FCC Test Report

Product Name	:	Tri-band - 5G Business Internet Receiver
Brand Name	:	Verizon
Model No.	:	LV65
FCC ID	:	NKR-LVSK-65
Applicant	:	Wistron NeWeb Corporation
Address	:	20 Park Avenue II, Hsinchu Science Park, Hsinchu 308, Taiwan
Date of Receipt	:	Mar. 09, 2022
Issued Date	:	Oct. 13, 2022
Report No.	:	2280830R-RFUSWWAV06-A
Report Version	:	V1.0

The test results relate only to the samples tested.
The test results shown in the test report are traceable to the national/international standard through the calibration of the equipment and evaluated measurement uncertainty herein.
This report must not be used to claim product endorsement by TAF or any agency of the government.
Measurement uncertainties evaluated for each testing system and associated connections are given here to provide the system information for reference. Compliance determinations do not take into account measurement uncertainties for each testing system, but are based on the results of the compliance measurement.

Product Name	:	Tri-band - 5G Business Internet Receiver
Applicant	:	Wistron NeWeb Corporation
Address	:	20 Park Avenue II, Hsinchu Science Park, Hsinchu 308, Taiwan
Manufacturer	:	Wistron NeWeb Corporation
Address	:	20 Park Avenue II, Hsinchu Science Park, Hsinchu 308, Taiwan
Brand Name	:	Verizon
Model No.	:	LV65
FCC ID	:	NKR-LVSK-65
EUT Voltage	:	AC 100-120V / 50-60Hz
Testing Voltage	:	AC 120V/60Hz
Applicable Standard	:	47 CFR FCC Part 96
Test Result	:	Complied

Documented By : Jinn Chen

(Supervisor / Jinn Chen)

Approved By : Tim Sung

(Manager / Tim Sung)

The test results relate only to the samples tested.

The test report shall not be reproduced except in full without the written approval of DEKRA Testing and Certification Co., Ltd.

Revision History

Report No.	Version	Description	Issued Date
2280830R-RFUSWWAV06-A	V1.0	Initial issue of report.	Oct. 13, 2022

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1. General Information

1.1. EUT Description

Product Name	Tri-band - 5G Business Internet Receiver		
Brand Name	Verizon		
Model No.	LV65		
Frequency Range	LTE Band 48	3550 ~ 3700 MHz (Uplink) 3550 ~ 3700 MHz (Downlink)	
	5G NR n48	3550 ~ 3700 MHz (Uplink) 3550 ~ 3700 MHz (Downlink)	
Bandwidth	LTE Band 48	5 / 10 / 15 / 20 MHz	
	5G NR n48	SCS: 30 kHz	10 / 20 / 30 / 40 MHz
Type of Modulation	LTE Band 48	QPSK / 16QAM / 64QAM / 256QAM	
	5G NR n48	pi/2 BPSK / QPSK / 16QAM / 64QAM / 256QAM	
Maximum RF Output Power	LTE Band 48	19.96 dBm	
	5G NR n48	19.99 dBm	
Hardware Version	0.0.5		
Software Version	0.2.10.1		
IMEI No.	35345010		

<For Model No.: LV65>

Accessories Information				
No.	Equipment Name	Brand Name	Model No.	Rating
1	PoE Adapter	DELTA	ADH-65BR H	INPUT: AC 100-1200V, 50-60Hz, 2.0A OUTPUT: DC 56.0V, 1.161A, 65.02W
No.	Equipment Name	Brand Name	Description	Remark
2	RJ-45 Cable	WNC	Non-Shielded, 4.5m	Installed in the EUT
3	RJ-45 Cable	WNC	Non-Shielded, 3m	-
4	Cable adapter	WNC	-	-

Antenna Information					
Ant.	Brand Name	Model No.	Type	Band	Gain (dBi)
0	WNC	LV65-LTE/FR1-0	PIFA	LTE Band 48 5G NR n48	3
1	WNC	LV65-LTE/FR1-1	Monopole		
2	WNC	LV65-LTE/FR1-2	PIFA		
3	WNC	LV65-LTE/FR1-3	Monopole		

For SA mode:

Band	ANT0		ANT1		ANT2		ANT3	
	TX	RX	TX	RX	TX	RX	TX	RX
LTE Band 48	-	V	-	V	-	V	V	V
5G NR n48	-	V	-	V	-	V	V	V

For NSA mode:

Configuration	Band	ANT0		ANT1		ANT2		ANT3	
		TX	RX	TX	RX	TX	RX	TX	RX
LTE(LB) + 5G NR n48	LTE(LB)	V	V	-	V	-	V	-	V
	5G NR n48	-	V	-	V	-	V	V	V
LTE(MB) + 5G NR n48	LTE(MB)	-	V	V	V	-	V	-	V
	5G NR n48	-	V	-	V	-	V	V	V
LTE(CB) + 5G NR n48	LTE(CB)	-	V	-	V	-	V	V	V
	5G NR n48	-	V	-	V	V	V	-	V

Note:

1. The EUT description is from the customer declaration.
2. LB: Low-Band, means LTE B5/B13
3. MB: Mid-Band, means LTE B2/B66
4. CB: C-Band, means LTE B48

1.2. Mode of Operation

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

Test Mode	Mode 1: LTE Band 48 Mode 2: 5G NR n48

Note:

1. Determining compliance shall be based on the results of the compliance measurement, not taking into account measurement instrumentation uncertainty.
2. Regarding frequency band operation, the lowest, middle and highest frequency of channel were selected to perform the test, and the details were shown on this report.
3. The device was tested under all configurations, combinations, bandwidths, RB configurations and modulations, and the worst case was found in QPSK modulation for LTE and SA mode pi/2 BPSK modulation for 5G NR, therefore the “Conducted Band Edge” & “Spurious Emission” test items perform QPSK modulation for LTE and SA mode pi/2 BPSK modulation for 5G NR in this report.
4. For 5G NR, “Peak to Average Ratio” test item shown worst case modulation pi/2 BPSK, QPSK and 16QAM on this report.
5. The product both supports the standalone and inter-carrier aggregation mode. After evaluation and comparison, the worst case is investigated in the standalone mode. Therefore, there is only displayed the test result for standalone mode in the test report.
6. The difference compared to the DEKRA Project No.: 2230313R (FCC ID: NKR-LVSK-65) is the change in SIM type, sets of LED, appearance, and size; these two devices are identical in RF hardware design, layout, circuit and antenna. After evaluation, it verified the simultaneous transmit RSE testing and the characteristics are similar to the original model, so other data references DEKRA Project No.: 2230313R (FCC ID: NKR-LVSK-65).

1.3. Comments and Remarks

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

1.4. Tested System Details

The types for all equipment, plus descriptions of all cables used in the tested system.

Mode 1: LTE Band 48

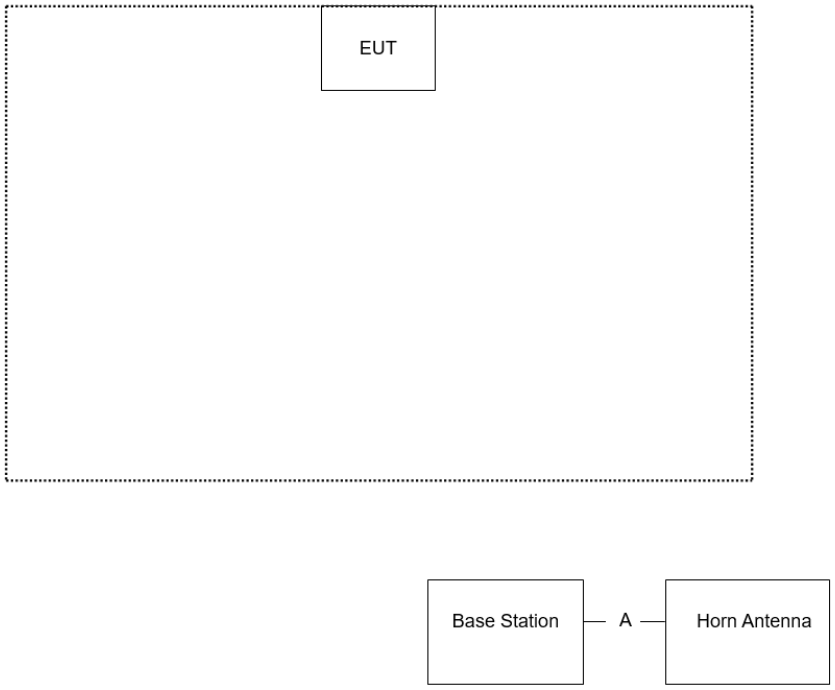
Product		Manufacturer	Model No.	Serial No.
1	Base Station	Anritsu	MT8820C	6201465467
2	Horn Antenna	Schwarzbeck	BBHA 9120D	1640

Mode 2: 5G NR n48

Product		Manufacturer	Model No.	Serial No.
1	Base Station	Keysight	E7515B	MY59321672
2	Horn Antenna	Schwarzbeck	BBHA 9120D	1640

1.5. Configuration of Tested System

Connection Diagram



Signal Cable Type		Signal cable Description
A	RF Cable	Shielded, 10m

1.6. EUT Operation of during Test

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

1.7. Test Environment

Ambient conditions in the laboratory:

Items	Test Item	Actually	Tested by	Test Date	Test Site
Temperature (°C)	RF Output Power	22 ~ 26	Daniel Wu	2022/04/14 ~ 2022/04/27	HY-SR03
Humidity (%RH)		60 ~ 69			
Temperature (°C)	Occupied Bandwidth	22 ~ 26	Daniel Wu	2022/04/11 ~ 2022/04/27	HY-SR03
Humidity (%RH)		60 ~ 69			
Temperature (°C)	Spurious Emission at Antenna Terminals	22 ~ 26	Daniel Wu	2022/04/26 ~ 2022/04/27	HY-SR03
Humidity (%RH)		60 ~ 69			
Temperature (°C)	Conducted Spurious Emission	22 ~ 26	Daniel Wu	2022/04/14 ~ 2022/04/28	HY-SR03
Humidity (%RH)		60 ~ 69			
Temperature (°C)	Radiated Spurious Emission	23	Daniel Wu	2022/04/26	HY-CB01
Humidity (%RH)		60			
Temperature (°C)	Frequency Stability	22 ~ 26	Daniel Wu	2022/04/14 ~ 2022/04/28	HY-SR03
Humidity (%RH)		60 ~ 69			
Temperature (°C)	Peak to Average Ratio	22 ~ 26	Daniel Wu	2022/04/06 ~ 2022/04/27	HY-SR03
Humidity (%RH)		60 ~ 69			

Note: Test site information refers to Laboratory Information.

Laboratory Information

USA	**:**	**FCC Registration Number: TW0033**
Canada		**CAB Identifier Number: TW3023 / Company Number: 26930**

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

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

Site Description	Accredited by TAF Accredited Number: 3023
Test Laboratory	DEKRA Testing and Certification Co., Ltd.
Address	No.5-22, Ruishukeng, Linkou Dist., New Taipei City 24451, Taiwan, R.O.C.
Performed Location	No. 26, Huaya 1st Rd., Guishan Dist.,Taoyuan City 333411, Taiwan, R.O.C.
Phone number	+886-3-275-7255
Fax number	+886-3-327-8031
E mail address	info.tw@dekra.com
Website	http://www.dekra.com.tw

1.8. List of Test Equipment

Instrument	Manufacturer	Model No.	Serial No.	Cal. Date	Next Cal. Date
Bi-Log Antenna	SCHWARZBECK	VULB9168	9168-0675	2021/08/11	2022/08/10
Horn Antenna	ETS-Lindgren	3117	00201259	2021/11/09	2022/11/08
Horn Antenna	Com-Power	AH-1840	101101	2021/11/30	2022/11/29
Pre-Amplifier	SGH	0301	20211007-7	2022/02/22	2023/02/21
Pre-Amplifier	EMCI	EMC051835SE	980312	2022/02/22	2023/02/21
Pre-Amplifier	SGH	PRAMP184	20200705	2021/08/11	2022/08/10
Coaxial Cable	EMCI	EMC102-KM-KM-600	160312	2022/02/16	2023/02/15
Coaxial Cable	HUBER+SUHNER	SUCOFLEX 102	MY3382/2	2022/02/16	2023/02/15
Spectrum Analyzer	R&S	FSV3044	101115	2022/01/10	2023/01/09
Coaxial Cable	SUHNER	SUCOFLEX 106	25450/6	2022/03/22	2023/03/21
Coaxial Cable	SGH	HA800	GD20110222-8	2022/03/22	2023/03/21
Coaxial Cable	SGH	SGH18	2021003-8	2022/03/22	2023/03/21
Coaxial Cable	EMCI	EMC106	151113	2022/03/22	2023/03/21
UXM 5G Wireless Test Platform	Keysight	E7515B	MY59321672	2021/05/26	2022/05/25
Universal Radio Communication Tester	Anritsu	MT8820C	6201465467	2021/08/13	2022/08/12
Temperature Chamber	KSON	THS-D4T-100	A0606	2021/08/24	2022/08/23
Radiated Software	AUDIX	e3 V9	N/A	N/A	N/A

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

1.9. Measurement Uncertainty

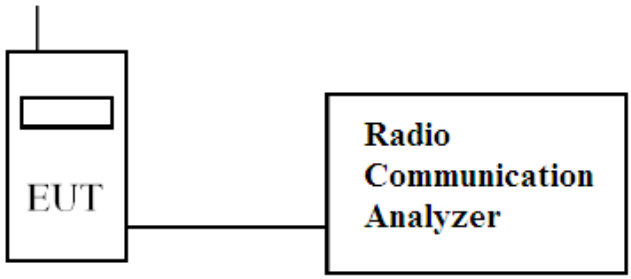
Uncertainties have been calculated according to the DEKRA internal document with the emissions test results be included in the report. The measurement uncertainties given below are based on a 95% confidence level (based on a coverage factor (k=2).

Test Item	Uncertainty
RF Output Power	± 1.126 dB
Occupied Bandwidth	± 682.83 Hz
Peak to Average Ratio	± 1.126 dB
Conducted Band Edge	± 1.126 dB
Conducted Spurious Emissions	± 1.126 dB
Radiated Spurious Emissions	± 4.06 dB below 1 GHz ± 3.73 dB above 1 GHz
Frequency Stability	± 103.92 Hz

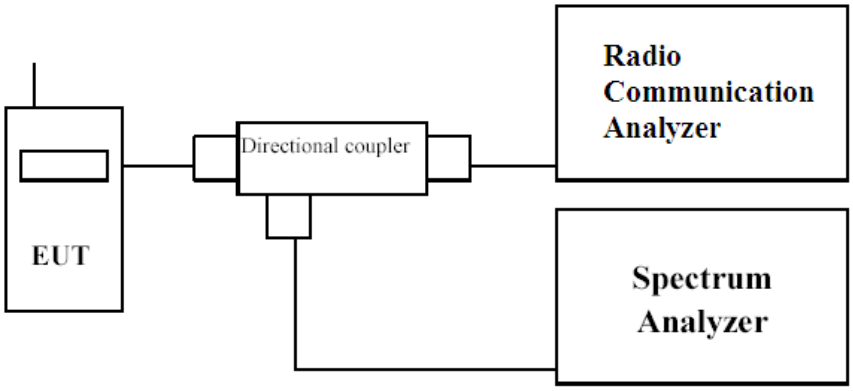
2. RF Output Power

2.1. Test Setup

Conducted Power



Channel Power



2.2. Test Limit

Type	Device	Maximum EIRP (dBm/10 MHz)	Maximum PSD (dBm/MHz)
X	End User Device	23	N/A
	Category A CBSD	30	20
	Category B CBSD	47	37

2.3. Test Procedure

Conducted Power:

The EUT is tested with maximum rated TX power via the Base Station simulator, and the output power was measured at the antenna terminals of the EUT.

Channel Power:

1. Channel power measurements are performed using the signal analyzer's "channel power" measurement capability for signals with continuous operation.
2. RBW = 1 – 5% of the expected OBW, not to exceed 1MHz.
3. VBW ≥ 3 x RBW.
4. Span = 1.5 times the OBW.
5. No. of sweep points > 2 x span / RBW.
6. Detector = RMS.
7. Trigger is set to "free run" for signals with continuous operation with the sweep times set to "auto".
8. The integration bandwidth was set to 10MHz.
9. Trace mode = trace averaging (RMS) over 100 sweeps.
10. The trace was allowed to stabilize.

2.4. Test Specification

According to FCC Part 2.1046, 96.41(b)

2.5. Test Result of RF Output Power

Mode 1: LTE Band 48

Mode					Conducted Power				EIRP Power				Limit
BW (MHz)	Channel	Frequency (MHz)	RB No.	RB Offset	QPSK (dBm)	16-QAM (dBm)	64-QAM (dBm)	256-QAM (dBm)	QPSK EIRP(W)	16-QAM EIRP(W)	64-QAM EIRP(W)	256-QAM EIRP(W)	Limit EIRP(W)
5	55265	3552.5	1	0	19.94	19.01	18.21	15.07	0.197	0.159	0.132	0.064	0.2
5	55265	3552.5	1	12	19.30	18.79	18.36	15.16	0.170	0.151	0.137	0.065	0.2
5	55265	3552.5	1	24	19.45	18.71	17.20	14.43	0.176	0.148	0.105	0.055	0.2
5	55265	3552.5	25	0	18.34	17.35	16.34	14.43	0.136	0.108	0.086	0.055	0.2
5	55990	3625	1	0	19.73	19.73	17.95	14.37	0.187	0.187	0.124	0.055	0.2
5	55990	3625	1	12	19.30	18.29	17.58	17.58	0.170	0.135	0.114	0.114	0.2
5	55990	3625	1	24	19.62	18.29	17.64	14.47	0.183	0.135	0.116	0.056	0.2
5	55990	3625	25	0	18.54	17.55	16.53	14.56	0.143	0.114	0.090	0.057	0.2
5	56715	3697.5	1	0	19.36	18.66	17.54	14.46	0.172	0.147	0.113	0.056	0.2
5	56715	3697.5	1	12	19.86	18.86	17.79	14.46	0.193	0.153	0.120	0.056	0.2
5	56715	3697.5	1	24	19.16	18.50	17.29	13.75	0.164	0.141	0.107	0.047	0.2
5	56715	3697.5	25	0	18.58	17.61	16.64	14.62	0.144	0.115	0.092	0.058	0.2
10	55290	3555	1	0	19.95	19.13	17.76	14.48	0.197	0.163	0.119	0.056	0.2
10	55290	3555	1	24	19.70	19.47	18.30	15.16	0.186	0.177	0.135	0.065	0.2
10	55290	3555	1	49	19.86	18.47	17.72	14.87	0.193	0.140	0.118	0.061	0.2
10	55290	3555	50	0	18.99	17.96	16.91	14.80	0.158	0.125	0.098	0.060	0.2
10	55990	3625	1	0	19.57	18.98	17.90	14.20	0.181	0.158	0.123	0.052	0.2
10	55990	3625	1	24	19.25	19.07	17.90	14.63	0.168	0.161	0.123	0.058	0.2
10	55990	3625	1	49	19.71	18.54	17.83	14.44	0.187	0.143	0.121	0.055	0.2
10	55990	3625	50	0	18.95	17.94	16.89	14.77	0.157	0.124	0.097	0.060	0.2
10	56690	3695	1	0	19.92	18.57	15.47	12.24	0.196	0.144	0.070	0.033	0.2
10	56690	3695	1	24	19.89	18.56	17.42	15.14	0.195	0.143	0.110	0.065	0.2
10	56690	3695	1	49	19.70	18.99	18.11	15.06	0.186	0.158	0.129	0.064	0.2
10	56690	3695	50	0	19.17	18.16	17.17	15.18	0.165	0.131	0.104	0.066	0.2

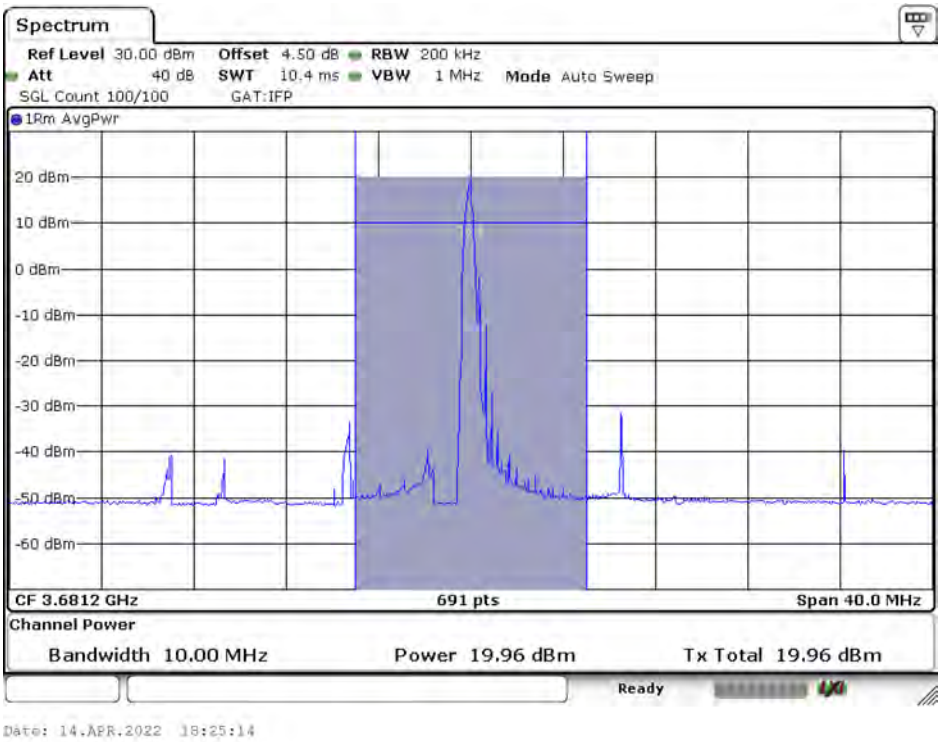
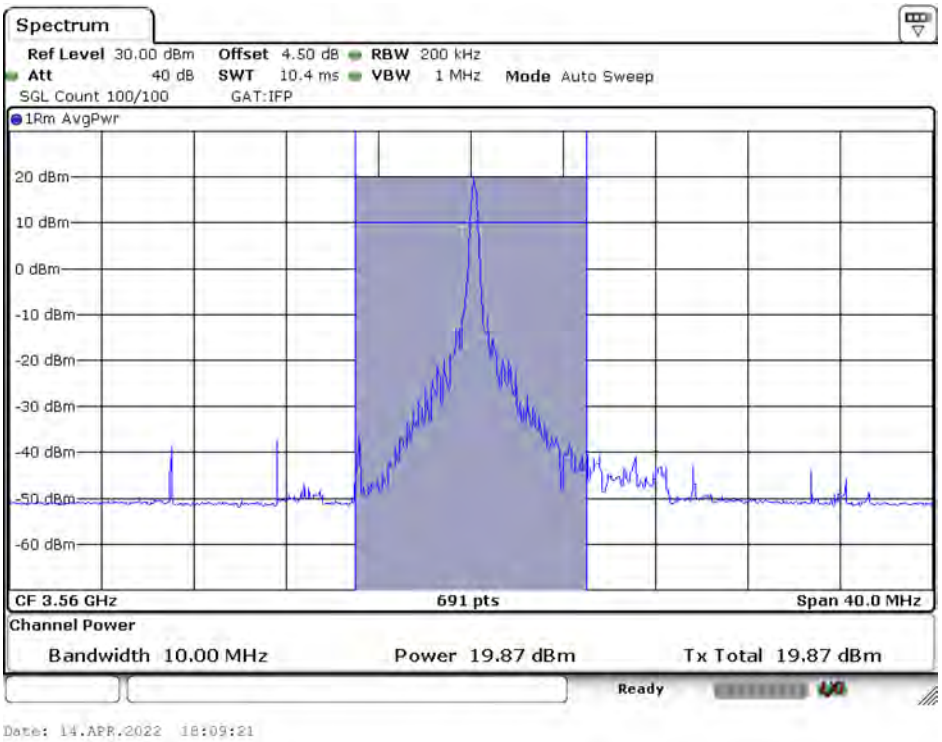
Mode					Conducted Power				EIRP Power				Limit
BW (MHz)	Channel	Frequency (MHz)	RB No.	RB Offset	QPSK (dBm)	16-QAM (dBm)	64-QAM (dBm)	256-QAM (dBm)	QPSK EIRP(W)	16-QAM EIRP(W)	64-QAM EIRP(W)	256-QAM EIRP(W)	Limit EIRP(W)
15	55315	3557.5	1	0	19.37	19.04	17.96	14.99	0.173	0.160	0.125	0.063	0.2
15	55315	3557.5	1	37	19.80	19.01	17.98	14.94	0.191	0.159	0.125	0.062	0.2
15	55315	3557.5	1	74	19.85	18.71	17.45	14.19	0.193	0.148	0.111	0.052	0.2
15	55315	3557.5	75	0	17.75	16.66	15.69	13.69	0.119	0.092	0.074	0.047	0.2
15	55990	3625	1	0	19.76	18.91	17.81	14.40	0.189	0.155	0.121	0.055	0.2
15	55990	3625	1	37	19.85	18.68	17.65	14.61	0.193	0.147	0.116	0.058	0.2
15	55990	3625	1	74	19.68	18.62	17.83	14.69	0.185	0.145	0.121	0.059	0.2
15	55990	3625	75	0	17.50	16.55	15.59	13.59	0.112	0.090	0.072	0.046	0.2
15	56665	3692.5	1	0	19.64	19.08	17.79	13.13	0.184	0.161	0.120	0.041	0.2
15	56665	3692.5	1	37	19.82	19.28	18.25	14.88	0.191	0.169	0.133	0.061	0.2
15	56665	3692.5	1	74	19.79	19.24	18.16	14.79	0.190	0.167	0.131	0.060	0.2
15	56665	3692.5	75	0	17.85	16.81	15.82	13.83	0.122	0.096	0.076	0.048	0.2
20	55340	3560	1	0	19.88	19.05	17.95	14.97	0.194	0.160	0.124	0.063	0.2
20	55340	3560	1	49	19.94	19.87	18.37	14.88	0.197	0.194	0.137	0.061	0.2
20	55340	3560	1	99	19.63	18.82	17.58	14.04	0.183	0.152	0.114	0.051	0.2
20	55340	3560	100	0	16.43	15.41	14.44	12.44	0.088	0.069	0.055	0.035	0.2
20	55990	3625	1	0	19.86	18.86	17.84	14.63	0.193	0.153	0.121	0.058	0.2
20	55990	3625	1	49	19.88	19.41	18.11	14.14	0.194	0.174	0.129	0.052	0.2
20	55990	3625	1	99	19.81	18.53	17.12	14.36	0.191	0.142	0.103	0.054	0.2
20	55990	3625	100	0	16.41	15.48	14.49	12.44	0.087	0.070	0.056	0.035	0.2
20	56640	3690	1	0	19.96	18.98	18.27	14.86	0.198	0.158	0.134	0.061	0.2
20	56640	3690	1	49	19.90	19.17	18.15	14.93	0.195	0.165	0.130	0.062	0.2
20	56640	3690	1	99	19.85	18.73	17.42	14.32	0.193	0.149	0.110	0.054	0.2
20	56640	3690	100	0	16.59	15.59	14.66	12.63	0.091	0.072	0.058	0.037	0.2

Note:

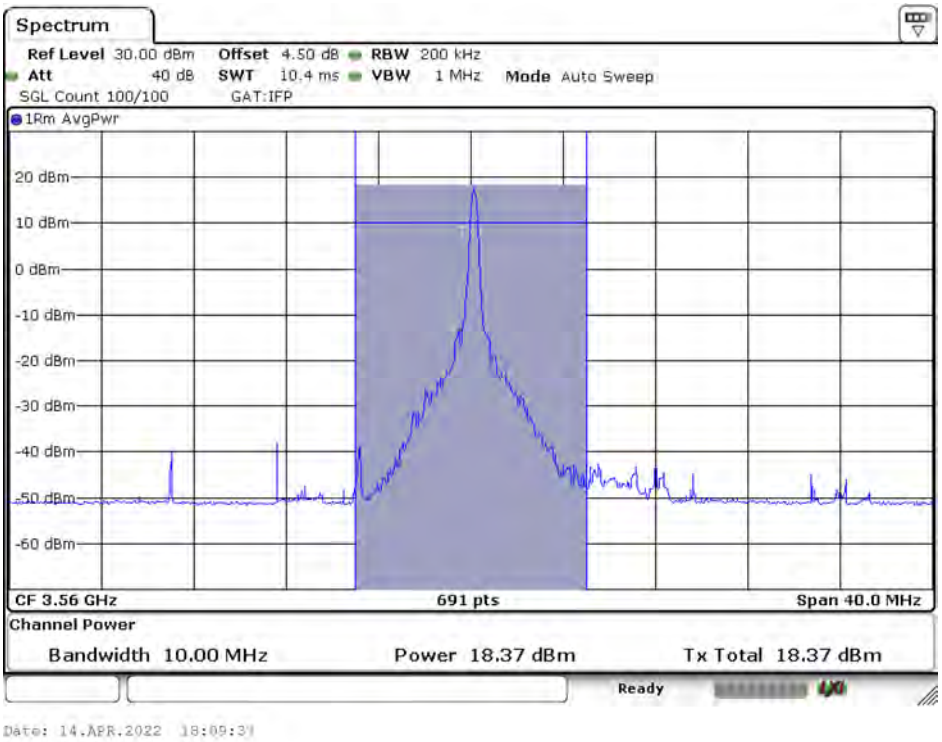
1. RF Output Power (W) EIRP = Conducted Output Power (dBm) + Antenna Gain (dBi)

2. Power (W)= $(10^{(Power(dBm)/10)})*10^{-3}$

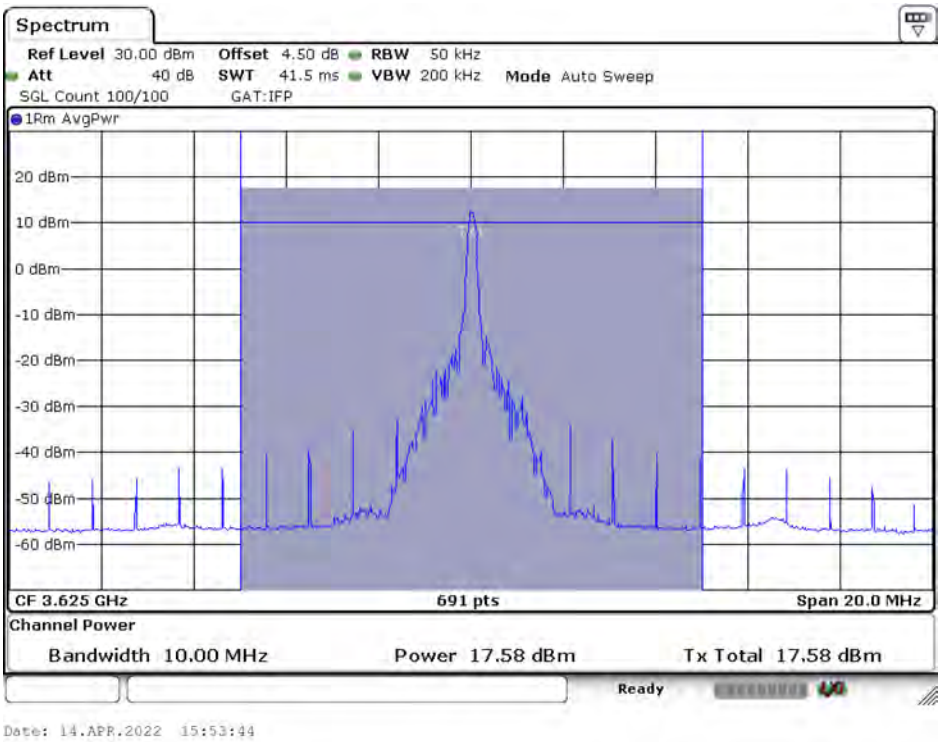
Spectrum plot of worst value

QPSK: 20 MHz / CH56640 / 1RB0

16-QAM: 20 MHz / CH55340 / 1RB49


64-QAM: 20 MHz / CH55340 / 1RB49



256-QAM: 5 MHz / CH55990 / 1RB12



Mode 2: 5G NR n48

Mode					Conducted Power					EIRP Power					Limit
BW (MHz)	Channel	Frequency (MHz)	RB No.	RB Offset	pi/2 BPSK (dBm)	QPSK (dBm)	16-QAM (dBm)	64-QAM (dBm)	256-QAM (dBm)	PI/2 BPSK EIRP(W)	QPSK EIRP(W)	16-QAM EIRP(W)	64-QAM EIRP(W)	256-QAM EIRP(W)	Limit EIRP(W)
10	637000	3555	1	0	18.62	18.59	17.76	17.15	15.26	0.145	0.144	0.119	0.104	0.067	0.2
10	637000	3555	1	12	19.09	19.08	19.00	17.12	15.30	0.162	0.161	0.158	0.103	0.068	0.2
10	637000	3555	1	23	18.51	18.47	17.64	17.00	15.33	0.142	0.140	0.116	0.100	0.068	0.2
10	637000	3555	24	0	18.70	18.05	17.50	17.08	15.01	0.148	0.127	0.112	0.102	0.063	0.2
10	641666	3625	1	0	19.55	19.52	18.77	17.14	15.09	0.180	0.179	0.150	0.103	0.064	0.2
10	641666	3625	1	12	19.76	19.63	18.72	17.39	15.34	0.189	0.183	0.149	0.109	0.068	0.2
10	641666	3625	1	23	19.43	19.39	18.77	17.58	15.16	0.175	0.173	0.150	0.114	0.065	0.2
10	641666	3625	24	0	19.62	19.59	18.87	17.57	15.13	0.183	0.182	0.154	0.114	0.065	0.2
10	646332	3695	1	0	19.62	19.59	18.99	17.11	15.43	0.183	0.182	0.158	0.103	0.070	0.2
10	646332	3695	1	12	19.89	19.50	18.76	17.34	14.74	0.195	0.178	0.150	0.108	0.059	0.2
10	646332	3695	1	23	19.60	19.65	18.25	17.41	15.05	0.182	0.184	0.133	0.110	0.064	0.2
10	646332	3695	24	0	19.75	19.56	18.85	17.06	15.26	0.188	0.180	0.153	0.101	0.067	0.2
20	637334	3560	1	0	16.88	16.85	16.06	15.27	13.87	0.097	0.097	0.081	0.067	0.049	0.2
20	637334	3560	1	25	19.31	19.11	18.37	17.35	14.45	0.170	0.163	0.137	0.108	0.056	0.2
20	637334	3560	1	50	17.42	17.39	16.61	15.80	14.33	0.110	0.109	0.091	0.076	0.054	0.2
20	637334	3560	50	0	15.93	15.88	15.21	14.60	13.16	0.078	0.077	0.066	0.058	0.041	0.2
20	637334	3560	50	1	15.62	15.59	14.98	14.34	12.94	0.073	0.072	0.063	0.054	0.039	0.2
20	641666	3625	1	0	17.02	16.98	16.29	15.53	14.05	0.100	0.100	0.085	0.071	0.051	0.2
20	641666	3625	1	25	19.79	19.46	19.03	17.45	14.96	0.190	0.176	0.160	0.111	0.063	0.2
20	641666	3625	1	50	17.24	17.21	16.48	15.72	14.30	0.106	0.105	0.089	0.074	0.054	0.2
20	641666	3625	50	0	15.22	15.19	14.39	13.73	12.31	0.066	0.066	0.055	0.047	0.034	0.2
20	641666	3625	50	1	15.29	15.26	14.46	13.86	12.40	0.067	0.067	0.056	0.049	0.035	0.2
20	646000	3690	1	0	17.05	17.03	16.32	15.65	14.16	0.101	0.101	0.086	0.073	0.052	0.2
20	646000	3690	1	25	19.23	19.15	18.01	17.50	15.26	0.167	0.164	0.126	0.112	0.067	0.2
20	646000	3690	1	50	17.74	17.70	17.02	16.28	14.83	0.119	0.117	0.100	0.085	0.061	0.2
20	646000	3690	50	0	15.25	15.21	14.39	13.55	12.06	0.067	0.066	0.055	0.045	0.032	0.2
20	646000	3690	50	1	15.34	15.30	14.56	13.94	12.46	0.068	0.068	0.057	0.049	0.035	0.2

Mode					Conducted Power					EIRP Power					Limit
BW (MHz)	Channel	Frequency (MHz)	RB No.	RB offset	pi/2 BPSK (dBm)	QPSK (dBm)	16-QAM (dBm)	64-QAM (dBm)	256-QAM (dBm)	pi/2 BPSK EIRP(W)	QPSK EIRP(W)	16-QAM EIRP(W)	64-QAM EIRP(W)	256-QAM EIRP(W)	Limit EIRP(W)
30	637668	3565	1	0	16.29	16.26	15.54	14.93	13.53	0.085	0.084	0.071	0.062	0.045	0.2
30	637668	3565	1	39	19.35	19.19	18.17	17.58	15.34	0.172	0.166	0.131	0.114	0.068	0.2
30	637668	3565	1	77	16.95	16.91	16.17	15.31	13.85	0.099	0.098	0.083	0.068	0.048	0.2
30	637668	3565	75	0	14.58	14.56	13.66	12.90	11.50	0.057	0.057	0.046	0.039	0.028	0.2
30	637668	3565	75	3	14.79	14.77	14.06	13.17	11.72	0.060	0.060	0.051	0.041	0.030	0.2
30	641666	3625	1	0	16.33	16.29	15.57	14.81	13.39	0.086	0.085	0.072	0.060	0.044	0.2
30	641666	3625	1	39	19.55	19.40	18.53	17.38	15.55	0.180	0.174	0.142	0.109	0.072	0.2
30	641666	3625	1	77	17.03	17.00	16.28	15.47	14.04	0.101	0.100	0.085	0.070	0.051	0.2
30	641666	3625	75	0	14.19	14.15	13.42	12.64	11.24	0.052	0.052	0.044	0.037	0.027	0.2
30	641666	3625	75	3	14.34	14.32	13.71	12.84	11.44	0.054	0.054	0.047	0.038	0.028	0.2
30	645666	3685	1	0	16.52	16.49	15.60	14.75	13.35	0.090	0.089	0.072	0.060	0.043	0.2
30	645666	3685	1	39	19.56	19.10	18.92	17.36	14.83	0.180	0.162	0.156	0.109	0.061	0.2
30	645666	3685	1	77	16.66	16.62	15.74	15.13	13.63	0.092	0.092	0.075	0.065	0.046	0.2
30	645666	3685	75	0	14.03	14.00	13.20	12.44	10.95	0.050	0.050	0.042	0.035	0.025	0.2
30	645666	3685	75	3	14.25	14.23	13.35	12.51	11.05	0.053	0.053	0.043	0.036	0.025	0.2
40	638000	3570	1	0	15.82	15.80	15.01	14.27	12.84	0.076	0.076	0.063	0.053	0.038	0.2
40	638000	3570	1	53	19.95	18.90	18.16	17.12	15.33	0.197	0.155	0.131	0.103	0.068	0.2
40	638000	3570	1	105	16.46	16.43	15.67	14.95	13.46	0.088	0.088	0.074	0.062	0.044	0.2
40	638000	3570	100	0	13.67	13.63	12.84	12.19	10.77	0.046	0.046	0.038	0.033	0.024	0.2
40	638000	3570	100	6	13.72	13.68	13.05	12.26	10.85	0.047	0.047	0.040	0.034	0.024	0.2
40	641666	3625	1	0	16.00	15.95	15.09	14.19	12.71	0.079	0.079	0.064	0.052	0.037	0.2
40	641666	3625	1	53	19.99	19.75	19.24	17.62	15.59	0.199	0.188	0.167	0.115	0.072	0.2
40	641666	3625	1	105	16.15	16.12	15.49	14.72	13.24	0.082	0.082	0.071	0.059	0.042	0.2
40	641666	3625	100	0	13.46	13.41	12.66	11.93	10.48	0.044	0.044	0.037	0.031	0.022	0.2
40	641666	3625	100	6	13.53	13.49	12.60	11.98	10.49	0.045	0.045	0.036	0.031	0.022	0.2
40	645332	3680	1	0	16.35	16.30	15.68	14.85	13.39	0.086	0.085	0.074	0.061	0.044	0.2
40	645332	3680	1	53	19.59	19.51	18.73	17.19	15.15	0.182	0.178	0.149	0.104	0.065	0.2
40	645332	3680	1	105	16.11	16.09	15.32	14.60	13.20	0.081	0.081	0.068	0.058	0.042	0.2
40	645332	3680	100	0	13.65	13.60	12.83	12.13	10.63	0.046	0.046	0.038	0.033	0.023	0.2
40	645332	3680	100	6	13.73	13.70	13.03	12.14	10.71	0.047	0.047	0.040	0.033	0.023	0.2

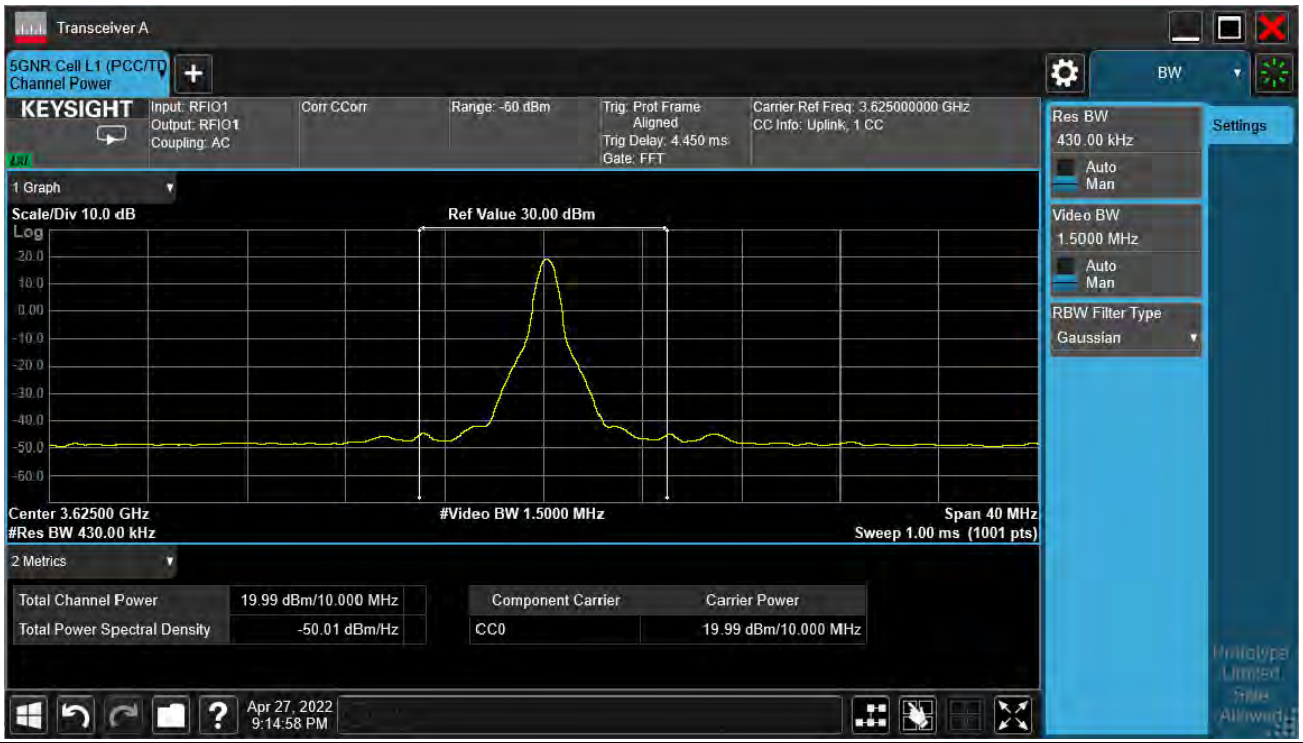
Note:

1. RF Output Power (W) ERP = Conducted Output Power (dBm) + Antenna Gain (dBi)

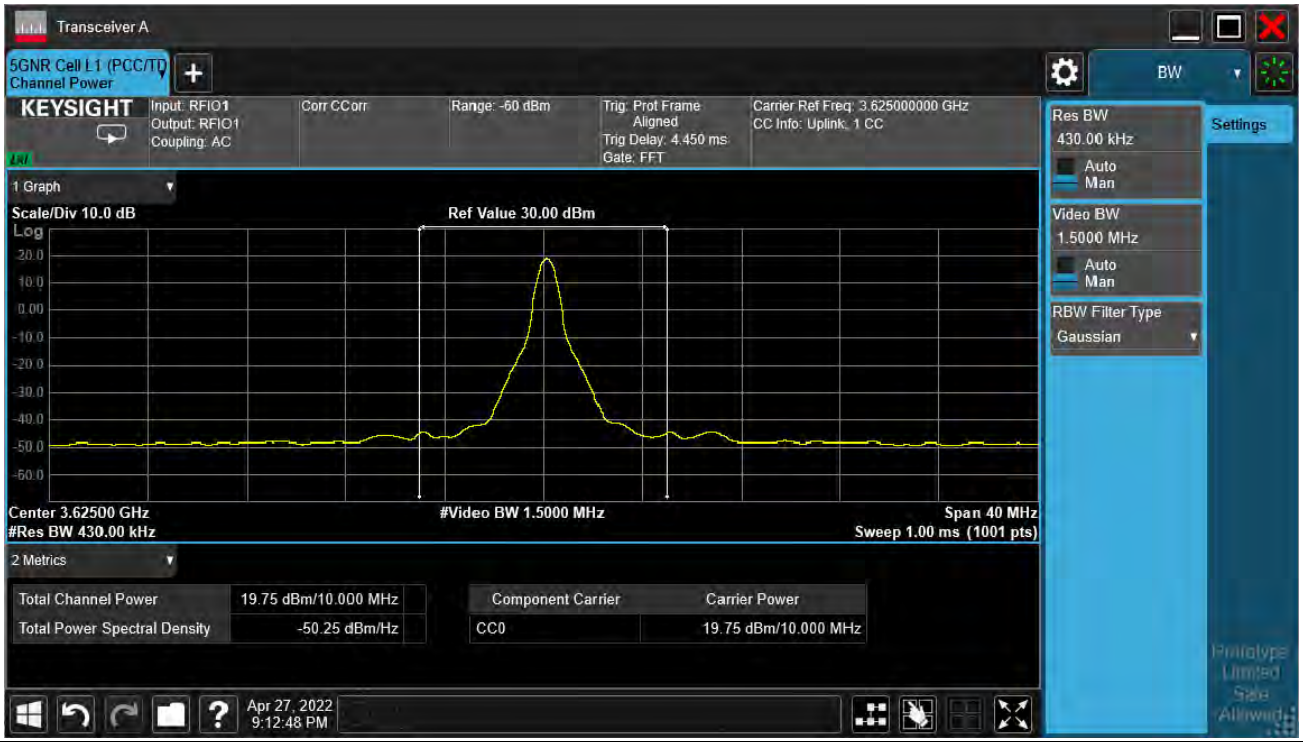
2. Power (W) = $(10^{(Power(dBm)/10)})*10^{-3}$

Spectrum plot of worst value

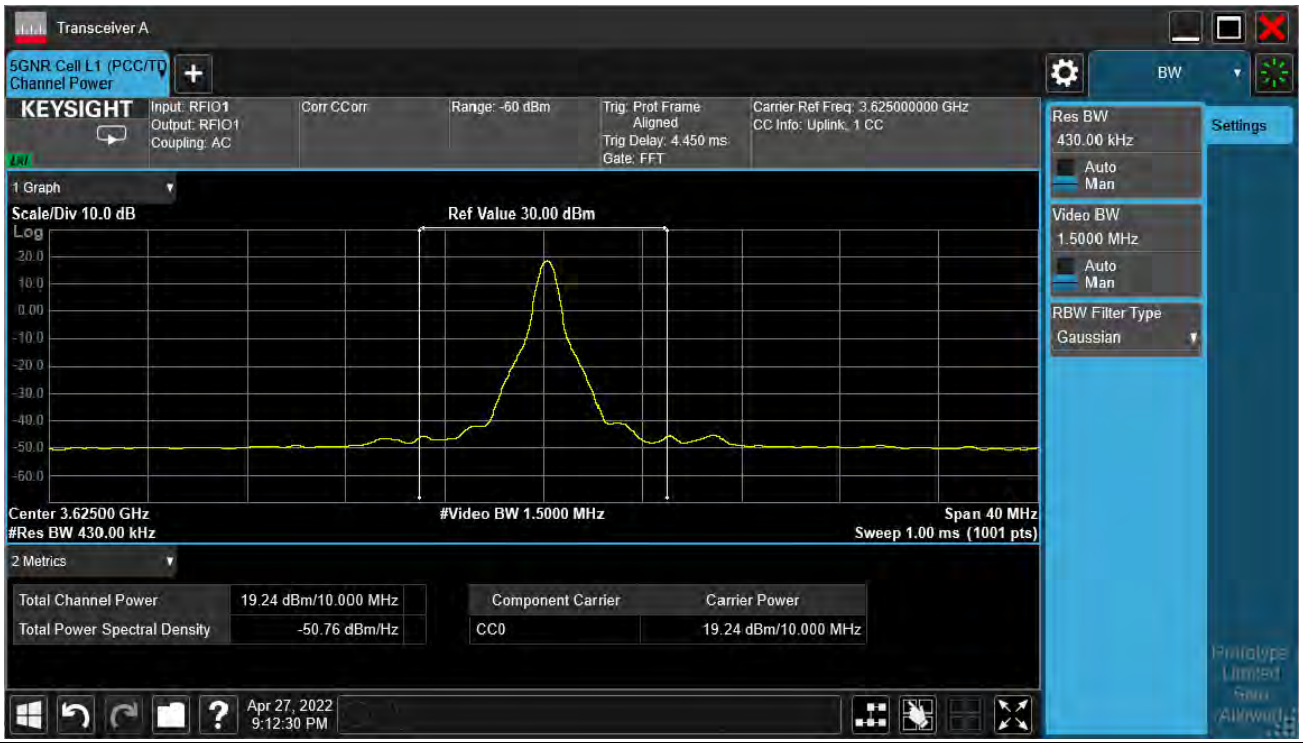
pi/2 BPSK: 40 MHz / CH641666 / 1RB53



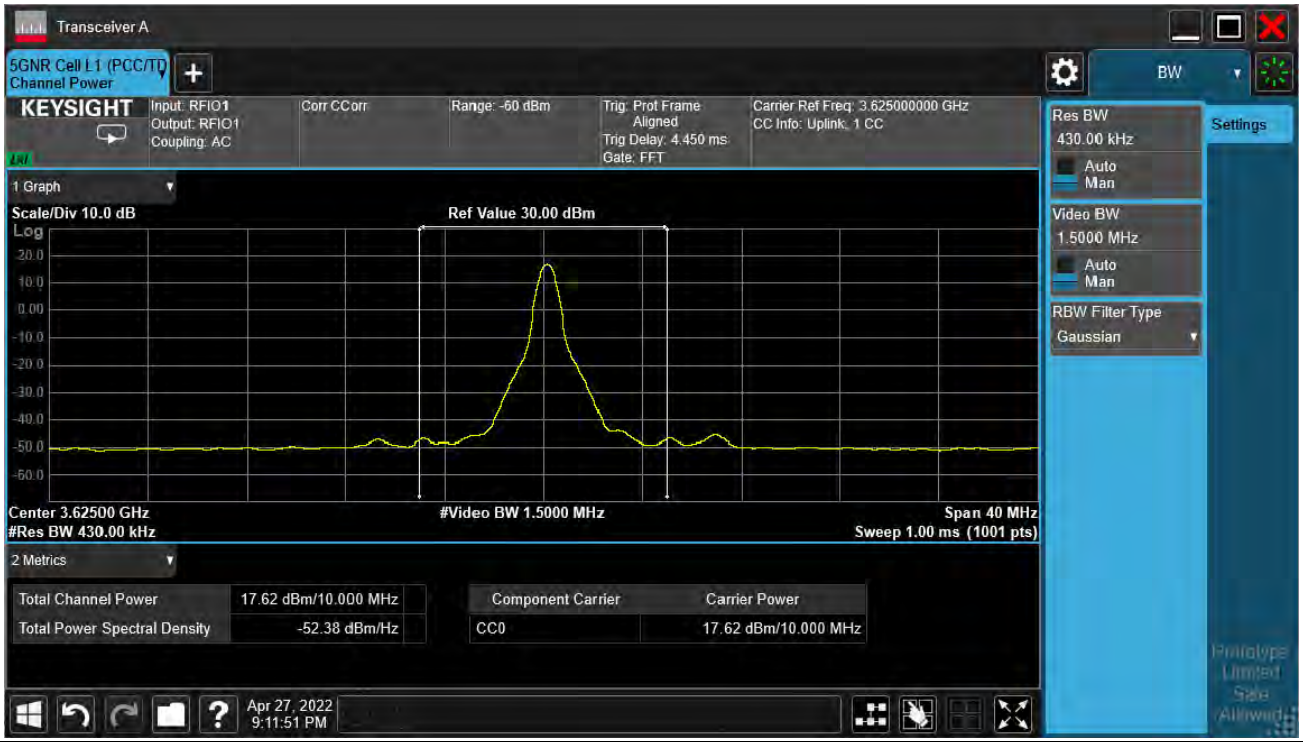
QPSK: 40 MHz / CH641666 / 1RB53



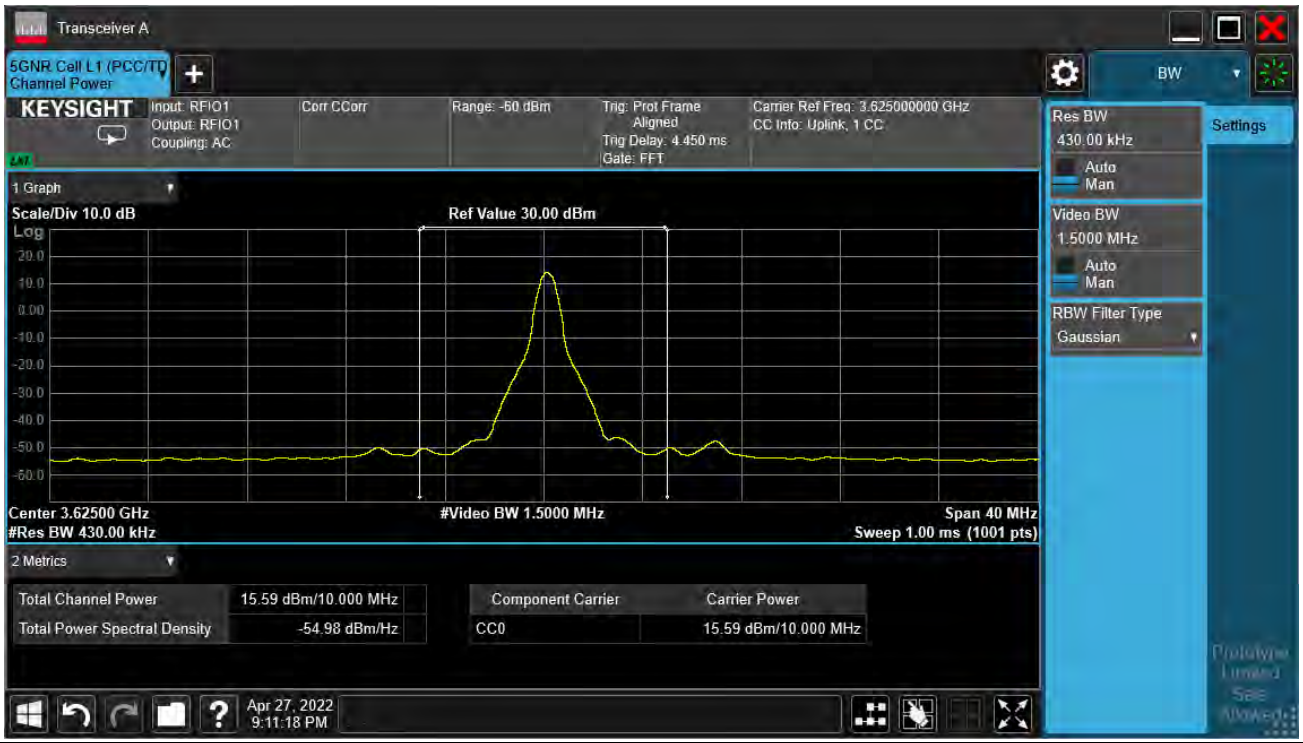
16-QAM: 40 MHz / CH641666 / 1RB53



64-QAM: 40 MHz / CH641666 / 1RB53

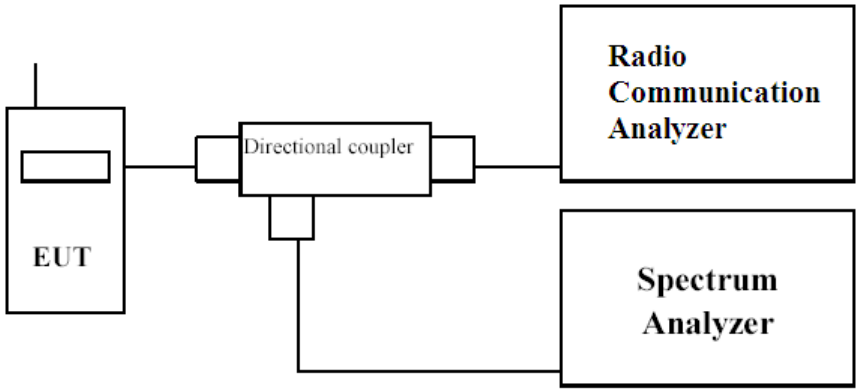


256-QAM: 40 MHz / CH641666 / 1RB53



3. Occupied Bandwidth

3.1. Test Setup



3.2. Test Limit

N/A

3.3. Test Procedure

The EUT is tested with maximum rated TX power via the Base Station simulator, and the occupied bandwidth was measured at the antenna terminals of the EUT.

The Resolution BW of the analyzer is set to 1 %~5% of the emission bandwidth. The EUT's occupied bandwidth is measured as the width of the signal between two points, one below the carrier center frequency and one above the carrier frequency, outside of which all emissions are attenuated at least 26 dB below the transmitter power. The plots below show the resultant display from the Spectrum Analyser.

3.4. Test Specification

According to FCC Part 2.1049, 96.41

3.5. Test Result of Occupied Bandwidth

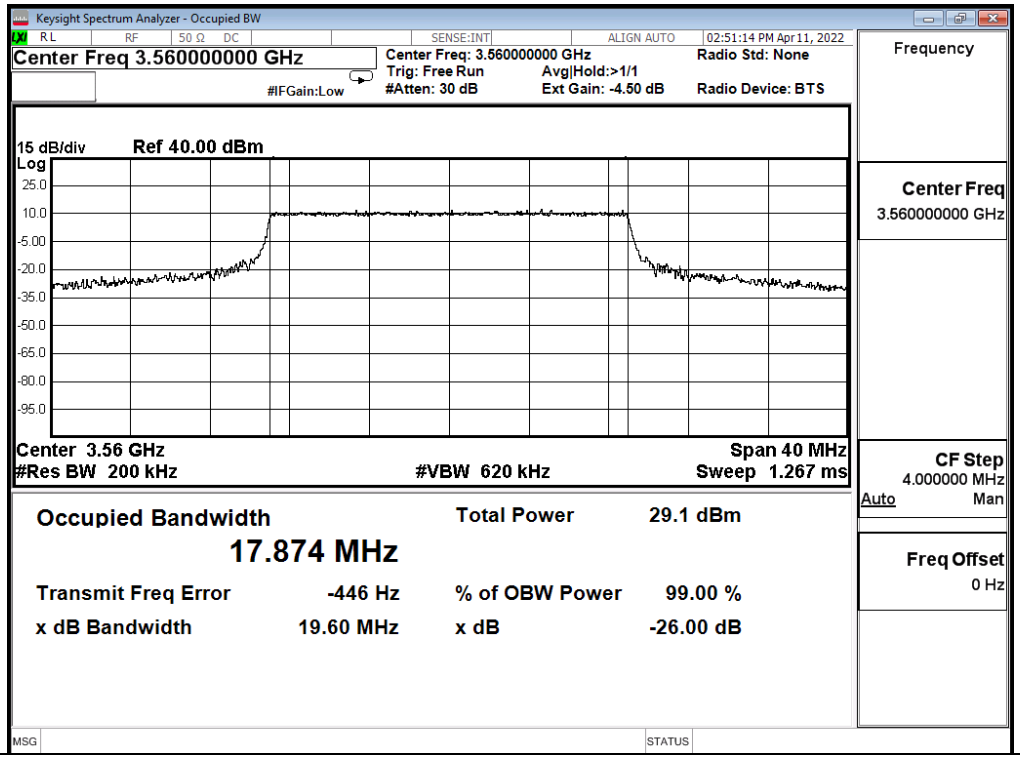
Mode 1: LTE Band 48

Bandwidth (MHz)	Modulation	Channel	Frequency (MHz)	Measure Level (MHz)		Limit (MHz)
				26dB BW	99% BW	
5	QPSK	55265	3552.5	4.989	4.473	N/A
		55990	3625.0	4.859	4.475	N/A
		56715	3697.5	4.910	4.470	N/A
	16-QAM	55265	3552.5	4.953	4.475	N/A
		55990	3625.0	4.985	4.471	N/A
		56715	3697.5	4.904	4.476	N/A
	64-QAM	55265	3552.5	4.830	4.474	N/A
		55990	3625.0	4.950	4.467	N/A
		56715	3697.5	4.879	4.489	N/A
	256-QAM	55265	3552.5	4.977	4.478	N/A
		55990	3625.0	4.965	4.468	N/A
		56715	3697.5	4.951	4.476	N/A
10	QPSK	55290	3555.0	9.943	8.947	N/A
		55990	3625.0	9.994	8.931	N/A
		56690	3695.0	9.686	8.937	N/A
	16-QAM	55290	3555.0	9.802	8.960	N/A
		55990	3625.0	9.610	8.951	N/A
		56690	3695.0	9.702	8.935	N/A
	64-QAM	55290	3555.0	9.874	8.961	N/A
		55990	3625.0	9.715	8.934	N/A
		56690	3695.0	9.737	8.921	N/A
	256-QAM	55290	3555.0	9.960	8.962	N/A
		55990	3625.0	9.675	8.929	N/A
		56690	3695.0	9.790	8.936	N/A

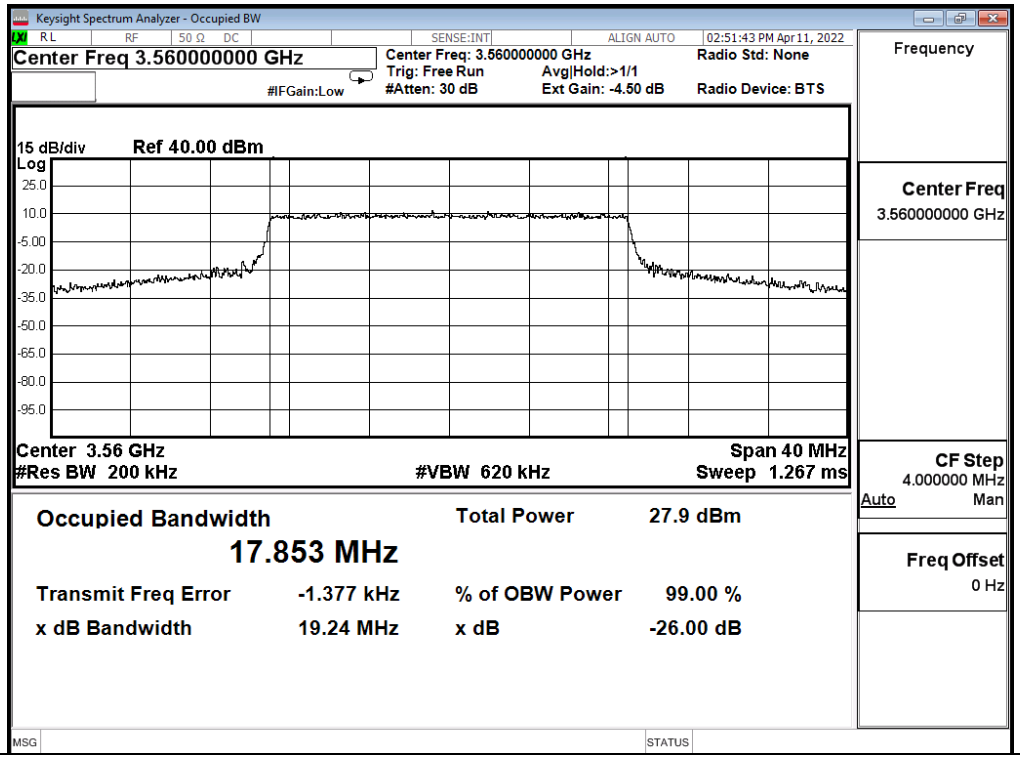
Bandwidth (MHz)	Modulation	Channel	Frequency (MHz)	Measure Level (MHz)		Limit (MHz)
				26dB BW	99% BW	
15	QPSK	55315	3557.5	14.570	13.435	N/A
		55990	3625.0	14.440	13.400	N/A
		56665	3692.5	14.400	13.389	N/A
	16-QAM	55315	3557.5	14.710	13.407	N/A
		55990	3625.0	14.400	13.414	N/A
		56665	3692.5	14.350	13.399	N/A
	64-QAM	55315	3557.5	14.930	13.423	N/A
		55990	3625.0	14.380	13.436	N/A
		56665	3692.5	14.120	13.395	N/A
	256-QAM	55315	3557.5	14.800	13.415	N/A
		55990	3625.0	14.470	13.406	N/A
		56665	3692.5	14.340	13.399	N/A
20	QPSK	55340	3560.0	19.600	17.874	N/A
		55990	3625.0	19.150	17.841	N/A
		56640	3690.0	19.170	17.805	N/A
	16-QAM	55340	3560.0	19.240	17.853	N/A
		55990	3625.0	19.210	17.833	N/A
		56640	3690.0	19.050	17.830	N/A
	64-QAM	55340	3560.0	19.270	17.880	N/A
		55990	3625.0	19.010	17.847	N/A
		56640	3690.0	19.030	17.830	N/A
	256-QAM	55340	3560.0	19.420	17.860	N/A
		55990	3625.0	19.290	17.866	N/A
		56640	3690.0	19.240	17.876	N/A

Spectrum plot of worst value

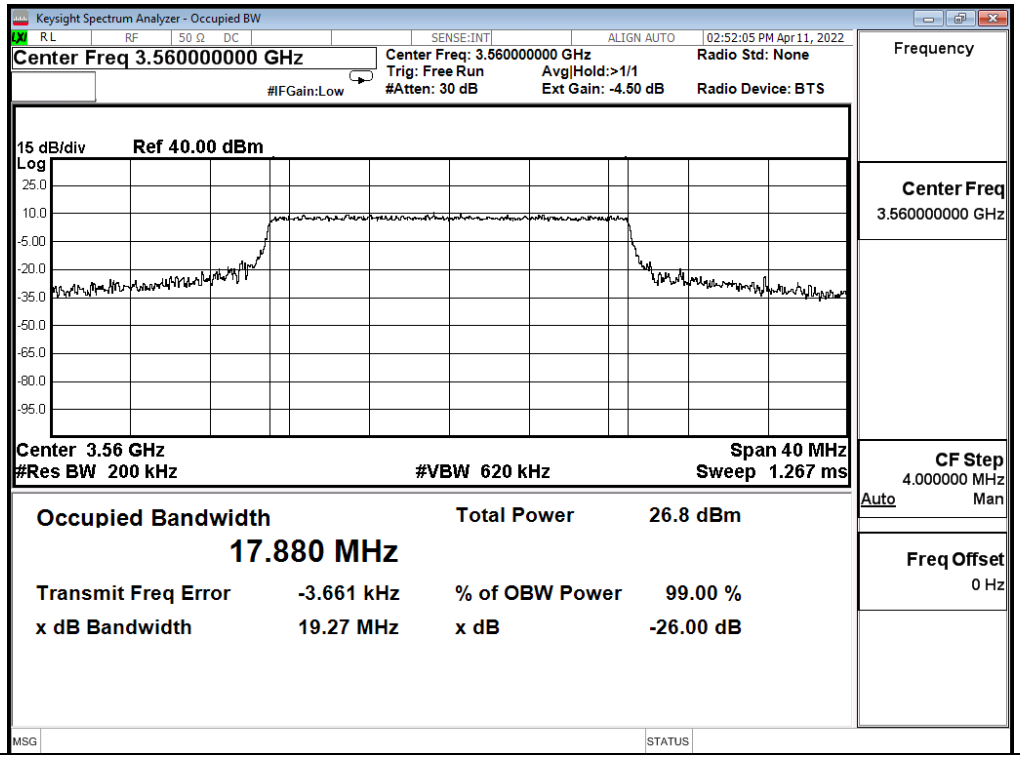
QPSK: 20 MHz / CH55340



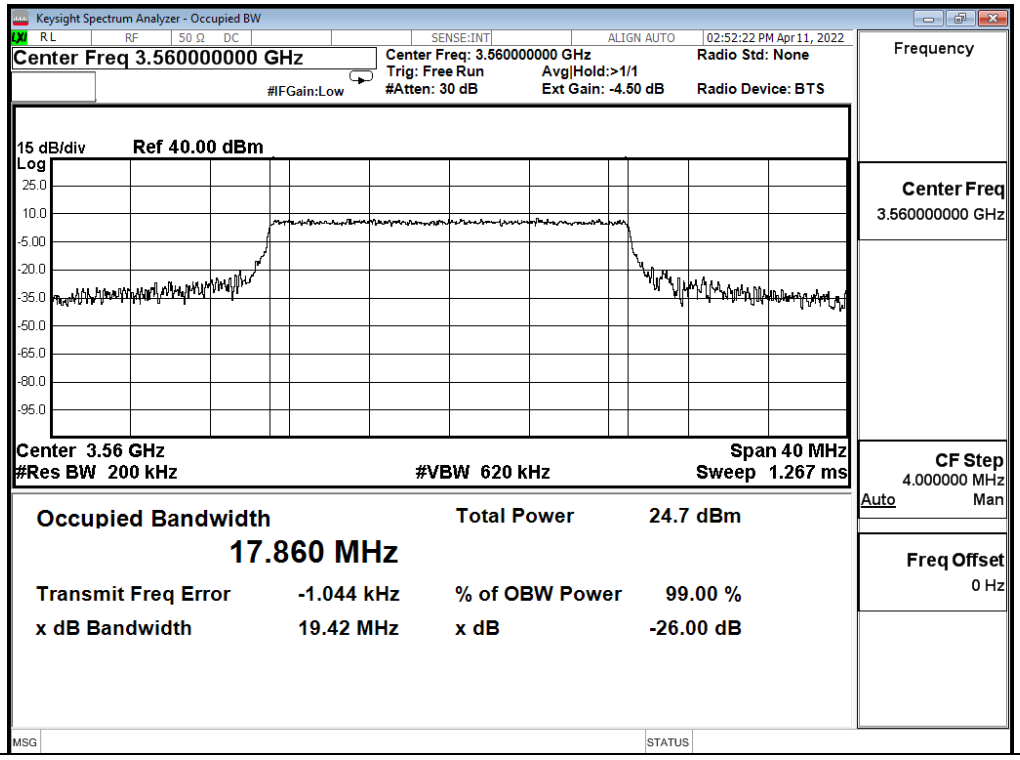
16-QAM: 20 MHz / CH55340



64-QAM: 20 MHz / CH55340



256-QAM: 20 MHz / CH55340



Mode 2: 5G NR n48

Bandwidth (MHz)	Modulation	Channel	Frequency (MHz)	Measure Level (MHz)		Limit (MHz)
				26dB BW	99% BW	
10	pi/2 BPSK	637000	3555	9.245	8.600	N/A
		641666	3625	9.241	8.576	N/A
		646332	3695	9.281	8.603	N/A
	QPSK	637000	3555	9.270	8.577	N/A
		641666	3625	9.180	8.600	N/A
		646332	3695	9.246	8.602	N/A
	16-QAM	637000	3555	9.313	8.610	N/A
		641666	3625	9.333	8.609	N/A
		646332	3695	9.258	8.611	N/A
	64-QAM	637000	3555	9.223	8.578	N/A
		641666	3625	9.179	8.604	N/A
		646332	3695	9.195	8.606	N/A
	256-QAM	637000	3555	9.247	8.578	N/A
		641666	3625	9.245	8.602	N/A
		646332	3695	9.239	8.607	N/A
20	pi/2 BPSK	637334	3560	18.570	18.021	N/A
		641666	3625	18.610	18.094	N/A
		646000	3690	18.680	18.038	N/A
	QPSK	637334	3560	18.590	18.020	N/A
		641666	3625	18.580	18.103	N/A
		646000	3690	18.630	18.038	N/A
	16-QAM	637334	3560	18.700	18.018	N/A
		641666	3625	18.640	18.084	N/A
		646000	3690	18.660	18.027	N/A
	64-QAM	637334	3560	18.610	18.018	N/A
		641666	3625	18.640	18.084	N/A
		646000	3690	18.670	18.034	N/A
	256-QAM	637334	3560	18.650	18.036	N/A
		641666	3625	18.730	18.090	N/A
		646000	3690	18.580	18.082	N/A

Bandwidth (MHz)	Modulation	Channel	Frequency (MHz)	Measure Level (MHz)		Limit (MHz)
				26dB BW	99% BW	
30	pi/2 BPSK	637668	3565	27.820	26.935	N/A
		641666	3625	27.870	27.014	N/A
		645666	3685	27.840	26.937	N/A
	QPSK	637668	3565	27.870	26.935	N/A
		641666	3625	27.880	26.936	N/A
		645666	3685	27.880	26.938	N/A
	16-QAM	637668	3565	27.810	26.932	N/A
		641666	3625	27.800	26.933	N/A
		645666	3685	27.860	26.931	N/A
	64-QAM	637668	3565	27.860	26.901	N/A
		641666	3625	27.750	26.900	N/A
		645666	3685	27.840	26.900	N/A
	256-QAM	637668	3565	27.790	26.913	N/A
		641666	3625	27.870	26.920	N/A
		645666	3685	27.810	26.912	N/A
40	pi/2 BPSK	638000	3570	37.160	35.734	N/A
		641666	3625	37.140	35.733	N/A
		645332	3680	37.170	35.727	N/A
	QPSK	638000	3570	37.130	35.707	N/A
		641666	3625	37.170	35.735	N/A
		645332	3680	37.120	35.713	N/A
	16-QAM	638000	3570	37.120	35.735	N/A
		641666	3625	37.160	35.727	N/A
		645332	3680	37.120	35.723	N/A
	64-QAM	638000	3570	37.160	35.718	N/A
		641666	3625	37.180	35.719	N/A
		645332	3680	37.160	35.712	N/A
	256-QAM	638000	3570	37.120	35.699	N/A
		641666	3625	37.130	35.704	N/A
		645332	3680	37.120	35.700	N/A

Spectrum plot of worst value

pi/2 BPSK: 40 MHz / CH645332

QPSK: 40 MHz / CH641666

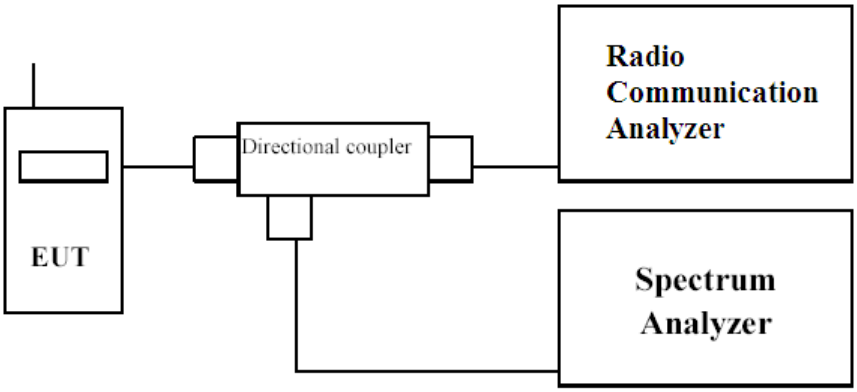
16-QAM: 40 MHz / CH641666

64-QAM: 40 MHz / CH641666

256-QAM: 40 MHz / CH641666

4. Spurious Emission at Antenna Terminals

4.1. Test Setup



4.2. Test Limit

(1) Within 0 MHz to 10 MHz above and below the assigned channel ≤ −13 dBm/MHz.

(2) Greater than 10 MHz above and below the assigned channel ≤ −25 dBm/MHz.

(3) Any emission below 3530 MHz and above 3720 MHz ≤ −40 dBm/MHz.

4.3. Test Procedure

In accordance with Part 96.41 at least 1% of the emission bandwidth was used for the resolution and video bandwidths up to 1MHz away from the Block Edge. At greater than 1MHz, the resolution and video bandwidth were increased to 1MHz/3MHz.

The reference power and path losses of all channels used for testing in each frequency block were measured.

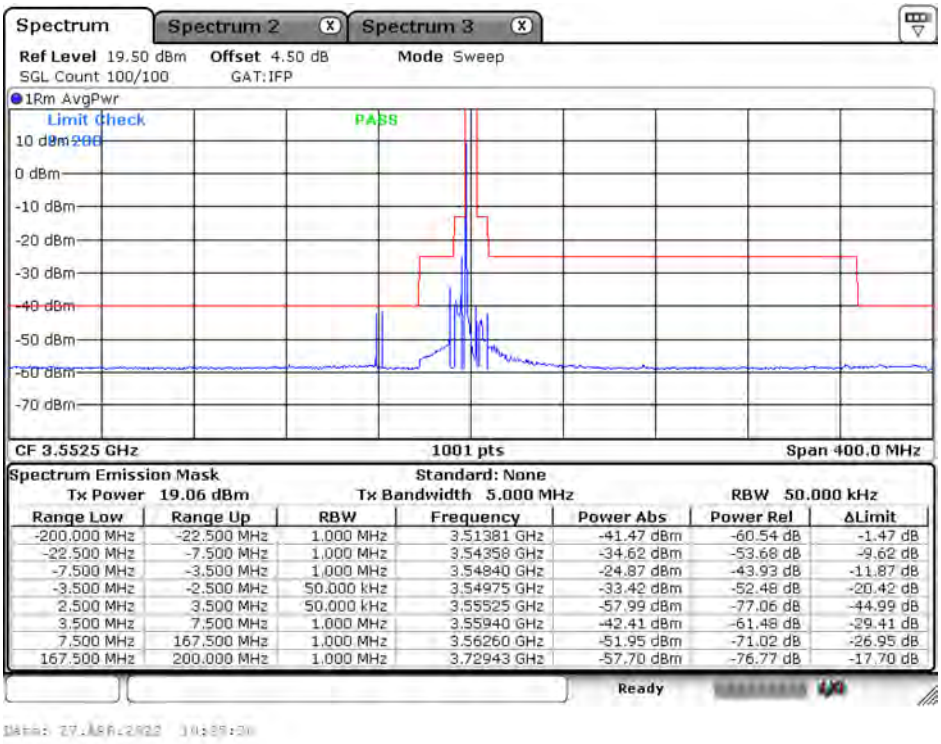
4.4. Test Specification

According to Part 2.1051, 96.41

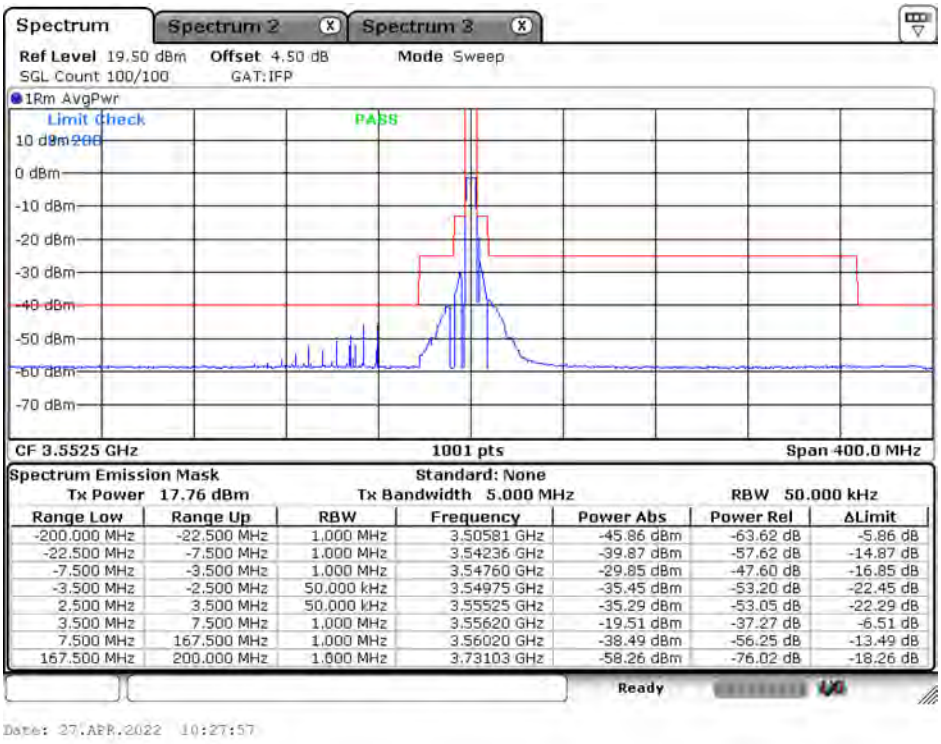
4.5. Test Result of Spurious Emission at Antenna Terminals

Mode 1: LTE Band 48

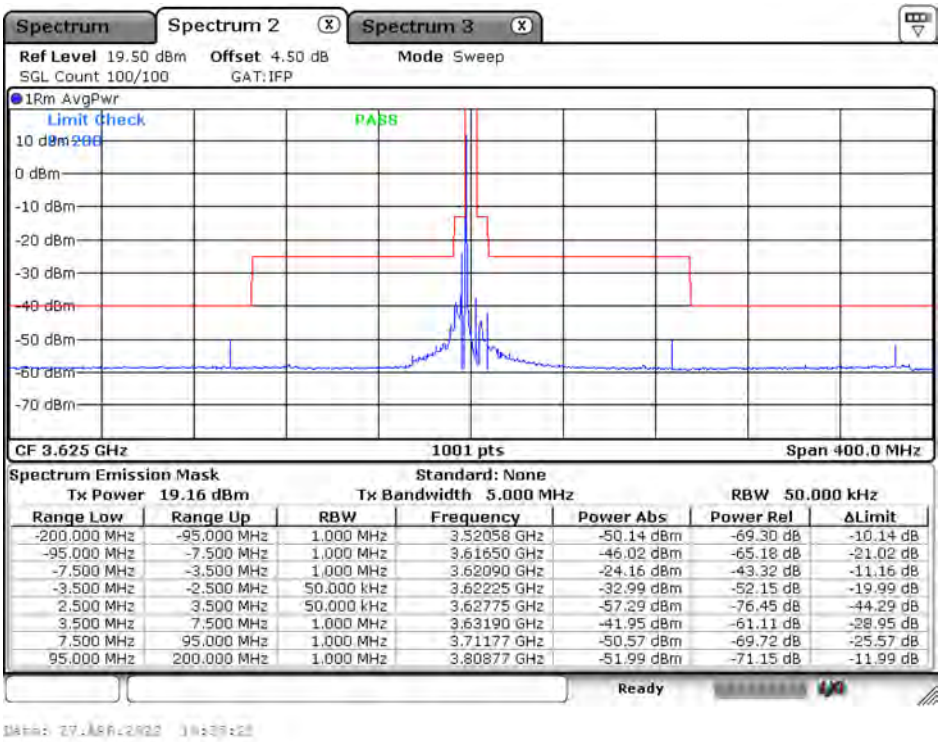
5 MHz / QPSK / CH55265 / 1RB0



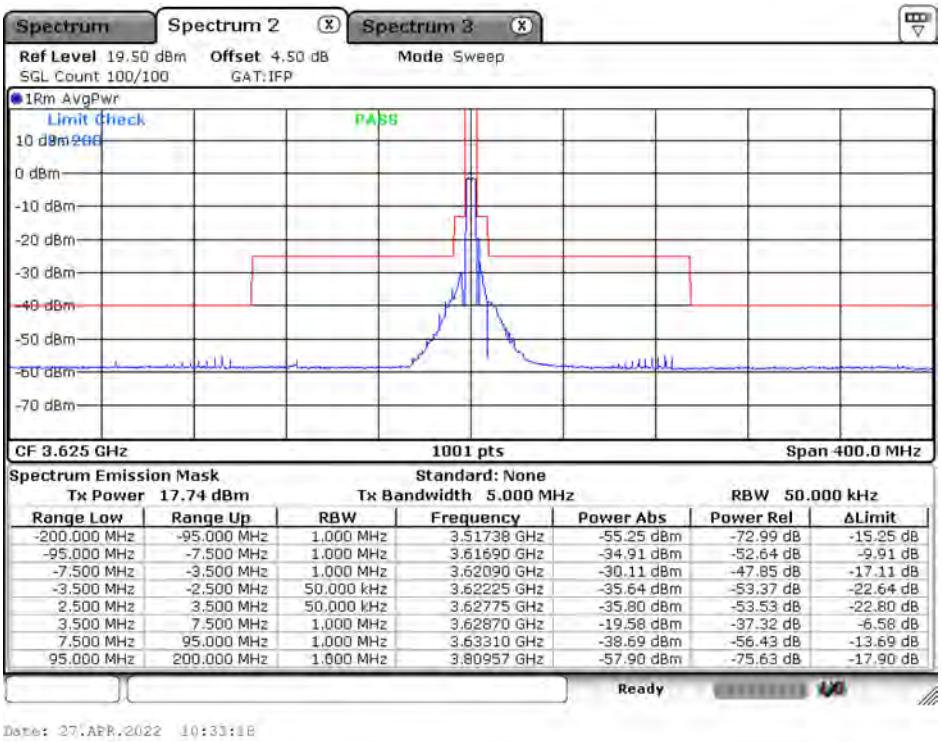
5 MHz / QPSK / CH55265 / 25RB0



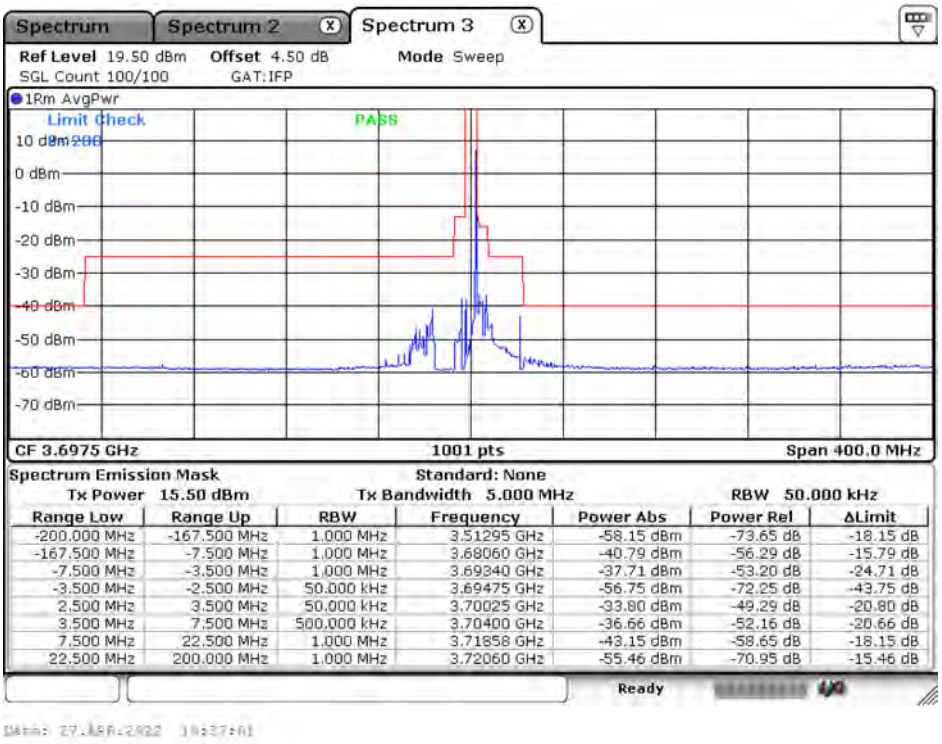
5 MHz / QPSK / CH55990 / 1RB0



5 MHz / QPSK / CH55990 / 25RB0

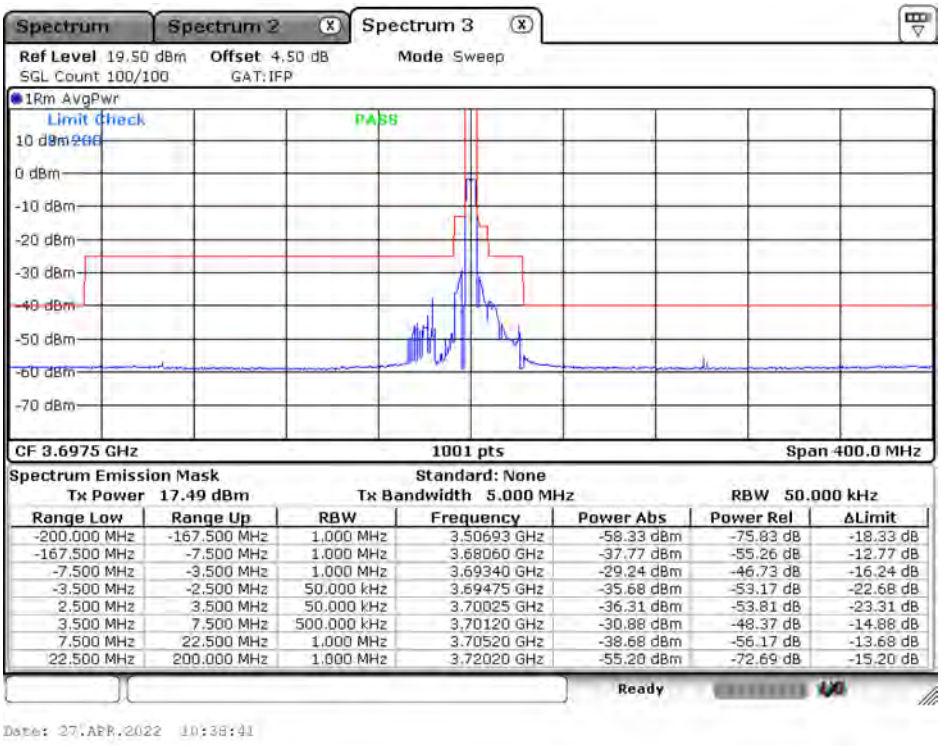


5 MHz / QPSK / CH56715 / 1RB24



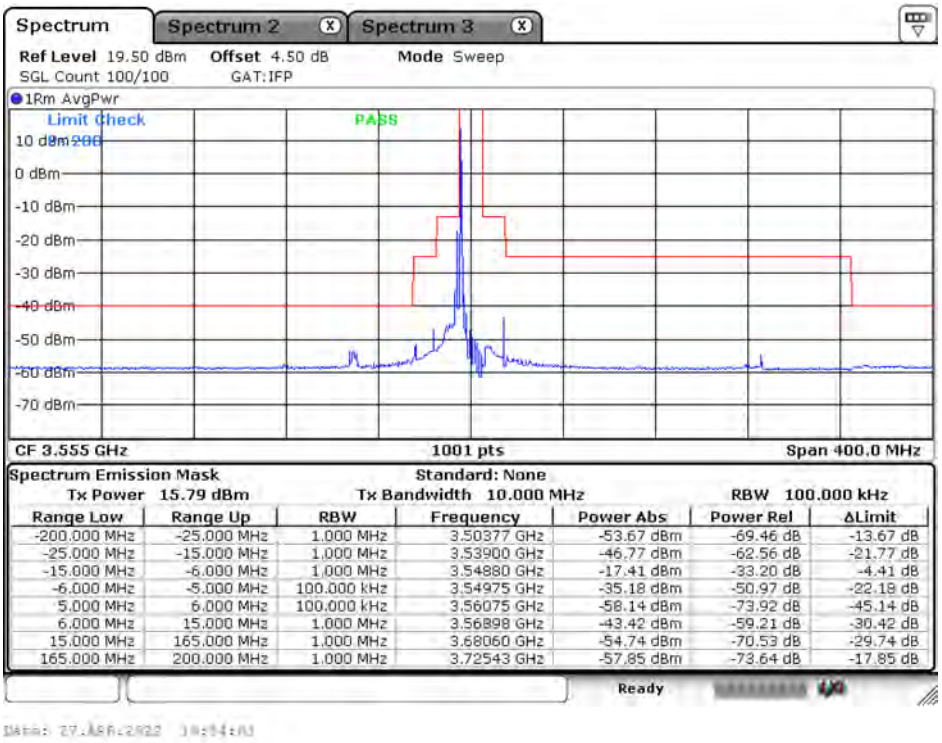
Note: From 3.5MHz to 7.5MHz reduce the limit further by 10*log (1000/500) to compensate for the integration from 1MHz to 500kHz.

5 MHz / QPSK / CH56715 / 25RB0

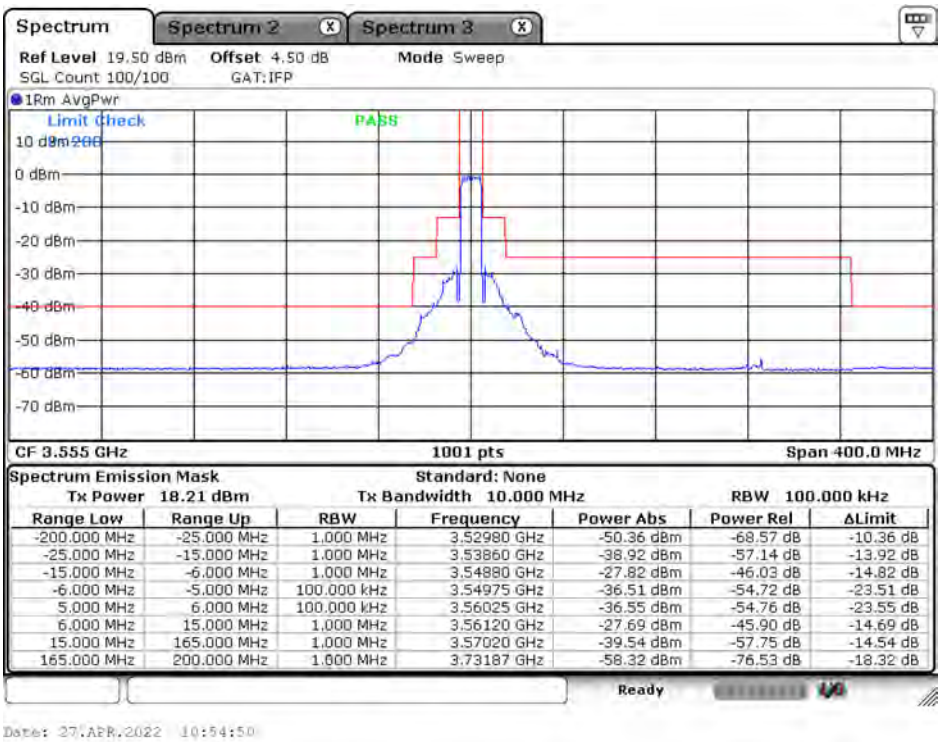


Note: From 3.5MHz to 7.5MHz reduce the limit further by 10*log (1000/500) to compensate for the integration from 1MHz to 500kHz.

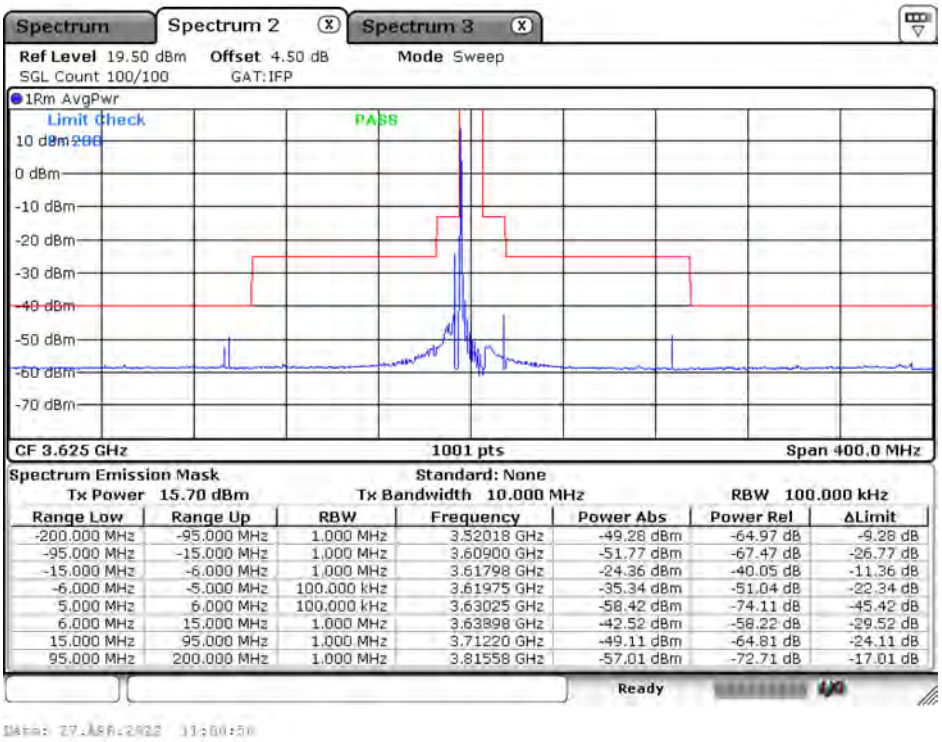
10 MHz / QPSK / CH55290 / 1RB0



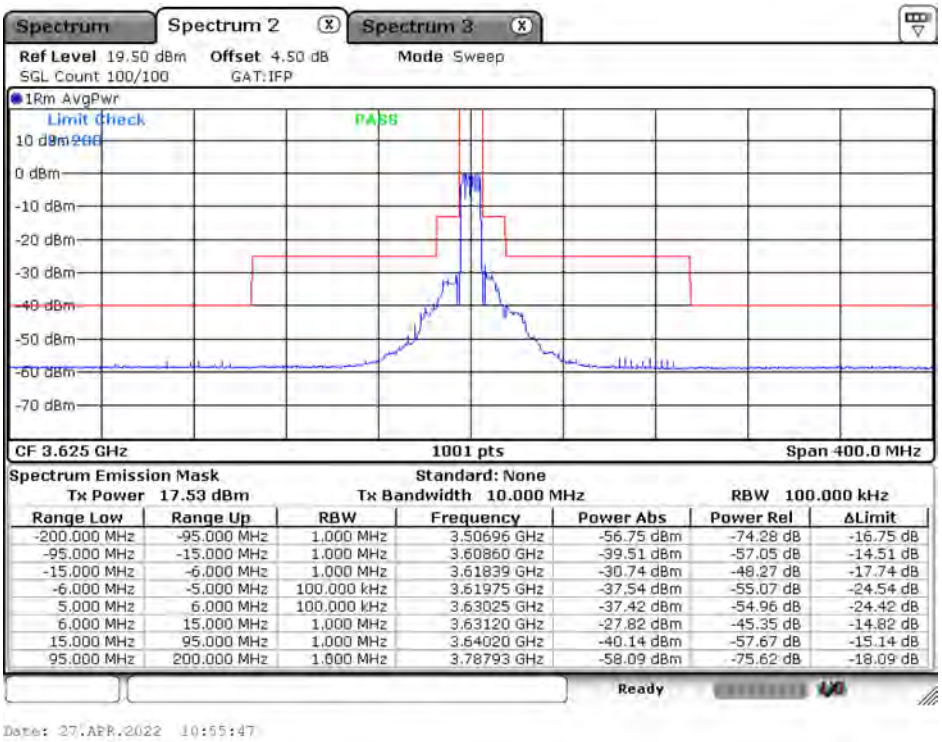
10 MHz / QPSK / CH55290 / 50RB0



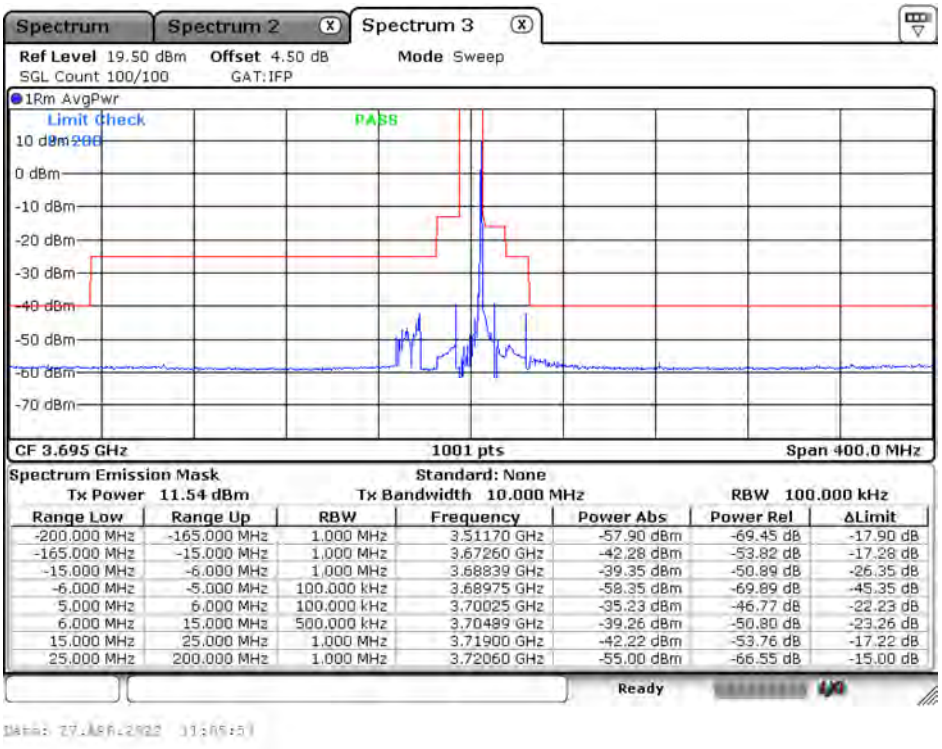
10 MHz / QPSK / CH55990 / 1RB0



10 MHz / QPSK / CH55990 / 50RB0

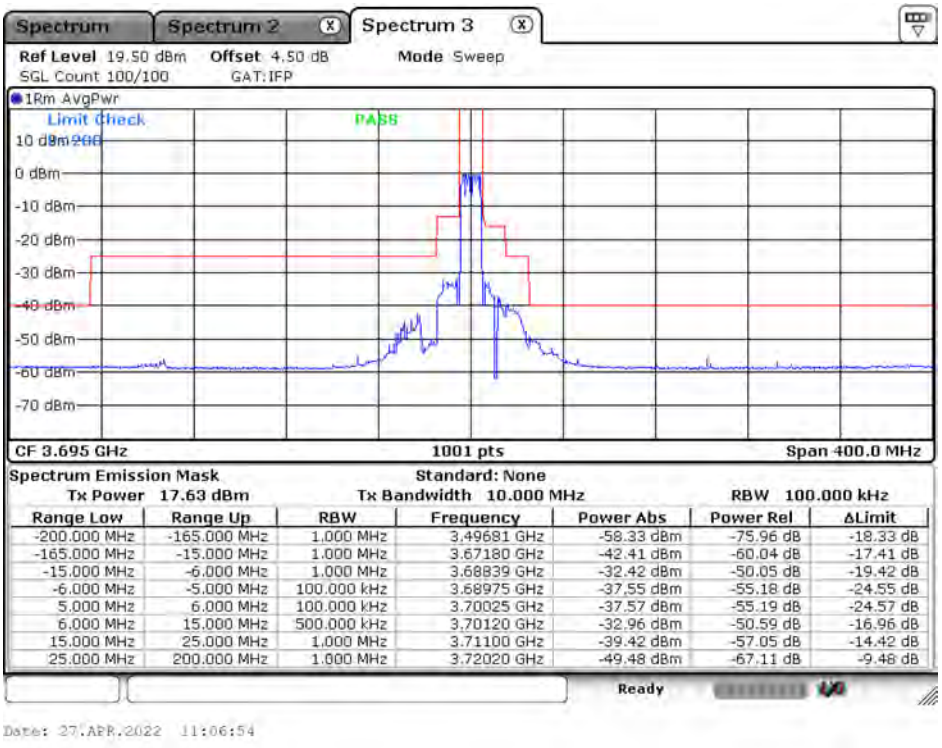


10 MHz / QPSK / CH56690 / 1RB49



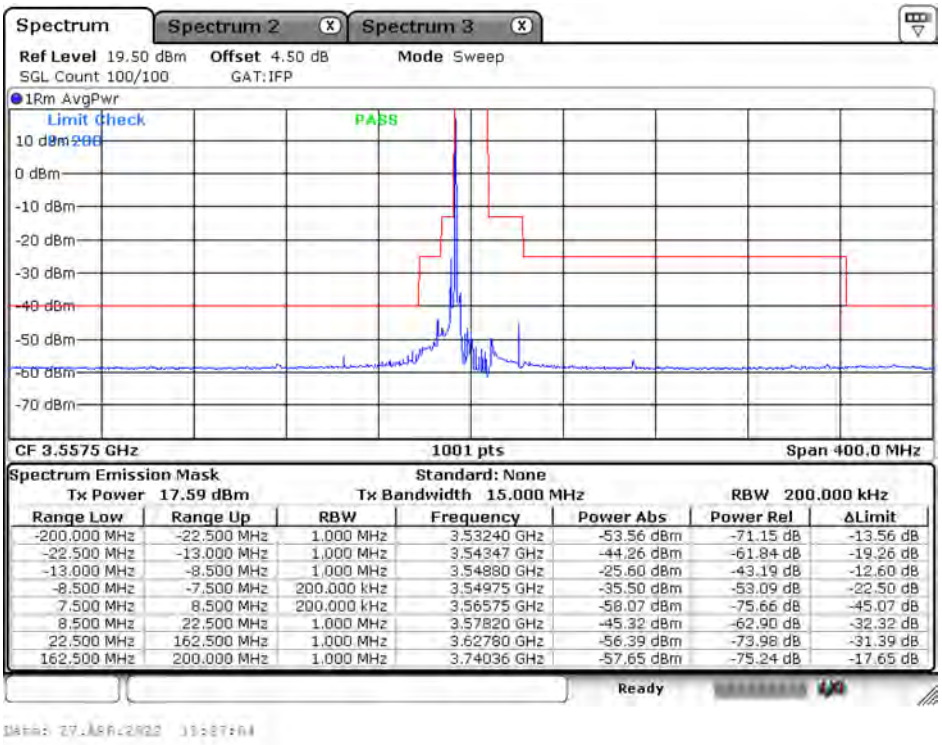
Note: From 6MHz to 15MHz reduce the limit further by 10*log (1000/500) to compensate for the integration from 1MHz to 500kHz.

10 MHz / QPSK / CH56690 / 50RB0

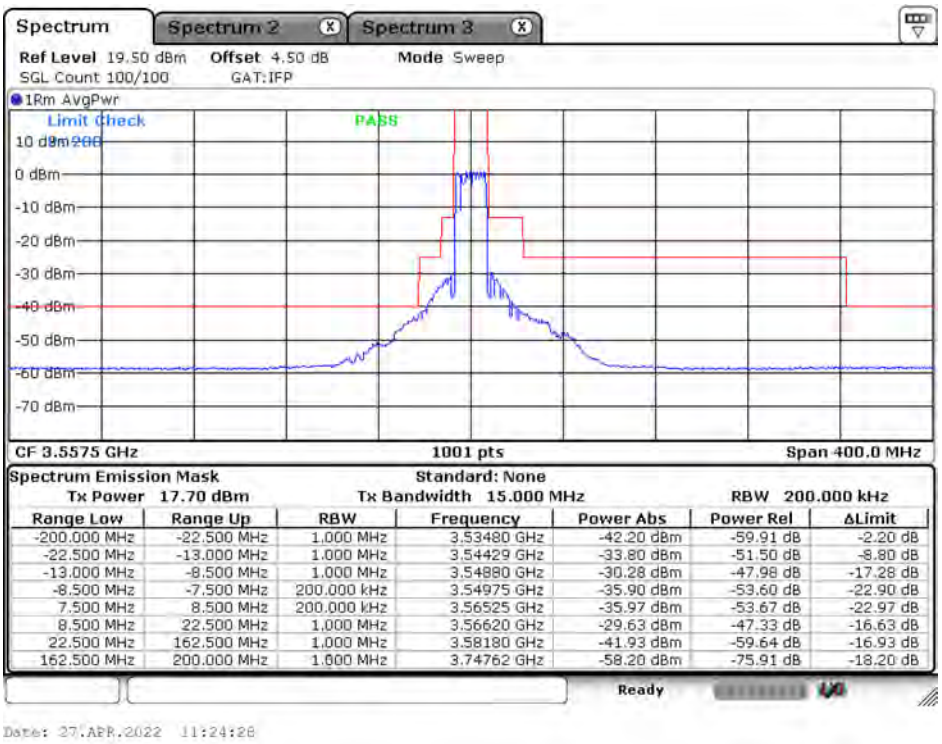


Note: From 6MHz to 15MHz reduce the limit further by 10*log (1000/500) to compensate for the integration from 1MHz to 500kHz.

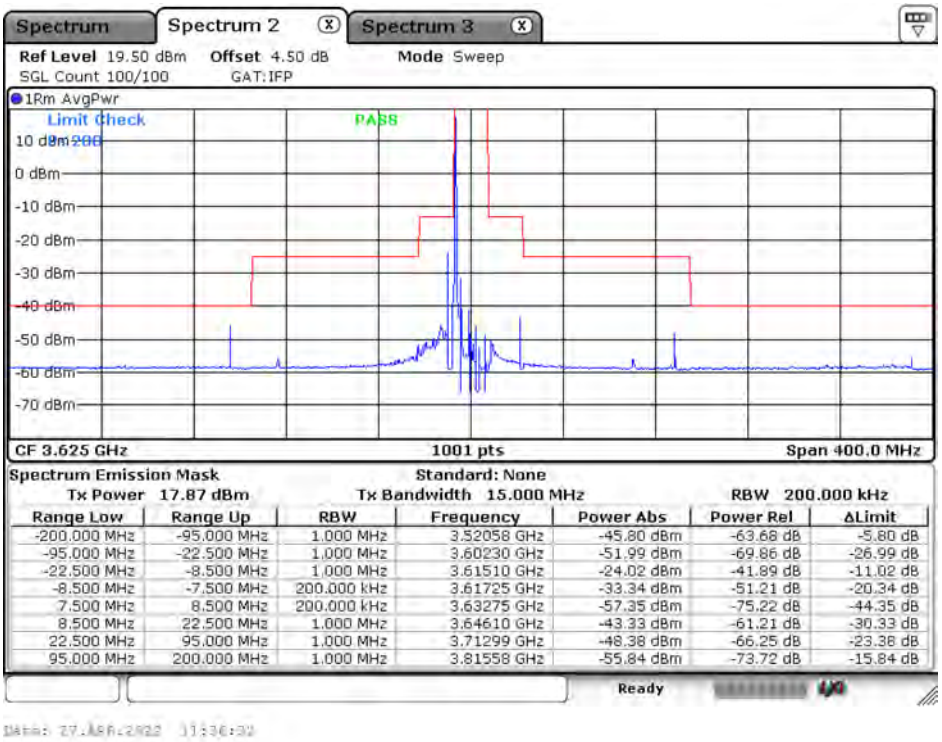
15 MHz / QPSK / CH55315 / 1RB0



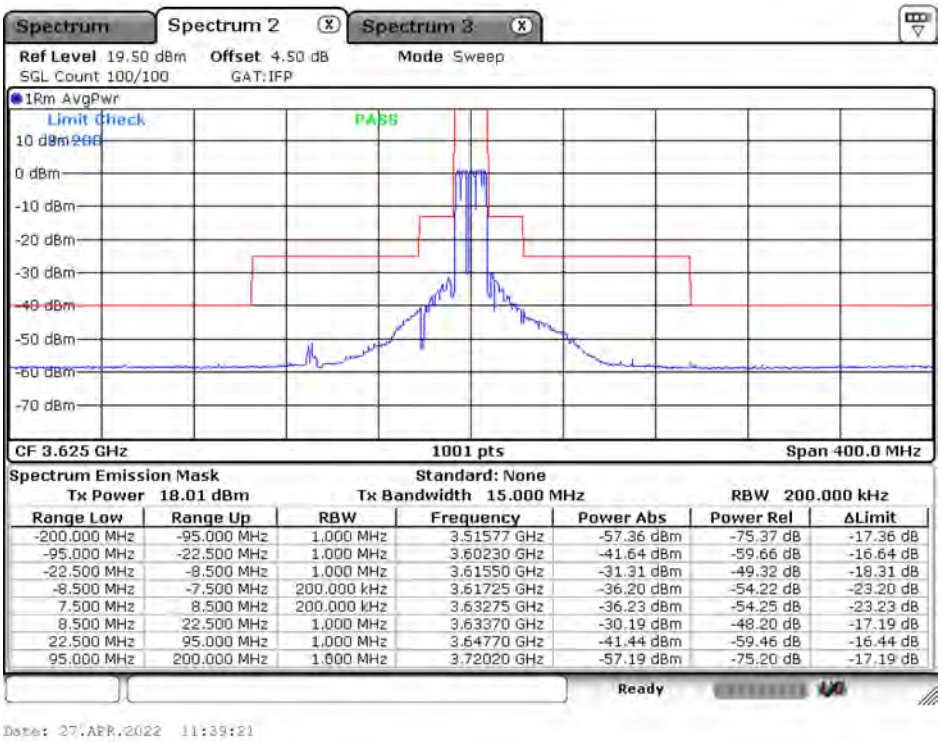
15 MHz / QPSK / CH55315 / 75RB0



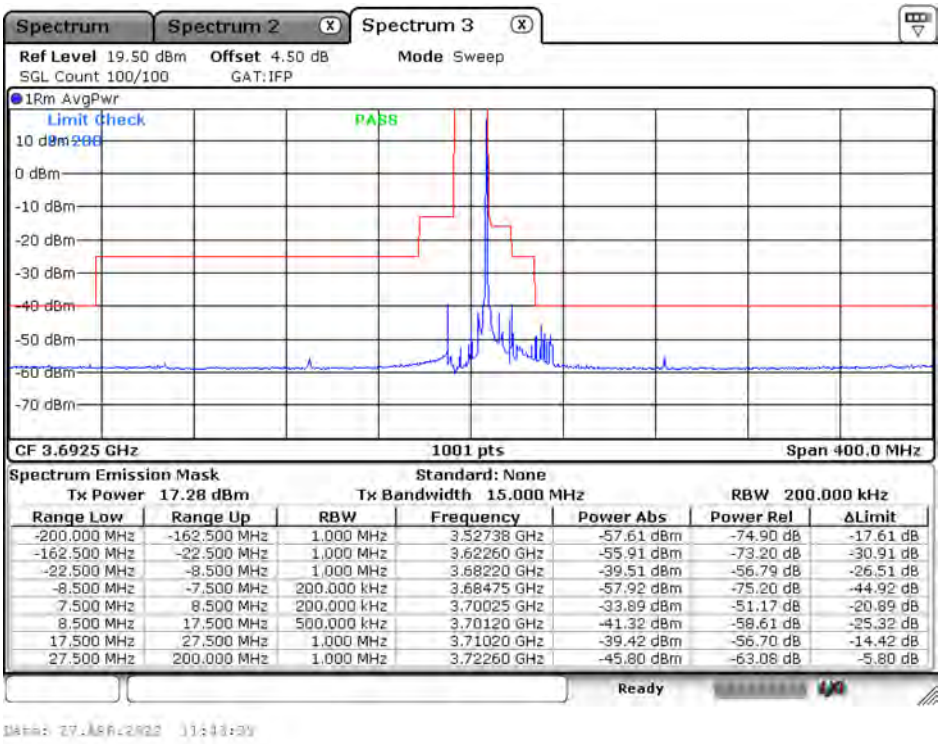
15 MHz / QPSK / CH55990 / 1RB0



15 MHz / QPSK / CH55990 / 75RB0

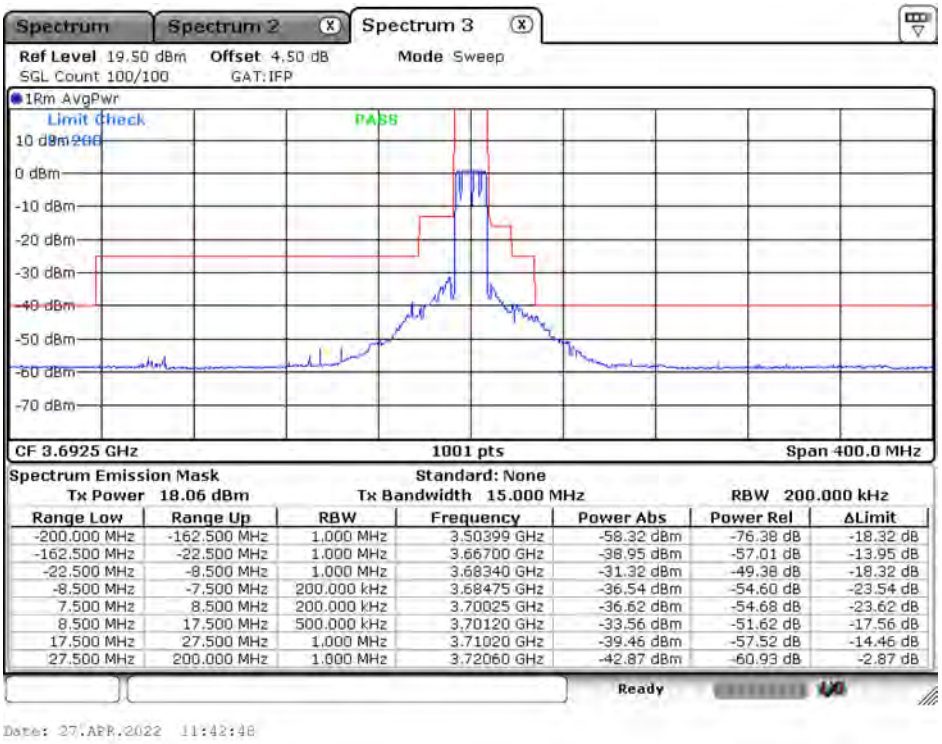


15 MHz / QPSK / CH56665 / 1RB74



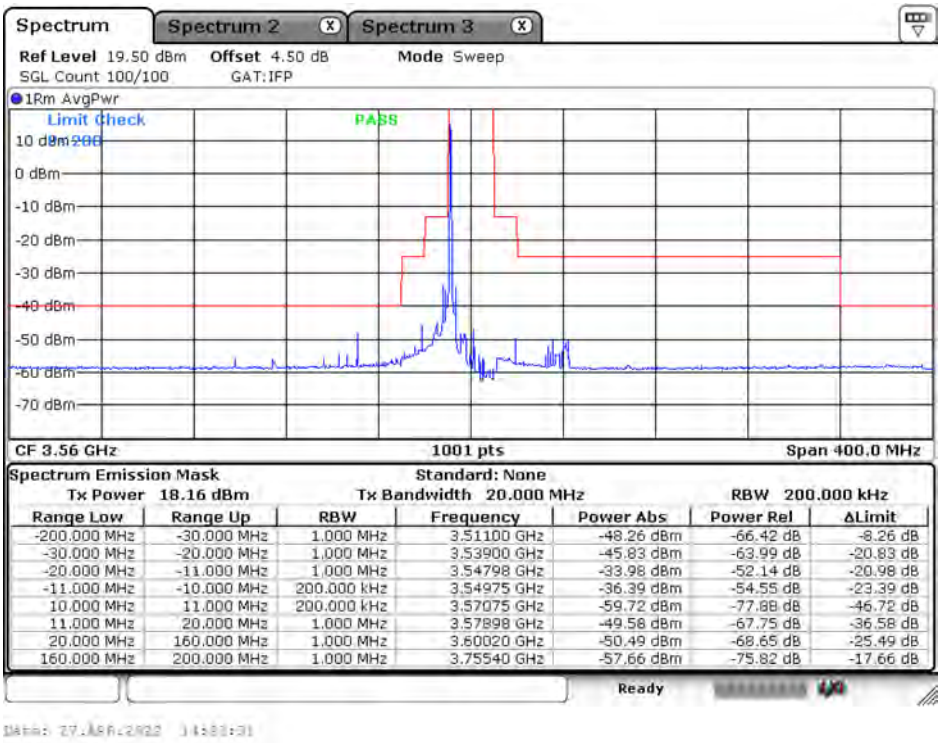
Note: From 8.5MHz to 17.5MHz reduce the limit further by 10*log (1000/500) to compensate for the integration from 1MHz to 500kHz.

15 MHz / QPSK / CH56665 / 75RB0

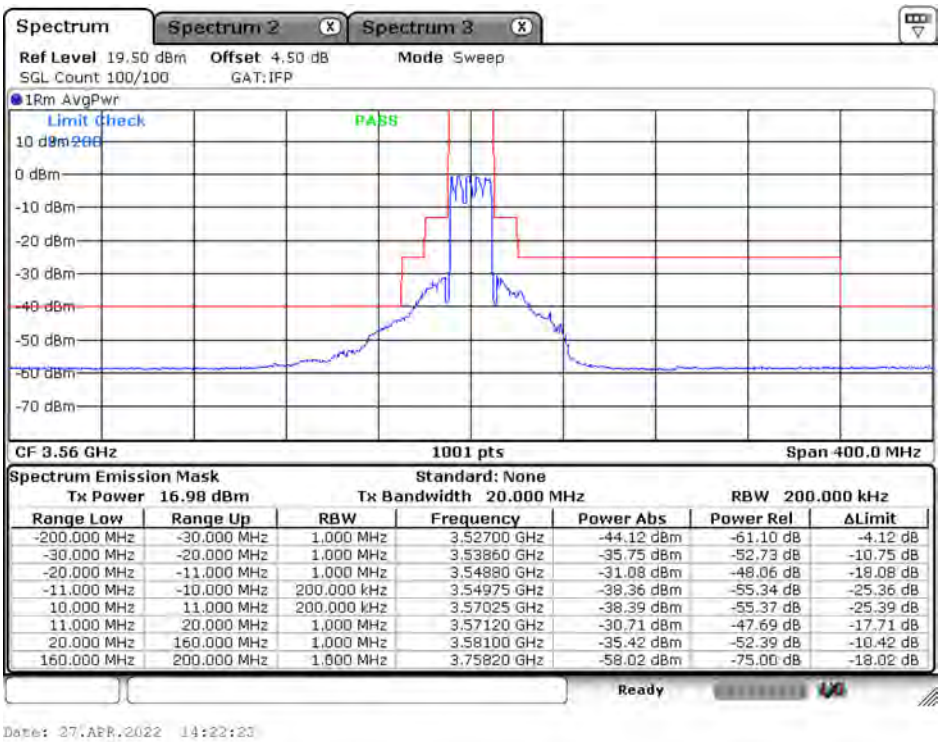


Note: From 8.5MHz to 17.5MHz reduce the limit further by 10*log (1000/500) to compensate for the integration from 1MHz to 500kHz.

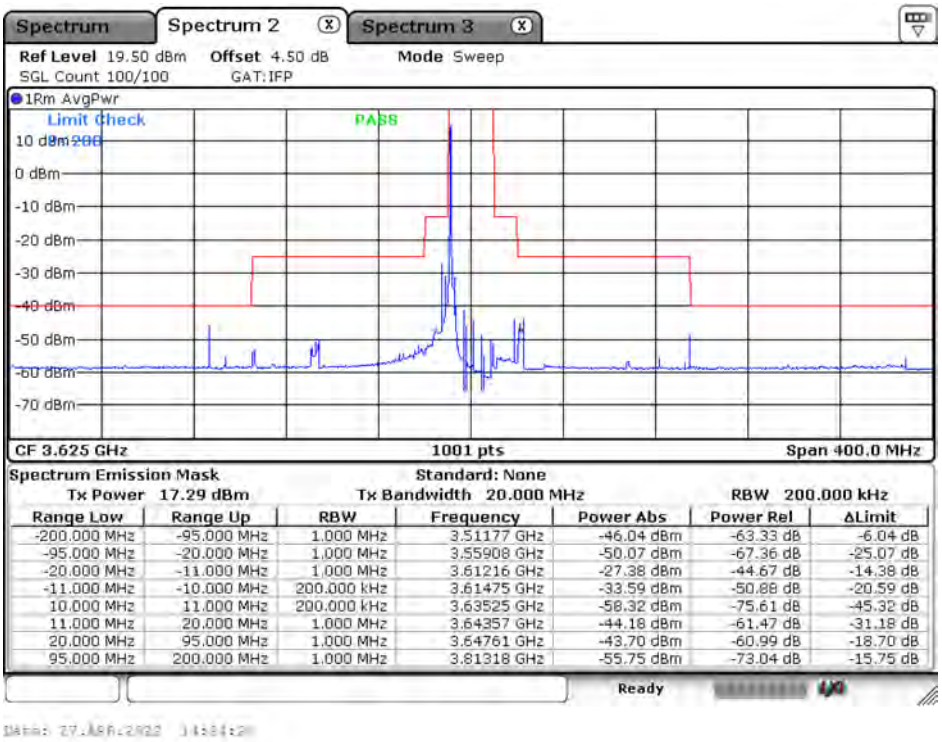
20 MHz / QPSK / CH55340 / 1RB0



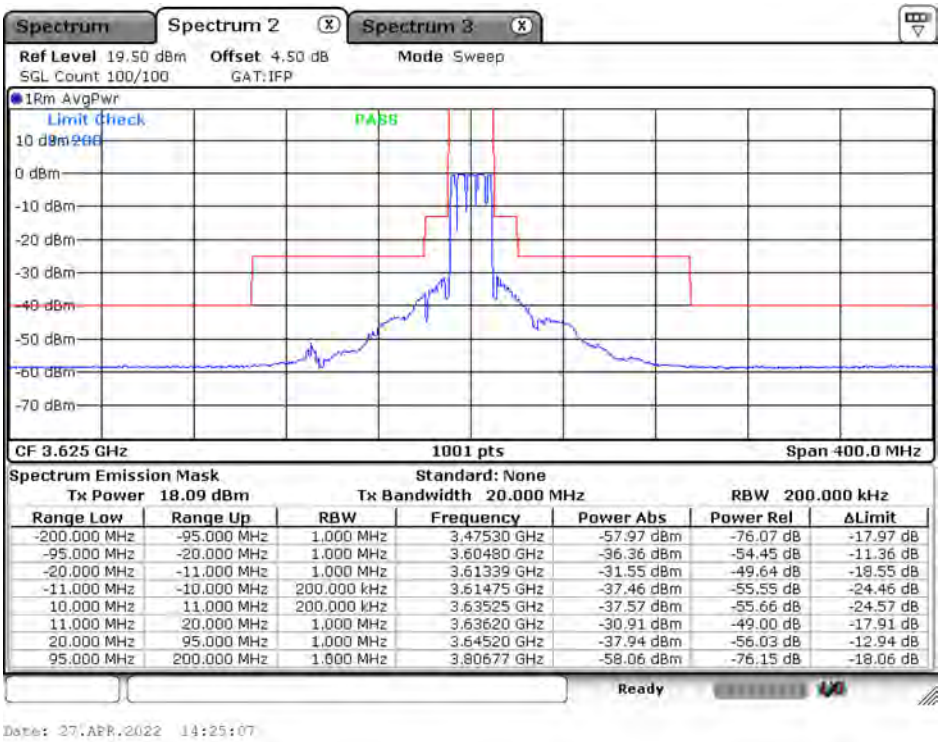
20 MHz / QPSK / CH55340 / 100RB0



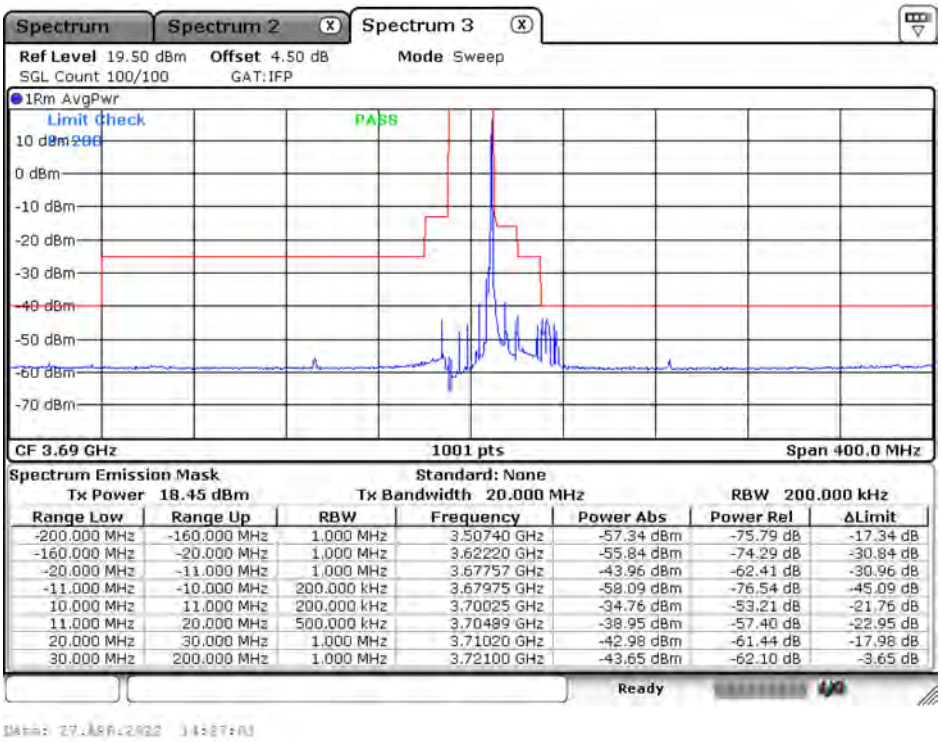
20 MHz / QPSK / CH55990 / 1RB0



20 MHz / QPSK / CH55990 / 100RB0

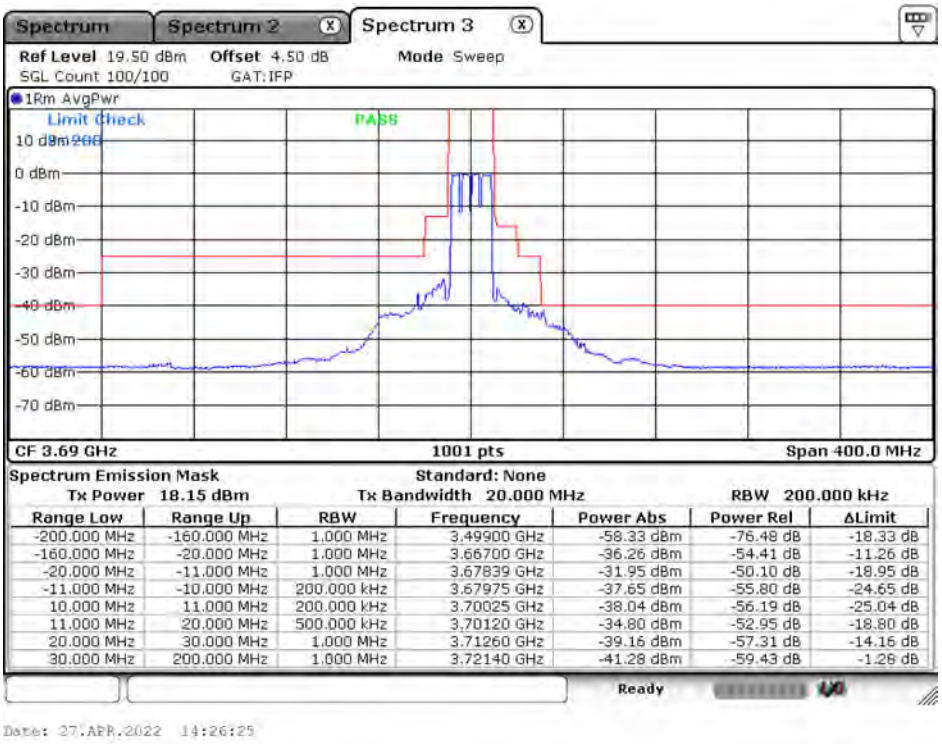


20 MHz / QPSK / CH56640 / 1RB99



Note: From 11MHz to 20MHz reduce the limit further by 10*log (1000/500) to compensate for the integration from 1MHz to 500kHz.

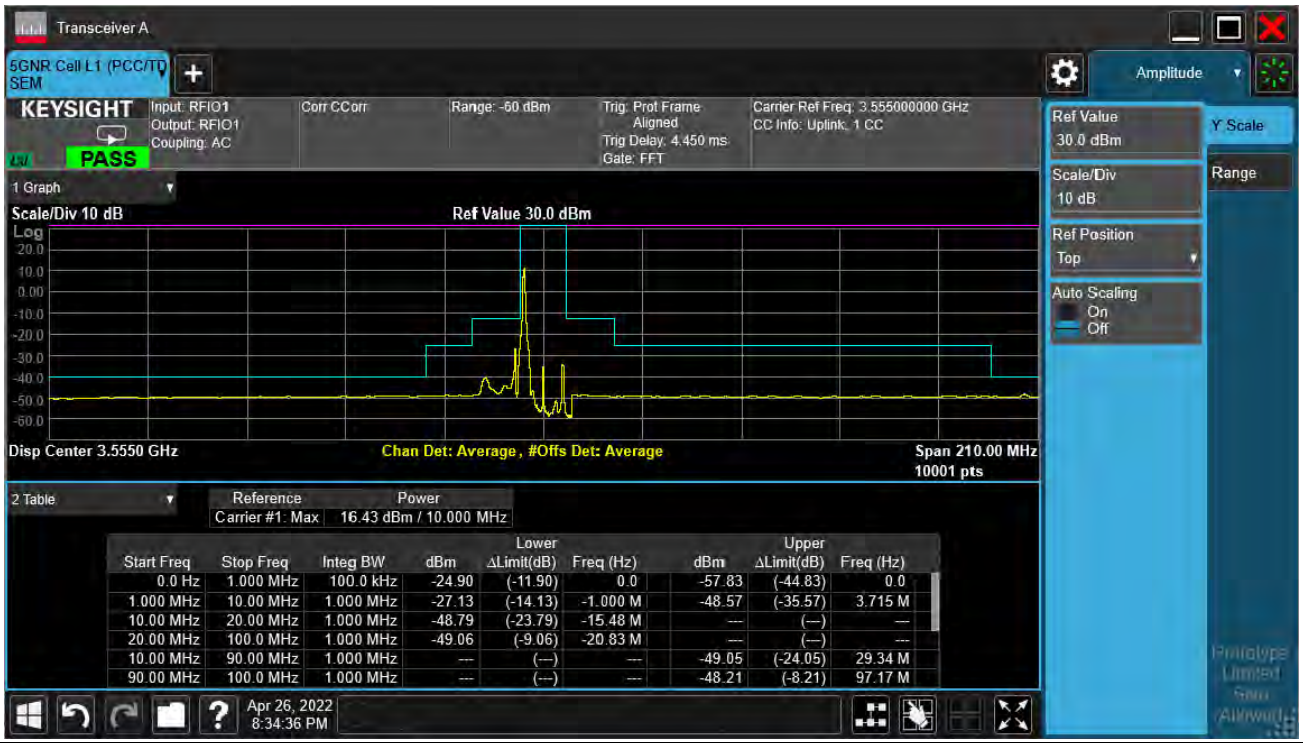
20 MHz / QPSK / CH56640 / 100RB0



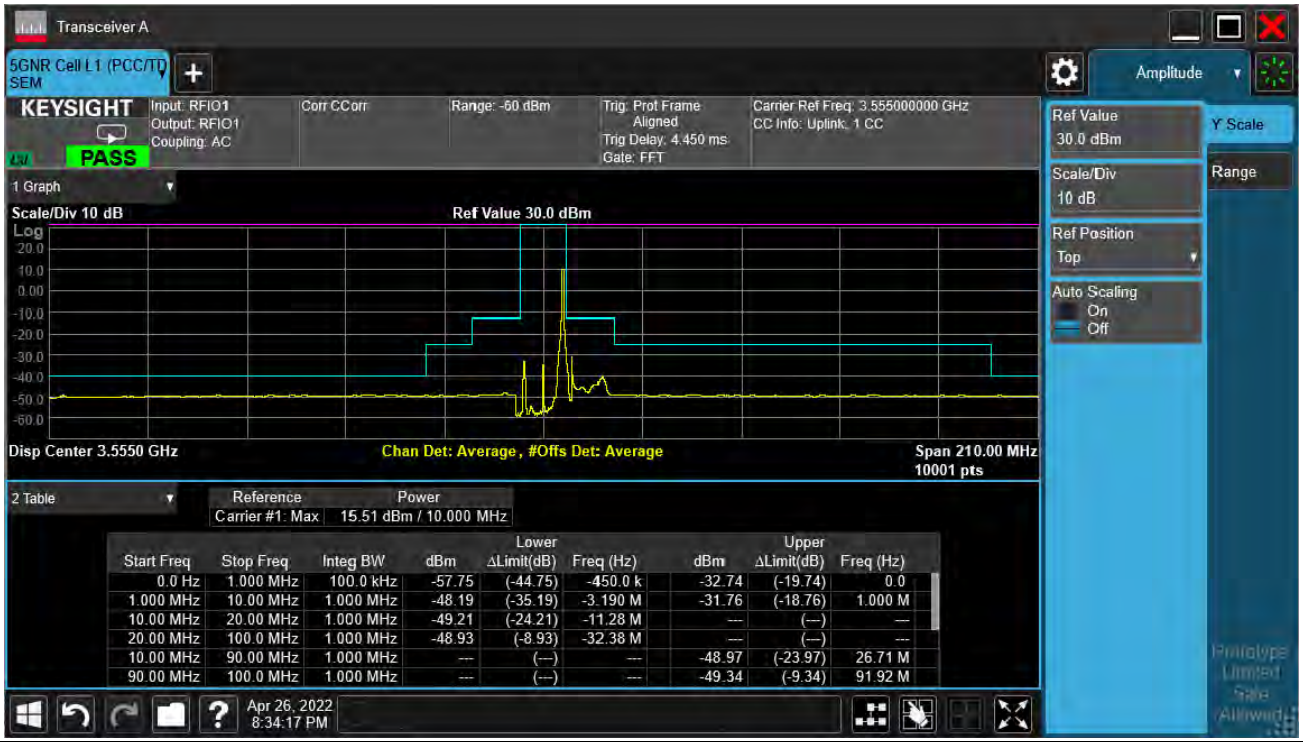
Note: From 11MHz to 20MHz reduce the limit further by 10*log (1000/500) to compensate for the integration from 1MHz to 500kHz.

Mode 2: 5G NR n48

10 MHz / pi/2 BPSK / CH637000 / 1RB0

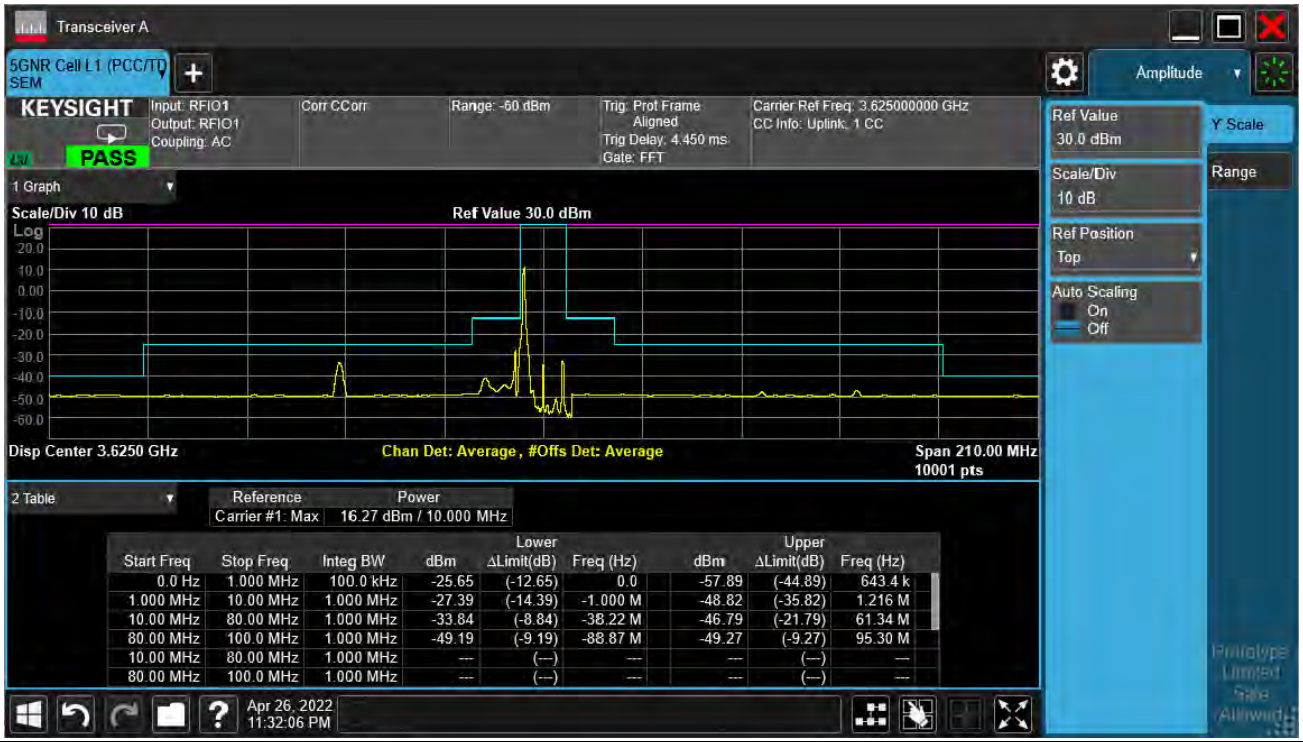


10 MHz / pi/2 BPSK / CH637000 / 1RB23

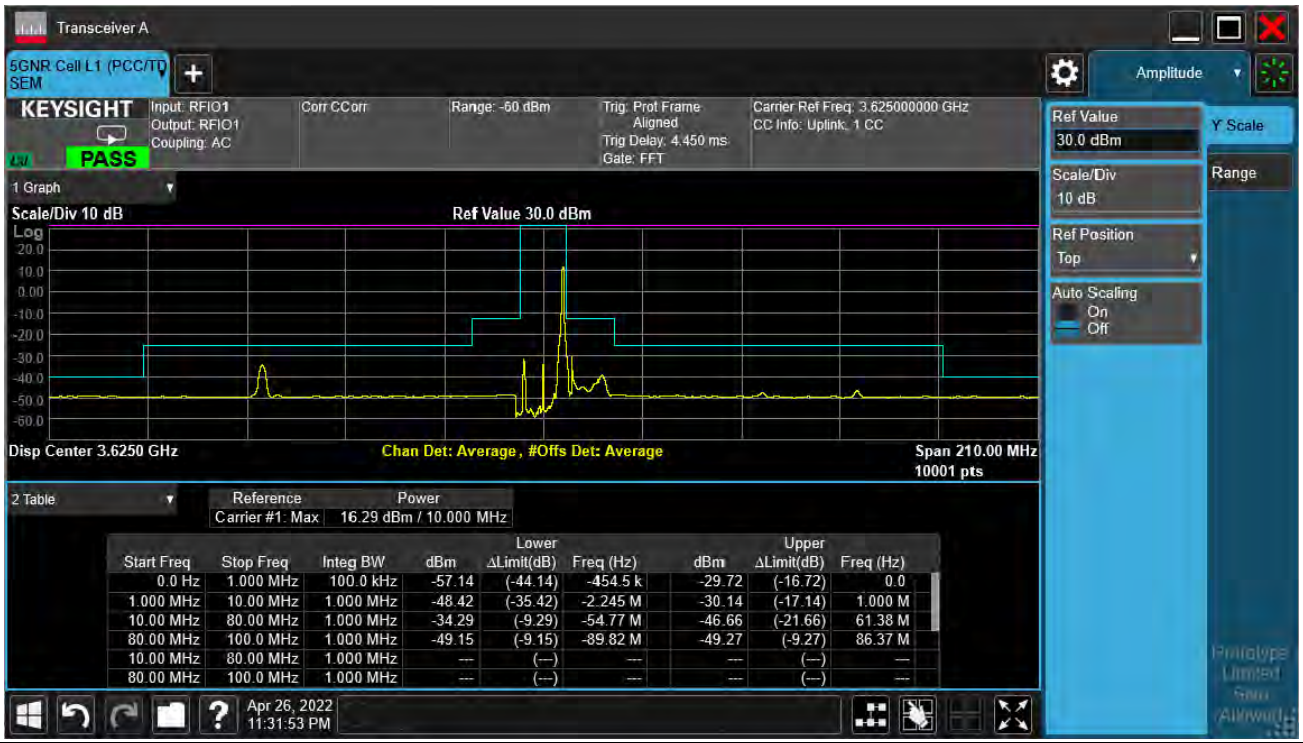


10 MHz / pi/2 BPSK / CH637000 / 24RB0

10 MHz / pi/2 BPSK / CH641666 / 1RB0

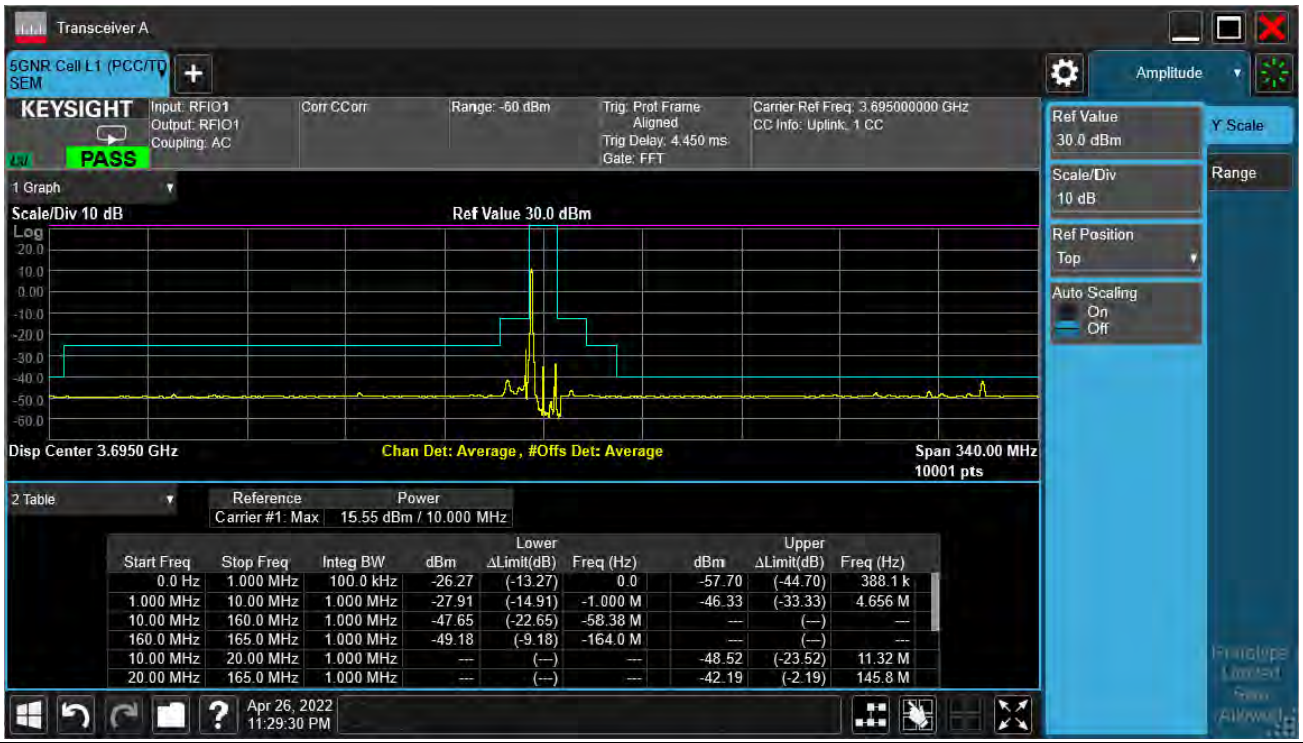


10 MHz / pi/2 BPSK / CH641666 / 1RB23

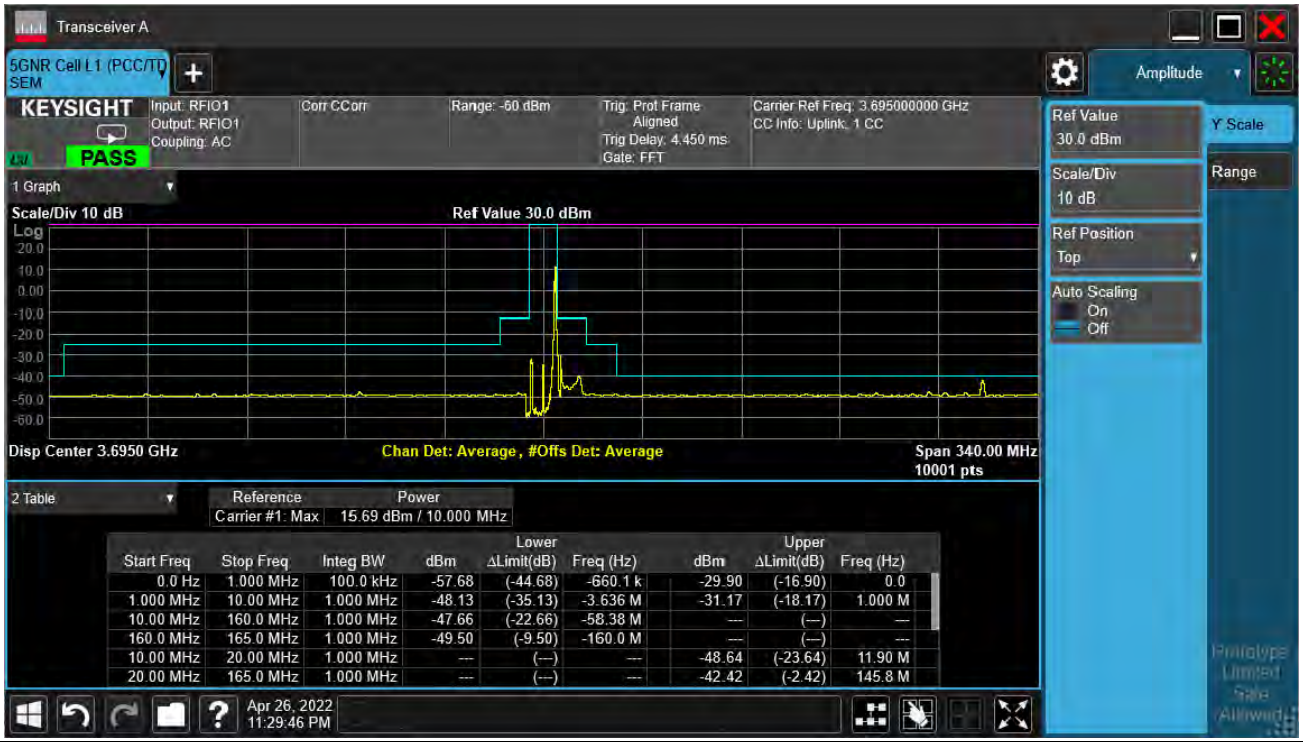


10 MHz / pi/2 BPSK / CH641666 / 24RB0

10 MHz / pi/2 BPSK / CH646332 / 1RB0



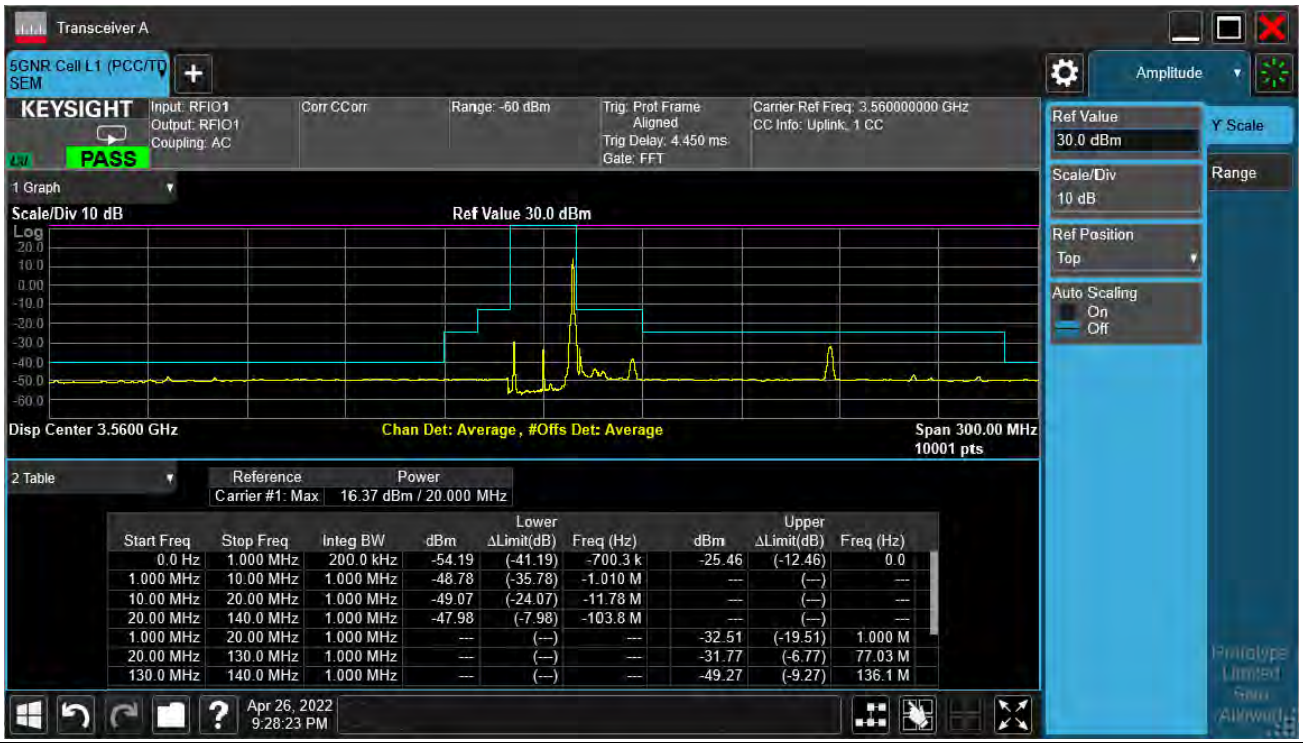
10 MHz / pi/2 BPSK / CH646332 / 1RB23



10 MHz / pi/2 BPSK / CH646332 / 24RB0

20 MHz / pi/2 BPSK / CH637334 / 1RB0

20 MHz / pi/2 BPSK / CH637334 / 1RB50

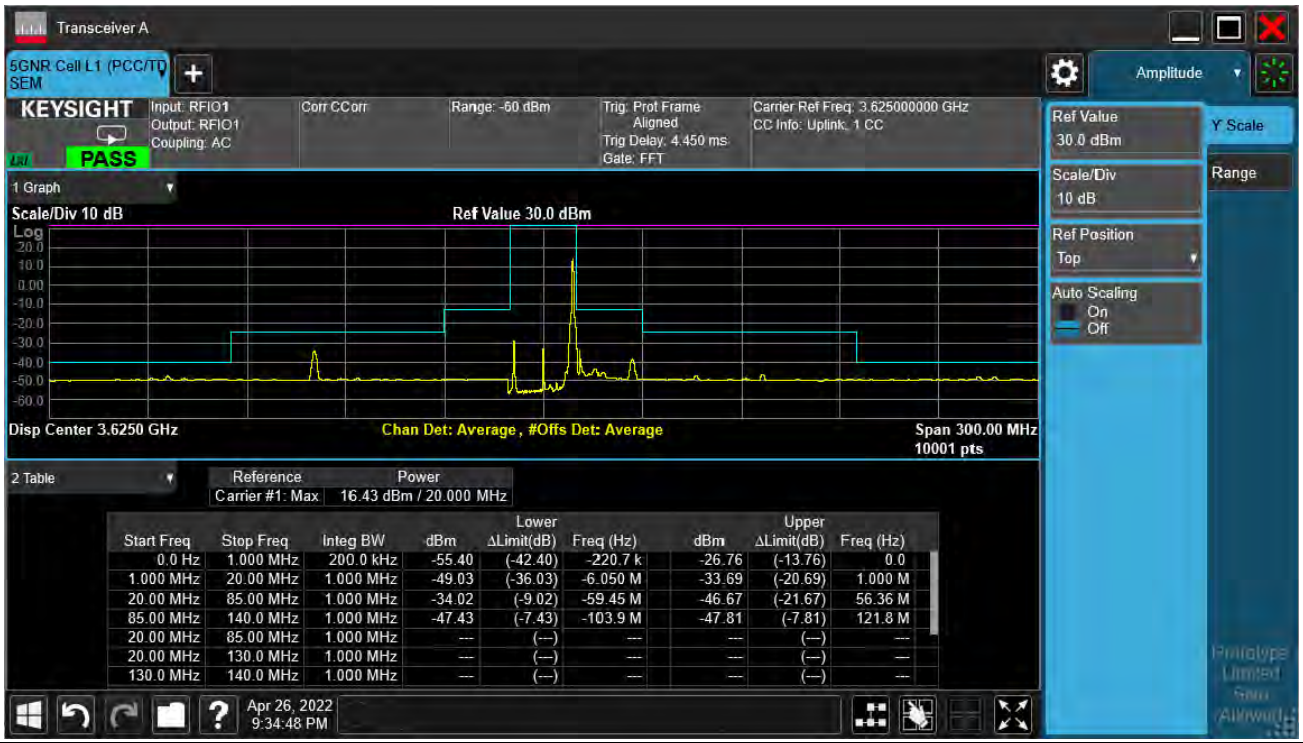


20 MHz / pi/2 BPSK / CH637334 / 50RB0

20 MHz / pi/2 BPSK / CH637334 / 50RB1

20 MHz / pi/2 BPSK / CH641666 / 1RB0

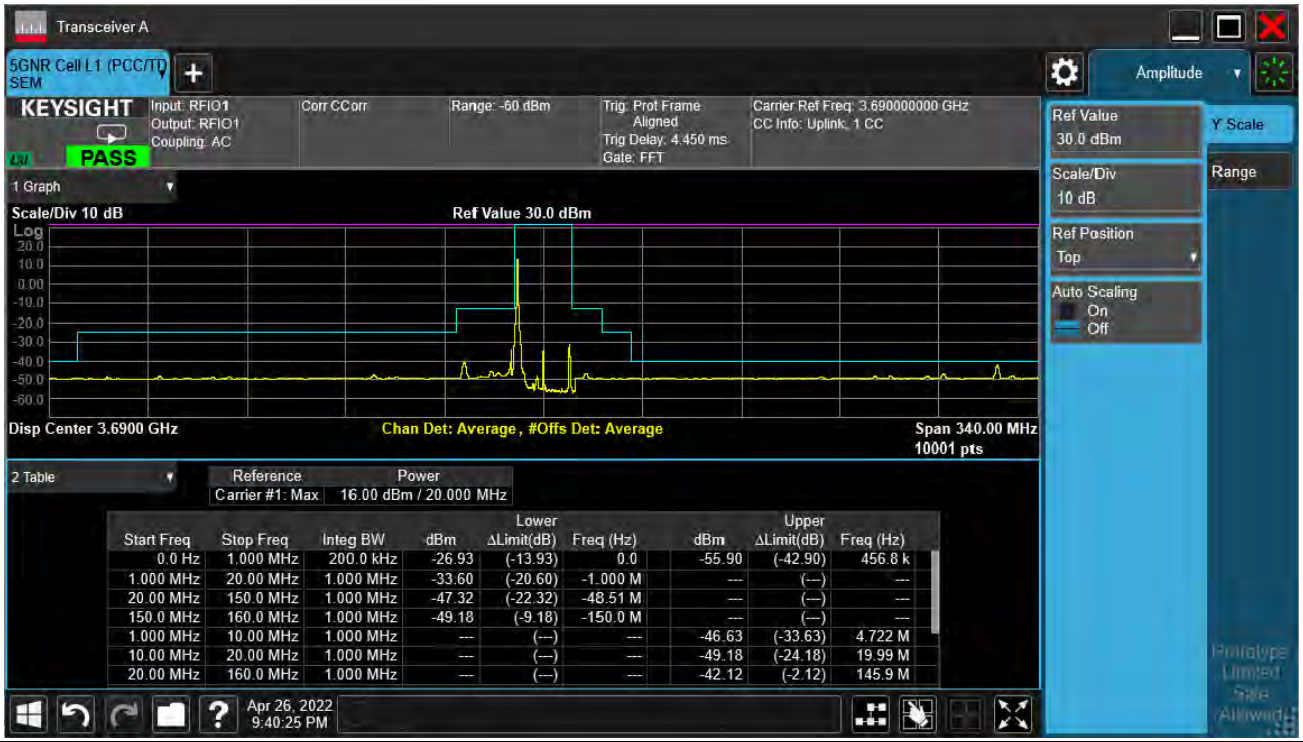
20 MHz / pi/2 BPSK / CH641666 / 1RB50



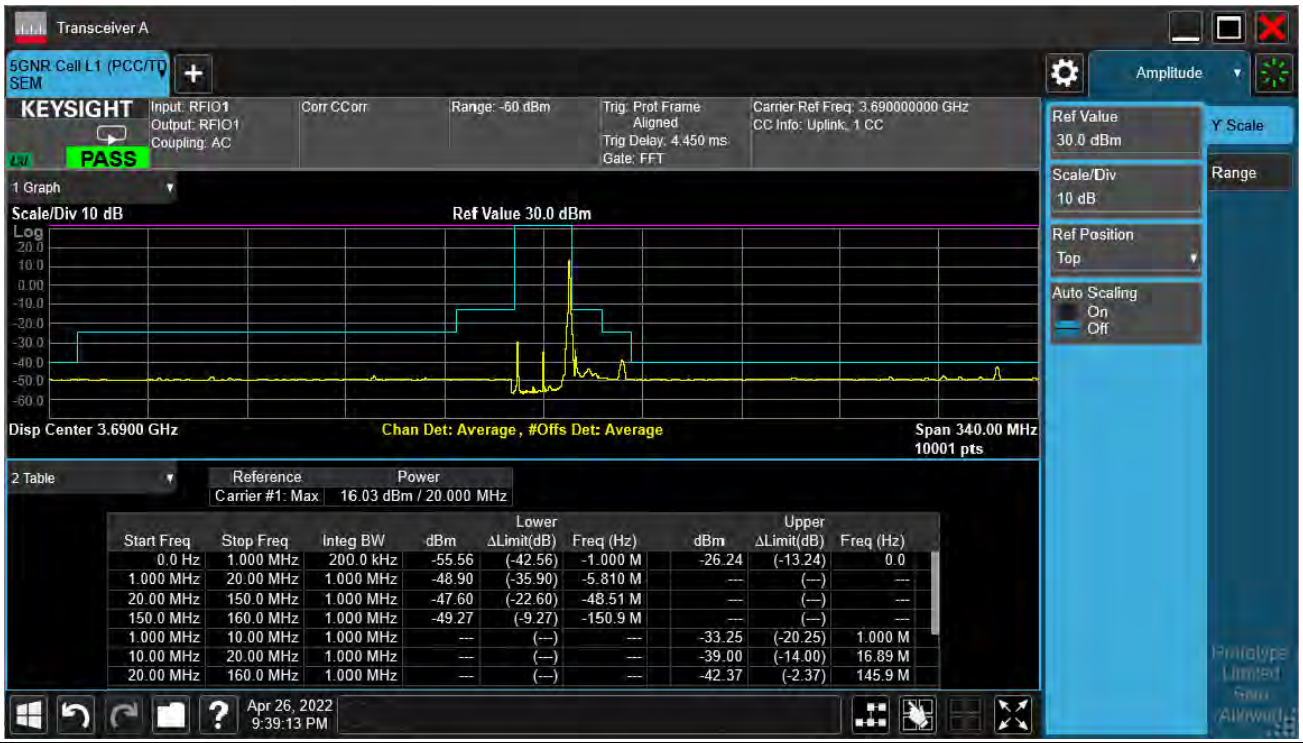
20 MHz / pi/2 BPSK / CH641666 / 50RB0

20 MHz / pi/2 BPSK / CH641666 / 50RB1

20 MHz / pi/2 BPSK / CH646000 / 1RB0



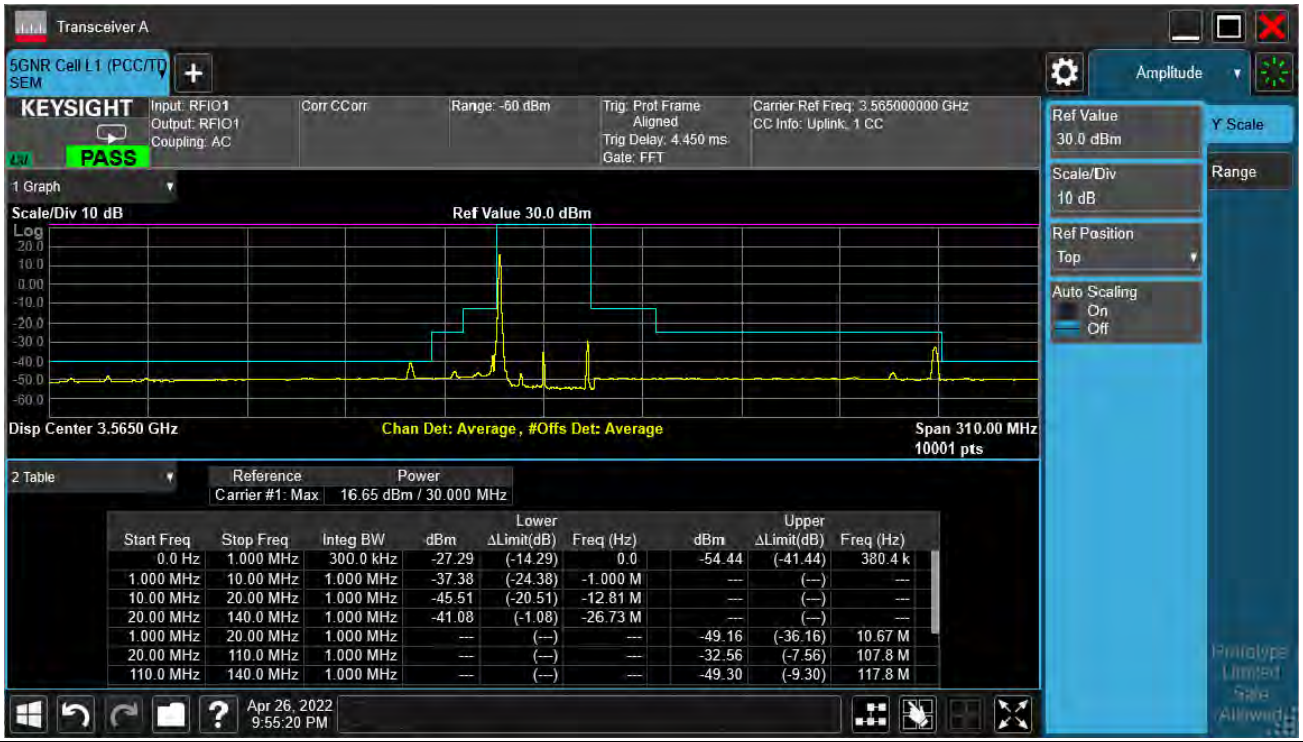
20 MHz / pi/2 BPSK / CH646000 / 1RB50



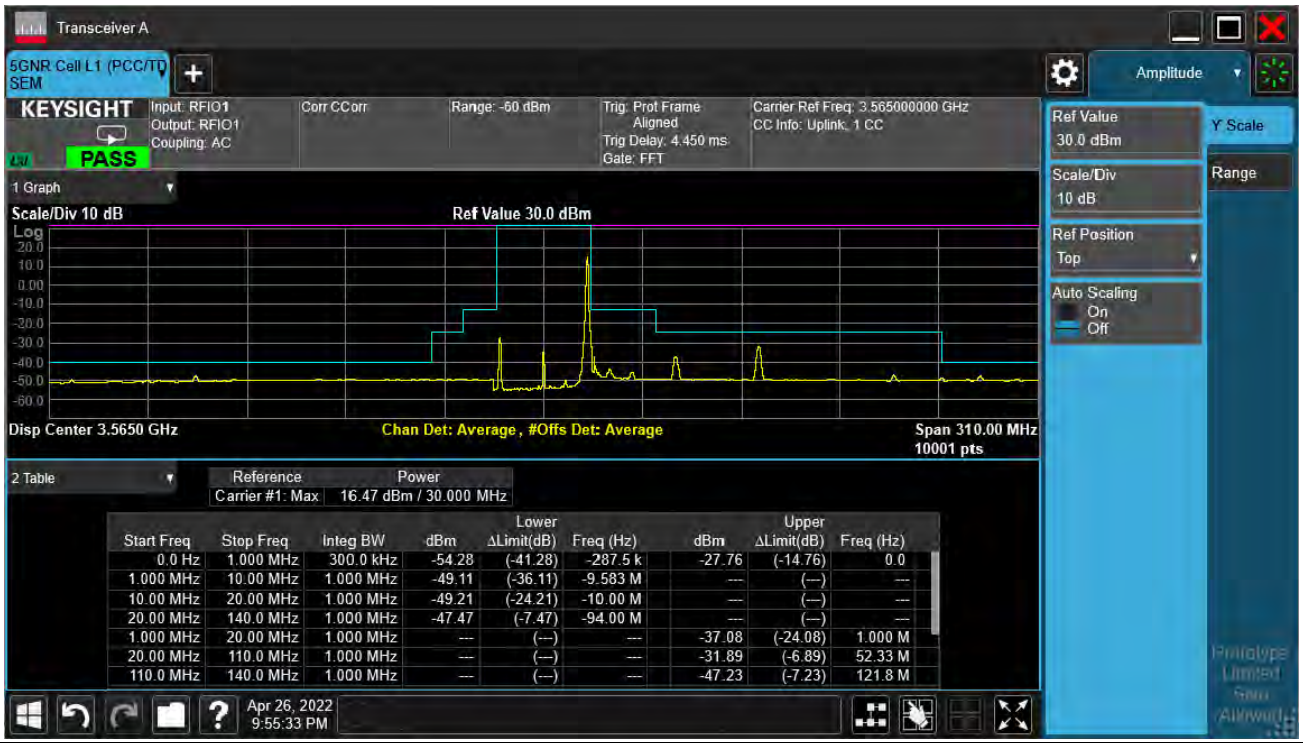
20 MHz / pi/2 BPSK / CH646000 / 50RB0

20 MHz / pi/2 BPSK / CH646000 / 50RB1

30 MHz / pi/2 BPSK / CH637688 / 1RB0



30 MHz / pi/2 BPSK / CH637688 / 1RB77

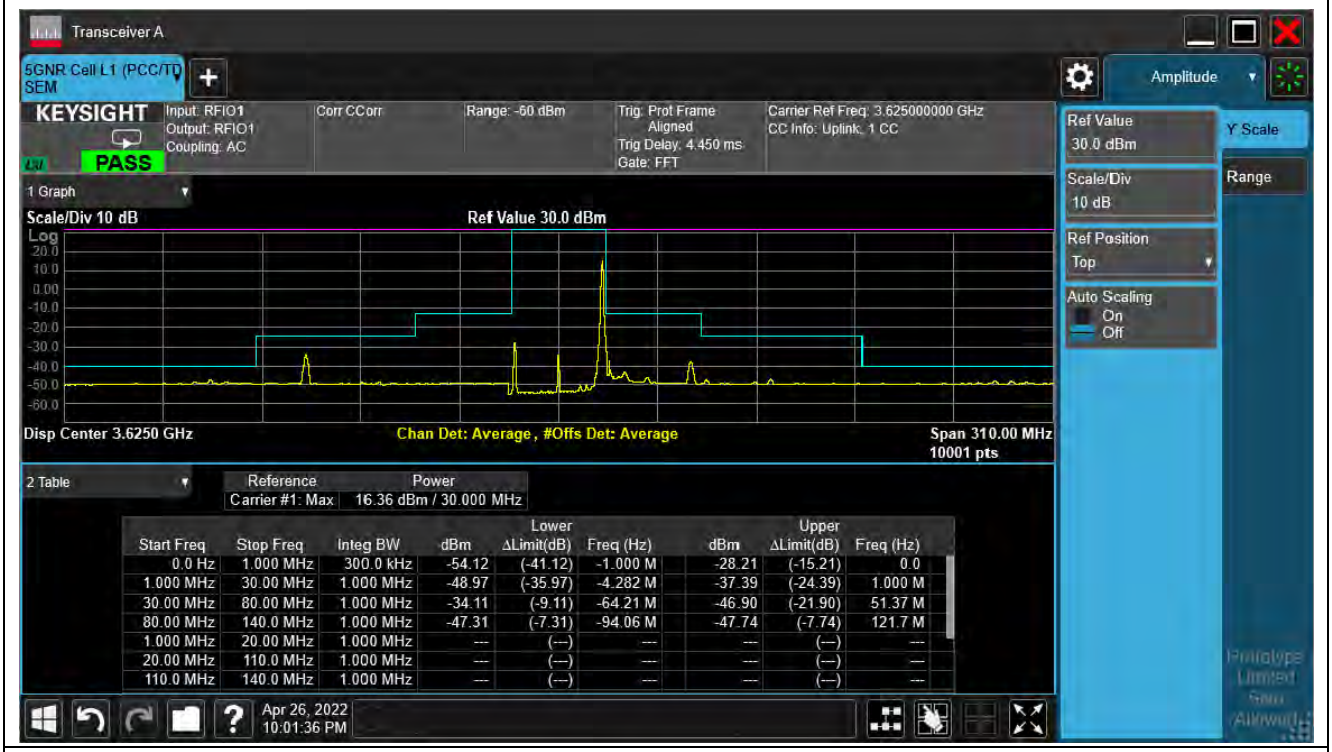


30 MHz / pi/2 BPSK / CH637688 / 75RB0

30 MHz / pi/2 BPSK / CH637688 / 75RB3

30 MHz / pi/2 BPSK / CH641666 / 1RB0

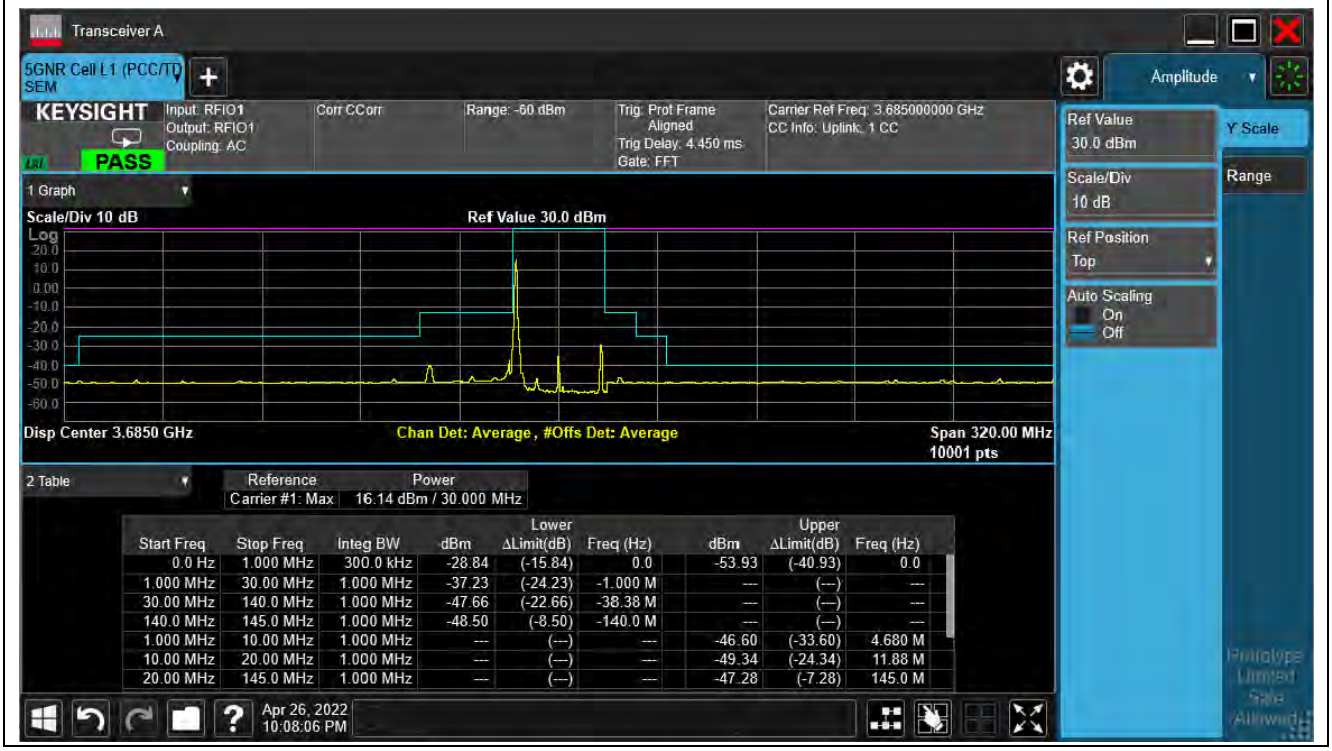
30 MHz / pi/2 BPSK / CH641666 / 1RB77



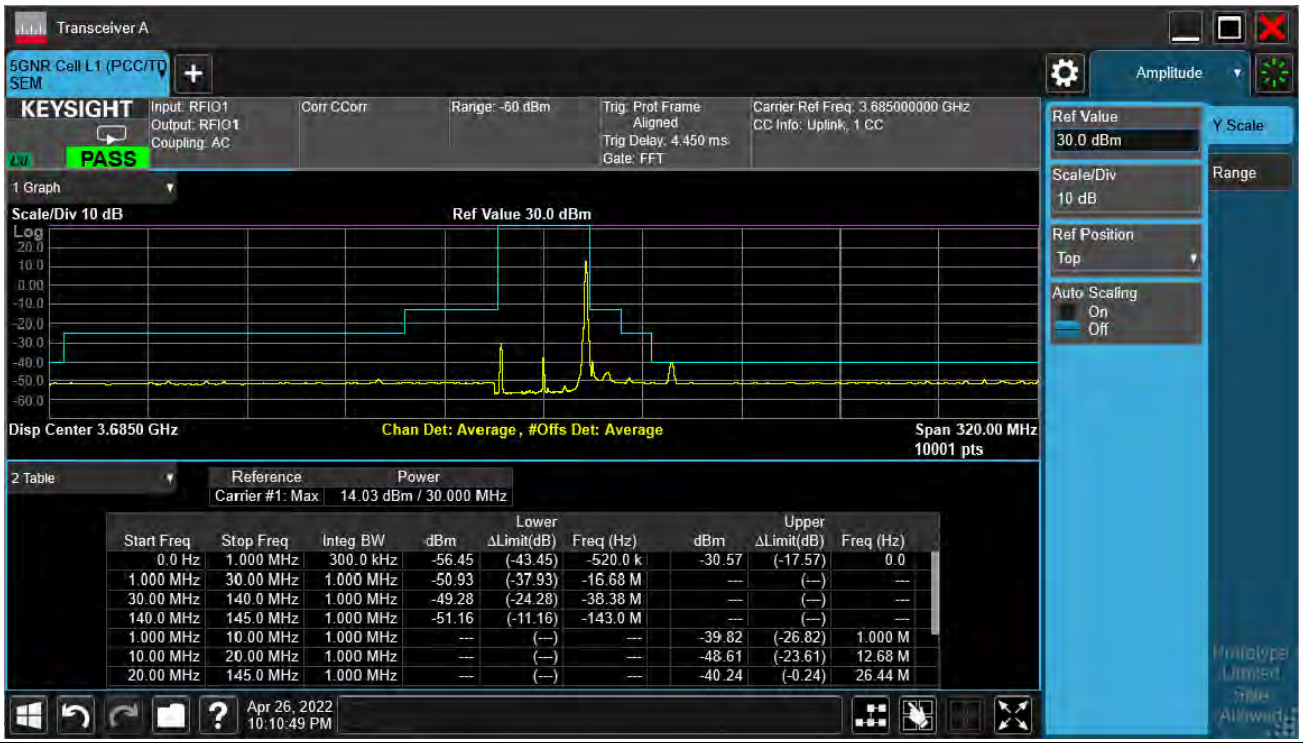
30 MHz / pi/2 BPSK / CH641666 / 75RB0

30 MHz / pi/2 BPSK / CH641666 / 75RB3

30 MHz / pi/2 BPSK / CH645666 / 1RB0



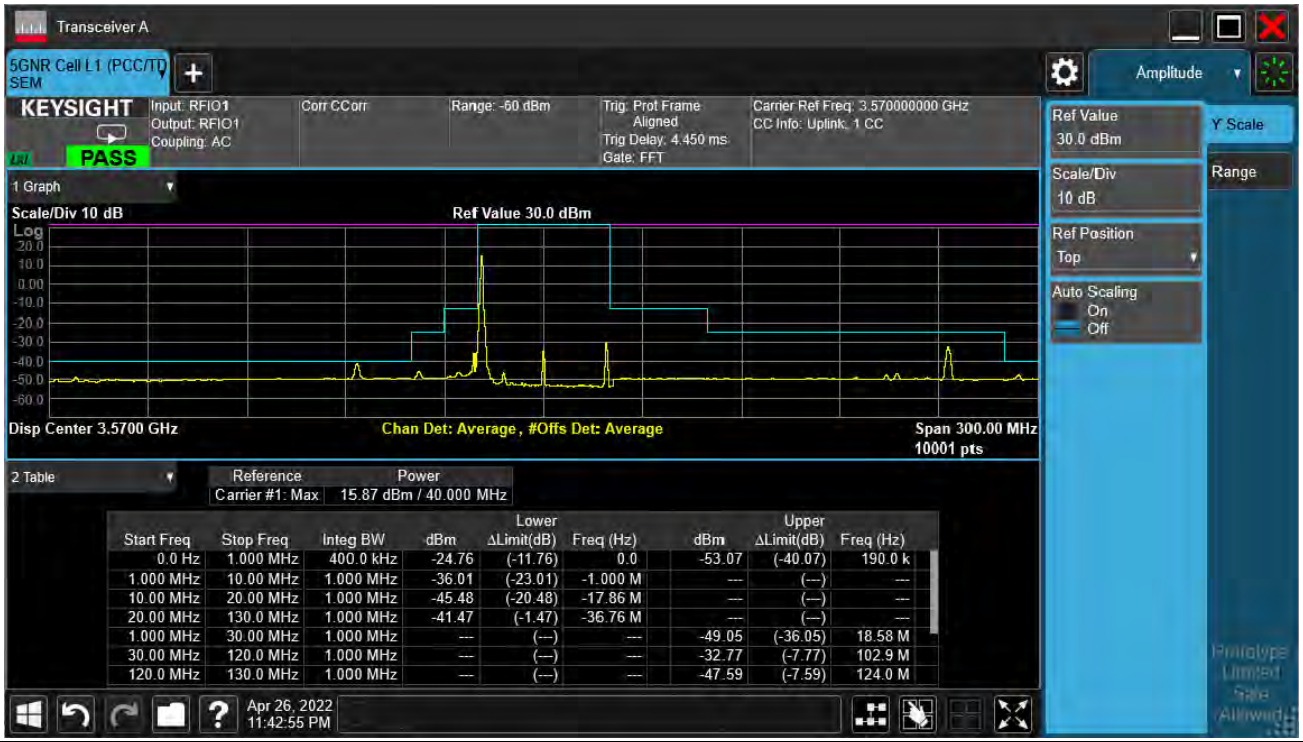
30 MHz / pi/2 BPSK / CH645666 / 1RB77



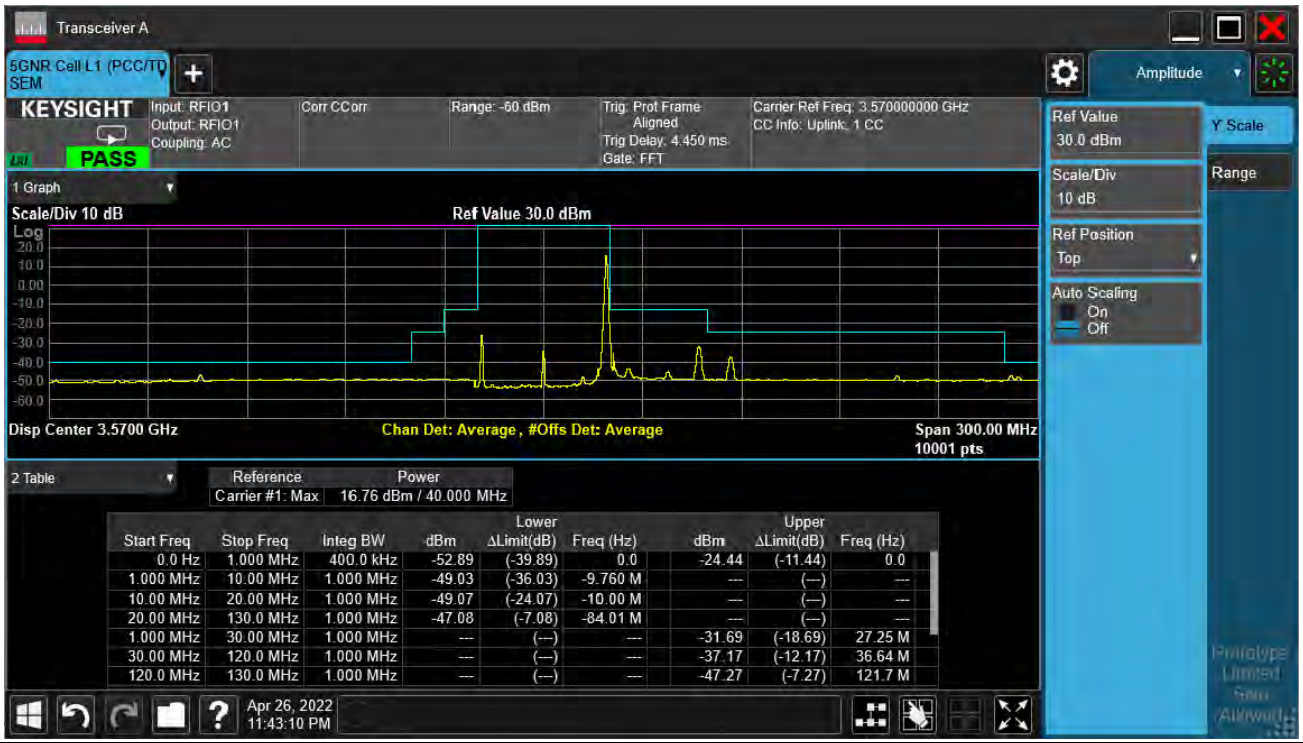
30 MHz / pi/2 BPSK / CH645666 / 75RB0

30 MHz / pi/2 BPSK / CH645666 / 75RB3

40 MHz / pi/2 BPSK / CH638000 / 1RB0



40 MHz / pi/2 BPSK / CH638000 / 1RB105

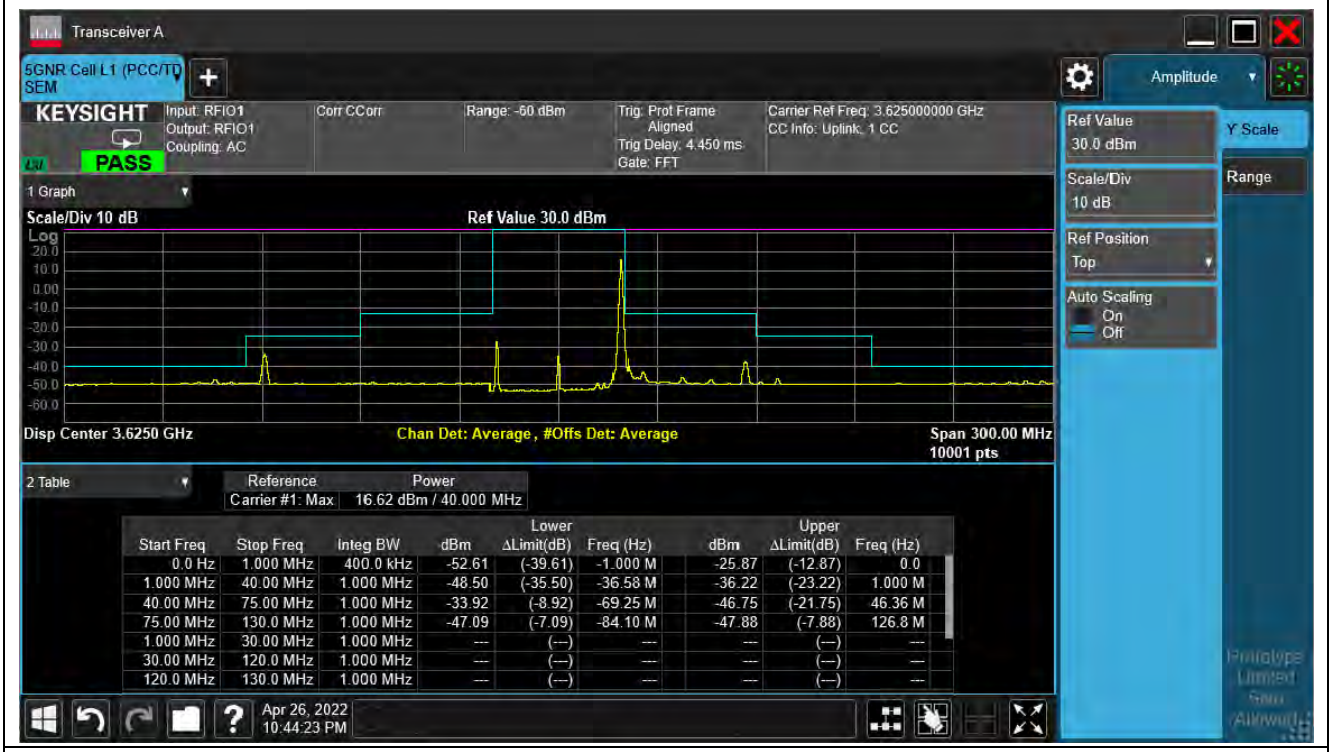


40 MHz / pi/2 BPSK / CH638000 / 100RB0

40 MHz / pi/2 BPSK / CH638000 / 100RB6

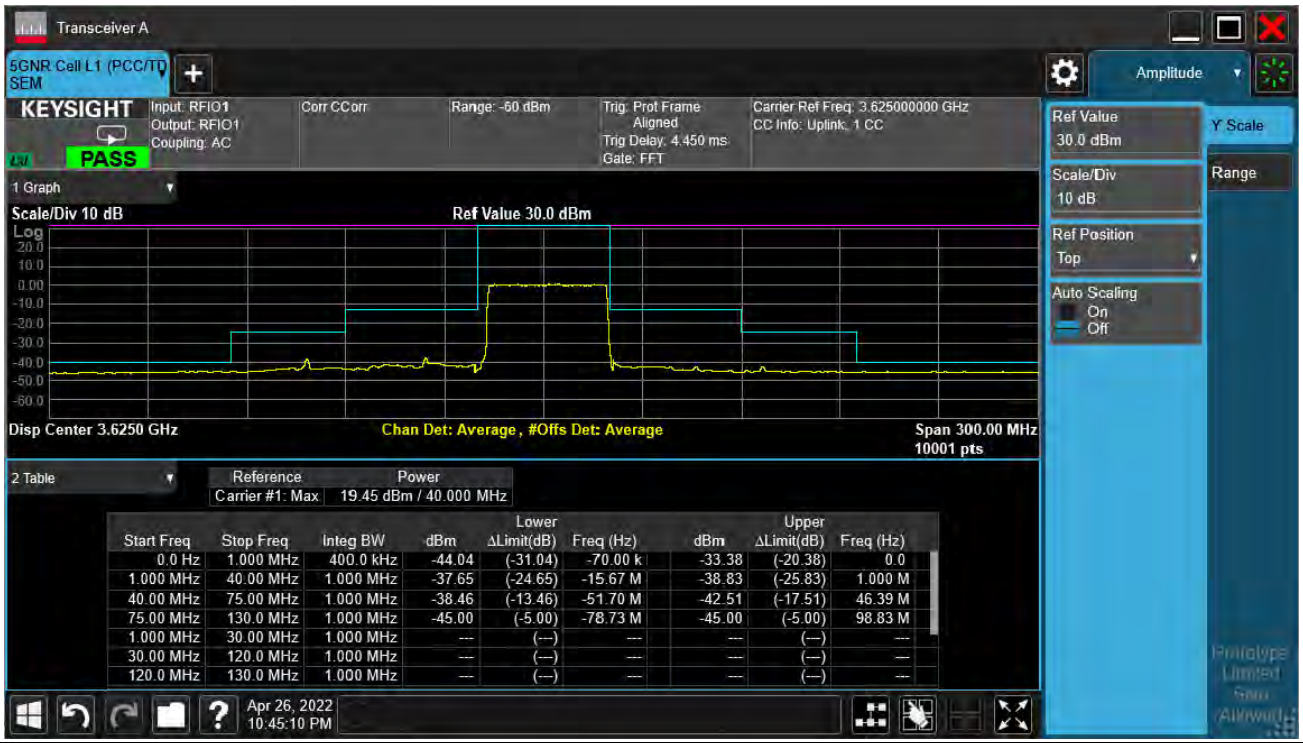
40 MHz / pi/2 BPSK / CH641666 / 1RB0

40 MHz / pi/2 BPSK / CH641666 / 1RB105



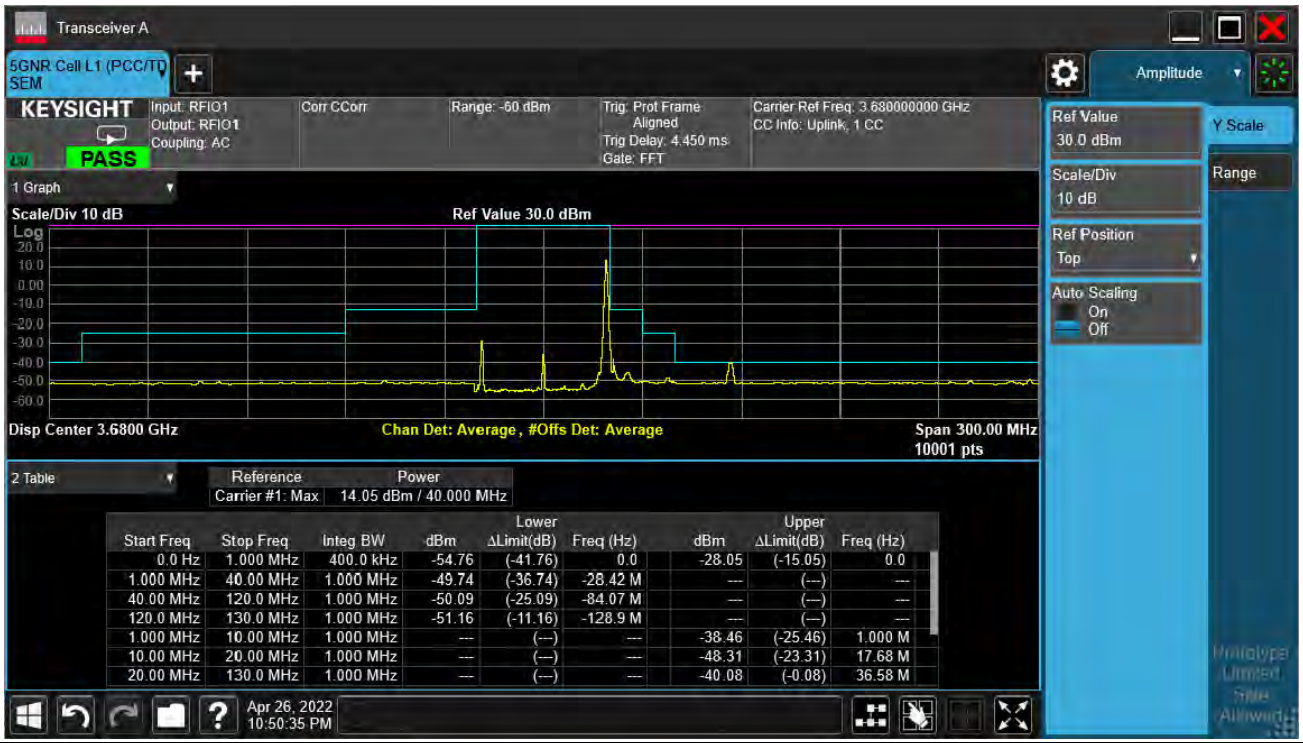
40 MHz / pi/2 BPSK / CH641666 / 100RB0

40 MHz / pi/2 BPSK / CH641666 / 100RB6



40 MHz / pi/2 BPSK / CH645332 / 1RB0

40 MHz / pi/2 BPSK / CH645332 / 1RB105



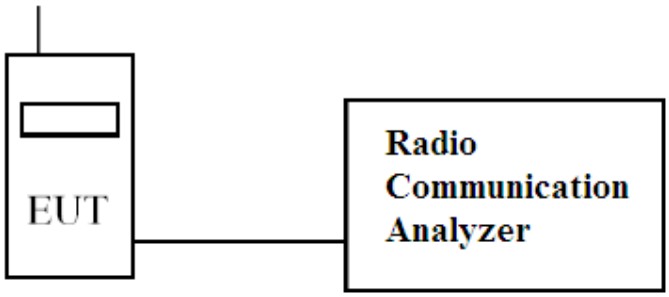
40 MHz / pi/2 BPSK / CH645332 / 100RB0

40 MHz / pi/2 BPSK / CH645332 / 100RB6

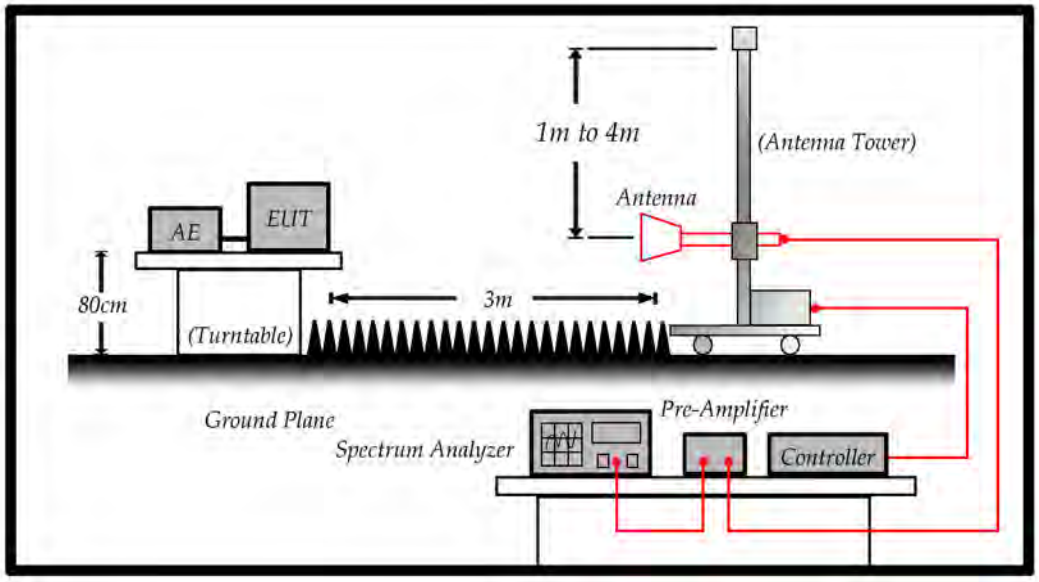
5. Spurious Emissions

5.1. Test Setup

Conducted Spurious Emission.



Radiated Spurious.



Note: The Worst case Mode is QPSK Mode for Radiated spurious emissions.

5.2. Test Limit

Limit: <-40 dBm

43 + 10Log(P) down on the carrier where P is the power in Watts.

5.3. Test Procedure

In accordance with Part 2.1051, 96.41, the spurious emissions from the antenna terminal were measured. The transmitter output power was attenuated using a combination of filters and attenuators and the frequency spectrum investigated from 30MHz to 40GHz. The EUT was set to transmit on full power. The EUT was tested on Low, middle and High channels for both power levels. The resolution and video bandwidth was set to 1MHz/3MHz in accordance with Part 2.1051, 96.41. The spectrum analyzer detector was set to Max Hold. In addition, measurements were made up to the 10th harmonic of the fundamental. The device was then replaced with a substitution antenna, which input signal was adjusted until the received level matched that of the previously detected emission.
(1) The EUT is tested with maximum rated TX power via the Base Station simulator.
(2) The EUT is tested in three orthogonal planes, The worst case was showing in this report.

The EUT is placed on a turn table which is 0.8 meter above ground. The turn table can rotate 360 degrees to determine the position of the maximum emission level. The EUT was positioned such that the distance from antenna to the EUT was 3 meters.
The antenna can move up and down between 1 meter and 4 meters to find out the maximum emission level. Both horizontal and vertical polarization of the antenna are set on measurement. In order to find the maximum emission, all of the interface cables must be manipulated according to TIA/EIA 603-E on radiated measurement.

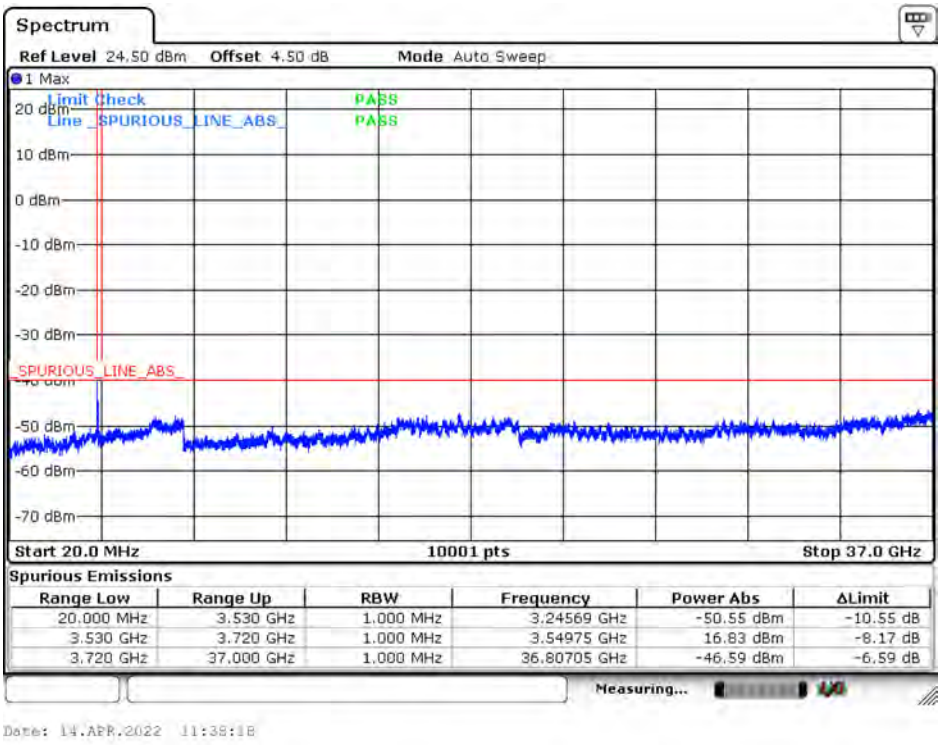
5.4. Test Specification

According to Part 2.1051, 96.41

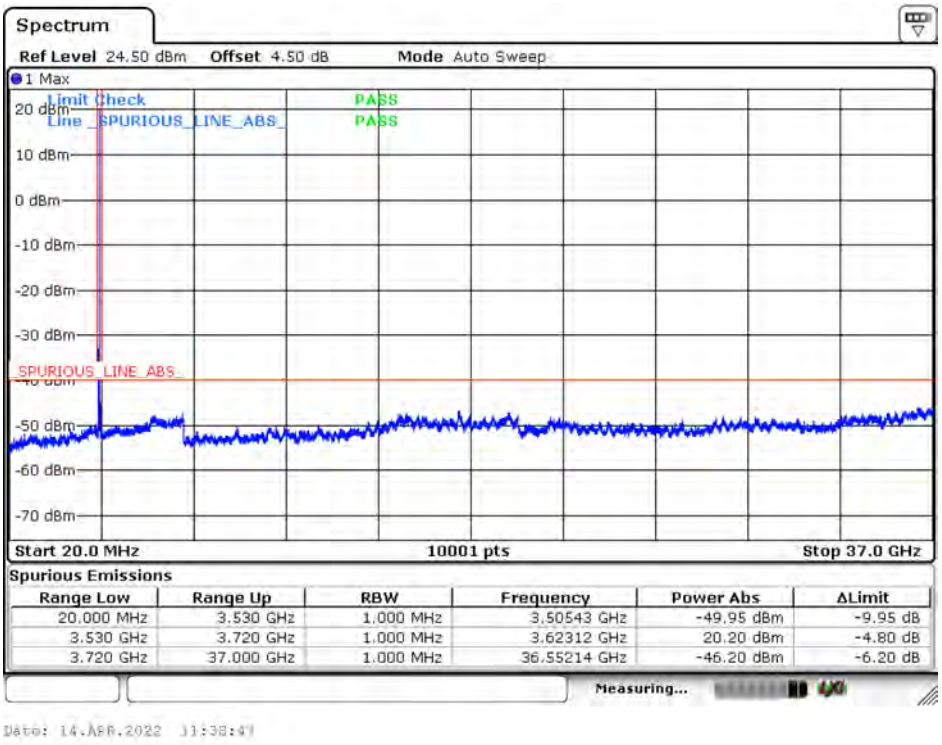
5.5. Test Result of Conducted Spurious Emission

Mode 1: LTE Band 48

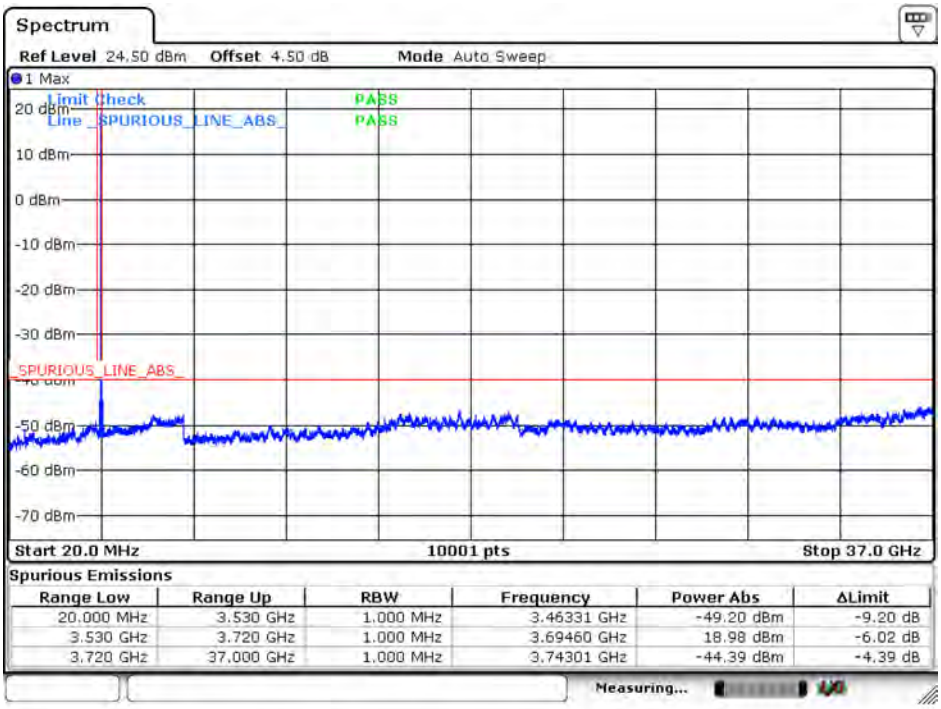
5 MHz / QPSK / CH55265 / 1RB



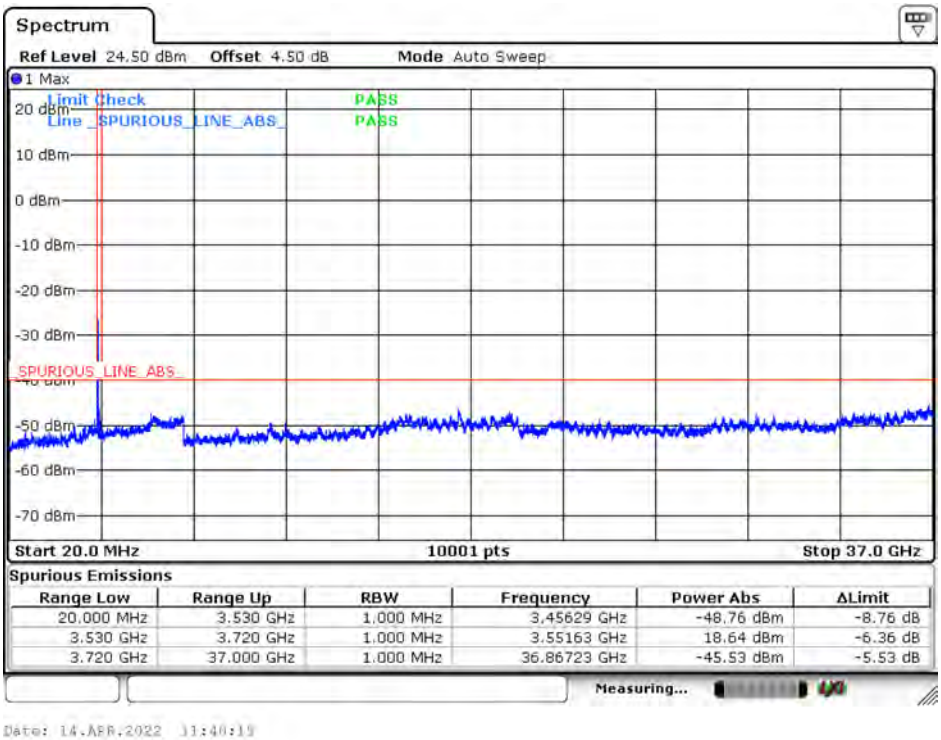
5 MHz / QPSK / CH55990 / 1RB



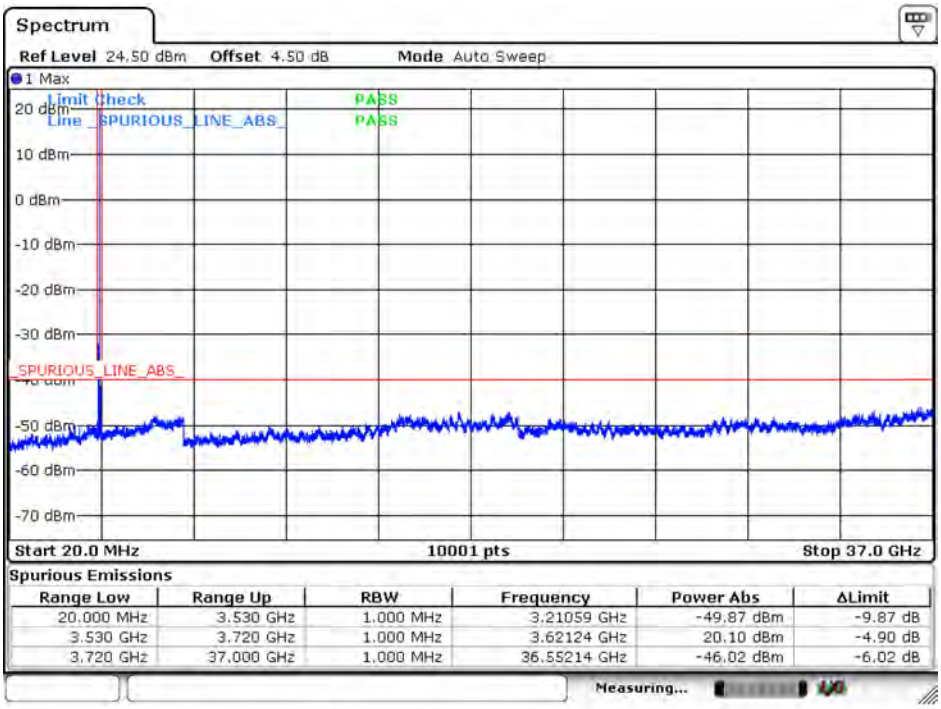
5 MHz / QPSK / CH56715 / 1RB



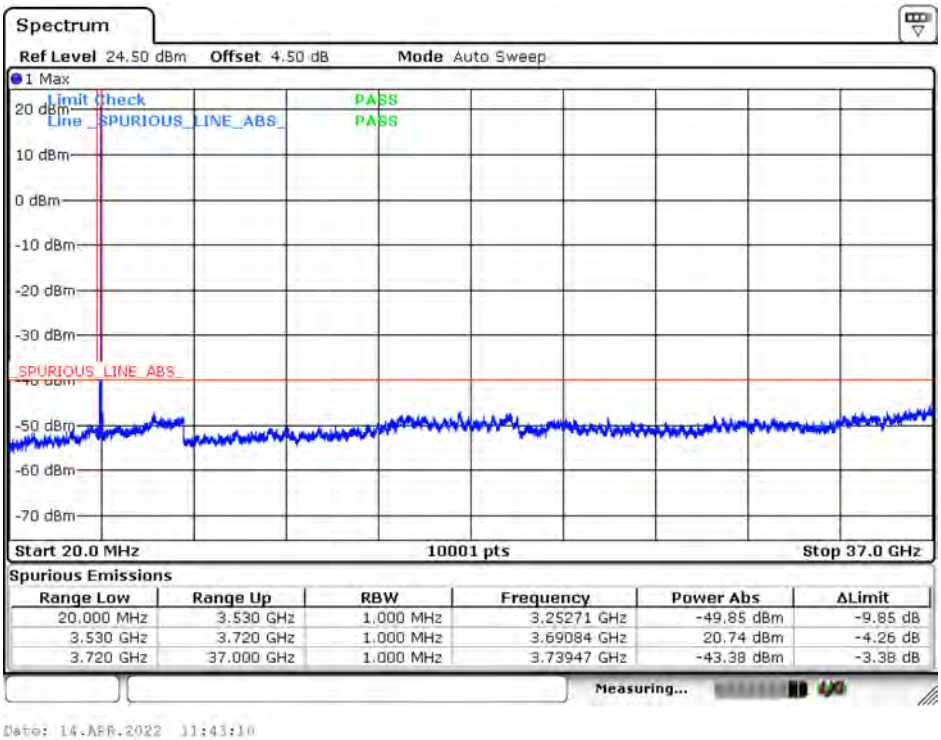
10 MHz / QPSK / CH55290 / 1RB



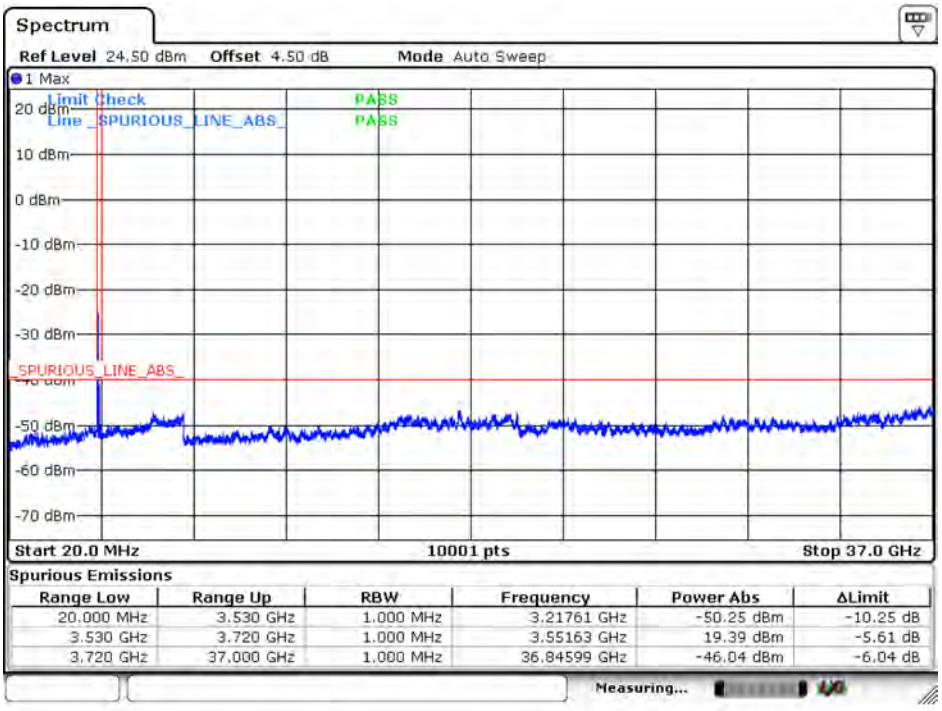
10 MHz / QPSK / CH55990 / 1RB



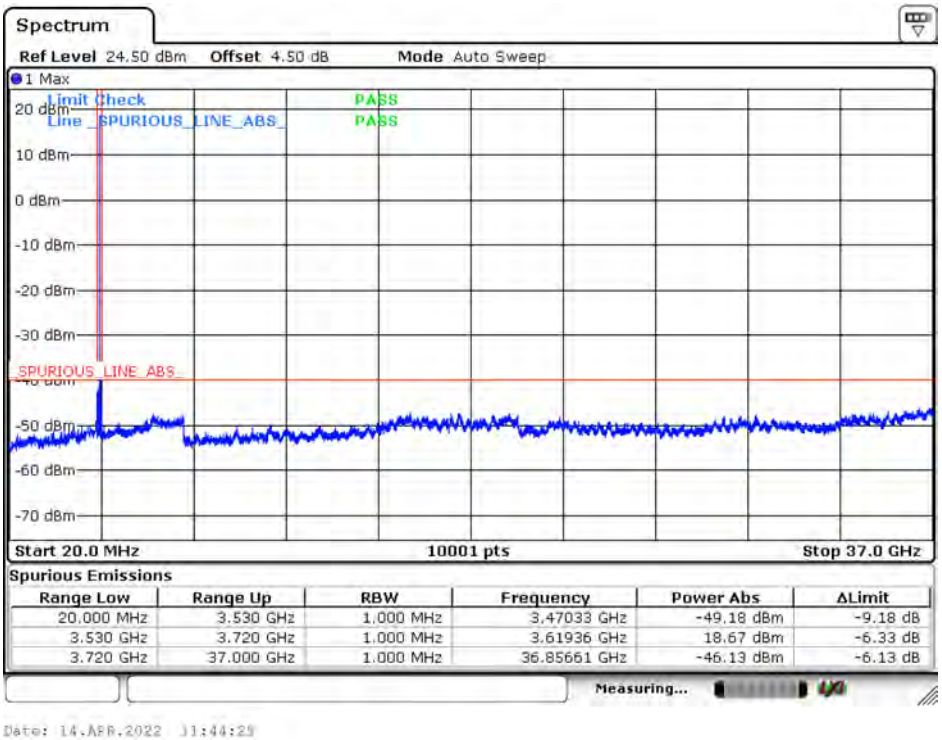
10 MHz / QPSK / CH56690 / 1RB



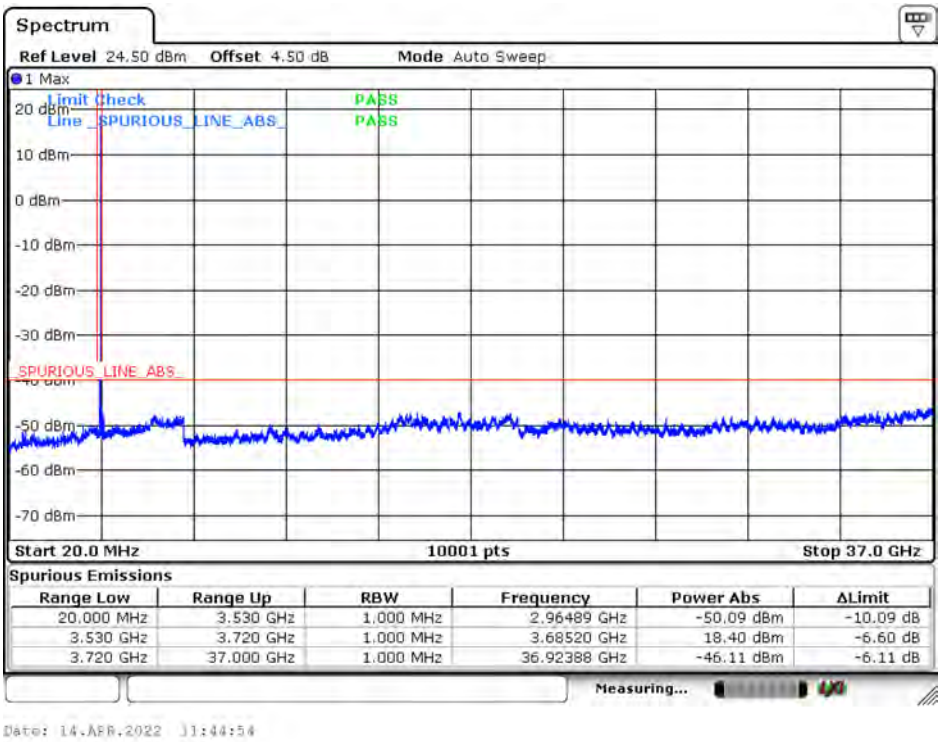
15 MHz / QPSK / CH55315 / 1RB



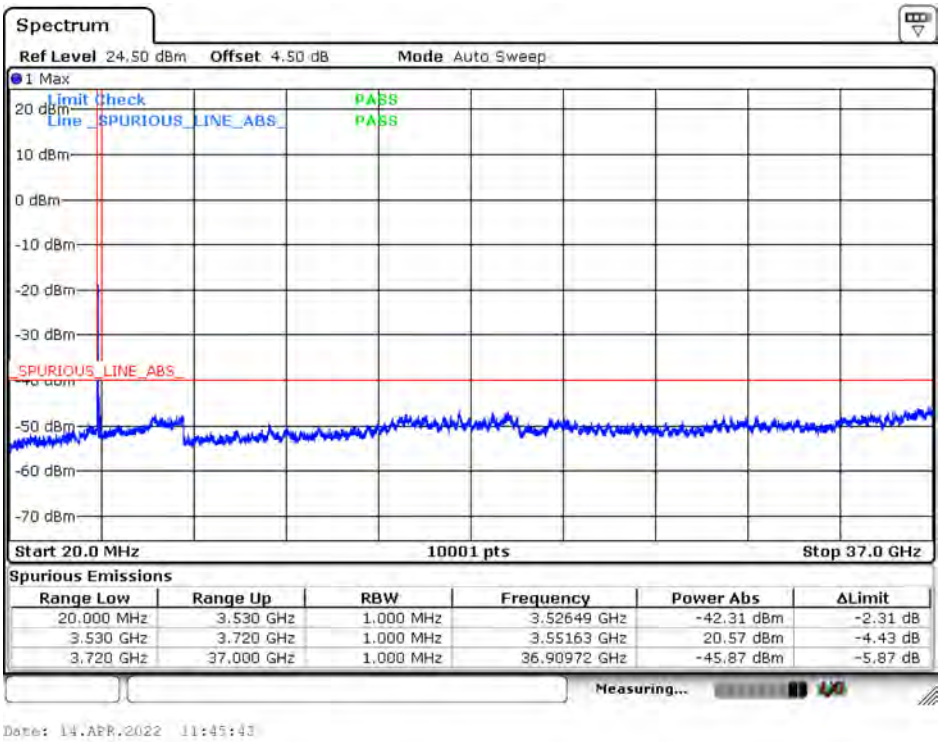
15 MHz / QPSK / CH55990 / 1RB



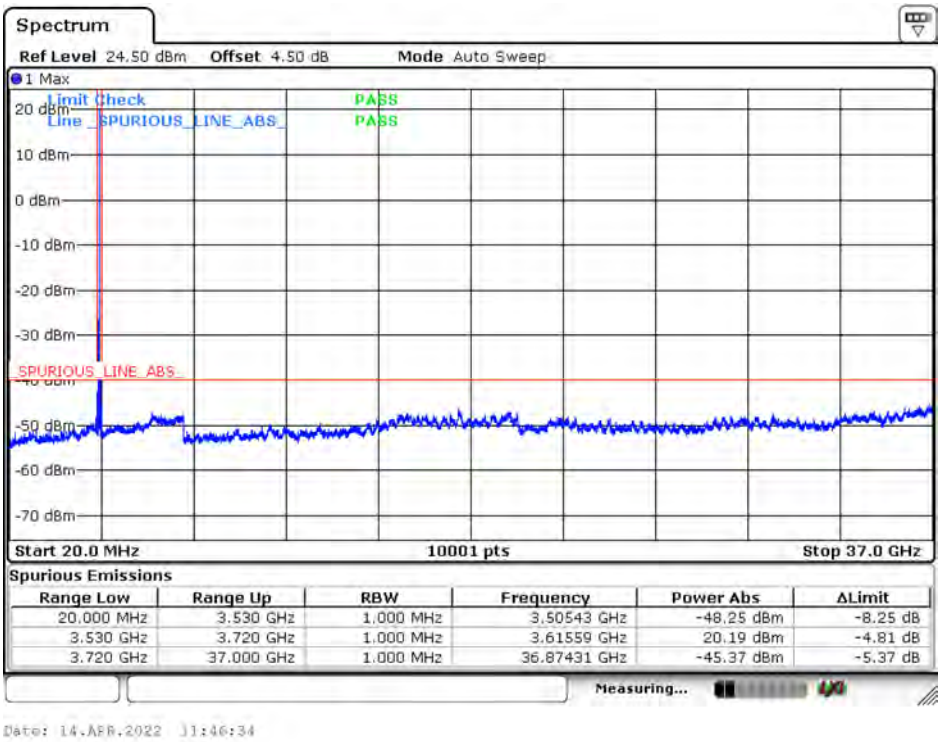
15 MHz / QPSK / CH56665 / 1RB



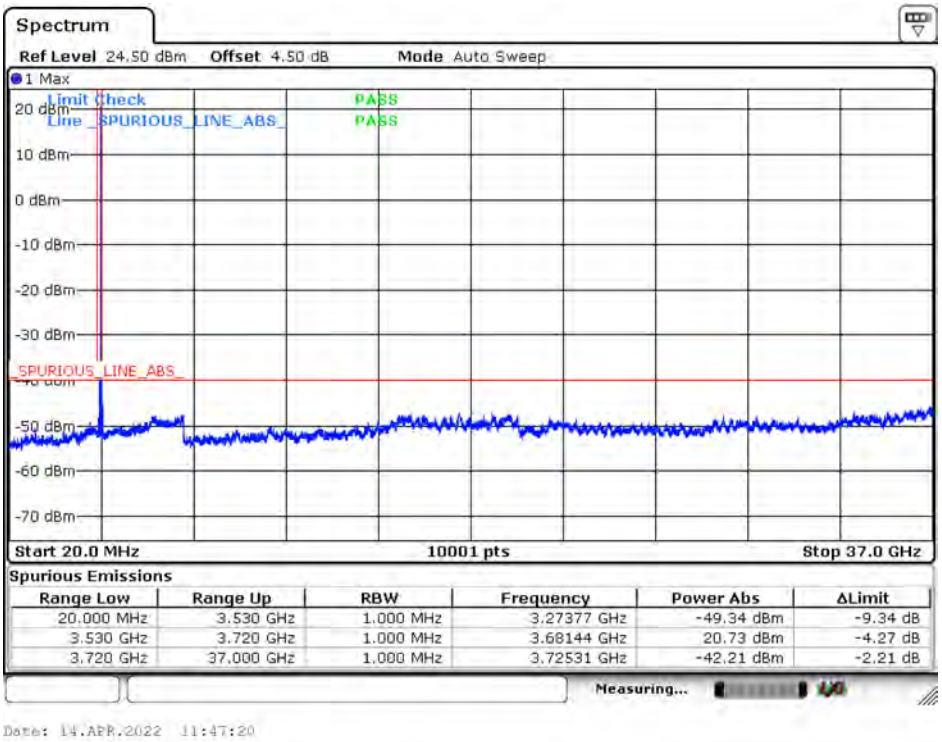
20 MHz / QPSK / CH55340 / 1RB



20 MHz / QPSK / CH55990 / 1RB

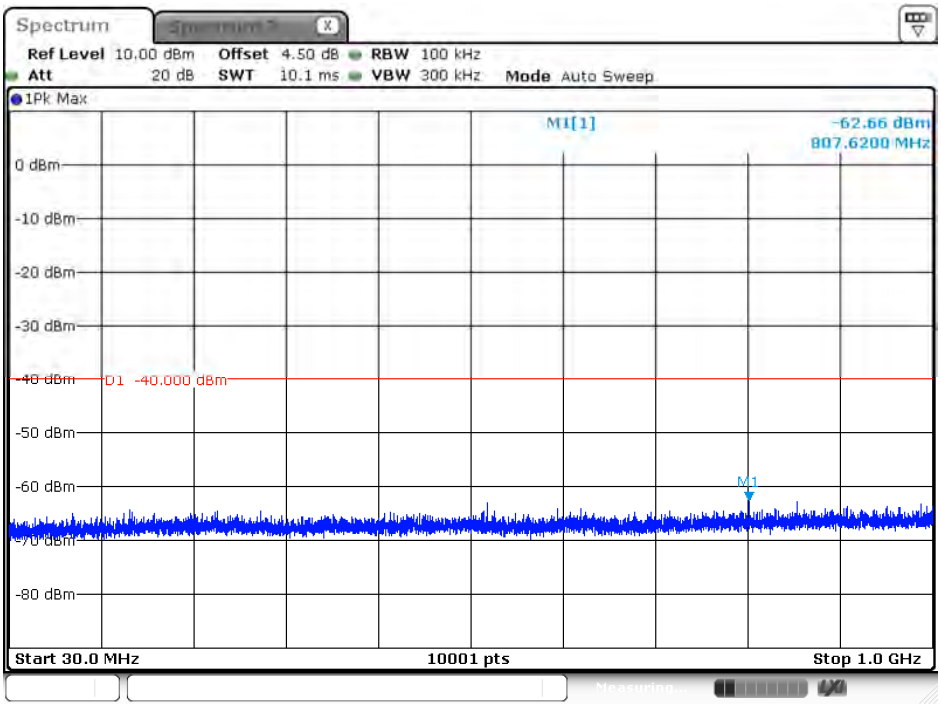


20 MHz / QPSK / CH56640 / 1RB



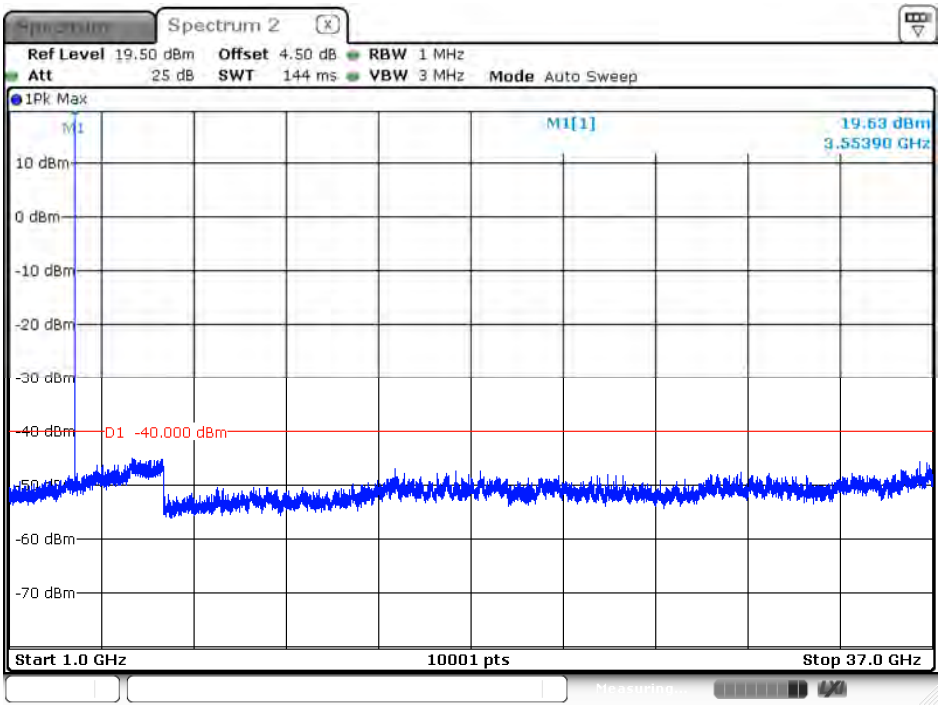
Mode 2: 5G NR n48

10 MHz / pi/2 BPSK / CH637000 / 1RB (Below 1GHz)



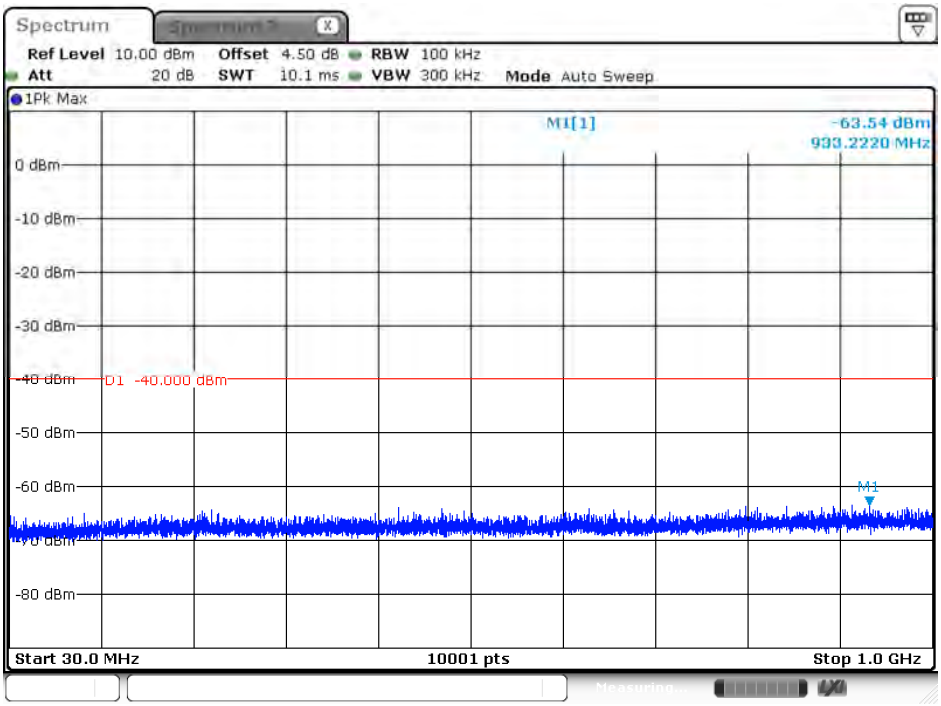
Date: 28.APR.2022 20:51:50

10 MHz / pi/2 BPSK / CH637000 / 1RB (Above 1GHz)



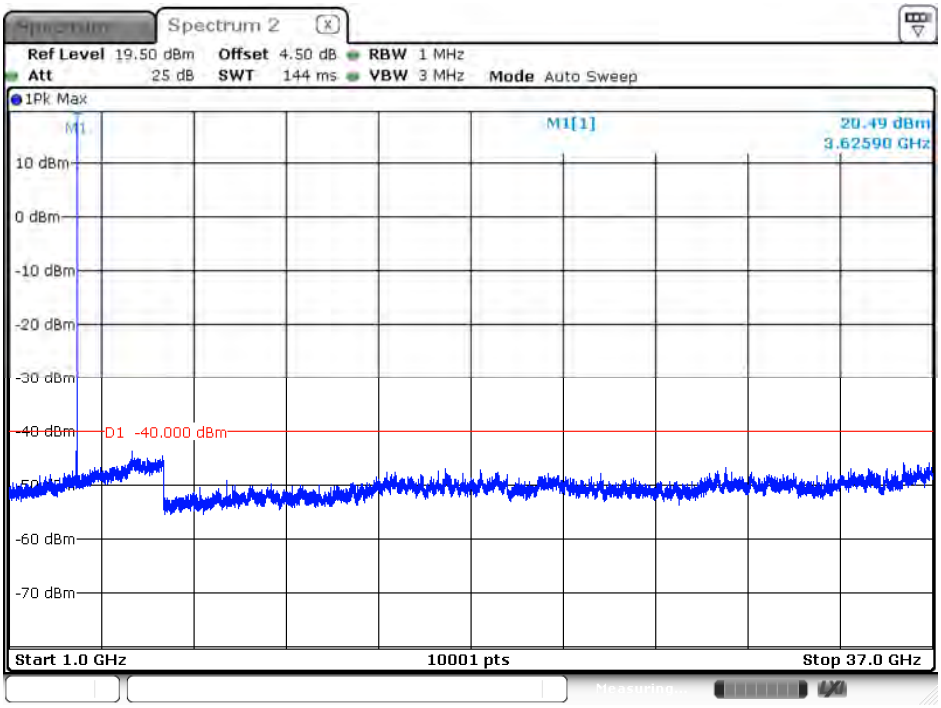
Date: 28.APR.2022 21:13:10

10 MHz / pi/2 BPSK / CH641666 / 1RB (Below 1GHz)



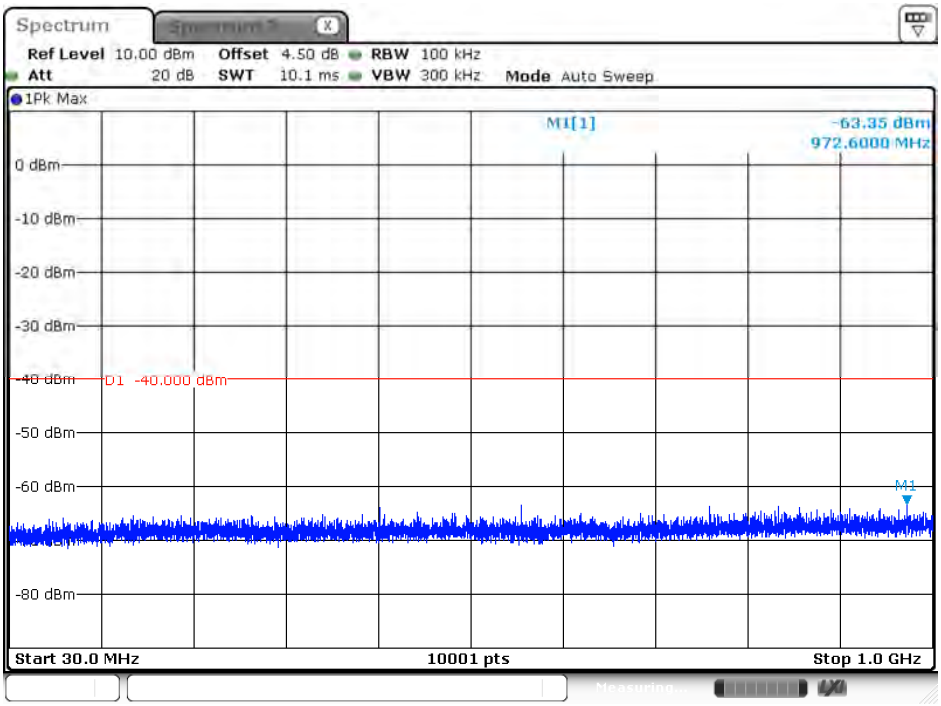
Date: 28.APR.2022 21:16:26

10 MHz / pi/2 BPSK / CH641666 / 1RB (Above 1GHz)



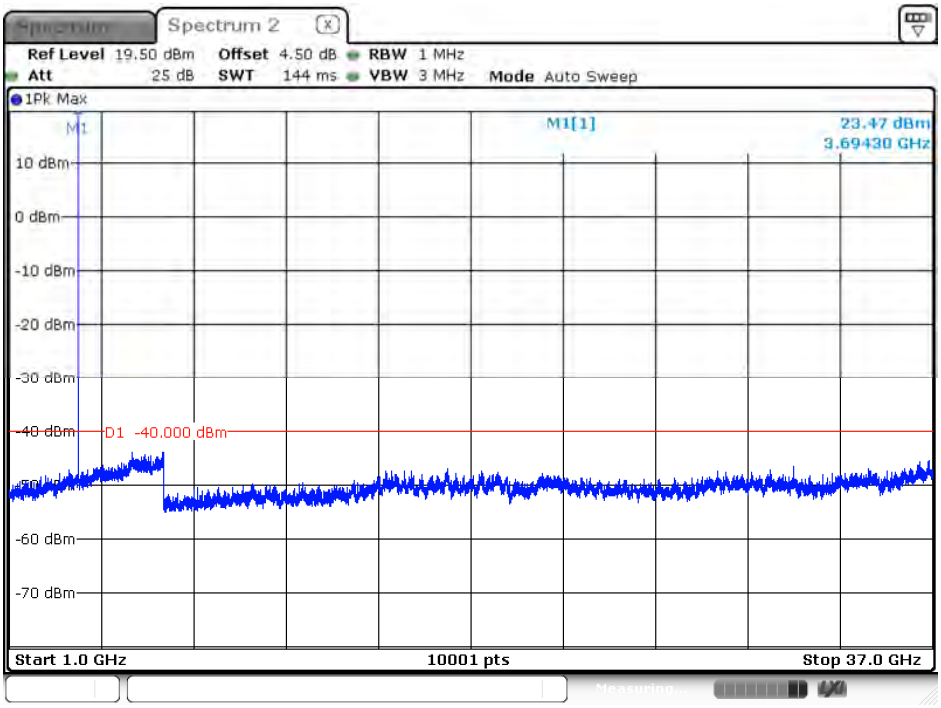
Date: 28.APR.2022 21:16:01

10 MHz / pi/2 BPSK / CH646332 / 1RB (Below 1GHz)



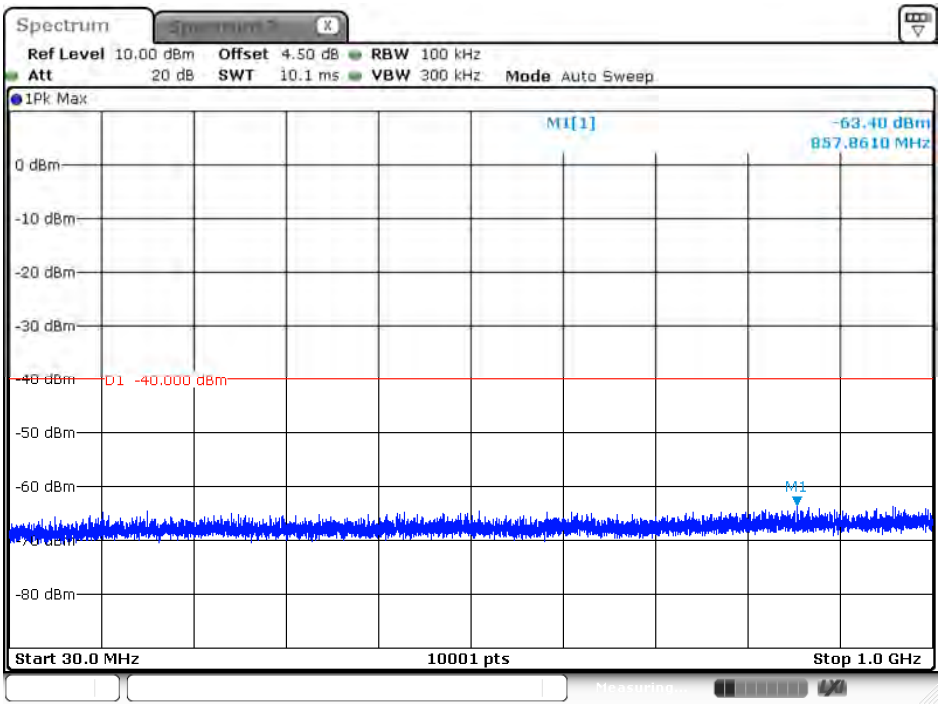
Date: 28.APR.2022 21:17:15

10 MHz / pi/2 BPSK / CH646332 / 1RB (Above 1GHz)



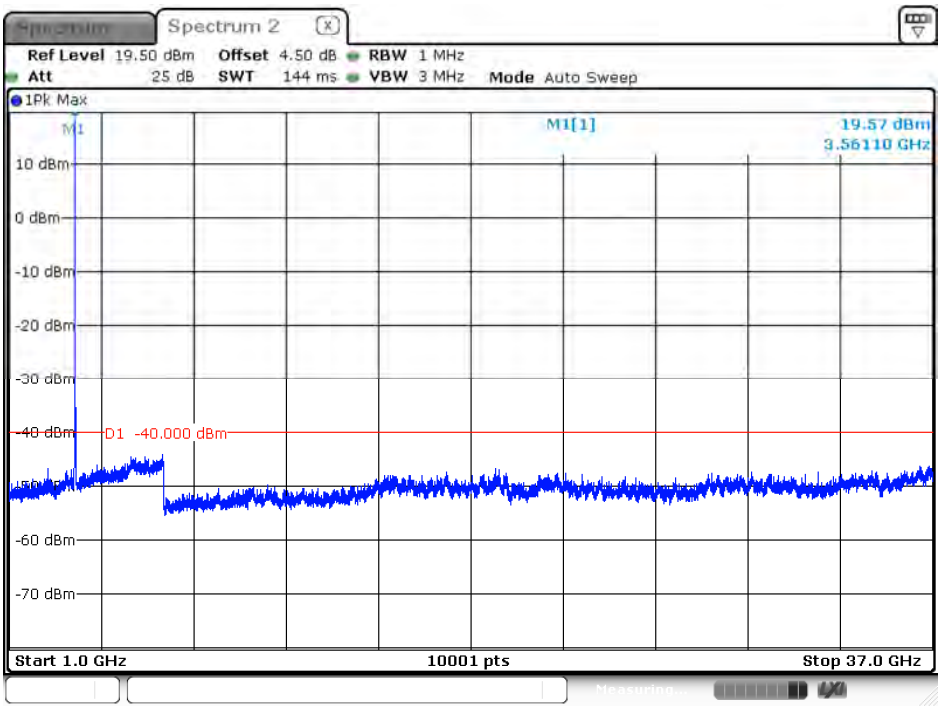
Date: 28.APR.2022 21:18:13

20 MHz / pi/2 BPSK / CH637334 / 1RB (Below 1GHz)



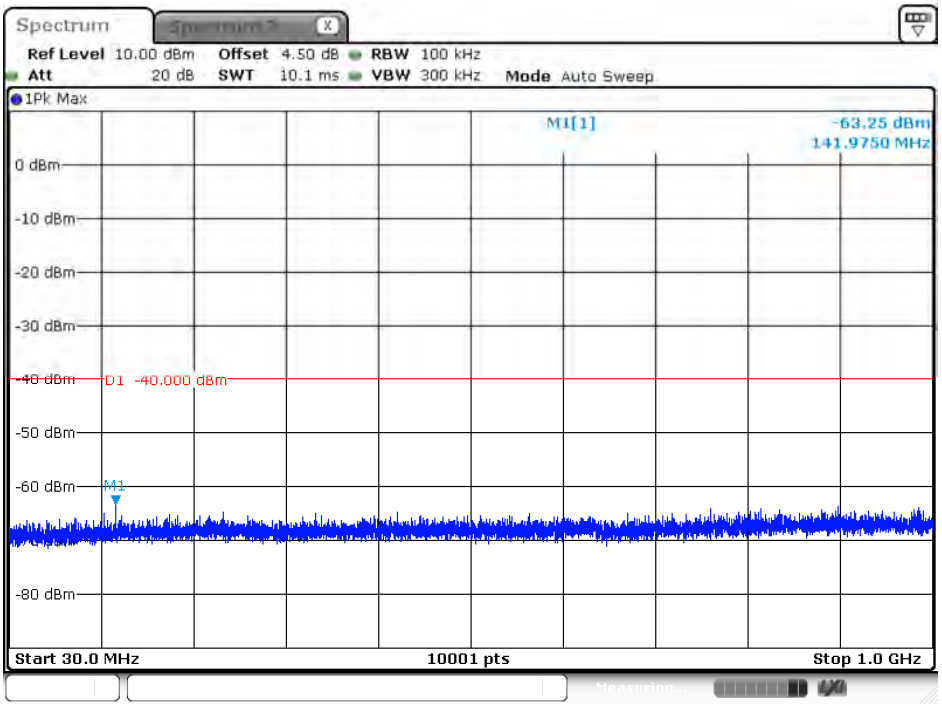
Date: 28.APR.2022 21:19:40

20 MHz / pi/2 BPSK / CH637334 / 1RB (Above 1GHz)



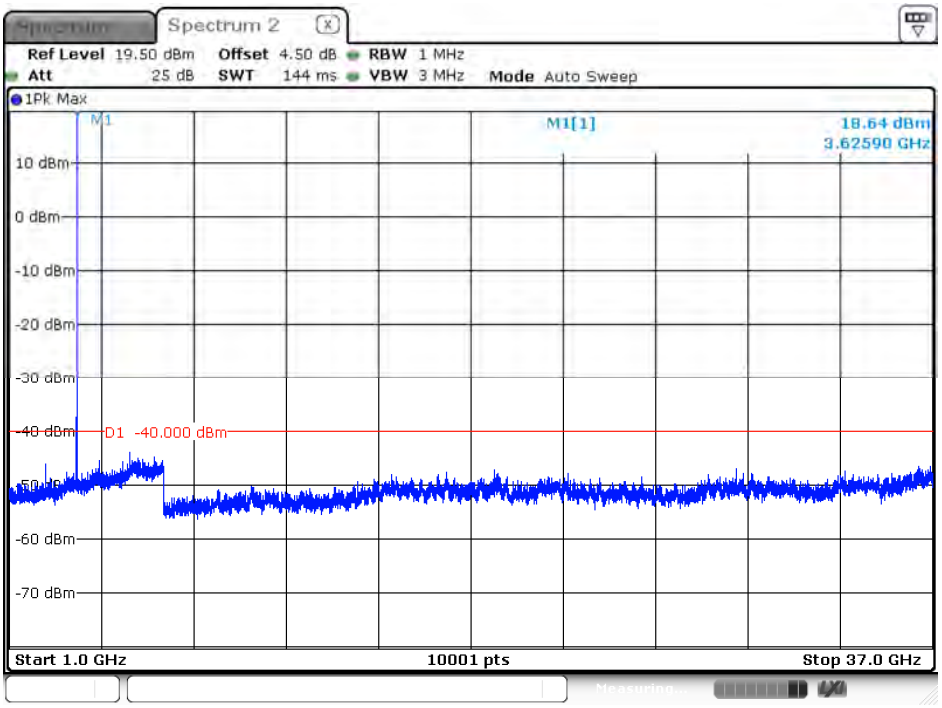
Date: 28.APR.2022 21:20:38

20 MHz / pi/2 BPSK / CH641666 / 1RB (Below 1GHz)



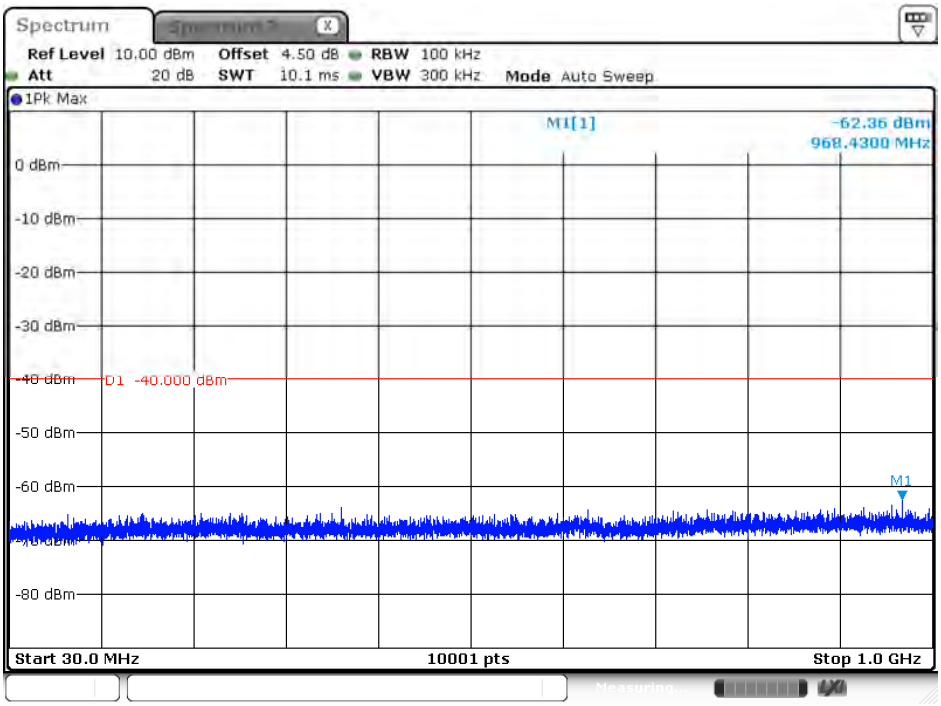
Date: 28.APR.2022 21:22:08

20 MHz / pi/2 BPSK / CH641666 / 1RB (Above 1GHz)



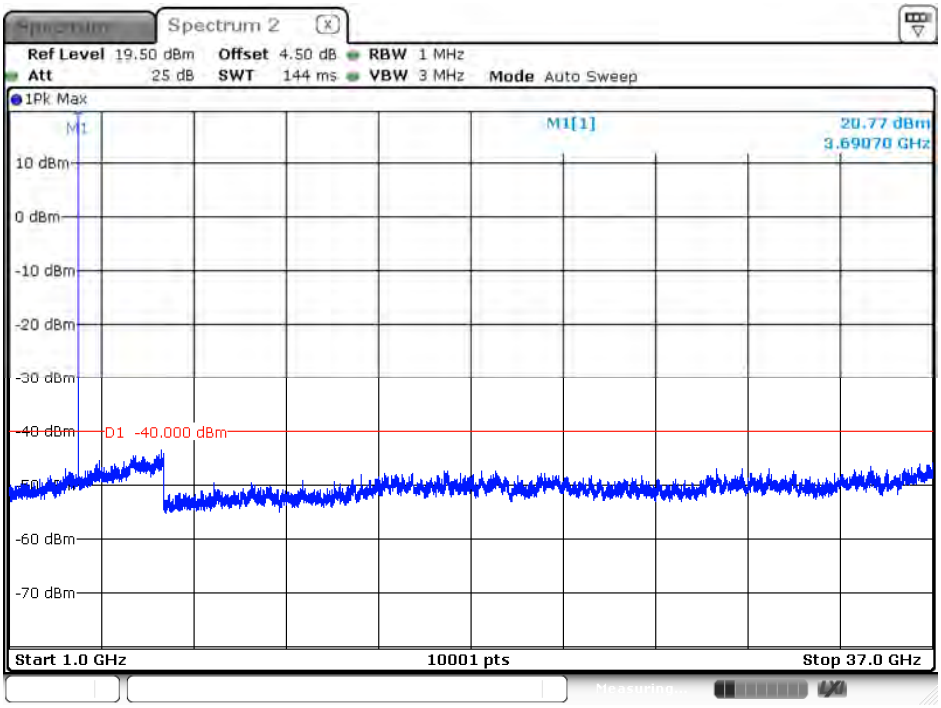
Date: 28.APR.2022 21:21:38

20 MHz / pi/2 BPSK / CH646000 / 1RB (Below 1GHz)



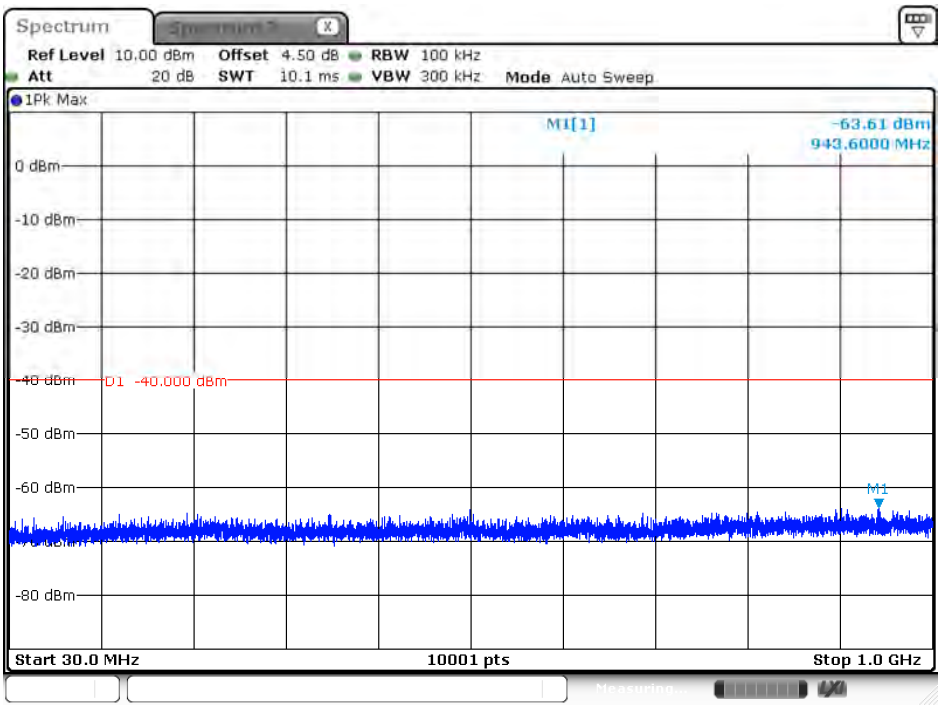
Date: 28.APR.2022 21:23:45

20 MHz / pi/2 BPSK / CH646000 / 1RB (Above 1GHz)



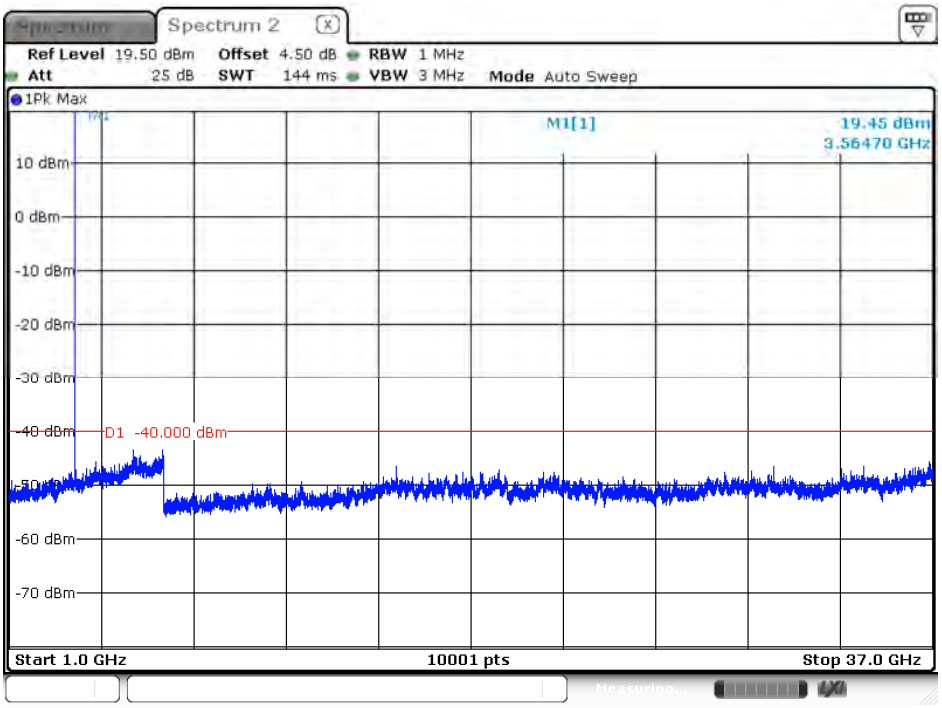
Date: 28.APR.2022 21:25:05

30 MHz / pi/2 BPSK / CH637668 / 1RB (Below 1GHz)



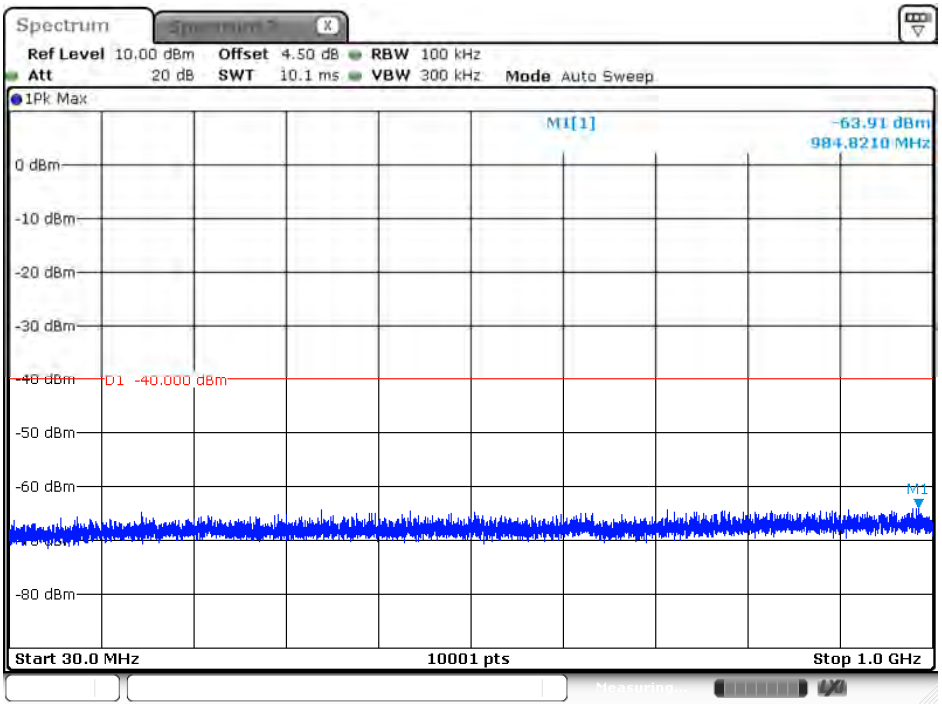
Date: 28.APR.2022 21:25:52

30 MHz / pi/2 BPSK / CH637668 / 1RB (Above 1GHz)



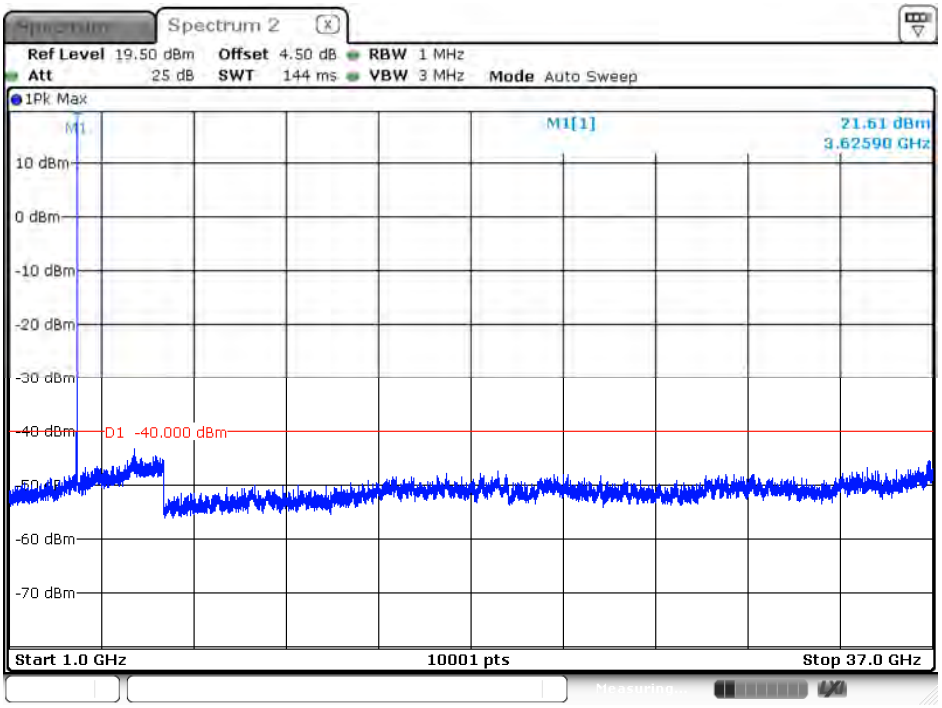
Date: 28.APR.2022 21:27:31

30 MHz / pi/2 BPSK / CH641666 / 1RB (Below 1GHz)



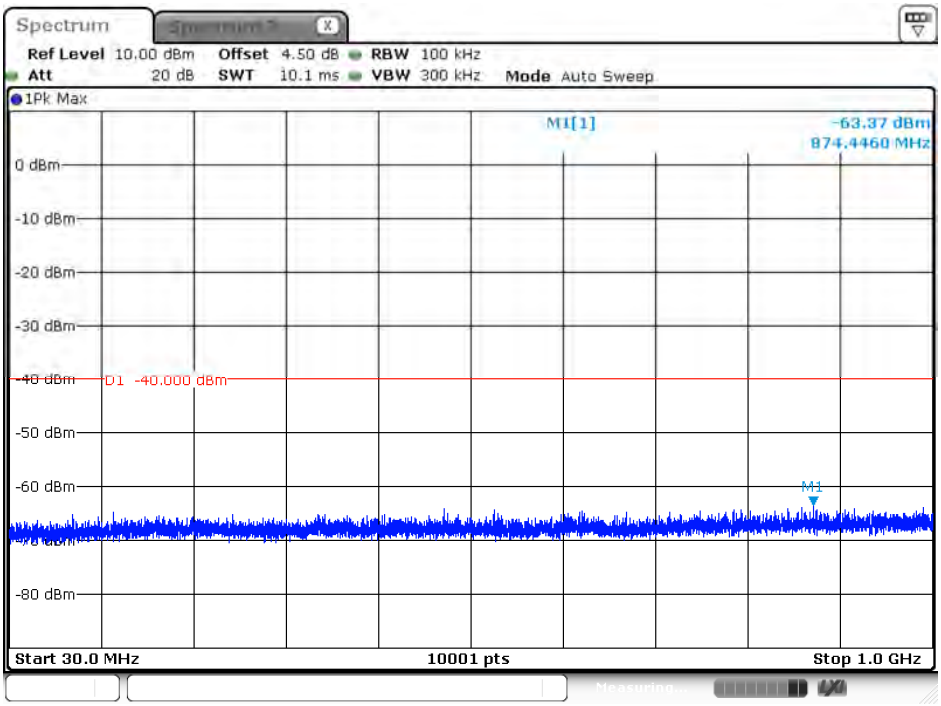
Date: 28.APR.2022 21:28:59

30 MHz / pi/2 BPSK / CH641666 / 1RB (Above 1GHz)



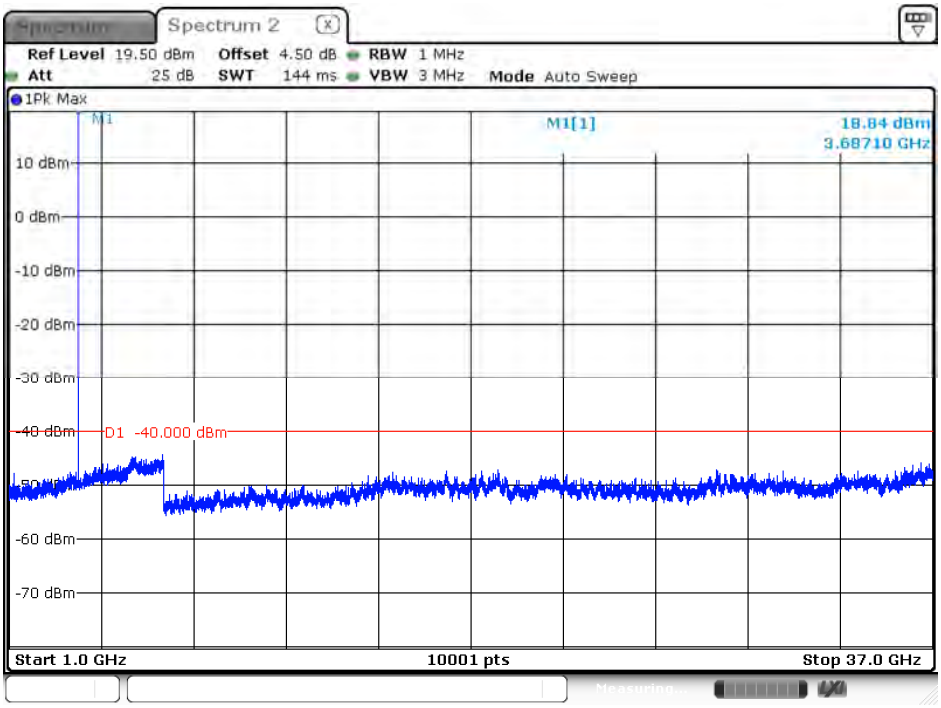
Date: 28.APR.2022 21:28:37

30 MHz / pi/2 BPSK / CH645666 / 1RB (Below 1GHz)



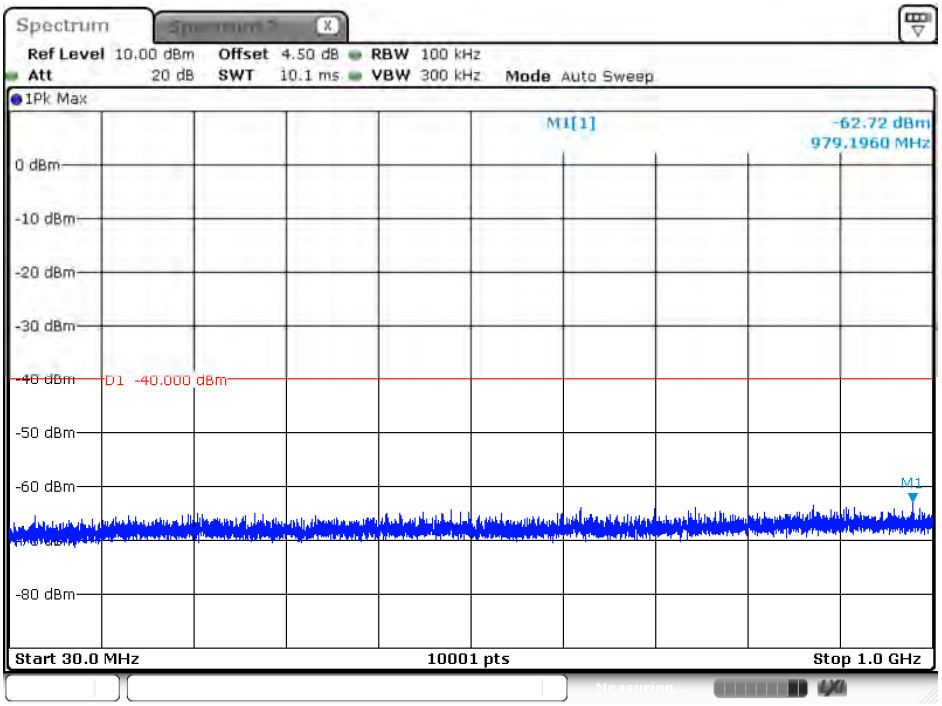
Date: 28.APR.2022 21:30:09

30 MHz / pi/2 BPSK / CH645666 / 1RB (Above 1GHz)



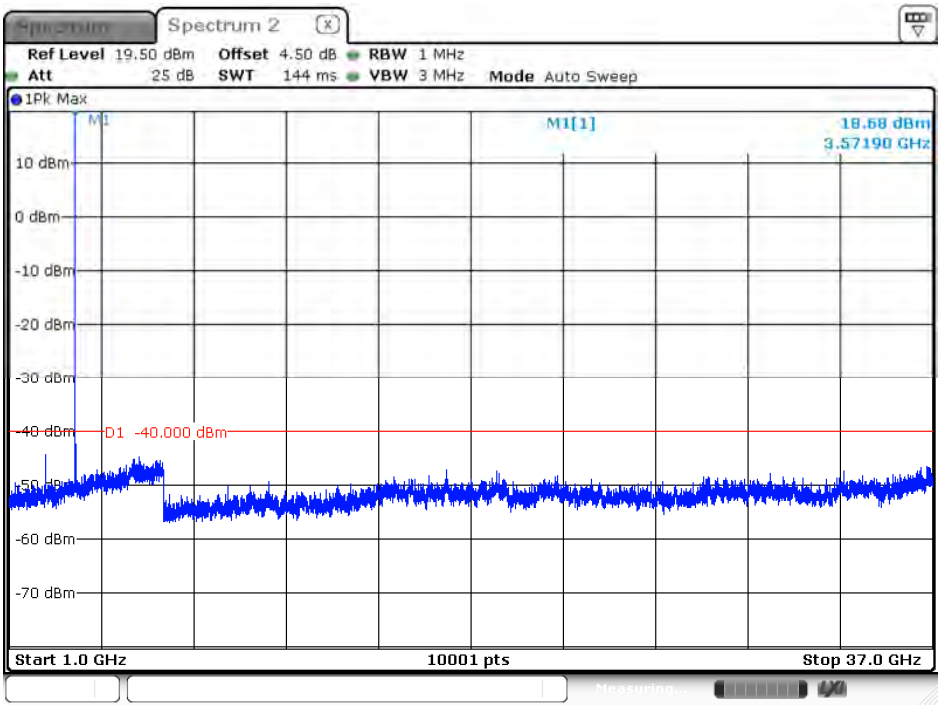
Date: 28.APR.2022 21:30:42

40 MHz / pi/2 BPSK / CH638000 / 1RB (Below 1GHz)



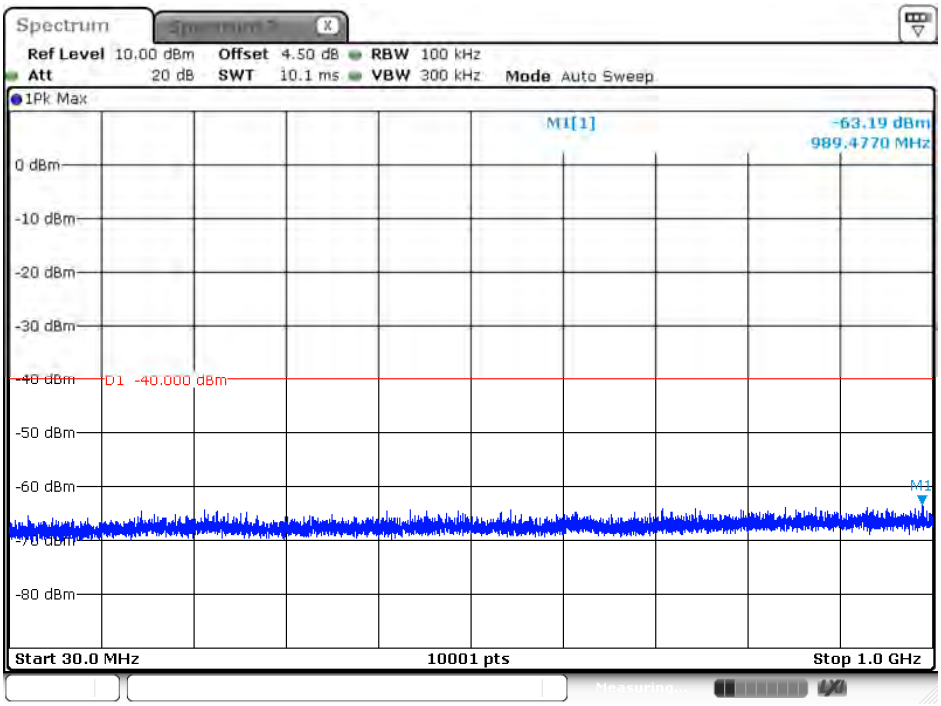
Date: 28.APR.2022 21:33:05

40 MHz / pi/2 BPSK / CH638000 / 1RB (Above 1GHz)



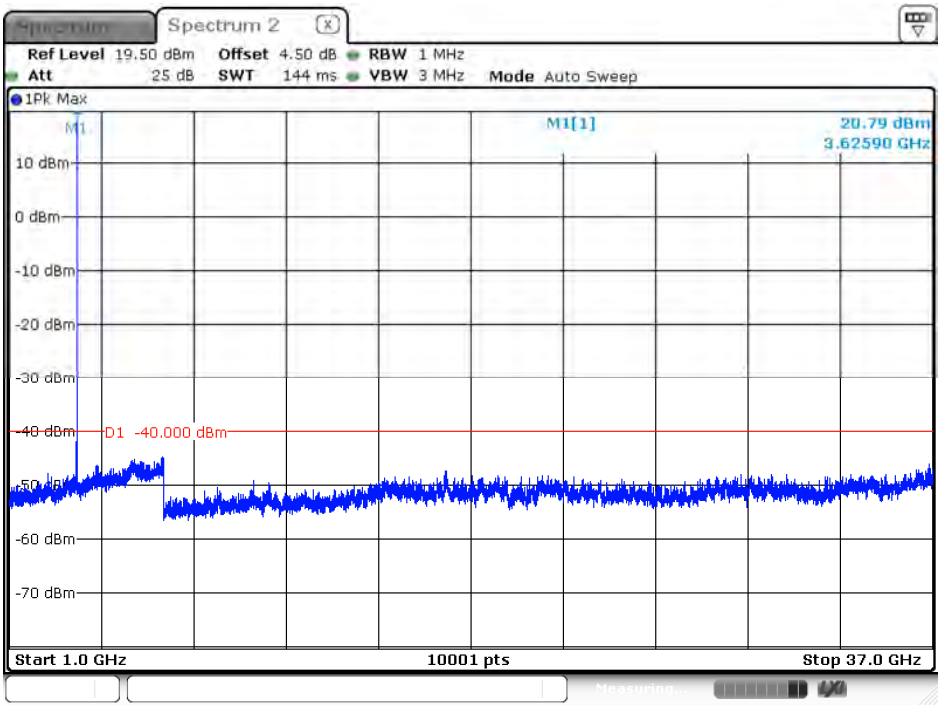
Date: 28.APR.2022 21:32:37

40 MHz / pi/2 BPSK / CH641666 / 1RB (Below 1GHz)



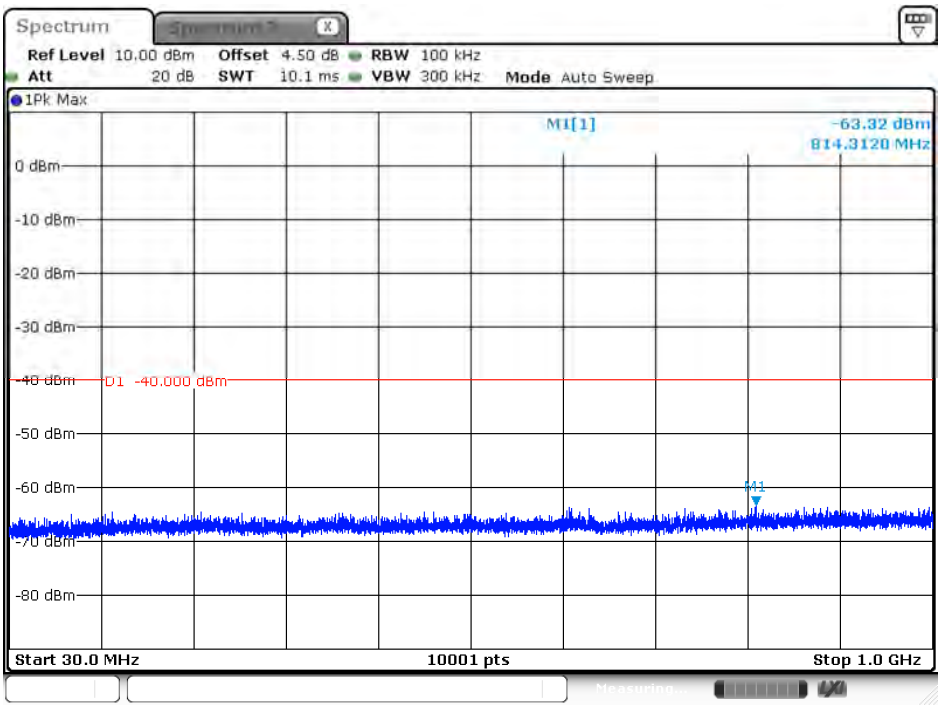
Date: 28.APR.2022 21:33:46

40 MHz / pi/2 BPSK / CH641666 / 1RB (Above 1GHz)



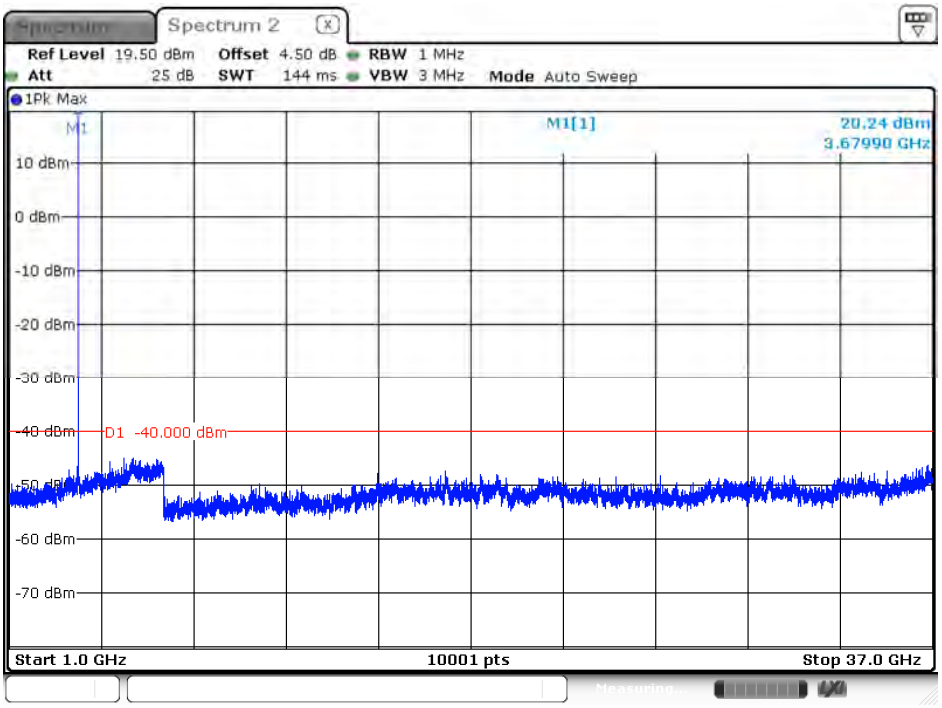
Date: 28.APR.2022 21:35:14

40 MHz / pi/2 BPSK / CH645332 / 1RB (Below 1GHz)



Date: 28.APR.2022 21:36:39

40 MHz / pi/2 BPSK / CH645332 / 1RB (Above 1GHz)

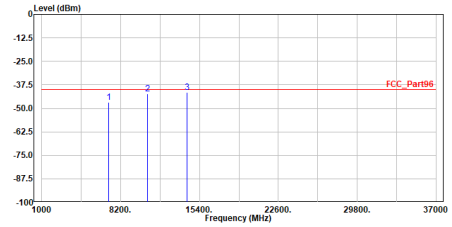


Date: 28.APR.2022 21:36:03

5.6. Test Result of Field Strength of Spurious Radiation

Mode 1: LTE Band 48

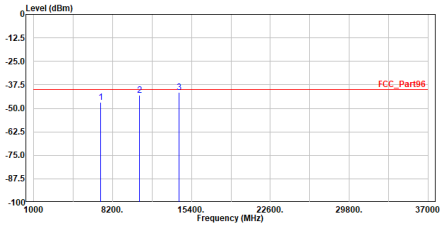
Site :HY-CB01
Condition :3m ,Horizontal
Mode :LTE_B48_20M_Ch55340
Test by :Daniel Wu



No.	Frequency	Level	Limit Line	Over Limit	Read Level	Factor	Remark
	MHz	dBm	dBm	dB	dBm	dB	
1	7120.000	-46.63	-40.00	-6.63	-59.22	12.59	Peak
2	10680.000	-42.44	-40.00	-2.44	-57.13	14.69	Peak
3	14240.000	-41.38	-40.00	-1.38	-58.57	17.19	Peak

Note:
1. Level = Read Level + Factor
2. Factor = Antenna Factor + Cable Loss - Preamp Factor + Aux Factor
3. Over Limit = Level - Limit Line
4. Aux Factor = Convert E (dBuVm) to EIRP (dBm)
= 107 + 20log(3) - 104.8 = 11.8 dB
5.The other emission levels were very low against the limit.
6.The emission under 1GHz was not included since the emission levels are very low against the limit.

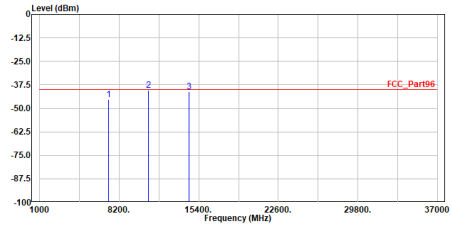
Site :HY-CB01
Condition :3m ,Vertical
Mode :LTE_B48_20M_Ch55340
Test by :Daniel Wu



No.	Frequency	Level	Limit Line	Over Limit	Read Level	Factor	Remark
	MHz	dBm	dBm	dB	dBm	dB	
1	7120.000	-46.73	-40.00	-6.73	-59.32	12.59	Peak
2	10680.000	-42.84	-40.00	-2.84	-57.53	14.69	Peak
3	14240.000	-41.50	-40.00	-1.50	-58.69	17.19	Peak

Note:
1. Level = Read Level + Factor
2. Factor = Antenna Factor + Cable Loss - Preamp Factor + Aux Factor
3. Over Limit = Level - Limit Line
4. Aux Factor = Convert E (dBuVm) to EIRP (dBm)
= 107 + 20log(3) - 104.8 = 11.8 dB
5.The other emission levels were very low against the limit.
6.The emission under 1GHz was not included since the emission levels are very low against the limit.

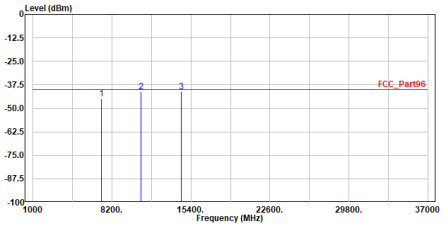
Site :HY-CB01
Condition :3m ,Horizontal
Mode :LTE_B48_20M_Ch55990
Test by :Daniel Wu



No.	Frequency	Level	Limit Line	Over Limit	Read Level	Factor	Remark
	MHz	dBm	dBm	dB	dBm	dB	
1	7250.000	-45.34	-40.00	-5.34	-57.90	12.56	Peak
2	10875.000	-40.36	-40.00	-0.36	-55.36	15.00	Peak
3	14500.000	-41.25	-40.00	-1.25	-59.28	18.03	Peak

Note:
1. Level = Read Level + Factor
2. Factor = Antenna Factor + Cable Loss - Preamp Factor + Aux Factor
3. Over Limit = Level - Limit Line
4. Aux Factor = Convert E (dBuVm) to EIRP (dBm)
= 107 + 20log(3) - 104.8 = 11.8 dB
5.The other emission levels were very low against the limit.
6.The emission under 1GHz was not included since the emission levels are very low against the limit.

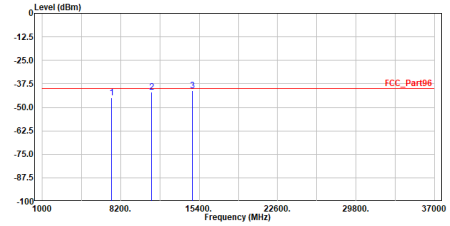
Site :HY-CB01
Condition :3m ,Vertical
Mode :LTE_B48_20M_Ch55990
Test by :Daniel Wu



No.	Frequency	Level	Limit Line	Over Limit	Read Level	Factor	Remark
	MHz	dBm	dBm	dB	dBm	dB	
1	7250.000	-44.99	-40.00	-4.99	-57.55	12.56	Peak
2	10875.000	-41.17	-40.00	-1.17	-56.17	15.00	Peak
3	14500.000	-40.98	-40.00	-0.98	-59.01	18.03	Peak

Note:
1. Level = Read Level + Factor
2. Factor = Antenna Factor + Cable Loss - Preamp Factor + Aux Factor
3. Over Limit = Level - Limit Line
4. Aux Factor = Convert E (dBuVm) to EIRP (dBm)
= 107 + 20log(3) - 104.8 = 11.8 dB
5.The other emission levels were very low against the limit.
6.The emission under 1GHz was not included since the emission levels are very low against the limit.

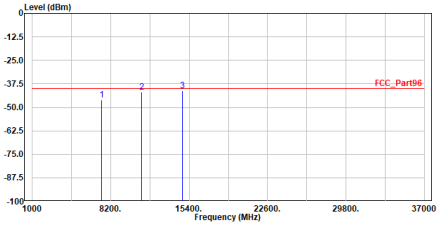
Site :HY-CB01
Condition :3m ,Horizontal
Mode :LTE_B48_20M_Ch56640
Test by :Daniel Wu



No.	Frequency	Level	Limit Line	Over Limit	Read Level	Factor	Remark
	MHz	dBm	dBm	dB	dBm	dB	
1	7380.000	-44.85	-40.00	-4.85	-57.65	12.80	Peak
2	11070.000	-41.73	-40.00	-1.73	-57.23	15.50	Peak
3	14760.000	-41.31	-40.00	-1.31	-59.72	18.41	Peak

Note:
1. Level = Read Level + Factor
2. Factor = Antenna Factor + Cable Loss - Preamp Factor + Aux Factor
3. Over Limit = Level - Limit Line
4. Aux Factor = Convert E (dBuVm) to EIRP (dBm)
= 107 + 20log(3) - 104.8 = 11.8 dB
5.The other emission levels were very low against the limit.
6.The emission under 1GHz was not included since the emission levels are very low against the limit.

Site :HY-CB01
Condition :3m ,Vertical
Mode :LTE_B48_20M_Ch56640
Test by :Daniel Wu

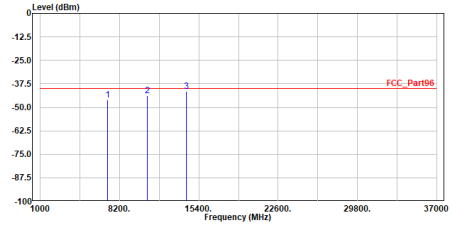


No.	Frequency	Level	Limit Line	Over Limit	Read Level	Factor	Remark
	MHz	dBm	dBm	dB	dBm	dB	
1	7380.000	-45.95	-40.00	-5.95	-58.75	12.80	Peak
2	11070.000	-41.82	-40.00	-1.82	-57.32	15.50	Peak
3	14760.000	-41.22	-40.00	-1.22	-59.63	18.41	Peak

Note:
1. Level = Read Level + Factor
2. Factor = Antenna Factor + Cable Loss - Preamp Factor + Aux Factor
3. Over Limit = Level - Limit Line
4. Aux Factor = Convert E (dBuVm) to EIRP (dBm)
= 107 + 20log(3) - 104.8 = 11.8 dB
5.The other emission levels were very low against the limit.
6.The emission under 1GHz was not included since the emission levels are very low against the limit.

Mode 1: LTE Band 48

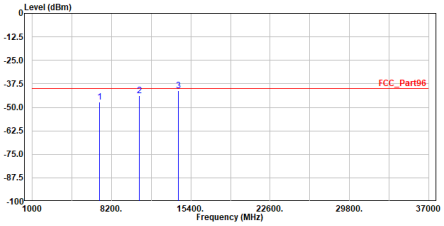
Site :HY-CB01
Condition :3m ,Horizontal
Mode :5G NR_N48_40M_Ch638000
Test by :Daniel Wu



No.	Frequency	Level	Limit Line	Over Limit	Read Level	Factor	Remark
	MHz	dBm	dBm	dB	dBm	dB	
1	7140.000	-45.89	-40.00	-5.89	-58.41	12.52	Peak
2	10710.000	-43.82	-40.00	-3.82	-58.47	14.65	Peak
3	14280.000	-41.32	-40.00	-1.32	-58.57	17.25	Peak

Note:
1. Level = Read Level + Factor
2. Factor = Antenna Factor + Cable Loss - Preamp Factor + Aux Factor
3. Over Limit = Level - Limit Line
4. Aux Factor = Convert E (dBuVm) to EIRP (dBm)
= 107 + 20log(3) - 104.8 = 11.8 dB
5.The other emission levels were very low against the limit.
6.The emission under 1GHz was not included since the emission levels are very low against the limit.

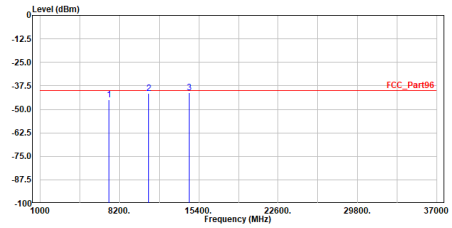
Site :HY-CB01
Condition :3m ,Vertical
Mode :5G NR_N48_40M_Ch638000
Test by :Daniel Wu



No.	Frequency	Level	Limit Line	Over Limit	Read Level	Factor	Remark
	MHz	dBm	dBm	dB	dBm	dB	
1	7140.000	-47.29	-40.00	-7.29	-59.81	12.52	Peak
2	10710.000	-43.75	-40.00	-3.75	-58.40	14.65	Peak
3	14280.000	-41.12	-40.00	-1.12	-58.37	17.25	Peak

Note:
1. Level = Read Level + Factor
2. Factor = Antenna Factor + Cable Loss - Preamp Factor + Aux Factor
3. Over Limit = Level - Limit Line
4. Aux Factor = Convert E (dBuVm) to EIRP (dBm)
= 107 + 20log(3) - 104.8 = 11.8 dB
5.The other emission levels were very low against the limit.
6.The emission under 1GHz was not included since the emission levels are very low against the limit.

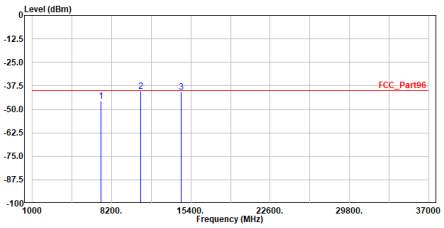
Site :HY-CB01
Condition :3m ,Horizontal
Mode :5G NR_N48_40M_Ch641666
Test by :Daniel Wu



No.	Frequency	Level	Limit Line	Over Limit	Read Level	Factor	Remark
	MHz	dBm	dBm	dB	dBm	dB	
1	7250.000	-44.79	-40.00	-4.79	-57.35	12.56	Peak
2	10875.000	-41.48	-40.00	-1.48	-56.48	15.00	Peak
3	14500.000	-41.11	-40.00	-1.11	-59.14	18.03	Peak

Note:
1. Level = Read Level + Factor
2. Factor = Antenna Factor + Cable Loss - Preamp Factor + Aux Factor
3. Over Limit = Level - Limit Line
4. Aux Factor = Convert E (dBuVm) to EIRP (dBm)
= 107 + 20log(3) - 104.8 = 11.8 dB
5.The other emission levels were very low against the limit.
6.The emission under 1GHz was not included since the emission levels are very low against the limit.

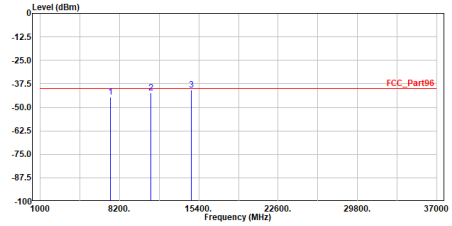
Site :HY-CB01
Condition :3m ,Vertical
Mode :5G NR_N48_40M_Ch641666
Test by :Daniel Wu



No.	Frequency	Level	Limit Line	Over Limit	Read Level	Factor	Remark
	MHz	dBm	dBm	dB	dBm	dB	
1	7250.000	-45.78	-40.00	-5.78	-58.34	12.56	Peak
2	10875.000	-40.48	-40.00	-0.48	-55.48	15.00	Peak
3	14500.000	-40.69	-40.00	-0.69	-58.72	18.03	Peak

Note:
1. Level = Read Level + Factor
2. Factor = Antenna Factor + Cable Loss - Preamp Factor + Aux Factor
3. Over Limit = Level - Limit Line
4. Aux Factor = Convert E (dBuVm) to EIRP (dBm)
= 107 + 20log(3) - 104.8 = 11.8 dB
5.The other emission levels were very low against the limit.
6.The emission under 1GHz was not included since the emission levels are very low against the limit.

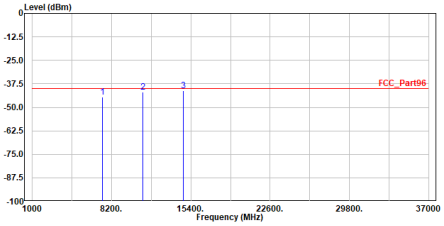
Site :HY-CB01
Condition :3m ,Horizontal
Mode :5G NR_N48_40M_Ch645332
Test by :Daniel Wu



No.	Frequency	Level	Limit Line	Over Limit	Read Level	Factor	Remark
	MHz	dBm	dBm	dB	dBm	dB	
1	7360.000	-44.56	-40.00	-4.56	-57.26	12.70	Peak
2	11040.000	-42.30	-40.00	-2.30	-57.99	15.69	Peak
3	14720.000	-40.91	-40.00	-0.91	-59.12	18.21	Peak

Note:
1. Level = Read Level + Factor
2. Factor = Antenna Factor + Cable Loss - Preamp Factor + Aux Factor
3. Over Limit = Level - Limit Line
4. Aux Factor = Convert E (dBuVm) to EIRP (dBm)
= 107 + 20log(3) - 104.8 = 11.8 dB
5.The other emission levels were very low against the limit.
6.The emission under 1GHz was not included since the emission levels are very low against the limit.

Site :HY-CB01
Condition :3m ,Vertical
Mode :5G NR_N48_40M_Ch645332
Test by :Daniel Wu

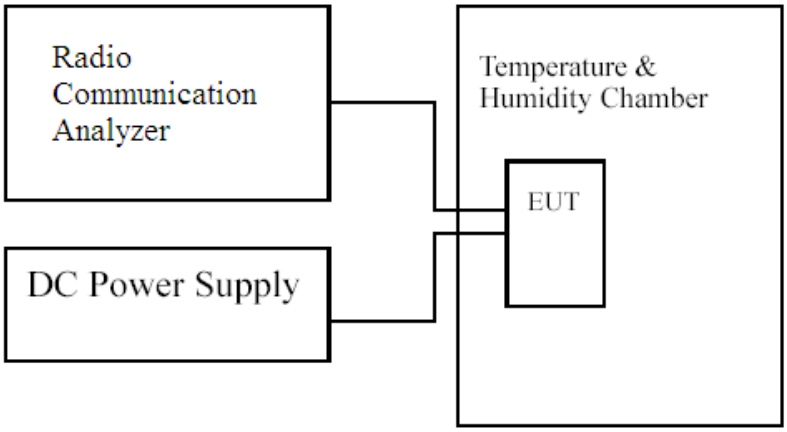


No.	Frequency	Level	Limit Line	Over Limit	Read Level	Factor	Remark
	MHz	dBm	dBm	dB	dBm	dB	
1	7360.000	-44.34	-40.00	-4.34	-57.04	12.70	Peak
2	11040.000	-42.04	-40.00	-2.04	-57.73	15.69	Peak
3	14720.000	-41.09	-40.00	-1.09	-59.30	18.21	Peak

Note:
1. Level = Read Level + Factor
2. Factor = Antenna Factor + Cable Loss - Preamp Factor + Aux Factor
3. Over Limit = Level - Limit Line
4. Aux Factor = Convert E (dBuVm) to EIRP (dBm)
= 107 + 20log(3) - 104.8 = 11.8 dB
5.The other emission levels were very low against the limit.
6.The emission under 1GHz was not included since the emission levels are very low against the limit.

6. Frequency Stability

6.1. Test Setup



6.2. Test Limit

Limit: <±2.5 ppm

6.3. Test Procedure

The frequency stability of transmitter is measured by:

(a) Temperature: The temperature is varied from -30˚C to 50˚C in 10˚C increment using a standard temperature & Humidity chamber.

(b) Primary Supply Voltage: The primary supply voltage is varied 85% to 115% of the nominal value for non hand-carried equipment. For hand-carried, battery-powered equipment, primary supply voltage is reduced to the battery operating endpoint which shall be specified by the manufacturer.

The EUT was connected via the base station simulator. Universal Radio Communication Tester, was used to measure The Frequency Error. The maximum result of measurements was recorded.

6.4. Test Specification

According to Part 2.1055

6.5. Test Result of Frequency Stability

Mode 1: LTE Band 48

5 MHz / CH55265

Voltage (VAC)	Frequency Stability (Hz)	Frequency Stability (ppm)
138.00	2.01	0.0006
120.00	2.44	0.0007
102.00	2.36	0.0007

Temperature (°C)	Frequency Stability (Hz)	Frequency Stability (ppm)
-30	1.89	0.0005
-20	2.82	0.0008
-10	1.51	0.0004
0	2.12	0.0006
10	0.80	0.0002
20	2.13	0.0006
30	1.45	0.0004
40	2.63	0.0007
50	2.07	0.0006

5 MHz / CH56715

Voltage (VAC)	Frequency Stability (Hz)	Frequency Stability (ppm)
138.00	2.49	0.0007
120.00	2.78	0.0008
102.00	2.32	0.0006

Temperature (°C)	Frequency Stability (Hz)	Frequency Stability (ppm)
-30	2.88	0.0008
-20	3.01	0.0008
-10	2.05	0.0006
0	2.29	0.0006
10	1.64	0.0004
20	2.14	0.0006
30	1.71	0.0005
40	2.21	0.0006
50	2.63	0.0007

10 MHz / CH55290

Voltage (VAC)	Frequency Stability (Hz)	Frequency Stability (ppm)
138.00	2.51	0.0007
120.00	2.99	0.0008
102.00	2.52	0.0007

Temperature (°C)	Frequency Stability (Hz)	Frequency Stability (ppm)
-30	2.71	0.0008
-20	3.25	0.0009
-10	2.37	0.0007
0	1.88	0.0005
10	2.98	0.0008
20	1.54	0.0004
30	1.96	0.0006
40	1.67	0.0005
50	3.22	0.0009

10 MHz / CH56690

Voltage (VAC)	Frequency Stability (Hz)	Frequency Stability (ppm)
138.00	3.34	0.0009
120.00	3.91	0.0011
102.00	2.35	0.0006

Temperature (°C)	Frequency Stability (Hz)	Frequency Stability (ppm)
-30	3.58	0.0010
-20	3.16	0.0009
-10	3.53	0.0010
0	3.95	0.0011
10	3.19	0.0009
20	3.44	0.0009
30	3.99	0.0011
40	3.03	0.0008
50	2.81	0.0008

15 MHz / CH55315

Voltage (VAC)	Frequency Stability (Hz)	Frequency Stability (ppm)
138.00	2.06	0.0006
120.00	2.37	0.0007
102.00	1.70	0.0005

Temperature (°C)	Frequency Stability (Hz)	Frequency Stability (ppm)
-30	1.25	0.0004
-20	1.71	0.0005
-10	1.22	0.0003
0	1.45	0.0004
10	1.30	0.0004
20	0.84	0.0002
30	1.34	0.0004
40	1.35	0.0004
50	1.18	0.0003

15 MHz / CH56665

Voltage (VAC)	Frequency Stability (Hz)	Frequency Stability (ppm)
138.00	2.35	0.0006
120.00	2.22	0.0006
102.00	1.82	0.0005

Temperature (°C)	Frequency Stability (Hz)	Frequency Stability (ppm)
-30	1.55	0.0004
-20	2.88	0.0008
-10	1.65	0.0004
0	1.29	0.0003
10	1.11	0.0003
20	1.44	0.0004
30	1.35	0.0004
40	2.28	0.0006
50	1.72	0.0005

20 MHz / CH55340

Voltage (VAC)	Frequency Stability (Hz)	Frequency Stability (ppm)
138.00	1.78	0.0005
120.00	3.33	0.0009
102.00	2.34	0.0007

Temperature (°C)	Frequency Stability (Hz)	Frequency Stability (ppm)
-30	3.65	0.0010
-20	3.15	0.0009
-10	2.49	0.0007
0	2.11	0.0006
10	2.91	0.0008
20	2.63	0.0007
30	2.63	0.0007
40	2.28	0.0006
50	2.39	0.0007

20 MHz / CH56640

Voltage (VAC)	Frequency Stability (Hz)	Frequency Stability (ppm)
138.00	2.04	0.0006
120.00	3.15	0.0009
102.00	2.16	0.0006

Temperature (°C)	Frequency Stability (Hz)	Frequency Stability (ppm)
-30	2.61	0.0007
-20	2.13	0.0006
-10	2.48	0.0007
0	2.25	0.0006
10	2.71	0.0007
20	3.24	0.0009
30	2.35	0.0006
40	2.93	0.0008
50	3.23	0.0009

Mode 2: 5G NR n48

10 MHz / CH641666

Voltage (VDC)	Frequency Stability (Hz)	Frequency Stability (ppm)
138.00	1.65	0.0005
120.00	1.84	0.0005
102.00	0.97	0.0003

Temperature (°C)	Frequency Stability (Hz)	Frequency Stability (ppm)
-30	1.66	0.0005
-20	1.60	0.0004
-10	1.53	0.0004
0	1.47	0.0004
10	1.05	0.0003
20	1.46	0.0004
30	2.00	0.0006
40	1.96	0.0005
50	1.61	0.0004

10 MHz / CH646332

Voltage (VDC)	Frequency Stability (Hz)	Frequency Stability (ppm)
138.00	3.61	0.0010
120.00	3.77	0.0010
102.00	3.64	0.0010

Temperature (°C)	Frequency Stability (Hz)	Frequency Stability (ppm)
-30	3.24	0.0009
-20	3.59	0.0010
-10	3.41	0.0009
0	3.23	0.0009
10	3.45	0.0009
20	3.25	0.0009
30	2.66	0.0007
40	3.46	0.0009
50	3.56	0.0010

20 MHz / CH637334

Voltage (VDC)	Frequency Stability (Hz)	Frequency Stability (ppm)
138.00	2.83	0.0008
120.00	2.42	0.0007
102.00	1.50	0.0004

Temperature (°C)	Frequency Stability (Hz)	Frequency Stability (ppm)
-30	2.82	0.0008
-20	2.37	0.0007
-10	2.48	0.0007
0	1.81	0.0005
10	2.04	0.0006
20	2.85	0.0008
30	2.45	0.0007
40	2.27	0.0006
50	1.61	0.0005

20 MHz / CH646000

Voltage (VDC)	Frequency Stability (Hz)	Frequency Stability (ppm)
138.00	2.16	0.0006
120.00	2.37	0.0006
102.00	1.75	0.0005

Temperature (°C)	Frequency Stability (Hz)	Frequency Stability (ppm)
-30	2.10	0.0006
-20	1.80	0.0005
-10	1.28	0.0003
0	1.36	0.0004
10	1.87	0.0005
20	1.41	0.0004
30	1.48	0.0004
40	1.79	0.0005
50	1.93	0.0005

30 MHz / CH637668

Voltage (VDC)	Frequency Stability (Hz)	Frequency Stability (ppm)
138.00	0.98	0.0003
120.00	1.49	0.0004
102.00	1.08	0.0003

Temperature (°C)	Frequency Stability (Hz)	Frequency Stability (ppm)
-30	0.81	0.0002
-20	1.27	0.0004
-10	1.36	0.0004
0	1.42	0.0004
10	0.54	0.0002
20	0.74	0.0002
30	0.51	0.0001
40	0.85	0.0002
50	1.61	0.0005

30 MHz / CH645666

Voltage (VDC)	Frequency Stability (Hz)	Frequency Stability (ppm)
138.00	1.25	0.0003
120.00	1.68	0.0005
102.00	0.73	0.0002

Temperature (°C)	Frequency Stability (Hz)	Frequency Stability (ppm)
-30	1.81	0.0005
-20	1.26	0.0003
-10	1.30	0.0004
0	1.42	0.0004
10	1.51	0.0004
20	0.57	0.0002
30	1.64	0.0004
40	1.60	0.0004
50	1.38	0.0004

40 MHz / CH638000

Voltage (VDC)	Frequency Stability (Hz)	Frequency Stability (ppm)
138.00	2.86	0.0008
120.00	2.56	0.0007
102.00	1.83	0.0005

Temperature (°C)	Frequency Stability (Hz)	Frequency Stability (ppm)
-30	0.99	0.0003
-20	1.93	0.0005
-10	2.07	0.0006
0	2.49	0.0007
10	3.22	0.0009
20	2.88	0.0008
30	2.35	0.0007
40	1.50	0.0004
50	2.32	0.0006

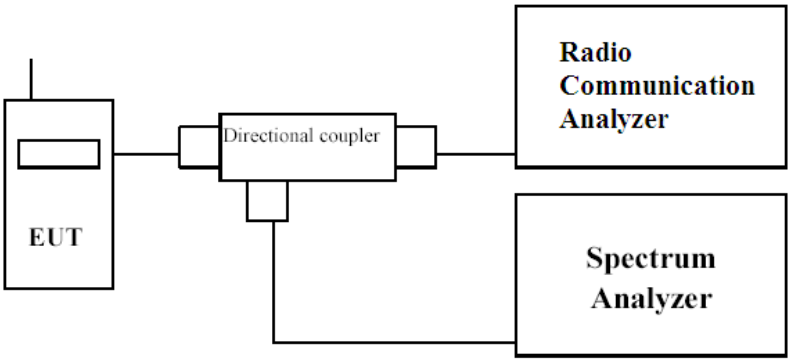
40 MHz / CH645332

Voltage (VDC)	Frequency Stability (Hz)	Frequency Stability (ppm)
138.00	-2.63	-0.0007
120.00	-1.99	-0.0005
102.00	-2.15	-0.0006

Temperature (°C)	Frequency Stability (Hz)	Frequency Stability (ppm)
-30	-1.50	-0.0004
-20	-1.84	-0.0005
-10	-3.09	-0.0008
0	-3.19	-0.0009
10	-2.12	-0.0006
20	-1.76	-0.0005
30	-3.36	-0.0009
40	-2.48	-0.0007
50	-2.89	-0.0008

7. Peak to Average Ratio

7.1. Test Setup



7.2. Test Limit

The peak-to-average power ratio (PAPR) of the transmitter output power must not exceed 13 dB. The PAPR measurements should be made using either an instrument with complementary cumulative distribution function (CCDF) capabilities to determine that PAPR will not exceed 13 dB for more than 0.1 percent of the time or other Commission approved procedure.

7.3. Test Procedure

a) Refer to instrument's analyzer instruction manual for details on how to use the power statistics/CCDF function;

b) Set resolution/measurement bandwidth ≥ signal's occupied bandwidth;

c) Set the number of counts to a value that stabilizes the measured CCDF curve;

d) Set the measurement interval as follows:

1) for continuous transmissions, set to 1 ms,

2) for burst transmissions, employ an external trigger that is synchronized with the EUT burst timing sequence, or use the internal burst trigger with a trigger level that allows the burst to stabilize and set the measurement interval to a time that is less than or equal to the burst duration.

e) Record the maximum PAPR level associated with a probability of 0.1%.

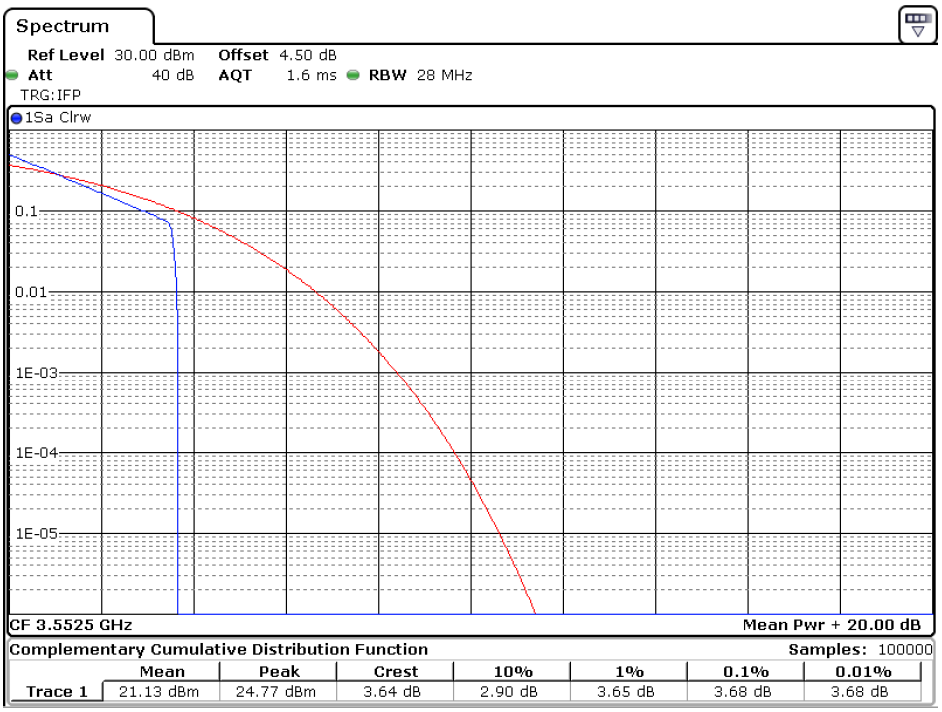
7.4. Test Specification

According to Part 96.41

7.5. Test Result of Peak to Average Ratio

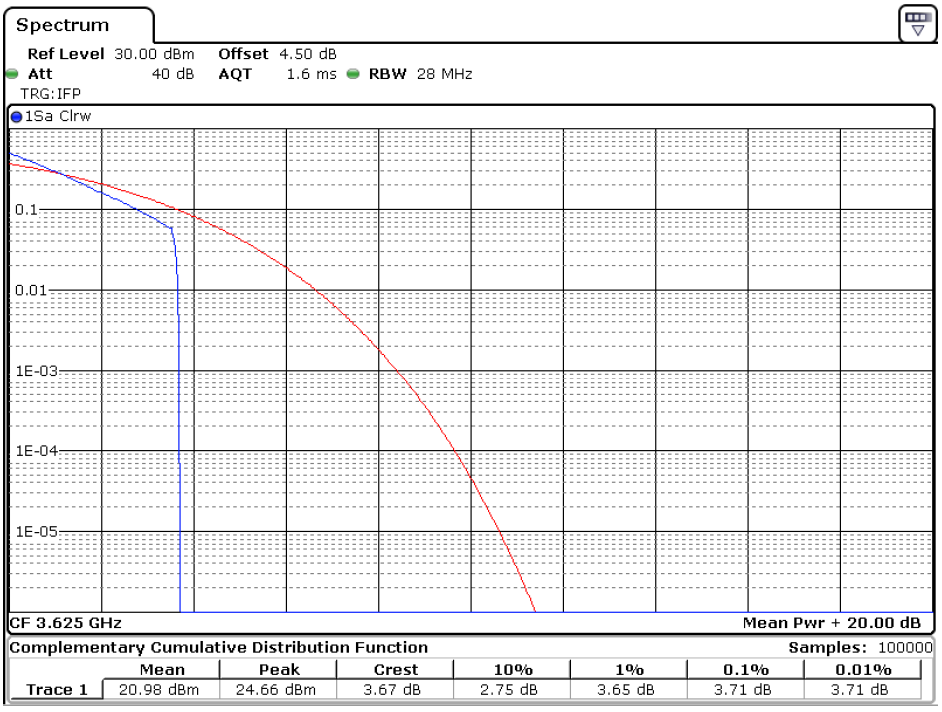
Mode 1: LTE Band 48

5 MHz / QPSK / CH55265 / 1RB



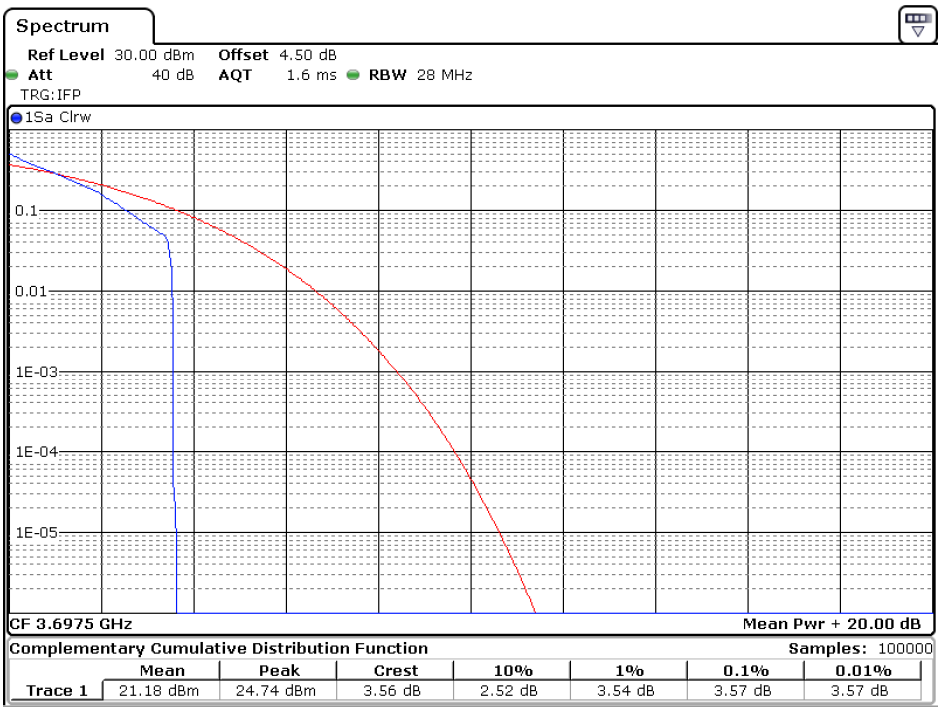
Date: 6.APR.2022 15:19:24

5 MHz / QPSK / CH55990 / 1RB



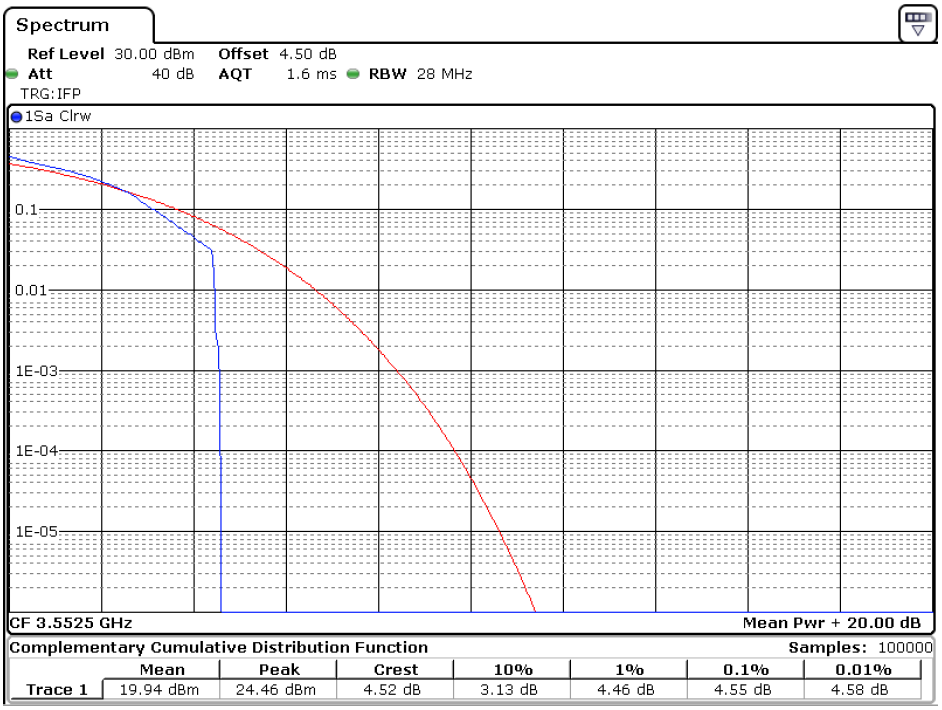
Date: 6.APR.2022 15:20:35

5 MHz / QPSK / CH56715 / 1RB



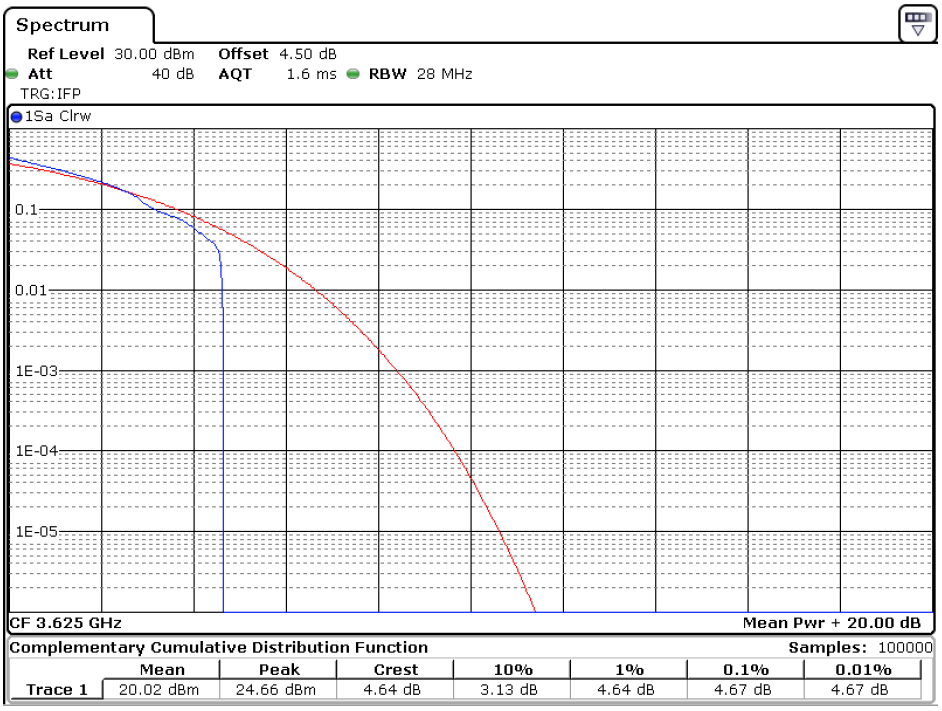
Date: 6.APR.2022 15:21:40

5 MHz / 16-QAM / CH55265 / 1RB



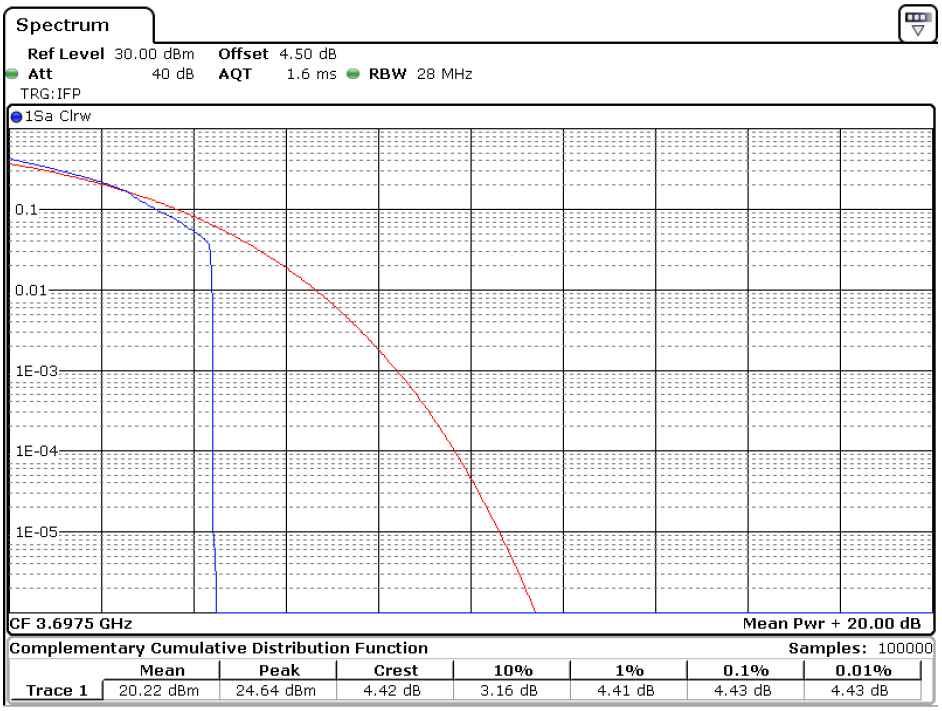
Date: 6.APR.2022 15:19:48

5 MHz / 16-QAM / CH55990 / 1RB



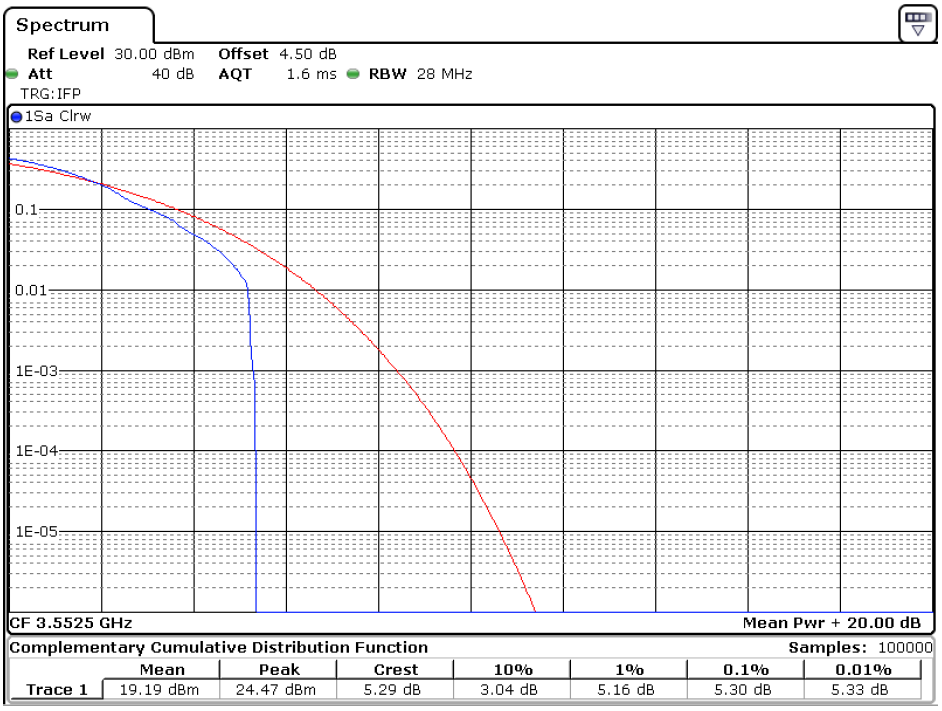
Date: 6.APR.2022 15:20:45

5 MHz / 16-QAM / CH56715 / 1RB



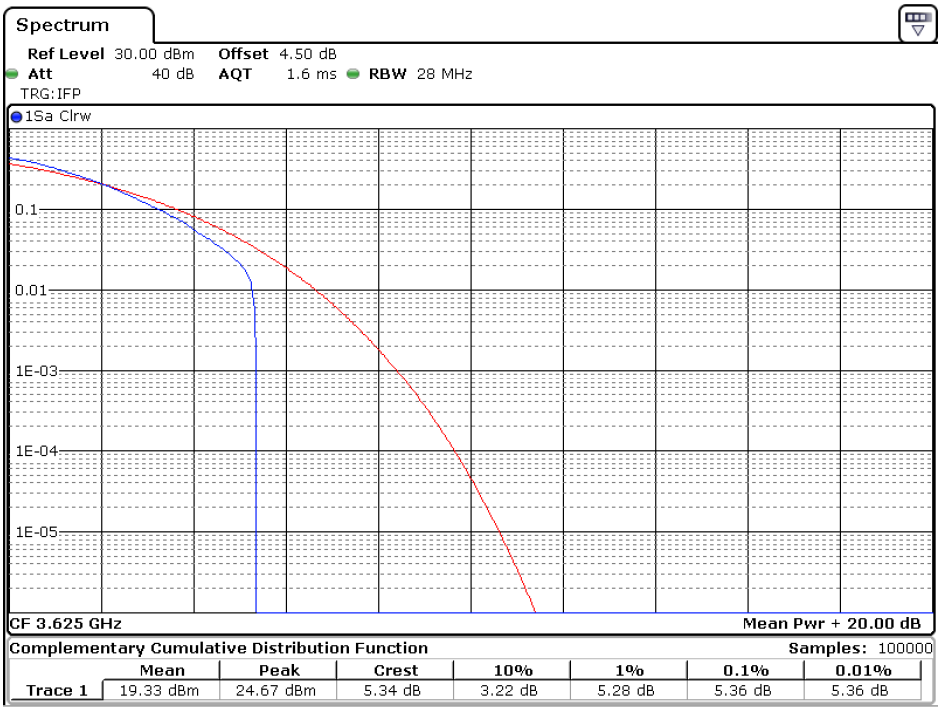
Date: 6.APR.2022 15:21:49

5 MHz / 64-QAM / CH55265 / 1RB



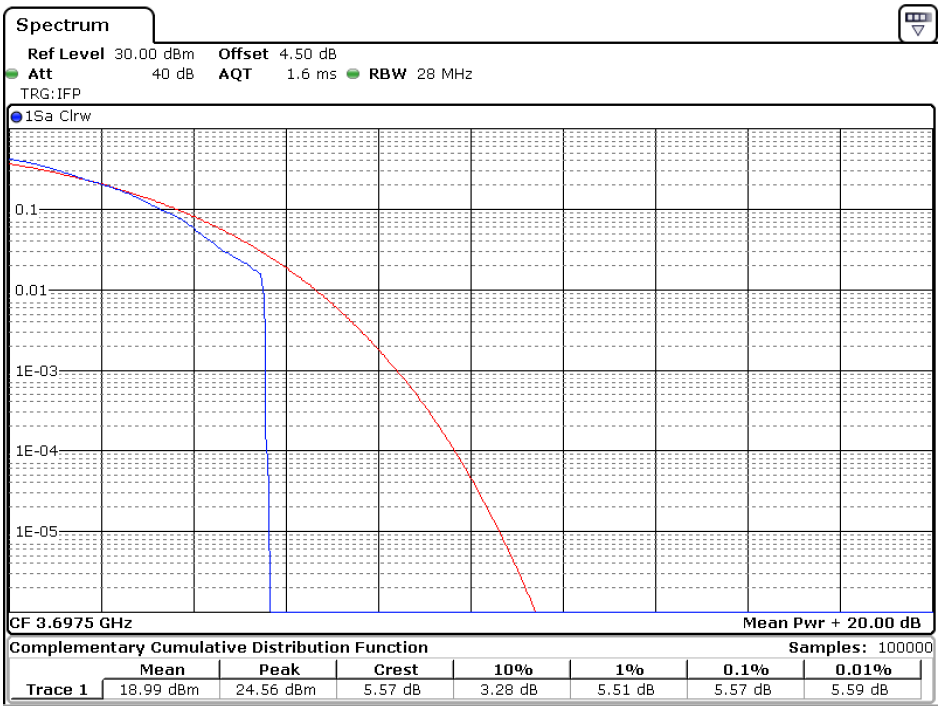
Date: 6.APR.2022 15:19:56

5 MHz / 64-QAM / CH55990 / 1RB



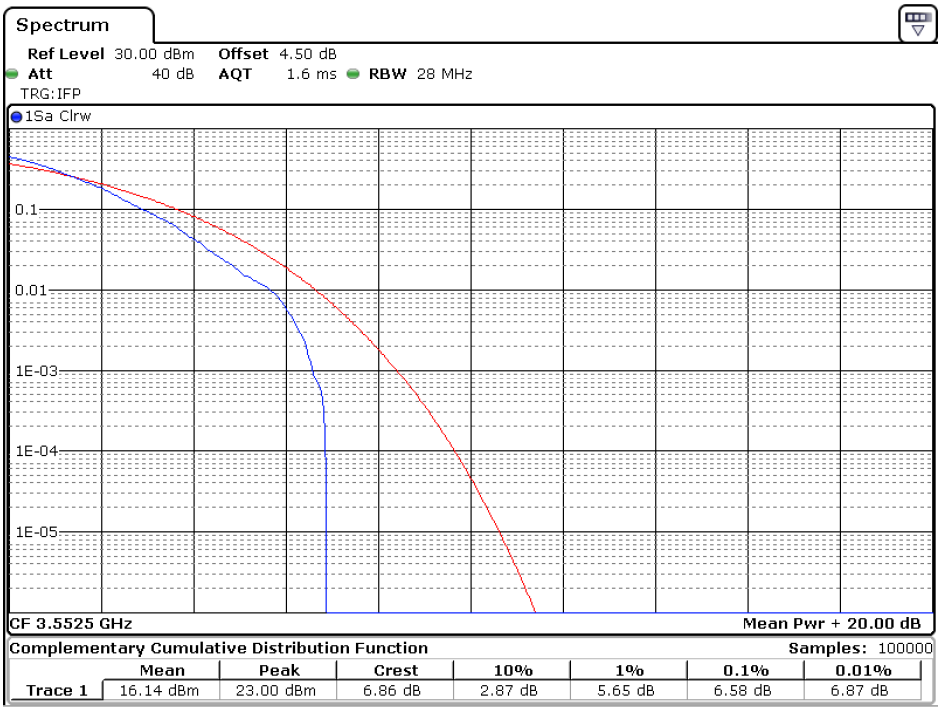
Date: 6.APR.2022 15:20:52

5 MHz / 64-QAM / CH56715 / 1RB



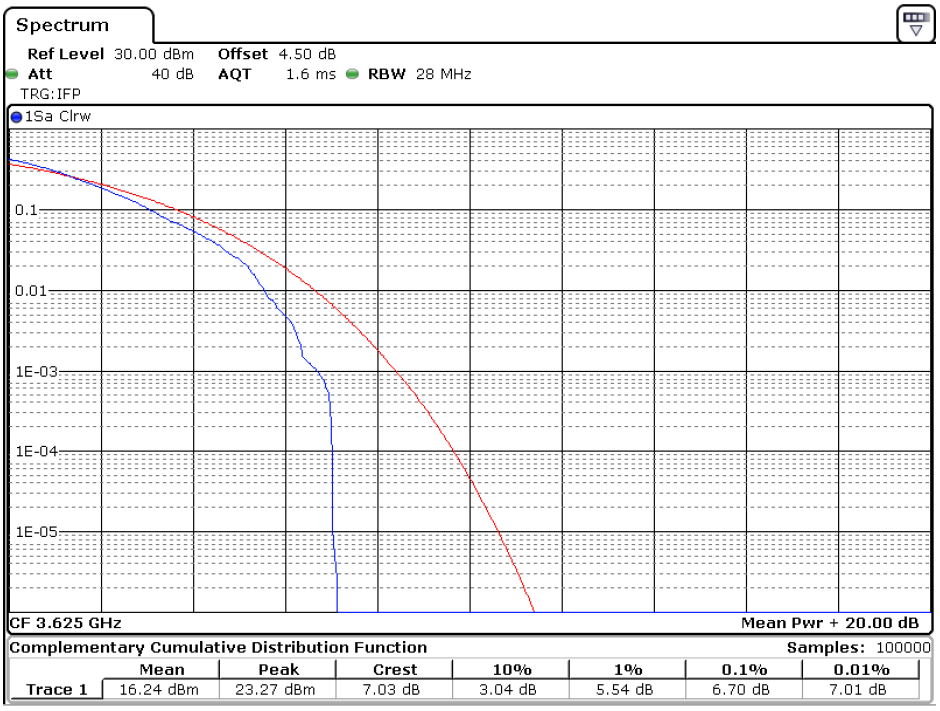
Date: 6.APR.2022 15:21:56

5 MHz / 256-QAM / CH55265 / 1RB



Date: 6.APR.2022 15:20:11

5 MHz / 256-QAM / CH55990 / 1RB

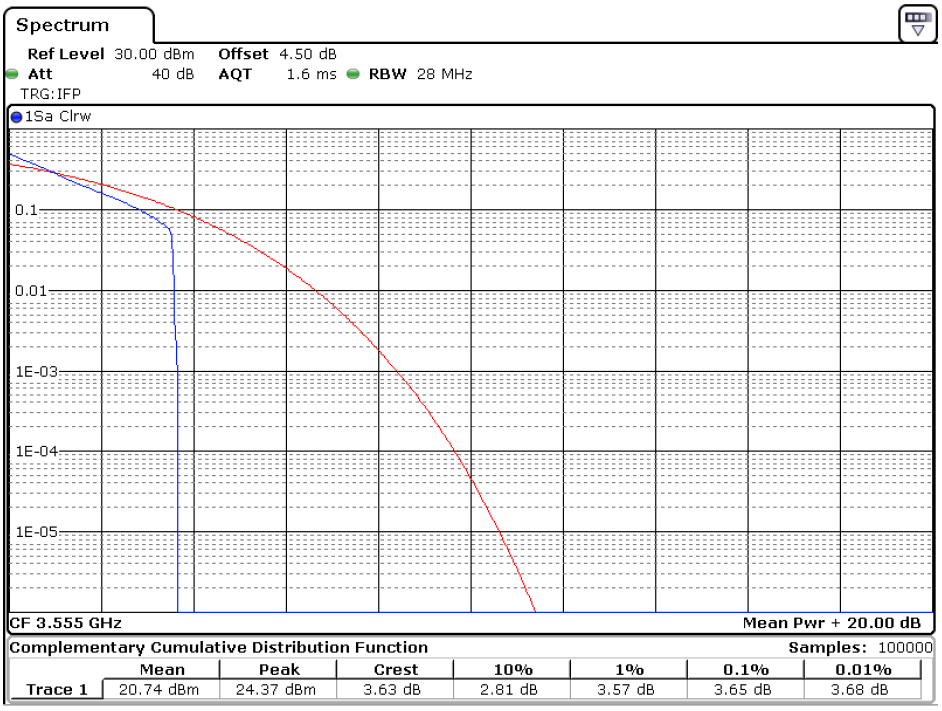


Date: 6.APR.2022 15:21:02

5 MHz / 256-QAM / CH56715 / 1RB

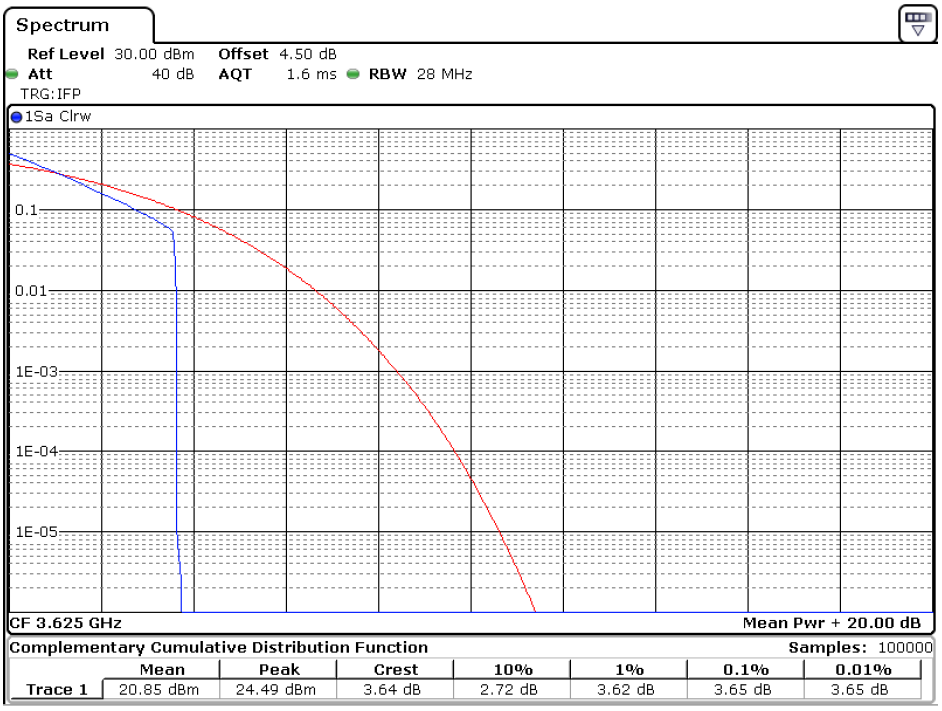
Date: 6.APR.2022 15:22:03

10 MHz / QPSK / CH55290 / 1RB



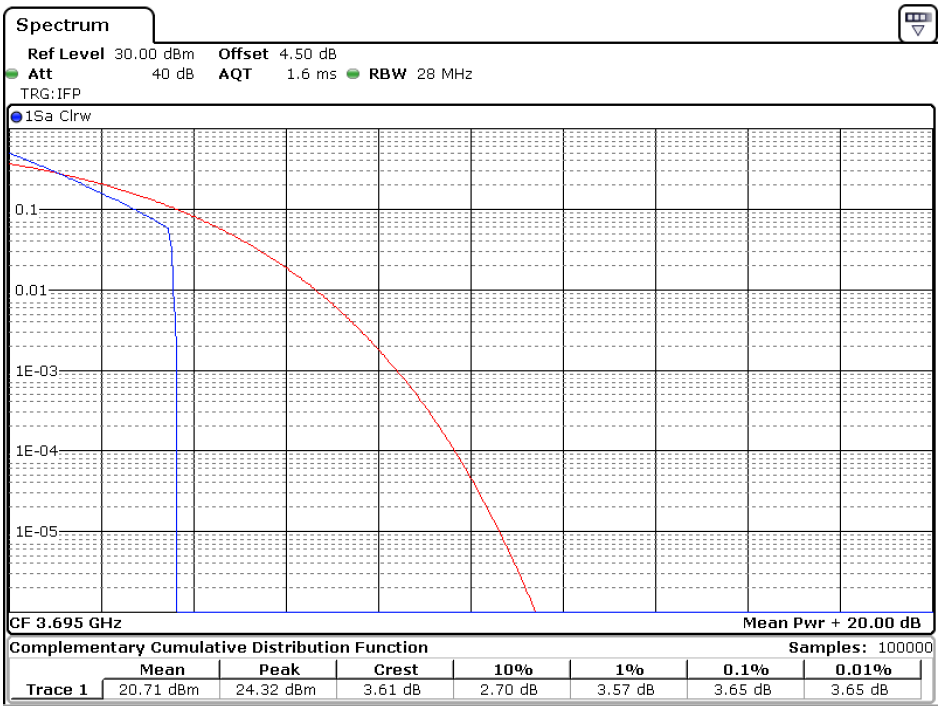
Date: 6.APR.2022 15:35:08

10 MHz / QPSK / CH55990 / 1RB



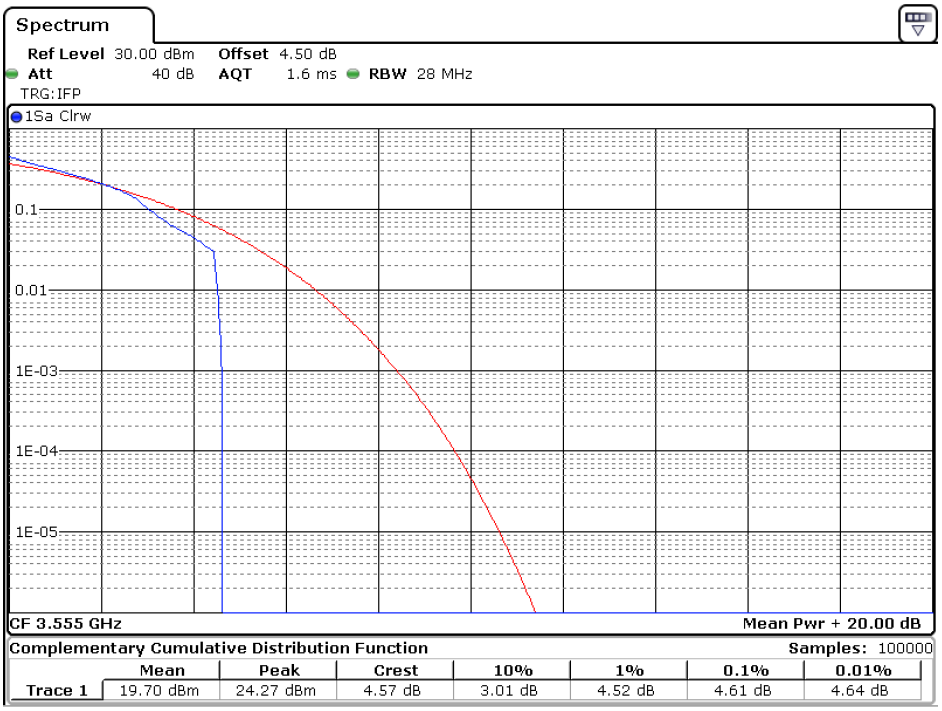
Date: 6.APR.2022 15:36:05

10 MHz / QPSK / CH56690 / 1RB



Date: 6.APR.2022 15:37:26

10 MHz / 16-QAM / CH55290 / 1RB

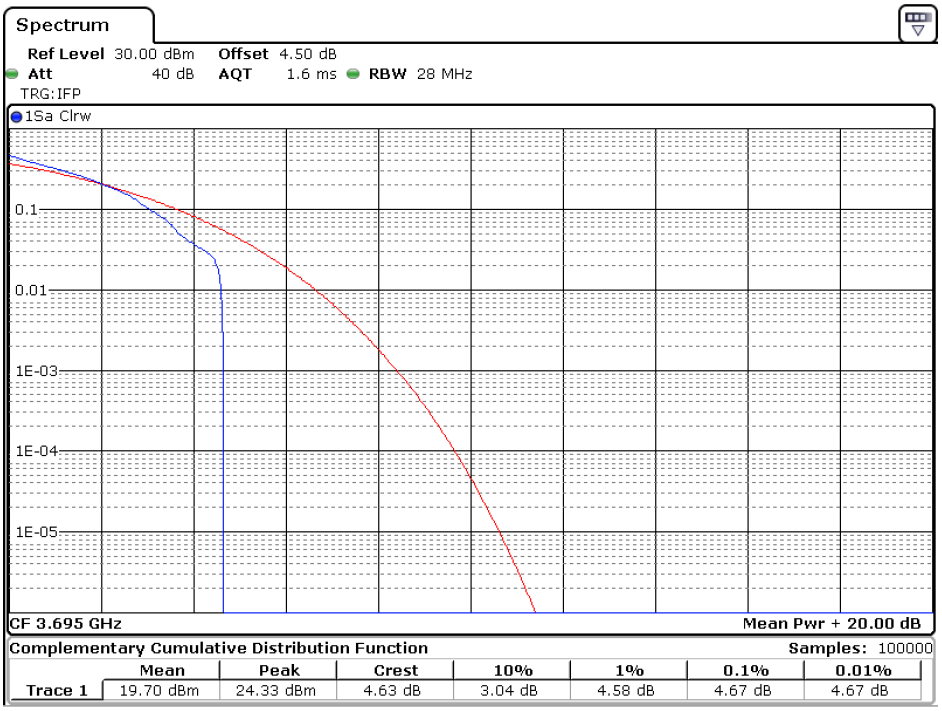


Date: 6.APR.2022 15:35:30

10 MHz / 16-QAM / CH55990 / 1RB

Date: 6.APR.2022 15:36:22

10 MHz / 16-QAM / CH56690 / 1RB



Date: 6.APR.2022 15:37:42