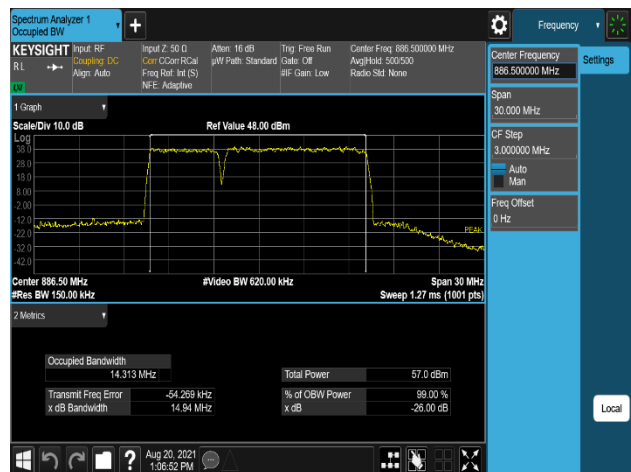
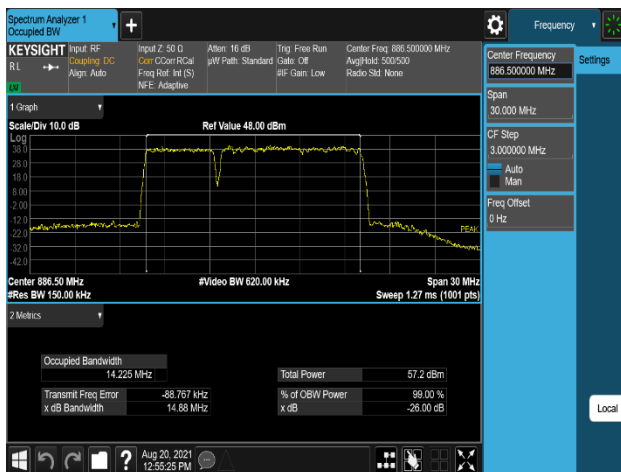
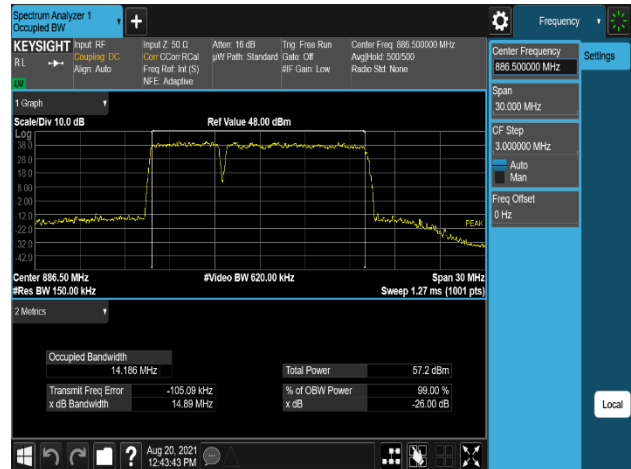
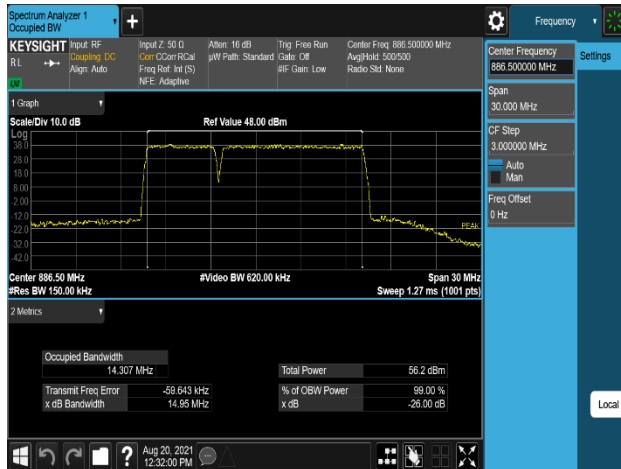
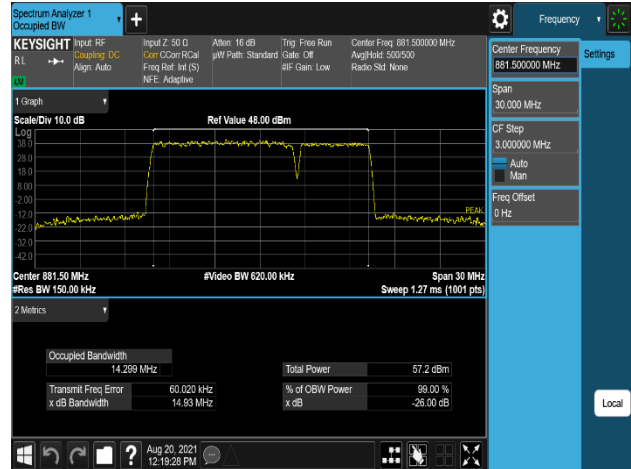
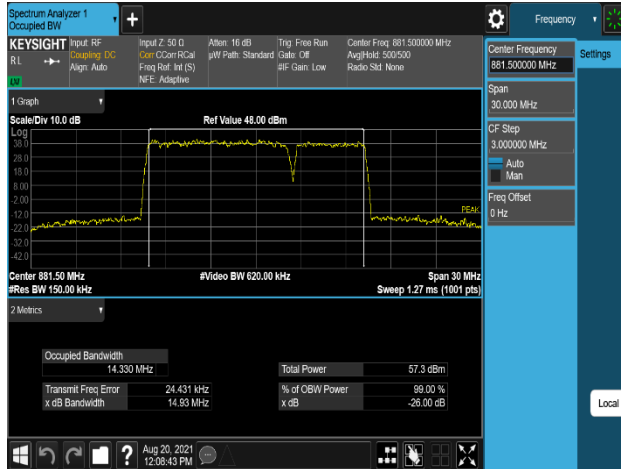
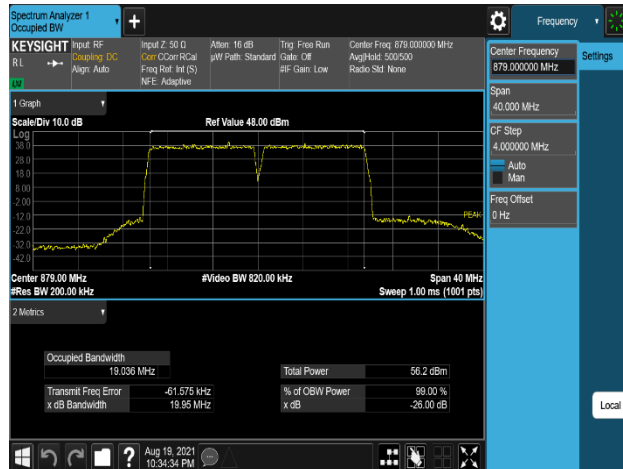
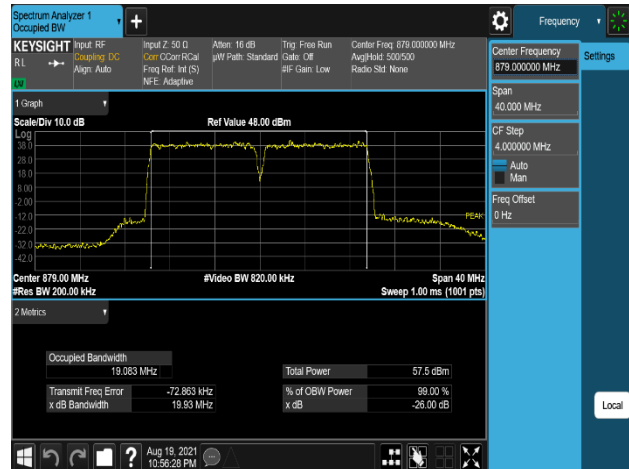




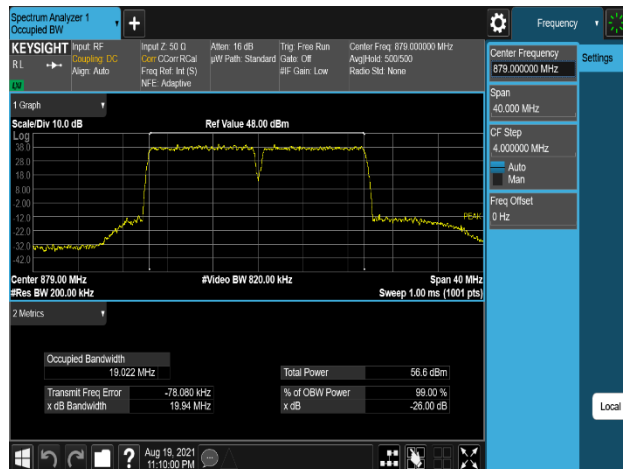
FCC ID: A3LRF4440D-13A	PCTEST ENGINEERING LABORATORY, INC.	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Technical Manager
Test Report S/N: 8K21070501R2-R1	Test Dates: 07/09/2021 - 08/25/2021	EUT Type: RRU (RF4440d)		Page 69 of 367



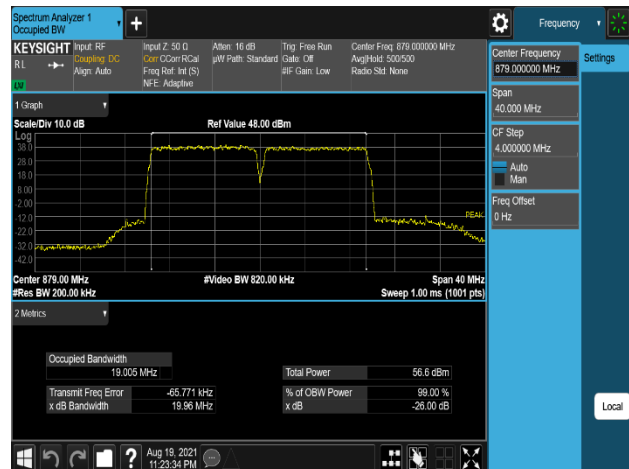
Plot 7-215. Occupied Bandwidth Plot
(B5_10M(DSS)+10M_2C_QPSK - Low Channel, Port 1)



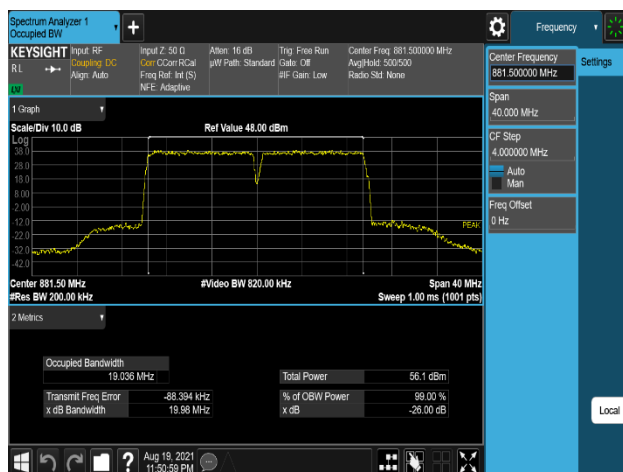
Plot 7-216. Occupied Bandwidth Plot
(B5_10M(DSS)+10M_2C_16QAM - Low Channel, Port 0)



Plot 7-217. Occupied Bandwidth Plot
(B5_10M(DSS)+10M_2C_64QAM - Low Channel, Port 0)



Plot 7-218. Occupied Bandwidth Plot
(B5_10M(DSS)+10M_2C_256QAM - Low Channel, Port 0)

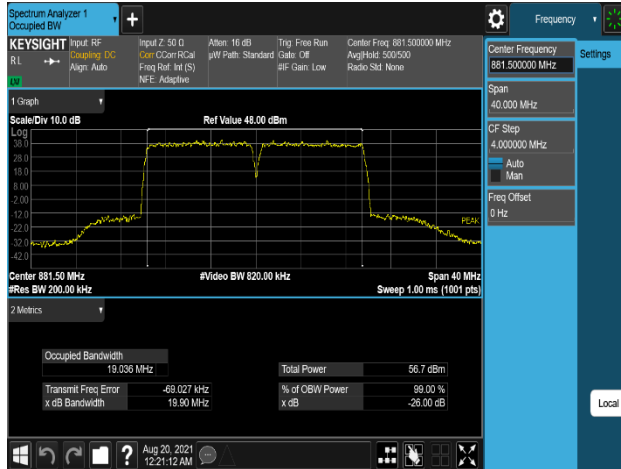


Plot 7-219. Occupied Bandwidth Plot
(B5_10M(DSS)+10M_2C_QPSK - Mid Channel, Port 0)

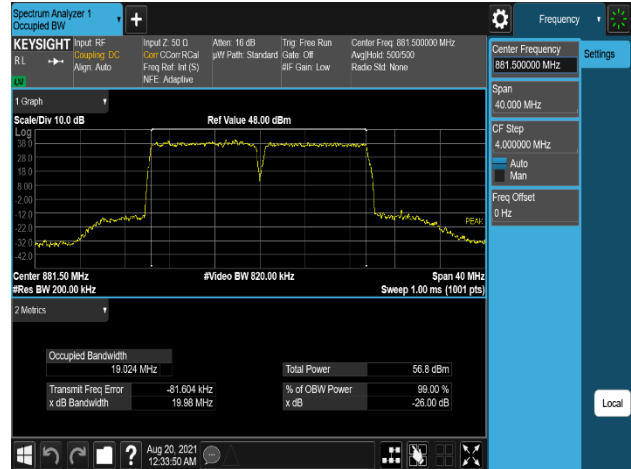


Plot 7-220. Occupied Bandwidth Plot
(B5_10M(DSS)+10M_2C_16QAM - Mid Channel, Port 1)

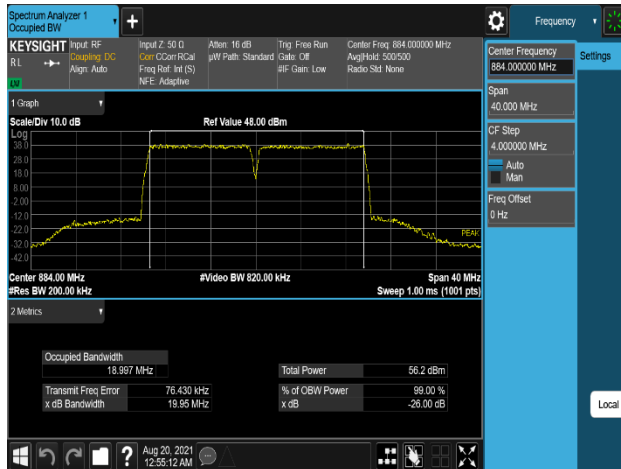
FCC ID: A3LRF4440D-13A	PCTEST ENGINEERING LABORATORY, INC.	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Technical Manager
Test Report S/N: 8K21070501R2-R1	Test Dates: 07/09/2021 - 08/25/2021	EUT Type: RRU (RF4440d)		Page 70 of 367



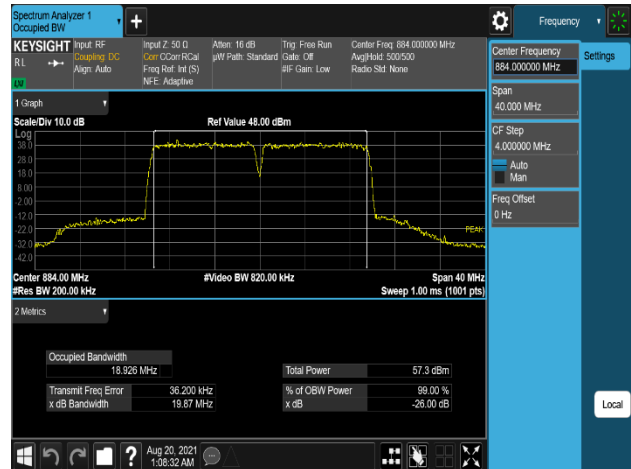
Plot 7-221. Occupied Bandwidth Plot
(B5_10M(DSS)+10M_2C_64QAM - Mid Channel, Port 0)



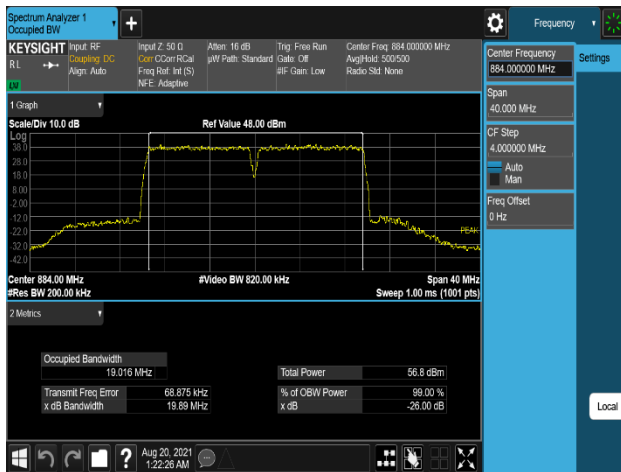
Plot 7-222. Occupied Bandwidth Plot
(B5_10M(DSS)+10M_2C_256QAM - Mid Channel, Port 0)



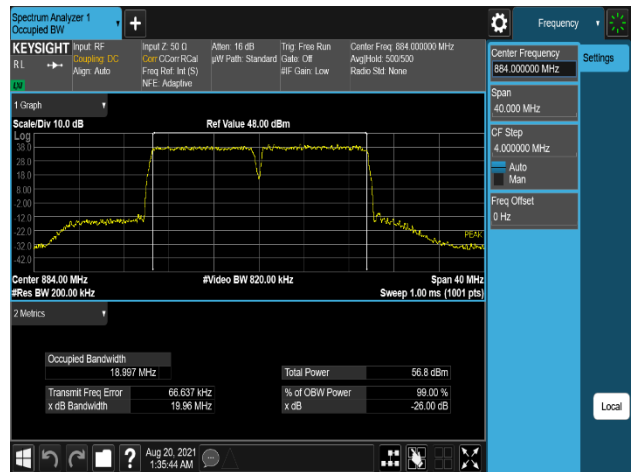
Plot 7-223. Occupied Bandwidth Plot
(B5_10M(DSS)+10M_2C_QPSK - High Channel, Port 1)



Plot 7-224. Occupied Bandwidth Plot
(B5_10M(DSS)+10M_2C_16QAM - High Channel, Port 0)



Plot 7-225. Occupied Bandwidth Plot
(B5_10M(DSS)+10M_2C_64QAM - High Channel, Port 1)

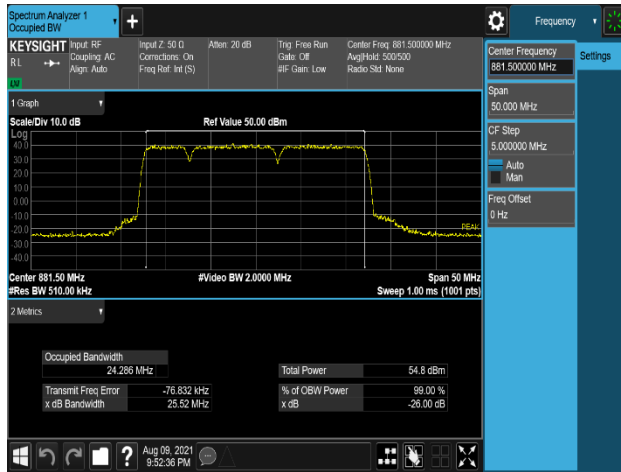


Plot 7-226. Occupied Bandwidth Plot
(B5_10M(DSS)+10M_2C_256QAM - High Channel, Port 0)

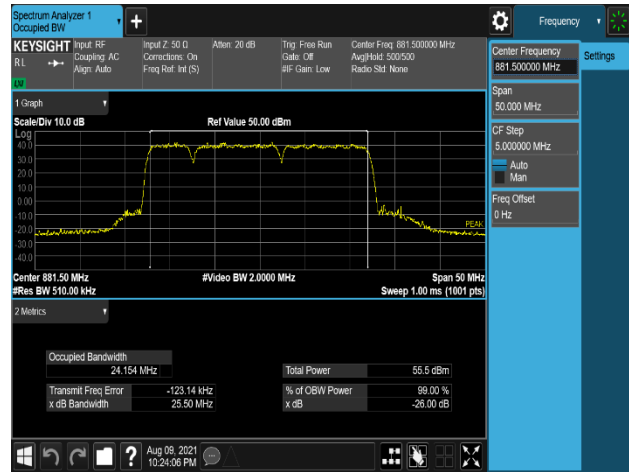
FCC ID: A3LRF4440D-13A	PCTEST ENGINEERING LABORATORY, INC.	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Technical Manager
Test Report S/N: 8K21070501R2-R1	Test Dates: 07/09/2021 - 08/25/2021	EUT Type: RRU (RF4440d)		Page 71 of 367

DSS Ratio	Channel	Port	OBW (MHz)			
			QPSK	16QAM	64QAM	256QAM
LTE 5 : NR 5	Low	0	24.29	24.11	24.34	24.23
		1	24.27	24.13	24.32	24.25
		2	24.25	24.15	24.27	24.22
		3	24.24	24.13	24.26	24.23

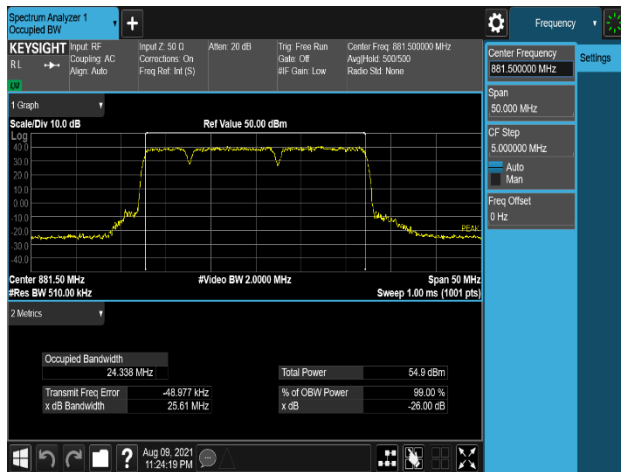
Table 7-32. Occupied Bandwidth Summary Data (B5_10M(DSS)+10M+5M_3C_4T)



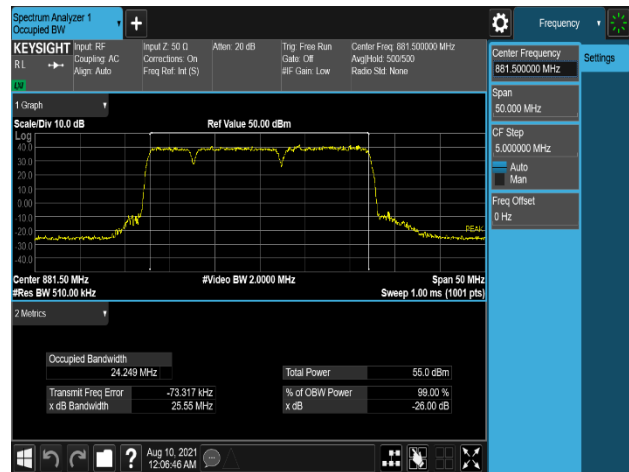
**Plot 7-227. Occupied Bandwidth Plot
(B5_10M(DSS)+10M+5M_3C_QPSK - Port 0)**



**Plot 7-228. Occupied Bandwidth Plot
(B5_10M(DSS)+10M+5M_3C_16QAM - Port 2)**



**Plot 7-229. Occupied Bandwidth Plot
(B5_10M(DSS)+10M+5M_3C_64QAM - Port 0)**

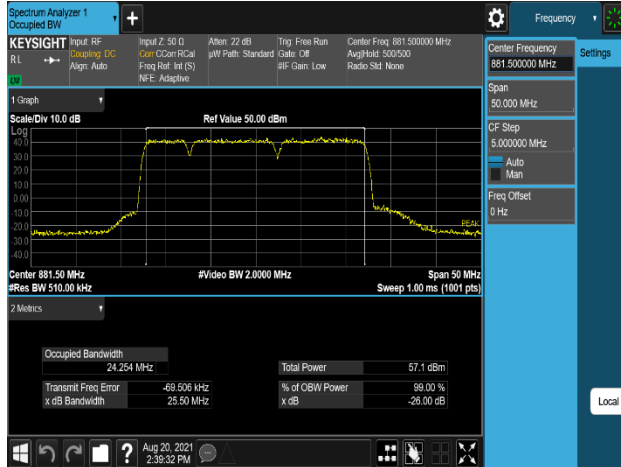


**Plot 7-230. Occupied Bandwidth Plot
(B5_10M(DSS)+10M+5M_3C_256QAM - Port 1)**

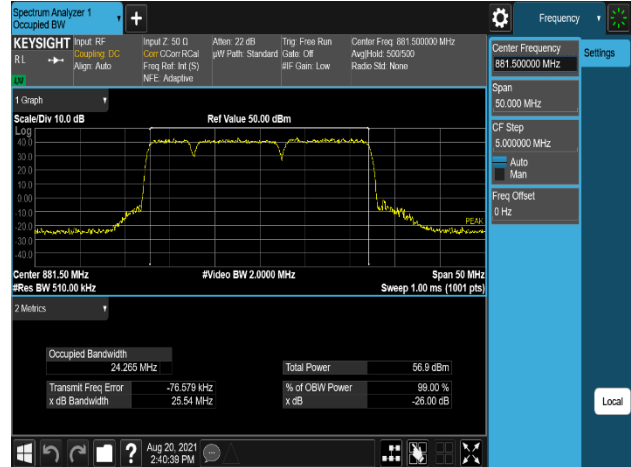
FCC ID: A3LRF4440D-13A	PCTEST ENGINEERING LABORATORY, INC.	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Technical Manager
Test Report S/N: 8K21070501R2-R1	Test Dates: 07/09/2021 - 08/25/2021	EUT Type: RRU (RF4440d)		Page 72 of 367

DSS Ratio	Channel	Port	OBW (MHz)			
			QPSK	16QAM	64QAM	256QAM
LTE 5 : NR 5	Low	0	24.23	24.27	24.25	24.23
		1	24.25	24.24	24.23	24.23

Table 7-33. Occupied Bandwidth Summary Data (B5_10M(DSS)+10M+5M_3C_2T)



sPlot 7-231. Occupied Bandwidth Plot (B5_10M(DSS)+10M+5M_3C_QPSK - Port 1)



Plot 7-232. Occupied Bandwidth Plot (B5_10M(DSS)+10M+5M_3C_16QAM - Port 0)



Plot 7-233. Occupied Bandwidth Plot (B5_10M(DSS)+10M+5M_3C_64QAM - Port 0)



Plot 7-234. Occupied Bandwidth Plot (B5_10M(DSS)+10M+5M_3C_256QAM - Port 1)

FCC ID: A3LRF4440D-13A	PCTEST ENGINEERING LABORATORY, INC.	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Technical Manager
Test Report S/N: 8K21070501R2-R1	Test Dates: 07/09/2021 - 08/25/2021	EUT Type: RRU (RF4440d)		Page 73 of 367

7.3 Conducted Average Output Power

\$2.1046

Test Overview

A transmitter port of EUT is connected to the input of a signal analyzer. All measurements are performed as RMS average measurements while the EUT is operating at its maximum duty cycle, at maximum power, and at the appropriate frequencies.

Test Procedure Used

KDB 971168 D01 v03r01 – Section 5

KDB 662911 D01 v02r01 – Section E)1) In-Band Power Measurements

ANSI C63.26-2015 – Section 5.2.4.4.1

Test Setting

The measurement was made using a direct connection between the RF output of the EUT and the spectrum analyzer. The spectrum analyzer settings were as follows:

1. Conducted average output power measurements are performed using the signal analyzer's "channel power mode" measurement capability for signals with continuous operation.
2. Set span to $2 \times$ to $3 \times$ the OBW.
3. Set RBW = $1 - 5\%$ of the expected OBW
4. Set VBW $\geq 3 \times$ RBW.
5. Set number of measurement points in sweep $\geq 2 \times$ span / RBW.
6. Sweep time: auto-couple
7. Detector = power averaging (rms).
8. Set sweep trigger to "free run."
9. The integration bandwidth was set equal to transmission bandwidth i.e. 20MHz for 1CC and 40MHz for 2CC measurements.
10. Trace average at least 100 traces in power averaging (rms) mode if sweep is set to auto-couple. To accurately determine the average power over the on and off time of the transmitter, it can be necessary to increase the number of traces to be averaged above 100, or if using a manually configured sweep time, increase the sweep time.
11. Compute the power by integrating the spectrum across the OBW of the signal using the instrument's band or channel power measurement function, with the band/channel limits set equal to the OBW band edges.

FCC ID: A3LRF4440D-13A		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Technical Manager
Test Report S/N: 8K21070501R2-R1	Test Dates: 07/09/2021 - 08/25/2021	EUT Type: RRU (RF4440d)		Page 74 of 367

Test Setup

The EUT and measurement equipment were set up as shown in the diagram below.

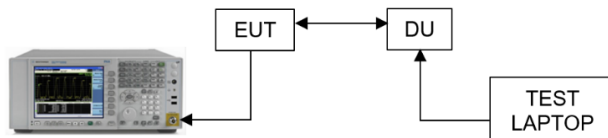


Figure 7-2. Test Instrument & Measurement Setup

Limit

N/A

Test Notes

1. The port with highest power i.e. worst case port per modulation has been highlighted in the following power tables.
2. Consider the following factors for MIMO Output Power:
 - a) Conducted power for each port is measured in dBm.
 - b) Powers are summed up in linear using the measure-and-sum technique defined in KDB 971168 D01 v03r01-Section D.
 - c) Conducted power per port (dBm) is converted to a linear value (mW). A summation of linear powers for all ports gives us the total MIMO conducted power in milliWatts (mW). We convert this back to logarithmic scale (dBm).
3. MIMO calculations are done considering output channel power for all ports and respective are calculated.
4. Consider the following factors for MIMO Output Power:
 - d) Conducted power for each port is measured in dBm.
 - e) Powers are summed up in linear using the measure-and-sum technique defined in KDB 662911 D01 v02r01-Section D.
 - f) Conducted power per port (dBm) is converted to a linear value (mW). A summation of linear powers for all ports gives us the total MIMO conducted power in milliWatts (mW). We convert this back to logarithmic scale (dBm).
5. Antenna Gains (dBi) are provided by the client.
6. Sample MIMO Calculation:

Let us assume the following numbers:

Factors	Value	Unit
Total MIMO Conducted Power (linear sum)	86802.57	mW
Total MIMO Conducted Power (dBm) = $10 * \log (86802.57) =$	49.39	dBm

FCC ID: A3LRF4440D-13A	PCTEST ENGINEERING LABORATORY, INC.	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Technical Manager
Test Report S/N: 8K21070501R2-R1	Test Dates: 07/09/2021 - 08/25/2021	EUT Type: RRU (RF4440d)		Page 75 of 367

Low Channel	Port	QPSK	16QAM	64QAM	256QAM
Conducted Average Power (dBm)	0	46.36	46.34	46.33	46.31
	1	46.39	46.35	46.32	46.35
Total MIMO Conducted Power (mW)		86802.57	86204.57	85808.49	85908.20
Total MIMO Conducted Power (dBm)		49.39	49.36	49.34	49.34

Table 7-34. Conducted Average Output Power Table (B5_5M_1C_2T - Low Channel)

Middle Channel	Port	QPSK	16QAM	64QAM	256QAM
Conducted Average Power (dBm)	0	46.34	46.32	46.35	46.35
	1	46.38	46.33	46.37	46.39
Total MIMO Conducted Power (mW)		86503.68	85808.49	86503.00	86703.10
Total MIMO Conducted Power (dBm)		49.37	49.34	49.37	49.38

Table 7-35. Conducted Average Output Power Table (B5_5M_1C_2T - Middle Channel)

High Channel	Port	QPSK	16QAM	64QAM	256QAM
Conducted Average Power (dBm)	0	46.31	46.29	46.30	46.27
	1	46.29	46.29	46.30	46.30
Total MIMO Conducted Power (mW)		85316.13	85119.68	85315.90	85022.25
Total MIMO Conducted Power (dBm)		49.31	49.30	49.31	49.30

Table 7-36. Conducted Average Output Power Table (B5_5M_1C_2T - High Channel)

FCC ID: A3LRF4440D-13A	 MEASUREMENT REPORT (CERTIFICATION) 		Approved by: Technical Manager
Test Report S/N: 8K21070501R2-R1	Test Dates: 07/09/2021 - 08/25/2021	EUT Type: RRU (RF4440d)	Page 76 of 367

Low Channel	Port	QPSK	16QAM	64QAM	256QAM
Conducted Average Power (dBm)	0	48.08	48.14	48.19	48.23
	1	48.22	48.14	48.18	48.18
Total MIMO Conducted Power (mW)		130643.08	130325.68	131683.17	132293.10
Total MIMO Conducted Power (dBm)		51.16	51.15	51.20	51.22

Table 7-37. Conducted Average Output Power Table (B5_10M_1C_2T - Low Channel)

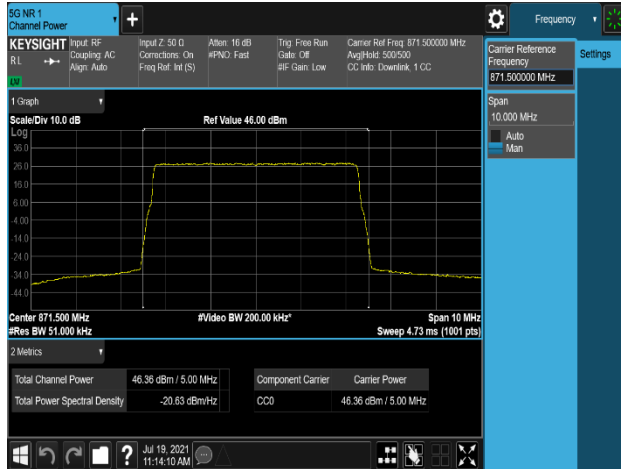
Middle Channel	Port	QPSK	16QAM	64QAM	256QAM
Conducted Average Power (dBm)	0	48.08	48.18	48.20	48.19
	1	48.17	48.08	48.17	48.15
Total MIMO Conducted Power (mW)		129883.30	130034.56	131683.87	131230.44
Total MIMO Conducted Power (dBm)		51.14	51.14	51.20	51.18

Table 7-38. Conducted Average Output Power Table (B5_10M_1C_2T - Middle Channel)

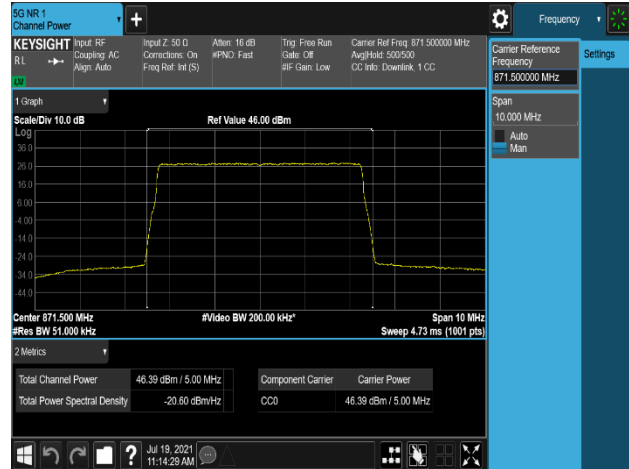
High Channel	Port	QPSK	16QAM	64QAM	256QAM
Conducted Average Power (dBm)	0	48.12	48.10	48.16	48.11
	1	48.08	48.06	48.11	48.11
Total MIMO Conducted Power (mW)		129132.22	128538.91	130177.88	129428.52
Total MIMO Conducted Power (dBm)		51.11	51.09	51.15	51.12

Table 7-39. Conducted Average Output Power Table (B5_10M_1C_2T - High Channel)

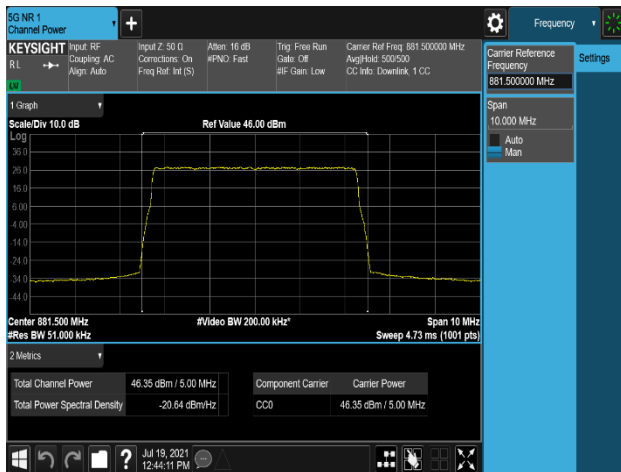
FCC ID: A3LRF4440D-13A	 MEASUREMENT REPORT (CERTIFICATION) 		Approved by: Technical Manager
Test Report S/N: 8K21070501R2-R1	Test Dates: 07/09/2021 - 08/25/2021	EUT Type: RRU (RF4440d)	Page 77 of 367



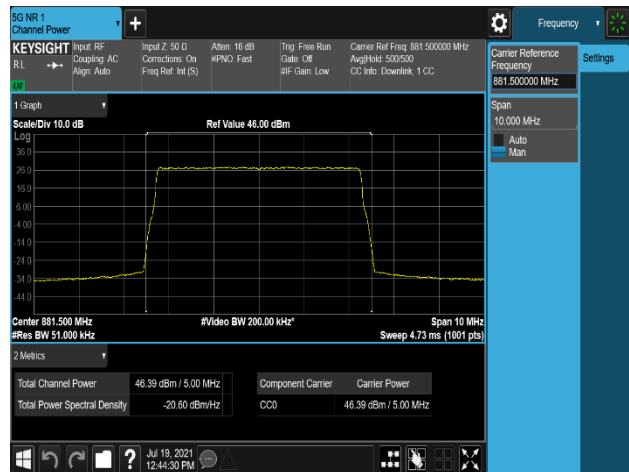
Plot 7-235. Conducted Average Output Power Plot
(B5_5M_1C_QPSK - Low Channel, Port 0)



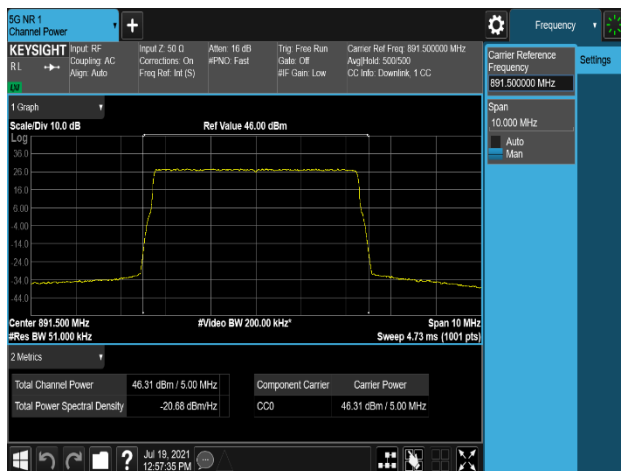
Plot 7-236. Conducted Average Output Power Plot
(B5_5M_1C_QPSK - Low Channel, Port 1)



Plot 7-237. Conducted Average Output Power Plot
(B5_5M_1C_256QAM - Mid Channel, Port 0)



Plot 7-238. Conducted Average Output Power Plot
(B5_5M_1C_256QAM - Mid Channel, Port 1)

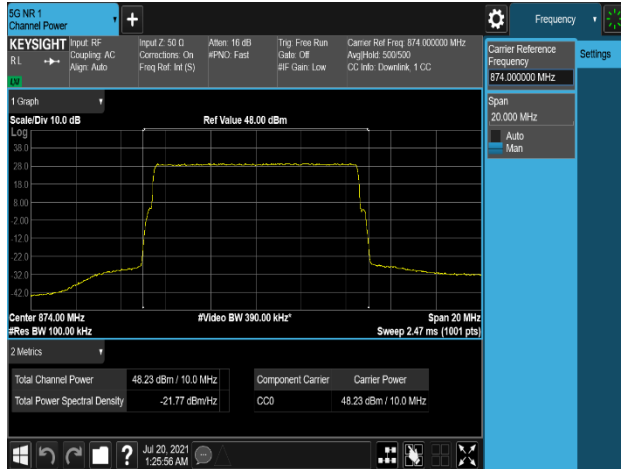


Plot 7-239. Conducted Average Output Power Plot
(B5_5M_1C_QPSK - High Channel, Port 0)

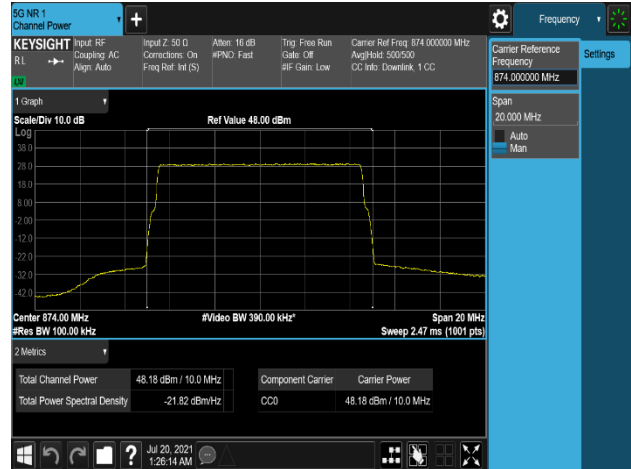


Plot 7-240. Conducted Average Output Power Plot
(B5_5M_1C_QPSK - High Channel, Port 1)

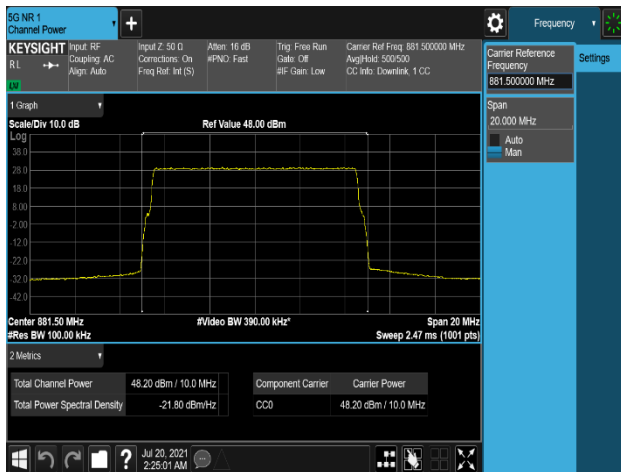
FCC ID: A3LRF4440D-13A	PCTEST ENGINEERING LABORATORY, INC.	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Technical Manager
Test Report S/N: 8K21070501R2-R1	Test Dates: 07/09/2021 - 08/25/2021	EUT Type: RRU (RF4440d)		Page 78 of 367



Plot 7-241. Conducted Average Output Power Plot
(B5_10M_1C_256QAM - Low Channel, Port 0)



Plot 7-242. Conducted Average Output Power Plot
(B5_10M_1C_256QAM - Low Channel, Port 1)



Plot 7-243. Conducted Average Output Power Plot
(B5_10M_1C_64QAM - Mid Channel, Port 0)



Plot 7-244. Conducted Average Output Power Plot
(B5_10M_1C_64QAM - Mid Channel, Port 1)



Plot 7-245. Conducted Average Output Power Plot
(B5_10M_1C_64QAM - High Channel, Port 0)



Plot 7-246. Conducted Average Output Power Plot
(B5_10M_1C_64QAM - High Channel, Port 1)

FCC ID: A3LRF4440D-13A	PCTEST ENGINEERING LABORATORY, INC.	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Technical Manager
Test Report S/N: BK21070501R2-R1	Test Dates: 07/09/2021 - 08/25/2021	EUT Type: RRU (RF4440d)		Page 79 of 367

Low Channel	Port	QPSK	16QAM	64QAM	256QAM
Conducted Average Power (dBm)	0	42.96	42.99	42.96	42.95
	1	43.00	43.00	43.00	43.03
	2	42.96	42.98	42.96	42.98
	3	42.66	42.67	42.68	42.69
Total MIMO Conducted Power (mW)		77942.17	78212.99	78027.33	78254.15
Total MIMO Conducted Power (dBm)		48.92	48.93	48.92	48.94

Table 7-40. Conducted Average Output Power Table (B5_5M_1C_4T - Low Channel)

Middle Channel	Port	QPSK	16QAM	64QAM	256QAM
Conducted Average Power (dBm)	0	43.02	43.02	43.00	43.00
	1	43.07	43.02	43.07	43.09
	2	42.94	42.94	42.92	42.93
	3	42.80	42.81	42.78	42.78
Total MIMO Conducted Power (mW)		79055.02	78866.84	78784.96	78923.71
Total MIMO Conducted Power (dBm)		48.98	48.97	48.96	48.97

Table 7-41. Conducted Average Output Power Table (B5_5M_1C_4T - Middle Channel)

High Channel	Port	QPSK	16QAM	64QAM	256QAM
Conducted Average Power (dBm)	0	42.96	42.88	42.97	42.93
	1	42.99	42.95	42.96	42.99
	2	42.91	42.90	42.94	42.94
	3	42.75	42.65	42.69	42.70
Total MIMO Conducted Power (mW)		78056.32	77039.25	77841.87	77840.07
Total MIMO Conducted Power (dBm)		48.92	48.87	48.91	48.91

Table 7-42. Conducted Average Output Power Table (B5_5M_1C_4T - High Channel)

FCC ID: A3LRF4440D-13A	 MEASUREMENT REPORT (CERTIFICATION)			Approved by: Technical Manager
Test Report S/N: 8K21070501R2-R1	Test Dates: 07/09/2021 - 08/25/2021	EUT Type: RRU (RF4440d)		Page 80 of 367

Low Channel	Port	QPSK	16QAM	64QAM	256QAM
Conducted Average Power (dBm)	0	45.99	45.98	45.99	46.04
	1	46.07	46.09	46.09	46.11
	2	45.96	45.99	45.95	46.00
	3	45.69	45.72	45.72	45.74
Total MIMO Conducted Power (mW)		156690.55	157316.31	157043.51	158319.04
Total MIMO Conducted Power (dBm)		51.95	51.97	51.96	52.00

Table 7-43. Conducted Average Output Power Table (B5_10M_1C_4T - Low Channel)

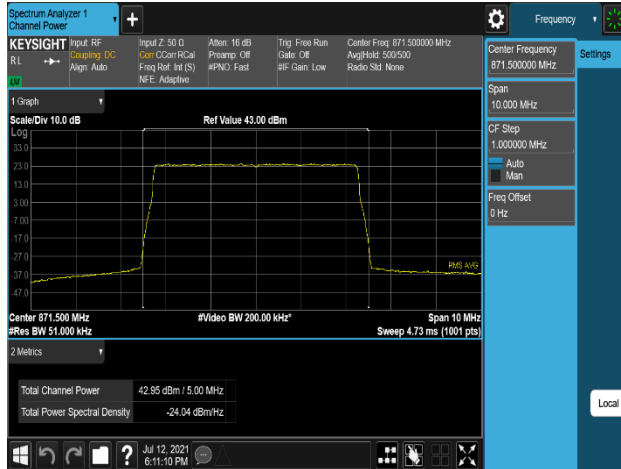
Middle Channel	Port	QPSK	16QAM	64QAM	256QAM
Conducted Average Power (dBm)	0	46.02	46.16	46.11	46.04
	1	46.14	46.21	46.23	46.11
	2	45.94	46.02	46.05	45.95
	3	45.79	45.88	45.92	45.77
Total MIMO Conducted Power (mW)		158305.44	161808.03	162163.63	158123.25
Total MIMO Conducted Power (dBm)		51.99	52.09	52.10	51.99

Table 7-44. Conducted Average Output Power Table (B5_10M_1C_4T - Middle Channel)

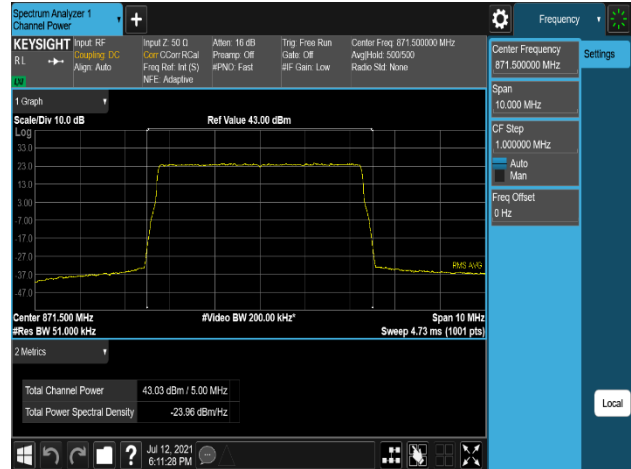
High Channel	Port	QPSK	16QAM	64QAM	256QAM
Conducted Average Power (dBm)	0	45.95	45.94	45.94	45.96
	1	46.03	46.03	46.01	46.01
	2	45.93	45.87	45.92	45.93
	3	45.75	45.76	45.76	45.76
Total MIMO Conducted Power (mW)		156199.61	155658.24	155921.45	156192.79
Total MIMO Conducted Power (dBm)		51.94	51.92	51.93	51.94

Table 7-45. Conducted Average Output Power Table (B5_10M_1C_4T - High Channel)

FCC ID: A3LRF4440D-13A	 MEASUREMENT REPORT (CERTIFICATION)			Approved by: Technical Manager
Test Report S/N: 8K21070501R2-R1	Test Dates: 07/09/2021 - 08/25/2021	EUT Type: RRU (RF4440d)		Page 81 of 367



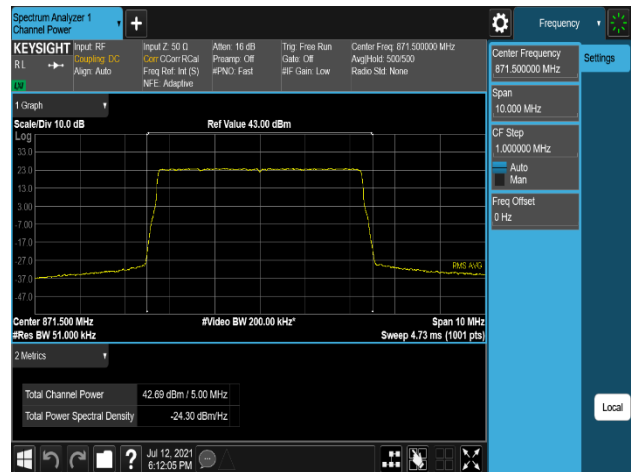
Plot 7-247. Conducted Average Output Power Plot
(B5_5M_1C_256QAM - Low Channel, Port 0)



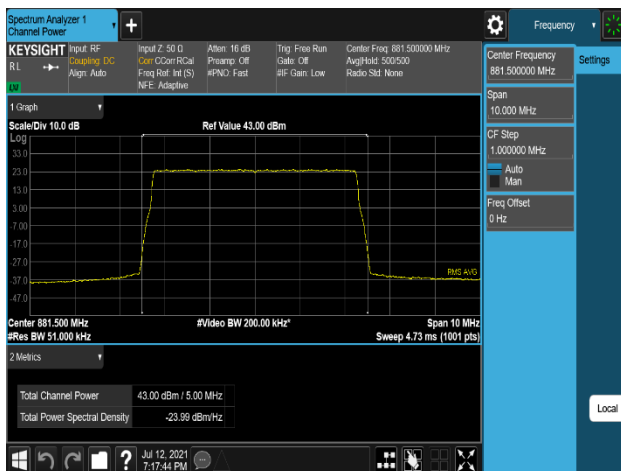
Plot 7-248. Conducted Average Output Power Plot
(B5_5M_1C_256QAM - Low Channel, Port 1)



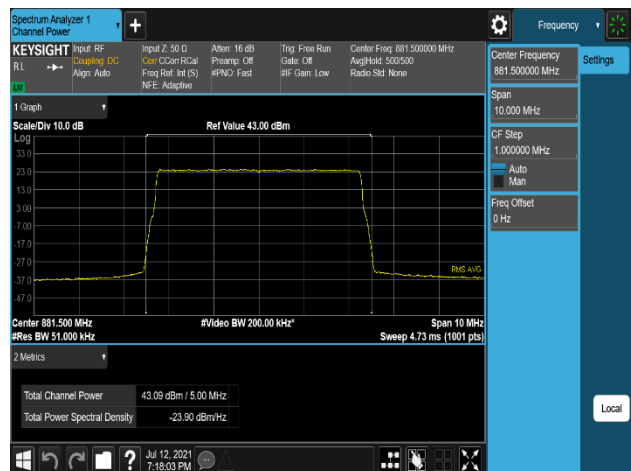
Plot 7-249. Conducted Average Output Power Plot
(B5_5M_1C_256QAM - Low Channel, Port 2)



Plot 7-250. Conducted Average Output Power Plot
(B5_5M_1C_256QAM - Low Channel, Port 3)

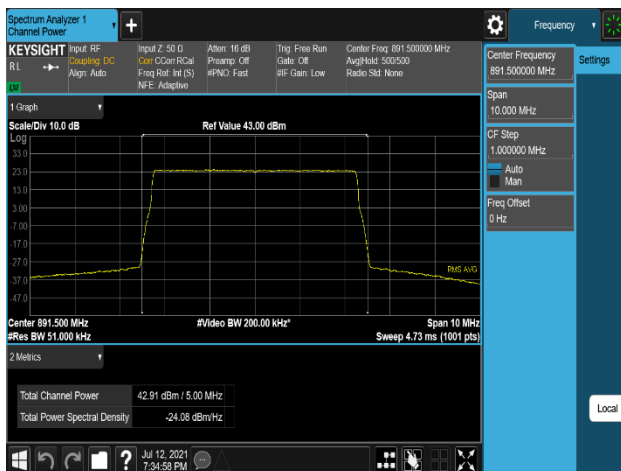
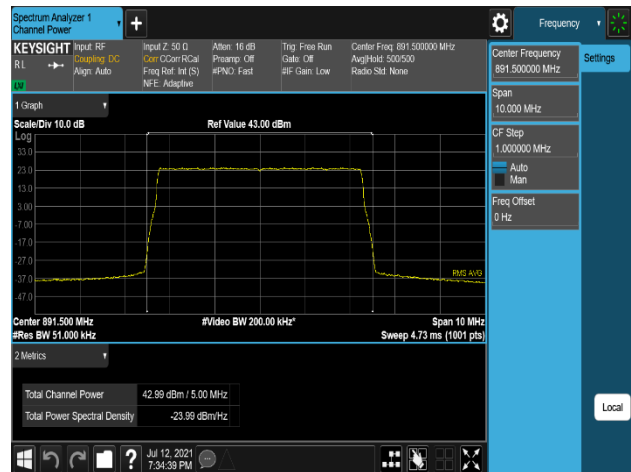
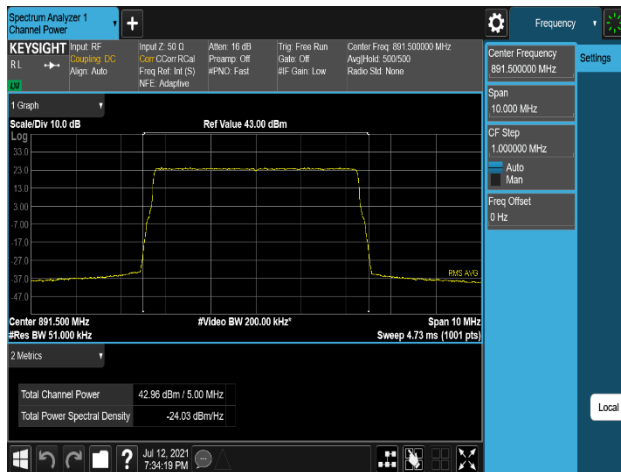
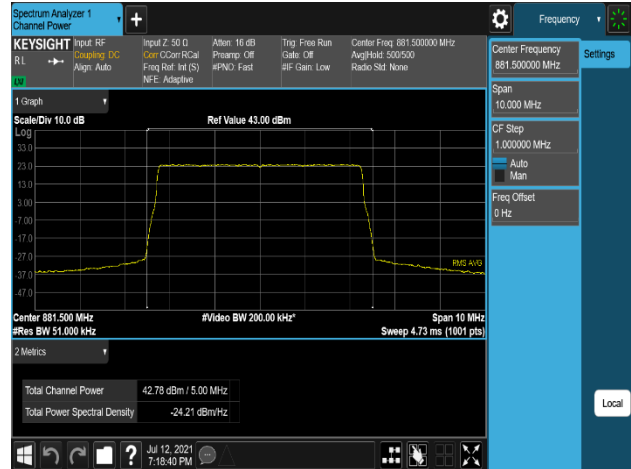
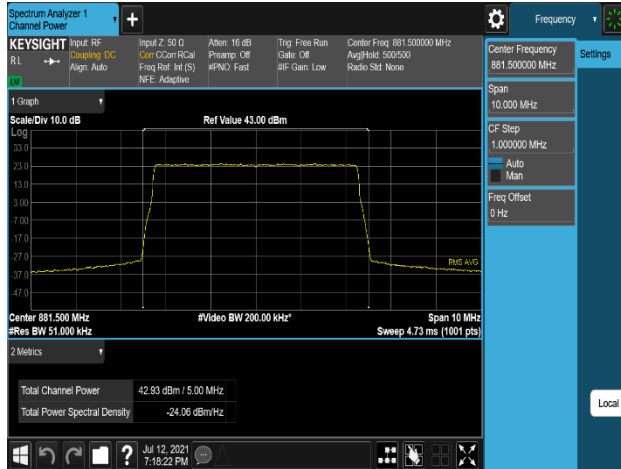


Plot 7-251. Conducted Average Output Power Plot
(B5_5M_1C_256QAM - Mid Channel, Port 0)

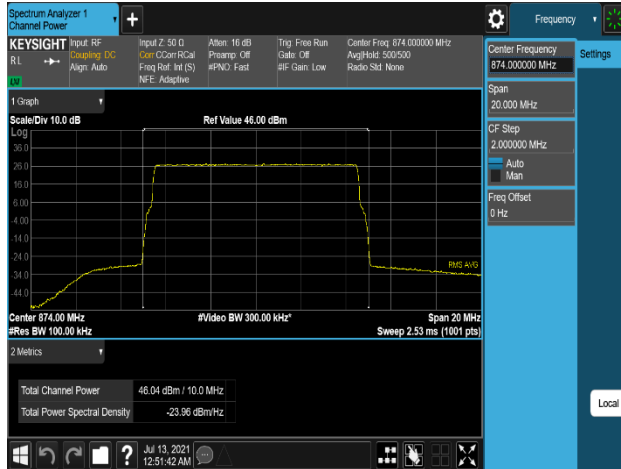


Plot 7-252. Conducted Average Output Power Plot
(B5_5M_1C_256QAM - Mid Channel, Port 1)

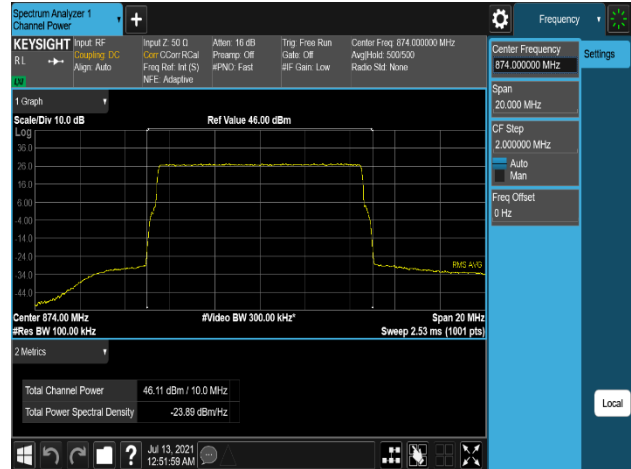
FCC ID: A3LRF4440D-13A	PCTEST ENGINEERING LABORATORY, INC.	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Technical Manager
Test Report S/N: 8K21070501R2-R1	Test Dates: 07/09/2021 - 08/25/2021	EUT Type: RRU (RF4440d)		Page 82 of 367



FCC ID: A3LRF4440D-13A	PCTEST ENGINEERING LABORATORY, INC.	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Technical Manager
Test Report S/N: BK21070501R2-R1	Test Dates: 07/09/2021 - 08/25/2021	EUT Type: RRU (RF4440d)		Page 83 of 367



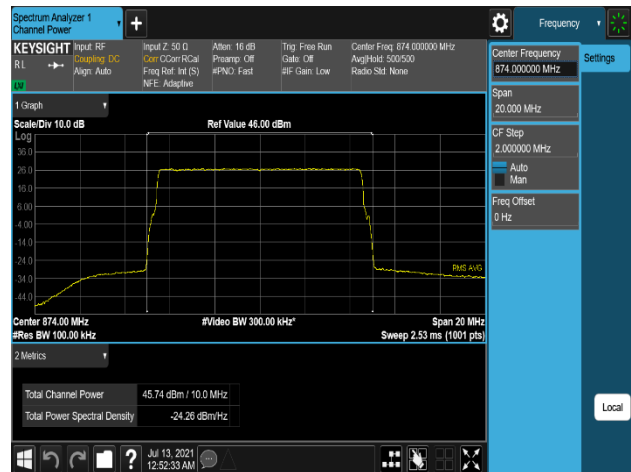
Plot 7-259. Conducted Average Output Power Plot (B5_10M_1C_256QAM - Low Channel, Port 0)



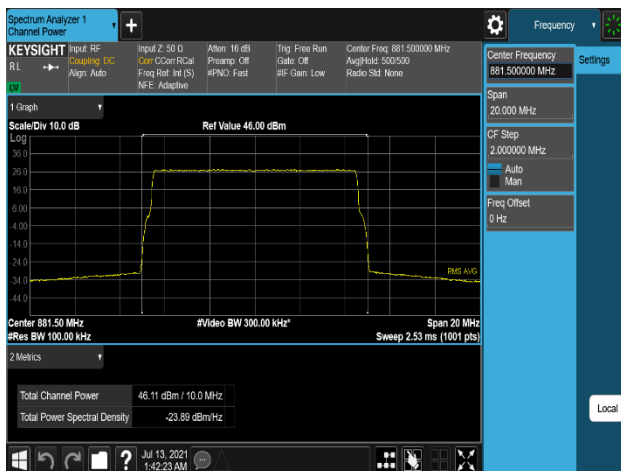
Plot 7-260. Conducted Average Output Power Plot (B5_10M_1C_256QAM - Low Channel, Port 1)



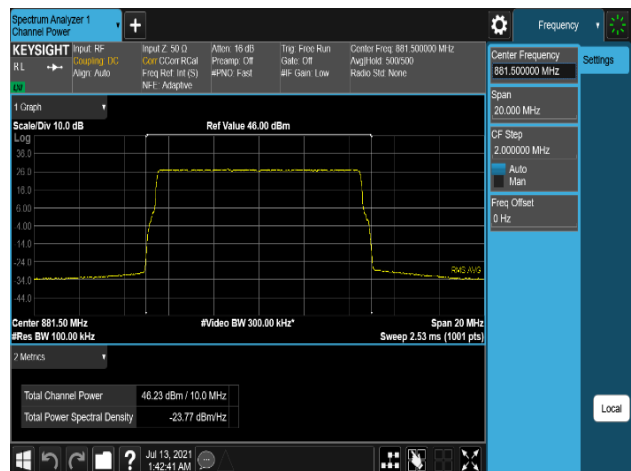
Plot 7-261. Conducted Average Output Power Plot (B5_10M_1C_256QAM - Low Channel, Port 2)



Plot 7-262. Conducted Average Output Power Plot (B5_10M_1C_256QAM - Low Channel, Port 3)

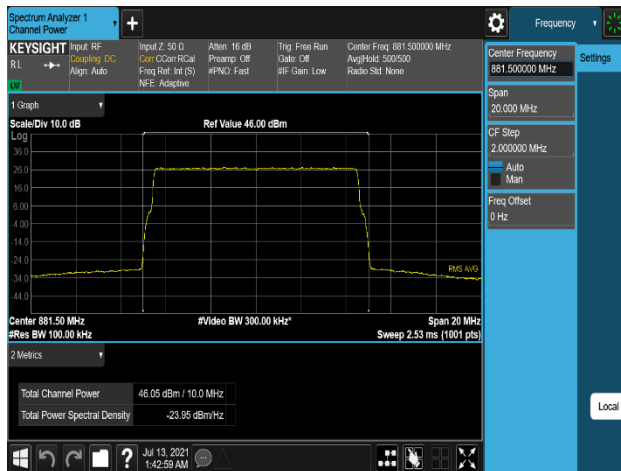


Plot 7-263. Conducted Average Output Power Plot (B5_10M_1C_64QAM - Mid Channel, Port 0)

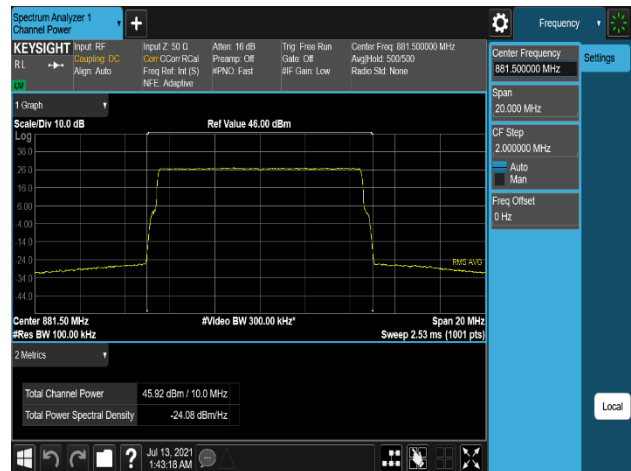


Plot 7-264. Conducted Average Output Power Plot (B5_10M_1C_64QAM - Mid Channel, Port 1)

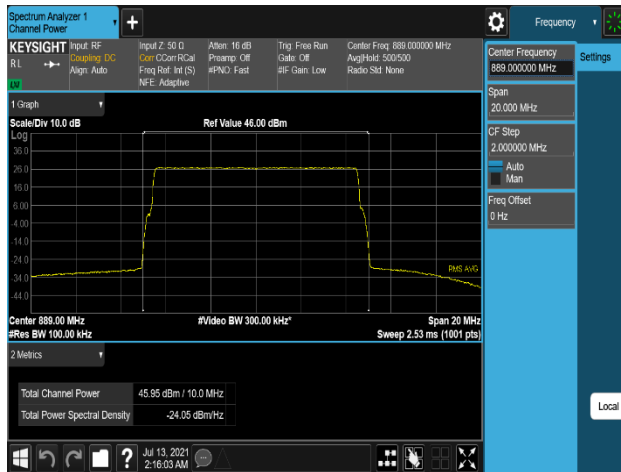
FCC ID: A3LRF4440D-13A	PCTEST ENGINEERING LABORATORY, INC.	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Technical Manager
Test Report S/N: 8K21070501R2-R1	Test Dates: 07/09/2021 - 08/25/2021	EUT Type: RRU (RF4440d)		Page 84 of 367



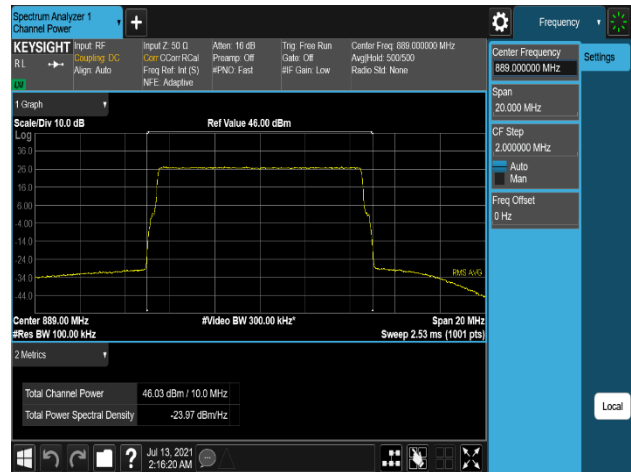
Plot 7-265. Conducted Average Output Power Plot
(B5_10M_1C_64QAM – Mid Channel, Port 2)



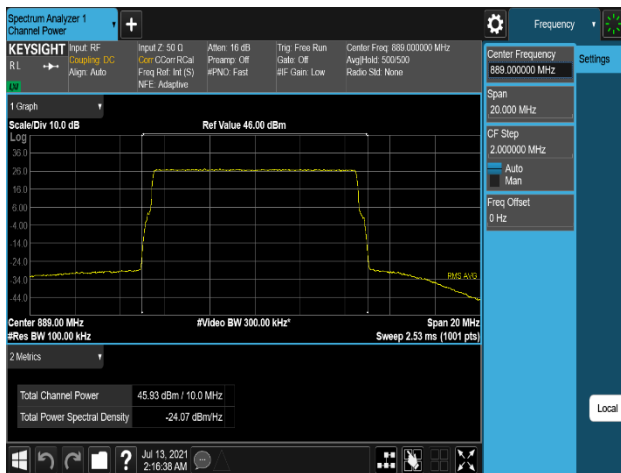
Plot 7-266. Conducted Average Output Power Plot
(B5_10M_1C_64QAM – Mid Channel, Port 3)



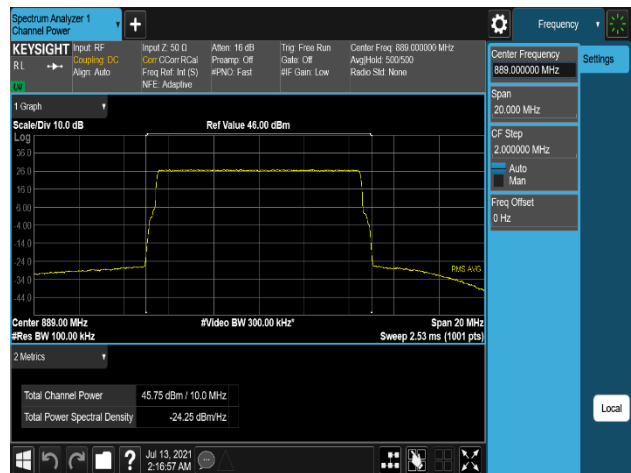
Plot 7-267. Conducted Average Output Power Plot
(B5_10M_1C_QPSK – High Channel, Port 0)



Plot 7-268. Conducted Average Output Power Plot
(B5_10M_1C_QPSK – High Channel, Port 1)



Plot 7-269. Conducted Average Output Power Plot
(B5_10M_1C_QPSK – High Channel, Port 2)



Plot 7-270. Conducted Average Output Power Plot
(B5_10M_1C_QPSK – High Channel, Port 3)

FCC ID: A3LRF4440D-13A	PCTEST ENGINEERING LABORATORY, INC.	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Technical Manager
Test Report S/N: 8K21070501R2-R1	Test Dates: 07/09/2021 - 08/25/2021	EUT Type: RRU (RF4440d)		Page 85 of 367

Low Channel	Port	QPSK	16QAM	64QAM	256QAM
Conducted Average Power (dBm)	0	47.92	47.99	47.98	47.98
	1	47.96	47.98	47.99	47.99
Total MIMO Conducted Power (mW)		124461.38	125756.45	125756.45	125756.45
Total MIMO Conducted Power (dBm)		50.95	51.00	51.00	51.00

Table 7-46. Conducted Average Output Power Table (B5_5M+5M_2C_2T - Low Channel)

Middle Channel	Port	QPSK	16QAM	64QAM	256QAM
Conducted Average Power (dBm)	0	47.97	47.92	47.92	47.94
	1	47.96	47.94	47.99	47.96
Total MIMO Conducted Power (mW)		125178.66	124174.14	124894.73	124747.30
Total MIMO Conducted Power (dBm)		50.98	50.94	50.97	50.96

Table 7-47. Conducted Average Output Power Table (B5_5M+5M_2C_2T - Middle Channel)

High Channel	Port	QPSK	16QAM	64QAM	256QAM
Conducted Average Power (dBm)	0	47.96	47.84	47.85	47.91
	1	47.95	47.89	47.93	47.93
Total MIMO Conducted Power (mW)		124890.75	122331.19	123040.59	123888.54
Total MIMO Conducted Power (dBm)		50.97	50.88	50.90	50.93

Table 7-48. Conducted Average Output Power Table (B5_5M+5M_2C_2T - High Channel)

FCC ID: A3LRF4440D-13A	 MEASUREMENT REPORT (CERTIFICATION) 		Approved by: Technical Manager
Test Report S/N: 8K21070501R2-R1	Test Dates: 07/09/2021 - 08/25/2021	EUT Type: RRU (RF4440d)	Page 86 of 367

Low Channel	Port	QPSK	16QAM	64QAM	256QAM
Conducted Average Power (dBm)	0	48.01	47.95	48.00	47.99
	1	47.99	47.99	47.97	48.00
Total MIMO Conducted Power (mW)		126191.80	125324.10	125757.12	126046.35
Total MIMO Conducted Power (dBm)		51.01	50.98	51.00	51.01

Table 7-49. Conducted Average Output Power Table (B5_10M+10M_2C_2T - Low Channel)

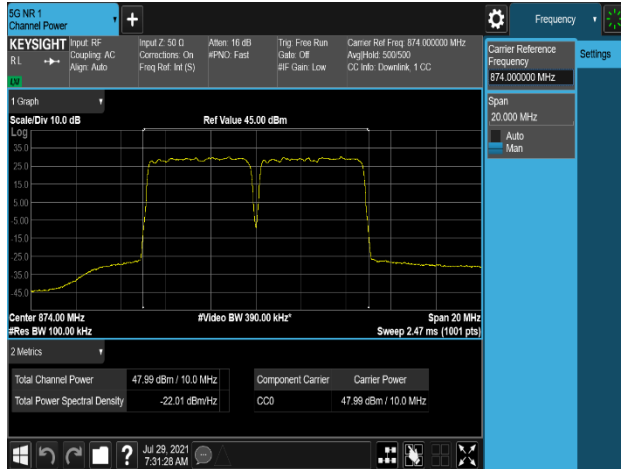
Middle Channel	Port	QPSK	16QAM	64QAM	256QAM
Conducted Average Power (dBm)	0	48.01	47.98	47.94	47.91
	1	48.03	48.00	48.00	47.98
Total MIMO Conducted Power (mW)		126774.28	125901.57	125325.76	124607.48
Total MIMO Conducted Power (dBm)		51.03	51.00	50.98	50.96

Table 7-50. Conducted Average Output Power Table (B5_10M+10M_2C_2T - Middle Channel)

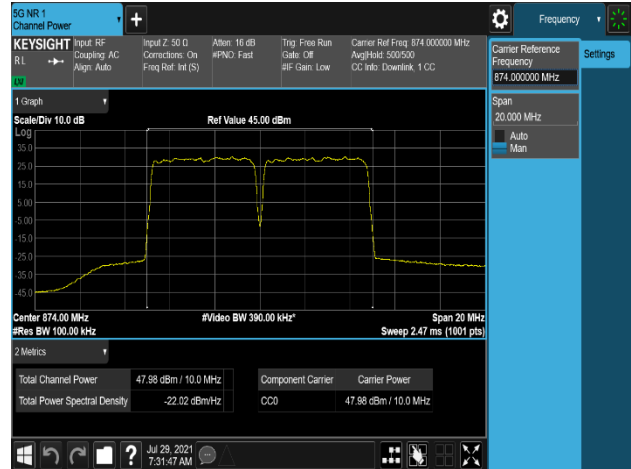
High Channel	Port	QPSK	16QAM	64QAM	256QAM
Conducted Average Power (dBm)	0	47.96	48.00	48.03	47.98
	1	48.01	48.01	48.10	47.98
Total MIMO Conducted Power (mW)		125758.45	126336.92	128098.52	125611.67
Total MIMO Conducted Power (dBm)		51.00	51.02	51.08	50.99

Table 7-51. Conducted Average Output Power Table (B5_10M+10M_2C_2T - High Channel)

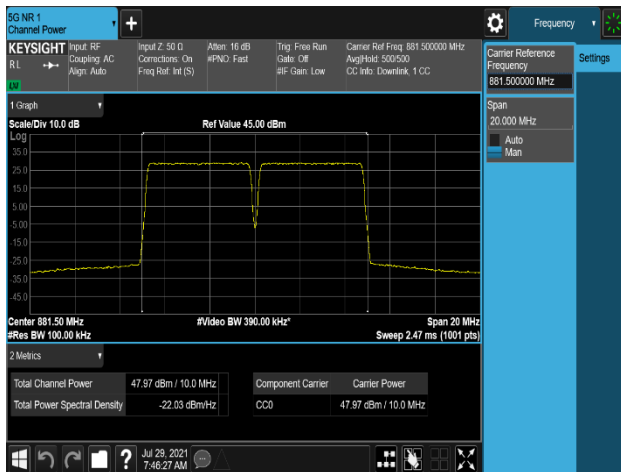
FCC ID: A3LRF4440D-13A	 MEASUREMENT REPORT (CERTIFICATION)			Approved by: Technical Manager
Test Report S/N: 8K21070501R2-R1	Test Dates: 07/09/2021 - 08/25/2021	EUT Type: RRU (RF4440d)		Page 87 of 367



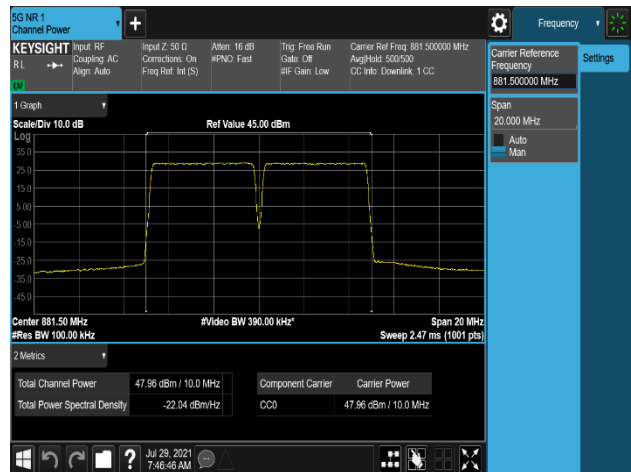
Plot 7-271. Conducted Average Output Power Plot (B5_5M+5M_2C_16QAM - Low Channel, Port 0)



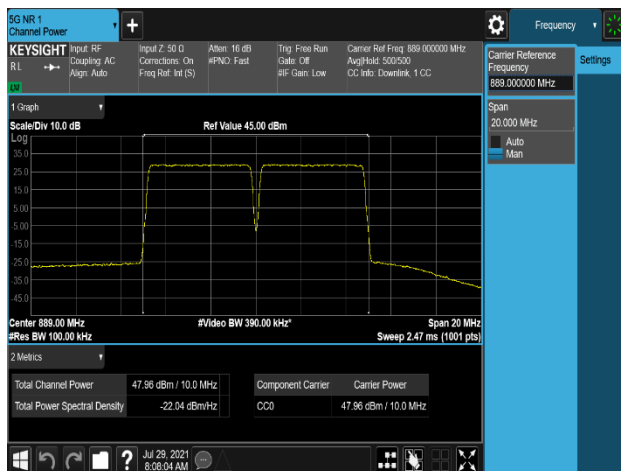
Plot 7-272. Conducted Average Output Power Plot (B5_5M+5M_2C_16QAM - Low Channel, Port 1)



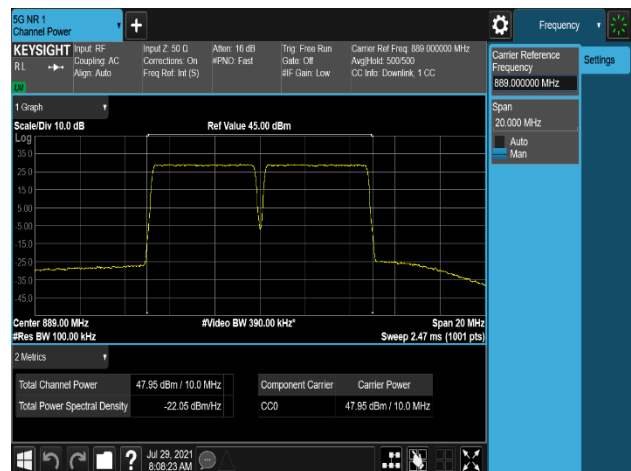
Plot 7-273. Conducted Average Output Power Plot (B5_5M+5M_2C_QPSK - Mid Channel, Port 0)



Plot 7-274. Conducted Average Output Power Plot (B5_5M+5M_2C_QPSK - Mid Channel, Port 1)

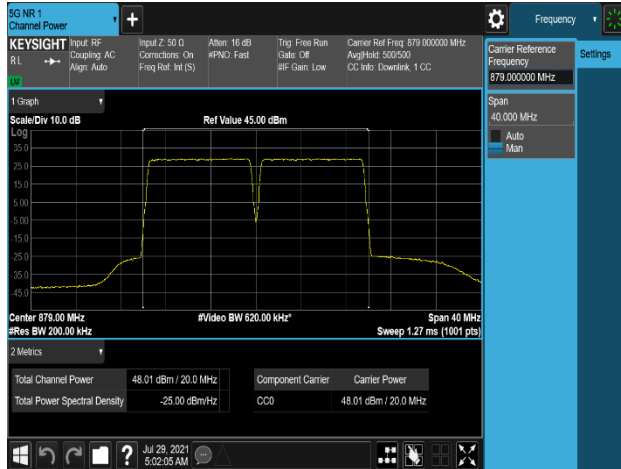


Plot 7-275. Conducted Average Output Power Plot (B5_5M+5M_2C_QPSK - High Channel, Port 0)

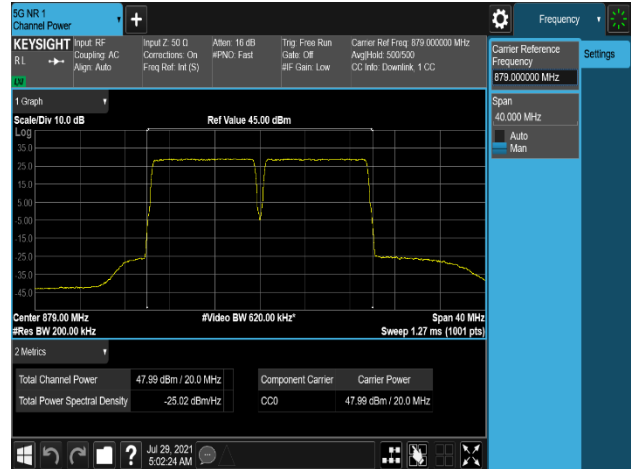


Plot 7-276. Conducted Average Output Power Plot (B5_5M+5M_2C_QPSK - High Channel, Port 1)

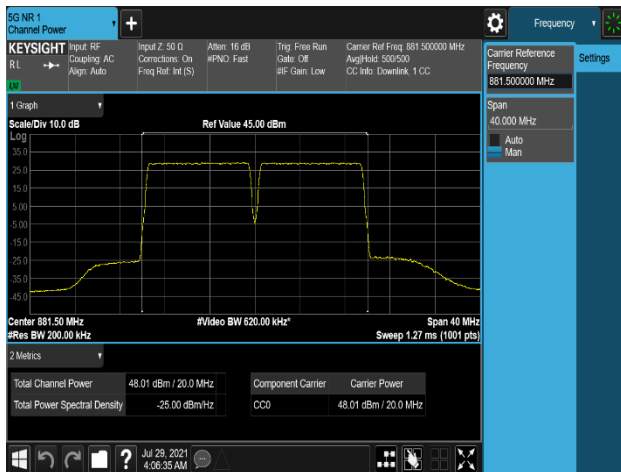
FCC ID: A3LRF4440D-13A		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Technical Manager
Test Report S/N: 8K21070501R2-R1	Test Dates: 07/09/2021 - 08/25/2021	EUT Type: RRU (RF4440d)		Page 88 of 367



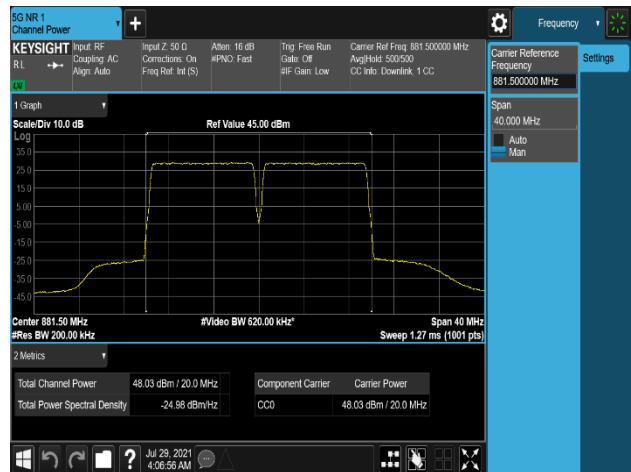
Plot 7-277. Conducted Average Output Power Plot (B5_10M+10M_2C_QPSK - Low Channel, Port 0)



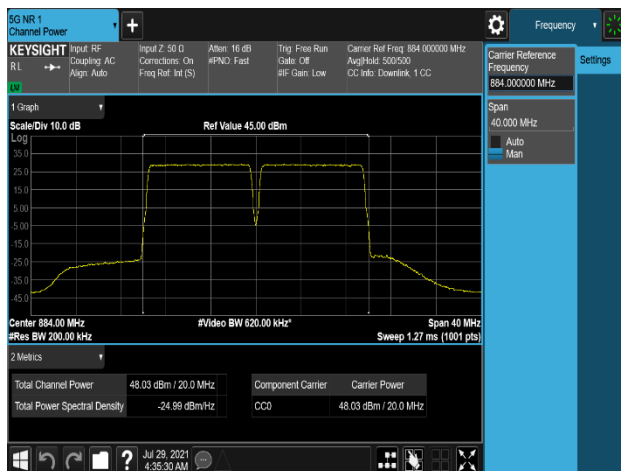
Plot 7-278. Conducted Average Output Power Plot (B5_10M+10M_2C_QPSK - Low Channel, Port 1)



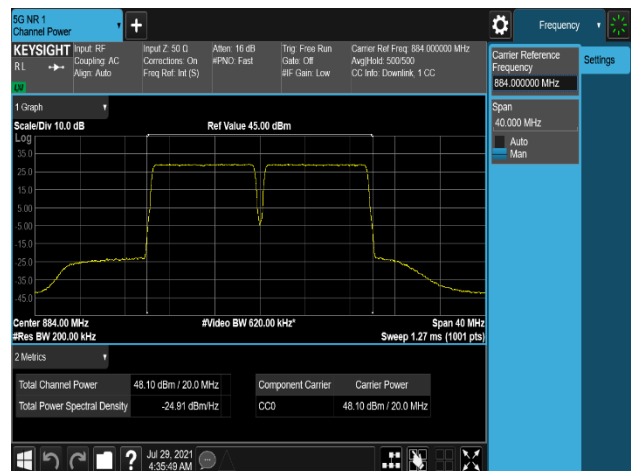
Plot 7-279. Conducted Average Output Power Plot (B5_10M+10M_2C_QPSK - Mid Channel, Port 0)



Plot 7-280. Conducted Average Output Power Plot (B5_10M+10M_2C_QPSK - Mid Channel, Port 1)



Plot 7-281. Conducted Average Output Power Plot (B5_10M+10M_2C_64QAM - High Channel, Port 0)



Plot 7-282. Conducted Average Output Power Plot (B5_10M+10M_2C_64QAM - High Channel, Port 1)

FCC ID: A3LRF4440D-13A	PCTEST ENGINEERING LABORATORY, INC.	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Technical Manager
Test Report S/N: 8K21070501R2-R1	Test Dates: 07/09/2021 - 08/25/2021	EUT Type: RRU (RF4440d)		Page 89 of 367

Low Channel	Port	QPSK	16QAM	64QAM	256QAM
Conducted Average Power (dBm)	0	46.13	46.09	46.01	46.04
	1	46.22	46.15	46.15	46.18
	2	46.21	46.33	46.38	46.40
	3	46.14	46.29	46.34	46.37
Total MIMO Conducted Power (mW)		165797.78	167367.57	167615.93	168677.16
Total MIMO Conducted Power (dBm)		52.20	52.24	52.24	52.27

Table 7-52. Conducted Average Output Power Table (B5_5M+5M_2C_4T - Low Channel)

Middle Channel	Port	QPSK	16QAM	64QAM	256QAM
Conducted Average Power (dBm)	0	46.11	46.02	46.09	46.07
	1	46.11	46.10	46.15	46.13
	2	46.30	46.38	46.39	46.35
	3	46.32	46.35	46.37	46.31
Total MIMO Conducted Power (mW)		167176.68	167335.43	168756.36	167386.20
Total MIMO Conducted Power (dBm)		52.23	52.24	52.27	52.24

Table 7-53. Conducted Average Output Power Table (B5_5M+5M_2C_4T - Middle Channel)

High Channel	Port	QPSK	16QAM	64QAM	256QAM
Conducted Average Power (dBm)	0	46.05	46.02	46.02	46.03
	1	46.08	46.07	46.09	46.13
	2	46.19	46.23	46.30	46.31
	3	46.15	46.24	46.31	46.29
Total MIMO Conducted Power (mW)		163623.37	164500.63	166053.05	166423.21
Total MIMO Conducted Power (dBm)		52.14	52.16	52.20	52.21

Table 7-54. Conducted Average Output Power Table (B5_5M+5M_2C_4T - High Channel)

FCC ID: A3LRF4440D-13A		MEASUREMENT REPORT (CERTIFICATION)			Approved by: Technical Manager
Test Report S/N: 8K21070501R2-R1	Test Dates: 07/09/2021 - 08/25/2021	EUT Type: RRU (RF4440d)		Page 90 of 367	

Low Channel	Port	QPSK	16QAM	64QAM	256QAM
Conducted Average Power (dBm)	0	46.31	46.29	46.31	46.31
	1	46.44	46.37	46.27	46.36
	2	46.29	46.33	46.40	46.40
	3	46.19	46.27	46.38	46.40
Total MIMO Conducted Power (mW)		170962.68	171228.87	172223.19	173310.84
Total MIMO Conducted Power (dBm)		52.33	52.34	52.36	52.39

Table 7-55. Conducted Average Output Power Table (B5_10M+10M_2C_4T - Low Channel)

Middle Channel	Port	QPSK	16QAM	64QAM	256QAM
Conducted Average Power (dBm)	0	46.30	46.29	46.31	46.29
	1	46.38	46.36	46.34	46.34
	2	46.41	46.41	46.38	46.37
	3	46.30	46.30	46.28	46.28
Total MIMO Conducted Power (mW)		172519.14	172221.39	171721.93	171425.55
Total MIMO Conducted Power (dBm)		52.37	52.36	52.35	52.34

Table 7-56. Conducted Average Output Power Table (B5_10M+10M_2C_4T - Middle Channel)

High Channel	Port	QPSK	16QAM	64QAM	256QAM
Conducted Average Power (dBm)	0	46.12	46.10	46.13	46.08
	1	46.18	46.13	46.14	46.12
	2	46.35	46.31	46.31	46.26
	3	46.31	46.26	46.31	46.18
Total MIMO Conducted Power (mW)		168329.67	166781.59	167647.96	165239.19
Total MIMO Conducted Power (dBm)		52.26	52.22	52.24	52.18

Table 7-57. Conducted Average Output Power Table (B5_10M+10M_2C_4T - High Channel)

FCC ID: A3LRF4440D-13A		MEASUREMENT REPORT (CERTIFICATION)			Approved by: Technical Manager
Test Report S/N: 8K21070501R2-R1	Test Dates: 07/09/2021 - 08/25/2021	EUT Type: RRU (RF4440d)		Page 91 of 367	