

	EMC Test Report for the BlackBerry® smartphone Model RHK211LW (STV100-1) , RHL211LW (STV100-3) APPENDIX 6	
Test Report No.: RTS-6066-1509-01A	Dates of Test: July 22 – September 8, and September 28, 2015	FCC ID: L6ARHK210LW, L6ARHL210LW IC: 2503A-RHK210LW, 2503A-RHL210LW

802.11b/g/n RF Conducted Emission Test Results cont'd

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

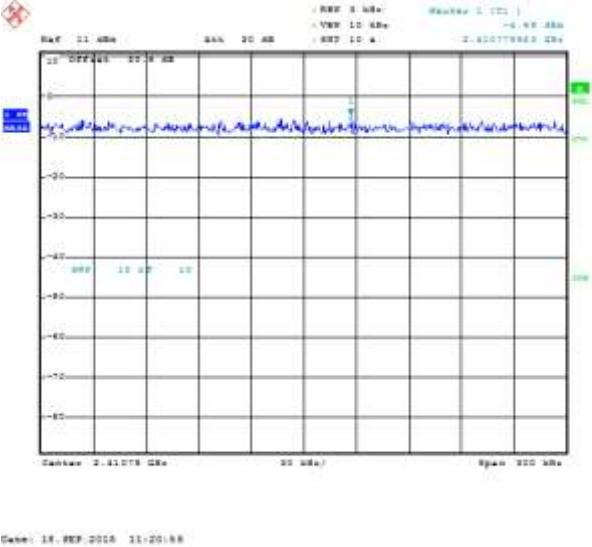
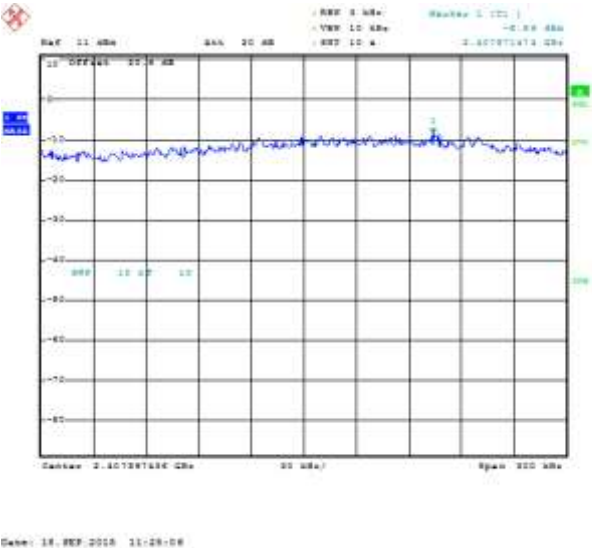


Figure 6-35: Peak Power Spectral Density
SISO Secondary, 802.11b, Channel 6, 1
Mbps



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



	EMC Test Report for the BlackBerry® smartphone Model RHK211LW (STV100-1) , RHL211LW (STV100-3) APPENDIX 6	
Test Report No.: RTS-6066-1509-01A	Dates of Test: July 22 – September 8, and September 28, 2015	FCC ID: L6ARHK210LW, L6ARHL210LW IC: 2503A-RHK210LW, 2503A-RHL210LW

802.11b/g/n RF Conducted Emission Test Results cont'd

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

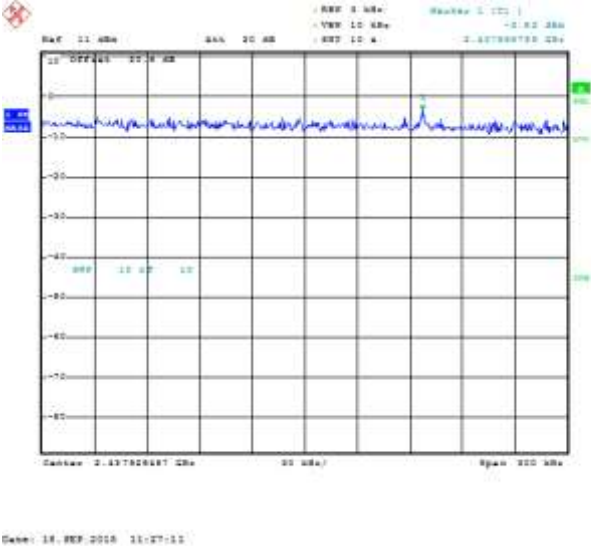


Figure 6-38: Peak Power Spectral Density
SISO Secondary, 802.11g, Channel 6, 6
Mbps

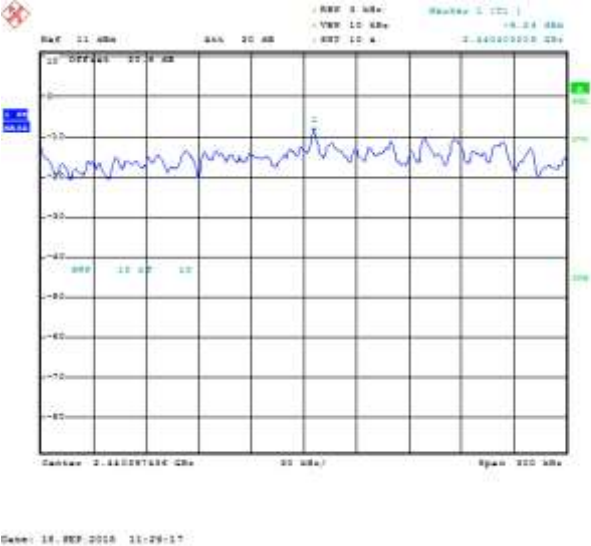
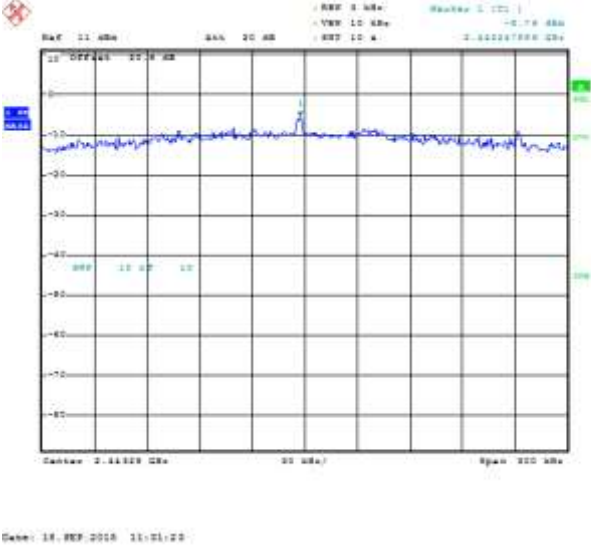


Figure 6-39: Peak Power Spectral Density
SISO Secondary, 802.11g, Channel 11, 6
Mbps



	EMC Test Report for the BlackBerry® smartphone Model RHK211LW (STV100-1) , RHL211LW (STV100-3) APPENDIX 6	
Test Report No.: RTS-6066-1509-01A	Dates of Test: July 22 – September 8, and September 28, 2015	FCC ID: L6ARHK210LW, L6ARHL210LW IC: 2503A-RHK210LW, 2503A-RHL210LW

802.11b/g/n RF Conducted Emission Test Results cont'd

Figure 6-40: Peak Power Spectral Density
SISO Secondary, 802.11n, Channel 1,
MCS 0

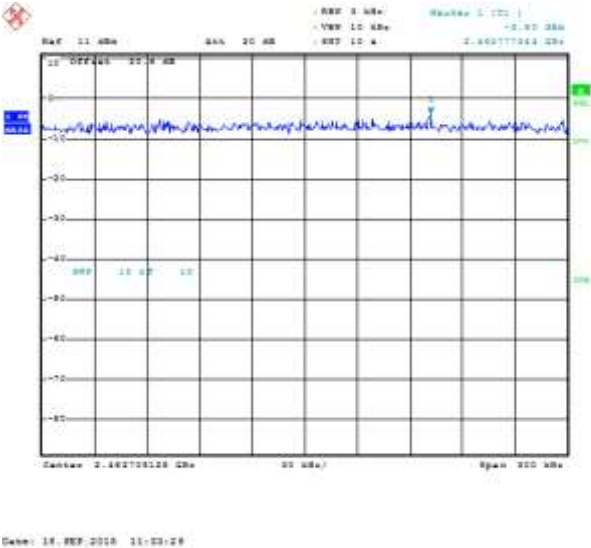


Figure 6-41: Peak Power Spectral Density
SISO Secondary, 802.11n, Channel 6,
MCS 0

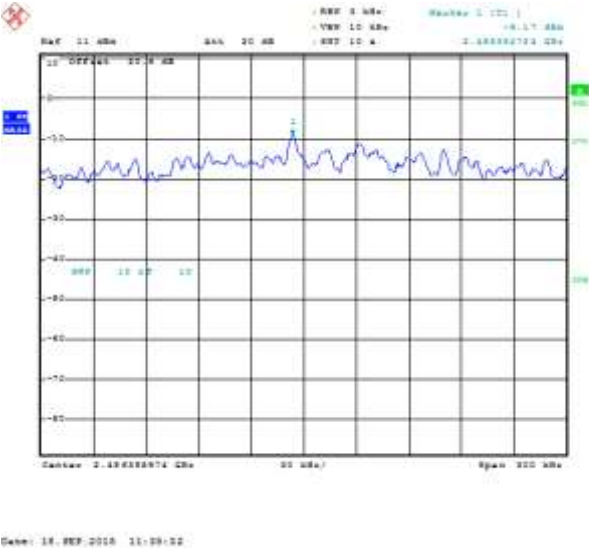
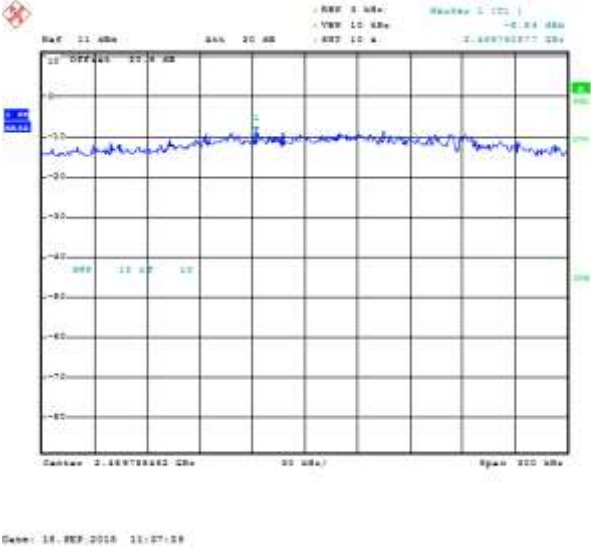


Figure 6-42: Peak Power Spectral Density
SISO Secondary, 802.11n, Channel 11,
MCS 0



	EMC Test Report for the BlackBerry® smartphone Model RHK211LW (STV100-1) , RHL211LW (STV100-3) APPENDIX 6	
Test Report No.: RTS-6066-1509-01A	Dates of Test: July 22 – September 8, and September 28, 2015	FCC ID: L6ARHK210LW, L6ARHL210LW IC: 2503A-RHK210LW, 2503A-RHL210LW

802.11b/g/n RF Conducted Emission Test Results cont'd

Figure 6-43: Peak Power Spectral Density
MIMO Primary, 802.11b, Channel 1, 1
Mbps

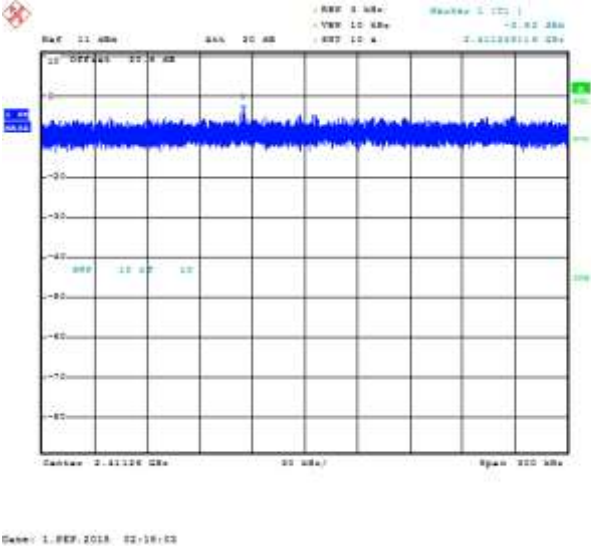


Figure 6-44: Peak Power Spectral Density
MIMO Primary, 802.11b, Channel 6, 1
Mbps

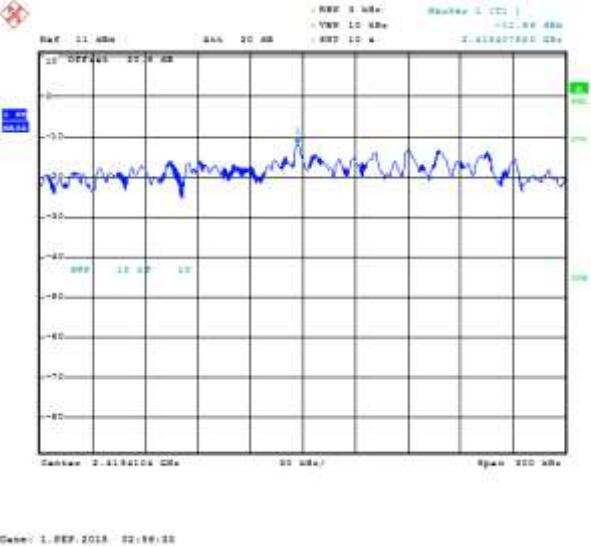
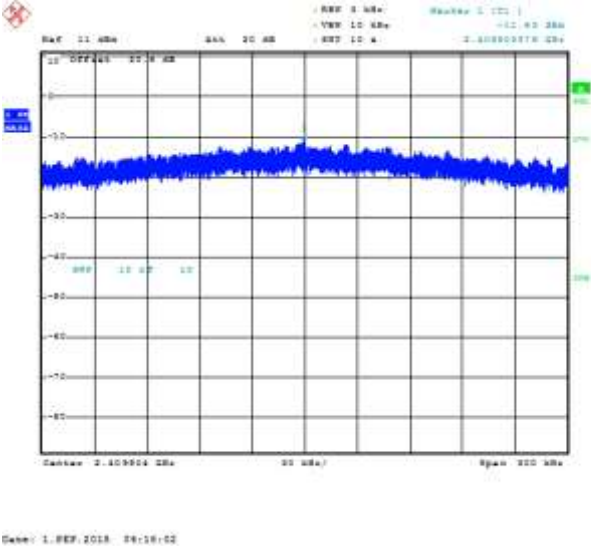


Figure 6-45: Peak Power Spectral Density
MIMO Primary, 802.11b, Channel 11, 1
Mbps



	EMC Test Report for the BlackBerry® smartphone Model RHK211LW (STV100-1) , RHL211LW (STV100-3) APPENDIX 6	
Test Report No.: RTS-6066-1509-01A	Dates of Test: July 22 – September 8, and September 28, 2015	FCC ID: L6ARHK210LW, L6ARHL210LW IC: 2503A-RHK210LW, 2503A-RHL210LW

802.11b/g/n RF Conducted Emission Test Results cont'd

Figure 6-46: Peak Power Spectral Density
MIMO Primary, 802.11g, Channel 1, 6
Mbps

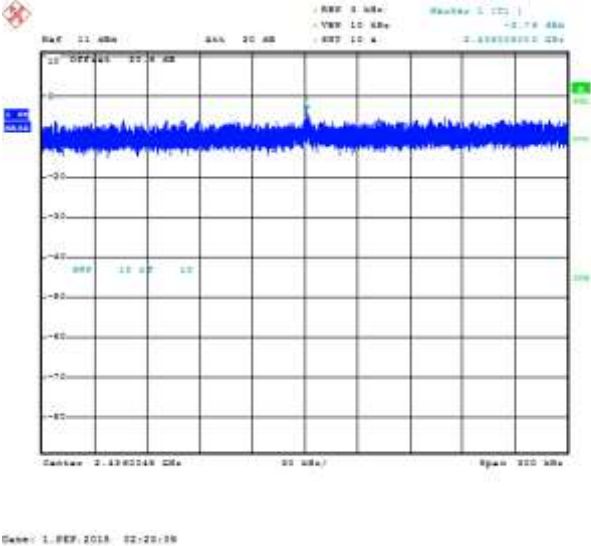


Figure 6-47: Peak Power Spectral Density
MIMO Primary, 802.11g, Channel 6, 6
Mbps

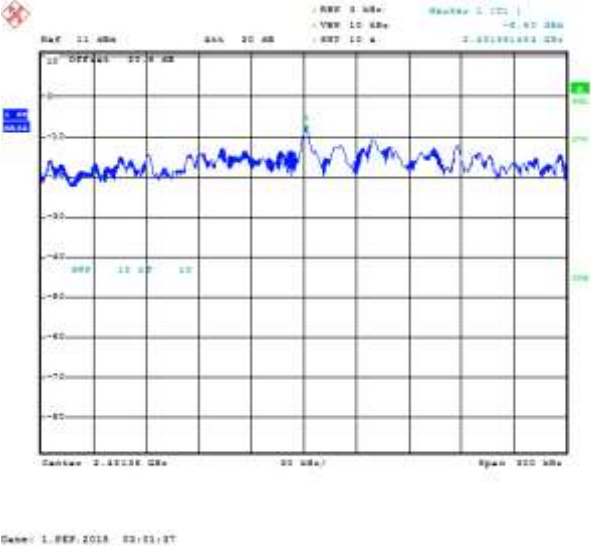
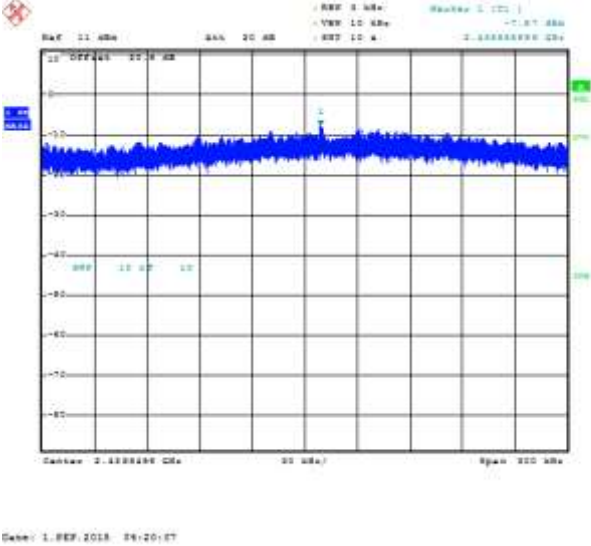


Figure 6-48: Peak Power Spectral Density
MIMO Primary, 802.11g, Channel 11, 6
Mbps



	EMC Test Report for the BlackBerry® smartphone Model RHK211LW (STV100-1) , RHL211LW (STV100-3) APPENDIX 6	
Test Report No.: RTS-6066-1509-01A	Dates of Test: July 22 – September 8, and September 28, 2015	FCC ID: L6ARHK210LW, L6ARHL210LW IC: 2503A-RHK210LW, 2503A-RHL210LW

802.11b/g/n RF Conducted Emission Test Results cont'd

Figure 6-49: Peak Power Spectral Density
 MIMO Primary, 802.11n, Channel 1, MCS
 0

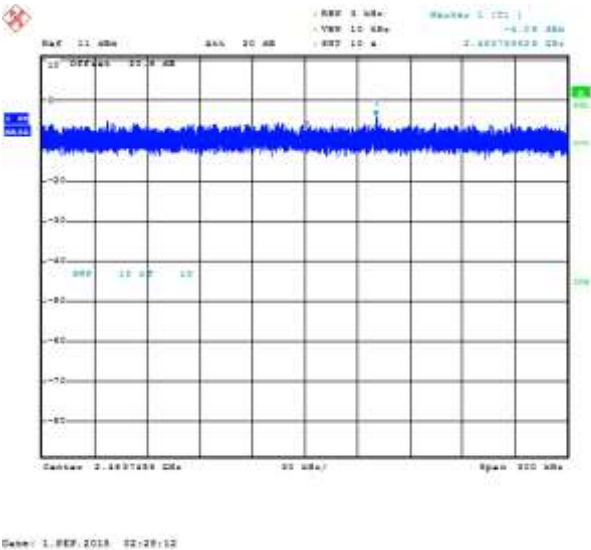


Figure 6-50: Peak Power Spectral Density
 MIMO Primary, 802.11n, Channel 6, MCS
 0

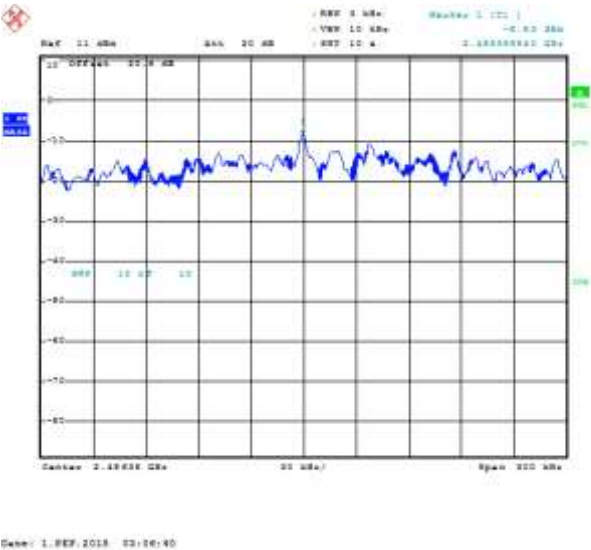
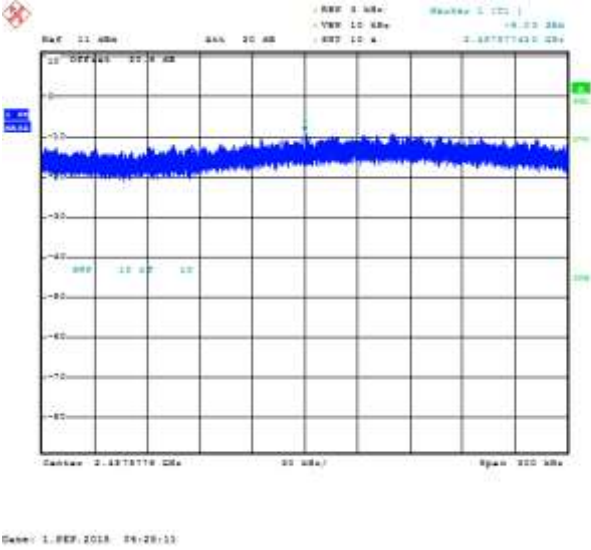


Figure 6-51: Peak Power Spectral Density
 MIMO Primary, 802.11n, Channel 11,
 MCS 0



	EMC Test Report for the BlackBerry® smartphone Model RHK211LW (STV100-1) , RHL211LW (STV100-3) APPENDIX 6	
Test Report No.: RTS-6066-1509-01A	Dates of Test: July 22 – September 8, and September 28, 2015	FCC ID: L6ARHK210LW, L6ARHL210LW IC: 2503A-RHK210LW, 2503A-RHL210LW

802.11b/g/n RF Conducted Emission Test Results cont'd

Figure 6-52: Peak Power Spectral Density
MIMO Secondary, 802.11b, Channel 1, 1
Mbps

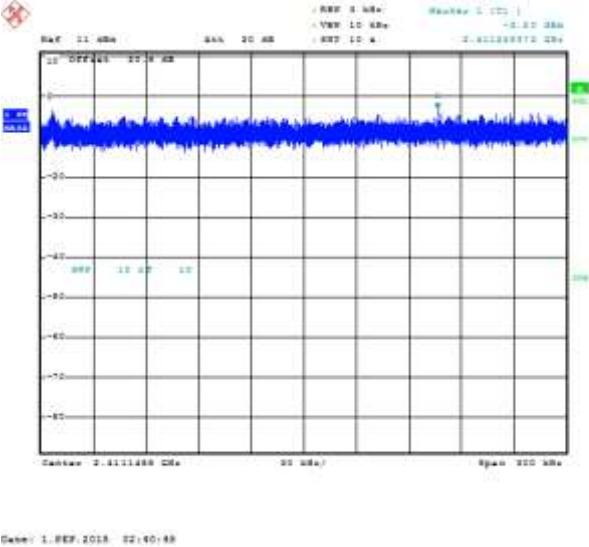


Figure 6-53: Peak Power Spectral Density
MIMO Secondary, 802.11b, Channel 6, 1
Mbps

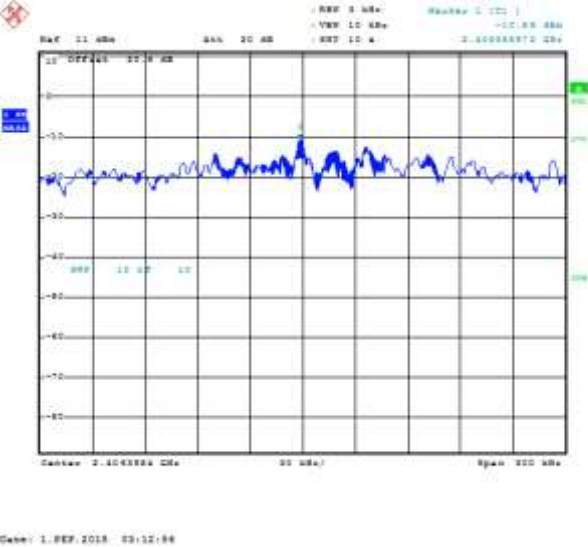
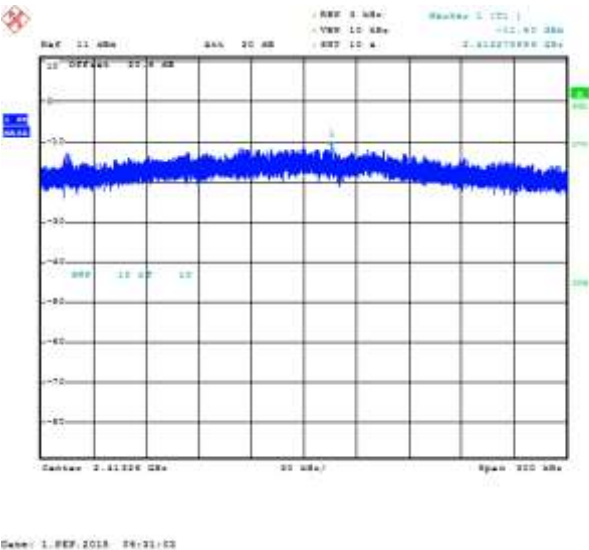


Figure 6-54: Peak Power Spectral Density
MIMO Secondary, 802.11b, Channel 11, 1
Mbps



	EMC Test Report for the BlackBerry® smartphone Model RHK211LW (STV100-1) , RHL211LW (STV100-3) APPENDIX 6	
Test Report No.: RTS-6066-1509-01A	Dates of Test: July 22 – September 8, and September 28, 2015	FCC ID: L6ARHK210LW, L6ARHL210LW IC: 2503A-RHK210LW, 2503A-RHL210LW

802.11b/g/n RF Conducted Emission Test Results cont'd

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

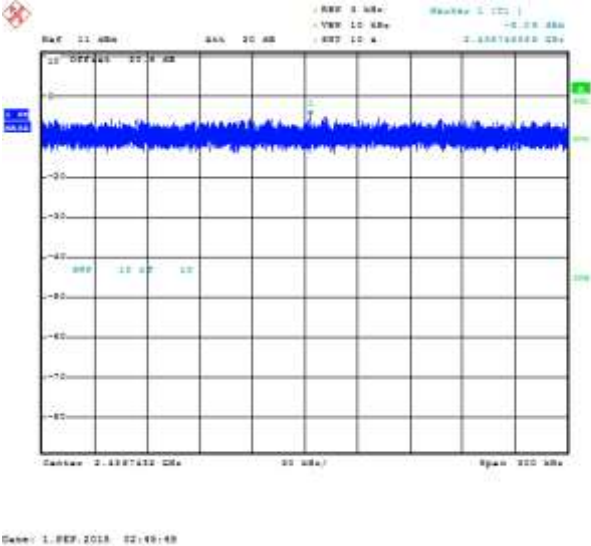
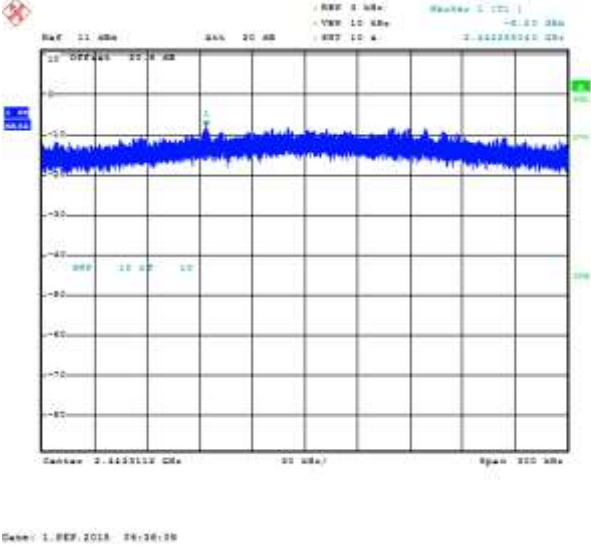


Figure 6-56: Peak Power Spectral Density
MIMO Secondary, 802.11g, Channel 6, 6
Mbps



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



	EMC Test Report for the BlackBerry® smartphone Model RHK211LW (STV100-1) , RHL211LW (STV100-3) APPENDIX 6	
Test Report No.: RTS-6066-1509-01A	Dates of Test: July 22 – September 8, and September 28, 2015	FCC ID: L6ARHK210LW, L6ARHL210LW IC: 2503A-RHK210LW, 2503A-RHL210LW

802.11b/g/n RF Conducted Emission Test Results cont'd

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

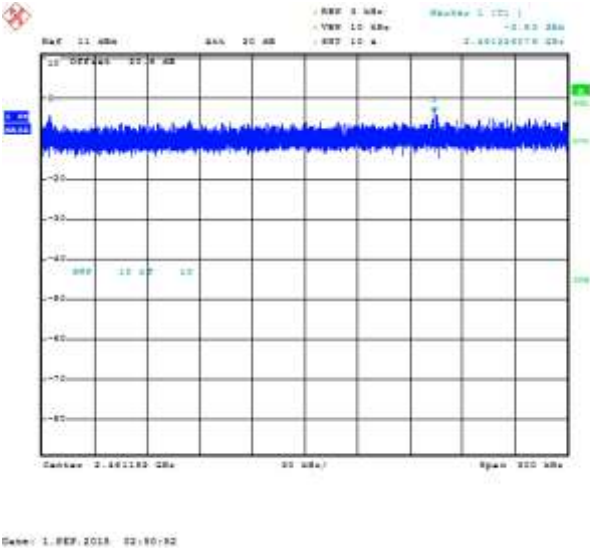


Figure 6-59: Peak Power Spectral Density
MIMO Secondary, 802.11n, Channel 6,
MCS 0

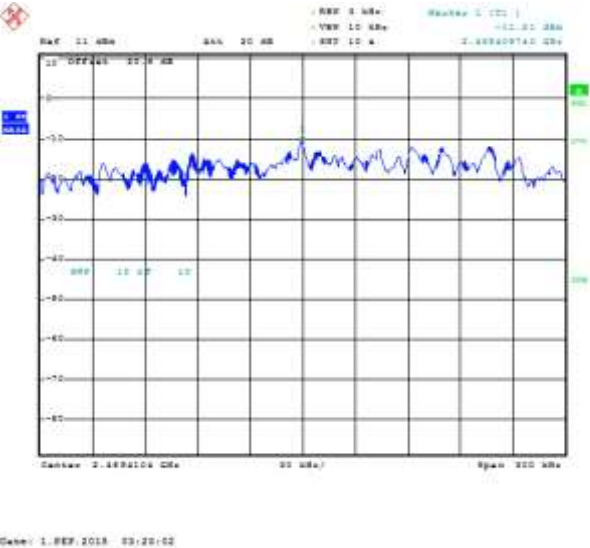
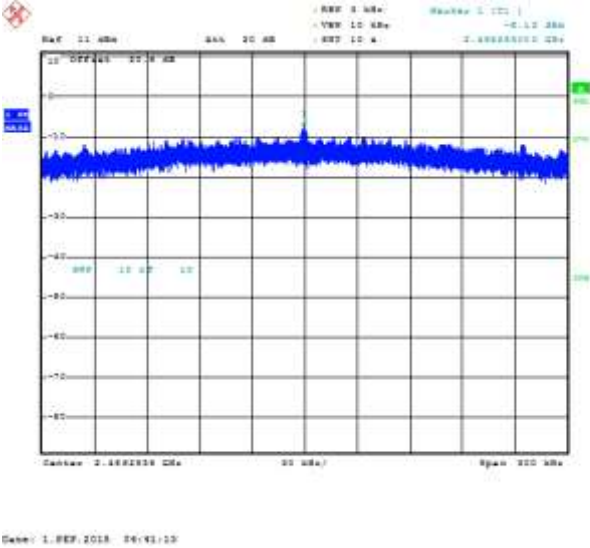


Figure 6-60: Peak Power Spectral Density
MIMO Secondary, 802.11n, Channel 11,
MCS 0



	EMC Test Report for the BlackBerry® smartphone Model RHK211LW (STV100-1) , RHL211LW (STV100-3) APPENDIX 6	
Test Report No.: RTS-6066-1509-01A	Dates of Test: July 22 – September 8, and September 28, 2015	FCC ID: L6ARHK210LW, L6ARHL210LW IC: 2503A-RHK210LW, 2503A-RHL210LW

802.11b/g/n RF Conducted Emission Test Results cont'd

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	1 Mbps	16.33	-27.67	-44.00	-20
	6 Mbps	16.20	-21.41	-37.61	-20
	MCS 0	15.99	-18.85	-34.84	-20
6	1 Mbps	16.85	-26.70	-43.55	-20
	6 Mbps	16.66	-16.69	-33.35	-20
	MCS 0	16.56	-17.04	-33.60	-20
11	1 Mbps	17.08	-26.96	-44.04	-20
	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	1 Mbps	17.01	-24.92	-41.93	-20
	6 Mbps	16.41	-17.42	-33.83	-20
	MCS 0	16.18	-19.94	-36.12	-20
6	1 Mbps	17.04	-36.17	-53.21	-20
	6 Mbps	16.55	-19.39	-35.94	-20
	MCS 0	16.30	-18.73	-35.03	-20
11	1 Mbps	16.79	-26.96	-43.75	-20
	6 Mbps	16.14	-22.28	-38.42	-20
	MCS 0	16.08	-18.66	-34.74	-20

	EMC Test Report for the BlackBerry® smartphone Model RHK211LW (STV100-1) , RHL211LW (STV100-3) APPENDIX 6	
Test Report No.: RTS-6066-1509-01A	Dates of Test: July 22 – September 8, and September 28, 2015	FCC ID: L6ARHK210LW, L6ARHL210LW IC: 2503A-RHK210LW, 2503A-RHL210LW

802.11b/g/n RF Conducted Emission Test Results cont'd

Sum

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

	EMC Test Report for the BlackBerry® smartphone Model RHK211LW (STV100-1) , RHL211LW (STV100-3) APPENDIX 6	
Test Report No.: RTS-6066-1509-01A	Dates of Test: July 22 – September 8, and September 28, 2015	FCC ID: L6ARHK210LW, L6ARHL210LW IC: 2503A-RHK210LW, 2503A-RHL210LW

802.11b/g/n RF Conducted Emission Test Results cont'd

Figure 6-61: Spurious Conducted RF Emissions
Primary, 802.11b, Channel 1, 1 Mbps

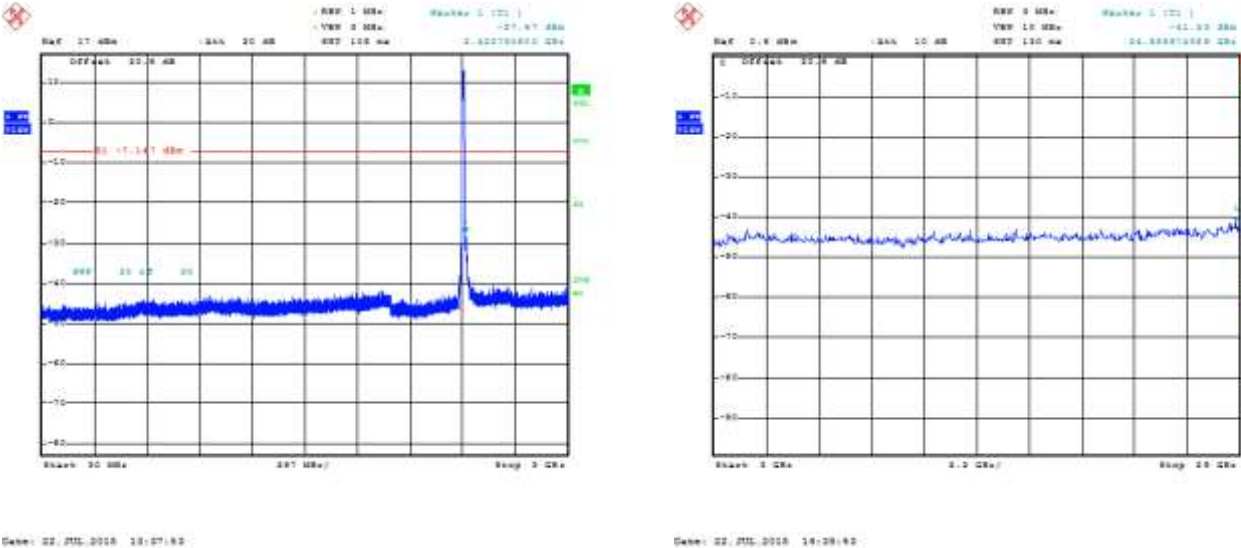
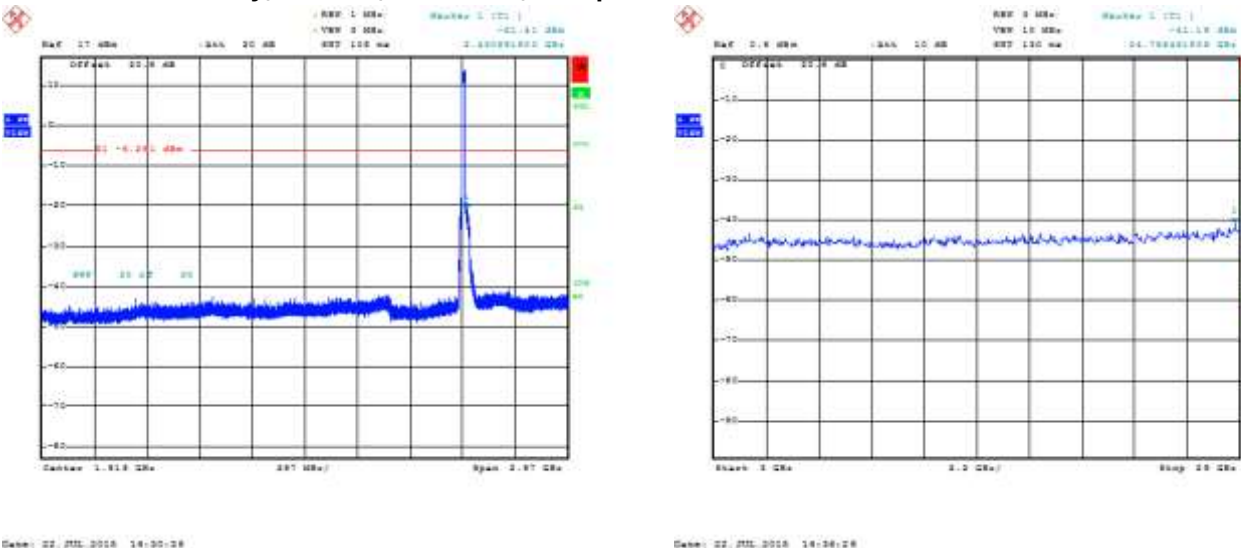


Figure 6-62 : Spurious Conducted RF Emissions
Primary, 802.11b, Channel 6, 1 Mbps



	EMC Test Report for the BlackBerry® smartphone Model RHK211LW (STV100-1) , RHL211LW (STV100-3) APPENDIX 6	
Test Report No.: RTS-6066-1509-01A	Dates of Test: July 22 – September 8, and September 28, 2015	FCC ID: L6ARHK210LW, L6ARHL210LW IC: 2503A-RHK210LW, 2503A-RHL210LW

802.11b/g/n RF Conducted Emission Test Results cont'd

Figure 6-63: Spurious Conducted RF Emissions
Primary, 802.11b, Channel 11, 1 Mbps

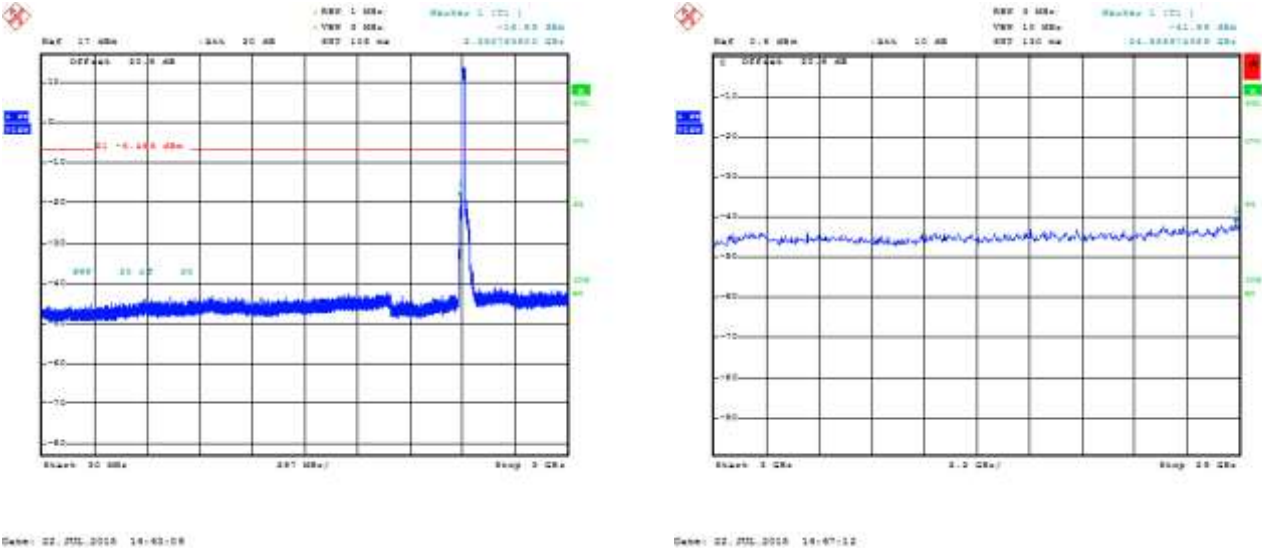
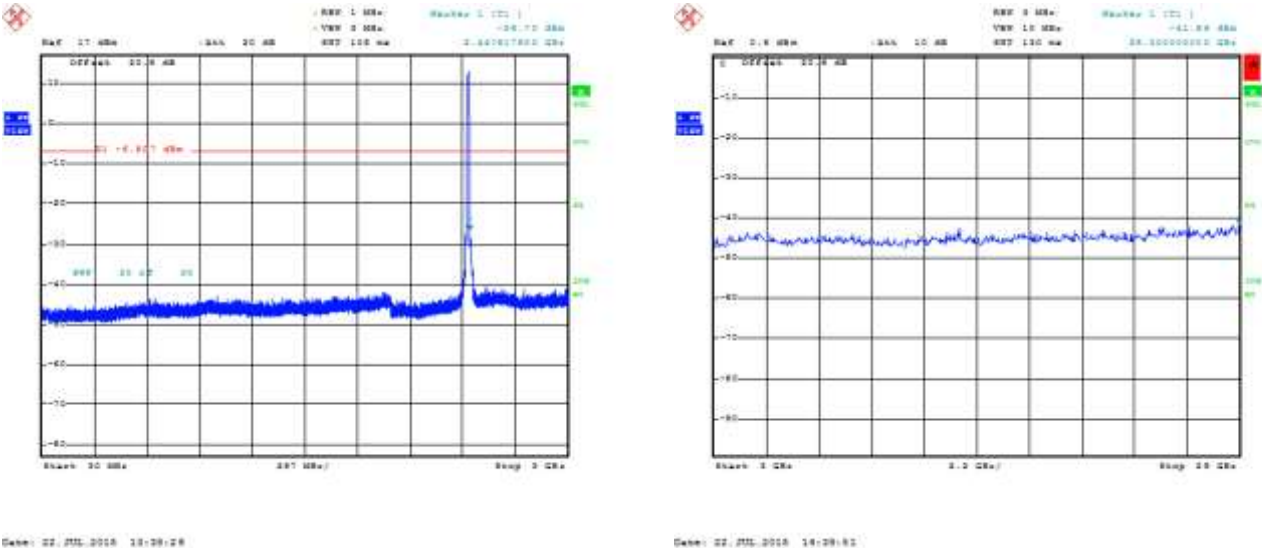


Figure 6-64: Spurious Conducted RF Emissions
Primary, 802.11g, Channel 1, 6 Mbps



	EMC Test Report for the BlackBerry® smartphone Model RHK211LW (STV100-1) , RHL211LW (STV100-3) APPENDIX 6	
Test Report No.: RTS-6066-1509-01A	Dates of Test: July 22 – September 8, and September 28, 2015	FCC ID: L6ARHK210LW, L6ARHL210LW IC: 2503A-RHK210LW, 2503A-RHL210LW

802.11b/g/n RF Conducted Emission Test Results cont'd

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

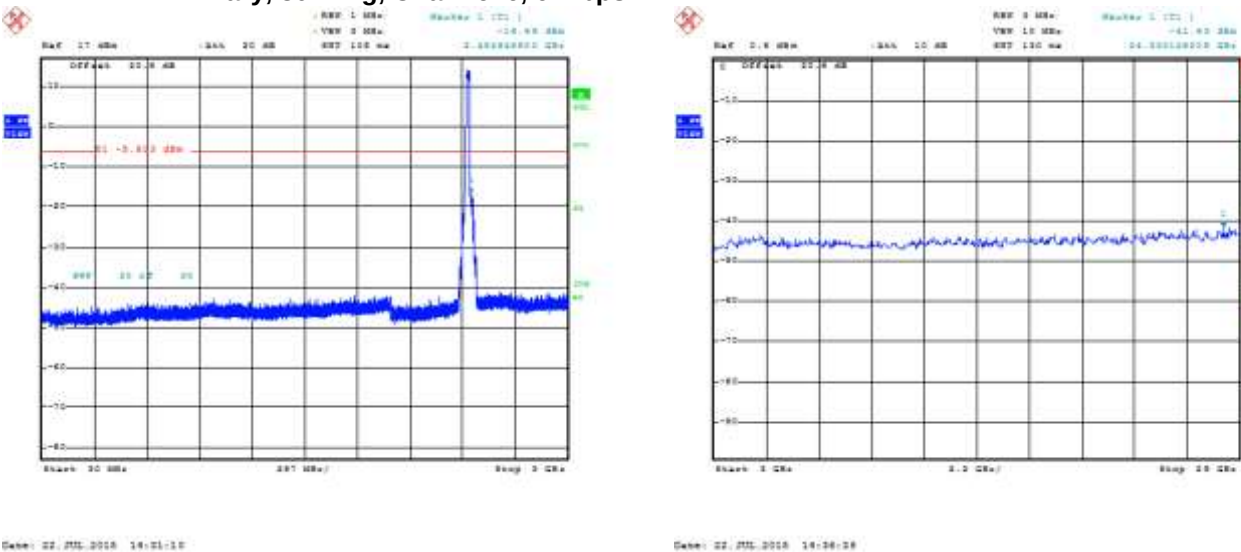
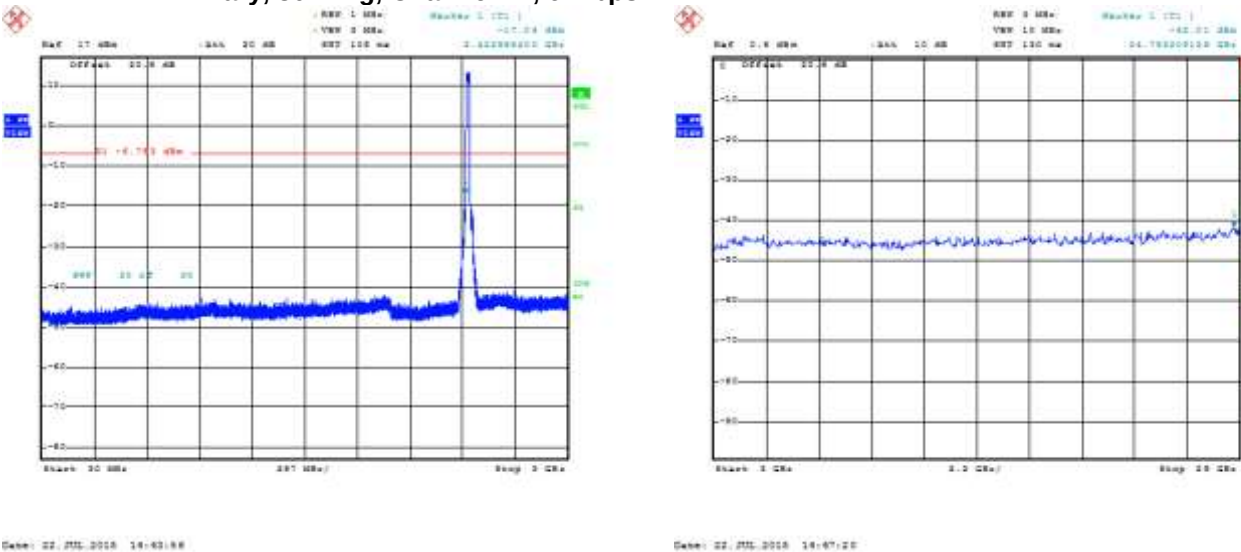


Figure 6-66: Spurious Conducted RF Emissions
Primary, 802.11g, Channel 11, 6 Mbps



	EMC Test Report for the BlackBerry® smartphone Model RHK211LW (STV100-1) , RHL211LW (STV100-3) APPENDIX 6	
Test Report No.: RTS-6066-1509-01A	Dates of Test: July 22 – September 8, and September 28, 2015	FCC ID: L6ARHK210LW, L6ARHL210LW IC: 2503A-RHK210LW, 2503A-RHL210LW

802.11b/g/n RF Conducted Emission Test Results cont'd

Figure 6-67: Spurious Conducted RF Emissions
Primary, 802.11n, Channel 1, MCS 0

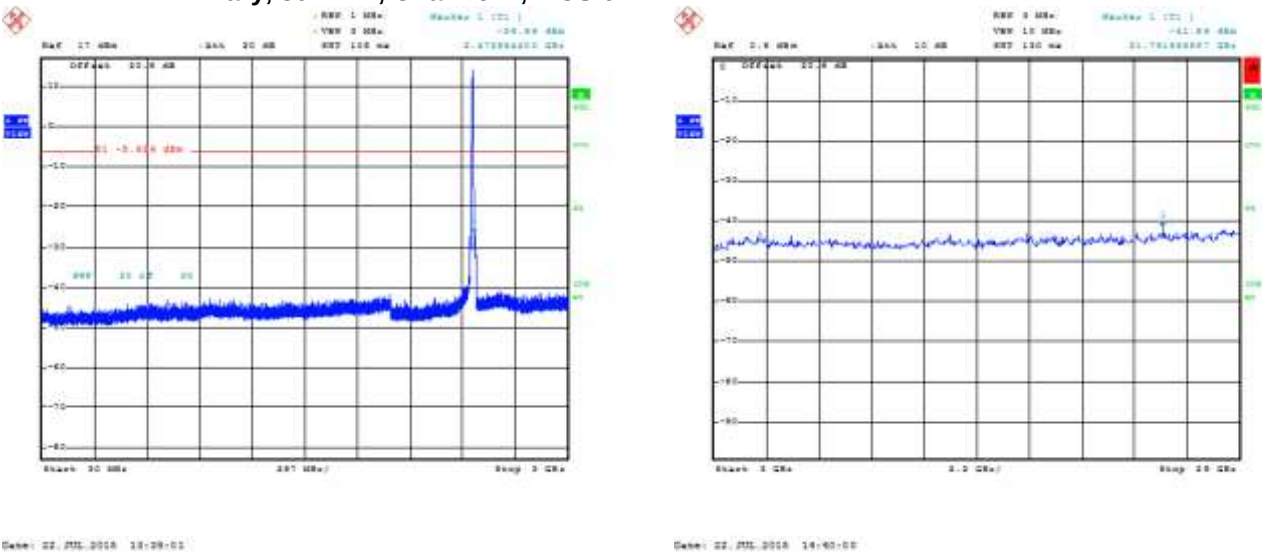
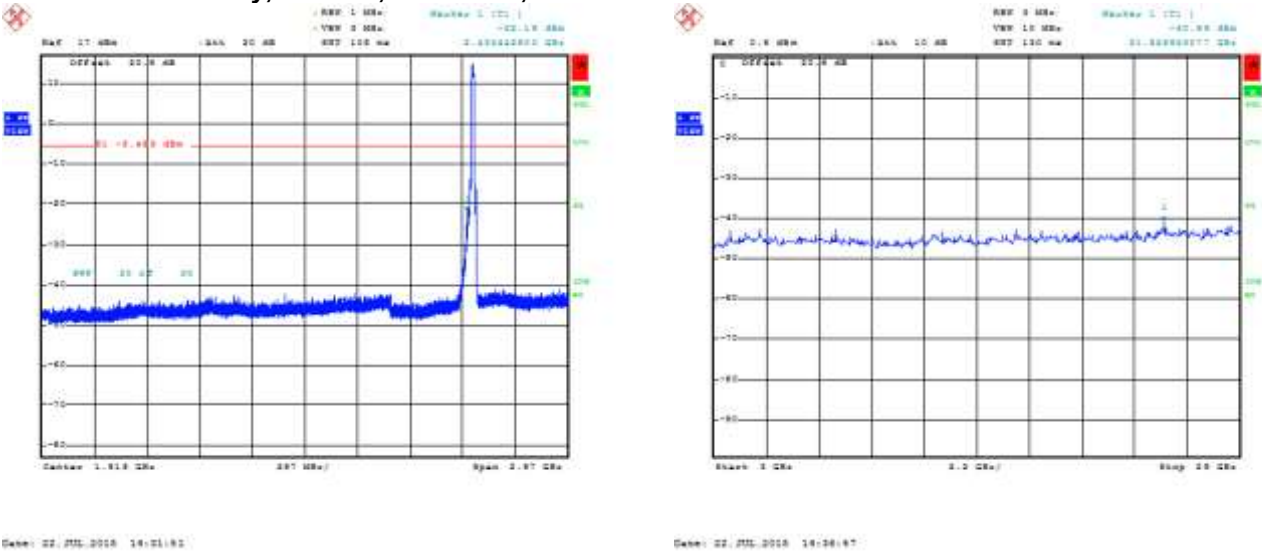


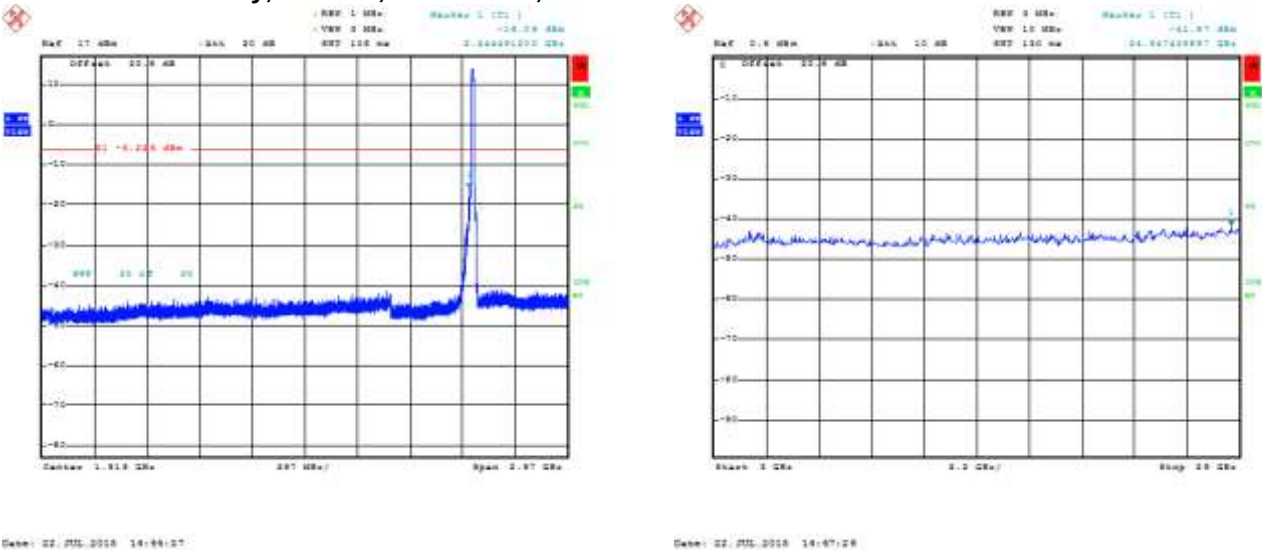
Figure 6-68: Spurious Conducted RF Emissions
Primary, 802.11n, Channel 6, MCS 0



	EMC Test Report for the BlackBerry® smartphone Model RHK211LW (STV100-1) , RHL211LW (STV100-3) APPENDIX 6	
Test Report No.: RTS-6066-1509-01A	Dates of Test: July 22 – September 8, and September 28, 2015	FCC ID: L6ARHK210LW, L6ARHL210LW IC: 2503A-RHK210LW, 2503A-RHL210LW

802.11b/g/n RF Conducted Emission Test Results cont'd

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



	EMC Test Report for the BlackBerry® smartphone Model RHK211LW (STV100-1) , RHL211LW (STV100-3) APPENDIX 6	
Test Report No.: RTS-6066-1509-01A	Dates of Test: July 22 – September 8, and September 28, 2015	FCC ID: L6ARHK210LW, L6ARHL210LW IC: 2503A-RHK210LW, 2503A-RHL210LW

802.11b/g/n RF Conducted Emission Test Results cont'd

Figure 6-70: Spurious Conducted RF Emissions
Secondary, 802.11b, Channel 1, 1 Mbps

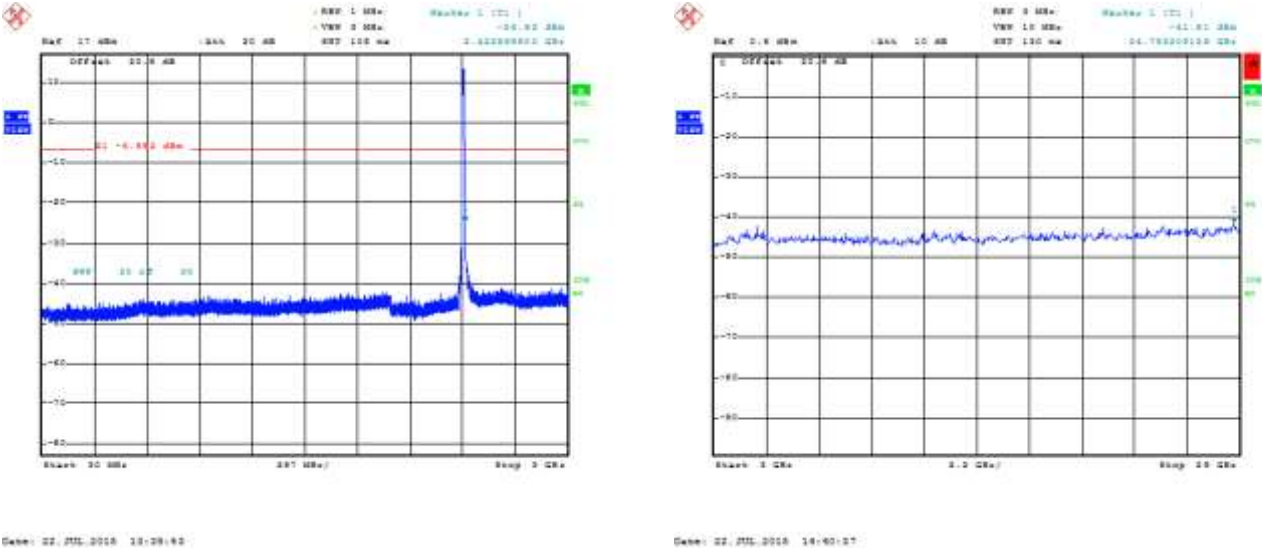
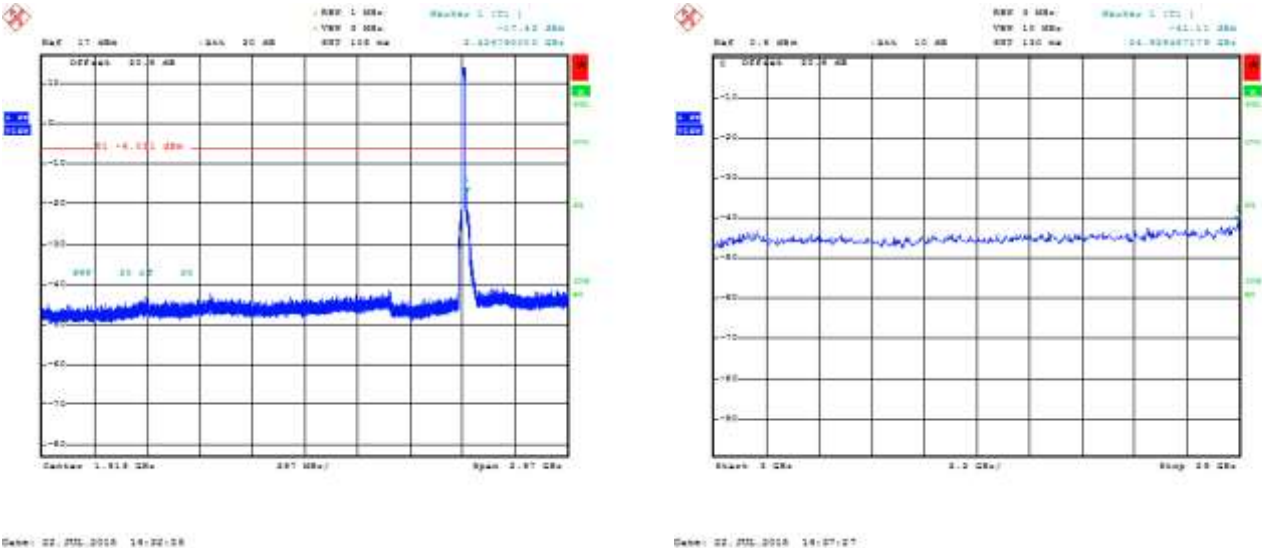


Figure 6-71 : Spurious Conducted RF Emissions
Secondary, 802.11b, Channel 6, 1 Mbps



	EMC Test Report for the BlackBerry® smartphone Model RHK211LW (STV100-1) , RHL211LW (STV100-3) APPENDIX 6	
Test Report No.: RTS-6066-1509-01A	Dates of Test: July 22 – September 8, and September 28, 2015	FCC ID: L6ARHK210LW, L6ARHL210LW IC: 2503A-RHK210LW, 2503A-RHL210LW

802.11b/g/n RF Conducted Emission Test Results cont'd

Figure 6-72: Spurious Conducted RF Emissions
Secondary, 802.11b, Channel 11, 1 Mbps

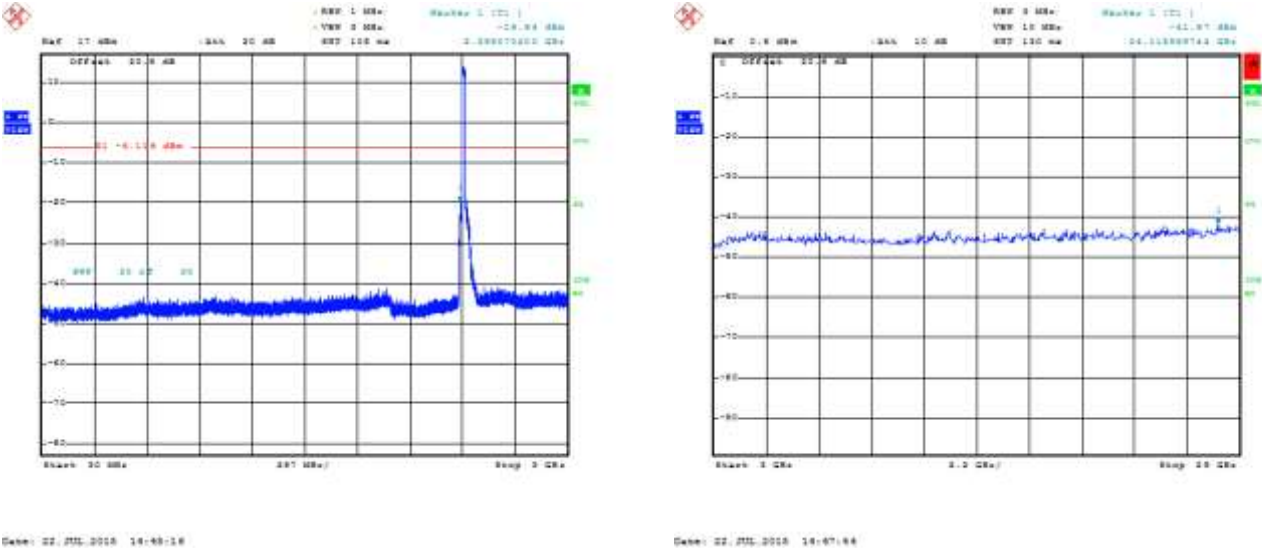
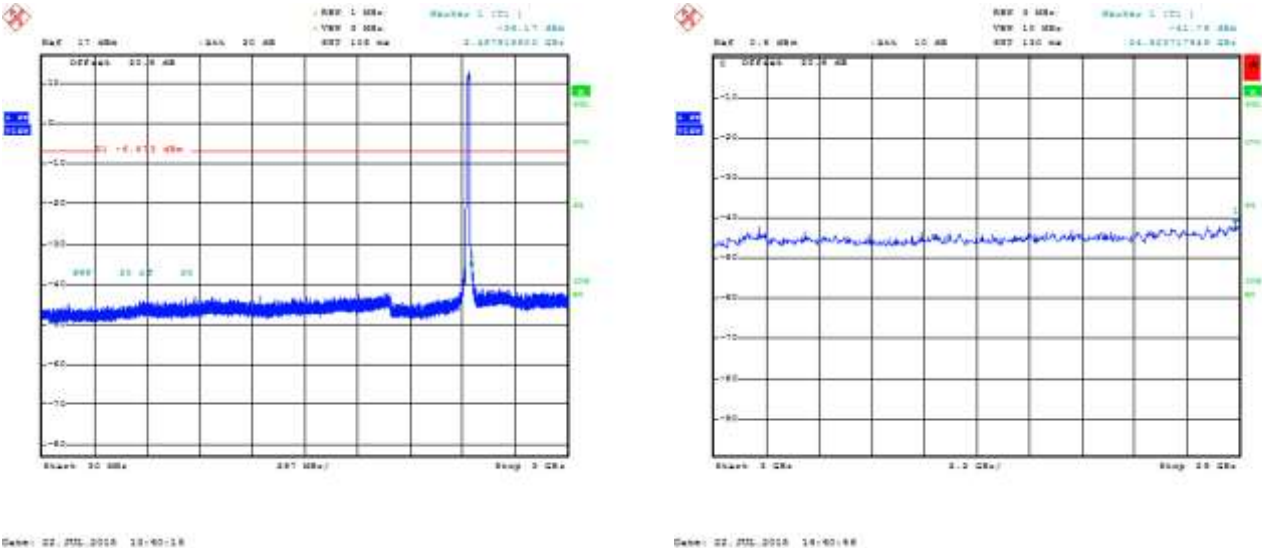


Figure 6-73: Spurious Conducted RF Emissions
Secondary, 802.11g, Channel 1, 6 Mbps



	EMC Test Report for the BlackBerry® smartphone Model RHK211LW (STV100-1) , RHL211LW (STV100-3) APPENDIX 6	
Test Report No.: RTS-6066-1509-01A	Dates of Test: July 22 – September 8, and September 28, 2015	FCC ID: L6ARHK210LW, L6ARHL210LW IC: 2503A-RHK210LW, 2503A-RHL210LW

802.11b/g/n RF Conducted Emission Test Results cont'd

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

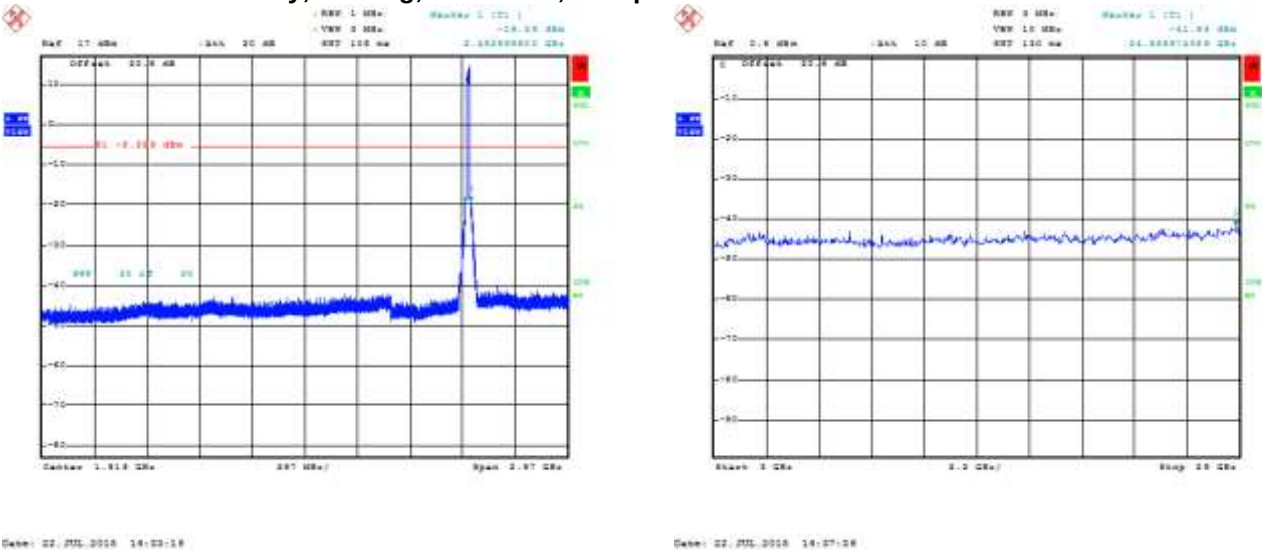
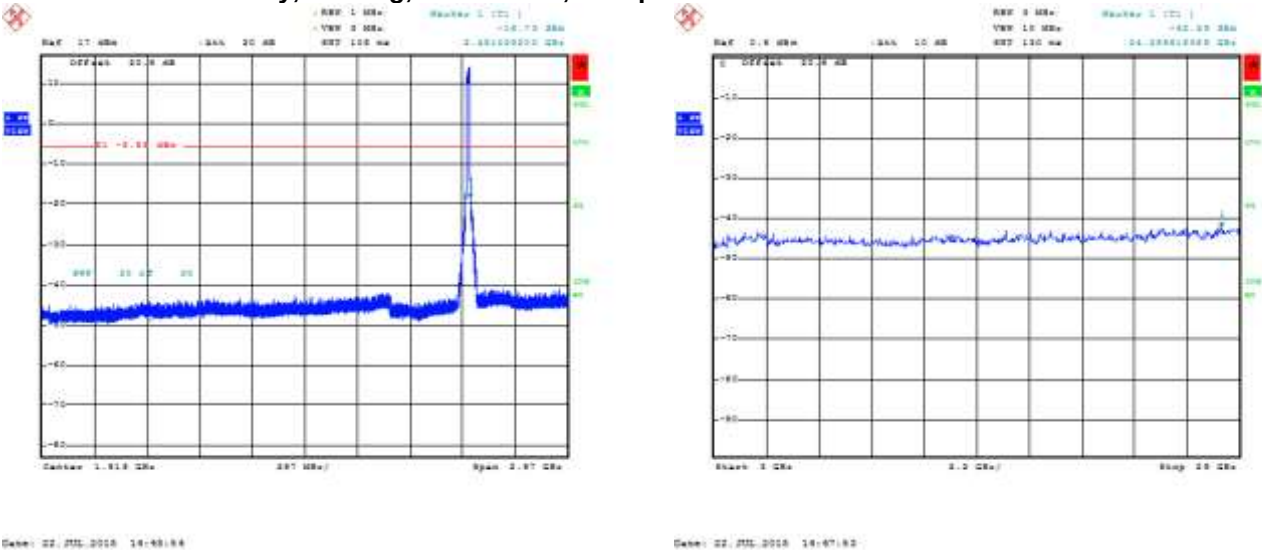


Figure 6-75: Spurious Conducted RF Emissions
Secondary, 802.11g, Channel 11, 6 Mbps



	EMC Test Report for the BlackBerry® smartphone Model RHK211LW (STV100-1) , RHL211LW (STV100-3) APPENDIX 6	
Test Report No.: RTS-6066-1509-01A	Dates of Test: July 22 – September 8, and September 28, 2015	FCC ID: L6ARHK210LW, L6ARHL210LW IC: 2503A-RHK210LW, 2503A-RHL210LW

802.11b/g/n RF Conducted Emission Test Results cont'd

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

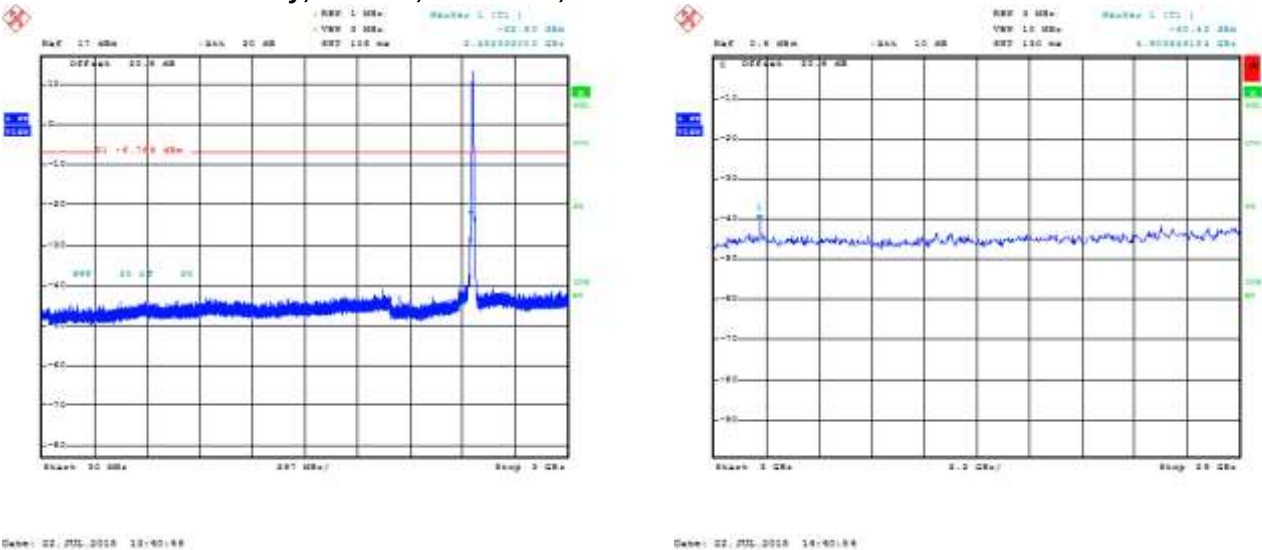
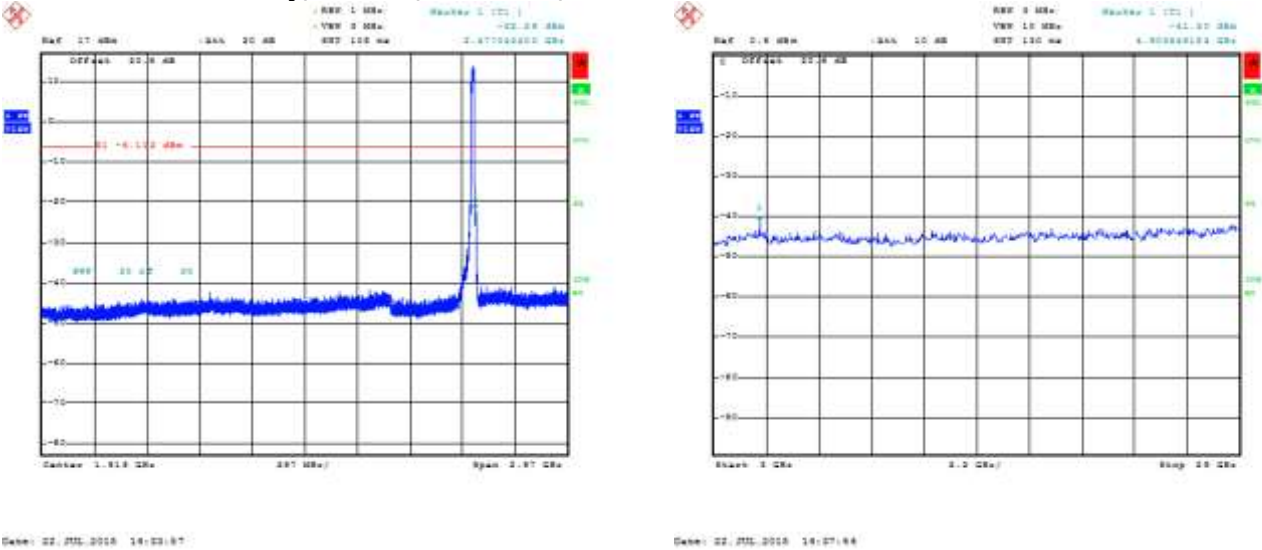


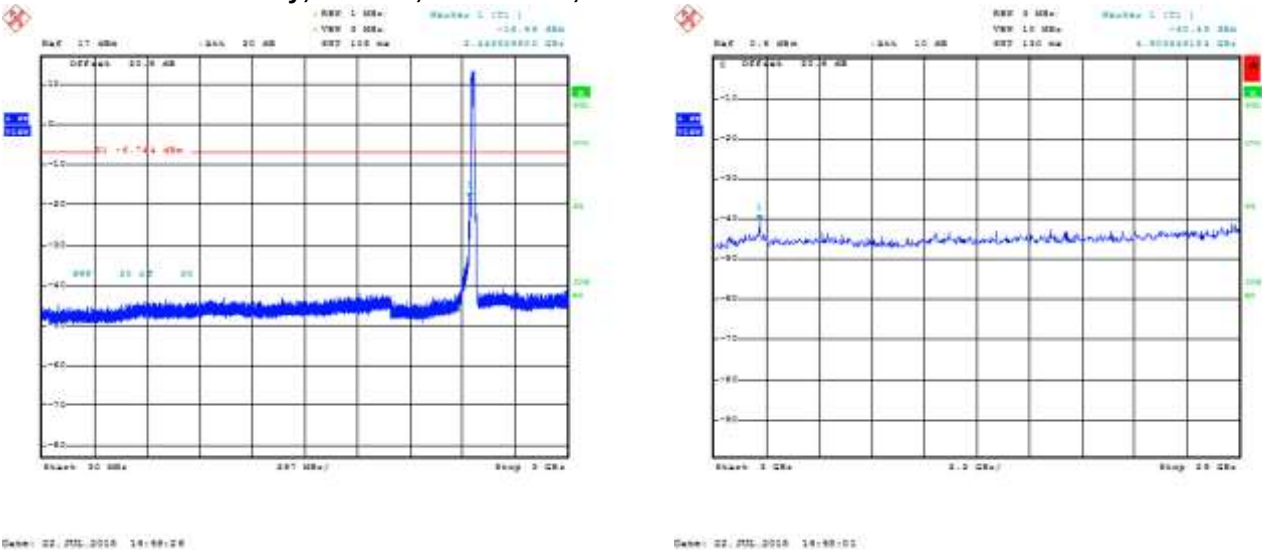
Figure 6-77: Spurious Conducted RF Emissions
Secondary, 802.11n, Channel 6, MCS 0



	EMC Test Report for the BlackBerry® smartphone Model RHK211LW (STV100-1) , RHL211LW (STV100-3) APPENDIX 6	
Test Report No.: RTS-6066-1509-01A	Dates of Test: July 22 – September 8, and September 28, 2015	FCC ID: L6ARHK210LW, L6ARHL210LW IC: 2503A-RHK210LW, 2503A-RHL210LW

802.11b/g/n RF Conducted Emission Test Results cont'd

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



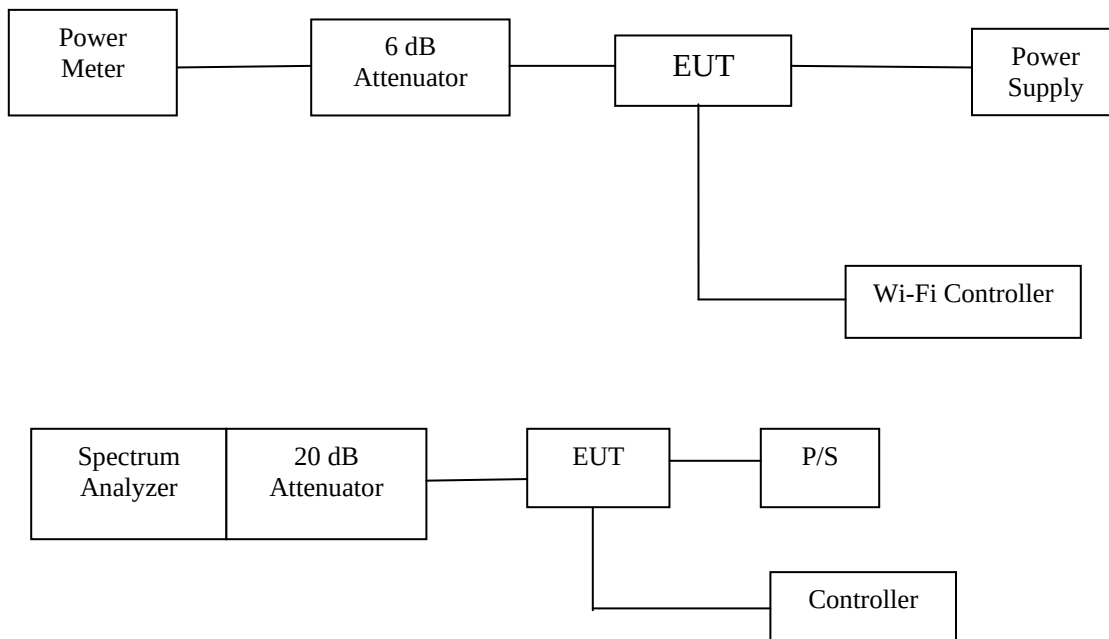
APPENDIX 7 – 802.11a/n CONDUCTED EMISSIONS TEST DATA/PLOTS

	EMC Test Report for the BlackBerry® smartphone Model RHK211LW (STV100-1) , RHL211LW (STV100-3) APPENDIX 7	
Test Report No.: RTS-6066-1509-01A	Dates of Test: July 22 – September 8, and September 28, 2015	FCC ID: L6ARHK210LW, L6ARHL210LW IC: 2503A-RHK210LW, 2503A-RHL210LW

802.11a/n RF Conducted Emission Test Results

The following test configurations were measured on model RHK211LW (STV100-1):

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 %

	EMC Test Report for the BlackBerry® smartphone Model RHK211LW (STV100-1) , RHL211LW (STV100-3) APPENDIX 7	
Test Report No.: RTS-6066-1509-01A	Dates of Test: July 22 – September 8, and September 28, 2015	FCC ID: L6ARHK210LW, L6ARHL210LW IC: 2503A-RHK210LW, 2503A-RHL210LW

802.11a RF Conducted Emission Test Results cont'd

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

	EMC Test Report for the BlackBerry® smartphone Model RHK211LW (STV100-1) , RHL211LW (STV100-3) APPENDIX 7	
Test Report No.: RTS-6066-1509-01A	Dates of Test: July 22 – September 8, and September 28, 2015	FCC ID: L6ARHK210LW, L6ARHL210LW IC: 2503A-RHK210LW, 2503A-RHL210LW

802.11n RF Conducted Emission Test Results

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.

	EMC Test Report for the BlackBerry® smartphone Model RHK211LW (STV100-1) , RHL211LW (STV100-3) APPENDIX 7	
Test Report No.: RTS-6066-1509-01A	Dates of Test: July 22 – September 8, and September 28, 2015	FCC ID: L6ARHK210LW, L6ARHL210LW IC: 2503A-RHK210LW, 2503A-RHL210LW

802.11a RF Conducted Emission Test Results cont'd

Figure 7-1: 6 dB Bandwidth
Primary, 802.11a, Channel 36, 6 Mbps

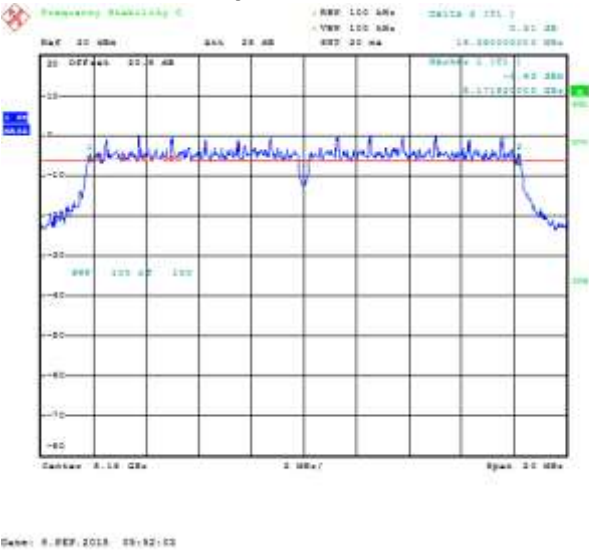


Figure 7-2: 6 dB Bandwidth
Primary, 802.11a, Channel 48, 6 Mbps

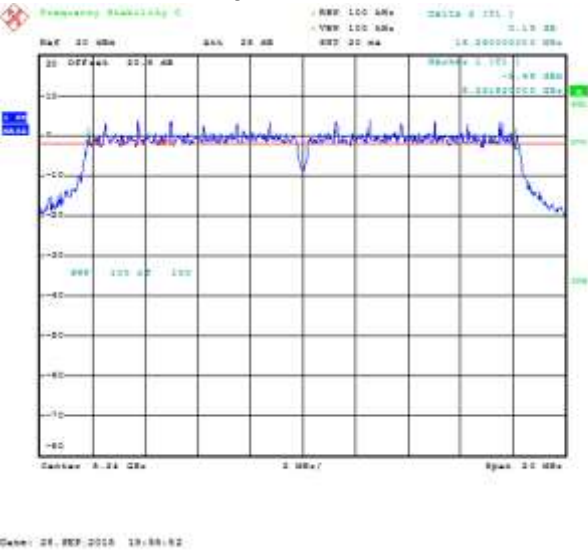


Figure 7-3: 6 dB Bandwidth
Primary, 802.11a, Channel 64, 6 Mbps

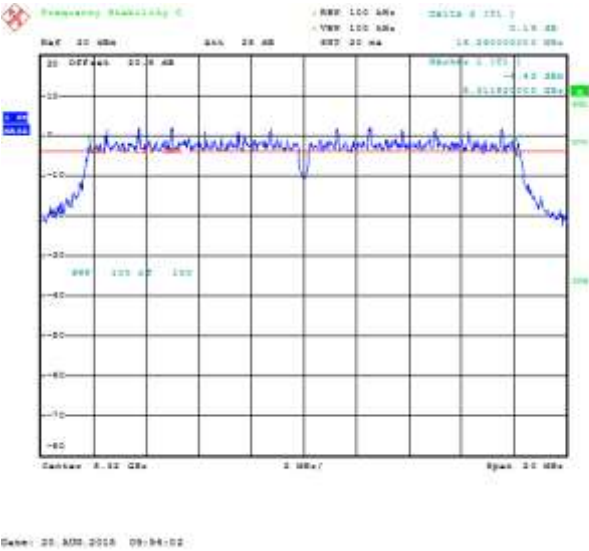
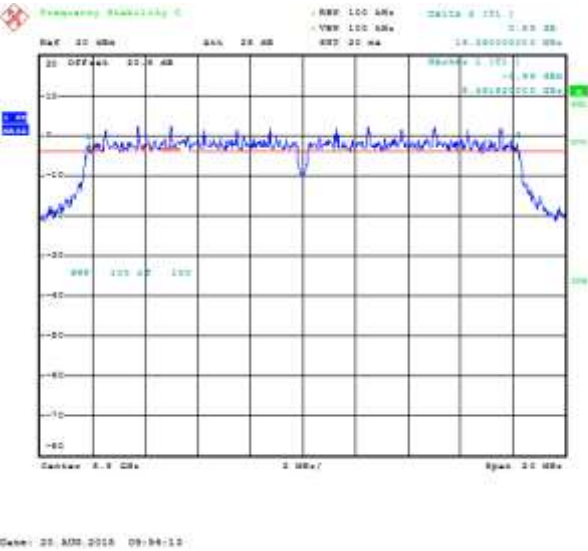


Figure 7-4: 6 dB Bandwidth
Primary, 802.11a, Channel 100, 6 Mbps



	EMC Test Report for the BlackBerry® smartphone Model RHK211LW (STV100-1) , RHL211LW (STV100-3) APPENDIX 7	
Test Report No.: RTS-6066-1509-01A	Dates of Test: July 22 – September 8, and September 28, 2015	FCC ID: L6ARHK210LW, L6ARHL210LW IC: 2503A-RHK210LW, 2503A-RHL210LW

802.11a RF Conducted Emission Test Results cont'd

Figure 7-5: 6 dB Bandwidth
Primary, 802.11a, Channel 140, 6 Mbps

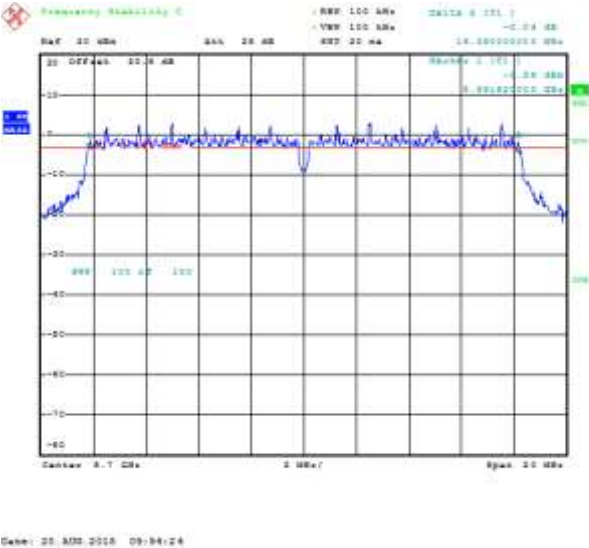


Figure 7-6: 6 dB Bandwidth
Primary, 802.11a, Channel 165, 6 Mbps

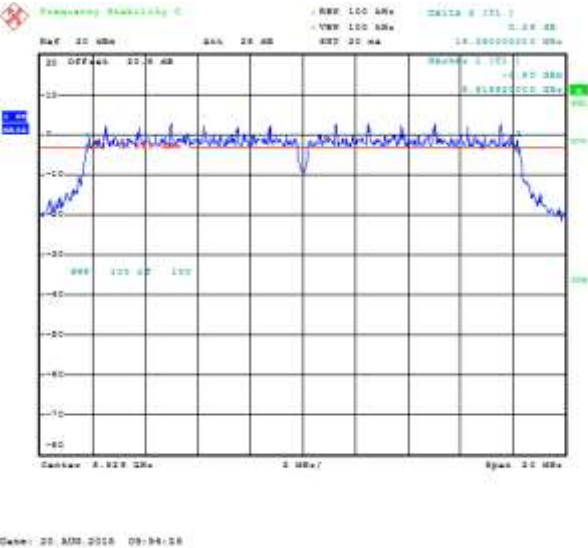


Figure 7-7: 6 dB Bandwidth
Secondary, 802.11a, Channel 36, 6 Mbps

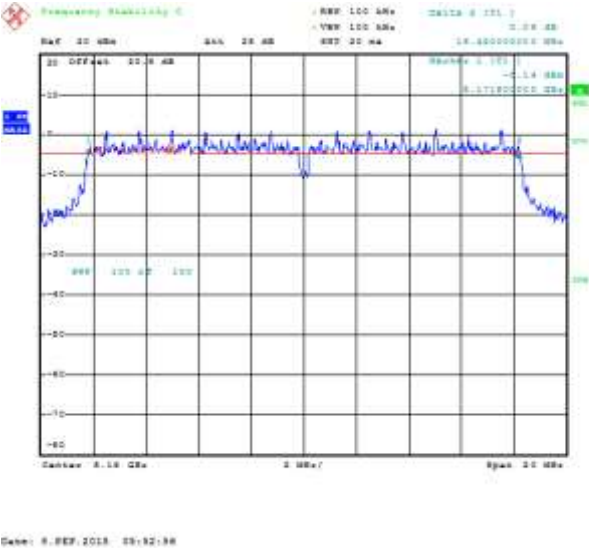


Figure 7-8: 6 dB Bandwidth
Secondary, 802.11a, Channel 48, 6 Mbps



	EMC Test Report for the BlackBerry® smartphone Model RHK211LW (STV100-1) , RHL211LW (STV100-3) APPENDIX 7	
Test Report No.: RTS-6066-1509-01A	Dates of Test: July 22 – September 8, and September 28, 2015	FCC ID: L6ARHK210LW, L6ARHL210LW IC: 2503A-RHK210LW, 2503A-RHL210LW

802.11a RF Conducted Emission Test Results cont'd

Figure 7-9: 6 dB Bandwidth
Secondary, 802.11a, Channel 64, 6 Mbps

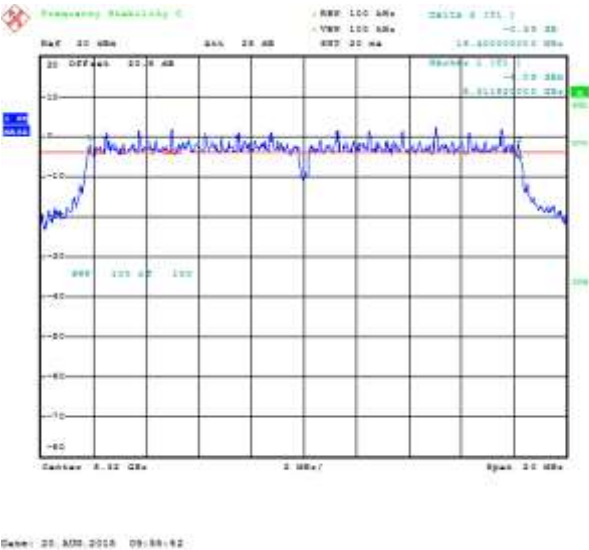


Figure 7-10: 6 dB Bandwidth
Secondary, 802.11a, Channel 100, 6 Mbps

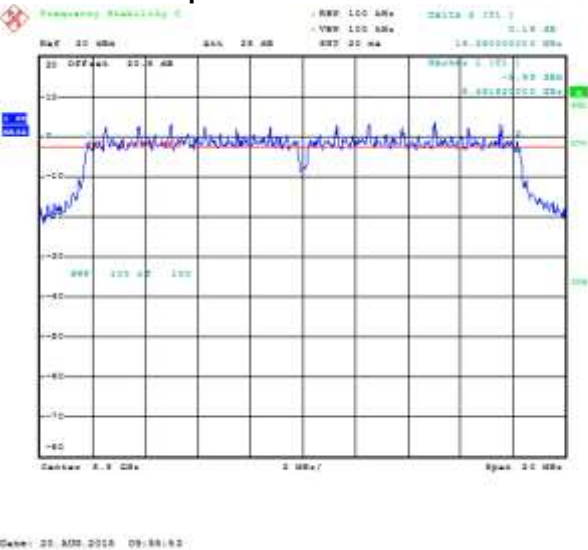


Figure 7-11: 6 dB Bandwidth
Secondary, 802.11a, Channel 140, 6 Mbps

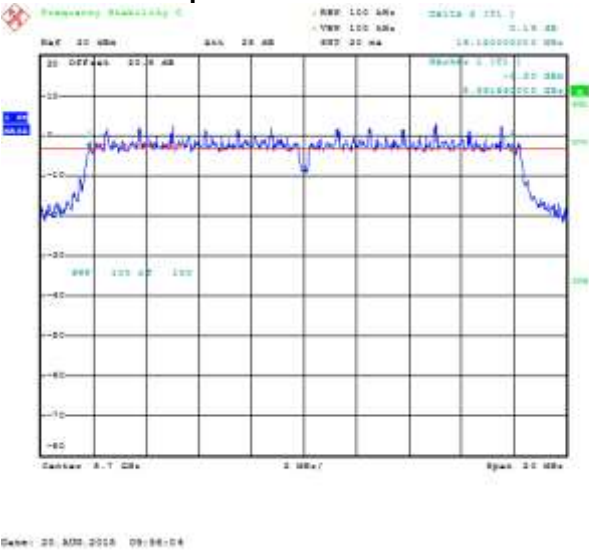


Figure 7-12: 6 dB Bandwidth
Secondary, 802.11a, Channel 165, 6 Mbps



	EMC Test Report for the BlackBerry® smartphone Model RHK211LW (STV100-1) , RHL211LW (STV100-3) APPENDIX 7	
Test Report No.: RTS-6066-1509-01A	Dates of Test: July 22 – September 8, and September 28, 2015	FCC ID: L6ARHK210LW, L6ARHL210LW IC: 2503A-RHK210LW, 2503A-RHL210LW

802.11n RF Conducted Emission Test Results cont'd

20 MHz Bandwidth

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

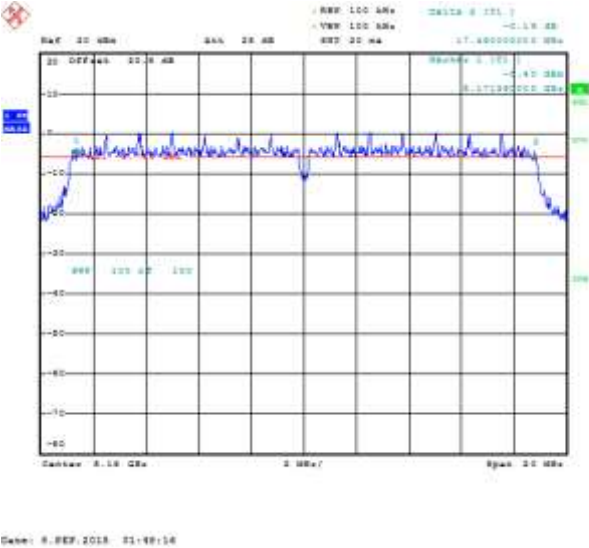


Figure 7-14: 6 dB Bandwidth
Primary, 802.11n, Channel 64, MCS 0



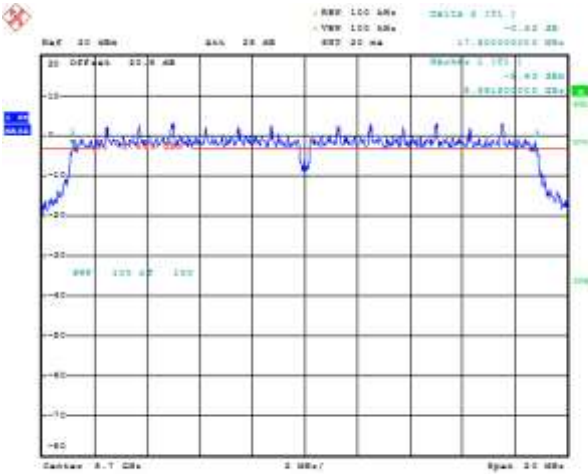
Figure 7-15: 6 dB Bandwidth
Primary, 802.11n, Channel 100, MCS 0



	EMC Test Report for the BlackBerry® smartphone Model RHK211LW (STV100-1) , RHL211LW (STV100-3)	
	APPENDIX 7	
Test Report No.: RTS-6066-1509-01A	Dates of Test: July 22 – September 8, and September 28, 2015	FCC ID: L6ARHK210LW, L6ARHL210LW IC: 2503A-RHK210LW, 2503A-RHL210LW

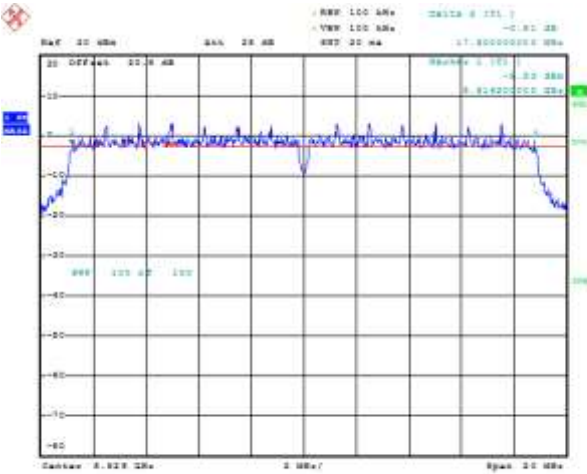
802.11n RF Conducted Emission Test Results cont'd

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



Date: 20, Sep 2015 09:40:58

Figure 7-17: 6 dB Bandwidth
Primary, 802.11n, Channel 165, MCS 0



Date: 20, Sep 2015 09:41:00

	EMC Test Report for the BlackBerry® smartphone Model RHK211LW (STV100-1) , RHL211LW (STV100-3) APPENDIX 7	
Test Report No.: RTS-6066-1509-01A	Dates of Test: July 22 – September 8, and September 28, 2015	FCC ID: L6ARHK210LW, L6ARHL210LW IC: 2503A-RHK210LW, 2503A-RHL210LW

802.11n RF Conducted Emission Test Results cont'd

Figure 7-18: 6 dB Bandwidth
Secondary, 802.11n, Channel 36, MCS 0

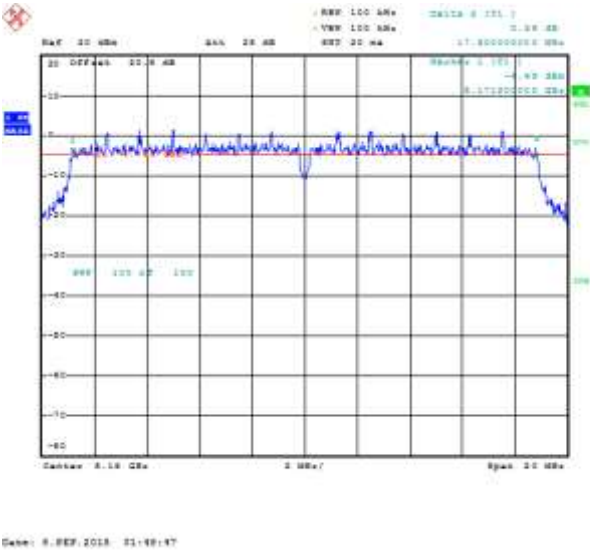


Figure 7-19: 6 dB Bandwidth
Secondary, 802.11n, Channel 64, MCS 0

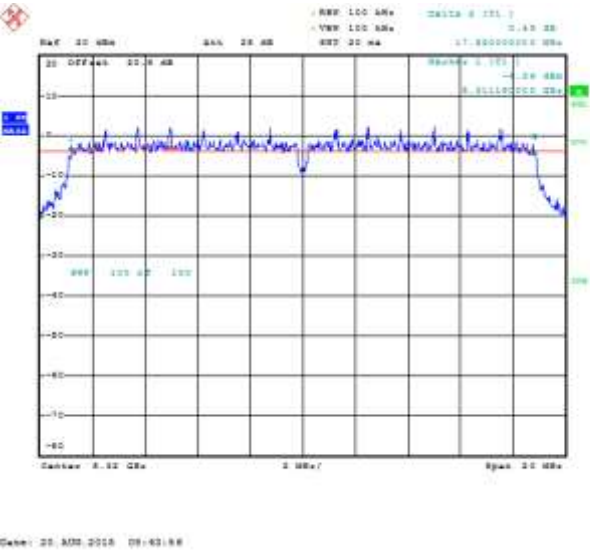
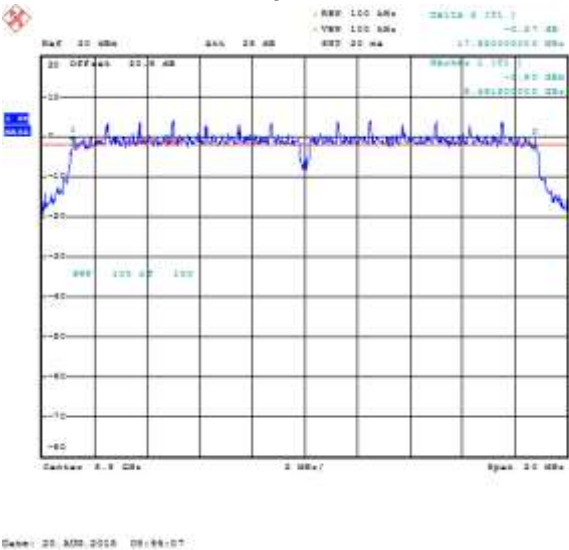


Figure 7-20: 6 dB Bandwidth
Secondary, 802.11n, Channel 100, MCS 0



	EMC Test Report for the BlackBerry® smartphone Model RHK211LW (STV100-1) , RHL211LW (STV100-3) APPENDIX 7	
Test Report No.: RTS-6066-1509-01A	Dates of Test: July 22 – September 8, and September 28, 2015	FCC ID: L6ARHK210LW, L6ARHL210LW IC: 2503A-RHK210LW, 2503A-RHL210LW

802.11n RF Conducted Emission Test Results cont'd

Figure 7-21: 6 dB Bandwidth
Secondary, 802.11n, Channel 140, MCS 0

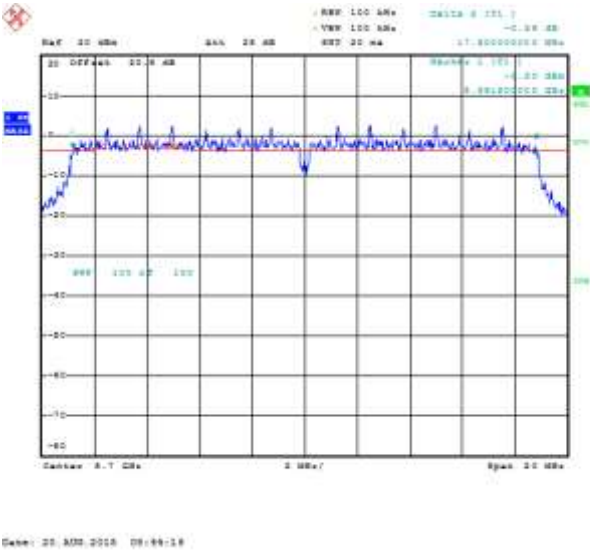
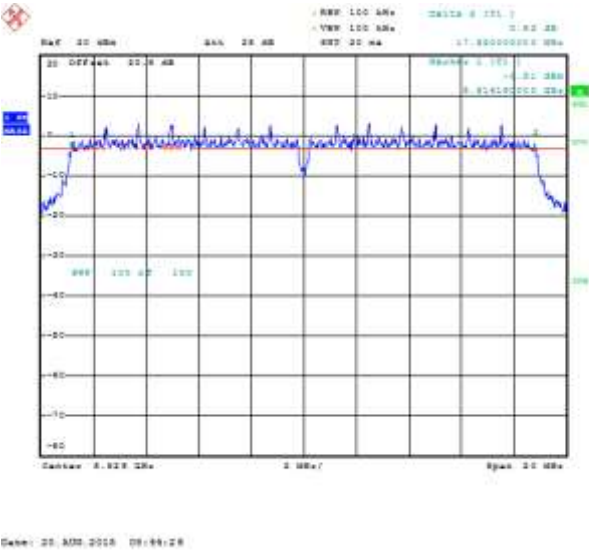


Figure 7-22: 6 dB Bandwidth
Secondary, 802.11n, Channel 165, MCS 0



	EMC Test Report for the BlackBerry® smartphone Model RHK211LW (STV100-1) , RHL211LW (STV100-3) APPENDIX 7	
Test Report No.: RTS-6066-1509-01A	Dates of Test: July 22 – September 8, and September 28, 2015	FCC ID: L6ARHK210LW, L6ARHL210LW IC: 2503A-RHK210LW, 2503A-RHL210LW

802.11n RF Conducted Emission Test Results cont'd

40 MHz Bandwidth

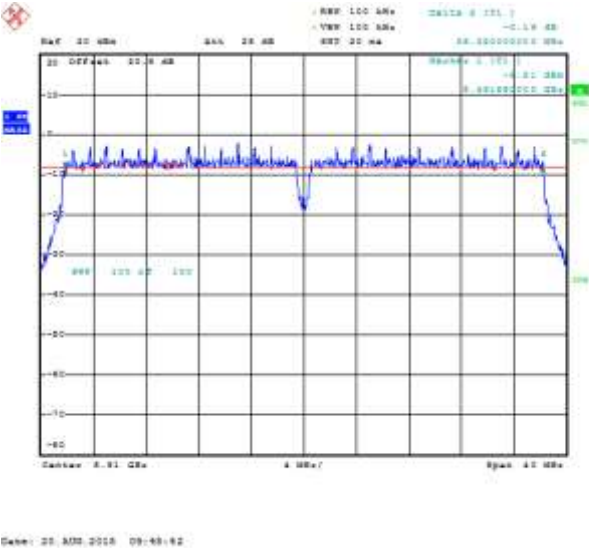
Figure 7-23: 6 dB Bandwidth
Primary, 802.11n, Channel 36, MCS 0



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



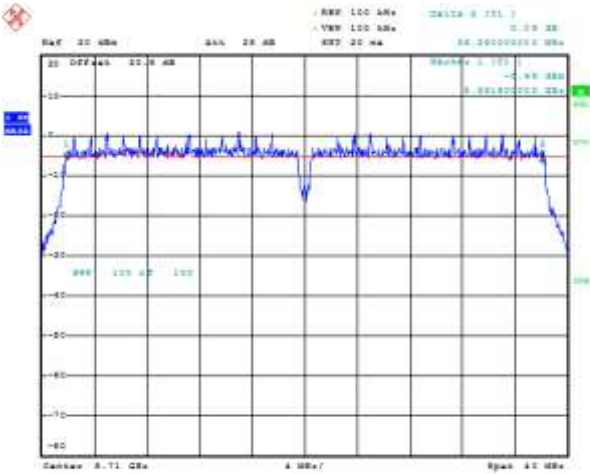
Figure 7-25: 6 dB Bandwidth
Primary, 802.11n, Channel 100, MCS 0



	EMC Test Report for the BlackBerry® smartphone Model RHK211LW (STV100-1) , RHL211LW (STV100-3) APPENDIX 7	
Test Report No.: RTS-6066-1509-01A	Dates of Test: July 22 – September 8, and September 28, 2015	FCC ID: L6ARHK210LW, L6ARHL210LW IC: 2503A-RHK210LW, 2503A-RHL210LW

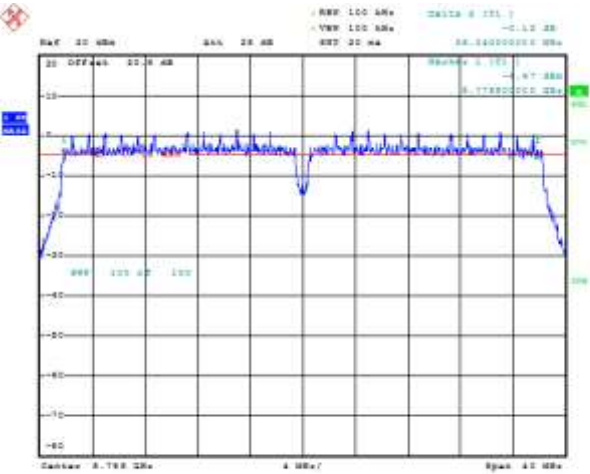
802.11n RF Conducted Emission Test Results cont'd

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



Date: 20.09.2015 09:49:02

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



Date: 20.09.2015 09:49:02

	EMC Test Report for the BlackBerry® smartphone Model RHK211LW (STV100-1) , RHL211LW (STV100-3) APPENDIX 7	
Test Report No.: RTS-6066-1509-01A	Dates of Test: July 22 – September 8, and September 28, 2015	FCC ID: L6ARHK210LW, L6ARHL210LW IC: 2503A-RHK210LW, 2503A-RHL210LW

802.11n RF Conducted Emission Test Results cont'd

Figure 7-28: 6 dB Bandwidth
Secondary, 802.11n, Channel 36, MCS 0

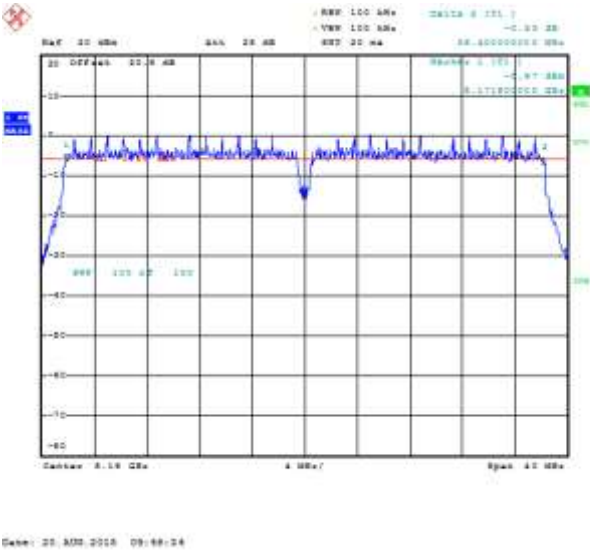


Figure 7-29: 6 dB Bandwidth
Secondary, 802.11n, Channel 64, MCS 0

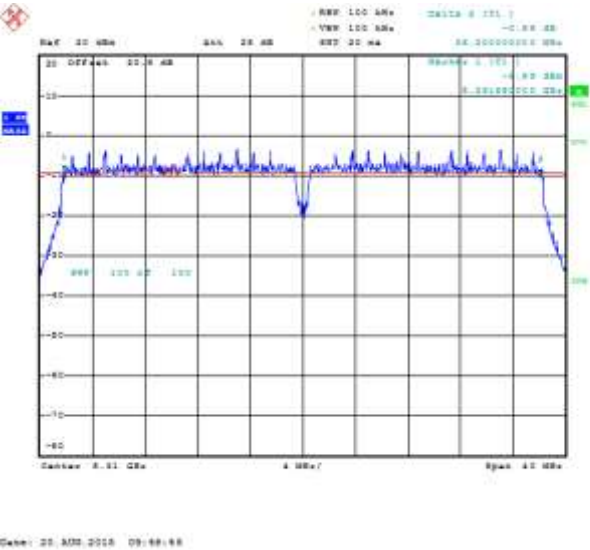
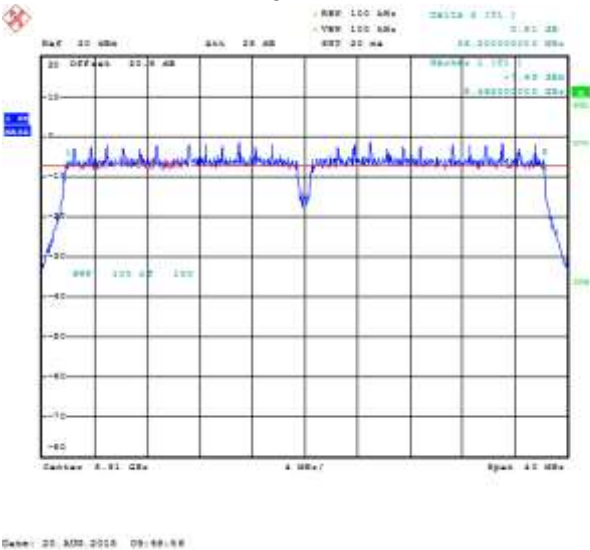


Figure 7-30: 6 dB Bandwidth
Secondary, 802.11n, Channel 100, MCS 0



	EMC Test Report for the BlackBerry® smartphone Model RHK211LW (STV100-1) , RHL211LW (STV100-3) APPENDIX 7	
Test Report No.: RTS-6066-1509-01A	Dates of Test: July 22 – September 8, and September 28, 2015	FCC ID: L6ARHK210LW, L6ARHL210LW IC: 2503A-RHK210LW, 2503A-RHL210LW

802.11n RF Conducted Emission Test Results cont'd

Figure 7-31: 6 dB Bandwidth
Secondary, 802.11n, Channel 140, MCS 0

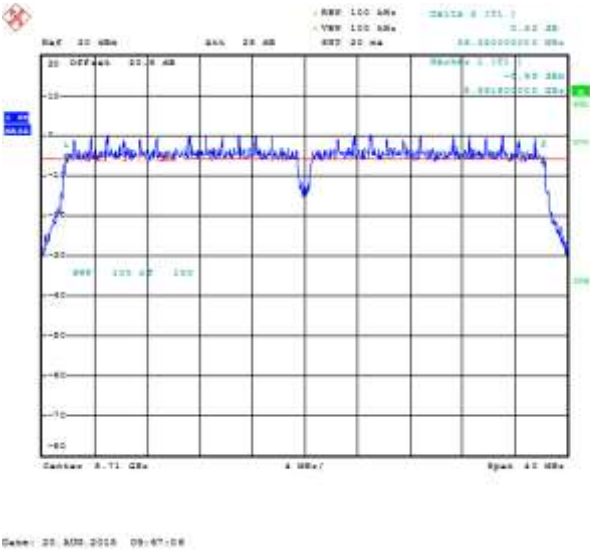
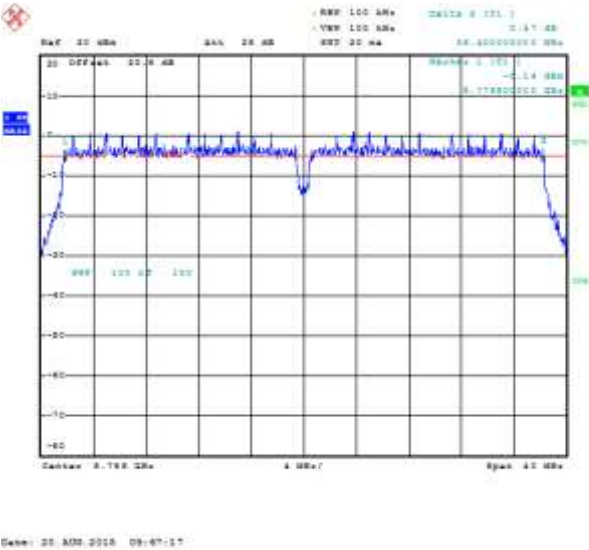


Figure 7-32: 6 dB Bandwidth
Secondary, 802.11n, Channel 161, MCS 0



	EMC Test Report for the BlackBerry® smartphone Model RHK211LW (STV100-1) , RHL211LW (STV100-3) APPENDIX 7	
Test Report No.: RTS-6066-1509-01A	Dates of Test: July 22 – September 8, and September 28, 2015	FCC ID: L6ARHK210LW, L6ARHL210LW IC: 2503A-RHK210LW, 2503A-RHL210LW

802.11a RF Conducted Emission Test Results cont'd

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

	EMC Test Report for the BlackBerry® smartphone Model RHK211LW (STV100-1) , RHL211LW (STV100-3) APPENDIX 7	
Test Report No.: RTS-6066-1509-01A	Dates of Test: July 22 – September 8, and September 28, 2015	FCC ID: L6ARHK210LW, L6ARHL210LW IC: 2503A-RHK210LW, 2503A-RHL210LW

802.11a RF Conducted Emission Test Results cont'd

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

	EMC Test Report for the BlackBerry® smartphone Model RHK211LW (STV100-1) , RHL211LW (STV100-3) APPENDIX 7	
Test Report No.: RTS-6066-1509-01A	Dates of Test: July 22 – September 8, and September 28, 2015	FCC ID: L6ARHK210LW, L6ARHL210LW IC: 2503A-RHK210LW, 2503A-RHL210LW

802.11n RF Conducted Emission Test Results

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

	EMC Test Report for the BlackBerry® smartphone Model RHK211LW (STV100-1) , RHL211LW (STV100-3) APPENDIX 7	
Test Report No.: RTS-6066-1509-01A	Dates of Test: July 22 – September 8, and September 28, 2015	FCC ID: L6ARHK210LW, L6ARHL210LW IC: 2503A-RHK210LW, 2503A-RHL210LW

802.11n RF Conducted Emission Test Results cont'd

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

	EMC Test Report for the BlackBerry® smartphone Model RHK211LW (STV100-1) , RHL211LW (STV100-3) APPENDIX 7	
Test Report No.: RTS-6066-1509-01A	Dates of Test: July 22 – September 8, and September 28, 2015	FCC ID: L6ARHK210LW, L6ARHL210LW IC: 2503A-RHK210LW, 2503A-RHL210LW

802.11n RF Conducted Emission Test Results cont'd

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

	EMC Test Report for the BlackBerry® smartphone Model RHK211LW (STV100-1) , RHL211LW (STV100-3) APPENDIX 7	
Test Report No.: RTS-6066-1509-01A	Dates of Test: July 22 – September 8, and September 28, 2015	FCC ID: L6ARHK210LW, L6ARHL210LW IC: 2503A-RHK210LW, 2503A-RHL210LW

802.11n RF Conducted Emission Test Results cont'd

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

	EMC Test Report for the BlackBerry® smartphone Model RHK211LW (STV100-1) , RHL211LW (STV100-3) APPENDIX 7	
Test Report No.: RTS-6066-1509-01A	Dates of Test: July 22 – September 8, and September 28, 2015	FCC ID: L6ARHK210LW, L6ARHL210LW IC: 2503A-RHK210LW, 2503A-RHL210LW

802.11a RF Conducted Emission Test Results cont'd

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.

	EMC Test Report for the BlackBerry® smartphone Model RHK211LW (STV100-1) , RHL211LW (STV100-3) APPENDIX 7	
Test Report No.: RTS-6066-1509-01A	Dates of Test: July 22 – September 8, and September 28, 2015	FCC ID: L6ARHK210LW, L6ARHL210LW IC: 2503A-RHK210LW, 2503A-RHL210LW

802.11n RF Conducted Emission Test Results

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 each 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

	EMC Test Report for the BlackBerry® smartphone Model RHK211LW (STV100-1) , RHL211LW (STV100-3) APPENDIX 7	
Test Report No.: RTS-6066-1509-01A	Dates of Test: July 22 – September 8, and September 28, 2015	FCC ID: L6ARHK210LW, L6ARHL210LW IC: 2503A-RHK210LW, 2503A-RHL210LW

802.11n RF Conducted Emission Test Results

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.

	EMC Test Report for the BlackBerry® smartphone Model RHK211LW (STV100-1) , RHL211LW (STV100-3) APPENDIX 7	
Test Report No.: RTS-6066-1509-01A	Dates of Test: July 22 – September 8, and September 28, 2015	FCC ID: L6ARHK210LW, L6ARHL210LW IC: 2503A-RHK210LW, 2503A-RHL210LW

802.11a RF Conducted Emission Test Results cont'd

Figure 7-32: Band Edge Compliance
Primary, 802.11a, Channel 36, 6 Mbps

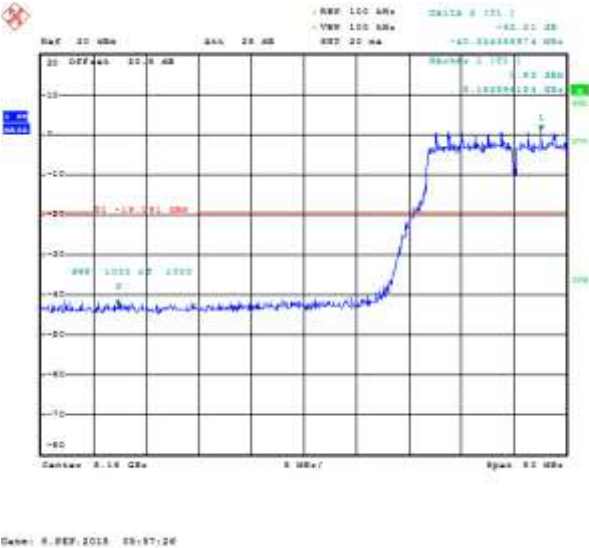


Figure 7-33: Band Edge Compliance
Primary, 802.11a, Channel 64, 6 Mbps

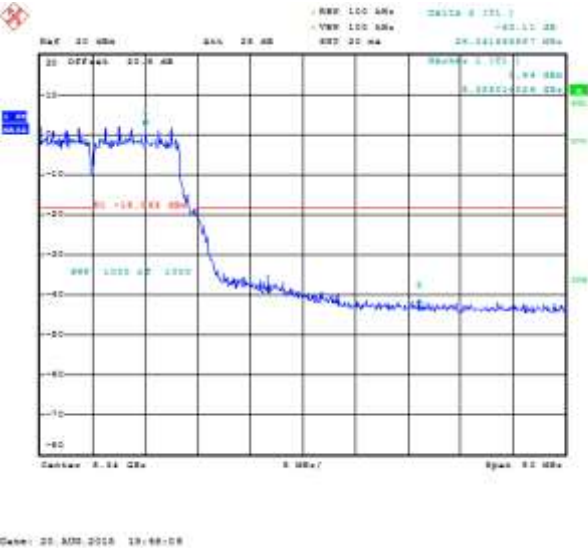


Figure 7-34: Band Edge Compliance
Primary, 802.11a, Channel 100, 6 Mbps

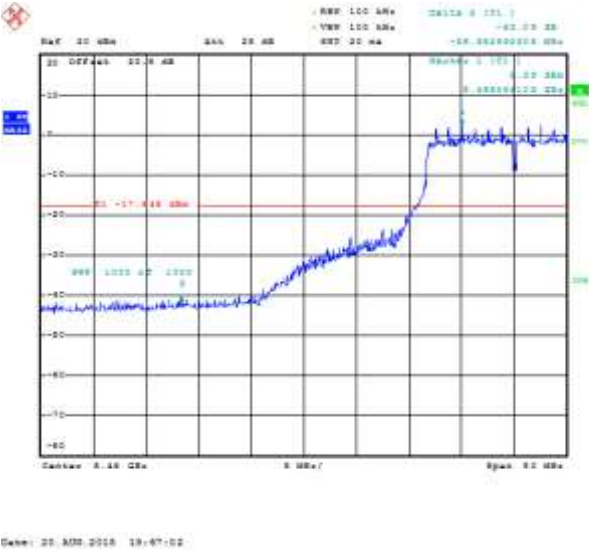
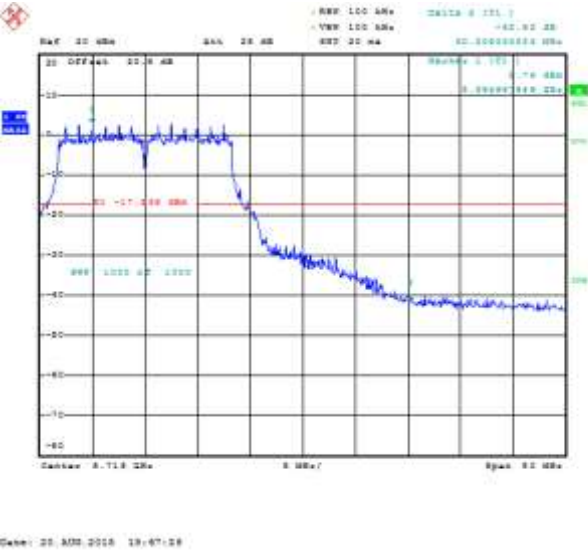


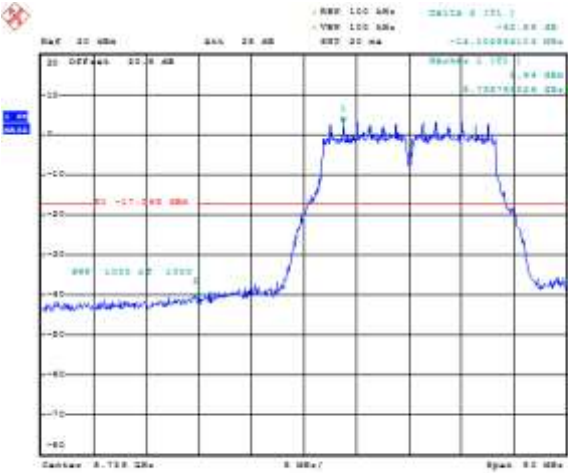
Figure 7-35: Band Edge Compliance
Primary, 802.11a, Channel 140, 6 Mbps



	EMC Test Report for the BlackBerry® smartphone Model RHK211LW (STV100-1) , RHL211LW (STV100-3) APPENDIX 7	
Test Report No.: RTS-6066-1509-01A	Dates of Test: July 22 – September 8, and September 28, 2015	FCC ID: L6ARHK210LW, L6ARHL210LW IC: 2503A-RHK210LW, 2503A-RHL210LW

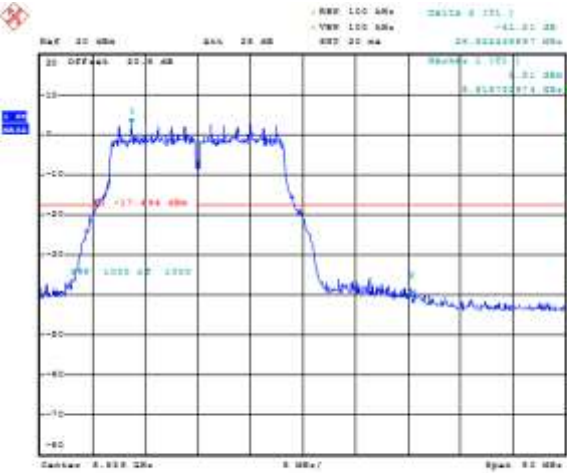
802.11a RF Conducted Emission Test Results cont'd

Figure 7-36: Band Edge Compliance
Primary, 802.11a, Channel 149, 6 Mbps



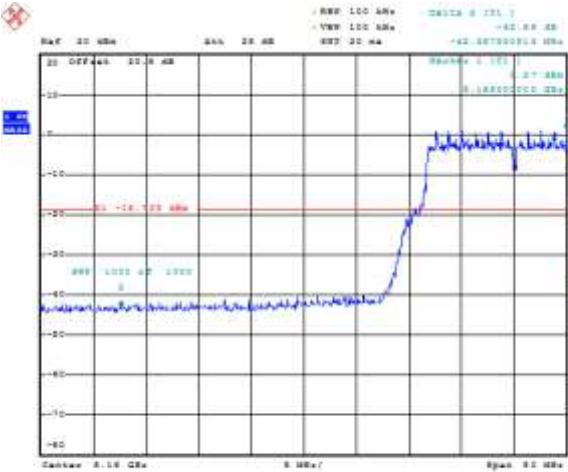
Date: 20. MAR. 2015 19:59:25

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



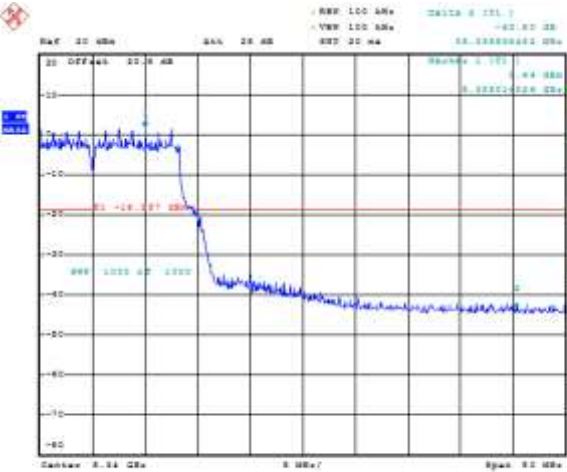
Date: 20. MAR. 2015 19:50:15

Figure 7-38: Band Edge Compliance
Secondary, 802.11a, Channel 36, 6 Mbps



Date: 8. SEP. 2015 19:59:15

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



Date: 20. MAR. 2015 19:52:15

	EMC Test Report for the BlackBerry® smartphone Model RHK211LW (STV100-1) , RHL211LW (STV100-3) APPENDIX 7	
Test Report No.: RTS-6066-1509-01A	Dates of Test: July 22 – September 8, and September 28, 2015	FCC ID: L6ARHK210LW, L6ARHL210LW IC: 2503A-RHK210LW, 2503A-RHL210LW

802.11a RF Conducted Emission Test Results cont'd

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

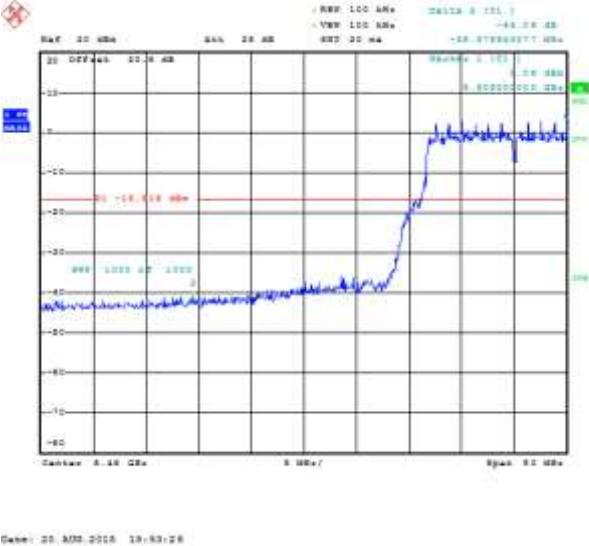


Figure 7-41: Band Edge Compliance
Secondary, 802.11a, Channel 140, 6
Mbps

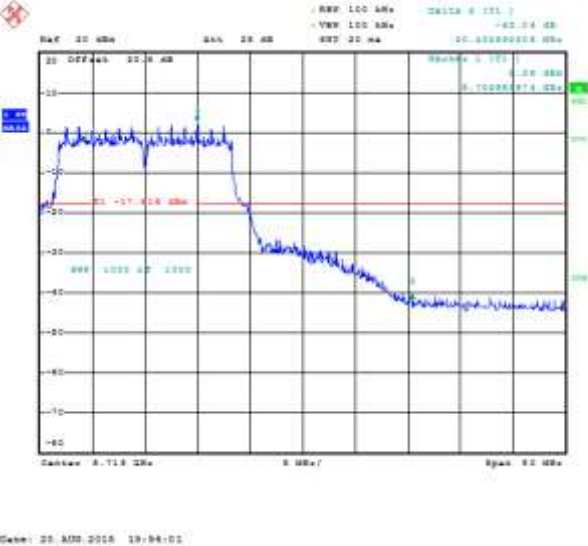


Figure 7-42: Band Edge Compliance
Secondary, 802.11a, Channel 149, 6
Mbps

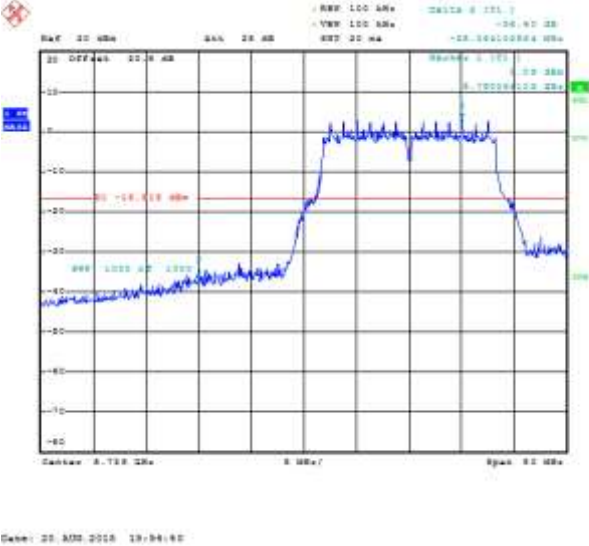
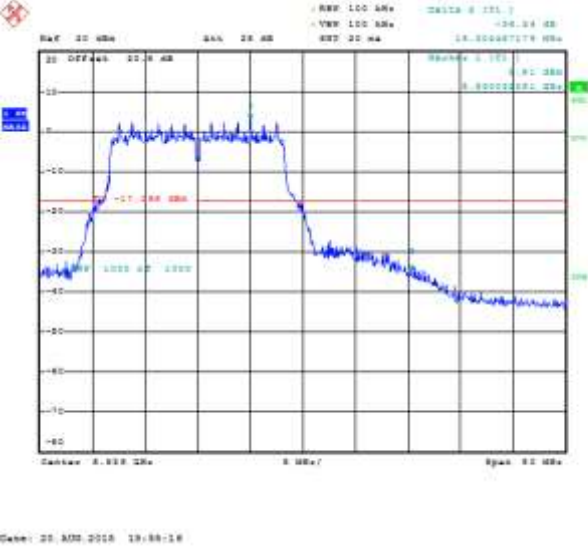


Figure 7-43: Band Edge Compliance
Secondary, 802.11a, Channel 165, 6
Mbps



	EMC Test Report for the BlackBerry® smartphone Model RHK211LW (STV100-1) , RHL211LW (STV100-3) APPENDIX 7	
Test Report No.: RTS-6066-1509-01A	Dates of Test: July 22 – September 8, and September 28, 2015	FCC ID: L6ARHK210LW, L6ARHL210LW IC: 2503A-RHK210LW, 2503A-RHL210LW

802.11n RF Conducted Emission Test Results

20 MHz Bandwidth

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

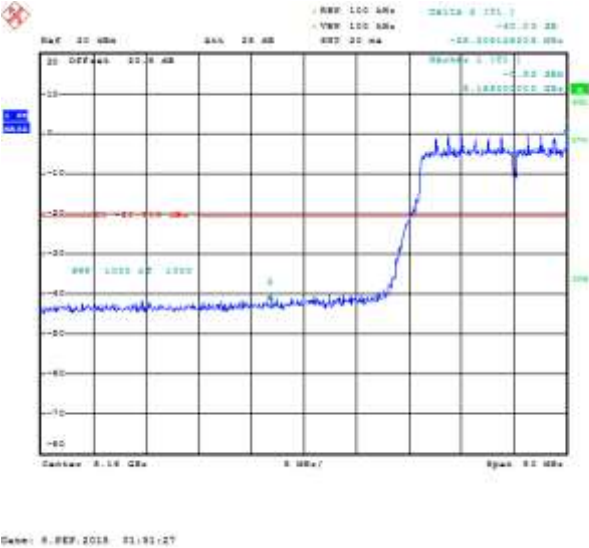


Figure 7-45: Band Edge Compliance
Primary, 802.11n, Channel 64, 6 Mbps

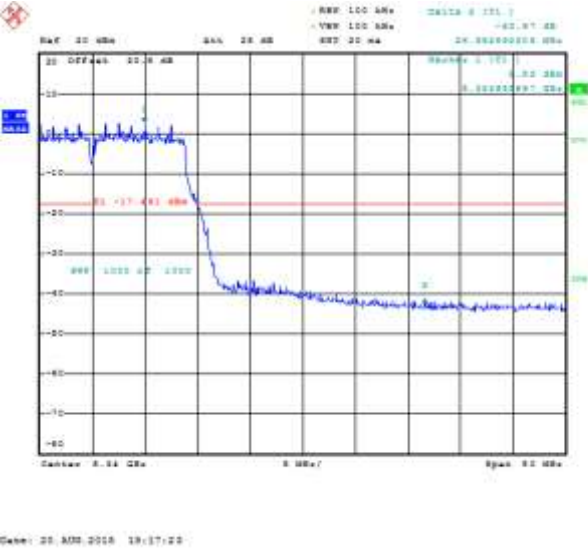


Figure 7-46: Band Edge Compliance
Primary, 802.11n, Channel 100, 6 Mbps

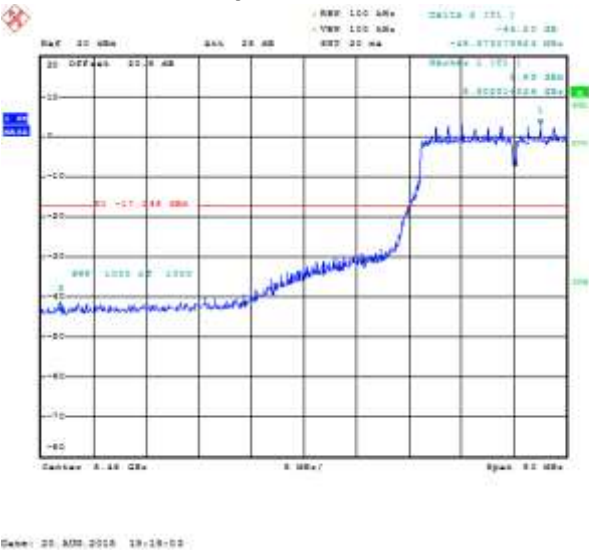
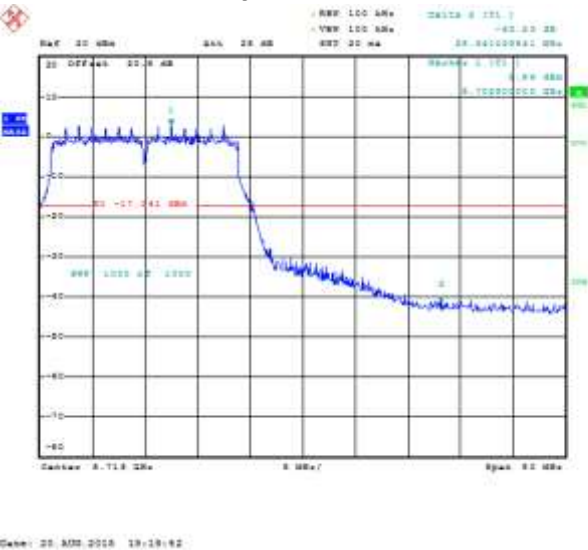


Figure 7-47: Band Edge Compliance
Primary, 802.11n, Channel 140, 6 Mbps



	EMC Test Report for the BlackBerry® smartphone Model RHK211LW (STV100-1) , RHL211LW (STV100-3) APPENDIX 7	
Test Report No.: RTS-6066-1509-01A	Dates of Test: July 22 – September 8, and September 28, 2015	FCC ID: L6ARHK210LW, L6ARHL210LW IC: 2503A-RHK210LW, 2503A-RHL210LW

802.11n RF Conducted Emission Test Results cont'd

Figure 7-48: Band Edge Compliance
Primary, 802.11n, Channel 149, 6 Mbps

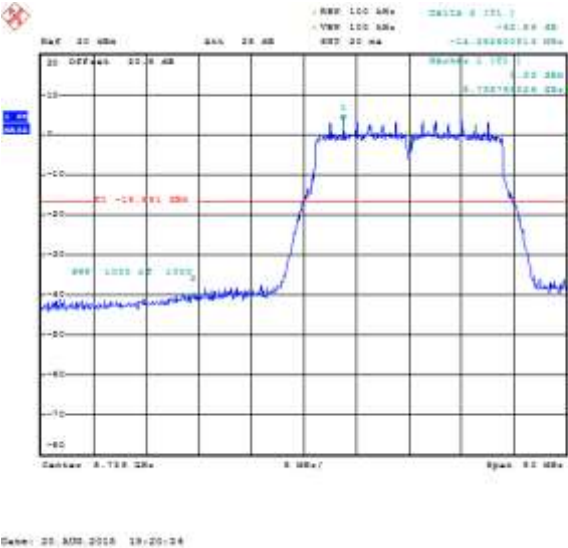


Figure 7-49: Band Edge Compliance
Primary, 802.11n, Channel 165, 6 Mbps

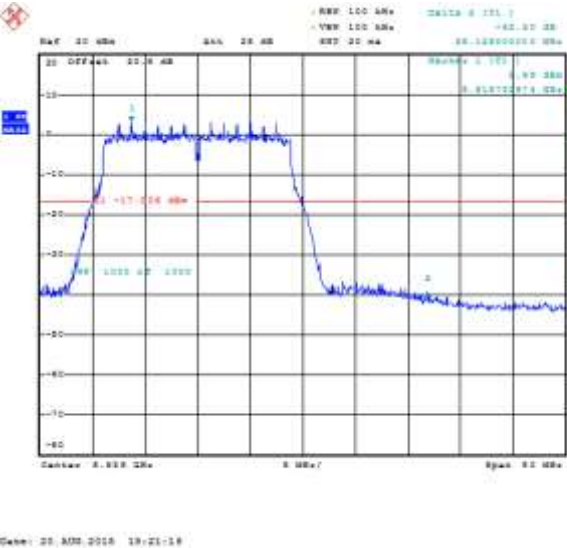


Figure 7-50: Band Edge Compliance
Secondary, 802.11n, Channel 36, 6 Mbps

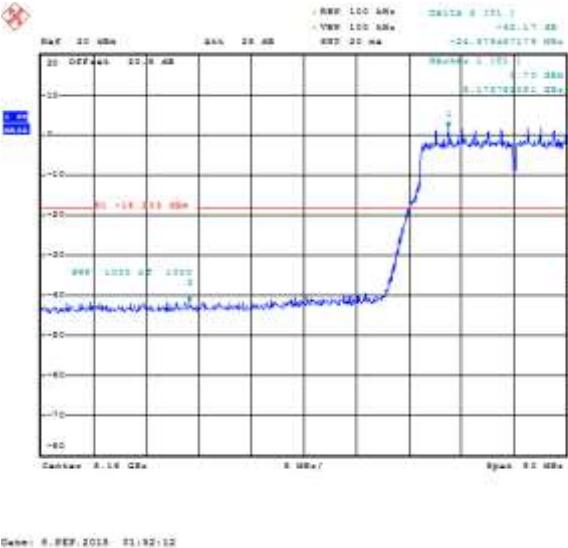
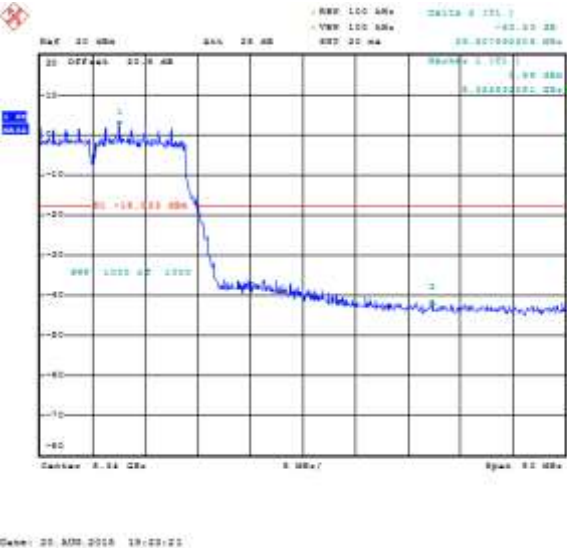


Figure 7-51: Band Edge Compliance
Secondary, 802.11n, Channel 64, 6 Mbps



	EMC Test Report for the BlackBerry® smartphone Model RHK211LW (STV100-1) , RHL211LW (STV100-3) APPENDIX 7	
Test Report No.: RTS-6066-1509-01A	Dates of Test: July 22 – September 8, and September 28, 2015	FCC ID: L6ARHK210LW, L6ARHL210LW IC: 2503A-RHK210LW, 2503A-RHL210LW

802.11n RF Conducted Emission Test Results cont'd

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

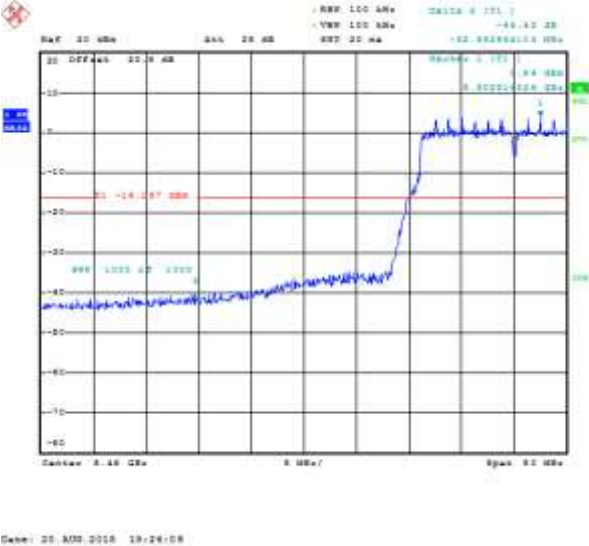


Figure 7-53: Band Edge Compliance
Secondary, 802.11n, Channel 140, 6
Mbps

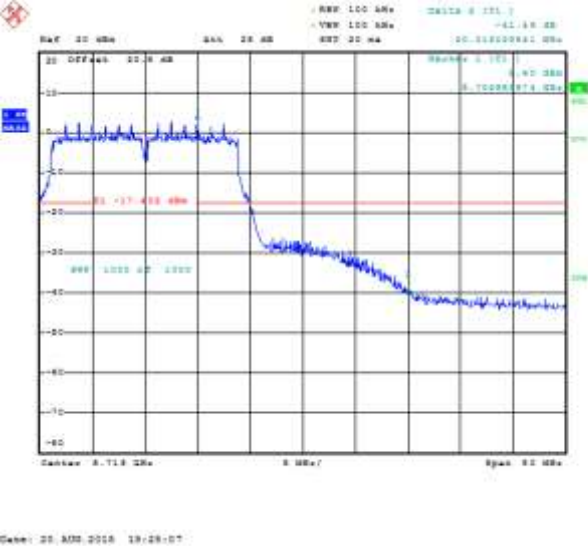


Figure 7-54: Band Edge Compliance
Secondary, 802.11n, Channel 149, 6
Mbps

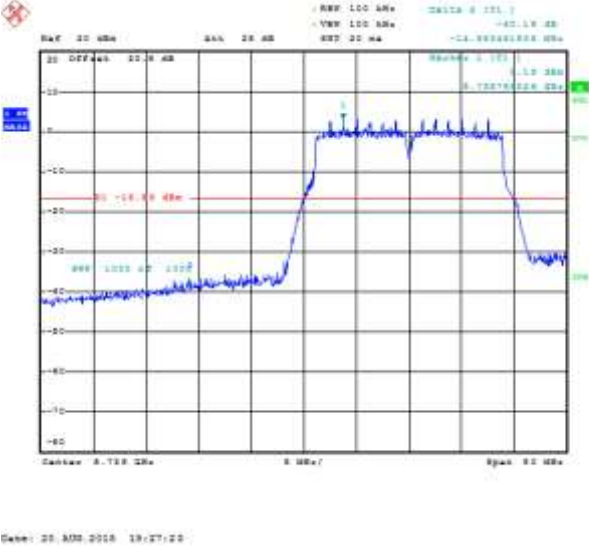
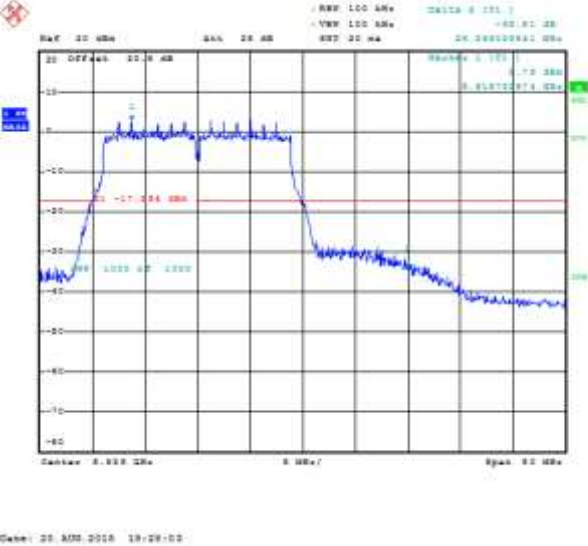


Figure 7-55: Band Edge Compliance
Secondary, 802.11n, Channel 165, 6
Mbps



	EMC Test Report for the BlackBerry® smartphone Model RHK211LW (STV100-1) , RHL211LW (STV100-3) APPENDIX 7	
Test Report No.: RTS-6066-1509-01A	Dates of Test: July 22 – September 8, and September 28, 2015	FCC ID: L6ARHK210LW, L6ARHL210LW IC: 2503A-RHK210LW, 2503A-RHL210LW

802.11n RF Conducted Emission Test Results cont'd

40 MHz Bandwidth

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

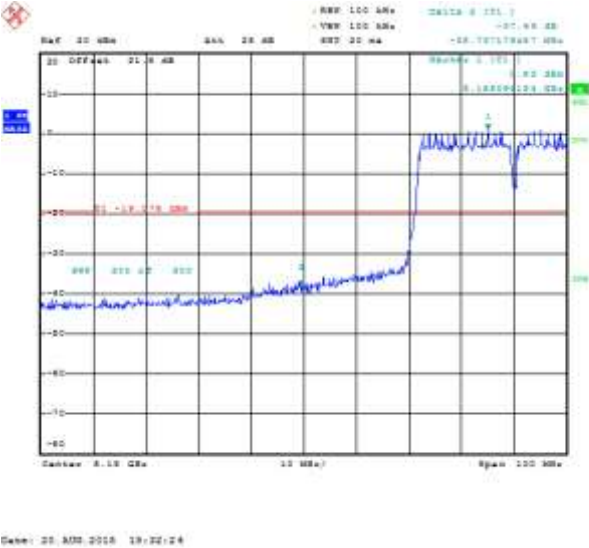


Figure 7-57: Band Edge Compliance
Primary, 802.11n, Channel 64, 6 Mbps

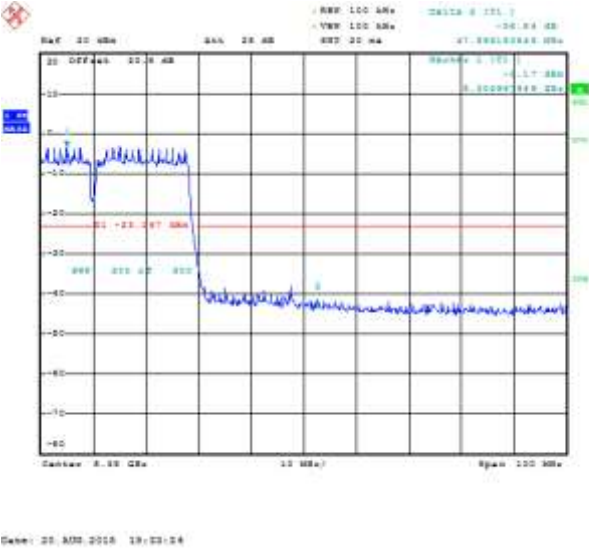


Figure 7-58: Band Edge Compliance
Primary, 802.11n, Channel 100, 6 Mbps

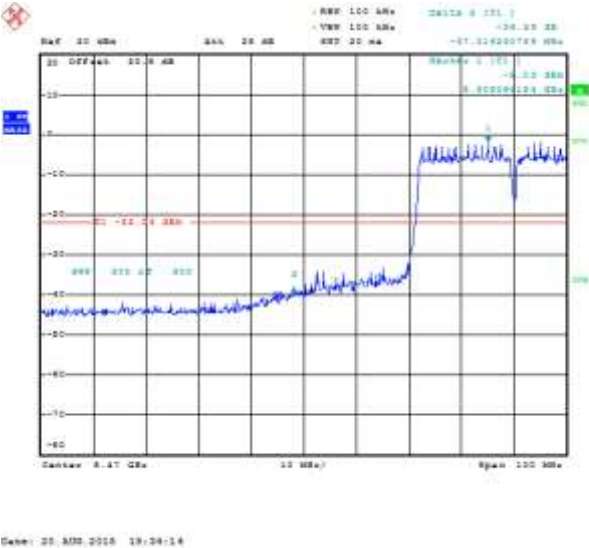
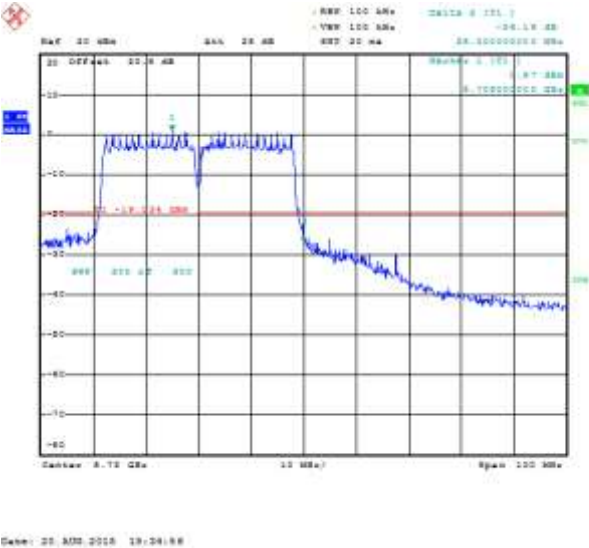


Figure 7-59: Band Edge Compliance
Primary, 802.11n, Channel 140, 6 Mbps



	EMC Test Report for the BlackBerry® smartphone Model RHK211LW (STV100-1) , RHL211LW (STV100-3) APPENDIX 7	
Test Report No.: RTS-6066-1509-01A	Dates of Test: July 22 – September 8, and September 28, 2015	FCC ID: L6ARHK210LW, L6ARHL210LW IC: 2503A-RHK210LW, 2503A-RHL210LW

802.11n RF Conducted Emission Test Results cont'd

Figure 7-60: Band Edge Compliance
Primary, 802.11n, Channel 149, 6 Mbps

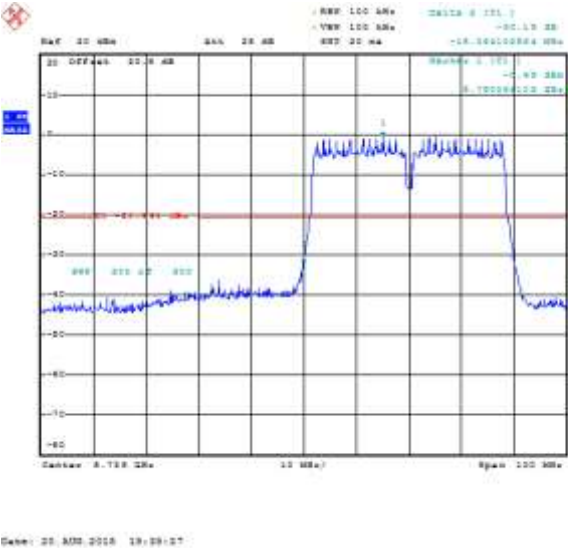


Figure 7-61: Band Edge Compliance
Secondary, 802.11n, Channel 36, 6 Mbps

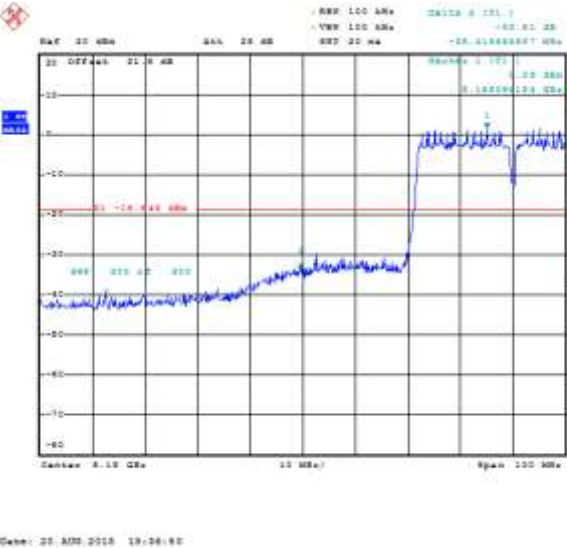


Figure 7-62: Band Edge Compliance
Secondary, 802.11n, Channel 64, 6 Mbps

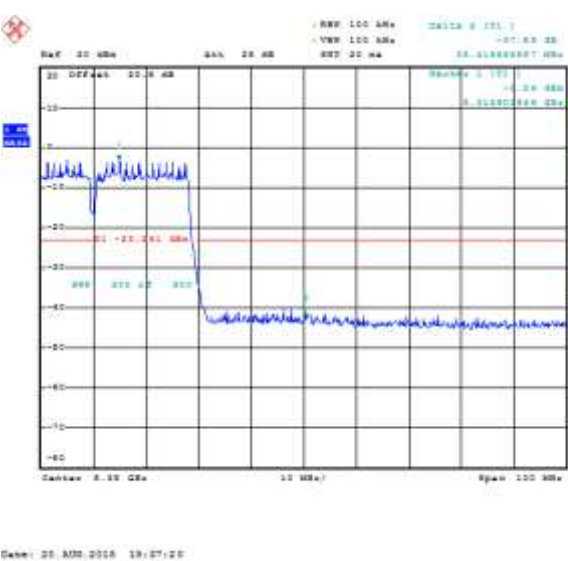
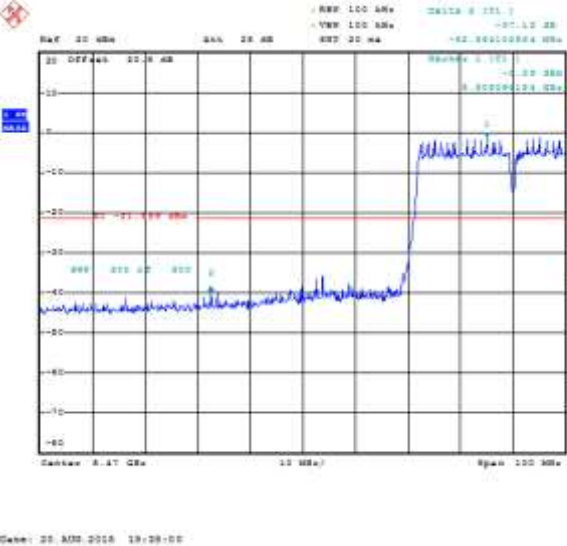


Figure 7-63: Band Edge Compliance
Secondary, 802.11n, Channel 100, 6 Mbps



	EMC Test Report for the BlackBerry® smartphone Model RHK211LW (STV100-1) , RHL211LW (STV100-3) APPENDIX 7	
Test Report No.: RTS-6066-1509-01A	Dates of Test: July 22 – September 8, and September 28, 2015	FCC ID: L6ARHK210LW, L6ARHL210LW IC: 2503A-RHK210LW, 2503A-RHL210LW

802.11a RF Conducted Emission Test Results cont'd

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

	EMC Test Report for the BlackBerry® smartphone Model RHK211LW (STV100-1) , RHL211LW (STV100-3) APPENDIX 7	
Test Report No.: RTS-6066-1509-01A	Dates of Test: July 22 – September 8, and September 28, 2015	FCC ID: L6ARHK210LW, L6ARHL210LW IC: 2503A-RHK210LW, 2503A-RHL210LW

802.11a RF Conducted Emission Test Results cont'd

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.

	EMC Test Report for the BlackBerry® smartphone Model RHK211LW (STV100-1) , RHL211LW (STV100-3) APPENDIX 7	
Test Report No.: RTS-6066-1509-01A	Dates of Test: July 22 – September 8, and September 28, 2015	FCC ID: L6ARHK210LW, L6ARHL210LW IC: 2503A-RHK210LW, 2503A-RHL210LW

802.11n RF Conducted Emission Test Results

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

	EMC Test Report for the BlackBerry® smartphone Model RHK211LW (STV100-1) , RHL211LW (STV100-3) APPENDIX 7	
Test Report No.: RTS-6066-1509-01A	Dates of Test: July 22 – September 8, and September 28, 2015	FCC ID: L6ARHK210LW, L6ARHL210LW IC: 2503A-RHK210LW, 2503A-RHL210LW

802.11n RF Conducted Emission Test Results cont'd

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

	EMC Test Report for the BlackBerry® smartphone Model RHK211LW (STV100-1) , RHL211LW (STV100-3) APPENDIX 7	
Test Report No.: RTS-6066-1509-01A	Dates of Test: July 22 – September 8, and September 28, 2015	FCC ID: L6ARHK210LW, L6ARHL210LW IC: 2503A-RHK210LW, 2503A-RHL210LW

802.11n RF Conducted Emission Test Results cont'd

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.

	EMC Test Report for the BlackBerry® smartphone Model RHK211LW (STV100-1) , RHL211LW (STV100-3) APPENDIX 7	
Test Report No.: RTS-6066-1509-01A	Dates of Test: July 22 – September 8, and September 28, 2015	FCC ID: L6ARHK210LW, L6ARHL210LW IC: 2503A-RHK210LW, 2503A-RHL210LW

802.11a RF Conducted Emission Test Results cont'd

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



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



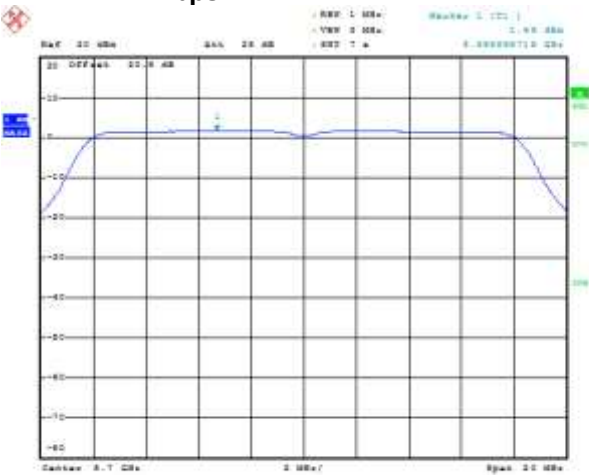
Figure 7-69: Peak Power Spectral Density
SISO Primary, 802.11a, Channel 100, 6 Mbps



	EMC Test Report for the BlackBerry® smartphone Model RHK211LW (STV100-1) , RHL211LW (STV100-3) APPENDIX 7	
Test Report No.: RTS-6066-1509-01A	Dates of Test: July 22 – September 8, and September 28, 2015	FCC ID: L6ARHK210LW, L6ARHL210LW IC: 2503A-RHK210LW, 2503A-RHL210LW

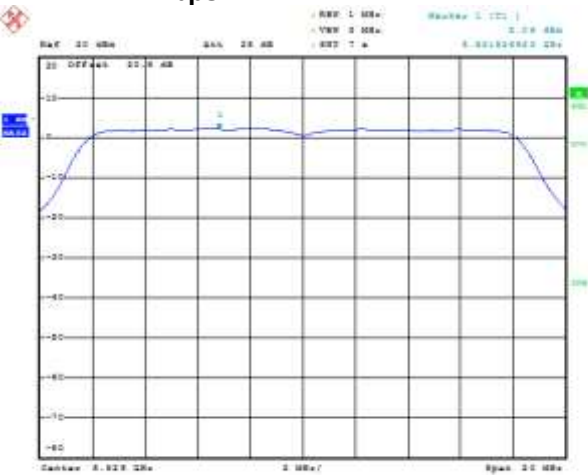
802.11a RF Conducted Emission Test Results cont'd

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



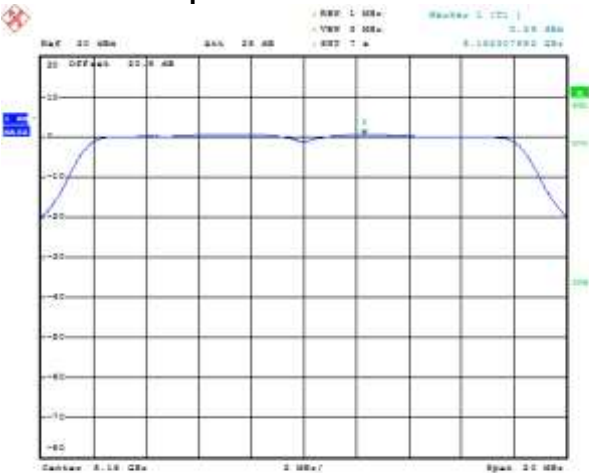
Date: 18. SEP. 2015 10:59:52

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



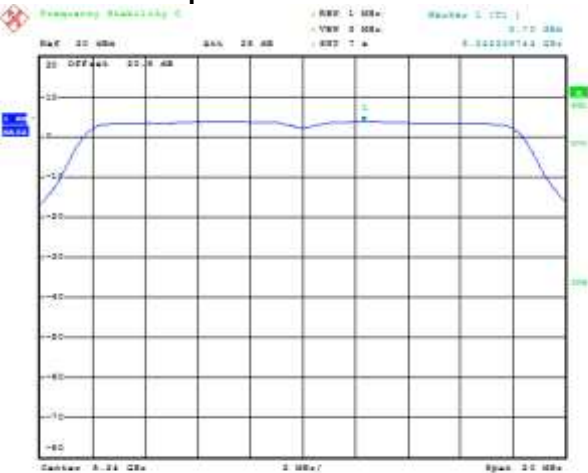
Date: 18. SEP. 2015 10:59:52

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



Date: 18. SEP. 2015 10:59:52

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



Date: 18. SEP. 2015 10:59:52

	EMC Test Report for the BlackBerry® smartphone Model RHK211LW (STV100-1) , RHL211LW (STV100-3) APPENDIX 7	
Test Report No.: RTS-6066-1509-01A	Dates of Test: July 22 – September 8, and September 28, 2015	FCC ID: L6ARHK210LW, L6ARHL210LW IC: 2503A-RHK210LW, 2503A-RHL210LW

802.11a RF Conducted Emission Test Results cont'd

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



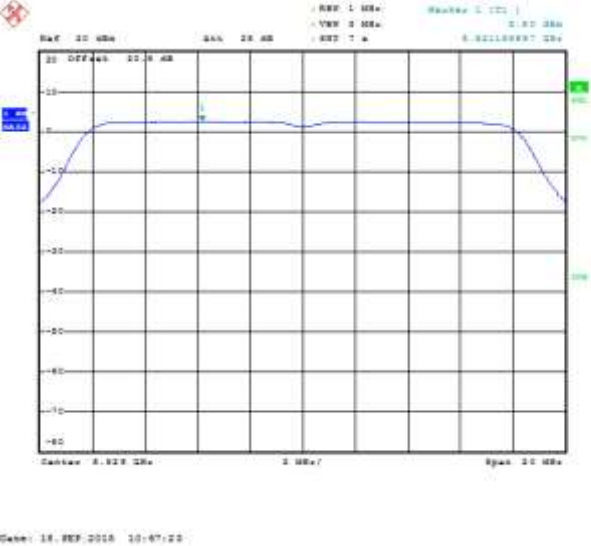
Figure 7-75: Peak Power Spectral Density
SISO Secondary, 802.11a, Channel 100, 6 Mbps



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



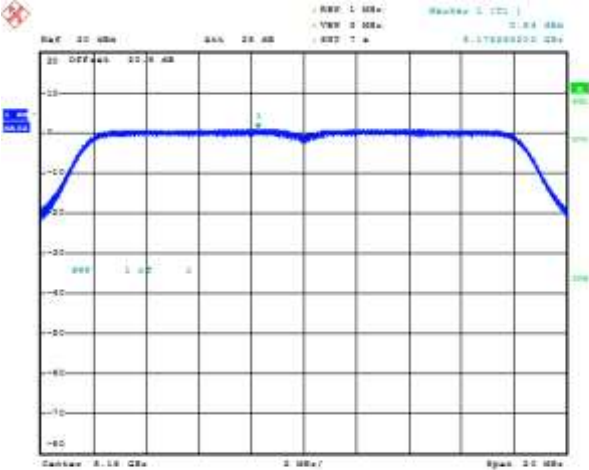
Figure 7-77: Peak Power Spectral Density
SISO Secondary, 802.11a, Channel 165, 6 Mbps



	EMC Test Report for the BlackBerry® smartphone Model RHK211LW (STV100-1) , RHL211LW (STV100-3) APPENDIX 7	
Test Report No.: RTS-6066-1509-01A	Dates of Test: July 22 – September 8, and September 28, 2015	FCC ID: L6ARHK210LW, L6ARHL210LW IC: 2503A-RHK210LW, 2503A-RHL210LW

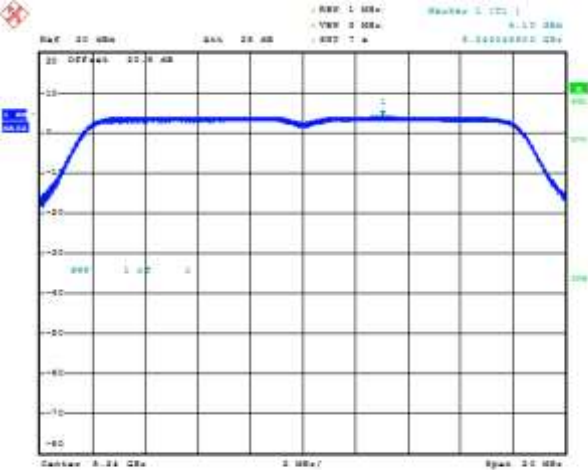
802.11a RF Conducted Emission Test Results cont'd

Figure 7-78: Peak Power Spectral Density
MIMO Primary, 802.11a, Channel 36, 6
Mbps



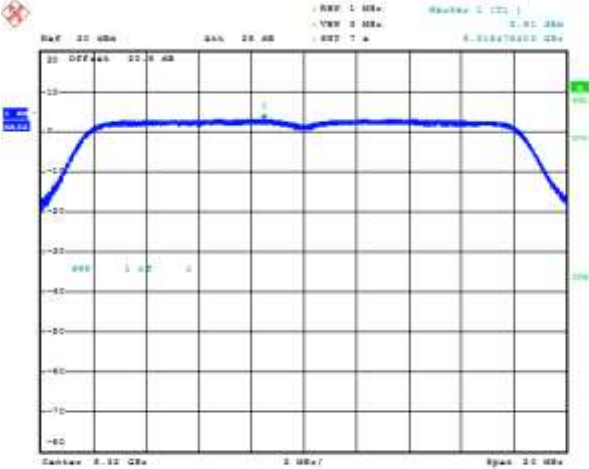
Date: 8 SEP 2015 09:37:23

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



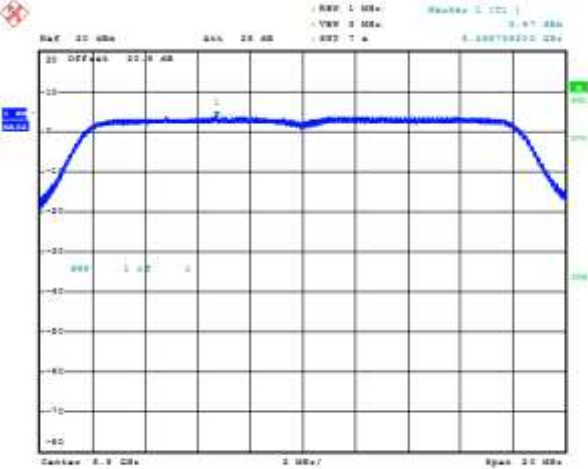
Date: 28 SEP 2015 16:43:38

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



Date: 28 SEP 2015 16:55:52

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



Date: 28 SEP 2015 16:59:58

	EMC Test Report for the BlackBerry® smartphone Model RHK211LW (STV100-1) , RHL211LW (STV100-3) APPENDIX 7	
Test Report No.: RTS-6066-1509-01A	Dates of Test: July 22 – September 8, and September 28, 2015	FCC ID: L6ARHK210LW, L6ARHL210LW IC: 2503A-RHK210LW, 2503A-RHL210LW

802.11a RF Conducted Emission Test Results cont'd

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

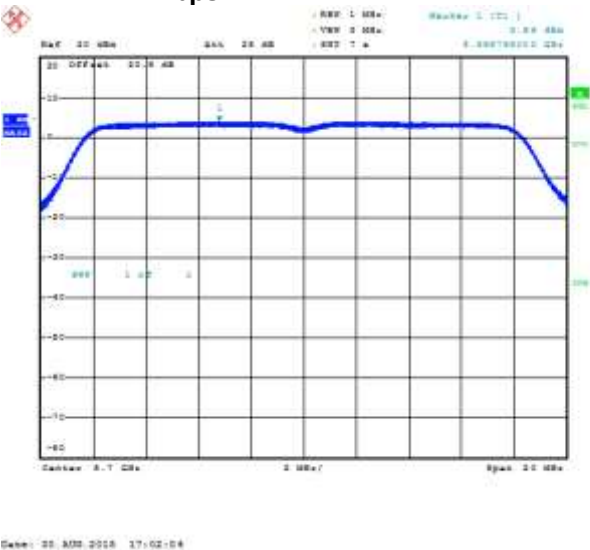


Figure 7-83: Peak Power Spectral Density
MIMO Primary, 802.11a, Channel 165, 6
Mbps

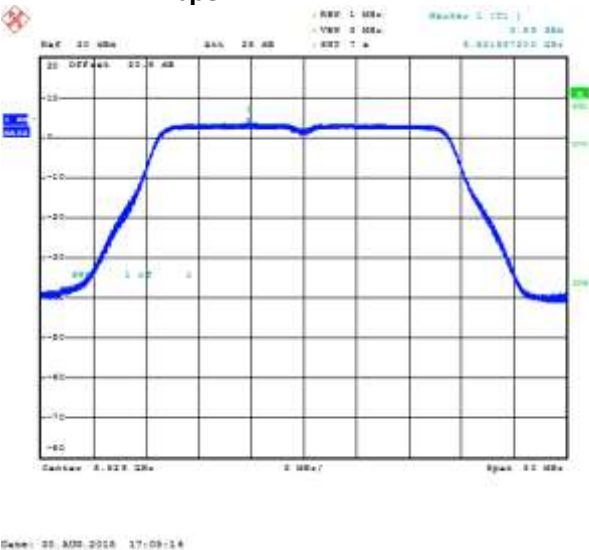


Figure 7-84: Peak Power Spectral Density
MIMO Secondary, 802.11a, Channel 36, 6
Mbps

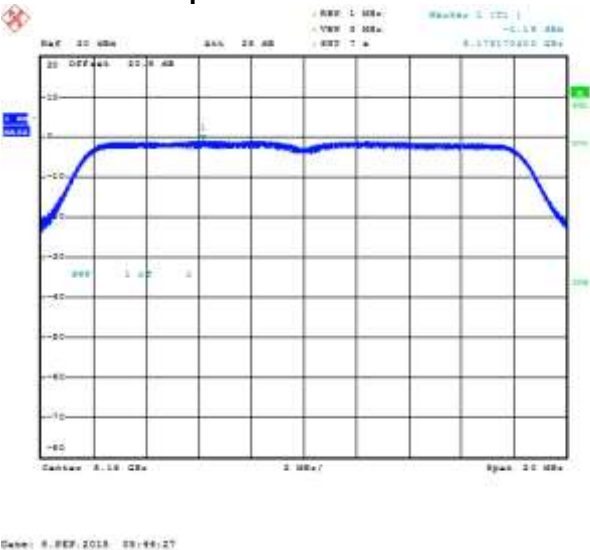
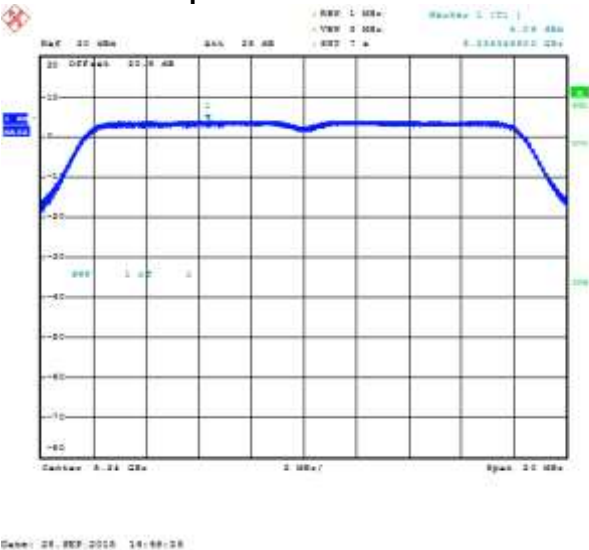


Figure 7-85: Peak Power Spectral Density
MIMO Secondary, 802.11a, Channel 48, 6
Mbps



	EMC Test Report for the BlackBerry® smartphone Model RHK211LW (STV100-1) , RHL211LW (STV100-3) APPENDIX 7	
Test Report No.: RTS-6066-1509-01A	Dates of Test: July 22 – September 8, and September 28, 2015	FCC ID: L6ARHK210LW, L6ARHL210LW IC: 2503A-RHK210LW, 2503A-RHL210LW

802.11a RF Conducted Emission Test Results cont'd

Figure 7-86: Peak Power Spectral Density
MIMO Secondary, 802.11a, Channel 64, 6
Mbps

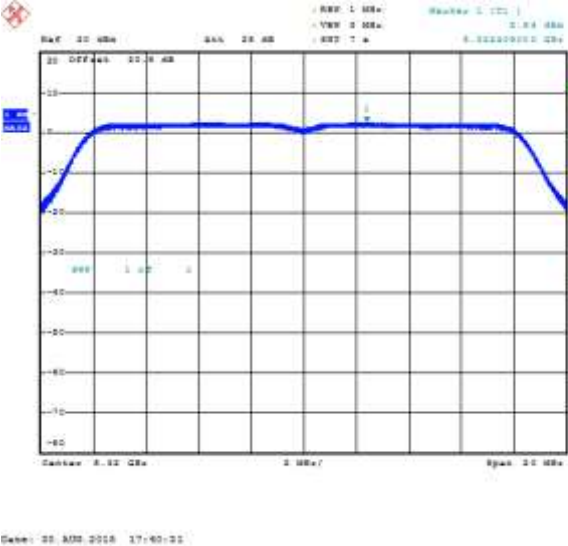


Figure 7-87: Peak Power Spectral Density
MIMO Secondary, 802.11a, Channel 100,
6 Mbps

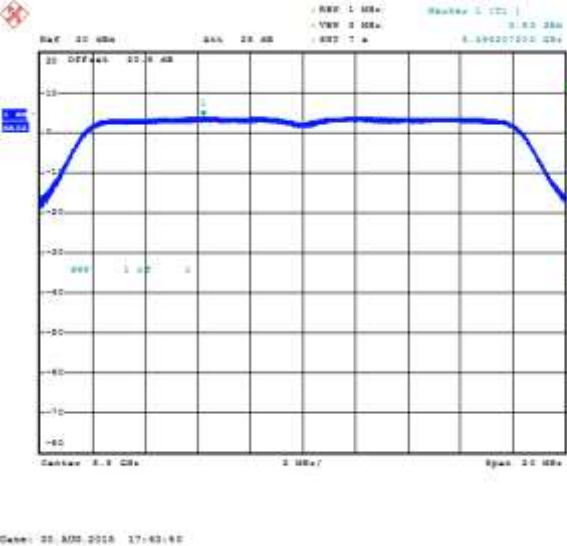


Figure 7-88: Peak Power Spectral Density
MIMO Secondary, 802.11a, Channel 140,
6 Mbps

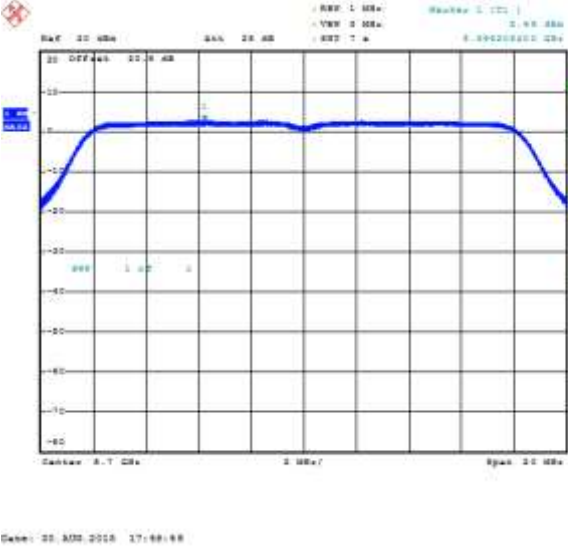
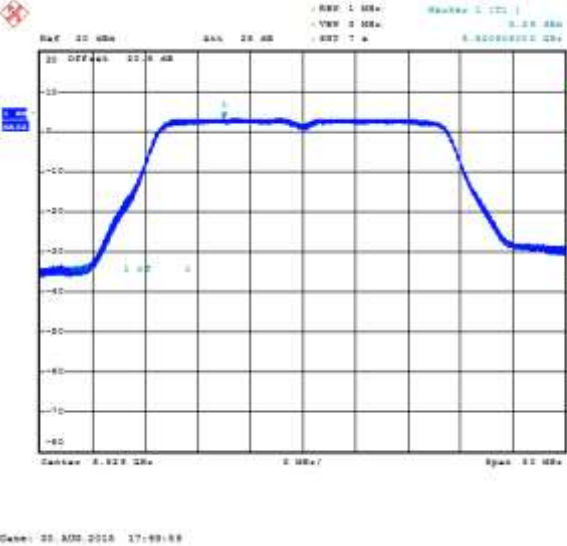


Figure 7-89: Peak Power Spectral Density
MIMO Secondary, 802.11a, Channel 165,
6 Mbps



	EMC Test Report for the BlackBerry® smartphone Model RHK211LW (STV100-1) , RHL211LW (STV100-3) APPENDIX 7	
Test Report No.: RTS-6066-1509-01A	Dates of Test: July 22 – September 8, and September 28, 2015	FCC ID: L6ARHK210LW, L6ARHL210LW IC: 2503A-RHK210LW, 2503A-RHL210LW

802.11n RF Conducted Emission Test Results

20 MHz bandwidth

Figure 7-90: Peak Power Spectral Density
SISO Primary, 802.11n, Channel 36, MCS 0

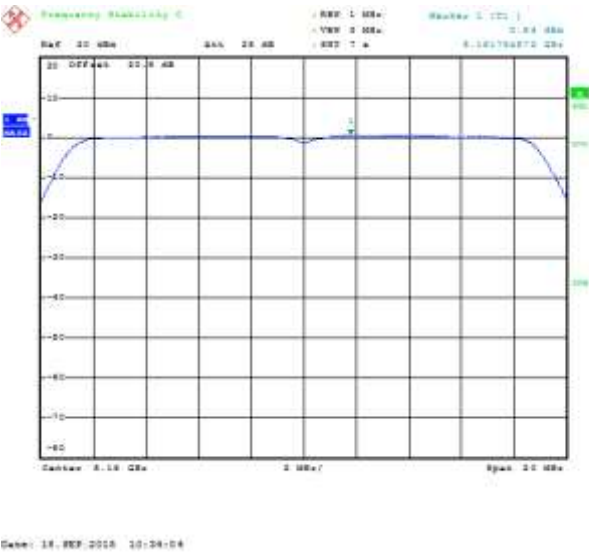


Figure 7-91: Peak Power Spectral Density
SISO Primary, 802.11n, Channel 64, MCS 0

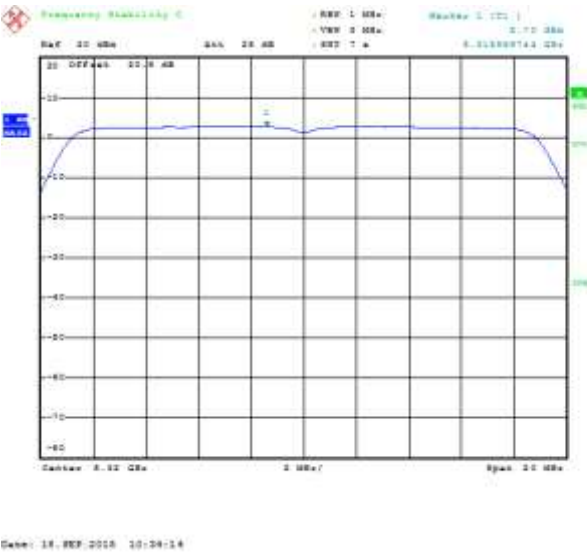


Figure 7-92: Peak Power Spectral Density
SISO Primary, 802.11n, Channel 100, MCS 0

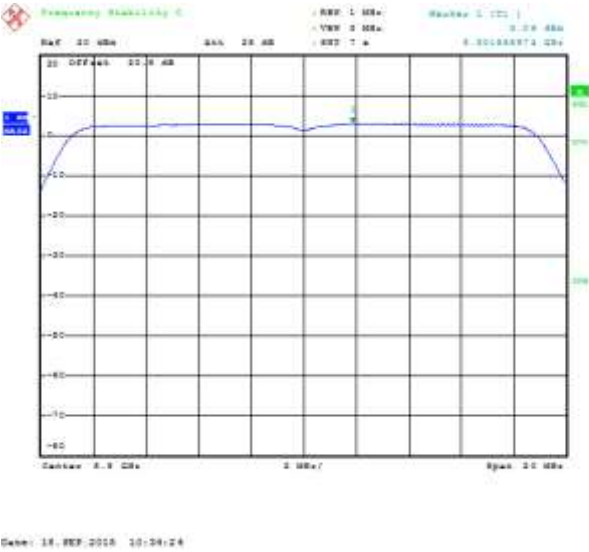
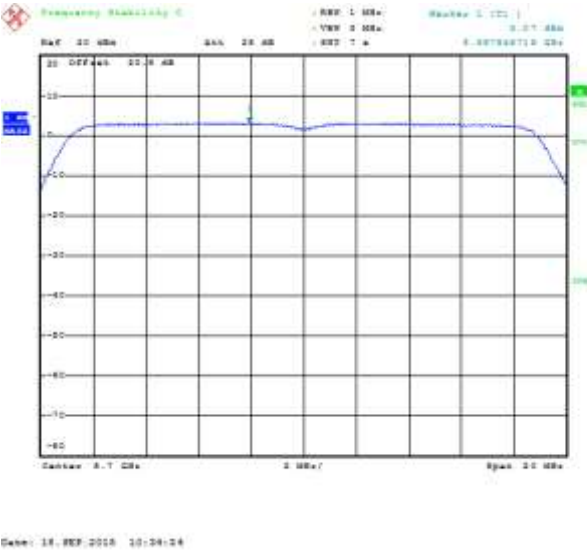


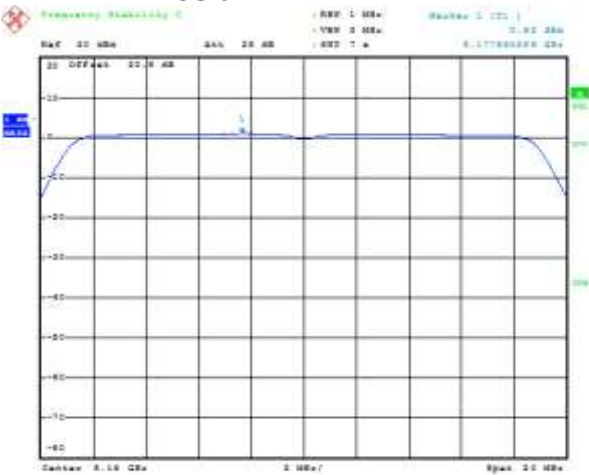
Figure 7-93: Peak Power Spectral Density
SISO Primary, 802.11n, Channel 140, MCS 0



	EMC Test Report for the BlackBerry® smartphone Model RHK211LW (STV100-1) , RHL211LW (STV100-3) APPENDIX 7	
Test Report No.: RTS-6066-1509-01A	Dates of Test: July 22 – September 8, and September 28, 2015	FCC ID: L6ARHK210LW, L6ARHL210LW IC: 2503A-RHK210LW, 2503A-RHL210LW

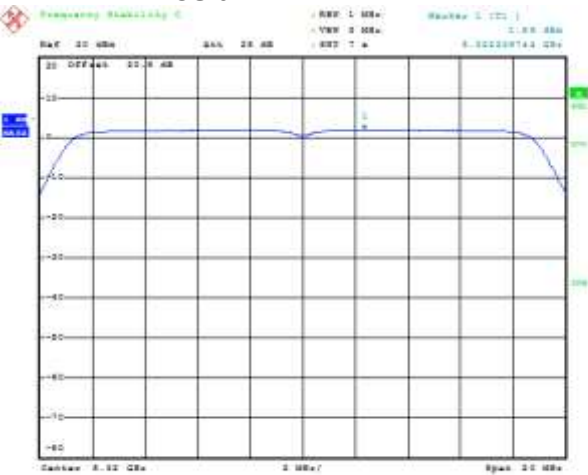
802.11n RF Conducted Emission Test Results

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



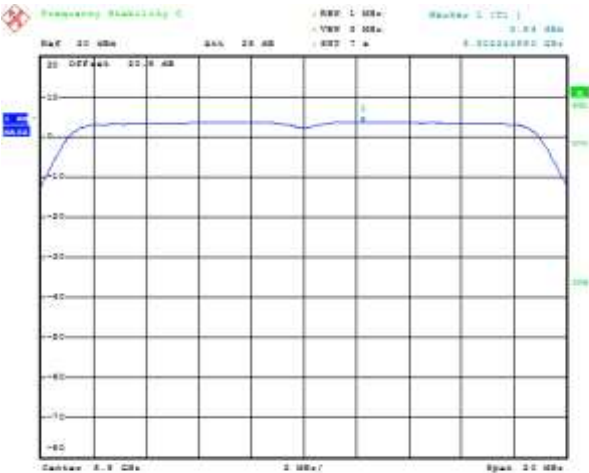
Date: 18. SEP. 2015 10:29:27

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



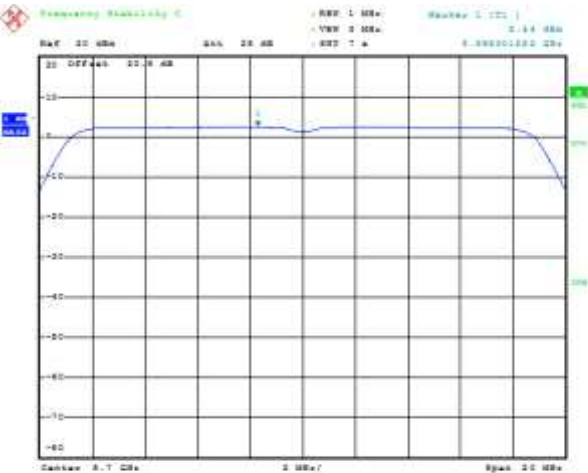
Date: 18. SEP. 2015 10:29:27

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



Date: 18. SEP. 2015 10:29:27

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



Date: 18. SEP. 2015 10:29:27

	EMC Test Report for the BlackBerry® smartphone Model RHK211LW (STV100-1) , RHL211LW (STV100-3) APPENDIX 7	
Test Report No.: RTS-6066-1509-01A	Dates of Test: July 22 – September 8, and September 28, 2015	FCC ID: L6ARHK210LW, L6ARHL210LW IC: 2503A-RHK210LW, 2503A-RHL210LW

802.11n RF Conducted Emission Test Results

20 MHz bandwidth

Figure 7-98: Peak Power Spectral Density
MIMO Primary, 802.11n, Channel 36, MCS 0

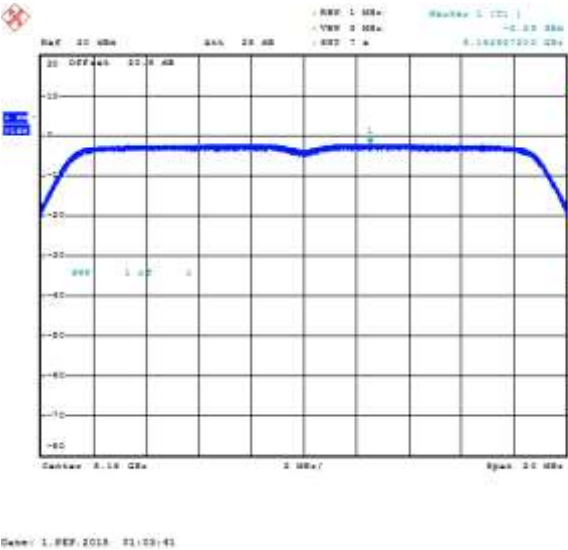


Figure 7-99: Peak Power Spectral Density
MIMO Primary, 802.11n, Channel 64, MCS 0

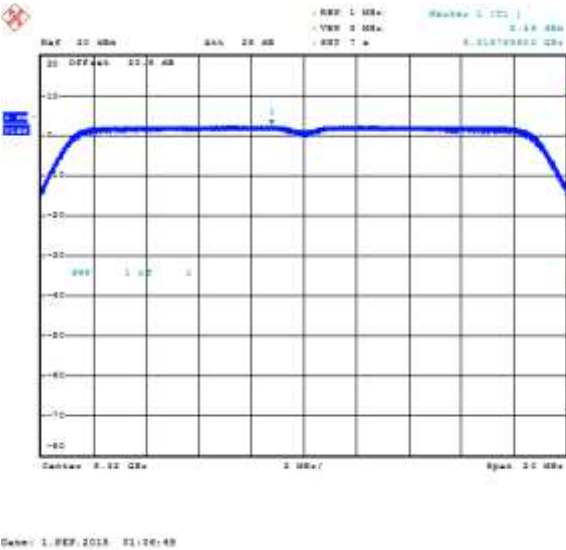


Figure 7-100: Peak Power Spectral Density
MIMO Primary, 802.11n, Channel 100, MCS 0

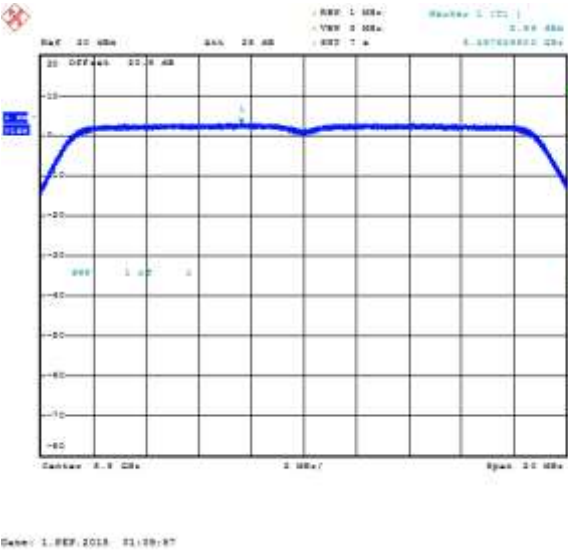
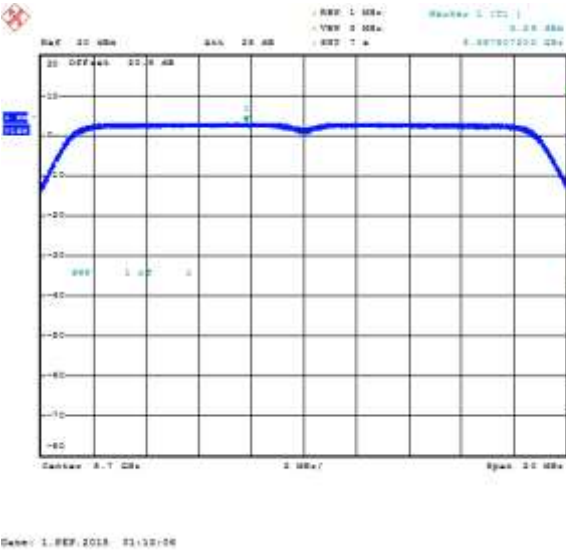


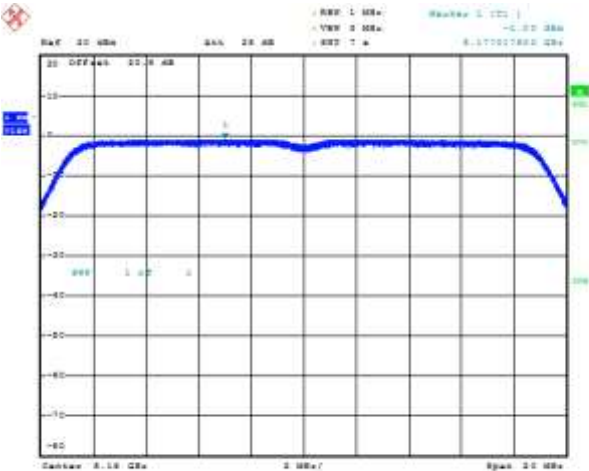
Figure 7-101: Peak Power Spectral Density
MIMO Primary, 802.11n, Channel 140, MCS 0



	EMC Test Report for the BlackBerry® smartphone Model RHK211LW (STV100-1) , RHL211LW (STV100-3) APPENDIX 7	
Test Report No.: RTS-6066-1509-01A	Dates of Test: July 22 – September 8, and September 28, 2015	FCC ID: L6ARHK210LW, L6ARHL210LW IC: 2503A-RHK210LW, 2503A-RHL210LW

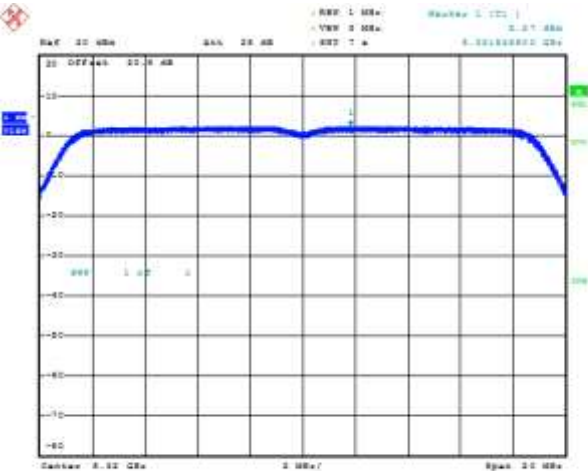
802.11n RF Conducted Emission Test Results

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



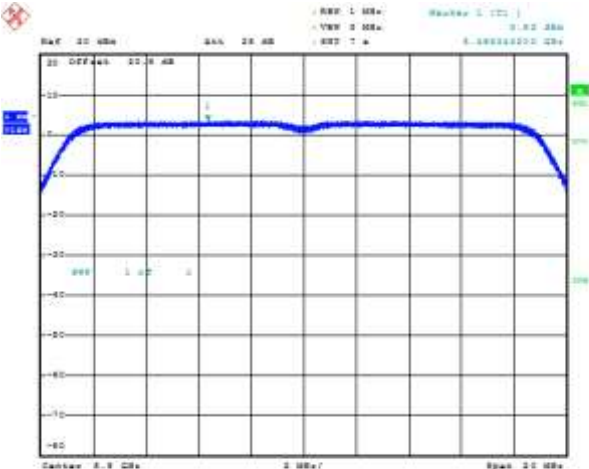
Date: 1 SEP 2015 13:20:36

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



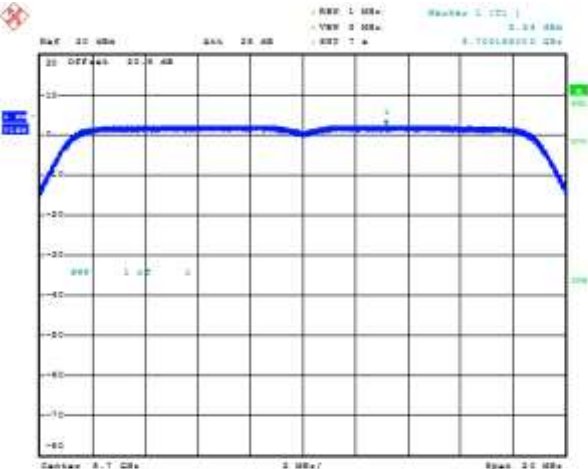
Date: 1 SEP 2015 13:20:42

Figure 7-104: Peak Power Spectral Density
MIMO Secondary, 802.11n, Channel 100,
MCS 0



Date: 1 SEP 2015 13:20:50

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



Date: 1 SEP 2015 13:21:00

	EMC Test Report for the BlackBerry® smartphone Model RHK211LW (STV100-1) , RHL211LW (STV100-3) APPENDIX 7	
Test Report No.: RTS-6066-1509-01A	Dates of Test: July 22 – September 8, and September 28, 2015	FCC ID: L6ARHK210LW, L6ARHL210LW IC: 2503A-RHK210LW, 2503A-RHL210LW

802.11n RF Conducted Emission Test Results

40 MHz bandwidth

Figure 7-106: Peak Power Spectral Density
SISO Primary, 802.11n, Channel 36, MCS 0

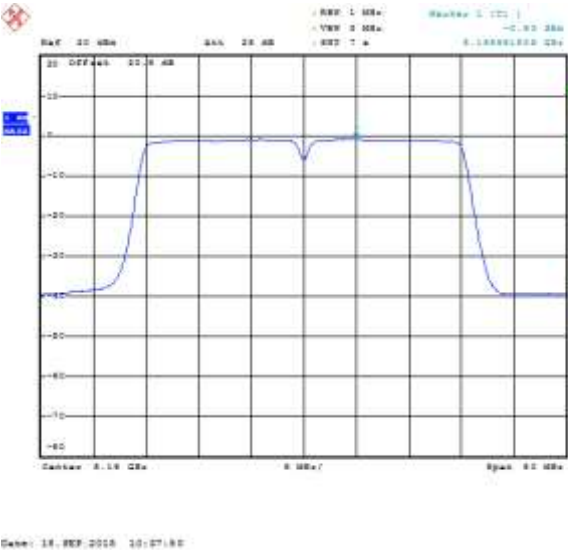


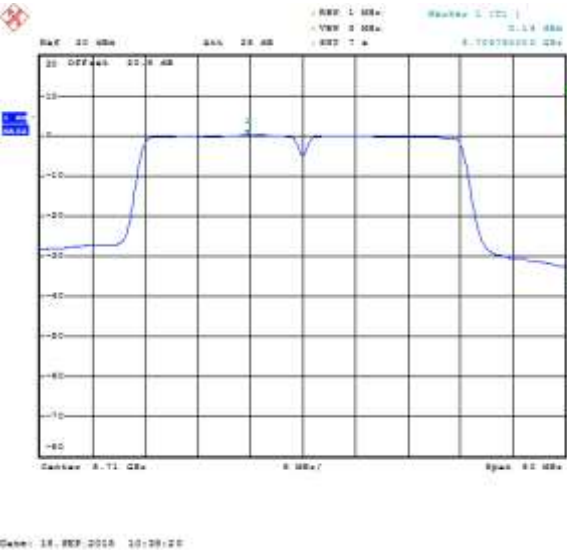
Figure 7-107: Peak Power Spectral Density
SISO Primary, 802.11n, Channel 64, MCS 0



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



	EMC Test Report for the BlackBerry® smartphone Model RHK211LW (STV100-1) , RHL211LW (STV100-3) APPENDIX 7	
Test Report No.: RTS-6066-1509-01A	Dates of Test: July 22 – September 8, and September 28, 2015	FCC ID: L6ARHK210LW, L6ARHL210LW IC: 2503A-RHK210LW, 2503A-RHL210LW

802.11n RF Conducted Emission Test Results

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,
MCS 0

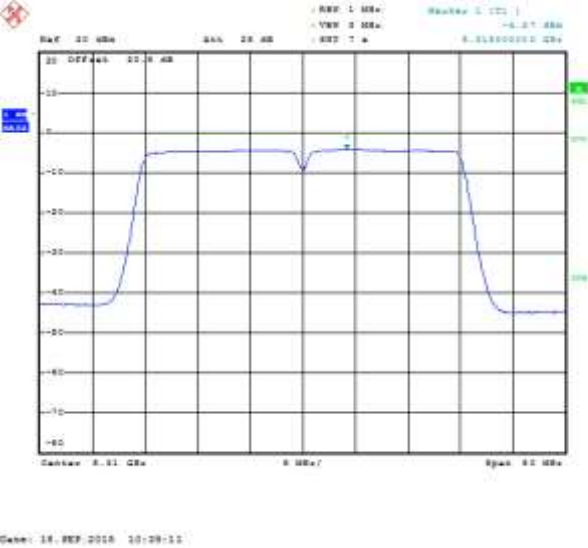


Figure 7-112: Peak Power Spectral Density
SISO Secondary, 802.11n, Channel 100,
MCS 0



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



	EMC Test Report for the BlackBerry® smartphone Model RHK211LW (STV100-1) , RHL211LW (STV100-3) APPENDIX 7	
Test Report No.: RTS-6066-1509-01A	Dates of Test: July 22 – September 8, and September 28, 2015	FCC ID: L6ARHK210LW, L6ARHL210LW IC: 2503A-RHK210LW, 2503A-RHL210LW

802.11n RF Conducted Emission Test Results

40 MHz bandwidth

Figure 7-114: Peak Power Spectral Density
MIMO Primary, 802.11n, Channel 36, MCS 0

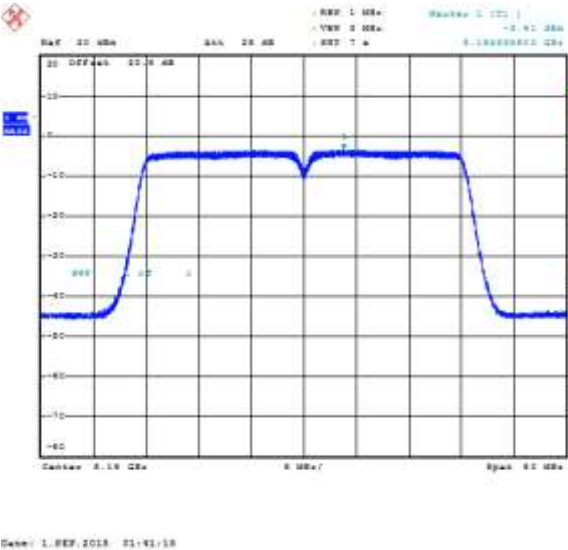


Figure 7-115: Peak Power Spectral Density
MIMO Primary, 802.11n, Channel 64, MCS 0

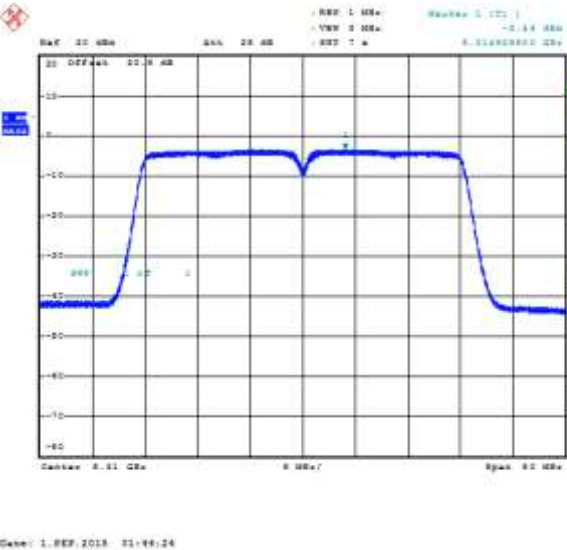


Figure 7-116: Peak Power Spectral Density
MIMO Primary, 802.11n, Channel 100, MCS 0

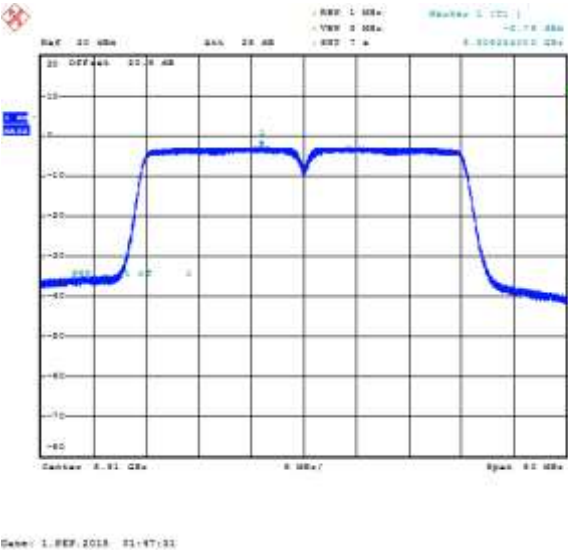
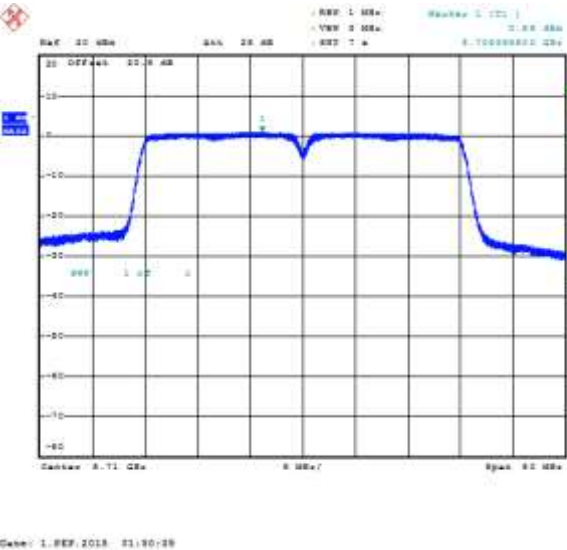


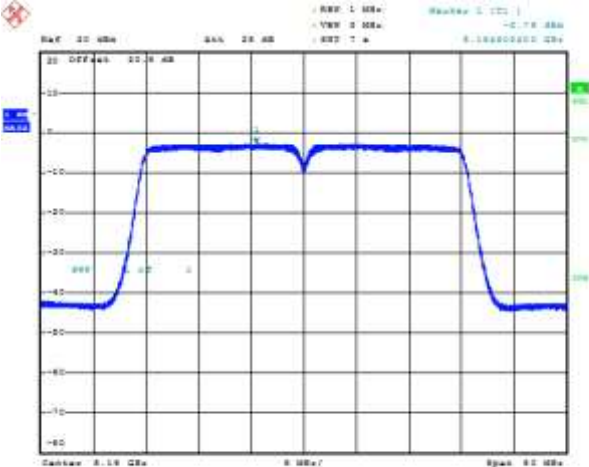
Figure 7-117: Peak Power Spectral Density
MIMO Primary, 802.11n, Channel 140, MCS 0



	EMC Test Report for the BlackBerry® smartphone Model RHK211LW (STV100-1) , RHL211LW (STV100-3) APPENDIX 7	
Test Report No.: RTS-6066-1509-01A	Dates of Test: July 22 – September 8, and September 28, 2015	FCC ID: L6ARHK210LW, L6ARHL210LW IC: 2503A-RHK210LW, 2503A-RHL210LW

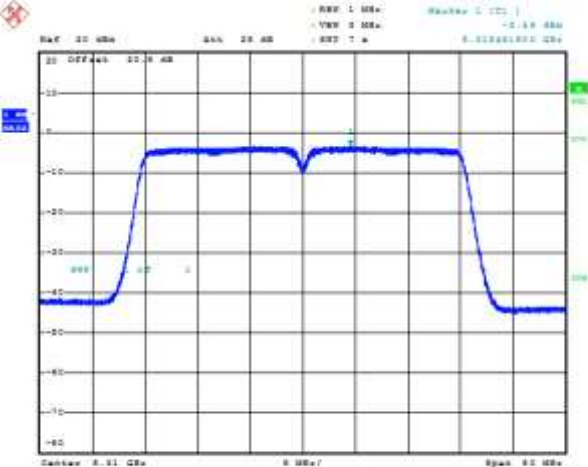
802.11n RF Conducted Emission Test Results

Figure 7-118: Peak Power Spectral Density
MIMO Secondary, 802.11n, Channel 36,
MCS 0



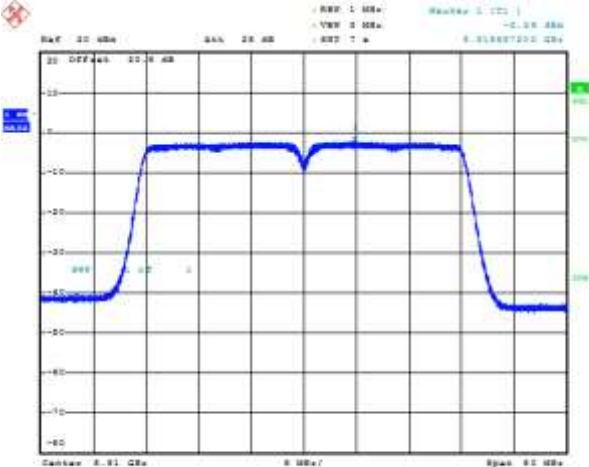
Date: 1 SEP 2015 21:59:43

Figure 7-119: Peak Power Spectral Density
MIMO Secondary, 802.11n, Channel 64,
MCS 0



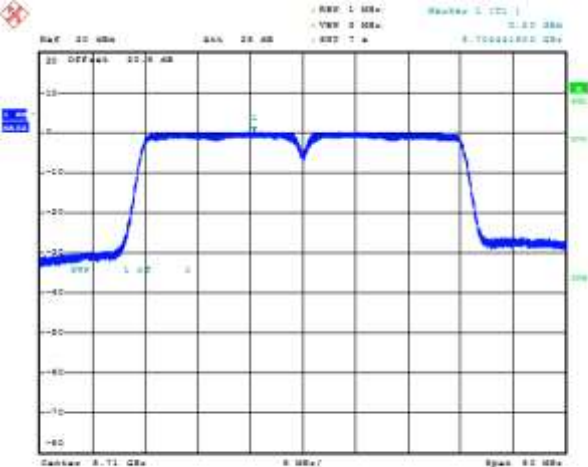
Date: 1 SEP 2015 21:59:51

Figure 7-120: Peak Power Spectral Density
MIMO Secondary, 802.11n, Channel 100,
MCS 0



Date: 1 SEP 2015 22:11:59

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



Date: 1 SEP 2015 22:16:06

	EMC Test Report for the BlackBerry® smartphone Model RHK211LW (STV100-1) , RHL211LW (STV100-3) APPENDIX 7	
Test Report No.: RTS-6066-1509-01A	Dates of Test: July 22 – September 8, and September 28, 2015	FCC ID: L6ARHK210LW, L6ARHL210LW IC: 2503A-RHK210LW, 2503A-RHL210LW

802.11a RF Conducted Emission Test Results cont'd

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

	EMC Test Report for the BlackBerry® smartphone Model RHK211LW (STV100-1) , RHL211LW (STV100-3) APPENDIX 7	
Test Report No.: RTS-6066-1509-01A	Dates of Test: July 22 – September 8, and September 28, 2015	FCC ID: L6ARHK210LW, L6ARHL210LW IC: 2503A-RHK210LW, 2503A-RHL210LW

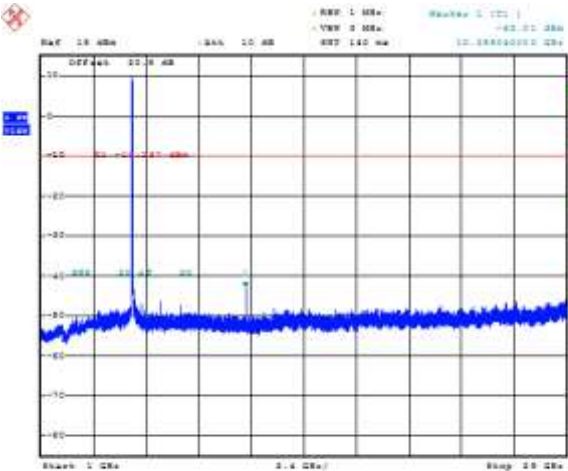
802.11a RF Conducted Emission Test Results cont'd

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.

	EMC Test Report for the BlackBerry® smartphone Model RHK211LW (STV100-1) , RHL211LW (STV100-3) APPENDIX 7	
Test Report No.: RTS-6066-1509-01A	Dates of Test: July 22 – September 8, and September 28, 2015	FCC ID: L6ARHK210LW, L6ARHL210LW IC: 2503A-RHK210LW, 2503A-RHL210LW

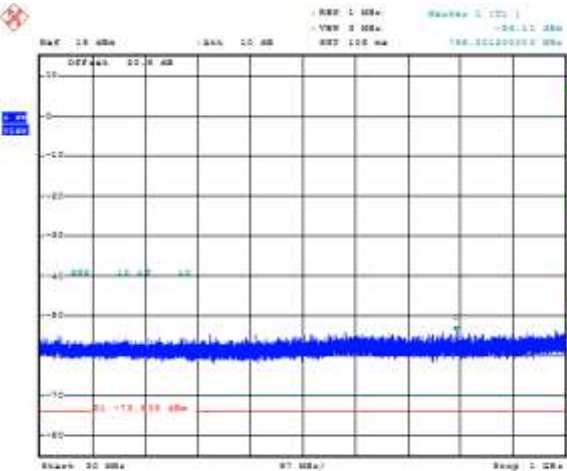
802.11a RF Conducted Emission Test Results cont'd

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



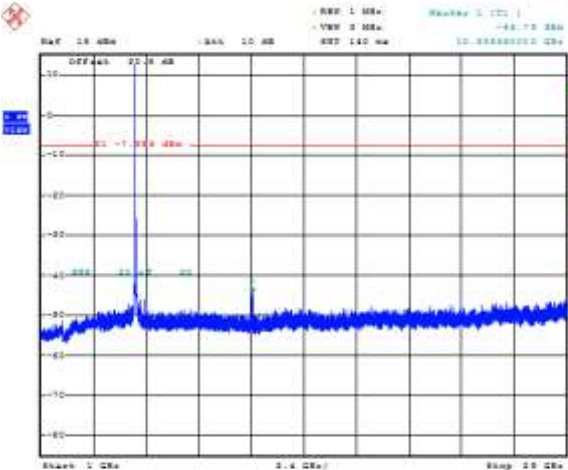
Date: 22/09/2015 11:29:12

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



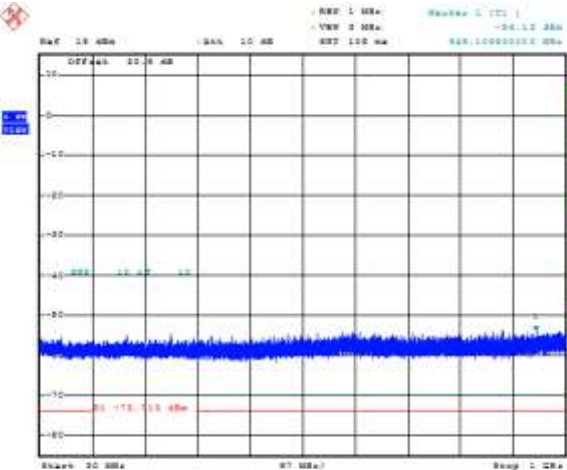
Date: 22/09/2015 11:29:18

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



Date: 22/09/2015 11:29:18

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



Date: 22/09/2015 11:29:18

	EMC Test Report for the BlackBerry® smartphone Model RHK211LW (STV100-1) , RHL211LW (STV100-3) APPENDIX 7	
Test Report No.: RTS-6066-1509-01A	Dates of Test: July 22 – September 8, and September 28, 2015	FCC ID: L6ARHK210LW, L6ARHL210LW IC: 2503A-RHK210LW, 2503A-RHL210LW

802.11a RF Conducted Emission Test Results cont'd

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

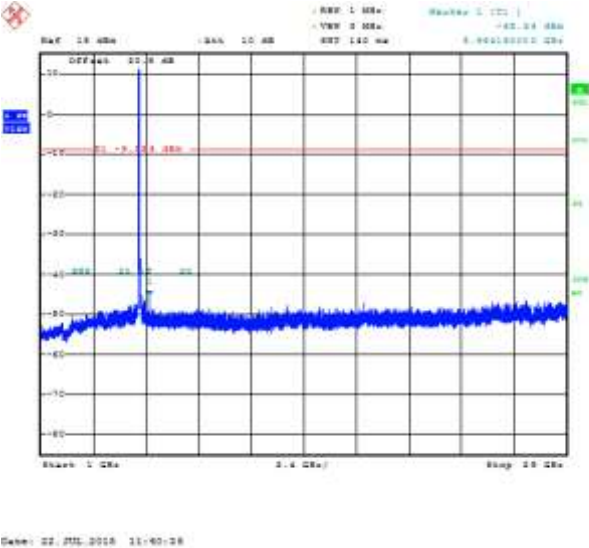


Figure 7-127: Spurious RF Conducted Emissions
Primary, 802.11a, Channel 100, MCS 0

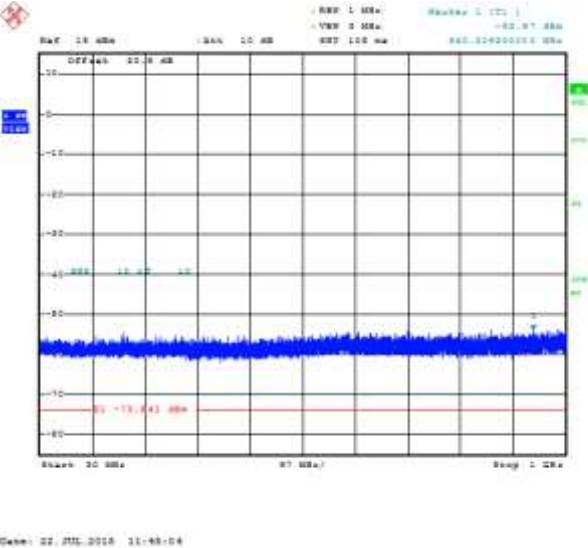


Figure 7-128: Spurious RF Conducted Emissions
Primary, 802.11a, Channel 140, MCS 0

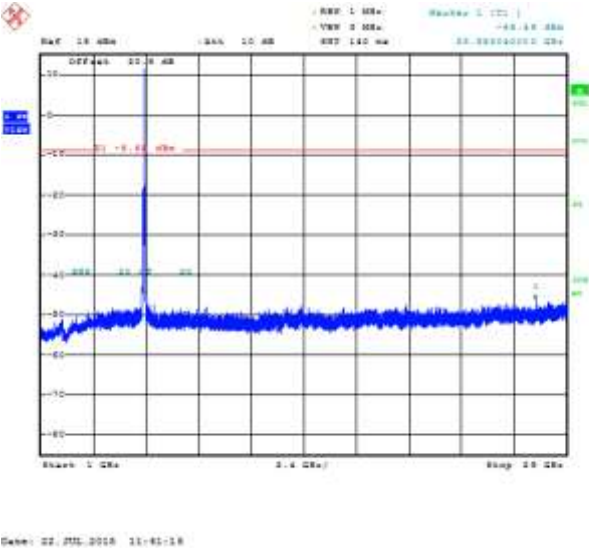
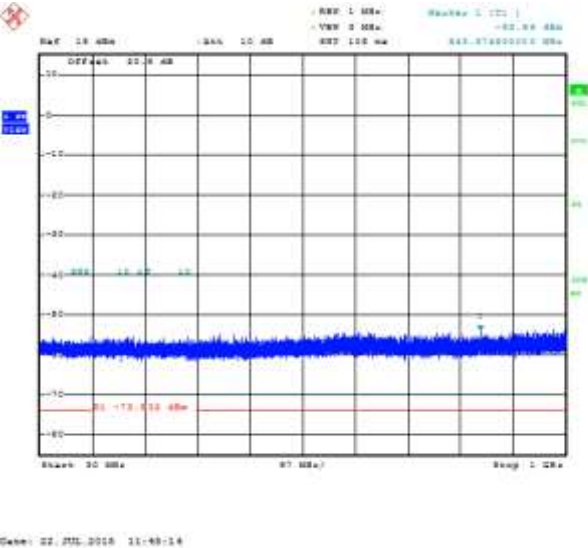


Figure 7-129: Spurious RF Conducted Emissions
Primary, 802.11a, Channel 140, MCS 0



	EMC Test Report for the BlackBerry® smartphone Model RHK211LW (STV100-1) , RHL211LW (STV100-3) APPENDIX 7	
Test Report No.: RTS-6066-1509-01A	Dates of Test: July 22 – September 8, and September 28, 2015	FCC ID: L6ARHK210LW, L6ARHL210LW IC: 2503A-RHK210LW, 2503A-RHL210LW

802.11a RF Conducted Emission Test Results cont'd

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

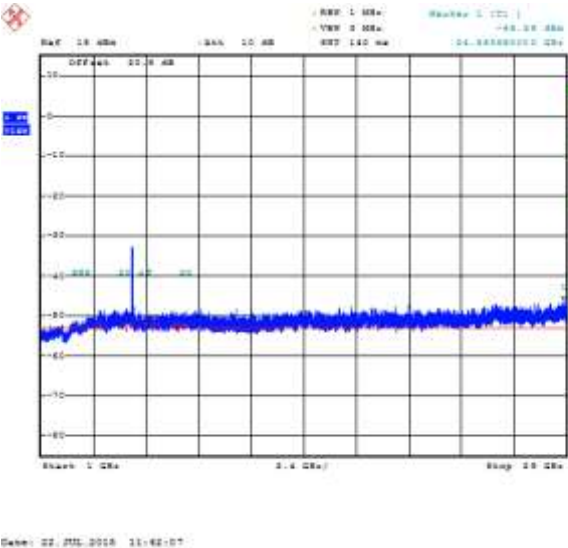


Figure 7-131: Spurious RF Conducted Emissions
Secondary, 802.11a, Channel 36, MCS 0

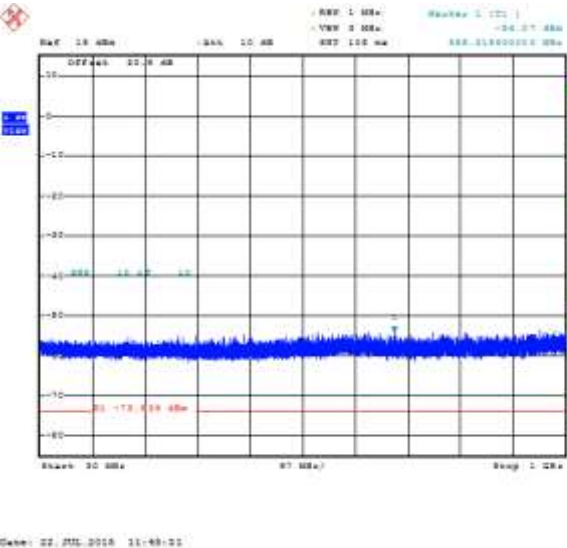


Figure 7-132: Spurious RF Conducted Emissions
Secondary, 802.11a, Channel 64, MCS 0

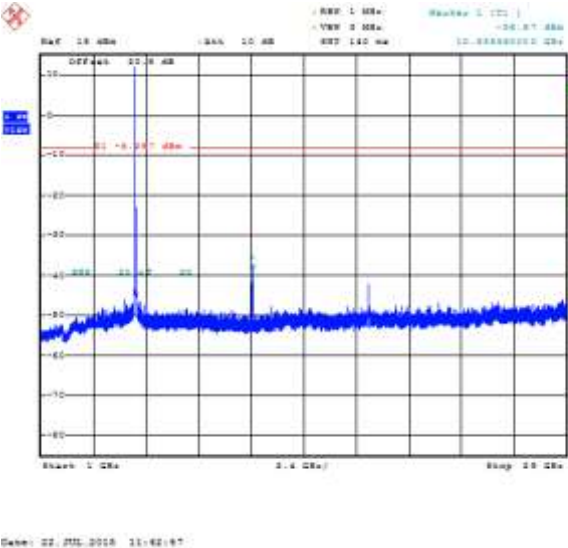
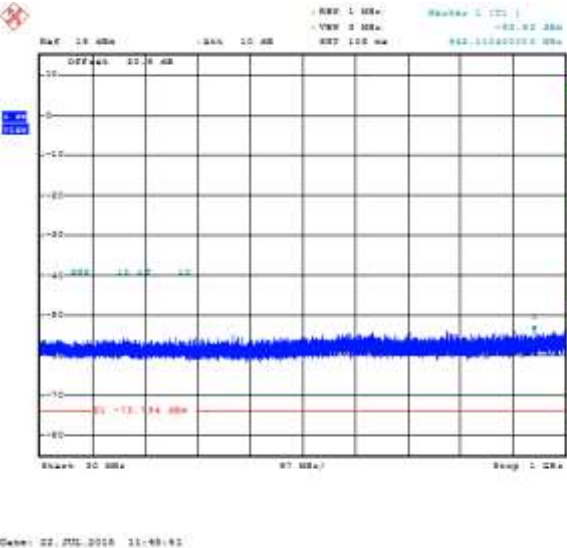


Figure 7-133: Spurious RF Conducted Emissions
Secondary, 802.11a, Channel 64, MCS 0



	EMC Test Report for the BlackBerry® smartphone Model RHK211LW (STV100-1) , RHL211LW (STV100-3) APPENDIX 7	
Test Report No.: RTS-6066-1509-01A	Dates of Test: July 22 – September 8, and September 28, 2015	FCC ID: L6ARHK210LW, L6ARHL210LW IC: 2503A-RHK210LW, 2503A-RHL210LW

802.11a RF Conducted Emission Test Results cont'd

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

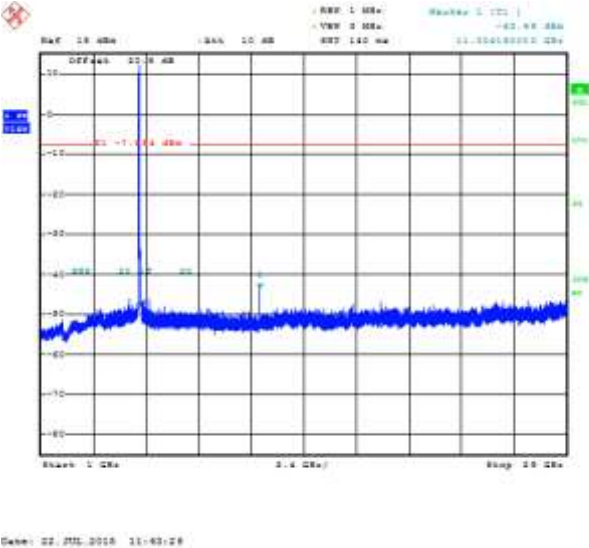


Figure 7-135: Spurious RF Conducted Emissions
Secondary, 802.11a, Channel 100, MCS 0

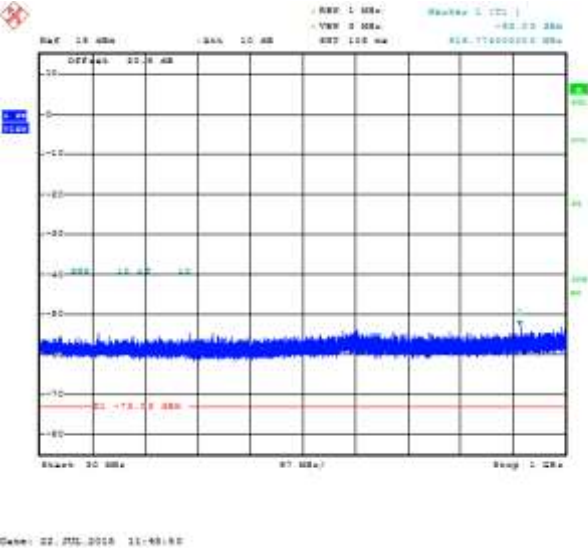


Figure 7-136: Spurious RF Conducted Emissions
Secondary, 802.11a, Channel 140, MCS 0

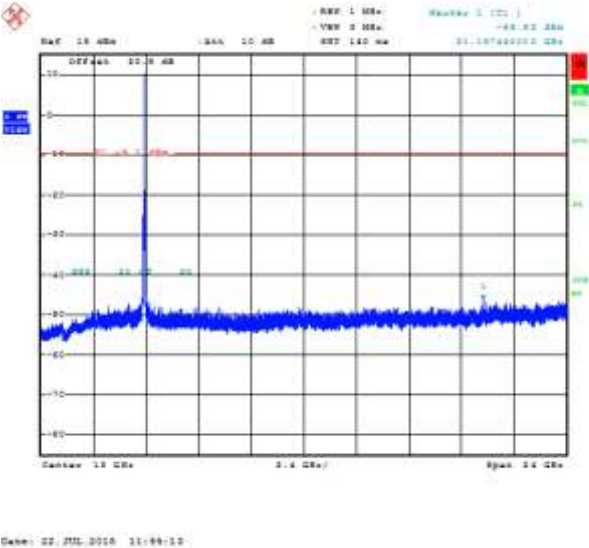
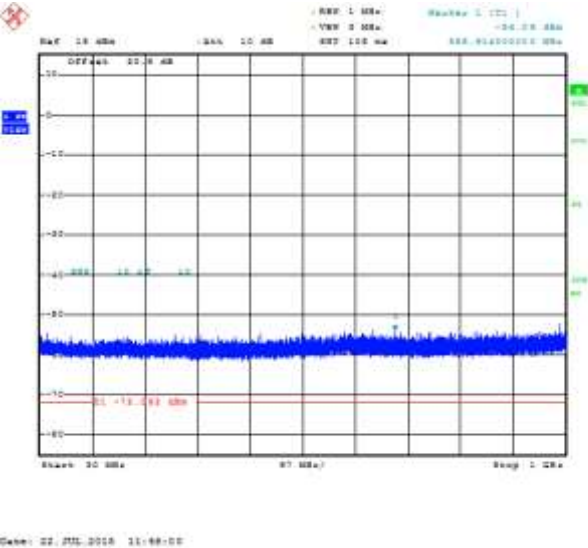


Figure 7-137: Spurious RF Conducted Emissions
Secondary, 802.11a, Channel 140, MCS 0



	EMC Test Report for the BlackBerry® smartphone Model RHK211LW (STV100-1) , RHL211LW (STV100-3) APPENDIX 7	
Test Report No.: RTS-6066-1509-01A	Dates of Test: July 22 – September 8, and September 28, 2015	FCC ID: L6ARHK210LW, L6ARHL210LW IC: 2503A-RHK210LW, 2503A-RHL210LW

802.11n RF Conducted Emission Test Results cont'd

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

	EMC Test Report for the BlackBerry® smartphone Model RHK211LW (STV100-1) , RHL211LW (STV100-3) APPENDIX 7	
Test Report No.: RTS-6066-1509-01A	Dates of Test: July 22 – September 8, and September 28, 2015	FCC ID: L6ARHK210LW, L6ARHL210LW IC: 2503A-RHK210LW, 2503A-RHL210LW

802.11n RF Conducted Emission Test Results cont'd

Sum

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

	EMC Test Report for the BlackBerry® smartphone Model RHK211LW (STV100-1) , RHL211LW (STV100-3) APPENDIX 7	
Test Report No.: RTS-6066-1509-01A	Dates of Test: July 22 – September 8, and September 28, 2015	FCC ID: L6ARHK210LW, L6ARHL210LW IC: 2503A-RHK210LW, 2503A-RHL210LW

802.11n RF Conducted Emission Test Results cont'd

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.

	EMC Test Report for the BlackBerry® smartphone Model RHK211LW (STV100-1) , RHL211LW (STV100-3) APPENDIX 7	
Test Report No.: RTS-6066-1509-01A	Dates of Test: July 22 – September 8, and September 28, 2015	FCC ID: L6ARHK210LW, L6ARHL210LW IC: 2503A-RHK210LW, 2503A-RHL210LW

802.11n RF Conducted Emission Test Results cont'd

20 MHz Bandwidth

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

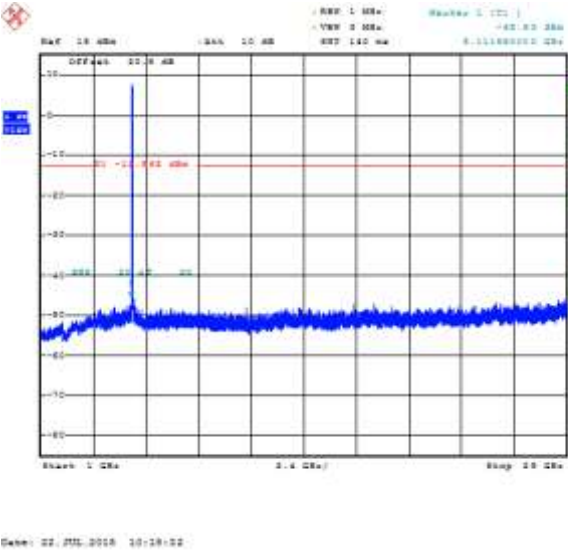


Figure 7-139: Spurious RF Conducted Emissions
Primary, 802.11n, Channel 36, MCS 0

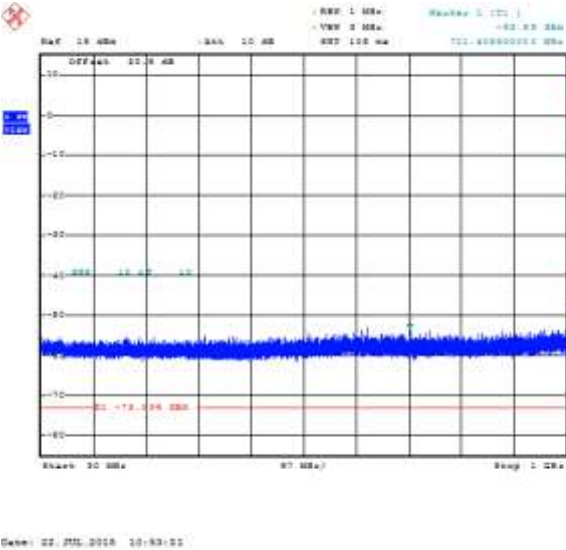


Figure 7-140: Spurious RF Conducted Emissions
Primary, 802.11n, Channel 64, MCS 0

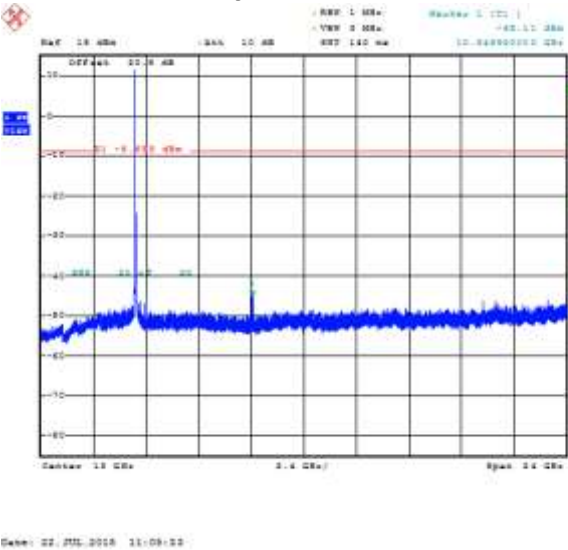
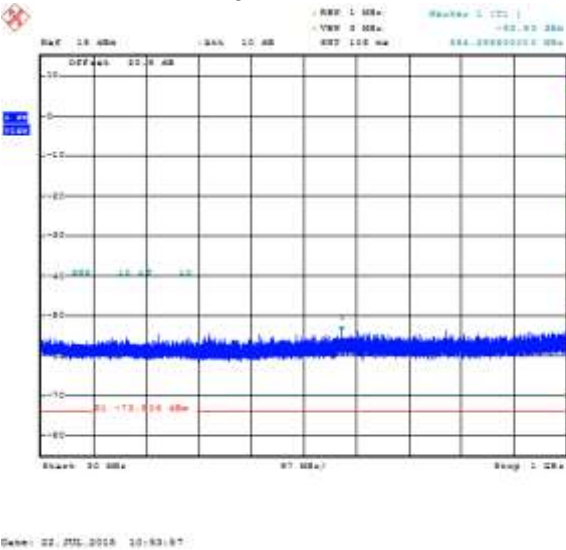


Figure 7-141: Spurious RF Conducted Emissions
Primary, 802.11n, Channel 64, MCS 0



	EMC Test Report for the BlackBerry® smartphone Model RHK211LW (STV100-1) , RHL211LW (STV100-3) APPENDIX 7	
Test Report No.: RTS-6066-1509-01A	Dates of Test: July 22 – September 8, and September 28, 2015	FCC ID: L6ARHK210LW, L6ARHL210LW IC: 2503A-RHK210LW, 2503A-RHL210LW

802.11n RF Conducted Emission Test Results cont'd

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

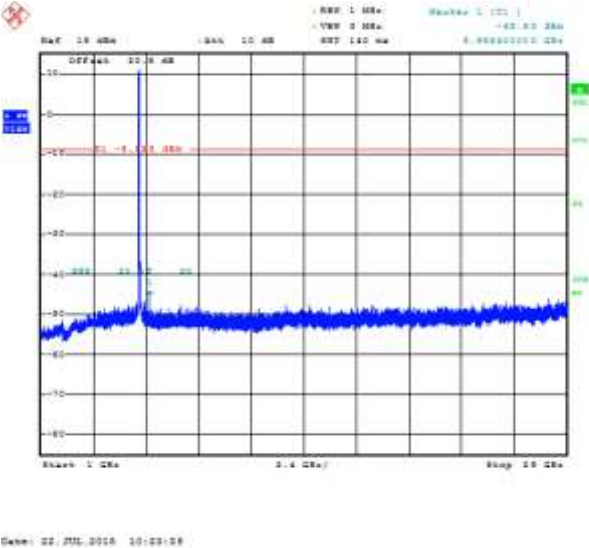


Figure 7-143: Spurious RF Conducted Emissions
Primary, 802.11n, Channel 100, MCS 0

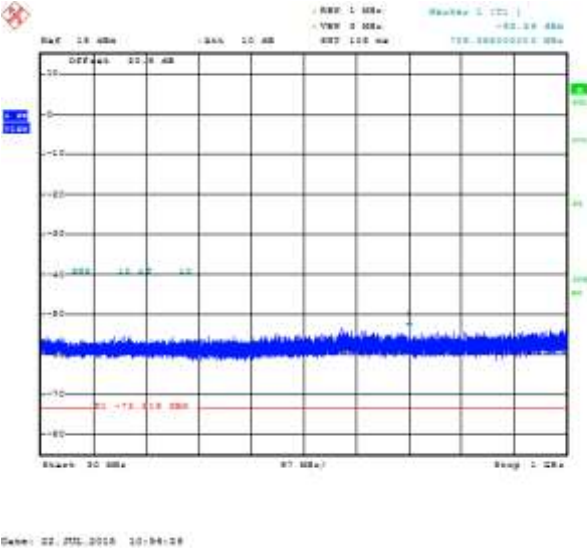


Figure 7-144: Spurious RF Conducted Emissions
Primary, 802.11n, Channel 140, MCS 0

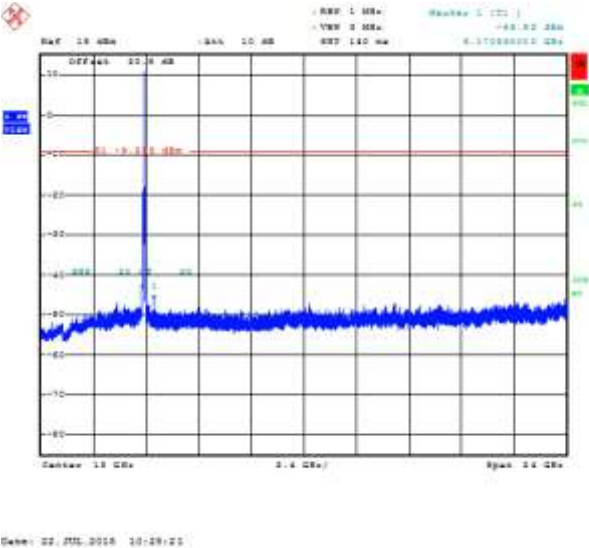
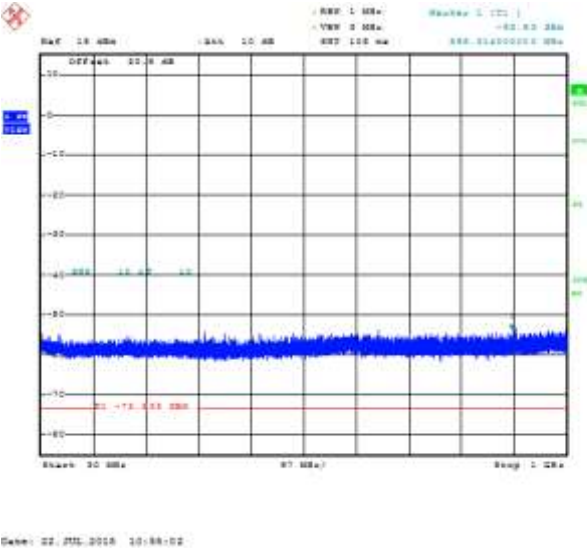


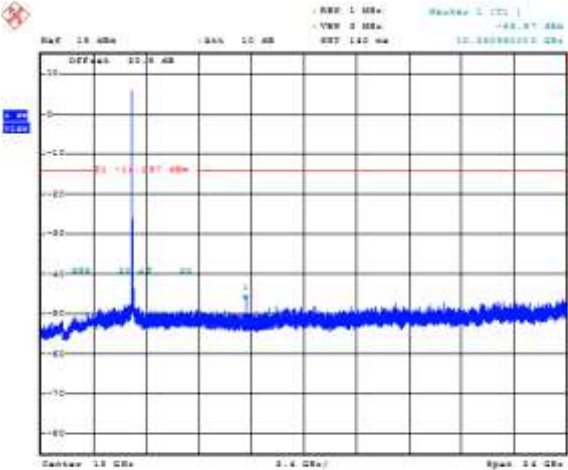
Figure 7-145: Spurious RF Conducted Emissions
Primary, 802.11n, Channel 140, MCS 0



	EMC Test Report for the BlackBerry® smartphone Model RHK211LW (STV100-1) , RHL211LW (STV100-3) APPENDIX 7	
Test Report No.: RTS-6066-1509-01A	Dates of Test: July 22 – September 8, and September 28, 2015	FCC ID: L6ARHK210LW, L6ARHL210LW IC: 2503A-RHK210LW, 2503A-RHL210LW

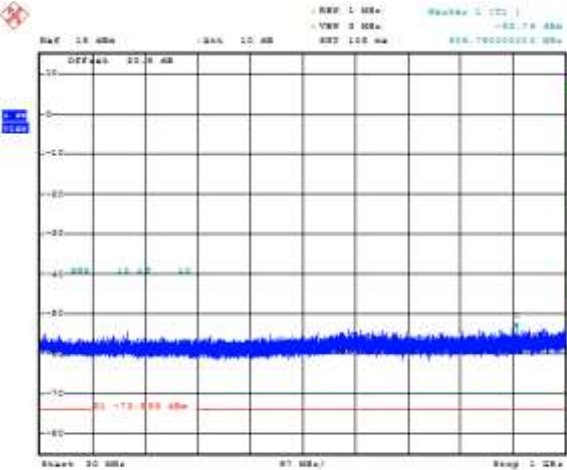
802.11n RF Conducted Emission Test Results cont'd

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



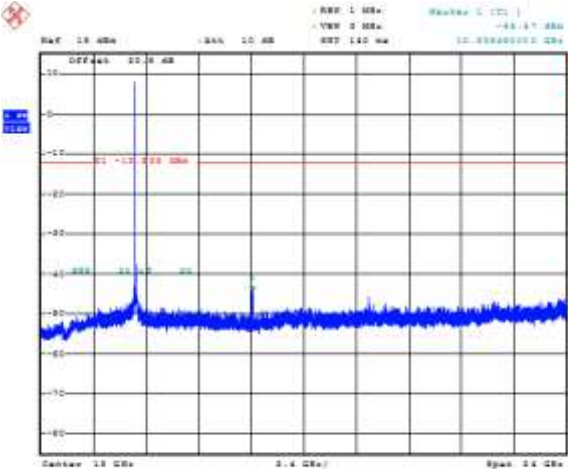
Date: 22, JUL 2015 10:50:22

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



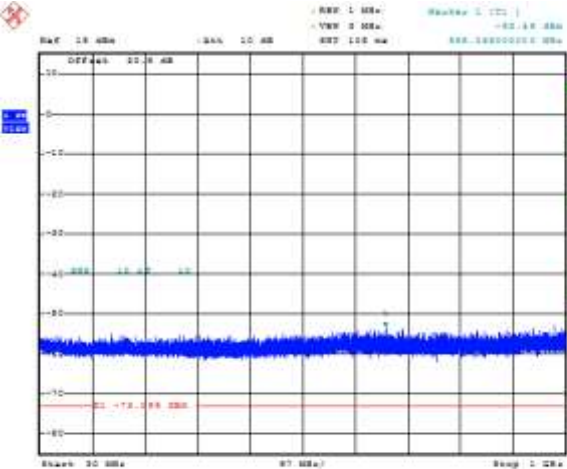
Date: 22, JUL 2015 10:51:42

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



Date: 22, JUL 2015 10:52:02

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



Date: 22, JUL 2015 10:52:04

	EMC Test Report for the BlackBerry® smartphone Model RHK211LW (STV100-1) , RHL211LW (STV100-3) APPENDIX 7	
Test Report No.: RTS-6066-1509-01A	Dates of Test: July 22 – September 8, and September 28, 2015	FCC ID: L6ARHK210LW, L6ARHL210LW IC: 2503A-RHK210LW, 2503A-RHL210LW

802.11n RF Conducted Emission Test Results cont'd

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

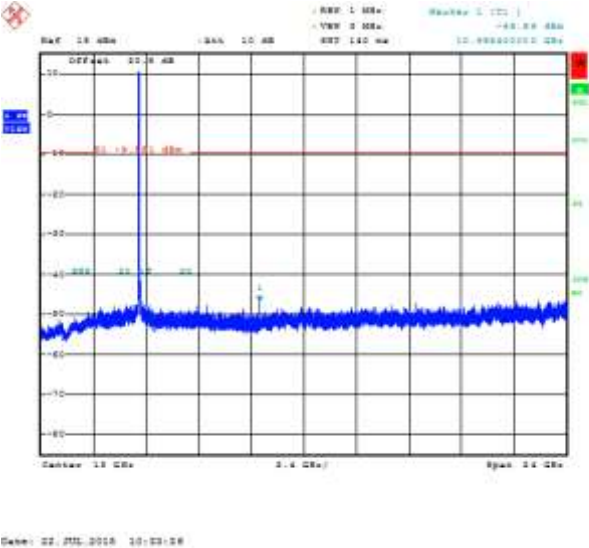


Figure 7-151: Spurious RF Conducted Emissions
Secondary, 802.11n, Channel 100, MCS 0

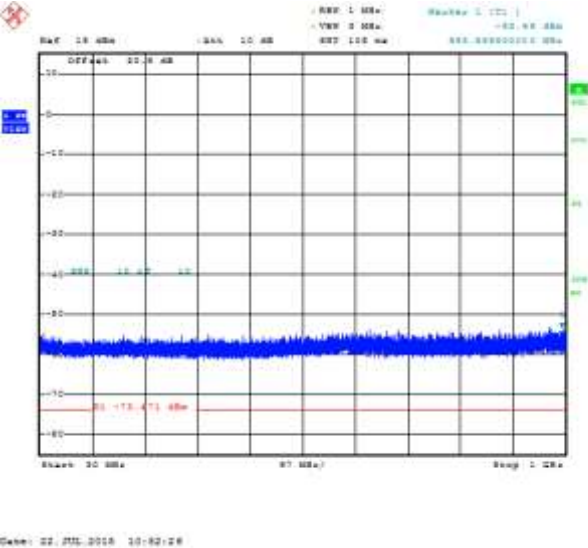


Figure 7-152: Spurious RF Conducted Emissions
Secondary, 802.11n, Channel 140, MCS 0

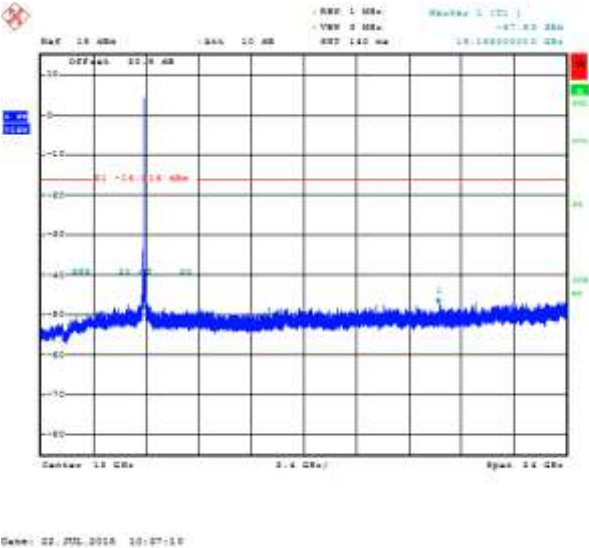
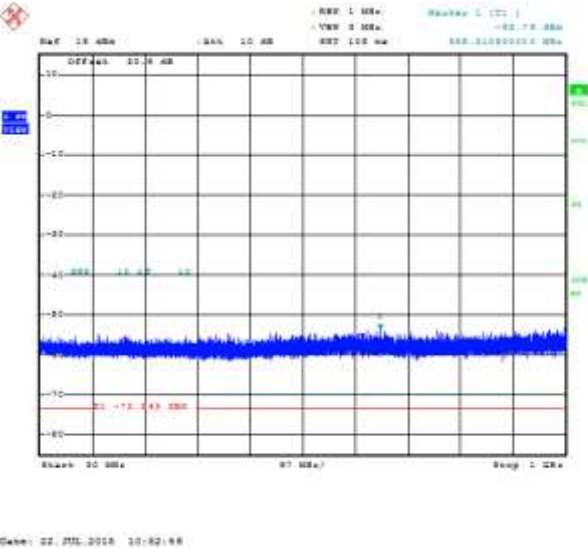


Figure 7-153: Spurious RF Conducted Emissions
Secondary, 802.11n, Channel 140, MCS 0



	EMC Test Report for the BlackBerry® smartphone Model RHK211LW (STV100-1) , RHL211LW (STV100-3) APPENDIX 7	
Test Report No.: RTS-6066-1509-01A	Dates of Test: July 22 – September 8, and September 28, 2015	FCC ID: L6ARHK210LW, L6ARHL210LW IC: 2503A-RHK210LW, 2503A-RHL210LW

802.11n RF Conducted Emission Test Results cont'd

40 MHz Bandwidth

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

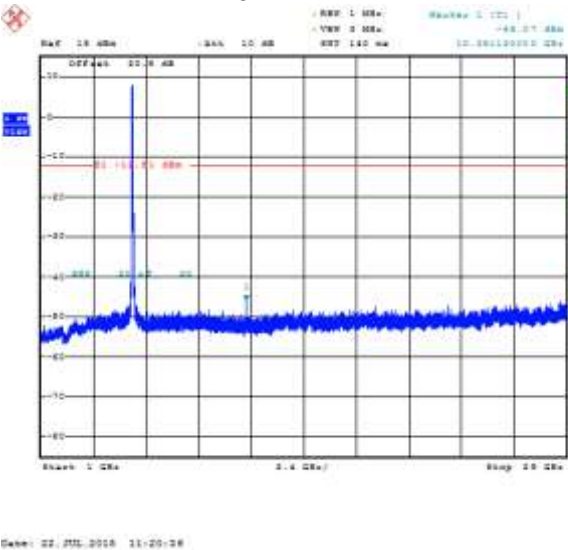


Figure 7-155: Spurious RF Conducted Emissions
Primary, 802.11n, Channel 36, MCS 0

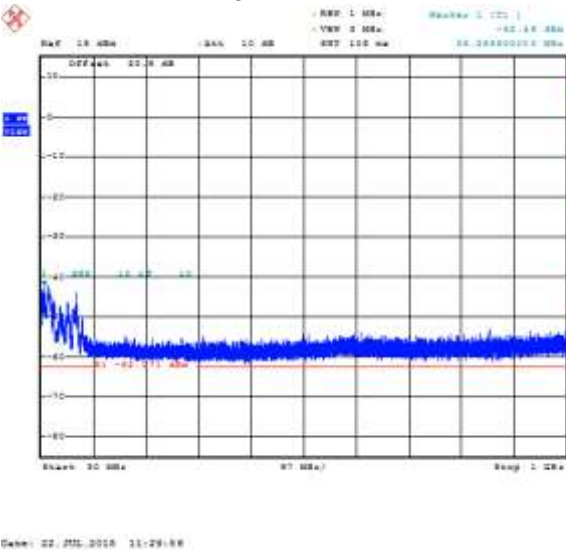


Figure 7-156: Spurious RF Conducted Emissions
Primary, 802.11n, Channel 64, MCS 0

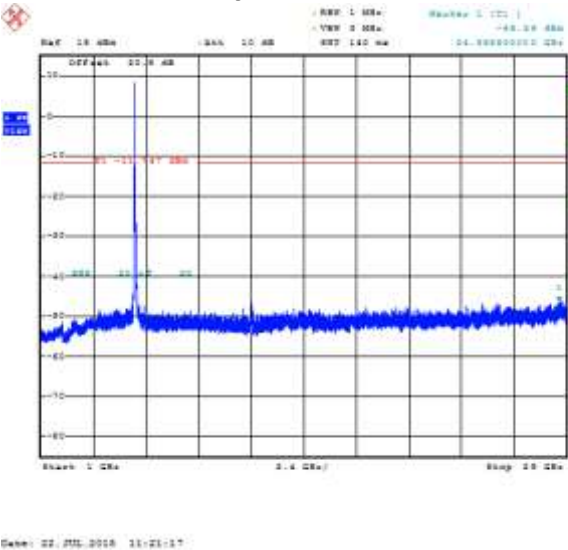
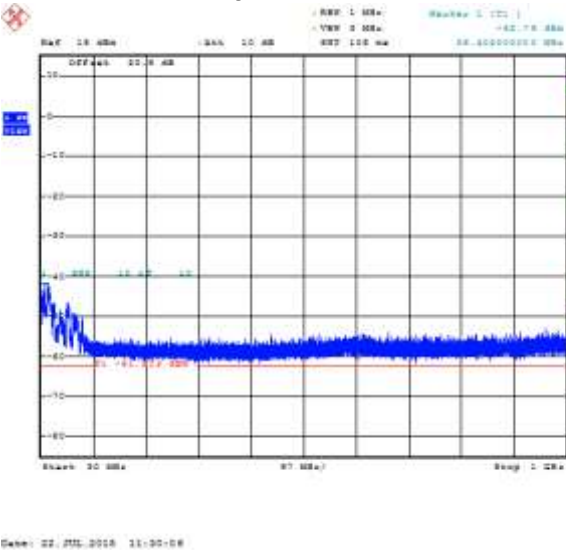


Figure 7-157: Spurious RF Conducted Emissions
Primary, 802.11n, Channel 64, MCS 0



	EMC Test Report for the BlackBerry® smartphone Model RHK211LW (STV100-1) , RHL211LW (STV100-3) APPENDIX 7	
Test Report No.: RTS-6066-1509-01A	Dates of Test: July 22 – September 8, and September 28, 2015	FCC ID: L6ARHK210LW, L6ARHL210LW IC: 2503A-RHK210LW, 2503A-RHL210LW

802.11n RF Conducted Emission Test Results cont'd

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

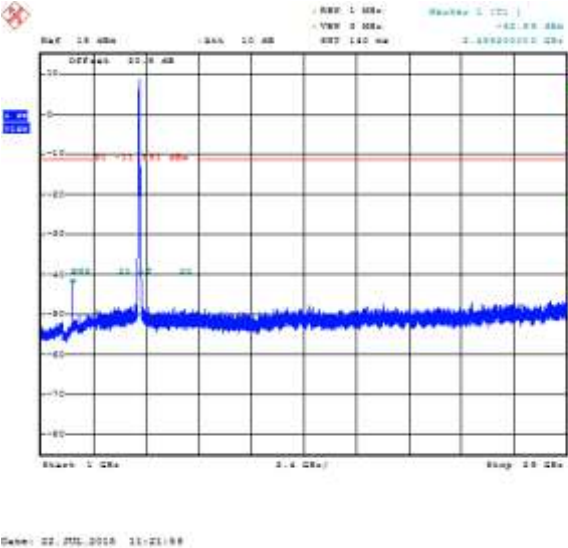


Figure 7-159 Spurious RF Conducted Emissions
Primary, 802.11n, Channel 100, MCS 0

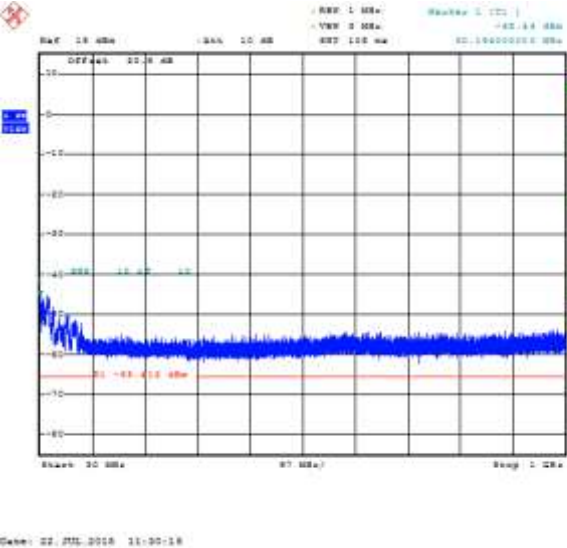


Figure 7-160: Spurious RF Conducted Emissions
Primary, 802.11n, Channel 140, MCS 0

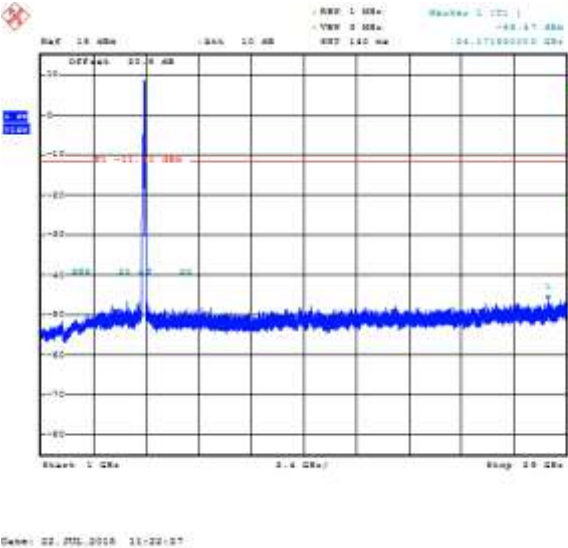
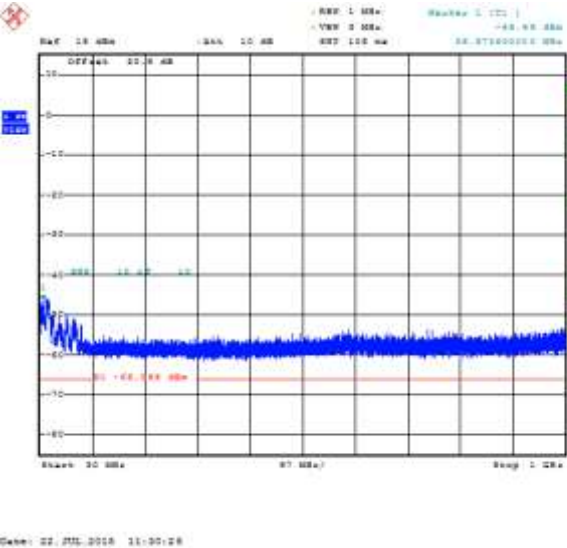


Figure 7-161: Spurious RF Conducted Emissions
Primary, 802.11n, Channel 140, MCS 0



	EMC Test Report for the BlackBerry® smartphone Model RHK211LW (STV100-1) , RHL211LW (STV100-3) APPENDIX 7	
Test Report No.: RTS-6066-1509-01A	Dates of Test: July 22 – September 8, and September 28, 2015	FCC ID: L6ARHK210LW, L6ARHL210LW IC: 2503A-RHK210LW, 2503A-RHL210LW

802.11n RF Conducted Emission Test Results cont'd

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

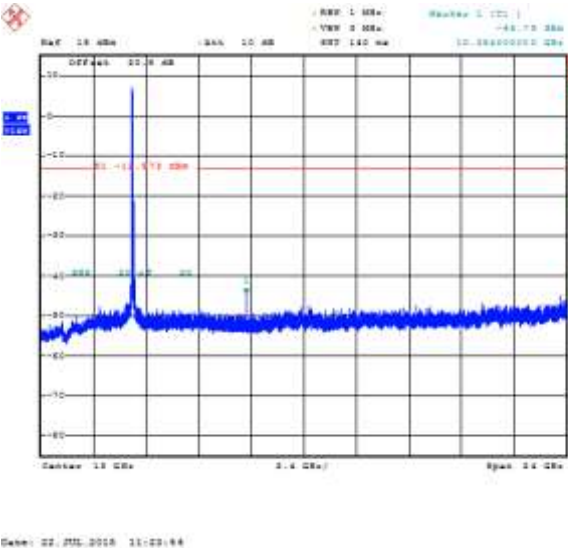


Figure 7-163: Spurious RF Conducted Emissions
Secondary, 802.11n, Channel 36, MCS 0

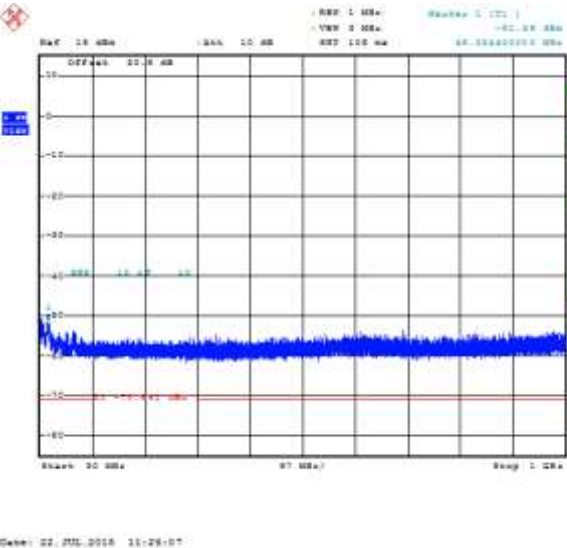


Figure 7-164: Spurious RF Conducted Emissions
Secondary, 802.11n, Channel 64, MCS 0

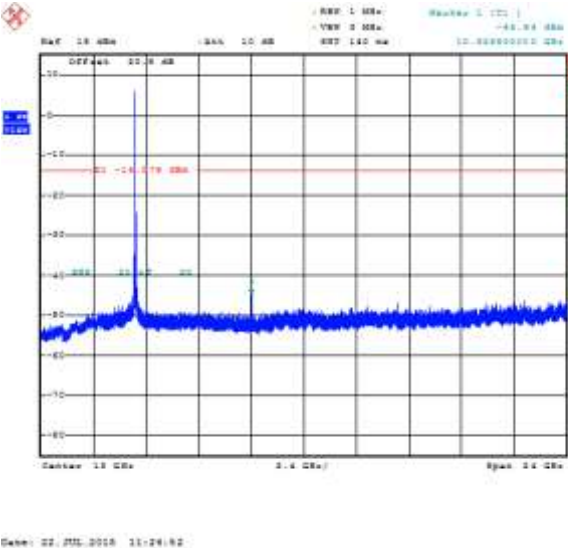
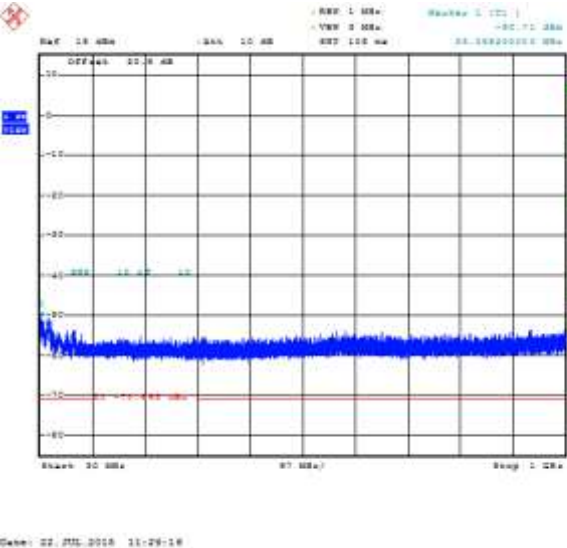


Figure 7-165: Spurious RF Conducted Emissions
Secondary, 802.11n, Channel 64, MCS 0



	EMC Test Report for the BlackBerry® smartphone Model RHK211LW (STV100-1) , RHL211LW (STV100-3) APPENDIX 7	
Test Report No.: RTS-6066-1509-01A	Dates of Test: July 22 – September 8, and September 28, 2015	FCC ID: L6ARHK210LW, L6ARHL210LW IC: 2503A-RHK210LW, 2503A-RHL210LW

802.11n RF Conducted Emission Test Results cont'd

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

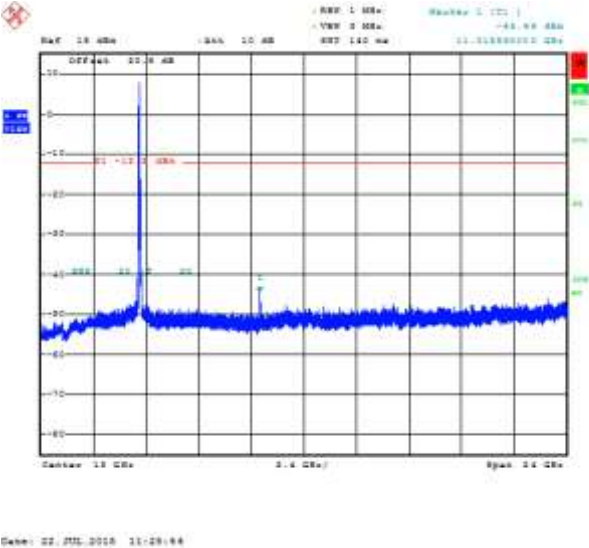


Figure 7-167: Spurious RF Conducted Emissions
Secondary, 802.11n, Channel 100, MCS 0

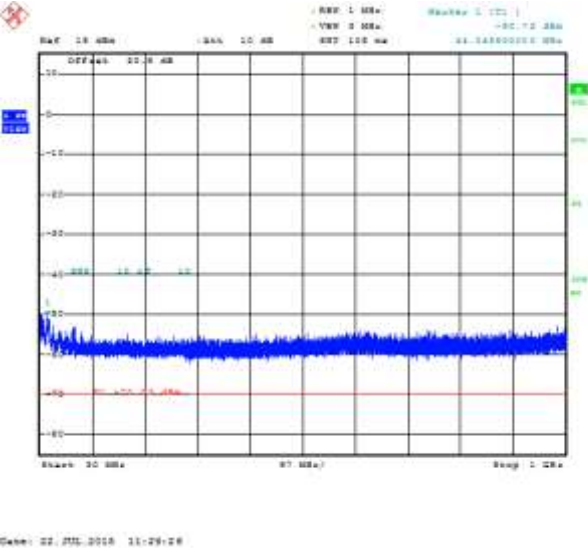


Figure 7-168: Spurious RF Conducted Emissions
Secondary, 802.11n, Channel 140, MCS 0

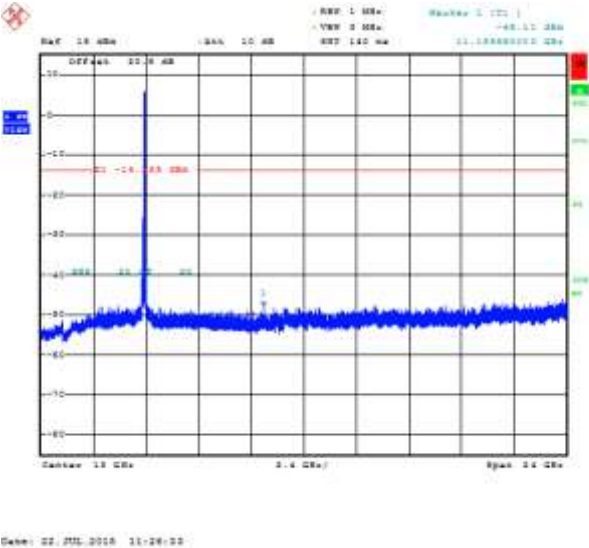
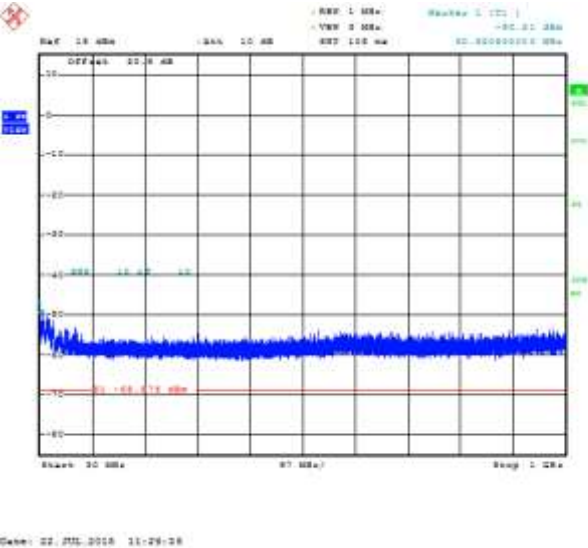


Figure 7-169: Spurious RF Conducted Emissions
Secondary, 802.11n, Channel 140, MCS 0



	EMC Test Report for the BlackBerry® smartphone Model RHK211LW (STV100-1) , RHL211LW (STV100-3) APPENDIX 8	
Test Report No.: RTS-6066-1509-01A	Dates of Test: July 22 – September 8, and September 28, 2015	FCC ID: L6ARHK210LW, L6ARHL210LW IC: 2503A-RHK210LW, 2503A-RHL210LW

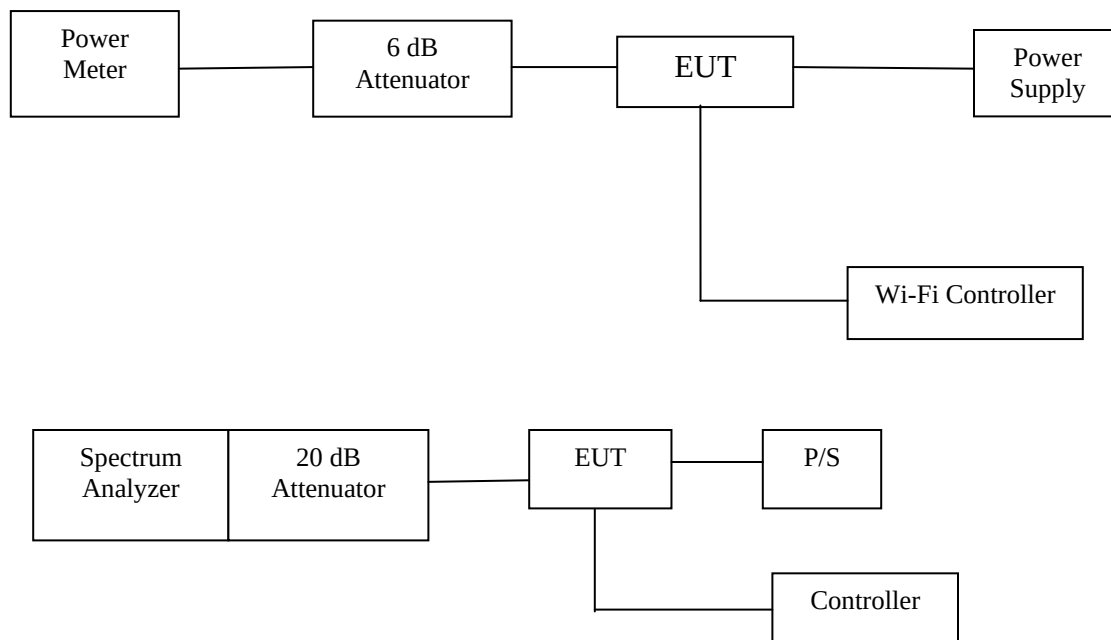
APPENDIX 8 – 802.11ac CONDUCTED EMISSIONS TEST DATA/PLOTS

	EMC Test Report for the BlackBerry® smartphone Model RHK211LW (STV100-1) , RHL211LW (STV100-3) APPENDIX 8	
Test Report No.: RTS-6066-1509-01A	Dates of Test: July 22 – September 8, and September 28, 2015	FCC ID: L6ARHK210LW, L6ARHL210LW IC: 2503A-RHK210LW, 2503A-RHL210LW

802.11ac RF Conducted Emission Test Results

The following test configurations were measured on model RHK211LW (STV100-1):

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 %

	EMC Test Report for the BlackBerry® smartphone Model RHK211LW (STV100-1) , RHL211LW (STV100-3) APPENDIX 8	
Test Report No.: RTS-6066-1509-01A	Dates of Test: July 22 – September 8, and September 28, 2015	FCC ID: L6ARHK210LW, L6ARHL210LW IC: 2503A-RHK210LW, 2503A-RHL210LW

802.11ac RF Conducted Emission Test Results cont'd

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

	EMC Test Report for the BlackBerry® smartphone Model RHK211LW (STV100-1) , RHL211LW (STV100-3) APPENDIX 8	
Test Report No.: RTS-6066-1509-01A	Dates of Test: July 22 – September 8, and September 28, 2015	FCC ID: L6ARHK210LW, L6ARHL210LW IC: 2503A-RHK210LW, 2503A-RHL210LW

802.11ac RF Conducted Emission Test Results cont'd

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.

	EMC Test Report for the BlackBerry® smartphone Model RHK211LW (STV100-1) , RHL211LW (STV100-3) APPENDIX 8	
Test Report No.: RTS-6066-1509-01A	Dates of Test: July 22 – September 8, and September 28, 2015	FCC ID: L6ARHK210LW, L6ARHL210LW IC: 2503A-RHK210LW, 2503A-RHL210LW

802.11ac RF Conducted Emission Test Results cont'd

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.

	EMC Test Report for the BlackBerry® smartphone Model RHK211LW (STV100-1) , RHL211LW (STV100-3) APPENDIX 8	
Test Report No.: RTS-6066-1509-01A	Dates of Test: July 22 – September 8, and September 28, 2015	FCC ID: L6ARHK210LW, L6ARHL210LW IC: 2503A-RHK210LW, 2503A-RHL210LW

802.11ac RF Conducted Emission Test Results cont'd

20 MHz Bandwidth

Figure 8-1: 6 dB Bandwidth

Primary, 802.11ac, Channel 36, MCS0

Mbps



Figure 8-2: 6 dB Bandwidth

Primary, 802.11ac, Channel 64, MCS0

Mbps



Figure 8-3: 6 dB Bandwidth

Primary, 802.11ac, Channel 100, 6 Mbps

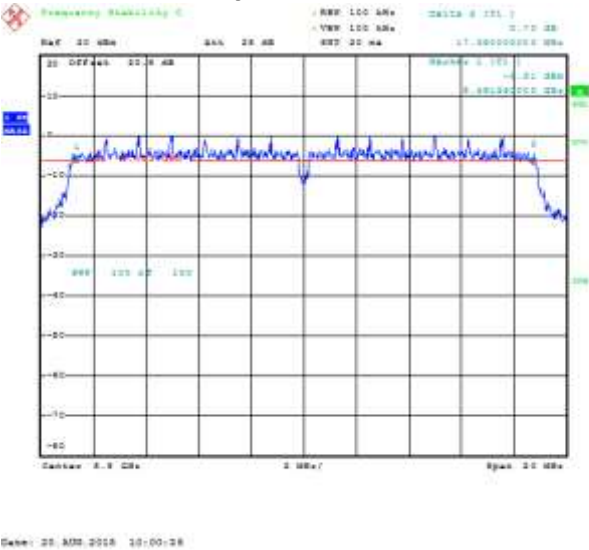
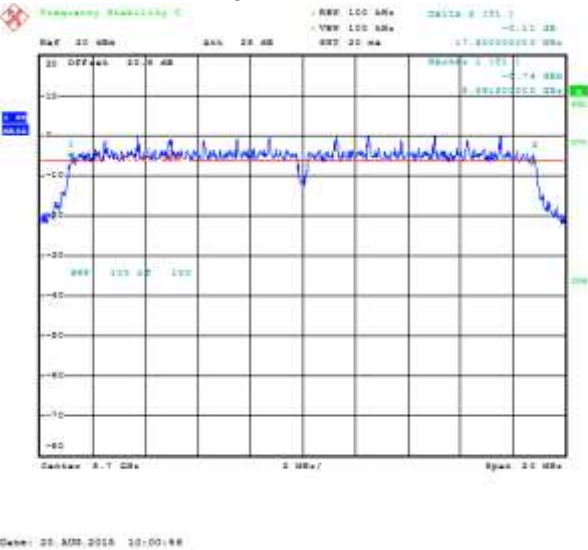


Figure 8-4: 6 dB Bandwidth

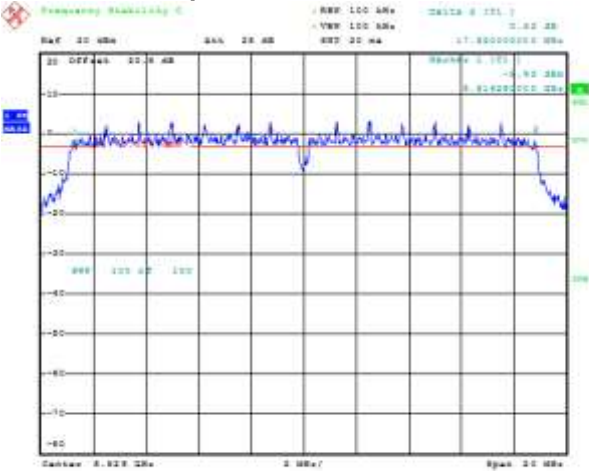
Primary, 802.11ac, Channel 140, 6 Mbps



	EMC Test Report for the BlackBerry® smartphone Model RHK211LW (STV100-1) , RHL211LW (STV100-3) APPENDIX 8	
Test Report No.: RTS-6066-1509-01A	Dates of Test: July 22 – September 8, and September 28, 2015	FCC ID: L6ARHK210LW, L6ARHL210LW IC: 2503A-RHK210LW, 2503A-RHL210LW

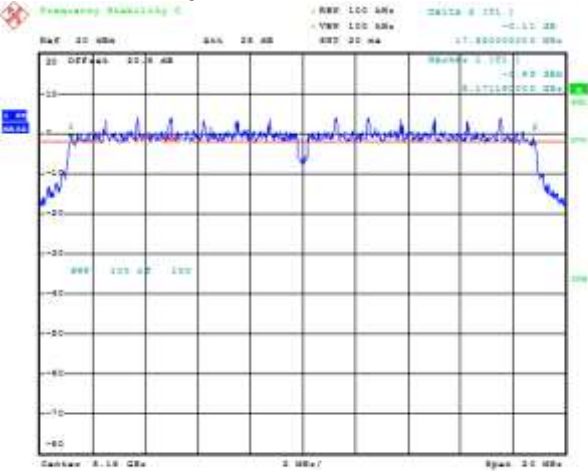
802.11ac RF Conducted Emission Test Results cont'd

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



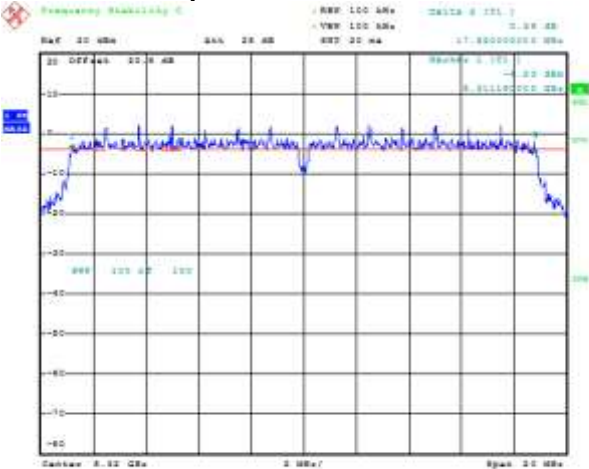
Date: 20. MAR. 2016 10:00:17

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



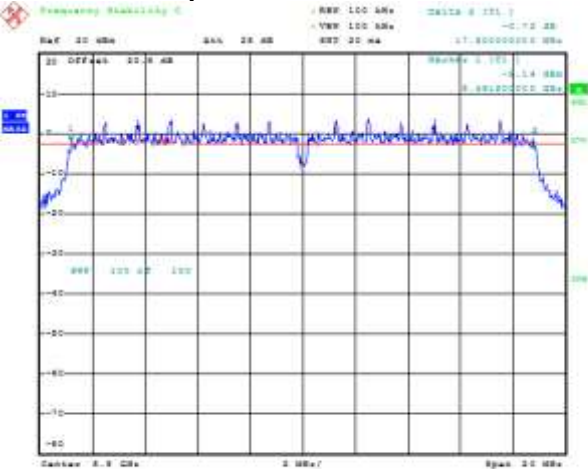
Date: 8. SEP. 2015 22:49:17

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



Date: 20. MAR. 2016 10:01:20

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

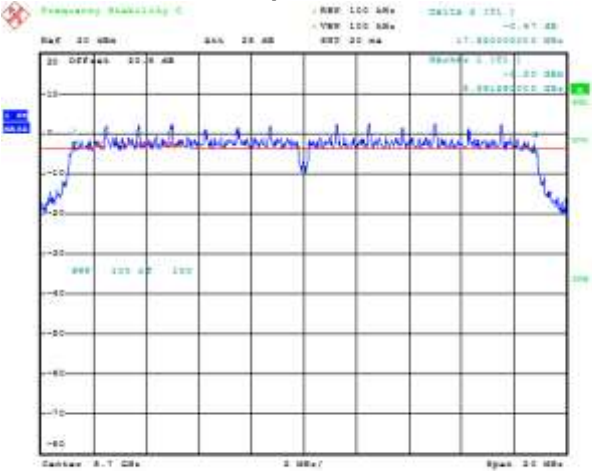


Date: 20. MAR. 2016 10:01:42

	EMC Test Report for the BlackBerry® smartphone Model RHK211LW (STV100-1) , RHL211LW (STV100-3) APPENDIX 8	
Test Report No.: RTS-6066-1509-01A	Dates of Test: July 22 – September 8, and September 28, 2015	FCC ID: L6ARHK210LW, L6ARHL210LW IC: 2503A-RHK210LW, 2503A-RHL210LW

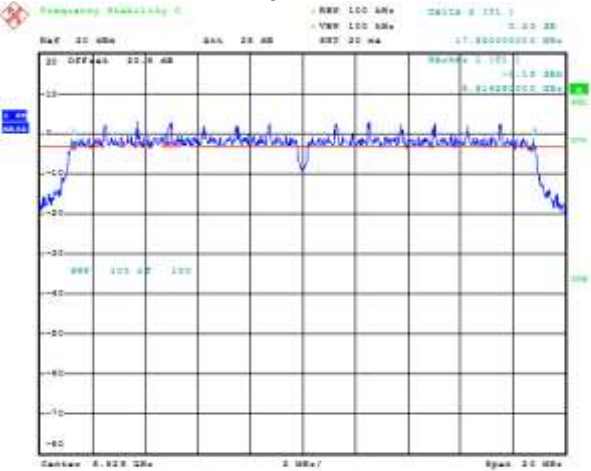
802.11ac RF Conducted Emission Test Results cont'd

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



Date: 20. APR. 2016 10:01:53

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



Date: 20. APR. 2016 10:02:04

	EMC Test Report for the BlackBerry® smartphone Model RHK211LW (STV100-1) , RHL211LW (STV100-3) APPENDIX 8	
Test Report No.: RTS-6066-1509-01A	Dates of Test: July 22 – September 8, and September 28, 2015	FCC ID: L6ARHK210LW, L6ARHL210LW IC: 2503A-RHK210LW, 2503A-RHL210LW

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



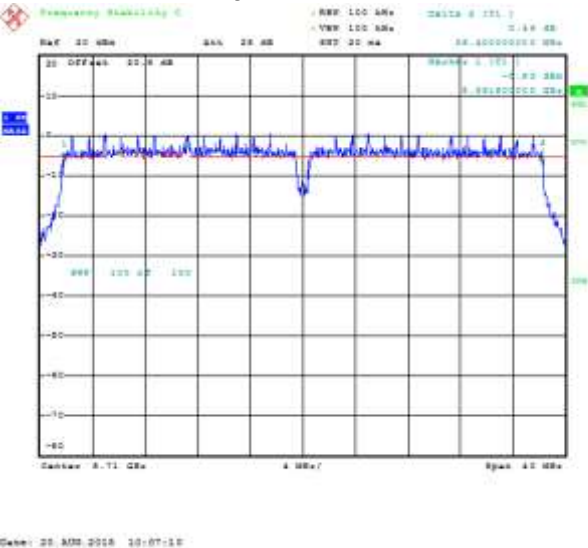
Figure 8-13: 6 dB Bandwidth

Primary, 802.11ac, Channel 100, 6 Mbps



Figure 8-14: 6 dB Bandwidth

Primary, 802.11ac, Channel 140, 6 Mbps



	EMC Test Report for the BlackBerry® smartphone Model RHK211LW (STV100-1) , RHL211LW (STV100-3) APPENDIX 8	
Test Report No.: RTS-6066-1509-01A	Dates of Test: July 22 – September 8, and September 28, 2015	FCC ID: L6ARHK210LW, L6ARHL210LW IC: 2503A-RHK210LW, 2503A-RHL210LW

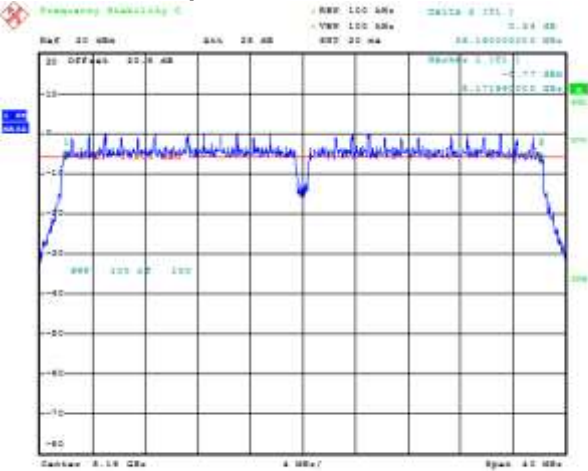
802.11ac RF Conducted Emission Test Results cont'd

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



Date: 20. APR. 2016 10:07:20

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



Date: 20. APR. 2016 10:07:42

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



Date: 20. APR. 2016 10:07:42

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



Date: 20. APR. 2016 10:08:00

	EMC Test Report for the BlackBerry® smartphone Model RHK211LW (STV100-1) , RHL211LW (STV100-3) APPENDIX 8	
Test Report No.: RTS-6066-1509-01A	Dates of Test: July 22 – September 8, and September 28, 2015	FCC ID: L6ARHK210LW, L6ARHL210LW IC: 2503A-RHK210LW, 2503A-RHL210LW

802.11ac RF Conducted Emission Test Results cont'd

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



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



	EMC Test Report for the BlackBerry® smartphone Model RHK211LW (STV100-1) , RHL211LW (STV100-3) APPENDIX 8	
Test Report No.: RTS-6066-1509-01A	Dates of Test: July 22 – September 8, and September 28, 2015	FCC ID: L6ARHK210LW, L6ARHL210LW IC: 2503A-RHK210LW, 2503A-RHL210LW

802.11ac RF Conducted Emission Test Results cont'd

80 MHz Bandwidth

Figure 8-21: 6 dB Bandwidth

Primary, 802.11ac, Channel 36, MCS0

Mbps

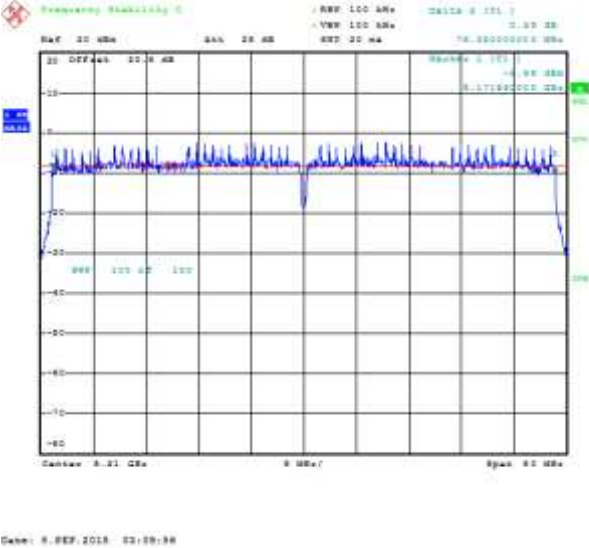


Figure 8-22: 6 dB Bandwidth

Primary, 802.11ac, Channel 64, MCS0

Mbps

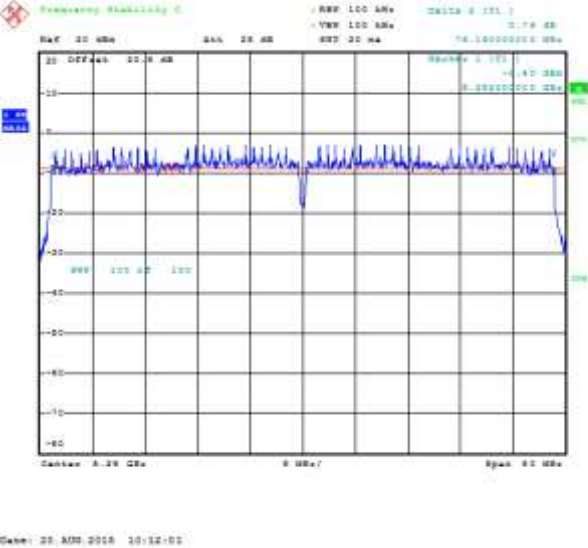


Figure 8-23: 6 dB Bandwidth

Primary, 802.11ac, Channel 100, 6 Mbps

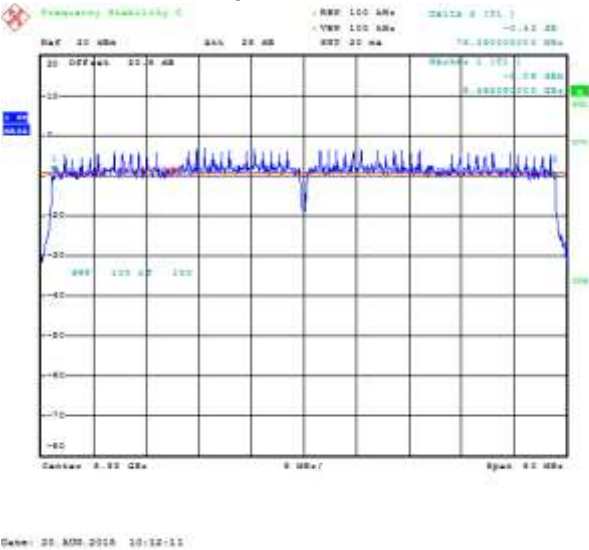
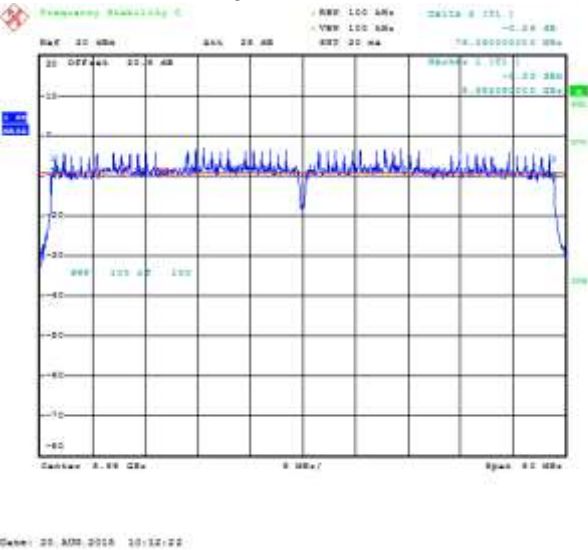


Figure 8-24: 6 dB Bandwidth

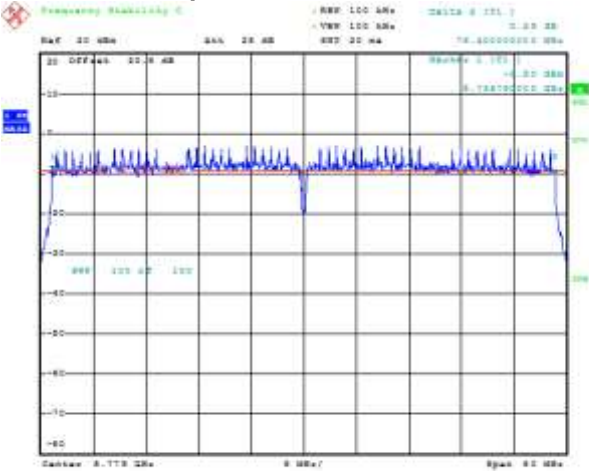
Primary, 802.11ac, Channel 140, 6 Mbps



	EMC Test Report for the BlackBerry® smartphone Model RHK211LW (STV100-1) , RHL211LW (STV100-3) APPENDIX 8	
Test Report No.: RTS-6066-1509-01A	Dates of Test: July 22 – September 8, and September 28, 2015	FCC ID: L6ARHK210LW, L6ARHL210LW IC: 2503A-RHK210LW, 2503A-RHL210LW

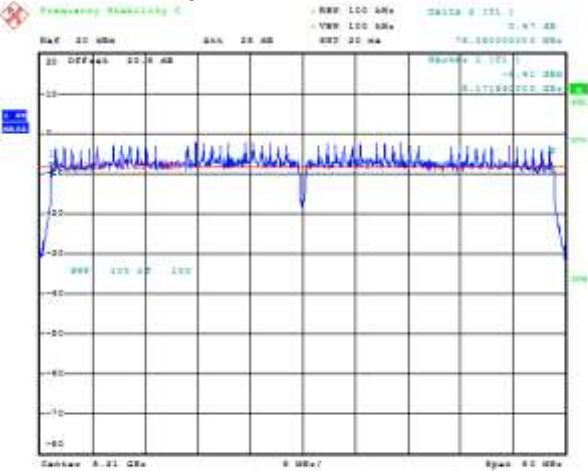
802.11ac RF Conducted Emission Test Results cont'd

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



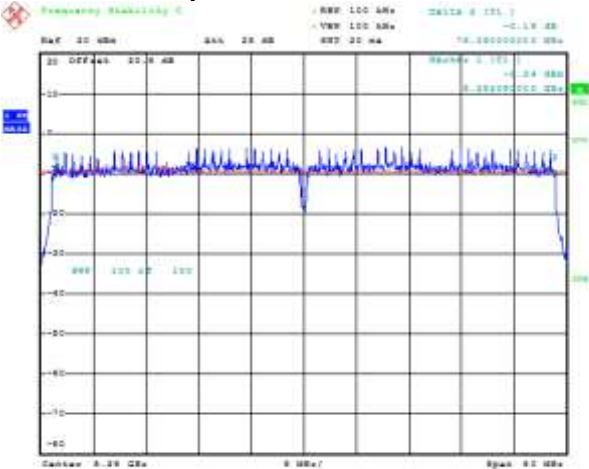
Date: 20. MAR. 2016 10:12:22

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



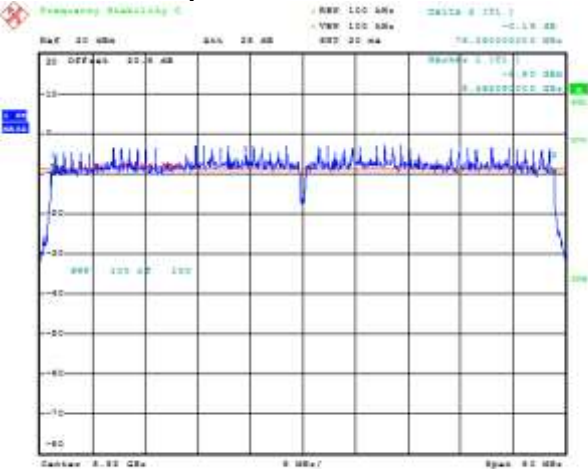
Date: 8. SEP. 2015 13:11:24

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



Date: 20. MAR. 2016 10:10:14

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



Date: 20. MAR. 2016 10:10:24

	EMC Test Report for the BlackBerry® smartphone Model RHK211LW (STV100-1) , RHL211LW (STV100-3) APPENDIX 8	
Test Report No.: RTS-6066-1509-01A	Dates of Test: July 22 – September 8, and September 28, 2015	FCC ID: L6ARHK210LW, L6ARHL210LW IC: 2503A-RHK210LW, 2503A-RHL210LW

802.11ac RF Conducted Emission Test Results cont'd

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

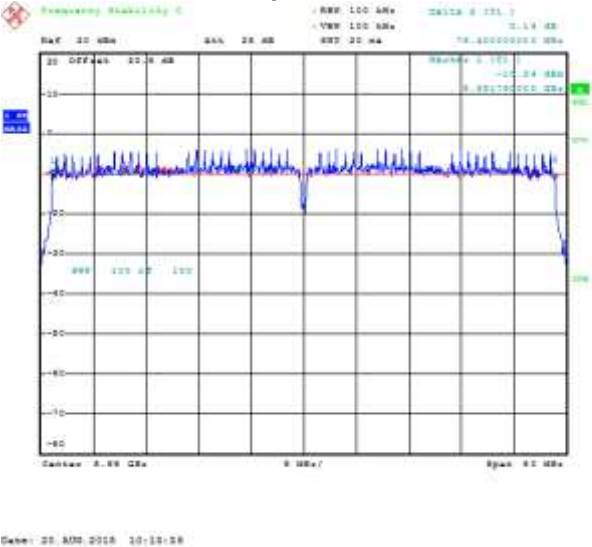
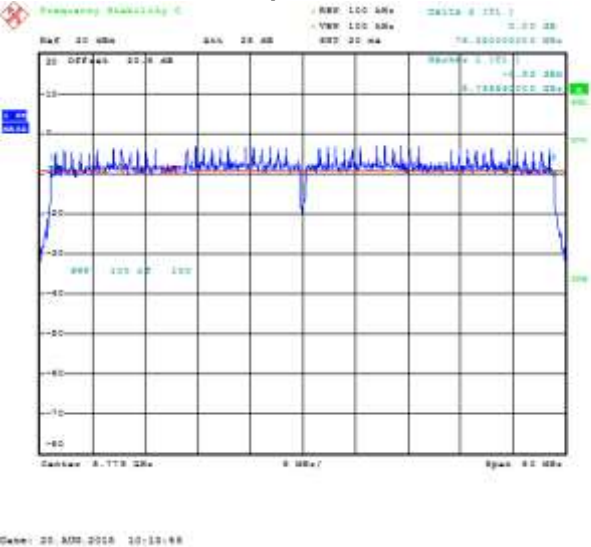


Figure 8-30: 6 dB Bandwidth
Secondary, 802.11ac, Channel 149,
MCS0 Mbps



	EMC Test Report for the BlackBerry® smartphone Model RHK211LW (STV100-1) , RHL211LW (STV100-3) APPENDIX 8	
Test Report No.: RTS-6066-1509-01A	Dates of Test: July 22 – September 8, and September 28, 2015	FCC ID: L6ARHK210LW, L6ARHL210LW IC: 2503A-RHK210LW, 2503A-RHL210LW

802.11ac RF Conducted Emission Test Results cont'd

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

	EMC Test Report for the BlackBerry® smartphone Model RHK211LW (STV100-1) , RHL211LW (STV100-3) APPENDIX 8	
Test Report No.: RTS-6066-1509-01A	Dates of Test: July 22 – September 8, and September 28, 2015	FCC ID: L6ARHK210LW, L6ARHL210LW IC: 2503A-RHK210LW, 2503A-RHL210LW

802.11ac RF Conducted Emission Test Results cont'd

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

	EMC Test Report for the BlackBerry® smartphone Model RHK211LW (STV100-1) , RHL211LW (STV100-3) APPENDIX 8	
Test Report No.: RTS-6066-1509-01A	Dates of Test: July 22 – September 8, and September 28, 2015	FCC ID: L6ARHK210LW, L6ARHL210LW IC: 2503A-RHK210LW, 2503A-RHL210LW

802.11ac RF Conducted Emission Test Results

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

	EMC Test Report for the BlackBerry® smartphone Model RHK211LW (STV100-1) , RHL211LW (STV100-3) APPENDIX 8	
Test Report No.: RTS-6066-1509-01A	Dates of Test: July 22 – September 8, and September 28, 2015	FCC ID: L6ARHK210LW, L6ARHL210LW IC: 2503A-RHK210LW, 2503A-RHL210LW

802.11ac RF Conducted Emission Test Results cont'd

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

	EMC Test Report for the BlackBerry® smartphone Model RHK211LW (STV100-1) , RHL211LW (STV100-3) APPENDIX 8	
Test Report No.: RTS-6066-1509-01A	Dates of Test: July 22 – September 8, and September 28, 2015	FCC ID: L6ARHK210LW, L6ARHL210LW IC: 2503A-RHK210LW, 2503A-RHL210LW

802.11ac RF Conducted Emission Test Results

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

	EMC Test Report for the BlackBerry® smartphone Model RHK211LW (STV100-1) , RHL211LW (STV100-3) APPENDIX 8	
Test Report No.: RTS-6066-1509-01A	Dates of Test: July 22 – September 8, and September 28, 2015	FCC ID: L6ARHK210LW, L6ARHL210LW IC: 2503A-RHK210LW, 2503A-RHL210LW

802.11ac RF Conducted Emission Test Results cont'd

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

	EMC Test Report for the BlackBerry® smartphone Model RHK211LW (STV100-1) , RHL211LW (STV100-3) APPENDIX 8	
Test Report No.: RTS-6066-1509-01A	Dates of Test: July 22 – September 8, and September 28, 2015	FCC ID: L6ARHK210LW, L6ARHL210LW IC: 2503A-RHK210LW, 2503A-RHL210LW

802.11ac RF Conducted Emission Test Results cont'd

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	Bandwidth(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

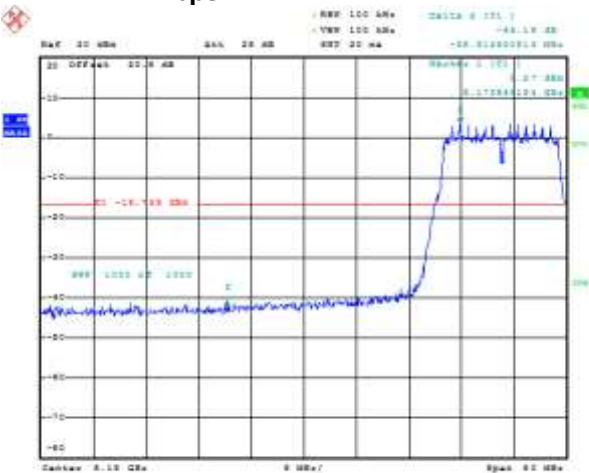
Channel	Bandwidth(MHz)	Data Rate	Limit (dBc)	Measured Level (dBc)	Margin (dB)
36	20	MCS0	< -20	-44.16	-24.16
64	20	MCS0	< -20	-49.63	-29.63
100	20	MCS0	< -20	-47.81	-27.81
140	20	MCS0	< -20	-43.94	-23.94
149	20	MCS0	< -20	-41.38	-21.38
165	20	MCS0	< -20	-35.15	-15.15

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.

	EMC Test Report for the BlackBerry® smartphone Model RHK211LW (STV100-1) , RHL211LW (STV100-3) APPENDIX 8	
Test Report No.: RTS-6066-1509-01A	Dates of Test: July 22 – September 8, and September 28, 2015	FCC ID: L6ARHK210LW, L6ARHL210LW IC: 2503A-RHK210LW, 2503A-RHL210LW

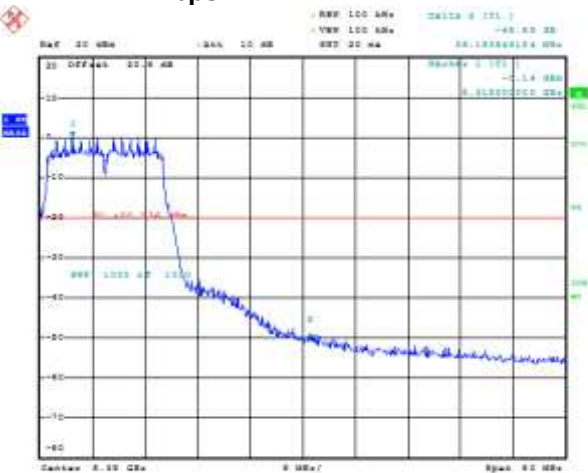
802.11ac RF Conducted Emission Test Results cont'd

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



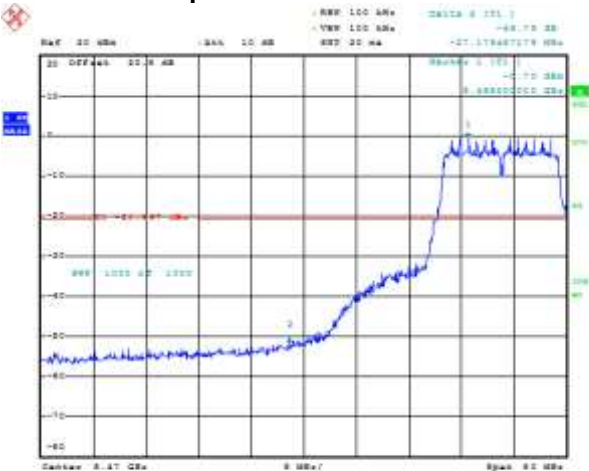
Date: 8 SEP 2015 22:19:50

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



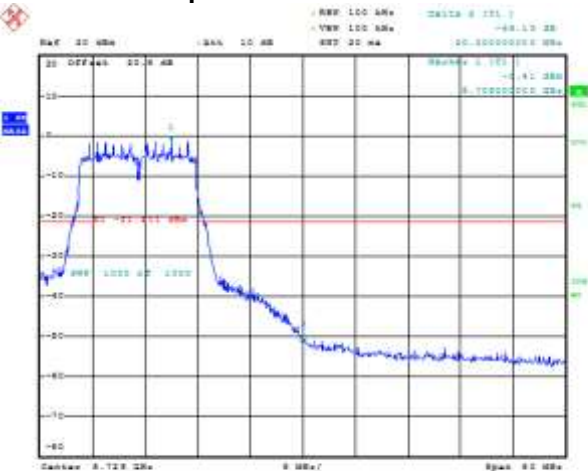
Date: 21 MAR 2016 19:24:07

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



Date: 21 MAR 2016 19:29:26

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

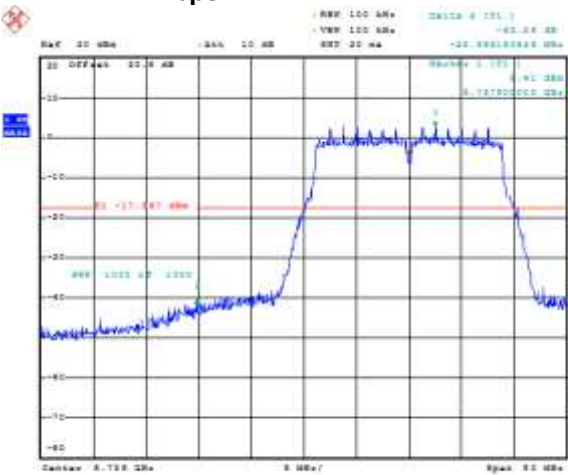


Date: 21 MAR 2016 19:29:26

	EMC Test Report for the BlackBerry® smartphone Model RHK211LW (STV100-1) , RHL211LW (STV100-3) APPENDIX 8	
Test Report No.: RTS-6066-1509-01A	Dates of Test: July 22 – September 8, and September 28, 2015	FCC ID: L6ARHK210LW, L6ARHL210LW IC: 2503A-RHK210LW, 2503A-RHL210LW

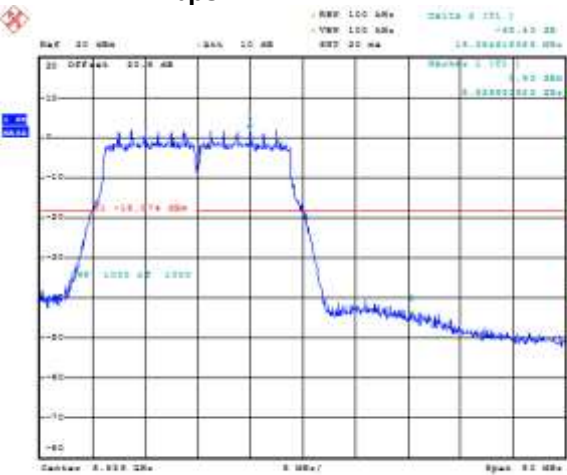
802.11a RF Conducted Emission Test Results cont'd

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



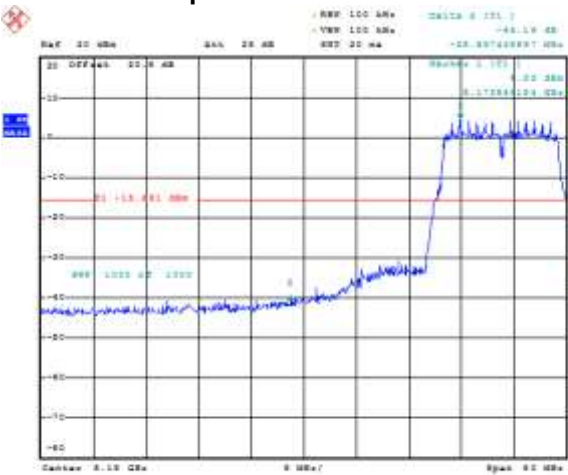
Date: 21, MAR, 2016 19:56:33

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



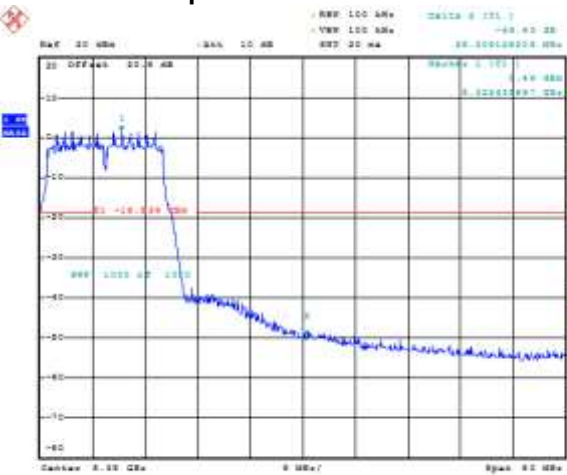
Date: 21, MAR, 2016 19:57:28

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



Date: 8, SEP, 2015 22:59:56

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



Date: 21, MAR, 2016 19:58:38

	EMC Test Report for the BlackBerry® smartphone Model RHK211LW (STV100-1) , RHL211LW (STV100-3) APPENDIX 8	
Test Report No.: RTS-6066-1509-01A	Dates of Test: July 22 – September 8, and September 28, 2015	FCC ID: L6ARHK210LW, L6ARHL210LW IC: 2503A-RHK210LW, 2503A-RHL210LW

802.11ac RF Conducted Emission Test Results cont'd

Figure 8-39: Band Edge Compliance
Secondary, 802.11ac, Channel 100,
MCS0 Mbps

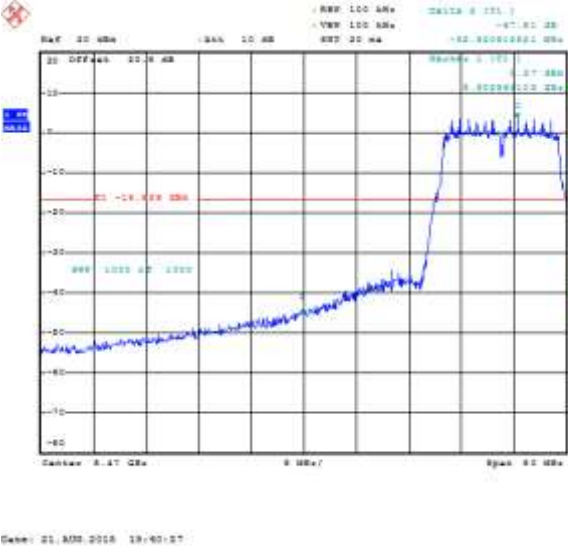


Figure 8-40: Band Edge Compliance
Secondary, 802.11ac, Channel 140,
MCS0 Mbps

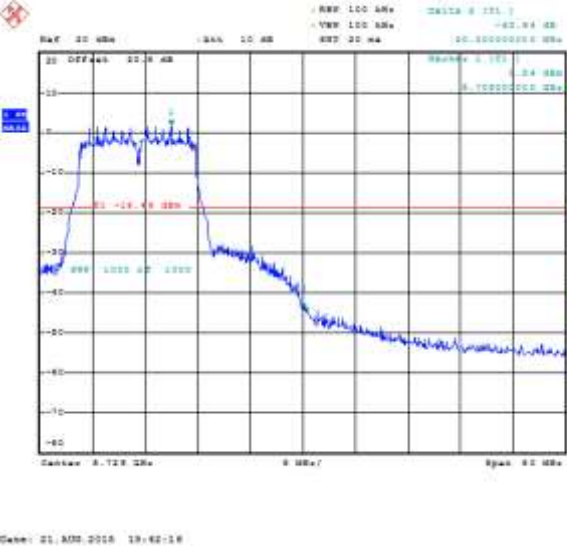


Figure 8-41: Band Edge Compliance
Secondary, 802.11ac, Channel 149,
MCS0 Mbps

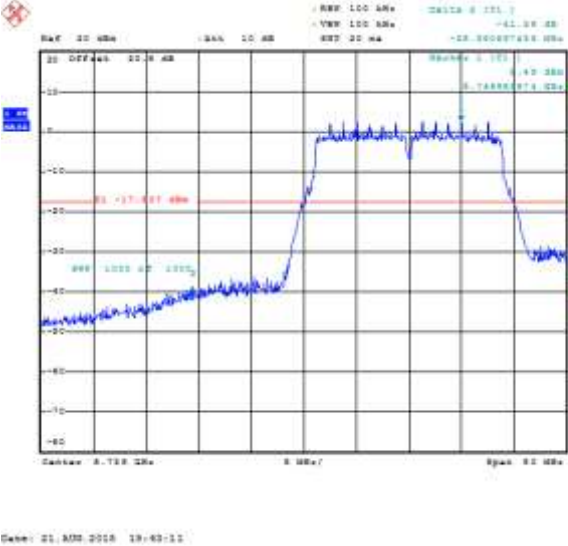
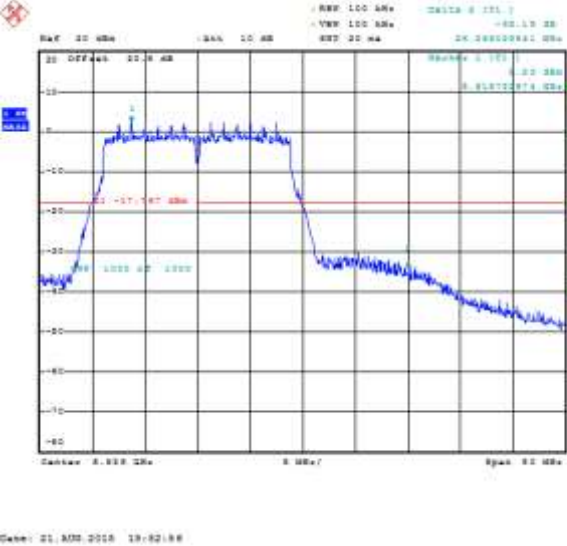


Figure 8-42: Band Edge Compliance
Secondary, 802.11ac, Channel 165,
MCS0 Mbps



	EMC Test Report for the BlackBerry® smartphone Model RHK211LW (STV100-1) , RHL211LW (STV100-3) APPENDIX 8	
Test Report No.: RTS-6066-1509-01A	Dates of Test: July 22 – September 8, and September 28, 2015	FCC ID: L6ARHK210LW, L6ARHL210LW IC: 2503A-RHK210LW, 2503A-RHL210LW

802.11ac RF Conducted Emission Test Results cont'd

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	Bandwidth(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

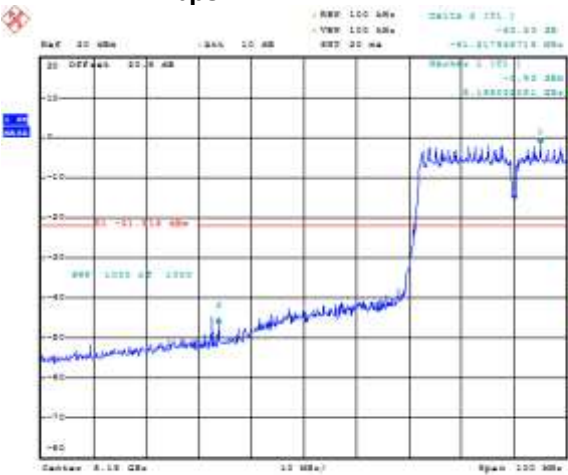
Channel	Bandwidth(MHz)	Data Rate	Limit (dBc)	Measured Level (dBc)	Margin (dB)
36	40	MCS0	< -20	-35.18	-15.18
64	40	MCS0	< -20	-42.22	-22.22
100	40	MCS0	< -20	-39.60	-19.60
140	40	MCS0	< -20	-23.43	-3.43
149	40	MCS0	< -20	-38.35	-18.35

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.

	EMC Test Report for the BlackBerry® smartphone Model RHK211LW (STV100-1) , RHL211LW (STV100-3) APPENDIX 8	
Test Report No.: RTS-6066-1509-01A	Dates of Test: July 22 – September 8, and September 28, 2015	FCC ID: L6ARHK210LW, L6ARHL210LW IC: 2503A-RHK210LW, 2503A-RHL210LW

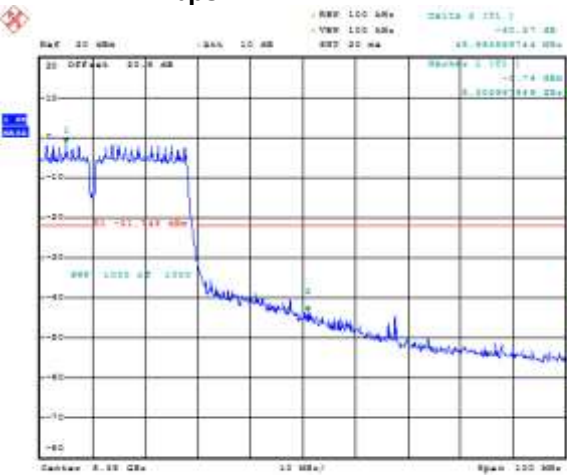
802.11ac RF Conducted Emission Test Results cont'd

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



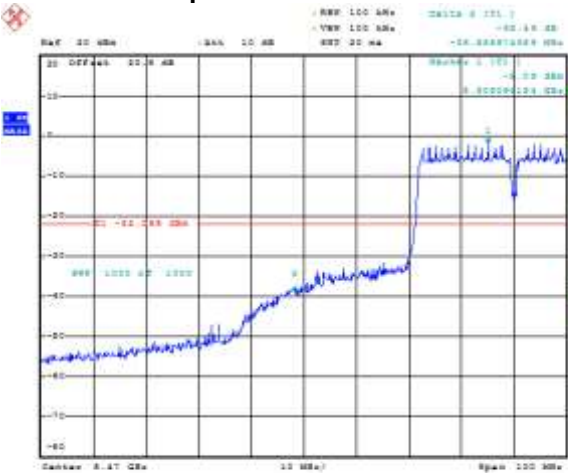
Date: 24.May.2015 09:59:50

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



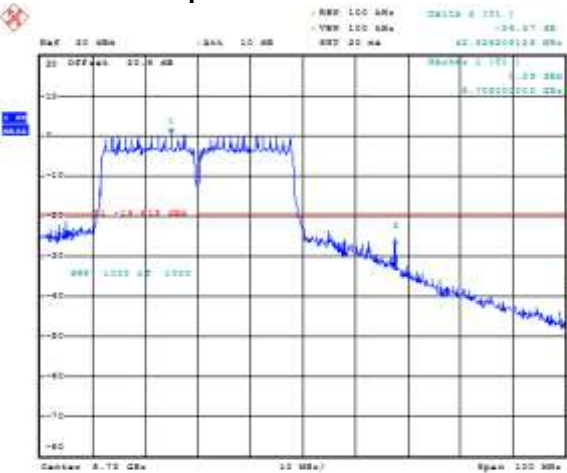
Date: 24.May.2015 10:00:22

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



Date: 24.May.2015 10:01:28

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

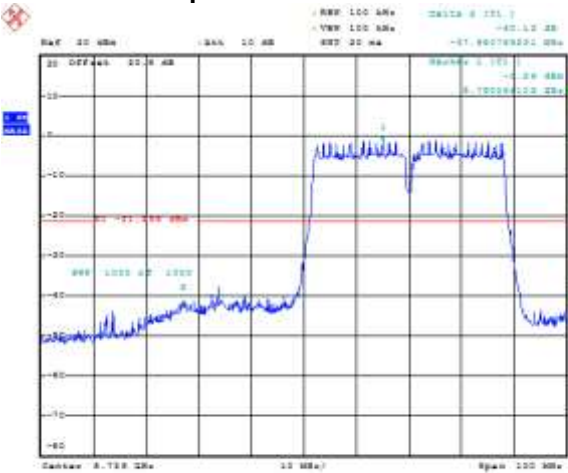


Date: 24.May.2015 10:02:28

	EMC Test Report for the BlackBerry® smartphone Model RHK211LW (STV100-1) , RHL211LW (STV100-3) APPENDIX 8	
Test Report No.: RTS-6066-1509-01A	Dates of Test: July 22 – September 8, and September 28, 2015	FCC ID: L6ARHK210LW, L6ARHL210LW IC: 2503A-RHK210LW, 2503A-RHL210LW

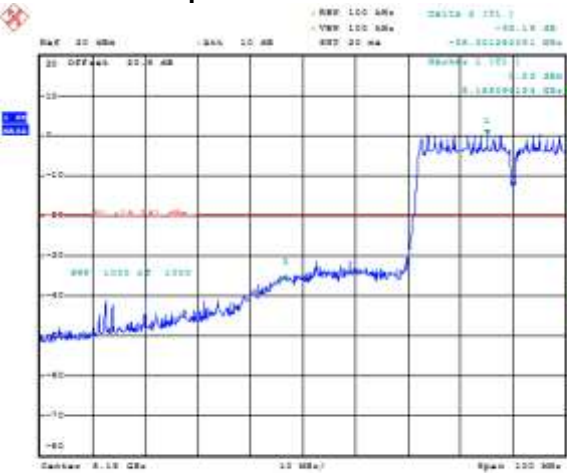
802.11a RF Conducted Emission Test Results cont'd

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



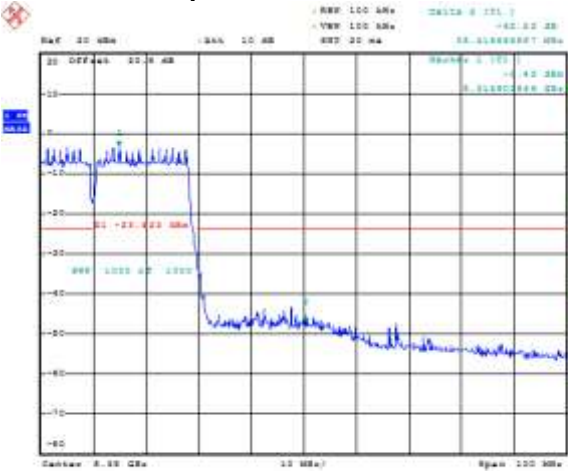
Date: 24.AUG.2015 10:03:28

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



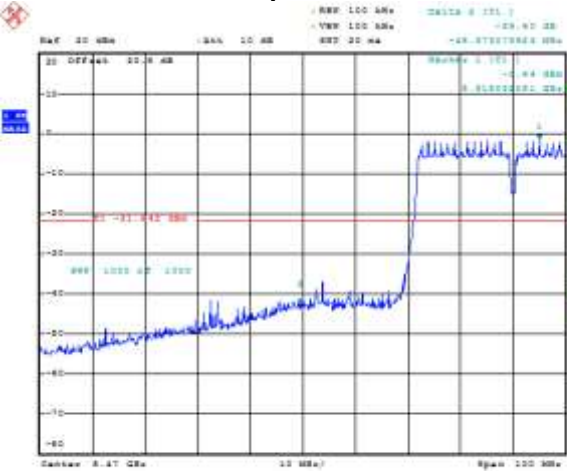
Date: 24.AUG.2015 10:06:58

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



Date: 24.AUG.2015 10:09:54

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



Date: 24.AUG.2015 10:09:58

	EMC Test Report for the BlackBerry® smartphone Model RHK211LW (STV100-1) , RHL211LW (STV100-3) APPENDIX 8	
Test Report No.: RTS-6066-1509-01A	Dates of Test: July 22 – September 8, and September 28, 2015	FCC ID: L6ARHK210LW, L6ARHL210LW IC: 2503A-RHK210LW, 2503A-RHL210LW

802.11a RF Conducted Emission Test Results cont'd

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

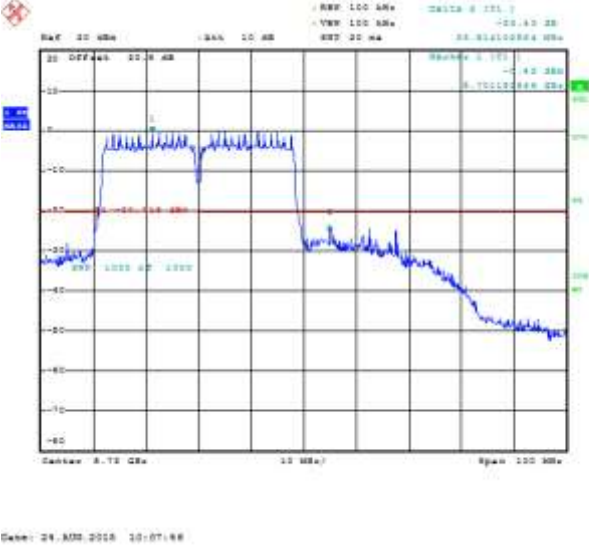
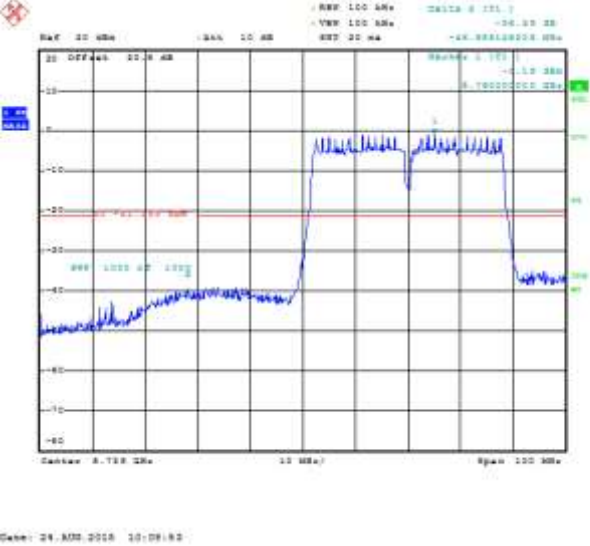


Figure 8-52: Band Edge Compliance
Secondary, 802.11ac, Channel 149,
MCS0 Mbps



	EMC Test Report for the BlackBerry® smartphone Model RHK211LW (STV100-1) , RHL211LW (STV100-3) APPENDIX 8	
Test Report No.: RTS-6066-1509-01A	Dates of Test: July 22 – September 8, and September 28, 2015	FCC ID: L6ARHK210LW, L6ARHL210LW IC: 2503A-RHK210LW, 2503A-RHL210LW

802.11ac RF Conducted Emission Test Results cont'd

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	Bandwidth(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

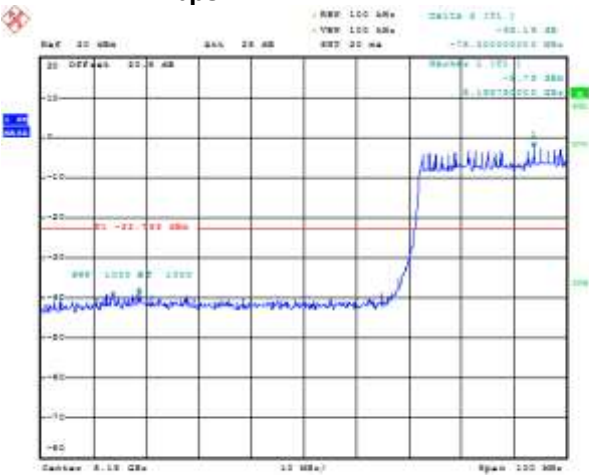
Channel	Bandwidth(MHz)	Data Rate	Limit (dBc)	Measured Level (dBc)	Margin (dB)
36	80	MCS0	< -20	-31.22	-11.22
64	80	MCS0	< -20	-36.10	-16.10
100	80	MCS0	< -20	-36.16	-16.16
140	80	MCS0	< -20	-27.95	-7.95
149	80	MCS0	< -20	-33.74	-13.74

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.

	EMC Test Report for the BlackBerry® smartphone Model RHK211LW (STV100-1) , RHL211LW (STV100-3) APPENDIX 8	
Test Report No.: RTS-6066-1509-01A	Dates of Test: July 22 – September 8, and September 28, 2015	FCC ID: L6ARHK210LW, L6ARHL210LW IC: 2503A-RHK210LW, 2503A-RHL210LW

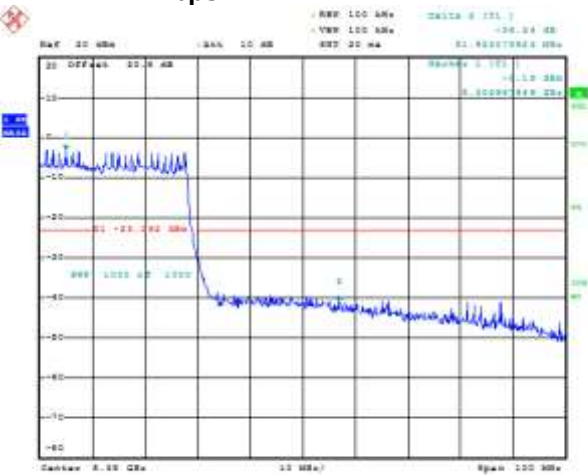
802.11ac RF Conducted Emission Test Results cont'd

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



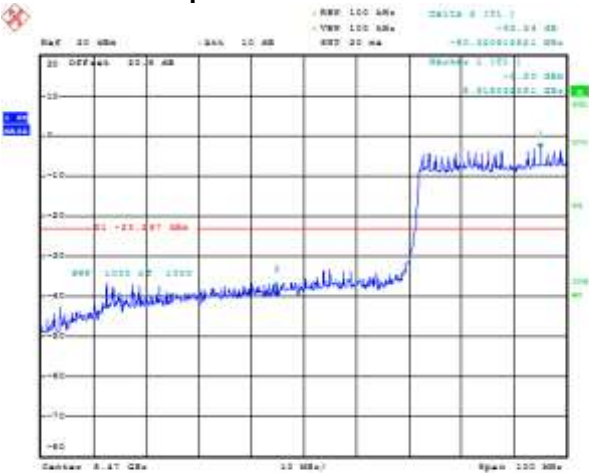
Date: 8 SEP 2015 03:57:40

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



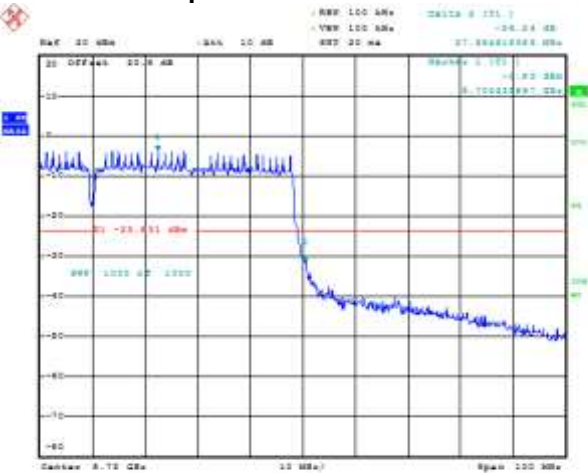
Date: 24 MAR 2016 10:19:40

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



Date: 24 MAR 2016 10:19:48

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

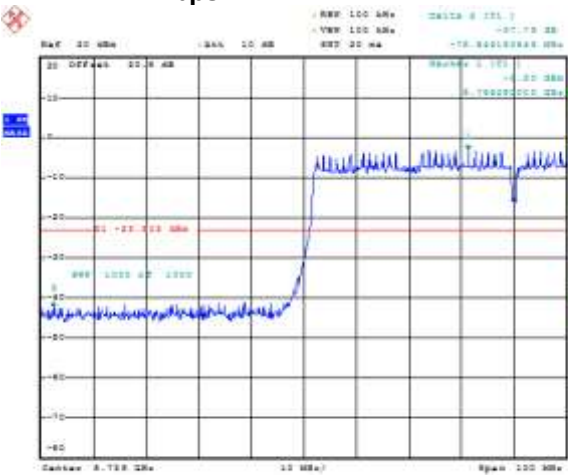


Date: 24 MAR 2016 10:20:13

	EMC Test Report for the BlackBerry® smartphone Model RHK211LW (STV100-1) , RHL211LW (STV100-3) APPENDIX 8	
Test Report No.: RTS-6066-1509-01A	Dates of Test: July 22 – September 8, and September 28, 2015	FCC ID: L6ARHK210LW, L6ARHL210LW IC: 2503A-RHK210LW, 2503A-RHL210LW

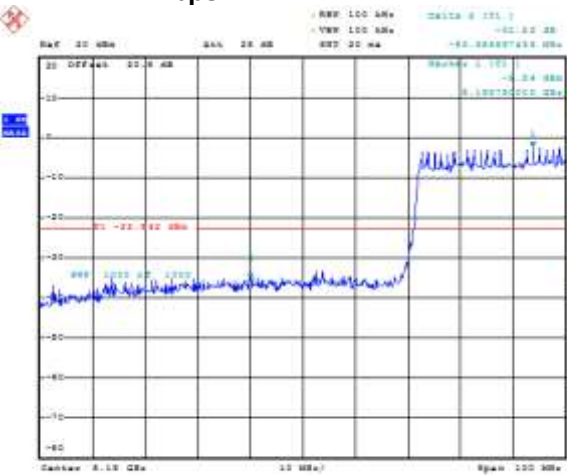
802.11ac RF Conducted Emission Test Results cont'd

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



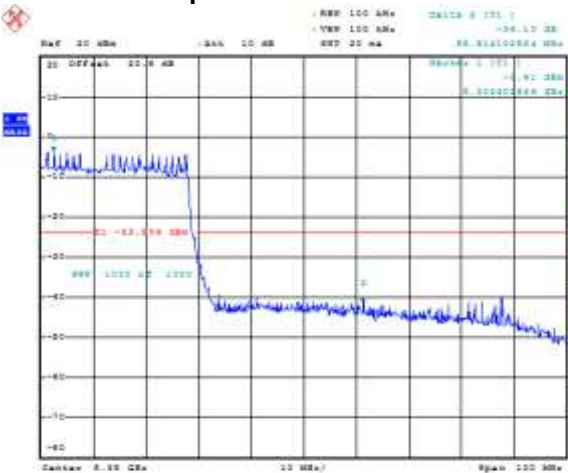
Date: 24.MAR.2016 10:21:42

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



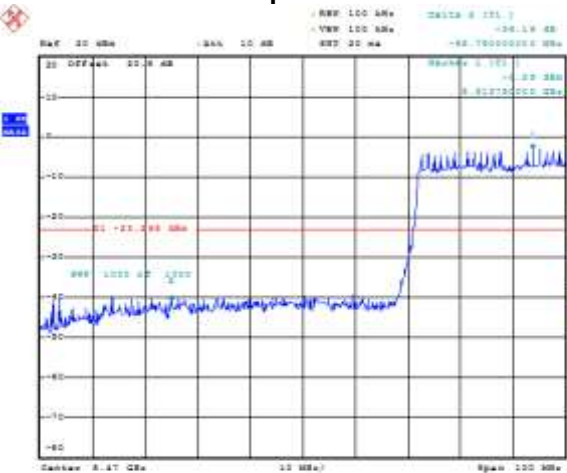
Date: 8.SEP.2015 03:16:38

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



Date: 24.MAR.2016 10:29:12

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



Date: 24.MAR.2016 10:29:18

	EMC Test Report for the BlackBerry® smartphone Model RHK211LW (STV100-1) , RHL211LW (STV100-3) APPENDIX 8	
Test Report No.: RTS-6066-1509-01A	Dates of Test: July 22 – September 8, and September 28, 2015	FCC ID: L6ARHK210LW, L6ARHL210LW IC: 2503A-RHK210LW, 2503A-RHL210LW

802.11ac RF Conducted Emission Test Results cont'd

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

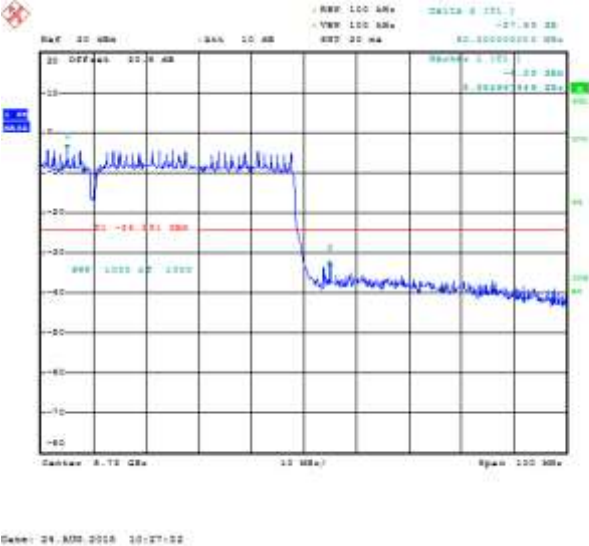
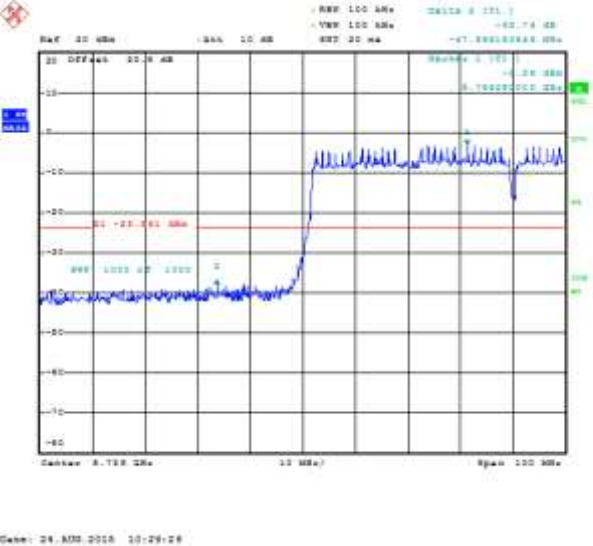


Figure 8-62: Band Edge Compliance
Secondary, 802.11ac, Channel 149,
MCS0 Mbps



	EMC Test Report for the BlackBerry® smartphone Model RHK211LW (STV100-1) , RHL211LW (STV100-3) APPENDIX 8	
Test Report No.: RTS-6066-1509-01A	Dates of Test: July 22 – September 8, and September 28, 2015	FCC ID: L6ARHK210LW, L6ARHL210LW IC: 2503A-RHK210LW, 2503A-RHL210LW

802.11ac RF Conducted Emission Test Results cont'd

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

	EMC Test Report for the BlackBerry® smartphone Model RHK211LW (STV100-1) , RHL211LW (STV100-3) APPENDIX 8	
Test Report No.: RTS-6066-1509-01A	Dates of Test: July 22 – September 8, and September 28, 2015	FCC ID: L6ARHK210LW, L6ARHL210LW IC: 2503A-RHK210LW, 2503A-RHL210LW

802.11ac RF Conducted Emission Test Results cont'd

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.

	EMC Test Report for the BlackBerry® smartphone Model RHK211LW (STV100-1) , RHL211LW (STV100-3) APPENDIX 8	
Test Report No.: RTS-6066-1509-01A	Dates of Test: July 22 – September 8, and September 28, 2015	FCC ID: L6ARHK210LW, L6ARHL210LW IC: 2503A-RHK210LW, 2503A-RHL210LW

802.11ac RF Conducted Emission Test Results cont'd

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

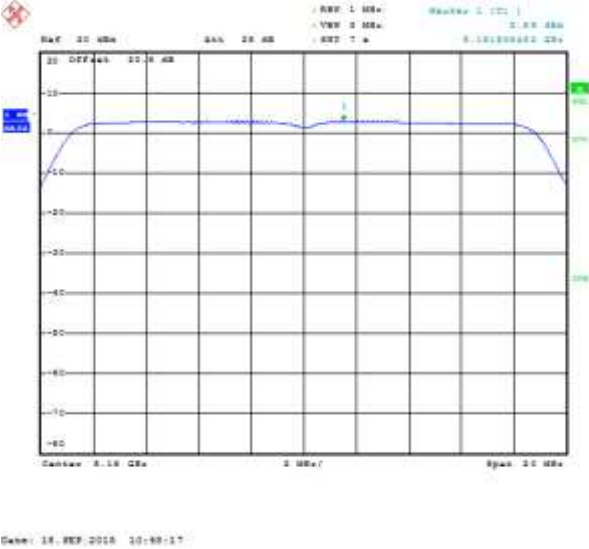


Figure 8-64: Peak Power Spectral Density
SISO Primary, 802.11ac, Channel 64,
MCS0 Mbps

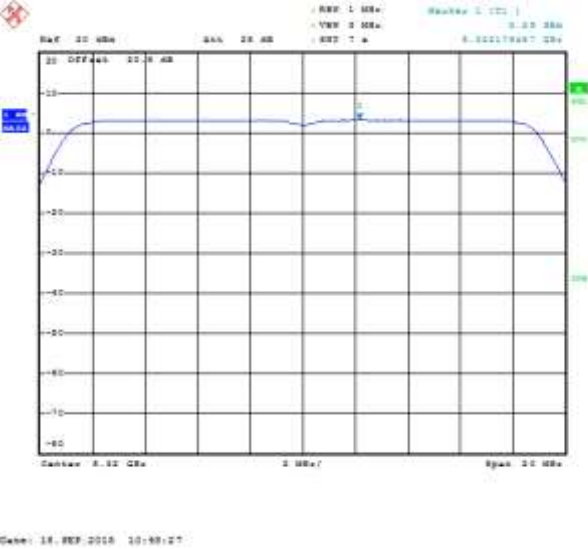


Figure 8-65: Peak Power Spectral Density
SISO Primary, 802.11ac, Channel 140,
MCS0 Mbps

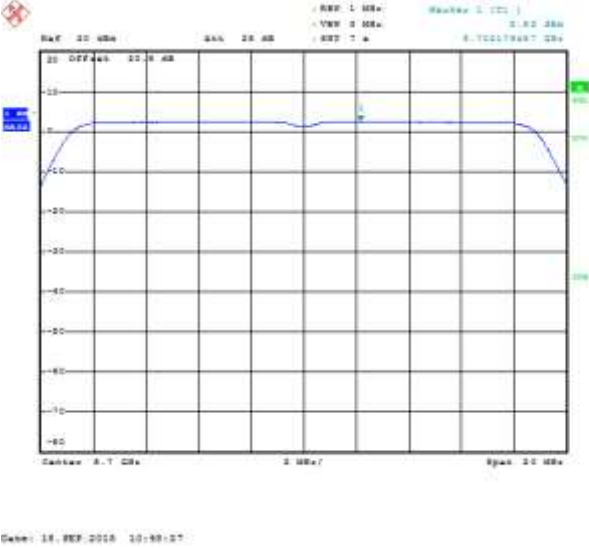
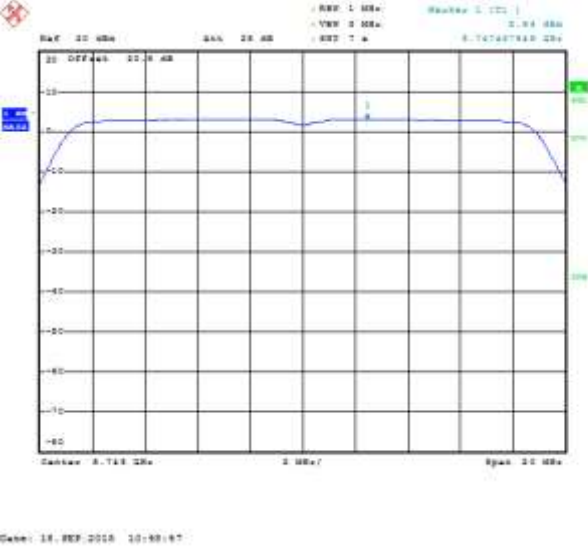


Figure 8-66: Peak Power Spectral Density
SISO Primary, 802.11ac, Channel 149,
MCS0 Mbps



	EMC Test Report for the BlackBerry® smartphone Model RHK211LW (STV100-1) , RHL211LW (STV100-3) APPENDIX 8	
Test Report No.: RTS-6066-1509-01A	Dates of Test: July 22 – September 8, and September 28, 2015	FCC ID: L6ARHK210LW, L6ARHL210LW IC: 2503A-RHK210LW, 2503A-RHL210LW

802.11ac RF Conducted Emission Test Results cont'd

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

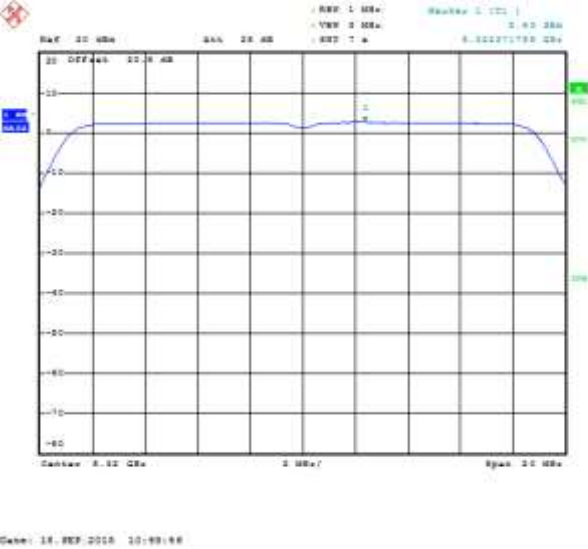


Figure 8-69: Peak Power Spectral Density
SISO Secondary, 802.11ac, Channel 140,
MCS0 Mbps

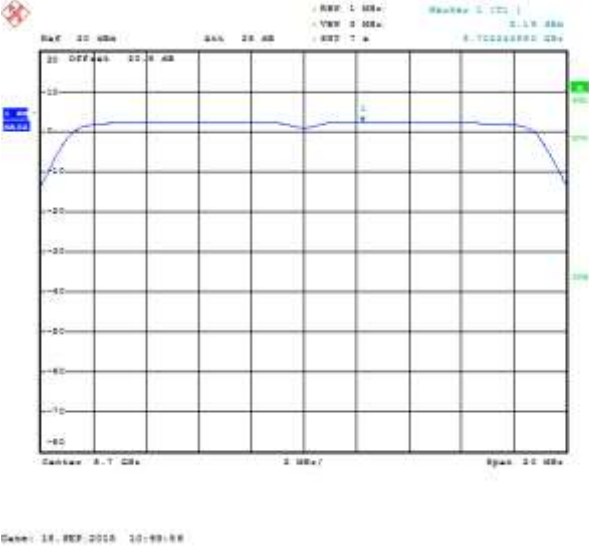
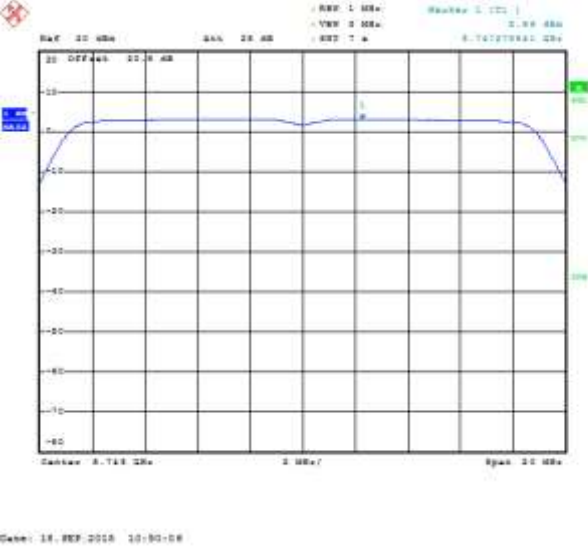


Figure 8-70: Peak Power Spectral Density
SISO Secondary, 802.11ac, Channel 149,
MCS0 Mbps



	EMC Test Report for the BlackBerry® smartphone Model RHK211LW (STV100-1) , RHL211LW (STV100-3) APPENDIX 8	
Test Report No.: RTS-6066-1509-01A	Dates of Test: July 22 – September 8, and September 28, 2015	FCC ID: L6ARHK210LW, L6ARHL210LW IC: 2503A-RHK210LW, 2503A-RHL210LW

802.11ac RF Conducted Emission Test Results cont'd

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

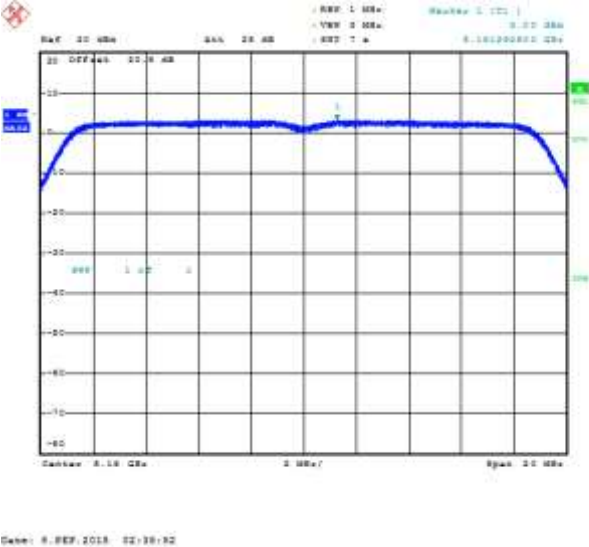


Figure 8-72: Peak Power Spectral Density
MIMO Primary, 802.11ac, Channel 64,
MCS0 Mbps

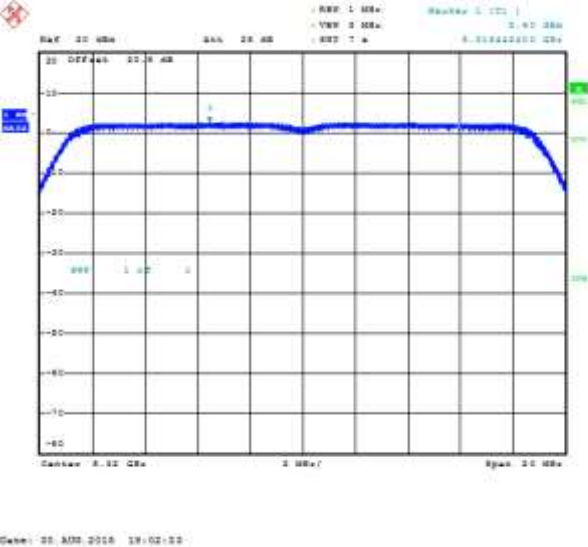


Figure 8-73: Peak Power Spectral Density
MIMO Primary, 802.11ac, Channel 140,
MCS0 Mbps

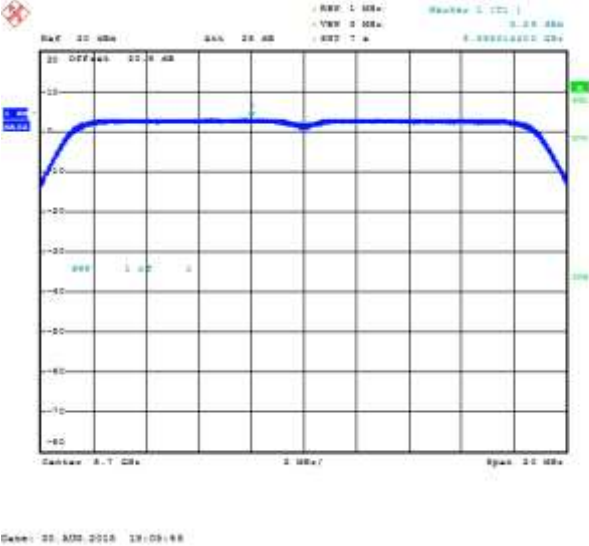
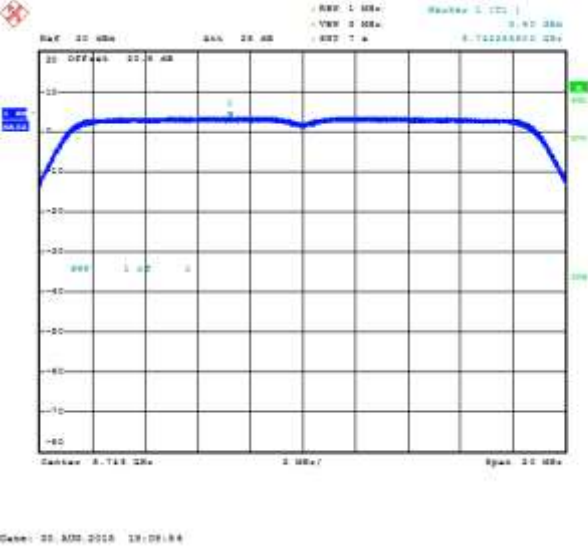


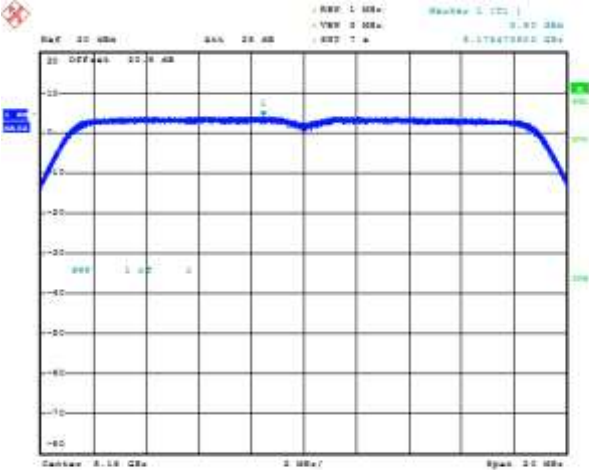
Figure 8-74: Peak Power Spectral Density
MIMO Primary, 802.11ac, Channel 149,
MCS0 Mbps



	EMC Test Report for the BlackBerry® smartphone Model RHK211LW (STV100-1) , RHL211LW (STV100-3) APPENDIX 8	
Test Report No.: RTS-6066-1509-01A	Dates of Test: July 22 – September 8, and September 28, 2015	FCC ID: L6ARHK210LW, L6ARHL210LW IC: 2503A-RHK210LW, 2503A-RHL210LW

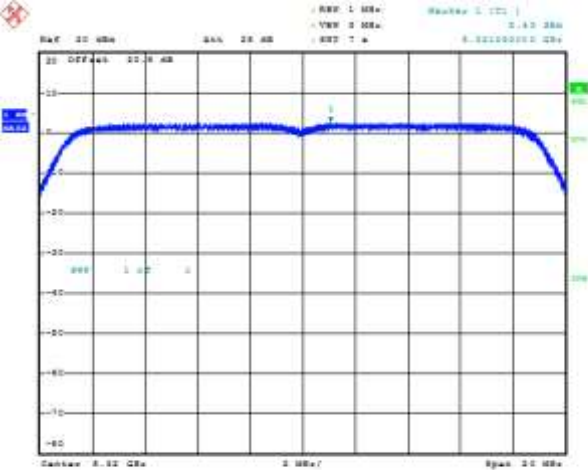
802.11ac RF Conducted Emission Test Results cont'd

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



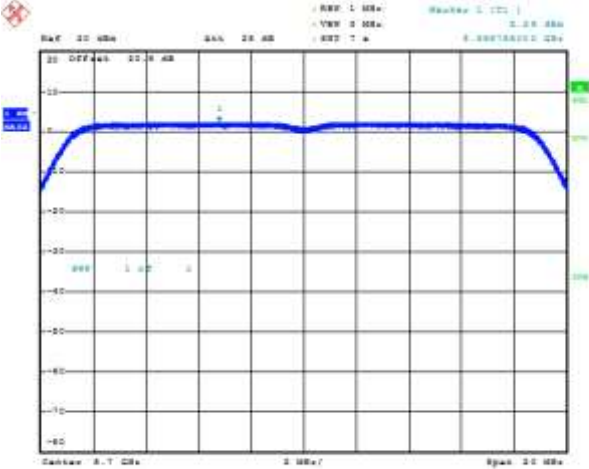
Date: 8 SEP 2015 02:39:30

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



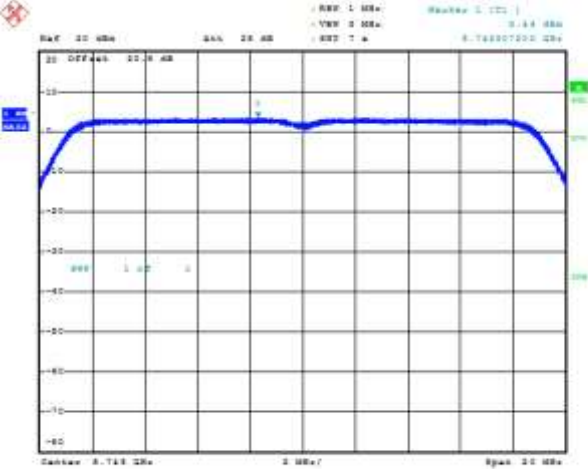
Date: 22 SEP 2015 19:19:38

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



Date: 22 SEP 2015 19:19:38

Figure 8-78: Peak Power Spectral Density
MIMO Secondary, 802.11ac, Channel 149,
MCS0 Mbps



Date: 22 SEP 2015 19:21:07

	EMC Test Report for the BlackBerry® smartphone Model RHK211LW (STV100-1) , RHL211LW (STV100-3) APPENDIX 8	
Test Report No.: RTS-6066-1509-01A	Dates of Test: July 22 – September 8, and September 28, 2015	FCC ID: L6ARHK210LW, L6ARHL210LW IC: 2503A-RHK210LW, 2503A-RHL210LW

802.11ac RF Conducted Emission Test Results cont'd

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

	EMC Test Report for the BlackBerry® smartphone Model RHK211LW (STV100-1) , RHL211LW (STV100-3) APPENDIX 8	
Test Report No.: RTS-6066-1509-01A	Dates of Test: July 22 – September 8, and September 28, 2015	FCC ID: L6ARHK210LW, L6ARHL210LW IC: 2503A-RHK210LW, 2503A-RHL210LW

802.11ac RF Conducted Emission Test Results cont'd

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.

	EMC Test Report for the BlackBerry® smartphone Model RHK211LW (STV100-1) , RHL211LW (STV100-3) APPENDIX 8	
Test Report No.: RTS-6066-1509-01A	Dates of Test: July 22 – September 8, and September 28, 2015	FCC ID: L6ARHK210LW, L6ARHL210LW IC: 2503A-RHK210LW, 2503A-RHL210LW

802.11ac RF Conducted Emission Test Results cont'd

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

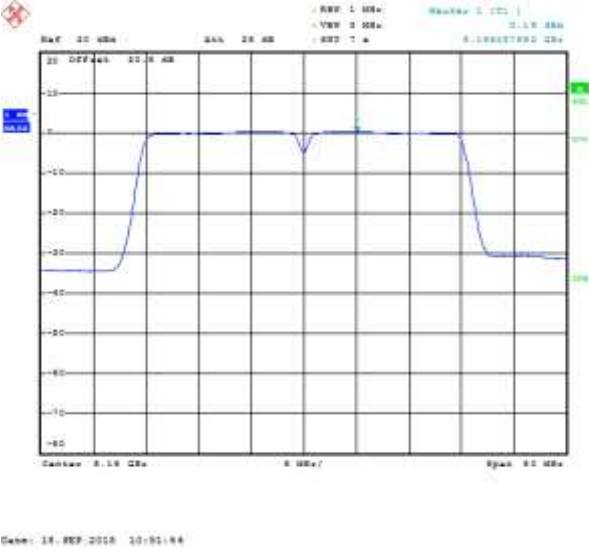


Figure 8-80: Peak Power Spectral Density
SISO Primary, 802.11ac, Channel 62,
MCS0 Mbps

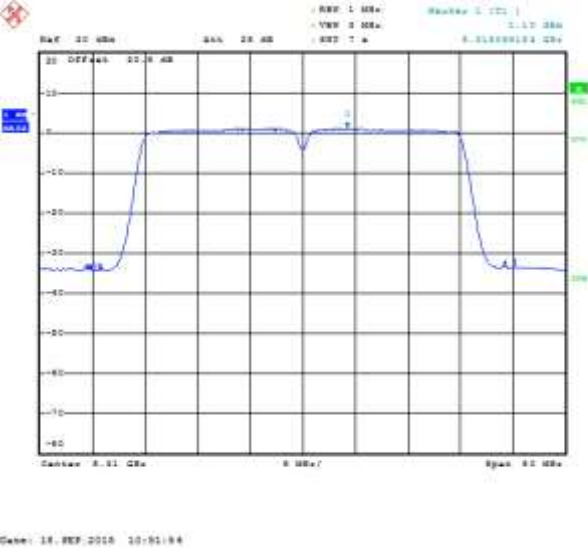


Figure 8-81: Peak Power Spectral Density
SISO Primary, 802.11ac, Channel 142,
MCS0 Mbps

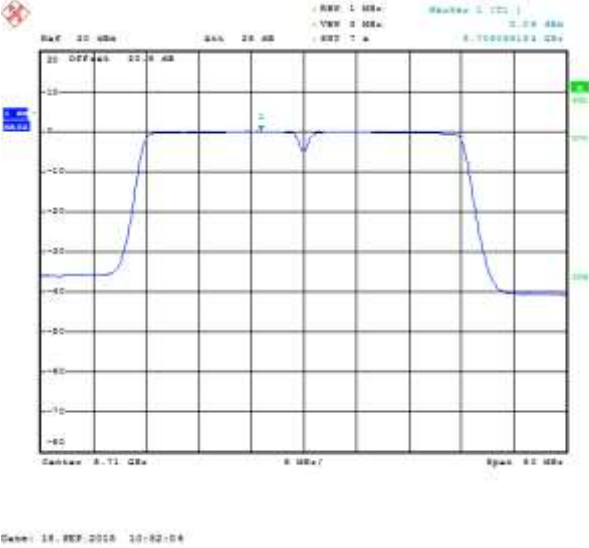
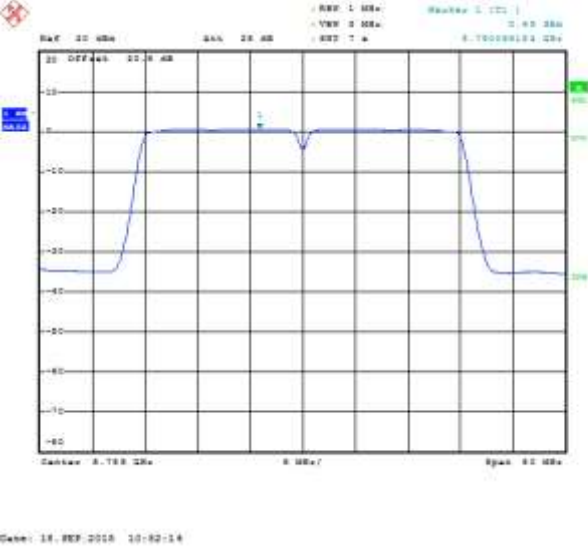


Figure 8-82: Peak Power Spectral Density
SISO Primary, 802.11ac, Channel 151,
MCS0 Mbps



	EMC Test Report for the BlackBerry® smartphone Model RHK211LW (STV100-1) , RHL211LW (STV100-3) APPENDIX 8	
Test Report No.: RTS-6066-1509-01A	Dates of Test: July 22 – September 8, and September 28, 2015	FCC ID: L6ARHK210LW, L6ARHL210LW IC: 2503A-RHK210LW, 2503A-RHL210LW

802.11ac RF Conducted Emission Test Results cont'd

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



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

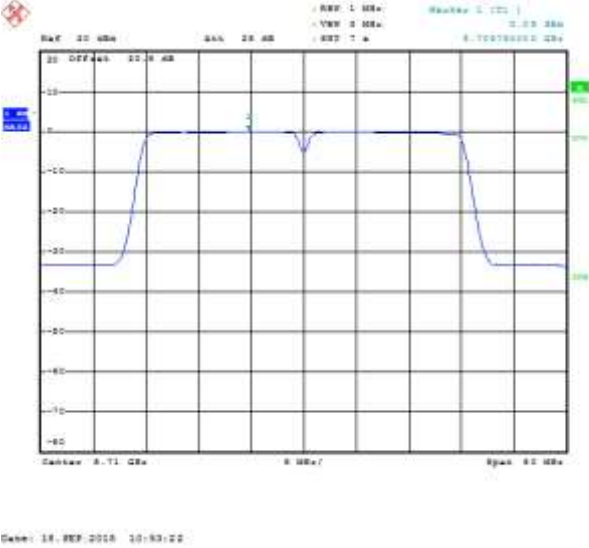


Figure 8-86: Peak Power Spectral Density
SISO Secondary, 802.11ac, Channel 151,
MCS0 Mbps



	EMC Test Report for the BlackBerry® smartphone Model RHK211LW (STV100-1) , RHL211LW (STV100-3) APPENDIX 8	
Test Report No.: RTS-6066-1509-01A	Dates of Test: July 22 – September 8, and September 28, 2015	FCC ID: L6ARHK210LW, L6ARHL210LW IC: 2503A-RHK210LW, 2503A-RHL210LW

802.11ac RF Conducted Emission Test Results cont'd

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

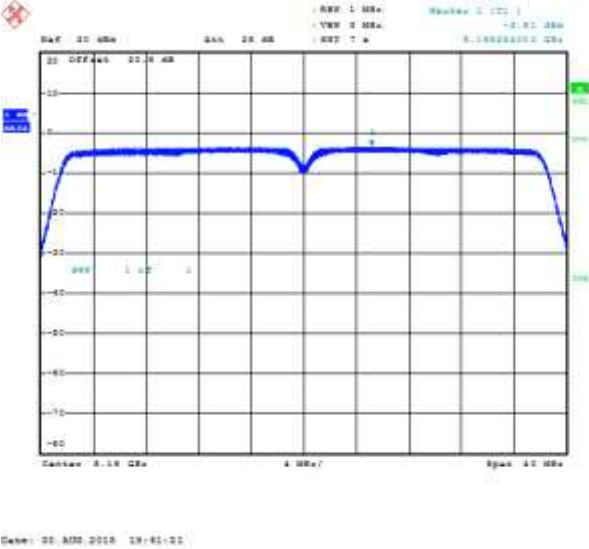


Figure 8-88: Peak Power Spectral Density
MIMO Primary, 802.11ac, Channel 62,
MCS0 Mbps

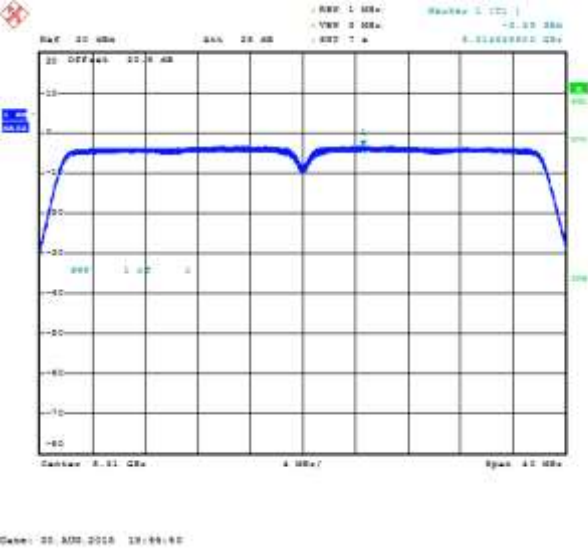


Figure 8-89: Peak Power Spectral Density
MIMO Primary, 802.11ac, Channel 142,
MCS0 Mbps

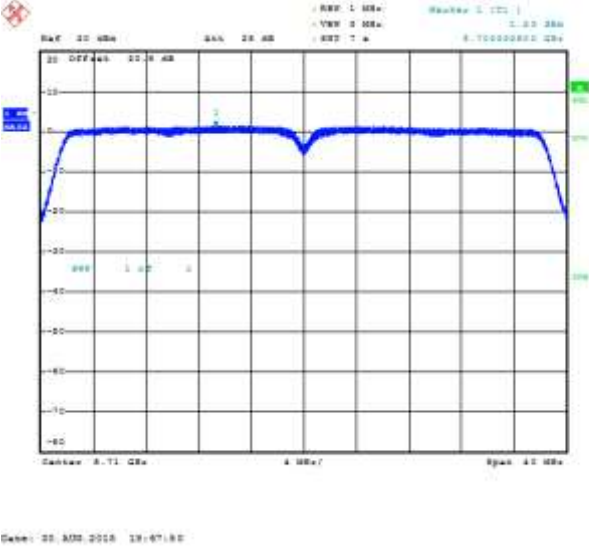
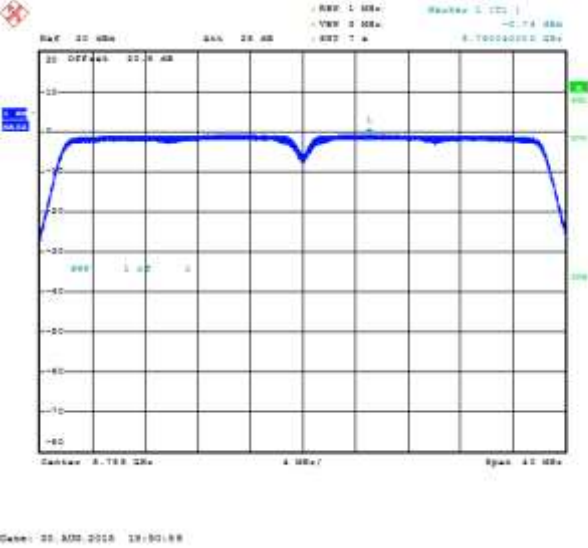


Figure 8-90: Peak Power Spectral Density
MIMO Primary, 802.11ac, Channel 151,
MCS0 Mbps



	EMC Test Report for the BlackBerry® smartphone Model RHK211LW (STV100-1) , RHL211LW (STV100-3) APPENDIX 8	
Test Report No.: RTS-6066-1509-01A	Dates of Test: July 22 – September 8, and September 28, 2015	FCC ID: L6ARHK210LW, L6ARHL210LW IC: 2503A-RHK210LW, 2503A-RHL210LW

802.11ac RF Conducted Emission Test Results cont'd

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

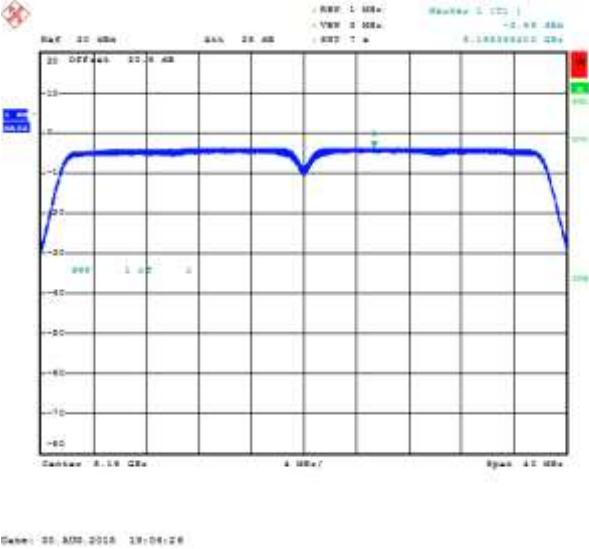


Figure 8-92: Peak Power Spectral Density
MIMO Secondary, 802.11ac, Channel 62,
MCS0 Mbps

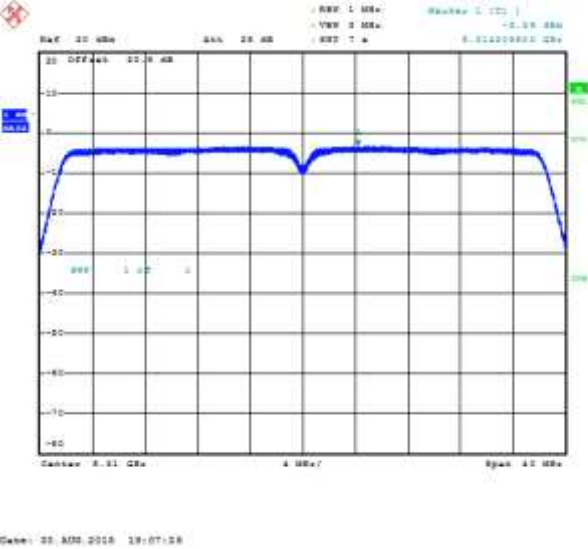


Figure 8-93: Peak Power Spectral Density
MIMO Secondary, 802.11ac, Channel 142,
MCS0 Mbps

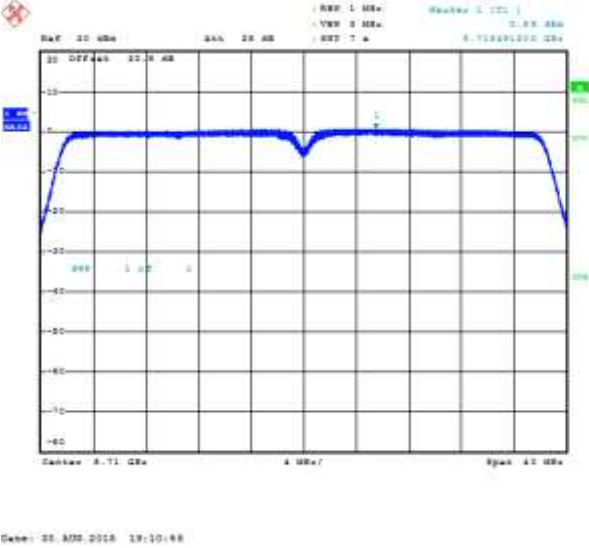
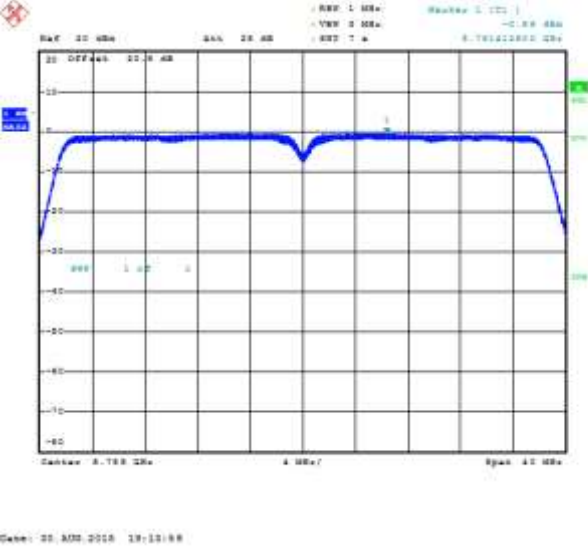


Figure 8-94: Peak Power Spectral Density
MIMO Secondary, 802.11ac, Channel 151,
MCS0 Mbps



	EMC Test Report for the BlackBerry® smartphone Model RHK211LW (STV100-1) , RHL211LW (STV100-3) APPENDIX 8	
Test Report No.: RTS-6066-1509-01A	Dates of Test: July 22 – September 8, and September 28, 2015	FCC ID: L6ARHK210LW, L6ARHL210LW IC: 2503A-RHK210LW, 2503A-RHL210LW

802.11ac RF Conducted Emission Test Results cont'd

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

	EMC Test Report for the BlackBerry® smartphone Model RHK211LW (STV100-1) , RHL211LW (STV100-3) APPENDIX 8	
Test Report No.: RTS-6066-1509-01A	Dates of Test: July 22 – September 8, and September 28, 2015	FCC ID: L6ARHK210LW, L6ARHL210LW IC: 2503A-RHK210LW, 2503A-RHL210LW

802.11ac RF Conducted Emission Test Results cont'd

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.

	EMC Test Report for the BlackBerry® smartphone Model RHK211LW (STV100-1) , RHL211LW (STV100-3) APPENDIX 8	
Test Report No.: RTS-6066-1509-01A	Dates of Test: July 22 – September 8, and September 28, 2015	FCC ID: L6ARHK210LW, L6ARHL210LW IC: 2503A-RHK210LW, 2503A-RHL210LW

802.11ac RF Conducted Emission Test Results cont'd

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



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



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



	EMC Test Report for the BlackBerry® smartphone Model RHK211LW (STV100-1) , RHL211LW (STV100-3) APPENDIX 8	
Test Report No.: RTS-6066-1509-01A	Dates of Test: July 22 – September 8, and September 28, 2015	FCC ID: L6ARHK210LW, L6ARHL210LW IC: 2503A-RHK210LW, 2503A-RHL210LW

802.11ac RF Conducted Emission Test Results cont'd

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



802.11ac RF Conducted Emission Test Results cont'd

	EMC Test Report for the BlackBerry® smartphone Model RHK211LW (STV100-1) , RHL211LW (STV100-3) APPENDIX 8	
Test Report No.: RTS-6066-1509-01A	Dates of Test: July 22 – September 8, and September 28, 2015	FCC ID: L6ARHK210LW, L6ARHL210LW IC: 2503A-RHK210LW, 2503A-RHL210LW

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

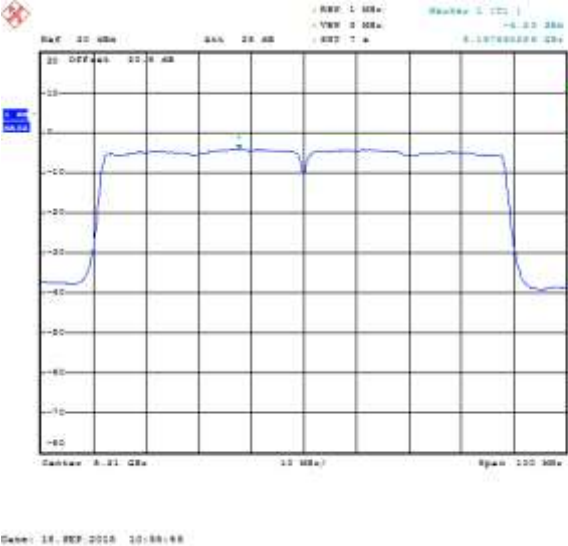


Figure 8-101: Peak Power Spectral Density
SISO Secondary, 802.11ac, Channel 58,
MCS0 Mbps



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

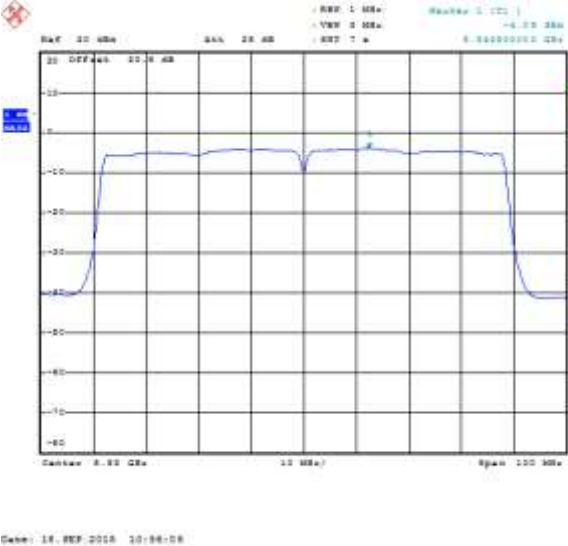


Figure 8-103: Peak Power Spectral Density
SISO Secondary, 802.11ac, Channel 138,
MCS0 Mbps



802.11ac RF Conducted Emission Test Results cont'd

	EMC Test Report for the BlackBerry® smartphone Model RHK211LW (STV100-1) , RHL211LW (STV100-3) APPENDIX 8	
Test Report No.: RTS-6066-1509-01A	Dates of Test: July 22 – September 8, and September 28, 2015	FCC ID: L6ARHK210LW, L6ARHL210LW IC: 2503A-RHK210LW, 2503A-RHL210LW

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



802.11ac RF Conducted Emission Test Results cont'd

	EMC Test Report for the BlackBerry® smartphone Model RHK211LW (STV100-1) , RHL211LW (STV100-3) APPENDIX 8	
Test Report No.: RTS-6066-1509-01A	Dates of Test: July 22 – September 8, and September 28, 2015	FCC ID: L6ARHK210LW, L6ARHL210LW IC: 2503A-RHK210LW, 2503A-RHL210LW

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

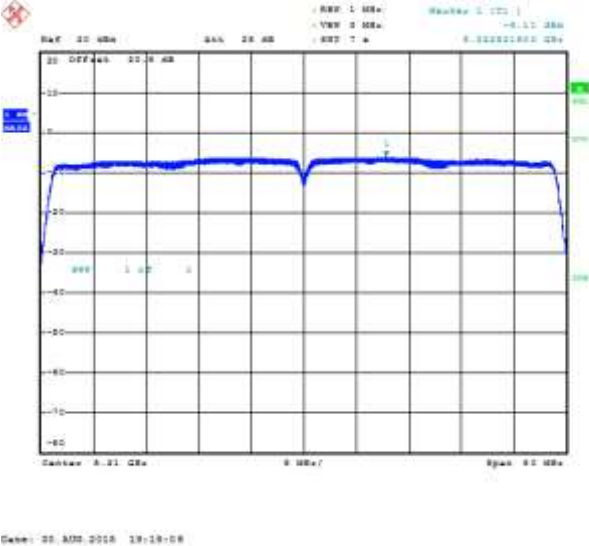


Figure 8-106: Peak Power Spectral Density
MIMO Primary, 802.11ac, Channel 58,
MCS0 Mbps

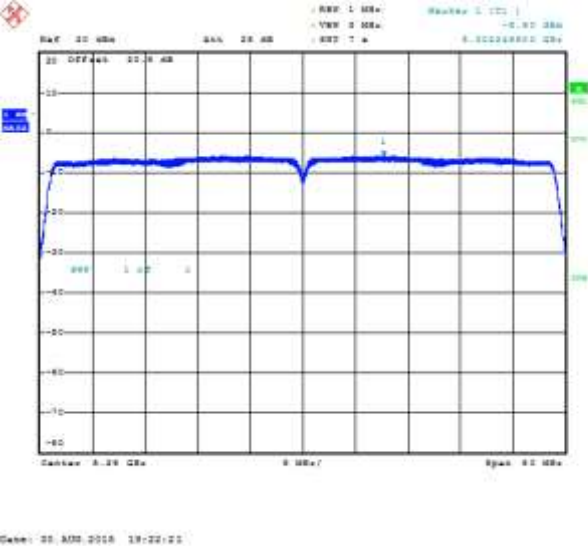


Figure 8-107: Peak Power Spectral Density
MIMO Primary, 802.11ac, Channel 106,
MCS0 Mbps

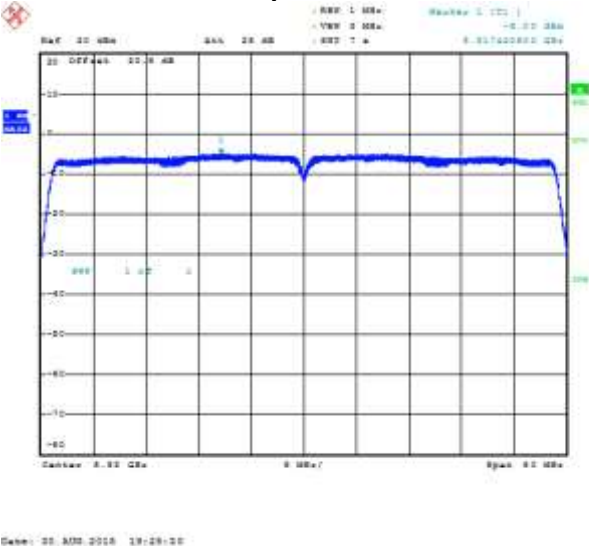
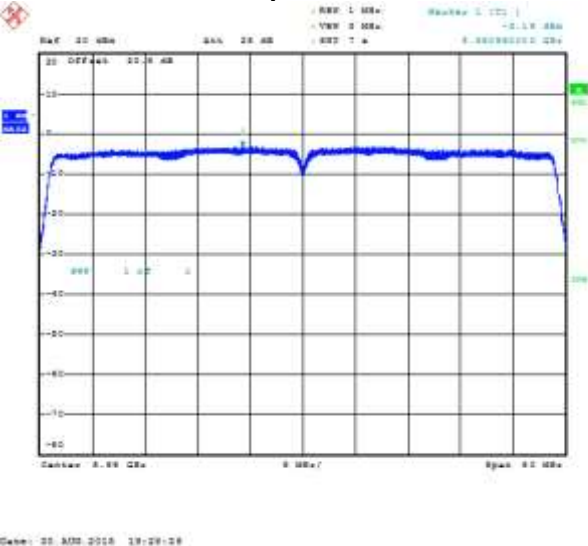


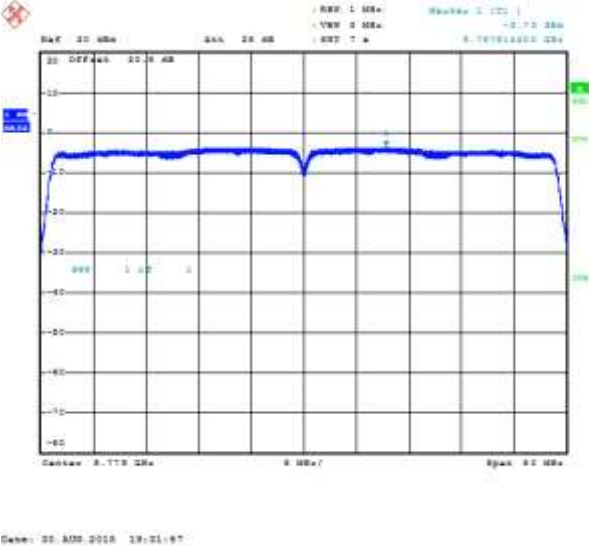
Figure 8-108: Peak Power Spectral Density
MIMO Primary, 802.11ac, Channel 138,
MCS0 Mbps



802.11ac RF Conducted Emission Test Results cont'd

	EMC Test Report for the BlackBerry® smartphone Model RHK211LW (STV100-1) , RHL211LW (STV100-3) APPENDIX 8	
Test Report No.: RTS-6066-1509-01A	Dates of Test: July 22 – September 8, and September 28, 2015	FCC ID: L6ARHK210LW, L6ARHL210LW IC: 2503A-RHK210LW, 2503A-RHL210LW

Figure 8-109: Peak Power Spectral Density
 MIMO Primary, 802.11ac, Channel 155,
 MCS0 Mbps



802.11ac RF Conducted Emission Test Results cont'd

	EMC Test Report for the BlackBerry® smartphone Model RHK211LW (STV100-1) , RHL211LW (STV100-3) APPENDIX 8	
Test Report No.: RTS-6066-1509-01A	Dates of Test: July 22 – September 8, and September 28, 2015	FCC ID: L6ARHK210LW, L6ARHL210LW IC: 2503A-RHK210LW, 2503A-RHL210LW

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

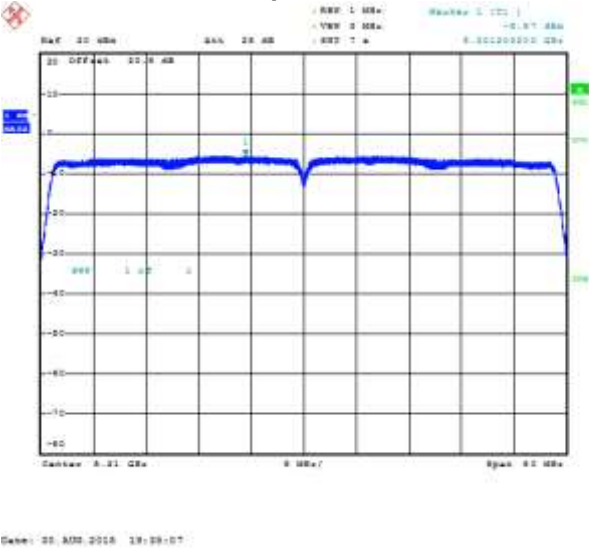


Figure 8-111: Peak Power Spectral Density
MIMO Secondary, 802.11ac, Channel 58,
MCS0 Mbps

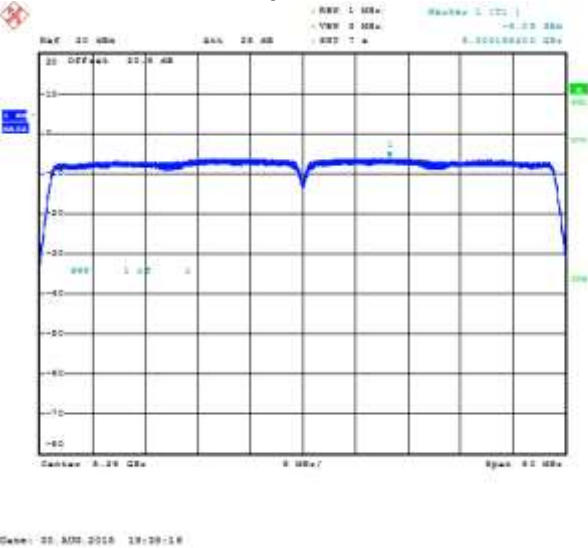


Figure 8-112: Peak Power Spectral Density
MIMO Secondary, 802.11ac, Channel 106,
MCS0 Mbps

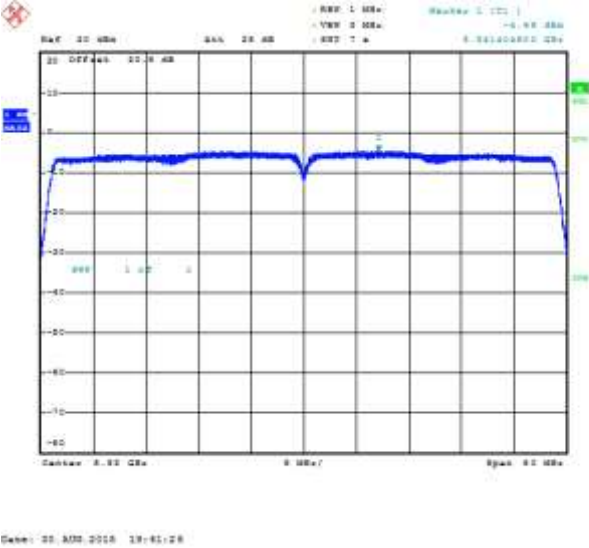
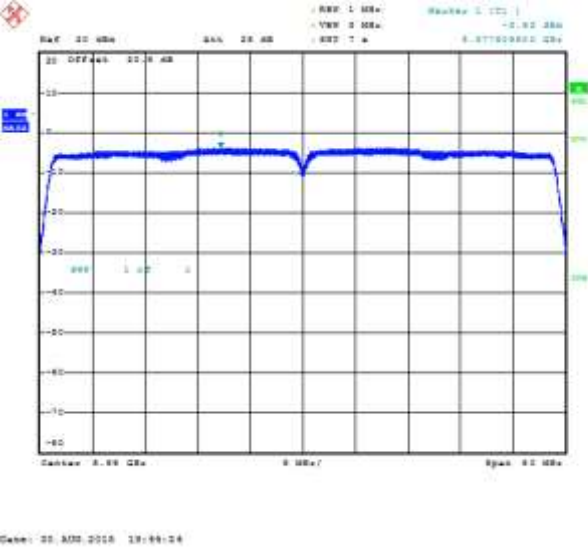


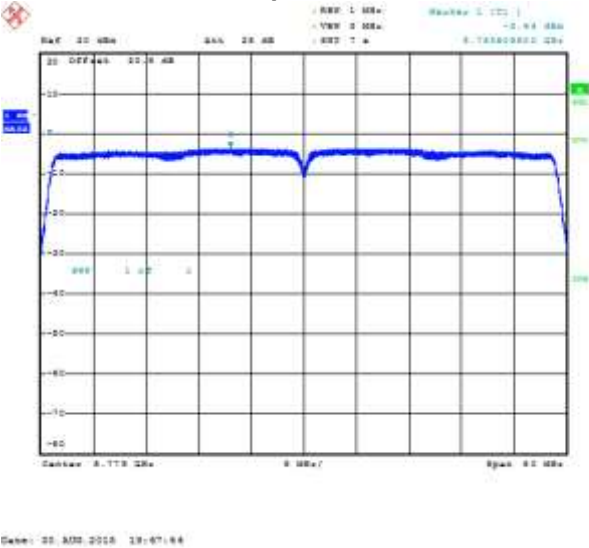
Figure 8-113: Peak Power Spectral Density
MIMO Secondary, 802.11ac, Channel 138,
MCS0 Mbps



802.11ac RF Conducted Emission Test Results cont'd

	EMC Test Report for the BlackBerry® smartphone Model RHK211LW (STV100-1) , RHL211LW (STV100-3) APPENDIX 8	
Test Report No.: RTS-6066-1509-01A	Dates of Test: July 22 – September 8, and September 28, 2015	FCC ID: L6ARHK210LW, L6ARHL210LW IC: 2503A-RHK210LW, 2503A-RHL210LW

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



802.11ac RF Conducted Emission Test Results cont'd

Spurious RF Conducted Emissions

BlackBerry	EMC Test Report for the BlackBerry® smartphone Model RHK211LW (STV100-1) , RHL211LW (STV100-3) APPENDIX 8	
Test Report No.: RTS-6066-1509-01A	Dates of Test: July 22 – September 8, and September 28, 2015	FCC ID: L6ARHK210LW, L6ARHL210LW IC: 2503A-RHK210LW, 2503A-RHL210LW

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

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

	EMC Test Report for the BlackBerry® smartphone Model RHK211LW (STV100-1) , RHL211LW (STV100-3) APPENDIX 8	
Test Report No.: RTS-6066-1509-01A	Dates of Test: July 22 – September 8, and September 28, 2015	FCC ID: L6ARHK210LW, L6ARHL210LW IC: 2503A-RHK210LW, 2503A-RHL210LW

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

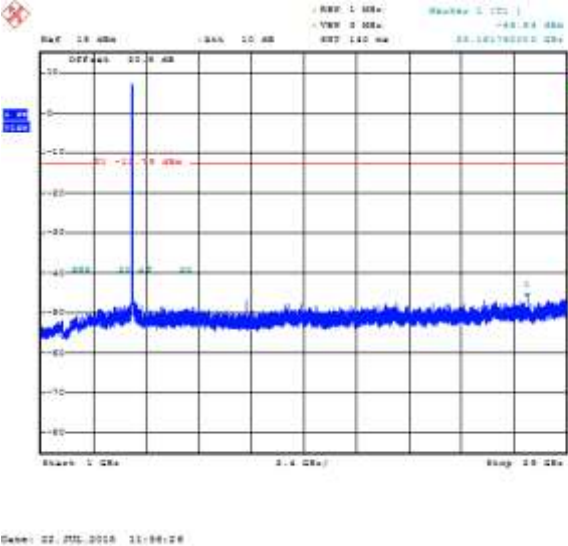


Figure 8-116: Spurious RF Conducted Emissions
Primary, 802.11ac, Channel 36, MCS0
Mbps

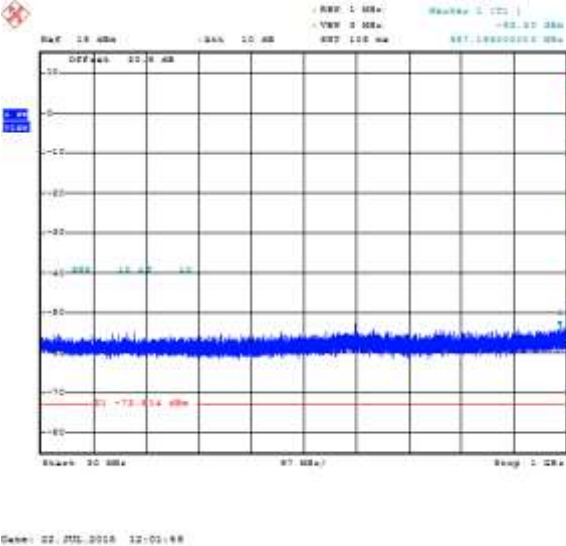


Figure 8-117: Spurious RF Conducted Emissions
Primary, 802.11ac, Channel 64, MCS0
Mbps

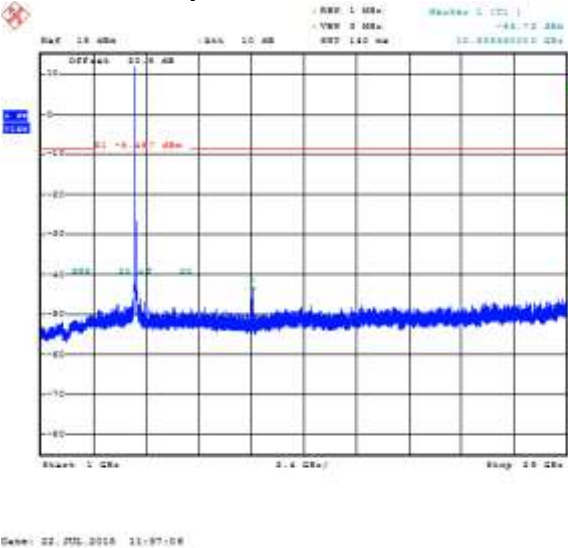
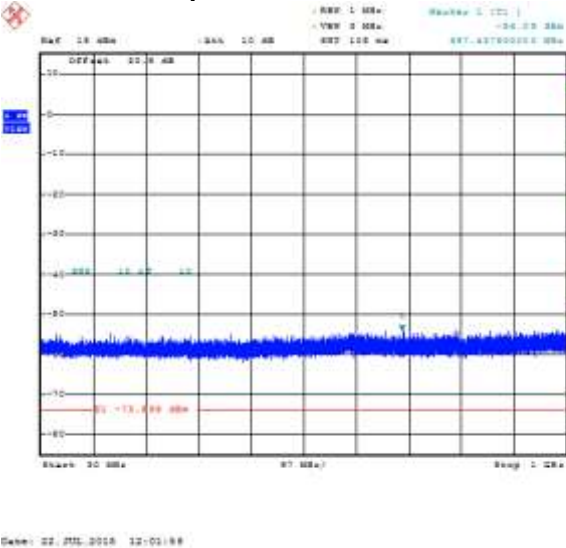


Figure 8-118: Spurious RF Conducted Emissions
Primary, 802.11ac, Channel 64, MCS0
Mbps



	EMC Test Report for the BlackBerry® smartphone Model RHK211LW (STV100-1) , RHL211LW (STV100-3) APPENDIX 8	
Test Report No.: RTS-6066-1509-01A	Dates of Test: July 22 – September 8, and September 28, 2015	FCC ID: L6ARHK210LW, L6ARHL210LW IC: 2503A-RHK210LW, 2503A-RHL210LW

802.11ac RF Conducted Emission Test Results cont'd

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

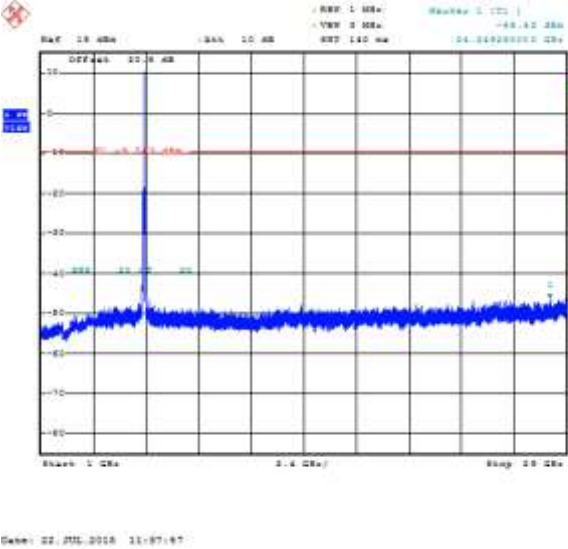


Figure 8-120: Spurious RF Conducted Emissions
Primary, 802.11ac, Channel 140, MCS0
Mbps

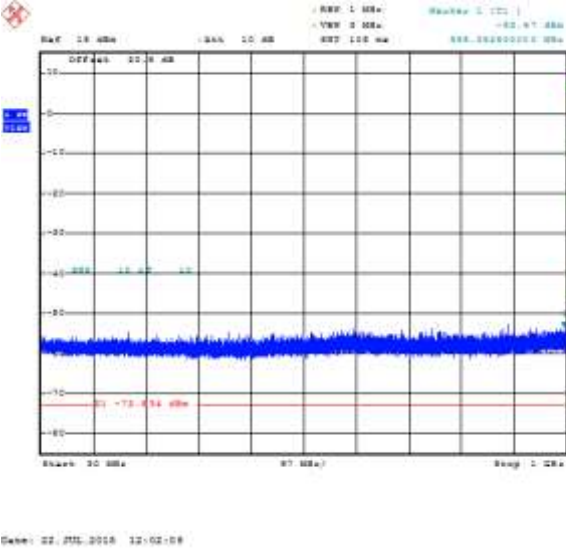


Figure 8-121: Spurious RF Conducted Emissions
Primary, 802.11ac, Channel 149, MCS0
Mbps

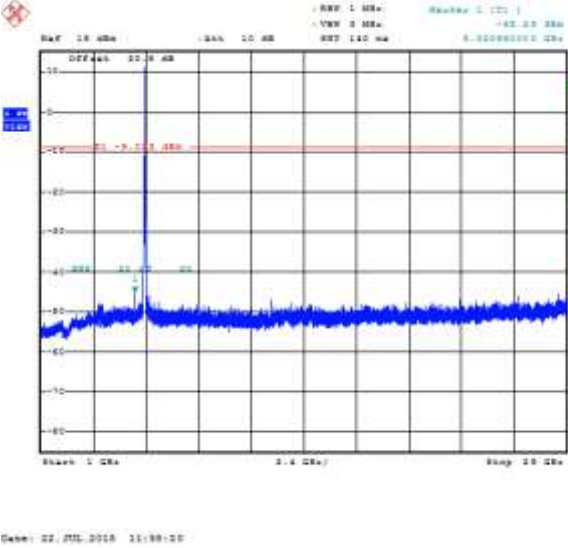
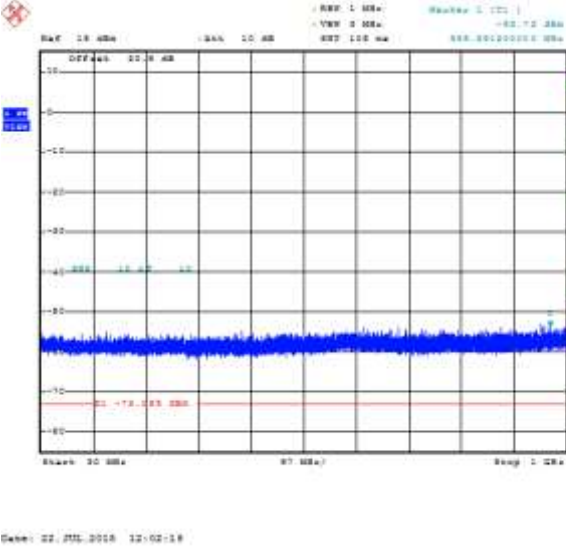


Figure 8-122: Spurious RF Conducted Emissions
Primary, 802.11ac, Channel 149, MCS0
Mbps



	EMC Test Report for the BlackBerry® smartphone Model RHK211LW (STV100-1) , RHL211LW (STV100-3) APPENDIX 8	
Test Report No.: RTS-6066-1509-01A	Dates of Test: July 22 – September 8, and September 28, 2015	FCC ID: L6ARHK210LW, L6ARHL210LW IC: 2503A-RHK210LW, 2503A-RHL210LW

802.11ac RF Conducted Emission Test Results cont'd

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

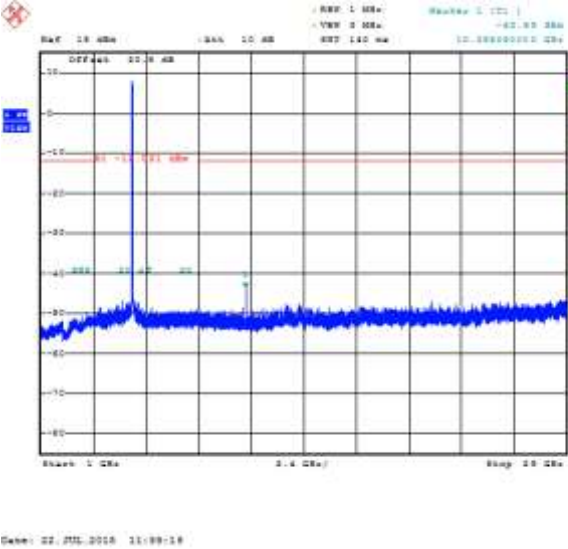


Figure 8-124: Spurious RF Conducted Emissions
Secondary, 802.11ac, Channel 36, MCS0
Mbps

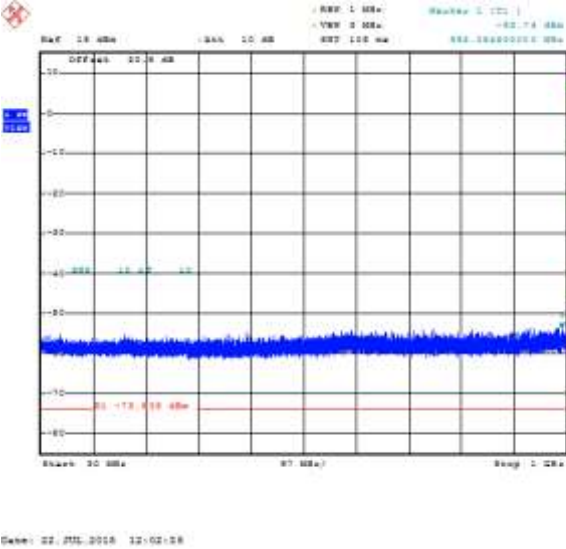


Figure 8-125: Spurious RF Conducted Emissions
Secondary, 802.11ac, Channel 64, MCS0
Mbps

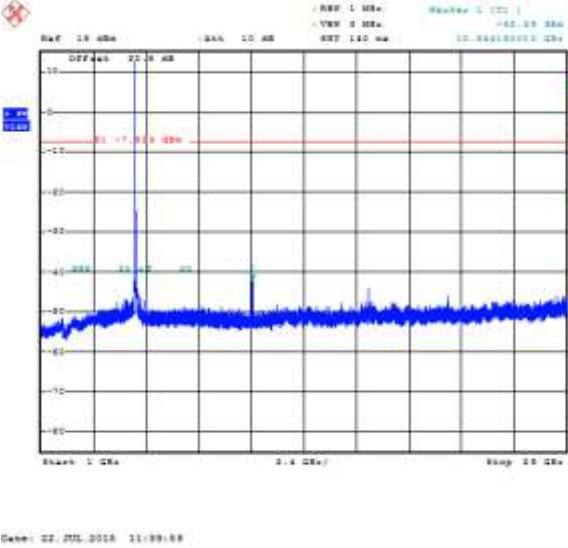
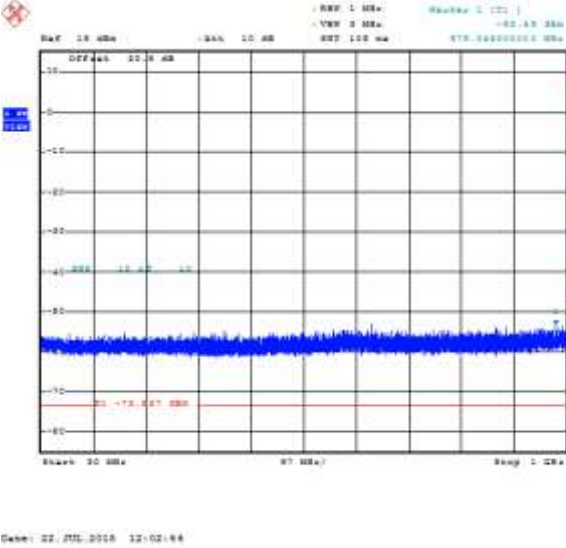


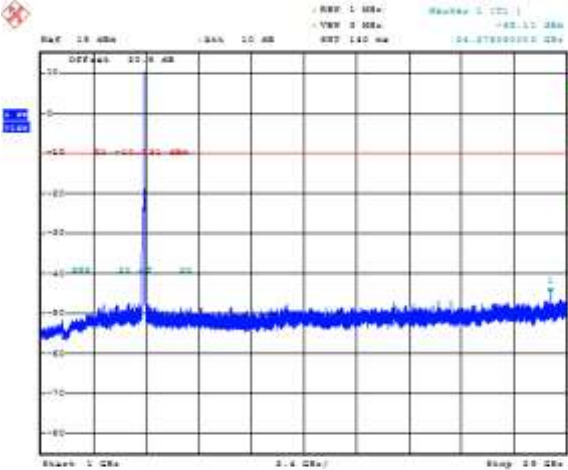
Figure 8-126: Spurious RF Conducted Emissions
Secondary, 802.11ac, Channel 64, MCS0
Mbps



	EMC Test Report for the BlackBerry® smartphone Model RHK211LW (STV100-1) , RHL211LW (STV100-3) APPENDIX 8	
Test Report No.: RTS-6066-1509-01A	Dates of Test: July 22 – September 8, and September 28, 2015	FCC ID: L6ARHK210LW, L6ARHL210LW IC: 2503A-RHK210LW, 2503A-RHL210LW

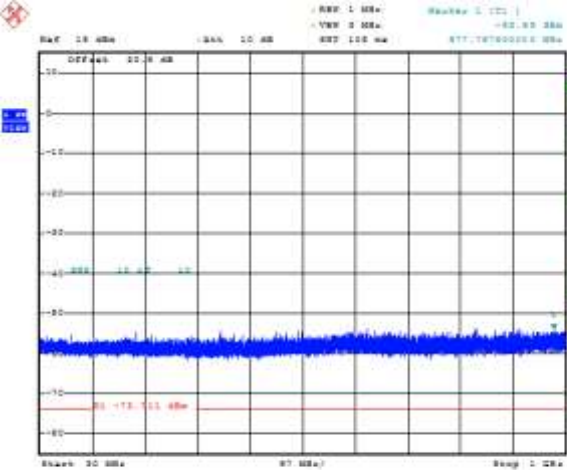
802.11ac RF Conducted Emission Test Results cont'd

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



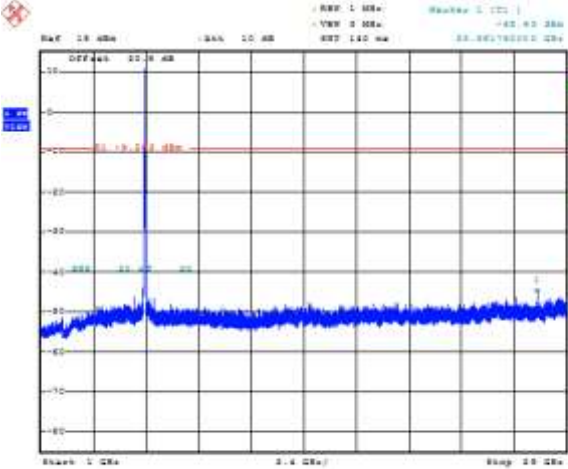
Date: 22-Jul-2015 12:00:38

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



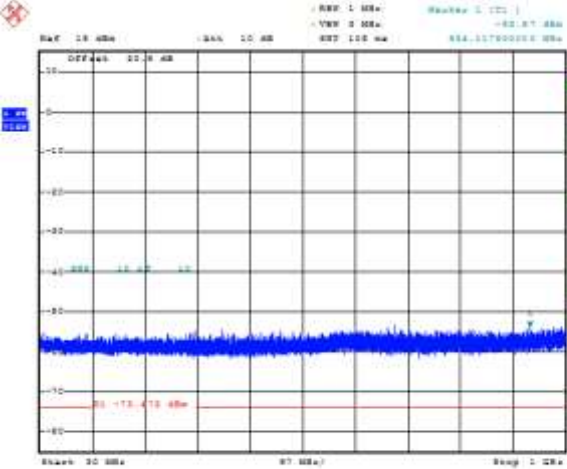
Date: 22-Jul-2015 12:02:56

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



Date: 22-Jul-2015 12:03:38

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



Date: 22-Jul-2015 12:03:56

	EMC Test Report for the BlackBerry® smartphone Model RHK211LW (STV100-1) , RHL211LW (STV100-3) APPENDIX 8	
Test Report No.: RTS-6066-1509-01A	Dates of Test: July 22 – September 8, and September 28, 2015	FCC ID: L6ARHK210LW, L6ARHL210LW IC: 2503A-RHK210LW, 2503A-RHL210LW

802.11ac RF Conducted Emission Test Results cont'd

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

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

Sum

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.

	EMC Test Report for the BlackBerry® smartphone Model RHK211LW (STV100-1) , RHL211LW (STV100-3) APPENDIX 8	
Test Report No.: RTS-6066-1509-01A	Dates of Test: July 22 – September 8, and September 28, 2015	FCC ID: L6ARHK210LW, L6ARHL210LW IC: 2503A-RHK210LW, 2503A-RHL210LW

802.11ac RF Conducted Emission Test Results cont'd

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

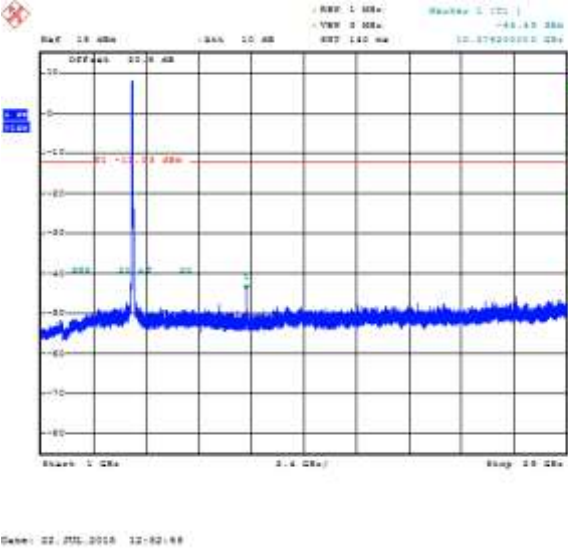


Figure 8-132: Spurious RF Conducted Emissions
Primary, 802.11ac, Channel 36, MCS0
Mbps

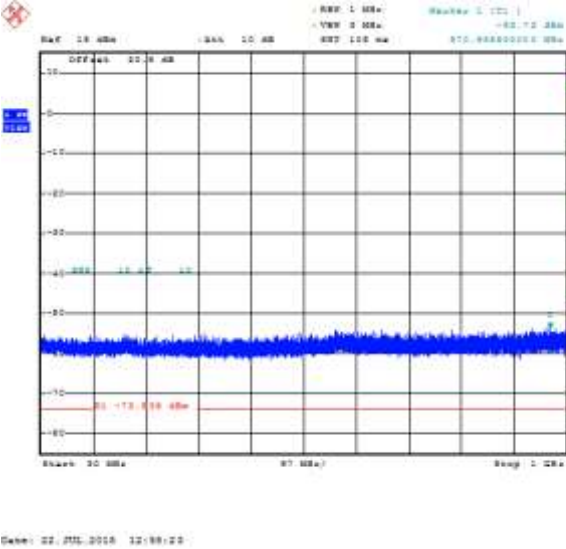


Figure 8-133: Spurious RF Conducted Emissions
Primary, 802.11ac, Channel 64, MCS0
Mbps

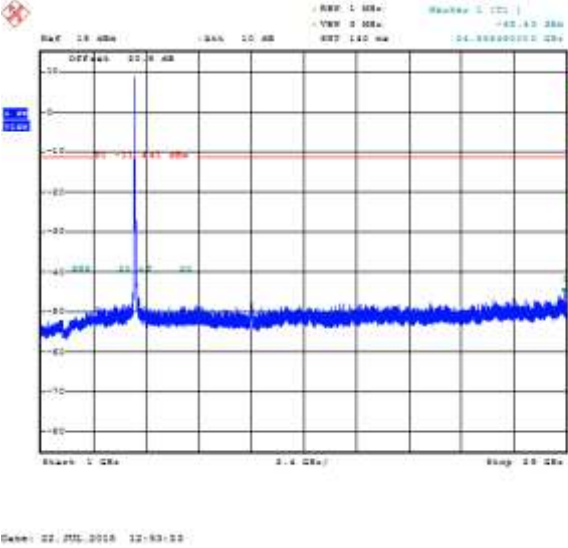
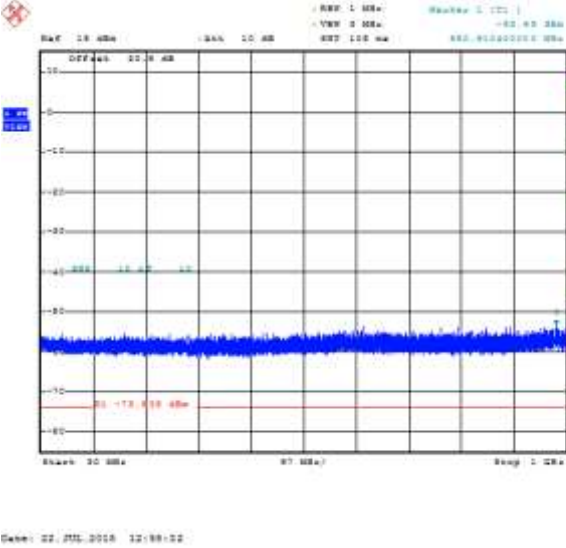


Figure 8-134: Spurious RF Conducted Emissions
Primary, 802.11ac, Channel 64, MCS0
Mbps



	EMC Test Report for the BlackBerry® smartphone Model RHK211LW (STV100-1) , RHL211LW (STV100-3) APPENDIX 8	
Test Report No.: RTS-6066-1509-01A	Dates of Test: July 22 – September 8, and September 28, 2015	FCC ID: L6ARHK210LW, L6ARHL210LW IC: 2503A-RHK210LW, 2503A-RHL210LW

802.11ac RF Conducted Emission Test Results cont'd

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

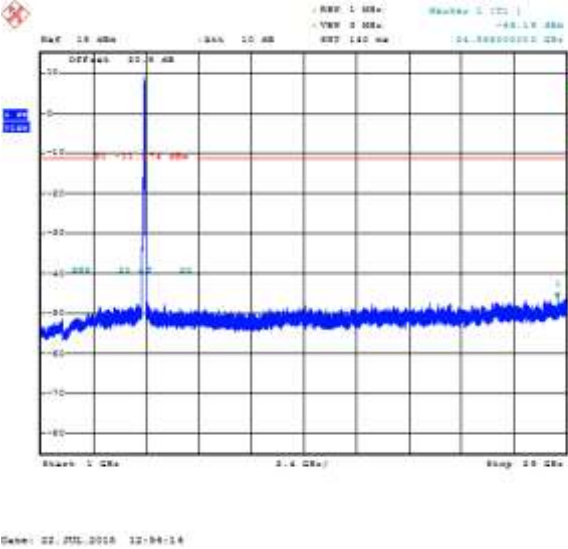


Figure 8-136: Spurious RF Conducted Emissions
Primary, 802.11ac, Channel 140, MCS0
Mbps

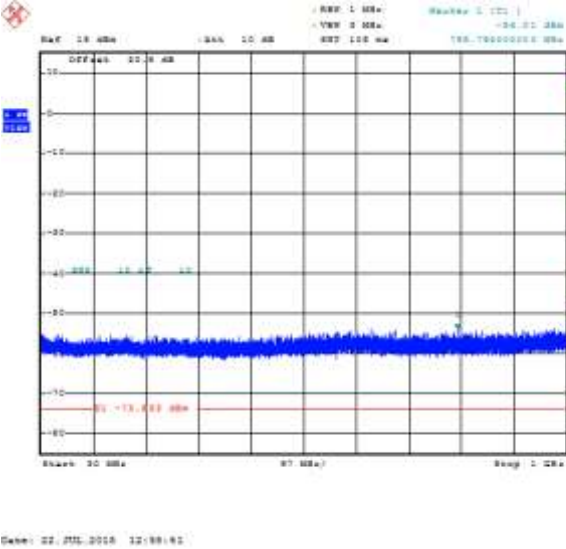


Figure 8-137: Spurious RF Conducted Emissions
Primary, 802.11ac, Channel 149, MCS0
Mbps

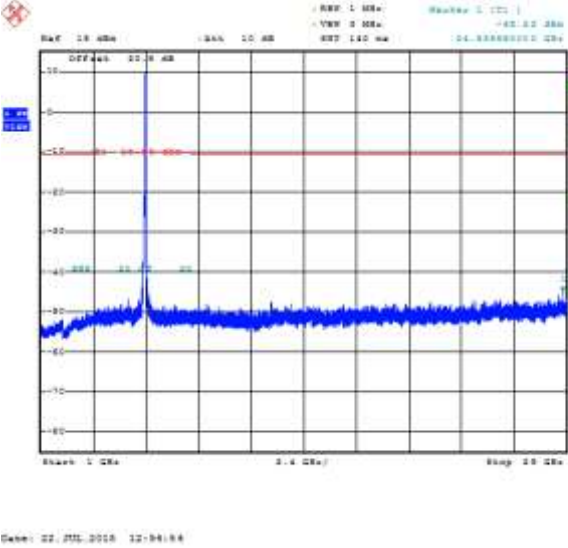
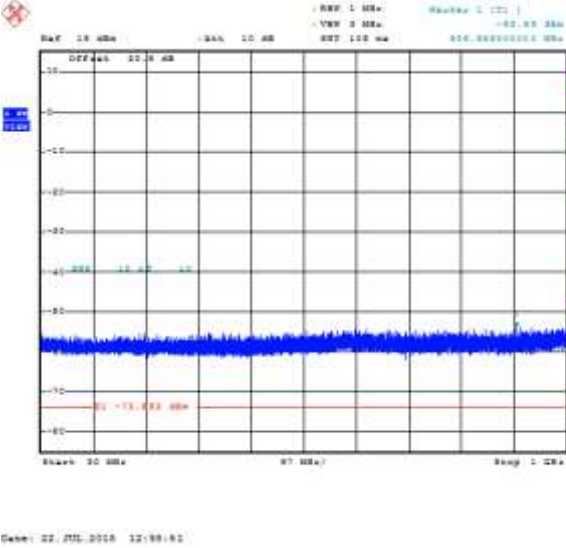


Figure 8-138: Spurious RF Conducted Emissions
Primary, 802.11ac, Channel 149, MCS0
Mbps



	EMC Test Report for the BlackBerry® smartphone Model RHK211LW (STV100-1) , RHL211LW (STV100-3) APPENDIX 8	
Test Report No.: RTS-6066-1509-01A	Dates of Test: July 22 – September 8, and September 28, 2015	FCC ID: L6ARHK210LW, L6ARHL210LW IC: 2503A-RHK210LW, 2503A-RHL210LW

802.11ac RF Conducted Emission Test Results cont'd

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

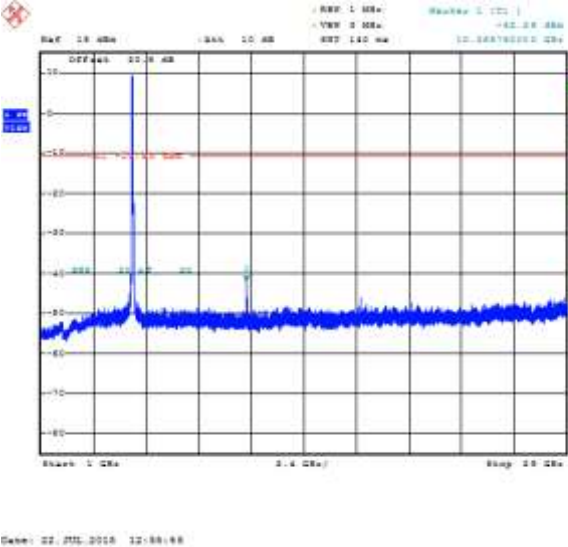


Figure 8-140: Spurious RF Conducted Emissions
Secondary, 802.11ac, Channel 36, MCS0
Mbps

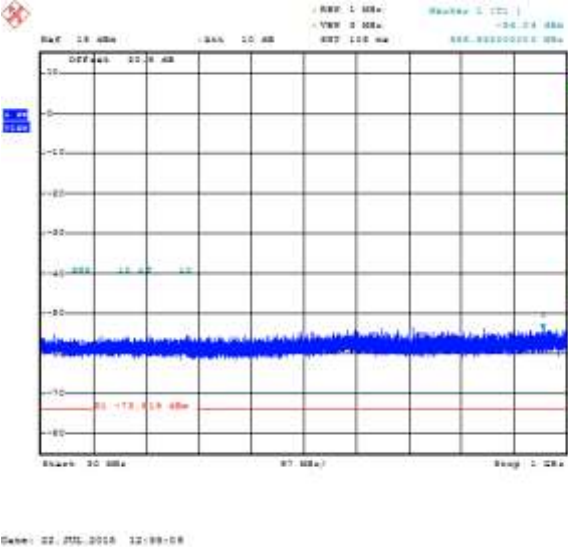


Figure 8-141: Spurious RF Conducted Emissions
Secondary, 802.11ac, Channel 60, MCS0
Mbps

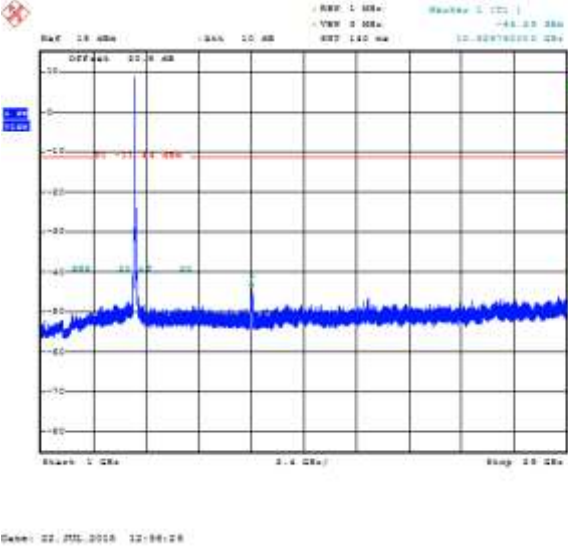
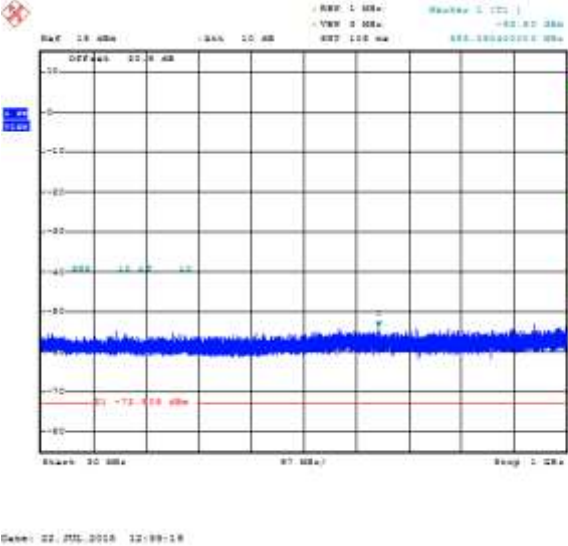


Figure 8-142: Spurious RF Conducted Emissions
Secondary, 802.11ac, Channel 60, MCS0
Mbps



	EMC Test Report for the BlackBerry® smartphone Model RHK211LW (STV100-1) , RHL211LW (STV100-3) APPENDIX 8	
Test Report No.: RTS-6066-1509-01A	Dates of Test: July 22 – September 8, and September 28, 2015	FCC ID: L6ARHK210LW, L6ARHL210LW IC: 2503A-RHK210LW, 2503A-RHL210LW

802.11ac RF Conducted Emission Test Results cont'd

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

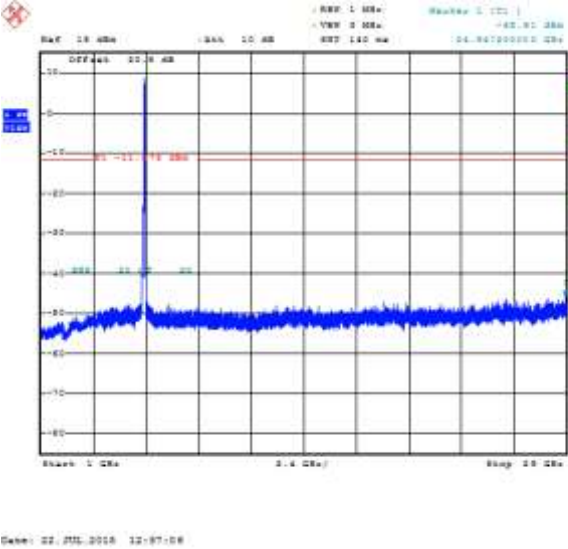


Figure 8-144: Spurious RF Conducted Emissions
Secondary, 802.11ac, Channel 140,
MCS0 Mbps

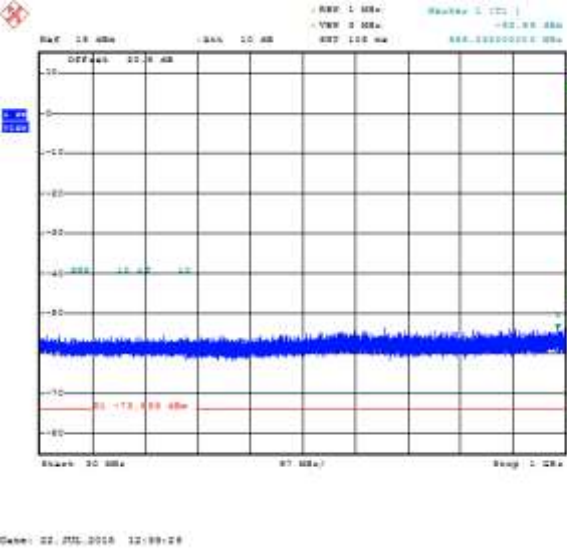


Figure 8-145: Spurious RF Conducted Emissions
Secondary, 802.11ac, Channel 149,
MCS0 Mbps

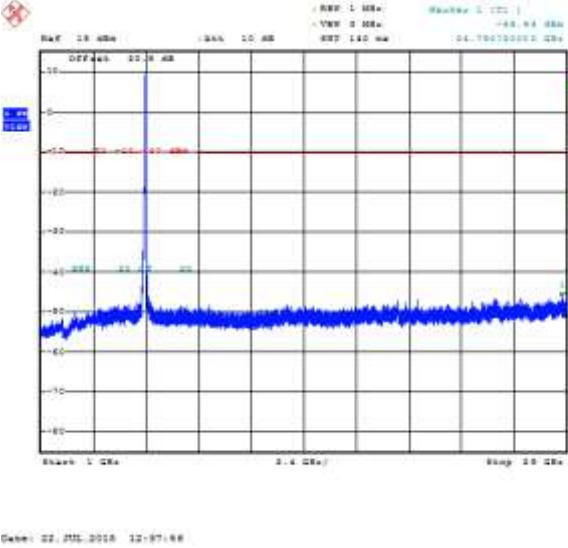
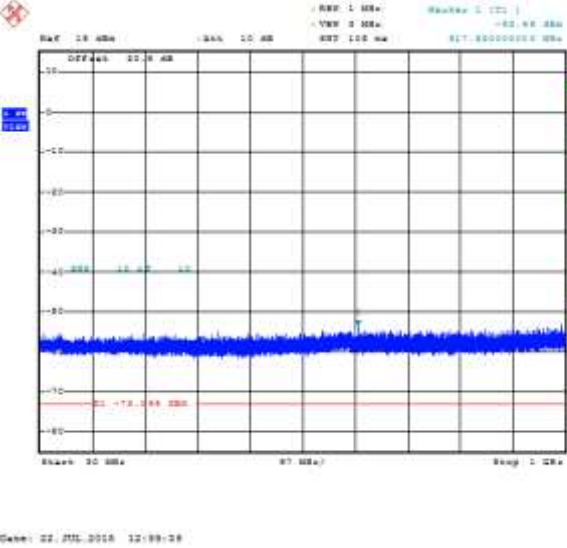


Figure 8-146: Spurious RF Conducted Emissions
Secondary, 802.11ac, Channel 149,
MCS0 Mbps



	EMC Test Report for the BlackBerry® smartphone Model RHK211LW (STV100-1) , RHL211LW (STV100-3) APPENDIX 8	
Test Report No.: RTS-6066-1509-01A	Dates of Test: July 22 – September 8, and September 28, 2015	FCC ID: L6ARHK210LW, L6ARHL210LW IC: 2503A-RHK210LW, 2503A-RHL210LW

802.11ac RF Conducted Emission Test Results cont'd

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.

	EMC Test Report for the BlackBerry® smartphone Model RHK211LW (STV100-1) , RHL211LW (STV100-3) APPENDIX 8	
Test Report No.: RTS-6066-1509-01A	Dates of Test: July 22 – September 8, and September 28, 2015	FCC ID: L6ARHK210LW, L6ARHL210LW IC: 2503A-RHK210LW, 2503A-RHL210LW

802.11ac RF Conducted Emission Test Results cont'd

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

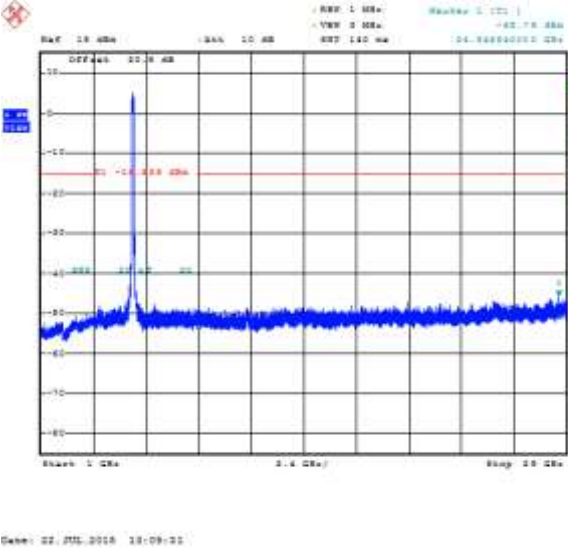


Figure 8-148: Spurious RF Conducted Emissions
Primary, 802.11ac, Channel 36, MCS0
Mbps

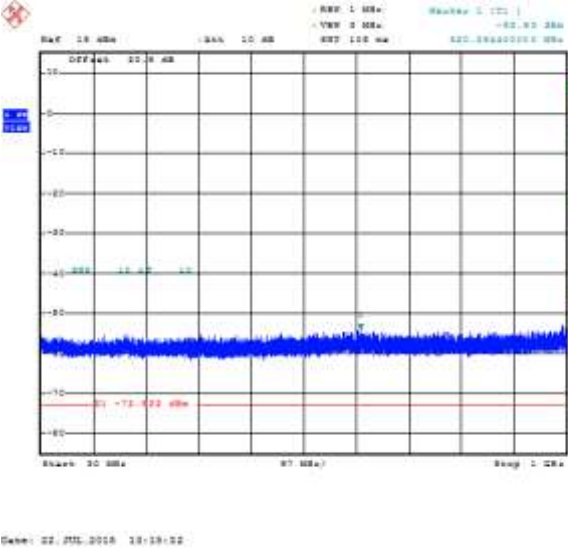


Figure 8-149: Spurious RF Conducted Emissions
Primary, 802.11ac, Channel 64, MCS0
Mbps

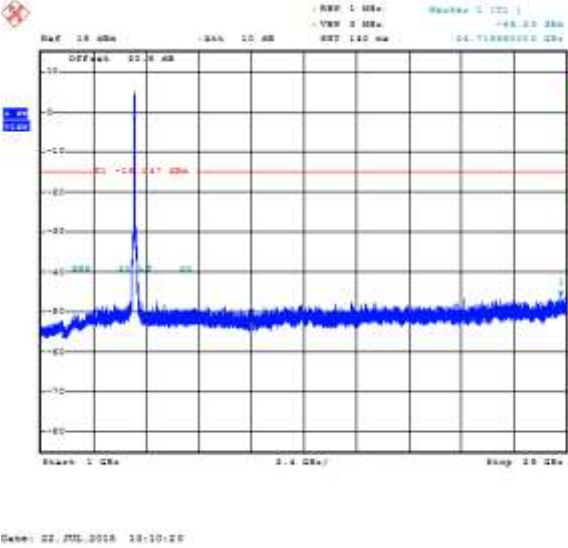
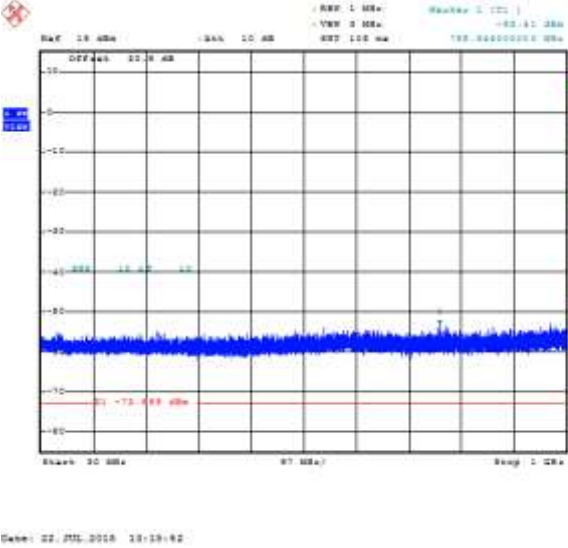


Figure 8-150: Spurious RF Conducted Emissions
Primary, 802.11ac, Channel 64, MCS0
Mbps



	EMC Test Report for the BlackBerry® smartphone Model RHK211LW (STV100-1) , RHL211LW (STV100-3) APPENDIX 8	
Test Report No.: RTS-6066-1509-01A	Dates of Test: July 22 – September 8, and September 28, 2015	FCC ID: L6ARHK210LW, L6ARHL210LW IC: 2503A-RHK210LW, 2503A-RHL210LW

802.11ac RF Conducted Emission Test Results cont'd

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

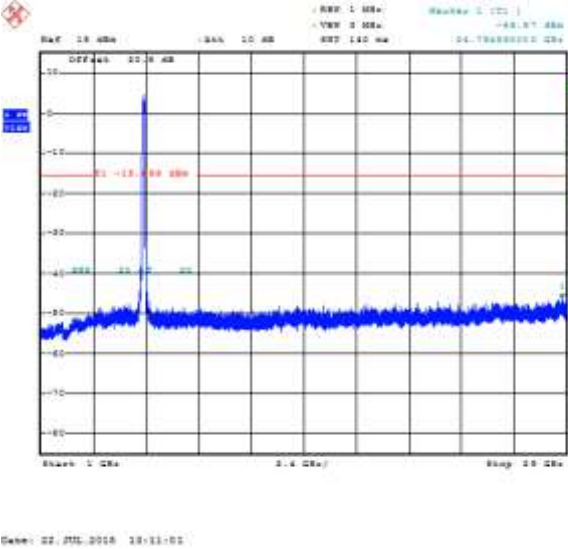


Figure 8-152: Spurious RF Conducted Emissions
Primary, 802.11ac, Channel 140, MCS0
Mbps

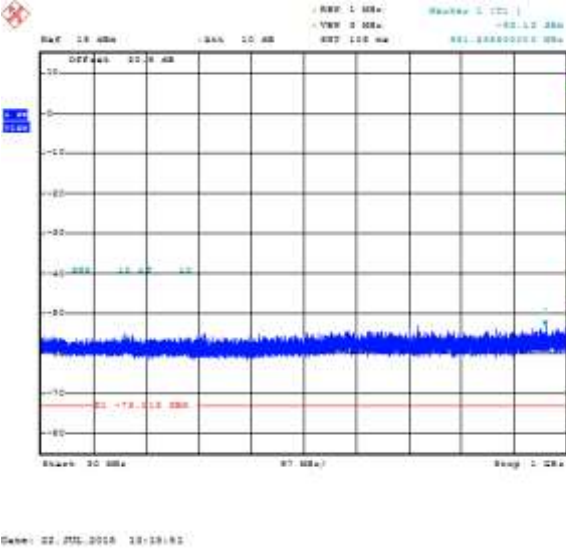


Figure 8-153 Spurious RF Conducted Emissions
Primary, 802.11ac, Channel 149, MCS0
Mbps

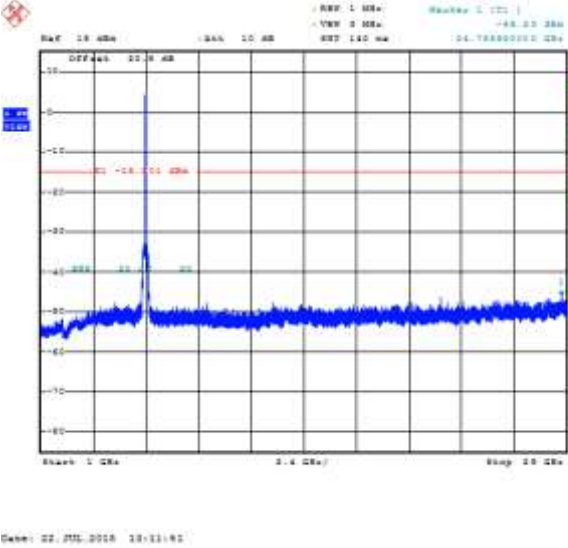
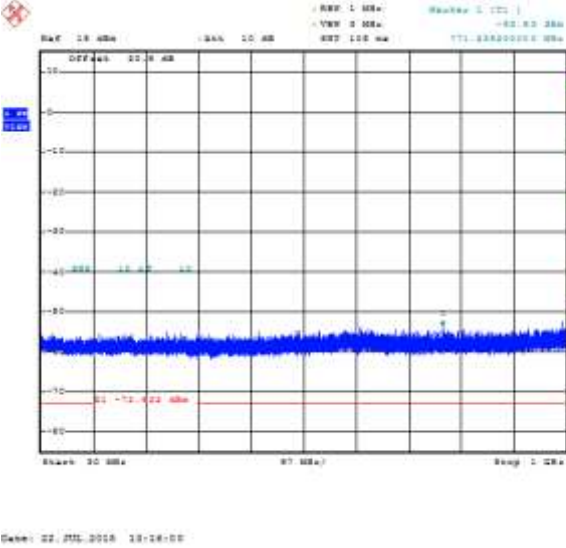


Figure 8-154: Spurious RF Conducted Emissions
Primary, 802.11ac, Channel 149, MCS0
Mbps



	EMC Test Report for the BlackBerry® smartphone Model RHK211LW (STV100-1) , RHL211LW (STV100-3) APPENDIX 8	
Test Report No.: RTS-6066-1509-01A	Dates of Test: July 22 – September 8, and September 28, 2015	FCC ID: L6ARHK210LW, L6ARHL210LW IC: 2503A-RHK210LW, 2503A-RHL210LW

802.11ac RF Conducted Emission Test Results cont'd

Figure 8-155: Spurious RF Conducted Emissions
Secondary, 802.11ac, Channel 36, MCS0
Mbps

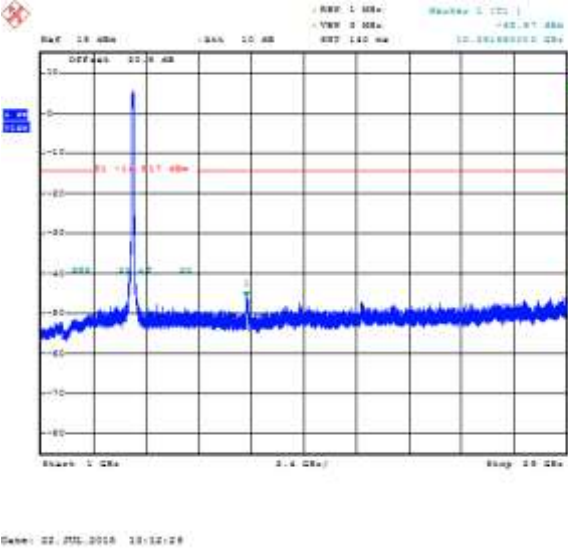


Figure 8-156: Spurious RF Conducted Emissions
Secondary, 802.11ac, Channel 36, MCS0
Mbps

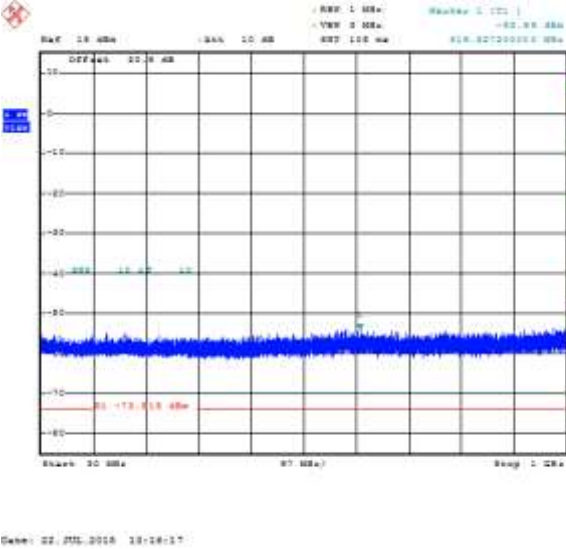


Figure 8-157: Spurious RF Conducted Emissions
Secondary, 802.11ac, Channel 64, MCS0
Mbps

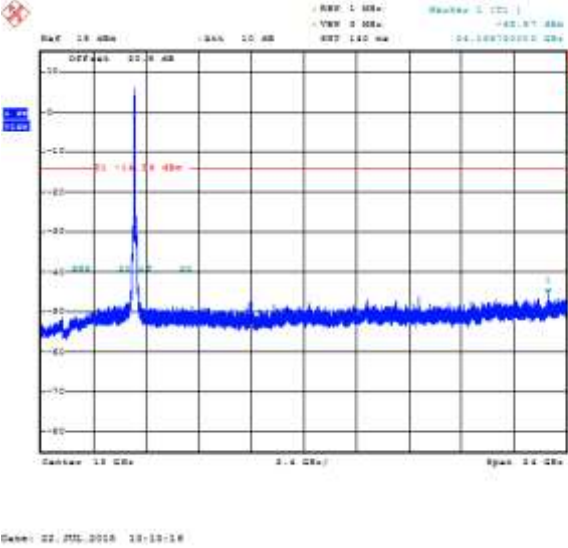
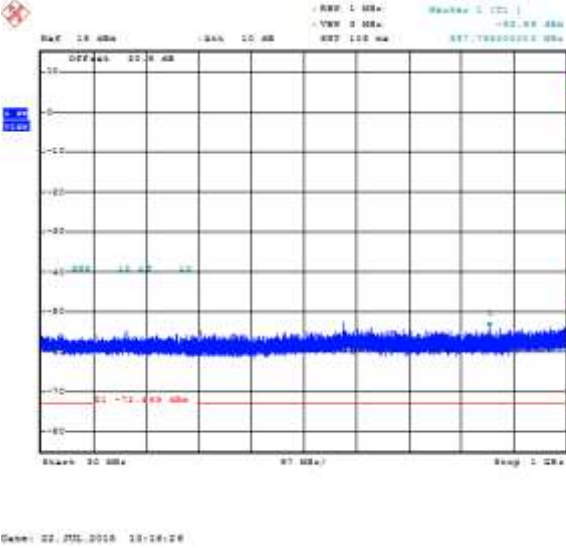


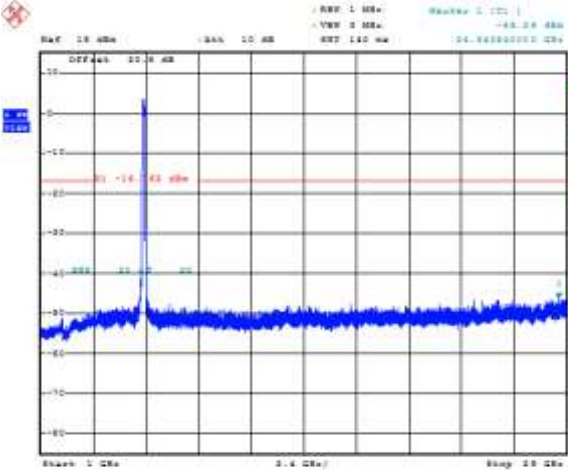
Figure 8-158: Spurious RF Conducted Emissions
Secondary, 802.11ac, Channel 64, MCS0
Mbps



	EMC Test Report for the BlackBerry® smartphone Model RHK211LW (STV100-1) , RHL211LW (STV100-3) APPENDIX 8	
Test Report No.: RTS-6066-1509-01A	Dates of Test: July 22 – September 8, and September 28, 2015	FCC ID: L6ARHK210LW, L6ARHL210LW IC: 2503A-RHK210LW, 2503A-RHL210LW

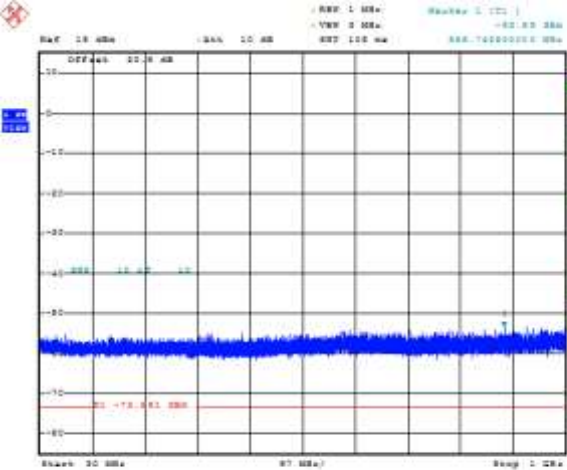
802.11ac RF Conducted Emission Test Results cont'd

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



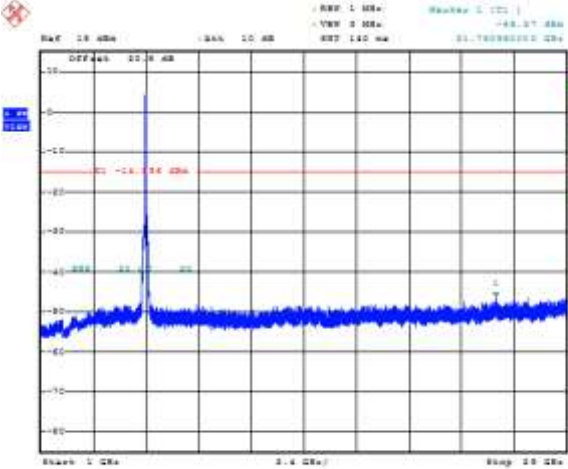
Date: 22-Jul-2015 18:18:57

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



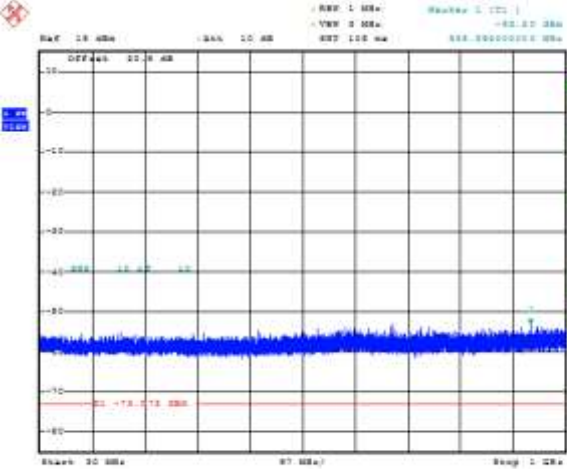
Date: 22-Jul-2015 18:18:58

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



Date: 22-Jul-2015 18:18:58

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



Date: 22-Jul-2015 18:18:58

APPENDIX 9 – NEAR FIELD COMMUNICATIONS TEST DATA/PLOTS

	EMC Test Report for the BlackBerry® smartphone Model RHK211LW (STV100-1) , RHL211LW (STV100-3) APPENDIX 9	
Test Report No.: RTS-6066-1509-01A	Dates of Test: July 22 – September 8, and September 28, 2015	FCC ID: L6ARHK210LW, L6ARHL210LW IC: 2503A-RHK210LW, 2503A-RHL210LW

Near Field Communications (NFC) Test Results

The following test configurations were measured on model RHK211LW (STV100-1):

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 (MHz)	Reading (QP) (dBµV/m)	Correction Factor (dB)	Corrected Reading (QP) (dBµV/m)	Limit (dBµV/m)	Test Margin (dB)
13.57	56.00	16.67	56	124.00	-68

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

	EMC Test Report for the BlackBerry® smartphone Model RHK211LW (STV100-1) , RHL211LW (STV100-3) APPENDIX 9	
Test Report No.: RTS-6066-1509-01A	Dates of Test: July 22 – September 8, and September 28, 2015	FCC ID: L6ARHK210LW, L6ARHL210LW IC: 2503A-RHK210LW, 2503A-RHL210LW

Near Field Communications (NFC) Test Results

Occupied Bandwidth

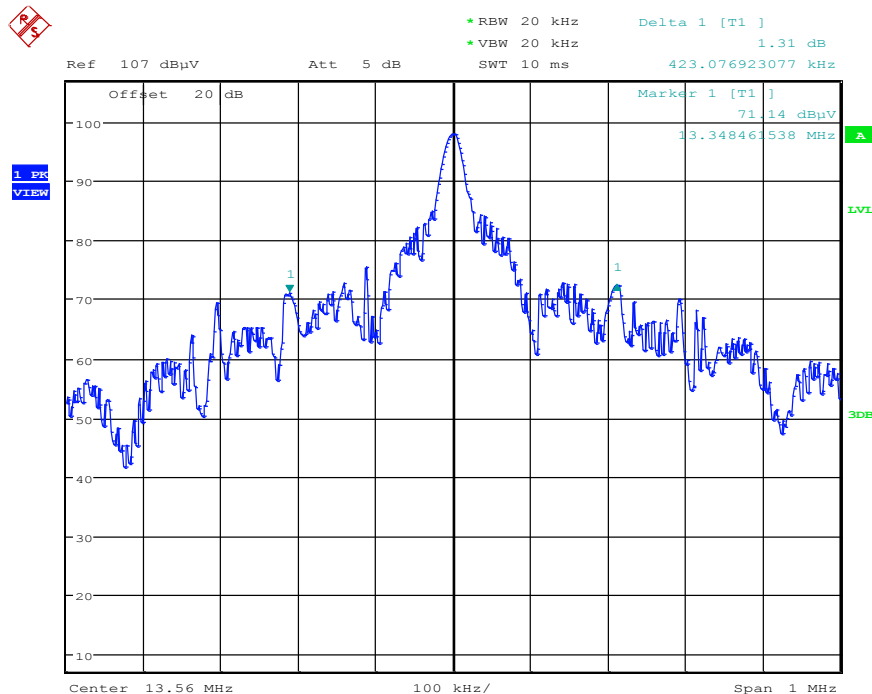
Date of test: September 2, 2015

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

	EMC Test Report for the BlackBerry® smartphone Model RHK211LW (STV100-1) , RHL211LW (STV100-3) APPENDIX 9	
Test Report No.: RTS-6066-1509-01A	Dates of Test: July 22 – September 8, and September 28, 2015	FCC ID: L6ARHK210LW, L6ARHL210LW IC: 2503A-RHK210LW, 2503A-RHL210LW

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