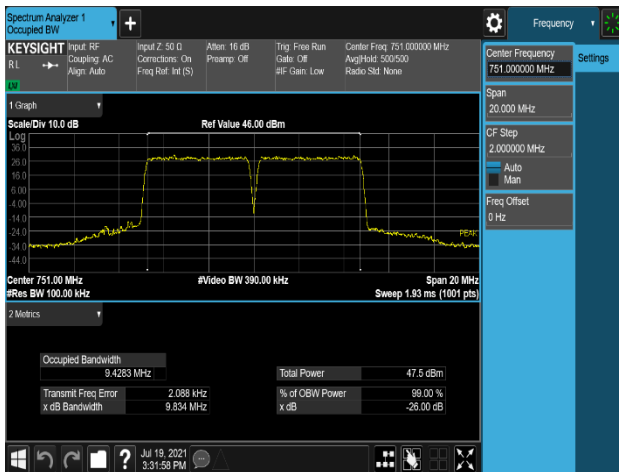
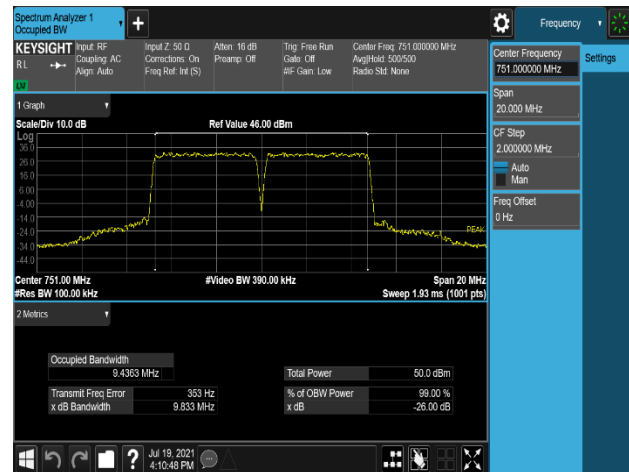


Channel	Port	OBW (MHz)			
		QPSK	16QAM	64QAM	256QAM
Middle	0	9.43	9.43	9.43	9.43
	1	9.43	9.43	9.42	9.44
	2	9.42	9.42	9.42	9.44
	3	9.43	9.44	9.43	9.44

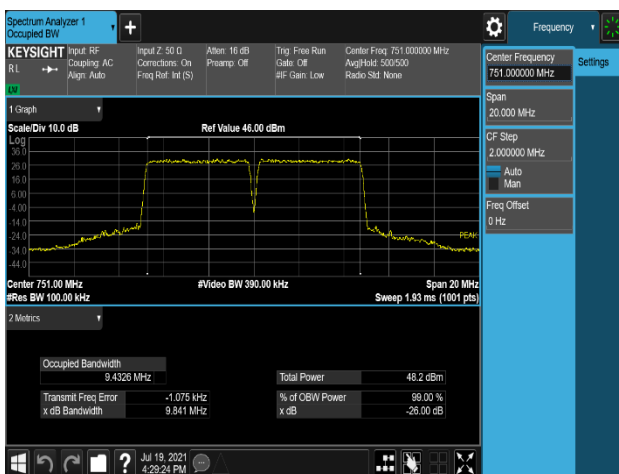
Table 7-9. Occupied Bandwidth Summary Data (LTE_B13_5M+5M_2C)



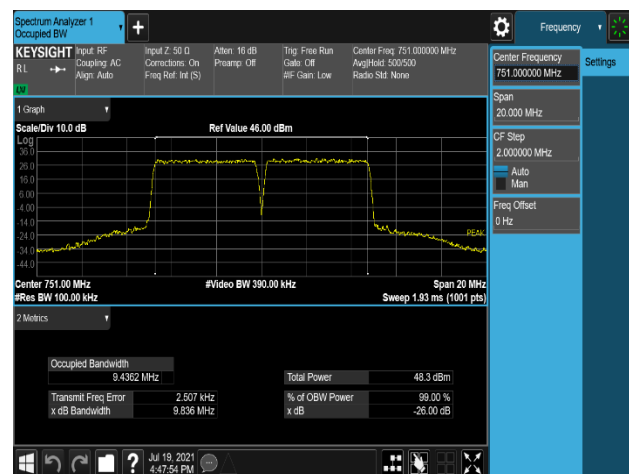
**Plot 7-69. Occupied Bandwidth Plot
(LTE_B13_5M+5M_2C_QPSK - Port 0)**



**Plot 7-70. Occupied Bandwidth Plot
(LTE_B13_5M+5M_2C_16QAM - Port 3)**



**Plot 7-71. Occupied Bandwidth Plot
(LTE_B13_5M+5M_2C_64QAM - Port 0)**



**Plot 7-72. Occupied Bandwidth Plot
(LTE_B13_5M+5M_2C_256QAM - Port 1)**

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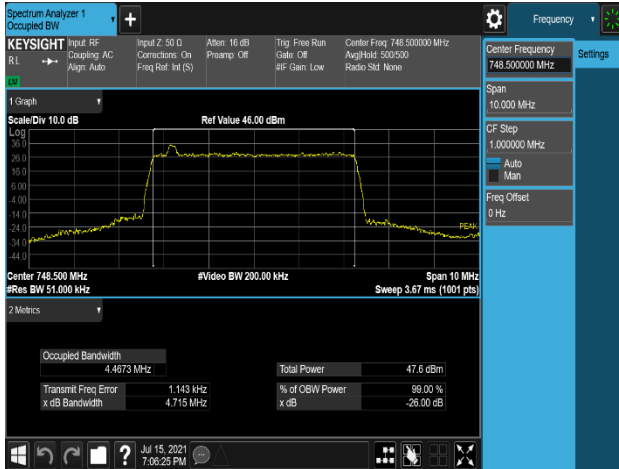
Channel	Port	OBW (MHz)
Low	0	4.47
	1	4.47
	2	4.47
	3	4.47
Middle	0	4.47
	1	4.47
	2	4.47
	3	4.47
High	0	4.47
	1	4.47
	2	4.47
	3	4.47

Table 7-10. Occupied Bandwidth Summary Data (LTE_B13_5M+NB-IOT(IB)_1C)

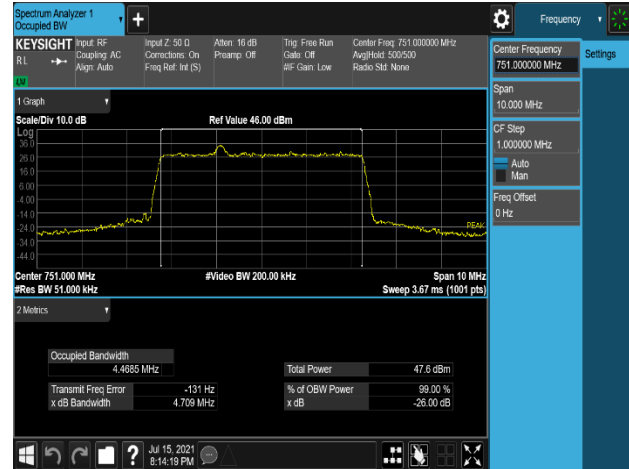
Configuration	Port	OBW (MHz)
B13_10M+Low_NB-IOT(IB)+High_NB-IOT(IB)_3C	0	8.95
	1	8.97
	2	8.95
	3	8.95
B13_10M+Low_NB-IOT(IB)+Low_NB-IOT(IB)_3C	0	8.95
	1	8.94
	2	8.96
	3	8.95
B13_10M+High_NB-IOT(IB)+High_NB-IOT(IB)_3C	0	8.96
	1	8.97
	2	8.97
	3	8.97

Table 7-11. Occupied Bandwidth Summary Data (LTE_B13_10M+NB-IOT(IB)+NB-IOT(IB)_1C)

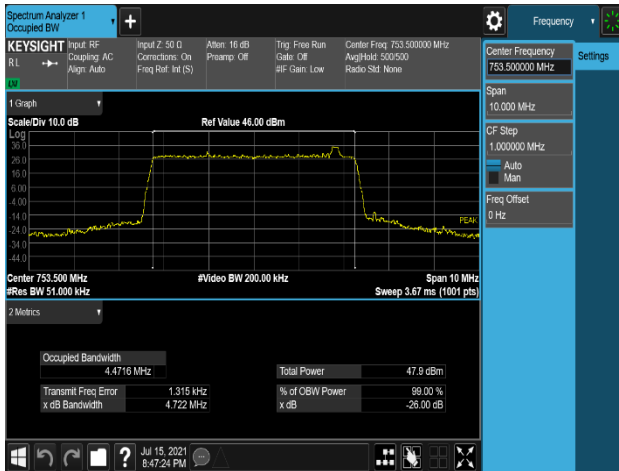
FCC ID: A3LRF4442D-13A		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Technical Manager
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Plot 7-73. Occupied Bandwidth Plot
(LTE_B13_5M+NB-lot(IB)_1C_QPSK - Low Channel, Port 0)



Plot 7-74. Occupied Bandwidth Plot
(LTE_B13_5M+NB-lot(IB)_1C_QPSK - Mid Channel, Port 0)



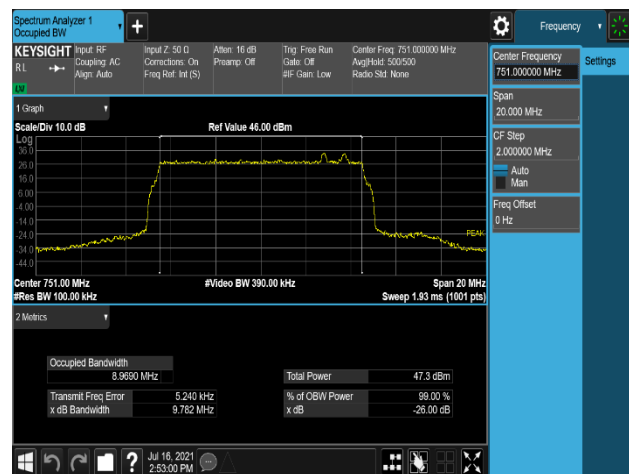
Plot 7-75. Occupied Bandwidth Plot
(LTE_B13_5M+NB-lot(IB)_1C_QPSK - High Channel, Port 0)



Plot 7-76. Occupied Bandwidth Plot
(LTE_B13_10M+Low_NB-lot(IB)+High_NB-lot(IB)_1C_QPSK - Port 1)



Plot 7-77. Occupied Bandwidth Plot
(LTE_B13_10M+Low_NB-lot(IB)+Low_NB-lot(IB)_1C_QPSK-Port 0)



Plot 7-78. Occupied Bandwidth Plot
(LTE_B13_10M+High_NB-lot(IB)+High_NB-lot(IB)_3C_QPSK-Port 0)

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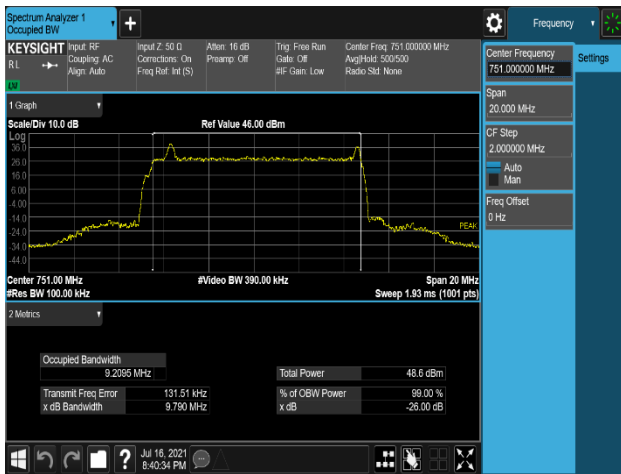
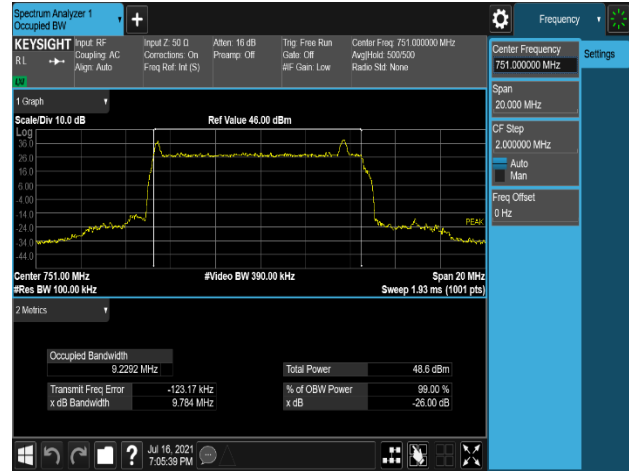
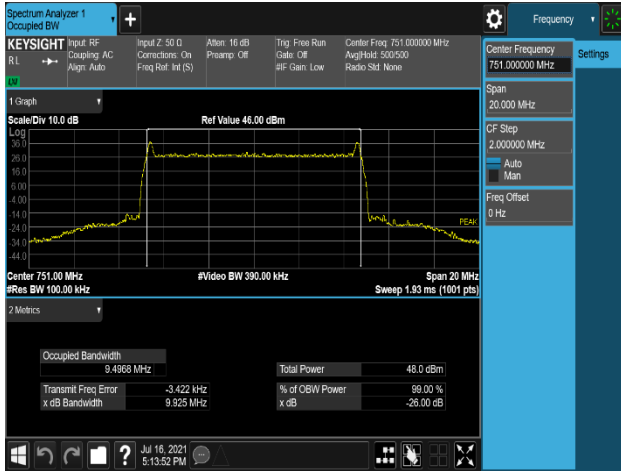
Channel	Port	OBW (MHz)
Middle	0	9.49
	1	9.50
	2	9.49
	3	9.49

Table 7-12. Occupied Bandwidth Summary Data (LTE_B13_10M+NB-IoT(GB)+ NB-IoT(GB)_3C)

Configuration	Port	OBW (MHz)
B13_10M+Low_NB-IoT(GB)+High_NB-IoT(IB)_2C	0	9.23
	1	9.22
	2	9.22
	3	9.21
B13_10M+High_NB-IoT(GB)+Low_NB-IoT(IB)_2C	0	9.22
	1	9.21
	2	9.22
	3	9.22

Table 7-13. Occupied Bandwidth Summary Data (LTE_B13_10M+NB-IoT(IB)+ NB-IoT(GB)_2C)

FCC ID: A3LRF4442D-13A		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Technical Manager
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DSS Ratio	Channel	Port	OBW (MHz)			
			QPSK	16QAM	64QAM	256QAM
LTE 9: NR 1	Low	0	9.21	9.16	9.21	9.18
		1	9.19	9.15	9.16	9.18
		2	9.20	9.15	9.14	9.16
		3	9.23	9.19	9.19	9.14
	Middle	0	9.22	9.16	9.18	9.16
		1	9.22	9.18	9.21	9.15
		2	9.24	9.17	9.20	9.17
		3	9.23	9.18	9.19	9.19
	High	0	9.19	9.19	9.20	9.15
		1	9.22	9.17	9.20	9.17
		2	9.22	9.21	9.21	9.18
		3	9.22	9.17	9.13	9.18
LTE 8: NR 2	Low	0	9.24	9.18	9.20	9.18
		1	9.24	9.19	9.20	9.18
		2	9.25	9.20	9.22	9.20
		3	9.26	9.19	9.21	9.19
	Middle	0	9.25	9.18	9.20	9.21
		1	9.25	9.17	9.22	9.19
		2	9.26	9.19	9.22	9.20
		3	9.26	9.17	9.23	9.21
	High	0	9.26	9.18	9.22	9.21
		1	9.22	9.18	9.22	9.20
		2	9.25	9.21	9.20	9.19
		3	9.26	9.19	9.23	9.19
LTE 7: NR 3	Low	0	9.26	9.18	9.23	9.20
		1	9.25	9.19	9.23	9.19
		2	9.27	9.17	9.23	9.19
		3	9.27	9.18	9.24	9.22
	Middle	0	9.27	9.20	9.26	9.20
		1	9.26	9.19	9.24	9.22
		2	9.27	9.19	9.22	9.22
		3	9.26	9.20	9.23	9.22
	High	0	9.26	9.19	9.21	9.22
		1	9.26	9.18	9.23	9.21
		2	9.26	9.19	9.22	9.21
		3	9.26	9.19	9.22	9.22
LTE 6: NR 4	Low	0	9.26	9.19	9.25	9.22
		1	9.27	9.18	9.23	9.22
		2	9.25	9.19	9.25	9.22
		3	9.27	9.19	9.22	9.22
	Middle	0	9.27	9.19	9.25	9.22
		1	9.27	9.19	9.24	9.21
		2	9.27	9.20	9.26	9.23
		3	9.28	9.18	9.23	9.21
	High	0	9.27	9.21	9.23	9.21
		1	9.27	9.20	9.21	9.23
		2	9.26	9.18	9.22	9.23
		3	9.27	9.19	9.21	9.22

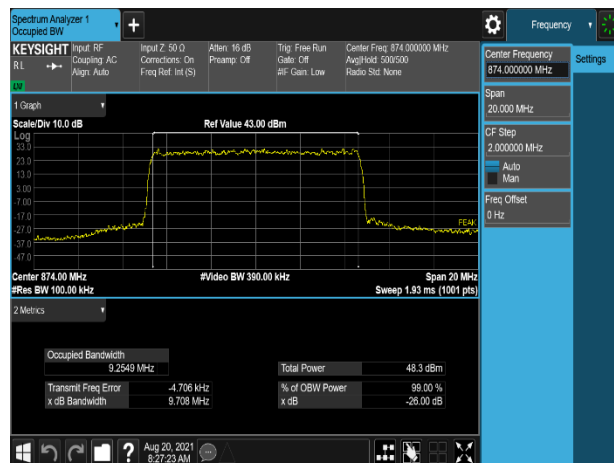
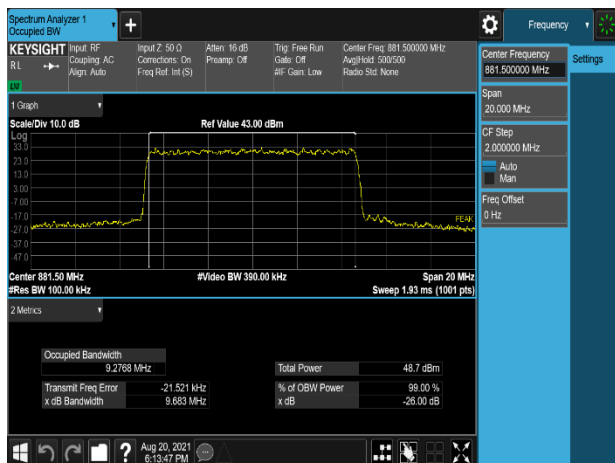
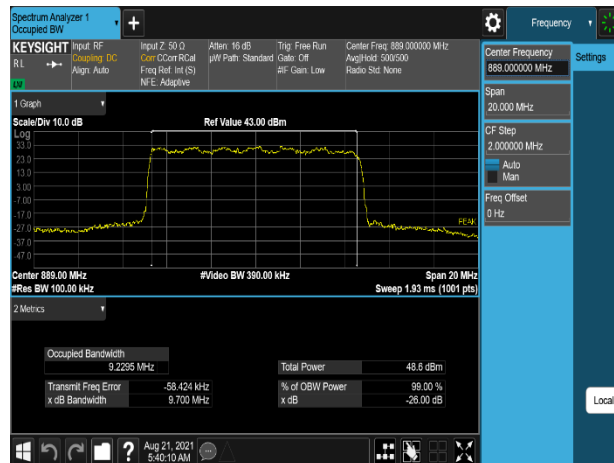
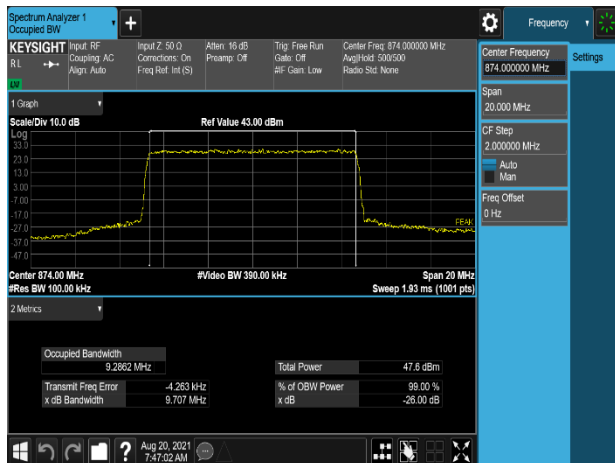
FCC ID: A3LRF4442D-13A		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Technical Manager
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LTE 5: NR 5	Low	0	9.27	9.19	9.25	9.22
		1	9.28	9.20	9.23	9.22
		2	9.27	9.20	9.24	9.24
		3	9.27	9.19	9.23	9.24
	Middle	0	9.28	9.20	9.23	9.24
		1	9.28	9.22	9.24	9.23
		2	9.28	9.20	9.24	9.24
		3	9.28	9.18	9.25	9.24
	High	0	9.27	9.21	9.24	9.23
		1	9.27	9.21	9.25	9.23
		2	9.27	9.19	9.23	9.22
		3	9.28	9.20	9.23	9.20
LTE 4: NR 6	Low	0	9.28	9.19	9.26	9.24
		1	9.28	9.19	9.25	9.24
		2	9.28	9.19	9.25	9.24
		3	9.28	9.19	9.25	9.23
	Middle	0	9.28	9.20	9.26	9.24
		1	9.28	9.20	9.25	9.24
		2	9.28	9.20	9.25	9.24
		3	9.29	9.20	9.26	9.24
	High	0	9.28	9.19	9.25	9.25
		1	9.28	9.19	9.25	9.24
		2	9.27	9.19	9.24	9.24
		3	9.27	9.22	9.23	9.25
LTE 3: NR 7	Low	0	9.28	9.20	9.26	9.24
		1	9.28	9.21	9.26	9.26
		2	9.28	9.20	9.24	9.24
		3	9.28	9.20	9.26	9.25
	Middle	0	9.28	9.21	9.25	9.25
		1	9.28	9.22	9.27	9.24
		2	9.28	9.19	9.26	9.25
		3	9.28	9.21	9.25	9.25
	High	0	9.28	9.20	9.25	9.25
		1	9.28	9.21	9.26	9.24
		2	9.29	9.22	9.25	9.24
		3	9.29	9.21	9.25	9.24
LTE 2: NR 8	Low	0	9.29	9.21	9.25	9.25
		1	9.28	9.19	9.25	9.25
		2	9.28	9.19	9.26	9.25
		3	9.28	9.22	9.26	9.26
	Middle	0	9.29	9.20	9.28	9.26
		1	9.29	9.23	9.27	9.26
		2	9.29	9.22	9.27	9.25
		3	9.29	9.20	9.27	9.26
	High	0	9.29	9.22	9.26	9.27
		1	9.28	9.21	9.25	9.27
		2	9.28	9.23	9.25	9.26
		3	9.28	9.21	9.26	9.26

Table 7-14. Occupied Bandwidth 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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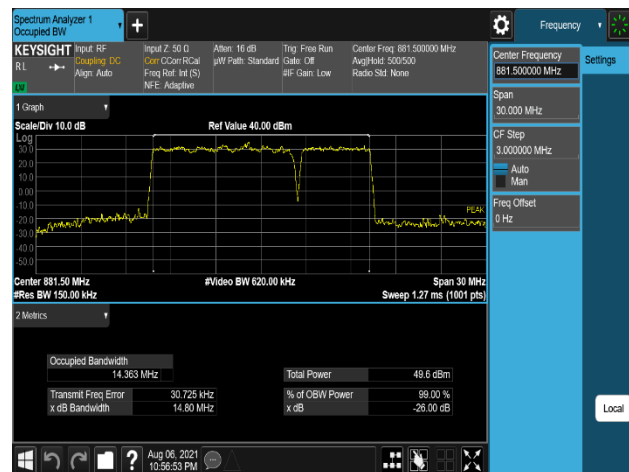
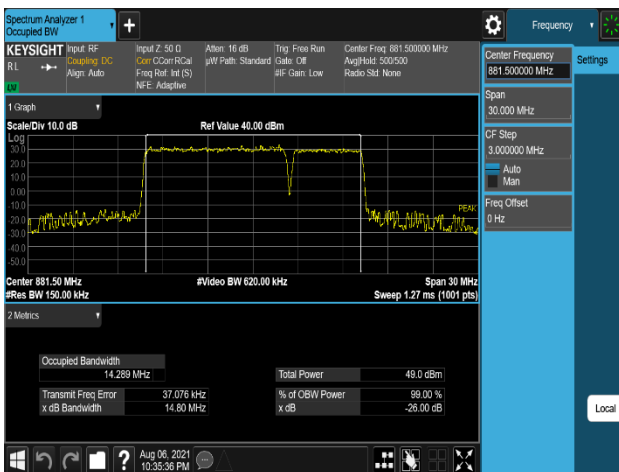
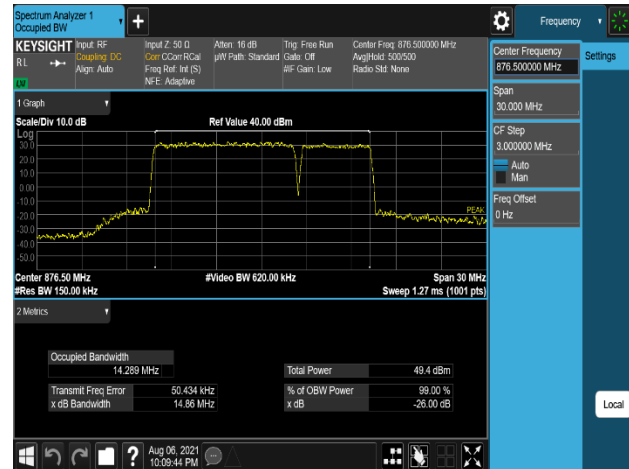
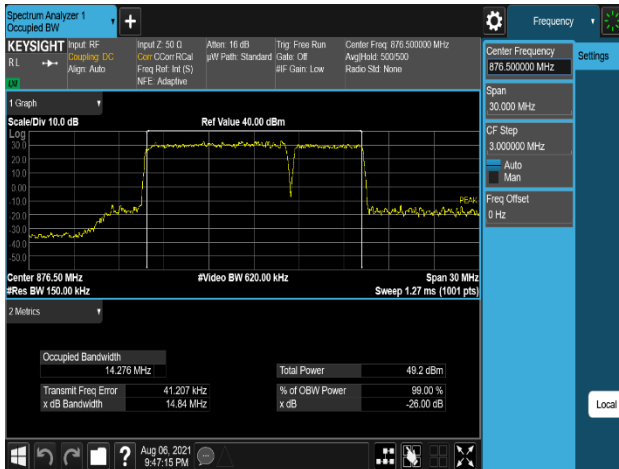
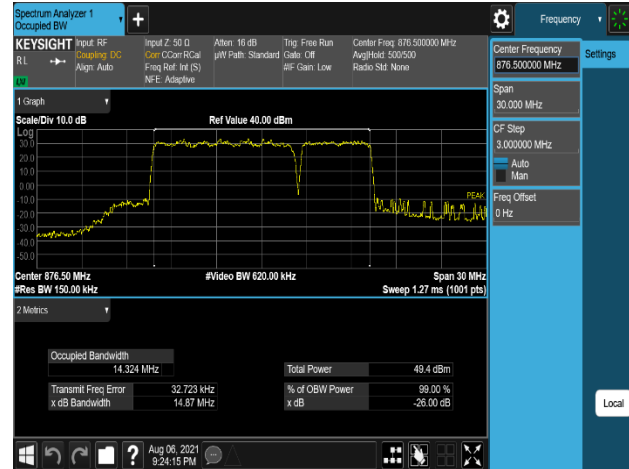
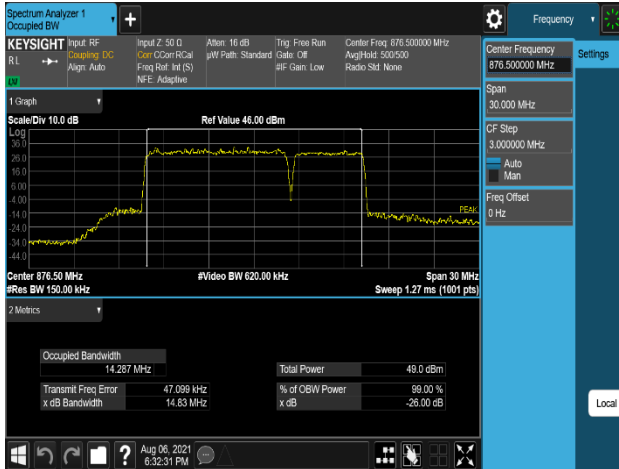
DSS Ratio	Channel	Port	OBW (MHz)			
			QPSK	16QAM	64QAM	256QAM
LTE 5: NR 5	Low	0	14.29	14.29	14.26	14.27
		1	14.28	14.32	14.26	14.29
		2	14.27	14.28	14.28	14.28
		3	14.26	14.27	14.23	14.26
	Middle	0	14.26	14.31	14.25	14.28
		1	14.29	14.36	14.27	14.30
		2	14.27	14.30	14.26	14.27
		3	14.29	14.31	14.25	14.28
	High	0	14.25	14.18	14.27	14.27
		1	14.28	14.17	14.27	14.24
		2	14.27	14.18	14.25	14.27
		3	14.26	14.16	14.26	14.26

Table 7-15. Occupied Bandwidth Summary Data (DSS_B5_10M+5M_2C)

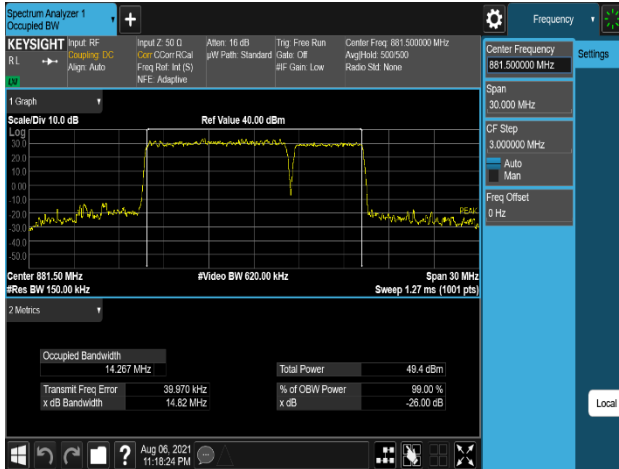
DSS Ratio	Channel	Port	OBW (MHz)			
			QPSK	16QAM	64QAM	256QAM
LTE 5: NR 5	Low	0	19.01	19.03	18.99	18.99
		1	19.01	19.04	19.02	18.98
		2	19.01	19.05	19.01	18.99
		3	19.02	19.01	19.00	18.92
	Middle	0	19.02	19.05	18.99	19.00
		1	19.00	19.10	18.94	18.97
		2	18.99	19.04	18.98	18.98
		3	18.94	19.05	18.97	19.02
	High	0	18.97	18.90	19.01	18.95
		1	18.98	18.91	19.01	18.98
		2	18.98	18.91	19.00	18.98
		3	18.95	18.88	19.00	18.96

Table 7-16. Occupied Bandwidth Summary Data (DSS_B5_10M+10M_2C)

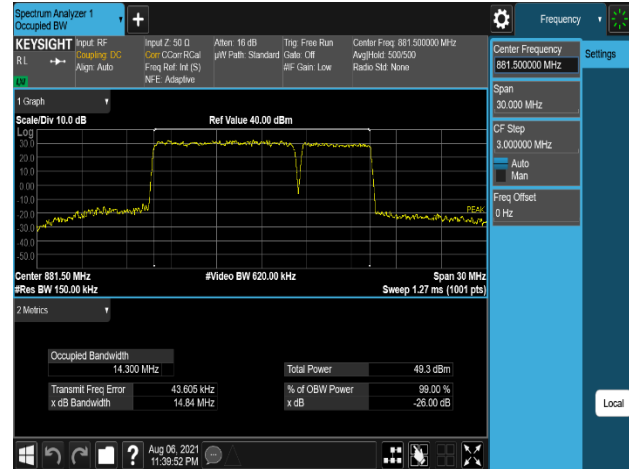
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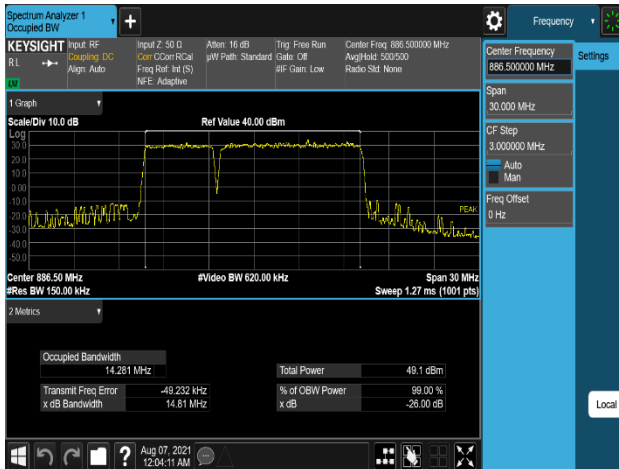
FCC ID: A3LRF4442D-13A	PCTEST ENGINEERING LABORATORY, INC.	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Technical Manager
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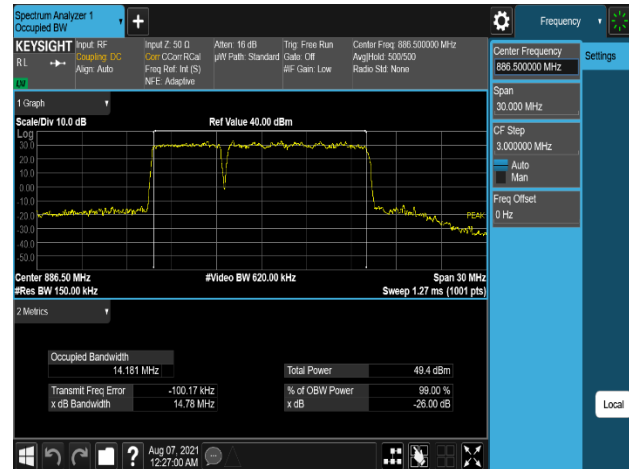
Plot 7-92. Occupied Bandwidth Plot
(DSS_B5_10M+5M_2C_64QAM - Mid Channel, Port 1)



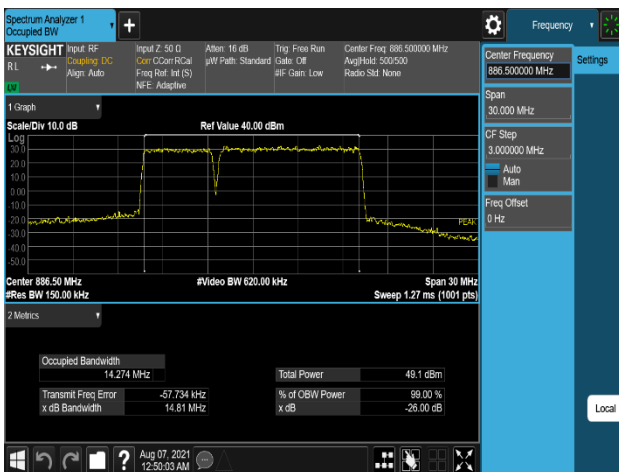
Plot 7-93. Occupied Bandwidth Plot
(DSS_B5_10M+5M_2C_256QAM - Mid Channel, Port 1)



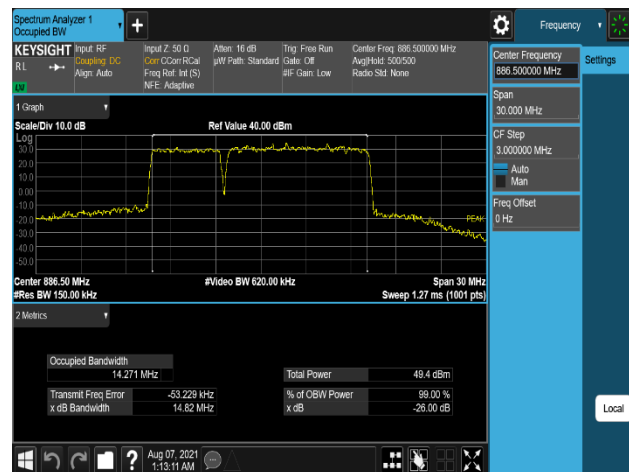
Plot 7-94. Occupied Bandwidth Plot
(DSS_B5_10M+5M_2C_QPSK - High Channel, Port 1)



Plot 7-95. Occupied Bandwidth Plot
(DSS_B5_10M+5M_2C_16QAM - High Channel, Port 0)

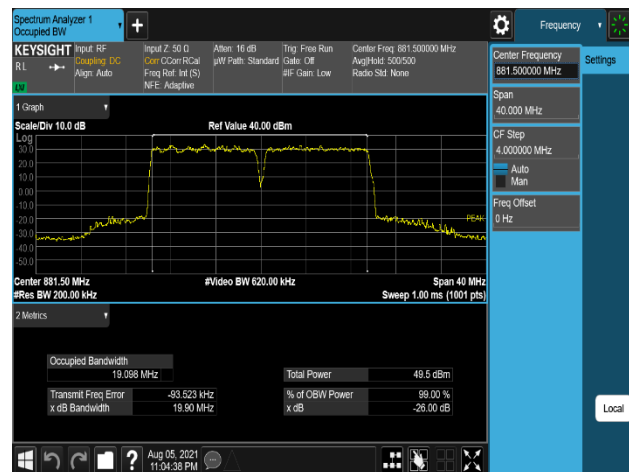
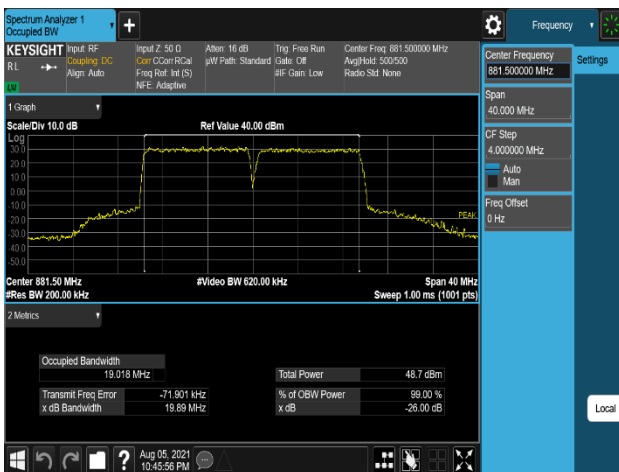
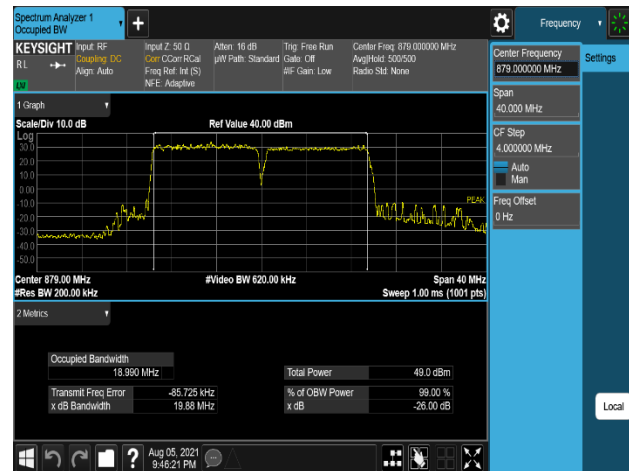
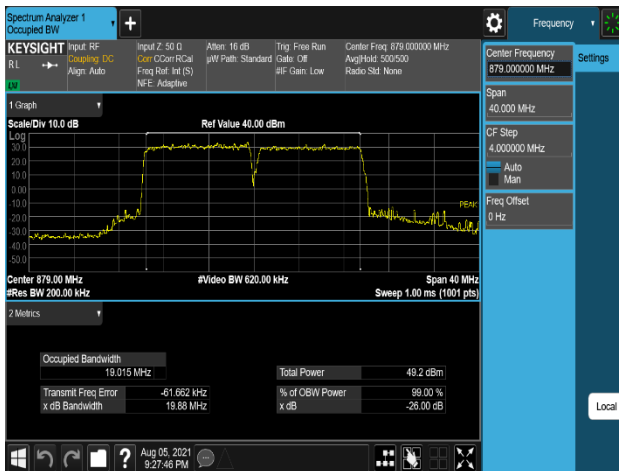
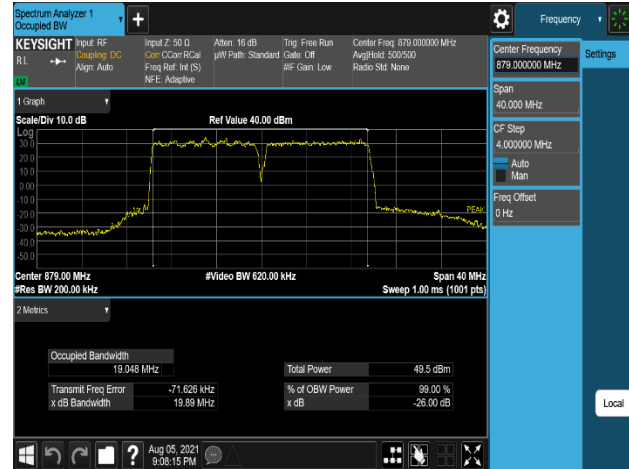
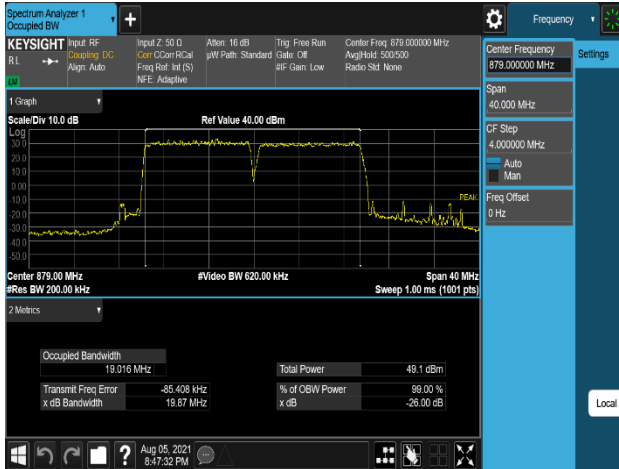


Plot 7-96. Occupied Bandwidth Plot
(DSS_B5_10M+5M_2C_64QAM - High Channel, Port 0)

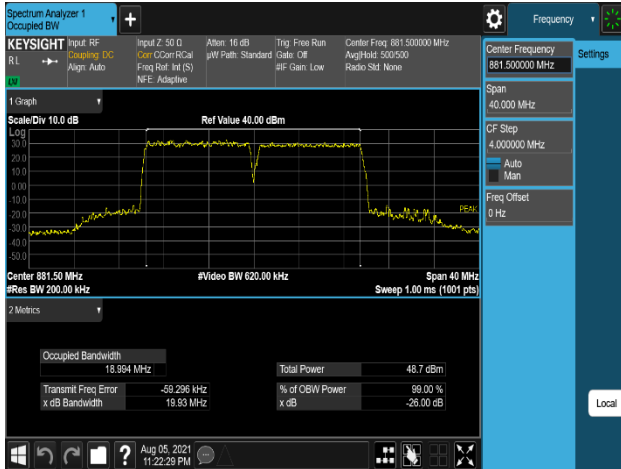


Plot 7-97. Occupied Bandwidth Plot
(DSS_B5_10M+5M_2C_256QAM - High Channel, Port 0)

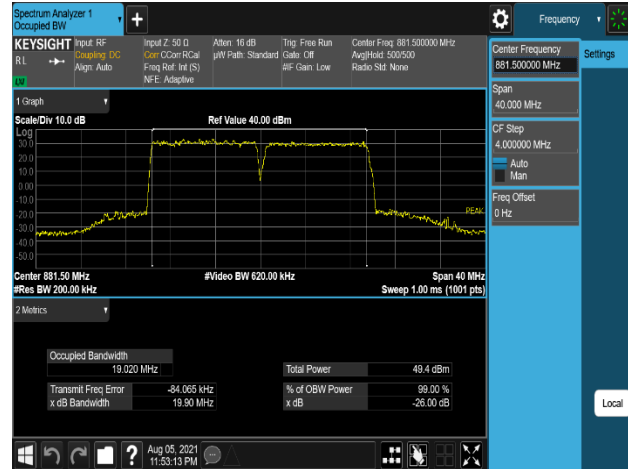
FCC ID: A3LRF4442D-13A	PCTEST ENGINEERING LABORATORY, INC.	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Technical Manager
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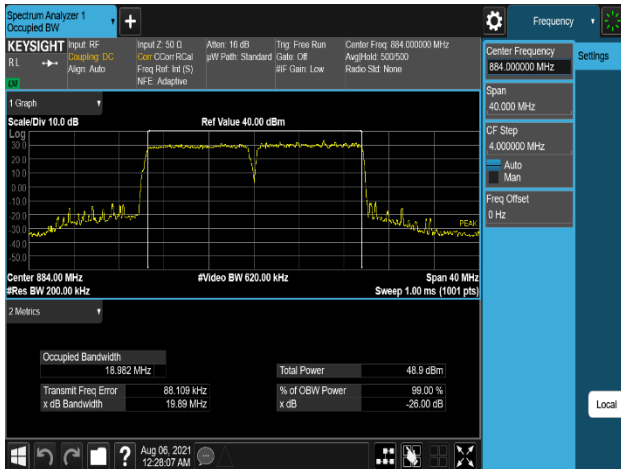
FCC ID: A3LRF4442D-13A	PCTEST ENGINEERING LABORATORY, INC.	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Technical Manager
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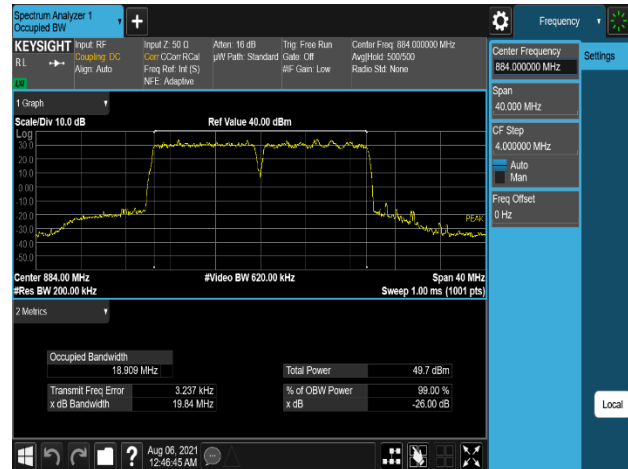
Plot 7-104. Occupied Bandwidth Plot
(DSS_B5_10M+10M_2C_64QAM - Mid Channel, Port 0)



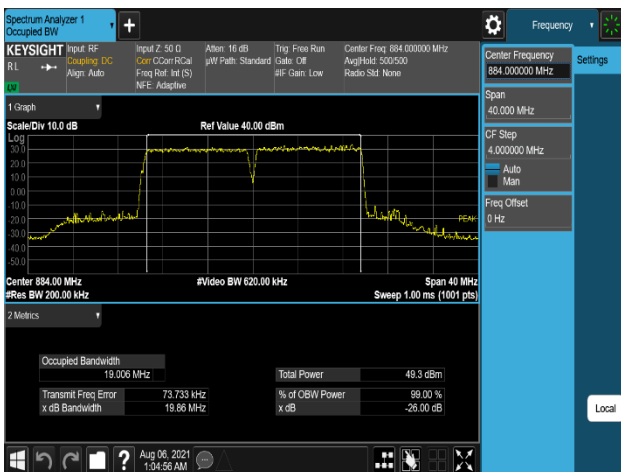
Plot 7-105. Occupied Bandwidth Plot
(DSS_B5_10M+10M_2C_256QAM - Mid Channel, Port 3)



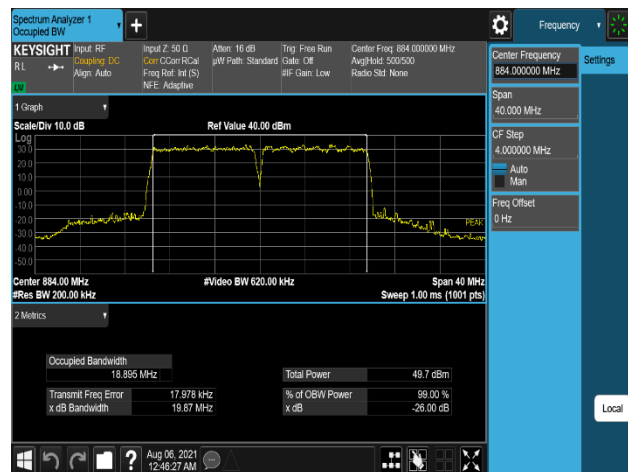
Plot 7-106. Occupied Bandwidth Plot
(DSS_B5_10M+10M_2C_QPSK - High Channel, Port 1)



Plot 7-107. Occupied Bandwidth Plot
(DSS_B5_10M+10M_2C_16QAM - High Channel, Port 1)



Plot 7-108. Occupied Bandwidth Plot
(DSS_B5_10M+10M_2C_64QAM - High Channel, Port 0)

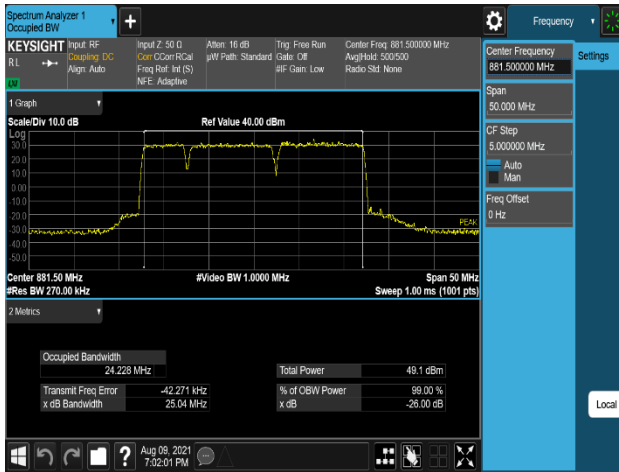


Plot 7-109. Occupied Bandwidth Plot
(DSS_B5_10M+10M_2C_256QAM - High Channel, Port 1)

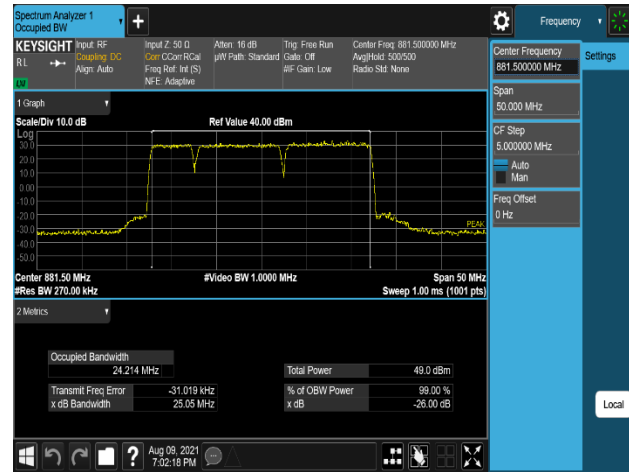
FCC ID: A3LRF4442D-13A	PCTEST ENGINEERING LABORATORY, INC.	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Technical Manager
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DSS Ratio	Channel	Port	OBW (MHz)			
			QPSK	16QAM	64QAM	256QAM
LTE 5: NR 5	Middle	0	24.20	24.05	24.23	24.17
		1	24.17	24.01	24.21	24.19
		2	24.20	24.11	24.21	24.15
		3	24.18	24.08	24.21	24.13

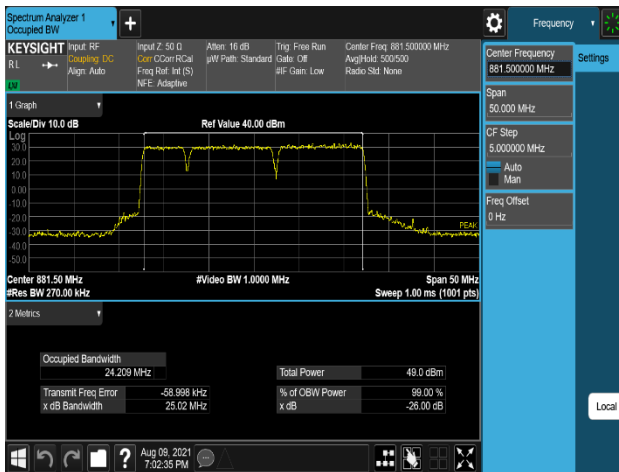
Table 7-17. Occupied Bandwidth Summary Data (DSS_B5_10M+10M+5M_3C)



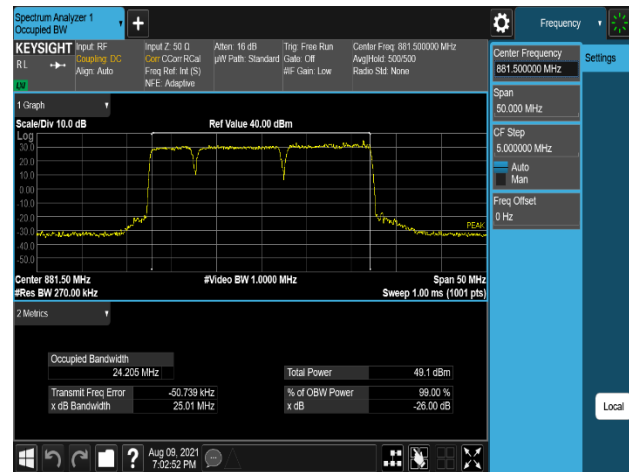
**Plot 7-110. Occupied Bandwidth Plot
(DSS_B5_10M+10M+5M_3C_64QAM - Port 0)**



**Plot 7-111. Occupied Bandwidth Plot
(DSS_B5_10M+10M+5M_3C_64QAM - Port 1)**



**Plot 7-112. Occupied Bandwidth Plot
(DSS_B5_10M+10M+5M_3C_64QAM - Port 2)**



**Plot 7-113. Occupied Bandwidth Plot
(DSS_B5_10M+10M+5M_3C_64QAM - Port 3)**

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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:
 - a) Set $\geq$ auto-couple, and enable trace averaging, or
 - b) Set $\geq [10 \times (\text{number of points in sweep}) \times (\text{transmission symbol period})]$ and enable a single sweep (automation-compatible) measurement. The sweep time should never be faster than the auto-coupled sweep time.
7. Detector = power averaging (rms).
8. Set sweep trigger to "free run."
9. 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.
10. 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.

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Test Setup

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

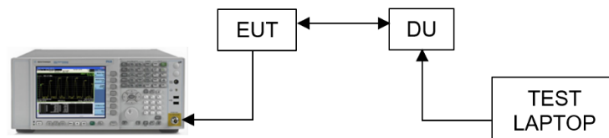


Figure 7-2. Test Instrument & Measurement Setup

Limit

N/A

Test Notes

- The highest values are highlighted in the following tables. The plots are presented only for the highlighted values.
- Consider the following factors for MIMO Output Power:
 - Conducted power for each port is measured in dBm.
 - Powers are summed up in linear using the measure-and-sum technique defined in KDB 971168 D01 v03r01-Section D.
 - 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).
- MIMO calculations are done considering output channel power for all ports and respective are calculated.
- Consider the following factors for MIMO Output Power:
 - Conducted power for each port is measured in dBm.
 - Powers are summed up in linear using the measure-and-sum technique defined in KDB 662911 D01 v02r01-Section D.
 - 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).
- Antenna Gains (dBi) are provided by the client.
- Sample MIMO Calculation:
Let us assume the following numbers:

Factors	Value	Unit
Total MIMO Conducted Power (linear sum)	114263.52	mW
Total MIMO Conducted Power (dBm) = $10 * \log (114263.52) =$	50.58	dBm
Antenna Gain	Max. 27.2 dBi (25.0 dBi $\pm$ 2.2dB)	dBi
MIMO EIRP =	Total MIMO Conducted Power + Antenna Gain	77.78 dBm
FCC EIRP Limit	87.10	dBm
Margin = MIMO EIRP - FCC EIRP Limit = $77.78 - 87.10 =$	-9.32	dB

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Low Channel	Port	QPSK	16QAM	64QAM	256QAM
Conducted Average Power (dBm)	0	40.15	40.12	40.30	40.15
	1	40.03	40.13	40.29	40.22
	2	40.04	40.07	40.12	40.01
	3	40.02	40.20	40.34	40.35
Total MIMO Conducted Power (mW)		40559.43	41217.80	42500.24	41733.36
Total MIMO Conducted Power (dBm)		46.08	46.15	46.28	46.20

Table 7-18. Conducted Average Output Power Table (LTE_B5_5M_1C - Low Channel)

Middle Channel	Port	QPSK	16QAM	64QAM	256QAM
Conducted Average Power (dBm)	0	40.15	40.06	40.09	40.08
	1	40.22	40.28	40.26	40.20
	2	40.13	40.12	40.13	40.11
	3	40.34	40.36	40.23	40.27
Total MIMO Conducted Power (mW)		41989.24	41949.49	41674.08	41555.15
Total MIMO Conducted Power (dBm)		46.23	46.23	46.20	46.19

Table 7-19. Conducted Average Output Power Table (LTE_B5_5M_1C - Middle Channel)

High Channel	Port	QPSK	16QAM	64QAM	256QAM
Conducted Average Power (dBm)	0	40.19	40.10	40.11	40.12
	1	40.27	40.28	40.16	40.21
	2	40.27	40.17	40.23	40.14
	3	40.33	40.31	40.20	40.35
Total MIMO Conducted Power (mW)		42519.53	42037.99	41646.96	41942.47
Total MIMO Conducted Power (dBm)		46.29	46.24	46.20	46.23

Table 7-20. Conducted Average Output Power Table (LTE_B5_5M_1C - High Channel)

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Low Channel	Port	QPSK	16QAM	64QAM	256QAM
Conducted Average Power (dBm)	0	39.93	39.85	39.85	39.81
	1	40.07	40.00	40.00	39.99
	2	40.11	40.03	40.03	40.01
	3	40.01	40.03	39.96	39.97
Total MIMO Conducted Power (mW)		40282.17	39799.14	39638.14	39503.15
Total MIMO Conducted Power (dBm)		46.05	46.00	45.98	45.97

Table 7-21. Conducted Average Output Power Table (LTE_B5_10M_1C - Low Channel)

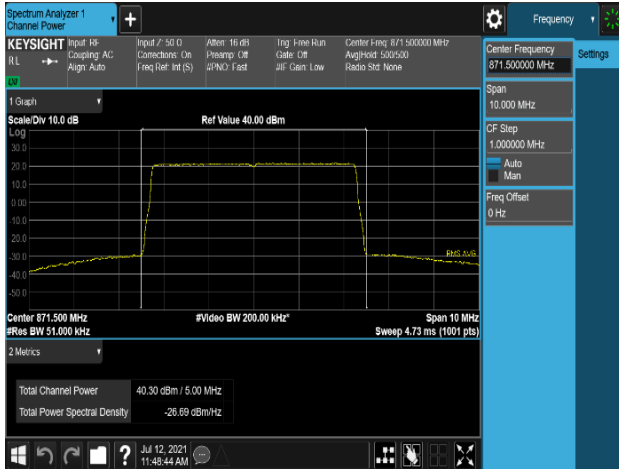
Middle Channel	Port	QPSK	16QAM	64QAM	256QAM
Conducted Average Power (dBm)	0	39.81	40.09	40.00	39.97
	1	40.16	40.26	40.09	40.16
	2	40.09	40.16	40.09	40.16
	3	40.09	40.39	40.03	40.05
Total MIMO Conducted Power (mW)		40366.01	42141.20	40488.11	40797.52
Total MIMO Conducted Power (dBm)		46.06	46.25	46.07	46.11

Table 7-22. Conducted Average Output Power Table (LTE_B5_10M_1C - Middle Channel)

High Channel	Port	QPSK	16QAM	64QAM	256QAM
Conducted Average Power (dBm)	0	39.98	40.00	39.97	39.98
	1	40.12	40.20	40.13	40.12
	2	40.15	40.15	40.16	40.15
	3	40.02	40.05	40.03	40.06
Total MIMO Conducted Power (mW)		40631.80	40938.50	40679.62	40724.75
Total MIMO Conducted Power (dBm)		46.09	46.12	46.09	46.10

Table 7-23. Conducted Average Output Power Table (LTE_B5_10M_1C - High Channel)

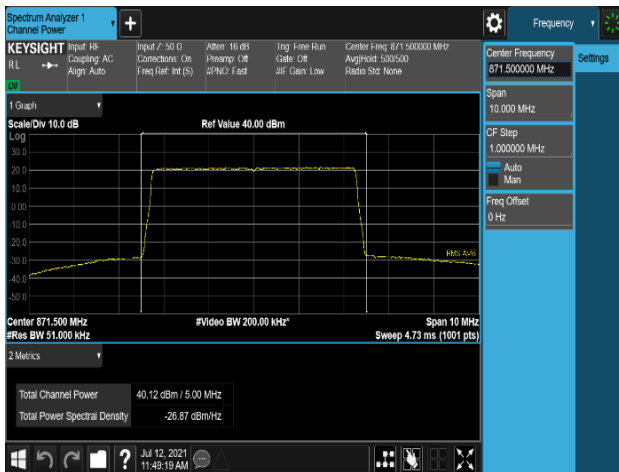
FCC ID: A3LRF4442D-13A		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Technical Manager
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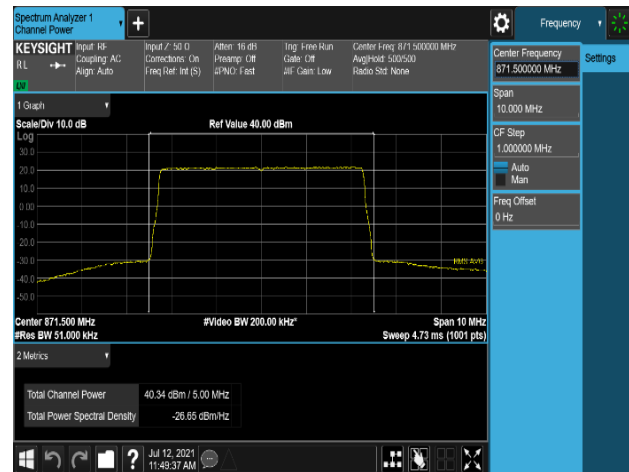
Plot 7-114. Conducted Average Output Power Plot (LTE_B5_5M_1C_64QAM - Low Channel, Port 0)



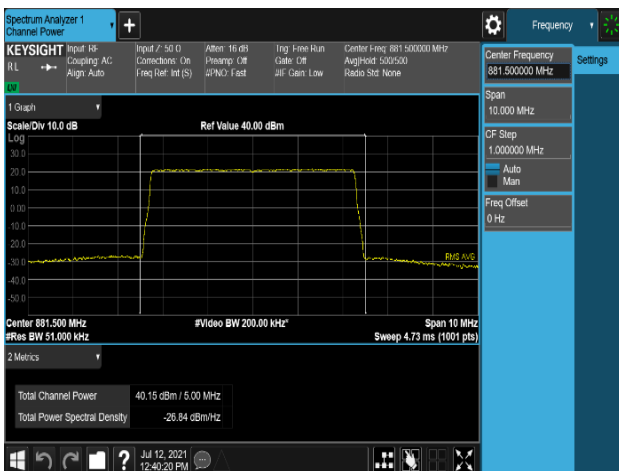
Plot 7-115. Conducted Average Output Power Plot (LTE_B5_5M_1C_64QAM - Low Channel, Port 1)



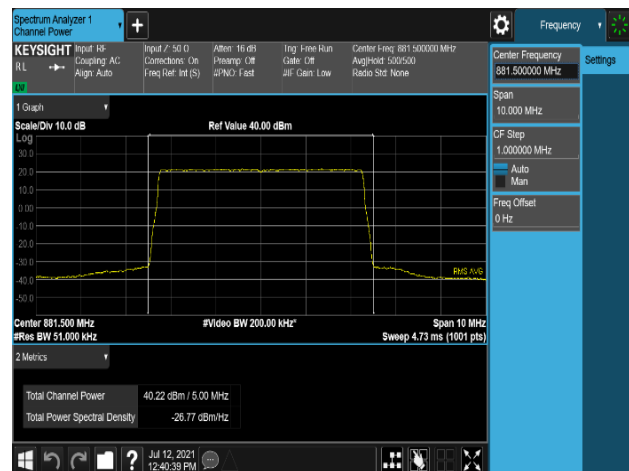
Plot 7-116. Conducted Average Output Power Plot (LTE_B5_5M_1C_64QAM - Low Channel, Port 2)



Plot 7-117. Conducted Average Output Power Plot (LTE_B5_5M_1C_64QAM - Low Channel, Port 3)

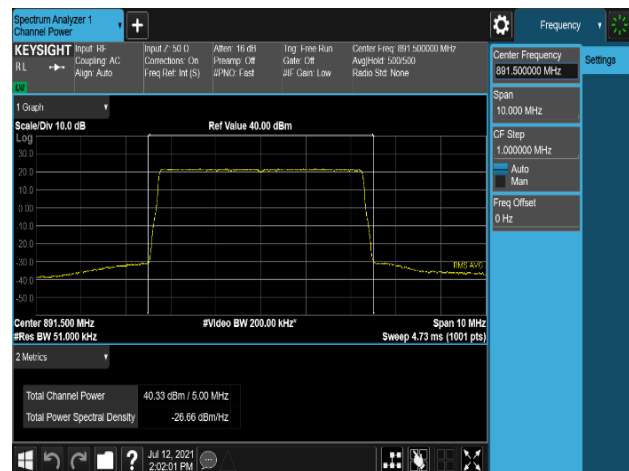
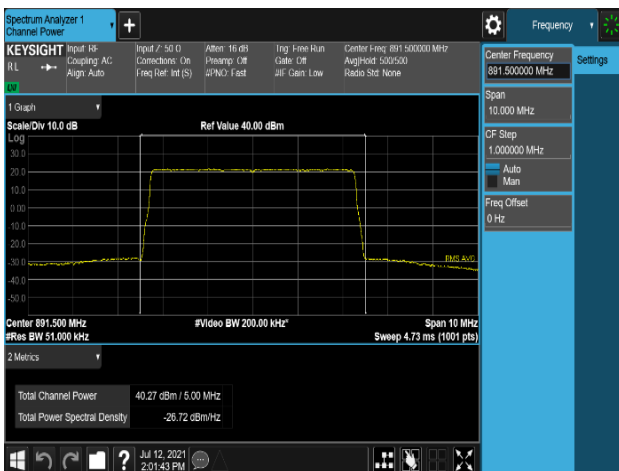
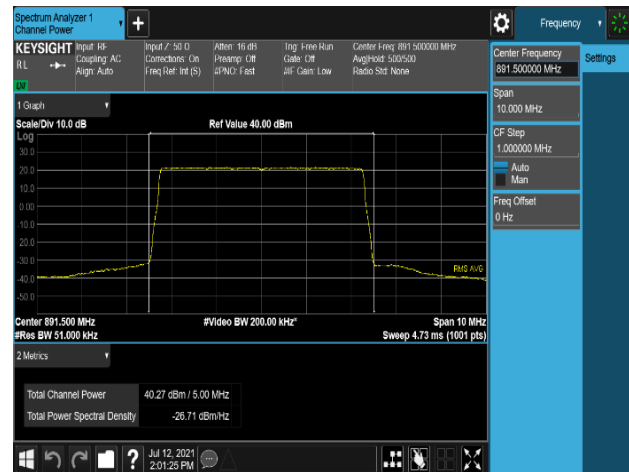
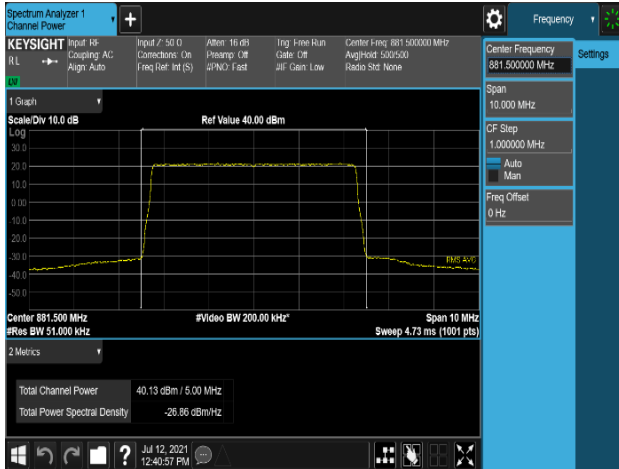


Plot 7-118. Conducted Average Output Power Plot (LTE_B5_5M_1C_QPSK - Mid Channel, Port 0)

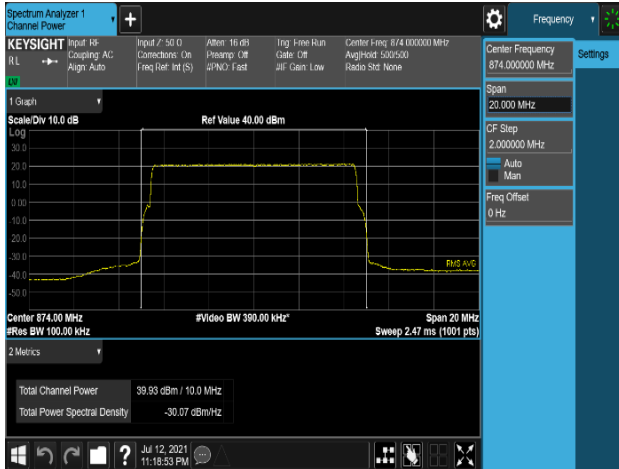


Plot 7-119. Conducted Average Output Power Plot (LTE_B5_5M_1C_QPSK - Mid Channel, Port 1)

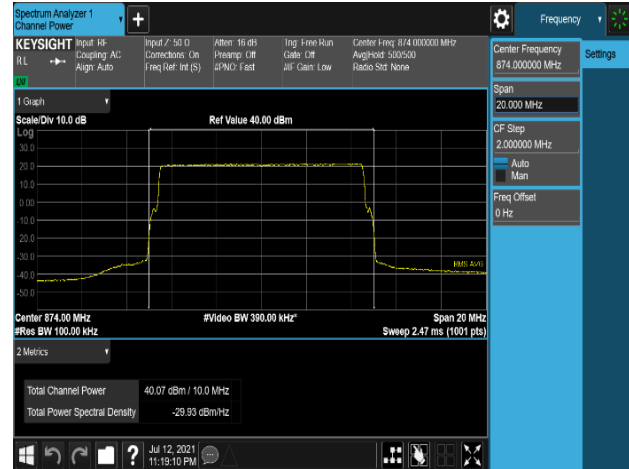
FCC ID: A3LRF4442D-13A	PCTEST ENGINEERING LABORATORY, INC.	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Technical Manager
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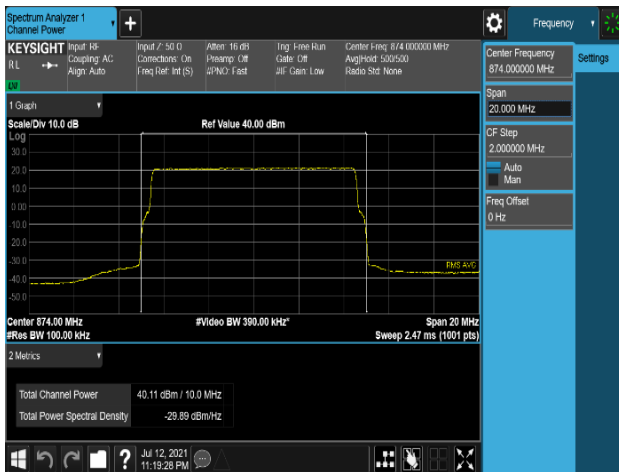
FCC ID: A3LRF4442D-13A	PCTEST ENGINEERING LABORATORY, INC.	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Technical Manager
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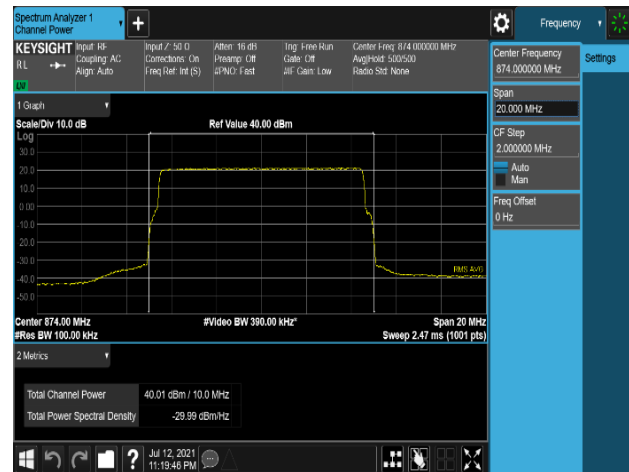
Plot 7-126. Conducted Average Output Power Plot
(LTE_B5_10M_1C_QPSK - Low Channel, Port 0)



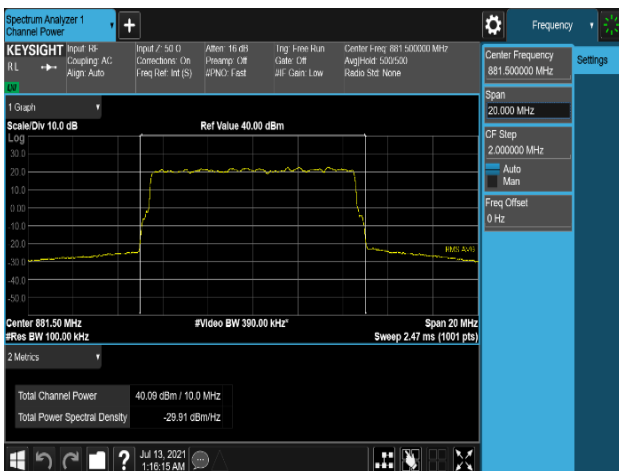
Plot 7-127. Conducted Average Output Power Plot
(LTE_B5_10M_1C_QPSK - Low Channel, Port 1)



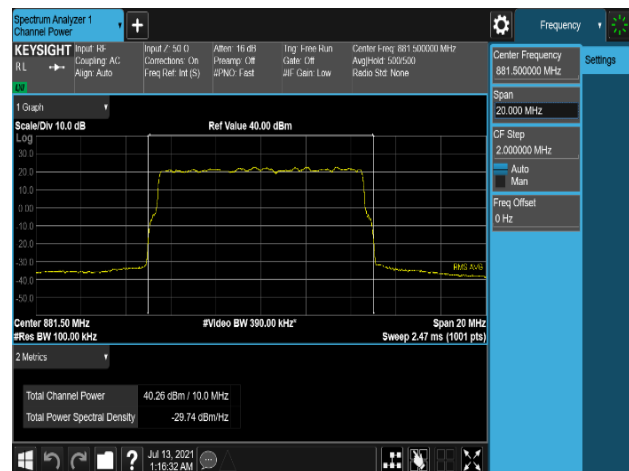
Plot 7-128. Conducted Average Output Power Plot
(LTE_B5_10M_1C_QPSK - Low Channel, Port 2)



Plot 7-129. Conducted Average Output Power Plot
(LTE_B5_10M_1C_QPSK - Low Channel, Port 3)



Plot 7-130. Conducted Average Output Power Plot
(LTE_B5_10M_1C_16QAM - Mid Channel, Port 0)



Plot 7-131. Conducted Average Output Power Plot
(LTE_B5_10M_1C_16QAM - Mid Channel, Port 1)

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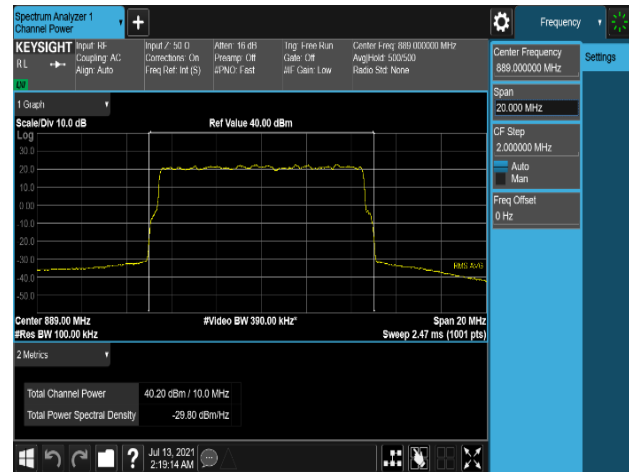
Plot 7-132. Conducted Average Output Power Plot (LTE_B5_10M_1C_16QAM – Mid Channel, Port 2)



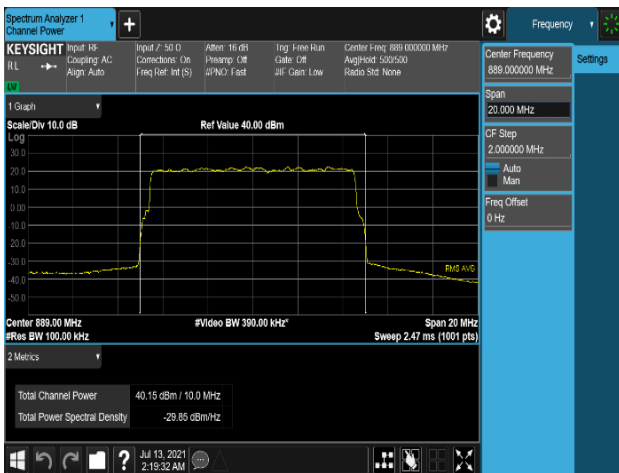
Plot 7-133. Conducted Average Output Power Plot (LTE_B5_10M_1C_16QAM – Mid Channel, Port 3)



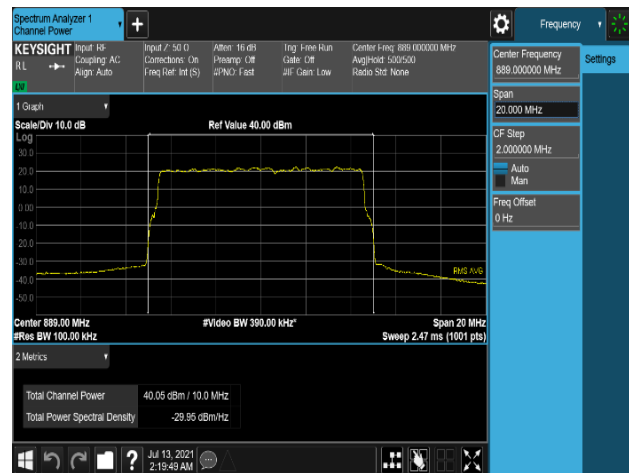
Plot 7-134. Conducted Average Output Power Plot (LTE_B5_10M_1C_16QAM – High Channel, Port 0)



Plot 7-135. Conducted Average Output Power Plot (LTE_B5_10M_1C_16QAM – High Channel, Port 1)



Plot 7-136. Conducted Average Output Power Plot (LTE_B5_10M_1C_16QAM – High Channel, Port 2)



Plot 7-137. Conducted Average Output Power Plot (LTE_B5_10M_1C_16QAM – High Channel, Port 3)

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Low Channel	Port	QPSK	16QAM	64QAM	256QAM
Conducted Average Power (dBm)	0	40.03	39.95	39.93	39.94
	1	39.94	39.94	39.95	40.02
	2	40.18	40.12	40.17	40.14
	3	39.76	39.74	39.74	39.78
Total MIMO Conducted Power (mW)		39817.66	39447.38	39543.74	39742.61
Total MIMO Conducted Power (dBm)		46.00	45.96	45.97	45.99

Table 7-24. Conducted Average Output Power Table (LTE_B5_5M+5M_2C - Low Channel)

Middle Channel	Port	QPSK	16QAM	64QAM	256QAM
Conducted Average Power (dBm)	0	39.88	39.86	39.82	39.90
	1	40.08	40.12	40.14	40.07
	2	40.26	40.22	40.24	40.23
	3	39.91	39.81	39.82	39.90
Total MIMO Conducted Power (mW)		40325.24	40054.50	40083.80	40251.10
Total MIMO Conducted Power (dBm)		46.06	46.03	46.03	46.05

Table 7-25. Conducted Average Output Power Table (LTE_B5_5M+5M_2C - Middle Channel)

High Channel	Port	QPSK	16QAM	64QAM	256QAM
Conducted Average Power (dBm)	0	39.98	39.91	40.00	39.96
	1	40.14	40.14	40.19	40.10
	2	40.29	40.31	40.27	40.21
	3	39.92	39.92	39.98	39.88
Total MIMO Conducted Power (mW)		40789.70	40679.89	41042.69	40364.15
Total MIMO Conducted Power (dBm)		46.11	46.09	46.13	46.06

Table 7-26. Conducted Average Output Power Table (LTE_B5_5M+5M_2C - High Channel)

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Low Channel	Port	QPSK	16QAM	64QAM	256QAM
Conducted Average Power (dBm)	0	39.99	39.94	40.01	39.99
	1	40.07	40.02	40.02	40.12
	2	40.25	40.20	40.22	40.22
	3	39.79	39.83	39.80	39.85
Total MIMO Conducted Power (mW)		40259.99	39996.36	40138.75	40437.29
Total MIMO Conducted Power (dBm)		46.05	46.02	46.04	46.07

Table 7-27. Conducted Average Output Power Table (LTE_B5_10M+10M_2C - Low Channel)

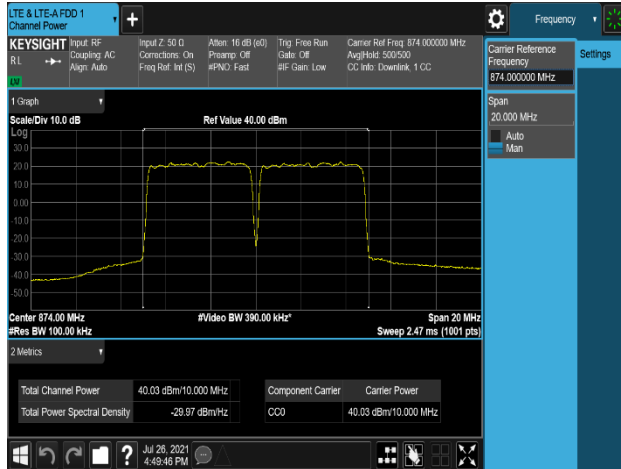
Middle Channel	Port	QPSK	16QAM	64QAM	256QAM
Conducted Average Power (dBm)	0	39.79	39.77	39.86	39.84
	1	40.14	40.06	40.16	40.10
	2	40.23	40.26	40.34	40.24
	3	39.89	39.85	39.90	39.83
Total MIMO Conducted Power (mW)		40149.34	39900.76	40644.77	40055.52
Total MIMO Conducted Power (dBm)		46.04	46.01	46.09	46.03

Table 7-28. Conducted Average Output Power Table (LTE_B5_10M+10M_2C - Middle Channel)

High Channel	Port	QPSK	16QAM	64QAM	256QAM
Conducted Average Power (dBm)	0	39.85	39.85	39.90	39.84
	1	40.17	40.14	40.14	40.22
	2	40.28	40.25	40.25	40.29
	3	39.88	39.94	39.91	39.91
Total MIMO Conducted Power (mW)		40453.14	40443.45	40487.42	40643.36
Total MIMO Conducted Power (dBm)		46.07	46.07	46.07	46.09

Table 7-29. Conducted Average Output Power Table (LTE_B5_10M+10M_2C - High Channel)

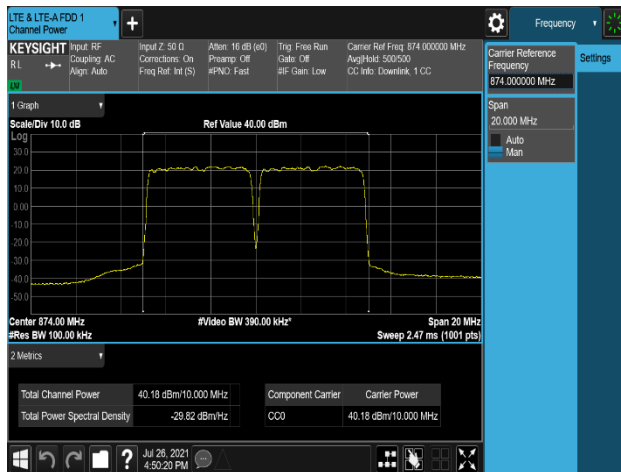
FCC ID: A3LRF4442D-13A		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Technical Manager
Test Report S/N: 8K21070502R3.A3L	Test Dates: 07/09/2021 - 08/26/2021	EUT Type: RRU (RF4442d)	Page 53 of 225	



Plot 7-138. Conducted Average Output Power Plot
(LTE_B5_5M+5M_2C_QPSK - Low Channel, Port 0)



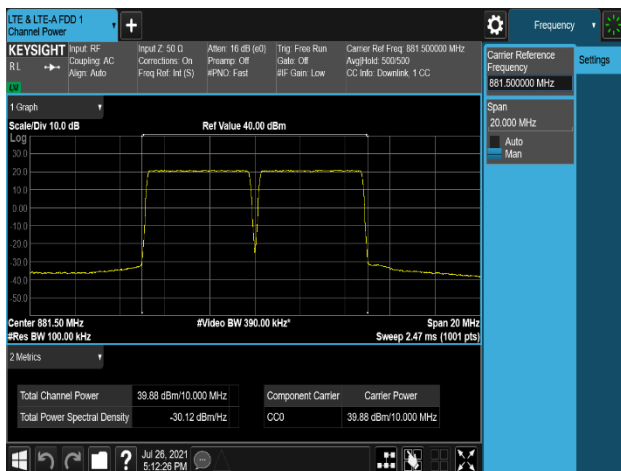
Plot 7-139. Conducted Average Output Power Plot
(LTE_B5_5M+5M_2C_QPSK - Low Channel, Port 1)



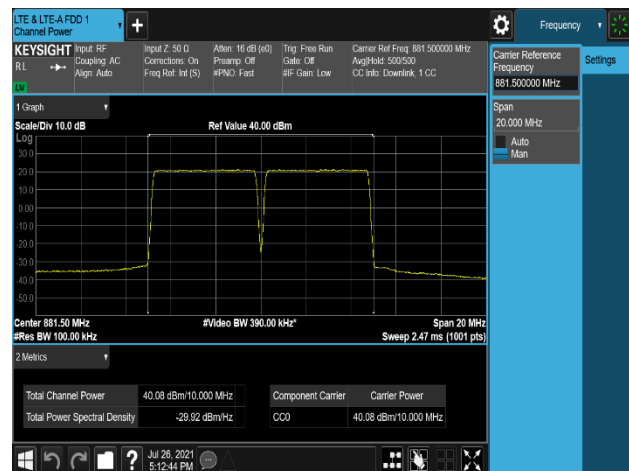
Plot 7-140. Conducted Average Output Power Plot
(LTE_B5_5M+5M_2C_QPSK - Low Channel, Port 2)



Plot 7-141. Conducted Average Output Power Plot
(LTE_B5_5M+5M_2C_QPSK - Low Channel, Port 3)



Plot 7-142. Conducted Average Output Power Plot
(LTE_B5_5M+5M_2C_QPSK - Mid Channel, Port 0)



Plot 7-143. Conducted Average Output Power Plot
(LTE_B5_5M+5M_2C_QPSK - Mid Channel, Port 1)

FCC ID: A3LRF4442D-13A	PCTEST ENGINEERING LABORATORY, INC.	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Technical Manager
Test Report S/N: 8K21070502R3.A3L	Test Dates: 07/09/2021 - 08/26/2021	EUT Type: RRU (RF4442d)		Page 54 of 225