FCC 47 CFR PART 27 SUBPART C, M
&
INDUSTRY CANADA RSS-199

TEST REPORT

For

Tablet PC

Model No.:
FCC: AIM-75S-6; AIM-75H-6; AIM-75S-6XXXXXXXXXXXXXXXX; AIM-75H-6XXXXXXXXXXXXXXXX; AIM75S-6XXXXXXXXXXXXXXXX; AIM75H-6XXXXXXXXXXXXXXXX (where "X" may be any alphanumeric character, "-" or blank)

IC: AIM-75S-6; AIM-75H-6

Trade Name: ADVANTECH

Issued to

Advantech Co., Ltd.
No. 1, Alley 20, Lane 26, Rueiguang Road, Neihu District, Taipei 114, Taiwan, R.O.C.

Issued by

Compliance Certification Services Inc.
Wugu Laboratory
No.11, Wugong 6th Rd., Wugu Dist.,
New Taipei City 24891, Taiwan. (R.O.C.)
Issued Date: September 7, 2021

Revision History

Rev.	Issue Date	Revisions	Effect Page	Revised By
00	September 7, 2021	Initial Issue	ALL	Doris Chu

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1. TEST RESULT CERTIFICATION

Applicant:	Advantech Co., Ltd. No. 1, Alley 20, Lane 26, Rueiguang Road, Neihu District, Taipei 114, Taiwan, R.O.C.
Manufacturer:	Advantech Co., Ltd. No. 1, Alley 20, Lane 26, Rueiguang Road, Neihu District, Taipei 114, Taiwan, R.O.C.
Equipment Under Test:	Tablet PC
Trade Name:	ADVANTECH
Model No.:	FCC: AIM-75S-6; AIM-75H-6; AIM-75S-6XXXXXXXXXXXXXXX; AIM-75H-6XXXXXXXXXXXXXXX; AIM75S-6XXXXXXXXXXXXXXX; AIM75H-6XXXXXXXXXXXXXXX (where “X” may be any alphanumeric character, “-” or blank) IC: AIM-75S-6; AIM-75H-6
Date of Test:	December 15, 2020 ~ September 6, 2021

APPLICABLE STANDARDS	
Standard	**TEST RESULT**
FCC Part 27, Subpart C, M, FCC Part 2 & RSS-199 Issue 3 December 2016	No non-compliance noted
Statements of Conformity	
Determination of compliance is based on the results of the compliance measurement, not taking into account measurement instrumentation uncertainty.	

The above equipment has been tested by Compliance Certification Services Inc., and found compliance with the requirements set forth in the technical standards mentioned above. The results of testing in this report apply only to the product/system, which was tested. Other similar equipment will not necessarily produce the same results due to production tolerance and measurement uncertainties.

Approved by:

Kevin Tsai
Deputy Manager
Compliance Certification Services Inc.

2. EUT DESCRIPTION

Product	Tablet PC	
Model No.	FCC: AIM-75S-6; AIM-75H-6; AIM-75S-6XXXXXXXXXXXXXXX; AIM-75H-6XXXXXXXXXXXXXXX; AIM75S-6XXXXXXXXXXXXXXX; AIM75H-6XXXXXXXXXXXXXXX (where "X" may be any alphanumeric character, "-" or blank) IC: AIM-75S-6; AIM-75H-6	
Model Discrepancy	Please see remark as below.	
Trade	ADVANTECH	
Received Date	November 2, 2020	
Power Supply	1. EUT Power by Adapter. (1) FSP / FSP045-A1BR I/P: 100-240Vac, 50-60Hz, 1.2A O/P: 5Vdc, 3.0A, 15.0W; 9.0Vdc, 3.0A, 27.0W; 12.0Vdc, 3.0A, 36.0W; 15.0Vdc, 3.0A, 45.0W; 20.0Vdc, 2.25A, 45.0W (2) GlobTek, Inc / GTM96605-GEN2-A1-T2 I/P: 100-240Vac, 50-60Hz, 1.5A O/P: 5Vdc, 4.6A; 5.8Vdc, 4.6A; 9Vdc, 4.4A; 12Vdc, 4A; 15Vdc, 3.6A; 20Vdc, 3A (3) DELTA / MEA-045AA2C I/P: 100-240V~1.0A Max. 50-60Hz O/P: 5VDC, 3A; 9VDC, 3A; 10VDC, 3A; 12VDC, 3A; 15VDC, 3A; 20VDC, 2.25A 2. EUT Power by Rechargeable Li-ion Battery. ADVANTECH / AIM-BAT-8 Rating: 3.8Vdc, 4900mAh, 18.62Wh	
Modulation Technology	LTE Band 41	QPSK, 16QAM, 64QAM
FCC Frequency Range	LTE Band 41 Channel Bandwidth: 5MHz	2498.5MHz ~2687.5MHz
	LTE Band 41 Channel Bandwidth: 10MHz	2501MHz ~2685MHz
	LTE Band 41 Channel Bandwidth: 15MHz	2503.5MHz ~2682.5MHz
	LTE Band 41 Channel Bandwidth: 20MHz	2506MHz ~2680MHz
IC Frequency Range	LTE Band 41 Channel Bandwidth: 5MHz	2502.5MHz ~ 2687.5MHz
	LTE Band 41 Channel Bandwidth: 10MHz	2505MHz ~ 2685MHz
	LTE Band 41 Channel Bandwidth: 15MHz	2507.5MHz ~ 2682.5MHz
	LTE Band 41 Channel Bandwidth: 20MHz	2510MHz ~ 2680MHz

IC Transmit Power (EIRP Power)	LTE Band 41 Channel Bandwidth: 5MHz	QPSK	25.27	dBm
		16QAM	24.39	dBm
		64QAM	24.02	dBm
	LTE Band 41 Channel Bandwidth: 10MHz	QPSK	25.60	dBm
		16QAM	24.60	dBm
		64QAM	24.05	dBm
	LTE Band 41 Channel Bandwidth: 15MHz	QPSK	25.81	dBm
		16QAM	24.87	dBm
		64QAM	24.04	dBm
	LTE Band 41 Channel Bandwidth: 20MHz	QPSK	25.85	dBm
		16QAM	25.07	dBm
		64QAM	23.92	dBm
FCC Transmit Power (EIRP Power)	LTE Band 41 Channel Bandwidth: 5MHz	QPSK	25.27	dBm
		16QAM	24.39	dBm
		64QAM	24.02	dBm
	LTE Band 41 Channel Bandwidth: 10MHz	QPSK	25.60	dBm
		16QAM	24.60	dBm
		64QAM	24.05	dBm
	LTE Band 41 Channel Bandwidth: 15MHz	QPSK	25.81	dBm
		16QAM	24.87	dBm
		64QAM	24.04	dBm
	LTE Band 41 Channel Bandwidth: 20MHz	QPSK	25.85	dBm
		16QAM	25.07	dBm
		64QAM	23.95	dBm
Antenna Specification	Antenna type: PIFA 1. YAGEO / 6036B0281601 / Main (TX) Band 41: 2.14 dBi 2. YAGEO / 6036B0281701 / Aux Band 41: 0.76 dBi			
HW Version	AX2			
SW Version	0.3.6.9_20201021.021551			
EUT Serial #	200CT32E00162			
Module	Quectel / EM06-A			

Remark:

1. For more details, refer to the User's manual of the EUT.
2. Disclaimer: Antenna information is provided by the applicant, test results of this report are applicable to the sample EUT received.
3. Disclaimer: Variant information between/among model numbers / trademarks are provided by the applicant, test results of this report are applicable to the sample EUT received of main test model name.
4. Model Discrepancy:

Model	Adapter	Tablet color
AIM-75H-6	1. GlobTek, Inc / GTM96605-GEN2-A1-T2 I/P: 100-240VAC, 50-60Hz, 1.5A O/P: 5VDC, 4.6A; 5.8VDC, 4.6A; 9VDC, 4.4A; 12VDC, 4A; 15VDC, 3.6A; 20VDC, 3A 2. DELTA / MEA-045AA2C IP: 100-240V~1.0A Max. 50-60Hz O/P: 5VDC, 3A; 9VDC, 3A; 10VDC, 3A; 12VDC, 3A; 15VDC, 3A; 20VDC, 2.25A	White
AIM-75S-6	1. FSP / FSP045-A1BR I/P: 100-240VAC, 50-60Hz, 1.2A O/P: 5.0VDC, 3.0A 15.0W; 9.0VDC, 3.0A 27.0W; 12.0VDC, 3.0A 36.0W; 15.0VDC, 3.0A 45.0W; 20.0VDC, 2.25A 45.0W	Black
AIM-75S-6XXXXXXXXXXXXXXXX; AIM-75H-6XXXXXXXXXXXXXXXX; AIM75S-6XXXXXXXXXXXXXXXX; AIM75H-6XXXXXXXXXXXXXXXX (where "X" may be any alphanumeric character, "-" or blank)	All the above models are identical except for the designation of model numbers. The suffix of (where "X" may be any alphanumeric character , "-" or blank) on model number is just for marketing purpose only.	

3. TEST METHODOLOGY

3.1 DESCRIPTION OF TEST TYPE

The EUT (model: AIM-75S-6) had been tested under operating condition.

Software used to control the EUT for staying in continuous transmitting mode was programmed.

For FCC

LTE Band 41: 2496MHz ~ 2690MHz

Three channels had been tested for each channel bandwidth.

Channel Bandwidth	5MHz		10MHz		15MHz		20MHz	
	Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)
Low CH	39675	2498.5	39700	2501	39725	2503.5	39750	2506
Middle CH	40620	2593	40620	2593	40620	2593	40620	2593
High CH	41565	2687.5	41540	2685	41515	2682.5	41490	2680

For IC

LTE Band 41: 2500MHz ~ 2690MHz

Channel Bandwidth	5MHz		10MHz		15MHz		20MHz	
	Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)
Low CH	39715	2502.5	39740	2505	39765	2507.5	39790	2510
Middle CH	40620	2593	40620	2593	40620	2593	40620	2593
High CH	41565	2687.5	41540	2685	41515	2682.5	41490	2680

3.2 THE WORST MODE OF MEASUREMENT

3.2.1 The worst mode of measurement

Radiated Emission Measurement Above 1G	
Test Condition	**Radiated Emission Above 1G**
Power supply Mode	**Mode 1: EUT power by Adapter. (GlobTek)** **Mode 2: EUT power by Adapter. (FSP)** **Mode 3: EUT power by Adapter. (DELTA)** **Mode 4: EUT power by Battery**
Worst Mode	☐ **Mode 1** ☒ **Mode 2** ☐ **Mode 3** ☐ **Mode 4**
Worst Position	☐ **Placed in fixed position.** ☒ **Placed in fixed position at X-Plane (E2-Plane)** ☐ **Placed in fixed position at Y-Plane (E1-Plane)** ☐ **Placed in fixed position at Z-Plane (H-Plane)**

Radiated Emission Measurement Below 1G	
Test Condition	**Radiated Emission Below 1G**
Power supply Mode	**Mode 1: EUT power by Adapter. (GlobTek)** **Mode 2: EUT power by Adapter. (FSP)** **Mode 3: EUT power by Adapter. (DELTA)** **Mode 4: EUT power by Battery**
Worst Mode	☐ **Mode 1** ☒ **Mode 2** ☐ **Mode 3** ☐ **Mode 4**

Remark:
1. The worst mode was record in this test report.
2. EUT pre-scanned in three axis ,X,Y, Z and two polarity, for radiated measurement. The worst case(X-Plane) were recorded in this report

4. TEST SUMMARY

FCC Standard Section	IC Standard Section	Report Section	Test Item	Result
2.1046 27.50(h)(2)	RSS-199, section 4.4	8.1	EIRP Measurement	Pass
2.1055, 27.54	RSS-199 section 4.3	8.2	Frequency Stability v.s. temperature measurement	Pass
2.1049	RSS-GEN 6.7 RSS-199, section 4.2	8.3	Occupied Bandwidth Measurement	Pass
27.50(d)(5)	RSS-199 section 4.5	8.4	Peak to Average Ratio	Pass
27.53(m)	RSS-199 section 4.5	8.5	Out of Band Emission at Antenna Terminals	Pass
27.53(m)	RSS-199 section 4.5	8.6	Spurious Radiation Measurement	Pass

5. INSTRUMENT CALIBRATION

5.1 MEASURING INSTRUMENT CALIBRATION

The measuring equipment, which was utilized in performing the tests documented herein, has been calibrated in accordance with the manufacturer's recommendations for utilizing calibration equipment, which is traceable to recognized national standards.

5.2 MEASUREMENT EQUIPMENT USED

Equipment Used for Emissions Measurement

Remark: *Each piece of equipment is scheduled for calibration once a year.*

RF Conducted Test Site					
Equipment	**Manufacturer**	**Model**	**S/N**	**Cal Date**	**Cal Due**
Coaxial Cable	Woken	WC12	CC003	06/29/2020	06/28/2021
Power Divider	Solvang Technology	STI08-0015	008	08/05/2020	08/04/2021
Radio Communication Analyzer	Anritsu	MT-8820C	6201240043	07/17/2020	07/16/2021
Thermostatic/Humidity Chamber	TAICHY	MHG-150LF	930619	09/24/2020	09/23/2021
EXA Signal Analyzer	KEYSIGHT	N9010B	MY55460167	09/07/2020	09/06/2021
Software	N/A				

Test date for August 26 ~ September 6, 2021

RF Conducted Test Site					
Equipment	**Manufacturer**	**Model**	**S/N**	**Cal Date**	**Cal Due**
Coaxial Cable	Woken	WC12	CC003	06/28/2021	06/27/2022
Coaxial Cable	Woken	WC12	CC001	06/28/2021	06/27/2022
Power Divider	Solvang Technology	STI08-0015	008	07/26/2021	07/25/2022
Thermostatic/Humidity Chamber	TAICHY	MHG-150LF	930619	09/24/2020	09/23/2021
EXA Signal Analyzer	KEYSIGHT	N9010B	MY55460167	09/07/2020	09/06/2021
Radio Communication Analyzer	Anritsu	MT-8820C	6201240043	08/19/2021	08/18/2022
Wideband Radio Communication Tester	R&S	CMW 500	116875	07/06/2021	07/05/2022
Software	E3 6.11-20180413 & Radio Test Software Ver.21 & LTE Measurement_Power-Ver. 21				

3M 966 Chamber Test Site					
Equipment	**Manufacturer**	**Model**	**S/N**	**Cal Date**	**Cal Due**
Band Reject Filters	MICRO TRONICS	BRM 50702	120	02/25/2020	02/24/2021
Bilog Antenna	Sunol Sciences	JB3	A030105	07/24/2020	07/23/2021
Coaxial Cable	HUBER SUHNER	SUCOFLEX 104PEA	20995	02/25/2020	02/24/2021
Coaxial Cable	EMCI	EMC105	190914+327109/4	09/19/2020	09/18/2021
Digital Thermo-Hygro Meter	WISEWIND	1206	D07	01/15/2020	01/14/2021
double Ridged Guide Horn Antenna	ETC	MCTD 1209	DRH13M02003	09/30/2020	09/29/2021
Loop Ant	COM-POWER	AL-130	121051	03/27/2020	03/26/2021
Pre-Amplifier	EMEC	EM330	060609	02/25/2020	02/24/2021
Pre-Amplifier	EMEC	EM01G26G	060570	06/29/2020	06/28/2021
PSA Series Spectrum Analyzer	Agilent	E4446A	MY46180323	07/24/2020	07/23/2021
S.G.	Agilent	E8257C	US42340383	07/21/2020	07/20/2021
Bilog Antenna	Sunol Sciences	JB1	A052609	07/24/2020	07/23/2021
Horn Antenna	ETS LINDGREN	3117	00055165	07/22/2020	07/21/2021
Horn Antenna	EMCO	3116	2487	05/11/2020	05/10/2021
Horn Antenna	ETS LINDGREN	3116	00026370	12/11/2020	12/10/2021
K Type Cable	Huber+Suhner	SUCOFLEX 102	29406/2	12/09/2020	12/08/2021
K Type Cable	Huber+Suhner	SUCOFLEX 102	22470/2	12/09/2020	12/08/2021
Antenna Tower	CCS	CC-A-1F	N/A	N.C.R	N.C.R
Controller	CCS	CC-C-1F	N/A	N.C.R	N.C.R
Turn Table	CCS	CC-T-1F	N/A	N.C.R	N.C.R
Software	e3 6.11-20180413				

5.3 MEASUREMENT UNCERTAINTY

PARAMETER	UNCERTAINTY
AC Powerline Conducted Emission	+/- 1.2575
Emission bandwidth, 20dB bandwidth	+/- 0.0014
RF output power, conducted	+/- 1.14
Power density, conducted	+/- 1.40
3M Semi Anechoic Chamber / 30M~200M	+/- 4.12
3M Semi Anechoic Chamber / 200M~1000M	+/- 4.68
3M Semi Anechoic Chamber / 1G~8G	+/- 5.18
3M Semi Anechoic Chamber / 8G~18G	+/- 5.47
3M Semi Anechoic Chamber / 18G~26G	+/- 3.81
3M Semi Anechoic Chamber / 26G~40G	+/- 3.87

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

6. FACILITIES AND ACCREDITATIONS

6.1 FACILITIES

All measurement facilities used to collect the measurement data are located at

☐ No.199, Chunghsen Road, Hsintien City, Taipei Hsien, Taiwan, R.O.C.
Tel: 886-2-2217-0894 / Fax: 886-2-2217-1029

☒ No.11, Wugong 6th Rd., Wugu Dist., New Taipei City 24891, Taiwan. (R.O.C.)
Tel: 886-2-2299-9720 / Fax: 886-2-2298-4045

Canada Regisreation number: 2324G

The lab has been recognized as the FCC accredited lad under the KDB 974614 D01 and is listed in the FCC pubic Access Link (PAL) database, FCC Registration No. :444940, the FCC Designation No.:TW1309

The sites are constructed in conformance with the requirements of ANSI C63.7, ANSI C63.10: 2013 and CISPR Publication 22.

6.2 EQUIPMENT

Radiated emissions are measured with one or more of the following types of linearly polarized antennas: tuned dipole, biconical, log periodic, bi-log, and/or ridged waveguide, horn. Spectrum analyzers with pre-selectors and quasi-peak detectors are used to perform radiated measurements.

Conducted emissions are measured with Line Impedance Stabilization Networks and EMI Test Receivers.

Calibrated wideband preamplifiers, coaxial cables, and coaxial attenuators are also used for making measurements.

All receiving equipment conforms to CISPR Publication 16-1, “Radio Interference Measuring Apparatus and Measurement Methods.”

7. SETUP OF EQUIPMENT UNDER TEST

7.1 SETUP CONFIGURATION OF EUT

See test photographs attached in Appendix I for the actual connections between EUT and support equipment.

7.2 SUPPORT EQUIPMENT

No	Equipment	Brand	Model	Series No.	FCC ID	IC
1	NB(J)	TOSHIBA	PT345T-00L002	N/A	PD97260H	1000M-7260H

Remark:

1. *All the equipment/cables were placed in the worst-case configuration to maximize the emission during the test.*
2. *Grounding was established in accordance with the manufacturer's requirements and conditions for the intended use.*

8. TEST PROCEDURE AND RESULT

8.1 EIRP MEASUREMENT

LIMIT

According to FCC §2.1046

FCC 27.50 (h)(2): Mobile and other user stations. Mobile stations are limited to 2.0 watts EIRP. All user stations are limited to 2.0 watts transmitter output power.

RSS-199 § 4.4,
For mobile subscriber equipment, the e.i.r.p. shall not exceed 2 W. For fixed subscriber equipment, the transmitter output power shall not exceed 2 W and the e.i.r.p. shall be limited to 40 W.

TEST PROCEDURES

CONDUCTED POWER MEASUREMENT:

1. The transmitter output power was connected to the call box.
2. Set EUT at maximum output power via call box.
3. Set Call box at lowest, middle and highest channels for each band and modulation.

TEST RESULTS

No non-compliance noted.

Temperature: 25℃ **Humidity:** 57% RH
Tested by: Jerry Chang **Test Date:** May 25, 2021

Temperature: 25℃ **Humidity:** 62% RH
Tested by: Jerry Chang **Test Date:** August 31, 2021

LTE Band 41
For IC

LTE Band 41_Uplink frequency band : 2500 to 2690 MHz											
BW (MHz)	RB Size	RB Offset	Conducted power (dBm)								
			QPSK			16QAM			64QAM		
			CH-Low 39715 2502.5 MHz	CH-Mid 40620 2593 MHz	CH-High 41565 2687.5 MHz	CH-Low 39715 2502.5 MHz	CH-Mid 40620 2593 MHz	CH-High 41565 2687.5 MHz	CH-Low 39715 2502.5 MHz	CH-Mid 40620 2593 MHz	CH-High 41565 2687.5 MHz
5	1	0	22.72	22.95	23.02	21.75	22	**22.25**	21.63	21.8	21.81
	1	24	22.78	22.95	**23.13**	21.84	21.98	22.13	21.66	21.75	**21.88**
	12	6	21.81	22.01	21.96	20.86	21.02	21.06	20.78	20.97	20.99
	25	0	21.79	21.99	22.05	20.81	21.02	21.01	20.74	20.93	20.92

LTE Band 41_Uplink frequency band : 2500 to 2690 MHz											
BW (MHz)	RB Size	RB Offset	EIRP (dBm)								
			QPSK			16QAM			64QAM		
			CH-Low 39715 2502.5 MHz	CH-Mid 40620 2593 MHz	CH-High 41565 2687.5 MHz	CH-Low 39715 2502.5 MHz	CH-Mid 40620 2593 MHz	CH-High 41565 2687.5 MHz	CH-Low 39715 2502.5 MHz	CH-Mid 40620 2593 MHz	CH-High 41565 2687.5 MHz
5	1	0	24.86	25.09	25.16	23.89	24.14	**24.39**	23.77	23.94	23.95
	1	24	24.92	25.09	**25.27**	23.98	24.12	24.27	23.8	23.89	**24.02**
	12	6	23.95	24.15	24.1	23	23.16	23.2	22.92	23.11	23.13
	25	0	23.93	24.13	24.19	22.95	23.16	23.15	22.88	23.07	23.06

LTE Band 41_Uplink frequency band : 2500 to 2690 MHz											
BW (MHz)	RB Size	RB Offset	Conducted power(dBm)								
			QPSK			16QAM			64QAM		
			CH-Low 39740 2505 MHz	CH-Mid 40620 2593 MHz	CH-High 41540 2685 MHz	CH-Low 39740 2505 MHz	CH-Mid 40620 2593 MHz	CH-High 41540 2685 MHz	CH-Low 39740 2505 MHz	CH-Mid 40620 2593 MHz	CH-High 41540 2685 MHz
10	1	0	22.96	23.24	**23.46**	22.03	22.26	**22.46**	21.81	21.72	**21.91**
	1	49	22.82	23.15	23.29	21.9	22.08	22.22	21.35	21.54	21.7
	25	12	21.88	22.01	22.14	20.89	21.02	21.11	20.69	20.78	20.9
	50	0	21.9	22.03	22.18	20.94	21	21.14	20.71	20.83	20.92

LTE Band 41_Uplink frequency band : 2500 to 2690 MHz											
BW (MHz)	RB Size	RB Offset	EIRP (dBm)								
			QPSK			16QAM			64QAM		
			CH-Low 39740 2505 MHz	CH-Mid 40620 2593 MHz	CH-High 41540 2685 MHz	CH-Low 39740 2505 MHz	CH-Mid 40620 2593 MHz	CH-High 41540 2685 MHz	CH-Low 39740 2505 MHz	CH-Mid 40620 2593 MHz	CH-High 41540 2685 MHz
10	1	0	25.1	25.38	**25.6**	24.17	24.4	**24.6**	23.95	23.86	**24.05**
	1	49	24.96	25.29	25.43	24.04	24.22	24.36	23.49	23.68	23.84
	25	12	24.02	24.15	24.28	23.03	23.16	23.25	22.83	22.92	23.04
	50	0	24.04	24.17	24.32	23.08	23.14	23.28	22.85	22.97	23.06

LTE Band 41_Uplink frequency band : 2500 to 2690 MHz											
BW (MHz)	RB Size	RB Offset	Conducted power(dBm)								
			QPSK			16QAM			64QAM		
			CH-Low 39765 2507.5 MHz	CH-Mid 40620 2593 MHz	CH-High 41515 2682.5 MHz	CH-Low 39765 2507.5 MHz	CH-Mid 40620 2593 MHz	CH-High 41515 2682.5 MHz	CH-Low 39765 2507.5 MHz	CH-Mid 40620 2593 MHz	CH-High 41515 2682.5 MHz
15	1	0	23.23	23.37	**23.67**	22.49	22.5	**22.73**	21.55	21.46	**21.9**
	1	74	22.83	23.22	23.26	22.03	22.32	22.6	20.93	21.25	21.4
	36	18	21.88	22.02	22.04	20.92	20.99	20.97	20.68	20.73	20.77
	75	0	21.87	22.13	22.24	20.99	21.09	21.1	20.73	20.81	20.76

LTE Band 41_Uplink frequency band : 2500 to 2690 MHz											
BW (MHz)	RB Size	RB Offset	EIRP (dBm)								
			QPSK			16QAM			64QAM		
			CH-Low 39765 2507.5 MHz	CH-Mid 40620 2593 MHz	CH-High 41515 2682.5 MHz	CH-Low 39765 2507.5 MHz	CH-Mid 40620 2593 MHz	CH-High 41515 2682.5 MHz	CH-Low 39765 2507.5 MHz	CH-Mid 40620 2593 MHz	CH-High 41515 2682.5 MHz
15	1	0	25.37	25.51	**25.81**	24.63	24.64	**24.87**	23.69	23.6	**24.04**
	1	74	24.97	25.36	25.4	24.17	24.46	24.74	23.07	23.39	23.54
	36	18	24.02	24.16	24.18	23.06	23.13	23.11	22.82	22.87	22.91
	75	0	24.01	24.27	24.38	23.13	23.23	23.24	22.87	22.95	22.9

LTE Band 41_Uplink frequency band : 2500 to 2690 MHz											
BW (MHz)	RB Size	RB Offset	Conducted power(dBm)								
			QPSK			16QAM			64QAM		
			CH-Low 39790 2510 MHz	CH-Mid 40620 2593 MHz	CH-High 41490 2680 MHz	CH-Low 39790 2510 MHz	CH-Mid 40620 2593 MHz	CH-High 41490 2680 MHz	CH-Low 39790 2510 MHz	CH-Mid 40620 2593 MHz	CH-High 41490 2680 MHz
20	1	0	23.64	**23.71**	23.67	22.5	22.83	**22.93**	**21.78**	21.64	21.67
	1	99	23.27	23.41	23.53	22.3	22.76	22.53	21.41	21.55	21.47
	50	24	21.98	22.15	22.2	21.01	21.14	21.16	20.2	20.57	20.56
	100	0	22.14	22.31	22.2	21.12	21.29	21.07	20.7	20.8	20.87

LTE Band 41_Uplink frequency band : 2500 to 2690 MHz											
BW (MHz)	RB Size	RB Offset	EIRP (dBm)								
			QPSK			16QAM			64QAM		
			CH-Low 39790 2510 MHz	CH-Mid 40620 2593 MHz	CH-High 41490 2680 MHz	CH-Low 39790 2510 MHz	CH-Mid 40620 2593 MHz	CH-High 41490 2680 MHz	CH-Low 39790 2510 MHz	CH-Mid 40620 2593 MHz	CH-High 41490 2680 MHz
20	1	0	25.78	**25.85**	25.81	24.64	24.97	**25.07**	**23.92**	23.78	23.81
	1	99	25.41	25.55	25.67	24.44	24.9	24.67	23.55	23.69	23.61
	50	24	24.12	24.29	24.34	23.15	23.28	23.3	22.34	22.71	22.7
	100	0	24.28	24.45	24.34	23.26	23.43	23.21	22.84	22.94	23.01

For FCC

LTE Band 41_Uplink frequency band : 2496 to 2690 MHz											
BW (MHz)	RB Size	RB Offset	Conducted power (dBm)								
			QPSK			16QAM			64QAM		
			CH-Low 39675	CH-Mid 40620	CH-High 41565	CH-Low 39675	CH-Mid 40620	CH-High 41565	CH-Low 39675	CH-Mid 40620	CH-High 41565
			2498.5 MHz	2593 MHz	2687.5 MHz	2498.5 MHz	2593 MHz	2687.5 MHz	2498.5 MHz	2593 MHz	2687.5 MHz
5	1	0	22.78	22.95	23.02	21.8	22	**22.25**	21.66	21.8	21.81
	1	24	22.81	22.95	**23.13**	21.88	21.98	22.13	21.69	21.75	**21.88**
	12	6	21.85	22.01	21.96	20.89	21.02	21.06	20.82	20.97	20.99
	25	0	21.84	21.99	22.05	20.84	21.02	21.01	20.77	20.93	20.92

LTE Band 41_Uplink frequency band : 2496 to 2690 MHz											
BW (MHz)	RB Size	RB Offset	EIRP (dBm)								
			QPSK			16QAM			64QAM		
			CH-Low 39675	CH-Mid 40620	CH-High 41565	CH-Low 39675	CH-Mid 40620	CH-High 41565	CH-Low 39675	CH-Mid 40620	CH-High 41565
			2498.5 MHz	2593 MHz	2687.5 MHz	2498.5 MHz	2593 MHz	2687.5 MHz	2498.5 MHz	2593 MHz	2687.5 MHz
5	1	0	24.92	25.09	25.16	23.94	24.14	**24.39**	23.8	23.94	23.95
	1	24	24.95	25.09	**25.27**	24.02	24.12	24.27	23.83	23.89	**24.02**
	12	6	23.99	24.15	24.1	23.03	23.16	23.2	22.96	23.11	23.13
	25	0	23.98	24.13	24.19	22.98	23.16	23.15	22.91	23.07	23.06

LTE Band 41_Uplink frequency band : 2496 to 2690 MHz											
BW (MHz)	RB Size	RB Offset	Conducted power(dBm)								
			QPSK			16QAM			64QAM		
			CH-Low 39700 2501 MHz	CH-Mid 40620 2593 MHz	CH-High 41540 2685 MHz	CH-Low 39700 2501 MHz	CH-Mid 40620 2593 MHz	CH-High 41540 2685 MHz	CH-Low 39700 2501 MHz	CH-Mid 40620 2593 MHz	CH-High 41540 2685 MHz
10	1	0	22.99	23.24	**23.46**	22.06	22.26	**22.46**	21.84	21.72	**21.91**
	1	49	22.85	23.15	23.29	21.93	22.08	22.22	21.38	21.54	21.7
	25	12	21.91	22.01	22.14	20.93	21.02	21.11	20.72	20.78	20.9
	50	0	21.94	22.03	22.18	20.97	21	21.14	20.74	20.83	20.92

LTE Band 41_Uplink frequency band : 2496 to 2690 MHz											
BW (MHz)	RB Size	RB Offset	EIRP (dBm)								
			QPSK			16QAM			64QAM		
			CH-Low 39700 2501 MHz	CH-Mid 40620 2593 MHz	CH-High 41540 2685 MHz	CH-Low 39700 2501 MHz	CH-Mid 40620 2593 MHz	CH-High 41540 2685 MHz	CH-Low 39700 2501 MHz	CH-Mid 40620 2593 MHz	CH-High 41540 2685 MHz
10	1	0	25.13	25.38	**25.6**	24.2	24.4	**24.6**	23.98	23.86	**24.05**
	1	49	24.99	25.29	25.43	24.07	24.22	24.36	23.52	23.68	23.84
	25	12	24.05	24.15	24.28	23.07	23.16	23.25	22.86	22.92	23.04
	50	0	24.08	24.17	24.32	23.11	23.14	23.28	22.88	22.97	23.06

LTE Band 41_Uplink frequency band : 2496 to 2690 MHz											
BW (MHz)	RB Size	RB Offset	Conducted power(dBm)								
			QPSK			16QAM			64QAM		
			CH-Low 39725 2503.5 MHz	CH-Mid 40620 2593 MHz	CH-High 41515 2682.5 MHz	CH-Low 39725 2503.5 MHz	CH-Mid 40620 2593 MHz	CH-High 41515 2682.5 MHz	CH-Low 39725 2503.5 MHz	CH-Mid 40620 2593 MHz	CH-High 41515 2682.5 MHz
15	1	0	23.27	23.37	**23.67**	22.52	22.5	**22.73**	21.59	21.46	**21.9**
	1	74	22.87	23.22	23.26	22.06	22.32	22.6	20.96	21.25	21.4
	36	18	21.92	22.02	22.04	20.95	20.99	20.97	20.71	20.73	20.77
	75	0	21.82	22.13	22.24	21.02	21.09	21.1	20.76	20.81	20.76

LTE Band 41_Uplink frequency band : 2496 to 2690 MHz											
BW (MHz)	RB Size	RB Offset	EIRP (dBm)								
			QPSK			16QAM			64QAM		
			CH-Low 39725 2503.5 MHz	CH-Mid 40620 2593 MHz	CH-High 41515 2682.5 MHz	CH-Low 39725 2503.5 MHz	CH-Mid 40620 2593 MHz	CH-High 41515 2682.5 MHz	CH-Low 39725 2503.5 MHz	CH-Mid 40620 2593 MHz	CH-High 41515 2682.5 MHz
15	1	0	25.41	25.51	**25.81**	24.66	24.64	**24.87**	23.73	23.6	**24.04**
	1	74	25.01	25.36	25.4	24.2	24.46	24.74	23.1	23.39	23.54
	36	18	24.06	24.16	24.18	23.09	23.13	23.11	22.85	22.87	22.91
	75	0	23.96	24.27	24.38	23.16	23.23	23.24	22.9	22.95	22.9

LTE Band 41_Uplink frequency band : 2496 to 2690 MHz											
BW (MHz)	RB Size	RB Offset	Conducted power(dBm)								
			QPSK			16QAM			64QAM		
			CH-Low 39750 2506 MHz	CH-Mid 40620 2593 MHz	CH-High 41490 2680 MHz	CH-Low 39750 2506 MHz	CH-Mid 40620 2593 MHz	CH-High 41490 2680 MHz	CH-Low 39750 2506 MHz	CH-Mid 40620 2593 MHz	CH-High 41490 2680 MHz
20	1	0	23.68	**23.71**	23.67	22.8	22.83	**22.93**	**21.81**	21.64	21.67
	1	99	23.31	23.41	23.53	22.34	22.76	22.53	21.44	21.55	21.47
	50	24	22	22.15	22.2	21.05	21.14	21.16	20.5	20.57	20.56
	100	0	22.17	22.31	22.2	21.15	21.29	21.07	20.74	20.8	20.87

LTE Band 41_Uplink frequency band : 2496 to 2690 MHz											
BW (MHz)	RB Size	RB Offset	EIRP (dBm)								
			QPSK			16QAM			64QAM		
			CH-Low 39750 2506 MHz	CH-Mid 40620 2593 MHz	CH-High 41490 2680 MHz	CH-Low 39750 2506 MHz	CH-Mid 40620 2593 MHz	CH-High 41490 2680 MHz	CH-Low 39750 2506 MHz	CH-Mid 40620 2593 MHz	CH-High 41490 2680 MHz
20	1	0	25.82	**25.85**	25.81	24.94	24.97	**25.07**	**23.95**	23.78	23.81
	1	99	25.45	25.55	25.67	24.48	24.9	24.67	23.58	23.69	23.61
	50	24	24.14	24.29	24.34	23.19	23.28	23.3	22.64	22.71	22.7
	100	0	24.31	24.45	24.34	23.29	23.43	23.21	22.88	22.94	23.01

8.2 FREQUENCY STABILITY MEASUREMENT

LIMIT

According to the FCC part 27.54 shall be tested the frequency stability. The rule is defined that" The frequency stability shall be sufficient to ensure that the fundamental emissions stay within the authorized bands of operation.

According to RSS -199 section 4.3,

The transmitter frequency stability limit shall be determined as follows:

(a) the frequency offset shall be measured according to the procedure described in RSS-Gen and recorded

(b) using a resolution bandwidth equal to that permitted within the 1 MHz band immediately outside the channel edge, as found in section 4.5, reference points will be selected at the unwanted emission limits, which comply with the attenuation specified in section 4.5 for the type of device under test, on the emission mask of the lowest and highest channels. The frequency at these points shall be recorded as fL and fH respectively

The applicant shall ensure compliance with frequency stability requirements by showing that fL minus the frequency offset and fH plus the frequency offset is within the frequency range in which the equipment is designed to operate.

TEST PROCEDURE

Use Anritsu 8820 with frequency Error measurement capability.
Temp = -30 to +50℃
Voltage= 85% to 115% of the nominal value for AC powered equipment.

NOTE: *The frequency error was recorded frequency error from the communication simulator.*

TEST RESULTS

Temperature: 25℃ **Humidity:** 57% RH

Tested by: Jerry Chang **Test Date:** May 25, 2021

FREQUENCY STABILITY V.S. TEMPERATURE MEASUREMENT:
LTE Band 41

Reference Freq.:	LTE B41 Mid Channel	2593	MHz	10M QPSK CH 40620
Power Supply Vdc	Temp. (℃)	Freq. (MHz)	Delta (Hz)	Limit = +/- 2.5 ppm (Hz)
Freq. ERROR vs. VOLTAGE				
5.5	25	2592.999944	-56	6483
5	25	2592.999970	-30	6483
4.75	25	2593.000041	41	6483
3.7 (End Point)	25	2593.000022	22	6483
Freq. ERROR vs. Temp.				
5	-30	2593.000052	52	6483
5	-20	2593.000008	8	6483
5	-10	2592.999985	-15	6483
5	0	2592.999977	-23	6483
5	10	2593.000013	13	6483
5	20	2593.000061	61	6483
5	30	2592.999977	-23	6483
5	40	2593.000024	24	6483
5	50	2593.000079	79	6483

8.3 OCCUPIED BANDWIDTH MEASUREMENT

LIMITS

The width of a frequency band such that, below the lower and above the upper frequency limits, the mean powers emitted are each equal to a specified percentage 0.5 % of the total mean power of a given emission.

TEST PROCEDURES

KDB 971168 D01 Power Meas License Digital Systems – Section 4.2

1. The occupied bandwidth was measured with the spectrum analyzer at the lowest, middle and highest channels in each band and different modulation. The 99% and -26dB bandwidth was measured and recorded.
2. RBW = 1-5% of the expected OBW
3. VBW ≥ 3 x RBW
4. Detector = Peak
5. Trace mode = max. hold

TEST RESULTS

Temperature:	23.1℃	**Humidity:**	53.2% RH
Tested by:	Jerry Chang	**Test Date:**	March 24, 2021
Temperature:	25.8℃	**Humidity:**	57.4% RH
Tested by:	Jerry Chang	**Test Date:**	August 26, 2021
Temperature:	25℃	**Humidity:**	62% RH
Tested by:	Jerry Chang	**Test Date:**	August 31, 2021

LTE Band 41
For IC low ch

LTE BAND 41 Channel bandwidth: 5MHz							
Freq. (MHz)	CH	99% BW (MHz)			26 dB BW (MHz)		
		QPSK	16QAM	64QAM	QPSK	16QAM	64QAM
2502.5	39715	**4.4854**	**4.4907**	**4.4737**	**4.954**	**4.984**	**4.945**

LTE BAND 41 Channel bandwidth: 10MHz							
Freq. (MHz)	CH	99% BW (MHz)			26 dB BW (MHz)		
		QPSK	16QAM	64QAM	QPSK	16QAM	64QAM
2505.0	39740	**8.9369**	**8.9381**	**8.9590**	**9.690**	**9.809**	**9.830**

LTE BAND 41 Channel bandwidth: 15MHz							
Freq. (MHz)	CH	99% BW (MHz)			26 dB BW (MHz)		
		QPSK	16QAM	64QAM	QPSK	16QAM	64QAM
2507.5	39765	**13.453**	**13.425**	**13.424**	**14.46**	**14.63**	**14.43**

LTE BAND 41 Channel bandwidth: 20MHz							
Freq. (MHz)	CH	99% BW (MHz)			26 dB BW (MHz)		
		QPSK	16QAM	64QAM	QPSK	16QAM	64QAM
2510.0	39790	**17.892**	**17.854**	**17.923**	**19.34**	**19.33**	**19.27**

LTE BAND 41 Channel bandwidth: 5MHz							
Freq. (MHz)	CH	99% BW (MHz)			26 dB BW (MHz)		
		QPSK	16QAM	64QAM	QPSK	16QAM	64QAM
2498.5	39675	4.4865	4.4866	4.4800	5.075	**4.976**	**4.984**
2593.0	40620	4.4835	4.4861	**4.4839**	5.059	4.961	4.973
2687.5	41565	**4.4920**	**4.4879**	4.4826	**5.091**	4.975	4.921

LTE BAND 41 Channel bandwidth: 10MHz							
Freq. (MHz)	CH	99% BW (MHz)			26 dB BW (MHz)		
		QPSK	16QAM	64QAM	QPSK	16QAM	64QAM
2501.0	39700	8.9651	**8.9467**	8.9693	9.835	**9.851**	9.890
2593.0	40620	8.9651	8.9289	8.9700	**9.852**	9.517	**10.04**
2685.0	41540	**8.9699**	8.9462	**8.9725**	9.840	9.730	9.981

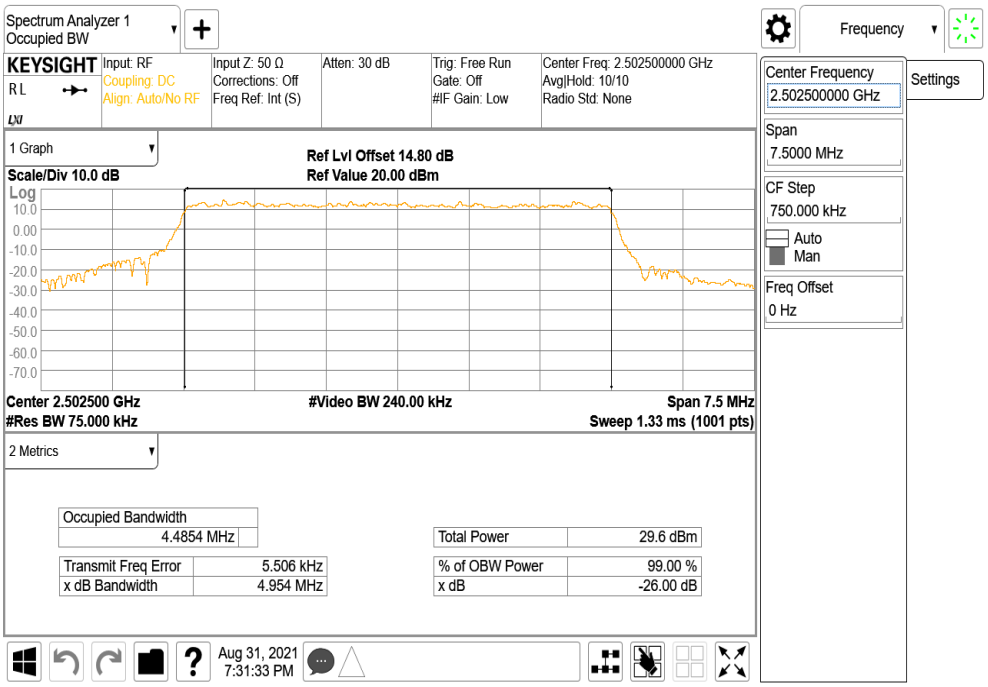
LTE BAND 41 Channel bandwidth: 15MHz							
Freq. (MHz)	CH	99% BW (MHz)			26 dB BW (MHz)		
		QPSK	16QAM	64QAM	QPSK	16QAM	64QAM
2503.5	39725	**13.481**	13.431	13.442	**14.69**	14.42	14.68
2593.0	40620	13.445	**13.435**	13.449	14.10	**14.51**	**15.07**
2682.5	41515	13.025	13.137	**13.466**	13.83	13.97	14.93

LTE BAND 41 Channel bandwidth: 20MHz							
Freq. (MHz)	CH	99% BW (MHz)			26 dB BW (MHz)		
		QPSK	16QAM	64QAM	QPSK	16QAM	64QAM
2506.0	39750	17.897	17.931	17.905	19.82	19.41	19.47
2593.0	40620	17.912	17.924	17.919	19.46	19.61	19.69
2680.0	41490	**17.917**	**17.936**	**17.925**	**19.89**	**19.74**	**19.78**

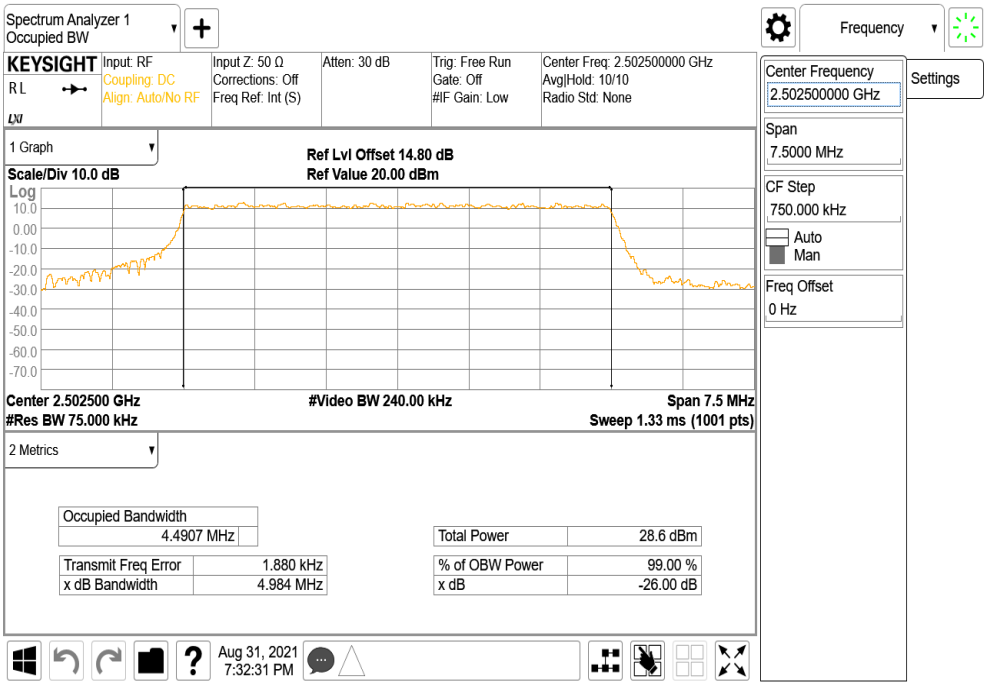
LTE Band 41

For IC low ch

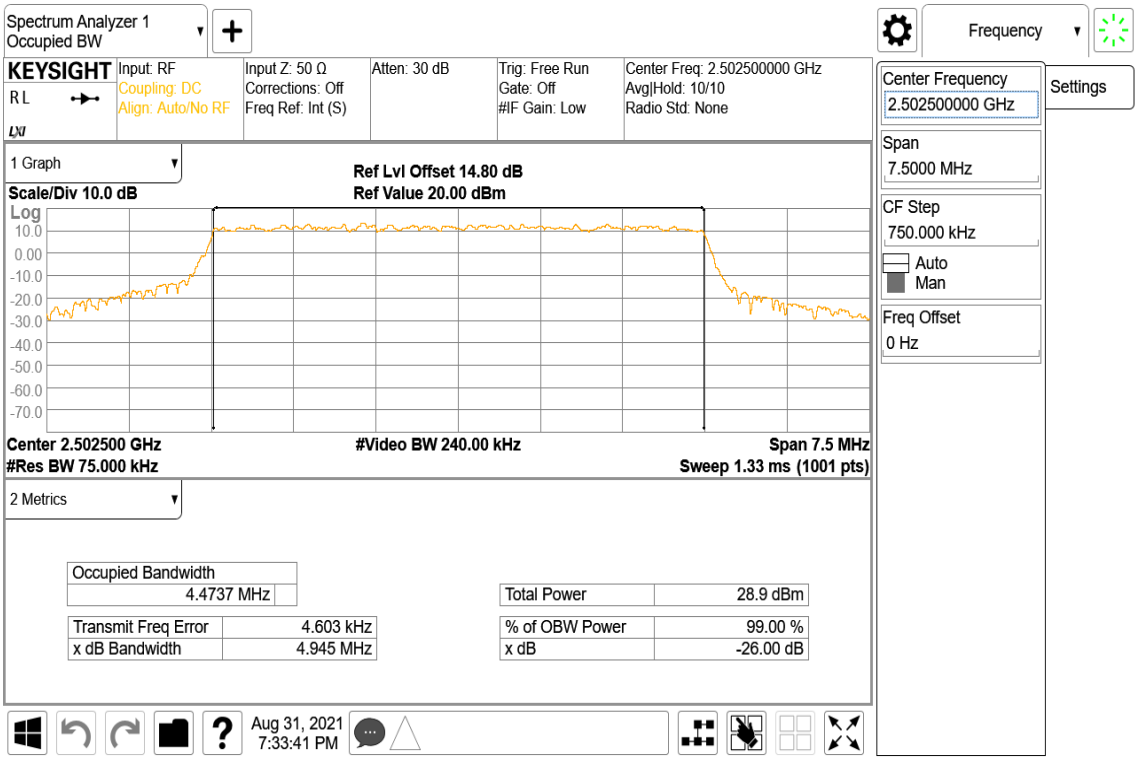
CHANNEL BANDWIDTH: 5MHz / QPSK / RB =25, RB Offset = 0 CH Low



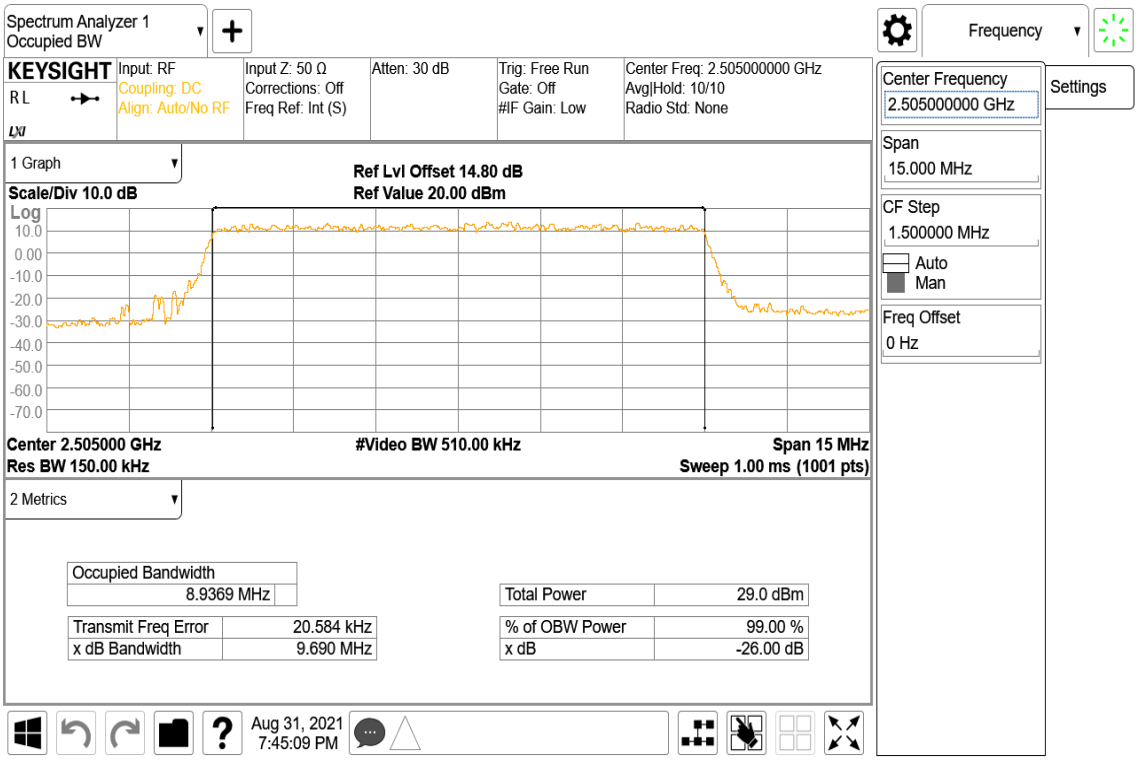
CHANNEL BANDWIDTH: 5MHz / 16QAM / RB =25, RB Offset = 0 CH Low



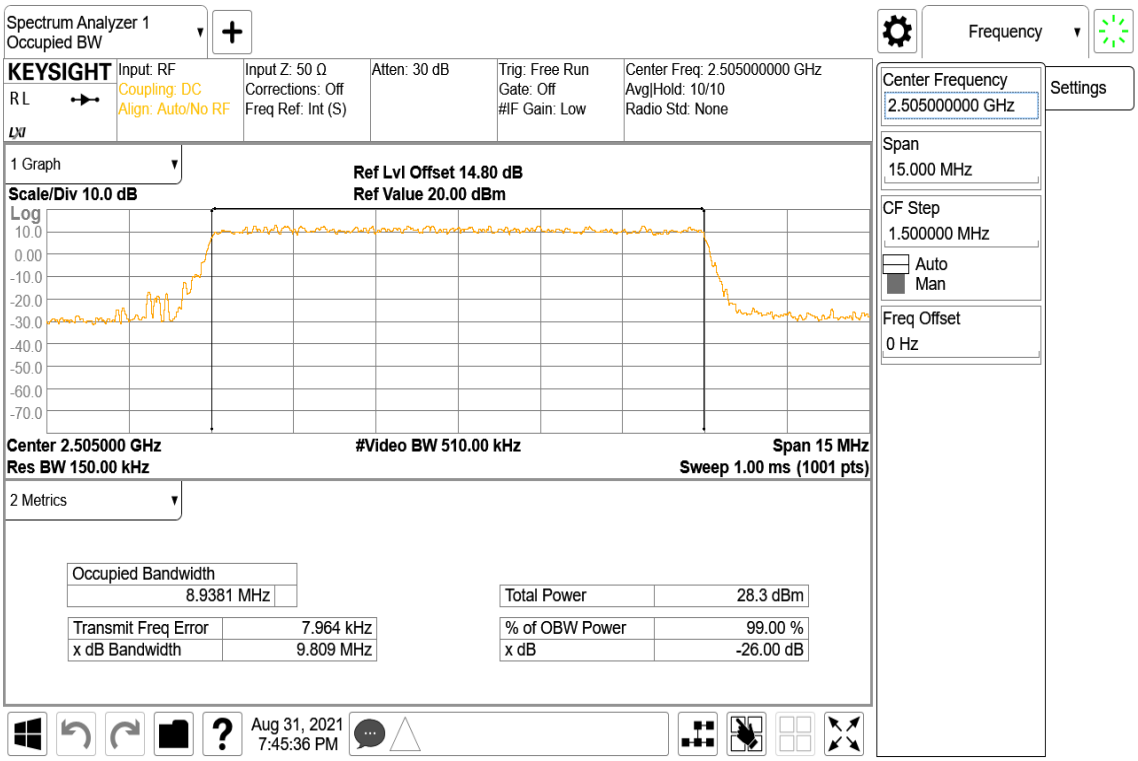
CHANNEL BANDWIDTH: 5MHz / 64QAM / RB =25, RB Offset = 0
CH Low



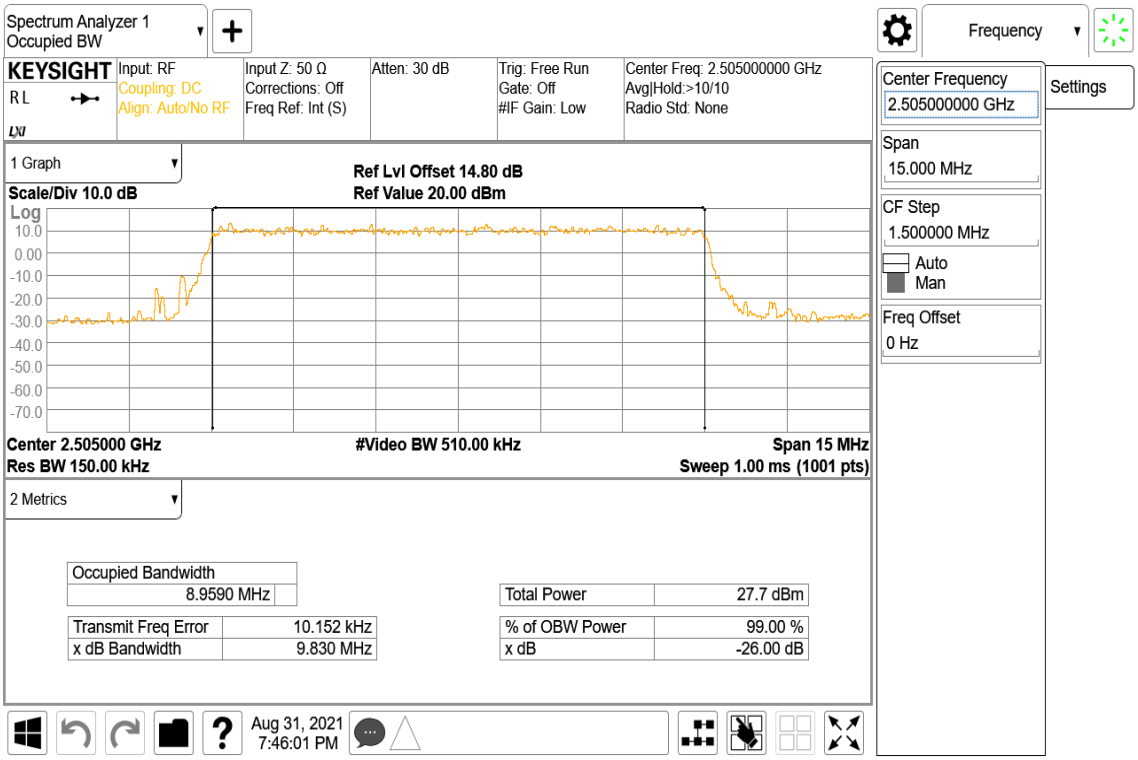
CHANNEL BANDWIDTH: 10MHz / QPSK / RB =50, RB Offset = 0
CH Low



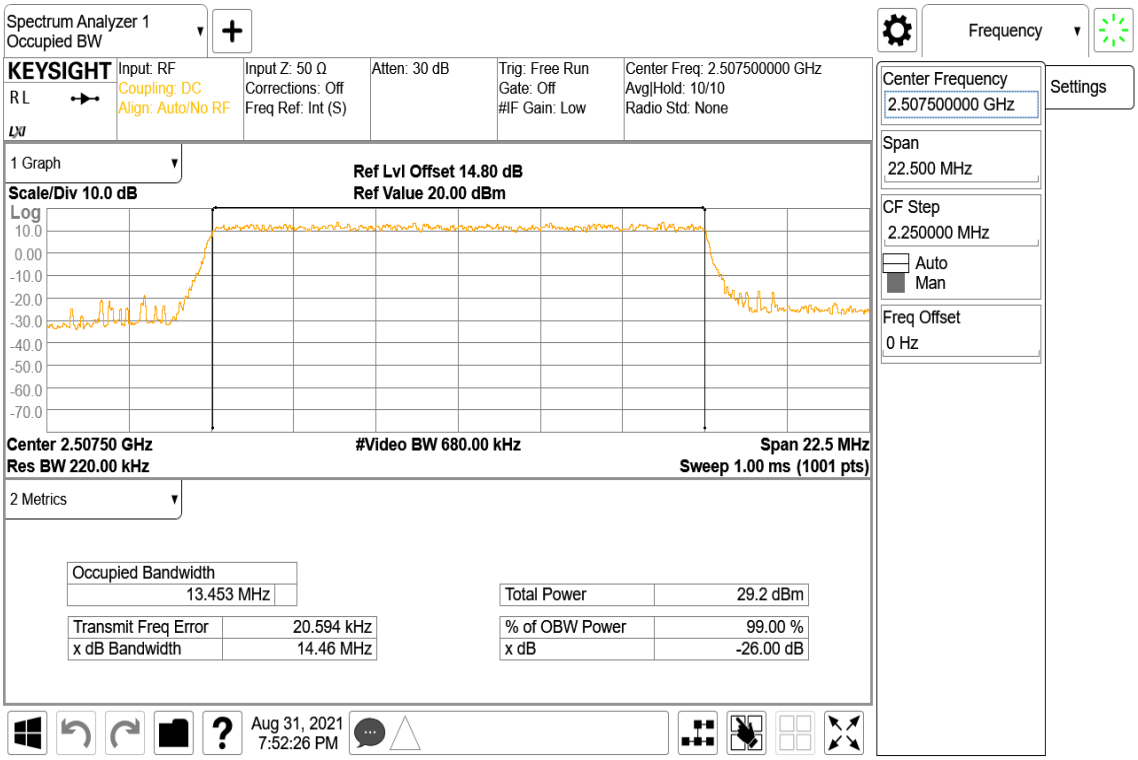
CHANNEL BANDWIDTH: 10MHz / 16QAM / RB =50, RB Offset = 0
CH Low



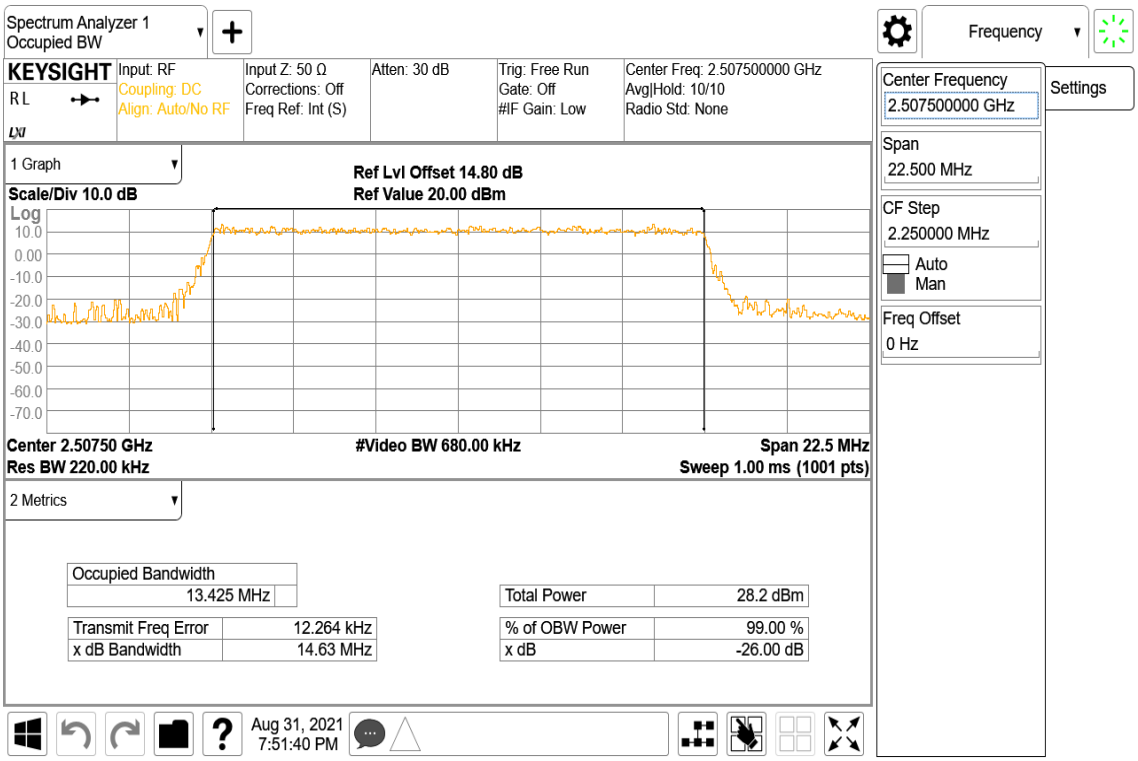
CHANNEL BANDWIDTH: 10MHz / 64QAM / RB =50, RB Offset = 0
CH Low



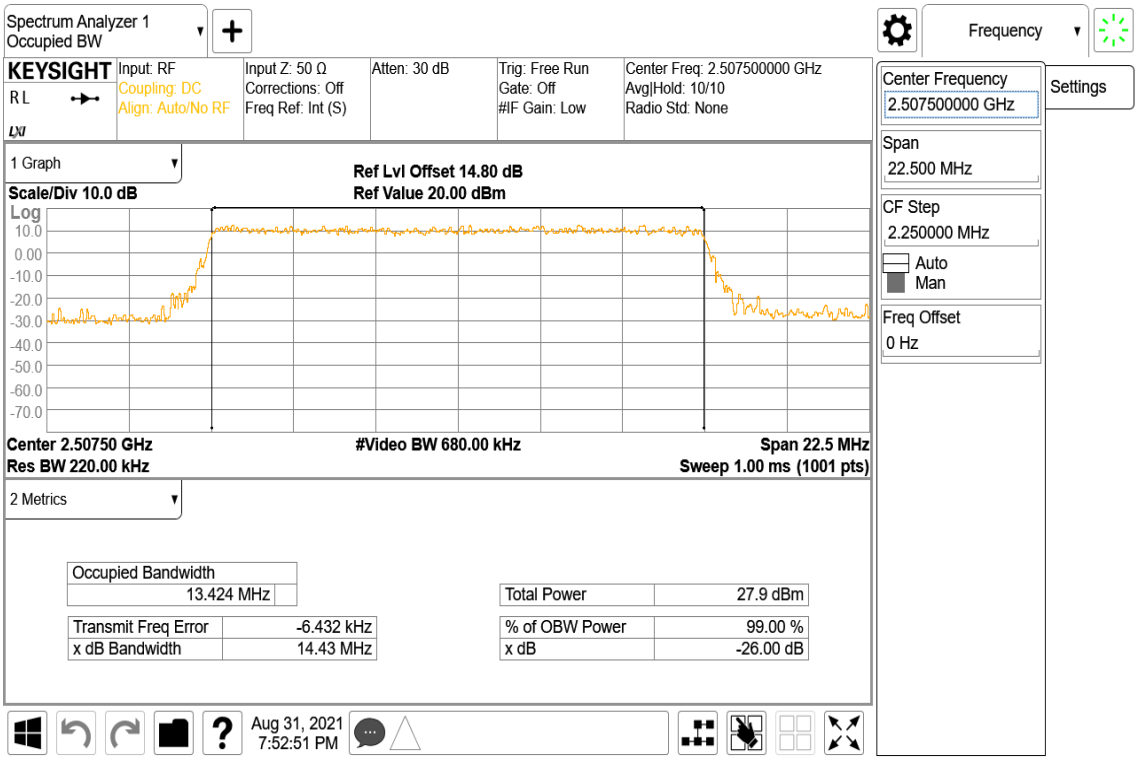
CHANNEL BANDWIDTH: 15MHz / QPSK / RB =75, RB Offset = 0
CH Low



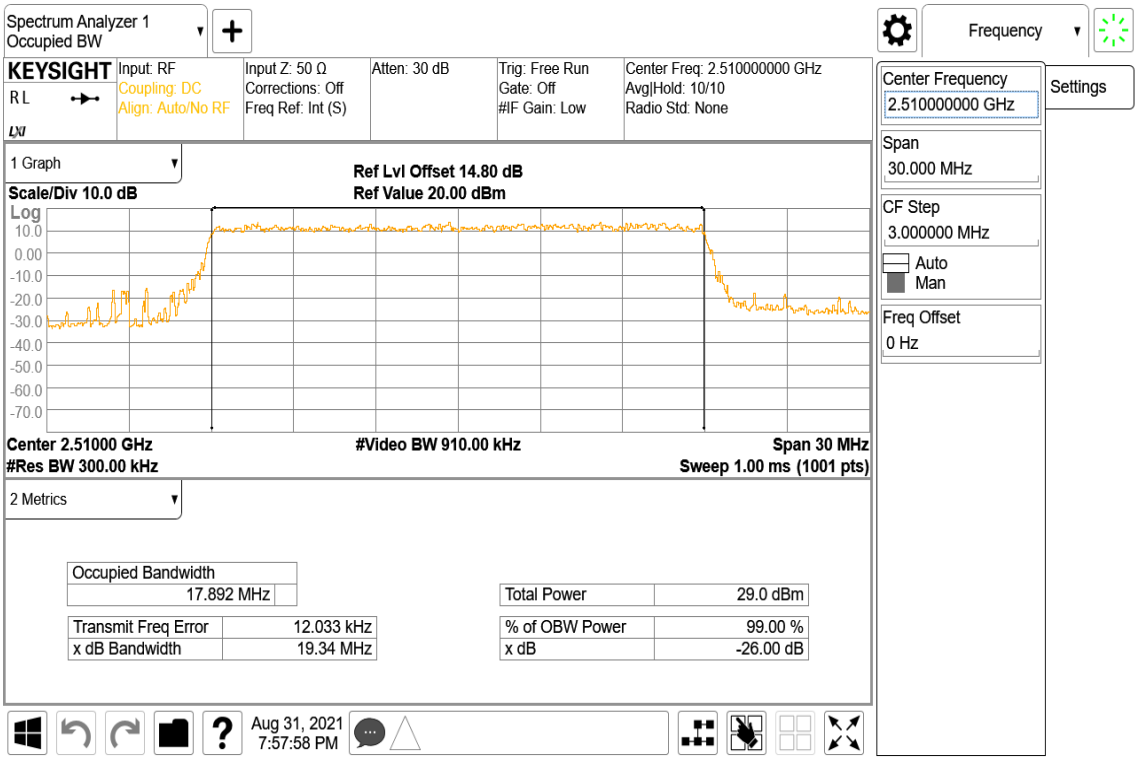
CHANNEL BANDWIDTH: 15MHz / 16QAM / RB =75, RB Offset = 0
CH Low



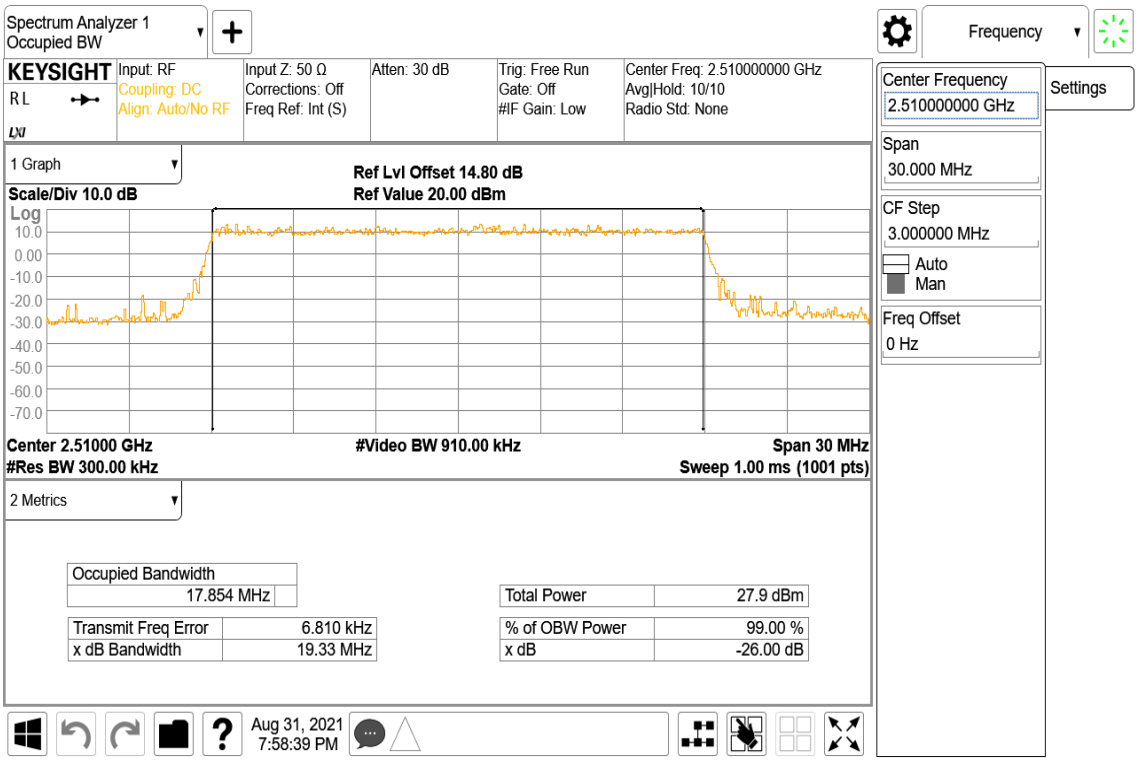
CHANNEL BANDWIDTH: 15MHz / 64QAM / RB =75, RB Offset = 0
CH Low



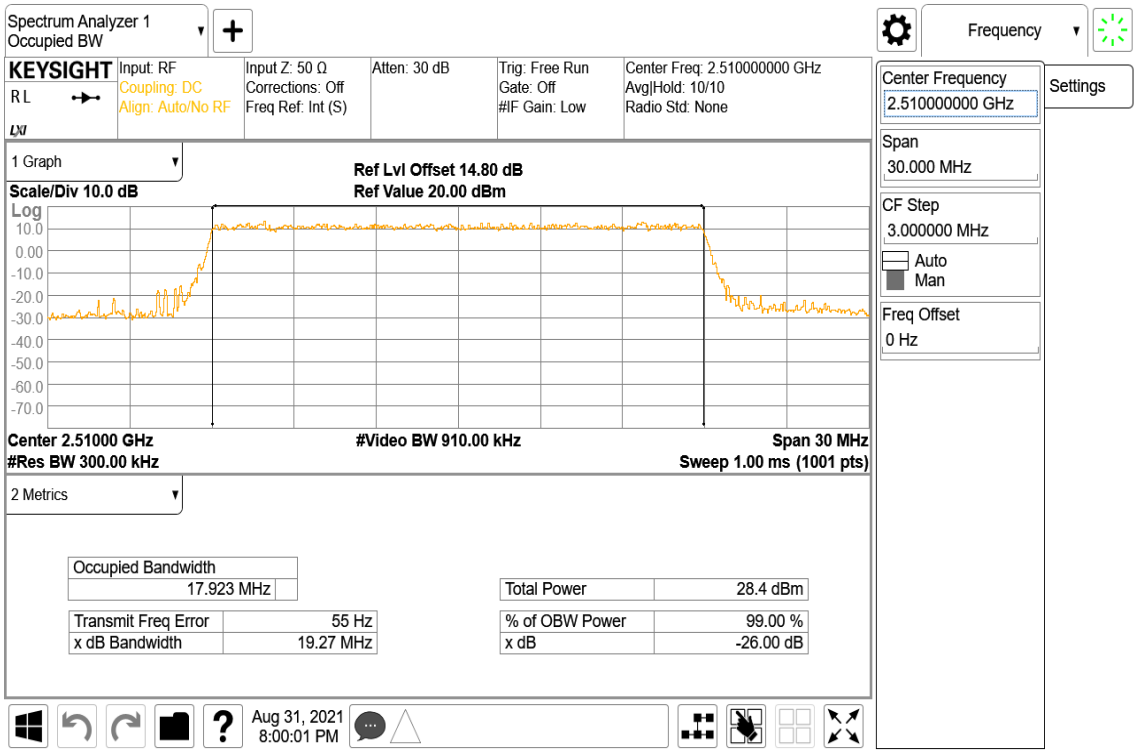
CHANNEL BANDWIDTH: 20MHz / QPSK / RB =100, RB Offset = 0 CH Low



CHANNEL BANDWIDTH: 20MHz / 16QAM / RB =100, RB Offset = 0 CH Low

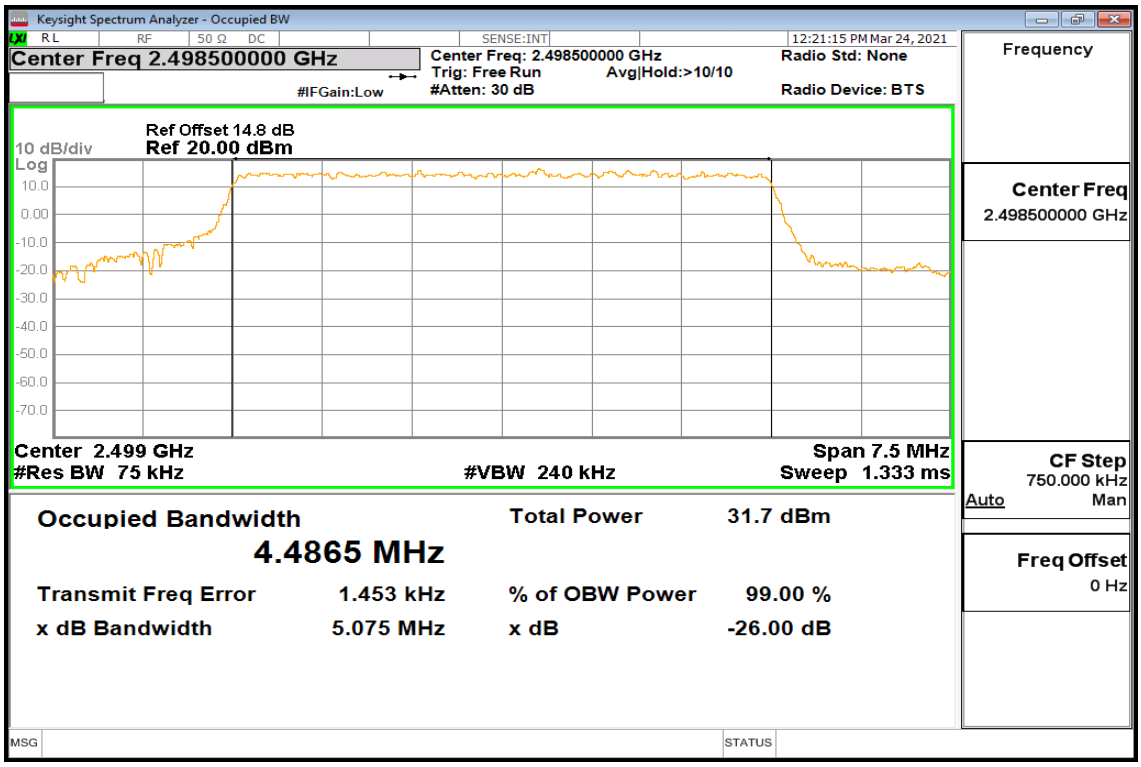


CHANNEL BANDWIDTH: 20MHz / 64QAM / RB =100, RB Offset = 0
CH Low

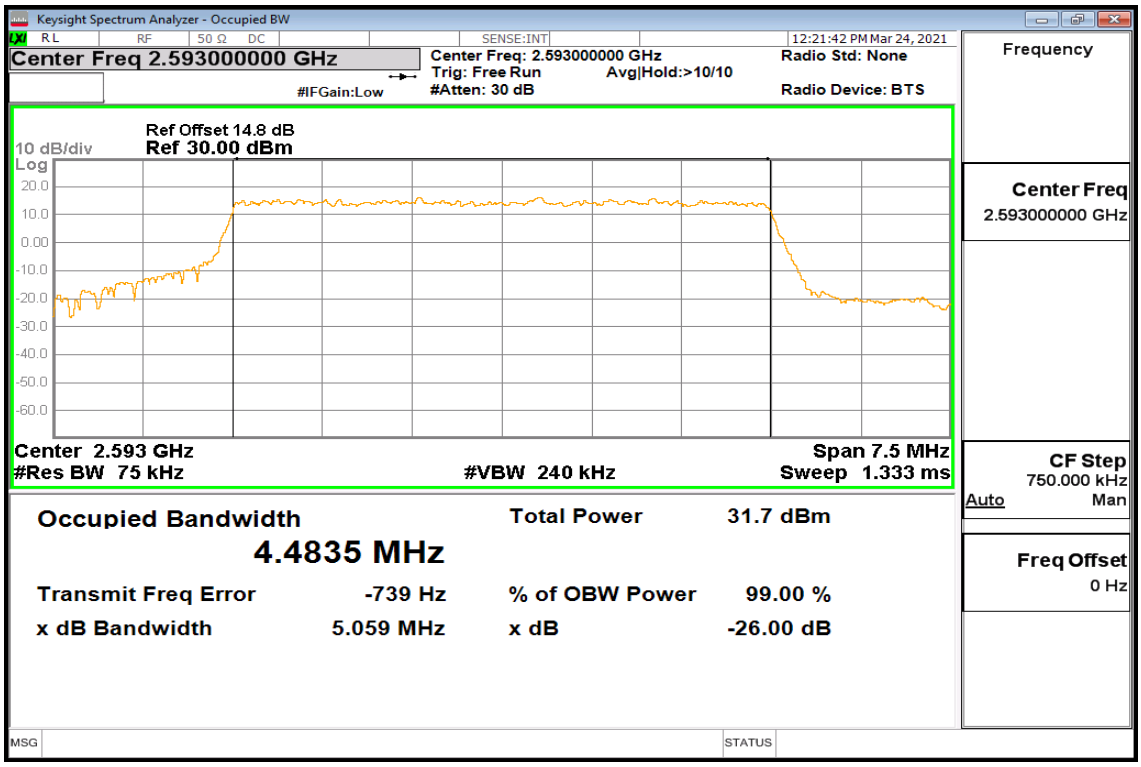


CHANNEL BANDWIDTH: 5MHz / QPSK / RB =25, RB Offset = 0

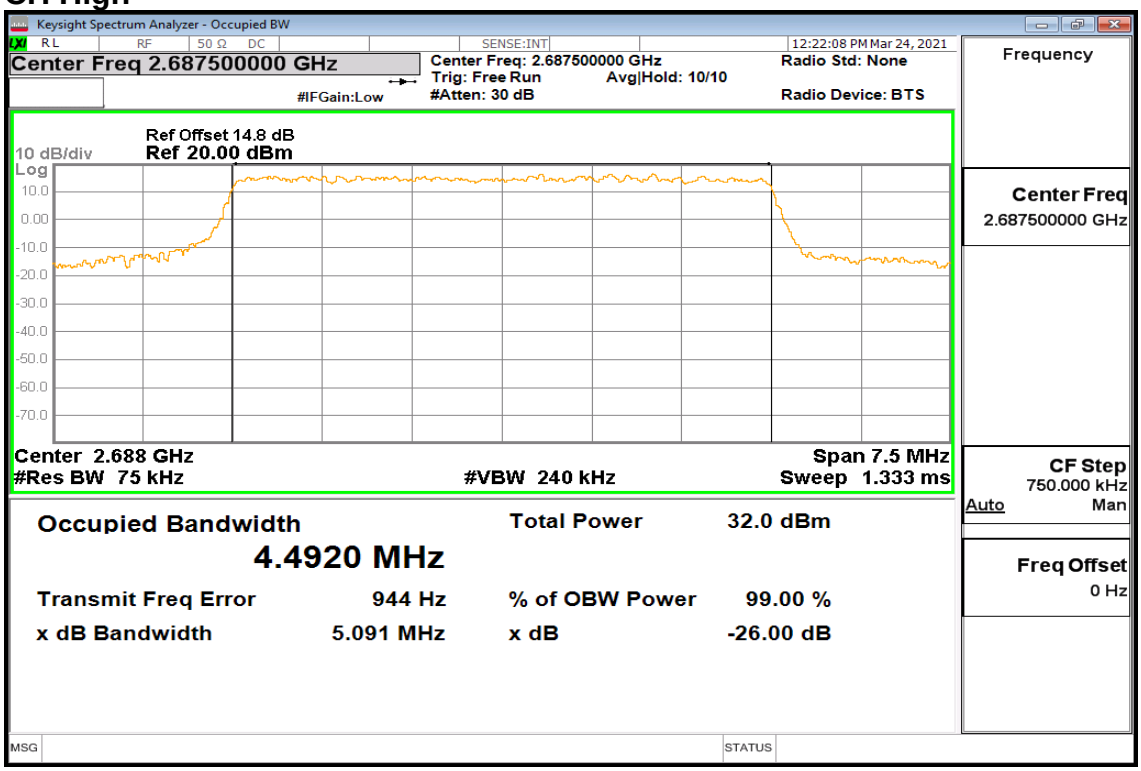
CH Low



CH Mid

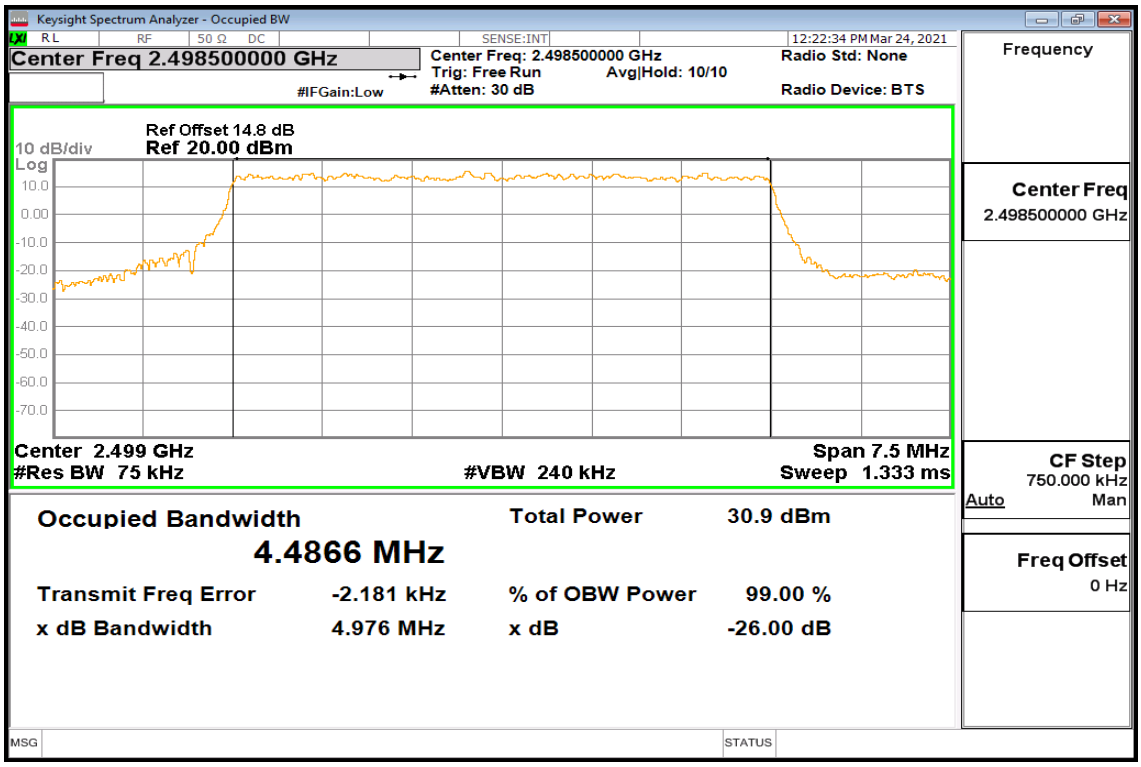


CH High

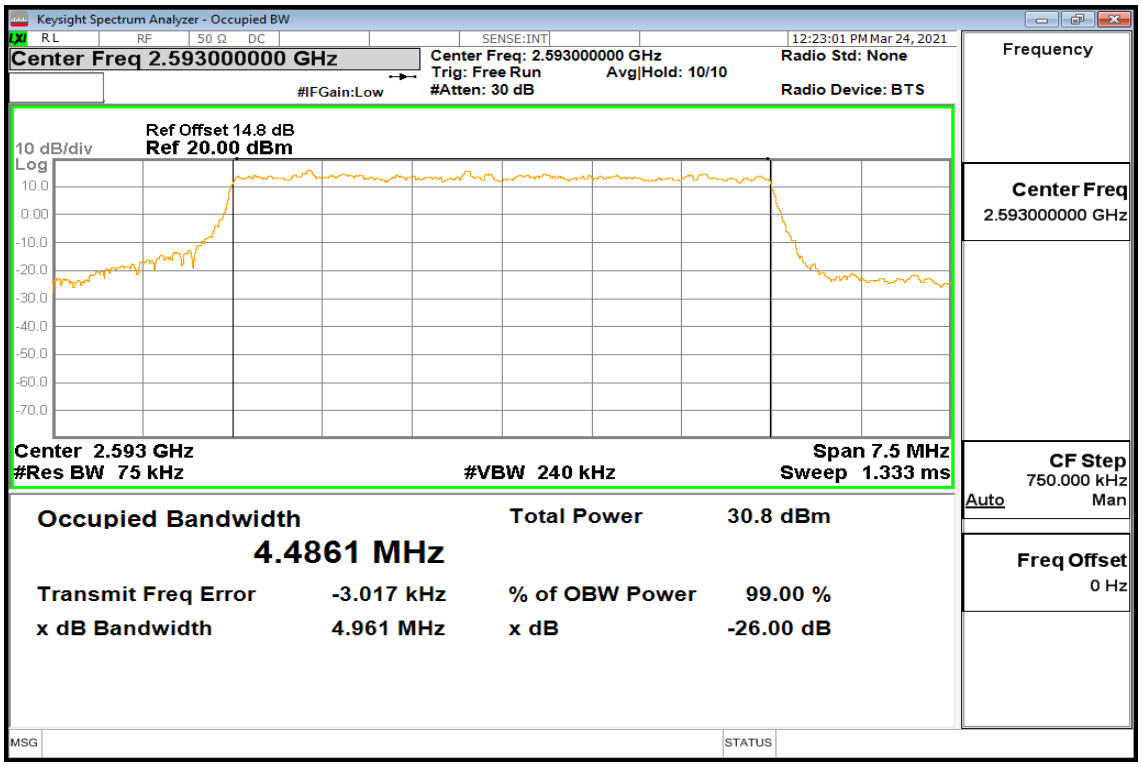


CHANNEL BANDWIDTH: 5MHz / 16QAM / RB =25, RB Offset = 0

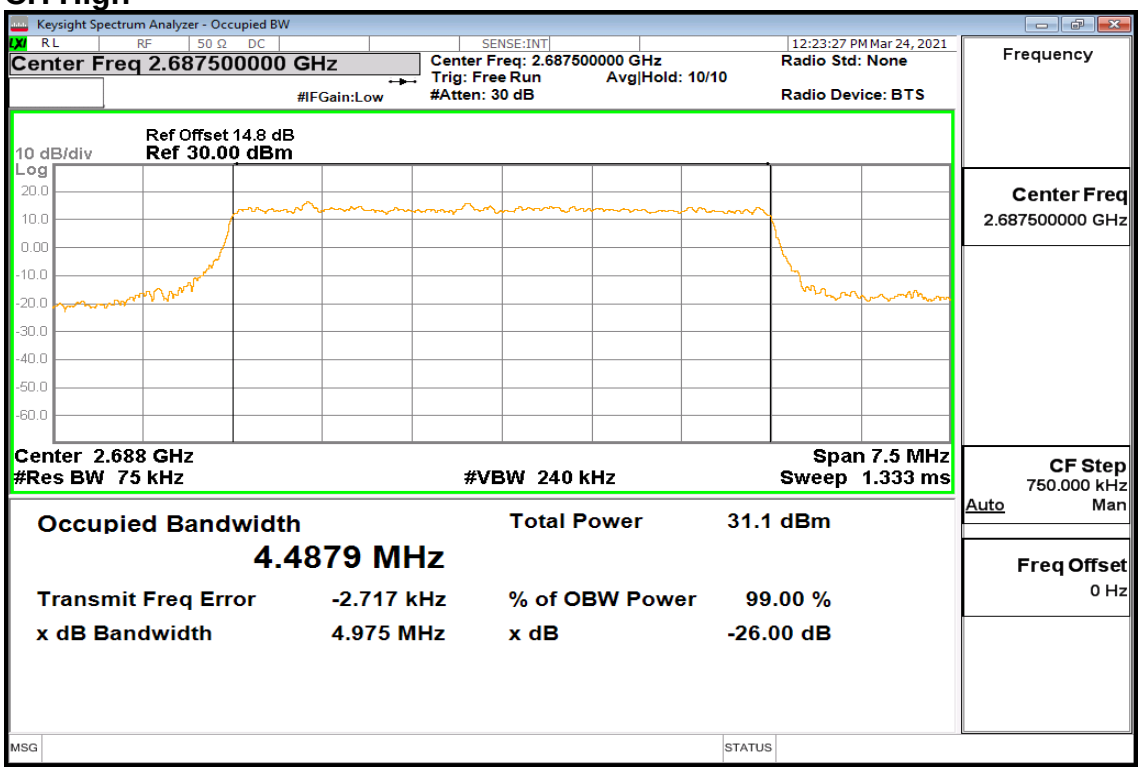
CH Low



CH Mid

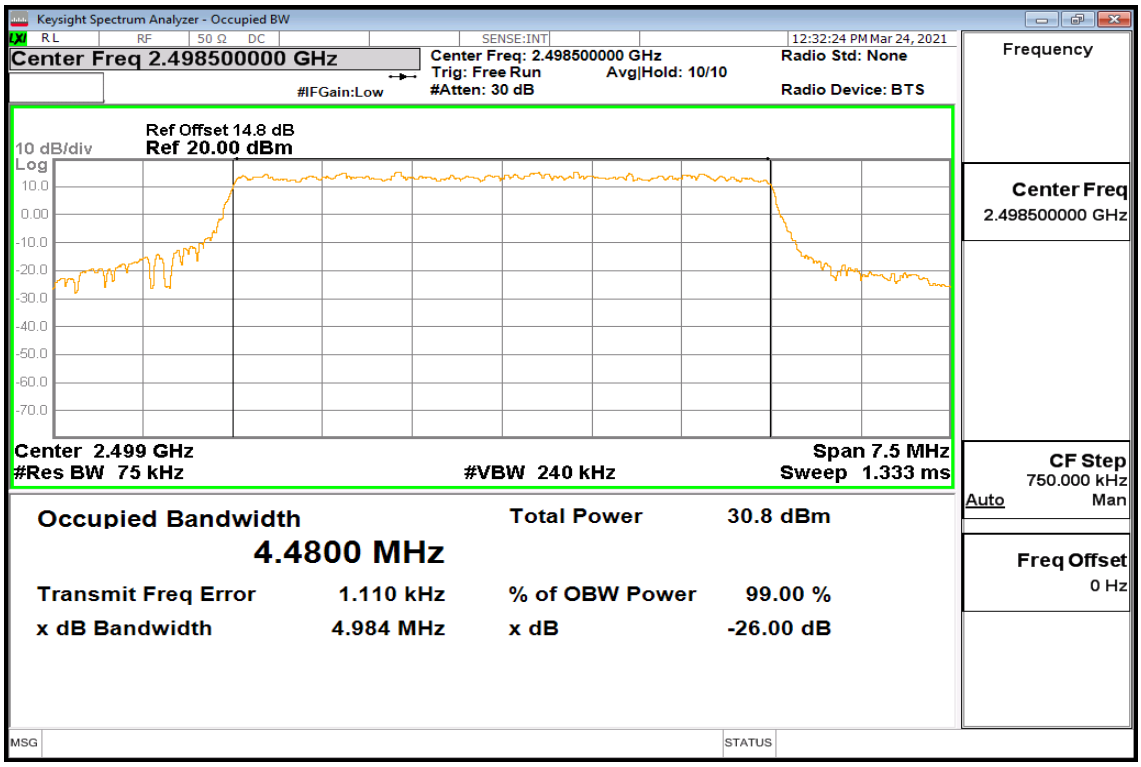


CH High

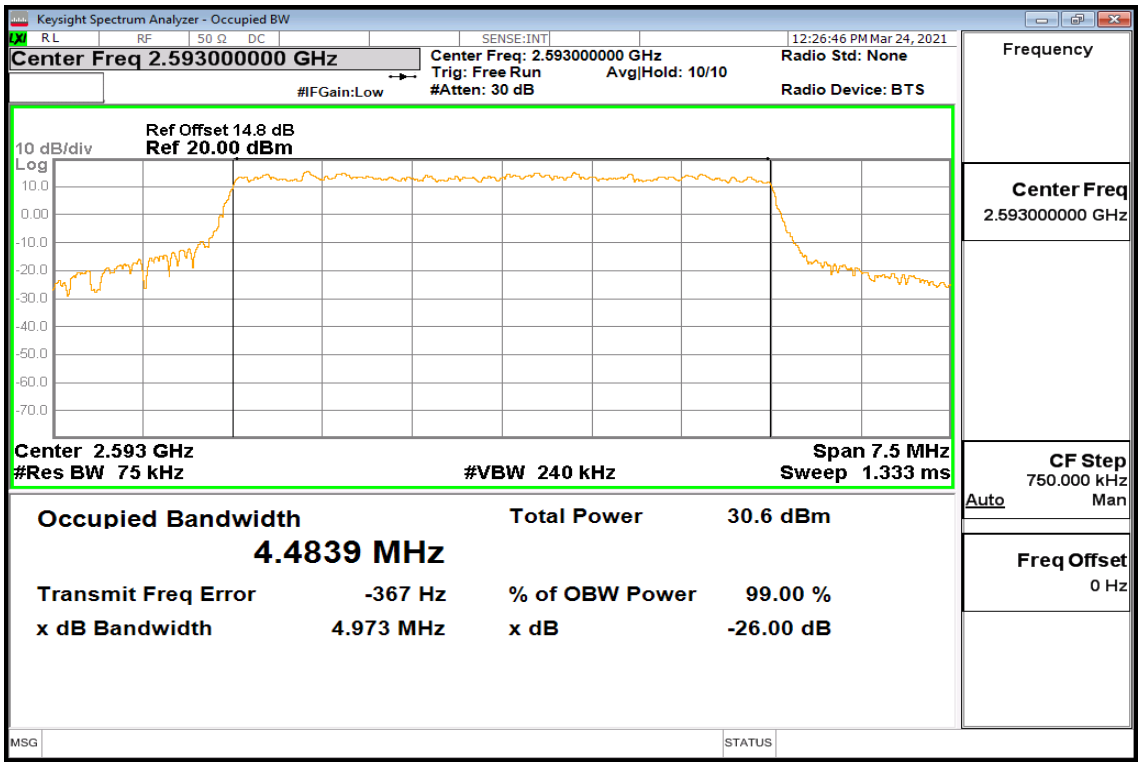


CHANNEL BANDWIDTH: 5MHz / 64QAM / RB =25, RB Offset = 0

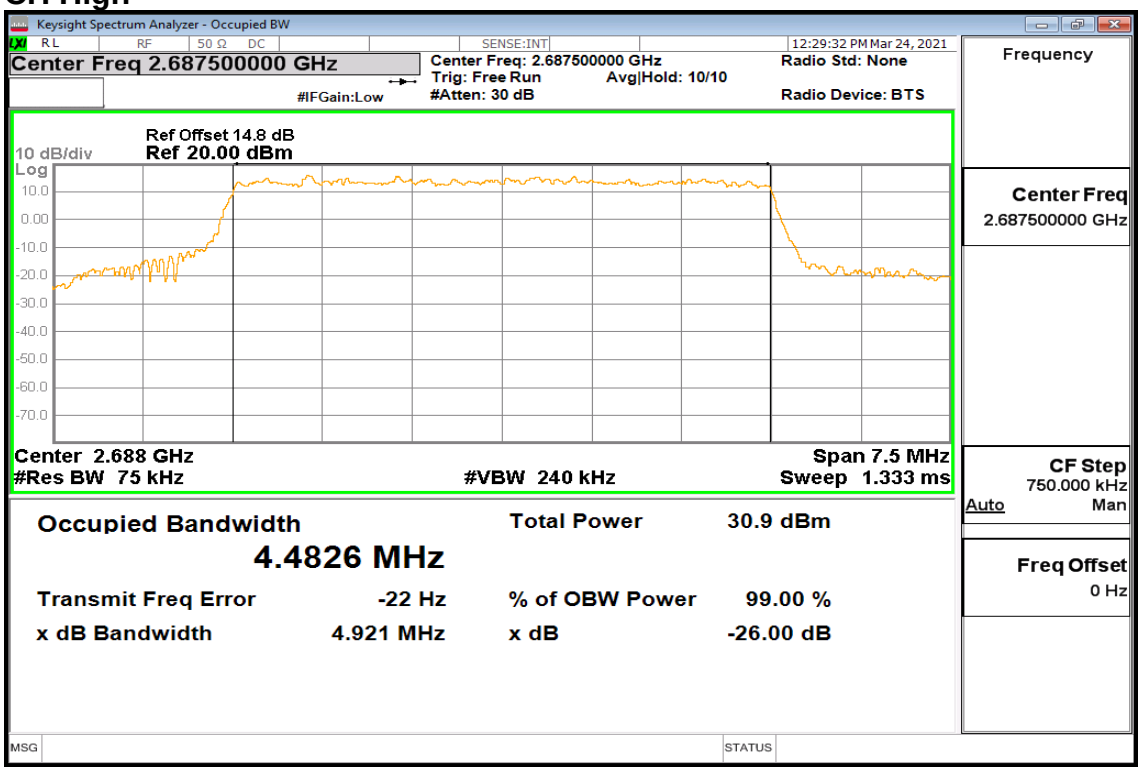
CH Low



CH Mid

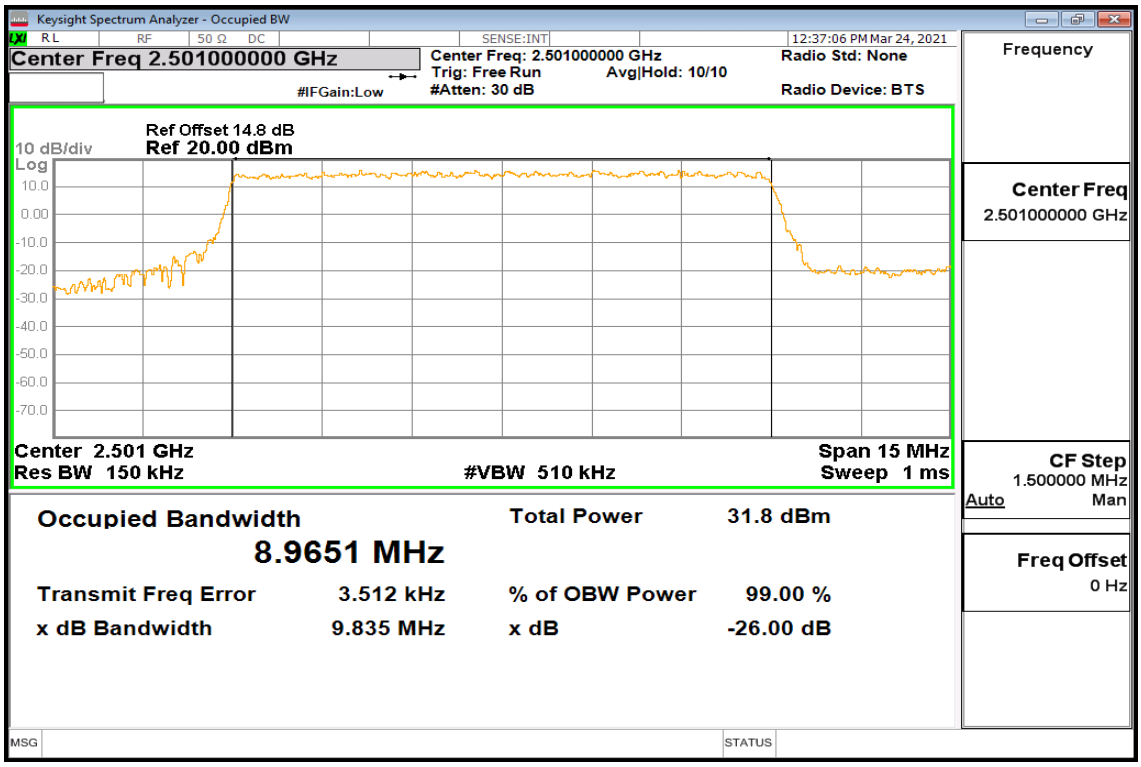


CH High

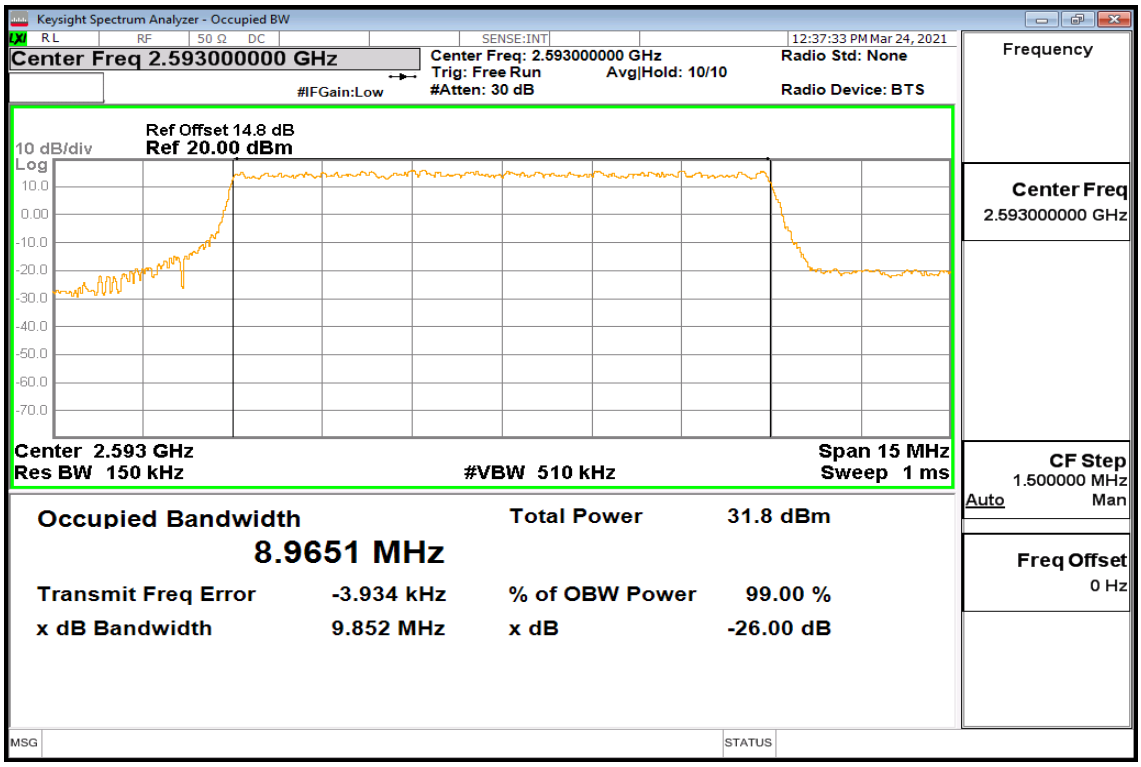


CHANNEL BANDWIDTH: 10MHz / QPSK / RB =50, RB Offset = 0

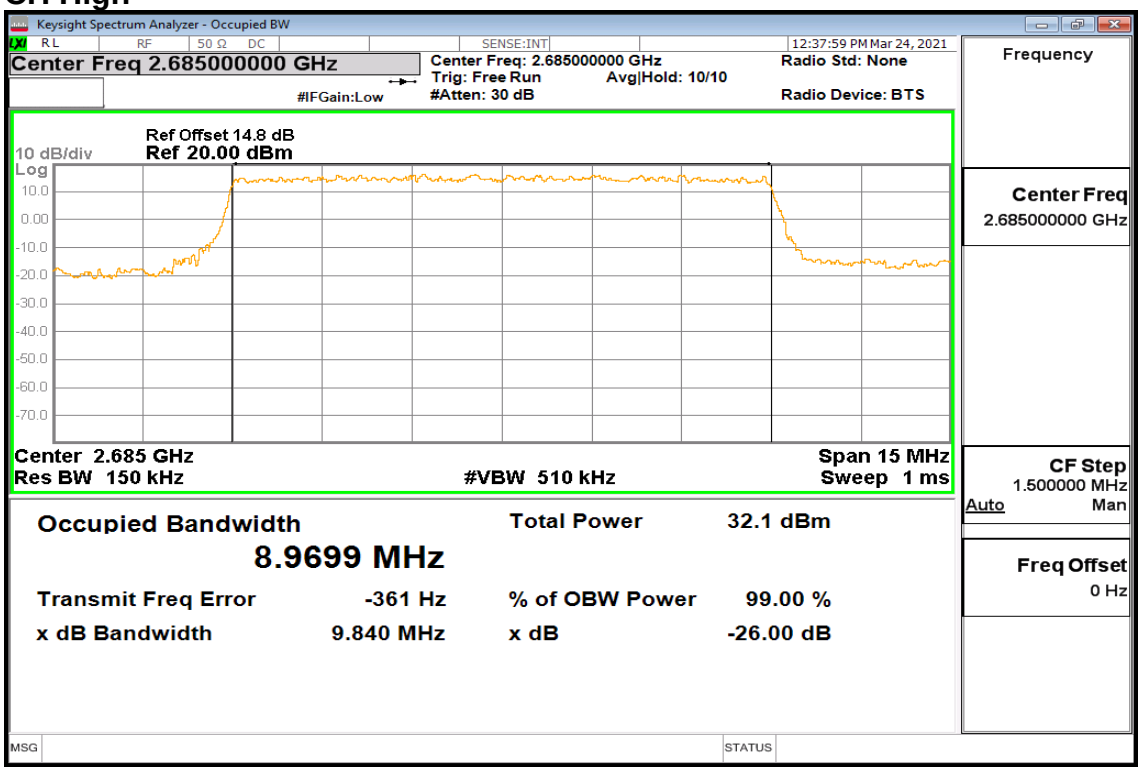
CH Low



CH Mid

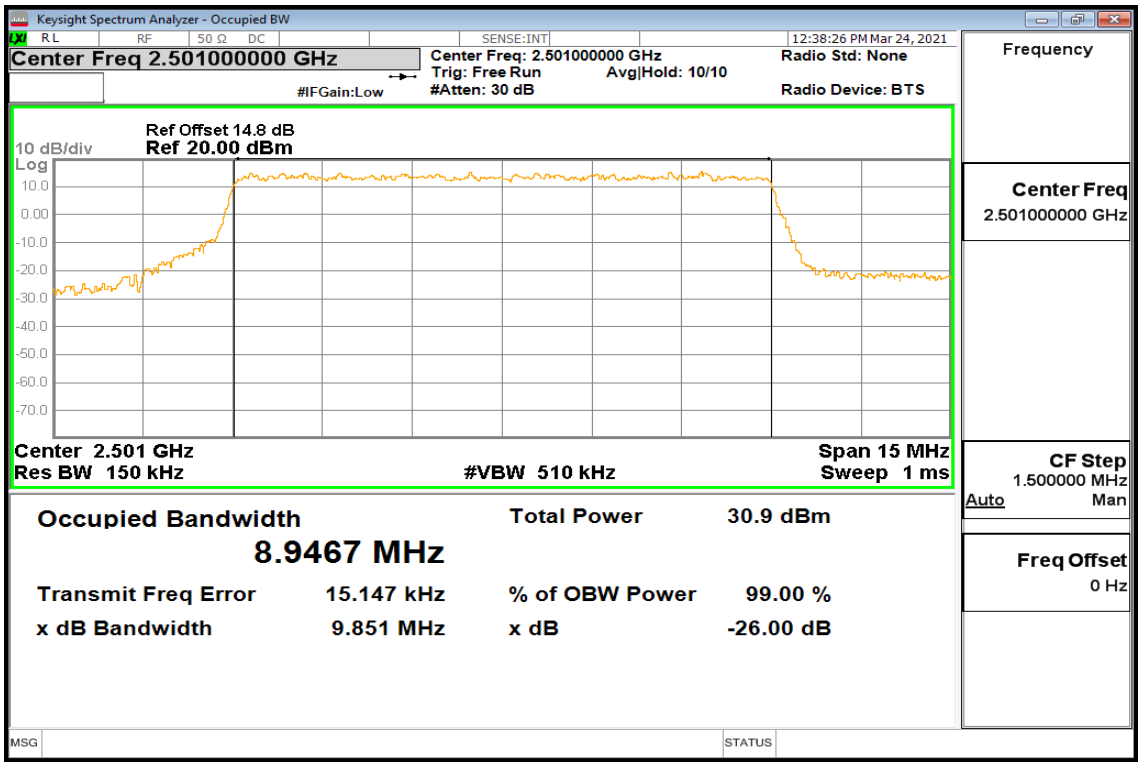


CH High

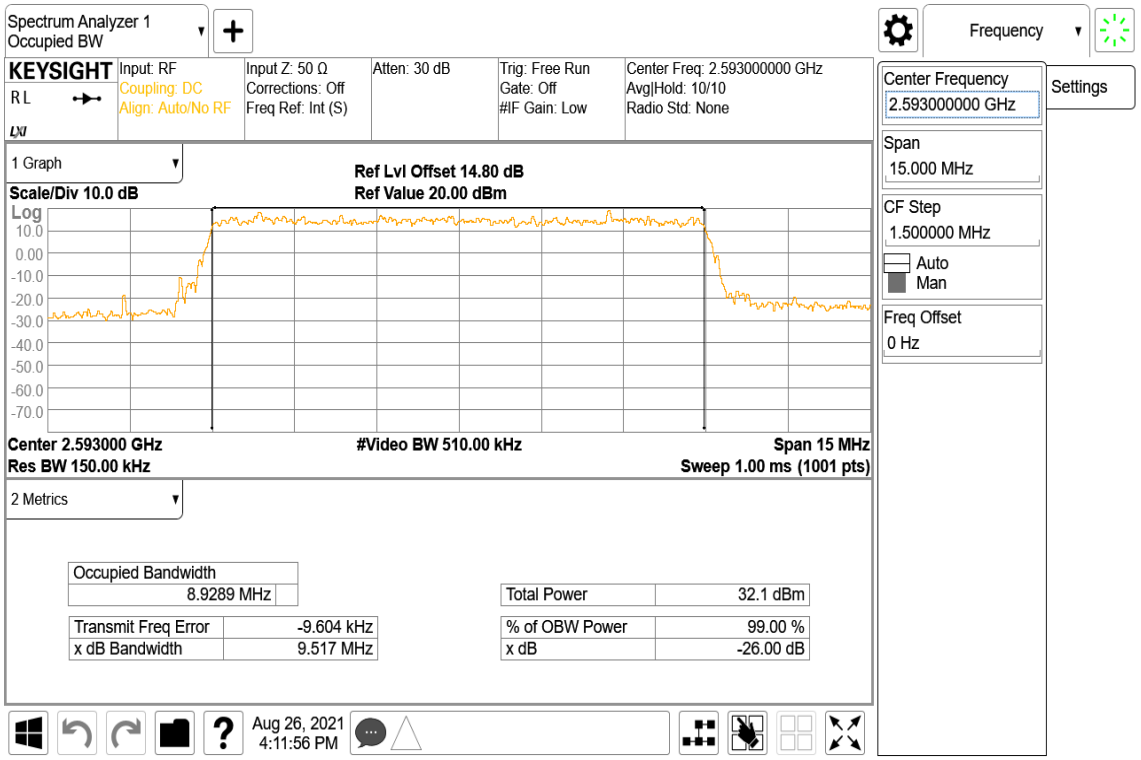


CHANNEL BANDWIDTH: 10MHz / 16QAM / RB =50, RB Offset = 0

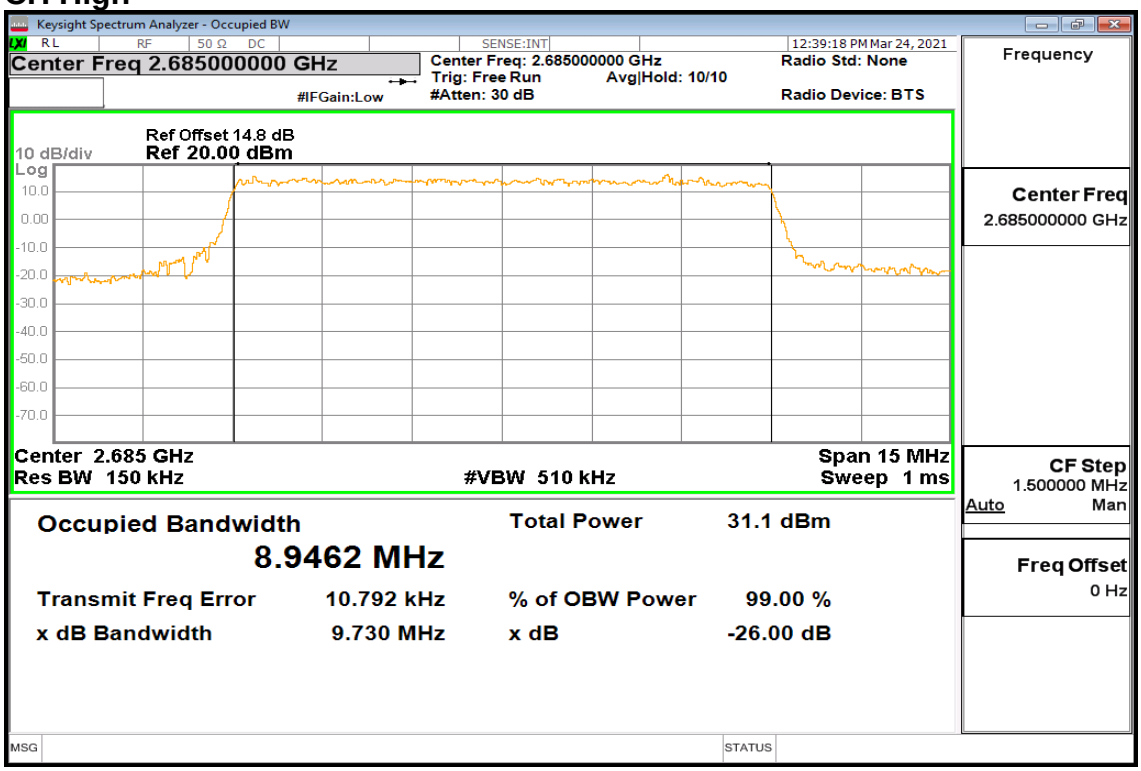
CH Low



CH Mid

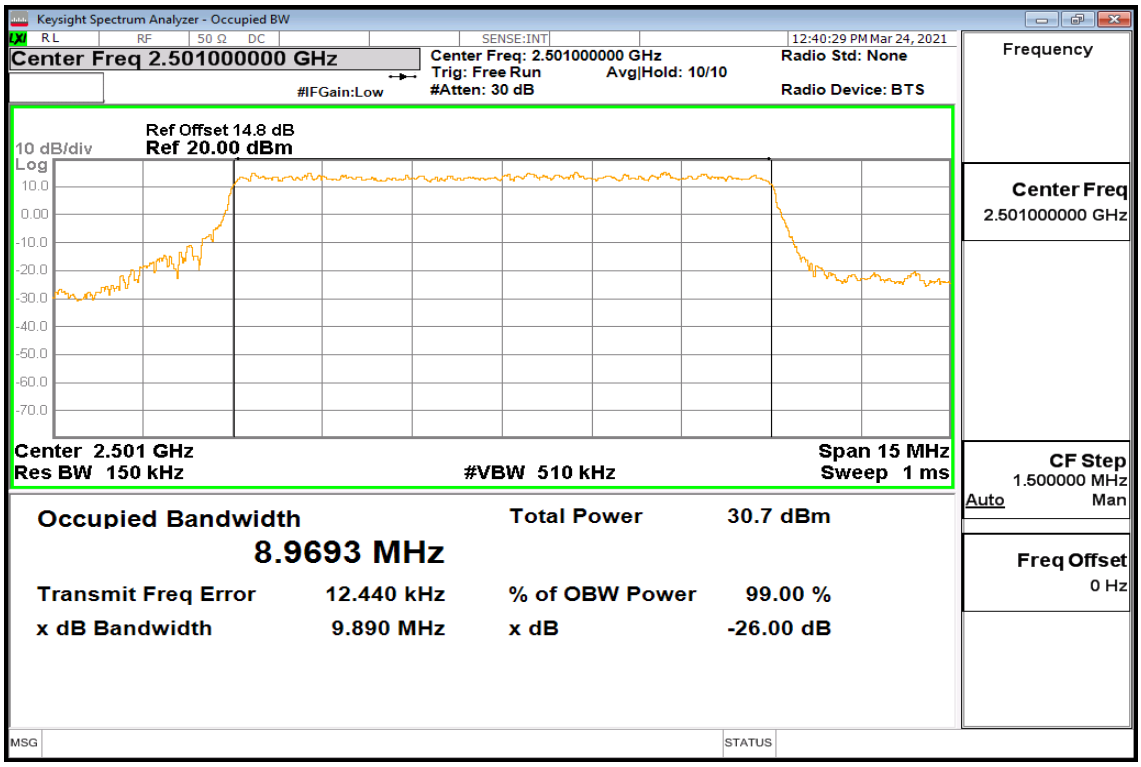


CH High

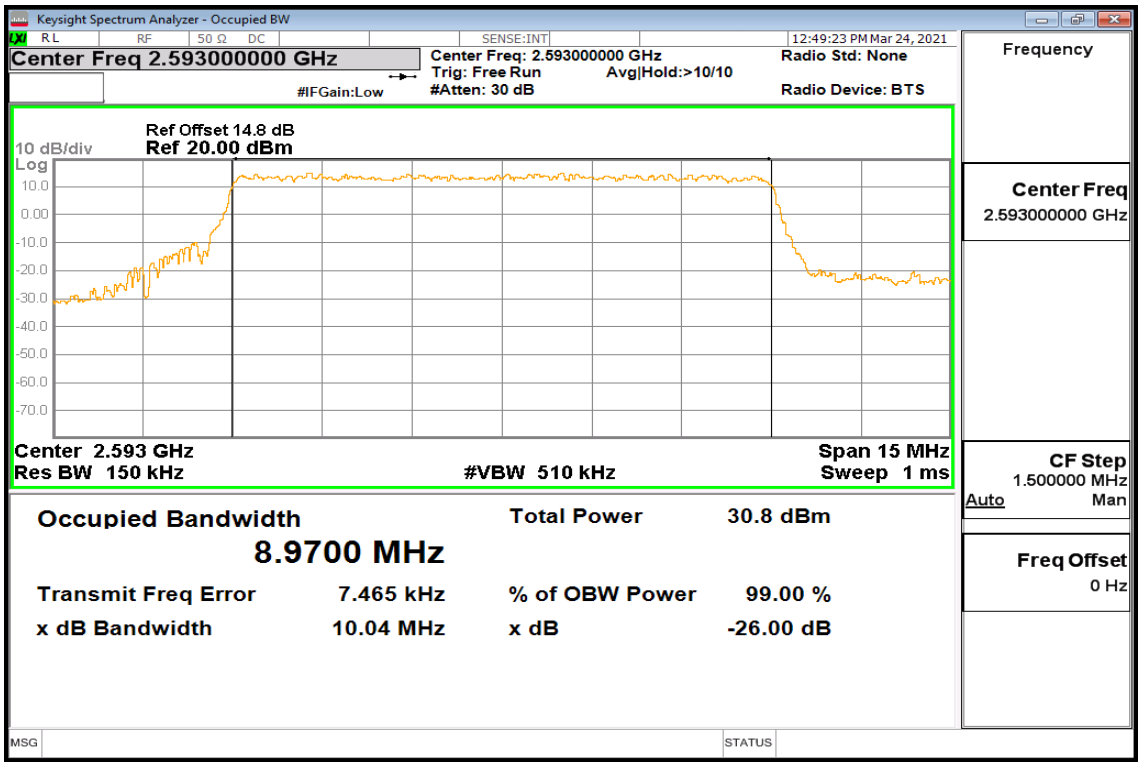


CHANNEL BANDWIDTH: 10MHz / 64QAM / RB =50, RB Offset = 0

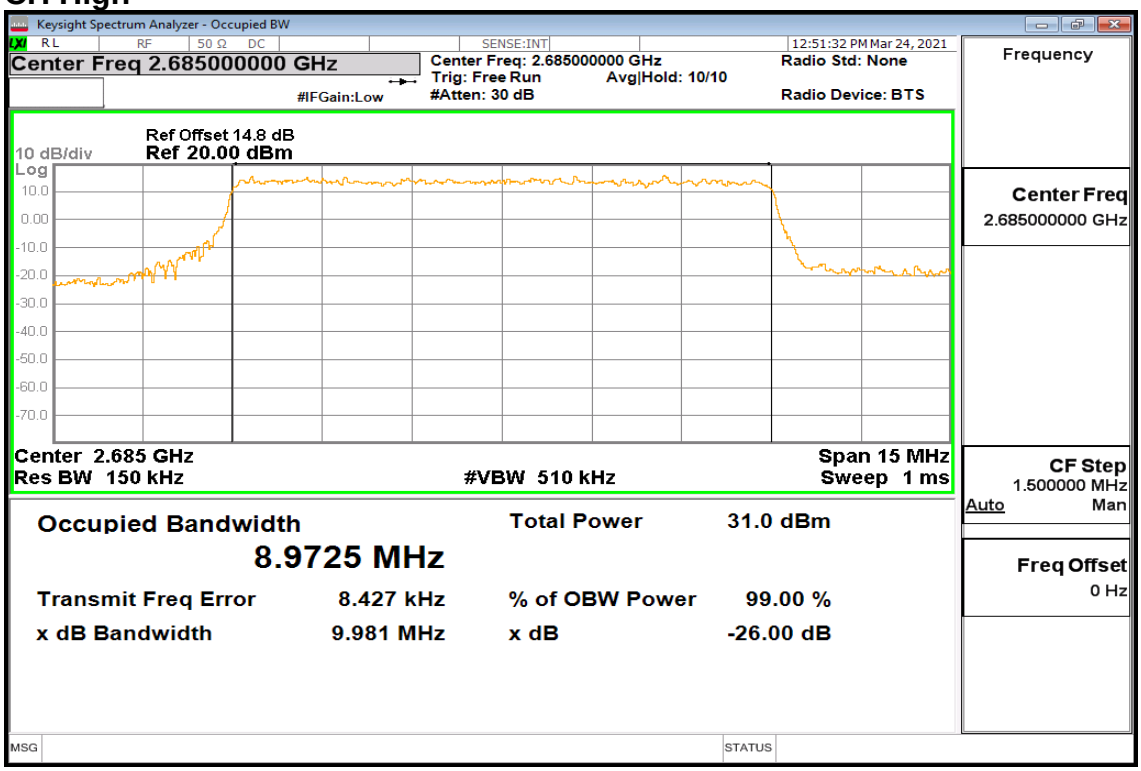
CH Low



CH Mid

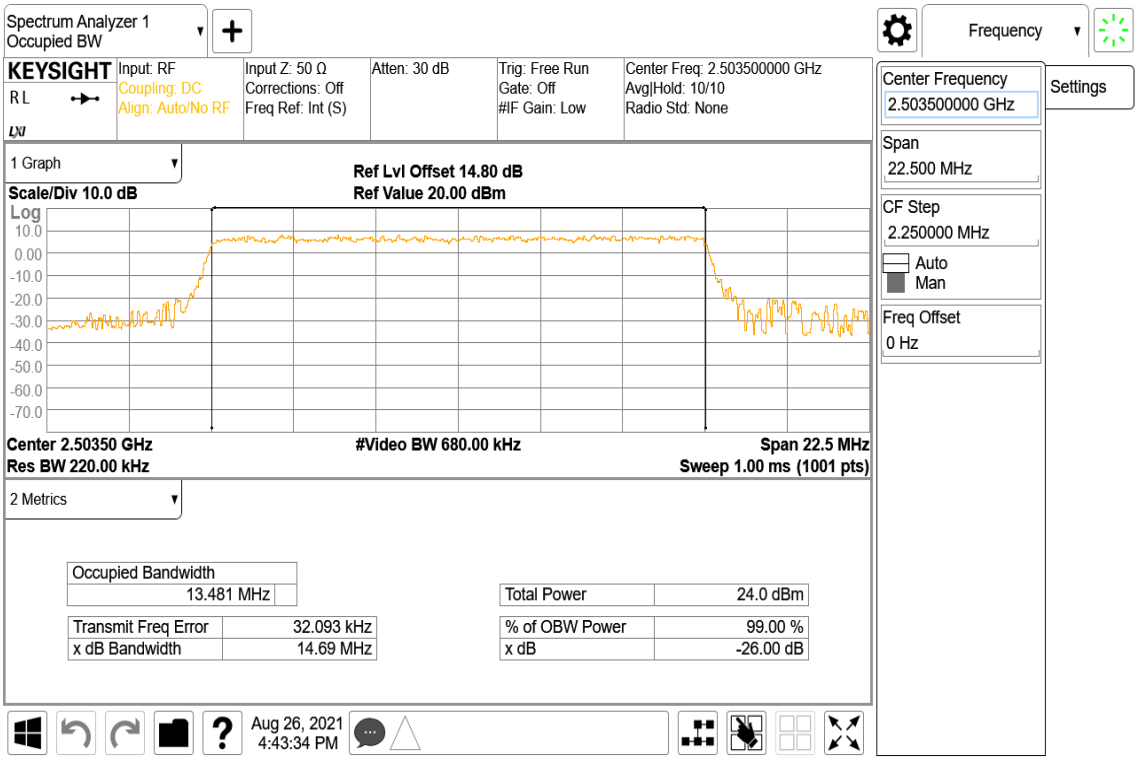


CH High

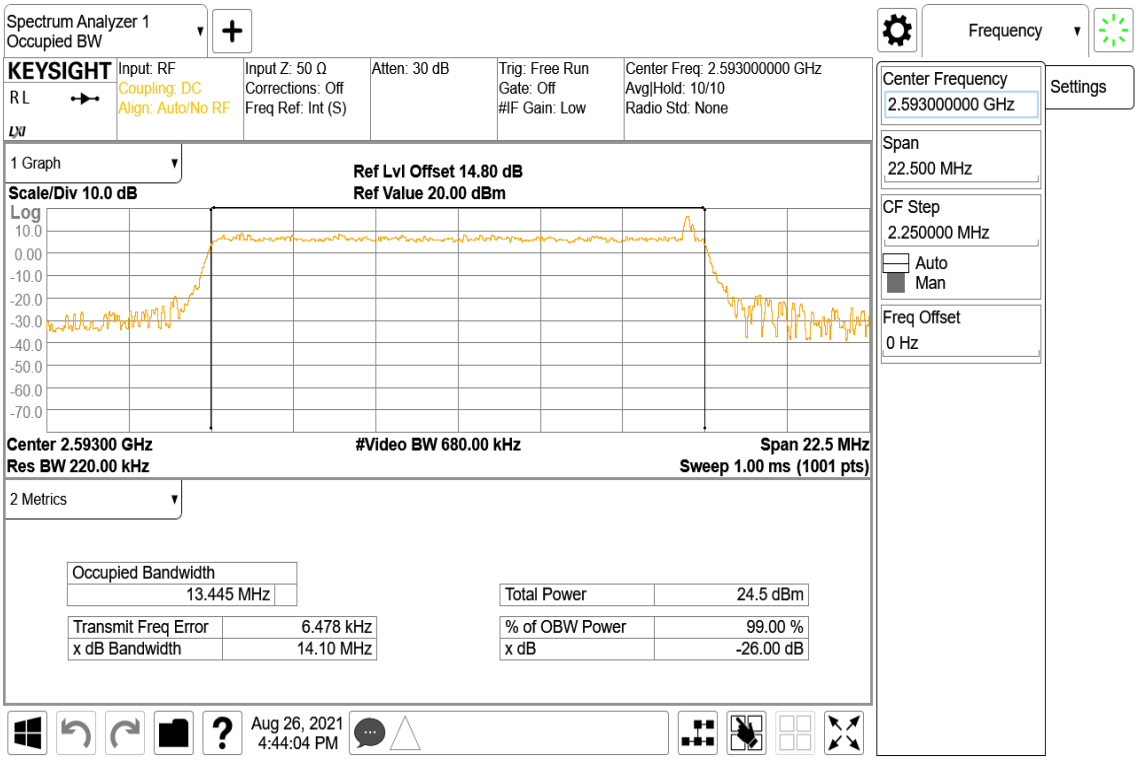


CHANNEL BANDWIDTH: 15MHz / QPSK / RB =75, RB Offset = 0

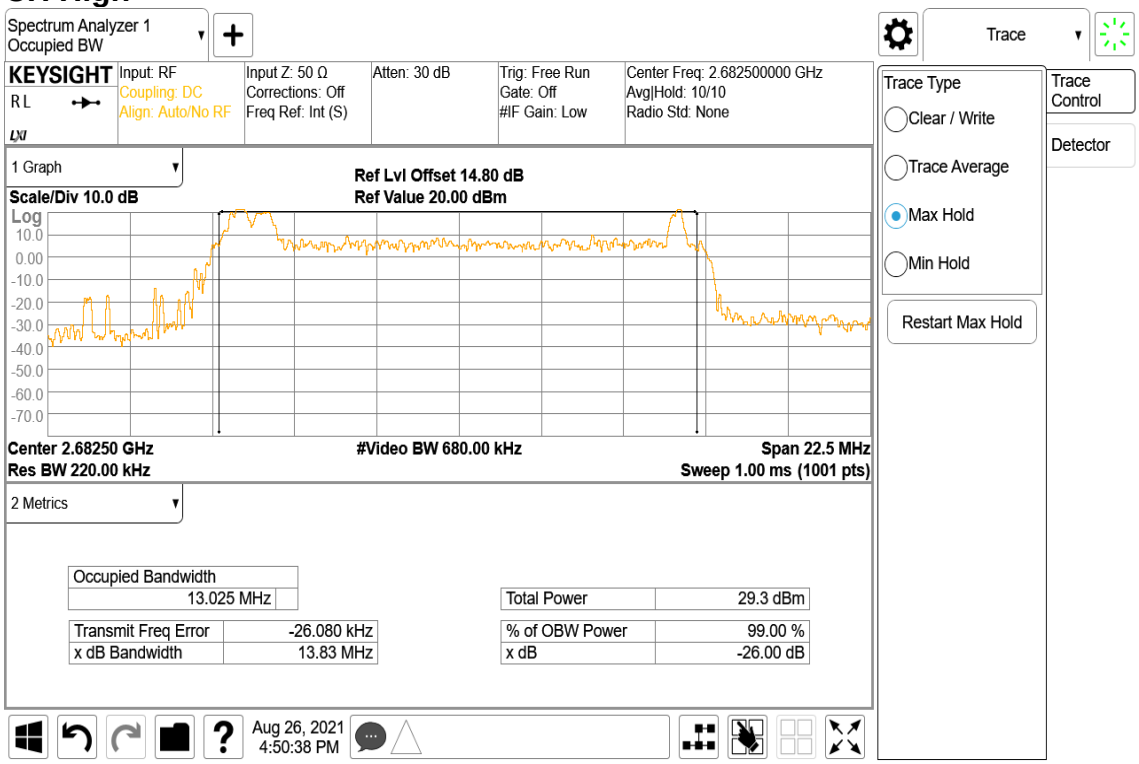
CH Low



CH Mid

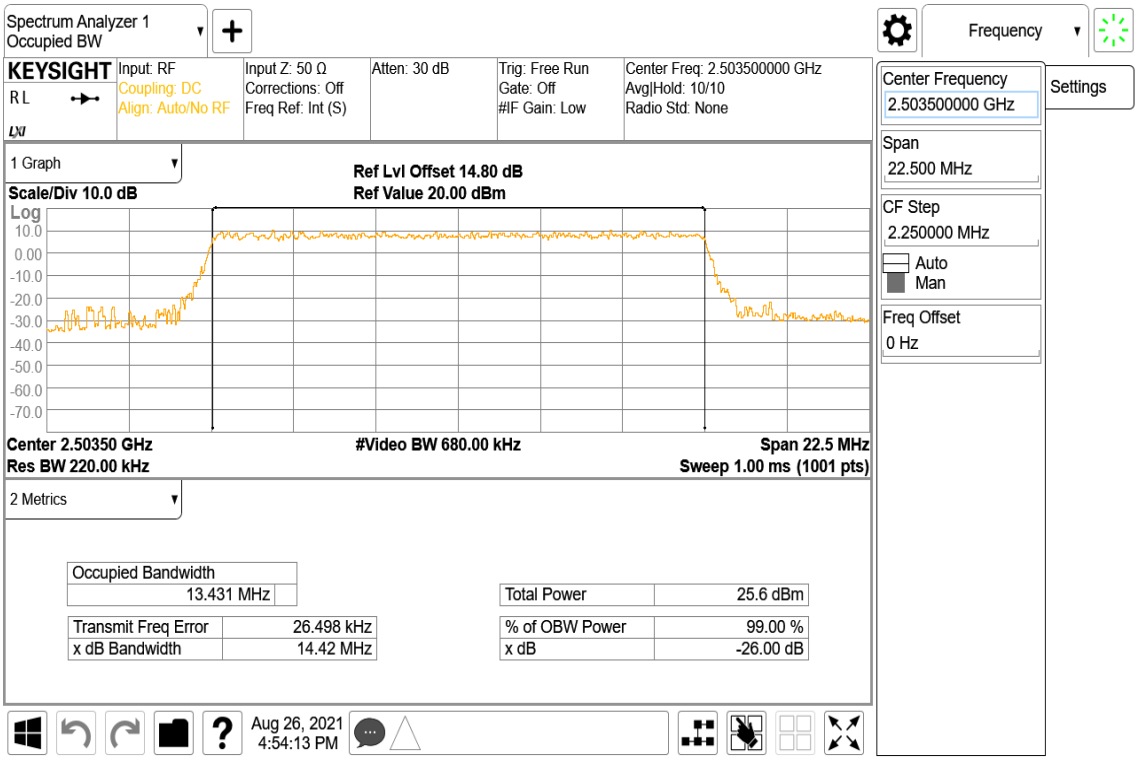


CH High

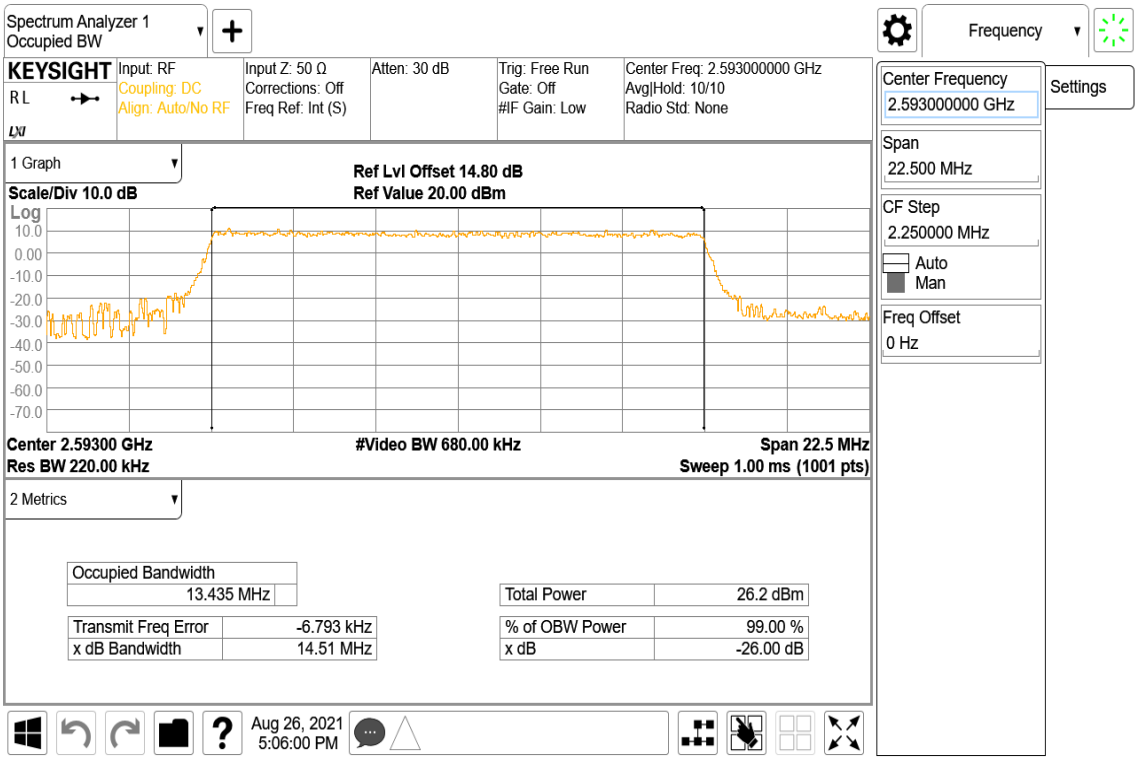


CHANNEL BANDWIDTH: 15MHz / 16QAM / RB =75, RB Offset = 0

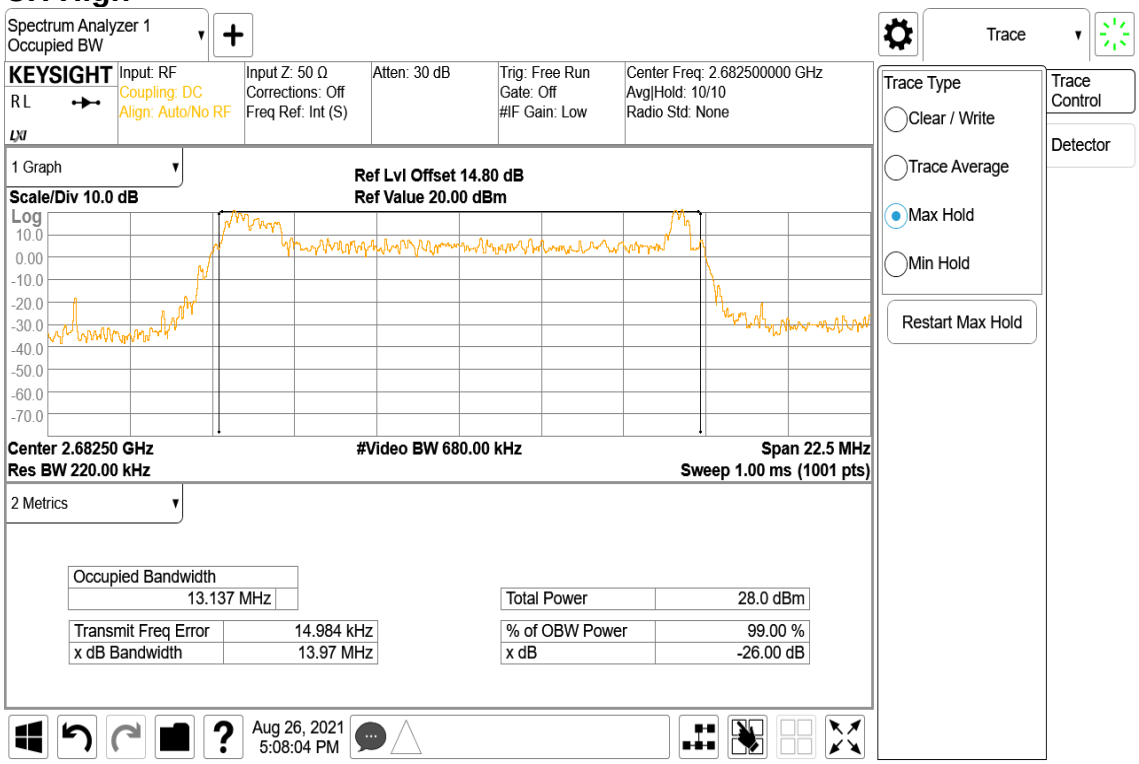
CH Low



CH Mid

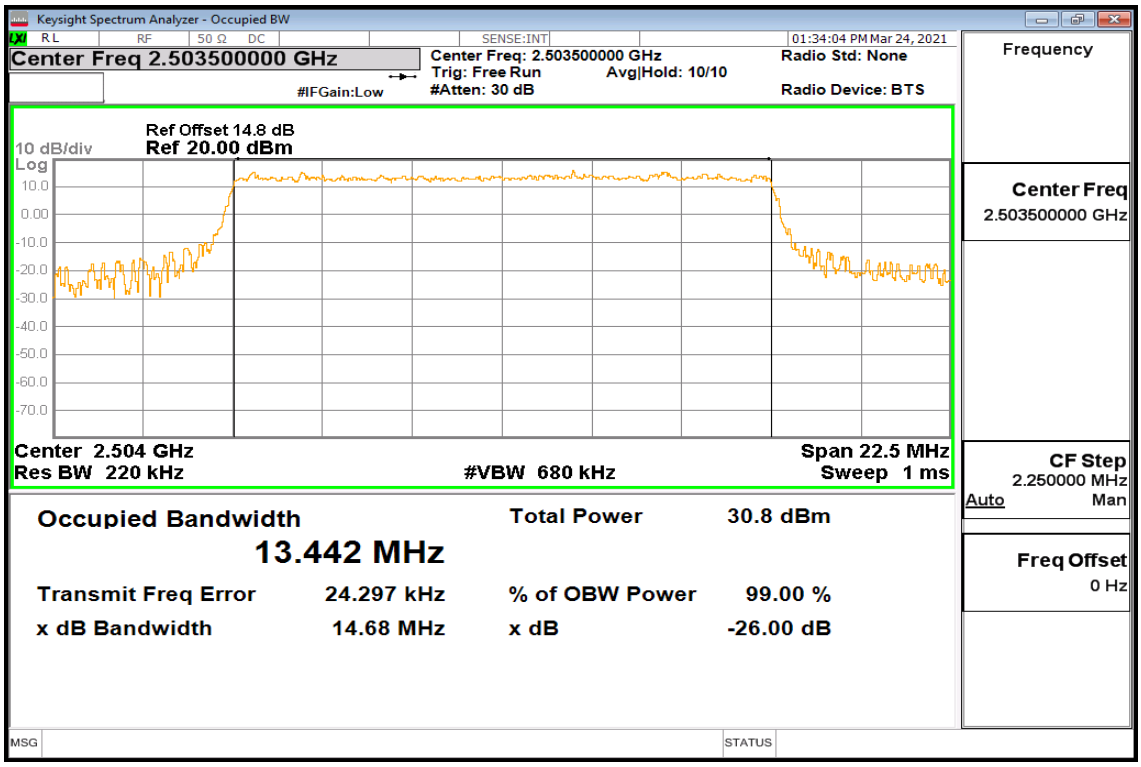


CH High

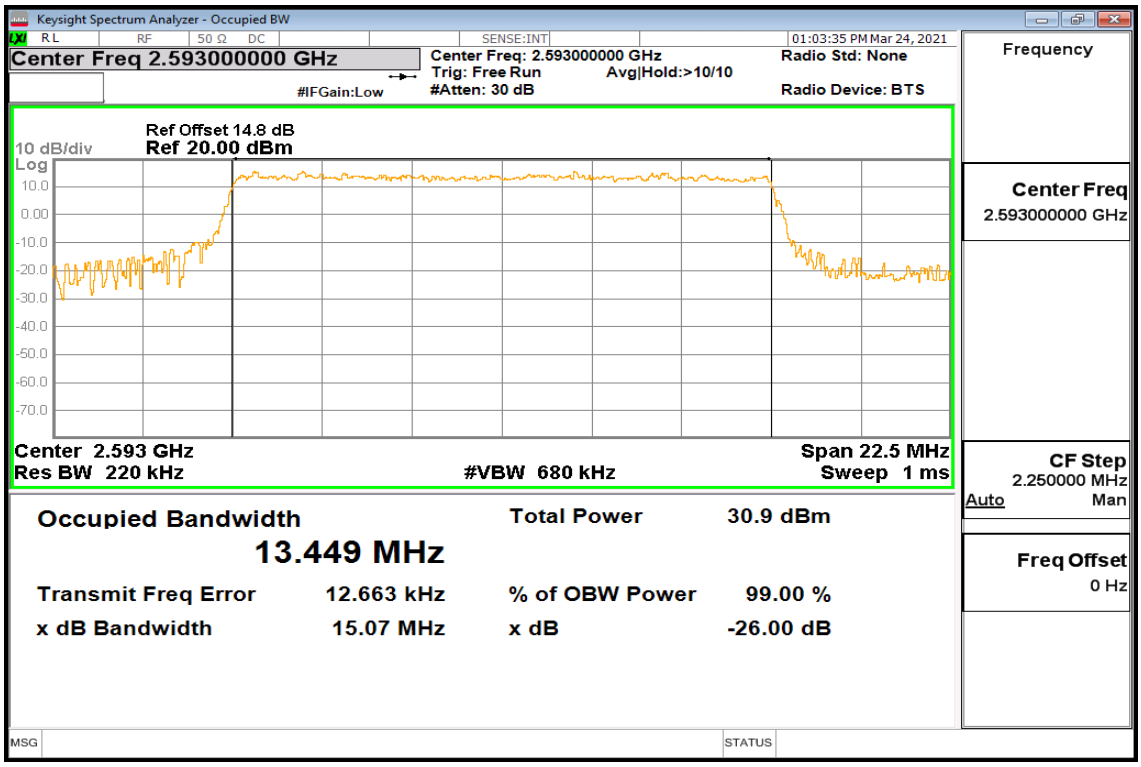


CHANNEL BANDWIDTH: 15MHz / 64QAM / RB =75, RB Offset = 0

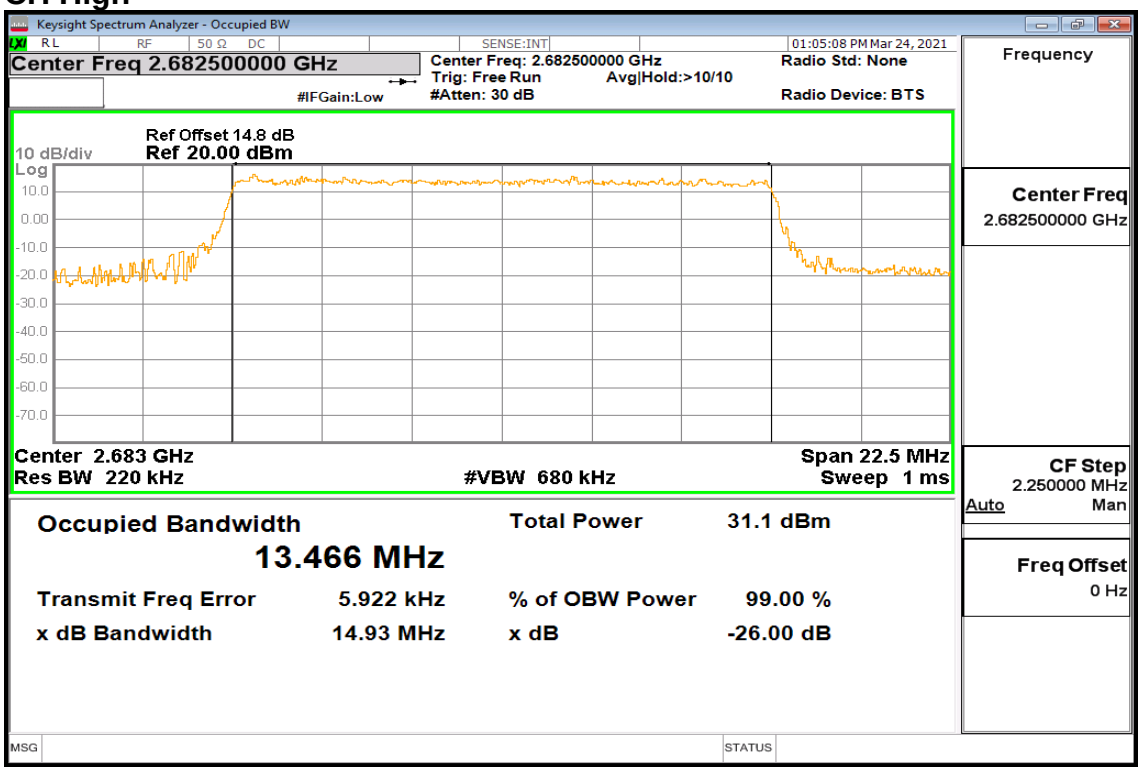
CH Low



CH Mid

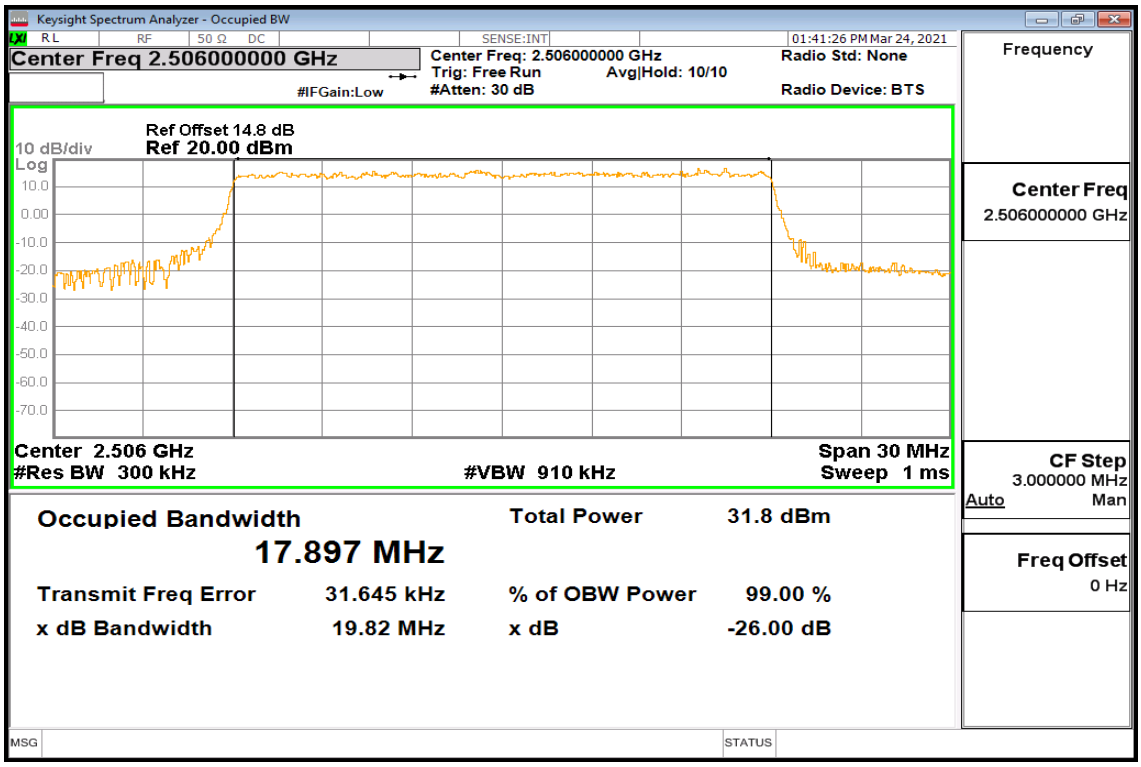


CH High

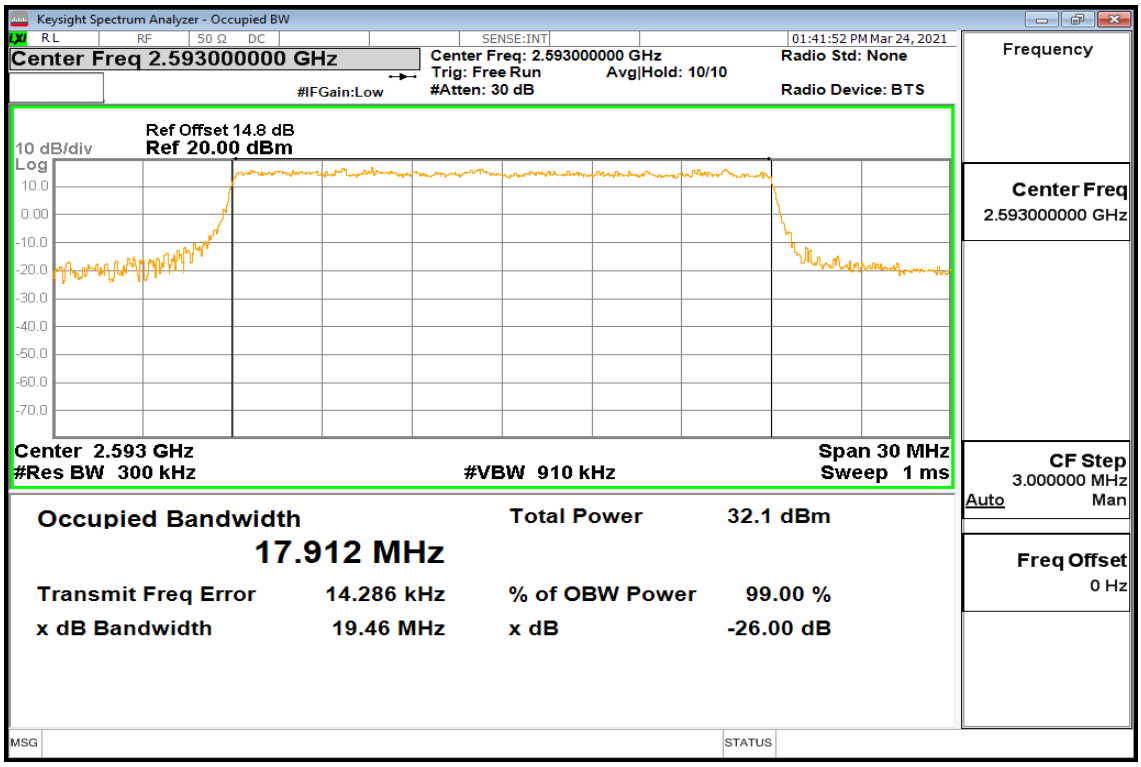


CHANNEL BANDWIDTH: 20MHz / QPSK / RB =100, RB Offset = 0

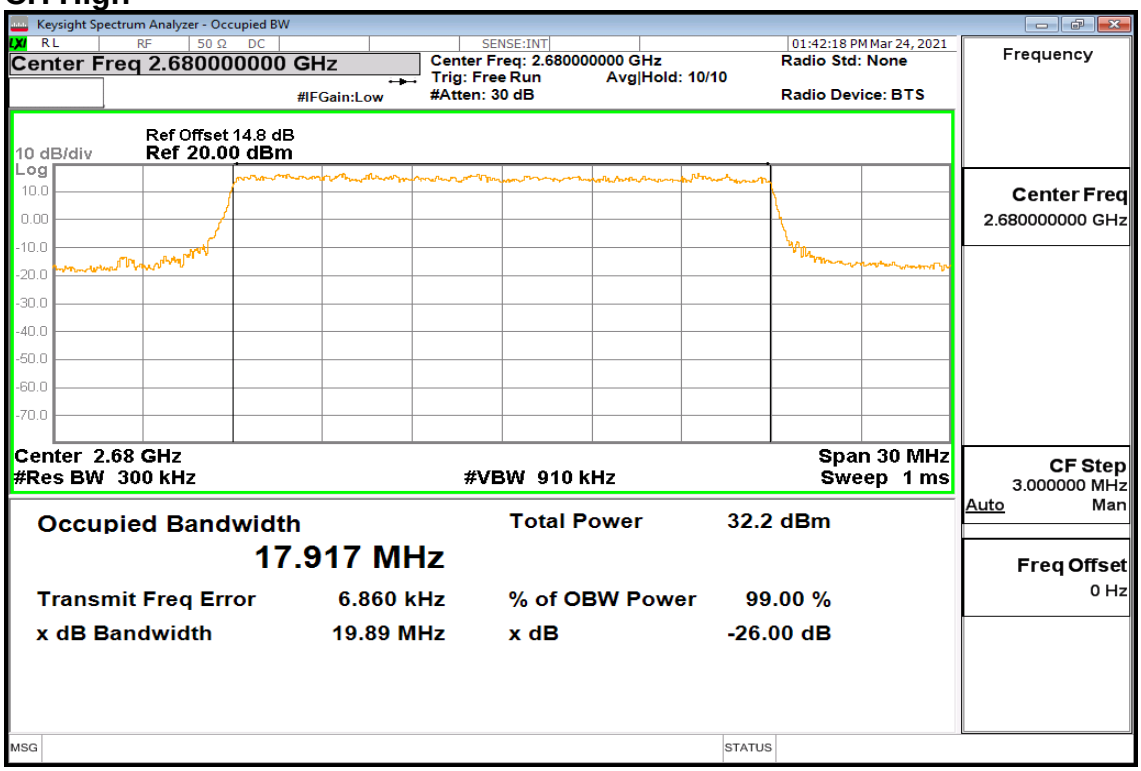
CH Low



CH Mid

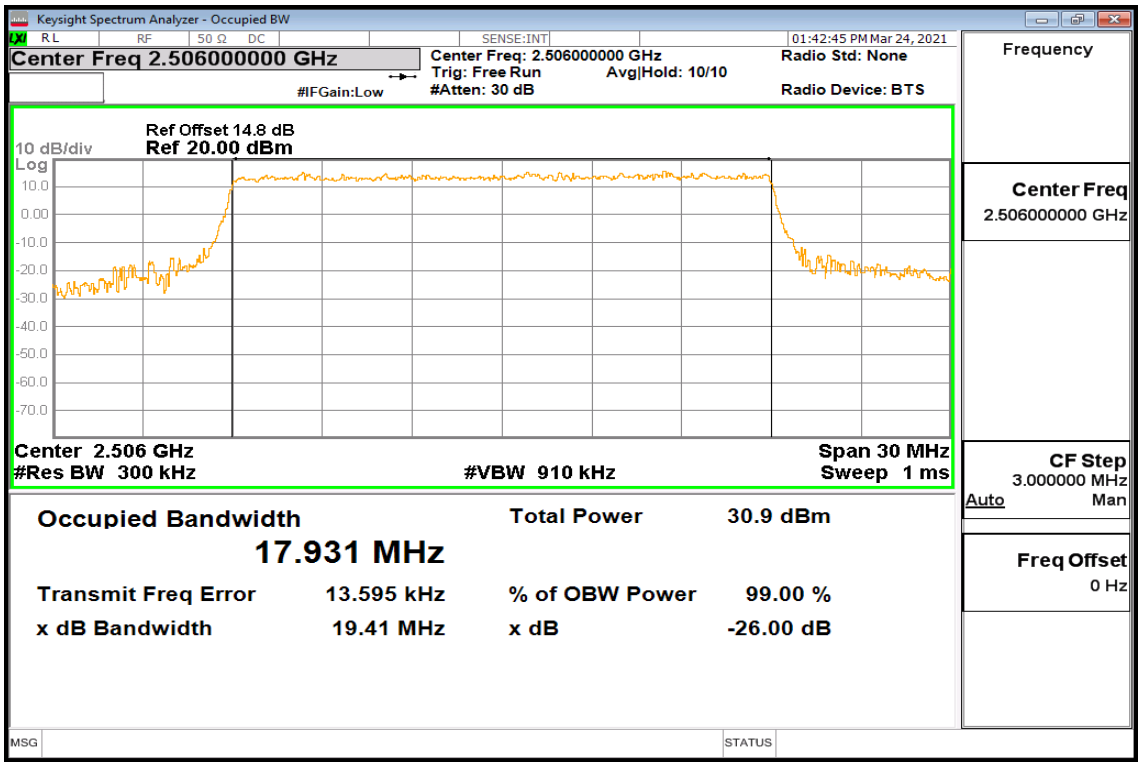


CH High

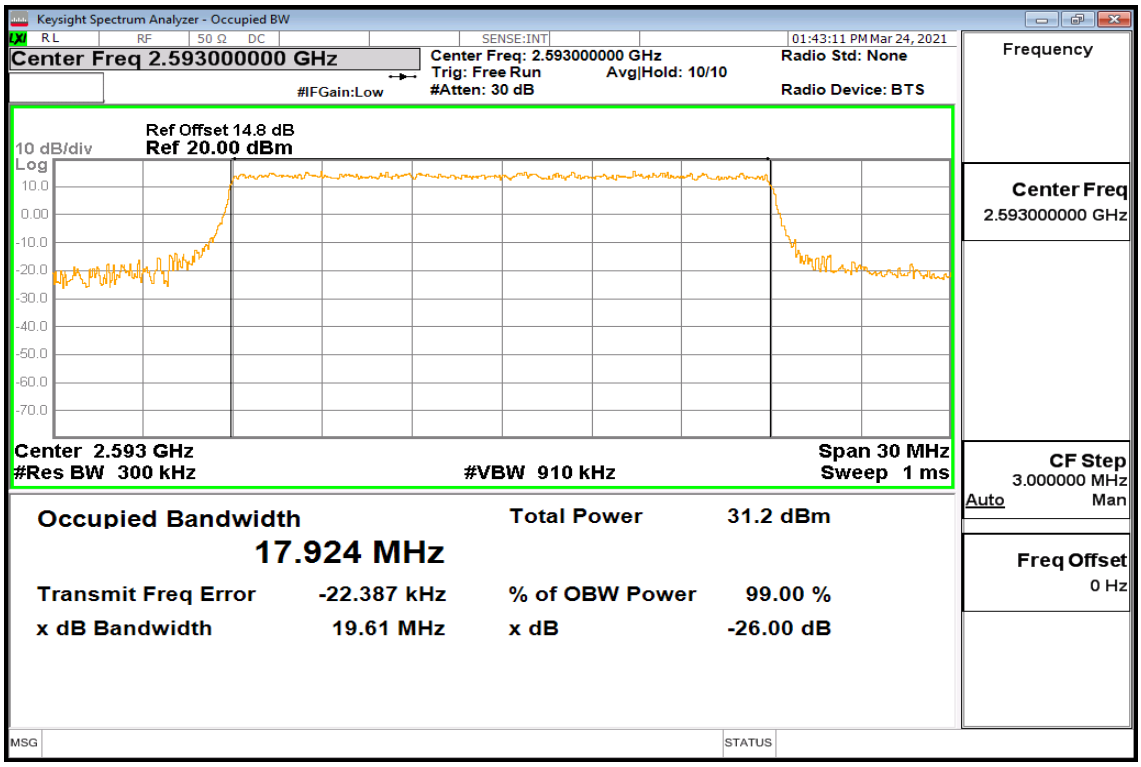


CHANNEL BANDWIDTH: 20MHz / 16QAM / RB =100, RB Offset = 0

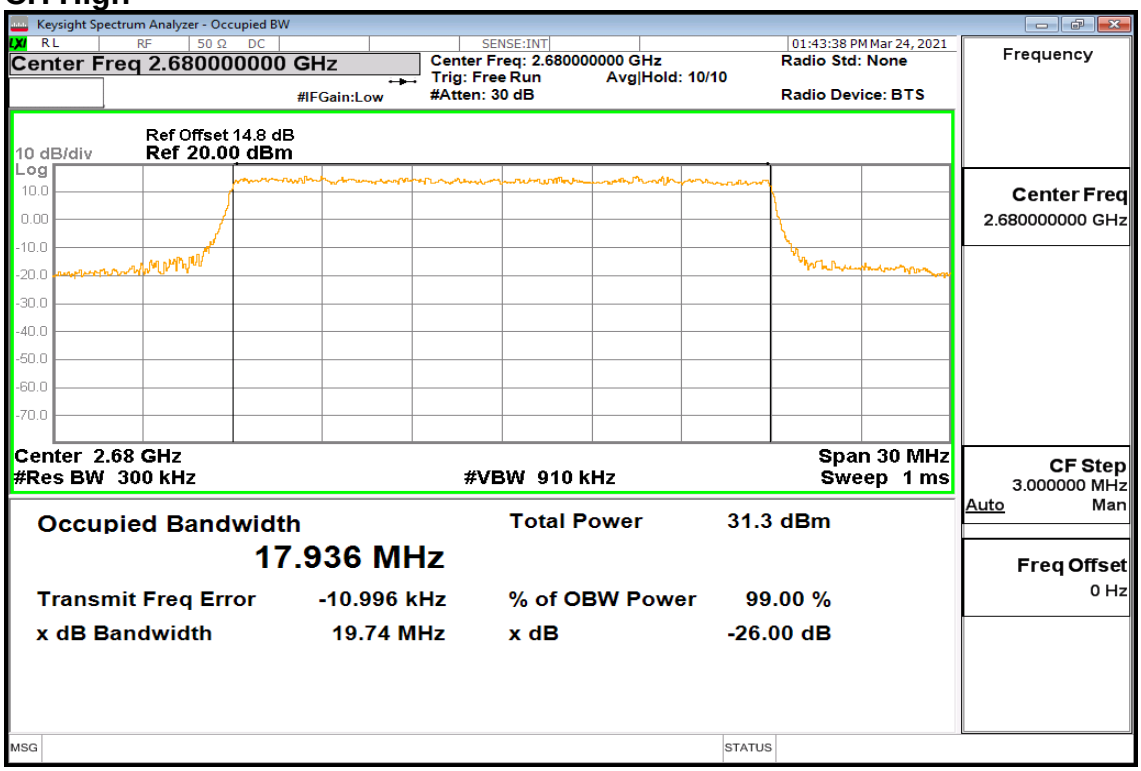
CH Low



CH Mid

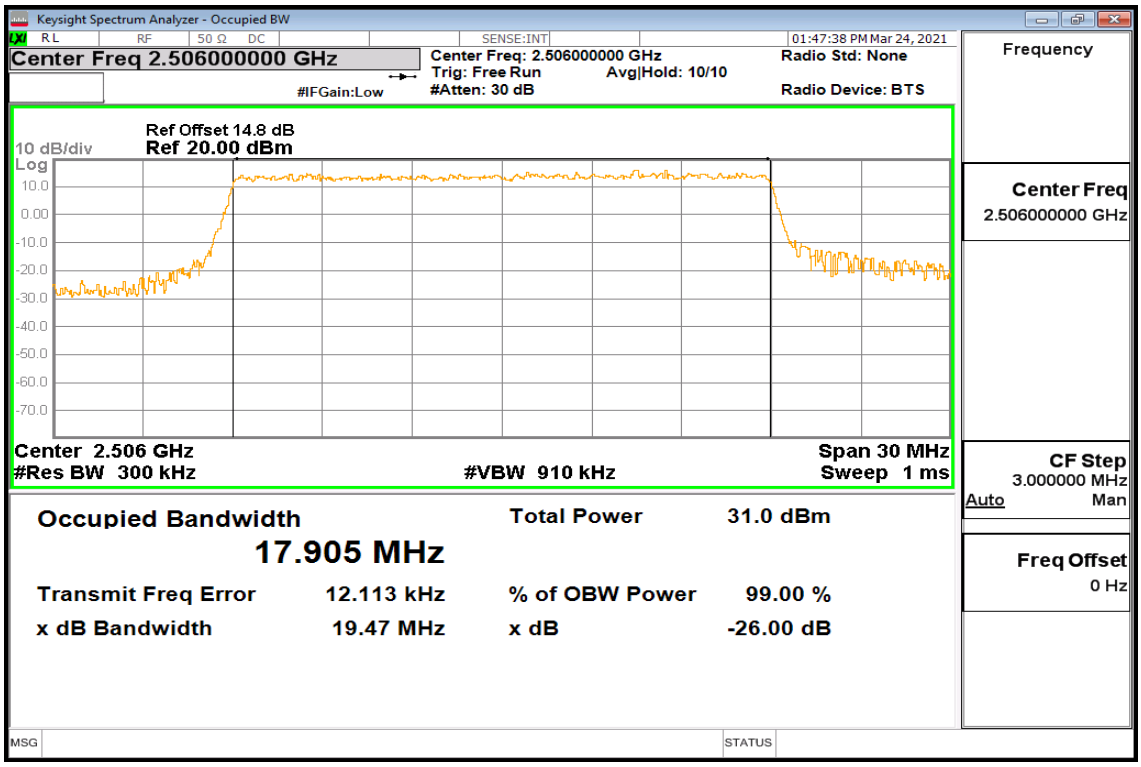


CH High

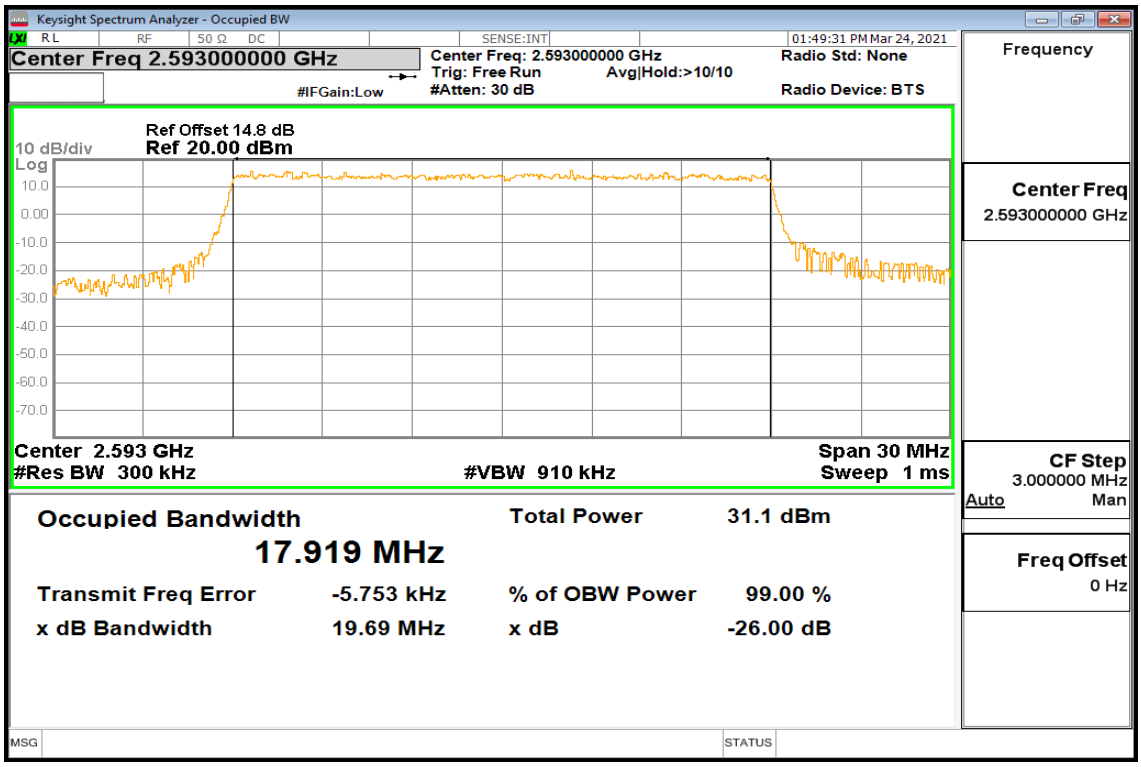


CHANNEL BANDWIDTH: 20MHz / 64QAM / RB =100, RB Offset = 0

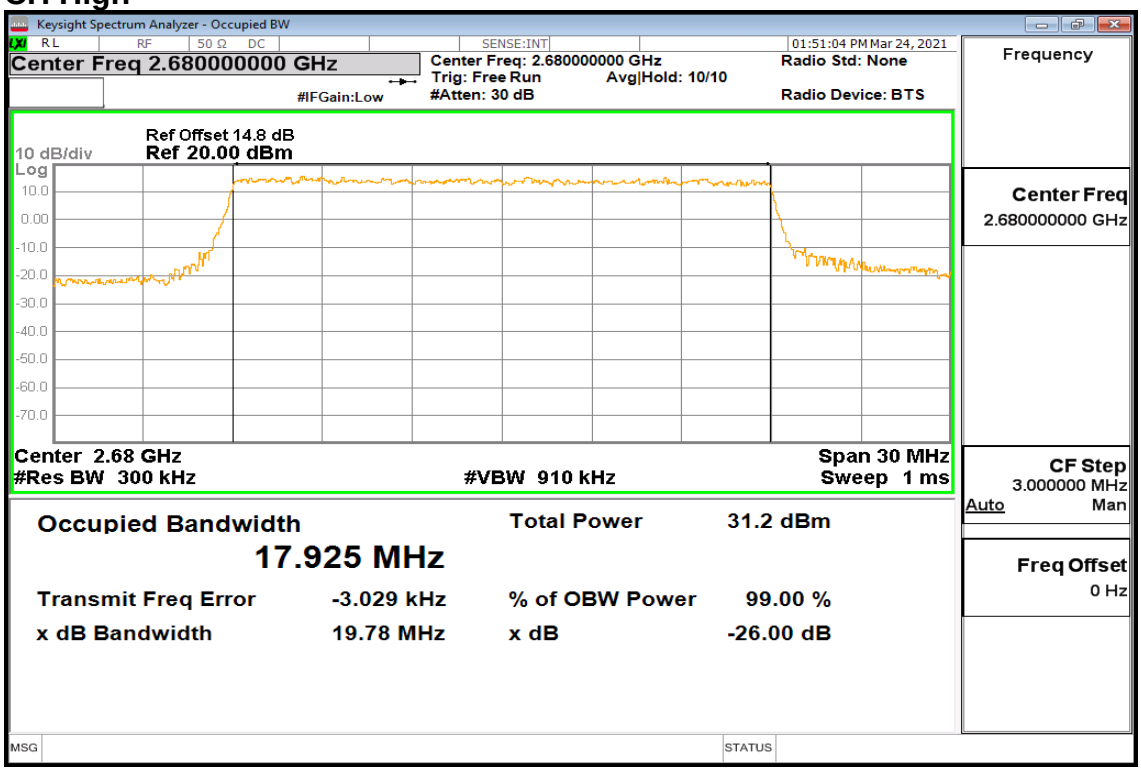
CH Low



CH Mid



CH High



8.4 PEAK TO AVERAGE POWER RATIO

LIMIT

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

TEST PROCEDURES

1. According to KDB 971168D01.
2. The EUT was connect to spectrum analyzer and call box.
3. Set the CCDF function in spectrum analyzer.
4. The highest RF output power were measured and recorded the maximum PAPR level associated with a probability of 0.1%.
5. Record the Peak to Average Power Ratio.

TEST RESULTS

Temperature:	23.1℃	**Humidity:**	53.2% RH
Tested by:	Jerry Chang	**Test Date:**	March 24, 2021

Temperature:	24.3 ~ 25.8℃	**Humidity:**	57.4 ~ 58.9% RH
Tested by:	Jerry Chang	**Test Date:**	August 26 ~ 27, 2021

Temperature:	25℃	**Humidity:**	62% RH
Tested by:	Jerry Chang	**Test Date:**	August 31, 2021

Temperature:	24℃	**Humidity:**	58% RH
Tested by:	Jerry Chang	**Test Date:**	September 6, 2021

LTE Band 41
For IC low ch

LTE BAND 41							
Channel bandwidth: 5MHz				Channel bandwidth: 10MHz			
Freq. (MHz)	CH	PAPR (dB)		Freq. (MHz)	CH	PAPR (dB)	
		64QAM	Limit			64QAM	Limit
2502.5	39715	6.91	13	2505.0	39740	5.01	13

LTE BAND 41							
Channel bandwidth: 15MHz				Channel bandwidth: 20MHz			
Freq. (MHz)	CH	PAPR (dB)		Freq. (MHz)	CH	PAPR (dB)	
		64QAM	Limit			64QAM	Limit
2507.5	39765	5.06	13	2510.0	39790	5.85	13

LTE BAND 41							
Channel bandwidth: 5MHz				Channel bandwidth: 10MHz			
Freq. (MHz)	CH	PAPR (dB)		Freq. (MHz)	CH	PAPR (dB)	
		64QAM	Limit			64QAM	Limit
2498.5	39675	5.77	13	2501.0	39700	5.68	13
2593.0	40620	6.02	13	2593.0	40620	5.89	13
2687.5	41565	5.62	13	2685.0	41540	5.82	13

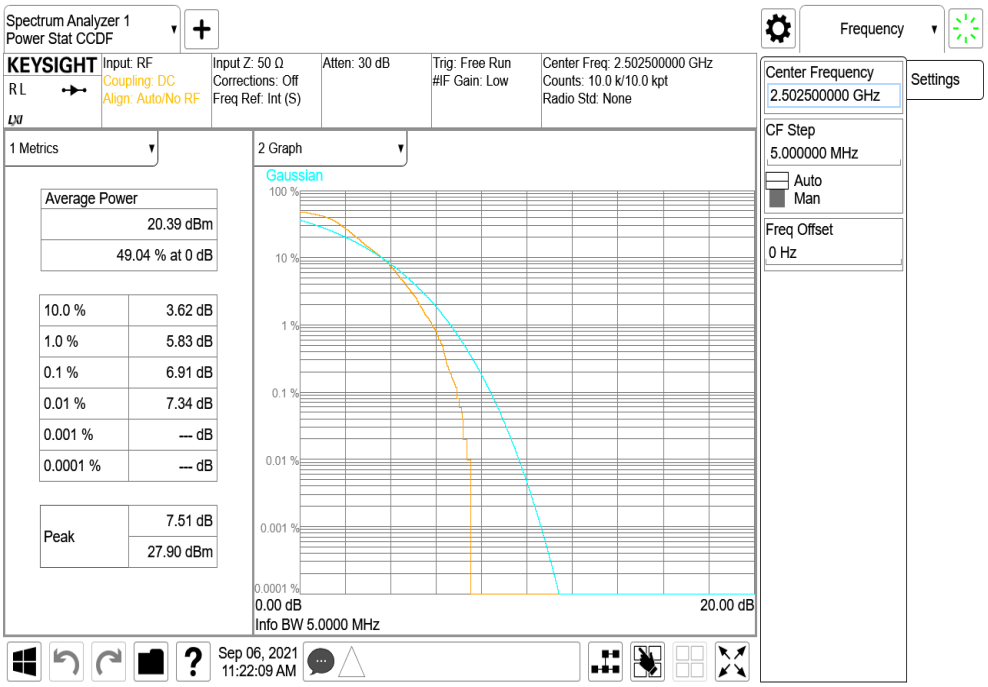
LTE BAND 41							
Channel bandwidth: 15MHz				Channel bandwidth: 20MHz			
Freq. (MHz)	CH	PAPR (dB)		Freq. (MHz)	CH	PAPR (dB)	
		64QAM	Limit			64QAM	Limit
2503.5	39725	10.40	13	2506.0	39750	6.02	13
2593.0	40620	5.74	13	2593.0	40620	5.79	13
2682.5	41515	4.45	13	2680.0	41490	5.74	13

Note: We selected worst case to performed test in middle channel, the results can be meet other channel.

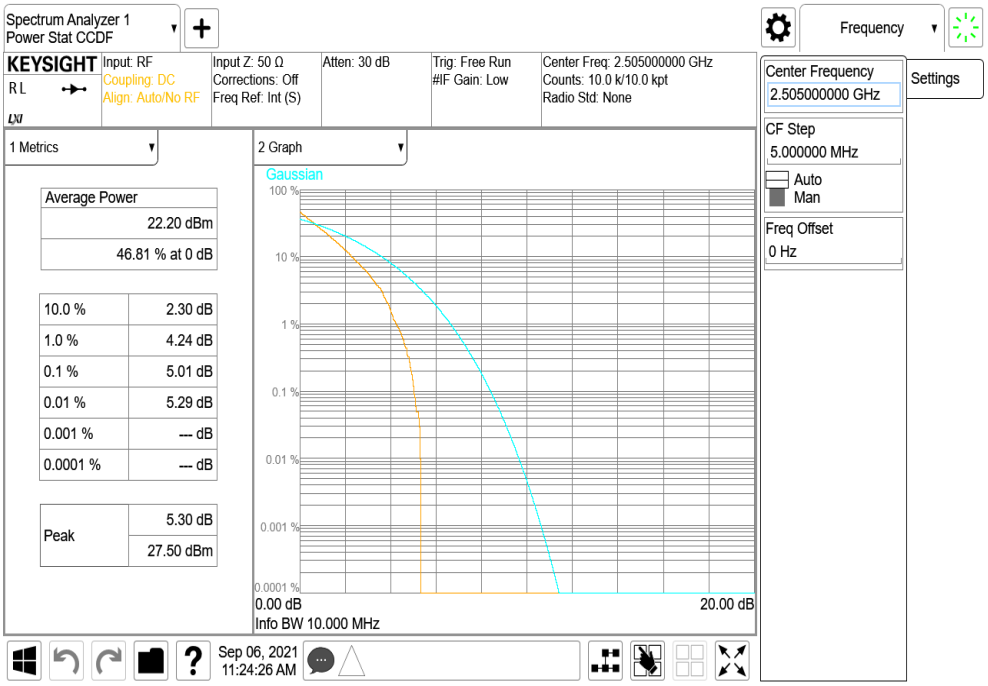
LTE Band 41

For IC low ch

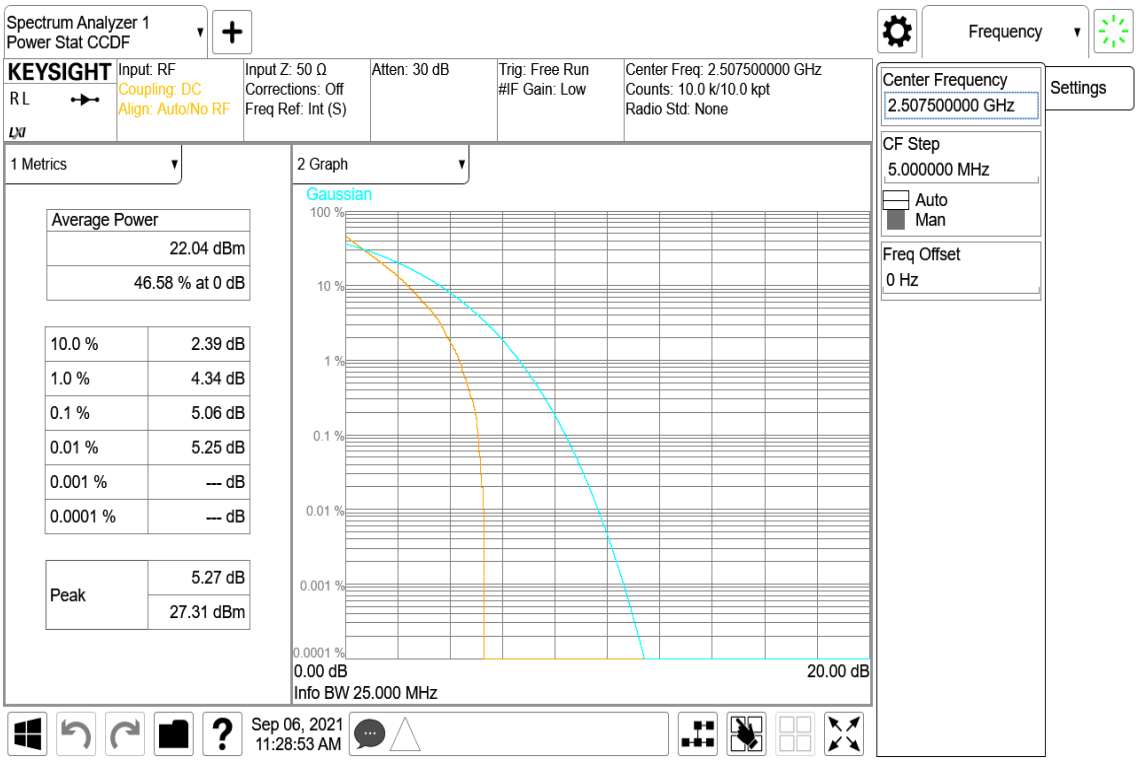
CHANNEL BANDWIDTH: 5MHz / 64QAM / RB =25, RB Offset = 0 CH Low



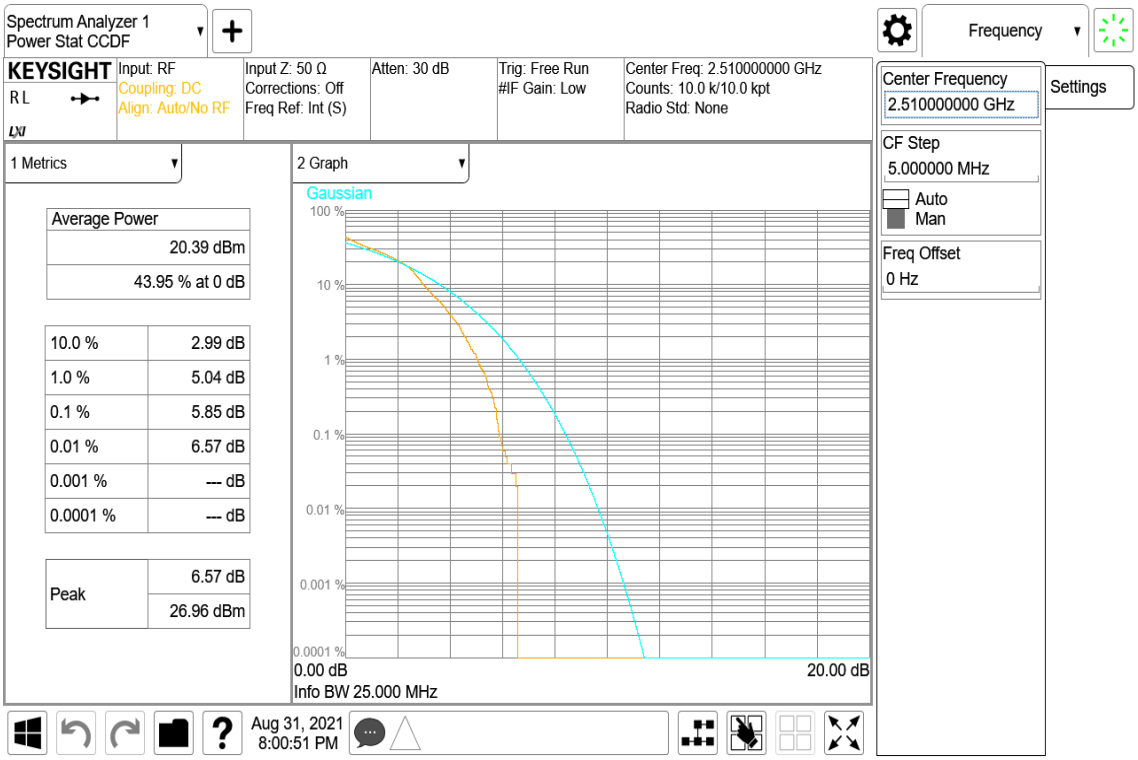
CHANNEL BANDWIDTH: 10MHz / 64QAM / RB =50, RB Offset = 0 CH Low



CHANNEL BANDWIDTH: 15MHz / 64QAM / RB =75, RB Offset = 0
CH Low

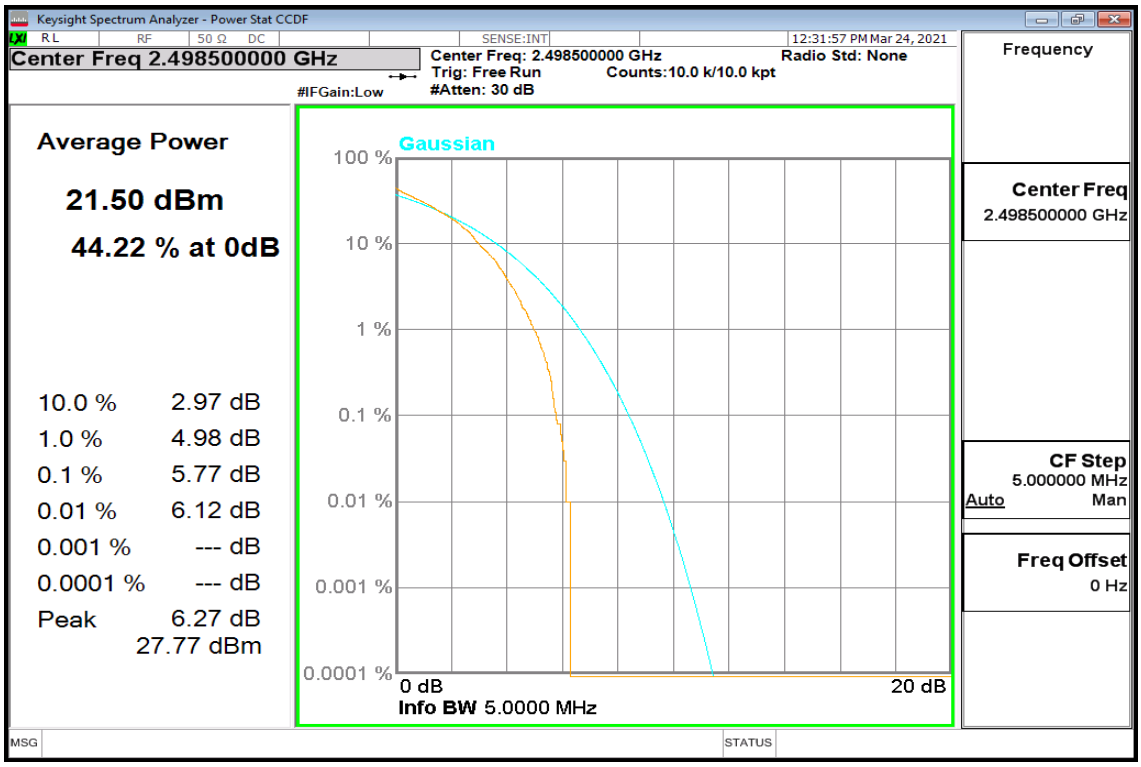


CHANNEL BANDWIDTH: 20MHz / 64QAM / RB =100, RB Offset = 0
CH Low

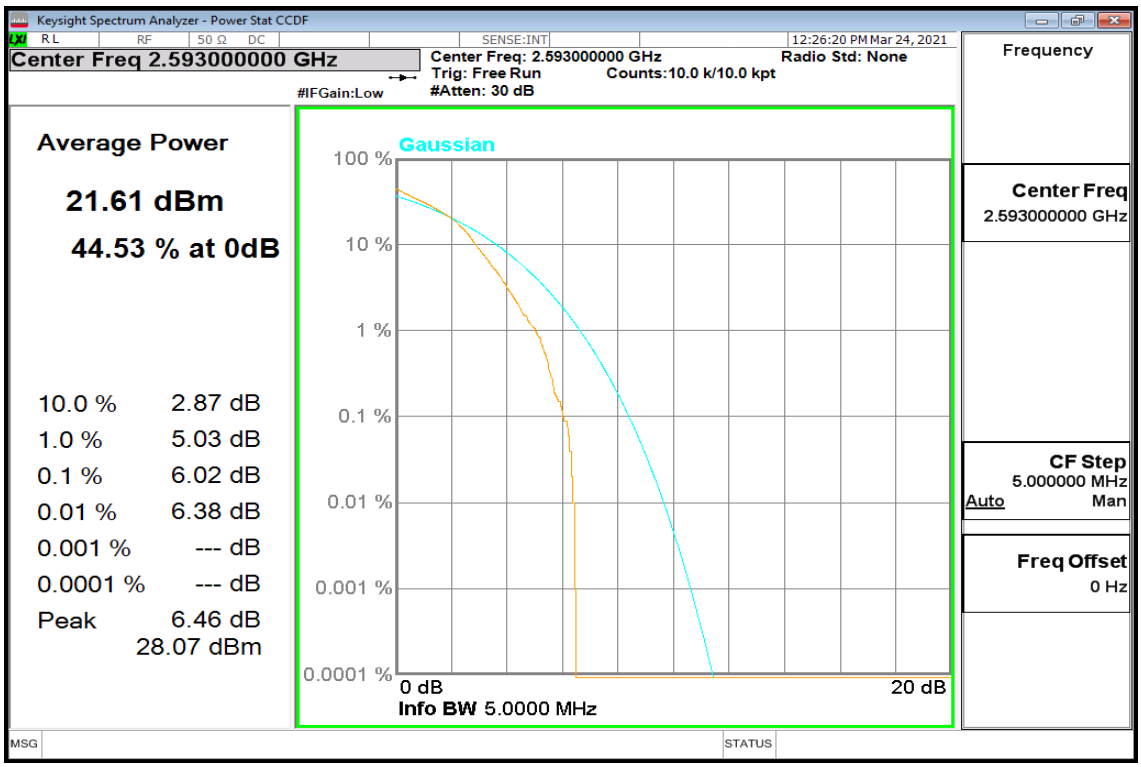


CHANNEL BANDWIDTH: 5MHz / 64QAM / RB =25, RB Offset = 0

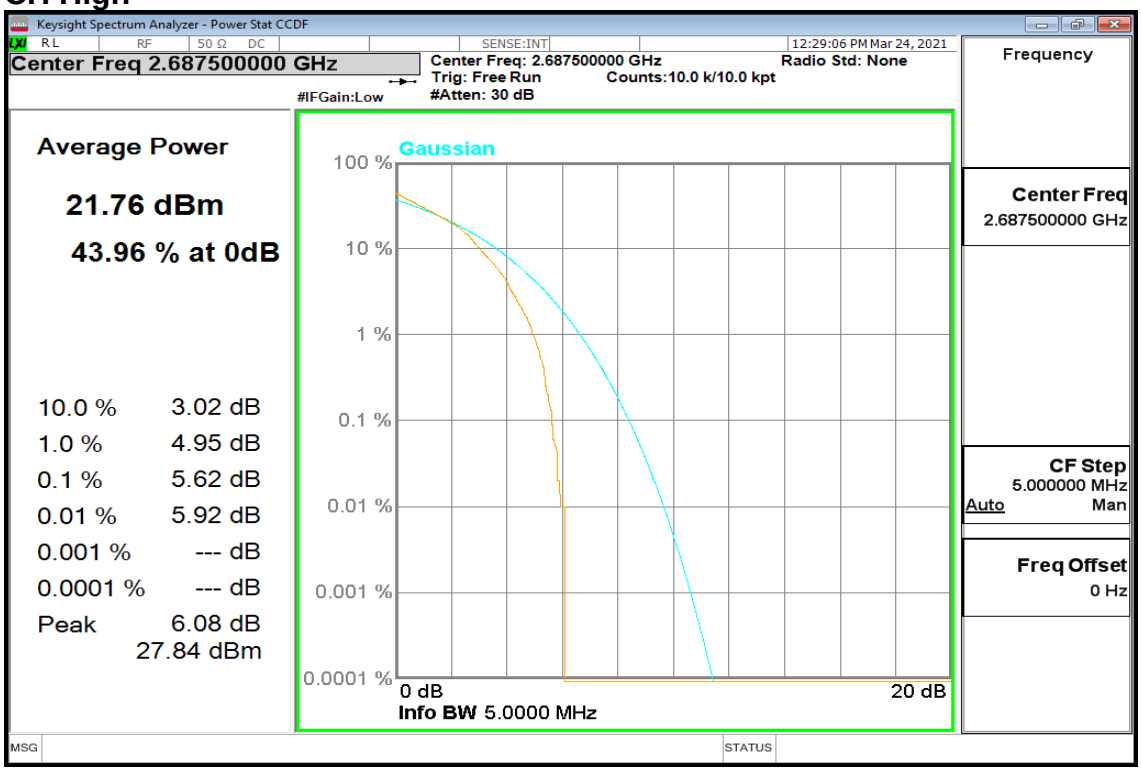
CH Low



CH Mid

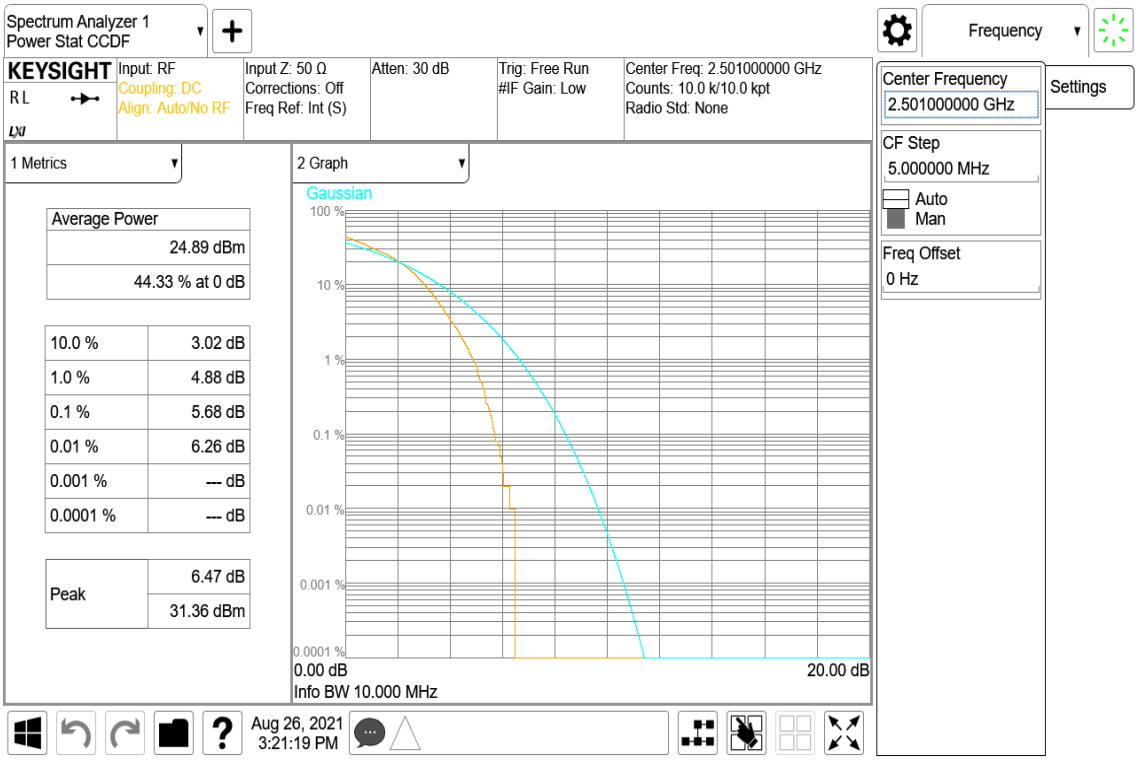


CH High

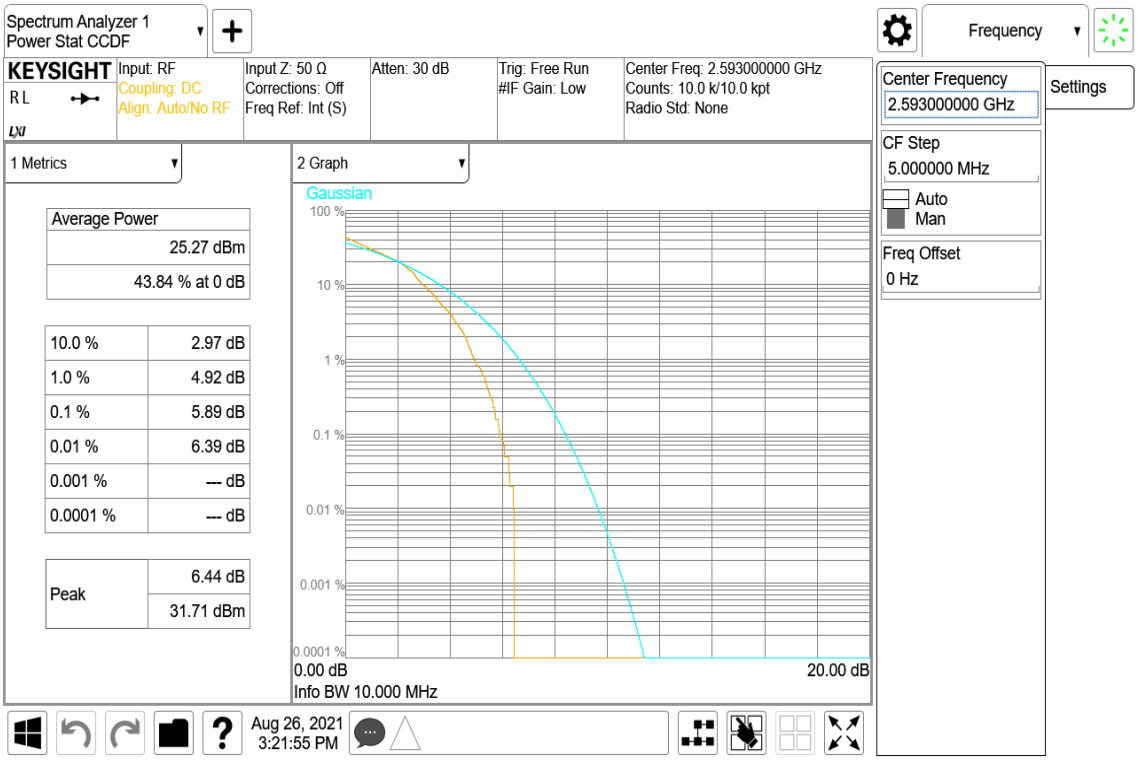


CHANNEL BANDWIDTH: 10MHz / 64QAM / RB =50, RB Offset = 0

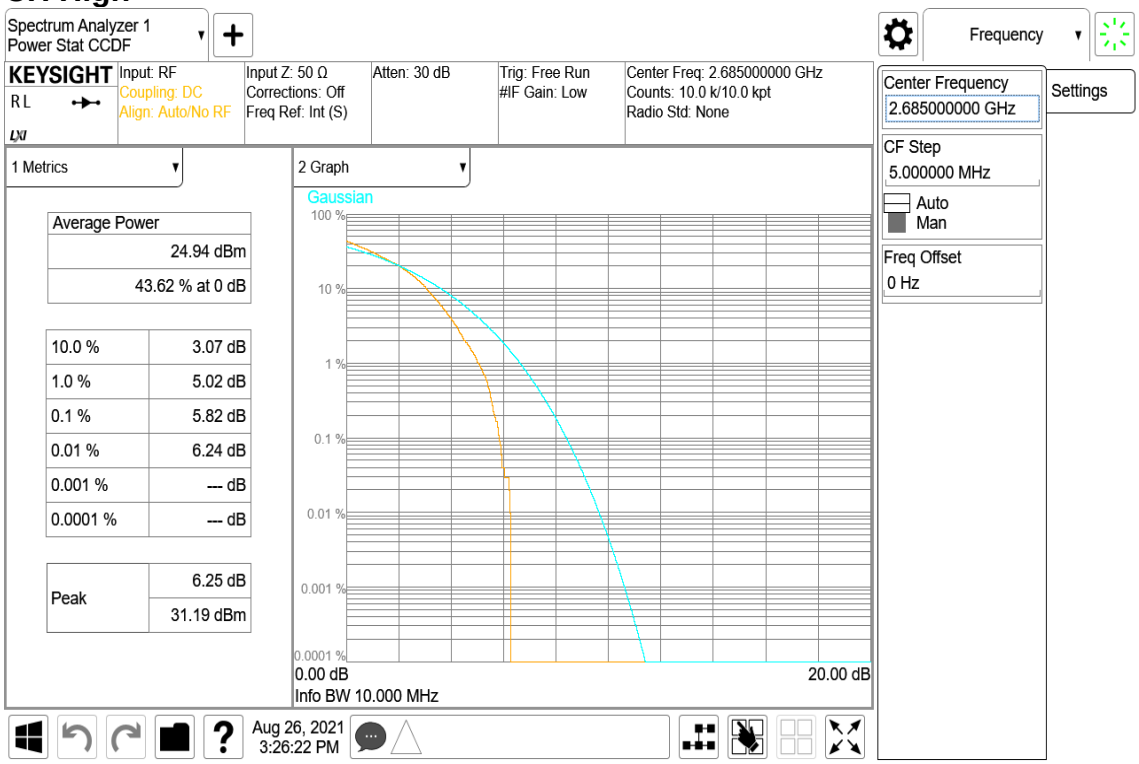
CH Low



CH Mid

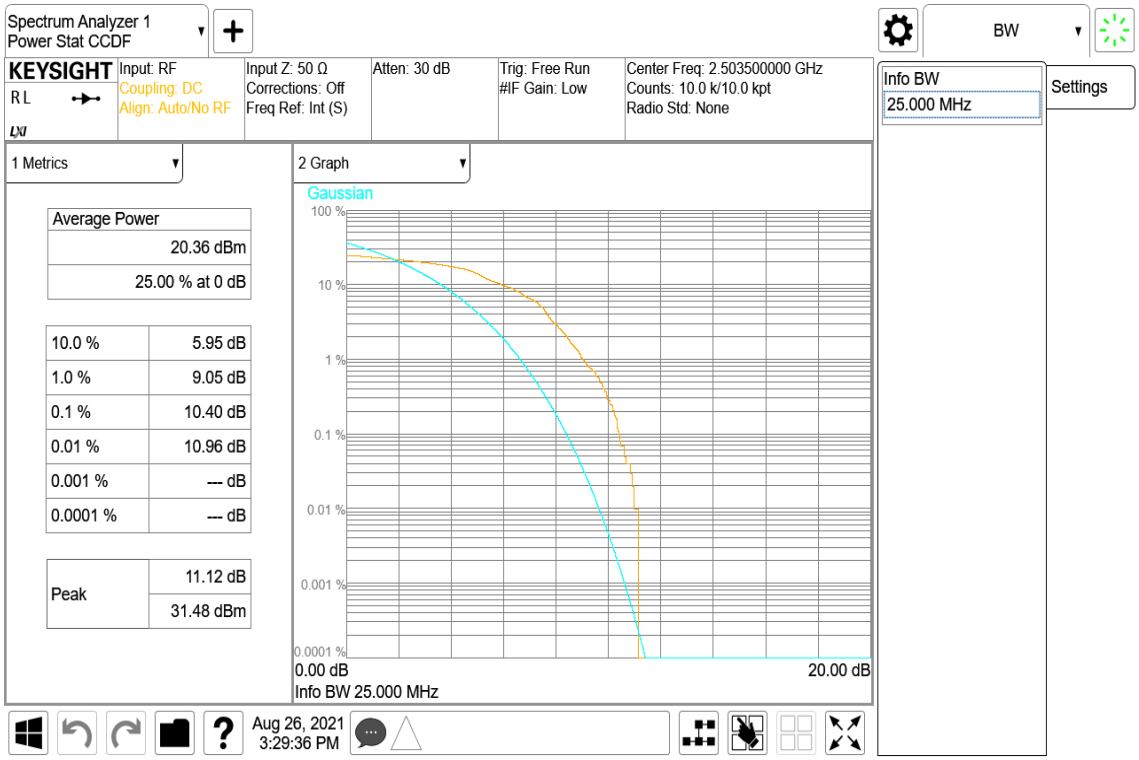


CH High

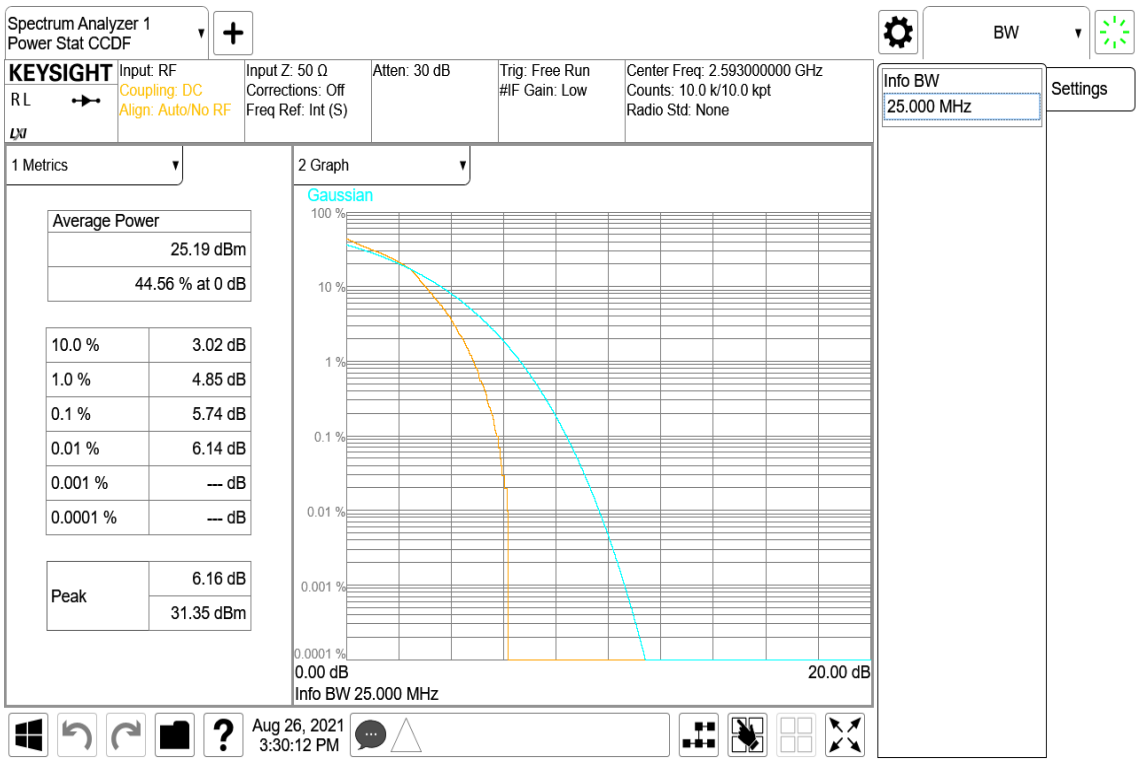


CHANNEL BANDWIDTH: 15MHz / 64QAM / RB =75, RB Offset = 0

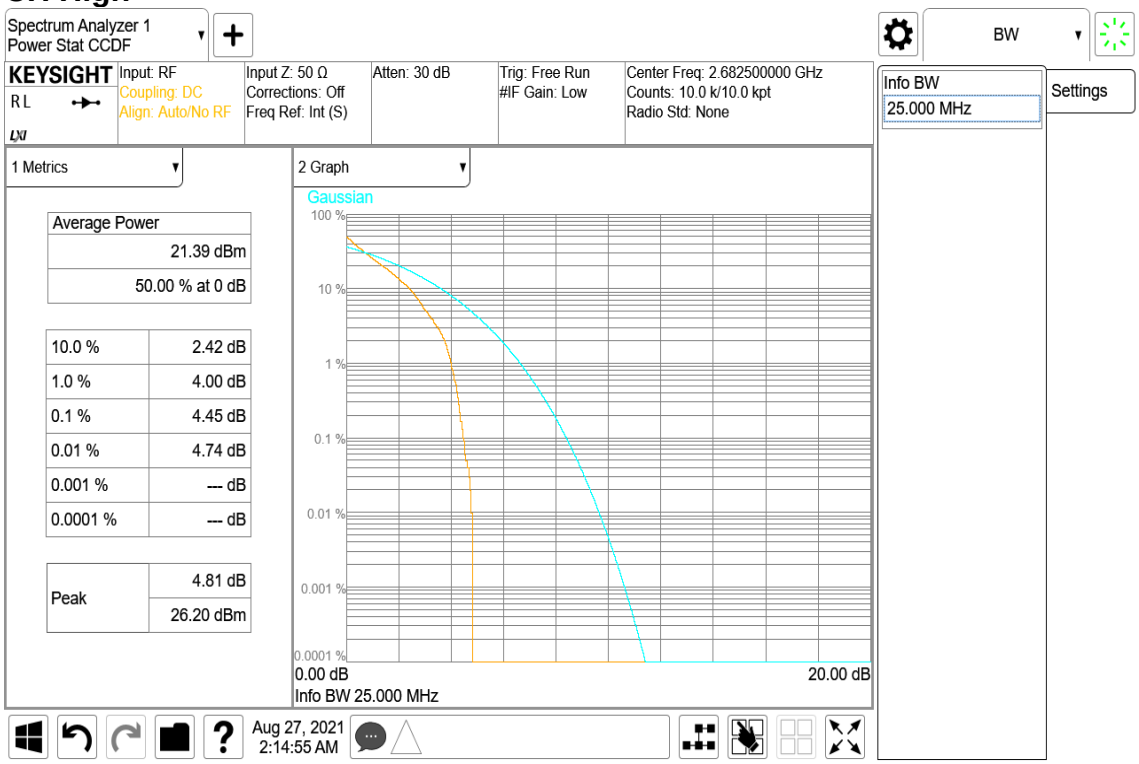
CH Low



CH Mid

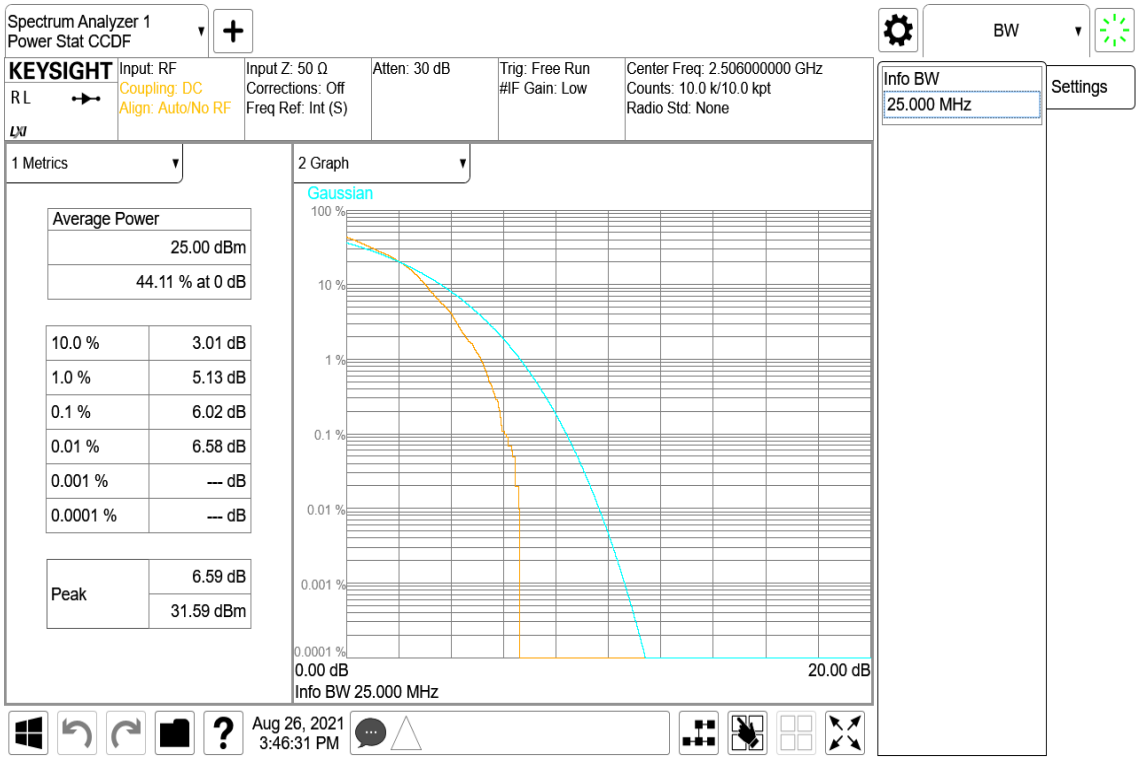


CH High

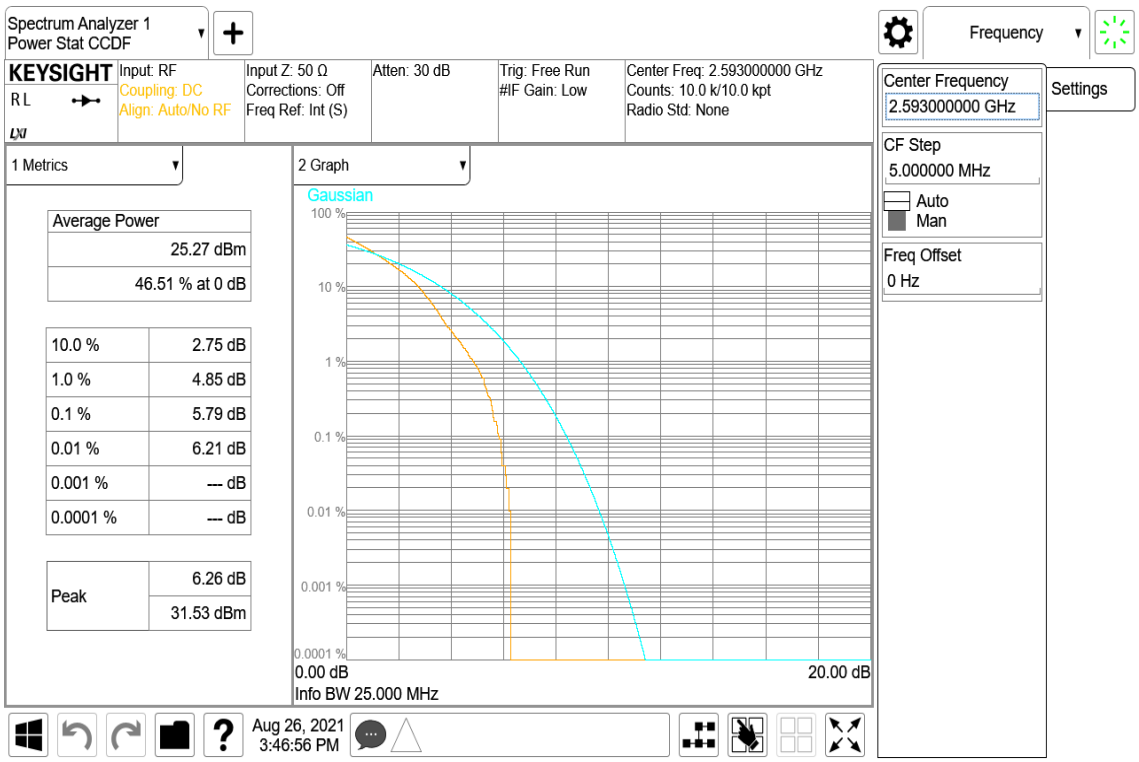


CHANNEL BANDWIDTH: 20MHz / 64QAM / RB =100, RB Offset = 0

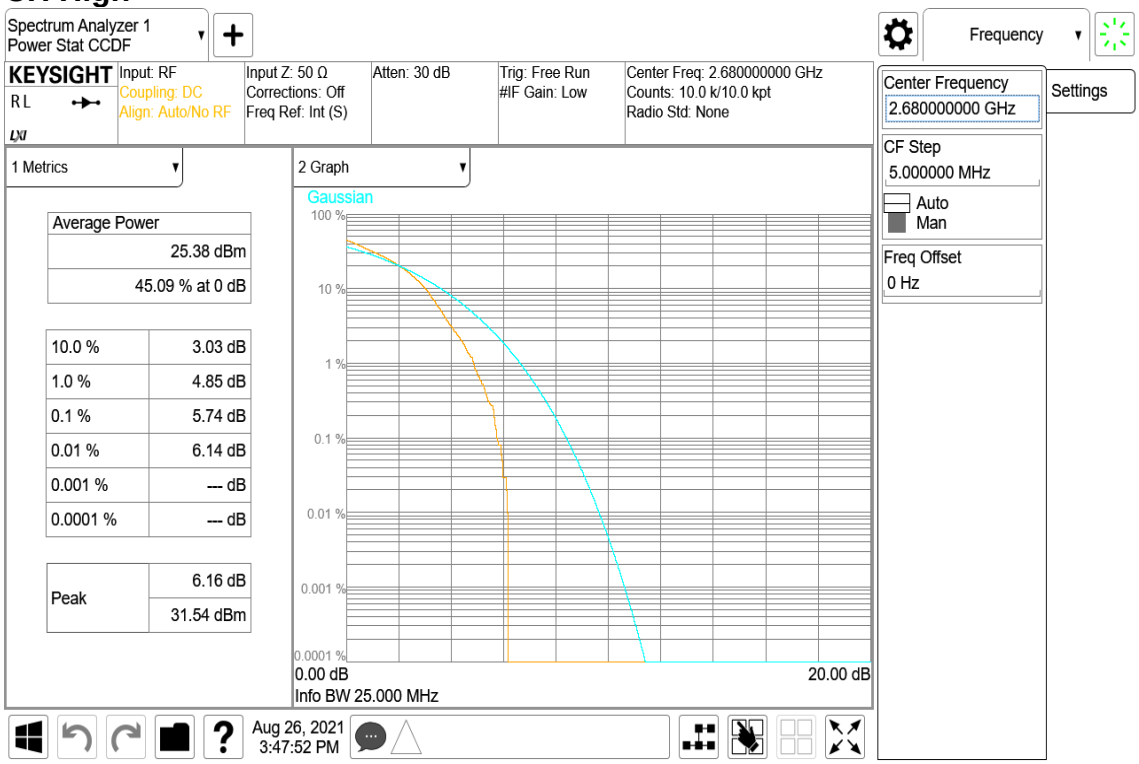
CH Low



CH Mid



CH High



8.5 OUT OF BAND EMISSION AT ANTENNA TERMINALS

LIMIT

Part 27.53(m) (4), Band 41
Specifies that “for BRS and EBS stations. For mobile digital stations, the attenuation factor shall be not less than 40 + 10 log (P) dB on all frequencies between the channel edge and 5 megahertz from the channel edge, 43 + 10 log (P) dB on all frequencies between 5 megahertz and X megahertz from the channel edge, and 55 + 10 log (P) dB on all frequencies more than X megahertz from the channel edge, where X is the greater of 6 megahertz or the actual emission bandwidth as defined in paragraph (m)(4) of this section. In addition, the attenuation factor shall not be less that 43 + 10 log (P) dB on all frequencies between 2490.5 MHz and 2496 MHz and 55 + 10 log (P) dB at or below 2490.5 MHz. Mobile Satellite Service licensees operating on frequencies below 2495 MHz may also submit a documented interference complaint against BRS licensees operating on channel BRS Channel 1 on the same terms and conditions as adjacent channel BRS or EBS licensees.

According to RSS-199, Band 41
For mobile subscriber equipment, the power of any unwanted emissions measured as above shall be attenuated (in dB) below the transmitter power, P (dBW), by at least:
(i) 40 + 10 log10 p from the channel edges to 5 MHz away
(ii) 43 + 10 log10 p between 5 MHz and X MHz from the channel edges, and
(iii) 55 + 10 log10 p at X MHz and beyond from the channel edges

In addition, the attenuation shall not be less than 43 + 10 log10 p on all frequencies between 2490.5 MHz and 2496 MHz, and 55 + 10 log10 p at or below 2490.5 MHz.

p is the transmitter power measured in watts and **X** is 6 MHz or the equipment occupied bandwidth, whichever is greater.

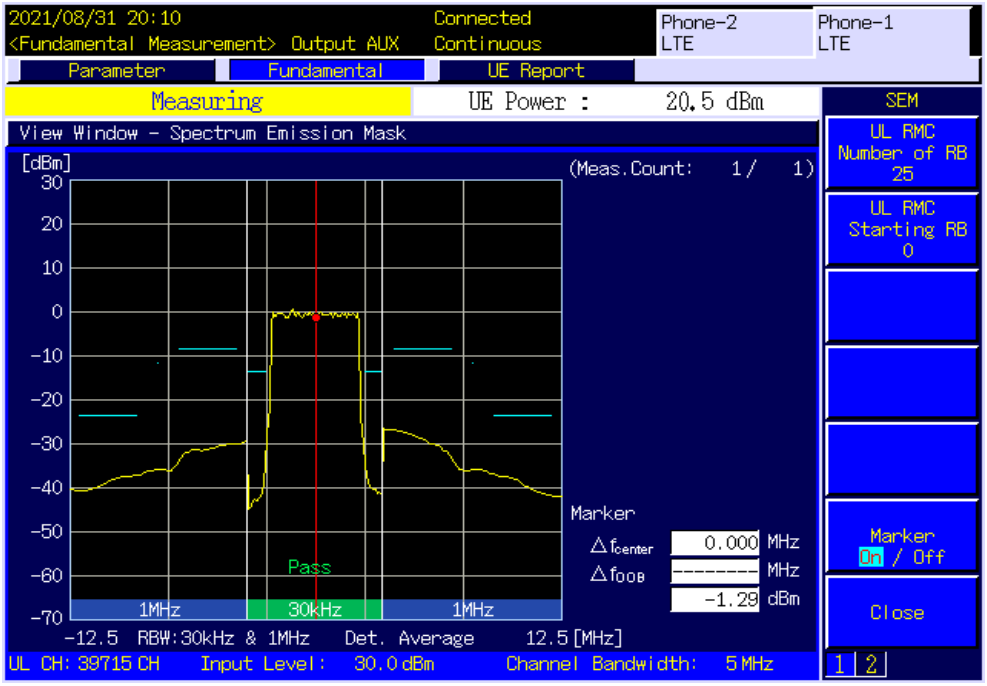
TEST PROCEDURES

KDB 971168 D01 Power Meas License Digital Systems – Section 6.0
1. RBW ≥ 1% of the emission bandwidth
2. VBW ≥ 3 x RBW
3. Span was set large enough so as to capture all out of emissions near the band edge.

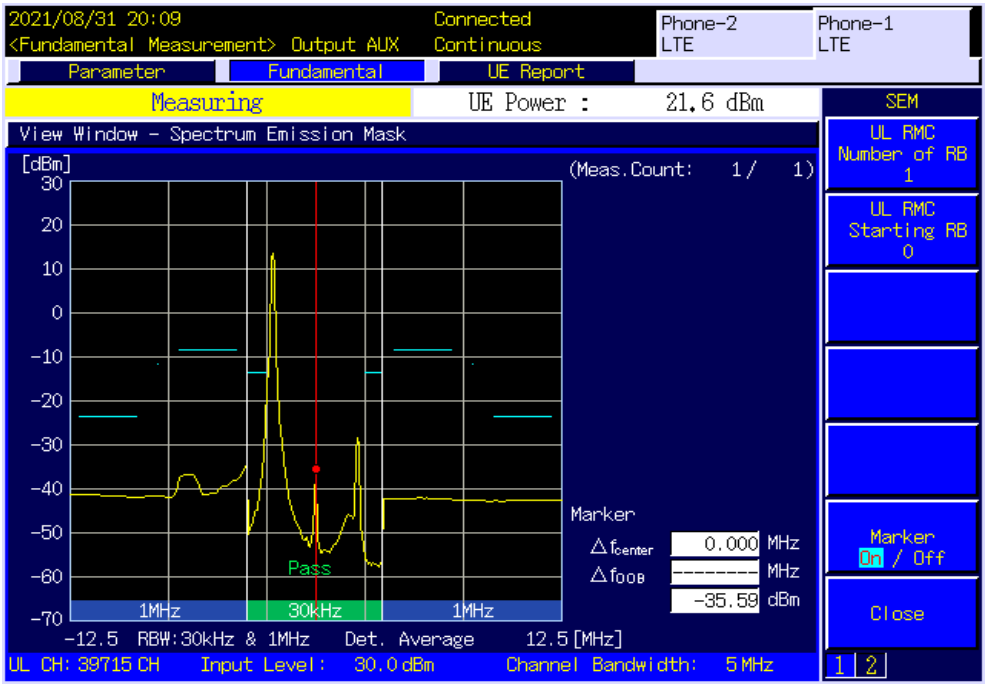
TEST RESULTS:

Temperature:	23.1℃	**Humidity:**	53.2% RH
Tested by:	Jerry Chang	**Test Date:**	March 24, 2021
Temperature:	25.8℃	**Humidity:**	57.4% RH
Tested by:	Jerry Chang	**Test Date:**	August 26, 2021
Temperature:	25℃	**Humidity:**	62% RH
Tested by:	Jerry Chang	**Test Date:**	August 31, 2021

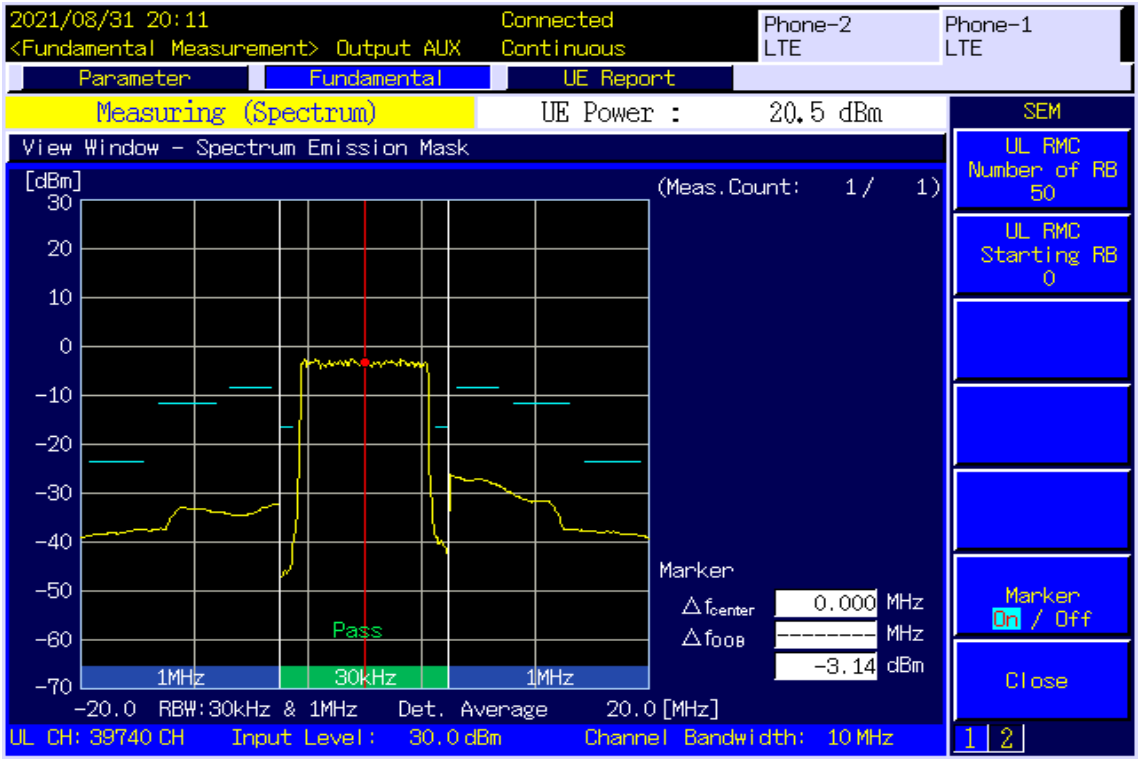
Emission Mask
LTE Band 41
For IC low ch
CHANNEL BANDWIDTH: 5MHz / QPSK / RB =25, RB Offset = 0
LOWER BAND EDGE



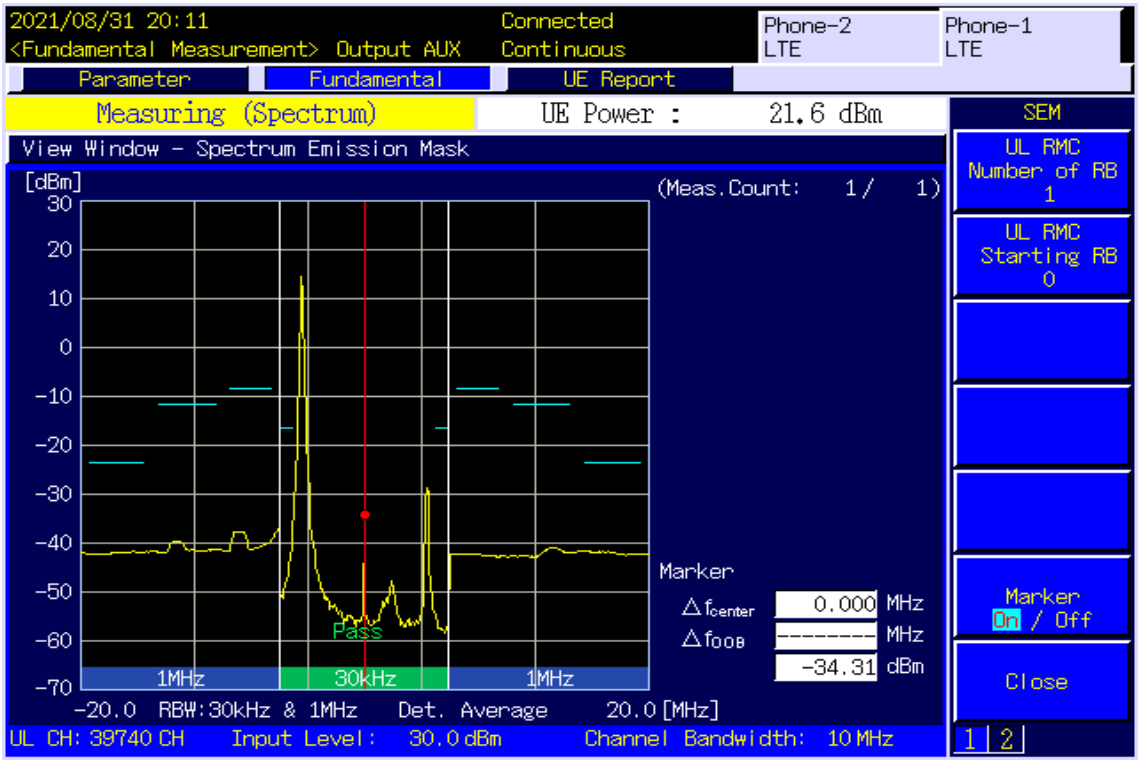
CHANNEL BANDWIDTH: 5MHz / QPSK / RB =1, RB Offset = 0
LOWER BAND EDGE



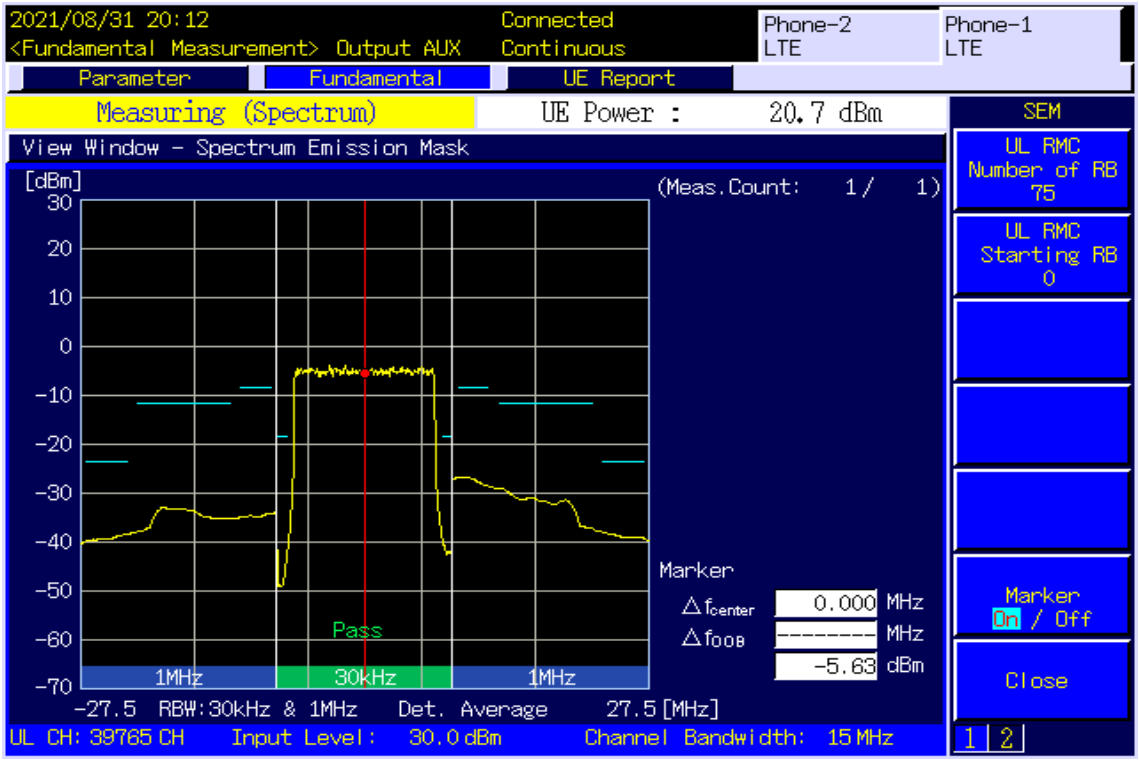
CHANNEL BANDWIDTH: 10MHz / QPSK / RB =50, RB Offset = 0
LOWER BAND EDGE



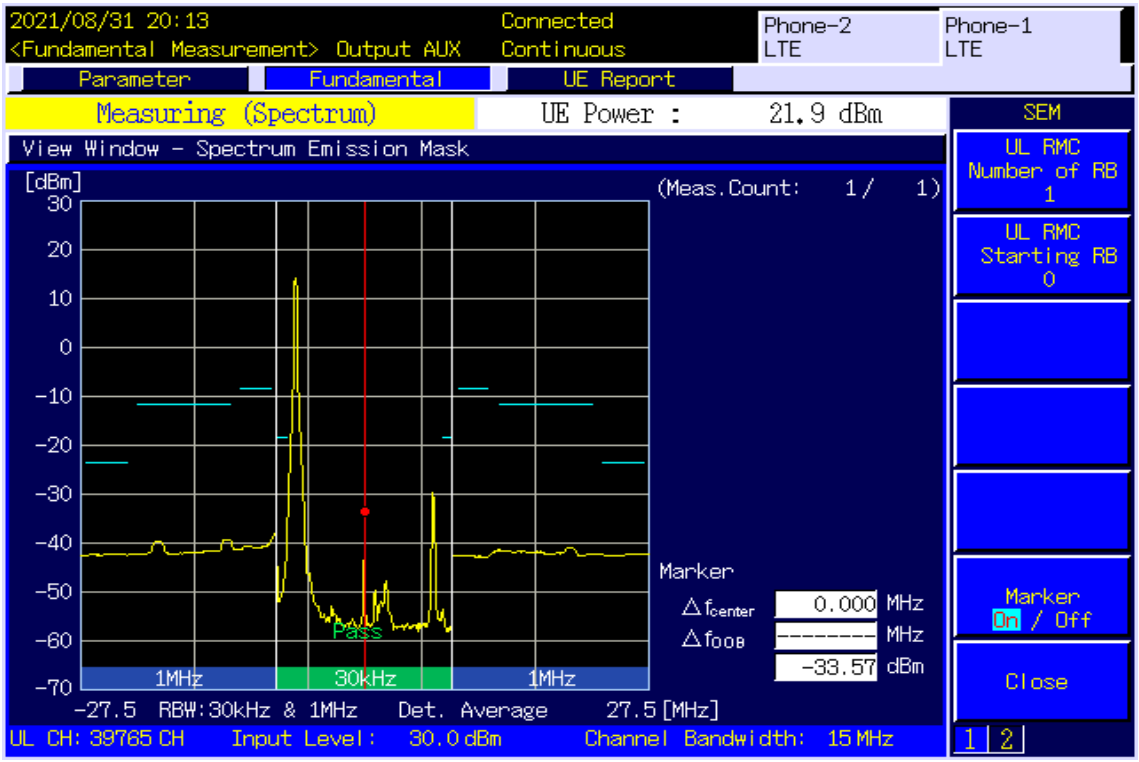
CHANNEL BANDWIDTH: 10MHz / QPSK / RB =1, RB Offset = 0
LOWER BAND EDGE



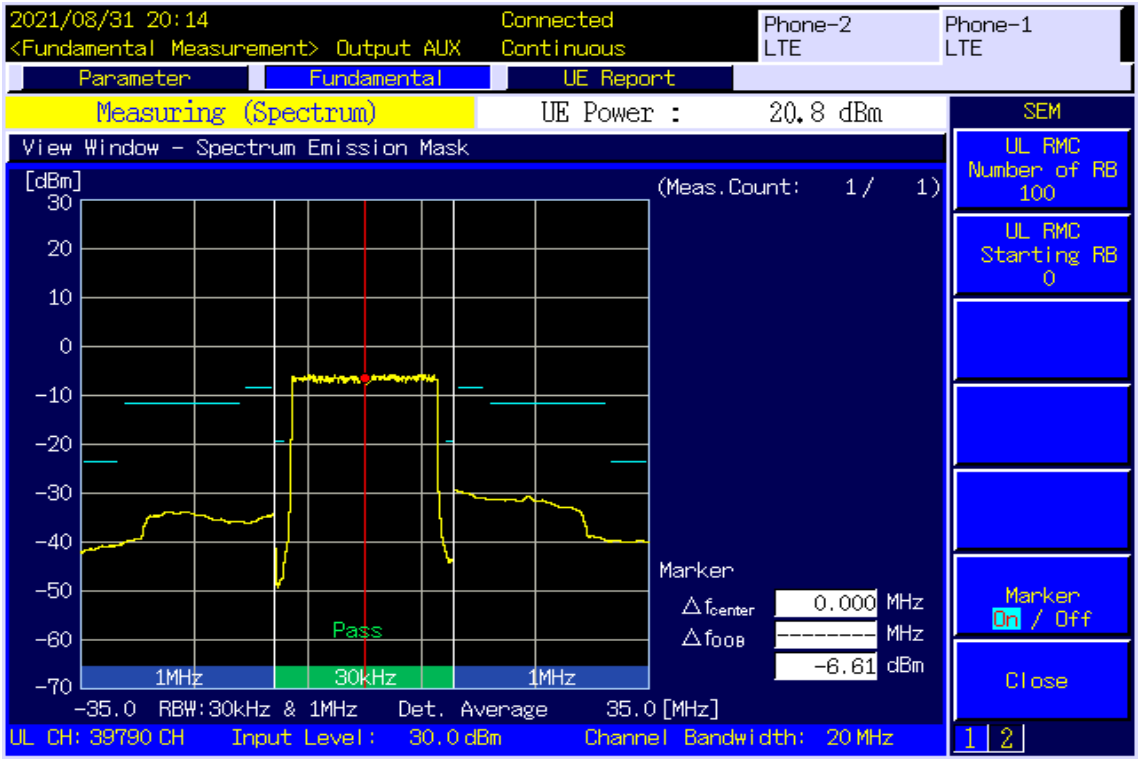
CHANNEL BANDWIDTH: 15MHz / QPSK / RB =75, RB Offset = 0
LOWER BAND EDGE



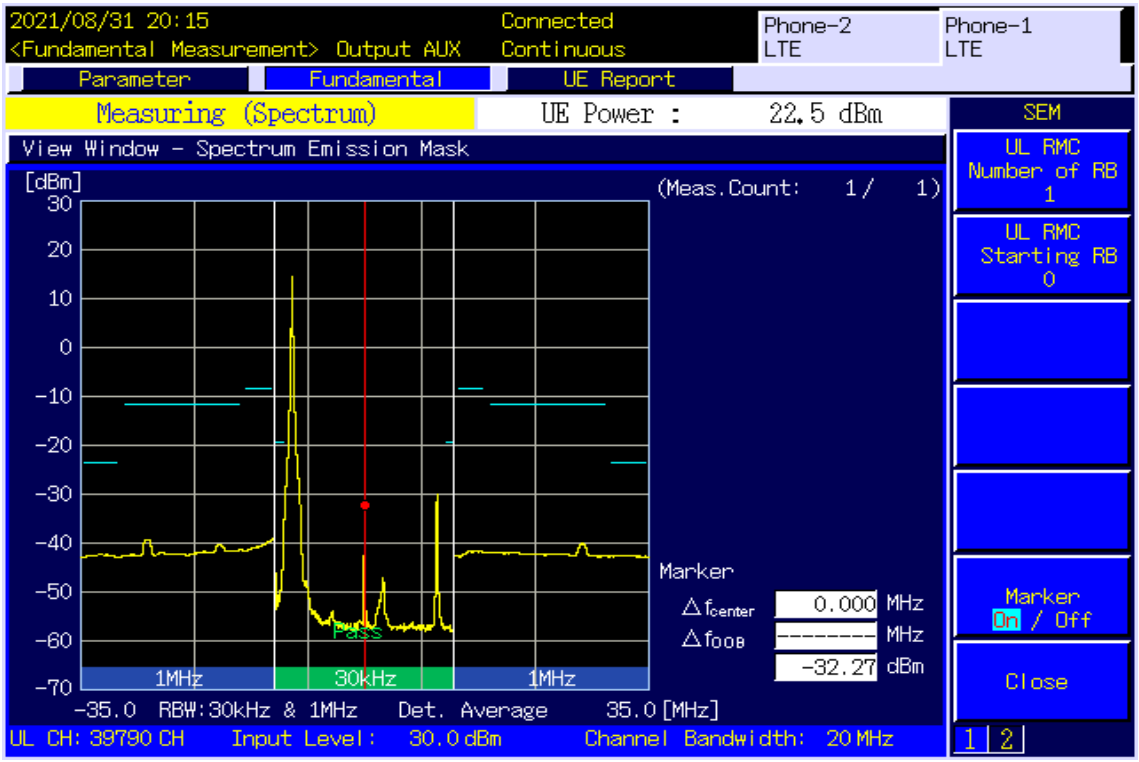
CHANNEL BANDWIDTH: 15MHz / QPSK / RB =1, RB Offset = 0
LOWER BAND EDGE



CHANNEL BANDWIDTH: 20MHz / QPSK / RB =100, RB Offset = 0
LOWER BAND EDGE

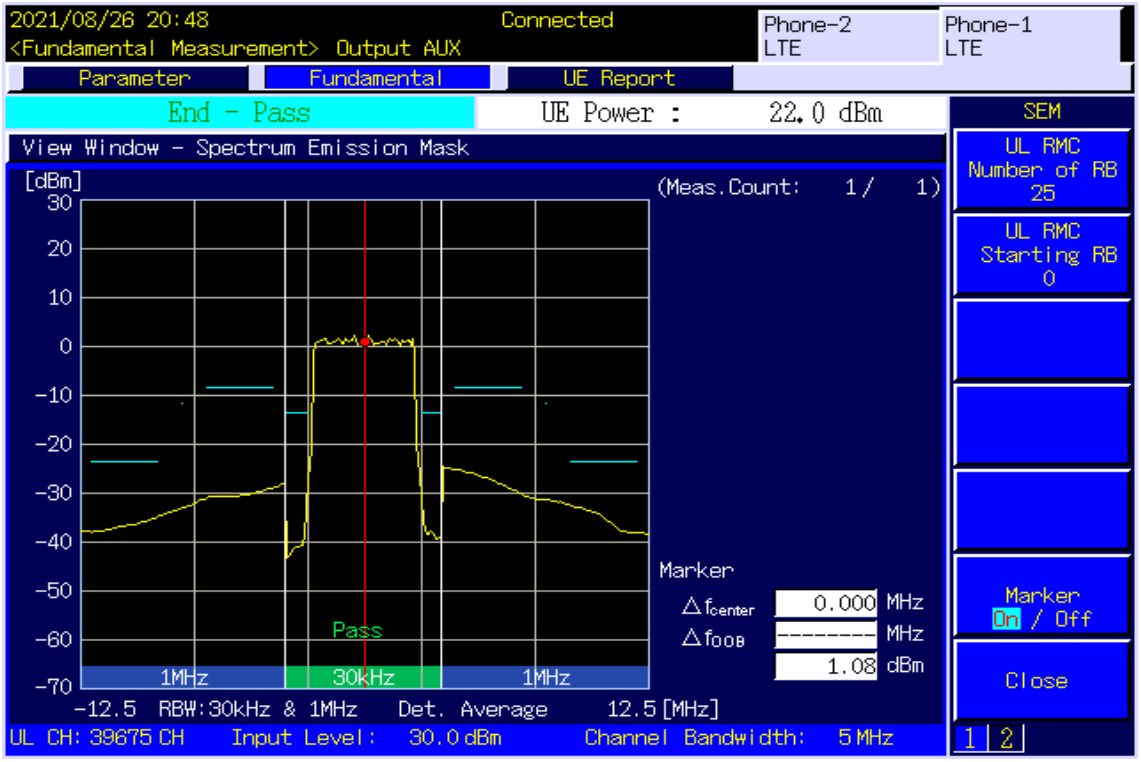


CHANNEL BANDWIDTH: 20MHz / QPSK / RB =1, RB Offset = 0
LOWER BAND EDGE

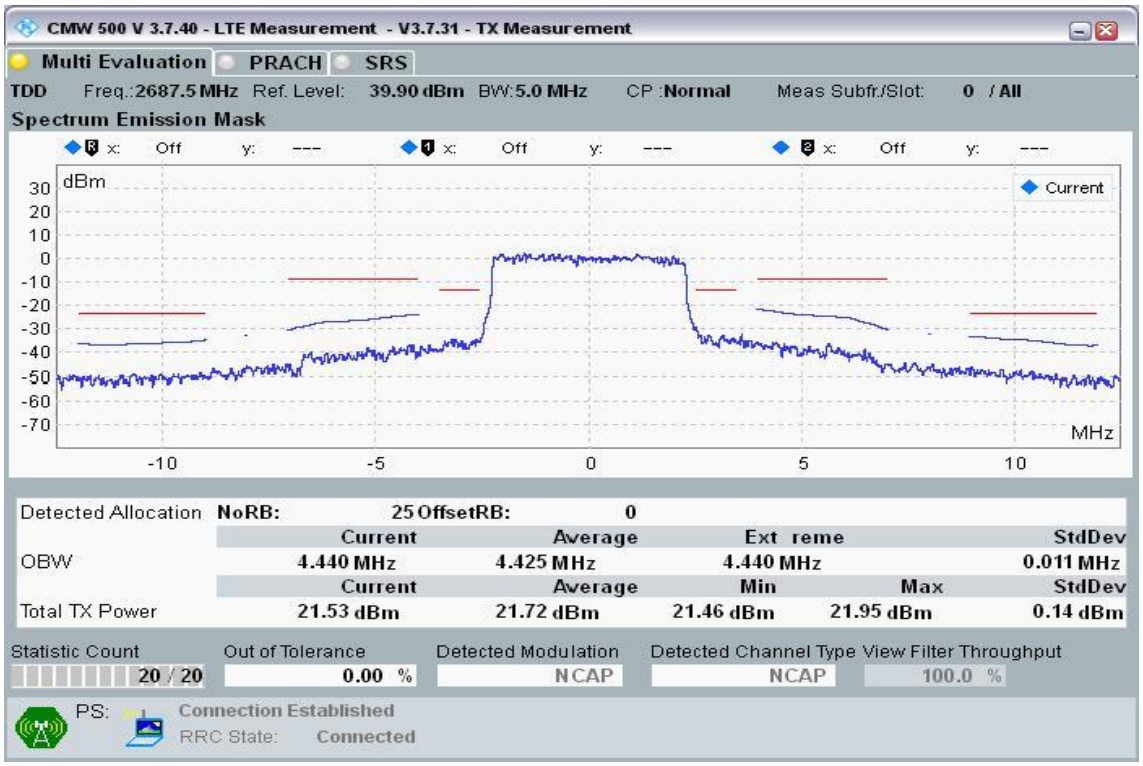


CHANNEL BANDWIDTH: 5MHz / QPSK / RB =25, RB Offset = 0

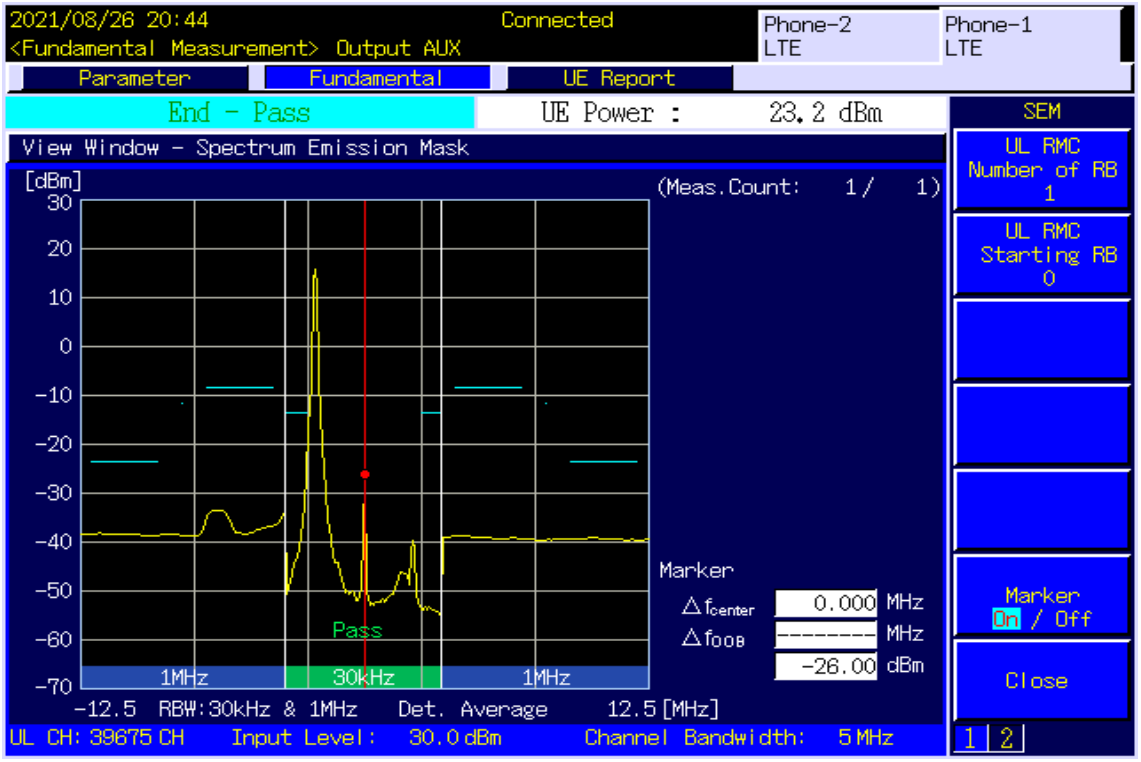
LOWER BAND EDGE



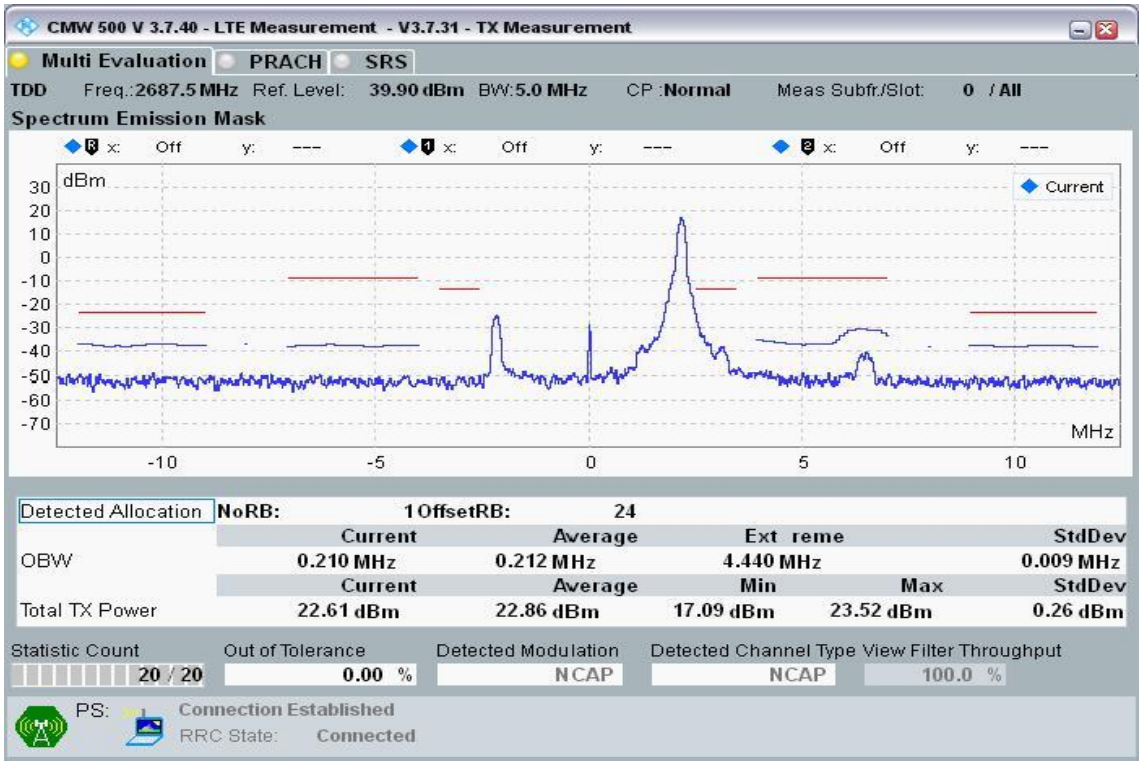
HIGHER BAND EDGE



CHANNEL BANDWIDTH: 5MHz / QPSK / RB =1, RB Offset = 0
LOWER BAND EDGE

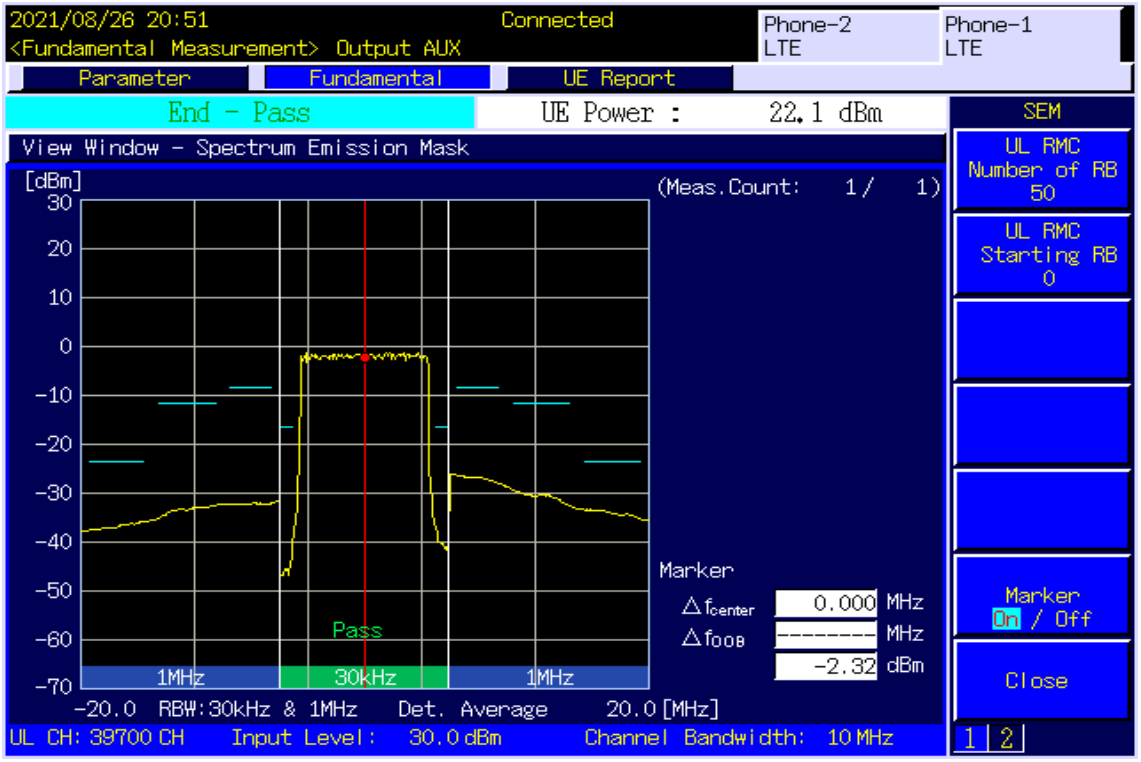


CHANNEL BANDWIDTH: 5MHz / QPSK / RB =1, RB Offset = 24
HIGHER BAND EDGE

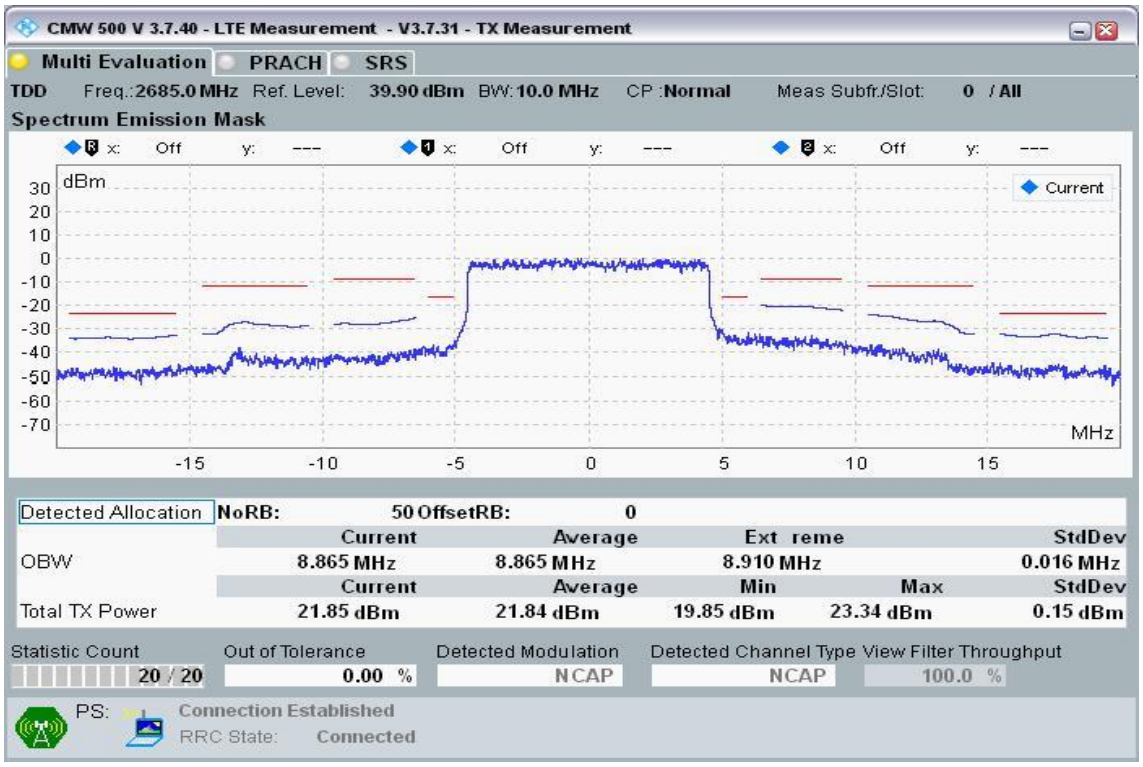


CHANNEL BANDWIDTH: 10MHz / QPSK / RB =50, RB Offset = 0

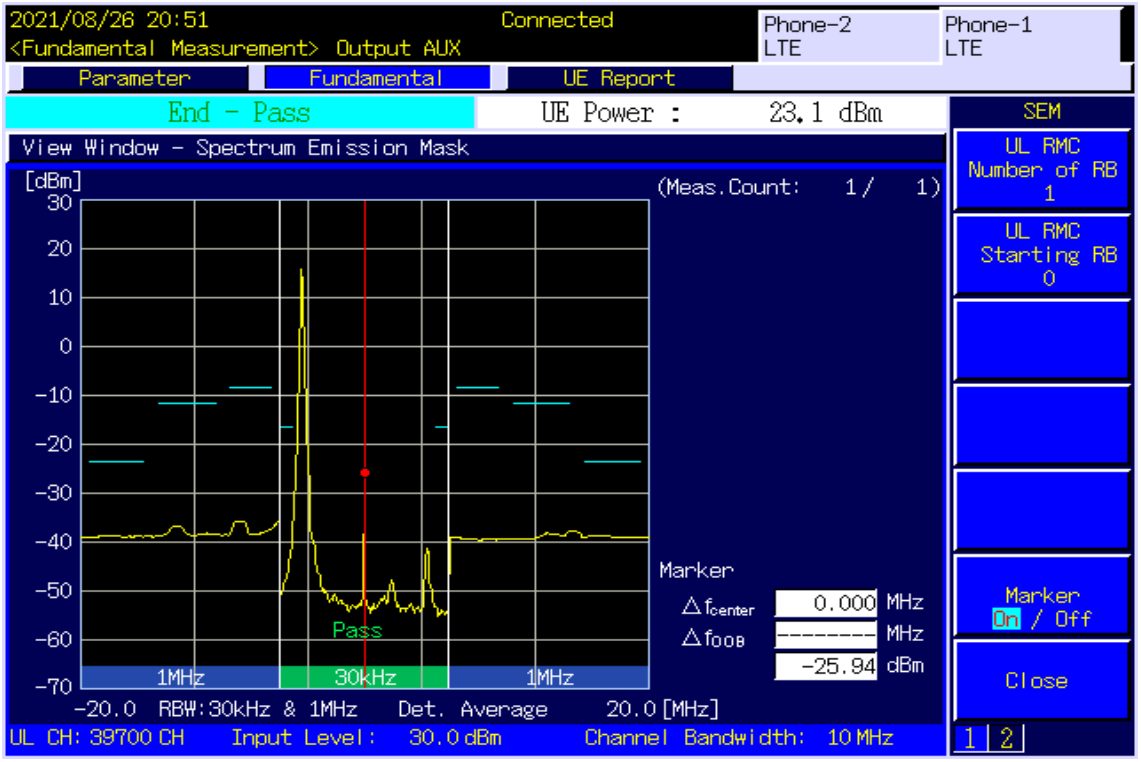
LOWER BAND EDGE



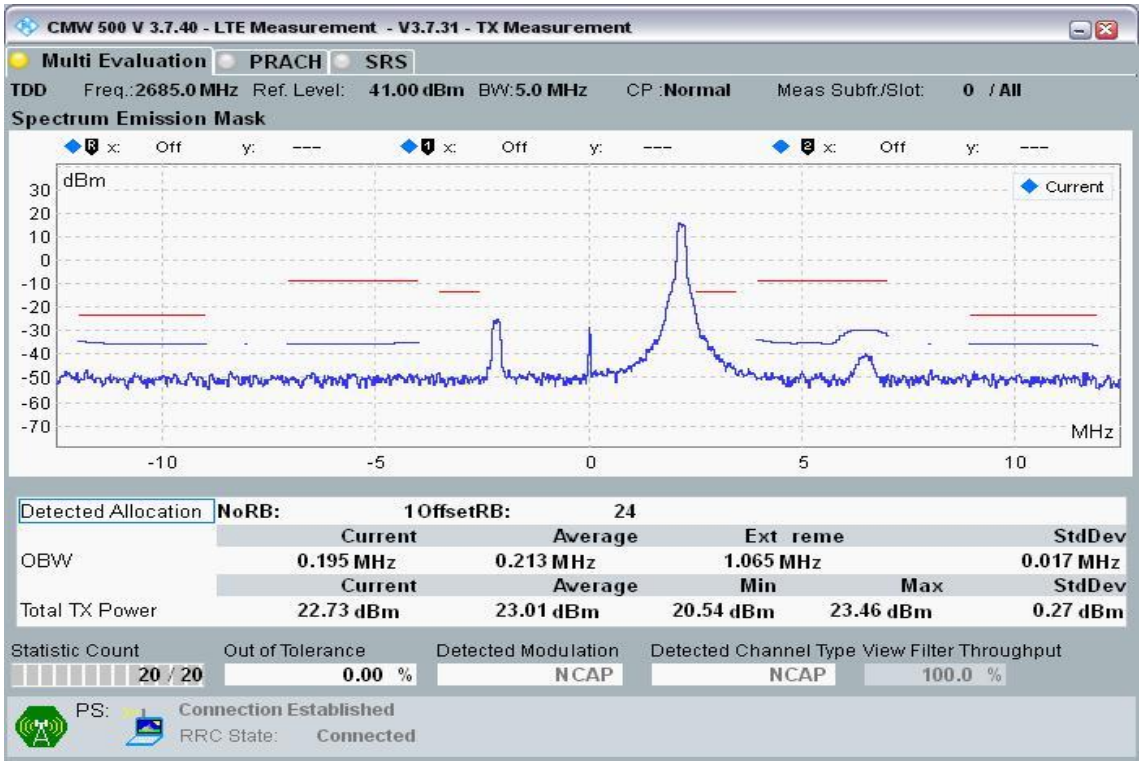
HIGHER BAND EDGE



CHANNEL BANDWIDTH: 10MHz / QPSK / RB =1, RB Offset = 0
LOWER BAND EDGE

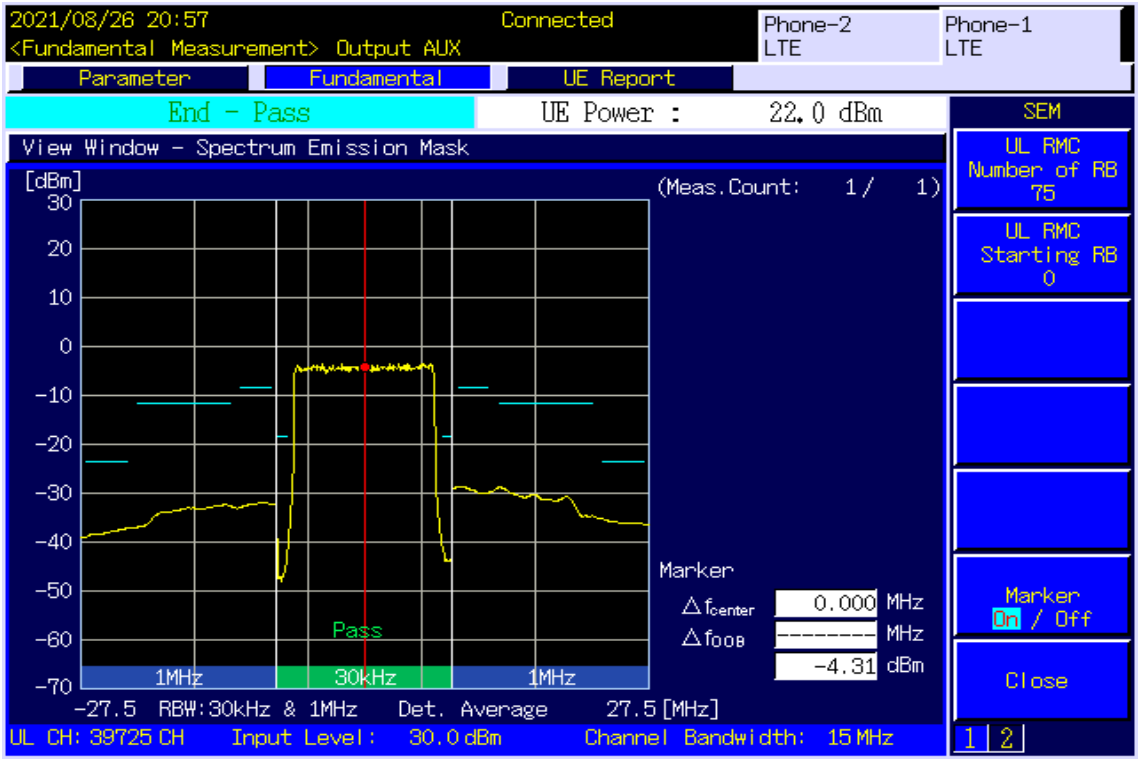


CHANNEL BANDWIDTH: 10MHz / QPSK / RB =1, RB Offset = 49
HIGHER BAND EDGE

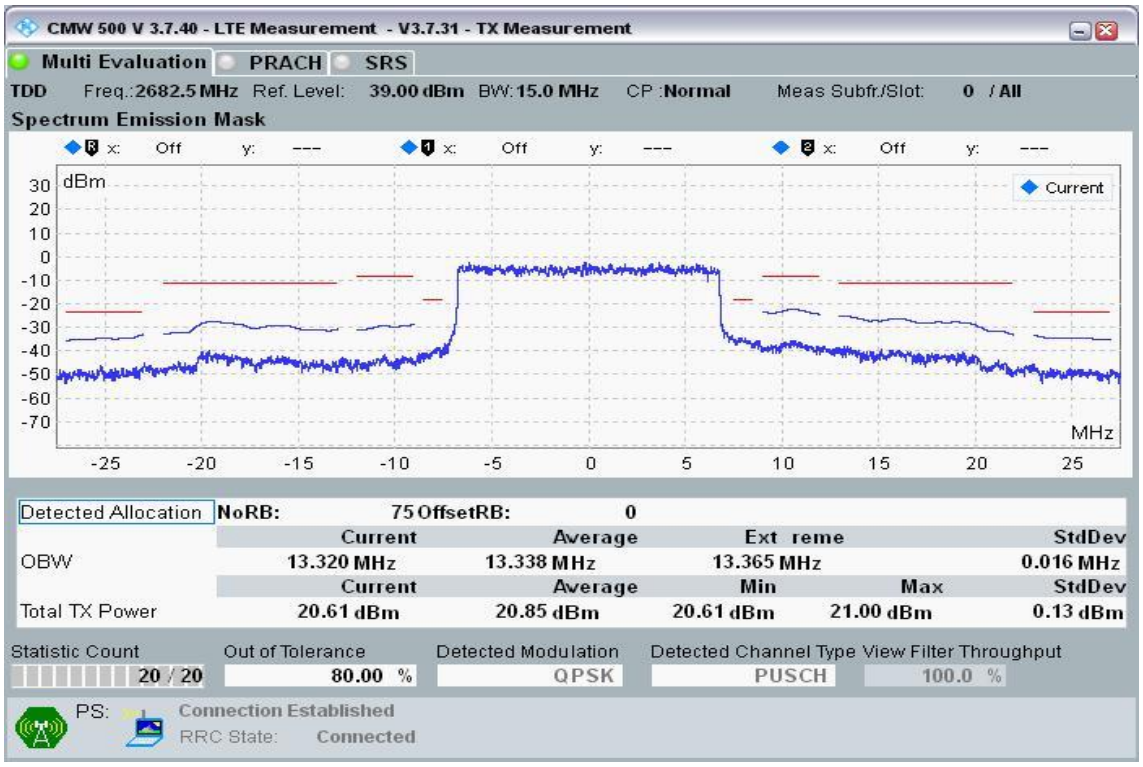


CHANNEL BANDWIDTH: 15MHz / QPSK / RB =75, RB Offset = 0

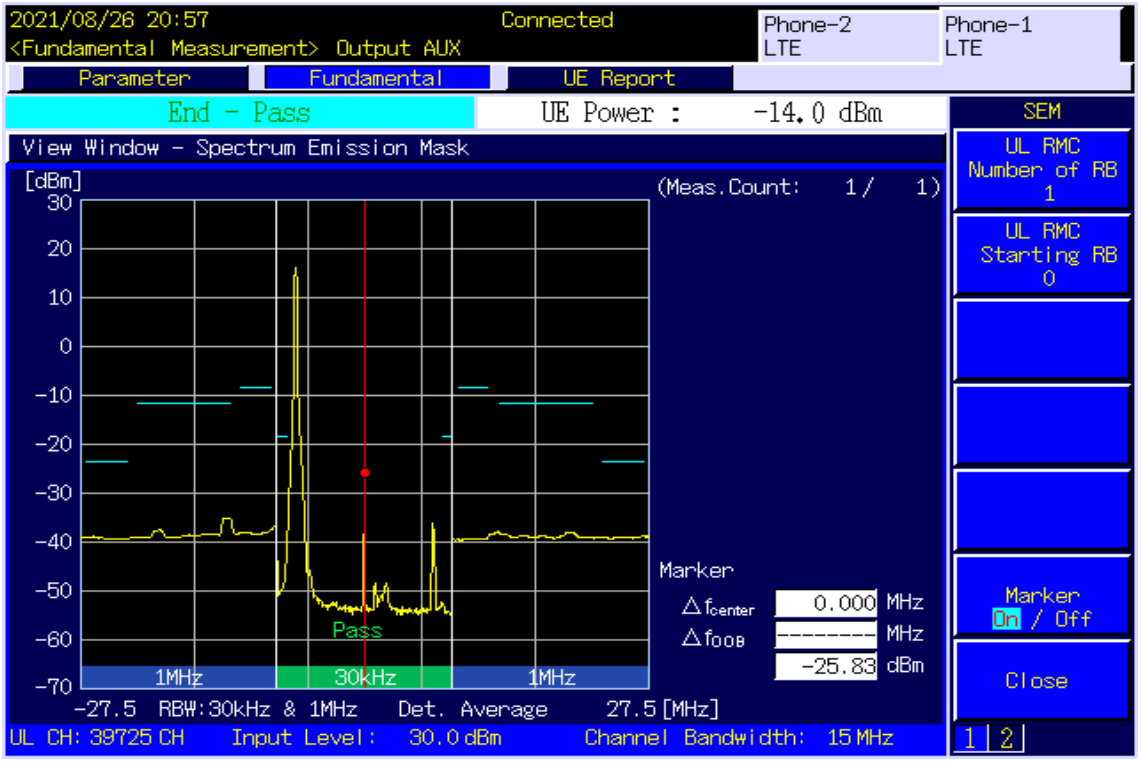
LOWER BAND EDGE



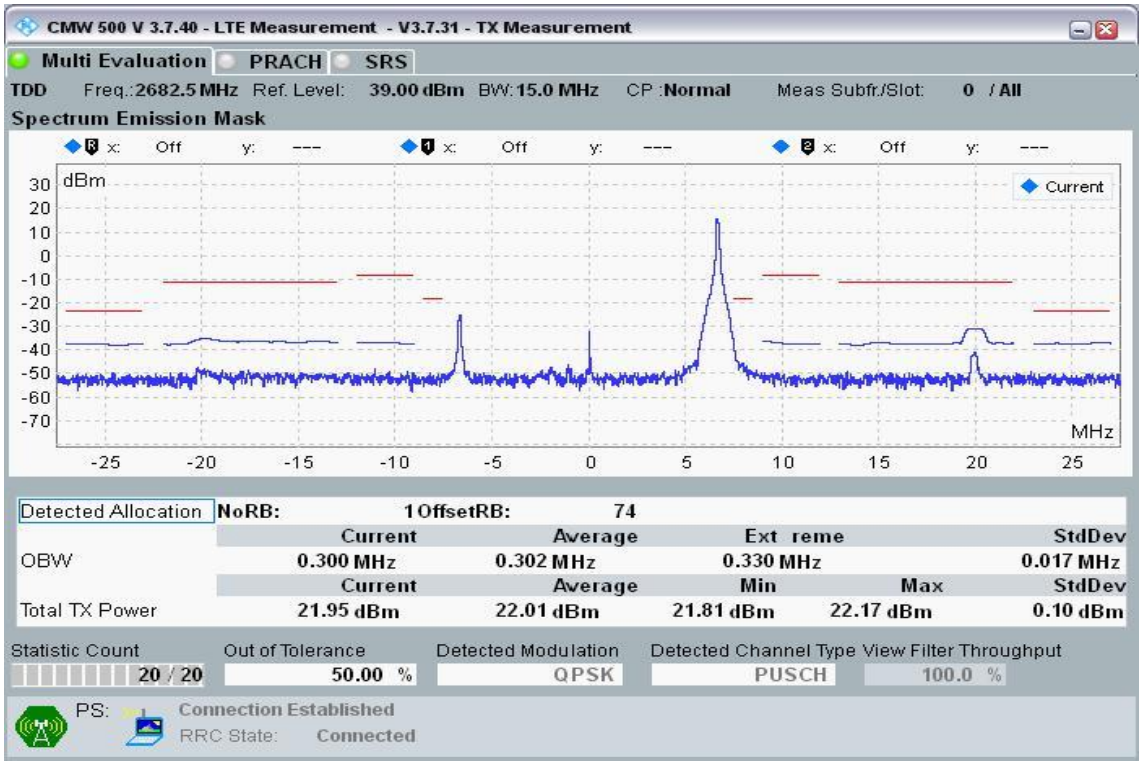
HIGHER BAND EDGE



CHANNEL BANDWIDTH: 15MHz / QPSK / RB =1, RB Offset = 0
LOWER BAND EDGE

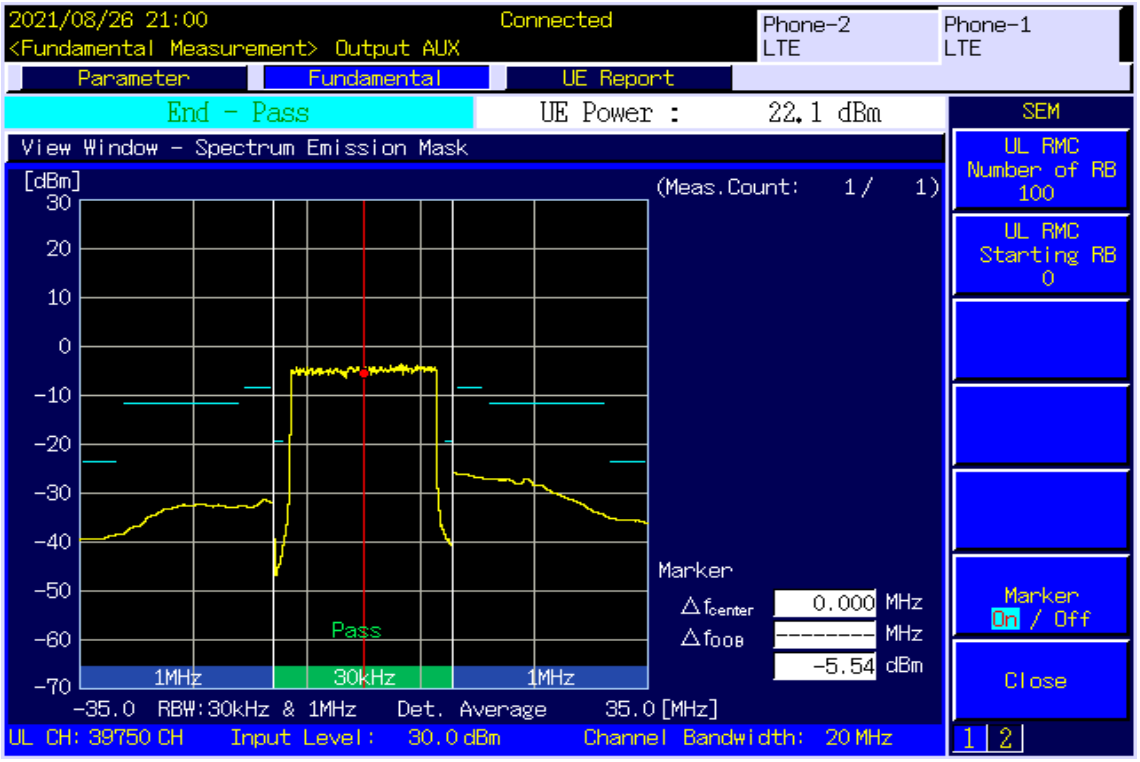


CHANNEL BANDWIDTH: 15MHz / QPSK / RB =1, RB Offset = 74
HIGHER BAND EDGE

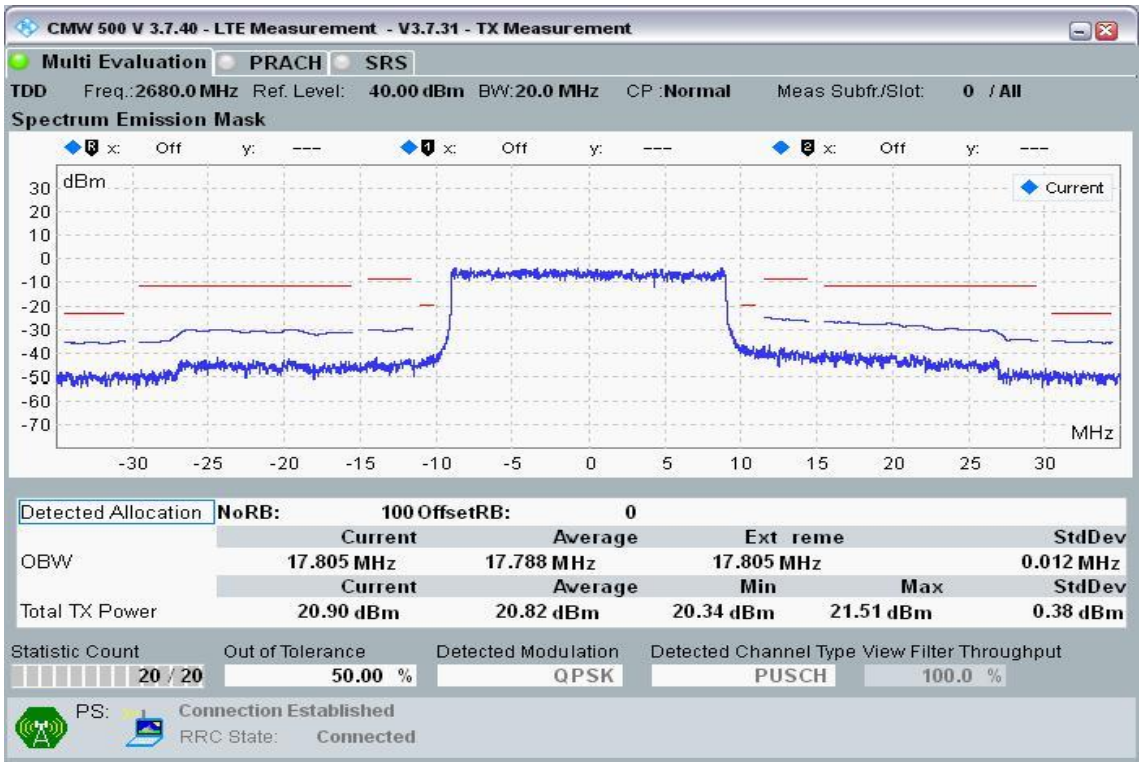


CHANNEL BANDWIDTH: 20MHz / QPSK / RB =100, RB Offset = 0

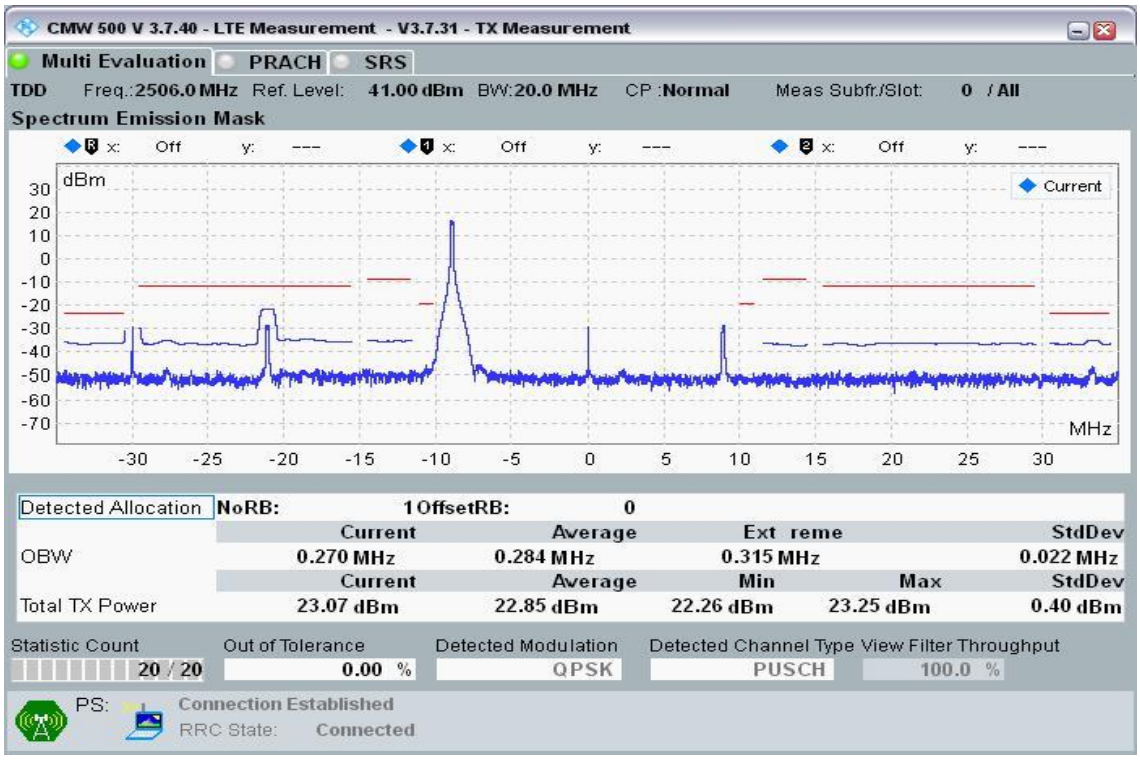
LOWER BAND EDGE



HIGHER BAND EDGE



CHANNEL BANDWIDTH: 20MHz / QPSK / RB =1, RB Offset = 0
LOWER BAND EDGE



CHANNEL BANDWIDTH: 20MHz / QPSK / RB =1, RB Offset = 99
HIGHER BAND EDGE