

OCCUPIED BANDWIDTH

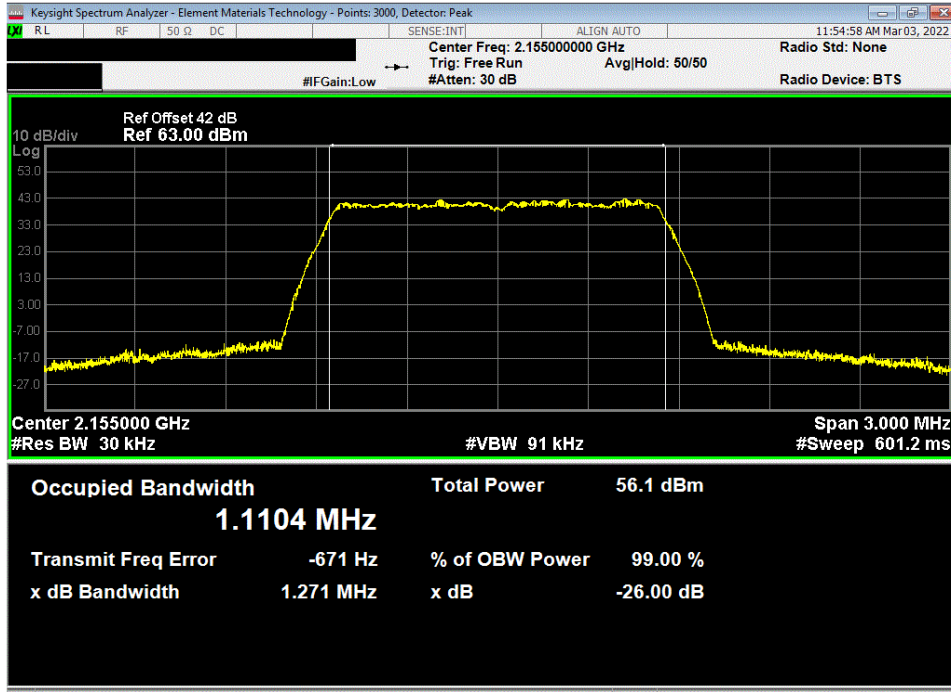


THY 2021-12-14.1 XMI 2022-02-07.0

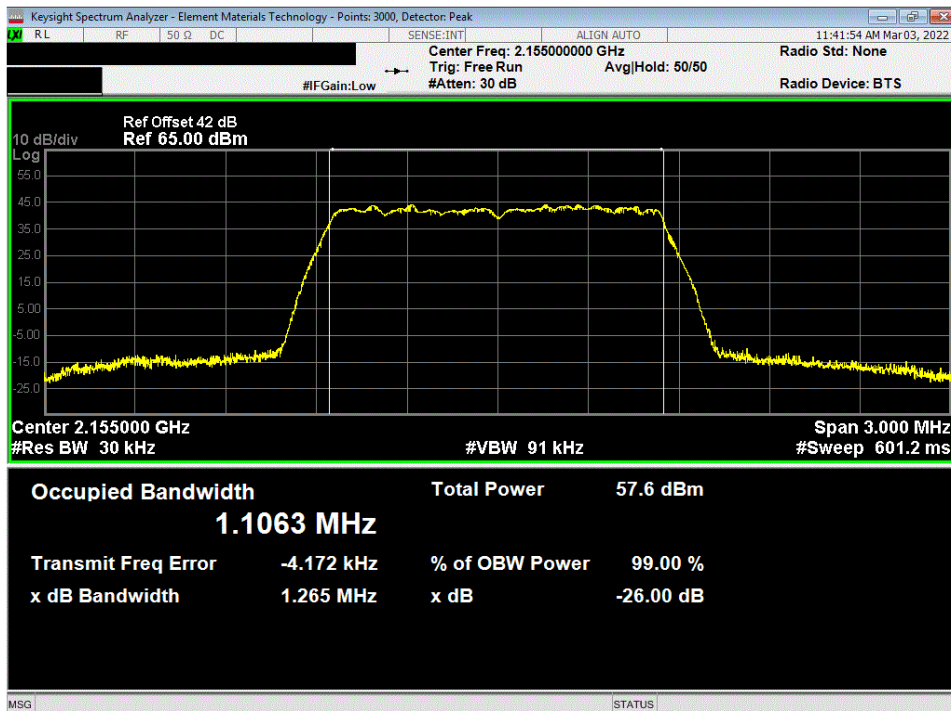
EUT: AHFI Remote Radio Head		Work Order: NOKI0037	
Serial Number: YK214000036		Date: 28-Feb-22	
Customer: Nokia Solutions and Networks		Temperature: 22.6 °C	
Attendees: David Le, John Rattanavong		Humidity: 23.7% RH	
Project: None		Barometric Pres.: 1026 mbar	
Tested by: Mark Baytan		Power: 54 VDC	
Job Site: TX09			
TEST SPECIFICATIONS		Test Method	
FCC 27:2022		ANSI C63.26:2015	
RSS-139 Issue 3:2015		RSS-139 Issue 3:2015	
RSS-170 Issue 3:2015		RSS-170 Issue 3:2015	
COMMENTS			
All measurement path losses accounted for in the reference level offset including any attenuators, filters, and DC blocks. Band 66 carriers enabled at maximum power is 80 watts/carrier.			
DEVIATIONS FROM TEST STANDARD			
None			
Configuration #	2	Signature 	
		Value	Value
		99% (MHz)	26dB (MHz)
		Limit	Result
Band 66, 2110 MHz - 2200 MHz, LTE Single Carrier			
Port 1			
1.4 MHz Bandwidth			
QPSK Modulation			
Mid Channel, 2155 MHz		1.11	1.27
16-QAM Modulation			
Mid Channel, 2155 MHz		1.11	1.27
64-QAM Modulation			
Mid Channel, 2155 MHz		1.11	1.28
256-QAM Modulation			
Low Channel, 2110.7 MHz		1.11	1.28
Mid Channel, 2155 MHz		1.11	1.28
High Channel, 2199.3 MHz		1.11	1.27
3 MHz Bandwidth			
QPSK Modulation			
Mid Channel, 2155 MHz		2.71	2.93
16-QAM Modulation			
Mid Channel, 2155 MHz		2.71	2.93
64-QAM Modulation			
Mid Channel, 2155 MHz		2.71	2.93
256-QAM Modulation			
Low Channel, 2111.5 MHz		2.71	2.93
Mid Channel, 2155 MHz		2.71	2.93
High Channel, 2198.5 MHz		2.71	2.93
5 MHz Bandwidth			
QPSK Modulation			
Mid Channel, 2155 MHz		4.50	4.85
16-QAM Modulation			
Mid Channel, 2155 MHz		4.49	4.83
64-QAM Modulation			
Mid Channel, 2155 MHz		4.49	4.84
256-QAM Modulation			
Low Channel, 2112.5 MHz		4.50	4.85
Mid Channel, 2155 MHz		4.50	4.84
High Channel, 2197.5 MHz		4.50	4.85
10 MHz Bandwidth			
QPSK Modulation			
Mid Channel, 2155 MHz		8.97	9.68
16-QAM Modulation			
Mid Channel, 2155 MHz		8.99	9.67
64-QAM Modulation			
Mid Channel, 2155 MHz		8.97	9.67
256-QAM Modulation			
Low Channel, 2115 MHz		9.00	9.67
Mid Channel, 2155 MHz		9.00	9.68
High Channel, 2195 MHz		9.00	9.68
15 MHz Bandwidth			
QPSK Modulation			
Mid Channel, 2155 MHz		13.4	14.5
16-QAM Modulation			
Mid Channel, 2155 MHz		13.5	14.5
64-QAM Modulation			
Mid Channel, 2155 MHz		13.5	14.5
256-QAM Modulation			
Low Channel, 2117.5 MHz		13.5	14.5
Mid Channel, 2155 MHz		13.5	14.5
High Channel, 2192.5 MHz		13.5	14.5
20 MHz Bandwidth			
QPSK Modulation			
Mid Channel, 2155 MHz		17.9	19.3
16-QAM Modulation			
Mid Channel, 2155 MHz		18.0	19.3
64-QAM Modulation			
Mid Channel, 2155 MHz		17.9	19.3
256-QAM Modulation			
Low Channel, 2120 MHz		17.9	19.4
Mid Channel, 2155 MHz		17.9	19.4
High Channel, 2190 MHz		17.9	19.4

OCCUPIED BANDWIDTH

Band 66, 2110 MHz - 2200 MHz, LTE Single Carrier, Port 1, 1.4 MHz Bandwidth, QPSK Modulation, Mid Channel, 2155 MHz							
			Value	Value	Limit	Result	
			99% (MHz)	26dB (MHz)			
			1.11	1.27	Within Band	Pass	

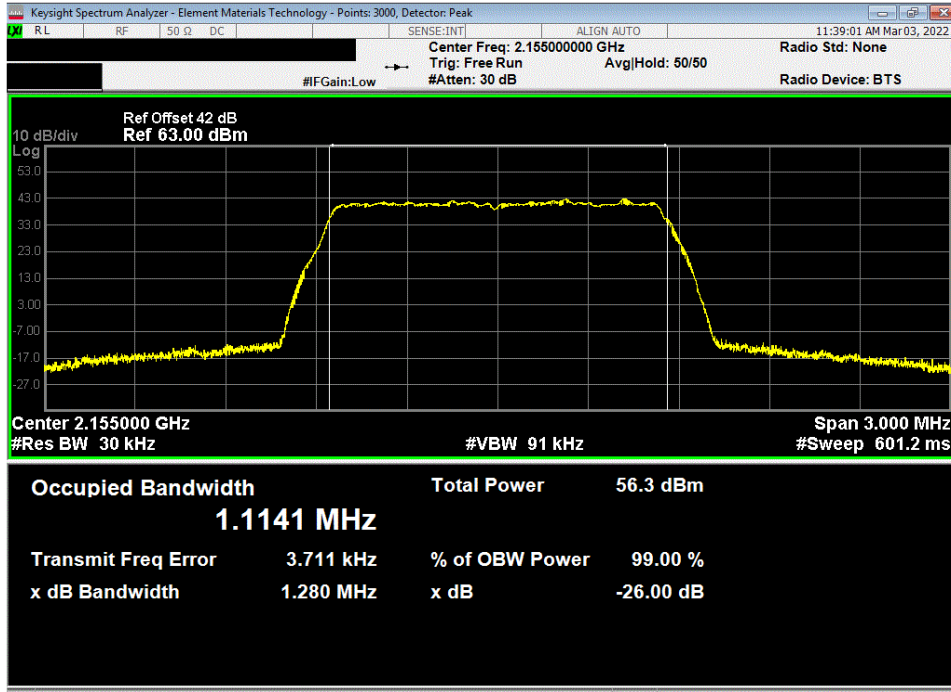


Band 66, 2110 MHz - 2200 MHz, LTE Single Carrier, Port 1, 1.4 MHz Bandwidth, QPSK Modulation, Mid Channel, 2155 MHz							
			Value	Value	Limit	Result	
			99% (MHz)	26dB (MHz)			
			1.11	1.27	Within Band	Pass	

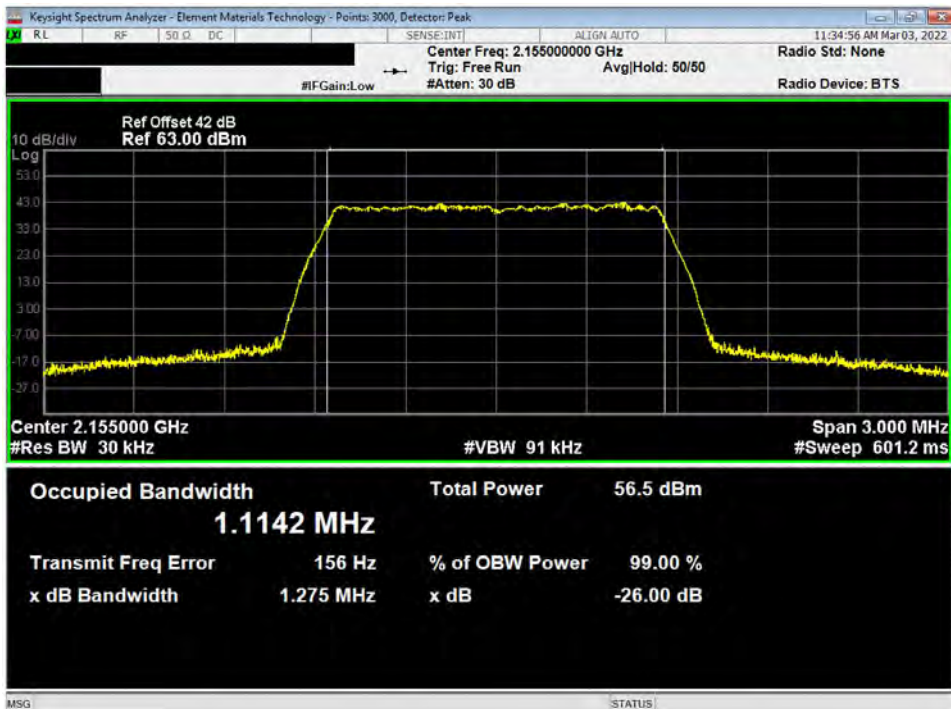


OCCUPIED BANDWIDTH

Band 66, 2110 MHz - 2200 MHz, LTE Single Carrier, Port 1, 1.4 MHz Bandwidth, 64-QAM Modulation, Mid Channel, 2155 MHz							
			Value	Value	Limit	Result	
			99% (MHz)	26dB (MHz)			
			1.11	1.28	Within Band	Pass	

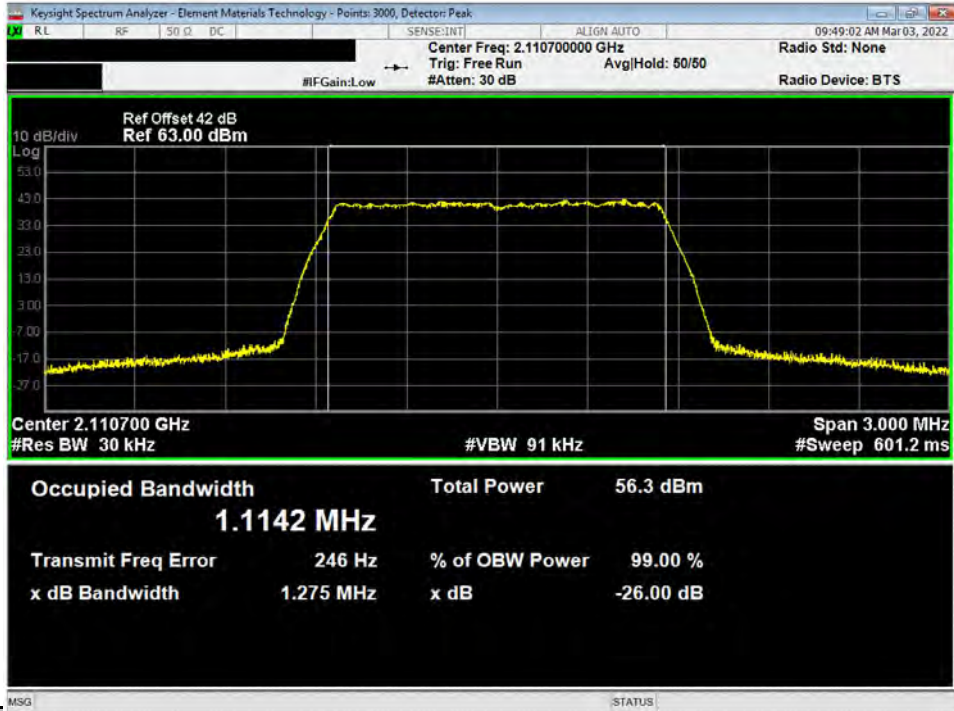


Band 66, 2110 MHz - 2200 MHz, LTE Single Carrier, Port 1, 1.4 MHz Bandwidth, 64-QAM Modulation, Mid Channel, 2155 MHz							
			Value	Value	Limit	Result	
			99% (MHz)	26dB (MHz)			
			1.11	1.28	Within Band	Pass	

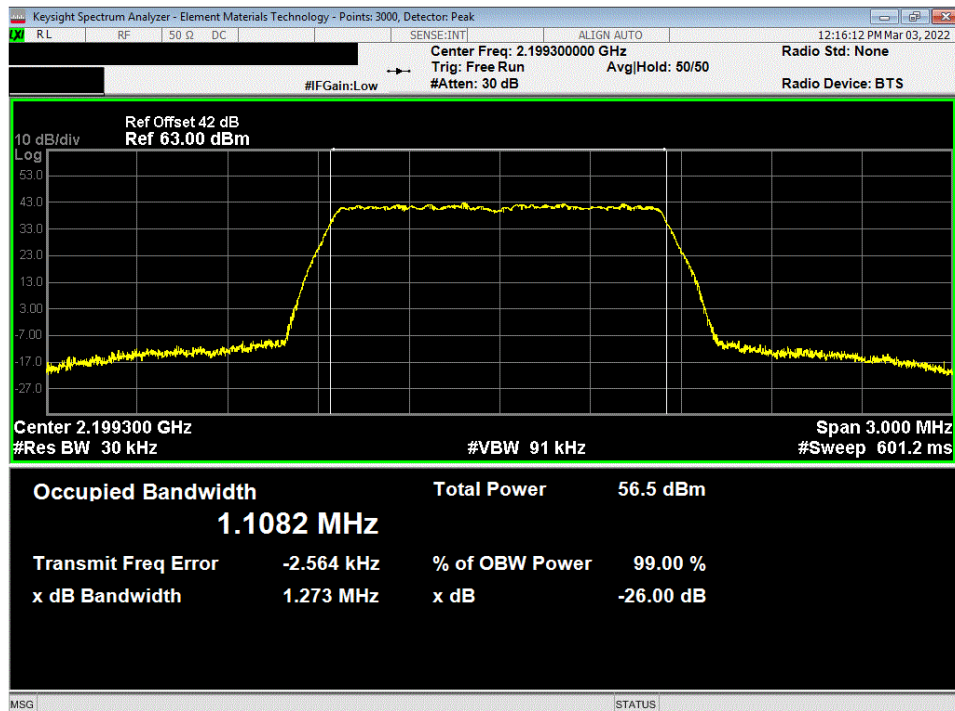


OCCUPIED BANDWIDTH

Band 66, 2110 MHz - 2200 MHz, LTE Single Carrier, Port 1, 1.4 MHz Bandwidth, 256-QAM Modulation, Low Channel, 2110.7 MHz							
			Value	Value	Limit	Result	
			99% (MHz)	26dB (MHz)			
			1.11	1.28	Within Band	Pass	

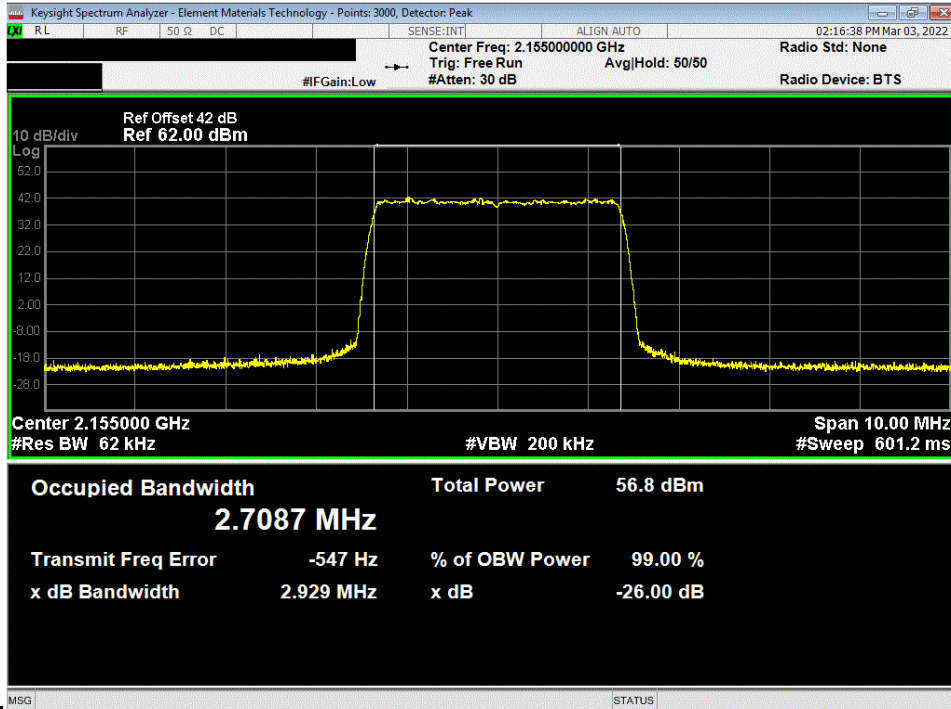


Band 66, 2110 MHz - 2200 MHz, LTE Single Carrier, Port 1, 1.4 MHz Bandwidth, 256-QAM Modulation, High Channel, 2199.3 MHz							
			Value	Value	Limit	Result	
			99% (MHz)	26dB (MHz)			
			1.11	1.27	Within Band	Pass	

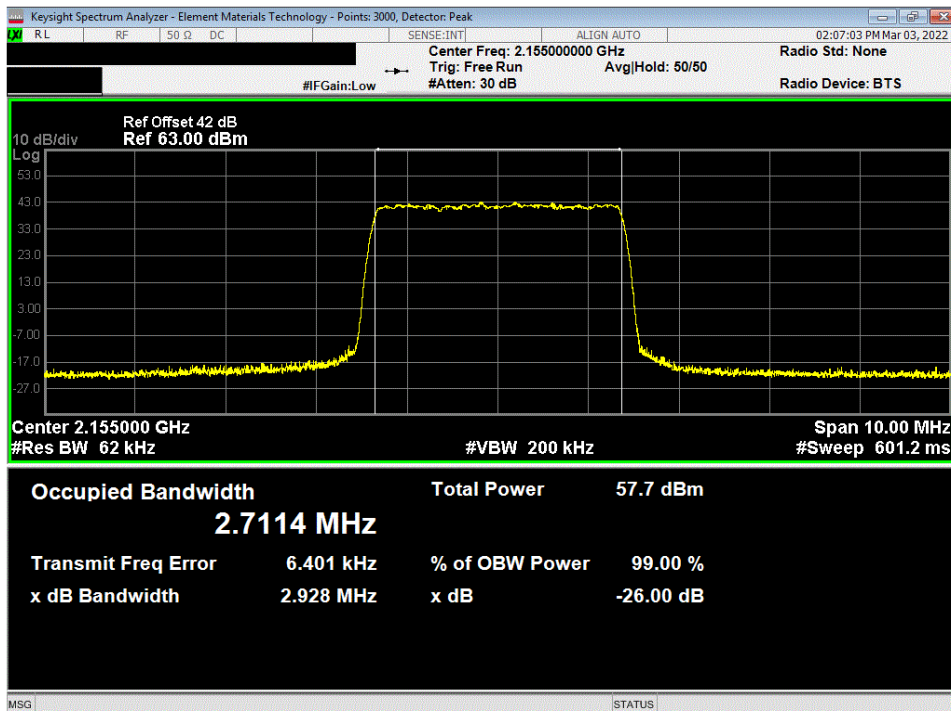


OCCUPIED BANDWIDTH

Band 66, 2110 MHz - 2200 MHz, LTE Single Carrier, Port 1, 3 MHz Bandwidth, QPSK Modulation, Mid Channel, 2155 MHz							
			Value	Value	Limit	Result	
			99% (MHz)	26dB (MHz)			
			2.71	2.93	Within Band	Pass	

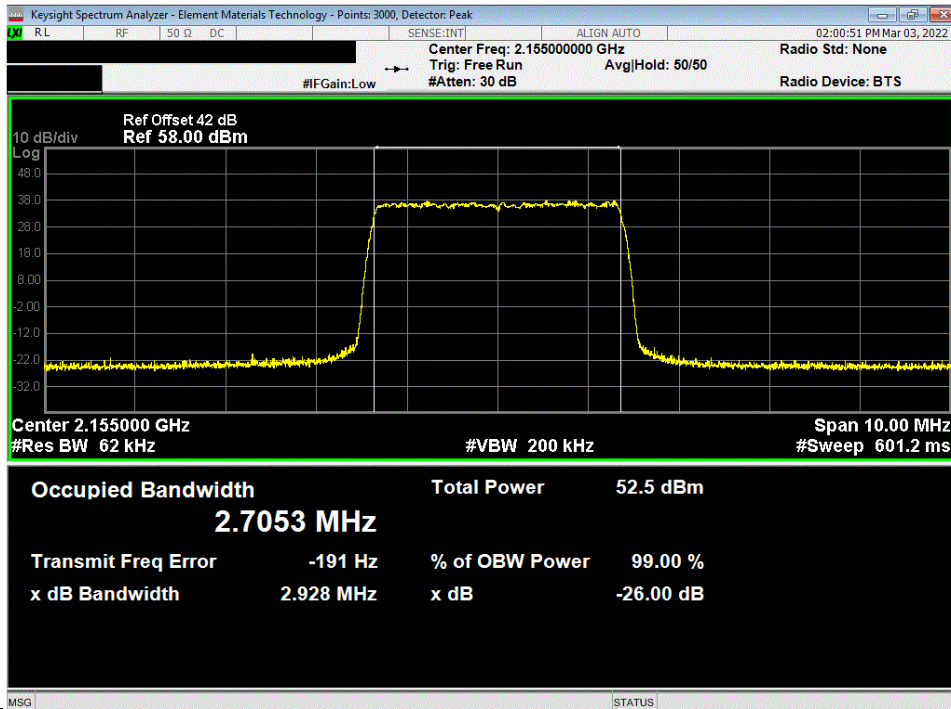


Band 66, 2110 MHz - 2200 MHz, LTE Single Carrier, Port 1, 3 MHz Bandwidth, QPSK Modulation, Mid Channel, 2155 MHz							
			Value	Value	Limit	Result	
			99% (MHz)	26dB (MHz)			
			2.71	2.93	Within Band	Pass	

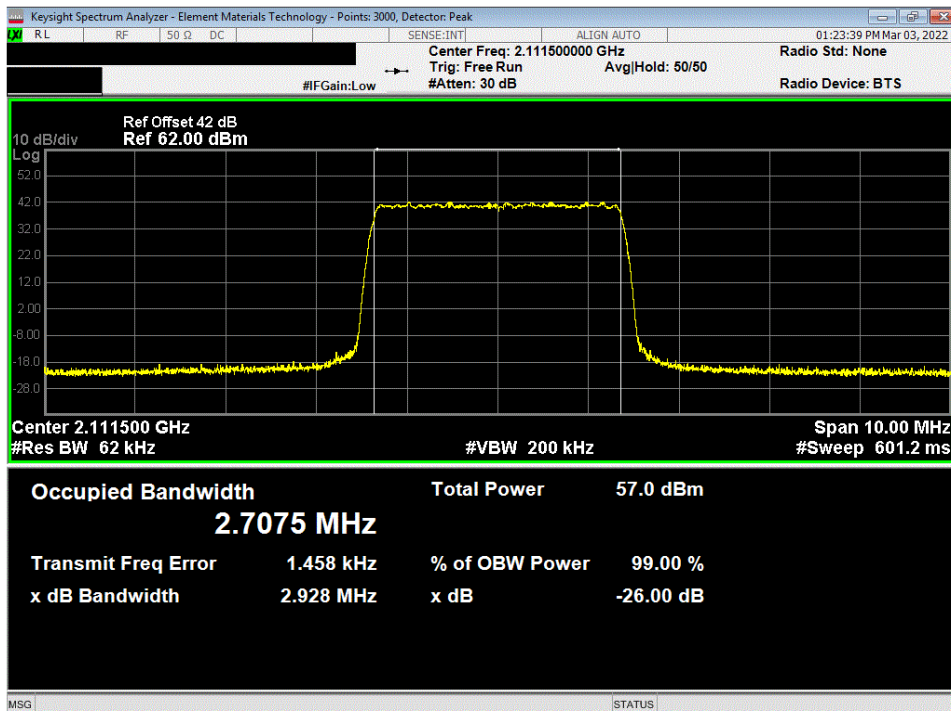


OCCUPIED BANDWIDTH

Band 66, 2110 MHz - 2200 MHz, LTE Single Carrier, Port 1, 3 MHz Bandwidth, 64-QAM Modulation, Mid Channel, 2155 MHz						
	Value	Value	Limit	Result		
	99% (MHz)	26dB (MHz)				
	2.71	2.93	Within Band	Pass		

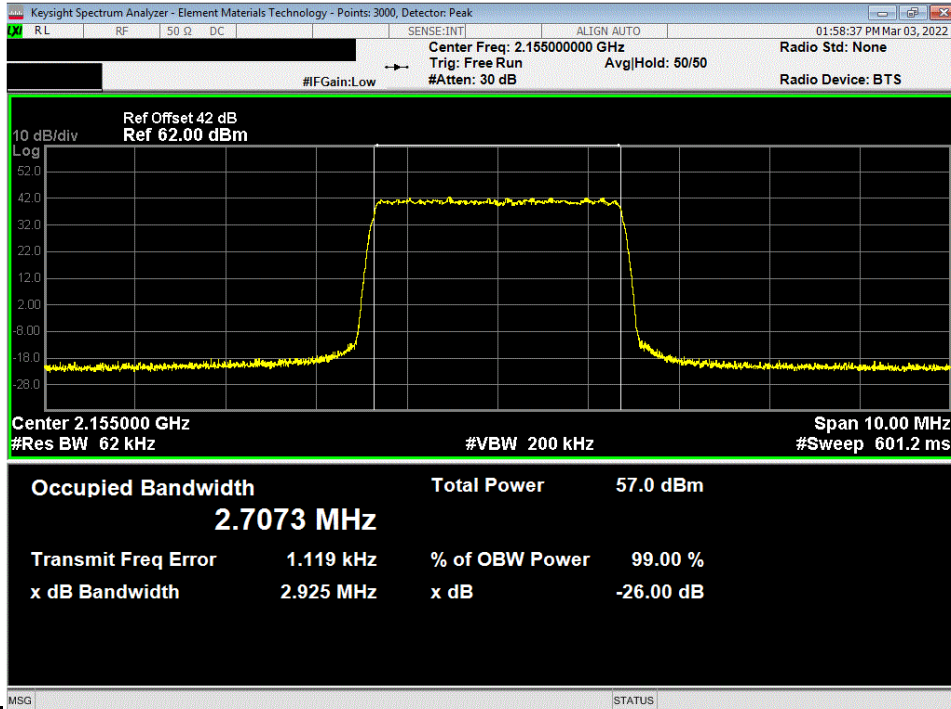


Band 66, 2110 MHz - 2200 MHz, LTE Single Carrier, Port 1, 3 MHz Bandwidth, 64-QAM Modulation, Low Channel, 2111.5 MHz						
	Value	Value	Limit	Result		
	99% (MHz)	26dB (MHz)				
	2.71	2.93	Within Band	Pass		

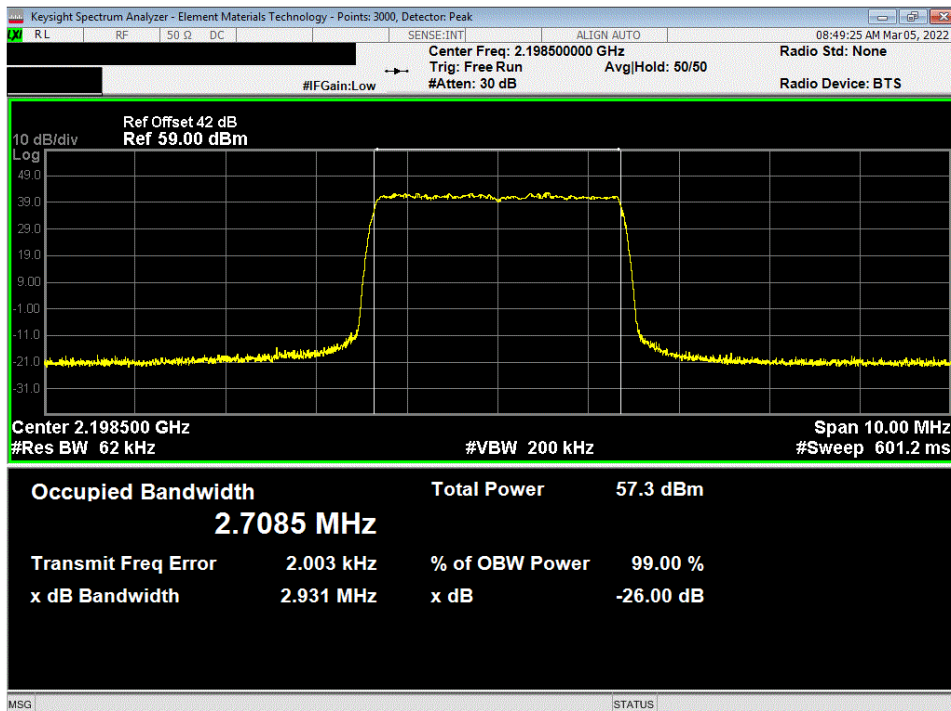


OCCUPIED BANDWIDTH

Band 66, 2110 MHz - 2200 MHz, LTE Single Carrier, Port 1, 3 MHz Bandwidth, 256-QAM Modulation, Mid Channel, 2155 MHz							
			Value	Value	Limit	Result	
			99% (MHz)	26dB (MHz)			
			2.71	2.93	Within Band	Pass	

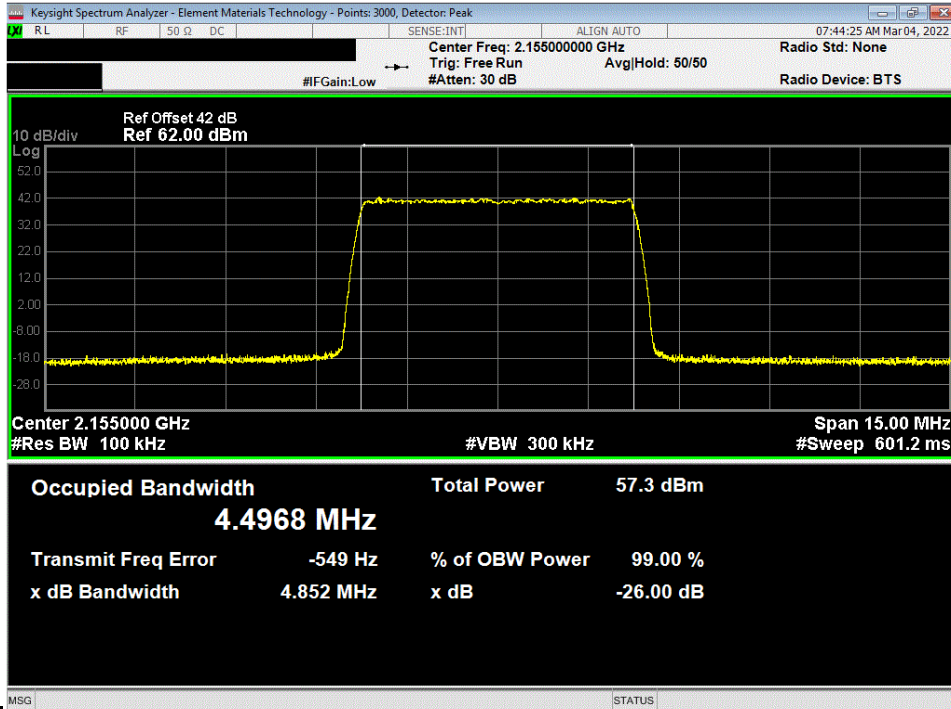


Band 66, 2110 MHz - 2200 MHz, LTE Single Carrier, Port 1, 3 MHz Bandwidth, 256-QAM Modulation, Mid Channel, 2153.5 MHz							
			Value	Value	Limit	Result	
			99% (MHz)	26dB (MHz)			
			2.71	2.93	Within Band	Pass	

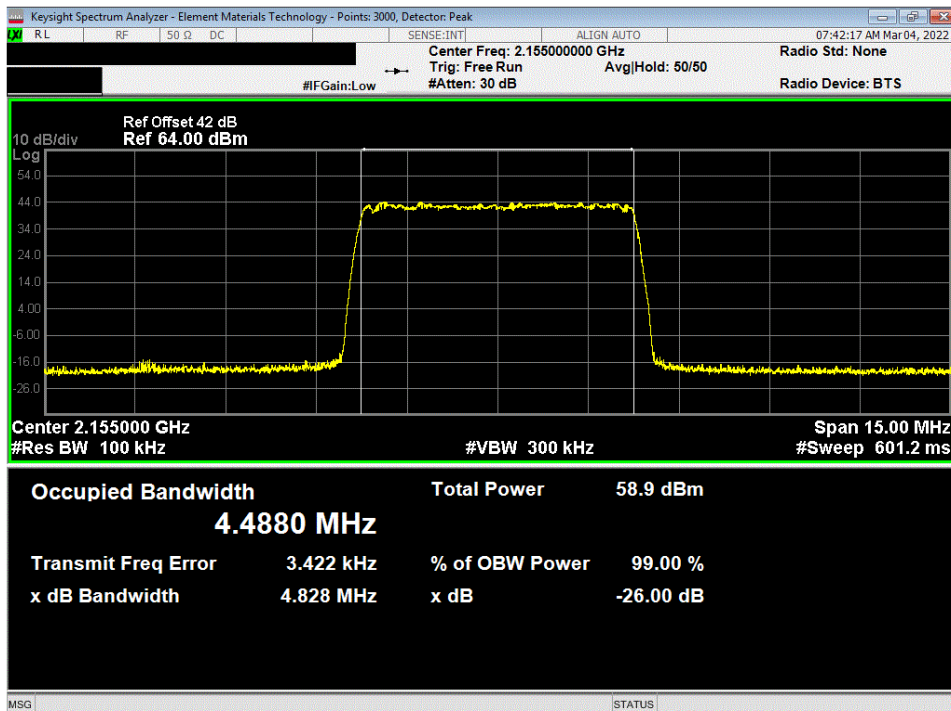


OCCUPIED BANDWIDTH

Band 66, 2110 MHz - 2200 MHz, LTE Single Carrier, Port 1, 5 MHz Bandwidth, QPSK Modulation, Mid Channel, 2155 MHz							
			Value	Value	Limit	Result	
			99% (MHz)	26dB (MHz)			
			4.50	4.85	Within Band	Pass	

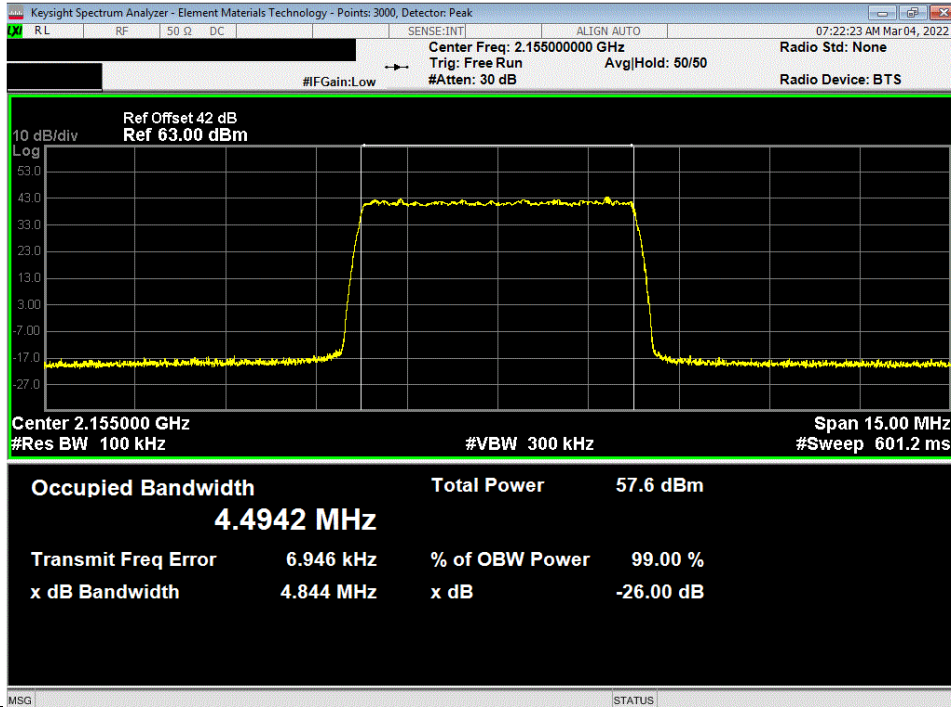


Band 66, 2110 MHz - 2200 MHz, LTE Single Carrier, Port 1, 5 MHz Bandwidth, QPSK Modulation, Mid Channel, 2155 MHz							
			Value	Value	Limit	Result	
			99% (MHz)	26dB (MHz)			
			4.49	4.83	Within Band	Pass	

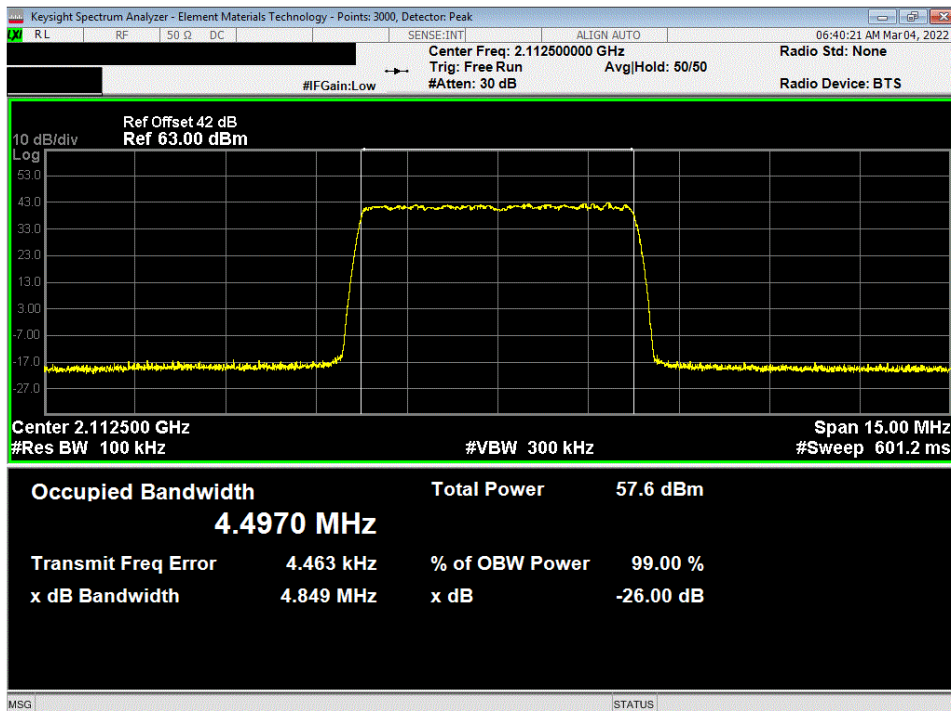


OCCUPIED BANDWIDTH

Band 66, 2110 MHz - 2200 MHz, LTE Single Carrier, Port 1, 5 MHz Bandwidth, 64-QAM Modulation, Mid Channel, 2155 MHz						
	Value	Value	Limit	Result		
	99% (MHz)	26dB (MHz)				
	4.49	4.84	Within Band	Pass		

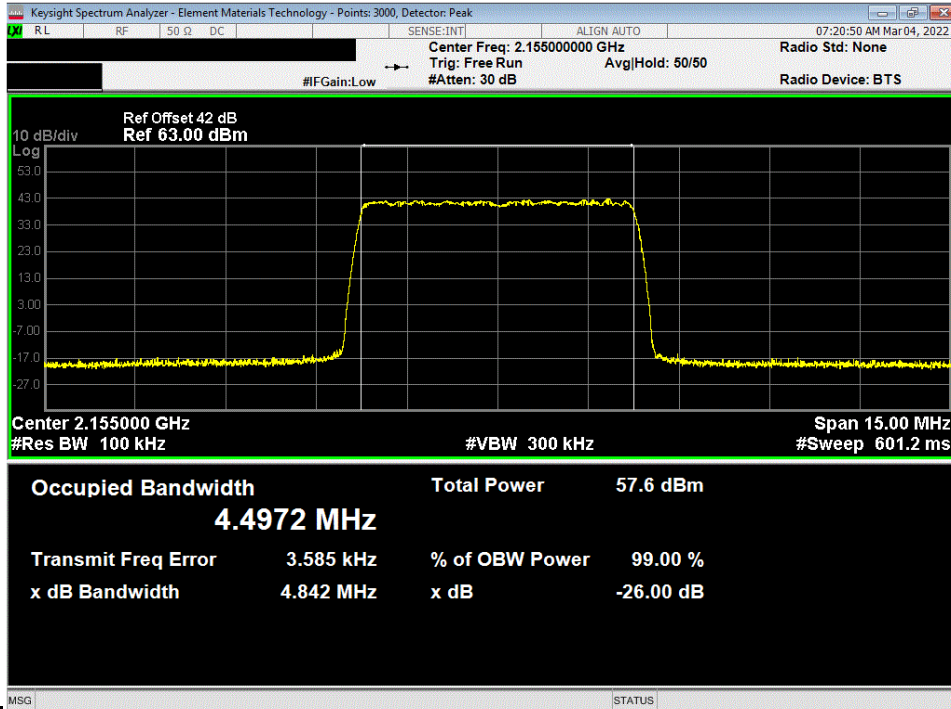


Band 66, 2110 MHz - 2200 MHz, LTE Single Carrier, Port 1, 5 MHz Bandwidth, 64-QAM Modulation, Low Channel, 2112.5 MHz						
	Value	Value	Limit	Result		
	99% (MHz)	26dB (MHz)				
	4.50	4.85	Within Band	Pass		

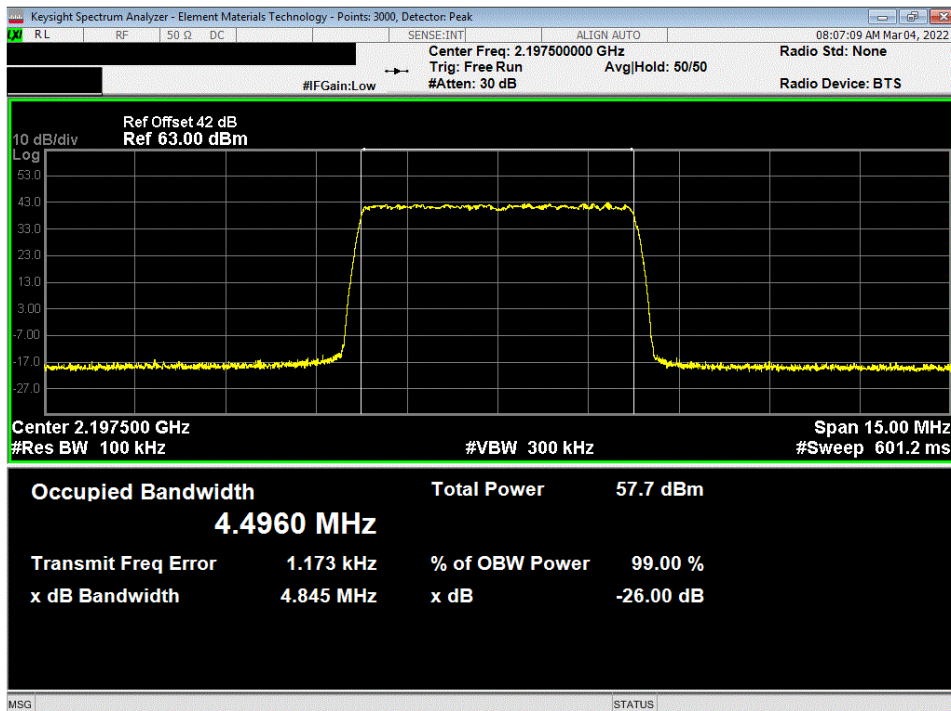


OCCUPIED BANDWIDTH

Band 66, 2110 MHz - 2200 MHz, LTE Single Carrier, Port 1, 5 MHz Bandwidth, 256-QAM Modulation, Mid Channel, 2155 MHz						
	Value	Value	Limit	Result		
	99% (MHz)	26dB (MHz)				
	4.50	4.84	Within Band	Pass		

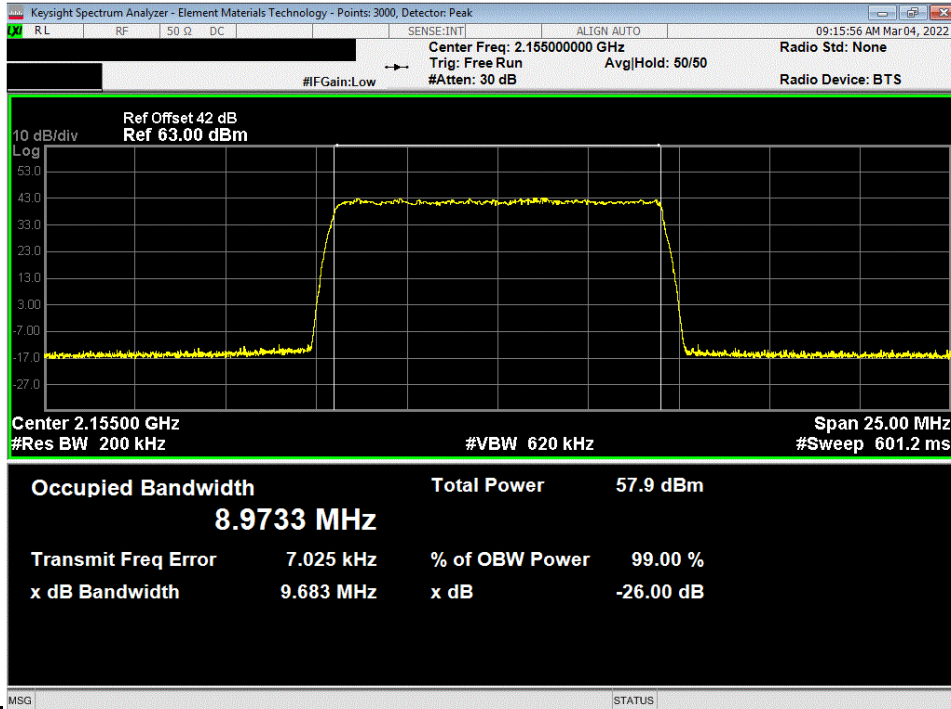


Band 66, 2110 MHz - 2200 MHz, LTE Single Carrier, Port 1, 5 MHz Bandwidth, 256-QAM Modulation, Mid Channel, 2157.5 MHz						
	Value	Value	Limit	Result		
	99% (MHz)	26dB (MHz)				
	4.50	4.85	Within Band	Pass		

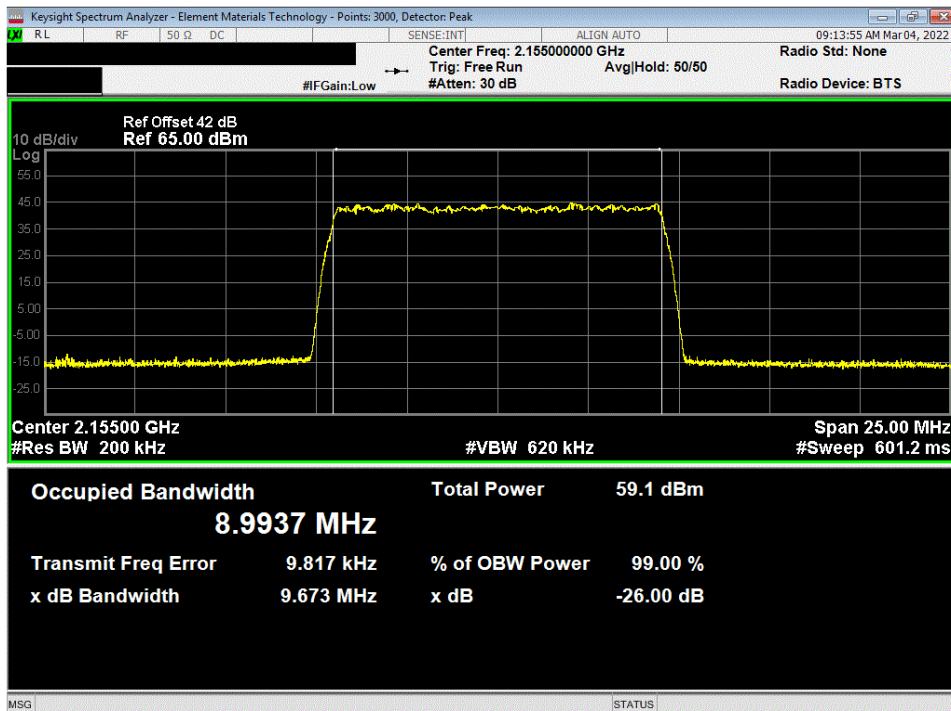


OCCUPIED BANDWIDTH

Band 66, 2110 MHz - 2200 MHz, LTE Single Carrier, Port 1, 10 MHz Bandwidth, QPSK Modulation, Mid Channel, 2155 MHz							
			Value	Value	Limit	Result	
			99% (MHz)	26dB (MHz)			
			8.97	9.68	Within Band	Pass	

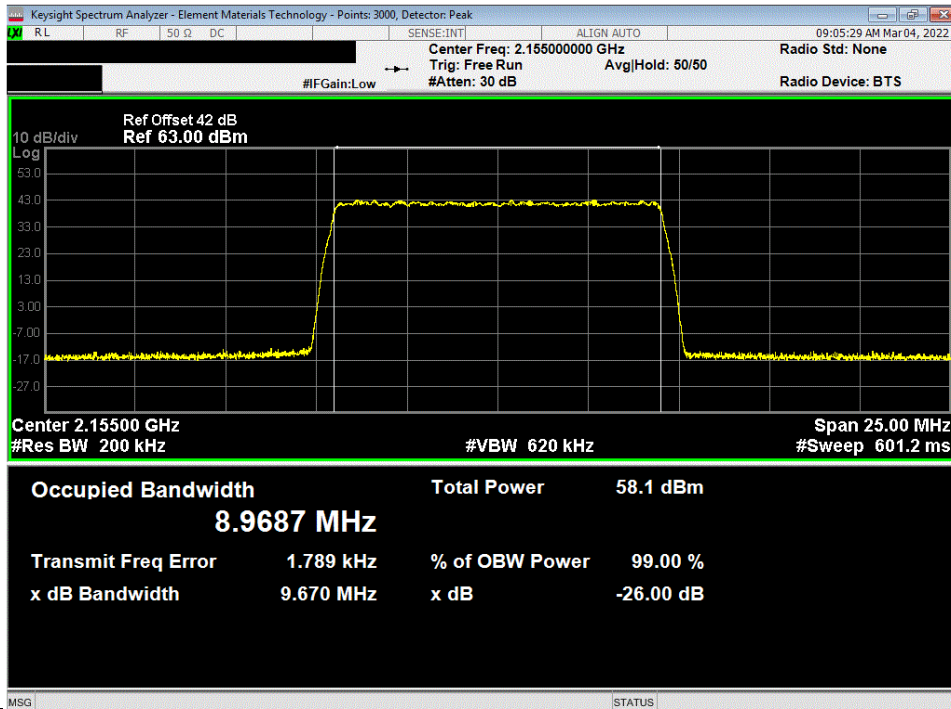


Band 66, 2110 MHz - 2200 MHz, LTE Single Carrier, Port 1, 10 MHz Bandwidth, QPSK Modulation, Mid Channel, 2155 MHz							
			Value	Value	Limit	Result	
			99% (MHz)	26dB (MHz)			
			8.99	9.67	Within Band	Pass	

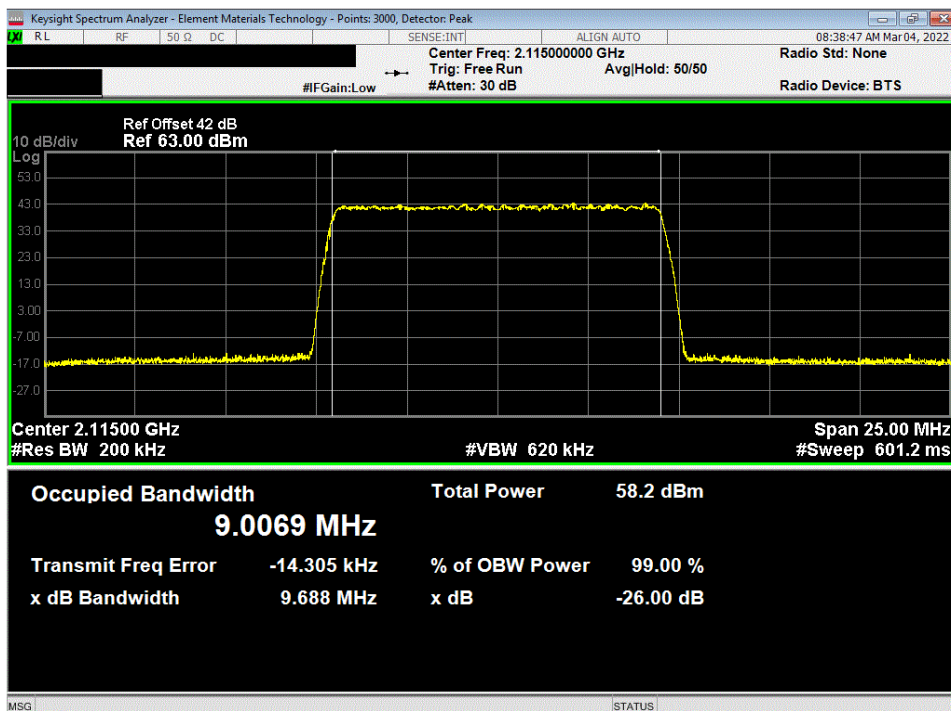


OCCUPIED BANDWIDTH

Band 66, 2110 MHz - 2200 MHz, LTE Single Carrier, Port 1, 10 MHz Bandwidth, 64-QAM Modulation, Mid Channel, 2155 MHz							
			Value	Value	Limit	Result	
			99% (MHz)	26dB (MHz)			
			8.97	9.67	Within Band	Pass	

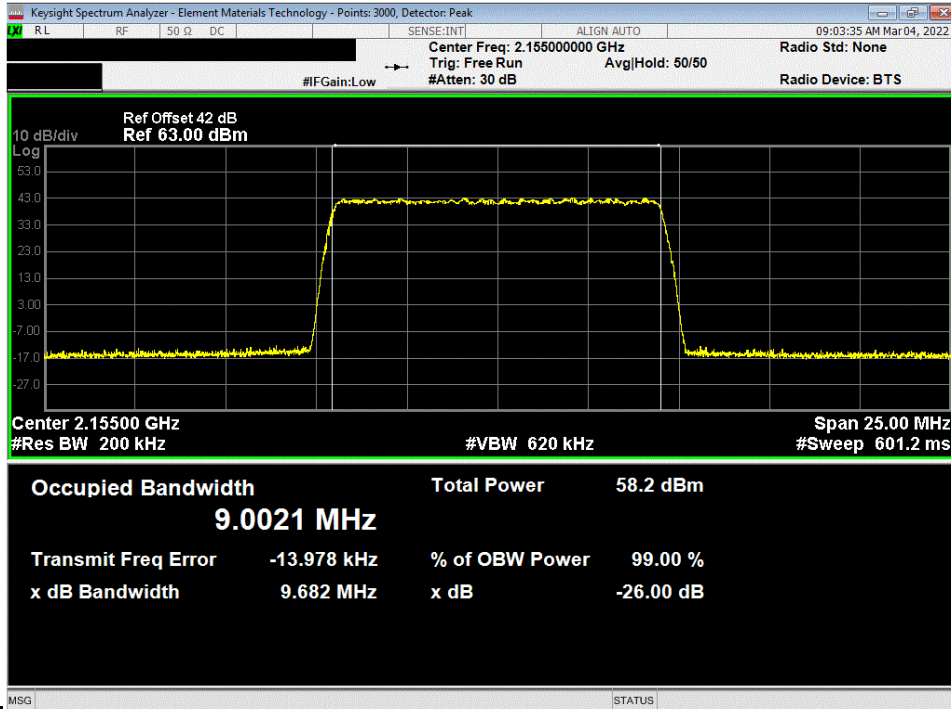


Band 66, 2110 MHz - 2200 MHz, LTE Single Carrier, Port 1, 10 MHz Bandwidth, 64-QAM Modulation, Low Channel, 2115 MHz							
			Value	Value	Limit	Result	
			99% (MHz)	26dB (MHz)			
			9.00	9.67	Within Band	Pass	

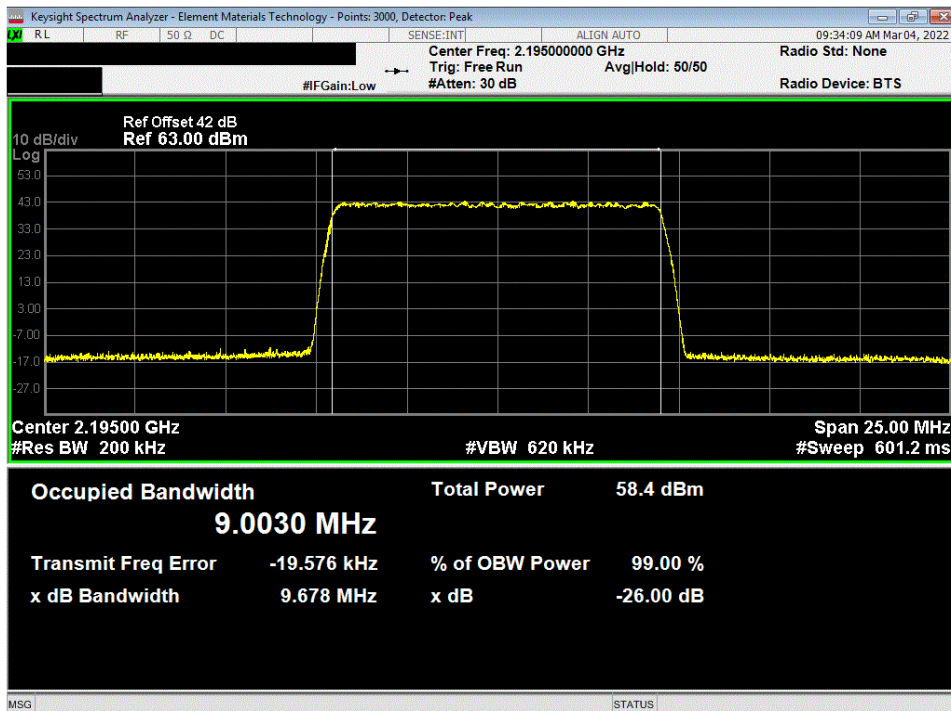


OCCUPIED BANDWIDTH

Band 66, 2110 MHz - 2200 MHz, LTE Single Carrier, Port 1, 10 MHz Bandwidth, 256-QAM Modulation, Mid Channel, 2155 MHz							
	Value	Value	Limit	Result			
	99% (MHz)	26dB (MHz)					
	9.00	9.68	Within Band	Pass			



Band 66, 2110 MHz - 2200 MHz, LTE Single Carrier, Port 1, 10 MHz Bandwidth, 256-QAM Modulation, Mid Channel, 2155 MHz							
	Value	Value	Limit	Result			
	99% (MHz)	26dB (MHz)					
	9.00	9.68	Within Band	Pass			

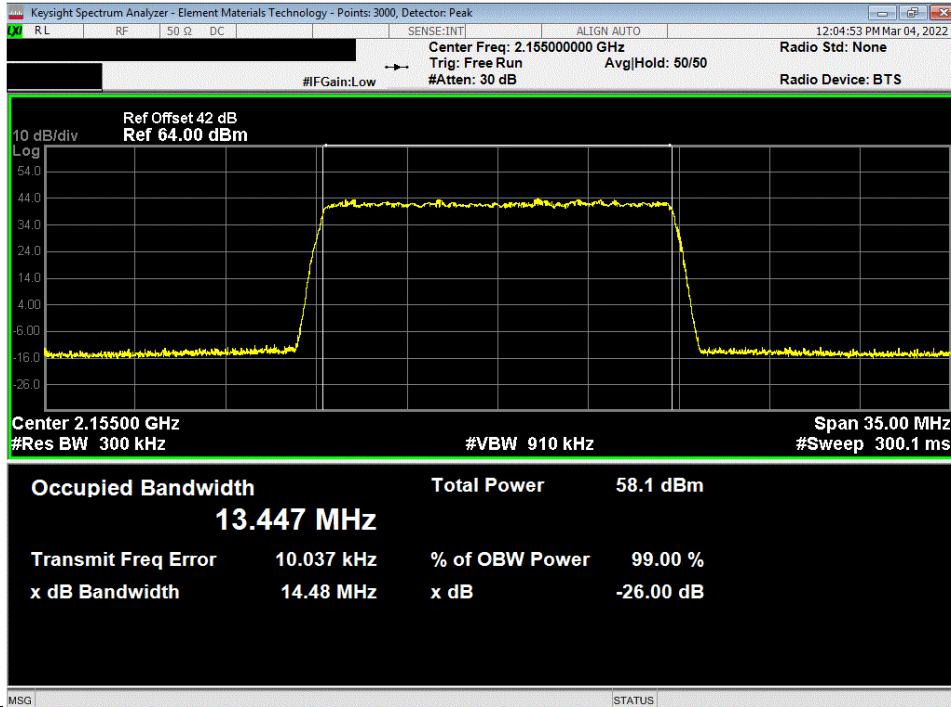


OCCUPIED BANDWIDTH

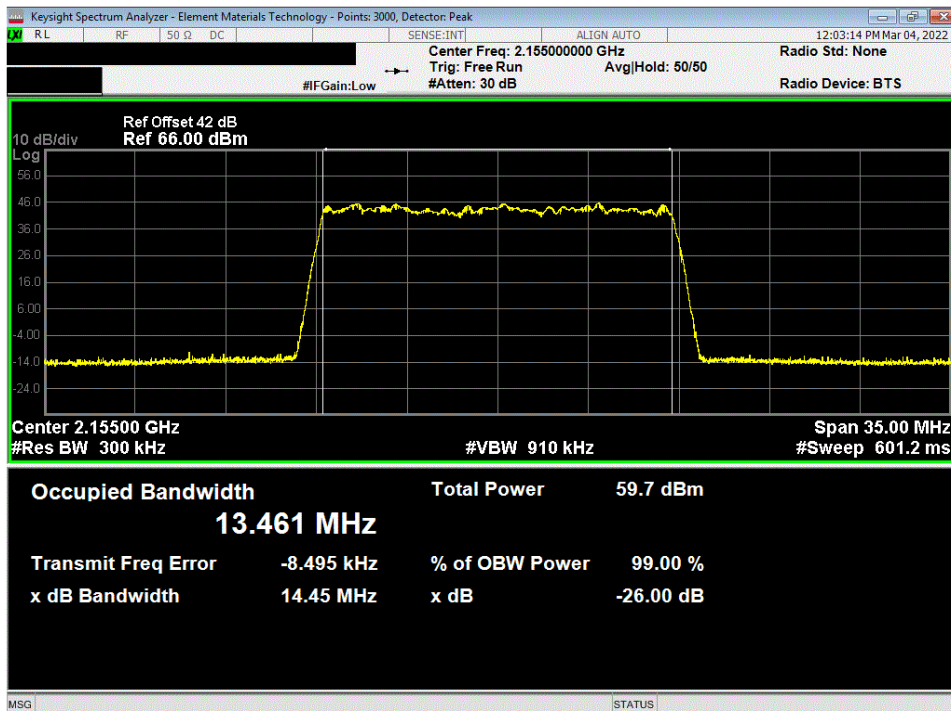


TbTxs 2021.12.14.1 XMt 2022.02.07.0

Band 66, 2110 MHz - 2200 MHz, LTE Single Carrier, Port 1, 15 MHz Bandwidth, QPSK Modulation, Mid Channel, 2155 MHz							
			Value	Value	Limit	Result	
			99% (MHz)	26dB (MHz)			
			13.4	14.5	Within Band	Pass	

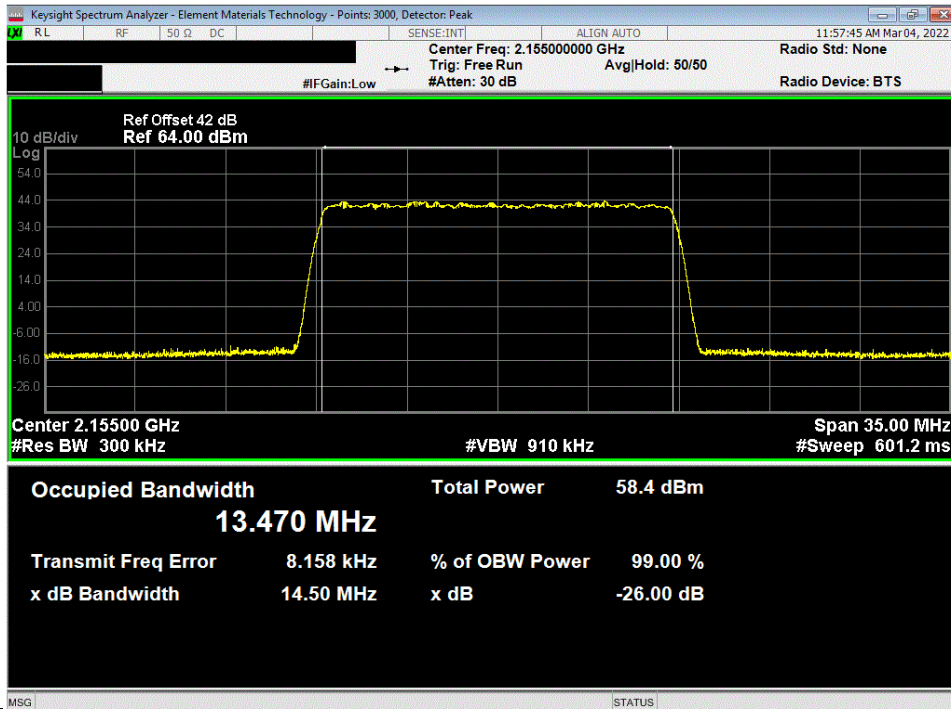


Band 66, 2110 MHz - 2200 MHz, LTE Single Carrier, Port 1, 15 MHz Bandwidth, 15-QAM Modulation, Mid Channel, 2155 MHz							
			Value	Value	Limit	Result	
			99% (MHz)	26dB (MHz)			
			13.5	14.5	Within Band	Pass	

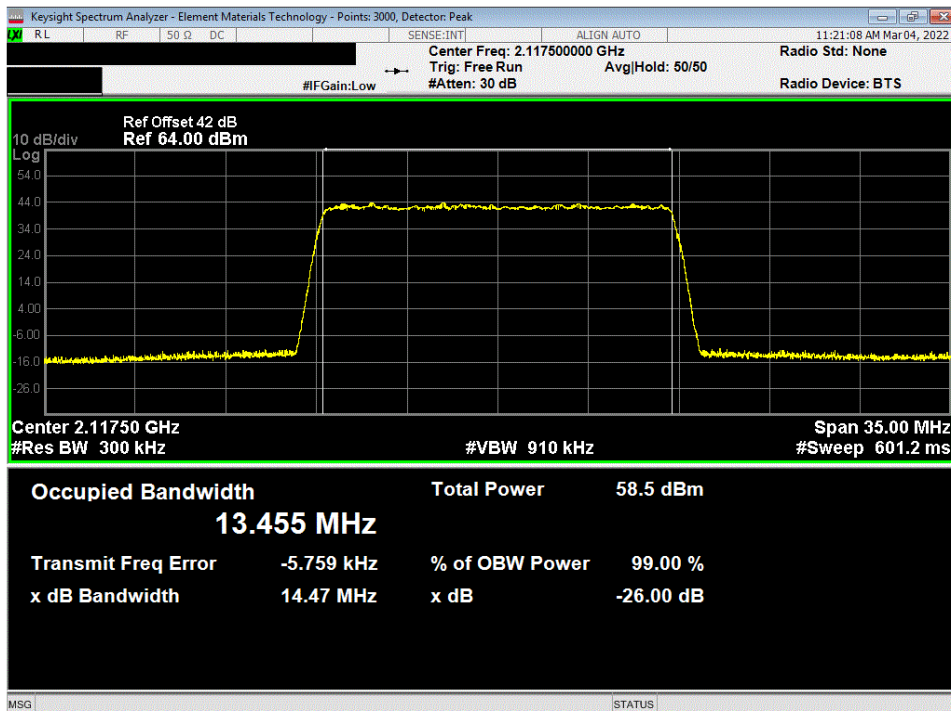


OCCUPIED BANDWIDTH

Band 66, 2110 MHz - 2200 MHz, LTE Single Carrier, Port 1, 15 MHz Bandwidth, 64-QAM Modulation, Mid Channel, 2155 MHz						
	Value	Value	Limit	Result		
	99% (MHz)	26dB (MHz)				
	13.5	14.5	Within Band	Pass		



Band 66, 2110 MHz - 2200 MHz, LTE Single Carrier, Port 1, 15 MHz Bandwidth, 64-QAM Modulation, Low Channel, 2117.5 MHz						
	Value	Value	Limit	Result		
	99% (MHz)	26dB (MHz)				
	13.5	14.5	Within Band	Pass		

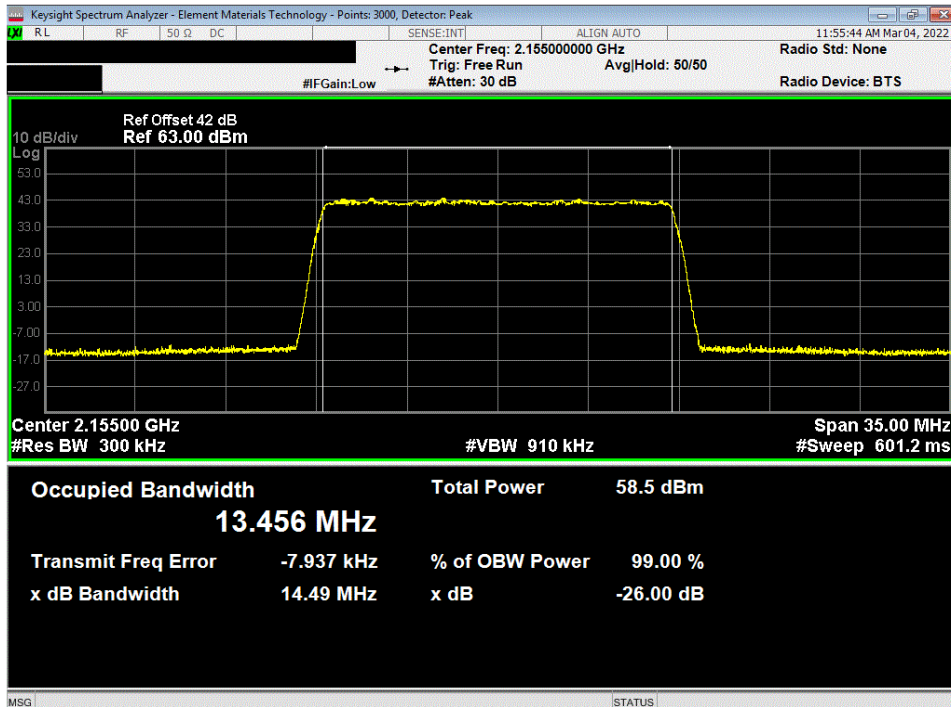


OCCUPIED BANDWIDTH

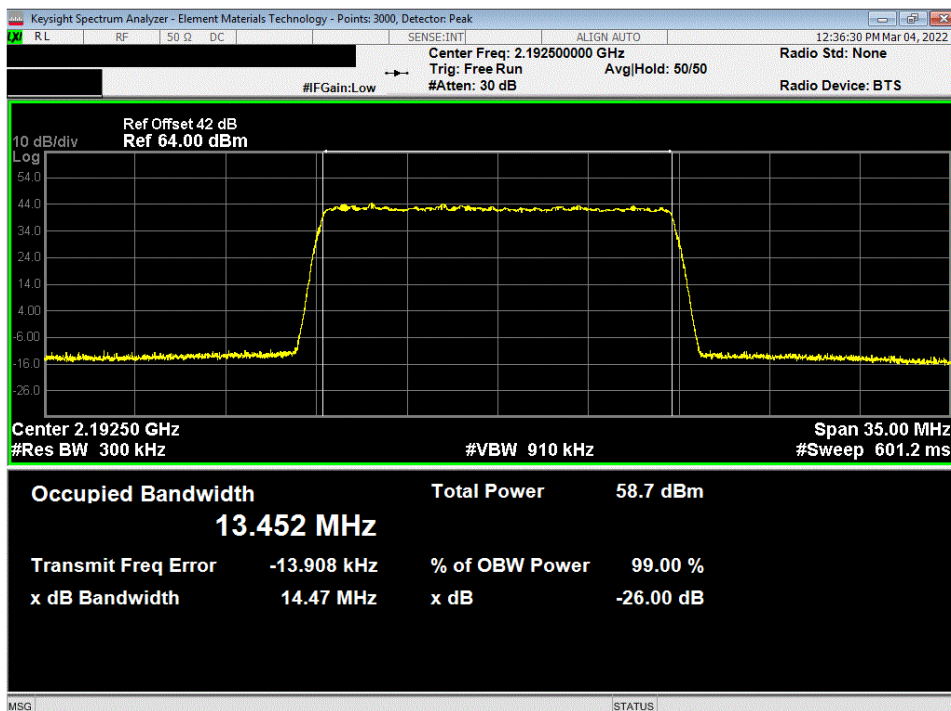


TbTtx 2021.12.14.1 XMt 2022.02.07.0

Band 66, 2110 MHz - 2200 MHz, LTE Single Carrier, Port 1, 15 MHz Bandwidth, 256-QAM Modulation, Mid Channel, 2155 MHz						
	Value	Value	Limit	Result		
	99% (MHz)	26dB (MHz)				
	13.5	14.5	Within Band	Pass		

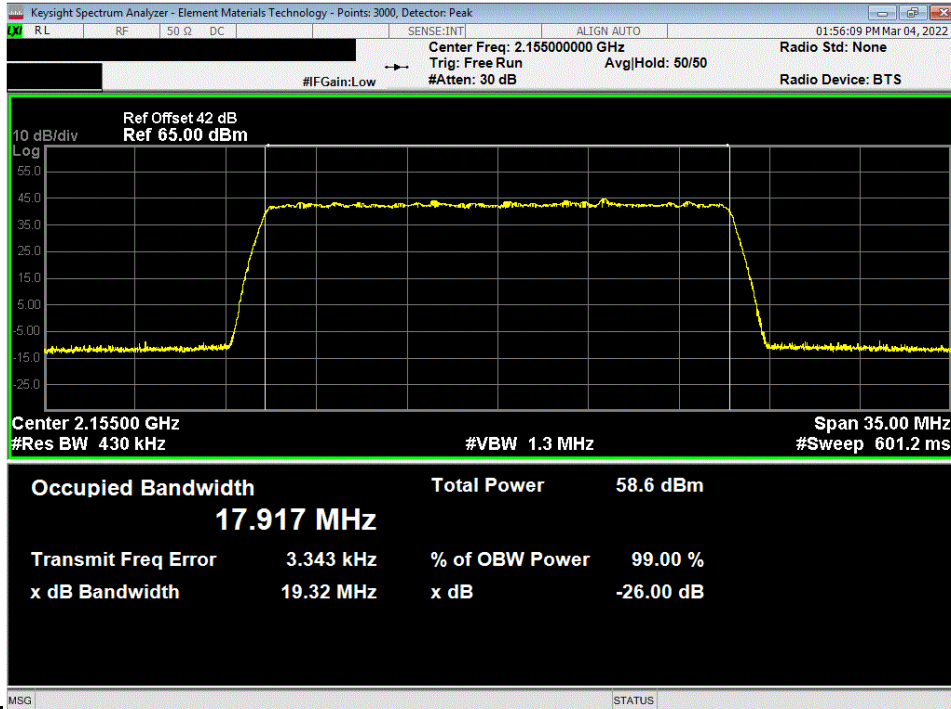


Band 66, 2110 MHz - 2200 MHz, LTE Single Carrier, Port 1, 15 MHz Bandwidth, 256-QAM Modulation, Mid Channel, 2152.5 MHz						
	Value	Value	Limit	Result		
	99% (MHz)	26dB (MHz)				
	13.5	14.5	Within Band	Pass		

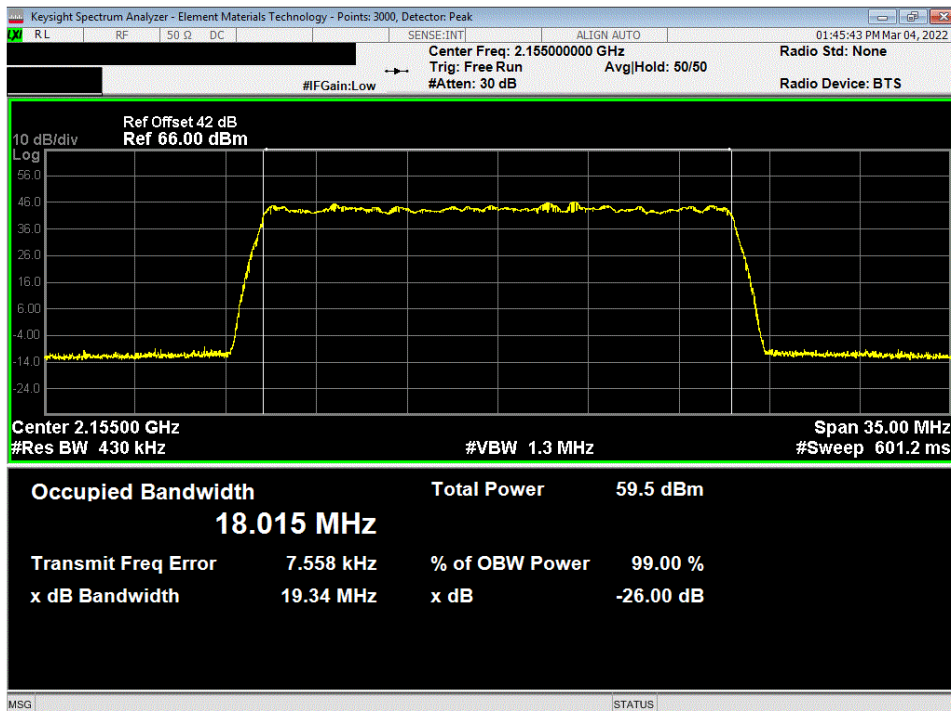


OCCUPIED BANDWIDTH

Band 66, 2110 MHz - 2200 MHz, LTE Single Carrier, Port 1, 20 MHz Bandwidth, QPSK Modulation, Mid Channel, 2155 MHz						
	Value	Value	Limit	Result		
	99% (MHz)	26dB (MHz)				
	17.9	19.3	Within Band	Pass		

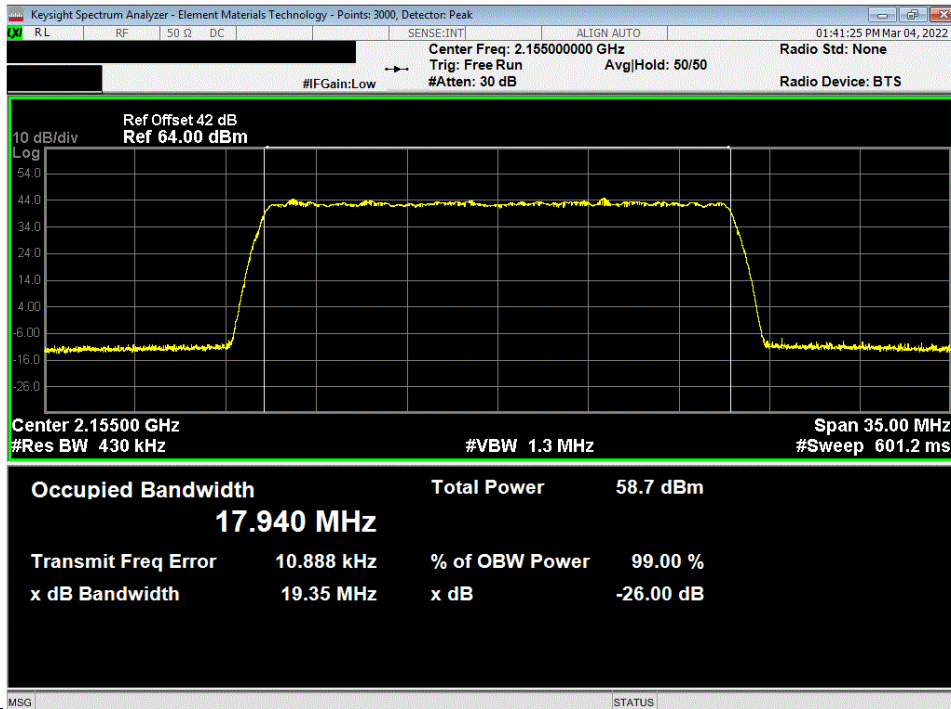


Band 66, 2110 MHz - 2200 MHz, LTE Single Carrier, Port 1, 20 MHz Bandwidth, QPSK Modulation, Mid Channel, 2155 MHz						
	Value	Value	Limit	Result		
	99% (MHz)	26dB (MHz)				
	18.0	19.3	Within Band	Pass		

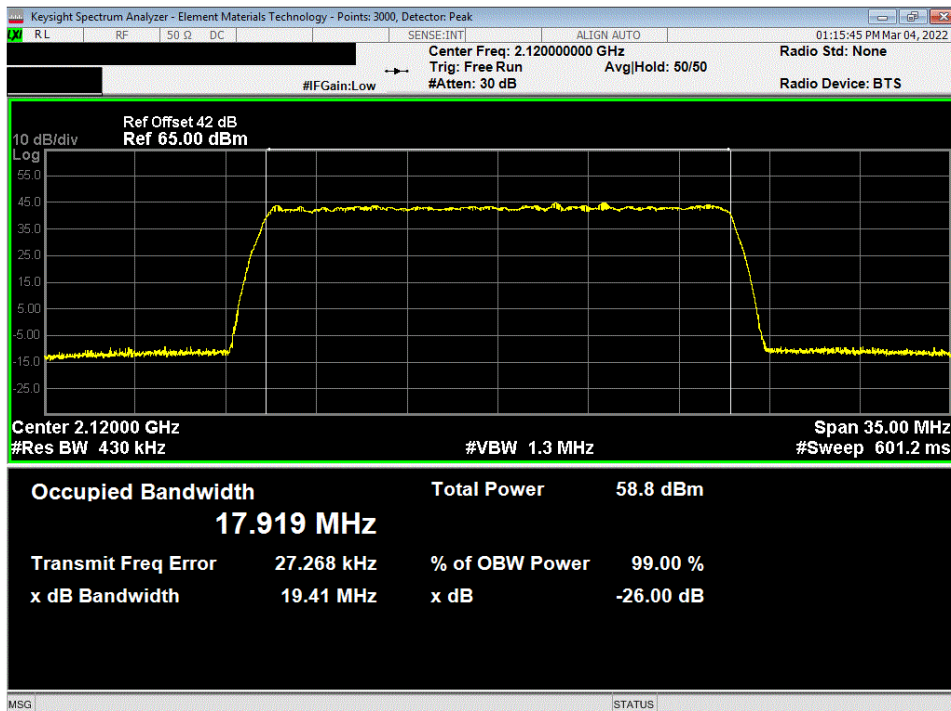


OCCUPIED BANDWIDTH

Band 66, 2110 MHz - 2200 MHz, LTE Single Carrier, Port 1, 20 MHz Bandwidth, 64-QAM Modulation, Mid Channel, 2155 MHz						
	Value	Value	Limit	Result		
	99% (MHz)	26dB (MHz)				
	17.9	19.3	Within Band	Pass		

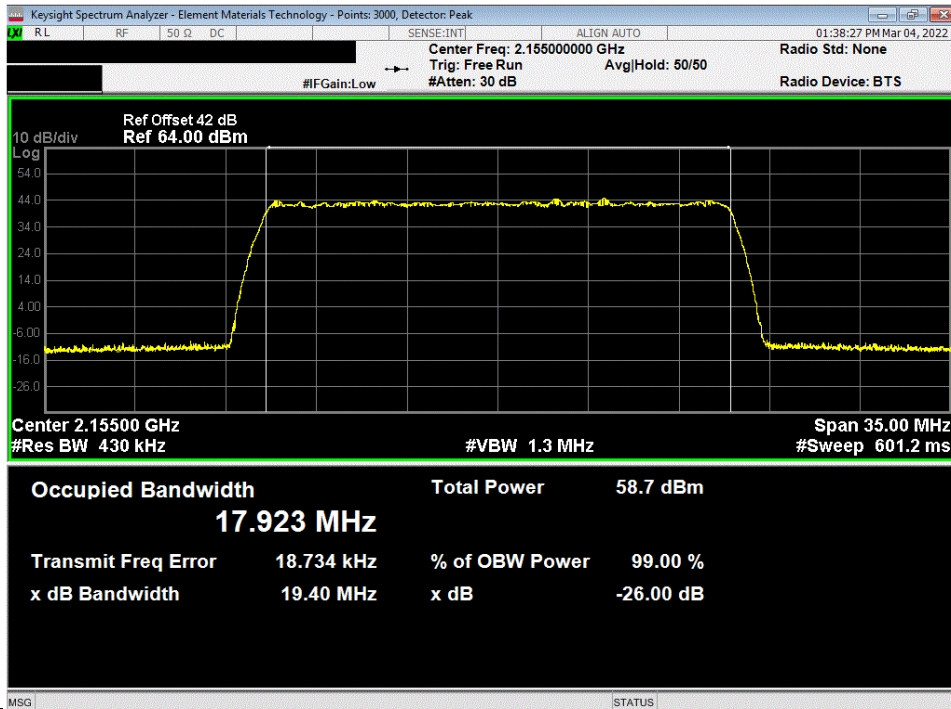


Band 66, 2110 MHz - 2200 MHz, LTE Single Carrier, Port 1, 20 MHz Bandwidth, 64-QAM Modulation, Low Channel, 2120 MHz						
	Value	Value	Limit	Result		
	99% (MHz)	26dB (MHz)				
	17.9	19.4	Within Band	Pass		

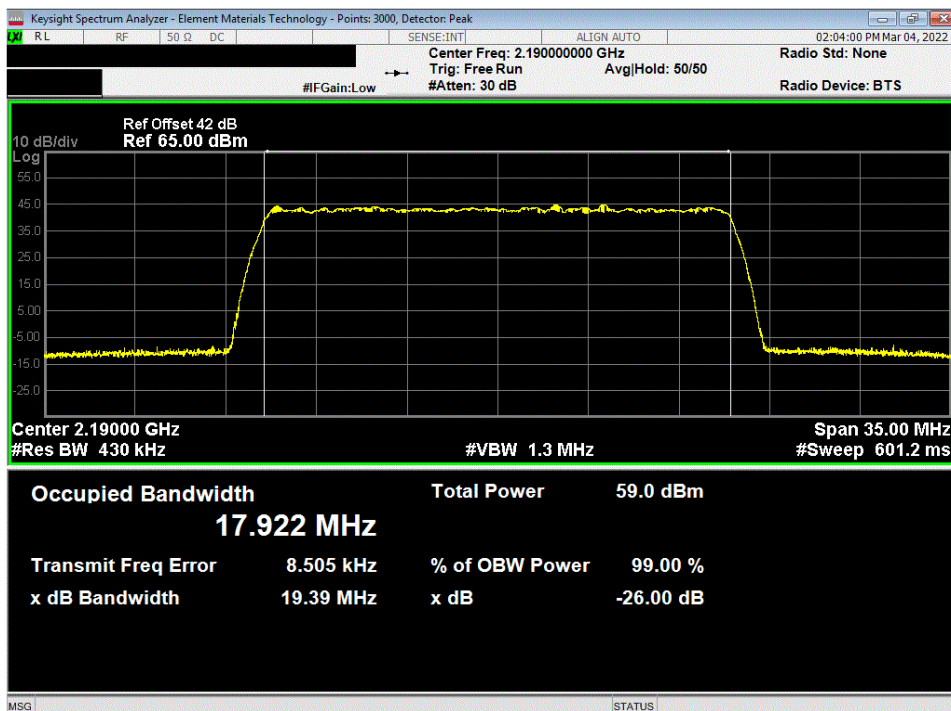


OCCUPIED BANDWIDTH

Band 66, 2110 MHz - 2200 MHz, LTE Single Carrier, Port 1, 20 MHz Bandwidth, 256-QAM Modulation, Mid Channel, 2155 MHz						
	Value	Value	Limit	Result		
	99% (MHz)	26dB (MHz)				
	17.9	19.4	Within Band	Pass		



Band 66, 2110 MHz - 2200 MHz, LTE Single Carrier, Port 1, 20 MHz Bandwidth, 256-QAM Modulation, Mid Channel, 2155 MHz						
	Value	Value	Limit	Result		
	99% (MHz)	26dB (MHz)				
	17.9	19.4	Within Band	Pass		



OCCUPIED BANDWIDTH - GUARD BAND

Testing was performed using the mode(s) of operation and configuration(s) noted within the report. The individuals and/or the organization requesting the test provided the modes, configurations and settings used to complete the evaluation. The actual test parameters are specified in the test data, this includes items such as investigated frequency range (scanned) and test levels. The testing methods and performance specifications, as well as the test site used for the evaluation are indicated in the test data.

TEST EQUIPMENT

Description	Manufacturer	Model	ID	Last Cal.	Cal. Due
Generator - Signal	Agilent	N5173B	TIW	2020-07-17	2023-07-17
Block - DC	Fairview Microwave	SD3379	AMT	2021-09-14	2022-09-14
Analyzer - Spectrum Analyzer	Keysight	N9010A	AFQ	2022-01-17	2023-01-17

TEST DESCRIPTION

The measurement was made using a direct connection between the RF output of the EUT and the spectrum analyzer. The method in section 5.4 of ANSI C63.26 was used to make this measurement. The spectrum analyzer settings were as follows:

- RBW is 1% - 5% of the occupied bandwidth
- VBW is $\geq 3x$ the RBW
- Peak Detector was used
- Trace max hold was used

RF conducted emissions testing was performed only on one port. All four AFHII antenna ports are essentially electrically identical (the RF power variation between antenna ports is small as shown in this certification testing) and antenna port 1 was selected to perform the testing under this effort as allowed by ANSI C63.26-2015 paragraphs 5.2.5.3, 5.7.2i, and 6.4.

The occupied bandwidth was measured with the EUT configured in the modes called out in the data sheets. FCC 24.238(b) and FCC 27.53(h)(3) defines the 26dB emission bandwidth requirement. RSS GEN Section 6.7 defines the 99% emission bandwidth requirement.

FCC and ISD Emission Designators for Band 25 (1930MHz to 1995MHz) Narrow-Band IOT Guard Band			
Ch BW	Radio Channel	4G-LTE: E-TM1.1 with N-TM	
		FCC	ISED
10MHz	Low	9M91F9W	9M50F9W
	Mid	9M90F9W	9M50F9W
	High	9M90F9W	9M49F9W
15MHz	Low	14M8F9W	14M2F9W
	Mid	14M8F9W	14M1F9W
	High	14M8F9W	14M2F9W
20MHz	Low	19M8F9W	18M7F9W
	Mid	19M8F9W	18M7F9W
	High	19M8F9W	18M7F9W
Note: FCC emission designators are based on 26dB emission bandwidth. ISD emission designators are based on 99% emission bandwidth.			

FCC and ISD Emission Designators for Band 66 (2110MHz to 2200MHz) Narrow-Band IOT Guard Band			
Ch BW	Radio Channel	4G-LTE: E-TM1.1 with N-TM	
		FCC	ISED
10MHz	Low	9M90F9W	9M50F9W
	Mid	9M90F9W	9M49F9W
	High	9M90F9W	9M50F9W
15MHz	Low	14M8F9W	14M1F9W
	Mid	14M8F9W	14M1F9W
	High	14M8F9W	14M1F9W
20MHz	Low	19M8F9W	18M7F9W
	Mid	19M8F9W	18M7F9W
	High	19M8F9W	18M7F9W
Note: FCC emission designators are based on 26dB emission bandwidth. ISD emission designators are based on 99% emission bandwidth.			

OCCUPIED BANDWIDTH - GUARD BAND



TstTx 2021.12.14.1 XMit 2022.02.07.0

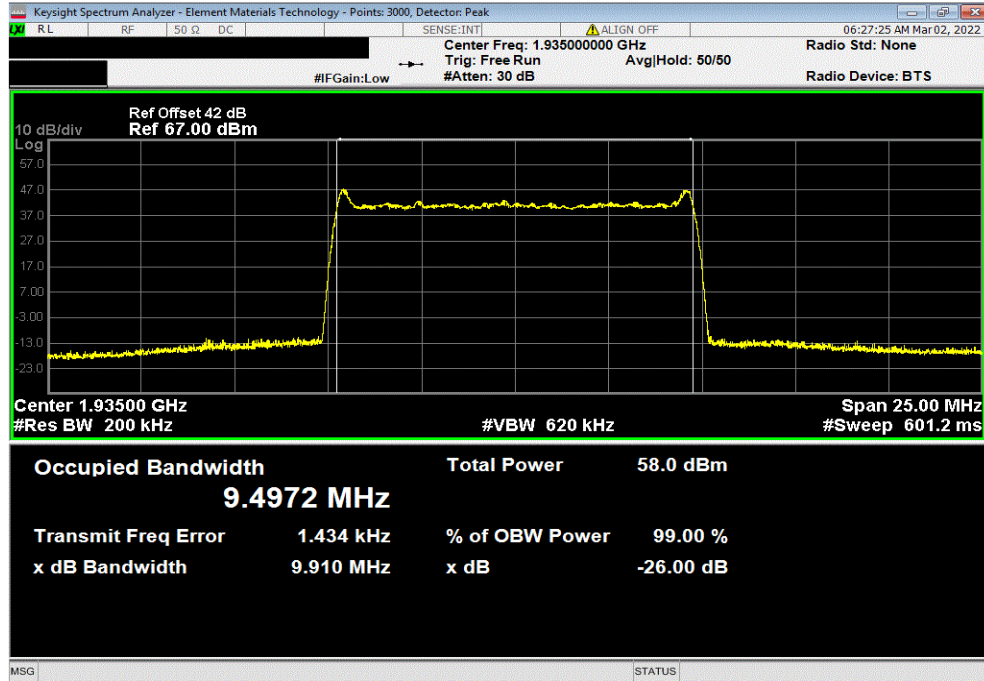
EUT: AHFII Remote Radio Head		Work Order: NOKI0037	
Serial Number: YK214000036		Date: 28-Feb-22	
Customer: Nokia Solutions and Networks		Temperature: 22.6 °C	
Attendees: David Le, John Rattanaovong		Humidity: 23.7% RH	
Project: None		Barometric Pres.: 1026 mbar	
Tested by: Mark Baytan		Power: 54 VDC	
Job Site: TX09			
TEST SPECIFICATIONS			
FCC 24E:2022		ANSI C63.26:2015	
RSS-133 Issue 6:2013+A1:2018		RSS-133 Issue 6:2013+A1:2018	
COMMENTS			
All measurement path losses accounted for in the reference level offset including any attenuators, filters, and DC blocks. Band 25 carriers enabled at maximum power is 80 watts/carrier.			
DEVIATIONS FROM TEST STANDARD			
None			
Configuration #	2	Signature	
		Value 99% (MHz)	Value 26dB (MHz)
		Limit	Result
Band 25, 1930 MHz - 1995 MHz, LTE Narrow Band IoT Guard Band			
Port 1			
10 MHz Bandwidth			
E-TM1.1 with N-TM			
Low Channel, 1935 MHz		9.50	9.91
Mid Channel, 1962.5 MHz		9.50	9.90
High Channel, 1990 MHz		9.49	9.90
15 MHz Bandwidth			
E-TM1.1 with N-TM			
Low Channel, 1937.5 MHz		14.2	14.8
Mid Channel, 1962.5 MHz		14.2	14.8
High Channel, 1987.5 MHz		14.2	14.8
20 MHz Bandwidth			
E-TM1.1 with N-TM			
Low Channel, 1940 MHz		18.7	19.8
Mid Channel, 1962.5 MHz		18.7	19.8
High Channel, 1985 MHz		18.7	19.8

OCCUPIED BANDWIDTH - GUARD BAND

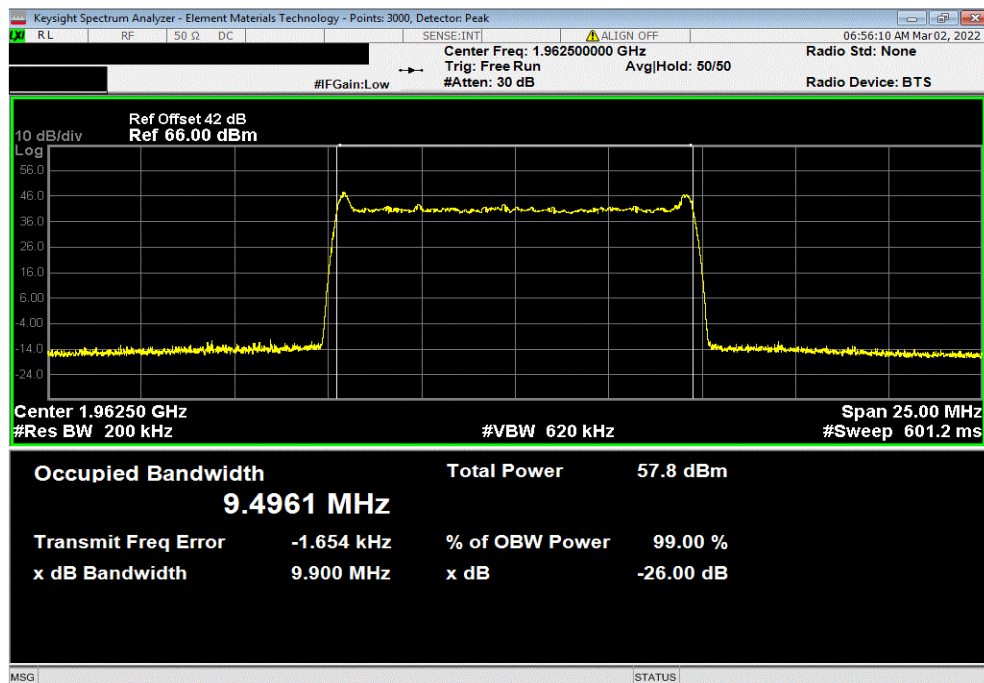


TbTx 2021.12.14.1 XMit 2022.02.07.0

Band 25, 1930 MHz - 1995 MHz, LTE Narrow Band IoT Guard Band, Port 1, 10 MHz Bandwidth, E-TM1.1 with N-TM, Low Channel, 1935 MHz							
			Value	Value	Limit	Result	
			99% (MHz)	26dB (MHz)			
			9.50	9.91	Within Band	Pass	



Band 25, 1930 MHz - 1995 MHz, LTE Narrow Band IoT Guard Band, Port 1, 10 MHz Bandwidth, E-TM1.1 with N-TM, Mid Channel, 1962.5 MHz							
			Value	Value	Limit	Result	
			99% (MHz)	26dB (MHz)			
			9.50	9.90	Within Band	Pass	

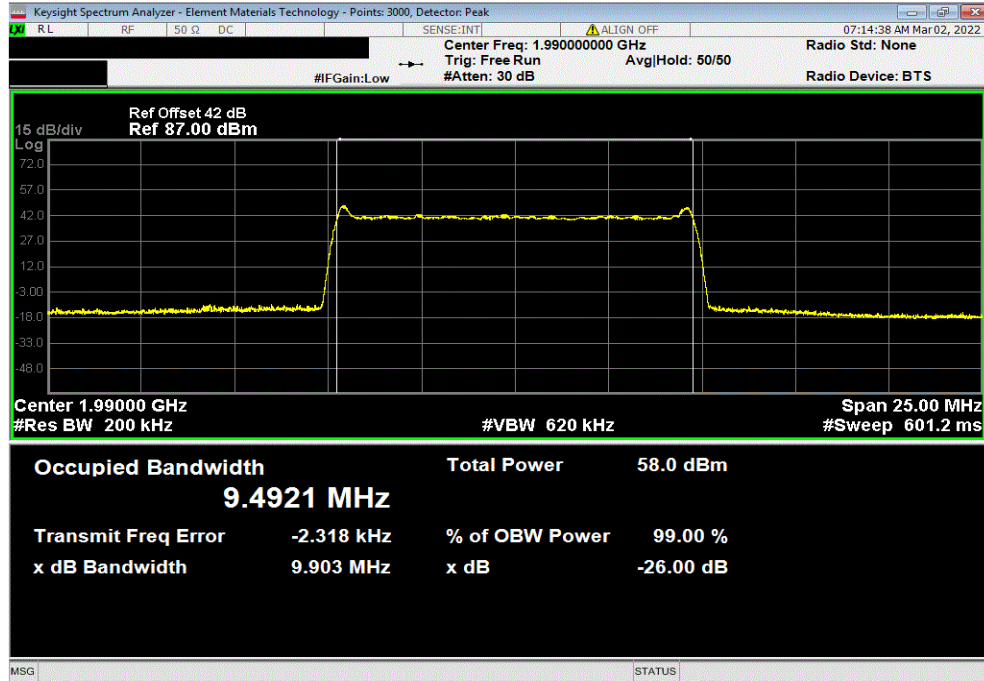


OCCUPIED BANDWIDTH - GUARD BAND

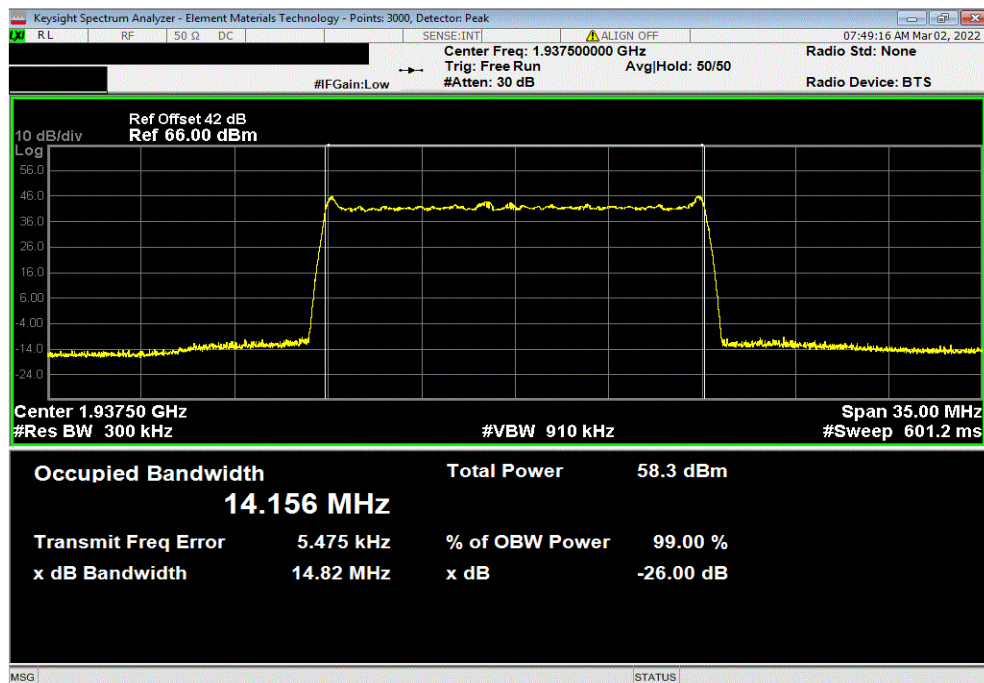


TbTx 2021.12.14.1 XMill 2022.02.07.0

Band 25, 1930 MHz - 1995 MHz, LTE Narrow Band IoT Guard Band, Port 1, 10 MHz Bandwidth, E-TM1.1 with N-TM, High Channel, 1990 MHz							
			Value	Value	Limit	Result	
			99% (MHz)	26dB (MHz)			
			9.49	9.90	Within Band	Pass	



Band 25, 1930 MHz - 1995 MHz, LTE Narrow Band IoT Guard Band, Port 1, 15 MHz Bandwidth, E-TM1.1 with N-TM, Low Channel, 1937.5 MHz							
			Value	Value	Limit	Result	
			99% (MHz)	26dB (MHz)			
			14.2	14.8	Within Band	Pass	

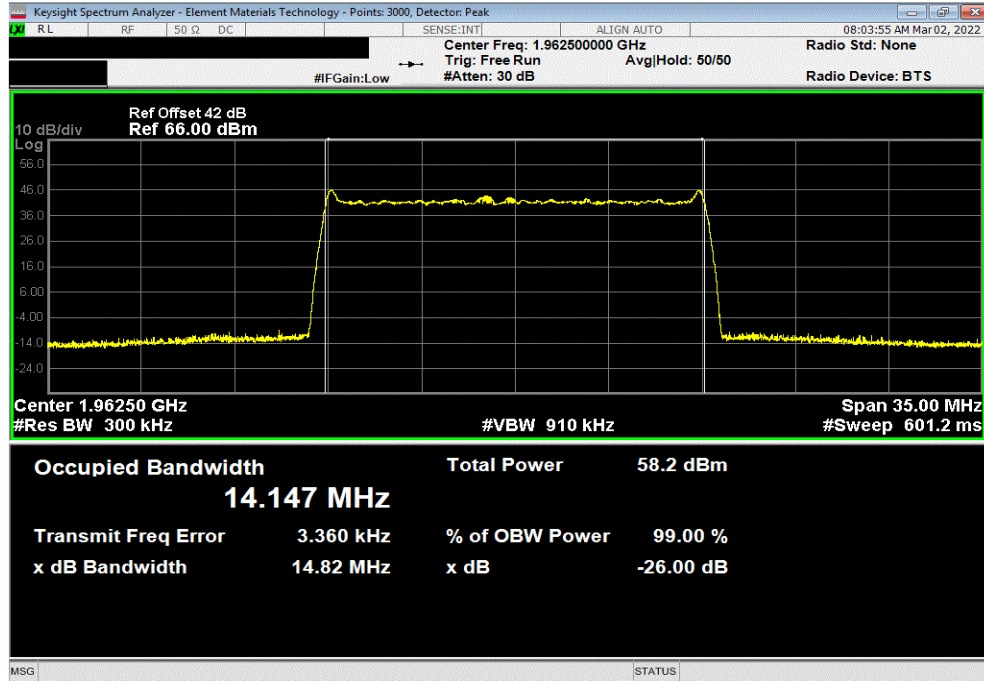


OCCUPIED BANDWIDTH - GUARD BAND

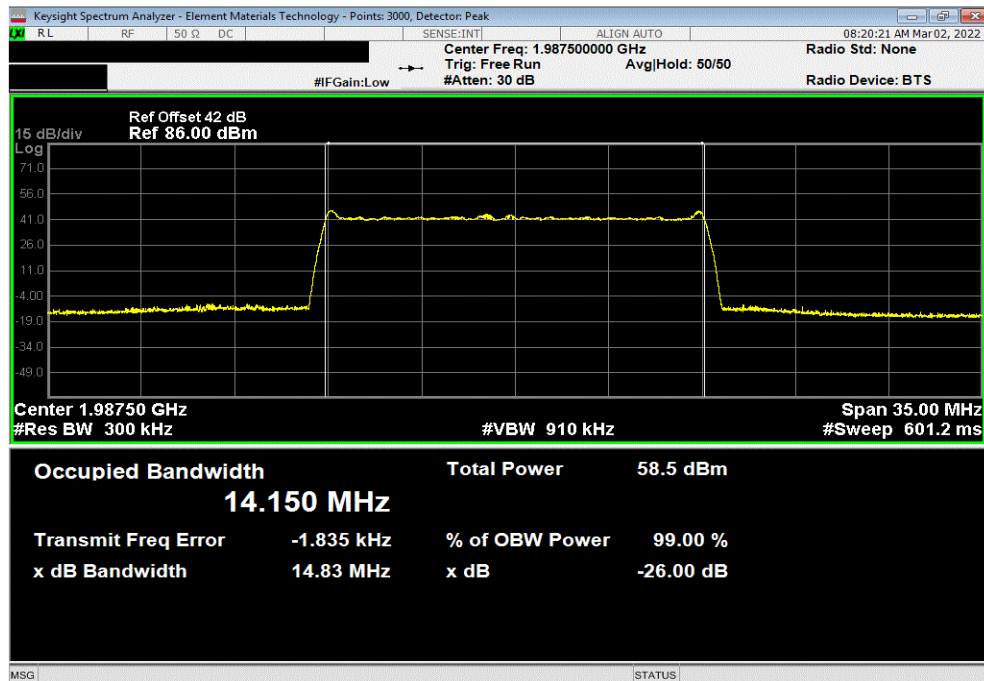


TbTx 2021.12.14.1 XMit 2022.02.07.0

Band 25, 1930 MHz - 1995 MHz, LTE Narrow Band IoT Guard Band, Port 1, 15 MHz Bandwidth, E-TM1.1 with N-TM, Mid Channel, 1962.5 MHz							
			Value	Value	Limit	Result	
			99% (MHz)	26dB (MHz)			
			14.2	14.8	Within Band	Pass	



Band 25, 1930 MHz - 1995 MHz, LTE Narrow Band IoT Guard Band, Port 1, 15 MHz Bandwidth, E-TM1.1 with N-TM, High Channel, 1987.5 MHz							
			Value	Value	Limit	Result	
			99% (MHz)	26dB (MHz)			
			14.2	14.8	Within Band	Pass	

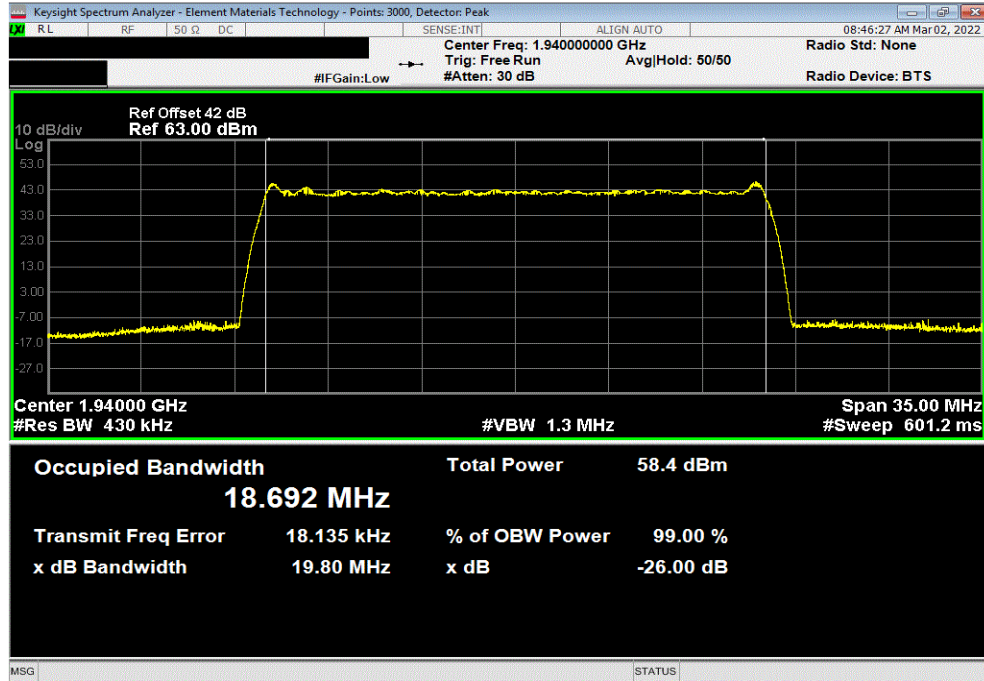


OCCUPIED BANDWIDTH - GUARD BAND

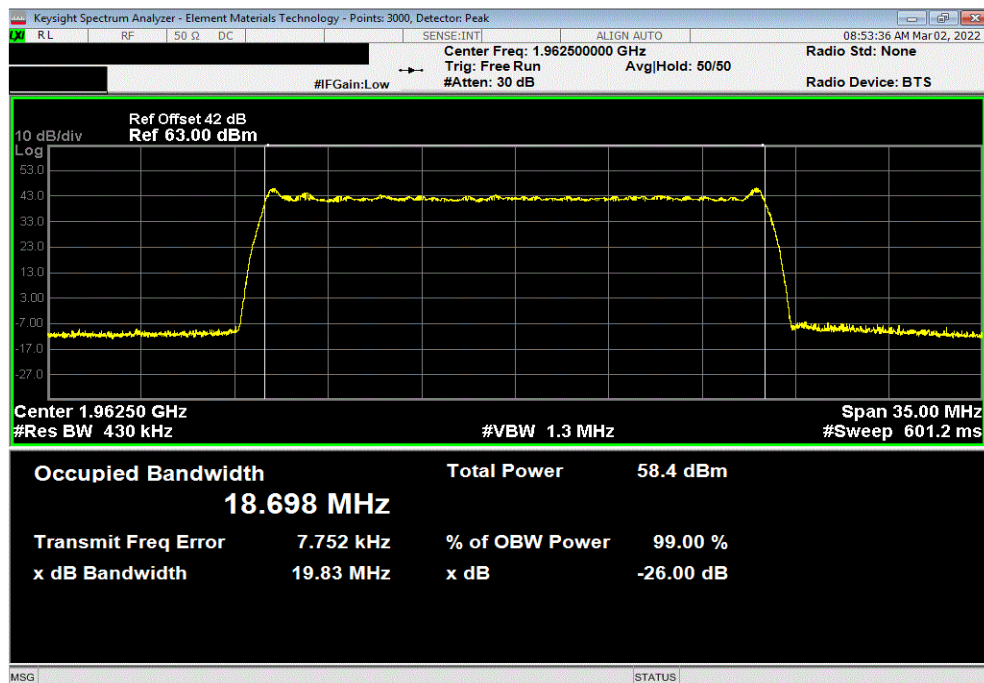


TbTx 2021.12.14.1 XMit 2022.02.07.0

Band 25, 1930 MHz - 1995 MHz, LTE Narrow Band IoT Guard Band, Port 1, 20 MHz Bandwidth, E-TM1.1 with N-TM, Low Channel, 1940 MHz							
			Value	Value			
			99% (MHz)	26dB (MHz)	Limit		Result
			18.7	19.8	Within Band		Pass



Band 25, 1930 MHz - 1995 MHz, LTE Narrow Band IoT Guard Band, Port 1, 20 MHz Bandwidth, E-TM1.1 with N-TM, Mid Channel, 1962.5 MHz							
			Value	Value			
			99% (MHz)	26dB (MHz)	Limit		Result
			18.7	19.8	Within Band		Pass

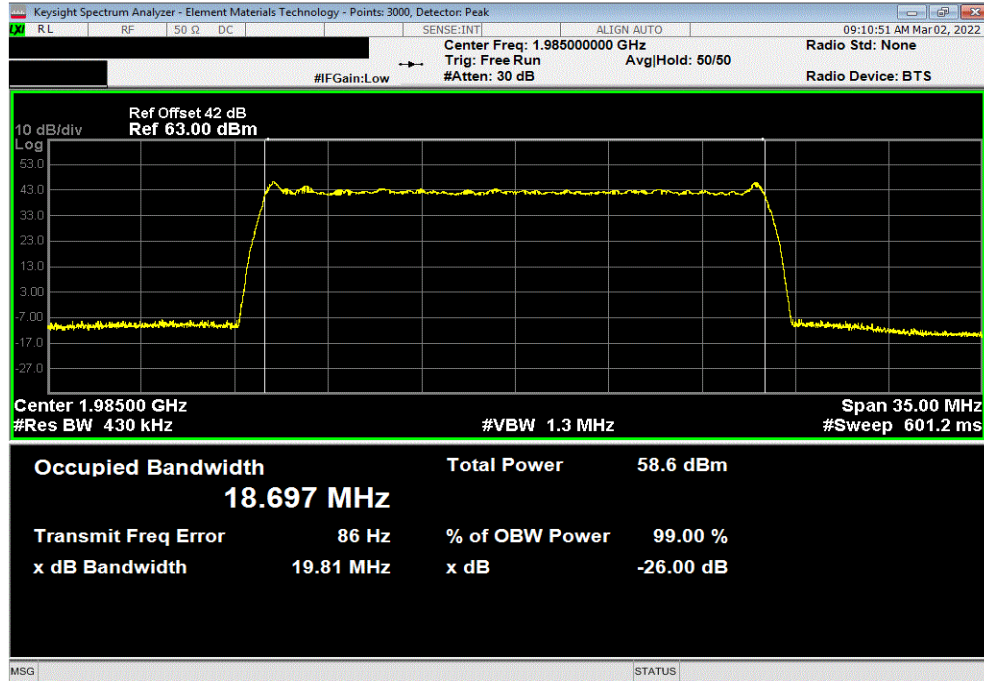


OCCUPIED BANDWIDTH - GUARD BAND



TbTx 2021.12.14.1 XMill 2022.02.07.0

Band 25, 1930 MHz - 1995 MHz, LTE Narrow Band IoT Guard Band, Port 1, 20 MHz Bandwidth, E-TM1.1 with N-TM, High Channel, 1985 MHz							
		Value		Value		Limit	
		99% (MHz)		26dB (MHz)			
		18.7		19.8		Within Band	
						Pass	



OCCUPIED BANDWIDTH - GUARD BAND



TstTx 2021.12.14.1 XMit 2022.02.07.0

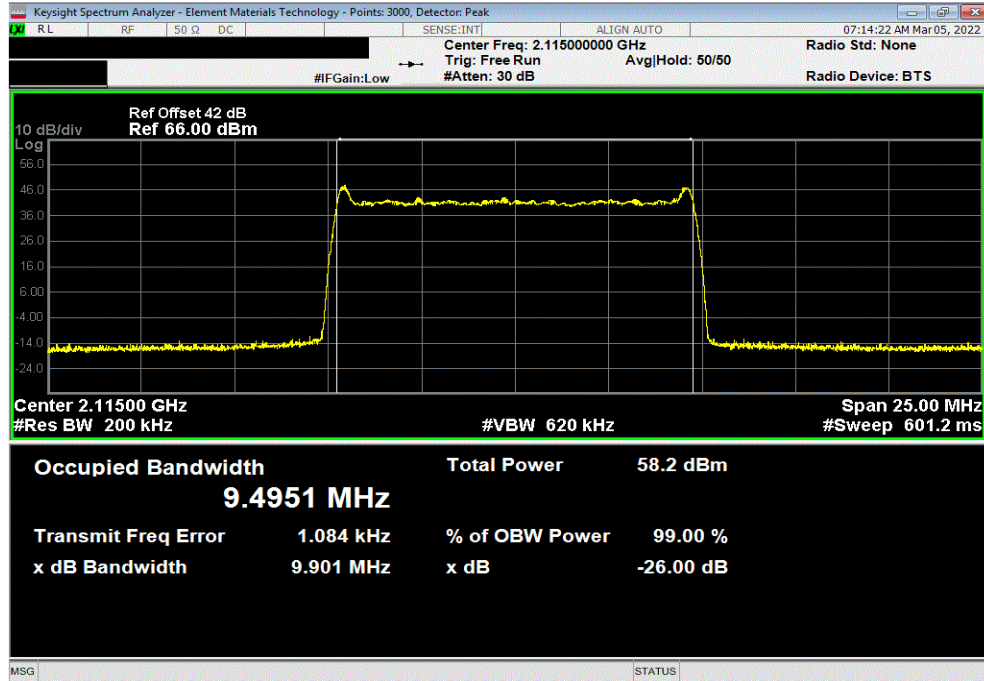
EUT: AHFII Remote Radio Head		Work Order: NOKI0037	
Serial Number: YK214000036		Date: 28-Feb-22	
Customer: Nokia Solutions and Networks		Temperature: 22.6 °C	
Attendees: David Le, John Rattanavong		Humidity: 23.7% RH	
Project: None		Barometric Pres.: 1026 mbar	
Tested by: Mark Baytan	Power: 54 VDC	Job Site: TX09	
TEST SPECIFICATIONS			
FCC 24E:2022		Test Method	
RSS-139 Issue 3:2015		ANSI C63.26:2015	
RSS-170 Issue 3:2015		RSS-139 Issue 3:2015	
RSS-170 Issue 3:2015		RSS-170 Issue 3:2015	
COMMENTS			
All measurement path losses accounted for in the reference level offset including any attenuators, filters, and DC blocks. Band 66 carriers enabled at maximum power is 80 watts/carrier.			
DEVIATIONS FROM TEST STANDARD			
None			
Configuration #	2	Signature 	
		Value 99% (MHz)	Value 26dB (MHz)
		Limit	Result
Band 66, 2110 MHz - 2200 MHz, LTE Narrow Band IoT Guard Band			
Port 1			
10 MHz Bandwidth			
E-TM1.1 with N-TM			
	Low Channel, 2115 MHz	9.50	9.90
	Mid Channel, 2155 MHz	9.49	9.90
	High Channel, 2195 MHz	9.50	9.90
15 MHz Bandwidth			
E-TM1.1 with N-TM			
	Low Channel, 2117.5 MHz	14.1	14.8
	Mid Channel, 2155 MHz	14.1	14.8
	High Channel, 2192.5 MHz	14.1	14.8
20 MHz Bandwidth			
E-TM1.1 with N-TM			
	Low Channel, 2120 MHz	18.7	19.8
	Mid Channel, 2155 MHz	18.7	19.8
	High Channel, 2190 MHz	18.7	19.8

OCCUPIED BANDWIDTH - GUARD BAND

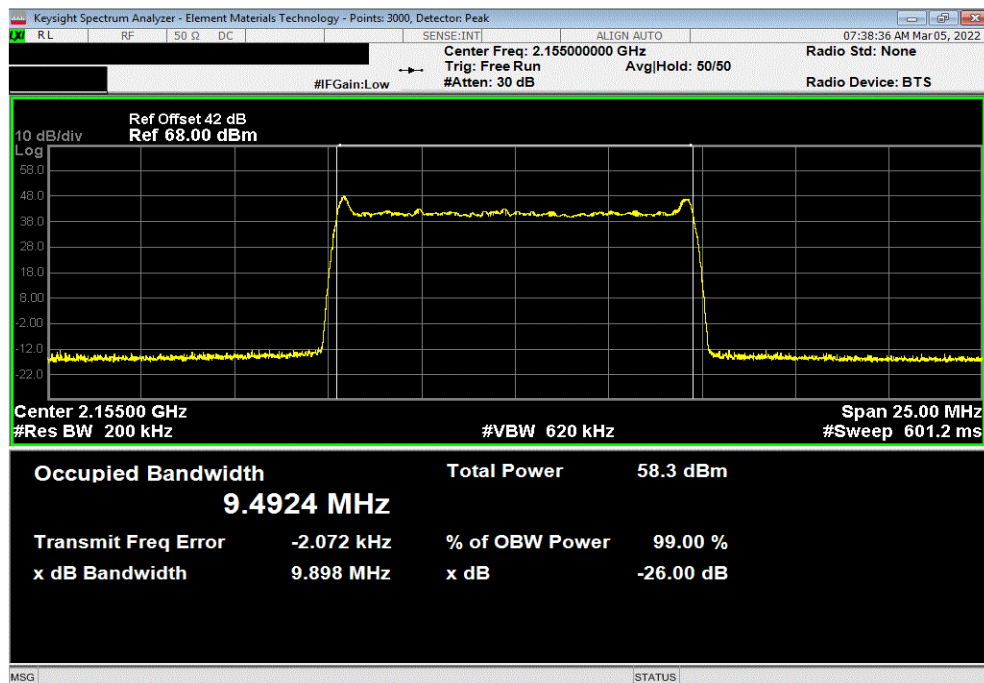


TbTx 2021.12.14.1 XMI 2022.02.07.0

Band 66, 2110 MHz - 2200 MHz, LTE Narrow Band IoT Guard Band, Port 1, 10 MHz Bandwidth, E-TM1.1 with N-TM, Low Channel, 2115 MHz							
			Value	Value			
			99% (MHz)	26dB (MHz)	Limit		Result
			9.50	9.90	Within Band		Pass



Band 66, 2110 MHz - 2200 MHz, LTE Narrow Band IoT Guard Band, Port 1, 10 MHz Bandwidth, E-TM1.1 with N-TM, Mid Channel, 2155 MHz							
			Value	Value			
			99% (MHz)	26dB (MHz)	Limit		Result
			9.49	9.90	Within Band		Pass

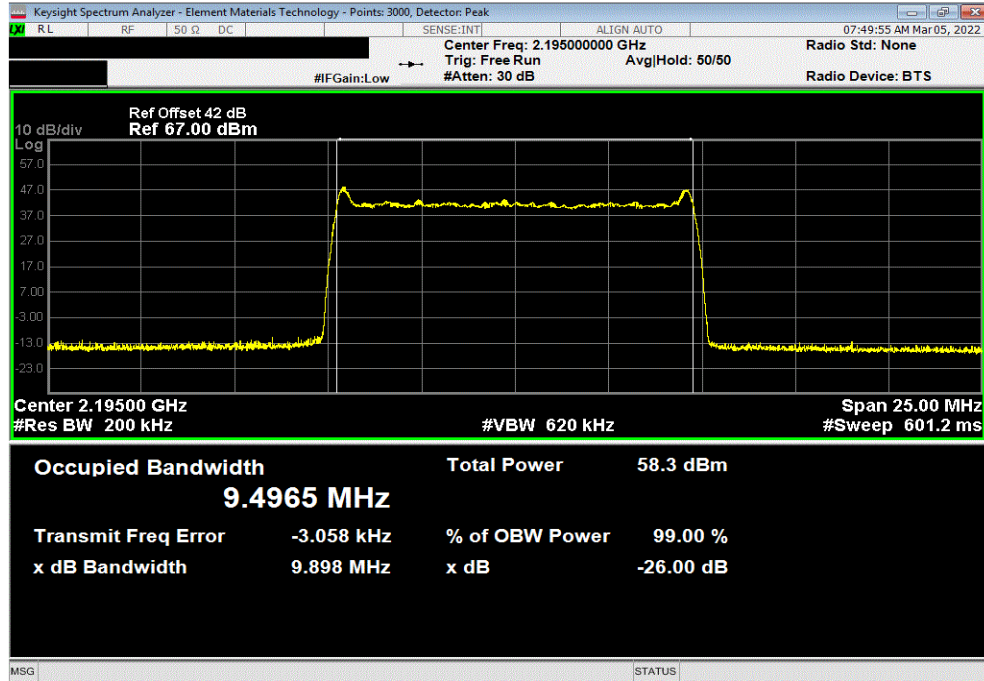


OCCUPIED BANDWIDTH - GUARD BAND

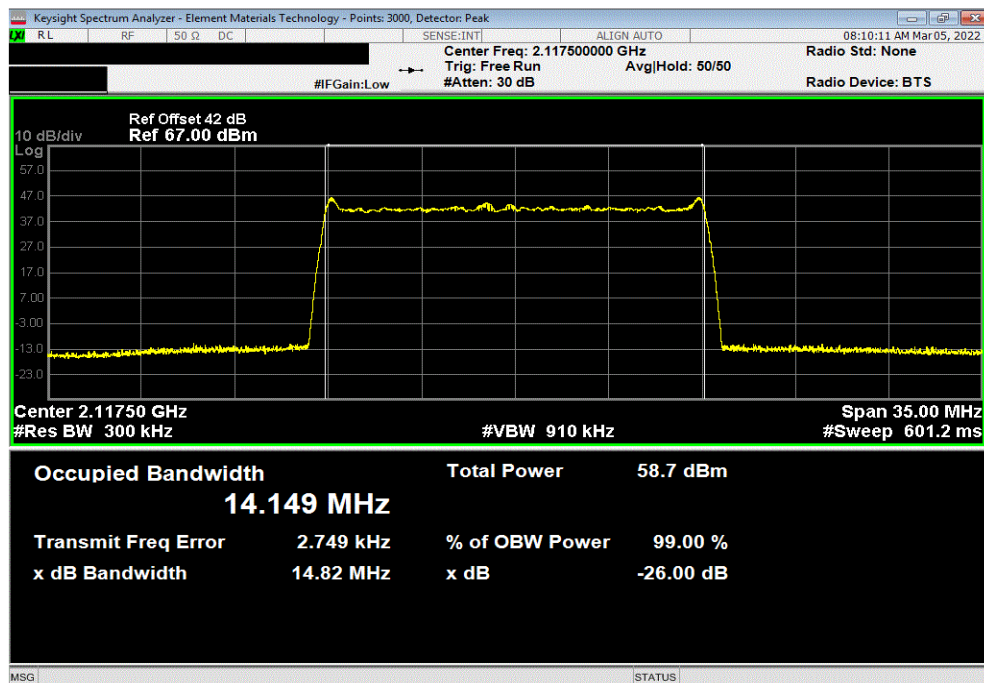


TbTx 2021.12.14.1 XbTx 2022.02.07.0

Band 66, 2110 MHz - 2200 MHz, LTE Narrow Band IoT Guard Band, Port 1, 10 MHz Bandwidth, E-TM1.1 with N-TM, High Channel, 2195 MHz							
			Value	Value	Limit	Result	
			99% (MHz)	26dB (MHz)			
			9.50	9.90	Within Band	Pass	



Band 66, 2110 MHz - 2200 MHz, LTE Narrow Band IoT Guard Band, Port 1, 15 MHz Bandwidth, E-TM1.1 with N-TM, Low Channel, 2117.5 MHz							
			Value	Value	Limit	Result	
			99% (MHz)	26dB (MHz)			
			14.1	14.8	Within Band	Pass	



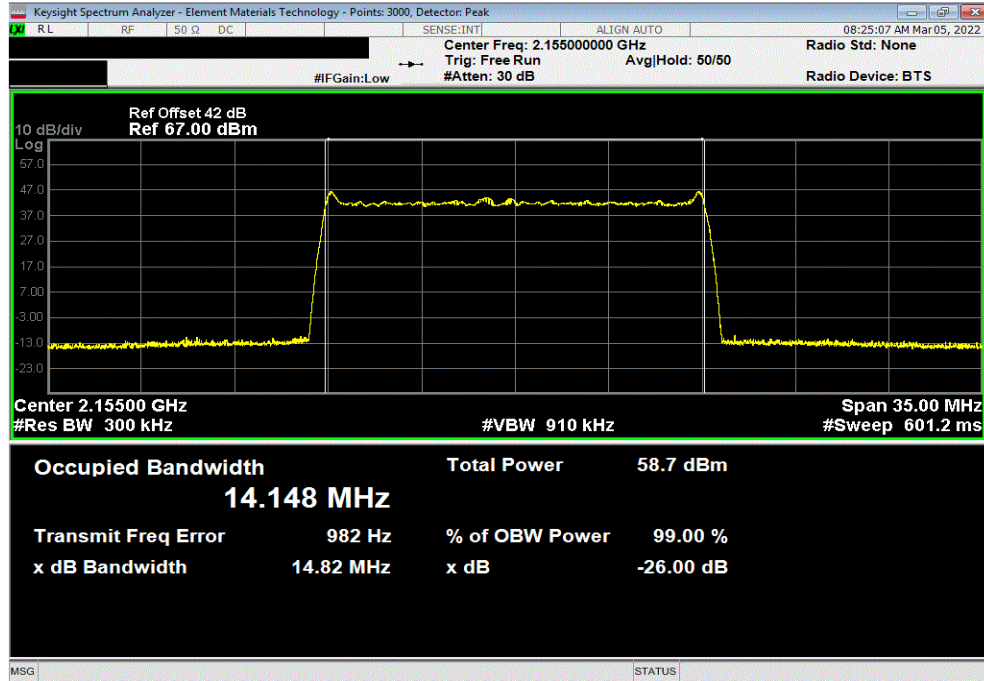
OCCUPIED BANDWIDTH - GUARD BAND



TbTx 2021.12.14.1 XMit 2022.02.07.0

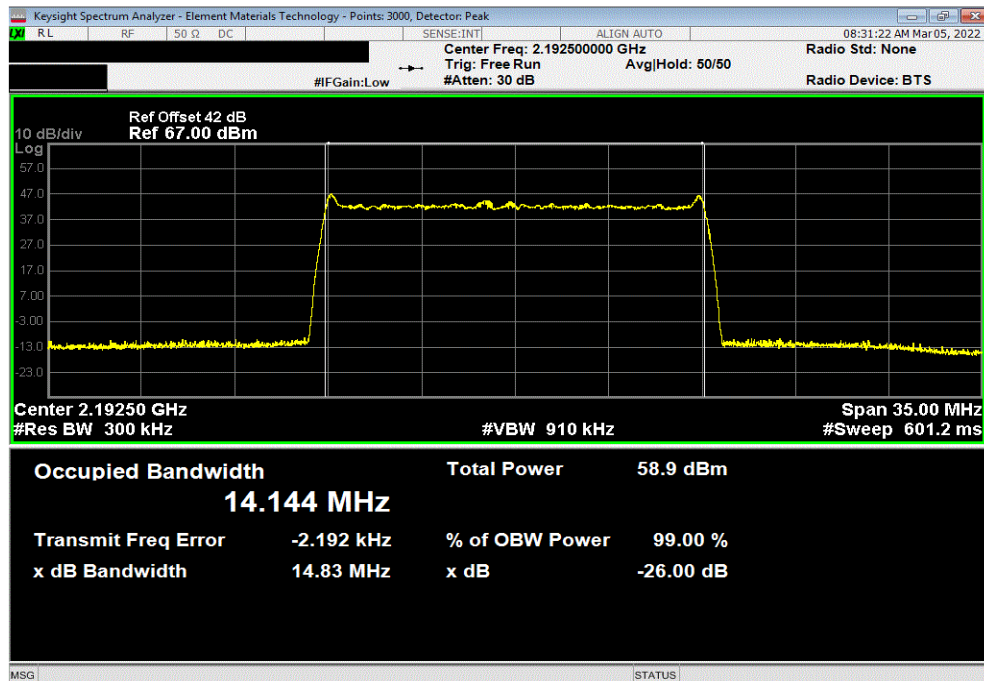
Band 66, 2110 MHz - 2200 MHz, LTE Narrow Band IoT Guard Band, Port 1, 15 MHz Bandwidth, E-TM1.1 with N-TM, Mid Channel, 2155 MHz.

	Value	Value	Limit	Result
	99% (MHz)	26dB (MHz)		
	14.1	14.8	Within Band	Pass



Band 66, 2110 MHz - 2200 MHz, LTE Narrow Band IoT Guard Band, Port 1, 15 MHz Bandwidth, E-TM1.1 with N-TM, High Channel, 2192.5 MHz

	Value	Value	Limit	Result
	99% (MHz)	26dB (MHz)		
	14.1	14.8	Within Band	Pass

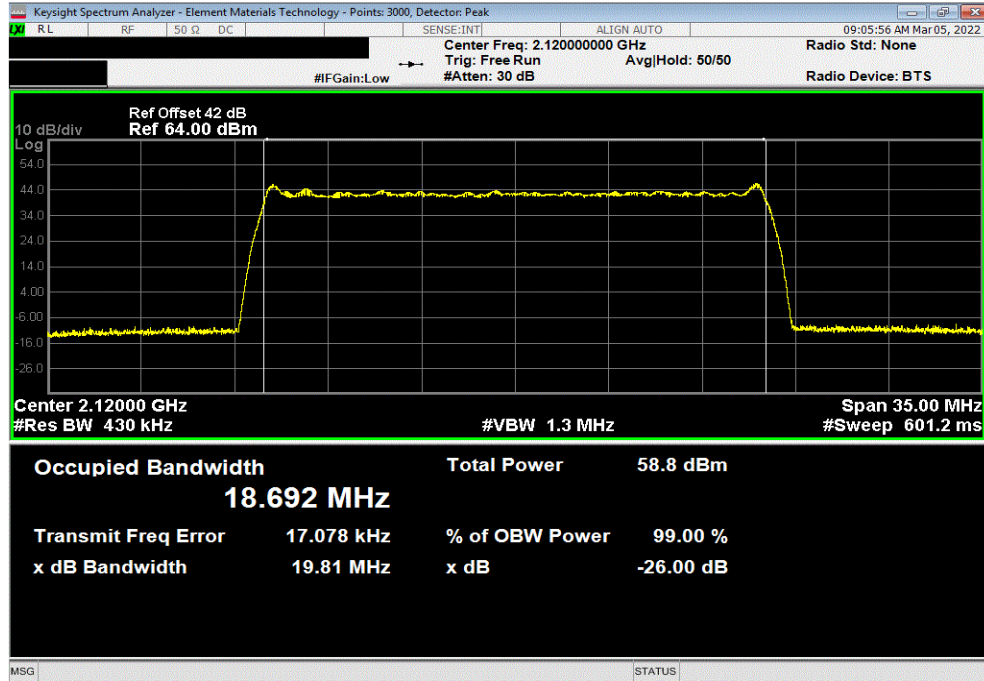


OCCUPIED BANDWIDTH - GUARD BAND

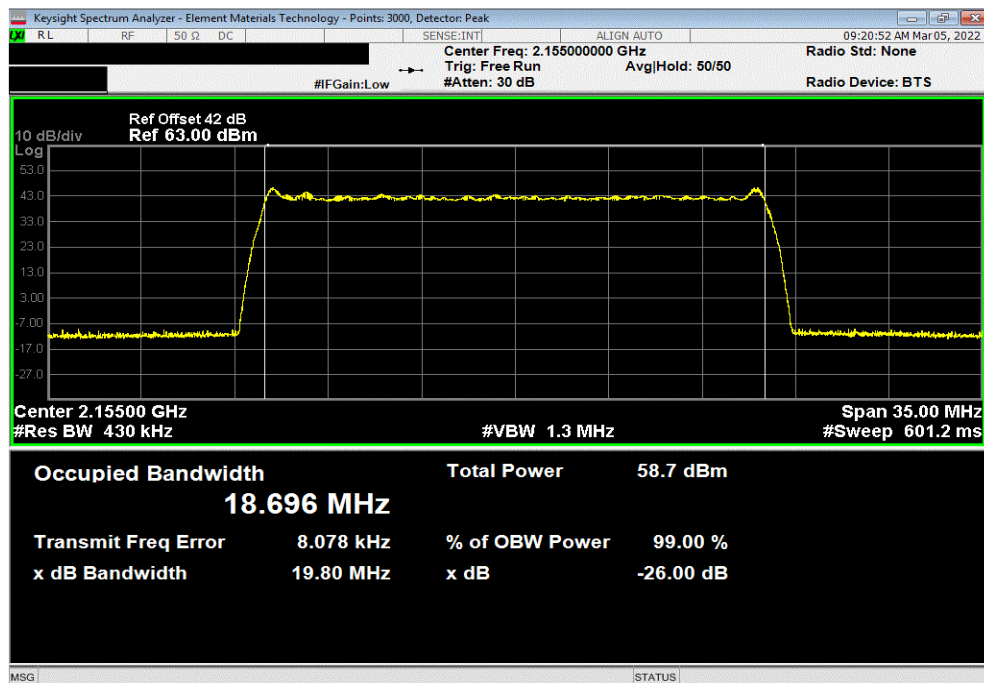


TbTx 2021.12.14.1 XMit 2022.02.07.0

Band 66, 2110 MHz - 2200 MHz, LTE Narrow Band IoT Guard Band, Port 1, 20 MHz Bandwidth, E-TM1.1 with N-TM, Low Channel, 2120 MHz							
			Value	Value	Limit	Result	
			99% (MHz)	26dB (MHz)			
			18.7	19.8	Within Band	Pass	



Band 66, 2110 MHz - 2200 MHz, LTE Narrow Band IoT Guard Band, Port 1, 20 MHz Bandwidth, E-TM1.1 with N-TM, Mid Channel, 2155 MHz..							
			Value	Value	Limit	Result	
			99% (MHz)	26dB (MHz)			
			18.7	19.8	Within Band	Pass	



OCCUPIED BANDWIDTH - GUARD BAND



TbTx 2021.12.14.1 XMit 2022.02.07.0

Band 66, 2110 MHz - 2200 MHz, LTE Narrow Band IoT Guard Band, Port 1, 20 MHz Bandwidth, E-TM1.1 with N-TM, High Channel, 2190 MHz						
	Value	Value	Limit	Result		
	99% (MHz)	26dB (MHz)				
	18.7	19.8	Within Band	Pass		

