FCC Test Report

Product Name	:	M2M DATA MODULE
Trade Name	:	WNC
Model No.	:	M18QM
FCC ID	:	NKRM18QM

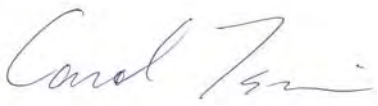
Applicant	:	Wistron Neweb Corporation
Address	:	20 Park Avenue II, Hsinchu Science Park, Hsinchu 308, Taiwan, R.O.C

Date of Receipt	:	Dec. 10, 2020
Issued Date	:	Jan. 18, 2021
Report No.	:	20C0388R-E3042110012
Report Version	:	V1.0

Test Report Certification

Issued Date : Jan. 18, 2021
Report No. : 20C0388R-E3042110012

Product Name	:	M2M DATA MODULE
Applicant	:	Wistron Neweb Corporation
Address	:	20 Park Avenue II, Hsinchu Science Park, Hsinchu 308, Taiwan, R.O.C
Manufacturer	:	Wistron Neweb Corporation
Address	:	20 Park Avenue II, Hsinchu Science Park, Hsinchu 308, Taiwan, R.O.C
Trade name	:	WNC
Model No.	:	M18QM
FCC ID	:	NKRM18QM
EUT Voltage	:	DC 3.8V
Testing Voltage	:	DC 3.8V
Applicable Standard	:	FCC CFR Title 47 Part 22 Subpart H FCC CFR Title 47 Part 24 Subpart E FCC CFR Title 47 Part 27 Subpart L, Subpart F ANSI/TIA-603-E-2016
Test Lab	:	Hsin Chu Laboratory
Address	:	No.372-2, Sec. 4, Zhongxing Rd., Zhudong Township, Hsinchu County 310, Taiwan, R.O.C. TEL: +886-3-582-8001 / FAX: +886-3-582-8958
Test Result	:	Complied

Documented By : 

(Carol Tsai / Senior Engineering Adm. Specialist)

Tested By : 

(Max Chang / Senior Engineer)

Approved By : 

(Louis Hsu / Deputy Manager)

Revision History

Version	Description	Issued Date
V1.0	Initial issue of report	Jan. 18, 2021

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1. General Information

1.1. EUT Description

Product Name	M2M DATA MODULE
Trade Name	WNC
Model No.	M18QM
Uplink Frequency Range (MHz)	Band 2: 1850~1910 Band 4: 1710~1755 Band 5: 824~849 Band 12: 699~716 Band 66: 1710~1780 Band 71: 663~698
Downlink Frequency Range (MHz)	Band 2: 1930~1990 Band 4: 2110~2155 Band 5: 869~894 Band 12: 729~746 Band 66: 2110~2200 Band 71: 617~652
Modulation	QPSK / 16QAM
HW Version	1.0
SW Version	MPSS: M18QM_v16.06 APSS: M18QM_05.10 
IMEI No.	015792000000187 

Antenna Information	
MFR. / Model	Wieson / GY115HT0330-041
Antenna Type	Omni directional Antenna
Antenna Gain	Band 2: 1.56dBi Band 4: 1.62dBi Band 5: 3.2dBi Band 12: 1.49dBi Band 66: 1.62dBi Band 71: 1.37dBi

Note:
1. This M2M DATA MODULE supports LTE Band 2/4/5/12/66/71 and GNSS functions
2. Regards to the frequency band operation: the lowest, middle and highest frequency of channel were selected to perform the test, then shown on this report.
3. The EUT description is from the customer declaration.

1.2. Mode of Operation

DEKRA has verified the construction and function in typical operation. All the test modes were carried out with the EUT in normal operation, which was shown in this test report and defined as:

Test Mode
Mode 1: LTE Band 2
Mode 2: LTE Band 5
Mode 3: LTE Band 12
Mode 4: LTE Band 4/66
Mode 5: LTE Band 71

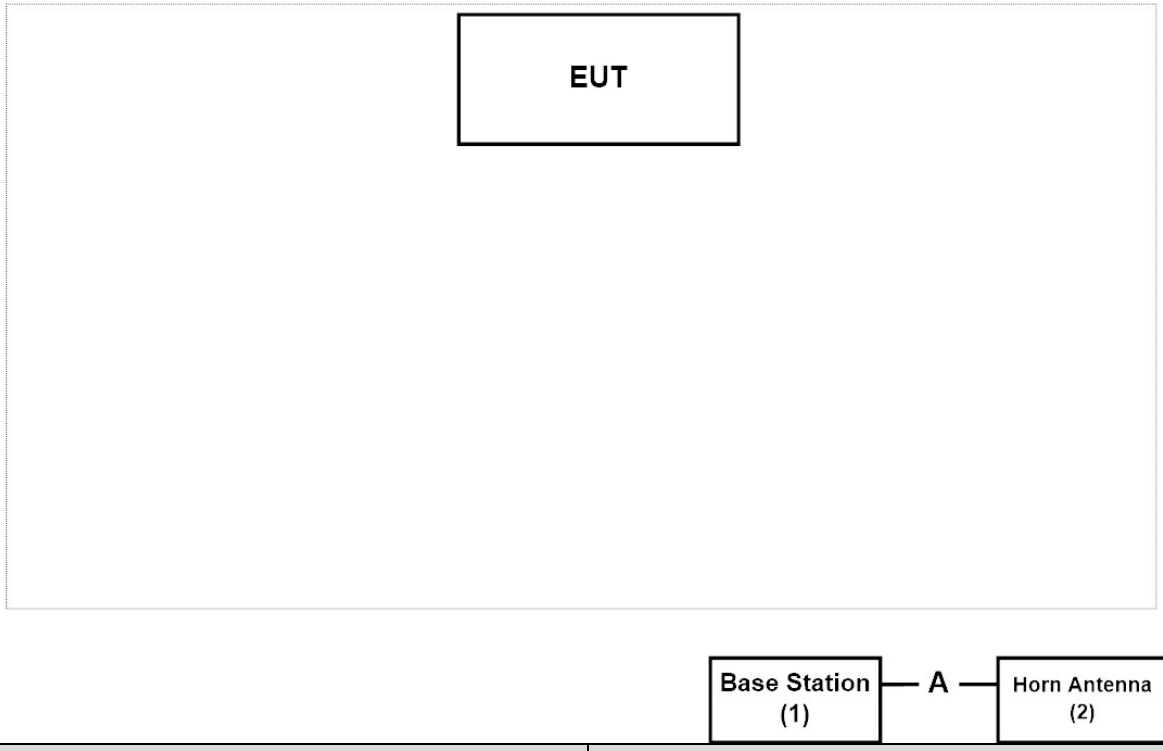
1.3. Tested System Details

The types for all equipment, plus descriptions of all cables used in the tested system (including inserted cards) are:

Product		Manufacturer	Model No.	Serial No.	FCC ID	Power Cord
1	Base Station	R&S	CMW500	157118	DoC	Non-Shielded, 1.8m
2	Horn Antenna	Schwarzbeck	BBHA 9120D	1640	DoC	--

1.4. Configuration of Tested System

Connection Diagram



Signal Cable Type		Signal cable Description
A	RF Cable	Shielded, 6m

1.5. EUT Exercise Software

1	Setup the EUT and simulators as shown on 1.4.
2	Turn on the power of all equipment.
3	The EUT will continue transmit the signal from LTE function.
4	Repeat the above procedure.

1.6. Comments and Remarks

The product specification and testing instructions for the EUT declared in the report are provided by the manufacturer who will take all responsibilities for the accuracy.

2. Technical Test

2.1. Summary of Test Result

☒ No deviations from the test standards

☐ Deviations from the test standards as below description:

Note: Determining compliance shall be based on the results of the compliance measurement, not taking into account measurement instrumentation uncertainty.

B2

Uplink: 1850-1910MHz

Downlink: 1930-1990MHz

LTE B2			
FCC Part 24 Subpart E			
Test item	Reference section	Limit	Result
RF Output Power	§2.1033 §2.1046 §24.232	< 2 Watts	Pass
Occupied Bandwidth	§2.1049	N/A	Pass
Peak-to-average power ratio	§24.232	< 13 dB	Pass
Spurious Emissions	§2.1053 §24.238	< -13dBm	Pass
Spurious Emissions at Antenna Terminals	§27.238	< -13dBm	Pass
Frequency Stability	§2.1055 §24.235	< ±2.5 ppm	Pass

Note: Determining compliance shall be based on the results of the compliance measurement, not taking into account measurement instrumentation uncertainty.

B4

Uplink: 1710-1755MHz

Downlink: 2110-2155MHz

LTE B4			
FCC Part 27 Subpart L			
Test item	Reference section	Limit	Result
RF Output Power	§2.1033 §2.1046 §27.50	< 1 Watt	Pass
Occupied Bandwidth	§2.1049	N/A	Pass
Peak-to-average power ratio	§27.50	< 13 dB	Pass
Spurious Emissions	§2.1053 §27.53	< -13dBm	Pass
Spurious Emissions at Antenna Terminals	§27.53	< -13dBm	Pass
Frequency Stability	§2.1055 §27.54	< 2.5 ppm	Pass

Note: Determining compliance shall be based on the results of the compliance measurement, not taking into account measurement instrumentation uncertainty.

B5

Uplink: 824-849MHz

Downlink: 869-894MHz

LTE B5			
FCC Part 22 Subpart H			
Test item	Reference section	Limit	Result
RF Output Power	§2.1033 §2.1046 §22.913	<7 Watts	Pass
Occupied Bandwidth	§2.1049	N/A	Pass
Peak-to-average power ratio	§22.913	<13 dB	Pass
Spurious Emissions	§2.1053 §22.917	<-13dBm	Pass
Spurious Emissions at Antenna Terminals	§22.917	<-13dBm	Pass
Frequency Stability	§2.1055 §22.335	<±2.5 ppm	Pass

Note: Determining compliance shall be based on the results of the compliance measurement, not taking into account measurement instrumentation uncertainty.

B12

Uplink: 699-716MHz

Downlink: 729-746MHz

LTE B12			
FCC Part 27 Subpart F			
Test item	Reference section	Limit	Result
RF Output Power	§2.1033 §2.1046 §27.50	<3 Watts ERP	Pass
Occupied Bandwidth	§2.1049	N/A	Pass
Peak-to-average power ratio	§27.50	<13 dB	Pass
Spurious Emissions	§2.1053 §27.53	<-13dBm	Pass
Spurious Emissions at Antenna Terminals	§27.53	<-13dBm	Pass
Frequency Stability	§2.1055 §27.54	<±2.5 ppm	Pass

Note: Determining compliance shall be based on the results of the compliance measurement, not taking into account measurement instrumentation uncertainty.

B66

Uplink: 1710~1780MHz

Downlink: 2110~2200MHz

LTE B66			
FCC Part 27 Subpart L			
Test item	Reference section	Limit	Result
RF Output Power	§2.1033 §2.1046 §27.50	<1 Watts	Pass
Occupied Bandwidth	§2.1049	N/A	Pass
Peak-to-average power ratio	§27.50	<13 dB	Pass
Spurious Emissions	§2.1053 §27.53	<-13dBm	Pass
Spurious Emissions at Antenna Terminals	§27.53	<-13dBm	Pass
Frequency Stability	§2.1055 §27.54	<2.5 ppm	Pass

Determining compliance shall be based on the results of the compliance measurement, not taking into account measurement instrumentation uncertainty.

B71

Uplink: 663~698MHz

Downlink: 617~652MHz

LTE B71			
FCC Part 27 Subpart F			
Test item	Reference section	Limit	Result
RF Output Power	§2.1033 §2.1046 §27.50	<3 Watts	Pass
Occupied Bandwidth	§2.1049	N/A	Pass
Peak-to-average power ratio	§27.50	<13 dB	Pass
Spurious Emissions	§2.1053 §27.53	<-13dBm	Pass
Spurious Emissions at Antenna Terminals	§27.53	<-13dBm	Pass
Frequency Stability	§2.1055 §27.54	<2.5 ppm	Pass

Determining compliance shall be based on the results of the compliance measurement, not taking into account measurement instrumentation uncertainty.

2.2. Test Environment

Items	Required	Test Site
Temperature (°C)	15-35	1
Humidity (%RH)	25-75	

Note: Test site information refers to Laboratory Information.

Laboratory Information

USA	**:**	**FCC Registration Number: TW3024**
Canada	**:**	**IC Registration Number: 22397-1 / 22397-2 / 22397-3**

The address and introduction of DEKRA Testing and Certification Co., Ltd. laboratories can be founded in our Web site: http://www.dekra.com.tw

If you have any comments, please don't hesitate to contact us. Our test sites as below:

Test Laboratory	DEKRA Testing and Certification Co., Ltd.
Address	1. No.372, Sec. 4, Zhongxing Rd., Zhudong Township, Hsinchu County 31061, Taiwan, R.O.C. 2. No.372-2, Sec. 4, Zhongxing Rd., Zhudong Township, Hsinchu County 31061, Taiwan, R.O.C.
Phone number	1. +886-3-582-8001 2. +886-3-582-8001
Fax number	1. +886-3-582-8958 2. +886-3-582-8958
Email address	info.tw@dekra.com
Website	http://www.dekra.com.tw

2.3. List of Test Equipment

RF Output Power / SR12-H

Instrument	Manufacturer	Model No.	Serial No.	Cal. Date	Next Cal. Date
Signal & Spectrum Analyzer	R&S	FSV40	101049	2020/03/30	2021/03/29
EXA Signal Analyzer	Keysight	N9010A	MY51440132	2020/02/21	2021/02/20
Spectrum Analyzer	Keysight	N9030B	MY57140404	2020/06/03	2021/06/02
Spectrum Analyzer	Keysight	N9010B	MY57110159	2020/04/15	2021/04/14
Wireless Conn. Tseter	R&S	CMW500	157118	2020/07/23	2021/07/22
Wideband Radio Communication Tester	R&S	CMW500	106071	2020/02/03	2021/02/02

Occupied Bandwidth / SR12-H

Instrument	Manufacturer	Model No.	Serial No.	Cal. Date	Next Cal. Date
Signal & Spectrum Analyzer	R&S	FSV40	101049	2020/03/30	2021/03/29
EXA Signal Analyzer	Keysight	N9010A	MY51440132	2020/02/21	2021/02/20
Spectrum Analyzer	Keysight	N9030B	MY57140404	2020/06/03	2021/06/02
Spectrum Analyzer	Keysight	N9010B	MY57110159	2020/04/15	2021/04/14
Wireless Conn. Tseter	R&S	CMW500	157118	2020/07/23	2021/07/22
Wideband Radio Communication Tester	R&S	CMW500	106071	2020/02/03	2021/02/02

Peak To Average Ratio / SR12-H

Instrument	Manufacturer	Model No.	Serial No.	Cal. Date	Next Cal. Date
Signal & Spectrum Analyzer	R&S	FSV40	101049	2020/03/30	2021/03/29
EXA Signal Analyzer	Keysight	N9010A	MY51440132	2020/02/21	2021/02/20
Spectrum Analyzer	Keysight	N9030B	MY57140404	2020/06/03	2021/06/02
Spectrum Analyzer	Keysight	N9010B	MY57110159	2020/04/15	2021/04/14
Wireless Conn. Tseter	R&S	CMW500	157118	2020/07/23	2021/07/22
Wideband Radio Communication Tester	R&S	CMW500	106071	2020/02/03	2021/02/02

Conducted Spurious Emissions / SR12-H

Instrument	Manufacturer	Model No.	Serial No.	Cal. Date	Next Cal. Date
Signal & Spectrum Analyzer	R&S	FSV40	101049	2020/03/30	2021/03/29
EXA Signal Analyzer	Keysight	N9010A	MY51440132	2020/02/21	2021/02/20
Spectrum Analyzer	Keysight	N9030B	MY57140404	2020/06/03	2021/06/02
Spectrum Analyzer	Keysight	N9010B	MY57110159	2020/04/15	2021/04/14
Wireless Conn. Tseter	R&S	CMW500	157118	2020/07/23	2021/07/22
Wideband Radio Communication Tester	R&S	CMW500	106071	2020/02/03	2021/02/02

Radiated Spurious Emissions / CB2-H

Instrument	Manufacturer	Model No.	Serial No.	Cal. Date	Next Cal. Date
Horn Antenna	Schwarzbeck	BBHA 9120D	639	2020/06/04	2021/06/03
Bilog Antenna	Teseq	CBL6112D	23191	2020/06/12	2021/06/11
Signal & Spectrum Analyzer	R&S	FSV40	101049	2020/03/30	2021/03/29
EXA Signal Analyzer	Keysight	N9010A	MY51440132	2020/02/21	2021/02/20
Signal Analyzer	R&S	FSVA40	101455	2020/10/12	2021/10/11
Horn Antenna	Schwarzbeck	BBHA 9170	202	2020/12/16	2021/12/15
Pre-Amplifier	DEKRA	AP-400C	201801231	2020/11/16	2021/11/15
Pre-Amplifier	EMCI	EMC11830I	980366	2020/11/30	2021/11/29
Horn Antenna	Schwarzbeck	BBHA 9120D	01656	2020/10/14	2021/10/13
Pre-Amplifier	DEKRA	AP-025C	12183122	2020/09/03	2021/09/02
Signal Analyzer	R&S	FSV40	101435	2020/06/24	2021/06/23
Wideband Radio Communication Tester	R&S	CMW500	106071	2020/02/03	2021/02/02
Wireless Conn. Tseter	R&S	CMW500	157118	2020/07/23	2021/07/22
Coaxial Cable(13m)	Huber+Suhner	SF104	CB2-H	2020/07/25	2021/07/24
DEKRA Testing System	DEKRA	Version 1.2	CB2-H	NA	NA

Spurious Emissions at Antenna Terminals / SR12-H

Instrument	Manufacturer	Model No.	Serial No.	Cal. Date	Next Cal. Date
Signal & Spectrum Analyzer	R&S	FSV40	101049	2020/03/30	2021/03/29
EXA Signal Analyzer	Keysight	N9010A	MY51440132	2020/02/21	2021/02/20
Spectrum Analyzer	Keysight	N9030B	MY57140404	2020/06/03	2021/06/02
Spectrum Analyzer	Keysight	N9010B	MY57110159	2020/04/15	2021/04/14
Wireless Conn. Tseter	R&S	CMW500	157118	2020/07/23	2021/07/22
Wideband Radio Communication Tester	R&S	CMW500	106071	2020/02/03	2021/02/02

Frequency Stability / SR12-H

Instrument	Manufacturer	Model No.	Serial No.	Cal. Date	Next Cal. Date
Signal & Spectrum Analyzer	R&S	FSV40	101049	2020/03/30	2021/03/29
EXA Signal Analyzer	Keysight	N9010A	MY51440132	2020/02/21	2021/02/20
Spectrum Analyzer	Keysight	N9030B	MY57140404	2020/06/03	2021/06/02
Spectrum Analyzer	Keysight	N9010B	MY57110159	2020/04/15	2021/04/14
Wireless Conn. Tseter	R&S	CMW500	157118	2020/07/23	2021/07/22
Wideband Radio Communication Tester	R&S	CMW500	106071	2020/02/03	2021/02/02

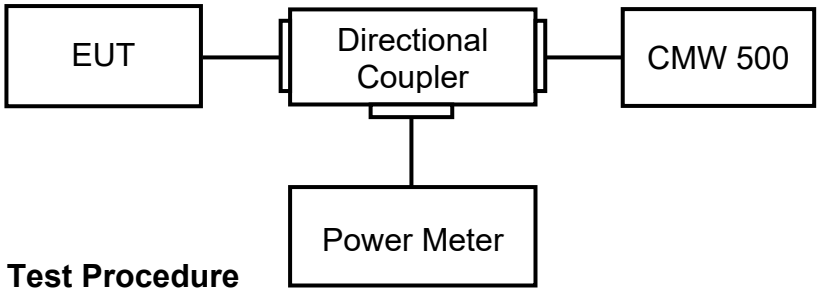
Note: All equipment upon which need to calibrated are with calibration period of 1 year.

2.4. Uncertainty

Test Item	Uncertainty
RF Output Power	±1.27 dB
Occupied Bandwidth	± 10 Hz
Peak To Average Ratio	Not exceed 13 dB
Spurious Emissions	± 1.27 dB for Conducted Measurement ± 3.2 dB for Radiated Measurement
Spurious Emissions at Antenna Terminals	± 3.2 dB
Frequency Stability	± 10 Hz

3. RF Output Power

3.1. Test Setup



3.2. Test Procedure

a) The RF output of the transmitter was connected to base station simulator.
b) The RF output of EUT was connected to the spectrum analyzer by RF cable and attenuator. The path loss was compensated to the results for each measurement.
c) Set EUT at maximum average power by base station simulator.
d) Measure lowest, middle, and highest channels for each bandwidth and different modulation.

Effective Isotropic Radiated Power = Conducted Power(dBm) + Antenna Gain(dBi)
Effective Radiated Power = Conducted Power(dBm) + Antenna Gain(dBi) - 2.15dB
The conversion of dBm to watts is given by the formula:

$$P_{(W)} = 1W \times \frac{10^{\left(\frac{P_{(dBm)}}{10}\right)}}{1000} = 10^{((P_{(dBm)}-30)/10)}$$

3.3. Test Method

KDB 971168 D01 Power Meas License Digital Systems v03 sub-clause 5.2.4
ANSI C63.26: 2015 Sub-clause 5.2.4.2

3.4. Test Result

Product	M2M DATA MODULE		
Test Item	RF Output Power		
Test Mode	Mode 1: LTE Band 2		
Date of Test	2020/12/14	Test Site	SR12-H
Temperature (°C)	25	Humidity (%RH)	65

Band	Channel Freq. (MHz)	Modulation	RB No.	RB offset	MPR	Conducted Output Power (dBm)	RF Output Power (W) EIRP	Limit (W) EIRP
Band 2 1.4MHz	18607 1850.7	QPSK	1	0	0	22.74	0.269	2
		QPSK		2		22.93	0.281	2
		QPSK		5		22.97	0.284	2
		QPSK	6	0	1	21.98	0.226	2
		16-QAM	1	0	1	22.09	0.232	2
		16-QAM		2		21.91	0.222	2
		16-QAM		5		21.68	0.211	2
		16-QAM	6	0	2	20.89	0.176	2
	18900 1880	QPSK	1	0	0	23.01	0.286	2
		QPSK		2		22.76	0.270	2
		QPSK		5		22.73	0.269	2
		QPSK	6	0	1	21.77	0.215	2
		16-QAM	1	0	1	22.09	0.232	2
		16-QAM		2		21.82	0.218	2
		16-QAM		5		21.73	0.213	2
		16-QAM	6	0	2	20.73	0.169	2
	19193 1909.3	QPSK	1	0	0	22.41	0.249	2
		QPSK		2		22.73	0.269	2
		QPSK		5		22.56	0.258	2
		QPSK	6	0	1	21.50	0.202	2
		16-QAM	1	0	1	21.71	0.212	2
		16-QAM		2		21.67	0.210	2
		16-QAM		5		21.34	0.195	2
		16-QAM	6	0	2	20.66	0.167	2

Band	Channel Freq. (MHz)	Modulation	RB No.	RB offset	MPR	Conducted Output Power (dBm)	RF Output Power (W) EIRP	Limit (W) EIRP
Band 2 3MHz	18615 1851.5	QPSK	1	0	0	23.17	0.297	2
		QPSK		7		22.97	0.284	2
		QPSK		14		22.88	0.278	2
		QPSK	15	0	1	22.08	0.231	2
		16-QAM	1	0	1	22.24	0.240	2
		16-QAM		7		22.38	0.248	2
		16-QAM		14		22.31	0.244	2
		16-QAM	15	0	2	21.13	0.186	2
	18900 1880	QPSK	1	0	0	22.79	0.272	2
		QPSK		7		22.73	0.269	2
		QPSK		14		22.63	0.262	2
		QPSK	15	0	1	21.71	0.212	2
		16-QAM	1	0	1	21.99	0.226	2
		16-QAM		7		21.96	0.225	2
		16-QAM		14		21.88	0.221	2
		16-QAM	15	0	2	20.67	0.167	2
	19185 1908.5	QPSK	1	0	0	22.91	0.280	2
		QPSK		7		22.51	0.255	2
		QPSK		14		22.67	0.265	2
		QPSK	15	0	1	21.53	0.204	2
		16-QAM	1	0	1	21.48	0.201	2
		16-QAM		7		21.26	0.191	2
		16-QAM		14		21.25	0.191	2
		16-QAM	15	0	2	20.47	0.160	2

Band	Channel Freq. (MHz)	Modulation	RB No.	RB offset	MPR	Conducted Output Power (dBm)	RF Output Power (W) EIRP	Limit (W) EIRP
Band 2 5MHz	18625 1852.5	QPSK	1	0	0	22.74	0.269	2
		QPSK		12		23.01	0.286	2
		QPSK		24		22.89	0.279	2
		QPSK	25	0	1	22.03	0.229	2
		16-QAM	1	0	1	21.13	0.186	2
		16-QAM		12		21.41	0.198	2
		16-QAM		24		21.43	0.199	2
		16-QAM	25	0	2	20.87	0.175	2
	18900 1880	QPSK	1	0	0	22.45	0.252	2
		QPSK		12		22.49	0.254	2
		QPSK		24		22.64	0.263	2
		QPSK	25	0	1	21.66	0.210	2
		16-QAM	1	0	1	21.10	0.185	2
		16-QAM		12		21.41	0.198	2
		16-QAM		24		21.51	0.203	2
		16-QAM	25	0	2	20.74	0.170	2
	19175 1907.5	QPSK	1	0	0	22.50	0.255	2
		QPSK		12		22.48	0.254	2
		QPSK		24		22.47	0.253	2
		QPSK	25	0	1	21.59	0.207	2
		16-QAM	1	0	1	21.23	0.190	2
		16-QAM		12		21.27	0.192	2
		16-QAM		24		21.24	0.191	2
		16-QAM	25	0	2	20.53	0.162	2

Band	Channel Freq. (MHz)	Modulation	RB No.	RB offset	MPR	Conducted Output Power (dBm)	RF Output Power (W) EIRP	Limit (W) EIRP
Band 2 10MHz	18650 1855	QPSK	1	0	0	22.82	0.274	2
		QPSK		24		23.12	0.294	2
		QPSK		49		22.96	0.283	2
		QPSK	50	0	1	22.10	0.232	2
		16-QAM	1	0	1	22.43	0.251	2
		16-QAM		24		23.05	0.289	2
		16-QAM		49		22.36	0.247	2
		16-QAM	50	0	2	20.91	0.177	2
	18900 1880	QPSK	1	0	0	22.92	0.281	2
		QPSK		24		22.72	0.268	2
		QPSK		49		22.82	0.274	2
		QPSK	50	0	1	21.91	0.222	2
		16-QAM	1	0	1	22.14	0.234	2
		16-QAM		24		22.62	0.262	2
		16-QAM		49		22.07	0.231	2
		16-QAM	50	0	2	20.98	0.179	2
	19150 1905	QPSK	1	0	0	22.58	0.259	2
		QPSK		24		22.53	0.256	2
		QPSK		49		22.45	0.252	2
		QPSK	50	0	1	21.69	0.211	2
		16-QAM	1	0	1	21.06	0.183	2
		16-QAM		24		21.67	0.210	2
		16-QAM		49		21.47	0.201	2
		16-QAM	50	0	2	20.68	0.167	2

Band	Channel Freq. (MHz)	Modulation	RB No.	RB offset	MPR	Conducted Output Power (dBm)	RF Output Power (W) EIRP	Limit (W) EIRP
Band 2 15MHz	18675 1857.5	QPSK	1	0	0	22.86	0.277	2
		QPSK		37		22.93	0.281	2
		QPSK		74		22.88	0.278	2
		QPSK	75	0	1	21.91	0.222	2
		16-QAM	1	0	1	22.31	0.244	2
		16-QAM		37		22.53	0.256	2
		16-QAM		74		21.47	0.201	2
		16-QAM	75	0	2	21.00	0.180	2
	18900 1880	QPSK	1	0	0	22.96	0.283	2
		QPSK		37		22.82	0.274	2
		QPSK		74		22.85	0.276	2
		QPSK	75	0	1	21.84	0.219	2
		16-QAM	1	0	1	22.03	0.229	2
		16-QAM		37		22.60	0.261	2
		16-QAM		74		22.11	0.233	2
		16-QAM	75	0	2	20.83	0.173	2
	19125 1902.5	QPSK	1	0	0	22.64	0.263	2
		QPSK		37		22.66	0.264	2
		QPSK		74		22.20	0.238	2
		QPSK	75	0	1	21.72	0.213	2
		16-QAM	1	0	1	21.45	0.200	2
		16-QAM		37		21.79	0.216	2
		16-QAM		74		21.29	0.193	2
		16-QAM	75	0	2	20.58	0.164	2

Band	Channel Freq. (MHz)	Modulation	RB No.	RB offset	MPR	Conducted Output Power (dBm)	RF Output Power (W) EIRP	Limit (W) EIRP
Band 2 20MHz	18700 1860	QPSK	1	0	0	22.79	0.272	2
		QPSK		49		23.2	0.299	2
		QPSK		99		22.20	0.238	2
		QPSK	100	0	1	21.98	0.226	2
		16-QAM	1	0	1	22.24	0.240	2
		16-QAM		49		22.99	0.285	2
		16-QAM		99		22.20	0.238	2
		16-QAM	100	0	2	21.00	0.180	2
	18900 1880	QPSK	1	0	0	22.91	0.280	2
		QPSK		49		23.36	0.310	2
		QPSK		99		22.77	0.271	2
		QPSK	100	0	1	21.86	0.220	2
		16-QAM	1	0	1	20.97	0.179	2
		16-QAM		49		21.57	0.206	2
		16-QAM		99		21.41	0.198	2
		16-QAM	100	0	2	20.87	0.175	2
	19100 1900	QPSK	1	0	0	22.55	0.258	2
		QPSK		49		23.10	0.292	2
		QPSK		99		22.33	0.245	2
		QPSK	100	0	1	21.71	0.212	2
		16-QAM	1	0	1	22.13	0.234	2
		16-QAM		49		22.54	0.257	2
		16-QAM		99		22.17	0.236	2
		16-QAM	100	0	2	20.73	0.169	2

Product	M2M DATA MODULE		
Test Item	RF Output Power		
Test Mode	Mode 2: LTE Band 5		
Date of Test	2020/12/14	Test Site	SR12-H
Temperature (°C)	25	Humidity (%RH)	65

Band	Channel Freq. (MHz)	Modulation	RB No.	RB offset	MPR	Conducted Output Power (dBm)	RF Output Power (W) ERP	Limit (W) ERP
Band 5 1.4MHz	20407 824.7	QPSK	1	0	0	23.24	0.269	7
		QPSK		2		23.23	0.268	7
		QPSK		5		23.25	0.269	7
		QPSK	6	0	1	22.30	0.216	7
		16-QAM	1	0	1	22.25	0.214	7
		16-QAM		2		22.15	0.209	7
		16-QAM		5		21.97	0.200	7
		16-QAM	6	0	2	21.29	0.171	7
	20525 836.5	QPSK	1	0	0	23.31	0.273	7
		QPSK		2		23.40	0.279	7
		QPSK		5		23.16	0.264	7
		QPSK	6	0	1	22.47	0.225	7
		16-QAM	1	0	1	22.85	0.245	7
		16-QAM		2		22.91	0.249	7
		16-QAM		5		22.84	0.245	7
		16-QAM	6	0	2	21.41	0.176	7
	20643 848.3	QPSK	1	0	0	23.38	0.277	7
		QPSK		2		23.49	0.284	7
		QPSK		5		23.55	0.288	7
		QPSK	6	0	1	22.39	0.221	7
		16-QAM	1	0	1	22.49	0.226	7
		16-QAM		2		22.40	0.221	7
		16-QAM		5		22.10	0.207	7
		16-QAM	6	0	2	21.42	0.177	7

Band	Channel Freq. (MHz)	Modulation	RB No.	RB offset	MPR	Conducted Output Power (dBm)	RF Output Power (W) ERP	Limit (W) ERP
Band 5 3MHz	20415 825.5	QPSK	1	0	0	23.46	0.282	7
		QPSK		7		23.23	0.268	7
		QPSK		14		23.25	0.269	7
		QPSK	15	0	1	22.30	0.216	7
		16-QAM	1	0	1	22.61	0.232	7
		16-QAM		7		22.67	0.236	7
		16-QAM		14		22.63	0.233	7
		16-QAM	15	0	2	21.20	0.168	7
	20525 836.5	QPSK	1	0	0	23.37	0.277	7
		QPSK		7		23.52	0.286	7
		QPSK		14		23.42	0.280	7
		QPSK	15	0	1	22.47	0.225	7
		16-QAM	1	0	1	22.56	0.230	7
		16-QAM		7		22.57	0.230	7
		16-QAM		14		22.62	0.233	7
		16-QAM	15	0	2	21.76	0.191	7
	20635 847.5	QPSK	1	0	0	23.26	0.270	7
		QPSK		7		23.54	0.288	7
		QPSK		14		23.28	0.271	7
		QPSK	15	0	1	22.34	0.218	7
		16-QAM	1	0	1	22.54	0.229	7
		16-QAM		7		22.50	0.226	7
		16-QAM		14		22.04	0.204	7
		16-QAM	15	0	2	21.46	0.178	7

Band	Channel Freq. (MHz)	Modulation	RB No.	RB offset	MPR	Conducted Output Power (dBm)	RF Output Power (W) ERP	Limit (W) ERP
Band 5 5MHz	20425 826.5	QPSK	1	0	0	22.98	0.253	7
		QPSK		12		23.16	0.264	7
		QPSK		24		23.05	0.257	7
		QPSK	25	0	1	22.24	0.213	7
		16-QAM	1	0	1	21.43	0.177	7
		16-QAM		12		21.66	0.187	7
		16-QAM		24		21.60	0.184	7
		16-QAM	25	0	2	21.36	0.174	7
	20525 836.5	QPSK	1	0	0	23.04	0.256	7
		QPSK		12		23.19	0.265	7
		QPSK		24		23.01	0.255	7
		QPSK	25	0	1	22.30	0.216	7
		16-QAM	1	0	1	22.70	0.237	7
		16-QAM		12		23.04	0.256	7
		16-QAM		24		22.89	0.248	7
		16-QAM	25	0	2	21.15	0.166	7
	20625 846.5	QPSK	1	0	0	23.27	0.270	7
		QPSK		12		23.45	0.282	7
		QPSK		24		22.92	0.249	7
		QPSK	25	0	1	22.28	0.215	7
		16-QAM	1	0	1	22.07	0.205	7
		16-QAM		12		22.09	0.206	7
		16-QAM		24		21.95	0.200	7
		16-QAM	25	0	2	21.26	0.170	7

Band	Channel Freq. (MHz)	Modulation	RB No.	RB offset	MPR	Conducted Output Power (dBm)	RF Output Power (W) ERP	Limit (W) ERP
Band 5 10MHz	20450 829	QPSK	1	0	0	23.10	0.260	7
		QPSK		24		23.53	0.287	7
		QPSK		49		23.24	0.269	7
		QPSK	50	0	1	22.34	0.218	7
		16-QAM	1	0	1	22.46	0.224	7
		16-QAM		24		22.72	0.238	7
		16-QAM		49		22.57	0.230	7
		16-QAM	50	0	2	21.32	0.173	7
	20525 836.5	QPSK	1	0	0	23.15	0.263	7
		QPSK		24		23.84	0.308	7
		QPSK		49		23.15	0.263	7
		QPSK	50	0	1	22.28	0.215	7
		16-QAM	1	0	1	22.60	0.232	7
		16-QAM		24		22.55	0.229	7
		16-QAM		49		22.69	0.237	7
		16-QAM	50	0	2	21.32	0.173	7
	20600 844	QPSK	1	0	0	23.23	0.268	7
		QPSK		24		23.70	0.299	7
		QPSK		49		23.10	0.260	7
		QPSK	50	0	1	22.41	0.222	7
		16-QAM	1	0	1	21.84	0.195	7
		16-QAM		24		22.35	0.219	7
		16-QAM		49		21.92	0.198	7
		16-QAM	50	0	2	21.30	0.172	7

Product	M2M DATA MODULE		
Test Item	RF Output Power		
Test Mode	Mode 3: LTE Band 12		
Date of Test	2020/12/14	Test Site	SR12-H
Temperature (°C)	25	Humidity (%RH)	65

Band	Channel Freq. (MHz)	Modulation	RB No.	RB offset	MPR	Conducted Output Power (dBm)	RF Output Power (W) ERP	Limit (W) ERP
Band 12 1.4MHz	23017 699.7	QPSK	1	0	0	23.00	0.171	3
		QPSK		2		23.21	0.180	3
		QPSK		5		23.02	0.172	3
		QPSK	6	0	1	22.09	0.139	3
		16-QAM	1	0	1	22.47	0.152	3
		16-QAM		2		22.53	0.154	3
		16-QAM		5		22.22	0.143	3
		16-QAM	6	0	2	21.28	0.115	3
	23095 707.5	QPSK	1	0	0	23.12	0.176	3
		QPSK		2		23.27	0.182	3
		QPSK		5		23.09	0.175	3
		QPSK	6	0	1	22.06	0.138	3
		16-QAM	1	0	1	22.16	0.141	3
		16-QAM		2		22.09	0.139	3
		16-QAM		5		22.10	0.139	3
		16-QAM	6	0	2	21.20	0.113	3
	23173 715.3	QPSK	1	0	0	23.10	0.175	3
		QPSK		2		23.30	0.184	3
		QPSK		5		23.29	0.183	3
		QPSK	6	0	1	22.01	0.136	3
		16-QAM	1	0	1	21.86	0.132	3
		16-QAM		2		21.98	0.136	3
		16-QAM		5		21.45	0.120	3
		16-QAM	6	0	2	21.15	0.112	3

Band	Channel Freq. (MHz)	Modulation	RB No.	RB offset	MPR	Conducted Output Power (dBm)	RF Output Power (W) ERP	Limit (W) ERP
Band 12 3MHz	23025 700.5	QPSK	1	0	0	23.02	0.172	3
		QPSK		7		22.93	0.169	3
		QPSK		14		23.07	0.174	3
		QPSK	15	0	1	22.34	0.147	3
		16-QAM	1	0	1	22.42	0.150	3
		16-QAM		7		22.52	0.153	3
		16-QAM		14		22.48	0.152	3
		16-QAM	15	0	2	21.53	0.122	3
	23095 707.5	QPSK	1	0	0	23.01	0.172	3
		QPSK		7		22.84	0.165	3
		QPSK		14		22.84	0.165	3
		QPSK	15	0	1	22.13	0.140	3
		16-QAM	1	0	1	22.35	0.148	3
		16-QAM		7		22.34	0.147	3
		16-QAM		14		22.21	0.143	3
		16-QAM	15	0	2	21.08	0.110	3
	23165 714.5	QPSK	1	0	0	22.94	0.169	3
		QPSK		7		23.29	0.183	3
		QPSK		14		23.10	0.175	3
		QPSK	15	0	1	22.08	0.139	3
		16-QAM	1	0	1	21.80	0.130	3
		16-QAM		7		22.15	0.141	3
		16-QAM		14		21.80	0.130	3
		16-QAM	15	0	2	21.12	0.111	3

Band	Channel Freq. (MHz)	Modulation	RB No.	RB offset	MPR	Conducted Output Power (dBm)	RF Output Power (W) ERP	Limit (W) ERP
Band 12 5MHz	23035 701.5	QPSK	1	0	0	22.92	0.168	3
		QPSK		12		23.05	0.173	3
		QPSK		24		23.19	0.179	3
		QPSK	25	0	1	22.18	0.142	3
		16-QAM	1	0	1	21.57	0.123	3
		16-QAM		12		21.59	0.124	3
		16-QAM		24		21.69	0.127	3
		16-QAM	25	0	2	21.43	0.119	3
	23095 707.5	QPSK	1	0	0	23.07	0.174	3
		QPSK		12		22.96	0.170	3
		QPSK		24		22.61	0.157	3
		QPSK	25	0	1	22.12	0.140	3
		16-QAM	1	0	1	22.93	0.169	3
		16-QAM		12		22.85	0.166	3
		16-QAM		24		22.34	0.147	3
		16-QAM	25	0	2	21.12	0.111	3
	23155 713.5	QPSK	1	0	0	22.96	0.170	3
		QPSK		12		22.92	0.168	3
		QPSK		24		22.69	0.160	3
		QPSK	25	0	1	22.07	0.138	3
		16-QAM	1	0	1	21.75	0.129	3
		16-QAM		12		21.80	0.130	3
		16-QAM		24		21.72	0.128	3
		16-QAM	25	0	2	21.29	0.116	3

Band	Channel Freq. (MHz)	Modulation	RB No.	RB offset	MPR	Conducted Output Power (dBm)	RF Output Power (W) ERP	Limit (W) ERP
Band 12 10MHz	23060 704	QPSK	1	0	0	22.91	0.168	3
		QPSK		24		23.26	0.182	3
		QPSK		49		22.96	0.170	3
		QPSK	50	0	1	22.16	0.141	3
		16-QAM	1	0	1	22.45	0.151	3
		16-QAM		24		22.38	0.149	3
		16-QAM		49		22.37	0.148	3
		16-QAM	50	0	2	21.13	0.111	3
	23095 707.5	QPSK	1	0	0	23.23	0.181	3
		QPSK		24		23.39	0.187	3
		QPSK		49		22.90	0.167	3
		QPSK	50	0	1	22.09	0.139	3
		16-QAM	1	0	1	22.51	0.153	3
		16-QAM		24		22.50	0.153	3
		16-QAM		49		22.34	0.147	3
		16-QAM	50	0	2	22.51	0.153	3
	23130 711	QPSK	1	0	0	23.00	0.171	3
		QPSK		24		23.37	0.187	3
		QPSK		49		22.90	0.167	3
		QPSK	50	0	1	22.18	0.142	3
		16-QAM	1	0	1	21.92	0.134	3
		16-QAM		24		22.05	0.138	3
		16-QAM		49		21.86	0.132	3
		16-QAM	50	0	2	21.13	0.111	3

Product	M2M DATA MODULE		
Test Item	RF Output Power		
Test Mode	Mode 4: LTE Band 4/66		
Date of Test	2020/12/14	Test Site	SR12-H
Temperature (°C)	25	Humidity (%RH)	65

Band	Channel Freq. (MHz)	Modulation	RB No.	RB offset	MPR	Conducted Output Power (dBm)	RF Output Power (W) EIRP	Limit (W) EIRP
Band 66 1.4MHz	131979 1710.7	QPSK	1	0	0	22.83	0.279	1
		QPSK		2		22.80	0.277	1
		QPSK		5		22.72	0.272	1
		QPSK	6	0	1	21.92	0.226	1
		16-QAM	1	0	1	22.16	0.239	1
		16-QAM		2		21.97	0.229	1
		16-QAM		5		22.08	0.234	1
		16-QAM	6	0	2	21.05	0.185	1
	132322 1745	QPSK	1	0	0	22.72	0.272	1
		QPSK		2		22.61	0.265	1
		QPSK		5		22.69	0.270	1
		QPSK	6	0	1	21.78	0.219	1
		16-QAM	1	0	1	21.60	0.210	1
		16-QAM		2		21.19	0.191	1
		16-QAM		5		21.31	0.196	1
		16-QAM	6	0	2	20.73	0.172	1
	132665 1779.3	QPSK	1	0	0	22.72	0.272	1
		QPSK		2		22.70	0.270	1
		QPSK		5		22.88	0.282	1
		QPSK	6	0	1	21.65	0.212	1
		16-QAM	1	0	1	21.51	0.206	1
		16-QAM		2		21.39	0.200	1
		16-QAM		5		21.31	0.196	1
		16-QAM	6	0	2	20.76	0.173	1

Band	Channel Freq. (MHz)	Modulation	RB No.	RB offset	MPR	Conducted Output Power (dBm)	RF Output Power (W) EIRP	Limit (W) EIRP
Band 66 3MHz	131987 1711.5	QPSK	1	0	0	22.85	0.280	1
		QPSK		7		22.83	0.279	1
		QPSK		14		22.81	0.277	1
		QPSK	15	0	1	21.97	0.229	1
		16-QAM	1	0	1	22.18	0.240	1
		16-QAM		7		22.41	0.253	1
		16-QAM		14		22.23	0.243	1
		16-QAM	15	0	2	21.15	0.189	1
	132322 1745	QPSK	1	0	0	22.80	0.277	1
		QPSK		7		22.60	0.264	1
		QPSK		14		22.71	0.271	1
		QPSK	15	0	1	21.73	0.216	1
		16-QAM	1	0	1	21.42	0.201	1
		16-QAM		7		21.76	0.218	1
		16-QAM		14		21.40	0.200	1
		16-QAM	15	0	2	20.78	0.174	1
	132657 1778.5	QPSK	1	0	0	22.57	0.262	1
		QPSK		7		22.42	0.254	1
		QPSK		14		22.41	0.253	1
		QPSK	15	0	1	21.62	0.211	1
		16-QAM	1	0	1	21.92	0.226	1
		16-QAM		7		21.87	0.223	1
		16-QAM		14		21.95	0.228	1
		16-QAM	15	0	2	20.72	0.171	1

Band	Channel Freq. (MHz)	Modulation	RB No.	RB offset	MPR	Conducted Output Power (dBm)	RF Output Power (W) EIRP	Limit (W) EIRP
Band 66 5MHz	131997 1712.5	QPSK	1	0	0	22.62	0.265	1
		QPSK		12		22.78	0.275	1
		QPSK		24		22.67	0.269	1
		QPSK	25	0	1	21.80	0.220	1
		16-QAM	1	0	1	21.47	0.204	1
		16-QAM		12		21.65	0.212	1
		16-QAM		24		21.69	0.214	1
		16-QAM	25	0	2	20.79	0.174	1
	132322 1745	QPSK	1	0	0	22.72	0.272	1
		QPSK		12		22.88	0.282	1
		QPSK		24		22.63	0.266	1
		QPSK	25	0	1	21.70	0.215	1
		16-QAM	1	0	1	21.38	0.200	1
		16-QAM		12		21.43	0.202	1
		16-QAM		24		21.18	0.191	1
		16-QAM	25	0	2	20.84	0.176	1
	132647 1777.5	QPSK	1	0	0	22.58	0.263	1
		QPSK		12		22.50	0.258	1
		QPSK		24		22.32	0.248	1
		QPSK	25	0	1	21.63	0.211	1
		16-QAM	1	0	1	21.49	0.205	1
		16-QAM		12		21.39	0.200	1
		16-QAM		24		21.27	0.195	1
		16-QAM	25	0	2	20.66	0.169	1

Band	Channel Freq. (MHz)	Modulation	RB No.	RB offset	MPR	Conducted Output Power (dBm)	RF Output Power (W) EIRP	Limit (W) EIRP
Band 66 10MHz	132022 1715	QPSK	1	0	0	22.77	0.275	1
		QPSK		24		22.72	0.272	1
		QPSK		49		22.90	0.283	1
		QPSK	50	0	1	21.84	0.222	1
		16-QAM	1	0	1	22.21	0.242	1
		16-QAM		24		22.24	0.243	1
		16-QAM		49		22.29	0.246	1
		16-QAM	50	0	2	20.92	0.179	1
	132322 1745	QPSK	1	0	0	22.75	0.274	1
		QPSK		24		22.73	0.272	1
		QPSK		49		22.58	0.263	1
		QPSK	50	0	1	21.76	0.218	1
		16-QAM	1	0	1	22.08	0.234	1
		16-QAM		24		22.05	0.233	1
		16-QAM		49		22.04	0.232	1
		16-QAM	50	0	2	20.82	0.175	1
	132622 1775	QPSK	1	0	0	22.80	0.277	1
		QPSK		24		22.85	0.280	1
		QPSK		49		22.58	0.263	1
		QPSK	50	0	1	21.57	0.208	1
		16-QAM	1	0	1	21.52	0.206	1
		16-QAM		24		21.56	0.208	1
		16-QAM		49		21.33	0.197	1
		16-QAM	50	0	2	20.68	0.170	1

Band	Channel Freq. (MHz)	Modulation	RB No.	RB offset	MPR	Conducted Output Power (dBm)	RF Output Power (W) EIRP	Limit (W) EIRP
Band 66 15MHz	132047 1717.5	QPSK	1	0	0	22.67	0.269	1
		QPSK		37		22.71	0.271	1
		QPSK		74		22.69	0.270	1
		QPSK	75	0	1	21.81	0.220	1
		16-QAM	1	0	1	22.17	0.239	1
		16-QAM		37		22.23	0.243	1
		16-QAM		74		22.34	0.249	1
		16-QAM	75	0	2	20.93	0.180	1
	132322 1745	QPSK	1	0	0	22.77	0.275	1
		QPSK		37		22.81	0.277	1
		QPSK		74		22.65	0.267	1
		QPSK	75	0	1	21.91	0.225	1
		16-QAM	1	0	1	21.76	0.218	1
		16-QAM		37		21.95	0.228	1
		16-QAM		74		21.18	0.191	1
		16-QAM	75	0	2	20.94	0.180	1
	132597 1772.5	QPSK	1	0	0	22.53	0.260	1
		QPSK		37		22.58	0.263	1
		QPSK		74		22.55	0.261	1
		QPSK	75	0	1	21.67	0.213	1
		16-QAM	1	0	1	22.17	0.239	1
		16-QAM		37		22.08	0.234	1
		16-QAM		74		22.18	0.240	1
		16-QAM	75	0	2	20.88	0.178	1

Band	Channel Freq. (MHz)	Modulation	RB No.	RB offset	MPR	Conducted Output Power (dBm)	RF Output Power (W) EIRP	Limit (W) EIRP
Band 66 20MHz	132072 1720	QPSK	1	0	0	22.44	0.255	1
		QPSK		49		22.98	0.288	1
		QPSK		99		22.58	0.263	1
		QPSK	100	0	1	21.87	0.223	1
		16-QAM	1	0	1	22.20	0.241	1
		16-QAM		49		22.66	0.268	1
		16-QAM		99		22.51	0.259	1
		16-QAM	100	0	2	20.84	0.176	1
	132322 1745	QPSK	1	0	0	22.56	0.262	1
		QPSK		49		23.24	0.306	1
		QPSK		99		22.76	0.274	1
		QPSK	100	0	1	21.76	0.218	1
		16-QAM	1	0	1	22.58	0.263	1
		16-QAM		49		22.74	0.273	1
		16-QAM		99		22.39	0.252	1
		16-QAM	100	0	2	20.82	0.175	1
	132572 1770	QPSK	1	0	0	22.76	0.274	1
		QPSK		49		22.93	0.285	1
		QPSK		99		22.92	0.284	1
		QPSK	100	0	1	21.71	0.215	1
		16-QAM	1	0	1	21.39	0.200	1
		16-QAM		49		21.62	0.211	1
		16-QAM		99		21.40	0.200	1
		16-QAM	100	0	2	20.71	0.171	1

Product	M2M DATA MODULE		
Test Item	RF Output Power		
Test Mode	Mode 5: LTE Band 71		
Date of Test	2020/12/14	Test Site	SR12-H
Temperature (°C)	25	Humidity (%RH)	65

Band	Channel Freq. (MHz)	Modulation	RB No.	RB offset	MPR	Conducted Output Power (dBm)	RF Output Power (W) ERP	Limit (W) ERP
Band 71 5MHz	133147 665.5	QPSK	1	0	0	22.90	0.163	3
		QPSK		12		22.95	0.165	3
		QPSK		24		22.75	0.157	3
		QPSK	25	0	1	21.92	0.130	3
		16-QAM	1	0	1	21.64	0.122	3
		16-QAM		12		21.74	0.125	3
		16-QAM		24		21.73	0.124	3
		16-QAM	25	0	2	21.05	0.106	3
	133297 680.5	QPSK	1	0	0	22.95	0.165	3
		QPSK		12		23.11	0.171	3
		QPSK		24		23.19	0.174	3
		QPSK	25	0	1	22.11	0.136	3
		16-QAM	1	0	1	21.45	0.117	3
		16-QAM		12		21.89	0.129	3
		16-QAM		24		21.90	0.129	3
		16-QAM	25	0	2	21.25	0.111	3
	133447 695.5	QPSK	1	0	0	22.81	0.160	3
		QPSK		12		22.91	0.163	3
		QPSK		24		22.96	0.165	3
		QPSK	25	0	1	22.09	0.135	3
		16-QAM	1	0	1	22.81	0.160	3
		16-QAM		12		22.91	0.163	3
		16-QAM		24		22.71	0.156	3
		16-QAM	25	0	2	21.15	0.109	3

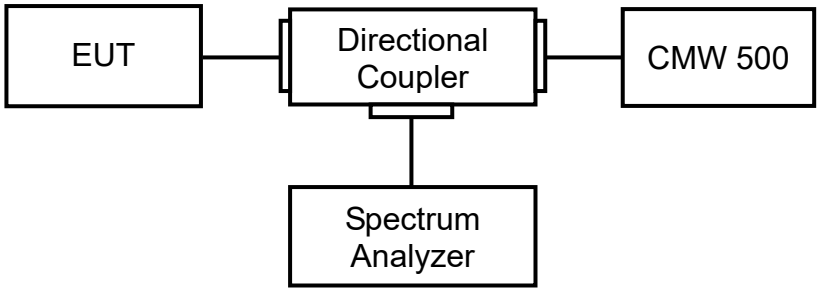
Band	Channel Freq. (MHz)	Modulation	RB No.	RB offset	MPR	Conducted Output Power (dBm)	RF Output Power (W) ERP	Limit (W) ERP
Band 71 10MHz	133172 668	QPSK	1	0	0	22.93	0.164	3
		QPSK		24		23.09	0.170	3
		QPSK		49		22.91	0.163	3
		QPSK	50	0	1	21.98	0.132	3
		16-QAM	1	0	1	22.32	0.143	3
		16-QAM		24		22.52	0.149	3
		16-QAM		49		22.15	0.137	3
		16-QAM	50	0	2	21.05	0.106	3
	133297 680.5	QPSK	1	0	0	23.13	0.172	3
		QPSK		24		23.34	0.180	3
		QPSK		49		22.90	0.163	3
		QPSK	50	0	1	22.13	0.136	3
		16-QAM	1	0	1	22.33	0.143	3
		16-QAM		24		22.38	0.145	3
		16-QAM		49		22.29	0.142	3
		16-QAM	50	0	2	21.22	0.111	3
	133422 693	QPSK	1	0	0	23.22	0.175	3
		QPSK		24		23.27	0.177	3
		QPSK		49		23.10	0.171	3
		QPSK	50	0	1	22.14	0.137	3
		16-QAM	1	0	1	22.18	0.138	3
		16-QAM		24		22.12	0.136	3
		16-QAM		49		21.96	0.131	3
		16-QAM	50	0	2	21.19	0.110	3

Band	Channel Freq. (MHz)	Modulation	RB No.	RB offset	MPR	Conducted Output Power (dBm)	RF Output Power (W) ERP	Limit (W) ERP
Band 71 15MHz	133197 670.5	QPSK	1	0	0	22.79	0.159	3
		QPSK		37		22.88	0.162	3
		QPSK		74		23.10	0.171	3
		QPSK	75	0	1	22.01	0.133	3
		16-QAM	1	0	1	22.10	0.136	3
		16-QAM		37		22.34	0.143	3
		16-QAM		74		22.54	0.150	3
		16-QAM	75	0	2	21.14	0.109	3
	133297 680.5	QPSK	1	0	0	22.85	0.161	3
		QPSK		37		23.09	0.170	3
		QPSK		74		22.99	0.166	3
		QPSK	75	0	1	22.02	0.133	3
		16-QAM	1	0	1	22.24	0.140	3
		16-QAM		37		22.71	0.156	3
		16-QAM		74		22.29	0.142	3
		16-QAM	75	0	2	20.89	0.103	3
	133397 690.5	QPSK	1	0	0	22.82	0.160	3
		QPSK		37		22.86	0.161	3
		QPSK		74		22.79	0.159	3
		QPSK	75	0	1	21.14	0.109	3
		16-QAM	1	0	1	22.24	0.140	3
		16-QAM		37		22.06	0.134	3
		16-QAM		74		21.90	0.129	3
		16-QAM	75	0	2	21.14	0.109	3

Band	Channel Freq. (MHz)	Modulation	RB No.	RB offset	MPR	Conducted Output Power (dBm)	RF Output Power (W) ERP	Limit (W) ERP
Band 71 20MHz	133222 673	QPSK	1	0	0	22.90	0.163	3
		QPSK		49		23.11	0.171	3
		QPSK		99		22.79	0.159	3
		QPSK	100	0	1	22.10	0.136	3
		16-QAM	1	0	1	22.12	0.136	3
		16-QAM		49		22.82	0.160	3
		16-QAM		99		22.44	0.147	3
		16-QAM	100	0	2	21.02	0.106	3
	133322 683	QPSK	1	0	0	22.81	0.160	3
		QPSK		49		23.40	0.183	3
		QPSK		99		22.96	0.165	3
		QPSK	100	0	1	22.01	0.133	3
		16-QAM	1	0	1	21.67	0.123	3
		16-QAM		49		22.20	0.139	3
		16-QAM		99		21.38	0.115	3
		16-QAM	100	0	2	21.09	0.107	3
	133372 688	QPSK	1	0	0	22.57	0.151	3
		QPSK		49		23.37	0.182	3
		QPSK		99		22.76	0.158	3
		QPSK	100	0	1	22.07	0.135	3
		16-QAM	1	0	1	22.25	0.140	3
		16-QAM		49		22.78	0.158	3
		16-QAM		99		22.47	0.148	3
		16-QAM	100	0	2	21.18	0.110	3

4. Occupied Bandwidth

4.1. Test Setup



4.2. Test Procedure

1. The EUT was connected to Spectrum Analyzer and Base Station via power divider.
2. The RF output of EUT was connected to the spectrum analyzer by RF cable and attenuator. The path loss was compensated to the results for each measurement.
3. The 26 dB bandwidth and 99% occupied bandwidth of the low & middle & high channel for the highest RF powers were measured.

4.3. Test Method

KDB 971168 D01 Power Meas License Digital Systems v03 sub-clause 4.2 & 4.3
ANSI C63.26: 2015 Sub-clause 5.4.3 & 5.4.4

4.4. Test Result

Product	M2M DATA MODULE		
Test Item	Occupied Bandwidth		
Test Mode	Mode 1: LTE Band 2		
Date of Test	2020/12/16	Test Site	SR12-H
Temperature (°C)	24	Humidity (%RH)	62

LTE Band 2

Bandwidth (MHz)	Modulation	Frequency (MHz)	Measure Level (MHz)		Limit (MHz)
			26dB BW	99% BW	
1.4M	QPSK	1850.7	1.278	1.081	N/A
		1880	1.245	1.088	N/A
		1909.3	1.257	1.080	N/A
	16-QAM	1850.7	1.232	1.079	N/A
		1880	1.245	1.083	N/A
		1909.3	1.271	1.083	N/A
3M	QPSK	1851.5	2.938	2.691	N/A
		1880	2.949	2.696	N/A
		1908.5	2.946	2.689	N/A
	16-QAM	1851.5	2.953	2.690	N/A
		1880	2.933	2.689	N/A
		1908.5	2.932	2.688	N/A
5M	QPSK	1852.5	4.940	4.490	N/A
		1880	4.929	4.469	N/A
		1907.5	4.911	4.489	N/A
	16-QAM	1852.5	4.903	4.479	N/A
		1880	4.955	4.475	N/A
		1907.5	4.938	4.475	N/A
10M	QPSK	1855	9.774	8.938	N/A
		1880	9.679	8.920	N/A
		1905	9.692	8.946	N/A
	16-QAM	1855	9.595	8.931	N/A
		1880	9.631	8.934	N/A
		1905	9.665	8.934	N/A
15M	QPSK	1857.5	14.550	13.411	N/A
		1880	14.530	13.419	N/A
		1902.5	14.460	13.398	N/A
	16-QAM	1857.5	14.460	13.414	N/A
		1880	14.450	13.395	N/A
		1902.5	14.470	13.402	N/A
20M	QPSK	1860	19.040	17.861	N/A
		1880	19.010	17.833	N/A
		1900	19.210	17.835	N/A
	16-QAM	1860	19.130	17.877	N/A
		1880	19.020	17.854	N/A
		1900	19.080	17.805	N/A

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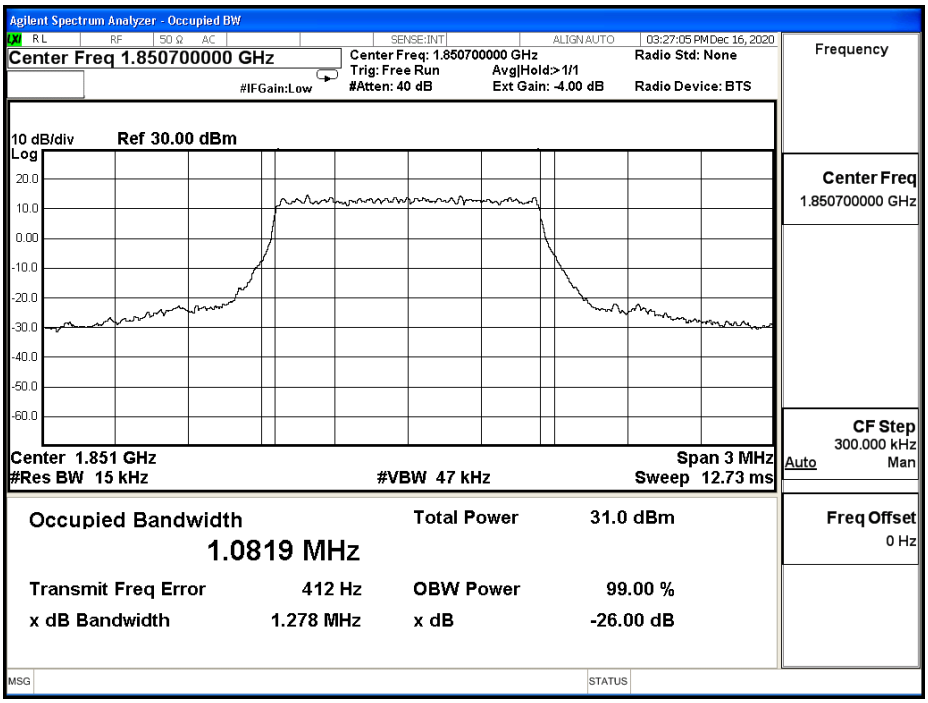

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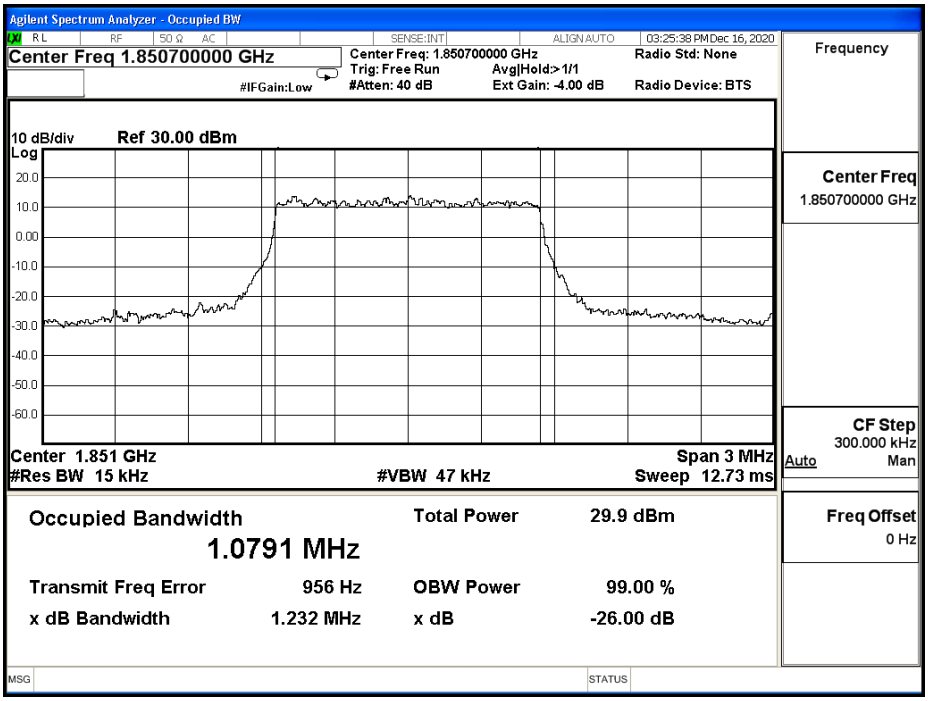

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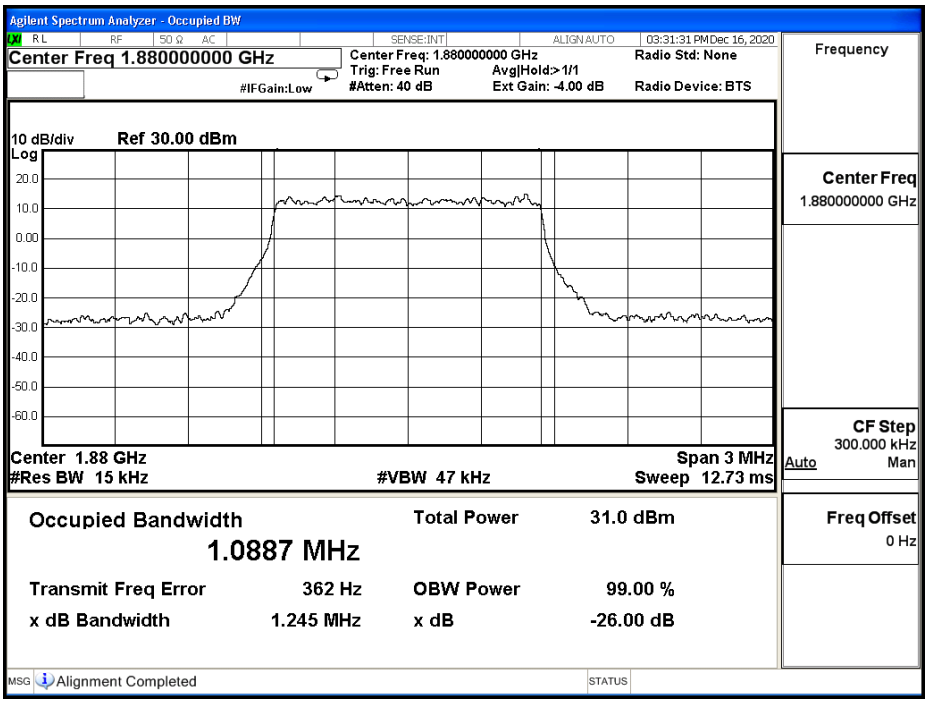

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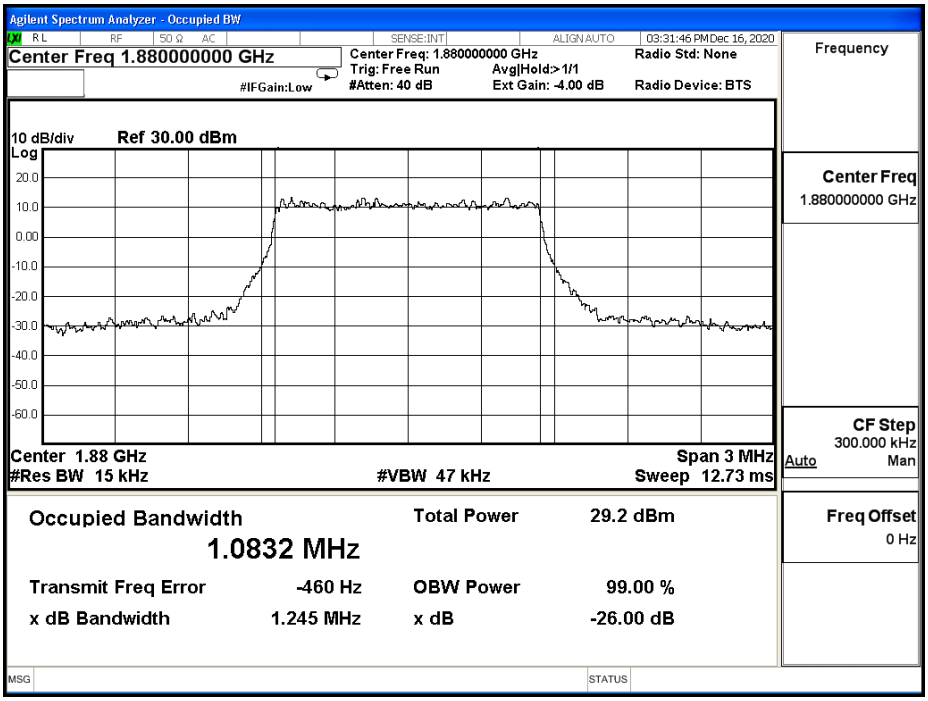

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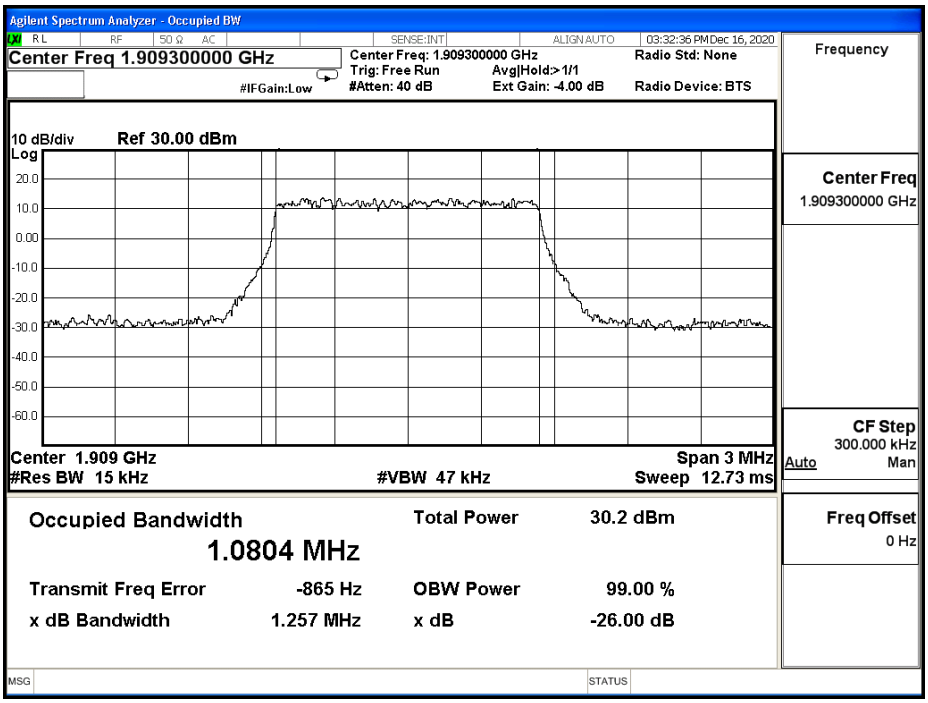

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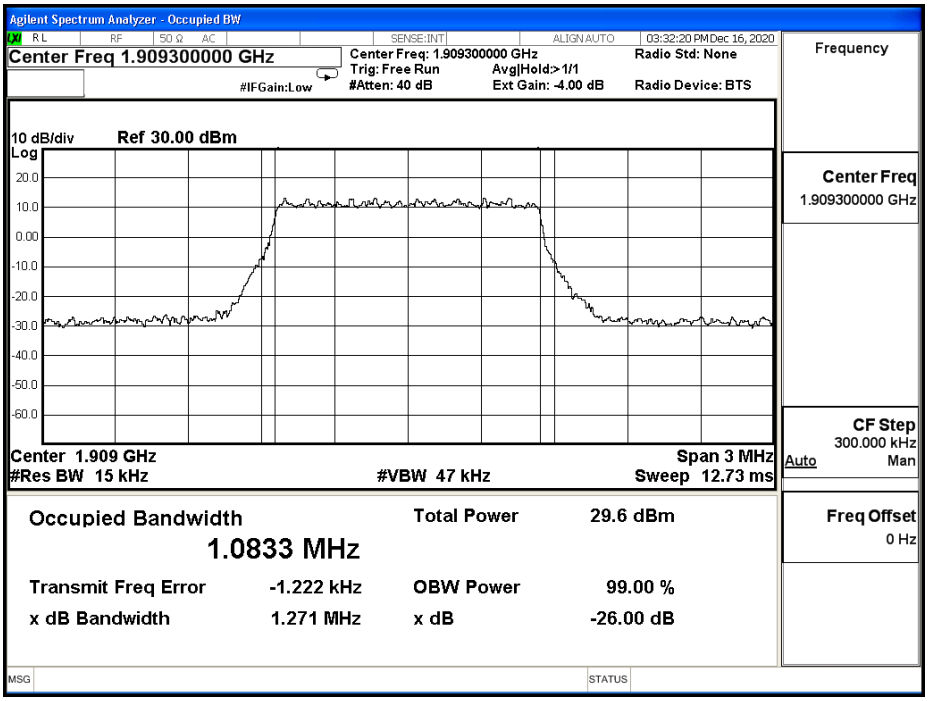

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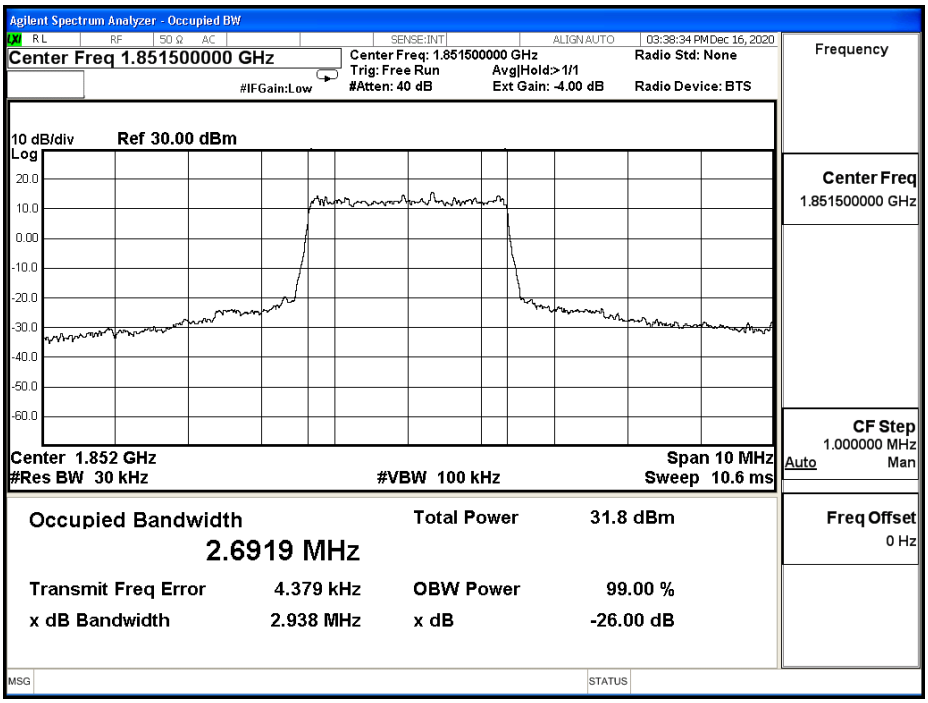

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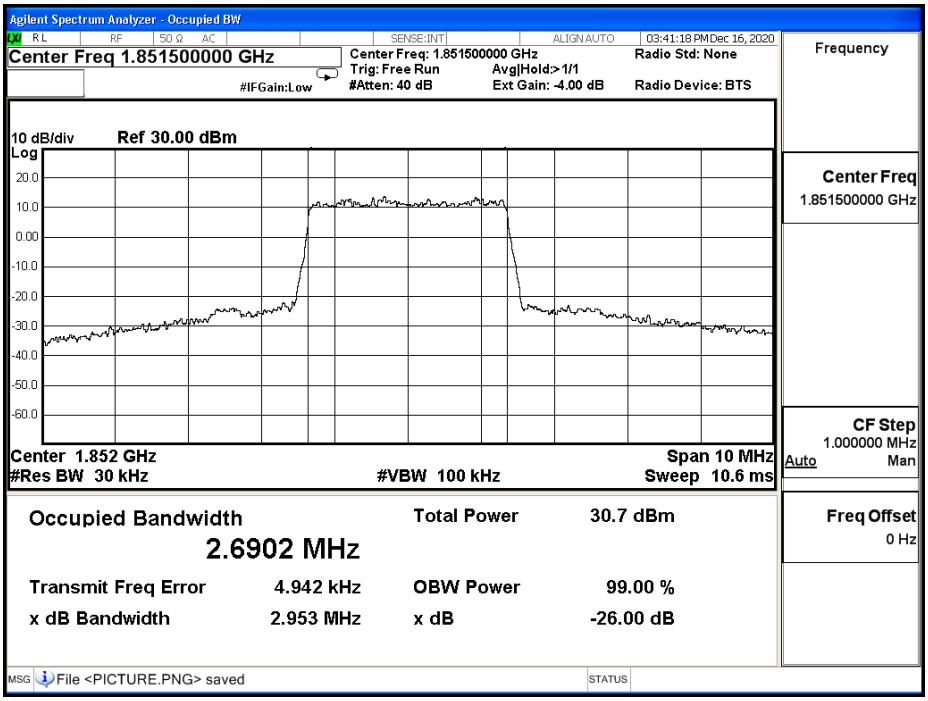

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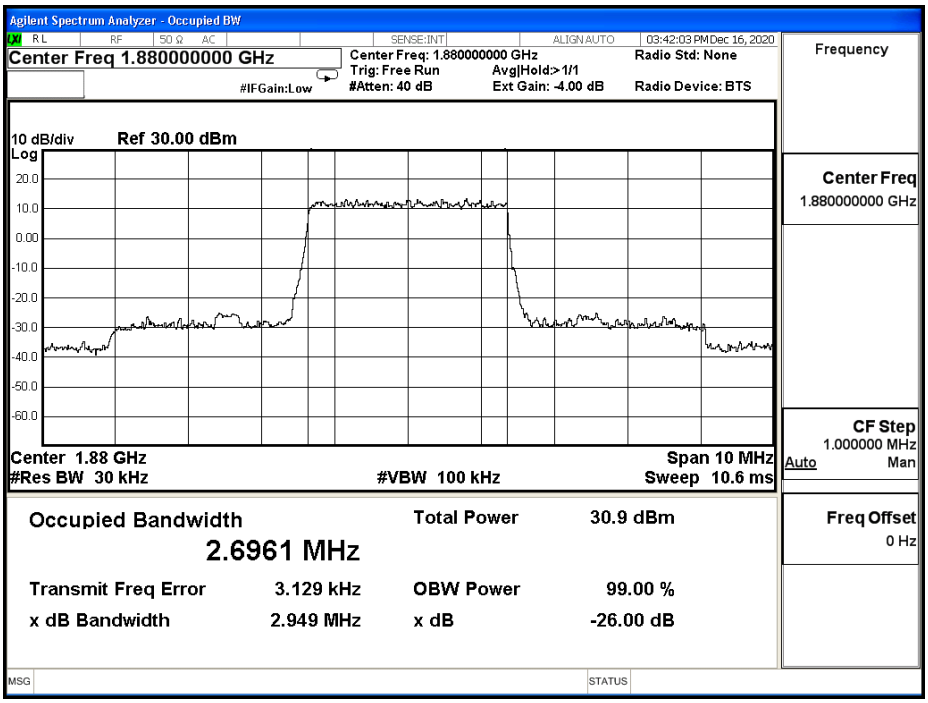

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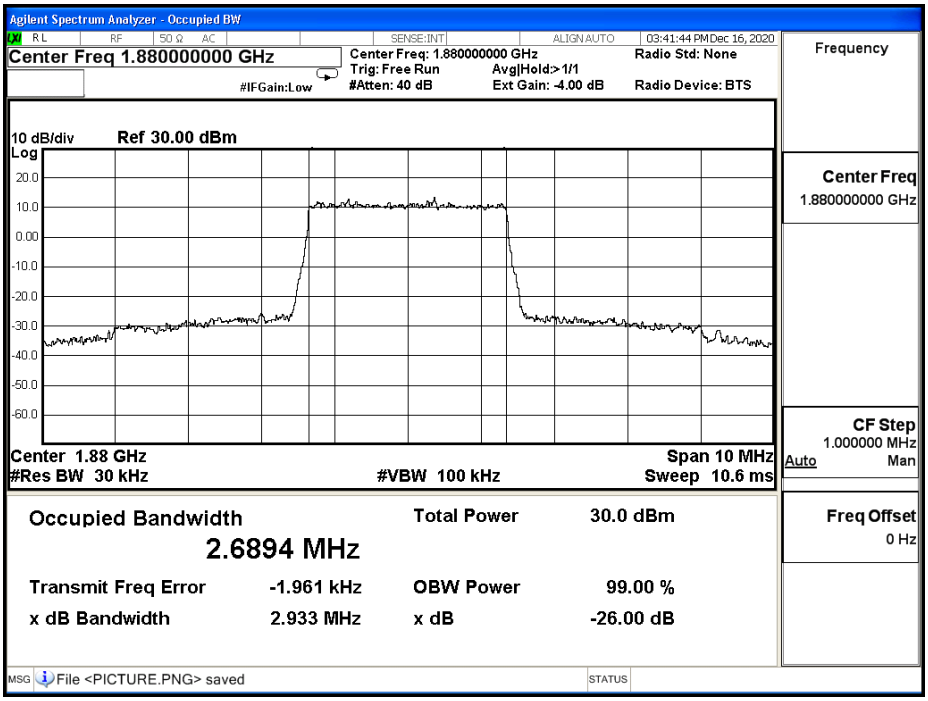

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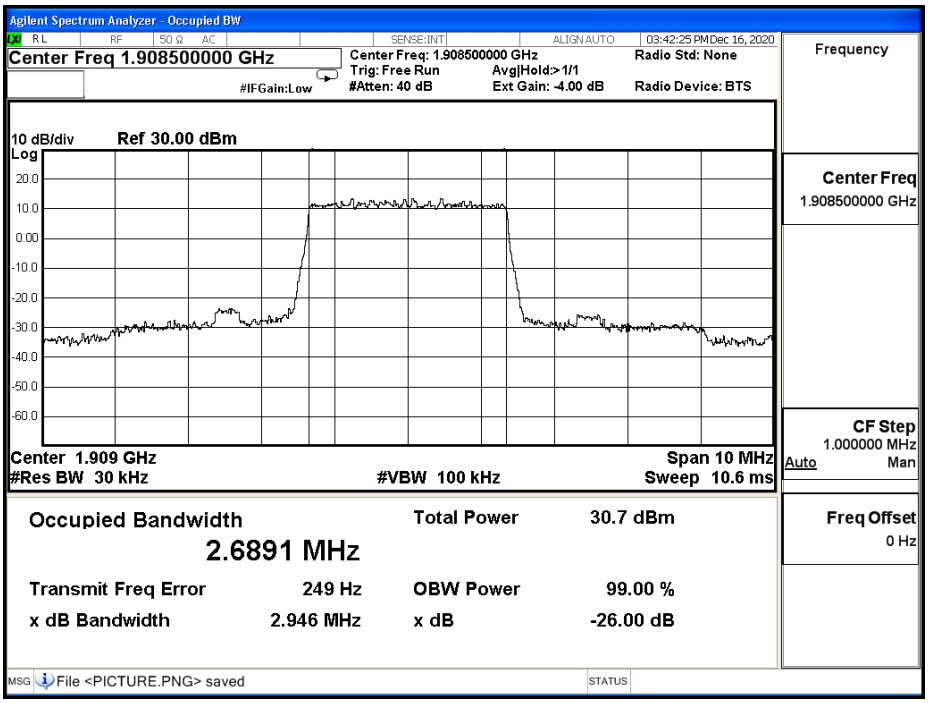

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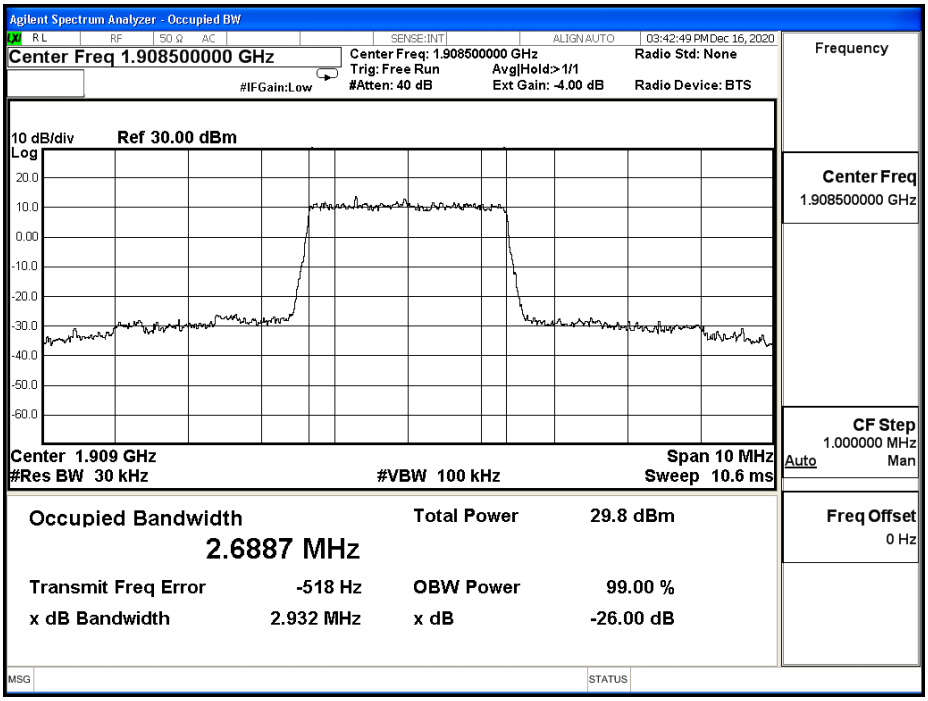

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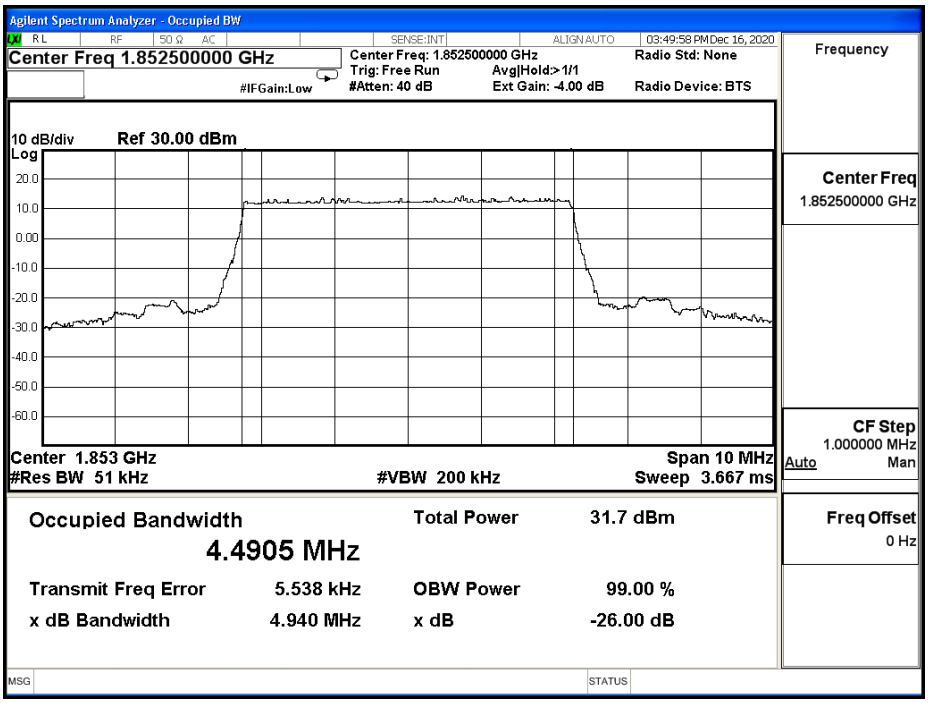

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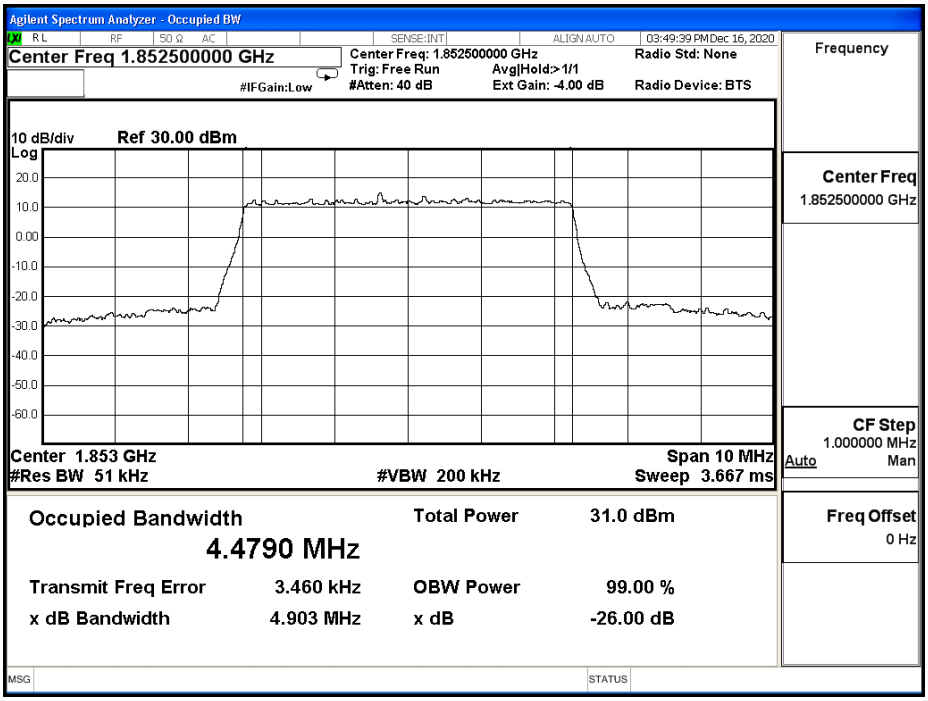

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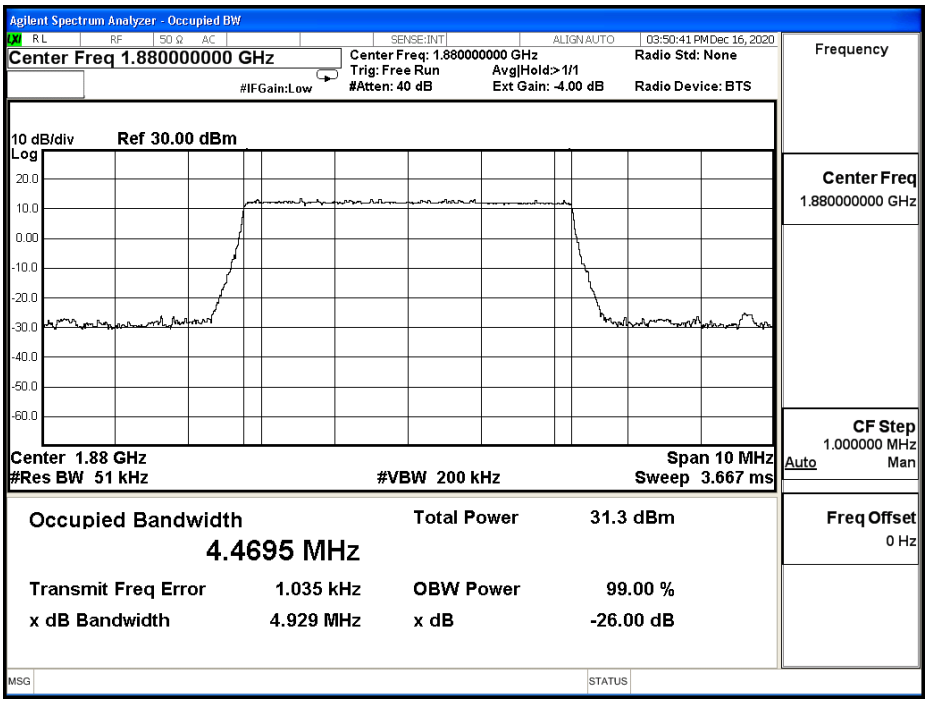

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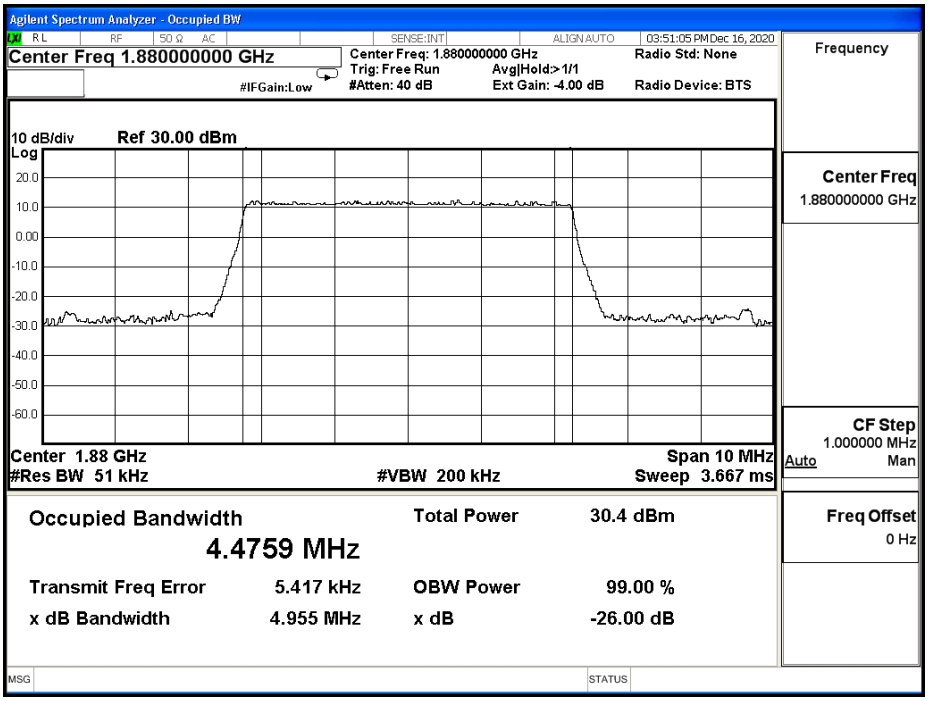
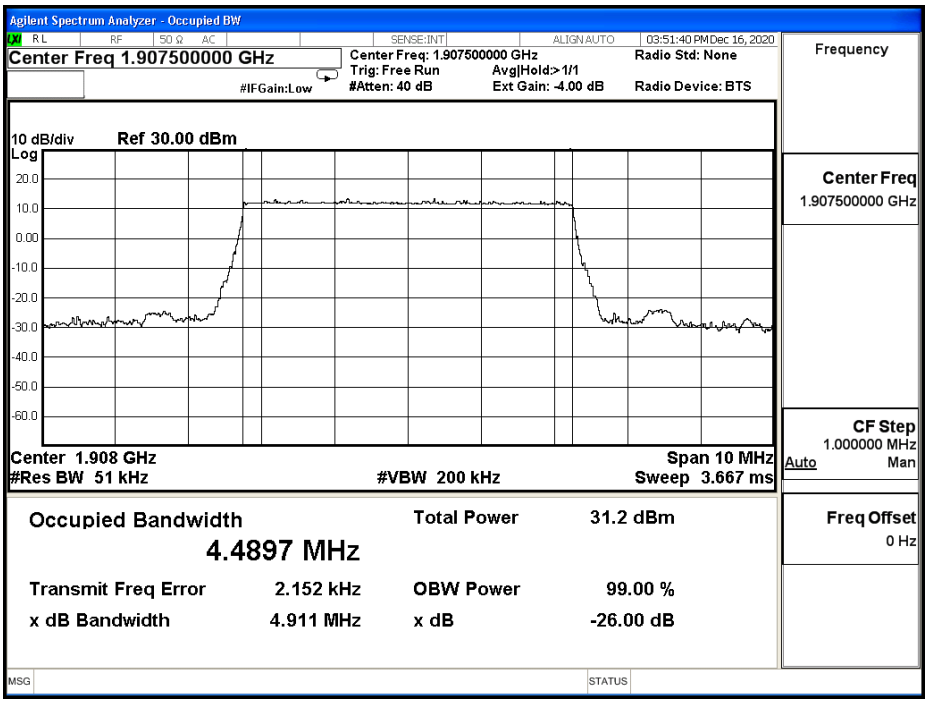
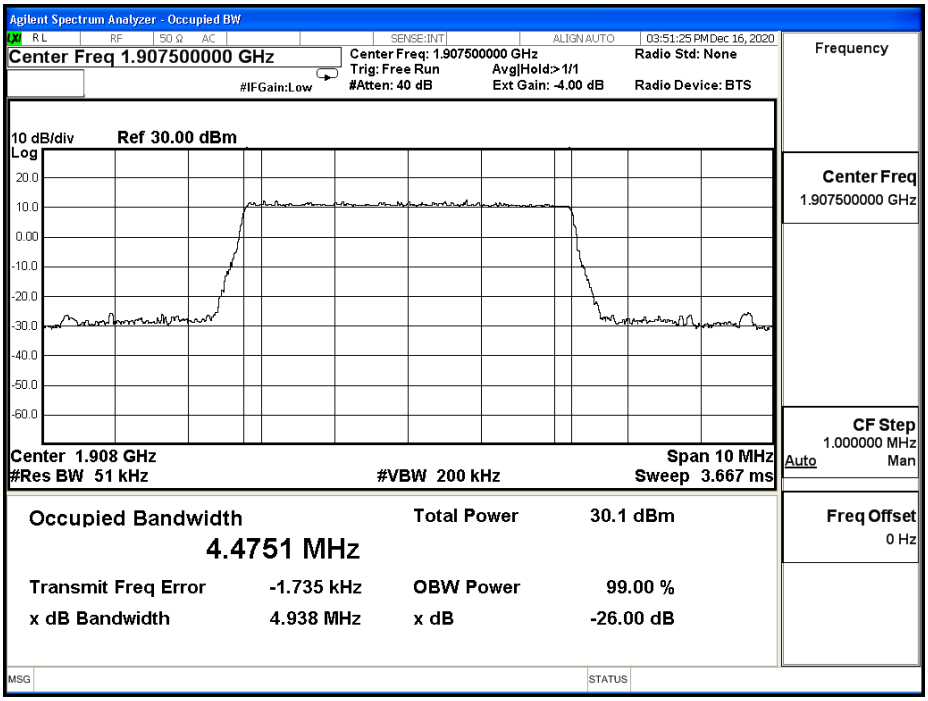


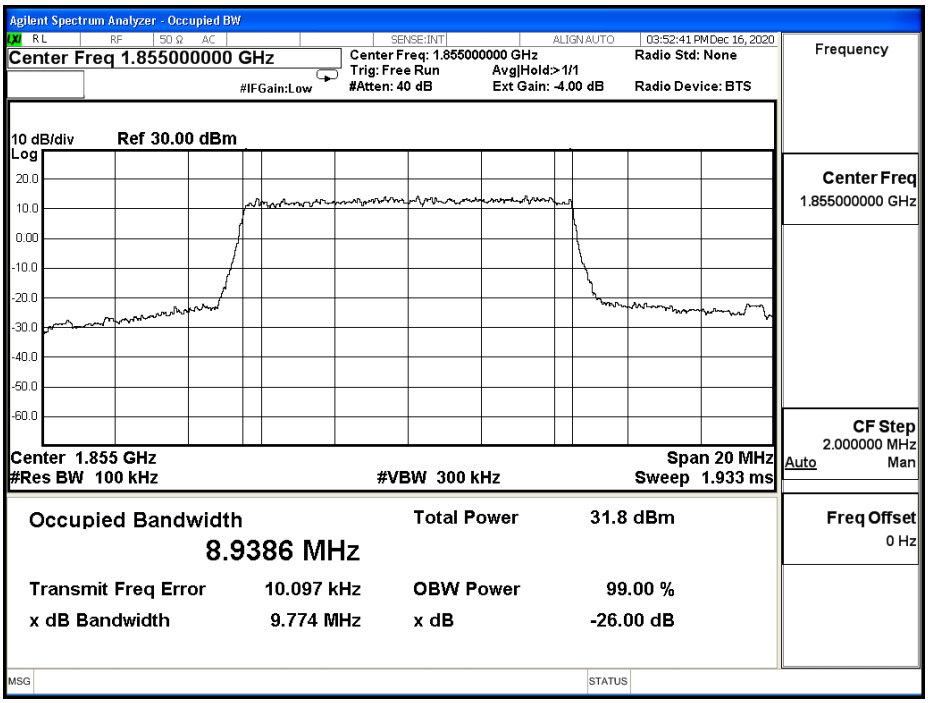
LTE_B2_CH19175_5M_QPSK_25RB0



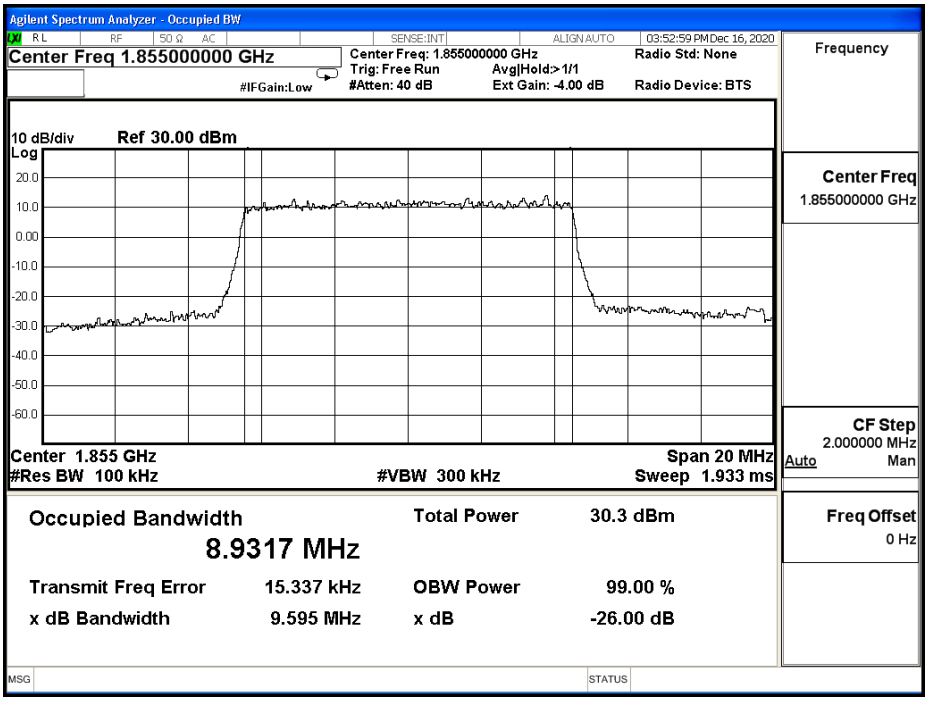
LTE_B2_CH19175_5M_16-QAM_25RB0



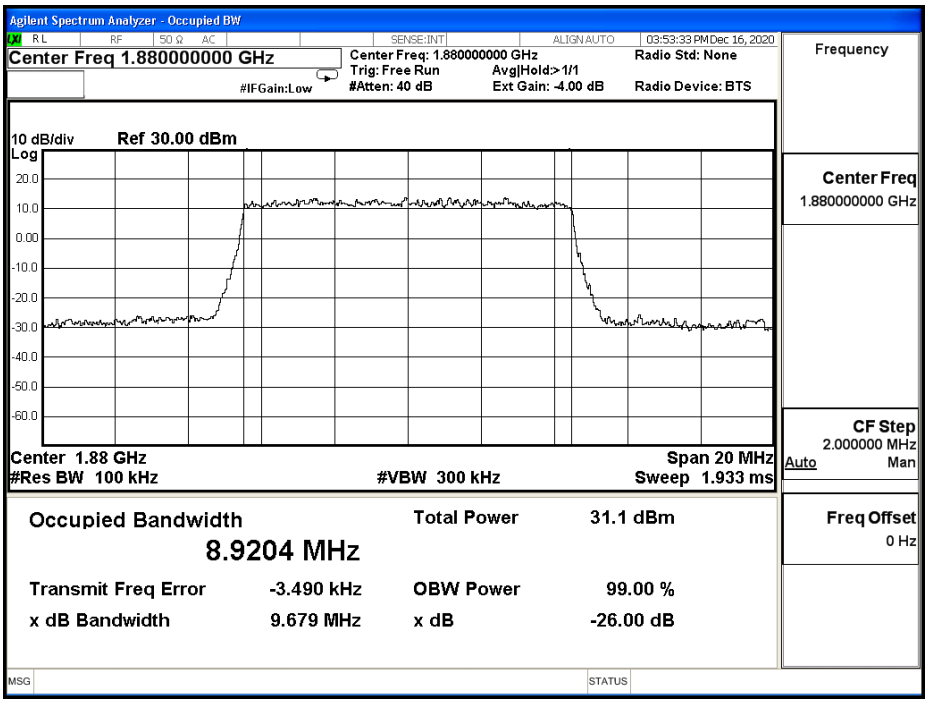
LTE_B2_CH18650_10M_QPSK_50RB0



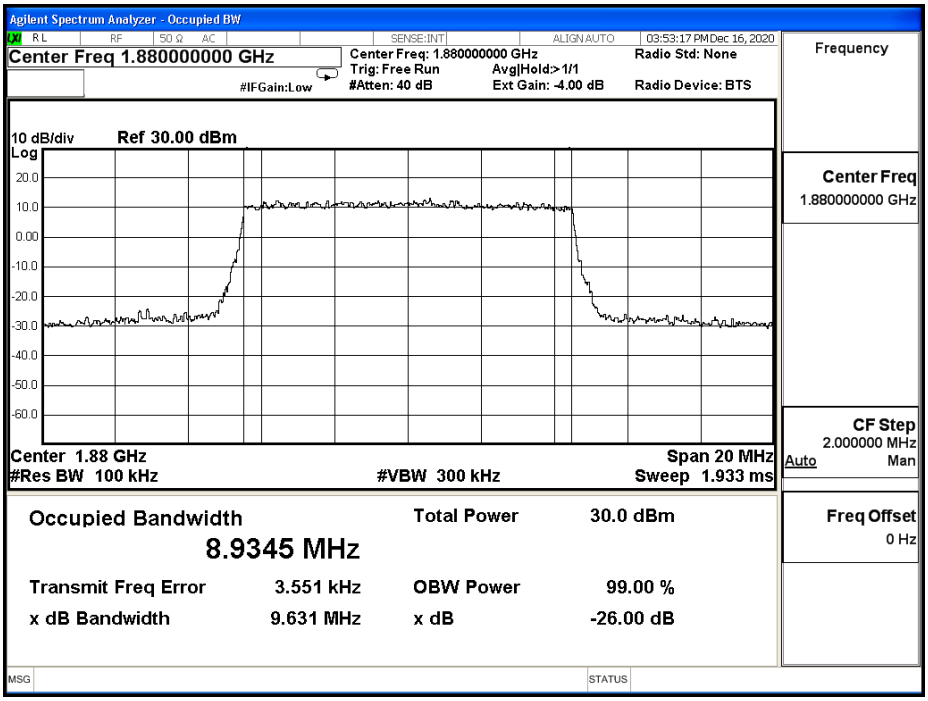
LTE_B2_CH18650_10M_16-QAM_50RB0



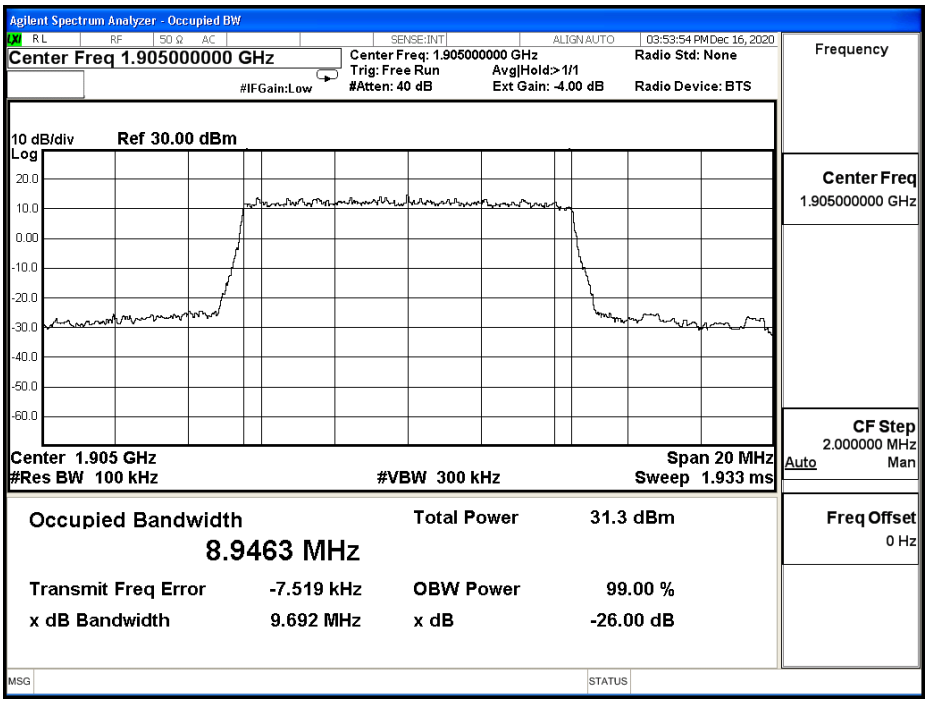
LTE_B2_CH18900_10M_QPSK_50RB0



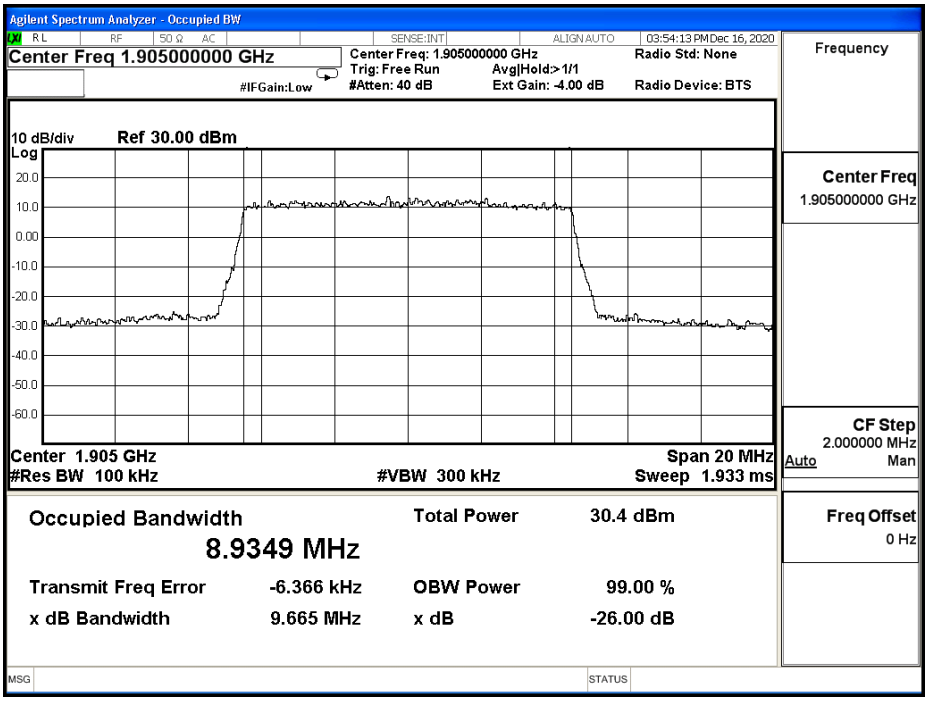
LTE_B2_CH18900_10M_16-QAM_50RB0



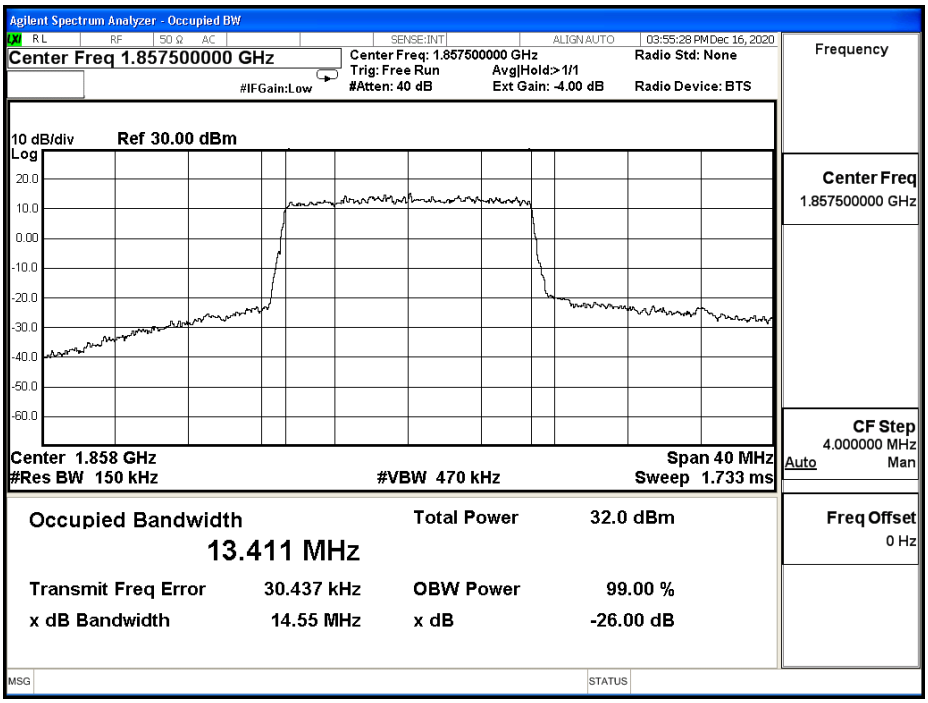
LTE_B2_CH19150_10M_QPSK_50RB0



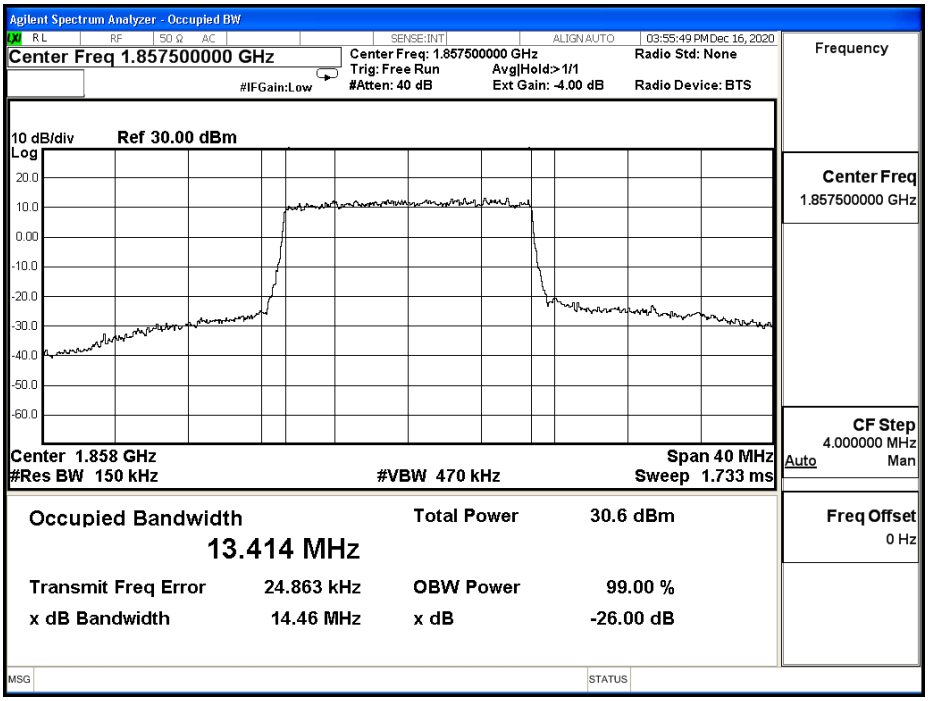
LTE_B2_CH19150_10M_16-QAM_50RB0



LTE_B2_CH18675_15M_QPSK_75RB0



LTE_B2_CH18675_15M_16-QAM_75RB0



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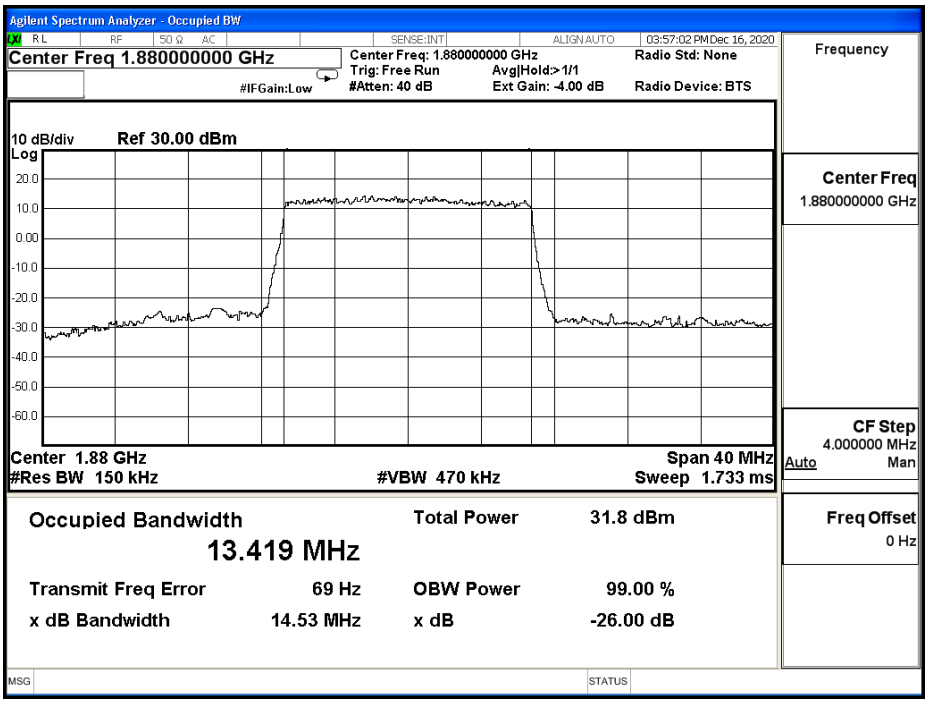

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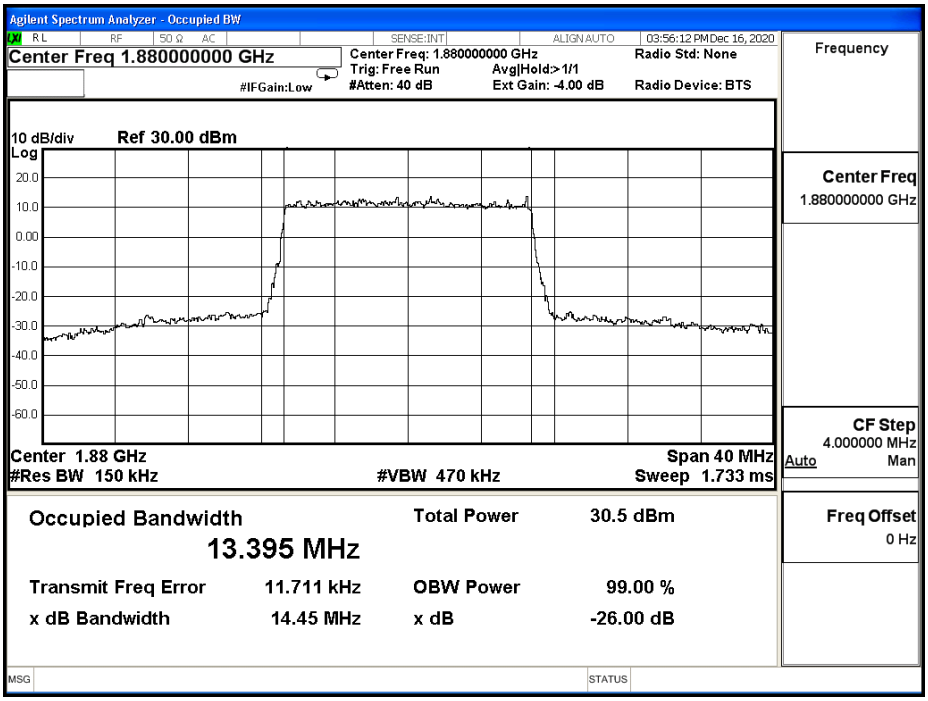
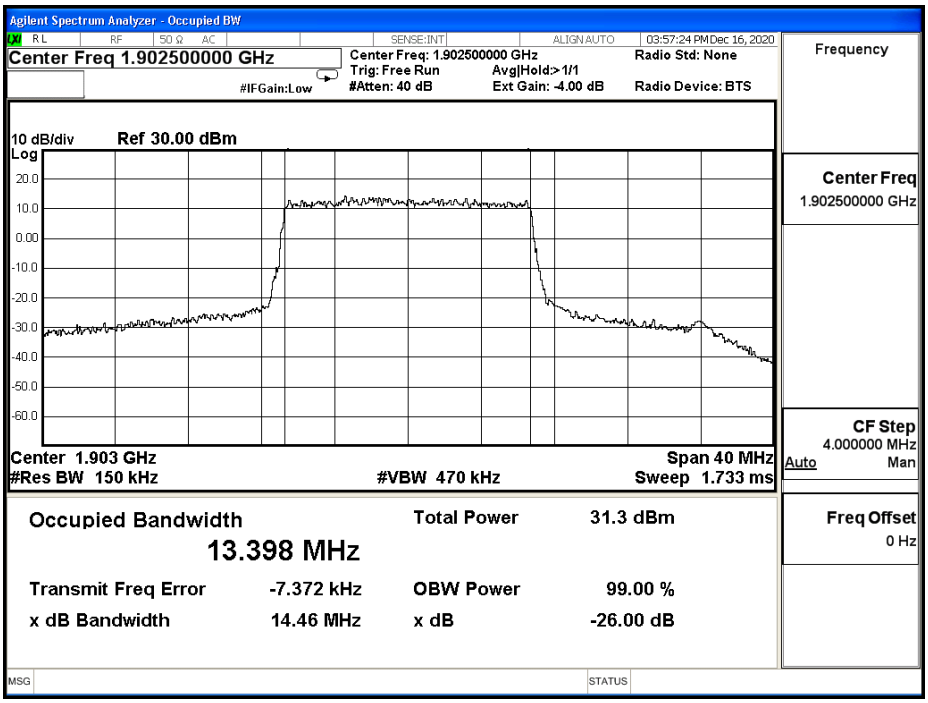
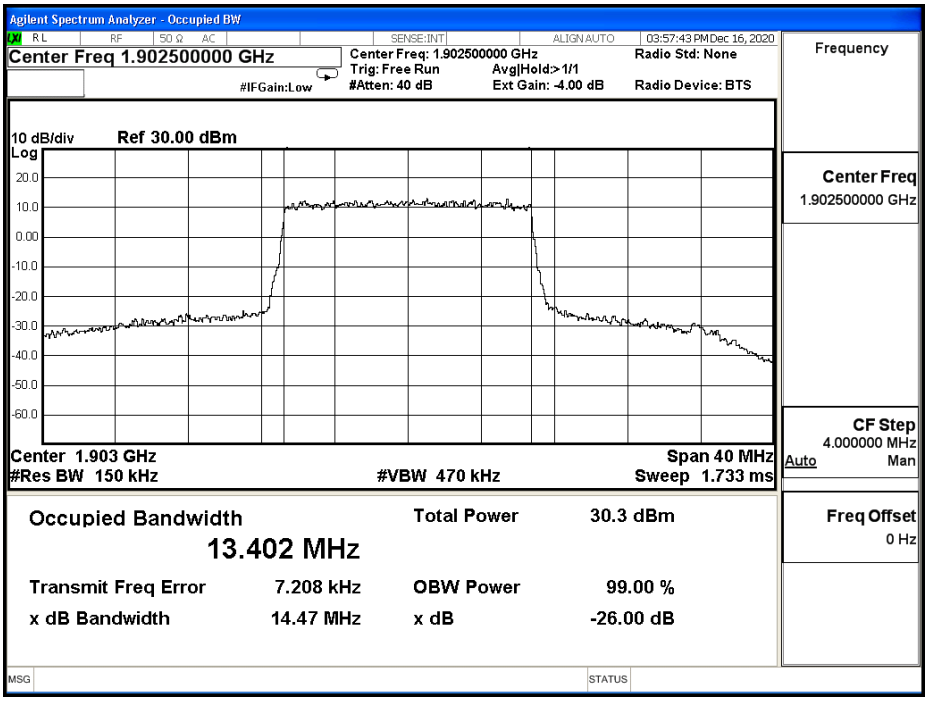


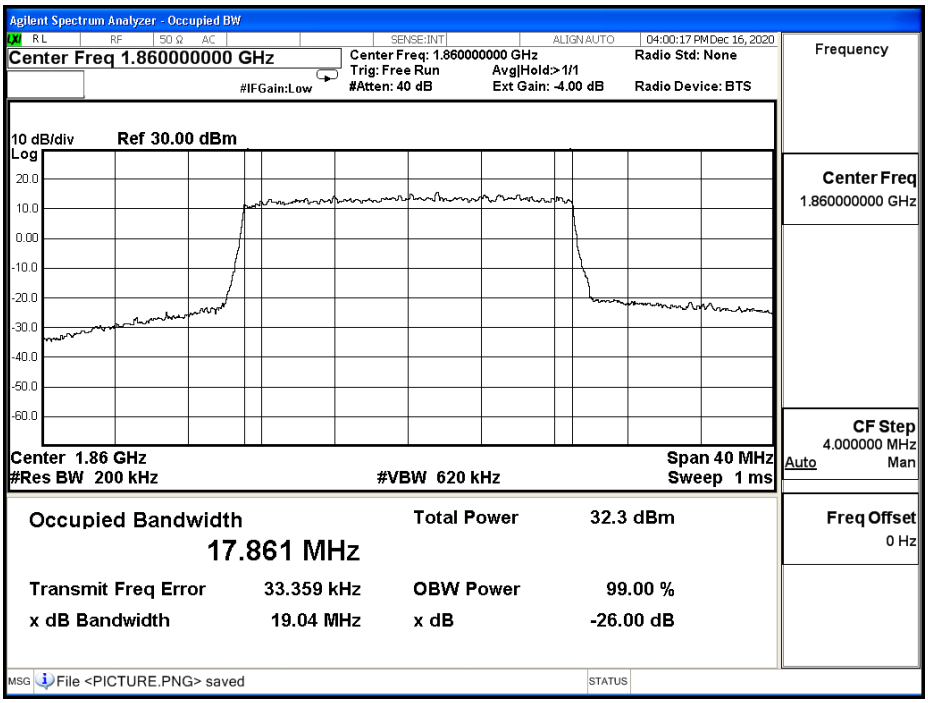
LTE_B2_CH19125_15M_QPSK_75RB0



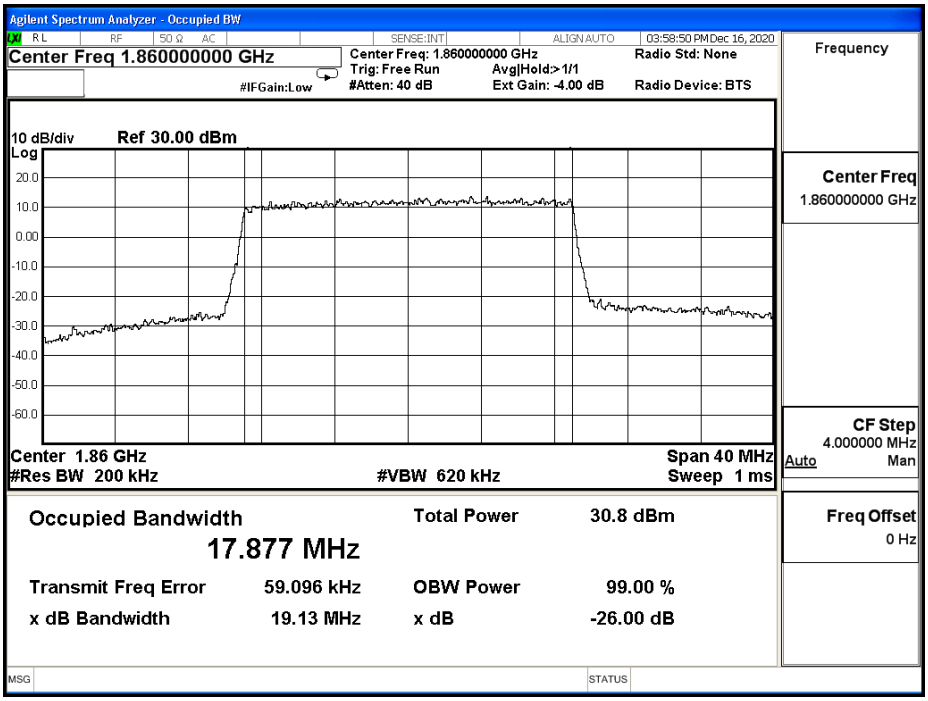
LTE_B2_CH19125_15M_16-QAM_75RB0



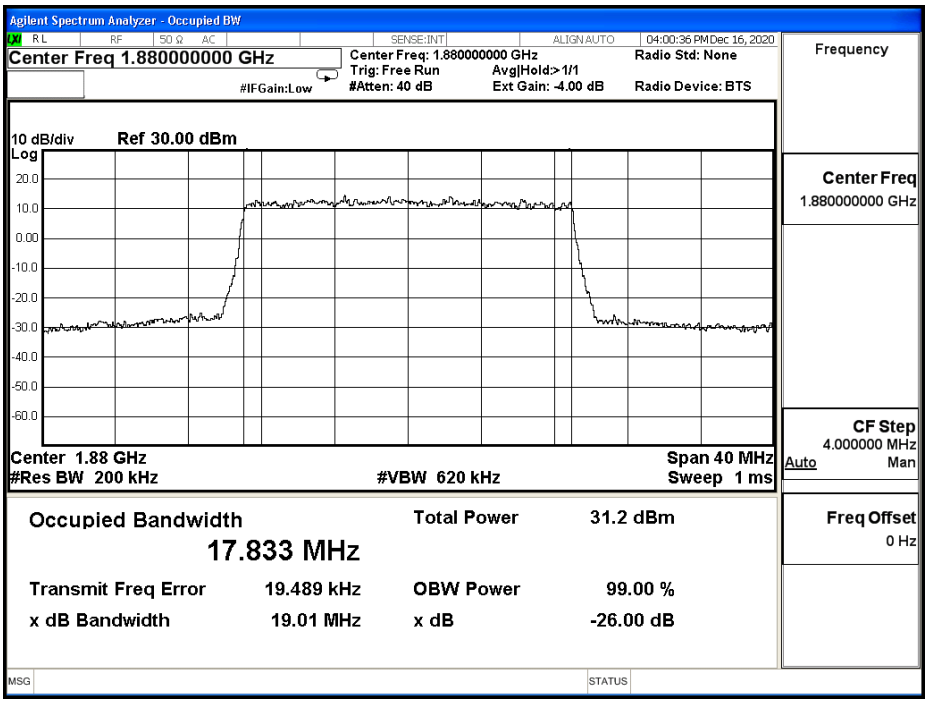
LTE_B2_CH18700_20M_QPSK_100RB0



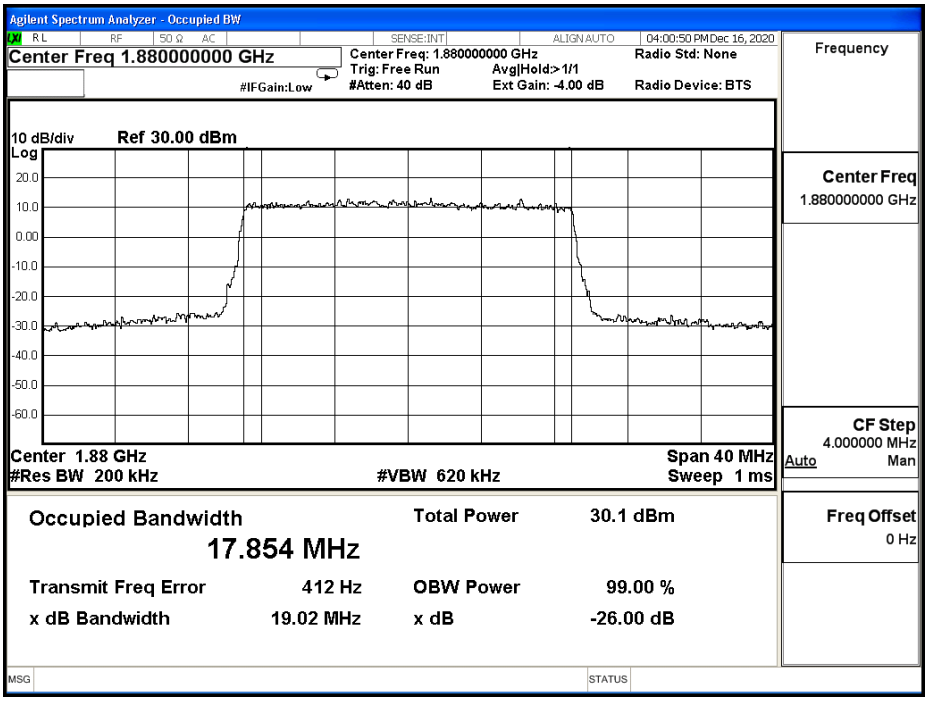
LTE_B2_CH18700_20M_16-QAM_100RB0



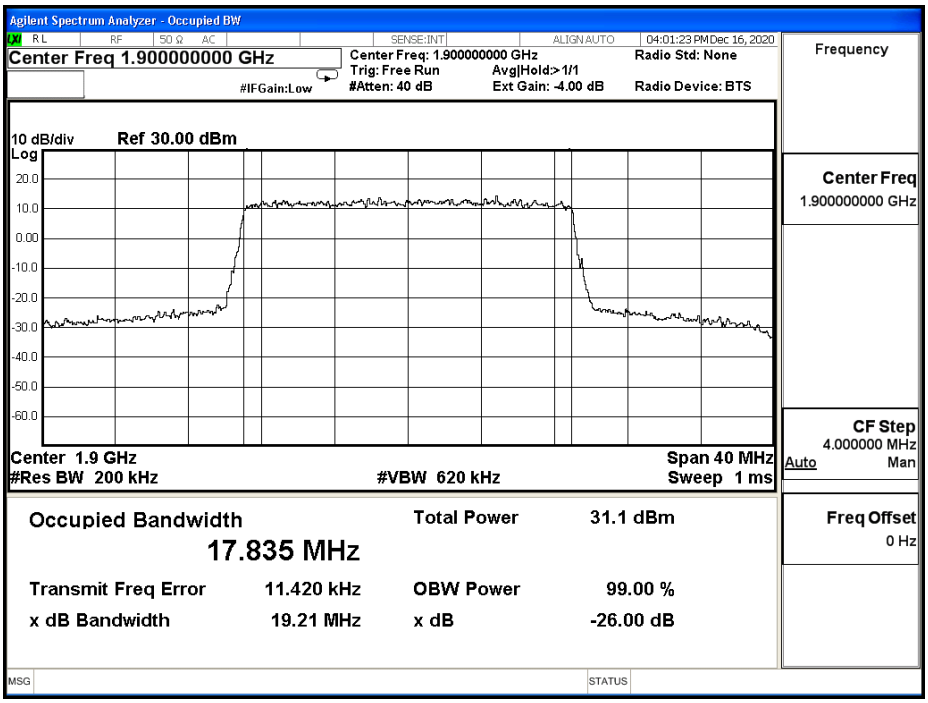
LTE_B2_CH18900_20M_QPSK_100RB0



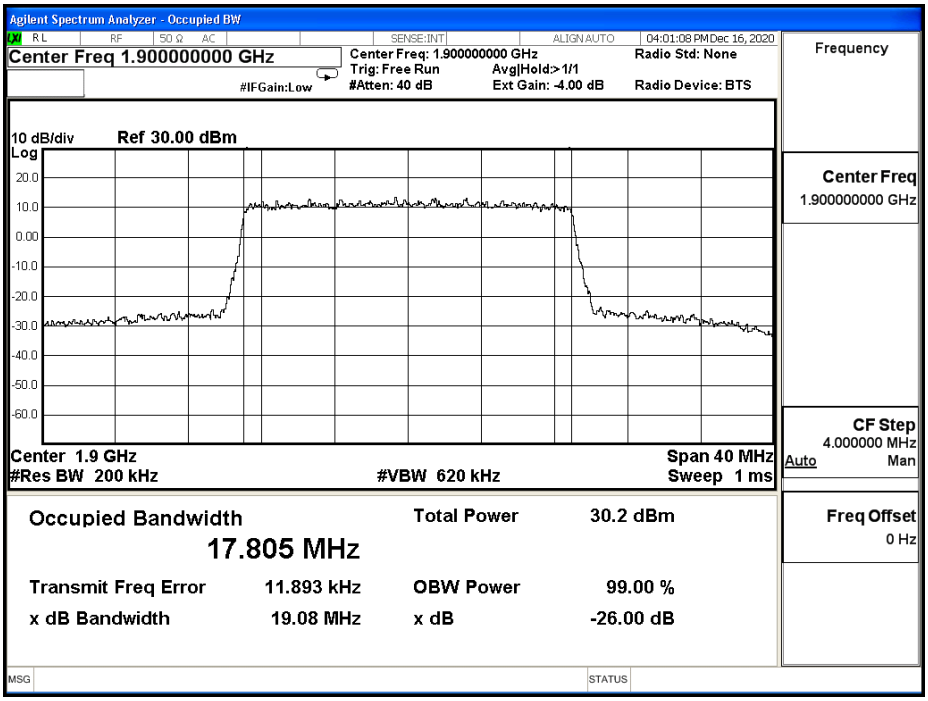
LTE_B2_CH18900_20M_16-QAM_100RB0



LTE_B2_CH19100_20M_QPSK_100RB0



LTE_B2_CH19100_20M_16-QAM_100RB0

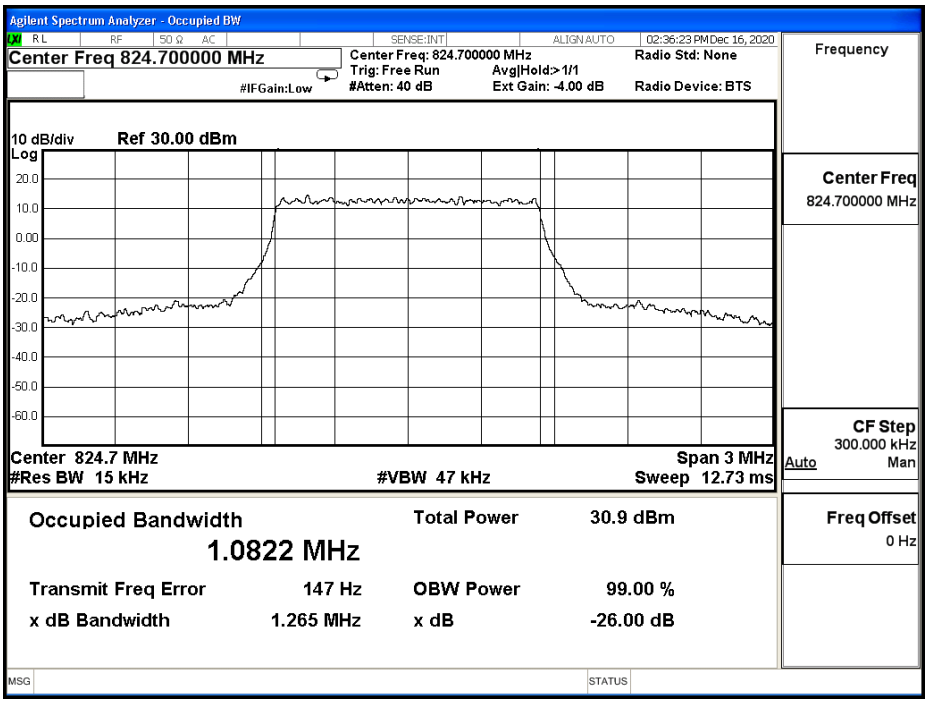


Product	M2M DATA MODULE		
Test Item	Occupied Bandwidth		
Test Mode	Mode 2: LTE Band 5		
Date of Test	2020/12/16	Test Site	SR12-H
Temperature (°C)	24	Humidity (%RH)	62

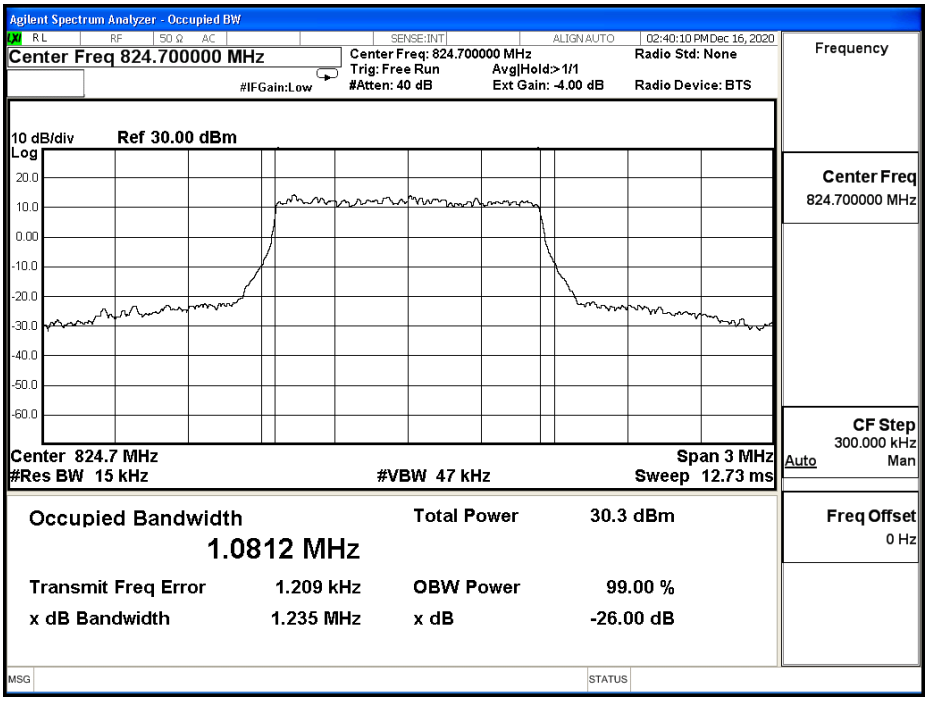
LTE Band 5

Bandwidth (MHz)	Modulation	Frequency (MHz)	Measure Level (MHz)		Limit (MHz)
			26dB BW	99% BW	
1.4M	QPSK	824.7	1.265	1.082	N/A
		836.5	1.238	1.088	N/A
		848.3	1.263	1.081	N/A
	16-QAM	824.7	1.235	1.081	N/A
		836.5	1.257	1.082	N/A
		848.3	1.270	1.083	N/A
3M	QPSK	825.5	2.931	2.690	N/A
		836.5	2.934	2.693	N/A
		847.5	2.943	2.691	N/A
	16-QAM	825.5	2.963	2.690	N/A
		836.5	2.939	2.687	N/A
		847.5	2.934	2.685	N/A
5M	QPSK	826.5	4.934	4.488	N/A
		836.5	4.872	4.468	N/A
		846.5	4.874	4.483	N/A
	16-QAM	826.5	4.914	4.478	N/A
		836.5	4.938	4.472	N/A
		846.5	4.920	4.477	N/A
10M	QPSK	829.0	9.803	8.951	N/A
		836.5	9.610	8.930	N/A
		844.0	9.631	8.914	N/A
	16-QAM	829.0	9.593	8.945	N/A
		836.5	9.643	8.926	N/A
		844.0	9.636	8.927	N/A

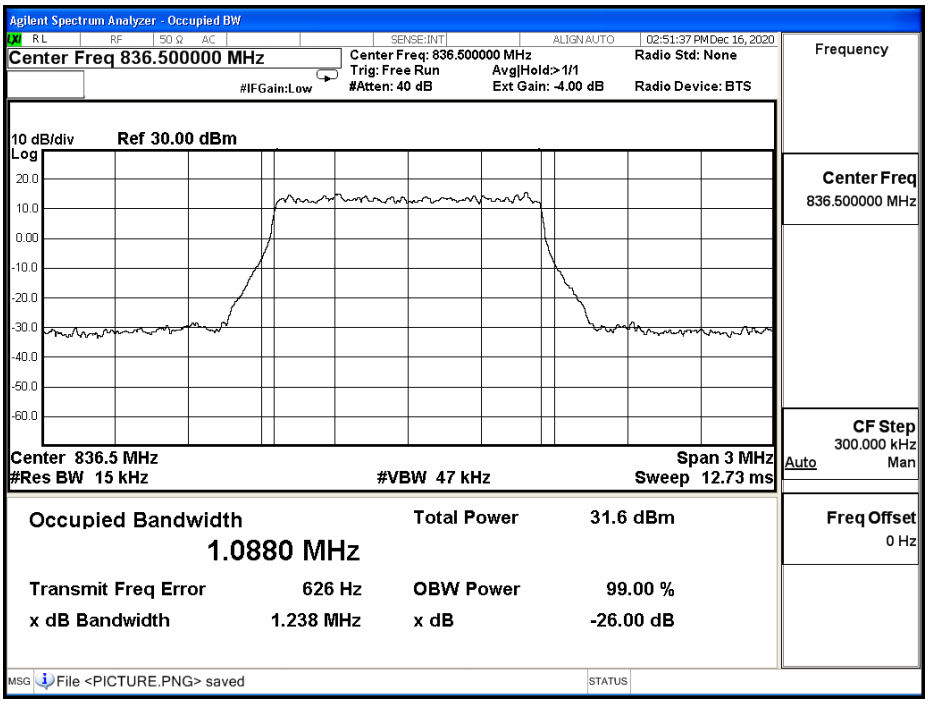
LTE_B5_CH20407_1.4M_QPSK_6RB0



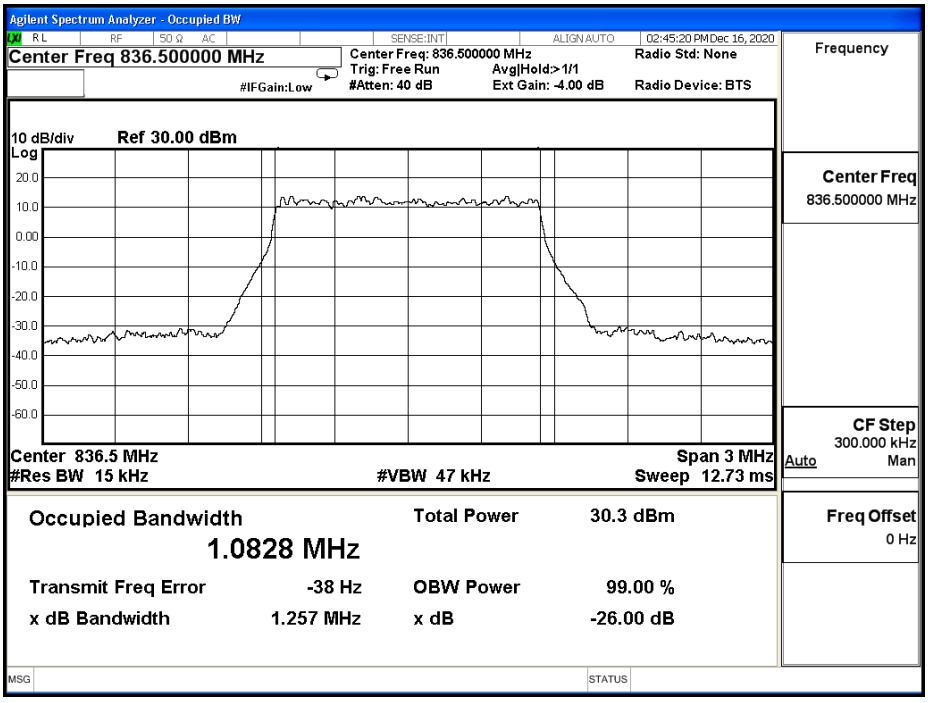
LTE_B5_CH20407_1.4M_16-QAM_6RB0



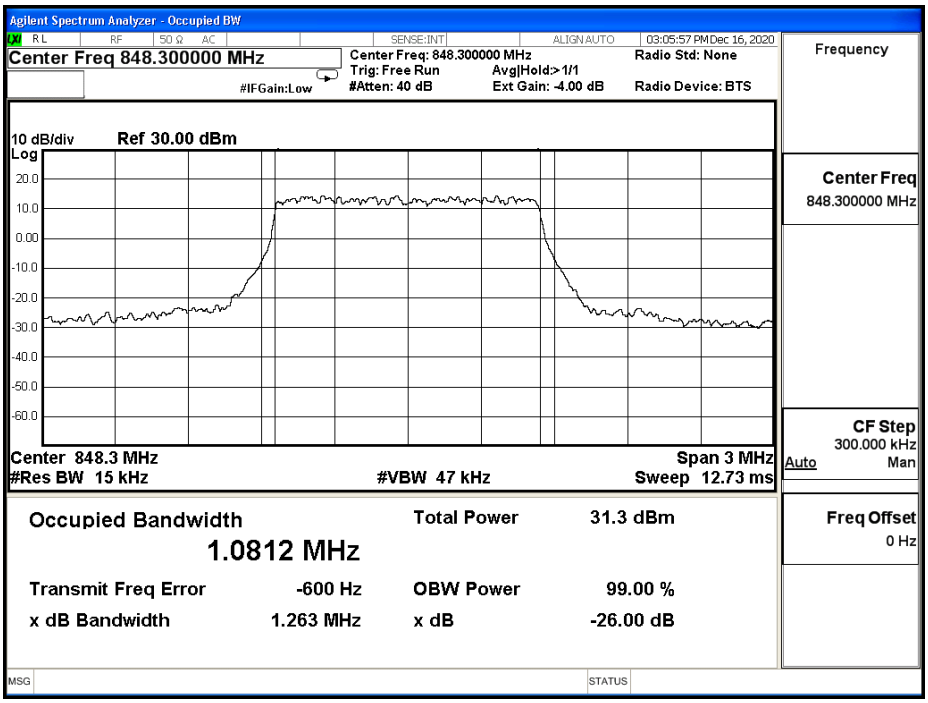
LTE_B5_CH20525_1.4M_QPSK_6RB0



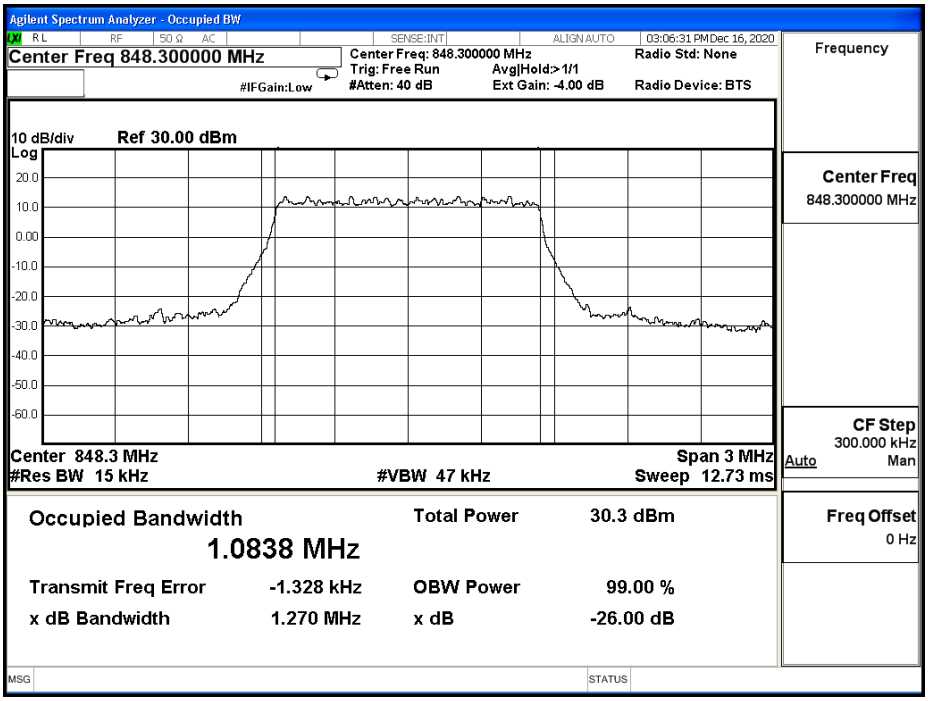
LTE_B5_CH20525_1.4M_16-QAM_6RB0



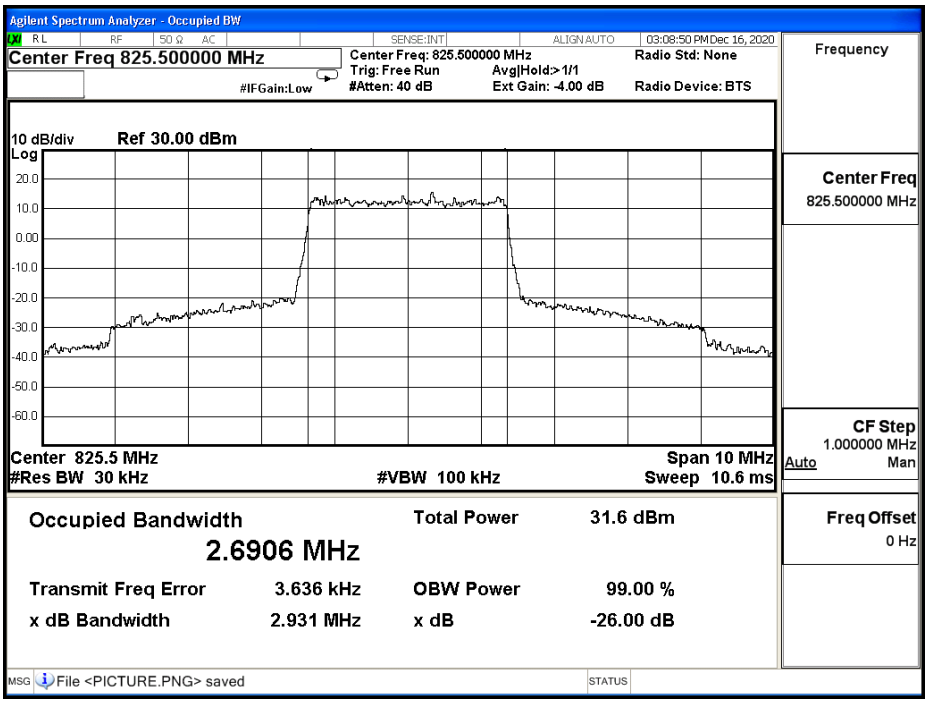
LTE_B5_CH20643_1.4M_QPSK_6RB0



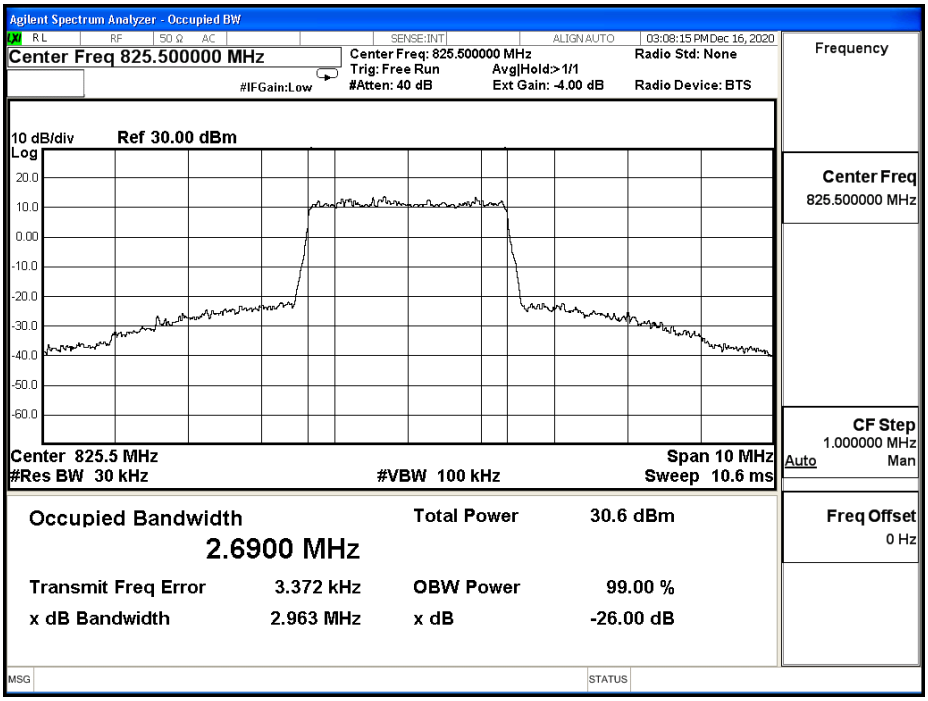
LTE_B5_CH20643_1.4M_16-QAM_6RB0



LTE_B5_CH20415_3M_QPSK_15RB0



LTE_B5_CH20415_3M_16-QAM_15RB0



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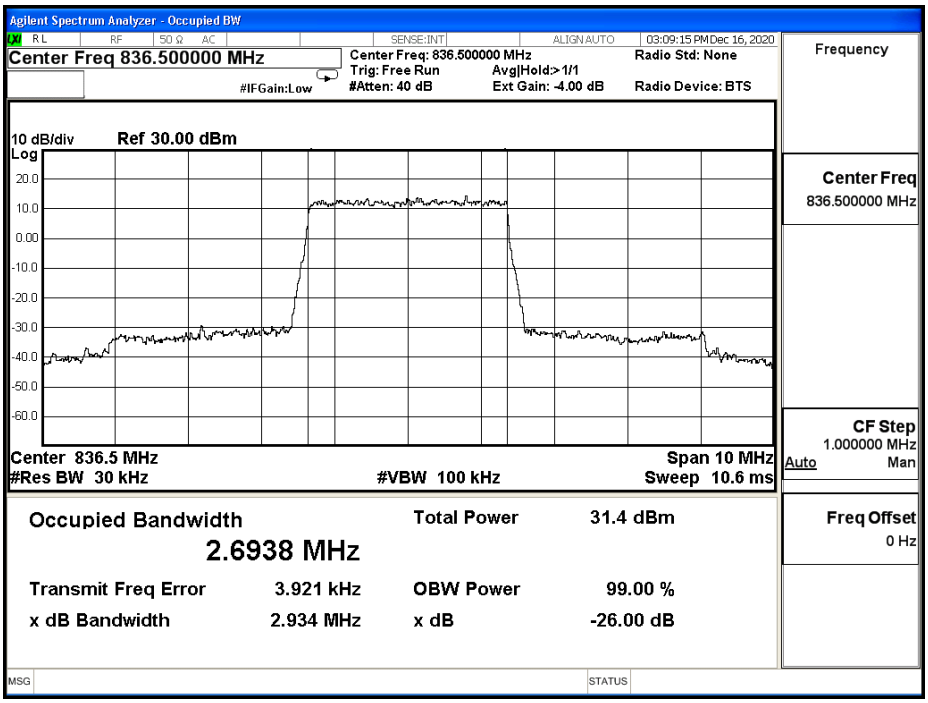

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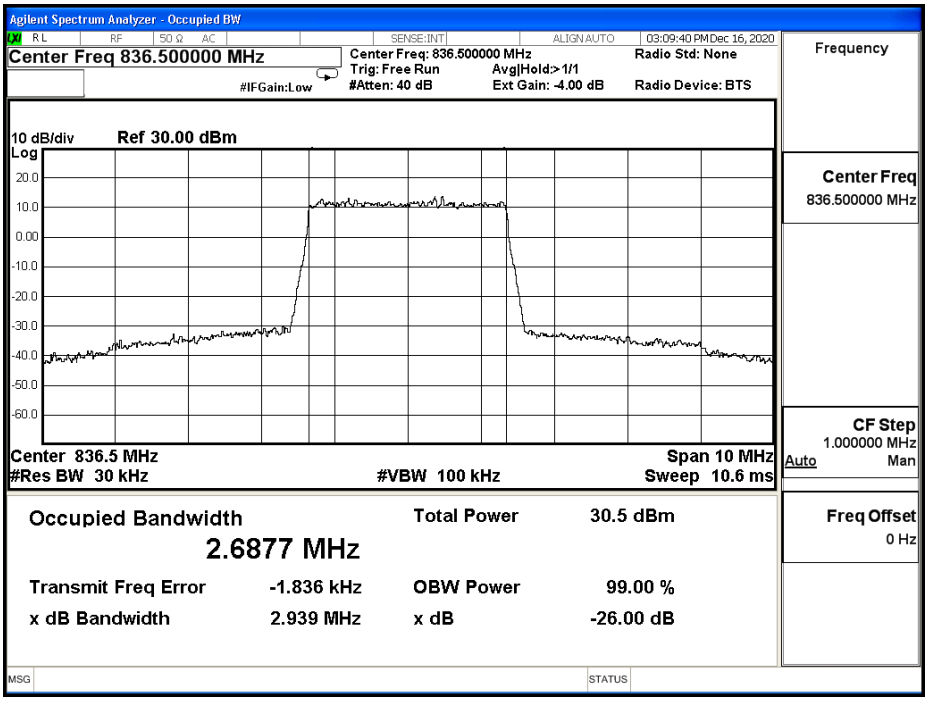

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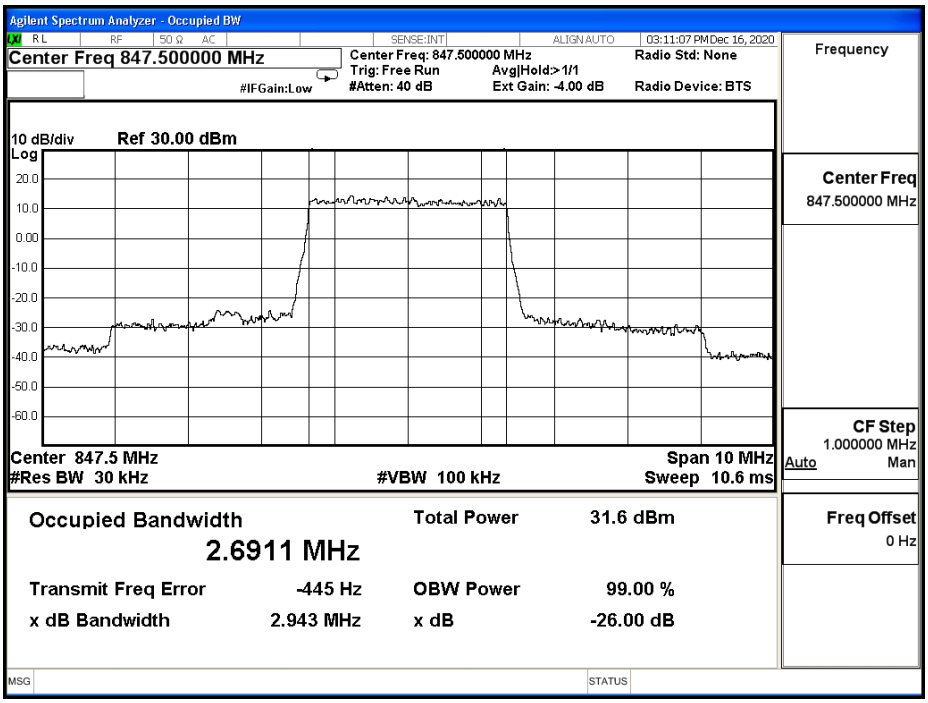

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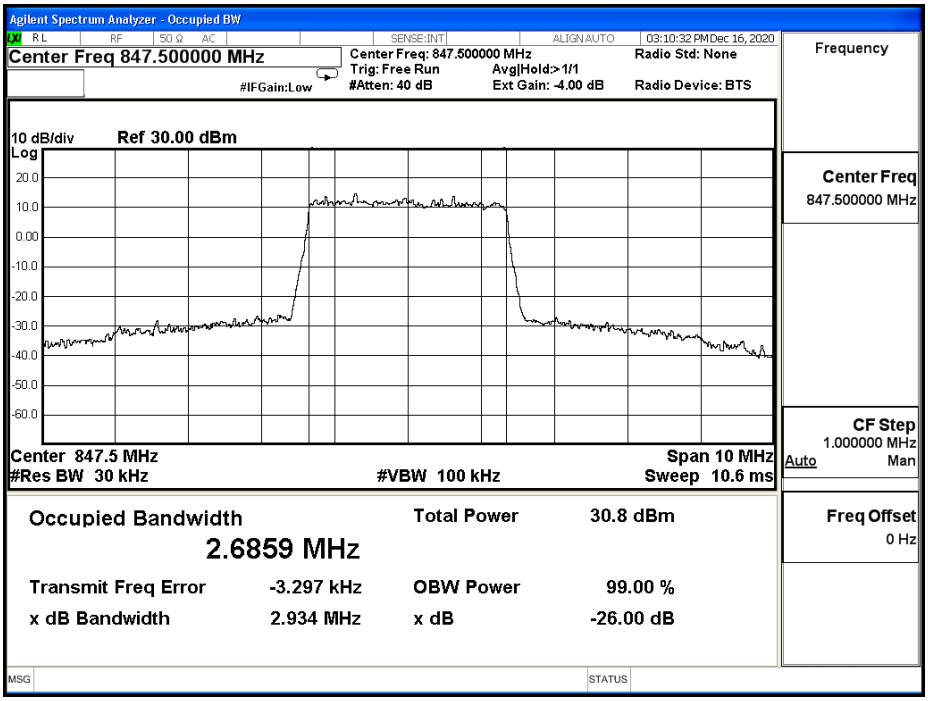
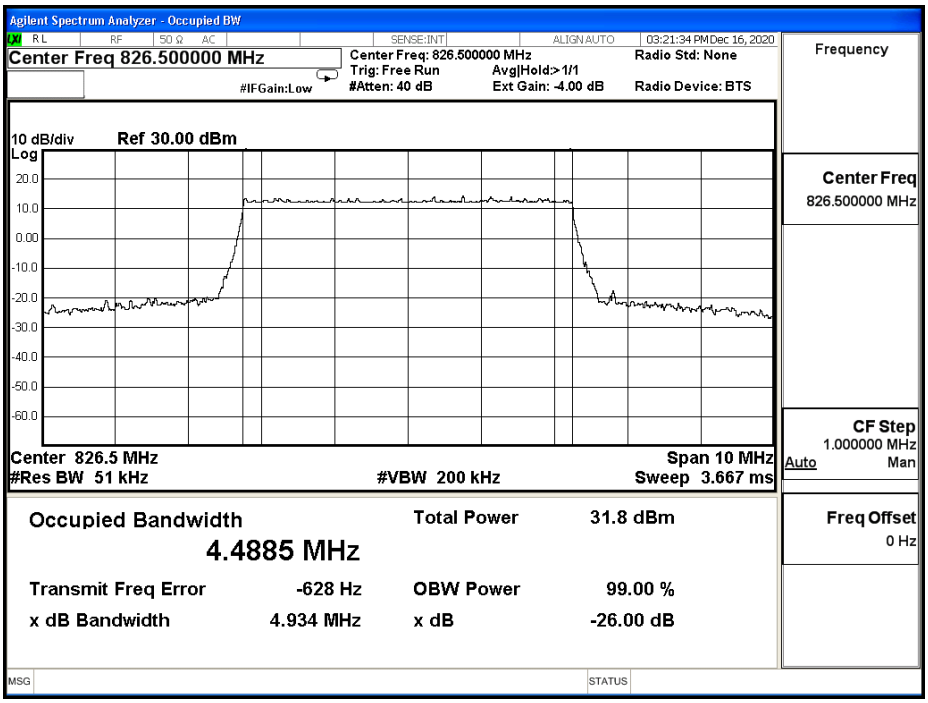
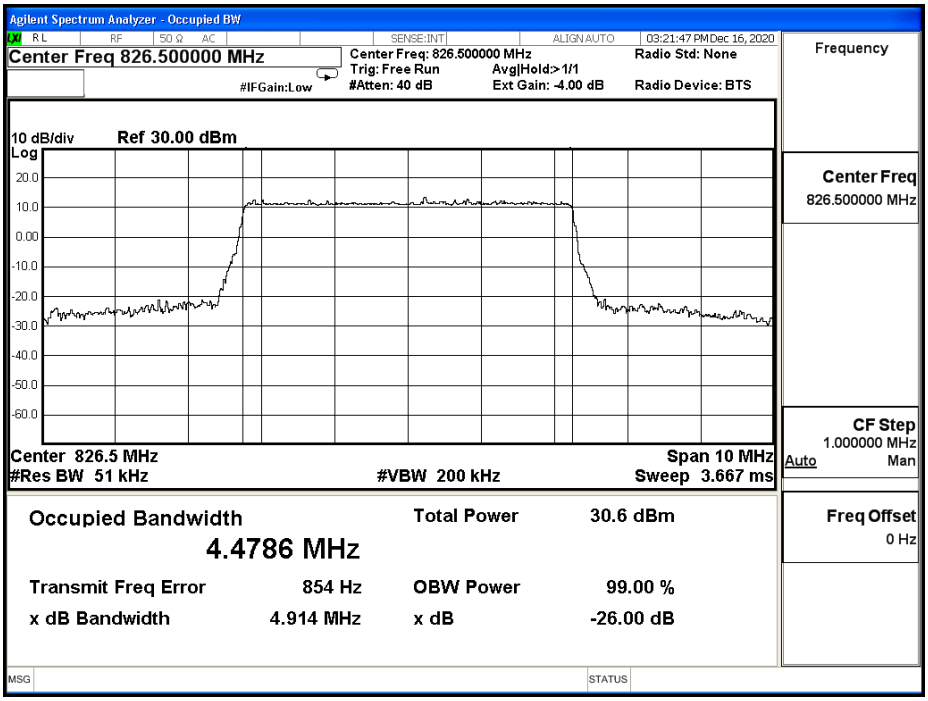


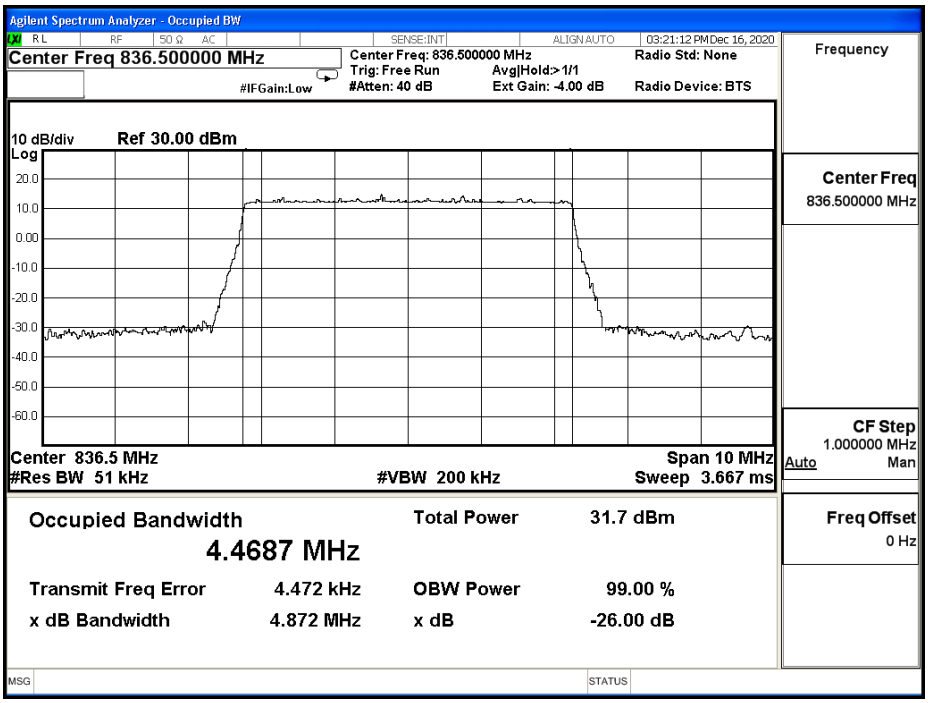
LTE_B5_CH20425_5M_QPSK_25RB0



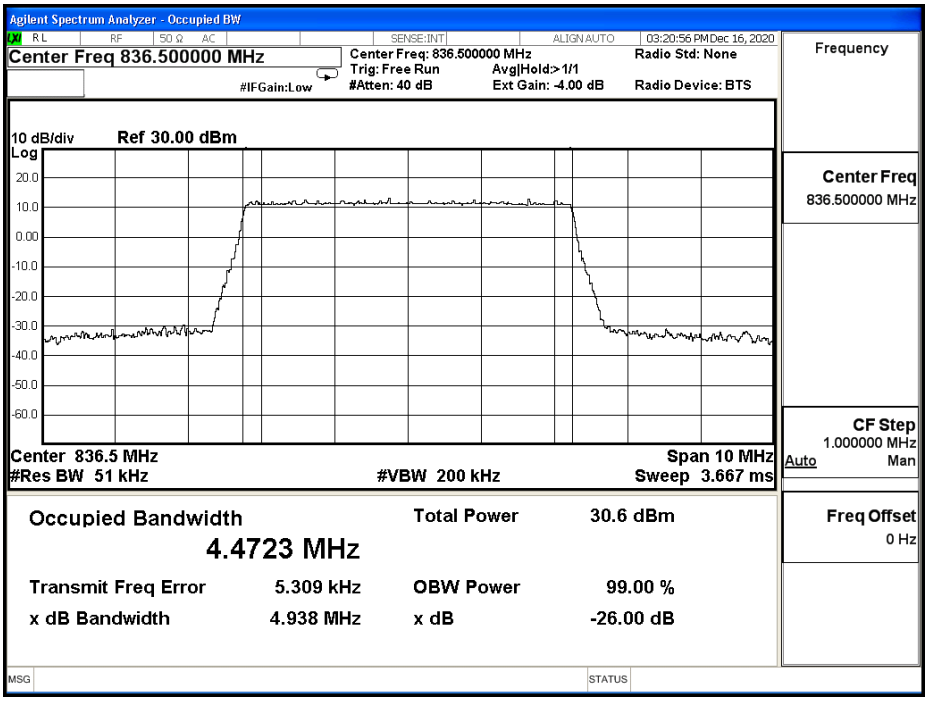
LTE_B5_CH20425_5M_16-QAM_25RB0



LTE_B5_CH20525_5M_QPSK_25RB0



LTE_B5_CH20525_5M_16-QAM_25RB0



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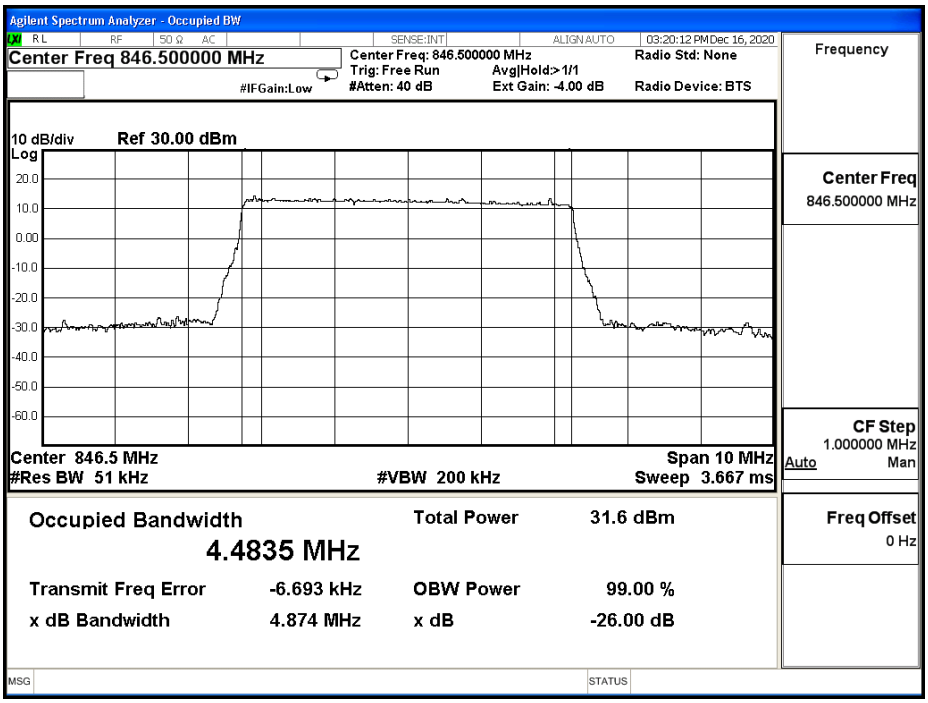

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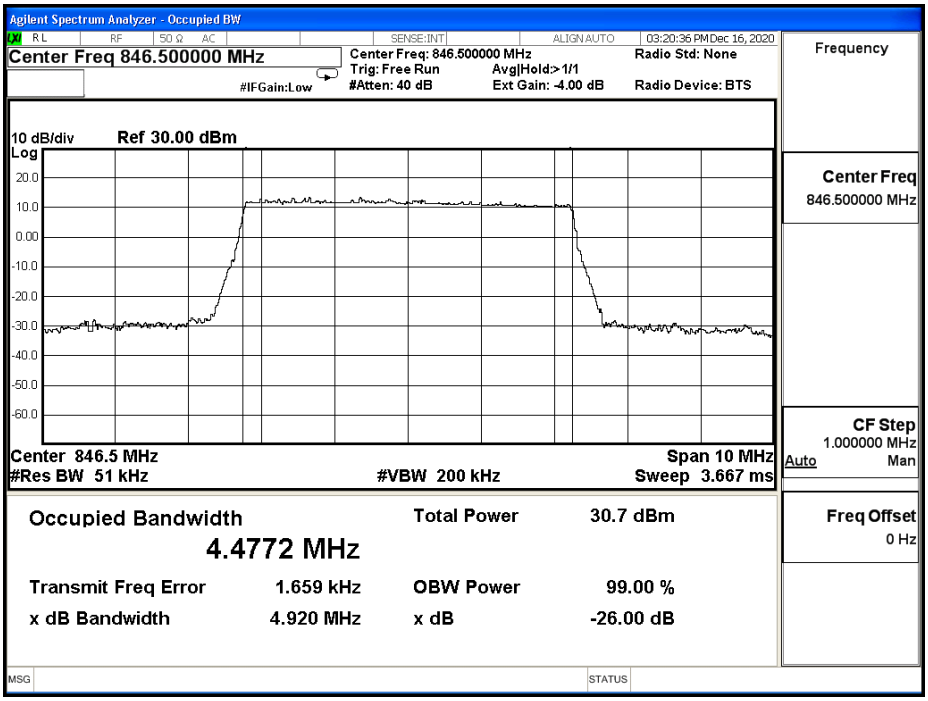
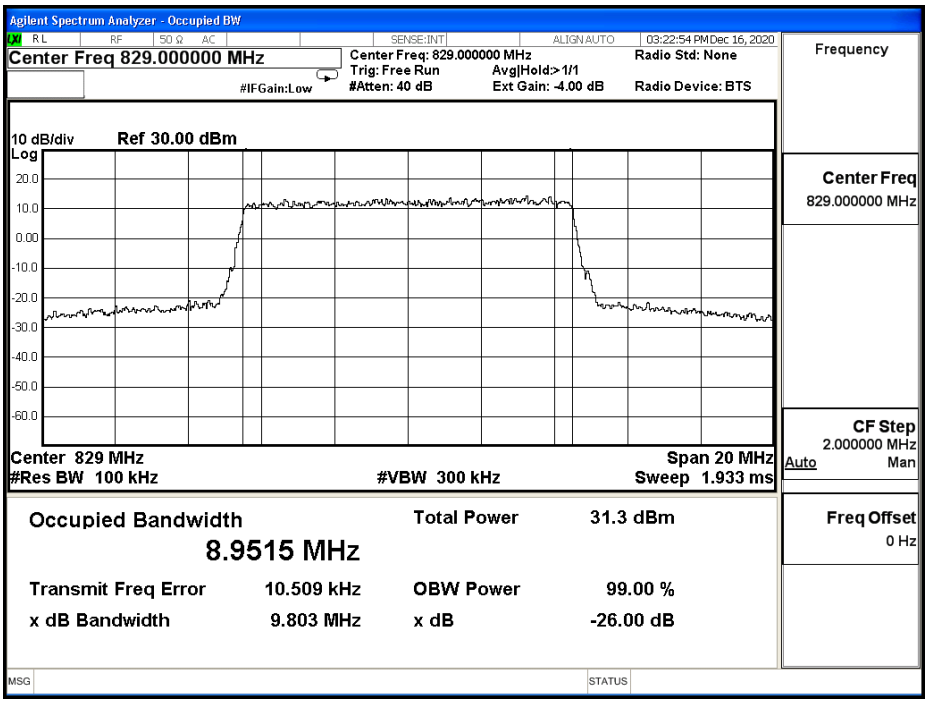
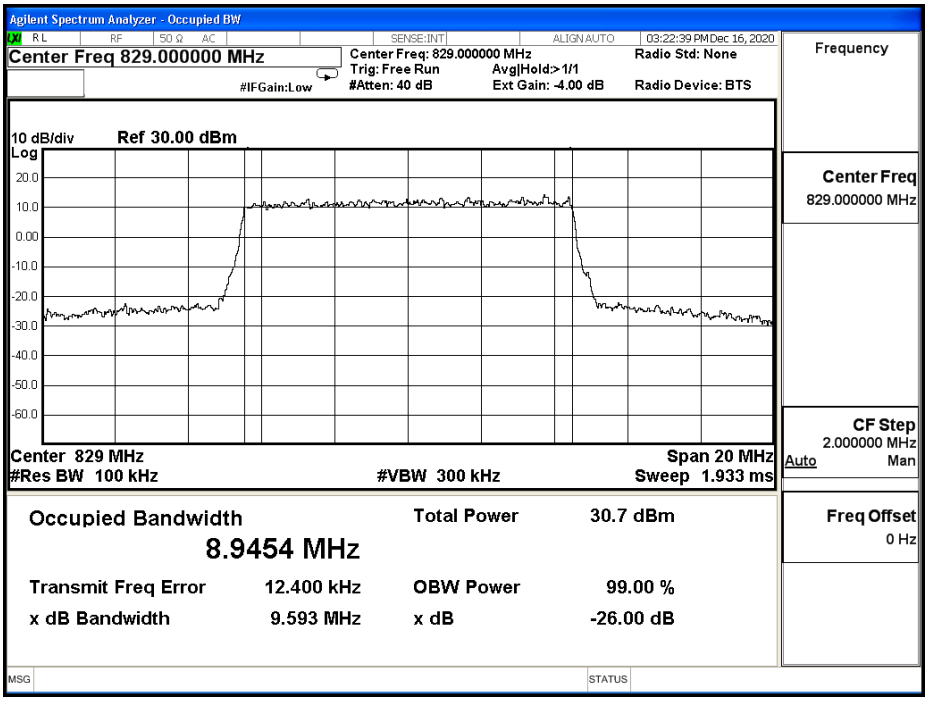


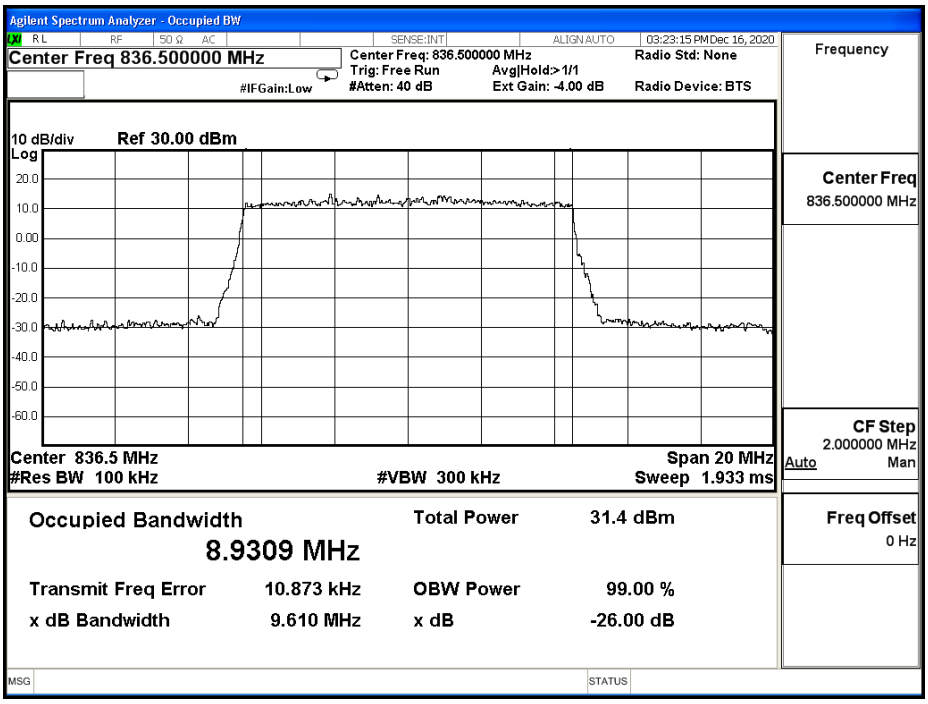
LTE_B5_CH20450_10M_QPSK_50RB0



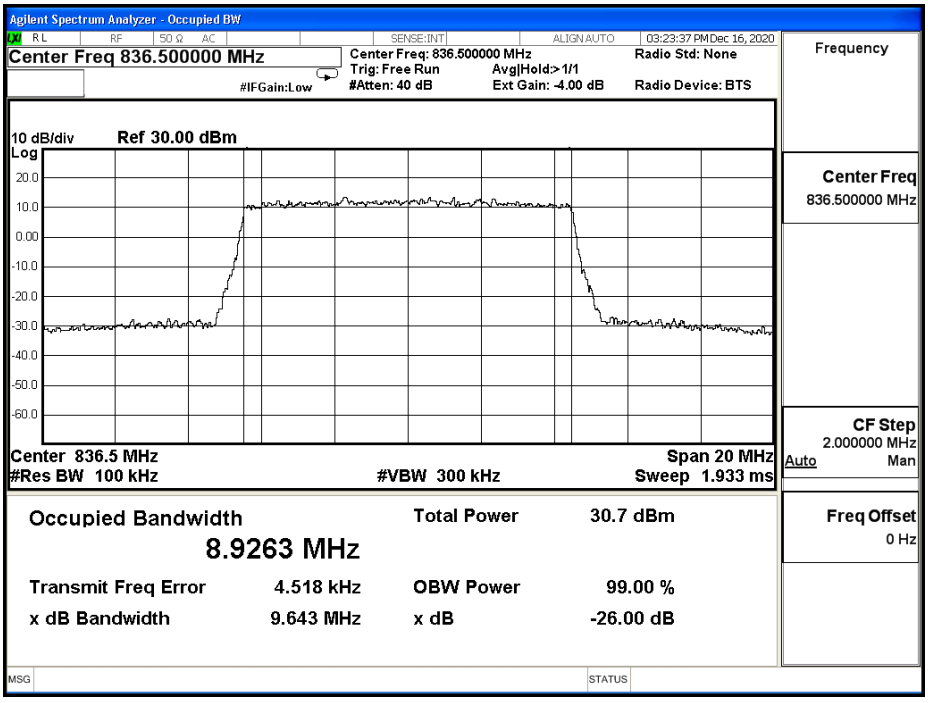
LTE_B5_CH20450_10M_16-QAM_50RB0



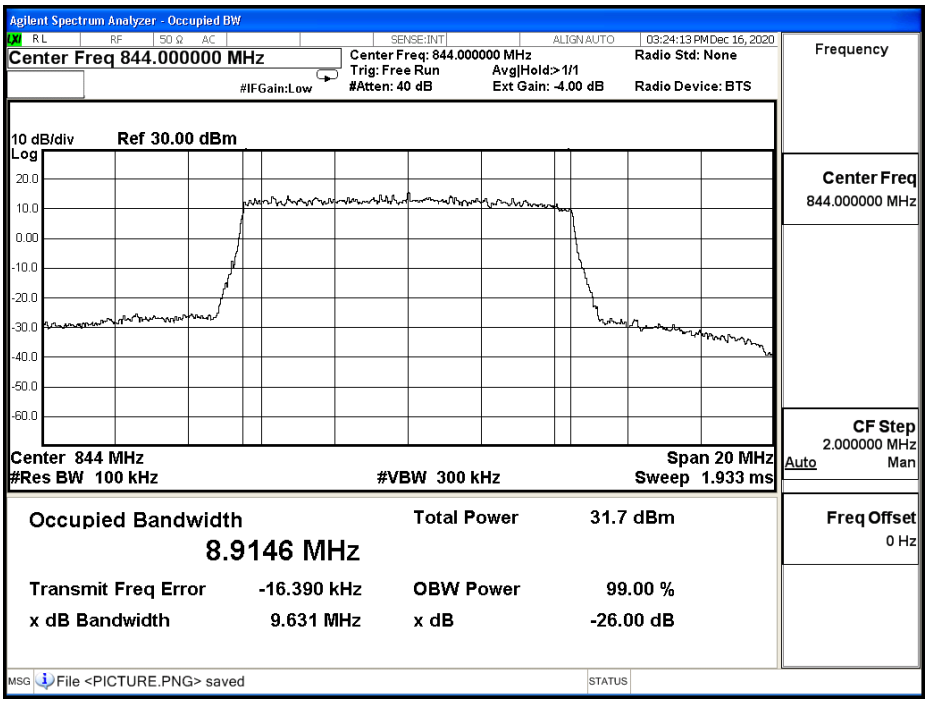
LTE_B5_CH20525_10M_QPSK_50RB0



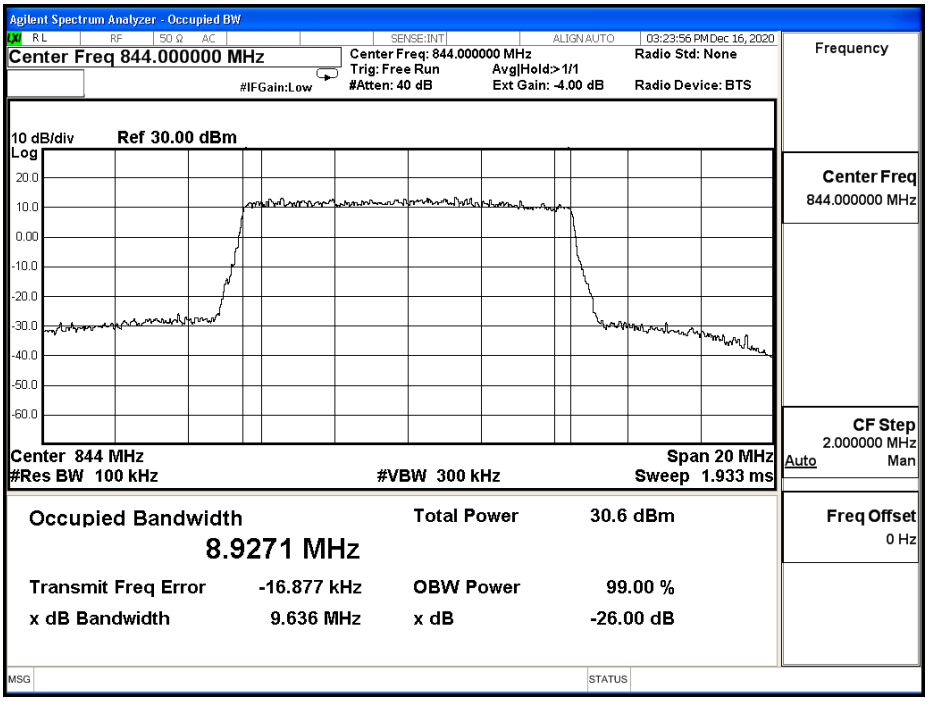
LTE_B5_CH20525_10M_16-QAM_50RB0



LTE_B5_CH20600_10M_QPSK_50RB0



LTE_B5_CH20600_10M_16-QAM_50RB0

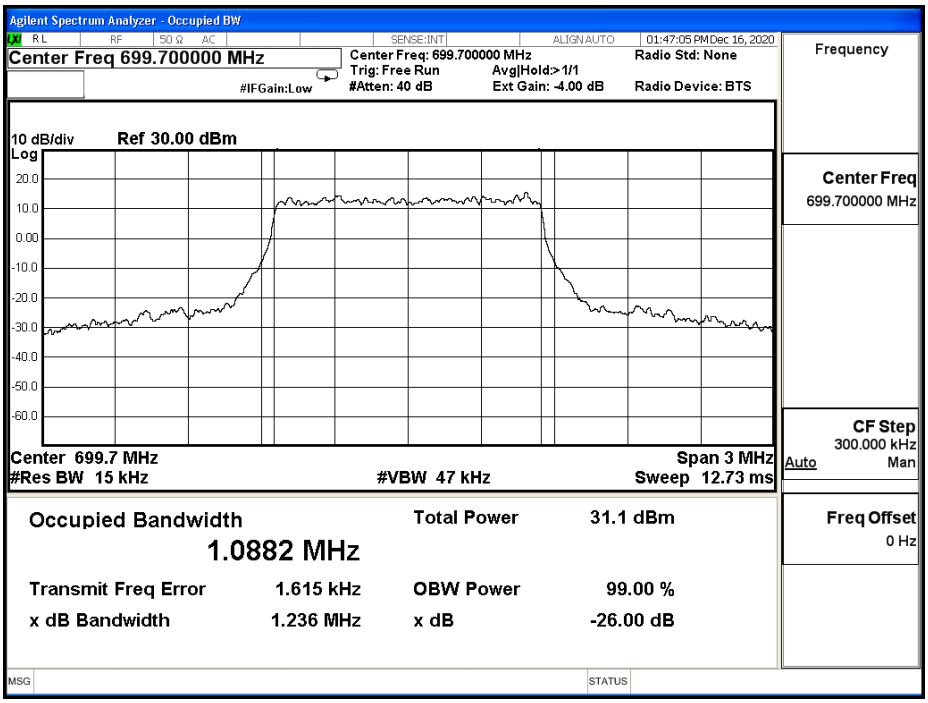


Product	M2M DATA MODULE		
Test Item	Occupied Bandwidth		
Test Mode	Mode 3: LTE Band 12		
Date of Test	2020/12/16	Test Site	SR12-H
Temperature (°C)	24	Humidity (%RH)	62

LTE Band 12

Bandwidth (MHz)	Modulation	Frequency (MHz)	Measure Level (MHz)		Limit (MHz)
			26dB BW	99% BW	
1.4M	QPSK	699.7	1.236	1.088	N/A
		707.5	1.252	1.080	N/A
		715.3	1.263	1.081	N/A
	16-QAM	699.7	1.253	1.083	N/A
		707.5	1.271	1.083	N/A
		715.3	1.230	1.081	N/A
3M	QPSK	700.5	2.928	2.689	N/A
		707.5	2.941	2.697	N/A
		714.5	2.949	2.689	N/A
	16-QAM	700.5	2.955	2.688	N/A
		707.5	2.943	2.689	N/A
		714.5	2.946	2.685	N/A
5M	QPSK	701.5	4.921	4.488	N/A
		707.5	4.945	4.488	N/A
		713.5	4.920	4.465	N/A
	16-QAM	701.5	4.893	4.470	N/A
		707.5	4.940	4.484	N/A
		713.5	4.956	4.477	N/A
10M	QPSK	704.0	9.720	8.924	N/A
		707.5	9.673	8.933	N/A
		711.0	9.706	8.943	N/A
	16-QAM	704.0	9.628	8.925	N/A
		707.5	9.696	8.954	N/A
		711.0	9.719	8.939	N/A

LTE_B12_CH23017_1.4M_QPSK_6RB0



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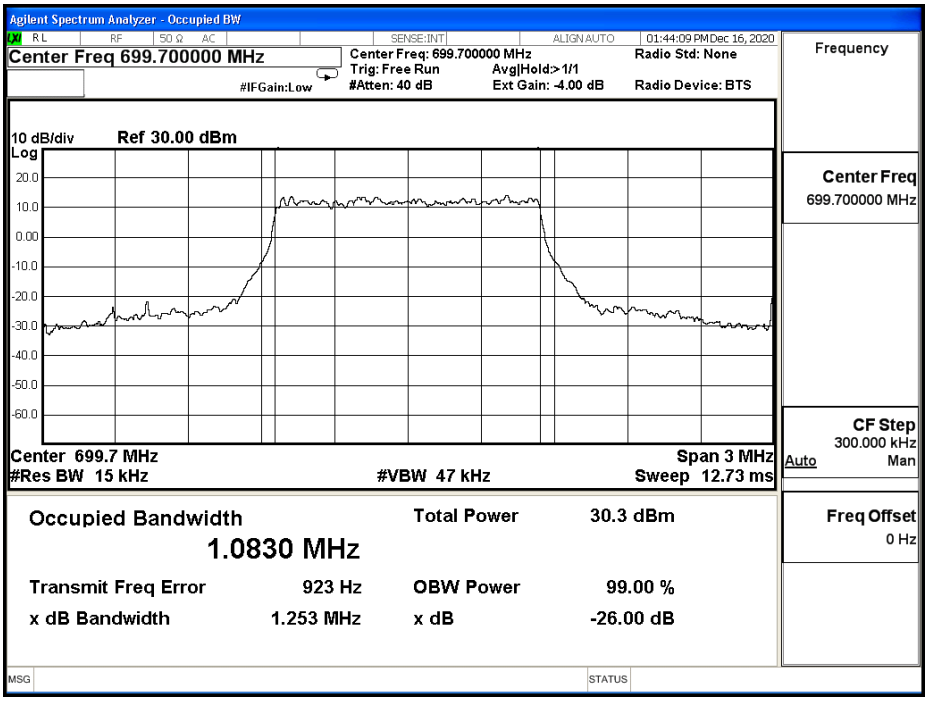

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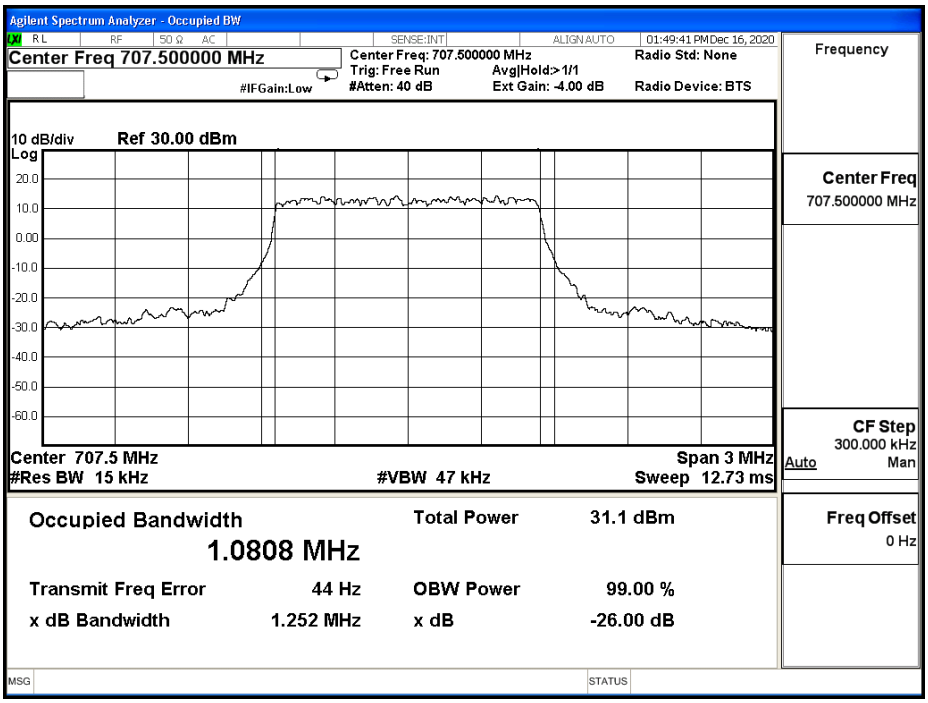

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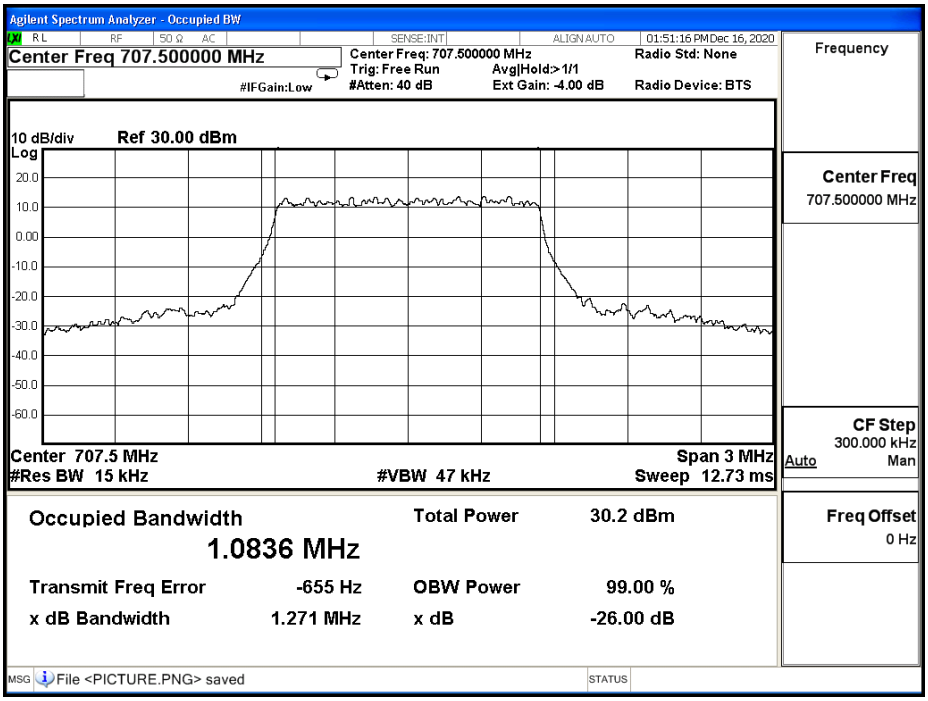

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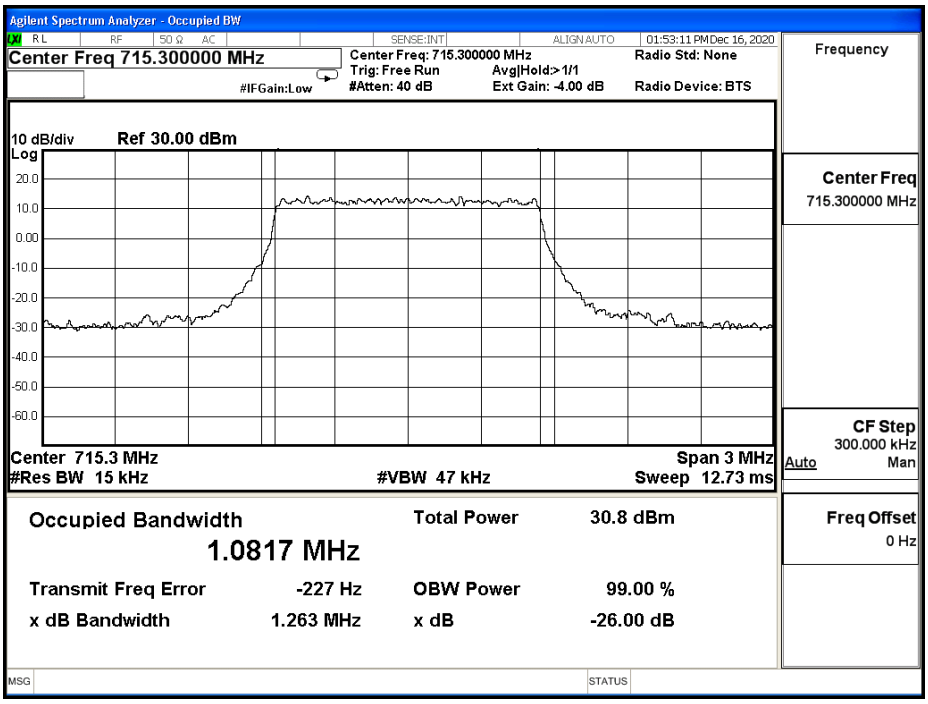

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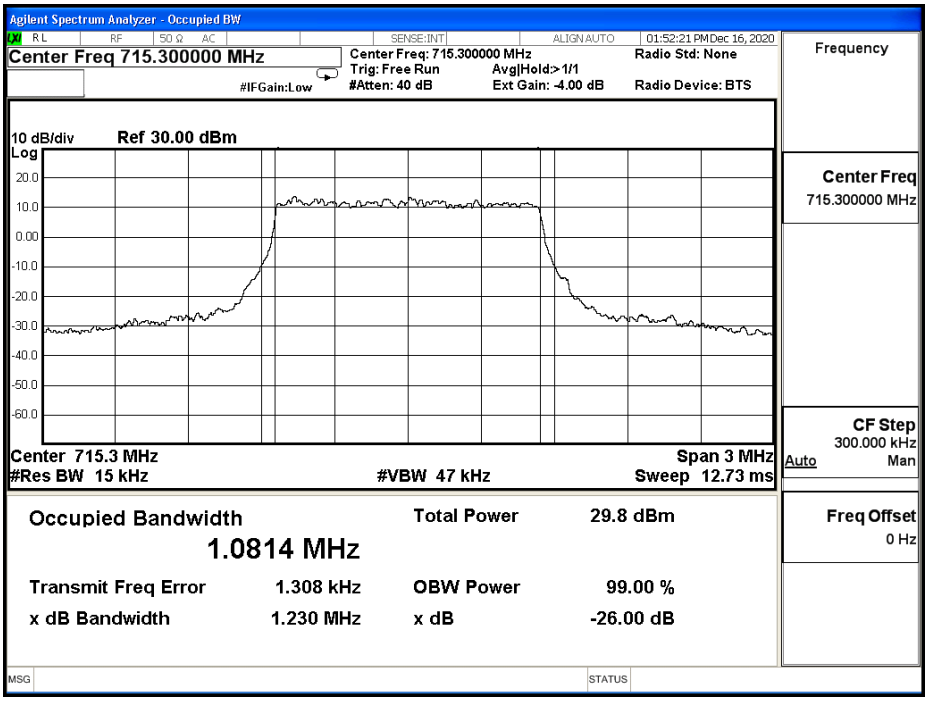

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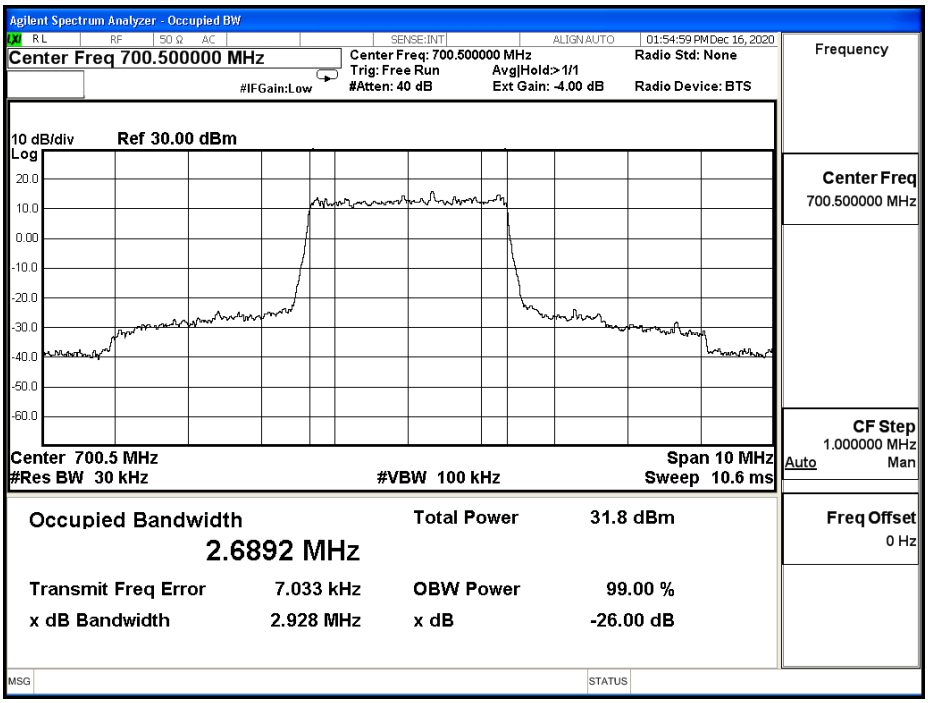

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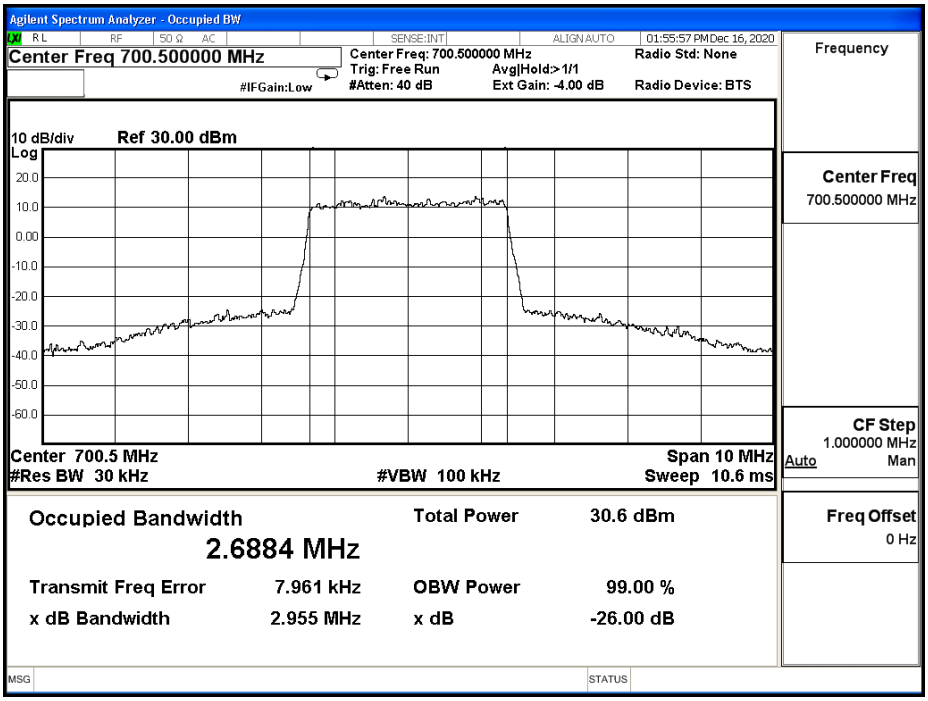

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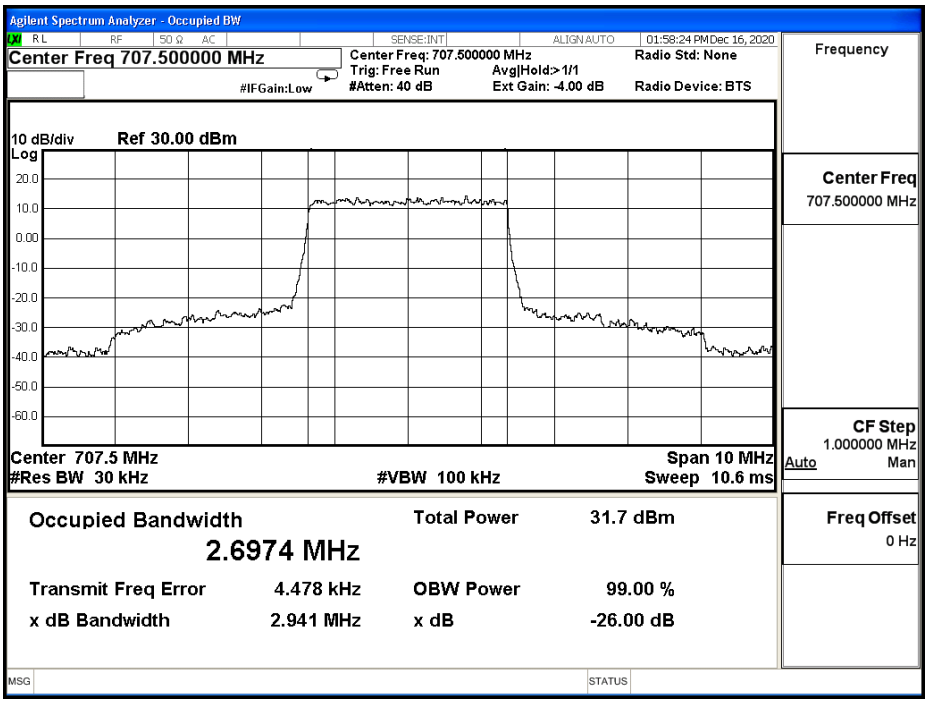

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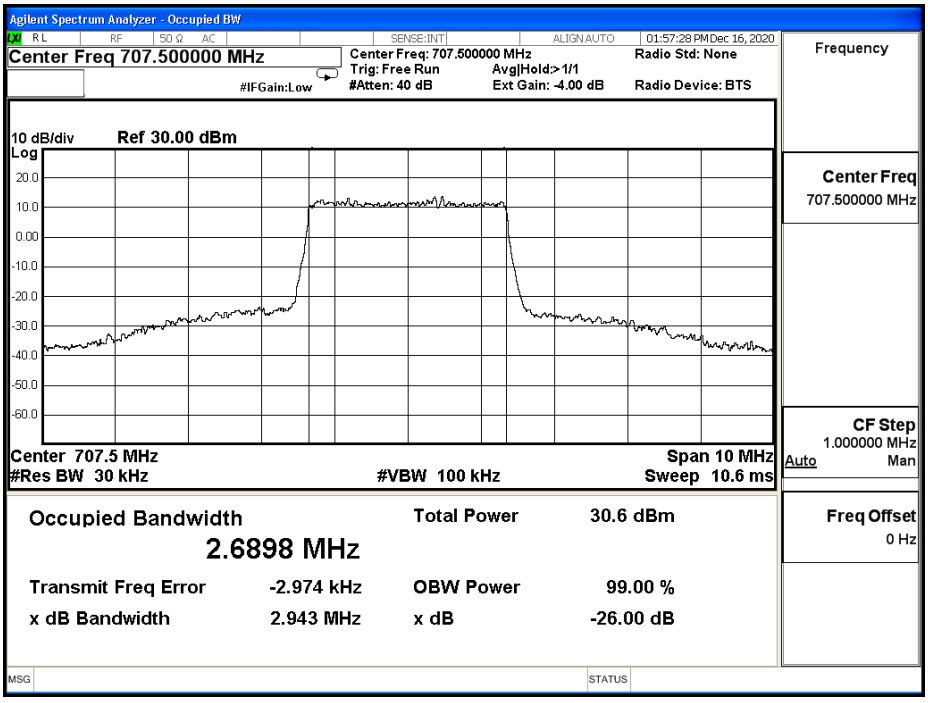

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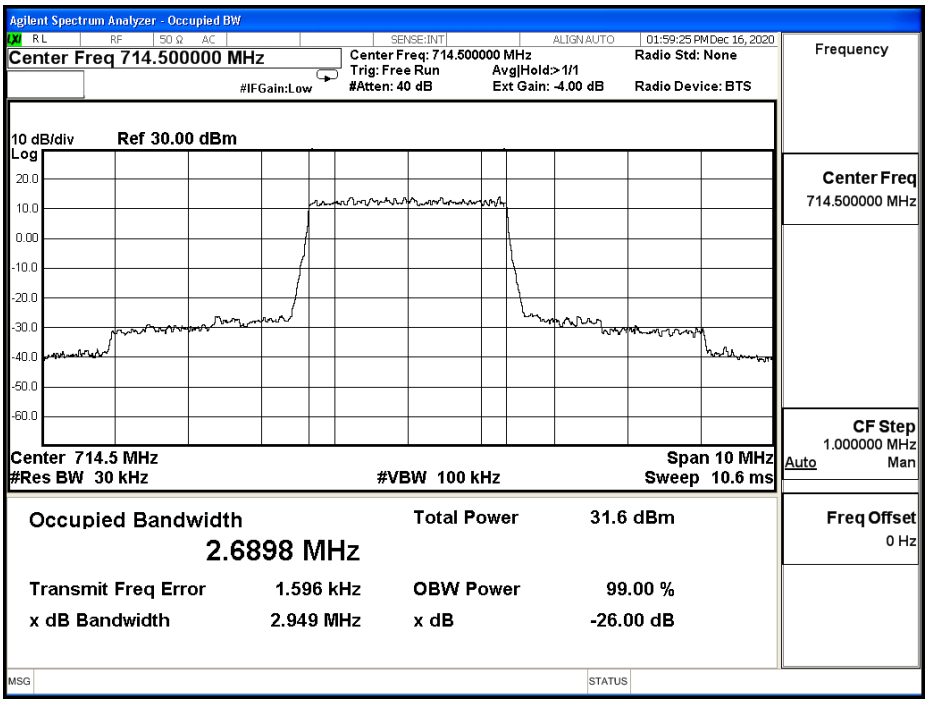

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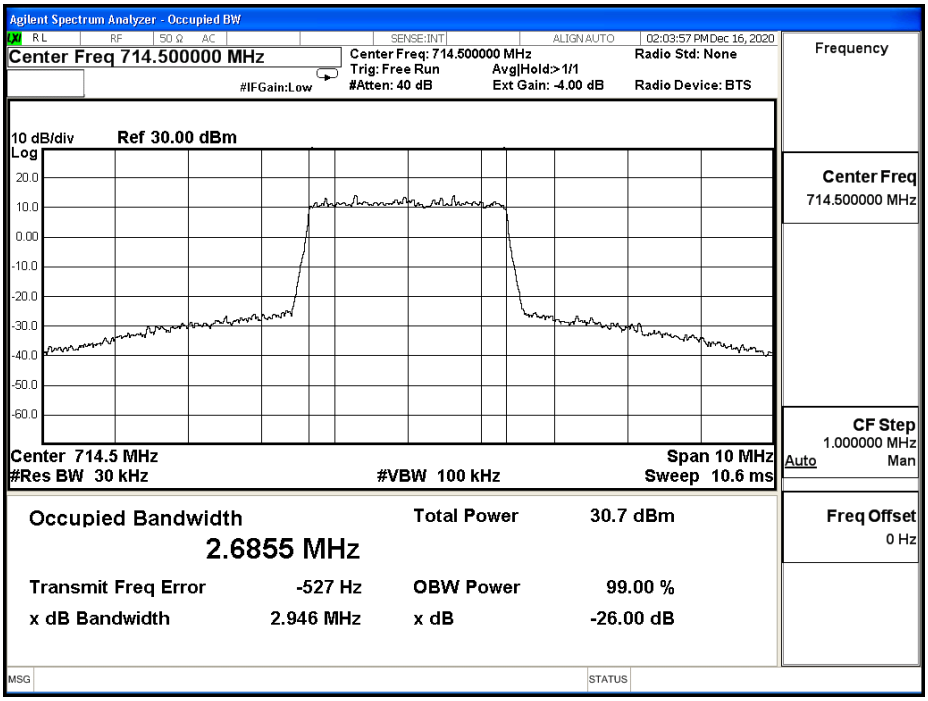

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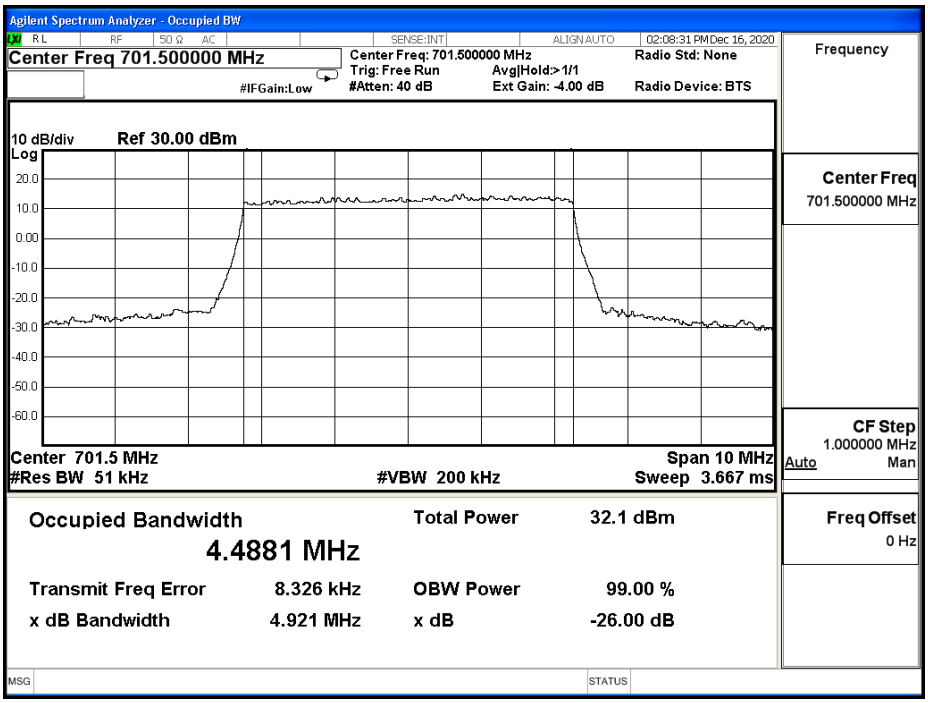

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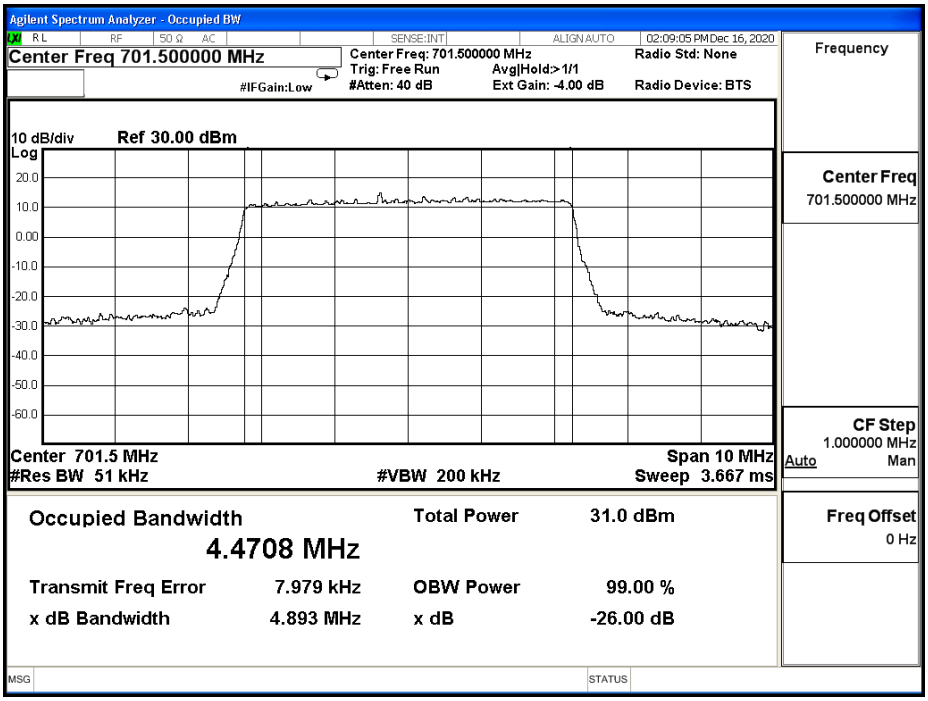

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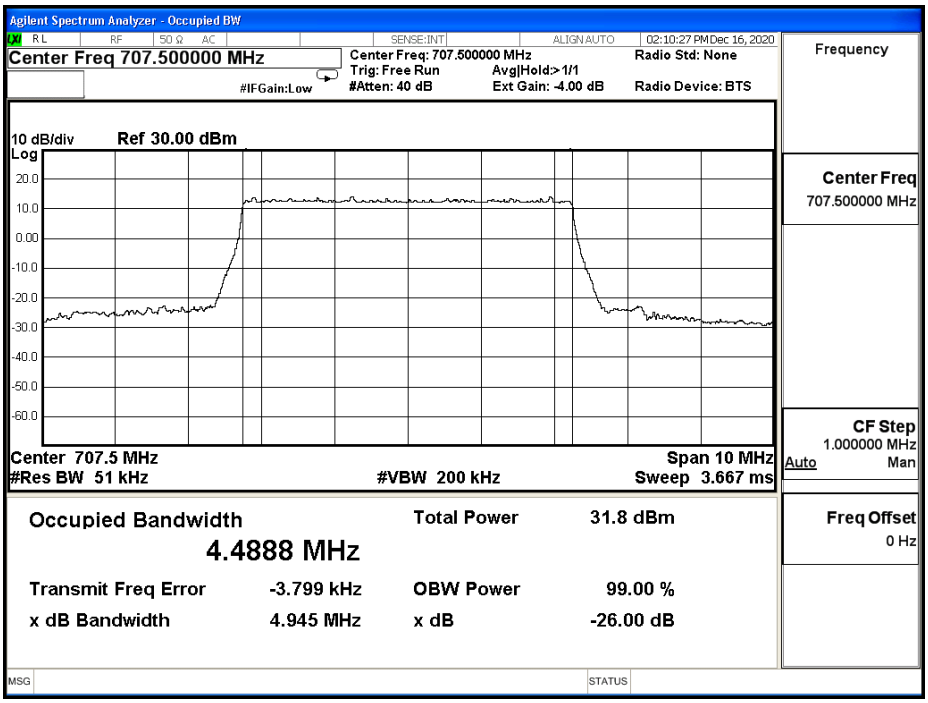

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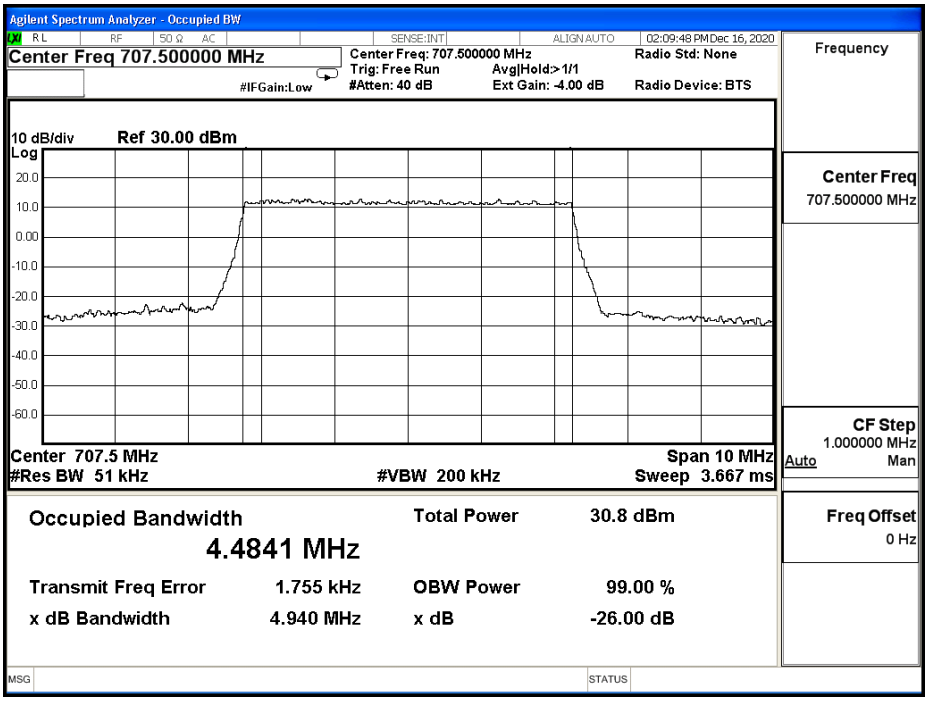

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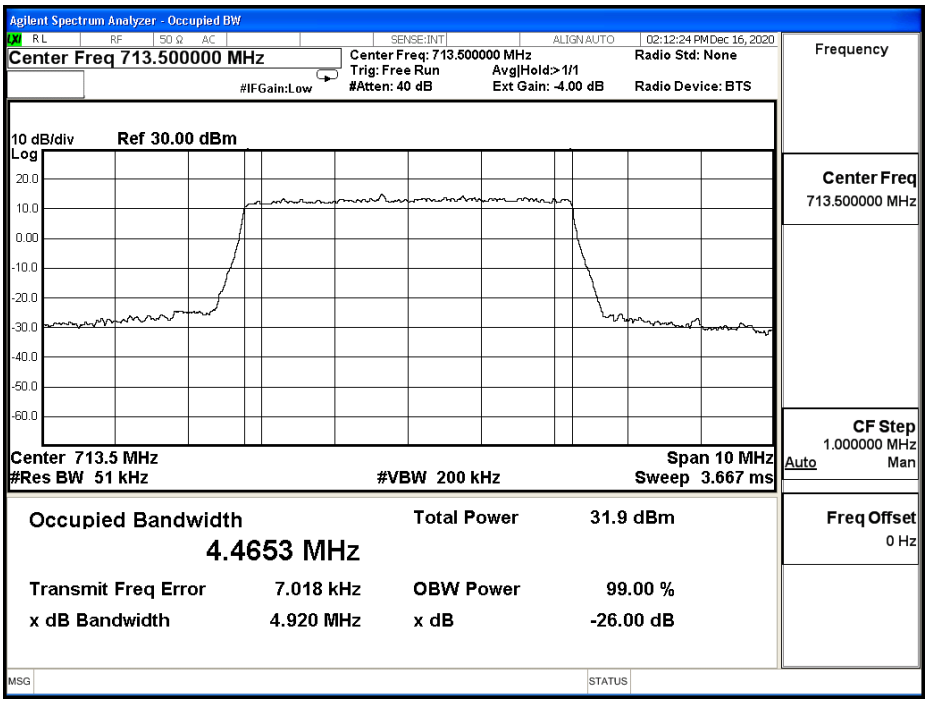

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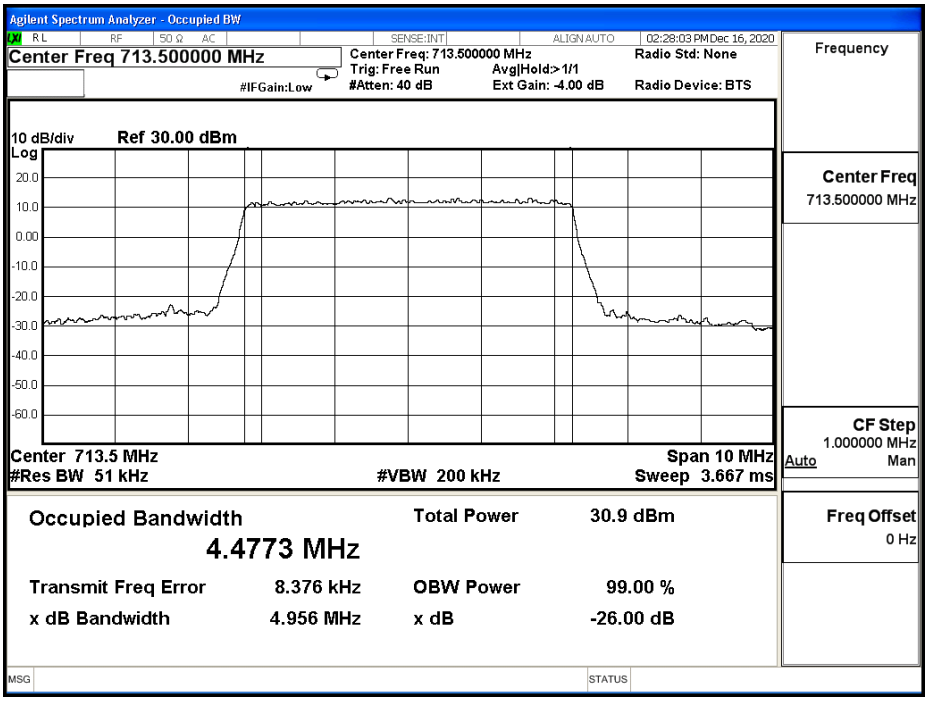

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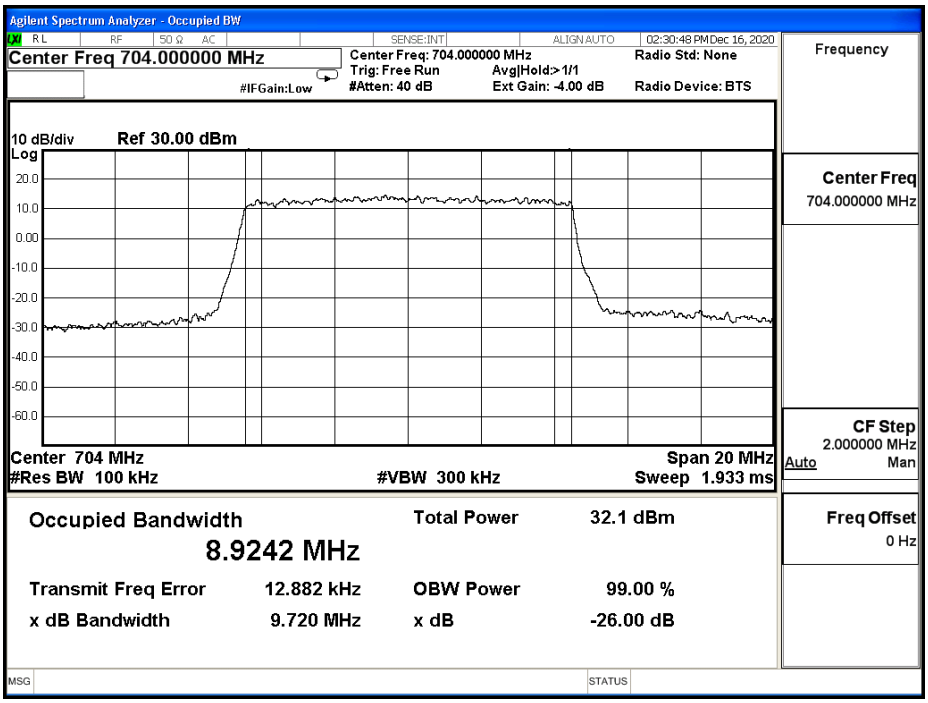

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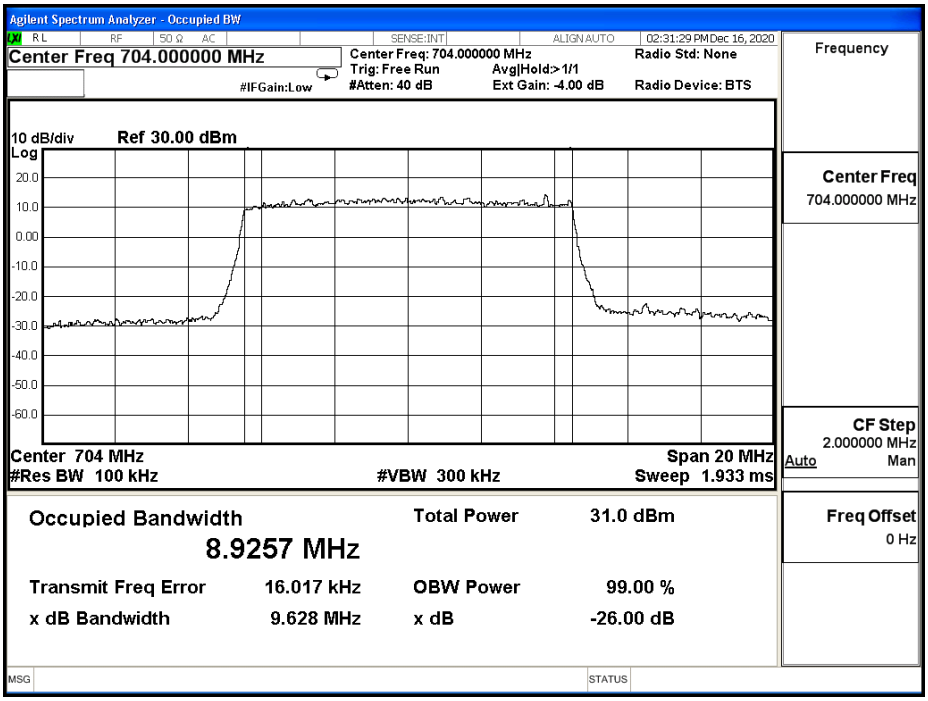

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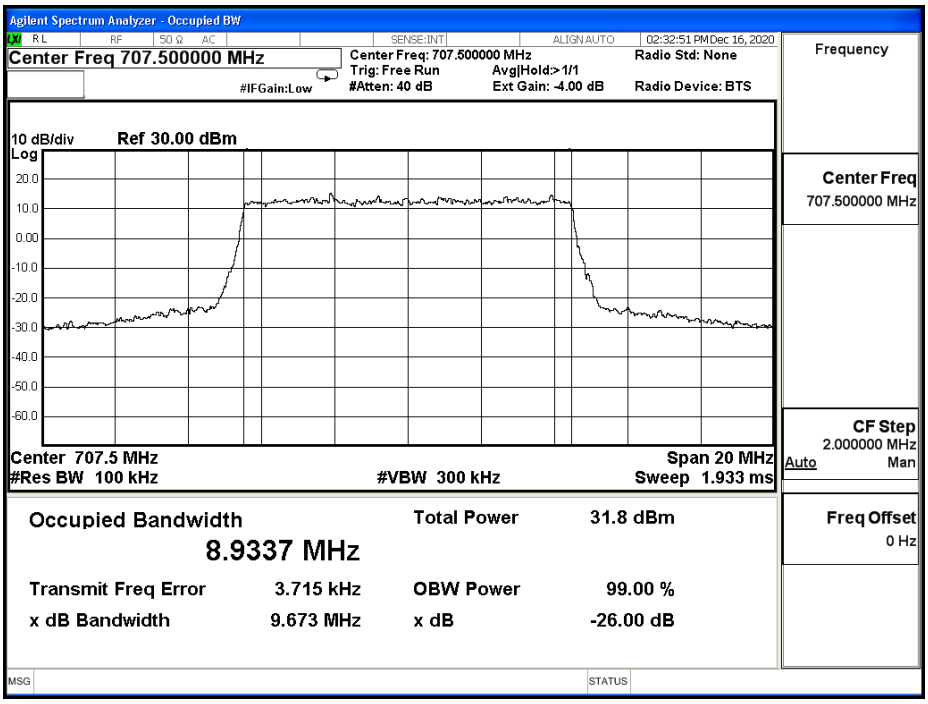

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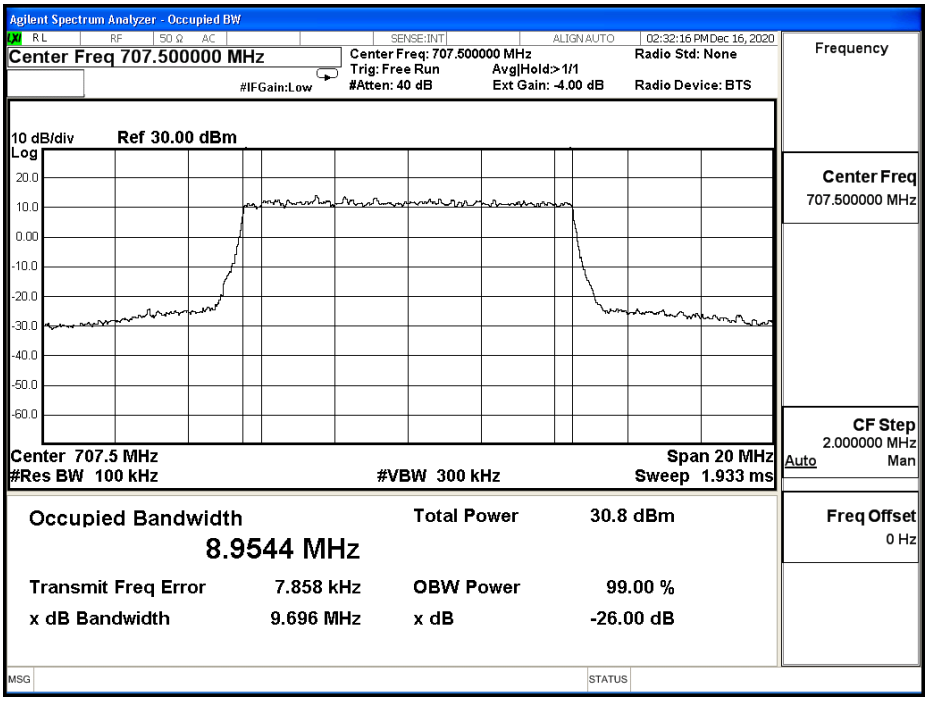

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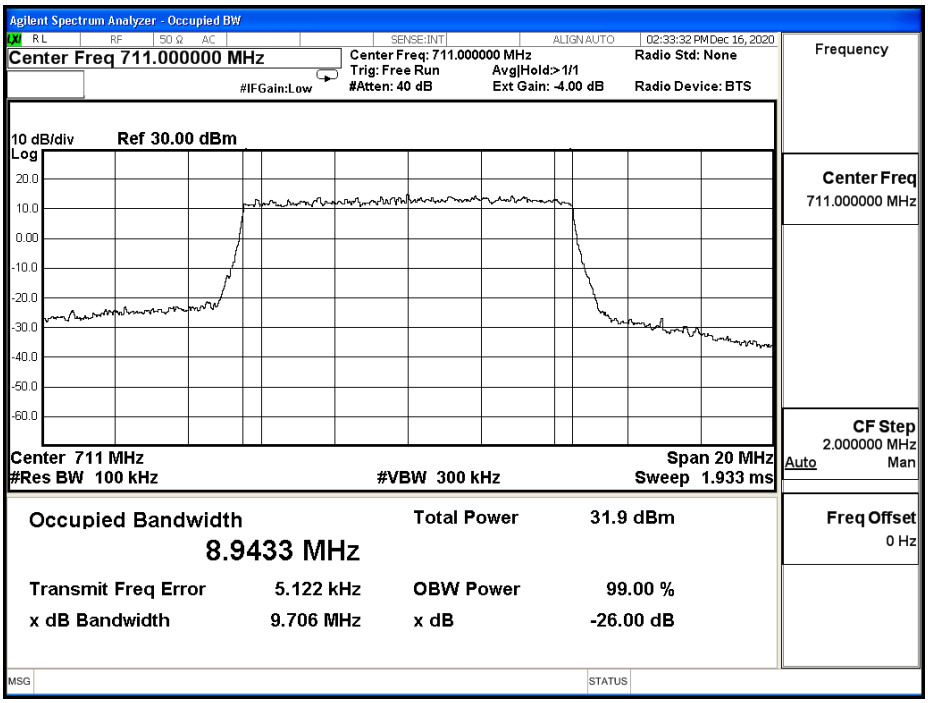

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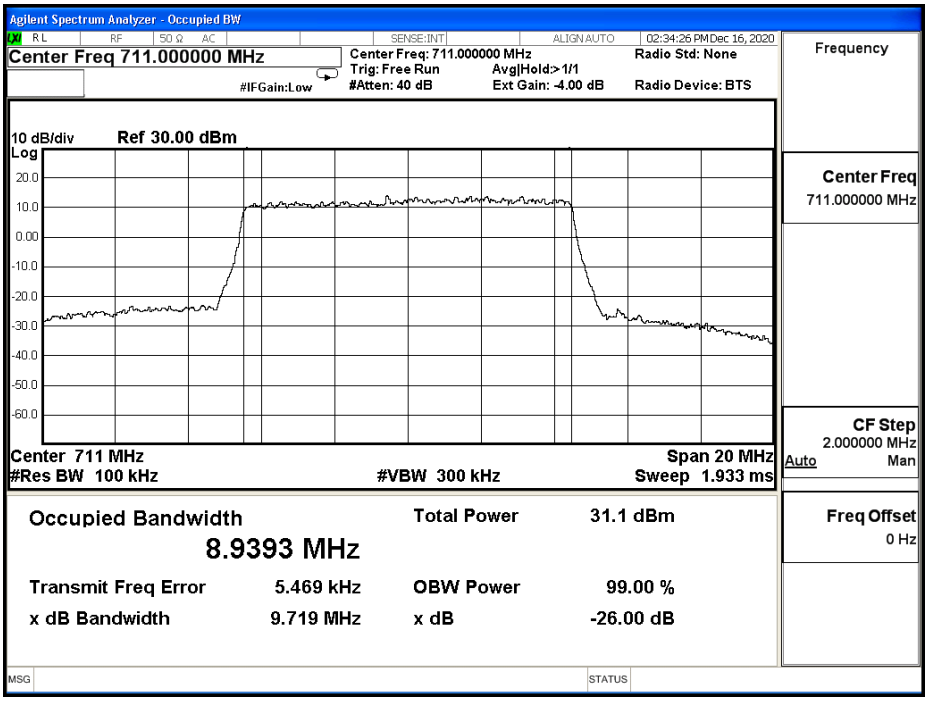
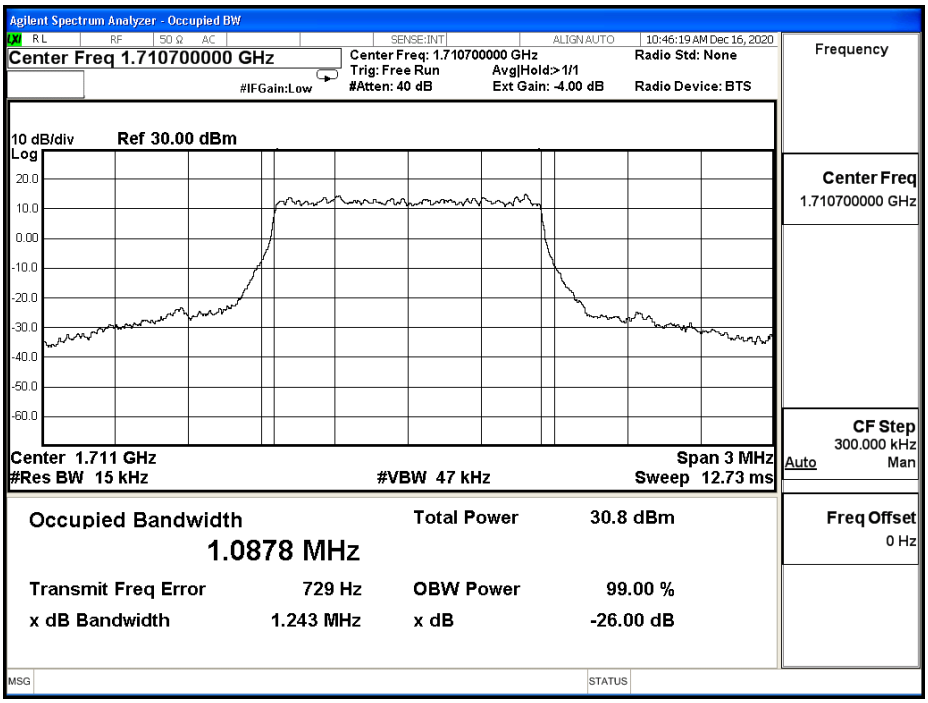


Product	M2M DATA MODULE		
Test Item	Occupied Bandwidth		
Test Mode	Mode 4: LTE Band 4/66		
Date of Test	2020/12/16	Test Site	SR12-H
Temperature (°C)	24	Humidity (%RH)	62

LTE Band 66

Bandwidth (MHz)	Modulation	Frequency (MHz)	Measure Level (MHz)		Limit (MHz)
			26dB BW	99% BW	
1.4M	QPSK	1710.7	1.243	1.087	N/A
		1745	1.258	1.081	N/A
		1779.3	1.279	1.081	N/A
	16-QAM	1710.7	1.260	1.083	N/A
		1745	1.276	1.084	N/A
		1779.3	1.241	1.081	N/A
3M	QPSK	1711.5	2.937	2.691	N/A
		1745	2.939	2.697	N/A
		1778.5	2.950	2.692	N/A
	16-QAM	1711.5	2.957	2.690	N/A
		1745	2.949	2.689	N/A
		1778.5	2.939	2.687	N/A
5M	QPSK	1712.5	4.955	4.492	N/A
		1745	4.938	4.491	N/A
		1777.5	4.929	4.474	N/A
	16-QAM	1712.5	4.881	4.477	N/A
		1745	4.950	4.489	N/A
		1777.5	4.958	4.482	N/A
10M	QPSK	1715	9.715	8.933	N/A
		1745	9.754	8.945	N/A
		1775	9.784	8.942	N/A
	16-QAM	1715	9.652	8.946	N/A
		1745	9.719	8.948	N/A
		1775	9.658	8.929	N/A
15M	QPSK	1717.5	14.530	13.415	N/A
		1745	14.480	13.400	N/A
		1772.5	14.550	13.416	N/A
	16-QAM	1717.5	14.440	13.408	N/A
		1745	14.520	13.409	N/A
		1772.5	14.470	13.413	N/A
20M	QPSK	1720	19.050	17.861	N/A
		1745	19.160	17.851	N/A
		1770	19.380	17.866	N/A
	16-QAM	1720	19.190	17.878	N/A
		1745	19.240	17.886	N/A
		1770	19.130	17.839	N/A

LTE_B66_CH131979_1.4M_QPSK_6RB0



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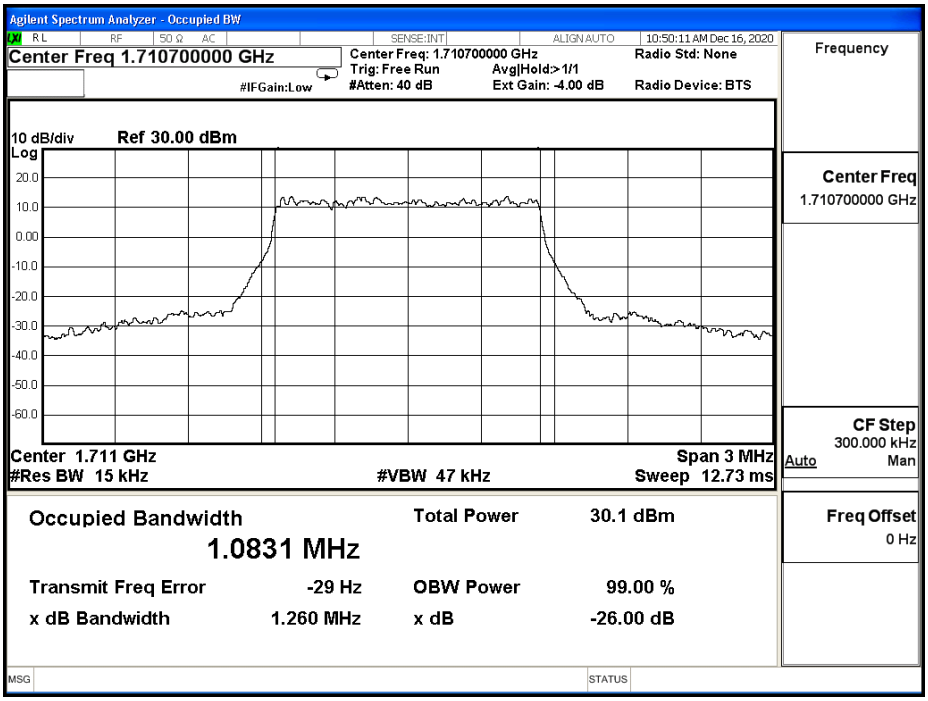

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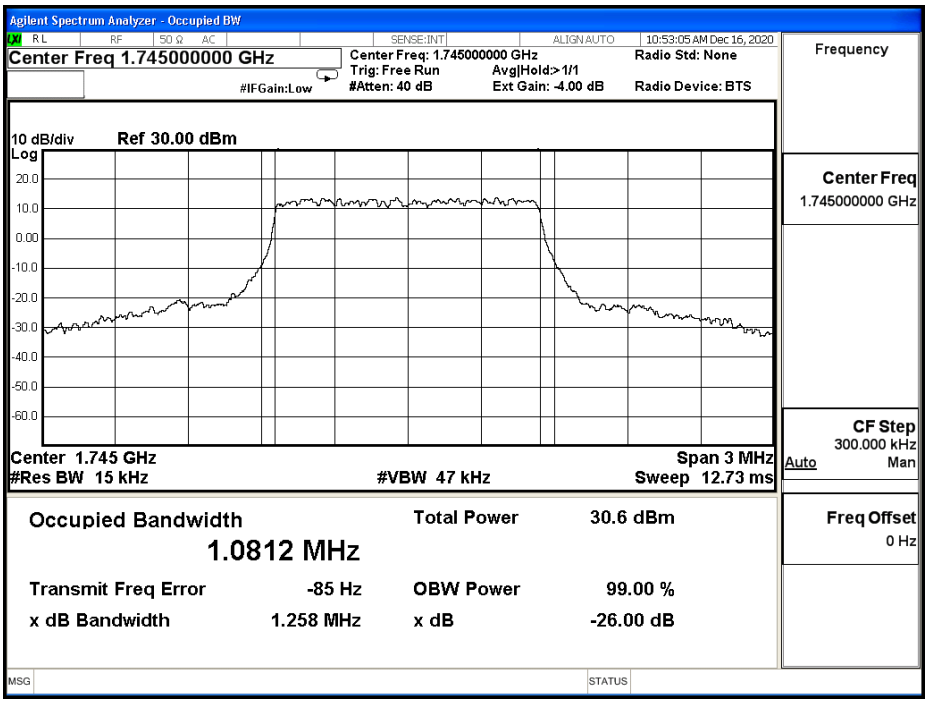

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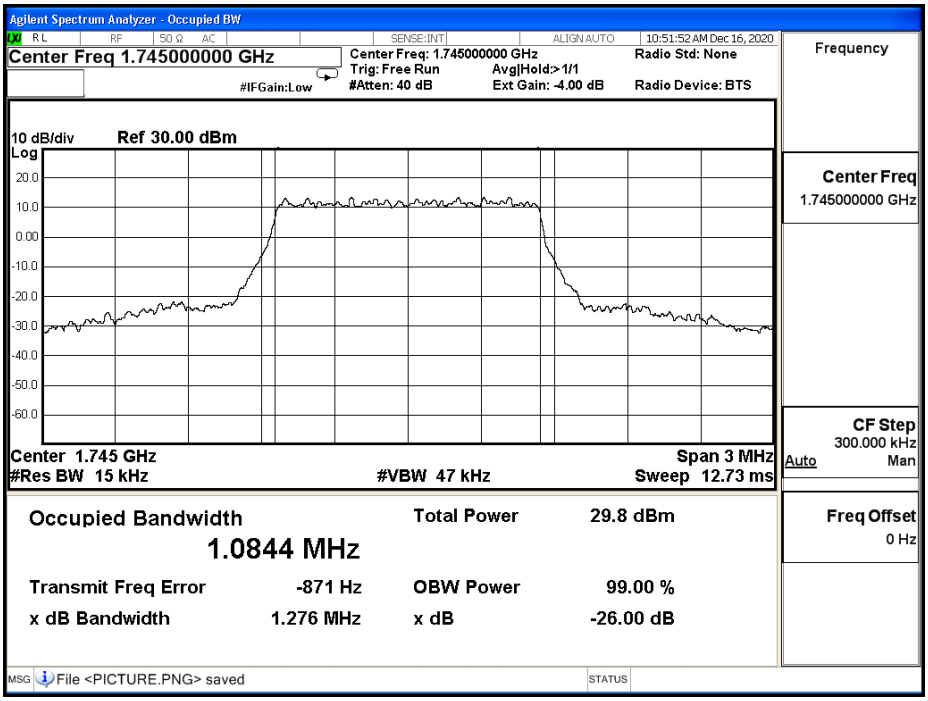

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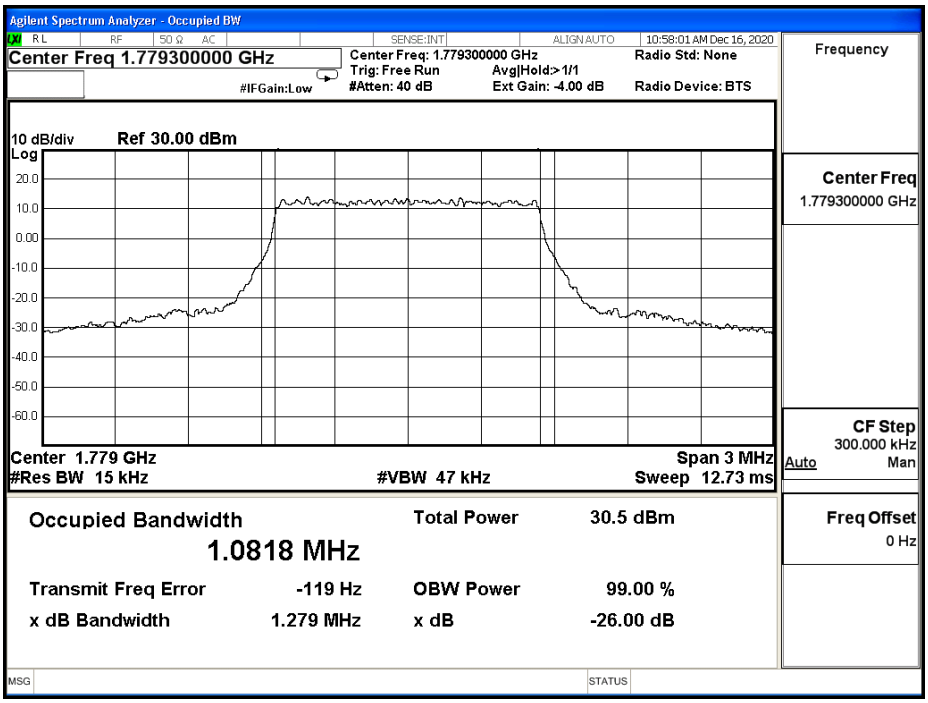

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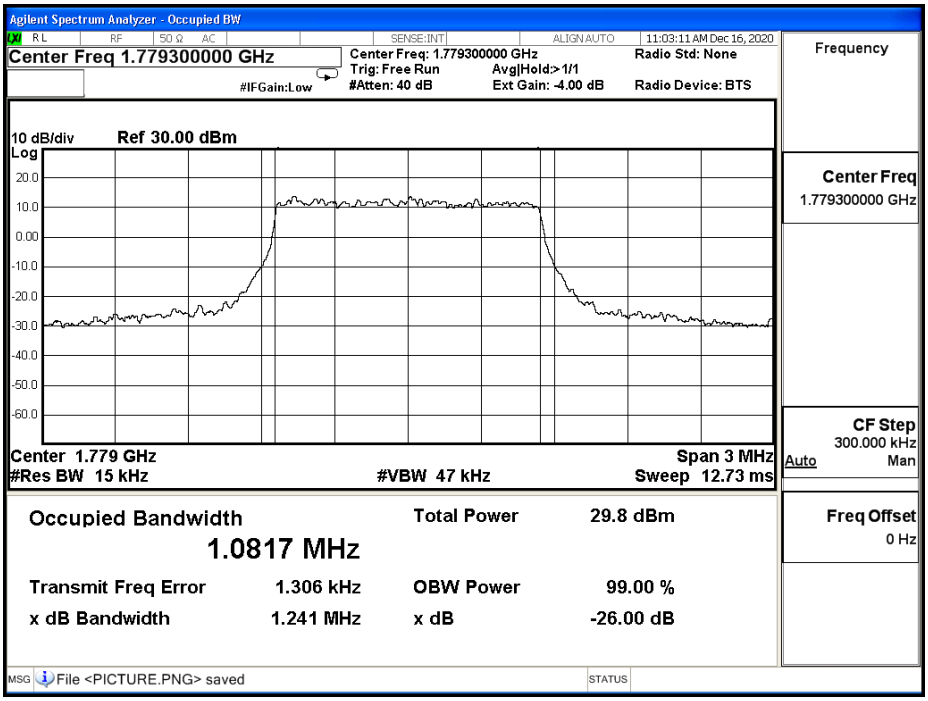

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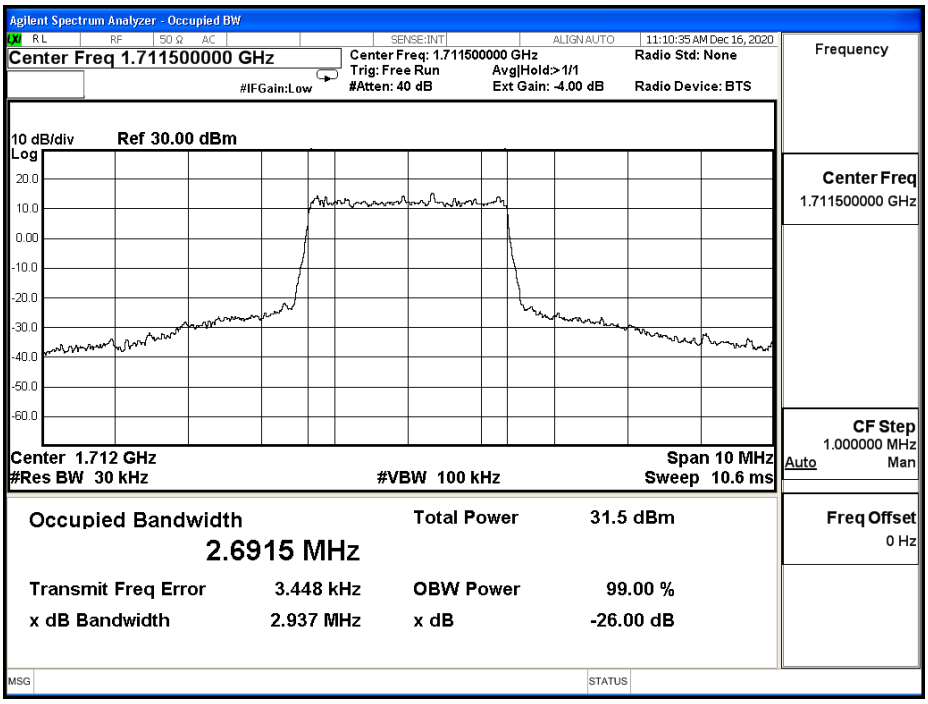

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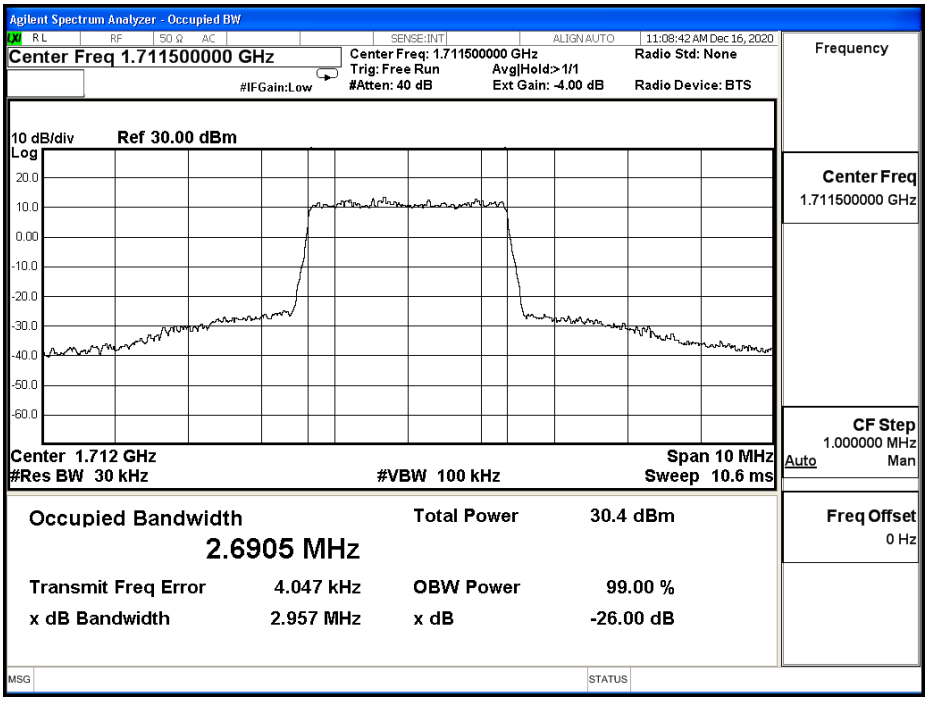

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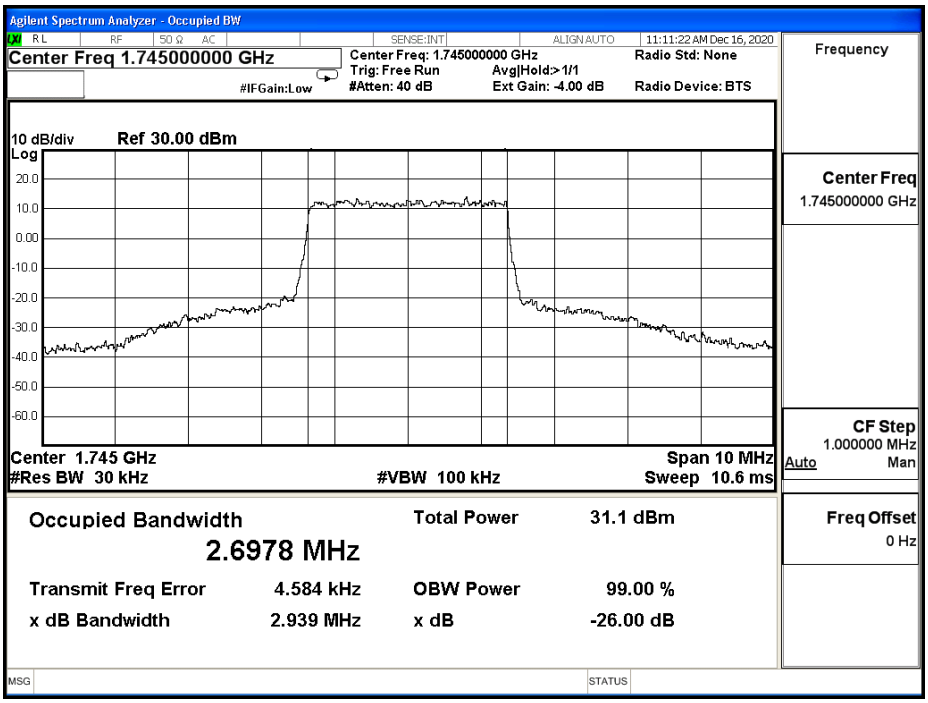

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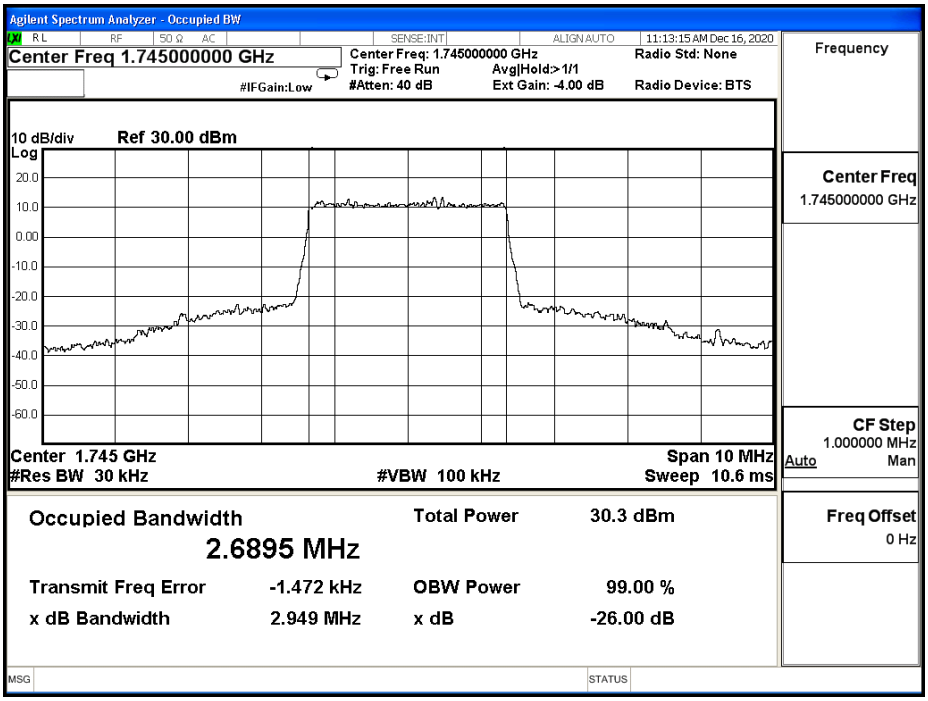

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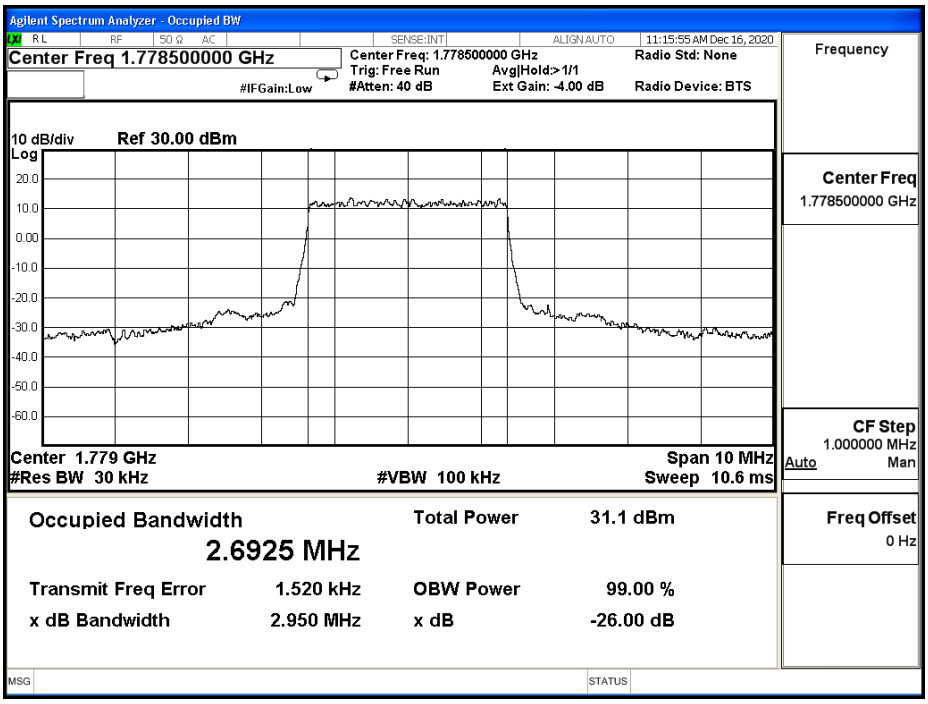

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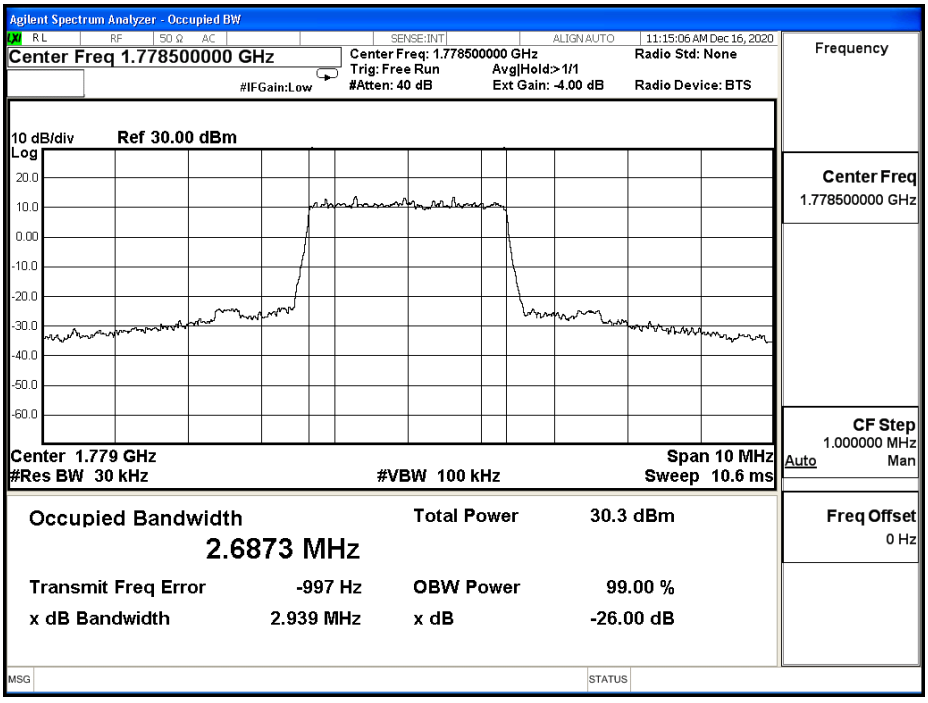

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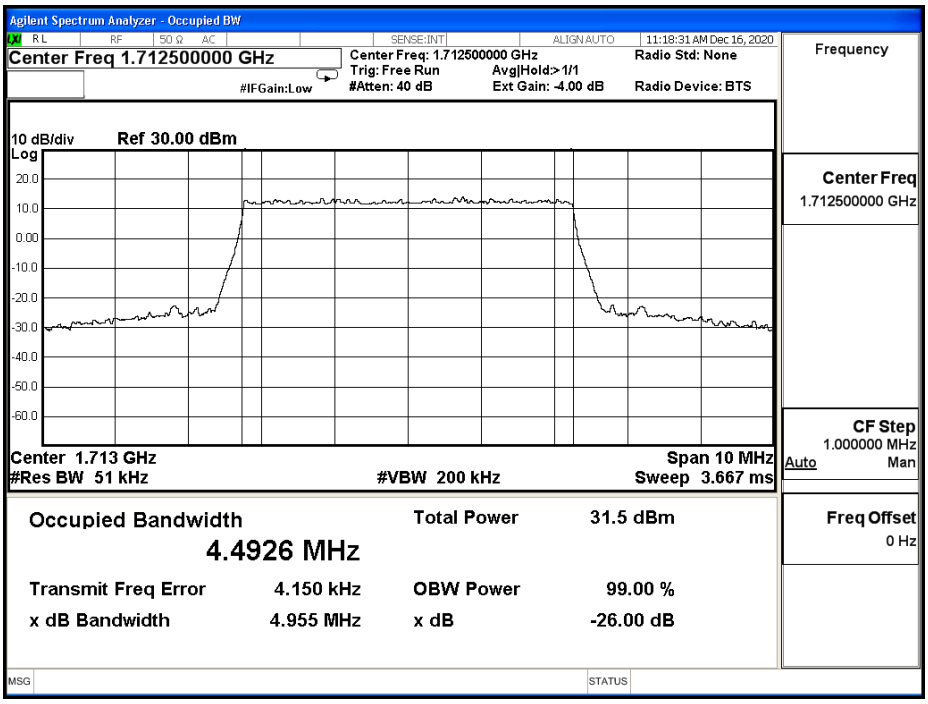

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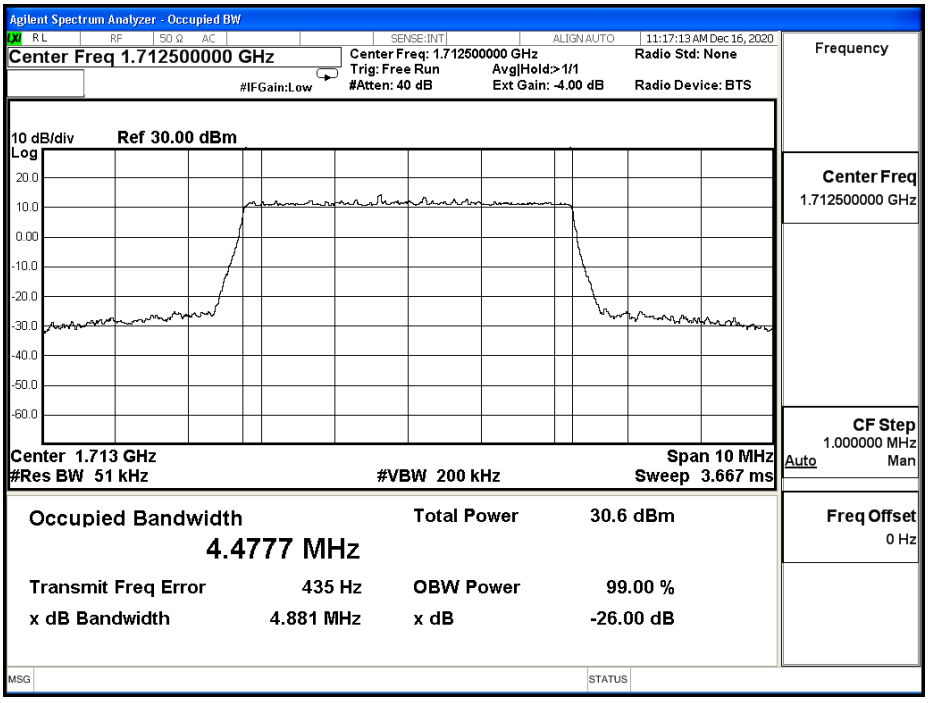

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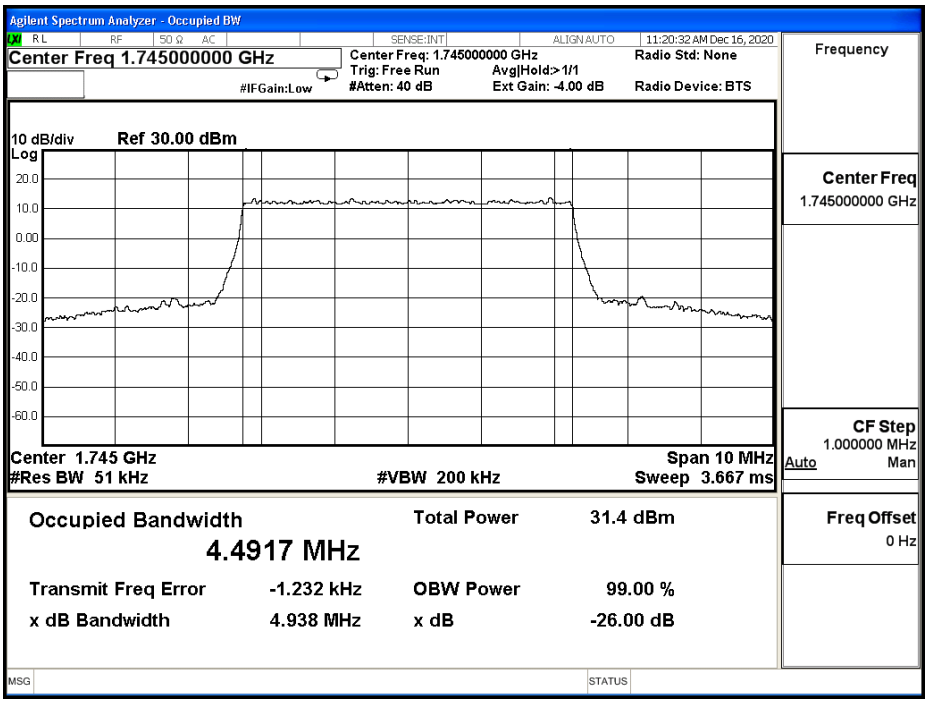

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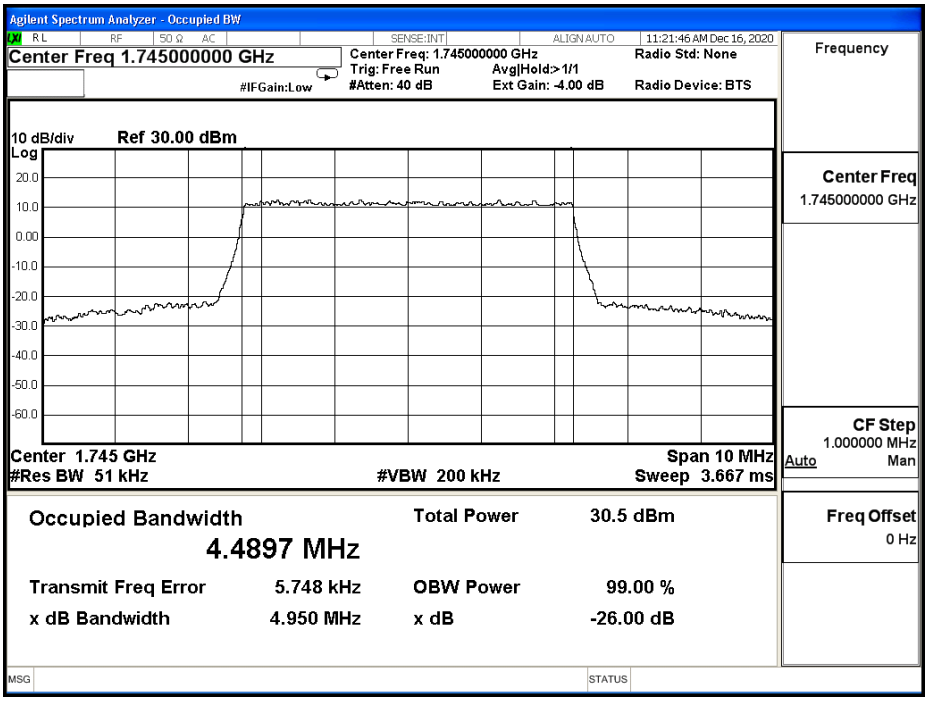

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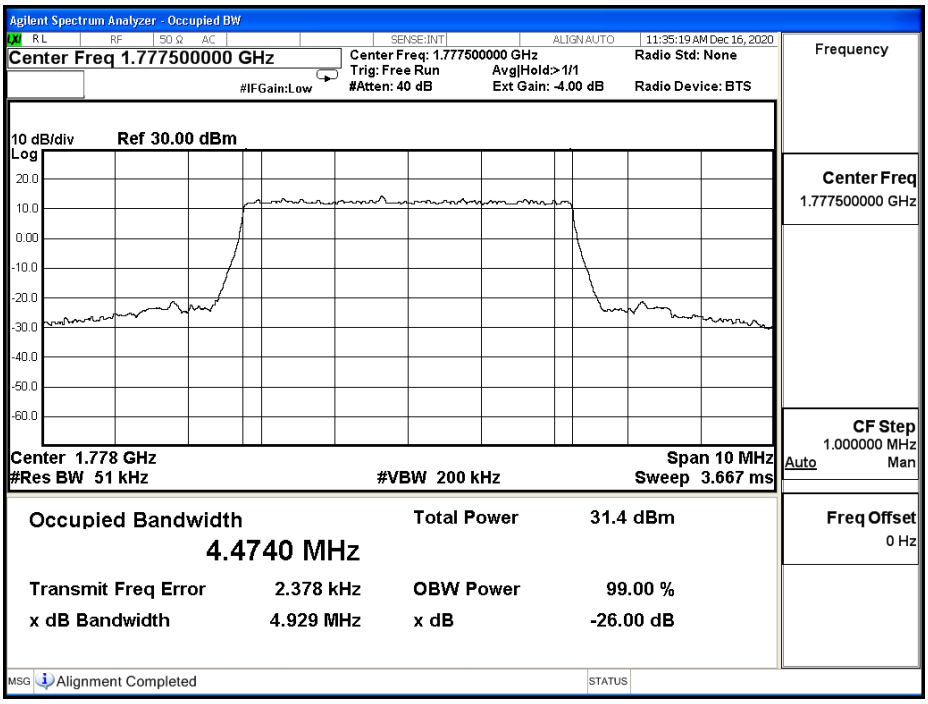

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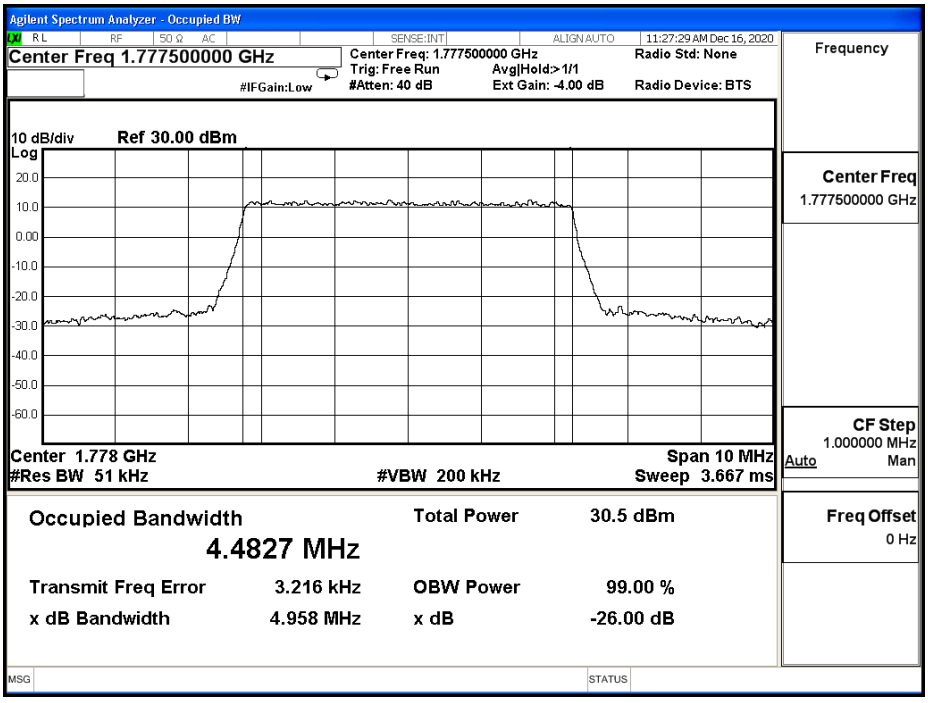

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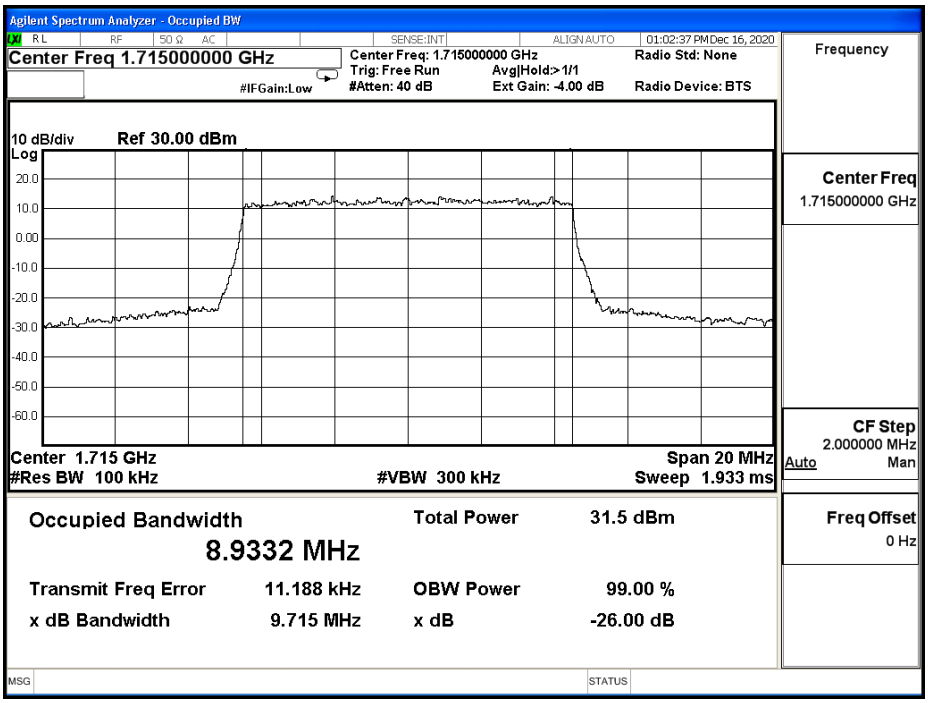

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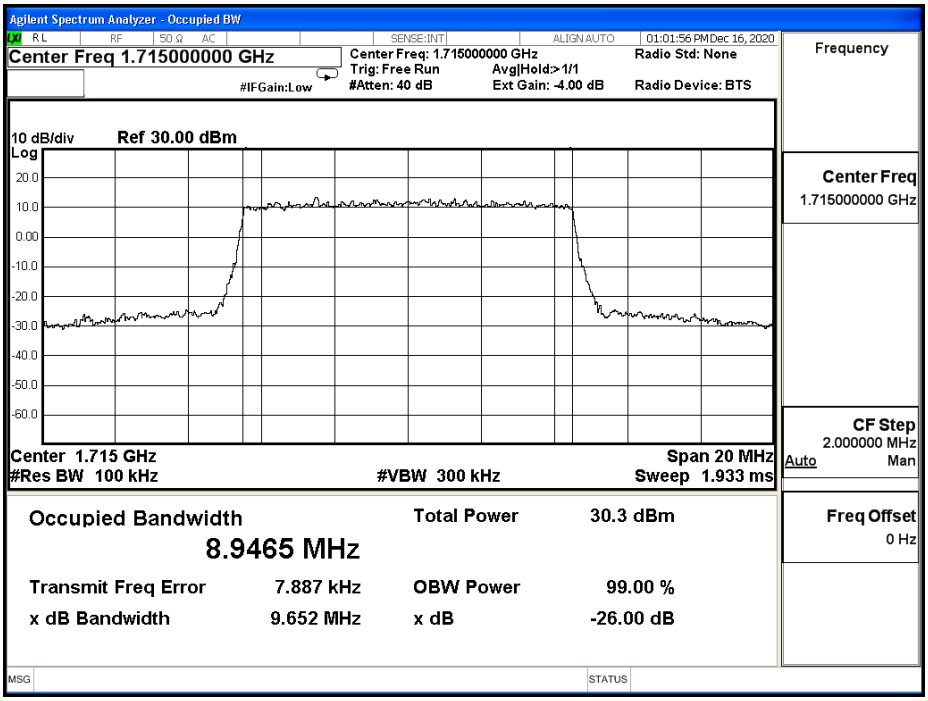

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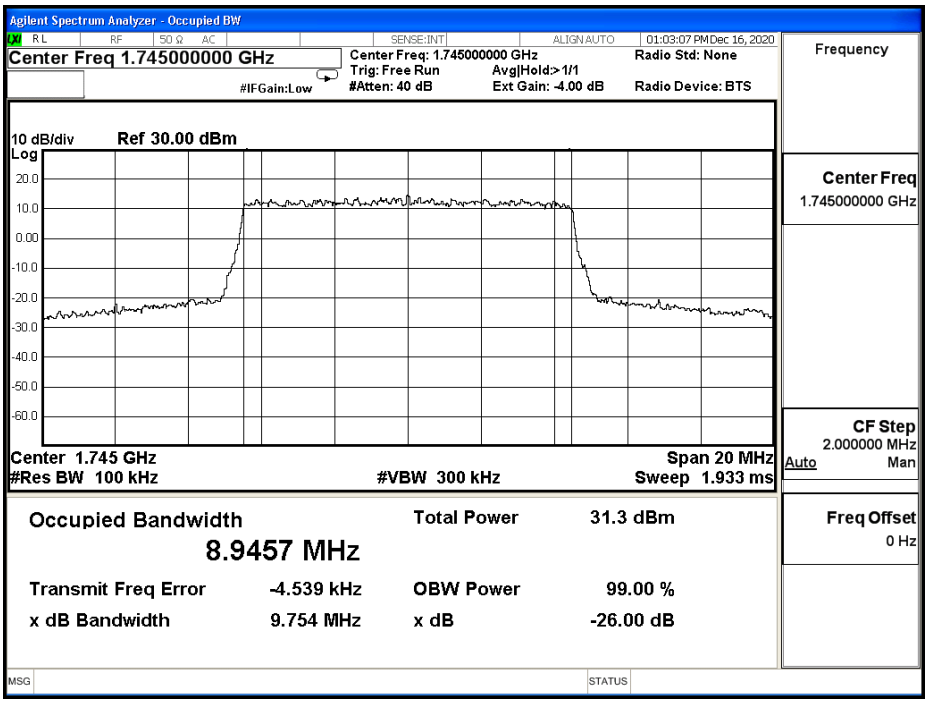

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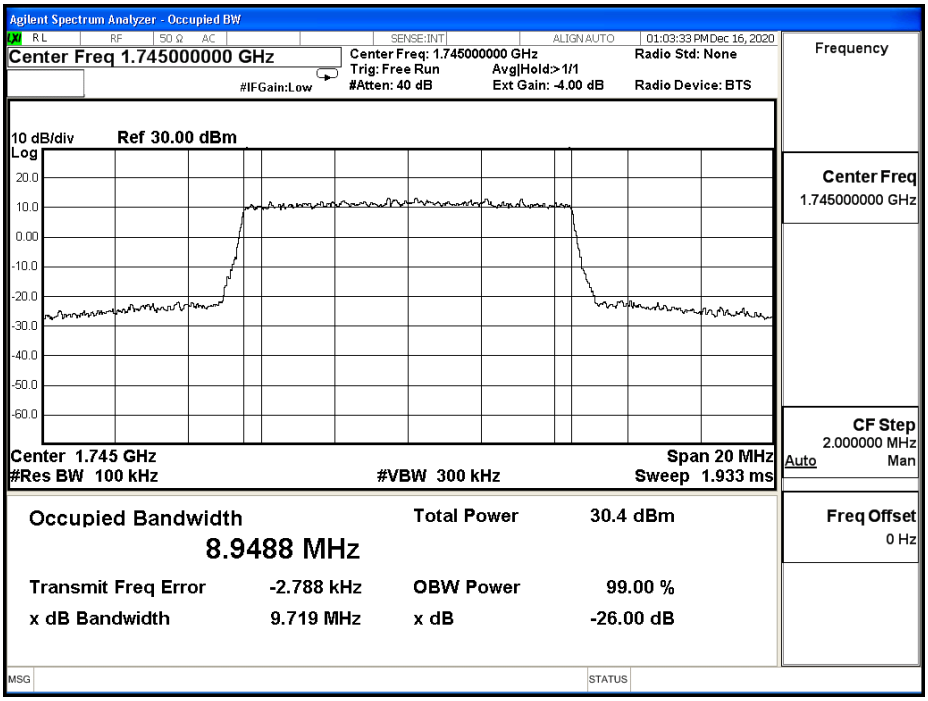

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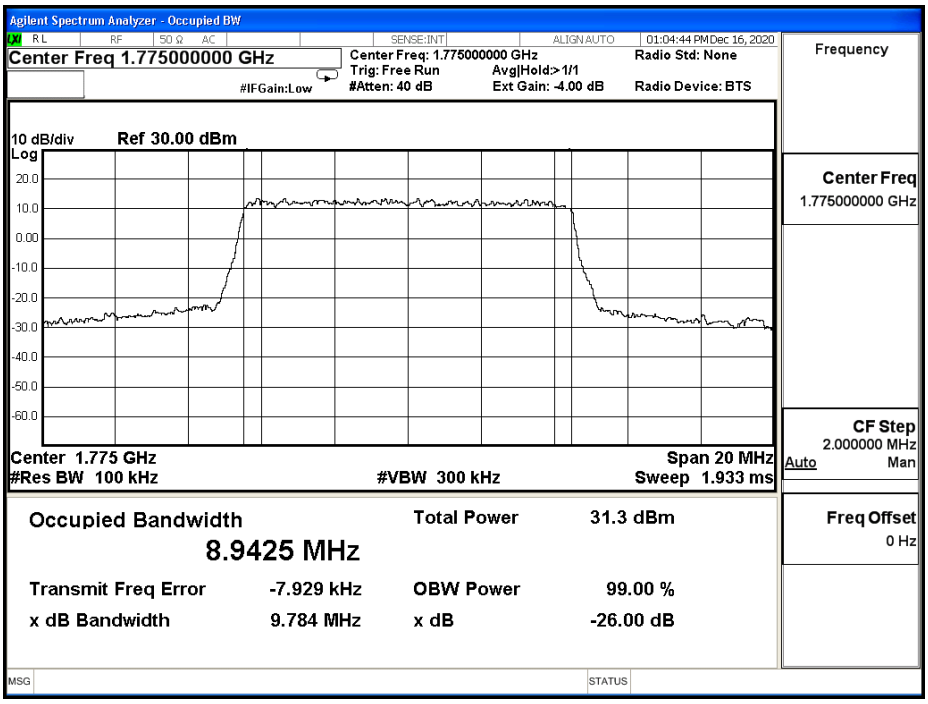

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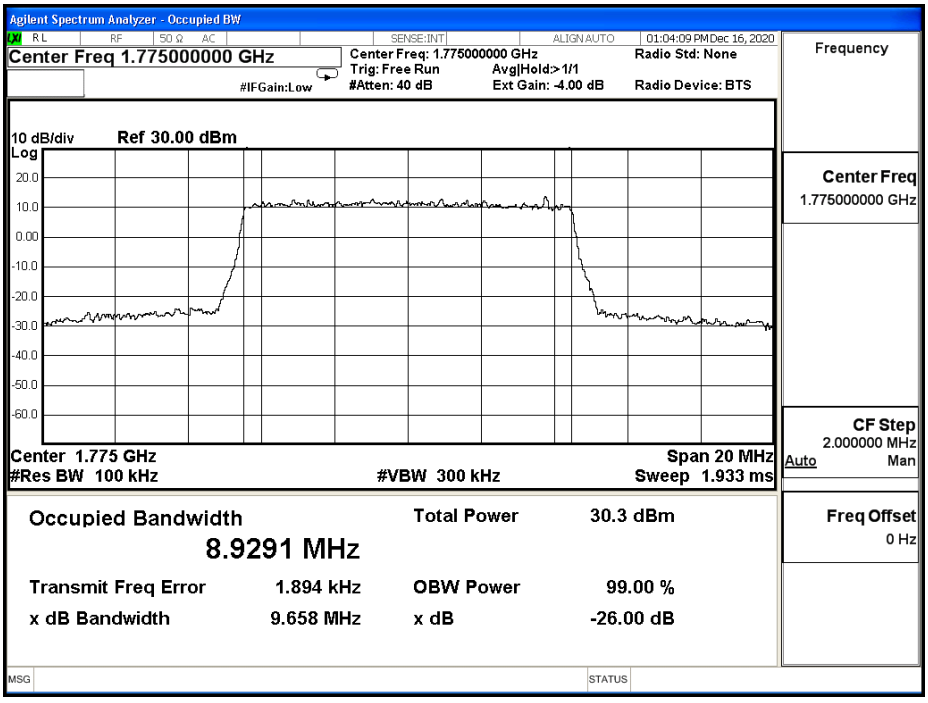

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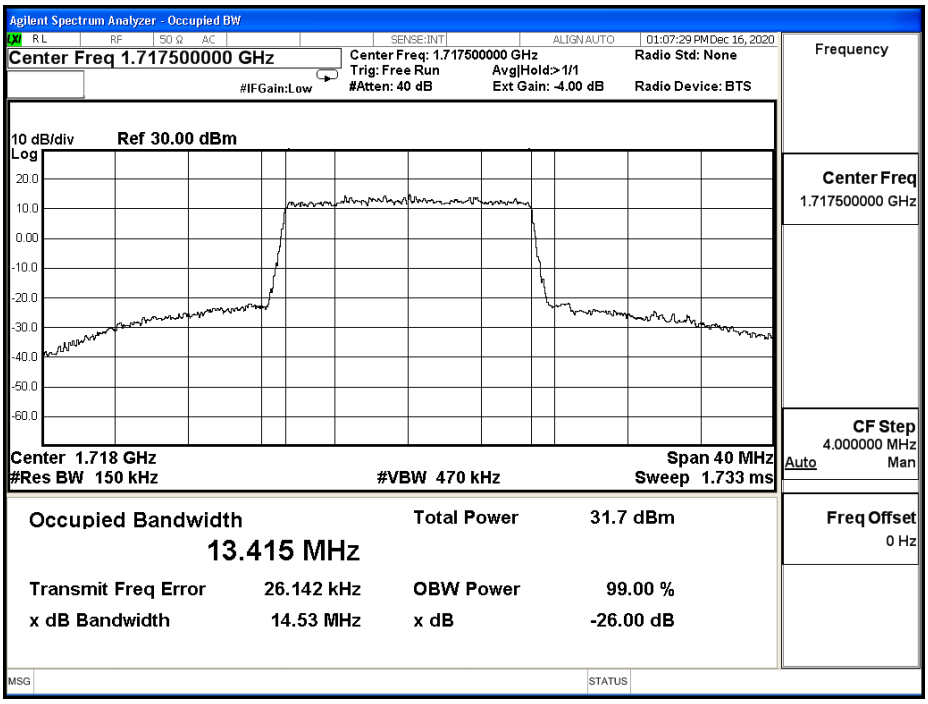

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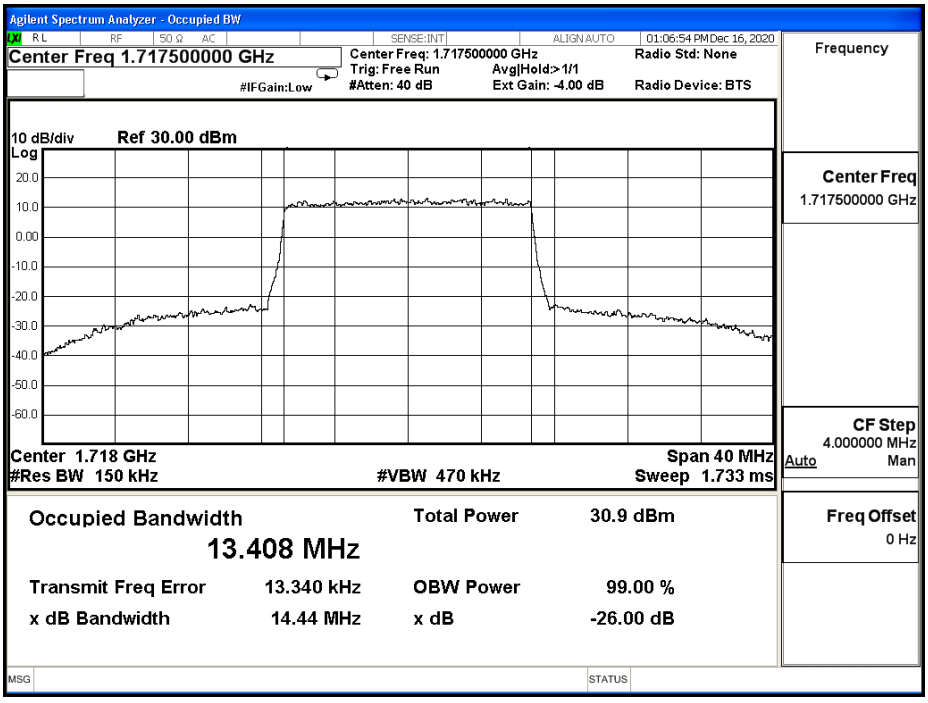

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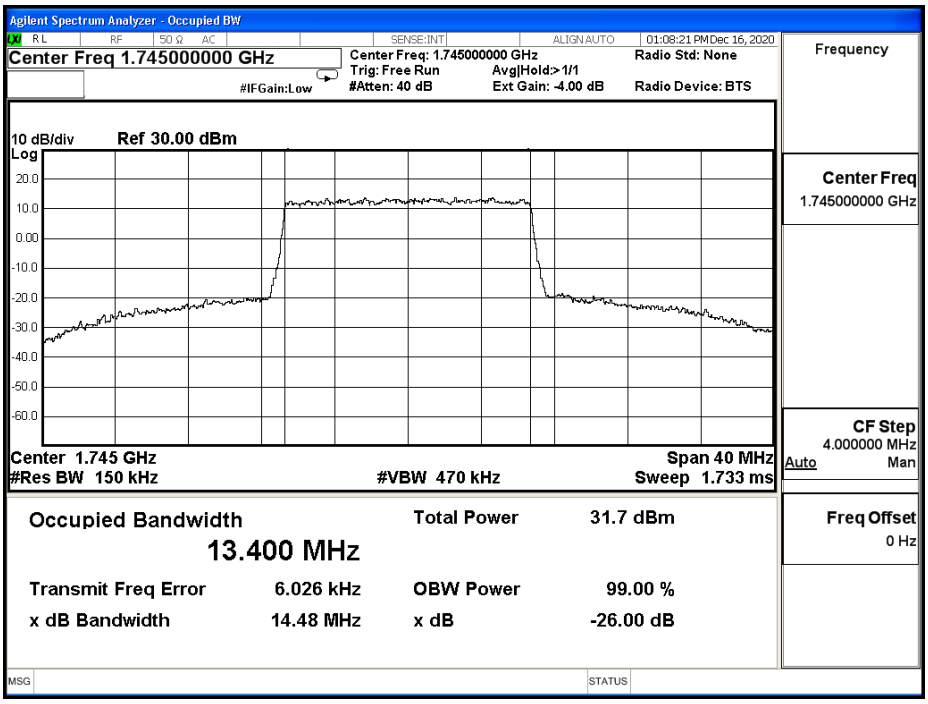

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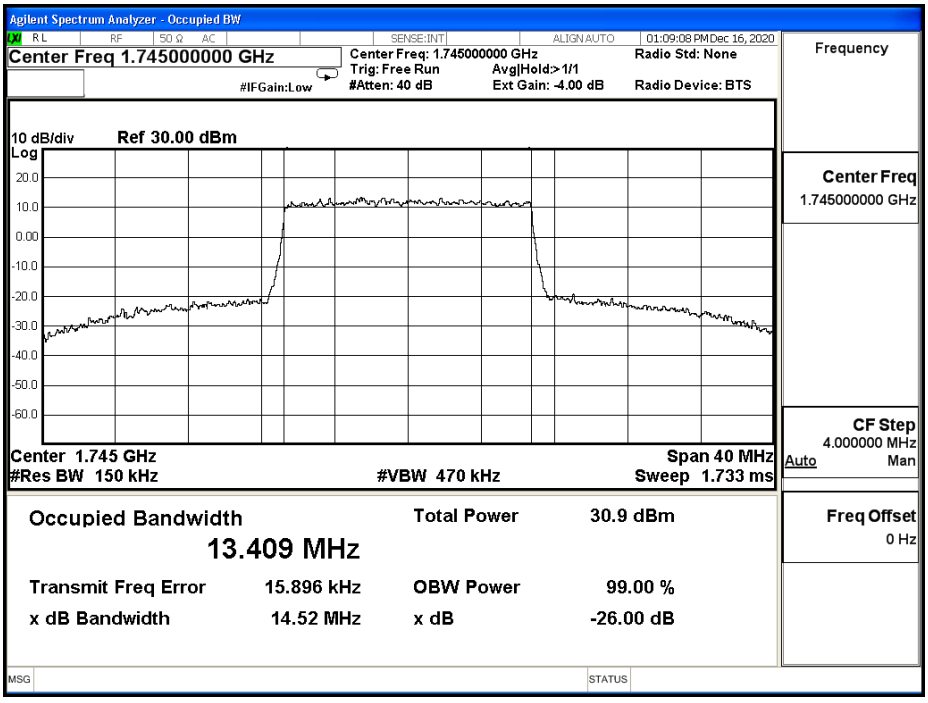

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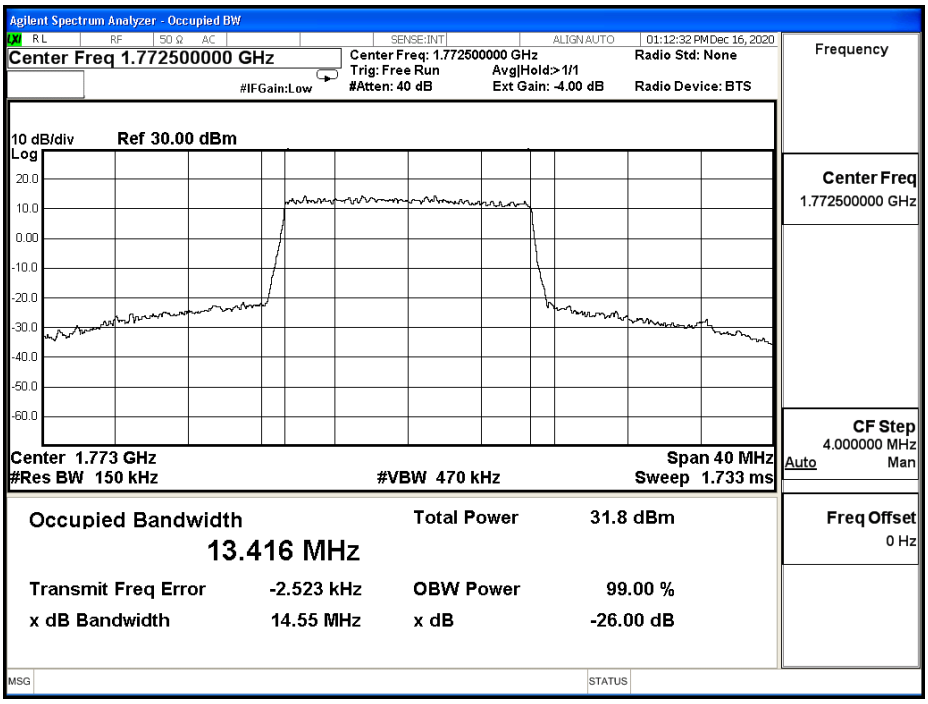

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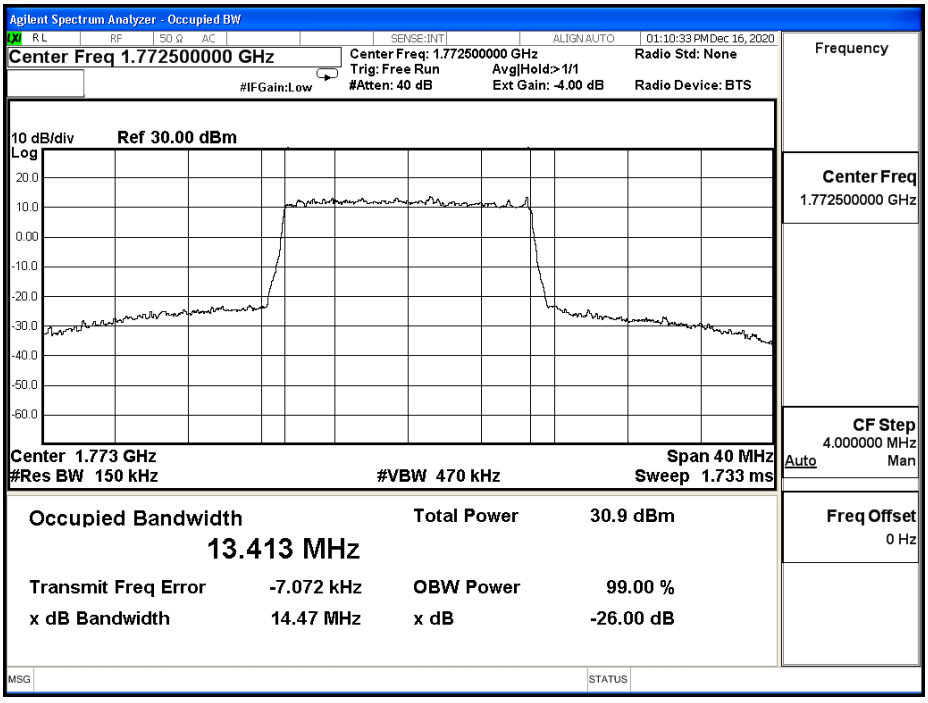

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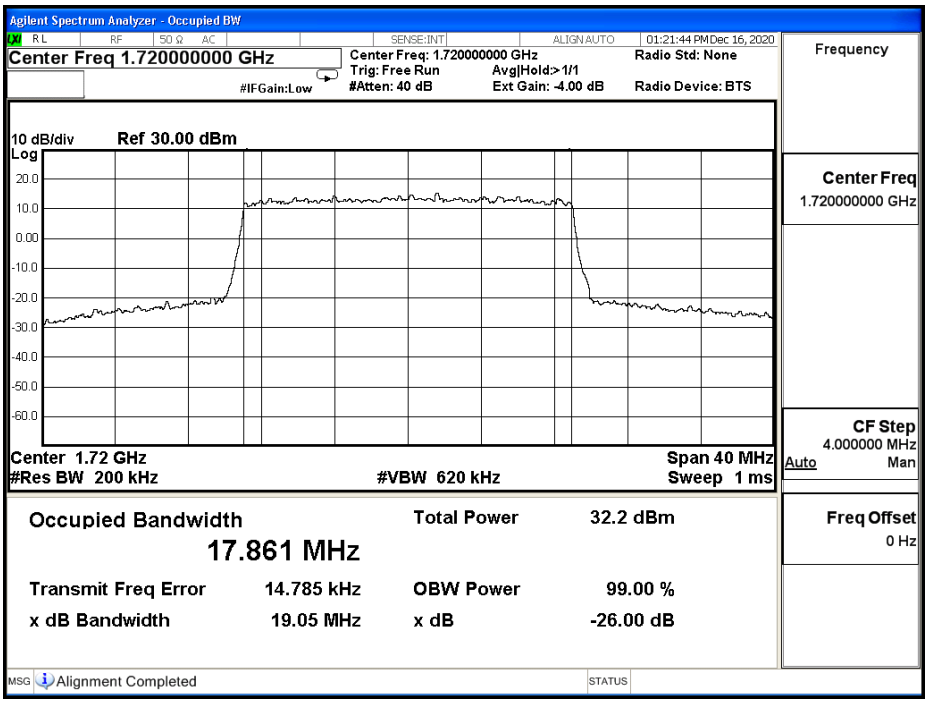

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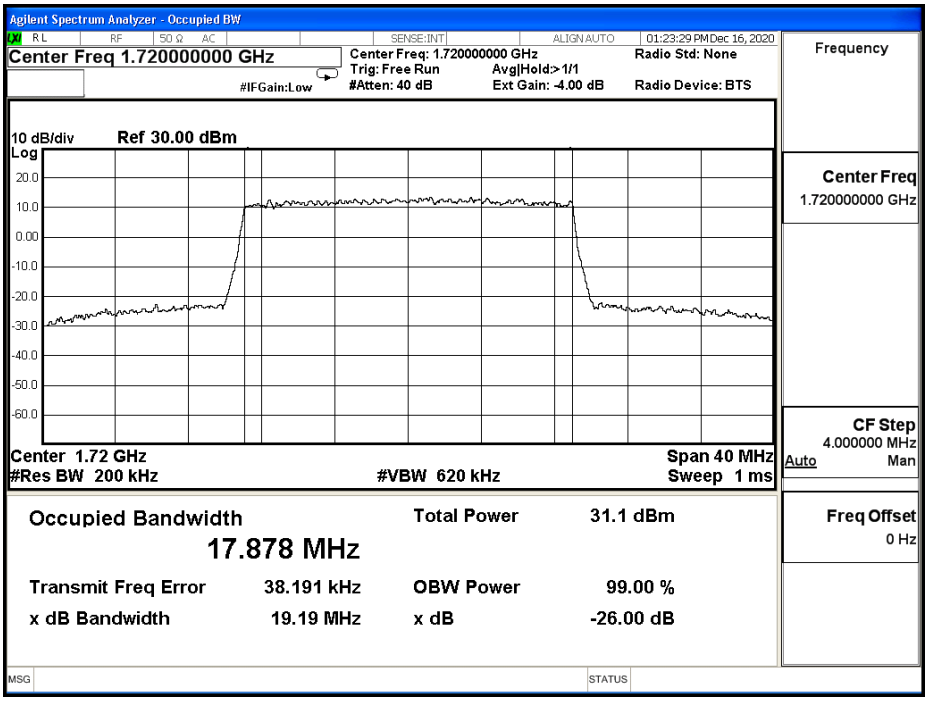

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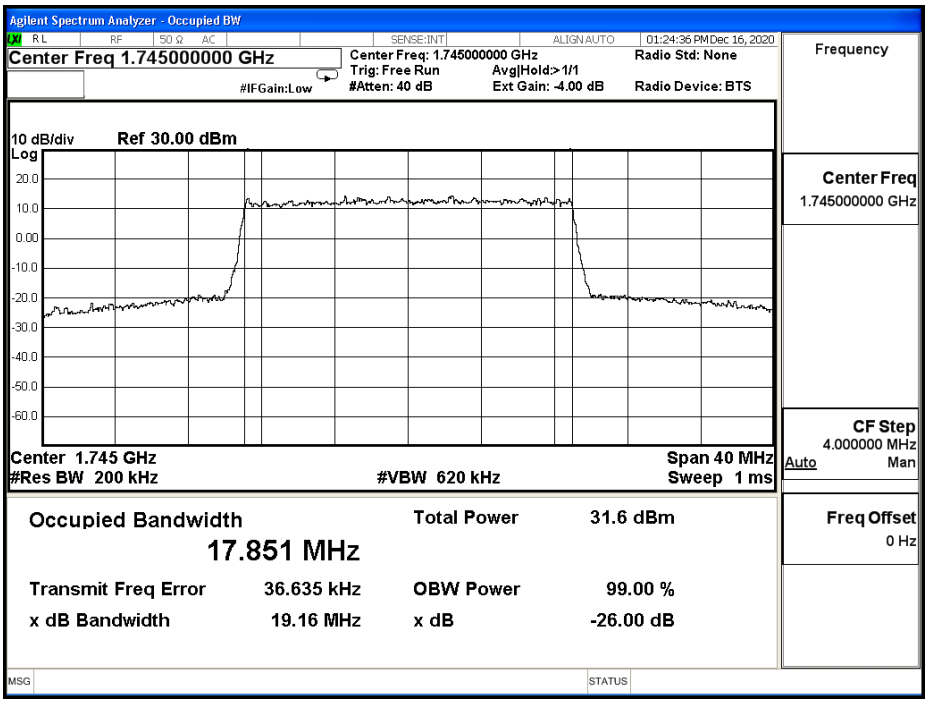

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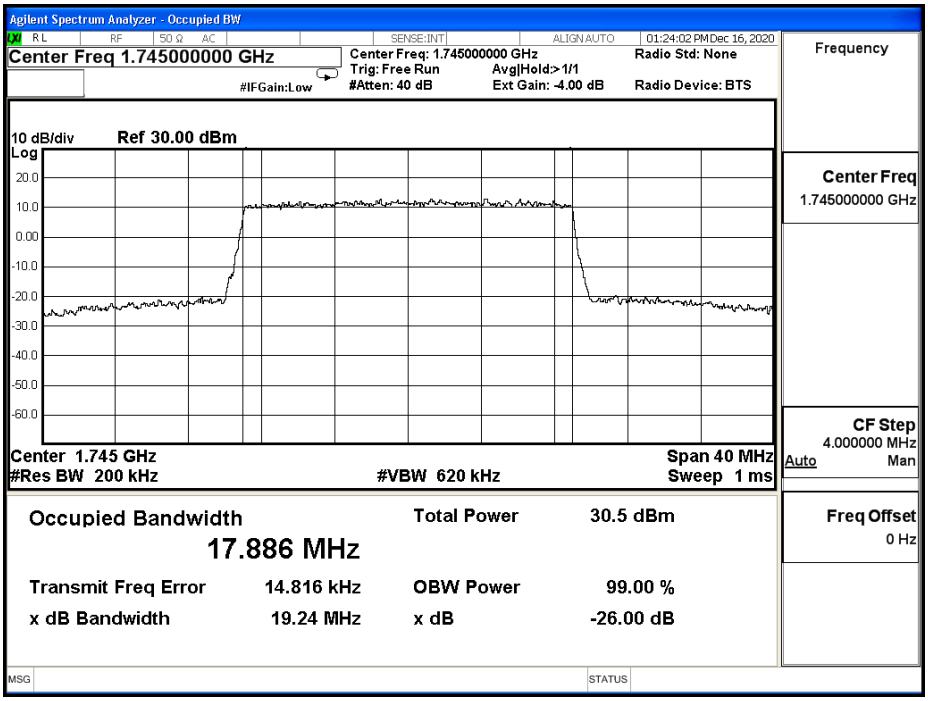

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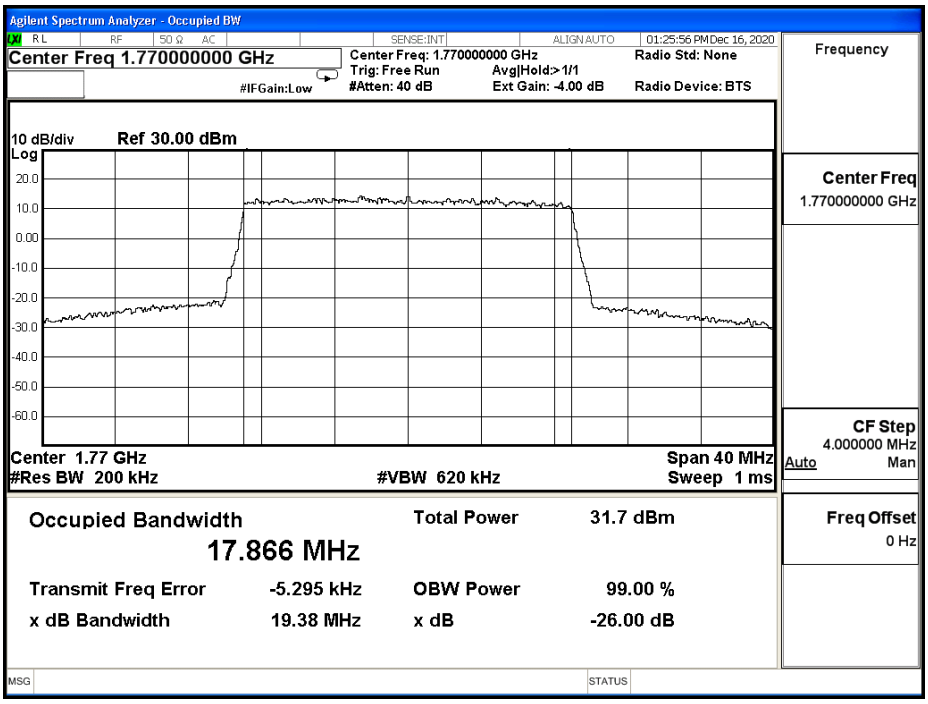

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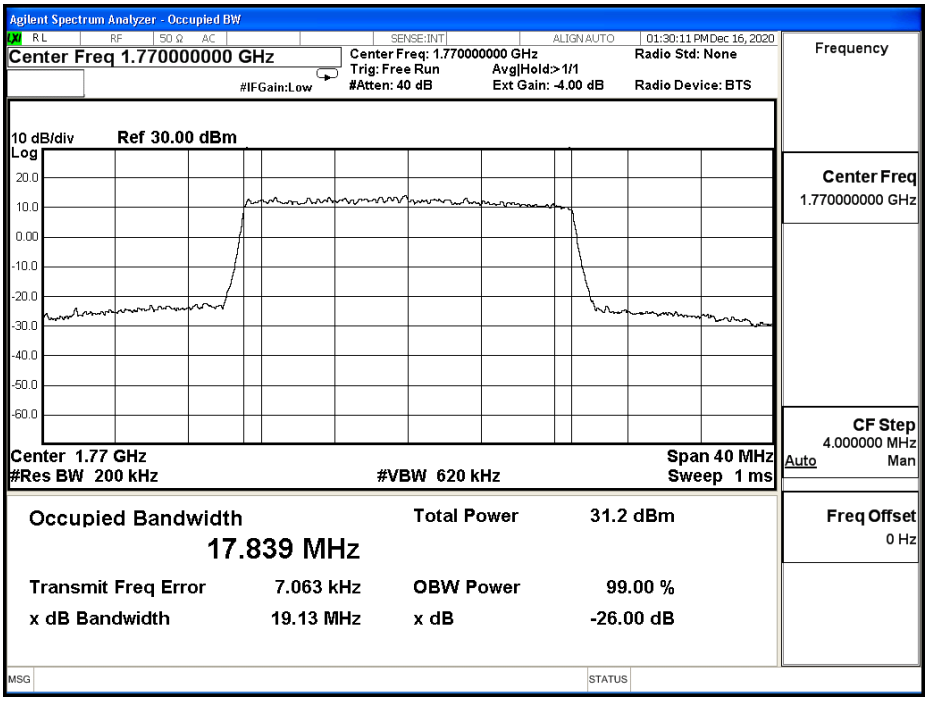
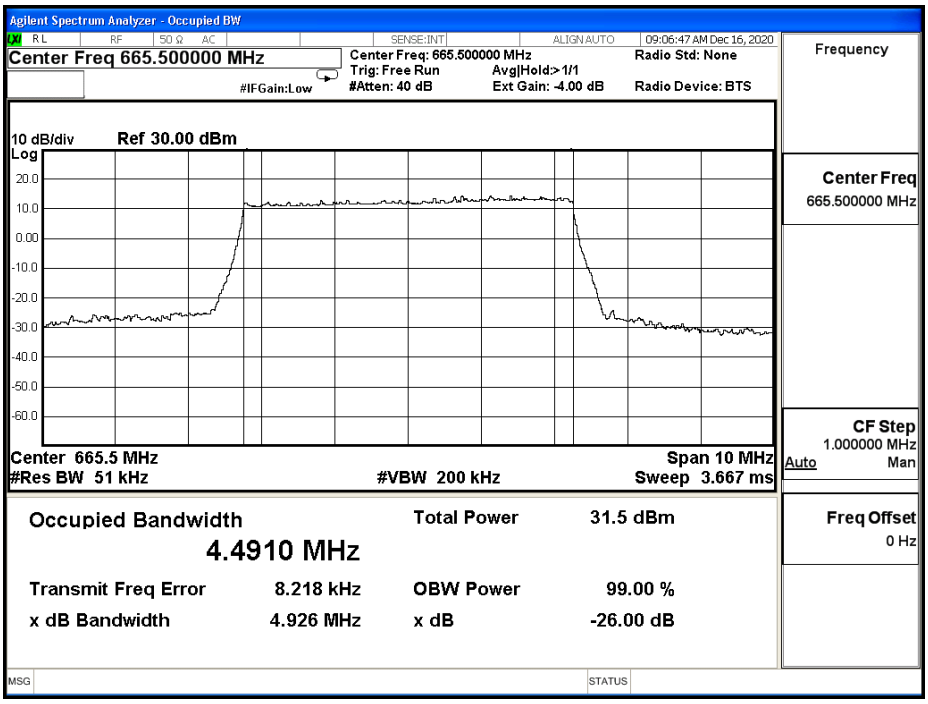


Product	M2M DATA MODULE		
Test Item	Occupied Bandwidth		
Test Mode	Mode 5: LTE Band 71		
Date of Test	2020/12/16	Test Site	SR12-H
Temperature (°C)	24	Humidity (%RH)	62

LTE Band 71

Bandwidth (MHz)	Modulation	Frequency (MHz)	Measure Level (MHz)		Limit (MHz)
			26dB BW	99% BW	
5M	QPSK	665.5	4.926	4.491	N/A
		680.5	4.941	4.492	N/A
		690.5	4.945	4.489	N/A
	16-QAM	665.5	4.893	4.477	N/A
		680.5	4.858	4.472	N/A
		690.5	4.924	4.483	N/A
10M	QPSK	668.0	9.665	8.915	N/A
		680.5	9.608	8.926	N/A
		693.0	9.768	8.947	N/A
	16-QAM	668.0	9.627	8.914	N/A
		680.5	9.703	8.937	N/A
		693.0	9.713	8.944	N/A
15M	QPSK	670.5	14.510	13.389	N/A
		680.5	14.480	13.379	N/A
		690.5	14.560	13.415	N/A
	16-QAM	670.5	14.430	13.368	N/A
		680.5	14.430	13.392	N/A
		690.5	14.480	13.412	N/A
20M	QPSK	673.0	19.100	17.843	N/A
		683.0	19.020	17.777	N/A
		688.0	19.280	17.830	N/A
	16-QAM	673.0	19.190	17.844	N/A
		683.0	19.170	17.797	N/A
		688.0	19.080	17.780	N/A

LTE_B71_CH133147_5M_QPSK_25RB0



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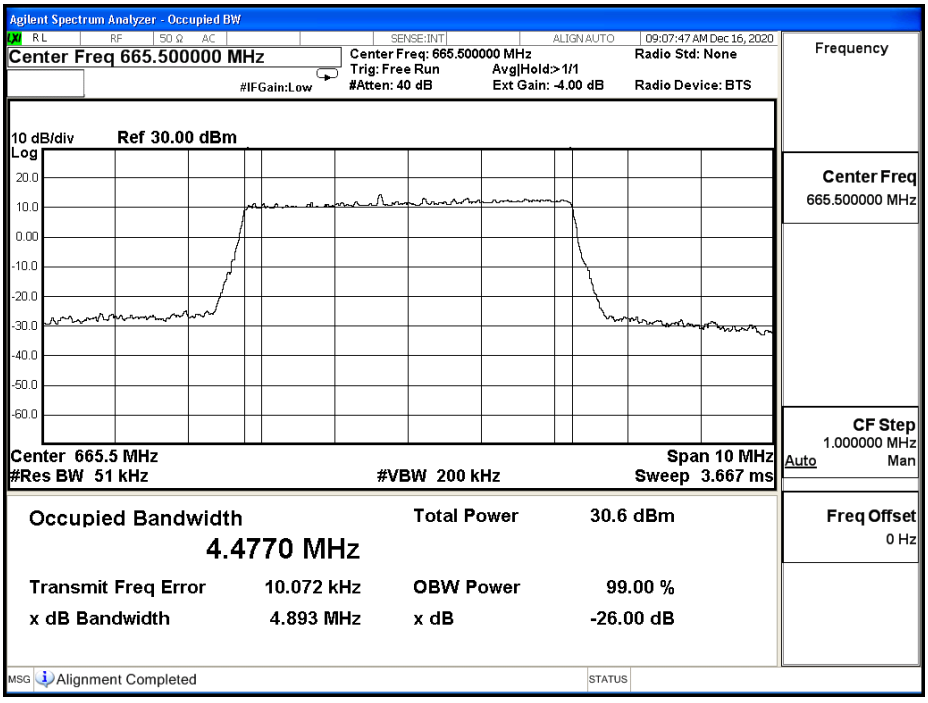

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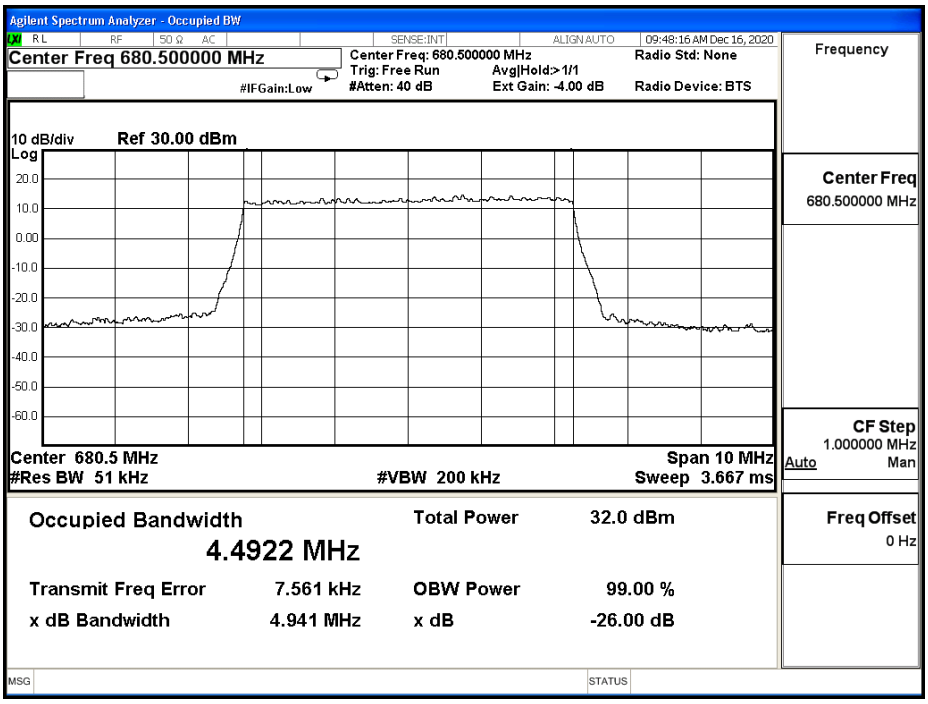

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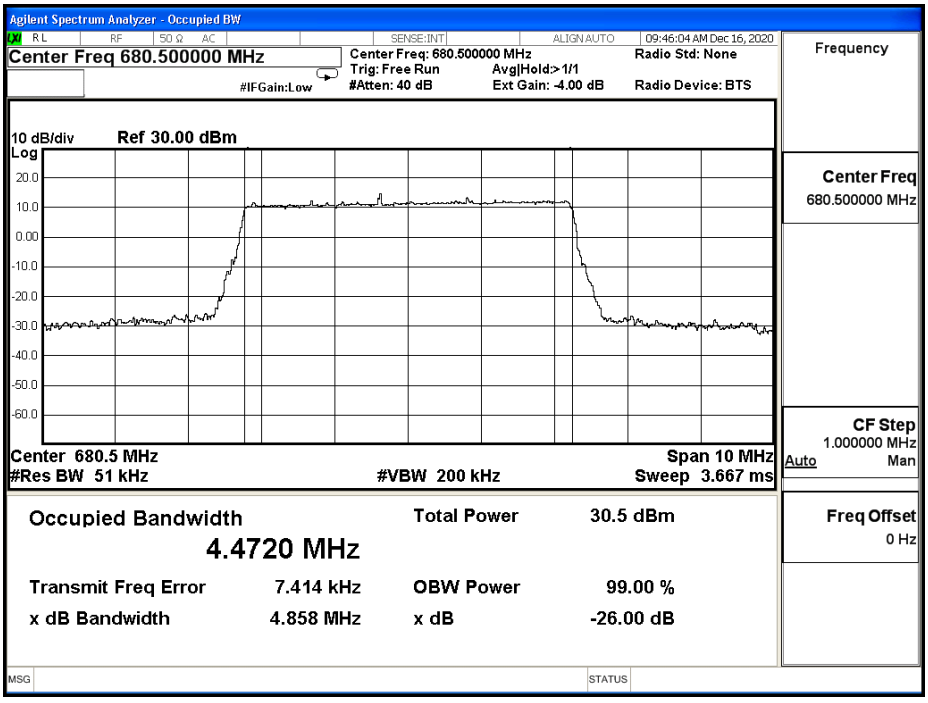

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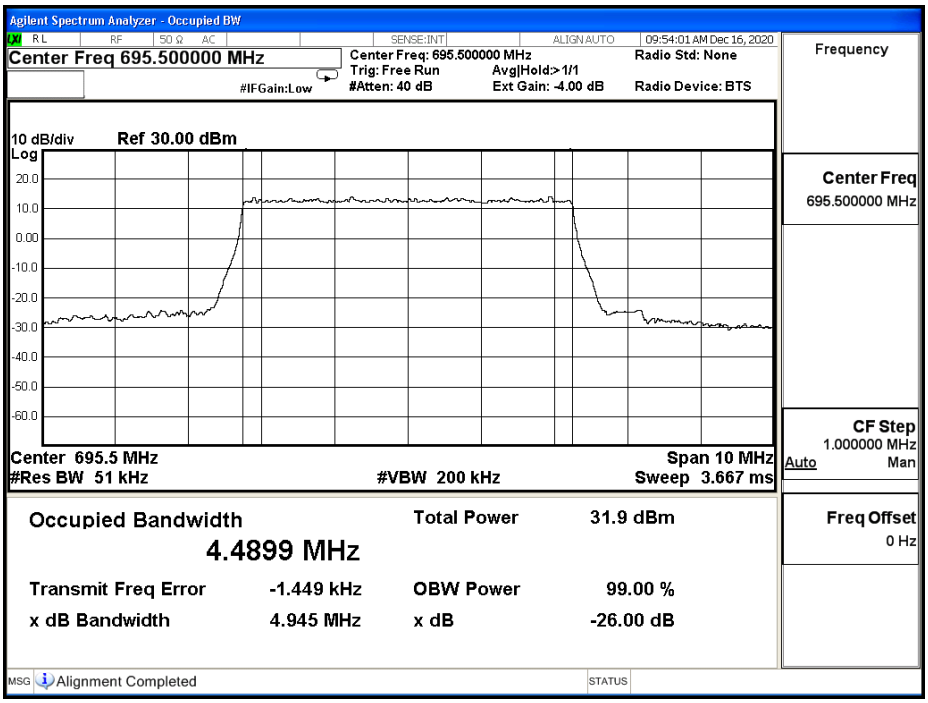

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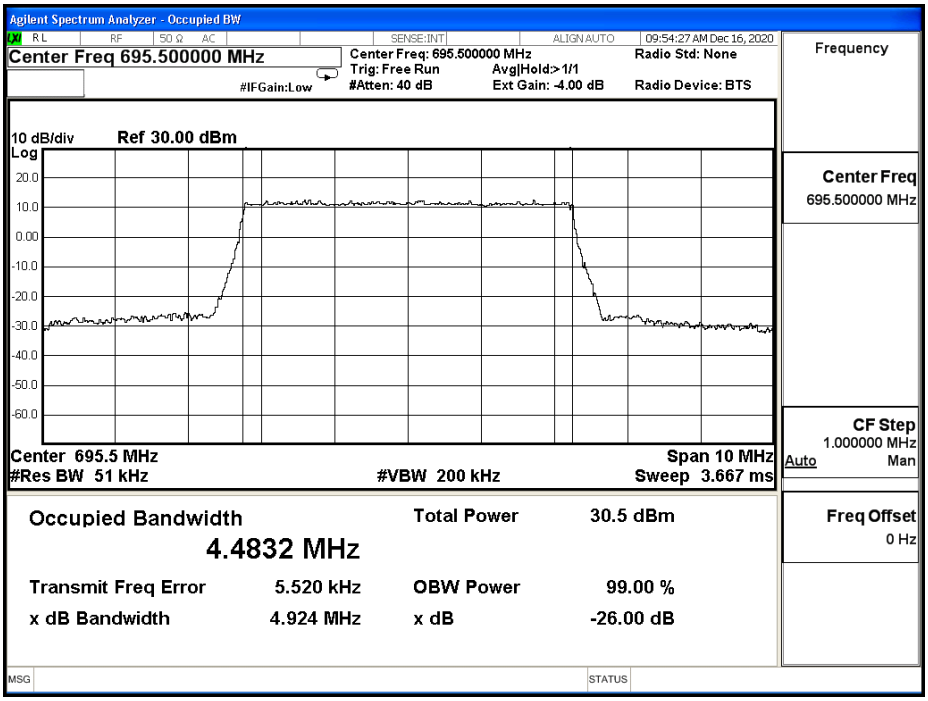

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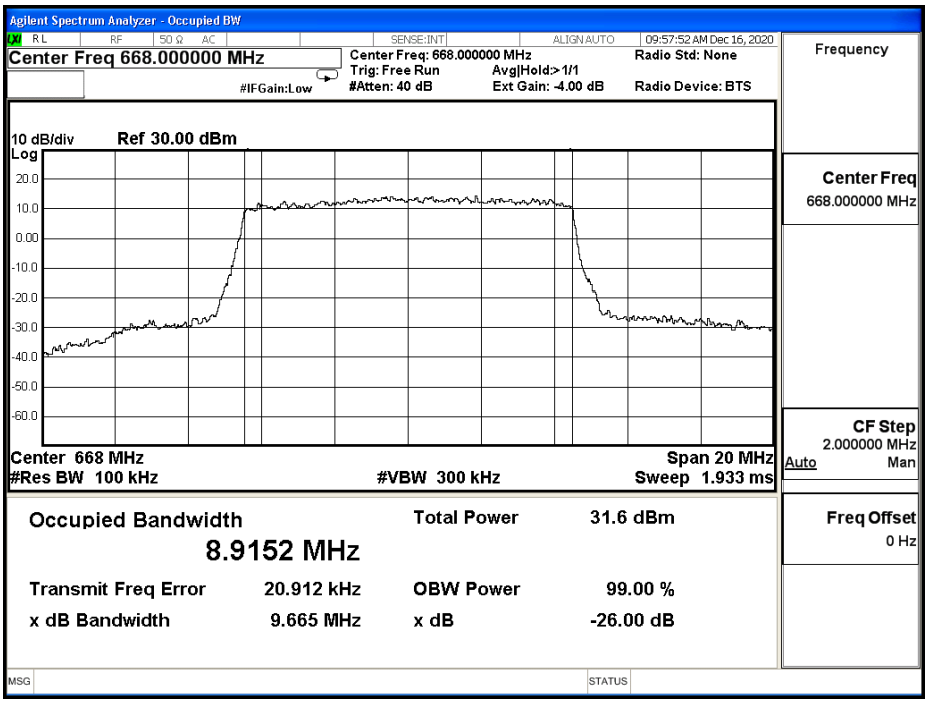

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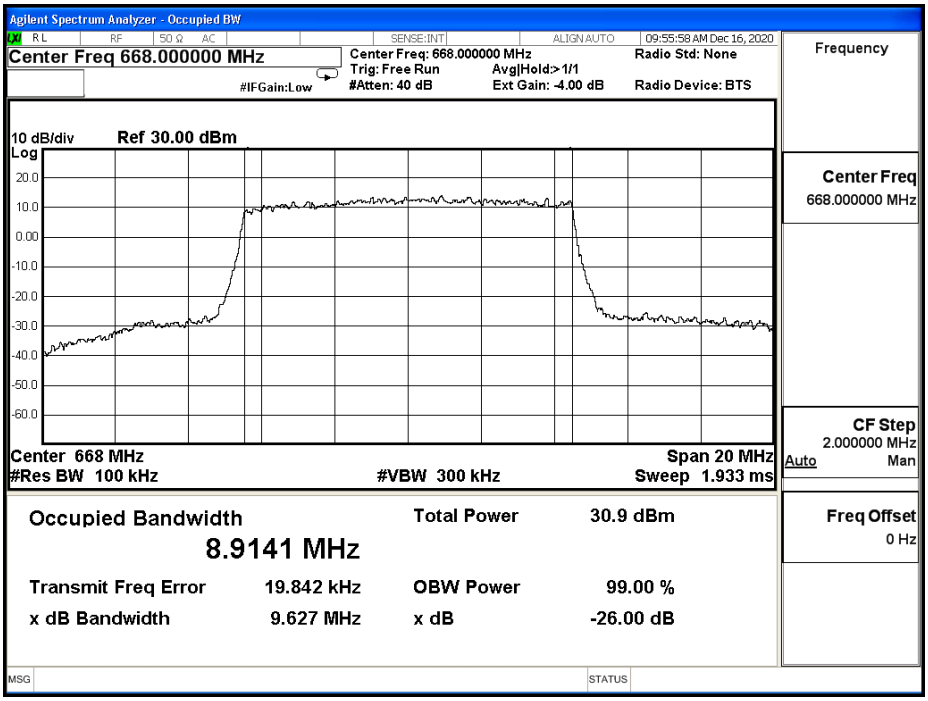

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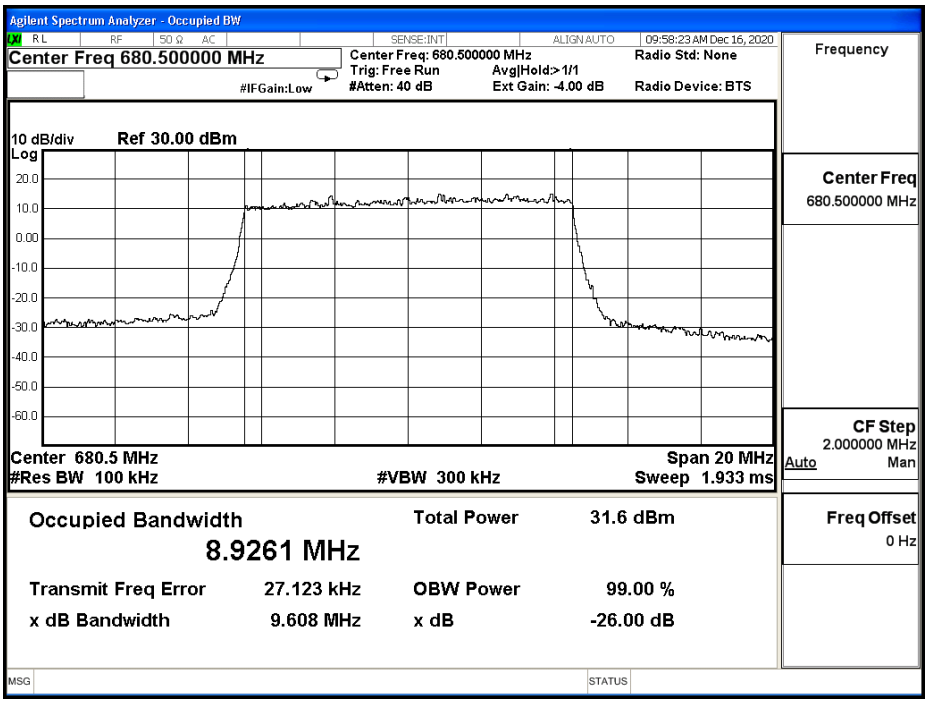

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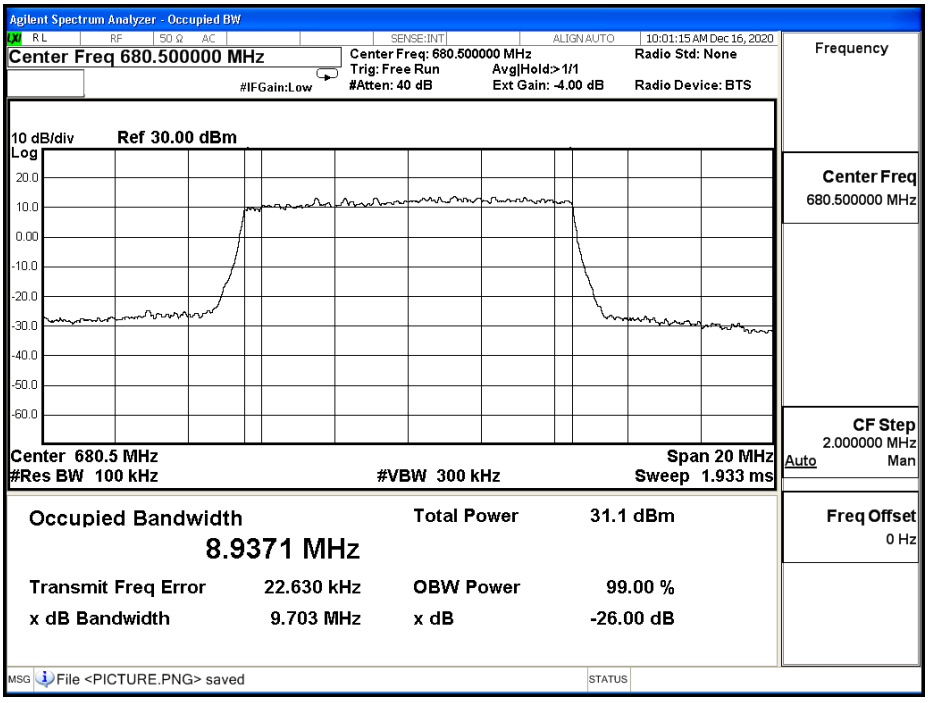

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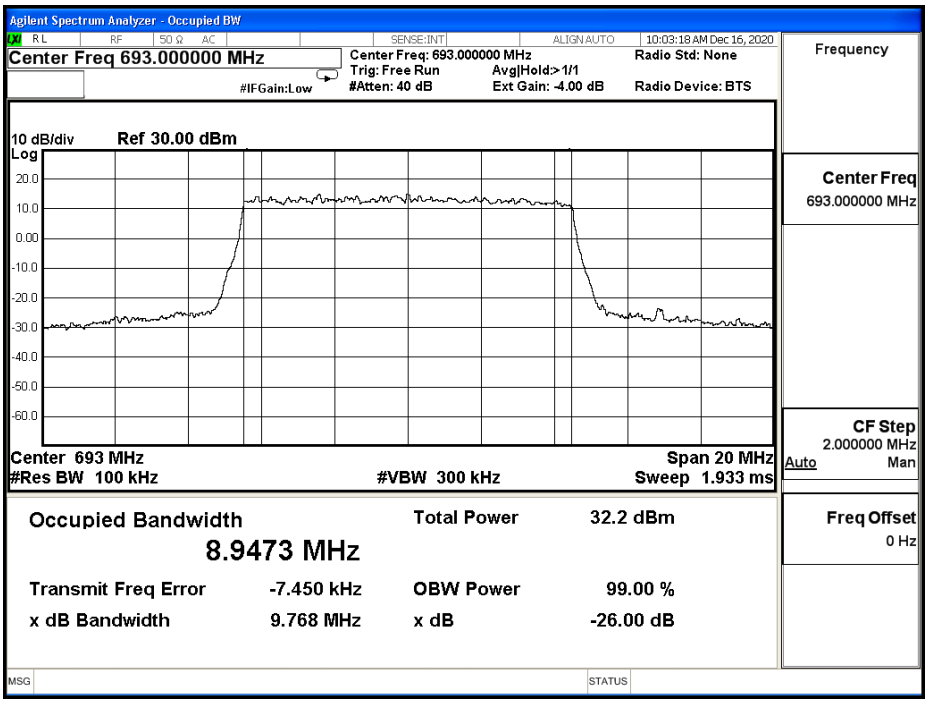

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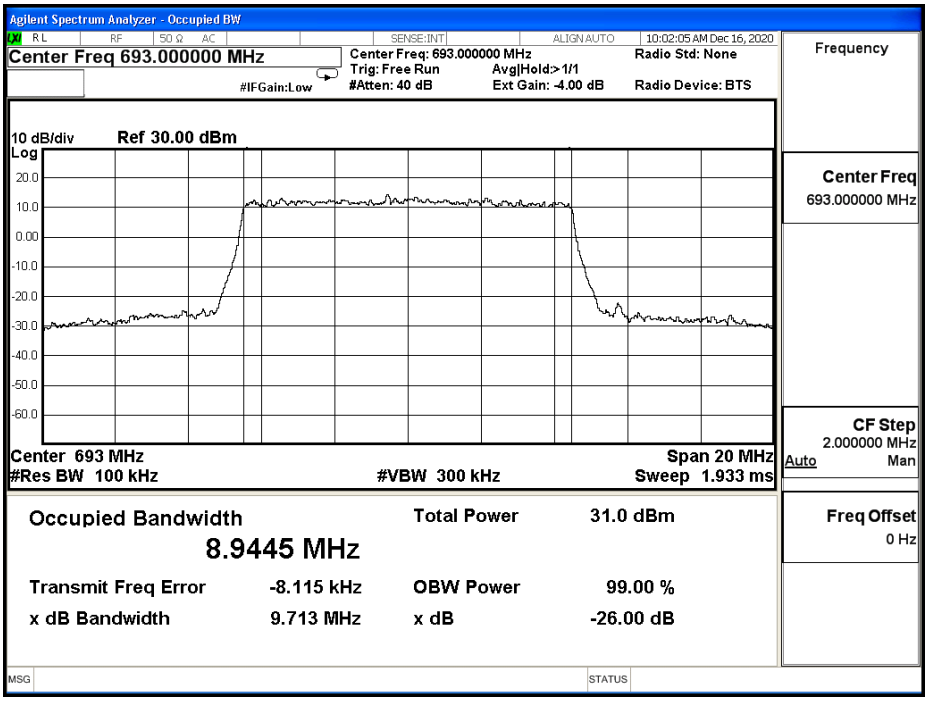

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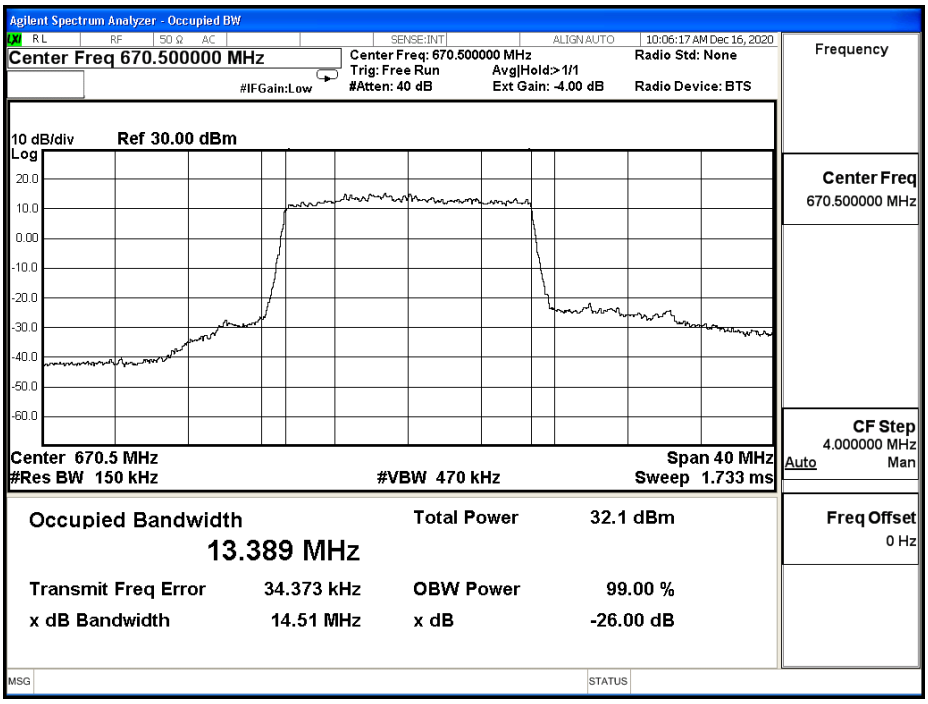

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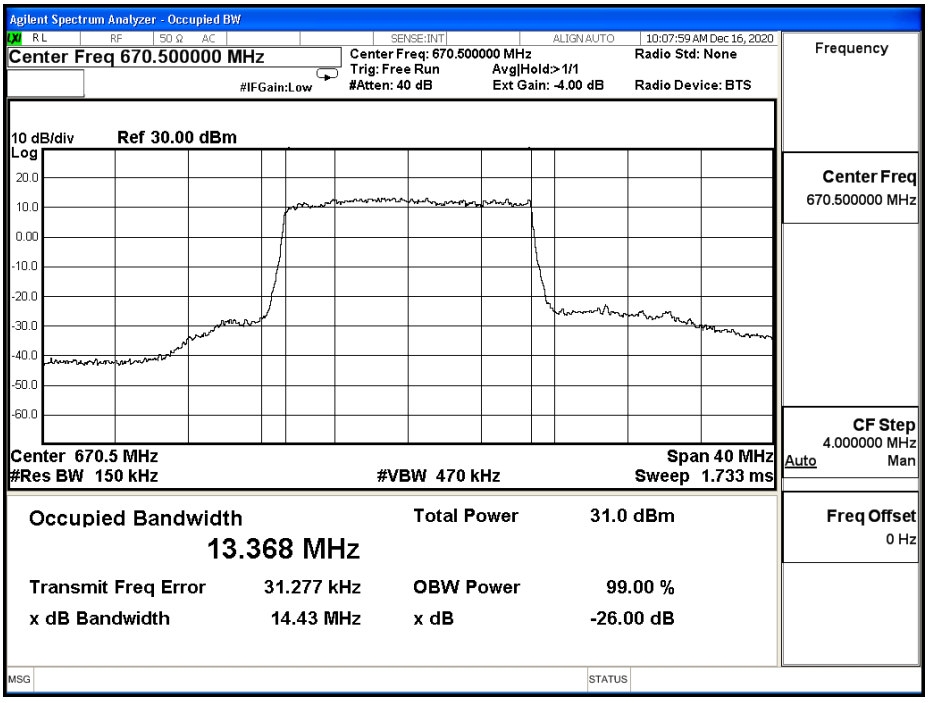

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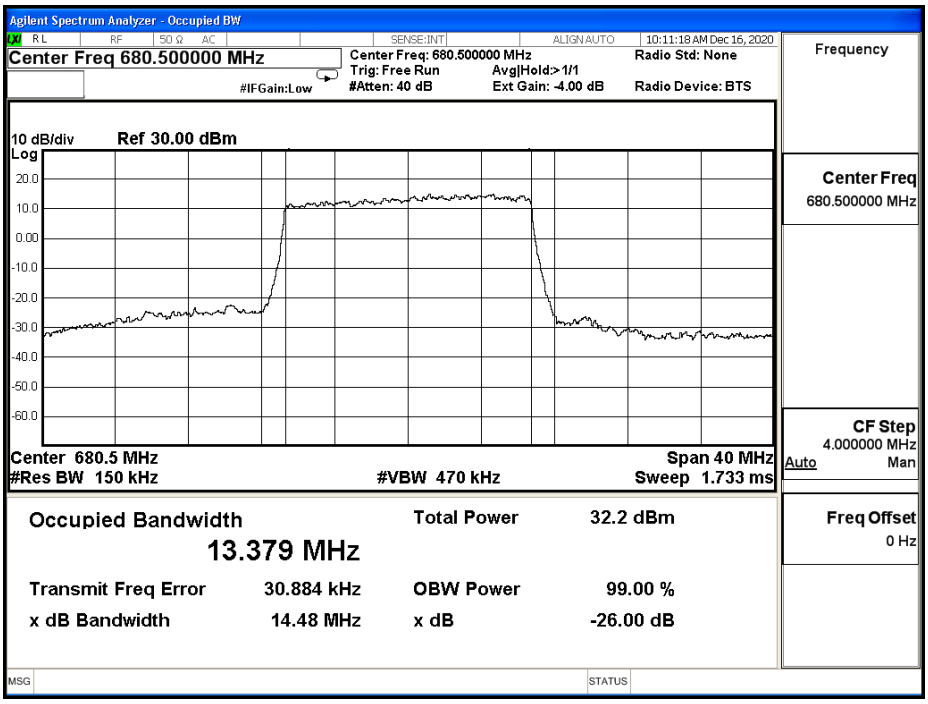

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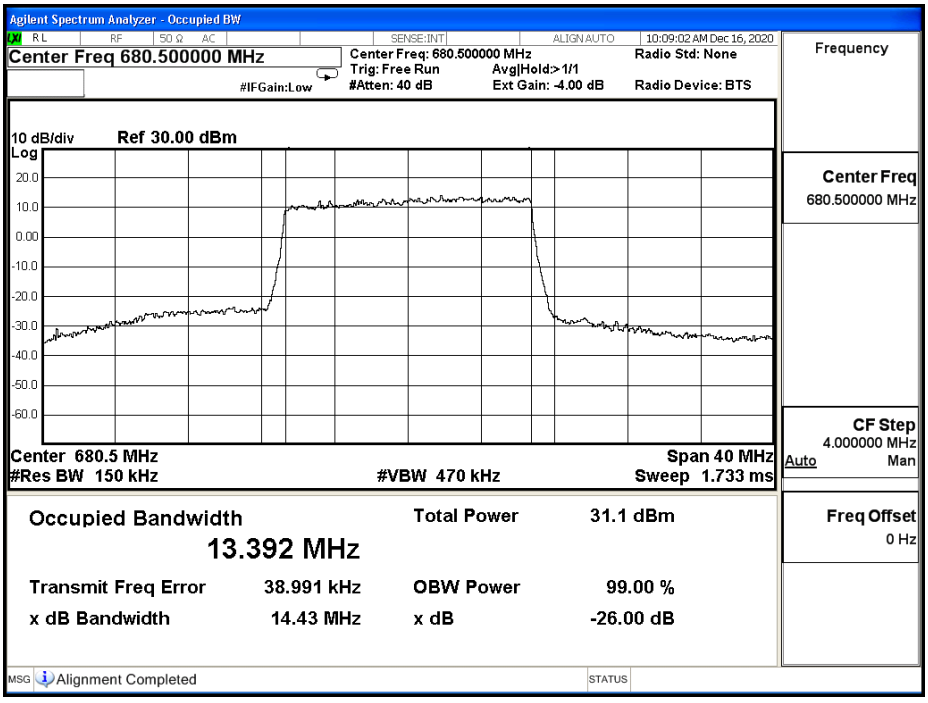

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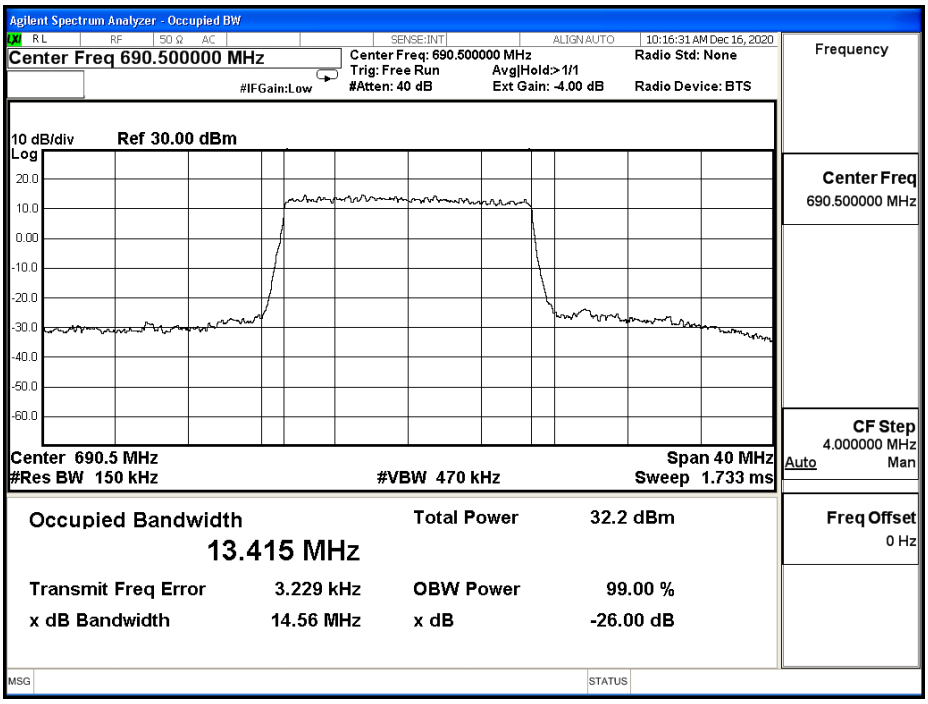

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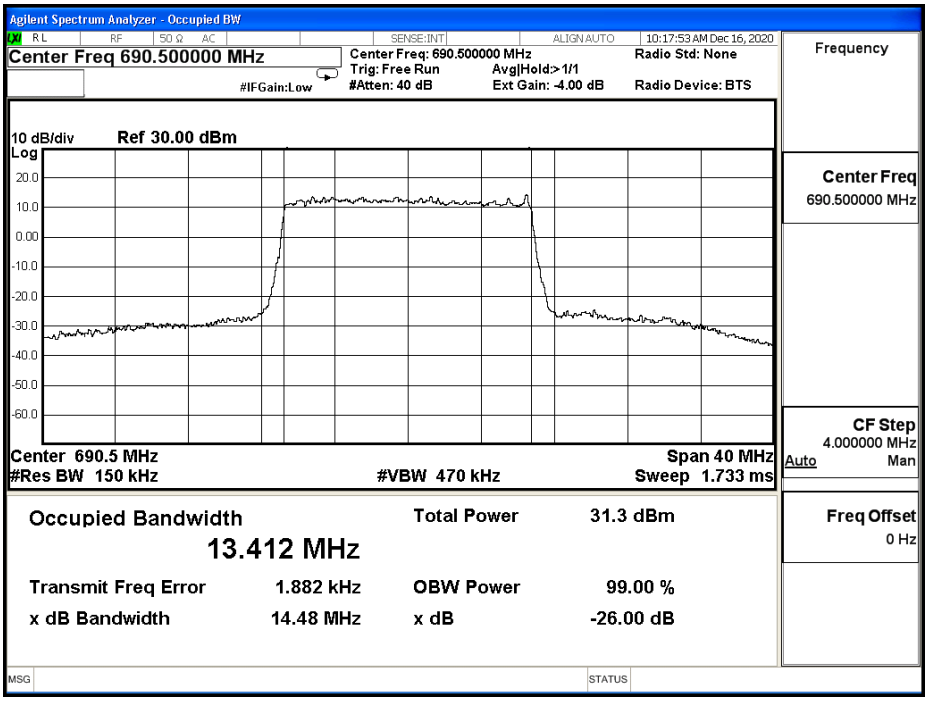

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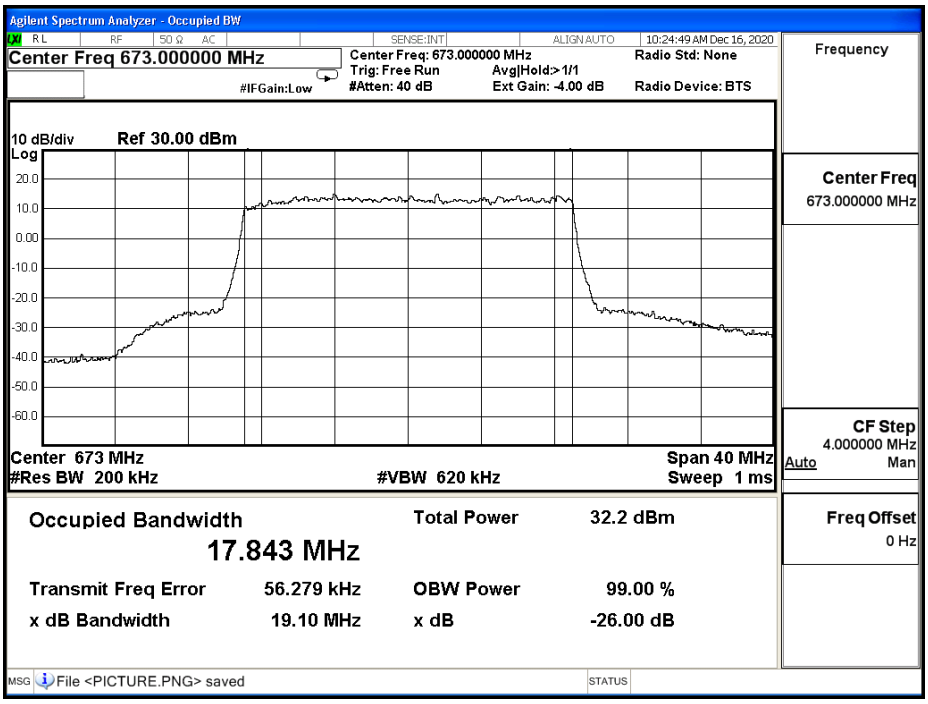

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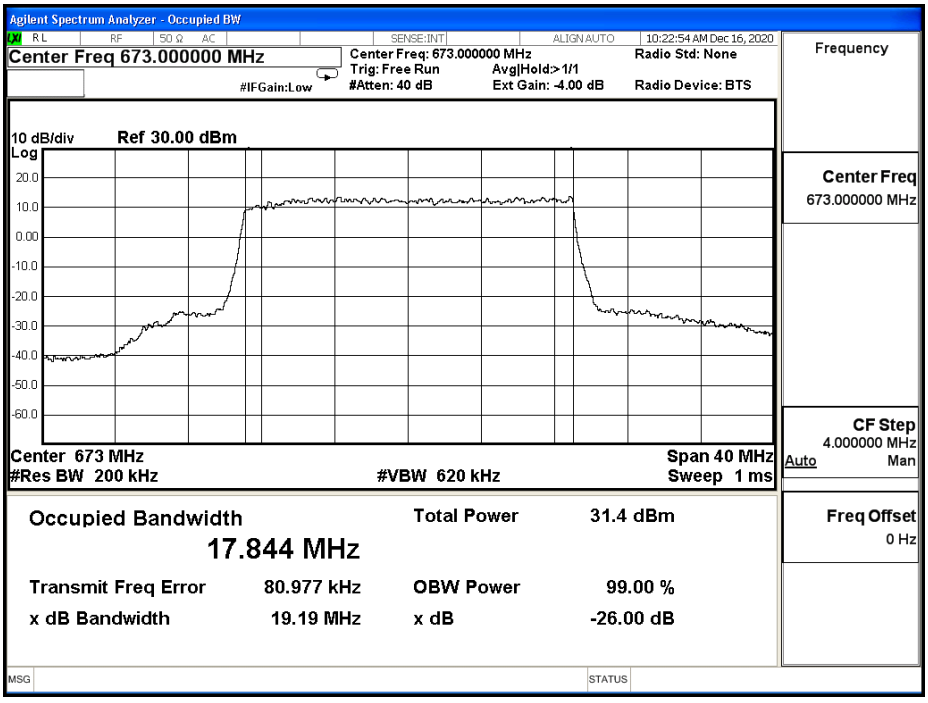

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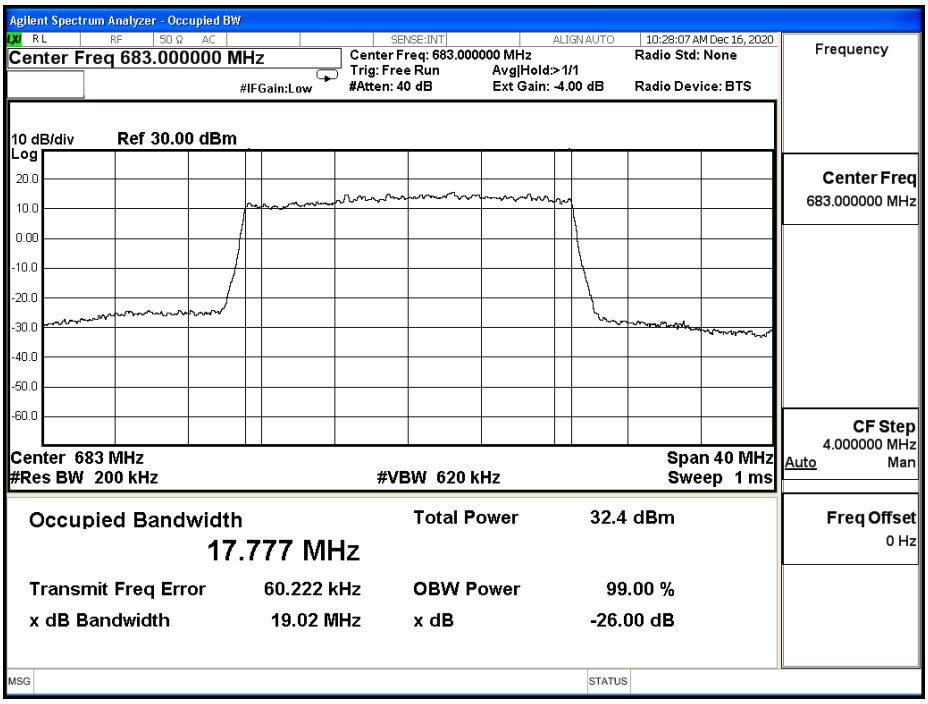

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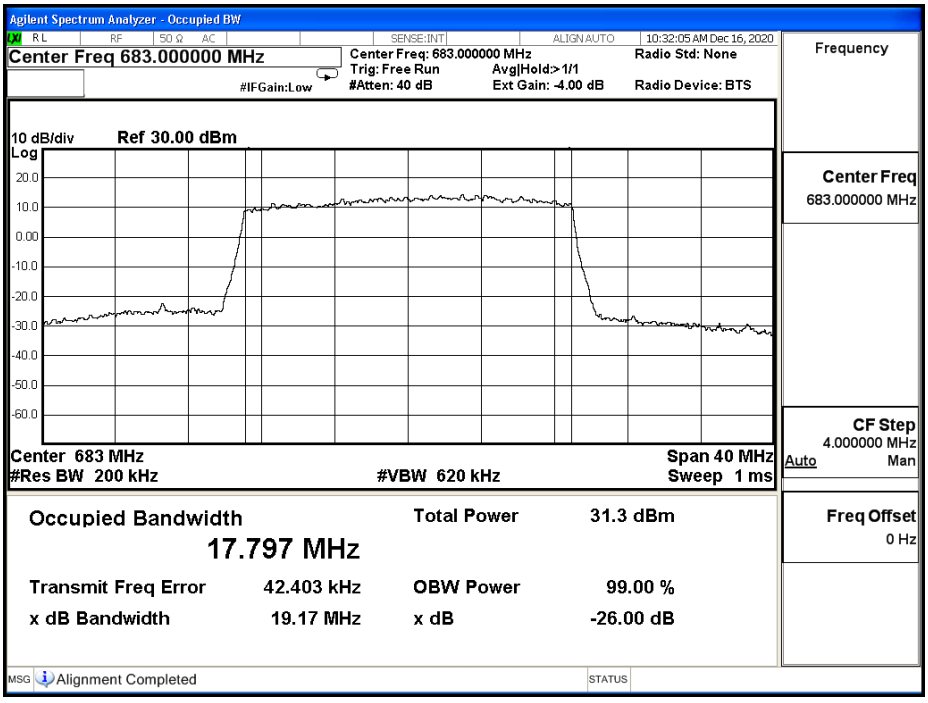

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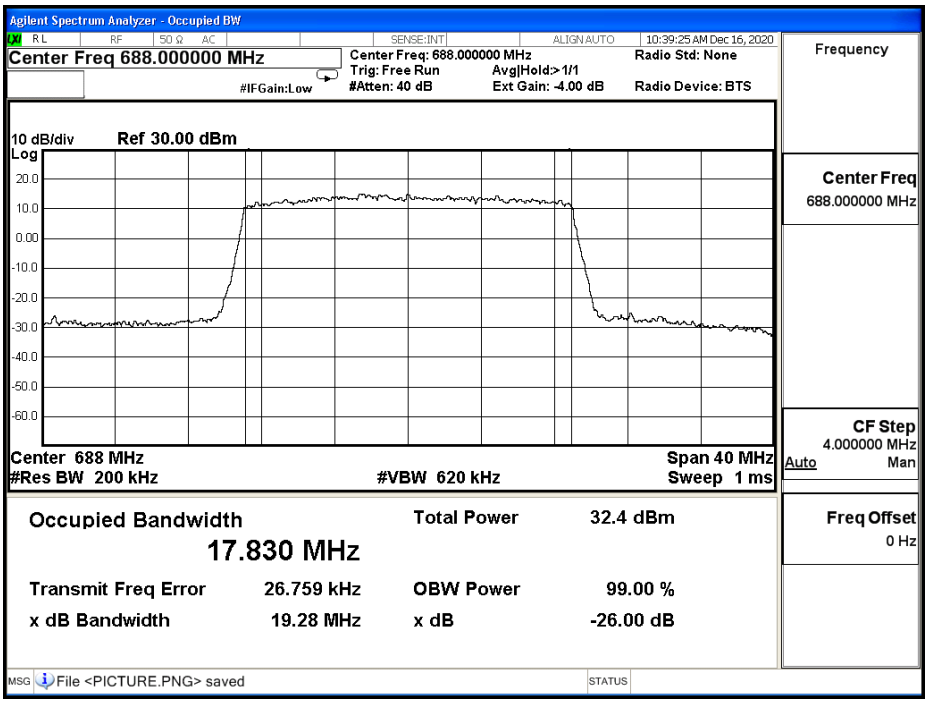

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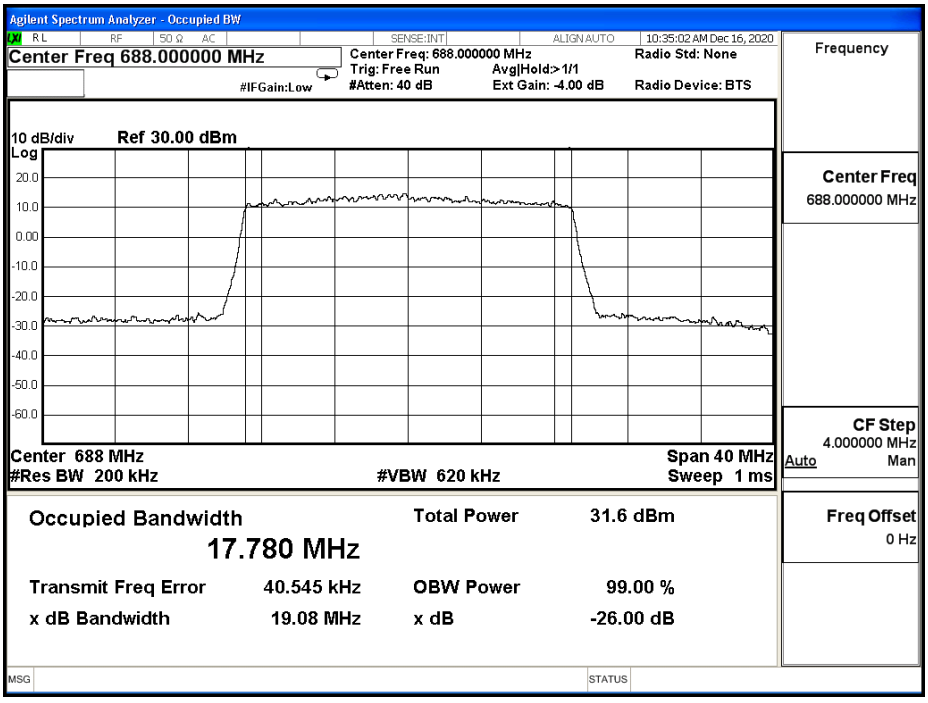
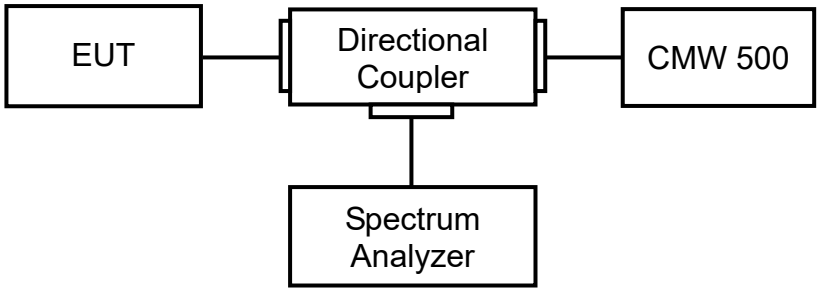


5. Peak To Average Ratio

5.1. Test Setup



5.2. Test Procedure

1. Set resolution/measurement bandwidth ≥ signal's occupied bandwidth.
2. Set the number of counts to a value that stabilizes the measured CCDF curve.
3. Record the maximum PAPR level associated with a probability of 0.1 %.

5.3. Test Method

KDB 971168 D01 Power Meas License Digital Systems v03 sub-clause 5.7.2
ANSI C63.26: 2015 Sub-clause 5.2.3.4

5.4. Limit

In measuring transmissions in this band using an average power technique, the peak to-average ratio (PAR) of the transmission may not exceed 13dB.

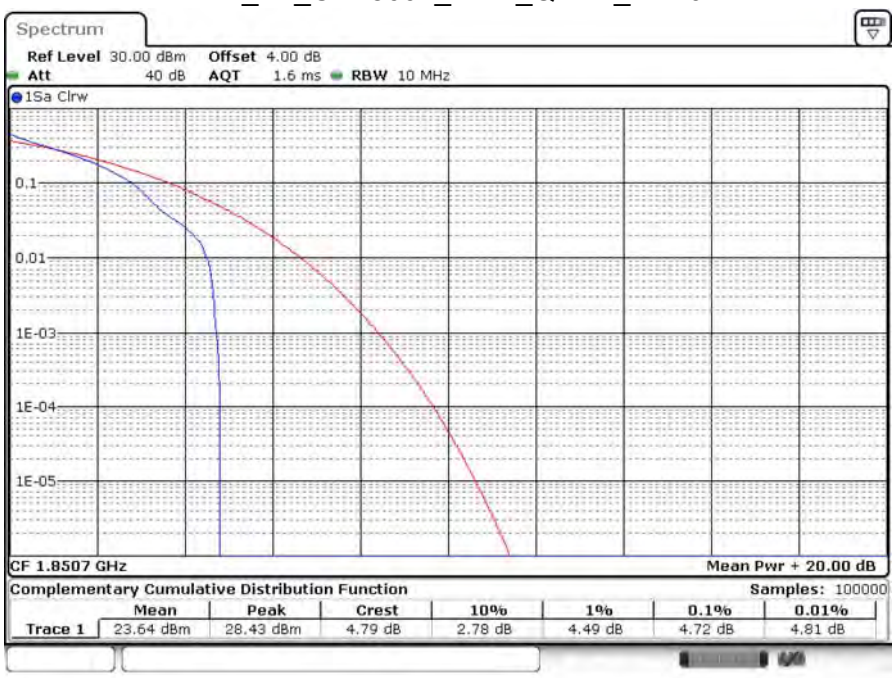
5.5. Test Result

Product	M2M DATA MODULE		
Test Item	Peak To Average Ratio		
Test Mode	Mode 1: LTE Band 2		
Date of Test	2020/12/21	Test Site	SR12-H
Temperature (°C)	23	Humidity (%RH)	60

Band 2

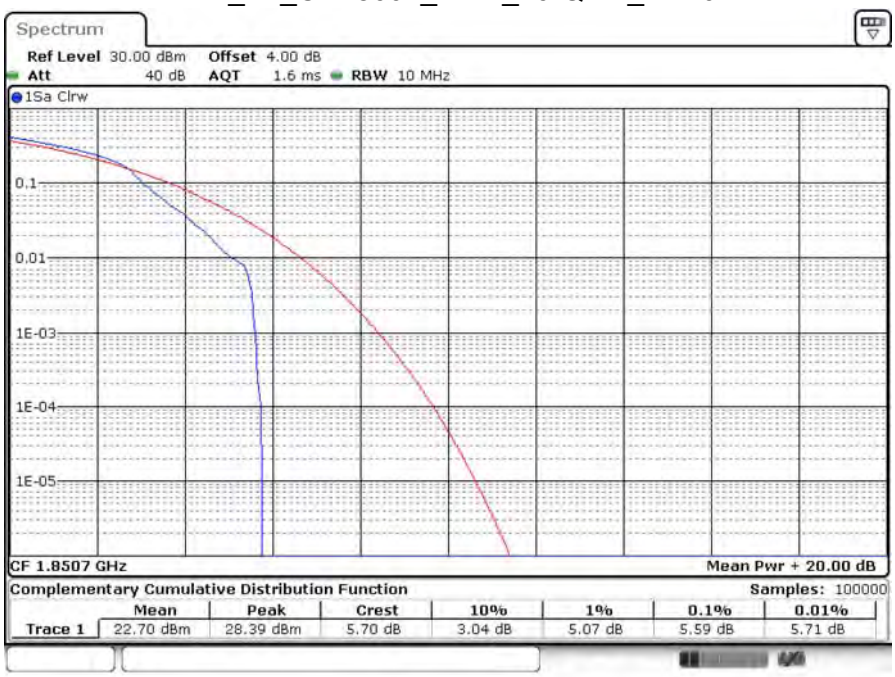
BW	Ch	Freq. (MHz)	Modulation	Peak (dBm)	Average (dBm)	PAPR (dB)
1.4M	18607	1850.7	QPSK	28.43	23.64	4.72
			16-QAM	28.39	22.70	5.59
	18900	1880	QPSK	27.77	23.16	4.49
			16-QAM	28.12	22.70	5.33
	19193	1909.3	QPSK	27.82	23.27	4.46
			16-QAM	27.64	22.25	5.30
3M	18615	1851.5	QPSK	28.47	23.88	4.52
			16-QAM	27.92	22.26	5.54
	18900	1880	QPSK	27.70	23.20	4.41
			16-QAM	27.87	22.56	5.22
	19185	1908.5	QPSK	27.68	23.30	4.32
			16-QAM	27.57	22.32	5.19
5M	18625	1852.5	QPSK	27.41	22.58	4.75
			16-QAM	26.99	21.16	5.71
	18900	1880	QPSK	27.02	22.44	4.49
			16-QAM	27.35	22.03	5.22
	19175	1907.5	QPSK	26.96	22.50	4.41
			16-QAM	26.91	21.57	5.25
10M	18650	1855	QPSK	26.10	21.32	4.67
			16-QAM	26.27	20.68	5.42
	18900	1880	QPSK	25.60	21.07	4.46
			16-QAM	25.57	20.39	5.04
	19150	1905	QPSK	25.33	20.90	4.35
			16-QAM	25.15	19.95	5.10
15M	18675	1857.5	QPSK	22.96	18.05	4.81
			16-QAM	22.90	17.38	5.42
	18900	1880	QPSK	22.59	18.10	4.38
			16-QAM	22.96	17.82	5.04
	19125	1902.5	QPSK	22.31	17.81	4.41
			16-QAM	21.94	16.51	5.33
20M	18700	1860	QPSK	18.85	13.73	4.96
			16-QAM	19.49	13.26	5.97
	18900	1880	QPSK	18.64	13.78	4.70
			16-QAM	18.38	12.56	5.57
	19100	1900	QPSK	18.18	13.53	4.46
			16-QAM	18.14	12.77	5.22

LTE_B2_CH18607_1.4M_QPSK_1RB0



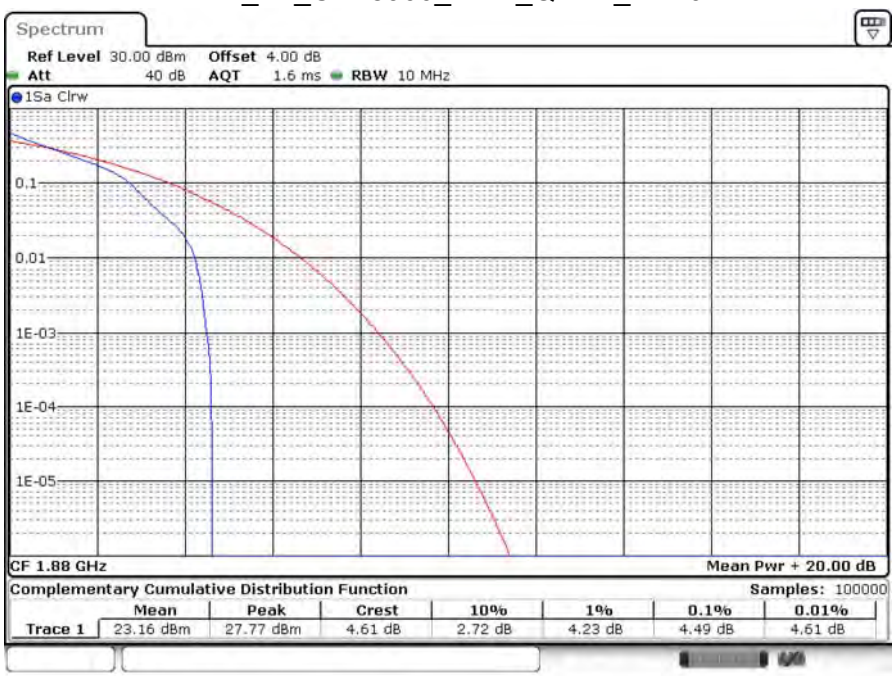
Date: 21.DEC.2020 08:34:14

LTE_B2_CH18607_1.4M_16-QAM_1RB0



Date: 21.DEC.2020 08:34:44

LTE_B2_CH18900_1.4M_QPSK_1RB0



Date: 21.DEC.2020 08:35:51

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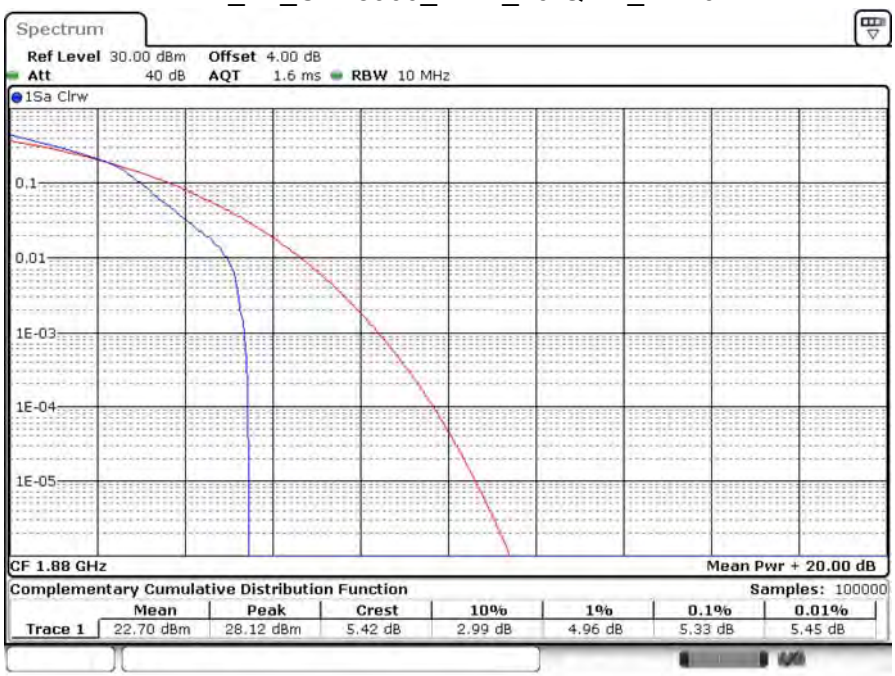

Date: 21.DEC.2020 08:35:26

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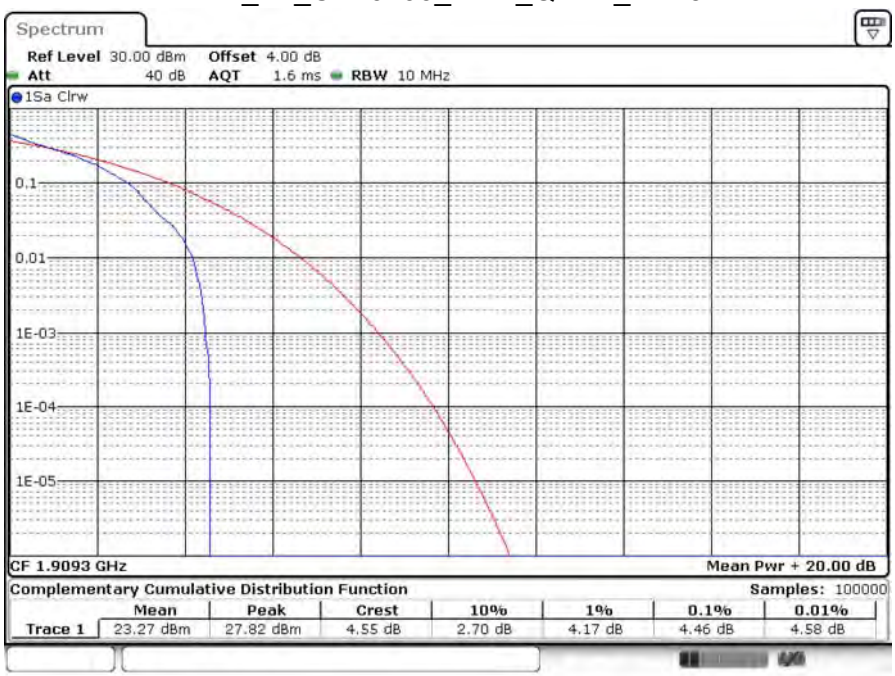

Date: 21.DEC.2020 08:36:22

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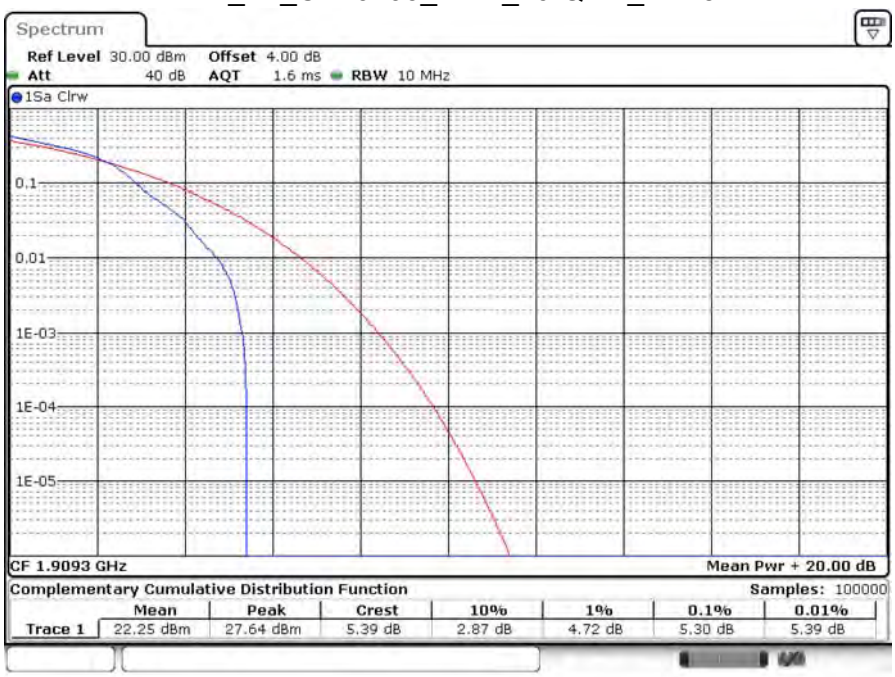

Date: 21.DEC.2020 08:36:37

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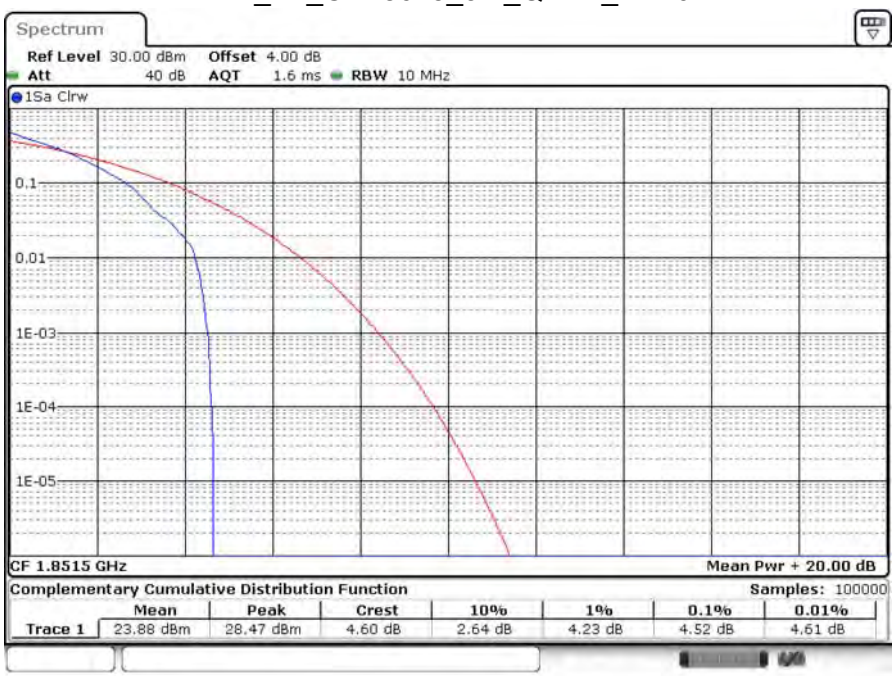

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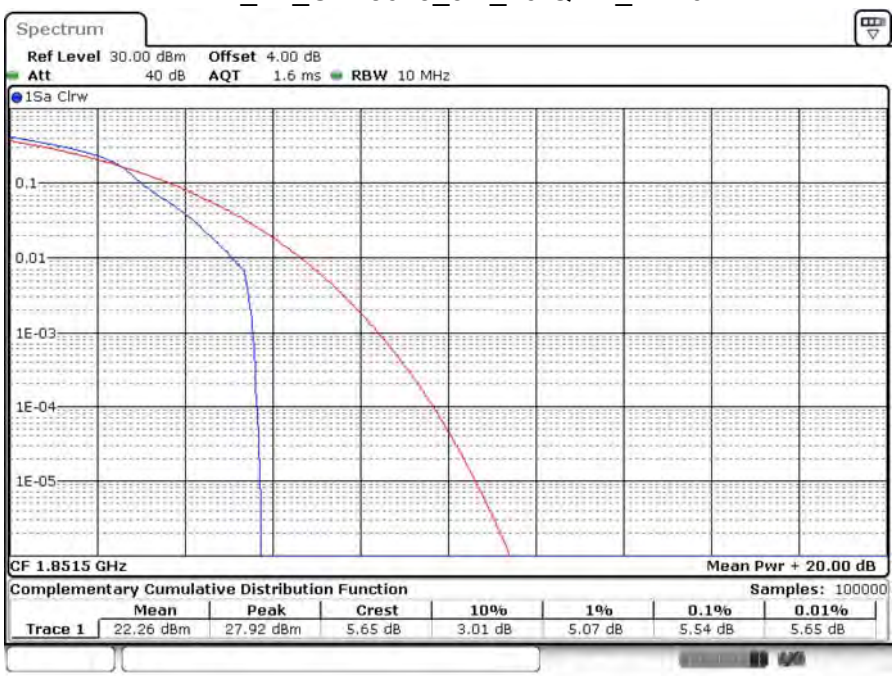
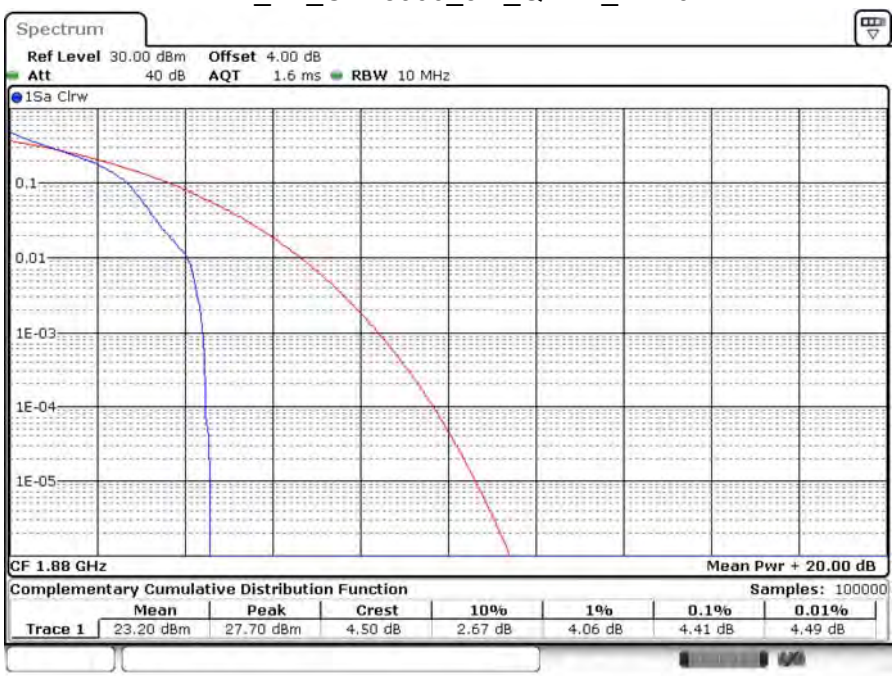


Date: 21.DEC.2020 08:40:18

LTE_B2_CH18900_3M_QPSK_1RB0



Date: 21.DEC.2020 08:39:47

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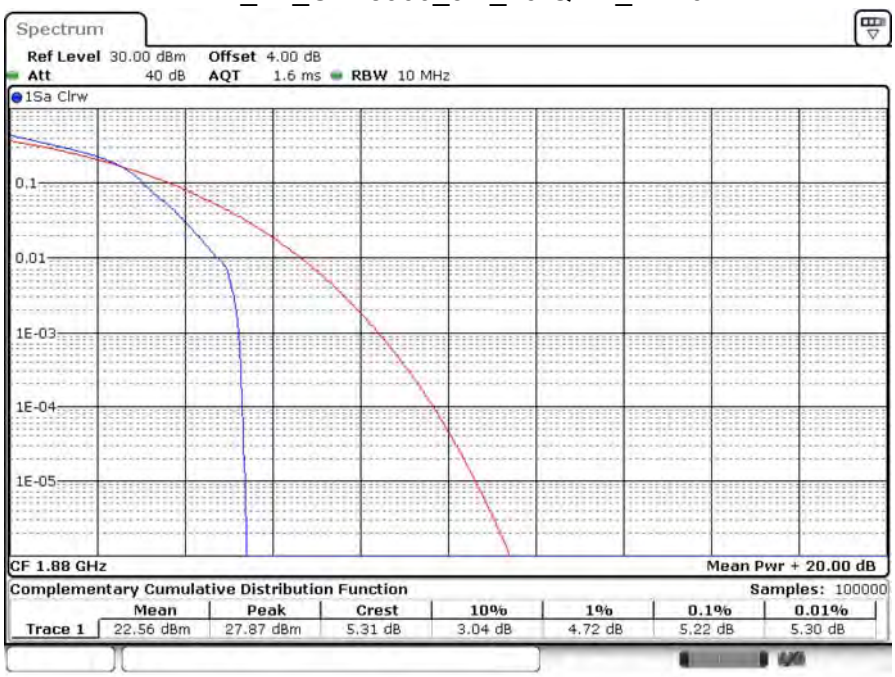

Date: 21.DEC.2020 08:39:33

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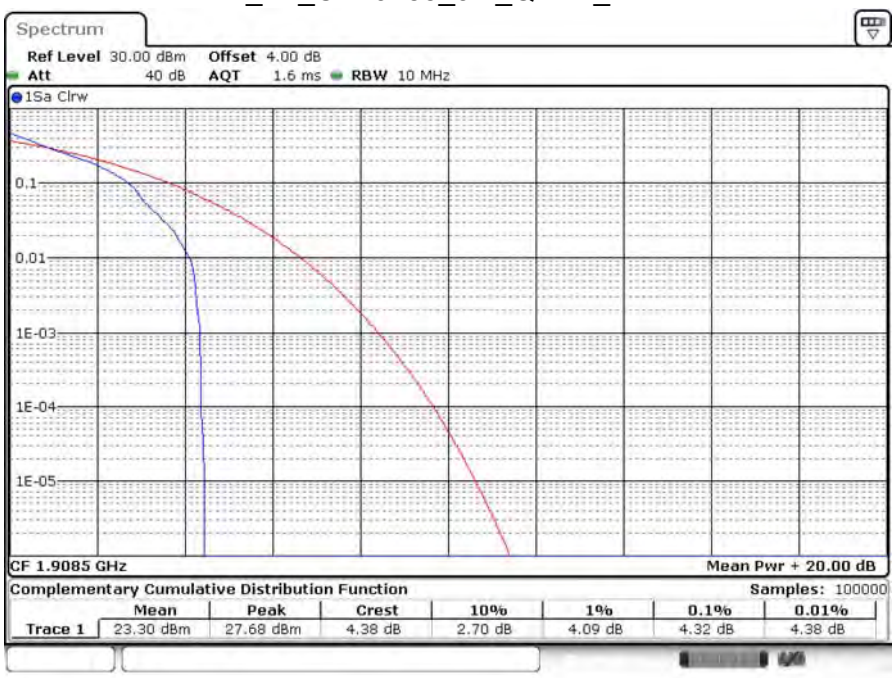

Date: 21.DEC.2020 08:38:59

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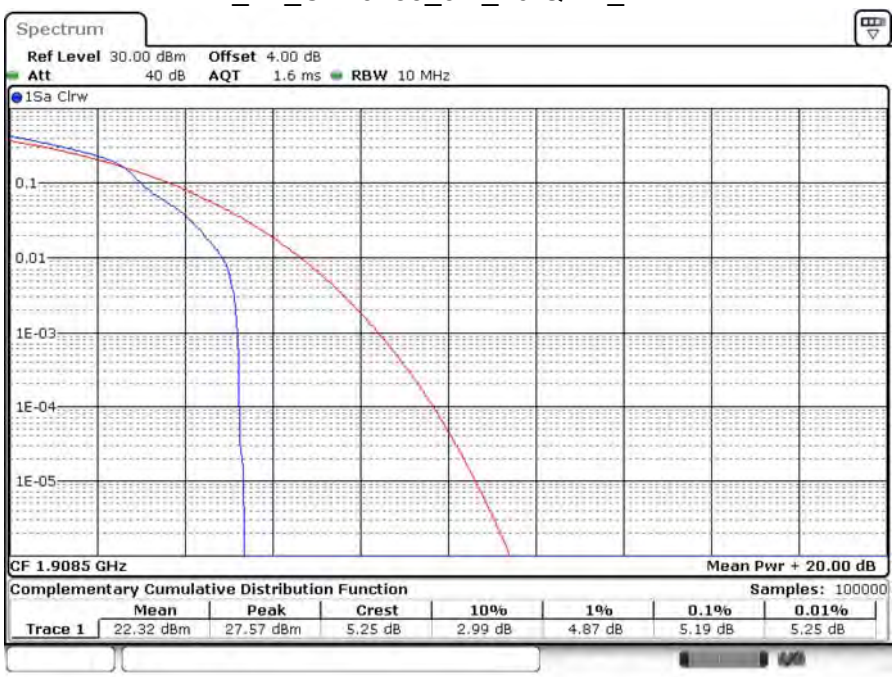

Date: 21.DEC.2020 08:39:11

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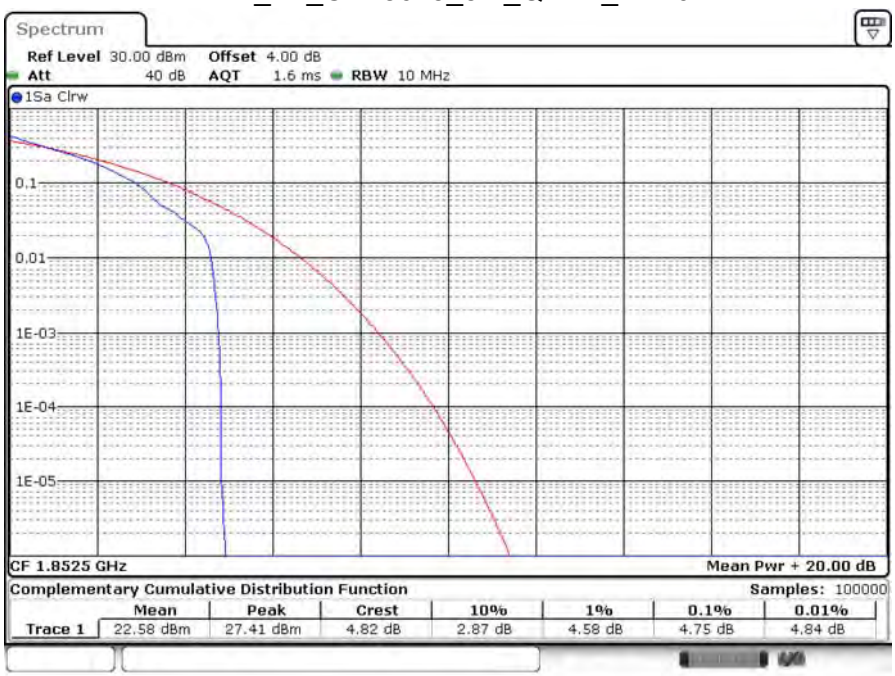
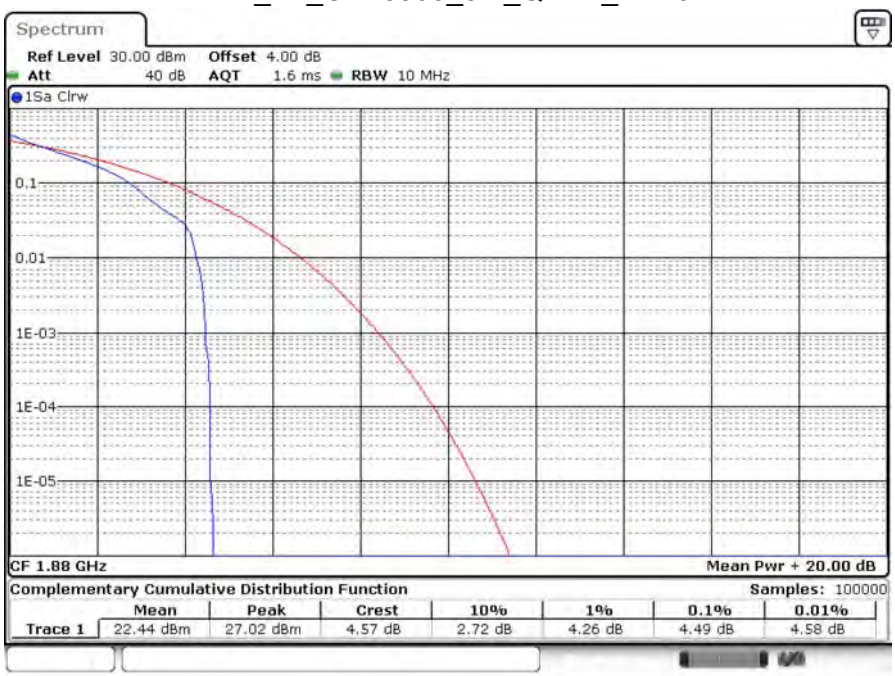


Date: 21.DEC.2020 08:59:01

LTE_B2_CH18625_5M_16-QAM_1RB0

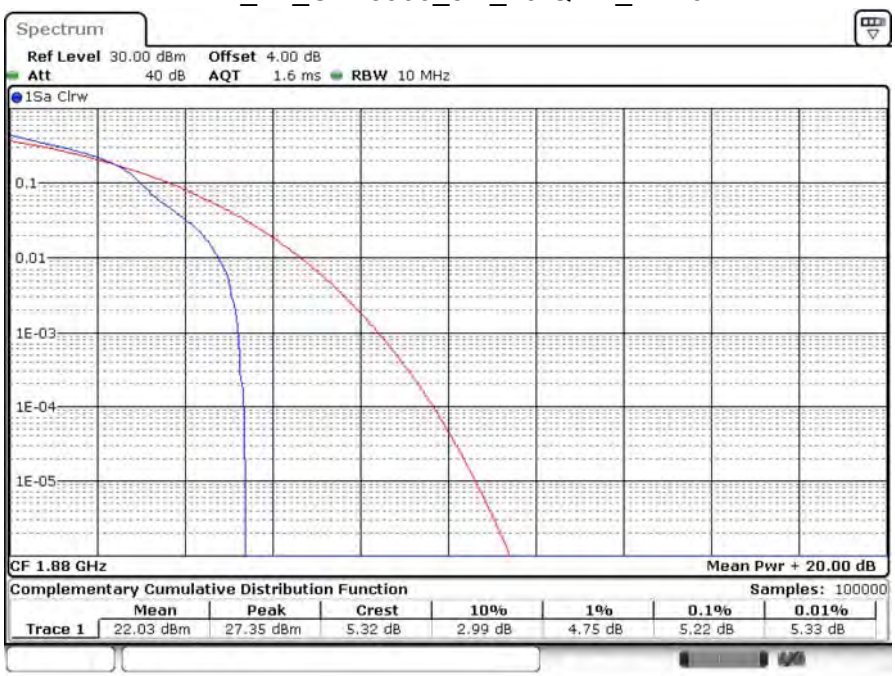
Date: 21.DEC.2020 08:59:15

LTE_B2_CH18900_5M_QPSK_1RB0



Date: 21.DEC.2020 09:00:05

LTE_B2_CH18900_5M_16-QAM_1RB0



Date: 21.DEC.2020 08:59:37

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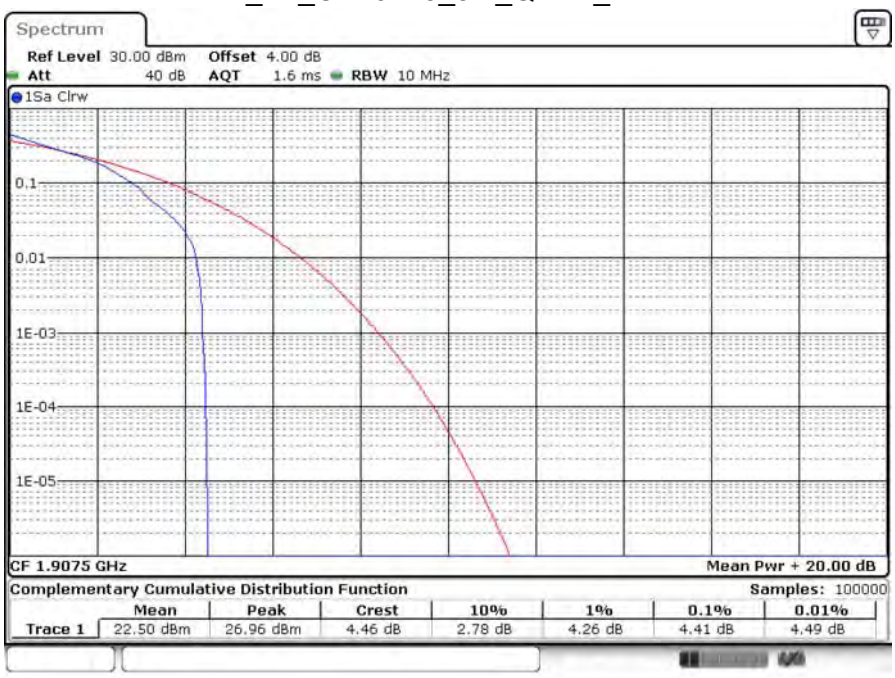

Date: 21.DEC.2020 09:00:53

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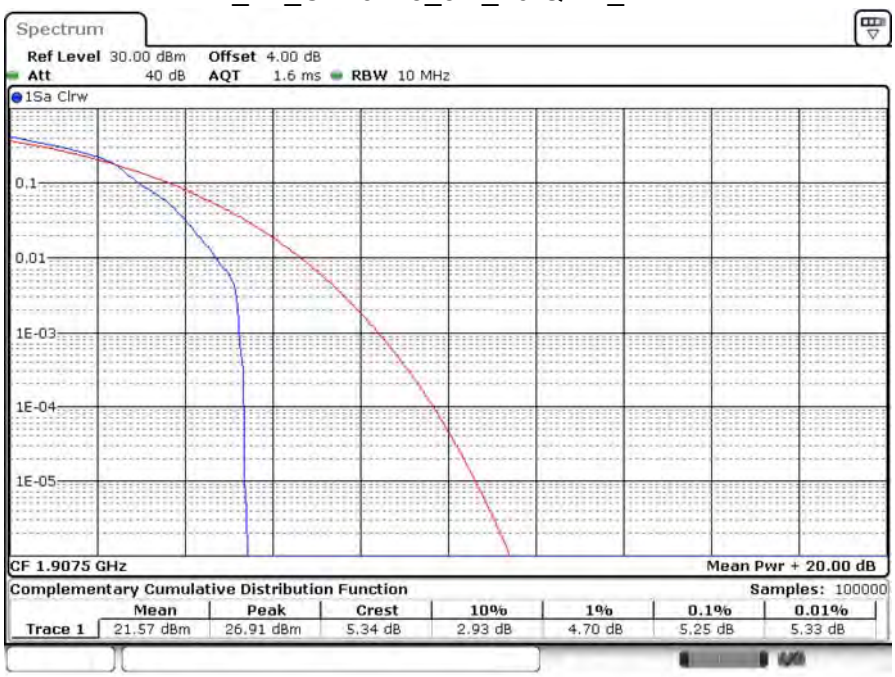

Date: 21.DEC.2020 09:01:24

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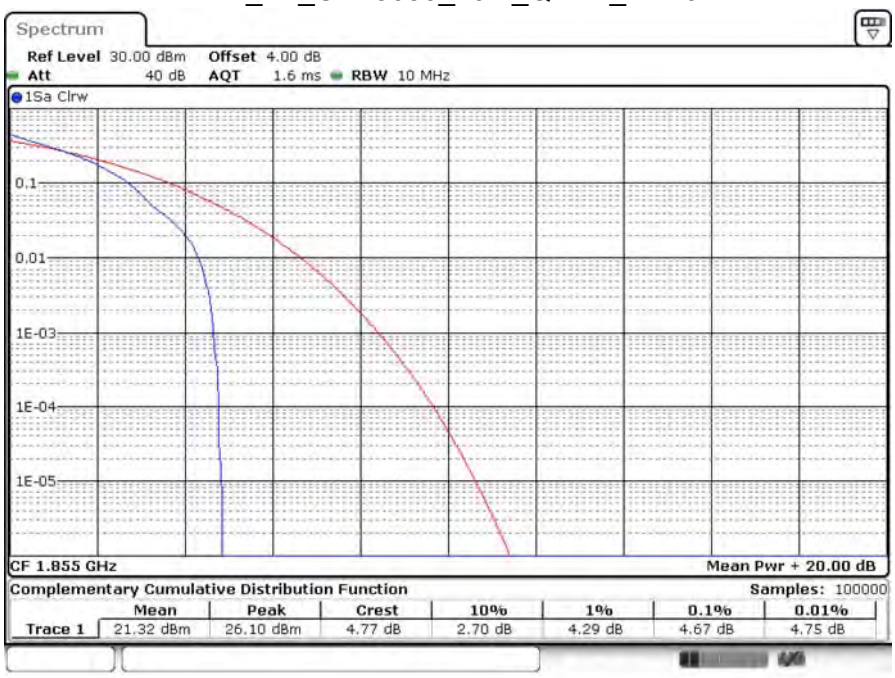

Date: 21.DEC.2020 09:11:35

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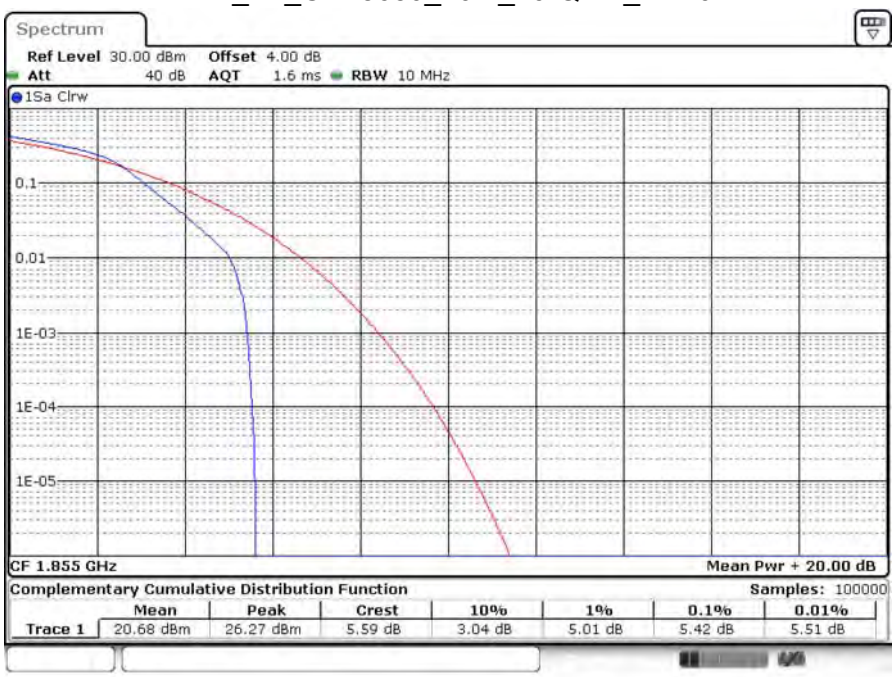

Date: 21.DEC.2020 09:12:02

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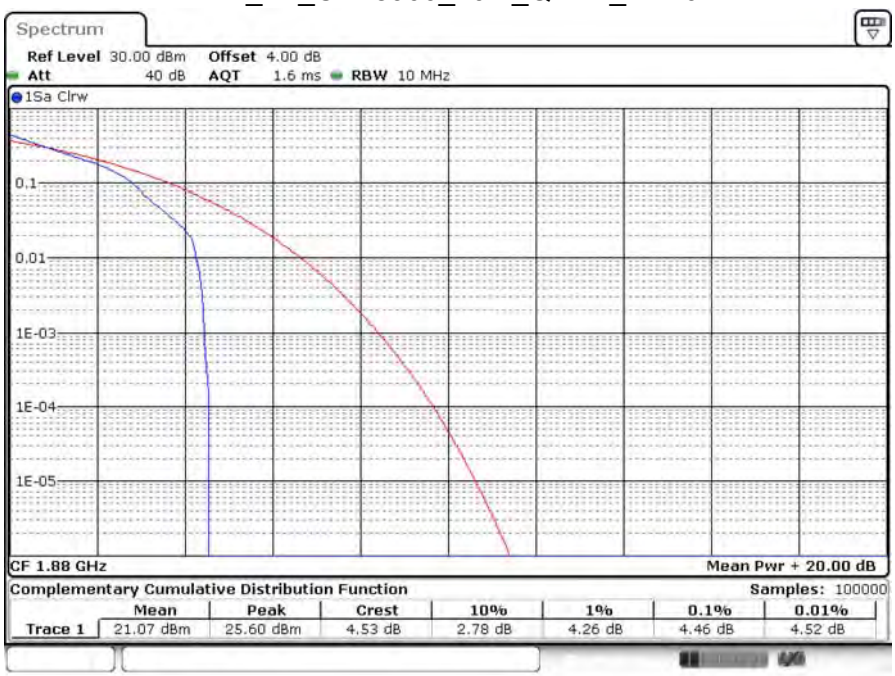

Date: 21.DEC.2020 09:10:00

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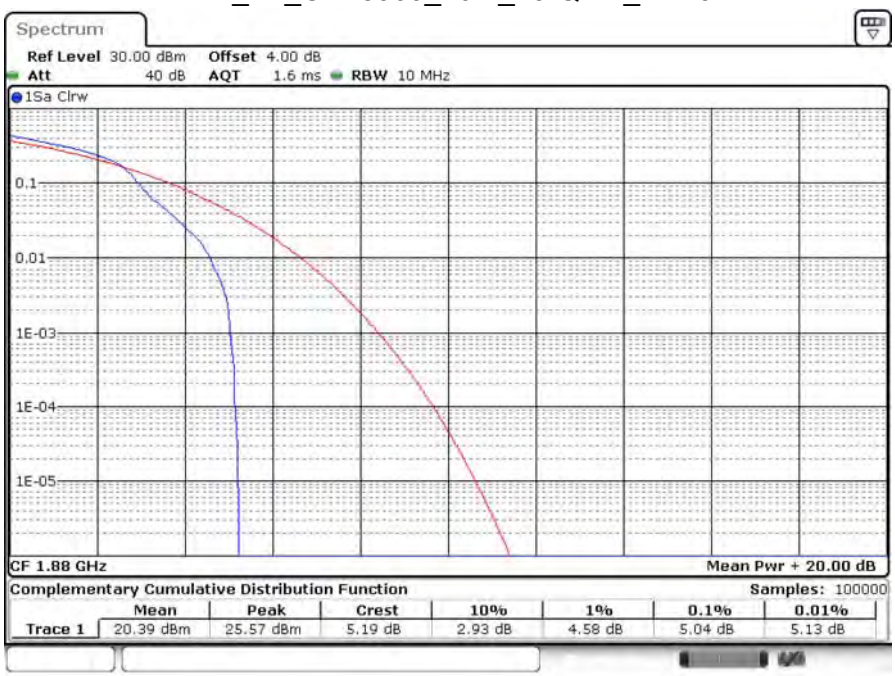

Date: 21.DEC.2020 09:09:16

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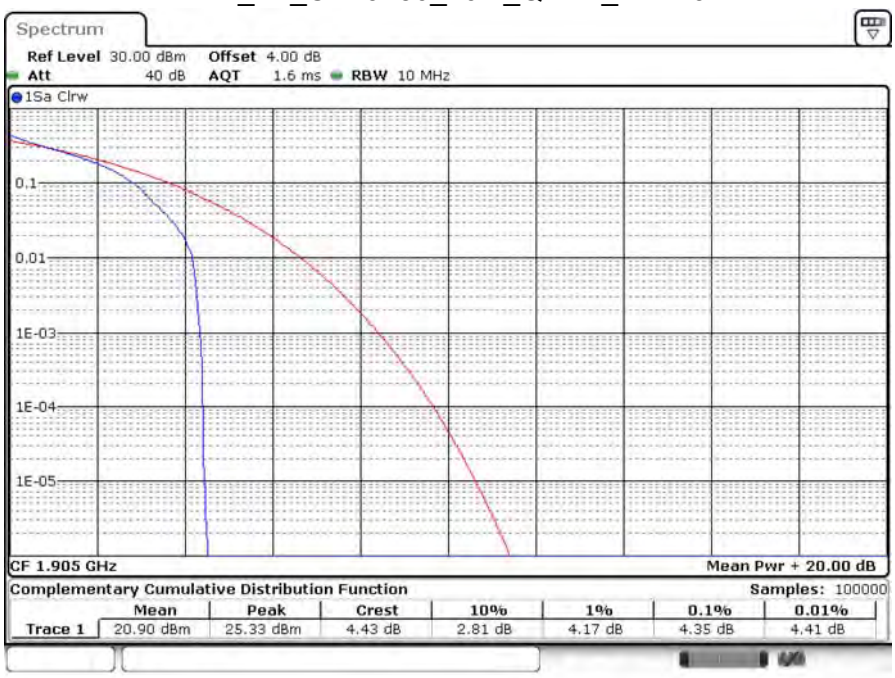

Date: 21.DEC.2020 09:06:31

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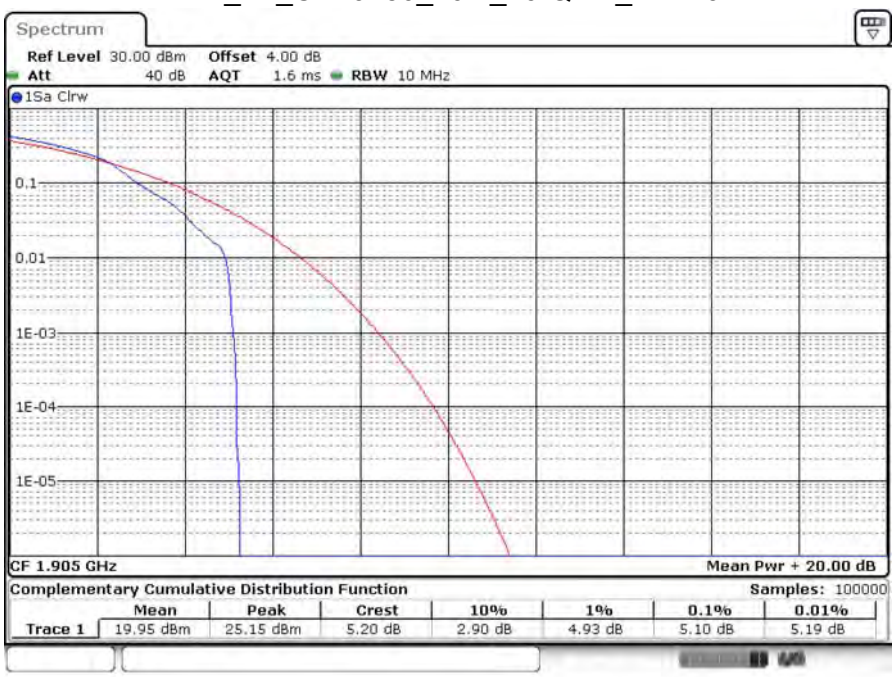

Date: 21.DEC.2020 09:07:04

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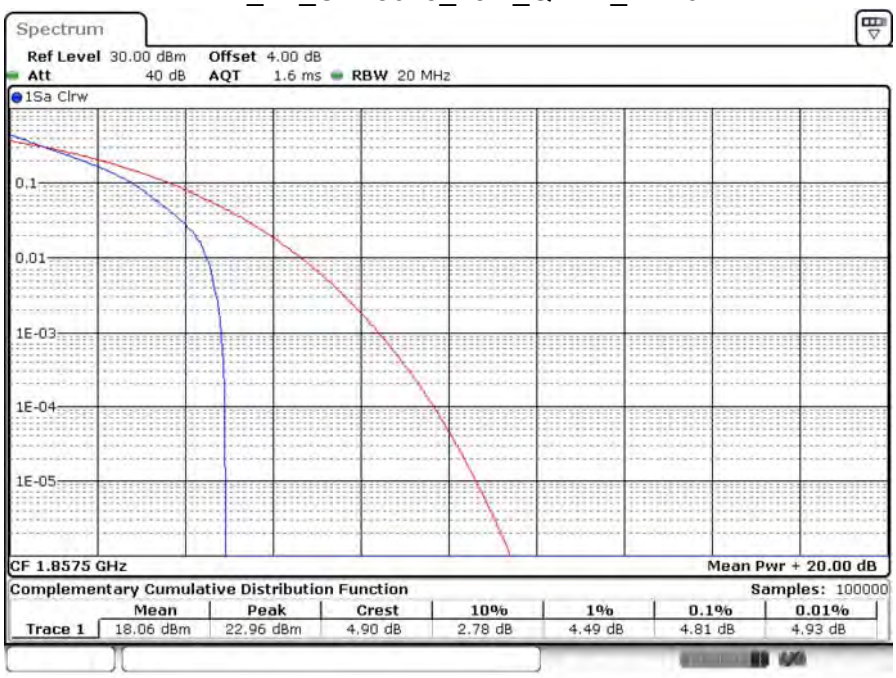

Date: 21.DEC.2020 09:18:12

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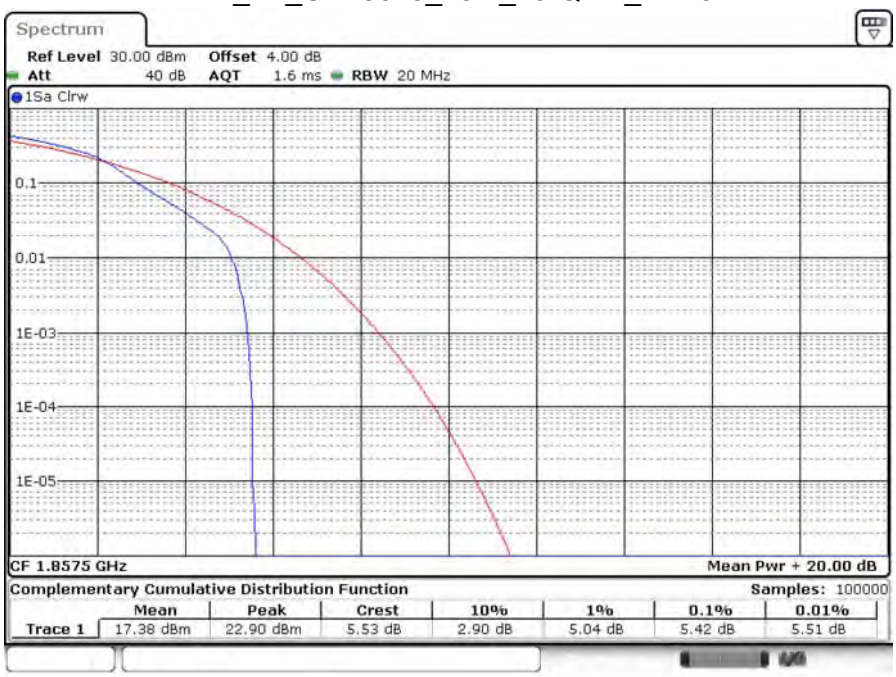

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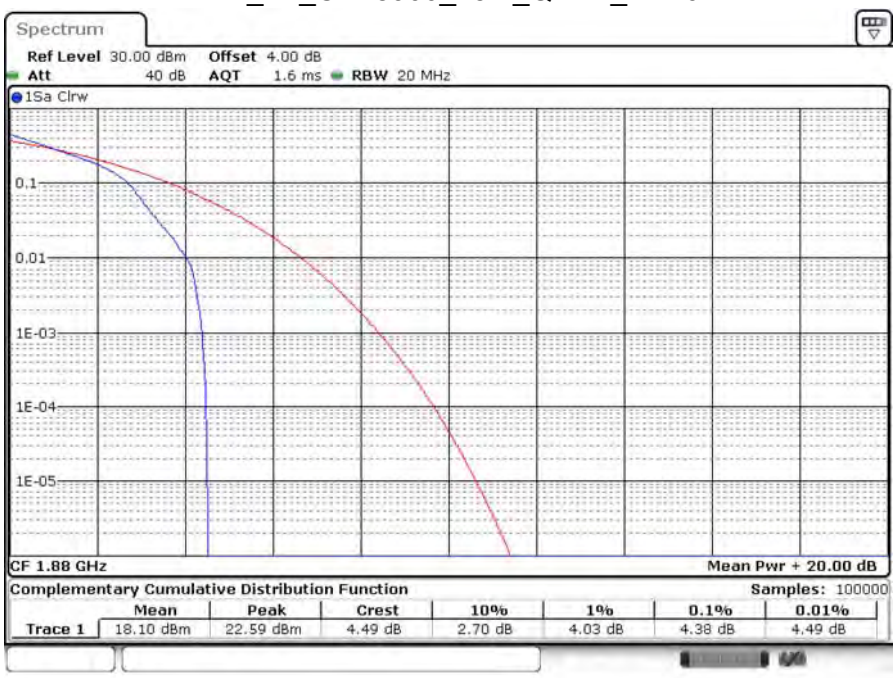

Date: 21.DEC.2020 09:19:06

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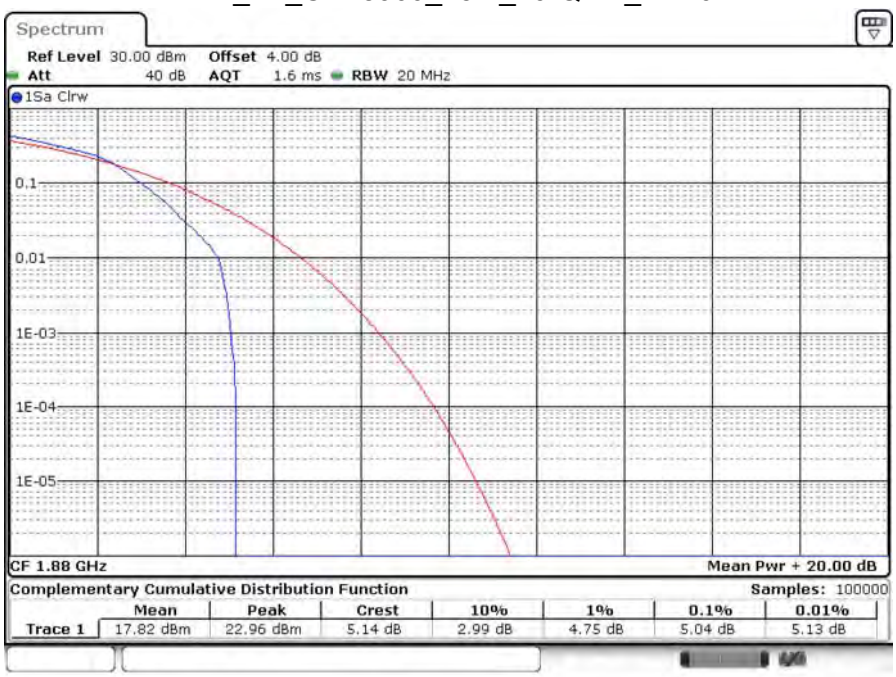

Date: 21.DEC.2020 09:18:47

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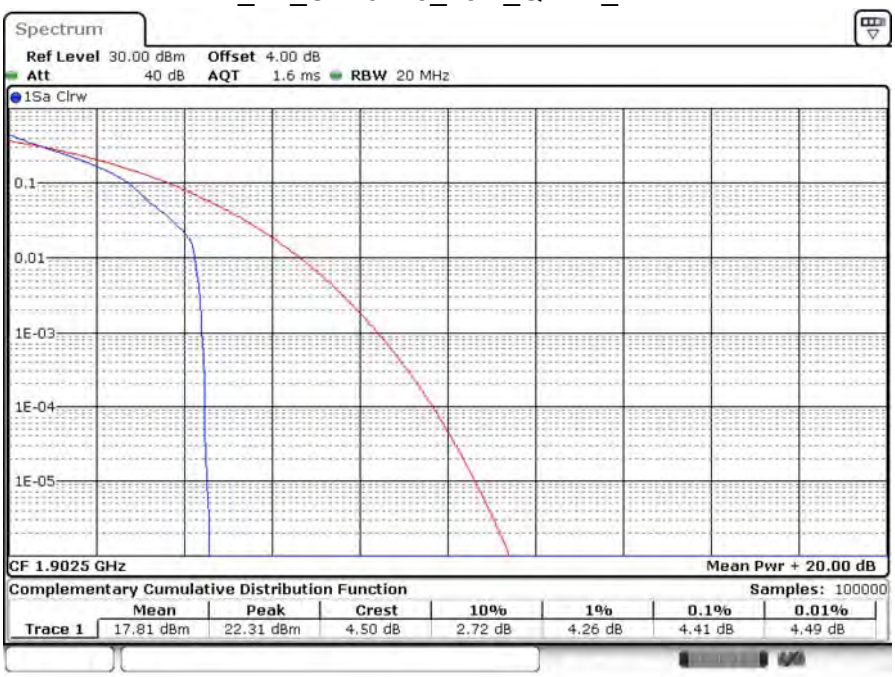

Date: 21.DEC.2020 09:22:16

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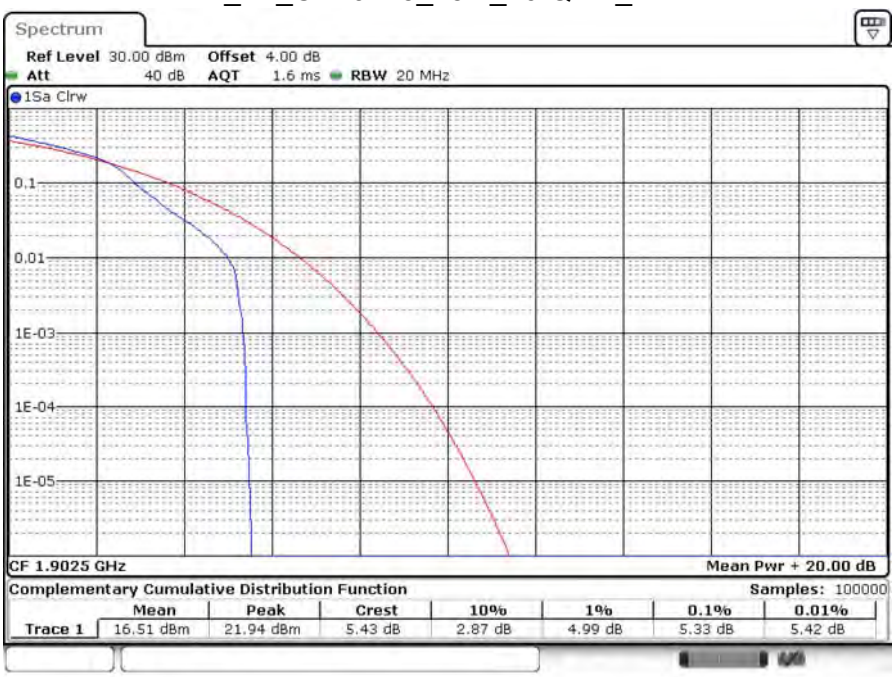

Date: 21.DEC.2020 09:22:45

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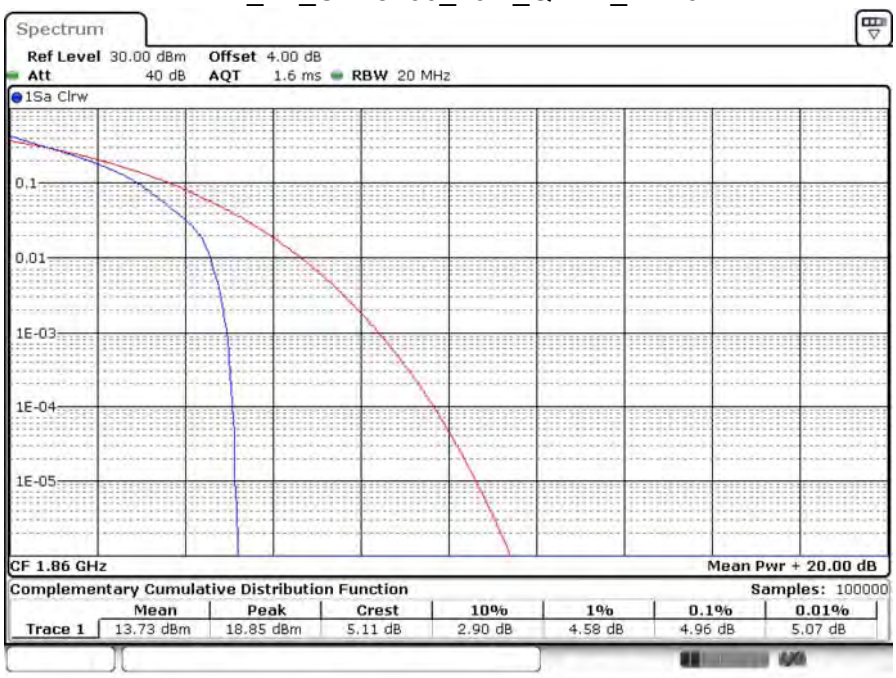

Date: 21.DEC.2020 09:32:39

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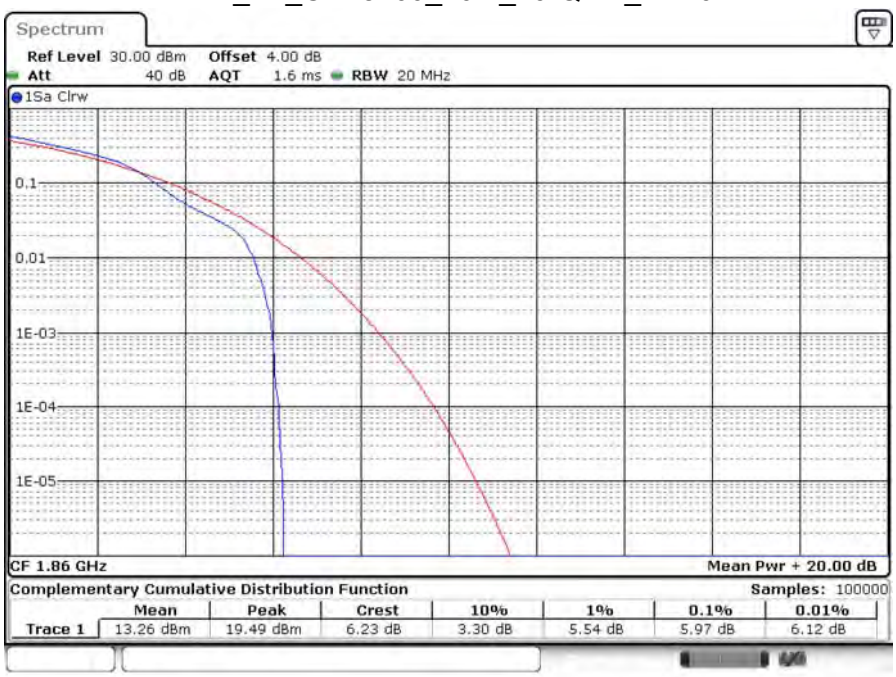

Date: 21.DEC.2020 09:33:18

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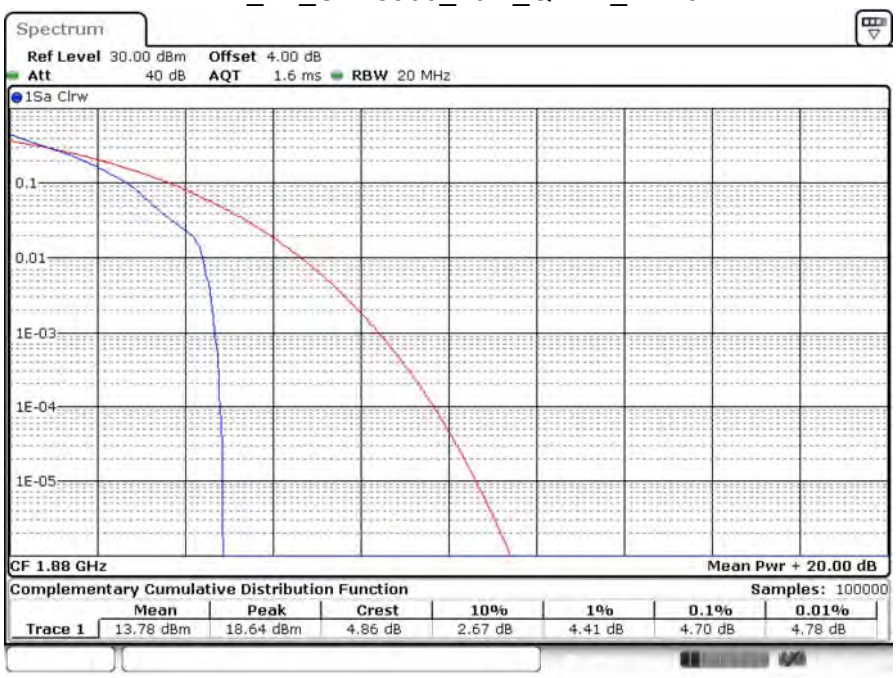

Date: 21.DEC.2020 09:29:06

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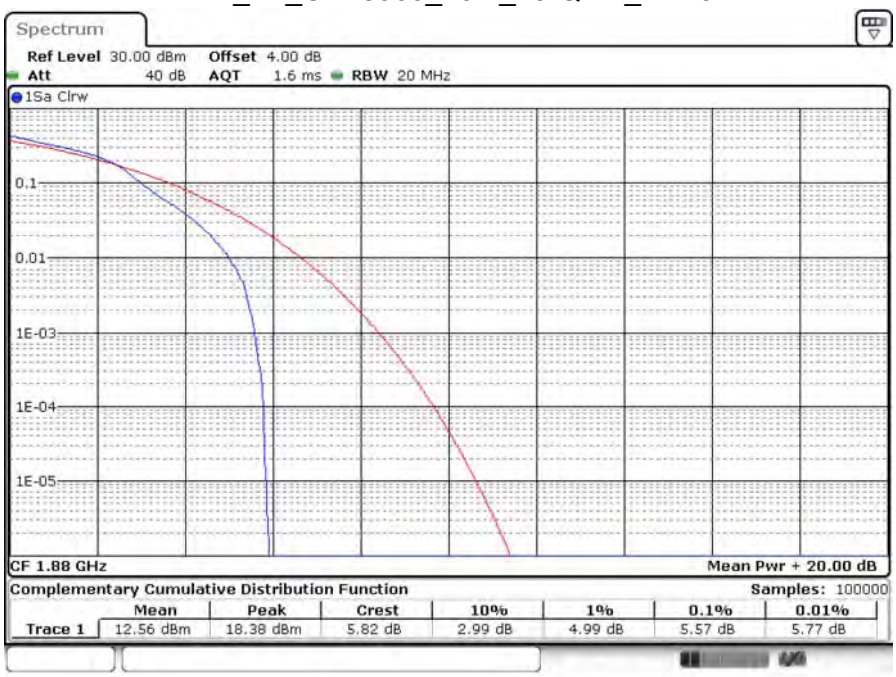

Date: 21.DEC.2020 09:28:32

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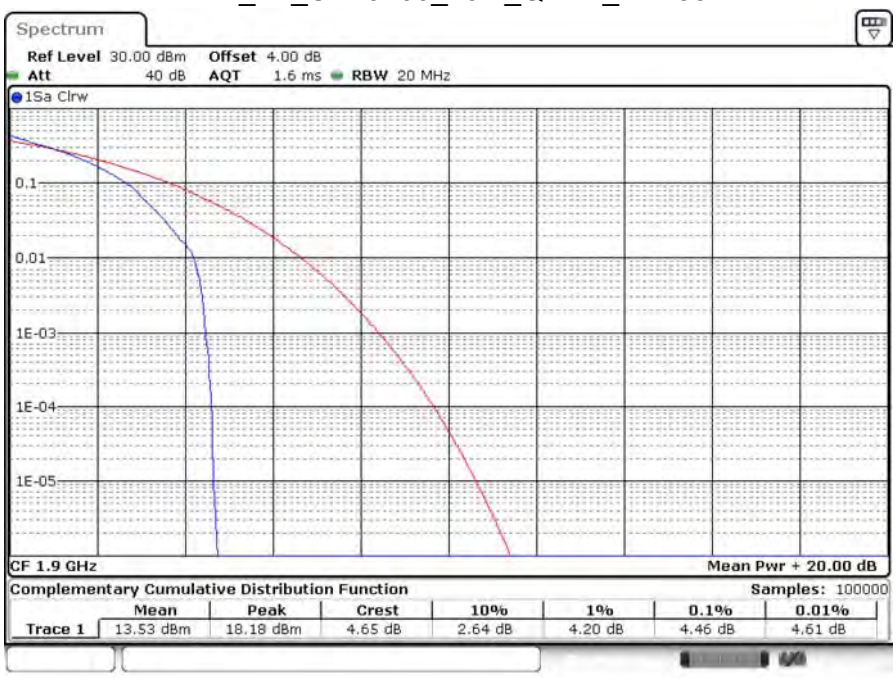
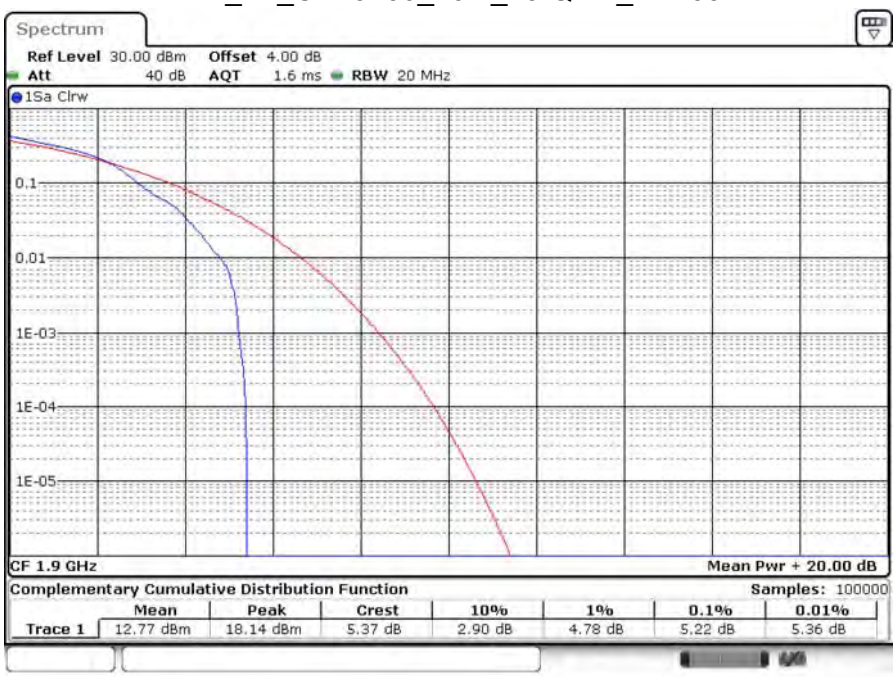


Date: 21.DEC.2020 09:26:31

LTE_B2_CH19100_20M_16-QAM_1RB99



Date: 21.DEC.2020 09:27:01

Product	M2M DATA MODULE		
Test Item	Peak To Average Ratio		
Test Mode	Mode 2: LTE Band 5		
Date of Test	2020/12/21	Test Site	SR12-H
Temperature (°C)	23	Humidity (%RH)	60

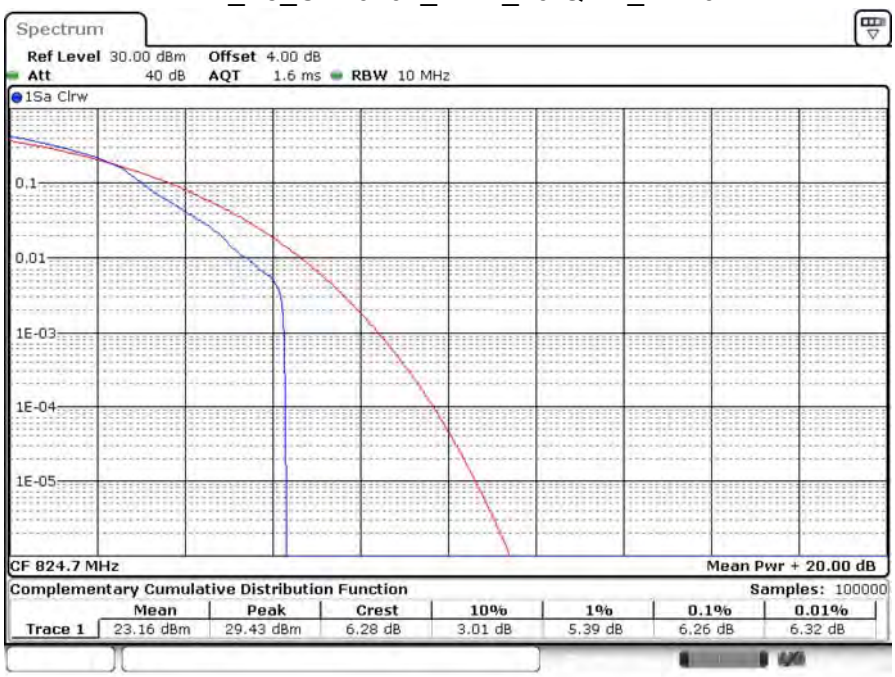
Band 5

BW	Ch	Freq. (MHz)	Modulation	Peak (dBm)	Average (dBm)	PAPR (dB)
1.4M	20407	824.7	QPSK	28.99	23.59	5.36
			16-QAM	29.43	23.16	6.26
	20525	836.5	QPSK	28.73	23.74	4.96
			16-QAM	29.20	23.45	5.74
	20643	848.3	QPSK	28.45	23.77	4.67
			16-QAM	28.23	22.49	5.71
3M	20415	825.5	QPSK	28.81	23.37	5.39
			16-QAM	28.89	22.62	6.17
	20525	836.5	QPSK	28.58	23.56	4.99
			16-QAM	28.86	22.96	5.86
	20635	847.5	QPSK	28.25	23.49	4.72
			16-QAM	28.13	22.26	5.83
5M	20425	826.5	QPSK	28.21	22.91	5.25
			16-QAM	28.51	22.26	6.17
	20525	836.5	QPSK	27.76	22.74	4.96
			16-QAM	27.99	22.42	5.51
	20625	846.5	QPSK	27.64	22.86	4.72
			16-QAM	27.56	21.95	5.59
10M	20450	829	QPSK	26.67	21.28	5.33
			16-QAM	26.55	20.26	6.20
	20525	836.5	QPSK	26.54	21.43	5.04
			16-QAM	27.01	21.20	5.74
	20600	844	QPSK	26.10	21.54	4.52
			16-QAM	25.87	20.25	5.54

LTE_B5_CH20407_1.4M__QPSK_1RB0

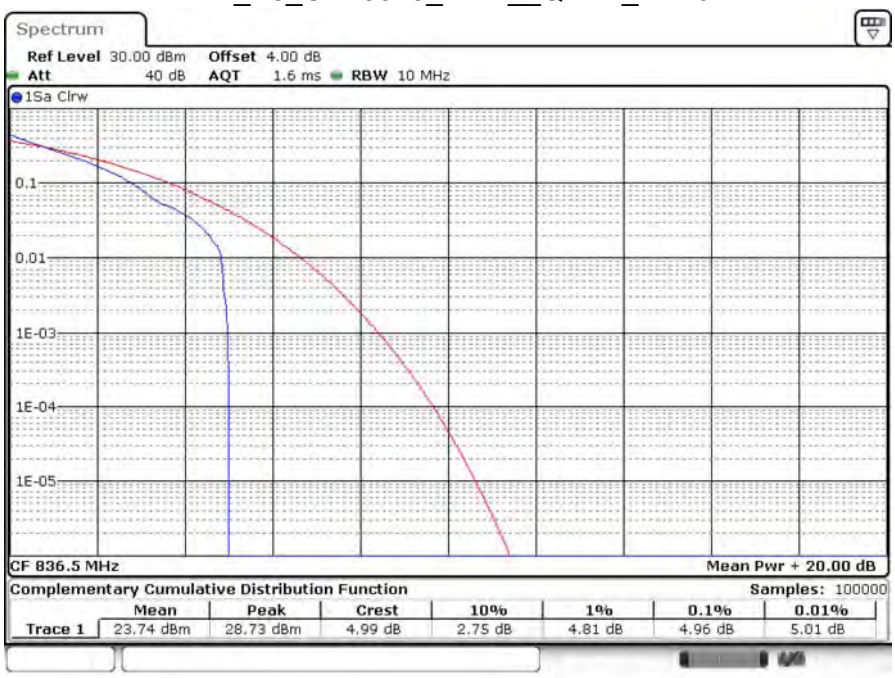
Date: 21.DEC.2020 12:00:12

LTE_B5_CH20407_1.4M_16-QAM_1RB0



Date: 21.DEC.2020 12:01:48

LTE_B5_CH20525_1.4M__QPSK_1RB0



Date: 21.DEC.2020 12:02:28

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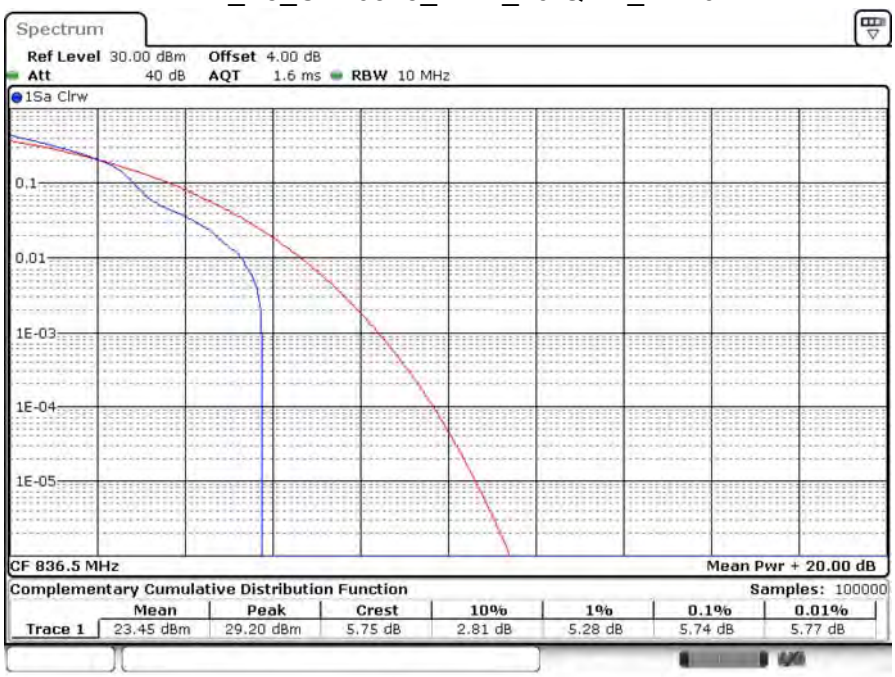
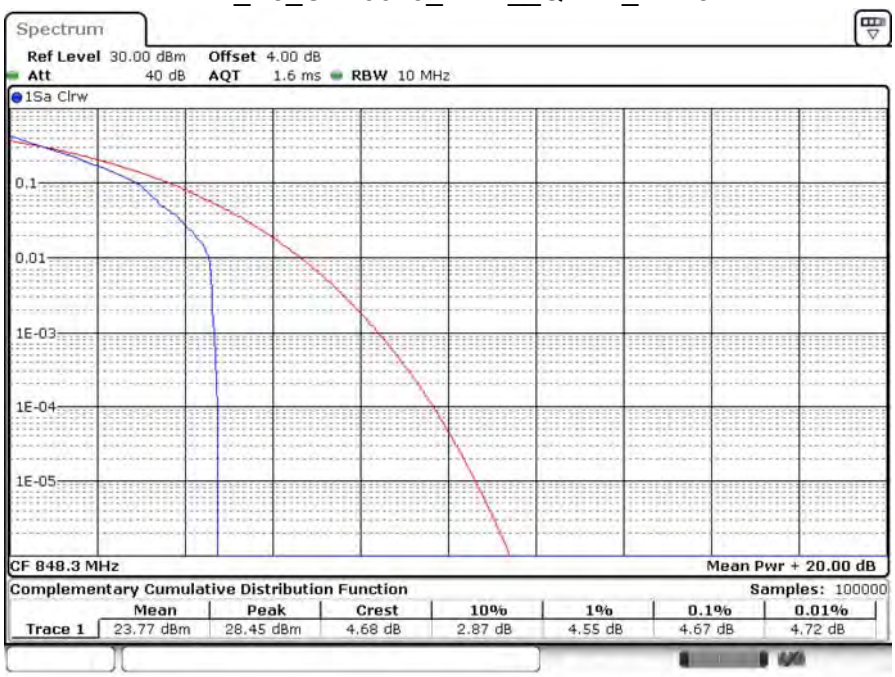


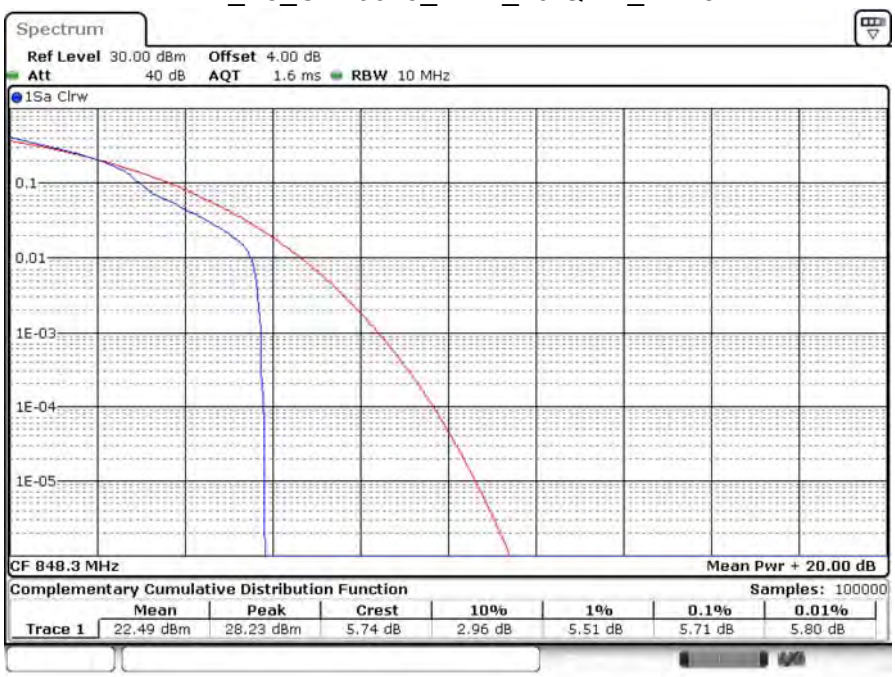
Date: 21.DEC.2020 12:02:16

LTE_B5_CH20643_1.4M__QPSK_1RB5



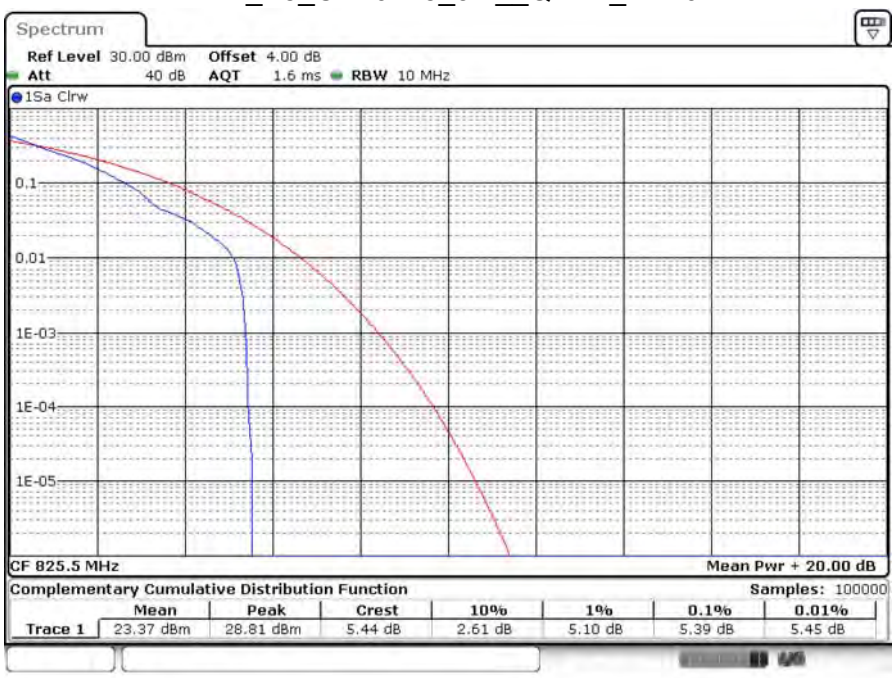
Date: 21.DEC.2020 12:02:52

LTE_B5_CH20643_1.4M_16-QAM_1RB5



Date: 21.DEC.2020 12:03:10

LTE_B5_CH20415_3M__QPSK_1RB0

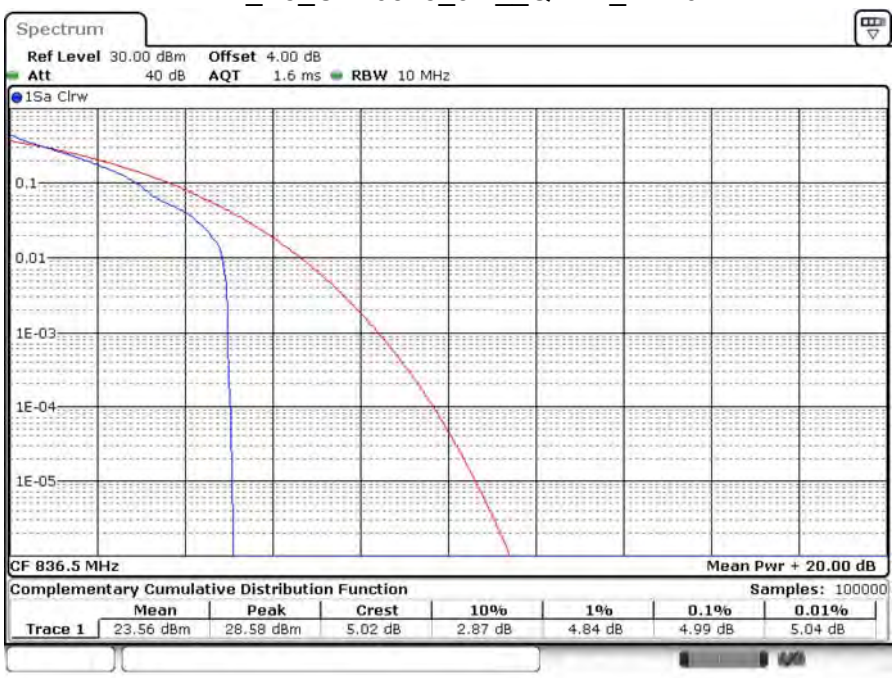


Date: 21.DEC.2020 12:05:48

LTE_B5_CH20415_3M_16-QAM_1RB0

Date: 21.DEC.2020 12:05:38

LTE_B5_CH20525_3M__QPSK_1RB0



Date: 21.DEC.2020 12:04:50

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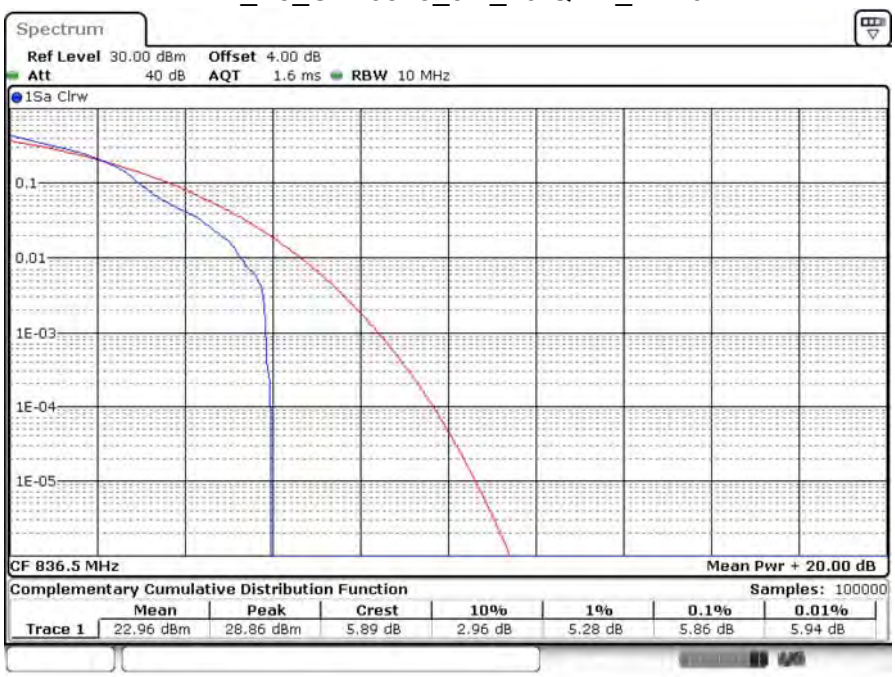
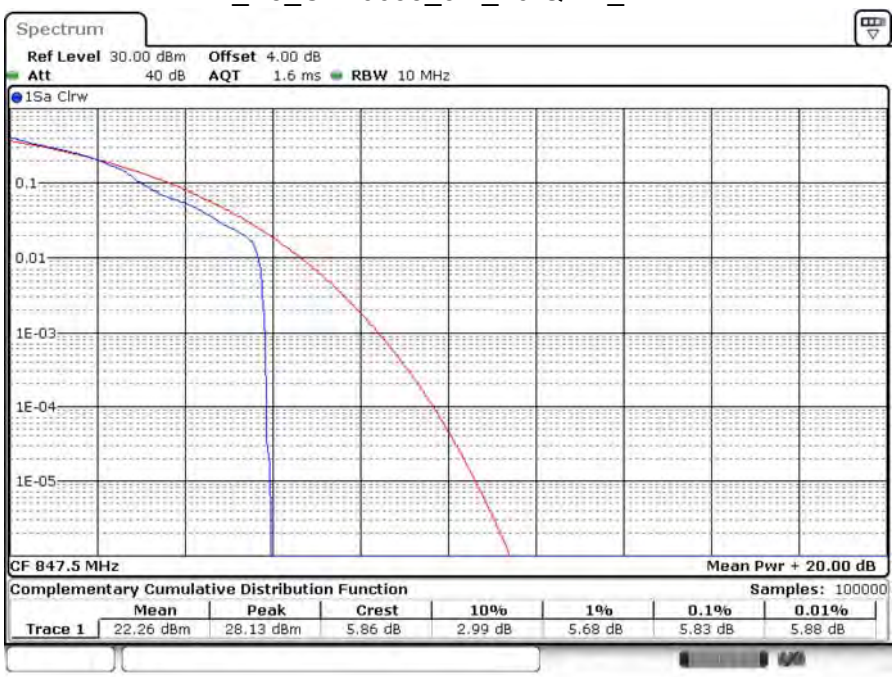


Date: 21.DEC.2020 12:05:03

LTE_B5_CH20635_3M__QPSK_1RB14

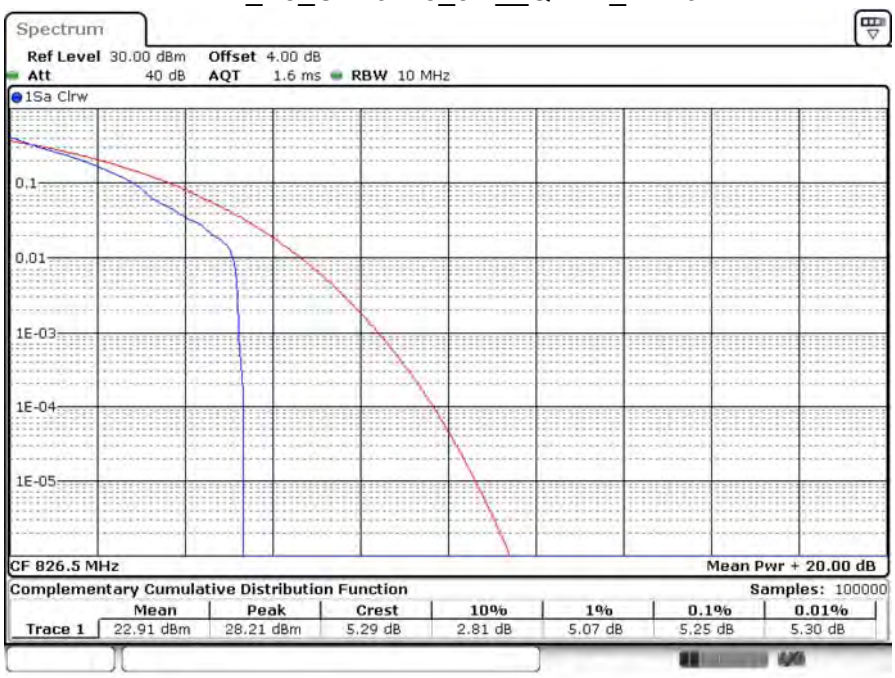
Date: 21.DEC.2020 12:04:32

LTE_B5_CH20635_3M_16-QAM_1RB14



Date: 21.DEC.2020 12:04:21

LTE_B5_CH20425_5M__QPSK_1RB0



Date: 21.DEC.2020 12:06:40

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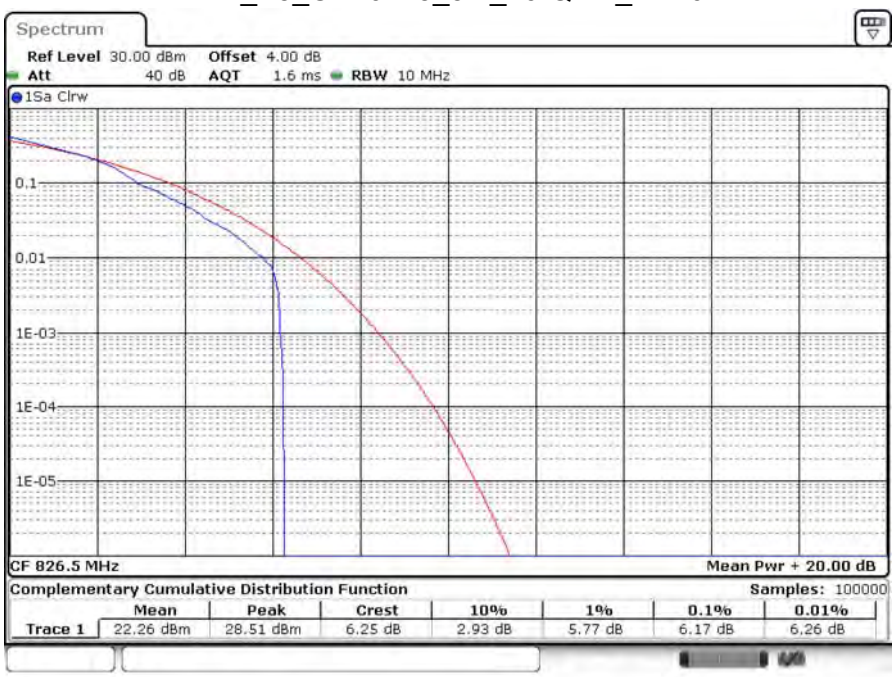

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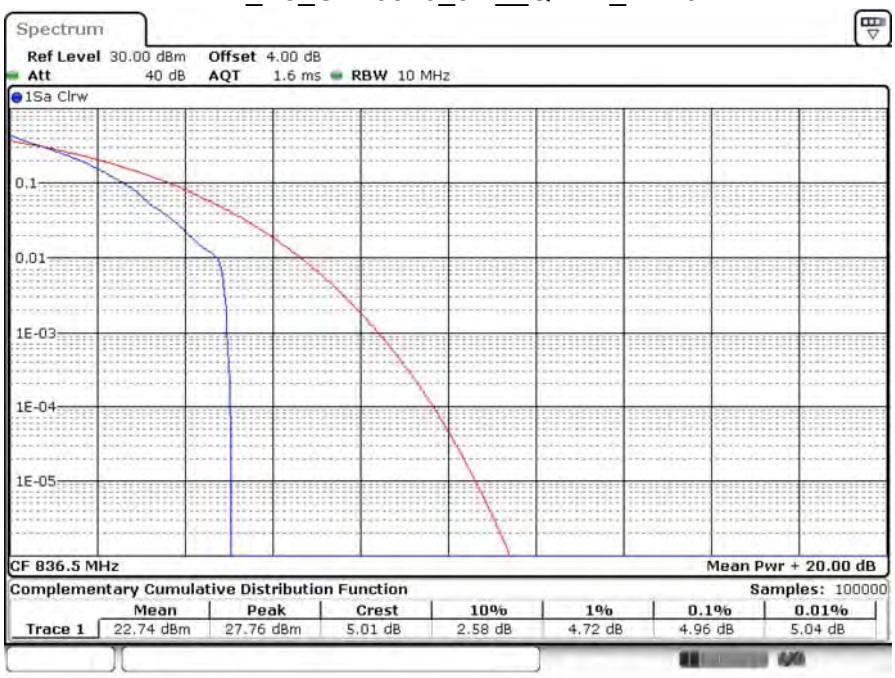


Date: 21.DEC.2020 12:06:58

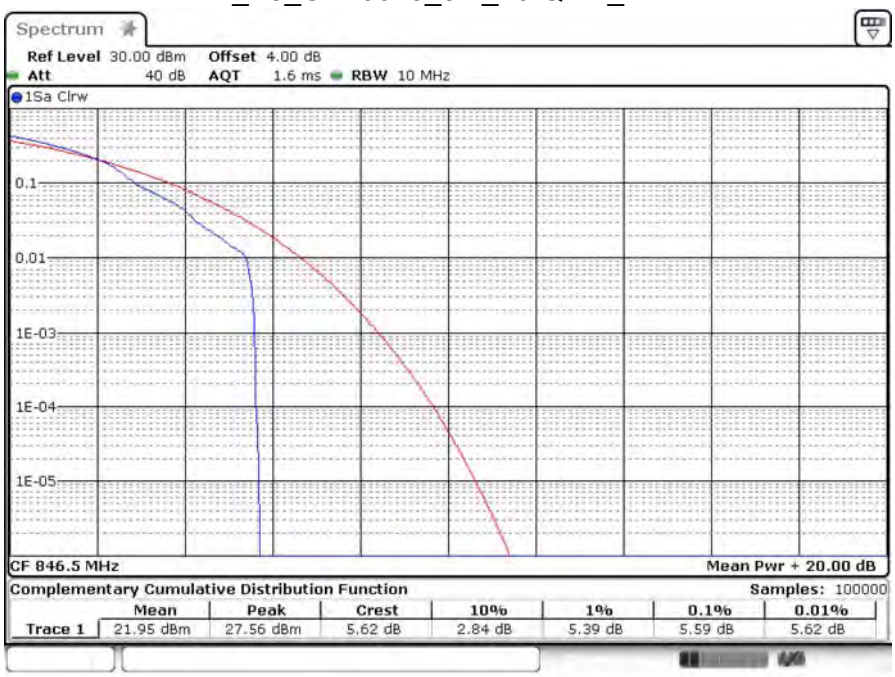
LTE_B5_CH20525_5M_16-QAM_1RB0

Date: 21.DEC.2020 12:07:11

LTE_B5_CH20625_5M__QPSK_1RB24

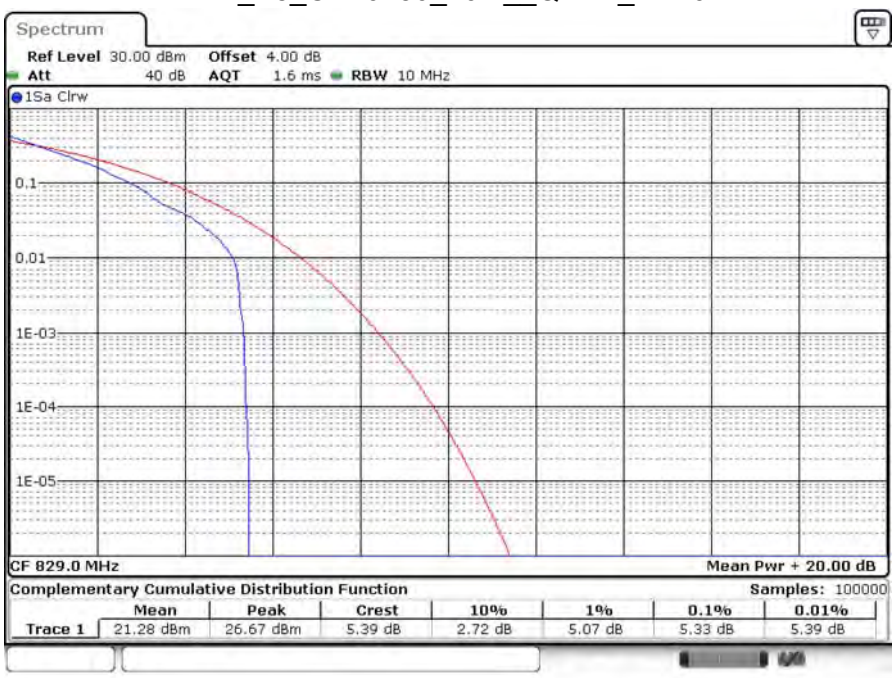
Date: 21.DEC.2020 12:07:43

LTE_B5_CH20625_5M_16-QAM_1RB24



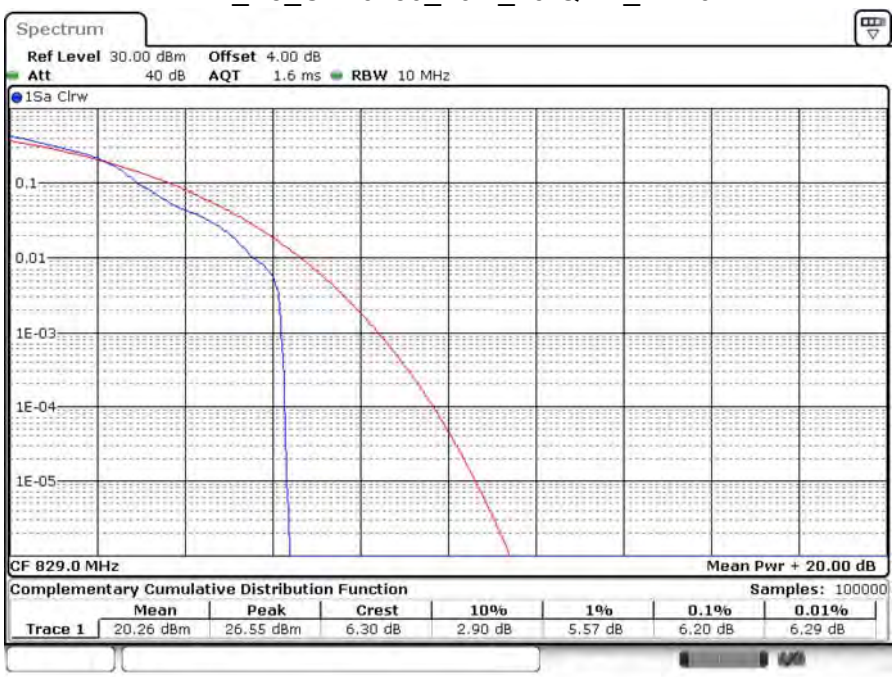
Date: 21.DEC.2020 12:07:34

LTE_B5_CH20450_10M__QPSK_1RB0



Date: 21.DEC.2020 12:09:48

LTE_B5_CH20450_10M_16-QAM_1RB0



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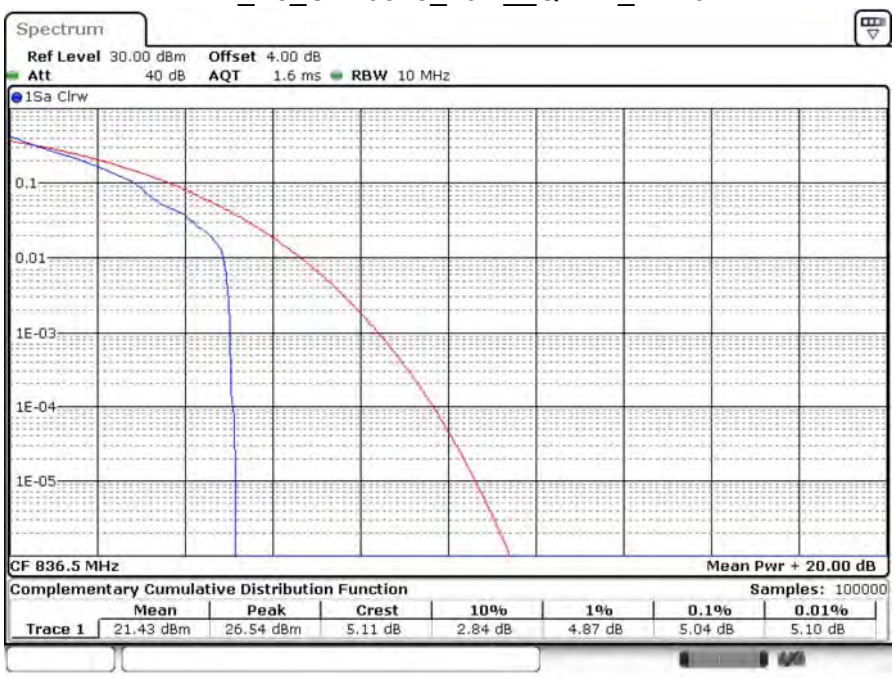

Date: 21.DEC.2020 12:09:01

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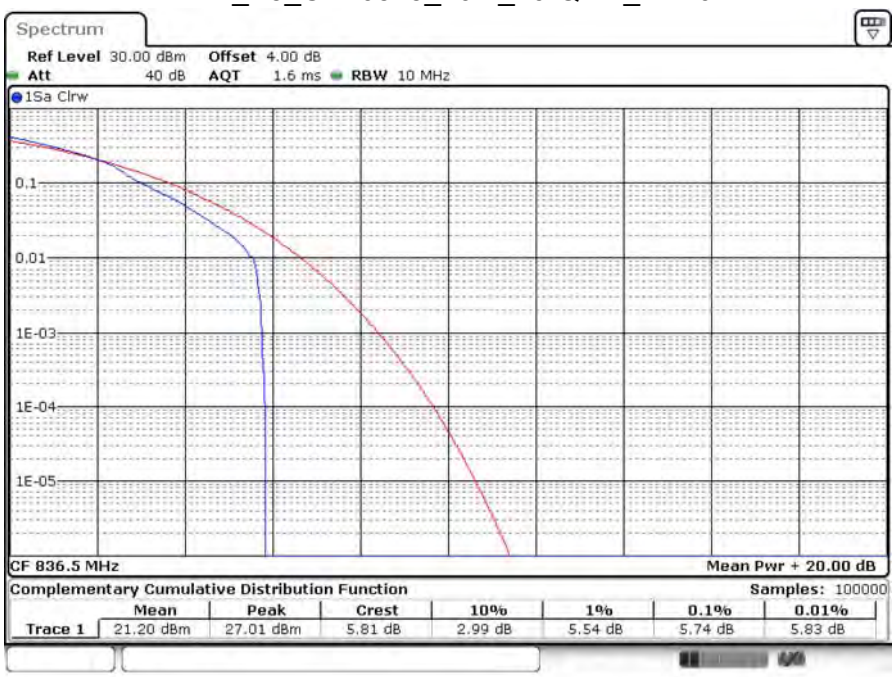
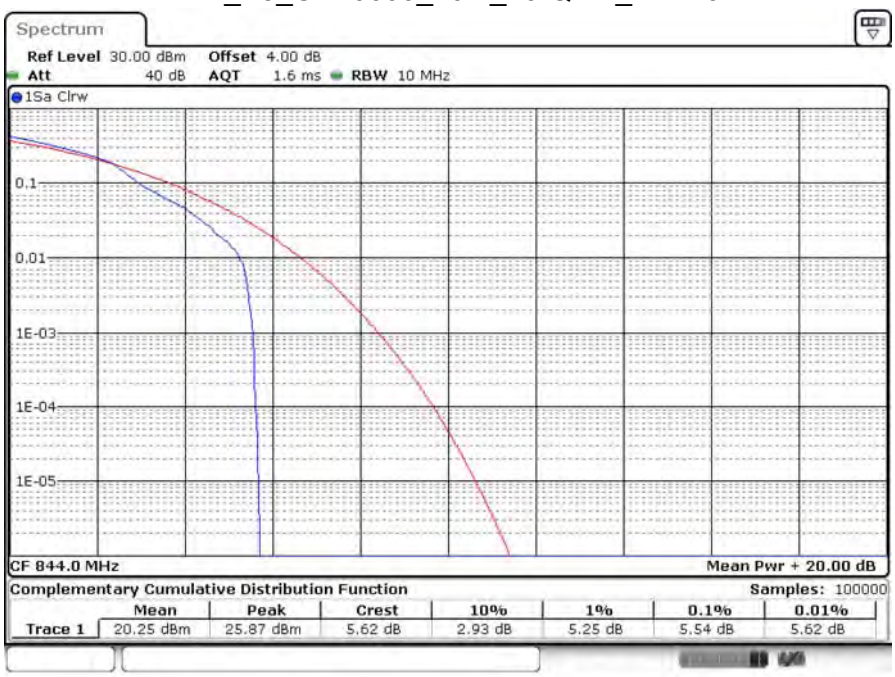


Date: 21.DEC.2020 12:09:16

LTE_B5_CH20600_10M__QPSK_1RB49

Date: 21.DEC.2020 12:08:37

LTE_B5_CH20600_10M_16-QAM_1RB49



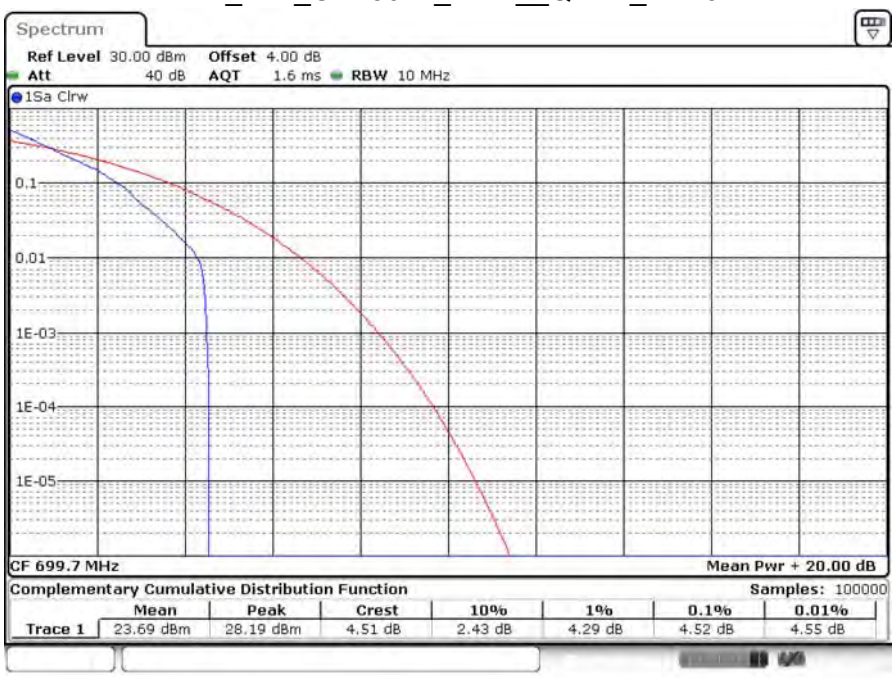
Date: 21.DEC.2020 12:08:18

Product	M2M DATA MODULE		
Test Item	Peak To Average Ratio		
Test Mode	Mode 3: LTE Band 12		
Date of Test	2020/12/21	Test Site	SR12-H
Temperature (°C)	23	Humidity (%RH)	60

Band 12

BW	Ch	Freq. (MHz)	Modulation	Peak (dBm)	Average (dBm)	PAPR (dB)
1.4M	23017	699.7	QPSK	28.19	23.69	4.52
			16-QAM	28.32	22.78	5.51
	23097	707.5	QPSK	27.93	23.49	4.46
			16-QAM	28.64	23.15	5.48
	23173	715.3	QPSK	27.68	23.39	4.29
			16-QAM	27.68	22.47	5.16
3M	23025	700.5	QPSK	27.83	23.26	4.49
			16-QAM	28.04	22.65	5.33
	23095	707.5	QPSK	28.08	23.53	4.46
			16-QAM	28.23	22.87	5.30
	23165	714.5	QPSK	27.70	23.43	4.23
			16-QAM	27.66	22.81	4.81
5M	23035	701.5	QPSK	27.37	22.86	4.46
			16-QAM	27.26	21.80	5.36
	23095	707.5	QPSK	27.57	23.14	4.35
			16-QAM	27.74	22.52	5.16
	23155	713.5	QPSK	27.18	22.97	4.17
			16-QAM	26.96	22.06	4.87
10M	23060	704	QPSK	25.75	21.16	4.52
			16-QAM	26.07	20.64	5.33
	23095	707.5	QPSK	26.01	21.58	4.38
			16-QAM	26.88	21.55	5.28
	23130	711	QPSK	25.45	21.12	4.23
			16-QAM	25.15	19.96	5.16

LTE_B12_CH23017_1.4M__QPSK_1RB0



Date: 21.DEC.2020 12:11:19

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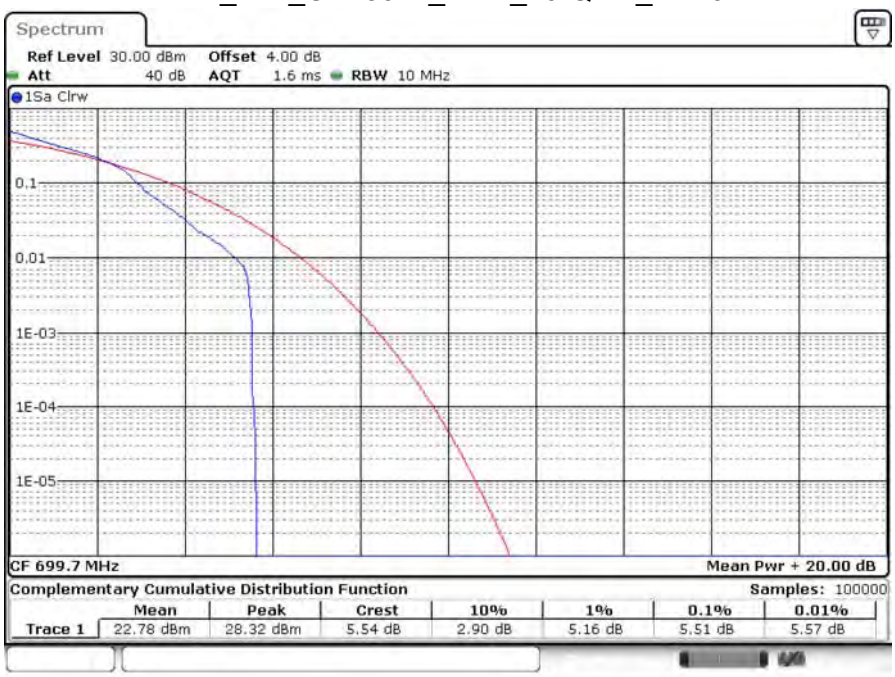
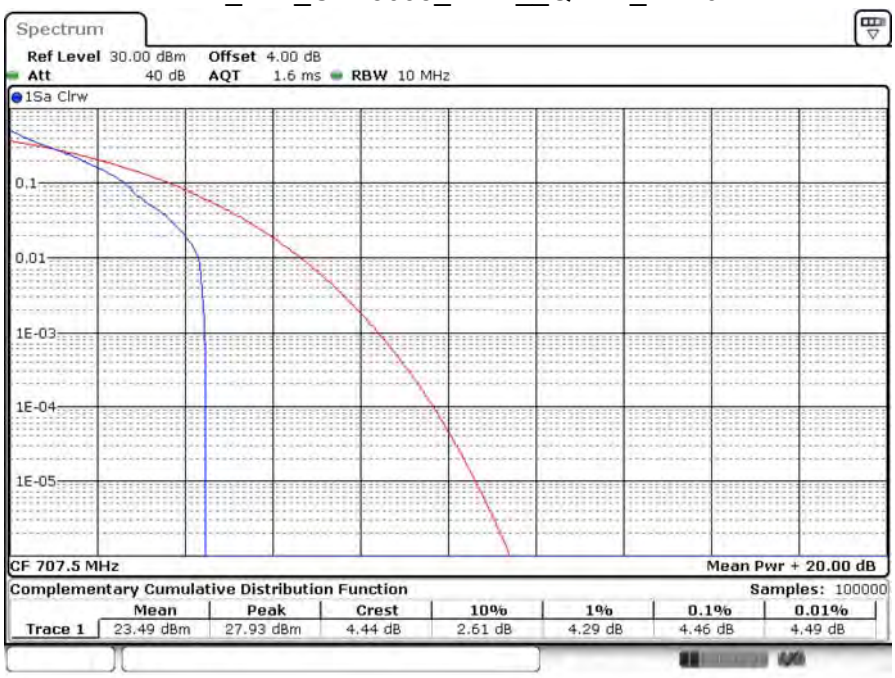


Date: 21.DEC.2020 12:11:01

LTE_B12_CH23095_1.4M__QPSK_1RB0



Date: 21.DEC.2020 12:11:44

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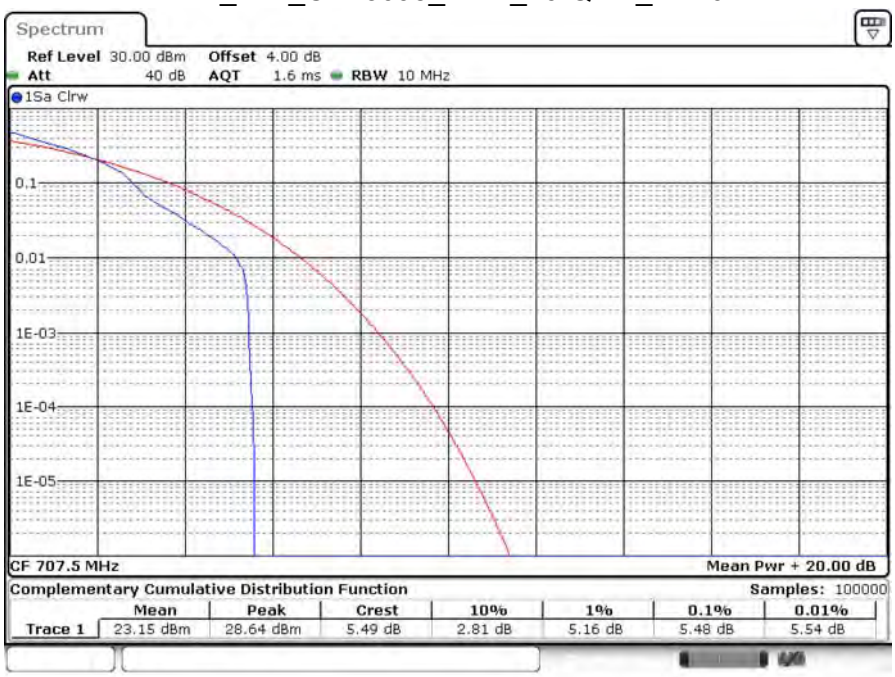

Date: 21.DEC.2020 12:11:56