



DSS Ratio	Channel	Port	QPSK	16QAM	64QAM	256QAM
LTE 4 : NR 6	Low	0	40.00	40.03	39.88	39.94
		1	39.90	39.97	39.84	39.93
		2	39.51	39.57	39.36	39.47
		3	39.80	39.87	39.73	39.82
		Total MIMO Conducted Power (mW)	38255.35	38762.90	37392.78	38148.07
		Total MIMO Conducted Power(dBm)	45.83	45.88	45.73	45.81
	Mid	0	39.92	39.99	39.99	39.95
		1	39.89	40.02	39.92	39.92
		2	39.94	39.97	39.90	39.93
		3	40.06	40.02	40.04	39.97
		Total MIMO Conducted Power (mW)	39569.28	40000.48	39659.38	39474.28
		Total MIMO Conducted Power(dBm)	45.97	46.02	45.98	45.96
	High	0	39.84	39.98	39.87	39.87
		1	39.88	40.03	39.93	39.88
		2	39.89	40.03	39.98	39.96
		3	39.84	39.92	39.83	39.82
		Total MIMO Conducted Power (mW)	38753.95	39910.17	39115.39	38934.90
		Total MIMO Conducted Power(dBm)	45.88	46.01	45.92	45.90

Table 7-50. Conducted Average Output Power Table (DSS_B5_10M_4:6_1C)

FCC ID: A3LRF4442D-13B		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Technical Manager
Test Report S/N: 8K21070502R3-01-R1.A3L	Test Dates: 07/09/2021 - 08/26/2021	EUT Type: RRU (RF4442d)		Page 79 of 240

DSS Ratio	Channel	Port	QPSK	16QAM	64QAM	256QAM
LTE 3 : NR 7	Low	0	39.87	39.95	39.96	39.90
		1	39.98	40.13	39.97	39.84
		2	39.35	39.44	39.42	39.39
		3	39.75	39.90	39.79	39.79
		Total MIMO Conducted Power (mW)	37709.70	38751.99	38117.28	37628.23
		Total MIMO Conducted Power(dBm)	45.76	45.88	45.81	45.76
	Mid	0	39.96	39.99	39.82	39.91
		1	39.89	39.96	39.78	39.86
		2	39.90	39.98	39.80	39.83
		3	39.96	40.04	39.89	39.83
		Total MIMO Conducted Power (mW)	39338.91	39931.90	38399.88	38709.92
		Total MIMO Conducted Power(dBm)	45.95	46.01	45.84	45.88
	High	0	39.80	39.91	39.79	39.85
		1	39.86	40.02	39.84	39.87
		2	39.90	39.93	39.90	39.90
		3	39.83	39.86	39.78	39.77
		Total MIMO Conducted Power (mW)	38621.20	39363.95	38444.67	38622.17
		Total MIMO Conducted Power(dBm)	45.87	45.95	45.85	45.87



Table 7-51. Conducted Average Output Power Table (DSS_B5_10M_3:7_1C)

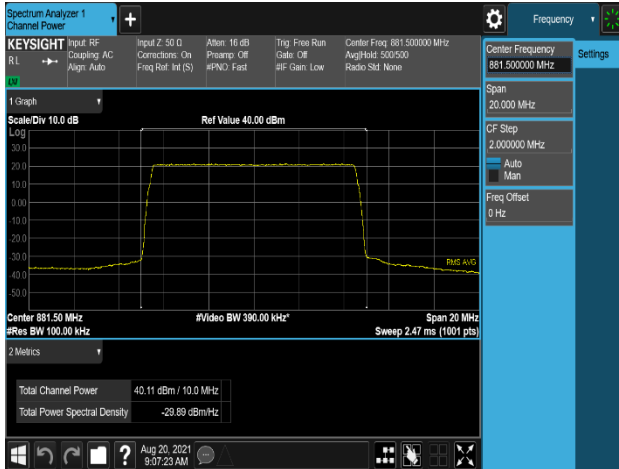
FCC ID: A3LRF4442D-13B		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Technical Manager
Test Report S/N: 8K21070502R3-01-R1.A3L	Test Dates: 07/09/2021 - 08/26/2021	EUT Type: RRU (RF4442d)		Page 80 of 240

DSS Ratio	Channel	Port	QPSK	16QAM	64QAM	256QAM
LTE 2 : NR 8	Low	0	39.62	39.60	39.53	39.57
		1	39.89	39.91	39.88	39.83
		2	39.44	39.45	39.39	39.36
		3	39.76	39.84	39.68	39.72
		Total MIMO Conducted Power (mW)	37164.70	37363.79	36681.03	36678.85
		Total MIMO Conducted Power(dBm)	45.70	45.72	45.64	45.64
	Mid	0	39.86	39.97	39.87	39.89
		1	39.92	40.05	39.84	39.91
		2	39.83	39.91	39.80	39.76
		3	39.91	40.00	39.86	39.85
		Total MIMO Conducted Power (mW)	38911.28	39841.85	38576.09	38667.68
		Total MIMO Conducted Power(dBm)	45.90	46.00	45.86	45.87
	High	0	39.80	39.93	39.80	39.78
		1	39.83	39.98	39.87	39.87
		2	39.90	39.97	39.82	39.88
		3	39.78	39.89	39.74	39.79
		Total MIMO Conducted Power (mW)	38444.47	39475.22	38267.93	38466.58
		Total MIMO Conducted Power(dBm)	45.85	45.96	45.83	45.85

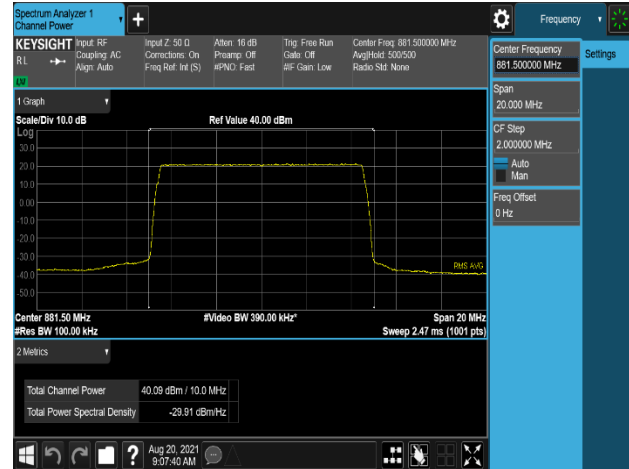
Table 7-52. Conducted Average Output Power Table (DSS_B5_10M_2:8_1C)

Note: Test result is no big difference depending on DSS Ratio. So, the only worst-ratio plots are included in this report.

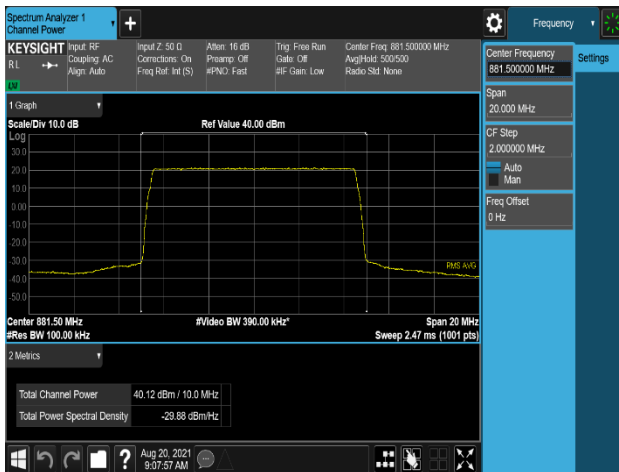
FCC ID: A3LRF4442D-13B		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Technical Manager
Test Report S/N: 8K21070502R3-01-R1.A3L	Test Dates: 07/09/2021 - 08/26/2021	EUT Type: RRU (RF4442d)		Page 81 of 240



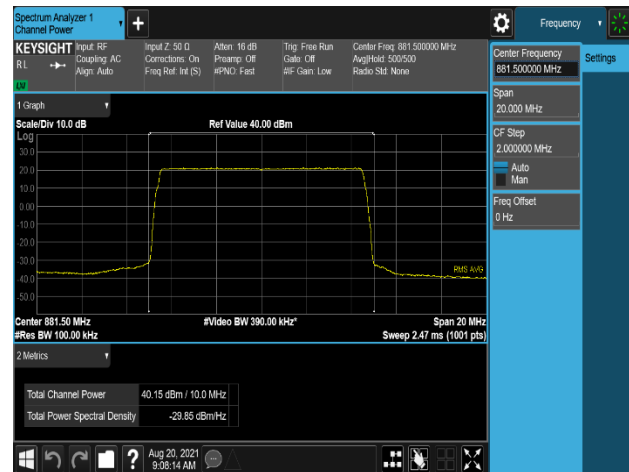
Plot 7-222. Conducted Average Output Power Plot
(DSS_B5_10M_9:1)_1C_QPSK - Mid Channel, Port 0)



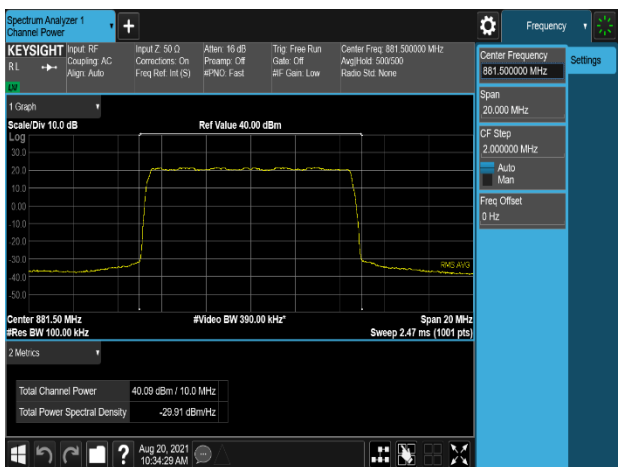
Plot 7-223. Conducted Average Output Power Plot
(DSS_B5_10M_9:1)_1C_Mid - Low Channel, Port 1)



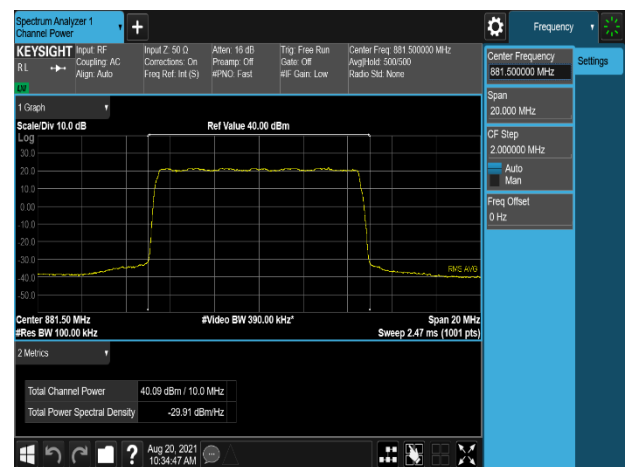
Plot 7-224. Conducted Average Output Power Plot
(DSS_B5_10M_9:1)_1C_QPSK - Mid Channel, Port 2)



Plot 7-225. Conducted Average Output Power Plot
(DSS_B5_10M_9:1)_1C_Mid - Low Channel, Port 3)

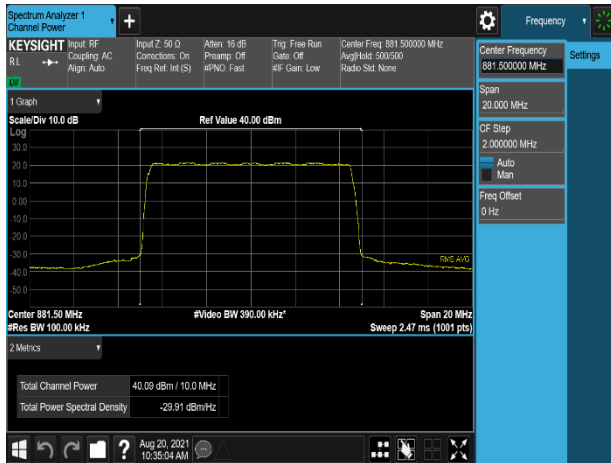


Plot 7-226. Conducted Average Output Power Plot
(DSS_B5_10M_8:2)_1C_16QAM - Mid Channel, Port 0)

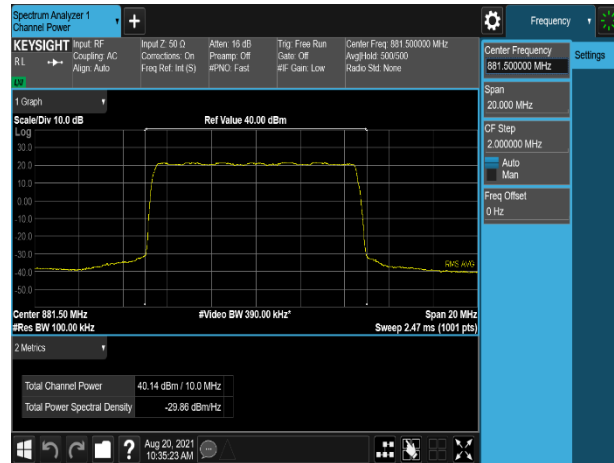


Plot 7-227. Conducted Average Output Power Plot
(DSS_B5_10M_8:2)_1C_16QAM - Mid Channel, Port 1)

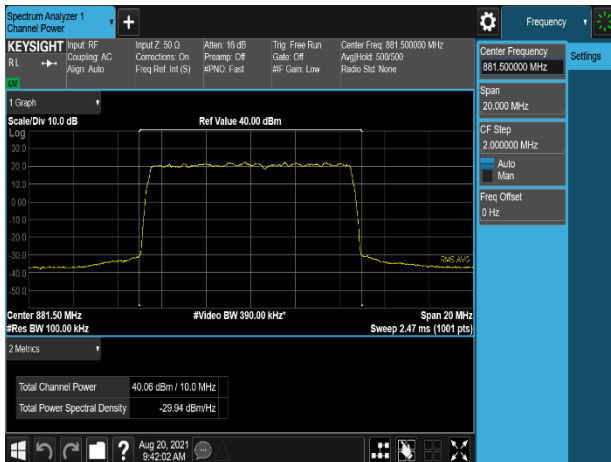
FCC ID: A3LRF4442D-13B	PCTEST ENGINEERING LABORATORY, INC.	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Technical Manager
Test Report S/N: 8K21070502R3-01-R1.A3L	Test Dates: 07/09/2021 - 08/26/2021	EUT Type: RRU (RF4442d)		Page 82 of 240



Plot 7-228. Conducted Average Output Power Plot
(DSS_B5_10M_8:2)_1C_16QAM - Mid Channel, Port 2)



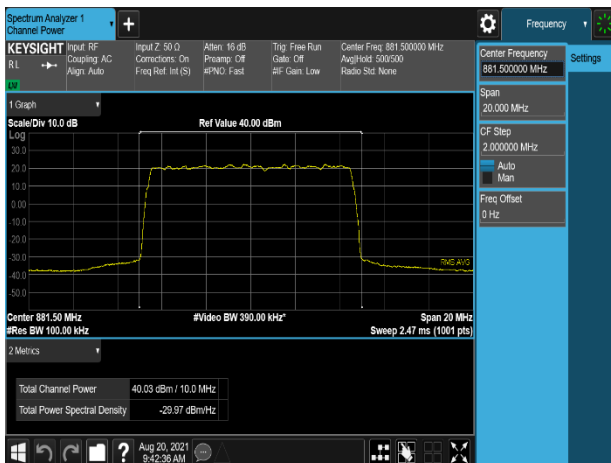
Plot 7-229. Conducted Average Output Power Plot
(DSS_B5_10M_8:2)_1C_16QAM - Mid Channel, Port 3)



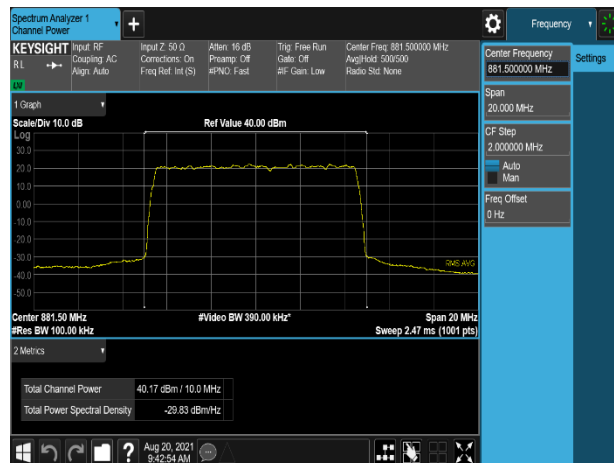
Plot 7-230. Conducted Average Output Power Plot
(DSS_B5_10M_9:1)_1C_64QAM - Mid Channel, Port 0)



Plot 7-231. Conducted Average Output Power Plot
(DSS_B5_10M_9:1)_1C_64QAM - Mid Channel, Port 1)

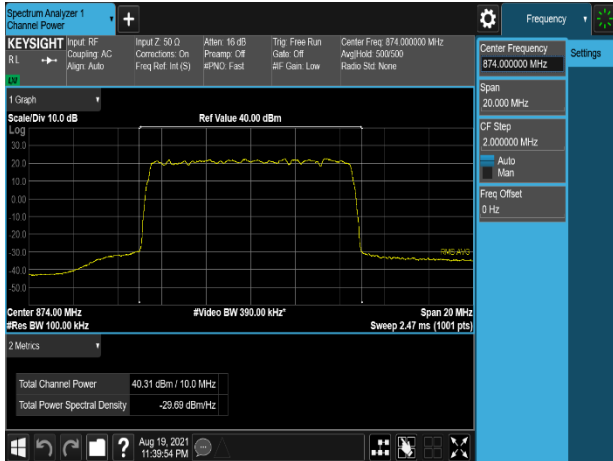


Plot 7-232. Conducted Average Output Power Plot
(DSS_B5_10M_9:1)_1C_64QAM - Mid Channel, Port 2)

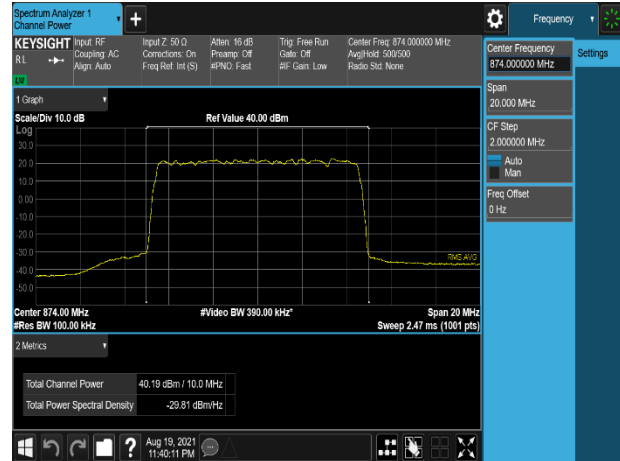


Plot 7-233. Conducted Average Output Power Plot
(DSS_B5_10M_9:1)_1C_64QAM - Mid Channel, Port 3)

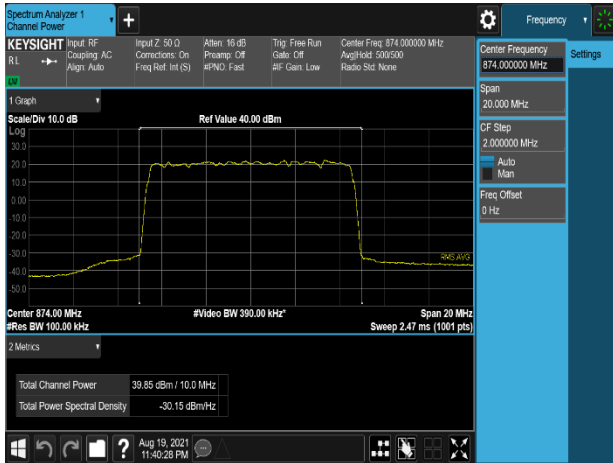
FCC ID: A3LRF4442D-13B	PCTEST ENGINEERING LABORATORY, INC.	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Technical Manager
Test Report S/N: 8K21070502R3-01-R1.A3L	Test Dates: 07/09/2021 - 08/26/2021	EUT Type: RRU (RF4442d)		Page 83 of 240



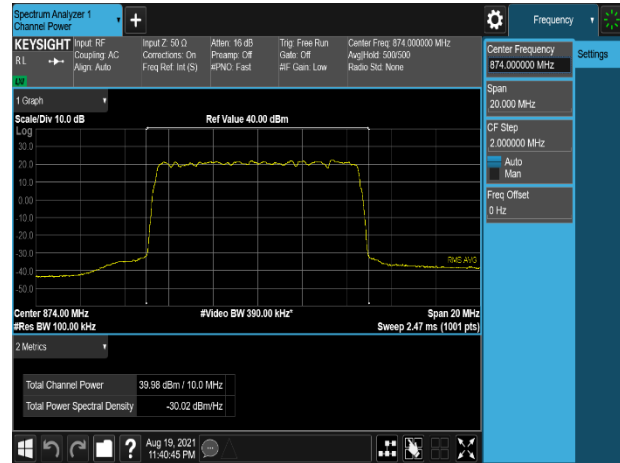
Plot 7-234. Conducted Average Output Power Plot (DSS_B5_10M_9:1)_1C_256QAM – Low Channel, Port 0)



Plot 7-235. Conducted Average Output Power Plot (DSS_B5_10M_9:1)_1C_256QAM – Low Channel, Port 1)



Plot 7-236. Conducted Average Output Power Plot (DSS_B5_10M_9:1)_1C_256QAM – Low Channel, Port 2)





Plot 7-237. Conducted Average Output Power Plot (DSS_B5_10M_9:1)_1C_256QAM – Low Channel, Port 3)

FCC ID: A3LRF4442D-13B	PCTEST ENGINEERING LABORATORY, INC.	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Technical Manager
Test Report S/N: 8K21070502R3-01-R1.A3L	Test Dates: 07/09/2021 - 08/26/2021	EUT Type: RRU (RF4442d)		Page 84 of 240

DSS Ratio	Channel	Port	QPSK	16QAM	64QAM	256QAM
LTE 5 : NR 5	Low	0	39.89	39.88	39.85	39.91
		1	39.90	39.90	40.00	39.91
		2	39.65	39.81	39.76	39.73
		3	39.54	39.59	39.64	39.67
		Total MIMO Conducted Power (mW)	37742.96	38170.92	38327.38	38255.33
		Total MIMO Conducted Power(dBm)	45.77	45.82	45.84	45.83
	Mid	0	39.76	39.81	39.78	39.84
		1	39.96	39.84	39.89	39.88
		2	39.74	39.76	39.71	39.66
		3	39.61	39.54	39.57	39.46
		Total MIMO Conducted Power (mW)	37930.72	37667.58	37667.33	37443.54
		Total MIMO Conducted Power(dBm)	45.79	45.76	45.76	45.73
	High	0	39.76	39.77	39.86	39.73
		1	39.99	39.96	39.92	40.00
		2	39.73	39.77	39.74	39.73
		3	39.60	39.69	39.50	39.54
		Total MIMO Conducted Power (mW)	37956.71	38187.77	37831.66	37789.44
		Total MIMO Conducted Power(dBm)	45.79	45.82	45.78	45.77

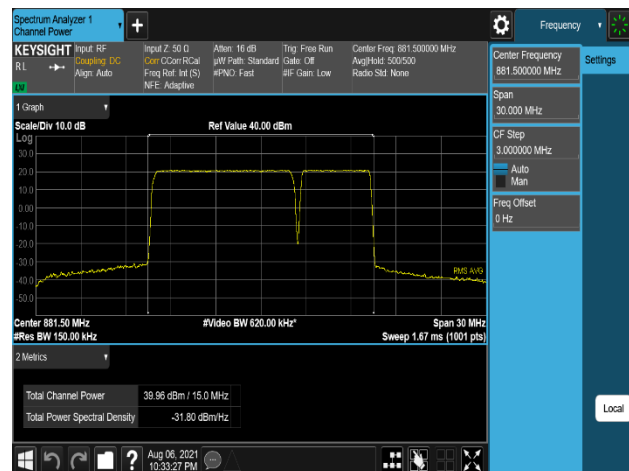
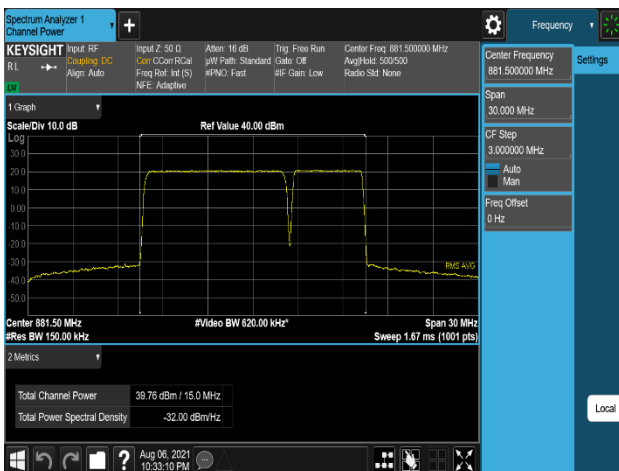
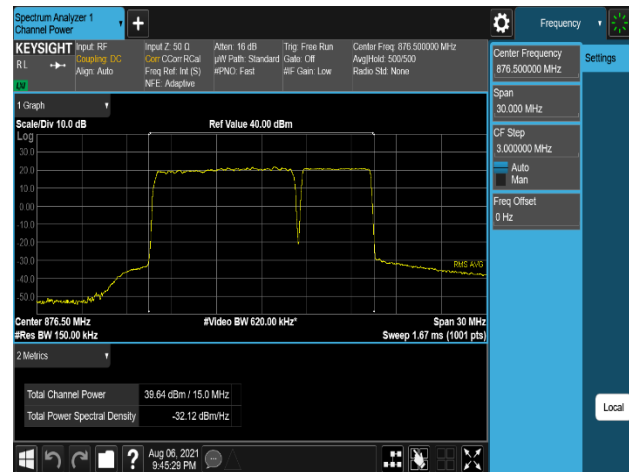
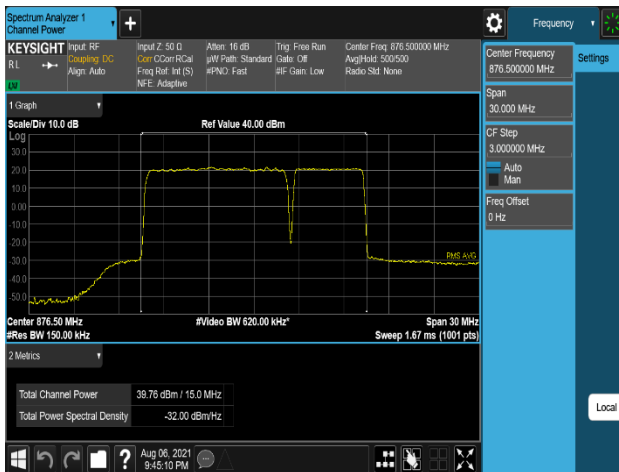
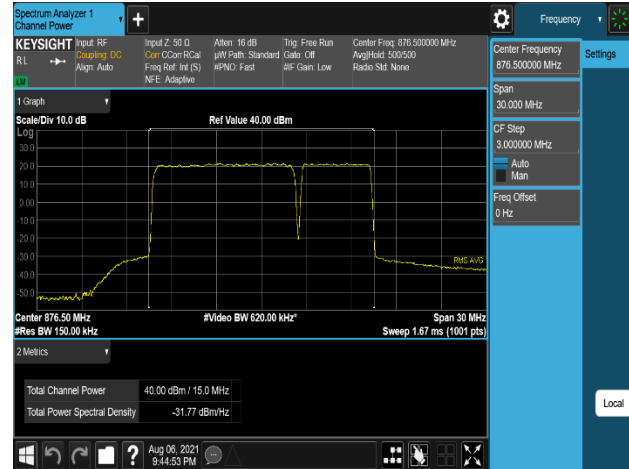
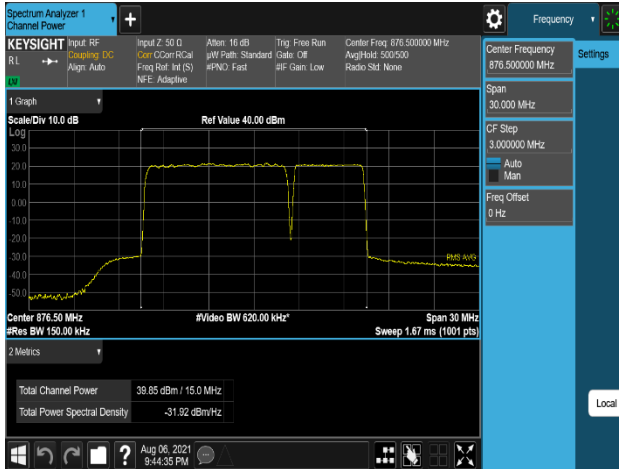
Table 7-53. Conducted Average Output Power Table (DSS_B5_10M+5M_2C)

FCC ID: A3LRF4442D-13B		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Technical Manager
Test Report S/N: 8K21070502R3-01-R1.A3L	Test Dates: 07/09/2021 - 08/26/2021	EUT Type: RRU (RF4442d)		Page 85 of 240

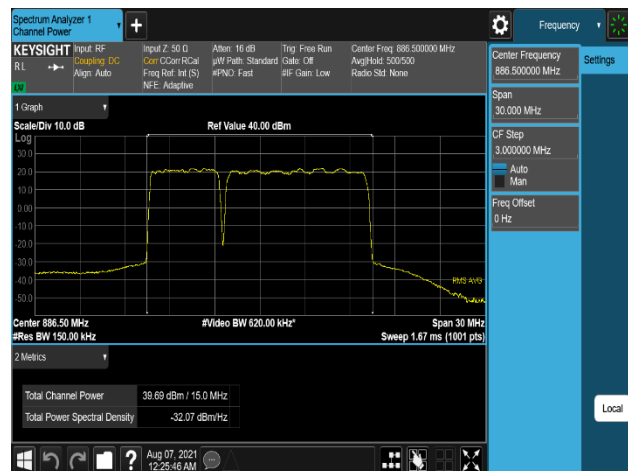
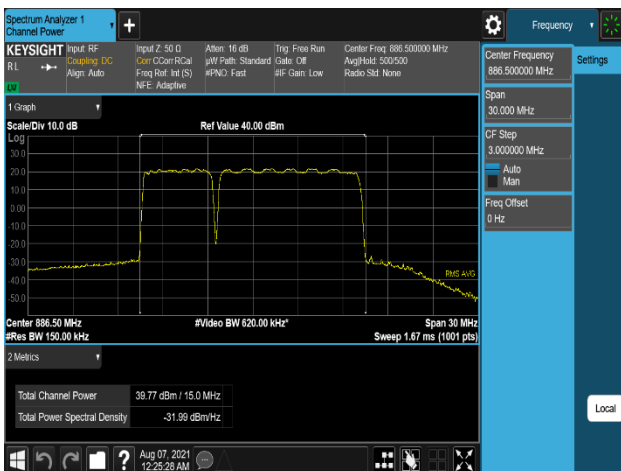
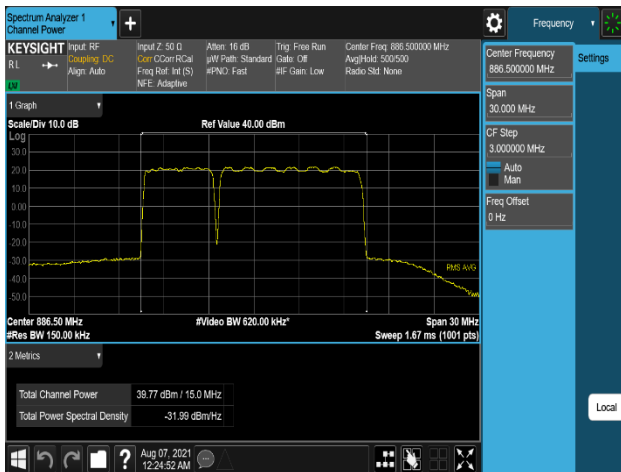
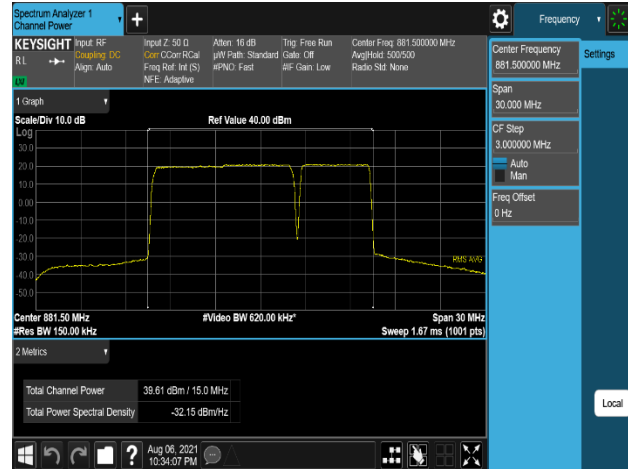
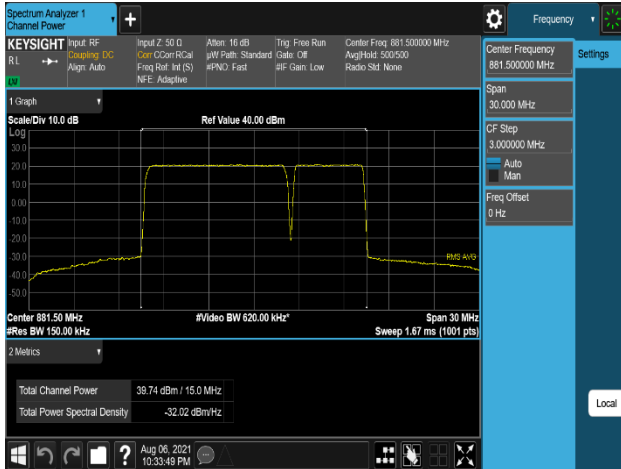
DSS Ratio	Channel	Port	QPSK	16QAM	64QAM	256QAM
LTE 5 : NR 5	Low	0	39.93	39.86	39.76	39.61
		1	39.97	39.92	39.81	39.88
		2	39.87	39.90	39.80	39.75
		3	39.88	39.86	39.87	39.76
		Total MIMO Conducted Power (mW)	39203.84	38955.41	38289.34	37771.59
		Total MIMO Conducted Power(dBm)	45.93	45.91	45.83	45.77
	Mid	0	39.72	39.69	39.46	39.81
		1	39.90	39.94	39.88	39.84
		2	39.76	39.82	39.71	39.84
		3	39.82	39.75	39.80	39.80
		Total MIMO Conducted Power (mW)	38204.37	38208.49	37462.25	38398.45
		Total MIMO Conducted Power(dBm)	45.82	45.82	45.74	45.84
	High	0	40.08	40.11	40.02	39.92
		1	39.98	39.95	39.98	39.92
		2	39.85	39.92	39.86	39.85
		3	39.77	39.71	39.72	39.70
		Total MIMO Conducted Power (mW)	39284.66	39313.59	39058.61	38628.01
		Total MIMO Conducted Power(dBm)	45.94	45.95	45.92	45.87

Table 7-54. Conducted Average Output Power Table (DSS_B5_10M+10M_2C)

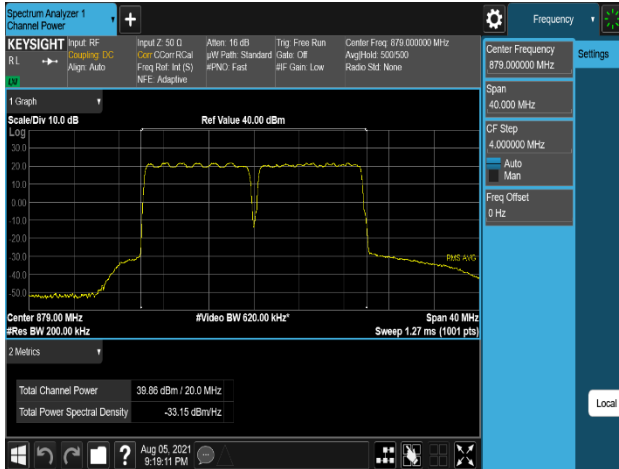
FCC ID: A3LRF4442D-13B		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Technical Manager
Test Report S/N: 8K21070502R3-01-R1.A3L	Test Dates: 07/09/2021 - 08/26/2021	EUT Type: RRU (RF4442d)		Page 86 of 240



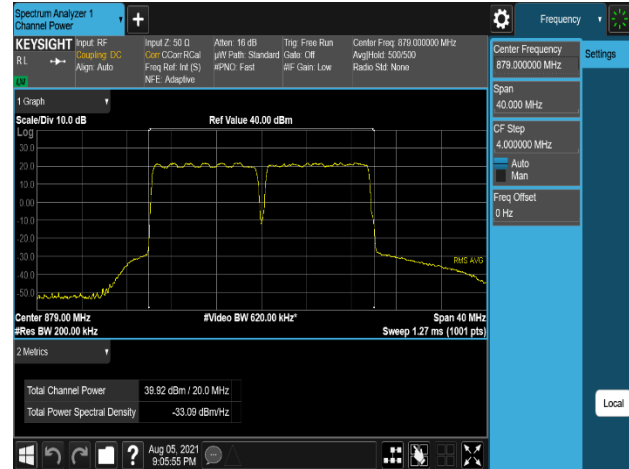
FCC ID: A3LRF4442D-13B	PCTEST ENGINEERING LABORATORY, INC.	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Technical Manager
Test Report S/N: 8K21070502R3-01-R1.A3L	Test Dates: 07/09/2021 - 08/26/2021	EUT Type: RRU (RF4442d)		Page 87 of 240



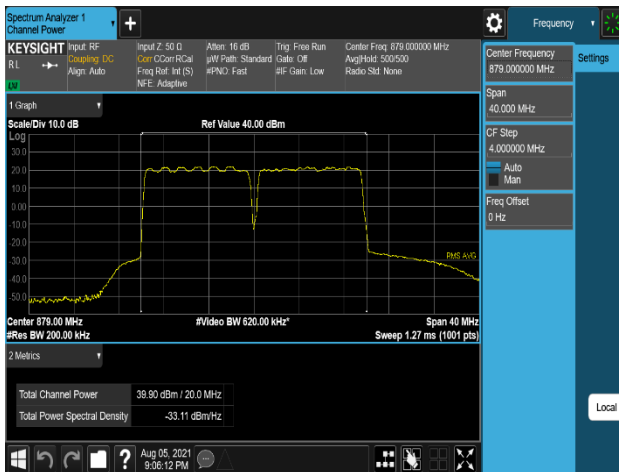
FCC ID: A3LRF4442D-13B	PCTEST ENGINEERING LABORATORY, INC.	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Technical Manager
Test Report S/N: 8K21070502R3-01-R1.A3L	Test Dates: 07/09/2021 - 08/26/2021	EUT Type: RRU (RF4442d)		Page 88 of 240



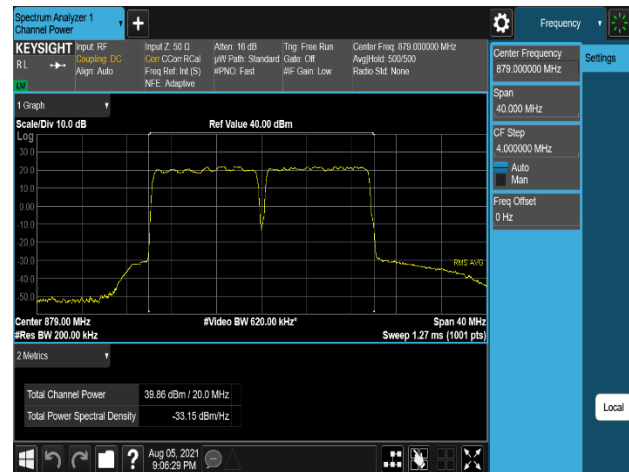
Plot 7-250. Conducted Average Output Power Plot
(DSS_B5_10M+10M_2C_16QAM - Low Channel, Port 0)



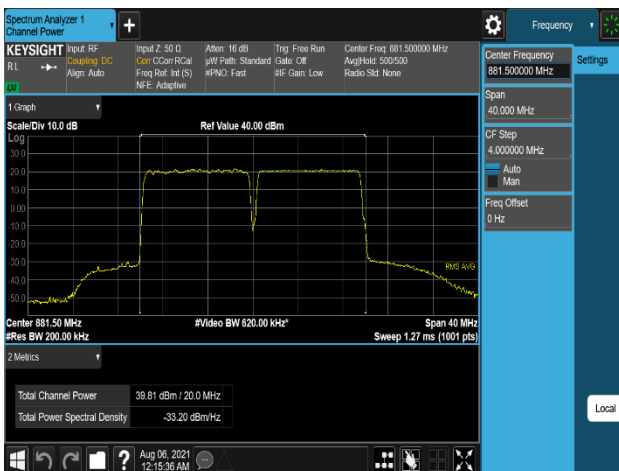
Plot 7-251. Conducted Average Output Power Plot
(DSS_B5_10M+10M_2C_16QAM - Low Channel, Port 1)



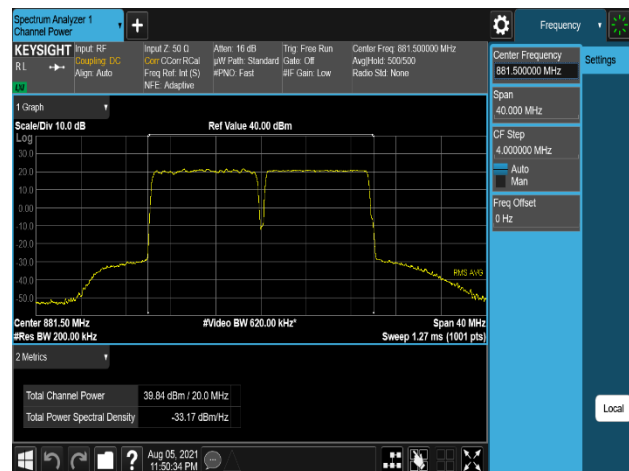
Plot 7-252. Conducted Average Output Power Plot
(DSS_B5_10M+10M_2C_16QAM - Low Channel, Port 2)



Plot 7-253. Conducted Average Output Power Plot
(DSS_B5_10M+10M_2C_16QAM - Low Channel, Port 3)

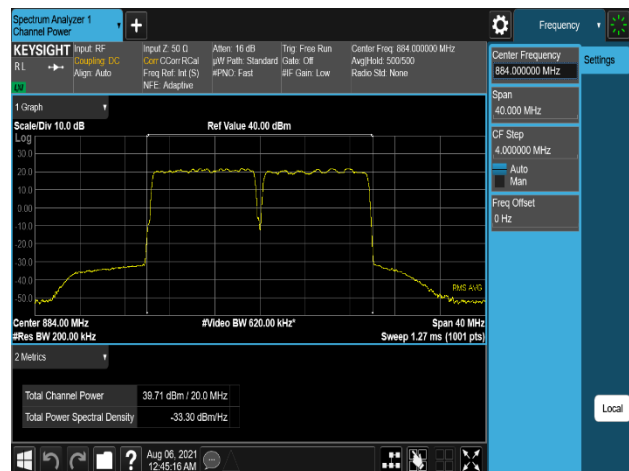
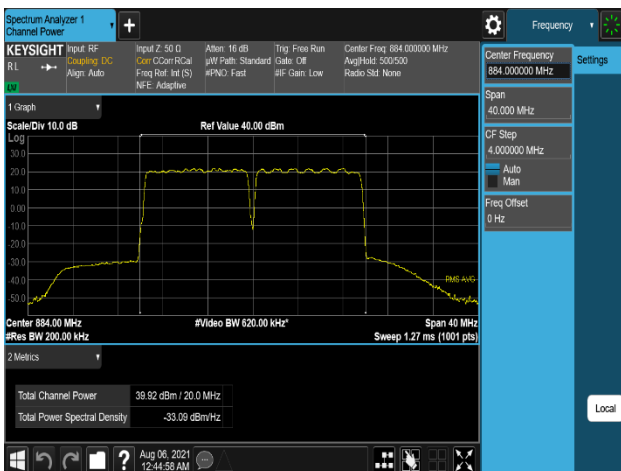
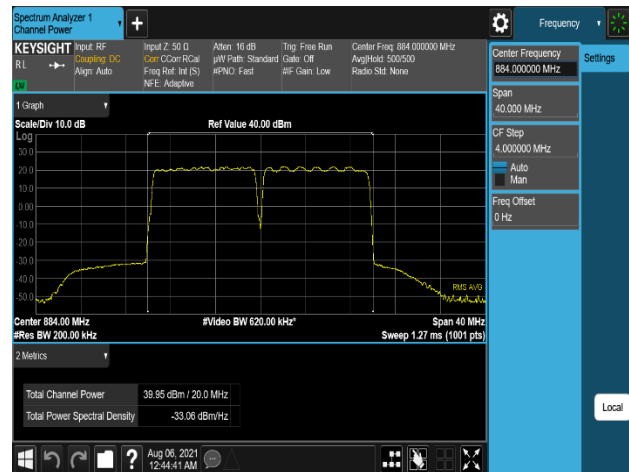
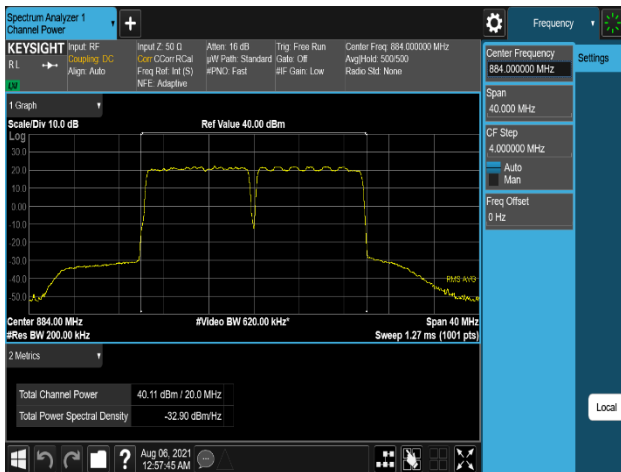
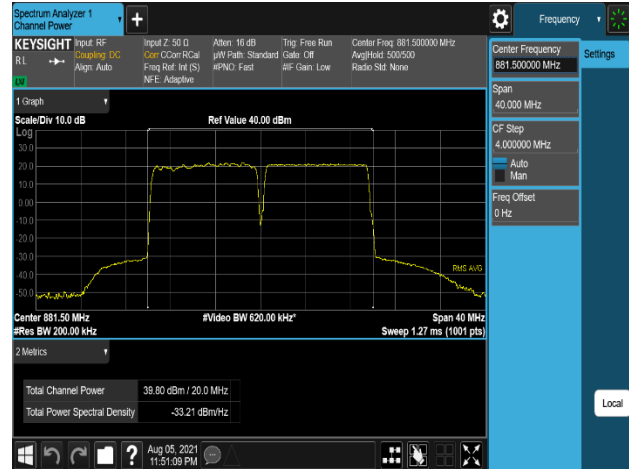


Plot 7-254. Conducted Average Output Power Plot
(DSS_B5_10M+10M_2C_256QAM - Mid Channel, Port 0)



Plot 7-255. Conducted Average Output Power Plot
(DSS_B5_10M+10M_2C_256QAM - Mid Channel, Port 1)

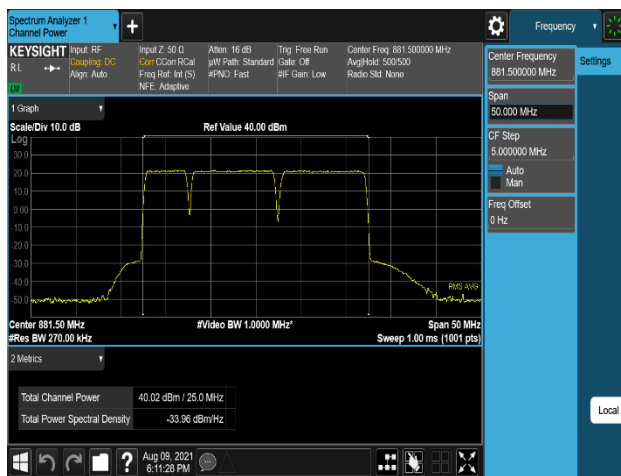
FCC ID: A3LRF4442D-13B	PCTEST ENGINEERING LABORATORY, INC.	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Technical Manager
Test Report S/N: 8K21070502R3-01-R1.A3L	Test Dates: 07/09/2021 - 08/26/2021	EUT Type: RRU (RF4442d)		Page 89 of 240



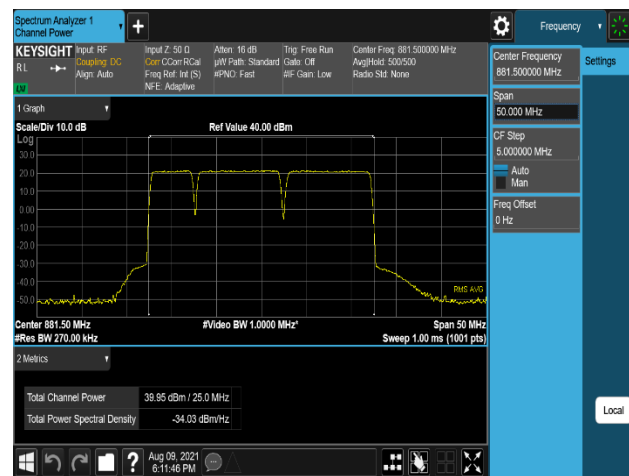
FCC ID: A3LRF4442D-13B	PCTEST ENGINEERING LABORATORY, INC.	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Technical Manager
Test Report S/N: 8K21070502R3-01-R1.A3L	Test Dates: 07/09/2021 - 08/26/2021	EUT Type: RRU (RF4442d)		Page 90 of 240

DSS Ratio	Channel	Port	QPSK	16QAM	64QAM	256QAM
LTE 5 : NR 5	Middle	0	40.02	40.10	40.05	40.09
		1	39.95	39.92	39.93	39.91
		2	39.96	39.93	39.87	39.91
		3	39.79	39.69	39.79	39.74
		Total MIMO Conducted Power (mW)	39367.97	39201.60	39188.97	39218.09
		Total MIMO Conducted Power(dBm)	45.95	45.93	45.93	45.93

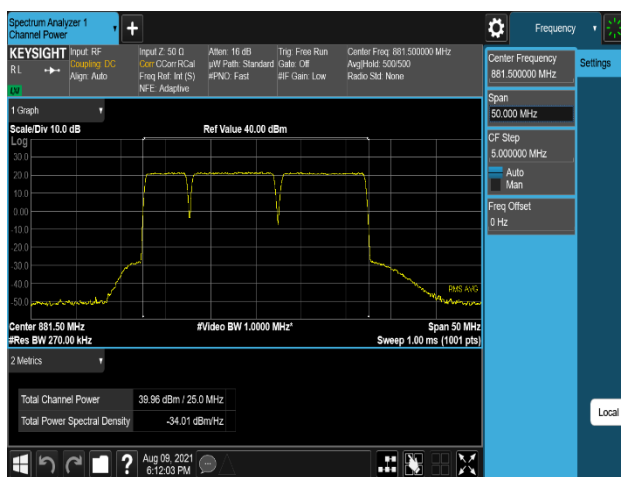
Table 7-55. Conducted Average Output Power Table (DSS_B5_10M+10M+5M_3C)



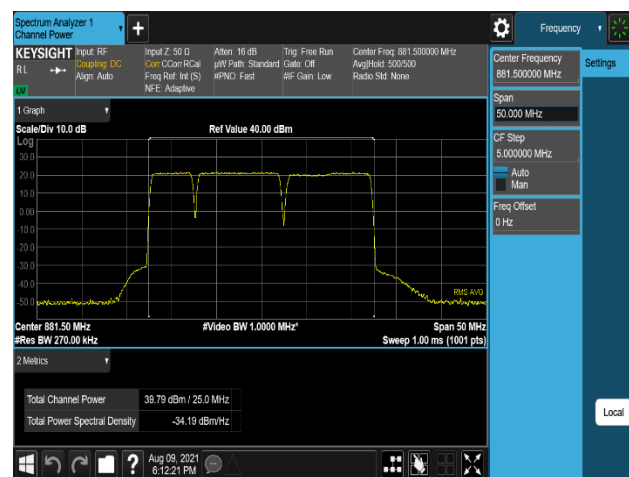
Plot 7-262. Conducted Average Output Power Plot (DSS_B5_10M+10M+5M_3C_QPSK - Port 0)



Plot 7-263. Conducted Average Output Power Plot (DSS_B5_10M+10M+5M_3C_QPSK - Port 1)



Plot 7-264. Conducted Average Output Power Plot (DSS_B5_10M+10M+5M_3C_QPSK - Port 2)



Plot 7-265. Conducted Average Output Power Plot (DSS_B5_10M+10M+5M_3C_QPSK - Port 3)

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7.4 Peak To Average Power Ratio (PAPR)

Test Overview

A peak to average ratio measurement is performed at the conducted port of the EUT. The spectrum analyzers Complementary Cumulative Distribution Function (CCDF) measurement profile is used to determine the largest deviation between the average and the peak power of the EUT in a given bandwidth. The CCDF curve shows how much time the peak waveform spends at or above a given average power level. The percent of time the signal spends at or above the level defines the probability for that particular power level.

Test Procedure Used

KDB 971168 D01 v03r01 – Section 5.7

ANSI C63.26-2015 – Section 5.2.3.4

Test Setting

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

1. The signal analyzer's CCDF function is enabled.
2. Frequency = carrier center frequency
3. Measurement BW \geq OBW or specified reference bandwidth
4. The signal analyzer was set to collect one million samples to generate the CCDF curve
5. The measurement interval was set depending on the type of signal analyzed. For continuous signals (>98% duty cycle), the measurement interval was set to 1ms.

Test Setup

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

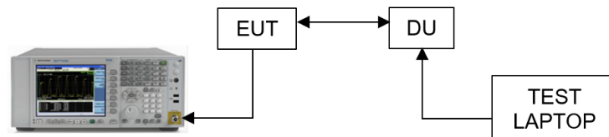


Figure 7-4. Test Instrument & Measurement Setup

Limit

The peak-to-average power ratio (PAPR) limit shall not exceed 13 dB for more than 0.1% of the time.

Test Notes

1. All ports and test channels were tested and only the worst case data were reported.
2. The port with highest PAPR i.e. worst case port per modulation has been highlighted in the following PAPR tables.
3. The peak to average ratio measurement is performed at the conducted ports of the EUT for single RAT mode.

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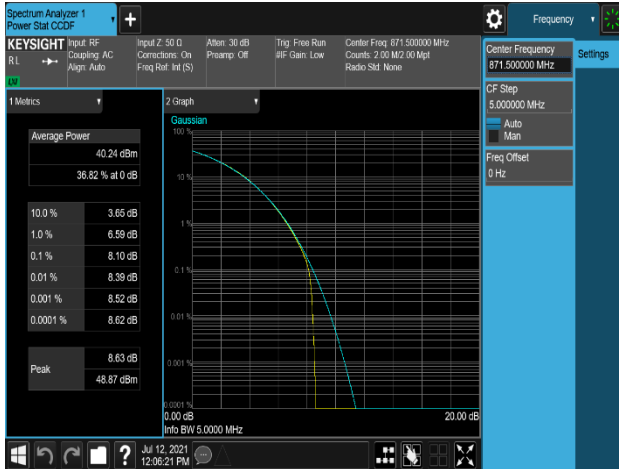
Channel	Port	PAPR (dB)				Limit (dB)
		QPSK	16QAM	64QAM	256QAM	
Low	0	8.05	8.07	8.07	8.10	< 13
	1	8.06	8.05	8.05	8.10	< 13
	2	8.07	8.05	8.06	8.10	< 13
	3	8.07	8.07	8.04	8.08	< 13
Middle	0	8.18	8.06	8.07	8.14	< 13
	1	8.09	8.03	8.04	8.10	< 13
	2	8.09	8.06	8.08	8.10	< 13
	3	8.09	8.10	8.07	8.09	< 13
High	0	8.11	8.08	8.05	8.09	< 13
	1	8.11	8.08	8.06	8.10	< 13
	2	8.11	8.05	8.06	8.10	< 13
	3	8.08	8.08	8.07	8.10	< 13

Table 7-56. Peak To Average Power Ratio Summary Data (LTE_B5_5M_1C)

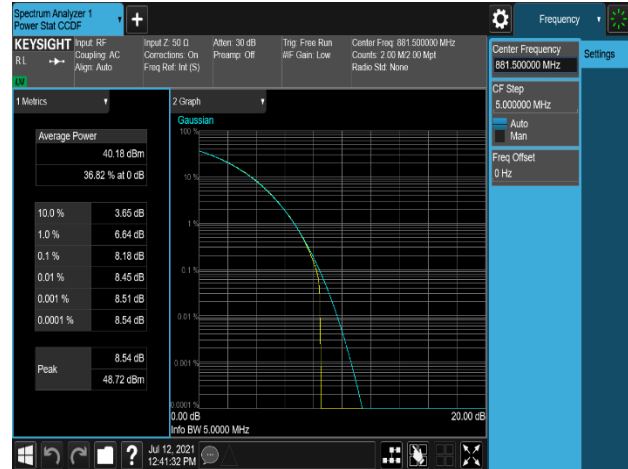
Channel	Port	PAPR (dB)				Limit (dB)
		QPSK	16QAM	64QAM	256QAM	
Low	0	8.06	8.04	8.08	8.16	< 13
	1	8.06	8.03	8.09	8.12	< 13
	2	8.09	8.04	8.10	8.10	< 13
	3	8.05	8.07	8.10	8.08	< 13
Middle	0	8.16	8.08	8.12	8.28	< 13
	1	8.11	8.05	8.11	8.13	< 13
	2	8.14	8.06	8.10	8.22	< 13
	3	8.11	8.10	8.08	8.13	< 13
High	0	8.11	8.06	8.10	8.14	< 13
	1	8.09	8.07	8.10	8.09	< 13
	2	8.11	8.06	8.11	8.12	< 13
	3	8.10	8.07	8.11	8.13	< 13

Table 7-57. Peak To Average Power Ratio Summary Data (LTE_B5_10M_1C)

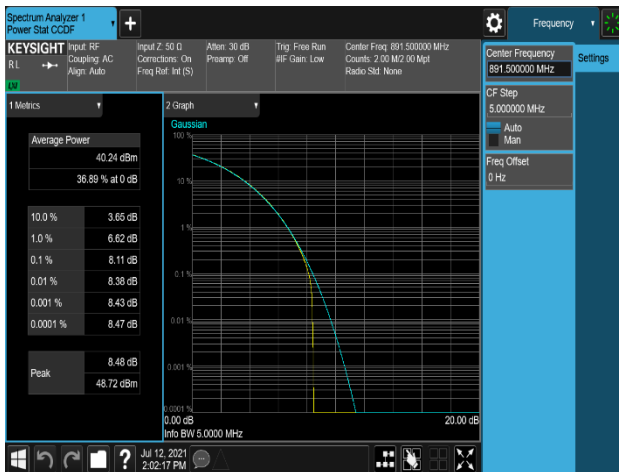
FCC ID: A3LRF4442D-13B	 MEASUREMENT REPORT (CERTIFICATION)			Approved by: Technical Manager
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Plot 7-266. Peak To Average Power Ratio Plot
(LTE_B5_5M_1C_256QAM - Low Channel, Port 0)



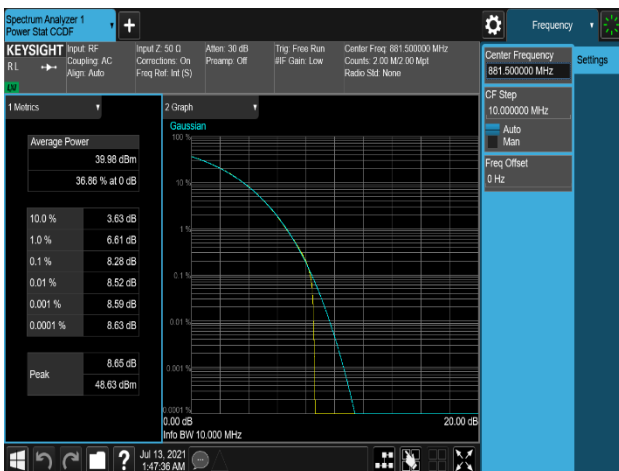
Plot 7-267. Peak To Average Power Ratio Plot
(LTE_B5_5M_1C_QPSK - Mid Channel, Port 0)



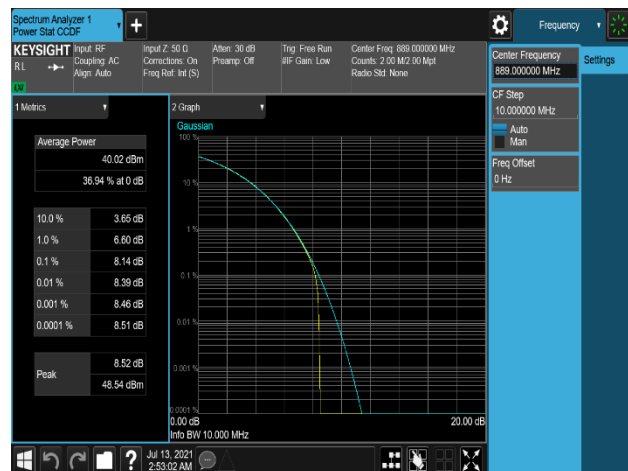
Plot 7-268. Peak To Average Power Ratio Plot
(LTE_B5_5M_1C_QPSK - High Channel, Port 0)



Plot 7-269. Peak To Average Power Ratio Plot
(LTE_B5_10M_1C_256QAM - Low Channel, Port 0)



Plot 7-270. Peak To Average Power Ratio Plot
(LTE_B5_10M_1C_256QAM - Mid Channel, Port 0)



Plot 7-271. Peak To Average Power Ratio Plot
(LTE_B5_10M_1C_256QAM - High Channel, Port 0)

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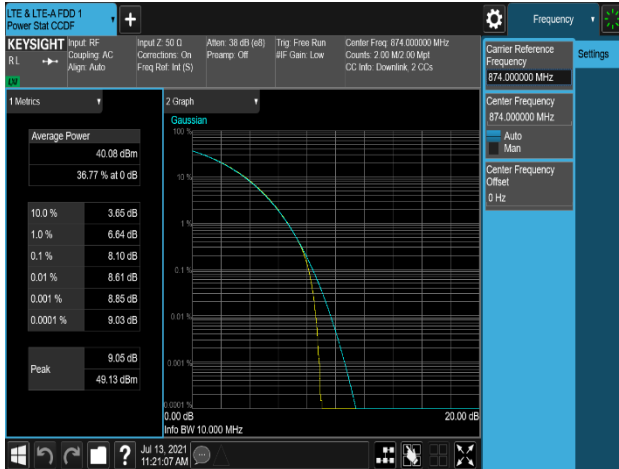
Channel	Port	PAPR (dB)				Limit (dB)
		QPSK	16QAM	64QAM	256QAM	
Low	0	8.08	8.07	8.10	8.06	< 13
	1	8.09	8.05	8.09	8.04	< 13
	2	8.10	8.06	8.07	8.05	< 13
	3	8.07	8.08	8.10	8.05	< 13
Middle	0	8.17	8.15	8.17	8.11	< 13
	1	8.14	8.11	8.13	8.07	< 13
	2	8.13	8.11	8.12	8.06	< 13
	3	8.12	8.10	8.12	8.06	< 13
High	0	8.16	8.11	8.13	8.09	< 13
	1	8.16	8.10	8.12	8.09	< 13
	2	8.11	8.10	8.13	8.09	< 13
	3	8.14	8.11	8.13	8.09	< 13

Table 7-58. Peak To Average Power Ratio Summary Data (LTE_B5_5M+5M_2C)

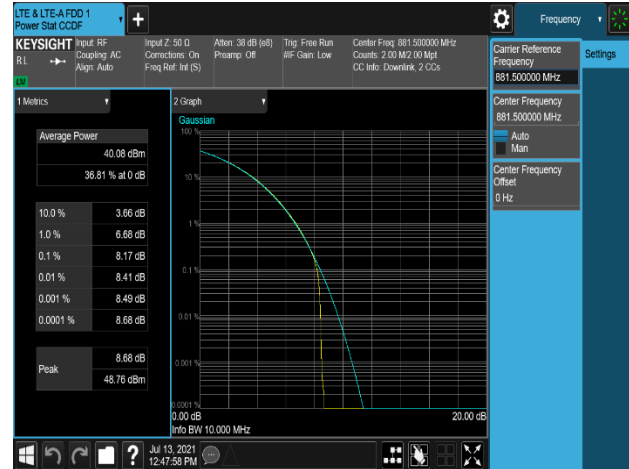
Channel	Port	PAPR (dB)				Limit (dB)
		QPSK	16QAM	64QAM	256QAM	
Low	0	8.09	8.09	8.10	8.14	< 13
	1	8.07	8.05	8.09	8.09	< 13
	2	8.15	8.10	8.09	8.12	< 13
	3	8.13	8.06	8.09	8.12	< 13
Middle	0	8.09	8.05	8.09	8.10	< 13
	1	8.05	8.05	8.08	8.09	< 13
	2	8.14	8.07	8.07	8.10	< 13
	3	8.12	8.05	8.07	8.09	< 13
High	0	8.15	8.10	8.11	8.15	< 13
	1	8.10	8.09	8.10	8.10	< 13
	2	8.13	8.12	8.12	8.11	< 13
	3	8.13	8.09	8.11	8.10	< 13

Table 7-59. Peak To Average Power Ratio Summary Data (LTE_B5_10M+10M_2C)

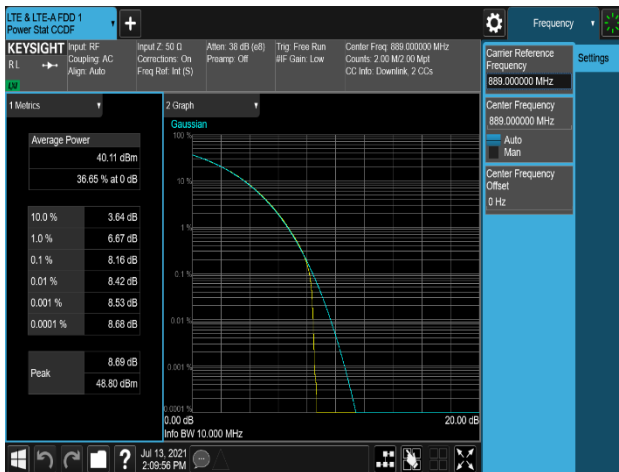
FCC ID: A3LRF4442D-13B	 MEASUREMENT REPORT (CERTIFICATION)			Approved by: Technical Manager
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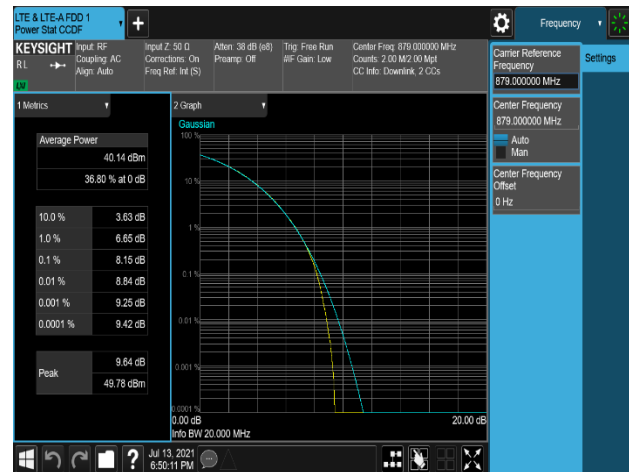
Plot 7-272. Peak To Average Power Ratio Plot
(LTE_B5_5M+5M_2C_QPSK - Low Channel, Port 2)



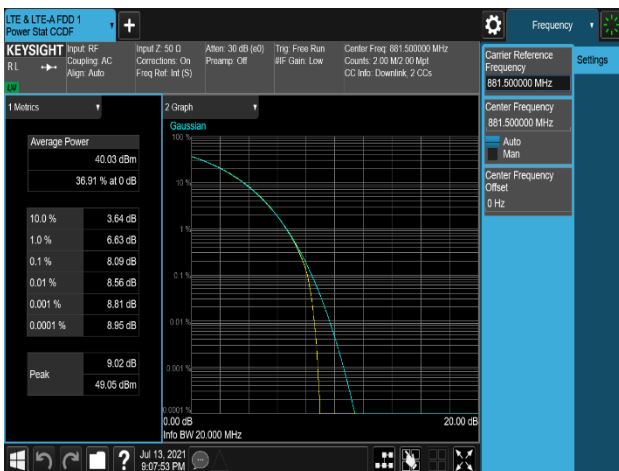
Plot 7-273. Peak To Average Power Ratio Plot
(LTE_B5_5M+5M_2C_QPSK - Mid Channel, Port 0)



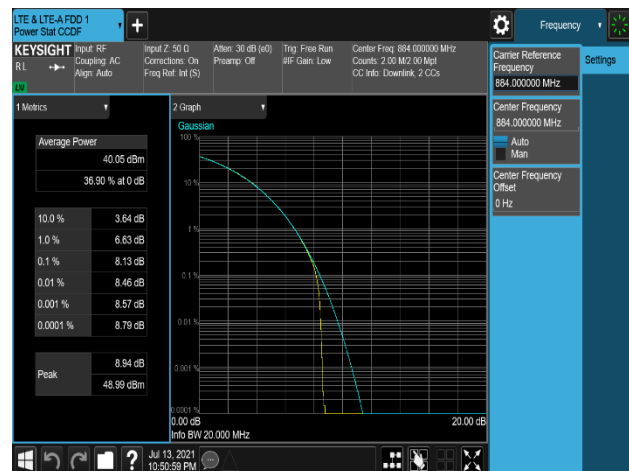
Plot 7-274. Peak To Average Power Ratio Plot
(LTE_B5_5M+5M_2C_QPSK - High Channel, Port 0)



Plot 7-275. Peak To Average Power Ratio Plot
(LTE_B5_10M+10M_2C_QPSK - Low Channel, Port 2)



Plot 7-276. Peak To Average Power Ratio Plot
(LTE_B5_10M+10M_2C_QPSK - Mid Channel, Port 2)

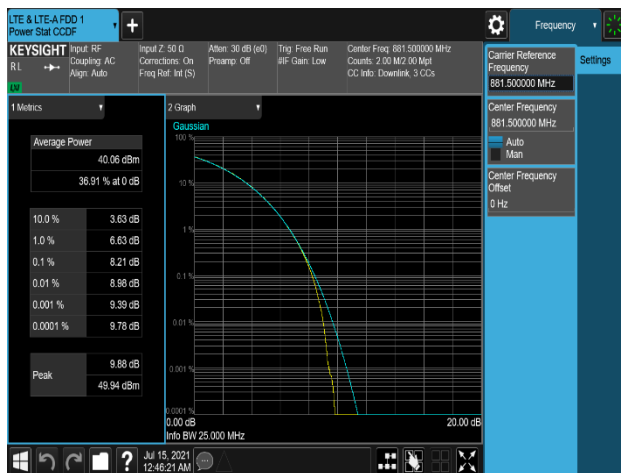


Plot 7-277. Peak To Average Power Ratio Plot
(LTE_B5_10M+10M_2C_QPSK - High Channel, Port 0)

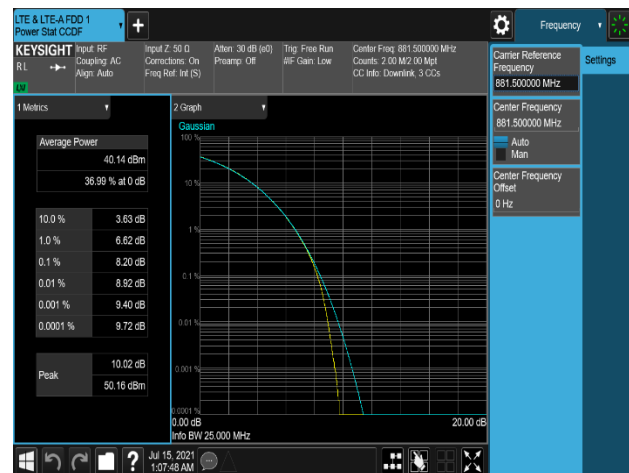
FCC ID: A3LRF4442D-13B	PCTEST ENGINEERING LABORATORY, INC.	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Technical Manager
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Channel	Port	PAPR (dB)				Limit (dB)
		QPSK	16QAM	64QAM	256QAM	
Middle	0	8.20	8.19	8.19	8.24	< 13
	1	8.21	8.18	8.20	8.21	< 13
	2	8.20	8.20	8.19	8.25	< 13
	3	8.17	8.20	8.19	8.25	< 13

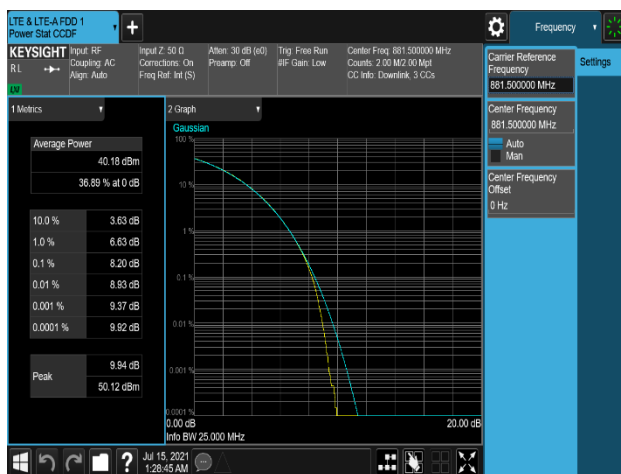
Table 7-60. Peak To Average Power Ratio Summary Data (LTE_B5_5M+10M+10M_3C)



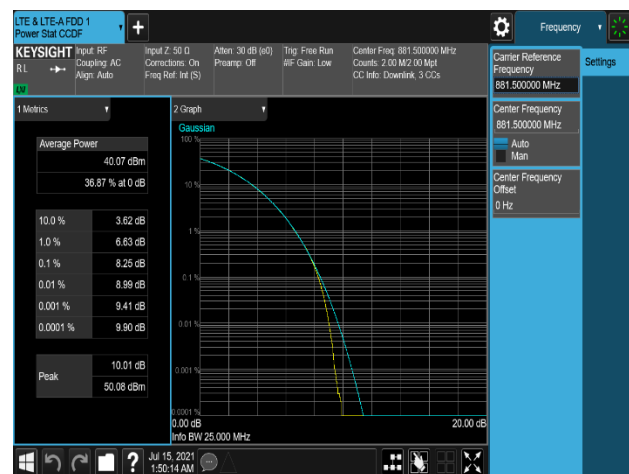
Plot 7-278. Peak To Average Power Ratio Plot (LTE_B5_5M+10M+10M_3C_QPSK - Low Channel, Port 1)



Plot 7-279. Peak To Average Power Ratio Plot (LTE_B5_5M+10M+10M_3C_16QAM - Low Channel, Port 2)




Plot 7-280. Peak To Average Power Ratio Plot (LTE_B5_5M+10M+10M_3C_64QAM - Low Channel, Port 1)



Plot 7-281. Peak To Average Power Ratio Plot (LTE_B5_5M+10M+10M_3C_256QAM - Low Channel, Port 2)

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DSS Ratio	Channel	Port	PAPR (dB)				Limit (dB)
			QPSK	16QAM	64QAM	256QAM	
LTE 9 : NR 1	Low	0	8.16	8.13	8.11	8.12	< 13
		1	8.14	8.12	8.10	8.11	< 13
		2	8.12	8.14	8.11	8.11	< 13
		3	8.13	8.15	8.08	8.10	< 13
	Middle	0	8.18	8.17	8.17	8.16	< 13
		1	8.15	8.18	8.14	8.15	< 13
		2	8.19	8.16	8.11	8.16	< 13
		3	8.17	8.14	8.12	8.17	< 13
	High	0	8.17	8.16	8.13	8.15	< 13
		1	8.16	8.16	8.17	8.15	< 13
		2	8.18	8.19	8.13	8.14	< 13
		3	8.18	8.14	8.14	8.15	< 13
LTE 8 : NR 2	Low	0	8.14	8.13	8.10	8.14	< 13
		1	8.15	8.16	8.08	8.15	< 13
		2	8.21	8.19	8.10	8.15	< 13
		3	8.20	8.14	8.12	8.13	< 13
	Middle	0	8.17	8.17	8.20	8.18	< 13
		1	8.17	8.17	8.14	8.18	< 13
		2	8.17	8.17	8.14	8.18	< 13
		3	8.16	8.17	8.13	8.16	< 13
	High	0	8.20	8.17	8.13	8.18	< 13
		1	8.17	8.19	8.14	8.16	< 13
		2	8.19	8.20	8.16	8.18	< 13
		3	8.19	8.17	8.14	8.19	< 13
LTE 7 : NR 3	Low	0	8.19	8.12	8.17	8.19	< 13
		1	8.18	8.15	8.19	8.20	< 13
		2	8.17	8.16	8.19	8.18	< 13
		3	8.14	8.14	8.17	8.19	< 13
	Middle	0	8.21	8.19	8.13	8.23	< 13
		1	8.21	8.21	8.14	8.23	< 13
		2	8.22	8.21	8.17	8.23	< 13
		3	8.19	8.23	8.15	8.22	< 13
	High	0	8.19	8.19	8.19	8.23	< 13
		1	8.19	8.19	8.18	8.20	< 13
		2	8.22	8.22	8.16	8.23	< 13
		3	8.17	8.18	8.15	8.25	< 13
LTE 6 : NR 4	Low	0	8.23	8.19	8.18	8.15	< 13
		1	8.19	8.19	8.15	8.21	< 13
		2	8.18	8.19	8.18	8.22	< 13
		3	8.16	8.21	8.17	8.18	< 13
	Middle	0	8.20	8.26	8.11	8.19	< 13
		1	8.17	8.26	8.12	8.20	< 13
		2	8.18	8.25	8.11	8.21	< 13
		3	8.17	8.24	8.13	8.19	< 13
	High	0	8.22	8.22	8.19	8.22	< 13
		1	8.17	8.20	8.23	8.26	< 13
		2	8.22	8.24	8.19	8.24	< 13
		3	8.18	8.20	8.16	8.21	< 13

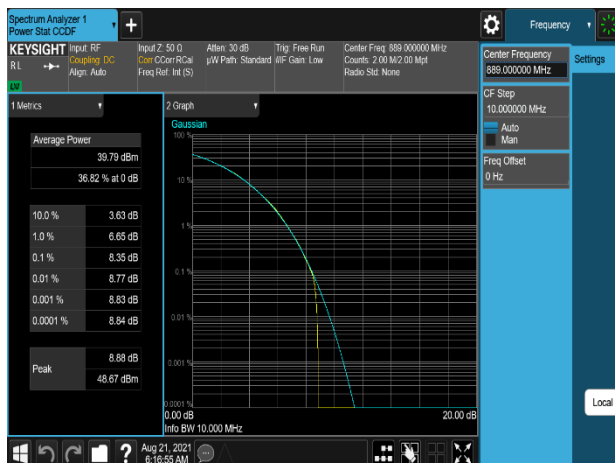
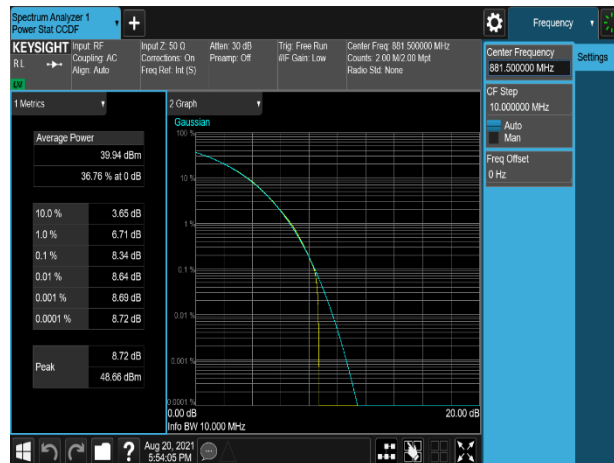
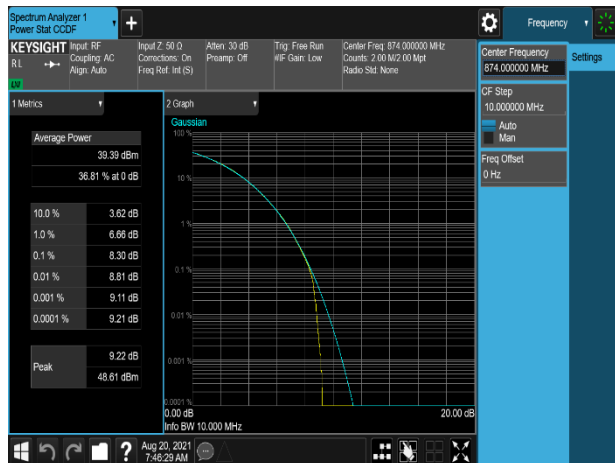
FCC ID: A3LRF4442D-13B		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Technical Manager
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LTE 5 : NR 5	Low	0	8.21	8.27	8.13	8.24	< 13
		1	8.17	8.20	8.15	8.26	< 13
		2	8.21	8.24	8.10	8.22	< 13
		3	8.18	8.22	8.14	8.26	< 13
	Middle	0	8.25	8.22	8.28	8.28	< 13
		1	8.18	8.28	8.28	8.28	< 13
		2	8.19	8.28	8.26	8.27	< 13
		3	8.22	8.25	8.22	8.19	< 13
	High	0	8.23	8.21	8.24	8.27	< 13
		1	8.22	8.23	8.14	8.27	< 13
		2	8.24	8.26	8.18	8.25	< 13
		3	8.21	8.22	8.22	8.23	< 13
LTE 4 : NR 6	Low	0	8.30	8.25	8.10	8.21	< 13
		1	8.25	8.27	8.14	8.26	< 13
		2	8.25	8.26	8.17	8.26	< 13
		3	8.24	8.22	8.12	8.24	< 13
	Middle	0	8.25	8.31	8.22	8.33	< 13
		1	8.24	8.28	8.24	8.31	< 13
		2	8.26	8.28	8.26	8.26	< 13
		3	8.28	8.27	8.22	8.23	< 13
	High	0	8.27	8.22	8.16	8.23	< 13
		1	8.24	8.27	8.23	8.25	< 13
		2	8.23	8.28	8.24	8.29	< 13
		3	8.22	8.24	8.24	8.26	< 13
LTE 7 : NR 3	Low	0	8.24	8.31	8.23	8.27	< 13
		1	8.22	8.30	8.23	8.18	< 13
		2	8.25	8.27	8.19	8.26	< 13
		3	8.25	8.25	8.12	8.21	< 13
	Middle	0	8.26	8.30	8.18	8.34	< 13
		1	8.27	8.32	8.15	8.32	< 13
		2	8.27	8.30	8.12	8.32	< 13
		3	8.26	8.26	8.17	8.29	< 13
	High	0	8.25	8.28	8.19	8.23	< 13
		1	8.24	8.27	8.22	8.26	< 13
		2	8.20	8.25	8.24	8.27	< 13
		3	8.23	8.25	8.24	8.27	< 13
LTE 2 : NR 8	Low	0	8.27	8.29	8.11	8.26	< 13
		1	8.27	8.27	8.16	8.26	< 13
		2	8.30	8.27	8.22	8.29	< 13
		3	8.28	8.29	8.25	8.30	< 13
	Middle	0	8.23	8.34	8.27	8.31	< 13
		1	8.26	8.28	8.26	8.25	< 13
		2	8.29	8.30	8.24	8.27	< 13
		3	8.27	8.27	8.16	8.31	< 13
	High	0	8.27	8.30	8.16	8.26	< 13
		1	8.28	8.29	8.21	8.34	< 13
		2	8.30	8.29	8.24	8.33	< 13
		3	8.28	8.26	8.26	8.35	< 13

Table 7-61. Peak To Average Power Ratio Summary Data (DSS_B5_10M_1C)

Note: Test result is no big difference depending on DSS Ratio. So, the only worst-ratio plots are included in this report.

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DSS Ratio	Channel	Port	PAPR (dB)				Limit (dB)
			QPSK	16QAM	64QAM	256QAM	
LTE 5 : NR 5	Low	0	8.64	8.41	8.49	8.56	< 13
		1	8.48	8.52	8.47	8.49	< 13
		2	8.66	8.41	8.45	8.53	< 13
		3	8.62	8.62	8.69	8.63	< 13
	Middle	0	8.46	8.52	8.51	8.46	< 13
		1	8.45	8.42	8.49	8.41	< 13
		2	8.42	8.64	8.44	8.43	< 13
		3	8.63	8.60	8.64	8.63	< 13
	High	0	8.45	8.58	8.47	8.50	< 13
		1	8.43	8.43	8.46	8.46	< 13
		2	8.40	8.49	8.44	8.45	< 13
		3	8.68	8.65	8.67	8.61	< 13

Table 7-62. Peak To Average Power Ratio Summary Data (DSS_B5_10M+5M_2C)

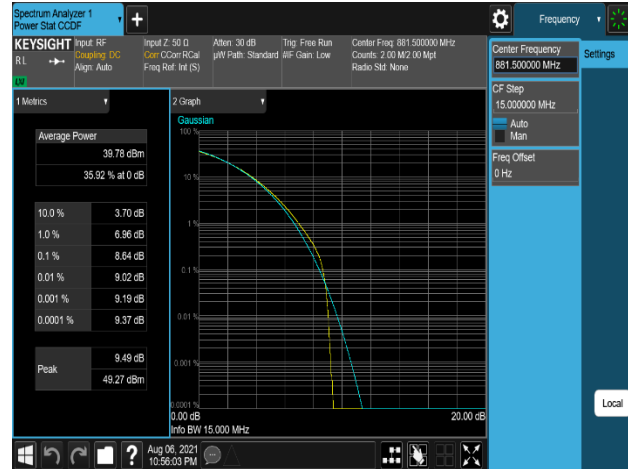
DSS Ratio	Channel	Port	PAPR (dB)				Limit (dB)
			QPSK	16QAM	64QAM	256QAM	
LTE 5 : NR 5	Low	0	8.34	8.34	8.37	8.39	< 13
		1	8.33	8.32	8.33	8.38	< 13
		2	8.34	8.35	8.33	8.36	< 13
		3	8.49	8.47	8.45	8.48	< 13
	Middle	0	8.33	8.34	8.35	8.41	< 13
		1	8.27	8.34	8.36	8.43	< 13
		2	8.39	8.25	8.32	8.36	< 13
		3	8.45	8.38	8.50	8.48	< 13
	High	0	8.35	8.36	8.36	8.36	< 13
		1	8.32	8.34	8.32	8.36	< 13
		2	8.38	8.34	8.34	8.40	< 13
		3	8.50	8.45	8.51	8.52	< 13

Table 7-63. Peak To Average Power Ratio Summary Data (DSS_B5_10M+10M_2C)

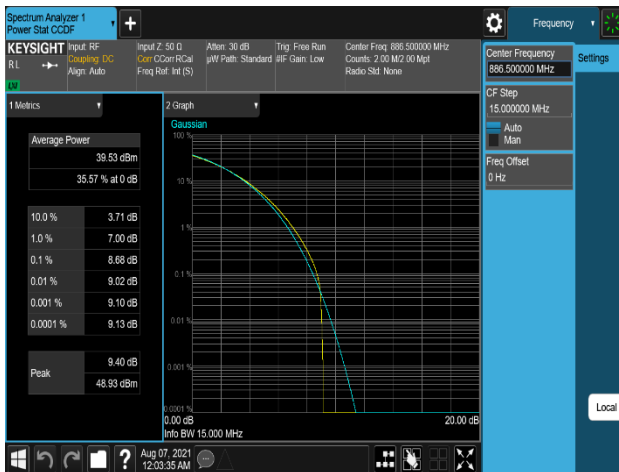
FCC ID: A3LRF4442D-13B		MEASUREMENT REPORT (CERTIFICATION)			Approved by: Technical Manager
Test Report S/N: 8K21070502R3-01-R1.A3L	Test Dates: 07/09/2021 - 08/26/2021	EUT Type: RRU (RF4442d)			Page 101 of 240



Plot 7-285. Peak To Average Power Ratio Plot
(DSS_B5_10M+5M_2C_64QAM - Low Channel, Port 3)



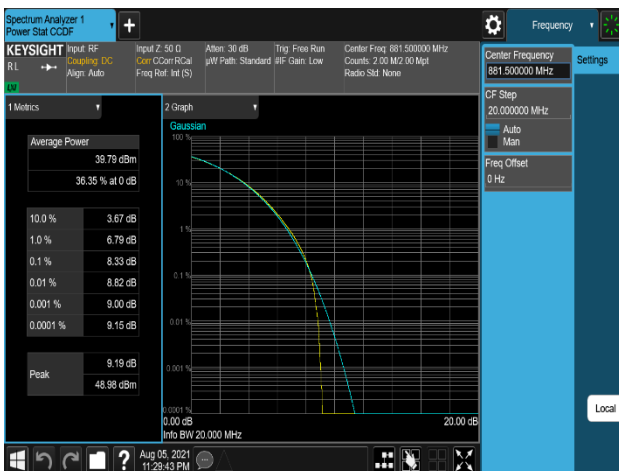
Plot 7-286. Peak To Average Power Ratio Plot
(DSS_B5_10M+5M_2C_16QAM - Mid Channel, Port 2)



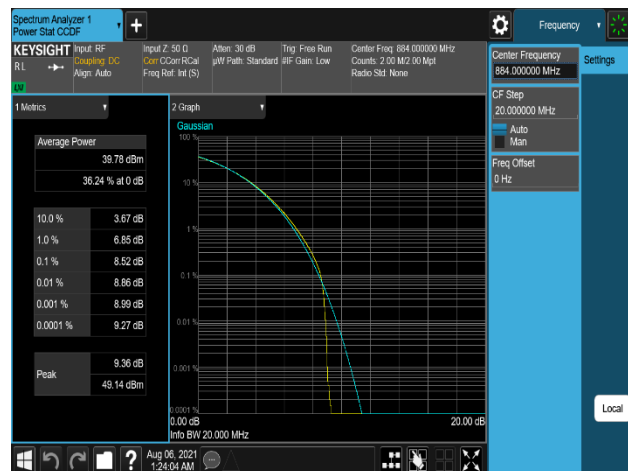
Plot 7-287. Peak To Average Power Ratio Plot
(DSS_B5_10M+5M_2C_QPSK - High Channel, Port 3)





Plot 7-288. Peak To Average Power Ratio Plot
(DSS_B5_10M+10M_2C_QPSK - Low Channel, Port 3)



Plot 7-289. Peak To Average Power Ratio Plot
(DSS_B5_10M+10M_2C_64QAM - Mid Channel, Port 2)



Plot 7-290. Peak To Average Power Ratio Plot
(DSS_B5_10M+10M_2C_256QAM - High Channel, Port 3)

FCC ID: A3LRF4442D-13B		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Technical Manager
Test Report S/N: 8K21070502R3-01-R1.A3L	Test Dates: 07/09/2021 - 08/26/2021	EUT Type: RRU (RF4442d)		Page 102 of 240