43 25.21 25.19 24.83 23.51 25.93	Limit 30.00 30.00 30.00 30.00 30.00 30.00 30.00 30.00 30.00	(dBm) -3.96 -3.90 -3.98 -4.57 -5.57 -4.79 -4.81 -5.17 -6.49 -4.07
	Modulation DFT-S-OFDM Pi/2 BPSK DFT-S-OFDM QPSK DFT-S-OFDM 16QAM DFT-S-OFDM 64QAM DFT-S-OFDM P256QAM CP-OFDM 16QAM CP-OFDM 16QAM CP-OFDM 64QAM CP-OFDM 256QAM DFT-S-OFDM Pi/2 BPSK DFT-S-OFDM Pi/2 BPSK	Band width LTE 10 + NR 20	FULL FULL FULL FULL FULL FULL FULL TRB Left 1RB Right	Channel 351000 351000 351000 351000 351000 351000 351000 351000 351000 351000 351000 351000 351000 351000 351000 351000 351000 351000 351000	(MHz) 1755 1755 1755 1755 1755 1755 1755 175	Power 23.83 23.74 23.74 23.84 23.87 23.74 23.76 23.91 23.94 23.82 23.86	Power (dBm/10MHz) 21.54 21.60 21.52 20.93 19.93 20.71 20.69 20.33 19.01 21.43 21.85	26.04 26.02 25.43 24.43 25.21 25.19 24.83 23.51 25.93 26.35	Limit 30.00 30.00 30.00 30.00 30.00 30.00 30.00 30.00 30.00 30.00	(dBm) -3.96 -3.90 -3.98 -4.57 -5.57 -4.79 -4.81 -5.17 -6.49 -4.07 -3.65
	Modulation DFT-S-OFDM Pi/2 BPSK DFT-S-OFDM QPSK DFT-S-OFDM 16QAM DFT-S-OFDM 64QAM DFT-S-OFDM P256QAM CP-OFDM 16QAM CP-OFDM 16QAM CP-OFDM 64QAM CP-OFDM 256QAM DFT-S-OFDM Pi/2 BPSK DFT-S-OFDM Pi/2 BPSK	Band width LTE 10 + NR 20 LTE 10 + NR 15	FULL FULL FULL FULL FULL FULL TRB Left FULL TRB Right FULL	Channel 351000 351000 351000 351000 351000 351000 351000 351000 351000 351000	(MHz) 1755 1755 1755 1755 1755 1755 1755 1755 1755 1755 1755 1755 1755 1755 1755 1755	Power 23.83 23.74 23.74 23.84 23.87 23.74 23.76 23.91 23.94 23.94 23.82 23.86 23.88	Power (dBm/10MHz) 21.54 21.60 21.52 20.93 19.93 20.71 20.69 20.33 19.01 21.43 21.43 21.63	26.04 26.10 26.02 25.43 24.43 25.21 25.19 24.83 23.51 25.93 26.35 26.13	Limit 30.00 30.00 30.00 30.00 30.00 30.00 30.00 30.00 30.00 30.00 30.00	(dBm) -3.96 -3.90 -3.98 -4.57 -5.57 -4.79 -4.81 -5.17 -6.49 -4.07 -3.65 -3.87
	Modulation DFT-S-OFDM Pi/2 BPSK DFT-S-OFDM QPSK DFT-S-OFDM 16QAM DFT-S-OFDM 64QAM DFT-S-OFDM 256QAM CP-OFDM 16QAM CP-OFDM 16QAM CP-OFDM 64QAM CP-OFDM 256QAM DFT-S-OFDM Pi/2 BPSK DFT-S-OFDM Pi/2 BPSK DFT-S-OFDM Pi/2 BPSK	Band width LTE 10 + NR 20 LTE 10 + NR 10	FULL FULL FULL FULL FULL FULL FULL TRB Left 1RB Right	Channel 351000	(MHz) 1755 1755 1755 1755 1755 1755 1755 175	Power 23.83 23.74 23.74 23.84 23.87 23.74 23.76 23.91 23.91 23.94 23.86 23.86 23.86	Power (dBm/10MHz) 21.54 21.60 21.52 20.93 19.93 20.71 20.69 20.33 19.01 21.43 21.43 21.85 21.63 21.59	26.04 26.10 26.02 25.43 24.43 25.21 25.19 24.83 23.51 25.93 26.35 26.13 26.09	Limit 30.00 30.00 30.00 30.00 30.00 30.00 30.00 30.00 30.00 30.00 30.00 30.00	(dBm) -3.96 -3.90 -3.98 -4.57 -5.57 -4.79 -4.81 -5.17 -6.49 -4.07 -3.65 -3.87 -3.91
	Modulation DFT-S-OFDM Pi/2 BPSK DFT-S-OFDM QPSK DFT-S-OFDM 16QAM DFT-S-OFDM 64QAM DFT-S-OFDM P256QAM CP-OFDM 16QAM CP-OFDM 16QAM CP-OFDM 64QAM CP-OFDM 256QAM DFT-S-OFDM Pi/2 BPSK DFT-S-OFDM Pi/2 BPSK	Band width LTE 10 + NR 20 LTE 10 + NR 10 LTE 10 + NR 5 LTE 10 + NR 15 LTE 10 + NR 15 LTE 10 + NR 5	FULL FULL FULL FULL FULL FULL TRB Left TRB Left FULL FULL FULL FULL	Channel 351000 351000 351000 351000 351000 351000 351000 351000 351000 351000	(MHz) 1755 1755 1755 1755 1755 1755 1755 1755 1755 1755 1755 1755 1755 1755 1755 1755 1755	Power 23.83 23.74 23.74 23.84 23.87 23.74 23.76 23.91 23.94 23.94 23.82 23.86 23.88	Power (dBm/10MHz) 21.54 21.60 21.52 20.93 19.93 20.71 20.69 20.33 19.01 21.43 21.43 21.63	26.04 26.10 26.02 25.43 24.43 25.21 25.19 24.83 23.51 25.93 26.35 26.13	Limit 30.00 30.00 30.00 30.00 30.00 30.00 30.00 30.00 30.00 30.00 30.00	(dBm) -3.96 -3.90 -3.98 -4.57 -5.57 -4.79 -4.81 -5.17 -6.49 -4.07 -3.65 -3.87
	Modulation DFT-S-OFDM Pi/2 BPSK DFT-S-OFDM QPSK DFT-S-OFDM 16QAM DFT-S-OFDM 64QAM DFT-S-OFDM 256QAM CP-OFDM 16QAM CP-OFDM 16QAM CP-OFDM 256QAM DFT-S-OFDM Pi/2 BPSK DFT-S-OFDM Pi/2 BPSK DFT-S-OFDM Pi/2 BPSK DFT-S-OFDM Pi/2 BPSK	Band width LTE 10 + NR 20 LTE 10 + NR 10	FULL FULL FULL FULL FULL FULL TRB Left TRB Right FULL FULL FULL FULL	Channel 351000	(MHz) 1755 1755 1755 1755 1755 1755 1755 1755 1755 1755 1755 1755 1755 1755 1755 1755 1755 1755	Power 23.83 23.74 23.74 23.84 23.87 23.74 23.76 23.91 23.94 23.86 23.86 23.88 23.86 23.88 23.86	Power (dBm/10MHz) 21.54 21.60 21.52 20.93 19.93 20.71 20.69 20.33 19.01 21.43 21.43 21.85 21.63 21.59 21.73	26.04 26.00 25.43 25.43 25.21 25.19 24.83 23.51 25.93 26.35 26.13 26.35 26.13 26.09 26.23	Limit 30.00 30.00 30.00 30.00 30.00 30.00 30.00 30.00 30.00 30.00 30.00 30.00 30.00 30.00 30.00	(dBm) -3.96 -3.90 -3.98 -4.57 -5.57 -4.79 -4.81 -5.17 -6.49 -4.07 -3.65 -3.87 -3.91 -3.77
Antenna Gain : 4.5	Modulation DFT-S-OFDM Pi/2 BPSK DFT-S-OFDM QPSK DFT-S-OFDM 16QAM DFT-S-OFDM 64QAM DFT-S-OFDM 256QAM CP-OFDM 16QAM CP-OFDM 16QAM CP-OFDM 256QAM DFT-S-OFDM Pi/2 BPSK DFT-S-OFDM Pi/2 BPSK DFT-S-OFDM Pi/2 BPSK DFT-S-OFDM Pi/2 BPSK DFT-S-OFDM Pi/2 BPSK	Band width LTE 10 + NR 20 LTE 10 + NR 10 LTE 10 + NR 10 LTE 10 + NR 10 LTE 10 + NR 5 LTE 10 + NR 20	FULL FULL FULL FULL FULL FULL FULL FULL	Channel 351000	(MHz) 1755	Power 23.83 23.74 23.74 23.84 23.87 23.74 23.76 23.91 23.91 23.94 23.82 23.86 23.88 23.86 23.88 23.86 23.81 23.76	Power (dBm/10MHz) 21.54 21.60 21.52 20.93 19.93 20.71 20.69 20.33 19.01 21.43 21.63 21.59 21.73 21.31	26.04 26.02 25.43 25.43 25.21 25.19 24.83 23.51 25.93 26.35 26.13 26.03 26.23 26.23 26.23	Limit 30.00 30	(dBm) -3.96 -3.90 -3.98 -4.57 -5.57 -4.79 -4.81 -5.17 -6.49 -4.07 -3.65 -3.87 -3.91 -3.77 -4.19

Antenna Ga	in :	4.	b
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	L13 + n66A			NR	Freq.		NR		EIRP	Margin
	Modulation	Band width	RB	Channel	(MHz)	LTE Power	Power (dBm/10MHz)	EIRP	Limit	(dBm)
	DFT-S-OFDM Pi/2 BPSK	LTE 10 + NR 20	FULL	351000	1755	23.86	21.51	26.01	30.00	-3.99
	DFT-S-OFDM QPSK	LTE 10 + NR 20	FULL	351000	1755	23.78	21.49	25.99	30.00	-4.01
	DFT-S-OFDM 16QAM	LTE 10 + NR 20	FULL	351000	1755	23.51	21.47	25.97	30.00	-4.03
	DFT-S-OFDM 64QAM	LTE 10 + NR 20	FULL	351000	1755	23.81	21.32	25.82	30.00	-4.18
	DFT-S-OFDM P256QAM	LTE 10 + NR 20	FULL	351000	1755	23.83	19.95	24.45	30.00	-5.55
	CP-OFDM QPSK	LTE 10 + NR 20	FULL	351000	1755	23.85	20.72	25.22	30.00	-4.78
	CP-OFDM 16QAM	LTE 10 + NR 20	FULL	351000	1755	23.86	20.71	25.21	30.00	-4.79
	CP-OFDM 64QAM	LTE 10 + NR 20	FULL	351000	1755	23.81	20.30	24.80	30.00	-5.20
	CP-OFDM 256QAM	LTE 10 + NR 20	FULL	351000	1755	23.7	18.05	22.55	30.00	-7.45
	DFT-S-OFDM Pi/2 BPSK	LTE 10 + NR 20	1RB Left	351000	1755	23.81	21.43	25.93	30.00	-4.07
	DFT-S-OFDM Pi/2 BPSK	LTE 10 + NR 20	1RB Right	351000	1755	23.98	21.74	26.24	30.00	-3.76
	DFT-S-OFDM Pi/2 BPSK	LTE 10 + NR 15	FULL	351000	1755	23.75	21.61	26.11	30.00	-3.89
	DFT-S-OFDM Pi/2 BPSK	LTE 10 + NR 10	FULL	351000	1755	23.81	21.55	26.05	30.00	-3.95
	DFT-S-OFDM Pi/2 BPSK	LTE 10 + NR 5	FULL	351000	1755	23.71	21.67	26.17	30.00	-3.83
	DFT-S-OFDM Pi/2 BPSK	LTE 10 + NR 20	FULL	344000	1720	23.96	21.14	25.64	30.00	-4.36
	DFT-S-OFDM Pi/2 BPSK	LTE 10 + NR 20	FULL	358000	1790	23.45	22.03	26.53	30.00	-3.47

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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Antenna Gain : 3.4

: 3.4										
	L25 + n41A			NR	Erog		NR		EIRP	Morgin
	Modulation	Band width	RB	Channel	Freq. (MHz)	LTE Power	Power (dBm/10MHz)	EIRP	Limit	Margin (dBm)
	DFT-S-OFDM Pi/2 BPSK	LTE 20 + NR 100	FULL	509202	2546.01	22.1	20.48	23.88	33	-9.12
	DFT-S-OFDM QPSK	LTE 20 + NR 100	FULL	518598	2592.99	21.92	20.57	23.97	33	-9.03
	DFT-S-OFDM 16QAM	LTE 20 + NR 100	FULL	518598	2592.99	21.82	20.54	23.94	33	-9.06
	DFT-S-OFDM 64QAM	LTE 20 + NR 100	FULL	518598	2592.99	21.79	20.56	23.96	33	-9.04
	DFT-S-OFDM P256QAM	LTE 20 + NR 100	FULL	518598	2592.99	21.87	20.51	23.91	33	-9.09
	CP-OFDM QPSK	LTE 20 + NR 100	FULL	518598	2592.99	22.06	20.45	23.85	33	-9.15
	CP-OFDM 16QAM	LTE 20 + NR 100	FULL	518598	2592.99	21.93	20.54	23.94	33	-9.06
	CP-OFDM 64QAM	LTE 20 + NR 100	FULL	518598	2592.99	22.04	20.51	23.91	33	-9.09
	CP-OFDM 256QAM	LTE 20 + NR 100	FULL	518598	2592.99	22.32	18.42	21.82	33	-11.18
	DFT-S-OFDM QPSK	LTE 20 + NR 100	1RB Left	518598	2592.99	21.87	18.57	21.97	33	-11.03
	DFT-S-OFDM QPSK	LTE 20 + NR 100	1RB Right	518598	2592.99	21.8	19.50	22.90	33	-10.10
	DFT-S-OFDM QPSK	LTE 20 + NR 90	FULL	518598	2592.99	21.67	21.67	25.07	33	-7.93
	DFT-S-OFDM QPSK	LTE 20 + NR 80	FULL	518598	2592.99	22.13	20.03	23.43	33	-9.57
	DFT-S-OFDM QPSK	LTE 20 + NR 60	FULL	518598	2592.99	22.52	20.40	23.80	33	-9.20
	DFT-S-OFDM QPSK	LTE 20 + NR 50	FULL	518598	2592.99	21.79	20.49	23.89	33	-9.11
	DFT-S-OFDM QPSK	LTE 20 + NR 40	FULL	518598	2592.99	22.42	20.62	24.02	33	-8.98
	DFT-S-OFDM QPSK	LTE 20 + NR 20	FULL	518598	2592.99	22.19	20.44	23.84	33	-9.16
	DFT-S-OFDM QPSK	LTE 20 + NR 90	FULL	509202	2546.01	22.7	20.29	23.69	33	-9.31
	DFT-S-OFDM QPSK	LTE 20 + NR 90	FULL	528000	2640	22.41	20.34	23.74	33	-9.26
. 24										

Antenna Gain : 3.4

L26 + n41A			NR	Freq.		NR		EIRP	Margin
Modulation	Band width	RB	Channel	(MHz)	LTE Power	Power (dBm/10MHz)	EIRP	Limit	(dBm)
DFT-S-OFDM Pi/2 BPSK	LTE 15+ NR 100	FULL	509202	2546.01	21.72	21.68	25.08	33	-7.92
DFT-S-OFDM QPSK	LTE 15+ NR 100	FULL	518598	2592.99	21.22	21.69	25.09	33	-7.91
DFT-S-OFDM 16QAM	LTE 15+ NR 100	FULL	518598	2592.99	21.6	21.70	25.10	33	-7.90
DFT-S-OFDM 64QAM	LTE 15+ NR 100	FULL	518598	2592.99	21.54	21.72	25.12	33	-7.88
DFT-S-OFDM P256QAM	LTE 15+ NR 100	FULL	518598	2592.99	21.4	21.74	25.14	33	-7.86
CP-OFDM QPSK	LTE 15+ NR 100	FULL	518598	2592.99	21.57	21.76	25.16	33	-7.84
CP-OFDM 16QAM	LTE 15+ NR 100	FULL	518598	2592.99	21.67	21.78	25.18	33	-7.82
CP-OFDM 64QAM	LTE 15+ NR 100	FULL	518598	2592.99	21.61	21.68	25.08	33	-7.92
CP-OFDM 256QAM	LTE 15+ NR 100	FULL	518598	2592.99	21.55	19.41	22.81	33	-10.19
CP-OFDM 16QAM	LTE 15+ NR 100	1RB Left	518598	2592.99	21.62	19.59	22.99	33	-10.01
CP-OFDM 16QAM	LTE 15+ NR 100	1RB Right	518598	2592.99	21.43	19.84	23.24	33	-9.76
CP-OFDM 16QAM	LTE 15 + NR 90	FULL	518598	2592.99	21.79	21.55	24.95	33	-8.05
CP-OFDM 16QAM	LTE 15 + NR 80	FULL	518598	2592.99	21.62	21.54	24.94	33	-8.06
CP-OFDM 16QAM	LTE 15 + NR 60	FULL	518598	2592.99	21.94	21.46	24.86	33	-8.14
CP-OFDM 16QAM	LTE 15 + NR 50	FULL	518598	2592.99	22.01	21.38	24.78	33	-8.22
CP-OFDM 16QAM	LTE 15 + NR 40	FULL	518598	2592.99	21.94	21.45	24.85	33	-8.15
CP-OFDM 16QAM	LTE 15 + NR 20	FULL	518598	2592.99	21.63	21.64	25.04	33	-7.96
CP-OFDM 16QAM	LTE 15 + NR 90	FULL	509202	2546.01	21.85	21.49	24.89	33	-8.11
CP-OFDM 16QAM	LTE 15 + NR 90	FULL	528000	2640	21.81	21.41	24.81	33	-8.19

Antenna Gain : 2.9

ain: <mark>2.9</mark>										
	L30 + n5A			NR	Freq.		NR		EIRP	Margin
	Modulation	Band width	RB	Channel	(MHz)	LTE Power	Power (dBm/10MHz)	EIRP	Limit	(dBm)
	DFT-S-OFDM Pi/2 BPSK	LTE 10 + NR 20	FULL	167300	836.5	24.3	18.09	20.99	38.45	-17.46
	DFT-S-OFDM QPSK	LTE 10 + NR 20	FULL	167300	836.5	24.21	18.12	21.02	38.45	-17.43
	DFT-S-OFDM 16QAM	LTE 10 + NR 20	FULL	167300	836.5	24.32	18.35	21.25	38.45	-17.20
	DFT-S-OFDM 64QAM	LTE 10 + NR 20	FULL	167300	836.5	24.26	18.17	21.07	38.45	-17.38
	DFT-S-OFDM P256QAM	LTE 10 + NR 20	FULL	167300	836.5	24.21	18.09	20.99	38.45	-17.46
	CP-OFDM QPSK	LTE 10 + NR 20	FULL	167300	836.5	24.24	18.10	21.00	38.45	-17.45
	CP-OFDM 16QAM	LTE 10 + NR 20	FULL	167300	836.5	24.18	18.05	20.95	38.45	-17.50
	CP-OFDM 64QAM	LTE 10 + NR 20	FULL	167300	836.5	24.26	18.15	21.05	38.45	-17.40
	CP-OFDM 256QAM	LTE 10 + NR 20	FULL	167300	836.5	24.14	18.16	21.06	38.45	-17.39
	DFT-S-OFDM 16QAM	LTE 10 + NR 20	1RB Left	167300	836.5	24.32	18.30	21.20	38.45	-17.25
	DFT-S-OFDM 16QAM	LTE 10 + NR 20	1RB Right	167300	836.5	24.3	17.91	20.81	38.45	-17.64
	DFT-S-OFDM 16QAM	LTE 10 + NR 15	FULL	167300	836.5	24.22	18.14	21.04	38.45	-17.41
	DFT-S-OFDM 16QAM	LTE 10 + NR 10	FULL	167300	836.5	24.3	18.02	20.92	38.45	-17.53
	DFT-S-OFDM 16QAM	LTE 10 + NR 5	FULL	167300	836.5	24.2	18.20	21.10	38.45	-17.35
	DFT-S-OFDM 16QAM	LTE 10 + NR 20	FULL	166800	834	20.3	18.26	21.16	38.45	-17.29
	DFT-S-OFDM 16QAM	LTE 10 + NR 20	FULL	167800	839	24.1	18.31	21.21	38.45	-17.24

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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Antenna Gain : 2.9

L48 + n5A			ND	Eroa		NR		EIDD	Margin
Modulation	Band width	RB	Channel	(MHz)	LTE Power	Power (dBm/10MHz)	EIRP	Limit	(dBm)
DFT-S-OFDM Pi/2 BPSK	LTE 20 + NR 20	FULL	167300	836.5	20.95	23.13	26.03	38.45	-12.42
DFT-S-OFDM QPSK	LTE 20 + NR 20	FULL	167300	836.5	20.96	23.88	26.78	38.45	-11.67
DFT-S-OFDM 16QAM	LTE 20 + NR 20	FULL	167300	836.5	20.94	24.81	27.71	38.45	-10.74
DFT-S-OFDM 64QAM	LTE 20 + NR 20	FULL	167300	836.5	20.98	24.33	27.23	38.45	-11.22
DFT-S-OFDM P256QAM	LTE 20 + NR 20	FULL	167300	836.5	21.01	22.34	25.24	38.45	-13.21
CP-OFDM QPSK	LTE 20 + NR 20	FULL	167300	836.5	20.97	23.67	26.57	38.45	-11.88
CP-OFDM 16QAM	LTE 20 + NR 20	FULL	167300	836.5	20.94	23.89	26.79	38.45	-11.66
CP-OFDM 64QAM	LTE 20 + NR 20	FULL	167300	836.5	20.99	23.26	26.16	38.45	-12.29
CP-OFDM 256QAM	LTE 20 + NR 20	FULL	167300	836.5	20.95	20.36	23.26	38.45	-15.19
DFT-S-OFDM 16QAM	LTE 20 + NR 20	1RB Left	167300	836.5	20.95	24.03	26.93	38.45	-11.52
DFT-S-OFDM 16QAM	LTE 20 + NR 20	1RB Right	167300	836.5	20.95	23.76	26.66	38.45	-11.79
DFT-S-OFDM 16QAM	LTE 20 + NR 15	FULL	167300	836.5	20.99	24.75	27.65	38.45	-10.80
DFT-S-OFDM 16QAM	LTE 20 + NR 10	FULL	167300	836.5	20.97	24.64	27.54	38.45	-10.91
DFT-S-OFDM 16QAM	LTE 20 + NR 5	FULL	167300	836.5	20.96	24.17	27.07	38.45	-11.38
DFT-S-OFDM 16QAM	LTE 20 + NR 15	FULL	166800	834	20.81	24.75	27.65	38.45	-10.80
DFT-S-OFDM 16QAM	LTE 20 + NR 15	FULL	167800	839	20.93	24.75	27.65	38.45	-10.80
	Modulation DFT-S-OFDM Pi/2 BPSK DFT-S-OFDM QPSK DFT-S-OFDM 16QAM DFT-S-OFDM 64QAM DFT-S-OFDM 256QAM CP-OFDM 16QAM CP-OFDM 64QAM CP-OFDM 16QAM DFT-S-OFDM 16QAM DFT-S-OFDM 16QAM DFT-S-OFDM 16QAM DFT-S-OFDM 16QAM	Modulation Band width DFT-S-OFDM Pi/2 BPSK LTE 20 + NR 20 DFT-S-OFDM QPSK LTE 20 + NR 20 DFT-S-OFDM 16QAM LTE 20 + NR 20 DFT-S-OFDM 16QAM LTE 20 + NR 20 DFT-S-OFDM 256QAM LTE 20 + NR 20 CP-OFDM 0PSK LTE 20 + NR 20 CP-OFDM 16QAM LTE 20 + NR 20 DFT-S-OFDM 16QAM LTE 20 + NR 5 DFT-S-OFDM 16QAM LTE 20 + NR 5 DFT-S-OFDM 16QAM LTE 20 + NR 10 DFT-S-OFDM 16QAM LTE 20 + NR 5 DFT-S-OFDM 16QAM LTE 20 + NR 5 DFT-S-OFDM 16QAM LTE 20 + NR 5	ModulationBand widthRBDFT-S-OFDM Pi/2 BPSKLTE 20 + NR 20FULLDFT-S-OFDM QPSKLTE 20 + NR 20FULLDFT-S-OFDM 16QAMLTE 20 + NR 20FULLDFT-S-OFDM 64QAMLTE 20 + NR 20FULLDFT-S-OFDM 256QAMLTE 20 + NR 20FULLCP-OFDM 16QAMLTE 20 + NR 20FULLDFT-S-OFDM 16QAMLTE 20 + NR 20FULLDFT-S-OFDM 16QAMLTE 20 + NR 20IRB LeftDFT-S-OFDM 16QAMLTE 20 + NR 10FULLDFT-S-OFDM 16QAMLTE 20 + NR 15FULLDFT-S-OFDM 16QAMLTE 20 + NR 15FULL	Modulation Band width RB NR Channel DFT-S-OFDM Pi/2 BPSK LTE 20 + NR 20 FULL 167300 DFT-S-OFDM QPSK LTE 20 + NR 20 FULL 167300 DFT-S-OFDM 16QAM LTE 20 + NR 20 FULL 167300 DFT-S-OFDM 16QAM LTE 20 + NR 20 FULL 167300 DFT-S-OFDM 64QAM LTE 20 + NR 20 FULL 167300 DFT-S-OFDM P256QAM LTE 20 + NR 20 FULL 167300 CP-OFDM 16QAM LTE 20 + NR 20 FULL 167300 CP-OFDM 16QAM LTE 20 + NR 20 FULL 167300 CP-OFDM 16QAM LTE 20 + NR 20 FULL 167300 CP-OFDM 16QAM LTE 20 + NR 20 FULL 167300 DFT-S-OFDM 16QAM LTE 20 + NR 20 TRB Left 167300 DFT-S-OFDM 16QAM LTE 20 + NR 20 1RB Right 167300 DFT-S-OFDM 16QAM LTE 20 + NR 10 FULL 167300 DFT-S-OFDM 16QAM LTE 20 + NR 10 FULL 167300 DFT-S-OFDM 16QAM LTE 20 + NR 10 <t< td=""><td>Modulation Band width RB NR Freq. Channel DFT-S-OFDM Pi/2 BPSK LTE 20 + NR 20 FULL 167300 836.5 DFT-S-OFDM QPSK LTE 20 + NR 20 FULL 167300 836.5 DFT-S-OFDM 16QAM LTE 20 + NR 20 FULL 167300 836.5 DFT-S-OFDM 64QAM LTE 20 + NR 20 FULL 167300 836.5 DFT-S-OFDM 64QAM LTE 20 + NR 20 FULL 167300 836.5 DFT-S-OFDM 16QAM LTE 20 + NR 20 FULL 167300 836.5 CP-OFDM QPSK LTE 20 + NR 20 FULL 167300 836.5 CP-OFDM 16QAM LTE 20 + NR 20 FULL 167300 836.5 CP-OFDM 16QAM LTE 20 + NR 20 FULL 167300 836.5 CP-OFDM 16QAM LTE 20 + NR 20 FULL 167300 836.5 DFT-S-OFDM 16QAM LTE 20 + NR 20 FULL 167300 836.5 DFT-S-OFDM 16QAM LTE 20 + NR 10 FULL 167300 836.5 DFT-S-OFDM 16QAM LTE 2</td><td>Modulation Band width RB NR Channel Freq. (MHz) LTE Power DFT-S-OFDM Pi/2 BPSK LTE 20 + NR 20 FULL 167300 836.5 20.95 DFT-S-OFDM QPSK LTE 20 + NR 20 FULL 167300 836.5 20.96 DFT-S-OFDM 16QAM LTE 20 + NR 20 FULL 167300 836.5 20.96 DFT-S-OFDM 64QAM LTE 20 + NR 20 FULL 167300 836.5 20.98 DFT-S-OFDM 256QAM LTE 20 + NR 20 FULL 167300 836.5 20.97 CP-OFDM QPSK LTE 20 + NR 20 FULL 167300 836.5 20.97 CP-OFDM 16QAM LTE 20 + NR 20 FULL 167300 836.5 20.97 CP-OFDM 16QAM LTE 20 + NR 20 FULL 167300 836.5 20.99 CP-OFDM 256QAM LTE 20 + NR 20 FULL 167300 836.5 20.99 CP-OFDM 16QAM LTE 20 + NR 20 IRB Left 167300 836.5 20.95 DFT-S-OFDM 16QAM LTE 20 + NR 20 IRB Right</td><td>Modulation Band width RB NR Channel Freq. (MHz) LTE Power Power (dBm/10MHz) DFT-S-OFDM Pi/2 BPSK LTE 20 + NR 20 FULL 167300 836.5 20.95 23.13 DFT-S-OFDM QPSK LTE 20 + NR 20 FULL 167300 836.5 20.96 23.88 DFT-S-OFDM 16QAM LTE 20 + NR 20 FULL 167300 836.5 20.94 24.81 DFT-S-OFDM 64QAM LTE 20 + NR 20 FULL 167300 836.5 20.98 24.33 DFT-S-OFDM 256QAM LTE 20 + NR 20 FULL 167300 836.5 20.97 23.67 CP-OFDM 16QAM LTE 20 + NR 20 FULL 167300 836.5 20.99 23.26 CP-OFDM 16QAM LTE 20 + NR 20 FULL 167300 836.5 20.95 20.36 CP-OFDM 256QAM LTE 20 + NR 20 FULL 167300 836.5 20.95 23.67 CP-OFDM 16QAM LTE 20 + NR 20 FULL 167300 836.5 20.95 20.36 DFT-S-OFDM 16QAM</td><td>Modulation Band width NR Channel Freq. (MHz) LTE Power Power (dBm/10MHz) EIRP DFT-S-OFDM Pi/2 BPSK LTE 20 + NR 20 FULL 167300 836.5 20.95 23.13 26.03 DFT-S-OFDM QPSK LTE 20 + NR 20 FULL 167300 836.5 20.96 23.88 26.78 DFT-S-OFDM 16QAM LTE 20 + NR 20 FULL 167300 836.5 20.94 24.81 27.71 DFT-S-OFDM 64QAM LTE 20 + NR 20 FULL 167300 836.5 20.98 24.33 27.23 DFT-S-OFDM 256QAM LTE 20 + NR 20 FULL 167300 836.5 20.97 23.67 26.57 CP-OFDM QPSK LTE 20 + NR 20 FULL 167300 836.5 20.99 23.26 26.16 CP-OFDM 16QAM LTE 20 + NR 20 FULL 167300 836.5 20.99 23.26 26.16 CP-OFDM 16QAM LTE 20 + NR 20 FULL 167300 836.5 20.95 23.36 23.26 DFT-S-OFDM 16QAM</td><td>Modulation Band width RB NR Freq. (MHz) LTE Power RB EIRP DFT-S-OFDM Pi/2 BPSK LTE 20 + NR 20 FULL 167300 836.5 20.95 23.13 26.03 38.45 DFT-S-OFDM QPSK LTE 20 + NR 20 FULL 167300 836.5 20.95 23.13 26.03 38.45 DFT-S-OFDM 16QAM LTE 20 + NR 20 FULL 167300 836.5 20.96 23.88 26.78 38.45 DFT-S-OFDM 64QAM LTE 20 + NR 20 FULL 167300 836.5 20.94 24.81 27.71 38.45 DFT-S-OFDM 64QAM LTE 20 + NR 20 FULL 167300 836.5 20.97 23.67 26.57 38.45 CP-OFDM QPSK LTE 20 + NR 20 FULL 167300 836.5 20.99 23.28 26.79 38.45 CP-OFDM 16QAM LTE 20 + NR 20 FULL 167300 836.5 20.99 23.26 38.45 CP-OFDM 16QAM LTE 20 + NR 20 FULL 167300</td></t<>	Modulation Band width RB NR Freq. Channel DFT-S-OFDM Pi/2 BPSK LTE 20 + NR 20 FULL 167300 836.5 DFT-S-OFDM QPSK LTE 20 + NR 20 FULL 167300 836.5 DFT-S-OFDM 16QAM LTE 20 + NR 20 FULL 167300 836.5 DFT-S-OFDM 64QAM LTE 20 + NR 20 FULL 167300 836.5 DFT-S-OFDM 64QAM LTE 20 + NR 20 FULL 167300 836.5 DFT-S-OFDM 16QAM LTE 20 + NR 20 FULL 167300 836.5 CP-OFDM QPSK LTE 20 + NR 20 FULL 167300 836.5 CP-OFDM 16QAM LTE 20 + NR 20 FULL 167300 836.5 CP-OFDM 16QAM LTE 20 + NR 20 FULL 167300 836.5 CP-OFDM 16QAM LTE 20 + NR 20 FULL 167300 836.5 DFT-S-OFDM 16QAM LTE 20 + NR 20 FULL 167300 836.5 DFT-S-OFDM 16QAM LTE 20 + NR 10 FULL 167300 836.5 DFT-S-OFDM 16QAM LTE 2	Modulation Band width RB NR Channel Freq. (MHz) LTE Power DFT-S-OFDM Pi/2 BPSK LTE 20 + NR 20 FULL 167300 836.5 20.95 DFT-S-OFDM QPSK LTE 20 + NR 20 FULL 167300 836.5 20.96 DFT-S-OFDM 16QAM LTE 20 + NR 20 FULL 167300 836.5 20.96 DFT-S-OFDM 64QAM LTE 20 + NR 20 FULL 167300 836.5 20.98 DFT-S-OFDM 256QAM LTE 20 + NR 20 FULL 167300 836.5 20.97 CP-OFDM QPSK LTE 20 + NR 20 FULL 167300 836.5 20.97 CP-OFDM 16QAM LTE 20 + NR 20 FULL 167300 836.5 20.97 CP-OFDM 16QAM LTE 20 + NR 20 FULL 167300 836.5 20.99 CP-OFDM 256QAM LTE 20 + NR 20 FULL 167300 836.5 20.99 CP-OFDM 16QAM LTE 20 + NR 20 IRB Left 167300 836.5 20.95 DFT-S-OFDM 16QAM LTE 20 + NR 20 IRB Right	Modulation Band width RB NR Channel Freq. (MHz) LTE Power Power (dBm/10MHz) DFT-S-OFDM Pi/2 BPSK LTE 20 + NR 20 FULL 167300 836.5 20.95 23.13 DFT-S-OFDM QPSK LTE 20 + NR 20 FULL 167300 836.5 20.96 23.88 DFT-S-OFDM 16QAM LTE 20 + NR 20 FULL 167300 836.5 20.94 24.81 DFT-S-OFDM 64QAM LTE 20 + NR 20 FULL 167300 836.5 20.98 24.33 DFT-S-OFDM 256QAM LTE 20 + NR 20 FULL 167300 836.5 20.97 23.67 CP-OFDM 16QAM LTE 20 + NR 20 FULL 167300 836.5 20.99 23.26 CP-OFDM 16QAM LTE 20 + NR 20 FULL 167300 836.5 20.95 20.36 CP-OFDM 256QAM LTE 20 + NR 20 FULL 167300 836.5 20.95 23.67 CP-OFDM 16QAM LTE 20 + NR 20 FULL 167300 836.5 20.95 20.36 DFT-S-OFDM 16QAM	Modulation Band width NR Channel Freq. (MHz) LTE Power Power (dBm/10MHz) EIRP DFT-S-OFDM Pi/2 BPSK LTE 20 + NR 20 FULL 167300 836.5 20.95 23.13 26.03 DFT-S-OFDM QPSK LTE 20 + NR 20 FULL 167300 836.5 20.96 23.88 26.78 DFT-S-OFDM 16QAM LTE 20 + NR 20 FULL 167300 836.5 20.94 24.81 27.71 DFT-S-OFDM 64QAM LTE 20 + NR 20 FULL 167300 836.5 20.98 24.33 27.23 DFT-S-OFDM 256QAM LTE 20 + NR 20 FULL 167300 836.5 20.97 23.67 26.57 CP-OFDM QPSK LTE 20 + NR 20 FULL 167300 836.5 20.99 23.26 26.16 CP-OFDM 16QAM LTE 20 + NR 20 FULL 167300 836.5 20.99 23.26 26.16 CP-OFDM 16QAM LTE 20 + NR 20 FULL 167300 836.5 20.95 23.36 23.26 DFT-S-OFDM 16QAM	Modulation Band width RB NR Freq. (MHz) LTE Power RB EIRP DFT-S-OFDM Pi/2 BPSK LTE 20 + NR 20 FULL 167300 836.5 20.95 23.13 26.03 38.45 DFT-S-OFDM QPSK LTE 20 + NR 20 FULL 167300 836.5 20.95 23.13 26.03 38.45 DFT-S-OFDM 16QAM LTE 20 + NR 20 FULL 167300 836.5 20.96 23.88 26.78 38.45 DFT-S-OFDM 64QAM LTE 20 + NR 20 FULL 167300 836.5 20.94 24.81 27.71 38.45 DFT-S-OFDM 64QAM LTE 20 + NR 20 FULL 167300 836.5 20.97 23.67 26.57 38.45 CP-OFDM QPSK LTE 20 + NR 20 FULL 167300 836.5 20.99 23.28 26.79 38.45 CP-OFDM 16QAM LTE 20 + NR 20 FULL 167300 836.5 20.99 23.26 38.45 CP-OFDM 16QAM LTE 20 + NR 20 FULL 167300

Antenna Gain : 4.5

L48 + n66A			NR	Erog		NR		EIRP	Margin
Modulation	Band width	RB	Channel	Freq. (MHz)	LTE Power	Power (dBm/10MHz)	EIRP	Limit	(dBm)
DFT-S-OFDM Pi/2 BPSK	LTE 20 + NR 20	FULL	351000	1755	23.91	23.49	27.99	30.00	-2.01
DFT-S-OFDM QPSK	LTE 20 + NR 20	FULL	351000	1755	23.84	22.56	27.06	30.00	-2.94
DFT-S-OFDM 16QAM	LTE 20 + NR 20	FULL	351000	1755	23.75	21.87	26.37	30.00	-3.63
DFT-S-OFDM 64QAM	LTE 20 + NR 20	FULL	351000	1755	23.79	21.33	25.83	30.00	-4.17
DFT-S-OFDM P256QAM	LTE 20 + NR 20	FULL	351000	1755	23.73	19.98	24.48	30.00	-5.52
CP-OFDM QPSK	LTE 20 + NR 20	FULL	351000	1755	23.66	20.78	25.28	30.00	-4.72
CP-OFDM 16QAM	LTE 20 + NR 20	FULL	351000	1755	23.78	20.78	25.28	30.00	-4.72
CP-OFDM 64QAM	LTE 20 + NR 20	FULL	351000	1755	23.68	20.37	24.87	30.00	-5.13
CP-OFDM 256QAM	LTE 20 + NR 20	FULL	351000	1755	23.84	18.03	22.53	30.00	-7.47
DFT-S-OFDM Pi/2 BPSK	LTE 20 + NR 20	1RB Left	351000	1755	23.76	22.69	27.19	30.00	-2.81
DFT-S-OFDM Pi/2 BPSK	LTE 20 + NR 20	1RB Right	351000	1755	23.86	23.24	27.74	30.00	-2.26
DFT-S-OFDM Pi/2 BPSK	LTE 20 + NR 15	FULL	351000	1755	23.84	23.38	27.88	30.00	-2.12
DFT-S-OFDM Pi/2 BPSK	LTE 20 + NR 10	FULL	351000	1755	23.78	21.52	26.02	30.00	-3.98
DFT-S-OFDM Pi/2 BPSK	LTE 20 + NR 5	FULL	351000	1755	23.41	22.78	27.28	30.00	-2.72
DFT-S-OFDM Pi/2 BPSK	LTE 20 + NR 20	FULL	344000	1720	23.91	21.23	25.73	30.00	-4.27
DFT-S-OFDM Pi/2 BPSK	LTE 20 + NR 20	FULL	358000	1790	24.17	23.41	27.91	30.00	-2.09

Antenna Gain : 2.9

9										
	L66 + n5A			NR	From		NR		EIRP	Morain
	Modulation	Band width	RB	Channel	Freq. (MHz)	LTE Power	Power (dBm/10MHz)	EIRP	Limit	Margin (dBm)
ľ	DFT-S-OFDM Pi/2 BPSK	LTE 20 + NR 20	FULL	167300	836.5	20.65	21.40	24.30	38.45	-14.15
ſ	DFT-S-OFDM QPSK	LTE 20 + NR 20	FULL	167300	836.5	20.63	23.82	26.72	38.45	-11.73
	DFT-S-OFDM 16QAM	LTE 20 + NR 20	FULL	167300	836.5	20.79	24.89	27.79	38.45	-10.66
ľ	DFT-S-OFDM 64QAM	LTE 20 + NR 20	FULL	167300	836.5	20.63	24.35	27.25	38.45	-11.20
ſ	DFT-S-OFDM P256QAM	LTE 20 + NR 20	FULL	167300	836.5	20.64	22.33	25.23	38.45	-13.22
ſ	CP-OFDM QPSK	LTE 20 + NR 20	FULL	167300	836.5	20.6	23.71	26.61	38.45	-11.84
	CP-OFDM 16QAM	LTE 20 + NR 20	FULL	167300	836.5	20.62	23.68	26.58	38.45	-11.87
	CP-OFDM 64QAM	LTE 20 + NR 20	FULL	167300	836.5	20.63	23.24	26.14	38.45	-12.31
[CP-OFDM 256QAM	LTE 20 + NR 20	FULL	167300	836.5	20.7	20.41	23.31	38.45	-15.14
	DFT-S-OFDM 16QAM	LTE 20 + NR 20	1RB Left	167300	836.5	20.66	24.84	27.74	38.45	-10.71
	DFT-S-OFDM 16QAM	LTE 20 + NR 20	1RB Right	167300	836.5	20.69	23.52	26.42	38.45	-12.03
[DFT-S-OFDM 16QAM	LTE 20 + NR 15	FULL	167300	836.5	20.65	23.55	26.45	38.45	-12.00
ſ	DFT-S-OFDM 16QAM	LTE 20 + NR 10	FULL	167300	836.5	20.72	23.31	26.21	38.45	-12.24
[DFT-S-OFDM 16QAM	LTE 20 + NR 5	FULL	167300	836.5	20.7	22.80	25.70	38.45	-12.75
[DFT-S-OFDM 16QAM	LTE 20 + NR 20	FULL	166800	834	20.66	24.74	27.64	38.45	-10.81
ſ	DFT-S-OFDM 16QAM	LTE 20 + NR 20	FULL	167800	839	20.65	24.56	27.46	38.45	-10.99

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Antenna Gain : 3.4

<u>ا</u>										
	L66 + n41A			NR	Freq.		NR		EIRP	Margir
	Modulation	Band width	RB	Channel	(MHz)	LTE Power	Power (dBm/10MHz)	EIRP	Limit	(dBm)
[DFT-S-OFDM Pi/2 BPSK	LTE 20 + NR 100	FULL	509202	2546.01	22.19	20.22	23.62	33	-9.38
	DFT-S-OFDM QPSK	LTE 20 + NR 100	FULL	518598	2592.99	22.04	19.89	23.29	33	-9.71
	DFT-S-OFDM 16QAM	LTE 20 + NR 100	FULL	518598	2592.99	21.79	20.41	23.81	33	-9.19
	DFT-S-OFDM 64QAM	LTE 20 + NR 100	FULL	518598	2592.99	21.84	20.51	23.91	33	-9.09
	DFT-S-OFDM P256QAM	LTE 20 + NR 100	FULL	518598	2592.99	21.73	20.24	23.64	33	-9.36
	CP-OFDM QPSK	LTE 20 + NR 100	FULL	518598	2592.99	21.89	20.12	23.52	33	-9.48
	CP-OFDM 16QAM	LTE 20 + NR 100	FULL	518598	2592.99	22.05	19.74	23.14	33	-9.86
	CP-OFDM 64QAM	LTE 20 + NR 100	FULL	518598	2592.99	21.88	20.06	23.46	33	-9.54
	CP-OFDM 256QAM	LTE 20 + NR 100	FULL	518598	2592.99	22.19	17.84	21.24	33	-11.76
	DFT-S-OFDM 64QAM	LTE 20 + NR 100	1RB Left	518598	2592.99	22.1	18.04	21.44	33	-11.56
	DFT-S-OFDM 64QAM	LTE 20 + NR 100	1RB Right	518598	2592.99	22.17	18.67	22.07	33	-10.9
	DFT-S-OFDM 64QAM	LTE 20 + NR 90	FULL	518598	2592.99	22.23	19.81	23.21	33	-9.79
	DFT-S-OFDM 64QAM	LTE 20 + NR 80	FULL	518598	2592.99	21.84	20.40	23.80	33	-9.20
	DFT-S-OFDM 64QAM	LTE 20 + NR 60	FULL	518598	2592.99	21.8	20.52	23.92	33	-9.08
	DFT-S-OFDM 64QAM	LTE 20 + NR 50	FULL	518598	2592.99	22.12	19.74	23.14	33	-9.86
	DFT-S-OFDM 64QAM	LTE 20 + NR 40	FULL	518598	2592.99	21.91	20.32	23.72	33	-9.28
	DFT-S-OFDM 64QAM	LTE 20 + NR 20	FULL	518598	2592.99	21.83	20.47	23.87	33	-9.13
	DFT-S-OFDM 64QAM	LTE 20 + NR 100	FULL	509202	2546.01	21.97	20.13	23.53	33	-9.47
	DFT-S-OFDM 64QAM	LTE 20 + NR 100	FULL	528000	2640	21.7	20.62	24.02	33	-8.98

Antenna Gain : 2.6

L66 + n71A			NR	Freq.		NR		EIRP	Margin
Modulation	Band width	RB	Channel	(MHz)	LTE Power	Power (dBm/10MHz)	EIRP	Limit	(dBm)
DFT-S-OFDM Pi/2 BPSK	LTE 20 + NR 20	FULL	136100	680.5	24.81	23.74	26.34	38.45	-12.11
DFT-S-OFDM QPSK	LTE 20 + NR 20	FULL	136100	680.5	24.67	23.47	26.07	38.45	-12.38
DFT-S-OFDM 16QAM	LTE 20 + NR 20	FULL	136100	680.5	24.66	23.17	25.77	38.45	-12.68
DFT-S-OFDM 64QAM	LTE 20 + NR 20	FULL	136100	680.5	24.67	23.14	25.74	38.45	-12.68
DFT-S-OFDM P256QAM	LTE 20 + NR 20	FULL	136100	680.5	24.91	22.65	25.25	38.45	-12.71
CP-OFDM QPSK	LTE 20 + NR 20	FULL	136100	680.5	24.98	24.07	26.67	38.45	-13.20
CP-OFDM 16QAM	LTE 20 + NR 20	FULL	136100	680.5	24.99	24.12	26.72	38.45	-11.78
CP-OFDM 64QAM	LTE 20 + NR 20	FULL	136100	680.5	24.93	24.29	26.89	38.45	-11.73
CP-OFDM 256QAM	LTE 20 + NR 20	FULL	136100	680.5	24.85	21.33	23.93	38.45	-11.56
CP-OFDM 64QAM	LTE 20 + NR 20	1RB Left	136100	680.5	24.91	21.93	24.53	38.45	-14.52
CP-OFDM 64QAM	LTE 20 + NR 20	1RB Right	136100	680.5	24.72	21.82	24.42	38.45	-13.92
CP-OFDM 64QAM	LTE 20 + NR 20	FULL	136100	680.5	24.66	21.72	24.32	38.45	-14.03
CP-OFDM 64QAM	LTE 20 + NR 15	FULL	136100	680.5	24.77	22.60	25.20	38.45	-14.13
CP-OFDM 64QAM	LTE 20 + NR 10	FULL	136100	680.5	24.88	22.43	25.03	38.45	-13.25
CP-OFDM 64QAM	LTE 20 + NR 5	FULL	136100	680.5	24.99	21.87	24.47	38.45	-13.42
CP-OFDM 64QAM	LTE 20 + NR 20	FULL	134600	673	24.78	22.19	24.79	38.45	-13.98
CP-OFDM 64QAM	LTE 20 + NR 20	FULL	137600	688	25.27	22.75	25.35	38.45	-13.66

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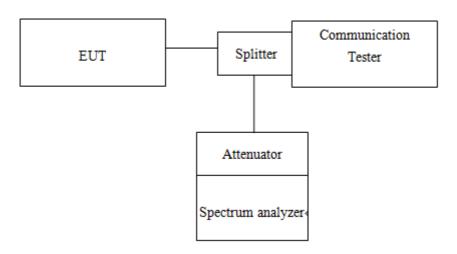


7 OCCUPIED BANDWIDTH MEASUREMENT

7.1 Standard Applicable

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

7.2 Test Set-up



7.3 Measurement Procedure

99% &26dB Bandwidth with detector peak

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

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7.4 Measurement Equipment Used

Conduc	ted Emission (m	neasured at a	antenna port)	Test Site	
EQUIPMENT TYPE	MFR	MODEL NUMBER	SERIAL NUMBER	LAST CAL.	CAL DUE.
Spectrum Analyzer	KEYSIGHT	N9010A	MY51440113	07/15/2019	07/14/2020
UXM 5G Wireless Test Platform	KEYSIGHT	E7515B	MY59321566	12/17/2019	12/16/2020
DC Block	PASTERNACK	PE8210	RF32	11/20/2019	11/19/2020
Splitter	Woken	DOM35LW1 A2	RF83	11/20/2019	11/19/2020
Splitter	Woken	DOM35LW1 E1	RF01	11/20/2019	11/19/2020
Coaxial Cables	Woken	00100A1F1A 185C	RF229	11/20/2019	11/19/2020
Coaxial Cables	Woken	00100A1F1A 185C	RF230	11/20/2019	11/19/2020
Coaxial Cables	Woken	00100A1F1A 185C	RF231	11/20/2019	11/19/2020

7.5 Measurement Result

Each bandwidth has been evaluated with the modulation that generated highest output power.

n2A		Channel	Freq.	OE	3W
Modulation	Band width	Channel	(MHz)	26dB(MHz)	99%(MHz)
DFT-S-OFDM Pi/2 BPSK	NR 20	376000	1880	18.98	17.869
DFT-S-OFDM QPSK	NR 20	376000	1880	19	17.875
DFT-S-OFDM 16QAM	NR 20	376000	1880	19.08	17.943
DFT-S-OFDM 64QAM	NR 20	376000	1880	20.22	18.974
DFT-S-OFDM 256QAM	NR 20	376000	1880	19.08	17.91
CP-OFDM QPSK	NR 20	376000	1880	20.17	19.001
CP-OFDM 16QAM	NR 20	376000	1880	20.15	19.032
CP-OFDM 64QAM	NR 20	376000	1880	20.14	18.989
CP-OFDM 256QAM	NR 20	376000	1880	20.18	18.966
DFT-S-OFDM 64QAM	NR 15	376000	1880	14.74	13.462
DFT-S-OFDM 64QAM	NR 10	376000	1880	10.3	8.9918
DFT-S-OFDM 64QAM	NR 20	376000	1880	4.921	4.5561
DFT-S-OFDM 64QAM	NR 5	372000	1860	19.01	17.855
DFT-S-OFDM 64QAM	NR 20	380000	1900	19.07	17.889

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n5A		Channel	Freq.	OE	BW
Modulation	Band width	Channel	(MHz)	26dB(MHz)	99%(MHz)
DFT-S-OFDM Pi/2 BPSK	NR 20	167300	836.5	19.06	17.993
DFT-S-OFDM QPSK	NR 20	167300	836.5	19.07	17.985
DFT-S-OFDM 16QAM	NR 20	167300	836.5	18.99	17.9
DFT-S-OFDM 64QAM	NR 20	167300	836.5	19.09	17.836
DFT-S-OFDM 256QAM	NR 20	167300	836.5	19.04	17.864
CP-OFDM QPSK	NR 20	167300	836.5	20.08	18.94
CP-OFDM 16QAM	NR 20	167300	836.5	20.14	18.98
CP-OFDM 64QAM	NR 20	167300	836.5	20.08	18.95
CP-OFDM 256QAM	NR 20	167300	836.5	20.15	18.914
DFT-S-OFDM 16QAM	NR 15	167300	836.5	15.1	14.136
DFT-S-OFDM 16QAM	NR 10	167300	836.5	10.1	9.3556
DFT-S-OFDM 16QAM	NR 20	167300	836.5	4.815	4.5461
DFT-S-OFDM 16QAM	NR 5	166800	824.46	18.98	17.925
DFT-S-OFDM 16QAM	NR 20	167800	828.38	19.05	17.881
n41A		Channel	Freq.	OE	BW
Modulation	Band width	Channel	(MHz)	26dB(MHz)	99%(MHz)
DFT-S-OFDM Pi/2 BPSK	NR 100	518598	2592.99	99.45	95.993
DFT-S-OFDM QPSK	NR 100	518598	2592.99	112.9	96.163
DFT-S-OFDM 16QAM	NR 100	518598	2592.99	116.7	96.21
DFT-S-OFDM 64QAM	NR 100	518598	2592.99	124.9	96.442
DFT-S-OFDM 256QAM	NR 100	518598	2592.99	99.62	96.061
CP-OFDM QPSK	NR 100	518598	2592.99	171.5	97.657
CP-OFDM 16QAM	NR 100	518598	2592.99	150.8	97.695
CP-OFDM 64QAM	NR 100	518598	2592.99	127.5	97.493
		0.0000			
CP-OFDM 256QAM	NR 100	518598	2592.99	100.6	97.23
CP-OFDM 256QAM CP-OFDM 16QAM			2592.99 2592.99	100.6 143.2	97.23 87.438
	NR 100	518598			
CP-OFDM 16QAM	NR 100 NR 90	518598 518598	2592.99	143.2	87.438
CP-OFDM 16QAM CP-OFDM 16QAM	NR 100 NR 90 NR 80	518598 518598 518598	2592.99 2592.99	143.2 117.8	87.438 77.583
CP-OFDM 16QAM CP-OFDM 16QAM CP-OFDM 16QAM	NR 100 NR 90 NR 80 NR 60	518598 518598 518598 518598	2592.99 2592.99 2592.99	143.2 117.8 67.65	87.438 77.583 57.848
CP-OFDM 16QAM CP-OFDM 16QAM CP-OFDM 16QAM CP-OFDM 16QAM	NR 100 NR 90 NR 80 NR 60 NR 50	518598 518598 518598 518598 518598 518598	2592.99 2592.99 2592.99 2592.99	143.2 117.8 67.65 58.84	87.438 77.583 57.848 47.607
CP-OFDM 16QAM CP-OFDM 16QAM CP-OFDM 16QAM CP-OFDM 16QAM CP-OFDM 16QAM	NR 100 NR 90 NR 80 NR 60 NR 50 NR 40	518598 518598 518598 518598 518598 518598 518598	2592.99 2592.99 2592.99 2592.99 2592.99	143.2 117.8 67.65 58.84 43.28	87.438 77.583 57.848 47.607 37.932

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n66A		Channel	Freq.	OE	BW
Modulation	Band width	Channel	(MHz)	26dB(MHz)	99%(MHz)
DFT-S-OFDM Pi/2 BPSK	NR 20	349000	1644.74	19.19	17.944
DFT-S-OFDM QPSK	NR 20	349000	1644.74	19.22	17.954
DFT-S-OFDM 16QAM	NR 20	349000	1644.74	19.17	17.909
DFT-S-OFDM 64QAM	NR 20	349000	1644.74	19.16	17.926
DFT-S-OFDM 256QAM	NR 20	349000	1644.74	19.07	17.942
CP-OFDM QPSK	NR 20	349000	1644.74	19.11	17.913
CP-OFDM 16QAM	NR 20	349000	1644.74	19.09	17.974
CP-OFDM 64QAM	NR 20	349000	1644.74	19.12	17.968
CP-OFDM 256QAM	NR 20	349000	1644.74	19.07	17.933
DFT-S-OFDM Pi/2 BPSK	NR 15	349000	1644.74	14.39	13.47
DFT-S-OFDM Pi/2 BPSK	NR 10	349000	1644.74	10.08	8.9821
DFT-S-OFDM Pi/2 BPSK	NR 20	349000	1644.74	4.837	4.5554
DFT-S-OFDM Pi/2 BPSK	NR 5	344000	1710.46	19.11	17.935
DFT-S-OFDM Pi/2 BPSK	NR 20	354000	1759.38	19.12	17.914
				-	
n71A			Freq.		3W
n71A Modulation	Band width	Channel			
	Band width NR 20		Freq.	OE	3W
Modulation		Channel	Freq. (MHz)	OE 26dB(MHz)	3W 99%(MHz)
Modulation DFT-S-OFDM Pi/2 BPSK	NR 20	Channel 136100	Freq. (MHz) 680.5	OE 26dB(MHz) 19.11	3W 99%(MHz) 17.901
Modulation DFT-S-OFDM Pi/2 BPSK DFT-S-OFDM QPSK	NR 20 NR 20	Channel 136100 136100	Freq. (MHz) 680.5 680.5	OE 26dB(MHz) 19.11 18.98	99%(MHz) 17.901 17.902
Modulation DFT-S-OFDM Pi/2 BPSK DFT-S-OFDM QPSK DFT-S-OFDM 16QAM	NR 20 NR 20 NR 20	Channel 136100 136100 136100	Freq. (MHz) 680.5 680.5 680.5	OE 26dB(MHz) 19.11 18.98 18.92	99%(MHz) 17.901 17.902 17.953
Modulation DFT-S-OFDM Pi/2 BPSK DFT-S-OFDM QPSK DFT-S-OFDM 16QAM DFT-S-OFDM 64QAM	NR 20 NR 20 NR 20 NR 20	Channel 136100 136100 136100 136100 136100	Freq. (MHz) 680.5 680.5 680.5 680.5	OE 26dB(MHz) 19.11 18.98 18.92 19.04	3W 99%(MHz) 17.901 17.902 17.953 17.843
Modulation DFT-S-OFDM Pi/2 BPSK DFT-S-OFDM QPSK DFT-S-OFDM 16QAM DFT-S-OFDM 64QAM DFT-S-OFDM 256QAM	NR 20 NR 20 NR 20 NR 20 NR 20 NR 20	Channel 136100 136100 136100 136100 136100 136100 136100	Freq. (MHz) 680.5 680.5 680.5 680.5 680.5	OE 26dB(MHz) 19.11 18.98 18.92 19.04 19.04	3W 99%(MHz) 17.901 17.902 17.953 17.843 17.851
Modulation DFT-S-OFDM Pi/2 BPSK DFT-S-OFDM QPSK DFT-S-OFDM 16QAM DFT-S-OFDM 64QAM DFT-S-OFDM 256QAM CP-OFDM QPSK	NR 20 NR 20 NR 20 NR 20 NR 20 NR 20 NR 20	Channel 136100 136100 136100 136100 136100 136100	Freq. (MHz) 680.5 680.5 680.5 680.5 680.5 680.5	OE 26dB(MHz) 19.11 18.98 18.92 19.04 19.04 20.06	3W 99%(MHz) 17.901 17.902 17.953 17.843 17.851 18.937
Modulation DFT-S-OFDM Pi/2 BPSK DFT-S-OFDM QPSK DFT-S-OFDM 16QAM DFT-S-OFDM 64QAM DFT-S-OFDM 256QAM CP-OFDM QPSK CP-OFDM 16QAM	NR 20 NR 20 NR 20 NR 20 NR 20 NR 20 NR 20 NR 20	Channel 136100 136100 136100 136100 136100 136100 136100 136100 136100 136100	Freq. (MHz) 680.5 680.5 680.5 680.5 680.5 680.5 680.5	OE 26dB(MHz) 19.11 18.98 18.92 19.04 19.04 20.06 20.09	3W 99%(MHz) 17.901 17.902 17.953 17.843 17.851 18.937 19.005
Modulation DFT-S-OFDM Pi/2 BPSK DFT-S-OFDM QPSK DFT-S-OFDM 16QAM DFT-S-OFDM 64QAM DFT-S-OFDM 256QAM CP-OFDM QPSK CP-OFDM 16QAM CP-OFDM 64QAM	NR 20 NR 20 NR 20 NR 20 NR 20 NR 20 NR 20 NR 20 NR 20	Channel 136100 136100 136100 136100 136100 136100 136100 136100 136100 136100 136100 136100 136100	Freq. (MHz) 680.5 680.5 680.5 680.5 680.5 680.5 680.5 680.5	OE 26dB(MHz) 19.11 18.98 18.92 19.04 19.04 20.06 20.09 20.13	3W 99%(MHz) 17.901 17.902 17.953 17.843 17.851 18.937 19.005 19.002
Modulation DFT-S-OFDM Pi/2 BPSK DFT-S-OFDM QPSK DFT-S-OFDM 16QAM DFT-S-OFDM 64QAM DFT-S-OFDM 256QAM CP-OFDM QPSK CP-OFDM 16QAM CP-OFDM 64QAM CP-OFDM 256QAM	NR 20 NR 20 NR 20 NR 20 NR 20 NR 20 NR 20 NR 20 NR 20 NR 20	Channel 136100 136100 136100 136100 136100 136100 136100 136100 136100	Freq. (MHz) 680.5 680.5 680.5 680.5 680.5 680.5 680.5 680.5 680.5 680.5	OE 26dB(MHz) 19.11 18.98 18.92 19.04 19.04 20.06 20.09 20.13 20.02	3W 99%(MHz) 17.901 17.902 17.953 17.843 17.851 18.937 19.005 19.002 18.91
Modulation DFT-S-OFDM Pi/2 BPSK DFT-S-OFDM QPSK DFT-S-OFDM 16QAM DFT-S-OFDM 64QAM DFT-S-OFDM 256QAM CP-OFDM QPSK CP-OFDM 16QAM CP-OFDM 64QAM CP-OFDM 64QAM	NR 20 NR 15	Channel 136100 136100 136100 136100 136100 136100 136100 136100 136100 136100	Freq. (MHz) 680.5 680.5 680.5 680.5 680.5 680.5 680.5 680.5 680.5 680.5 680.5	OE 26dB(MHz) 19.11 18.98 18.92 19.04 19.04 20.06 20.09 20.13 20.02 15.13	3W 99%(MHz) 17.901 17.902 17.953 17.843 17.851 18.937 19.005 19.002 18.91 14.177
Modulation DFT-S-OFDM Pi/2 BPSK DFT-S-OFDM QPSK DFT-S-OFDM 16QAM DFT-S-OFDM 64QAM DFT-S-OFDM 256QAM CP-OFDM QPSK CP-OFDM 16QAM CP-OFDM 64QAM CP-OFDM 64QAM CP-OFDM 64QAM	NR 20 NR 15 NR 10	Channel 136100 136100 136100 136100 136100 136100 136100 136100 136100 136100	Freq. (MHz) 680.5 680.5 680.5 680.5 680.5 680.5 680.5 680.5 680.5 680.5 680.5 680.5	OE 26dB(MHz) 19.11 18.98 18.92 19.04 19.04 20.06 20.09 20.13 20.02 15.13 10.09	3W 99%(MHz) 17.901 17.902 17.953 17.843 17.851 18.937 19.005 19.002 18.91 14.177 9.2998

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Band2_5MHz_64QAM_25_0_Main_MidCH376000-1880

Frequency		Radio Std	>50/50	Avg Hold	Freq: 1,8800 Free Run :: 30 dB	Trig: I	enter Freq 1.880000000 GHz						
	Ref Offset 10.6 dB Mkr1 1.87788 GHz div Ref 30.00 dBm 26.080 dBm									10 d			
Center Fre 1.880000000 GH	m	าาาาระุจะประวั	A A A A A A A A A A A A A A A A A A A				m	Yr		200 100 0.00 100 20.0 20.0 30.0 40.0 50.0			
CF Step 1.000000 MH	n 10 MHz ep 1 ms			Hz	VBW 300				ter 1.88				
Auto Ma		dBm	34.5	ower	Total F	1 MHz		d Bandy	Occupi	c			
OH		.00 % 00 dB		ower	OBW F x dB	.728 kHz 921 MHz		Freq Erro dwidth	ransmi dB Bar				

Center Fre	eq 1.880000000	MFGain:Low	Center F		0000 GHz AvgHold	Radio St	PM Mar 30, 2020 d: None vice: BTS	Frequency	
10 dB/div									
20.0 10.0		former	~~		m				Center Freq 1.88000000 GHz
10.00						5	-		
-20.0						-			
50.0 60.0									
Center 1.8 #Res BW 3			#VI	BW 620 k	Hz			an 20 MHz eep 1 ms	CF Step 2.000000 MHz
Occup	ied Bandwidt			Total P	ower	32.	1 dBm		Auto Ma
Transm	8. hit Freg Error	-174.66		OBW P	ower	90	9.00 %		Freq Offset 0 Hz
	indwidth	10.30 M		x dB			00 dB	1	
res.						STATU			

Band2_10MHz_64QAM_50_0_Main_MidCH3760000-1880

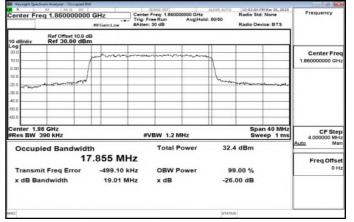
Band2 15MHz 64QAM 75 0 Main MidCH376000-1880

Center Fre	aq 1.880000000	nFGain:Law	Center F	Center Freq: 1.880000000 GHz Trig: Free Run Avg[Hold: 50/50 #Atten: 30 dB			Radio St	PH Mar 30, 2020 d: None vice: BTS	Frequency		
10 dB/div	Ref Offset 10.8 d Ref 30.00 dBr										
200 100		- Jummer		~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~					Center Freq 1.88000000 GHz		
-10.0						Low	m	-			
-40.0											
-60.0											
Center 1.8 #Res BW 3			#V	BW 910 k	Hz			an 30 MHz eep 1 ms	CF Step 3.000000 MHz		
Occup	ied Bandwid	th 3.462 M	u.,	Total P	ower	32.5	ō dBm		Auto Man		
	Transmit Freq Error -349.1		it Freq Error -349.19 kHz			OBW P	DBW Power S dB -20				Freq Offset 0 Hz
aso lea						STATU	5				

Band2 20MHz 16QAM 100 0 Main MidCH376000-1880

enter F	Freq 1.880000000	#FGain:Low	Center Fr		ALIGN AUTO 12 fold: 50/50	Radio Std: None Radio Device: BTS	Frequency
0 dB/div							
og 15.0 5.00		man	Amon A		-		Center Fred 1.880000000 GH
5.0 5.0	monormand				he	mar an har hard	
5.0							
	1.88 GHz / 390 kHz		#VE	W 1.2 MHz		Span 40 MHz Sweep 1 ms	CF Step 4.000000 MH
Occu	pied Bandwidt 17	th 7.943 MH	z	Total Power	32.3	3 dBm	Auto Mar Freq Offset
	mit Freq Error Bandwidth	-544.24 k 19.08 M		OBW Power x dB		9.00 % .00 dB	0 H2

Band2_20MHz_64QAM_100_0_worse_Main_LowCH372000-1860



Band2_20MHz_64QAM_100_0_worse_Main_MidCH376000-1880

Center Fre	rg 1.880000000	GHz	Center Fr	eq: 1.88000	0000 GHz	ALIGN AL1		12 PH Mar 30, 2020 Std: None	Frequency
		#FGain:Low	#Atten: 3				Radio	Device: BTS	
10 dB/div									
.og 200		~~~~	mant			~			Center Free
1.00						1	_		1.880000000 GH
0.0							-	-	
0.0							m		
30.0									
0.0									
60.0				-	-		-	-	
enter 1.8 Res BW			#VE	W 1.2 M	Hz			pan 40 MHz weep 1 ms	CF Step 4.000000 MH
Occup	ied Bandwidt	th		Total P	ower	2	9.9 dBm		Auto Mar
		3.974 MI	Iz						Freg Offse
Transm	it Freg Error	26.272	Hz	OBW P	ower		99.00 %		OH
	ndwidth	20.22 N	IHz	x dB		-2	6.00 dB		

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Band2_20MHz_64QAM_100_0_worse_Main_HighCH380000-1900

Center Fre	eq 1.900000000	GHz #FGain:Low	Center Freq: 1,900000000 GHz Trig: Freq: 1,90000000 GHz Trig: Freq Run AvgiHold: 50/50 #Atten: 30 dB			50/50	Radio Std		Frequency
10 dB/div									
20.0 10.0		mm							Center Free 1.900000000 GH
10.0 20.0						han	~~~~	- 000	
40.0 50.0									
Center 1.9			#VB	W 1.2 M	Hz			n 40 MHz ep 1 ms	CF Ste 4.000000 MH
Occup	ied Bandwidt 17	h 7.889 MH		Total P	ower	32.6 dBm			Auto Mi
	iit Freq Error Indwidth	-551.82 ki 19.07 Mi		OBW P	ower		.00 % 00 dB		он

Center Fre	aq 1.88000000	IFGain:Low	Center F			ALIGN AUTO	Radio De		Frequency		
10 dB/div											
.og 15.0 5.00			-0+			1			Center Freq 1.880000000 GHz		
15.0	mand					m	-	~~~~			
35.0 45.0											
65.0											
enter 1.8 Res BW			#VI	BW 1.2 M	Hz			an 40 MHz eep 1 ms	CF Step		
Occup	ied Bandwid	th 7.910 MH		Total Pe	ower	31.2	dBm		Auto Man		
	Transmit Freq Error -509.38		mit Freq Error -509.38 kHz Ol			OBW Po x dB	BW Power dB -2				Freq Offset 0 Hz
						STATUS					

Band2_20MHz_256QAM_100_0_Main_MidCH376000-1880

Band2_20MHz_BPSK_100_0_Main_MidCH376000-1880

Keynight Spect	num Analyzar - Occupied BV	v		ME-INT	-	LIGN AUTO	1	1M Mar 30, 2020	
Center Fre	q 1.880000000	IGHz #FGain:Low	Center F	req: 1,880000 • Run			Radio Sto	I: None	Frequency
10 dB/div	Ref Officet 10.6 dB dB/div Ref 25,00 dBm P								
15.0 5.00		promes	A		a				Center Fred 1.880000000 GH;
15.0 25.0	m					~~~~	الاستاب ماريد.	an a	
35.0 45.0 65.0									
Center 1.8			#VI	SW 1.2 M	17			an 40 MHz eep 1 ms	CF Step
	ied Bandwidt			Total Po		32.3	2 dBm	cep ma	4.000000 MH Auto Ma
	17 it Freq Error indwidth	-515.31 k 18.98 M	Hz	OBW Po x dB	wer		9.00 % .00 dB		Freq Offse 0 H
190						STATU	s		

Band2 20MHz QPSK 100 0 Main MidCH376000-1880

enter Fre	R NP 59 G ALIGN AUTO (de3.56 aPMLe 20.2) Inter Freq 1.880000000 GHz Center Freq 1.18000000 GHz Radio Std1 None MFGainLew #FGainLew Avg Hold>50/50 REGIStream Avg Hold>50/50 Red Offset 10.6 dB Radio Std1								
0 dB/div									
og 50 100		providence and the second seco							
	up mar and			hermony	an water lange way				
5.0									
enter 1.8 Res BW 3			VBW 1.2 MHz		Span 40 MHz Sweep 1 ms	CF Step 4.000000 MH			
Occup	ied Bandwidt 17	h 7.875 MHz	Total Power	32.3	dBm	Auto Mar Freq Offse			
	it Freq Error Indwidth	-521.17 kHz 19.00 MHz	OBW Power x dB		9.00 % 00 dB	0 H3			

Band2_20MHz_16QAM_100_0_Main_MidCH376000-1880

Center Fre	iu 50 D DC		stree Run	00000 GHz Avg/Hold	ALIGN AUTO	Radio St	PM Mar 30, 2020 d: None	Frequency
		#FGein:Low #A	ten: 30 dB			Radio De	vice: BTS	
10 dB/div	Ref Offset 10.6 dB Ref 25.00 dBm							
og 15.0 5.00		****		-	Center Freq 1.88000000 GHz			
5.0	Inort		_		6	man .	4-Montes	
5.0	Rendering					-	hand a set	
5.0								
25.0						-		
enter 1.8 Res BW			#VBW 1.2	лнz			an 40 MHz /eep 1 ms	CF Step 4.000000 MHz
Occup	ied Bandwidt	h	Total F	ower	32	.5 dBm		Auto Man
	19.032 MHz							Freq Offset
Transm	it Freq Error	13.846 kHz	OBW F	ower	9	99.00 %		0 H:
x dB Ba	ndwidth	20.15 MHz	x dB		-20	6.00 dB		
50					STAT	rus		

Band2_20MHz_64QAM_100_0_Main_MidCH376000-1880

Keynight Spectr	Knyvight Spectrum Analyzer - Occupied BW R Nr 55 D DC SERVER.INT ALIGN AUTO (29-28:38 PM Nar 30, 2020)									
Center Fre	q 1.880000000	Trig:	r Freq: 1.880000000 GHz Free Run AvgiHolo n: 30 dB		Radio St		Frequency			
10 dB/div										
.og 15.0 5.00		procession and the second		-		Center Free 1.880000000 GH				
15.0	amount			h		almanene				
25.0										
95.0 95.0										
enter 1.8	P CH3				C m	an 40 MHz				
Res BW 3		4	VBW 1.2 MHz			eep 1 ms	CF Ste 4.000000 MH			
Occupi	ed Bandwidt	h	Total Power	32.6	dBm		Auto Ma			
	18	8.989 MHz					Freq Offse			
Transmi	Transmit Freq Error 18.0		OBW Power	99	.00 %		0 H			
x dB Bar	ndwidth	20.14 MHz	x dB	-26.0	00 dB					
50				STATUS						

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Band2 20MHz 256QAM 100 0 Main MidCH376000-1880

Center Fre	q 1.880000000	GHz #FGain:Low	Center Fre	Center Free: 1,88000000 GHz Trig: Free Run AvgiHold: 50/50 #Atten: 30 dB				Radio St	PM Mar 30, 2020 d: None tvice: BTS	Frequency
10 dB/div										
.og 15.0 5.00						-				Center Freq 1.880000000 GHz
15.0	roomen						L	-	- Constants	
45.0						H	_			
55.0 65.0						H	_			
Center 1.8 Res BW 3			#VE	SW 1.2 N	IHz				an 40 MHz eep 1 ms	CF Step 4.000000 MH
Occupi	ed Bandwidt 18	h 8.966 MH	Iz	Total P	ower		29.7	dBm		Auto Mar Freq Offse
Transmi x dB Ba	it Freq Error ndwidth	16.588 k 20.18 M		OBW P	ower			.00 % 00 dB		0 H

Center Fre	q 1.88000		GHz NFGain:Low	Center F			50/50	Radio St	Vice: BTS	Frequency
10 dB/div	Ref Offset 1 Ref 25.00									
.0g 15.0 5.00		1			ann Cheolan Cr		-			Center Freq 1.880000000 GHz
47.0	L. readers and	~					~	- Auranda	manne	
35.0 45.0 95.0		_								
65.0										
Center 1.8 Res BW 3				#VI	BW 1.2 M	Hz			an 40 MHz eep 1 ms	CF Step 4.000000 MHz
Occup	ied Bandy		001 MH	17	Total P	ower	32.	5 dBm		Auto Man
	it Freq Erro ndwidth		25.599 k 20.17 M	Hz	OBW P	ower		9.00 % .00 dB		Freq Offset 0 Hz
50							STAT	JS		

Band2_20MHz_QPSK_100_0_Main_MidCH376000-1880

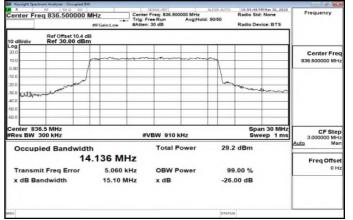
Band5_5MHz_16QAM_25_0_Main_MidCH167300-836.5

Keynight Spectru	M Analyzer - Occupi	ed BW/			war-meri		ALTIGN AUTO	111.01.00.	M Apr 01. 2020	
Center Free	g 835.50000	nı M	Z Gain:Low	Center F	eq: 836,500			Radio Std Radio Dei	: None	Frequency
10 dB/div	Ref 30.00 c									
20.0		r	marma	00-0000	~~~~		-	-		Center Free 836.500000 MH
0.00 -10.0	mmm	w					1			
30'0 Wall	A.M.I	-	-				1	W. W. W.	Month and	
40.0										
60.0		-			-			-		
Center 836. Res BW 1				#VE	SW 300 H	kHz			n 10 MHz eep 1 ms	CF Ste 1.000000 MH
Occupie	ed Bandw	idth			Total P	ower	29	.1 dBm		Auto Mar
		4.54	61 MI	Iz						Freq Offse
Transmit	Freq Error	r	-35.573	Hz	OBW P	ower	9	9.00 %		OH
x dB Ban	dwidth		4.815 N	IHz	x dB		-26	5.00 dB		
693							ETAT	us		

Band5 10MHz 16QAM 50 0 Main MidCH167300-836.5

enter Fr	eq 836.500000 I	-	Center Freq: 836,5000 Trig: Free Run #Atten: 30 dB	ALIGN ALIGN ALIGN 00 MHz Avg[Hold: 50/50	10:57:26 PM Mar 30, 2020 Radio Std: None Radio Device: BTS	Frequency
0 dB/div	Ref Offset 10.4 dl	B			HIGH DEVICE DIV	
		pommen				Center Free 836.500000 MH
10	- martine					
1.0						
enter 83 Res BW			#VBW 620 ki	Hz	Span 20 MHz Sweep 1 ms	CF Ste 2.000000 MH
Occup	ied Bandwidt 9.	th 3556 MHz	Total Po	ower 29	0 dBm	Auto Ma
	nit Freq Error andwidth	-11.210 kH 10.10 MH			9.00 % 5.00 dB	0 H

Band5_15MHz_16QAM_75_0_Main_MidCH167300-836.5



Band5_20MHz_16QAM_100_0_worse_Main_LowCH166800-834

Center Fre	ng 834.000000	MHz	Center Fre			50/50	Radio Std		Frequency
		#FGain:Low	#Atten: 3	0 dB			Radio De	vice: BTS	
10 dB/div	Ref Offset 10.4 d Ref 30.00 dBi			_					
200			nan		nem			-	Center Free 834.000000 MH
0.00		1				1			834,000000 MH
10.0						1			
20.0						hon	m	non an	
	- I			-			-	- mark	
0.0									
60.0									
Center 834								an 40 MHz	
Res BW			#VE	3W 1.2 M	Hz			eep 1 ms	CF Ster 4.000000 MH
Occup	ied Bandwid	th		Total P	ower	28.9	dBm		Auto Mar
	1	7.925 MH	Iz						Freg Offse
Transm	it Freg Error	-549.01	Hz	OBW P	ower	99	.00 %		OH
	ndwidth	18.98 M		x dB		-26.	00 dB		
						TATU			

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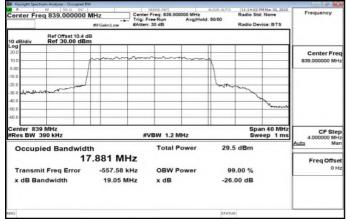
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Band5_20MHz_16QAM_100_0_worse_Main_MidCH167300-836.5

	MHz Cer Trig #FGain:Low #At	nter Freq: 836,500000 MHz g: Free Run AvgiHo tten: 30 dB	old: 50/50	adio Std: None adio Device: BTS	Frequency
	man				Center Freq 836.500000 MHz
			1 m	~~~~	
				~	
.5 MHz 90 kHz		#VBW 1.2 MHz		Span 40 MHz Sweep 1 ms	CF Step 4.000000 MH
		Total Power	29.1 d	Bm	Auto Mar Freq Offse
t Freq Error Idwidth	-555.44 kHz 18.99 MHz	OBW Power x dB			0 H3
	Ref 30.00 dBn 5 MHz 5 MHz 90 kHz 17 15 Freq Error	5 MHz 50 KHz ed Bandwidth 17.900 MHz 15 req Error -555.44 kHz	Ref 30.00 dBm	Ref 30.00 dBm Image: State of the sta	Ref 30.00 dBm

Band5_20MHz_16QAM_100_0_worse_Main_HighCH167800-839



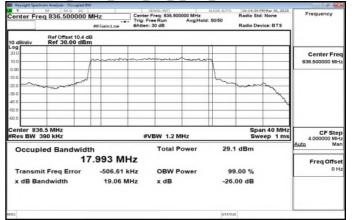
Band5_20MHz_64QAM_100_0_Main_MidCH167300-836.5

R.	a 836,500000 I		enter Freg: 836,500000 MHz	ALIGN ALITO	10:20:23 PM Mar 30, 2020 Radio Std: None	Frequency
senter Fro	eq 836,500000 i	The T	rig: Free Run Avg Ho Atten: 30 dB	ld: 60/60	Radio Device: BTS	
10 dB/div	Ref Offset 10.4 d Ref 30.00 dBn					
200			~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	-		Center Free 836.500000 MH
0.00 10.0 20.0						
30.0	TT			~	m	
50.0					14	
enter 83 Res BW			#VBW 1.2 MHz		Span 40 MHz Sweep 1 ms	CF Ste 4.000000 MH
Occup	ied Bandwidt		Total Power	29.1	dBm	Auto Ma
	1 / hit Freq Error andwidth	7.836 MHz -518.78 kHz 19.09 MHz	OBW Power		00 % 0 dB	Freq Offse 0 H
0				STATUS		

Band5 20MHz 256QAM 100 0 Main MidCH167300-836.5

	strum Analyzer - Occupied BV	V	the second second				
enter Fro	eq 836.500000 I	T	enter Freq: 836.50 rig: Free Run Atten: 30 dB		Radio Str 0/50	PH Mar 30, 2020 d: None vice: BTS	Frequency
0 dB/div	Ref Offset 10.4 di Ref 30.00 dBn						
00 100 100			~*~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~				Center Free 836.500000 MH
	the second				Lunnon	~	
0.0			_			1	
enter 83 Res BW			#VBW 1.2 M	лнz		an 40 MHz eep 1 ms	CF Ste 4.000000 MH
Occup	bied Bandwidt 17	h 7.864 MHz	Total F	ower	28.2 dBm		Auto Ma
	nit Freq Error andwidth	-519.29 kHz 19.04 MHz		ower	99.00 % -26.00 dB		он

Band5_20MHz_BPSK_100_0_Main_MidCH167300-836.5



Band5_20MHz_QPSK_100_0_Main_MidCH167300-836.5

Keynight Spect	IV SD D DC	N	sense net	ALIGN AUTO 110	22:51 PM Mar 30, 2020	
enter Fre	eq 836,500000	Trig: I	r Freq: 836.500006 MHz Free Run AvgiHol 1: 30 dB	Ra d: 50/50	dio Std: None dio Device: BTS	Frequency
10 dB/div	Ref Offset 10.4 d Ref 30.00 dBr					
.og 200 100		promission	man			Center Fre 836.500000 MH
0.0 ~~~	annow				~~~~~	
0.0						
enter 836 Res BW		#	VBW 1.2 MHz		Span 40 MHz Sweep 1 ms	CF Ste 4.000000 MH
Occup	ied Bandwidt 17	th 7.985 MHz	Total Power	28.6 dE	Bm	Auto Ma
	it Freq Error Indwidth	-506.32 kHz 19.07 MHz	OBW Power x dB	99.00 -26.00		0 H
a				STATUS		

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Band5_20MHz_16QAM_100_0_Main_MidCH167300-836.5

R	Analyser - Occupied IW r 30 D DC 836.500000 M	Tri Tri	sense stor nter Freq: 836,5000 g: Free Run tten: 30 dB	ALIGN AUTO 000 MHz Avg[Hold: 50/50	10:35:07 PH Mar 30, 2020 Radio Std: None Radio Device: BTS	Frequency
10 dB/div	Ref Offset 10.4 dB Ref 30.00 dBm					
200 10.0	1			mannen		Center Fred 836.500000 MHz
20.0	server			1	man and a state of the state of	
30.0 Janyang Provension 40.0 50.0					-	
Center 836.5			#VBW 1.2 M		Span 40 MHz	CF Step
	d Bandwidth	980 MHz	Total Po		Sweep 1 ms .3 dBm	4.000000 MH
Transmit x dB Banc	Freq Error dwidth	-1.815 kHz 20.14 MHz	OBW Po x dB		99.00 % 5.00 dB	он

enter Fre	ng 836.500000	MHz	Trig	sense sor er Freq: 836,50 Free Run	AvgHold	ALIGN ALITO	Radio Sta		Frequency
		#FGain:	Low #Att	en: 30 dB			Radio De	vice: BTS	
0 dB/div	Ref Offset 10.4 Ref 30.00 dB								
20.0									Center Fred
0.0		por	m	m	man	man			836.500000 MH
1.00		A		-	-	1	-		
0.0		4		-	-	11	-	-	
0.0		++-		-		-	m		
0.0				-				\mathbf{X}	
0.0								1	
50.0									
Res BW				#VBW 1.2	MHz			eep 1 ms	CF Step 4.000000 MH
Occup	ied Bandwid	th		Total	Power	29.4	dBm		Auto Ma
occup			MHz					1	
-									Freq Offse
	it Freq Error		.251 kHz	OBW	ower		9.00 %	1	
x dB Ba	ndwidth	20).08 MHz	x dB		-26.	00 dB		
						STATU			

Band5_20MHz_64QAM_100_0_Main_MidCH167300-836.5

Band5_20MHz_256QAM_100_0_Main_MidCH167300-836.5

Keynight Spect	NF SD D DC (SUNSE INT		ALIGN AUTO	10:38:16 PM Mar 30.	2020
Center Fre	eq 836.500000 N		Center Freq: 836.5 Trig: Free Run #Atten: 30 dB			Radio Std: None Radio Device: BT	Frequency
10 dB/div	Ref Offset 10.4 dB Ref 30.00 dBm						
200 100							Center Free 836.500000 MH
10.0							_
40.0	manne						1
Center 836	5.5 MHz					Span 40 f	047
Res BW			#VBW 1.2	MHz		Sweep 1	ms 4.000000 MH
Occup	ied Bandwidth 18	.914 MH		Power	26.6	dBm	Auto Mar
	it Freq Error ndwidth	6.638 kH 20.15 MH		Power		.00 % 00 dB	он
ea.					STATUS		

Band5 20MHz QPSK 100 0 Main MidCH167300-836.5

enter Fr	req 836.500000 M	WHz C	enter Freq: 836,500000 MHz	ALIGN ALITO	10:33:31 PM Mar 30, 2020 Radio Std: None	Frequency
			tten: 30 dB		Radio Device: BTS	
0 dB/div	Ref Offset 10.4 dB Ref 30.00 dBm					
00 00				my		Center Free 836.500000 MH
10						
0.0	m				my	
0.0						
	36.5 MHz 390 kHz		#VBW 1.2 MHz		Span 40 MHz Sweep 1 ms	CF Ste 4.000000 MH
Occup	bied Bandwidt	h 8.940 MHz	Total Power	29.5	5 dBm	Auto Ma
Transn	nit Freq Error	13.206 kHz	OBW Power	99	9.00 %	Freq Offse 0 H
x dB B	andwidth	20.08 MHz	x dB	-26.	00 dB	

Band41_20MHz_16QAM_100_0_Main_MidCH518598-2592.99

Agient Spects	um Analyzer - Occupies BW									
enter Fre	eq 2.592990000	GHz #FGain:Low	Center Freq: 2.592990000 GHz Trig: Free Run AvgiHold: 50/50 #Atten: 30 dB					Radio Std Radio Dev		Frequency
0 dB/div	Ref 0ffset 10.8 dB Ref 30.00 dBm									
0.0										Center Free 2.592990000 GH
0.00		munor	Contract	al de la constante	*****	2				
00	1.0°							V		
							_			CF Step
enter 2.5 Res BW 2			#VB	N 620 k	Hz			Spa Swe	n 40 MHz ep 1 ms	4.000000 MH Auto Mar
Occupi	ied Bandwidt 18	h .276 MH		Total P	ower		19.8	dBm		Freq Offse 0 H
	it Freq Error Indwidth	17,480 ki 24.59 Mi		OBW P	ower			.00 % 00 dB		

Band41_40MHz_16QAM_100_0_Main_MidCH518598-2592.99

Center Free	q 2.592990000 (+++	Center F			ISN AUTO	Radio Std		Frequency
		#FGain:Low	#Atten:	30 dB			Radio Dev	ice: BTS	
10 dB/div	Ref Offset 10.8 dB Ref 30.00 dBm								
20.0									Center Free
10.0		-				-			2.592990000 GH
0.00			menso	- margan	-	~			
10.0				-		-	-	-	
20.0		-						-	
0.0 0000000000	normalistant	-				mar an	Marrison	-	
0.0									
50.0		-				-			
0.0									CF Ste 8.000000 MH
Center 2.59 Res BW 3			#V	BW 1.2 M	Hz		Spa Swe	n 80 MHz ep 1 ms	Auto Mar
Occupie	ed Bandwidth	6		Total Pe	ower	19.5	i dBm		Freq Offse
	37.	932 MH	z						0 H
Transmit	t Freq Error	71.592 k	Hz	OBW P	ower	99	.00 %		
x dB Bar	dwidth	43.28 M	Hz	x dB		-26.	00 dB		
96						STATU	5		

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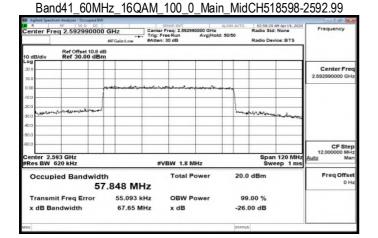
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Band41_50MHz_16QAM_100_0_Main_MidCH518598-2592.99

Agient Spectru	en Analyzer - Occupied BW		SENSE INT	ALIGN AUTO 1 83:00	02 AM AUY 19: 2628	
Center Fre	q 2.592990000	GHz Cent AFGain:Low PAtte	Frequency			
10 dB/div	Ref Offset 10.8 dB Ref 30.00 dBm					
20.0						Center Fre 2.592990000 GH
0.00	r	in a Cross Standards				
	al marine and the set			lationstra	manyange	
40.0 50.0						
00.0					-	CF Ste 10.000000 MH
Center 2.5 #Res BW 5			VBW 1.5 MHz		an 100 MHz weep 1 ms	Auto Ma
Occupi	ed Bandwidth 47	607 MHz	Total Power	20.2 dBm		Freq Offse 0 F
Transmi	it Freq Error	44.521 kHz	OBW Power	99.00 %		
x dB Ba	ndwidth	58.84 MHz	x dB	-26.00 dB		
56				STATUS		



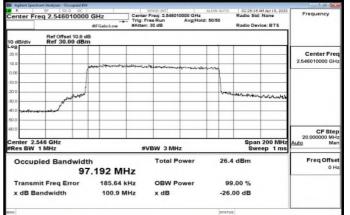
Band41_80MHz_16QAM_100_0_Main_MidCH518598-2592.99

R	am Analyzer - Occupied BW RE 50 Ω DC			ENSEINT		ALIGN	OTUA	Radio St	1 AM Apr 19, 2628	Frequency
Center Fre	eq 2.592990000	MFGain:Low	+++ Thg: Free Run Avginold: 50/50						d: None wice: BTS	
10 dB/div	Ref Offset 10.8 dB Ref 30.00 dBm									
20.0						-				Center Fre
10.0		man we with a		- shinger	ano					2.00200000 011
10.0							1000			
ميانينيني 200 200	and the second s						-T early	- manager from		
40.0		_								
50.0	+	-				-				
60.0										CF Stel 16.000000 MH
Center 2.5 Res BW 8			#V	BW 2.4 N	IHz				n 160 MHz /eep 1 ms	Auto Ma
Occupi	ied Bandwidth 77	583 MH	łz	Total P	ower		26.6	dBm		Freq Offse 0 H
Transmi	it Freq Error	71,533 k	Hz	OBW P	ower		99	.00 %		
x dB Ba	ndwidth	117.8 M	Hz	x dB			-26.	00 dB		
80							STATUS	1		

Band41_90MHz_16QAM_100_0_Main_MidCH518598-2592.99

Agient Spectro	um Analyzer · Occupies BW	-							
Center Fre	eq 2.592990000	GHz #FGain:Low	SERSEINIT ALIGN #AITO 102:54:36 AM April 102 Cantar Freq: 2.592990000 GHz Radio Std: None +++ Trig: Free Run Avg Hold: 50/50 cLow #Atten: 30 dB Radio Device: BTS						
10 dB/div									
20.0							Center Free 2.592990000 GH		
10.0		- and a stand as a start of a	man when we will also a	- marine	~				
10.0	and and and				harden	no-wheeler			
30.0		_							
40.0 90.0									
0.0		_					CF Step		
enter 2.5 Res BW	93 GHz 1 MHz		#VBW 3M	Hz		Span 180 MHz Sweep 1 ms	18.000000 MH Auto Ma		
Occupi	ied Bandwidt			Power	26.5 dB	m	Freq Offse		
	87	.438 MH	z				U.S.		
Transm	it Freq Error	-8.776 k	Hz OBW	Power	99,00	%			
x dB Ba	ndwidth	143.2 M	Hz x dB		-26.00 c	B			
50					STATUS				

Band41_100MHz_16QAM_100_0_worse_Main_LowCH509202-2546.01



Band41_100MHz_16QAM_100_0_worse_Main_MidCH518598-2592.99

Agient Spect	trum Analyzer - Occupies Bi	v		NSEINT		ALIEN		1		0 4 6
Center Fr	eq 2.59299000	MFGaintlow	Canter Fr	Center Freq: 2.592990000 GHz					None Ice: BT5	Frequency
10 dB/div	Ref Offset 10.8 c Ref 30.00 dB									
20.0										Center Fred 2.592990000 GHz
0.00		-	and the second second the	*********		-	-		-	
-10.0	Atomoutur						-	-	Antina	
400							-		-	
-50.0										
-60.0							_			CF Step
Center 2.4 #Res BW			#VE	з мн	z			Span Swe	200 MHz ep 1 ms	Auto Mar
Occup	oied Bandwid			Total P	ower		26.4	dBm		Freq Offset
	9	7.695 MI	Hz							
Transm	nit Freq Error	368	Hz	OBW P	ower		99	.00 %		
x dB B	andwidth	150,8 N	IHz	x dB			-26.	00 dB		
NSG						-	STATUS			

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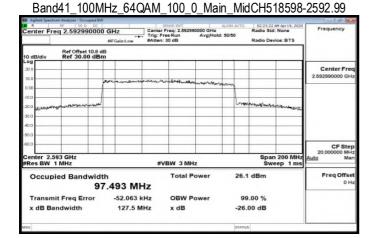
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Band41_100MHz_16QAM_100_0_worse_Main_HighCH528000-2640

Agient Spectru	Analyzer - Occupies				SENSE INT		ALIGN	ALCED.	1.00.00.00	PM Apr 20, 2620	
Center Fre	q 2.6400000	000 G								Frequency	
10 dB/div	Ref Offset 10. Ref 30.00 d								_	_	
20.0		-					-				Center Fre
10.0		nu	when	a a star and	nomesous	-	time				2.54000000 GP
10.0		1									
200 000	and the second s	u	-				-	400	-	an series	
40.0										mary	
50.0			_	_	_						
80.0		-			-		-	-		-	CF Ste
Center 2.6 Res BW 1				#\	/BW 3 MH	z				n 200 MHz eep 1 ms	20.000000 MH Auto Ma
Occupi	ied Bandwi				Total P	ower		25.7	dBm		Freq Offse
1.000			514 M								
	t Freq Error		-62.282		OBW P	ower			.00 %		
x dB Ba	nawiath		108.8 M	IHZ	x dB			-26.	00 dB		
56								STATUS	1		



Band41_100MHz_256QAM_100_0_Main_MidCH518598-2592.99

Agient Spectr	um Analyzer - Occupied BW									
Center Fre	eq 2.592990000	ALION ALIO DO GHZ Center Freq: 2.52590000 GHz AFGainLow AFGainLow AFGainLow AFGainLow AFGainLow AFGainLow AFGAIN AFG							None	Frequency
10 dB/div	Ref Offset 10.8 dB Ref 30.00 dBm									
20.0										Center Free 2.592990000 GHz
0.00		-news-winder	************		- markananta	-				
-20.0	an way was a				-		-	when	mother	
-40.0										
-60.0										CF Step 20.000000 MH
Center 2.5 #Res BW			#VE	ж змн	z				ep 1 ms	Auto Mar
Occup	ied Bandwidt 97	th 7.230 MH	łz	Total P	ower		24.2	dBm		Freq Offse 0 Hi
	it Freq Error	-68,300 k		OBW P	ower			.00 %		
x dB Ba	indwidth	100,6 M	Hz	x dB			-26.0	0 dB		
WSG						-	STATUS			

Band41_100MHz_QPSK_100_0_Main_MidCH518598-2592.99

R	RF 50 D DC		SENSE INT			21:39 AM Apr 19, 2628	Frequency		
Center	Freq 2.592990000	MFGaintLow	Center Freq: 2.5929 Trig: Free Run #Atten: 30 dB	Avg Hold: 50	o Std: None Device: BTS	Frequency			
10 dB/div	Ref Offset 10.8 dB dB/div Ref 30.00 dBm								
20.0							Center Free 2.592990000 GHz		
0.00		mare an odd down	in suff-section and section of the		~				
10.0	hormonitered				hunder	runakonsi-makuna			
30.0									
40.0									
60.0							CF Step		
Center Res BV	2.593 GHz V 1 MHz		#VBW 3 MH	łz		pan 200 MHz Sweep 1 ms	20.000000 MH Auto Mar		
Occu	pied Bandwidt		Total P	ower	26.7 dBn	n	Freq Offse		
	97	7.657 MH	z						
Trans	mit Freq Error	24,558 k	Hz OBW P	ower	99,00 %	6			
x dB	Bandwidth	171.5 M	Hz x dB		-26.00 df	3			
856					STATUS				

Band41_100MHz_16QAM_100_0_Main_MidCH518598-2592.99

Agilent Spectru	m Analyzer + Occupies BV	v	1 - 100	NSEINT		JEN AUTO	1 10.02.00	AN AUY 19, 2028	
enter Fre	q 2.59299000	MFGaintow		e Run		Radio Std Radio Dev	None	Frequency	
0 dB/div	Ref Offset 10.8 c Ref 30.00 dB								
0.0		prichase many	200-20-21						Center Free 2.592990000 GHz
00				- ALANNAN	(inand strain ageneses				
	and a second second second					horis	a low produces	-	
10									
10						-	-		CF Step
enter 2.59 Res BW 1			#VE	aw 3 MH	z			200 MHz 200 1 ms	20.000000 MHz Auto Mar
Occupi	ed Bandwid 9	th 6.210 MH	łz	Total P	ower	26.	9 dBm		Freq Offse 0 Ha
	t Freq Error	-494.38		OBW P	ower	9	9,00 %		
x dB Bar	ndwidth	116.7 M	Hz	x dB		-26	.00 dB		
							1		-

Band41 100MHz 64QAM 100 0 Main MidCH518598-2592.99

R Agiest Spectrum R Center Free	H Analyzer + Occup ≈ 50 Ω	DC	201-	Cente	SENSE INT	90000 GHz	ALIGN	AUTD	Radio Std	AM Apr 19, 2628	Frequency
center Fre	ArgiHold: 50/50 AFGain:Low #Atten: 30 dB Radio Device: BTS										
10 dB/div	Ref Offset 1 Ref 30.00								_		
20.0				-			-	_			Center Fre
0.00		m	41 - 100 - NOV	nelle-level	and a second	freeman/1-1	inn				2.00200000 011
10.0	-	have	-					Instead	man	man al hater	
0.0											
0.0		-		-			+	-			
0.0											CF Ster 20.000000 MH
Center 2.59 Res BW 1				#	VBW 3 M	łz				eep 1 ms	Auto Ma
Occupie	ed Bandv		442 M	Hz	Total F	ower		27.0	dBm		Freq Offse 0 H
Transmit	t Freq Erro	or	-480.08	kHz	OBW F	ower		99	,00 %		
x dB Bar	ndwidth		124.9	MHz	x dB			-26.	00 dB		
56								STATUS	5		

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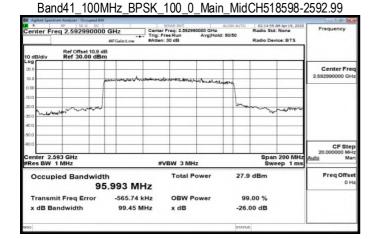
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Band41_100MHz_256QAM_100_0_Main_MidCH518598-2592.99

Agient Spectrum	Analyzer - Occupied BV	v		SENSE INT		1116		1 10.16.22		
Center Fred	2.59299000	MFGain:Low	Trig: F	Center Freq: 2.592990000 GHz Radio Std: None						
10 dB/div	Ref Offset 10.8 c Ref 30.00 dB							_		
20.0						-			-	Center Fre
0.00		pertino marito	man comment	er lige per Martine	marian	m				
10.0							1			
200 300	how portal thank the state of the	-	_		-		all ^{er th} omes and	Postant Realing		
40.0 50.0										
0.0										CF Ste
Center 2.59 #Res BW 1			#	VBW ЗМН	z			Spai Sw	n 200 MHz eep 1 ms	Auto Ma
Occupie	ed Bandwid 9	th 6.061 M	Hz	Total P	ower		25.7	dBm		Freq Offs 0)
Transmit	Freq Error	-551.68	kHz	OBW P	ower		99	.00 %		
x dB Ban	dwidth	99.62	MHz	x dB			-26.	00 dB		
66							STATUS			



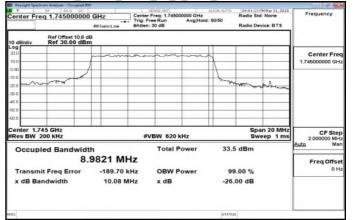
Band41_100MHz_QPSK_100_0_Main_MidCH518598-2592.99

Agient Spect	trum Analyzer - Occupies BW	·		station and						
Center Fr	eq 2.592990000	AFGaincLow	Center		90000 GHz	ALIGN AUTO 1021617 AN April 9, 2020 100 GHz Radio Std: None Frequer Avg Hold: 50/50 Radio Device: 815				
10 dB/div	Ref Offset 10.8 d Ref 30.00 dBr									
20.0									Center Free 2.592990000 GH	
0.06		ansama taninga kana an		al how when	adarsh dayadi sed	ma				
-10.0	man and and					L	- and the markey	themes.		
30.0				-	-	+				
-40.0										
60.0									CF Ster 20.000000 MH	
Center 2.4 #Res BW			#V	BW 3 MH	łz			200 MHz 200 1 ms	<u>Auto</u> Ma	
Occup	bied Bandwid 90	th 6.163 MI	Ηz	Total F	ower	2	7.5 dBm		Freq Offse 0 H	
	Transmit Freq Error -542.73			OBW Power			99.00 %			
x dB B	andwidth	112.9 N	IHz	x dB		-	26.00 dB			
eso .						5	TATUS			

Band66 5MHz BPSK 25 0 Main MidCH349000-1745

enter Fre	iq 1.7550000		Center			10N AUTO 50/50	Radio Si	PM Apro1, 2626 d: None evice: BTS	Frequency
0 dB/div	Ref Offset 10.6 dB /div Ref 30.00 dBm								
00 100		1		^					Center Fred 1.755000000 GH
	- Mar Mar	ar			_	100	here and the second	the second s	
1.0					_				
enter 1.7 Res BW 1			#\	/BW 300 kHz				an 10 MHz /eep 1 ms	CF Step 1.000000 MH
Occupi	ied Bandwi	dth 4.5554 MH	łz	Total Pow	er	33.	1 dBm		Auto Mar
	Transmit Freq Error x dB Bandwidth		Hz	OBW Pow x dB	er	-	9.00 % .00 dB		0 H

Band66_10MHz_BPSK_50_0_Main_MidCH349000-1745



Band66_15MHz_BPSK_75_0_Main_MidCH349000-1745

Center Fre	aq 1.745000000	MFGain:Low	Center Fr			60/50	Radio Std	Frequency	
10 dB/div	Ref Offset 10.6 d Ref 30.00 dBr								
200 100		man	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~		~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~				Center Free 1,745000000 GH
20.0 mm	mand					helme	n the little of	manc	
a a a a									
enter 1.7 Res BW 3			#VE	W 910 K	Hz			n 30 MHz eep 1 ms	CF Step 3.000000 MH
Occup	ied Bandwidt	th 3.470 MH	Iz	Total P	ower	34.3	2 dBm		Auto Ma
	it Freq Error andwidth			OBW P	ower	99.00 % -26.00 dB			он
10						STATU	s		

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Band66_20MHz_16QAM_100_0_Main_MidCH349000-1745

Center Fre	R an 2000 DC GHz Contract Ref 1 A5000000 GHz Radio Statis None enter Freq 1.745000000 GHz Statis None #FGainLaw Attan: 30 dB Radio Statis None Attan: 30 dB Radio Statis None								
10 dB/div	Ref Offset 10.6 dB Ref 30.00 dBm								
200 100			vor more m	- Marine				Center Fred 1.745000000 GH	
20.0	monad				mou	mm			
30.0 40.0 50.0									
60.0									
Center 1.7 #Res BW			#VBW 1.2	MHz			n 40 MHz eep 1 ms	CF Ster 4.000000 MH	
Occup	ied Bandwidt 17	h .909 MH:	Total F	ower	34.1	dBm		Auto Mar Freq Offse	
	it Freq Error andwidth			ower	99.00 % -26.00 dB			0 H	

R	NF 50 D DC			NSE:3NT		ALIGN AUTO		PM Mar 31, 2020	Frequency
Center Fre	aq 1.745000000	#FGain:Low			Avg/Hold	60/60	Radio Std: None Frequency Radio Device: BTS		
10 dB/div	Ref Offset 10.6 d Ref 30.00 dBn			_					
			~~~~		~~~~	1			Center Freq 1.745000000 GHz
-10.0 -20.0	mont					In	how		
-40.0									
-60.0 Center 1.7								an 40 MHz	CF Step
#Res BW	390 kHz		#VI	BW 1.2 M	Hz		SW	eep 1 ms	4.000000 MHz
Occup	ied Bandwidt	th		Total P	ower	32.0	dBm		Auto Man
	17	.926 MH	Iz						Freq Offset
Transmit Freq Error		-542.63 k	Hz	OBW P	ower	99	9.00 %		0 Hz
x dB Ba	ndwidth	19.16 MHz		x dB		-26.	00 dB		
Dew						STATU	s		

### Band66_20MHz_64QAM_100_0_Main_MidCH349000-1745

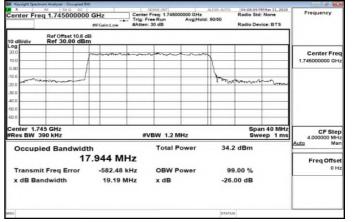
### Band66_20MHz_256QAM_100_0_Main_MidCH349000-1745

enter Fre	eq 1.745000000	GHz #FGein:Low	Center Freq: 1.7 Trig: Free Run #Atten: 30 dB	Frequency			
10 dB/div	Ref Offset 10.6 dl Ref 30.00 dBn						
.0g 200 100				بدريهندر	7		Center Free 1.745000000 GH
0.0	mon				6	m	~~~
0.0 0.0 0.0							
enter 1.7						Span 40	
Occup	ied Bandwidt	h	#VBW 1. Tota	I Power	30.4	Sweep 1 dBm	4.000000 MH Auto Ma
	17	.942 MH	z				Freq Offse
	it Freq Error ndwidth	-547.16 kH 19.07 MH				9.00 % 00 dB	он
0					STATU	5	

#### Band66_20MHz_BPSK_100_0_worse_Main_LowCH344000-1720

Keynight Spect	trum Analyzer - Occupied BV	N	server met	ALTON AUTO	04.59:41 PM Mar 31. 2	1010
enter Fre	eq 1.720000000	-mar Trip	ter Freq: 1.720000000 GH		Radio Std: None Radio Device: BTS	Frequency
0 dB/div	Ref Offset 10.6 d Ref 30.00 dBn					
		manna	moundance	-		Center Free 1.720000000 GH
0.0	mont			house		~
1.0						-
enter 1.7 Res BW			#VBW 1.2 MHz		Span 40 M Sweep 1	
Occup	ied Bandwidt 17	th 7.935 MHz	Total Power	34.	6 dBm	Auto Ma
	it Freq Error Indwidth	-552.48 kHz 19.11 MHz	OBW Power x dB	-	9.00 % .00 dB	он

#### Band66_20MHz_BPSK_100_0_worse_Main_MidCH349000-1745



### Band66_20MHz_BPSK_100_0_worse_Main_HighCH354000-1770

Center Fre	eq 1.770000000	-	Center Freq: 1.7700 Trig: Free Run #Atten: 30 dB	Frequency		
10 dB/div	Ref Offset 10.6 d Ref 30.00 dBr					
200 100 0.00				h		Center Free 1,770000000 GH
20.0					m	~
40.0						
60.0						
Center 1.7 Res BW 3			#VBW 1.2 M	ЛНz	Span 40 M Sweep 1 r	ns 4.000000 MH
Occupi	ied Bandwidt 17	h 7.914 MH	Total F	ower 31	.2 dBm	Auto Ma
	it Freq Error ndwidth				99.00 % 5.00 dB	он
ce.				STAT	rus	

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#### Band66_20MHz_QPSK_100_0_Main_MidCH349000-1745

Center Fre	eq 1.745000000	#FGain:Low	Center Freq: 1.7450 Trig: Free Run #Atten: 30 dB		Radio Std	Radio Std: None Frequer		
10 dB/div	Ref Offset 10.6 d Ref 30.00 dBn							
200 100		~~~~~		alanand			Center Fred 1.745000000 GH	
20.0	monormand				mann.	m		
40.0								
50.0 60.0								
Center 1.7 #Res BW			#VBW 1.2	MHz		n 40 MHz ep 1 ms	CF Step 4.000000 MH	
Occup	ied Bandwidt 17	h 7.954 MH		Power	33.9 dBm		Auto Mar Freq Offset	
Transm	it Freq Error	-573.31 ki	dz OBW	Power	99.00 %		0 H	
x dB Ba	andwidth	19.22 M	lz xdB		-26.00 dB			

R R	IU 50 D DC	N		NSE: INT		LIGH AUTO	04:33:201	M Mar 31, 2020	
Center Fre	eq 1.74500000	#FGain:Low			Avg Hold	-50/50	Radio Std: None Frequency Radio Device: BTS		
10 dB/div	Ref Offset 10.6 d Ref 30.00 dBr		_		_				
.og 200 100 0.00			~~~~		~~~~				Center Freq 1.745000000 GHz
20.0	Amont			_		han	min	Nones	
40.0									
60.0									
Res BW			#VE	SW 1.2 M	Hz			eep 1 ms	CF Step 4.000000 MH
Occup	ied Bandwidt			Total P	ower	32.	5 dBm		Auto Mar
	17	7.974 MH	IZ						Freq Offset
Transm	it Freq Error	-570.98 k	Hz	OBW P	ower	99	9.00 %		0 H:
x dB Ba	andwidth	19.09 M	Hz	x dB		-26.	00 dB		
60						STATU	5		

### Band66_20MHz_16QAM_100_0_Main_MidCH349000-1745

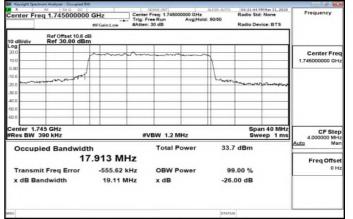
### Band66_20MHz_64QAM_100_0_Main_MidCH349000-1745

enter Fre	eq 1.745000000	GHz #FGainclow	Center Fr			-50/50	Radio St	PH Mar 31, 2020 d: None vice: BTS	Frequency
10 dB/div	Ref Offset 10.6 dl	в	Britteri. e			_	Printing Dr		
200			~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~		men				Center Free 1,745000000 GH
	nonem					Inna	~~~~	a replacement	
0.0 0.0 0.0									
enter 1.7								an 40 MHz	CF Step
Res BW	390 kHz ied Bandwidt	h	#VE	Total P		32.4	Sw	eep 1 ms	4.000000 MH Auto Ma
		.968 MI	Hz						Freq Offse
	Transmit Freq Error x dB Bandwidth		kHz MHz	OBW P	ower		.00 % 00 dB		OH
						TATUS			

#### Band66 20MHz 256QAM 100 0 Main MidCH349000-1745

R NF 50 D DC SERVERINT ALIGN A	UTO 04:37:07 PM Mar 31, 2020
enter Freq 1.745000000 GHz #FGein1.ov #FGein1.ov #FGein1.ov #FGein1.ov	Radio Std: None Frequency Radio Device: BTS
0 dB/div Ref 30.00 dBm	
00 00 00	Center Free 1,74500000 GH
	and the second sec
enter 1.745 GHz Res BW 390 kHz #VBW 1.2 MHz	Span 40 MHz CF Ste Sweep 1 ms 4.00000 MH
Occupied Bandwidth Total Power 3 17.933 MHz	30.5 dBm
Transmit Freq Error -547.57 kHz OBW Power x dB Bandwidth 19.07 MHz x dB -	99.00 % OH

#### Band66_20MHz_QPSK_100_0_Main_MidCH349000-1745



#### Band71 5MHz 64QAM 25 0 Main MidCH136100-680.5

Agient Spect	trum Analyzer · Occupies BW				0 18:07:07 PM Apr 13, 2628	
Center Fr		se 56.5 bc Section Autor Auto				Frequency
10 dB/div	Ref Offset 10.4 dl Ref 30.00 dBn					
20.0 10.0		Ann	6.7	how		Center Free 680.500000 MH;
-10.0	Wal					
-000 mm	and i				moundhour	
-50.0						
Center 68 #Res BW			#VBW 300 k	Hz	Span 10 MHz Sweep 1 ms	
Occup	pied Bandwidt 4.	^ь 5543 MH:	Total P	ower 21	1.9 dBm	Freq Offse 0 H
	nit Freq Error andwidth	-35.585 kH 4.920 MH			99,00 % 6.00 dB	
MSG				517	rus	

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#### Band71_10MHz_64QAM_50_0_Main_MidCH136100-680.5

R Center Fre	eq 680,500000 M	Tri	sense INT ntar Freq: 680.500000 Mi g: Free Run Avg tten: 30 dB	Radio Std: None Radio Device: BTS	Frequency	
10 dB/div	Ref Offset 10.4 dE Ref 30.00 dBm	3				
20.0 10.0		montes	mmm	www		Center Free 680.500000 MH
10.00				have	mar-instrumenting	
30.0	malitherester					
80.0						CF Ste 2.000000 MH
Res BW			#VBW 620 kHz		Span 20 MHz Sweep 1 ms	Auto Ma
Occup	ied Bandwidt 9.3	^h 2998 MHz	Total Power	31.3	3 dBm	Freq Offse 0 H
	it Freq Error Indwidth	16.784 kHz 10.09 MHz	OBW Power x dB		9.00 % .00 dB	
156				STATU	6	



#### Band71_15MHz_64QAM_75_0_Main_MidCH136100-680.5

#### Band71_20MHz_16QAM_100_0_Main_MidCH136100-680.5

Agient Spectre	um Analyzer - Occupies BW				_				10 \$ E
Center Fre	eq 680,500000 M	MHz AFGain:Low		nSE3NT req: 680.500 e Run IQ dB		50/50	Radio St	d: None wice: BTS	Frequency
Ref Offset 10.4 dB 10 dB/div Ref 30.00 dBm Log									
20.0		prosperanterspe		even wann	¥4.45+394-242				Center Freq 680.500000 MHz
0.00 -10 D						1	*****	antonio	
30.0	made the fragment					-		ALL CONTRACT	
-40.0							-		
Center 68			#VE	3W 1.2 M	IHz			an 40 MHz reep 1 ms	CF Step 4.000000 MHz Auto Man
Occup	ied Bandwidt 19	h 0.005 MH	łz	Total P	ower	33.	7 dBm		Freq Offset 0 Hz
Transm	it Freq Error	60,585 k	Hz	OBW P	ower	9	9.00 %		
x dB Ba	ndwidth	20.09 M	Hz	x dB		-26	.00 dB		
MSG						STAT	us		

#### Band71_20MHz_64QAM_100_0_worse_Main_LowCH134600-673

R	₩ 58 Ω DC		SENSE INT		DTLA NAL		AM Apr11, 2628	Frequency
Center Fr	eg 673,000000 MHz Genter Freq: 673.00000 MHz Radio Std: None AFGaincLow #Atten: 30 dB Radio Device: BTS							Frequency
10 dB/div								
20.0		preserver	he ^{r an} internet of the second	Mattrion agis alban	2			Center Free 673.000000 MHz
0.08 10.0 20.0	marenard				h	Wheise Low		
000 - M	and and the second s				-			
center 67	2 664-					Cm	an 40 MHz	CF Step 4.000000 MH
Res BW			#VBW 1.2 M	Hz		Sw	eep 1 ms	Auto Mar
Occup	ied Bandwid	th 8.934 MH	Total Po	ower	33.5	i dBm		Freq Offse 0 Ha
Transm	it Freq Error	93.859 kH	Z OBW Po	ower	99	.00 %		
x dB Ba	andwidth	20.07 MH	z x dB		-26.	00 dB		
150					STATU			

### Band71_20MHz_64QAM_100_0_worse_Main_MidCH136100-680.5

Agfent Spects	num Analyzer · Occupies Bi	W.							
enter Fre	reg 680,500000 MHz Align Align Alig				Radio Std Radio De		Frequency		
0 dB/div	Ref Offset 10.4 c Ref 30.00 dB								
0.0		former		~~~~		~			Center Free 680.500000 MH
00	-	/				ľ	ne mar	- um	
enter 68	0.5 MHz						Spa	an 40 MHz	CF Step 4.000000 MH Auto Mar
Res BW	390 kHz		#VBV	V 1.2 M	Hz		Sw	eep 1 ms	
Occup	ied Bandwid 1	th 9.002 MH		fotal P	ower	3	4.2 dBm		Freq Offse 0 H
	nit Freq Error andwidth	66,644 ki 20,13 Mi		DBW Po	ower		99.00 % 6.00 dB		

#### Band71_20MHz_64QAM_100_0_worse_Main_HighCH137600-688

Agfent Spect	trum Analyzer • Occupies BW	·			_	ALIGN AUTO			
R Center Fr	eq 688.000000	45         59.0 DC         SPR5EIMI         ALIGN AUTO           Q 688,000000 MHz         Centar Freq: 888.000000 MHz         Centar Freq: 888.000000 MHz           MFGain:Low         #Atten: 30 dB				Radio Std Radio Der		Frequency	
10 dB/div	Ref Offset 10.4 d Ref 30.00 dBr								
20.0 10.0		hater terment	~~~~~	anan ana ana		-			Center Fre 688.000000 MH
0.00 -10 D	annangen					-	With many of the	Service marchine	
30.0 000	Hard Clark P							train white	
50.0 50.0					-		_		
Center 68 #Res BW			#V	BW 1.2 N	IHz		Spa	an 40 MHz eep 1 ms	CF Step 4.000000 MH Auto Mar
Occup	bied Bandwidt	th 8.961 MI	Ηz	Total P	ower	34	.4 dBm		Freq Offse 0 H
	nit Freq Error andwidth	31.386 M		OBW P	ower		99.00 % 5.00 dB		
NSG						STAT	rus		

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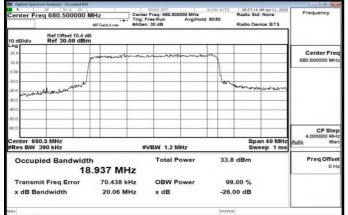
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#### Band71_20MHz_256QAM_100_0_Main_MidCH136100-680.5

Agient Spectru	um Analyzer - Occupies BW						
Center Fre	eq 680,500000 l	Tr	SPRSEINT         ALIGN AUTO           Center Freq: 580.500000 MHz         Trig: Freq Run Avg Hold: 50/50           #Atten: 30 dB         Avg Hold: 50/50			None ice: BTS	Frequency
10 dB/div	Ref Offset 10.4 dl Ref 30.00 dBn						
20.0		manan	-marine - marine	-			Center Fre
0.00					-		
20.0	mound				Laparano	(perioriteriste	
40.0							
50.0							
Center 680			#VBW 1.2 MH	łz	Spa	n 40 MHz ep 1 ms	CF Ste 4.000000 MH Auto Ma
Occupi	ied Bandwidt 18	h 3.910 MHz	Total Po	wer	30.5 dBm		Freq Offse 0 H
Transmi	it Freq Error	55.036 kHz	OBW Po	wer	99.00 %		
x dB Ba	ndwidth	20.02 MHz	x dB		-26.00 dB		
rso					STATUS		



#### Band71_20MHz_QPSK_100_0_Main_MidCH136100-680.5

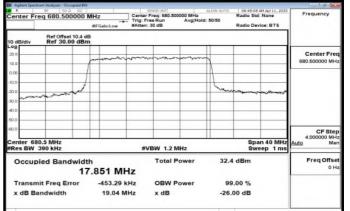
#### Band71_20MHz_16QAM_100_0_Main_MidCH136100-680.5

Agient Spect	trum Analyzer - Occu									10 2 10
Center Fr	eq 680,500		IHZ AFGain:Low		Freq: 680.500 ree Run : 30 dB		\$0/50	Radio Sta		Frequency
10 dB/div	Ref Offset Ref 30.00			_						
20.0		- /	e garden and and and and and and and and and an	-	Jananama	Tothe Ageneration	1		_	Center Freq 680.500000 MHz
-10.0	www.what	part	-	-	-		Adventer	human	mon	
-30.0	hard and the second second									
-50.0				-						CF Step
Center 68 #Res BW				#\	/BW 1.2 N	1Hz			an 40 MHz eep 1 ms	4.000000 MHz
Occup	oied Band		.953 M	Hz	Total P	ower	34.3	dBm		Freq Offset 0 Hz
	nit Freq Err	or	-487.12		OBW P	ower		.00 %		
x dB B	andwidth		18.92	MHz	x dB		-26.	00 dB		
MSG							STATUS	5		l

#### Band71 20MHz 64QAM 100 0 Main MidCH136100-680.5

Agient Specto	W Analyzer Occupies BW		SENSE INT		ALISN AUTO	1 10 17 10	man and a state of	10 \$ E
Center Fre	ter Freq 680,500000 MHz BFGaint.aw ALGRAUD 0 684723 Mrsq11, 2020 ALGRAUD 0 68473 Mrsq11, 2020 ALGRAU							
10 dB/div	Ref Offset 10.4 di Ref 30.00 dBn							
20.0		warowing	alaman na na ana ana ana ana ana ana ana a					Center Free 680.500000 MH;
10.0	happyman				hopman	when	man	
400								
200 200 Center 68	0.6 MHz						an 40 MHz	CF Step 4.000000 MH
Res BW			#VBW 1.2 N	IHz		Sw	eep 1 ms	Auto Mar
Occup	ied Bandwidt 17	h 7.843 MH	Total P	ower	34.1	dBm		Freq Offse 0 Hi
	it Freq Error	-462.03 kH	Z OBW P	ower	99	.00 %		
x dB Ba	indwidth	19.04 MH	z xdB		-26.	00 dB		
uso.					STATUS			

#### Band71_20MHz_256QAM_100_0_Main_MidCH136100-680.5



#### Band71_20MHz_BPSK_100_0_Main_MidCH136100-680.5

R	eq 680,500000 I	MHz	Sense INT Center Freq: 680.50 Trig: Free Run		LIGN AUTO	Radio Std	None	Frequency
			Atten: 30 dB	New Distance	00.00	Radio Dev	ice: BTS	
10 dB/div	Ref Offset 10.4 d Ref 30.00 dBn		_					
20.0								Center Free
10.0				and and a	1			680.500000 MH
0.00	- 1			-	1			
0.0					ha			
0.0	w				1.64	and the second	man	
00	and a strength of the strength			-	-			
0.0				-				
0.0								
0.0								CF Ste 4.000000 MH
Res BW			#VBW 1.2 M	AHz		Spa Swe	n 40 MHz ep 1 ms	Auto Ma
Occup	ied Bandwidt	h	Total P	ower	31.6	dBm		Freq Offse
		.901 MHz	2					0 H
Transm	it Freq Error	-495.94 kH	Z OBW P	ower	99	.00 %		
	ndwidth	19.11 MH	z x dB		-26.	00 dB		
6					STATUS	5		

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#### Band71 20MHz QPSK 100 0 Main MidCH136100-680.5

Agient Spec	etrum Analyzer - Occupies BW		SENSEINT	ALIGN AUTO	08:45:47 AM Auv 11, 262	
R Center Fi	Frequency					
10 dB/div	Ref Offset 10.4 d Ref 30.00 dBn					
20.0		mansan	with the second second	mante		Center Free 680.500000 MHz
10.00	mananterint			how	- martin and and an and	
40.0	had a share a star					
50.0 60.0						CF Step
Center 61 Res BW			#VBW 1.2 MHz		Span 40 MH Sweep 1 ms	Auto Mar
Occup	pied Bandwidt 17	th 7.902 MHz	Total Powe	or 34.1	2 dBm	Freq Offsel 0 Hz
	mit Freq Error Sandwidth	-463.44 kHz 18.98 MHz			9.00 % 00 dB	
NSG				STATU	5	

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# **3 OUT OF BAND EMISSION AT ANTENNA TERMINALS**

## 8.1 Standard Applicable

## FCC §22.917(a), §24.238(a), §27.53(h)

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

## FCC §27.53(g)

Compliance for operations in the 600 MHz, 698-746 MHz, 746-758 MHz and the 776-788 MHz band with this provision is based on the use of measurement instrumentation employing a resolution bandwidth of 100 kilohertz or greater. However, in the 100 kilohertz bands immediately outside and adjacent to a licensee's frequency block, a resolution bandwidth of at least 30 kHz may be employed.

## FCC §27.53(m) (4) (6)

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

Measurement procedure. Compliance with these rules is based on the use of measurement nstrumentation employing a resolution bandwidth of 1 megahertz or greater. However, in the 1 MHz bands immediately outside and adjacent to the frequency block a resolution bandwidth of at least one percent of the emission bandwidth of the fundamental emission of the transmitter may be employed; for mobile digital stations, in the 1 megahertz bands immediately outside and adjacent to the frequency block a resolution bandwidth of at least two percent may be employed, except when the 1 megahertz band is 2495-2496 MHz, in which case a resolution bandwidth of at least one percent may be employed. A narrower resolution bandwidth is permitted in all cases to improve measurement accuracy provided the measured power is integrated over the full required measurement bandwidth (i.e. 1 megahertz or 1 percent of emission bandwidth, as specified; or 1 megahertz or 2 percent for mobile digital stations, except in the band 2495-2496 MHz). The emission bandwidth is defined as the width of the signal between two points, one below the carrier center frequency and one above the carrier center frequency, outside of which all emissions are attenuated at least 26 dB below the transmitter power. With respect to television operations, measurements must be made of the separate visual and aural operating powers at sufficiently frequent intervals to ensure compliance with the rules.

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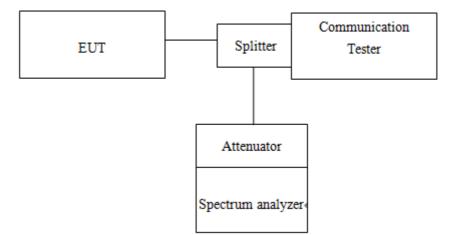
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## 8.2 Test SET-UP



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## 8.3 Measurement Procedure

## 8.3.1 Conducted Emission

The RF output of the transceiver was connected to a spectrum analyzer through appropriate attenuation The resolution bandwidth of the spectrum analyzer was set at 1MHz, sufficient scans were taken to show the out of band Emissions if any up to 10th harmonic.

- 1. To connect Antenna Port of EUT to Spectrum.
- 2. Set RBW = 1MHz & VBW = 1MHz on Spectrum.
- 3. Allow trace to fully stabilize
- 4. Repeat above procedures until all default test channel measured were complete.

## 8.3.2 Band Edge

- 1. To connect Antenna Port of EUT to Spectrum.
- The band edge of low and high channels for the highest RF powers was measured. Setting RBW ≥ 1% EBW.
- 3. The only N41 Band used RBW offset method and describe in C63.26 section 5.7.2 the correction factor is following:

Correction factor = 10 log [(reference bandwidth 1MHz) / (measurement bandwidth 100KHz) =10dB

- 4. Allow trace to fully stabilize
- 5. Repeat above procedures until all default test channel measured were complete.

## 8.4 Measurement Equipment Used

Conduc	ted Emission (m	neasured at a	antenna port)	Test Site	
EQUIPMENT TYPE	MFR	MODEL NUMBER	SERIAL NUMBER	LAST CAL.	CAL DUE.
Spectrum Analyzer	KEYSIGHT	N9010A	MY51440113	07/15/2019	07/14/2020
UXM 5G Wireless Test Platform	KEYSIGHT	E7515B	MY59321566	12/17/2019	12/16/2020
DC Block	PASTERNACK	PE8210	RF32	11/20/2019	11/19/2020
Splitter	Woken	DOM35LW1 A2	RF83	11/20/2019	11/19/2020
Splitter	Woken	DOM35LW1 E1	RF01	11/20/2019	11/19/2020
Coaxial Cables	Woken	00100A1F1A 185C	RF229	11/20/2019	11/19/2020
Coaxial Cables	Woken	00100A1F1A 185C	RF230	11/20/2019	11/19/2020
Coaxial Cables	Woken	00100A1F1A 185C	RF231	11/20/2019	11/19/2020

## 8.5 Measurement Result:

### Refer to next pages.

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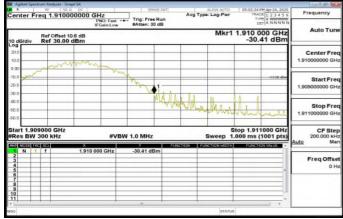
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Band Edge DET-s-OEDM Band2 20MHz 64QAM 1 0 CH LowCH372000-1860

Agiterit Spectrum Analyzer - Swept 5A				
enter Freq 1.850000000	GHz PND: Fast +++ Trig: Free Run IFGain.Low #Atten: 30 dB	ALISN AUTO Avg Type: Log-Pwr	TRACE 1 2 3 4 5 6 TYPE A WWWWW DET A NNNN N	Frequency
Ref Offset 10.6 dB 0 dB/div Ref 30.00 dBm	PGantlew Priting of Go	Mkr1	1.850 000 GHz -22.95 dBm	Auto Tun
000		and a start	man	Center Fre 1.85000000 GH
10.0 20.0 20.0	1. AL	and the second sec	Andrea	Start Fre 1.849000000 GH
100 Hattle Mathe	wet best they wet			Stop Fre 1.851000000 GP
Res BW 300 kHz	#VBW 1.0 MHz		itop 1.851000 GHz .000 ms (1001 pts)	CF Ste 200.000 kF Auto Ma
1 N 1 f 1,854 2 3 4 5 6 6	0 000 GHz -22.95 dBm			Freq Offso 0 F
7 8 9 10 11				
96		STATUS		

### DFT-s-OFDM_Band2_20MHz_64QAM_1_99_CH_HighCH380000-1900



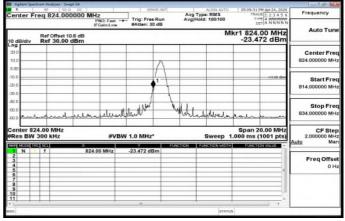
#### DFT-s-OFDM_Band2_20MHz_64QAM_100_0_CH_LowCH372000-1860

	ectrum Analyzar - Sy					0.2	
	req 1.8500	00000 GHz	Trig: Free Run	Avg Type: Log-Pwr	10:02:17 PM Mar 30, 2020 TRACE 1 2 3 4 5 6	Frequency	
		PND: Fast == IFGain:Low	#Atten: 30 dB		DET A NNNNN	Auto Tune	
10 dB/div	Ref Offset 10 Ref 30.00			Mkr1	1.850 000 GHz -27.06 dBm	Auto Tur	
20.0						Center Free 1.85000000 GH	
-10.0	_		1		-13.07 401	Start Fre	
-20.0						1.849000000 GH	
-40,0	_					Stop Free 1.851000000 GH	
-60.0	9000 GHz				top 1.851000 GHz		
#Res BW	300 kHz	#VB	W 1.0 MHz	Sweep 1	.000 ms (1001 pts)	CF Stej 200.000 kH Auto Ma	
1 N 1		1.850 000 GHz	-27.06 dBm	ACTION POWERCONWERN	POWLITE WALDE		
2 2 4 6 6						Freq Offse	
6 7 8 9							
10	+ +				·		
Cen				STATUS	1		

### DFT-s-OFDM_Band2_20MHz_64QAM_100_0_CH_HighCH380000-1900

0.12						allyzan - Sivaget SA,		yaight Spec	Ke Ke
Frequency	10-07:49 PM Mar 30, 2020 TRACE 1 2 3 4 5 6 Trace 1 2 3 4 5 6	Type: RMS Hold: 100/100		Trig: Free Run	GHz	910000000	req 1.9	ter Fr	Cen
Auto Tun	DET A NINNN N			#Atten: 30 dB	IFGein:Low			_	_
Auto Tun	1.910 00 GHz -28.235 dBm	Mkr1				ffset 10.8 dB 30.00 dBm		B/div	0 d
Center Fre									og 20.0
1.91000000 GF									10.0
Start Fre 1.905000000 GH	+13.03 dDn	-	_				-		10.0
									20 0 30 0
Stop Fre								-	0.0
1.915000000 GH							_		50.0
CF Ste 1.000000 MH Auto Ma	Span 10.00 MHz 000 ms (1001 pts)	Sweep 1.		1.0 MHz*	#VBW		910000 300 kH		
Auto Ma	FUNCTION VALUE	EUNICION WORTH	FUNCTION	28.235 dBm	0 000 GHz	1,910	1	N	
Freq Offse 0 H									2345
								+	6 7 8
				_				-	9 10 11
		TATUS		n					100
		STATUS							252

#### DFT-s-OFDM_Band5_20MHz_16QAM_1_0_CH_LowCH166800-829



#### DFT-s-OFDM_Band5_20MHz_16QM_1_99_CH_HighCH167800-839

Agien Spectrum Analyzes -				The second s	10 P
Center Freq 849.0	000000 MHz	SENSE INT	Avg Type: RMS Avg/Hold: 100/100	15:12:08 PM Apr 24, 2028 TRACE 1 2 3 4 5 6	Frequency
Ref Offse		#Atten: 30 dB		1 849.000 MHz -26.034 dBm	Auto Tune
200 100				20.004 0.001	Center Free 849.000000 MH
0.00 10.0 20.0	- Cond	Martin all		-1940 (68)	Start Free 848.000000 MH
40.0 50.0		and an 14	Manufathanalina	addente Aplala	Stop Free 850.000000 MH
enter 849.000 MH Res BW 300 kHz		W 1.0 MHz*		Span 2.000 MHz .000 ms (1001 pts)	CF Stej 200.000 kH Auto Ma
N         I         I           2         3         3           4         5         5           6         7         7           7         7         9           9         10         10	849.000 MHz	-26,034 dBm			Freq Offse 0 H
11 50			STÂTU	· ·	

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#### DFT-s-OFDM_Band5_20MHz_16QAM_100_0_CH_LowCH166800-834

0.9						Analyzer - Swept S		laynight
Frequency	11:10:50 PM Mar 30, 2020 TRACE 1 2 3 4 5 6	Type: RMS		\$1762.33			10	R.
	DET A NIN NIN	Hold: 100/100	Avg	Trig: Free Run	PNO: Fast	23.000000	req 82	art P
Auto Tur				#Atten: 30 dB	IFGein:Low			
Auto Tur	1 824.000 MHz -32.998 dBm	Mkr				f Offset 10.4 d		dB/di
Center Fred								
824.000000 MH								0
824,000000 MP								
								-
Start Fr	-13.00 dDn		100					
823.000000 M		-	1	1				0
		-	<i>v</i> .					0
		_		second .	man de la companya de	minim		0
Stop Fr								0
825.000000 M								
CF Ste 200.000 ki	Stop 825.000 MHz .000 ms (1001 pts)			1.0 MHz*	#VBW		23,000 W 300	
Auto M		FUNCTION WOTH	FUNCTION	-32.998 dBm	824.000 MHz			N
Freg Offs								
0						-		-
	*					+		-
		STATUS						-
	1	STATUS						

#### DFT-s-OFDM_Band5_20MHz_16QAM_100_0_CH_HighCH167800-839

019		a constant						m Analyzar - S	Cipectru	rysight		
Frequency	M Mar 30, 2020	TRAC	Type: RMS Hold: 100/100		Trig: Free Ru		0000 MHz		Free	nter		
Auto Tu	ET A NINNNN				#Atten: 30 dB		PND: Fest IFGeiniLow					
Auto Tu	00 MHz 64 dBm		м				Ref Offset 10.4 dB dB/div Ref 30.00 dBm					
Center Fr			_									
849.000000 M		-	-					-		-		
		-	-	-		~				-		
Start Fr 844.000000 M	-13.05 dDrs											
844.000000 M			-		+ ¹	1						
Stop Fr	man							-		-		
854.000000 N												
CF St	0.00 MHz							000 MHz				
1.000000 N	1001 pts)			_	1.0 MHz*	#VBW	_	0 kHz		_		
	CH WALKE	HUNCT	FUNCTION WOTH	FUNCTIO	-32.664 dBm	MHz	849.001	f.		N		
Freq Off						_				_		
0						-		-		_		
								-		_		
		1			n	-		1	11	_		
		s	STATU									

#### DFT-s-OFDM Pi/2_Band66_20MHz_BPSK_1_0_CH_LowCH344000-1720

Agreen Spectrum Analyzer - Swepe 5	A				10 4 10
Center Freq 1.710000	000 GHz	SENSE INT	ALIGN AUTO Avg Type: Log-Pwr	15:26:50 PM Apr 24, 2020 TRACE 1, 2, 3, 4, 5, 6 TUPE A WWWWW DET A NNNN N	Frequency
Ref Offset 10.5 10 dB/div Ref 30.00 dB	IFGain:Low	#Atten: 30 dB	Mkr2	1.709 992 GHz -19.33 dBm	Auto Tune
20.0 10.0				- marcher	Center Free 1.710000000 GH
-10.0		1 41 2000		1010-00	Start Fre 1.709000000 GH
-40.0 -60.0	Inflor Marth	WWWW-			Stop Fre 1.711000000 GH
Center 1.710000 GHz #Res BW 300 kHz		1.0 MHz		Span 2.000 MHz 000 ms (1001 pts)	CF Ste 200.000 kH Auto Ma
1         N         1         F           2         N         1         f           3         -         f         -           4         -         -         -           5         -         -         -           6         -         -         -         -	2 1.710 000 GHz 1.709 992 GHz	-29.31 dBm -19.33 dBm	PUNCTION WOTH	5.	Freq Offse 0 H
7 8 9 10 11		-01			
MSG			STATUS		

#### DFT-s-OFDM Pi/2_Band66_20MHz_BPSK_1_99_CH_HighCH132572-1770

Agiters Spectrum Analyzer - Sivept SA				10 P 🖬
Center Freq 1.780000000 GH	12 ND: Fant + ►+ Trig: Free Run	Avg Type: RMS Avg Hold: 100/100	15:21:20 PM Apr 24, 2628 TRACE 1 2 3 4 5 6	Frequency
Ref Offset 10.6 dB	1.780 00 GHz -28.938 dBm	Auto Tune		
20.0 10.0				Center Free 1.780000000 GH
-10.0			-1010 (64)	Start Free 1.775000000 GH
100 medeller Marchard	annut would	Stand Mark	Mahman	Stop Free 1.785000000 GH
Center 1.780000 GHz #Res BW 300 kHz	#VBW 1.0 MHz*	Sweep 1.0	Span 10.00 MHz 00 ms (1001 pts)	CF Stej 1.000000 MH Auto Ma
1 N 1 F 1.780 0 2 3 3 4 5 5 7 7	0 GHz -28.938 dBm		6	Freq Offse 0 H
8 9 9 10 11 11 14 14 14 14 14 14 14 14 14 14 14	m.	STATUS	· · ·	

#### DFT-s-OFDM Pi/2_Band66_20MHz_BPSK_100_0_CH_LowCH344000-1720

Keynight Spectrum Analyzer - Swept !					0 2 2
Center Freq 1.710000	000 GHz	Trig: Free Run	Avg Type: Log-Pwr	04:59:57 PM Mar 31, 2020 TRACE 1 2 3 4 5 6 TYPE A WWWWW DET A NNNNN	Frequency
Ref Offset 10.6	IFGeinLow dB	#Atten: 30 dB	Mkr1	1.710 000 GHz -25.44 dBm	Auto Tune
20.0					Center Fre 1.710000000 GH
20.0				-13.03 40 *	Start Free 1.709000000 GH
40.0 50.0					Stop Fre 1.711000000 GH
Start 1.709000 GHz Res BW 300 kHz	#VBW	1.0 MHz		top 1.711000 GHz .000 ms (1001 pts)	CF Ste 200.000 kH Auto Ma
1 N 1 T 2 3 4 6	1.710 000 GHz	-25.44 dBm			Freq Offse 0 H
6 7 8 9 10		5			
80			STATUS		

#### DFT-s-OFDM Pi/2_Band66_20MHz_BPSK_100_0_CH_HighCH354000-1770

								trum Analyzar -	nightSpe	Di Ke	
Frequency	MMar 31, 2020 CE 1 2 3 4 5 6 PE A WWWWW ST A N N N N	TRA	#: RMS	Av	Stree Rur	IZ	00000 GI	eq 1.780	ter Fr	Cen	
Auto Tun	Ref Offset 10.5 dB Mkr1 1.780 00 GHz 0 dB/div Ref 30.00 dBm -24.183 dBm										
Center Fre		21.1					dbm	Ref 30.0	5/0//	20.0 10.0	
Start Fre 1.775000000 GH	-13.03 424	contraction of the sector		~~~~		1				10.0 10.0 20.0	
Stop Fre 1.785000000 Gi										10,0 50,0	
CF Ste 1.000000 M		Span 1 .000 ms (	Sweep 1.		0 MHz*	#VBW	z	80000 GH 300 kHz			
Auto Mi	ON VALUE	FUNCT	NETIONWOTH	RENETION	4.183 dBm	0 GHz	1.780 00	SOL 1	N	1993 1993	
Freq Offs 01	_				A. 167 Statil,	o one	1.7 00 05			2745	
										6 7 8 9 10	
	· ·		-			-		+ +	+	11	
		1	STATUS							603	

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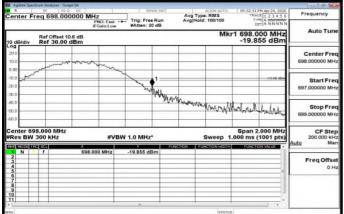


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#### CP-OFDM Band71 20MHz 64QAM 1 0 CH LowCH134600-673

Agien ipe	ctrum Analyzer - Sive					
Center F	req 663,000	0000 MHz	Trig: Free Run	Avg Type: RMS Avg Hold: 100/100	15:30:29 PM Apr 24, 2028 TRACE 1 2 3 4 5 6	Frequency
	Ref Offset 10	PNC: Fast + IFGain:Low	#Atten: 30 dB	-	r1 663.000 MHz	Auto Tune
10 dB/div	Ref 30.00				-26.356 dBm	
20.0	_				www	Center Fre 663.000000 MH
10.00			,	North		Start Fre
20.0			N. WWW			662.000000 MH
40.0 50.0	_luhuhu	Alightenmon	the Agen Mall Arth			Stop Fr 664.000000 M
	53.000 MHz 300 kHz		W 1.0 MHz*		Span 2.000 MHz 1.000 ms (1001 pts)	CF Ste 200.000 ki Auto M
1 N	T T	663.000 MHz	-26,356 dBm	UNCTION FUNCTION WOTH	FUNCTION VALUE -	AULD MI
2 3 4 5					6	Freq Offs
5 6 7 8 9 10						
10						
66				STATU	5	1

#### CP-OFDM_Band71_20MHz_64QAM_1_99_CH_HighCH137600-688



#### CP-OFDM_Band71_20MHz_64QAM_100_0_CH_LowCH134600-673

Agilent Spectrum Analyzer - Swept 54	and the second second second second second		and the second	0 0 0
Start Freq 662,000000 MHz	SENSE INT	ALIGN AUTO Avg Type: RMS	TRACE 1 2 3 4 5 6	Frequency
PND: Fas IFGaint.c	#Atten: 30 dB	Avg Hold: 100/100	DET A NNNN N	
Ref Offset 10.4 dB	1 663.000 MHz -24.980 dBm	Auto Tune		
20.0				Center Free 663.000000 MH
0.00 -10.0 -20.0			-1010-050	Start Free 662.000000 MHz
-00				Stop Free 664.000000 MH:
Start 662.000 MHz #Res BW 300 kHz #1	/BW 1.0 MHz*		Stop 664.000 MHz 000 ms (1001 pts)	CF Step 200.000 kH Auto Mar
1 N 1 f 653.000 MHz 2 3 3 5	-24.980 dBm			Freq Offse 0 H
6 7 8 9 9 10				
MISG	т	STATUS	•	

#### CP-OFDM Band71 20MHz 64QAM 100 0 CH HighCH137600-688

	Hum Analyzer - Swept SA			and the second		
Center Fr	eq 698.00000	0 MHz	Trig: Free Run	Aug Type: RMS Avg Hold: 100/100	19:06:31 AN Apr 11, 2020 TRACE 1 2 3 4 5 6 TYPE A WWWW DET A NNNN N	Frequency
	Ref Offset 10.4 di	IFGain:Low	#Atten: 30 dB		r1 698.000 MHz -24.800 dBm	Auto Tune
10 dB/div 20.0	Ref 30.00 dBn	n			-24.800 UBM	Center Freq 698.000000 MHz
-10.0			Marine 1		-1910-65	Start Free
-30.0						Stop Free
Center 69 Res BW	8.000 MHz 300 kHz	#VBA	N 1.0 MHz*	Sweep 1	Span 2.000 MHz .000 ms (1001 pts)	699.000000 MH
1 N 2 3 4		898.000 MHz	-24.800 dBm	UNCTION FUNCTION WOTH	PLANCTION VALUE	Auto Mar Freq Offse 0 Hi
4 5 6 7 8 9 10						
11 •			- 10	STATU	*	

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### Report No.: E2/2019/A0033 Page 49 of 98

### Mask n41 CH Low 1RB0

	Analyzer - Swept SA RF 50 Ω DC		SENSE:INT	ALIGN AUT	04:01:24 PM Apr 23, 2020	
	2.54600000	GHz	Trig: Free Run	Avg Type: RMS Avg Hold: 100/100	TRACE 1 2 3 4 5 6 TYPE A WWWW	Frequency
	ef Offset 20.8 dB ef 30.00 dBm	PNO: Fast IFGain:Low	#Atten: 30 dB	Avginoid: 100/100	DETANNNN	Auto Tu
Trace 1	19 V. A. A. L. B. P. L. D.					
0.0						Center Fr 2.546000000 G
0.0						Start Fi
.00						2.471000000
0.0						Stop F
0.0						2.621000000
0.0						CF St 15.000000 M
0.0						Auto P
	from home	**************************************	may and any market		and and an and a second	Freq Off
0.0						
enter 2.546 Res BW 10		#\(B)4(	300 kHz*	Swoon	Span 150.0 MHz 7.133 ms (1001 pts)	

#### Mask_n41_CH_Low_1RBmax

Agilent Spect	rum Analyzer - Swept SA					
	RF 50 Ω DC eq 2.54600000		SENSE:INT	ALIGN AUTO Avg Type: RMS	04:37:17 PM Apr 23, 2020 TRACE 1 2 3 4 5 6	Frequency
PASS	Ref Offset 20.8 dE Ref 30.00 dBm	PNO: Fast IFGain:Low	Trig: Free Run #Atten: 30 dB	Avg Hold: 100/100	TYPE A WWWWW DET A NNNNN	Auto Tu
00	1 Pass					Center Fr 2.546000000 G
0.0						Start Fr 2.471000000 G
0.0						Stop Fr 2.621000000 G
0.0						CF St 15.000000 M Auto M
0.0 <b>manuterga</b>	ware and the second	an a	marker and the state of the sta		- Lybourson	Freq Off: 0
	4600 GHz				Span 150.0 MHz	
Res BW	100 kHz	#VBW	300 kHz*	Sweep 7	.133 ms (1001 pts)	

### Mask n41 CH Low Full RB

R			Ω 0	DC C		SET	ISE:INT	Avg Type	ALIGN AUTO	04:02:44 9	M Apr 23, 2020	Frequency
AS	s Frec	2.540	000		HZ PNO: Fast ++ FGain:Low	Trig: Free #Atten: 3		Avg Hold:		TYP	A NNNNN	
0 dE		ef Offset ef 30.0										Auto Tu
°g [	Trace 1	Pass										Center Fr
20.0			-									2.546000000 G
10.0												Start Fr
0.00				Marina	al the share was	harden service and and the	***					2.471000000 G
0.0								and an and	Jerthand Berlinsberger	M	h	Stop Fr
0.0			$\square$	_						-		2.621000000 G
10.0												CF St
0.0	- Aller	annina								manya	17.44 and an of the	15.000000 M Auto N
0.0	/					_						Freq Offs
												0
0.0												
	er 2.546 BW 10		z		#1/D14	300 kHz		-	Sweep 7.		50.0 MHz	

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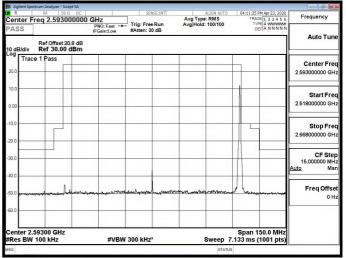
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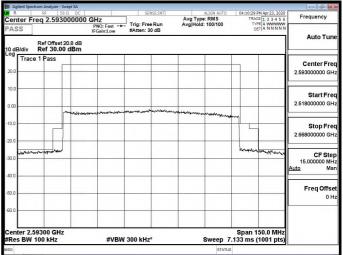
#### Mask n41 CH Mid 1RB0

R	RF	50 Ω	DC		SE	NSE:INT		ALIGN AUTO	04:10:58 PM Apr 23,	
	req 2.59	eq 2.593000000 GHz PNO: Fast			Trig: Fre	e Run	Avg Type Avg Hold		TRACE 1 2 3	
SS				FGain:Low	#Atten: 3		Avginola: 100/100		DET A NN	Auto Tu
dB/div	Ref Offs Ref 30.									
Trac	e 1 Pass									
.0										Center Fr
.0										2.593000000 G
.0		1								
										Start Fr
10										2.518000000 G
0	-			_				-		Stop Fr
		-11							_	2.668000000 G
.0										
-	_	11								CF St
0						-				15.000000 M
		111								Auto N
.0	-					1				
		M		marmel			manne			Freq Offs
0 waren			-	and the state of the state	and the strate and	1. Jaskow C. A. Jake		aprone of she	and the second	0
.0				_						
	59300 GI	١z							Span 150.0 M	AHZ
es BW	100 kHz			#VBW	/ 300 kHz	*		sweep 7	133 ms (1001 )	ots)

#### Mask_n41_CH_Mid_1RBMax



#### Mask n41 CH Mid Full RB



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### Mask_n41_CH_High_1RB0

Offset 20.8 30.00 dE	dB	NO: Fast 🔸	Trig: Free #Atten: 30				TRACE 1 2 3 4 5 6 TYPE A WWWW DET A NNNNN	Frequency
30.00 dE	dB	Gain:Low	#Atten: 34	dB	Avg Type: RMS Avg Hold: 100/100		LA WWWW	4
							DETIA NNNNN	Auto Tun
								Center Fre 2.640000000 GH
								Start Fre
								2.565000000 GH
								Stop Fre 2.715000000 GH
								CF Ste 15.000000 MH Auto Ma
	uuu	Mahr	error and a	Ungered	uniona			Freq Offse
) GHz (Hz	_	#VBW	300 kHz			Sweep 7	Span 150.0 MHz 133 ms (1001 pts)	
				) GHz		) GHz	) GHz	D GHz Span 150.0 MHz Hz #VBW 300 kHz* Sweep 7.133 ms (1001 pts)

### Mask_n41_CH_High_1RBMax

R	RF 50 Ω DC		SENSE:INT	ALIGN AUTO	04:24:19 PM Apr 23, 2020	Frequency
ASS		PNO: Fast	Trig: Free Run #Atten: 30 dB	Avg Type: RMS Avg Hold: 100/100	TRACE 1 2 3 4 5 6 TYPE A WWWWW DET A N N N N N	Frequency
dB/div R	ef Offset 20.8 dB ef 30.00 dBm	IFGain:Low	wAtten: 30 dB			Auto Tun
og Trace 1	Pass					Center Fre 2.64000000 GH
.00						Start Fre 2.565000000 GH
D.0						Stop Fre 2.715000000 GH
0.0						CF Ste 15.000000 MH Auto Ma
0.0 <b>Manadangan</b>	- den	uuruutana ataitata	malles	martelletelle	5 Milpheser	Freq Offs 0 F
enter 2.640 Res BW 10			300 kHz*		Span 150.0 MHz 133 ms (1001 pts)	

### Mask_n41_CH_High_Full RB

R	F	SF 5	0Ω DC	1		SENSE:INT		IGN AUTO		M Apr 23, 2020	Frequency
PAS	s			PNO: Fast IFGain:Low		Avg Tyj g: Free Run Avg Hol iten: 30 dB			TRACE 1 2 3 4 5 6 TVPE A WWWW DET A NNNNN		
0 dE			20.8 dB 0 dBm								Auto Tun
g	Trace 1	Pass									Center Fre
20.0											2.640000000 GH
10.0			-								Start Fre
0.00			monter	ungeneration and	in the second		Manay Martin Maryon		**		2.565000000 GH
10.0										]	Stop Fre 2.715000000 GH
0.0	ware warder 1/4	war							howaya	warden tomation	CF Ste
0.0											15.000000 Mi Auto Mi
10.0											Freq Offs
50.0											01
50.0			-								
	ter 2.640 s BW 100		2	#\/F	3W 300 k	Liz*		ween 7	Span 1	50.0 MHz 1001 pts)	
SG	5 644 100	1112		#96	JAA 200 K	112	3	status	100 1115 (	ioo i pisj	

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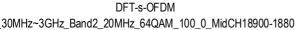
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DFT-s-OFDM 30MHz~3GHz Band2 20MHz 64QAM 100 0 LowCH372000-1860

enter Fi		000000 GHz	-	SUMSE ONT	Avg 1	ype: Log-Pwr	10:02:42 PM Mar 30 TRACE 1 2 3	Frequency
		PNO	Fast	#Atten: 30 dB			DET P NR	
10 dB/div	Ref Offset					Mk	Bm Auto Tun	
20.0		Q1			2			Center Fre
10.0					1			1.515000000 GH
0.00	_		_					
10.0	_	_				-	-131	Start Fre
20.0			-		A	-		30.000000 MH
30.0		R	-		11	-		
10.0		manufacture test	method	- to an and a second	war ha	Ange Ander product in the Top	and the second second second	Stop Fre
50,0								3.00000000 GH
enter 1.	515 GHz 1.0 MHz		#VRW	1.0 MHz		Sween 3	Span 2.970	
THE OWNER AND					FUNCTION	EUTROCE/WOODI	ENTERNA CONTRACT	dute Me
1 N	1	831.9 1.853 6 (		20.73 dBm 19.60 dBm				-11
2 4		1.694 9.1		12.00 0011				Freq Offse
5								-
7 8								
9								
ii	+ +			n				
60						STATUS		



e 1 🗊 📄								ectrum Analyzer	KeynightSp		
Frequency	TRACE 1 2 3 4 5 8	ALIGN AUTO	Avg Typ	SE-INT			50 D DC	q 30.000	tart Fre		
Auto Tun	DET P NNNN				#Atten: 30	PNO: Fast * IFGeIn:Low		-			
	kr2 837.8 MHz 21.06 dBm	21.06 dBm 21.06 dBm									
Center Fre			¥1			2			15.0		
1.515000000 GH							_		5.00		
	-11.07 dBn		11		-		-		5.00		
Start Fre	1110/039		A.				_		15 D		
30.000000 MH			11			1			35.0		
	and the second second second	and a state of the state	I have	manshire		homerga	andar		45.0		
Stop Fre 3.00000000 GH			-			-			56,D		
0.0000000000000		-	-		-	-	-	_	55.0		
CF Ste 297.000000 MH	Stop 3.000 GHz 500 ms (1001 pts)	Owner 26	-		W 1.0 MHz	#1/8		MHz 1.0 MHz	tart 30 P		
Auto Ma		aweep 5.0	1001 18	FU	VV 1.0 IVINZ	#VB	×		DE MORE		
				m	19.73 dE 21.06 dE	83 3 GHz	1.	1	1 N		
Freq Offs									2 4		
			_	-					5		
									7 8		
				-					9		
					н	-					
		STATUS							50		

DFT-s-OFDM 30MHz~3GHz_Band2_20MHz_64QAM_100_0_HighCH380000-1900

		-						yrightSpectru	Di Kaj
TRACE 1 3 3 4 5 6			Run	Trig: Fre	NO: Fast	00000 GH		ter Fred	
t 10.8 dB 21.73 dBm 21.73 dBm									10 dE
		◆2				01			20.0 10.0
-1303-001									-10.0 -20.0 -30.0
Anton Starward Col	0,++ <b>0</b> 151	مدها ام			. Lansentert	rent b	مىم، <u>دە</u> ستۇرىيانىيە	anta na safawidi	-40,0 -60,0
0 ms (1001 pts)				V 1.0 MHz	#VB		0 MHz	s BW 1.0	Cen #Re
			Bm	21.80 d 21.73 d			f f	N 1 N 1	1 2 7 4 5
									6 7 8
	21.382 2 GHz 21.73 dBm 	http://www.initiality.org/initiality.org/initiality.org/initiality.org/initiality.org/initiality.org/initiality.org/initiality.org/initiality.org/initiality.org/initiality.org/initiality.org/initiality.org/initiality.org/initiality.org/initiality.org/initiality.org/initiality.org/initiality.org/initiality.org/initiality.org/initiality.org/initiality.org/initiality.org/initiality.org/initiality.org/initiality.org/initiality.org/initiality.org/initiality.org/initiality.org/initiality.org/initiality.org/initiality.org/initiality.org/initiality.org/initiality.org/initiality.org/initiality.org/initiality.org/initiality.org/initiality.org/initiality.org/initiality.org/initiality.org/initiality.org/initiality.org/initiality.org/initiality.org/initiality.org/initiality.org/initiality.org/initiality.org/initiality.org/initiality.org/initiality.org/initiality.org/initiality.org/initiality.org/initiality.org/initiality.org/initiality.org/initiality.org/initiality.org/initiality.org/initiality.org/initiality.org/initiality.org/initiality.org/initiality.org/initiality.org/initiality.org/initiality.org/initiality.org/initiality.org/initiality.org/initiality.org/initiality.org/initiality.org/initiality.org/initiality.org/initiality.org/initiality.org/initiality.org/initiality.org/initiality.org/initiality.org/initiality.org/initiality.org/initiality.org/initiality.org/initiality.org/initiality.org/initiality.org/initiality.org/initiality.org/initiality.org/initiality.org/initiality.org/initiality.org/initiality.org/initiality.org/initiality.org/initiality.org/initiality.org/initiality.org/initiality.org/initiality.org/initiality.org/initiality.org/initiality.org/initiality.org/initiality.org/initiality.org/initiality.org/initiality.org/initiality.org/initiality.org/initiality.org/initiality.org/initiality.org/initiality.org/initiality.org/initiality.org/initiality.org/initiality.org/initiality.org/initiality.org/initiality.org/initiality.org/initiality.org/initiality.org/initiality.org/initiality.org/initiality.org/initiality	Avg Type: Log-Pwr Tracce [:::::::::::::::::::::::::::::::::::	Avg Type: Log-Per         Thord [] 33 4 5 €           Bun         The control [] 33 4 5 €           Mkr2 1.892 2 GHz         21.73 dBm           \$\$2         1           \$\$2         1           \$\$2         1           \$\$2         1           \$\$2         1           \$\$2         1           \$\$2         1           \$\$2         1           \$\$2         1           \$\$2         1           \$\$2         1           \$\$2         1           \$\$2         1           \$\$2         1           \$\$2         1           \$\$2         1           \$\$3         1           \$\$2         1           \$\$2         1           \$\$3         2           \$\$3         3           \$\$3         3           \$\$3         3           \$\$3         3           \$\$3         3           \$\$3         3           \$\$3         3           \$\$3         3           \$3         3           \$3         3           \$3 </td <td>Avg Type: Log-Per Trace [: 23 4 3 6 Trace [: 23 4 5 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7</td> <td>Hz         Trigi Free Run RAtter: 30 dB         Avg Type: Log-Per         Tricic [1:23:45:4           Micro Strate: 30 dB         Mkr2 1:892 2:0 GHz 21.73 dBm         Mkr2 1:892 2:0 GHz 21.73 dBm           VE         V         Image 1:0 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 -</td> <td>Image: Speed and Speed</td> <td>00         100.000         CH2         Avia Avia         Teach 2000         Teach 2000         Avia Avia         Teach 2000         Teach 2000         Teach 2000         Teach 2000         Avia Avia         Teach 2000         Teac</td> <td>Trig: Pres Run FG 000000 GHz Heater: 30 dB         Trig: Pres Run #Ater: 30 dB         Mkr2 1.882 2 GHz 21.73 dBm           Ref 006+t 10 dB         01         02         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         <t< td=""></t<></td>	Avg Type: Log-Per Trace [: 23 4 3 6 Trace [: 23 4 5 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7	Hz         Trigi Free Run RAtter: 30 dB         Avg Type: Log-Per         Tricic [1:23:45:4           Micro Strate: 30 dB         Mkr2 1:892 2:0 GHz 21.73 dBm         Mkr2 1:892 2:0 GHz 21.73 dBm           VE         V         Image 1:0 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 -	Image: Speed and Speed	00         100.000         CH2         Avia Avia         Teach 2000         Teach 2000         Avia Avia         Teach 2000         Teach 2000         Teach 2000         Teach 2000         Avia Avia         Teach 2000         Teac	Trig: Pres Run FG 000000 GHz Heater: 30 dB         Trig: Pres Run #Ater: 30 dB         Mkr2 1.882 2 GHz 21.73 dBm           Ref 006+t 10 dB         01         02         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0 <t< td=""></t<>

DFT-s-OFDM 3GHz~26GHz Band2 20MHz 64QAM 100 0 LowCH372000-1860

Keynight:Spectrum Analyzer - Sive			A TON MITTO	10-02:56 PM Mar 30, 2020	0 9 8
enter Freg 11.5000	00000 GHz	SERGESINT	Avg Type: Log-Pwr	TRACE 1 5 3 4 5 6	Frequency
onter ried ritoree	PNO: Fast	#Atten: 30 dB		DET P N N N N N	
Ref Offset 10. 0 dB/div Ref 30.00 d			N	Akr3 5.580 GHz -39.48 dBm	Auto Tur
20.0 10.0					Center Fro 11.500000000 G
1.00				-1303 421	Start Fr
200 200 200 2 400		and an and the series	1 Jacoba A Sulla	1 Martin Martin	3.000000000 G
50,0	ية • 4 يوسال خد النصار ب ^ي اد يوميني				Stop Fr 20.000000000 G
tart 3.000 GHz Res BW 1.0 MHz	#VBV	V 1.0 MHz	Sweep 2	Stop 20.000 GHz 8.33 ms (1001 pts)	CF St 1.700000000 G Auto M
1 N 1 f 2 N 1 f 4 5 6	19.262 GHz 3.720 GHz 5.580 GHz	-34.75 dBm -39.35 dBm -39.48 dBm			Freq Offs 0
6 7 8 9 10					

DFT-s-OFDM 3GHz~26GHz Band2 20MHz 64QAM 100 0 MidCH376000-1880

enter Freq 11.500000	000 GHz	Trig: Free Run		e: Log-Pwr	TRACE 1		Frequency
Ref Offset 10.6 d		#Atten: 30 dB		N	1kr3 5.640 -40.45	GHz	Auto Tun
							Center Fre 11.500000000 GH
so ∧ ² ▲3						110/ <i>4</i> 54	Start Fre 3.000000000 GH
	and the second	- A A A A A A A A A A A A A A A A A A A	and the contraction				Stop Fre 20.000000000 GH
art 3.000 GHz Res BW 1.0 MHz	#VB	W 1.0 MHz		Sweep 2	Stop 20.000 8.33 ms (100	1 pts)	CF Ste 1.70000000 GH Auto Ma
	18.946 GHz 3.760 GHz	-34.25 dBm	FUNCTION FU	NCTION WOTH	FUNCTION VA	1.0E	Auto mo
N 1 1 5 5	5.640 GHz	-40.45 dBm				Ξ.	Freq Offs 0 H
	1						

DFT-s-OFDM 3GHz~26GHz_Band2_20MHz_64QAM_100_0_HighCH380000-1900

center Pri	aq 11.50000000	PNO: Fast -	Trig: Free Run #Atten: 30 dB	Avg Type: Log-Pwr	10:00:04 PM Mar 30, 2020 TRACE 1 2 3 4 5 6 TYPE MWWWWW DET P N N N N N	Frequency
10 dB/div	Ref Offset 10.8 dB Ref 30.00 dBm			h	4kr3 5.700 GHz -39.87 dBm	Auto Tun
og 20.0 10.0						Center Fre 11.500000000 GH
10.0					-1100 aDs	Start Fre 3.000000000 GR
	and a stranger		ينفحد الالي المحطورين	and the substrates	- marine and a series of the s	Stop Fre 20.000000000 G
tart 3.000 Res BW 1		#VB	W 1.0 MHz	Sweep 2	Stop 20.000 GHz 8.33 ms (1001 pts)	CF Str 1.700000000 G
AND MODE THE	sol x	19.014 GHz	-34.56 dBm	UNCTION FUNCTION WOTH	FUNCTION WALVE	Auto M
1 N 1	1	3.800 GHz 5.700 GHz	-38.71 dBm -39.87 dBm			Freq Offs
1 N 1 2 N 1 3 N 1 4 5 6 7		_				

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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DFT-s-OFDM 30MHz~3GHz Band5 20MHz 16OAM 100 0 LowCH166800-829

Center Freq 1.51500	DOODO GHz PND: Fest = IFGaintLow	Trig: Free Run #Atten: 30 dB	Avg Type: Log-Pwr	11:11:21 PM Mar 30, 2020 TRACE 1 2 3 4 5 8 TIPE M	Frequency
Ref Offset 10	1.4 dB		M	4 1.761 5 GHz 23.70 dBm	Auto Tune
20.0 10.0 10.0	01		4		Center Free 1.515000000 GH
20.0				-1303-0D1	Start Fre 30,000000 MH
50,0 50,0		Q ²		Strange and	Stop Fre 3.000000000 GH
enter 1.515 GHz Res BW 1.0 MHz	#VB	W 1.0 MHz	Sweep 3	Span 2.970 GHz 1.600 ms (1001 pts)	CF Ste 297.000000 MH Auto Ma
1 N 1 f 2 N 1 f 3 N 1 f 6 6	637.8 MHz 1.668 0 GHz 2.487 0 GHz 1.761.6 GHz	16.81 dBm -41.84 dBm -39.72 dBm 23.70 dBm			Freq Offse
7 8 9 10					

DFT-s-OFDM _30MHz~3GHz_Band5_20MHz_16QAM_100_0_MidCH167300-836.5

Keynight Spectrum Analyzer					0.2
Start Freq 30.000	PNO: Fast	Trig: Free Run	Avg Type: Log-Pwr	10:24:52 PM Mar 30, 2020 TRACE 1 2 3 4 5 5 TVPE M	Frequency
Ref Offse		#Atten: 30 dB	М	kr4 1.761 5 GHz 22.39 dBm	Auto Tun
20.0 10.0	<b>0</b> ¹		4		Center Fre 1.515000000 GH
-10.0			1	-1107 dD1	Start Fre 30.000000 MH
	under south and the second second	2 ²	and the second s	- horsener	Stop Fre 3.00000000 GH
Start 30 MHz Res BW 1.0 MHz	#VBI	V 1.0 MHz	Sweep 3	Stop 3.000 GHz 3.600 ms (1001 pts)	
1 N 1 f 2 N 1 f 3 N 1 f 6	634.9 MHz 1.673 0 GHz 2.609 5 GHz 1.761 5 GHz	16.44 dBm -43.00 dBm -37.86 dBm 22.39 dBm			Freq Offs 01
7 8 9 10 11		n			
CEM			STATU	s	

DFT-s-OFDM _30MHz~3GHz_Band5_20MHz_16QAM_100_0_HighCH167800-844

2 2 8									nalyzar - Sive		hespes	Keynigh
Frequency	Nar 30, 2020	TRACE	Log-Pwr	Avg Typ		Trig: Free R	D: Fast		000000	q 30.	Freq	art F
Auto Tun						#Atten: 30 d	ieintLow			_		
	4 dBm	r4 1.758 22.9	MK						Offset 10. 30.00 d		tiv	dB/d
Center Fre					74			Q1				8
1.515000000 GH					_			- 1		-		0
										-		-
Start Fre 30,000000 Mil	-1303-001	1			4			1				0
30.00000 MP		03			2			111		_		0
Stop Fre	Del appression del	- Aller						parent la	1.24 March 1.		مر، <u>ا</u>	0
3.000000000 GH												0
CF Ste	000 GHz	Stop 3.									30 M	
297.000000 Mi-		.600 ms (1	Sweep 3.			1.0 MHz	#VBV		1Hz	1.0 N	-	-
	N VALUE	FUNCTIO	ACTION WEATH	ION FU	m	18.42 dBn -43.93 dBn	MHz	834.5 1.688 (			1	N
Freq Offs				-	m	40.74 dBn 22.94 dBn	GHz	2.632 0		1	1	N
01												
				_	-		-				-	
	-			_	-						+	-

DFT-s-OFDM 3GHz~26GHz Band5 20MHz 16QAM 100 0 LowCH20450-829

Keynight Sp	nestriam Analyzer - Si							
R	reg 6.5000		\$086.38		Log-Pwr	11:11:35 PM	Mar 30, 2020	Frequency
enter r	red 0.5000	PNO: Fest * IFGeIn:Low	#Atten: 30 dB		Logitai	DET	PNNNN	
0 dB/div	Ref Offset 1 Ref 30.00				N	1kr1 3.95 -37.3	2 GHz 2 dBm	Auto Tur
20.0								Center Fr 6.500000000 Gi
1 001 10 0 20 0							-13.00 dDm	Start Fr 3.000000000 G
30 0 40.0 50.0		<b>6.3</b> .5.0 <del>00,000,000,0</del> 00,000,000,000,000,000,00		and the first of the second	er deresander der			Stop Fr 10.00000000 G
tart 3.0	1.0 MHz	#VB	W 1.0 MHz		Sweep 1	Stop 10.0 1.67 ms (1	001 pts)	CF St 700.000000 M Auto M
1 N 2 2 4 5	1 f	3.962 GHz	-37.32 dBm					Freq Offs 0
6 7 8 9								
11			n	-			- · ·	
53					STATUS			

DFT-s-OFDM 3GHz~26GHz Band5 20MHz 16QAM 100 0 MidCH20525-836.5

enter Fr	10 50 m C 6000	Q DC					
	ed 0.5000	PNO: F	ast Trig: Free	Run	Avg Type: Log-Pwr	10:25:09 PM Mar 30, 2020 TRACE 1 2 3 4 5 TYPE MWWWW DET P N N N N	Frequency
) dB/div	Ref Offset		Low #Atten: 30	dB		Mkr1 3.749 GHz -37.01 dBm	Auto Tun
0.0 0.0							Center Fre 6.500000000 GH
0.0	.1					-1303-001	Start Fre 3.000000000 GH
0.0	And the second second					aingothedening-rough-see	Stop Fr. 10.000000000 G
	1.0 MHz		#VBW 1.0 MHz			Stop 10.000 GHz 11.67 ms (1001 pts	
IL N 1 2 2		3.749 G	Hz -37.01 dB		PA FUNCTION WOTH	+ FUNCTION VALUE	FreqOffs
4 5 6 7 8							0
9			н	-		L	

DFT-s-OFDM 3GHz~26GHz_Band5_20MHz_16QAM_100_0_HighCH20600-844

R 8	ectrum Analyzer - 1					
Center F	req 6.5000	000000 GHz PNO: Fast	Trig: Free Run	Avg Type: Log-Pwr	11:15:48 PM Mar 30, 2020 TRACE 1 2 3 4 5 6 TYPE MWWWWW DET P N/N/N/N	Frequency
	Ref Offset	IFGain:Low	#Atten: 30 dB	•	Akr1 9.447 GHz	Auto Tune
10 dB/div	Ref 30.00				-37.19 dBm	
20.0						Center Fre
10.0	_					6.500000000 GH
0.00	_					
-10.0					-1303 40-1	Start Fre
-20.0	_					3.00000000 GH
-30.0					▲ ¹	
40.0		Station - production	- Antonia	Supervised and the spin of the spin of	- Martines & Magnetic State	Stop Fre
60.0						10.000000000 GH
-60.0						
Start 3.00	00 GHz				Stop 10.000 GHz	CF Ste
#Rec RIM	1.0 MHz	#VE	SW 1.0 MHz	Sweep 1	1.67 ms (1001 pts)	700.000000 MH
						Auto Ma
MAR MADE I		0.447.011-	27.40 dBm	FUNCTION FUNCTION WOTH	FUNCTION VALUE	Auto Ma
1 N	1 f	9.447 GHz	-37.19 dBm	FUNCTION FUNCTION WOTH	FUNCTION VALUE	
1 N 2 2 4		9.447 GHz	-37.19 dBm	FUNCTION FUNCTION WOTH	FUNCTION VALUE	FreqOffs
2 2 3 4 5		9.447 GHz	-37.19 dBm	FUNCTION FUNCTION WOTH	FUNCTION VALUE	FreqOffs
1 N 2 2 4 5 6 7		* 9.447.GHz	-37.19 dBm	FUNCTION FUNCTION WOTH	FUNCTION VALUE	FreqOffse
2 2 2 4 5 6 7 8 9		9.447 GHz	-37.19 dBm	FUNCTION FUNCTION WOTH	FUNCTION WALVE	FreqOffs
1 N 2 2 4 5 6 7 8		x 9.447 GHz	-37.19 dBm	FUNCTION FUNCTION	FUNCTION VALUE	Auto Ma Freq Offse 0 H

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CP-OFDM 30MHz-3CHz Banddi 100MHz 16OAM 100 0 LowCH500202 2546.01

Frequency	# Apr 19, 2628	TRAC	ALIGN AUTO	Avg	NSE:INT		2	0000 GH	51500	ren 1	ter F	R
1	PNNNNN	Tv#				#Atten: 3	iO: Fast + lain:Low	PN				
Auto Tur	37 GHz 38 dBm		Mk						Offset 10. 30.00 d		B/div	10 d
Center Fre		.2-					_	Q1				.0g
1.515000000 GH		And a		_	-		-			-	-	10.0
					-	-						0.00
Start Fre 30,000000 MH	-25.10 (fm	11										20.0
50.00000 mil	-25 00 1010	f		-	-			1		-		30.0
Stop Fre	hardward	-	and the second	where where	white he	and the party	and and	unteres las	-	Arena	- los	40.0
3.00000000 GH												50,0 60,0
								1				
CF Ste 297.000000 MH			Sweep 2.			V 1.0 MHz	#VB			515 G		
Auto Mi	WARE -	PUNCTR	UNCTION WIDTH	INCIDA		Ť		x		28 E 283		
Freq Offs						18.84 d 9.88 d	7 GHz	2,533 7		1	NN	1
01				_	_		-					34
				_	_						-	5 6 7 8 9 10
	_				-							8
					_		-					10 11
	- +			_		(III)				-		1.0

CP-OFDM 30MHz~3GHz Band41 100MHz 16QAM 100 0 MidCH518598-2592.99

	um Analyzes : Sw		and the second second second	and the second state of th	mental statisticals descent	0.0
enter Fre		00000 GHz	Trig: Free Run	Aug Type: Log-Pwr	12:46:08 AN A0119, 2028 TRACE 1 2 3 4 5 6 TIPE M WARNING DET P NNNNN	Frequency
		IFGaind.ow	#Atten: 30 dB		DET P NNNN N	
0 dB/div	Ref Offset 1 Ref 30.00			Mk	r2 2.560 4 GHz 7.98 dBm	Auto Tu
.og		01				
20.0		1			▲ ²	Center Fr 1.515000000 G
10.0					1	1.515000000 G
10.0						
		1 11				Start Fr
20.0	-				-2510 dbm	30.000000 M
0.0						
40.0	-ver-war	under the man	and the all and the second	a diama di tana data data data data data data data	and being and a	Stop Fr
50,0						3.00000000 G
66) D	-					
enter 1.5					Span 2.970 GHz	CF St
Res BW 1	.0 MHz	#VB	N 1.0 MHz	Sweep 2	.000 ms (1001 pts)	297.000000 M Auto N
T N 1	1	831.9 MHz	19.66 dBm	INCTION FUNCTION WIDTH	FUNCTION VALUE	<u>nun</u>
2 N 1	1	2,560 4 GHz	7.98 dBm			Freq Offs
3 4						o Preq Ons
5					6	
6 7						
8						
10						
50				STATUS		

CP-OFDM _30MHz~3GHz_Band41_100MHz_16QAM_100_0_HighCH528000-2640

Agient Spectrum Ana					10 4
R 😸	50 0 DC	SENSE INT	ALIGN AUTO Avg Type: Log-Pwr	12:37:30 PM Apr 20, 2628 TRACE 1 2 3 4 5 6	Frequency
enter Freq 1	PND: Fast ++ IFGain:Low	Trig: Free Run #Atten: 30 dB	Avg Hold: 1/1	TIPE HWWWW	
0 dB/div Ref	30.00 dBm		Mk	2 2.608 0 GHz 9.154 dBm	Auto Tu
20.0	()1				
00				♦ ²	Center Fr 1.515000000 G
1.00				1 may	1.818000000 0
0,0	I. I				Start Fr
0.0	10			-3510 ibn	30.000000 M
0.0				1	
		and a start of the	the second state of the second s	and leanances	Stop Fr
0,0					3.000000000 0
0.0					
enter 1.515 G				Span 2.970 GHz	CF St
Res BW 1.0 M	Hz #VBW	1.0 MHz		000 ms (1001 pts)	297.000000 N Auto N
	831,9 MHz	19.929 dBm	NETION FUNCTION WIDTH	PUNCTION VALUE	
2 N 1	2,608 0 GHz	9.154 dBm			Freq Offs
3 4					of the going
5				4	
7					
9					
10					
		-m			
6			STATUS		

CP-OFDM _3GHz~26GHz Band41 100MHz 16QAM 100 0 LowCH509202-2546.01

				-		alyzes : Sweet	pestinam Ana	gian i	A. 10
Frequency	12:51:26 AM Apr19, 2628 TRACE 1 2 3 4 5 6	ALIGN AUTO		SENSEU	00000 GHz		Freq 1	nter	i a
	DET P NINNI		Trig: Free Run #Atten: 30 dB		PNO: Fant IFGain:Low	110000		no.	
Auto Tur	40.38 dBm	N				Offset 10.4		B/div	10 d
Center Fre								-	.0g
11.20000000 01			_				_	-	0.00
Start Fre 3.000000000 GH	-3610 atm					.2		-	10.0
Stop Fre 20.00000000 G	an and a second and a	manundoriantee		and the state of t	****	line	and and	F	40.0
CF Ste 1.70000000 GH	Span 17.00 GHz 8.33 ms (1001 pts)			4 1.0 MHz	#VB		11.500 ( W 1.0 M	nter 1 es BV	Re
	PUNCTION VALUE	FUNCTION WOTH	FUNC	-34.79 dBm	18,963 GHz			N	1
Freq Offs 0)				-40.38 dBm	5.092 GHz 7.638 GHz		1 1	N	34
									6 7 8 9
			_	- 18					10
		STATUS							56

CP-OFDM _3GHz~26GHz_Band41_100MHz_16QAM_100_0_MidCH518598-2592.99

10 St 1						Analyzes - Sinner SA	Tpestnern An	dista 3									
Frequency	12:46:50 AM Apr 19, 2028 TRACE 1 2 3 4 5 6	ALIGN AUTO Type: Log-Pwr		SENSE:1	0000 GHz	11.5000000	Freq 1	nter									
	Atten: 30 dB		tten: 30 dB		en: 30 dB		en: 30 dB DET(P NINNN N		n: 30 dB		Atten: 30 dB		#Atten: 30 dB	PND: Fast + IFGain:Low			
Auto Tun	40.50 dBm	M				f Offset 10.8 dE		dB/di									
Center Fre								0									
11.50000000 GH								0									
Start Fre			_		-			0									
3.000000000 0	-state atm		_			. 2	-										
Stop Fr	- with man which has	handburne	-	- destantion	man and a standard and and and and and and and and and an	and	, Million and	0									
20.000000000 G																	
CF Ste 1.70000000 G	Span 17.00 GHz 33 ms (1001 pts)	Sweep 28		1.0 MHz	#VB		11.500 W 1.0 M										
Auto Mi	PUNCTION VALUE	FUNCTION MOTH	FUNCT	-34.55 dBm	19.082 GHz			N									
Freq Offs 01				-39,58 dBm -40.50 dBm	5.186 GHz 7.779 GHz		1 1	N									
	,	STATUS						-									

CP-OFDM 3GHz~26GHz_Band41_100MHz_16QAM_100_0_HighCH528000-2640

Agitent Spectrum Analyzer - Sw		SENSE INT	ALIGN AUTO		0 0 0			
Renter Freq 11.500			Avg Type: Log-Pwr	12:38:26 PM 40720, 2028 TRACE 1 2 3 4 5 6 TIPE M WWWWW DPT P NNNN N	Frequency			
	IFGain:Low	#Atten: 30 dB			Auto Tun			
Ref Officet 10.8 dB Mkr3 7.920 GHz 10 dB/div Ref 30.00 dBm -41.58 dBm								
20.0					Center Fre			
10.0					11.50000000 GH			
0.00					11.00000000000			
-10.0					Start Fre			
20.0				-2510, Em	3.000000000 GH			
30.0	3			Q'.				
40.0 to the state of the state	the more the provide	all and the second	and a set to a state of the second	and and and the second and	Stop Fre			
50,0					20.00000000 GH			
Center 11.500 GHz Res BW 1.0 MHz	#VB	W 1.0 MHz	Sweep 2	Span 17.00 GHz 8.33 ms (1001 pts)	CF Ste 1.70000000 GH			
NAP MADE THE SEL	×		UNCTION FUNCTION WIDTH	FUNCTION VALUE	Auto Ma			
1 N 1 1 2 N 1 1	19,201 GHz 5,280 GHz	-34,59 dBm -40,99 dBm						
3 N 1 1	7.920 GHz	-41.58 dBm			Freq Offse			
5				6				
7								
# 9 10								
11								

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### Report No.: E2/2019/A0033 Page 54 of 98

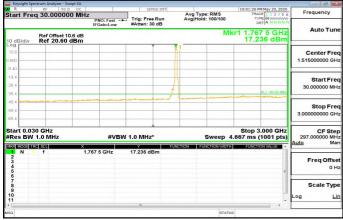
DFT-s-OFDM Pi/2 30MHz~3GHz Band66 20MHz BPSK 100 0 LowCH344000-1720



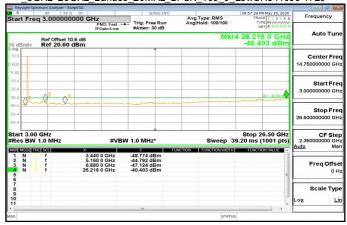
DFT-s-OFDM Pi/2 _30MHz~3GHz_Band66_20MHz_BPSK_100_0_MidCH132322-1745

Keysight Spectrum Ana							
tart Freq 30.0	50 Ω DC		SENSE:		Avg Type: RMS	09:45:32 PM May 20, 202 TRACE 1 2 3 4 5	Frequency
itari i roq ooro	00000 11112	PNO: Fast + IFGain:Low	#Atten: 30 dl		Avg Hold: 100/100	DET A NNNN	
0 dB/div Ref 2	ffset 10.6 dB 20.60 dBm				M	kr1 1.758 5 GH: 16.828 dBn	Auto Tur
.og 10.6 .600							Center Fre 1.515000000 GR
9.40							Start Fre
39.4				A		DL1 -40.00 dD	30.000000 M
19.4			angugith stakey and a t	~~	and the second		Stop Fr 3.000000000 G
.4							
tart 0.030 GHz Res BW 1.0 MH	Ηz	#VB	W 1.0 MHz*		-	Stop 3.000 GH 1.667 ms (1001 pts	
KR MODE TRC SCL	× 1.7	58 5 GHz	16.828 dBm	FUNCT	TION FUNCTION WIDTH	FUNCTION VALUE	
2 3 4 5 6						5	Freq Offs 0
6 7 8 9							Scale Ty
10							Log
11							

DFT-s-OFDM Pi/2 30MHz~3GHz_Band66_20MHz_BPSK_100_0_HighCH354000-1770



DFT-s-OFDM Pi/2 3GHz~26GHz Band66 20MHz BPSK 100 0 LowCH344000-1720



DFT-s-OFDM Pi/2 _3GHz~26GHz_Band66_20MHz_BPSK_100_0_MidCH349000-1745



DFT-s-OFDM Pi/2 3GHz~26GHz_Band66_20MHz_BPSK_100_0_HighCH354000-1770

- 2						rzer - Swept SA		ysight Spe	
Frequency	10:00:07 PM May 20, 2020 TRACE 1 2 3 4 5 6 TYPE M WWWWW DET A N N N N N	Type: RMS Hold: 100/100		Trig: Free Ru #Atten: 30 dB	PNO: Fast +	50 Ω DC	RF	_	R
Auto Tur	26.124 0 GHz -40.707 dBm	Mkr4				fset 10.6 dB 0.60 dBm	Ref Of Ref 2	B/div	) di
Center Fre								-	og 10.6
14.750000000 GH									500 40
Start Fre									4U 9.4
3.00000000 G	01 40 00					03	2	1	9.4
					- in province	In.	-P-	Jr-	9.4
Stop Fre 26.50000000 G									9.4 9.4
CF Ste 2.350000000 G	Stop 26.50 GHz 20 ms (1001 pts)	Sweep 39		W 1.0 MHz*	#VB	z	GHz 1.0 MH	t 3.00 s BW	
<u>Auto</u> M	FUNCTION VALUE	FUNCTION MDTH	FUNCTIO	-43,665 dBm	3.540 0 GHz	×	RC SCL		KR 1
Freq Offs 01	E			-46.877 dBm -46.605 dBm -40.707 dBm	5.310 0 GHz 7.080 0 GHz 5.124 0 GHz	57	t t t	ZZZ	2345
Scale Typ									78
Log L									9 0 1
	•		_	m					l.

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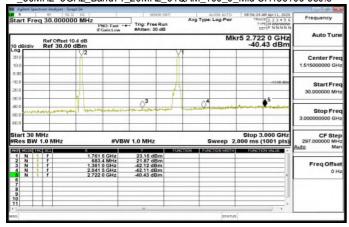
### Report No.: E2/2019/A0033 Page 55 of 98



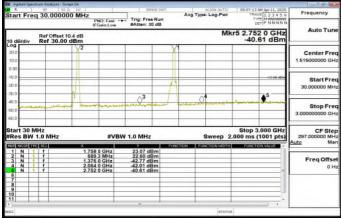
CP-OFDM 30MHz~3GHz Band71 20MHz 64QAM 100 0 LowCH134600-673

Frequency	19:00:13 AM Apr 11, 2028 TRACE 1 2 3 4 5 6	ALIGN AUTO	A	NSE INT		1	BC	60000	44		R.
	DET P NINNN N	LIET P NINN			#Atten: 30	PND: Fast +					
Auto Tun	5 2.692 0 GHz -38.86 dBm	Mkr5 2.692 0 GH: -38.86 dBn						Offset 10 30.00		div	IO de
Center Fre			Q1				1/2				.0g
1.515000000 GH		_		-		_	4		_	_	10.0
		_		-					-	_	0.00
Start Fre	-10.00 (Des	-	1	-	-	-	11		-	_	10.0
30.000000 MH	5		1			-	11				20.0
	the second se	4			03	_					40.0
Stop Fre			-	-	and a second	- stranderer	l home		n au	Name and Address	50,0
3.00000000 GP		-	-	-		-	-	_	-	-	60 D
CF Ste	Stop 3.000 GHz		_	-			-			30 1	
297.000000 MH Auto Ma	000 ms (1001 pts)	Sweep 2.0	COMPANY OF THE OWNER	_	N 1.0 MHz	#VB1		aHz	1.0 N		_
					22.40 dE	64 5 GHz 74.5 MHz	1,76	_	1	N	1 2
Freq Offse				3m	-43.07 dE	46 0 GHz	1,34			N.	3
UH	-			Bm	-38.86 dE	92 0 GHz	2,69		ł	N I	
				-						+	7
				-				_		-	9
	· · ·				-m						11
		STATUS									56

CP-OFDM 30MHz~3GHz Band71 20MHz 64QAM 100 0 Mid CH136100-680.5



CP-OFDM 30MHz~3GHz_Band71_20MHz_64QAM_100_0_HighCH137600-688



CP-OFDM 3GHz~26GHz Band71 20MHz 64QAM 100 0 LowCH134600-673

	the second s					m Analyzes = Sine	pectru	gian i	At At	
Frequency	TRACE 1 2 3 4 5 6 TIPE MUMININ	Type: Log-Pwr	A	Trig: Free Run	000 GHz	3.000000	req	rt Fr	Star	
Auto Tun		Bet Office 10 d dB Mkr2 3.365 GHz								
Center Fre 11.500000000 GH									20.0 10.0	
Start Fre 3.000000000 GH	-1010-60								0.00 -10,0 -20.0	
Stop Fre 20.000000000 GH	and a second and a second			******	1 <del>9433</del>	*****	2000		40.0	
CF Ste 1.700000000 GH Auto Ma	Stop 20.000 GHz 3.33 ms (1001 pts)	Sweep 2		V 1.0 MHz	#VB	0 MHz	W 1.	rt 3,	#Re	
Freq Offse 0 H			AGHE I GH	-35,59 dBm -42,42 dBm	19.830 GHz 3.365 GHz	1	1	NN	123456	
									7 8 9 10 11	
L		STATUS							usa	

CP-OFDM 3GHz~26GHz Band71 20MHz 64QAM 100 0 MidCH136100-680.5

Agiest	Typestmark	Analyzes - Some	e SA		-						
enter	Freq	11.5000	00000 GH	2	Trig: Free R			Log-Pwr	TRA	AM Apr 11, 2628	Frequency
			IFGai	Fant ++	#Atten: 30 d	B			1	TE STWWWWW ZT P NNNNN	Auto Tun
0 dB/di		f Offset 10. 2f 30.00 d									
20.0											Center Fre
10.0											11.50000000 GH
0.00											
0.0										-1010-004	Start Fre 3.000000000 G
0.0	2								-	01	3.00000000 07
40.0	-	And alan		maker			hab-class	alor and all	1 million	and a stand and	Stop Fre
50,0											20.00000000 G
	11.50	0 GHz		-					Span	17.00 GHz	CF Ste
	W 1.0			#VBV	1.0 MHz		5	Sweep	28.33 ms	(1001 pts)	1.700000000 G
1 N			19.354 0	Hz	-35.38 dBm		4 Fuh	CTION MDT	H PUNCT	CRIVALUE .	
2 N	1 1		3.403 0	Hz	-41.91 dBm						Freq Offs
4											01
5 6 7 8		-									
9		-				-					
		+				-	-		-	· · ·	
10		-			100						

CP-OFDM 3GHz~26GHz_Band71_20MHz_64QAM_100_0_HighCH137600-688

						e SA	HANDER - SINTE	Typestnern	autor 1	A Ag
Frequency	TRACE 1 2 3 4 5 6 TRACE 1 2 3 4 5 6 THE MUNICIPAL	ALIGN AUTO Type: Log-Pwr		SENSE:	Hz ND: Fant +	00000 G	11.5000	Freq	nter	Cen
Auto Tun	Bet Officit 10.1 dB Mkr3 5.310 GHz					_	-			
	-40.81 dBm						f 30.00 c		B/din	10 d
Center Fre 11.50000000 GH								_	-	20.0
Start Fre	-10 (D +Dm									0.00
3.00000000 GH							A3	2		20 0 30 0
Stop Fre 20.000000000 GH		et cales protocolog		وتيالب الاربار المسالين	المسترية الموسولة ال	-		Jan 10	F	40.0 50,0
CF Ste 1.70000000 GH	Stop 20.000 GHz 3.33 ms (1001 pts)	Sweep 21		1.0 MHz	#VB			.000 G		
Auto Ma	FUNCTION VALUE	FUNCTION MOTH	PUNCTR	Ý		×				
Freq Offse				-34,73 dBm -42,31 dBm -40,81 dBm	4 GHz 0 GHz 0 GHz	3.54		1	NNN	1 2 3 4 5
							-			56789
									_	10 11
				an .			'			1
	-	STATUS								96

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# 9 FIELD STRENGTH OF SPURIOUS RADIATION MEASUREMENT

## 9.1 Standard Applicable

## According to FCC §2.1053,

## FCC §22.917(a), §24.238(a), §27.53(h)

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

## FCC §27.53(g)

Compliance for operations in the 600 MHz, 698-746 MHz, 746-758 MHz and the 776-788 MHz band with this provision is based on the use of measurement instrumentation employing a resolution bandwidth of 100 kilohertz or greater. However, in the 100 kilohertz bands immediately outside and adjacent to a licensee's frequency block, a resolution bandwidth of at least 30 kHz may be employed.

## FCC §27.53(m) (4) (6)

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

Measurement procedure. Compliance with these rules is based on the use of measurement nstrumentation employing a resolution bandwidth of 1 megahertz or greater. However, in the 1 MHz bands immediately outside and adjacent to the frequency block a resolution bandwidth of at least one percent of the emission bandwidth of the fundamental emission of the transmitter may be employed; for mobile digital stations, in the 1 megahertz bands immediately outside and adjacent to the frequency block a resolution bandwidth of at least two percent may be employed, except when the 1 megahertz band is 2495-2496 MHz, in which case a resolution bandwidth of at least one percent may be employed. A narrower resolution bandwidth is permitted in all cases to improve measurement accuracy provided the measured power is integrated over the full required measurement bandwidth (i.e. 1 megahertz or 1 percent of emission bandwidth, as specified; or 1 megahertz or 2 percent for mobile digital stations, except in the band 2495-2496 MHz). The emission bandwidth is defined as the width of the signal between two points, one below the carrier center frequency and one above the carrier center frequency, outside of which all emissions are attenuated at least 26 dB below the transmitter power. With respect to television operations, measurements must be made of the separate visual and aural operating powers at sufficiently frequent intervals to ensure compliance with the rules.

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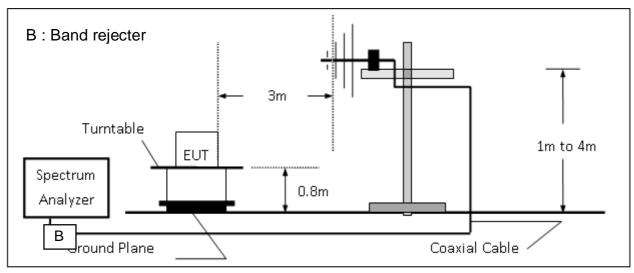
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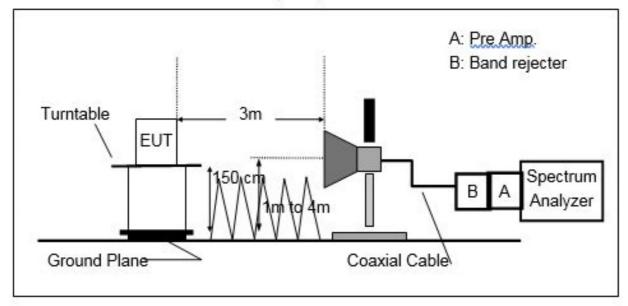


# EUT Setup

Radiated Emission Test Set-Up, Frequency Below 1000MHz



Radiated Emission Test Set-UP Frequency Over 1 GHz



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## 9.2 Measurement Procedure:

The EUT was placed on a non-conductive; the measurement antenna was placed at a distance of 3 meters from the EUT. During the tests, the antenna height and the EUT azimuth were varied in order to identify the maximum level of emissions from the EUT. This maximization process was repeated with the EUT positioned in each of its three orthogonal orientations.

The frequency range up to tenth harmonic was investigated for each of three fundamental frequencies (low, middle and high channels). Once spurious emission was identified, the power of the emission was determined using the substitution method.

The spurious emissions attenuation was calculated as the difference between radiated power at the fundamental frequency and the spurious emissions frequency.

ERP (dBm) = SG Level(dBm) + Antenna Gain(dBd) + Cable Loss(dB)

EIRP (dBm) = SG Level(dBm) + Antenna Gain(dBi) + Cable Loss(dB)

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## 9.3 Measurement Equipment Used:

E	RP, EIRP MEASU	JREMENT EQUIP	MENT List 966 Ch	amber	
EQUIPMENT TYPE	MFR	MODEL NUMBER	SERIAL NUMBER	LAST CAL.	CAL DUE.
Broadband Antenna	TESEQ	CBL 6112D	35240	09/09/2019	09/08/2020
Horn Antenna	Schwarzbeck	BBHA9170	185	08/07/2019	08/06/2020
Horn Antenna	Schwarzbeck	BBHA9120D	1187	01/10/2020	01/09/2021
Spectrum Analyzer	R&S	FSV-40	10058	01/03/2020	01/02/2021
EMI Test Receiver	R&S	ESU 40	100363	04/15/2019	04/14/2020
UXM 5G Wireless Test Platform	KEYSIGHT	E7515B	MY59321566	12/17/2019	12/16/2020
Pre-Amplifier	EMC Instruments	EMC330	980096	11/20/2019	11/19/2020
Pre-Amplifier	EMC Instruments	EMC0011830	980199	11/20/2019	11/19/2020
Pre-Amplifier	EMC Instruments	EMC184045B	980135	11/20/2019	11/19/2020
Notch Filter	Woken	EWT-54-0037	RF54	11/20/2019	11/19/2020
Notch Filter	Woken	EWT-54-0038	RF55	11/20/2019	11/19/2020
Coaxial Cable	Huber Suhner	SUCOFLEX 104	MY17388/4	11/20/2019	11/19/2020
Coaxial Cable	Huber Suhner	RG 214/U	W22.03	11/20/2019	11/19/2020
Coaxial Cable	Huber Suhner	SUCOFLEX 104	MY17413/4	11/20/2019	11/19/2020

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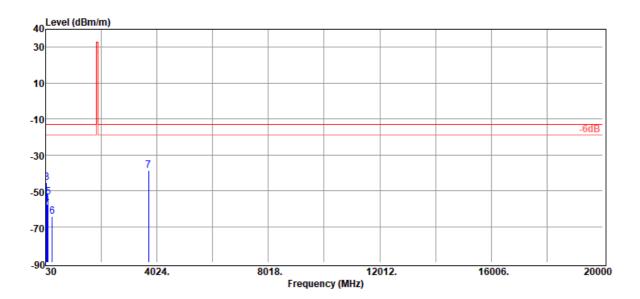
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## 9.4 Measurement Result: (worst case)

## Radiated Spurious Emission Measurement Result: DC_5A_n2A

Report Number	:E2/2019/A0033	Test Date	:2020-02-27
Operation Mode	:L5A + n2A	Temp./Humi.	:21.2/64
Test Mode	:TX CH LOW	Antenna Pol.	:VERTICAL
EUT Pol	:E2 Plan	Engineer	:Ashton
Test Frequency	:1860 MHz		



Freq.	EIRP/ERP	SG Output Level	Antenna Gain	Cable Loss	Limit	Margin
MHz	dBm	dBm	dBi/dBd	dB	dBm	dB
41.64	-56.23	-36.45	-18.92	-0.86	-13.00	-43.23
55.22	-57.61	-40.20	-16.48	-0.93	-13.00	-44.61
64.92	-45.56	-30.85	-13.71	-1.00	-13.00	-32.56
77.53	-57.69	-47.42	-9.15	-1.12	-13.00	-44.69
118.27	-53.50	-44.97	-7.08	-1.45	-13.00	-40.50
272.50	-64.28	-60.34	-1.63	-2.31	-13.00	-51.28
3720.00	-38.77	-39.86	12.34	-11.25	-13.00	-25.77

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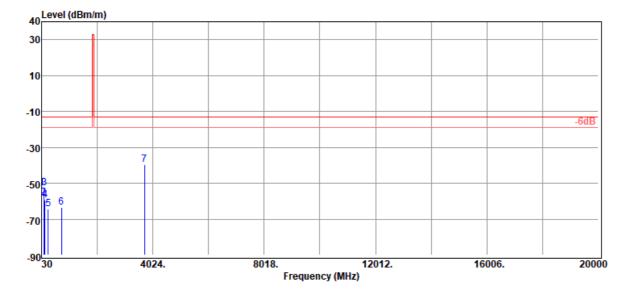
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Report Number	:E2/2019/A0033
Operation Mode	:L5A + n2A
Test Mode	:TX CH LOW
EUT Pol	:E2 Plan
Test Frequency	:1860 MHz

Test Date	:2020-02-27
Temp./Humi.	:21.2/64
Antenna Pol.	:HORIZONTAL
Engineer	:Ashton



Freq.	EIRP/ERP	SG Output Level	Antenna Gain	Cable Loss	Limit	Margin
MHz	dBm	dBm	dBi/dBd	dB	dBm	dB
37.76	-52.87	-32.72	-19.35	-0.80	-13.00	-39.87
105.66	-58.13	-49.90	-6.83	-1.40	-13.00	-45.13
118.27	-52.85	-44.32	-7.08	-1.45	-13.00	-39.85
149.31	-59.56	-50.42	-7.46	-1.68	-13.00	-46.56
268.62	-64.56	-60.69	-1.60	-2.27	-13.00	-51.56
745.86	-63.25	-57.45	-1.61	-4.19	-13.00	-50.25
3720.00	-39.50	-40.59	12.34	-11.25	-13.00	-26.50

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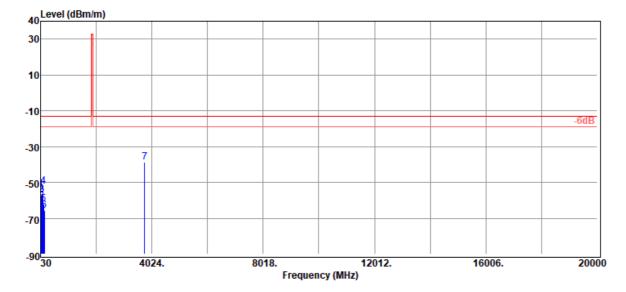
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:E2/2019/A0033
:L5A + n2A
:TX CH MID
:E2 Plan
:1880 MHz

Test Date	:2020-02-27
Temp./Humi.	:21.2/64
Antenna Pol.	:VERTICAL
Engineer	:Ashton



Freq.	EIRP/ERP	SG Output Level	Antenna Gain	Cable Loss	Limit	Margin
MHz	dBm	dBm	dBi/dBd	dB	dBm	dB
42.61	-53.91	-34.24	-18.81	-0.86	-13.00	-40.91
56.19	-57.38	-40.18	-16.25	-0.95	-13.00	-44.38
78.50	-56.85	-46.87	-8.84	-1.14	-13.00	-43.85
118.27	-52.33	-43.80	-7.08	-1.45	-13.00	-39.33
140.58	-62.10	-52.80	-7.64	-1.66	-13.00	-49.10
167.74	-65.76	-57.58	-6.45	-1.73	-13.00	-52.76
3760.00	-38.94	-40.28	12.42	-11.08	-13.00	-25.94

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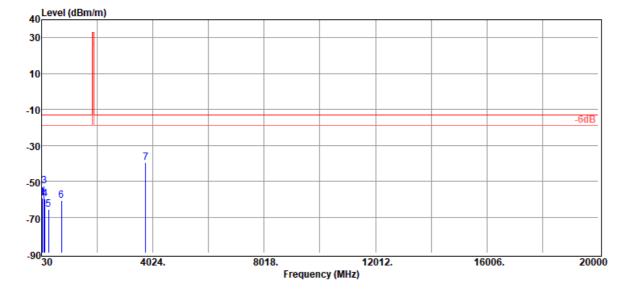
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Report Number	:E2/2019/A0033
Operation Mode	:L5A + n2A
Test Mode	:TX CH MID
EUT Pol	:E2 Plan
Test Frequency	:1880 MHz

Test Date	:2020-02-27
Temp./Humi.	:21.2/64
Antenna Pol.	:HORIZONTAL
Engineer	:Ashton



Freq.	EIRP/ERP	SG Output Level	Antenna Gain	Cable Loss	Limit	Margin
MHz	dBm	dBm	dBi/dBd	dB	dBm	dB
37.76	-59.12	-38.97	-19.35	-0.80	-13.00	-46.12
50.37	-59.36	-40.99	-17.50	-0.87	-13.00	-46.36
118.27	-52.60	-44.07	-7.08	-1.45	-13.00	-39.60
148.34	-60.00	-50.81	-7.51	-1.68	-13.00	-47.00
282.20	-65.66	-61.56	-1.67	-2.43	-13.00	-52.66
740.04	-60.86	-55.11	-1.56	-4.19	-13.00	-47.86
3760.00	-39.52	-40.86	12.42	-11.08	-13.00	-26.52

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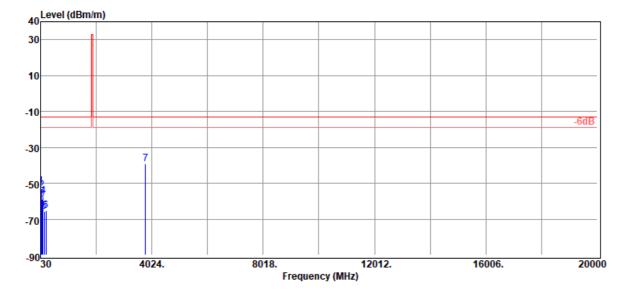
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Report Number	:E2/2019/A0033
Operation Mode	:L5A + n2A
Test Mode	:TX CH HIGH
EUT Pol	:E2 Plan
Test Frequency	:1900 MHz

Test Date	:2020-02-27
Temp./Humi.	:21.2/64
Antenna Pol.	:VERTICAL
Engineer	:Ashton



Freq.	EIRP/ERP	SG Output Level	Antenna Gain	Cable Loss	Limit	Margin
MHz	dBm	dBm	dBi/dBd	dB	dBm	dB
42.61	-51.77	-32.10	-18.81	-0.86	-13.00	-38.77
67.83	-54.06	-40.23	-12.83	-1.00	-13.00	-41.06
78.50	-59.15	-49.17	-8.84	-1.14	-13.00	-46.15
117.30	-57.34	-48.80	-7.09	-1.45	-13.00	-44.34
167.74	-65.76	-57.58	-6.45	-1.73	-13.00	-52.76
227.88	-65.10	-61.59	-1.32	-2.19	-13.00	-52.10
3800.00	-39.01	-40.59	12.50	-10.92	-13.00	-26.01

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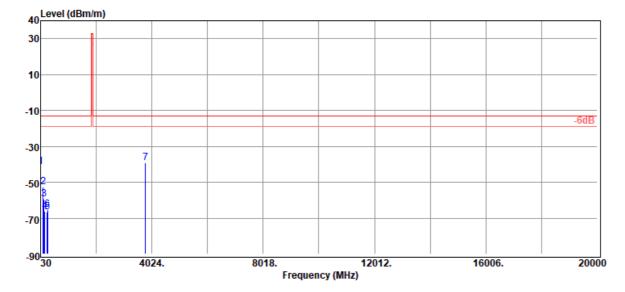
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Report Number	:E2/2019/A0033
Operation Mode	:L5A + n2A
Test Mode	:TX CH HIGH
EUT Pol	:E2 Plan
Test Frequency	:1900 MHz

Test Date	:2020-02-27
Temp./Humi.	:21.2/64
Antenna Pol.	:HORIZONTAL
Engineer	:Ashton



Freq.	EIRP/ERP	SG Output Level	Antenna Gain	Cable Loss	Limit	Margin
MHz	dBm	dBm	dBi/dBd	dB	dBm	dB
35.82	-41.39	-20.99	-19.64	-0.76	-13.00	-28.39
120.21	-52.80	-44.29	-7.06	-1.45	-13.00	-39.80
147.37	-59.60	-50.36	-7.57	-1.67	-13.00	-46.60
175.50	-66.37	-59.37	-5.26	-1.74	-13.00	-53.37
267.65	-66.64	-62.77	-1.60	-2.27	-13.00	-53.64
287.05	-65.05	-60.91	-1.66	-2.48	-13.00	-52.05
3800.00	-39.12	-40.70	12.50	-10.92	-13.00	-26.12

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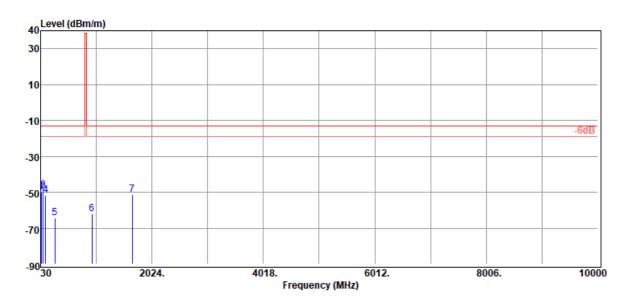
:VERTICAL

:21.9/65

:Ashton

### Radiated Spurious Emission Measurement Result: DC_66A_n5A

Report Number	:E2/2019/A0033	Test Date
Operation Mode	:L66A + n5A	Temp./Humi.
Test Mode	:TX CH LOW	Antenna Pol.
EUT Pol	:E2 Plan	Engineer
Test Frequency	:834 MHz	



Freq.	EIRP/ERP	SG Output Level	Antenna Gain	Cable Loss	Limit	Margin
MHz	dBm	dBm	dBi/dBd	dB	dBm	dB
34.85	-49.90	-29.40	-19.77	-0.73	-13.00	-36.90
51.34	-50.06	-31.85	-17.33	-0.88	-13.00	-37.06
75.59	-48.85	-37.91	-9.85	-1.09	-13.00	-35.85
118.27	-51.91	-43.38	-7.08	-1.45	-13.00	-38.91
285.11	-64.29	-60.19	-1.64	-2.46	-13.00	-51.29
949.56	-62.07	-55.59	-1.68	-4.80	-13.00	-49.07
1668.00	-51.13	-52.96	9.48	-7.65	-13.00	-38.13

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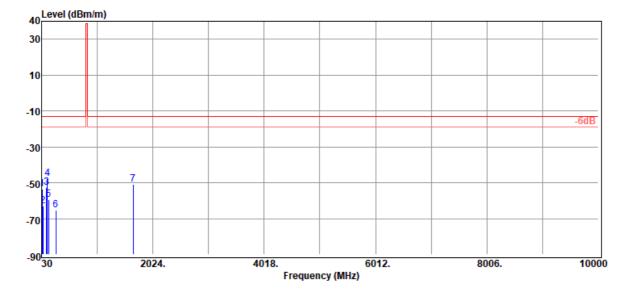
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Report Number	:E2/2019/A0033
Operation Mode	:L66A + n5A
Test Mode	:TX CH LOW
EUT Pol	:E2 Plan
Test Frequency	:834 MHz

Test Date	:2020-02-27
Temp./Humi.	:21.9/65
Antenna Pol.	:HORIZONTAL
Engineer	:Ashton



Freq.	EIRP/ERP	SG Output Level	Antenna Gain	Cable Loss	Limit	Margin
MHz	dBm	dBm	dBi/dBd	dB	dBm	dB
37.76	-53.65	-33.50	-19.35	-0.80	-13.00	-40.65
56.19	-63.23	-46.03	-16.25	-0.95	-13.00	-50.23
118.27	-52.81	-44.28	-7.08	-1.45	-13.00	-39.81
132.82	-47.85	-38.84	-7.35	-1.66	-13.00	-34.85
158.04	-59.61	-50.86	-7.07	-1.68	-13.00	-46.61
288.99	-65.11	-60.93	-1.68	-2.50	-13.00	-52.11
1668.00	-50.97	-52.80	9.48	-7.65	-13.00	-37.97

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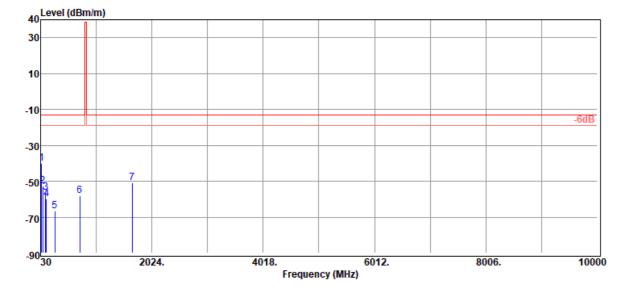
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Report Number	:E2/2019/A0033
Operation Mode	:L66A + n5A
Test Mode	:TX CH MID
EUT Pol	:E2 Plan
Test Frequency	:836.5 MHz

Test Date	:2020-02-27
Temp./Humi.	:21.8/64
Antenna Pol.	:VERTICAL
Engineer	:Ashton



Freq.	EIRP/ERP	SG Output Level	Antenna Gain	Cable Loss	Limit	Margin
MHz	dBm	dBm	dBi/dBd	dB	dBm	dB
44.55	-40.10	-20.73	-18.51	-0.86	-13.00	-27.10
67.83	-52.75	-38.92	-12.83	-1.00	-13.00	-39.75
119.24	-56.33	-47.84	-7.04	-1.45	-13.00	-43.33
132.82	-59.80	-50.79	-7.35	-1.66	-13.00	-46.80
285.11	-66.67	-62.57	-1.64	-2.46	-13.00	-53.67
734.22	-58.18	-52.50	-1.42	-4.26	-13.00	-45.18
1673.00	-51.09	-52.94	9.53	-7.68	-13.00	-38.09

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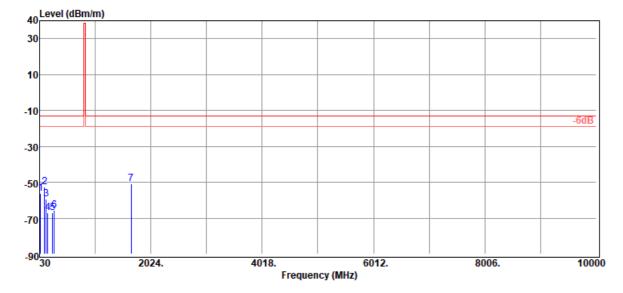
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Report Number	:E2/2019/A0033
Operation Mode	:L66A + n5A
Test Mode	:TX CH MID
EUT Pol	:E2 Plan
Test Frequency	:836.5 MHz

Test Date	:2020-02-27
Temp./Humi.	:21.8/64
Antenna Pol.	:HORIZONTAL
Engineer	:Ashton



Freq.	EIRP/ERP	SG Output Level	Antenna Gain	Cable Loss	Limit	Margin
MHz	dBm	dBm	dBi/dBd	dB	dBm	dB
51.34	-56.13	-37.92	-17.33	-0.88	-13.00	-43.13
118.27	-52.86	-44.33	-7.08	-1.45	-13.00	-39.86
148.34	-59.30	-50.11	-7.51	-1.68	-13.00	-46.30
177.44	-66.98	-60.37	-4.87	-1.74	-13.00	-53.98
267.65	-66.94	-63.07	-1.60	-2.27	-13.00	-53.94
294.81	-65.49	-61.43	-1.55	-2.51	-13.00	-52.49
1673.00	-50.95	-52.80	9.53	-7.68	-13.00	-37.95

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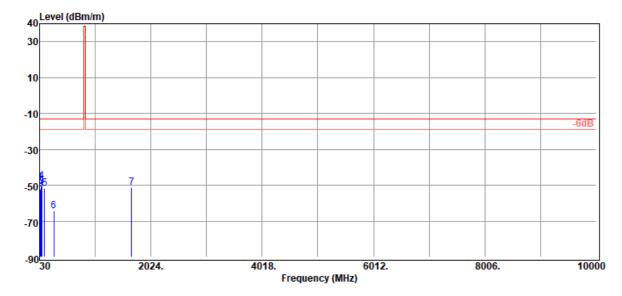
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Report Number	:E2/2019/A0033
Operation Mode	:L66A + n5A
Test Mode	:TX CH HIGH
EUT Pol	:E2 Plan
Test Frequency	:839 MHz

Test Date	:2020-02-27
Temp./Humi.	:21.8/66
Antenna Pol.	:VERTICAL
Engineer	:Ashton



Freq.	EIRP/ERP	SG Output Level	Antenna Gain	Cable Loss	Limit	Margin
MHz	dBm	dBm	dBi/dBd	dB	dBm	dB
35.82	-48.81	-28.41	-19.64	-0.76	-13.00	-35.81
43.58	-51.99	-32.42	-18.71	-0.86	-13.00	-38.99
63.95	-51.00	-35.97	-14.03	-1.00	-13.00	-38.00
72.68	-47.66	-35.68	-10.94	-1.04	-13.00	-34.66
118.27	-51.72	-43.19	-7.08	-1.45	-13.00	-38.72
283.17 1678.00	-64.32 -51.09	-60.22 -52.96	-1.66 9.58	-2.44 -7.71	-13.00 -13.00	-51.32 -38.09

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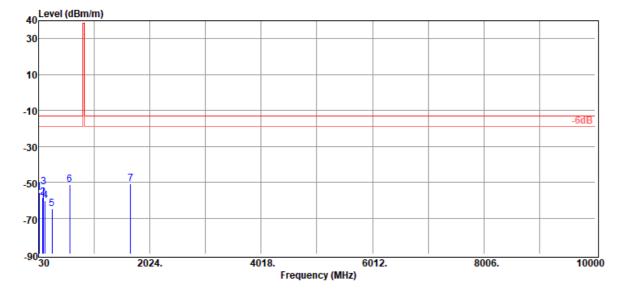
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Report Number	:E2/2019/A0033
Operation Mode	:L66A + n5A
Test Mode	:TX CH HIGH
EUT Pol	:E2 Plan
Test Frequency	:839 MHz

Test Date	:2020-02-27
Temp./Humi.	:21.8/66
Antenna Pol.	:HORIZONTAL
Engineer	:Ashton



Freq.	EIRP/ERP	SG Output Level	Antenna Gain	Cable Loss	Limit	Margin
MHz	dBm	dBm	dBi/dBd	dB	dBm	dB
44.04	55.00	00.40	40.00	0.00	40.00	10.00
41.64	-55.88	-36.10	-18.92	-0.86	-13.00	-42.88
104.69	-58.37	-50.20	-6.78	-1.39	-13.00	-45.37
118.27	-52.85	-44.32	-7.08	-1.45	-13.00	-39.85
149.31	-60.13	-50.99	-7.46	-1.68	-13.00	-47.13
269.59	-64.85	-60.97	-1.61	-2.27	-13.00	-51.85
586.78	-51.12	-45.96	-1.41	-3.75	-13.00	-38.12
1678.00	-50.94	-52.81	9.58	-7.71	-13.00	-37.94

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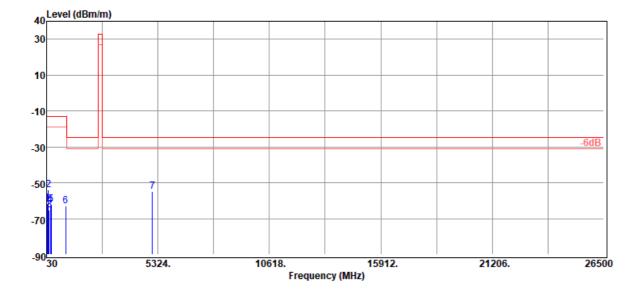
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## Radiated Spurious Emission Measurement Result: DC_26A_n41A

Report Number	:E2/2019/A0033
Operation Mode	:L26A + n41a
Test Mode	:TX CH LOW
EUT Pol	:E2 Plan
Test Frequency	:2526 MHz

	•
Test Date	:2020-04-14
Temp./Humi.	:22.5/51
Antenna Pol.	:VERTICAL
Engineer	:Enzo



Freq.	EIRP/ERP	SG Output Level	Antenna Gain	Cable Loss	Limit	Margin
MHz	dBm	dBm	dBi/dBd	dB	dBm	dB
57.16	-61.51	-44.49	-16.06	-0.96	-13.00	-48.51
118.27	-54.06	-45.53	-7.08	-1.45	-13.00	-41.06
158.04	-65.17	-56.42	-7.07	-1.68	-13.00	-52.17
203.63	-62.77	-58.73	-1.96	-2.08	-13.00	-49.77
252.13	-61.93	-58.14	-1.55	-2.24	-13.00	-48.93
942.77	-63.10	-56.65	-1.65	-4.80	-13.00	-50.10
5052.00	-54.70	-55.55	12.40	-11.55	-25.00	-29.70

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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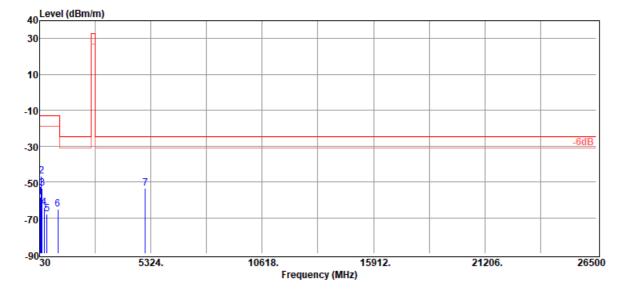
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Report Number	:E2/2019/A0033
Operation Mode	:L26A + n41a
Test Mode	:TX CH LOW
EUT Pol	:E2 Plan
Test Frequency	:2526 MHz

Test Date	:2020-04-14
Temp./Humi.	:22.5/51
Antenna Pol.	:HORIZONTAL
Engineer	:Enzo



Freq.	EIRP/ERP	SG Output Level	Antenna Gain	Cable Loss	Limit	Margin
MHz	dBm	dBm	dBi/dBd	dB	dBm	dB
56.19	-58.41	-41.21	-16.25	-0.95	-13.00	-45.41
118.27	-46.96	-38.43	-7.08	-1.45	-13.00	-33.96
155.13	-53.53	-44.64	-7.21	-1.68	-13.00	-40.53
253.10	-64.34	-60.56	-1.54	-2.24	-13.00	-51.34
385.99	-67.95	-63.58	-1.53	-2.84	-13.00	-54.95
897.18	-65.28	-59.29	-1.38	-4.61	-13.00	-52.28
5052.00	-53.78	-54.63	12.40	-11.55	-25.00	-28.78

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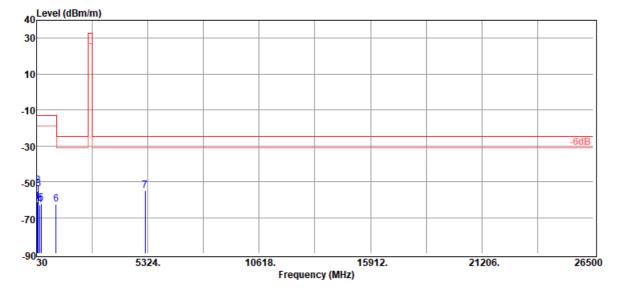
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Report Number	:E2/2019/A0033
Operation Mode	:L26A + n41a
Test Mode	:TX CH MID
EUT Pol	:E2 Plan
Test Frequency	:2592.99 MHz

Test Date	:2020-04-14
Temp./Humi.	:22.5/51
Antenna Pol.	:VERTICAL
Engineer	:Enzo



Freq.	EIRP/ERP	SG Output Level	Antenna Gain	Cable Loss	Limit	Margin
MHz	dBm	dBm	dBi/dBd	dB	dBm	dB
49.40	-61.40	-42.81	-17.73	-0.86	-13.00	-48.40
93.05	-52.33	-45.35	-5.77	-1.21	-13.00	-39.33
118.27	-54.19	-45.66	-7.08	-1.45	-13.00	-41.19
201.69	-63.01	-58.88	-2.05	-2.08	-13.00	-50.01
252.13	-61.95	-58.16	-1.55	-2.24	-13.00	-48.95
964.11	-62.35	-55.46	-1.64	-5.25	-13.00	-49.35
5185.98	-55.07	-55.75	12.64	-11.96	-25.00	-30.07

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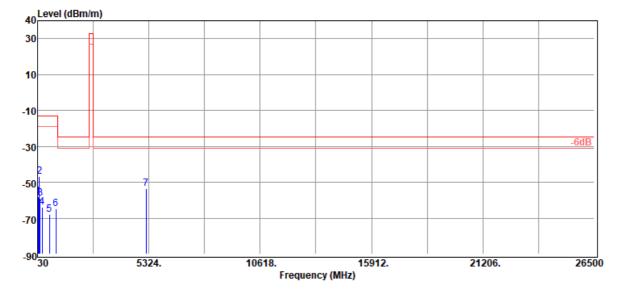
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Report Number	:E2/2019/A0033
Operation Mode	:L26A + n41a
Test Mode	:TX CH MID
EUT Pol	:E2 Plan
Test Frequency	:2592.99 MHz

Test Date	:2020-04-14
Temp./Humi.	:22.5/51
Antenna Pol.	:HORIZONTAL
Engineer	:Enzo



Freq.	EIRP/ERP	SG Output Level	Antenna Gain	Cable Loss	Limit	Margin
MHz	dBm	dBm	dBi/dBd	dB	dBm	dB
55.22	-57.87	-40.46	-16.48	-0.93	-13.00	-44.87
118.27	-46.93	-38.40	-7.08	-1.45	-13.00	-33.93
155.13	-58.95	-50.06	-7.21	-1.68	-13.00	-45.95
251.16	-63.99	-60.20	-1.56	-2.23	-13.00	-50.99
585.81	-67.94	-62.79	-1.40	-3.75	-13.00	-54.94
893.30	-65.01	-58.98	-1.42	-4.61	-13.00	-52.01
5185.98	-53.55	-54.23	12.64	-11.96	-25.00	-28.55

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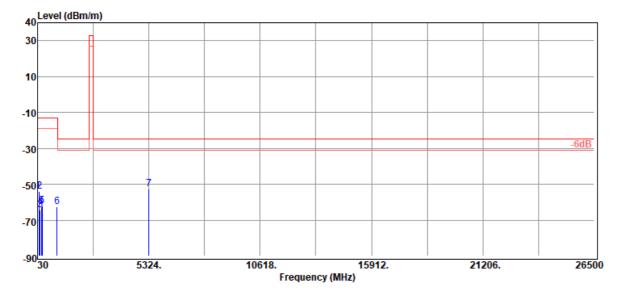
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f (886-2) 2298-0488



Report Number	:E2/2019/A0033
Operation Mode	:L26A + n41a
Test Mode	:TX CH HIGH
EUT Pol	:E2 Plan
Test Frequency	:2659.98 MHz

Test Date	:2020-04-14
Temp./Humi.	:22.5/51
Antenna Pol.	:VERTICAL
Engineer	:Enzo



Freq.	EIRP/ERP	SG Output Level	Antenna Gain	Cable Loss	Limit	Margin
MHz	dBm	dBm	dBi/dBd	dB	dBm	dB
35.82	-54.15	-33.75	-19.64	-0.76	-13.00	-41.15
118.27	-53.88	-45.35	-7.08	-1.45	-13.00	-40.88
158.04	-64.15	-55.40	-7.07	-1.68	-13.00	-51.15
205.57	-62.58	-58.63	-1.87	-2.08	-13.00	-49.58
253.10	-62.00	-58.22	-1.54	-2.24	-13.00	-49.00
962.17	-62.74	-55.87	-1.62	-5.25	-13.00	-49.74
5319.96	-52.70	-54.43	13.38	-11.65	-25.00	-27.70

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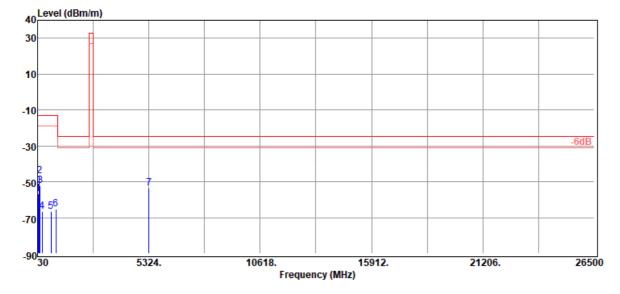
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Report Number	:E2/2019/A0033
Operation Mode	:L26A + n41a
Test Mode	:TX CH HIGH
EUT Pol	:E2 Plan
Test Frequency	:2659.98 MHz

Test Date:2020-04-14Temp./Humi.:22.5/51Antenna Pol.:HORIZONTALEngineer:Enzo



Freq.	EIRP/ERP	SG Output Level	Antenna Gain	Cable Loss	Limit	Margin
MHz	dBm	dBm	dBi/dBd	dB	dBm	dB
64.92	-56.67	-41.96	-13.71	-1.00	-13.00	-43.67
118.27	-46.97	-38.44	-7.08	-1.45	-13.00	-33.97
153.19	-52.27	-43.35	-7.24	-1.68	-13.00	-39.27
247.28	-66.51	-62.60	-1.68	-2.23	-13.00	-53.51
666.32	-66.52	-61.43	-1.19	-3.90	-13.00	-53.52
902.03	-65.06	-59.05	-1.38	-4.63	-13.00	-52.06
5319.96	-53.34	-55.07	13.38	-11.65	-25.00	-28.34

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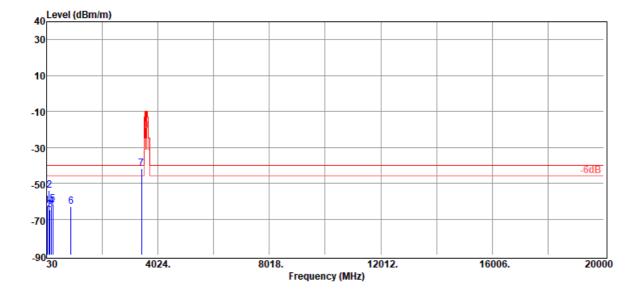
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# Radiated Spurious Emission Measurement Result: DC_48A_n66A

:E2/2019/A0033
:L48A + n66a
:TX CH LOW
:E2 Plan
:1720 MHz

Test Date	: 2020-05-19
Temp./Humi.	:24.2/57
Antenna Pol.	:VERTICAL
Engineer	:Enzo



Freq.	EIRP/ERP	SG	Antenna	Cable	Limit	Margin
MHz	dBm	Output Level dBm	Gain dBi/dBd	Loss dB	dBm	dB
FC 10	62.44	45.04	-16.25	0.05	40.00	-22.41
56.19 118.27	-62.41 -54.05	-45.21 -45.52	-7.08	-0.95 -1.45	-40.00 -40.00	-22.41
157.07	-64.87	-56.17	-7.02	-1.68	-40.00	-24.87
204.60	-62.94	-58.94	-1.92	-2.08	-40.00	-22.94
252.13	-61.70	-57.91	-1.55	-2.24	-40.00	-21.70
903.97	-62.89	-56.85	-1.40	-4.64	-40.00	-22.89
3440.00	-41.84	-43.27	12.62	-11.19	-40.00	-1.84

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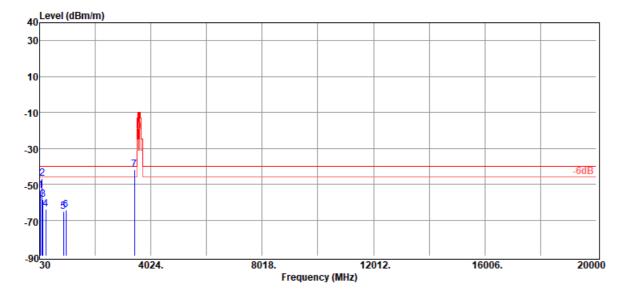
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Report Number	:E2/2019/A0033
Operation Mode	:L48A + n66a
Test Mode	:TX CH LOW
EUT Pol	:E2 Plan
Test Frequency	:1720 MHz

Test Date	: 2020-05-19
Temp./Humi.	:24.3/57
Antenna Pol.	:HORIZONTAL
Engineer	:Enzo



Freq.	EIRP/ERP	SG Output Level	Antenna Gain	Cable Loss	Limit	Margin
MHz	dBm	dBm	dBi/dBd	dB	dBm	dB
65.89	-53.34	-39.04	-13.30	-1.00	-40.00	-13.34
118.27	-47.02	-38.49	-7.08	-1.45	-40.00	-7.02
159.01	-58.50	-49.81	-7.01	-1.68	-40.00	-18.50
253.10	-64.00	-60.22	-1.54	-2.24	-40.00	-24.00
887.48	-65.38	-59.27	-1.42	-4.69	-40.00	-25.38
983.51	-64.46	-58.07	-1.48	-4.91	-40.00	-24.46
3440.00	-41.72	-43.15	12.62	-11.19	-40.00	-1.72

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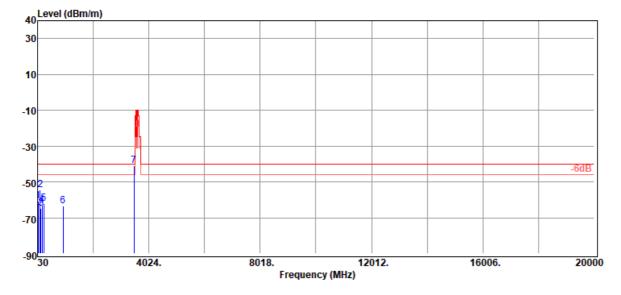
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Report Number	:E2/2019/A0033
Operation Mode	:L48A + n66a
Test Mode	:TX CH MID
EUT Pol	:E2 Plan
Test Frequency	:1745 MHz

Test Date	: 2020-05-19
Temp./Humi.	:24.2/57
Antenna Pol.	:VERTICAL
Engineer	:Enzo



Freq.	EIRP/ERP	SG Output Level	Antenna Gain	Cable Loss	Limit	Margin
MHz	dBm	dBm	dBi/dBd	dB	dBm	dB
56.19	-60.96	-43.76	-16.25	-0.95	-40.00	-20.96
119.24	-54.24	-45.75	-7.04	-1.45	-40.00	-14.24
155.13	-64.88	-55.99	-7.21	-1.68	-40.00	-24.88
201.69	-63.02	-58.89	-2.05	-2.08	-40.00	-23.02
253.10	-62.05	-58.27	-1.54	-2.24	-40.00	-22.05
944.71	-63.59	-57.16	-1.63	-4.80	-40.00	-23.59
3490.00	-41.06	-42.55	12.36	-10.87	-40.00	-1.06

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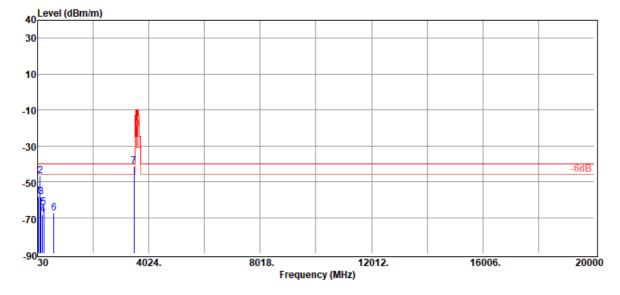
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Report Number	:E2/2019/A0033
Operation Mode	:L48A + n66a
Test Mode	:TX CH MID
EUT Pol	:E2 Plan
Test Frequency	:1745 MHz

: 2020-05-19
:24.2/57
:HORIZONTAL
:Enzo



Freq.	EIRP/ERP	SG Output Level	Antenna Gain	Cable Loss	Limit	Margin
MHz	dBm	dBm	dBi/dBd	dB	dBm	dB
56.19	-58.22	-41.02	-16.25	-0.95	-40.00	-18.22
118.27	-47.02	-38.49	-7.08	-1.45	-40.00	-7.02
154.16	-58.60	-49.72	-7.20	-1.68	-40.00	-18.60
206.54	-68.26	-64.37	-1.81	-2.08	-40.00	-28.26
250.19	-64.26	-60.45	-1.58	-2.23	-40.00	-24.26
619.76	-67.38	-62.21	-1.59	-3.58	-40.00	-27.38
3490.00	-41.27	-42.76	12.36	-10.87	-40.00	-1.27

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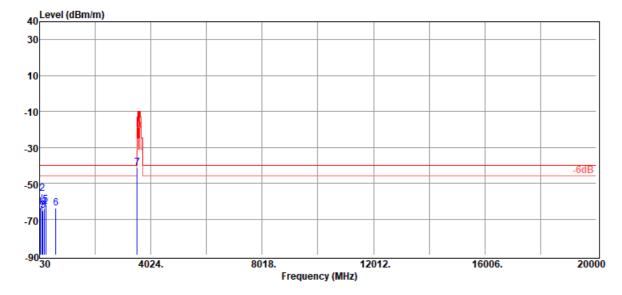
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Report Number	:E2/2019/A0033
Operation Mode	:L48A + n66a
Test Mode	:TX CH HIGH
EUT Pol	:E2 Plan
Test Frequency	:1770 MHz

:2020-05-19
:24.3/58
:VERTICAL
:Ashton



Freq.	EIRP/ERP	SG Output Level	Antenna Gain	Cable Loss	Limit	Margin
MHz	dBm	dBm	dBi/dBd	dB	dBm	dB
48.43	-63.28	-44.53	-17.89	-0.86	-40.00	-23.28
118.27	-55.85	-47.32	-7.08	-1.45	-40.00	-15.85
159.01	-65.35	-56.66	-7.01	-1.68	-40.00	-25.35
204.60	-63.83	-59.83	-1.92	-2.08	-40.00	-23.83
252.13	-62.26	-58.47	-1.55	-2.24	-40.00	-22.26
614.91	-64.13	-58.69	-1.66	-3.78	-40.00	-24.13
3540.00	-41.26	-42.57	12.30	-10.99	-40.00	-1.26

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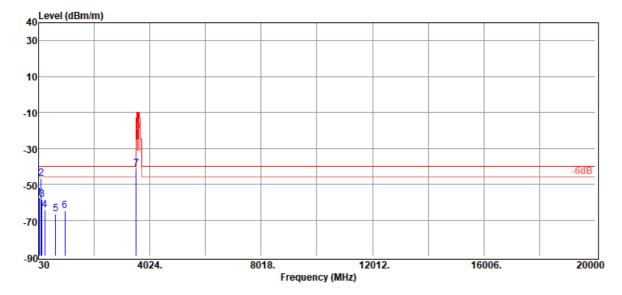
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Report Number	:E2/2019/A0033
Operation Mode	:L48A + n66a
Test Mode	:TX CH HIGH
EUT Pol	:E2 Plan
Test Frequency	:1770 MHz

Test Date	: 2020-05-19
Temp./Humi.	:24.3/58
Antenna Pol.	:HORIZONTAL
Engineer	:Ashton



Freq.	EIRP/ERP	SG Output Level	Antenna Gain	Cable Loss	Limit	Margin
MHz	dBm	dBm	dBi/dBd	dB	dBm	dB
57.16	-57.65	-40.63	-16.06	-0.96	-40.00	-17.65
118.27	-46.98	-38.45	-7.08	-1.45	-40.00	-6.98
151.25	-58.55	-49.52	-7.35	-1.68	-40.00	-18.55
253.10	-64.17	-60.39	-1.54	-2.24	-40.00	-24.17
649.83	-66.71	-61.63	-1.28	-3.80	-40.00	-26.71
981.57	-64.67	-58.26	-1.50	-4.91	-40.00	-24.67
3540.00	-41.37	-42.68	12.30	-10.99	-40.00	-1.37

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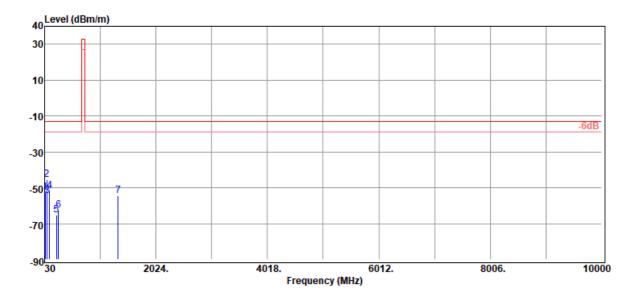
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## Radiated Spurious Emission Measurement Result: DC_66A_n71A

Report Number	:E2/2019/A0033	Test Date	:2020-02-27
Operation Mode	:L66A + n71A	Temp./Humi.	:22.0/65
Test Mode	:TX CH LOW	Antenna Pol.	:VERTICAL
EUT Pol	:E2 Plan	Engineer	:Ashton
Test Frequency	:673 MHz		



Freq.	EIRP/ERP	SG Output Level	Antenna Gain	Cable Loss	Limit	Margin
MHz	dBm	dBm	dBi/dBd	dB	dBm	dB
40.67	-52.87	-32.99	-19.02	-0.86	-13.00	-39.87
66.86	-45.64	-31.59	-13.05	-1.00	-13.00	-32.64
76.56	-54.62	-44.03	-9.49	-1.10	-13.00	-41.62
117.30	-51.56	-43.02	-7.09	-1.45	-13.00	-38.56
240.49	-65.11	-61.05	-1.83	-2.23	-13.00	-52.11
280.26	-62.67	-58.56	-1.70	-2.41	-13.00	-49.67
1346.00	-54.43	-54.65	6.52	-6.30	-13.00	-41.43

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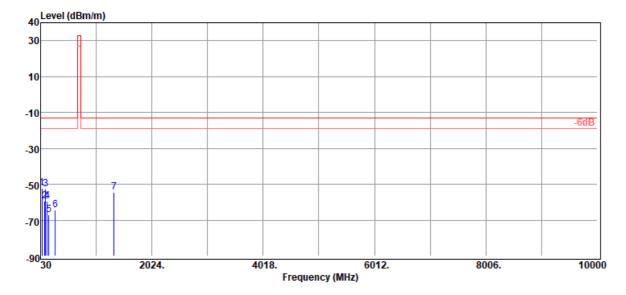
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f (886-2) 2298-0488



Report Number	:E2/2019/A0033
Operation Mode	:L66A + n71A
Test Mode	:TX CH LOW
EUT Pol	:E2 Plan
Test Frequency	:673 MHz

Test Date	:2020-02-27
Temp./Humi.	:22.0/65
Antenna Pol.	:HORIZONTAL
Engineer	:Ashton



Freq.	EIRP/ERP	SG Output Level	Antenna Gain	Cable Loss	Limit	Margin
MHz	dBm	dBm	dBi/dBd	dB	dBm	dB
58.13	-52.30	-35.59	-15.74	-0.97	-13.00	-39.30
105.66	-59.40	-51.17	-6.83	-1.40	-13.00	-46.40
117.30	-52.87	-44.33	-7.09	-1.45	-13.00	-39.87
148.34	-59.28	-50.09	-7.51	-1.68	-13.00	-46.28
179.38	-67.04	-60.78	-4.52	-1.74	-13.00	-54.04
289.96	-64.38	-60.18	-1.69	-2.51	-13.00	-51.38
1346.00	-54.52	-54.74	6.52	-6.30	-13.00	-41.52

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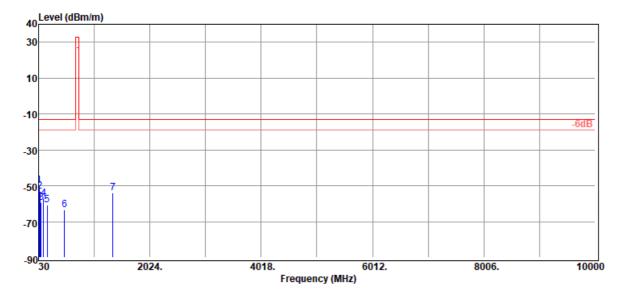
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:E2/2019/A0033
:L66A + n71A
:TX CH MID
:E2 Plan
:680.5 MHz

Test Date	:2020-02-27
Temp./Humi.	:22.0/65
Antenna Pol.	:VERTICAL
Engineer	:Ashton



Freq.	EIRP/ERP	SG Output Level	Antenna Gain	Cable Loss	Limit	Margin
MHz	dBm	dBm	dBi/dBd	dB	dBm	dB
38.73	-49.97	-29.89	-19.25	-0.83	-13.00	-36.97
58.13	-53.18	-36.47	-15.74	-0.97	-13.00	-40.18
78.50	-59.22	-49.24	-8.84	-1.14	-13.00	-46.22
117.30	-57.38	-48.84	-7.09	-1.45	-13.00	-44.38
186.17	-60.56	-55.32	-3.42	-1.82	-13.00	-47.56
492.69	-63.54	-59.00	-1.05	-3.49	-13.00	-50.54
1361.00	-54.13	-54.38	6.61	-6.36	-13.00	-41.13

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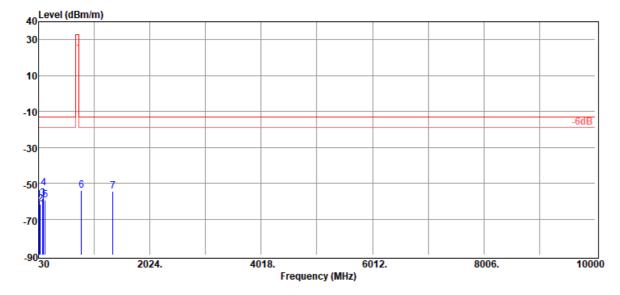
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Report Number	:E2/2019/A0033
Operation Mode	:L66A + n71A
Test Mode	:TX CH MID
EUT Pol	:E2 Plan
Test Frequency	:680.5 MHz

Test Date	:2020-02-27
Temp./Humi.	:22.0/65
Antenna Pol.	:HORIZONTAL
Engineer	:Ashton



Freq.	EIRP/ERP	SG Output Level	Antenna Gain	Cable Loss	Limit	Margin
MHz	dBm	dBm	dBi/dBd	dB	dBm	dB
00 <b>7</b> 0	50.00		40.05		10.00	10.00
38.73	-59.38	-39.30	-19.25	-0.83	-13.00	-46.38
64.92	-61.58	-46.87	-13.71	-1.00	-13.00	-48.58
105.66	-58.74	-50.51	-6.83	-1.40	-13.00	-45.74
117.30	-52.59	-44.05	-7.09	-1.45	-13.00	-39.59
149.31	-59.39	-50.25	-7.46	-1.68	-13.00	-46.39
798.24	-53.82	-47.90	-1.63	-4.29	-13.00	-40.82
1361.00	-54.43	-54.68	6.61	-6.36	-13.00	-41.43

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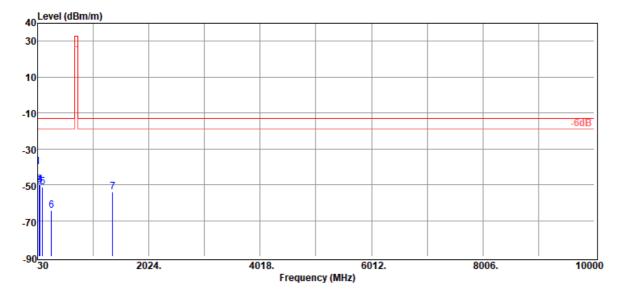
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Report Number	:E2/2019/A0033
Operation Mode	:L66A + n71A
Test Mode	:TX CH HIGH
EUT Pol	:E2 Plan
Test Frequency	:688 MHz

Test Date:2020-02-27Temp./Humi.:22.0/64Antenna Pol.:VERTICALEngineer:Ashton



Freq.	EIRP/ERP	SG Output Level	Antenna Gain	Cable Loss	Limit	Margin
MHz	dBm	dBm	dBi/dBd	dB	dBm	dB
36.79	-39.98	-19.77	-19.43	-0.78	-13.00	-26.98
57.16	-49.86	-32.84	-16.06	-0.96	-13.00	-36.86
62.98	-50.91	-35.65	-14.26	-1.00	-13.00	-37.91
77.53	-49.79	-39.52	-9.15	-1.12	-13.00	-36.79
118.27	-51.32	-42.79	-7.08	-1.45	-13.00	-38.32
279.29	-64.32	-60.23	-1.69	-2.40	-13.00	-51.32
1376.00	-54.12	-54.46	6.76	-6.42	-13.00	-41.12

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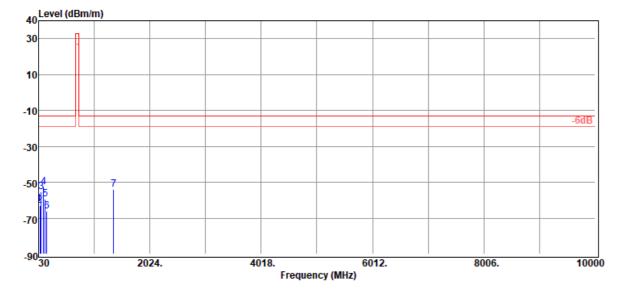
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Report Number	:E2/2019/A0033
Operation Mode	:L66A + n71A
Test Mode	:TX CH HIGH
EUT Pol	:E2 Plan
Test Frequency	:688 MHz

Test Date	:2020-02-27
Temp./Humi.	:22.0/64
Antenna Pol.	:HORIZONTAL
Engineer	:Ashton



Freq.	EIRP/ERP	SG Output Level	Antenna Gain	Cable Loss	Limit	Margin
MHz	dBm	dBm	dBi/dBd	dB	dBm	dB
33.88	-61.93	-41.38	-19.84	-0.71	-13.00	-48.93
55.22	-62.96	-45.55	-16.48	-0.93	-13.00	-49.96
73.65	-55.44	-43.88	-10.50	-1.06	-13.00	-42.44
119.24	-52.75	-44.26	-7.04	-1.45	-13.00	-39.75
148.34	-59.57	-50.38	-7.51	-1.68	-13.00	-46.57
177.44	-66.10	-59.49	-4.87	-1.74	-13.00	-53.10
1376.00	-54.10	-54.44	6.76	-6.42	-13.00	-41.10

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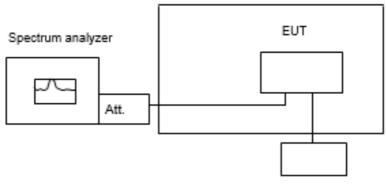
# 10 FREQUENCY STABILITY MEASUREMENT

# 10.1 Standard Applicabl

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

# 10.2 Test Set-up

Temperature Chamber



Variable DC Power Supply

# **10.3 Measurement Procedure**

The equipment under test was connected to an external AC or DC power supply and input rated voltage. RF output was connected to a frequency counter or spectrum analyzer via feed through attenuators. The EUT was placed inside the temperature chamber. Set the spectrum analyzer RBW low enough to obtain the desired frequency resolution and measure EUT 25°C operating frequency as reference frequency. Turn EUT off and set the chamber temperature to -30°C. After the temperature stabilized for approximately 30 minutes recorded the frequency. Repeat step measure with 10°C increased per stage until the highest temperature of +50°C reached.

Set chamber temperature to  $25^{\circ}$ C. Use a variable AC power supply / DC power source to power the EUT and set the voltage to rated voltage. Set the spectrum analyzer RBW low enough to obtain the desired frequency resolution and recorded the frequency.

Reduce the input voltage to specify extreme voltage variation (+/- 15%) and endpoint as declared by the manufacturer, record the maximum frequency change.

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Note: Measurement setup for testing on Antenna connector



# 10.4 Measurement Equipment Used

Conducted Emission (measured at antenna port) Test Site					
EQUIPMENT TYPE	MFR	MODEL NUMBER	SERIAL NUMBER	LAST CAL.	CAL DUE.
Spectrum Analyzer	KEYSIGHT	N9010A	MY51440113	07/15/2019	07/14/2020
UXM 5G Wireless Test Platform	KEYSIGHT	E7515B	MY59321566	12/17/2019	12/16/2020
DC Block	PASTERNACK	PE8210	RF32	11/20/2019	11/19/2020
Splitter	Woken	DOM35LW1 A2	RF83	11/20/2019	11/19/2020
Splitter	Woken	DOM35LW1 E1	RF01	11/20/2019	11/19/2020
Coaxial Cables	Woken	00100A1F1A 185C	RF229	11/20/2019	11/19/2020
Coaxial Cables	Woken	00100A1F1A 185C	RF230	11/20/2019	11/19/2020
Coaxial Cables	Woken	00100A1F1A 185C	RF231	11/20/2019	11/19/2020

# 10.5 Measurement Result

Reference Freq.:		0M CH 376000 hannel	1880	MHz DFT-S-OFDM 64QAM
Power Supply Vdc	Temp. (°C)	Freq. (MHz)	Delta (Hz)	Limit = +/- 2.5 ppm (Hz)
	Fr	req. ERROR vs. V	/OLTAGE	
3.465	25	1880.000021	21	2091
3.3	25	1880.000024	24	2091
3.135	25	1880.000019	19	2091
2.9 (End Point)	25	1880.000017	17	2091
		Freq. ERROR vs	. Temp.	
3.3	-30	1879.999985	-15	2091
3.3	-20	1879.999981	-19	2091
3.3	-10	1879.999979	-21	2091
3.3	0	1879.999983	-17	2091
3.3	10	1880.000015	15	2091
3.3	20	1879.999982	-18	2091
3.3	30	1879.999981	-19	2091
3.3	40	1879.999988	-12	2091
3.3	50	1879.999984	-16	2091

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Reference Freq.:		0M CH 167300 hannel	836.5	MHz DFT-S-OFDM 16QAM
Power Supply Vdc	Temp. (°C)		Delta (Hz)	Limit = +/- 2.5 ppm (Hz)
		eq. ERROR vs. V		Linit - 1/- 2.3 ppin (112)
3.465	25	836.500011	11	6488
3.3	25	836.500025	25	6488
3.135	25	836.500015	15	6488
2.9				
(End Point)	25	836.500021	21	6488
		Freq. ERROR vs.	. Temp.	
3.3	-30	836.499985	-15	6488
3.3	-20	836.499981	-19	6488
3.3	-10	836.499979	-21	6488
3.3	0	836.499983	-17	6488
3.3	10	836.500015	15	6488
3.3	20	836.499980	-20	6488
3.3	30	836.499975	-25	6488
3.3	40	836.499985	-15	6488
3.3	50	836.500017	17	6488
Reference Freq.:	n41A Mid	100M CH 51859	¹⁸ 2592	.99 MHz CP-OFDM 16QAM
Relefence Fleq		Channel	2092	
Power Supply Vdc	Temp. (°C)	Freq. (MHz)	Delta	(Hz) Limit = +/- 2.5 ppm (Hz)
	Fre	eq. ERROR vs. V	/OLTAGE	
3.465	25	2592.990020	) 20	6338
3.3	25	2592.99001	7 17	6338
3.135	25	2592.99001	9 19	6338
2.9	05	2502.00001	1 11	6229
(End Point)	25	2592.99001	1 11	6338
		Freq. ERROR vs	. Temp.	
3.3	-30	2592.99001	7 17	6338
3.3	-20	2592.98998	5 -15	6338
3.3	-10	2592.98998	9 -11	6338
3.3	0	2592.98997	<u>-24</u>	6338
3.3	10	2592.99001	1 11	6338
3.3	20	2592.98997	<u>-24</u>	6338
3.3	30	2592.98998	1 -19	6338
3.3	40	2592.989983	3 -17	6338
3.3	50	2592.989980	) -20	) 6338

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Reference Freq.:		0M CH 349000 nannel	1645	MHz DFT-S-OFDM Pi/2 BPSK	(
Power Supply Vdc	Temp. (°C)	Freq. (MHz)	Delta (Hz)	Limit = +/- 2.5 ppm (Hz)	
		eq. ERROR vs. V			
3.465	25	1644.740021	21	6488	
3.3	25	1644.740014	14	6488	
3.135	25	1644.740019	19	6488	
2.9	25	1644.740021	21	6488	
(End Point)					
		Freq. ERROR vs.			
3.3	-30	1644.739981	-19	6488	
3.3	-20	1644.739976	-24	6488	
3.3	-10	1644.739979	-21	6488	
3.3	0	1644.739980	-20	6488	
3.3	10	1644.740011	11	6488	
3.3	20	1644.739981	-19	6488	
3.3	30	1644.739983	-17	6488	
3.3	40	1644.739982	-18	6488	
3.3	50	1644.740013	13	6488	
Reference Freq.:		20M CH 13610	D 680	5 MHz CP-OFDM 64QAM	
		Channel	-		
Power Supply Vdc	Temp. (°C)			(Hz) Limit = +/- 2.5 ppm (Hz)	
		eq. ERROR vs. V			
3.465	25	680.500011		6488	
3.3	25	680.500015	15	6488	
3.135	25	680.500011	11	6488	
2.9	25	680.500008	8	6488	
(End Point)				0.00	
		req. ERROR vs			
3.3	-30	680.499984	-16		
3.3	-20	680.499989	-11	6488	
3.3	-10	680.499992	-8	6488	
3.3	0	680.50008	8	6488	
3.3	10	680.500009	9	6488	
3.3	20	680.500011	11	6488	
3.3	30	680.500015	15	6488	
3.3	40	680.500014			
3.3	50	680.500011		6488	

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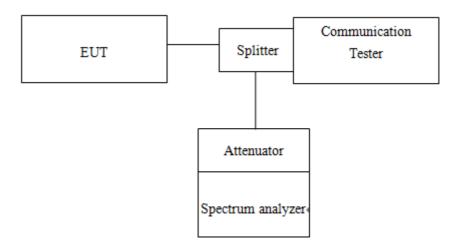


# 11 PEAK TO AVERAGE RATIO

# 11.1 Standard Applicable

The peak-to-average ratio (PAR) of the transmission may not exceed 13dB.

# 11.2 Test SET-UP



# 11.3 Measurement Procedure

- 1. KDB 971168 D01 is employed as the following procedure is proper adjusted accordingly:
- 2. Set resolution/measurement bandwidth ≥ signal's occupied bandwidth; & internal =1ms
- 3. Set the number of counts to a value that stabilizes the measured CCDF curve.

### **11.4 Measurement Equipment Used**

Conducted Emission (measured at antenna port) Test Site					
EQUIPMENT TYPE	MFR	MODEL NUMBER	SERIAL NUMBER	LAST CAL.	CAL DUE.
Spectrum Analyzer	KEYSIGHT	N9010A	MY51440113	07/15/2019	07/14/2020
UXM 5G Wireless Test Platform	KEYSIGHT	E7515B	MY59321566	12/17/2019	12/16/2020
DC Block	PASTERNACK	PE8210	RF32	11/20/2019	11/19/2020
Splitter	Woken	DOM35LW1 A2	RF83	11/20/2019	11/19/2020
Splitter	Woken	DOM35LW1 E1	RF01	11/20/2019	11/19/2020
Coaxial Cables	Woken	00100A1F1A 185C	RF229	11/20/2019	11/19/2020
Coaxial Cables	Woken	00100A1F1A 185C	RF230	11/20/2019	11/19/2020
Coaxial Cables	Woken	00100A1F1A 185C	RF231	11/20/2019	11/19/2020

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### 11.5 Measurement Result

n2A (DFT-s	s-OFDM)	Freq.	PAPR	
Band width	Channel	(MHz)	256QAM	EIRP
20 MHz	372000	1860	7.44	13
20 MHz	376000	1880	7.84	13
20 MHz	380000	1900	7.60	13
n5A (DFT-s	s-OFDM)	Freq.	PAP	<b>P</b> R
Band width	Channel	(MHz)	256QAM	Limit
20 MHz	166800	834	7.51	13
20 MHz	167300	836.5	7.08	13
20 MHz	167800	839	7.68	13
n41A (CP	-OFDM)	Freq.	PAP	<b>P</b> R
Band width	Channel	(MHz)	256QAM	Limit
100 MHz	509202	2546	11.57	13
100 MHz	518598	2593	12.65	13
100 MHz	528000	2640	12.79	13
n66A (DFT-	s-OFDM)	Freq.	PAF	<b>P</b> R
Band width	Channel	(MHz)	256QAM	Limit
20 MHz	344000	1710.5	7.82	13
20 MHz	349000	1644.7	7.31	13
20 MHz	354000	1759.4	6.93	13
n71A (CP	-OFDM)	Freq.	PAF	<b>P</b> R
Band width	Channel	(MHz)	256QAM	Limit
20 MHz	134600	673	8.39	13
20 MHz	136100	680.5	8.72	13
20 MHz	137600	688	8.17	13

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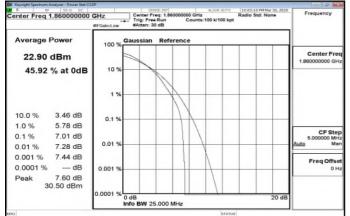
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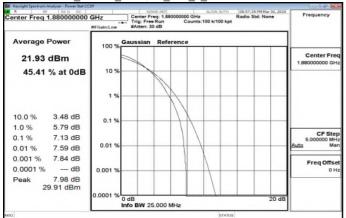
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### Band2_20MHz_256QAM_100_0_LowCH372000-1860



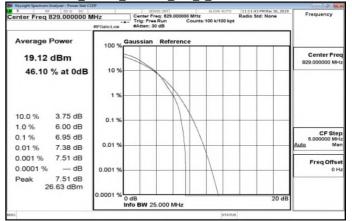


### Band2_20MHz_256QAM_100_0_MidCH376000-1880

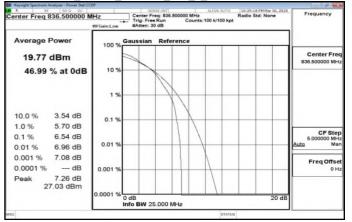
### Band2_20MHz_256QAM_100_0_HighCH380000-1900

enter Freq 1.900000000 (		o Std: None Frequency
Average Power	100 % Gaussian Reference	
23.17 dBm	10 %	Center Fred 1.900000000 GH
45.49 % at 0dB	1 %	
1.0 % 5.93 dB 0.1 % 7.19 dB	0.1 %	CF Step 5.00000 MH
0.01 % 7.51 dB 0.001 % 7.60 dB	0.01 %	Auto Ma Freq Offse
0.0001 % dB Peak 7.70 dB 30.87 dBm	0.001 %	0H
	0.0001 % 0 dB Info BW 25.000 MHz	20 dB

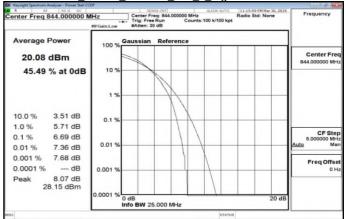
#### Band5 20MHz 256QAM 100 0 LowCH166800-829



### Band5_20MHz_256QAM_100_0_MidCH167300-836.5



### Band5_20MHz_256QAM_100_0_HighCH20600-844



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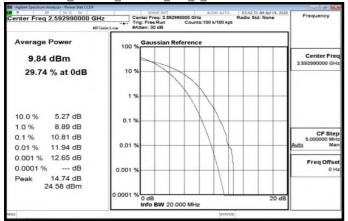
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### Band41_100MHz_256QAM_100_0_LowCH509202-2546.01

R SF 50.0 DC Center Freq 2.546010000 GHz	Sense:Init         ALinit Autority Autority         B2:32:11 AM Agr19, 2020           Center Freq: 2.546010000 GHz         Radio Std: None           +p-         Trig: Free Run         Counts:100 k/100 kpt           Hatten: 30 dB         Ratio         Ratio	Frequency
Average Power	100 % Gaussian Reference	
8.35 dBm		Center Fred
36.48 % at 0dB	10 %	
	1 %	
10.0 % 4.17 dB	0.1 %	
0.1 % 9.06 dB 0.01 % 10.56 dB	0.01 %	CF Step 5.000000 MH: Auto Mar
0.001 % 11.57 dB 0.0001 % dB	0.001 %	Freq Offse 0 Hi
Peak 13.75 dB 22.10 dBm	0.0001 % 0 dB 20.000 MHz 20 dB	

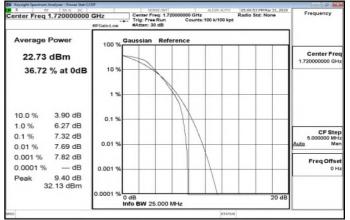
### Band41_100MHz_256QAM_100_0_MidCH518598-2592.99



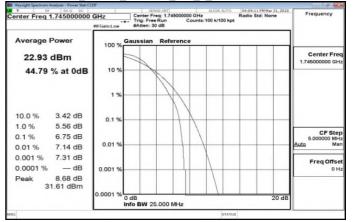
### Band41_100MHz_256QAM_100_0_HighCH528000-2640

Center Freq 2.640000000 GHz	Center Freq: 2.540000000 GHz Radio Std: None Freq: 2.540000000 GHz Radio Std: None Freq: Free Run Counts: 100 k/100 kpt Low #Atten: 30 dB	Frequency
Average Power	100 % Gaussian Reference	
5.70 dBm	10 %	Center Freq 2.64000000 GHz
29.19 % at 0dB	1%	
10.0 % 5.23 dB 1.0 % 9.13 dB	0.1 %	
0.1 % 11.07 dB 0.01 % 12.39 dB	0.01 %	CF Step 5.000000 MH: Auto Mar
0.001 % 12.79 dB 0.0001 % dB Peak 14.02 dB	0.001 %	Freq Offse 0 Hi
19.72 dBm	0.0001 % 0 dB 20 dB	

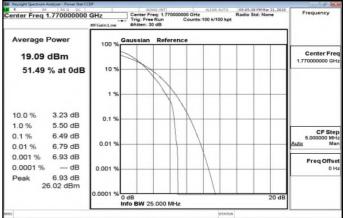
#### Band66_20MHz_256QAM_100_0_LowCH344000-1720



### Band66_20MHz_256QAM_100_0_MidCH349000-1745



### Band66_20MHz_256QAM_100_0_HighCH354000-1770



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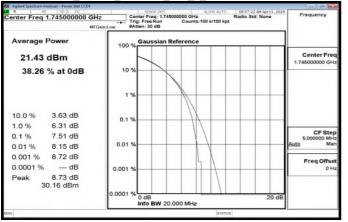
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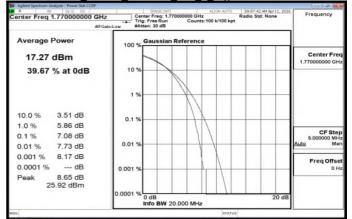
### Band71_20MHz_256QAM_100_0_LowCH134600-673

R & 50 0 DC Center Freq 673,000000 MHz #FGain:1.	Isense Junit         ALIGN AUTO         1994×12 AH Art11, 2020           Centar Freq: 673.000000 MHz         Radio Std: None           →→         Trig: Free Run         Counts:100 k/100 kpt           aw         #Atten: 30 dB	Frequency
Average Power	100 % Gaussian Reference	
21.45 dBm		Center Freq 673.000000 MHz
36.87 % at 0dB	10 %	
	1 %	
10.0 % 4.20 dB	0.1 %	
0.1 % 7.86 dB		CF Step 5.000000 MH;
0.01 % 8.24 dB 0.001 % 8.39 dB	0.01 %	Auto Man
0.0001 % dB	0.001 %	Freq Offset 0 Hz
Peak 8.49 dB 29.94 dBm		
	0.0001 % 0 dB 20 dB Info BW 20.000 MHz	

### Band71_20MHz_256QAM_100_0_MidCH136100-680.5



Band71 20MHz 256QAM 100 0 HighCH137600-688



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