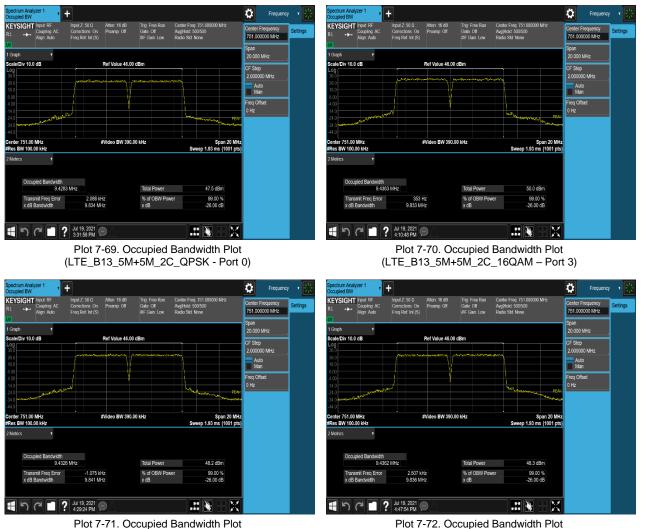


Channel	Port	OBW (MHz)			
	POIL	QPSK	16QAM	64QAM	256QAM
Middle	0	9.43	9.43	9.43	9.43
	1	9.43	9.43	9.42	9.44
	2	9.42	9.42	9.42	9.44
	3	9.43	9.44	9.43	9.44

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



(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)
	0	4.47
Low	1	4.47
Low	2	4.47
	3	4.47
	0	4.47
Middle	1	4.47
Middle	2	4.47
	3	4.47
	0	4.47
Lliab	1	4.47
High	2	4.47
	3	4.47

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

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

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

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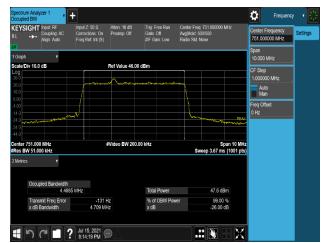
Plot 7-73. Occupied Bandwidth Plot (LTE_B13_5M+NB-lot(IB)_1C_QPSK - Low Channel, Port 0)



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



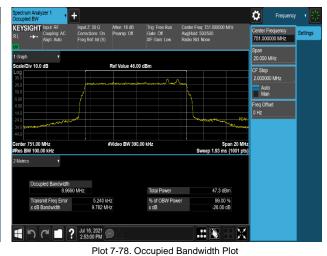
(LTE_B13_10M+Low_NB-lot(IB)+Low_NB-lot(IB)_1C _QPSK-Port 0)



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



Plot 7-76. Occupied Bandwidth Plot (LTE_B13_10M+Low_NB-lot(IB)+High_NB-lot(IB)_1C _QPSK - Port 1)



(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-lot(GB)+ NB-lot(GB)_3C)

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

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

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Spectrum Analyzer 1	-			Frequency	
KEYSIGHT Input: RF RL ↔ Align: Auto	Input Z: 50 0 Atten: 16 Corrections: On Preamp: Freq Ref: Int (S)		Center Freq: 751.000000 MHz Avg[Hold: 500/500 Redio Std: None	Center Frequency 751.000000 MHz	Settings
1 Graph T Scale/Div 10.0 dB	Ref Valu	e 46.00 dBm		Span 20.000 MHz	
Log 36 0 26 0 16 0	A	nilette.tuestimusepaertaitet		CF Step 2.000000 MHz Auto Man	
6.00 -4.00 -14.0 -24.0			line and	Freq Offset 0 Hz	
-24.0 -34.0 -44.0 Center 751.00 MHz		W 390.00 kHz	Span 20		
#Res BW 100.00 kHz	#video B	W 390.00 RHZ	Span 20 Sweep 1.93 ms (1001		
2 Metrics v					
9.4968	MHz	Total Power	48.0 dBm		
Transmit Freq Error x dB Bandwidth	-3.422 kHz 9.925 MHz	% of OBW Pow x dB	ver 99.00 % -26.00 dB		
• • • • • • •	Jul 16, 2021 5:13:52 PM			X	

Plot 7-79. Occupied Bandwidth Plot (LTE_B13_10M+NB-lot(GB)+ NB-lot(GB)_3C_QPSK - Port 0)



Plot 7-81. Occupied Bandwidth Plot (LTE_B13_10M+NB-lot(IB)+ NB-lot(GB)_2C_QPSK - Port 0)



Plot 7-80. Occupied Bandwidth Plot

(LTE_B13_10M+NB-lot(IB)+ NB-lot(GB)_2C_QPSK - Port 0)

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DSS		Dest		OBW	(MHz)	
Ratio	Channel	Port	QPSK	16QAM	64QAM	256QAM
		0	9.21	9.16	9.21	9.18
	Low	1	9.19	9.15	9.16	9.18
L	LOW	2	9.20	9.15	9.14	9.16
		3	9.23	9.19	9.19	9.14
		0	9.22	9.16	9.18	9.16
LTE 9:	Middle	1	9.22	9.18	9.21	9.15
NR 1	Middle	2	9.24	9.17	9.20	9.17
		3	9.23	9.18	9.19	9.19
		0	9.19	9.19	9.20	9.15
	High —	1	9.22	9.17	9.20	9.17
	nign	2	9.22	9.21	9.21	9.18
		3	9.22	9.17	9.13	9.18
		0	9.24	9.18	9.20	9.18
		1	9.24	9.19	9.20	9.18
	Low	2	9.25	9.20	9.22	9.20
		3	9.26	9.19	9.21	9.19
		0	9.25	9.18	9.20	9.21
LTE 8:	Middle	1	9.25	9.17	9.22	9.19
NR 2	Middle	2	9.26	9.19	9.22	9.20
		3	9.26	9.17	9.23	9.21
		0	9.26	9.18	9.22	9.21
	LUmb	1	9.22	9.18	9.22	9.20
	High	2	9.25	9.21	9.20	9.19
		3	9.26	9.19	9.23	9.19
		0	9.26	9.18	9.23	9.20
		1	9.25	9.19	9.23	9.19
	Low	2	9.27	9.17	9.23	9.19
		3	9.27	9.18	9.24	9.22
		0	9.27	9.20	9.26	9.20
LTE 7:	Middle	1	9.26	9.19	9.24	9.22
NR 3	Middle	2	9.27	9.19	9.22	9.22
		3	9.26	9.20	9.23	9.22
		0	9.26	9.19	9.21	9.22
	Llink	1	9.26	9.18	9.23	9.21
	High —	2	9.26	9.19	9.22	9.21
		3	9.26	9.19	9.22	9.22
		0	9.26	9.19	9.25	9.22
		1	9.27	9.18	9.23	9.22
	Low	2	9.25	9.19	9.25	9.22
		3	9.27	9.19	9.22	9.22
		0	9.27	9.19	9.25	9.22
LTE 6:	N4: -L-U	1	9.27	9.19	9.24	9.21
NR 4	Middle	2	9.27	9.20	9.26	9.23
		3	9.28	9.18	9.23	9.21
		0	9.27	9.21	9.23	9.21
		1	9.27	9.20	9.21	9.23
	High —	2	9.26	9.18	9.22	9.23
		3	9.27	9.19	9.21	9.22

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	High —	1 2	9.28 9.28	9.21 9.23	9.25 9.25	9.27 9.26
		0	9.29	9.22	9.26	9.27
		3	9.29	9.20	9.27	9.26
NR 8		2	9.29	9.22	9.27	9.25
LTE 2:	Middle —	1	9.29	9.23	9.27	9.26
		0	9.29	9.20	9.28	9.26
		3	9.28	9.22	9.26	9.26
		2	9.28	9.19	9.26	9.25
	Low	1	9.28	9.19	9.25	9.25
		0	9.29	9.21	9.25	9.25
		3	9.29	9.21	9.25	9.24
	High —	2	9.29	9.22	9.25	9.24
	Lligh	1	9.28	9.21	9.26	9.24
		0	9.28	9.20	9.25	9.25
-		3	9.28	9.21	9.25	9.25
NR 7	Middle —	2	9.28	9.19	9.26	9.25
LTE 3:		1	9.28	9.22	9.27	9.24
		0	9.28	9.20	9.25	9.25
		3	9.28	9.20	9.24	9.24
	Low	2	9.28	9.21	9.20	9.20
		1	9.28	9.20	9.26	9.24
	<u>├</u>	0	9.27	9.22	9.23	9.25
		2 3	9.27 9.27	9.19 9.22	9.24 9.23	9.24 9.25
	High —	1	9.28	9.19	9.25	9.24
		0	9.28	9.19	9.25	9.25
		3	9.29	9.20	9.26	9.24
NR 6		2	9.28	9.20	9.25	9.24
LTE 4:	Middle	1	9.28	9.20	9.25	9.24
		0	9.28	9.20	9.26	9.24
		3	9.28	9.19	9.25	9.23
	2011	2	9.28	9.19	9.25	9.24
	Low	1	9.28	9.19	9.25	9.24
		0	9.28	9.19	9.26	9.24
		3	9.28	9.20	9.23	9.20
	riigii	2	9.27	9.19	9.23	9.22
	High	1	9.27	9.21	9.25	9.23
		0	9.27	9.21	9.24	9.23
		3	9.28	9.18	9.25	9.24
NR 5	Middle —	2	9.28	9.20	9.24	9.24
LTE 5:		1	9.28	9.22	9.24	9.23
		0	9.28	9.20	9.23	9.24
Low -		3	9.27	9.19	9.23	9.24
	Low	2	9.27	9.20	9.24	9.24
		0	9.27 9.28	9.19 9.20	9.25 9.23	9.22 9.22

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.

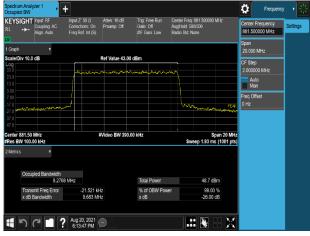
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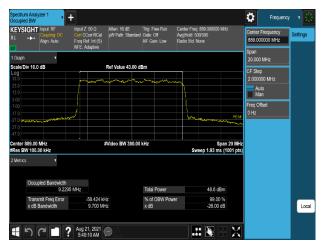


KEYSIGHT Input: RF L →→ Coupling: AC Align: Auto		Atten: 16 dB Preamp: Off	Trig: Free Run Gato: Off #IF Gain: Low	Center Freq: 874.000 Avg Hold: 500/500 Radio Std: None	0000 MHz	Center Frequency 874.000000 MHz	Setting
Graph •						Span 20.000 MHz	
cale/Div 10.0 dB		tef Value 43.00	dBm			CF Step	
33.0		mananan	un	~~~		2.000000 MHz	
						Auto Man	
3.00				ļ.		Freq Offset	
17.0	w.l.			an and the second	FEAK	0 Hz	
37.0					1999 Barry Constraints		
enter 874.00 MHz Res BW 100.00 kHz	#\	/ideo BW 390.	00 kHz	Sweep 1.9	Span 20 MHz 3 ms (1001 pts)		
Metrics v							
Occupied Bandwidth							
9.2862 Transmit Freg Error	-4.263 kHz		Total Power % of OBW Pow		.6 dBm 9.00 %		
x dB Bandwidth	-4.263 KHz 9.707 MHz		x dB		9.00 % 6.00 dB		

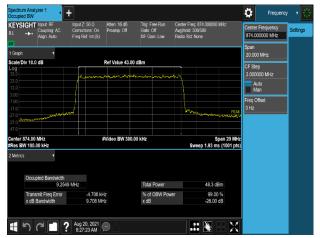
Plot 7-82. Occupied Bandwidth Plot (DSS_B5_10M_2:8_1C__QPSK - Low Channel, Port 0)



Plot 7-84. Occupied Bandwidth Plot (DSS_B5_10M_2:8_1C__64QAM - Mid Channel, Port 0)



Plot 7-83. Occupied Bandwidth Plot (DSS_B5_10M_2:8_1C__16QAM - High Channel, Port 2)



Plot 7-85. Occupied Bandwidth Plot (DSS_B5_10M_2:8_1C__256QAM - High Channel, Port 0)

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DSS	Channel	Port		OBW	(MHz)	
Ratio	Channel	POIL	QPSK	16QAM	64QAM	256QAM
		0	14.29	14.29	14.26	14.27
	Low	1	14.28	14.32	14.26	14.29
	Low	2	14.27	14.28	14.28	14.28
		3	14.26	14.27	14.23	14.26
		0	14.26	14.31	14.25	14.28
LTE 5:	Middle	1	14.29	14.36	14.27	14.30
NR 5	Middle	2	14.27	14.30	14.26	14.27
		3	14.29	14.31	14.25	14.28
		0	14.25	14.18	14.27	14.27
	High	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	Channel	Dort	OBW (MHz)			
Ratio	Channel	Port	QPSK	16QAM	64QAM	256QAM
		0	19.01	19.03	18.99	18.99
	Low	1	19.01	19.04	19.02	18.98
	Low	2	19.01	19.05	19.01	18.99
		3	19.02	19.01	19.00	18.92
		0	19.02	19.05	18.99	19.00
LTE 5:	Middle	1	19.00	19.10	18.94	18.97
NR 5	wildule	2	18.99	19.04	18.98	18.98
		3	18.94	19.05	18.97	19.02
		0	18.97	18.90	19.01	18.95
	High	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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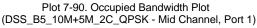


Plot 7-86. Occupied Bandwidth Plot (DSS_B5_10M+5M_2C_QPSK - Low Channel, Port 0)



Plot 7-88. Occupied Bandwidth Plot (DSS_B5_10M+5M_2C_64QAM - Low Channel, Port 2)



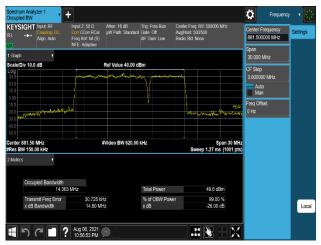




Plot 7-87. Occupied Bandwidth Plot (DSS_B5_10M+5M_2C_16QAM - Low Channel, Port 1)



Plot 7-89. Occupied Bandwidth Plot (DSS_B5_10M+5M_2C_256QAM - Low Channel, Port 1)



Plot 7-91. Occupied Bandwidth Plot (DSS_B5_10M+5M_2C_16QAM - Mid Channel, Port 1)

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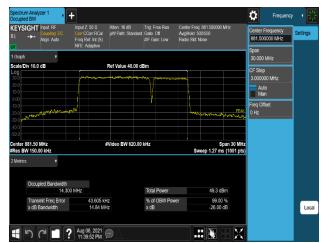
Plot 7-92. Occupied Bandwidth Plot (DSS_B5_10M+5M_2C_64QAM - Mid Channel, Port 1)



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



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



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



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



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

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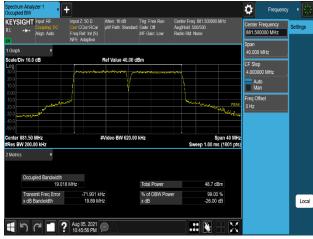


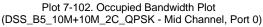


Plot 7-98. Occupied Bandwidth Plot (DSS_B5_10M+10M_2C_QPSK - Low Channel, Port 3)



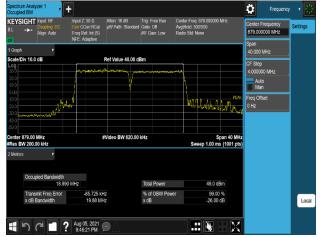
Plot 7-100. Occupied Bandwidth Plot (DSS_B5_10M+10M_2C_64QAM - Low Channel, Port 1)







Plot 7-99. Occupied Bandwidth Plot (DSS_B5_10M+10M_2C_16QAM - Low Channel, Port 2)



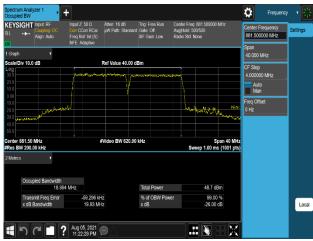
Plot 7-101. Occupied Bandwidth Plot (DSS_B5_10M+10M_2C_256QAM - Low Channel, Port 0)



Plot 7-103. Occupied Bandwidth Plot (DSS_B5_10M+10M_2C_16QAM – Mid Channel, Port 1)

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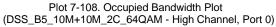


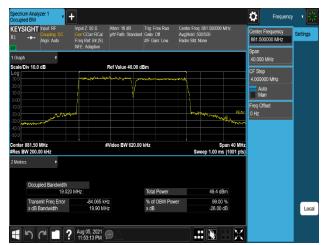
Plot 7-104. Occupied Bandwidth Plot (DSS_B5_10M+10M_2C_64QAM - Mid Channel, Port 0)



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



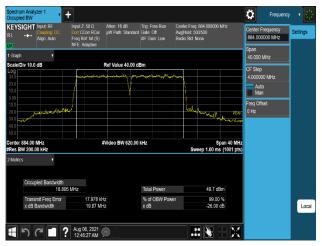




Plot 7-105. Occupied Bandwidth Plot (DSS_B5_10M+10M_2C_256QAM – Mid Channel, Port 3)



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



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

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KEYSIGHT

Div 10.0 dB

881.50 MHz W 270.00 kH

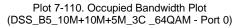
24.209 MHz

Aug 09, 2021 7:02:35 PM

DSS	Channel	Port	OBW (MHz)				
Ratio	Channel	Channel	iannei Pon	QPSK	16QAM	64QAM	256QAM
LTE 5: NR 5 Middle	0	24.20	24.05	24.23	24.17		
	Middle	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)





lue 40.00 dB

#Video BW 1.0000 MHz

Total Powe

% of OBW Po x dB

Plot 7-112. Occupied Bandwidth Plot

(DSS_B5_10M+10M+5M_3C _64QAM - Port 2)

Ö

Frequ

881.500000 MHz

50.000 MH

CF Step 5.000000 MHz

Auto Man

Freq Offset 0 Hz

Span 50 MH ep 1.00 ms (1001 pts

49.0 dBm

99.00 % -26.00 dB

 \square

...



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



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 × RBW.
- 5. Set number of measurement points in sweep $\geq 2 \times \text{span} / \text{RBW}$.
- 6. Sweep time:
 - a) Set \geq auto-couple, and enable trace averaging, or
 - b) Set ≥ [10 × (number of points in sweep) × (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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The EUT and measurement equipment were set up as shown in the diagram below.

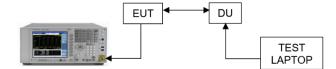


Figure 7-2. Test Instrument & Measurement Setup

Limit

N/A

Test Notes

- 1. The highest values are highlighted in the following tables. The plots are presented only for the highlighted values.
- 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 considerting 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.
 - 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	= 10 * log (114263.52) =	Value	Unit
Total MIMO Conducted Power (linear sum)		114263.52	mW
Total MIMO Conducted Power (dBm)		50.58	dBm
Antenna Gain MIMO EIRP =	Max. 27.2 dBi (25.0 dBi ± 2.2dB) Total MIMO Conducted Power + Antenna Gain	27.2 77.78	dBi dBm
FCC EIRP Limit	= 77.78 - 87.10 =	87.10	dBm
Margin = MIMO EIRP - FCC EIRP Limit		-9.32	dB

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Low Channel	Port	QPSK	16QAM	64QAM	256QAM
	0	40.15	40.12	40.30	40.15
Conducted Average	1	40.03	40.13	40.29	40.22
Power (dBm)	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
	0	40.15	40.06	40.09	40.08
Conducted Average	1	40.22	40.28	40.26	40.20
Power (dBm)	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
	0	40.19	40.10	40.11	40.12
Conducted Average	1	40.27	40.28	40.16	40.21
Power (dBm)	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
	0	39.93	39.85	39.85	39.81
Conducted Average	1	40.07	40.00	40.00	39.99
Power (dBm)	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
	0	39.81	40.09	40.00	39.97
Conducted Average	1	40.16	40.26	40.09	40.16
Power (dBm)	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
	0	39.98	40.00	39.97	39.98
Conducted Average	1	40.12	40.20	40.13	40.12
Power (dBm)	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)

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Spectrum Analyzer 1 Channel Power		Amon. 417 (13)	In the local bar	Control or an A (DD)	20 M In	🔅 Freque	incy 🕴 🗦
RL ++ Align: Auto	Corrections: On	Atten: 16 dB Preamp: Ott #PNO: Fast	Trig: Free Run Gate: Off #IF Gain: Low	Center Freq: 871 5000 Avg[Hold: 500/500 Radio Std: None	CU MH2	Center Frequency 871.500000 MHz	Settings
UV 1 Giaph V						Span 10.000 MHz	
Scale/Div 10.0 dB		Ref Value 40.00) dBm			CF Step	
						1.000000 MHz Auto Man	
						Freq Offset 0 Hz	
20.0	_				RMS AVG		
-40.0							
Center 871.500 MHz #Res BW 51.000 kHz	#/	/ideo BW 200.0	00 kHz ^x	Sweep 4.73	Span 10 MHz ms (1001 pts)		
2 Metrics 🔻							
Total Channel Power	40.30 dBm / 5.00	MHz					
Total Power Spectral Densi	ity -26.69 dBr	n/Hz					
1 7 7 1	? Jul 12, 2021						

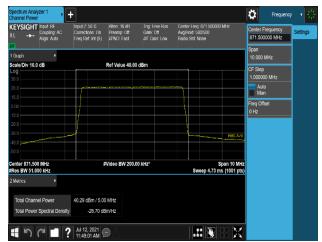
Plot 7-114. Conducted Average Output Power Plot (LTE_B5_5M_1C_64QAM - Low Channel, Port 0)



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



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



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



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



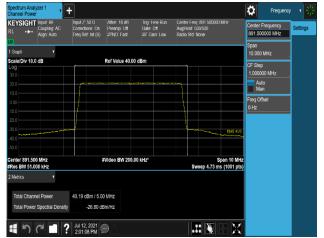
Plot 7-119. Conducted Average Output Power Plot (LTE_B5_5M_1C_QPSK - Mid Channel, Port 1)

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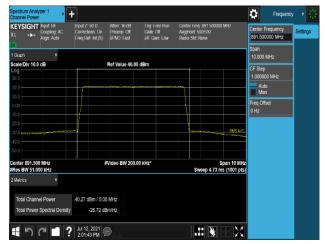


KEYSIGHT Input: RE RL ++ Couping: AC Align: Auto	Corrections: On Pre	amp:Off (ing: Free Run Sate: Ott 4F Gain: Low	Center Freq Avg Hold: 50 Radio Std: N		MH7	Center Freq 881.50000		Settings
1 Graph V Scale/Div 10.0 dB	Ref	Value 40.00 dBr	n				Span 10.000 MH	z	
20.0				~			CF Step 1.000000 M Auto Man	/Hz	
							Freq Offset 0 Hz		
20.0						EMS AVO			
50.0 Senter 881.500 MHz	#Vide	o BW 200.00 kł	łz ^x			an 10 MHz			
Res BW 51.000 kHz Metrics v				Swe	ep 4.73 ms	(1001 pts)			
Total Channel Power Total Power Spectral Dens	40.13 dBm / 5.00 MH; ity -26.86 dBm/H;								
190	? Jul 12, 2021	A				F M			

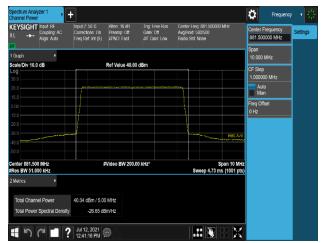
Plot 7-120. Conducted Average Output Power Plot (LTE_B5_5M_1C_QPSK - Mid Channel, Port 2)



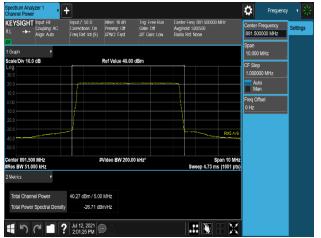
Plot 7-122. Conducted Average Output Power Plot (LTE_B5_5M_1C_QPSK – High Channel, Port 0)



Plot 7-124. Conducted Average Output Power Plot (LTE_B5_5M_1C_QPSK – High Channel, Port 2)



Plot 7-121. Conducted Average Output Power Plot (LTE_B5_5M_1C_QPSK - Mid Channel, Port 3)



Plot 7-123. Conducted Average Output Power Plot (LTE_B5_5M_1C_QPSK – High Channel, Port 1)



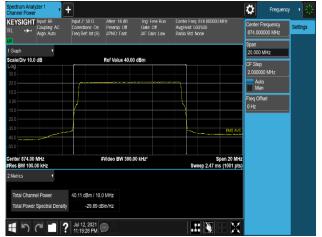
Plot 7-125. Conducted Average Output Power Plot (LTE_B5_5M_1C_QPSK – High Channel, Port 3)

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RL + Align: Auto	Input Z: 50 0 Atten Corrections: On Pream Freq Ref: Int (S) #PNO	p: Off Gate: Off	Center Freq: 874 000000 MHz Avg Hold: 500/500 Radio Std: None	Center Frequency 874.000000 MHz	Settings
1 Graph v Scale/Div 10.0 dB	Ref Va	ue 40.00 dBm		Span 20.000 MHz	
20.0				CF Step 2.000000 MHz Auto Man	
				Freq Offset 0 Hz	
20.0			FIMS	<u>AV6</u>	
50.0 Center 874.00 MHz IRes BW 100.00 kHz	#Video I	3W 390.00 kHz*	Span 20 Sweep 2.47 ms (1001		
2 Metrics V					
Total Channel Power Total Power Spectral Dens	39.93 dBm / 10.0 MHz ity -30.07 dBm/Hz				
1 50	? Jul 12, 2021 🗩 🛆		.:: 🔊 -)	X	

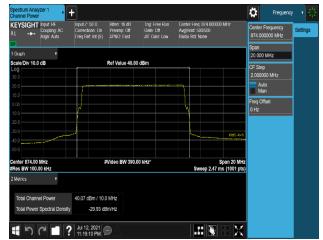
Plot 7-126. Conducted Average Output Power Plot (LTE_B5_10M_1C_QPSK - Low Channel, Port 0)



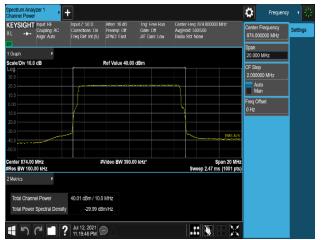
Plot 7-128. Conducted Average Output Power Plot (LTE_B5_10M_1C_QPSK - Low Channel, Port 2)



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



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



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



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

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I Graph Scale/Div 10.0 dB .0g .0g .0g .0g .0g .0g .0g .0	Ref Value 4	0.00 dBm		Span 20.000 MHz CF Step 2.000000 MH Auto Man	łz
0.0				Auto	łz
	<u>/</u>		-\	Freq Offset 0 Hz	
0.0				FINS AV46	
50.0					
enter 881.50 MHz Res BW 100.00 kHz	#Video BW 3	90.00 kHz*	Spectra Spectra Spectra Sweep 2.47 ms	an 20 MHz (1001 pts)	
Metrics v					
Total Channel Power	40.16 dBm / 10.0 MHz -29.84 dBm/Hz				
	Jul 13, 2021		.:: 🔖 -	EX	

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



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



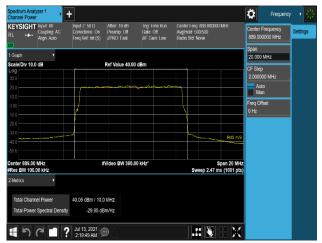
Plot 7-136. Conducted Average Output Power Plot (LTE_B5_10M_1C_16QAM – High Channel, Port 2)

L Align: Auto	Input Z' 50 0 Corrections: On Freq Ref: Int (S)	Atten: 16 dB Preamp: Off 4PNO: Fast	Tng: Free Run Gate: Off AFF Gain: Low	Center Freq: 881 50000 Avg Hold: 500/500 Radio Std: None) MHz	Center Frequency 881.500000 MHz Span	Settings
Graph v sale/Div 10.0 dB 0 0 0 0 0 0 0 0 0 0 0 0		Ref Value 40.00	dBm			20.000 MHz CF Step 2.000000 MHz Auto Man Freq Offset	
					RMS AV/6	0 Hz	
nter 881.50 MHz es BW 100.00 kHz Metrics v Total Channel Power	40.39 dBm / 10.0	Video BW 390.0	0 kHz"	Sweep 2.47 n	Span 20 MHz 1s (1001 pts)		
Total Power Spectral Density		3m/Hz		.:: ¥			

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



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



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
	0	40.03	39.95	39.93	39.94
Conducted Average	1	39.94	39.94	39.95	40.02
Power (dBm)	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
	0	39.88	39.86	39.82	39.90
Conducted Average	1	40.08	40.12	40.14	40.07
Power (dBm) 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
	0	39.85	39.85	39.90	39.84
Conducted Average	1	40.17	40.14	40.14	40.22
Power (dBm)	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)

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



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



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



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



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



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

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