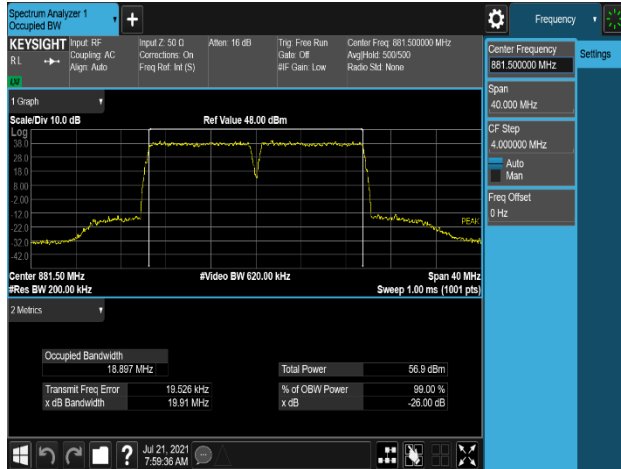
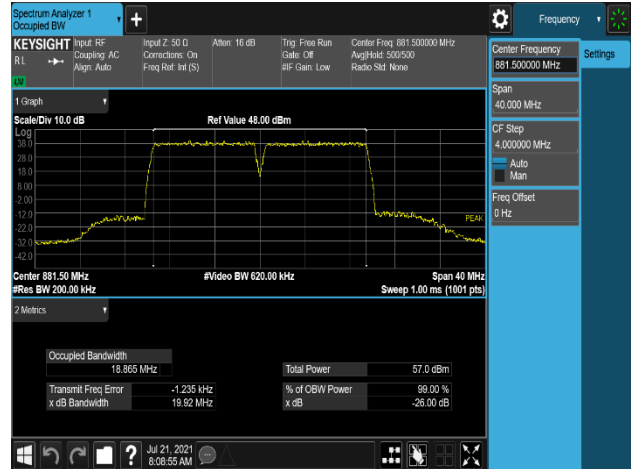
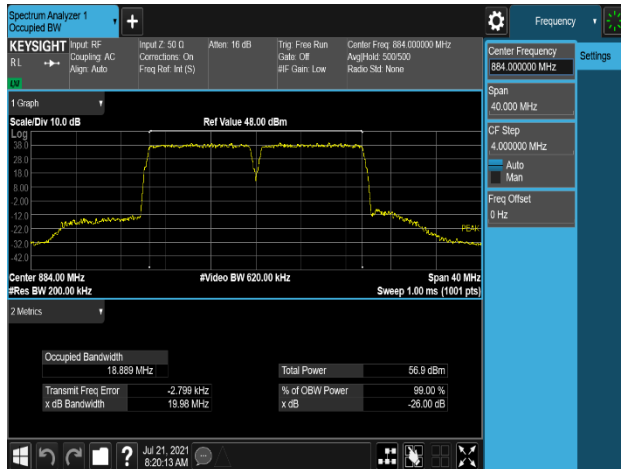




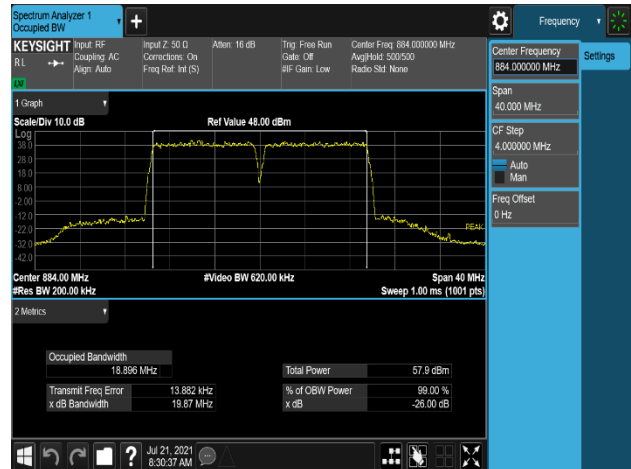
Plot 7-67. Occupied Bandwidth Plot
(B5_10M+10M_2C_64QAM - Mid Channel, Port 0)



Plot 7-68. Occupied Bandwidth Plot
(B5_10M+10M_2C_256QAM – Mid Channel, Port 1)



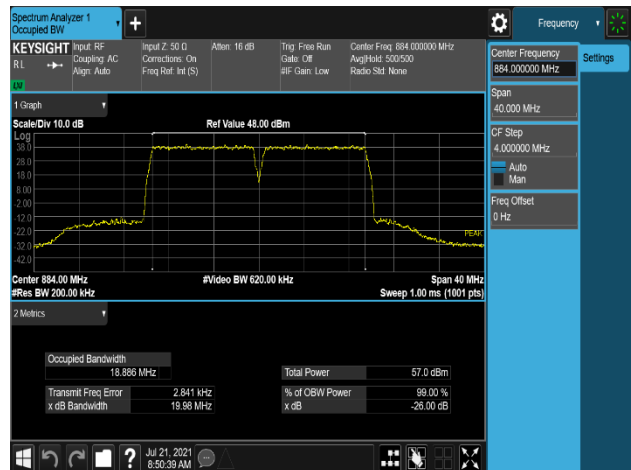
Plot 7-69. Occupied Bandwidth Plot
(B5_10M+10M_2C_QPSK - High Channel, Port 0)



Plot 7-70. Occupied Bandwidth Plot
(B5_10M+10M_2C_16QAM – High Channel, Port 1)



Plot 7-71. Occupied Bandwidth Plot
(B5_10M+10M_2C_64QAM - High Channel, Port 1)



Plot 7-72. Occupied Bandwidth Plot
(B5_10M+10M_2C_256QAM – High Channel, Port 0)

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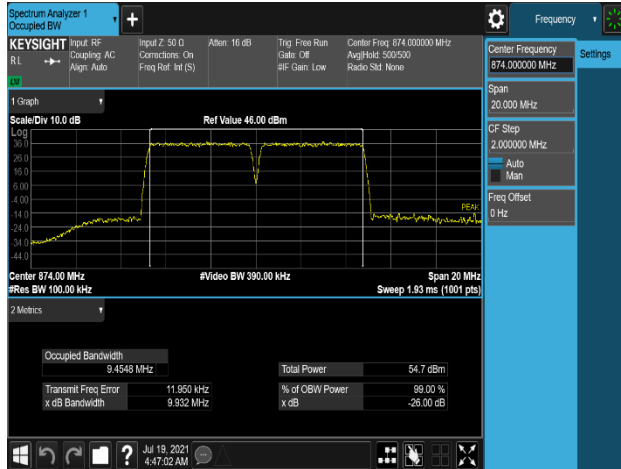
Channel	Port	OBW (MHz)			
		QPSK	16QAM	64QAM	256QAM
Low	0	9.44	9.42	9.43	9.43
	1	9.45	9.43	9.44	9.46
	2	9.45	9.45	9.46	9.45
	3	9.45	9.41	9.44	9.46
Middle	0	9.44	9.42	9.43	9.45
	1	9.45	9.47	9.43	9.45
	2	9.45	9.44	9.44	9.47
	3	9.45	9.42	9.43	9.47
High	0	9.43	9.43	9.46	9.45
	1	9.44	9.43	9.44	9.46
	2	9.44	9.44	9.45	9.45
	3	9.44	9.44	9.44	9.45

Table 7-8. Occupied Bandwidth Summary Data (B5_5M+5M_2C_4T)

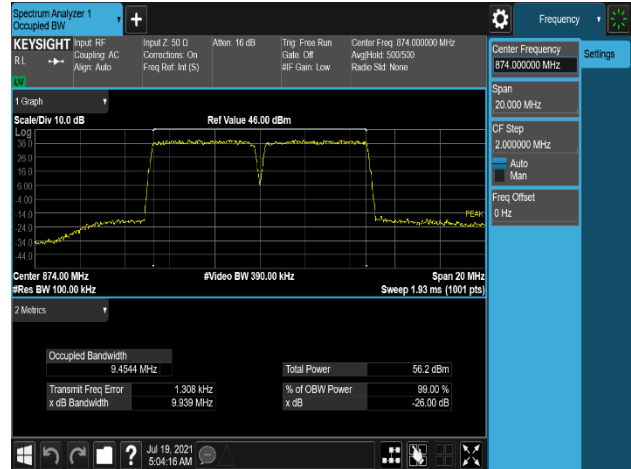
Channel	Port	OBW (MHz)			
		QPSK	16QAM	64QAM	256QAM
Low	0	18.86	18.87	18.87	18.85
	1	18.89	18.91	18.88	18.86
	2	18.91	18.94	18.92	18.86
	3	18.89	18.88	18.89	18.87
Middle	0	18.88	18.93	18.89	18.86
	1	18.87	18.94	18.91	18.88
	2	18.88	18.89	18.93	18.87
	3	18.86	18.89	18.90	18.87
High	0	18.92	18.87	18.87	18.87
	1	18.90	18.85	18.88	18.87
	2	18.89	18.92	18.89	18.87
	3	18.90	18.92	18.92	18.87

Table 7-9. Occupied Bandwidth Summary Data (B5_10M+10M_2C_4T)

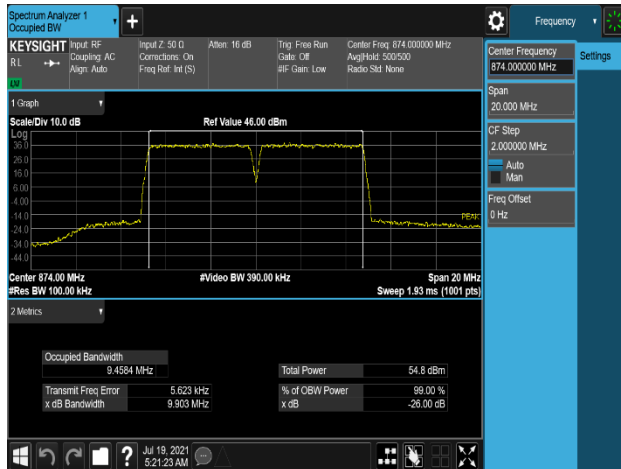
FCC ID: A3LRF4440D-13A	 MEASUREMENT REPORT (CERTIFICATION)			Approved by: Technical Manager
Test Report S/N: 8K21070501R2-R1	Test Dates: 07/09/2021 - 08/25/2021	EUT Type: RRU (RF4440d)	Page 31 of 367	



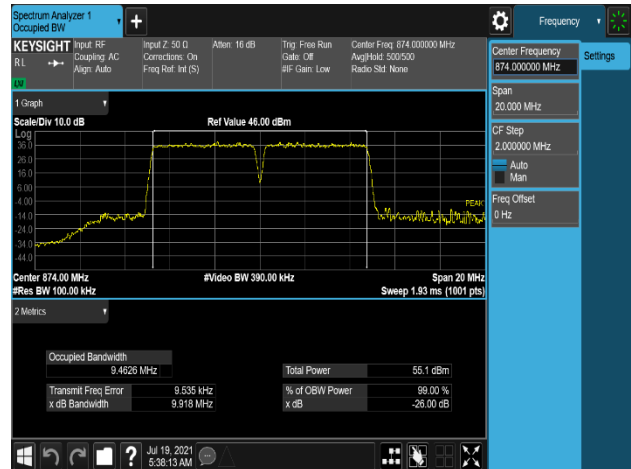
Plot 7-73. Occupied Bandwidth Plot
(B5_5M+5M_2C_QPSK - Low Channel, Port 2)



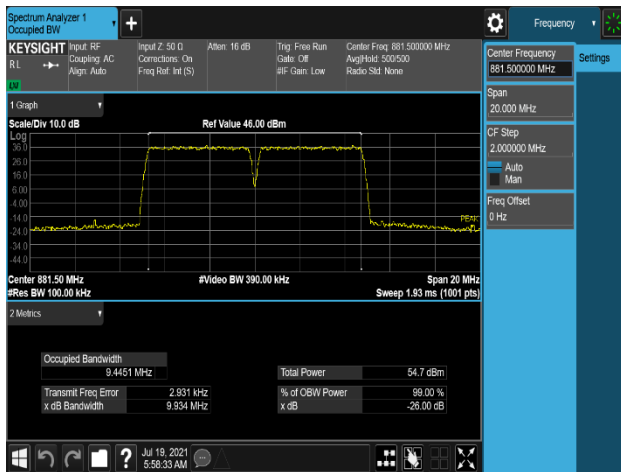
Plot 7-74. Occupied Bandwidth Plot
(B5_5M+5M_2C_16QAM - Low Channel, Port 2)



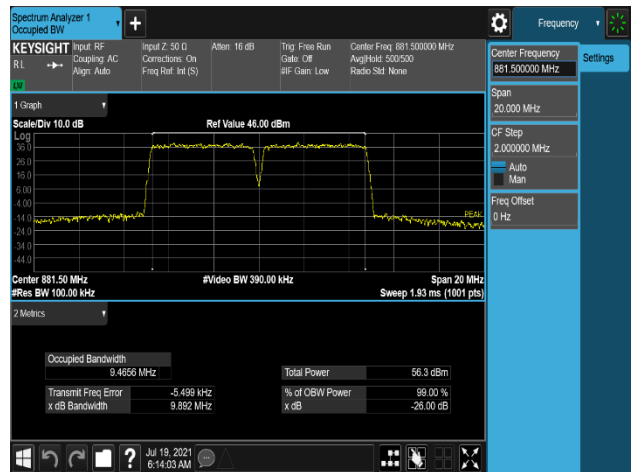
Plot 7-75. Occupied Bandwidth Plot
(B5_5M+5M_2C_64QAM - Low Channel, Port 2)



Plot 7-76. Occupied Bandwidth Plot
(B5_5M+5M_2C_256QAM - Low Channel, Port 1)

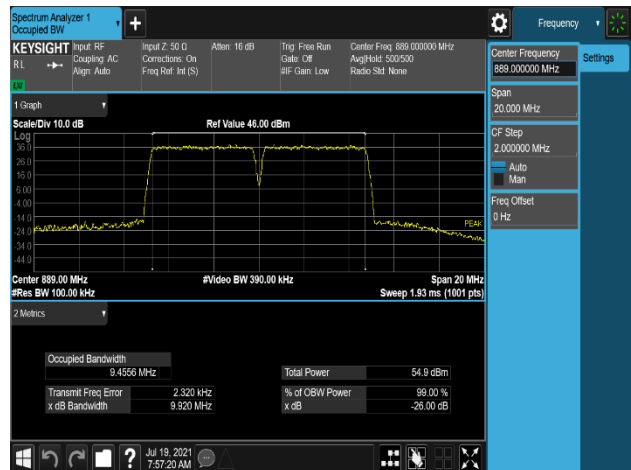
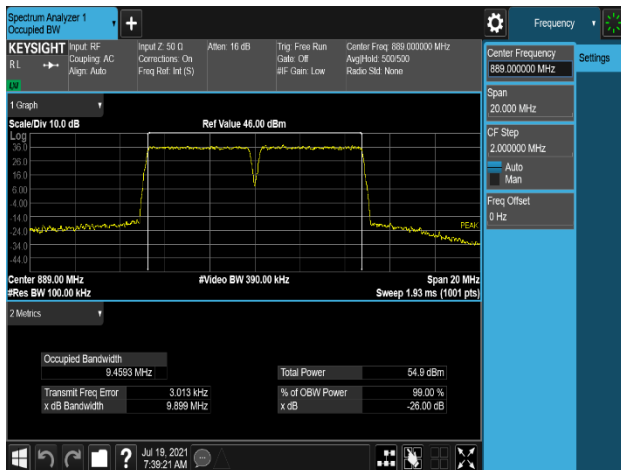
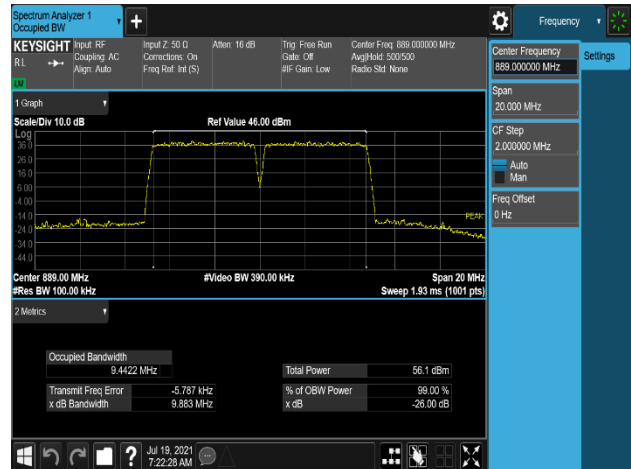
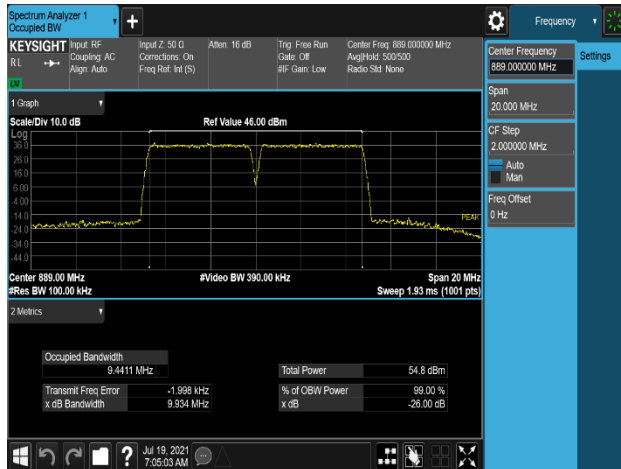
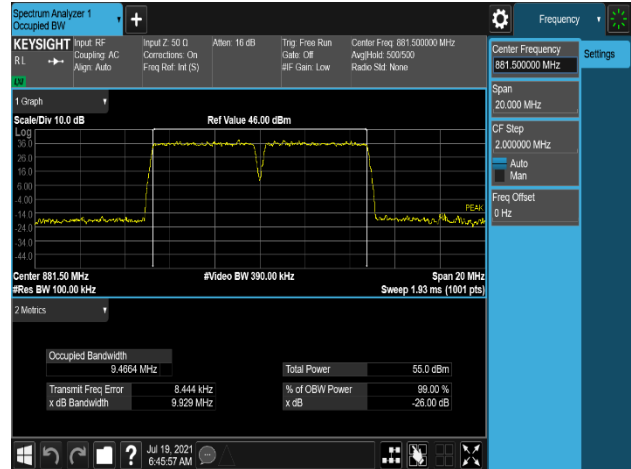
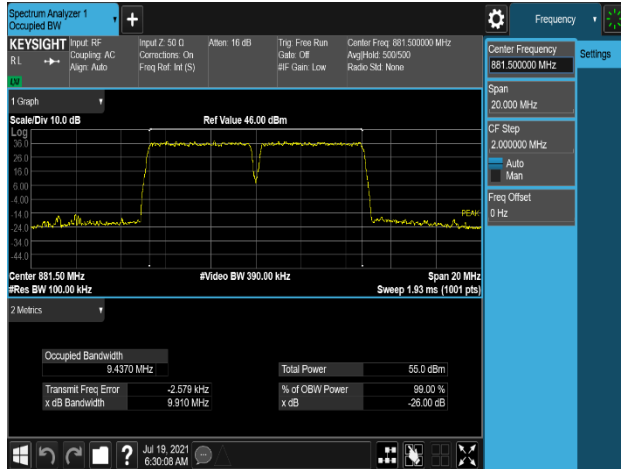


Plot 7-77. Occupied Bandwidth Plot
(B5_5M+5M_2C_QPSK - Mid Channel, Port 2)

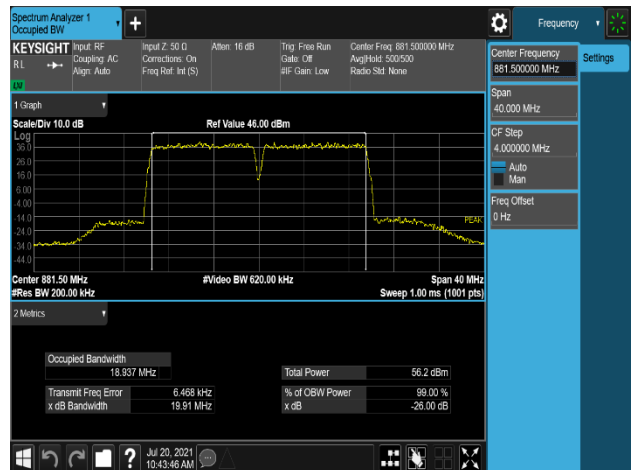
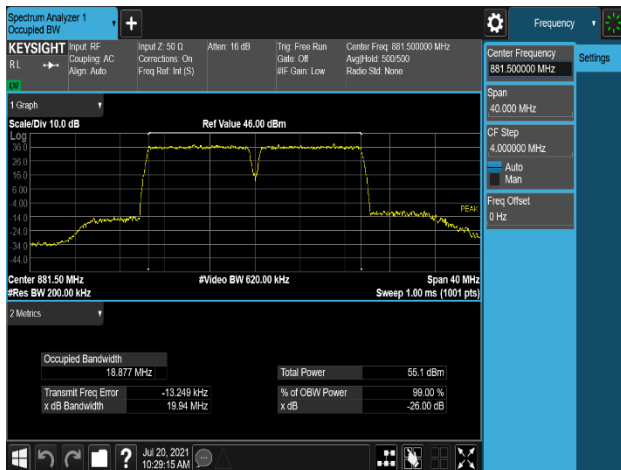
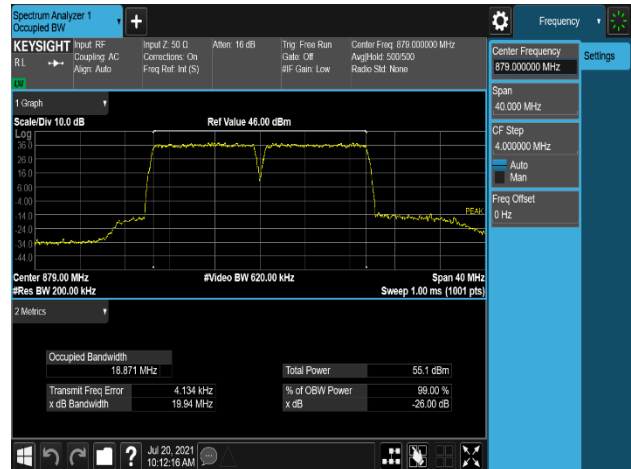
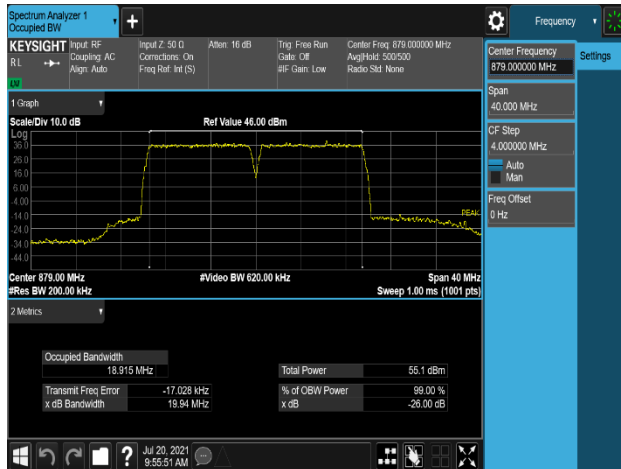
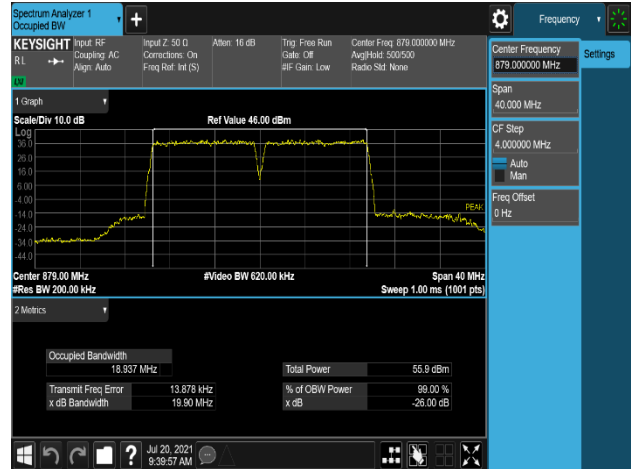
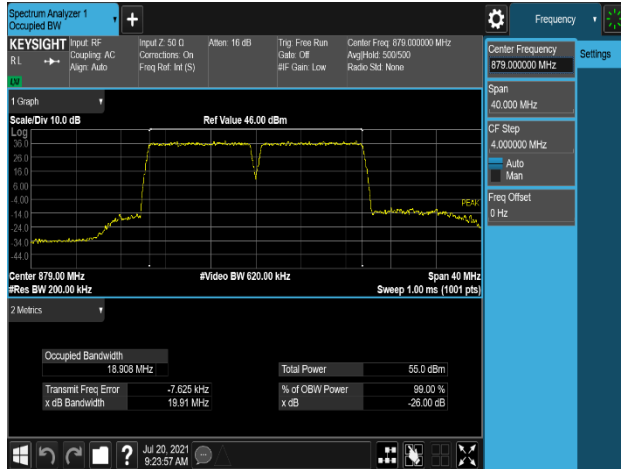


Plot 7-78. Occupied Bandwidth Plot
(B5_5M+5M_2C_16QAM - Mid Channel, Port 1)

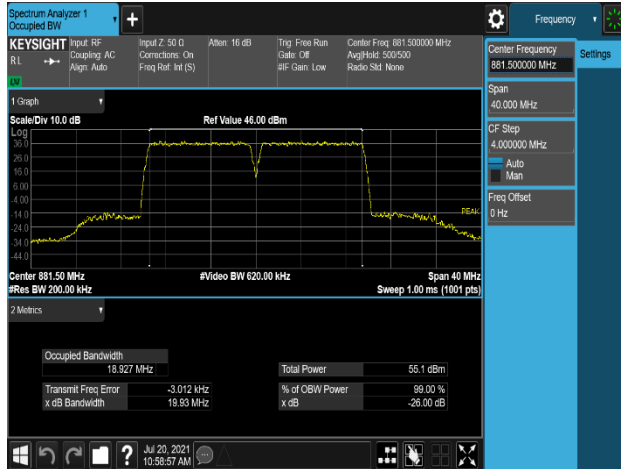
FCC ID: A3LRF4440D-13A	PCTEST ENGINEERING LABORATORY, INC.	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Technical Manager
Test Report S/N: 8K21070501R2-R1	Test Dates: 07/09/2021 - 08/25/2021	EUT Type: RRU (RF4440d)		Page 32 of 367



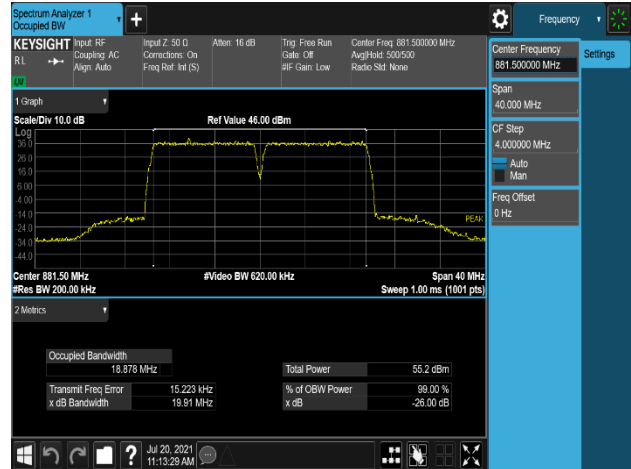
FCC ID: A3LRF4440D-13A	PCTEST ENGINEERING LABORATORY, INC.	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Technical Manager
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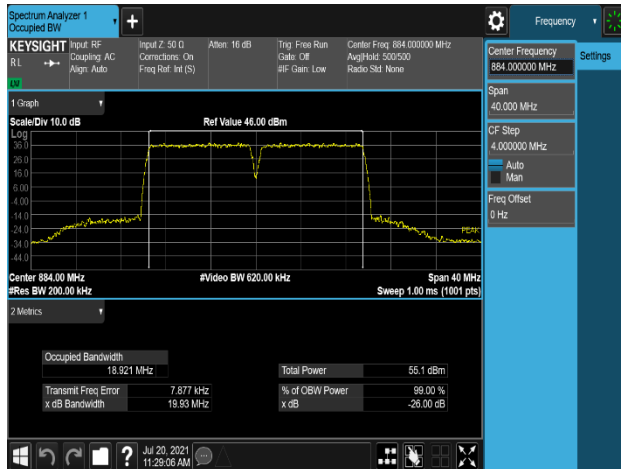
FCC ID: A3LRF4440D-13A	PCTEST ENGINEERING LABORATORY, INC.	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Technical Manager
Test Report S/N: 8K21070501R2-R1	Test Dates: 07/09/2021 - 08/25/2021	EUT Type: RRU (RF4440d)		Page 34 of 367



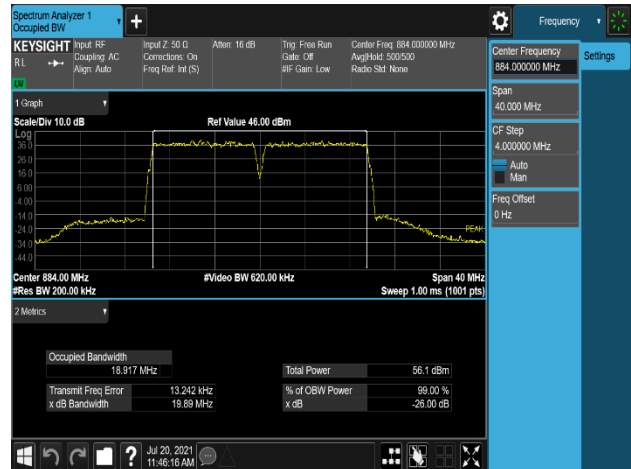
Plot 7-91. Occupied Bandwidth Plot
(B5_10M+10M_2C_64QAM - Mid Channel, Port 2)



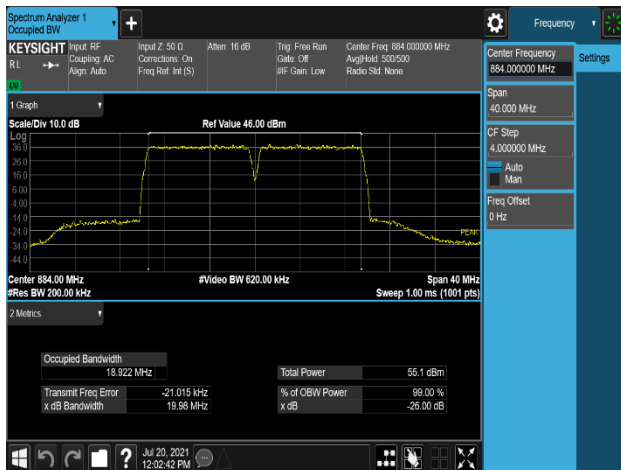
Plot 7-92. Occupied Bandwidth Plot
(B5_10M+10M_2C_256QAM - Mid Channel, Port 1)



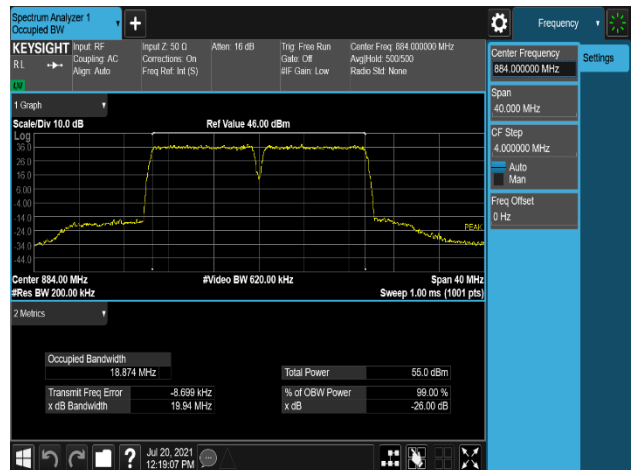
Plot 7-93. Occupied Bandwidth Plot
(B5_10M+10M_2C_QPSK - High Channel, Port 0)



Plot 7-94. Occupied Bandwidth Plot
(B5_10M+10M_2C_16QAM - High Channel, Port 3)



Plot 7-95. Occupied Bandwidth Plot
(B5_10M+10M_2C_64QAM - High Channel, Port 3)

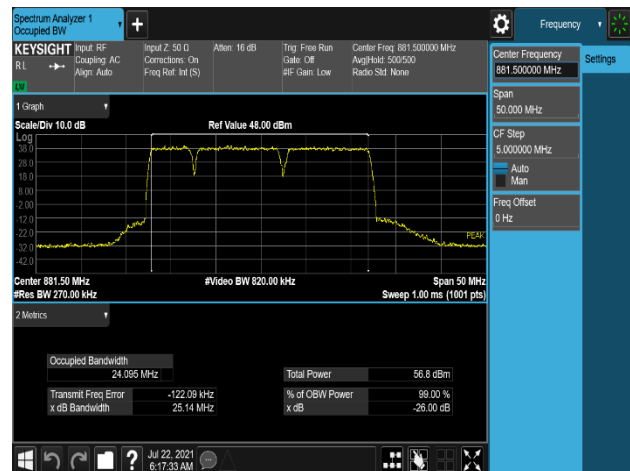
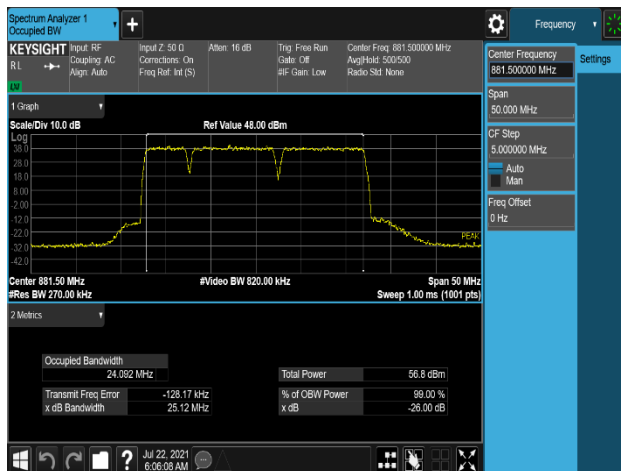
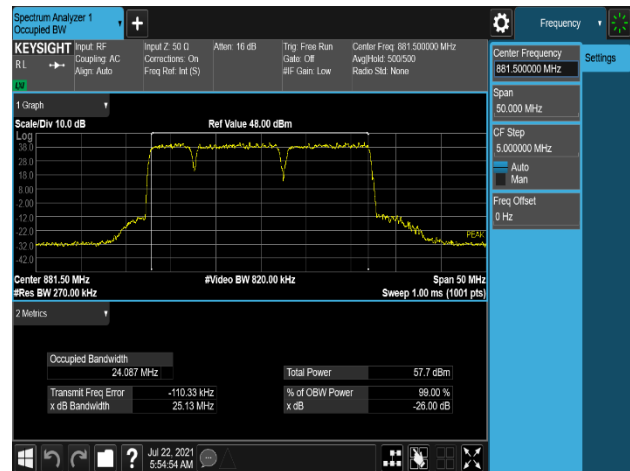
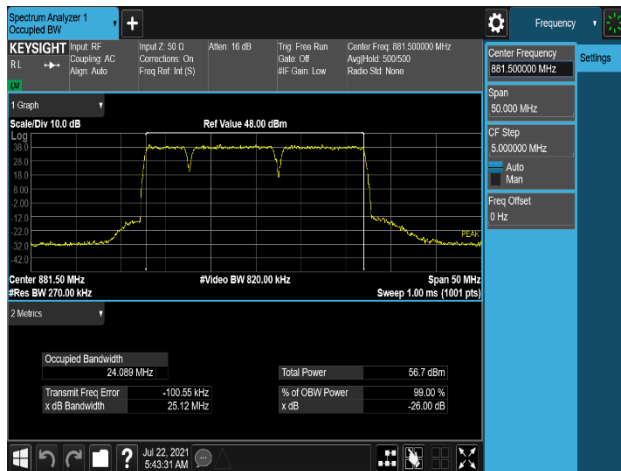


Plot 7-96. Occupied Bandwidth Plot
(B5_10M+10M_2C_256QAM - High Channel, Port 3)

FCC ID: A3LRF4440D-13A	PCTEST ENGINEERING LABORATORY, INC.	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Technical Manager
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Channel	Port	OBW (MHz)			
		QPSK	16QAM	64QAM	256QAM
Middle	0	24.09	24.09	24.09	24.09
	1	24.09	24.06	24.05	24.10

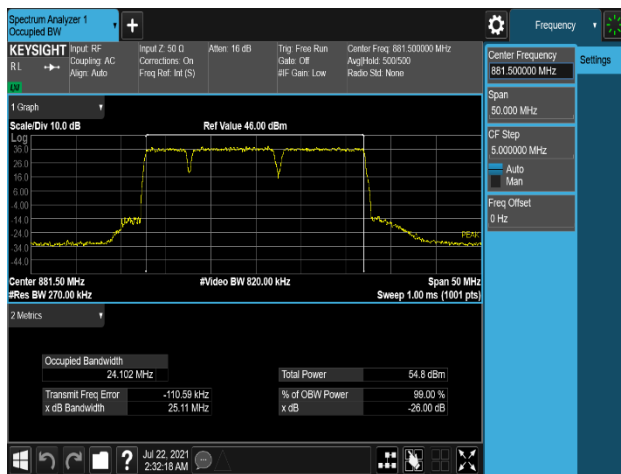
Table 7-10. Occupied Bandwidth Summary Data (B5_5M+10M+10M_3C_2T)



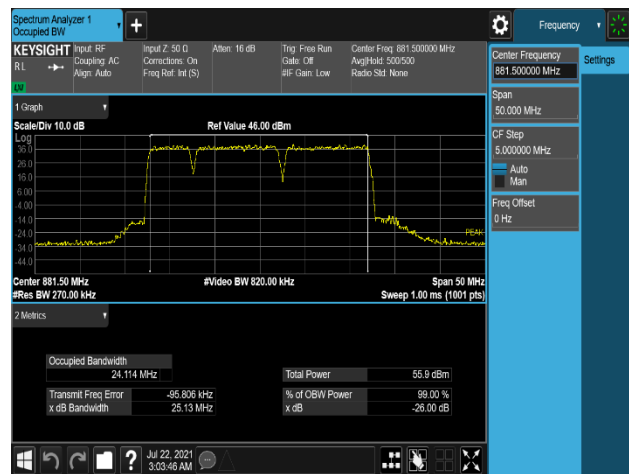
FCC ID: A3LRF4440D-13A	PCTEST ENGINEERING LABORATORY, INC.	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Technical Manager
Test Report S/N: 8K21070501R2-R1	Test Dates: 07/09/2021 - 08/25/2021	EUT Type: RRU (RF4440d)		Page 36 of 367

Channel	Port	OBW (MHz)			
		QPSK	16QAM	64QAM	256QAM
Middle	0	24.10	24.11	24.07	24.04
	1	24.10	24.10	24.08	24.05
	2	24.09	24.08	24.09	24.06
	3	24.07	24.09	24.10	24.08

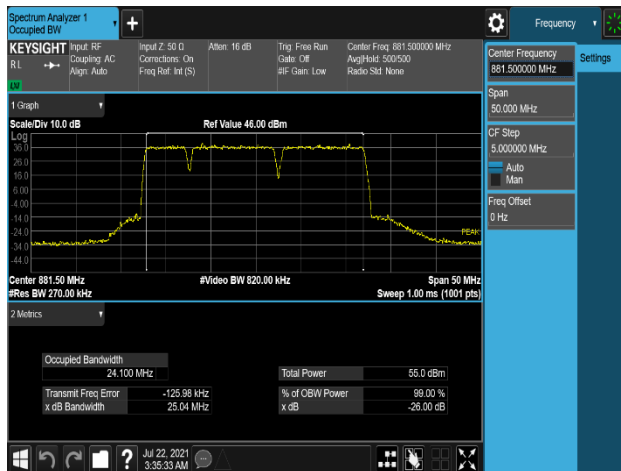
Table 7-11. Occupied Bandwidth Summary Data (B5_5M+10M+10M_3C_4T)



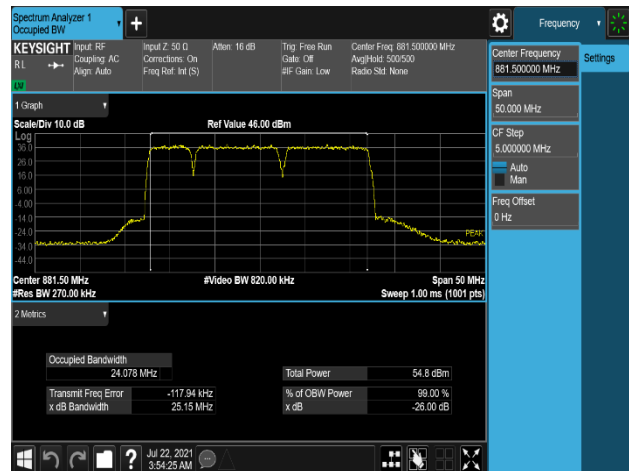
Plot 7-101. Occupied Bandwidth Plot
(B5_5M+10M+10M_3C_QPSK - Low Channel, Port 0)



Plot 7-102. Occupied Bandwidth Plot
(B5_5M+10M+10M_3C_16QAM - Low Channel, Port 0)



Plot 7-103. Occupied Bandwidth Plot
(B5_5M+10M+10M_3C_64QAM - Low Channel, Port 3)



Plot 7-104. Occupied Bandwidth Plot
(B5_5M+10M+10M_3C_256QAM - Low Channel, Port 3)

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Test Report S/N: BK21070501R2-R1	Test Dates: 07/09/2021 - 08/25/2021	EUT Type: RRU (RF4440d)		Page 37 of 367

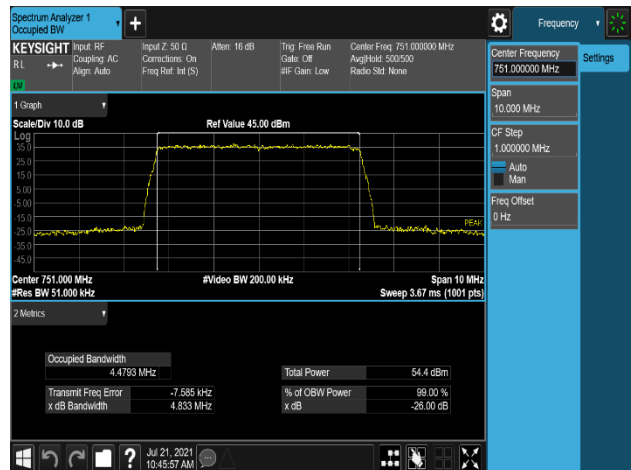
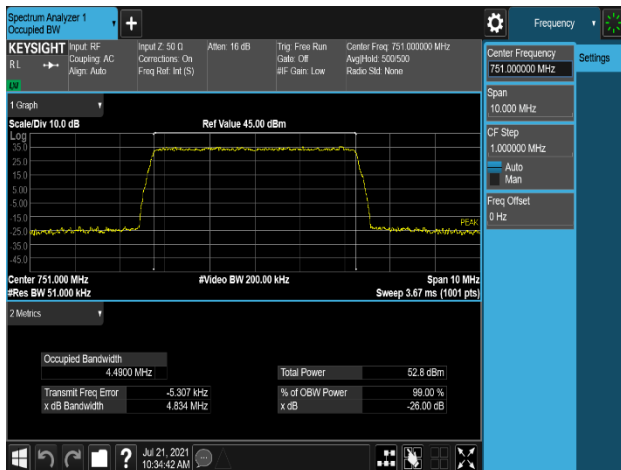
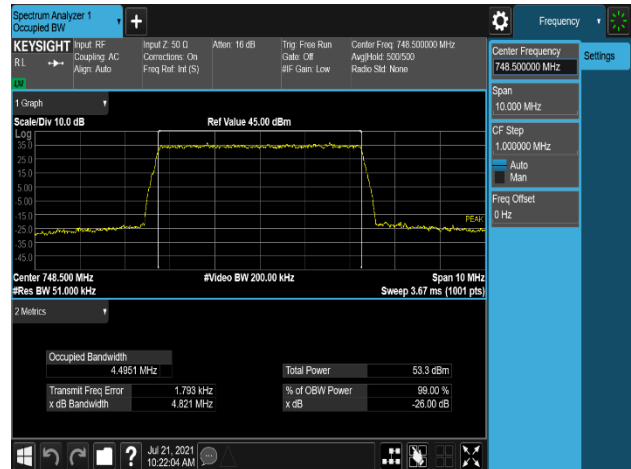
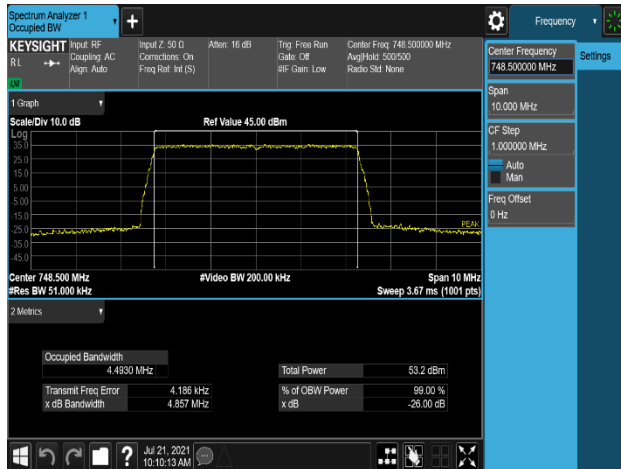
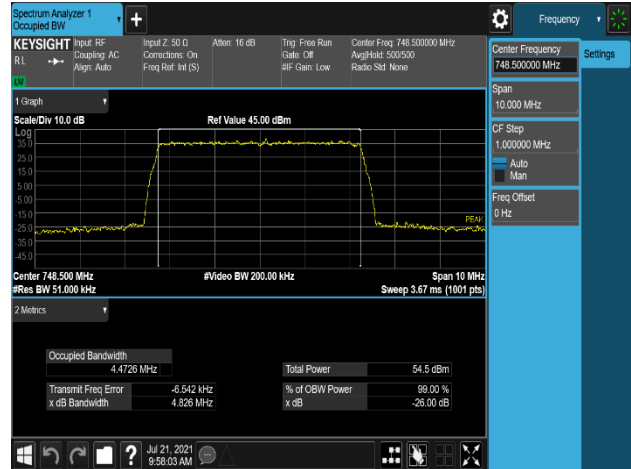
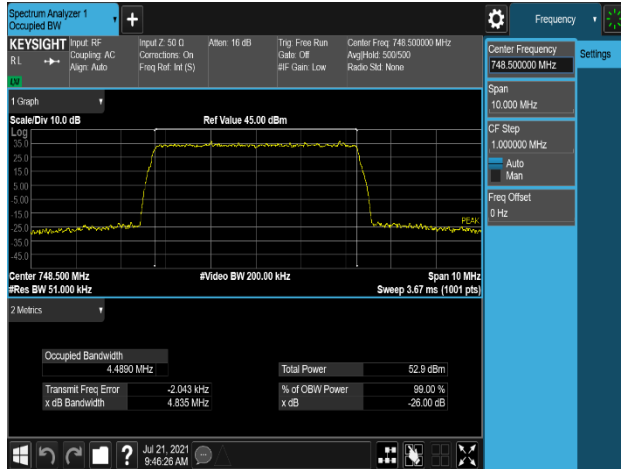
Channel	Port	OBW (MHz)			
		QPSK	16QAM	64QAM	256QAM
Low	0	4.48	4.47	4.49	4.49
	1	4.49	4.47	4.49	4.50
Middle	0	4.49	4.48	4.50	4.47
	1	4.49	4.47	4.50	4.49
High	0	4.49	4.47	4.49	4.48
	1	4.49	4.48	4.49	4.48

Table 7-12. Occupied Bandwidth Summary Data (B13_5M_1C_2T)

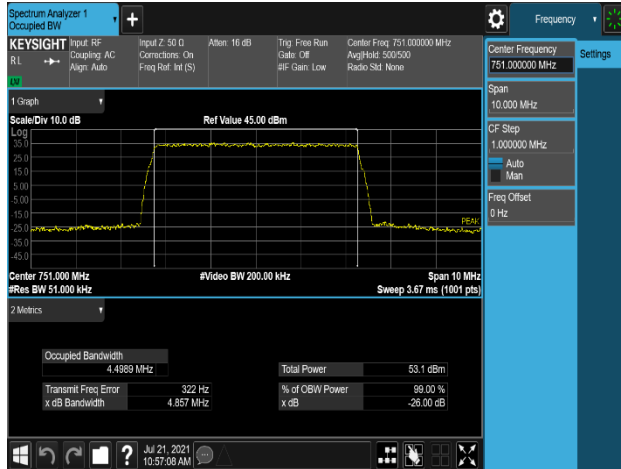
Channel	Port	OBW (MHz)			
		QPSK	16QAM	64QAM	256QAM
Middle	0	8.96	8.96	8.96	8.96
	1	8.97	8.96	8.97	8.95

Table 7-13. Occupied Bandwidth Summary Data (B13_10M_1C_2T)

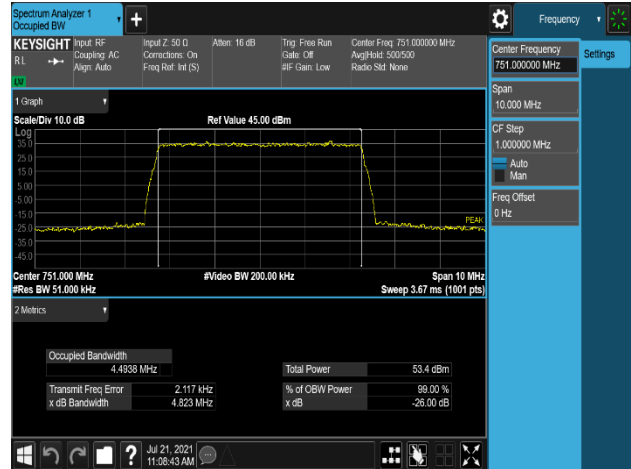
FCC ID: A3LRF4440D-13A		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Technical Manager
Test Report S/N: 8K21070501R2-R1	Test Dates: 07/09/2021 - 08/25/2021	EUT Type: RRU (RF4440d)	Page 38 of 367	



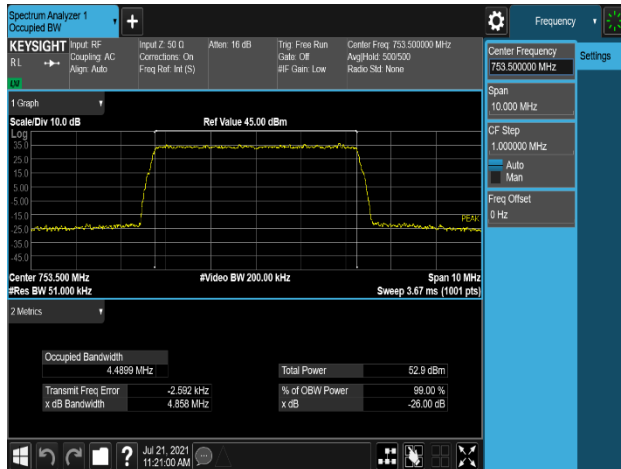
FCC ID: A3LRF4440D-13A	PCTEST ENGINEERING LABORATORY, INC.	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Technical Manager
Test Report S/N: 8K21070501R2-R1	Test Dates: 07/09/2021 - 08/25/2021	EUT Type: RRU (RF4440d)		Page 39 of 367



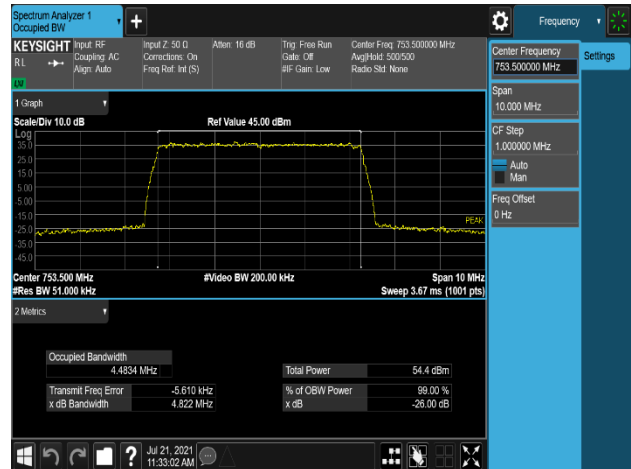
Plot 7-111. Occupied Bandwidth Plot
(B13_5M_1C_64QAM - Mid Channel, Port 0)



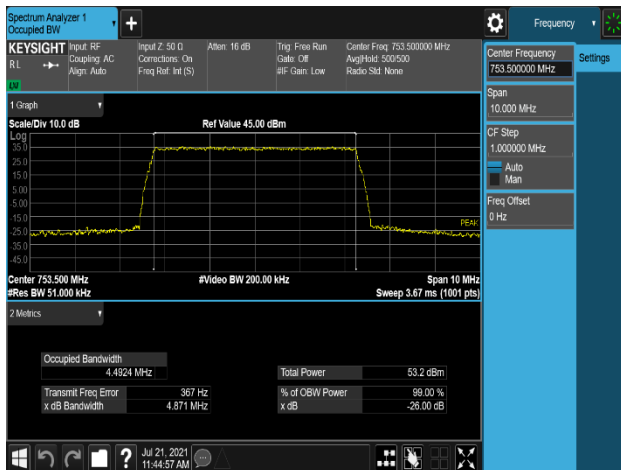
Plot 7-112. Occupied Bandwidth Plot
(B13_5M_1C_256QAM - Mid Channel, Port 1)



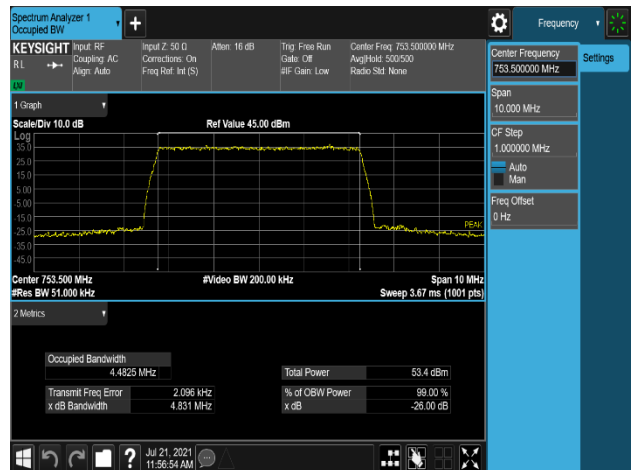
Plot 7-113. Occupied Bandwidth Plot
(B13_5M_1C_QPSK - High Channel, Port 1)



Plot 7-114. Occupied Bandwidth Plot
(B13_5M_1C_16QAM - High Channel, Port 1)

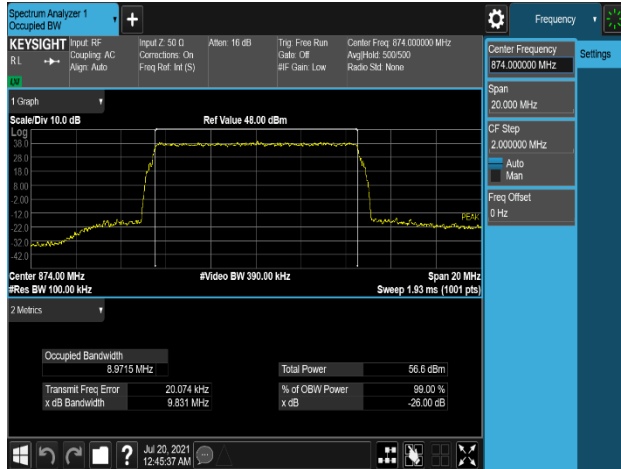


Plot 7-115. Occupied Bandwidth Plot
(B13_5M_1C_64QAM - High Channel, Port 1)

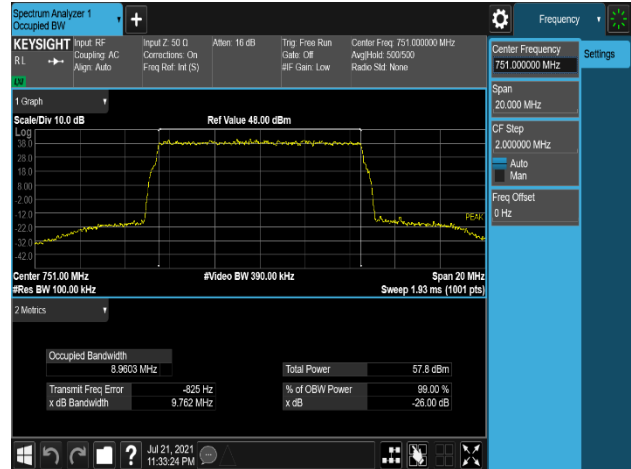


Plot 7-116. Occupied Bandwidth Plot
(B13_5M_1C_256QAM - High Channel, Port 1)

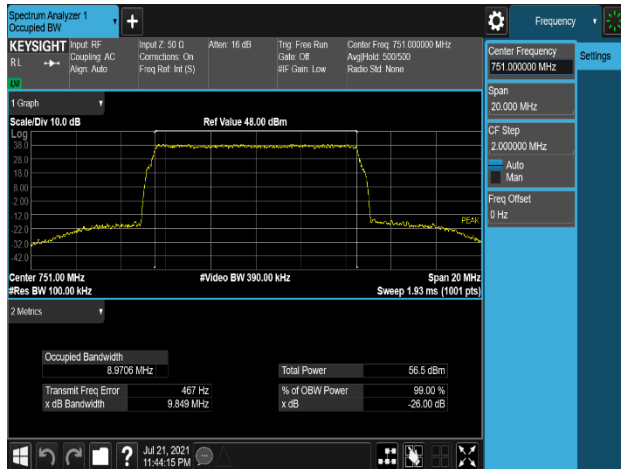
FCC ID: A3LRF4440D-13A	PCTEST ENGINEERING LABORATORY, INC.	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Technical Manager
Test Report S/N: 8K21070501R2-R1	Test Dates: 07/09/2021 - 08/25/2021	EUT Type: RRU (RF4440d)		Page 40 of 367



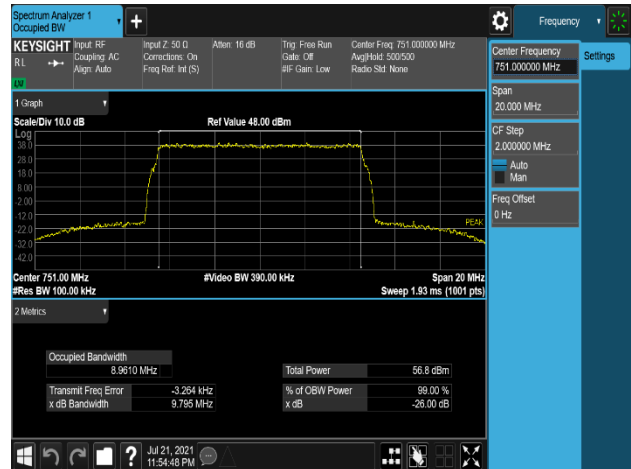
Plot 7-117. Occupied Bandwidth Plot
(B13_10M_1C_QPSK - Port 1)



Plot 7-118. Occupied Bandwidth Plot
(B13_10M_1C_16QAM - Port 1)



Plot 7-119. Occupied Bandwidth Plot
(B13_10M_1C_64QAM - Port 1)



Plot 7-120. Occupied Bandwidth Plot
(B13_10M_1C_256QAM - Port 0)

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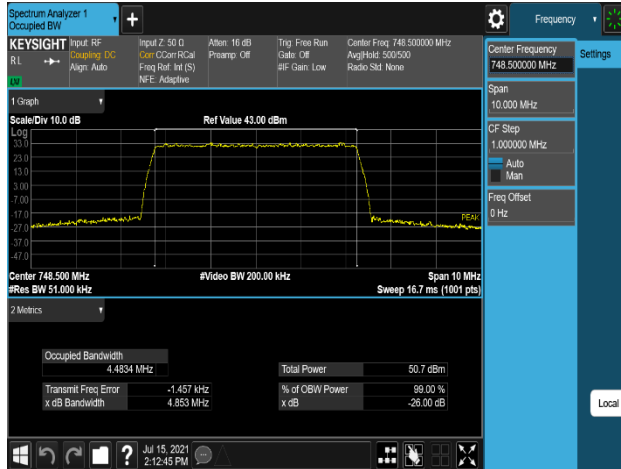
Channel	Port	OBW (MHz)			
		QPSK	16QAM	64QAM	256QAM
Low	0	4.48	4.47	4.49	4.48
	1	4.48	4.47	4.49	4.48
	2	4.48	4.48	4.49	4.48
	3	4.48	4.48	4.49	4.48
Middle	0	4.48	4.48	4.48	4.48
	1	4.48	4.48	4.48	4.48
	2	4.48	4.49	4.48	4.48
	3	4.48	4.48	4.49	4.48
High	0	4.48	4.48	4.48	4.48
	1	4.48	4.48	4.48	4.49
	2	4.49	4.48	4.48	4.49
	3	4.48	4.48	4.48	4.48

Table 7-14. Occupied Bandwidth Summary Data (B13_5M_1C_4T)

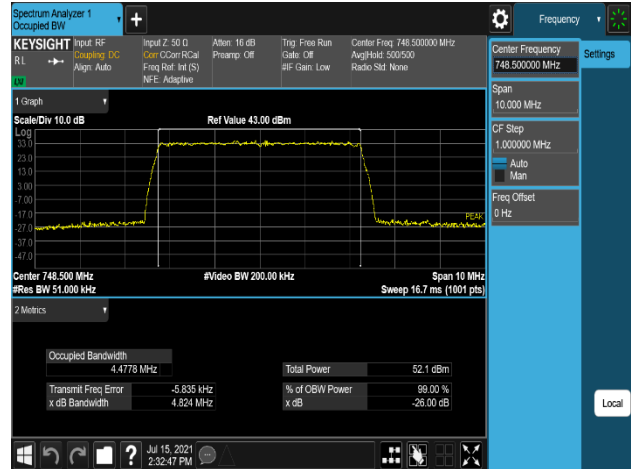
Channel	Port	OBW (MHz)			
		QPSK	16QAM	64QAM	256QAM
Middle	0	8.96	8.95	8.97	8.97
	1	8.95	8.95	8.97	8.96
	2	8.96	8.96	8.98	8.96
	3	8.96	8.95	8.97	8.94

Table 7-15. Occupied Bandwidth Summary Data (B13_10M_1C_4T)

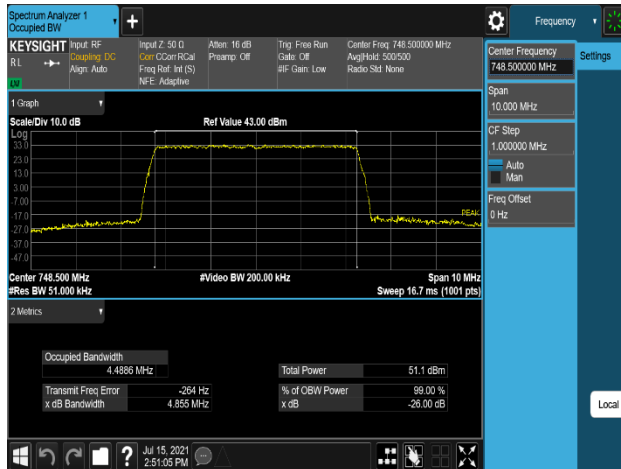
FCC ID: A3LRF4440D-13A		MEASUREMENT REPORT (CERTIFICATION)		Approved by: Technical Manager
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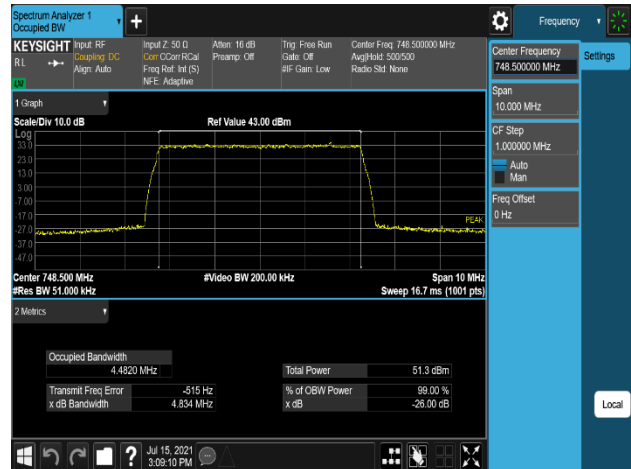
Plot 7-121. Occupied Bandwidth Plot
(B13_5M_1C_QPSK - Low Channel, Port 0)



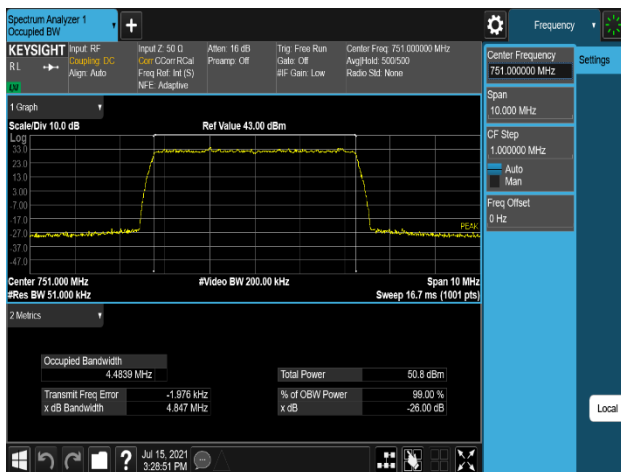
Plot 7-122. Occupied Bandwidth Plot
(B13_5M_1C_16QAM - Low Channel, Port 3)



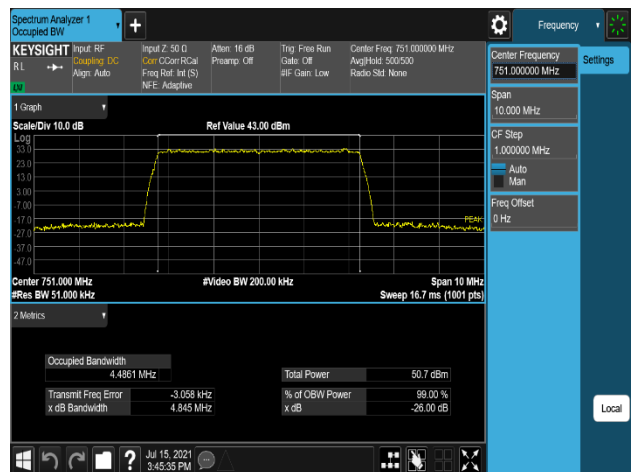
Plot 7-123. Occupied Bandwidth Plot
(B13_5M_1C_64QAM - Low Channel, Port 2)



Plot 7-124. Occupied Bandwidth Plot
(B13_5M_1C_256QAM - Low Channel, Port 0)

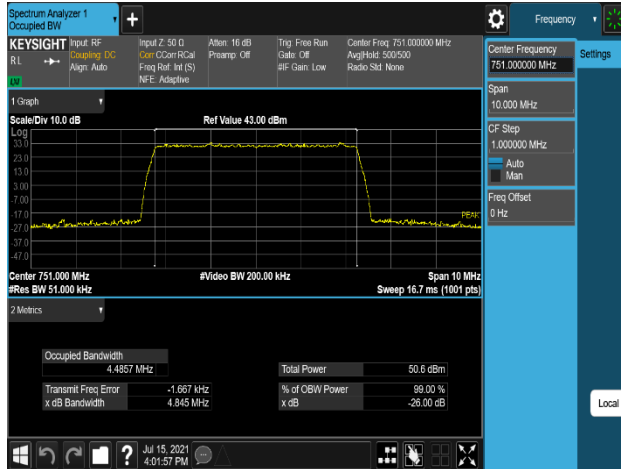


Plot 7-125. Occupied Bandwidth Plot
(B13_5M_1C_QPSK - Mid Channel, Port 0)

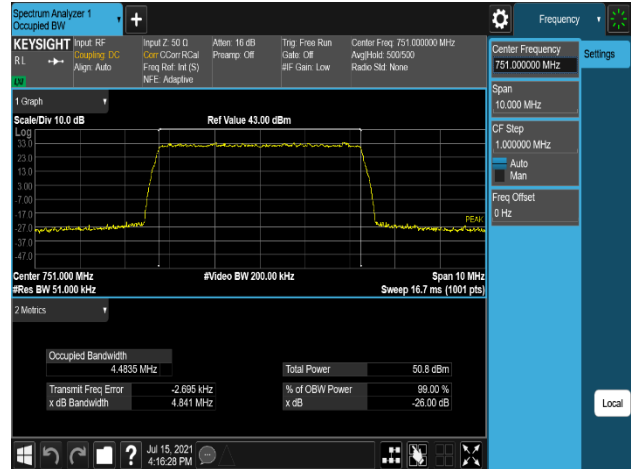


Plot 7-126. Occupied Bandwidth Plot
(B13_5M_1C_16QAM - Mid Channel, Port 2)

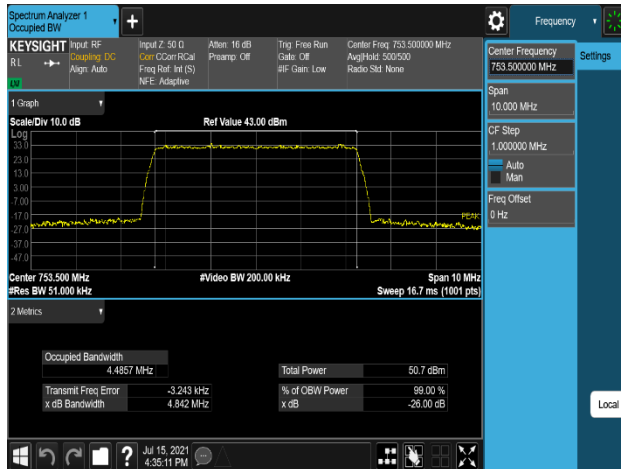
FCC ID: A3LRF4440D-13A	PCTEST ENGINEERING LABORATORY, INC.	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Technical Manager
Test Report S/N: BK21070501R2-R1	Test Dates: 07/09/2021 - 08/25/2021	EUT Type: RRU (RF4440d)		Page 43 of 367



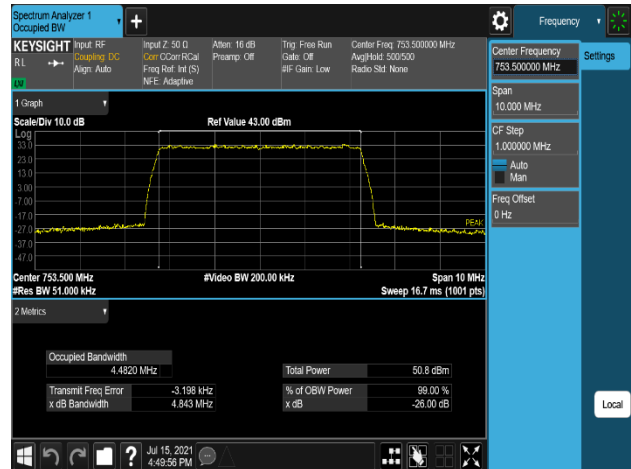
Plot 7-127. Occupied Bandwidth Plot
(B13_5M_1C_64QAM - Mid Channel, Port 3)



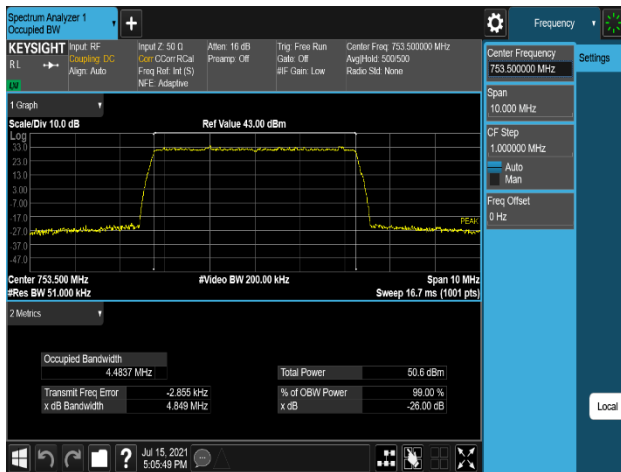
Plot 7-128. Occupied Bandwidth Plot
(B13_5M_1C_256QAM - Mid Channel, Port 0)



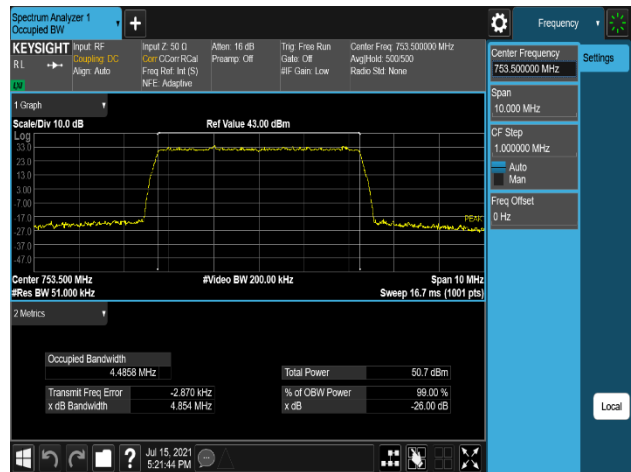
Plot 7-129. Occupied Bandwidth Plot
(B13_5M_1C_QPSK - High Channel, Port 2)



Plot 7-130. Occupied Bandwidth Plot
(B13_5M_1C_16QAM - High Channel, Port 0)

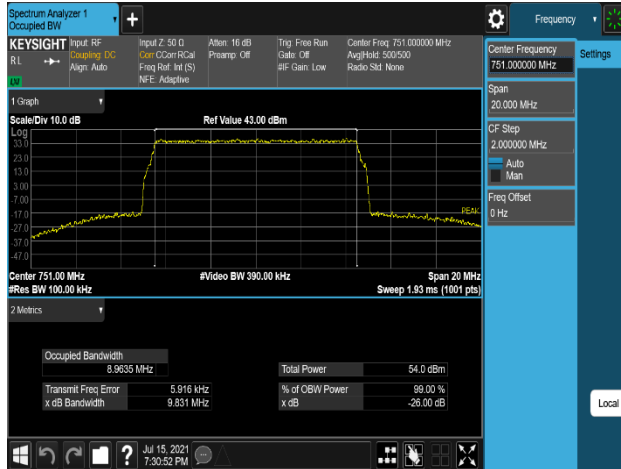


Plot 7-131. Occupied Bandwidth Plot
(B13_5M_1C_64QAM - High Channel, Port 1)

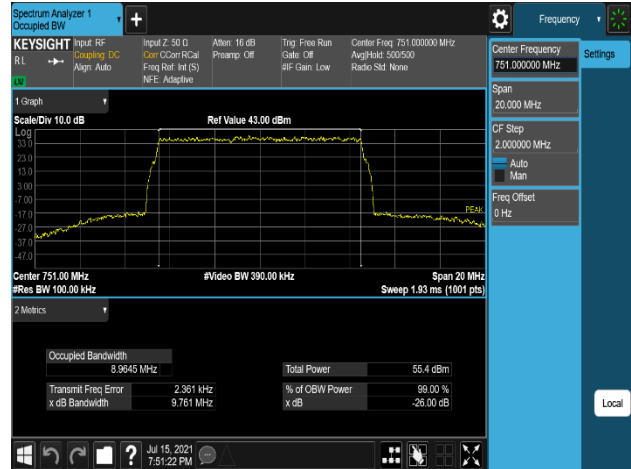


Plot 7-132. Occupied Bandwidth Plot
(B13_5M_1C_256QAM - High Channel, Port 2)

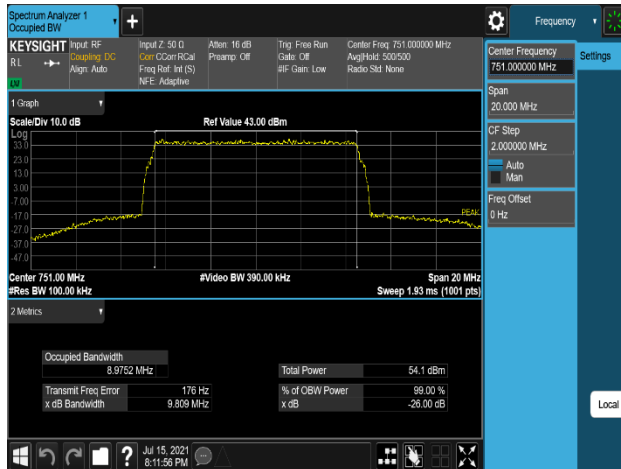
FCC ID: A3LRF4440D-13A	PCTEST ENGINEERING LABORATORY, INC.	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Technical Manager
Test Report S/N: BK21070501R2-R1	Test Dates: 07/09/2021 - 08/25/2021	EUT Type: RRU (RF4440d)		Page 44 of 367



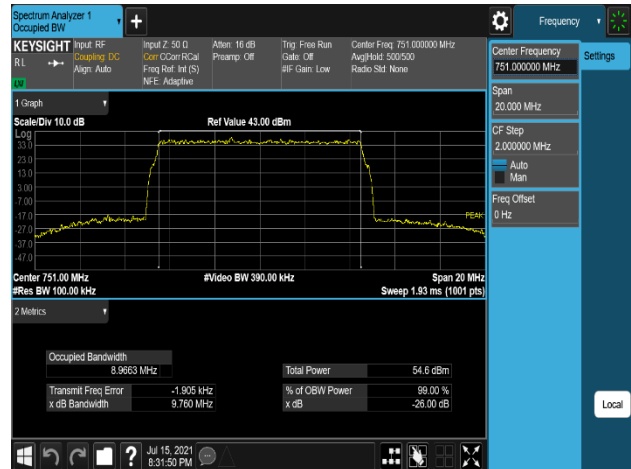
Plot 7-133. Occupied Bandwidth Plot (B13_10M_1C_QPSK - Port 2)



Plot 7-134. Occupied Bandwidth Plot (B13_10M_1C_16QAM - Port 2)



Plot 7-135. Occupied Bandwidth Plot (B13_10M_1C_64QAM - Port 2)

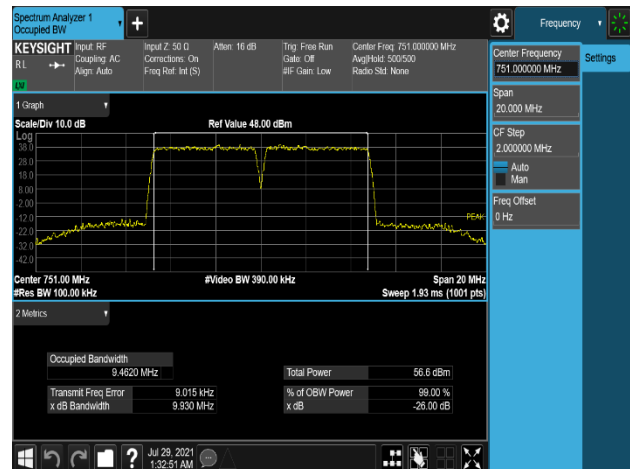
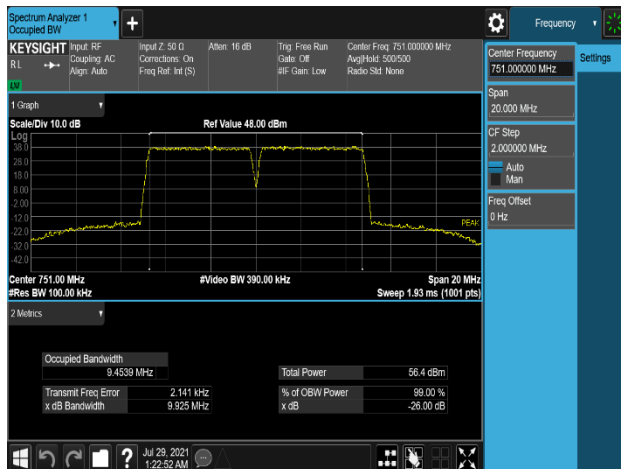
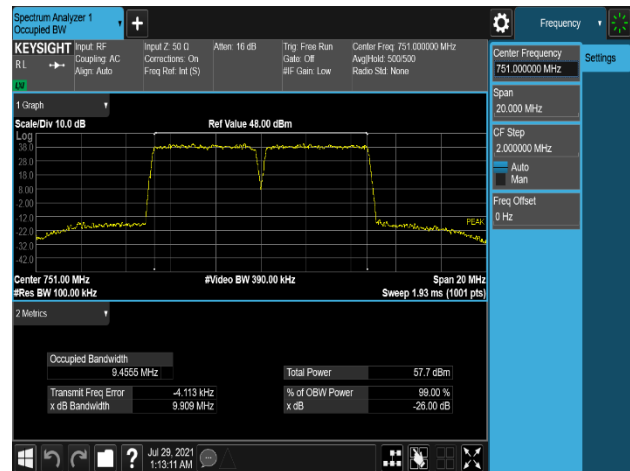
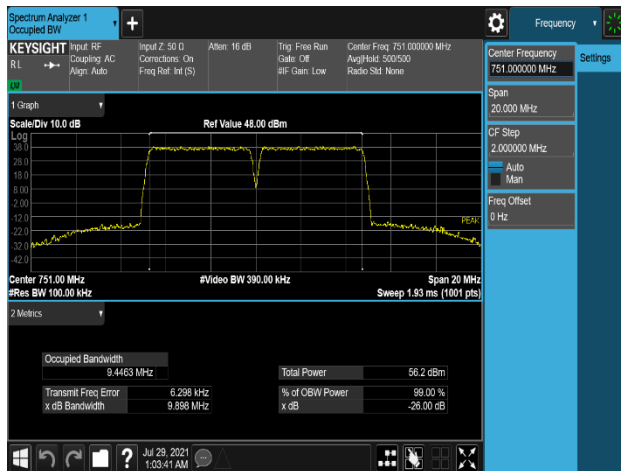


Plot 7-136. Occupied Bandwidth Plot (B13_10M_1C_256QAM - Port 0)

FCC ID: A3LRF4440D-13A	PCTEST ENGINEERING LABORATORY, INC.	MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Approved by: Technical Manager
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Channel	Port	OBW (MHz)			
		QPSK	16QAM	64QAM	256QAM
Middle	0	9.44	9.46	9.45	9.46
	1	9.45	9.44	9.44	9.46

Table 7-16. Occupied Bandwidth Summary Data (B13_5M+5M_2C_2T)



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 46 of 367