



FCC ID: M82-AIM75L  
Report No.: T201102D09-RP11

IC: 9404A-AIM75L

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**FCC 47 CFR PART 27 SUBPART C, H  
&  
INDUSTRY CANADA RSS-130**

**TEST REPORT**

**For**

**Tablet PC**

**Model No.:**

**FCC: AIM-75S-6; AIM-75H-6; AIM-75S-6XXXXXXXXXXXXXXXXXX;  
AIM-75H-6XXXXXXXXXXXXXXXXXX; AIM75S-6XXXXXXXXXXXXXXXXXX;  
AIM75H-6XXXXXXXXXXXXXXXXXX (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**

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only.

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### **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-6XXXXXXXXXXXXXXXXXX;  
AIM-75H-6XXXXXXXXXXXXXXXXXX;  
AIM75S-6XXXXXXXXXXXXXXXXXX;  
AIM75H-6XXXXXXXXXXXXXXXXXX (where "X" may be any  
alphanumeric character, "-" or blank)  
IC: AIM-75S-6; AIM-75H-6

**Date of Test:** December 15, 2020 ~ August 27, 2021



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APPLICABLE STANDARDS	
Standard	TEST RESULT
FCC Part 27, Subpart C, H, FCC Part 2 & RSS-130 Issue 2 February 2019	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

<b>Product</b>	Tablet PC	
<b>Model No.</b>	FCC: AIM-75S-6; AIM-75H-6; AIM-75S-6XXXXXXXXXXXXXXXXXX; AIM-75H-6XXXXXXXXXXXXXXXXXX; AIM75S-6XXXXXXXXXXXXXXXXXX; AIM75H-6XXXXXXXXXXXXXXXXXX (where "X" may be any alphanumeric character, "-" or blank) IC: AIM-75S-6; AIM-75H-6	
<b>Model Discrepancy</b>	Please see remark as below.	
<b>Trade</b>	ADVANTECH	
<b>Received Date</b>	November 2, 2020	
<b>Power Supply</b>	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	
<b>Modulation Technology</b>	LTE Band 12	QPSK, 16QAM, 64QAM
<b>Frequency Range</b>	LTE Band 12 Channel Bandwidth: 1.4MHz	669.7MHz ~ 715.3MHz
	LTE Band 12 Channel Bandwidth: 3MHz	700.5MHz ~ 714.5MHz
	LTE Band 12 Channel Bandwidth: 5MHz	701.5MHz ~ 713.5MHz
	LTE Band 12 Channel Bandwidth: 10MHz	704MHz ~ 711MHz

<b>Transmit Power (ERP Power)</b>	LTE Band 12 Channel Bandwidth: 1.4MHz	QPSK	19.42	dBm
		16QAM	19.63	dBm
		64QAM	18.64	dBm
	LTE Band 12 Channel Bandwidth: 3MHz	QPSK	19.56	dBm
		16QAM	19.28	dBm
		64QAM	18.71	dBm
	LTE Band 12 Channel Bandwidth: 5MHz	QPSK	19.33	dBm
		16QAM	19.48	dBm
		64QAM	18.73	dBm
	LTE Band 12 Channel Bandwidth: 10MHz	QPSK	19.56	dBm
		16QAM	19.83	dBm
		64QAM	18.87	dBm
<b>Antenna Specification</b>	Antenna type: PIFA 1. YAGEO / 6036B0281601 / Main (TX) Band 12: -0.97 dBi 2. YAGEO / 6036B0281701 / Aux Band 12: 0.38 dBi			
<b>HW Version</b>	AX2			
<b>SW Version</b>	0.3.6.9_20201021.021551			
<b>EUT Serial #</b>	200CT32E00162			
<b>Module</b>	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-6XXXXXXXXXXXXXXXXXX; AIM-75H-6XXXXXXXXXXXXXXXXXX; AIM75S-6XXXXXXXXXXXXXXXXXX; AIM75H-6XXXXXXXXXXXXXXXXXX (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.

#### LTE Band 12: 699 MHz ~ 716 MHz

Three channels had been tested for each channel bandwidth.

Channel Bandwidth	1.4MHz		3MHz		5MHz		10MHz	
	Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)
Low CH	23017	699.7	23025	700.5	23035	701.5	23060	704
Middle CH	23095	707.5	23095	707.5	23095	707.5	23095	707.5
High CH	23173	715.3	23165	714.5	23155	713.5	23130	711



## 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	<input type="checkbox"/> Mode 1 <input checked="" type="checkbox"/> Mode 2 <input type="checkbox"/> Mode 3 <input type="checkbox"/> Mode 4
Worst Position	<input type="checkbox"/> Placed in fixed position. <input checked="" type="checkbox"/> Placed in fixed position at X-Plane (E2-Plane) <input type="checkbox"/> Placed in fixed position at Y-Plane (E1-Plane) <input type="checkbox"/> 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	<input type="checkbox"/> Mode 1 <input checked="" type="checkbox"/> Mode 2 <input type="checkbox"/> Mode 3 <input type="checkbox"/> 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	Antenna Requirement	Pass
27.50(c)	RSS-130, section 4.6	8.1	ERP Measurement	Pass
2.1055, 27.54	RSS-130 section 4.5	8.2	Frequency Stability v.s. temperature measurement	Pass
2.1049	RSS-GEN 6.7	8.3	Occupied Bandwidth Measurement	Pass
27.50(b)	RSS-130 section 4.6	8.4	Peak to Average Ratio	Pass
27.53(g)	RSS-130 section 4.7	8.5	Out of Band Emission at Antenna Terminals	Pass
27.53(g)	RSS-130 section 4.7	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 ~ 27, 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
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				



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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."



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## 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 ERP MEASUREMENT

#### **LIMIT**

**According to FCC §2.1046**

**FCC 27.50 (c) (10):** The portable stations (hand-held devices) in the 600MHz uplink band and the 698-746MHz band, and fixed and mobile stations in the 600MHz uplink band are limited to 3 Watts ERP.

RSS-130 § 4.6,

The e.r.p. shall not exceed 30 watts for mobile equipment and outdoor fixed subscriber equipment. The e.r.p. shall not exceed 3 watts for portable equipment and indoor fixed subscriber equipment.

#### **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.*



**TEST RESULTS**

Temperature: 25°C

Humidity: 57% RH

Tested by: Jerry Chang

Test Date: May 25, 2021

**LTE Band 12**

LTE Band 12_Uplink frequency band : 699 to 716 MHz											
BW (MHz)	RB Size	RB Offset	Conducted power(dBm)								
			QPSK			16QAM			64QAM		
			CH-Low 23017	CH-Mid 23095	CH-High 23173	CH-Low 23017	CH-Mid 23095	CH-High 23173	CH-Low 23017	CH-Mid 23095	CH-High 23173
			699.7 MHz	707.5 MHz	715.3 MHz	699.7 MHz	707.5 MHz	715.3 MHz	699.7 MHz	707.5 MHz	715.3 MHz
1.4	1	0	22.28	22.31	22.05	<b>22.75</b>	22.38	22.07	21.74	21.34	21.09
	1	5	22.15	22.31	22.05	22.56	22.33	21.89	<b>21.76</b>	21.27	21.08
	3	2	22.48	22.21	22.15	22.34	22.34	22.05	21.54	21.26	21.03
	6	0	<b>22.54</b>	22.31	22.17	21.9	21.66	21.48	20.91	20.51	20.43

LTE Band 12_Uplink frequency band : 699 to 716 MHz											
BW (MHz)	RB Size	RB Offset	ERP (dBm)								
			QPSK			16QAM			64QAM		
			CH-Low 23017	CH-Mid 23095	CH-High 23173	CH-Low 23017	CH-Mid 23095	CH-High 23173	CH-Low 23017	CH-Mid 23095	CH-High 23173
			699.7 MHz	707.5 MHz	715.3 MHz	699.7 MHz	707.5 MHz	715.3 MHz	699.7 MHz	707.5 MHz	715.3 MHz
1.4	1	0	19.16	19.19	18.93	<b>19.63</b>	19.26	18.95	18.62	18.22	17.97
	1	5	19.03	19.19	18.93	19.44	19.21	18.77	<b>18.64</b>	18.15	17.96
	3	2	19.36	19.09	19.03	19.22	19.22	18.93	18.42	18.14	17.91
	6	0	<b>19.42</b>	19.19	19.05	18.78	18.54	18.36	17.79	17.39	17.31

LTE Band 12_Uplink frequency band : 699 to 716 MHz											
BW (MHz)	RB Size	RB Offset	Conducted power(dBm)								
			QPSK			16QAM			64QAM		
			CH-Low 23025	CH-Mid 23095	CH-High 23165	CH-Low 23025	CH-Mid 23095	CH-High 23165	CH-Low 23025	CH-Mid 23095	CH-High 23165
			700.5 MHz	707.5 MHz	714.5 MHz	700.5 MHz	707.5 MHz	714.5 MHz	700.5 MHz	707.5 MHz	714.5 MHz
3	1	0	22.48	22.31	22.16	22.25	22.34	22.31	<b>21.83</b>	21.79	21.43
	1	14	22.53	22.35	22.22	<b>22.4</b>	22.09	<b>22.4</b>	21.7	<b>21.83</b>	21.36
	8	4	<b>22.68</b>	22.39	22.3	21.87	21.31	21.38	20.81	20.54	20.21
	15	0	22.67	22.4	22.12	21.75	21.42	21.38	20.67	20.42	20.33

LTE Band 12_Uplink frequency band : 699 to 716 MHz											
BW (MHz)	RB Size	RB Offset	ERP (dBm)								
			QPSK			16QAM			64QAM		
			CH-Low 23025	CH-Mid 23095	CH-High 23165	CH-Low 23025	CH-Mid 23095	CH-High 23165	CH-Low 23025	CH-Mid 23095	CH-High 23165
			700.5 MHz	707.5 MHz	714.5 MHz	700.5 MHz	707.5 MHz	714.5 MHz	700.5 MHz	707.5 MHz	714.5 MHz
3	1	0	19.36	19.19	19.04	19.13	19.22	19.19	<b>18.71</b>	18.67	18.31
	1	14	19.41	19.23	19.1	<b>19.28</b>	18.97	<b>19.28</b>	18.58	<b>18.71</b>	18.24
	8	4	<b>19.56</b>	19.27	19.18	18.75	18.19	18.26	17.69	17.42	17.09
	15	0	19.55	19.28	19	18.63	18.3	18.26	17.55	17.3	17.21

LTE Band 12_Uplink frequency band : 699 to 716 MHz											
BW (MHz)	RB Size	RB Offset	Conducted power(dBm)								
			QPSK			16QAM			64QAM		
			CH-Low	CH-Mid	CH-High	CH-Low	CH-Mid	CH-High	CH-Low	CH-Mid	CH-High
			23035	23095	23155	23035	23095	23155	23035	23095	23155
			701.5 MHz	707.5 MHz	713.5 MHz	701.5 MHz	707.5 MHz	713.5 MHz	701.5 MHz	707.5 MHz	713.5 MHz
5	1	0	<b>22.45</b>	22.24	22.23	22.23	22.55	22.41	21.8	<b>21.85</b>	<b>21.85</b>
	1	24	22.29	22.25	22.32	22.45	<b>22.6</b>	22.55	21.42	21.71	21.81
	12	6	<b>22.45</b>	22.43	22.38	21.82	21.87	21.81	20.77	20.77	20.8
	25	0	22.38	22.4	22.33	21.81	21.66	21.89	20.75	20.82	20.72

LTE Band 12_Uplink frequency band : 699 to 716 MHz											
BW (MHz)	RB Size	RB Offset	ERP (dBm)								
			QPSK			16QAM			64QAM		
			CH-Low	CH-Mid	CH-High	CH-Low	CH-Mid	CH-High	CH-Low	CH-Mid	CH-High
			23035	23095	23155	23035	23095	23155	23035	23095	23155
			701.5 MHz	707.5 MHz	713.5 MHz	701.5 MHz	707.5 MHz	713.5 MHz	701.5 MHz	707.5 MHz	713.5 MHz
5	1	0	<b>19.33</b>	19.12	19.11	19.11	19.43	19.29	18.68	<b>18.73</b>	<b>18.73</b>
	1	24	19.17	19.13	19.2	19.33	<b>19.48</b>	19.43	18.3	18.59	18.69
	12	6	<b>19.33</b>	19.31	19.26	18.7	18.75	18.69	17.65	17.65	17.68
	25	0	19.26	19.28	19.21	18.69	18.54	18.77	17.63	17.7	17.6

LTE Band 12_Uplink frequency band : 699 to 716 MHz											
BW (MHz)	RB Size	RB Offset	Conducted power(dBm)								
			QPSK			16QAM			64QAM		
			CH-Low 23060	CH-Mid 23095	CH-High 23130	CH-Low 23060	CH-Mid 23095	CH-High 23130	CH-Low 23060	CH-Mid 23095	CH-High 23130
			704 MHz	707.5 MHz	711 MHz	704 MHz	707.5 MHz	711 MHz	704 MHz	707.5 MHz	711 MHz
10	1	0	22.51	22.46	22.37	<b>22.95</b>	22.62	22.59	21.81	21.61	21.7
	1	49	22.47	22.43	22.3	21.94	22.6	22.56	<b>21.99</b>	21.72	21.65
	25	12	22.65	22.65	<b>22.68</b>	21.8	21.9	21.93	20.8	20.83	20.87
	50	0	22.62	<b>22.68</b>	22.67	21.8	21.83	21.82	20.79	20.81	19.89

LTE Band 12_Uplink frequency band : 699 to 716 MHz											
BW (MHz)	RB Size	RB Offset	ERP (dBm)								
			QPSK			16QAM			64QAM		
			CH-Low 23060	CH-Mid 23095	CH-High 23130	CH-Low 23060	CH-Mid 23095	CH-High 23130	CH-Low 23060	CH-Mid 23095	CH-High 23130
			704 MHz	707.5 MHz	711 MHz	704 MHz	707.5 MHz	711 MHz	704 MHz	707.5 MHz	711 MHz
10	1	0	19.39	19.34	19.25	<b>19.83</b>	19.5	19.47	18.69	18.49	18.58
	1	49	19.35	19.31	19.18	18.82	19.48	19.44	<b>18.87</b>	18.6	18.53
	25	12	19.53	19.53	<b>19.56</b>	18.68	18.78	18.81	17.68	17.71	17.75
	50	0	19.5	<b>19.56</b>	19.55	18.68	18.71	18.7	17.67	17.69	16.77

## 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-130 section 4.5,

For equipment that is capable of transmitting numerous channels simultaneously for different applications (e.g. LTE and narrowband – Internet of Things (IoT)), the occupied bandwidth shall be the bandwidth representing the sum of the occupied bandwidths of these channels.

The frequency stability shall be sufficient to ensure that the occupied bandwidth remains within each frequency block range when tested at the temperature and supply voltage variations specified in RSS-Gen.

### TEST PROCEDURE

Use Anritsu 8820 with frequency Error measurement capability.

Temp = -30 to +50°C

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°C

**Humidity:** 57% RH

**Tested by:** Jerry Chang

**Test Date:** May 25, 2021

**FREQUENCY STABILITY V.S. TEMPERATURE MEASUREMENT:  
LTE Band 12**

Reference Freq.:		LTE B12 Mid Channel		707.5 MHz	10M QPSK CH 23095
Power Supply Vdc	Temp. (°C)	Freq. (MHz)	Delta (Hz)	Limit = +/- 2.5 ppm (Hz)	
Freq. ERROR vs. VOLTAGE					
5.5	25	707.500028	28	1769	
5	25	707.499983	-17	1769	
4.75	25	707.500043	43	1769	
3.7 (End Point)	25	707.500015	15	1769	
Freq. ERROR vs. Temp.					
5	-30	707.500016	16	1769	
5	-20	707.499987	-13	1769	
5	-10	707.499985	-15	1769	
5	0	707.500028	28	1769	
5	10	707.500054	54	1769	
5	20	707.499964	-36	1769	
5	30	707.500011	11	1769	
5	40	707.499985	-15	1769	
5	50	707.499975	-25	1769	

### **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  $\geq 3 \times$  RBW
4. Detector = Peak
5. Trace mode = max. hold

## TEST RESULTS

Temperature: 24.1°C

Humidity: 58.3% RH

Tested by: Jerry Chang

Test Date: March 4, 2021

Temperature: 25.8°C

Humidity: 57.4% RH

Tested by: Jerry Chang

Test Date: August 26, 2021

## LTE Band 12

LTE BAND 12 Channel bandwidth: 1.4MHz							
Freq. (MHz)	CH	99% BW (MHz)			26 dB BW (MHz)		
		QPSK	16QAM	64QAM	QPSK	16QAM	64QAM
699.7	23017	<b>1.0862</b>	1.0845	<b>1.0858</b>	<b>1.235</b>	<b>1.239</b>	<b>1.225</b>
707.5	23095	1.0850	1.0853	1.0843	1.225	1.224	1.223
715.3	23173	1.0848	<b>1.0861</b>	1.0854	1.226	1.225	1.224

LTE BAND 12 Channel bandwidth: 3MHz							
Freq. (MHz)	CH	99% BW (MHz)			26 dB BW (MHz)		
		QPSK	16QAM	64QAM	QPSK	16QAM	64QAM
700.5	23025	2.6865	2.6918	2.6984	2.958	2.974	2.985
707.5	23095	2.6841	2.6832	2.6956	2.946	<b>2.977</b>	2.980
714.5	23165	<b>2.6885</b>	<b>2.6926</b>	<b>2.6988</b>	<b>2.967</b>	2.968	<b>2.989</b>

LTE BAND 12 Channel bandwidth: 5MHz							
Freq. (MHz)	CH	99% BW (MHz)			26 dB BW (MHz)		
		QPSK	16QAM	64QAM	QPSK	16QAM	64QAM
701.5	23035	4.4861	<b>4.4871</b>	4.4888	<b>4.960</b>	4.952	<b>4.939</b>
707.5	23095	4.4803	4.4832	4.4798	4.952	4.951	4.916
713.5	23155	<b>4.4899</b>	4.4853	<b>4.4933</b>	<b>4.960</b>	<b>4.961</b>	4.938

LTE BAND 12 Channel bandwidth: 10MHz							
Freq. (MHz)	CH	99% BW (MHz)			26 dB BW (MHz)		
		QPSK	16QAM	64QAM	QPSK	16QAM	64QAM
704.0	23060	<b>9.0070</b>	<b>8.9689</b>	<b>8.9854</b>	<b>9.815</b>	<b>9.772</b>	<b>9.804</b>
707.5	23095	8.9516	8.9209	8.9431	9.688	9.672	9.763
711.0	23130	8.9399	8.9077	8.9282	9.668	9.697	9.777



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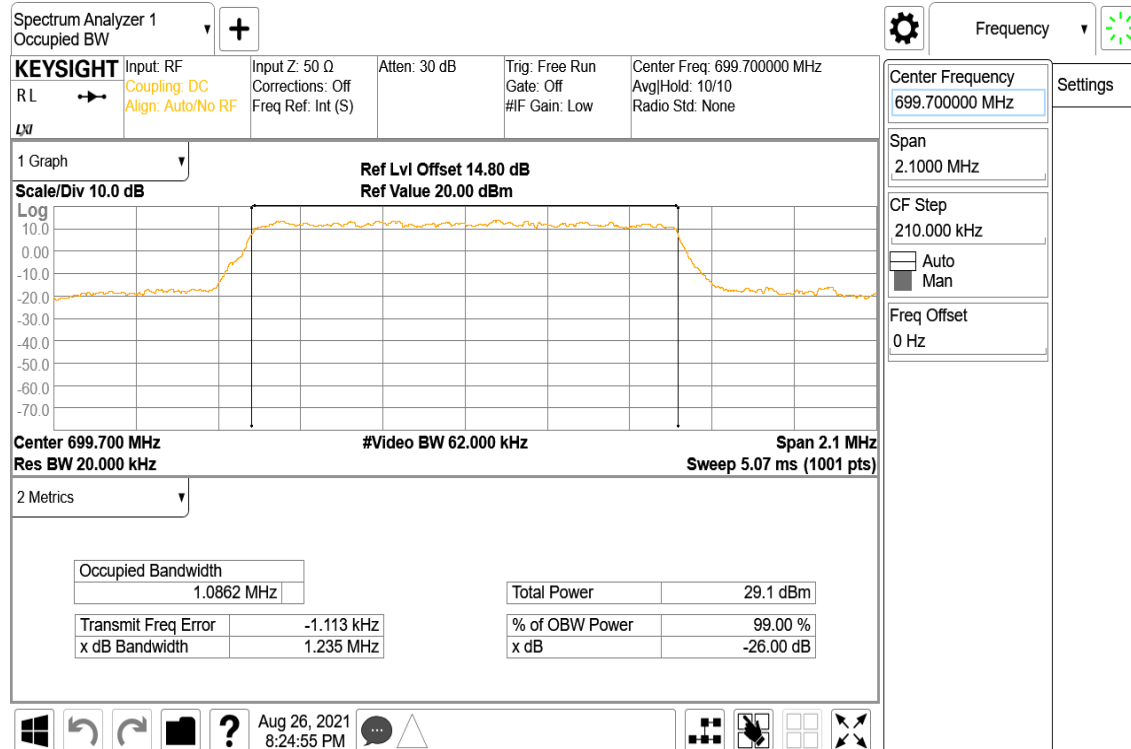
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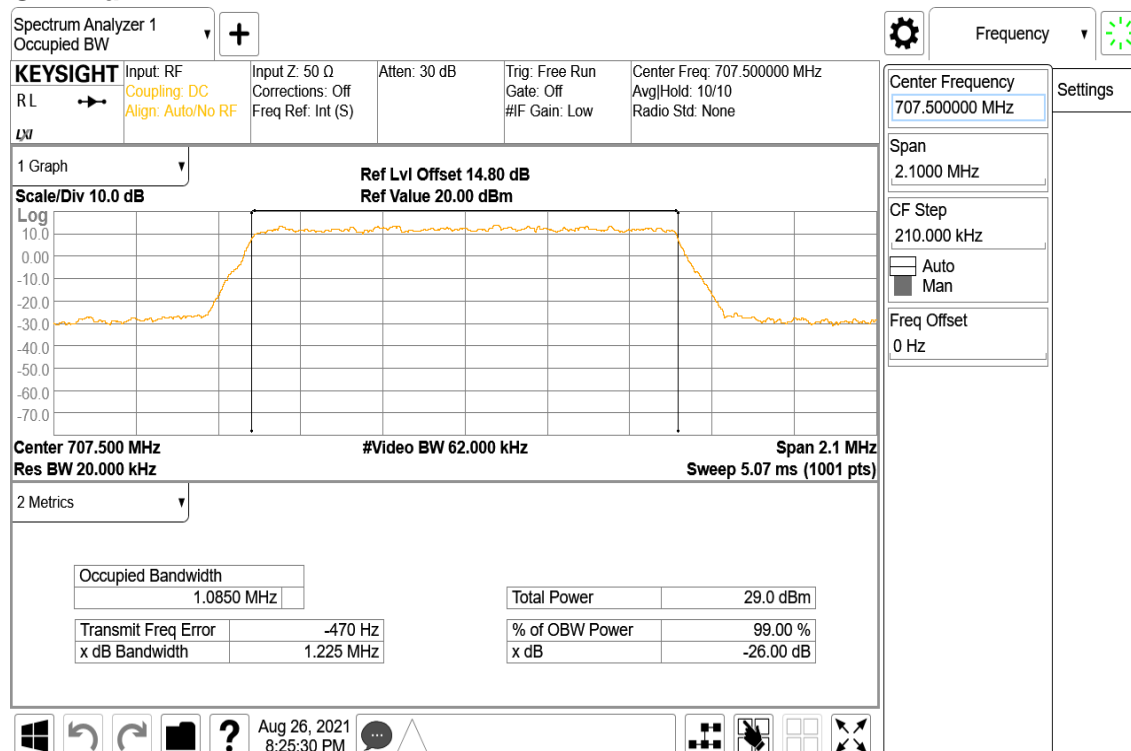
## LTE Band 12

CHANNEL BANDWIDTH: 1.4MHz / QPSK / RB =6, RB Offset = 0

## CH Low

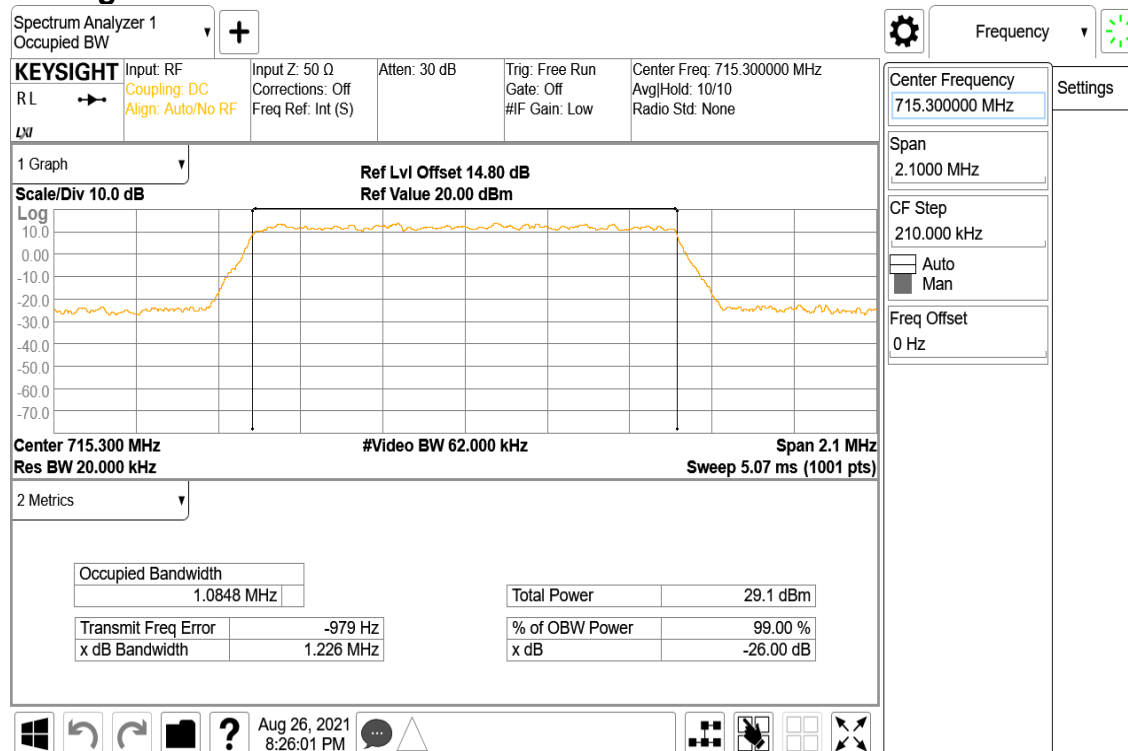


## CH Mid



Report No.: T201102D09-RP11

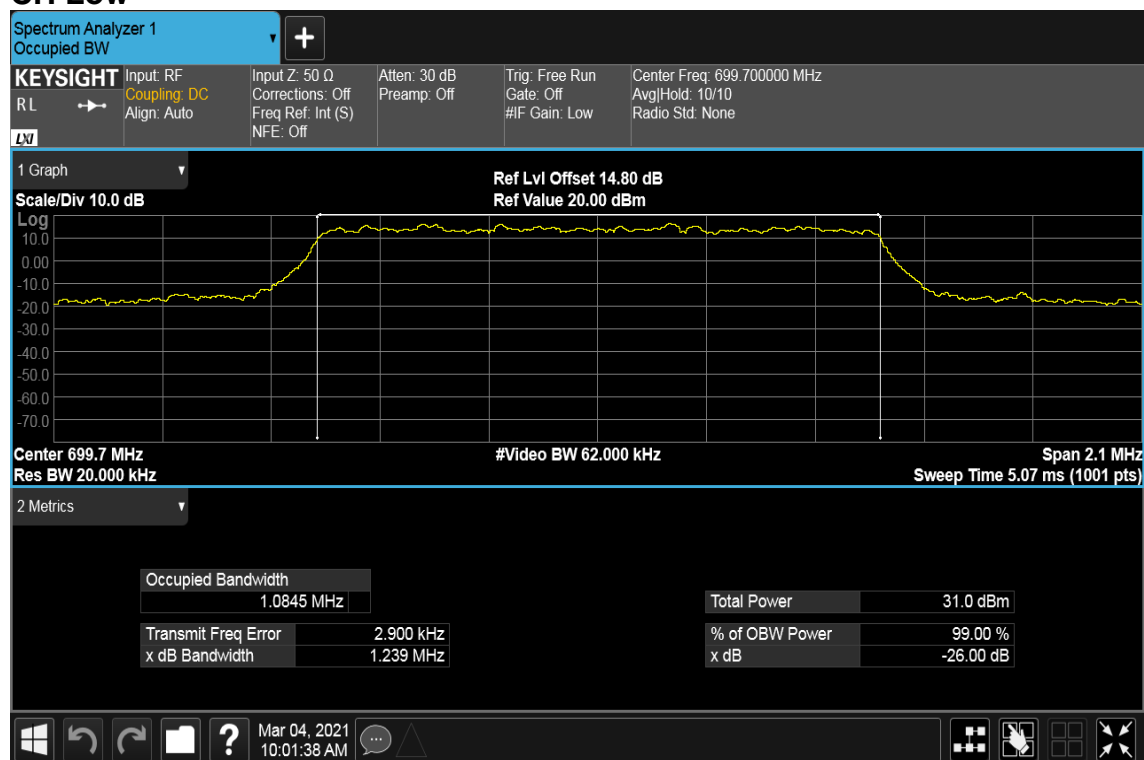
## CH High



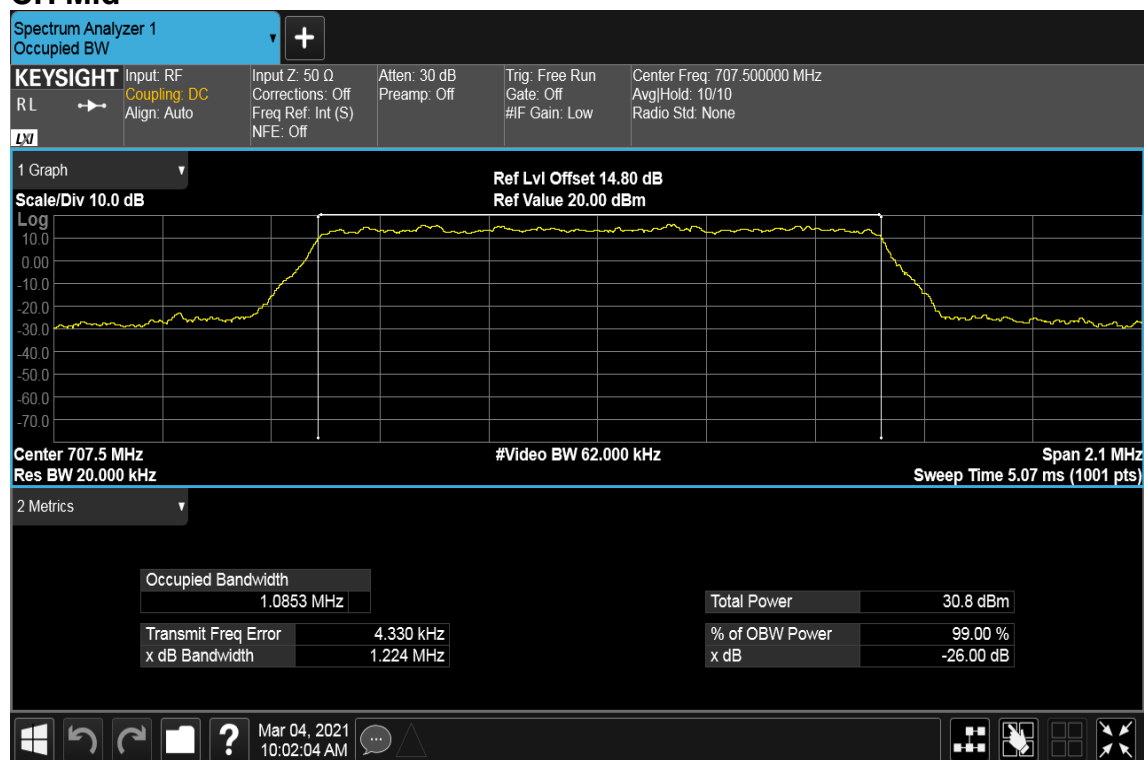
Report No.: T201102D09-RP11

CHANNEL BANDWIDTH: 1.4MHz / 16QAM / RB =6, RB Offset = 0

CH Low



CH Mid

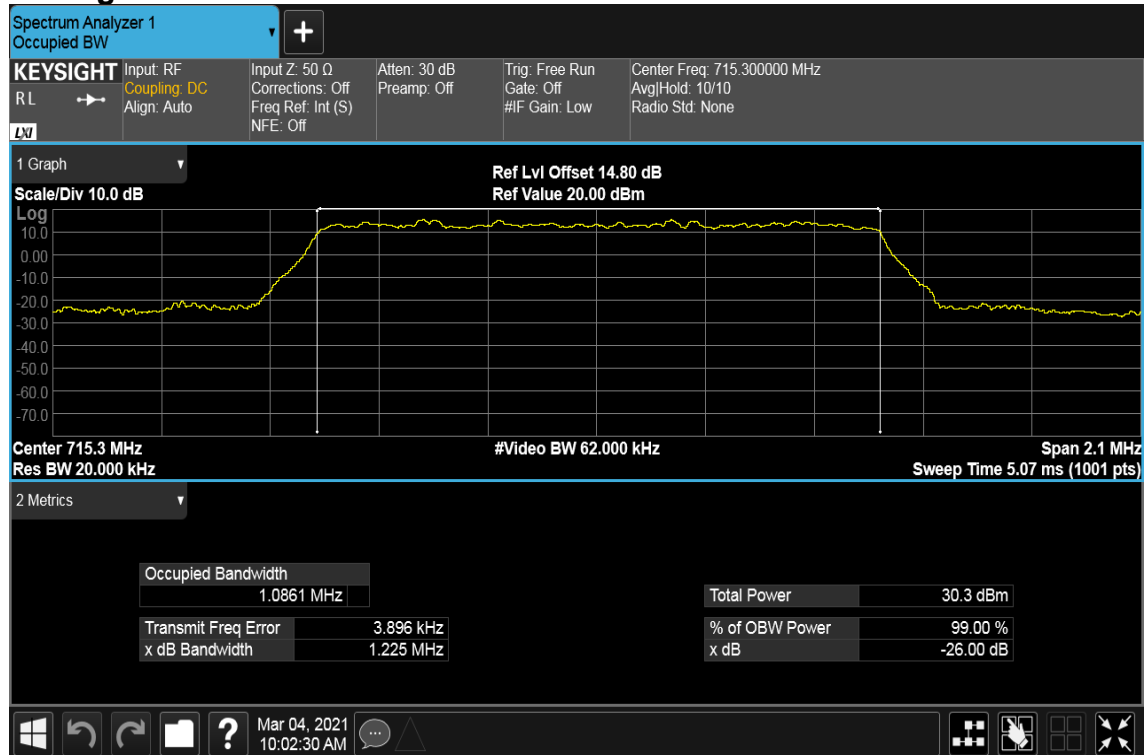


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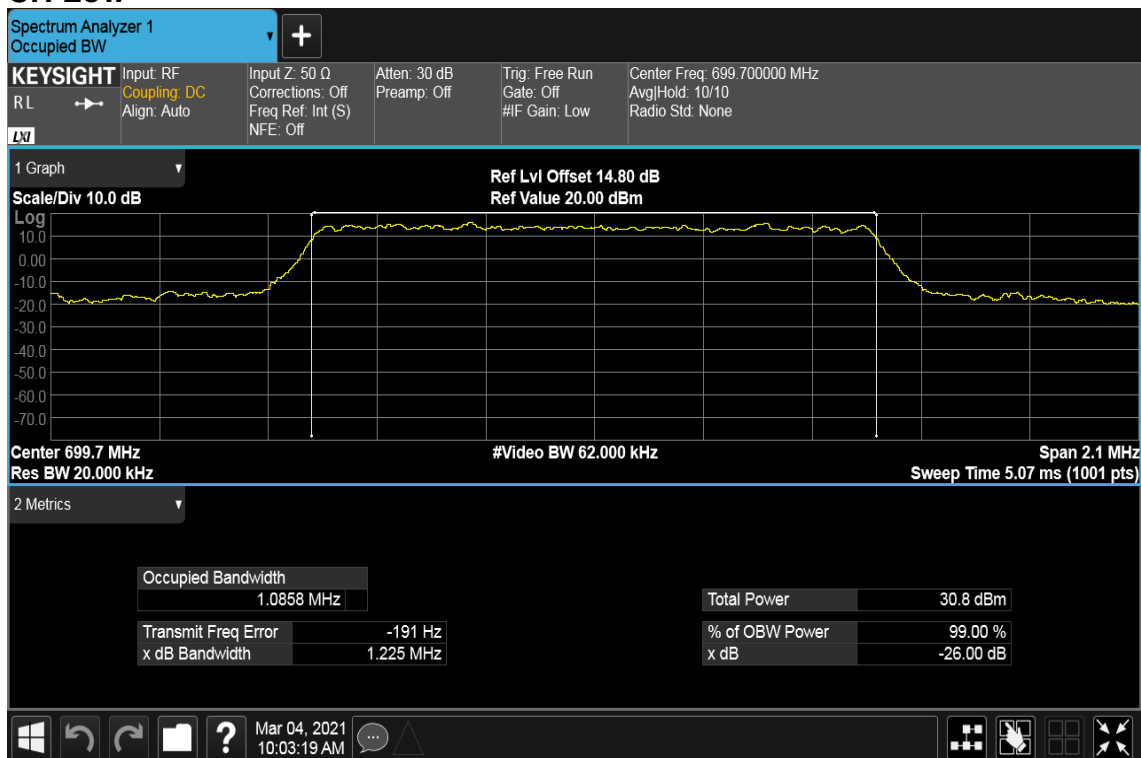
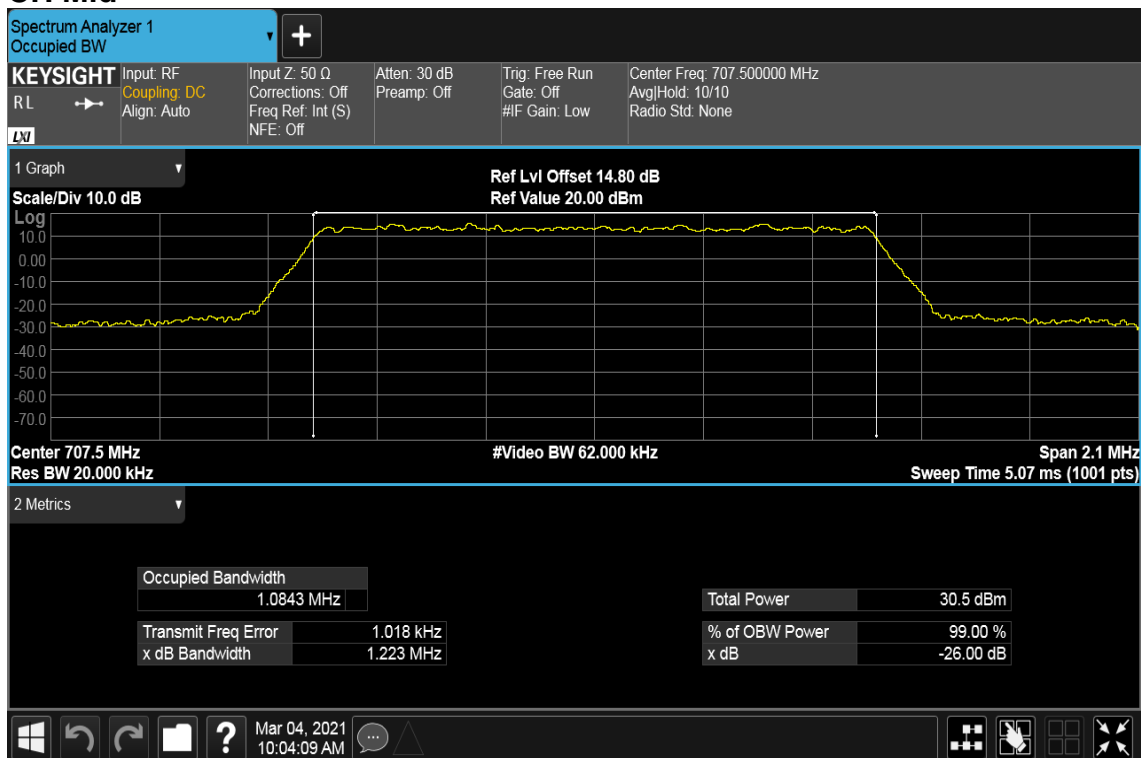
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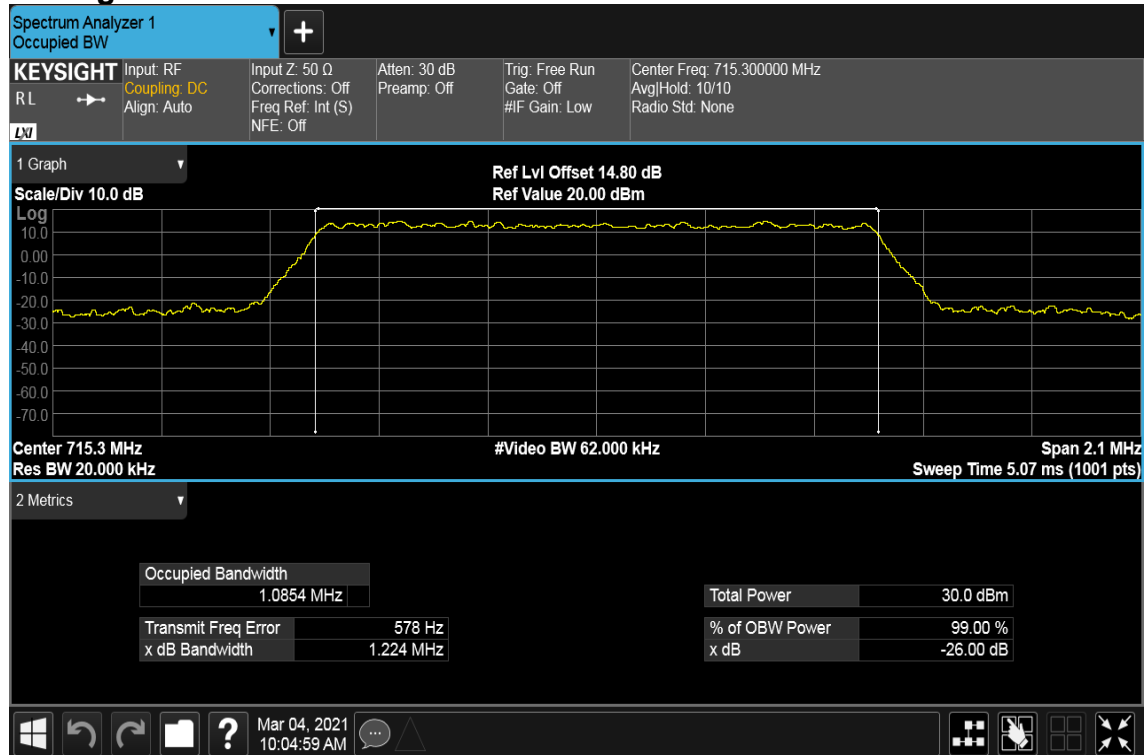
## CH High



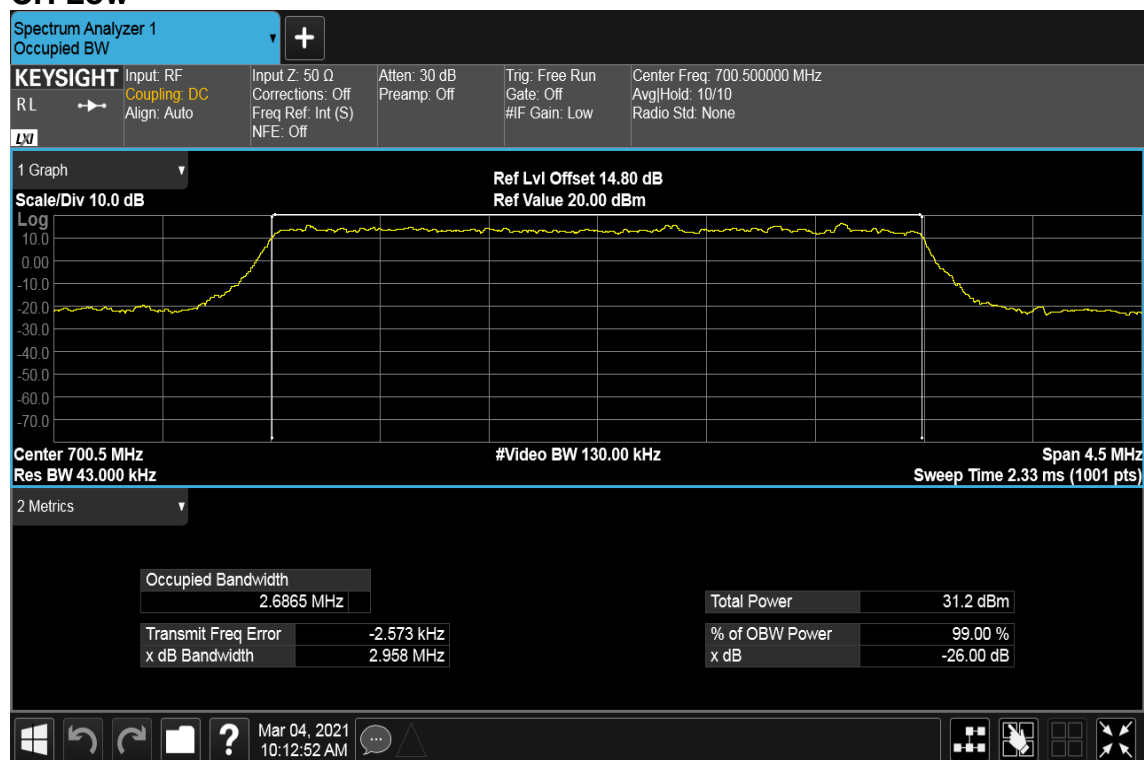
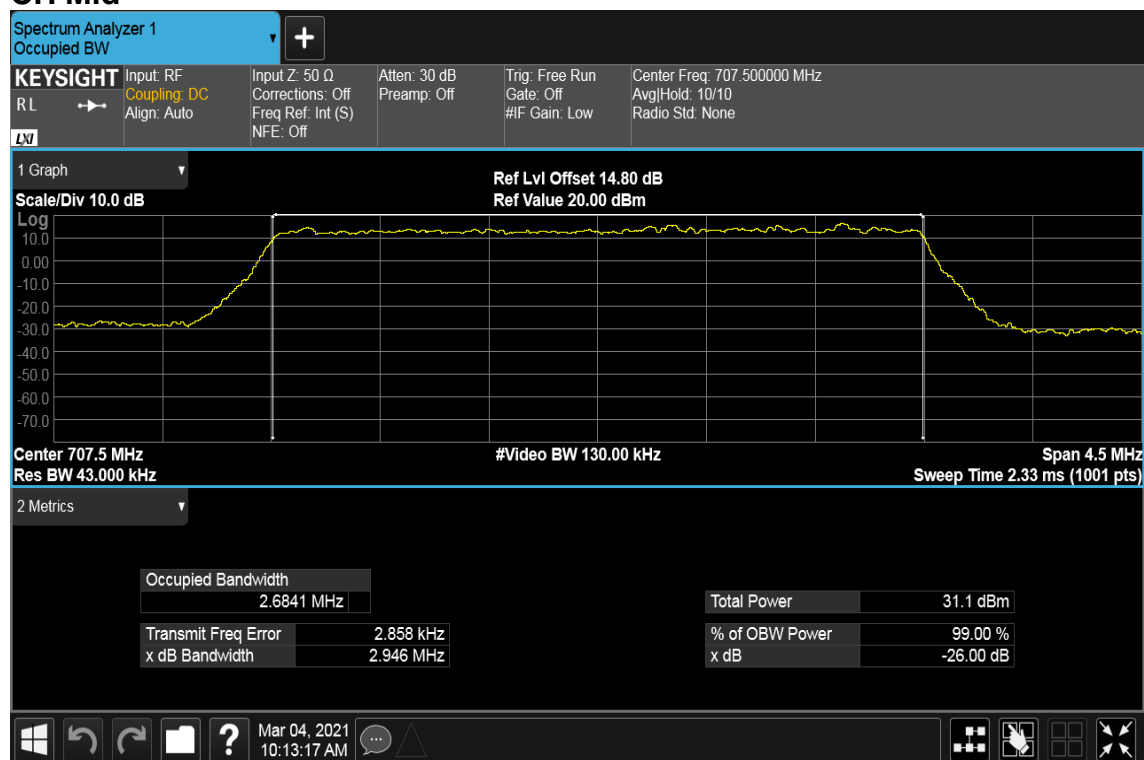
Report No.: T201102D09-RP11

**CHANNEL BANDWIDTH: 1.4MHz / 64QAM / RB =6, RB Offset = 0****CH Low****CH Mid**

## CH High

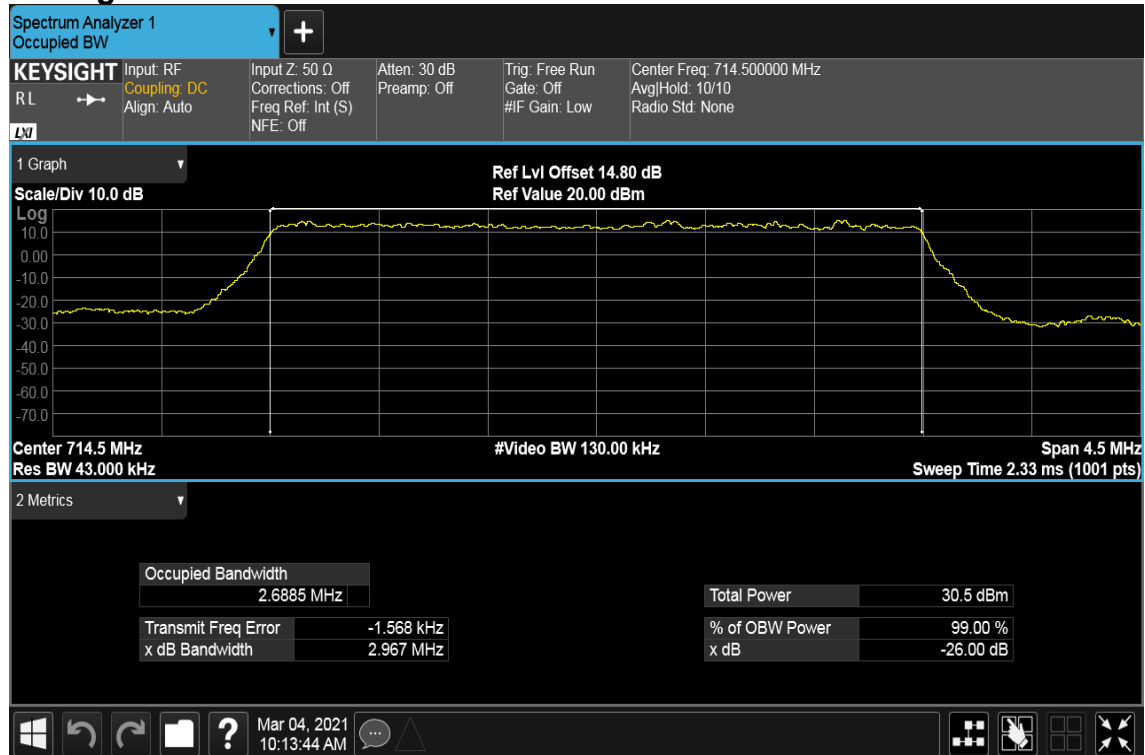


Report No.: T201102D09-RP11

**CHANNEL BANDWIDTH: 3MHz / QPSK / RB =15, RB Offset = 0****CH Low****CH Mid**

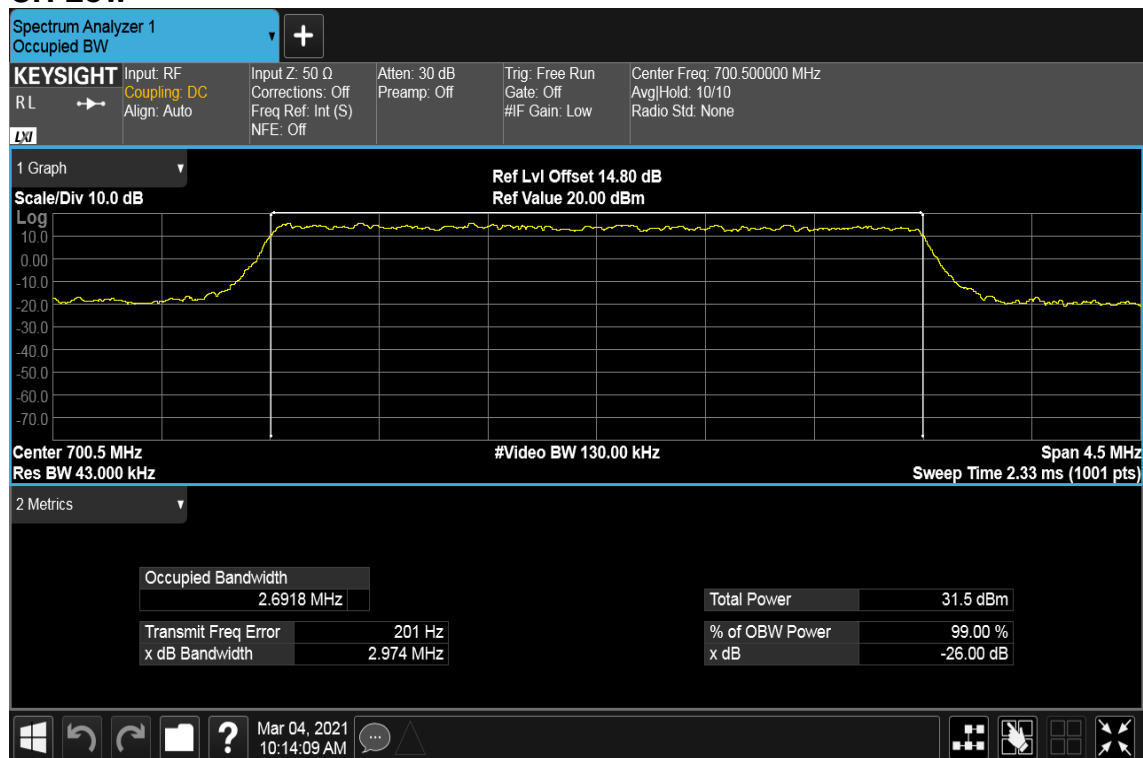
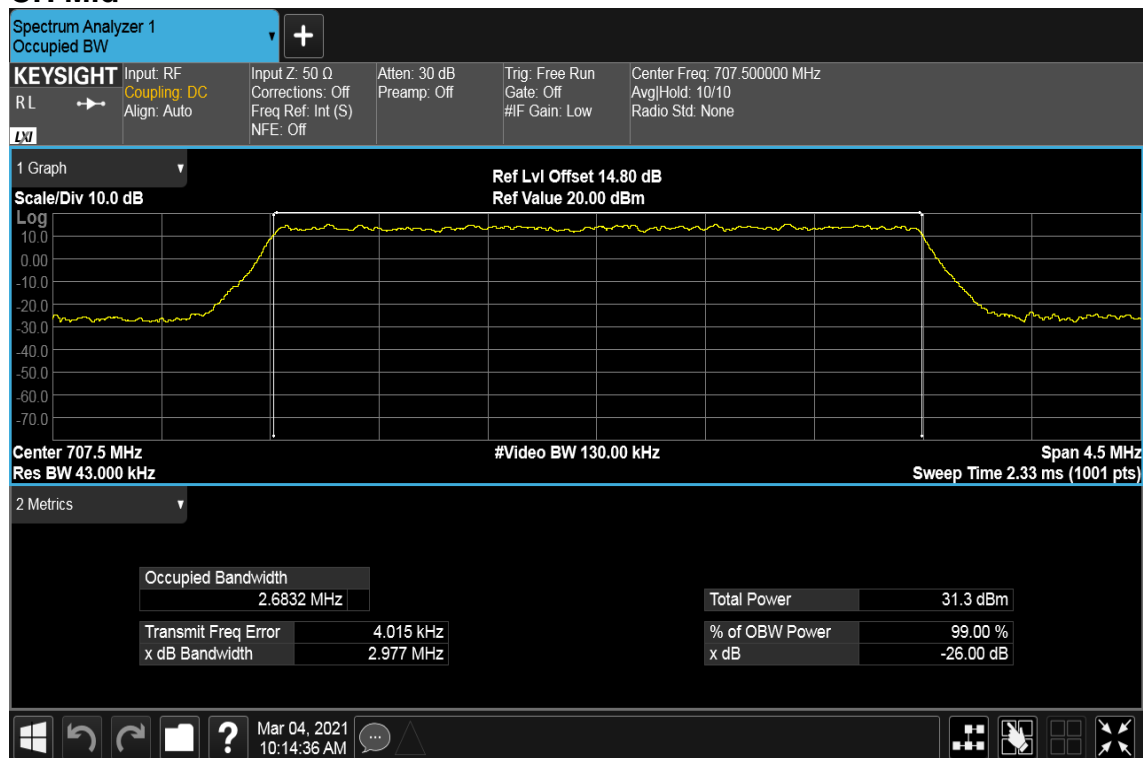
Report No.: T201102D09-RP11

## CH High





Report No.: T201102D09-RP11

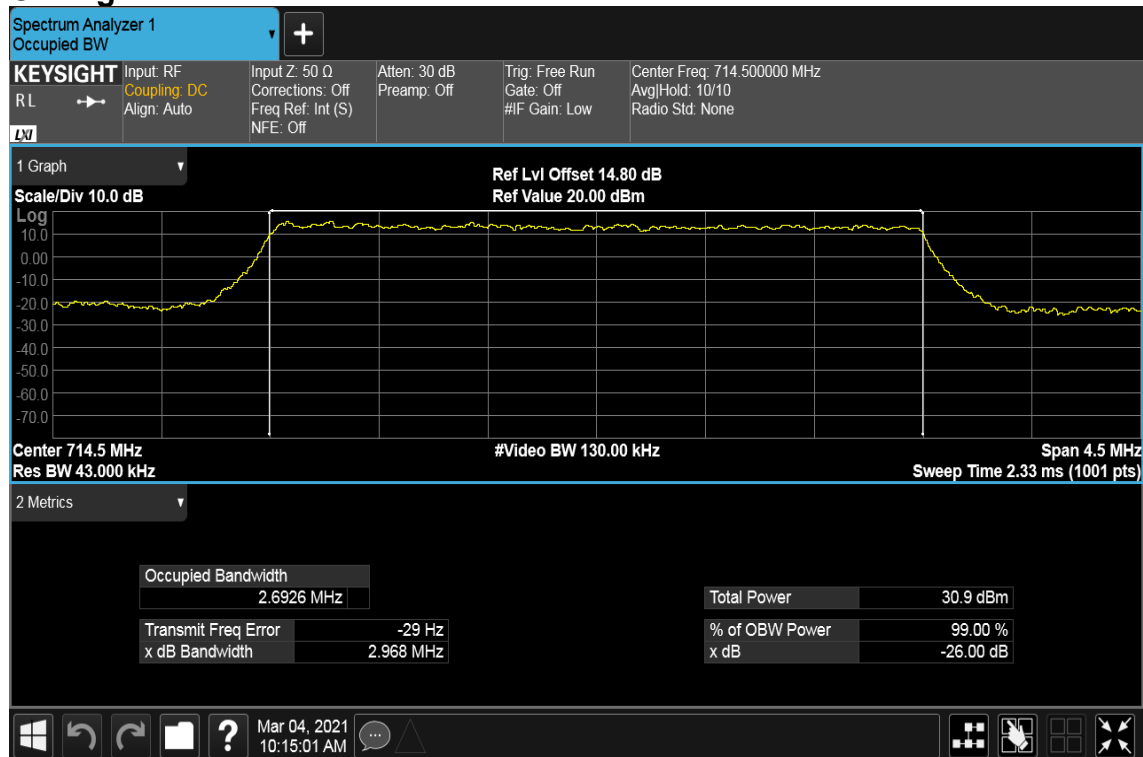
**CHANNEL BANDWIDTH: 3MHz / 16QAM / RB =15, RB Offset = 0****CH Low****CH Mid**

Report No.: T201102D09-RP11

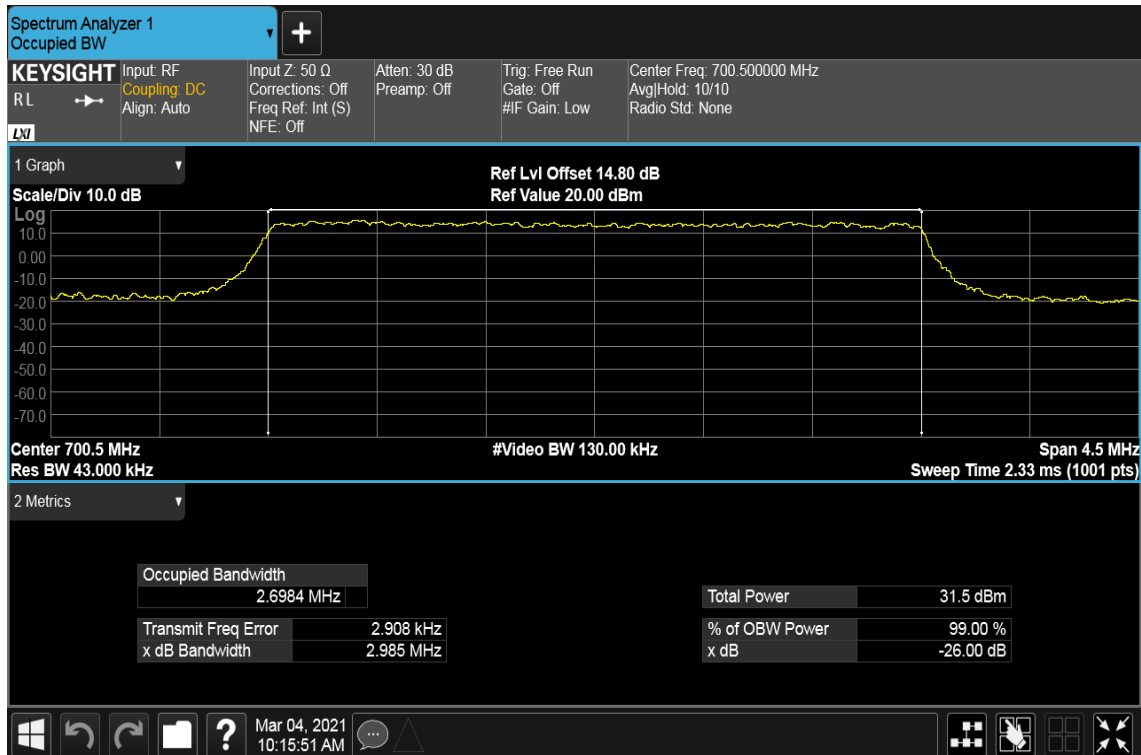
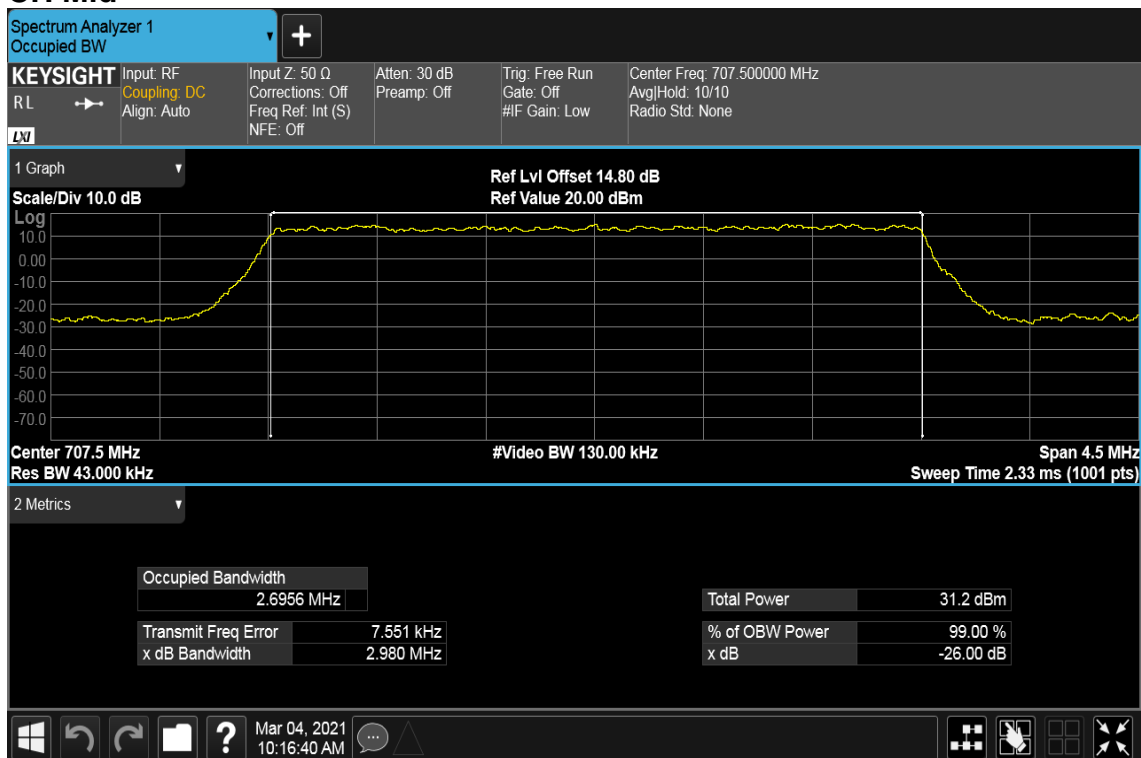
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## CH High



Report No.: T201102D09-RP11

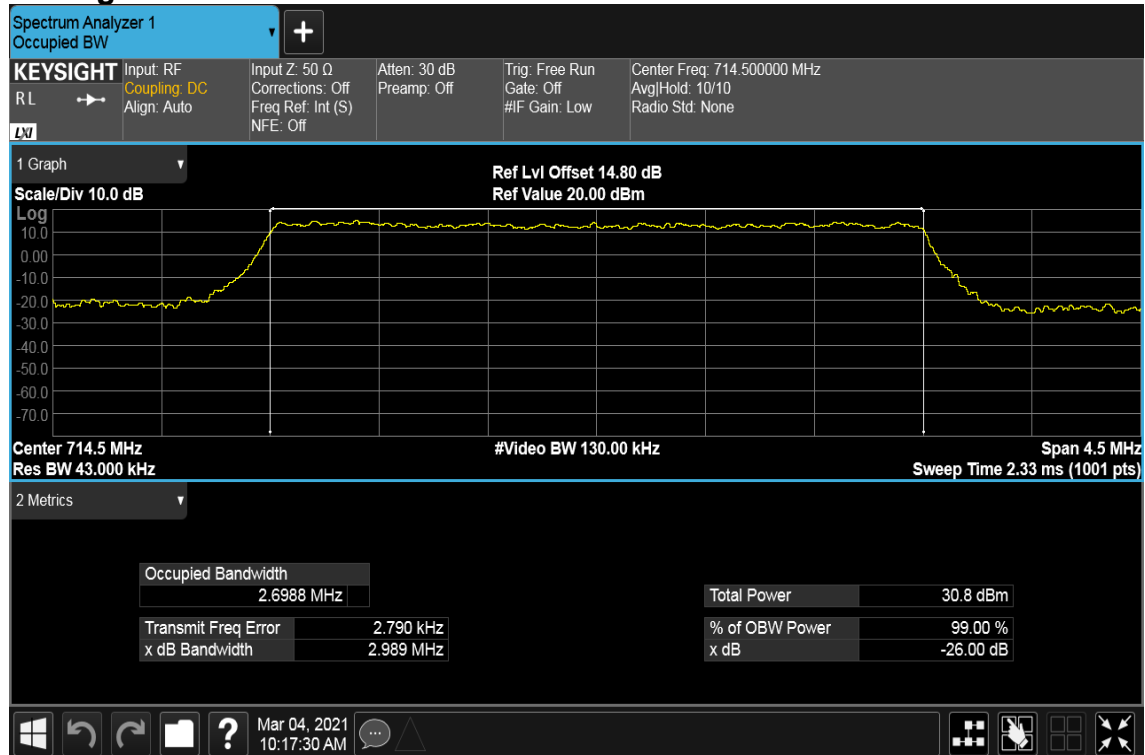
**CHANNEL BANDWIDTH: 3MHz / 64QAM / RB =15, RB Offset = 0****CH Low****CH Mid**

Report No.: T201102D09-RP11

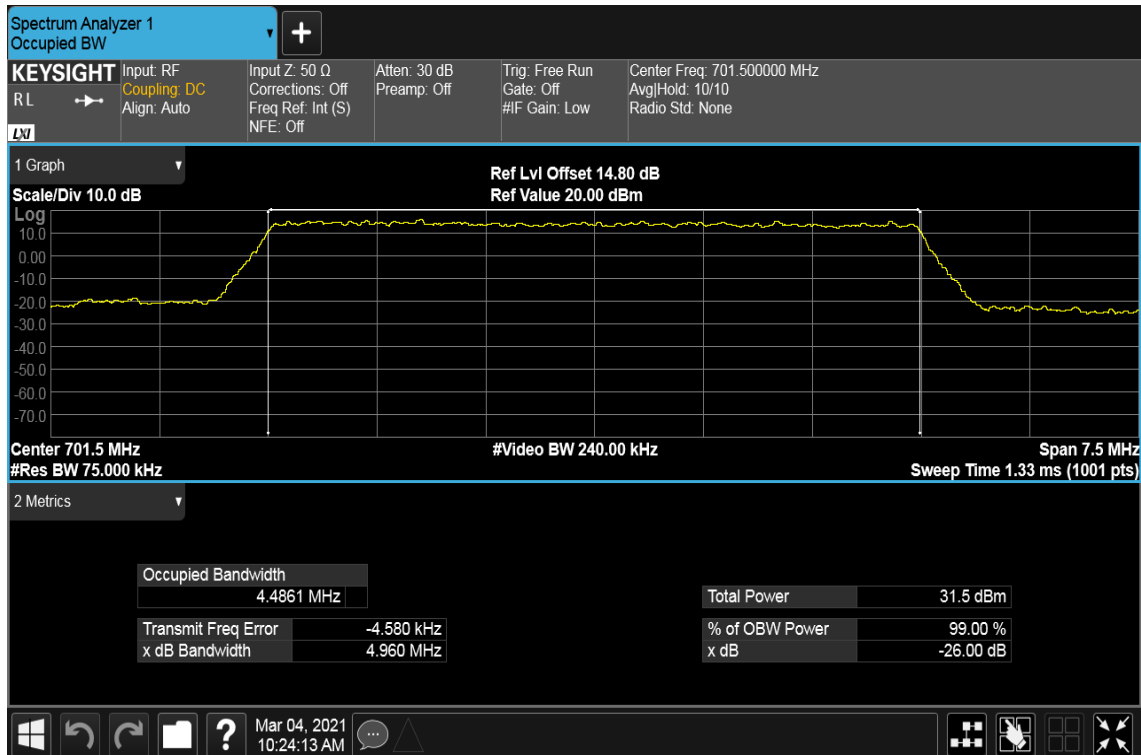
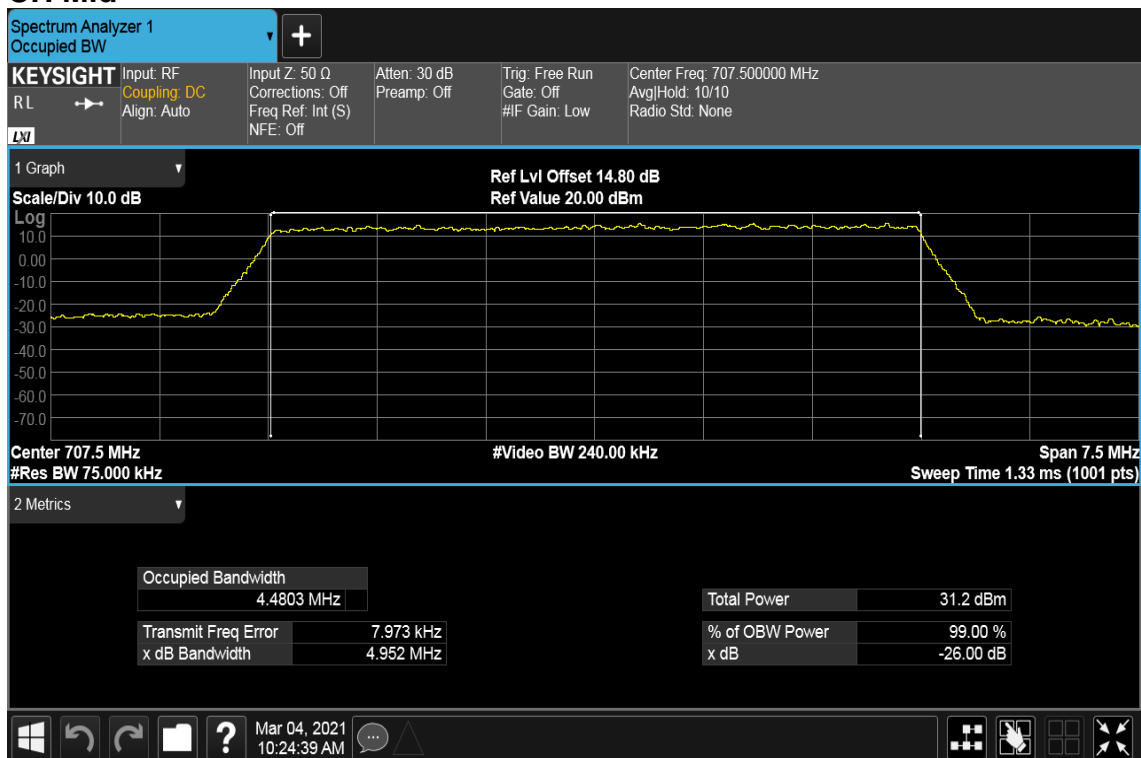
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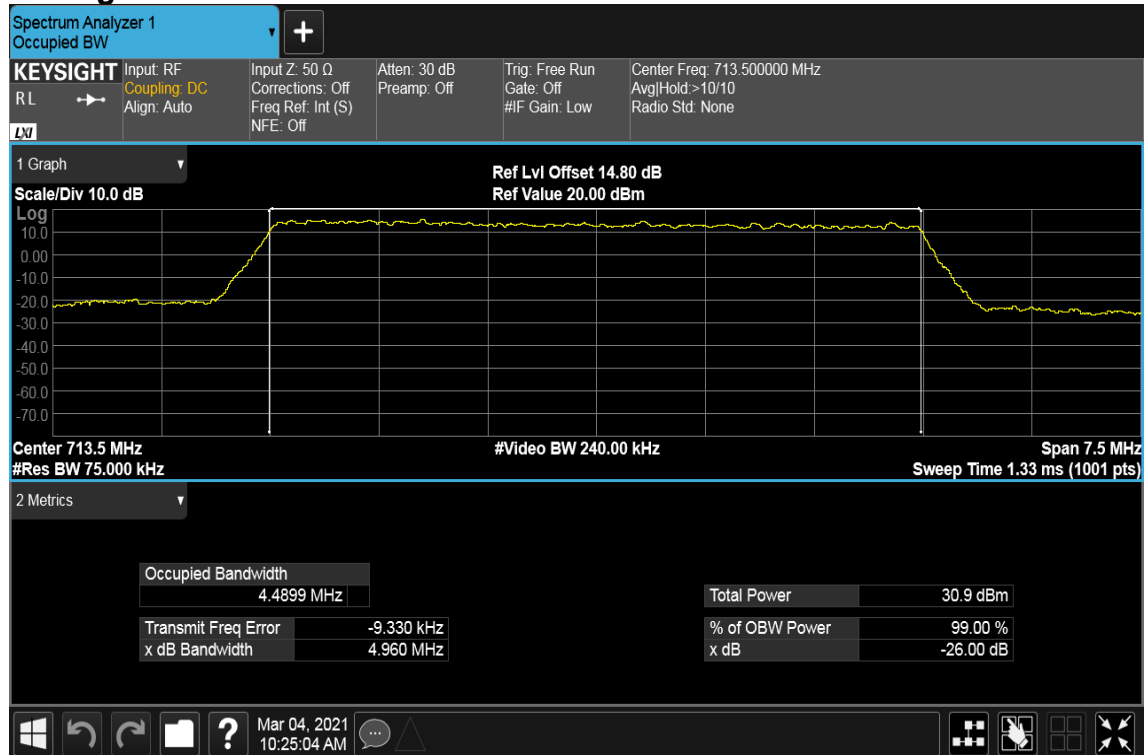
## CH High



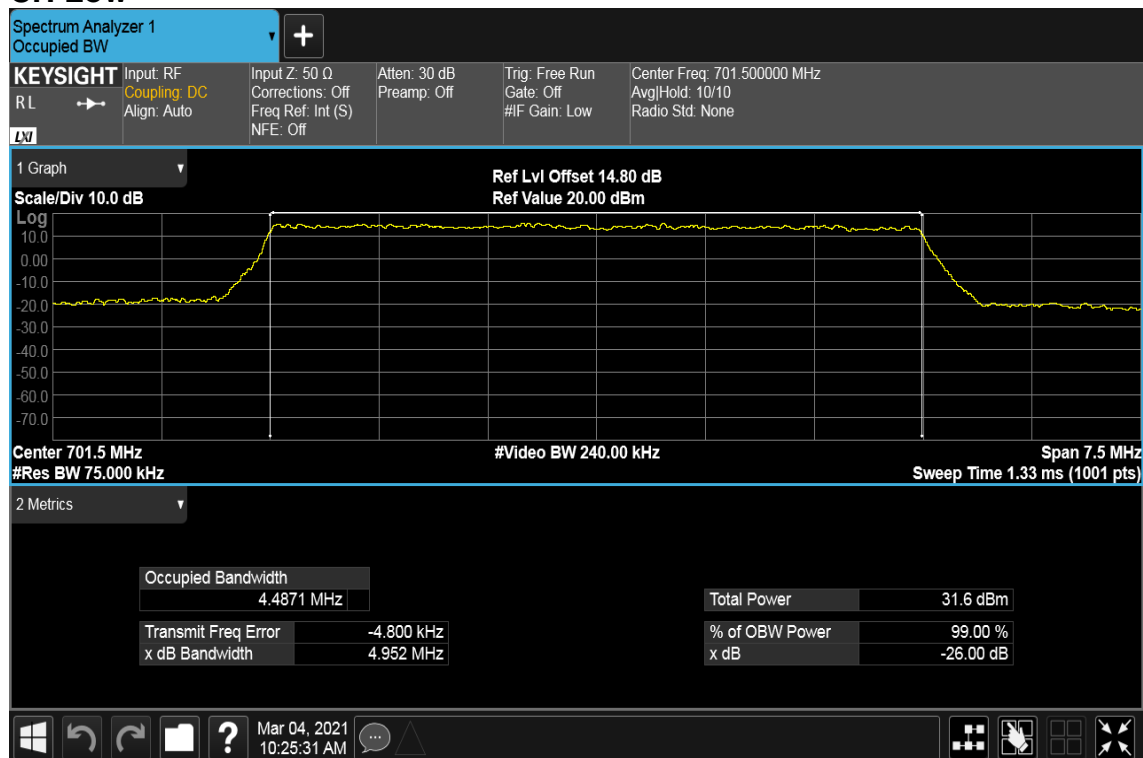
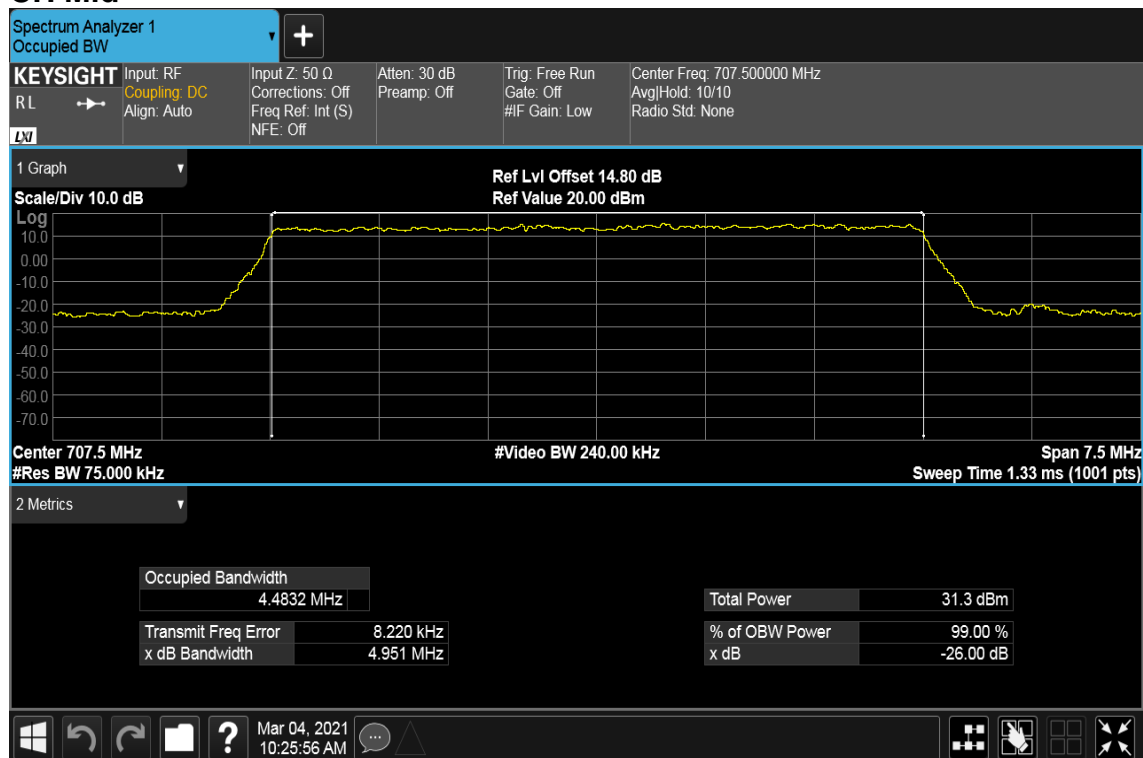
Report No.: T201102D09-RP11

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

## CH High



Report No.: T201102D09-RP11

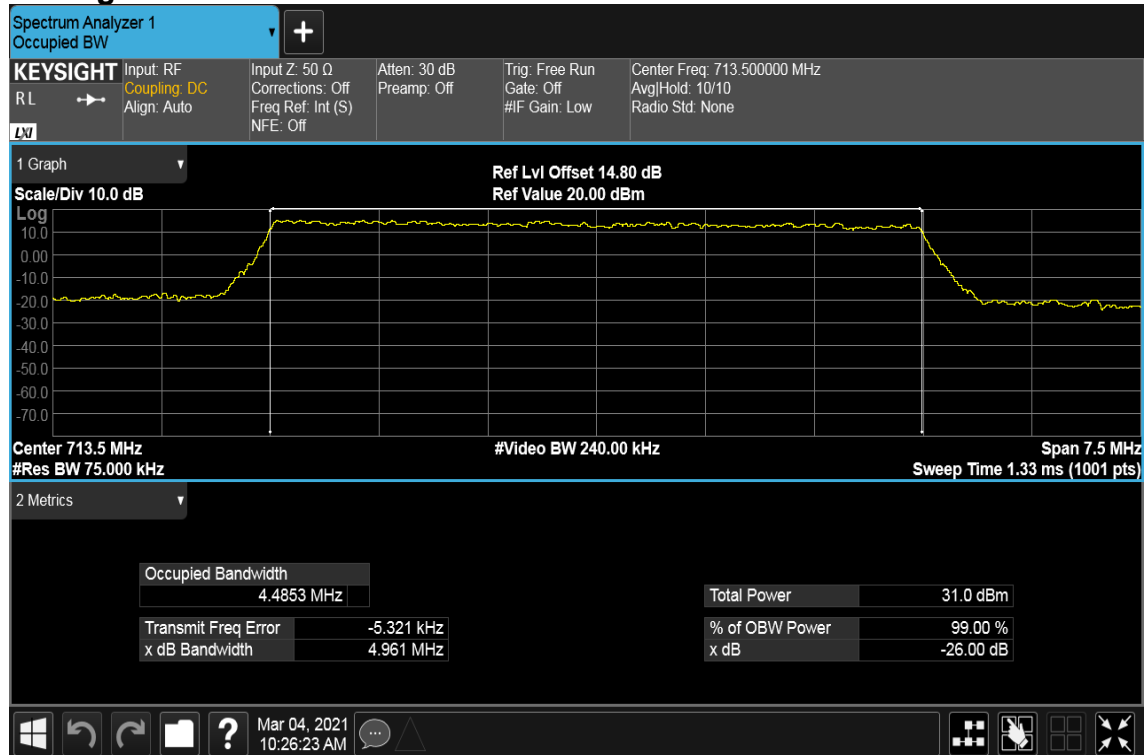
**CHANNEL BANDWIDTH: 5MHz / 16QAM / RB =25, RB Offset = 0****CH Low****CH Mid**

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## CH High

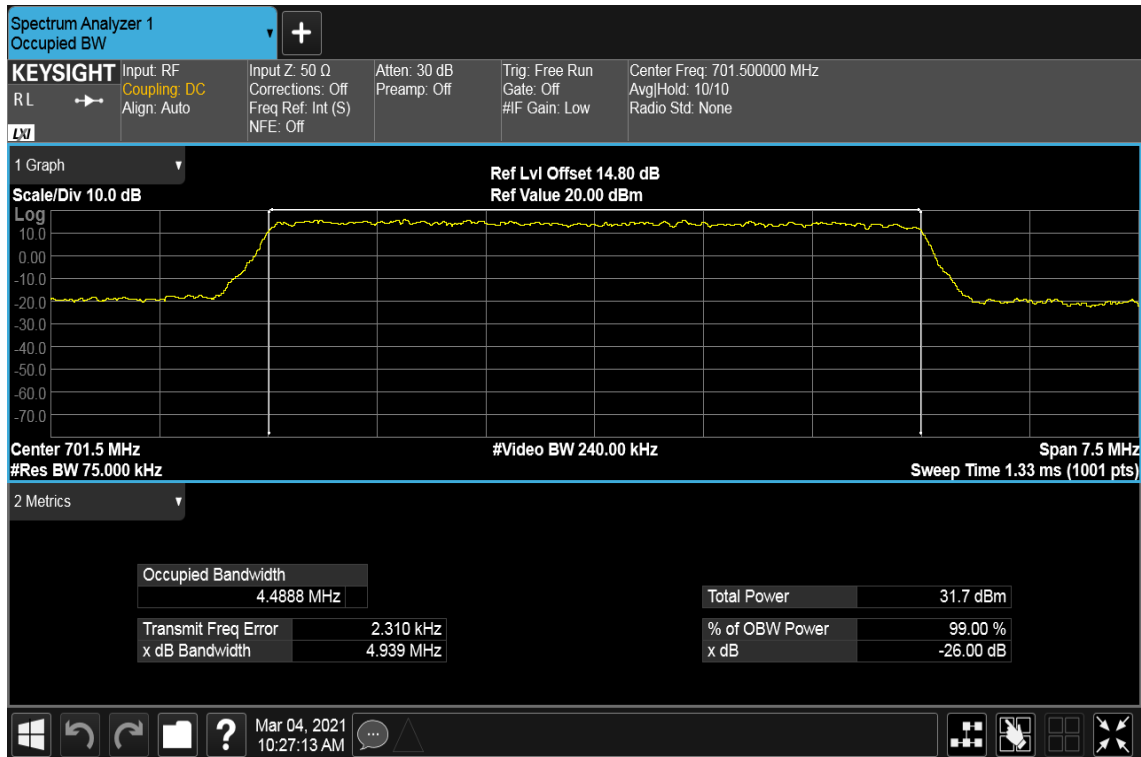




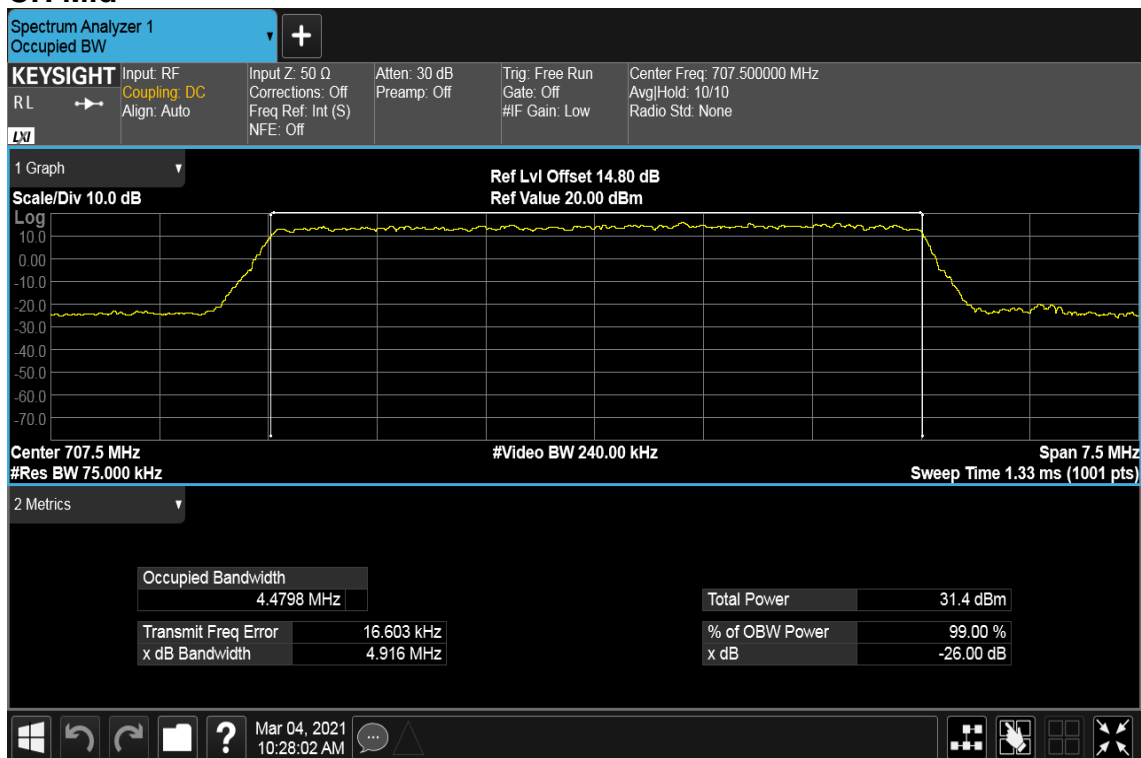
Report No.: T201102D09-RP11

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

### CH Low

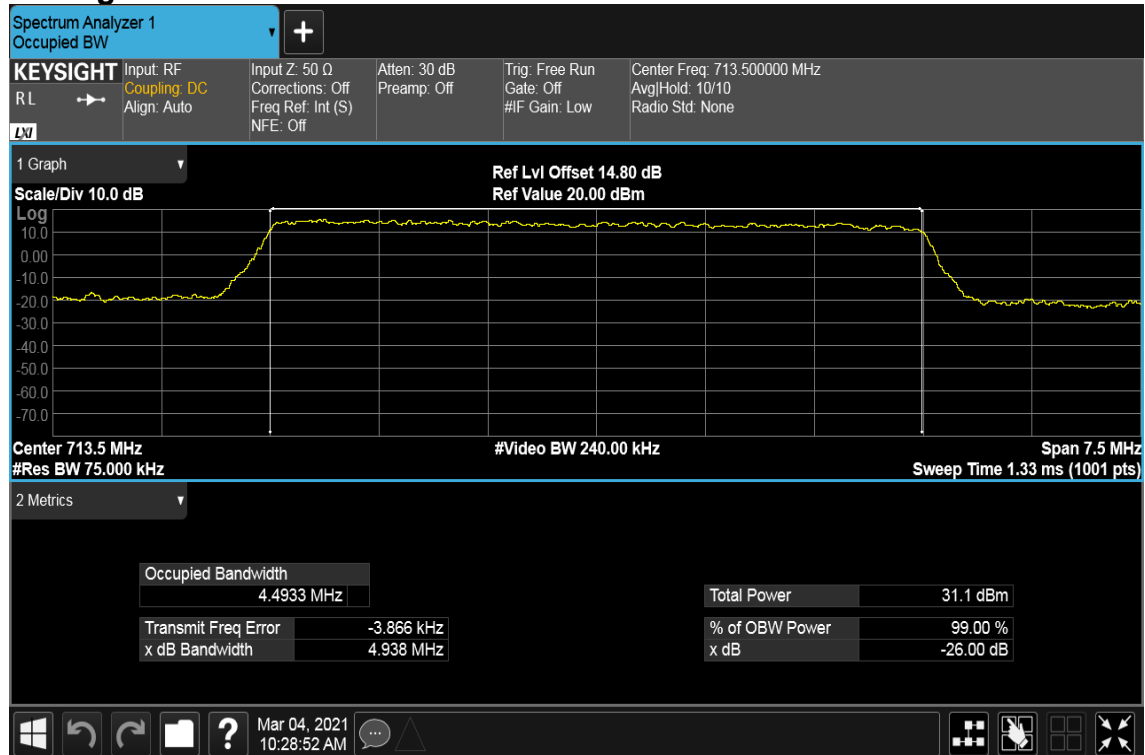


### CH Mid

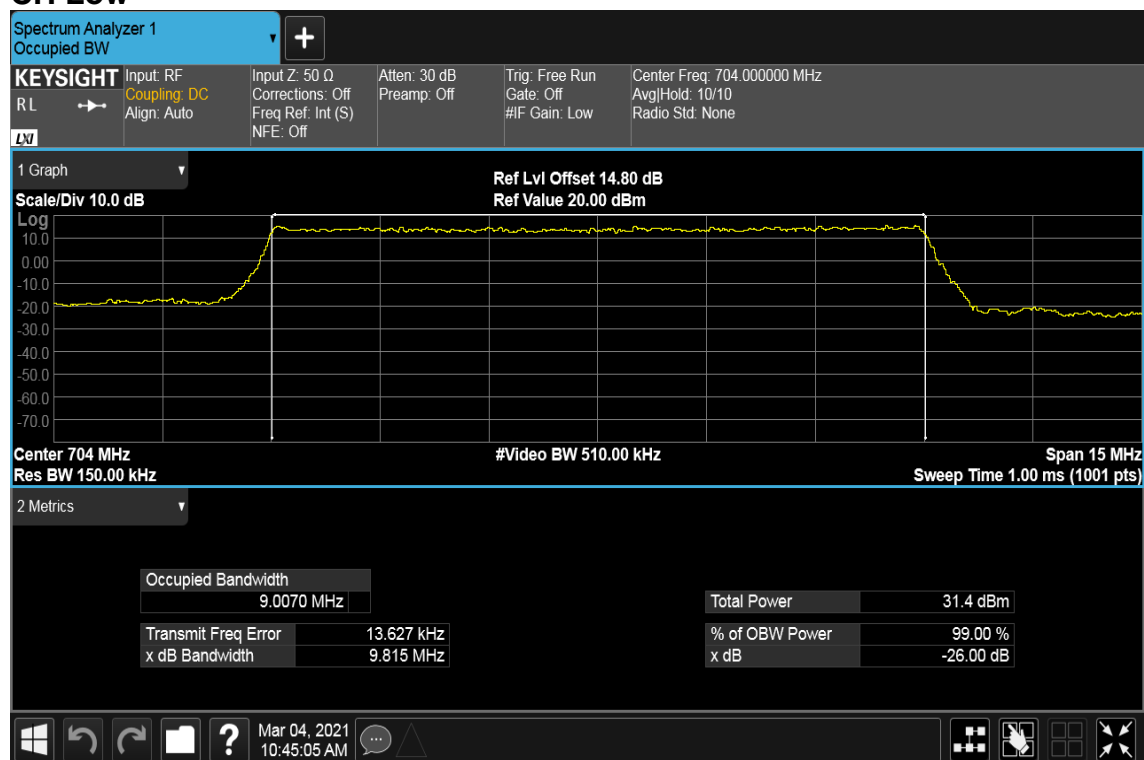
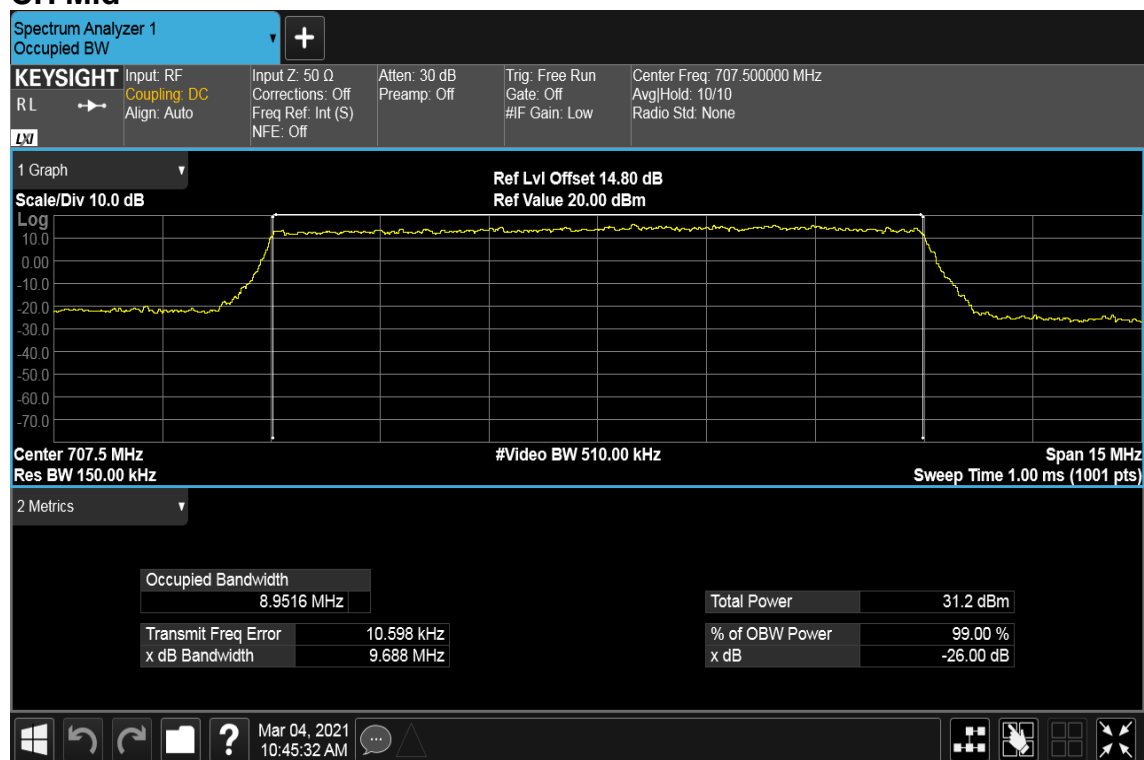


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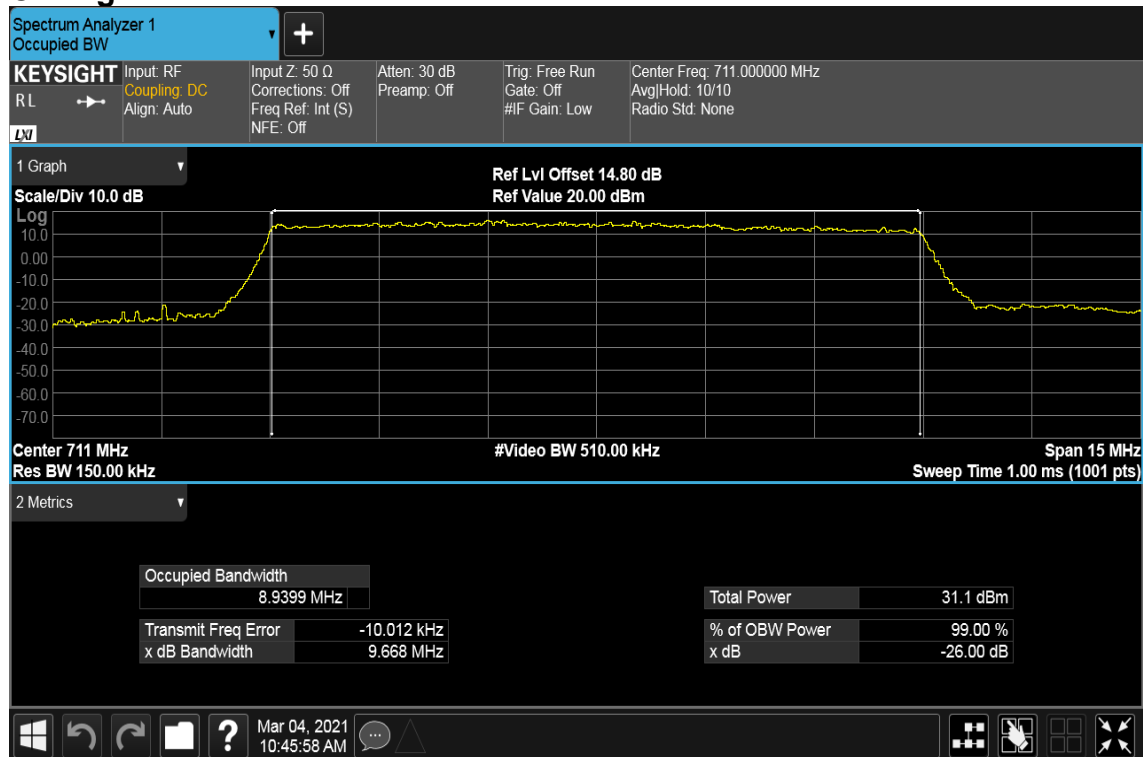
## CH High



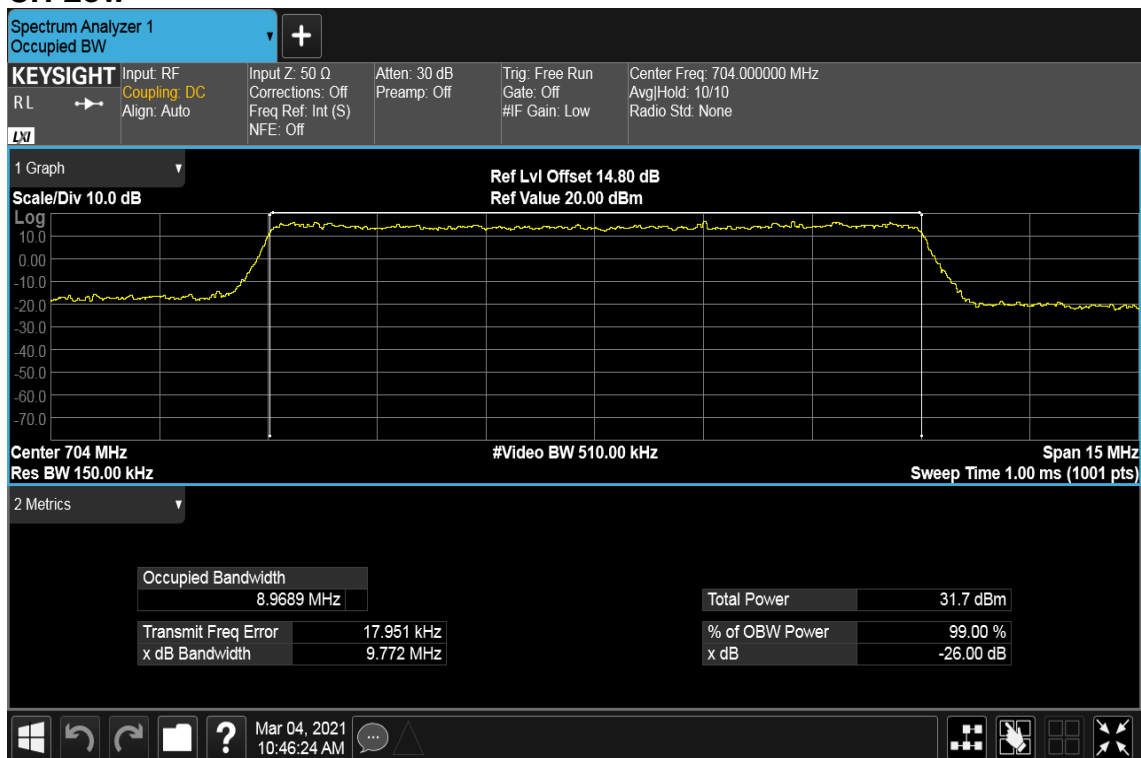
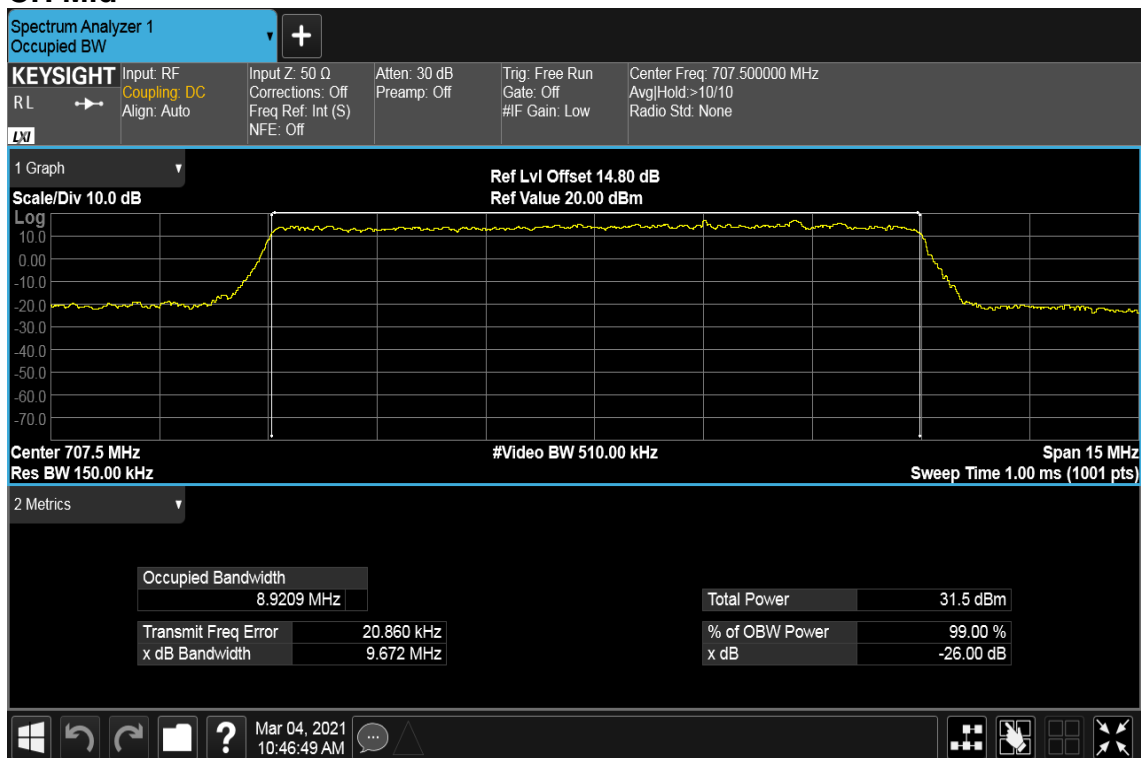
Report No.: T201102D09-RP11

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

## CH High



Report No.: T201102D09-RP11

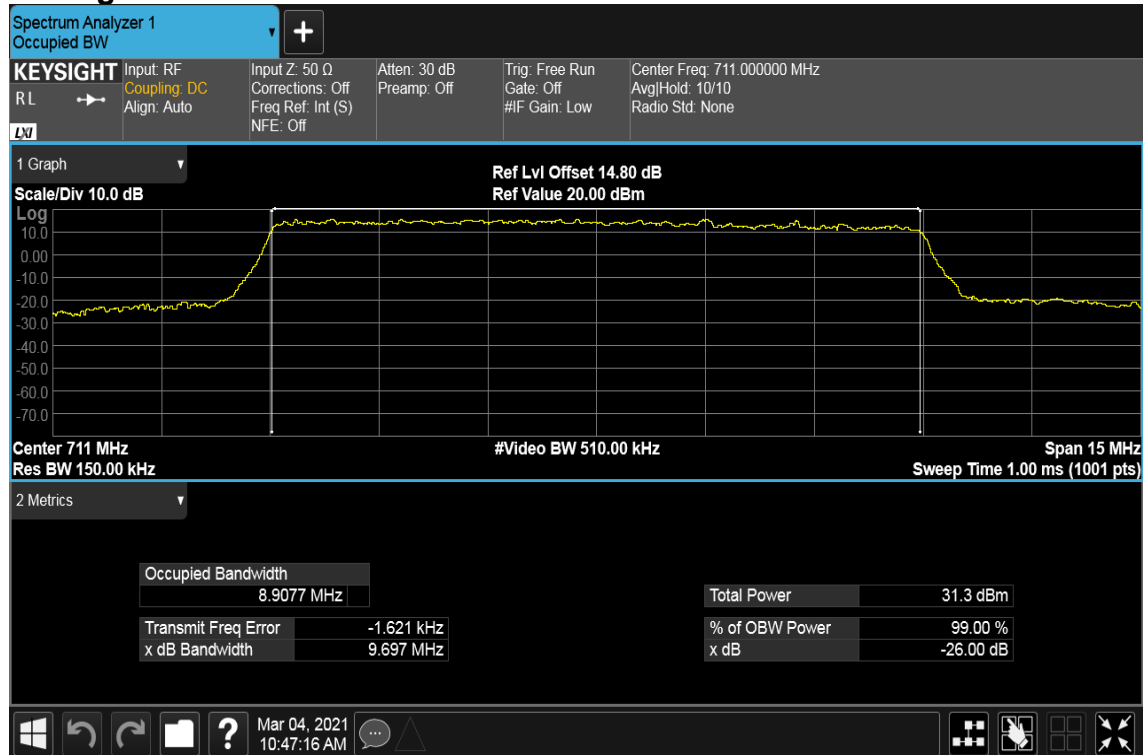
**CHANNEL BANDWIDTH: 10MHz / 16QAM / RB =50, RB Offset = 0****CH Low****CH Mid**

Report No.: T201102D09-RP11

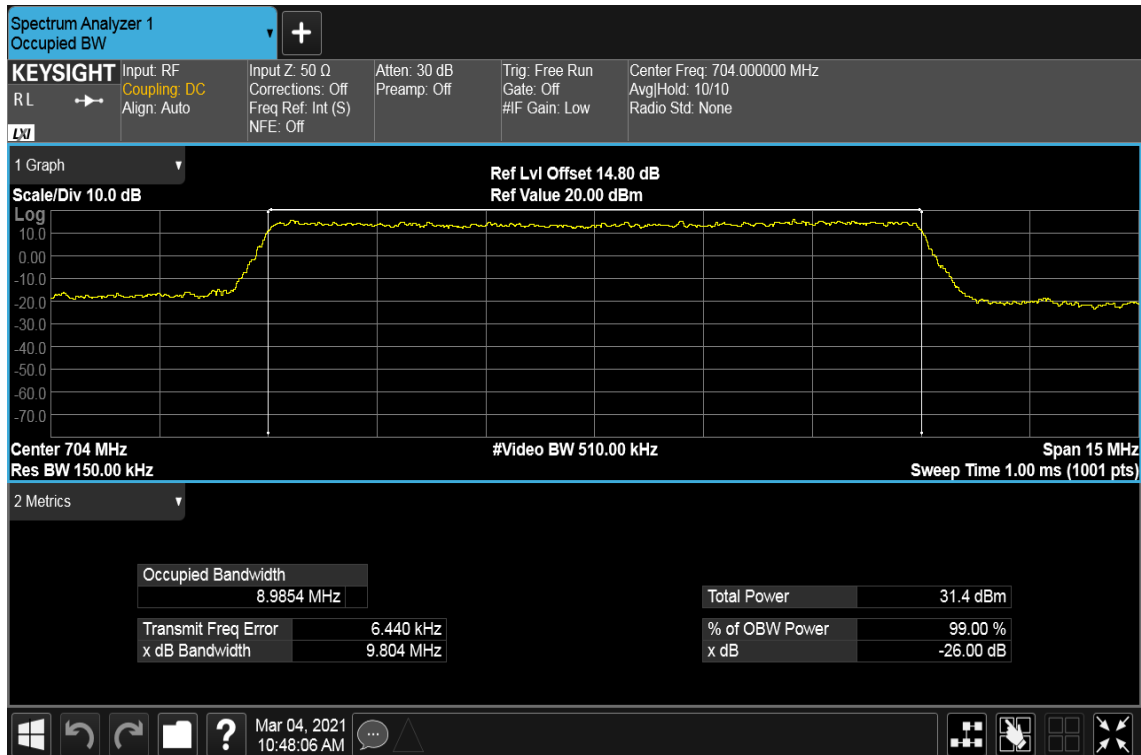
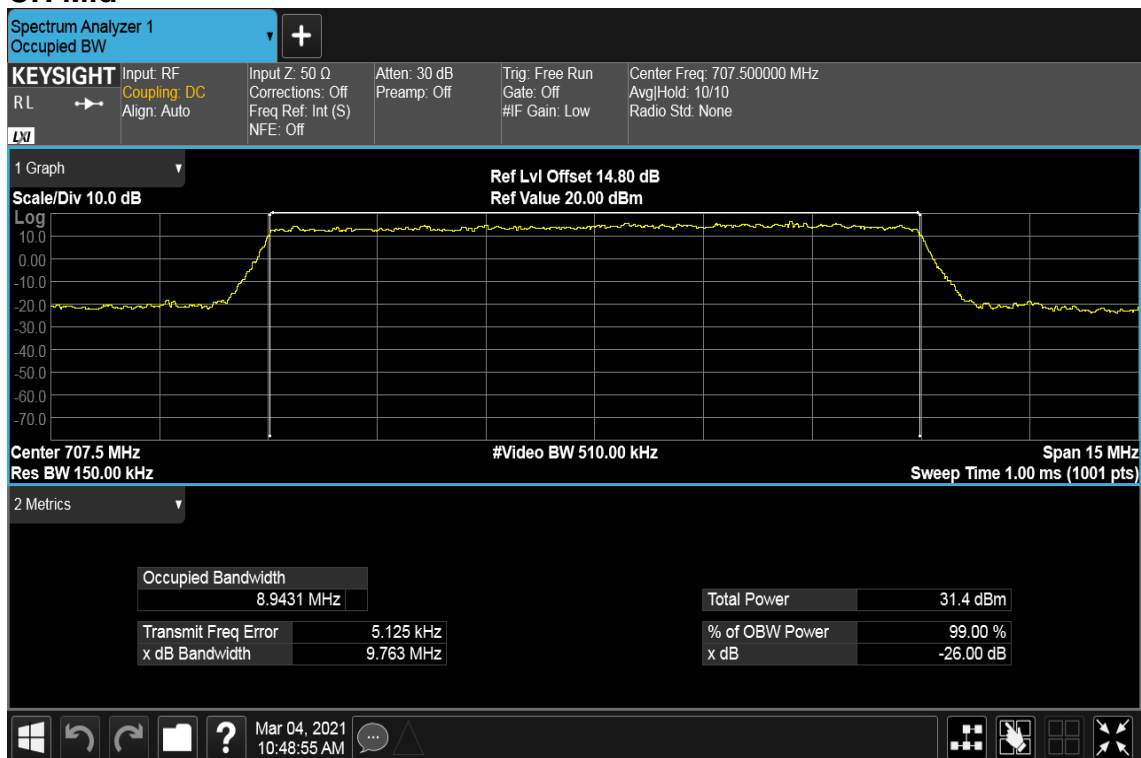
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## CH High

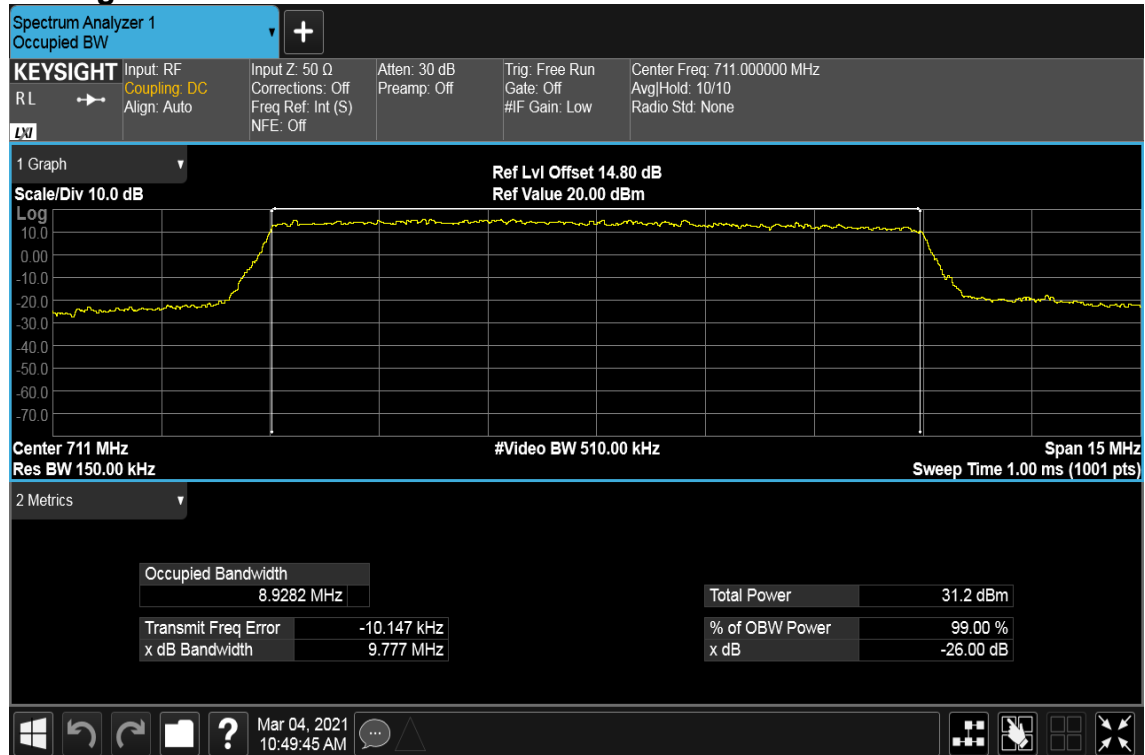


Report No.: T201102D09-RP11

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

Report No.: T201102D09-RP11

## 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:** 24.1°C

**Humidity:** 58.3% RH

**Tested by:** Jerry Chang

**Test Date:** March 4, 2021

**Temperature:** 24.3°C

**Humidity:** 58.9% RH

**Tested by:** Jerry Chang

**Test Date:** August 27, 2021

## **LTE Band 12**

LTE BAND 12							
Channel bandwidth: 1.4MHz				Channel bandwidth: 3MHz			
Freq. (MHz)	CH	PAPR (dB)		Freq. (MHz)	CH	PAPR (dB)	
		64QAM	Limit			64QAM	Limit
699.7	23017	4.66	13	700.5	23025	5.38	13
707.5	23095	5.61	13	707.5	23095	5.95	13
715.3	23173	5.40	13	714.5	23165	5.46	13

LTE BAND 12							
Channel bandwidth: 5MHz				Channel bandwidth: 10MHz			
Freq. (MHz)	CH	PAPR (dB)		Freq. (MHz)	CH	PAPR (dB)	
		64QAM	Limit			64QAM	Limit
701.5	23035	5.42	13	704.0	23060	5.76	13
707.5	23095	5.64	13	707.5	23095	5.60	13
713.5	23155	5.48	13	711.0	23130	5.28	13

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

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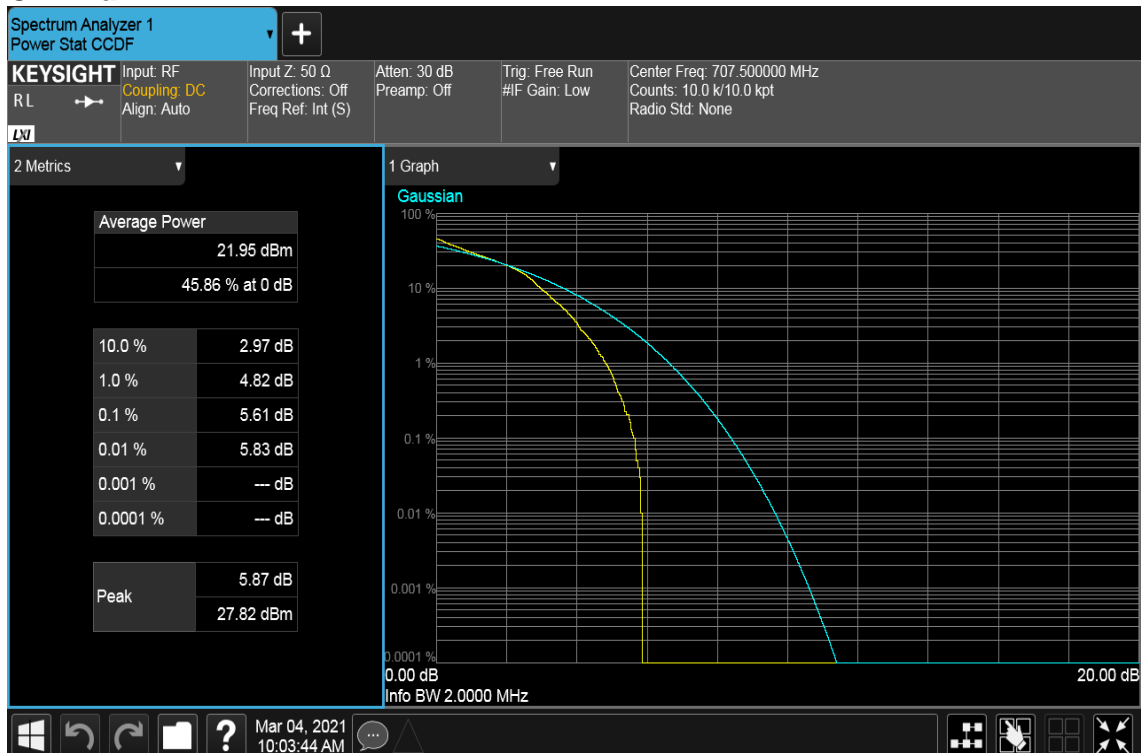
## LTE Band 12

CHANNEL BANDWIDTH: 1.4MHz / 64QAM / RB =6, RB Offset = 0

### CH Low



### CH Mid



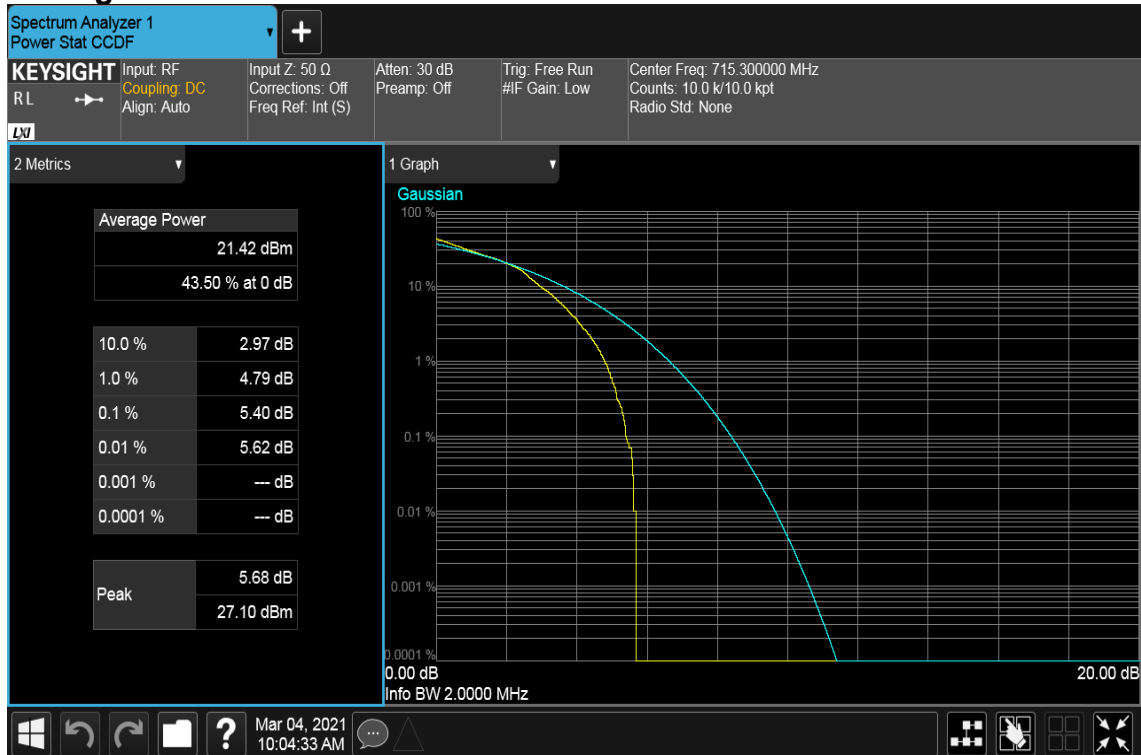


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## CH High



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## CHANNEL BANDWIDTH: 3MHz / 64QAM / RB =15, RB Offset = 0

### CH Low



### CH Mid



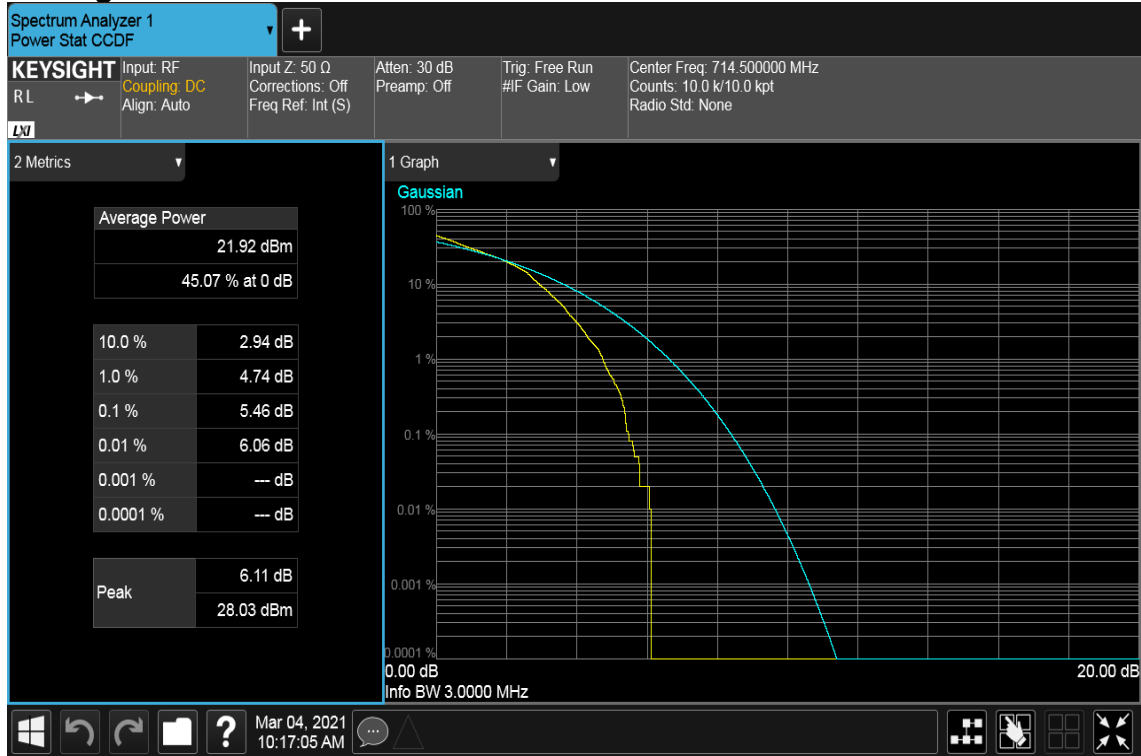


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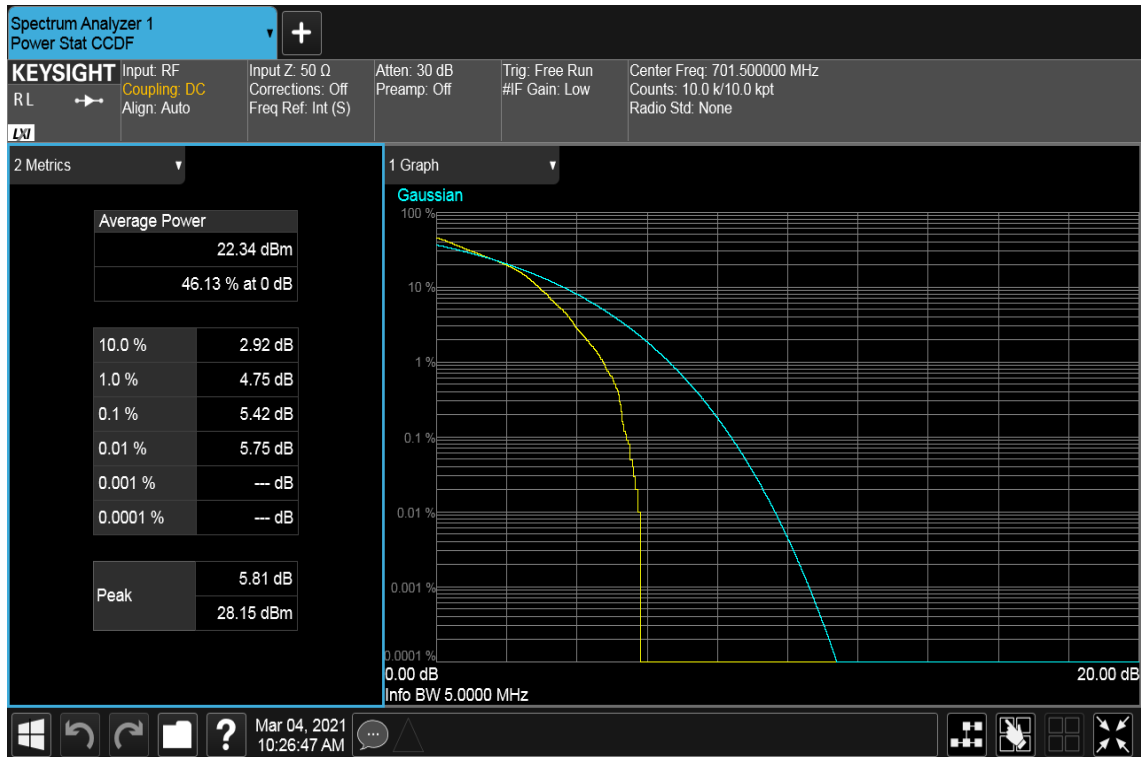
## CH High



Report No.: T201102D09-RP11

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

### CH Low



### CH Mid





Report No.: T201102D09-RP11

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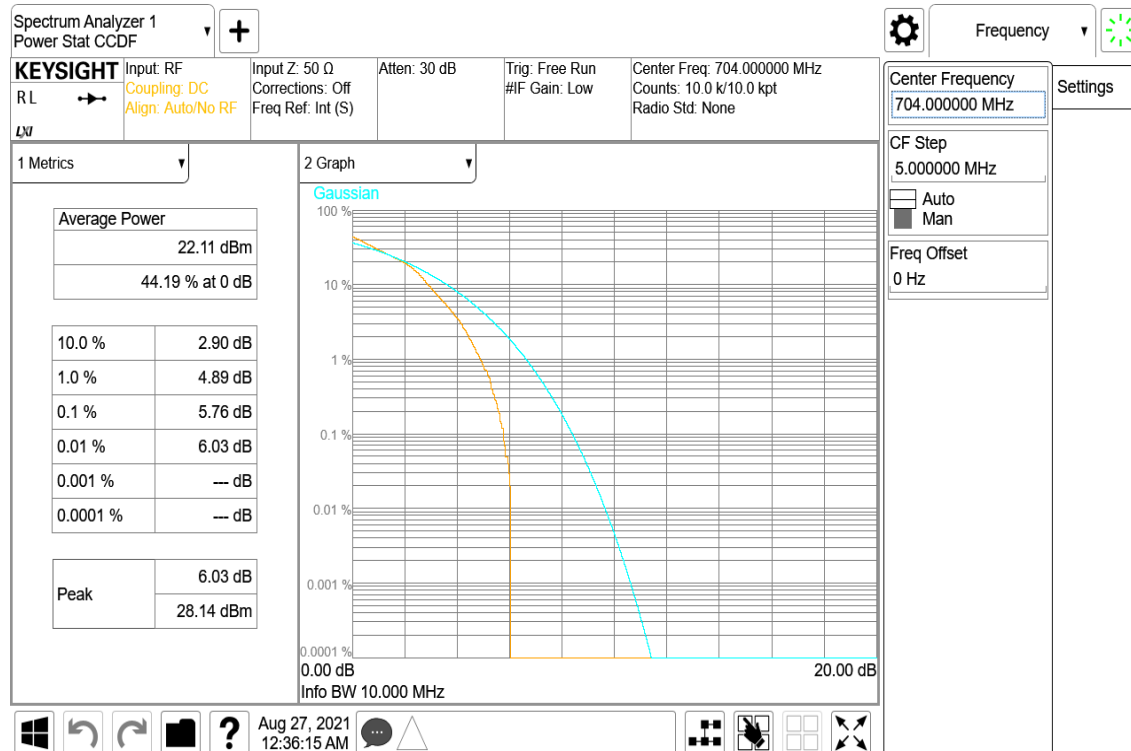
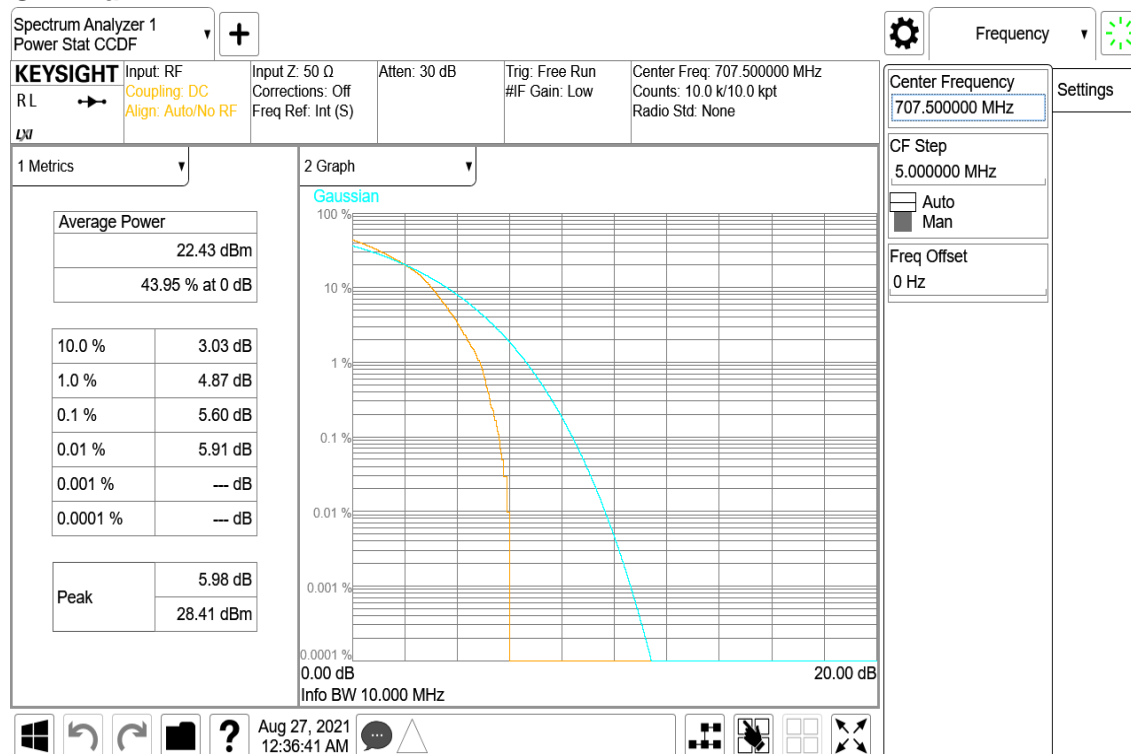
## CH High







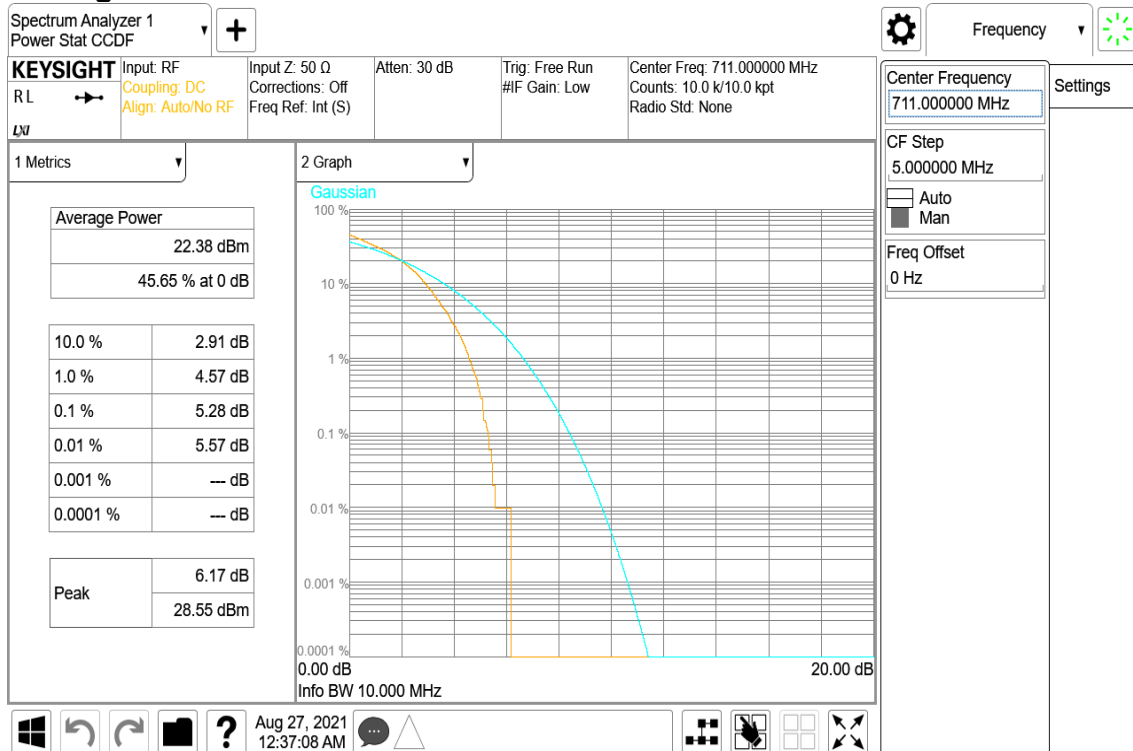
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**CHANNEL BANDWIDTH: 10MHz / 64QAM / RB =50, RB Offset = 0****CH Low****CH Mid**



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## CH High



## 8.5 OUT OF BAND EMISSION AT ANTENNA TERMINALS

### LIMIT

#### **Part 27.53 (g), Band 12**

For operations in the 600 MHz band and the 698-746 MHz band, the power of any emission outside a licensee's frequency band(s) of operation shall be attenuated below the transmitter power (P) within the licensed band(s) of operation, measured in watts, by at least  $43 + 10 \log (P)$  dB. Compliance with this provision is based on the use of measurement instrumentation employing a resolution bandwidth of 100 kilohertz or greater. However, in the 100 kilohertz bands immediately outside and adjacent to a licensee's frequency block, a resolution bandwidth of at least 30 kHz may be employed.

#### **According to RSS-130, Band 12**

The power of any unwanted emissions in any 100 kHz bandwidth on any frequency outside the frequency range(s) within which the equipment is designed to operate shall be attenuated below the transmitter power, P (dBW), by at least  $43 + 10 \log_{10} p$  (watts), dB. However, in the 100 kHz band immediately outside the equipment's operating frequency range, a resolution bandwidth of 30 kHz may be employed.

### TEST PROCEDURES

KDB 971168 D01 Power Meas License Digital Systems – Section 6.0

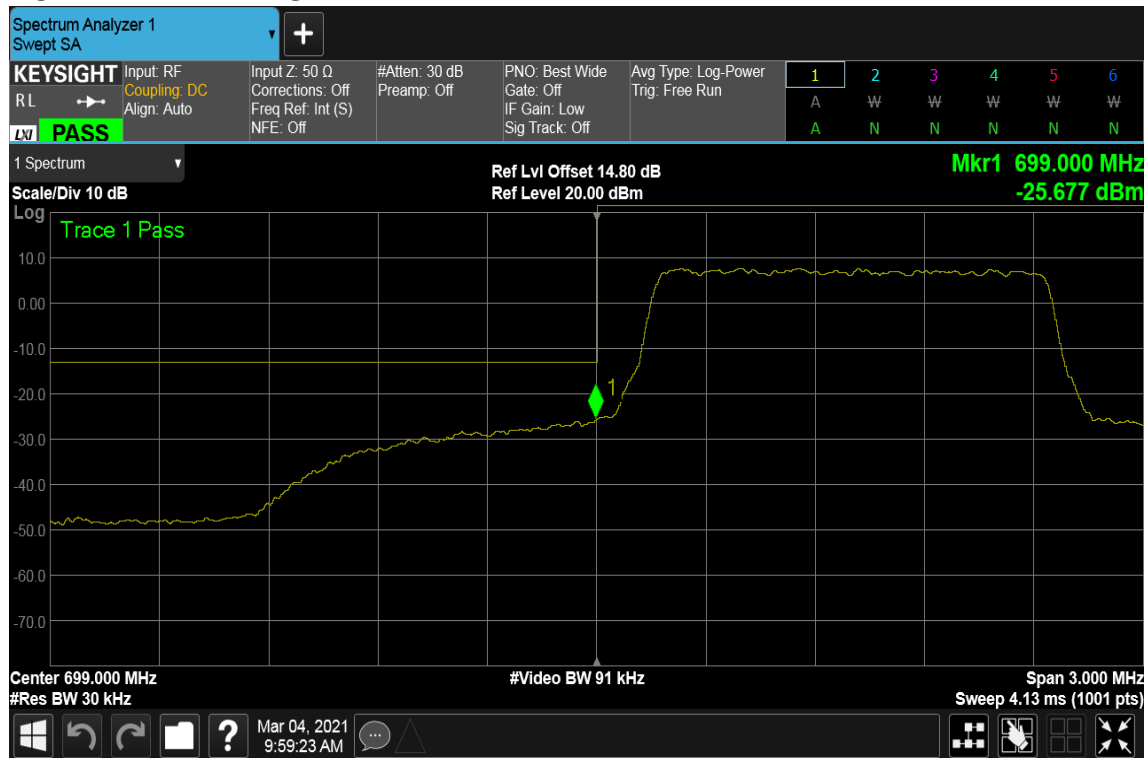
1. RBW  $\geq 1\%$  of the emission bandwidth
2. VBW  $\geq 3 \times$  RBW
3. Span was set large enough so as to capture all out of emissions near the band edge.

### TEST RESULTS:

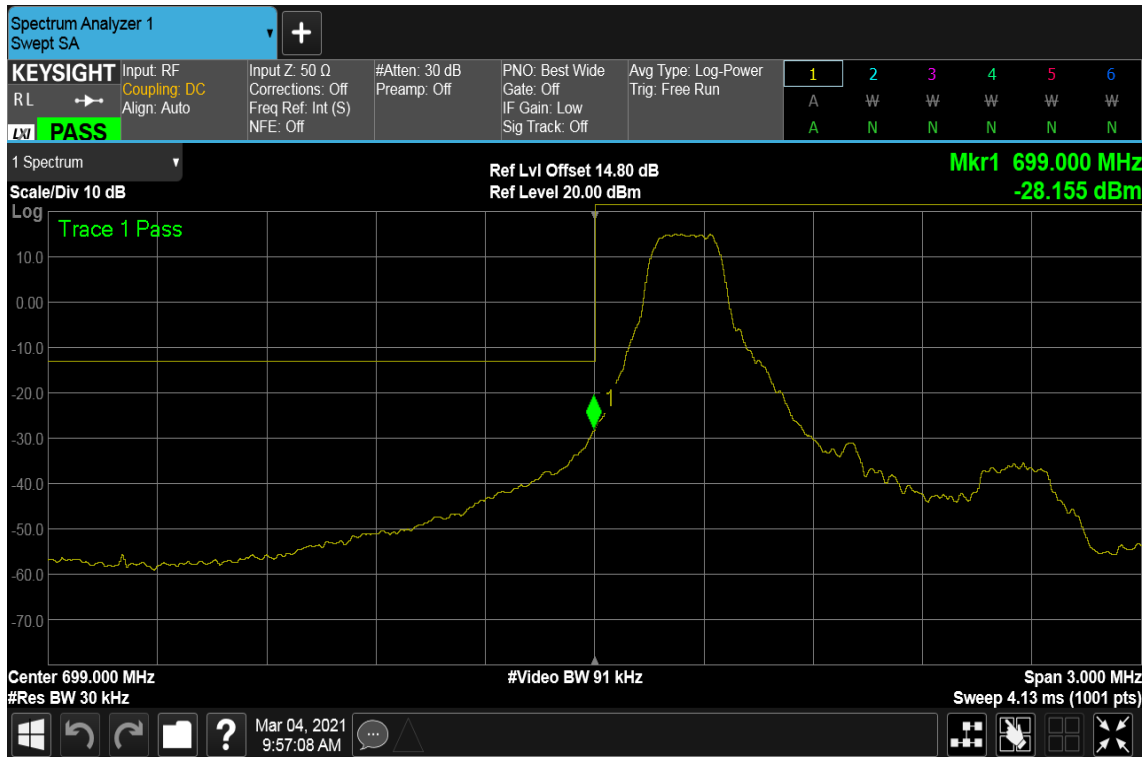
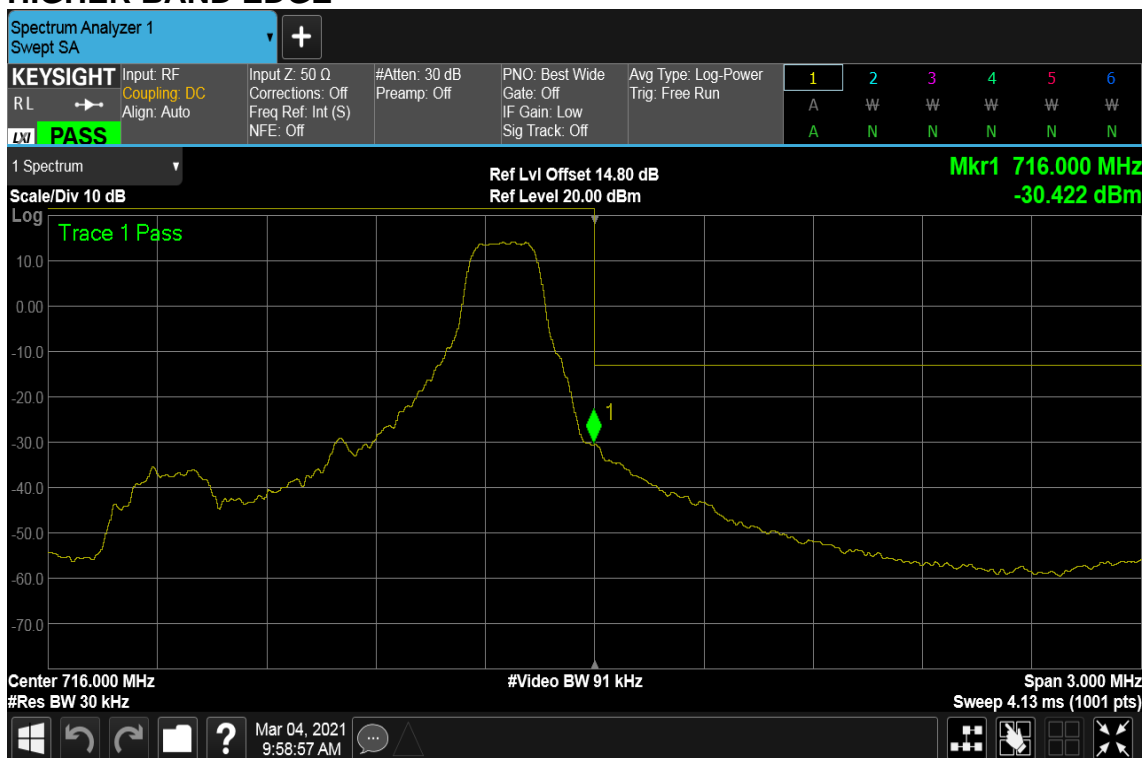
<b>Temperature:</b>	24.1°C	<b>Humidity:</b>	58.3% RH
<b>Tested by:</b>	Jerry Chang	<b>Test Date:</b>	March 4, 2021
<b>Temperature:</b>	25.8°C	<b>Humidity:</b>	57.4% RH
<b>Tested by:</b>	Jerry Chang	<b>Test Date:</b>	August 26, 2021



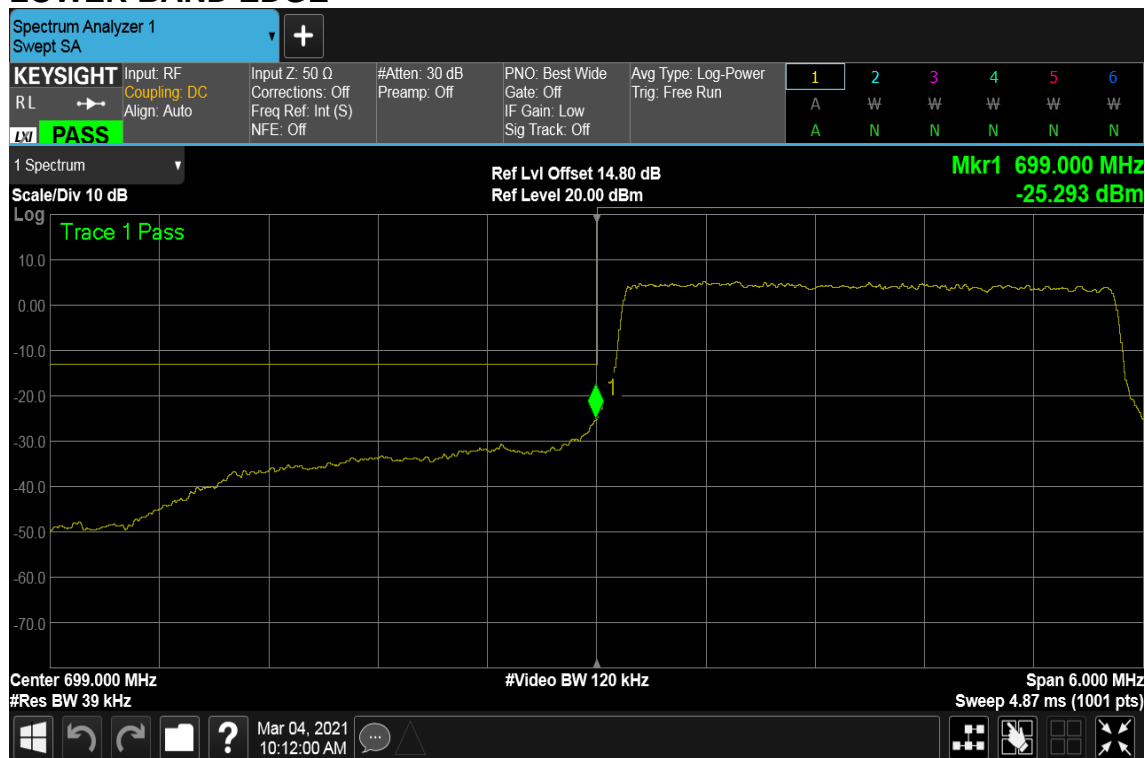
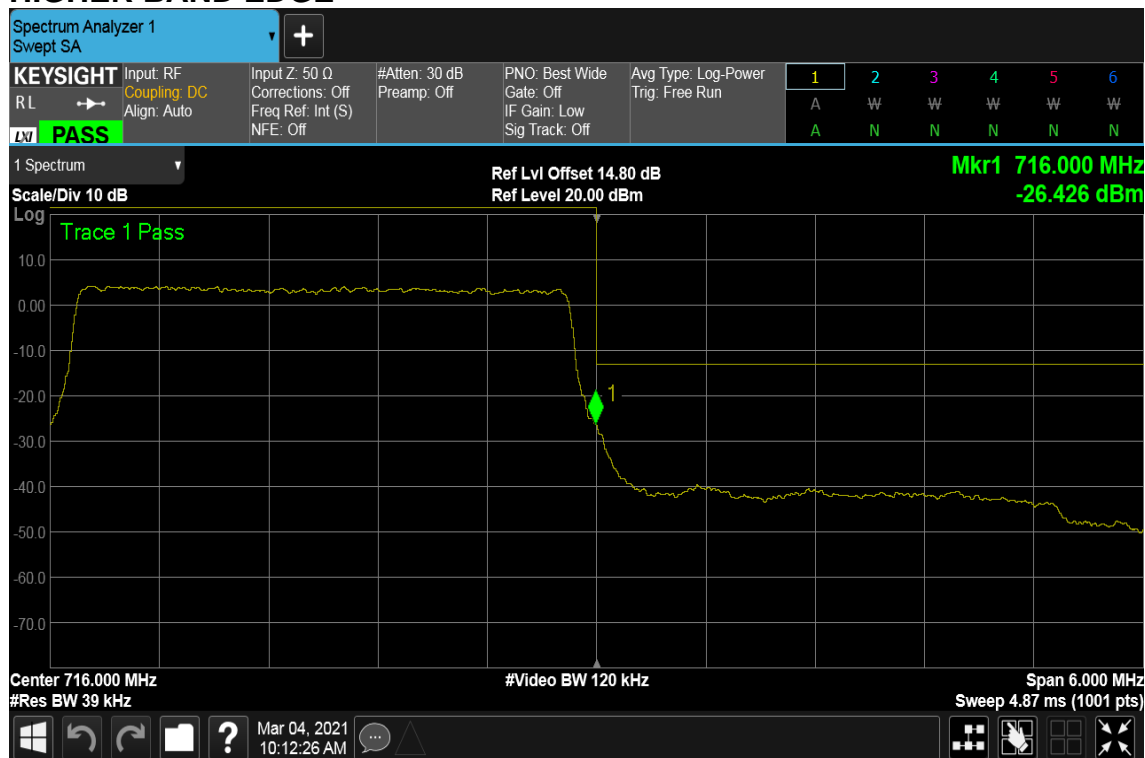
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**Band Edge****LTE Band 12****CHANNEL BANDWIDTH: 1.4MHz / QPSK / RB =6, RB Offset = 0****LOWER BAND EDGE****HIGHER BAND EDGE**

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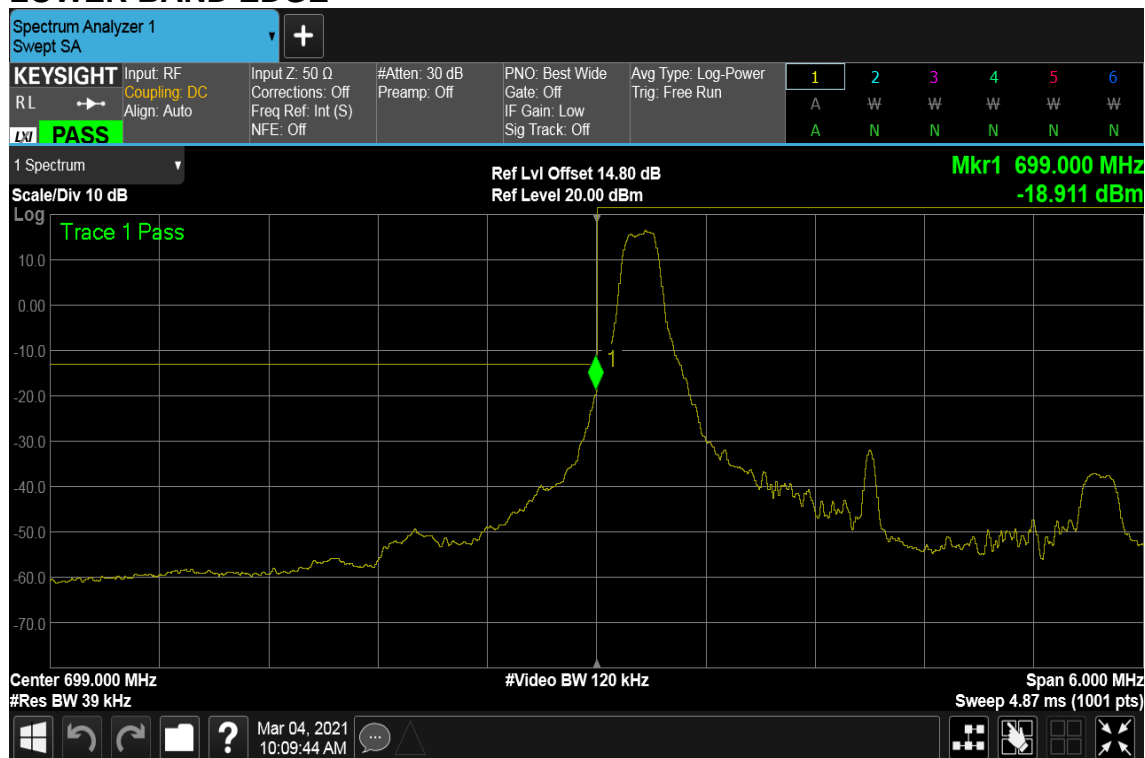
**CHANNEL BANDWIDTH: 1.4MHz / QPSK / RB =1, RB Offset = 0**  
**LOWER BAND EDGE****CHANNEL BANDWIDTH: 1.4MHz / QPSK / RB =1, RB Offset = 5**  
**HIGHER BAND EDGE**

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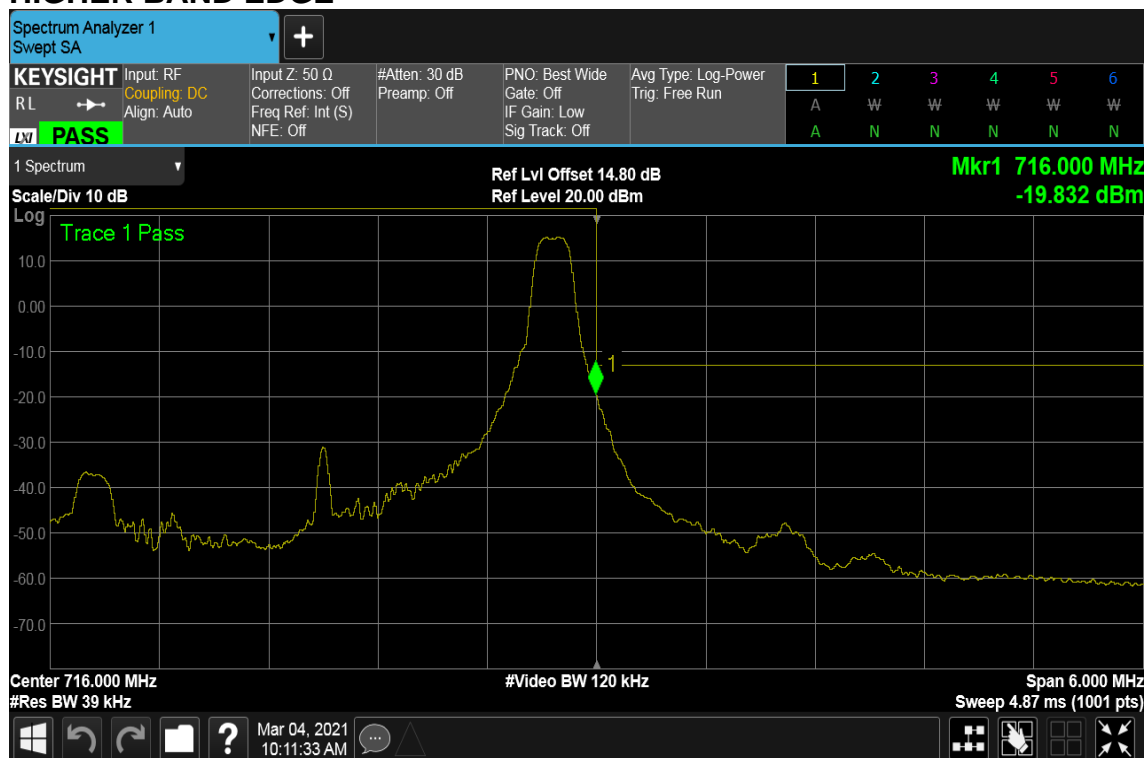
**CHANNEL BANDWIDTH: 3MHz / QPSK / RB =15, RB Offset = 0**  
**LOWER BAND EDGE****HIGHER BAND EDGE**

Report No.: T201102D09-RP11

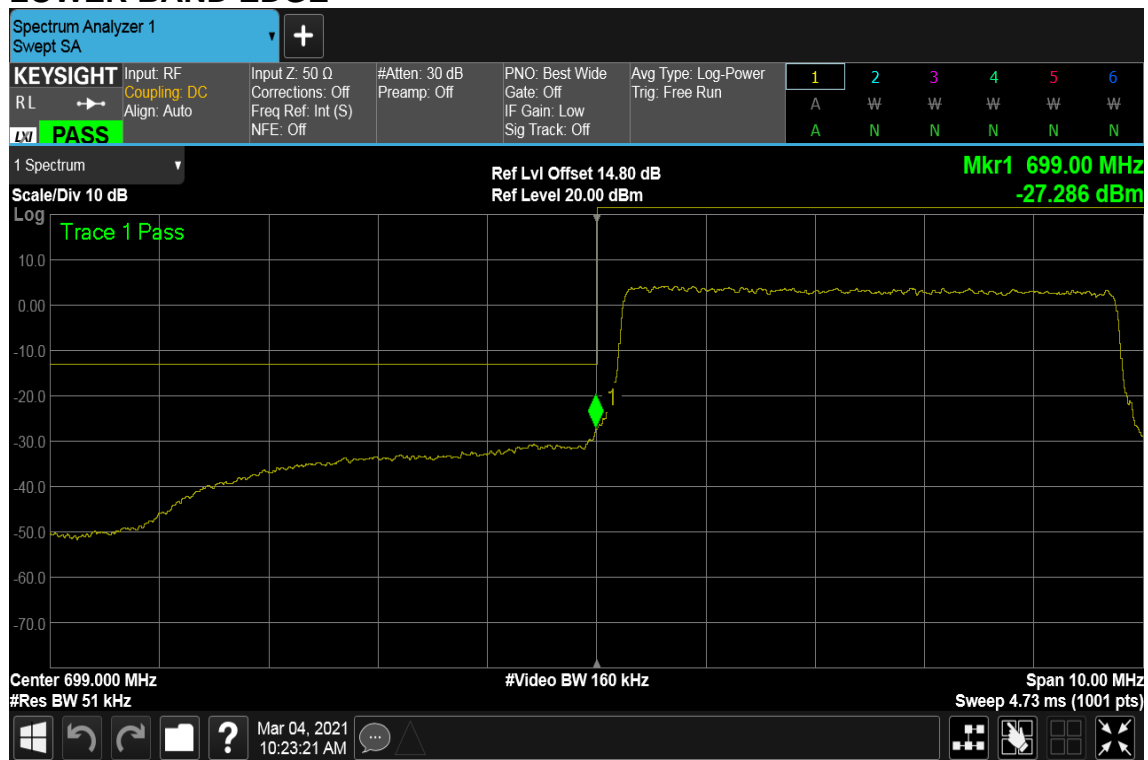
## CHANNEL BANDWIDTH: 3MHz / QPSK / RB =1, RB Offset = 0 LOWER BAND EDGE



## CHANNEL BANDWIDTH: 3MHz / QPSK / RB =1, RB Offset = 14 HIGHER BAND EDGE

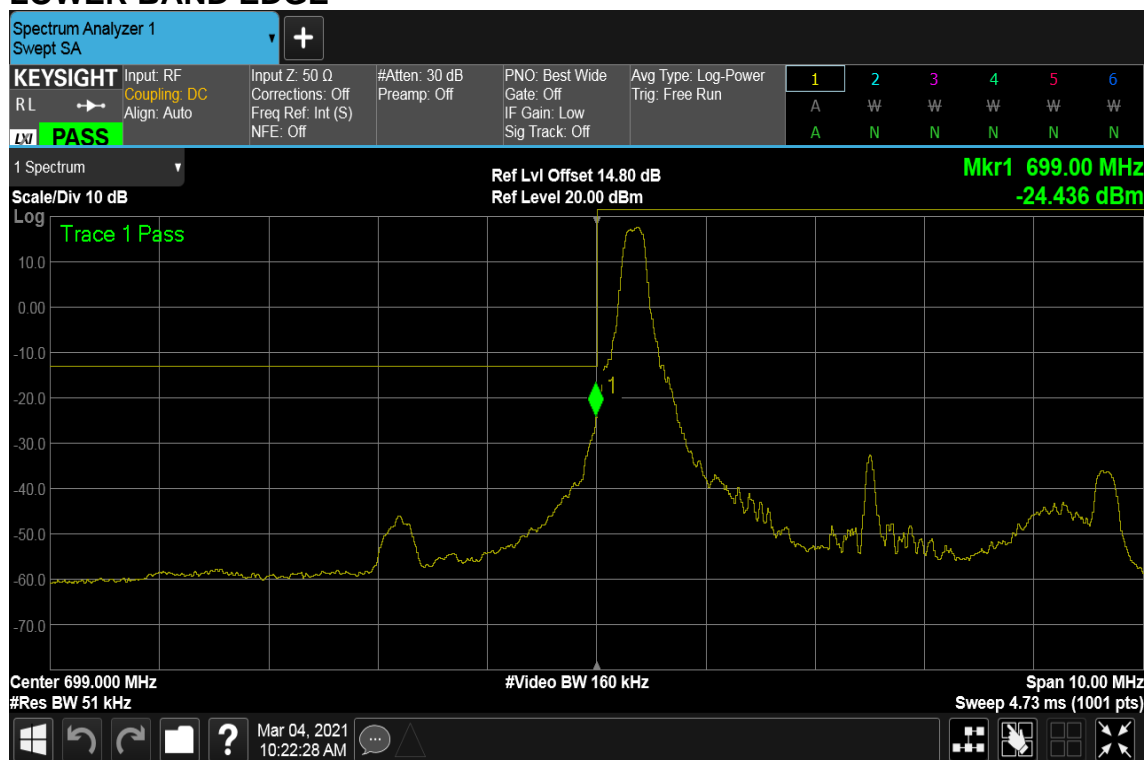
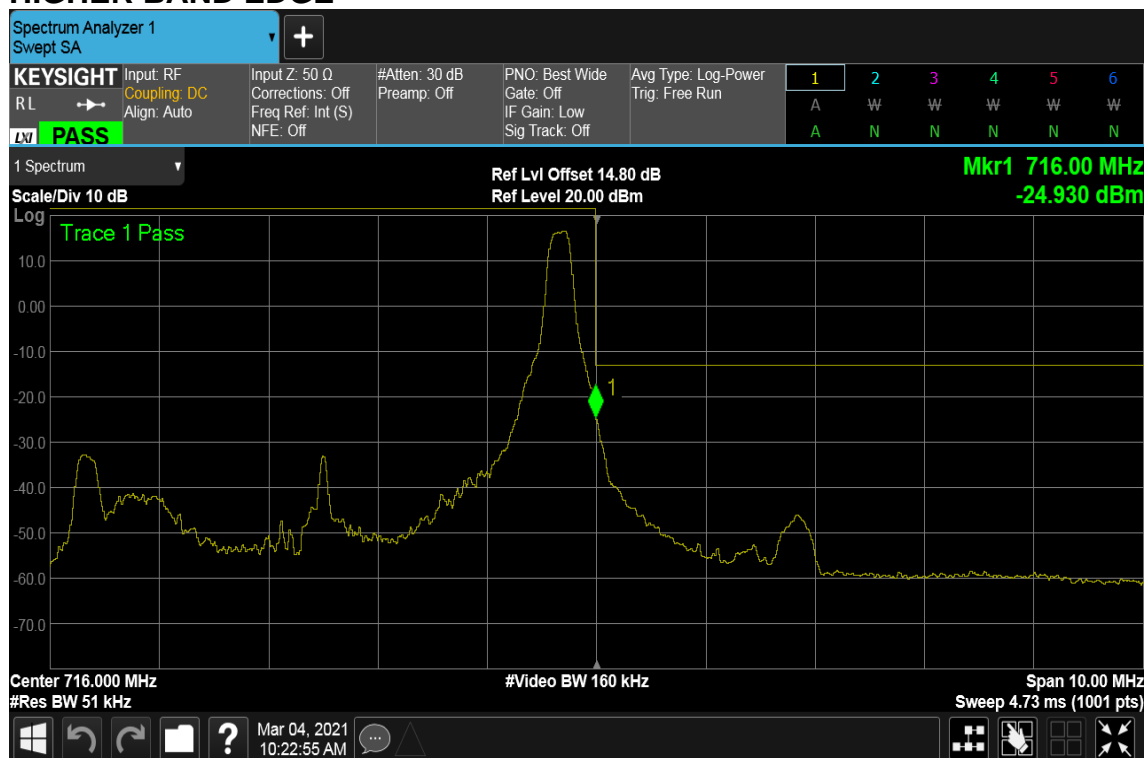


Report No.: T201102D09-RP11

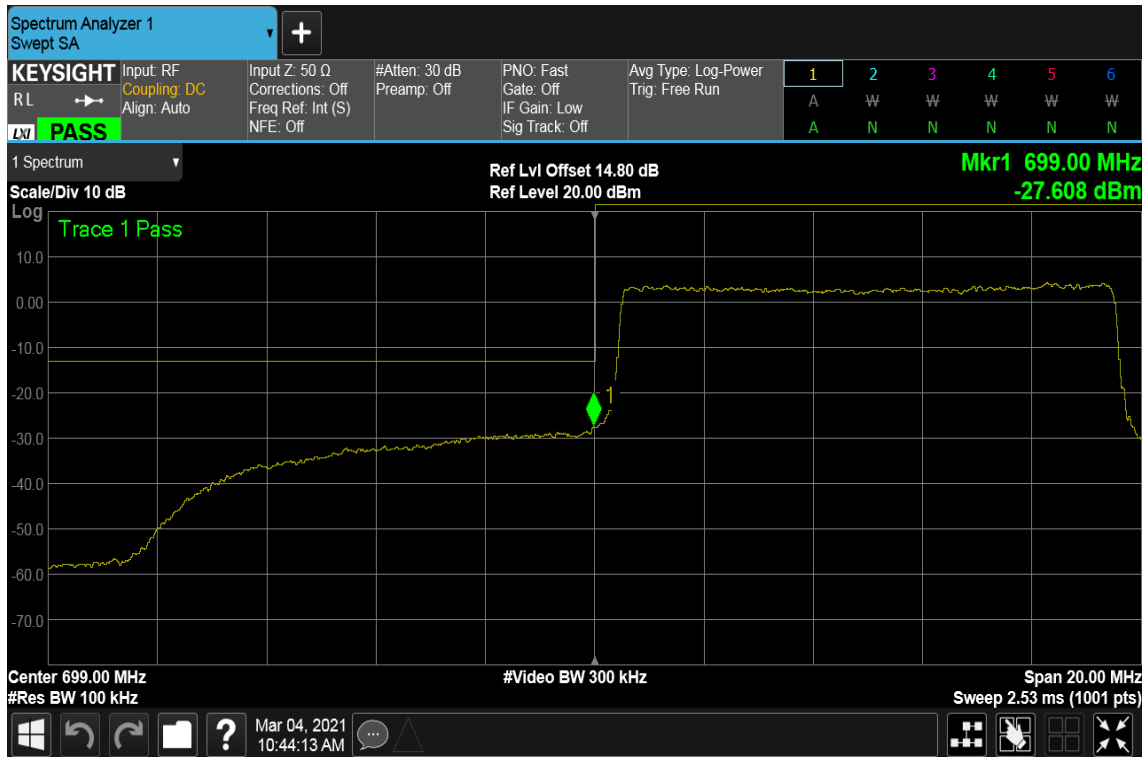
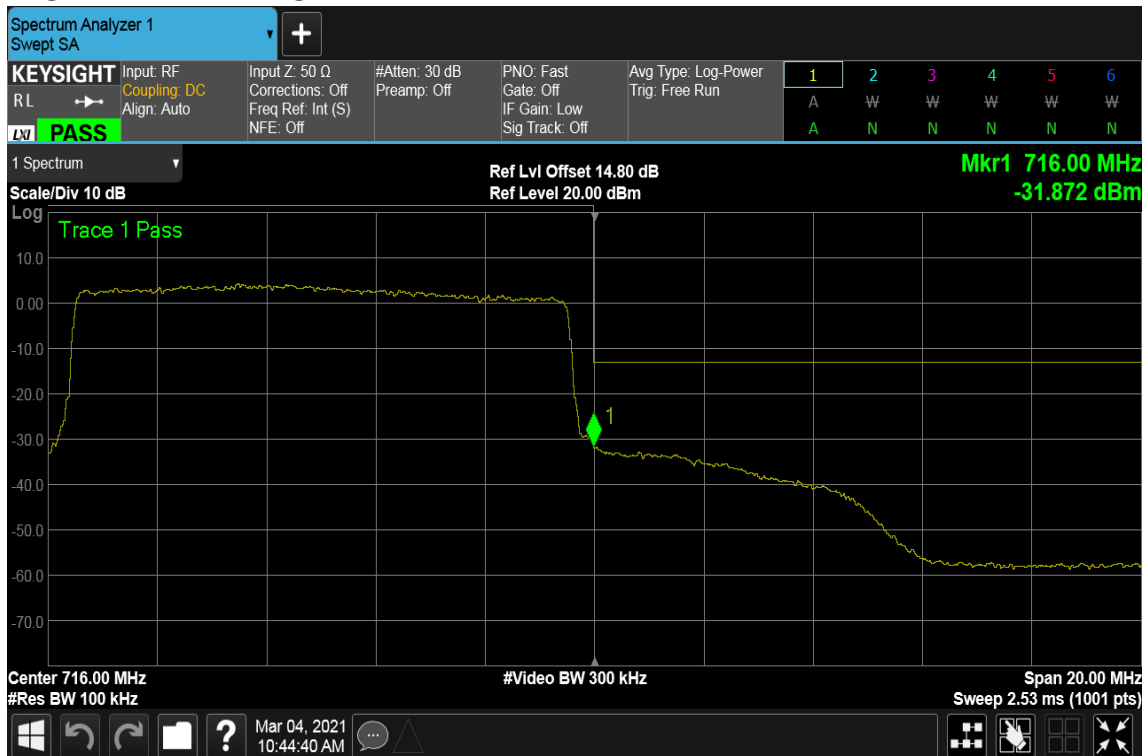
**CHANNEL BANDWIDTH: 5MHz / QPSK / RB =25, RB Offset = 0**  
**LOWER BAND EDGE****HIGHER BAND EDGE**



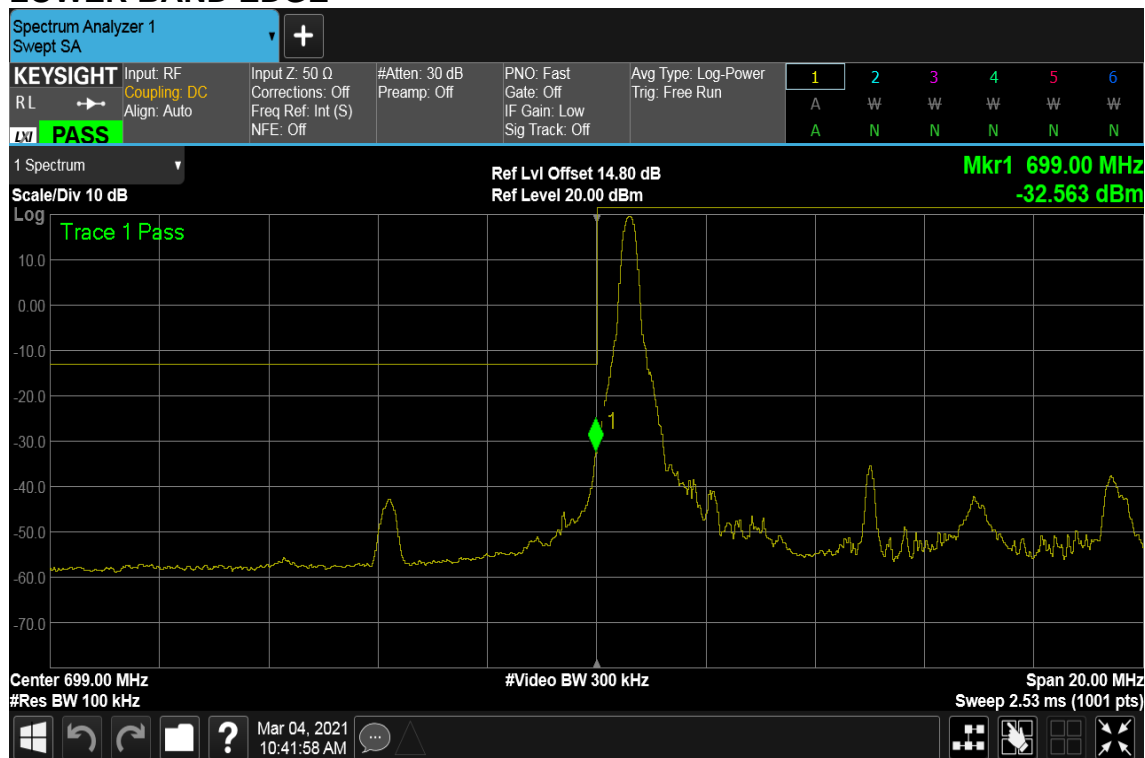
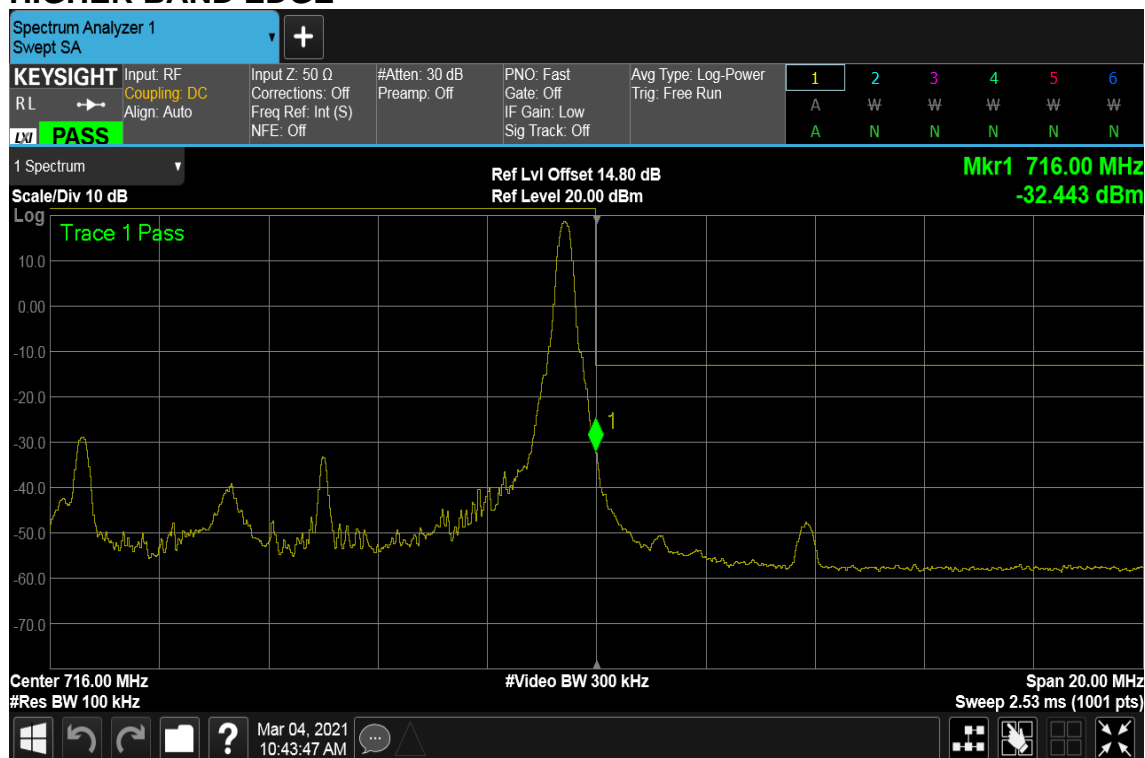
Report No.: T201102D09-RP11

**CHANNEL BANDWIDTH: 5MHz / QPSK / RB =1, RB Offset = 0**  
**LOWER BAND EDGE****CHANNEL BANDWIDTH: 5MHz / QPSK / RB =1, RB Offset = 24**  
**HIGHER BAND EDGE**

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

Report No.: T201102D09-RP11

**CHANNEL BANDWIDTH: 10MHz / QPSK / RB =1, RB Offset = 0**  
**LOWER BAND EDGE****CHANNEL BANDWIDTH: 10MHz / QPSK / RB =1, RB Offset = 49**  
**HIGHER BAND EDGE**

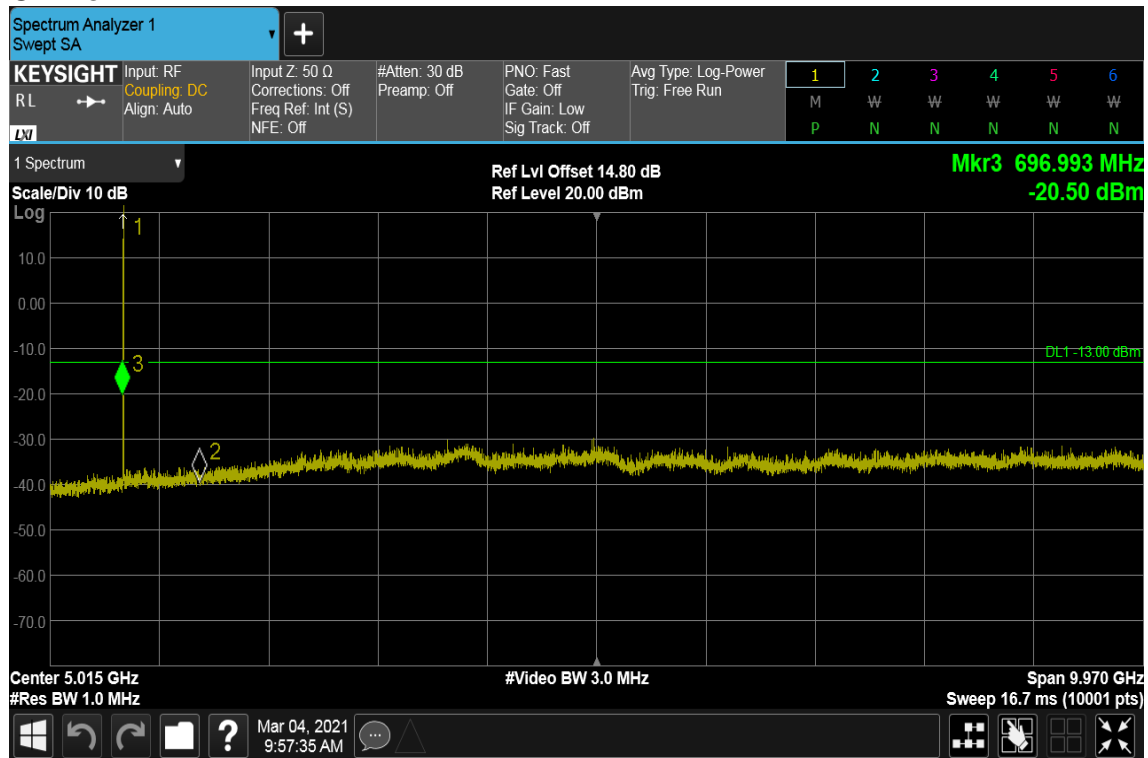
Report No.: T201102D09-RP11

## Spurious Emission

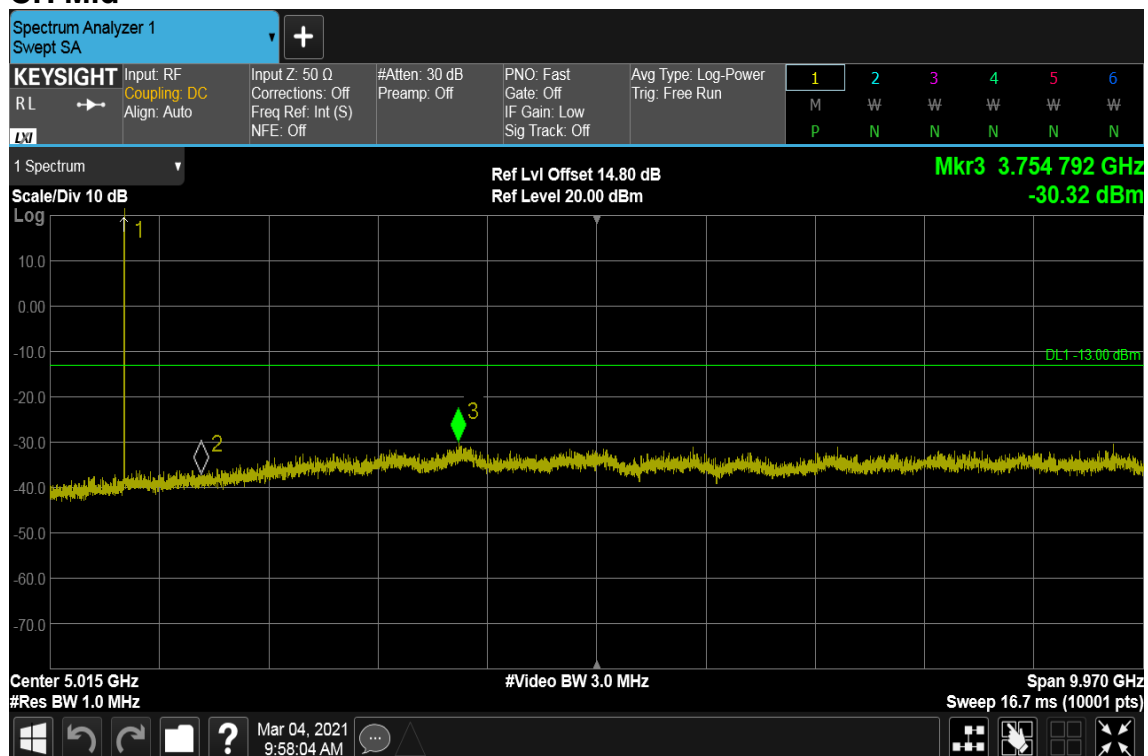
### LTE Band 12

CHANNEL BANDWIDTH: 1.4MHz / QPSK / RB =1, RB Offset = 0

### CH Low



### CH Mid



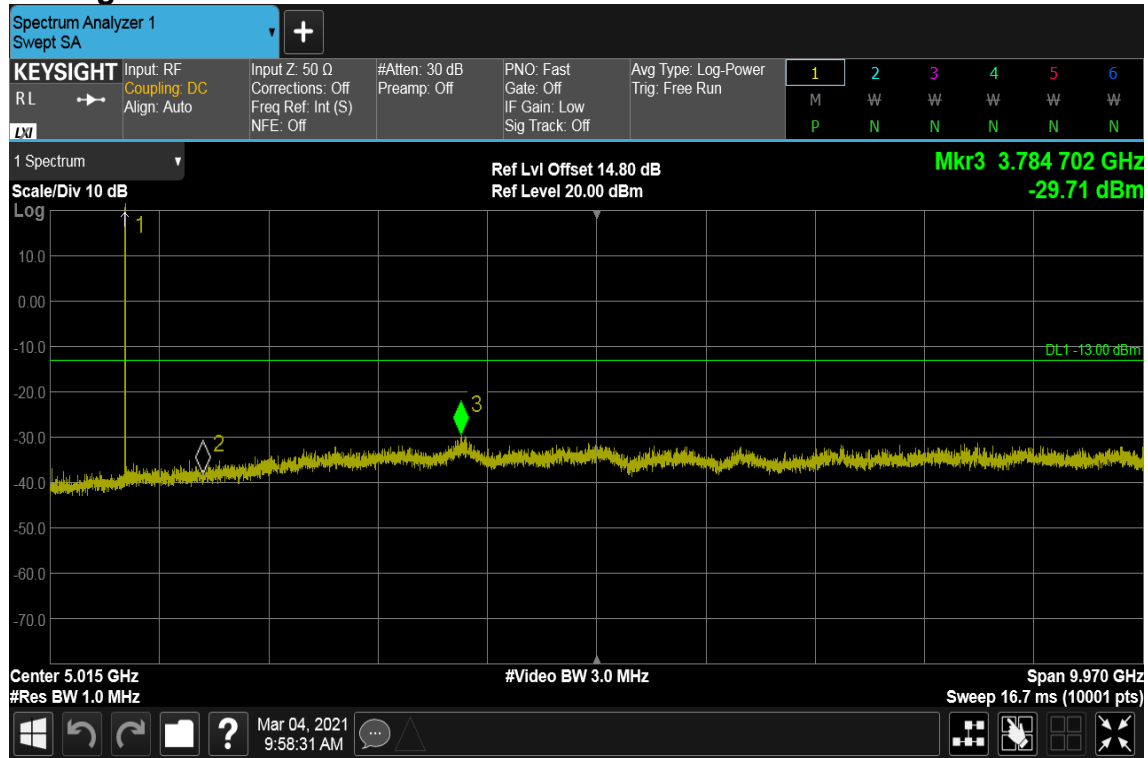


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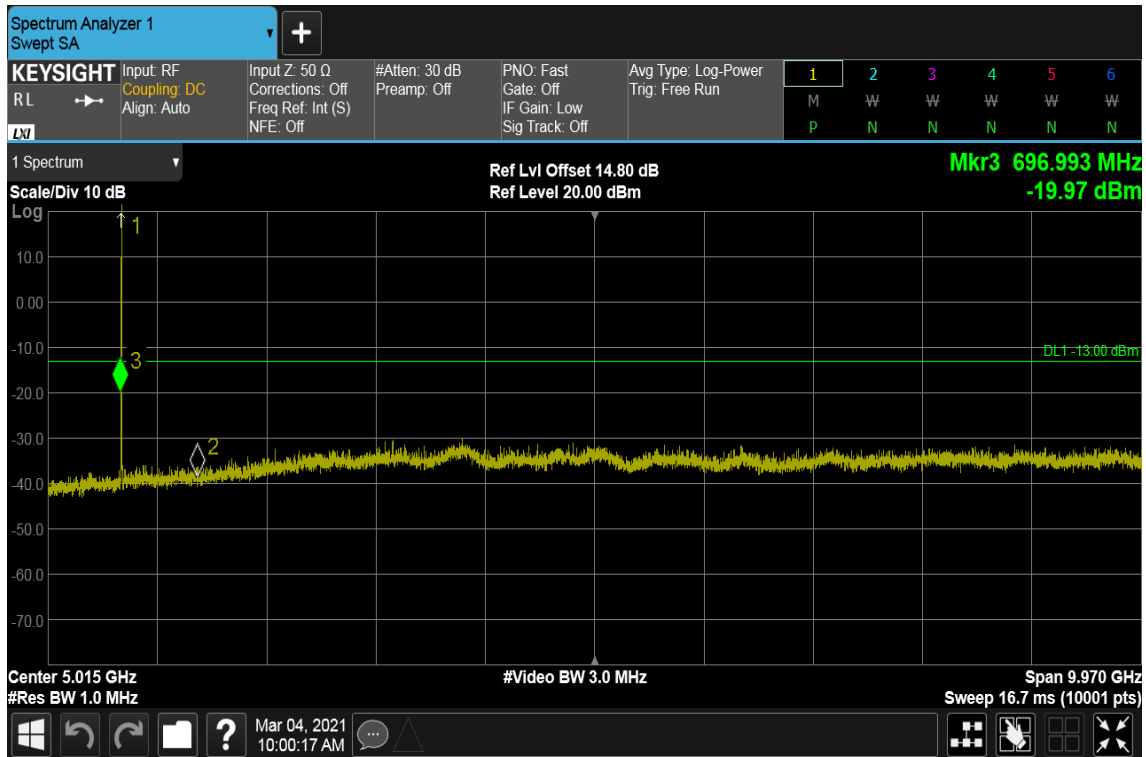
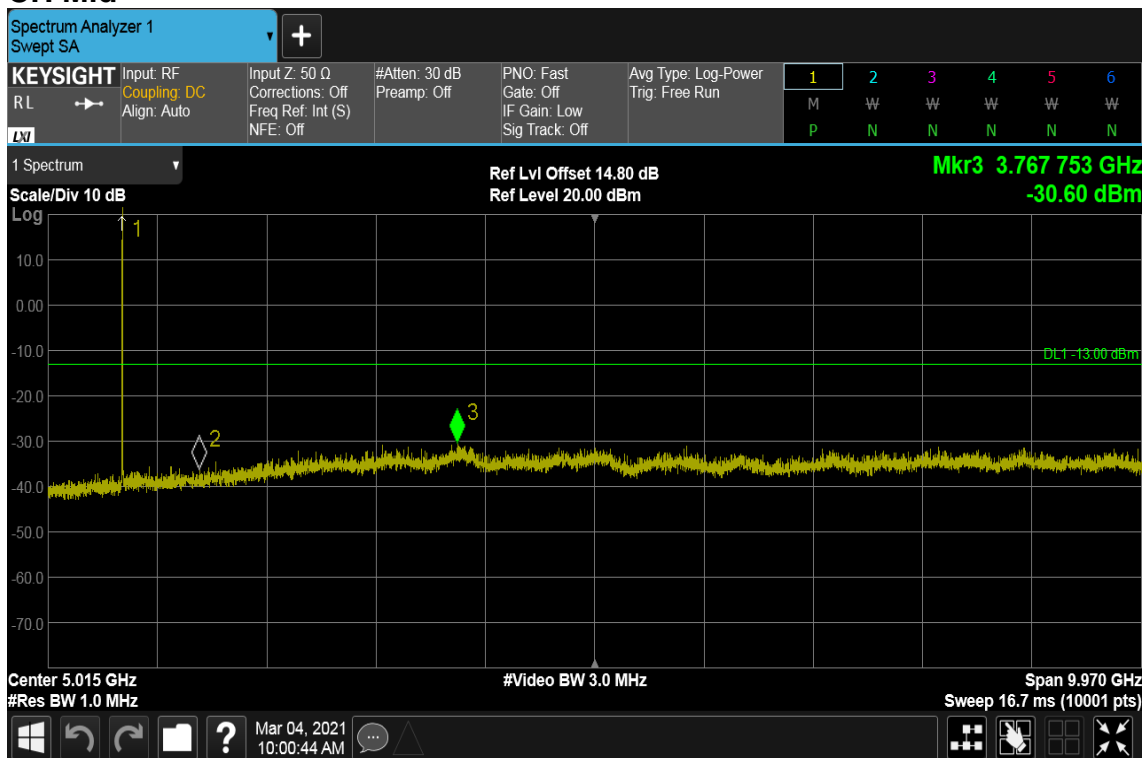
Rev.: 00

## CH High





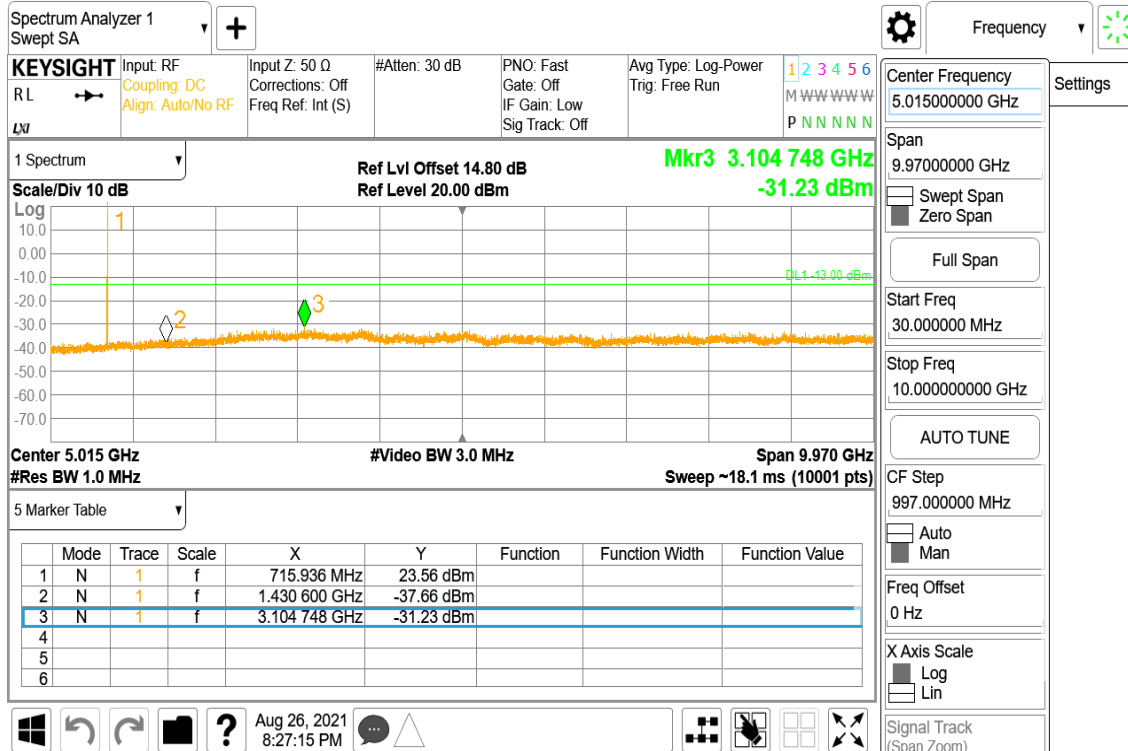
Report No.: T201102D09-RP11

**CHANNEL BANDWIDTH: 1.4MHz /QPSK / RB =6, RB Offset = 0**  
**CH Low****CH Mid**



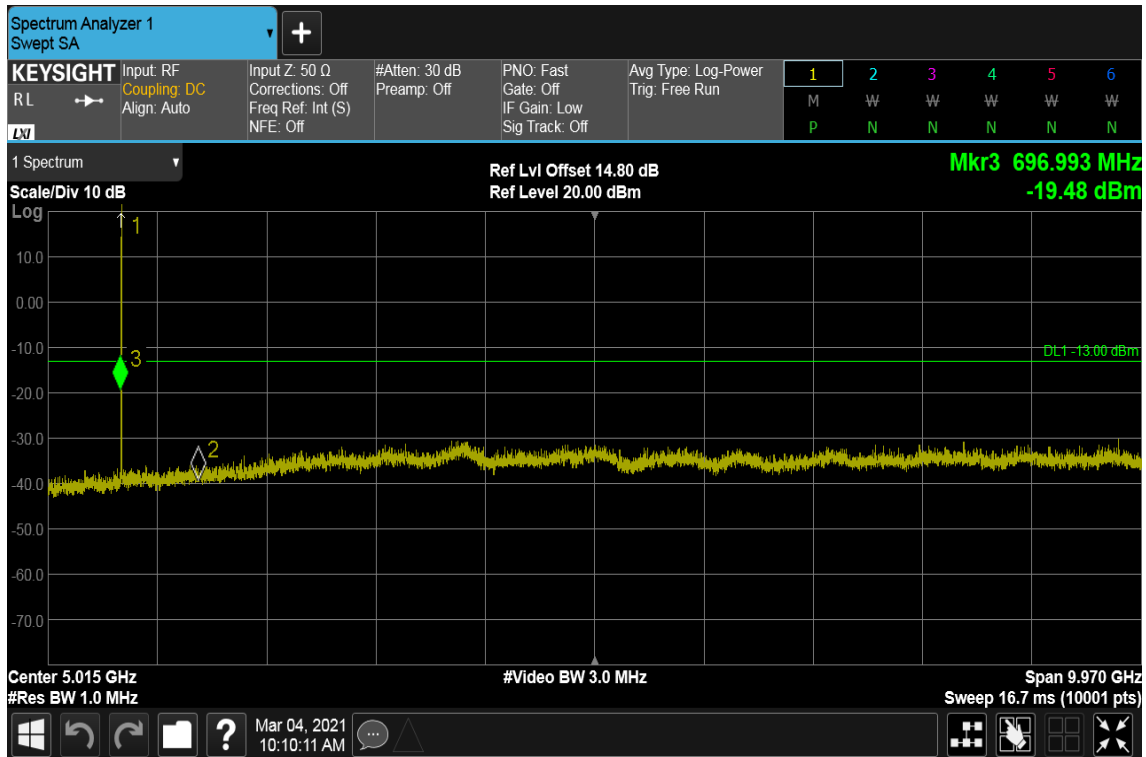
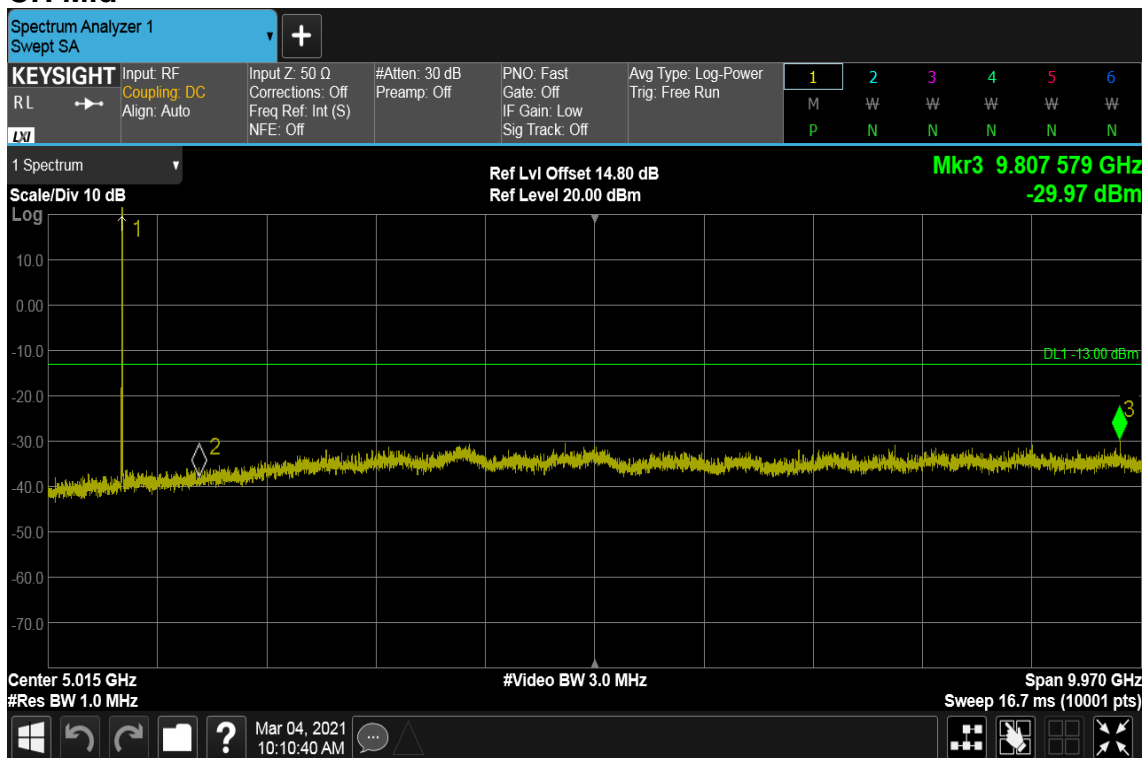
Report No.: T201102D09-RP11

## CH High





Report No.: T201102D09-RP11

**CHANNEL BANDWIDTH: 3MHz /QPSK / RB =1, RB Offset = 0**  
**CH Low****CH Mid**



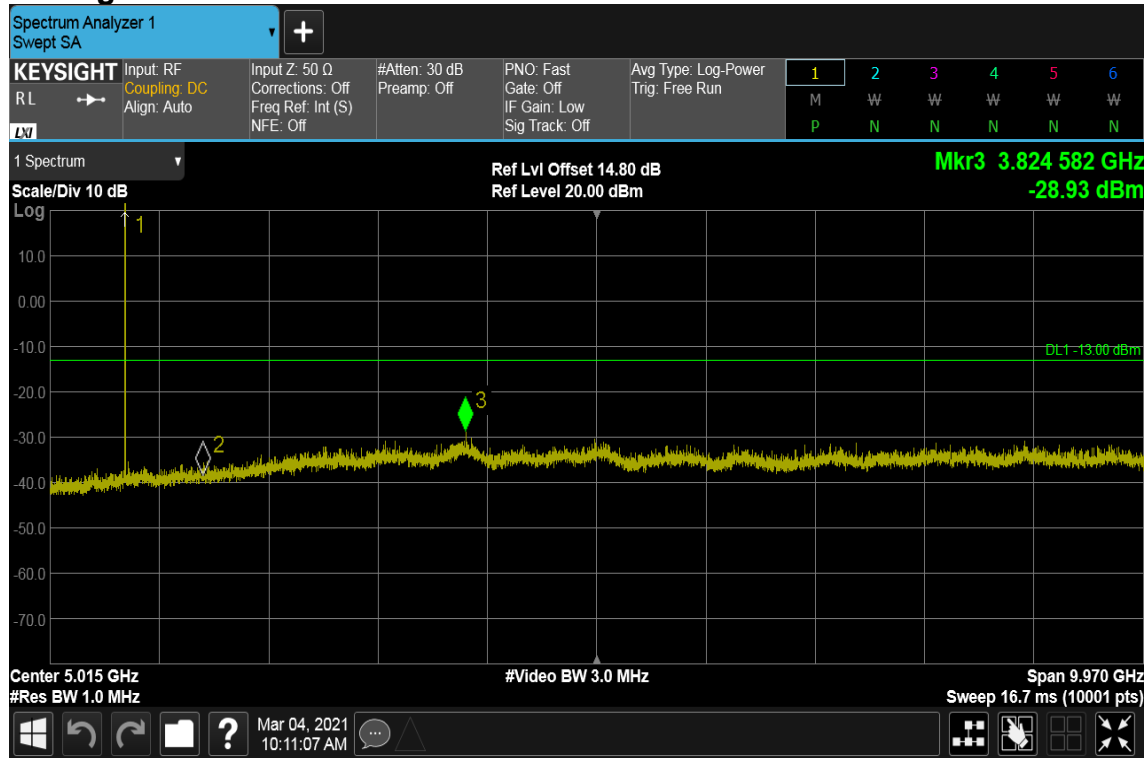


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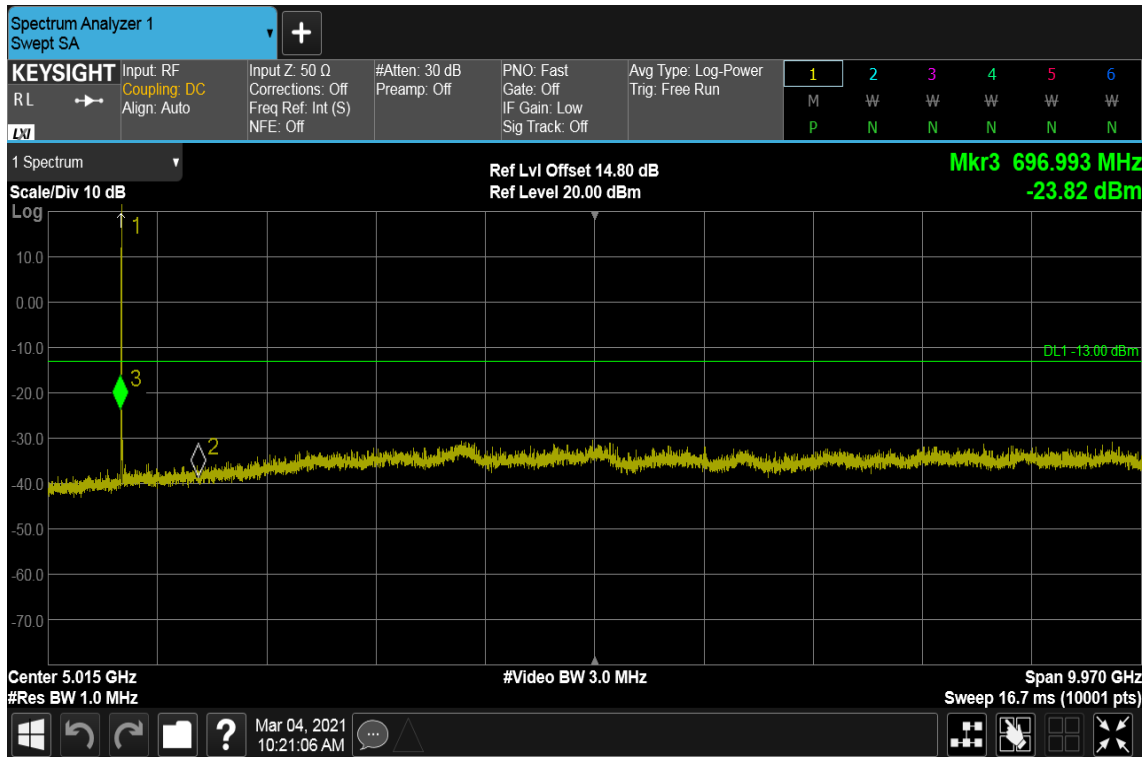
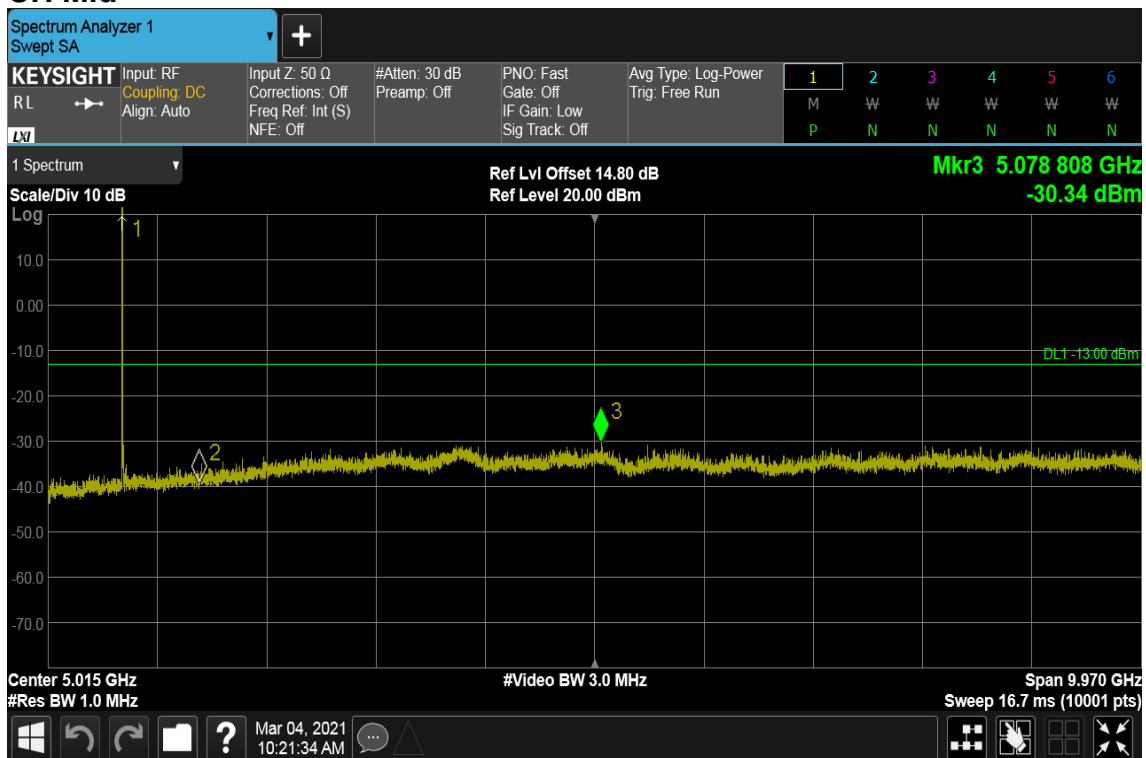
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## CH High





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**CHANNEL BANDWIDTH: 5MHz /QPSK / RB =1, RB Offset = 0**  
**CH Low****CH Mid**

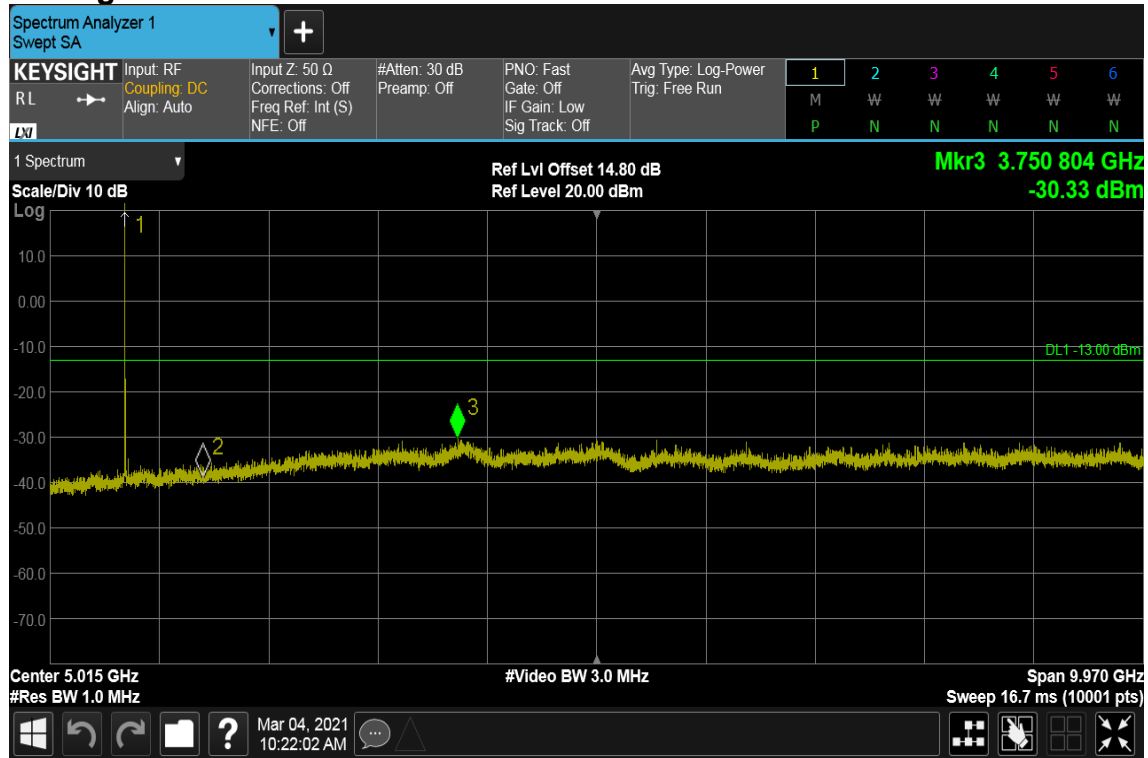


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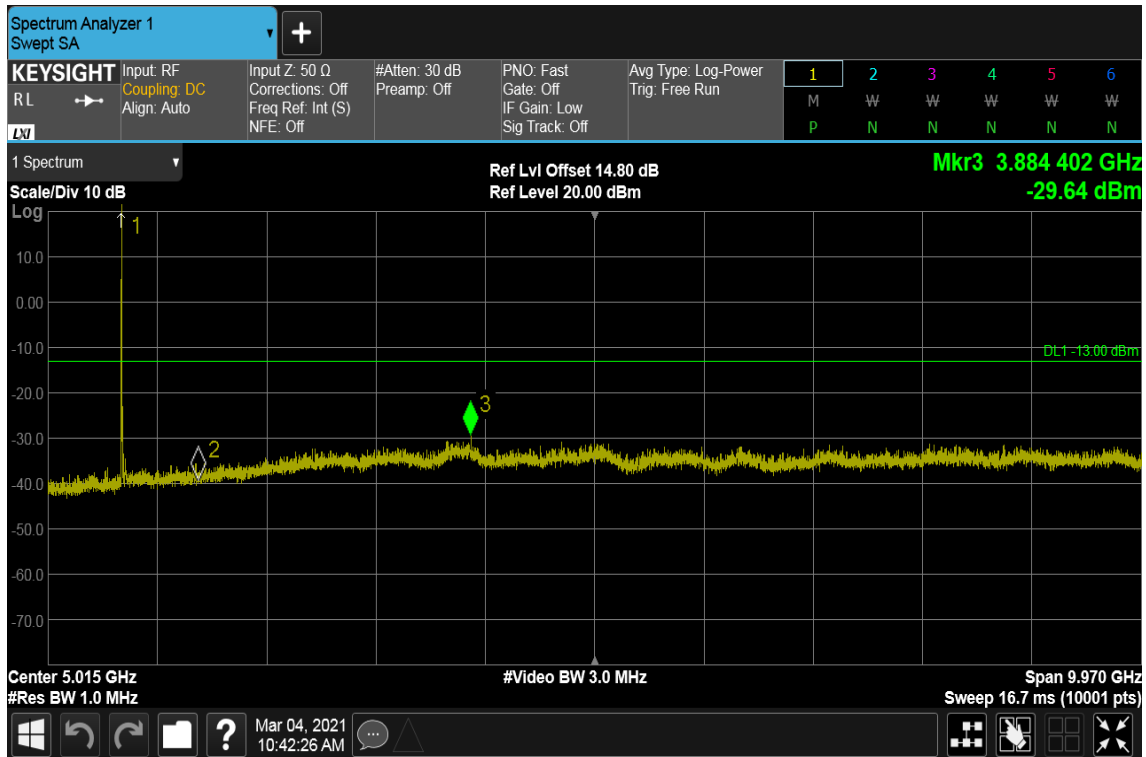
## CH High



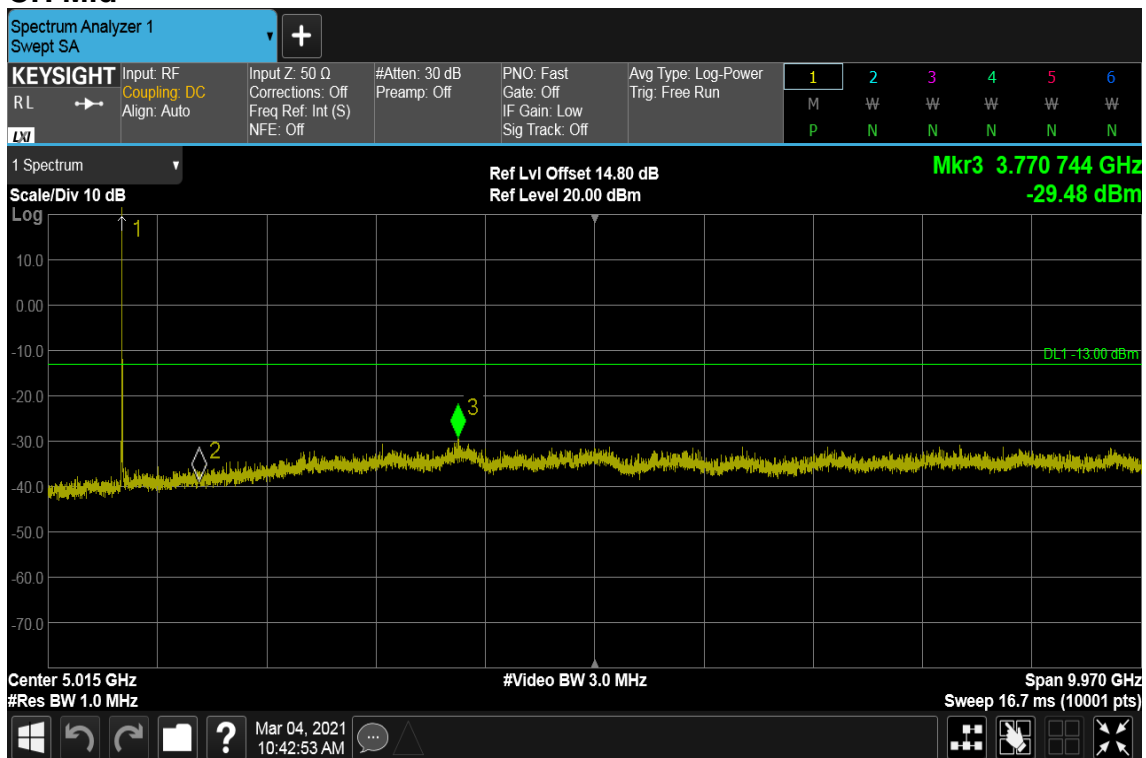
Report No.: T201102D09-RP11

## CHANNEL BANDWIDTH: 10MHz /QPSK / RB =1, RB Offset = 0

### CH Low



### CH Mid



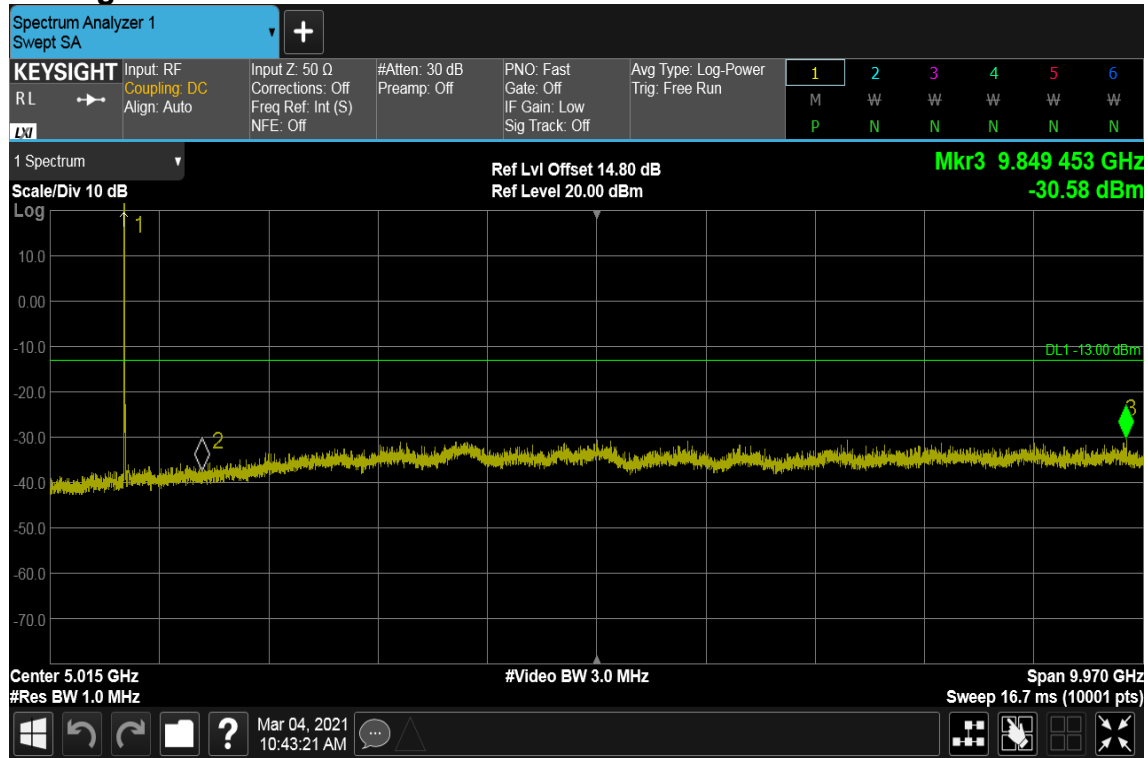


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## CH High



## 8.6 RADIATED EMISSION MEASUREMENT

### LIMITS

#### **FCC §27.53(g), Band 12**

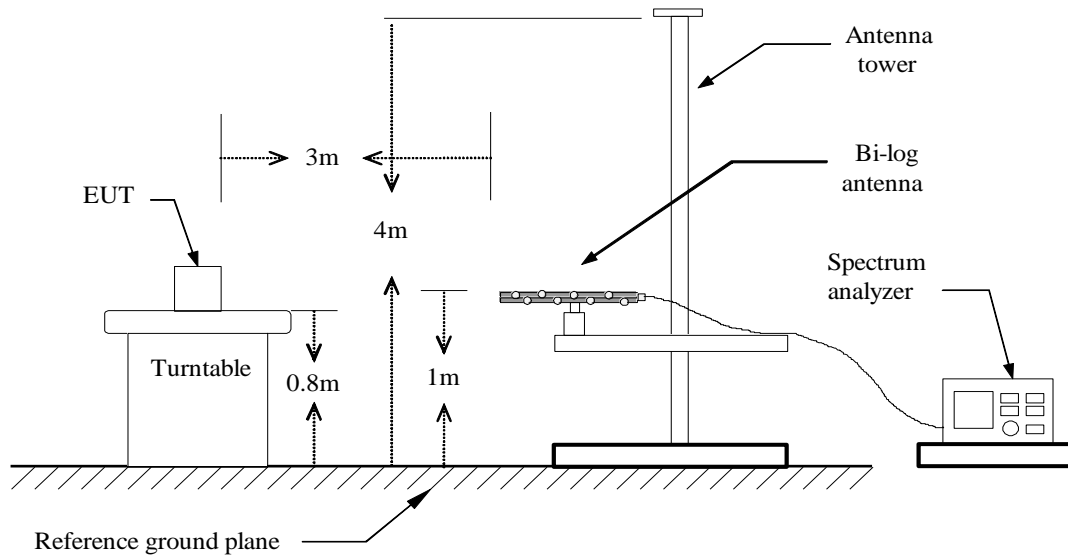
(g) For operations in the 600 MHz band and the 698-746 MHz band, the power of any emission outside a licensee's frequency band(s) of operation shall be attenuated below the transmitter power (P) within the licensed band(s) of operation, measured in watts, by at least  $43 + 10 \log (P)$  dB. Compliance with this provision is based on the use of measurement instrumentation employing a resolution bandwidth of 100 kilohertz or greater. However, in the 100 kilohertz bands immediately outside and adjacent to a licensee's frequency block, a resolution bandwidth of at least 30 kHz may be employed.

#### **According to RSS-130, Band 12**

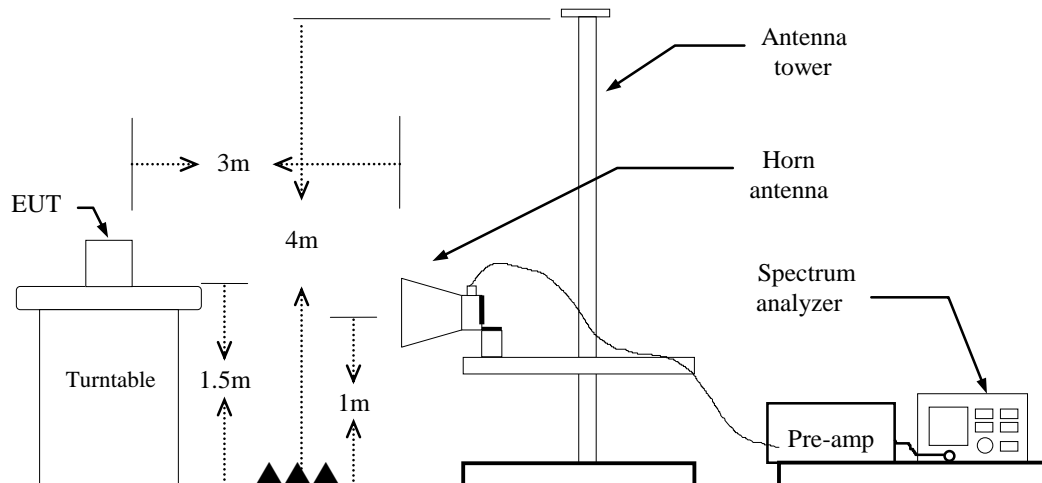
The power of any unwanted emissions in any 100 kHz bandwidth on any frequency outside the frequency range(s) within which the equipment is designed to operate shall be attenuated below the transmitter power, P (dBW), by at least  $43 + 10 \log_{10} p$  (watts), dB. However, in the 100 kHz band immediately outside the equipment's operating frequency range, a resolution bandwidth of 30 kHz may be employed.

## Test Configuration

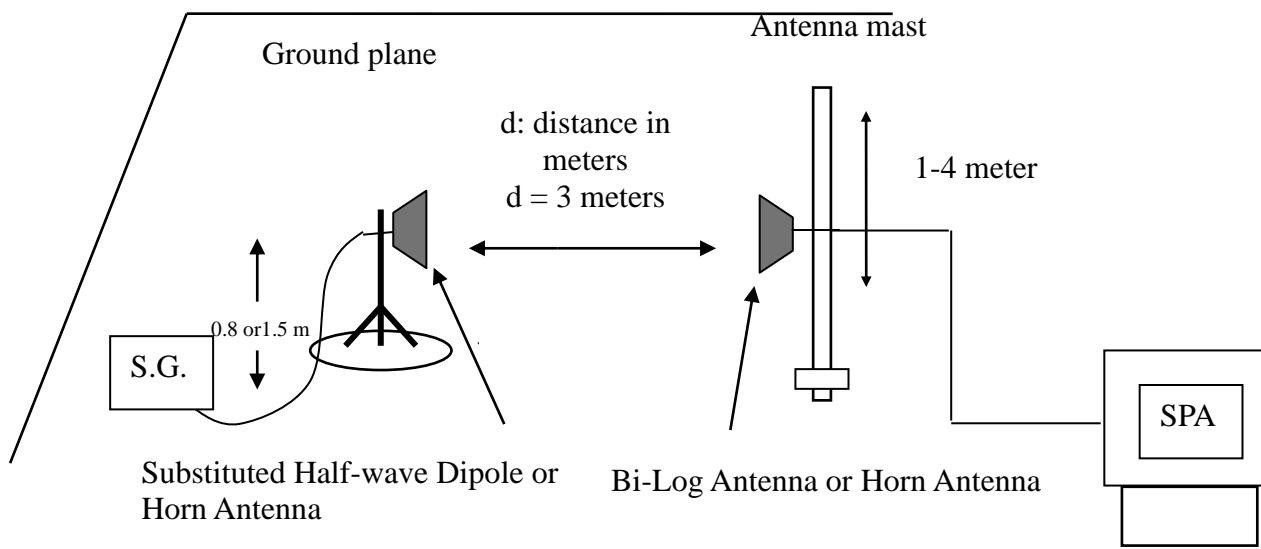
### **Below 1 GHz**



### **Above 1 GHz**



## Substituted Method Test Set-up



## TEST PROCEDURES

1. According to KDB 971168 D01 and ANSI C63.26.
2. The EUT was placed on a turntable
  - (1) Below 1G : 0.8m
  - (2) Above 1G : 1.5m
  - (3) EUT set 3m from the receiving antenna
  - (4) The table was rotated 360 degrees of the highest spurious emission to determine the position.
3. Set the spectrum analyzer , RBW=1MHz, VBW=3MHz.
4. A horn antenna was driven by a signal generator.
5. Tune the output power of signal generator to the same emission level with EUT maximum spurious emission.





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**Test Results****LTE Band 12 / BW: 10MHz / QPSK / RB =1, RB Offset = 0****Operation Mode:** Tx / Low CH**Test Date:**

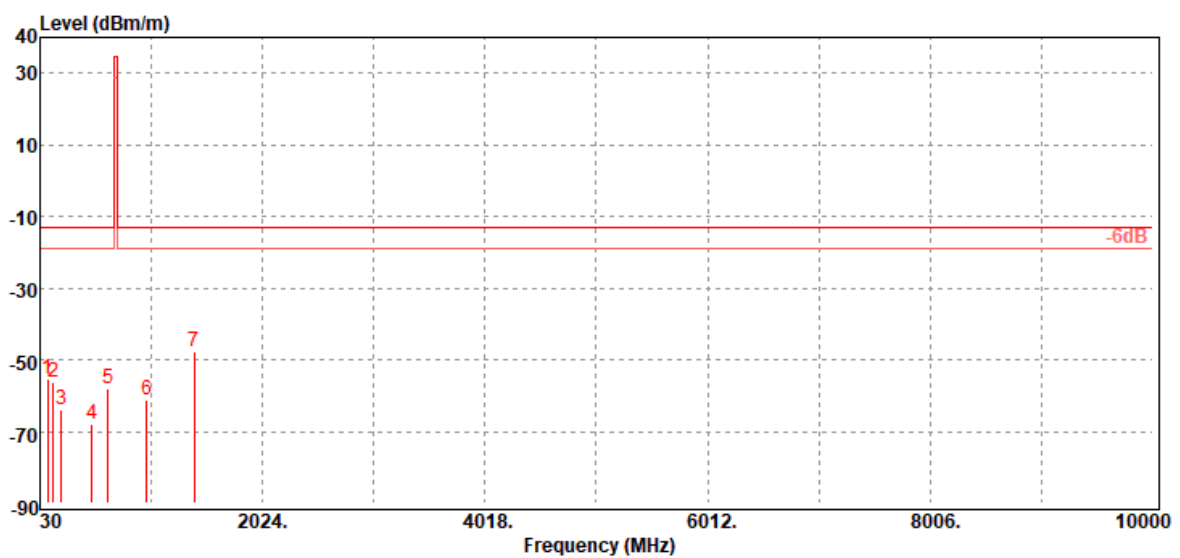
December 15, 2020

**Temperature:** 21.5°C**Tested by:**

Jerry Chang

**Humidity:** 60% RH**Polarity:**

Ver.



Freq. MHz	ERP/EIRP dBm	SG Output Level dBm	Antenna Gain dBd/dBi	Cable Loss dB	Limit dBm	Margin dB	Antenna Polarization (V/H)
94.99	-55.26	-47.16	-7.30	-0.80	-13.00	-42.26	V
152.22	-56.29	-48.42	-6.86	-1.01	-13.00	-43.29	V
219.15	-64.10	-60.86	-2.02	-1.22	-13.00	-51.10	V
497.54	-68.15	-64.29	-2.00	-1.86	-13.00	-55.15	V
636.25	-58.01	-54.18	-1.70	-2.13	-13.00	-45.01	V
985.45	-61.07	-57.01	-1.40	-2.66	-13.00	-48.07	V
1408.00	-47.64	-52.44	8.05	-3.25	-13.00	-34.64	V

**Operation Mode:** Tx / Low CH

**Test Date:**

December 15, 2020

**Temperature:** 21.5°C

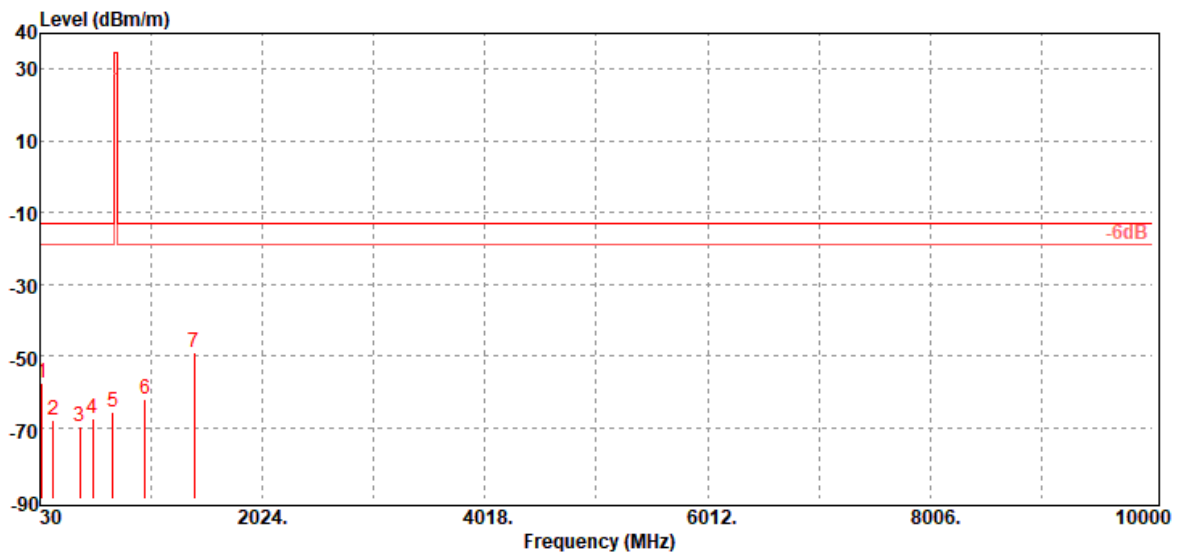
**Tested by:**

Jerry Chang

**Humidity:** 60% RH

**Polarity:**

Hor.



Freq. MHz	ERP/EIRP dBm	SG Output Level dBm	Antenna Gain dBd/dBi	Cable Loss dB	Limit dBm	Margin dB	Antenna Polarization (V/H)
44.55	-57.64	-41.24	-15.86	-0.54	-13.00	-44.64	H
151.25	-68.02	-59.96	-7.05	-1.01	-13.00	-55.02	H
385.99	-69.71	-66.68	-1.40	-1.63	-13.00	-56.71	H
500.45	-67.56	-63.70	-1.99	-1.87	-13.00	-54.56	H
679.90	-65.62	-62.12	-1.30	-2.20	-13.00	-52.62	H
970.90	-62.14	-58.18	-1.32	-2.64	-13.00	-49.14	H
1408.00	-49.10	-53.90	8.05	-3.25	-13.00	-36.10	H



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**Operation Mode:** Tx / Mid CH

**Test Date:**

December 15, 2020

**Temperature:** 21.5°C

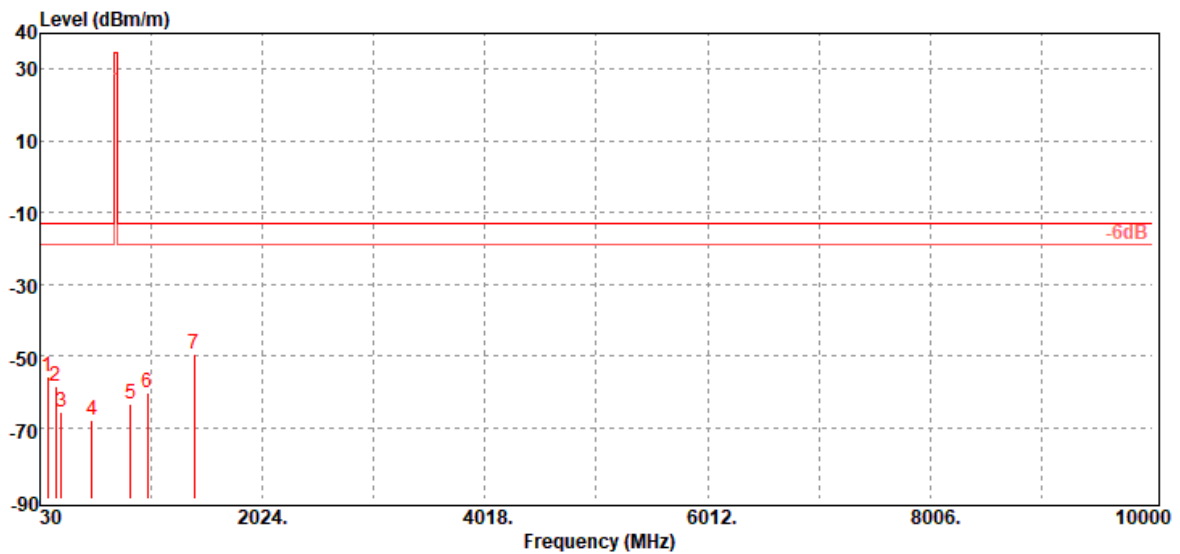
**Tested by:**

Jerry Chang

**Humidity:** 60% RH

**Polarity:**

Ver.



Freq. MHz	ERP/EIRP dBm	SG Output Level dBm	Antenna Gain dBd/dBi	Cable Loss dB	Limit dBm	Margin dB	Antenna Polarization (V/H)
94.99	-55.79	-47.69	-7.30	-0.80	-13.00	-42.79	V
172.59	-58.46	-52.24	-5.14	-1.08	-13.00	-45.46	V
219.15	-65.76	-62.52	-2.02	-1.22	-13.00	-52.76	V
492.69	-67.96	-64.02	-2.09	-1.85	-13.00	-54.96	V
844.80	-63.68	-59.83	-1.40	-2.45	-13.00	-50.68	V
993.21	-60.50	-56.43	-1.40	-2.67	-13.00	-47.50	V
1415.00	-49.61	-54.45	8.09	-3.25	-13.00	-36.61	V



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**Operation Mode:** Tx / Mid CH

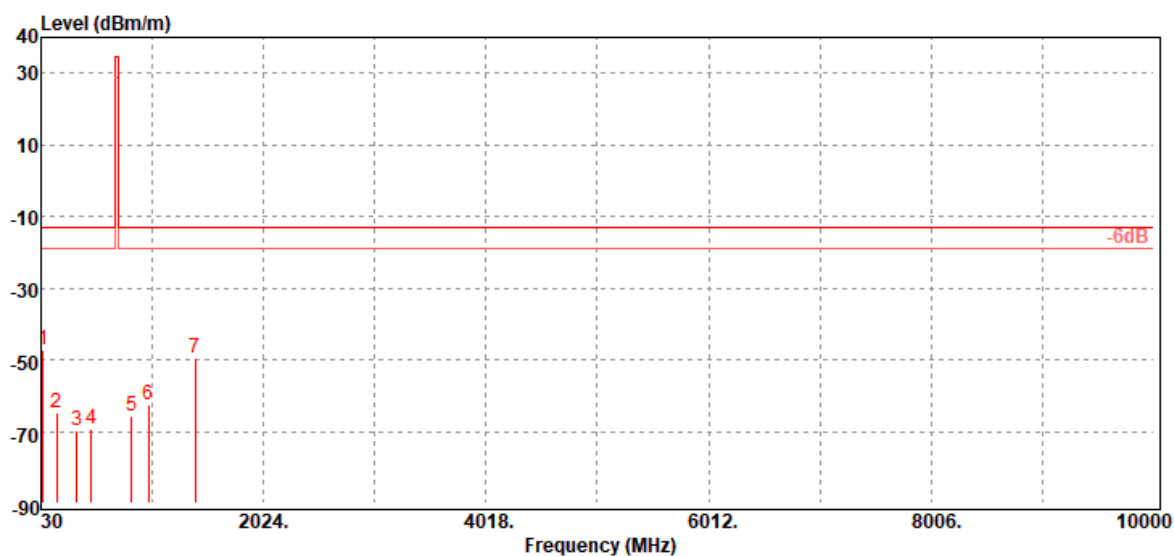
**Test Date:** December 15, 2020

**Temperature:** 21.5°C

**Tested by:** Jerry Chang

**Humidity:** 60% RH

**Polarity:** Hor.



Freq. MHz	ERP/EIRP dBm	SG Output Level dBm	Antenna Gain dBd/dBi	Cable Loss dB	Limit dBm	Margin dB	Antenna Polarization (V/H)
44.55	-47.38	-30.98	-15.86	-0.54	-13.00	-34.38	H
172.59	-64.72	-58.50	-5.14	-1.08	-13.00	-51.72	H
348.16	-69.61	-66.57	-1.50	-1.54	-13.00	-56.61	H
478.14	-69.27	-65.05	-2.40	-1.82	-13.00	-56.27	H
838.01	-65.56	-61.68	-1.44	-2.44	-13.00	-52.56	H
990.30	-62.66	-58.60	-1.40	-2.66	-13.00	-49.66	H
1415.00	-49.65	-54.49	8.09	-3.25	-13.00	-36.65	H

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**Operation Mode:** Tx / High CH

**Test Date:**

December 15, 2020

**Temperature:** 21.5°C

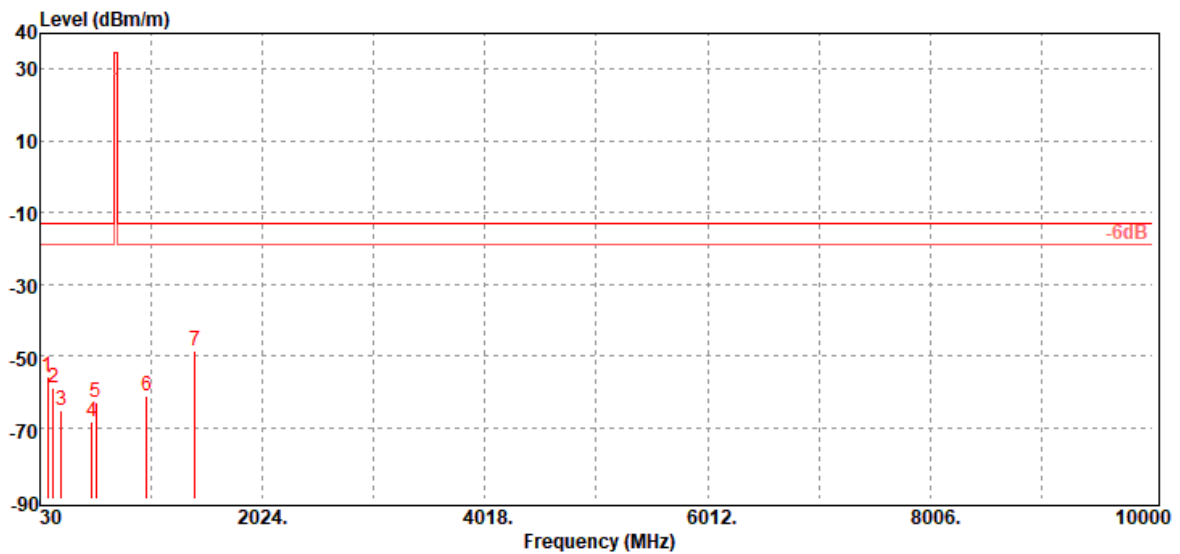
**Tested by:**

Jerry Chang

**Humidity:** 60% RH

**Polarity:**

Ver.



Freq. MHz	ERP/EIRP dBm	SG Output Level dBm	Antenna Gain dBd/dBi	Cable Loss dB	Limit dBm	Margin dB	Antenna Polarization (V/H)
94.99	-56.01	-47.91	-7.30	-0.80	-13.00	-43.01	V
151.25	-59.19	-51.13	-7.05	-1.01	-13.00	-46.19	V
219.15	-65.18	-61.94	-2.02	-1.22	-13.00	-52.18	V
497.54	-68.25	-64.39	-2.00	-1.86	-13.00	-55.25	V
529.55	-63.06	-59.84	-1.30	-1.92	-13.00	-50.06	V
985.45	-61.26	-57.20	-1.40	-2.66	-13.00	-48.26	V
1422.00	-48.59	-53.46	8.13	-3.26	-13.00	-35.59	V



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**Operation Mode:** Tx / High CH

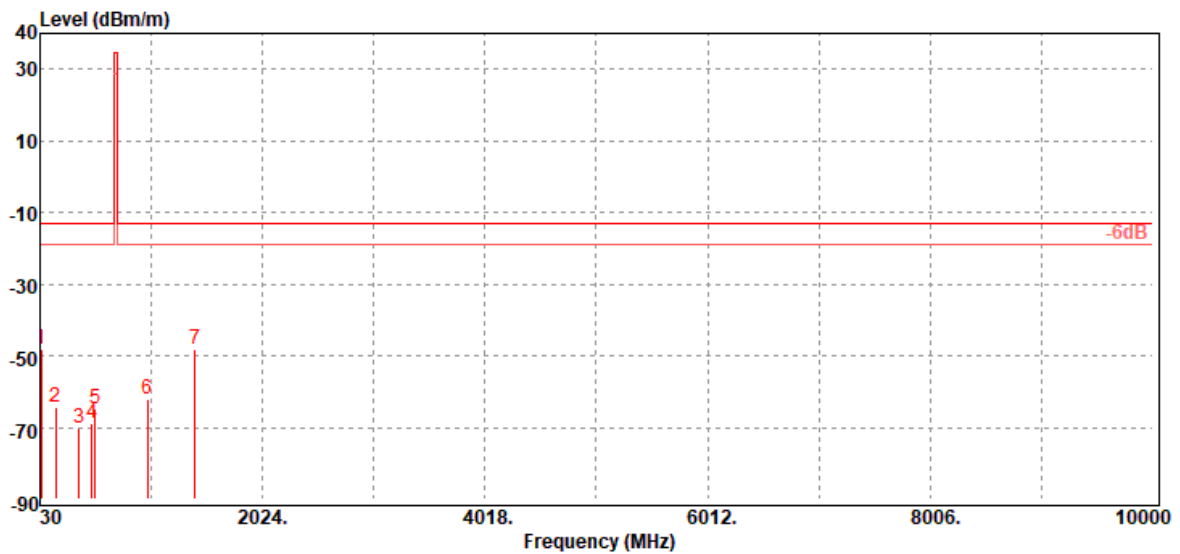
**Test Date:** December 15, 2020

**Temperature:** 21.5°C

**Tested by:** Jerry Chang

**Humidity:** 60% RH

**Polarity:** Hor.



Freq. MHz	ERP/EIRP dBm	SG Output Level dBm	Antenna Gain dBd/dBi	Cable Loss dB	Limit dBm	Margin dB	Antenna Polarization (V/H)
41.64	-48.34	-29.20	-18.62	-0.52	-13.00	-35.34	H
172.59	-64.58	-58.36	-5.14	-1.08	-13.00	-51.58	H
376.29	-70.29	-67.03	-1.65	-1.61	-13.00	-57.29	H
498.51	-68.98	-65.11	-2.00	-1.87	-13.00	-55.98	H
527.61	-64.91	-61.69	-1.30	-1.92	-13.00	-51.91	H
990.30	-61.90	-57.84	-1.40	-2.66	-13.00	-48.90	H
1422.00	-48.30	-53.17	8.13	-3.26	-13.00	-35.30	H

- End of Test Report -