



No.I20Z60709-WMD01



TEST REPORT

No.I20Z60709-WMD01

for

Ericsson AB Radio 8863 B41 KRC 161 857/1

Remote Radio Unit

FCC ID: TA8AKRC161857-1

In accordance with FCC CFR 47 Part 27

Issued Date: 2020-08-04

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No.I20Z60709-WMD01

REPORT HISTORY

Report Number	Revision	Description	Issue Date
I20Z60709-WMD01	Rev.0	1 st edition	2020-08-04

Note: the latest revision of the test report supersedes all previous version.

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1. Test Laboratory

1.1. Introduction & Accreditation

Telecommunication Technology Labs, CAICT is an ISO/IEC 17025:2005 accredited test laboratory under NATIONAL VOLUNTARY LABORATORY ACCREDITATION PROGRAM (NVLAP) with lab code 600118-0, and is also an FCC accredited test laboratory (CN5017), and ISED accredited test laboratory (ISED#: 24849). The detail accreditation scope can be found on NVLAP website.

1.2. Testing Location

Location 1: CTTL(huayuan North Road)

Address: No. 52, Huayuan North Road, Haidian District, Beijing,
P. R. China 100191

Location 2: CTTL(BDA)

Address: No.18A, Kangding Street, Beijing Economic-Technology
Development Area, Beijing, P. R. China 100176

1.3. Project date

Testing Start Date: 2020-07-17

Testing End Date: 2020-07-31

1.4. Signature

Dong Yuan**(Prepared this test report)**

Zhou Yu**(Reviewed this test report)**

Liu Baodian**(Approved this test report)**

2. Client Information

2.1. Applicant Information

Company Name: Ericsson (China) Communications Company Ltd.
Address /Post: Ericsson Tower, No.5 Lize East Street, Chaoyang District, Beijing
100102, P.R.China
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Email: jieying.zhu@ericsson.com
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2.2. Manufacturer Information

Company Name: Ericsson AB
Address /Post: Isafjordsgatan 10, 164 80 Stockholm
Sweden
Contact: /
Email: /
Telephone: /

3. Equipment Under Test (EUT)

3.1. About EUT

Description	Remote Radio Unit
Product Name	Radio 8863 B41
Product Number	KRC 161 857/1
FCC ID	TA8AKRC161857-1
Antenna	N/A
Output power	Maximum 46.02dBm (40W) per port for all modes. Maximum 30dBm/MHz (1W/MHz) per port for all modes.
Power source	-48V DC
Serial Number	D82A189057
Hardware Version	R1E
Software Version	Radio SW: CXP9017316%14_R4A784
Frequency range	RX: 2496MHz-2690MHz, TX: 2496MHz-2690MHz
Number of Antenna ports	8 TX / RX
Maximum RF bandwidth (IBW)	194MHz
Supported Channel Bandwidth	LTE: 10 MHz, 15 MHz, 20MHz NR: 10 MHz, 15 MHz, 20 MHz, 30 MHz, 40 MHz, 50 MHz, 60 MHz, 70 MHz, 80 MHz, 90MHz, 100MHz
Maximum Number of supported carriers per port	SR NR: up to 3 carriers SR LTE: up to 6 carriers LTE+NR mix: up to 6 carriers
Supported modulations	LTE and NR: QPSK, 16QAM, 64QAM and 256QAM
Date of receipt	2020-07-17

3.2. General Description

The Equipment Under Test (EUT) Radio 8863 B41 is an Ericsson Radio Unit working in the 2496-2690 MHz band which provides communication connections to 2496-2690 MHz network. The Radio 8863 B41 operates from a -48V DC supply.

The EUT includes 8 TX/RX ports and it can be configured to transmit in MIMO mode for LTE and NR carriers, and MIMO mode was used for measurements as the worst configuration. The complete testing was performed with the EUT transmitting at maximum RF power unless otherwise stated.

A full technical description can be found in the Manufacturer's documentation.

3.3. Configuration Description

The following settings were used to represent all traffic scenarios. The output power was measured on the bottom, middle and top channel of all applicable antenna ports. By measuring the output power of QPSK, 16QAM, 64QAM and 256QAM for all on one of the antenna ports, it was determined that QPSK was the worst case modulation scheme and was used for all testing.

Complete testing was carried out on the worst case antenna port which was established as being the highest output power from the applicable measured ports on worst case modulation scheme. This antenna port was Port H for all mode.

The settings below were used for all measurements unless otherwise noted:

LTE

Configuration	Carrier	Carrier Bandwidth	Carrier Frequency Configuration (MHz)		
			Bottom	Middle	Top
LTE-MIMO-1C	1 Carrier	10.0MHz	2501.0	2593.0	2685.0
		15.0MHz	2503.5	2593.0	2682.5
		20.0MHz	2506.0	2593.0	2680.0
LTE-MIMO-2C	2 Carriers	10.0MHz	-	2501+2685	-
		15.0MHz	-	2503.5+2682.5	-
		20.0MHz	-	2506+2680	-
LTE-MIMO-6C	6 Carriers	10.0MHz	-	2501+2511+2521+2665+2675+2685	-
		15.0MHz	-	2503.5+2518.5+2533.5+2652.5+2667.5+2682.5	-
		20.0MHz	-	2506+2526+2546+2640+2660+2680	-
LTE-MIMO-1C-BE	1 Carrier	10.0MHz	2501.0	N/A	2685.0
		15.0MHz	2503.5	N/A	2682.5
		20.0MHz	2506.0	N/A	2680.0
LTE-MIMO-2C-BE	2 Carriers	10.0MHz	2501+2511	N/A	2675+2685
		15.0MHz	2503.5+2518.5	N/A	2667.5+2682.5
		20.0MHz	2506+2526	N/A	2660+2680

NR

Configuration	Carrier	Carrier Bandwidth	Carrier Frequency Configuration (MHz)		
			Bottom	Middle	Top
NR-MIMO-1C	1 Carrier	10.0MHz	2501.01	2593.02	2685.00
		15.0MHz	2503.50	2593.02	2682.51
		20.0MHz	2506.02	2593.02	2680.02
		30.0MHz	2511.00	2593.02	2675.01
		40.0MHz	2516.01	2593.02	2670.00
		50.0MHz	2521.02	2593.02	2665.02
		60.0MHz	2526.00	2593.02	2660.01
		70.0MHz	2531.01	2593.02	2655.00
		80.0MHz	2536.02	2593.02	2650.02
		90.0MHz	2541.00	2593.02	2645.01
		100.0MHz	2546.01	2593.02	2640.00
NR-MIMO-2C	2 Carriers	10.0MHz	-	2501.01+2685	-
		15.0MHz	-	2503.5+2682.51	-
		20.0MHz	-	2506.02+2680.02	-
		30.0MHz	-	2511+2675.01	-
		40.0MHz	-	2516.01+2670	-
		50.0MHz	-	2521.02+2665.02	-
		60.0MHz	-	2526+2660.01	-
		70.0MHz	-	2531.01+2655	-
		80.0MHz	-	2536.02+2650.02	-
		90.0MHz	-	2541+2645.01	-
NR-MIMO-3C	3 Carriers	10.0MHz	-	2501.01+2511+2685	-
		15.0MHz	-	2503.5+2518.5+2682.51	-
		20.0MHz	-	2506.02+2526.03+2680.02	-
		30.0MHz	-	2511+2541+2675.01	-
		40.0MHz	-	2516.01+2556.03+2670	-
		50.0MHz	-	2521.02+2571.03+2665.02	-
NR-MIMO-1C-BE	1 Carrier	10.0MHz	2501.01	N/A	2685.00
		15.0MHz	2503.50	N/A	2682.51
		20.0MHz	2506.02	N/A	2680.02
		30.0MHz	2511.00	N/A	2675.01
		40.0MHz	2516.01	N/A	2670.00
		50.0MHz	2521.02	N/A	2665.02
		60.0MHz	2526.00	N/A	2660.01
		70.0MHz	2531.01	N/A	2655.00
		80.0MHz	2536.02	N/A	2650.02

Configuration	Carrier	Carrier Bandwidth	Carrier Frequency Configuration (MHz)		
			Bottom	Middle	Top
NR-MIMO-1C-BE	1 Carrier	90.0MHz	2541.00	N/A	2645.01
		100.0MHz	2546.01	N/A	2640.00
NR-MIMO-2C-BE	2 Carriers	10.0MHz	2501.01+2511	N/A	2675.01+2685
		15.0MHz	2503.5+2518.5	N/A	2667.51+2682.51
		20.0MHz	2506.02+2526.03	N/A	2660.01+2680.02
		30.0MHz	2511+2541	N/A	2645.01+2675.01
		40.0MHz	2516.01+2556.03	N/A	2629.8+2670
		50.0MHz	2521.02+2571.03	N/A	2615.01+2665.02
		60.0MHz	2526+2586	N/A	2600.01+2660.01
		70.0MHz	2531.01+2601	N/A	2585.01+2655
		80.0MHz	2536.02+2616.03	N/A	2570.01+2650.02
		90.0MHz	2541+2631	N/A	2555.01+2645.01

LTE+NR

Configuration	Carrier	Carrier Bandwidth	Carrier Frequency Configuration (MHz)		
			Bottom	Middle	Top
LTE+NR-MIMO-MC-1	1L+1NR	1L 10MHz+1NR 10MHz	-	(NR)2501.01+(L)2685	-
		1L 20MHz+1NR 100MHz	-	(NR)2546.01+(L)2680	-
		2L 10MHz+1NR 10MHz	-	(NR)2501.01+(L)2675+2685	-
LTE+NR-MIMO-MC-2	2L+1NR	2L 20MHz+1NR 100MHz	-	(NR)2546.01+(L)2660+2680	-
		3L 10MHz+3NR 10MHz	-	(NR)2501.01+2511.03+2521.05+(L)2665+2675+2685	-
		1L 10MHz+1NR 10MHz	(L)2501+(NR)2511	N/A	(NR)2675.01+(L)2685
LTE+NR-MIMO-MC-BE-1	1L+1NR	1L 20MHz+1NR 20MHz	(L)2506+(NR)2526	N/A	(NR)2660.01+(L)2680

Configuration	Carrier	Carrier Bandwidth	Carrier Frequency Configuration (MHz)		
			Bottom	Middle	Top
LTE+NR-MIMO-MC-BE-2	2L+1NR	2L	(L)2501+2511+(NR)2521.02	N/A	(NR)2665.02+(L)2675+2685
		10MHz+1NR			
		10MHz	(L)2501+2511+(NR)2526	N/A	(NR)2660.01+(L)2675+2685
		20MHz			

N/A – Not Applicable

4. Reference Documents

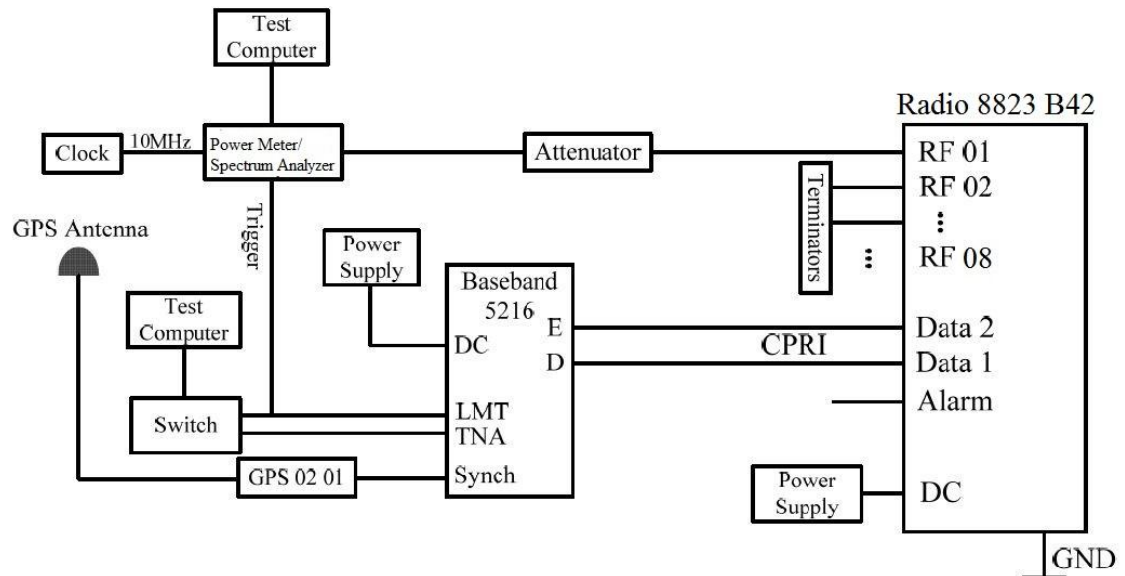
4.1. Reference Documents for testing

The following documents listed in this section are referred for testing.

Reference	Title	Version
FCC Part 27	MISCELLANEOUS WIRELESS COMMUNICATIONS SERVICES	10-1-19 Edition
FCC Part 2	FREQUENCY ALLOCATIONS AND RADIO TREATY MATTERS; GENERAL RULES AND REGULATIONS	10-1-19 Edition
ANSI 63.26	American National Standard for Compliance Testing of Transmitters Used in Licensed Radio Services	2015
ANSI/TIA-603-E	Land Mobile FM or PM Communications Equipment Measurement and Performance Standards	2016
KDB 971168 D01	MEASUREMENT GUIDANCE FOR CERTIFICATION OF LICENSED DIGITAL TRANSMITTERS	v03r01
KDB 662911 D01	Emissions Testing of Transmitters with Multiple Outputs in the Same Band	v02r01

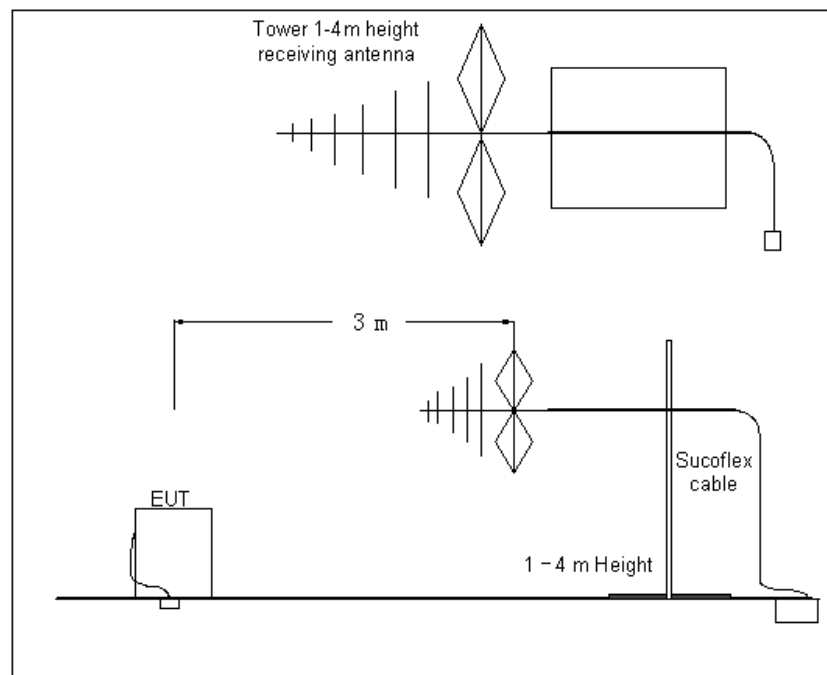
5. TEST SETUP

Test Setup, Conducted Measurement:



No.	Auxiliary Equipment	Model Type	Version
1	Computer	HP EliteBook 8540w	-
2	Baseband 5216	KDU 137 925/3	R7C
3	Power supply unit	PCR2000M	-
4	Terminators	WTF50-6G-A	-
5	Attenuator	Aeroflex / Weinschel	-

Test Setup, Radiated Measurement:



6. LABORATORY ENVIRONMENT

Control room / conducted chamber did not exceed following limits along the EMC testing:

Temperature	Min. = 15 °C, Max. = 35 °C
Relative humidity	Min. = 20 %, Max. = 80 %
Shielding effectiveness	> 110 dB
Electrical insulation	> 2 MΩ
Ground system resistance	< 0.5 Ω

Semi-anechoic chamber(10 meters×6.7 meters×6.15 meters) did not exceed following limits along the EMC testing:

Temperature	Min. = 15 °C, Max. = 30 °C
Relative humidity	Min. = 35 %, Max. = 60 %
Shielding effectiveness	> 100 dB
Electrical insulation	> 2 MΩ
Ground system resistance	< 0.5 Ω
Normalised site attenuation (NSA)	< ± 3.5 dB, 3 m distance
Site voltage standing-wave ratio (S_{VSWR})	Between 0 and 6 dB, from 1GHz to 18GHz
Uniformity of field strength	Between 0 and 6 dB, from 80 to 3000 MHz

7. SUMMARY OF TEST RESULTS

Items	Test Name	Clause in FCC rules	Verdict
1	Maximum Output Power and Peak to Average Power Ratio - EIRP calculation	27.50(h), 2.1046	Pass
2	Occupied Bandwidth	27.53(m), 2.1049	Pass
3	Spurious Emissions at Band Edge	27.53(m), 2.1051	Pass
4	Conducted Spurious Emission	27.53(m), 2.1051	Pass
5	Radiated Spurious Emission	27.53(m), 2.1053	Pass
6	Frequency Stability	27.54, 2.1055	Pass

8. Test Equipment Utilized

NO.	Description	TYPE	series number	MANUFACTURE	CAL DUE DATE
1	AC Power Supply	PAS20-18	UH000694	Kikusui	2021-08-01
2	40dB Attenuator	66-40-33	CD4019	Aeroflex / Weinschel	-
3	40dB Attenuator	TSG150R-4-40N11	1511040001	Nanjing Jiexi Technologies	-
4	Spectrum Analyzer	N9030	MY57142378	Keysight	2021-02-25
5	Climate Chamber	KTHG-415TBS	7353K	QINGSHENG	2020-08-07
6	Antenna	3117	00139065	ETS	2020-11-10
7	Antenna	VULB9163	9163-514	Schwarzbeck	2021-02-24
8	Test Receiver	ESU26	100376	R&S	2020-10-30
9	Test Receiver	FSV40	101047	R&S	2021-06-15
10	Antenna	3116	2661	ETS	2020-10-08
11	Chamber	FACT-3	Ct000332-1074	ETS	2021-07-19

9. MEASUREMENT UNCERTAINTY

For a 95% confidence level, the measurement uncertainties for defined systems are:

Test Discipline	Measurement Uncertainty
Conducted Maximum Peak Output Power	0.5dB
Occupied Bandwidth	1.1Hz
Conducted Spurious Emissions	2.3dB
Band Edge	2.3dB
Radiated Spurious Emissions	5.4dB
Frequency Stability	$<\pm 1 \times 10^{-7}$

ANNEX A: MEASUREMENT RESULTS

A.1 Maximum Output Power and Peak to Average Power Ratio - EIRP calculation

A.1.1 Reference

FCC CFR 47 Part 2, Clause 2.1046

FCC CFR 47 Part 27, Clause 27.50(h)

A.1.2 Method of Measurements

During the process of testing, the EUT was configured to transmit on maximum power and proper modulation. The transmitter power shall be measured in terms of a root-mean-square (RMS) average value. In case of the EUT was configured to MIMO mode, since the EUT transmits on all antennas simultaneously in the same frequency range, using the Measure-and-Sum approach, the output power at all antennas were tested, and the total output power were then summed mathematically in linear power units according to FCC KDB 662911 D01.

A peak to average ratio measurement is performed at the conducted ports of the EUT for single carrier for single RAT mode. The spectrum analyzers Complementary Cumulative Distribution Function (CCDF) was used and 0.1% probability value recorded.

A.1.3 Limit

Output Power:

$$\text{EIRP} \leq 33 \text{ dBW} + 10\log(X/Y) \text{ dBW}$$

X is the actual channel width

Y is 5.5 or 6 MHz

Peak to Average Ratio: $\leq 13 \text{ dB}$

A.1.4 Measurement result

Configuration LTE-MIMO-1C

Maximum Output Power 40dBm per port

Antenna	Modulation/ Carrier Bandwidth (MHz)	Output Power / Peak to Average Ratio (PAR)								
		Channel position B			Channel position M			Channel position T		
		POWER (dBm)	POWER (dBm/MHz)	PAR (db)	POWER (dBm)	POWER (dBm/MHz)	PAR (db)	POWER (dBm)	POWER (dBm/MHz)	PAR (db)
A	QPSK/10.0	39.93	32.08	8.26	39.87	31.98	8.26	39.62	31.96	8.30
B		40.18	32.21	8.42	40.19	32.26	8.45	40.03	31.94	8.43
C		39.86	31.82	8.25	39.71	31.85	8.29	39.70	31.98	8.31
D		40.22	31.82	8.45	40.15	31.68	8.45	40.12	31.83	8.45
E		40.02	31.69	8.44	39.85	31.58	8.42	40.00	31.60	8.41
F		40.19	31.88	8.48	40.15	31.92	8.47	40.14	31.75	8.52
G		39.85	31.69	8.61	39.89	31.60	8.52	39.70	31.29	8.54
H		40.34	31.96	8.29	40.41	31.98	8.29	40.26	32.07	8.26
Total		49.11	40.93	-	49.06	40.89	-	48.98	40.84	-

Maximum Output Power 41.76dBm per port

Antenna	Modulation/ Carrier Bandwidth (MHz)	Output Power / Peak to Average Ratio (PAR)								
		Channel position B			Channel position M			Channel position T		
		POWER (dBm)	POWER (dBm/MHz)	PAR (db)	POWER (dBm)	POWER (dBm/MHz)	PAR (db)	POWER (dBm)	POWER (dBm/MHz)	PAR (db)
A	QPSK/15.0	41.64	31.69	8.41	41.65	31.71	8.41	41.58	31.39	8.41
B		41.80	32.18	8.41	41.91	32.25	8.42	41.80	32.09	8.41
C		41.60	31.19	8.42	41.51	31.10	8.41	41.50	31.20	8.40
D		41.96	31.97	8.41	41.95	32.08	8.42	41.93	32.49	8.38
E		41.74	31.77	8.46	41.46	31.51	8.46	41.66	31.53	8.43
F		41.95	31.85	8.31	41.93	31.99	8.36	41.98	31.75	8.37
G		41.61	31.80	8.46	41.62	31.86	8.39	41.52	31.95	8.36
H		41.96	32.12	8.38	42.05	32.26	8.38	41.89	32.10	8.41
Total		50.82	40.86	-	50.80	40.89	-	50.77	40.86	-

Maximum Output Power 43.01dBm per port

Antenna	Modulation/ Carrier Bandwidth (MHz)	Output Power / Peak to Average Ratio (PAR)								
		Channel position B			Channel position M			Channel position T		
		POWER (dBm)	POWER (dBm/MHz)	PAR (db)	POWER (dBm)	POWER (dBm/MHz)	PAR (db)	POWER (dBm)	POWER (dBm/MHz)	PAR (db)
A	QPSK/20.0	42.70	31.88	8.28	42.97	31.95	8.26	42.67	31.74	8.26
B		42.80	32.10	8.26	43.16	32.26	8.27	42.86	32.14	8.26
C		42.46	31.47	8.29	42.68	31.64	8.26	42.43	31.19	8.25
D		42.87	31.77	8.27	43.22	32.37	8.26	42.85	32.27	8.25
E		42.82	31.60	8.15	42.79	31.63	8.20	42.76	31.56	8.23
F		43.20	31.87	8.29	43.17	32.06	8.34	43.23	31.78	8.35
G		42.64	31.62	8.29	42.92	31.83	8.27	42.56	31.55	8.29
H		43.02	31.72	8.32	43.40	32.34	8.41	43.04	32.18	8.43
Total		51.85	40.79	-	52.08	41.05	-	51.84	40.85	-

Configuration LTE-MIMO-2C

Maximum Output Power 43.01dBm per port

Antenna	Modulation/ Carrier Bandwidth (MHz)	Output Power / Peak to Average Ratio (PAR)								
		Channel position B			Channel position M			Channel position T		
		POWER (dBm)	POWER (dBm/MHz)	PAR (db)	POWER (dBm)	POWER (dBm/MHz)	PAR (db)	POWER (dBm)	POWER (dBm/MHz)	PAR (db)
A	QPSK/10.0	-	-	-	42.30	31.61	-	-	-	-
B		-	-	-	42.21	31.18	-	-	-	-
C		-	-	-	42.06	30.87	-	-	-	-
D		-	-	-	42.42	31.26	-	-	-	-
E		-	-	-	42.58	30.89	-	-	-	-
F		-	-	-	42.64	31.25	-	-	-	-
G		-	-	-	42.45	31.23	-	-	-	-
H		-	-	-	42.84	31.45	-	-	-	-
Total		-	-	-	51.47	40.25	-	-	-	-

Maximum Output Power 44.77dBm per port

Antenna	Modulation/ Carrier Bandwidth (MHz)	Output Power / Peak to Average Ratio (PAR)								
		Channel position B			Channel position M			Channel position T		
		POWER (dBm)	POWER (dBm/MHz)	PAR (db)	POWER (dBm)	POWER (dBm/MHz)	PAR (db)	POWER (dBm)	POWER (dBm/MHz)	PAR (db)
A	QPSK/15.0	-	-	-	44.15	33.21	-	-	-	-
B		-	-	-	44.05	32.99	-	-	-	-
C		-	-	-	44.04	32.51	-	-	-	-
D		-	-	-	44.32	32.84	-	-	-	-
E		-	-	-	44.32	30.95	-	-	-	-
F		-	-	-	44.27	31.30	-	-	-	-
G		-	-	-	44.15	30.98	-	-	-	-
H		-	-	-	44.73	31.37	-	-	-	-
Total		-	-	-	53.29	41.14	-	-	-	-

Maximum Output Power 46.02dBm per port

Antenna	Modulation/ Carrier Bandwidth (MHz)	Output Power / Peak to Average Ratio (PAR)								
		Channel position B			Channel position M			Channel position T		
		POWER (dBm)	POWER (dBm/MHz)	PAR (db)	POWER (dBm)	POWER (dBm/MHz)	PAR (db)	POWER (dBm)	POWER (dBm/MHz)	PAR (db)
A	QPSK/20.0	-	-	-	45.13	31.26	-	-	-	-
B		-	-	-	45.58	31.28	-	-	-	-
C		-	-	-	45.44	31.28	-	-	-	-
D		-	-	-	45.60	31.40	-	-	-	-
E		-	-	-	45.17	31.35	-	-	-	-
F		-	-	-	45.78	31.42	-	-	-	-
G		-	-	-	45.15	31.47	-	-	-	-
H		-	-	-	45.91	31.66	-	-	-	-
Total		-	-	-	54.51	40.42	-	-	-	-

Configuration LTE-MIMO-6C

Maximum Output Power 46.02dBm per port

Antenna	Modulation/ Carrier Bandwidth (MHz)	Output Power / Peak to Average Ratio (PAR)								
		Channel position B			Channel position M			Channel position T		
		POWER (dBm)	POWER (dBm/MHz)	PAR (db)	POWER (dBm)	POWER (dBm/MHz)	PAR (db)	POWER (dBm)	POWER (dBm/MHz)	PAR (db)
A	QPSK/10.0	-	-	-	45.22	29.67	-	-	-	-
B		-	-	-	45.51	30.19	-	-	-	-
C		-	-	-	45.23	29.64	-	-	-	-
D		-	-	-	45.70	30.18	-	-	-	-
E		-	-	-	45.55	29.93	-	-	-	-
F		-	-	-	45.77	29.91	-	-	-	-
G		-	-	-	45.30	29.73	-	-	-	-
H		-	-	-	45.73	29.87	-	-	-	-
Total		-	-	-	54.54	38.93	-	-	-	-

Maximum Output Power 46.02dBm per port

Antenna	Modulation/ Carrier Bandwidth (MHz)	Output Power / Peak to Average Ratio (PAR)								
		Channel position B			Channel position M			Channel position T		
		POWER (dBm)	POWER (dBm/MHz)	PAR (db)	POWER (dBm)	POWER (dBm/MHz)	PAR (db)	POWER (dBm)	POWER (dBm/MHz)	PAR (db)
A	QPSK/15.0	-	-	-	45.03	27.70	-	-	-	-
B		-	-	-	45.13	27.74	-	-	-	-
C		-	-	-	45.23	27.63	-	-	-	-
D		-	-	-	45.26	28.37	-	-	-	-
E		-	-	-	45.60	27.86	-	-	-	-
F		-	-	-	45.74	28.35	-	-	-	-
G		-	-	-	45.58	27.87	-	-	-	-
H		-	-	-	45.74	28.53	-	-	-	-
Total		-	-	-	54.45	37.05	-	-	-	-

Maximum Output Power 46.02dBm per port

Antenna	Modulation/ Carrier Bandwidth (MHz)	Output Power / Peak to Average Ratio (PAR)								
		Channel position B			Channel position M			Channel position T		
		POWER (dBm)	POWER (dBm/MHz)	PAR (db)	POWER (dBm)	POWER (dBm/MHz)	PAR (db)	POWER (dBm)	POWER (dBm/MHz)	PAR (db)
A	QPSK/20.0	-	-	-	45.54	27.08	-	-	-	-
B		-	-	-	45.79	27.09	-	-	-	-
C		-	-	-	45.55	26.96	-	-	-	-
D		-	-	-	45.85	27.08	-	-	-	-
E		-	-	-	45.60	27.12	-	-	-	-
F		-	-	-	45.68	27.09	-	-	-	-
G		-	-	-	45.53	27.20	-	-	-	-
H		-	-	-	45.80	27.35	-	-	-	-
Total		-	-	-	54.70	36.15	-	-	-	-

Configuration NR-MIMO-1C

Maximum Output Power 40dBm per port

Antenna	Modulation/ Carrier Bandwidth (MHz)	Output Power / Peak to Average Ratio (PAR)								
		Channel position B			Channel position M			Channel position T		
		POWER (dBm)	POWER (dBm/MHz)	PAR (db)	POWER (dBm)	POWER (dBm/MHz)	PAR (db)	POWER (dBm)	POWER (dBm/MHz)	PAR (db)
A	QPSK/10.0	39.79	32.26	8.67	39.73	32.15	8.68	39.62	32.11	8.70
B		39.91	31.75	8.65	40.06	32.21	8.66	39.85	31.66	8.71
C		39.91	32.20	8.68	39.73	31.99	8.69	39.73	32.08	8.71
D		40.21	31.97	8.67	40.28	31.99	8.68	40.12	31.97	8.71
E		40.01	32.19	8.66	39.66	32.10	8.69	39.96	32.19	8.72
F		40.06	31.69	8.69	40.15	31.84	8.69	40.04	32.02	8.72
G		39.85	32.13	8.68	39.75	32.14	8.71	39.75	32.01	8.69
H		40.25	31.92	8.67	40.27	31.97	8.70	40.18	31.80	8.71
Total		49.03	41.05	-	48.99	41.08	-	48.94	41.01	-

Maximum Output Power 41.76dBm per port

Antenna	Modulation/ Carrier Bandwidth (MHz)	Output Power / Peak to Average Ratio (PAR)								
		Channel position B			Channel position M			Channel position T		
		POWER (dBm)	POWER (dBm/MHz)	PAR (db)	POWER (dBm)	POWER (dBm/MHz)	PAR (db)	POWER (dBm)	POWER (dBm/MHz)	PAR (db)
A	QPSK/15.0	41.58	31.63	8.70	41.60	31.66	8.70	41.45	31.55	8.64
B		41.82	31.55	8.68	41.85	31.60	8.67	41.81	31.39	8.64
C		41.76	31.61	8.70	41.63	31.40	8.70	41.61	31.46	8.63
D		41.93	32.06	8.68	41.88	31.88	8.69	41.87	31.93	8.63
E		41.42	31.46	8.70	41.66	31.43	8.69	41.33	31.33	8.64
F		41.70	31.60	8.69	41.77	31.60	8.69	41.71	31.56	8.63
G		41.50	31.55	8.72	41.49	31.49	8.69	41.44	31.54	8.63
H		41.98	31.83	8.70	42.16	31.60	8.68	41.92	31.83	8.64
Total		50.75	40.70	-	50.79	40.62	-	50.68	40.61	-

Maximum Output Power 43.01dBm per port

Antenna	Modulation/ Carrier Bandwidth (MHz)	Output Power / Peak to Average Ratio (PAR)								
		Channel position B			Channel position M			Channel position T		
		POWER (dBm)	POWER (dBm/MHz)	PAR (db)	POWER (dBm)	POWER (dBm/MHz)	PAR (db)	POWER (dBm)	POWER (dBm/MHz)	PAR (db)
A	QPSK/20.0	42.52	31.39	8.65	42.81	31.90	8.64	42.49	31.27	8.67
B		42.78	31.88	8.64	43.10	31.89	8.63	42.77	31.44	8.67
C		42.23	31.27	8.64	42.69	31.33	8.71	42.19	31.03	8.66
D		42.87	31.52	8.64	43.12	31.66	8.68	42.87	31.49	8.65
E		42.43	31.18	8.64	42.72	31.39	8.70	42.40	31.06	8.68
F		42.74	31.42	8.64	43.11	31.66	8.70	42.76	31.33	8.67
G		42.47	31.23	8.65	43.24	31.49	8.71	42.49	31.21	8.66
H		42.94	31.62	8.64	43.37	32.09	8.70	42.96	31.58	8.67
Total		51.66	40.48	-	52.06	40.71	-	51.65	40.34	-

Maximum Output Power 44.77dBm per port

Antenna	Modulation/ Carrier Bandwidth (MHz)	Output Power / Peak to Average Ratio (PAR)								
		Channel position B			Channel position M			Channel position T		
		POWER (dBm)	POWER (dBm/MHz)	PAR (db)	POWER (dBm)	POWER (dBm/MHz)	PAR (db)	POWER (dBm)	POWER (dBm/MHz)	PAR (db)
A	QPSK/30.0	44.20	31.12	8.30	44.55	31.41	8.31	44.10	31.21	8.32
B		44.38	31.37	8.33	44.81	31.52	8.33	44.35	31.12	8.32
C		44.13	30.92	8.48	44.38	31.23	8.45	44.01	31.08	8.30
D		44.14	31.31	8.48	45.05	31.47	8.45	44.20	31.15	8.30
E		44.07	31.09	8.49	44.38	31.27	8.45	44.11	31.20	8.32
F		44.28	31.18	8.48	44.98	31.53	8.46	44.38	31.14	8.32
G		44.11	31.19	8.48	44.31	31.40	8.45	44.16	31.32	8.32
H		44.51	31.36	8.48	45.19	31.74	8.46	44.51	31.29	8.33
Total		53.26	40.23	-	53.75	40.48	-	53.26	40.22	-

Maximum Output Power 46.02dBm per port

Antenna	Modulation/ Carrier Bandwidth (MHz)	Output Power / Peak to Average Ratio (PAR)								
		Channel position B			Channel position M			Channel position T		
		POWER (dBm)	POWER (dBm/MHz)	PAR (db)	POWER (dBm)	POWER (dBm/MHz)	PAR (db)	POWER (dBm)	POWER (dBm/MHz)	PAR (db)
A	QPSK/40.0	45.50	31.54	7.80	45.88	31.65	7.47	45.52	31.38	7.78
B		45.73	31.41	7.79	46.05	31.70	7.48	45.75	31.26	7.79
C		45.34	31.38	7.79	45.67	31.24	7.47	45.33	31.14	7.79
D		45.71	31.57	7.79	45.84	31.64	7.46	45.65	31.29	7.78
E		45.47	31.36	7.83	45.87	31.38	7.48	45.58	31.46	7.79
F		45.65	31.22	7.82	46.04	31.44	7.47	45.74	31.25	7.78
G		45.49	31.43	7.80	45.97	31.47	7.47	45.59	31.58	7.78
H		45.90	31.49	7.83	46.12	31.63	7.48	45.92	31.45	7.78
Total		54.63	40.46	-	54.96	40.55	-	54.67	40.38	-

Maximum Output Power 46.02dBm per port

Antenna	Modulation/ Carrier Bandwidth (MHz)	Output Power / Peak to Average Ratio (PAR)								
		Channel position B			Channel position M			Channel position T		
		POWER (dBm)	POWER (dBm/MHz)	PAR (db)	POWER (dBm)	POWER (dBm/MHz)	PAR (db)	POWER (dBm)	POWER (dBm/MHz)	PAR (db)
A	QPSK/50.0	45.65	30.72	7.80	45.90	30.65	7.46	45.61	30.50	7.81
B		45.87	30.74	7.80	46.12	30.98	7.46	45.83	30.64	7.82
C		45.44	30.50	7.79	45.47	30.15	7.44	45.45	30.44	7.83
D		46.22	30.58	7.79	46.13	30.56	7.45	46.18	30.51	7.82
E		45.63	30.53	7.82	45.71	30.29	7.46	45.58	30.25	7.82
F		45.77	30.51	7.81	46.11	30.48	7.46	45.78	30.41	7.81
G		45.64	30.57	7.80	45.76	30.43	7.46	45.65	30.37	7.81
H		46.03	30.78	7.83	46.26	30.61	7.47	46.10	30.78	7.82
Total		54.82	39.65	-	54.97	39.56	-	54.81	39.52	-

Maximum Output Power 46.02dBm per port

Antenna	Modulation/ Carrier Bandwidth (MHz)	Output Power / Peak to Average Ratio (PAR)								
		Channel position B			Channel position M			Channel position T		
		POWER (dBm)	POWER (dBm/MHz)	PAR (db)	POWER (dBm)	POWER (dBm/MHz)	PAR (db)	POWER (dBm)	POWER (dBm/MHz)	PAR (db)
A	QPSK/60.0	45.58	29.65	7.90	45.78	29.70	7.45	45.57	29.92	7.83
B		45.89	29.84	7.88	46.05	29.82	7.46	45.81	29.74	7.85
C		45.59	29.79	7.89	45.79	29.47	7.45	45.49	29.47	7.83
D		45.65	29.66	7.88	46.09	29.80	7.46	45.51	29.85	7.84
E		45.62	29.69	7.91	45.76	29.55	7.45	45.67	29.74	7.83
F		45.79	29.55	7.90	45.98	30.16	7.45	45.81	29.79	7.83
G		45.61	29.68	7.89	45.97	29.85	7.45	45.68	29.78	7.82
H		45.99	29.65	7.92	46.12	29.78	7.46	46.11	29.92	7.82
Total		54.75	38.72	-	54.98	38.80	-	54.74	38.81	-

Maximum Output Power 46.02dBm per port

Antenna	Modulation/ Carrier Bandwidth (MHz)	Output Power / Peak to Average Ratio (PAR)								
		Channel position B			Channel position M			Channel position T		
		POWER (dBm)	POWER (dBm/MHz)	PAR (db)	POWER (dBm)	POWER (dBm/MHz)	PAR (db)	POWER (dBm)	POWER (dBm/MHz)	PAR (db)
A	QPSK/70.0	45.58	29.38	7.85	45.86	29.17	7.44	45.73	28.94	7.84
B		45.84	28.95	7.86	46.03	28.94	7.45	45.90	29.20	7.84
C		45.69	29.29	7.88	45.73	28.84	7.44	45.64	28.74	7.83
D		45.84	29.22	7.87	46.16	28.92	7.45	45.77	28.86	7.82
E		45.52	29.08	7.89	45.54	28.92	7.45	45.56	28.84	7.84
F		45.70	28.87	7.88	46.02	28.89	7.45	45.80	28.95	7.82
G		45.60	29.15	7.89	45.77	29.04	7.44	45.63	28.96	7.82
H		46.01	28.95	7.92	46.22	29.27	7.44	46.02	29.39	7.82
Total		54.76	38.15	-	54.95	38.03	-	54.79	38.02	-

Maximum Output Power 46.02dBm per port

Antenna	Modulation/ Carrier Bandwidth (MHz)	Output Power / Peak to Average Ratio (PAR)								
		Channel position B			Channel position M			Channel position T		
		POWER (dBm)	POWER (dBm/MHz)	PAR (db)	POWER (dBm)	POWER (dBm/MHz)	PAR (db)	POWER (dBm)	POWER (dBm/MHz)	PAR (db)
A	QPSK/80.0	45.66	28.33	8.02	45.90	28.22	7.50	45.62	28.29	7.97
B		45.91	28.32	8.01	46.02	28.42	7.49	45.85	28.50	7.96
C		45.39	28.06	8.03	45.68	28.00	7.48	45.36	28.01	7.97
D		45.87	28.32	8.02	45.96	28.33	7.49	45.93	28.31	7.97
E		45.47	28.07	8.04	45.78	28.22	7.50	45.66	28.36	7.97
F		45.66	28.10	8.03	46.07	28.52	7.50	45.79	28.32	7.95
G		45.50	28.22	8.04	45.86	28.32	7.50	45.58	28.18	7.95
H		45.91	28.44	8.06	46.08	28.47	7.50	46.00	28.59	7.95
Total		54.71	37.27	-	54.95	37.35	-	54.76	37.35	-

Maximum Output Power 46.02dBm per port

Antenna	Modulation/ Carrier Bandwidth (MHz)	Output Power / Peak to Average Ratio (PAR)								
		Channel position B			Channel position M			Channel position T		
		POWER (dBm)	POWER (dBm/MHz)	PAR (db)	POWER (dBm)	POWER (dBm/MHz)	PAR (db)	POWER (dBm)	POWER (dBm/MHz)	PAR (db)
A	QPSK/90.0	45.67	28.34	8.04	45.89	28.54	7.48	45.69	28.57	7.91
B		45.89	27.82	8.03	46.05	27.77	7.49	45.94	28.04	7.92
C		45.36	27.67	8.03	45.71	28.07	7.49	45.37	27.69	7.93
D		45.94	27.76	8.00	46.10	27.76	7.48	46.04	28.19	7.92
E		45.58	28.14	8.03	45.78	28.25	7.50	45.68	28.39	7.92
F		45.70	27.96	8.02	45.86	27.95	7.49	45.85	27.84	7.91
G		45.47	28.24	8.03	45.84	28.29	7.50	45.63	28.36	7.91
H		45.96	27.97	8.03	46.13	28.09	7.50	46.04	28.04	7.92
Total		54.73	37.02	-	54.95	37.13	-	54.82	37.18	-

Maximum Output Power 46.02dBm per port

Antenna	Modulation/ Carrier Bandwidth (MHz)	Output Power / Peak to Average Ratio (PAR)								
		Channel position B			Channel position M			Channel position T		
		POWER (dBm)	POWER (dBm/MHz)	PAR (db)	POWER (dBm)	POWER (dBm/MHz)	PAR (db)	POWER (dBm)	POWER (dBm/MHz)	PAR (db)
A	QPSK/100.0	45.58	27.43	8.08	45.89	27.40	7.51	45.65	27.35	7.98
B		45.82	27.54	8.05	46.04	27.51	7.50	45.89	27.51	7.98
C		45.45	27.15	8.05	45.88	27.08	7.50	45.45	27.07	7.98
D		46.00	27.51	8.05	45.93	27.24	7.51	45.95	27.61	7.97
E		45.47	27.21	8.08	45.67	27.18	7.51	45.63	27.35	7.99
F		45.71	27.22	8.07	45.92	27.82	7.52	45.85	27.25	7.97
G		45.47	27.26	8.06	45.65	27.22	7.52	45.53	27.25	7.96
H		45.94	27.47	8.08	46.10	27.34	7.53	45.98	27.72	7.96
Total		54.72	36.38	-	54.92	36.39	-	54.78	36.42	-

Configuration NR-MIMO-2C

Maximum Output Power 43.01dBm per port

Antenna	Modulation/ Carrier Bandwidth (MHz)	Output Power / Peak to Average Ratio (PAR)								
		Channel position B			Channel position M			Channel position T		
		POWER (dBm)	POWER (dBm/MHz)	PAR (db)	POWER (dBm)	POWER (dBm/MHz)	PAR (db)	POWER (dBm)	POWER (dBm/MHz)	PAR (db)
A	QPSK/10.0	-	-	-	42.45	31.44	-	-	-	-
B		-	-	-	42.53	31.43	-	-	-	-
C		-	-	-	42.05	31.31	-	-	-	-
D		-	-	-	42.53	31.45	-	-	-	-
E		-	-	-	42.11	31.57	-	-	-	-
F		-	-	-	42.45	31.25	-	-	-	-
G		-	-	-	42.13	31.58	-	-	-	-
H		-	-	-	42.55	31.32	-	-	-	-
Total		-	-	-	51.39	40.45	-	-	-	-

Maximum Output Power 44.77dBm per port

Antenna	Modulation/ Carrier Bandwidth (MHz)	Output Power / Peak to Average Ratio (PAR)								
		Channel position B			Channel position M			Channel position T		
		POWER (dBm)	POWER (dBm/MHz)	PAR (db)	POWER (dBm)	POWER (dBm/MHz)	PAR (db)	POWER (dBm)	POWER (dBm/MHz)	PAR (db)
A	QPSK/15.0	-	-	-	44.09	31.31	-	-	-	-
B		-	-	-	44.27	31.01	-	-	-	-
C		-	-	-	44.02	31.13	-	-	-	-
D		-	-	-	44.18	30.82	-	-	-	-
E		-	-	-	44.09	31.12	-	-	-	-
F		-	-	-	44.26	31.38	-	-	-	-
G		-	-	-	44.11	31.28	-	-	-	-
H		-	-	-	44.43	31.19	-	-	-	-
Total		-	-	-	53.21	40.19	-	-	-	-

Maximum Output Power 46.02dBm per port

Antenna	Modulation/ Carrier Bandwidth (MHz)	Output Power / Peak to Average Ratio (PAR)								
		Channel position B			Channel position M			Channel position T		
		POWER (dBm)	POWER (dBm/MHz)	PAR (db)	POWER (dBm)	POWER (dBm/MHz)	PAR (db)	POWER (dBm)	POWER (dBm/MHz)	PAR (db)
A	QPSK/20.0	-	-	-	45.41	31.08	-	-	-	-
B		-	-	-	45.52	31.03	-	-	-	-
C		-	-	-	45.12	30.51	-	-	-	-
D		-	-	-	45.37	31.13	-	-	-	-
E		-	-	-	45.49	30.81	-	-	-	-
F		-	-	-	45.60	31.52	-	-	-	-
G		-	-	-	45.33	30.84	-	-	-	-
H		-	-	-	45.77	31.38	-	-	-	-
Total		-	-	-	54.49	40.08	-	-	-	-

Maximum Output Power 46.02dBm per port

Antenna	Modulation/ Carrier Bandwidth (MHz)	Output Power / Peak to Average Ratio (PAR)								
		Channel position B			Channel position M			Channel position T		
		POWER (dBm)	POWER (dBm/MHz)	PAR (db)	POWER (dBm)	POWER (dBm/MHz)	PAR (db)	POWER (dBm)	POWER (dBm/MHz)	PAR (db)
A	QPSK/30.0	-	-	-	45.67	29.42	-	-	-	-
B		-	-	-	45.57	29.81	-	-	-	-
C		-	-	-	45.21	29.16	-	-	-	-
D		-	-	-	45.54	29.38	-	-	-	-
E		-	-	-	45.28	29.46	-	-	-	-
F		-	-	-	45.65	29.63	-	-	-	-
G		-	-	-	45.71	29.62	-	-	-	-
H		-	-	-	45.46	29.30	-	-	-	-
Total		-	-	-	54.55	38.51	-	-	-	-

Maximum Output Power 46.02dBm per port

Antenna	Modulation/ Carrier Bandwidth (MHz)	Output Power / Peak to Average Ratio (PAR)								
		Channel position B			Channel position M			Channel position T		
		POWER (dBm)	POWER (dBm/MHz)	PAR (db)	POWER (dBm)	POWER (dBm/MHz)	PAR (db)	POWER (dBm)	POWER (dBm/MHz)	PAR (db)
A	QPSK/40.0	-	-	-	45.20	28.39	-	-	-	-
B		-	-	-	45.65	28.19	-	-	-	-
C		-	-	-	45.56	28.05	-	-	-	-
D		-	-	-	46.13	28.13	-	-	-	-
E		-	-	-	45.69	28.03	-	-	-	-
F		-	-	-	45.83	28.26	-	-	-	-
G		-	-	-	45.90	28.22	-	-	-	-
H		-	-	-	45.60	28.26	-	-	-	-
Total		-	-	-	54.73	37.22	-	-	-	-

Maximum Output Power 46.02dBm per port

Antenna	Modulation/ Carrier Bandwidth (MHz)	Output Power / Peak to Average Ratio (PAR)								
		Channel position B			Channel position M			Channel position T		
		POWER (dBm)	POWER (dBm/MHz)	PAR (db)	POWER (dBm)	POWER (dBm/MHz)	PAR (db)	POWER (dBm)	POWER (dBm/MHz)	PAR (db)
A	QPSK/50.0	-	-	-	45.39	27.44	-	-	-	-
B		-	-	-	45.66	27.23	-	-	-	-
C		-	-	-	45.14	27.04	-	-	-	-
D		-	-	-	45.96	27.28	-	-	-	-
E		-	-	-	45.72	27.14	-	-	-	-
F		-	-	-	45.89	27.47	-	-	-	-
G		-	-	-	45.84	27.25	-	-	-	-
H		-	-	-	45.81	27.63	-	-	-	-
Total		-	-	-	54.71	36.34	-	-	-	-

Maximum Output Power 46.02dBm per port

Antenna	Modulation/ Carrier Bandwidth (MHz)	Output Power / Peak to Average Ratio (PAR)								
		Channel position B			Channel position M			Channel position T		
		POWER (dBm)	POWER (dBm/MHz)	PAR (db)	POWER (dBm)	POWER (dBm/MHz)	PAR (db)	POWER (dBm)	POWER (dBm/MHz)	PAR (db)
A	QPSK/60.0	-	-	-	45.23	26.22	-	-	-	-
B		-	-	-	45.74	26.44	-	-	-	-
C		-	-	-	45.32	26.31	-	-	-	-
D		-	-	-	45.62	26.45	-	-	-	-
E		-	-	-	45.46	26.39	-	-	-	-
F		-	-	-	45.75	26.68	-	-	-	-
G		-	-	-	45.51	26.51	-	-	-	-
H		-	-	-	45.92	26.55	-	-	-	-
Total		-	-	-	54.61	35.48	-	-	-	-

Maximum Output Power 46.02dBm per port

Antenna	Modulation/ Carrier Bandwidth (MHz)	Output Power / Peak to Average Ratio (PAR)								
		Channel position B			Channel position M			Channel position T		
		POWER (dBm)	POWER (dBm/MHz)	PAR (db)	POWER (dBm)	POWER (dBm/MHz)	PAR (db)	POWER (dBm)	POWER (dBm/MHz)	PAR (db)
A	QPSK/70.0	-	-	-	45.37	25.95	-	-	-	-
B		-	-	-	45.82	25.98	-	-	-	-
C		-	-	-	45.32	25.76	-	-	-	-
D		-	-	-	45.92	26.18	-	-	-	-
E		-	-	-	45.68	25.89	-	-	-	-
F		-	-	-	45.84	25.75	-	-	-	-
G		-	-	-	45.78	25.97	-	-	-	-
H		-	-	-	45.91	26.04	-	-	-	-
Total		-	-	-	54.74	34.97	-	-	-	-

Maximum Output Power 46.02dBm per port

Antenna	Modulation/ Carrier Bandwidth (MHz)	Output Power / Peak to Average Ratio (PAR)								
		Channel position B			Channel position M			Channel position T		
		POWER (dBm)	POWER (dBm/MHz)	PAR (db)	POWER (dBm)	POWER (dBm/MHz)	PAR (db)	POWER (dBm)	POWER (dBm/MHz)	PAR (db)
A	QPSK/80.0	-	-	-	45.37	25.21	-	-	-	-
B		-	-	-	45.83	25.31	-	-	-	-
C		-	-	-	45.36	25.11	-	-	-	-
D		-	-	-	45.84	25.62	-	-	-	-
E		-	-	-	45.54	25.26	-	-	-	-
F		-	-	-	45.73	25.36	-	-	-	-
G		-	-	-	45.71	25.33	-	-	-	-
H		-	-	-	45.92	25.64	-	-	-	-
Total		-	-	-	54.70	34.39	-	-	-	-

Maximum Output Power 46.02dBm per port

Antenna	Modulation/ Carrier Bandwidth (MHz)	Output Power / Peak to Average Ratio (PAR)								
		Channel position B			Channel position M			Channel position T		
		POWER (dBm)	POWER (dBm/MHz)	PAR (db)	POWER (dBm)	POWER (dBm/MHz)	PAR (db)	POWER (dBm)	POWER (dBm/MHz)	PAR (db)
A	QPSK/90.0	-	-	-	45.46	24.68	-	-	-	-
B		-	-	-	45.79	25.06	-	-	-	-
C		-	-	-	45.35	24.52	-	-	-	-
D		-	-	-	45.88	24.88	-	-	-	-
E		-	-	-	45.63	24.68	-	-	-	-
F		-	-	-	45.79	24.69	-	-	-	-
G		-	-	-	45.65	24.85	-	-	-	-
H		-	-	-	45.88	24.95	-	-	-	-
Total		-	-	-	54.71	33.82	-	-	-	-

Configuration NR-MIMO-3C

Maximum Output Power 44.77dBm per port

Antenna	Modulation/ Carrier Bandwidth (MHz)	Output Power / Peak to Average Ratio (PAR)								
		Channel position B			Channel position M			Channel position T		
		POWER (dBm)	POWER (dBm/MHz)	PAR (db)	POWER (dBm)	POWER (dBm/MHz)	PAR (db)	POWER (dBm)	POWER (dBm/MHz)	PAR (db)
A	QPSK/10.0	-	-	-	43.94	31.30	-	-	-	-
B		-	-	-	44.42	31.42	-	-	-	-
C		-	-	-	43.82	31.27	-	-	-	-
D		-	-	-	44.14	31.29	-	-	-	-
E		-	-	-	43.94	31.51	-	-	-	-
F		-	-	-	44.35	31.53	-	-	-	-
G		-	-	-	44.15	31.65	-	-	-	-
H		-	-	-	44.35	31.56	-	-	-	-
Total		-	-	-	53.17	40.47	-	-	-	-

Maximum Output Power 46.02dBm per port

Antenna	Modulation/ Carrier Bandwidth (MHz)	Output Power / Peak to Average Ratio (PAR)								
		Channel position B			Channel position M			Channel position T		
		POWER (dBm)	POWER (dBm/MHz)	PAR (db)	POWER (dBm)	POWER (dBm/MHz)	PAR (db)	POWER (dBm)	POWER (dBm/MHz)	PAR (db)
A	QPSK/15.0	-	-	-	45.20	30.71	-	-	-	-
B		-	-	-	45.68	30.61	-	-	-	-
C		-	-	-	45.42	30.56	-	-	-	-
D		-	-	-	45.45	30.59	-	-	-	-
E		-	-	-	45.21	30.70	-	-	-	-
F		-	-	-	45.54	30.80	-	-	-	-
G		-	-	-	45.32	30.82	-	-	-	-
H		-	-	-	45.46	30.68	-	-	-	-
Total		-	-	-	54.44	39.72	-	-	-	-

Maximum Output Power 46.02dBm per port

Antenna	Modulation/ Carrier Bandwidth (MHz)	Output Power / Peak to Average Ratio (PAR)								
		Channel position B			Channel position M			Channel position T		
		POWER (dBm)	POWER (dBm/MHz)	PAR (db)	POWER (dBm)	POWER (dBm/MHz)	PAR (db)	POWER (dBm)	POWER (dBm/MHz)	PAR (db)
A	QPSK/20.0	-	-	-	45.15	29.36	-	-	-	-
B		-	-	-	45.46	29.72	-	-	-	-
C		-	-	-	45.20	29.19	-	-	-	-
D		-	-	-	45.56	29.80	-	-	-	-
E		-	-	-	45.41	29.44	-	-	-	-
F		-	-	-	45.58	29.54	-	-	-	-
G		-	-	-	45.30	29.56	-	-	-	-
H		-	-	-	45.67	30.08	-	-	-	-
Total		-	-	-	54.45	38.62	-	-	-	-

Maximum Output Power 46.02dBm per port

Antenna	Modulation/ Carrier Bandwidth (MHz)	Output Power / Peak to Average Ratio (PAR)								
		Channel position B			Channel position M			Channel position T		
		POWER (dBm)	POWER (dBm/MHz)	PAR (db)	POWER (dBm)	POWER (dBm/MHz)	PAR (db)	POWER (dBm)	POWER (dBm/MHz)	PAR (db)
A	QPSK/30.0	-	-	-	45.52	27.76	-	-	-	-
B		-	-	-	45.62	27.94	-	-	-	-
C		-	-	-	45.35	27.82	-	-	-	-
D		-	-	-	45.62	27.75	-	-	-	-
E		-	-	-	45.38	27.81	-	-	-	-
F		-	-	-	45.68	27.83	-	-	-	-
G		-	-	-	45.44	27.95	-	-	-	-
H		-	-	-	45.97	28.06	-	-	-	-
Total		-	-	-	54.61	36.90	-	-	-	-

Maximum Output Power 46.02dBm per port

Antenna	Modulation/ Carrier Bandwidth (MHz)	Output Power / Peak to Average Ratio (PAR)								
		Channel position B			Channel position M			Channel position T		
		POWER (dBm)	POWER (dBm/MHz)	PAR (db)	POWER (dBm)	POWER (dBm/MHz)	PAR (db)	POWER (dBm)	POWER (dBm/MHz)	PAR (db)
A	QPSK/40.0	-	-	-	45.45	26.51	-	-	-	-
B		-	-	-	45.98	26.49	-	-	-	-
C		-	-	-	45.41	26.46	-	-	-	-
D		-	-	-	46.11	26.42	-	-	-	-
E		-	-	-	45.40	26.59	-	-	-	-
F		-	-	-	46.05	26.60	-	-	-	-
G		-	-	-	45.67	26.68	-	-	-	-
H		-	-	-	45.69	26.79	-	-	-	-
Total		-	-	-	54.76	35.60	-	-	-	-

Maximum Output Power 46.02dBm per port

Antenna	Modulation/ Carrier Bandwidth (MHz)	Output Power / Peak to Average Ratio (PAR)								
		Channel position B			Channel position M			Channel position T		
		POWER (dBm)	POWER (dBm/MHz)	PAR (db)	POWER (dBm)	POWER (dBm/MHz)	PAR (db)	POWER (dBm)	POWER (dBm/MHz)	PAR (db)
A	QPSK/50.0	-	-	-	45.22	25.56	-	-	-	-
B		-	-	-	45.44	25.81	-	-	-	-
C		-	-	-	45.24	25.42	-	-	-	-
D		-	-	-	45.50	25.66	-	-	-	-
E		-	-	-	45.47	25.54	-	-	-	-
F		-	-	-	45.59	25.65	-	-	-	-
G		-	-	-	45.76	25.60	-	-	-	-
H		-	-	-	45.90	25.99	-	-	-	-
Total		-	-	-	54.55	34.69	-	-	-	-

Configuration LTE+NR-MIMO-MC-1 (1LTE+1NR)

Maximum Output Power 43.01dBm per port

Antenna	LTEMd./ NR Mod. Bandwidth (MHz)	Output Power / Peak to Average Ratio (PAR)								
		Channel position B			Channel position M			Channel position T		
		POWER (dBm)	POWER (dBm/MHz)	PAR (db)	POWER (dBm)	POWER (dBm/MHz)	PAR (db)	POWER (dBm)	POWER (dBm/MHz)	PAR (db)
A	QPSK10.0/ QPSK 10.0	-	-	-	42.14	31.02	-	-	-	-
B	QPSK10.0/ QPSK 10.0	-	-	-	42.61	31.07	-	-	-	-
C	QPSK10.0/ QPSK 10.0	-	-	-	42.32	30.91	-	-	-	-
D	QPSK10.0/ QPSK 10.0	-	-	-	42.46	31.04	-	-	-	-
E	QPSK10.0/ QPSK 10.0	-	-	-	42.26	30.89	-	-	-	-
F	QPSK10.0/ QPSK 10.0	-	-	-	42.50	31.22	-	-	-	-
G	QPSK10.0/ QPSK 10.0	-	-	-	42.28	31.26	-	-	-	-
H	QPSK10.0/ QPSK 10.0	-	-	-	42.79	31.22	-	-	-	-
Total		-	-	-	51.46	40.11	-	-	-	-

Maximum Output Power 46.02dBm per port

Antenna	LTEMod./ NR Mod. Bandwidth (MHz)	Output Power / Peak to Average Ratio (PAR)								
		Channel position B			Channel position M			Channel position T		
		POWER (dBm)	POWER (dBm/MHz)	PAR (db)	POWER (dBm)	POWER (dBm/MHz)	PAR (db)	POWER (dBm)	POWER (dBm/MHz)	PAR (db)
A	QPSK20.0/ QPSK 100.0	-	-	-	45.53	30.81	-	-	-	-
B	QPSK20.0/ QPSK 100.0	-	-	-	45.95	31.16	-	-	-	-
C	QPSK20.0/ QPSK 100.0	-	-	-	45.40	30.82	-	-	-	-
D	QPSK20.0/ QPSK 100.0	-	-	-	45.80	31.13	-	-	-	-
E	QPSK20.0/ QPSK 100.0	-	-	-	45.39	30.89	-	-	-	-
F	QPSK20.0/ QPSK 100.0	-	-	-	45.74	31.79	-	-	-	-
G	QPSK20.0/ QPSK 100.0	-	-	-	45.60	30.98	-	-	-	-
H	QPSK20.0/ QPSK 100.0	-	-	-	45.93	32.43	-	-	-	-
Total		-	-	-	54.70	40.32	-	-	-	-

Configuration LTE+NR-MIMO-MC-2 (2LTE+1NR)

Maximum Output Power 44.77dBm per port

Antenna	LTEMd./ NR Mod. Bandwidth (MHz)	Output Power / Peak to Average Ratio (PAR)								
		Channel position B			Channel position M			Channel position T		
		POWER (dBm)	POWER (dBm/MHz)	PAR (db)	POWER (dBm)	POWER (dBm/MHz)	PAR (db)	POWER (dBm)	POWER (dBm/MHz)	PAR (db)
A	QPSK10.0/ QPSK 10.0	-	-	-	43.92	31.72	-	-	-	-
B	QPSK10.0/ QPSK 10.0	-	-	-	44.47	31.33	-	-	-	-
C	QPSK10.0/ QPSK 10.0	-	-	-	44.08	31.69	-	-	-	-
D	QPSK10.0/ QPSK 10.0	-	-	-	44.53	31.19	-	-	-	-
E	QPSK10.0/ QPSK 10.0	-	-	-	44.02	31.74	-	-	-	-
F	QPSK10.0/ QPSK 10.0	-	-	-	44.26	31.73	-	-	-	-
G	QPSK10.0/ QPSK 10.0	-	-	-	44.03	31.81	-	-	-	-
H	QPSK10.0/ QPSK 10.0	-	-	-	44.31	32.04	-	-	-	-
Total		-	-	-	53.24	40.69	-	-	-	-

Maximum Output Power 46.02dBm per port

Antenna	LTEMod./ NR Mod. Bandwidth (MHz)	Output Power / Peak to Average Ratio (PAR)								
		Channel position B			Channel position M			Channel position T		
		POWER (dBm)	POWER (dBm/MHz)	PAR (db)	POWER (dBm)	POWER (dBm/MHz)	PAR (db)	POWER (dBm)	POWER (dBm/MHz)	PAR (db)
A	QPSK20.0/ QPSK 100.0	-	-	-	45.46	29.49	-	-	-	-
B	QPSK20.0/ QPSK 100.0	-	-	-	45.84	30.03	-	-	-	-
C	QPSK20.0/ QPSK 100.0	-	-	-	45.58	29.52	-	-	-	-
D	QPSK20.0/ QPSK 100.0	-	-	-	45.79	29.86	-	-	-	-
E	QPSK20.0/ QPSK 100.0	-	-	-	45.69	29.60	-	-	-	-
F	QPSK20.0/ QPSK 100.0	-	-	-	45.88	29.89	-	-	-	-
G	QPSK20.0/ QPSK 100.0	-	-	-	45.54	29.69	-	-	-	-
H	QPSK20.0/ QPSK 100.0	-	-	-	45.82	30.46	-	-	-	-
Total		-	-	-	54.73	38.86	-	-	-	-

Configuration LTE+NR-MIMO-MC-3 (3LTE+3NR)

Maximum Output Power 46.02dBm per port

Antenna	LTEMd./ NR Mod. Bandwidth (MHz)	Output Power / Peak to Average Ratio (PAR)								
		Channel position B			Channel position M			Channel position T		
		POWER (dBm)	POWER (dBm/MHz)	PAR (db)	POWER (dBm)	POWER (dBm/MHz)	PAR (db)	POWER (dBm)	POWER (dBm/MHz)	PAR (db)
A	QPSK10.0/ QPSK 10.0	-	-	-	45.36	30.14	-	-	-	-
B	QPSK10.0/ QPSK 10.0	-	-	-	45.50	30.12	-	-	-	-
C	QPSK10.0/ QPSK 10.0	-	-	-	45.46	30.15	-	-	-	-
D	QPSK10.0/ QPSK 10.0	-	-	-	45.53	29.89	-	-	-	-
E	QPSK10.0/ QPSK 10.0	-	-	-	45.45	30.10	-	-	-	-
F	QPSK10.0/ QPSK 10.0	-	-	-	45.69	29.80	-	-	-	-
G	QPSK10.0/ QPSK 10.0	-	-	-	45.35	30.21	-	-	-	-
H	QPSK10.0/ QPSK 10.0	-	-	-	45.71	30.19	-	-	-	-
Total		-	-	-	54.54	39.11	-	-	-	-

NOTE:

The DUT is tested without antenna. ERP/EIRP compliance is addressed at the time of licensing, as required by the responsible FCC/ISED Bureau(s). Licensee's are required to take into account maximum allowed antenna gain used in combination with above power settings to prevent the radiated output power to exceed the limits.

A.2 Occupied Bandwidth

A.2.1 Reference

FCC CFR 47 Part 2, Clause 2.1049

FCC CFR 47 Part 27, Clause 27.53 (m)

A.2.2 Method of Measurements

The EUT was set to transmit at maximum power and testing was carried out on bottom, middle and top channels. Using the Occupied Bandwidth measurement function in the spectrum analyzer, the 26dB bandwidth was measured in accordance with ANSI 63.26.

The measurement method is from ANSI 63.26:

- a) The spectrum analyzer center frequency is set to the nominal EUT channel center frequency. The frequency span for the spectrum analyzer shall be set wide enough to capture all modulation products including the emission skirts (i.e., two to five times the OBW).
- b) The nominal IF filter bandwidth (3 dB RBW) shall be in the range of 1 to 5 % of the anticipated OBW, and the VBW shall be at least 3 times the RBW.
- c) Set the reference level of the instrument as required to keep the signal from exceeding the maximum input mixer level for linear operation. In general, the peak of the spectral envelope must be at least $10\log(\text{OBW} / \text{RBW})$ below the reference level.
- d) Set the detection mode to peak, and the trace mode to max hold.
- e) Use the 99 % power bandwidth function of the spectrum analyzer and report the measured bandwidth.

A.2.3 Measurement result

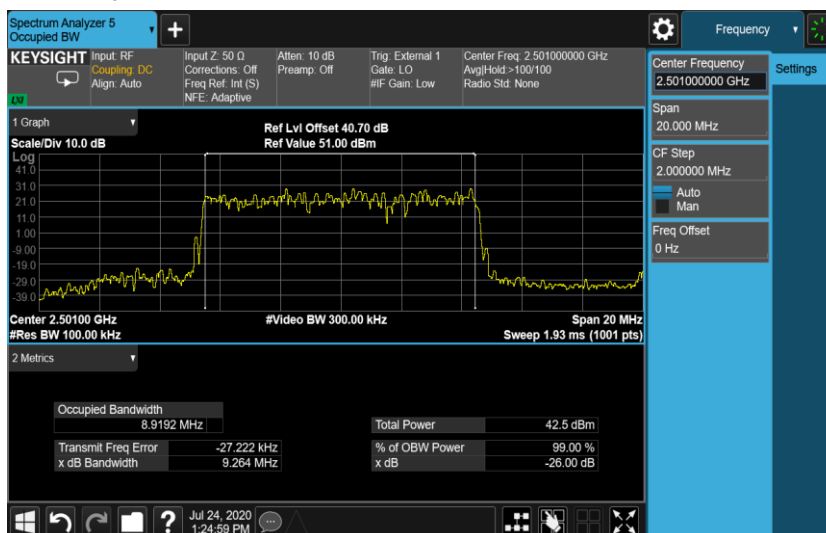
Configuration LTE-MIMO-1C
-26dBc Occupied Bandwidth

Antenna	Modulation / Bandwidth	Occupied Bandwidth (MHz)		
		Channel Position B	Channel Position M	Channel Position T
H	QPSK/ 10.0MHz	9.264	9.267	9.267
	QPSK/ 15.0MHz	13.87	13.87	13.87
	QPSK/ 20.0MHz	18.50	18.50	18.50

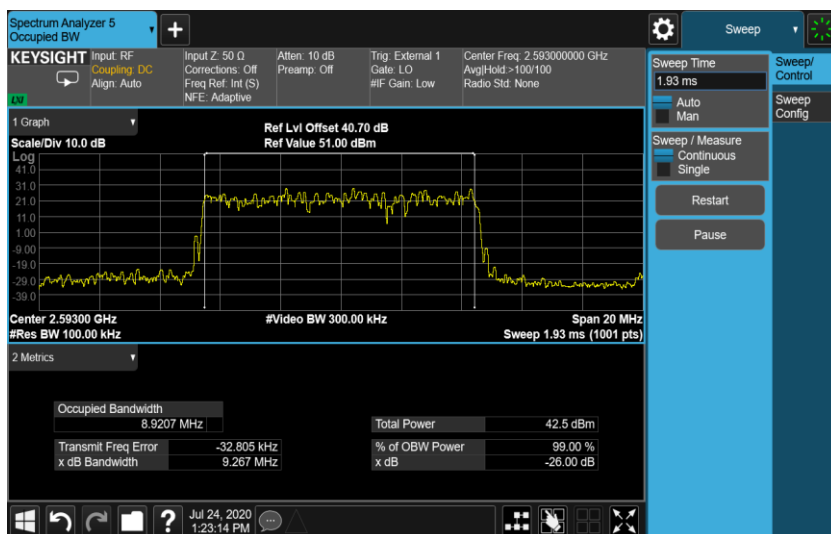
99% Occupied Bandwidth

Antenna	Modulation / Bandwidth	Occupied Bandwidth (MHz)		
		Channel Position B	Channel Position M	Channel Position T
H	QPSK/ 10.0MHz	8.9192	8.9207	8.9171
	QPSK/ 15.0MHz	13.378	13.445	13.458
	QPSK/ 20.0MHz	17.912	17.914	17.880

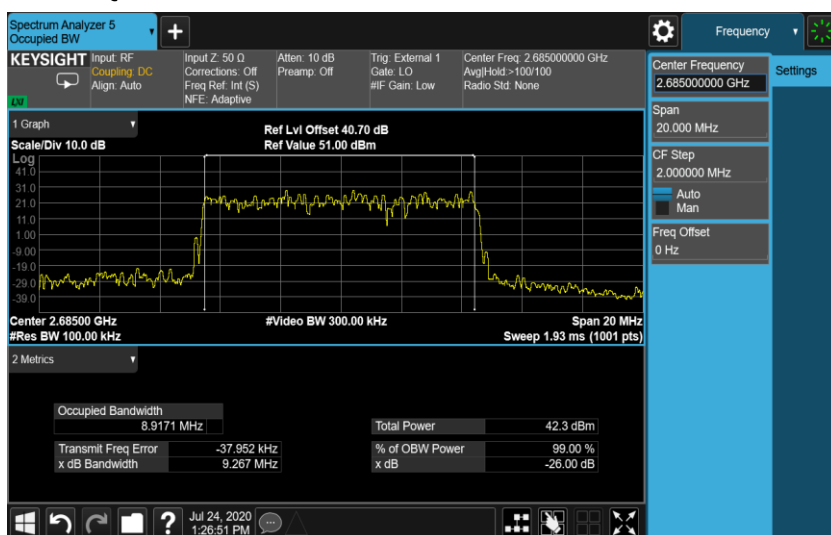
Port H, QPSK/10.0MHz Channel Position B



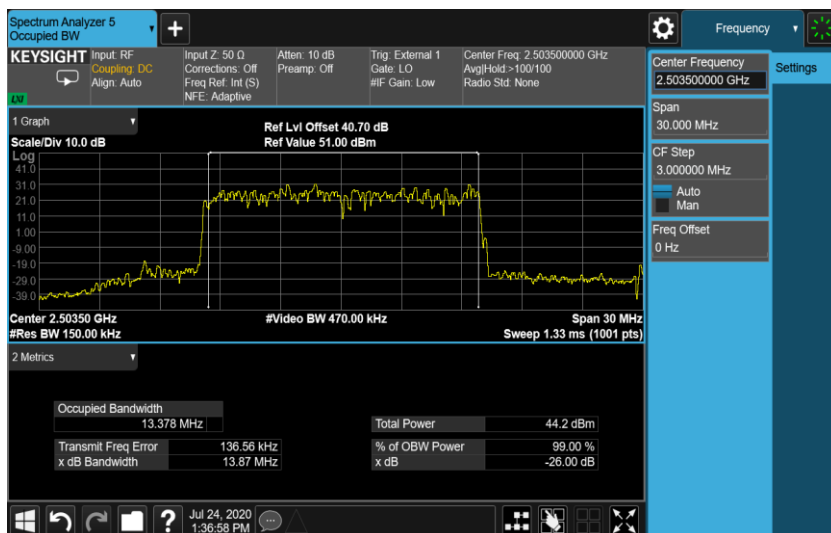
Port H, QPSK/10.0MHz Channel Position M



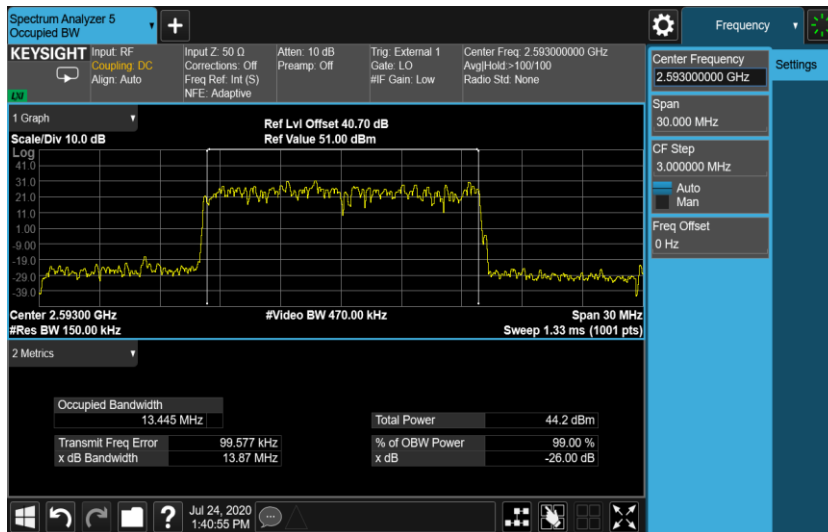
Port H, QPSK/10.0MHz Channel Position T



Port H, QPSK/15.0MHz Channel Position B



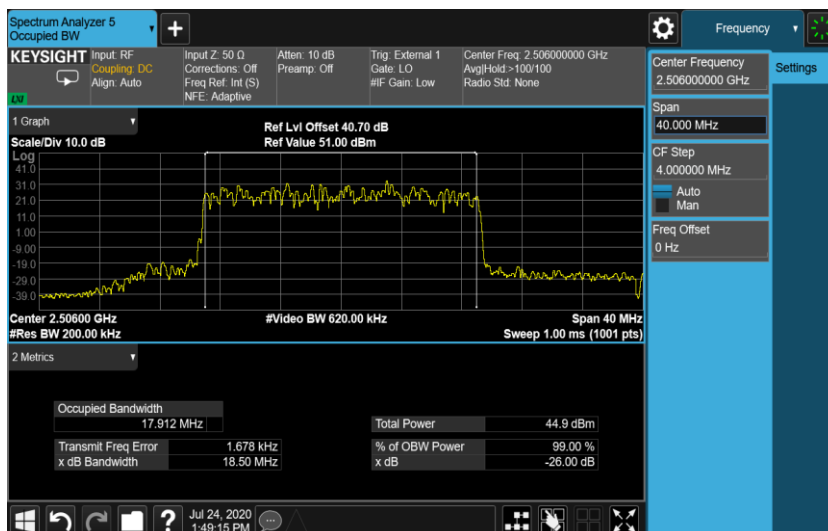
Port H, QPSK/15.0MHz Channel Position M



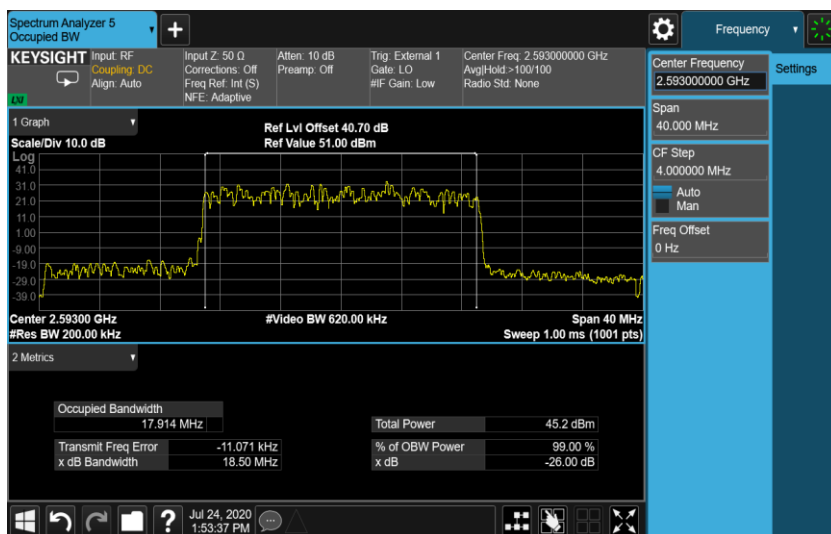
Port H, QPSK/15.0MHz Channel Position T



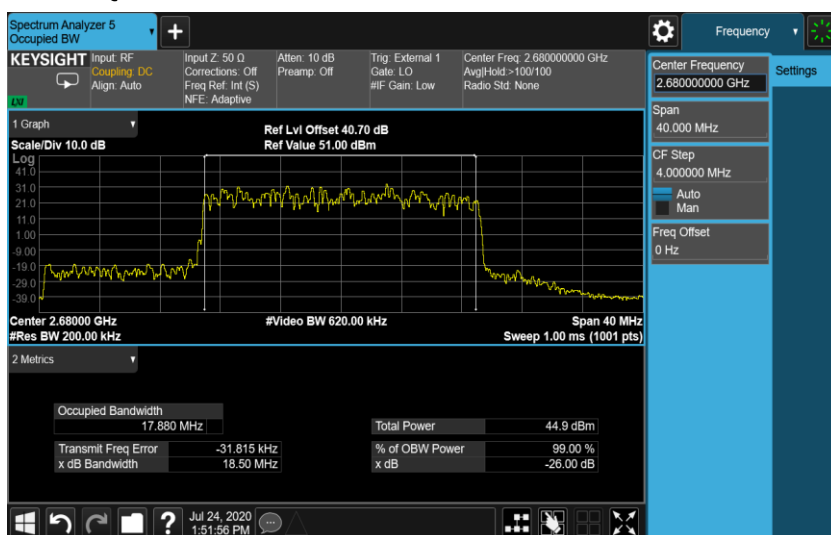
Port H, QPSK/20.0MHz Channel Position B



Port H, QPSK/20.0MHz Channel Position M



Port H, QPSK/20.0MHz Channel Position T



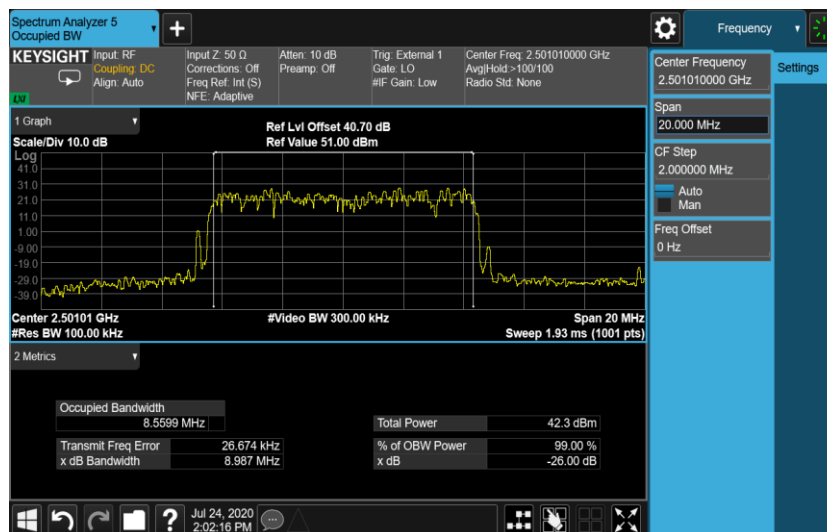
Configuration NR-MIMO-1C
-26dBc Occupied Bandwidth

Antenna	Modulation / Bandwidth	Occupied Bandwidth (MHz)		
		Channel Position B	Channel Position M	Channel Position T
H	QPSK/ 10.0MHz	8.987	8.988	8.986
	QPSK/ 15.0MHz	14.06	14.06	14.05
	QPSK/ 20.0MHz	19.08	19.09	19.09
	QPSK/ 30.0MHz	28.77	28.78	28.77
	QPSK/ 40.0MHz	38.98	38.99	38.97
	QPSK/ 50.0MHz	48.89	48.90	48.88
	QPSK/ 60.0MHz	59.63	59.63	59.62
	QPSK/ 70.0MHz	69.43	69.45	69.44
	QPSK/ 80.0MHz	79.95	79.97	79.96
	QPSK/ 90.0MHz	90.14	90.13	90.12
	QPSK/ 100.0MHz	100.4	100.5	100.5

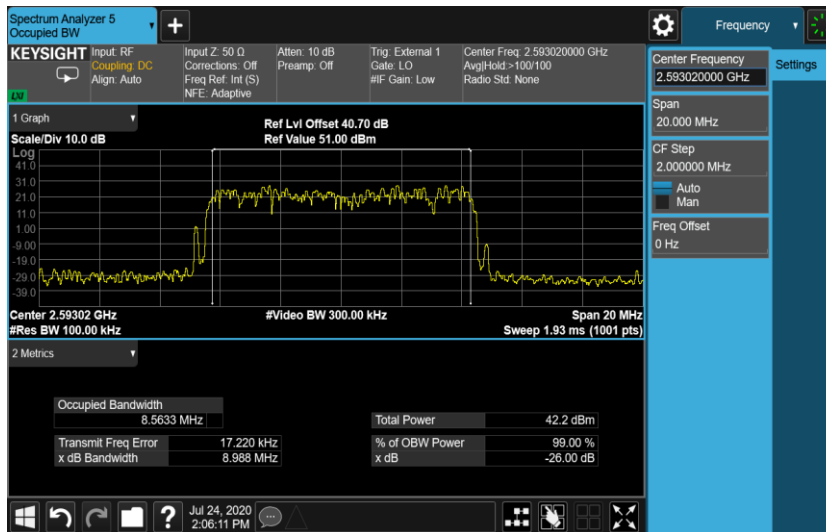
99% Occupied Bandwidth

Antenna	Modulation / Bandwidth	Occupied Bandwidth (MHz)		
		Channel Position B	Channel Position M	Channel Position T
H	QPSK/ 10.0MHz	8.5599	8.5633	8.5572
	QPSK/ 15.0MHz	13.491	13.500	13.495
	QPSK/ 20.0MHz	18.060	18.072	18.071
	QPSK/ 30.0MHz	27.866	27.889	27.875
	QPSK/ 40.0MHz	37.440	37.520	37.495
	QPSK/ 50.0MHz	47.226	47.270	47.240
	QPSK/ 60.0MHz	57.842	57.881	57.835
	QPSK/ 70.0MHz	67.379	67.488	67.432
	QPSK/ 80.0MHz	77.252	77.366	77.222
	QPSK/ 90.0MHz	86.691	86.820	86.684
	QPSK/ 100.0MHz	97.146	97.269	97.046

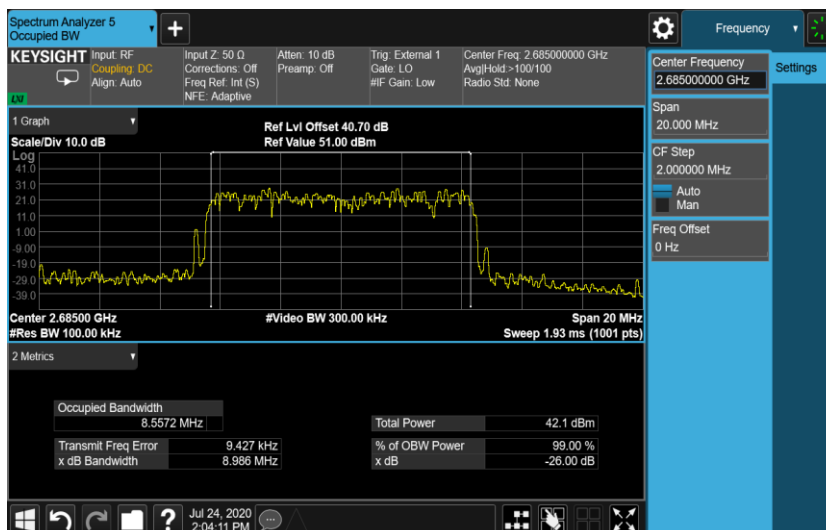
Port H, QPSK/10.0MHz Channel Position B



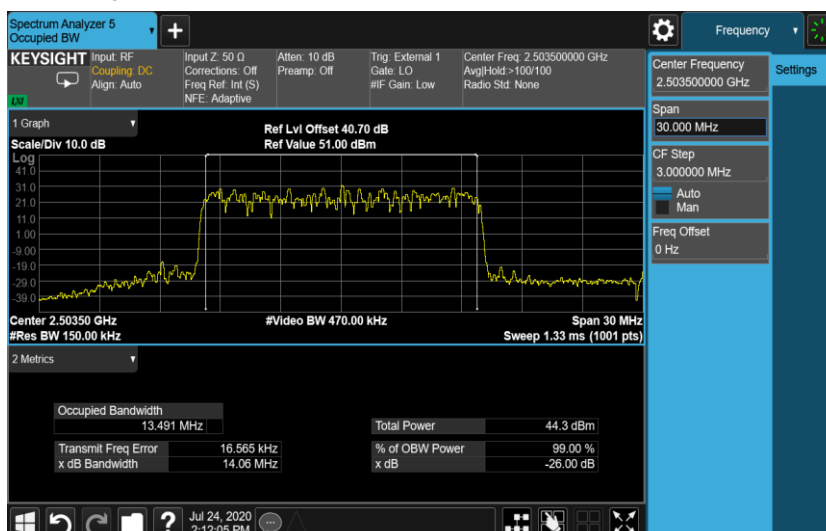
Port H, QPSK/10.0MHz Channel Position M



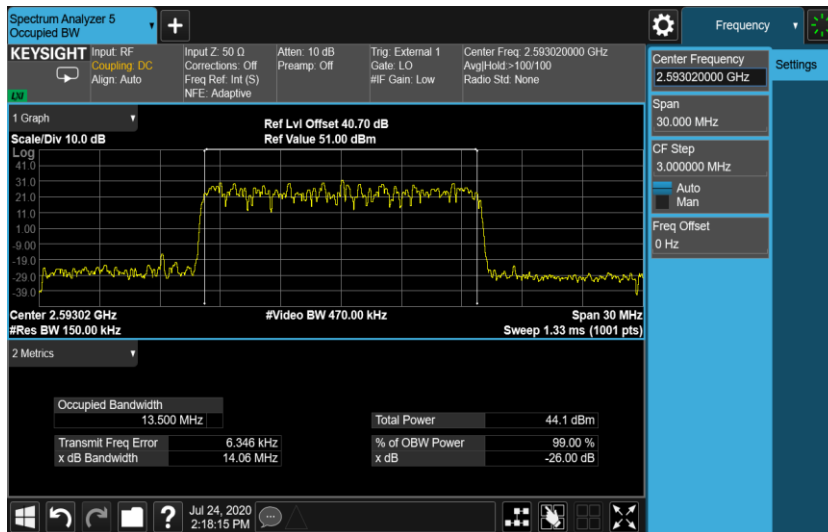
Port H, QPSK/10.0MHz Channel Position T



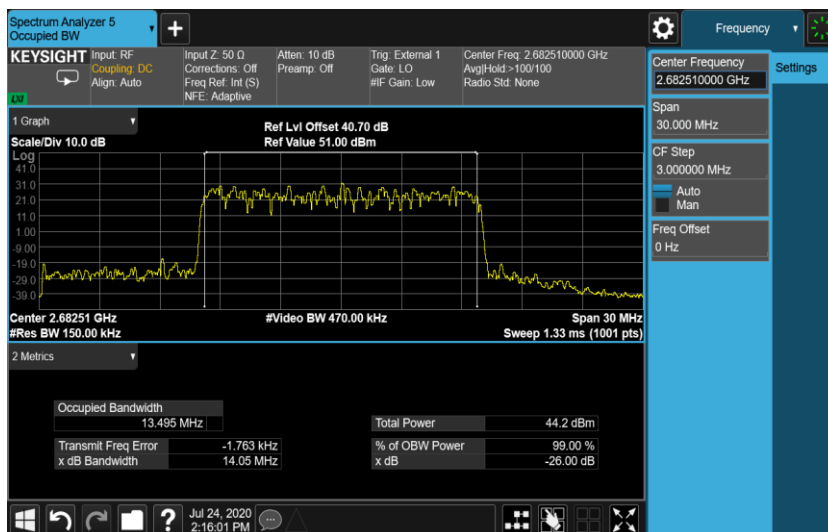
Port H, QPSK/15.0MHz Channel Position B



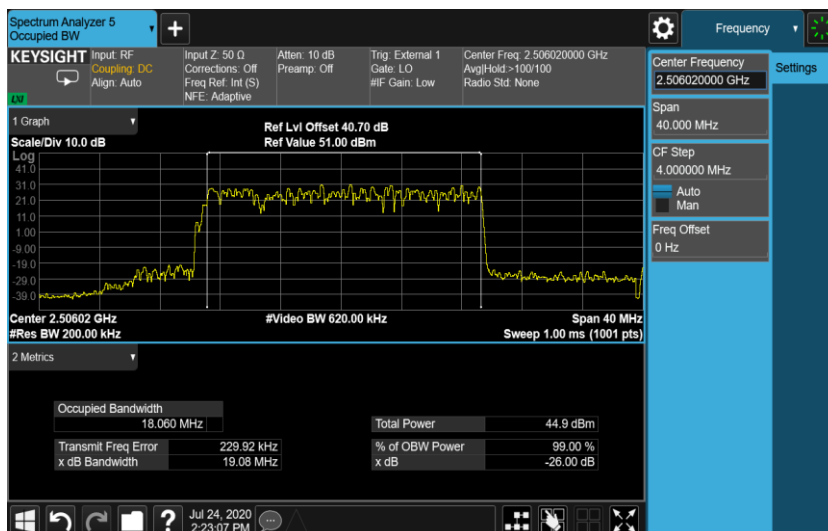
Port H, QPSK/15.0MHz Channel Position M



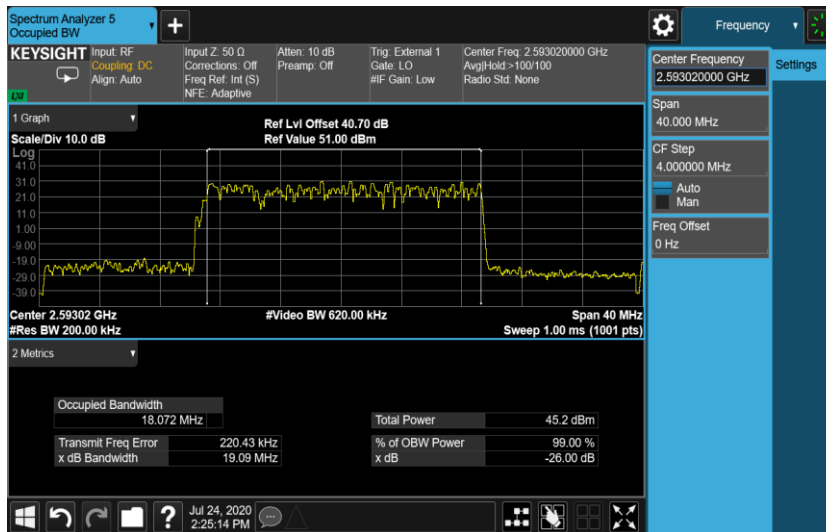
Port H, QPSK/15.0MHz Channel Position T



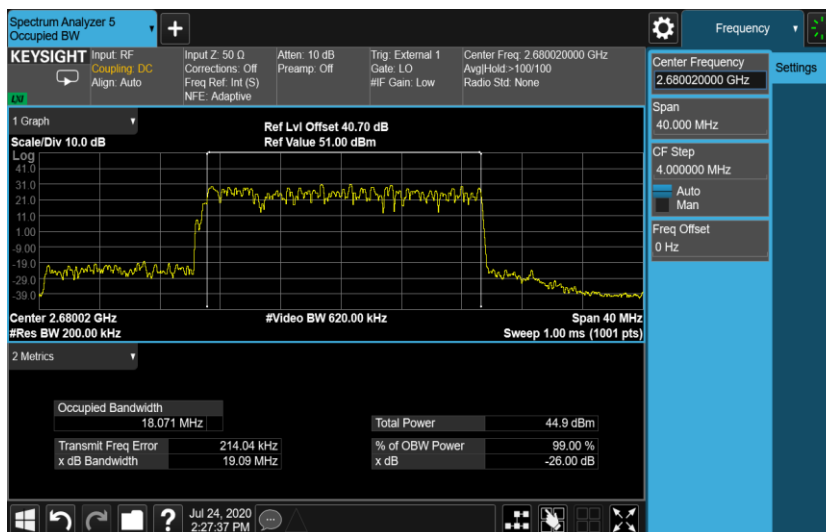
Port H, QPSK/20.0MHz Channel Position B



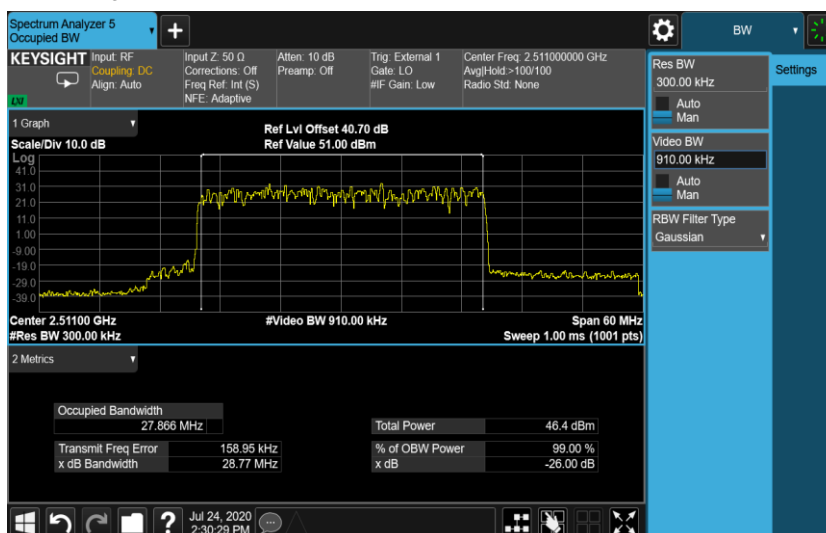
Port H, QPSK/20.0MHz Channel Position M



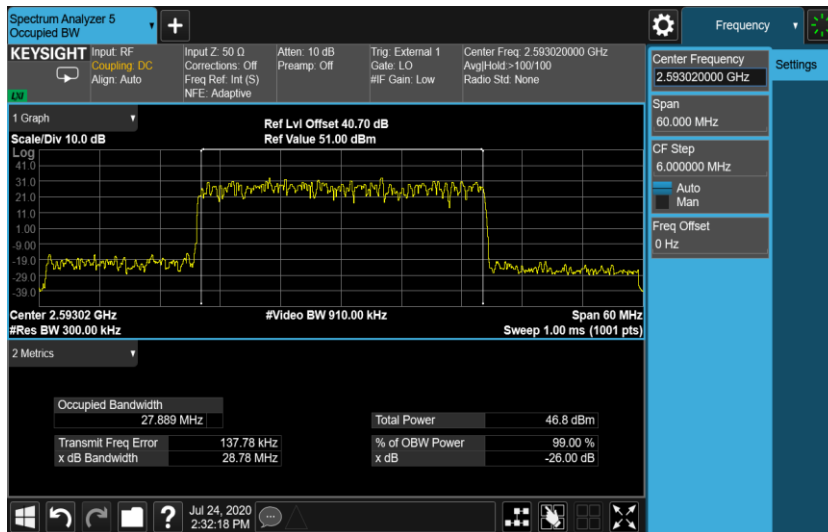
Port H, QPSK/20.0MHz Channel Position T



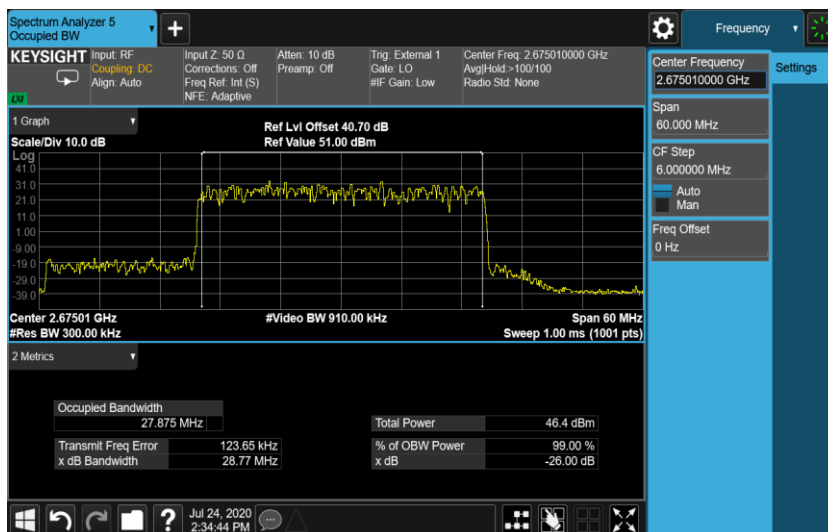
Port H, QPSK/30.0MHz Channel Position B



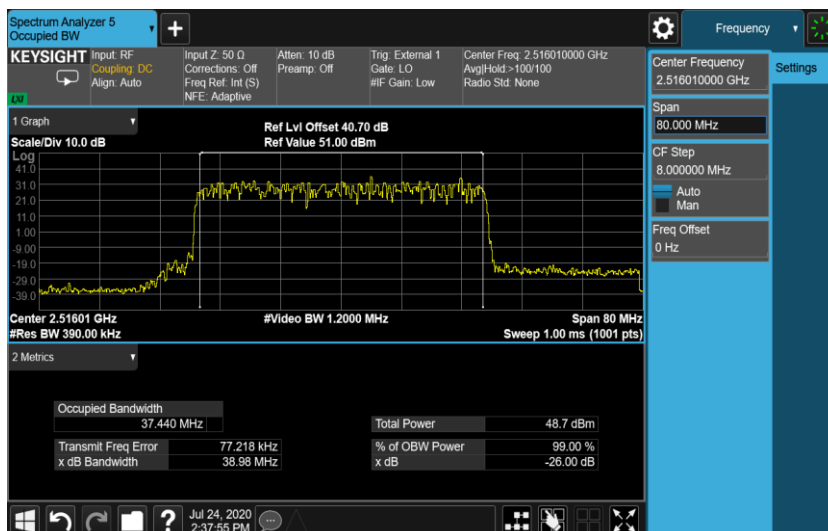
Port H, QPSK/30.0MHz Channel Position M



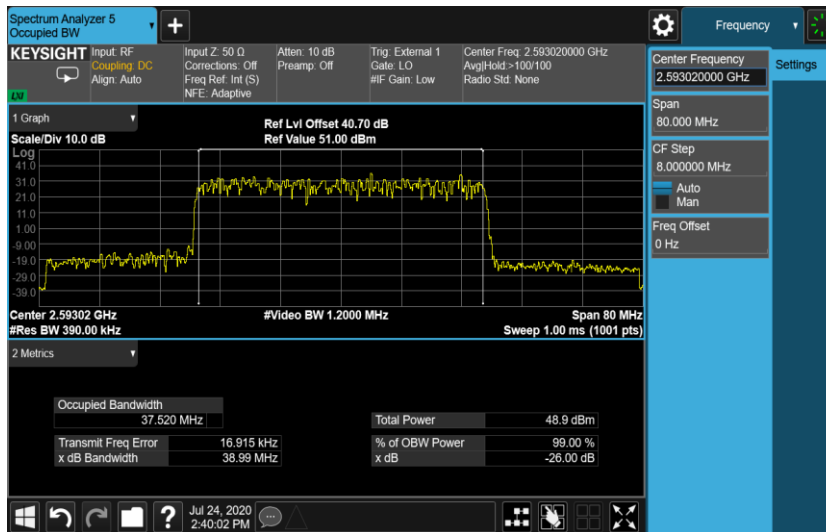
Port H, QPSK/30.0MHz Channel Position T



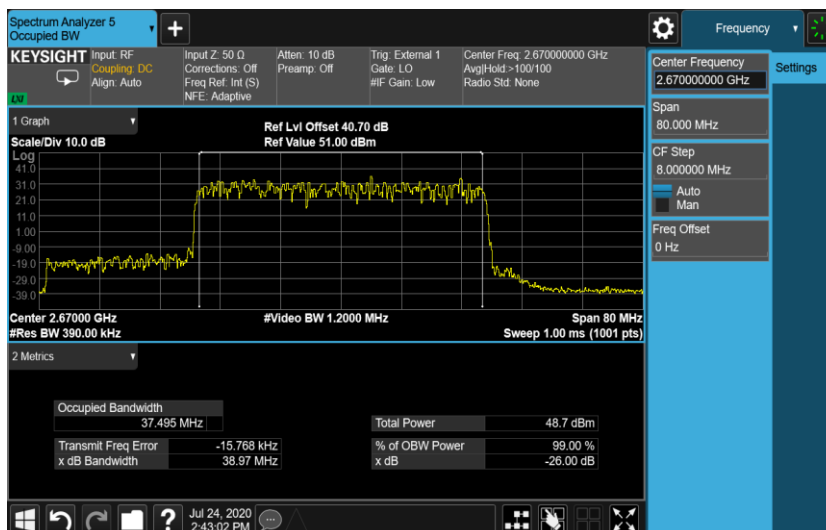
Port H, QPSK/40.0MHz Channel Position B



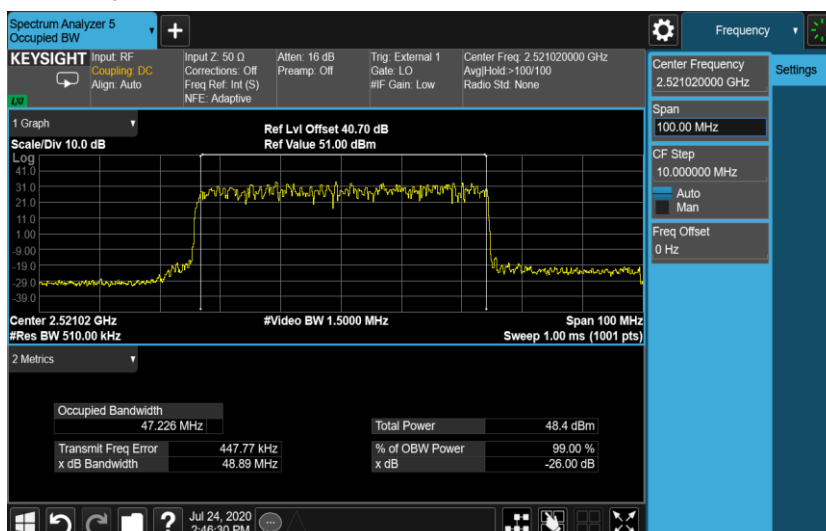
Port H, QPSK/40.0MHz Channel Position M



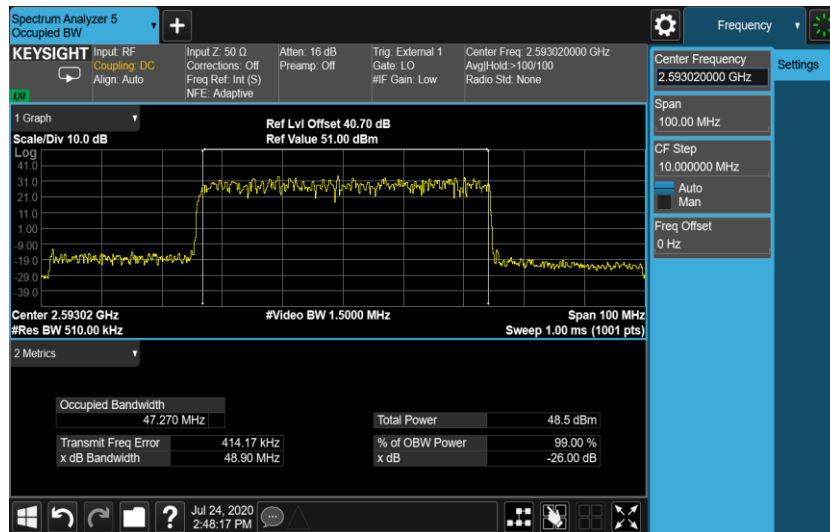
Port H, QPSK/40.0MHz Channel Position T



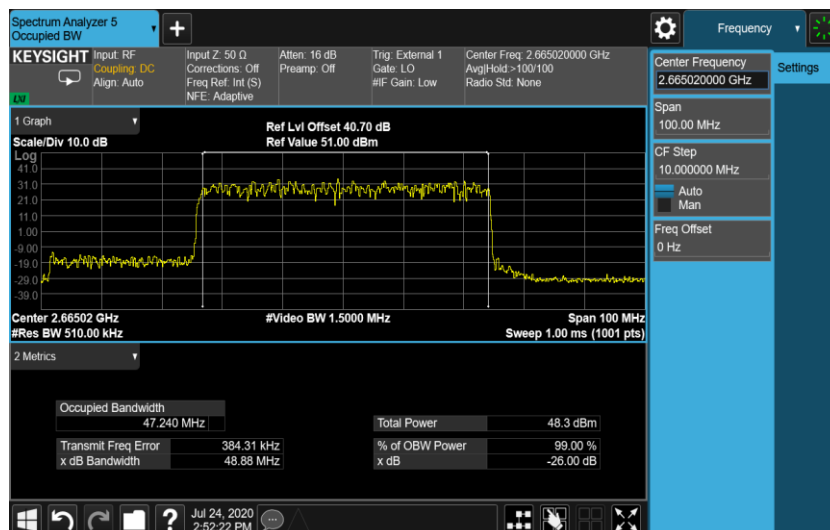
Port H, QPSK/50.0MHz Channel Position B



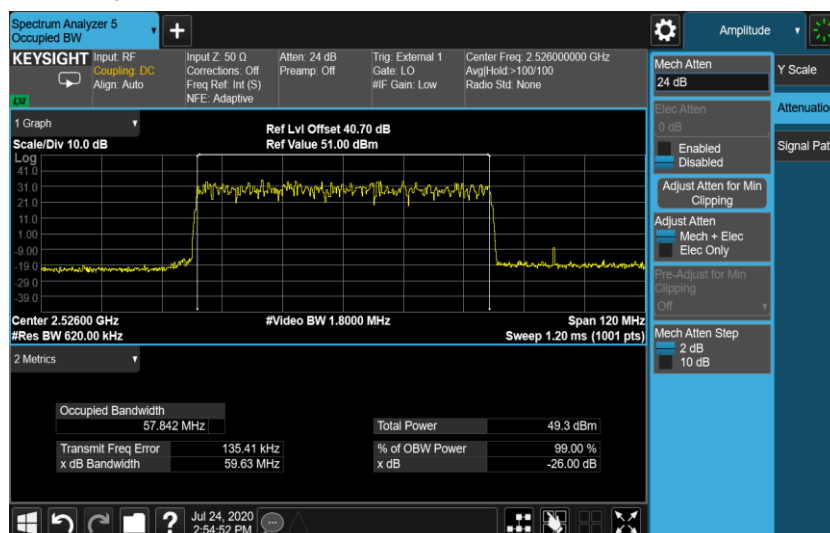
Port H, QPSK/50.0MHz Channel Position M



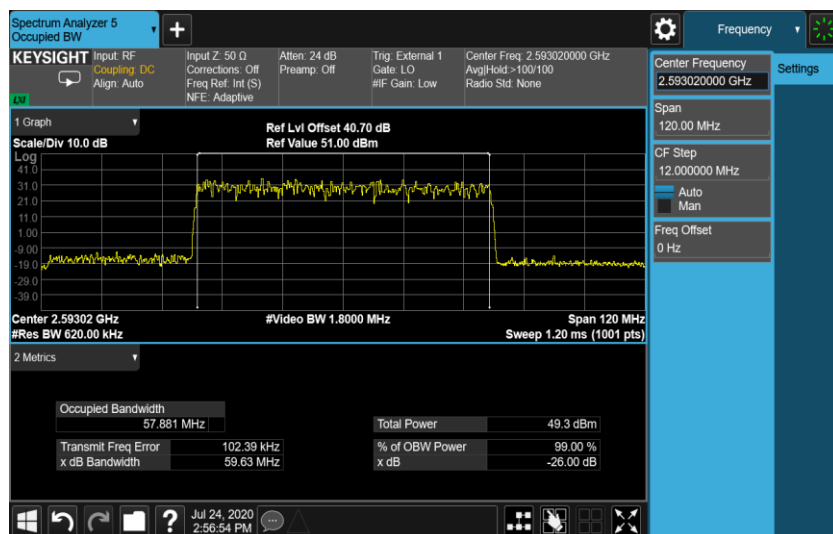
Port H, QPSK/50.0MHz Channel Position T



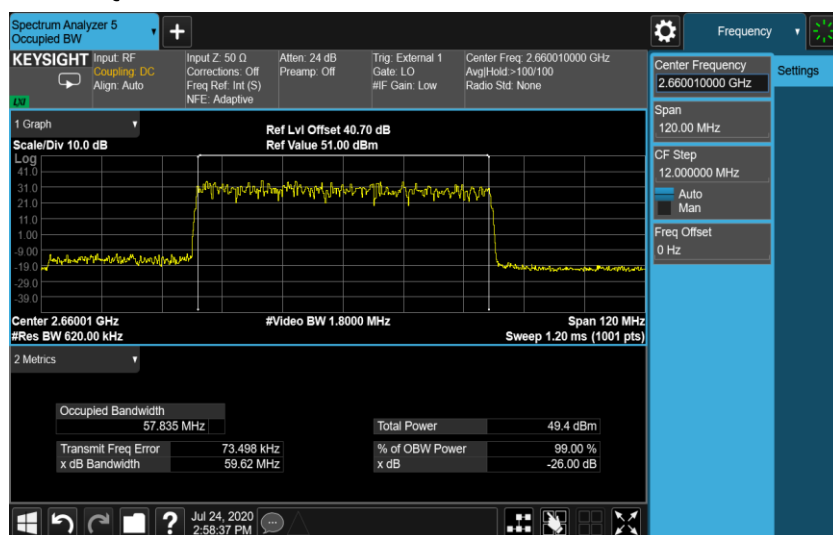
Port H, QPSK/60.0MHz Channel Position B



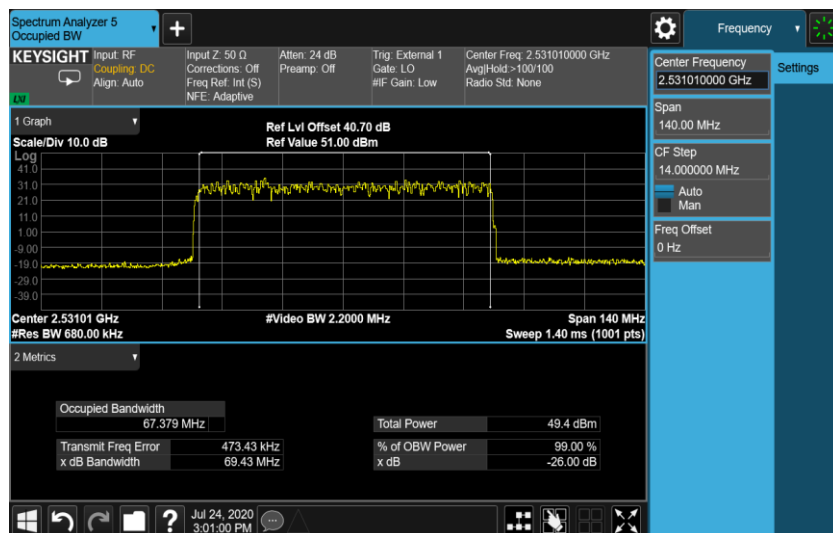
Port H, QPSK/60.0MHz Channel Position M



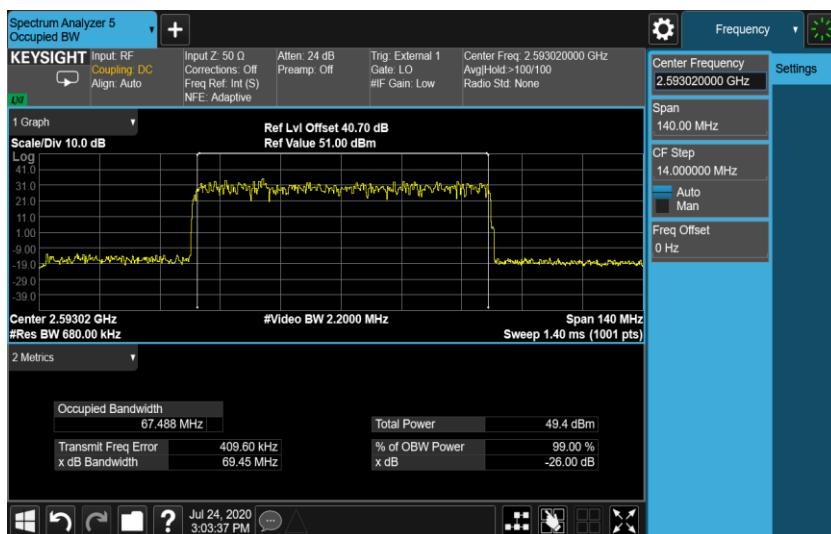
Port H, QPSK/60.0MHz Channel Position T



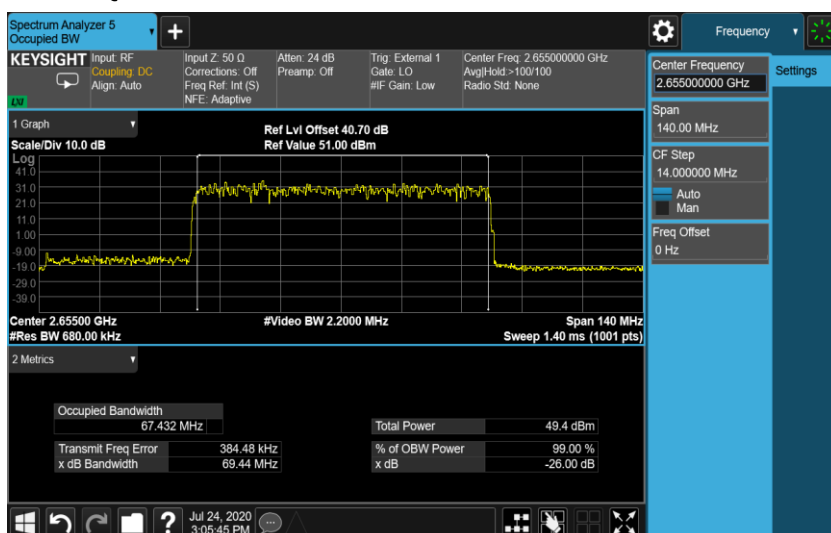
Port H, QPSK/70.0MHz Channel Position B



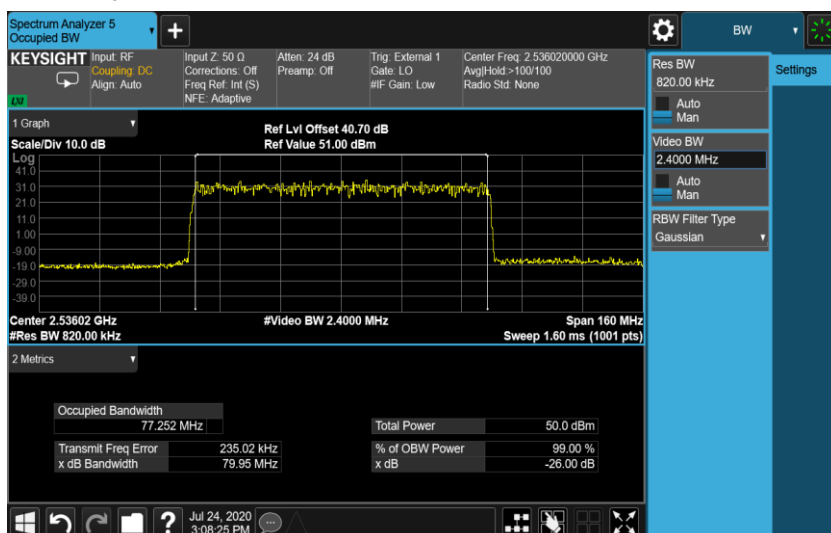
Port H, QPSK/70.0MHz Channel Position M



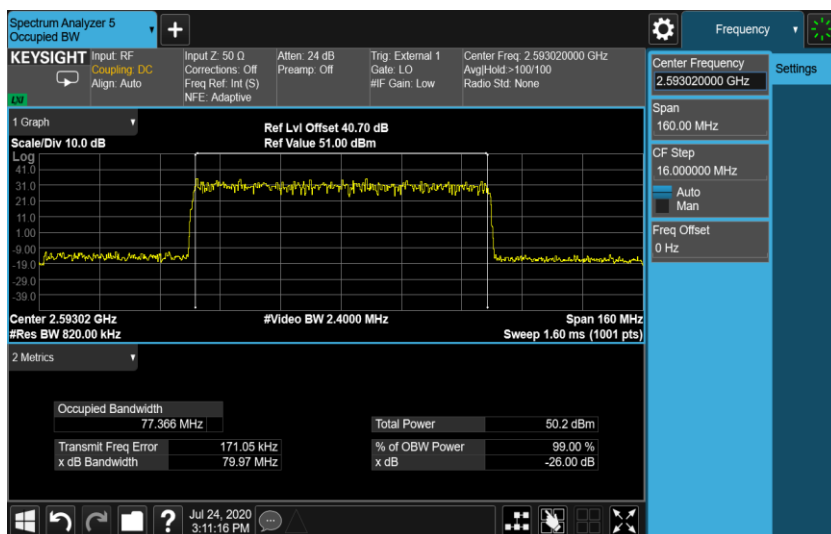
Port H, QPSK/70.0MHz Channel Position T



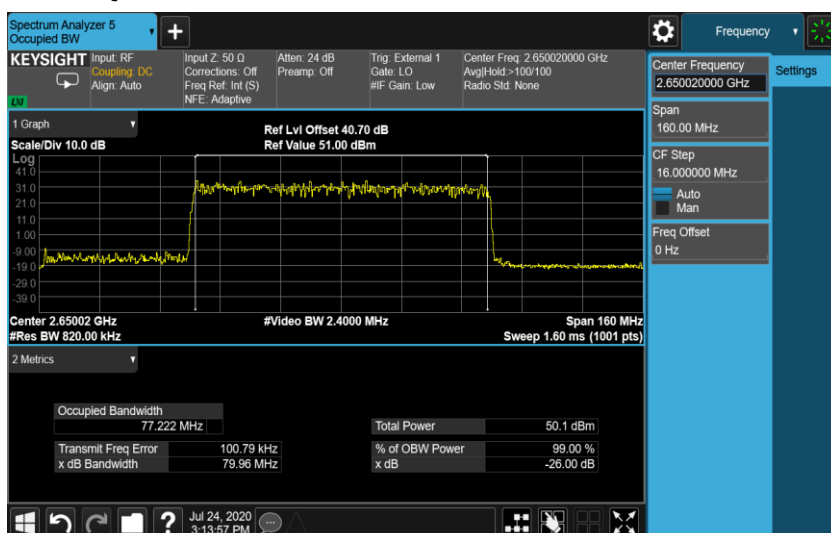
Port H, QPSK/80.0MHz Channel Position B



Port H, QPSK/80.0MHz Channel Position M



Port H, QPSK/80.0MHz Channel Position T



Port H, QPSK/90.0MHz Channel Position B

