

TEST REPORT



CTK Co., Ltd.
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Report No.:
CTK-2020-04662
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1. Client

- Name : Samsung Electronics Co Ltd
- Address : 19 Chapin Rd, Building D. Pine Brook, New Jersey, United States
- Date of Receipt : 2020-10-12

2. Manufacturer

- Name : Samsung Electronics Co., Ltd.
- Address : 129, Samsung-ro, Yeongtong-gu, Suwon-si, Gyeonggi-do, 16677, Republic of Korea

3. Use of Report : For FCC Certification

4. Test Sample / Model: MMU(MT6407) / MT6407-77A



5. Date of Test : 2020-10-29 to 2020-12-01

6. Test Standard(method) used : FCC 47 CFR Part 2, 27

7. Testing Environment: Temp.: (25 ± 1) °C, Humidity: (45 ± 1) % R.H.

8. Test Results : Compliance

The results shown in this test report refer only to the sample(s) tested unless otherwise stated. This Test Report cannot be reproduced, except in full.

Affirmation	Tested by  Bong-jun Jang: (Signature)	Technical Manager  Young-taek Lee: (Signature)
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2020-12-02

Republic of KOREA **CTK Co., Ltd.**



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REPORT REVISION HISTORY

Date	Revision	Page No
2020-12-02	Issued (CTK-2020-04662)	all

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1. General Information

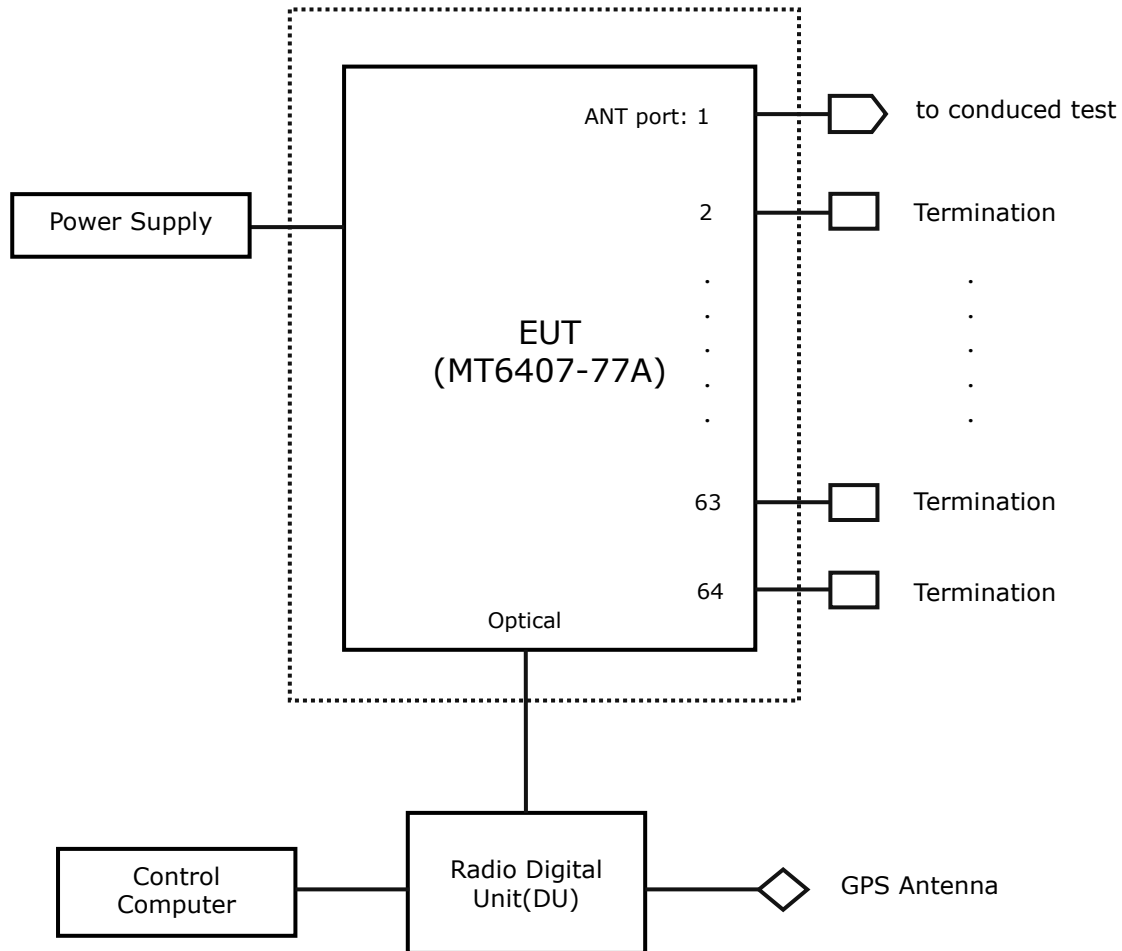
1.1 Client Information

Company	Samsung Electronics Co., Ltd.
Contact Point	129, Samsung-ro, Yeongtong-gu, Suwon-si, Gyeonggi-do, 16677, Republic of Korea
Contact Person	Name : Kim, Jong-in E-mail : jered.kim@samsung.com Tel : +82-31-279-3096

1.2 Product Information

FCC ID	A3LMT6407-77A
Product Description	MMU(MT6407)
Model name	MT6407-77A
Power Supply	-48 Vdc
Operating Frequency	DL/UL : 3 700 MHz - 3 980 MHz
RF Output Power	[Single Carrier] BW 100 MHz : 3.125 W / path(Total 64 path = 200 W) [Multi Carrier] BW 100 MHz+100 MHz : 1.5625 + 1.5625 = 3.125 W / path(Total 64 path =200 W)
Channel Bandwidth	100 MHz, 200 MHz
Antenna ports	64TRX
Modulation Type	QPSK, 16QAM, 64QAM, 256QAM
FCC Rule	Part 2 : FREQUENCY ALLOCATIONS AND RADIO TREATY MATTERS; GENERAL RULES AND REGULATIONS Part 27 : MISCELLANEOUS WIRELESS COMMUNICATIONS SERVICES KDB Publication 662911 D01 Multiple Transmitter Output v02r01 ANSI C63.26-2015

1.3 Configurations





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2. Facility and Accreditations

2.1 Test Facility

The measurement facility is located at (Ho-dong), 113, Yejik-ro, Cheoin-gu, Yong-in-si, Gyeonggi-do, Korea.

2.2 Laboratory Accreditations and Listings

Country	Agency	Registration Number
USA	FCC	805871
CANADA	ISED	8737A-2
KOREA	NRRA	KR0025

2.3 Calibration Details of Equipment Used for Measurement

Test equipment and test accessories are calibrated on regular basis. The maximum time between calibrations is one year or what is recommended by the manufacturer, whichever is less. All test equipment calibrations are traceable to the Korea Research Institute of Standards and Science (KRISS), therefore, all test data recorded in this report is traceable to KRISS.



3. Test Specifications

3.1 Standards

The following tests were conducted on a sample of the equipment for the purpose of demonstrating compliance with FCC Part 2, Part 27.

Section	Test Items	Results
§2.1046, §27.50(d)(2)	RF output power	Compliant
§2.1049	Occupied bandwidth	Compliant
§2.1051, §27.53(I)	Spurious Emissions at Antenna Terminals	Compliant
§2.1051, §27.53(I)	Band edge	Compliant
§2.1053, §27.53(I)	Spurious Radiated Emissions	Compliant
§2.1055(a)(1), §27.54	Frequency Stability over Temperature variation	Compliant
§2.1055(d), §27.54	Frequency Stability over Voltage variation	Compliant

3.2 Mode of operation during the test

The EUT is operated in a manner representative of the typical of the equipments. During at testing, system components were manipulated within the confines of typical usage to maximize each emission. All modulation(QPSK, 16QAM, 64QAM, 256QAM) modes were tests. The results are only attached worst cases.



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Frequency range	
Transmit	3 700 MHz to 3 980 MHz
Receive	3 700 MHz to 3 980 MHz

Operating Configurations	
Supported configurations	Single carrier, Multi carrier
Spectrum Operation	Contiguous, Non-Contiguous

Single carrier rated total output power as a sum of all carriers					
Bandwidth	Positions	Frequency [MHz]	Power [W]	Output port	Total Power(sum)[W]
100 MHz	Bottom	3 750	3.125	64 TX	200
	Middle	3 840			
	Top	3 930			

Multi carrier(Contiguous) rated total output power as a sum of all carriers						
Bandwidth	Bandwidth positions		1 st FA (Component Carrier)_CC0	2 nd FA (Component Carrier)_CC1	Output port	Total Power(sum)[W]
200 MHz	Bottom	Bandwidth	100 MHz	100 MHz		
		Frequency	3 750 MHz	3 850 MHz		
		Output Power	3.125 W		64 TX	200
	Middle	Bandwidth	100 MHz	100 MHz		
		Frequency	3 790 MHz	3 890 MHz		
		Output Power	3.125 W		64 TX	200
	Top	Bandwidth	100 MHz	100 MHz		
		Frequency	3 830 MHz	3 930 MHz		
		Output Power	3.125 W		64 TX	200

Multi carrier(Non-contiguous) rated total output power as a sum of all carriers						
Bandwidth	Bandwidth positions		1 st FA (Component Carrier)_CC0	2 nd FA (Component Carrier)_CC1	Output port	Total Power(sum)[W]
200 MHz	Bottom / Top	Bandwidth	100 MHz	100 MHz		
		Frequency	3 750 MHz	3 930 MHz		
		Output Power	1.5625 W	1.5625 W	64 TX	200 W



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3.3 Maximum Measurement Uncertainty

The value of the measurement uncertainty for the measurement of each parameter.
Coverage factor $k = 2$, Confidence levels of 95 %

Description	Uncertainty
Conducted RF output power	1.5 dB
Occupied bandwidth	0.1 MHz
Spurious emission at antenna terminals	3.0 dB
Radiated spurious emissions ($f \leq 1$ GHz)	4.0 dB
Radiated spurious emissions ($f > 1$ GHz)	5.0 dB
Frequency stability	0.1 kHz

3.4 Standards Environmental Test conditions

Temperature	+ 15 °C to + 35 °C
Relative humidity	30 % to 60 %
Air pressure	860 mbar to 1 060 mbar



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4. RF output power

Test Requirements :

§ 2.1046 Measurements required : RF power output :

(a) For transmitters other than single sideband, independent sideband and controlled carrier radiotelephone, power output shall be measured at the RF output terminals when the transmitter is adjusted in accordance with the tune-up procedure to give the values of current and voltage on the circuit elements specified in §2.1033(c)(8). The electrical characteristics of the radio frequency load attached to the output terminals when this test is made shall be stated.

(b) For single sideband, independent sideband, and single channel, controlled carrier radiotelephone transmitters the procedure specified in paragraph (a) of this section shall be employed and, in addition, the transmitter shall be modulated during the test as follows. In all tests, the input level of the modulating signal shall be such as to develop rated peak envelope power or carrier power, as appropriate, for the transmitter.

(c) For measurements conducted pursuant to paragraphs (a) and (b) of this section, all calculations and methods used by the applicant for determining carrier power or peak envelope power, as appropriate, on the basis of measured power in the radio frequency load attached to the transmitter output terminals shall be shown. Under the test conditions specified, no components of the emission spectrum shall exceed the limits specified in the applicable rule parts as necessary for meeting occupied bandwidth or emission limitations.

§ 27.50 Power limits and duty cycle.

(j) The following power requirements apply to stations transmitting in the 3700-3980 MHz band:

(1) The power of each fixed or base station transmitting in the 3700-3980 MHz band and located in any county with population density of 100 or fewer persons per square mile, based upon the most recently available population statistics from the Bureau of the Census, is limited to an equivalent isotropically radiated power (EIRP) of 3280 Watts/MHz. This limit applies to the aggregate power of all antenna elements in any given sector of a base station.

(2) The power of each fixed or base station transmitting in the 3700-3980 MHz band and situated in any geographic location other than that described in paragraph (j)(1) of this section is limited to an EIRP of 1640 Watts/MHz. This limit applies to the aggregate power of all antenna elements in any given sector of a base station.

(3) Mobile and portable stations are limited to 1 Watt EIRP. Mobile and portable stations operating in these bands must employ a means for limiting power to the minimum necessary for successful communications.

(4) Equipment employed must be authorized in accordance with the provisions of §27.51. Power measurements for transmissions by stations authorized under this section may be made either in accordance with a Commission-approved average power technique or in compliance with paragraph (j)(5) of this section. In measuring transmissions in this band using an average power technique, the peak-to-average ratio (PAR) of the transmission may not exceed 13 dB.

(5) Peak transmit power must be measured over any interval of continuous transmission using instrumentation calibrated in terms of an rms-equivalent voltage. The measurement results shall be properly adjusted for any instrument limitations, such as detector response times, limited resolution bandwidth capability when compared to the emission bandwidth, sensitivity, and any other relevant factors, so as to obtain a true peak measurement for the emission in question over the full bandwidth of the channel.



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Test Procedures :

According to FCC §2.1046 (a), for transmitters other than single sideband, independent sideband and controlled carrier radiotelephone, power output shall be measured at the RF output terminals when the transmitter is adjusted in accordance with the tune-up procedure to give the values of current and voltage on the circuit elements specified in §2.1033(c). The electrical characteristics of the radio frequency load attached to the output terminals when this is made shall be stated.

- 1) The radio frequency load attached to the EUT antenna terminal was 50 Ohm. The loss of the cables the test system is calibrated to correct the reading.
- 2) The spectrum analyzer was set to RMS Detector function and Average mode.
- 3) The resolution bandwidth of the spectrum analyzer was comparable to the emission bandwidth.
- 4) The conducted emission level is measured at each antenna port and then summed mathematically to determine the total emission level from the device.

Note 1 : The conducted emission level is measured at each antenna port and then summed mathematically to determine the total emission level from the device.

Note 2: Maximum ERP is sufficient level to pass the limit.

Note 3 : Sum data is in a tolerance of specification provided from manufacturer.

Maximum output power for one port :

- Single carrier
BW 100 MHz : **34.949 dBm (3.125 W)**
- Multi carrier
Contiguous BW 100 MHz + 100 MHz : **34.949 dBm (1.5625 W + 1.5625 W = 3.125 W)**
Non-Contiguous BW 100 MHz + 100 MHz : **34.949 dBm (1.5625 W + 1.5625 W = 3.125 W)**

Maximum output sum power :

- Single carrier
BW 100 MHz : **53.01 dBm (200 W)**
- Multi carrier
Contiguous BW 100 MHz +100 MHz : **53.01 dBm (100 W + 100 W = 200 W)**
Non-Contiguous BW 100 MHz +100 MHz : **53.01 dBm (100 W + 100 W = 200 W)**

Measured sum maximum power : **53.30 dBm (213.78 W)**



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Test Results :

Test Data : Single carrier

Channel position(Bottom)

Antenna port	Output Power [dBm]			
	Modulation Type			
	QPSK	16QAM	64QAM	256QAM
1	34.65	34.65	34.68	34.61
2	34.34	34.34	34.36	34.30
3	34.50	34.49	34.42	34.45
4	34.62	34.65	34.61	34.61
5	34.68	34.61	34.62	34.53
6	34.67	34.62	34.66	34.61
7	34.66	34.63	34.59	34.61
8	34.65	34.53	34.52	34.47
9	34.64	34.54	34.56	34.52
10	34.79	34.69	34.75	34.62
11	34.48	34.32	34.39	34.33
12	34.61	34.51	34.39	34.56
13	34.60	34.64	34.39	34.52
14	34.73	34.57	34.53	34.68
15	34.59	34.59	34.43	34.58
16	34.56	34.62	34.51	34.63
17	34.63	34.70	34.48	34.60
18	34.50	34.60	34.33	34.47
19	34.62	34.58	34.39	34.59
20	34.81	34.92	34.62	34.73
21	34.69	34.91	34.63	34.69
22	34.77	34.83	34.65	34.72
23	34.72	34.76	34.53	34.65
24	34.68	34.79	34.56	34.65
25	34.58	34.68	34.48	34.54
26	33.75	33.87	33.67	33.58
27	34.72	34.95	34.60	34.74
28	34.38	34.64	34.35	34.38
29	34.60	34.84	34.54	34.59
30	34.78	34.97	34.63	34.70
31	34.77	35.05	34.65	34.70
32	34.55	34.79	34.47	34.54
33	34.62	34.76	34.62	34.72
34	34.62	34.67	34.68	34.70
35	34.77	34.74	34.70	34.76
36	34.89	34.83	34.74	34.91
37	34.67	34.51	34.51	34.60
38	34.64	34.52	34.48	34.57
39	34.66	34.54	34.54	34.64
40	34.80	34.63	34.63	34.76
41	34.63	34.42	34.35	34.51
42	34.85	34.66	34.57	34.71
43	34.75	34.55	34.54	34.65
44	34.78	34.53	34.48	34.58
45	34.73	34.54	34.53	34.54
46	34.84	34.59	34.66	34.70
47	34.97	34.93	34.80	34.85
48	34.81	34.78	34.63	34.70
49	34.62	34.57	34.39	34.44
50	34.62	34.58	34.42	34.43
51	34.69	34.62	34.51	34.64
52	34.67	34.63	34.43	34.56
53	35.05	35.18	34.93	35.05
54	34.81	34.97	34.56	34.76
55	34.69	34.93	34.51	34.69



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Antenna port	Output Power [dBm]			
	Modulation Type			
	QPSK	16QAM	64QAM	256QAM
56	34.95	35.18	34.71	34.85
57	34.75	34.94	34.53	34.61
58	35.00	35.37	34.97	35.11
59	34.96	35.36	34.92	35.09
60	34.99	35.37	34.95	35.07
61	34.68	35.00	34.62	34.75
62	34.61	35.04	34.62	34.76
63	34.64	35.08	34.66	34.73
64	34.97	35.00	35.26	35.34

Antenna port	Total Output Power							
	Modulation Type							
	QPSK		16QAM		64QAM		256QAM	
	[dBm]	[W]	[dBm]	[W]	[dBm]	[W]	[dBm]	[W]
1 - 64	52.75	188.53	52.80	190.65	52.64	183.48	52.71	186.75



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Channel position(Middle)

Antenna port	Output Power [dBm]			
	Modulation Type			
	QPSK	16QAM	64QAM	256QAM
1	34.83	34.98	35.21	35.07
2	34.71	34.84	34.97	34.79
3	34.76	34.93	35.03	34.89
4	34.97	35.11	35.17	35.10
5	35.05	35.19	35.14	35.19
6	34.91	35.05	34.97	35.07
7	34.98	35.24	35.02	35.14
8	34.84	34.99	34.79	35.05
9	34.83	35.06	34.75	34.96
10	35.15	35.28	35.04	35.26
11	34.74	34.89	34.66	34.86
12	34.90	35.06	35.00	34.95
13	34.95	35.11	35.06	34.95
14	35.01	34.95	35.11	35.00
15	34.81	34.91	34.73	34.82
16	34.86	34.98	34.75	34.81
17	34.85	34.87	34.74	34.83
18	34.80	34.84	34.76	34.76
19	34.89	34.99	34.90	34.86
20	35.05	35.11	35.16	35.07
21	34.97	35.04	35.06	34.95
22	34.94	34.99	35.04	34.94
23	34.96	35.06	35.17	34.99
24	34.97	34.93	35.11	35.02
25	34.91	35.03	35.18	35.07
26	33.94	33.99	34.25	34.04
27	35.04	35.11	35.34	35.12
28	34.59	34.68	34.94	34.73
29	35.00	35.03	35.33	35.06
30	35.06	35.07	35.36	35.06
31	35.05	35.08	35.29	35.24
32	34.91	34.89	35.13	35.06
33	35.23	35.16	35.51	35.32
34	35.13	35.22	35.54	35.31
35	35.19	35.28	35.52	35.38
36	35.13	35.33	35.45	35.52
37	35.01	35.14	35.18	35.23
38	35.05	35.18	35.15	35.31
39	35.21	35.26	35.25	35.43
40	35.39	35.49	35.48	35.68
41	35.19	35.21	35.15	35.31
42	35.34	35.40	35.42	35.56
43	35.21	35.28	35.19	35.22
44	35.20	35.24	35.20	35.15
45	35.07	35.19	35.21	35.15
46	35.30	35.32	35.40	35.29
47	35.45	35.36	35.46	35.49
48	35.27	35.31	35.27	35.21
49	35.02	35.04	35.01	34.97
50	35.04	35.15	35.04	34.92
51	35.19	35.17	35.12	35.07
52	35.12	35.12	35.06	34.99
53	35.62	35.62	35.70	35.51
54	35.02	35.10	35.21	34.98
55	34.98	35.10	35.19	34.94



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Antenna port	Output Power [dBm]			
	Modulation Type			
	QPSK	16QAM	64QAM	256QAM
56	35.08	35.35	35.52	35.22
57	34.97	35.20	35.38	35.05
58	35.45	35.72	35.15	35.71
59	35.40	35.58	35.46	35.49
60	35.54	35.69	35.25	35.51
61	35.24	35.29	35.48	35.42
62	35.12	35.20	35.48	35.33
63	35.18	35.27	35.54	35.39
64	35.20	35.26	35.27	35.15

Antenna port	Total Output Power							
	Modulation Type							
	QPSK		16QAM		64QAM		256QAM	
	[dBm]	[W]	[dBm]	[W]	[dBm]	[W]	[dBm]	[W]
1 - 64	53.11	204.73	53.20	209.01	53.23	210.47	53.19	208.63



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Channel position(Top)

Antenna port	Output Power [dBm]			
	Modulation Type			
	QPSK	16QAM	64QAM	256QAM
1	34.81	34.64	34.72	34.57
2	34.75	34.46	34.56	34.53
3	34.66	34.46	34.53	34.56
4	34.93	34.68	34.77	34.85
5	34.97	34.65	34.85	34.95
6	34.92	34.67	34.79	34.86
7	34.94	34.71	34.80	34.93
8	34.80	34.58	34.63	34.75
9	34.95	34.67	34.71	34.88
10	35.11	34.85	34.84	35.05
11	34.74	34.45	34.40	34.63
12	34.90	34.69	34.57	34.86
13	34.92	34.66	34.55	34.79
14	35.05	34.72	34.61	34.87
15	34.88	34.64	34.45	34.78
16	34.89	34.65	34.52	34.77
17	34.73	34.71	34.57	34.90
18	34.50	34.50	34.45	34.81
19	34.54	34.59	34.58	34.93
20	34.84	34.73	34.82	35.14
21	34.65	34.62	34.64	35.07
22	34.73	34.56	34.57	34.99
23	34.81	34.66	34.58	34.91
24	34.81	34.62	34.52	34.79
25	34.77	34.62	34.48	34.66
26	34.01	33.73	33.51	33.49
27	34.98	34.80	34.63	34.71
28	34.70	34.58	34.31	34.39
29	34.88	34.85	34.54	34.52
30	35.06	35.01	34.69	34.63
31	35.12	35.06	34.83	34.82
32	34.93	34.83	34.65	34.58
33	35.31	35.17	35.15	34.98
34	35.29	35.07	35.03	35.03
35	35.37	35.20	35.18	35.16
36	35.42	35.27	35.20	35.32
37	35.19	35.01	34.98	35.04
38	35.22	35.10	34.99	35.12
39	35.26	35.11	35.01	35.24
40	35.40	35.23	35.18	35.33
41	35.29	35.06	35.01	35.22
42	35.45	35.22	35.23	35.42
43	35.23	35.01	35.03	35.24
44	35.26	35.00	34.91	35.21
45	35.27	35.10	35.03	35.28
46	35.28	35.20	35.09	35.36
47	35.36	35.25	35.08	35.44
48	35.30	35.22	35.06	35.35
49	34.85	34.97	34.89	35.20
50	34.66	34.78	34.83	35.15
51	34.83	34.94	34.96	35.32
52	34.79	34.94	34.99	35.38
53	35.58	35.36	35.44	35.32
54	35.22	34.88	34.99	35.30
55	35.25	34.87	35.01	35.25



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Antenna port	Output Power [dBm]			
	Modulation Type			
	QPSK	16QAM	64QAM	256QAM
56	35.46	35.17	35.14	35.31
57	35.28	35.01	34.93	35.12
58	35.74	35.48	35.38	35.47
59	35.76	35.48	35.35	35.40
60	35.90	35.57	35.42	35.52
61	35.41	35.16	35.02	34.97
62	35.09	35.12	35.00	34.91
63	35.22	35.17	35.08	34.93
64	35.76	35.00	35.44	35.21

Antenna port	Total Output Power							
	Modulation Type							
	QPSK		16QAM		64QAM		256QAM	
	[dBm]	[W]	[dBm]	[W]	[dBm]	[W]	[dBm]	[W]
1 - 64	53.14	205.94	52.96	197.69	52.91	195.56	53.07	202.58



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Test Data : Multi carrier(Contiguous)

Channel position(Bottom)

Antenna port	Output Power [dBm]											
	Modulation Type											
	QPSK			16QAM			64QAM			256QAM		
	1st FA CC0	2nd FA CC1	CC0+CC1	1st FA CC0	2nd FA CC1	CC0+CC1	1st FA CC0	2nd FA CC1	CC0+CC1	1st FA CC0	2nd FA CC1	CC0+CC1
1	31.72	31.71	34.73	30.97	32.33	34.71	32.00	31.88	34.95	32.17	31.98	35.09
2	31.30	31.46	34.39	31.18	31.60	34.40	31.64	31.66	34.66	31.84	31.80	34.83
3	31.61	31.72	34.67	31.76	31.91	34.85	31.78	31.71	34.76	31.96	31.83	34.90
4	31.75	31.92	34.85	31.90	32.06	34.99	31.92	31.90	34.92	31.78	31.76	34.78
5	31.84	32.09	34.98	31.91	32.14	35.04	31.92	31.96	34.95	32.13	32.11	35.13
6	31.88	32.04	34.97	31.59	31.78	34.69	31.93	31.86	34.91	31.93	31.97	34.96
7	31.94	32.19	35.08	31.66	31.91	34.80	31.98	31.98	34.99	31.95	32.08	35.03
8	31.86	32.03	34.96	31.53	31.69	34.62	31.92	31.84	34.89	31.90	31.93	34.93
9	31.82	31.99	34.92	31.55	31.72	34.65	31.83	31.76	34.81	31.79	31.83	34.82
10	31.89	32.12	35.02	31.71	31.95	34.85	32.09	32.04	35.08	31.97	32.10	35.04
11	31.49	31.66	34.58	31.74	31.90	34.83	31.69	31.67	34.69	31.66	31.76	34.72
12	31.62	31.77	34.70	31.57	31.80	34.70	31.80	31.77	34.79	31.75	31.84	34.81
13	31.66	31.89	34.79	31.60	31.91	34.77	31.77	31.83	34.81	31.75	31.94	34.86
14	31.91	31.98	34.95	31.72	31.86	34.80	31.95	31.86	34.91	31.92	31.96	34.95
15	31.71	31.79	34.76	31.53	31.70	34.63	31.79	31.69	34.75	31.82	31.85	34.85
16	31.76	31.79	34.79	31.59	31.73	34.67	31.82	31.69	34.76	31.79	31.79	34.80
17	31.78	31.84	34.82	31.67	31.76	34.72	31.94	31.79	34.88	31.88	31.87	34.88
18	31.78	31.91	34.86	31.51	31.64	34.58	31.78	31.68	34.74	31.81	31.85	34.84
19	31.82	32.03	34.94	31.59	31.79	34.70	31.84	31.80	34.83	31.85	31.97	34.92
20	32.01	32.23	35.13	32.14	32.28	35.22	32.02	31.98	35.01	31.74	31.93	34.85
21	32.02	32.16	35.10	32.08	32.14	35.12	31.95	31.81	34.89	32.00	32.01	35.02
22	32.02	32.11	35.08	31.74	31.81	34.78	31.97	31.78	34.89	31.99	31.95	34.98
23	31.88	32.11	35.01	31.64	31.84	34.75	31.89	31.83	34.87	31.91	32.00	34.97
24	31.89	32.12	35.02	31.65	31.84	34.76	31.97	31.89	34.94	31.90	31.97	34.95
25	31.85	32.07	34.97	31.54	31.84	34.70	31.80	31.82	34.82	31.74	31.90	34.83
26	30.83	30.88	33.87	30.74	30.89	33.83	30.83	30.76	33.81	30.72	30.80	33.77
27	31.87	31.97	34.93	31.69	31.93	34.82	31.97	31.92	34.96	31.91	32.00	34.97
28	31.58	31.57	34.59	31.42	31.57	34.50	31.71	31.58	34.66	31.63	31.63	34.64
29	31.63	31.74	34.69	31.57	31.86	34.73	31.82	31.83	34.83	31.58	31.80	34.70
30	31.78	31.73	34.77	32.07	32.16	35.12	32.05	31.92	34.99	31.71	31.79	34.76
31	31.79	31.76	34.79	31.77	31.96	34.88	32.06	31.95	35.02	32.09	32.13	35.12
32	31.55	31.51	34.54	31.61	31.79	34.71	31.82	31.69	34.77	31.88	31.91	34.91
33	32.02	32.44	35.25	30.95	33.15	35.20	31.64	32.07	34.87	31.52	31.88	34.72
34	32.06	32.48	35.29	31.77	32.29	35.05	31.61	32.01	34.83	31.49	31.83	34.67
35	32.20	32.56	35.39	31.87	32.27	35.09	31.71	32.04	34.89	31.60	31.86	34.74
36	32.21	32.52	35.38	32.03	32.36	35.21	31.83	32.10	34.98	31.70	31.90	34.81
37	31.88	32.26	35.08	31.71	32.10	34.92	31.53	31.90	34.73	31.35	31.65	34.51
38	31.81	32.23	35.03	31.64	32.07	34.87	31.50	31.90	34.71	31.40	31.75	34.59
39	31.84	32.35	35.11	31.71	32.22	34.98	31.60	32.10	34.87	31.44	31.87	34.67
40	31.90	32.44	35.19	31.86	32.48	35.19	31.71	32.26	35.00	31.58	32.08	34.85
41	31.66	32.25	34.98	31.52	32.16	34.86	31.42	32.00	34.73	31.31	31.86	34.60
42	31.94	32.45	35.22	31.85	32.43	35.16	31.67	32.20	34.96	31.52	32.00	34.78
43	31.75	32.09	34.93	31.82	32.25	35.05	31.63	31.98	34.82	31.53	31.83	34.69
44	31.67	31.93	34.81	31.76	32.11	34.95	31.61	31.90	34.77	31.46	31.71	34.60
45	31.90	32.21	35.07	31.76	32.15	34.97	31.50	31.81	34.67	31.48	31.75	34.63
46	32.04	32.37	35.22	31.91	32.27	35.10	31.67	31.98	34.84	31.58	31.84	34.72
47	32.27	32.69	35.49	32.05	32.52	35.31	31.83	32.22	35.04	31.70	32.05	34.89
48	32.15	32.60	35.39	31.80	32.28	35.06	31.66	32.07	34.88	31.56	31.92	34.75
49	31.99	32.39	35.21	31.68	32.12	34.92	31.43	31.78	34.62	31.36	31.66	34.52
50	31.97	32.47	35.24	31.67	32.21	34.96	31.37	31.81	34.60	31.31	31.71	34.52
51	31.99	32.49	35.26	31.77	32.31	35.06	31.45	31.88	34.68	31.44	31.83	34.65
52	31.96	32.45	35.22	31.73	32.29	35.03	31.44	31.88	34.67	31.37	31.76	34.58
53	32.29	32.81	35.57	32.16	32.72	35.46	31.91	32.38	35.16	31.81	32.22	35.03
54	31.81	32.12	34.98	31.86	32.24	35.06	31.60	31.88	34.75	31.55	31.78	34.68
55	31.78	32.13	34.97	31.72	32.13	34.94	31.52	31.85	34.70	31.45	31.73	34.61



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Antenna port	Output Power [dBm]											
	Modulation Type											
	QPSK			16QAM			64QAM			256QAM		
	1st FA CC0	2 nd FA CC1	CC0+CC1	1st FA CC0	2 nd FA CC1	CC0+CC1	1st FA CC0	2 nd FA CC1	CC0+CC1	1st FA CC0	2 nd FA CC1	CC0+CC1
56	31.84	32.14	35.00	31.96	32.35	35.17	31.66	31.96	34.82	31.62	31.85	34.75
57	31.66	32.09	34.89	31.74	32.23	35.01	31.59	32.01	34.82	31.50	31.88	34.71
58	32.13	32.57	35.37	32.30	32.82	35.58	32.19	32.62	35.42	32.02	32.40	35.22
59	32.13	32.48	35.32	32.30	32.74	35.53	32.07	32.41	35.25	31.93	32.23	35.10
60	32.25	32.67	35.47	32.33	32.84	35.60	32.04	32.46	35.26	31.95	32.32	35.15
61	31.89	32.28	35.10	31.98	32.44	35.23	31.69	32.05	34.88	31.75	32.05	34.92
62	31.97	32.41	35.21	31.93	32.45	35.21	31.51	31.88	34.71	31.63	31.98	34.82
63	32.09	32.54	35.33	32.00	32.51	35.27	31.45	31.80	34.64	31.62	31.97	34.81
64	32.70	33.32	36.03	31.76	32.11	34.95	31.61	31.90	34.77	31.46	31.71	34.60

Antenna port	Total Output Power							
	Modulation Type							
	QPSK		16QAM		64QAM		256QAM	
	1st FA CC0 + 2 nd FA CC1		1st FA CC0 + 2 nd FA CC1		1st FA CC0 + 2 nd FA CC1		1st FA CC0 + 2 nd FA CC1	
	[dBm]	[W]	[dBm]	[W]	[dBm]	[W]	[dBm]	[W]
1 - 64	53.09	203.82	53.01	199.84	52.91	195.36	52.87	193.71



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Channel position(Middle)

Antenna port	Output Power [dBm]											
	Modulation Type											
	QPSK			16QAM			64QAM			256QAM		
	1st FA CC0	2 nd FA CC1	CC0+CC1	1st FA CC0	2 nd FA CC1	CC0+CC1	1st FA CC0	2 nd FA CC1	CC0+CC1	1st FA CC0	2 nd FA CC1	CC0+CC1
1	31.82	31.66	34.75	31.99	31.78	34.90	32.27	32.05	35.17	32.17	31.92	35.06
2	31.61	31.39	34.51	31.70	31.47	34.60	31.99	31.74	34.88	31.95	31.68	34.83
3	31.64	31.43	34.55	31.77	31.58	34.69	32.04	31.82	34.94	31.72	31.54	34.64
4	31.92	31.58	34.77	32.04	31.75	34.91	32.32	32.00	35.17	32.29	31.92	35.12
5	31.83	31.64	34.74	32.04	31.87	34.97	31.95	31.82	34.90	32.25	32.02	35.15
6	31.86	31.65	34.77	32.31	32.04	35.19	32.20	31.98	35.10	32.21	31.97	35.10
7	31.98	31.80	34.90	32.06	31.88	34.98	31.90	31.73	34.83	32.20	31.95	35.09
8	31.95	31.82	34.90	31.98	31.83	34.92	32.11	31.91	35.02	31.81	31.69	34.76
9	31.93	31.79	34.87	32.03	31.84	34.95	31.84	31.67	34.77	32.17	31.91	35.05
10	32.25	31.95	35.11	32.33	31.97	35.17	32.35	31.93	35.16	32.43	32.01	35.23
11	31.87	31.71	34.80	31.96	31.70	34.84	32.01	31.69	34.86	32.05	31.74	34.91
12	32.06	31.86	34.97	32.18	31.88	35.04	32.15	31.80	34.99	32.14	31.78	34.97
13	31.94	31.79	34.87	32.44	32.11	35.29	31.81	31.57	34.70	32.10	31.80	34.96
14	32.10	32.07	35.10	32.22	32.09	35.16	31.96	31.82	34.90	32.24	32.04	35.15
15	31.91	31.78	34.86	32.03	31.79	34.92	32.06	31.75	34.92	31.76	31.54	34.66
16	31.94	31.79	34.88	32.06	31.80	34.94	32.05	31.70	34.89	32.10	31.77	34.95
17	32.28	32.13	35.21	32.07	31.79	34.94	32.29	31.91	35.11	32.27	31.92	35.11
18	32.13	31.94	35.05	31.93	31.63	34.80	32.17	31.76	34.98	32.12	31.73	34.94
19	32.27	32.18	35.23	32.08	31.88	34.99	32.24	31.94	35.10	32.26	31.99	35.14
20	32.38	32.29	35.34	32.22	32.03	35.13	32.09	31.88	35.00	32.44	32.17	35.32
21	32.27	32.19	35.24	32.04	31.86	34.96	31.98	31.76	34.88	32.21	31.95	35.10
22	32.19	32.12	35.16	32.05	31.88	34.98	31.93	31.72	34.83	32.23	31.97	35.11
23	32.21	32.21	35.22	32.03	31.92	34.99	32.22	32.00	35.12	32.20	32.02	35.12
24	32.21	32.14	35.18	31.98	31.81	34.91	31.87	31.66	34.78	32.17	31.93	35.06
25	32.14	32.07	35.12	32.15	31.97	35.07	32.08	31.81	34.96	32.20	31.96	35.09
26	31.08	31.00	34.05	30.80	30.68	33.75	30.82	30.60	33.72	30.95	30.76	33.87
27	32.09	32.08	35.10	32.21	32.09	35.16	32.18	31.95	35.07	32.25	32.05	35.16
28	31.76	31.78	34.78	31.84	31.76	34.81	31.79	31.56	34.69	31.92	31.74	34.84
29	32.08	31.93	35.02	32.17	31.88	35.04	32.17	31.77	34.98	32.28	31.92	35.11
30	32.24	32.14	35.20	32.32	32.09	35.22	32.34	31.98	35.17	32.36	32.04	35.21
31	32.27	32.29	35.29	32.34	32.22	35.29	32.08	31.92	35.01	32.38	32.17	35.29
32	31.99	31.92	34.96	32.12	31.92	35.03	32.07	31.75	34.92	32.13	31.84	35.00
33	31.89	32.20	35.06	31.87	32.27	35.08	32.41	32.48	35.46	32.33	32.41	35.38
34	31.97	32.13	35.06	32.09	32.15	35.13	32.32	32.27	35.30	32.27	32.24	35.26
35	31.93	32.12	35.04	32.16	32.24	35.21	32.42	32.44	35.44	32.26	32.31	35.29
36	32.05	32.22	35.15	32.30	32.34	35.33	32.46	32.48	35.48	32.52	32.53	35.53
37	31.63	31.85	34.75	32.05	32.12	35.10	32.12	32.17	35.15	32.16	32.21	35.19
38	31.74	31.95	34.85	32.08	32.12	35.11	32.13	32.18	35.16	32.11	32.17	35.15
39	31.98	32.06	35.03	32.23	32.23	35.24	32.39	32.31	35.36	32.26	32.23	35.25
40	32.05	32.48	35.28	32.26	32.52	35.41	32.42	32.66	35.55	32.30	32.57	35.45
41	31.94	32.22	35.09	32.13	32.21	35.18	32.27	32.33	35.31	32.17	32.27	35.23
42	32.28	32.50	35.40	32.39	32.42	35.41	32.56	32.57	35.57	32.52	32.54	35.54
43	32.12	32.28	35.21	32.31	32.22	35.28	32.36	32.34	35.36	32.30	32.28	35.30
44	32.04	32.25	35.16	32.22	32.19	35.21	32.28	32.28	35.29	32.21	32.24	35.24
45	32.19	32.33	35.27	32.29	32.22	35.27	32.43	32.33	35.39	32.32	32.25	35.29
46	32.25	32.62	35.45	32.32	32.46	35.40	32.45	32.56	35.52	32.42	32.54	35.49
47	32.40	32.56	35.49	32.51	32.43	35.48	32.57	32.50	35.55	32.50	32.45	35.49
48	32.29	32.60	35.45	32.36	32.44	35.41	32.44	32.48	35.47	32.44	32.51	35.49
49	32.12	32.41	35.28	32.07	32.10	35.09	32.26	32.27	35.27	32.18	32.24	35.22
50	32.24	32.37	35.31	32.14	32.03	35.10	32.28	32.16	35.23	32.23	32.15	35.20
51	32.20	32.44	35.33	32.20	32.22	35.22	32.32	32.28	35.31	32.30	32.31	35.32
52	32.29	32.57	35.44	32.17	32.25	35.22	32.37	32.37	35.38	32.36	32.38	35.38
53	32.69	33.03	35.87	32.56	32.66	35.62	32.76	32.81	35.80	32.68	32.77	35.73
54	32.23	32.47	35.36	32.16	32.16	35.17	32.34	32.30	35.33	32.21	32.24	35.24
55	32.20	32.47	35.35	32.16	32.19	35.19	32.25	32.25	35.26	32.23	32.28	35.27



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Antenna port	Output Power [dBm]											
	Modulation Type											
	QPSK			16QAM			64QAM			256QAM		
	1st FA CC0	2 nd FA CC1	CC0+CC1	1st FA CC0	2 nd FA CC1	CC0+CC1	1st FA CC0	2 nd FA CC1	CC0+CC1	1st FA CC0	2 nd FA CC1	CC0+CC1
56	32.33	32.75	35.55	32.27	32.48	35.39	32.43	32.57	35.51	32.32	32.52	35.43
57	32.18	32.40	35.30	32.27	32.26	35.27	32.35	32.30	35.33	32.23	32.23	35.24
58	32.54	32.85	35.71	32.61	32.68	35.65	32.71	32.74	35.73	32.70	32.76	35.74
59	32.60	32.83	35.73	32.65	32.64	35.66	32.79	32.74	35.77	32.69	32.70	35.70
60	32.61	32.91	35.77	32.71	32.75	35.74	32.83	32.83	35.84	32.71	32.76	35.74
61	32.13	32.41	35.28	32.20	32.22	35.22	32.30	32.30	35.31	32.27	32.30	35.30
62	32.13	32.43	35.29	32.24	32.28	35.27	32.26	32.28	35.28	32.27	32.32	35.30
63	32.29	32.49	35.40	32.30	32.24	35.28	32.50	32.39	35.45	32.35	32.29	35.33
64	33.08	33.30	36.20	32.29	32.22	35.27	32.43	32.33	35.39	32.30	32.57	35.45

Antenna port	Total Output Power							
	Modulation Type							
	QPSK		16QAM		64QAM		256QAM	
	1st FA CC0 + 2 nd FA CC1		1st FA CC0 + 2 nd FA CC1		1st FA CC0 + 2 nd FA CC1		1st FA CC0 + 2 nd FA CC1	
	[dBm]	[W]	[dBm]	[W]	[dBm]	[W]	[dBm]	[W]
1 - 64	53.22	209.99	53.20	208.84	53.25	211.21	53.26	211.96



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Channel position(Top)

Antenna port	Output Power [dBm]											
	Modulation Type											
	QPSK			16QAM			64QAM			256QAM		
	1st FA CC0	2nd FA CC1	CC0+CC1	1st FA CC0	2nd FA CC1	CC0+CC1	1st FA CC0	2nd FA CC1	CC0+CC1	1st FA CC0	2nd FA CC1	CC0+CC1
1	31.81	31.61	34.72	32.32	32.09	35.22	32.15	31.85	35.01	32.15	31.92	35.04
2	31.62	31.42	34.53	31.82	31.61	34.73	31.96	31.66	34.82	31.93	31.70	34.83
3	31.78	31.51	34.66	31.94	31.66	34.81	32.07	31.70	34.90	32.03	31.71	34.88
4	31.90	31.71	34.82	32.35	32.13	35.25	32.14	31.86	35.01	32.16	31.92	35.05
5	32.08	31.83	34.97	32.15	31.92	35.05	32.27	31.94	35.12	32.30	32.01	35.17
6	31.98	31.69	34.85	32.08	31.82	34.96	32.17	31.82	35.01	32.21	31.89	35.06
7	32.09	31.78	34.95	32.14	31.85	35.01	32.33	31.96	35.16	32.29	31.96	35.14
8	31.94	31.60	34.78	32.11	31.79	34.96	32.23	31.82	35.04	32.18	31.80	35.01
9	31.78	31.62	34.71	32.00	31.86	34.94	31.98	31.75	34.88	32.03	31.82	34.94
10	32.03	31.82	34.94	32.26	32.06	35.17	32.22	31.93	35.09	32.30	32.05	35.19
11	31.82	31.50	34.67	31.92	31.61	34.77	32.02	31.62	34.84	31.79	31.43	34.63
12	31.93	31.62	34.79	32.08	31.77	34.94	32.08	31.70	34.91	32.14	31.78	34.97
13	31.88	31.59	34.75	32.09	31.81	34.96	32.12	31.75	34.95	32.16	31.83	35.01
14	32.03	31.74	34.90	32.22	31.95	35.10	32.27	31.90	35.10	32.28	31.93	35.12
15	31.85	31.57	34.72	32.00	31.73	34.88	32.05	31.69	34.88	32.07	31.73	34.91
16	31.93	31.57	34.77	32.07	31.73	34.91	32.14	31.69	34.93	32.19	31.78	35.00
17	31.92	31.65	34.79	32.00	31.75	34.89	32.10	31.74	34.93	32.10	31.78	34.96
18	31.78	31.48	34.64	31.91	31.63	34.78	31.71	31.35	34.54	31.97	31.63	34.82
19	31.92	31.63	34.79	32.04	31.76	34.91	32.15	31.77	34.97	32.16	31.82	35.00
20	32.07	31.87	34.98	32.20	32.01	35.11	32.32	32.04	35.19	32.33	32.08	35.22
21	31.86	31.67	34.78	32.06	31.89	34.99	31.94	31.69	34.83	31.96	31.72	34.85
22	31.83	31.64	34.74	32.01	31.84	34.93	32.13	31.87	35.01	32.15	31.90	35.04
23	32.00	31.63	34.83	32.13	31.76	34.96	32.27	31.82	35.06	32.27	31.84	35.07
24	31.87	31.60	34.75	31.97	31.70	34.85	31.86	31.53	34.71	32.16	31.84	35.01
25	31.95	31.68	34.83	32.18	31.91	35.06	32.24	31.90	35.08	32.14	31.82	34.99
26	30.89	30.57	33.74	31.01	30.69	33.86	31.01	30.66	33.85	30.97	30.65	33.82
27	32.11	31.89	35.01	32.44	32.19	35.33	32.03	31.74	34.90	32.26	31.98	35.13
28	31.73	31.51	34.63	31.79	31.59	34.70	31.98	31.70	34.86	31.95	31.69	34.83
29	31.96	31.68	34.84	32.08	31.80	34.95	32.23	31.89	35.07	32.21	31.88	35.06
30	32.13	31.90	35.02	32.22	32.00	35.12	32.31	32.03	35.19	32.31	32.04	35.19
31	32.17	31.96	35.08	32.28	32.05	35.18	32.41	32.12	35.28	32.39	32.12	35.27
32	31.95	31.67	34.82	32.03	31.74	34.90	32.22	31.86	35.05	32.14	31.81	34.99
33	32.21	32.24	35.24	32.33	32.44	35.40	32.17	32.17	35.18	32.22	32.30	35.27
34	32.28	32.27	35.29	32.48	32.49	35.50	32.18	32.15	35.18	32.24	32.25	35.25
35	32.33	32.37	35.36	32.48	32.55	35.53	32.35	32.30	35.34	32.26	32.34	35.31
36	32.31	32.35	35.34	32.58	32.65	35.63	32.33	32.35	35.35	32.36	32.43	35.40
37	32.12	32.12	35.13	32.36	32.39	35.39	32.06	32.02	35.05	32.06	32.09	35.08
38	32.13	32.19	35.17	32.40	32.48	35.45	32.13	32.16	35.15	32.09	32.17	35.14
39	32.10	32.19	35.15	32.41	32.53	35.48	32.24	32.23	35.24	32.13	32.23	35.19
40	32.38	32.32	35.36	32.58	32.61	35.61	32.45	32.31	35.39	32.52	32.40	35.47
41	32.05	32.13	35.10	32.37	32.40	35.39	32.17	32.16	35.18	32.22	32.24	35.24
42	32.37	32.35	35.37	32.62	32.60	35.62	32.47	32.35	35.42	32.56	32.47	35.52
43	32.20	32.17	35.20	32.43	32.42	35.43	32.33	32.21	35.28	32.36	32.29	35.33
44	32.20	32.21	35.22	32.23	32.34	35.30	32.13	32.12	35.13	32.21	32.25	35.24
45	32.19	32.36	35.29	32.34	32.54	35.45	32.06	32.22	35.15	32.17	32.36	35.28
46	32.31	32.40	35.37	32.56	32.63	35.60	32.32	32.31	35.33	32.25	32.35	35.31
47	32.46	32.41	35.45	32.74	32.67	35.71	32.36	32.29	35.34	32.55	32.45	35.51
48	32.32	32.35	35.35	32.54	32.55	35.56	32.24	32.25	35.26	32.33	32.36	35.35
49	32.09	32.12	35.11	32.26	32.28	35.28	32.00	32.01	35.01	32.05	32.09	35.08
50	32.09	32.03	35.07	32.20	32.19	35.20	32.02	31.95	35.00	32.09	32.03	35.07
51	32.12	32.10	35.12	32.34	32.31	35.33	32.07	32.03	35.06	32.12	32.11	35.12
52	32.18	32.15	35.17	32.34	32.30	35.33	32.13	32.09	35.12	32.15	32.14	35.16
53	32.59	32.58	35.59	32.81	32.78	35.81	32.66	32.56	35.62	32.62	32.62	35.63
54	32.19	32.18	35.20	32.38	32.36	35.38	32.09	32.07	35.09	32.12	32.13	35.13
55	32.18	32.18	35.19	32.36	32.34	35.36	32.12	32.10	35.12	32.14	32.17	35.17



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Antenna port	Output Power [dBm]											
	Modulation Type											
	QPSK			16QAM			64QAM			256QAM		
	1st FA CC0	2 nd FA CC1	CC0+CC1	1st FA CC0	2 nd FA CC1	CC0+CC1	1st FA CC0	2 nd FA CC1	CC0+CC1	1st FA CC0	2 nd FA CC1	CC0+CC1
56	32.25	32.30	35.28	32.42	32.46	35.45	32.23	32.27	35.26	32.23	32.31	35.28
57	32.22	32.20	35.22	32.49	32.44	35.47	32.38	32.27	35.34	32.35	32.36	35.37
58	32.76	32.68	35.73	32.96	32.86	35.92	32.84	32.68	35.77	32.93	32.82	35.89
59	32.63	32.60	35.63	32.85	32.79	35.83	32.63	32.58	35.62	32.86	32.79	35.83
60	32.71	32.77	35.75	32.87	32.89	35.89	32.76	32.73	35.75	32.85	32.86	35.87
61	32.38	32.23	35.32	32.57	32.38	35.49	32.39	32.21	35.31	32.45	32.32	35.40
62	32.29	32.22	35.26	32.49	32.38	35.44	32.29	32.19	35.25	32.35	32.30	35.33
63	32.44	32.33	35.40	32.59	32.46	35.53	32.42	32.30	35.37	32.51	32.37	35.45
64	33.07	32.78	35.94	32.37	32.40	35.39	32.33	32.21	35.28	32.25	32.35	35.31

Antenna port	Total Output Power							
	Modulation Type							
	QPSK		16QAM		64QAM		256QAM	
	1st FA CC0 + 2 nd FA CC1		1st FA CC0 + 2 nd FA CC1		1st FA CC0 + 2 nd FA CC1		1st FA CC0 + 2 nd FA CC1	
	[dBm]	[W]	[dBm]	[W]	[dBm]	[W]	[dBm]	[W]
1 - 64	53.13	205.36	53.30	213.78	53.18	208.04	53.23	210.41



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Test Data : Multi carrier(Non-contiguous)

Antenna port	Output Power [dBm]											
	Modulation Type											
	QPSK			16QAM			64QAM			256QAM		
	1st FA CC0	2 nd FA CC1	CC0+CC1	1st FA CC0	2 nd FA CC1	CC0+CC1	1st FA CC0	2 nd FA CC1	CC0+CC1	1st FA CC0	2 nd FA CC1	CC0+CC1
1	31.79	31.83	34.82	31.70	31.71	34.72	31.61	31.44	34.53	31.95	31.67	34.82
2	31.46	31.61	34.55	31.42	31.53	34.48	31.55	31.42	34.50	31.65	31.50	34.59
3	31.64	31.69	34.68	31.74	31.68	34.72	31.68	31.46	34.58	31.73	31.47	34.61
4	31.80	31.88	34.85	31.72	31.76	34.75	31.83	31.63	34.74	31.92	31.69	34.81
5	31.79	31.95	34.88	31.69	31.80	34.75	31.86	31.75	34.81	31.93	31.76	34.86
6	31.84	31.88	34.87	31.92	31.84	34.89	31.85	31.60	34.74	31.97	31.69	34.84
7	31.88	31.95	34.93	31.79	31.81	34.81	31.94	31.71	34.84	32.00	31.74	34.88
8	31.76	31.80	34.79	31.91	31.82	34.87	31.86	31.59	34.74	31.90	31.61	34.76
9	31.78	31.85	34.82	31.85	31.80	34.84	31.79	31.56	34.69	31.72	31.54	34.64
10	31.89	32.01	34.96	31.80	31.89	34.86	31.95	31.78	34.87	31.86	31.72	34.80
11	31.82	31.79	34.82	31.48	31.48	34.49	31.63	31.37	34.51	31.70	31.43	34.58
12	31.82	31.89	34.87	31.66	31.70	34.69	31.80	31.57	34.70	31.91	31.64	34.79
13	31.69	31.80	34.75	31.61	31.66	34.65	31.71	31.51	34.62	31.80	31.58	34.70
14	31.86	31.94	34.91	31.99	31.94	34.97	31.87	31.64	34.77	32.00	31.74	34.88
15	31.74	31.79	34.77	31.66	31.64	34.66	31.77	31.51	34.65	31.88	31.59	34.75
16	31.82	31.80	34.82	31.91	31.76	34.85	31.82	31.50	34.67	31.94	31.58	34.77
17	31.75	31.80	34.78	31.65	31.65	34.66	31.80	31.54	34.68	31.93	31.64	34.80
18	31.65	31.67	34.67	31.75	31.66	34.72	31.63	31.35	34.50	31.83	31.51	34.68
19	31.67	31.78	34.74	31.63	31.70	34.68	31.70	31.50	34.61	31.83	31.61	34.73
20	31.89	32.06	34.98	31.78	31.89	34.85	31.83	31.68	34.77	32.05	31.87	34.97
21	31.89	31.98	34.94	31.81	31.85	34.84	31.90	31.67	34.80	32.09	31.84	34.98
22	31.93	31.95	34.95	32.07	31.97	35.03	31.68	31.45	34.57	32.09	31.77	34.95
23	31.81	31.88	34.86	31.94	31.88	34.92	31.78	31.52	34.66	31.95	31.66	34.82
24	31.83	31.88	34.87	31.69	31.69	34.70	31.77	31.49	34.64	32.00	31.70	34.86
25	31.80	31.95	34.89	31.71	31.80	34.76	31.72	31.53	34.64	31.88	31.67	34.79
26	30.90	31.01	33.96	30.81	30.85	33.84	30.90	30.67	33.80	30.97	30.72	33.86
27	31.99	32.11	35.06	31.83	31.91	34.88	31.87	31.65	34.77	32.02	31.78	34.91
28	31.66	31.76	34.72	31.52	31.57	34.56	31.60	31.37	34.50	31.74	31.50	34.63
29	31.83	31.93	34.89	31.76	31.81	34.79	31.58	31.43	34.52	31.95	31.69	34.83
30	32.04	32.11	35.08	31.94	31.96	34.96	32.02	31.78	34.91	32.12	31.84	34.99
31	32.07	32.20	35.15	32.22	32.21	35.23	32.03	31.84	34.95	32.17	31.94	35.07
32	31.86	31.95	34.92	31.70	31.73	34.72	31.74	31.51	34.64	31.88	31.62	34.76
33	31.97	32.44	35.23	31.76	32.26	35.03	31.65	31.98	34.83	31.76	32.07	34.93
34	31.99	32.45	35.24	31.84	32.31	35.09	31.70	32.03	34.88	31.83	32.12	34.98
35	32.07	32.50	35.30	31.86	32.33	35.11	31.81	32.11	34.97	31.87	32.13	35.01
36	32.19	32.61	35.42	31.93	32.35	35.16	31.92	32.20	35.07	31.96	32.21	35.10
37	31.89	32.31	35.11	31.71	32.16	34.95	31.61	31.88	34.75	31.72	31.96	34.85
38	31.90	32.41	35.18	31.73	32.23	35.00	31.60	31.96	34.79	31.72	32.04	34.89
39	31.94	32.44	35.21	31.83	32.31	35.09	31.70	32.04	34.88	31.80	32.10	34.96
40	32.05	32.57	35.33	31.86	32.36	35.13	31.78	32.12	34.96	31.91	32.23	35.08
41	31.82	32.43	35.15	31.67	32.23	34.97	31.43	31.85	34.66	31.68	32.08	34.89
42	32.12	32.72	35.44	31.87	32.41	35.16	31.70	32.12	34.92	31.92	32.29	35.12
43	32.01	32.45	35.25	31.81	32.21	35.03	31.59	31.85	34.73	31.83	32.04	34.95
44	31.97	32.47	35.24	31.65	32.12	34.90	31.54	31.84	34.70	31.78	32.06	34.93
45	31.95	32.55	35.27	31.68	32.24	34.98	31.57	31.96	34.78	31.79	32.15	34.98
46	32.05	32.59	35.34	31.84	32.30	35.09	31.64	31.97	34.82	31.90	32.19	35.06
47	32.23	32.67	35.47	31.99	32.39	35.20	31.77	32.00	34.90	32.03	32.21	35.13
48	32.03	32.59	35.33	31.81	32.29	35.06	31.68	32.02	34.86	31.88	32.20	35.05
49	31.75	32.28	35.04	31.61	32.09	34.87	31.53	31.86	34.70	31.66	31.97	34.83
50	31.75	32.22	35.00	31.55	31.98	34.78	31.52	31.79	34.67	31.62	31.86	34.75
51	31.81	32.33	35.09	31.65	32.15	34.92	31.59	31.89	34.75	31.70	31.99	34.85
52	31.82	32.40	35.13	31.67	32.17	34.94	31.53	31.91	34.73	31.65	32.00	34.84
53	32.23	32.80	35.54	32.13	32.64	35.40	31.97	32.33	35.16	32.12	32.46	35.30
54	31.99	32.38	35.20	31.85	32.19	35.03	31.68	31.88	34.79	31.81	31.98	34.91
55	31.84	32.34	35.11	31.74	32.18	34.98	31.60	31.91	34.77	31.71	31.98	34.86



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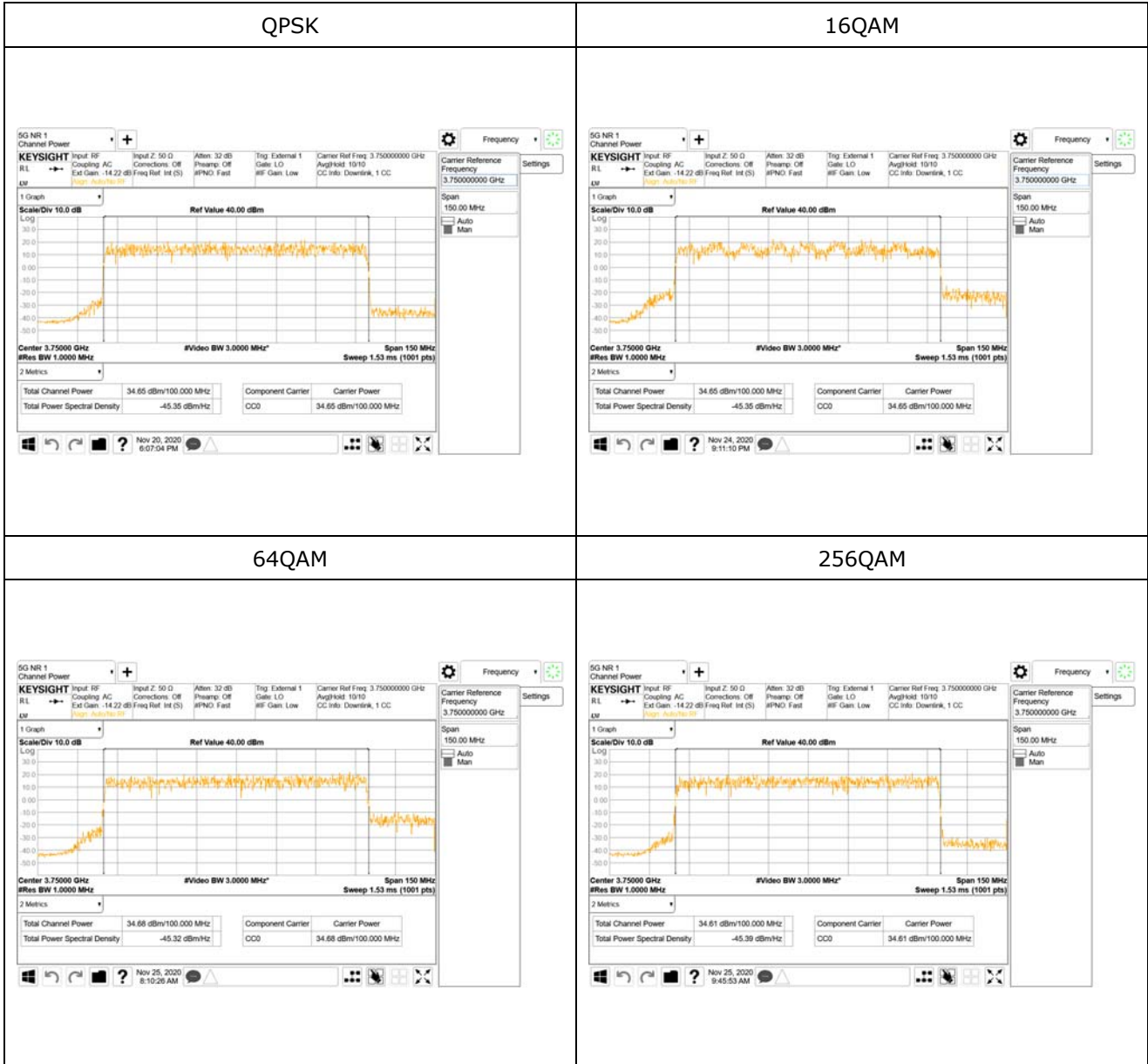
Antenna port	Output Power [dBm]											
	Modulation Type											
	QPSK			16QAM			64QAM			256QAM		
	1st FA CC0	2 nd FA CC1	CC0+CC1	1st FA CC0	2 nd FA CC1	CC0+CC1	1st FA CC0	2 nd FA CC1	CC0+CC1	1st FA CC0	2 nd FA CC1	CC0+CC1
56	32.04	32.52	35.30	31.91	32.37	35.16	31.78	32.06	34.93	31.95	32.20	35.09
57	31.86	32.40	35.15	31.65	32.15	34.92	31.60	31.92	34.77	31.73	32.02	34.89
58	32.32	32.86	35.61	32.18	32.65	35.43	32.03	32.34	35.20	32.21	32.47	35.35
59	32.31	32.81	35.58	32.17	32.61	35.41	32.11	32.36	35.24	32.19	32.42	35.32
60	32.32	32.95	35.66	32.17	32.73	35.47	32.10	32.47	35.30	32.13	32.52	35.34
61	31.97	32.42	35.21	31.78	32.17	34.99	31.67	31.90	34.80	31.79	32.00	34.91
62	31.93	32.42	35.19	31.71	32.16	34.95	31.77	32.00	34.90	31.79	32.03	34.92
63	31.97	32.50	35.25	31.88	32.32	35.11	31.73	32.02	34.89	31.88	32.15	35.03
64	31.97	32.47	35.20	31.65	32.12	34.90	31.54	31.84	34.70	31.78	32.06	34.93

Antenna port	Total Output Power							
	Modulation Type							
	QPSK		16QAM		64QAM		256QAM	
	1st FA CC0 + 2 nd FA CC1		1st FA CC0 + 2 nd FA CC1		1st FA CC0 + 2 nd FA CC1		1st FA CC0 + 2 nd FA CC1	
	[dBm]	[W]	[dBm]	[W]	[dBm]	[W]	[dBm]	[W]
1 - 64	53.12	205.26	52.98	198.64	52.83	191.78	52.95	197.40



Test Plot at Output Power

BW 100MHz, Single carrier, Bottom
ANT 1





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ANT 2

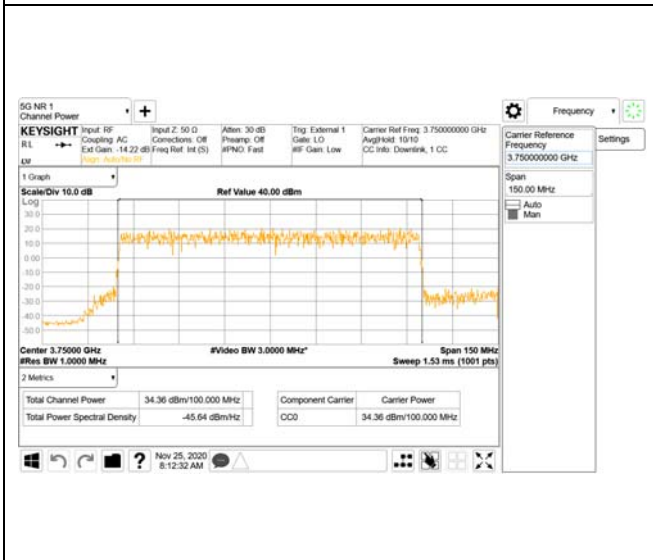
QPSK



16QAM



64QAM



256QAM





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ANT 3

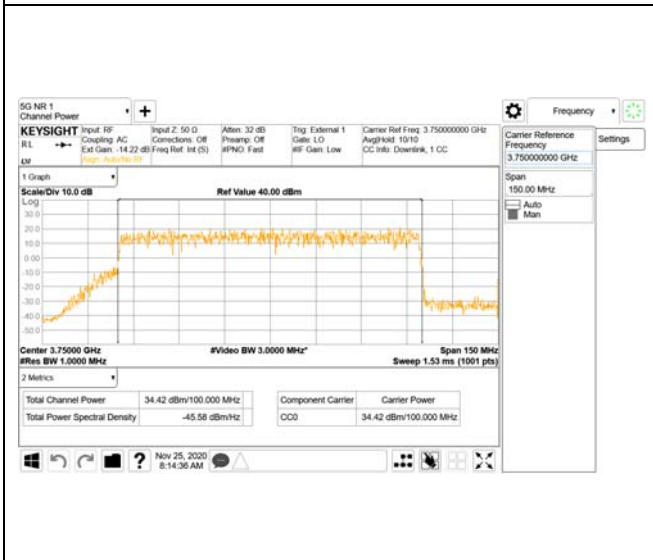
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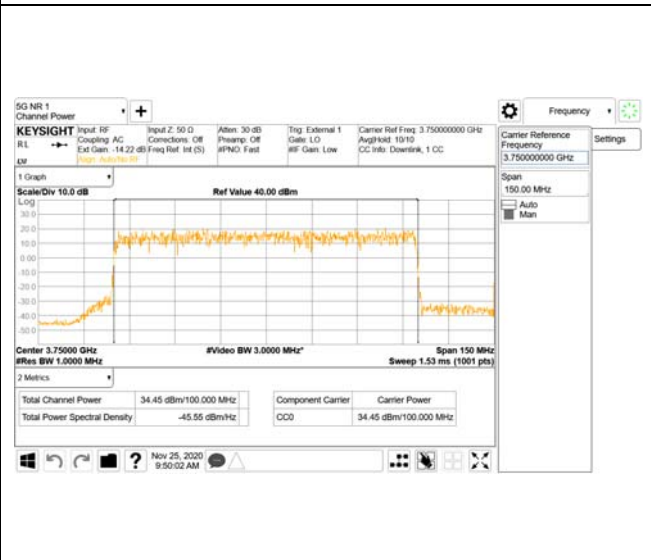
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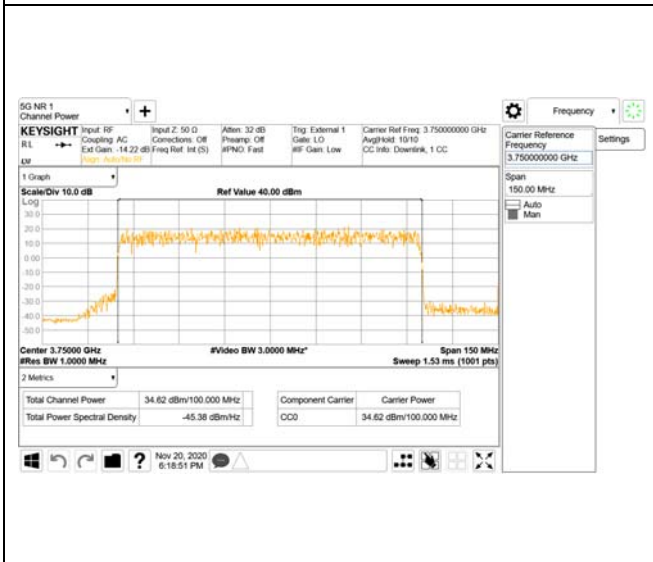


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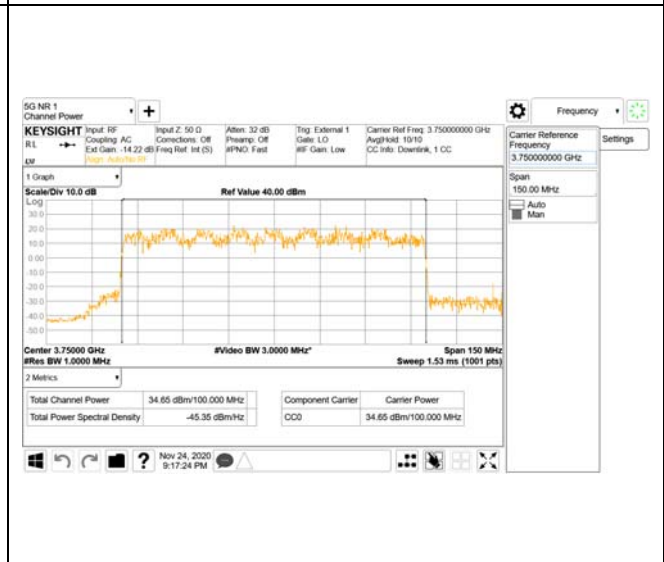
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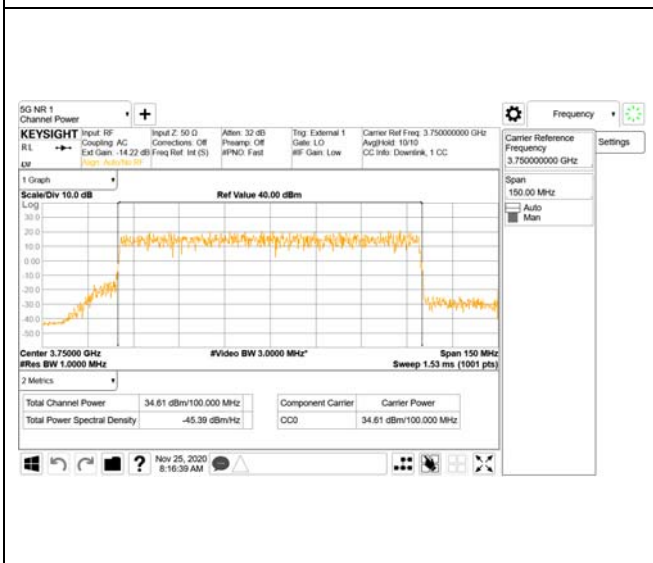
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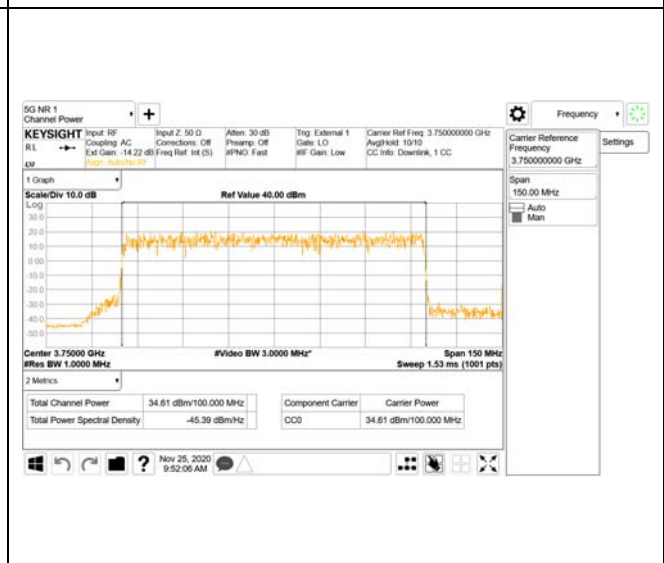
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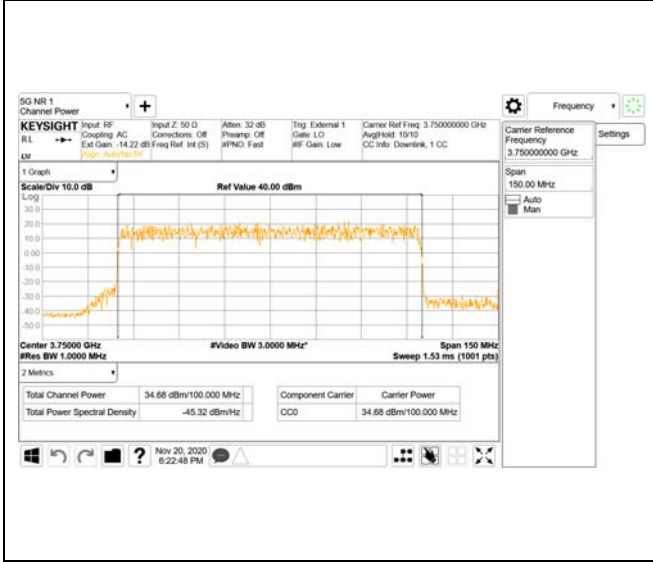


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ANT 5

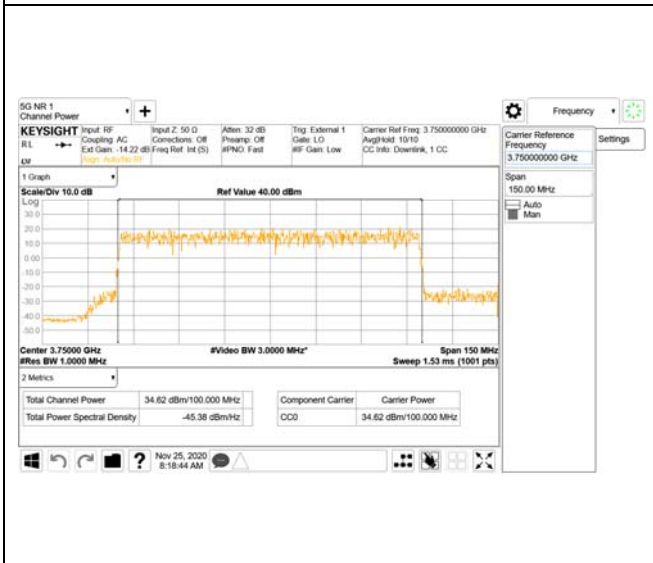
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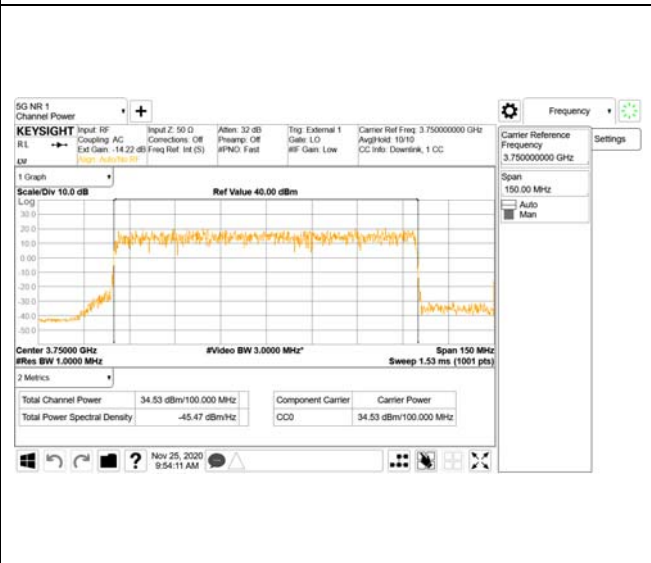
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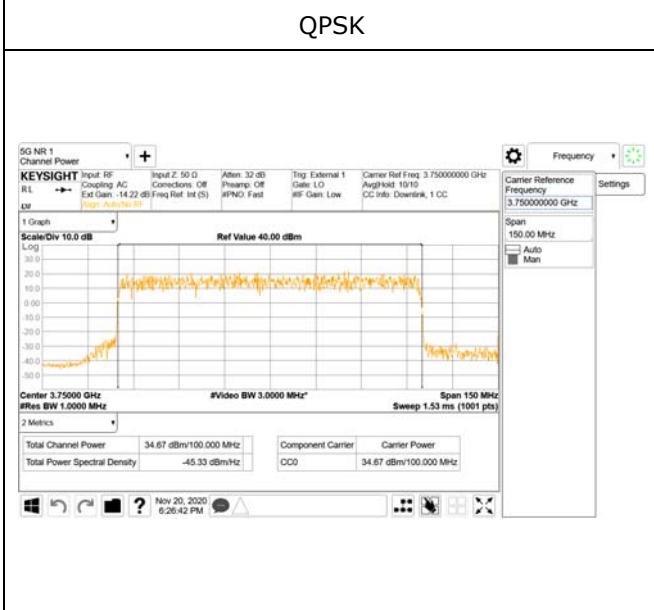


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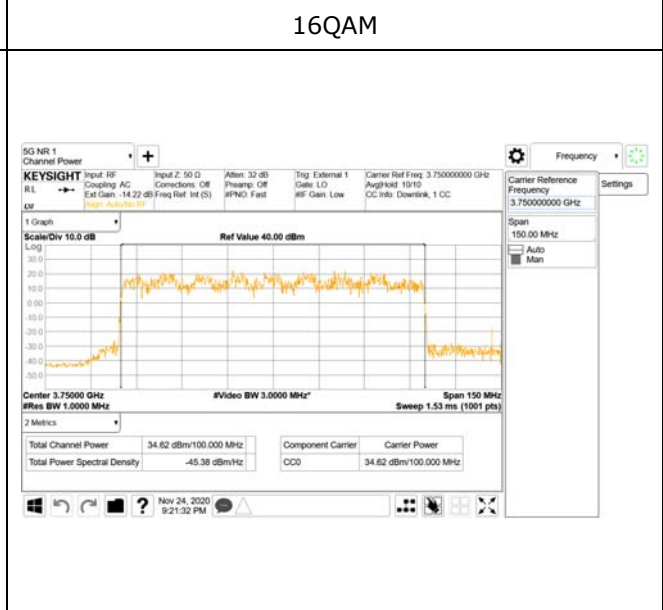
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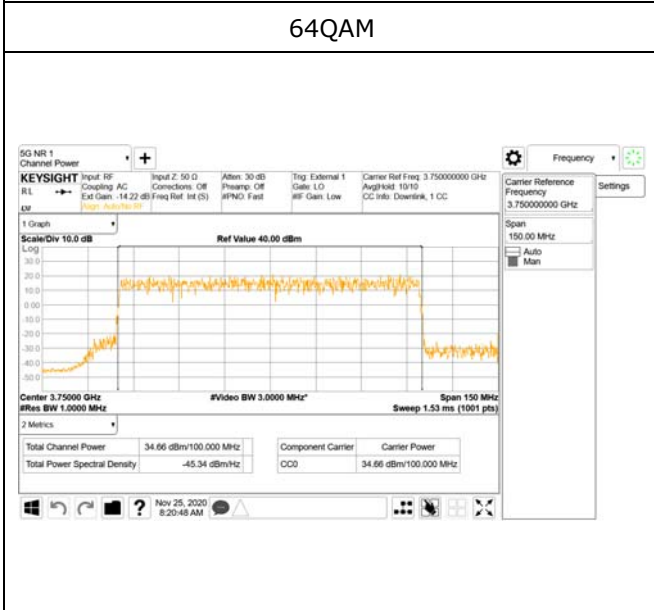
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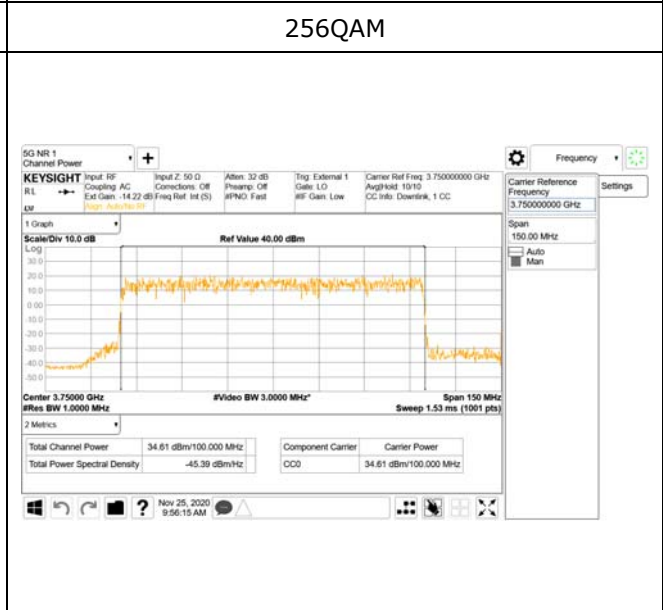
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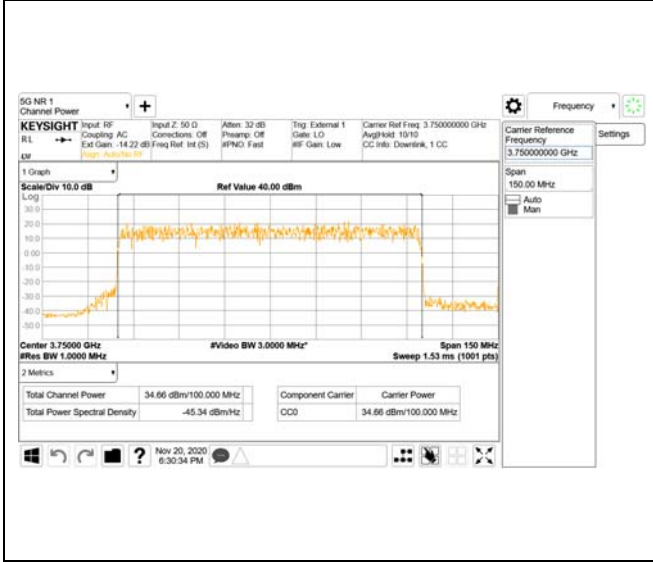


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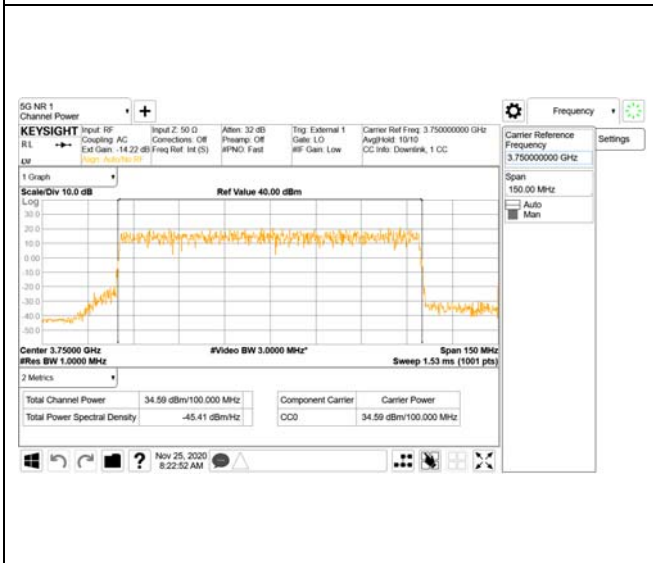
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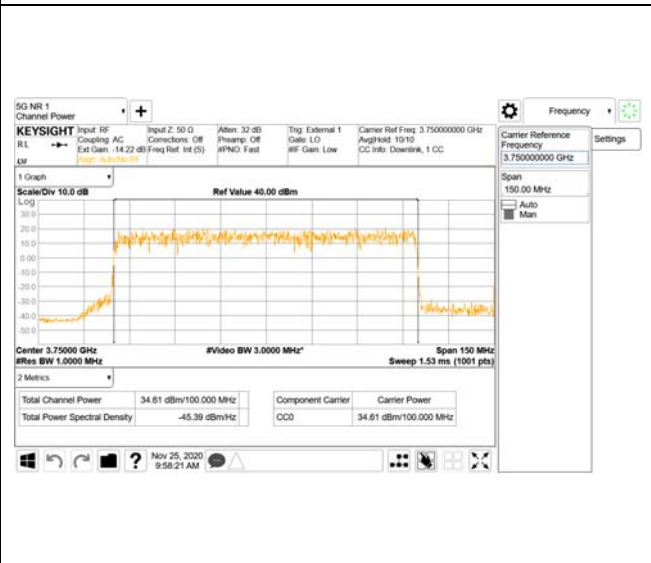
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64QAM



256QAM





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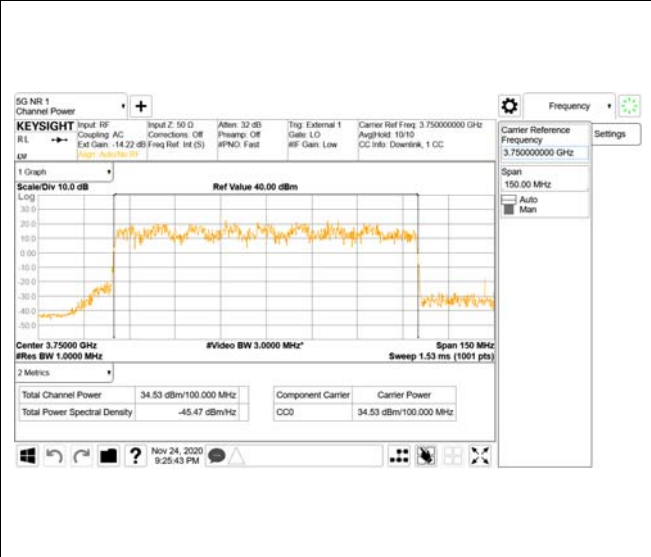
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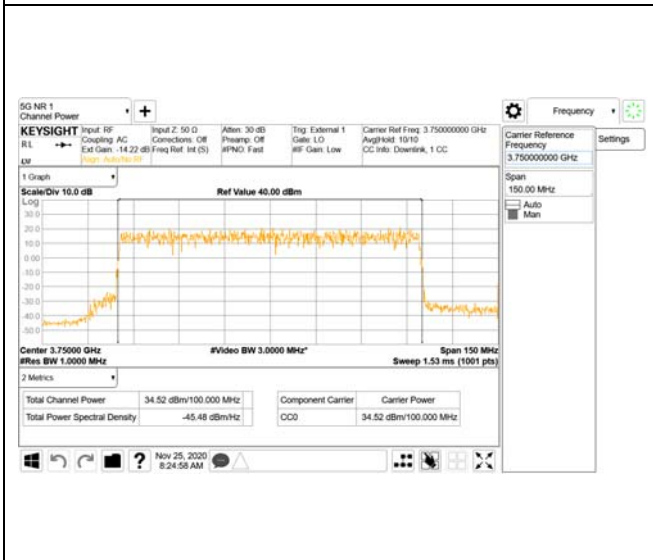
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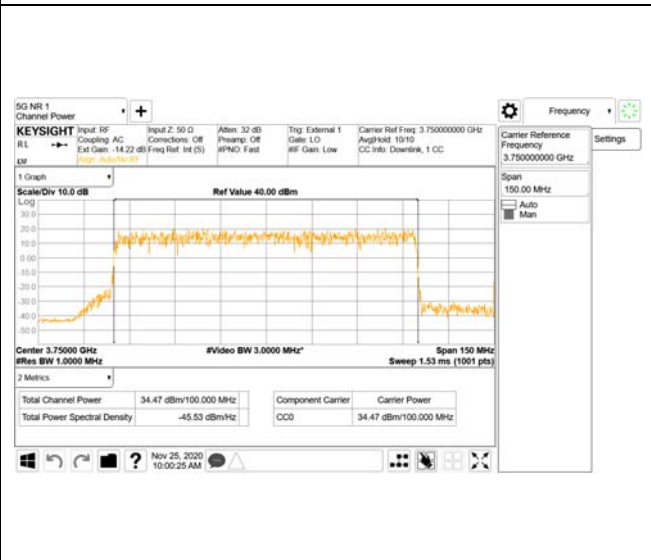
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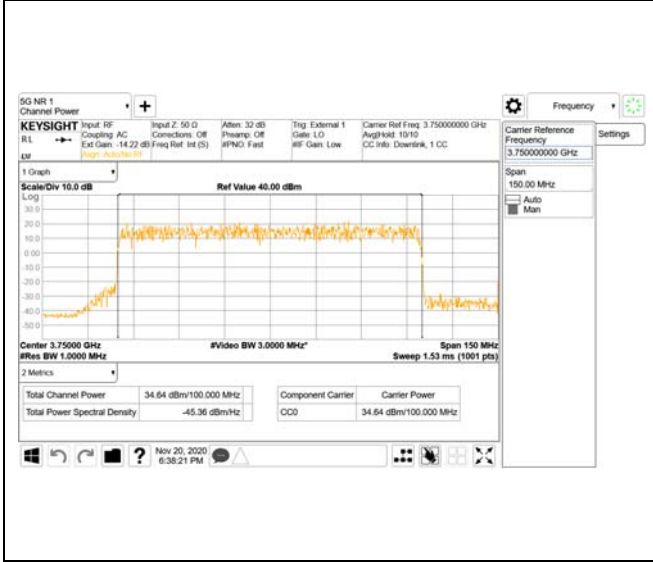


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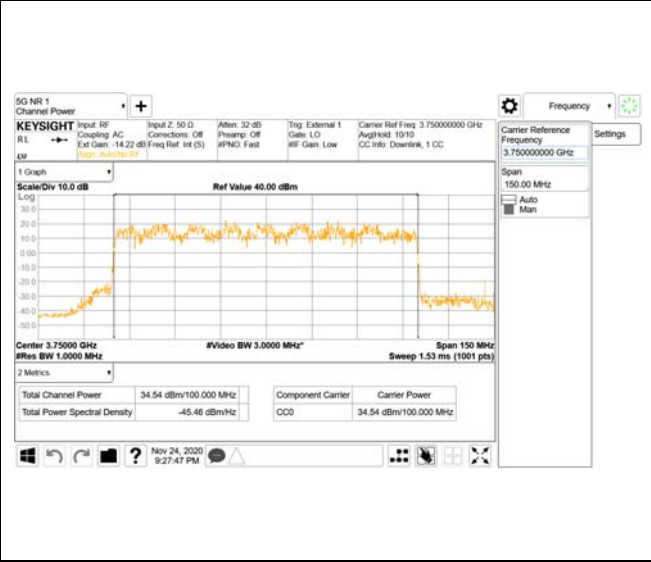
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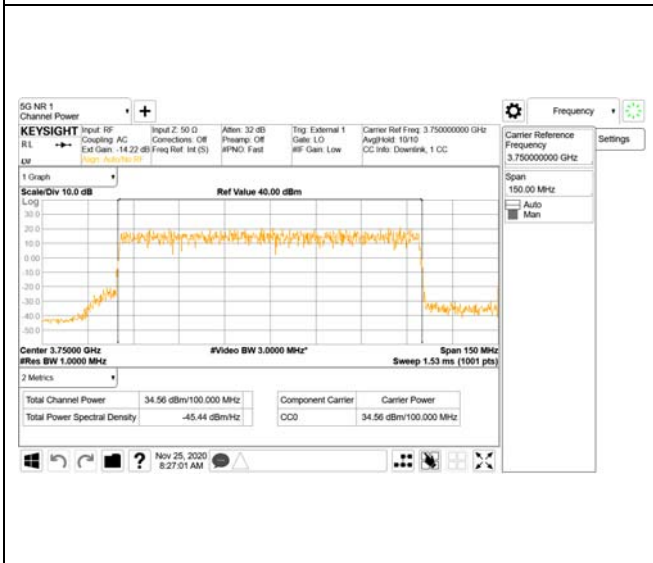
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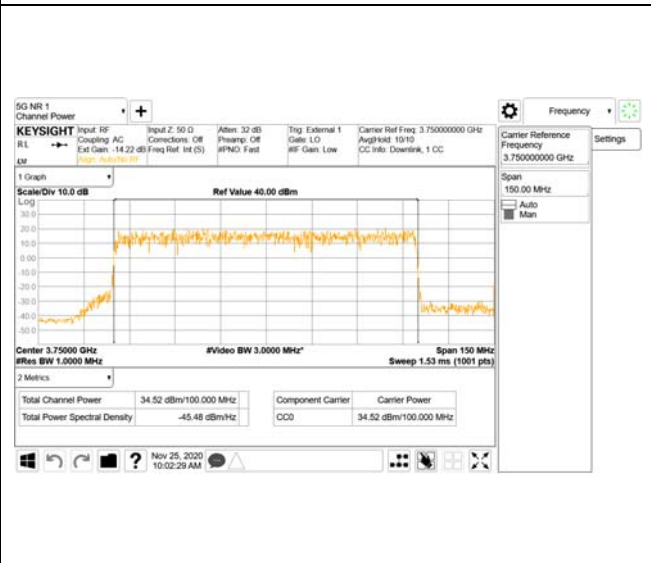
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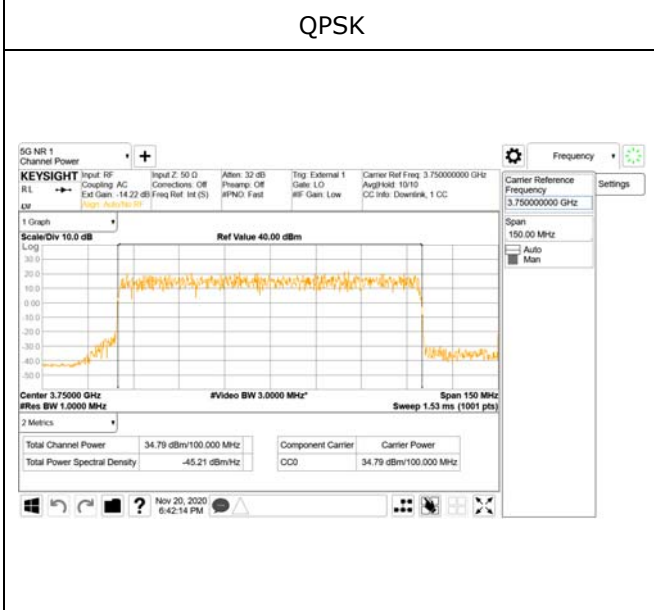


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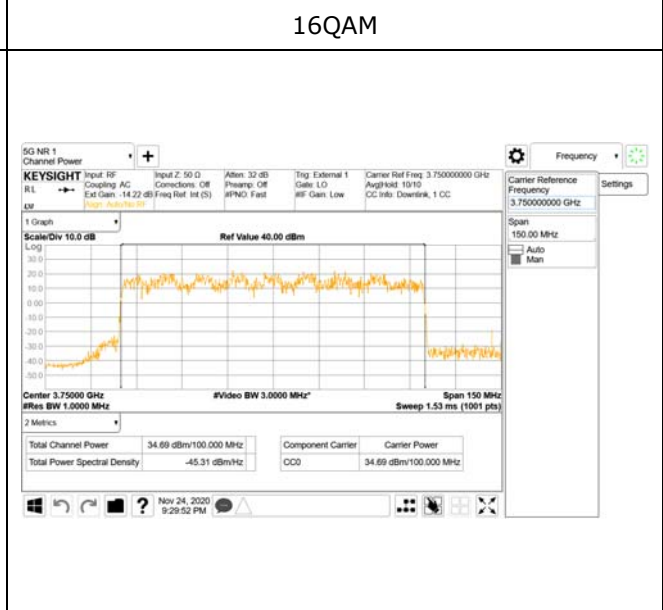
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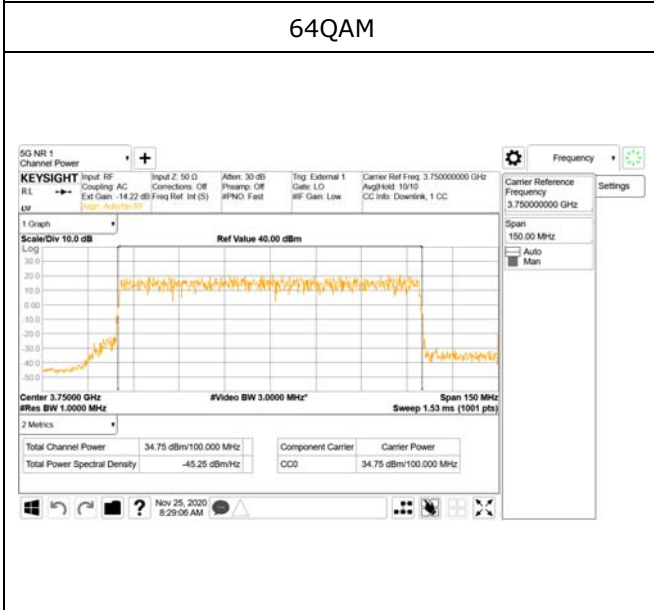
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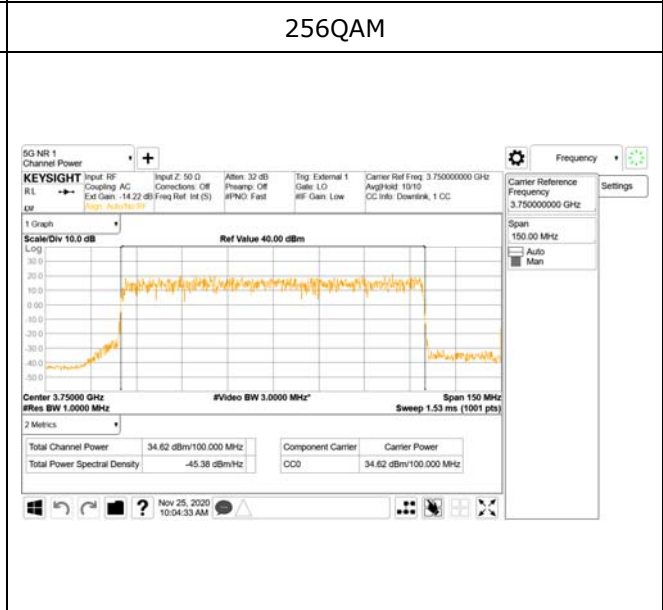
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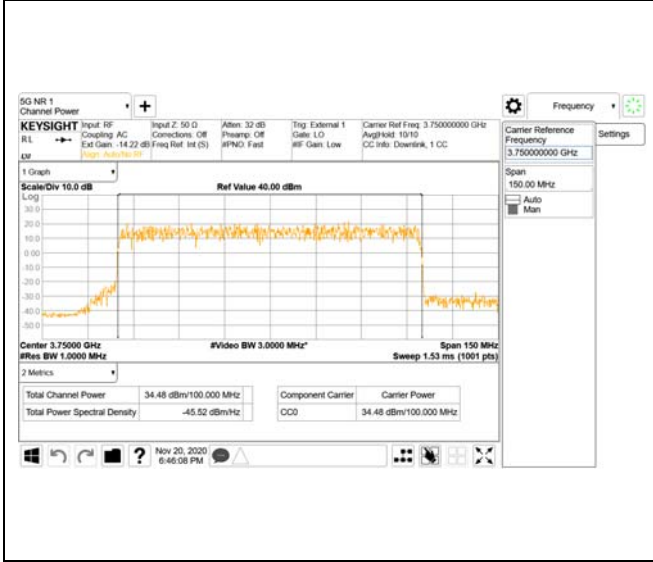


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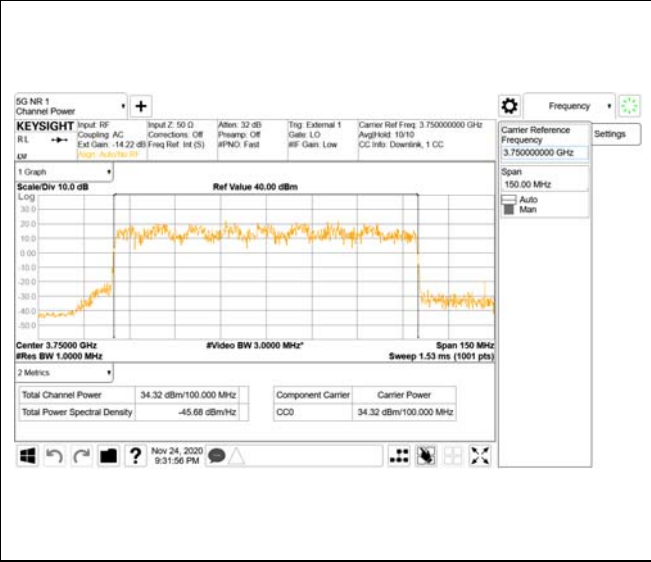
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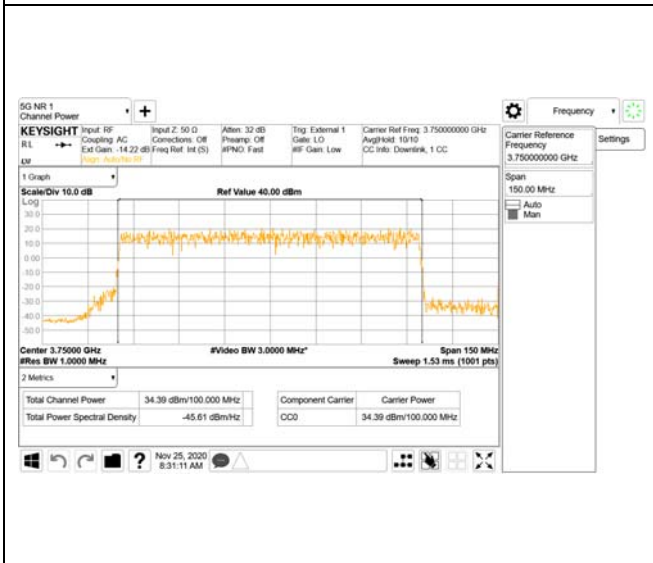
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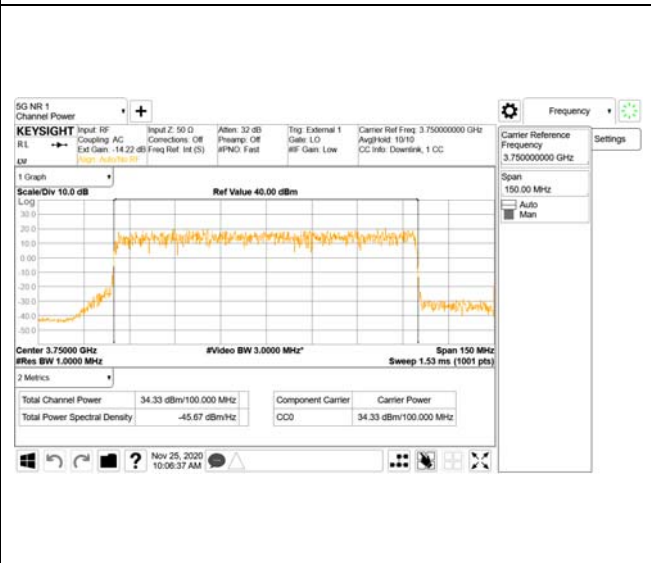
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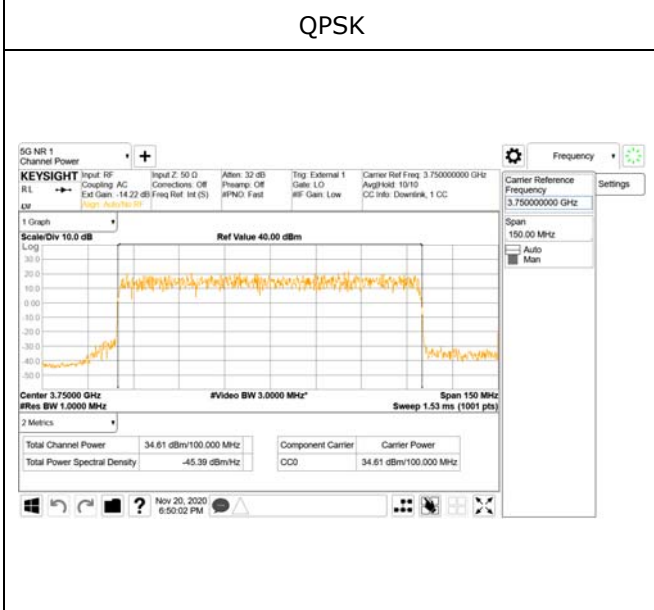


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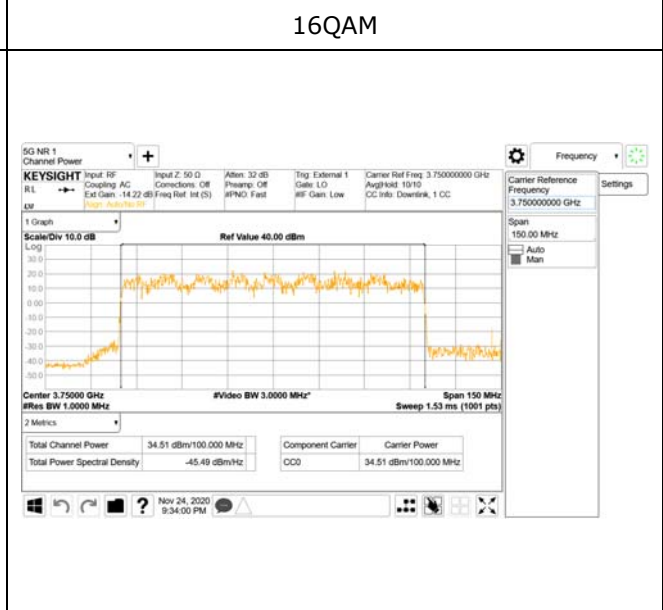
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ANT 12

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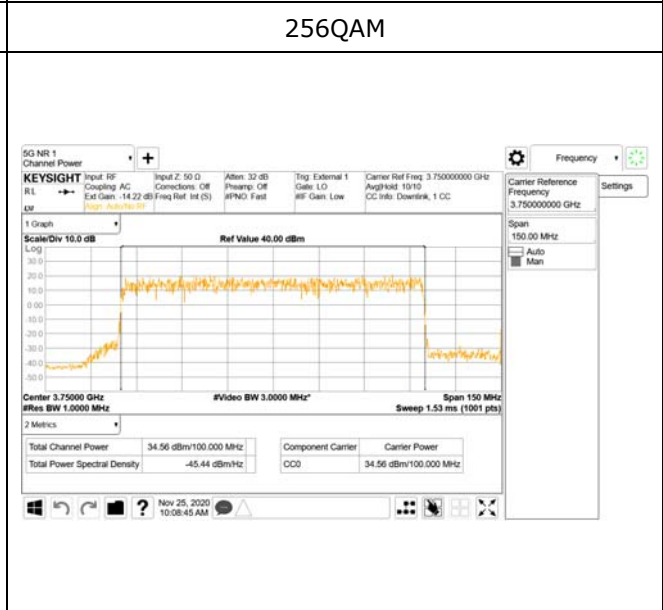
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ANT 13

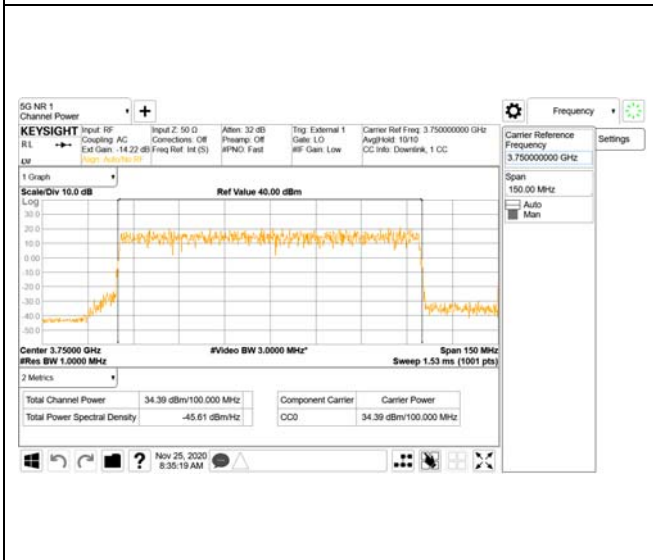
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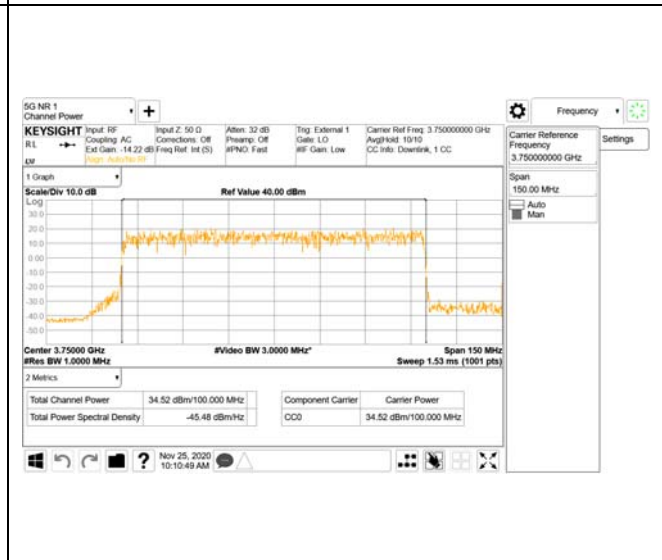
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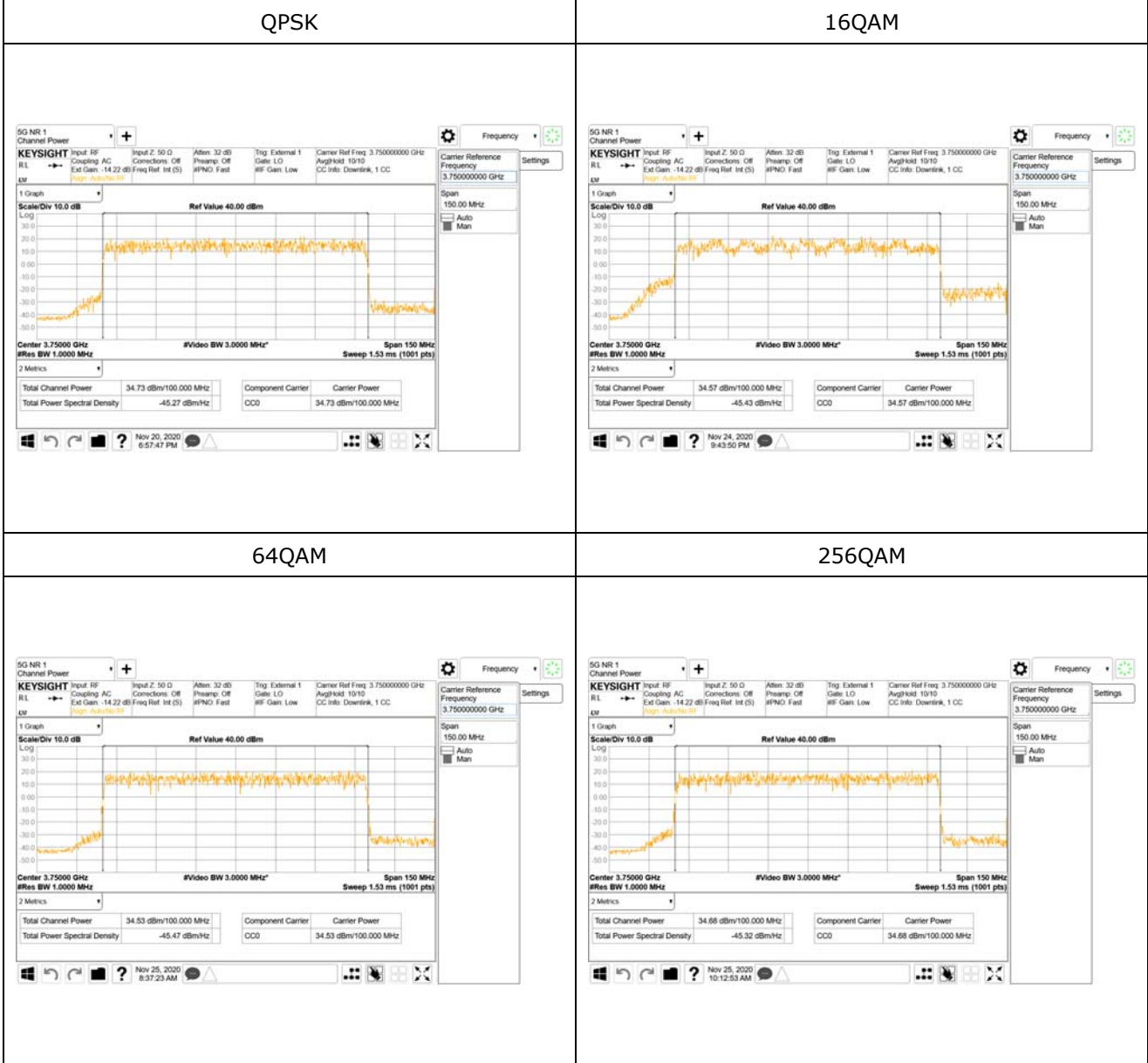
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ANT 14

QPSK

16QAM



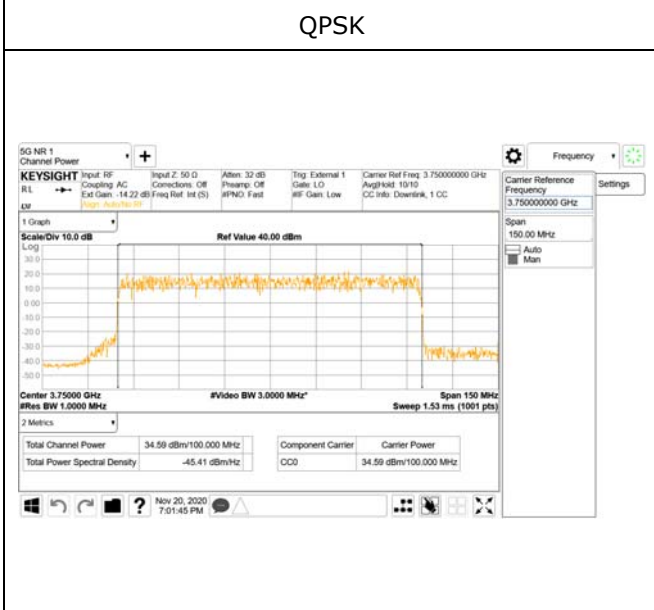


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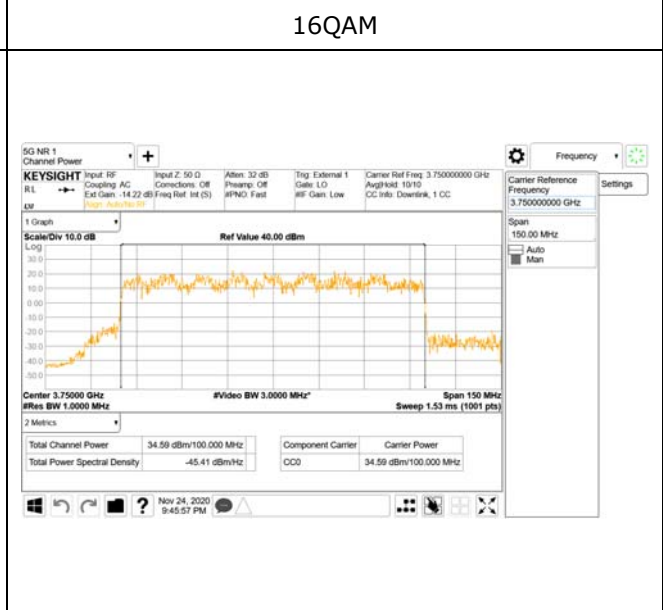
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ANT 15

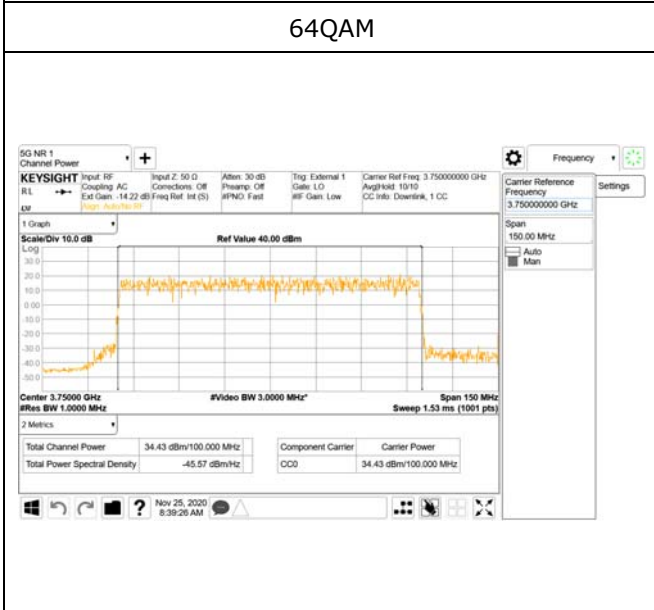
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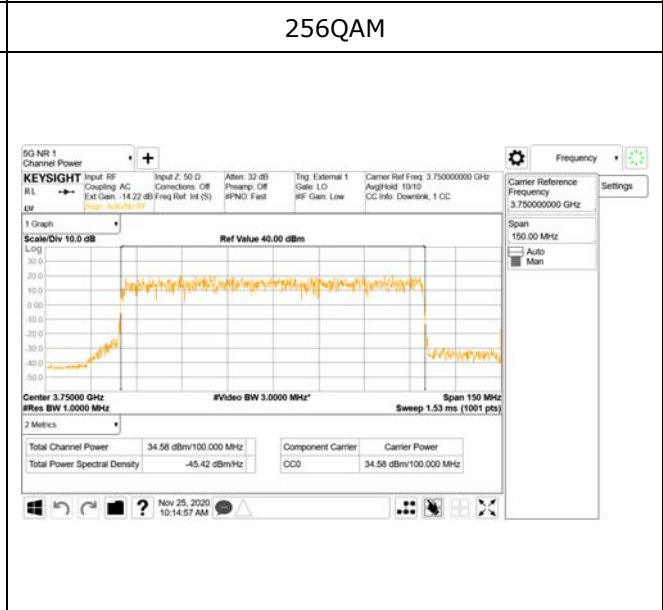
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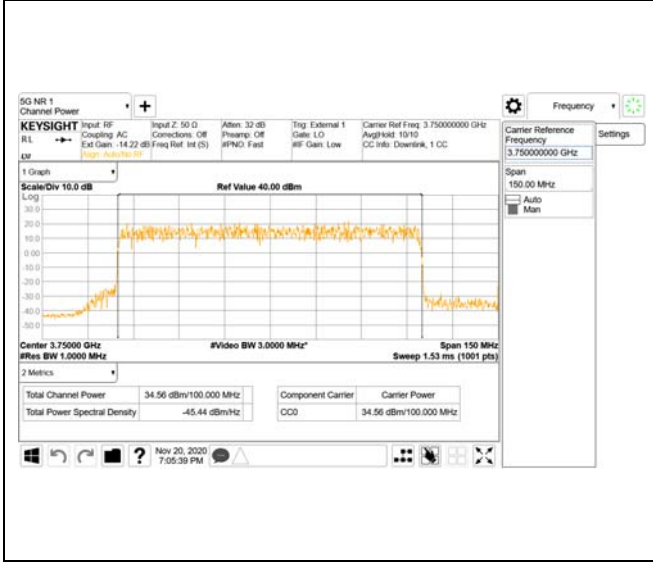


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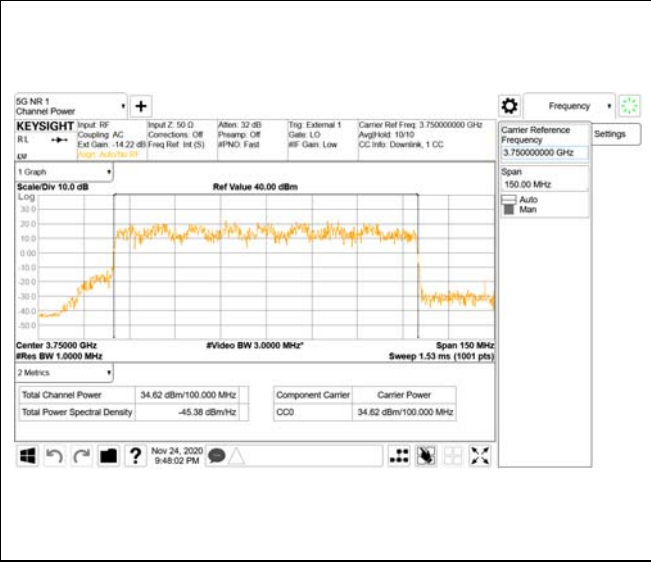
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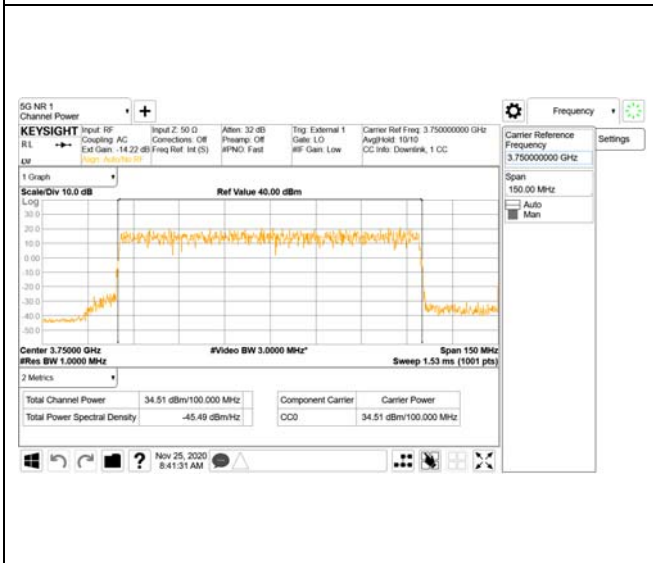
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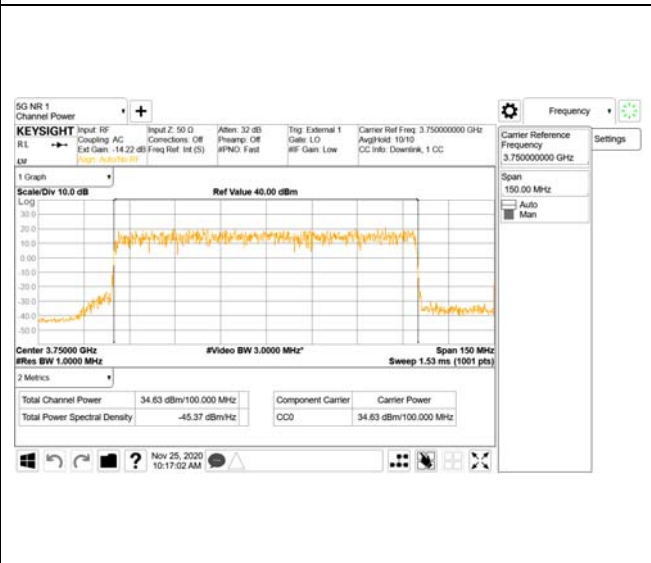
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ANT 17

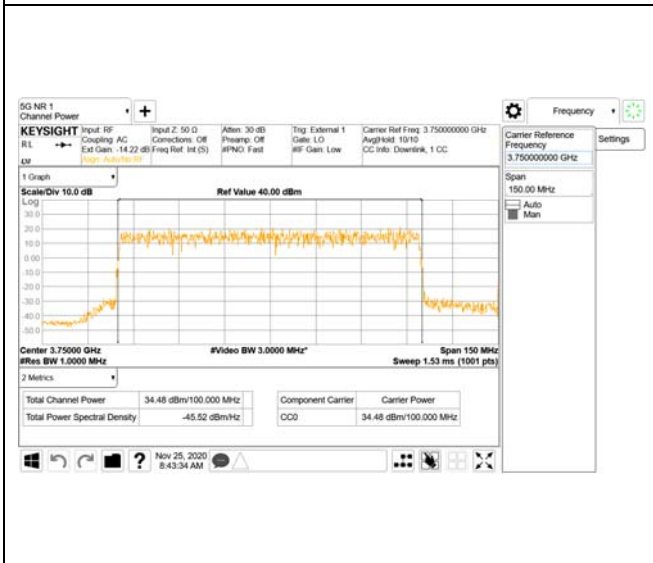
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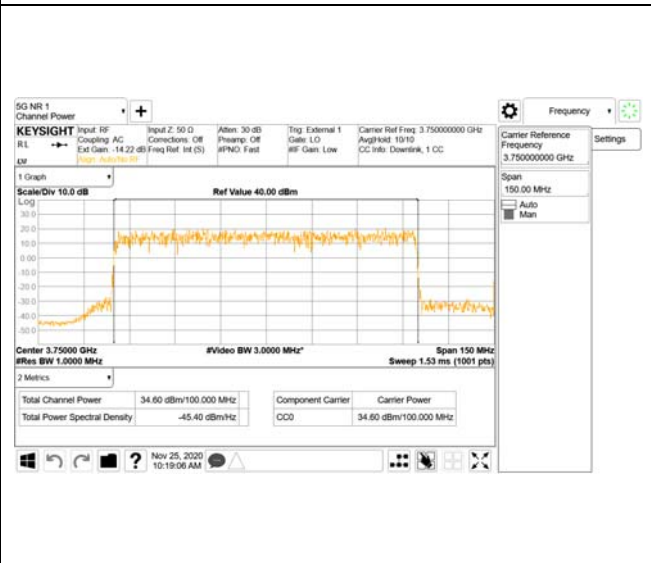
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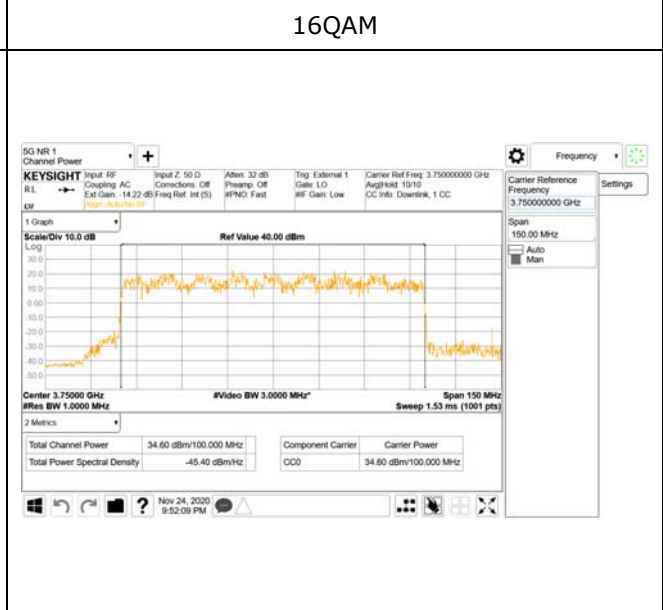
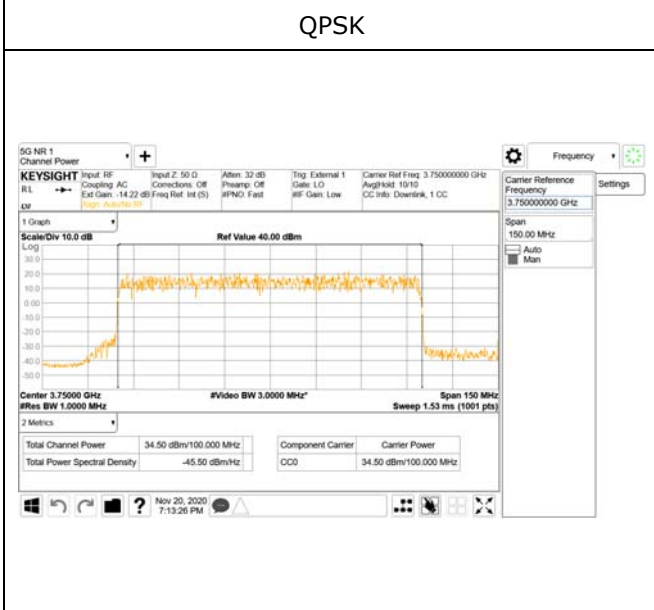
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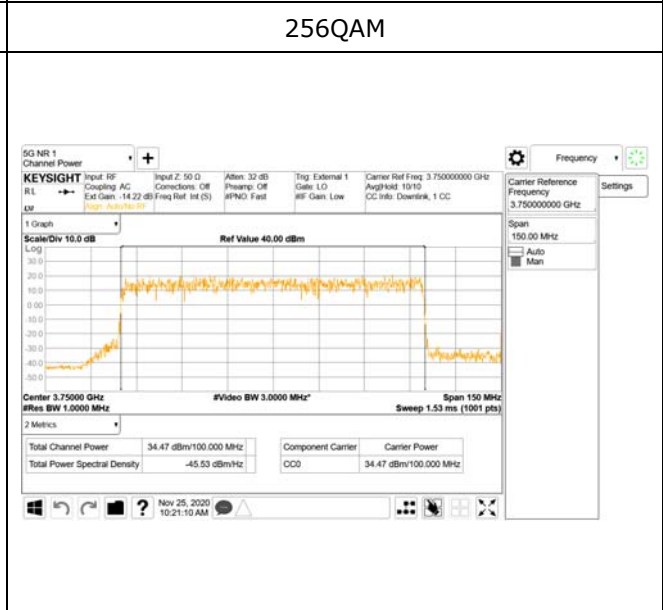
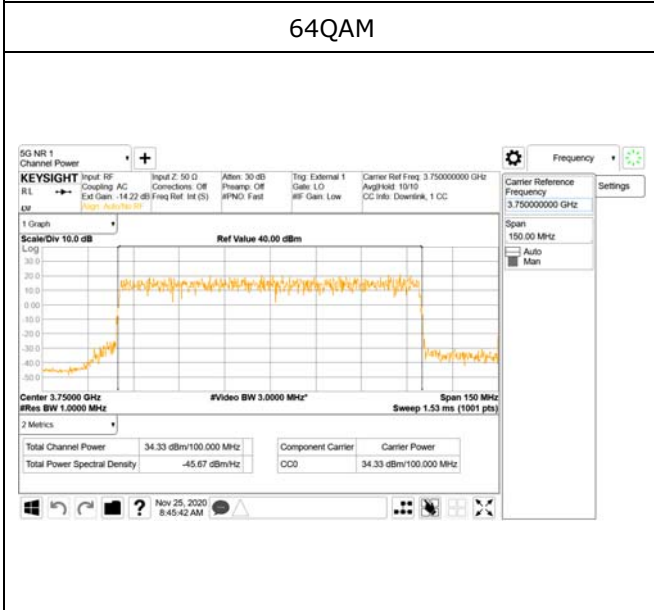
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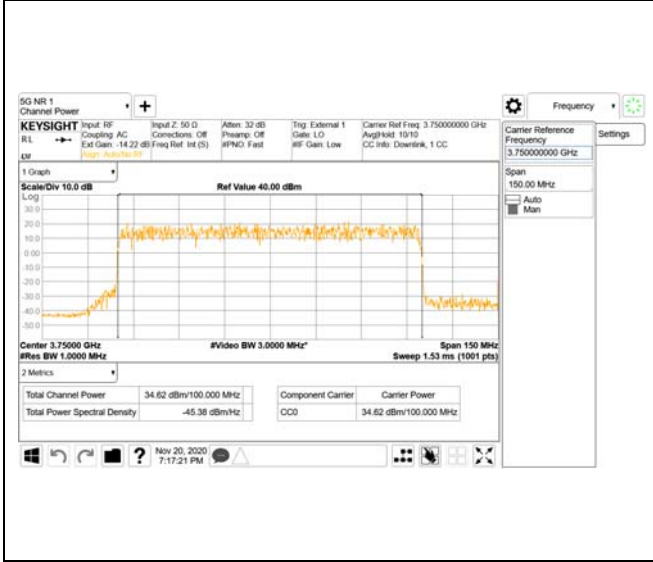


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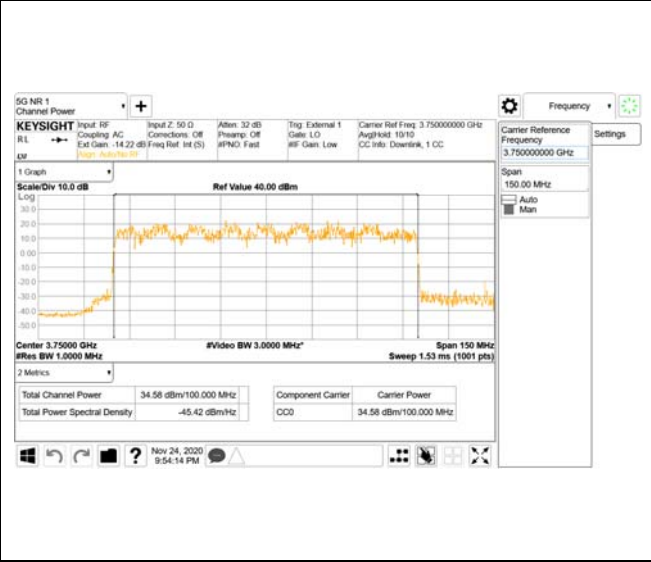
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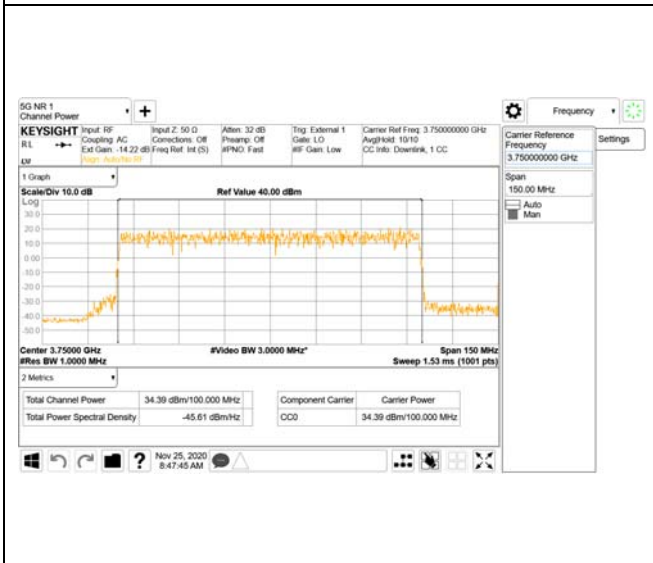
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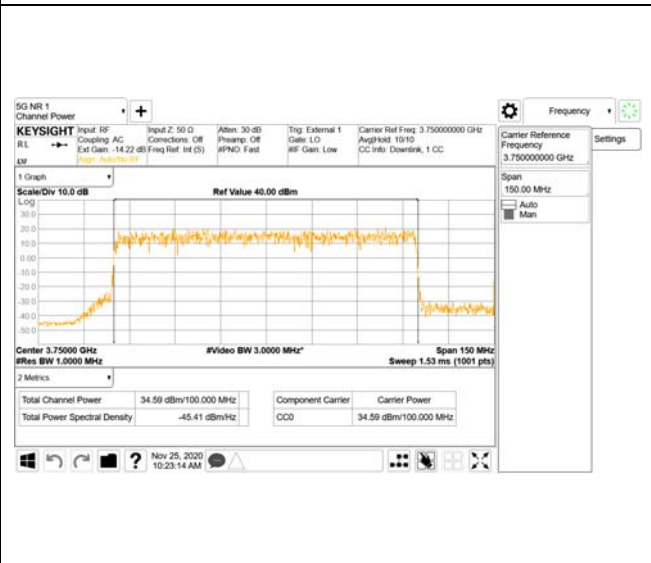
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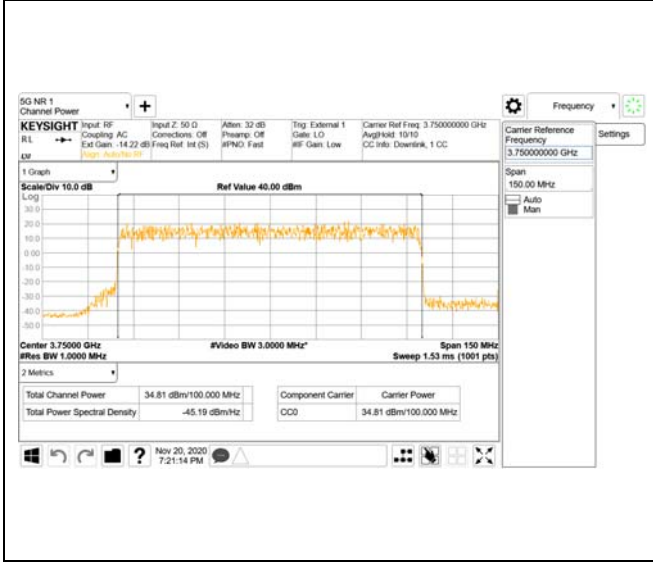


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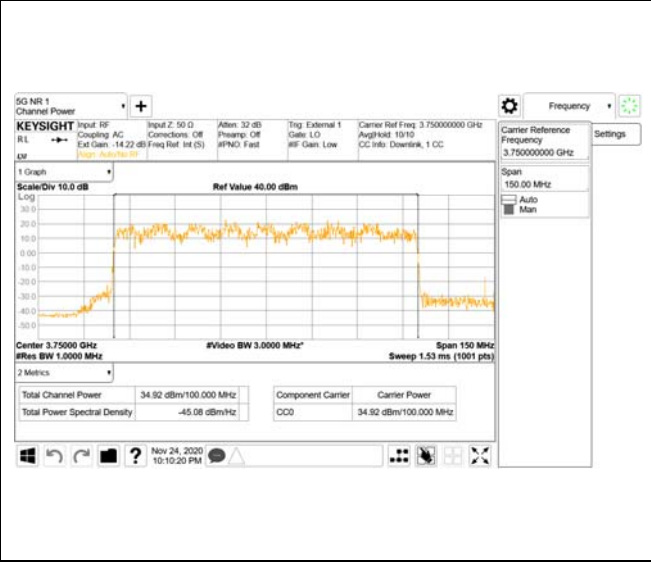
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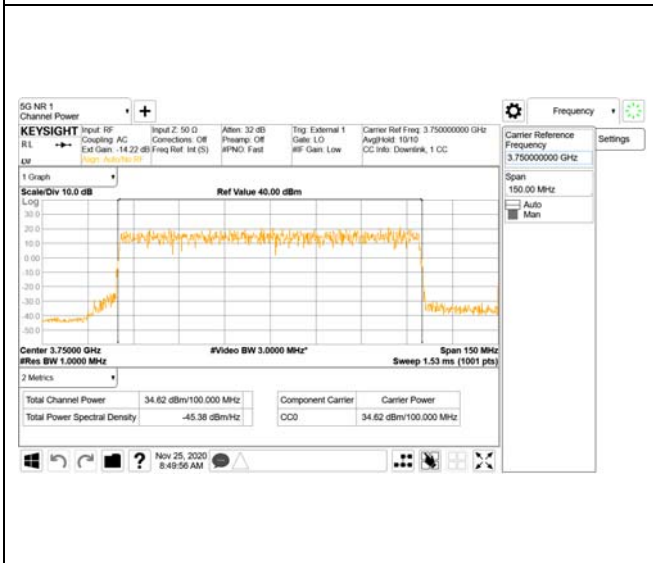
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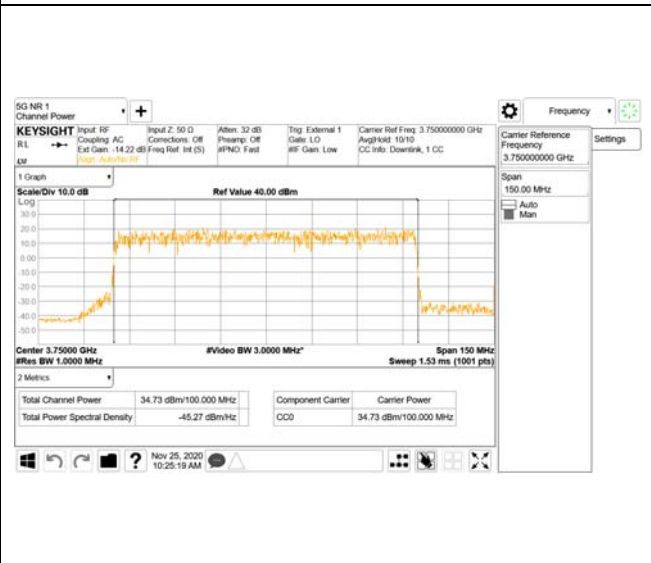
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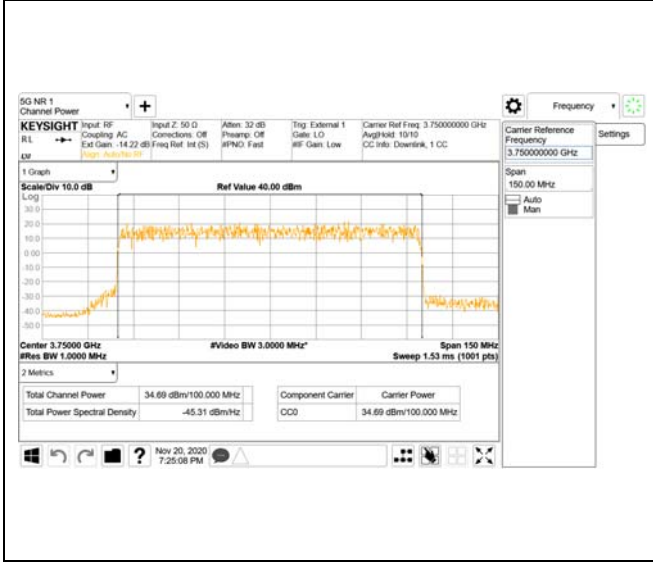


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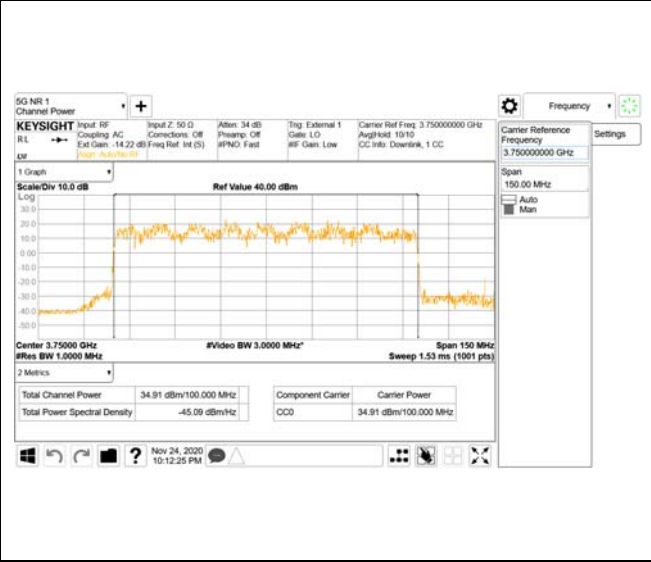
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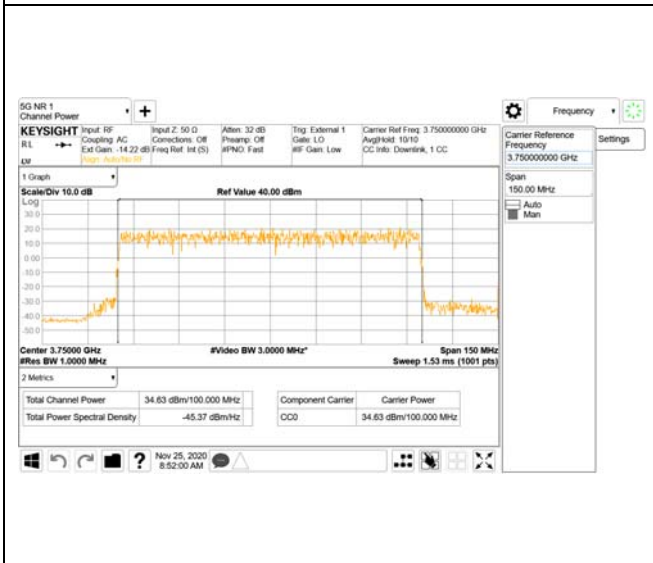
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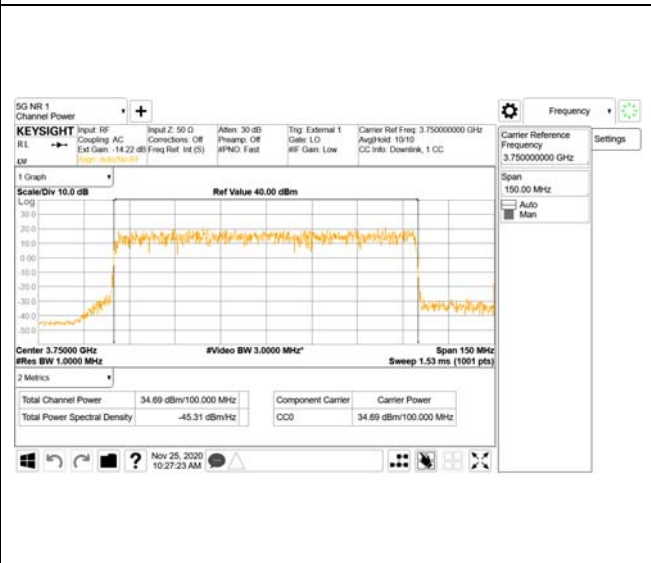
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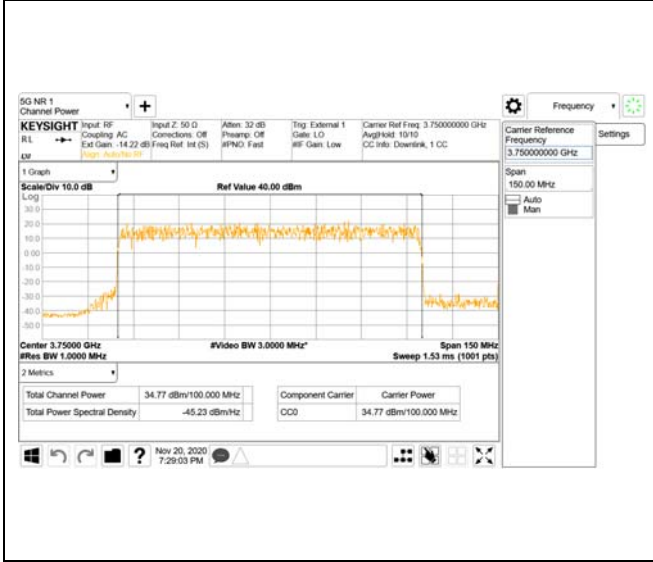


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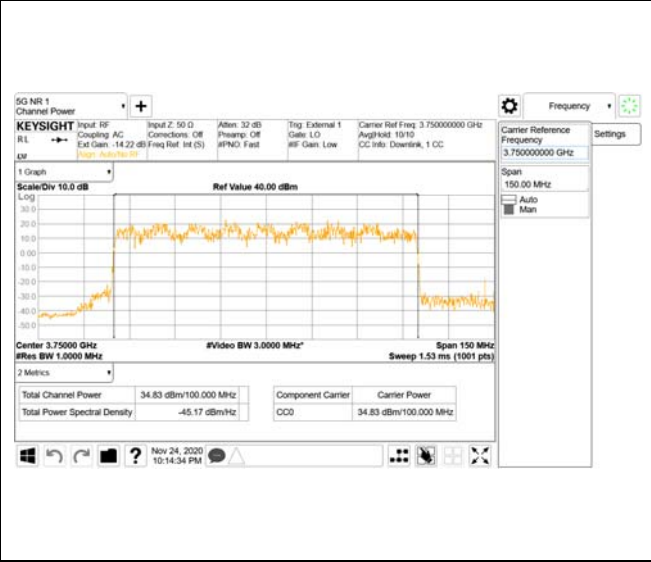
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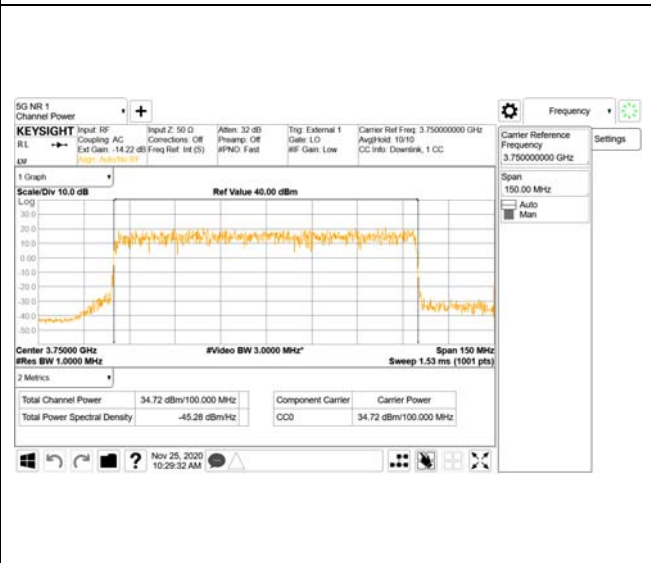
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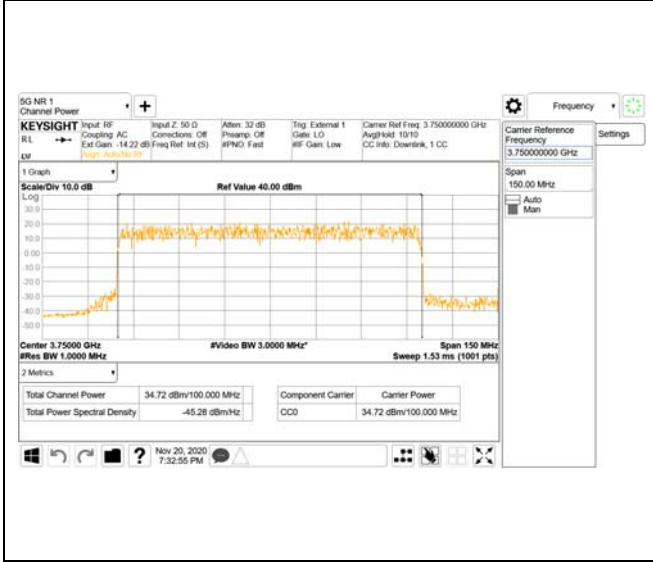


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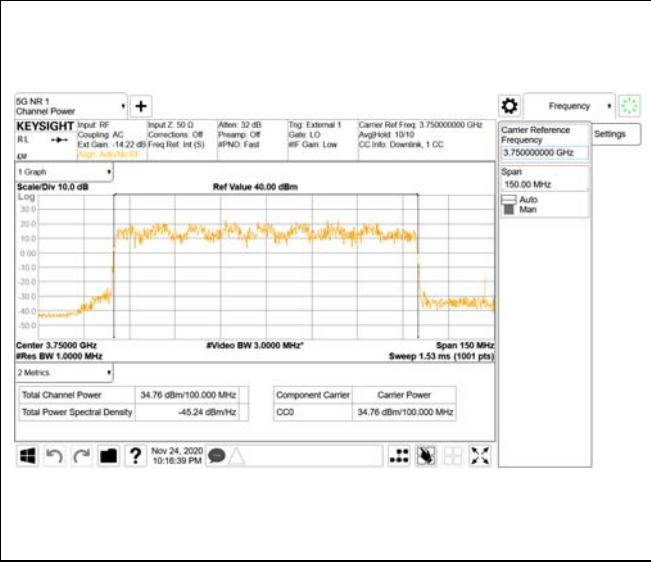
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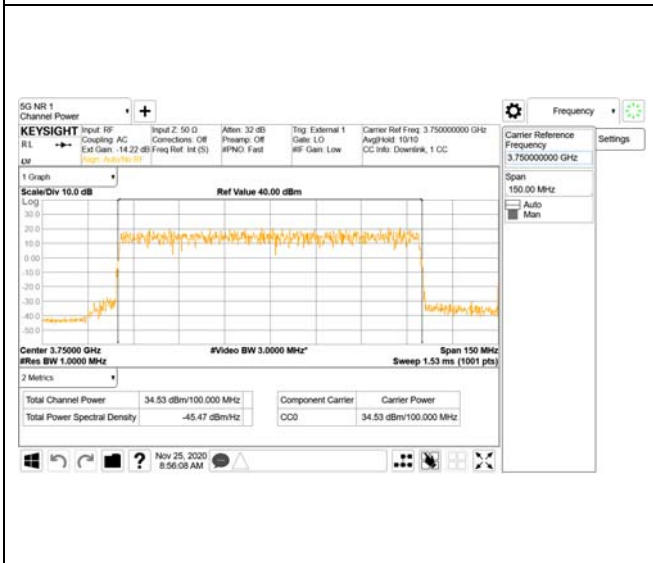
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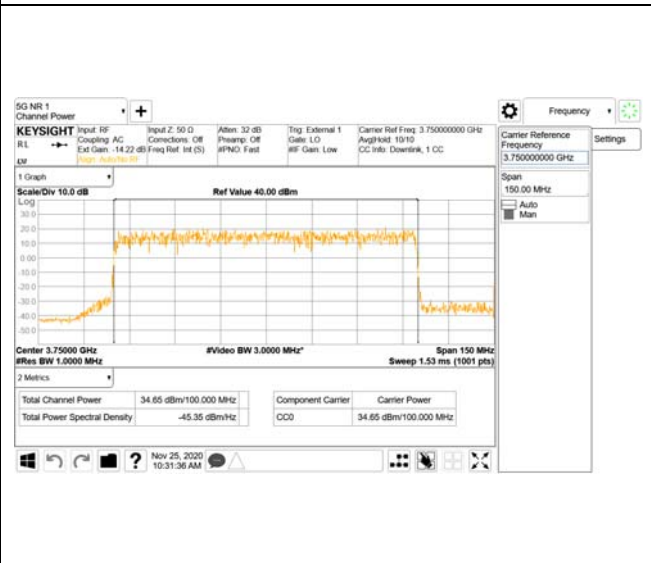
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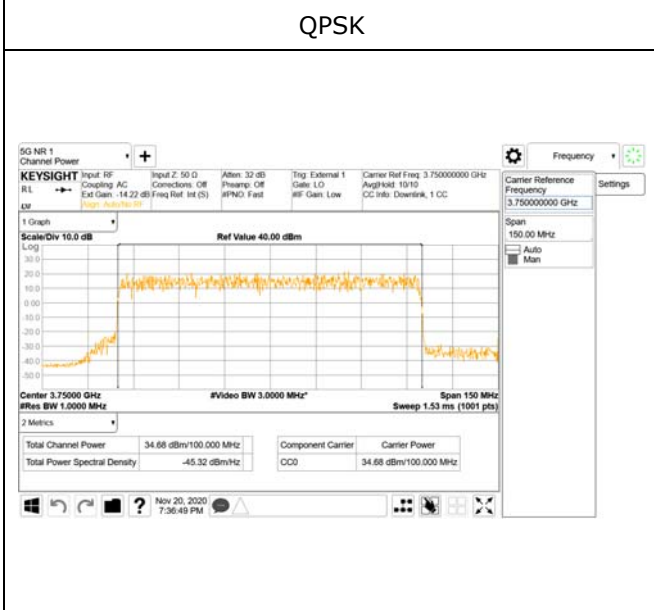


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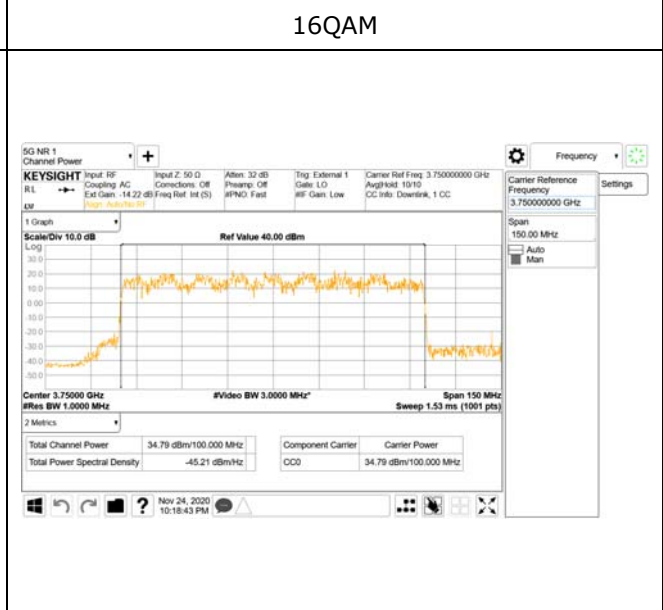
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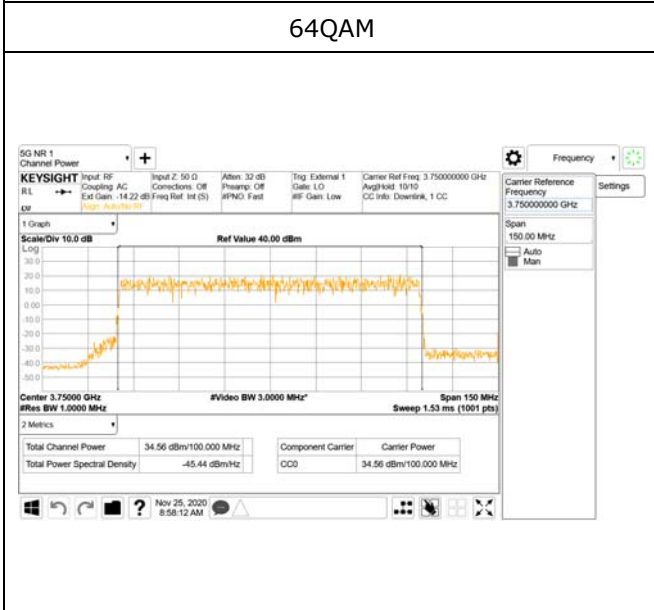
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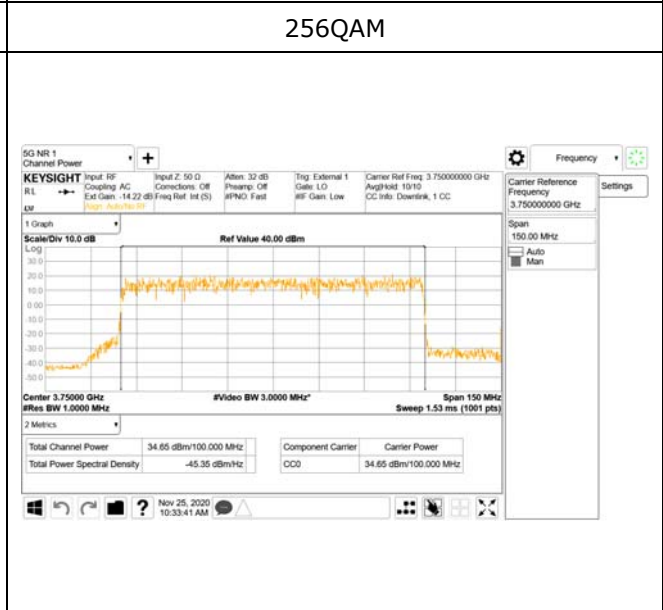
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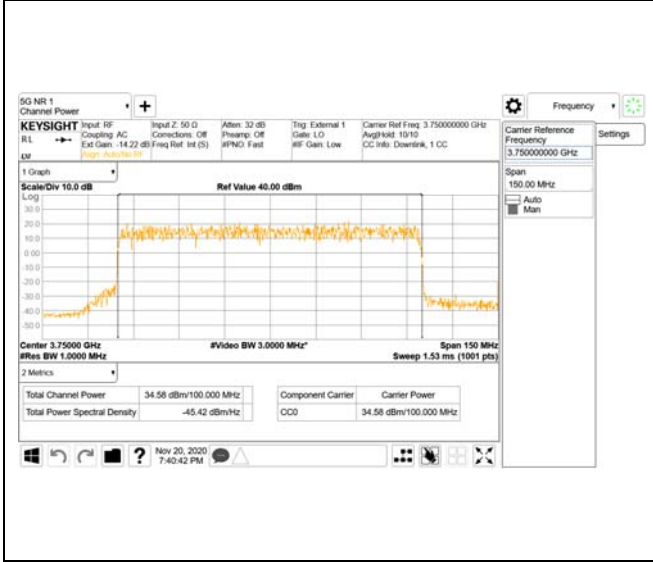


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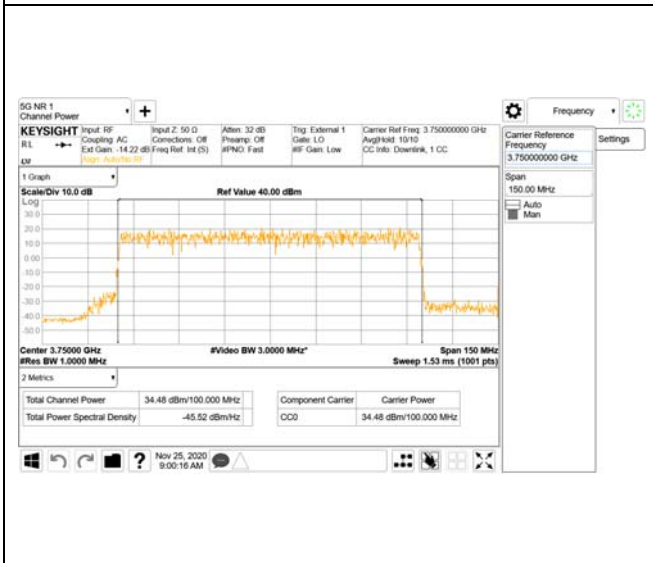
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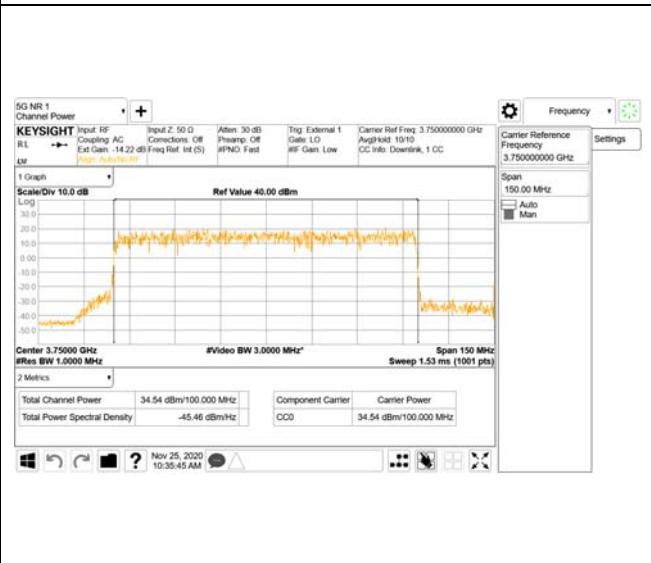
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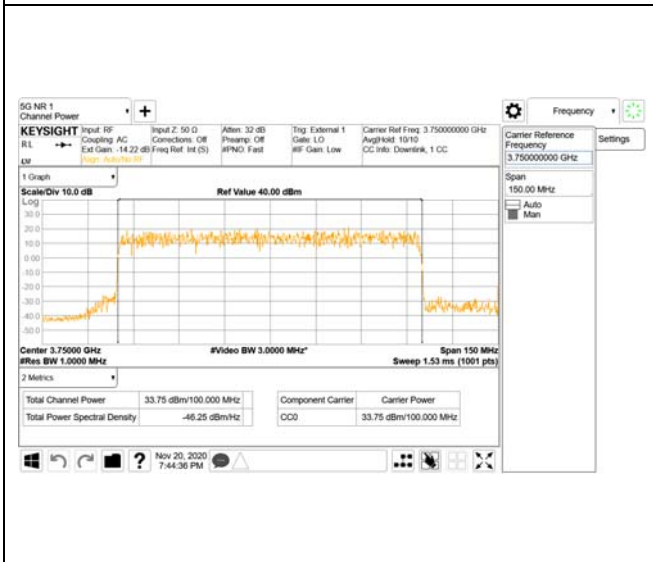


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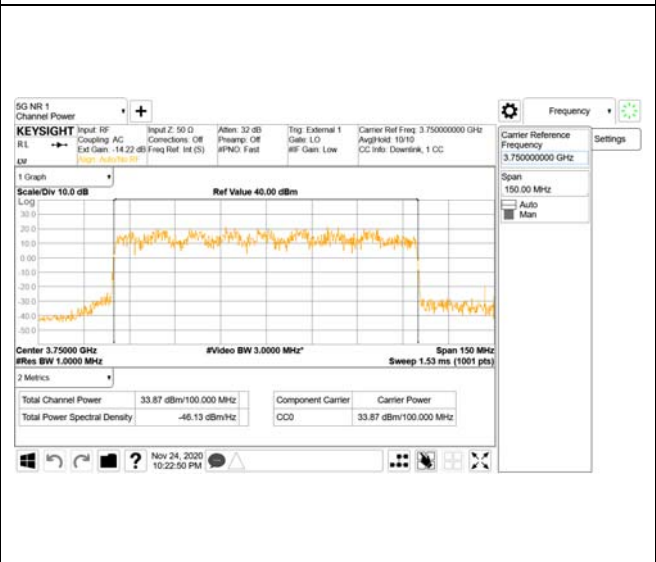
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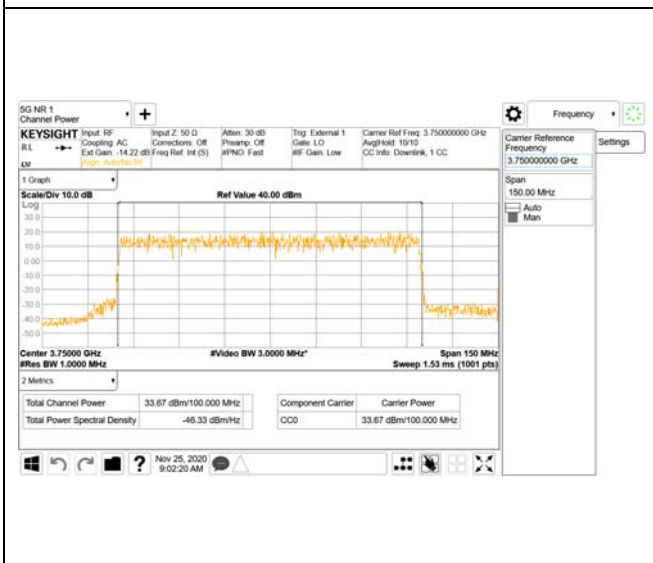
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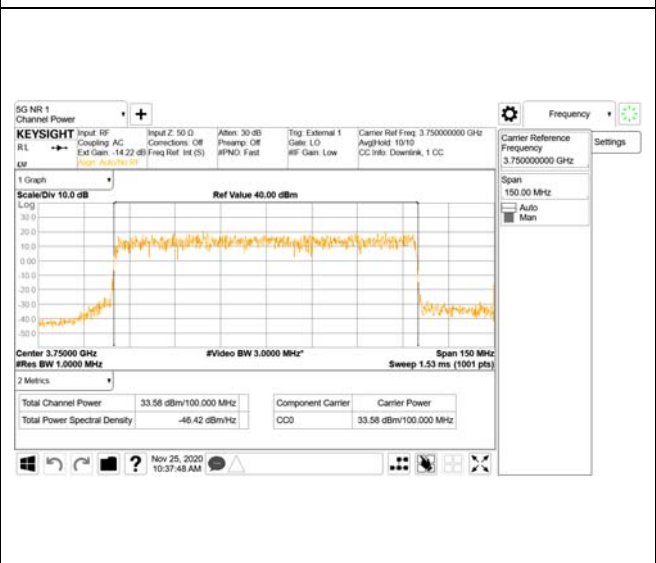
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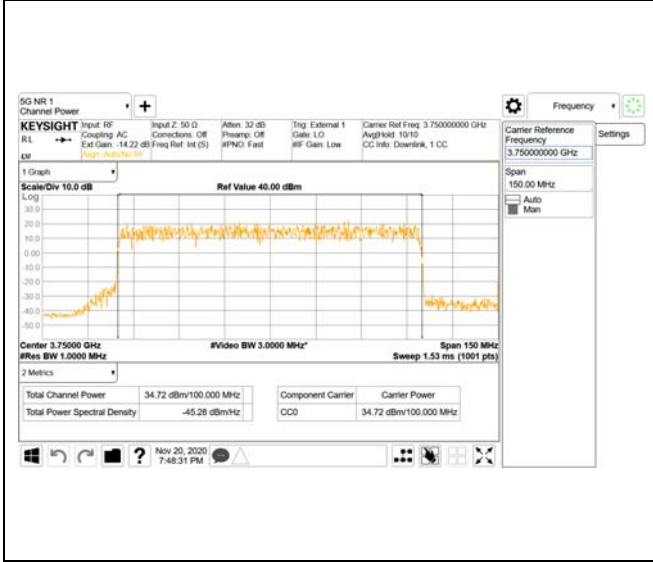


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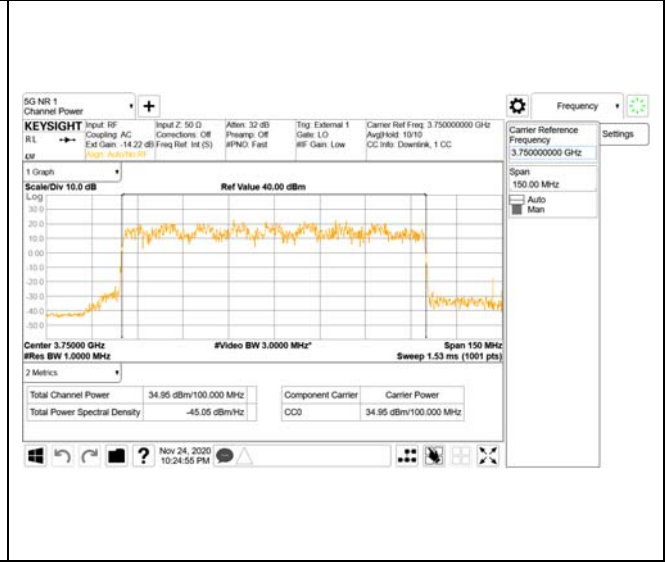
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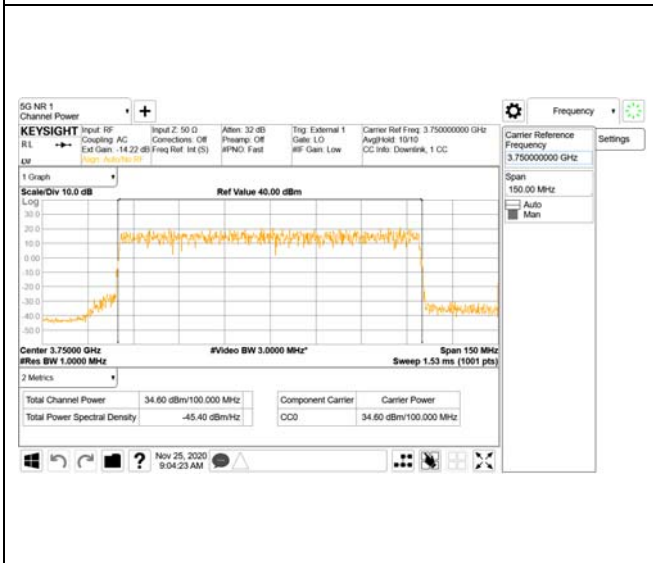
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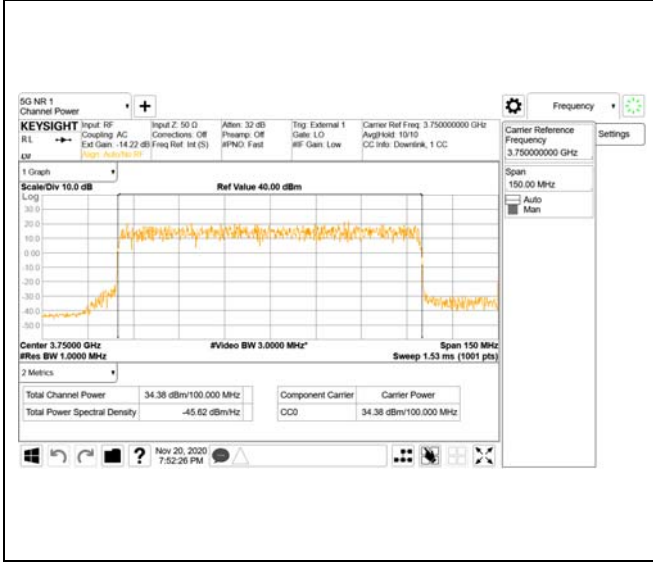


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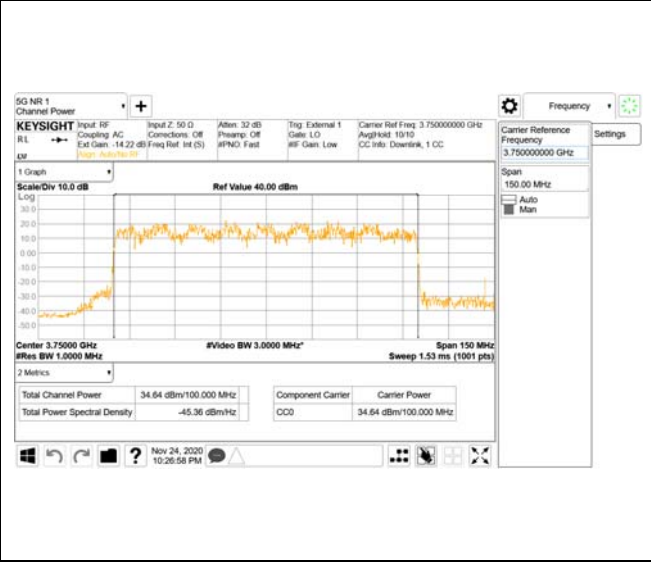
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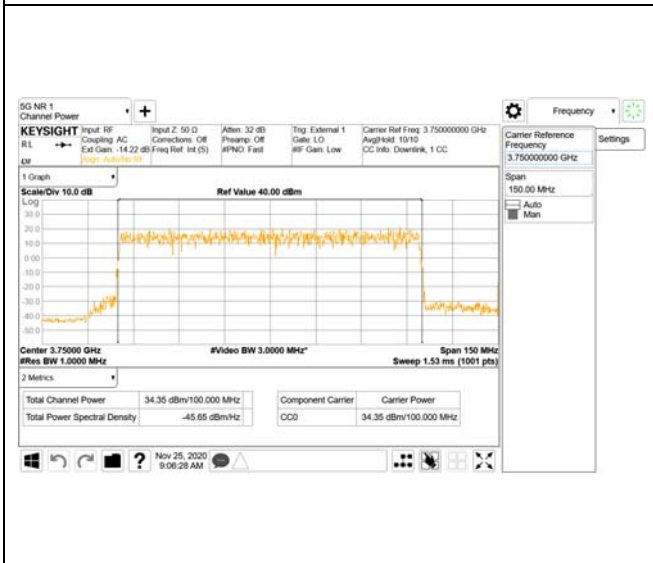
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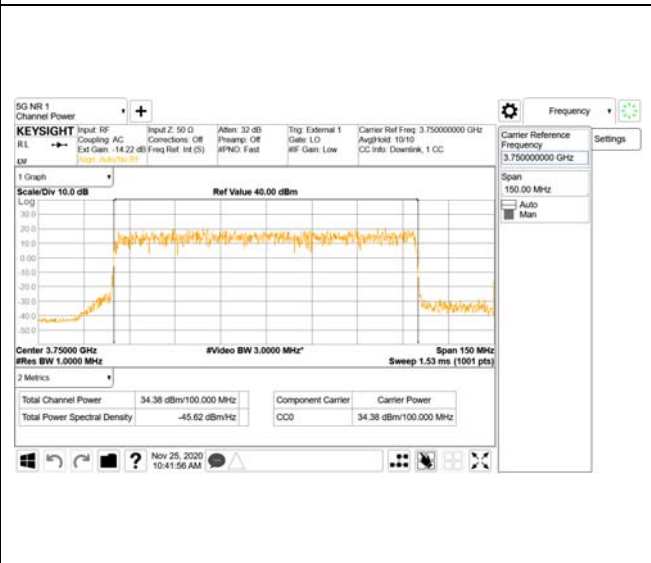
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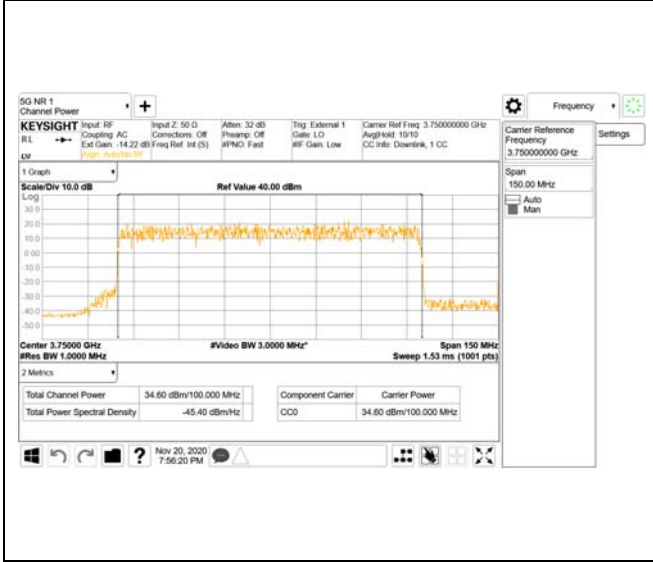


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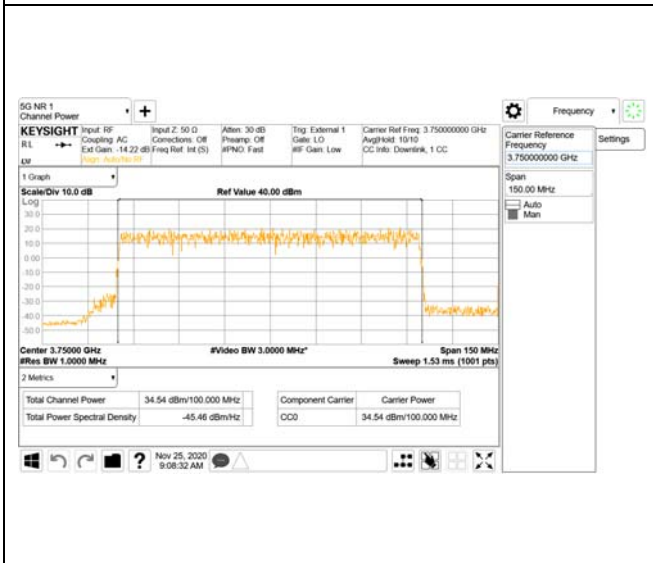
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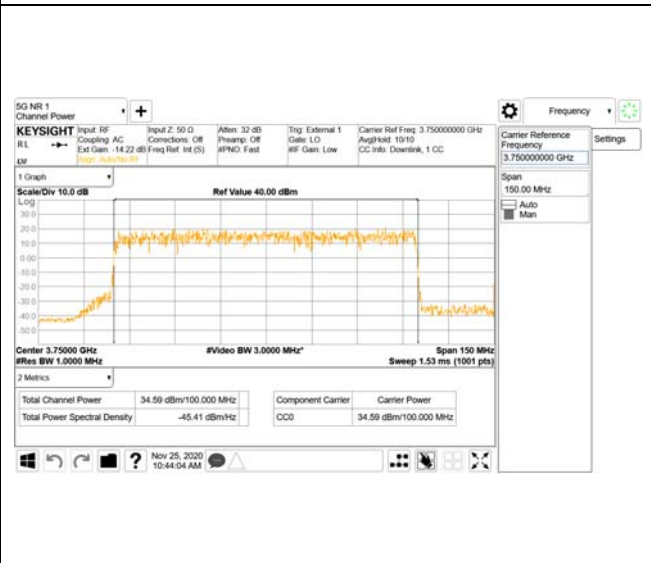
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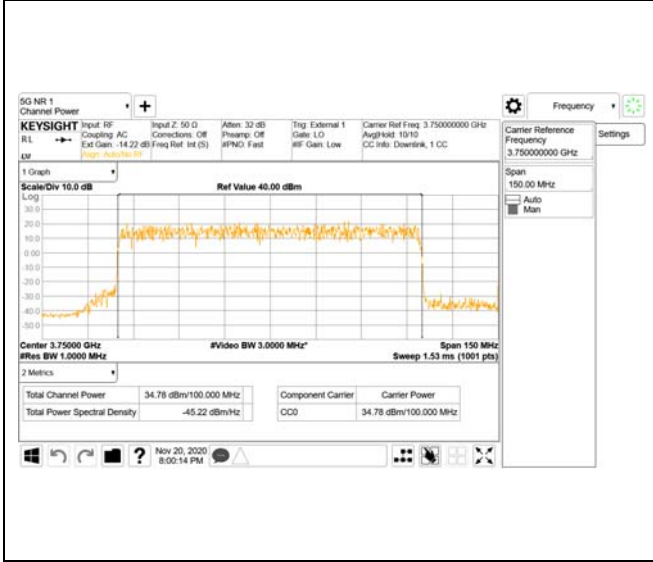


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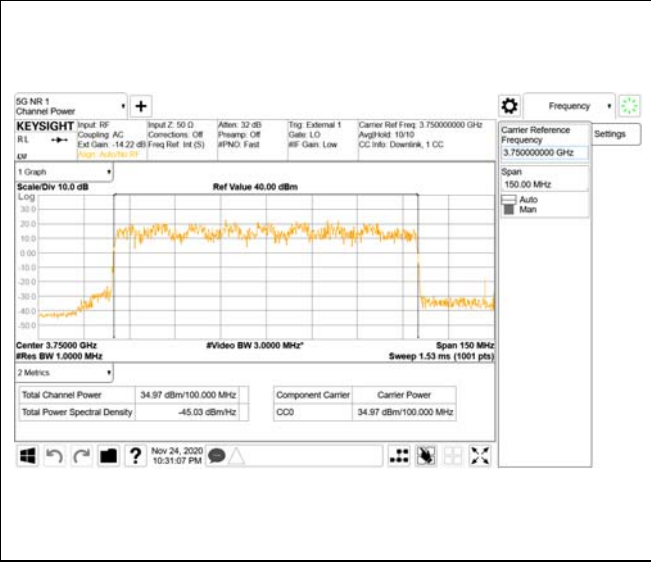
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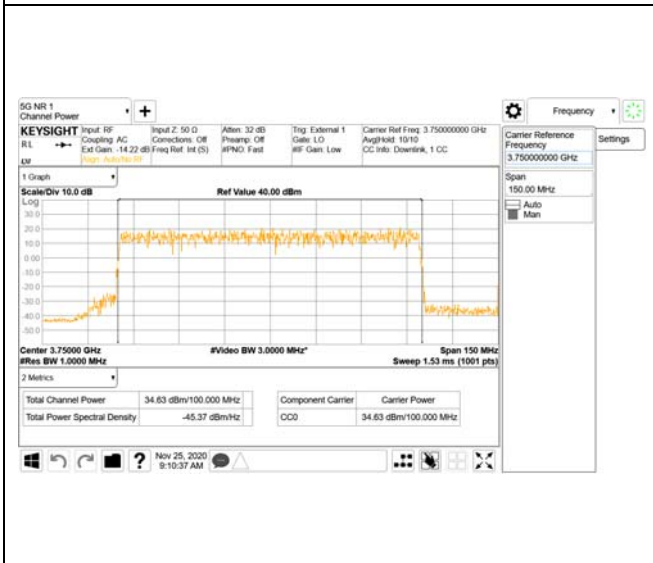
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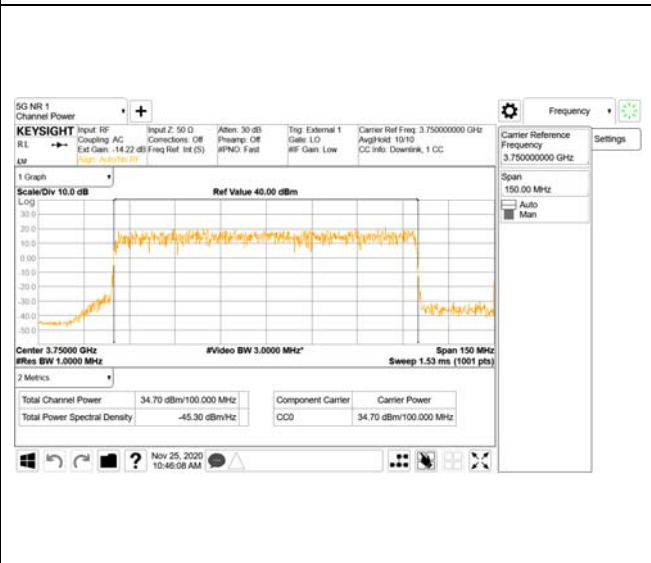
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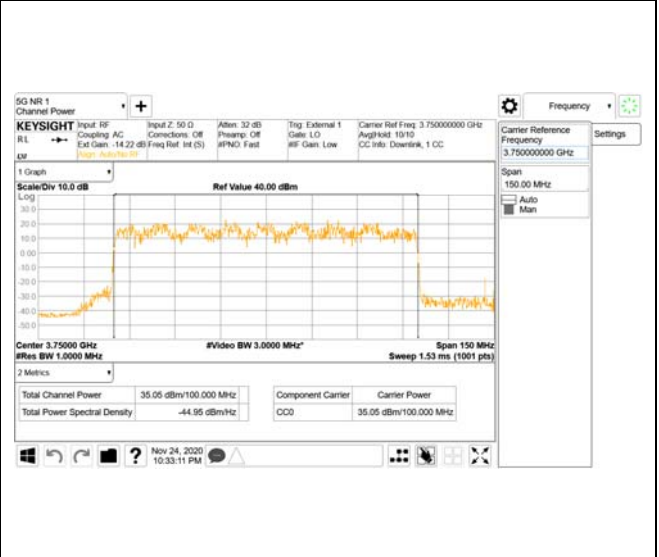
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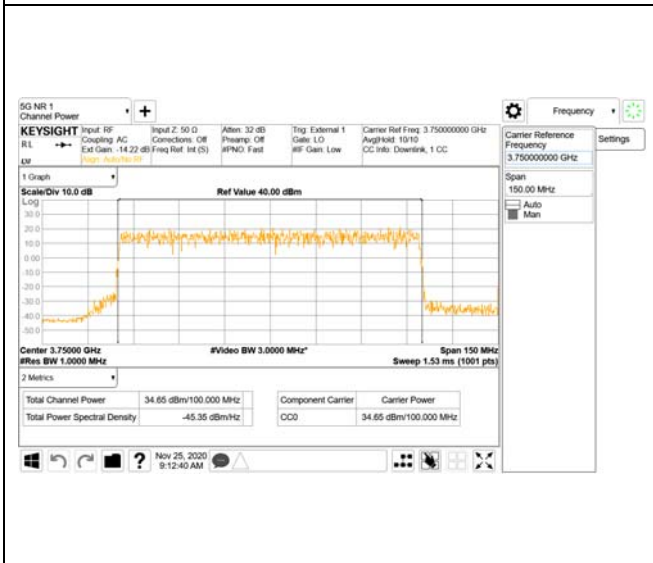
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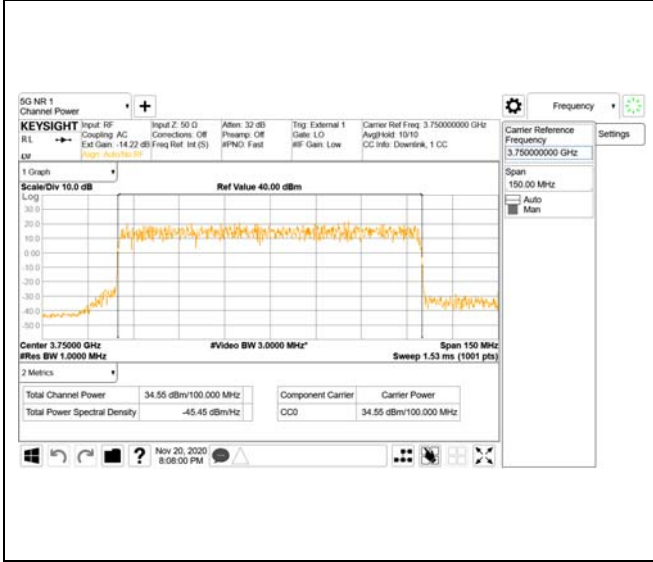


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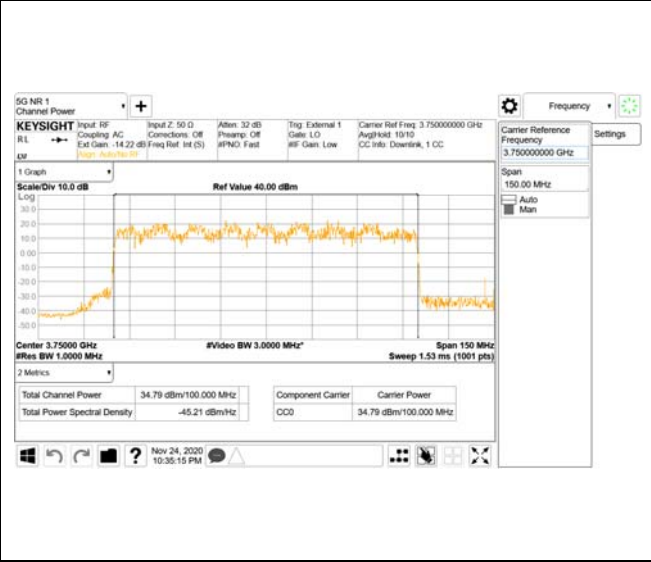
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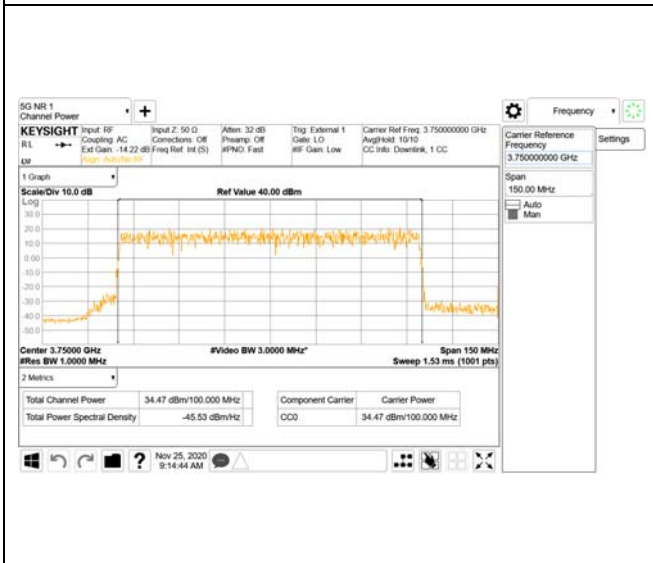
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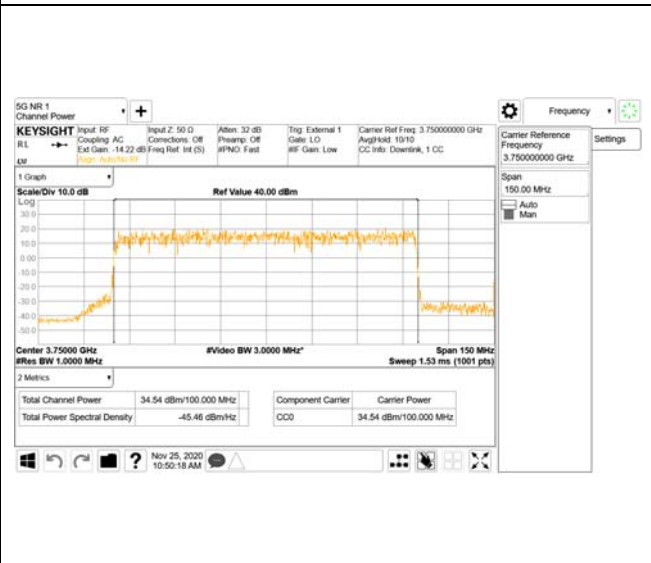
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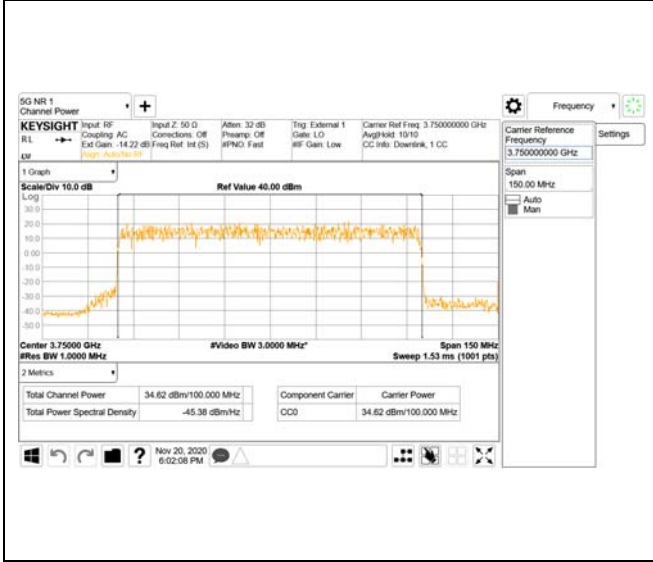


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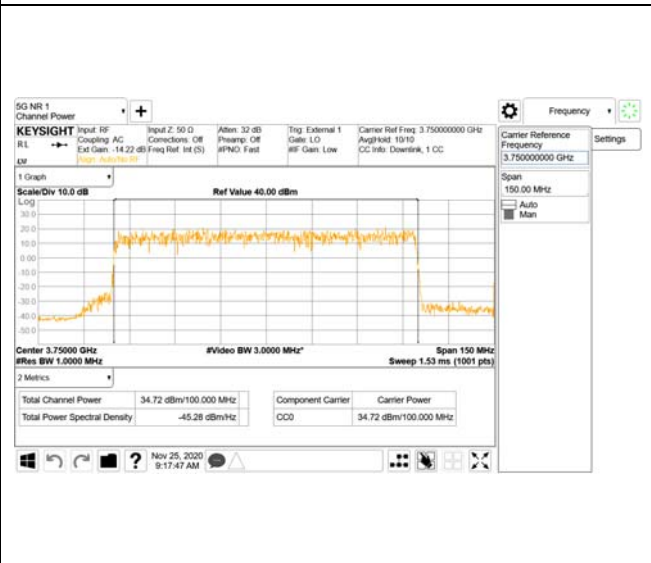
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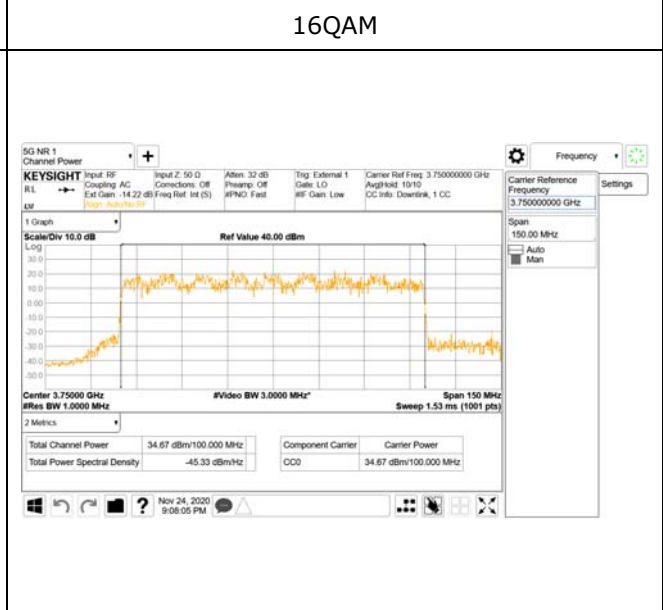
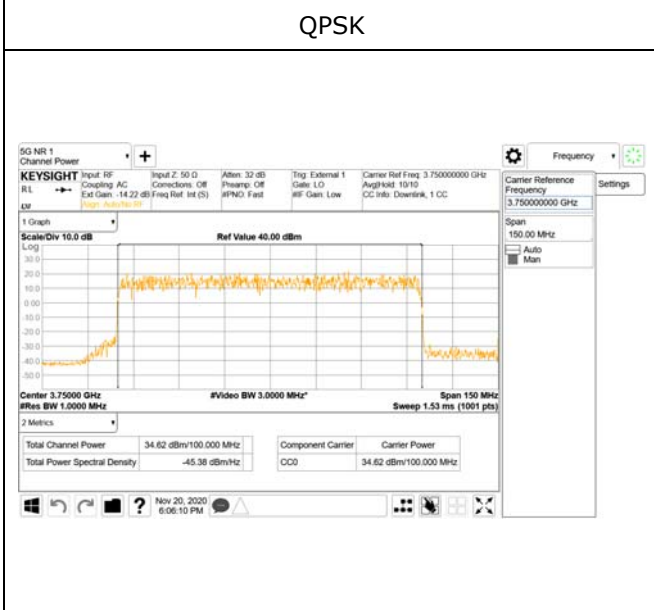
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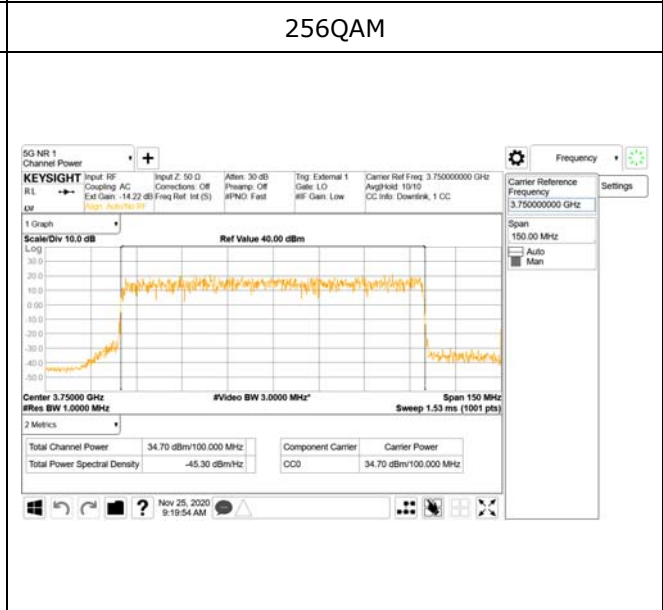
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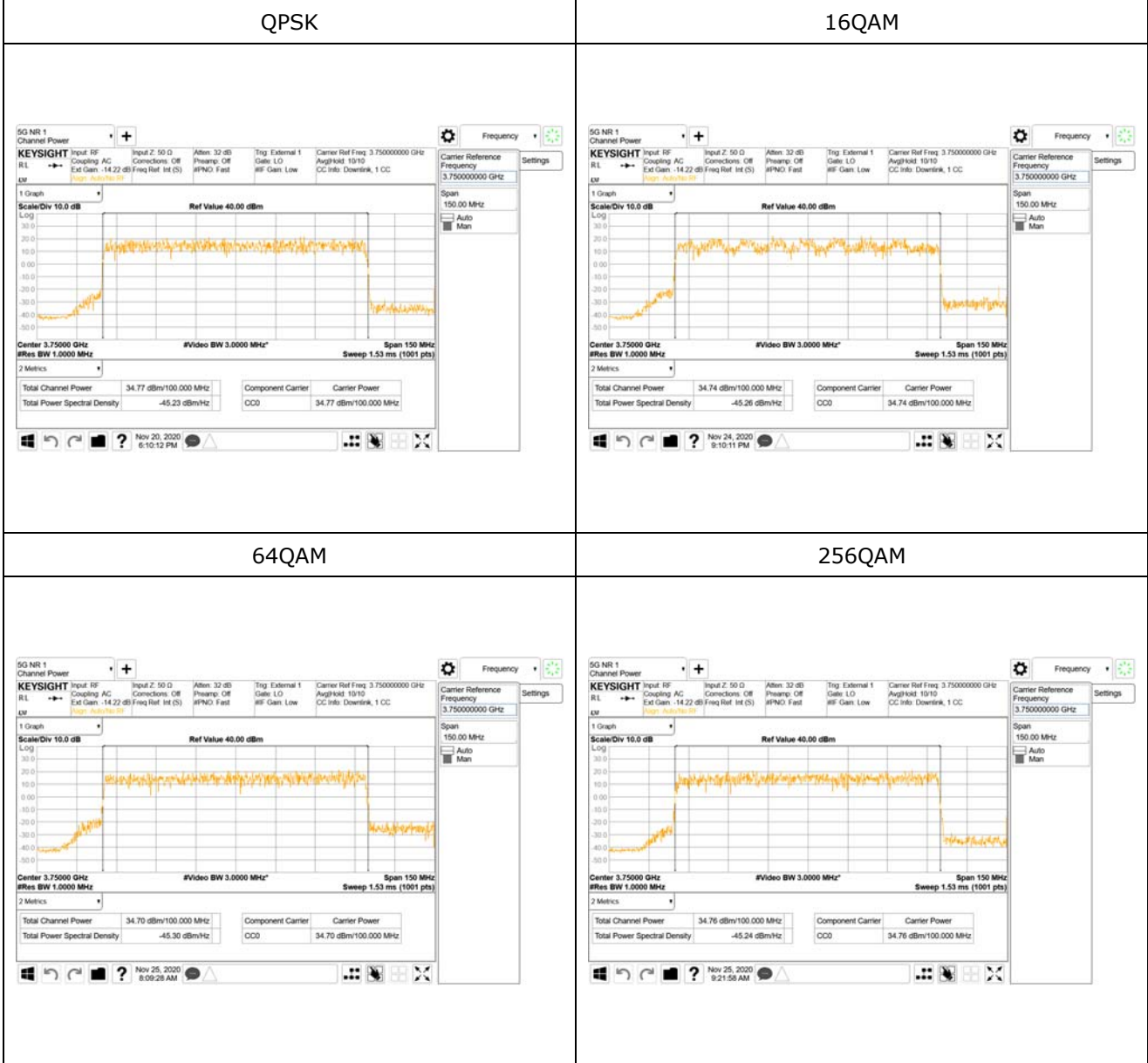
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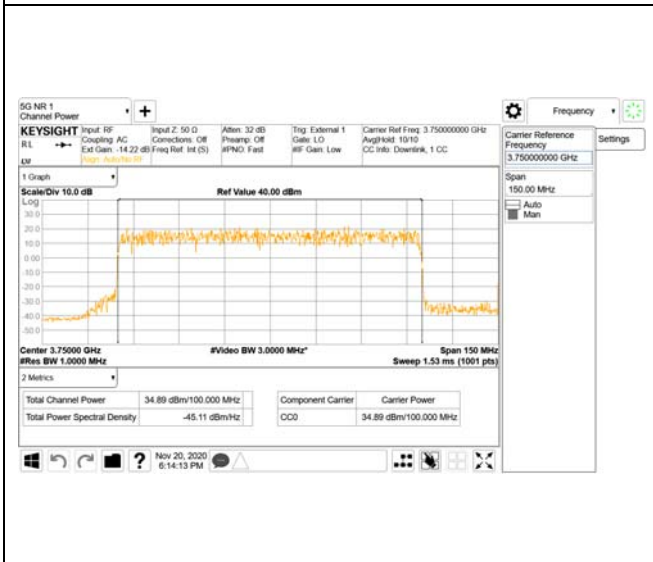


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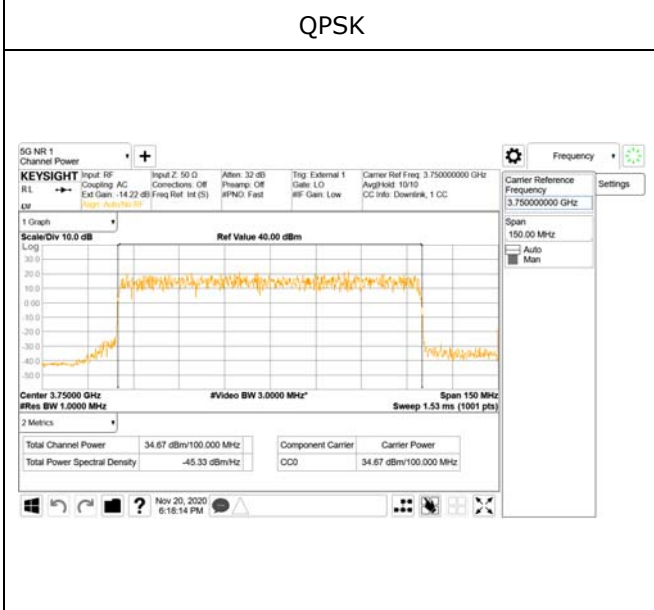


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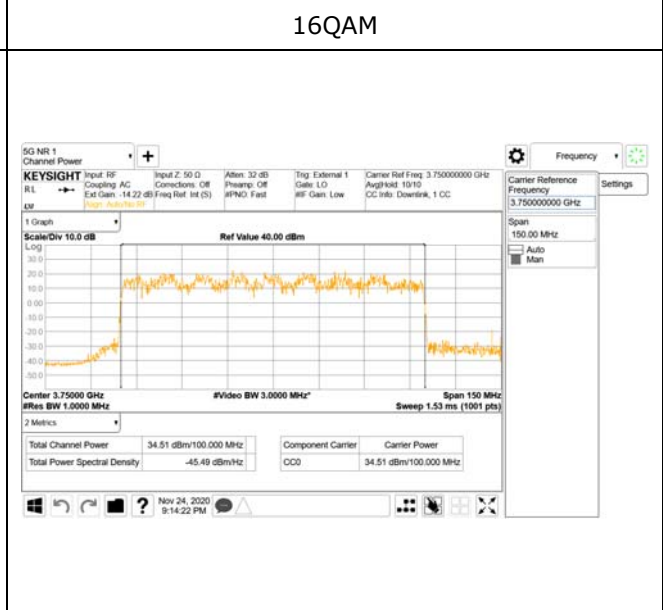
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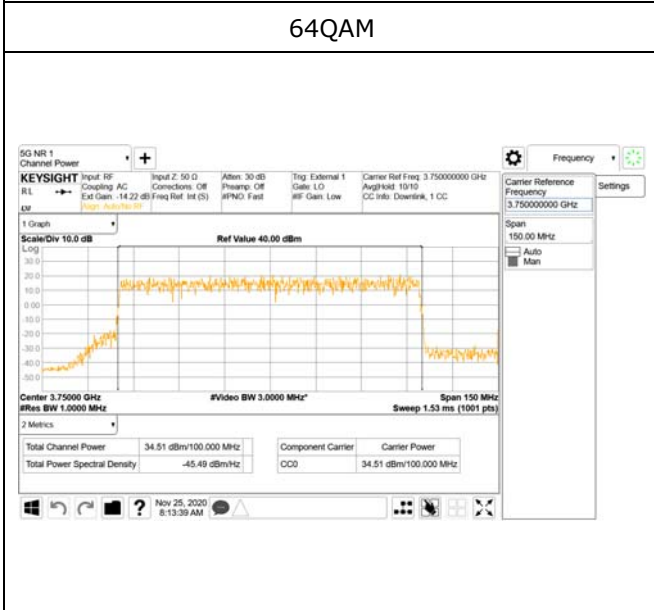
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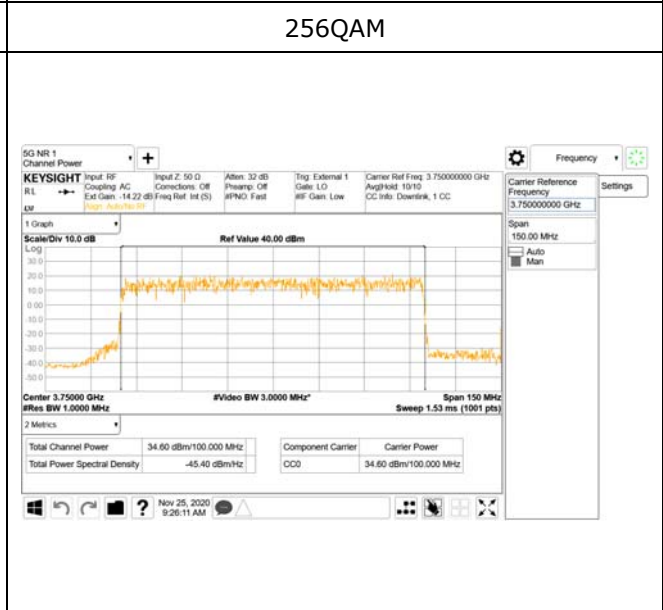
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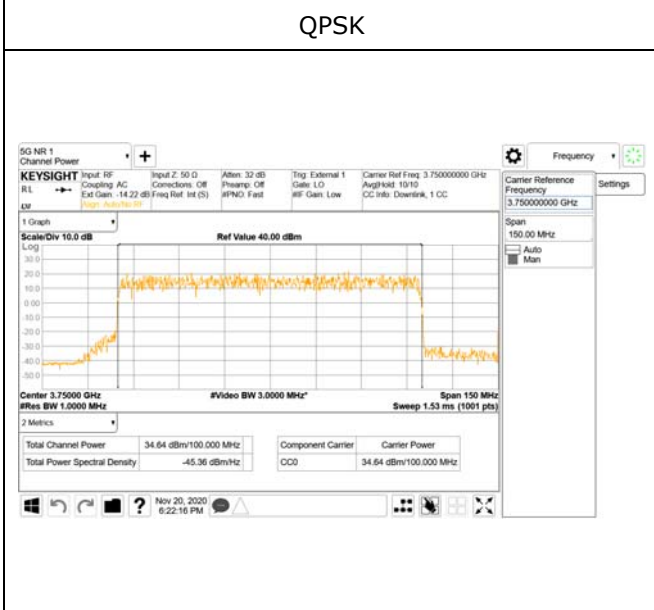


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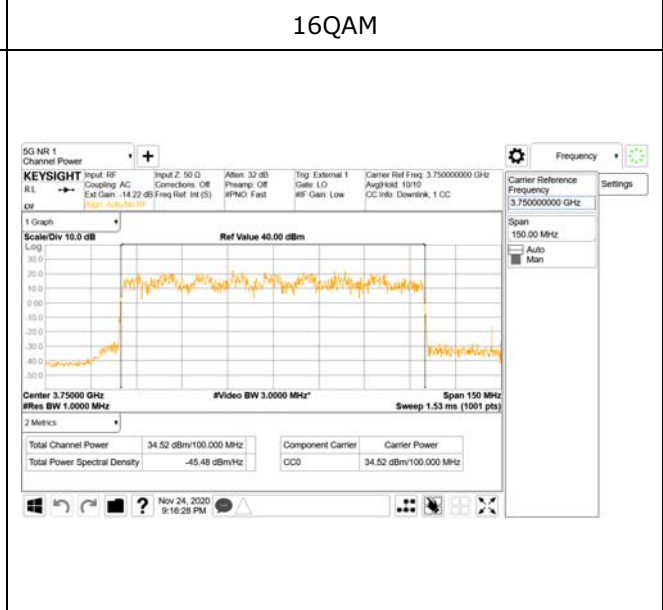
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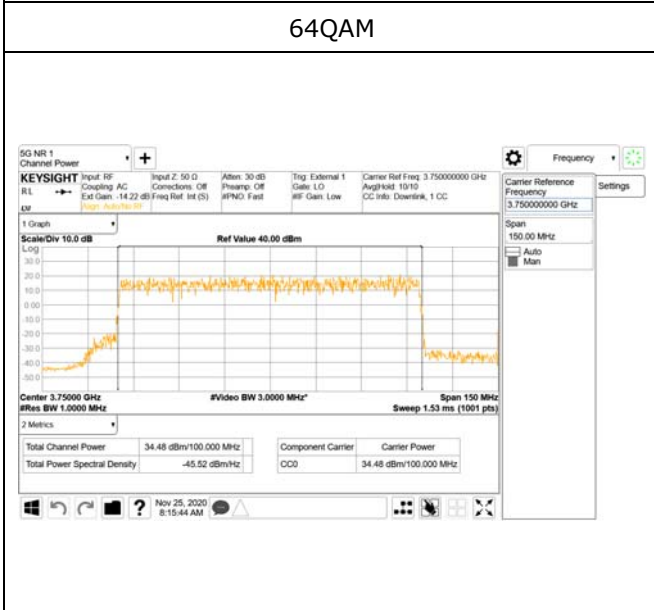
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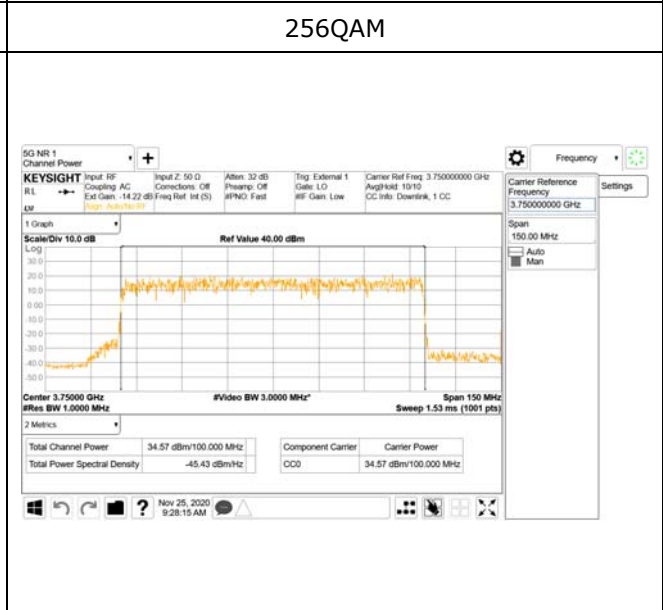
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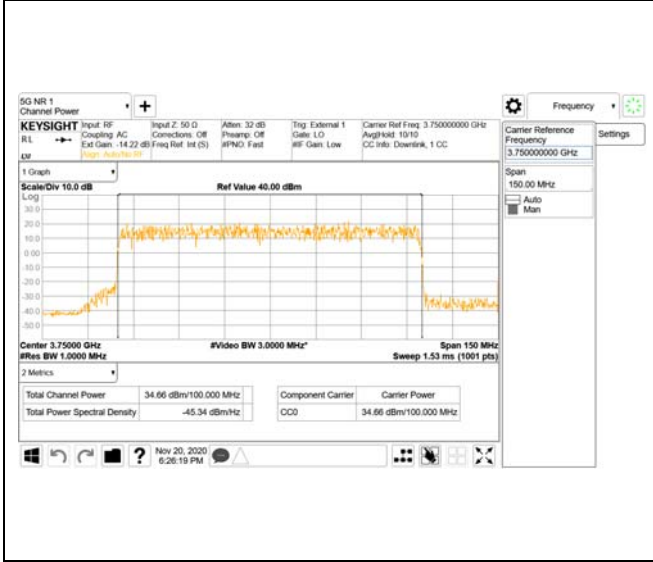


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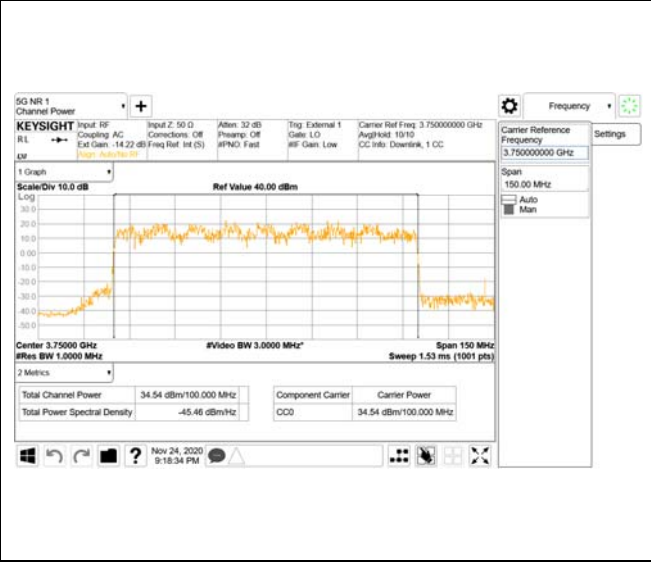
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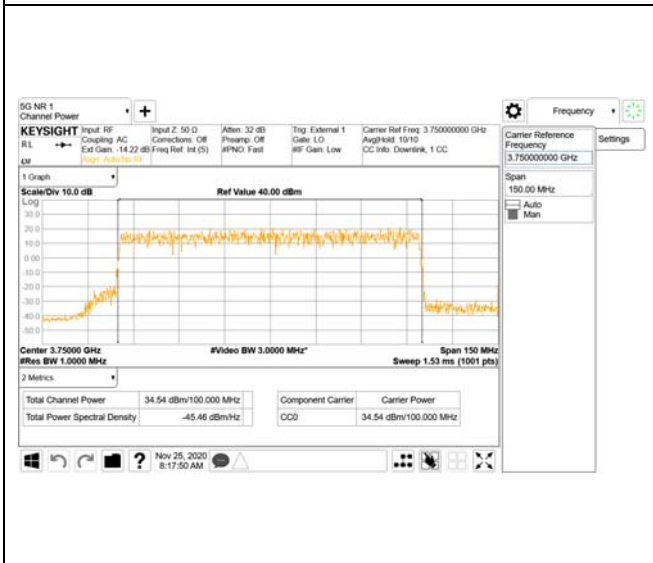
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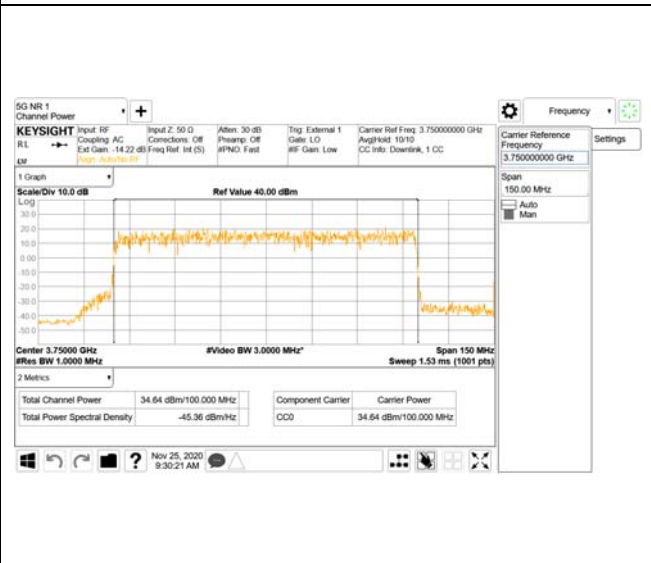
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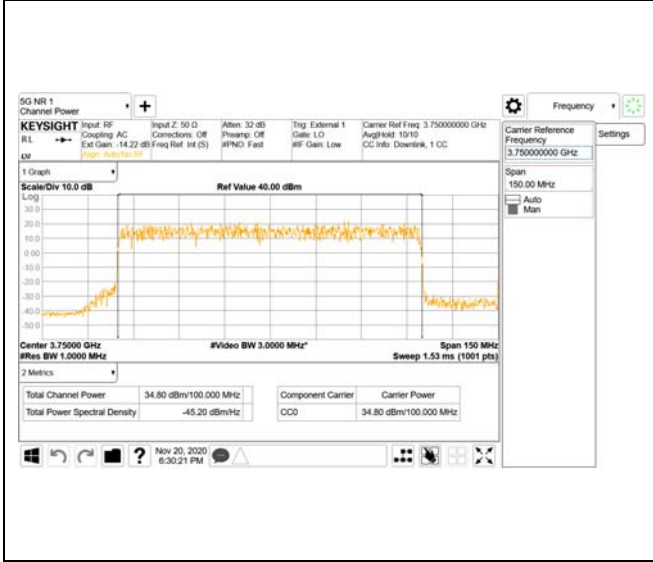


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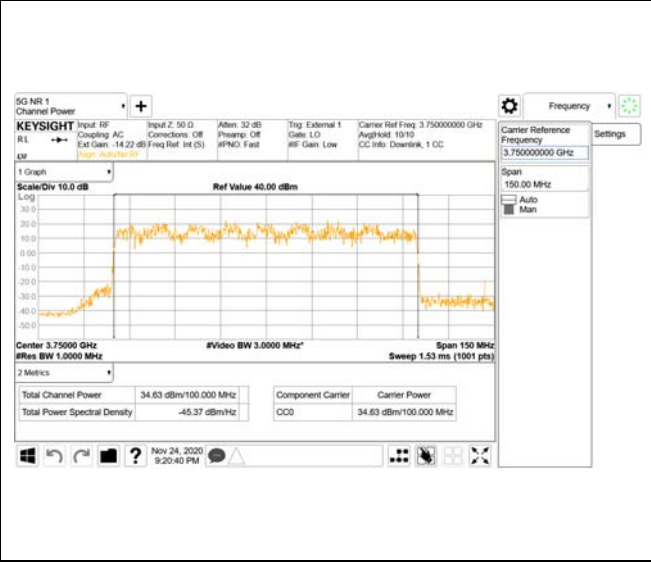
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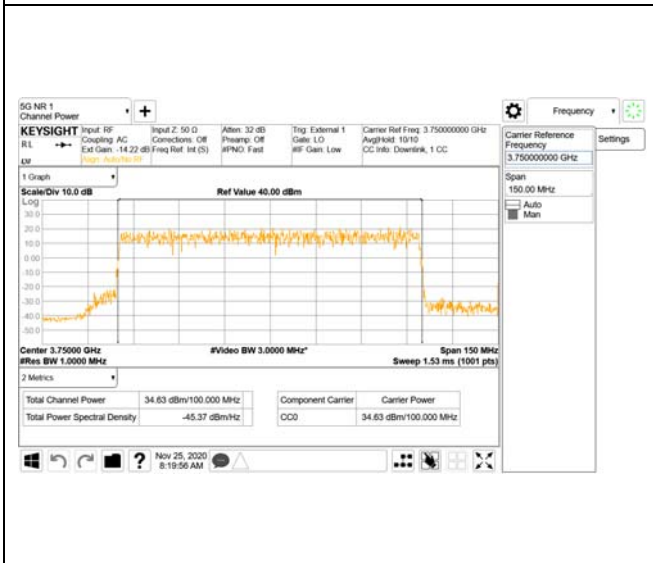
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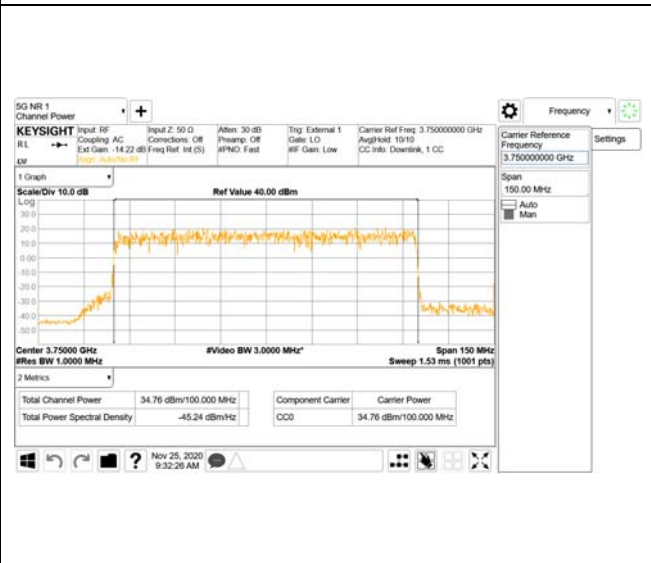
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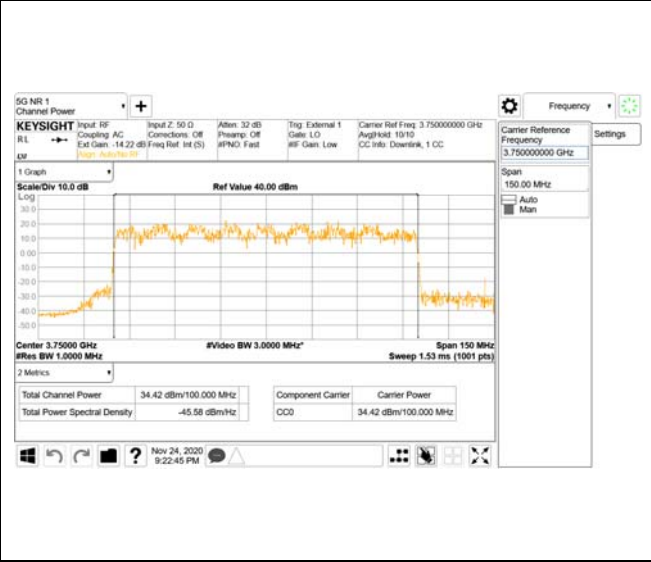
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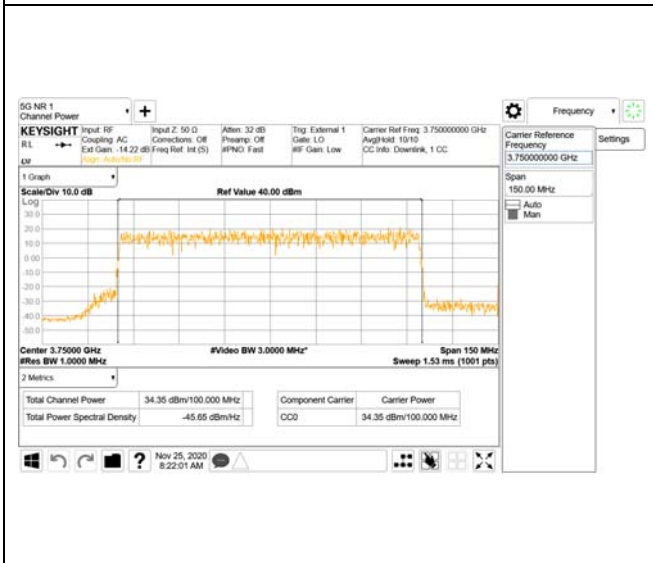
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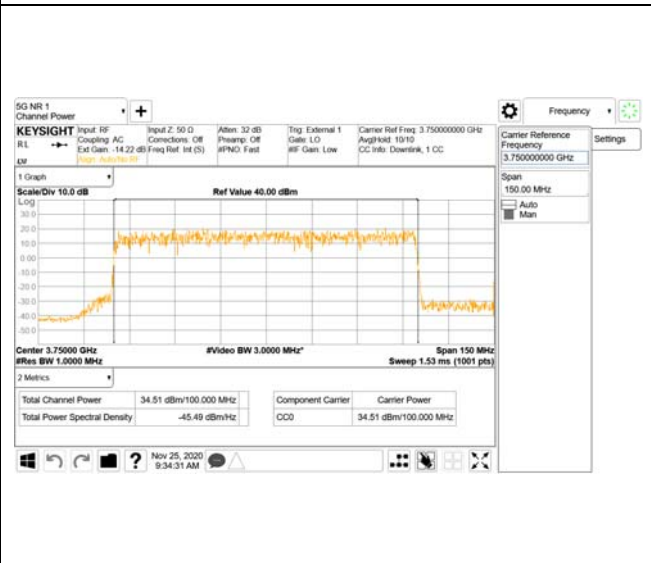
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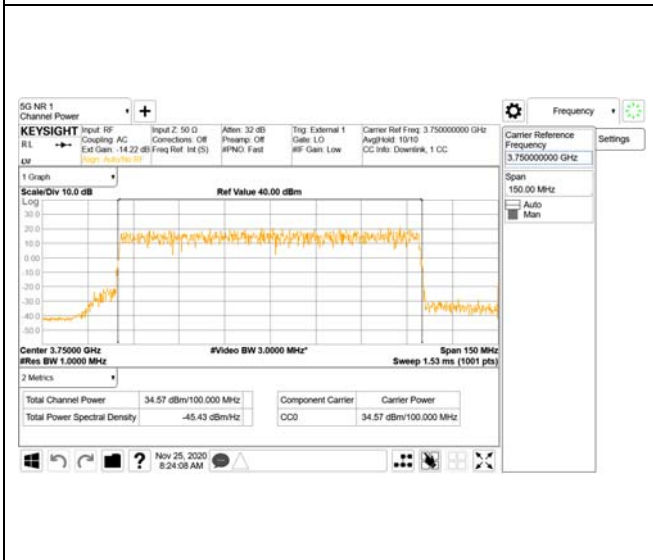
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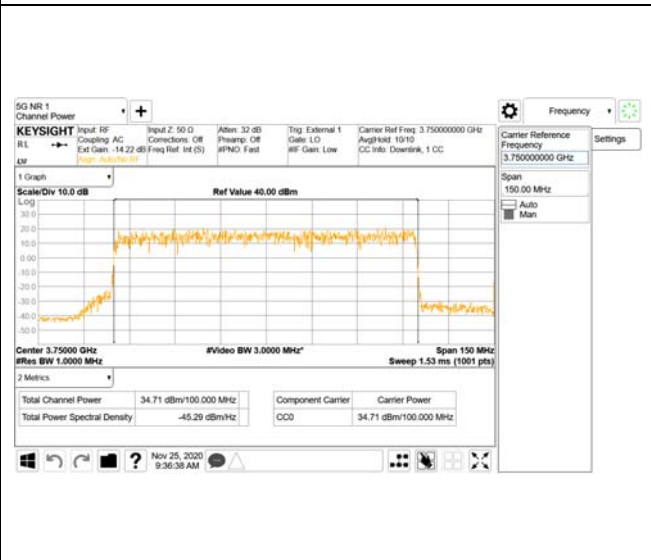
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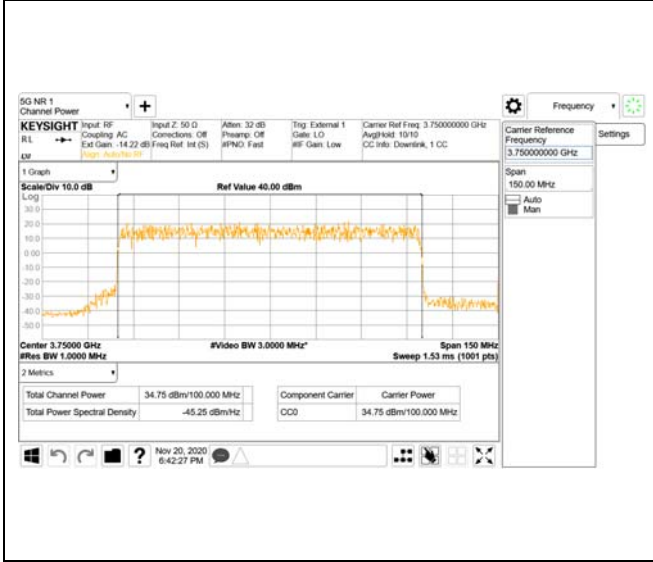


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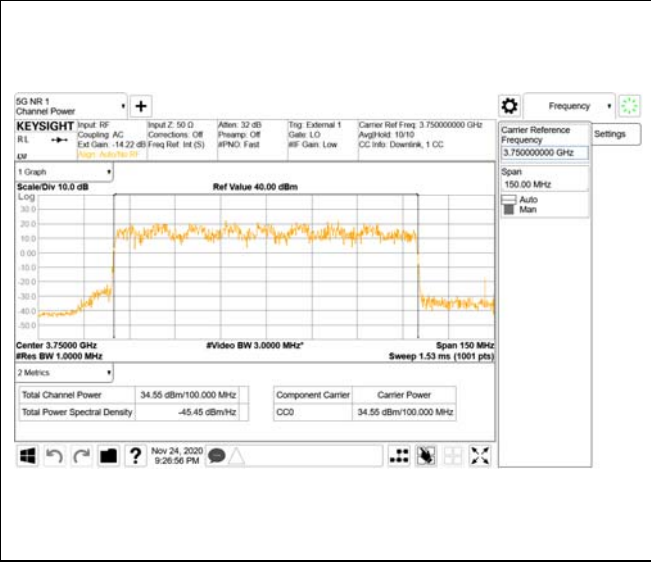
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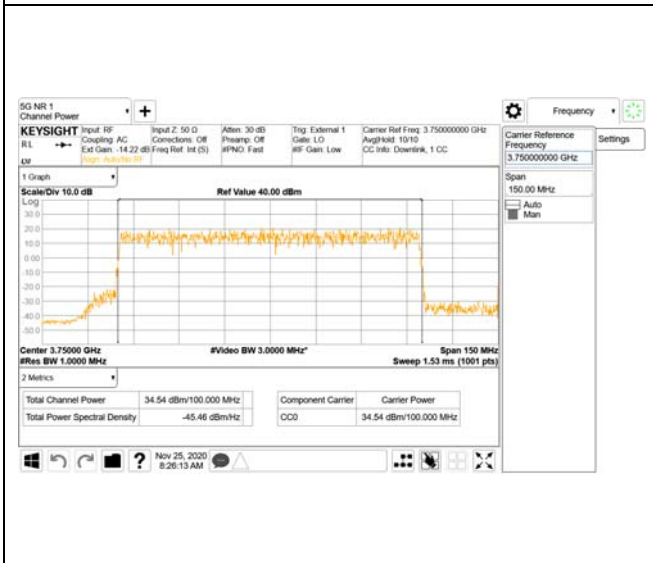
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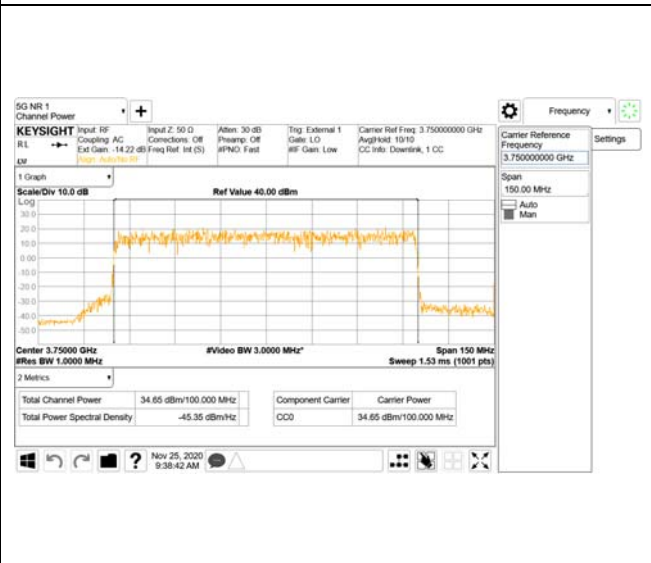
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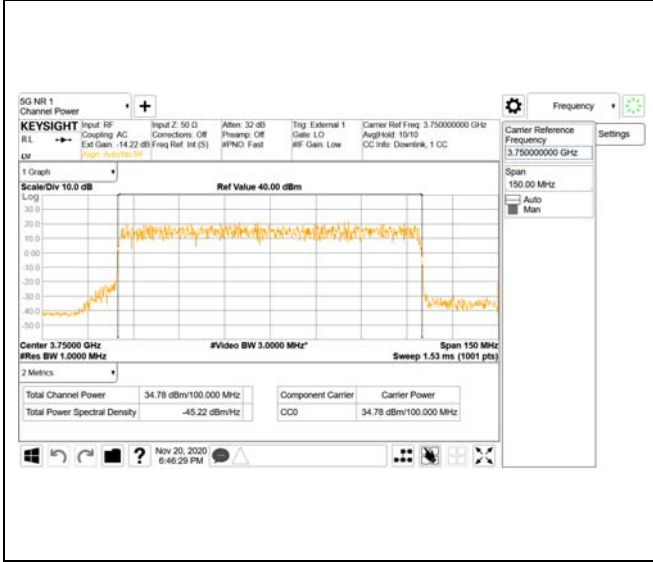


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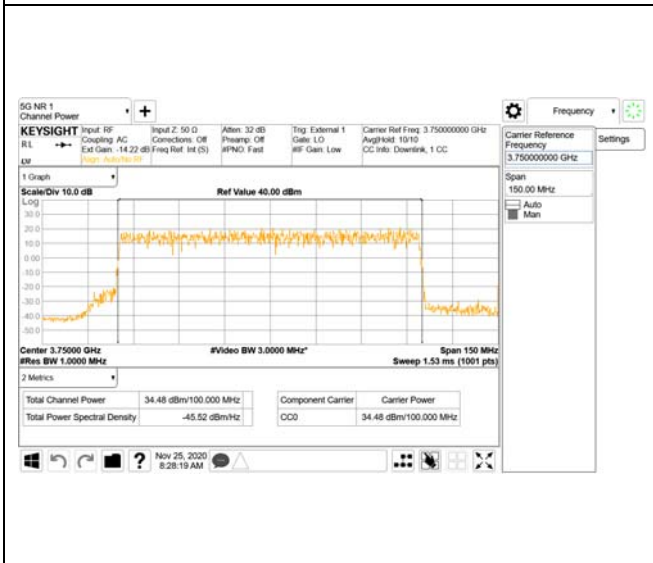
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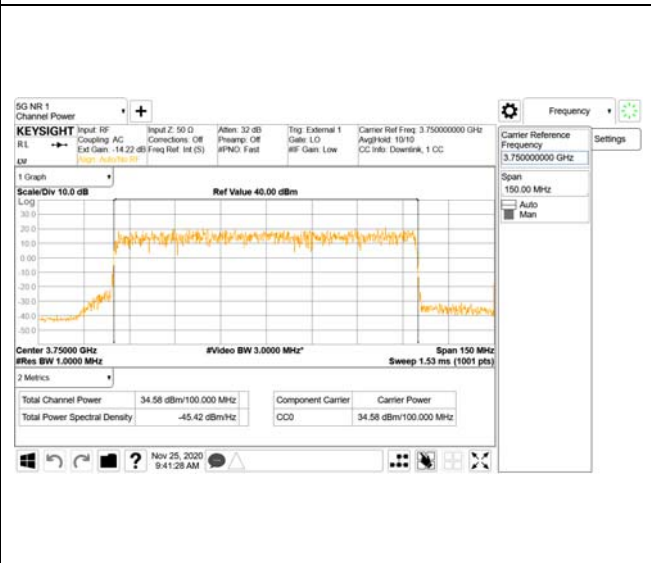
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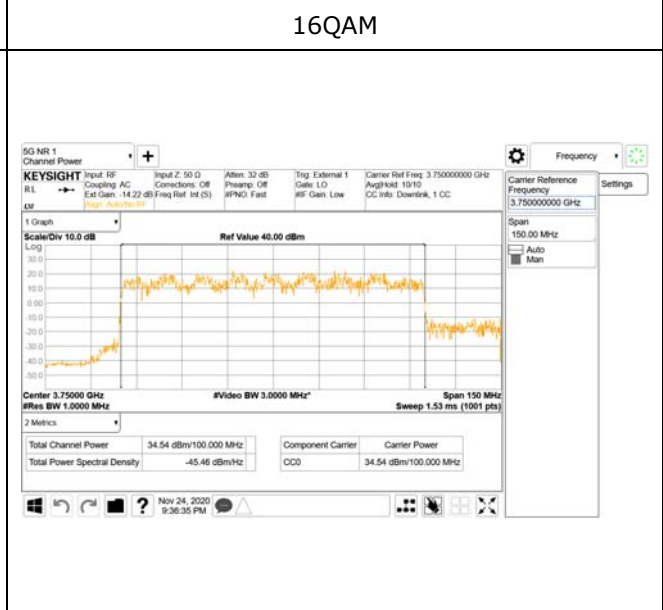
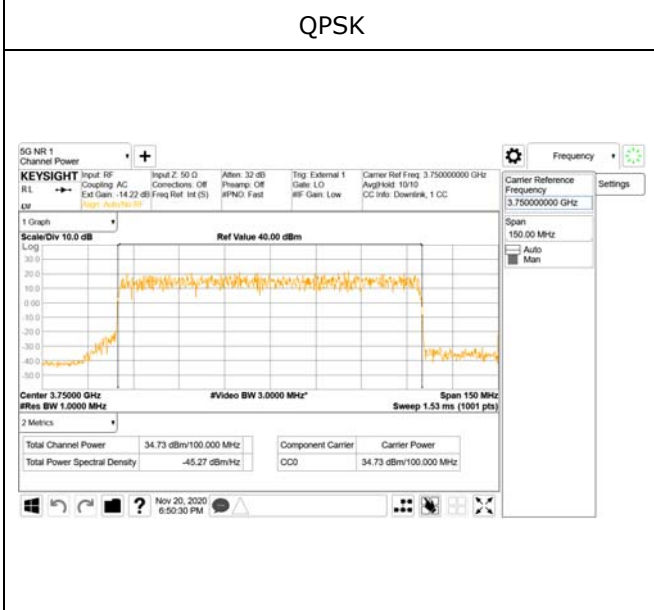
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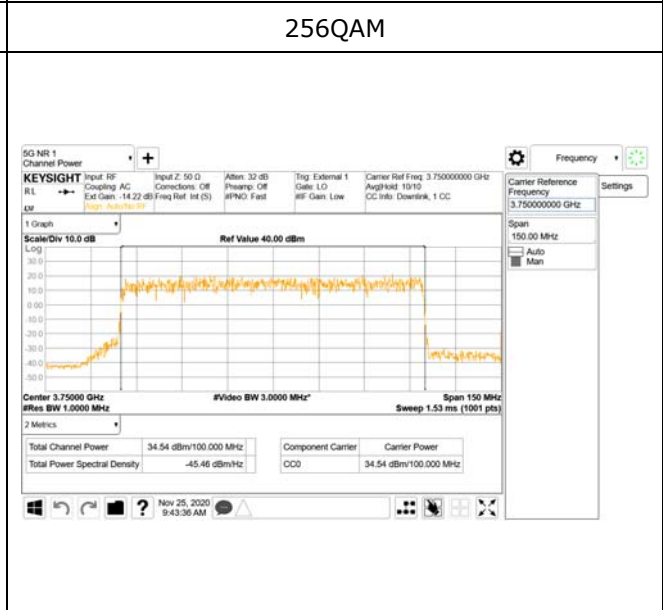
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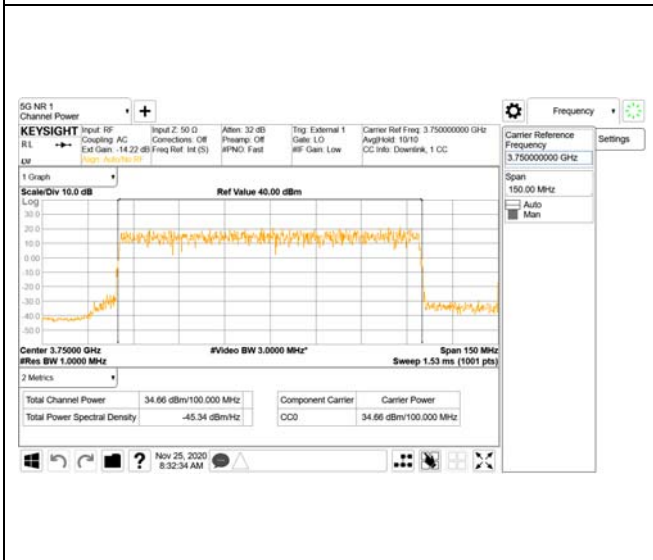
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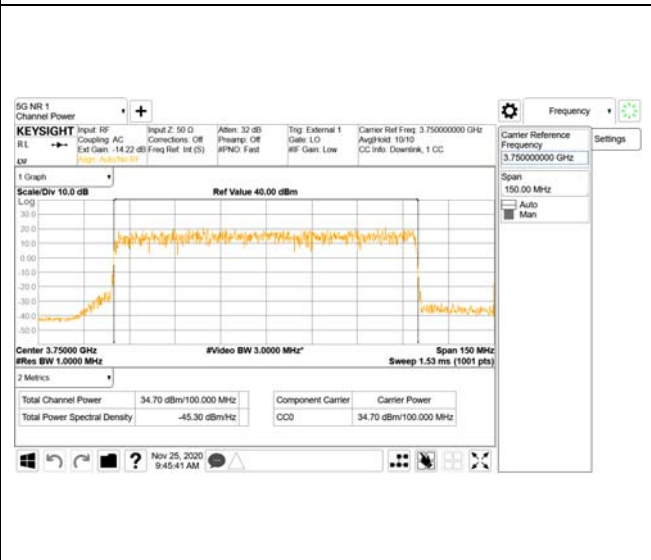
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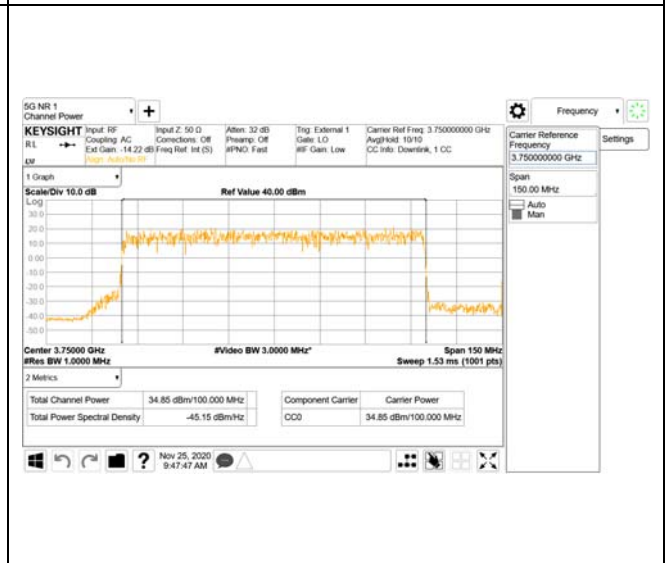
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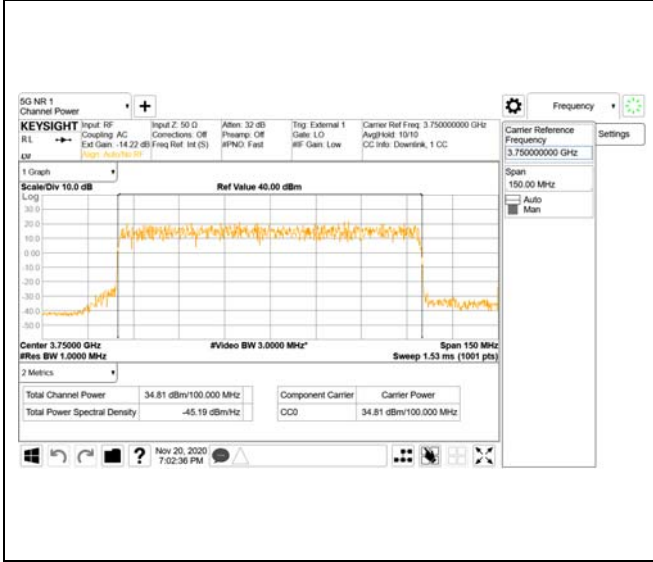


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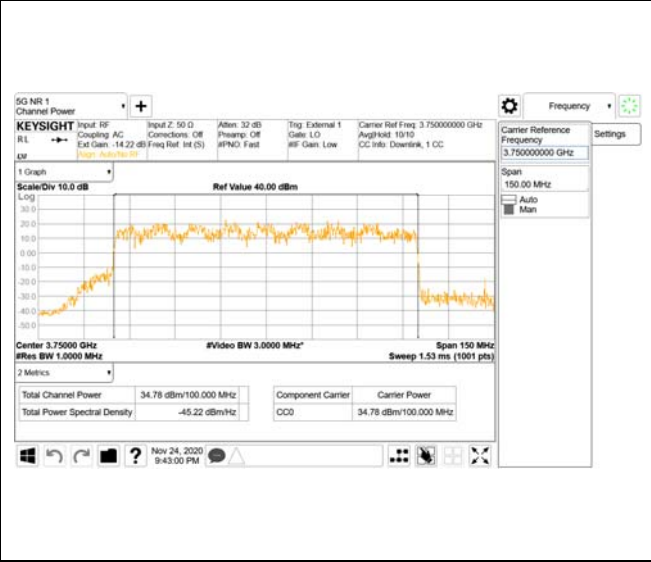
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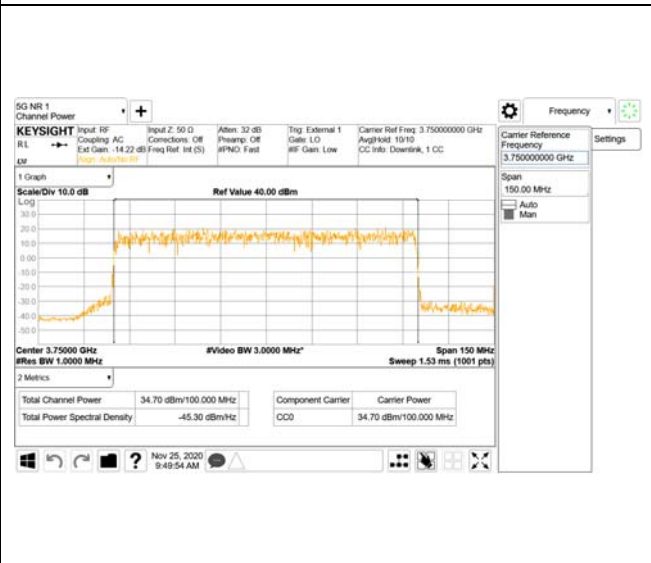
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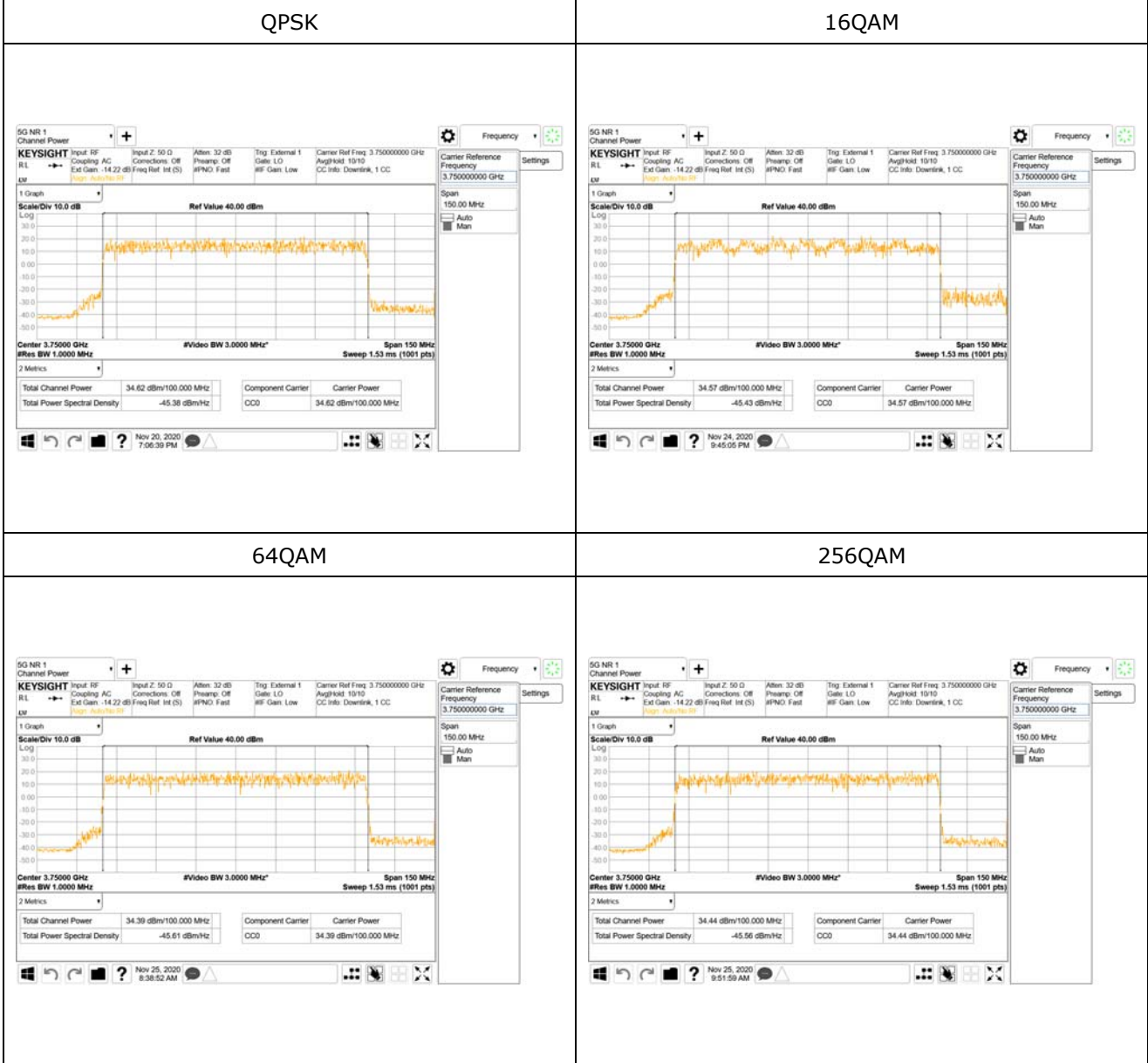
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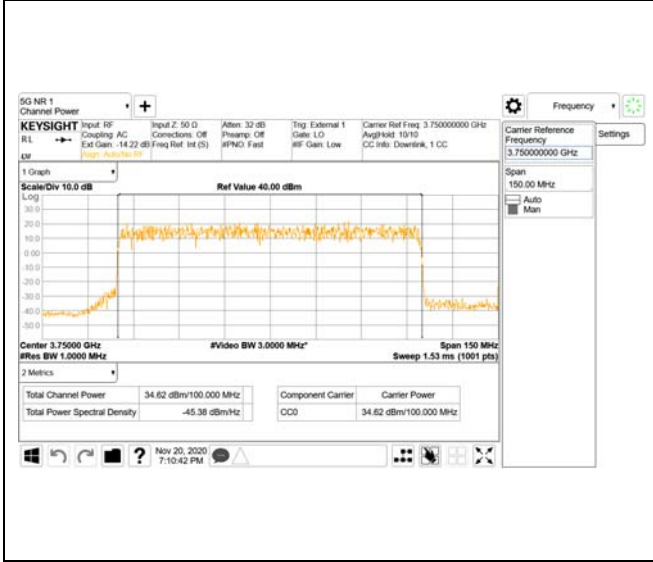


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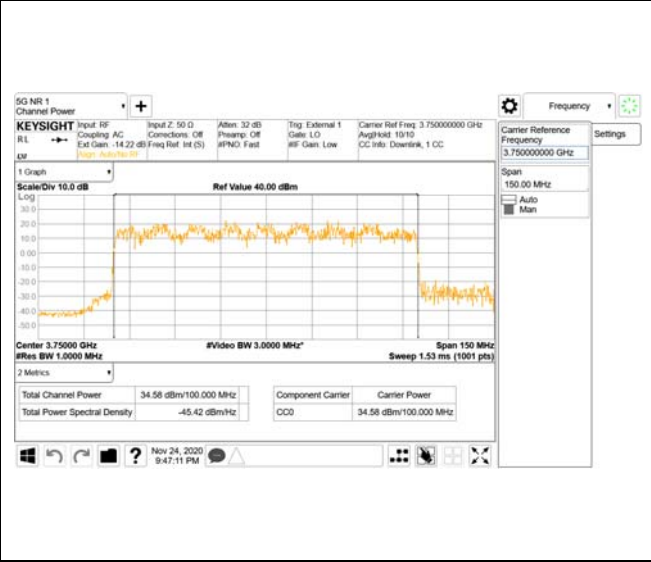
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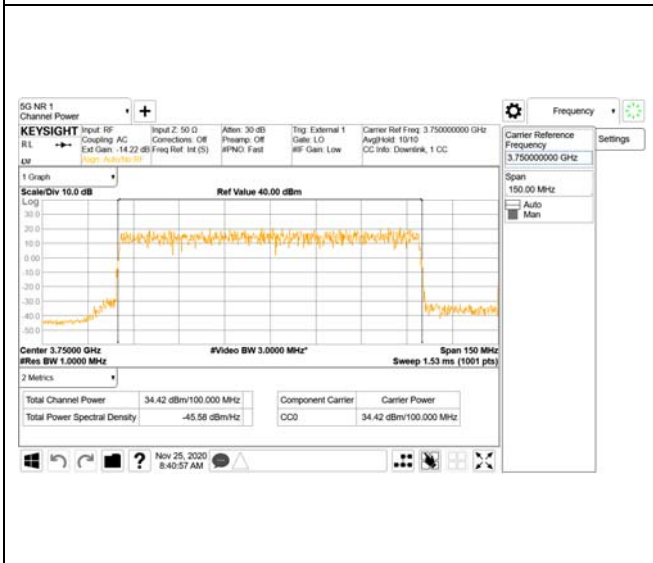
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