BlackBerry.	EMC Test Report for the BlackBerry® smartphone Model RHK211LW (STV100-1)			
,	APPENDIX 6			
Test Report No.: RTS-6066-1509-01	Dates of Test: July 22 – September 8, and September 28, 2015	FCC ID: L6ARHK210LW IC: 2503A-RHK210LW		

Figure 6-34: Peak Power Spectral Density
SISO Secondary, 802.11b, Channel 1, 1
Mbps

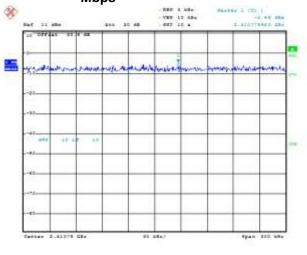
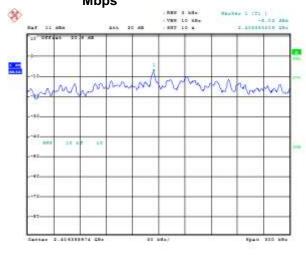
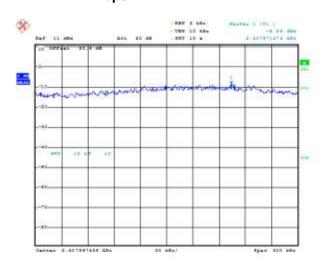


Figure 6-35: Peak Power Spectral Density
SISO Secondary, 802.11b, Channel 6, 1
Mbps



Gabe: 18.809.0018 11:20:88 Gabe: 18.809.0018 11:23:81

Figure 6-36: Peak Power Spectral Density SISO Secondary, 802.11b, Channel 11, 1 Mbps



Date: 18.809.2018 11-28-06

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Figure 6-37: Peak Power Spectral Density
SISO Secondary, 802.11g, Channel 1, 6
Mbps

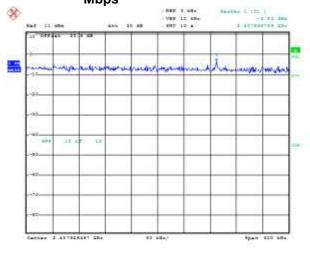
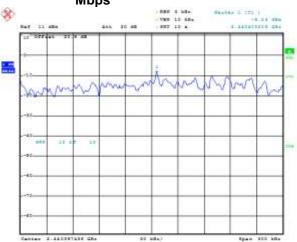


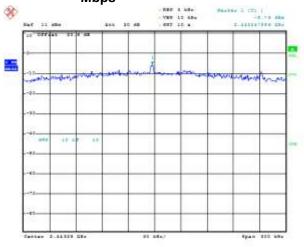
Figure 6-38: Peak Power Spectral Density
SISO Secondary, 802.11g, Channel 6, 6
Mbps



Date: 18.809.2018 11:37:11

Date: 18.809.2018 11:29:17

Figure 6-39: Peak Power Spectral Density
SISO Secondary, 802.11g, Channel 11, 6
Mbps



Dane: 18.869.2018 11:51:22

BlackBerry.	EMC Test Report for the BlackBerry® smartphone Model RHK211LW (STV100-1)			
,	APPENDIX 6			
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Figure 6-40: Peak Power Spectral Density SISO Secondary, 802.11n, Channel 1, MCS 0

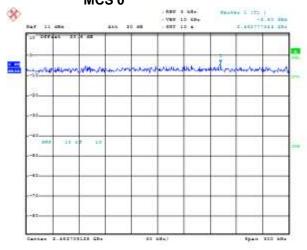
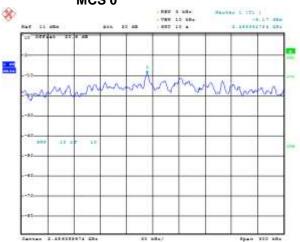


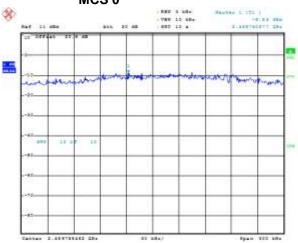
Figure 6-41: Peak Power Spectral Density
SISO Secondary, 802.11n, Channel 6,
MCS 0



Date: 18.809.2018 11:03:28

Date: 18.809.2018 11:59:12

Figure 6-42: Peak Power Spectral Density
SISO Secondary, 802.11n, Channel 11,
MCS 0



Date: 18.869,2018 11:57:39

≅ BlackBerry.	EMC Test Report for the BlackBerry® smartphone Model RHK211LW (STV100-1)  APPENDIX 6	
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Figure 6-43: Peak Power Spectral Density
MIMO Primary, 802.11b, Channel 1, 1

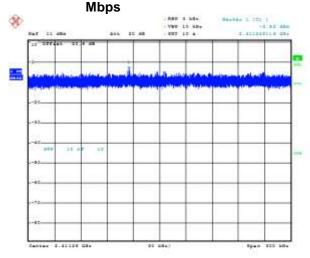
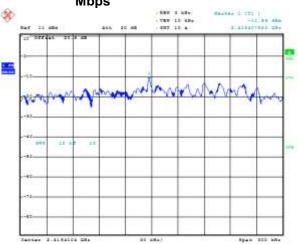
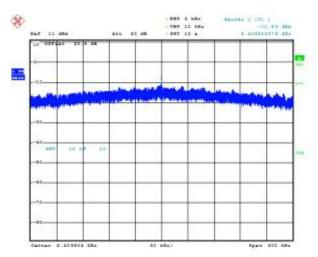


Figure 6-44: Peak Power Spectral Density
MIMO Primary, 802.11b, Channel 6, 1
Mbps



Date: 1.889.2018 02-18-03 Date: 1.889.2018 02-18-13

Figure 6-45: Peak Power Spectral Density
MIMO Primary, 802.11b, Channel 11, 1
Mbps



Date: 1.869.2018 84:16:62

<b>∷</b> BlackBerry.	EMC Test Report for the BlackBerry® smartphone Model RHK211LW (STV100-1)			
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Figure 6-46: Peak Power Spectral Density
MIMO Primary, 802.11g, Channel 1, 6

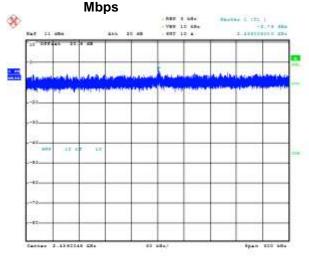
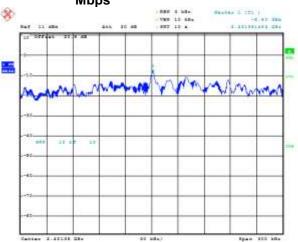


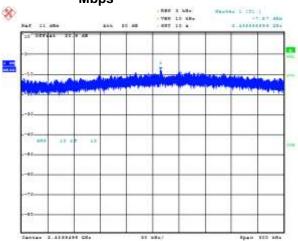
Figure 6-47: Peak Power Spectral Density
MIMO Primary, 802.11g, Channel 6, 6
Mbps



Sane: 1.889.2018 02:22:08

Sene: 1.FEF.2018 03:01:27

Figure 6-48: Peak Power Spectral Density
MIMO Primary, 802.11g, Channel 11, 6
Mbps



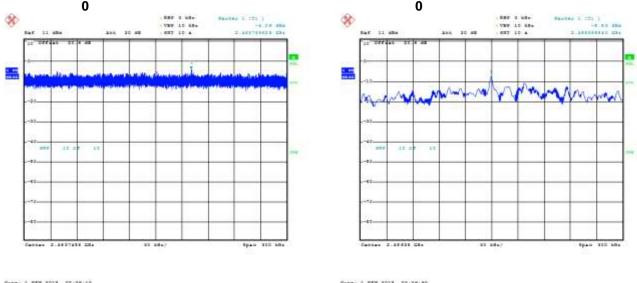
Date: 1.8EF.2018 84-20-67

<b>∷</b> BlackBerry.	EMC Test Report for the BlackBerry® smartphone Model RHK211LW (STV100-1)			
,	APPENDIX 6			
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Figure 6-49: Peak Power Spectral Density
MIMO Primary, 802.11n, Channel 1, MCS

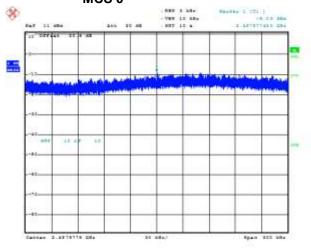
Figure 6-50: Peak Power Spectral Density

MIMO Primary, 802.11n, Channel 6, MCS



Same: 1.8EF.2018 02:28:12 Came: 1.8EF.2018 02:28:12

Figure 6-51: Peak Power Spectral Density
MIMO Primary, 802.11n, Channel 11,
MCS 0



Date: 1.FEF.2018 14-28-11

<b>∷</b> BlackBerry.	EMC Test Report for the BlackBerry® smartphone Model RHK211LW (STV100-1)			
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Figure 6-52: Peak Power Spectral Density
MIMO Secondary, 802.11b, Channel 1, 1
Mbps

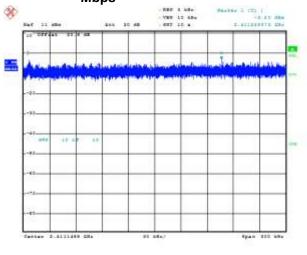
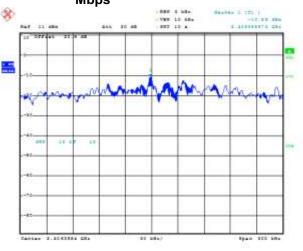
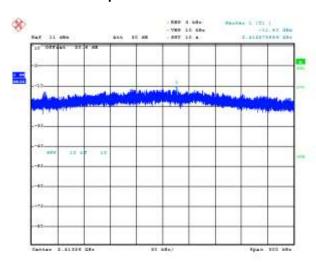


Figure 6-53: Peak Power Spectral Density
MIMO Secondary, 802.11b, Channel 6, 1
Mbps



Same: 1.8EF.2018 02:40:48 Same: 1.8EF.2018 03:12:86

Figure 6-54: Peak Power Spectral Density
MIMO Secondary, 802.11b, Channel 11, 1
Mbps



Date: 1.FEF.2018 84-31-63

≅ BlackBerry.	EMC Test Report for the BlackBerry® smartphone Model RHK211LW (STV100-1)  APPENDIX 6	
Test Report No.: RTS-6066-1509-01	Dates of Test: July 22 – September 8, and September 28, 2015	FCC ID: L6ARHK210LW IC: 2503A-RHK210LW

Figure 6-55: Peak Power Spectral Density
MIMO Secondary, 802.11g, Channel 1, 6
Mbps

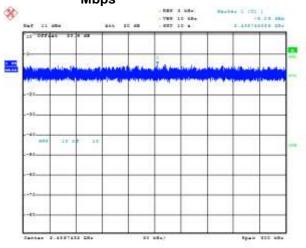
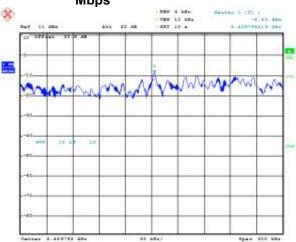


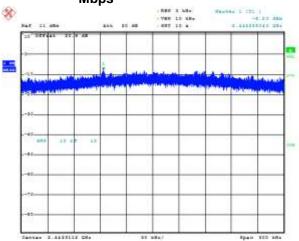
Figure 6-56: Peak Power Spectral Density
MIMO Secondary, 802.11g, Channel 6, 6
Mbps



Sabe: 1.8EF.2018 82:49:48

Date: 1.869.2018 03:17:88

Figure 6-57: Peak Power Spectral Density
MIMO Secondary, 802.11g, Channel 11, 6
Mbps



Date: 1.FEF.2018 14:16:18

≅ BlackBerry.	EMC Test Report for the BlackBerry® smartphone Model RHK211LW (STV100-1)  APPENDIX 6	
Test Report No.: RTS-6066-1509-01	Dates of Test: July 22 – September 8, and September 28, 2015	FCC ID: L6ARHK210LW IC: 2503A-RHK210LW

Figure 6-58: Peak Power Spectral Density
MIMO Secondary, 802.11n, Channel 1,
MCS 0

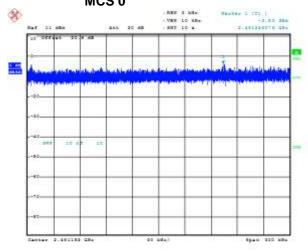


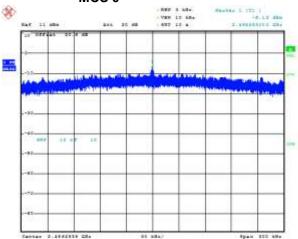
Figure 6-59: Peak Power Spectral Density
MIMO Secondary, 802.11n, Channel 6,
MCS 0



Date: 1.869.2018 82:80:82

Same: 1.869.2018 83:21:62

Figure 6-60: Peak Power Spectral Density
MIMO Secondary, 802.11n, Channel 11,
MCS 0



Date: 1.889.2018 84:41:15

<b>∷</b> BlackBerry.	EMC Test Report for the BlackBerry® smart RHK211LW (STV100-1)		
	APPENDIX	6	
Test Report No.: RTS-6066-1509-01	Dates of Test: July 22 – September 8, and September 28, 2015  FCC ID: L6ARHK210LW IC: 2503A-RHK210LW		

## **Spurious RF Conducted Emissions**

The EUT met the requirements of the spurious RF conducted emissions as per 47 CFR 15.247(c) and RSS-247. Channels 1, 6 and 11 were measured at 1 Mbps for 802.11b mode, 6 Mbps each for 802.11g mode, and MCS 0 for 802.11n mode. Peak power was measured using an Agilent power meter, model N1911A with model N1921A power sensor. A reference offset of 18.4 dB was applied to the power meter reference level for the coaxial cable loss and attenuators in the test circuit.

#### Primary Antenna

Channel	Data Rate	Carrier Level (dBm)	Max. Measured Level (dBm)	Max. Measured Level from Carrier (dBc)	Limit (dBc)
	1 Mbps	16.33	-27.67	-44.00	-20
1	6 Mbps	16.20	-21.41	-37.61	-20
	MCS 0	15.99	-18.85	-34.84	-20
	1 Mbps	16.85	-26.70	-43.55	-20
6	6 Mbps	16.66	-16.69	-33.35	-20
	MCS 0	16.56	-17.04	-33.60	-20
	1 Mbps	17.08	-26.96	-44.04	-20
11	6 Mbps	16.74	-22.18	-38.92	-20
	MCS 0	16.70	-16.06	-32.76	-20

#### Secondary Antenna

Channel	Data Rate	Carrier Level (dBm)	Max. Measured Level (dBm)	Max. Measured Level from Carrier (dBc)	Limit (dBc)
	1 Mbps	17.01	-24.92	-41.93	-20
1	6 Mbps	16.41	-17.42	-33.83	-20
	MCS 0	16.18	-19.94	-36.12	-20
	1 Mbps	17.04	-36.17	-53.21	-20
6	6 Mbps	16.55	-19.39	-35.94	-20
	MCS 0	16.30	-18.73	-35.03	-20
	1 Mbps	16.79	-26.96	-43.75	-20
11	6 Mbps	16.14	-22.28	-38.42	-20
	MCS 0	16.08	-18.66	-34.74	-20

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Test Report No.: RTS-6066-1509-01	Dates of Test: July 22 – September 8, and September 28, 2015	FCC ID: L6ARHK210LW IC: 2503A-RHK210LW

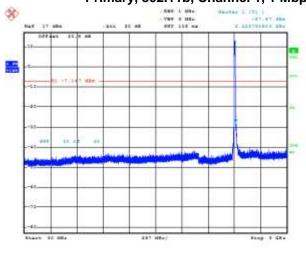
#### Sum

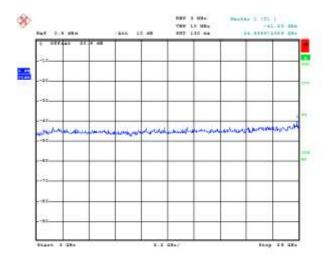
Channel	Data Rate	Carrier Level (dBm)	Max. Measured Level (dBm)	Max. Measured Level from Carrier (dBc)	Limit (dBc)
	1 Mbps	19.87	-23.07	-42.94	-20
1	6 Mbps	16.67	-15.96	-32.63	-20
	MCS 0	16.69	-16.35	-33.04	-20
	1 Mbps	20.09	-26.24	-46.33	-20
6	6 Mbps	19.64	-14.82	-34.46	-20
	MCS 0	19.56	-14.79	-34.35	-20
	1 Mbps	20.05	-23.95	-44.00	-20
11	6 Mbps	18.69	-19.22	-37.91	-20
	MCS 0	18.47	-14.16	-32.63	-20

See figures 6-61 to 6-78 for the plots of the spurious RF conducted emissions for Channels 1, 6 and 11, at 1 Mbps each for 802.11b mode, 6 Mbps each for 802.11g mode, and MCS 0 each for 802.11n mode.

<b>::</b> BlackBerry.	EMC Test Report for the BlackBerry® smartphone Model RHK211LW (STV100-1)		
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Figure 6-61: Spurious Conducted RF Emissions
Primary, 802.11b, Channel 1, 1 Mbps

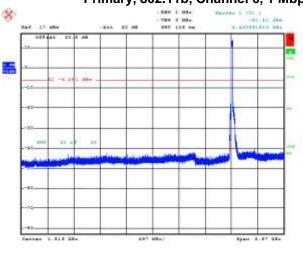


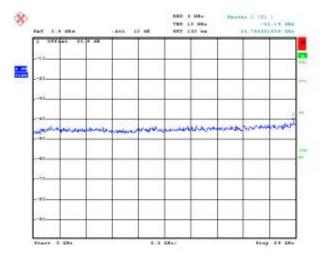


Date: 22,575,2018 18:07:82

Date: 22.592.3018 14:29:43

Figure 6-62 : Spurious Conducted RF Emissions Primary, 802.11b, Channel 6, 1 Mbps



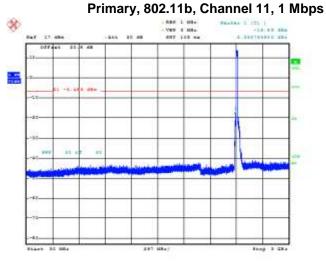


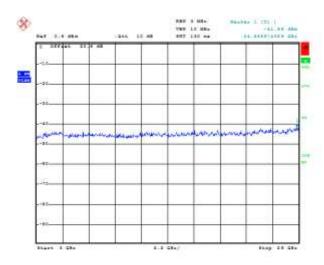
Date: 22.795.2016 14:30:39

Sene: 22.792.3018 14:36:28

<b>::</b> BlackBerry.	EMC Test Report for the BlackBerry® smartphone Model RHK211LW (STV100-1)		
•	APPENDIX 6		
Test Report No.: RTS-6066-1509-01	Dates of Test: July 22 – September 8, and September 28, 2015  FCC ID: L6ARHK210LW IC: 2503A-RHK210LW		

Figure 6-63: Spurious Conducted RF Emissions

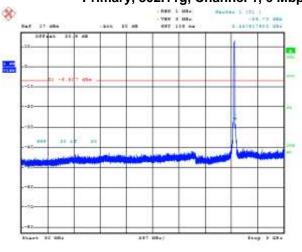


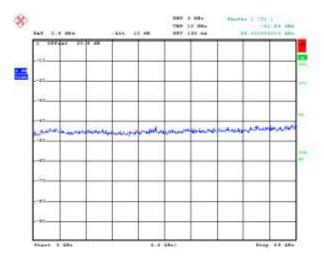


Date: 22.775.2018 14:43:08

Date: 22.201.0018 14:47:12

Figure 6-64: Spurious Conducted RF Emissions Primary, 802.11g, Channel 1, 6 Mbps



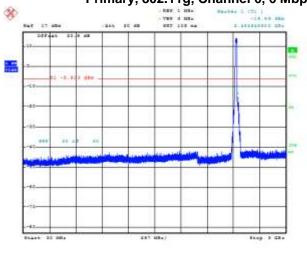


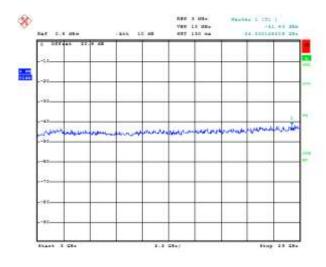
Date: 22.795.2016 18:29:28

Sene: 22.792.2018 14:29:81

<b>::</b> BlackBerry.	EMC Test Report for the BlackBerry® smartphone Model RHK211LW (STV100-1)		
•	APPENDIX 6		
Test Report No.: RTS-6066-1509-01	Dates of Test: July 22 – September 8, and September 28, 2015  FCC ID: L6ARHK210LW IC: 2503A-RHK210LW		

Figure 6-65: Spurious Conducted RF Emissions Primary, 802.11g, Channel 6, 6 Mbps

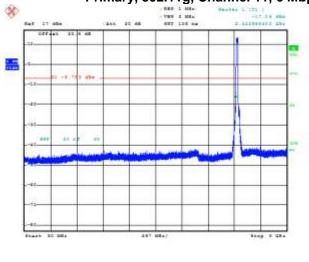


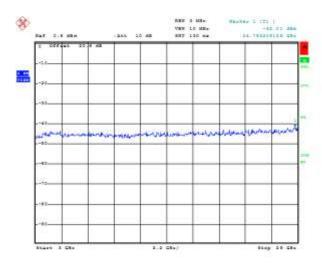


Date: 22.792.2018 14:21:10

Date: 22.772.3018 14:38:38

Figure 6-66: Spurious Conducted RF Emissions Primary, 802.11g, Channel 11, 6 Mbps



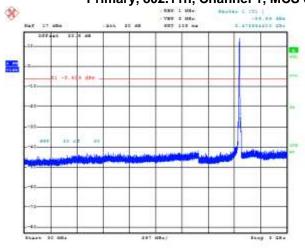


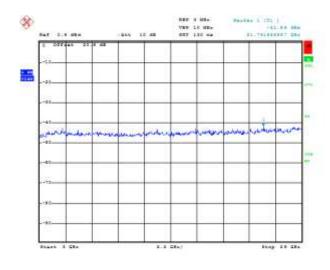
Date: 22,795,3018 14-63-88

Date: 22.292.2018 14:47:20

<b>::</b> BlackBerry.	EMC Test Report for the BlackBerry® smartphone Model RHK211LW (STV100-1)		
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Figure 6-67: Spurious Conducted RF Emissions Primary, 802.11n, Channel 1, MCS 0

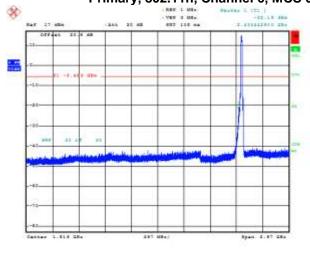


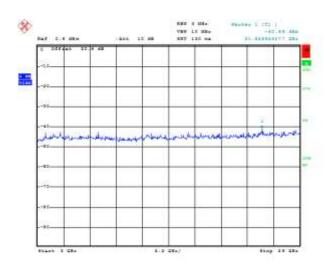


Date: 22.792.2018 18:28:01

Sene: 22,792,3018 14:40:00

Figure 6-68: Spurious Conducted RF Emissions Primary, 802.11n, Channel 6, MCS 0



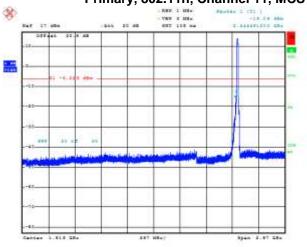


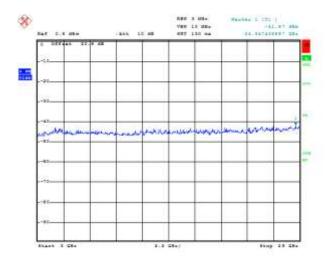
Date: 22.795.2018 14:31:81

Date: 22,200,2018 14:28:87

<b>::</b> BlackBerry.	EMC Test Report for the BlackBerry® smartphone Model RHK211LW (STV100-1)		
•	APPENDIX 6		
Test Report No.: RTS-6066-1509-01	Dates of Test: July 22 – September 8, and September 28, 2015  FCC ID: L6ARHK210LW IC: 2503A-RHK210LW		

Figure 6-69: Spurious Conducted RF Emissions Primary, 802.11n, Channel 11, MCS 0





Same: 22,575\_3018 14:44:27 Same: 22,575\_3018 14:47:28

<b>::</b> : BlackBerry.	EMC Test Report for the BlackBerry® smartphone Model RHK211LW (STV100-1)		
,	APPENDIX 6		
Test Report No.: RTS-6066-1509-01	Dates of Test: July 22 – September 8, and September 28, 2015  FCC ID: L6ARHK210LV IC: 2503A-RHK210LV		

Figure 6-70: Spurious Conducted RF Emissions

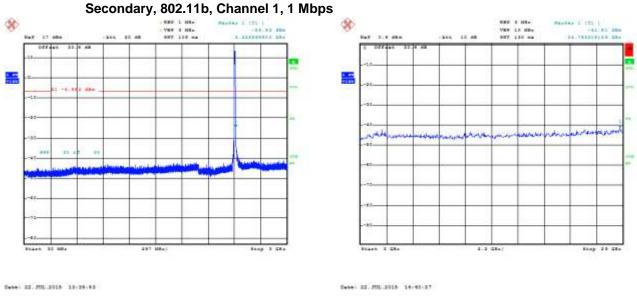
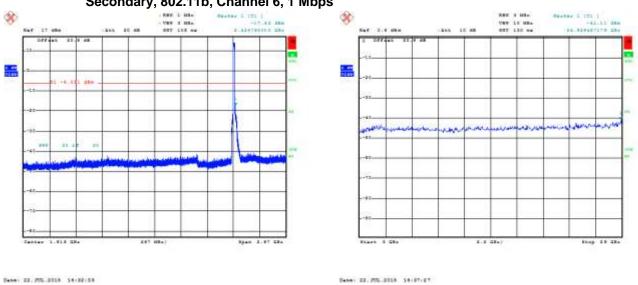


Figure 6-71 : Spurious Conducted RF Emissions Secondary, 802.11b, Channel 6, 1 Mbps



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Figure 6-72: Spurious Conducted RF Emissions

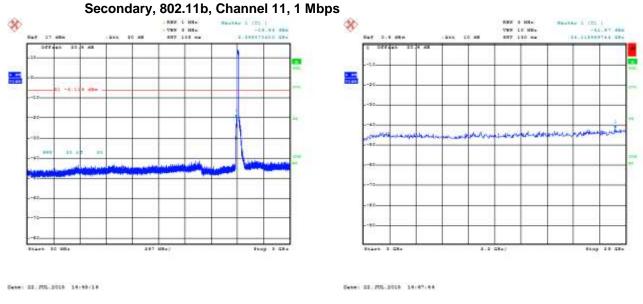
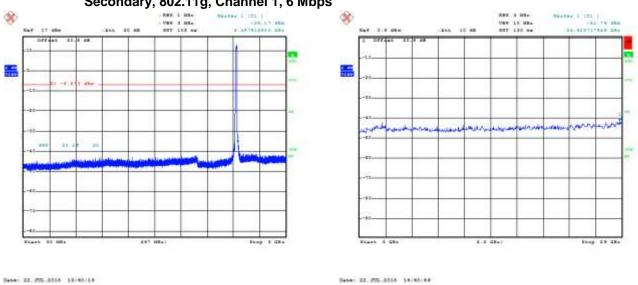


Figure 6-73: Spurious Conducted RF Emissions Secondary, 802.11g, Channel 1, 6 Mbps



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<b>::</b> : BlackBerry.	EMC Test Report for the BlackBerry® smartphone Model RHK211LW (STV100-1)		
,	APPENDIX 6		
Test Report No.: RTS-6066-1509-01	Dates of Test: July 22 – September 8, and September 28, 2015  FCC ID: L6ARHK210LV IC: 2503A-RHK210LV		

Figure 6-74: Spurious Conducted RF Emissions Secondary, 802.11g, Channel 6, 6 Mbps

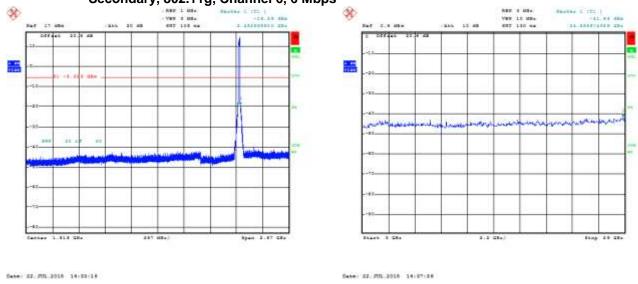
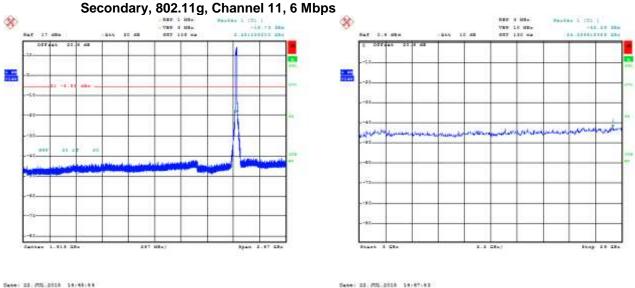


Figure 6-75: Spurious Conducted RF Emissions



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<b>::</b> BlackBerry.	EMC Test Report for the BlackBerry® smartphone Model RHK211LW (STV100-1)		
•	APPENDIX 6		
Test Report No.: RTS-6066-1509-01	Dates of Test: July 22 – September 8, and September 28, 2015  FCC ID: L6ARHK210LW IC: 2503A-RHK210LW		

Figure 6-76: Spurious Conducted RF Emissions Secondary, 802.11n, Channel 1, MCS 0

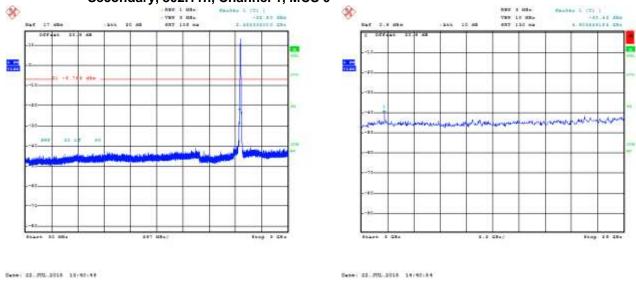
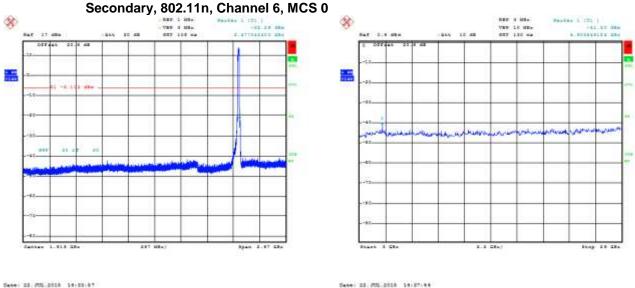


Figure 6-77: Spurious Conducted RF Emissions



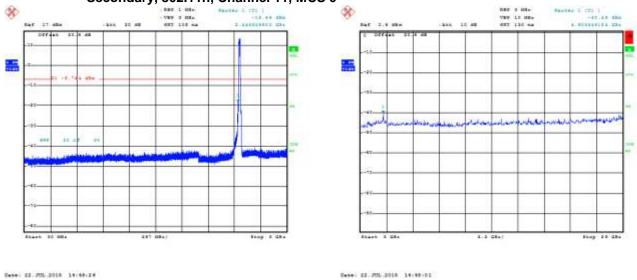
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<b>::</b> BlackBerry.	EMC Test Report for the BlackBerry® smartphone Model RHK211LW (STV100-1)		
•	APPENDIX 6		
Test Report No.: RTS-6066-1509-01	Dates of Test: July 22 – September 8, and September 28, 2015  FCC ID: L6ARHK210LW IC: 2503A-RHK210LW		

Figure 6-78: Spurious Conducted RF Emissions Secondary, 802.11n, Channel 11, MCS 0



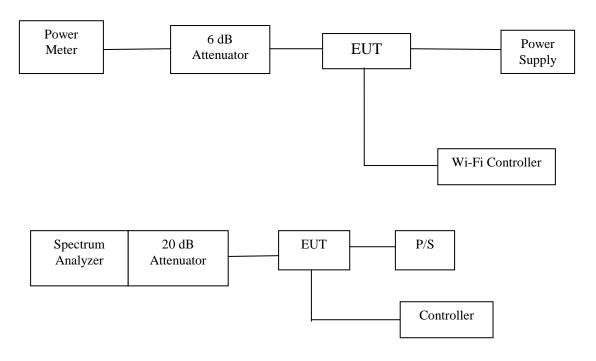
	EMC Test Report for the BlackBerry® smartphone Model RHK211LW (STV100-1)  APPENDIX 7	
Test Report No.: RTS-6066-1509-01	Dates of Test: July 22 - September 8, 2015  FCC ID: L6ARHK210LW IC: 2503A-RHK210LW	

APPENDIX 7 – 802.11a/n CONDUCTED EMISSIONS TEST DATA/PLOTS

<b>∷</b> BlackBerry.	EMC Test Report for the BlackBerry® smartphone Model RHK211LW (STV100-1)  APPENDIX 7	
Test Report No.: RTS-6066-1509-01	Dates of Test: July 22 – September 8, and September 28, 2015	FCC ID: L6ARHK210LW IC: 2503A-RHK210LW

#### 802.11a/n RF Conducted Emission Test Results

## **Test Setup Diagram**



A reference offset of 8.9 dB was applied to the spectrum analyzer and 7.4 dB to the Power Meter reference level for the attenuators and coaxial cable loss in the test circuit.

Date of test: August 20, and September 28, 2015 The measurements were performed by Landon Martin.

The environmental test conditions were: Temperature: 23.6 °C

Relative Humidity: 62.90 %

<b>∷</b> BlackBerry.	EMC Test Report for the BlackBerry® smartphone Model RHK211LW (STV100-1)  APPENDIX 7	
Test Report No.: RTS-6066-1509-01	Dates of Test: July 22 – September 8, and September 28, 2015	FCC ID: L6ARHK210LW IC: 2503A-RHK210LW

#### 6 dB Bandwidth

The EUT met the requirements of the 6 dB bandwidth as per 47 CFR 15.247(a) (2) and RSS-247. Channels 36, 48, 64, 100, 140, and 165 were measured at 6 Mbps each for 802.11a mode.

Channel	Data Rate	Limit (kHz)	Measured Level Primary Antenna (MHz)	Measured Level Secondary Antenna (MHz)
36	6 Mbps	≥ 500	16.38	16.42
48	6 Mbps	≥ 500	16.40	16.26
64	6 Mbps	≥ 500	16.26	16.40
100	6 Mbps	≥ 500	16.36	16.38
140	6 Mbps	≥ 500	16.38	16.12
165	6 Mbps	≥ 500	16.38	16.22

See figures 7-1 to 7-12 for the plots of the 6 dB bandwidth measurements for Channel 36, 48, 64, 100, 140, and 165 at 6 Mbps each for 802.11a mode

## BlackBerry.	EMC Test Report for the BlackBerry® smartphone Model RHK211LW (STV100-1)  APPENDIX 7	
Test Report No.: RTS-6066-1509-01	Dates of Test: July 22 – September 8, and September 28, 2015	FCC ID: L6ARHK210LW IC: 2503A-RHK210LW

#### 6 dB Bandwidth

The EUT met the requirements of the 6 dB bandwidth as per 47 CFR 15.247(a) (2) and RSS-247. Channels 36, 64, 140, 100 and 165 were measured at MCS 0 each for 802.11n mode.

#### 20 MHz Bandwidth

Channel	Data Rate	Limit (kHz)	Measured Level Primary Antenna (MHz)	Measured Level Secondary Antenna (MHz)
36	MCS0	≥ 500	17.60	17.62
64	MCS0	≥ 500	17.42	17.62
100	MCS0	≥ 500	17.62	17.50
140	MCS0	≥ 500	17.60	17.60
165	MCS0	≥ 500	17.60	17.62

#### 40 MHz Bandwidth

Channel	Data Rate	Limit (kHz)	Measured Level Primary Antenna (MHz)	Measured Level Secondary Antenna (MHz)
36	MCS0	≥ 500	36.40	36.40
64	MCS0	≥ 500	36.32	36.20
100	MCS0	≥ 500	36.32	36.20
140	MCS0	≥ 500	36.28	36.32
161	MCS0	≥ 500	36.04	36.40

See figures 7-13 to 7-32 for the plots of the 6 dB bandwidth measurements for Channel 36, 64, 140, 100 and 161 at MCS 0 each for 802.11n mode.

<b>∷</b> BlackBerry.	EMC Test Report for the BlackBerry® smartphone Model RHK211LW (STV100-1)  APPENDIX 7	
Test Report No.: RTS-6066-1509-01	Dates of Test: July 22 – September 8, and September 28, 2015	FCC ID: L6ARHK210LW IC: 2503A-RHK210LW

Figure 7-1: 6 dB Bandwidth

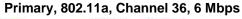
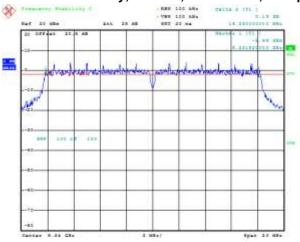




Figure 7-2: 6 dB Bandwidth
Primary, 802.11a, Channel 48, 6 Mbps



Date: 8.869.2018 05:12:03

Sene: 26.807.0018 19:88:82

Figure 7-3: 6 dB Bandwidth

Primary, 802.11a, Channel 64, 6 Mbps

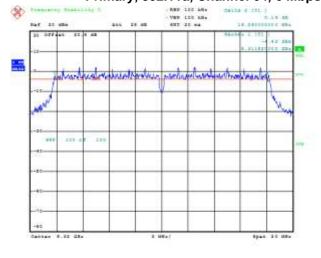
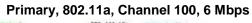
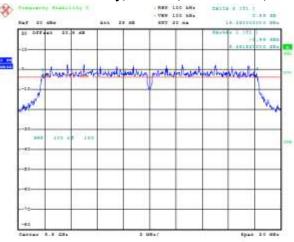


Figure 7-4: 6 dB Bandwidth





Date: 25 A02 2015 09:54:02

Date: 25.800.2018 09:84:12

## BlackBerry.	EMC Test Report for the BlackBerry® smartphone Model RHK211LW (STV100-1)  APPENDIX 7	
Test Report No.: RTS-6066-1509-01	Dates of Test: July 22 – September 8, and September 28, 2015	FCC ID: L6ARHK210LW IC: 2503A-RHK210LW

Figure 7-5: 6 dB Bandwidth



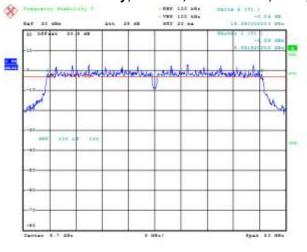


Figure 7-6: 6 dB Bandwidth Primary, 802.11a, Channel 165, 6 Mbps



Date: 25.800.2016 09:54:24 Date: 25.800.2016 09-54-28

Figure 7-7: 6 dB Bandwidth

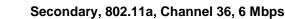
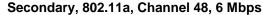
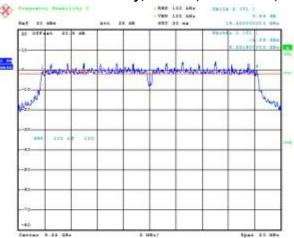




Figure 7-8: 6 dB Bandwidth





Same: 28.809-2018 19:88:28

Same: 8. PEF. 2018 - 29-32-30

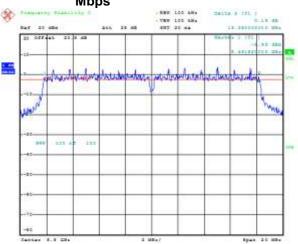
## BlackBerry.	EMC Test Report for the BlackBerry® smartphone Model RHK211LW (STV100-1)  APPENDIX 7	
Test Report No.: RTS-6066-1509-01	Dates of Test: July 22 – September 8, and September 28, 2015	FCC ID: L6ARHK210LW IC: 2503A-RHK210LW

Figure 7-9: 6 dB Bandwidth

Secondary, 802.11a, Channel 64, 6 Mbps

NEW LCC AND VEW LCC AND SET JC MA BAY 22 989 be prefes 122 In

Figure 7-10: 6 dB Bandwidth Secondary, 802.11a, Channel 100, 6 **Mbps** 



Date: 25.800.2018 09:88:82

Figure 7-11: 6 dB Bandwidth Secondary, 802.11a, Channel 140, 6

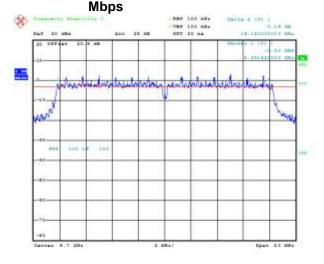
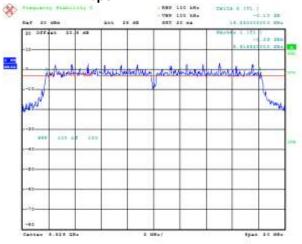


Figure 7-12: 6 dB Bandwidth

Date: 25.800.2018 09:84:42

Secondary, 802.11a, Channel 165, 6 **Mbps** 



Date: 25 AUG 2018 09:86:18

Date: 25,800,2015 09:54:04

<b>∷</b> BlackBerry.	EMC Test Report for the BlackBerry® smartphone Model RHK211LW (STV100-1)  APPENDIX 7	
Test Report No.: RTS-6066-1509-01	Dates of Test: July 22 – September 8, and September 28, 2015	FCC ID: L6ARHK210LW IC: 2503A-RHK210LW

### 20 MHz Bandwidth

Figure 7-13: 6 dB Bandwidth
Primary, 802.11n, Channel 36, MCS 0

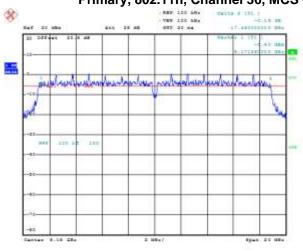
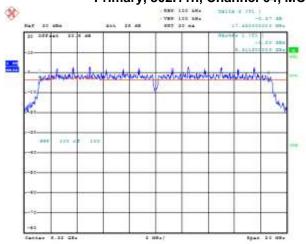


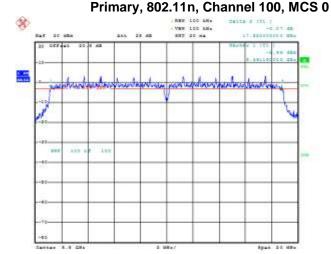
Figure 7-14: 6 dB Bandwidth
Primary, 802.11n, Channel 64, MCS 0



Date: 8.889.2018 - 81-49-14

Date: 20,800,2018 06:40:20

Figure 7-15: 6 dB Bandwidth



Date: 20 A00,2018 06:40:24

## BlackBerry.	EMC Test Report for the BlackBerry® smartphone Model RHK211LW (STV100-1)  APPENDIX 7	
Test Report No.: RTS-6066-1509-01	Dates of Test: July 22 – September 8, and September 28, 2015	FCC ID: L6ARHK210LW IC: 2503A-RHK210LW

Figure 7-16: 6 dB Bandwidth
Primary, 802.11n, Channel 140, MCS 0

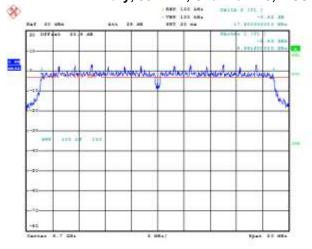
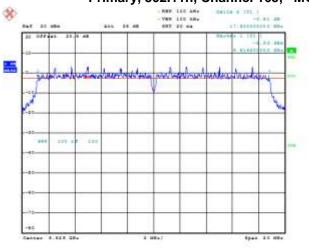


Figure 7-17: 6 dB Bandwidth

Primary, 802.11n, Channel 165, MCS 0



Sene: 25 A00 2010 09:40:48 Sene: 25 A00 2010 09:41:00

<b>∷</b> BlackBerry.	EMC Test Report for the BlackBerry® smartphone Model RHK211LW (STV100-1)  APPENDIX 7	
Test Report No.: RTS-6066-1509-01	Dates of Test: July 22 – September 8, and September 28, 2015	FCC ID: L6ARHK210LW IC: 2503A-RHK210LW

Figure 7-18: 6 dB Bandwidth

Secondary, 802.11n, Channel 36, MCS 0

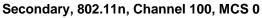
Figure 7-19: 6 dB Bandwidth
Secondary, 802.11n, Channel 64,

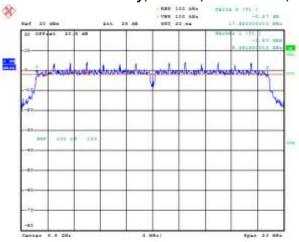


Date: 8.889.2018 81-49-47

Date: 25,800,2016 05-63-66

Figure 7-20: 6 dB Bandwidth



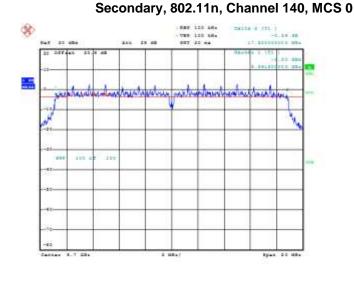


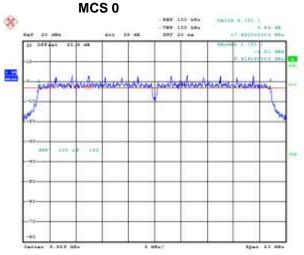
Date: 25 A00 2018 09:84:07

<b>∷</b> BlackBerry.	EMC Test Report for the BlackBerry® smartphone Model RHK211LW (STV100-1)  APPENDIX 7	
Test Report No.: RTS-6066-1509-01	Dates of Test: July 22 – September 8, and September 28, 2015	FCC ID: L6ARHK210LW IC: 2503A-RHK210LW

Figure 7-21: 6 dB Bandwidth

Figure 7-22: 6 dB Bandwidth Secondary, 802.11n, Channel 165,





Date: 25.800.2018 08:66:18

Date: 20,800,2018 08:84:28

<b>∷</b> BlackBerry.	EMC Test Report for the BlackBerry® smartphone Model RHK211LW (STV100-1)  APPENDIX 7	
Test Report No.: RTS-6066-1509-01	Dates of Test: July 22 – September 8, and September 28, 2015	FCC ID: L6ARHK210LW IC: 2503A-RHK210LW

### 40 MHz Bandwidth

Figure 7-23: 6 dB Bandwidth
Primary, 802.11n, Channel 36, MCS 0

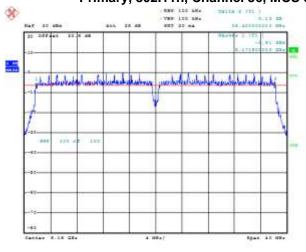
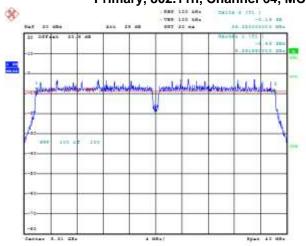
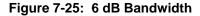
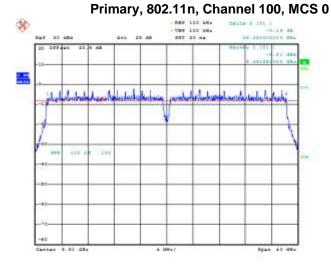


Figure 7-24: 6 dB Bandwidth
Primary, 802.11n, Channel 64, MCS 0



Case: 20 AND 2018 09-48-18 Case: 20 AND 2018 09-48-10





Date: 25.800.2018 09:48:42

<b>∷</b> BlackBerry.	EMC Test Report for the BlackBerry® smartphone Model RHK211LW (STV100-1)  APPENDIX 7	
Test Report No.: RTS-6066-1509-01	Dates of Test: July 22 – September 8, and September 28, 2015	FCC ID: L6ARHK210LW IC: 2503A-RHK210LW

Figure 7-26: 6 dB Bandwidth
Primary, 802.11n, Channel 140, MCS 0

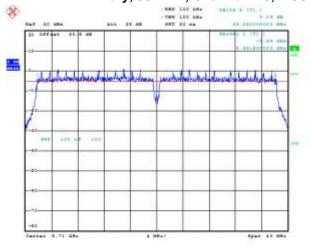
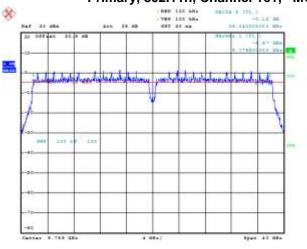


Figure 7-27: 6 dB Bandwidth
Primary, 802.11n, Channel 161, MCS 0



Game: 25 A00 2018 09-48-82 Game: 25 A00 2018 09-48-02

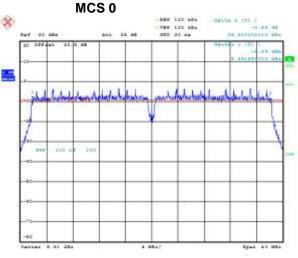
<b>∷</b> BlackBerry.	EMC Test Report for the BlackBerry® smartphone Model RHK211LW (STV100-1)  APPENDIX 7	
Test Report No.: RTS-6066-1509-01	Dates of Test: July 22 – September 8, and September 28, 2015	FCC ID: L6ARHK210LW IC: 2503A-RHK210LW

Figure 7-28: 6 dB Bandwidth

Secondary, 802.11n, Channel 36, MCS 0

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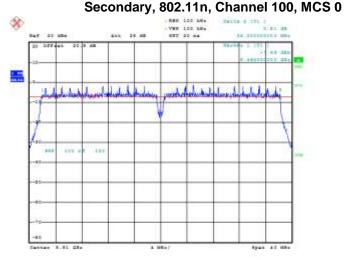
Figure 7-29: 6 dB Bandwidth
Secondary, 802.11n, Channel 64,



Dane: 25 A00 2015 09:48:24

Date: 25.800.2018 09:48:48

Figure 7-30: 6 dB Bandwidth

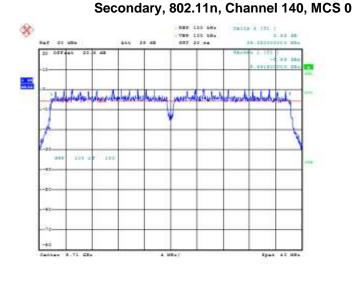


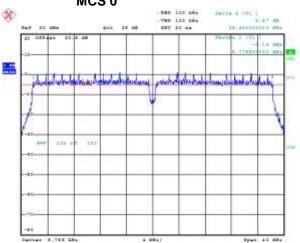
Date: 25.800.2018 09:69:68

<b>∷</b> BlackBerry.	EMC Test Report for the BlackBerry® smartphone Model RHK211LW (STV100-1)  APPENDIX 7	
Test Report No.: RTS-6066-1509-01	Dates of Test: July 22 – September 8, and September 28, 2015	FCC ID: L6ARHK210LW IC: 2503A-RHK210LW

Figure 7-31: 6 dB Bandwidth

Figure 7-32: 6 dB Bandwidth Secondary, 802.11n, Channel 161, MCS 0





Dane: 30,800,2018 09:47:08

Date: 25.800.2018 09:47:17

## BlackBerry.	EMC Test Report for the BlackBerry® smartphone Model RHK211LW (STV100-1)  APPENDIX 7		
Test Report No.: RTS-6066-1509-01	Dates of Test: July 22 – September 8, and September 28, 2015	FCC ID: L6ARHK210LW IC: 2503A-RHK210LW	

# **Maximum Conducted Output Power**

The EUT met the requirements of the maximum conducted output power of class 2 as per 47 CFR 15.407 and RSS-247. Channels 36, 48, 64, 100, 140 and 165 were measured for 802.11a mode using an Agilent power meter, model N1911A with model N1921A power sensor. A reference offset of 8.9 dB was applied to the power meter reference level for the coaxial cable loss and attenuators in the test circuit.

#### SISO Primary Antenna

Channel	Data Rate	Power Limit (mW)	Measured Level (dBm)	Measured Level (mW)
36	6 Mbps	< 250.0	12.32	17.06
48	6 Mbps	< 250.0	15.20	33.11
64	6 Mbps	< 250.0	13.93	24.72
100	6 Mbps	< 250.0	14.37	27.35
140	6 Mbps	< 250.0	14.66	29.24
165	6 Mbps	< 1000	14.70	29.51

# SISO Secondary Antenna

Channel	Data Rate	Power Limit (mW)	Measured Level (dBm)	Measured Level (mW)
36	6 Mbps	< 250.0	13.36	21.68
48	6 Mbps	< 250.0	15.50	35.48
64	6 Mbps	< 250.0	13.62	23.01
100	6 Mbps	< 250.0	14.75	29.85
140	6 Mbps	< 250.0	13.73	23.60
165	6 Mbps	< 1000	14.26	26.67

## BlackBerry.	EMC Test Report for the BlackBerry® smartphone Model RHK211LW (STV100-1)  APPENDIX 7		
Test Report No.: RTS-6066-1509-01	Dates of Test: July 22 – September 8, and September 28, 2015	FCC ID: L6ARHK210LW IC: 2503A-RHK210LW	

# 2TX//CDD Primary Antenna

Channel	Data Rate	Power Limit (mW)	Measured Level (dBm)	Measured Level (mW)
36	6 Mbps	< 250.0	12.32	17.06
48	6 Mbps	< 250.0	15.50	35.48
64	6 Mbps	< 250.0	13.97	24.95
100	6 Mbps	< 250.0	15.05	31.99
140	6 Mbps	< 250.0	13.82	24.10
165	6 Mbps	< 1000	14.41	27.61

# 2TX//CDD Secondary Antenna

Channel	Data Rate	Power Limit (mW)	Measured Level (dBm)	Measured Level (mW)
36	6 Mbps	< 250.0	13.35	21.63
48	6 Mbps	< 250.0	15.15	32.73
64	6 Mbps	< 250.0	14.13	25.88
100	6 Mbps	< 250.0	14.54	28.44
140	6 Mbps	< 250.0	15.01	31.70
165	6 Mbps	< 1000	14.81	30.27

# 2TX/CDD Sum

Channel	Data Rate	Power Limit (mW)	Measured Level (dBm)	Measured Level (mW)
36	6 Mbps	< 250.0	15.88	38.69
48	6 Mbps	< 250.0	18.34	68.22
64	6 Mbps	< 250.0	17.06	50.83
100	6 Mbps	< 250.0	17.81	60.43
140	6 Mbps	< 250.0	17.47	55.79
165	6 Mbps	< 1000	17.62	57.87

### BlackBerry.	EMC Test Report for the BlackBerry® smartphone Model RHK211LW (STV100-1)  APPENDIX 7		
Test Report No.: RTS-6066-1509-01	Dates of Test: July 22 – September 8, and September 28, 2015	FCC ID: L6ARHK210LW IC: 2503A-RHK210LW	

## **Maximum Conducted Output Power**

The EUT met the requirements of the maximum conducted output power of class 2 as per 47 CFR 15.407 and RSS-247. Channels 36, 64, 100, 140 and 165 were measured for 802.11n mode using an Agilent power meter, model N1911A with model N1921A power sensor. A reference offset of 8.9 dB was applied to the power meter reference level for the coaxial cable loss and attenuators in the test circuit.

#### 20 MHz Bandwidth

#### SISO Primary Antenna

Channel	Data Rate	Class 2 Limit (mW)	Measured Level (dBm)	Measured Level (mW)
36	MCS0	< 250.0	12.01	15.89
64	MCS0	< 250.0	14.17	26.12
100	MCS0	< 250.0	14.65	29.17
140	MCS0	< 250.0	14.61	28.91
165	MCS0	< 1000	14.73	29.72

#### SISO Secondary Antenna

Channel	Data Rate	Class 2 Limit (mW)	Measured Level (dBm)	Measured Level (mW)
36	MCS0	< 250.0	13.16	20.70
64	MCS0	< 250.0	13.77	23.82
100	MCS0	< 250.0	15.11	32.43
140	MCS0	< 250.0	13.86	24.32
165	MCS0	< 1000	14.11	25.76

### BlackBerry.	EMC Test Report for the BlackBerry® smartphone Model RHK211LW (STV100-1)  APPENDIX 7		
Test Report No.: RTS-6066-1509-01	Dates of Test: July 22 – September 8, and September 28, 2015	FCC ID: L6ARHK210LW IC: 2503A-RHK210LW	

# MIMO Primary Antenna

Channel	Data Rate	Class 2 Limit (mW)	Measured Level (dBm)	Measured Level (mW)
36	MCS0	< 250.0	15.02	31.77
64	MCS0	< 250.0	14.07	25.53
100	MCS0	< 250.0	14.48	28.05
140	MCS0	< 250.0	14.89	30.83
165	MCS0	< 1000	14.55	28.51

# MIMO Secondary Antenna

Channel	Data Rate	Class 2 Limit (mW)	Measured Level (dBm)	Measured Level (mW)
36	MCS0	< 250.0	15.89	38.82
64	MCS0	< 250.0	13.75	23.71
100	MCS0	< 250.0	14.90	30.90
140	MCS0	< 250.0	13.72	23.55
165	MCS0	< 1000	14.27	26.73

# MIMO Sum

Channel	Data Rate	Class 2 Limit (mW)	Measured Level (dBm)	Measured Level (mW)
36	MCS0	< 250.0	18.49	70.58
64	MCS0	< 250.0	16.92	49.24
100	MCS0	< 250.0	17.71	58.96
140	MCS0	< 250.0	17.35	54.38
165	MCS0	< 1000	17.42	55.24

<b>∷</b> BlackBerry.	EMC Test Report for the BlackBerry® smartphone Model RHK211LW (STV100-1)			
•	APPENDIX 7			
<b>Test Report No.:</b> RTS-6066-1509-01	Dates of Test: July 22 – September 8, and September 28, 2015	FCC ID: L6ARHK210LW IC: 2503A-RHK210LW		

#### 40 MHz Bandwidth

# SISO Primary Antenna

Channel	Data Rate	Class 2 Limit (mW)	Measured Level (dBm)	Measured Level (mW)
36	MCS0	< 250.0	13.65	23.17
64	MCS0	< 250.0	10.76	11.91
100	MCS0	< 250.0	11.90	15.49
140	MCS0	< 250.0	14.78	30.06
165	MCS0	< 1000	15.04	31.92

# SISO Secondary Antenna

Channel	Data Rate	Class 2 Limit (mW)	Measured Level (dBm)	Measured Level (mW)
36	MCS0	< 250.0	14.50	28.18
64	MCS0	< 250.0	10.64	11.59
100	MCS0	< 250.0	12.32	17.06
140	MCS0	< 250.0	13.99	25.06
165	MCS0	< 1000	14.65	29.17

## BlackBerry.	EMC Test Report for the BlackBerry® smartphone Model RHK211LW (STV100-1)  APPENDIX 7			
Test Report No.: RTS-6066-1509-01	Dates of Test: July 22 – September 8, and September 28, 2015  FCC ID: L6ARHK210LW IC: 2503A-RHK210LW			

# MIMO Primary Antenna

Channel	Data Rate	Class 2 Limit (mW)	Measured Level (dBm)	Measured Level (mW)
36	MCS0	< 250.0	11.51	14.16
64	MCS0	< 250.0	10.67	11.67
100	MCS0	< 250.0	11.73	14.89
140	MCS0	< 250.0	14.20	26.30
165	MCS0	< 1000	14.84	30.48

# MIMO Secondary Antenna

Channel	Data Rate	Class 2 Limit (mW)	Measured Level (dBm)	Measured Level (mW)
36	MCS0	< 250.0	10.62	11.53
64	MCS0	< 250.0	10.75	11.89
100	MCS0	< 250.0	11.26	13.37
140	MCS0	< 250.0	15.08	32.21
165	MCS0	< 1000	15.40	34.67

# MIMO Sum

Channel	Data Rate	Class 2 Limit (mW)	Measured Level (dBm)	Measured Level (mW)
36	MCS0	< 250.0	14.10	25.69
64	MCS0	< 250.0	13.72	23.55
100	MCS0	< 250.0	14.51	28.26
140	MCS0	< 250.0	17.67	58.51
165	MCS0	< 1000	18.14	65.15

## BlackBerry.	EMC Test Report for the BlackBerry® smartphone Model RHK211LW (STV100-1)  APPENDIX 7			
Test Report No.: RTS-6066-1509-01	Dates of Test: July 22 – September 8, and September 28, 2015  FCC ID: L6ARHK210LW IC: 2503A-RHK210LW			

# **Band Edge Compliance**

The EUT met the requirements of the band edge compliance as per 47 CFR 15.407 and RSS-247. Channels 36, 64, 100, 140, 149, and 165 were measured at 6 Mbps each for 802.11a mode.

# Primary Antenna

Channel	Data Rate	Limit (dBc)	Measured Level (dBc)	Margin (dB)
36	6 Mbps	< -20	-42.21	-22.21
64	6 Mbps	< -20	-43.11	-23.11
100	6 Mbps	< -20	-43.05	-23.05
140	6 Mbps	< -20	-42.92	-22.92
149	6 Mbps	< -20	-42.88	-22.88
165	6 Mbps	< -20	-41.21	-21.21

# Secondary Antenna

Channel	Data Rate	Limit (dBc)	Measured Level (dBc)	Margin (dB)
36	6 Mbps	< -20	-42.88	-22.88
64	6 Mbps	< -20	-43.80	-23.80
100	6 Mbps	< -20	-44.08	-24.08
140	6 Mbps	< -20	-43.04	-23.04
149	6 Mbps	< -20	-38.60	-18.60
165	6 Mbps	< -20	-36.34	-16.34

See figures 7-32 to 7-43 for the plots of the band edge compliance measurements for Channel 36, 64, 100, 140, 149 and 165 at 6 Mbps each for 802.11a mode.

<b>∷</b> BlackBerry.	EMC Test Report for the BlackBerry® smartphone Model RHK211LW (STV100-1)  APPENDIX 7	
Test Report No.: RTS-6066-1509-01	Dates of Test: July 22 – September 8, and September 28, 2015  FCC ID: L6ARHK210LW IC: 2503A-RHK210LW	

#### **Band Edge Compliance**

The EUT met the requirements of the band edge compliance as per 47 CFR 15.407 and RSS-247. Channels 36, 64, 100, 140, 149 and 165 were measured at MCS 0each for 802.11n mode.

#### 20 MHz bandwidth

#### Primary Antenna

Channel	Data Rate	Limit (dBc)	Measured Level (dBc)	Margin (dB)
36	6 Mbps	< -20	-40.03	-20.03
64	6 Mbps	< -20	-43.97	-23.97
100	6 Mbps	< -20	-44.20	-24.20
140	6 Mbps	< -20	-43.23	-23.23
149	6 Mbps	< -20	-42.86	-22.86
165	6 Mbps	< -20	-42.30	-22.30

# Secondary Antenna

Channel	Data Rate	Limit (dBc)	Measured Level (dBc)	Margin (dB)
36	6 Mbps	< -20	-42.17	-22.17
64	6 Mbps	< -20	-43.33	-23.33
100	6 Mbps	< -20	-44.42	-24.42
140	6 Mbps	< -20	-41.49	-21.49
149	6 Mbps	< -20	-40.18	-20.18
165	6 Mbps	< -20	-35.51	-15.51

## BlackBerry.	EMC Test Report for the BlackBerry® smartphone Model RHK211LW (STV100-1)  APPENDIX 7	
Test Report No.: RTS-6066-1509-01	Dates of Test: July 22 – September 8, and September 28, 2015	FCC ID: L6ARHK210LW IC: 2503A-RHK210LW

#### 40 MHz bandwidth

# Primary Antenna

Channel	Data Rate	Limit (dBc)	Measured Level (dBc)	Margin (dB)
36	6 Mbps	< -20	-37.69	-17.69
64	6 Mbps	< -20	-38.54	-18.54
100	6 Mbps	< -20	-36.35	-16.35
140	6 Mbps	< -20	-26.18	-6.18
149	6 Mbps	< -20	-30.15	-10.15

# Secondary Antenna

Channel	Data Rate	Limit (dBc)	Measured Level (dBc)	Margin (dB)
36	6 Mbps	< -20	-37.69	-17.69
64	6 Mbps	< -20	-38.54	-18.54
100	6 Mbps	< -20	-36.35	-16.35
140	6 Mbps	< -20	-26.18	-6.18
149	6 Mbps	< -20	-30.15	-10.15

See figures 7-44 to 7-65 for the plots of the band edge compliance measurements for Channel 36, 64, 100, 140, 149, and 165 at MCS 0 each for 802.11n mode.

<b>∷</b> BlackBerry.	EMC Test Report for the BlackBerry® smartphone Model RHK211LW (STV100-1)  APPENDIX 7	
Test Report No.: RTS-6066-1509-01	Dates of Test: July 22 – September 8, and September 28, 2015  FCC ID: L6ARHK210LW IC: 2503A-RHK210LW	

Figure 7-32: Band Edge Compliance

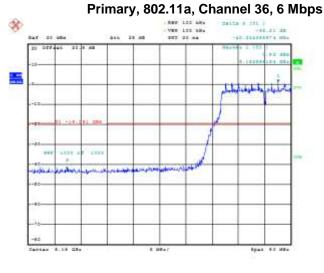
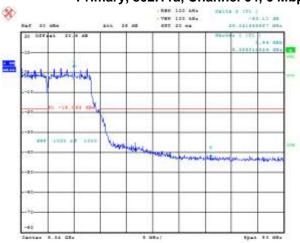


Figure 7-33: Band Edge Compliance Primary, 802.11a, Channel 64, 6 Mbps



Date: 8.869.2018 05:57:26

Figure 7-34: Band Edge Compliance Primary, 802.11a, Channel 100, 6 Mbps

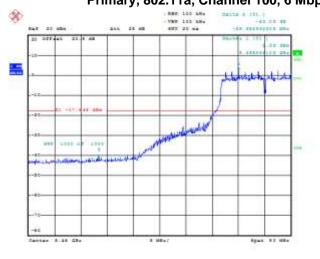
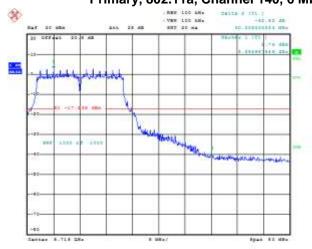


Figure 7-35: Band Edge Compliance **Primary, 802.11a, Channel 140, 6 Mbps** 



Date: 25.800.2016 19:47:29

Date: 25 A00 2016 19:48-08

Date: 25.800.2016 19:47:02

<b>∷</b> BlackBerry.	EMC Test Report for the BlackBerry® smartphone Model RHK211LW (STV100-1)  APPENDIX 7	
Test Report No.: RTS-6066-1509-01	Dates of Test: July 22 – September 8, and September 28, 2015  FCC ID: L6ARHK210LW IC: 2503A-RHK210LW	

Figure 7-36: Band Edge Compliance

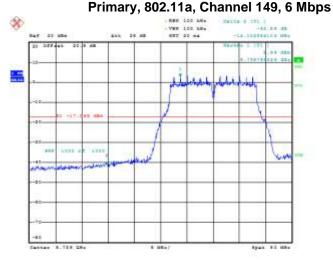
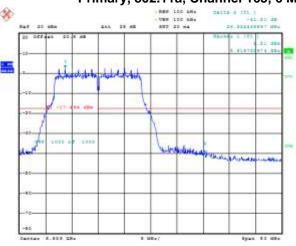


Figure 7-37: Band Edge Compliance
Primary, 802.11a, Channel 165, 6 Mbps



Date: 25 A00 2015 18:48:25

Figure 7-38: Band Edge Compliance

Secondary, 802.11a, Channel 36, 6 Mbps

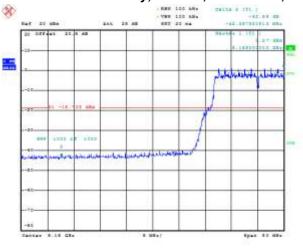
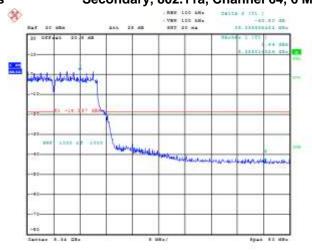


Figure 7-39: Band Edge Compliance
Secondary, 802.11a, Channel 64, 6 Mbps



Date: 8.889.2018 05:59:18

Date: 25,800,2018 19:82:28

Date: 25.800.2018 19:80:10

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Figure 7-40: Band Edge Compliance Secondary, 802.11a, Channel 100, 6

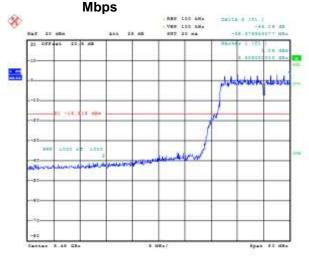
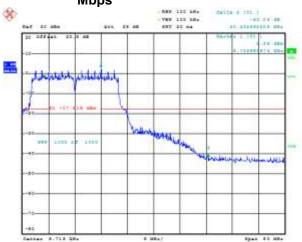


Figure 7-41: Band Edge Compliance Secondary, 802.11a, Channel 140, 6 **Mbps** 



Date: 25.800.2016 19:53:26

Figure 7-42: Band Edge Compliance Secondary, 802.11a, Channel 149, 6

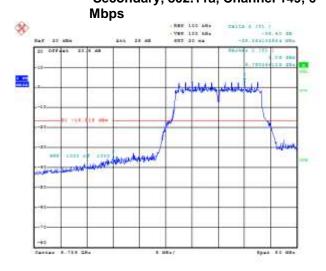
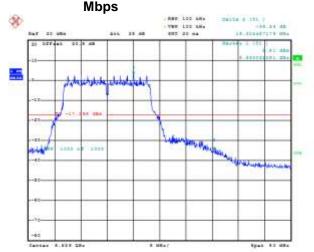


Figure 7-43: Band Edge Compliance Secondary, 802.11a, Channel 165, 6



Date: 25 AUG 2018 18-88-18

Date: 25 A00 2018 19-94-01

Case: 25 A02 2018 19-54:45

	EMC Test Report for the BlackBerry® smartphone Model RHK211LW (STV100-1)  APPENDIX 7	
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# 20 MHz Bandwidth

Figure 7-44: Band Edge Compliance
Primary, 802.11n, Channel 36, 6 Mbps

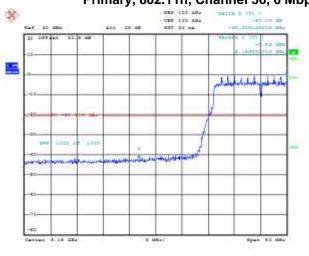
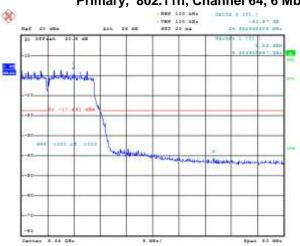


Figure 7-45: Band Edge Compliance
Primary, 802.11n, Channel 64, 6 Mbps



Date: 8.869.2018 81:91:27

Date: 20,800,2018 19:17:22

Figure 7-46: Band Edge Compliance
Primary, 802.11n, Channel 100, 6 Mbps

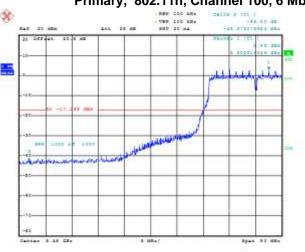
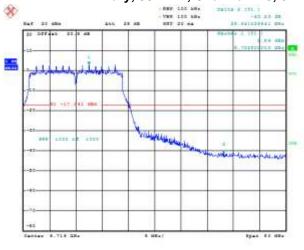


Figure 7-47: Band Edge Compliance
Primary, 802.11n, Channel 140, 6 Mbps



Date: 25.800.2018 19:19:42

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Date: 25.800.2018 19:18:02

<b>∷</b> BlackBerry.	EMC Test Report for the BlackBerry® smartphone Model RHK211LW (STV100-1)  APPENDIX 7	
Test Report No.: RTS-6066-1509-01	Dates of Test: July 22 – September 8, and September 28, 2015  FCC ID: L6ARHK210LW IC: 2503A-RHK210LW	

Figure 7-48: Band Edge Compliance

Primary, 802.11n, Channel 149, 6 Mbps

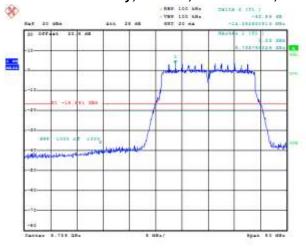
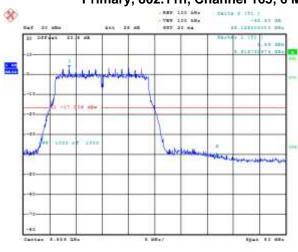


Figure 7-49: Band Edge Compliance
Primary, 802.11n, Channel 165, 6 Mbps



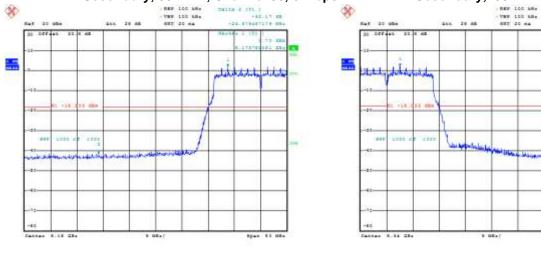
Date: 25 AUS 2018 18:20-24 Date: 25 AUS 2018 18:21-18

Figure 7-50: Band Edge Compliance

Same: 8. PEF. 2018 - 81:92:12

Secondary, 802.11n, Channel 36, 6 Mbps

Figure 7-51: Band Edge Compliance Secondary, 802.11n, Channel 64, 6 Mbps



Date: 20,800,2018 19:23:21

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Figure 7-52: Band Edge Compliance Secondary, 802.11n, Channel 100, 6

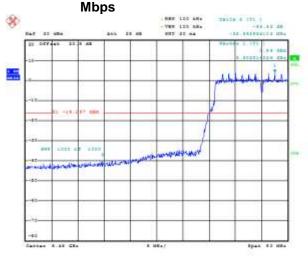
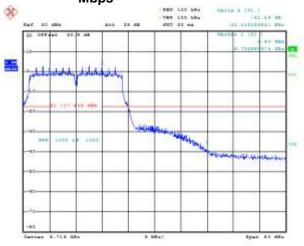


Figure 7-53: Band Edge Compliance Secondary, 802.11n, Channel 140, 6 Mbps



Date: 20 A00 2018 19:24:08

Date: 25.800.2018 19:28:07

Figure 7-54: Band Edge Compliance Secondary, 802.11n, Channel 149, 6 Mbps

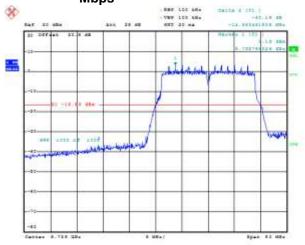


Figure 7-55: Band Edge Compliance Secondary, 802.11n, Channel 165, 6 Mbps



Date: 20 AUX.2018 18:27:23 Date: 20 AUX.2018 18:29:13

BlackBerry.	EMC Test Report for the BlackBerry® sma RHK211LW (STV100-1)	tphone Model		
	APPENDIX 7			
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# 40 MHz Bandwidth

Figure 7-56: Band Edge Compliance
Primary, 802.11n, Channel 36, 6 Mbps

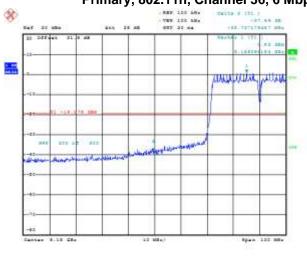
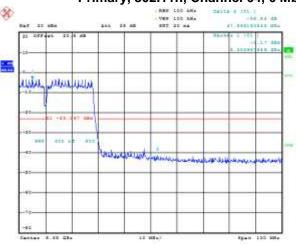


Figure 7-57: Band Edge Compliance
Primary, 802.11n, Channel 64, 6 Mbps



Date: 25,800,2018 19:32:24

Date: 25 AUG 2018 19-24-14

Date: 25.800.2018 19:53:34

Figure 7-58: Band Edge Compliance
Primary, 802.11n, Channel 100, 6 Mbps

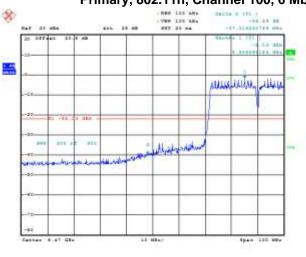
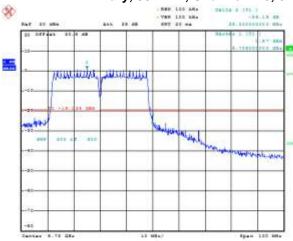


Figure 7-59: Band Edge Compliance
Primary, 802.11n, Channel 140, 6 Mbps



Date: 25 AUG 2018 19:24:88

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Figure 7-60: Band Edge Compliance

Primary, 802.11n, Channel 149, 6 Mbps

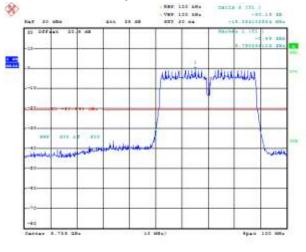
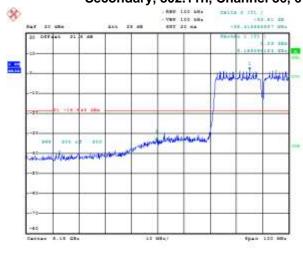


Figure 7-61: Band Edge Compliance Secondary, 802.11n, Channel 36, 6 Mbps



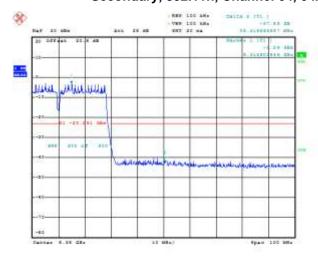
Date: 25,800,2018 19:59:17

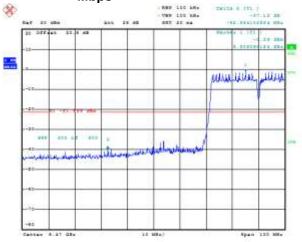
Date: 25.802.2016 18:26:60

Figure 7-62: Band Edge Compliance

Secondary, 802.11n, Channel 64, 6 Mbps

Figure 7-63: Band Edge Compliance
Secondary, 802.11n, Channel 100, 6
Mbps



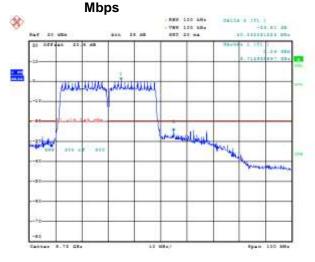


Date: 25 A00 2018 19:57:25

Date: 25.800.2018 19:29:00

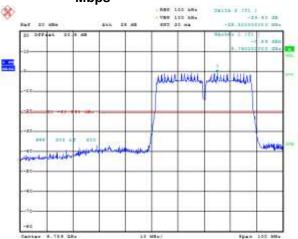
EMC Test Report for the BlackBerry® smartphone Model RHK211LW (STV100-1)				
•	APPENDIX 7			
<b>Test Report No.:</b> RTS-6066-1509-01	Dates of Test: July 22 – September 8, and September 28, 2015	FCC ID: L6ARHK210LW IC: 2503A-RHK210LW		

Figure 7-64: Band Edge Compliance Secondary, 802.11n, Channel 140, 6



Date: 25 AUG 2018 19:20:46

Figure 7-65: Band Edge Compliance Secondary, 802.11n, Channel 149, 6 Mbps



Same: 25,800,2018 18:29:44

## BlackBerry.	EMC Test Report for the BlackBerry® smartphone Model RHK211LW (STV100-1)  APPENDIX 7		
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# **Peak Power Spectral Density**

The EUT met the requirements of the peak power spectral density as per 47 CFR 15.407 and RSS-247. Channels 36, 48, 64, 100, 140 and 165 were measured at 6 Mbps each for 802.11a mode.

#### SISO Primary Antenna

Channel	Data Rate	Limit (dBm/MHz)	Measured Level (dBm/MHz)	Margin (dB)
36	6 Mbps	< 11.00	-0.81	-11.81
48	6 Mbps	< 11.00	3.83	-7.17
64	6 Mbps	< 11.00	2.91	-8.09
100	6 Mbps	< 11.00	2.21	-8.79
140	6 Mbps	< 11.00	1.69	-9.31
165	6 Mbps	< 33.00	2.06	-30.94

# SISO Secondary Antenna

Channel	Data Rate	Limit (dBm/MHz)	Measured Level (dBm/MHz)	Margin (dB)
36	6 Mbps	< 11.00	0.39	-10.61
48	6 Mbps	< 11.00	3.70	-7.30
64	6 Mbps	< 11.00	2.34	-8.66
100	6 Mbps	< 11.00	2.58	-8.42
140	6 Mbps	< 11.00	1.83	-9.17
165	6 Mbps	< 33.00	2.50	-30.5

#### 2TX/CDD Primary Antenna

Channel	Data Rate	Limit (dBm/MHz)	Measured Level (dBm/MHz)	Margin (dB)
36	6 Mbps	< 11.00	0.84	-10.16
48	6 Mbps	< 11.00	4.10	-6.90
64	6 Mbps	< 11.00	2.54	-8.46
100	6 Mbps	< 11.00	3.67	-7.33
140	6 Mbps	< 11.00	3.86	-7.14
165	6 Mbps	< 33.00	3.55	-29.45

*** BlackBerry.	EMC Test Report for the BlackBerry® smartphone Model RHK211LW (STV100-1)  APPENDIX 7		
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# 2TX/CDD Secondary Antenna

Channel	Data Rate	Limit (dBm/MHz)	Measured Level (dBm/MHz)	Margin (dB)
36	6 Mbps	< 11.00	-1.18	-12.18
48	6 Mbps	< 11.00	4.06	-6.94
64	6 Mbps	< 11.00	2.91	-8.09
100	6 Mbps	< 11.00	3.83	-7.17
140	6 Mbps	< 11.00	2.69	-8.31
165	6 Mbps	< 33.00	3.29	-29.71

# 2TX/CDD Combined

Channel	Data Rate	Limit (dBm/MHz)	Combined Peak (dBm/MHz)	Margin (dB)
36	6 Mbps	< 11.00	2.86	-8.14
48	6 Mbps	< 11.00	6.96	-4.04
64	6 Mbps	< 11.00	5.67	-5.33
100	6 Mbps	< 11.00	6.62	-4.38
140	6 Mbps	< 11.00	6.21	-10.79
165	6 Mbps	< 33.00	6.34	-10.66

See figures 7-66 to 7-89 for the plots of the peak power spectral density for Channel 36, 48, 64, 100, 140, and 165 at 6 Mbps each for 802.11a mode.

<b>∷</b> BlackBerry.	EMC Test Report for the BlackBerry® smartphone Model RHK211LW (STV100-1)  APPENDIX 7		
Test Report No.: RTS-6066-1509-01	Dates of Test: July 22 – September 8, and September 28, 2015	FCC ID: L6ARHK210LW IC: 2503A-RHK210LW	

# **Peak Power Spectral Density**

The EUT met the requirements of the peak power spectral density as per 47 CFR 15.407 and RSS-247. Channels 36, 64 100 and 140 were measured at MCS 0 each for 802.11n mode.

#### 20 MHz Bandwidth

# SISO Primary Antenna

Channel	Data Rate	Limit (dBm/MHz)	Measured Level (dBm/MHz)	Margin (dB)
36	MCS0	< 11.00	0.54	-10.46
64	MCS0	< 11.00	2.70	-8.3
100	MCS0	< 11.00	3.06	-7.94
140	MCS0	< 11.00	3.07	-7.93

# SISO Secondary Antenna

Channel	Data Rate	Limit (dBm/MHz)	Measured Level (dBm/MHz)	Margin (dB)
36	MCS0	< 11.00	0.92	-10.08
64	MCS0	< 11.00	1.89	-9.11
100	MCS0	< 11.00	3.54	-7.46
140	MCS0	< 11.00	2.44	-8.56

#### MIMO Primary Antenna

Channel	Data Rate	Limit (dBm/MHz)	Measured Level (dBm/MHz)	Margin (dB)
36	MCS0	< 11.00	-2.25	-13.25
64	MCS0	< 11.00	2.46	-8.54
100	MCS0	< 11.00	2.96	-8.04
140	MCS0	< 11.00	3.25	-7.75

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BlackBerry.	EMC Test Report for the BlackBerry® sma RHK211LW (STV100-1)	rtphone Model
	X 7	
<b>Test Report No.:</b> RTS-6066-1509-01	Dates of Test: July 22 – September 8, and September 28, 2015	FCC ID: L6ARHK210LW IC: 2503A-RHK210LW

# MIMO Secondary Antenna

Channel	Data Rate	Limit (dBm/MHz)	Measured Level (dBm/MHz)	Margin (dB)
36	MCS0	< 11.00	-1.00	-12.00
64	MCS0	< 11.00	2.27	-8.73
100	MCS0	< 11.00	3.52	-7.48
140	MCS0	< 11.00	2.34	-8.66

# **MIMO Combined**

Channel	Data Rate	Limit (dBm/MHz)	Combined Peak (dBm/MHz)	Margin (dB)
36	MCS0	< 11.00	1.43	-9.72
64	MCS0	< 11.00	5.38	-5.75
100	MCS0	< 11.00	6.26	-4.88
140	MCS0	< 11.00	5.83	-5.32

# **40 MHz Bandwidth** SISO Primary Antenna

Channel	Data Rate	Limit (dBm/MHz)	Measured Level (dBm/MHz)	Margin (dB)
36	MCS0	< 11.00	-0.93	-11.93
64	MCS0	< 11.00	-3.44	-14.44
100	MCS0	< 11.00	-2.85	-13.85
140	MCS0	< 11.00	0.14	-10.86

# SISO Secondary Antenna

Channel	Data Rate	Limit (dBm/MHz)	Measured Level (dBm/MHz)	Margin (dB)
36	MCS0	< 11.00	-0.78	-11.78
64	MCS0	< 11.00	-4.27	-15.27
100	MCS0	< 11.00	-2.31	-13.31
140	MCS0	< 11.00	-0.29	-11.29

*** BlackBerry.	EMC Test Report for the BlackBerry® smartphone Model RHK211LW (STV100-1)  APPENDIX 7		
Test Report No.: RTS-6066-1509-01	Dates of Test: July 22 – September 8, and September 28, 2015	FCC ID: L6ARHK210LW IC: 2503A-RHK210LW	

# MIMO Primary Antenna

Channel	Data Rate	Limit (dBm/MHz)	Measured Level (dBm/MHz)	Margin (dB)
36	MCS0	< 11.00	-3.61	-14.61
64	MCS0	< 11.00	-3.44	-14.44
100	MCS0	< 11.00	-2.73	-13.73
140	MCS0	< 11.00	0.88	-10.12

# MIMO Secondary Antenna

Channel	Data Rate	Limit (dBm/MHz)	Measured Level (dBm/MHz)	Margin (dB)
36	MCS0	< 11.00	-2.73	-13.73
64	MCS0	< 11.00	-3.46	-14.46
100	MCS0	< 11.00	-2.39	-13.39
140	MCS0	< 11.00	0.20	-10.80

#### MIMO Combined

Channel	Data Rate	Limit (dBm/MHz)	Combined Peak (dBm/MHz)	Margin (dB)
36	MCS0	< 11.00	-0.28	-11.28
64	MCS0	< 11.00	-0.48	-11.48
100	MCS0	< 11.00	0.31	-10.69
140	MCS0	< 11.00	3.40	-7.60

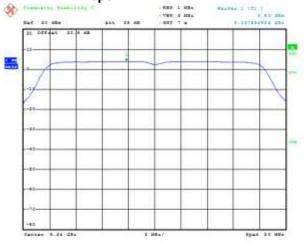
See figures 7-90 to 7-121 for the plots of the peak power spectral density for Channel 36, 64 and 165 at MCS 0 each for 802.11n mode.

## BlackBerry.	EMC Test Report for the BlackBerry® smartphone Model RHK211LW (STV100-1)  APPENDIX 7		
Test Report No.: RTS-6066-1509-01	Dates of Test: July 22 – September 8, and September 28, 2015	FCC ID: L6ARHK210LW IC: 2503A-RHK210LW	

Figure 7-66: Peak Power Spectral Density SISO Primary, 802.11a, Channel 36, 6 Mbps



Figure 7-67: Peak Power Spectral Density SISO Primary, 802.11a, Channel 48, 6 Mbps



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Figure 7-68: Peak Power Spectral Density
SISO Primary, 802.11a, Channel 64, 6

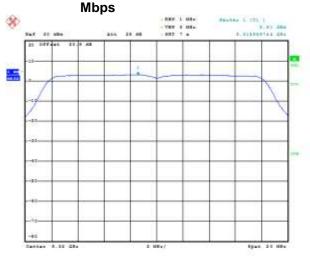


Figure 7-69: Peak Power Spectral Density SISO Primary, 802.11a, Channel 100, 6 Mbps



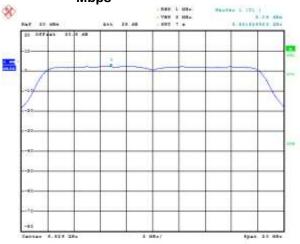
Cane 18 SEF 2018 10:48:12 Cane 18 SEF 2018 10:48:42

<b>∷</b> BlackBerry.	EMC Test Report for the BlackBerry® smartphone Model RHK211LW (STV100-1)  APPENDIX 7	
Test Report No.: RTS-6066-1509-01	Dates of Test: July 22 – September 8, and September 28, 2015	FCC ID: L6ARHK210LW IC: 2503A-RHK210LW

Figure 7-70: Peak Power Spectral Density SISO Primary, 802.11a, Channel 140, 6 Mbps



Figure 7-71: Peak Power Spectral Density SISO Primary, 802.11a, Channel 165, 6 Mbps



Date: 18.809.2018 10:48:42

Same: 18.869-2018 10:48-22

Date: 18.809.2018 10:48-02

Figure 7-72: Peak Power Spectral Density SISO Secondary, 802.11a, Channel 36, 6 Mbps



Figure 7-73: Peak Power Spectral Density
SISO Secondary, 802.11a, Channel 48, 6
Mbps



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Figure 7-74: Peak Power Spectral Density SISO Secondary, 802.11a, Channel 64, 6 Mbps

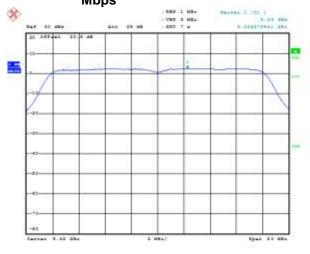


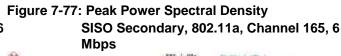
Figure 7-75: Peak Power Spectral Density
SISO Secondary, 802.11a, Channel 100, 6
Mbps

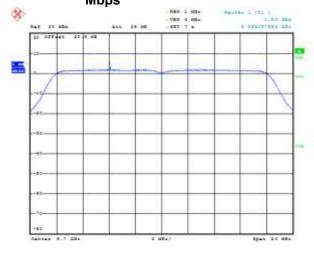


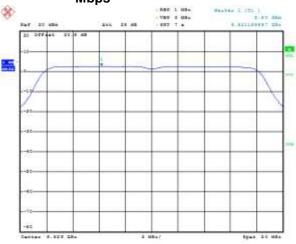
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Figure 7-76: Peak Power Spectral Density
SISO Secondary, 802.11a, Channel 140, 6
Mbps







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## BlackBerry.	EMC Test Report for the BlackBerry® smartphone Model RHK211LW (STV100-1)  APPENDIX 7	
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Figure 7-78: Peak Power Spectral Density
MIMO Primary, 802.11a, Channel 36, 6
Mbps

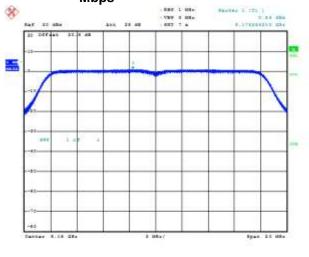
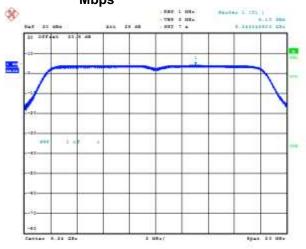


Figure 7-79: Peak Power Spectral Density
MIMO Primary, 802.11a, Channel 48, 6
Mbps



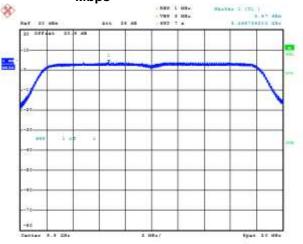
Date: 8.FEF.2018 09:37:23

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Figure 7-80: Peak Power Spectral Density
MIMO Primary, 802.11a, Channel 64, 6
Mbps



Figure 7-81: Peak Power Spectral Density
MIMO Primary, 802.11a, Channel 100, 6
Mbps



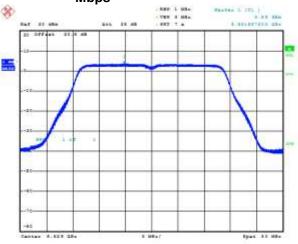
Case: 30 A00 2018 16:88:82 Case: 30 A00 2018 16:88:88

<b>∷</b> BlackBerry.	EMC Test Report for the BlackBerry® smartphone Model RHK211LW (STV100-1)  APPENDIX 7	
Test Report No.: RTS-6066-1509-01	Dates of Test: July 22 – September 8, and September 28, 2015	FCC ID: L6ARHK210LW IC: 2503A-RHK210LW

Figure 7-82: Peak Power Spectral Density
MIMO Primary, 802.11a, Channel 140, 6
Mbps



Figure 7-83: Peak Power Spectral Density
MIMO Primary, 802.11a, Channel 165, 6
Mbps



Date: 25,800,2018 17:02:04

Date: 20.800.2018 17:09:14

Figure 7-84: Peak Power Spectral Density
MIMO Secondary, 802.11a, Channel 36, 6

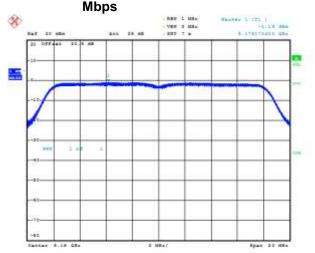
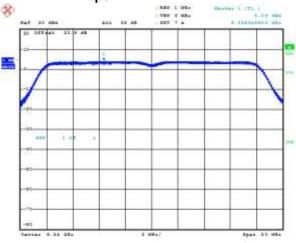


Figure 7-85: Peak Power Spectral Density
MIMO Secondary, 802.11a, Channel 48, 6
Mbps



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## BlackBerry.	EMC Test Report for the BlackBerry® smartphone Model RHK211LW (STV100-1)  APPENDIX 7	
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Figure 7-86: Peak Power Spectral Density
MIMO Secondary, 802.11a, Channel 64, 6

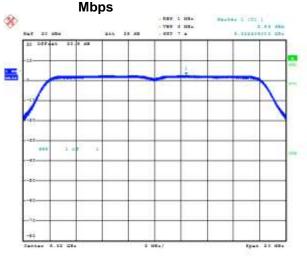
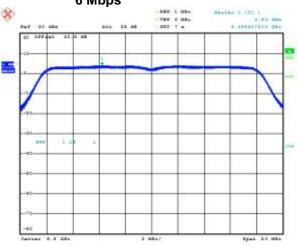


Figure 7-87: Peak Power Spectral Density
MIMO Secondary, 802.11a, Channel 100,
6 Mbps



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Figure 7-88: Peak Power Spectral Density
MIMO Secondary, 802.11a, Channel 140,
6 Mbps

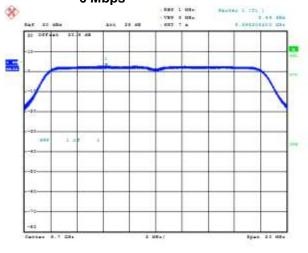


Figure 7-89: Peak Power Spectral Density
MIMO Secondary, 802.11a, Channel 165,
6 Mbps



Date: 20,800,2018 17:68:68

Date: 20,800,2018 17:40:89

BlackBerry.	EMC Test Report for the BlackBerry® smartphone Model RHK211LW (STV100-1)	
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# 20 MHz bandwidth

Figure 7-90: Peak Power Spectral Density SISO Primary, 802.11n, Channel 36, MCS

SISO Primary, 802.11n, Channel 64, MCS 0 1.75 dan 1.75 dan 8.33388744 536

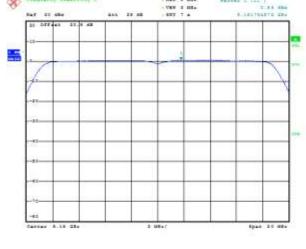




Figure 7-91: Peak Power Spectral Density

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Figure 7-92: Peak Power Spectral Density SISO Primary, 802.11n, Channel 100, MCS 0



Figure 7-93: Peak Power Spectral Density SISO Primary, 802.11n, Channel 140, MCS 0



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<b>∷</b> BlackBerry.	EMC Test Report for the BlackBerry® smartphone Model RHK211LW (STV100-1)  APPENDIX 7	
Test Report No.: RTS-6066-1509-01	Dates of Test: July 22 – September 8, and September 28, 2015	FCC ID: L6ARHK210LW IC: 2503A-RHK210LW

Figure 7-94: Peak Power Spectral Density
SISO Secondary, 802.11n, Channel 36,
MCS 0

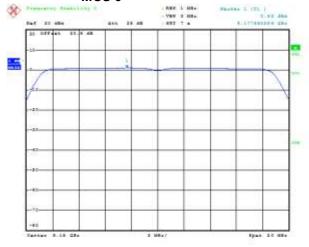


Figure 7-95: Peak Power Spectral Density
SISO Secondary, 802.11n, Channel 48,
MCS 0



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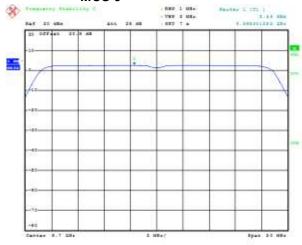
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Date: 18.869.2018 10:39:17

Figure 7-96: Peak Power Spectral Density
SISO Secondary, 802.11n, Channel 100,
MCS 0



Figure 7-97: Peak Power Spectral Density
SISO Secondary, 802.11n, Channel 140,
MCS 0



Date: 18.809.2018 10:59:67

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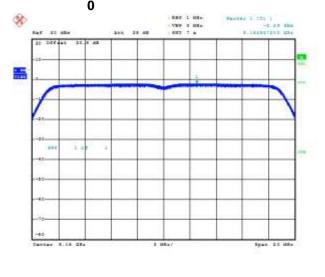
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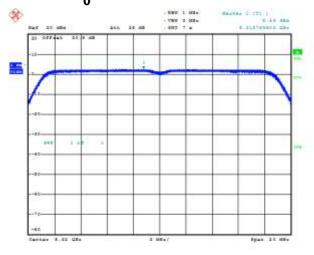
<b>∷</b> BlackBerry.	EMC Test Report for the BlackBerry® smartphone Model RHK211LW (STV100-1)  APPENDIX 7	
Test Report No.: RTS-6066-1509-01	Dates of Test: July 22 – September 8, and September 28, 2015	FCC ID: L6ARHK210LW IC: 2503A-RHK210LW

# 20 MHz bandwidth

Figure 7-98: Peak Power Spectral Density
MIMO Primary, 802.11n, Channel 36, MCS

Figure 7-99: Peak Power Spectral Density
MIMO Primary, 802.11n, Channel 64, MCS
0





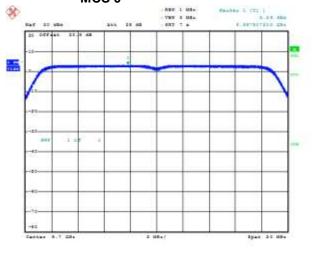
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Date: 1.889.2018 31:16:48

Figure 7-100: Peak Power Spectral Density
MIMO Primary, 802.11n, Channel 100,
MCS 0



Figure 7-101: Peak Power Spectral Density
MIMO Primary, 802.11n, Channel 140,
MCS 0



Date: 1.8EF.2018 51:58:87 Date: 1.8EF.2018 51:12:08

<b>∷</b> BlackBerry.	EMC Test Report for the BlackBerry® smartphone Model RHK211LW (STV100-1)  APPENDIX 7	
Test Report No.: RTS-6066-1509-01	Dates of Test: July 22 – September 8, and September 28, 2015	FCC ID: L6ARHK210LW IC: 2503A-RHK210LW

Figure 7-102: Peak Power Spectral Density
MIMO Secpmdaru, 802.11n, Channel 36,
MCS 0

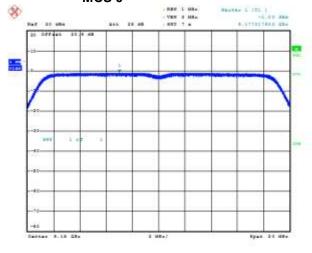


Figure 7-103: Peak Power Spectral Density
MIMO Secondary, 802.11n, Channel 64,
MCS 0



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of BlackBerry Limited.

Date: 1.889.2018 81-26-82

Figure 7-104: Peak Power Spectral Density
MIMO Secondary, 802.11n, Channel 100,

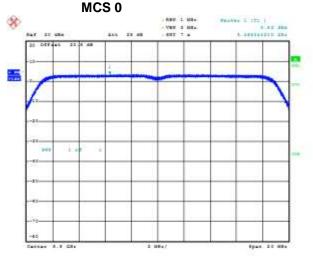
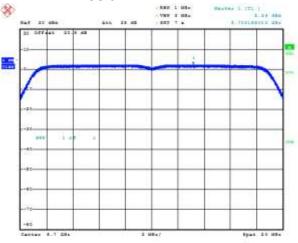


Figure 7-105: Peak Power Spectral Density
MIMO Secondary, 802.11n, Channel 140,
MCS 0



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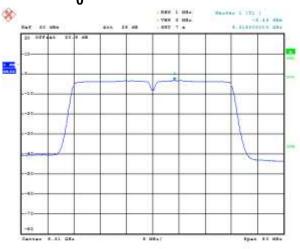
<b>∷</b> BlackBerry.	EMC Test Report for the BlackBerry® smartphone Model RHK211LW (STV100-1)  APPENDIX 7	
Test Report No.: RTS-6066-1509-01	Dates of Test: July 22 – September 8, and September 28, 2015	FCC ID: L6ARHK210LW IC: 2503A-RHK210LW

# 40 MHz bandwidth

Figure 7-106: Peak Power Spectral Density
SISO Primary, 802.11n, Channel 36, MCS

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Figure 7-107: Peak Power Spectral Density
SISO Primary, 802.11n, Channel 64, MCS
0



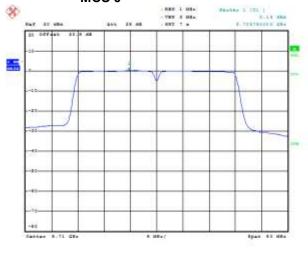
Date: 18.809.2018 10:07:80

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Figure 7-108: Peak Power Spectral Density SISO Primary, 802.11n, Channel 100, MCS 0



Figure 7-109: Peak Power Spectral Density SISO Primary, 802.11n, Channel 140, MCS 0



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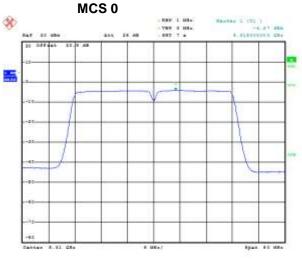
Date: 18.869.2018 10:29:20

<b>∷</b> BlackBerry.	EMC Test Report for the BlackBerry® smartphone Model RHK211LW (STV100-1)  APPENDIX 7	
Test Report No.: RTS-6066-1509-01	Dates of Test: July 22 – September 8, and September 28, 2015	FCC ID: L6ARHK210LW IC: 2503A-RHK210LW

Figure 7-110: Peak Power Spectral Density SISO Secondary, 802.11n, Channel 36, MCS 0



Figure 7-111: Peak Power Spectral Density
SISO Secondary, 802.11n, Channel 64,



Date: 18.889.2018 10:29:01

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Figure 7-112: Peak Power Spectral Density
SISO Secondary, 802.11n, Channel 100,
MCS 0

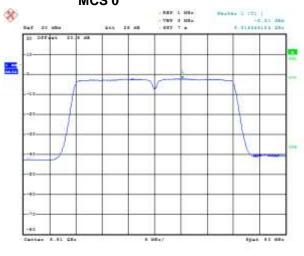


Figure 7-113: Peak Power Spectral Density
SISO Secondary, 802.11n, Channel 140,
MCS 0



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## BlackBerry.	EMC Test Report for the BlackBerry® smartphone Model RHK211LW (STV100-1)  APPENDIX 7	
Test Report No.: RTS-6066-1509-01	Dates of Test: July 22 – September 8, and September 28, 2015	FCC ID: L6ARHK210LW IC: 2503A-RHK210LW

# 40 MHz bandwidth

Figure 7-114: Peak Power Spectral Density MIMO Primary, 802.11n, Channel 36, MCS

Figure 7-115: Peak Power Spectral Density MIMO Primary, 802.11n, Channel 64, MCS

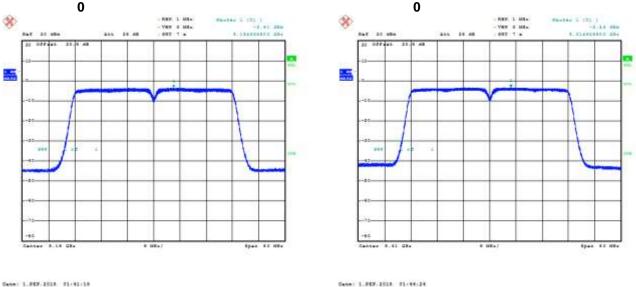


Figure 7-116: Peak Power Spectral Density MIMO Primary, 802.11n, Channel 100,

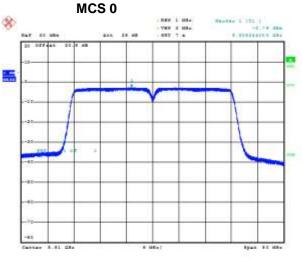
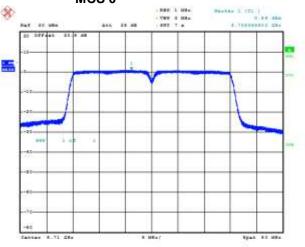


Figure 7-117: Peak Power Spectral Density MIMO Primary, 802.11n, Channel 140, MCS 0



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Same: 1.869.2018 81:47:31

## BlackBerry.	EMC Test Report for the BlackBerry® smartphone Model RHK211LW (STV100-1)  APPENDIX 7		
Test Report No.: RTS-6066-1509-01	Dates of Test: July 22 – September 8, and September 28, 2015  FCC ID: L6ARHK210LW IC: 2503A-RHK210LW		

Figure 7-118: Peak Power Spectral Density
MIMO Secondary, 802.11n, Channel 36,

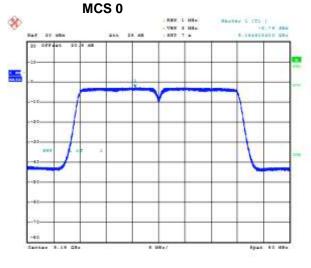
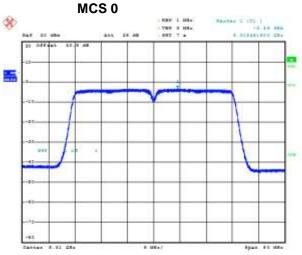


Figure 7-119: Peak Power Spectral Density
MIMO Secondary, 802.11n, Channel 64,



Date: 1.889.2018 81:88:43

Date: 1.FEF.2018 \$1.98:81

Figure 7-120: Peak Power Spectral Density
MIMO Secondary, 802.11n, Channel 100,

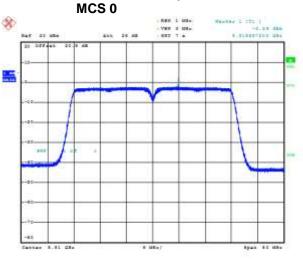
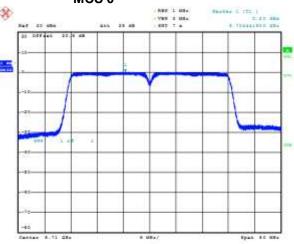


Figure 7-121: Peak Power Spectral Density
MIMO Secondary, 802.11n, Channel 140,
MCS 0



Date: 1.869.2018 82:11:88

Same: 1.869.2018 82:16:04

## BlackBerry.	EMC Test Report for the BlackBerry® smartphone Model RHK211LW (STV100-1)  APPENDIX 7		
Test Report No.: RTS-6066-1509-01	Dates of Test: July 22 – September 8, and September 28, 2015  FCC ID: L6ARHK210LW IC: 2503A-RHK210LW		

#### **Spurious RF Conducted Emissions**

The EUT met the requirements of the spurious RF conducted emissions as per 47 CFR 15.407 and RSS-247. Channels 36, 64, 100 and 140 were measured at MCS 0 each for 802.11a mode. Peak power was measured using an Agilent power meter, model N1911A with model N1921A power sensor. A reference offset of 29.0 dB was applied to the spectrum analyzer reference level for the attenuators and coaxial cable loss in the test circuit.

#### Primary Antenna

Channel	Data Rate	Carrier Level (dBm)	Max. Measured Level (dBm)	Max. Measured Level from Carrier (dBc)	Limit (dBc)
36	MCS0	12.32	-43.01	-55.33	-20
64	MCS0	12.74	-44.75	-57.49	-20
100	MCS0	13.93	-45.34	-59.27	-20
140	MCS0	14.37	-46.48	-60.85	-20

# Secondary Antenna

Channel	Data Rate	Carrier Level (dBm)	Max. Measured Level (dBm)	Max. Measured Level from Carrier (dBc)	Limit (dBc)
36	MCS0	13.36	-46.38	-59.74	-20
64	MCS0	12.78	-38.87	-51.65	-20
100	MCS0	13.62	-43.68	-57.30	-20
140	MCS0	14.75	-46.52	-61.27	-20

#### Sum

Channel	Data Rate	Carrier Level (dBm)	Combined Peak (dBm)	Max. Measured Level from Carrier (dBc)	Limit (dBc)
36	MCS0	15.88	-41.37	-57.24	-20
64	MCS0	15.77	-37.87	-53.64	-20
100	MCS0	17.06	-41.42	-58.48	-20
140	MCS0	17.81	-43.49	-61.30	-20

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## BlackBerry.	EMC Test Report for the BlackBerry® smartphone Model RHK211LW (STV100-1)  APPENDIX 7		
Test Report No.: RTS-6066-1509-01	Dates of Test: July 22 – September 8, and September 28, 2015  FCC ID: L6ARHK210LW IC: 2503A-RHK210LW		

See figures 7-122 to 7-137 for the plots of the spurious RF conducted emissions for Channel 36, 64, 100 and 140 at MCS 0 each for 802.11a mode.

BlackBerry.	EMC Test Report for the BlackBerry® sma RHK211LW (STV100-1)	tphone Model	
	APPENDI	ENDIX 7	
Test Report No.: RTS-6066-1509-01	Dates of Test: July 22 – September 8, and September 28, 2015	FCC ID: L6ARHK210LW IC: 2503A-RHK210LW	

Figure 7-122: Spurious RF Conducted Emissions Primary, 802.11a, Channel 36, MCS 0

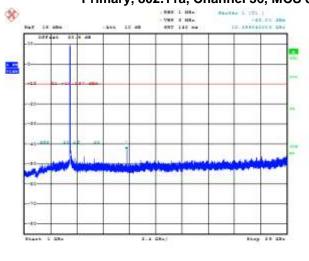
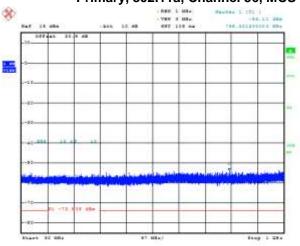


Figure 7-123: Spurious RF Conducted Emissions Primary, 802.11a, Channel 36, MCS 0



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Figure 7-124: Spurious RF Conducted Emissions Primary, 802.11a, Channel 64, MCS 0

Same: 22 PML 2018 11:28:12

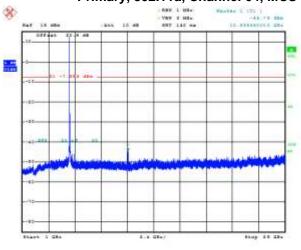
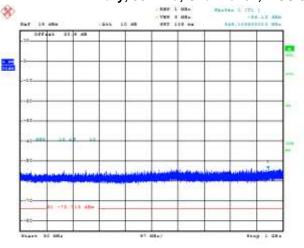


Figure 7-125: Spurious RF Conducted Emissions Primary, 802.11a, Channel 64, MCS 0



Same: 22,701,2018 11:28:88 Same: 22,701,2018 11:88:88

## BlackBerry.	EMC Test Report for the BlackBerry® smartphone Model RHK211LW (STV100-1)  APPENDIX 7		
Test Report No.: RTS-6066-1509-01	Dates of Test: July 22 – September 8, and September 28, 2015  FCC ID: L6ARHK210LW IC: 2503A-RHK210LW		

Figure 7-126: Spurious RF Conducted Emissions
Primary, 802.11a, Channel 100, MCS 0

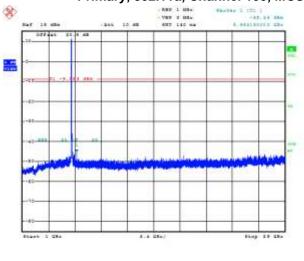
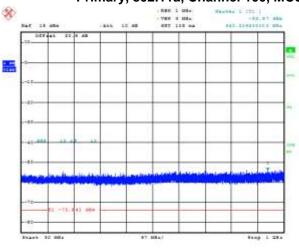


Figure 7-127: Spurious RF Conducted Emissions
Primary, 802.11a, Channel 100, MCS 0



Same: 22 JUL 2018 11:40:28 Same: 22 JUL 2018 11:40:08

Figure 7-128: Spurious RF Conducted Emissions
Primary, 802.11a, Channel 140, MCS 0

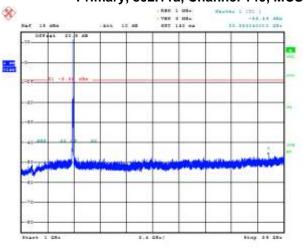
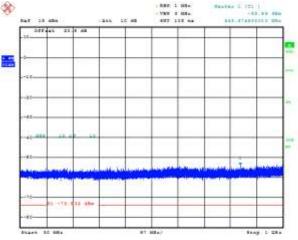


Figure 7-129: Spurious RF Conducted Emissions
Primary, 802.11a, Channel 140, MCS 0



Date: 02.501.0018 11:41:18 Date: 02.501.0018 11:48:18

	EMC Test Report for the BlackBerry® smartphone Model RHK211LW (STV100-1)  APPENDIX 7		
Test Report No.: RTS-6066-1509-01	Dates of Test: July 22 – September 8, and September 28, 2015	FCC ID: L6ARHK210LW IC: 2503A-RHK210LW	

Figure 7-130: Spurious RF Conducted Emissions Secondary, 802.11a, Channel 36, MCS 0

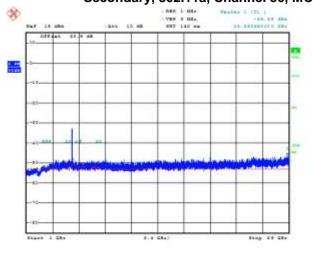
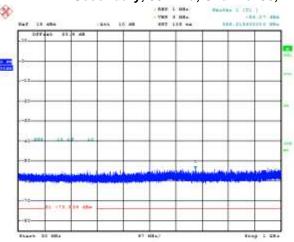
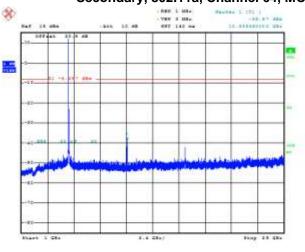


Figure 7-131: Spurious RF Conducted Emissions Secondary, 802.11a, Channel 36, MCS 0



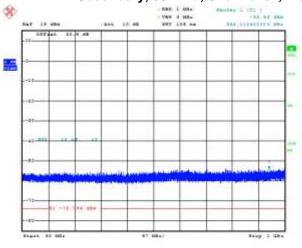
Date: 22.005.2016 11:42:07

Figure 7-132: Spurious RF Conducted Emissions Secondary, 802.11a, Channel 64, MCS 0



Date: 22.592.2018 11:42:47

Figure 7-133: Spurious RF Conducted Emissions Secondary, 802.11a, Channel 64, MCS 0



Dame: 22.755.3018 11-48:41

Same: 22 PML 2018 11-48-21

<b>∷</b> BlackBerry.	EMC Test Report for the BlackBerry® smartphone Model RHK211LW (STV100-1)  APPENDIX 7		
Test Report No.: RTS-6066-1509-01	Dates of Test: July 22 – September 8, and September 28, 2015  FCC ID: L6ARHK210LW IC: 2503A-RHK210LW		

Figure 7-134: Spurious RF Conducted Emissions Secondary, 802.11a, Channel 100, MCS 0

Figure 7-135: Spurious RF Conducted Emissions Secondary, 802.11a, Channel 100, MCS 0

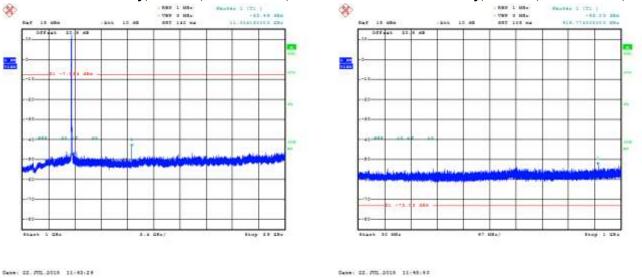
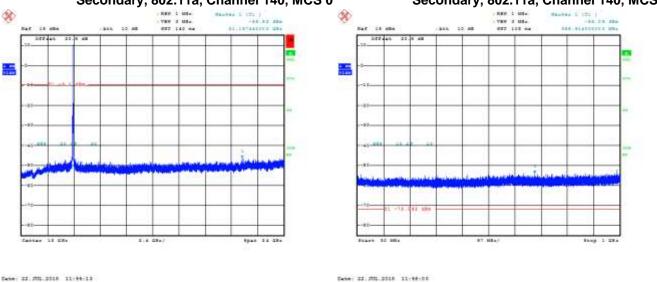


Figure 7-136: Spurious RF Conducted Emissions Secondary, 802.11a, Channel 140, MCS 0

Figure 7-137: Spurious RF Conducted Emissions Secondary, 802.11a, Channel 140, MCS 0



<b>∷</b> BlackBerry.	EMC Test Report for the BlackBerry® smartphone Model RHK211LW (STV100-1)  APPENDIX 7		
Test Report No.: RTS-6066-1509-01	Dates of Test: July 22 – September 8, and September 28, 2015  FCC ID: L6ARHK210LW IC: 2503A-RHK210LW		

#### **Spurious RF Conducted Emissions**

The EUT met the requirements of the spurious RF conducted emissions as per 47 CFR 15.407 and RSS-247. Channels 36, 64, 100 and 140 were measured at MCS0 Mbps each for 802.11n mode. Peak power was measured using an Agilent power meter, model N1911A with model N1921A power sensor. A reference offset of 29.0 dB was applied to the spectrum analyzer reference level for the attenuators and coaxial cable loss in the test circuit.

#### 20 MHZ Bandwidth

#### Primary Antenna

Channel	Data Rate	Carrier Level (dBm)	Max. Measured Level (dBm)	Max. Measured Level from Carrier (dBc)	Limit (dBc)
36	MCS0	12.01	-45.53	-57.54	-20
64	MCS0	14.17	-45.11	-59.28	-20
100	MCS0	14.65	-45.53	-60.18	-20
140	MCS0	14.61	-46.52	-61.13	-20

#### Secondary Antenna

Channel	Data Rate	Carrier Level (dBm)	Max. Measured Level (dBm)	Max. Measured Level from Carrier (dBc)	Limit (dBc)
36	MCS0	13.16	-46.97	-60.13	-20
64	MCS0	13.77	-44.47	-58.24	-20
100	MCS0	15.11	-46.86	-61.97	-20
140	MCS0	13.86	-47.53	-61.39	-20

*#* BlackBerry.	EMC Test Report for the BlackBerry® smartphone Model RHK211LW (STV100-1)  APPENDIX 7			
Test Report No.: RTS-6066-1509-01	Dates of Test: July 22 – September 8, and September 28, 2015	FCC ID: L6ARHK210LW IC: 2503A-RHK210LW		

## <u>Sum</u>

Channel	Data Rate	Carrier Level (dBm)	Combined Peak (dBm)	Max. Measured Level from Carrier (dBc)	Limit (dBc)
36	MCS0	18.49	-43.18	-61.67	-20
64	MCS0	16.92	-41.77	-58.69	-20
100	MCS0	17.71	-43.13	-60.84	-20
140	MCS0	17.35	-43.99	-61.34	-20

#### 40 MHZ Bandwidth

# Primary Antenna

Channel	Data Rate	Carrier Level (dBm)	Max. Measured Level (dBm)	Max. Measured Level from Carrier (dBc)	Limit (dBc)
36	MCS0	13.65	-42.48	-56.13	-20
64	MCS0	10.76	-42.79	-53.55	-20
100	MCS0	11.90	-42.59	-54.49	-20
140	MCS0	11.90	-46.47	-58.37	-20

# Secondary Antenna

Channel	Data Rate	Carrier Level (dBm)	Max. Measured Level (dBm)	Max. Measured Level from Carrier (dBc)	Limit (dBc)
36	MCS0	14.50	-44.75	-59.25	-20
64	MCS0	10.64	-44.94	-55.58	-20
100	MCS0	12.32	-44.66	-56.98	-20
140	MCS0	13.99	-48.11	-62.10	-20

<b>∷</b> BlackBerry.	EMC Test Report for the BlackBerry® smartphone Model RHK211LW (STV100-1)  APPENDIX 7		
Test Report No.: RTS-6066-1509-01	Dates of Test: July 22 – September 8, and September 28, 2015	FCC ID: L6ARHK210LW IC: 2503A-RHK210LW	

## Sum

Channel	Data Rate	Carrier Level (dBm)	Combined Peak (dBm)	Max. Measured Level from Carrier (dBc)	Limit (dBc)
36	MCS0	14.10	-40.46	-54.56	-20
64	MCS0	13.72	-40.72	-54.44	-20
100	MCS0	14.51	-40.49	-55.00	-20
140	MCS0	17.67	-44.20	-61.88	-20

See figures 7-138 to 7-169 for the plots of the spurious RF conducted emissions for Channel 36, 64, 100 and 140 at MCS0 Mbps each for 802.11n mode.

BlackBerry.	EMC Test Report for the BlackBerry® smartphone Model RHK211LW (STV100-1)		
	APPENDIX 7		
Test Report No.: RTS-6066-1509-01	Dates of Test: July 22 – September 8, and September 28, 2015	FCC ID: L6ARHK210LW IC: 2503A-RHK210LW	

## 20 MHz Bandwidth

Figure 7-138: Spurious RF Conducted Emissions Primary, 802.11n, Channel 36, MCS 0

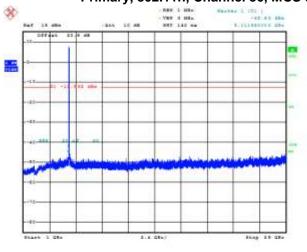
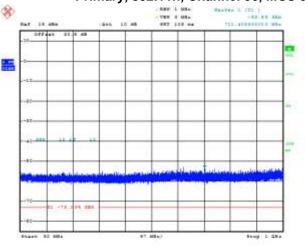


Figure 7-139: Spurious RF Conducted Emissions Primary, 802.11n, Channel 36, MCS 0



Date: 22.292.3018 10:18:32

Date: 22. PUL.2018 10:83:21

Figure 7-140: Spurious RF Conducted Emissions Primary, 802.11n, Channel 64, MCS 0

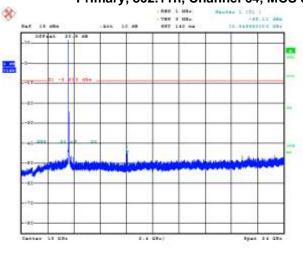
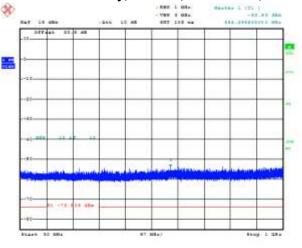


Figure 7-141: Spurious RF Conducted Emissions Primary, 802.11n, Channel 64, MCS 0



Date: 22.792.2018 11:08:12

Date: 22.792.3018 10:63:67

<b>∷</b> BlackBerry.	EMC Test Report for the BlackBerry® smartphone Model RHK211LW (STV100-1)  APPENDIX 7		
Test Report No.: RTS-6066-1509-01	Dates of Test: July 22 – September 8, and September 28, 2015	FCC ID: L6ARHK210LW IC: 2503A-RHK210LW	

Figure 7-142: Spurious RF Conducted Emissions **Primary, 802.11n, Channel 100, MCS 0** 

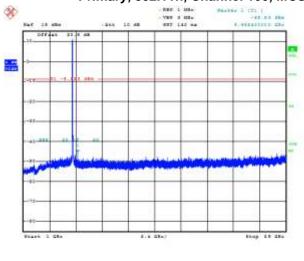
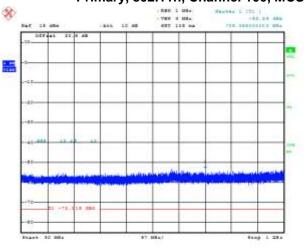


Figure 7-143: Spurious RF Conducted Emissions **Primary, 802.11n, Channel 100, MCS 0** 



Date: 22.795.2018 10:54:28

Figure 7-144: Spurious RF Conducted Emissions Primary, 802.11n, Channel 140, MCS 0

Date: 22.792.2018 10:23:28

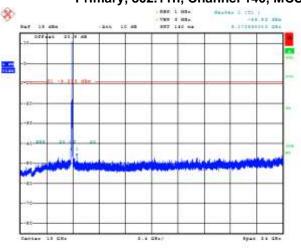
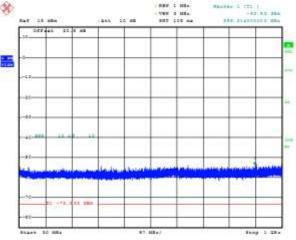


Figure 7-145: Spurious RF Conducted Emissions Primary, 802.11n, Channel 140, MCS 0



Date: 22.500.2018 10:88:02

Date: 22.79% 2018 10:28:21

	EMC Test Report for the BlackBerry® smartphone Model RHK211LW (STV100-1)  APPENDIX 7		
Test Report No.: RTS-6066-1509-01	Dates of Test: July 22 – September 8, and September 28, 2015	FCC ID: L6ARHK210LW IC: 2503A-RHK210LW	

Figure 7-146: Spurious RF Conducted Emissions Secondary, 802.11n, Channel 36, MCS 0

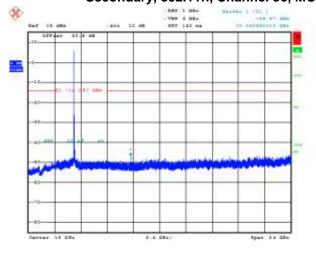
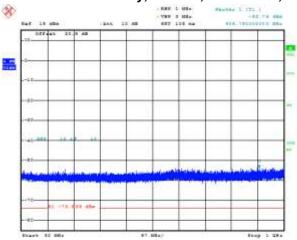


Figure 7-147: Spurious RF Conducted Emissions Secondary, 802.11n, Channel 36, MCS 0



Date: 22. PML.2018 10:30:20

Date: 22,200,2018 10:81:82

Figure 7-148: Spurious RF Conducted Emissions Secondary, 802.11n, Channel 64, MCS 0

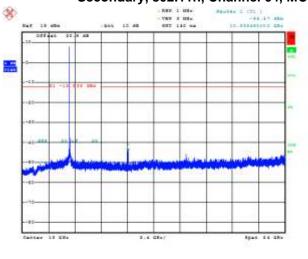
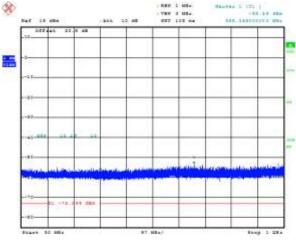


Figure 7-149: Spurious RF Conducted Emissions Secondary, 802.11n, Channel 64, MCS 0



Sene: 22 PML 2018 10:82:08

Date: 22 PML 2018 10:32:01

## BlackBerry.	EMC Test Report for the BlackBerry® smartphone Model RHK211LW (STV100-1)  APPENDIX 7			
Test Report No.: RTS-6066-1509-01	Dates of Test: July 22 – September 8, and September 28, 2015	FCC ID: L6ARHK210LW IC: 2503A-RHK210LW		

Figure 7-150: Spurious RF Conducted Emissions Secondary, 802.11n, Channel 100, MCS 0

Figure 7-151: Spurious RF Conducted Emissions Secondary, 802.11n, Channel 100, MCS 0

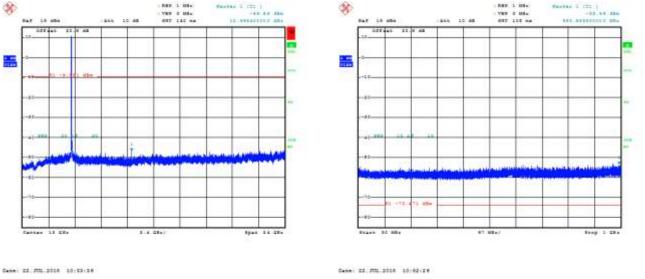
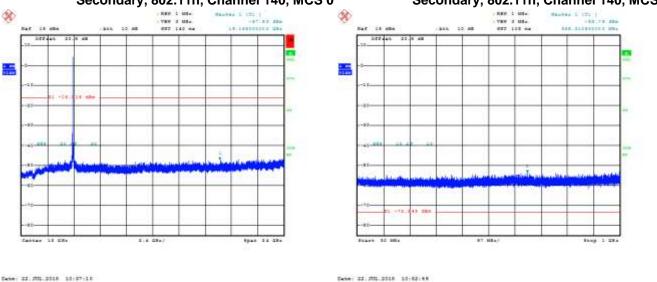


Figure 7-152: Spurious RF Conducted Emissions Secondary, 802.11n, Channel 140, MCS 0

Figure 7-153: Spurious RF Conducted Emissions Secondary, 802.11n, Channel 140, MCS 0



Date: 22.500.2018 10:82:48

<b>∷</b> BlackBerry.	EMC Test Report for the BlackBerry® smartphone Model RHK211LW (STV100-1)  APPENDIX 7		
Test Report No.: RTS-6066-1509-01	Dates of Test: July 22 – September 8, and September 28, 2015	FCC ID: L6ARHK210LW IC: 2503A-RHK210LW	

## 40 MHz Bandwidth

Figure 7-154: Spurious RF Conducted Emissions Primary, 802.11n, Channel 36, MCS 0

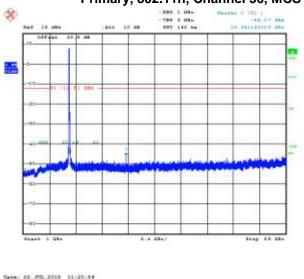
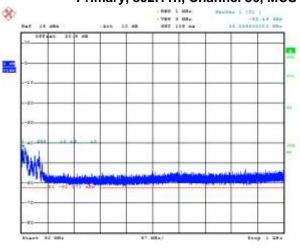
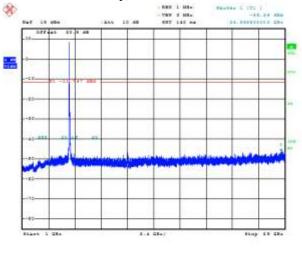


Figure 7-155: Spurious RF Conducted Emissions Primary, 802.11n, Channel 36, MCS 0



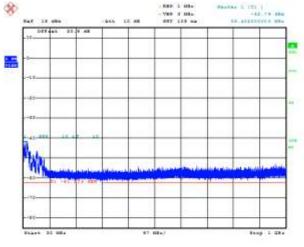
Date: 22.702.2018 11:29:88

Figure 7-156: Spurious RF Conducted Emissions Primary, 802.11n, Channel 64, MCS 0



Date: 22,795,2018 11:21:17

Figure 7-157: Spurious RF Conducted Emissions Primary, 802.11n, Channel 64, MCS 0



Date: 22.792.3018 11:30:06

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## BlackBerry.	EMC Test Report for the BlackBerry® smartphone Model RHK211LW (STV100-1)  APPENDIX 7	
Test Report No.: RTS-6066-1509-01	Dates of Test: July 22 – September 8, and September 28, 2015  FCC ID: L6ARHK210LW IC: 2503A-RHK210LW	

Figure 7-158: Spurious RF Conducted Emissions
Primary, 802.11n, Channel 100, MCS 0

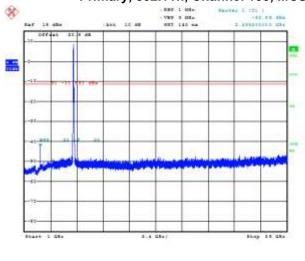
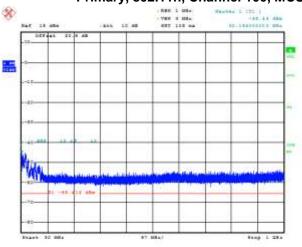


Figure 7-159 Spurious RF Conducted Emissions
Primary, 802.11n, Channel 100, MCS 0



Date: 22.750.3018 11:30:18

Figure 7-160: Spurious RF Conducted Emissions
Primary, 802.11n, Channel 140, MCS 0

Date: 22.792.2018 11:21:88

Date: 22,792,3018 11:22:27

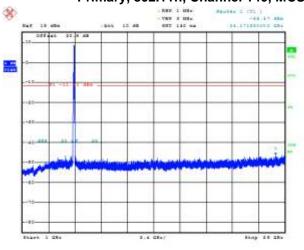
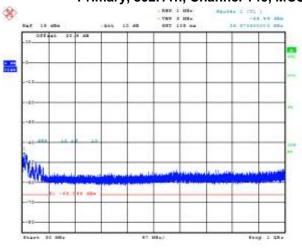


Figure 7-161: Spurious RF Conducted Emissions
Primary, 802.11n, Channel 140, MCS 0



Date: 22.792.2018 11:30:28

	EMC Test Report for the BlackBerry® smartphone Model RHK211LW (STV100-1)  APPENDIX 7	
Test Report No.: RTS-6066-1509-01	Dates of Test: July 22 - September 8, and September 28, 2015  FCC ID: L6ARHK210LW IC: 2503A-RHK210LW	

Figure 7-162: Spurious RF Conducted Emissions Secondary, 802.11n, Channel 36, MCS 0

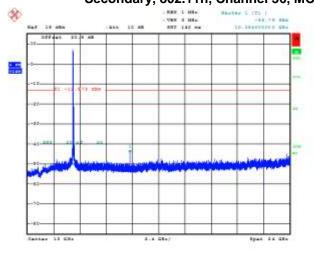
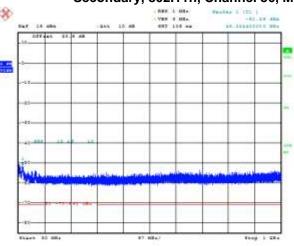


Figure 7-163: Spurious RF Conducted Emissions Secondary, 802.11n, Channel 36, MCS 0



Same: 22 PML 2018 11:23:44

Same: 22 PML 2018 11-24-07

Figure 7-164: Spurious RF Conducted Emissions Secondary, 802.11n, Channel 64, MCS 0

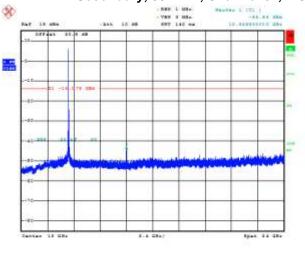
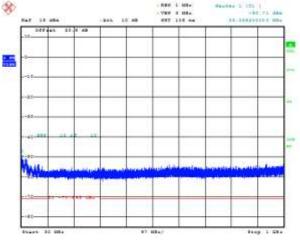


Figure 7-165: Spurious RF Conducted Emissions Secondary, 802.11n, Channel 64, MCS 0



Date: 22 PML 2018 11-29-18

Date: 22 FML 2018 11-24-62

<b>∷</b> BlackBerry.	EMC Test Report for the BlackBerry® smartphone Model RHK211LW (STV100-1)  APPENDIX 7	
Test Report No.: RTS-6066-1509-01	Dates of Test: July 22 – September 8, and September 28, 2015  FCC ID: L6ARHK210LW IC: 2503A-RHK210LW	

Figure 7-166: Spurious RF Conducted Emissions Secondary, 802.11n, Channel 100, MCS 0

Figure 7-167: Spurious RF Conducted Emissions Secondary, 802.11n, Channel 100, MCS 0

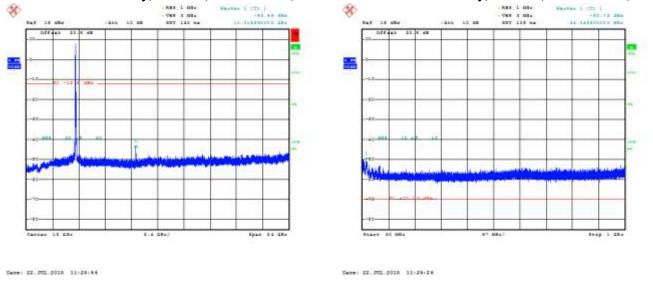
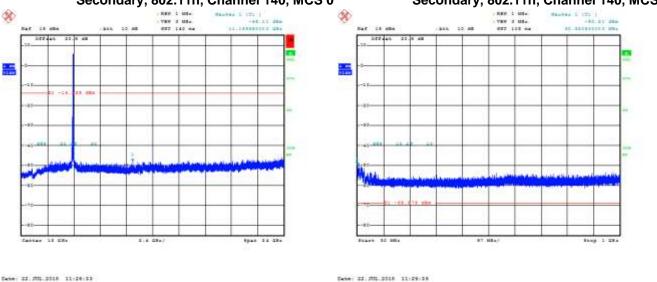


Figure 7-168: Spurious RF Conducted Emissions Secondary, 802.11n, Channel 140, MCS 0

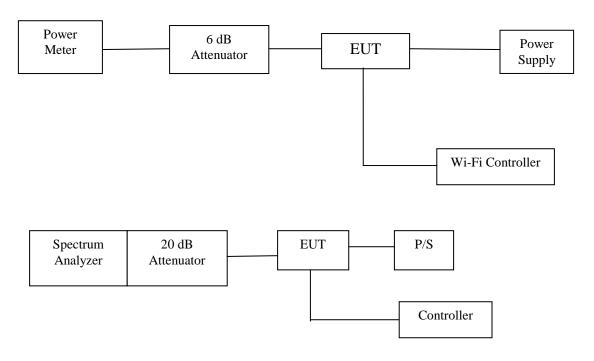
Figure 7-169: Spurious RF Conducted Emissions Secondary, 802.11n, Channel 140, MCS 0



APPENDIX 8 – 802.11ac CONDUCTED EMISSIONS TEST DATA/PLOTS

*## BlackBerry.	EMC Test Report for the BlackBerry® smartphone Model RHK211LW (STV100-1)  APPENDIX 8	
Test Report No.: RTS-6066-1509-01	Dates of Test: July 22 – September 8, and September 28, 2015  FCC ID: L6ARHK210LW IC: 2503A-RHK210LW	

# **Test Setup Diagram**



A reference offset of 8.9 dB was applied to the spectrum analyzer and 7.4 dB to the Power Meter reference level for the attenuators and coaxial cable loss in the test circuit.

Date of test: July 22, August 20, 24, and 30, 2015 The measurements were performed by Landon Martin.

The environmental test conditions were: Temperature: 26.4 °C

Relative Humidity: 48.2 %

≅ BlackBerry.	EMC Test Report for the BlackBerry® smartphone Model RHK211LW (STV100-1)  APPENDIX 8		
<b>Test Report No.:</b> RTS-6066-1509-01	Dates of Test: July 22 – September 8, and September 28, 2015  FCC ID: L6ARHK210LW IC: 2503A-RHK210LW		

#### 6 dB Bandwidth

The EUT met the requirements of the 6 dB bandwidth as per 47 CFR 15.247(a) (2) and RSS-247. For bandwidth 20 MHz, channels 36, 64, 100, 140 and 149 were measured at MCS 0 each; for bandwidth 40 MHz, channels 36, 64, 100 and 149 were measured at MCS 0 each; for bandwidth 80 MHz, channels 36, 64, 100, 140 and 149 were measured at MCS 0 each.

#### **20MHz Bandwidth**

#### Primary Antenna

Channel	Data Rate	Limit (kHz)	Measured Level (MHz)
36	MCS0	≥ 500	17.46
64	MCS0	≥ 500	17.62
100	MCS0	≥ 500	17.38
140	MCS0	≥ 500	17.60
149	MCS0	≥ 500	17.52

#### Secondary Antenna

Channel	Data Rate	Limit (kHz)	Measured Level (MHz)
36	MCS0	≥ 500	17.62
64	MCS0	≥ 500	17.62
100	MCS0	≥ 500	17.60
140	MCS0	≥ 500	17.52
149	MCS0	≥ 500	17.52

See figures 8-1 to 8-10 for the plots of the 6 dB bandwidth measurements for Channel 36, 64, 100, 140 and 149 at MCS0 Mbps each for 802.11ac mode

<b>∷</b> BlackBerry.	EMC Test Report for the BlackBerry® smartphone Model RHK211LW (STV100-1)  APPENDIX 8		
Test Report No.: RTS-6066-1509-01	Dates of Test: July 22 – September 8, and September 28, 2015  FCC ID: L6ARHK210LW IC: 2503A-RHK210LW		

# **40MHz Bandwidth**

#### Primary Antenna

Channel	Data Rate	Limit (kHz)	Measured Level (MHz)
36	MCS0	≥ 500	36.36
64	MCS0	≥ 500	36.20
100	MCS0	≥ 500	36.40
140	MCS0	≥ 500	36.40
149	MCS0	≥ 500	36.40

## Secondary Antenna

Channel	Data Rate	Limit (kHz)	Measured Level (MHz)
36	MCS0	≥ 500	36.16
64	MCS0	≥ 500	36.20
100	MCS0	≥ 500	36.40
140	MCS0	≥ 500	36.40
149	MCS0	≥ 500	36.40

See figures 8-11 to 8-20 for the plots of the 6 dB bandwidth measurements for Channel 36, 64, 100, 140 and 149 at MCS 0 each for 802.11ac mode.

<b>∷</b> BlackBerry.	EMC Test Report for the BlackBerry® smartphone Model RHK211LW (STV100-1)  APPENDIX 8		
Test Report No.: RTS-6066-1509-01	Dates of Test: July 22 – September 8, and September 28, 2015  FCC ID: L6ARHK210LW IC: 2503A-RHK210LW		

# 80MHz Bandwidth

# Primary Antenna

Channel	Data Rate	Limit (kHz)	Measured Level (MHz)
36	MCS0	≥ 500	76.32
64	MCS0	≥ 500	76.16
100	MCS0	≥ 500	76.08
140	MCS0	≥ 500	76.08
149	MCS0	≥ 500	76.40

# Secondary Antenna

Channel	Data Rate	Limit (kHz)	Measured Level (MHz)
36	MCS0	≥ 500	76.08
64	MCS0	≥ 500	76.08
100	MCS0	≥ 500	76.08
140	MCS0	≥ 500	76.40
149	MCS0	≥ 500	76.32

See figures 8-21 to 8-30 for the plots of the 6 dB bandwidth measurements for Channel 36, 64, 100, 140 and 149 at MCS 0 each for 802.11n mode.

<b>≅</b> BlackBerry.	EMC Test Report for the BlackBerry® smartphone Model RHK211LW (STV100-1)	
•	APPENDIX 8	
Test Report No.: RTS-6066-1509-01	Dates of Test: July 22 – September 8, and September 28, 2015	FCC ID: L6ARHK210LW IC: 2503A-RHK210LW

## 802.11ac RF Conducted Emission Test Results cont'd 20 MHz Bandwidth

Figure 8-1: 6 dB Bandwidth Primary, 802.11ac, Channel 36, MCS0

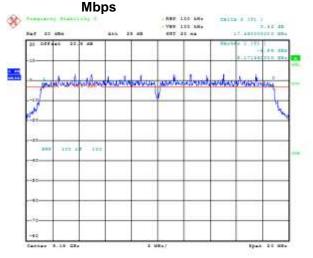
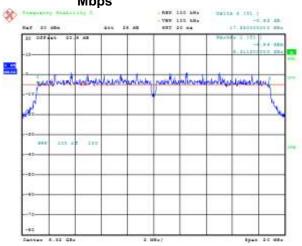


Figure 8-2: 6 dB Bandwidth Primary, 802.11ac, Channel 64, MCS0 **Mbps** 



Same: 8.889.2018 82:49:18 Same: 25 AUG 2018 10-00-24

Figure 8-3: 6 dB Bandwidth

Primary, 802.11ac, Channel 100, 6 Mbps

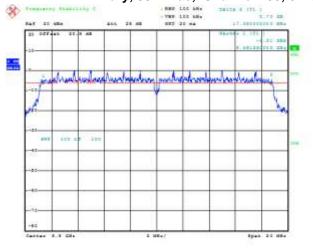
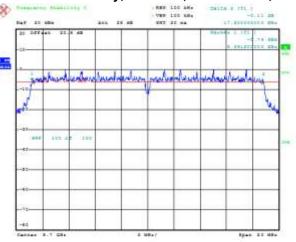


Figure 8-4: 6 dB Bandwidth

Primary, 802.11ac, Channel 140, 6 Mbps



Date: 25 800 2016 10:00:46

Date: 25.800.2018 10:00:28

<b>≅</b> BlackBerry.	EMC Test Report for the BlackBerry® smartphone Model RHK211LW (STV100-1)	
•	APPENDIX 8	
Test Report No.: RTS-6066-1509-01	Dates of Test: July 22 – September 8, and September 28, 2015	FCC ID: L6ARHK210LW IC: 2503A-RHK210LW

Figure 8-5: 6 dB Bandwidth
Primary, 802.11ac, Channel 149, MCS0

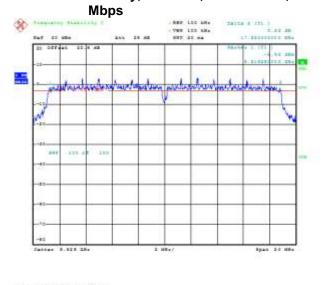
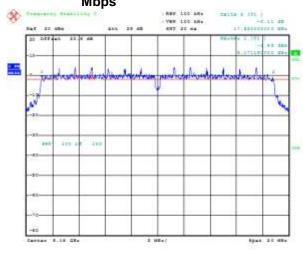


Figure 8-6: 6 dB Bandwidth Secondary, 802.11ac, Channel 36, MCS0 Mbps



Date: 25.800.2018 10:00:87

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Figure 8-7: 6 dB Bandwidth
Secondary, 802.11ac, Channel 64, 6

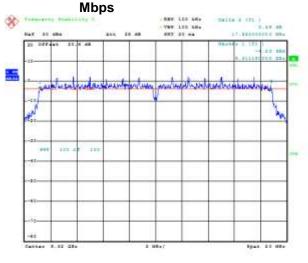
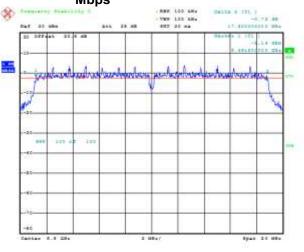


Figure 8-8: 6 dB Bandwidth Secondary, 802.11ac, Channel 100, 6 Mbps

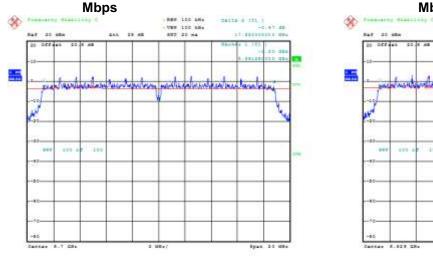


Date: 25 AUG 2018 18:01:20 Date: 25 AUG 2018 18:01:42

≅ BlackBerry.	EMC Test Report for the BlackBerry® smartphone Model RHK211LW (STV100-1)  APPENDIX 8	
APPE		. 8
<b>Test Report No.:</b> RTS-6066-1509-01	Dates of Test: July 22 – September 8, and September 28, 2015	FCC ID: L6ARHK210LW IC: 2503A-RHK210LW

Figure 8-9: 6 dB Bandwidth
Secondary, 802.11ac, Channel 140, MCS0

Figure 8-10: 6 dB Bandwidth
Secondary, 802.11ac, Channel 149, MCS0
Mbps



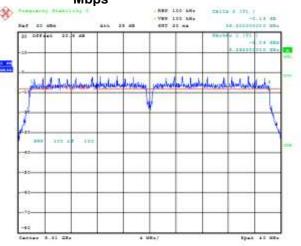


<b>≅</b> BlackBerry.	EMC Test Report for the BlackBerry® smartphone Model RHK211LW (STV100-1)	
•	APPENDIX 8	
Test Report No.: RTS-6066-1509-01	Dates of Test: July 22 – September 8, and September 28, 2015	FCC ID: L6ARHK210LW IC: 2503A-RHK210LW

## 802.11ac RF Conducted Emission Test Results cont'd 40 MHz Bandwidth

Figure 8-11: 6 dB Bandwidth
Primary, 802.11ac, Channel 36, MCS0
Mbps

Figure 8-12: 6 dB Bandwidth
Primary, 802.11ac, Channel 64, MCS0
Mbps



Date: 20 A00 2018 10:06:28 Date: 20 A00 2018 10:06:48

Figure 8-13: 6 dB Bandwidth

Date: 25.800.2016 10:07:00

Primary, 802.11ac, Channel 100, 6 Mbps

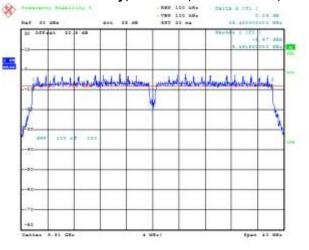
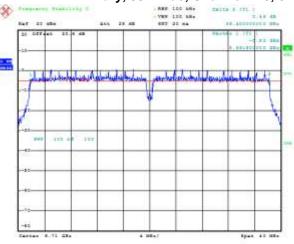


Figure 8-14: 6 dB Bandwidth





Same: 25.800.2018 10:07:15

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Test Report No.: RTS-6066-1509-01	Dates of Test: July 22 – September 8, and September 28, 2015	FCC ID: L6ARHK210LW IC: 2503A-RHK210LW

Figure 8-15: 6 dB Bandwidth
Primary, 802.11ac, Channel 149, MCS0

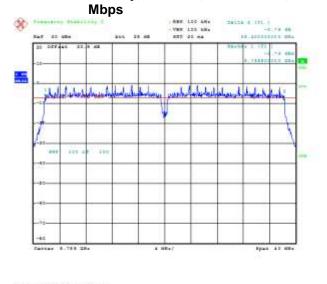
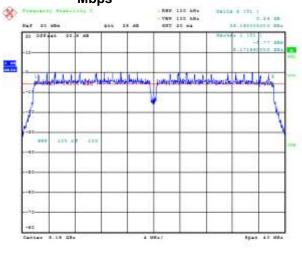


Figure 8-16: 6 dB Bandwidth Secondary, 802.11ac, Channel 36, MCS0 Mbps



Date: 20.800.2018 10:07:20

Date: 25,800,2018 10:07:42

Figure 8-17: 6 dB Bandwidth
Secondary, 802.11ac, Channel 64, 6

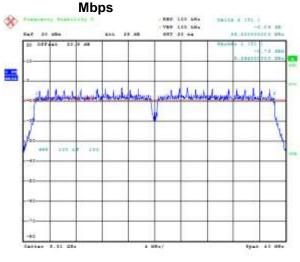
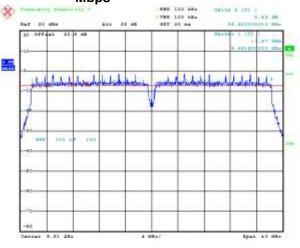


Figure 8-18: 6 dB Bandwidth
Secondary, 802.11ac, Channel 100, 6
Mbps

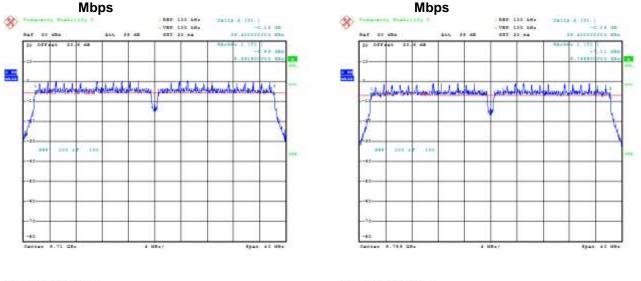


Date: 25 A03 2018 18:07.92 Date: 25 A03 2018 18:07.92

≅ BlackBerry.	EMC Test Report for the BlackBerry® smartphone Model RHK211LW (STV100-1)  APPENDIX 8	
APPE		. 8
<b>Test Report No.:</b> RTS-6066-1509-01	Dates of Test: July 22 – September 8, and September 28, 2015	FCC ID: L6ARHK210LW IC: 2503A-RHK210LW

Figure 8-19: 6 dB Bandwidth
Secondary, 802.11ac, Channel 140, MCS0

Figure 8-20: 6 dB Bandwidth
Secondary, 802.11ac, Channel 149, MCS0



Game: 20 A00 2018 10:09:12 Game: 20 A00 2018 10:09:23

<b>≅</b> BlackBerry.	EMC Test Report for the BlackBerry® smartphone Model RHK211LW (STV100-1)	
•	APPENDIX 8	
Test Report No.: RTS-6066-1509-01	Dates of Test: July 22 – September 8, and September 28, 2015	FCC ID: L6ARHK210LW IC: 2503A-RHK210LW

# 802.11ac RF Conducted Emission Test Results cont'd 80 MHz Bandwidth

Figure 8-21: 6 dB Bandwidth
Primary, 802.11ac, Channel 36, MCS0

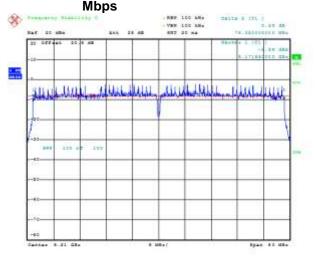
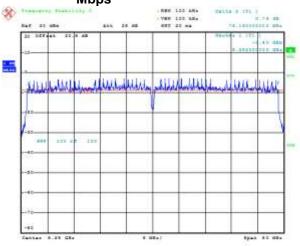


Figure 8-22: 6 dB Bandwidth
Primary, 802.11ac, Channel 64, MCS0
Mbps



Date: 8.8EF.2018 03:09:34

Date: 20 A00 2018 10:12:01

Figure 8-23: 6 dB Bandwidth

Primary, 802.11ac, Channel 100, 6 Mbps

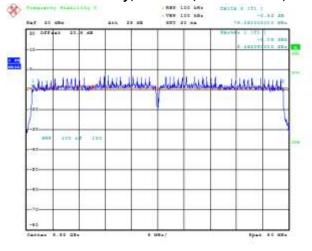
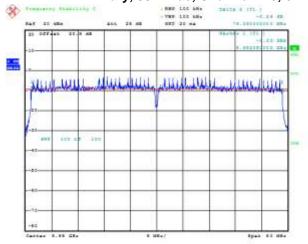


Figure 8-24: 6 dB Bandwidth

Primary, 802.11ac, Channel 140, 6 Mbps



Date: 25.809.2018 10:12:11

Date: 25 A00 2018 10:12:22

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Test Report No.: RTS-6066-1509-01	Dates of Test: July 22 – September 8, and September 28, 2015	FCC ID: L6ARHK210LW IC: 2503A-RHK210LW

Figure 8-25: 6 dB Bandwidth
Primary, 802.11ac, Channel 149, MCS0

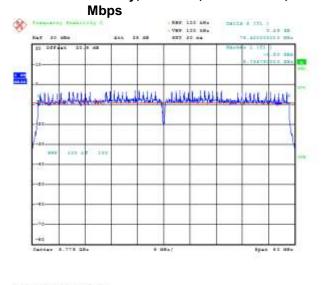
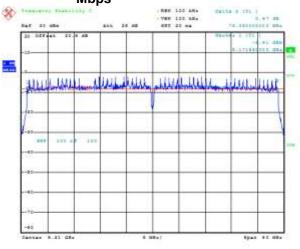
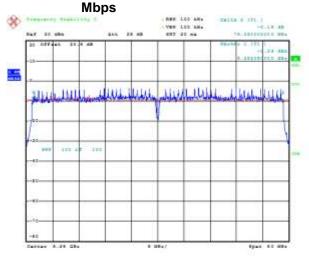


Figure 8-26: 6 dB Bandwidth
Secondary, 802.11ac, Channel 36, MCS0
Mbps



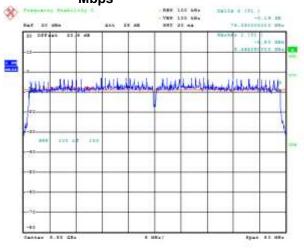
Sale: 35 ASS 2018 10:12:22 Case: 8.8EF.2018 03:31:24

Figure 8-27: 6 dB Bandwidth
Secondary, 802.11ac, Channel 64, 6



Case: 20 A00 2018 10-10-16

Figure 8-28: 6 dB Bandwidth Secondary, 802.11ac, Channel 100, 6 Mbps

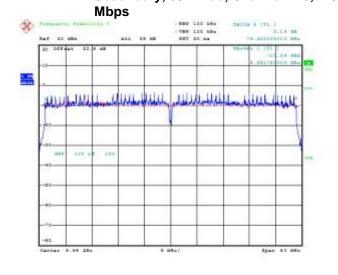


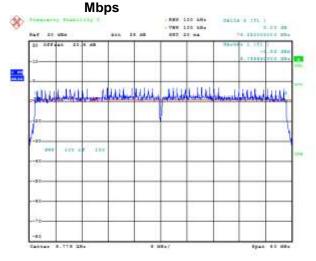
Came: 20 A00 2018 10:12:24

<b>∷</b> BlackBerry.	EMC Test Report for the BlackBerry® smartphone Model RHK211LW (STV100-1)  APPENDIX 8	
Test Report No.: RTS-6066-1509-01	Dates of Test: July 22 – September 8, and September 28, 2015	FCC ID: L6ARHK210LW IC: 2503A-RHK210LW

Figure 8-29: 6 dB Bandwidth
Secondary, 802.11ac, Channel 140, MCS0

Figure 8-30: 6 dB Bandwidth Secondary, 802.11ac, Channel 149, MCS0





Same: 25.800.0018 10:15:28 Same: 25.800.0018 10:15:48

<b>∷</b> BlackBerry.	EMC Test Report for the BlackBerry® smartphone Model RHK211LW (STV100-1)  APPENDIX 8	
Test Report No.: RTS-6066-1509-01	Dates of Test: July 22 – September 8, and September 28, 2015	FCC ID: L6ARHK210LW IC: 2503A-RHK210LW

## **Maximum Conducted Output Power**

The EUT met the requirements of the maximum conducted output power of class 2 as per 47 CFR 15.407 and RSS-247. Channels 36, 64, 100, 140 and 165 were measured for 802.11ac mode, bandwidth 20MHz, using an Agilent power meter, model N1911A with model N1921A power sensor. A reference offset of 8.9 dB was applied to the power meter reference level for the coaxial cable loss and attenuators in the test circuit.

#### 20 MHz Bandwidth

## SISO Primary Antenna

Channel	BW(MHz)	Data Rate	Power Limit (mW)	Measured Level (dBm)	Measured Level (mW)
36	20	MCS0	< 250.0	14.73	29.72
64	20	MCS0	< 250.0	12.29	16.94
100	20	MCS0	< 250.0	17.59	57.41
140	20	MCS0	< 250.0	17.45	55.59
149	20	MCS0	< 1000	15.10	32.36

#### SISO Secondary Antenna

Channel	BW(MHz)	Data Rate	Power Limit (mW)	Measured Level (dBm)	Measured Level (mW)
36	20	MCS0	< 250.0	15.91	38.99
64	20	MCS0	< 250.0	14.04	25.35
100	20	MCS0	< 250.0	15.30	33.88
140	20	MCS0	< 250.0	13.86	24.32
149	20	MCS0	< 1000	14.62	28.97

#### MIMO Primary Antenna

Channel	BW(MHz)	Data Rate	Power Limit (mW)	Measured Level (dBm)	Measured Level (mW)
36	20	MCS0	< 250.0	15.01	31.70
64	20	MCS0	< 250.0	13.90	24.55
100	20	MCS0	< 250.0	14.96	31.33
140	20	MCS0	< 250.0	13.71	23.50
149	20	MCS0	< 1000	14.75	29.85

*** BlackBerry.	EMC Test Report for the BlackBerry® smartphone Model RHK211LW (STV100-1)		
,	(8		
Test Report No.: RTS-6066-1509-01	Dates of Test: July 22 – September 8, and September 28, 2015	FCC ID: L6ARHK210LW IC: 2503A-RHK210LW	

# MIMO Secondary Antenna

Channel	BW(MHz)	Data Rate	Power Limit (mW)	Measured Level (dBm)	Measured Level (mW)
36	20	MCS0	< 250.0	15.80	38.02
64	20	MCS0	< 250.0	13.60	22.91
100	20	MCS0	< 250.0	13.71	23.50
140	20	MCS0	< 250.0	14.52	28.31
149	20	MCS0	< 1000	15.21	33.19

# MIMO Sum

Channel	BW(MHz)	Data Rate	Power Limit (mW)	Measured Level (dBm)	Measured Level (mW)
36	20	MCS0	< 250.0	18.43	69.71
64	20	MCS0	< 250.0	16.76	47.46
100	20	MCS0	< 250.0	17.39	54.83
140	20	MCS0	< 250.0	17.14	51.81
149	20	MCS0	< 1000	18.00	63.04

<b>∷</b> BlackBerry.	EMC Test Report for the BlackBerry® smartphone Model RHK211LW (STV100-1)  APPENDIX 8	
Test Report No.: RTS-6066-1509-01	Dates of Test: July 22 – September 8, and September 28, 2015	FCC ID: L6ARHK210LW IC: 2503A-RHK210LW

Channels 36, 64, 100, 140 and 165 were measured for 802.11ac mode, bandwidth 40MHz, using an Agilent power meter, model N1911A with model N1921A power sensor. A reference offset of 8.9 dB was applied to the power meter reference level for the coaxial cable loss and attenuators in the test circuit.

#### **40 MHz Bandwidth**

#### SISO Primary Antenna

Channel	BW(MHz)	Data Rate	Power Limit (mW)	Measured Level (dBm)	Measured Level (mW)
36	20	MCS0	< 250.0	12.18	16.52
64	20	MCS0	< 250.0	10.81	12.05
100	20	MCS0	< 250.0	11.87	15.38
140	20	MCS0	< 250.0	14.68	29.38
149	20	MCS0	< 1000	13.24	21.09

# SISO Secondary Antenna

Channel	BW(MHz)	Data Rate	Power Limit (mW)	Measured Level (dBm)	Measured Level (mW)
36	20	MCS0	< 250.0	14.65	29.17
64	20	MCS0	< 250.0	10.81	12.05
100	20	MCS0	< 250.0	12.35	17.18
140	20	MCS0	< 250.0	14.21	26.36
149	20	MCS0	< 1000	13.11	20.46

#### MIMO Primary Antenna

Channel	BW(MHz)	Data Rate	Power Limit (mW)	Measured Level (dBm)	Measured Level (mW)
36	20	MCS0	< 250.0	11.60	14.45
64	20	MCS0	< 250.0	10.76	11.91
100	20	MCS0	< 250.0	11.71	14.83
140	20	MCS0	< 250.0	14.20	26.30
149	20	MCS0	< 1000	13.09	20.37

<b>:</b> :: BlackBerry.	EMC Test Report for the BlackBerry® smartphone Model RHK211LW (STV100-1)  APPENDIX 8		
<b>Test Report No.:</b> RTS-6066-1509-01	Dates of Test: July 22 – September 8, and September 28, 2015	FCC ID: L6ARHK210LW IC: 2503A-RHK210LW	

# MIMO Secondary Antenna

Channel	BW(MHz)	Data Rate	Power Limit (mW)	Measured Level (dBm)	Measured Level (mW)
36	20	MCS0	< 250.0	10.73	11.83
64	20	MCS0	< 250.0	10.87	12.22
100	20	MCS0	< 250.0	11.25	13.34
140	20	MCS0	< 250.0	15.22	33.27
149	20	MCS0	< 1000	13.47	22.23

# MIMO Sum

Channel	BW(MHz)	Data Rate	Power Limit (mW)	Measured Level (dBm)	Measured Level (mW)
36	20	MCS0	< 250.0	14.20	26.28
64	20	MCS0	< 250.0	13.83	24.13
100	20	MCS0	< 250.0	14.50	28.16
140	20	MCS0	< 250.0	17.75	59.57
149	20	MCS0	< 1000	16.29	42.60

*** BlackBerry.	EMC Test Report for the BlackBerry® smartphone Model RHK211LW (STV100-1)  APPENDIX 8			
Test Report No.: RTS-6066-1509-01	Dates of Test: July 22 – September 8, and September 28, 2015	FCC ID: L6ARHK210LW IC: 2503A-RHK210LW		

Channels 36, 64, 100, 140 and 165 were measured for 802.11ac mode, bandwidth 80MHz, using an Agilent power meter; model N1911A with model N1921A power sensor. A reference offset of 8.9 dB was applied to the power meter reference level for the coaxial cable loss and attenuators in the test circuit.

### 80 MHz Bandwidth

### SISO Primary Antenna

Channel	BW(MHz)	Data Rate	Power Limit (mW)	Measured Level (dBm)	Measured Level (mW)
36	20	MCS0	< 250.0	13.14	20.61
64	20	MCS0	< 250.0	13.07	20.28
100	20	MCS0	< 250.0	12.79	19.01
140	20	MCS0	< 250.0	12.63	18.32
149	20	MCS0	< 1000	12.94	19.68

# SISO Secondary Antenna

Channel	BW(MHz)	Data Rate	Power Limit (mW)	Measured Level (dBm)	Measured Level (mW)
36	20	MCS0	< 250.0	13.69	23.39
64	20	MCS0	< 250.0	12.30	16.98
100	20	MCS0	< 250.0	12.72	18.71
140	20	MCS0	< 250.0	11.32	13.55
149	20	MCS0	< 1000	12.19	16.56

## MIMO Primary Antenna

Channel	BW(MHz)	Data Rate	Power Limit (mW)	Measured Level (dBm)	Measured Level (mW)
36	20	MCS0	< 250.0	13.68	23.33
64	20	MCS0	< 250.0	10.50	11.22
100	20	MCS0	< 250.0	11.65	14.62
140	20	MCS0	< 250.0	12.22	16.67
149	20	MCS0	< 1000	12.43	17.50

*** BlackBerry.	EMC Test Report for the BlackBerry® smartphone Model RHK211LW (STV100-1)  APPENDIX 8			
Test Report No.: RTS-6066-1509-01	Dates of Test: July 22 – September 8, and September 28, 2015	FCC ID: L6ARHK210LW IC: 2503A-RHK210LW		

# MIMO Secondary Antenna

Channel	BW(MHz)	Data Rate	Power Limit (mW)	Measured Level (dBm)	Measured Level (mW)
36	20	MCS0	< 250.0	14.12	25.82
64	20	MCS0	< 250.0	10.98	12.53
100	20	MCS0	< 250.0	11.24	13.30
140	20	MCS0	< 250.0	13.08	20.32
149	20	MCS0	< 1000	12.83	19.19

# MIMO Sum

Channel	BW(MHz)	Data Rate	Power Limit (mW)	Measured Level (dBm)	Measured Level (mW)
36	20	MCS0	< 250.0	16.92	49.16
64	20	MCS0	< 250.0	13.76	23.75
100	20	MCS0	< 250.0	14.46	27.93
140	20	MCS0	< 250.0	15.68	37.00
149	20	MCS0	< 1000	15.64	36.69

<b>:</b> :: BlackBerry.	EMC Test Report for the BlackBerry® smartphone Model RHK211LW (STV100-1)  APPENDIX 8		
Test Report No.: RTS-6066-1509-01	Dates of Test: July 22 – September 8, and September 28, 2015	FCC ID: L6ARHK210LW IC: 2503A-RHK210LW	

### **Band Edge Compliance**

The EUT met the requirements of the band edge compliance as per 47 CFR 15.407 and RSS-247. Channels 36, 64, 100, 140, 149, and 165 were measured at MCS 0 Mbps each for bandwidth 20MHz, 802.11ac mode.

## 20MHz Bandwidth

## SISO Primary Antenna

Channel	Bandwidt(MHz)	Data Rate	Limit (dBc)	Measured Level (dBc)	Margin (dB)
36	20	MCS0	< -20	-44.18	-24.18
64	20	MCS0	< -20	-48.86	-28.86
100	20	MCS0	< -20	-49.75	-29.75
140	20	MCS0	< -20	-49.13	-29.13
149	20	MCS0	< -20	-43.28	-23.28
165	20	MCS0	< -20	-45.43	-25.43

# SISO Secondary Antenna

Channel	Bandwidt(MHz)	Data Rate	Limit (dBc)	Measured Level (dBc)	Margin (dB)
36	20	MCS0	< -20	-44.16	-24.16
64	20	MCS0	< -20	-49.63	-29.63
100	20	MCS0	< -20	-47.81	-27.81
140	20	MCS0	< -20	-43.94	-23.94
149	20	MCS0	< -20	-41.38	-21.38
165	20	MCS0	< -20	-35.15	-15.15

See figures 8-31 to 8-42 for the plots of the band edge compliance measurements for Channel 36, 64, 100, 149 and 165 at MCS0 Mbps each for 802.11ac mode.

<b>∷</b> BlackBerry.	EMC Test Report for the BlackBerry® smartphone Model RHK211LW (STV100-1)		
	8		
Test Report No.: RTS-6066-1509-01	Dates of Test: July 22 – September 8, and September 28, 2015	FCC ID: L6ARHK210LW IC: 2503A-RHK210LW	

Figure 8-31: Band Edge Compliance
Primary, 802.11ac, Channel 36, MCS0
Mbps

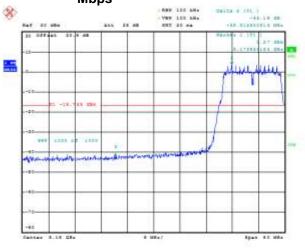
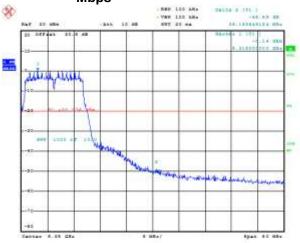


Figure 8-32: Band Edge Compliance
Primary, 802.11ac, Channel 64, MCS0
Mbps



Danie: 8.8EF.2018 02:49:00 Game: 21,800.0018 18:04:07

Figure 8-33: Band Edge Compliance
Primary, 802.11ac, Channel 100, MCS0
Mbps

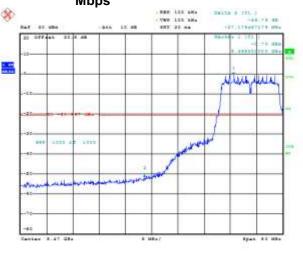
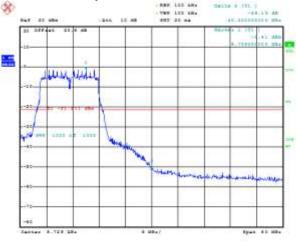


Figure 8-34: Band Edge Compliance
Primary, 802.11ac, Channel 140, MCS0
Mbps



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Figure 8-35: Band Edge Compliance
Primary, 802.11ac, Channel 149, MCS0
Mbps

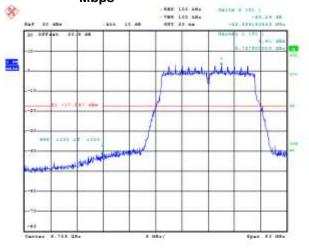
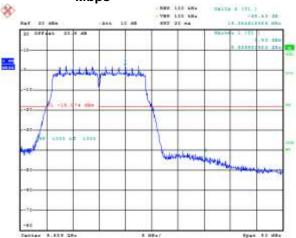


Figure 8-36: Band Edge Compliance
Primary, 802.11ac, Channel 165, MCS0
Mbps



Date: 21,800,2018 18,84:21

Date: 21,800,2018 19:27:28

Figure 8-37: Band Edge Compliance Secondary, 802.11ac, Channel 36, MCS0

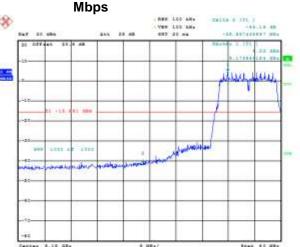
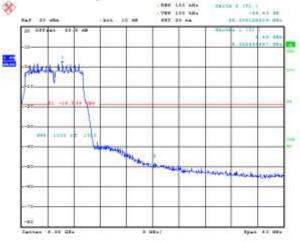


Figure 8-38: Band Edge Compliance Secondary, 802.11ac, Channel 64, MCS0 Mbps



Date: 8.8EF.2018 12:49:44

Date: 21,800,2018 19:29:28

EMC Test Report for the BlackBerry® smartphone Model RHK211LW (STV100-1)				
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Figure 8-39: Band Edge Compliance Secondary, 802.11ac, Channel 100, MCS0 Mbps

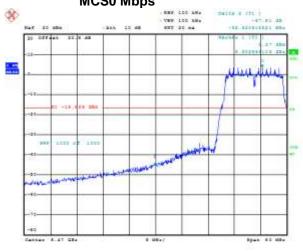
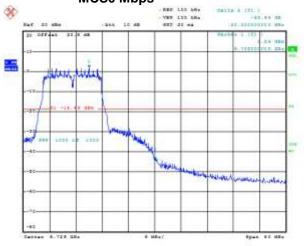


Figure 8-40: Band Edge Compliance Secondary, 802.11ac, Channel 140, MCS0 Mbps



Date: \$1,800,2018 19:40:57

Date: 21,800,2018 19:43:11

Same: 21,800,2018 19:62:18

Figure 8-41: Band Edge Compliance Secondary, 802.11ac, Channel 149, MCS0 Mbps

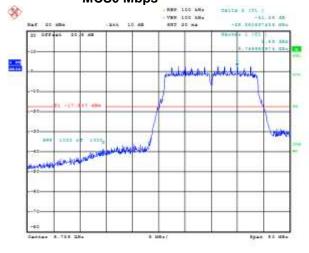
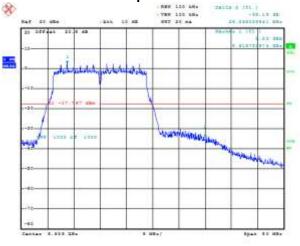


Figure 8-42: Band Edge Compliance Secondary, 802.11ac, Channel 165, MCS0 Mbps



Sene: 21,800,2018 19:82:88

<b>:</b> :: BlackBerry.	EMC Test Report for the BlackBerry® smartphone Model RHK211LW (STV100-1)  APPENDIX 8		
Test Report No.: RTS-6066-1509-01	Dates of Test: July 22 – September 8, and September 28, 2015	FCC ID: L6ARHK210LW IC: 2503A-RHK210LW	

Channels 36, 64, 100, 140, and 149 were measured at MCS0 mode each for bandwidth 40MHz, 802.11ac mode.

### 40MHz Bandwidth

### SISO Primary Antenna

Channel	Bandwidt(MHz)	Data Rate	Limit (dBc)	Measured Level (dBc)	Margin (dB)
36	40	MCS0	< -20	-43.33	-23.33
64	40	MCS0	< -20	-40.37	-20.37
100	40	MCS0	< -20	-35.49	-15.49
140	40	MCS0	< -20	-26.37	-6.37
149	40	MCS0	< -20	-40.12	-20.12

### SISO Secondary Antenna

Channel	Bandwidt(MHz)	Data Rate	Limit (dBc)	Measured Level (dBc)	Margin (dB)
36	40	MCS0	< -20	-35.18	-15.18
64	40	MCS0	< -20	-42.22	-22.22
100	40	MCS0	< -20	-39.60	-19.60
140	40	MCS0	< -20	-23.43	-3.43
149	40	MCS0	< -20	-38.35	-18.35

See figures 8-43 to 8-52 for the plots of the band edge compliance measurements for Channel 36, 64, 100, 140, and 149 at MCS0 Mbps each for 802.11ac mode.

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Figure 8-43: Band Edge Compliance
Primary, 802.11ac, Channel 36, MCS0

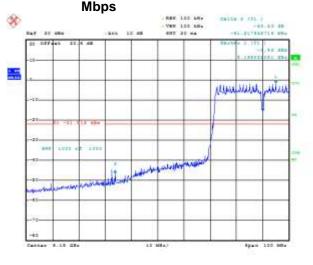
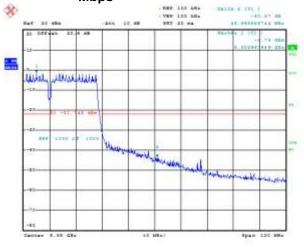


Figure 8-44: Band Edge Compliance
Primary, 802.11ac, Channel 64, MCS0
Mbps



Same: 24.800.2018 10:00:22

Case: 24.800.2018 09:88.81

Date: 24.800.2018 10:01:28

Figure 8-45: Band Edge Compliance
Primary, 802.11ac, Channel 100, MCS0

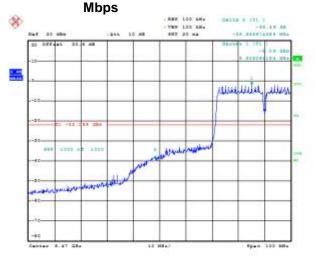
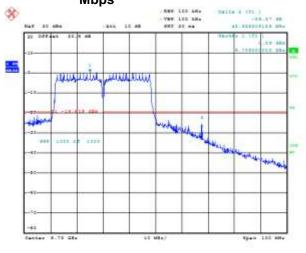


Figure 8-46: Band Edge Compliance
Primary, 802.11ac, Channel 140, MCS0
Mbps



Date: 24.800.2018 10:02:26

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Figure 8-47: Band Edge Compliance
Primary, 802.11ac, Channel 149, MCS0
Mbps

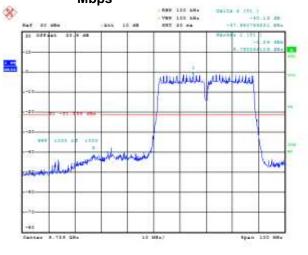
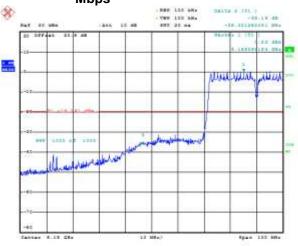
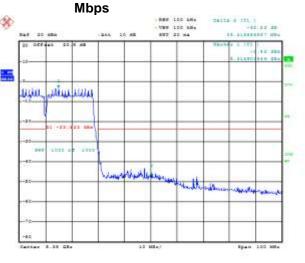


Figure 8-48: Band Edge Compliance Secondary, 802.11ac, Channel 36, MCS0 Mbps



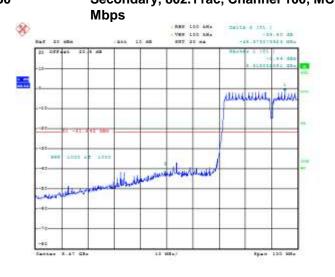
Date: 24.800.2018 10:03:28 Date: 24.800.2018 10:04:48

Figure 8-49: Band Edge Compliance Secondary, 802.11ac, Channel 64, MCS0



Date: 24.800.2018 10:09:44

Figure 8-50: Band Edge Compliance
Secondary, 802.11ac, Channel 100, MCS0



Date: 24.800.2018 10:06:68

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Figure 8-51: Band Edge Compliance Secondary, 802.11ac, Channel 140, MCS0 Mbps

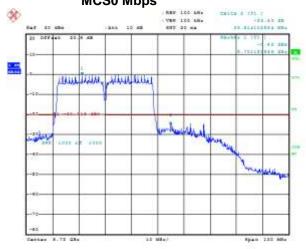
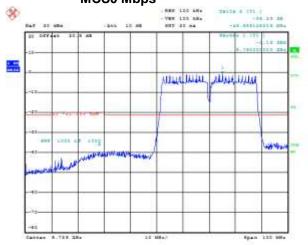


Figure 8-52: Band Edge Compliance Secondary, 802.11ac, Channel 149, MCS0 Mbps



<b>:</b> :: BlackBerry.	EMC Test Report for the BlackBerry® smartphone Model RHK211LW (STV100-1)  APPENDIX 8		
Test Report No.: RTS-6066-1509-01	Dates of Test: July 22 – September 8, and September 28, 2015	FCC ID: L6ARHK210LW IC: 2503A-RHK210LW	

Channels 36, 64, 100, 140, and 149 were measured at MCS0 Mbps each for bandwidth 80MHz, 802.11ac mode.

### **80MHz Bandwidth**

### SISO Primary Antenna

Channel	Bandwidt(MHz)	Data Rate	Limit (dBc)	Measured Level (dBc)	Margin (dB)
36	80	MCS0	< -20	-35.19	-15.19
64	80	MCS0	< -20	-36.34	-16.34
100	80	MCS0	< -20	-33.34	-13.34
140	80	MCS0	< -20	-26.24	-6.24
149	80	MCS0	< -20	-37.75	-17.75

### SISO Secondary Antenna

Channel	Bandwidt(MHz)	Data Rate	Limit (dBc)	Measured Level (dBc)	Margin (dB)
36	80	MCS0	< -20	-31.22	-11.22
64	80	MCS0	< -20	-36.10	-16.10
100	80	MCS0	< -20	-36.16	-16.16
140	80	MCS0	< -20	-27.95	-7.95
149	80	MCS0	< -20	-33.74	-13.74

See figures 8-53 to 8-62 for the plots of the band edge compliance measurements for Channel 36, 64, 100, 140, and 149 at MCS0 Mbps each for 802.11ac mode.

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Figure 8-53: Band Edge Compliance Primary, 802.11ac, Channel 36, MCS0 Mbps

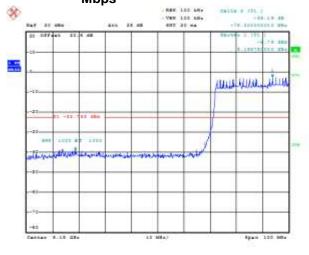
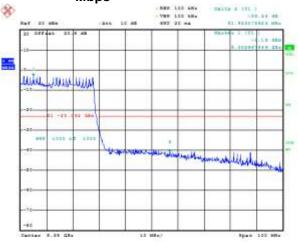


Figure 8-54: Band Edge Compliance Primary, 802.11ac, Channel 64, MCS0 Mbps



Case: 8.8EF.2018 83:37:40

Date: 24.800.2018 10:18:46

Date: 24.800.2018 10:18:40

Figure 8-55: Band Edge Compliance Primary, 802.11ac, Channel 100, MCS0 **Mbps** 

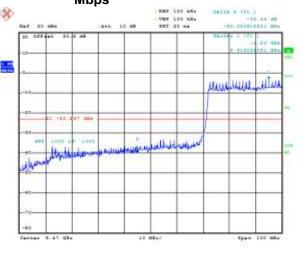
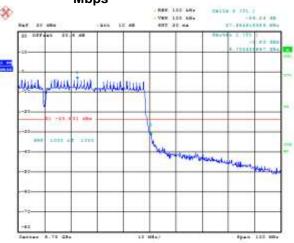


Figure 8-56: Band Edge Compliance Primary, 802.11ac, Channel 140, MCS0 **Mbps** 



Same: 24.800.2018 10:20:12

EMC Test Report for the BlackBerry® smartphone Model RHK211LW (STV100-1)				
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Test Report No.: RTS-6066-1509-01	Dates of Test: July 22 – September 8, and September 28, 2015	FCC ID: L6ARHK210LW IC: 2503A-RHK210LW		

Figure 8-57: Band Edge Compliance
Primary, 802.11ac, Channel 149, MCS0
Mbps

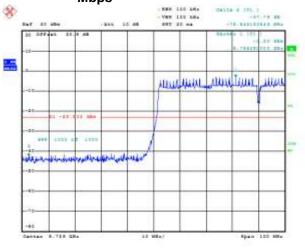
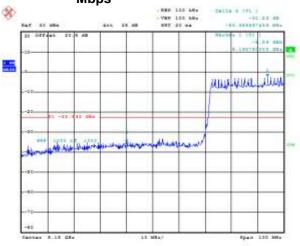


Figure 8-58: Band Edge Compliance Secondary, 802.11ac, Channel 36, MCS0 Mbps



Date: 24.800.2018 10:21:42

Case: 24.800.2018 10:28:12

Date: 8.889.2018 03:16:88

Figure 8-59: Band Edge Compliance Secondary, 802.11ac, Channel 64, MCS0 Mbps

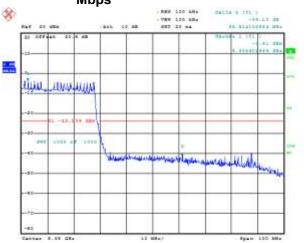
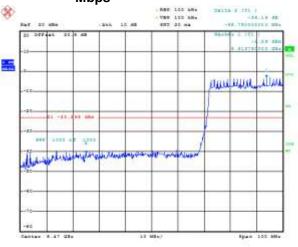


Figure 8-60: Band Edge Compliance Secondary, 802.11ac, Channel 100, MCS0 Mbps



Sene: 24.800.2018 10:26:16

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Figure 8-61: Band Edge Compliance Secondary, 802.11ac, Channel 140, MCS0 Mbps

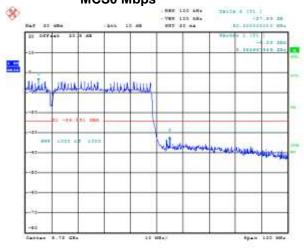
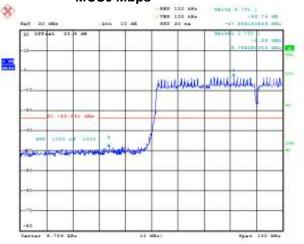


Figure 8-62: Band Edge Compliance Secondary, 802.11ac, Channel 149, MCS0 Mbps



Date: 24.A00.2018 10:27:22 Date: 24.A00.2018 10:29:28

<b>:</b> :: BlackBerry.	EMC Test Report for the BlackBerry® smartphone Model RHK211LW (STV100-1)  APPENDIX 8		
Test Report No.: RTS-6066-1509-01	Dates of Test: July 22 – September 8, and September 28, 2015  FCC ID: L6ARHK210LW IC: 2503A-RHK210LW		

# **Peak Power Spectral Density**

The EUT met the requirements of the peak power spectral density as per 47 CFR 15.407 and RSS-247. Channels 36, 64, 140 and 149 were measured at MCS0 Mbps each for 802.11ac mode, bandwidth 20MHz.

### **Bandwidth 20 MHz**

### SISO Primary Antenna

Channel	Data Rate	Limit (dBm/MHz)	Measured Level (dBm/MHz)	Margin (dB)
36	MCS0	< 11.00	2.89	-8.11
64	MCS0	< 11.00	3.25	-7.75
140	MCS0	< 11.00	2.52	-8.48
149	MCS0	< 33.00	2.94	-30.06

# SISO Secondary Antenna

Channel	Data Rate	Limit (dBm/MHz)	Measured Level (dBm/MHz)	Margin (dB)
36	MCS0	< 11.00	3.26	-7.74
64	MCS0	< 11.00	2.63	-8.37
140	MCS0	< 11.00	2.19	-8.81
149	MCS0	< 33.00	2.96	-30.04

### MIMO Primary Antenna

Channel	Data Rate	Limit (dBm/MHz)	Measured Level (dB)	Margin (dB)
36	MCS0	< 11.00	3.00	-8.00
64	MCS0	< 11.00	2.60	-8.40
140	MCS0	< 11.00	3.29	-7.71
149	MCS0	< 33.00	3.60	-29.40

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## MIMO Secondary Antenna

Channel	Data Rate	Limit (dBm/MHz)	Measured Level (dB)	Margin (dB)
36	MCS0	< 11.00	3.90	-7.10
64	MCS0	< 11.00	2.43	-8.57
140	MCS0	< 11.00	2.29	-8.71
149	MCS0	< 33.00	3.44	-29.56

# **MIMO Combined**

Channel	Data Rate	Limit (dBm/MHz)	Combined Peak (dBm/MHz)	Margin (dB)
36	MCS0	< 11.00	6.38	-4.62
64	MCS0	< 11.00	5.41	-5.59
140	MCS0	< 11.00	5.73	-5.27
149	MCS0	< 33.00	6.41	-26.59

See figures 8-63 to 8-78 for the plots of the peak power spectral density for Channel 36, 64, 140 and 149 at MCS0 Mbps each for 802.11ac mode, 20MHz bandwidth.

≅ BlackBerry.	EMC Test Report for the BlackBerry® smartphone Model RHK211LW (STV100-1)		
•	APPENDIX 8		
Test Report No.: RTS-6066-1509-01	Dates of Test: July 22 – September 8, and September 28, 2015	FCC ID: L6ARHK210LW IC: 2503A-RHK210LW	

Figure 8-63: Peak Power Spectral Density SISO Primary, 802.11ac, Channel 36, MCS0 Mbps



Figure 8-64: Peak Power Spectral Density
SISO Primary, 802.11ac, Channel 64,
MCS0 Mbps



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Figure 8-65: Peak Power Spectral Density SISO Primary, 802.11ac, Channel 140, MCS0 Mbps

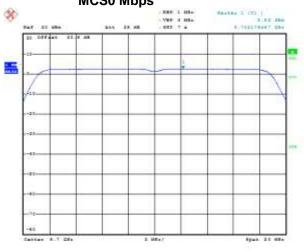
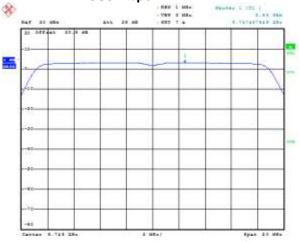


Figure 8-66: Peak Power Spectral Density SISO Primary, 802.11ac, Channel 149, MCS0 Mbps



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*## BlackBerry.	EMC Test Report for the BlackBerry® smartphone Model RHK211LW (STV100-1)  APPENDIX 8		
Test Report No.: RTS-6066-1509-01	Dates of Test: July 22 – September 8, and September 28, 2015  FCC ID: L6ARHK210LW IC: 2503A-RHK210LW		

Figure 8-67: Peak Power Spectral Density
SISO Secondary, 802.11ac, Channel 36,
MCS0 Mbps

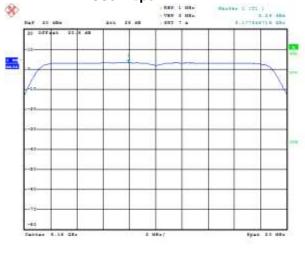


Figure 8-68: Peak Power Spectral Density
SISO Secondary, 802.11ac, Channel 64,
MCS0 Mbps



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Figure 8-69: Peak Power Spectral Density
SISO Secondary, 802.11ac, Channel 140,
MCS0 Mbps

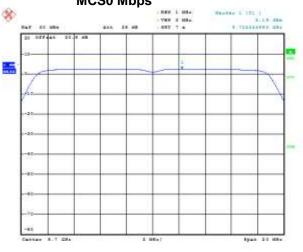
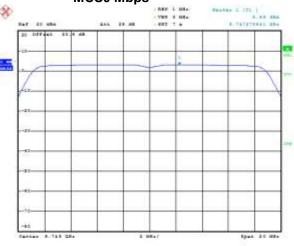


Figure 8-70: Peak Power Spectral Density
SISO Secondary, 802.11ac, Channel 149,
MCS0 Mbps



Cabe: 18.889.2018 10-90-88 Cabe: 18.889.2018 10-90-18

*## BlackBerry.	EMC Test Report for the BlackBerry® smartphone Model RHK211LW (STV100-1)  APPENDIX 8		
Test Report No.: RTS-6066-1509-01	Dates of Test: July 22 – September 8, and September 28, 2015  FCC ID: L6ARHK210LW IC: 2503A-RHK210LW		

Figure 8-71: Peak Power Spectral Density
MIMO Primary, 802.11ac, Channel 36,
MCS0 Mbps

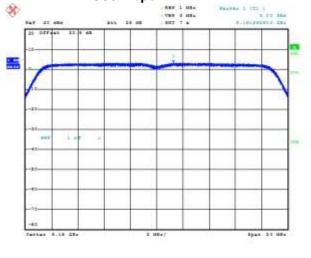
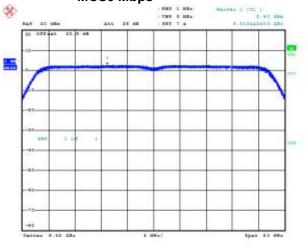


Figure 8-72: Peak Power Spectral Density
MIMO Primary, 802.11ac, Channel 64,
MCS0 Mbps



Date: 8.889.2018 52:38:82 Date: 20.800.2018 18:02:22

Figure 8-73: Peak Power Spectral Density
MIMO Primary, 802.11ac, Channel 140,
MCS0 Mbps

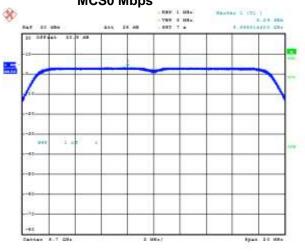
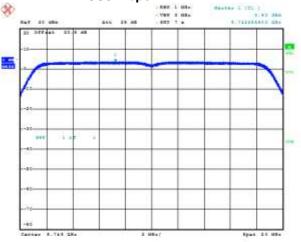


Figure 8-74: Peak Power Spectral Density
MIMO Primary, 802.11ac, Channel 149,
MCS0 Mbps



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*## BlackBerry.	EMC Test Report for the BlackBerry® smartphone Model RHK211LW (STV100-1)  APPENDIX 8		
Test Report No.: RTS-6066-1509-01	Dates of Test: July 22 – September 8, and September 28, 2015  FCC ID: L6ARHK210LW IC: 2503A-RHK210LW		

Figure 8-75: Peak Power Spectral Density
MIMO Secondary, 802.11ac, Channel 36,
MCS0 Mbps

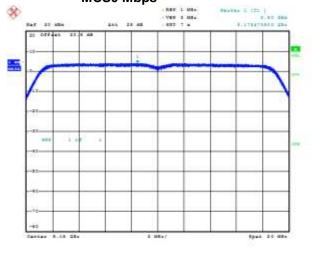
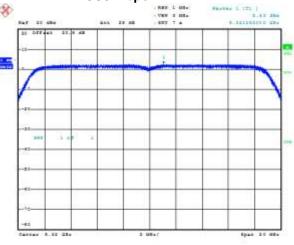


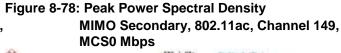
Figure 8-76: Peak Power Spectral Density
MIMO Secondary, 802.11ac, Channel 64,
MCS0 Mbps

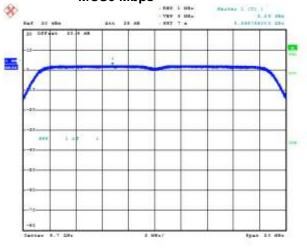


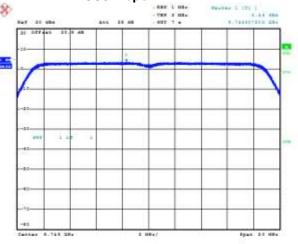
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Figure 8-77: Peak Power Spectral Density
MIMO Secondary, 802.11ac, Channel 140,
MCS0 Mbps







Date: 35 A00 2018 19:18:28

Date: 25.800.2018 19:21:27

<b>:</b> :: BlackBerry.	EMC Test Report for the BlackBerry® smartphone Model RHK211LW (STV100-1)  APPENDIX 8		
Test Report No.: RTS-6066-1509-01	Dates of Test: July 22 – September 8, and September 28, 2015	FCC ID: L6ARHK210LW IC: 2503A-RHK210LW	

Channels 38, 62, 142 and 151 were measured at MCS0 Mbps each for 802.11ac mode, bandwidth 40MHz.

## **Bandwidth 40MHz**

# SISO Primary Antenna

Channel	Data Rate	Limit (dBm/MHz)	Measured Level (dBm/MHz)	Margin (dB)
38	MCS0	< 11.00	0.19	-10.81
62	MCS0	< 11.00	1.10	-9.9
142	MCS0	< 11.00	0.06	-10.94
151	MCS0	< 33.00	0.65	-32.35

### SISO Secondary Antenna

Channel	Data Rate	Limit (dBm/MHz)	Measured Level (dBm/MHz)	Margin (dB)
38	MCS0	< 11.00	0.93	-10.07
62	MCS0	< 11.00	0.29	-10.71
142	MCS0	< 11.00	0.05	-10.95
151	MCS0	< 33.00	1.06	-31.94

# MIMO Primary Antenna

Channel	Data Rate	Limit (dBm/MHz)	Measured Level (dBm/MHz)	Margin (dB)
38	MCS0	< 11.00	-3.51	-14.51
62	MCS0	< 11.00	-3.35	-14.35
142	MCS0	< 11.00	-1.23	-12.23
151	MCS0	< 33.00	-0.74	-33.74

# MIMO Secondary Antenna

Channel	Data Rate	Limit (dBm/MHz)	Measured Level (dBm/MHz)	Margin (dB)
38	MCS0	< 11.00	-3.68	-14.68
62	MCS0	< 11.00	-3.39	-14.39
142	MCS0	< 11.00	0.58	-10.42
151	MCS0	< 33.00	-0.56	-33.56

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*## BlackBerry.	EMC Test Report for the BlackBerry® smartphone Model RHK211LW (STV100-1)  APPENDIX 8		
Test Report No.: RTS-6066-1509-01	Dates of Test: July 22 – September 8, and September 28, 2015	FCC ID: L6ARHK210LW IC: 2503A-RHK210LW	

## **MIMO Combined**

Channel	Data Rate	Limit (dBm/MHz)	Combined Peak (dBm/MHz)	Margin (dB)
38	MCS0	< 11.00	-0.69	-11.69
62	MCS0	< 11.00	-0.47	-11.47
142	MCS0	< 11.00	3.88	-7.12
151	MCS0	< 33.00	2.21	-30.79

See figures 8-79 to 8-94 for the plots of the peak power spectral density for channel 38, 62, 142 and 151 at MCS0 Mbps each for 802.11ac mode, 40MHz bandwidth.

BlackBerry.	EMC Test Report for the BlackBerry® smartphone Model RHK211LW (STV100-1)		
•	APPENDIX 8		
Test Report No.: RTS-6066-1509-01	Dates of Test: July 22 – September 8, and September 28, 2015	FCC ID: L6ARHK210LW IC: 2503A-RHK210LW	

Figure 8-79: Peak Power Spectral Density SISO Primary, 802.11ac, Channel 38, MCS0 Mbps

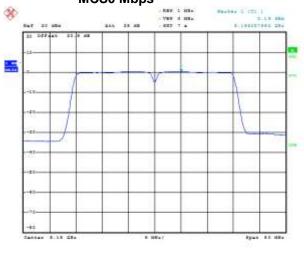
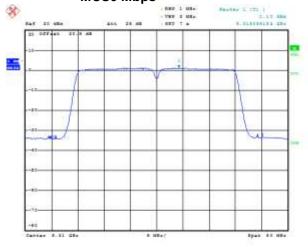


Figure 8-80: Peak Power Spectral Density SISO Primary, 802.11ac, Channel 62, MCS0 Mbps



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Figure 8-81: Peak Power Spectral Density SISO Primary, 802.11ac, Channel 142, MCS0 Mbps

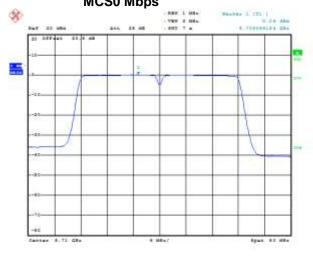
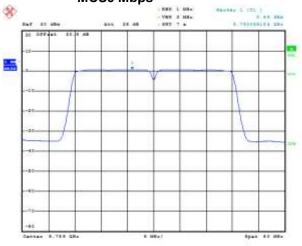


Figure 8-82: Peak Power Spectral Density SISO Primary, 802.11ac, Channel 151, MCS0 Mbps



Same: 18.889-2018 10-82-04 Date: 18.889-2018 10-82-14

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Figure 8-83: Peak Power Spectral Density
SISO Secondary, 802.11ac, Channel 38,
MCS0 Mbps

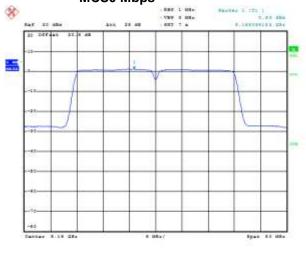
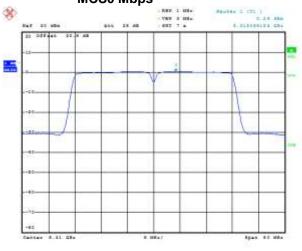


Figure 8-84: Peak Power Spectral Density
SISO Secondary, 802.11ac, Channel 62,
MCS0 Mbps



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Figure 8-85: Peak Power Spectral Density
SISO Secondary, 802.11ac, Channel 142,
MCS0 Mbps

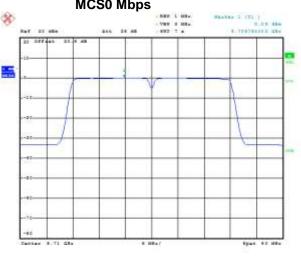
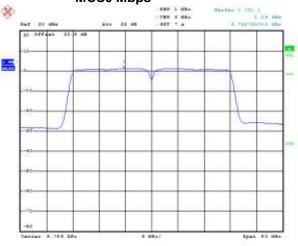


Figure 8-86: Peak Power Spectral Density
SISO Secondary, 802.11ac, Channel 151,
MCS0 Mbps



Date: 18.887-2018 10:83:22 Date: 18.887-2018 10:83:22

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Figure 8-87: Peak Power Spectral Density
MIMO Primary, 802.11ac, Channel 38,
MCS0 Mbps

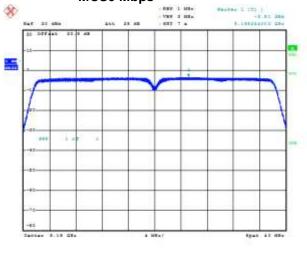
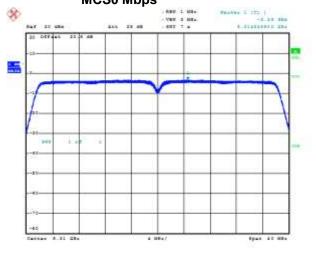


Figure 8-88: Peak Power Spectral Density
MIMO Primary, 802.11ac, Channel 62,
MCS0 Mbps



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Figure 8-89: Peak Power Spectral Density
MIMO Primary, 802.11ac, Channel 142,
MCS0 Mbps

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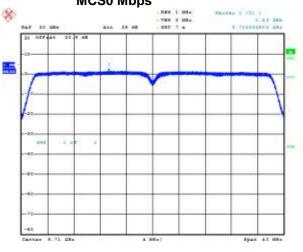
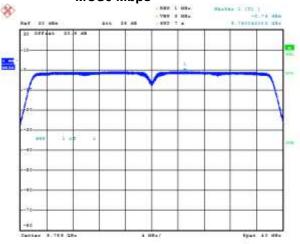


Figure 8-90: Peak Power Spectral Density
MIMO Primary, 802.11ac, Channel 151,
MCS0 Mbps



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Figure 8-91: Peak Power Spectral Density
MIMO Secondary, 802.11ac, Channel 38,
MCS0 Mbps

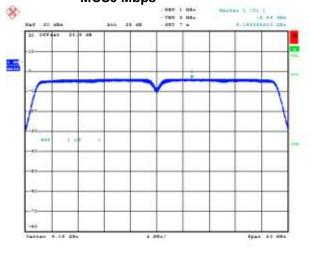
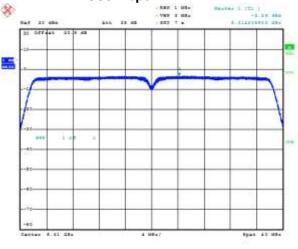


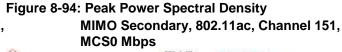
Figure 8-92: Peak Power Spectral Density
MIMO Secondary, 802.11ac, Channel 62,
MCS0 Mbps

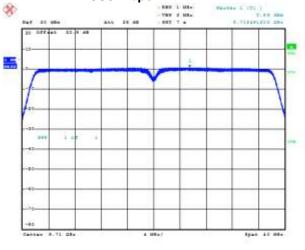


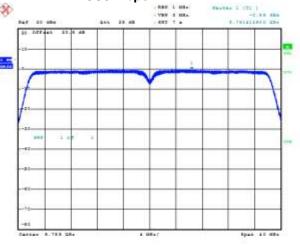
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Date: 35 800 3018 19:07:28

Figure 8-93: Peak Power Spectral Density
MIMO Secondary, 802.11ac, Channel 142,
MCS0 Mbps







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Channels 42, 58, 138 and 155 were measured at MCS0 Mbps each for 802.11ac mode, bandwidth 80MHz.

## **Bandwidth 80 MHz**

# SISO Primary Antenna

Channel	Data Rate	Limit (dBm/MHz)	Measured Level (dBm/MHz)	Margin (dB)
42	MCS0	< 11.00	-6.41	-17.41
58	MCS0	< 11.00	-5.78	-16.78
106	MCS0	< 11.00	-6.51	-17.51
138	MCS0	< 11.00	-6.12	-17.12
155	MCS0	< 33.00	-5.41	-38.41

# SISO Secondary Antenna

Channel	Data Rate	Limit (dBm/MHz)	Measured Level (dBm/MHz)	Margin (dB)
42	MCS0	< 11.00	-4.23	-15.23
58	MCS0	< 11.00	-5.02	-16.02
106	MCS0	< 11.00	-4.05	-15.05
138	MCS0	< 11.00	-4.86	-15.86
155	MCS0	< 33.00	-4.01	-37.01

# MIMO Primary Antenna

Channel	Data Rate	Limit (dBm/MHz)	Measured Level (dB/MHz)	Margin (dB)
42	MCS0	< 11.00	-2.80	-13.80
58	MCS0	< 11.00	-5.90	-16.90
106	MCS0	< 11.00	-5.00	-16.00
138	MCS0	< 11.00	-3.18	-14.18
155	MCS0	< 33.00	-3.73	-36.73

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# MIMO Secondary Antenna

Channel	Data Rate	Limit (dBm/MHz)	Measured Level (dB/MHz)	Margin (dB)
42	MCS0	< 11.00	-2.91	-13.91
58	MCS0	< 11.00	-6.05	-17.05
106	MCS0	< 11.00	-4.63	-15.63
138	MCS0	< 11.00	-3.92	-14.92
155	MCS0	< 33.00	-3.64	-36.64

# MIMO Combined

Channel	Data Rate	Limit (dBm/MHz)	Combined Peak (dBm/MHz)	Margin (dB)
42	MCS0	< 11.00	0.06	-10.94
58	MCS0	< 11.00	-3.13	-14.13
106	MCS0	< 11.00	-2.00	-13.00
138	MCS0	< 11.00	-0.98	-11.98
155	MCS0	< 33.00	-0.78	-33.78

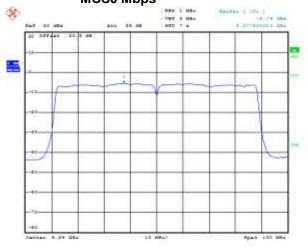
See figures 8-95 to 8-114 for the plots of the peak power spectral density for channel 42, 58, 138 and 155 at MCS0 Mbps each for 802.11ac mode, 80MHz bandwidth.

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Figure 8-95: Peak Power Spectral Density SISO Primary, 802.11ac, Channel 42, MCS0 Mbps



Figure 8-96: Peak Power Spectral Density
SISO Primary, 802.11ac, Channel 58,
MCS0 Mbps



Date: 18.80F.2018 10-94185

Figure 8-97: Peak Power Spectral Density SISO Primary, 802.11ac, Channel 106, MCS0 Mbps

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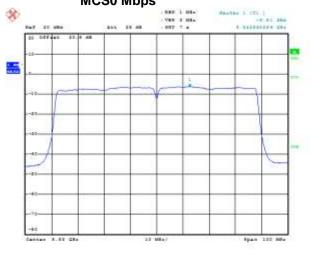
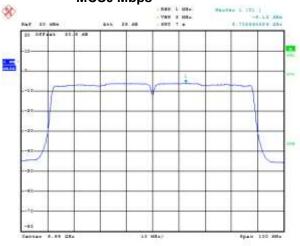


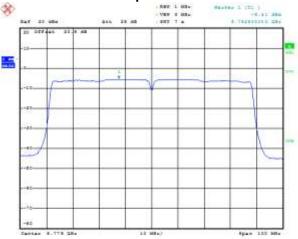
Figure 8-98: Peak Power Spectral Density SISO Primary, 802.11ac, Channel 138, MCS0 Mbps



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≅ BlackBerry.	EMC Test Report for the BlackBerry® smartphone Model RHK211LW (STV100-1)  APPENDIX 8	
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Test Report No.: RTS-6066-1509-01	Dates of Test: July 22 – September 8, and September 28, 2015	FCC ID: L6ARHK210LW IC: 2503A-RHK210LW

Figure 8-99: Peak Power Spectral Density SISO Primary, 802.11ac, Channel 155, MCS0 Mbps



Date: 18.869.2018 10:88:20

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Figure 8-100 Peak Power Spectral Density SISO Secondary, 802.11ac, Channel 42, MCS0 Mbps

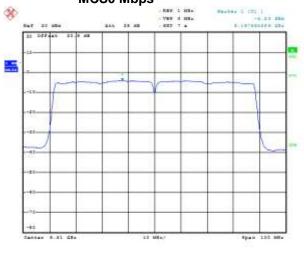
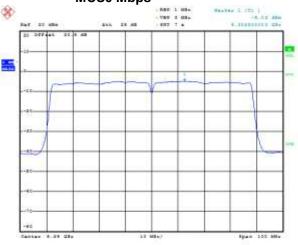


Figure 8-101: Peak Power Spectral Density
SISO Secondary, 802.11ac, Channel 58,
MCS0 Mbps

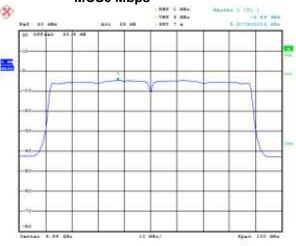


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Figure 8-102: Peak Power Spectral Density
SISO Secondary, 802.11ac, Channel 106,
MCS0 Mbps



Figure 8-103: Peak Power Spectral Density
SISO Secondary, 802.11ac, Channel 138,
MCS0 Mbps



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<b>Test Report No.:</b> RTS-6066-1509-01	Dates of Test: July 22 – September 8, and September 28, 2015	FCC ID: L6ARHK210LW IC: 2503A-RHK210LW

Figure 8-104: Peak Power Spectral Density SISO Secondary, 802.11ac, Channel 155, MCS0 Mbps



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≅ BlackBerry.	EMC Test Report for the BlackBerry® smartphone Model RHK211LW (STV100-1)		
•	APPENDIX 8		
Test Report No.: RTS-6066-1509-01	Dates of Test: July 22 – September 8, and September 28, 2015	FCC ID: L6ARHK210LW IC: 2503A-RHK210LW	

Figure 8-105: Peak Power Spectral Density
MIMO Primary, 802.11ac, Channel 42,
MCS0 Mbps

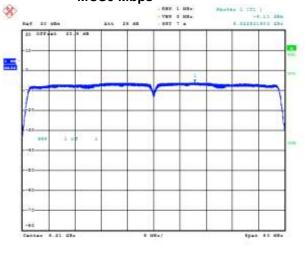
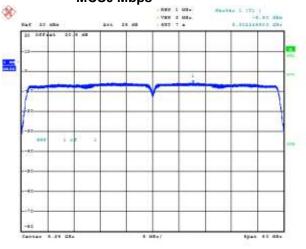


Figure 8-106: Peak Power Spectral Density
MIMO Primary, 802.11ac, Channel 58,
MCS0 Mbps



Date: 00.800.2018 19:19:09 Date: 00.800.2018 19:22:21

Figure 8-107: Peak Power Spectral Density
MIMO Primary, 802.11ac, Channel 106,
MCS0 Mbps

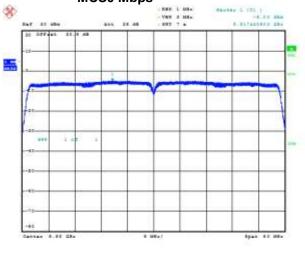
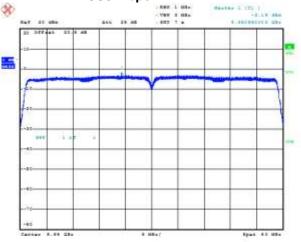


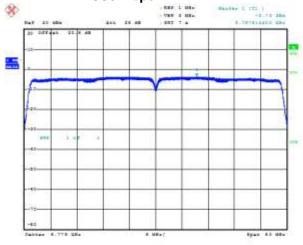
Figure 8-108: Peak Power Spectral Density
MIMO Primary, 802.11ac, Channel 138,
MCS0 Mbps



Case: 20 AUR 2018 19:29:10 Case: 20 AUR 2018 19:29:10

≅ BlackBerry.	EMC Test Report for the BlackBerry® smartphone Model RHK211LW (STV100-1)  APPENDIX 8	
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Figure 8-109: Peak Power Spectral Density
MIMO Primary, 802.11ac, Channel 155,
MCS0 Mbps



Date: 00.800.0018 19:01:67

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Figure 8-110: Peak Power Spectral Density
MIMO Secondary, 802.11ac, Channel 42,
MCS0 Mbps

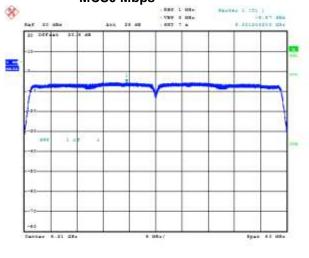
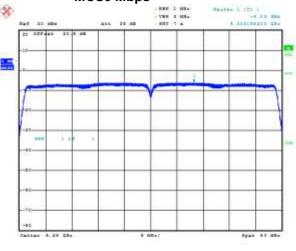


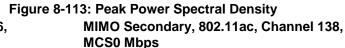
Figure 8-111: Peak Power Spectral Density
MIMO Secondary, 802.11ac, Channel 58,
MCS0 Mbps

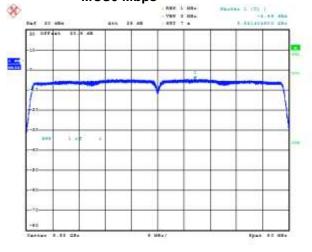


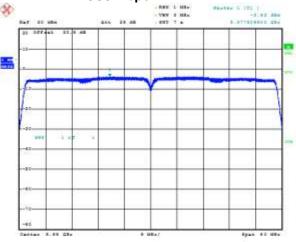
Date: 25,300,2018 19:58:07

Sene: 25.800.2018 19:29:18

Figure 8-112: Peak Power Spectral Density
MIMO Secondary, 802.11ac, Channel 106,
MCS0 Mbps





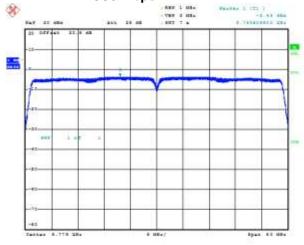


Date: 35 A03 2018 19-61-28

Date: 25 AUG 2018 19:84-24

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Figure 8-114: Peak Power Spectral Density
MIMO Secondary, 802.11ac, Channel 155,
MCS0 Mbps



Date: 25.802.2015 19:47:44

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### **Spurious RF Conducted Emissions**

The EUT met the requirements of the spurious RF conducted emissions as per 47 CFR 15.407 and RSS-247. Channels 36, 64, 140 and 149 were measured at MCS0 Mbps each for 802.11ac mode, 20MHz bandwidth. Peak power was measured using an Agilent power meter, model N1911A with model N1921A power sensor. A reference offset of 29.0 dB was applied to the spectrum analyzer reference level for the attenuators and coaxial cable loss in the test circuit.

## 20 MHz Bandwidth

#### Primary Antenna

Channel	Data Rate	Carrier Level (dBm)	Max. Measured Level (dBm)	Max. Measured Level from Carrier (dBc)	Limit (dBc)
36	MCS0	14.73	-46.54	-61.27	-20
64	MCS0	12.29	-44.72	-57.01	-20
140	MCS0	17.45	-46.42	-63.87	-20
149	MCS0	15.10	-45.25	-60.35	-20

#### Secondary Antenna

Channel	Data Rate	Carrier Level (dBm)	Max. Measured Level (dBm)	Max. Measured Level from Carrier (dBc)	Limit (dBc)
36	MCS0	15.91	-43.95	-59.86	-20
64	MCS0	14.04	-42.35	-56.39	-20
140	MCS0	13.86	-45.11	-58.97	-20
149	MCS0	14.62	-45.63	-60.25	-20

#### Sum

Channel	Data Rate	Carrier Level (dBm)	Combined Peak (dBm)	Max. Measured Level from Carrier (dBc)	Limit (dBc)
36	MCS0	18.43	-42.04	-60.48	-20
64	MCS0	16.76	-40.36	-57.13	-20
140	MCS0	17.14	-42.71	-59.85	-20
149	MCS0	18.00	-42.43	-60.42	-20

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See figures 8-115 to 8-130 for the plots of the spurious RF conducted emissions for Channel 36, 64, 140 and 149 at MCS0 Mbps each for 802.11ac mode.

802.11ac RF Conducted Emission Test Results cont'd

Figure 8-115: Spurious RF Conducted Emissions Primary, 802.11ac, Channel 36, MCS0 Mbps

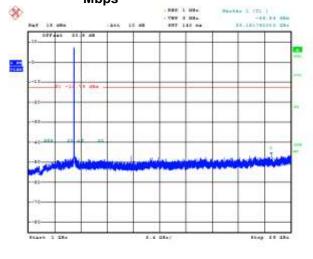
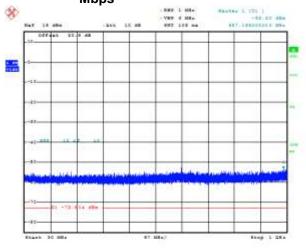


Figure 8-116: Spurious RF Conducted Emissions Primary, 802.11ac, Channel 36, MCS0 Mbps



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Date: 22.705.2018 12:03:48

Figure 8-117: Spurious RF Conducted Emissions Primary, 802.11ac, Channel 64, MCS0 Mbps

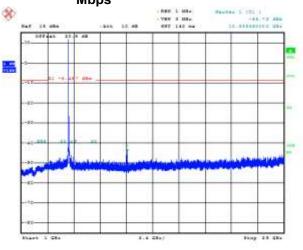
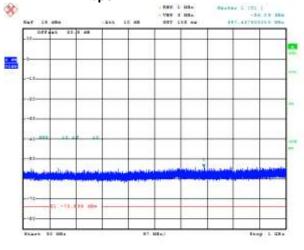


Figure 8-118: Spurious RF Conducted Emissions Primary, 802.11ac, Channel 64, MCS0 Mbps



Date: 22.255.3018 11:97:08

Date: 22.592.3018 12:01:88

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Figure 8-119: Spurious RF Conducted Emissions
Primary, 802.11ac, Channel 140, MCS0
Mbps

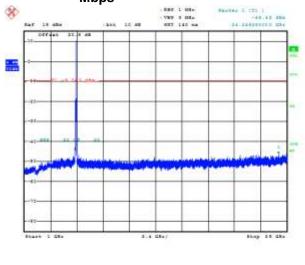
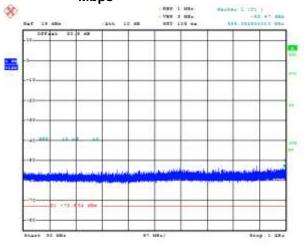


Figure 8-120: Spurious RF Conducted Emissions Primary, 802.11ac, Channel 140, MCS0 Mbps



Date: 22.701.3018 12:02:08

Figure 8-121: Spurious RF Conducted Emissions
Primary, 802.11ac, Channel 149, MCS0

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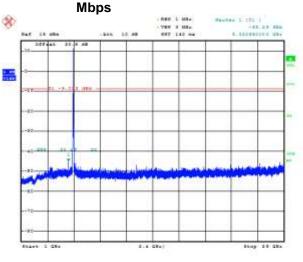
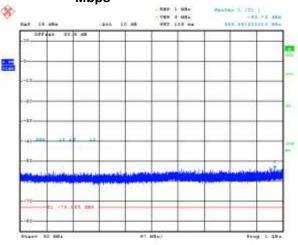


Figure 8-122: Spurious RF Conducted Emissions Primary, 802.11ac, Channel 149, MCS0 Mbps



Same: 22 PML 2018 12:02:19

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•	APPENDIX 8			
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Figure 8-123: Spurious RF Conducted Emissions Secondary, 802.11ac, Channel 36, MCS0 Mbps

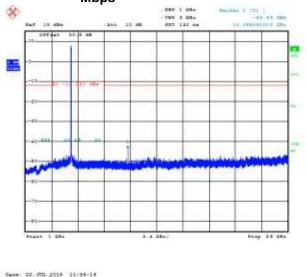
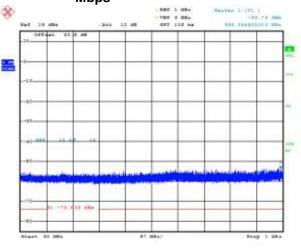
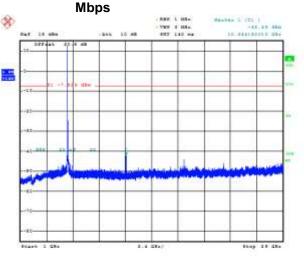


Figure 8-124: Spurious RF Conducted Emissions Secondary, 802.11ac, Channel 36, MCS0 Mbps



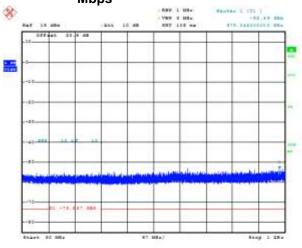
Game: 22,592,2018 12:02:28

Figure 8-125: Spurious RF Conducted Emissions Secondary, 802.11ac, Channel 64, MCS0



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Figure 8-126: Spurious RF Conducted Emissions Secondary, 802.11ac, Channel 64, MCS0 Mbps



Same: 22,201,3018 12:02:44

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Figure 8-127: Spurious RF Conducted Emissions F Secondary, 802.11ac, Channel 140, MCS0

Figure 8-128: Spurious RF Conducted Emissions
Secondary, 802.11ac, Channel 140, MCS0
Mbps

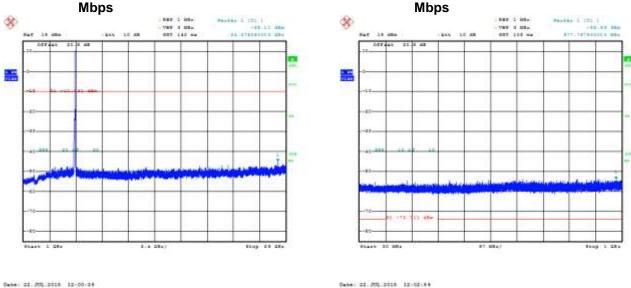
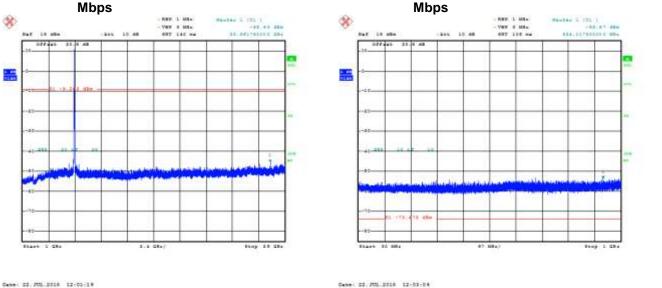


Figure 8-129: Spurious RF Conducted Emissions Secondary, 802.11ac, Channel 149, MCS0

Figure 8-130: Spurious RF Conducted Emissions
Secondary, 802.11ac, Channel 149, MCS0



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Channels 36, 64, 140 and 149 were measured at MCS0 Mbps each for 802.11ac mode, 40MHz bandwidth. Peak power was measured using an Agilent power meter, model N1911A with model N1921A power sensor. A reference offset of 29.0 dB was applied to the spectrum analyzer reference level for the attenuators and coaxial cable loss in the test circuit.

#### 40 MHz Bandwidth

#### **Primary Antenna**

			r mmany rancomia		
Channel	Data Rate	Carrier Level (dBm)	Max. Measured Level (dBm)	Max. Measured Level from Carrier (dBc)	Limit (dBc)
36	MCS0	12.18	-44.45	-56.63	-20
64	MCS0	10.81	-45.43	-56.24	-20
140	MCS0	14.68	-46.18	-60.86	-20
149	MCS0	13.24	-45.22	-58.46	-20

#### Secondary Antenna

Channel	Data Rate	Carrier Level (dBm)	Max. Measured Level (dBm)	Max. Measured Level from Carrier (dBc)	Limit (dBc)
36	MCS0	14.65	-42.28	-56.93	-20
64	MCS0	10.81	-44.25	-55.06	-20
140	MCS0	14.21	-45.91	-60.12	-20
149	MCS0	13.11	-46.64	-59.75	-20

### <u>Sum</u>

Channel	Data Rate	Carrier Level (dBm)	Combined Peak (dBm)	Max. Measured Level from Carrier (dBc)	Limit (dBc)
36	MCS0	14.20	-40.22	-54.42	-20
64	MCS0	13.83	-41.79	-55.62	-20
140	MCS0	17.75	-43.03	-60.78	-20
149	MCS0	16.29	-42.86	-59.16	-20

See figures 8-131 to 8-146 for the plots of the spurious RF conducted emissions for Channel 36, 64, 140 and 149 at MCS0 Mbps each for 802.11ac mode, bandwidth 40MHz.

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Figure 8-131: Spurious RF Conducted Emissions Primary, 802.11ac, Channel 36, MCS0 Mbps

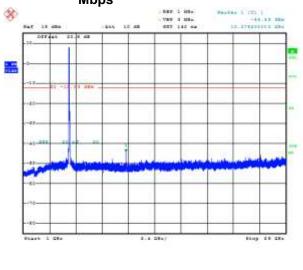
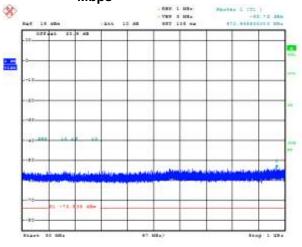


Figure 8-132: Spurious RF Conducted Emissions Primary, 802.11ac, Channel 36, MCS0 Mbps



Date: 22.501.3018 12:88:23

Figure 8-133: Spurious RF Conducted Emissions Primary, 802.11ac, Channel 64, MCS0

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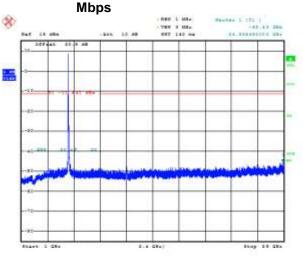
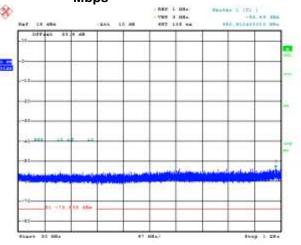


Figure 8-134: Spurious RF Conducted Emissions Primary, 802.11ac, Channel 64, MCS0 Mbps



Date: 22,705,3018 12:88:12

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Figure 8-135: Spurious RF Conducted Emissions Primary, 802.11ac, Channel 140, MCS0 Mbps

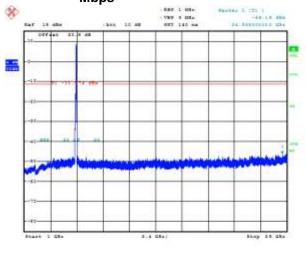
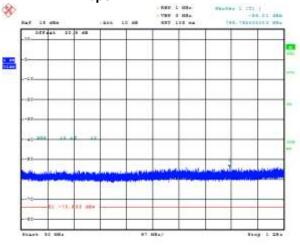


Figure 8-136: Spurious RF Conducted Emissions Primary, 802.11ac, Channel 140, MCS0 **Mbps** 



Date: 22 PML 2018 12:88:81

Figure 8-137: Spurious RF Conducted Emissions Primary, 802.11ac, Channel 149, MCS0

Date: 22. PUL 2018 12-84-14

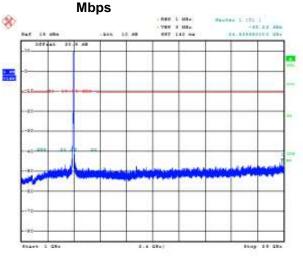
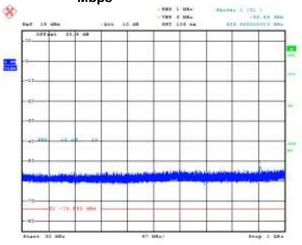


Figure 8-138: Spurious RF Conducted Emissions Primary, 802.11ac, Channel 149, MCS0 **Mbps** 

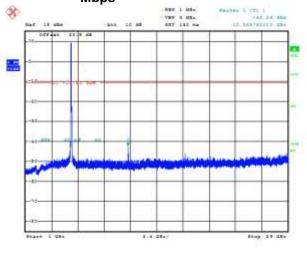


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Same: 22 PUL 2016 12-84:44

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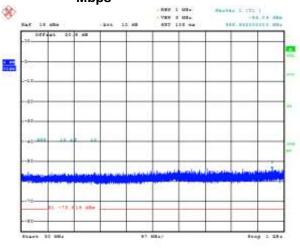
Figure 8-139: Spurious RF Conducted Emissions Secondary, 802.11ac, Channel 36, MCS0 Mbps



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Figure 8-140: Spurious RF Conducted Emissions Secondary, 802.11ac, Channel 36, MCS0 Mbps



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Figure 8-141: Spurious RF Conducted Emissions Secondary, 802.11ac, Channel 60, MCS0

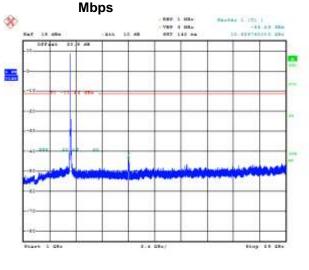
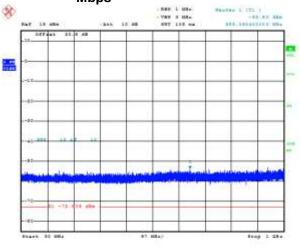


Figure 8-142: Spurious RF Conducted Emissions Secondary, 802.11ac, Channel 60, MCS0 Mbps



Same: 22.200.2018 12:00:18

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Figure 8-143: Spurious RF Conducted Emissions F Secondary, 802.11ac, Channel 140, MCS0

Figure 8-144: Spurious RF Conducted Emissions
Secondary, 802.11ac, Channel 140, MCS0
Mbps

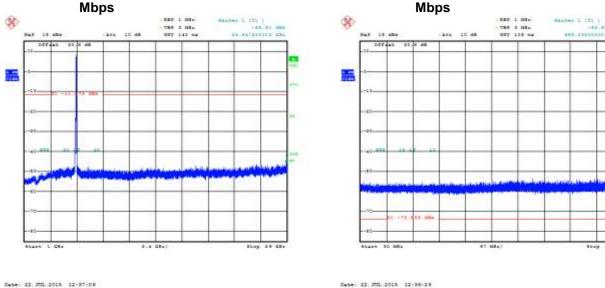
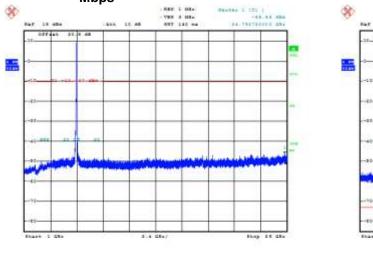
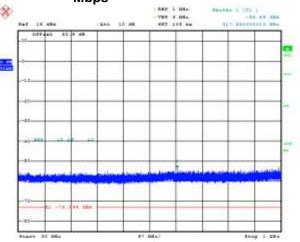


Figure 8-145: Spurious RF Conducted Emissions Figure 8-146: Spurious RF Conducted Emissions Secondary, 802.11ac, Channel 149, MCS0 Mbps

Figure 8-146: Spurious RF Conducted Emissions Secondary, 802.11ac, Channel 149, MCS0 Mbps





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Test Report No.: RTS-6066-1509-01	Dates of Test: July 22 – September 8, and September 28, 2015	FCC ID: L6ARHK210LW IC: 2503A-RHK210LW

Channels 36, 64, 140 and 149 were measured at MCS0 Mbps each for 802.11ac mode, 80MHz bandwidth. Peak power was measured using an Agilent power meter, model N1911A with model N1921A power sensor. A reference offset of 29.0 dB was applied to the spectrum analyzer reference level for the attenuators and coaxial cable loss in the test circuit.

## 80 MHz Bandwidth Primary Antenna

Channel	Data Rate	Carrier Level (dBm)	Max. Measured Level (dBm)	Max. Measured Level from Carrier (dBc)	Limit (dBc)
36	MCS0	13.14	-45.79	-58.93	-20
64	MCS0	13.07	-46.23	-59.30	-20
140	MCS0	12.63	-46.57	-59.20	-20
149	MCS0	12.94	-46.23	-59.17	-20

## Secondary Antenna

Channel	Data Rate	Carrier Level (dBm)	Max. Measured Level (dBm)	Max. Measured Level from Carrier (dBc)	Limit (dBc)
36	MCS0	13.69	-45.97	-59.66	-20
64	MCS0	12.30	-45.57	-57.87	-20
140	MCS0	11.32	-46.26	-57.58	-20
149	MCS0	12.19	-46.37	-58.56	-20

#### Sum

Channel	Data Rate	Carrier Level (dBm)	Combined Peak (dBm)	Max. Measured Level from Carrier (dBc)	Limit (dBc)
36	MCS0	16.92	-42.87	-59.78	-20
64	MCS0	13.76	-42.88	-56.63	-20
140	MCS0	15.68	-43.40	-59.08	-20
149	MCS0	15.64	-43.29	-58.93	-20

See figures 8-147 to 8-162 for the plots of the spurious RF conducted emissions for Channel 36, 64, 140 and 149 at MCS0 Mbps each for 802.11ac mode, bandwidth 80MHz.

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Figure 8-147: Spurious RF Conducted Emissions Primary, 802.11ac, Channel 36, MCS0 Mbps

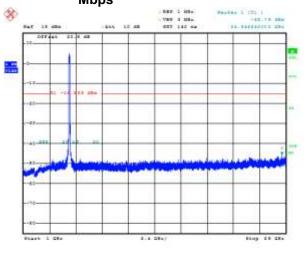
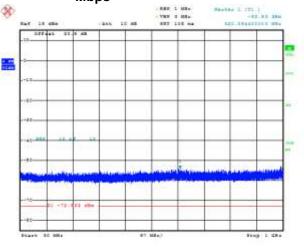


Figure 8-148: Spurious RF Conducted Emissions Primary, 802.11ac, Channel 36, MCS0 **Mbps** 



Same: 22 PML 2018 18-18-12

Figure 8-149: Spurious RF Conducted Emissions Primary, 802.11ac, Channel 64, MCS0

Same: 22 JUL 2018 18:09:31

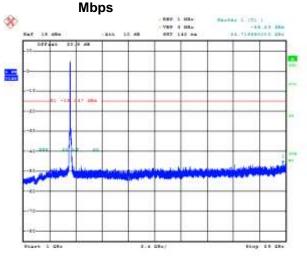
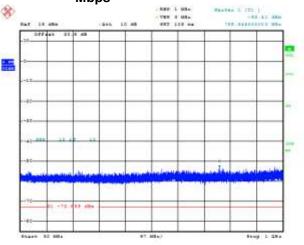


Figure 8-150: Spurious RF Conducted Emissions Primary, 802.11ac, Channel 64, MCS0 **Mbps** 



Date: 22, 201, 2018 18-18-62

Same: 22 PML 2018 18:10:20

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Figure 8-151: Spurious RF Conducted Emissions Primary, 802.11ac, Channel 140, MCS0 Mbps

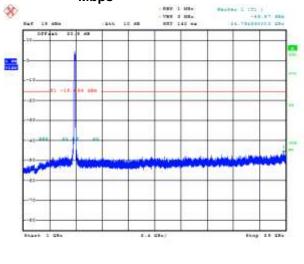
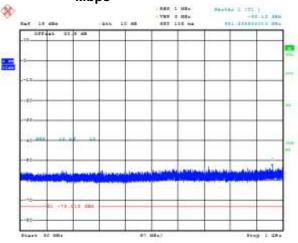


Figure 8-152: Spurious RF Conducted Emissions
Primary, 802.11ac, Channel 140, MCS0
Mbps



Date: 22.700.2018 18-18-81

Figure 8-153 Spurious RF Conducted Emissions
Primary, 802.11ac, Channel 149, MCS0

Sene: 22 PML 2018 18:11:01

Sene: 22 PML 2018 18:11:41

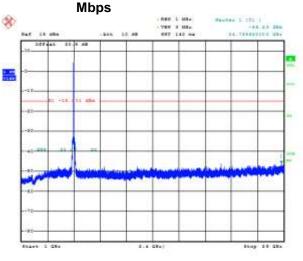
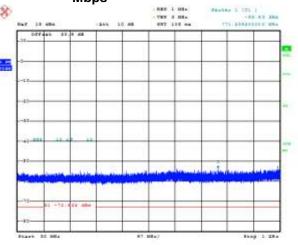


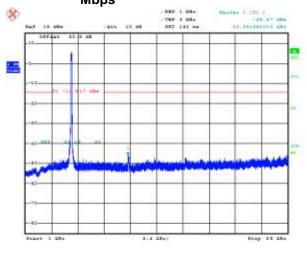
Figure 8-154: Spurious RF Conducted Emissions
Primary, 802.11ac, Channel 149, MCS0
Mbps



Date: 22, 201, 2018 18-18-00

<b>≅</b> BlackBerry.	EMC Test Report for the BlackBerry® smartphone Model RHK211LW (STV100-1)	
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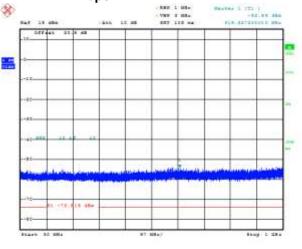
Figure 8-155: Spurious RF Conducted Emissions Secondary, 802.11ac, Channel 36, MCS0 Mbps



Sene: 22 PML 2018 18:12:28

Same: 22 PML 2018 18-18-18

Figure 8-156: Spurious RF Conducted Emissions Secondary, 802.11ac, Channel 36, MCS0 Mbps



Same: 22.705.2018 18-18-17

Figure 8-157: Spurious RF Conducted Emissions Secondary, 802.11ac, Channel 64, MCS0

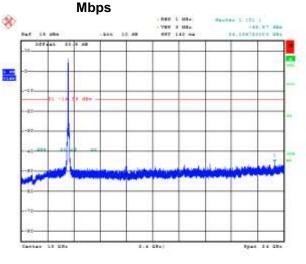
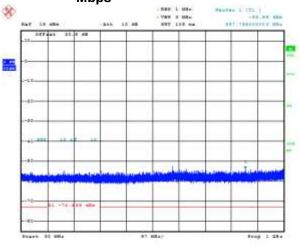


Figure 8-158: Spurious RF Conducted Emissions Secondary, 802.11ac, Channel 64, MCS0 Mbps



Date: 22 JUL 2018 15-16-26

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Figure 8-159: Spurious RF Conducted Emissions F Secondary, 802.11ac, Channel 140, MCS0

Figure 8-160: Spurious RF Conducted Emissions
Secondary, 802.11ac, Channel 140, MCS0
Mbps

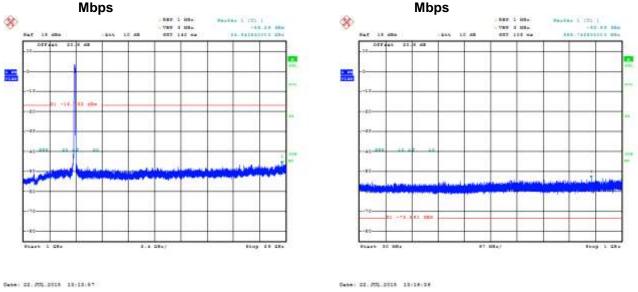
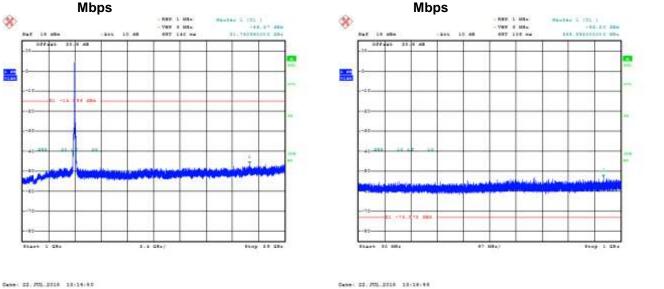


Figure 8-161: Spurious RF Conducted Emissions Secondary, 802.11ac, Channel 149, MCS0

Figure 8-162: Spurious RF Conducted Emissions
Secondary, 802.11ac, Channel 149, MCS0



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APPENDIX 9 – NEAR FIELD COMMUNICATIONS TEST DATA/PLOTS

<b>::</b> : BlackBerry.	EMC Test Report for the BlackBerry <sup>®</sup> smartphone Model RHK211LW (STV100-1)		
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<b>Test Report No.:</b> RTS-6066-1509-01	Dates of Test: July 22 – September 8, and September 28, 2015	FCC ID: L6ARHK210LW IC: 2503A-RHK210LW	

### Near Field Communications (NFC) Test Results

## **Radiated Emissions**

Date of Test: August 24, 2015

Measurements were performed by Savtej Sandhu.

The environmental test conditions were: Temperature: 26.2 °C

Relative Humidity: 31.5 %

The test distance was 3.0 meters with a EUT height of 1.5 meters, and sweep frequency of 9 kHz to 1 GHz.

The BlackBerry® smartphone was in vertical position.

The frequency sweep measurements were performed in Near Field Communications Tx mode at 13.56 MHz

Frequency	Reading (QP)	J		Limit	Test Margin
(MHz)	(dBµV/m)	(dB)	(dBµV/m)	(dBµV/m)	(dB)
13.57	56.00	16.67	56	124.00	-68

All other emissions had a test margin of greater than 25.0 dB

*** BlackBerr	RHK211LW (STV100-1)	EMC Test Report for the BlackBerry® smartphone Model RHK211LW (STV100-1)  APPENDIX 9		
Test Report No.: RTS-6066-1509-0	Dates of Test: July 22 – September 8, and September 28, 2015	FCC ID: L6ARHK210LW IC: 2503A-RHK210LW		

## Near Field Communications (NFC) Test Results

### Occupied Bandwidth

Date of test: September 2, 2015

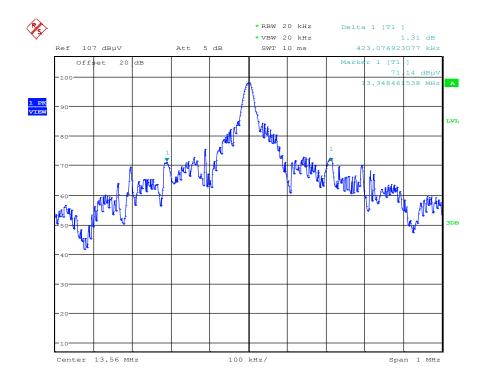
The measurements were performed by Kevin Guo.

The environmental test conditions were: Temperature: 25.2 °C

Relative Humidity: 41.5 %

Operation mode (TX ON)	Occupied Bandwidth (kHz)	
NFC, modulated	491.99	

Figure 9-1: Occupied Bandwidth, NFC TX Frequency = 13.56 MHz



Date: 13.MAY.2015 12:21:02

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Test Report No.: RTS-6066-1509-01	Dates of Test: July 22 – September 8, and September 28, 2015	FCC ID: L6ARHK210LW IC: 2503A-RHK210LW			

## Near Field Communications (NFC) Test Results cont'd

## Frequency Stability

The measurements were performed by Kevin Guo.

The environmental test conditions were: Temperature: 25.2 °C

Relative Humidity: 41.5 %

Test Temperature (Celsius)	Nominal Freq. (MHz)	Measured Freq. (MHz)	Input Voltage (Volts)	Max Freq Error (Hz)	% Deviation (Limit .01%)	PPM
-20	13.56	13.560005	3.6	0.000005	50	0.00004
-20	13.56	13.559993	3.8	-0.000007	-70	-0.00005
-20	13.56	13.560003	4.35	0.000003	30	0.00002
-10	13.56	13.559950	3.6	-0.000050	-499	-0.00037
-10	13.56	13.559974	3.8	-0.000027	-265	-0.00020
-10	13.56	13.559969	4.35	-0.000031	-310	-0.00023
0	13.56	13.559961	3.6	-0.000039	-390	-0.00029
0	13.56	13.559989	3.8	-0.000011	-110	-0.00008
0	13.56	13.560030	4.35	0.000030	300	0.00022
10	13.56	13.559974	3.6	-0.000026	-257	-0.00019
10	13.56	13.559977	3.8	-0.000023	-231	-0.00017
10	13.56	13.559973	4.35	-0.000027	-274	-0.00020
20	13.56	13.560022	3.6	0.000022	220	0.00016
20	13.56	13.560022	3.8	0.000022	220	0.00016
20	13.56	13.560008	4.35	0.000008	80	0.00006

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# Near Field Communications (NFC) Test Results cont'd

# Frequency Stability cont'd

Test Temperature (Celsius)	Nominal Freq. (MHz)	Measured Freq. (MHz)	Input Voltage (Volts)	Max Freq Error (Hz)	% Deviation (Limit .01%)	PPM
30	13.56	13.560000	3.6	0.000000	0	0.00000
30	13.56	13.560014	3.8	0.000014	140	0.00010
30	13.56	13.559949	4.35	-0.000051	-510	-0.00038
40	13.56	13.559963	3.6	-0.000037	-367	-0.00027
40	13.56	13.559965	3.8	-0.000035	-351	-0.00026
40	13.56	13.559921	4.35	-0.000079	-790	-0.00058
50	13.56	13.559952	3.6	-0.000048	-478	-0.00035
50	13.56	13.559953	3.8	-0.000047	-473	-0.00035
50	13.56	13.559967	4.35	-0.000033	-326	-0.00024
60	13.56	13.559954	3.6	-0.000046	-465	-0.00034
60	13.56	13.559960	3.8	-0.000040	-404	-0.00030
60	13.56	13.559963	4.35	-0.000037	-371	-0.00027