Test specification:	FCC section 15.407(b), RSS-210 Annex 9, section A9.3 Conducted emissions at band edges		
Test procedure:	Public notice DA 00-705 / ANSI C63.4, Section 13.1.4		
Test mode:	Compliance	Verdict:	PASS
Date:	11/23/2008		
Temperature: 22ºC	Air Pressure: 1007 hPa	Relative Humidity: 42 %	Power Supply: 120 VAC
Remarks:			

7.4 Conducted spurious emission measurements at band edges

7.4.1 General

This test was performed to measure conducted spurious emissions from the EUT near the band edges and within the pass band of the antenna. Specification test limits are given in Table 7.4.1.

Table 7.4.1 Spurious emission test limits

Assigned frequency range, MHz	EIRP of spurious, dBm/MHz	Antenna assembly gain, dBi	Resolution bandwidth, kHz
5470 - 5725	-27	22.5	1000
5470 - 5725	-27	28	1000

7.4.2 Test procedure

7.4.2.1 The EUT was set up as shown in Figure 7.4.1, energized normally modulated at the maximum data rate and its proper operation was checked.

7.4.2.2 The EUT was adjusted to produce maximum available to end user RF output power at the lowest carrier frequency.

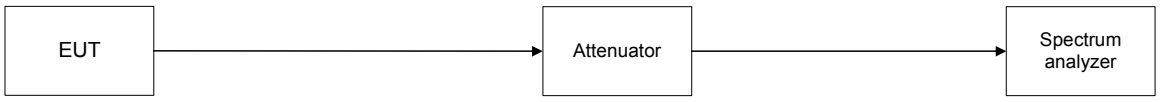
7.4.2.3 The spectrum analyzer span was set to capture the carrier frequency and associated modulation products. The resolution bandwidth was set to 1 MHz.

7.4.2.4 The spectrum analyzer was set in max hold mode and allowed trace to stabilize. The highest emission level within the authorized band was measured.

7.4.2.5 The maximum band edge emission and modulation product outside of the band were measured as provided in Table 7.4.2, Table 7.4.3 and associated plots and referenced to the highest emission level measured within the authorized band.

7.4.2.6 The above procedure was repeated with the EUT adjusted to produce maximum RF output power at the mid and highest carrier frequencies.

Figure 7.4.1 Setup for conducted spurious emissions



Reference numbers of test equipment used

HL 2780	HL 2883	HL 3176					

Full description is given in Appendix A.

Test specification:	FCC section 15.407(b), RSS-210 Annex 9, section A9.3 Conducted emissions at band edges		
Test procedure:	Public notice DA 00-705 / ANSI C63.4, Section 13.1.4		
Test mode:	Compliance	Verdict:	PASS
Date:	11/23/2008		
Temperature: 22ºC	Air Pressure: 1007 hPa	Relative Humidity: 42 %	Power Supply: 120 VAC
Remarks: EUT with 22.5 dBi antenna assembly gain			

Table 7.4.2 Conducted spurious emission test results

ASSIGNED FREQUENCY RANGE: 5470 – 5725 MHz
DETECTOR USED: Peak
RESOLUTION BANDWIDTH 1000 kHz
VIDEO BANDWIDTH: 3000 kHz

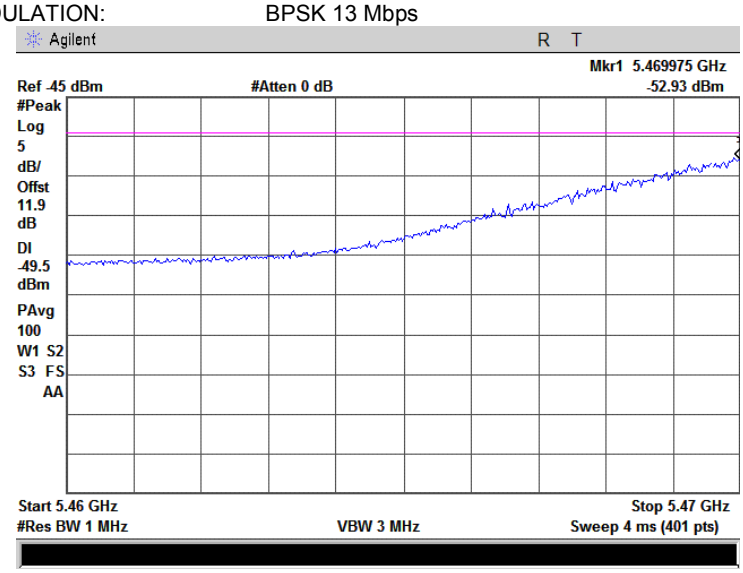
Frequency, MHz		Modulation	Bit rate, Mbps	CBW, MHz	SA reading, dBm	Limit*, dBm/MHz	Antenna assembly gain. dBi	EIRP, dBm/MHz	Margin**, dB	Verdict
Edge	Channel									
5469.975	5490	BPSK	13	20	-52.93	-27	22.5	-30.43	-3.43	Pass
5469.925		64QAM	130		-52.98	-27	22.5	-30.48	-3.48	Pass
5469.975	5485	BPSK	6.5	10	-65.2	-27	22.5	-42.70	-15.70	Pass
5470.000		64QAM	65		-66.14	-27	22.5	-43.64	-16.64	Pass
5469.950	5480	BPSK	3.25	5	-65.95	-27	22.5	-43.45	-16.45	Pass
5470.000		BPSK	3.25		-67.11	-27	22.5	-44.61	-17.61	Pass
5600.000	5580	BPSK	13	20	-54.38	-27	22.5	-31.88	-4.88	Pass
5600.000		64QAM	130		-53.52	-27	22.5	-31.02	-4.02	Pass
5600.000	5585	BPSK	6.5	10	-66.70	-27	22.5	-44.20	-17.20	Pass
5625.000					-68.76	-27	22.5	-46.26	-19.26	Pass
5600.000		64QAM	65		-66.89	-27	22.5	-44.39	-17.39	Pass
5624.875					-68.91	-27	22.5	-46.41	-19.41	Pass
5600.000	5590	BPSK	3.25	5	-68.58	-27	22.5	-46.08	-19.08	Pass
5628.250					-63.53	-27	22.5	-41.03	-14.03	Pass
5631.875					-65.71	-27	22.5	-43.21	-16.21	Pass
5600.000		64QAM	32.5	5	-68.72	-27	22.5	-46.22	-19.22	Pass
5628.125					-63.71	-27	22.5	-41.21	-14.21	Pass
5631.750					-65.19	-27	22.5	-42.69	-15.69	Pass
5630.250	5670	BPSK	13	20	-67.58	-27	22.5	-45.08	-18.08	Pass
5650.000					-55.13	-27	22.5	-32.63	-5.63	Pass
5630.250		64QAM	130		-67.80	-27	22.5	-45.30	-18.30	Pass
5650.000					-54.64	-27	22.5	-32.14	-5.14	Pass
5625.000	5665	BPSK	6.5	10	-68.91	-27	22.5	-46.41	-19.41	Pass
5650.000					-67.02	-27	22.5	-44.52	-17.52	Pass
5625.125		64QAM	65		-68.75	-27	22.5	-46.25	-19.25	Pass
5650.000					-67.04	-27	22.5	-44.54	-17.54	Pass
5618.250	5660	BPSK	3.25	5	-65.69	-27	22.5	-43.19	-16.19	Pass
5621.875					-63.70	-27	22.5	-41.20	-14.20	Pass
5650.000					-68.24	-27	22.5	-45.74	-18.74	Pass
5618.500		64QAM	32.5		-65.46	-27	22.5	-42.96	-15.96	Pass
5621.875					-63.79	-27	22.5	-41.29	-14.29	Pass
5650.000					-68.39	-27	22.5	-45.89	-18.89	Pass
5725.000	5705	BPSK	13	20	-56.03	-27	22.5	-33.53	-6.53	Pass
5745.060					-67.89	-27	22.5	-45.39	-18.39	Pass
5725.000		64QAM	130		-55.33	-27	22.5	-32.83	-5.83	Pass
5745.350					-68.01	-27	22.5	-45.51	-18.51	Pass
5725.025	5710	BPSK	6.5	10	-66.98	-27	22.5	-44.48	-17.48	Pass
5786.460					-68.84	-27	22.5	-46.34	-19.34	Pass
5725.025		64QAM	65		-66.86	-27	22.5	-44.36	-17.36	Pass
5785.890					-68.85	-27	22.5	-46.35	-19.35	Pass
5725.000	5715	BPSK	3.25	5	-68.27	-27	22.5	-45.77	-18.77	Pass
5753.110					-64.51	-27	22.5	-42.01	-15.01	Pass
5756.850					-66.27	-27	22.5	-43.77	-16.77	Pass
5725.000		64QAM	32.5		-68.20	-27	22.5	-45.70	-18.70	Pass
5753.110					-64.61	-27	22.5	-42.11	-15.11	Pass
5756.850					-66.34	-27	22.5	-43.84	-16.84	Pass

* - EIRP = SA reading (dBm) + Antenna assembly gain;
**- Margin = EIRP of spurious –specified limit.

Test specification:	FCC section 15.407(b), RSS-210 Annex 9, section A9.3 Conducted emissions at band edges		
Test procedure:	Public notice DA 00-705 / ANSI C63.4, Section 13.1.4		
Test mode:	Compliance	**Verdict:**	PASS
Date:	11/23/2008		
Temperature: 22ºC	**Air Pressure:** 1007 hPa	**Relative Humidity:** 42 %	**Power Supply:** 120 VAC
Remarks: EUT with 22.5 dBi antenna assembly gain			

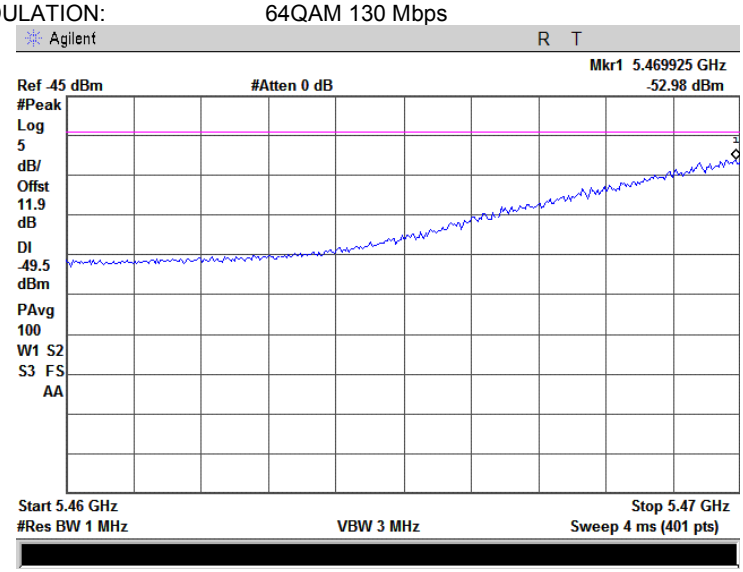
Plot 7.4.1 Conducted spurious emission measurements at the band edges

CARRIER FREQUENCY 5490 MHz
CHANNEL BANDWIDTH 20 MHz
MODULATION: BPSK 13 Mbps



Plot 7.4.2 Conducted spurious emission measurements at the band edges

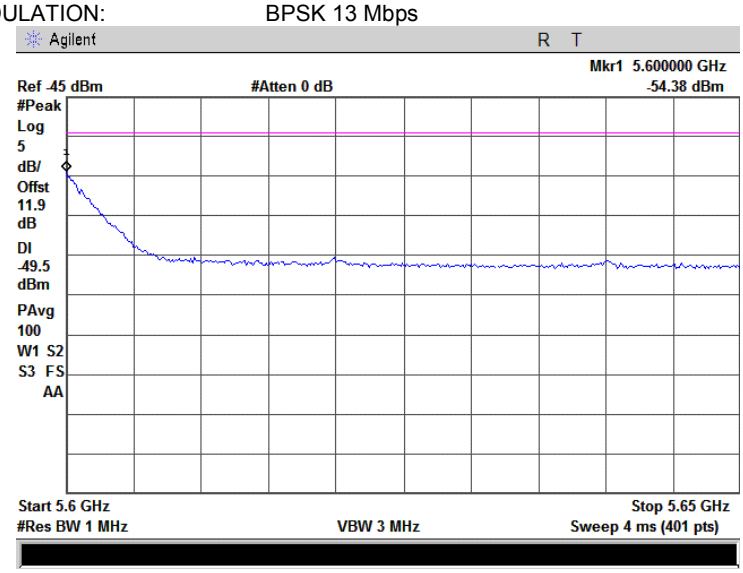
CARRIER FREQUENCY 5490 MHz
CHANNEL BANDWIDTH 20 MHz
MODULATION: 64QAM 130 Mbps



Test specification:	**FCC section 15.407(b), RSS-210 Annex 9, section A9.3 Conducted emissions at band edges**		
Test procedure:	Public notice DA 00-705 / ANSI C63.4, Section 13.1.4		
Test mode:	Compliance	**Verdict:**	PASS
Date:	11/23/2008		
Temperature: 22ºC	**Air Pressure:** 1007 hPa	**Relative Humidity:** 42 %	**Power Supply:** 120 VAC
Remarks: EUT with 22.5 dBi antenna assembly gain			

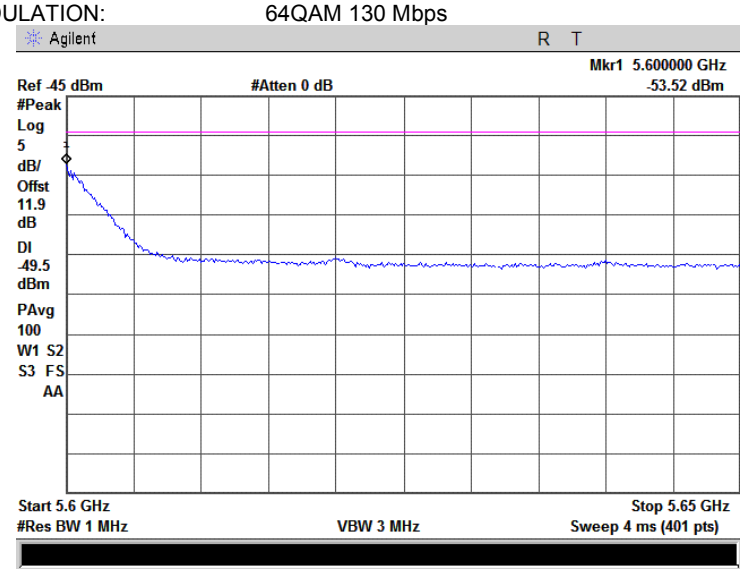
Plot 7.4.3 Conducted spurious emission measurements at the band edges

CARRIER FREQUENCY 5580 MHz
CHANNEL BANDWIDTH 20 MHz
MODULATION: BPSK 13 Mbps



Plot 7.4.4 Conducted spurious emission measurements at the band edges

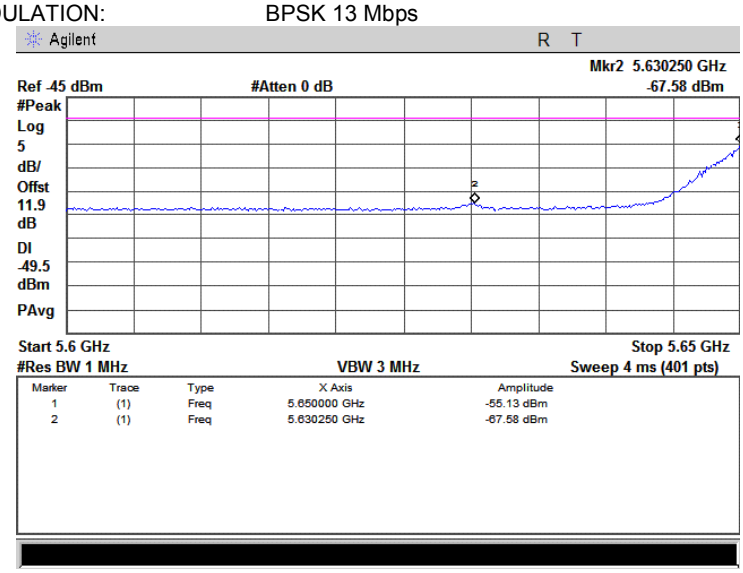
CARRIER FREQUENCY 5580 MHz
CHANNEL BANDWIDTH 20 MHz
MODULATION: 64QAM 130 Mbps



Test specification:	**FCC section 15.407(b), RSS-210 Annex 9, section A9.3** **Conducted emissions at band edges**		
Test procedure:	Public notice DA 00-705 / ANSI C63.4, Section 13.1.4		
Test mode:	Compliance	**Verdict:**	PASS
Date:	11/23/2008		
Temperature: 22ºC	**Air Pressure:** 1007 hPa	**Relative Humidity:** 42 %	**Power Supply:** 120 VAC
Remarks: EUT with 22.5 dBi antenna assembly gain			

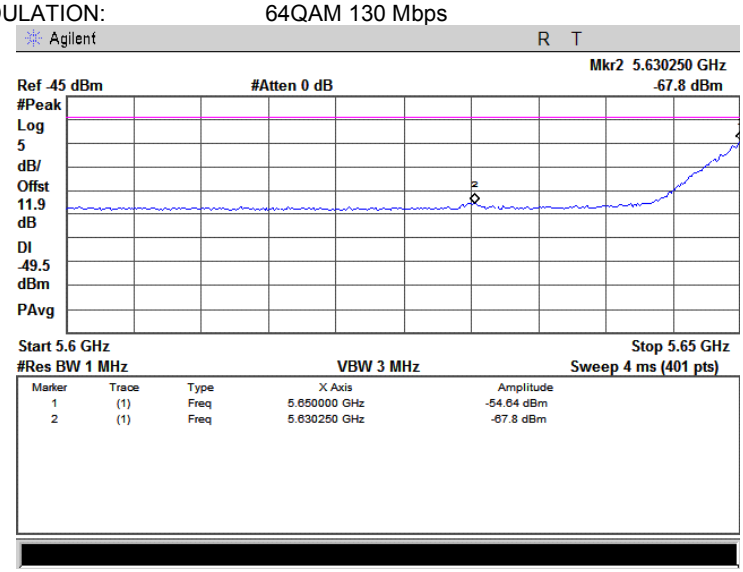
Plot 7.4.5 Conducted spurious emission measurements at the band edges

CARRIER FREQUENCY 5670 MHz
CHANNEL BANDWIDTH 20 MHz
MODULATION: BPSK 13 Mbps



Plot 7.4.6 Conducted spurious emission measurements at the band edges

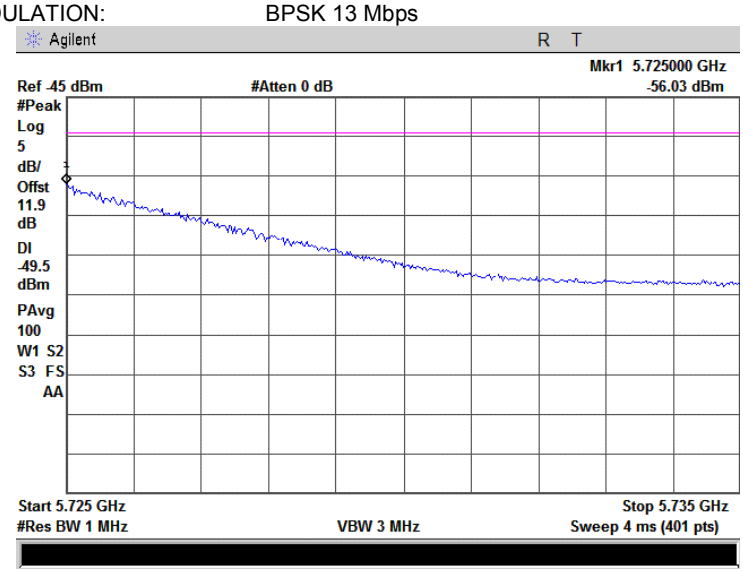
CARRIER FREQUENCY 5670 MHz
CHANNEL BANDWIDTH 20 MHz
MODULATION: 64QAM 130 Mbps



Test specification:	**FCC section 15.407(b), RSS-210 Annex 9, section A9.3 Conducted emissions at band edges**		
Test procedure:	Public notice DA 00-705 / ANSI C63.4, Section 13.1.4		
Test mode:	Compliance	**Verdict:**	PASS
Date:	11/23/2008		
Temperature: 22ºC	**Air Pressure:** 1007 hPa	**Relative Humidity:** 42 %	**Power Supply:** 120 VAC
Remarks: EUT with 22.5 dBi antenna assembly gain			

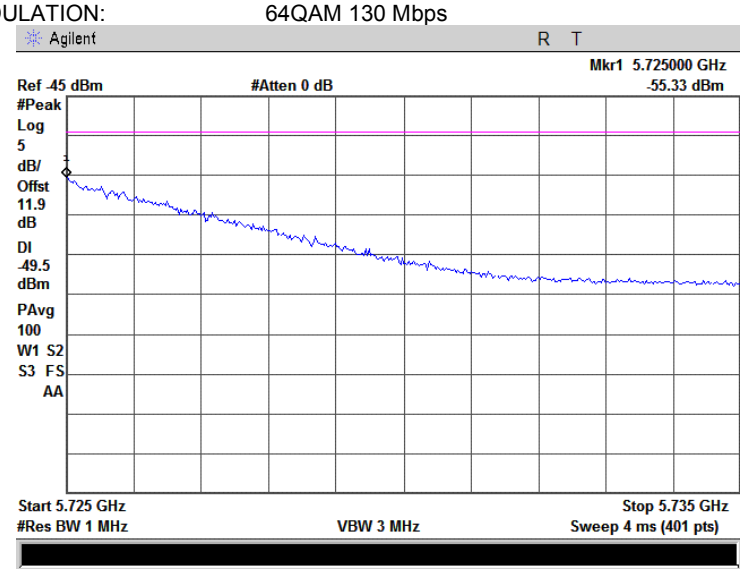
Plot 7.4.7 Conducted spurious emission measurements at the band edges

CARRIER FREQUENCY 5705 MHz
CHANNEL BANDWIDTH 20 MHz
MODULATION: BPSK 13 Mbps



Plot 7.4.8 Conducted spurious emission measurements at the band edges

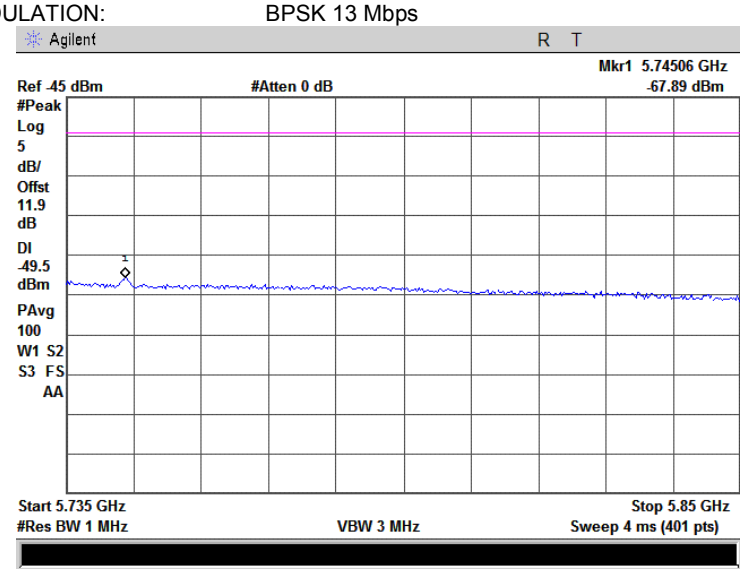
CARRIER FREQUENCY 5705 MHz
CHANNEL BANDWIDTH 20 MHz
MODULATION: 64QAM 130 Mbps



Test specification:	**FCC section 15.407(b), RSS-210 Annex 9, section A9.3** **Conducted emissions at band edges**		
Test procedure:	Public notice DA 00-705 / ANSI C63.4, Section 13.1.4		
Test mode:	Compliance	**Verdict:**	PASS
Date:	11/23/2008		
Temperature: 22ºC	**Air Pressure:** 1007 hPa	**Relative Humidity:** 42 %	**Power Supply:** 120 VAC
Remarks: EUT with 22.5 dBi antenna assembly gain			

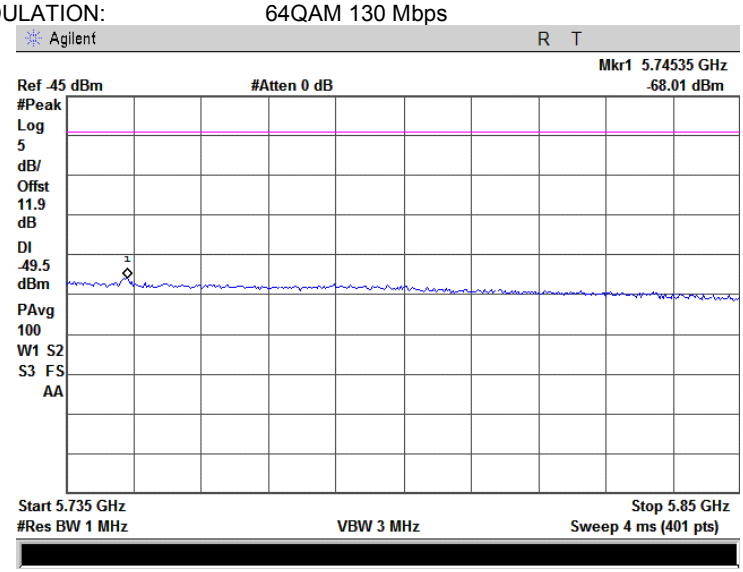
Plot 7.4.9 Conducted spurious emission measurements in the frequency range 5735 – 5850 MHz

CARRIER FREQUENCY 5705 MHz
CHANNEL BANDWIDTH 20 MHz
MODULATION: BPSK 13 Mbps



Plot 7.4.10 Conducted spurious emission measurements in the frequency range 5735 – 5850 MHz

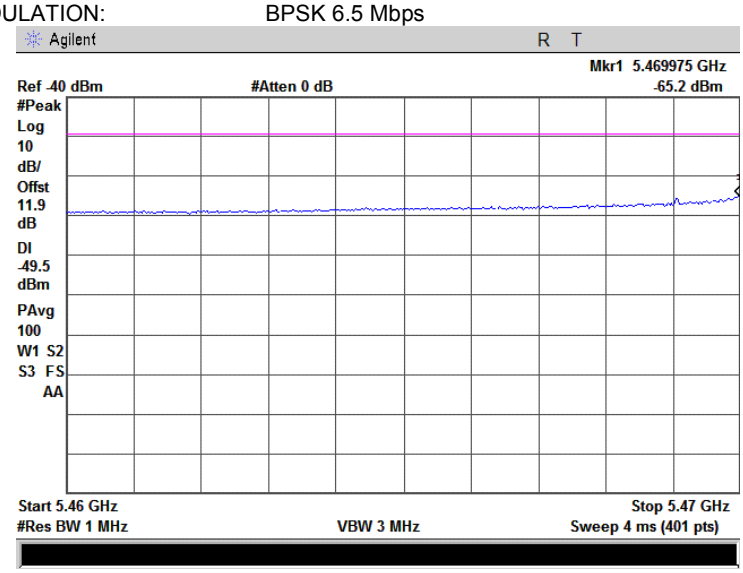
CARRIER FREQUENCY 5705 MHz
CHANNEL BANDWIDTH 20 MHz
MODULATION: 64QAM 130 Mbps



Test specification:	FCC section 15.407(b), RSS-210 Annex 9, section A9.3 Conducted emissions at band edges		
Test procedure:	Public notice DA 00-705 / ANSI C63.4, Section 13.1.4		
Test mode:	Compliance	**Verdict:**	PASS
Date:	11/23/2008		
Temperature: 22ºC	**Air Pressure:** 1007 hPa	**Relative Humidity:** 42 %	**Power Supply:** 120 VAC
Remarks: EUT with 22.5 dBi antenna assembly gain			

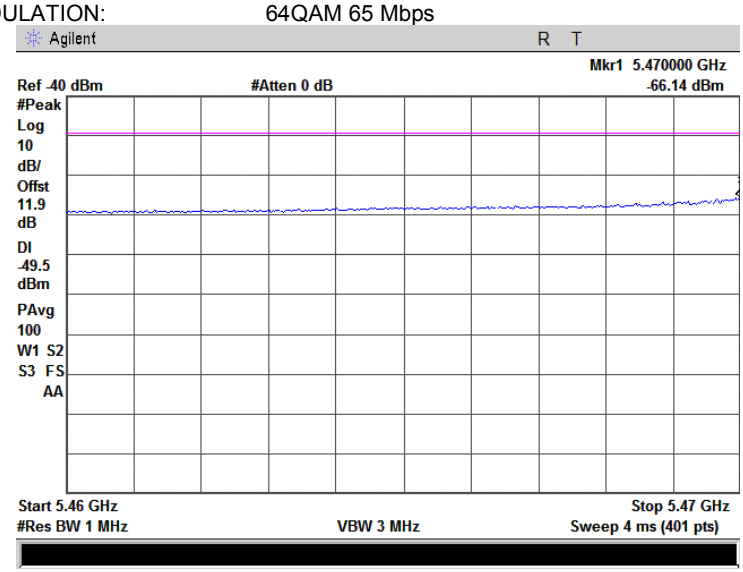
Plot 7.4.11 Conducted spurious emission measurements at the band edges

CARRIER FREQUENCY 5485 MHz
CHANNEL BANDWIDTH 10 MHz
MODULATION: BPSK 6.5 Mbps



Plot 7.4.12 Conducted spurious emission measurements at the band edges

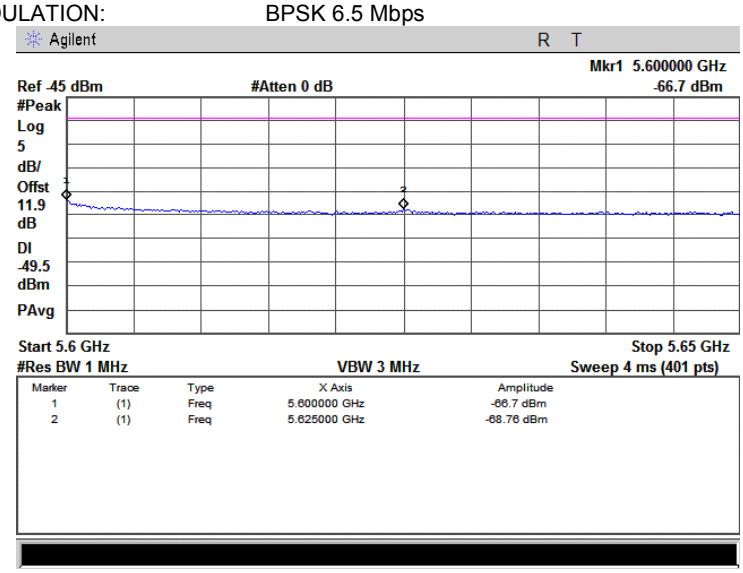
CARRIER FREQUENCY 5485 MHz
CHANNEL BANDWIDTH 10 MHz
MODULATION: 64QAM 65 Mbps



Test specification:	**FCC section 15.407(b), RSS-210 Annex 9, section A9.3 Conducted emissions at band edges**		
Test procedure:	Public notice DA 00-705 / ANSI C63.4, Section 13.1.4		
Test mode:	Compliance	**Verdict:**	PASS
Date:	11/23/2008		
Temperature: 22ºC	**Air Pressure:** 1007 hPa	**Relative Humidity:** 42 %	**Power Supply:** 120 VAC
Remarks: EUT with 22.5 dBi antenna assembly gain			

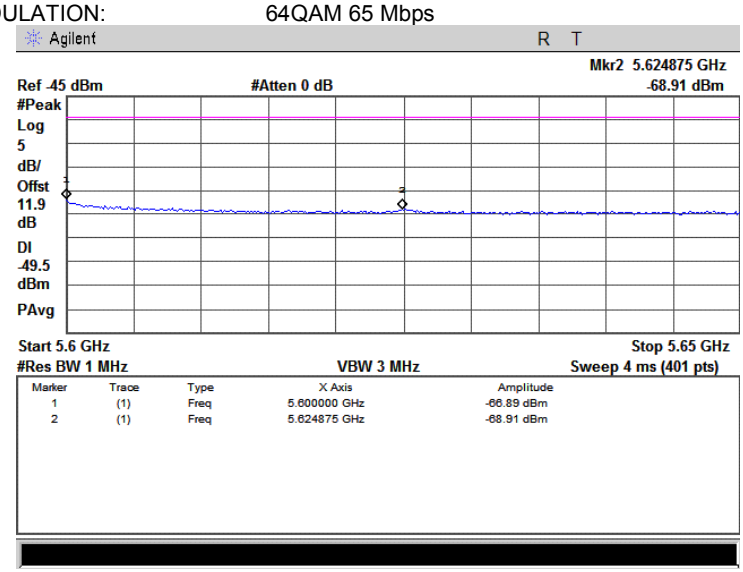
Plot 7.4.13 Conducted spurious emission measurements at the band edges

CARRIER FREQUENCY 5585 MHz
CHANNEL BANDWIDTH 10 MHz
MODULATION: BPSK 6.5 Mbps



Plot 7.4.14 Conducted spurious emission measurements at the band edges

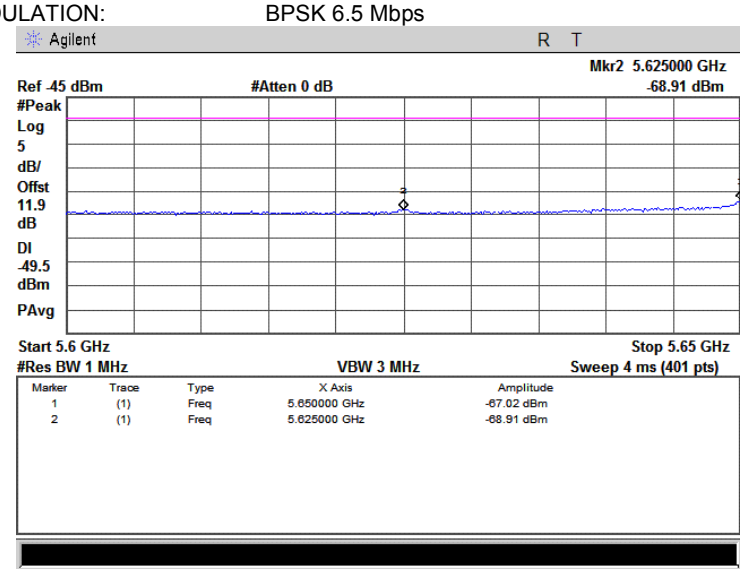
CARRIER FREQUENCY 5585 MHz
CHANNEL BANDWIDTH 10 MHz
MODULATION: 64QAM 65 Mbps



Test specification:	**FCC section 15.407(b), RSS-210 Annex 9, section A9.3 Conducted emissions at band edges**		
Test procedure:	Public notice DA 00-705 / ANSI C63.4, Section 13.1.4		
Test mode:	Compliance	**Verdict:**	PASS
Date:	11/23/2008		
Temperature: 22ºC	**Air Pressure:** 1007 hPa	**Relative Humidity:** 42 %	**Power Supply:** 120 VAC
Remarks: EUT with 22.5 dBi antenna assembly gain			

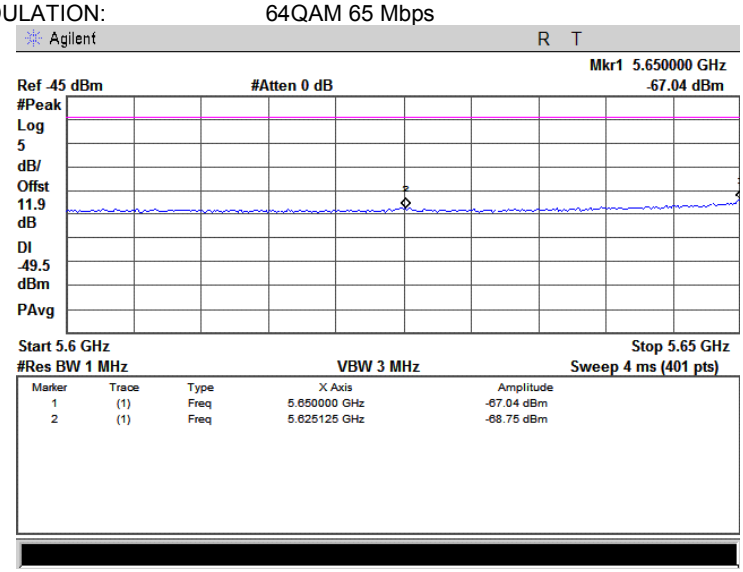
Plot 7.4.15 Conducted spurious emission measurements at the band edges

CARRIER FREQUENCY 5665 MHz
CHANNEL BANDWIDTH 10 MHz
MODULATION: BPSK 6.5 Mbps



Plot 7.4.16 Conducted spurious emission measurements at the band edges

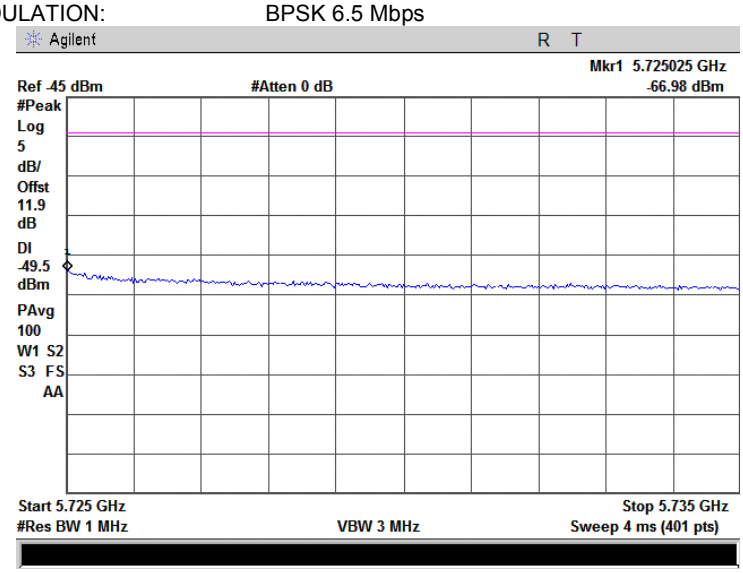
CARRIER FREQUENCY 5665 MHz
CHANNEL BANDWIDTH 10 MHz
MODULATION: 64QAM 65 Mbps



Test specification:	**FCC section 15.407(b), RSS-210 Annex 9, section A9.3 Conducted emissions at band edges**		
Test procedure:	Public notice DA 00-705 / ANSI C63.4, Section 13.1.4		
Test mode:	Compliance	**Verdict:**	PASS
Date:	11/23/2008		
Temperature: 22ºC	**Air Pressure:** 1007 hPa	**Relative Humidity:** 42 %	**Power Supply:** 120 VAC
Remarks: EUT with 22.5 dBi antenna assembly gain			

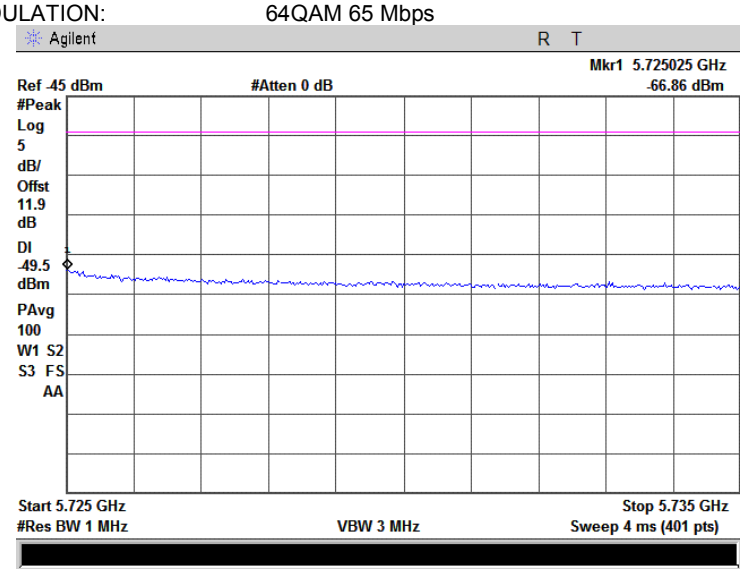
Plot 7.4.17 Conducted spurious emission measurements at the band edges

CARRIER FREQUENCY 5710 MHz
CHANNEL BANDWIDTH 10 MHz
MODULATION: BPSK 6.5 Mbps



Plot 7.4.18 Conducted spurious emission measurements at the band edges

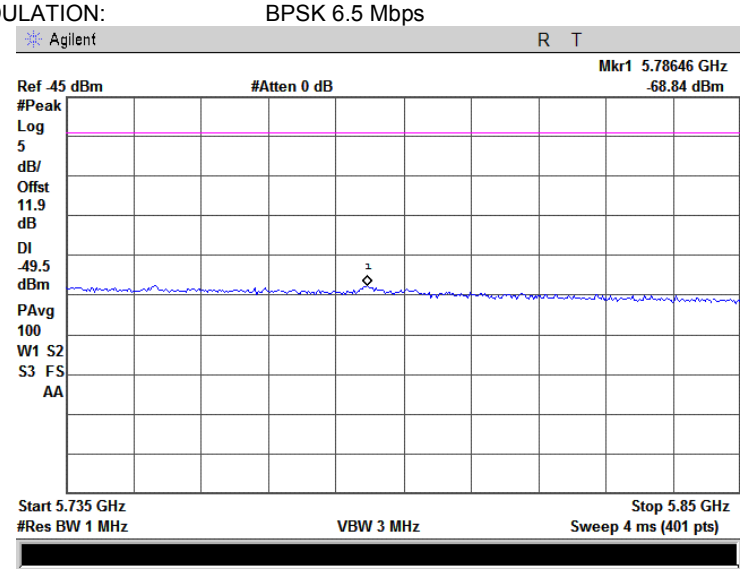
CARRIER FREQUENCY 5710 MHz
CHANNEL BANDWIDTH 10 MHz
MODULATION: 64QAM 65 Mbps



Test specification:	**FCC section 15.407(b), RSS-210 Annex 9, section A9.3 Conducted emissions at band edges**		
Test procedure:	Public notice DA 00-705 / ANSI C63.4, Section 13.1.4		
Test mode:	Compliance	**Verdict:**	PASS
Date:	11/23/2008		
Temperature: 22ºC	**Air Pressure:** 1007 hPa	**Relative Humidity:** 42 %	**Power Supply:** 120 VAC
Remarks: EUT with 22.5 dBi antenna assembly gain			

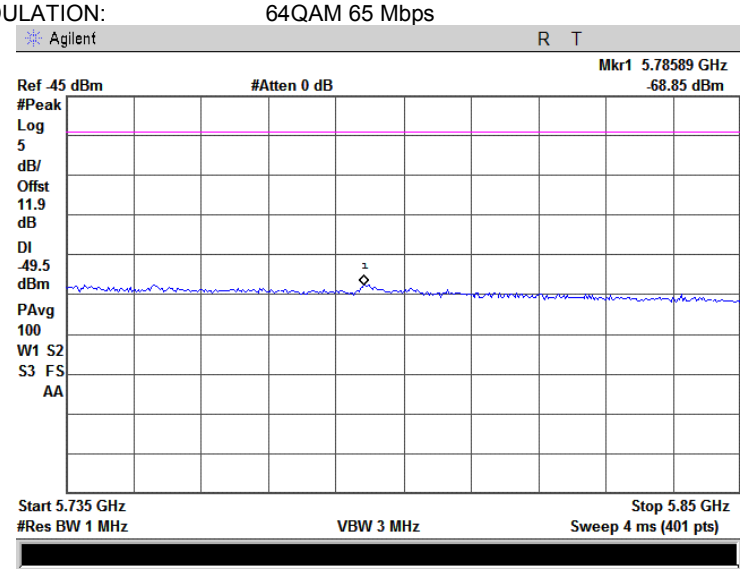
Plot 7.4.19 Conducted spurious emission measurements in the frequency range 5735 – 5850 MHz

CARRIER FREQUENCY 5710 MHz
CHANNEL BANDWIDTH 10 MHz
MODULATION: BPSK 6.5 Mbps



Plot 7.4.20 Conducted spurious emission measurements in the frequency range 5735 – 5850 MHz

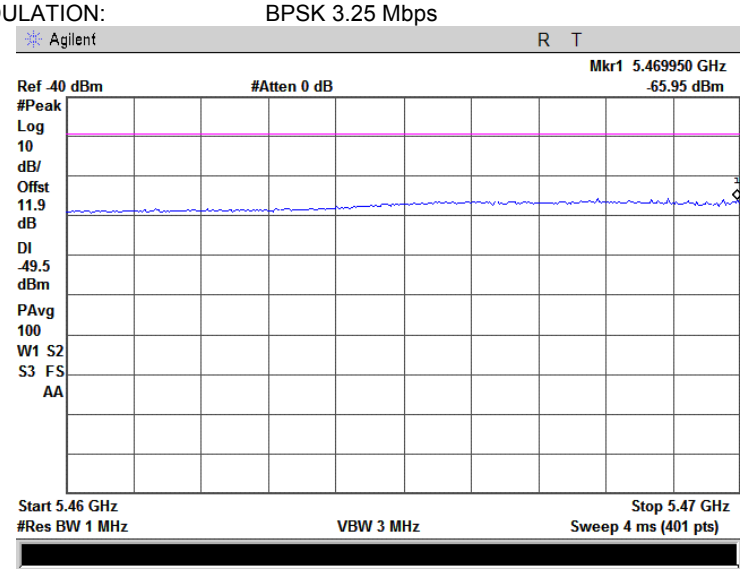
CARRIER FREQUENCY 5710 MHz
CHANNEL BANDWIDTH 10 MHz
MODULATION: 64QAM 65 Mbps



Test specification:	**FCC section 15.407(b), RSS-210 Annex 9, section A9.3 Conducted emissions at band edges**		
Test procedure:	Public notice DA 00-705 / ANSI C63.4, Section 13.1.4		
Test mode:	Compliance	**Verdict:**	PASS
Date:	11/23/2008		
Temperature: 22ºC	**Air Pressure:** 1007 hPa	**Relative Humidity:** 42 %	**Power Supply:** 120 VAC
Remarks: EUT with 22.5 dBi antenna assembly gain			

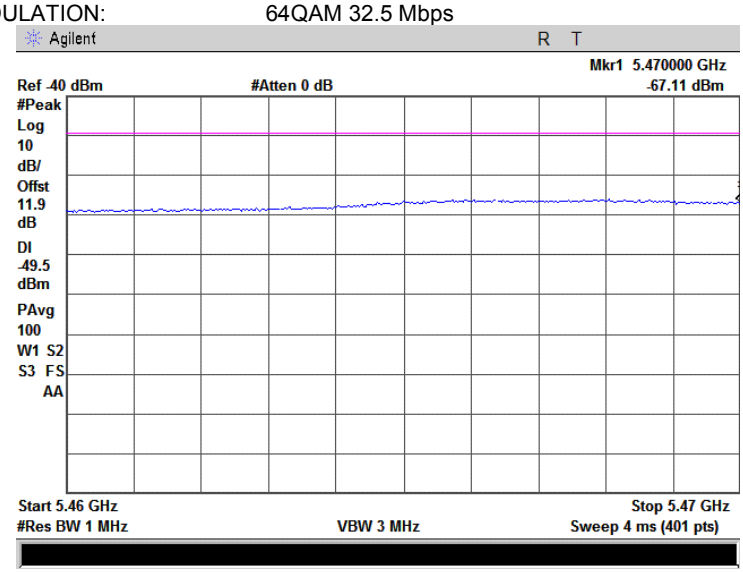
Plot 7.4.21 Conducted spurious emission measurements at the band edges

CARRIER FREQUENCY 5480 MHz
CHANNEL BANDWIDTH 5 MHz
MODULATION: BPSK 3.25 Mbps



Plot 7.4.22 Conducted spurious emission measurements at the band edges

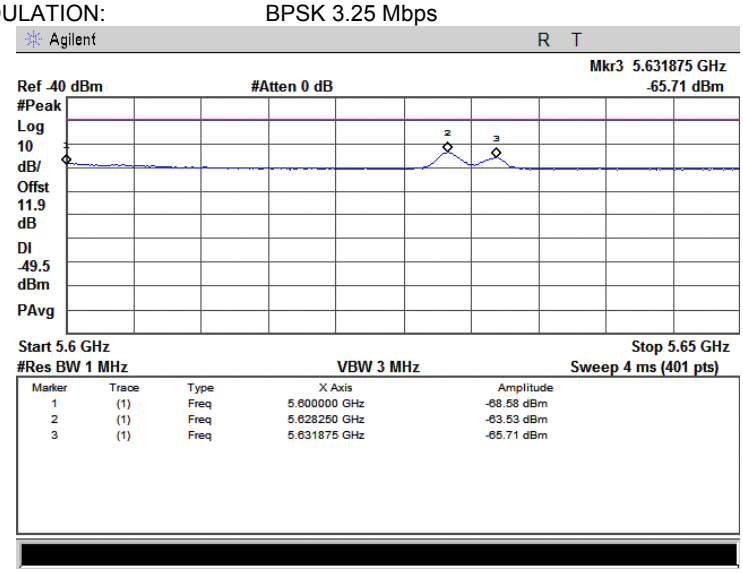
CARRIER FREQUENCY 5480 MHz
CHANNEL BANDWIDTH 5 MHz
MODULATION: 64QAM 32.5 Mbps



Test specification:	**FCC section 15.407(b), RSS-210 Annex 9, section A9.3** **Conducted emissions at band edges**		
Test procedure:	Public notice DA 00-705 / ANSI C63.4, Section 13.1.4		
Test mode:	Compliance	**Verdict:**	PASS
Date:	11/23/2008		
Temperature: 22ºC	**Air Pressure:** 1007 hPa	**Relative Humidity:** 42 %	**Power Supply:** 120 VAC
Remarks: EUT with 22.5 dBi antenna assembly gain			

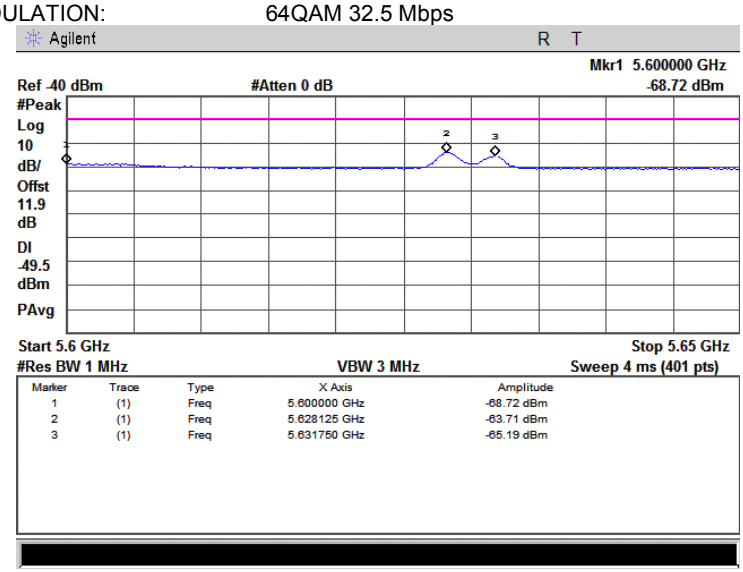
Plot 7.4.23 Conducted spurious emission measurements at the band edges

CARRIER FREQUENCY 5590 MHz
CHANNEL BANDWIDTH 5 MHz
MODULATION: BPSK 3.25 Mbps



Plot 7.4.24 Conducted spurious emission measurements at the band edges

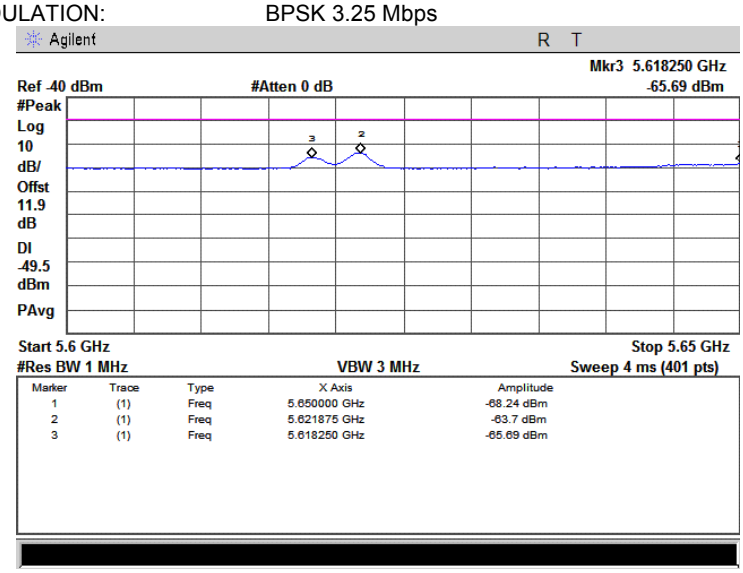
CARRIER FREQUENCY 5590 MHz
CHANNEL BANDWIDTH 5 MHz
MODULATION: 64QAM 32.5 Mbps



Test specification:	**FCC section 15.407(b), RSS-210 Annex 9, section A9.3 Conducted emissions at band edges**		
Test procedure:	Public notice DA 00-705 / ANSI C63.4, Section 13.1.4		
Test mode:	Compliance	**Verdict:**	PASS
Date:	11/23/2008		
Temperature: 22ºC	**Air Pressure:** 1007 hPa	**Relative Humidity:** 42 %	**Power Supply:** 120 VAC
Remarks: EUT with 22.5 dBi antenna assembly gain			

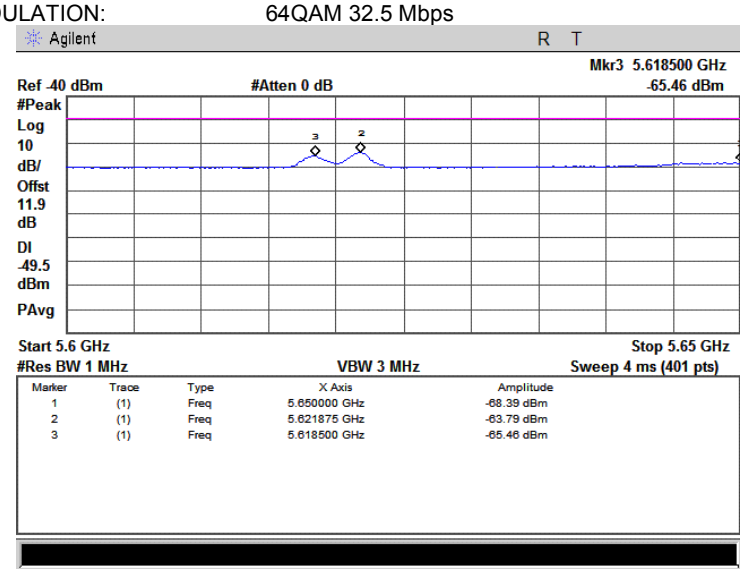
Plot 7.4.25 Conducted spurious emission measurements at the band edges

CARRIER FREQUENCY 5660 MHz
CHANNEL BANDWIDTH 5 MHz
MODULATION: BPSK 3.25 Mbps



Plot 7.4.26 Conducted spurious emission measurements at the band edges

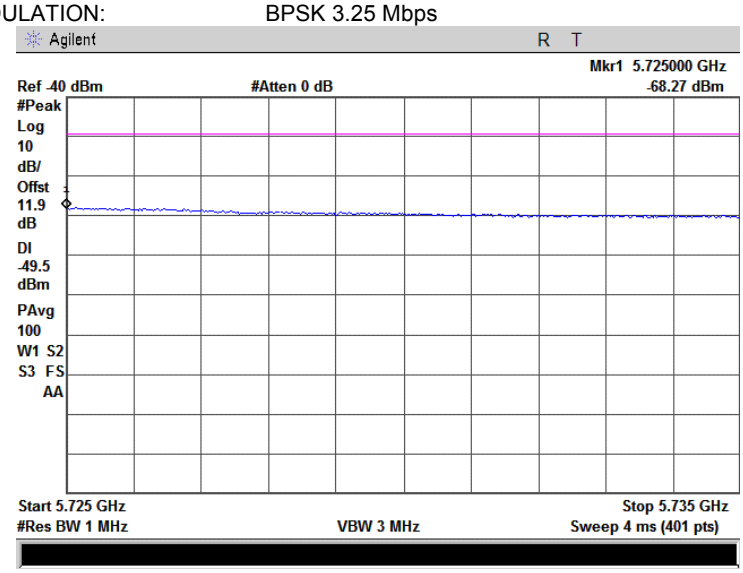
CARRIER FREQUENCY 5660 MHz
CHANNEL BANDWIDTH 5 MHz
MODULATION: 64QAM 32.5 Mbps



Test specification:	**FCC section 15.407(b), RSS-210 Annex 9, section A9.3 Conducted emissions at band edges**		
Test procedure:	Public notice DA 00-705 / ANSI C63.4, Section 13.1.4		
Test mode:	Compliance	**Verdict:**	PASS
Date:	11/23/2008		
Temperature: 22ºC	**Air Pressure:** 1007 hPa	**Relative Humidity:** 42 %	**Power Supply:** 120 VAC
Remarks: EUT with 22.5 dBi antenna assembly gain			

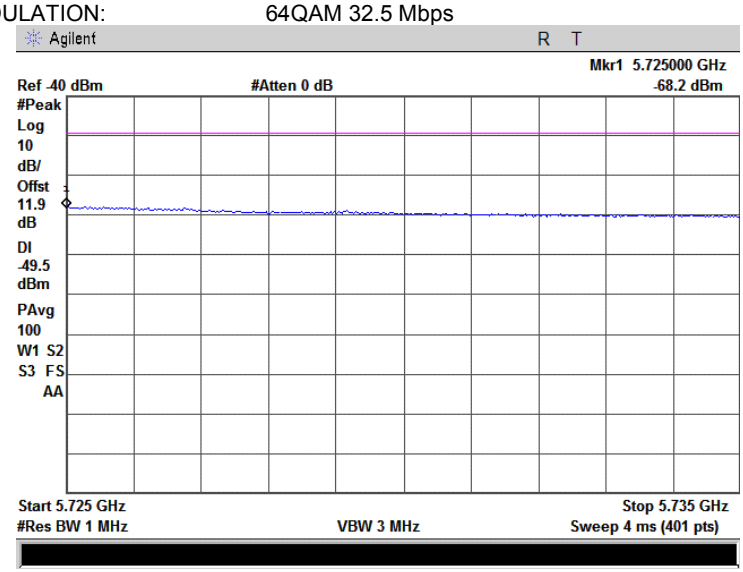
Plot 7.4.27 Conducted spurious emission measurements at the band edges

CARRIER FREQUENCY 5715 MHz
CHANNEL BANDWIDTH 5 MHz
MODULATION: BPSK 3.25 Mbps



Plot 7.4.28 Conducted spurious emission measurements at the band edges

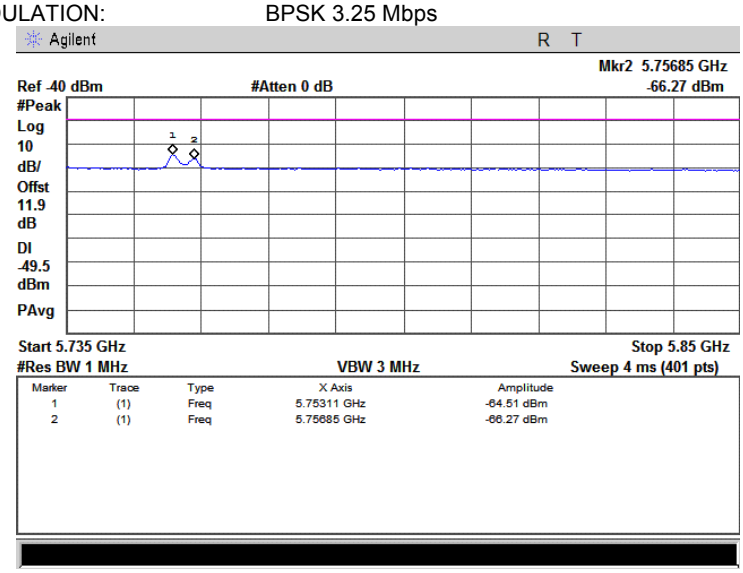
CARRIER FREQUENCY 5715 MHz
CHANNEL BANDWIDTH 5 MHz
MODULATION: 64QAM 32.5 Mbps



Test specification:	FCC section 15.407(b), RSS-210 Annex 9, section A9.3 Conducted emissions at band edges		
Test procedure:	Public notice DA 00-705 / ANSI C63.4, Section 13.1.4		
Test mode:	Compliance	**Verdict:**	PASS
Date:	11/23/2008		
Temperature: 22ºC	**Air Pressure:** 1007 hPa	**Relative Humidity:** 42 %	**Power Supply:** 120 VAC
Remarks: EUT with 22.5 dBi antenna assembly gain			

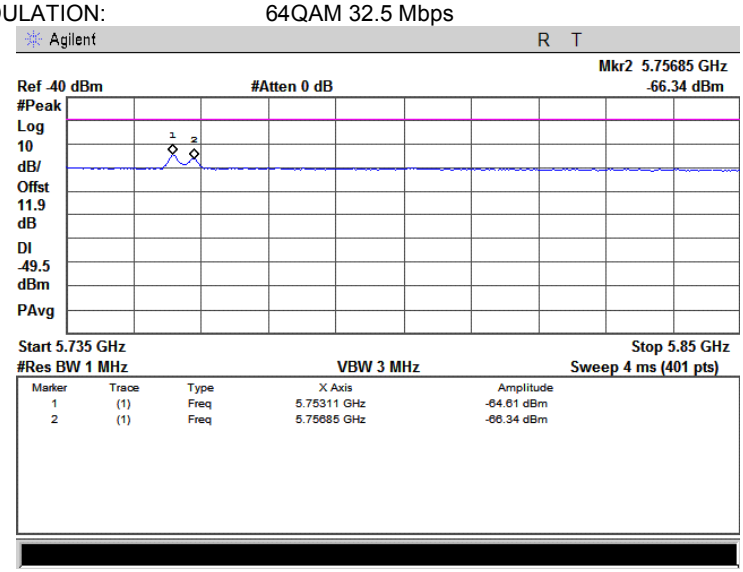
Plot 7.4.29 Conducted spurious emission measurements in the frequency range 5735 – 5850 MHz

CARRIER FREQUENCY 5715 MHz
CHANNEL BANDWIDTH 5 MHz
MODULATION: BPSK 3.25 Mbps



Plot 7.4.30 Conducted spurious emission measurements in the frequency range 5735 – 5850 MHz

CARRIER FREQUENCY 5715 MHz
CHANNEL BANDWIDTH 5 MHz
MODULATION: 64QAM 32.5 Mbps



Test specification:	**FCC section 15.407(b), RSS-210 Annex 9, section A9.3 Conducted emissions at band edges**		
Test procedure:	Public notice DA 00-705 / ANSI C63.4, Section 13.1.4		
Test mode:	Compliance	**Verdict:**	PASS
Date:	12/04/2008		
Temperature: 22ºC	**Air Pressure:** 1013 hPa	**Relative Humidity:** 48 %	**Power Supply:** 120 VAC
Remarks: EUT with 28 dBi antenna assembly gain			

Table 7.4.3 Conducted spurious emission test results

ASSIGNED FREQUENCY RANGE: 5470 – 5725 MHz
DETECTOR USED: Peak
RESOLUTION BANDWIDTH 1000 kHz
VIDEO BANDWIDTH: 3000 kHz

Frequency, MHz		Modulation	Bit rate, Mbps	CBW, MHz	SA reading, dBm	Limit, dBm/MHz	Antenna assembly gain. dBi	EIRP, dBm/MHz	Margin*, dB	Verdict
Edge	Channel									
5470	5490	BPSK	13	20	-64.03	-27	28	-36.03	-9.03	Pass
5470		64QAM	130		-64.06	-27	28	-36.06	-9.06	Pass
5470	5485	BPSK	6.5	10	No emissions were found					Pass
5470		64QAM	65							
5470	5480	BPSK	3.25	5						
5470										
5470		64QAM	32.5							
5470										
5600	5580	BPSK	13	20	-63.87	-27	28	-35.87	-8.87	Pass
5600		64QAM	130		-63.70	-27	28	-35.70	-8.70	Pass
5600	5585	BPSK	6.5	10	No emissions were found					Pass
5600		64QAM	65							
5628.125	5590	BPSK	3.25	5	-66.59	-27	28	-38.59	-11.59	Pass
5631.750					-68.21	-27	28	-40.21	-13.21	Pass
5628.000		64QAM	32.5		-67.01	-27	28	-39.01	-12.01	Pass
5631.625					-68.52	-27	28	-40.52	-13.52	Pass
5650	5670	BPSK	13	20	-63.51	-27	28	-35.51	-8.51	Pass
5650		64QAM	130		-64.20	-27	28	-36.20	-9.20	Pass
5650	5665	BPSK	6.5	10	No emissions were found					Pass
5650		64QAM	65							
5618.375	5660	BPSK	3.25	5	-68.44	-27	28	-40.44	-13.44	Pass
5621.875					-67.25	-27	28	-39.25	-12.25	Pass
5618.125		64QAM	32.5		-68.05	-27	28	-40.05	-13.05	Pass
5621.875					-66.74	-27	28	-38.74	-11.74	Pass
5725	5705	BPSK	13	20	-64.24	-27	28	-36.24	-9.24	Pass
5725		64QAM	130		-64.62	-27	28	-36.62	-9.62	Pass
5725	5710	BPSK	6.5	10	No emissions were found					Pass
5725		64QAM	65							
5753.40	5715	BPSK	3.25	5	-67.50	-27	28	-39.5	-12.5	Pass
5756.85					-69.03	-27	28	-41.03	-14.03	Pass
5753.40		64QAM	32.5		-67.88	-27	28	-39.88	-12.88	Pass
5756.85					-69.06	-27	28	-41.06	-14.06	Pass

*****- Margin = Field strength of spurious – calculated field strength limit.

Reference numbers of test equipment used

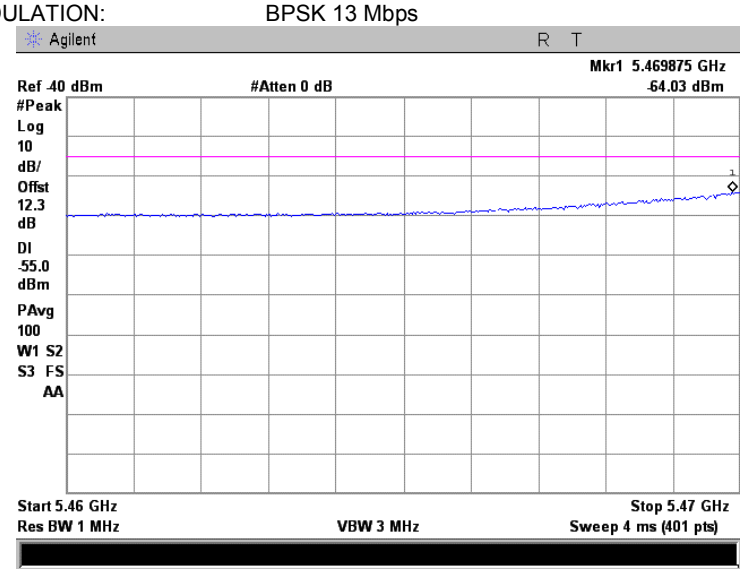
HL 2780	HL 2883	HL 3176					

Full description is given in Appendix A.

Test specification:	FCC section 15.407(b), RSS-210 Annex 9, section A9.3 Conducted emissions at band edges		
Test procedure:	Public notice DA 00-705 / ANSI C63.4, Section 13.1.4		
Test mode:	Compliance	**Verdict:**	PASS
Date:	12/04/2008		
Temperature: 22ºC	**Air Pressure:** 1013 hPa	**Relative Humidity:** 48 %	**Power Supply:** 120 VAC
Remarks: EUT with 28 dBi antenna assembly gain			

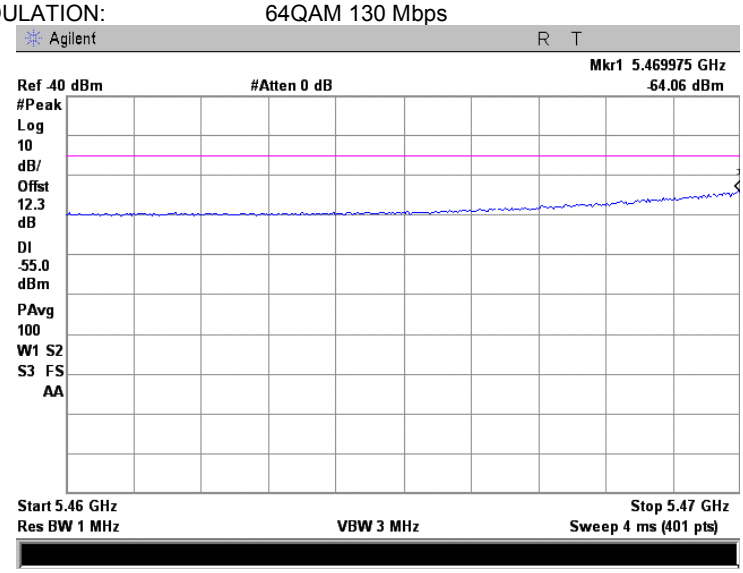
Plot 7.4.31 Conducted spurious emission measurements at the band edges

CARRIER FREQUENCY 5490 MHz
CHANNEL BANDWIDTH 20 MHz
MODULATION: BPSK 13 Mbps



Plot 7.4.32 Conducted spurious emission measurements at the band edges

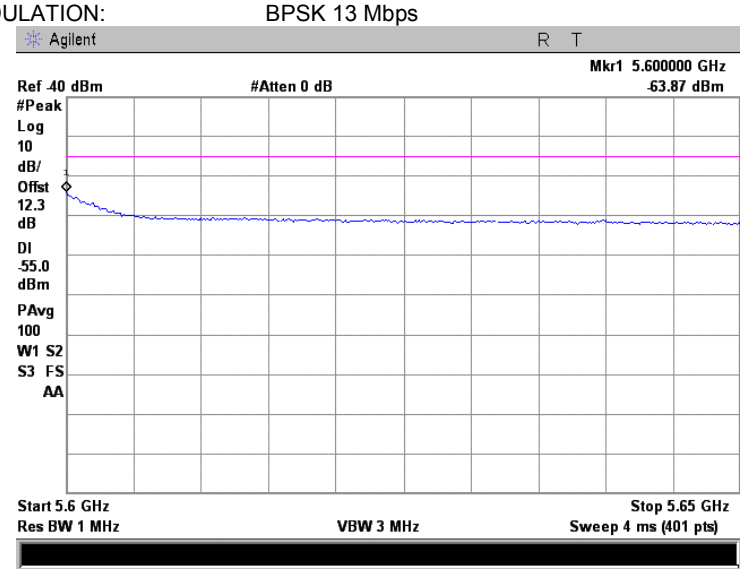
CARRIER FREQUENCY 5490 MHz
CHANNEL BANDWIDTH 20 MHz
MODULATION: 64QAM 130 Mbps



Test specification:	FCC section 15.407(b), RSS-210 Annex 9, section A9.3 Conducted emissions at band edges		
Test procedure:	Public notice DA 00-705 / ANSI C63.4, Section 13.1.4		
Test mode:	Compliance	**Verdict:**	PASS
Date:	12/04/2008		
Temperature: 22ºC	**Air Pressure:** 1013 hPa	**Relative Humidity:** 48 %	**Power Supply:** 120 VAC
Remarks: EUT with 28 dBi antenna assembly gain			

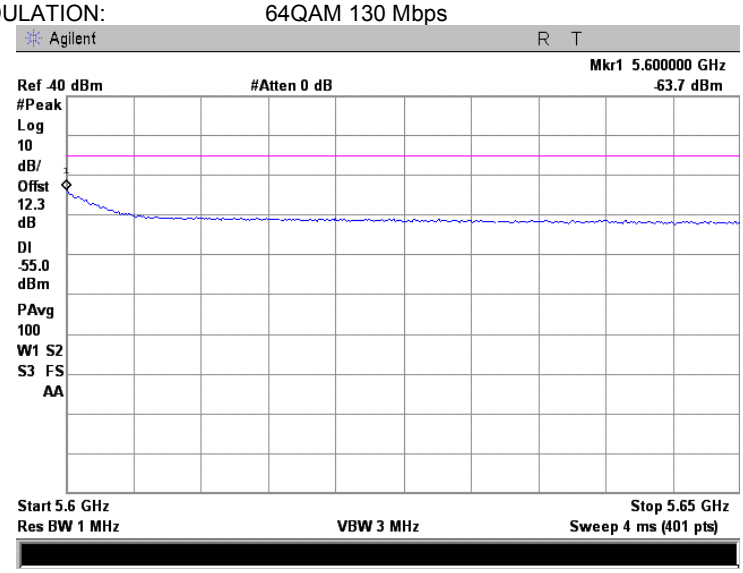
Plot 7.4.33 Conducted spurious emission measurements at the band edges

CARRIER FREQUENCY 5580 MHz
CHANNEL BANDWIDTH 20 MHz
MODULATION: BPSK 13 Mbps



Plot 7.4.34 Conducted spurious emission measurements at the band edges

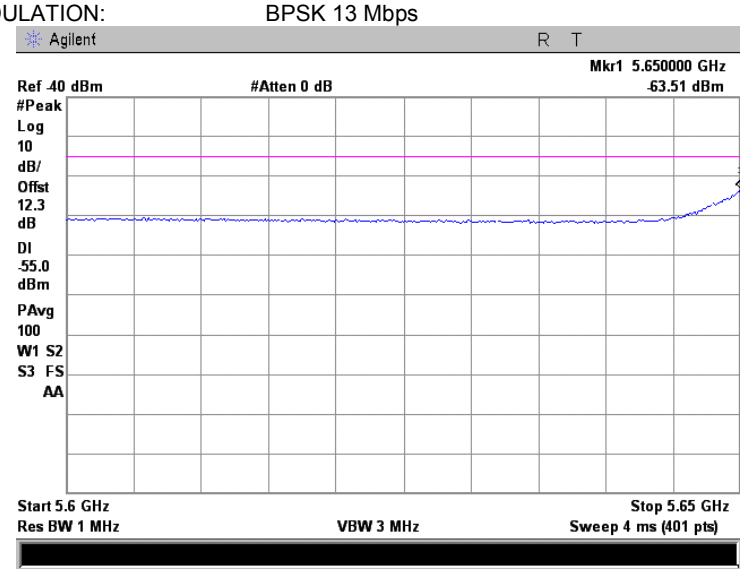
CARRIER FREQUENCY 5580 MHz
CHANNEL BANDWIDTH 20 MHz
MODULATION: 64QAM 130 Mbps



Test specification:	FCC section 15.407(b), RSS-210 Annex 9, section A9.3 Conducted emissions at band edges		
Test procedure:	Public notice DA 00-705 / ANSI C63.4, Section 13.1.4		
Test mode:	Compliance	**Verdict:**	PASS
Date:	12/04/2008		
Temperature: 22ºC	**Air Pressure:** 1013 hPa	**Relative Humidity:** 48 %	**Power Supply:** 120 VAC
Remarks: EUT with 28 dBi antenna assembly gain			

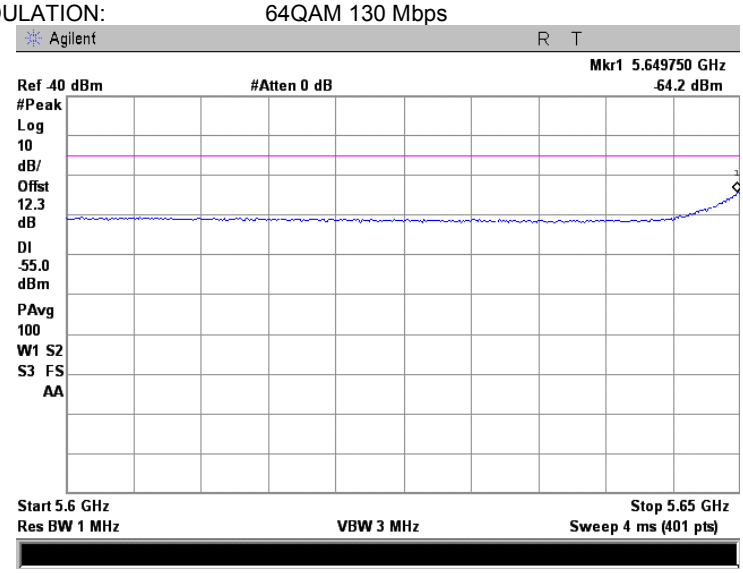
Plot 7.4.35 Conducted spurious emission measurements at the band edges

CARRIER FREQUENCY 5670 MHz
CHANNEL BANDWIDTH 20 MHz
MODULATION: BPSK 13 Mbps



Plot 7.4.36 Conducted spurious emission measurements at the band edges

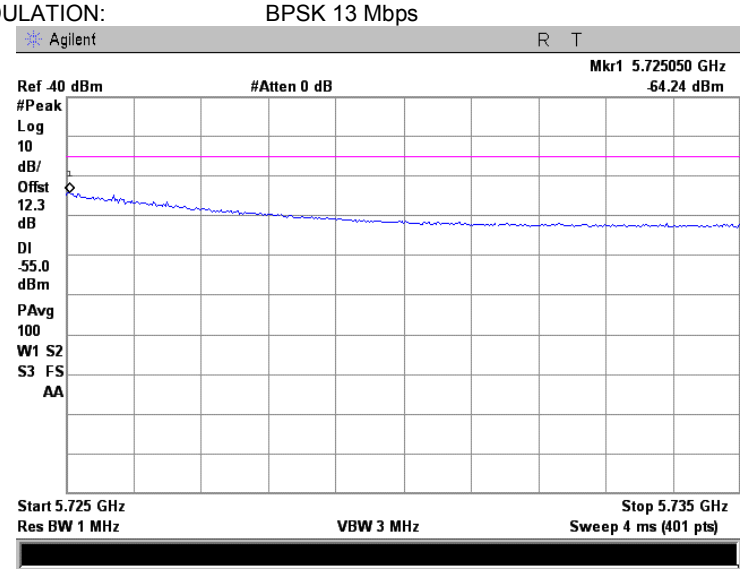
CARRIER FREQUENCY 5670 MHz
CHANNEL BANDWIDTH 20 MHz
MODULATION: 64QAM 130 Mbps



Test specification:	**FCC section 15.407(b), RSS-210 Annex 9, section A9.3** **Conducted emissions at band edges**		
Test procedure:	Public notice DA 00-705 / ANSI C63.4, Section 13.1.4		
Test mode:	Compliance	**Verdict:**	PASS
Date:	12/04/2008		
Temperature: 22ºC	**Air Pressure:** 1013 hPa	**Relative Humidity:** 48 %	**Power Supply:** 120 VAC
Remarks: EUT with 28 dBi antenna assembly gain			

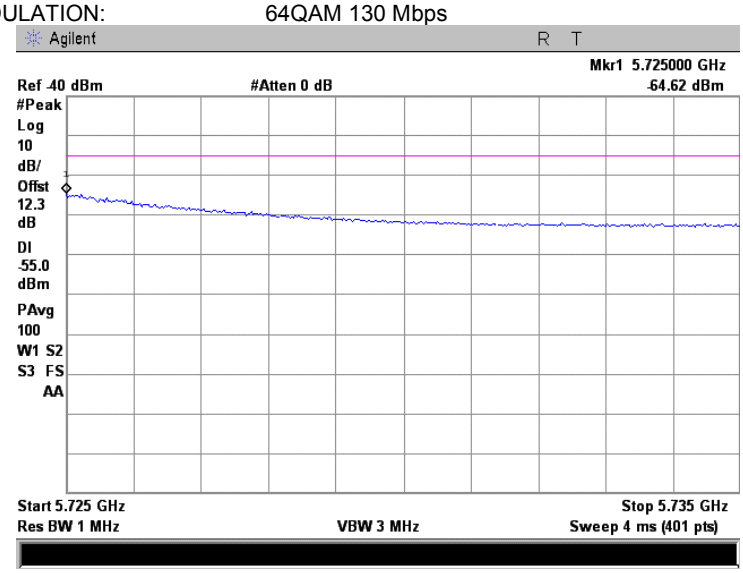
Plot 7.4.37 Conducted spurious emission measurements at the band edges

CARRIER FREQUENCY 5705 MHz
CHANNEL BANDWIDTH 20 MHz
MODULATION: BPSK 13 Mbps



Plot 7.4.38 Conducted spurious emission measurements at the band edges

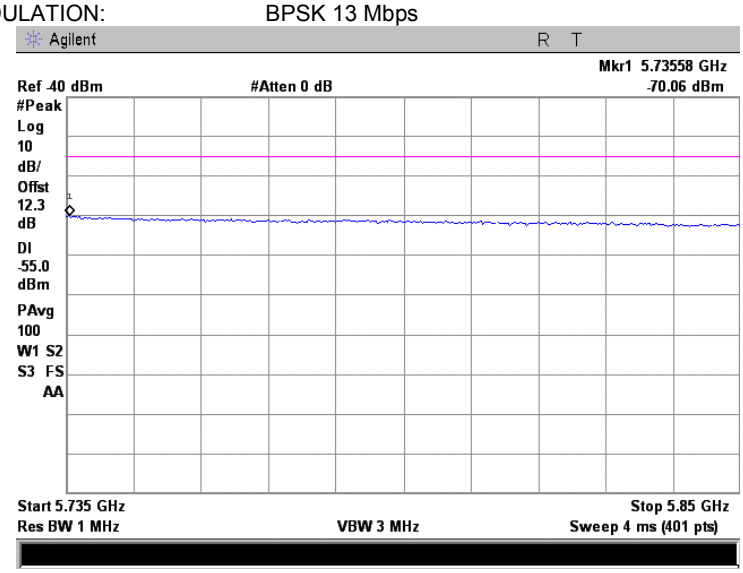
CARRIER FREQUENCY 5705 MHz
CHANNEL BANDWIDTH 20 MHz
MODULATION: 64QAM 130 Mbps



Test specification:	**FCC section 15.407(b), RSS-210 Annex 9, section A9.3 Conducted emissions at band edges**		
Test procedure:	Public notice DA 00-705 / ANSI C63.4, Section 13.1.4		
Test mode:	Compliance	**Verdict:**	PASS
Date:	12/04/2008		
Temperature: 22ºC	**Air Pressure:** 1013 hPa	**Relative Humidity:** 48 %	**Power Supply:** 120 VAC
Remarks: EUT with 28 dBi antenna assembly gain			

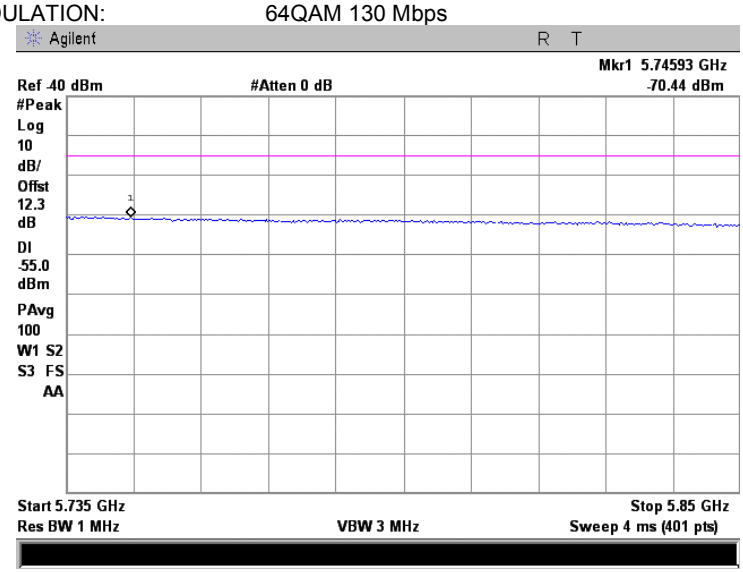
Plot 7.4.39 Conducted spurious emission measurements in the frequency range 5735 – 5850 MHz

CARRIER FREQUENCY 5705 MHz
CHANNEL BANDWIDTH 20 MHz
MODULATION: BPSK 13 Mbps



Plot 7.4.40 Conducted spurious emission measurements in the frequency range 5735 – 5850 MHz

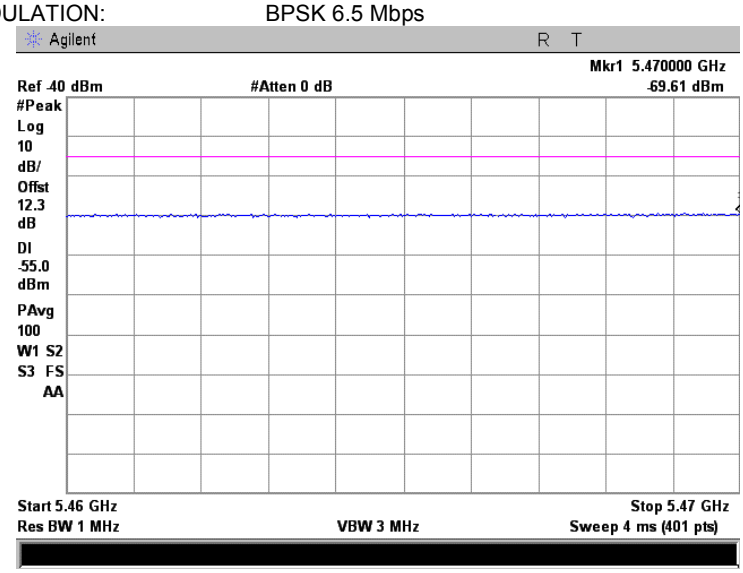
CARRIER FREQUENCY 5705 MHz
CHANNEL BANDWIDTH 20 MHz
MODULATION: 64QAM 130 Mbps



Test specification:	FCC section 15.407(b), RSS-210 Annex 9, section A9.3 Conducted emissions at band edges		
Test procedure:	Public notice DA 00-705 / ANSI C63.4, Section 13.1.4		
Test mode:	Compliance	**Verdict:**	PASS
Date:	12/04/2008		
Temperature: 22ºC	**Air Pressure:** 1013 hPa	**Relative Humidity:** 48 %	**Power Supply:** 120 VAC
Remarks: EUT with 28 dBi antenna assembly gain			

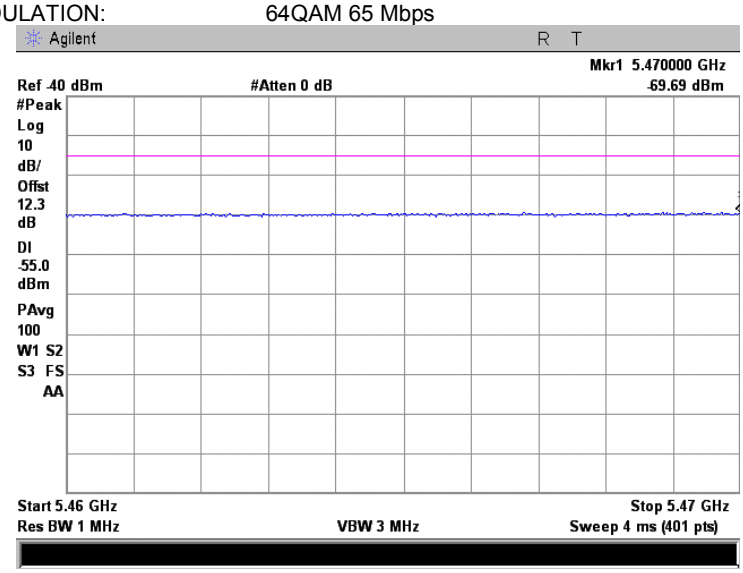
Plot 7.4.41 Conducted spurious emission measurements at the band edges

CARRIER FREQUENCY 5485 MHz
CHANNEL BANDWIDTH 10 MHz
MODULATION: BPSK 6.5 Mbps



Plot 7.4.42 Conducted spurious emission measurements at the band edges

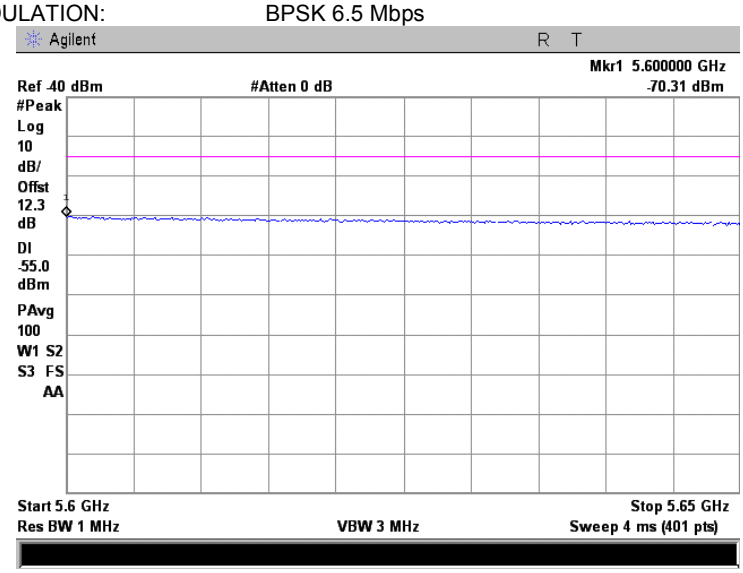
CARRIER FREQUENCY 5485 MHz
CHANNEL BANDWIDTH 10 MHz
MODULATION: 64QAM 65 Mbps



Test specification:	**FCC section 15.407(b), RSS-210 Annex 9, section A9.3 Conducted emissions at band edges**		
Test procedure:	Public notice DA 00-705 / ANSI C63.4, Section 13.1.4		
Test mode:	Compliance	**Verdict:**	PASS
Date:	12/04/2008		
Temperature: 22ºC	**Air Pressure:** 1013 hPa	**Relative Humidity:** 48 %	**Power Supply:** 120 VAC
Remarks: EUT with 28 dBi antenna assembly gain			

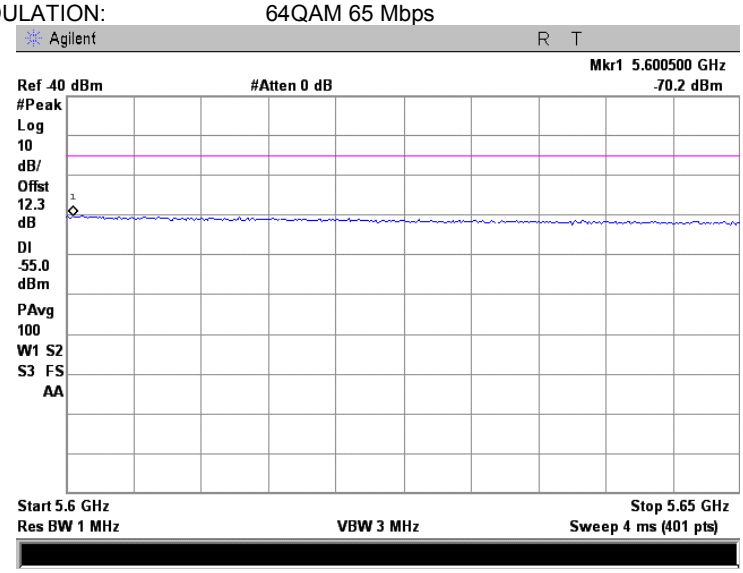
Plot 7.4.43 Conducted spurious emission measurements at the band edges

CARRIER FREQUENCY 5585 MHz
CHANNEL BANDWIDTH 10 MHz
MODULATION: BPSK 6.5 Mbps



Plot 7.4.44 Conducted spurious emission measurements at the band edges

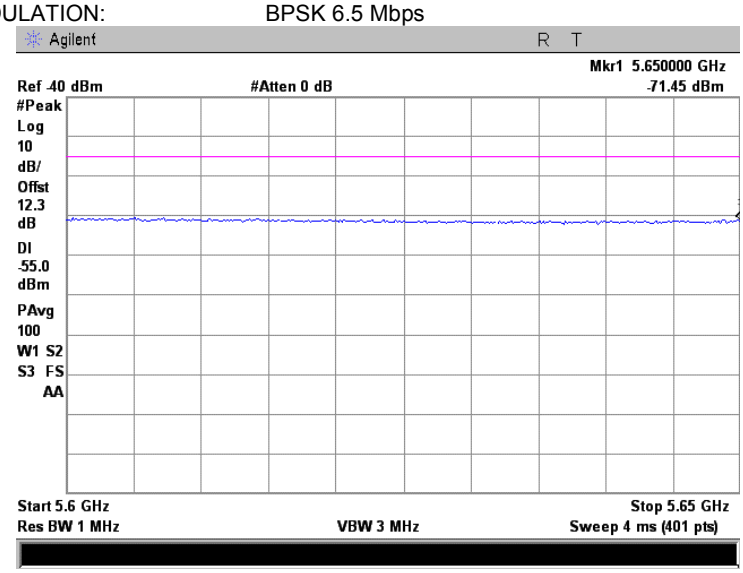
CARRIER FREQUENCY 5585 MHz
CHANNEL BANDWIDTH 10 MHz
MODULATION: 64QAM 65 Mbps



Test specification:	**FCC section 15.407(b), RSS-210 Annex 9, section A9.3 Conducted emissions at band edges**		
Test procedure:	Public notice DA 00-705 / ANSI C63.4, Section 13.1.4		
Test mode:	Compliance	**Verdict:**	PASS
Date:	12/04/2008		
Temperature: 22ºC	**Air Pressure:** 1013 hPa	**Relative Humidity:** 48 %	**Power Supply:** 120 VAC
Remarks: EUT with 28 dBi antenna assembly gain			

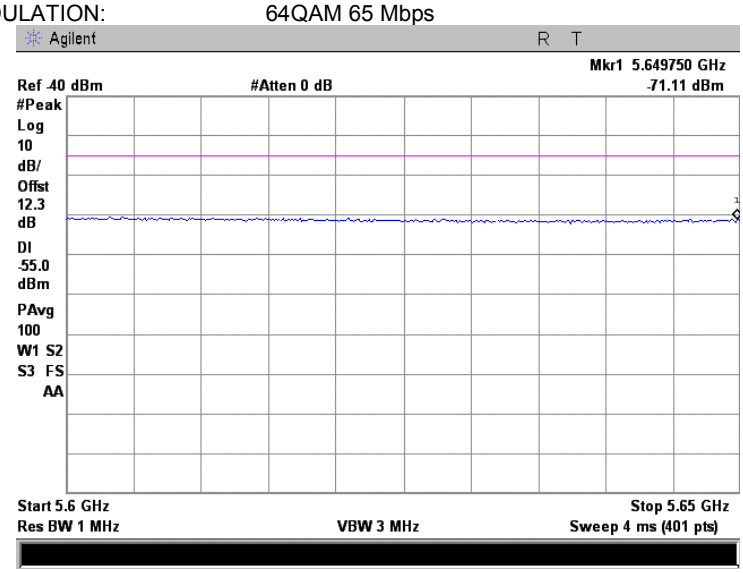
Plot 7.4.45 Conducted spurious emission measurements at the band edges

CARRIER FREQUENCY 5665 MHz
CHANNEL BANDWIDTH 10 MHz
MODULATION: BPSK 6.5 Mbps



Plot 7.4.46 Conducted spurious emission measurements at the band edges

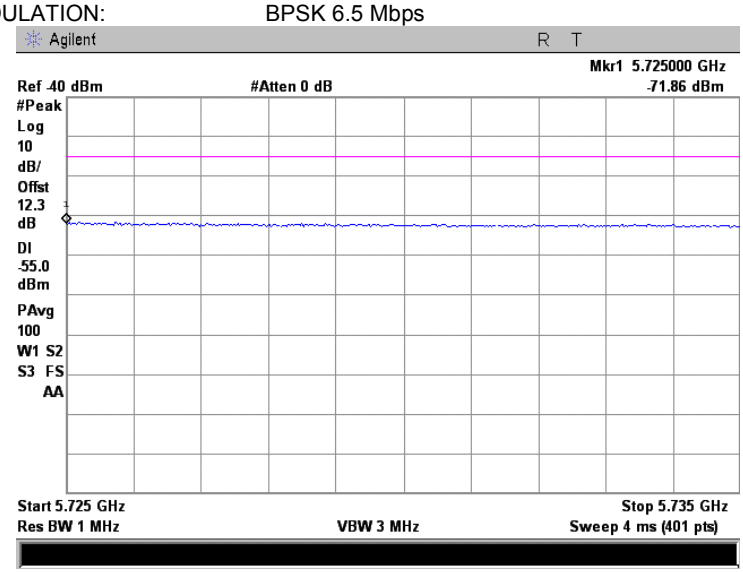
CARRIER FREQUENCY 5665 MHz
CHANNEL BANDWIDTH 10 MHz
MODULATION: 64QAM 65 Mbps



Test specification:	**FCC section 15.407(b), RSS-210 Annex 9, section A9.3 Conducted emissions at band edges**		
Test procedure:	Public notice DA 00-705 / ANSI C63.4, Section 13.1.4		
Test mode:	Compliance	**Verdict:**	PASS
Date:	12/04/2008		
Temperature: 22ºC	**Air Pressure:** 1013 hPa	**Relative Humidity:** 48 %	**Power Supply:** 120 VAC
Remarks: EUT with 28 dBi antenna assembly gain			

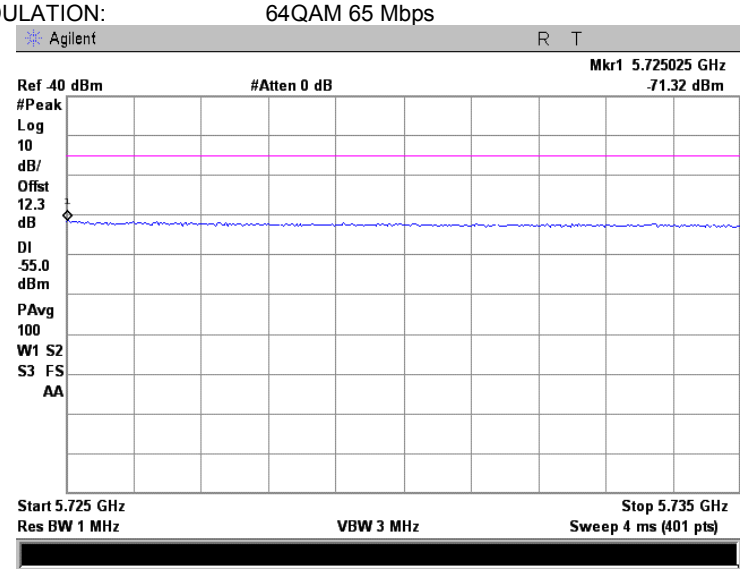
Plot 7.4.47 Conducted spurious emission measurements at the band edges

CARRIER FREQUENCY 5710 MHz
CHANNEL BANDWIDTH 10 MHz
MODULATION: BPSK 6.5 Mbps



Plot 7.4.48 Conducted spurious emission measurements at the band edges

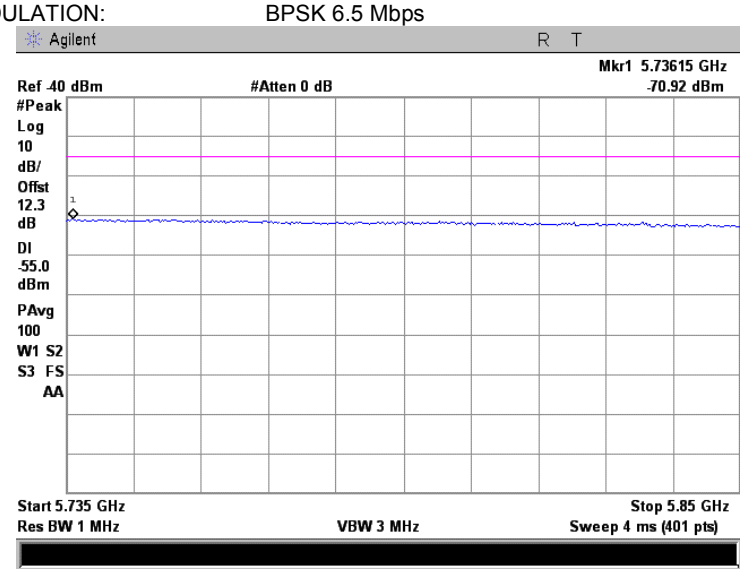
CARRIER FREQUENCY 5710 MHz
CHANNEL BANDWIDTH 10 MHz
MODULATION: 64QAM 65 Mbps



Test specification:	FCC section 15.407(b), RSS-210 Annex 9, section A9.3 Conducted emissions at band edges		
Test procedure:	Public notice DA 00-705 / ANSI C63.4, Section 13.1.4		
Test mode:	Compliance	Verdict:	PASS
Date:	12/04/2008		
Temperature: 22ºC	Air Pressure: 1013 hPa	Relative Humidity: 48 %	Power Supply: 120 VAC
Remarks: EUT with 28 dBi antenna assembly gain			

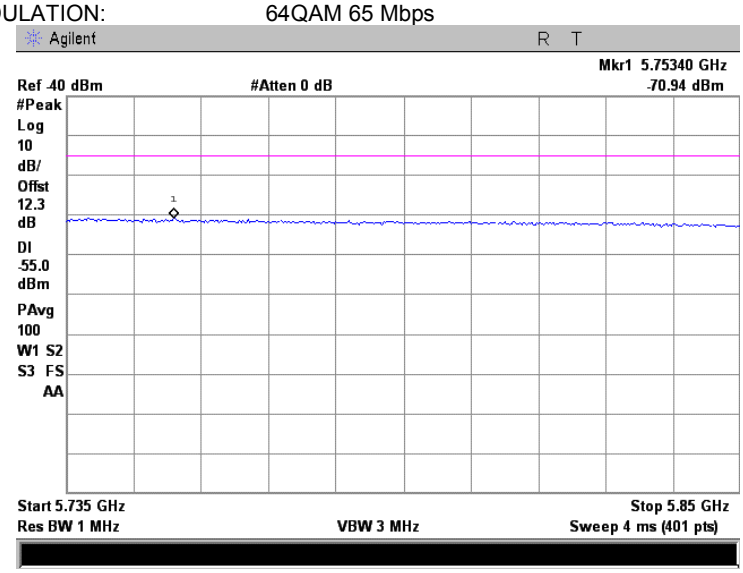
Plot 7.4.49 Conducted spurious emission measurements in the frequency range 5735 – 5850 MHz

CARRIER FREQUENCY 5710 MHz
CHANNEL BANDWIDTH 10 MHz
MODULATION: BPSK 6.5 Mbps



Plot 7.4.50 Conducted spurious emission measurements in the frequency range 5735 – 5850 MHz

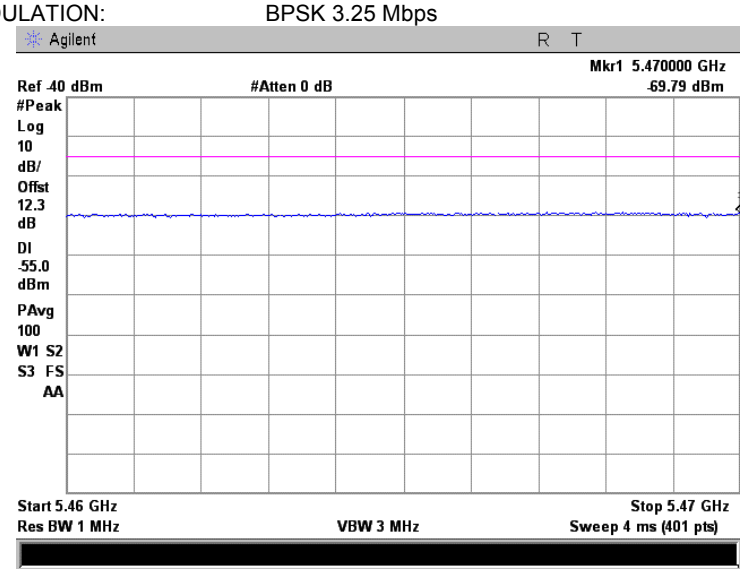
CARRIER FREQUENCY 5710 MHz
CHANNEL BANDWIDTH 10 MHz
MODULATION: 64QAM 65 Mbps



Test specification:	FCC section 15.407(b), RSS-210 Annex 9, section A9.3 Conducted emissions at band edges		
Test procedure:	Public notice DA 00-705 / ANSI C63.4, Section 13.1.4		
Test mode:	Compliance	**Verdict:**	PASS
Date:	12/04/2008		
Temperature: 22ºC	**Air Pressure:** 1013 hPa	**Relative Humidity:** 48 %	**Power Supply:** 120 VAC
Remarks: EUT with 28 dBi antenna assembly gain			

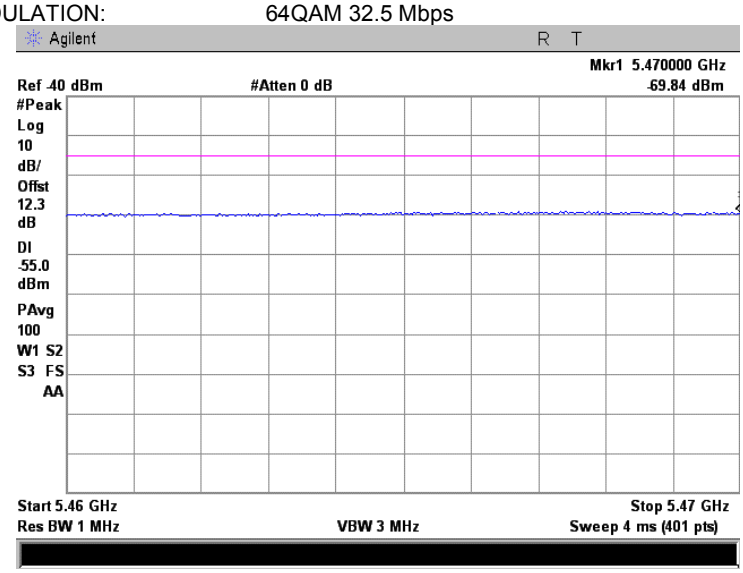
Plot 7.4.51 Conducted spurious emission measurements at the band edges

CARRIER FREQUENCY 5480 MHz
CHANNEL BANDWIDTH 5 MHz
MODULATION: BPSK 3.25 Mbps



Plot 7.4.52 Conducted spurious emission measurements at the band edges

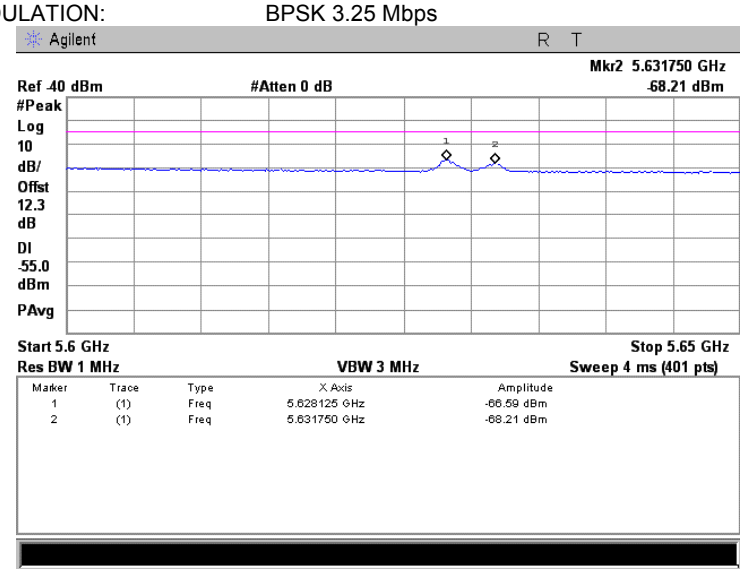
CARRIER FREQUENCY 5480 MHz
CHANNEL BANDWIDTH 5 MHz
MODULATION: 64QAM 32.5 Mbps



Test specification:	**FCC section 15.407(b), RSS-210 Annex 9, section A9.3 Conducted emissions at band edges**		
Test procedure:	Public notice DA 00-705 / ANSI C63.4, Section 13.1.4		
Test mode:	Compliance	**Verdict:**	PASS
Date:	12/04/2008		
Temperature: 22ºC	**Air Pressure:** 1013 hPa	**Relative Humidity:** 48 %	**Power Supply:** 120 VAC
Remarks: EUT with 28 dBi antenna assembly gain			

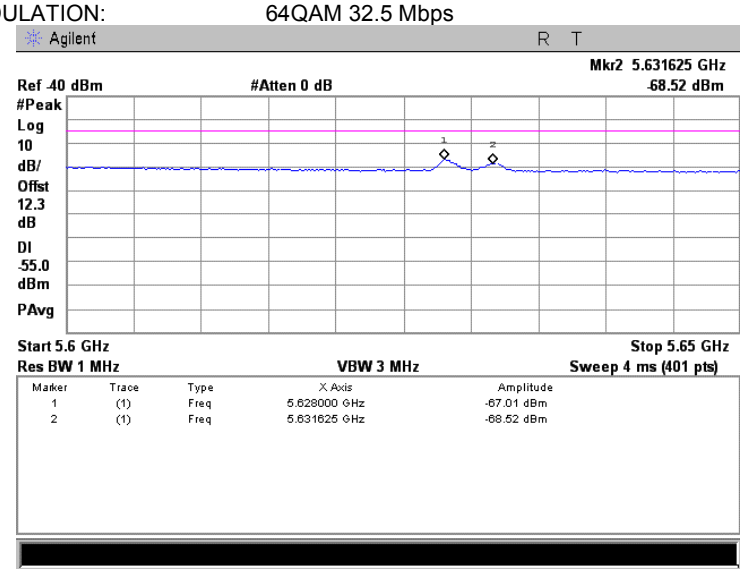
Plot 7.4.53 Conducted spurious emission measurements at the band edges

CARRIER FREQUENCY 5590 MHz
CHANNEL BANDWIDTH 5 MHz
MODULATION: BPSK 3.25 Mbps



Plot 7.4.54 Conducted spurious emission measurements at the band edges

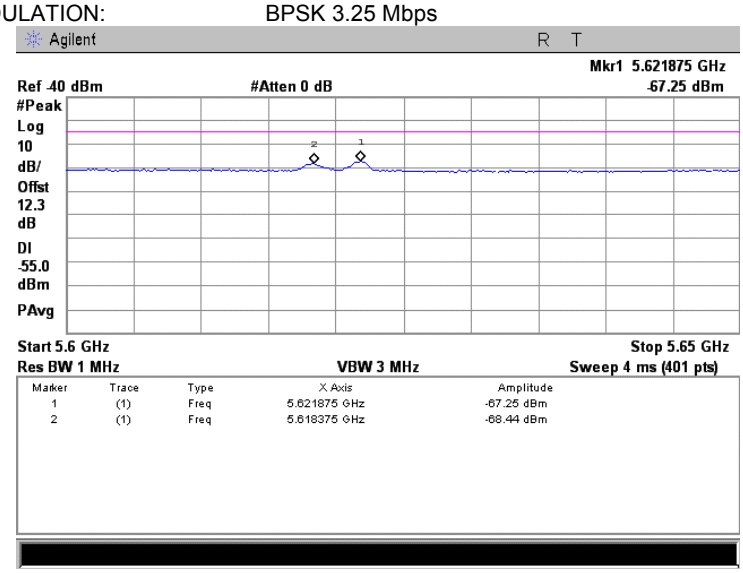
CARRIER FREQUENCY 5590 MHz
CHANNEL BANDWIDTH 5 MHz
MODULATION: 64QAM 32.5 Mbps



Test specification:	**FCC section 15.407(b), RSS-210 Annex 9, section A9.3 Conducted emissions at band edges**		
Test procedure:	Public notice DA 00-705 / ANSI C63.4, Section 13.1.4		
Test mode:	Compliance	**Verdict:**	PASS
Date:	12/04/2008		
Temperature: 22ºC	**Air Pressure:** 1013 hPa	**Relative Humidity:** 48 %	**Power Supply:** 120 VAC
Remarks: EUT with 28 dBi antenna assembly gain			

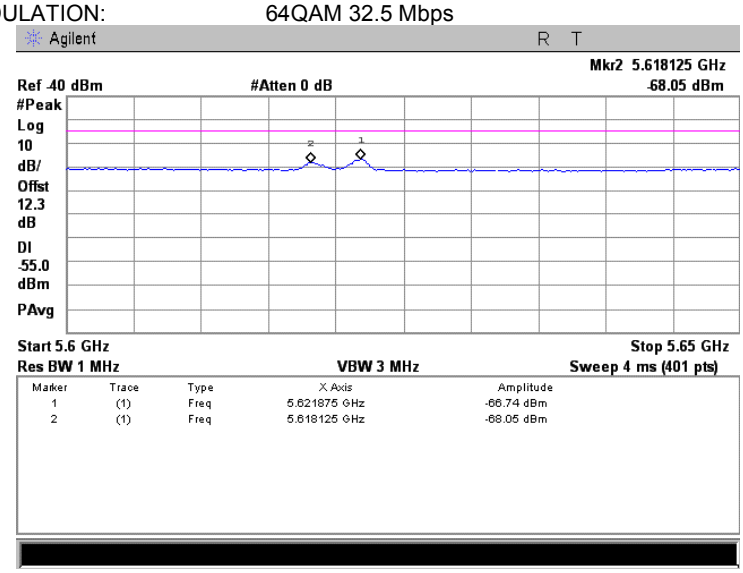
Plot 7.4.55 Conducted spurious emission measurements at the band edges

CARRIER FREQUENCY 5660 MHz
CHANNEL BANDWIDTH 5 MHz
MODULATION: BPSK 3.25 Mbps



Plot 7.4.56 Conducted spurious emission measurements at the band edges

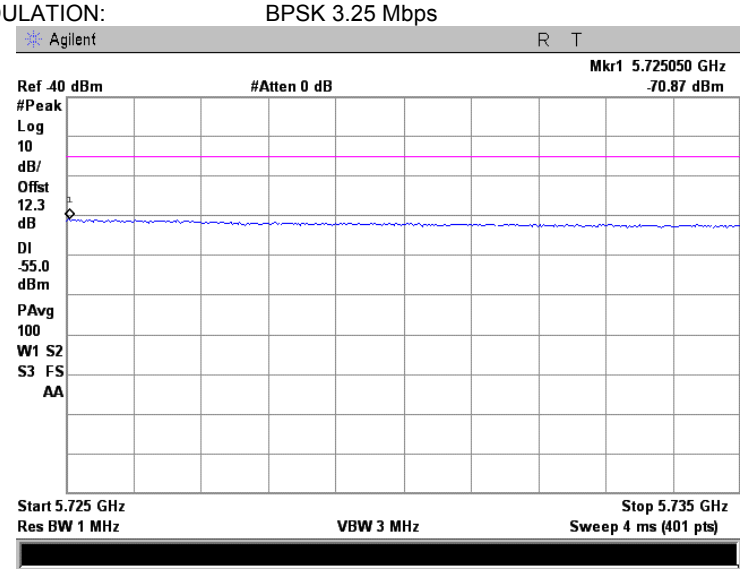
CARRIER FREQUENCY 5660 MHz
CHANNEL BANDWIDTH 5 MHz
MODULATION: 64QAM 32.5 Mbps



Test specification:	**FCC section 15.407(b), RSS-210 Annex 9, section A9.3 Conducted emissions at band edges**		
Test procedure:	Public notice DA 00-705 / ANSI C63.4, Section 13.1.4		
Test mode:	Compliance	**Verdict:**	PASS
Date:	12/04/2008		
Temperature: 22ºC	**Air Pressure:** 1013 hPa	**Relative Humidity:** 48 %	**Power Supply:** 120 VAC
Remarks: EUT with 28 dBi antenna assembly gain			

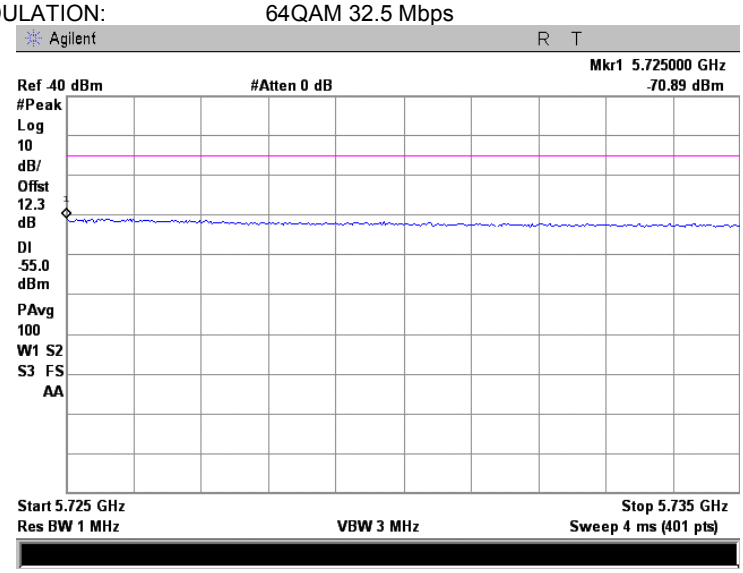
Plot 7.4.57 Conducted spurious emission measurements at the band edges

CARRIER FREQUENCY 5715 MHz
CHANNEL BANDWIDTH 5 MHz
MODULATION: BPSK 3.25 Mbps



Plot 7.4.58 Conducted spurious emission measurements at the band edges

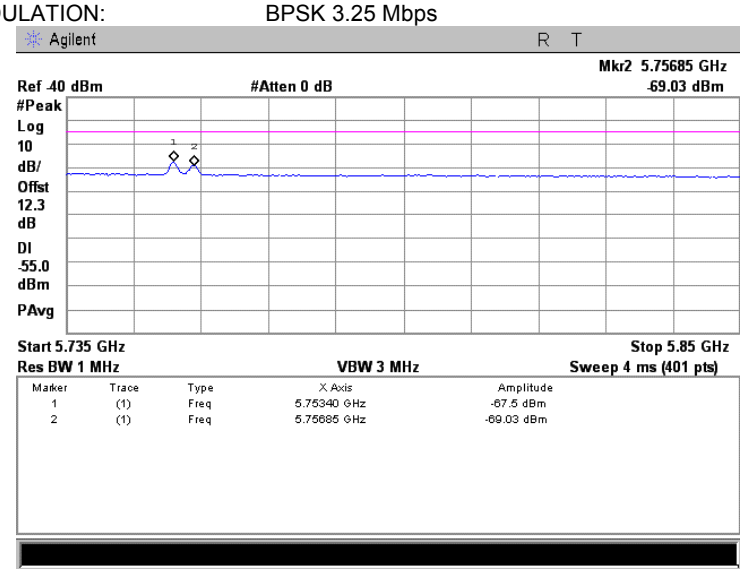
CARRIER FREQUENCY 5715 MHz
CHANNEL BANDWIDTH 5 MHz
MODULATION: 64QAM 32.5 Mbps



Test specification:	FCC section 15.407(b), RSS-210 Annex 9, section A9.3 Conducted emissions at band edges		
Test procedure:	Public notice DA 00-705 / ANSI C63.4, Section 13.1.4		
Test mode:	Compliance	**Verdict:**	PASS
Date:	12/04/2008		
Temperature: 22ºC	**Air Pressure:** 1013 hPa	**Relative Humidity:** 48 %	**Power Supply:** 120 VAC
Remarks: EUT with 28 dBi antenna assembly gain			

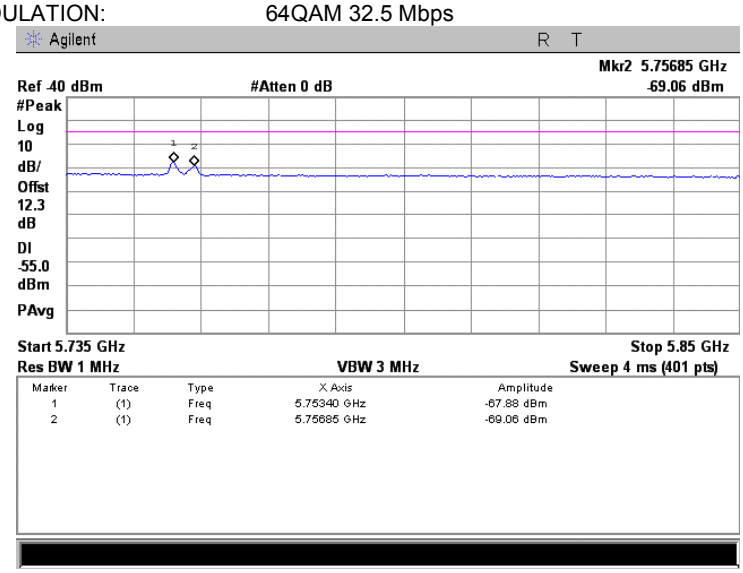
Plot 7.4.59 Conducted spurious emission measurements in the frequency range 5735 – 5850 MHz

CARRIER FREQUENCY 5715 MHz
CHANNEL BANDWIDTH 5 MHz
MODULATION: BPSK 3.25 Mbps



Plot 7.4.60 Conducted spurious emission measurements in the frequency range 5735 – 5850 MHz

CARRIER FREQUENCY 5715 MHz
CHANNEL BANDWIDTH 5 MHz
MODULATION: 64QAM 32.5 Mbps



Test specification:	FCC section 15.407(g), RSS-210 Annex 9, section A9.5, Frequency stability		
Test procedure:	Section 2.1055		
Test mode:	Compliance	Verdict:	PASS
Date:	12/10/2008		
Temperature: 22ºC	Air Pressure: 1013 hPa	Relative Humidity: 60 %	Power Supply: 120 VAC
Remarks:			

7.5 Frequency stability test

7.5.1 General

This test was performed to measure frequency stability of transmitter RF carrier. Specification test limits are given in Table 7.5.1.

Table 7.5.1 Frequency stability limits

Assigned frequency band, MHz	Maximum allowed frequency displacement
5470 - 5725	Manufacturers of U-NII devices are responsible for ensuring frequency stability such that an emission is maintained within the band of operation under all conditions of normal operation as specified in the users manual

7.5.2 Test procedure

7.5.2.1 The EUT was set up as shown in Figure 7.5.1, energized and its proper operation was checked.

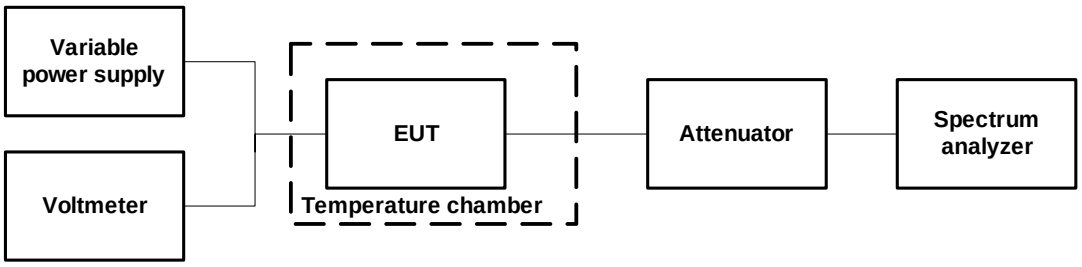
7.5.2.2 The EUT power was turned off. Temperature within test chamber was set to the required one and a period of time sufficient to stabilize all of the oscillator circuit components was allowed.

7.5.2.3 The EUT was powered on and carrier frequency was measured on the modulation slope at –27 dBm level at start up moment and then after 2, 5 and 10 minutes. The EUT was powered off.

7.5.2.4 The above procedure was repeated at the rest of the test temperatures and voltages as provided in Table 7.5.2, Table 7.5.3.

7.5.2.5 Frequency displacement was calculated and compared with the limit as provided in Table 7.5.2, Table 7.5.3.

Figure 7.5.1 Frequency stability test setup



Test specification:	FCC section 15.407(g), RSS-210 Annex 9, section A9.5, Frequency stability		
Test procedure:	Section 2.1055		
Test mode:	Compliance	Verdict:	PASS
Date:	12/10/2008		
Temperature: 22ºC	Air Pressure: 1013 hPa	Relative Humidity: 60 %	Power Supply: 120 VAC
Remarks: EUT with 22.5 dBi antenna assembly gain			

Table 7.5.2 Frequency stability test results

ASSIGNID FREQUENCY BAND: 5470 - 5725 MHz
NOMINAL POWER VOLTAGE: 120 VAC
TEMPERATURE STABILIZATION PERIOD: 20 min
POWER DURING TEMPERATURE TRANSITION: Off
SPECTRUM ANALYZER MODE: Peak 100 Power averaging
RESOLUTION BANDWIDTH: 1000 kHz
VIDEO BANDWIDTH: 3000 kHz
CHANNEL BANDWIDTH / MODULATION: 20 MHZ / 64QAM, 130Mbps (as worst case at normal steady state condition)

Temperature, ºC	Voltage, V	Frequency, MHz				Band edge limit, MHz	Margin, MHz*	Verdict
		Start up	2nd min	5th min	10th min			
Low frequency:								
-35	Nominal	5471.1750	5471.6000	5471.5125	5471.4250	5470	1.1750	Pass
20	Nominal +15%	5470.9000	5471.1375	5471.1500	5471.2250		0.9000	
20	Nominal	5470.9250	5471.2580	5471.3500	5471.4625		0.9250	
20	Nominal -15%	5470.8250	5470.9875	5471.1250	5471.2375		0.8250	
60	Nominal	5472.0000	5472.3500	5472.6500	5472.9875		2.0000	
Mid first frequency:								
-35	Nominal	5598.9875	5598.9000	5599.0000	5595.9625	5600	1.0000	Pass
20	Nominal +15%	5598.3500	5598.1875	5598.1875	5598.1625		1.6500	
20	Nominal	5598.1250	5598.4250	5598.5320	5598.5750		1.4250	
20	Nominal -15%	5598.5000	5598.5375	5598.6000	5598.6500		1.3500	
60	Nominal	5598.1000	5597.9125	5597.8750	5597.7625		1.9000	
Mid second frequency (IC only):								
-35	Nominal	5650.8625	5650.9500	5650.8500	5650.8125	5650	0.8125	Pass
20	Nominal +15%	5651.2250	5651.2625	5651.3750	5651.2875		1.2250	
20	Nominal	5650.9500	5651.1520	5651.2350	5651.2500		0.9500	
20	Nominal -15%	5651.2125	5651.2375	5651.3875	5651.3975		1.2125	
60	Nominal	5651.5250	5651.6375	5651.7500	5651.8500		1.5250	
High frequency:								
-35	Nominal	5723.6000	5723.5875	5723.6625	5723.7500	5725	1.2500	Pass
20	Nominal +15%	5723.4625	5723.0625	5723.1375	5723.1750		1.5375	
20	Nominal	5723.2500	5723.4850	5723.5100	5723.5250		1.4750	
20	Nominal -15%	5723.4500	5723.3000	5723.5250	5723.3375		1.4750	
60	Nominal	5722.7750	5722.6875	5722.7125	5722.6755		2.2250	

* - Margin is an absolute frequency delta between the edge of assigned frequency band and frequency in which the spurious emissions drops below the limit –27 dBm/MHz

Reference numbers of test equipment used

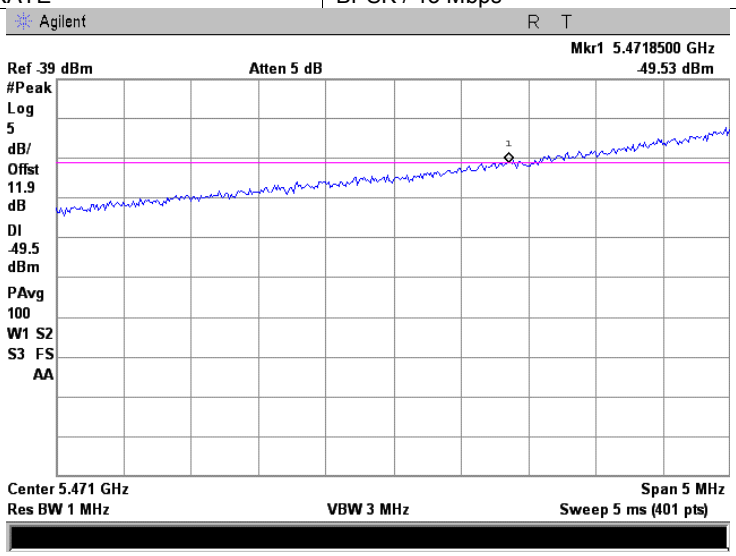
HL 0493	HL 1194	HL 2780	HL 3175	HL 3233	HL 3286		

Full description is given in Appendix A.

Test specification:	**FCC section 15.407(g), RSS-210 Annex 9, section A9.5, Frequency stability**		
Test procedure:	Section 2.1055		
Test mode:	Compliance	**Verdict:**	PASS
Date:	12/10/2008		
Temperature: 22ºC	**Air Pressure:** 1013 hPa	**Relative Humidity:** 60 %	**Power Supply:** 120 VAC
Remarks: EUT with 22.5 dBi antenna assembly gain			

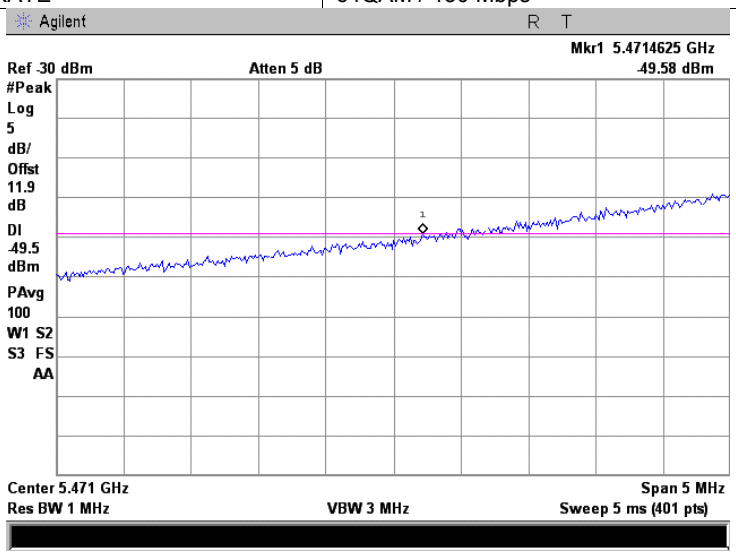
Plot 7.5.1 Band edge emissions at normal conditions at 10th minute

FREQUENCY EDGE	5470
CHANNEL BANDWIDTH	20 MHz
MODULATION / BIT RATE	BPSK / 13 Mbps



Plot 7.5.2. Band edge emissions at normal conditions at 10th minute

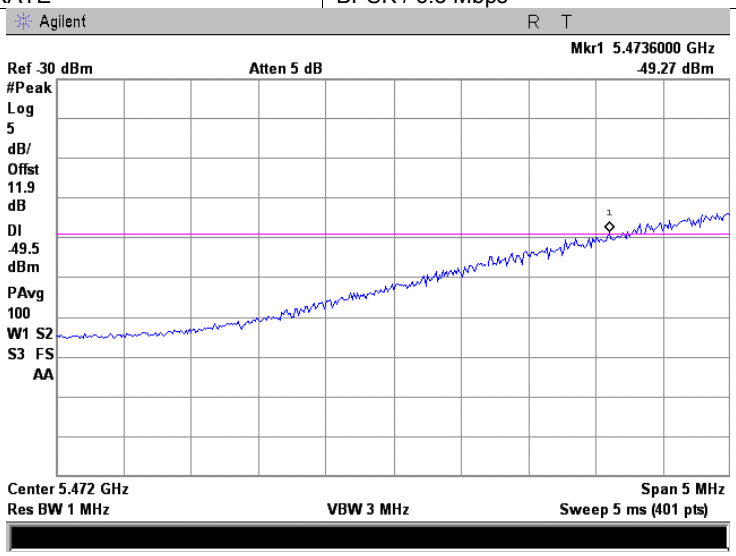
FREQUENCY EDGE	5470
CHANNEL BANDWIDTH	20 MHz
MODULATION / BIT RATE	64QAM / 130 Mbps



Test specification:	**FCC section 15.407(g), RSS-210 Annex 9, section A9.5, Frequency stability**		
Test procedure:	Section 2.1055		
Test mode:	Compliance	**Verdict:**	PASS
Date:	12/10/2008		
Temperature: 22ºC	**Air Pressure:** 1013 hPa	**Relative Humidity:** 60 %	**Power Supply:** 120 VAC
Remarks: EUT with 22.5 dBi antenna assembly gain			

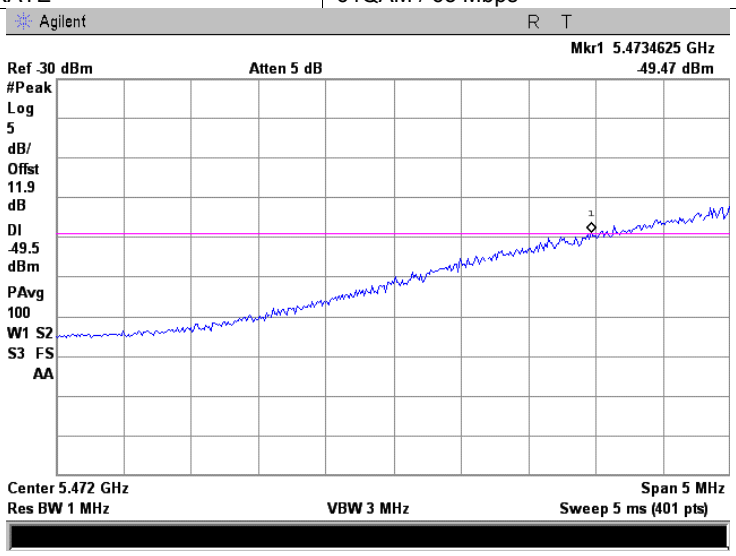
Plot 7.5.3. Band edge emissions at normal conditions at 10th minute

FREQUENCY EDGE	5470
CHANNEL BANDWIDTH	10 MHz
MODULATION / BIT RATE	BPSK / 6.5 Mbps



Plot 7.5.4. Band edge emissions at normal conditions at 10th minute

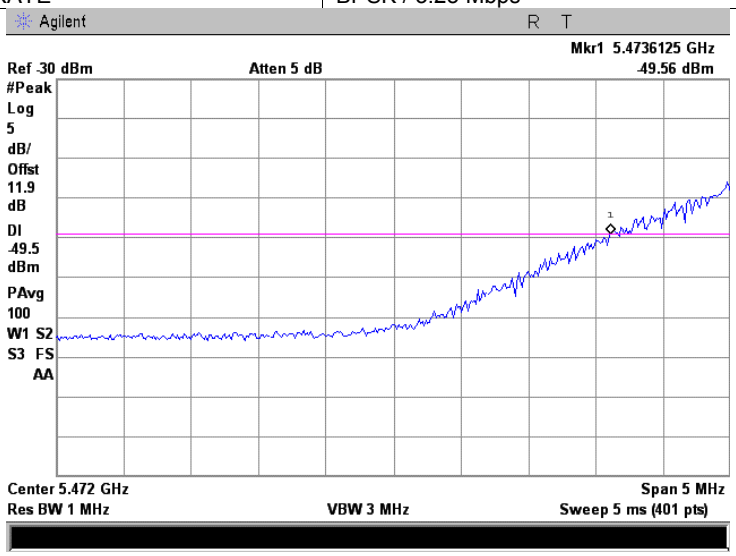
FREQUENCY EDGE	5470
CHANNEL BANDWIDTH	10 MHz
MODULATION / BIT RATE	64QAM / 65 Mbps



Test specification:	FCC section 15.407(g), RSS-210 Annex 9, section A9.5, Frequency stability		
Test procedure:	Section 2.1055		
Test mode:	Compliance	Verdict:	PASS
Date:	12/10/2008		
Temperature: 22ºC	Air Pressure: 1013 hPa	Relative Humidity: 60 %	Power Supply: 120 VAC
Remarks: EUT with 22.5 dBi antenna assembly gain			

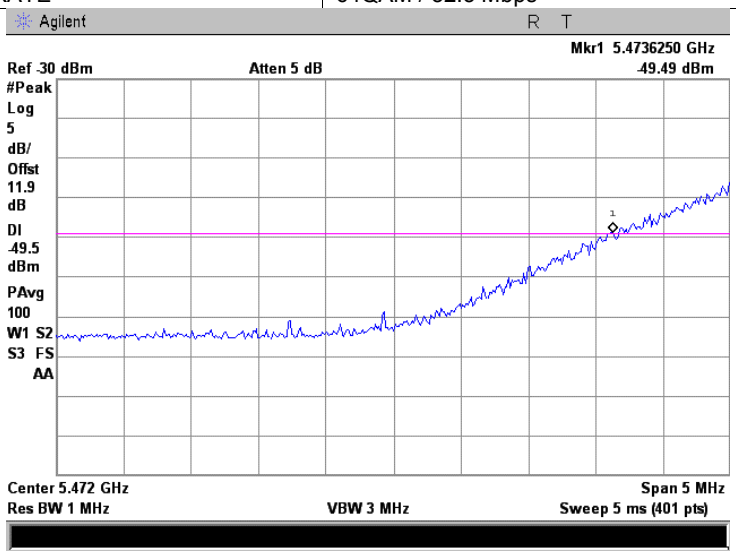
Plot 7.5.5. Band edge emissions at normal conditions at 10th minute

FREQUENCY EDGE	5470
CHANNEL BANDWIDTH	5 MHz
MODULATION / BIT RATE	BPSK / 3.25 Mbps



Plot 7.5.6. Band edge emissions at normal conditions at 10th minute

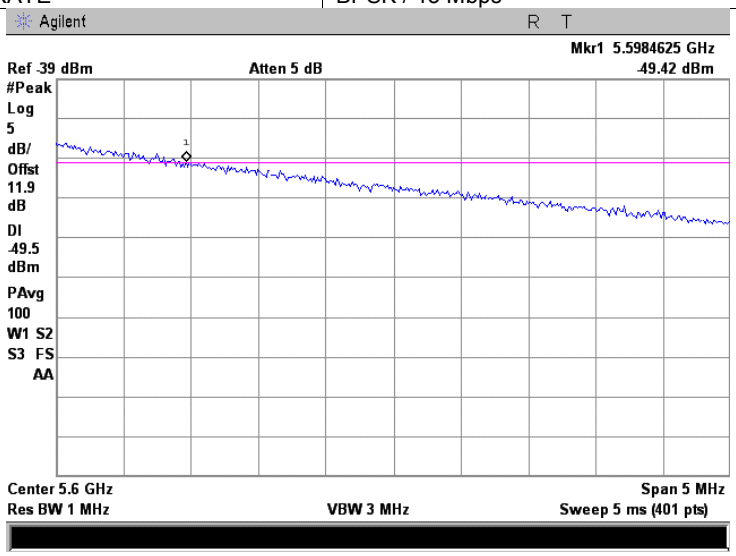
FREQUENCY EDGE	5470
CHANNEL BANDWIDTH	5 MHz
MODULATION / BIT RATE	64QAM / 32.5 Mbps



Test specification:	FCC section 15.407(g), RSS-210 Annex 9, section A9.5, Frequency stability		
Test procedure:	Section 2.1055		
Test mode:	Compliance	Verdict:	PASS
Date:	12/10/2008		
Temperature: 22ºC	Air Pressure: 1013 hPa	Relative Humidity: 60 %	Power Supply: 120 VAC
Remarks: EUT with 22.5 dBi antenna assembly gain			

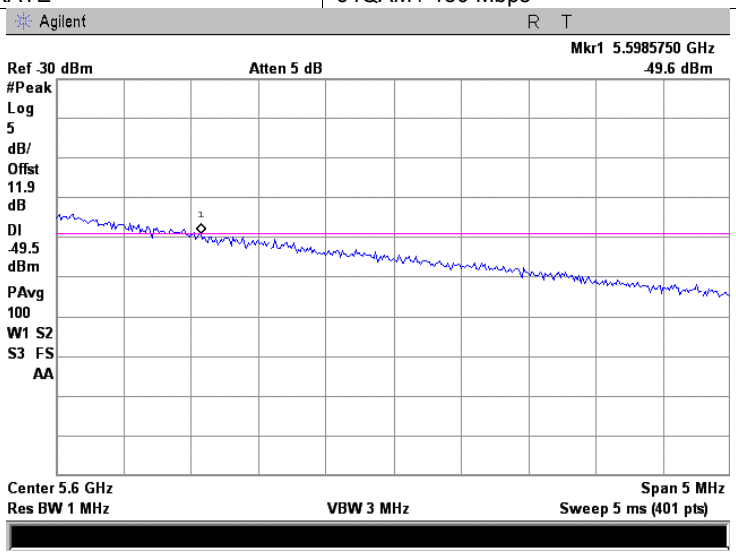
Plot 7.5.7. Band edge emissions at normal conditions at 10th minute

FREQUENCY EDGE	5600
CHANNEL BANDWIDTH	20 MHz
MODULATION / BIT RATE	BPSK / 13 Mbps



Plot 7.5.8. Band edge emissions at normal conditions at 10th minute

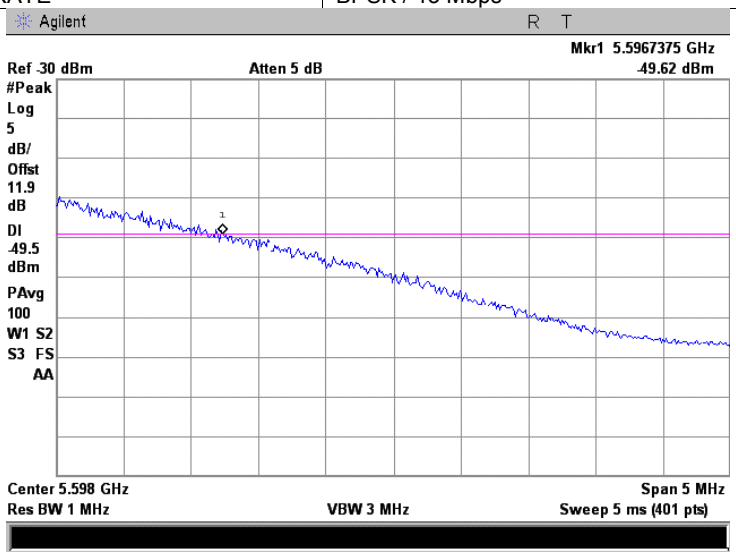
FREQUENCY EDGE	5600
CHANNEL BANDWIDTH	20 MHz
MODULATION / BIT RATE	64QAM / 130 Mbps



Test specification:	FCC section 15.407(g), RSS-210 Annex 9, section A9.5, Frequency stability		
Test procedure:	Section 2.1055		
Test mode:	Compliance	Verdict:	PASS
Date:	12/10/2008		
Temperature: 22ºC	Air Pressure: 1013 hPa	Relative Humidity: 60 %	Power Supply: 120 VAC
Remarks: EUT with 22.5 dBi antenna assembly gain			

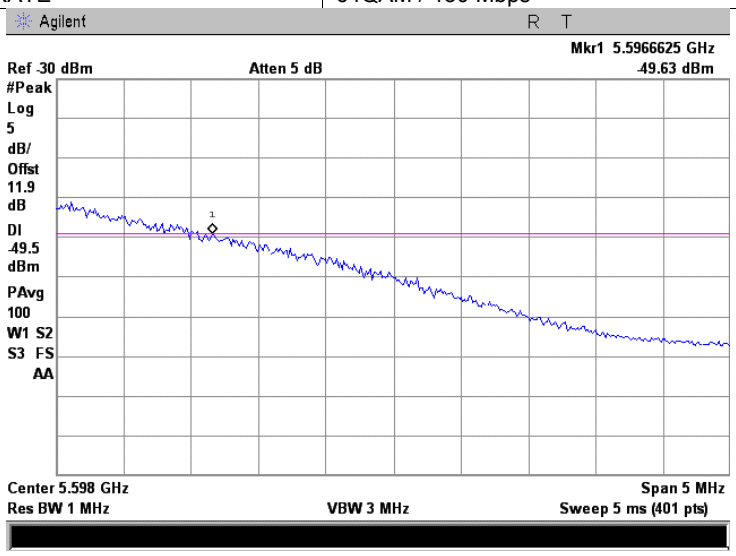
Plot 7.5.9. Band edge emissions at normal conditions at 10th minute

FREQUENCY EDGE	5600
CHANNEL BANDWIDTH	10 MHz
MODULATION / BIT RATE	BPSK / 13 Mbps



Plot 7.5.10. Band edge emissions at normal conditions at 10th minute

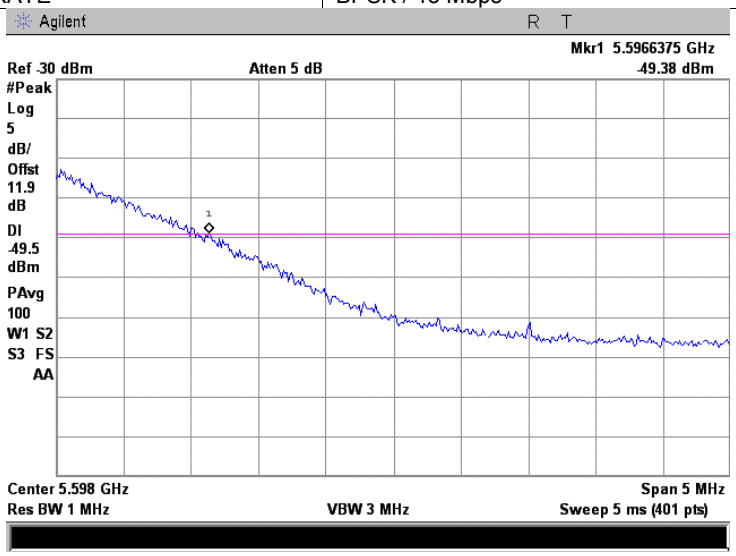
FREQUENCY EDGE	5600
CHANNEL BANDWIDTH	10 MHz
MODULATION / BIT RATE	64QAM / 130 Mbps



Test specification:	FCC section 15.407(g), RSS-210 Annex 9, section A9.5, Frequency stability		
Test procedure:	Section 2.1055		
Test mode:	Compliance	Verdict:	PASS
Date:	12/10/2008		
Temperature: 22ºC	Air Pressure: 1013 hPa	Relative Humidity: 60 %	Power Supply: 120 VAC
Remarks: EUT with 22.5 dBi antenna assembly gain			

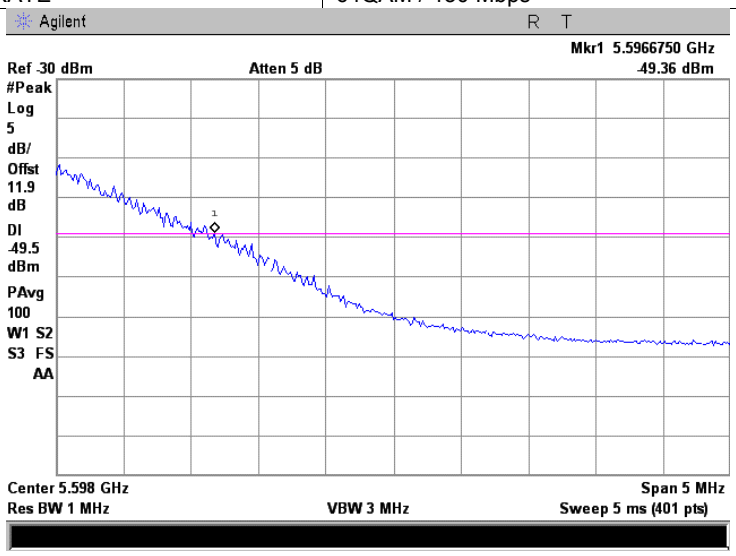
Plot 7.5.11. Band edge emissions at normal conditions at 10th minute

FREQUENCY EDGE	5600
CHANNEL BANDWIDTH	5 MHz
MODULATION / BIT RATE	BPSK / 13 Mbps



Plot 7.5.12. Band edge emissions at normal conditions at 10th minute

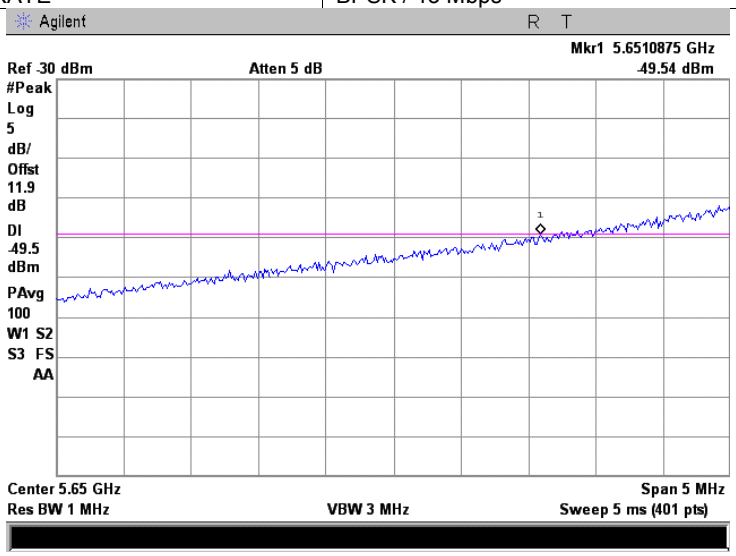
FREQUENCY EDGE	5600
CHANNEL BANDWIDTH	5 MHz
MODULATION / BIT RATE	64QAM / 130 Mbps



Test specification:	**FCC section 15.407(g), RSS-210 Annex 9, section A9.5, Frequency stability**		
Test procedure:	Section 2.1055		
Test mode:	Compliance	**Verdict:**	PASS
Date:	12/10/2008		
Temperature: 22ºC	**Air Pressure:** 1013 hPa	**Relative Humidity:** 60 %	**Power Supply:** 120 VAC
Remarks: EUT with 22.5 dBi antenna assembly gain			

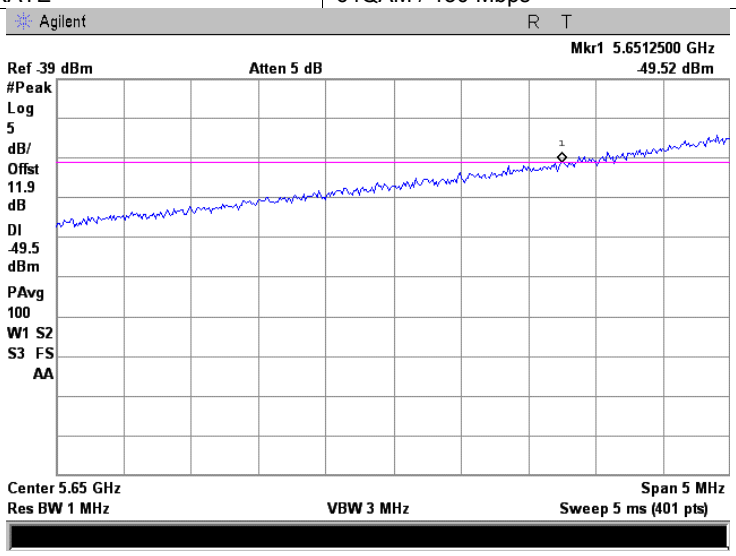
Plot 7.5.13. Band edge emissions at normal conditions at 10th minute

FREQUENCY EDGE	5650
CHANNEL BANDWIDTH	20 MHz
MODULATION / BIT RATE	BPSK / 13 Mbps



Plot 7.5.14. Band edge emissions at normal conditions at 10th minute

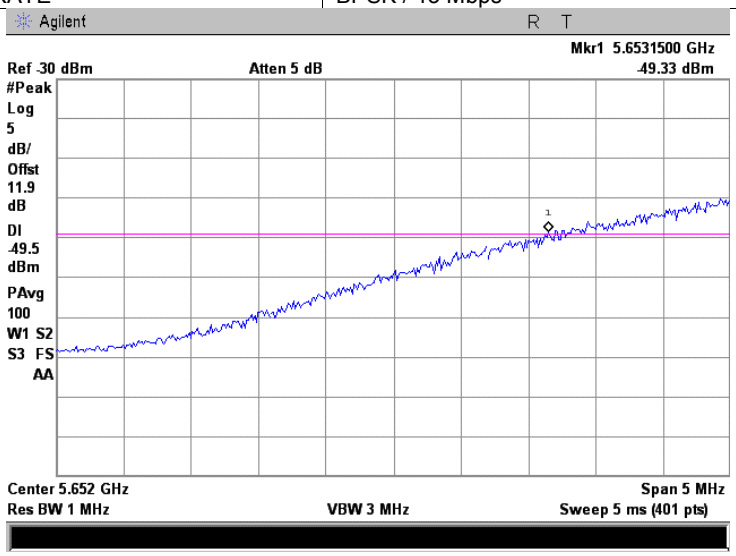
FREQUENCY EDGE	5650
CHANNEL BANDWIDTH	20 MHz
MODULATION / BIT RATE	64QAM / 130 Mbps



Test specification:	**FCC section 15.407(g), RSS-210 Annex 9, section A9.5, Frequency stability**		
Test procedure:	Section 2.1055		
Test mode:	Compliance	**Verdict:**	PASS
Date:	12/10/2008		
Temperature: 22ºC	**Air Pressure:** 1013 hPa	**Relative Humidity:** 60 %	**Power Supply:** 120 VAC
Remarks: EUT with 22.5 dBi antenna assembly gain			

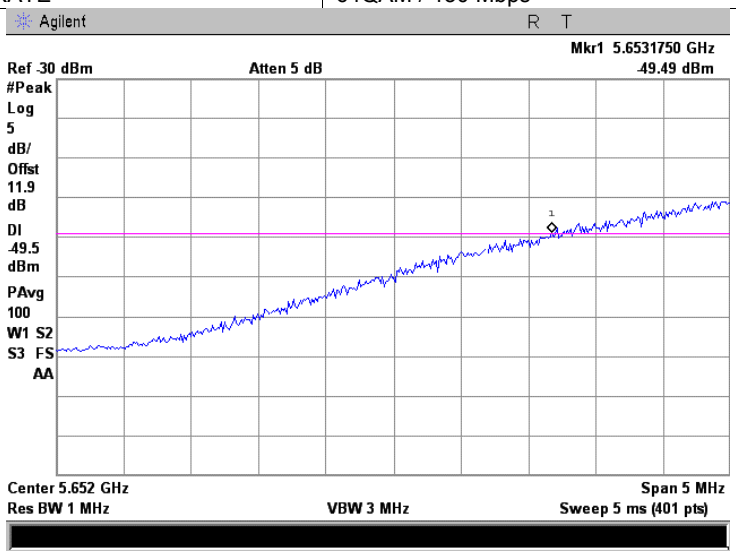
Plot 7.5.15. Band edge emissions at normal conditions at 10th minute

FREQUENCY EDGE	5650
CHANNEL BANDWIDTH	10 MHz
MODULATION / BIT RATE	BPSK / 13 Mbps



Plot 7.5.16. Band edge emissions at normal conditions at 10th minute

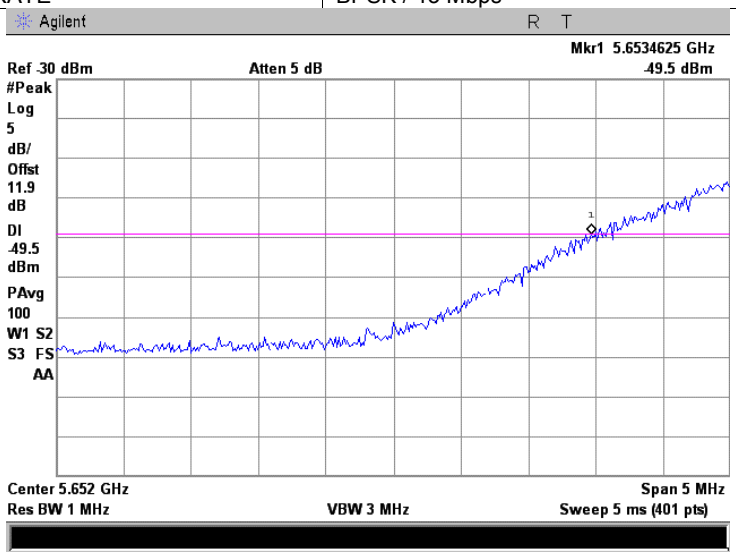
FREQUENCY EDGE	5650
CHANNEL BANDWIDTH	10 MHz
MODULATION / BIT RATE	64QAM / 130 Mbps



Test specification:	**FCC section 15.407(g), RSS-210 Annex 9, section A9.5, Frequency stability**		
Test procedure:	Section 2.1055		
Test mode:	Compliance	**Verdict:**	PASS
Date:	12/10/2008		
Temperature: 22ºC	**Air Pressure:** 1013 hPa	**Relative Humidity:** 60 %	**Power Supply:** 120 VAC
Remarks: EUT with 22.5 dBi antenna assembly gain			

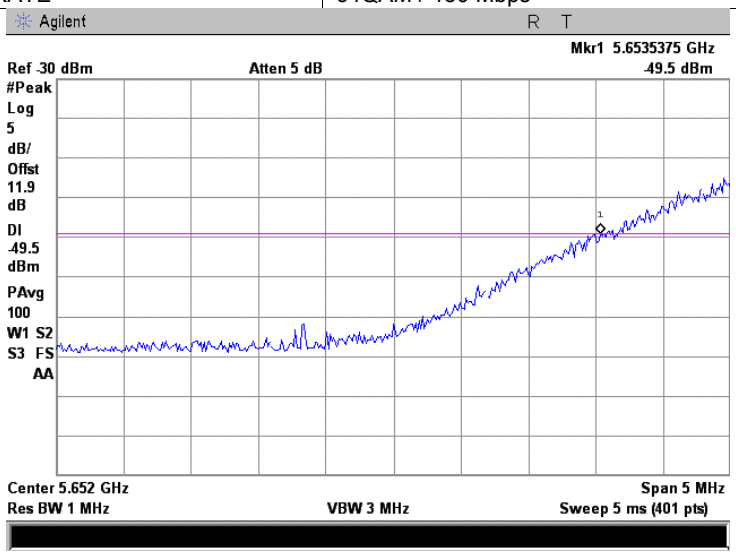
Plot 7.5.17. Band edge emissions at normal conditions at 10th minute

FREQUENCY EDGE	5650
CHANNEL BANDWIDTH	5 MHz
MODULATION / BIT RATE	BPSK / 13 Mbps



Plot 7.5.18. Band edge emissions at normal conditions at 10th minute

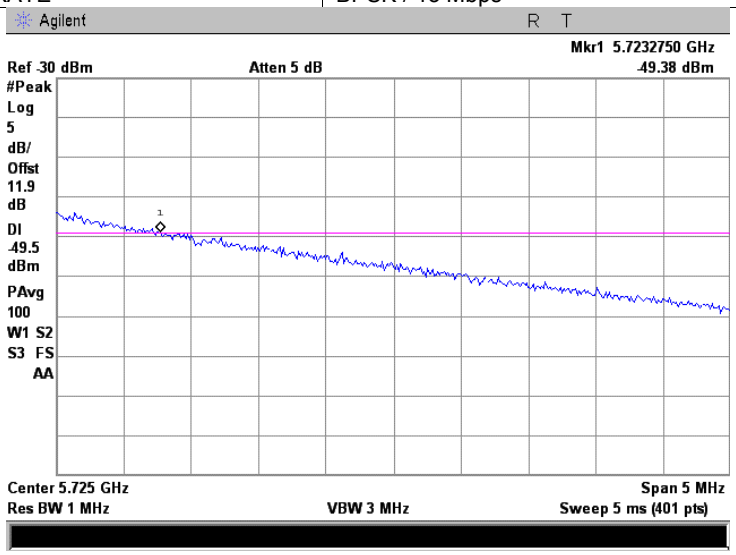
FREQUENCY EDGE	5650
CHANNEL BANDWIDTH	5 MHz
MODULATION / BIT RATE	64QAM / 130 Mbps



Test specification:	FCC section 15.407(g), RSS-210 Annex 9, section A9.5, Frequency stability		
Test procedure:	Section 2.1055		
Test mode:	Compliance	Verdict:	PASS
Date:	12/10/2008		
Temperature: 22ºC	Air Pressure: 1013 hPa	Relative Humidity: 60 %	Power Supply: 120 VAC
Remarks: EUT with 22.5 dBi antenna assembly gain			

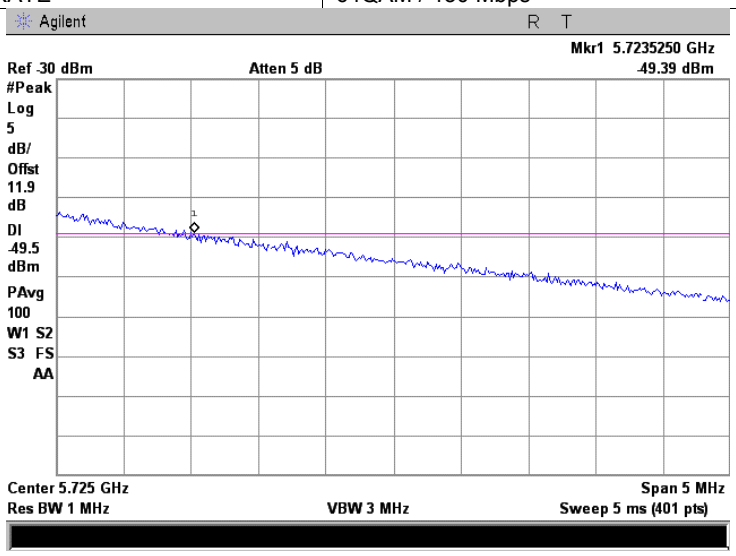
Plot 7.5.19. Band edge emissions at normal conditions at 10th minute

FREQUENCY EDGE	5725
CHANNEL BANDWIDTH	20 MHz
MODULATION / BIT RATE	BPSK / 13 Mbps



Plot 7.5.20. Band edge emissions at normal conditions at 10th minute

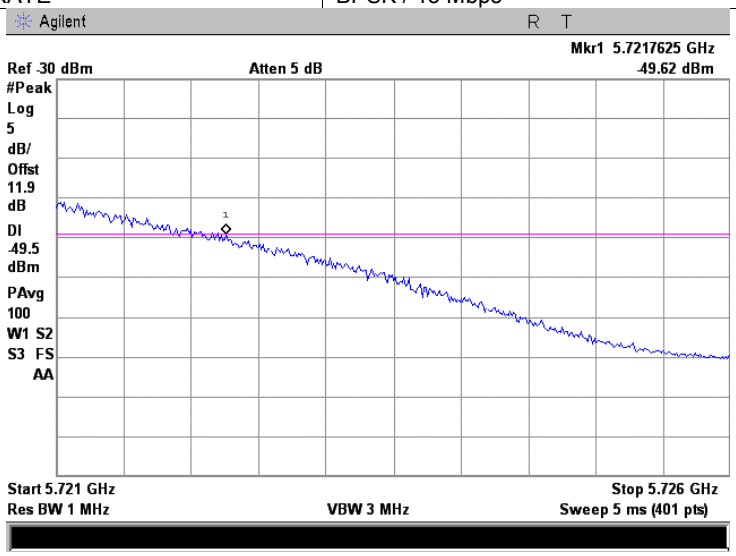
FREQUENCY EDGE	5725
CHANNEL BANDWIDTH	20 MHz
MODULATION / BIT RATE	64QAM / 130 Mbps



Test specification:	FCC section 15.407(g), RSS-210 Annex 9, section A9.5, Frequency stability		
Test procedure:	Section 2.1055		
Test mode:	Compliance	Verdict:	PASS
Date:	12/10/2008		
Temperature: 22ºC	Air Pressure: 1013 hPa	Relative Humidity: 60 %	Power Supply: 120 VAC
Remarks: EUT with 22.5 dBi antenna assembly gain			

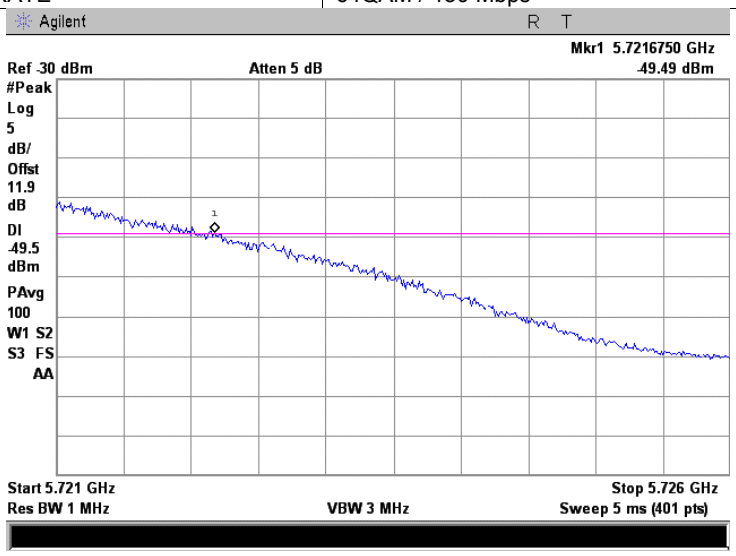
Plot 7.5.21. Band edge emissions at normal conditions at 10th minute

FREQUENCY EDGE	5725
CHANNEL BANDWIDTH	10 MHz
MODULATION / BIT RATE	BPSK / 13 Mbps



Plot 7.5.22. Band edge emissions at normal conditions at 10th minute

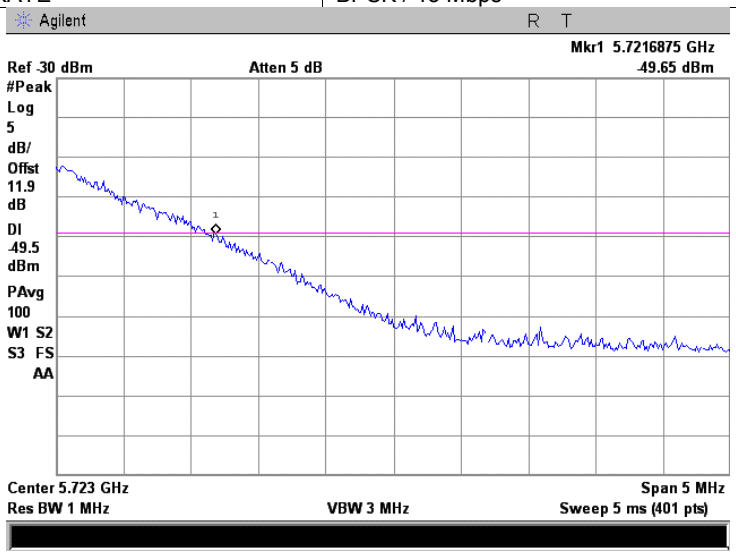
FREQUENCY EDGE	5725
CHANNEL BANDWIDTH	10 MHz
MODULATION / BIT RATE	64QAM / 130 Mbps



Test specification:	FCC section 15.407(g), RSS-210 Annex 9, section A9.5, Frequency stability		
Test procedure:	Section 2.1055		
Test mode:	Compliance	Verdict:	PASS
Date:	12/10/2008		
Temperature: 22ºC	Air Pressure: 1013 hPa	Relative Humidity: 60 %	Power Supply: 120 VAC
Remarks: EUT with 22.5 dBi antenna assembly gain			

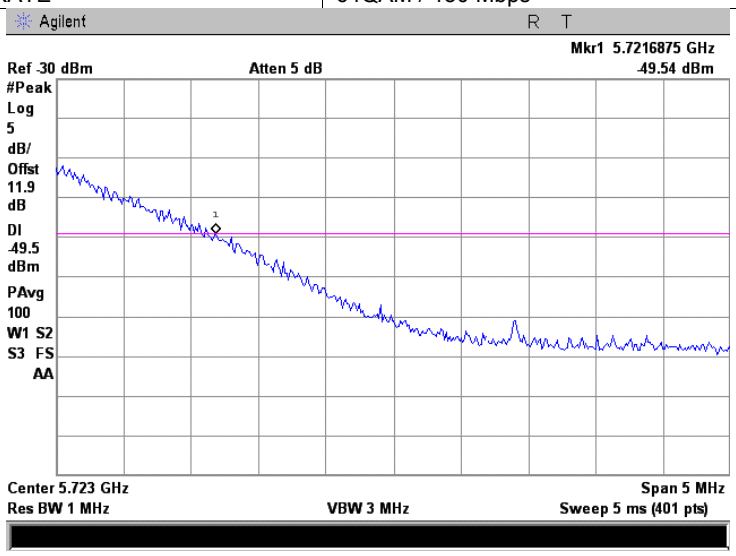
Plot 7.5.23. Band edge emissions at normal conditions at 10th minute

FREQUENCY EDGE	5725
CHANNEL BANDWIDTH	5 MHz
MODULATION / BIT RATE	BPSK / 13 Mbps



Plot 7.5.24. Band edge emissions at normal conditions at 10th minute

FREQUENCY EDGE	5725
CHANNEL BANDWIDTH	5 MHz
MODULATION / BIT RATE	64QAM / 130 Mbps



Test specification:	**FCC section 15.407(g), RSS-210 Annex 9, section A9.5, Frequency stability**		
Test procedure:	Section 2.1055		
Test mode:	Compliance	**Verdict:**	PASS
Date:	12/10/2008		
Temperature: 22ºC	**Air Pressure:** 1013 hPa	**Relative Humidity:** 60 %	**Power Supply:** 120 VAC
Remarks: EUT with 28 dBi antenna assembly gain			

Table 7.5.3 Frequency stability test results

ASSIGNID FREQUENCY BAND: 5470 - 5725 MHz
NOMINAL POWER VOLTAGE: 120 VAC
TEMPERATURE STABILIZATION PERIOD: 20 min
POWER DURING TEMPERATURE TRANSITION: Off
SPECTRUM ANALYZER MODE: Peak 100 Power averaging
RESOLUTION BANDWIDTH: 1000 kHz
VIDEO BANDWIDTH: 3000 kHz
CHANNEL BANDWIDTH / MODULATION: 20 MHZ / 64QAM, 130Mbps (as worst case at normal steady state condition)

Temperature ºC	Voltage, V	Frequency, MHz				Band edge limit, MHz	Margin, MHz	Verdict
		Start up	2nd min	5th min	10th min			
Low frequency:								
-35	Nominal	5472.2820	5471.7170	5471.8070	5471.8020	5470	1.7170	Pass
20	Nominal +15%	5472.0670	5472.0420	5472.0620	5472.0720		2.0420	
20	Nominal	5471.9625	5472.2500	5472.2000	5471.9375		1.9375	
20	Nominal -15%	5471.9570	5472.1170	5472.0570	5472.0920		1.9570	
60	Nominal	5472.6170	5472.8870	5473.0420	5473.1920		2.6170	
Mid frequency:								
-35	Nominal	5598.8670	5598.8370	5598.8760	5598.9070	5600	1.0930	Pass
20	Nominal +15%	5598.2720	5598.1670	5598.1570	5598.1670		1.7280	
20	Nominal	5598.6820	5598.6720	5598.5320	5598.5125		1.3180	
20	Nominal -15%	5598.4920	5598.4170	5598.3270	5598.4420		1.5080	
60	Nominal	5598.4470	5598.2670	5598.1470	5598.0770		1.5530	
Mid frequency:								
-35	Nominal	5651.1120	5651.1570	5651.1370	5651.2120	5650	1.1120	Pass
20	Nominal +15%	5651.1672	5651.7320	5651.7920	5651.7720		1.1672	
20	Nominal	5651.4370	5651.5270	5651.5920	5651.5375		1.4370	
20	Nominal -15%	5651.4920	5651.5520	5651.5770	5651.5720		1.4920	
60	Nominal	5651.8070	5651.9070	5652.0120	5652.0370		1.8070	
High frequency:								
-35	Nominal	5723.8070	5723.6700	5723.7120	5723.7270	5725	1.1930	Pass
20	Nominal +15%	5723.1020	5723.1470	5723.0570	5723.0770		1.8530	
20	Nominal	5723.0770	5723.1820	5723.2670	5723.2625		1.7330	
20	Nominal -15%	5723.1320	5723.0220	5723.0420	5723.0620		1.8680	
60	Nominal	5722.6670	5722.6070	5722.6520	5722.5950		2.3330	

* - Margin is an absolute frequency delta between the edge of assigned frequency band and frequency in which the spurious emissions drops below the limit –27 dBm/MHz

Reference numbers of test equipment used

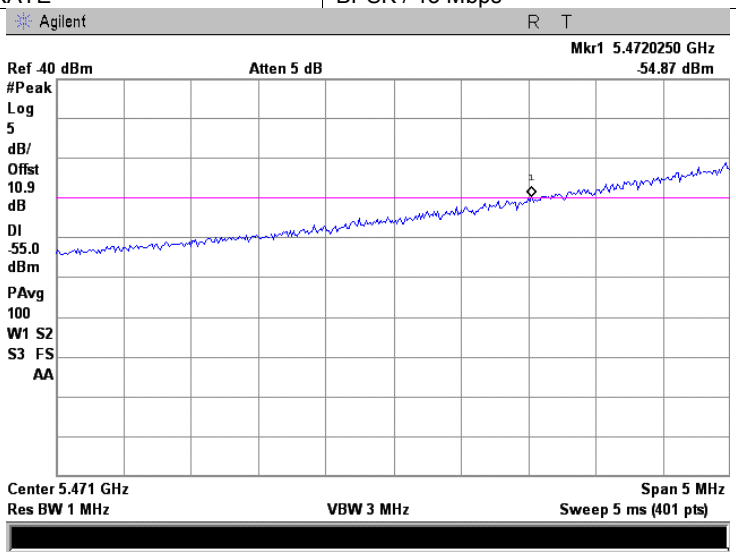
HL 0493	HL 1194	HL 2780	HL 3175	HL 3233	HL 3286		

Full description is given in Appendix A.

Test specification:	**FCC section 15.407(g), RSS-210 Annex 9, section A9.5, Frequency stability**		
Test procedure:	Section 2.1055		
Test mode:	Compliance	**Verdict:**	PASS
Date:	12/10/2008		
Temperature: 22ºC	**Air Pressure:** 1013 hPa	**Relative Humidity:** 60 %	**Power Supply:** 120 VAC
Remarks: EUT with 28 dBi antenna assembly gain			

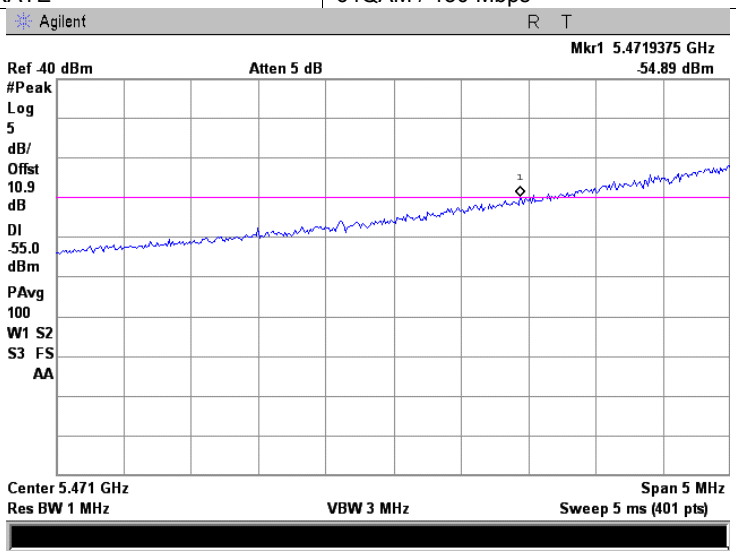
Plot 7.5.25 Band edge emissions at normal conditions at 10th minute

FREQUENCY EDGE	5470
CHANNEL BANDWIDTH	20 MHz
MODULATION / BIT RATE	BPSK / 13 Mbps



Plot 7.5.26. Band edge emissions at normal conditions at 10th minute

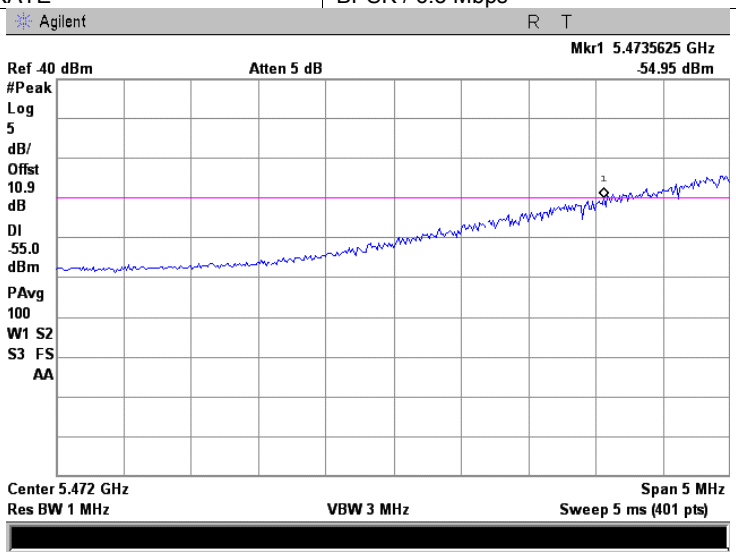
FREQUENCY EDGE	5470
CHANNEL BANDWIDTH	20 MHz
MODULATION / BIT RATE	64QAM / 130 Mbps



Test specification:	FCC section 15.407(g), RSS-210 Annex 9, section A9.5, Frequency stability		
Test procedure:	Section 2.1055		
Test mode:	Compliance	Verdict:	PASS
Date:	12/10/2008		
Temperature: 22ºC	Air Pressure: 1013 hPa	Relative Humidity: 60 %	Power Supply: 120 VAC
Remarks: EUT with 28 dBi antenna assembly gain			

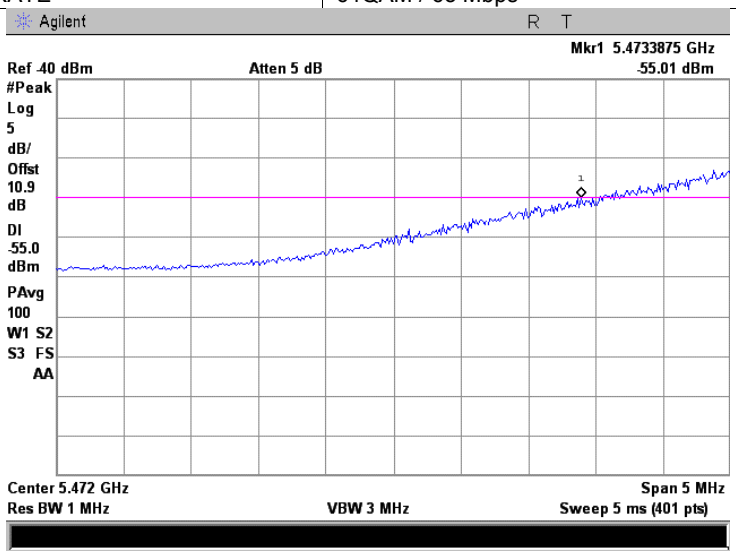
Plot 7.5.27. Band edge emissions at normal conditions at 10th minute

FREQUENCY EDGE	5470
CHANNEL BANDWIDTH	10 MHz
MODULATION / BIT RATE	BPSK / 6.5 Mbps



Plot 7.5.28. Band edge emissions at normal conditions at 10th minute

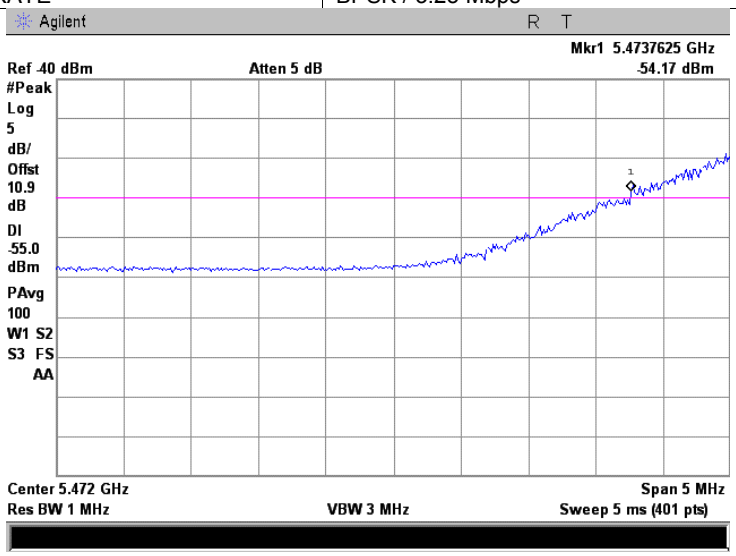
FREQUENCY EDGE	5470
CHANNEL BANDWIDTH	10 MHz
MODULATION / BIT RATE	64QAM / 65 Mbps



Test specification:	FCC section 15.407(g), RSS-210 Annex 9, section A9.5, Frequency stability		
Test procedure:	Section 2.1055		
Test mode:	Compliance	Verdict:	PASS
Date:	12/10/2008		
Temperature: 22ºC	Air Pressure: 1013 hPa	Relative Humidity: 60 %	Power Supply: 120 VAC
Remarks: EUT with 28 dBi antenna assembly gain			

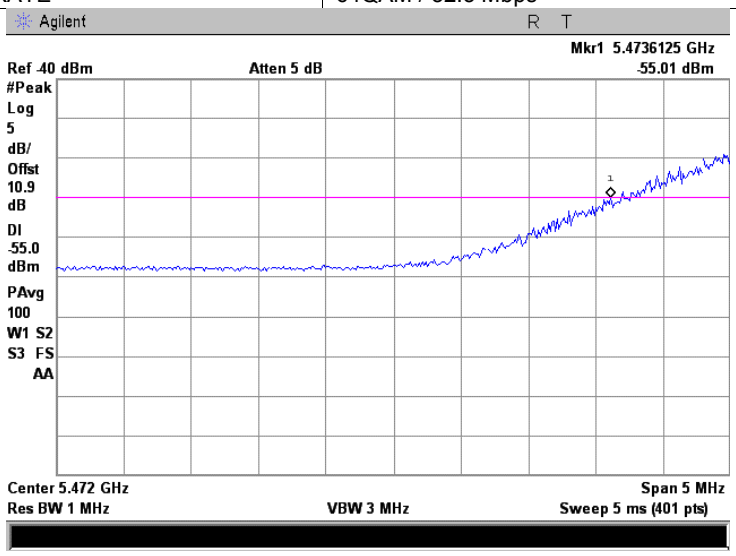
Plot 7.5.29. Band edge emissions at normal conditions at 10th minute

FREQUENCY EDGE	5470
CHANNEL BANDWIDTH	5 MHz
MODULATION / BIT RATE	BPSK / 3.25 Mbps



Plot 7.5.30. Band edge emissions at normal conditions at 10th minute

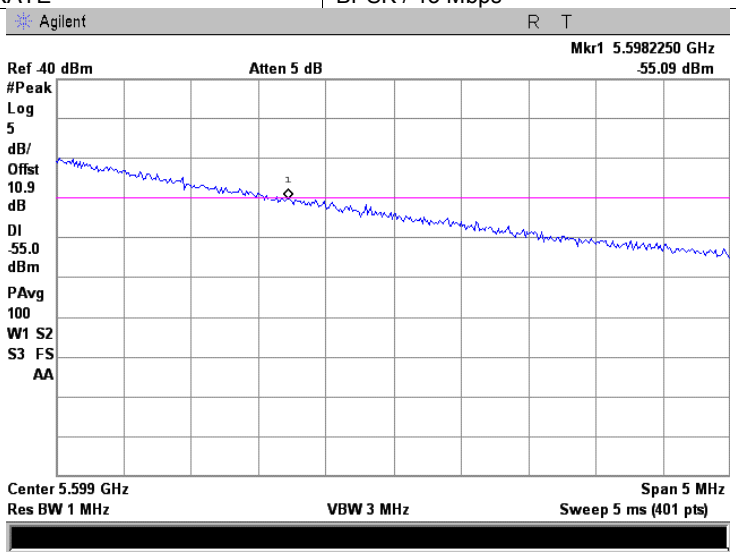
FREQUENCY EDGE	5470
CHANNEL BANDWIDTH	5 MHz
MODULATION / BIT RATE	64QAM / 32.5 Mbps



Test specification:	**FCC section 15.407(g), RSS-210 Annex 9, section A9.5, Frequency stability**		
Test procedure:	Section 2.1055		
Test mode:	Compliance	**Verdict:**	PASS
Date:	12/10/2008		
Temperature: 22ºC	**Air Pressure:** 1013 hPa	**Relative Humidity:** 60 %	**Power Supply:** 120 VAC
Remarks: EUT with 28 dBi antenna assembly gain			

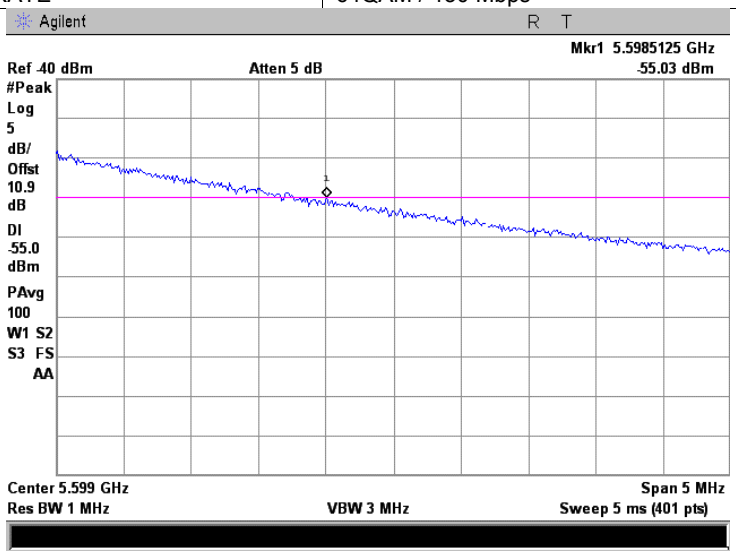
Plot 7.5.31. Band edge emissions at normal conditions at at 10th minute

FREQUENCY EDGE	5600
CHANNEL BANDWIDTH	20 MHz
MODULATION / BIT RATE	BPSK / 13 Mbps



Plot 7.5.32. Band edge emissions at normal conditions at 10th minute

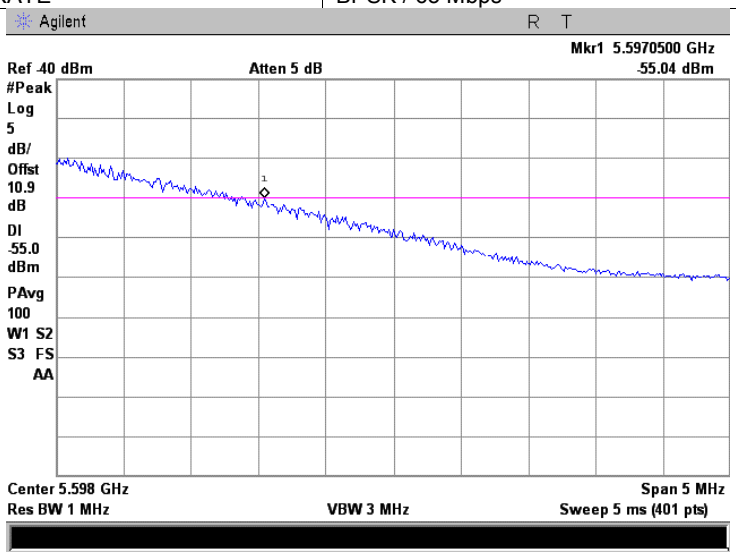
FREQUENCY EDGE	5600
CHANNEL BANDWIDTH	20 MHz
MODULATION / BIT RATE	64QAM / 130 Mbps



Test specification:	FCC section 15.407(g), RSS-210 Annex 9, section A9.5, Frequency stability		
Test procedure:	Section 2.1055		
Test mode:	Compliance	Verdict:	PASS
Date:	12/10/2008		
Temperature: 22ºC	Air Pressure: 1013 hPa	Relative Humidity: 60 %	Power Supply: 120 VAC
Remarks: EUT with 28 dBi antenna assembly gain			

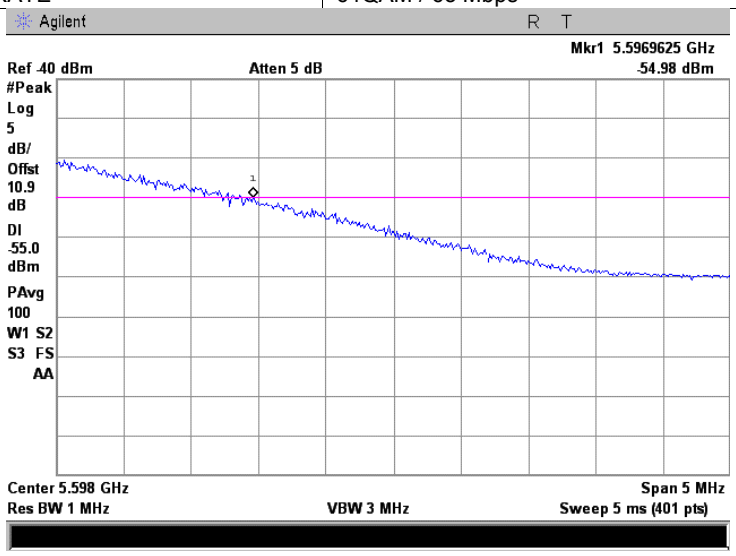
Plot 7.5.33. Band edge emissions at normal conditions at 10th minute

FREQUENCY EDGE	5600
CHANNEL BANDWIDTH	10 MHz
MODULATION / BIT RATE	BPSK / 65 Mbps



Plot 7.5.34. Band edge emissions at normal conditions at 10th minute

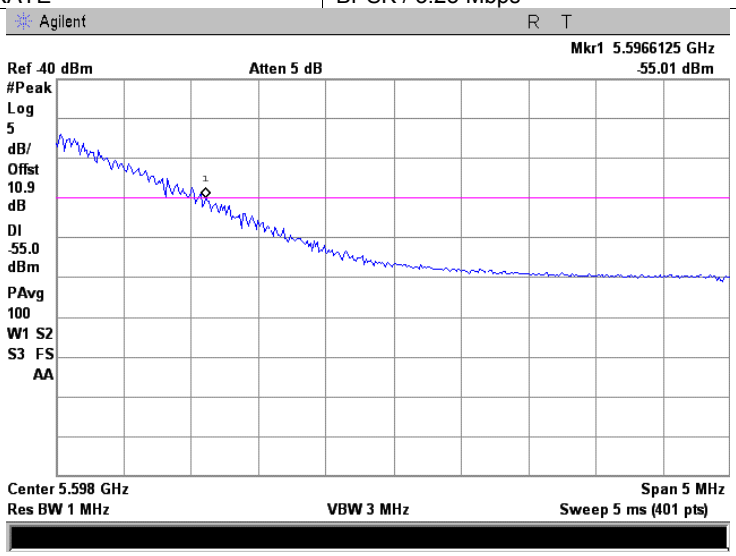
FREQUENCY EDGE	5600
CHANNEL BANDWIDTH	10 MHz
MODULATION / BIT RATE	64QAM / 65 Mbps



Test specification:	FCC section 15.407(g), RSS-210 Annex 9, section A9.5, Frequency stability		
Test procedure:	Section 2.1055		
Test mode:	Compliance	Verdict:	PASS
Date:	12/10/2008		
Temperature: 22ºC	Air Pressure: 1013 hPa	Relative Humidity: 60 %	Power Supply: 120 VAC
Remarks: EUT with 28 dBi antenna assembly gain			

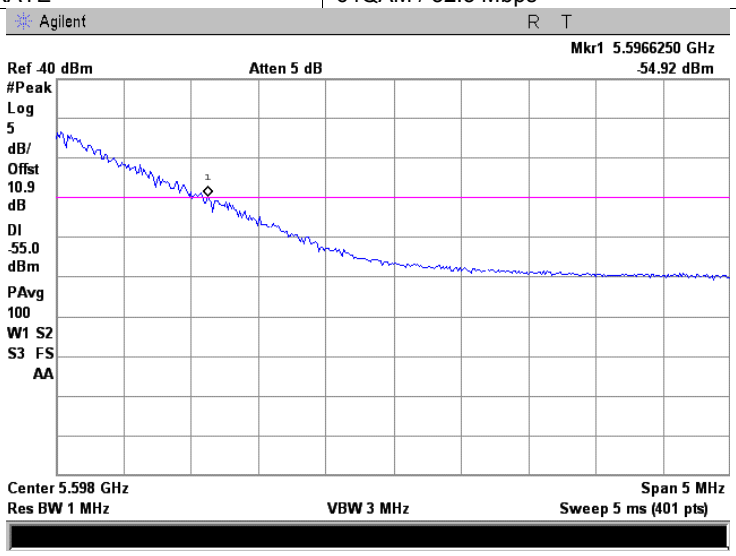
Plot 7.5.35. Band edge emissions at normal conditions at 10th minute

FREQUENCY EDGE	5600
CHANNEL BANDWIDTH	5 MHz
MODULATION / BIT RATE	BPSK / 3.25 Mbps



Plot 7.5.36. Band edge emissions at normal conditions at 10th minute

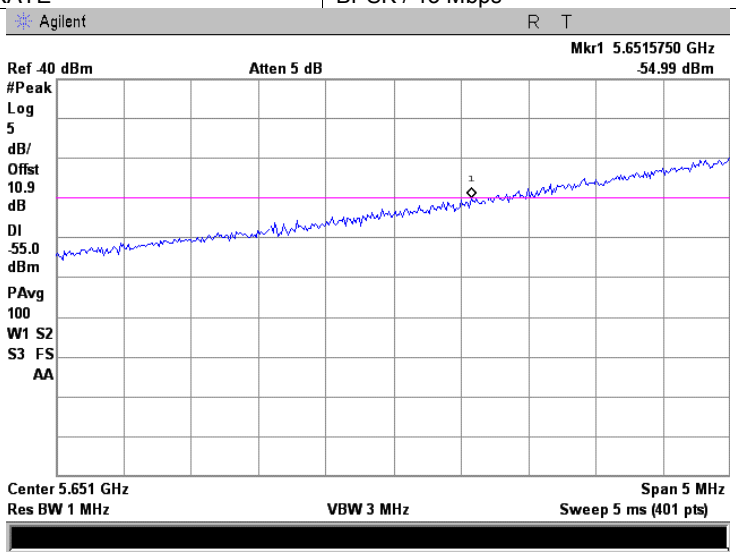
FREQUENCY EDGE	5600
CHANNEL BANDWIDTH	5 MHz
MODULATION / BIT RATE	64QAM / 32.5 Mbps



Test specification:	FCC section 15.407(g), RSS-210 Annex 9, section A9.5, Frequency stability		
Test procedure:	Section 2.1055		
Test mode:	Compliance	Verdict:	PASS
Date:	12/10/2008		
Temperature: 22ºC	Air Pressure: 1013 hPa	Relative Humidity: 60 %	Power Supply: 120 VAC
Remarks: EUT with 28 dBi antenna assembly gain			

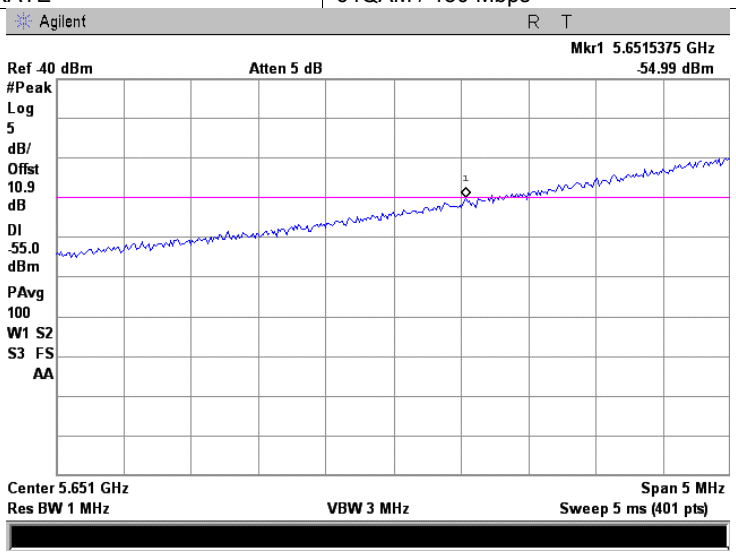
Plot 7.5.37. Band edge emissions at normal conditions at at 10th minute

FREQUENCY EDGE	5650
CHANNEL BANDWIDTH	20 MHz
MODULATION / BIT RATE	BPSK / 13 Mbps



Plot 7.5.38. Band edge emissions at normal conditions at 10th minute

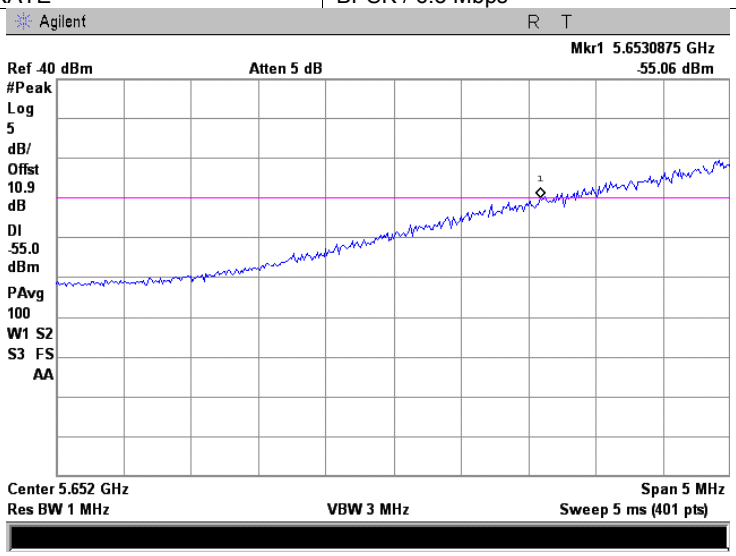
FREQUENCY EDGE	5650
CHANNEL BANDWIDTH	20 MHz
MODULATION / BIT RATE	64QAM / 130 Mbps



Test specification:	**FCC section 15.407(g), RSS-210 Annex 9, section A9.5, Frequency stability**		
Test procedure:	Section 2.1055		
Test mode:	Compliance	**Verdict:**	PASS
Date:	12/10/2008		
Temperature: 22ºC	**Air Pressure:** 1013 hPa	**Relative Humidity:** 60 %	**Power Supply:** 120 VAC
Remarks: EUT with 28 dBi antenna assembly gain			

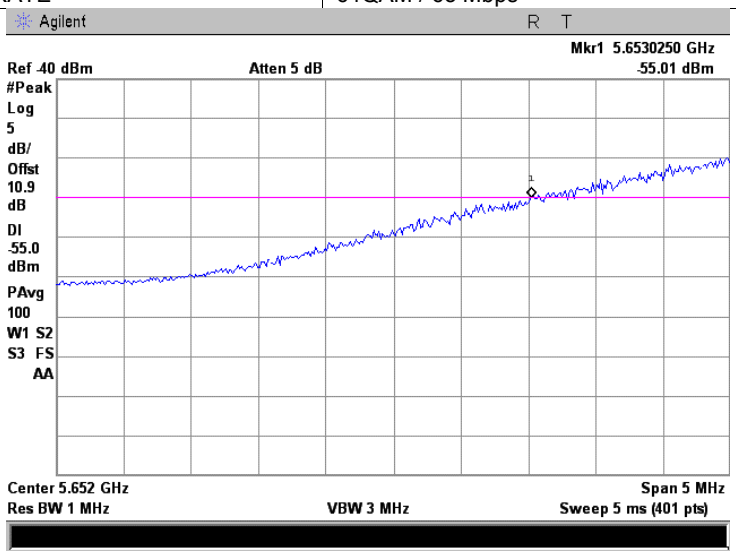
Plot 7.5.39. Band edge emissions at normal conditions at 10th minute

FREQUENCY EDGE	5650
CHANNEL BANDWIDTH	10 MHz
MODULATION / BIT RATE	BPSK / 6.5 Mbps



Plot 7.5.40. Band edge emissions at normal conditions at 10th minute

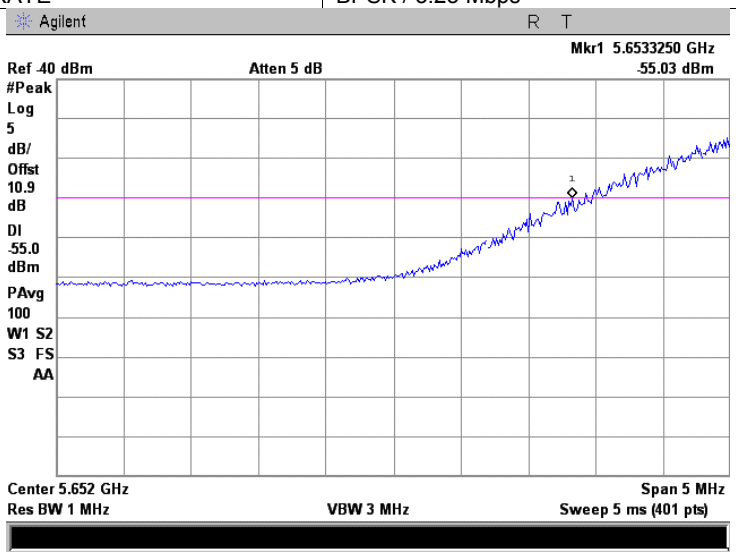
FREQUENCY EDGE	5650
CHANNEL BANDWIDTH	10 MHz
MODULATION / BIT RATE	64QAM / 65 Mbps



Test specification:	FCC section 15.407(g), RSS-210 Annex 9, section A9.5, Frequency stability		
Test procedure:	Section 2.1055		
Test mode:	Compliance	Verdict:	PASS
Date:	12/10/2008		
Temperature: 22ºC	Air Pressure: 1013 hPa	Relative Humidity: 60 %	Power Supply: 120 VAC
Remarks: EUT with 28 dBi antenna assembly gain			

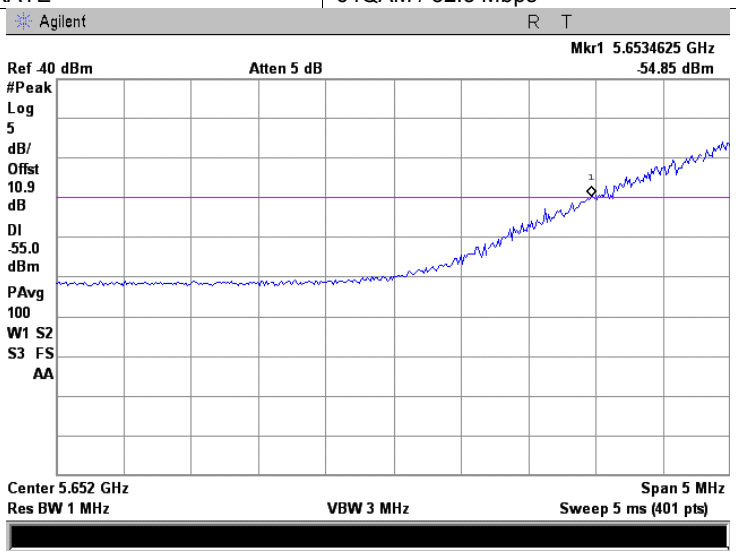
Plot 7.5.41. Band edge emissions at normal conditions at 10th minute

FREQUENCY EDGE	5650
CHANNEL BANDWIDTH	5 MHz
MODULATION / BIT RATE	BPSK / 3.25 Mbps



Plot 7.5.42. Band edge emissions at normal conditions at 10th minute

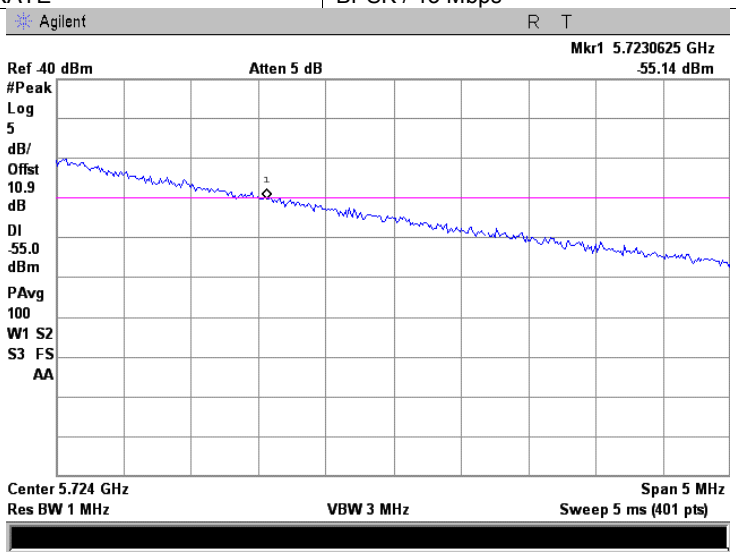
FREQUENCY EDGE	5650
CHANNEL BANDWIDTH	5 MHz
MODULATION / BIT RATE	64QAM / 32.5 Mbps



Test specification:	FCC section 15.407(g), RSS-210 Annex 9, section A9.5, Frequency stability		
Test procedure:	Section 2.1055		
Test mode:	Compliance	Verdict:	PASS
Date:	12/10/2008		
Temperature: 22ºC	Air Pressure: 1013 hPa	Relative Humidity: 60 %	Power Supply: 120 VAC
Remarks: EUT with 28 dBi antenna assembly gain			

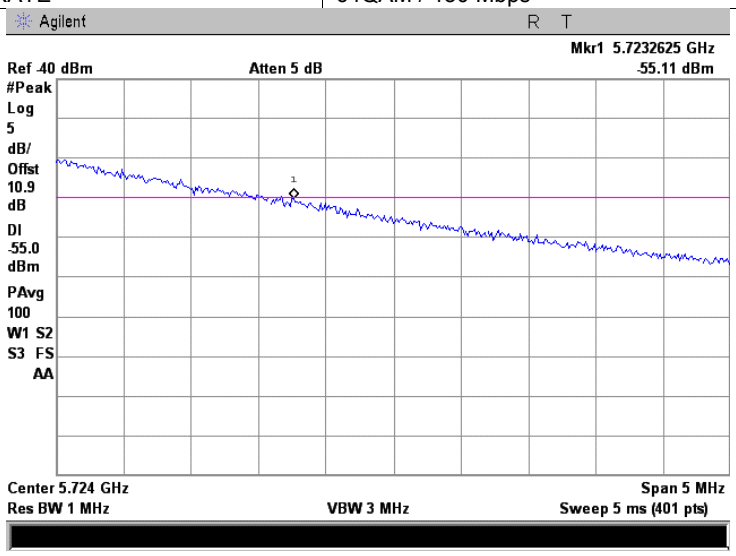
Plot 7.5.43. Band edge emissions at normal conditions at 10th minute

FREQUENCY EDGE	5725
CHANNEL BANDWIDTH	20 MHz
MODULATION / BIT RATE	BPSK / 13 Mbps



Plot 7.5.44. Band edge emissions at normal conditions at 10th minute

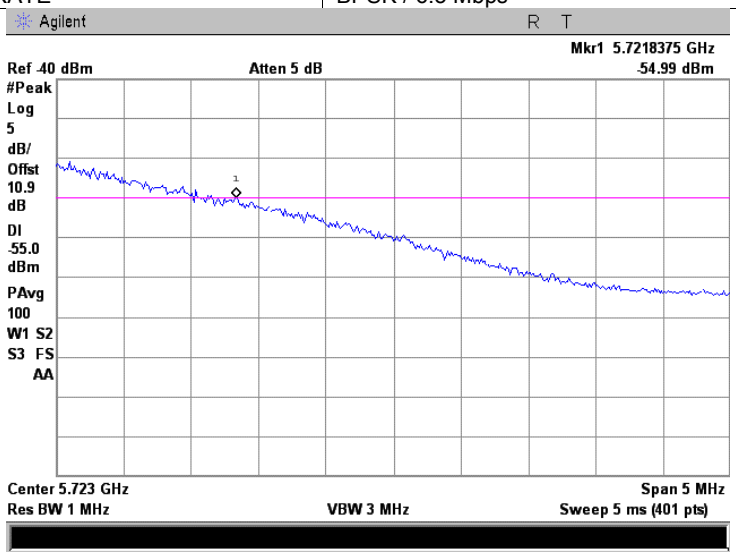
FREQUENCY EDGE	5725
CHANNEL BANDWIDTH	20 MHz
MODULATION / BIT RATE	64QAM / 130 Mbps



Test specification:	**FCC section 15.407(g), RSS-210 Annex 9, section A9.5, Frequency stability**		
Test procedure:	Section 2.1055		
Test mode:	Compliance	**Verdict:**	PASS
Date:	12/10/2008		
Temperature: 22ºC	**Air Pressure:** 1013 hPa	**Relative Humidity:** 60 %	**Power Supply:** 120 VAC
Remarks: EUT with 28 dBi antenna assembly gain			

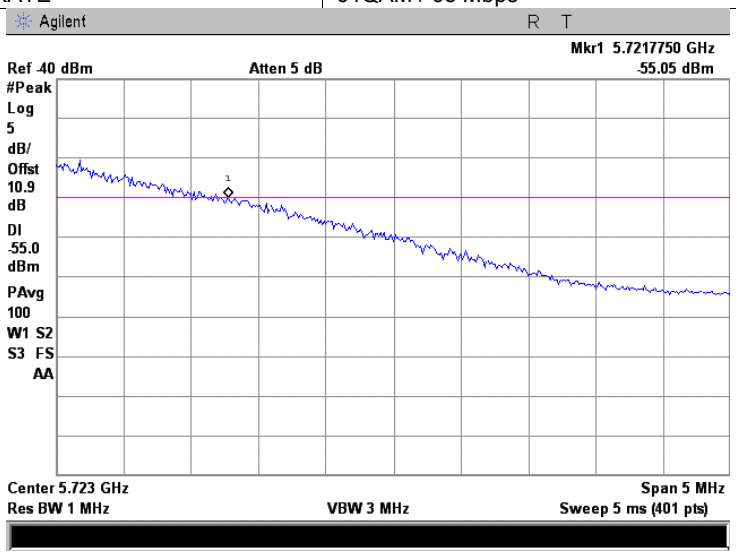
Plot 7.5.45. Band edge emissions at normal conditions at 10th minute

FREQUENCY EDGE	5725
CHANNEL BANDWIDTH	10 MHz
MODULATION / BIT RATE	BPSK / 6.5 Mbps



Plot 7.5.46. Band edge emissions at normal conditions at 10th minute

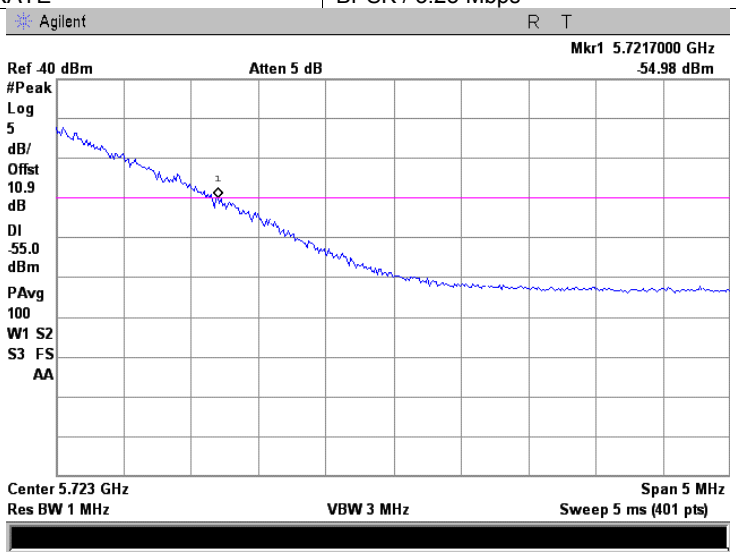
FREQUENCY EDGE	5725
CHANNEL BANDWIDTH	10 MHz
MODULATION / BIT RATE	64QAM / 65 Mbps



Test specification:	**FCC section 15.407(g), RSS-210 Annex 9, section A9.5, Frequency stability**		
Test procedure:	Section 2.1055		
Test mode:	Compliance	**Verdict:**	PASS
Date:	12/10/2008		
Temperature: 22ºC	**Air Pressure:** 1013 hPa	**Relative Humidity:** 60 %	**Power Supply:** 120 VAC
Remarks: EUT with 28 dBi antenna assembly gain			

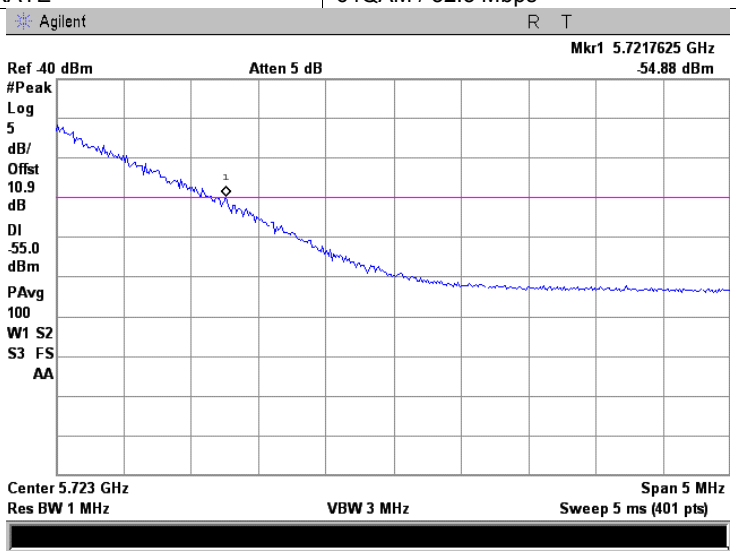
Plot 7.5.47. Band edge emissions at normal conditions at 10th minute

FREQUENCY EDGE	5725
CHANNEL BANDWIDTH	5 MHz
MODULATION / BIT RATE	BPSK / 3.25 Mbps



Plot 7.5.48. Band edge emissions at normal conditions at 10th minute

FREQUENCY EDGE	5725
CHANNEL BANDWIDTH	5 MHz
MODULATION / BIT RATE	64QAM / 32.5 Mbps



Test specification:	FCC Part 15, section 203, RSS-Gen section 7.1.4, Antenna requirements		
Test procedure:	Visual inspection / supplier declaration		
Test mode:	Compliance	Verdict:	PASS
Date:	10/08/2007		
Temperature: 24ºC	Air Pressure: 1012 hPa	Relative Humidity: 44 %	Power Supply: 120 VAC
Remarks:			

7.6 Antenna requirements

The EUT was verified for compliance with antenna requirements. A transmitter shall be designed to ensure that no antenna other than that furnished by the responsible party will be used with the device. It may be either permanently attached or employs a unique antenna connector for every antenna proposed for use with the EUT. This requirement does not apply to professionally installed transmitters.
The rationale for compliance with the above requirements was either visual inspection results or supplier declaration. The summary of results is provided in Table 7.6.1.

Table 7.6.1 Antenna requirements

Requirement	Rationale	Verdict
The transmitter antenna is permanently attached (integral)	Visual inspection	Comply
The transmitter employs a unique antenna connector	NA	
The transmitter requires professional installation (external)	Visual inspection	

Test specification:	FCC part 15 section 15.207(a), RSS-Gen section 7.2.2, Conducted emission		
Test procedure:	ANSI C63.4, Section 13.1.3		
Test mode:	Compliance	Verdict:	PASS
Date:	12/28/2008		
Temperature: 21ºC	Air Pressure: 1012 hPa	Relative Humidity: 44 %	Power Supply: 120 VAC
Remarks:			

7.7 Conducted emissions

7.7.1 General

This test was performed to measure common mode conducted emissions at the power port. Specification test limits are given in Table 7.7.1.

Table 7.7.1 Limits for conducted emissions

Frequency, MHz	Class B limit, dB(µV)	
	QP	AVRG
0.15 - 0.5	66 - 56*	56 - 46*
0.5 - 5.0	56	46
5.0 - 30	60	50

* - The limit decreases linearly with the logarithm of frequency.

7.7.2 Test procedure

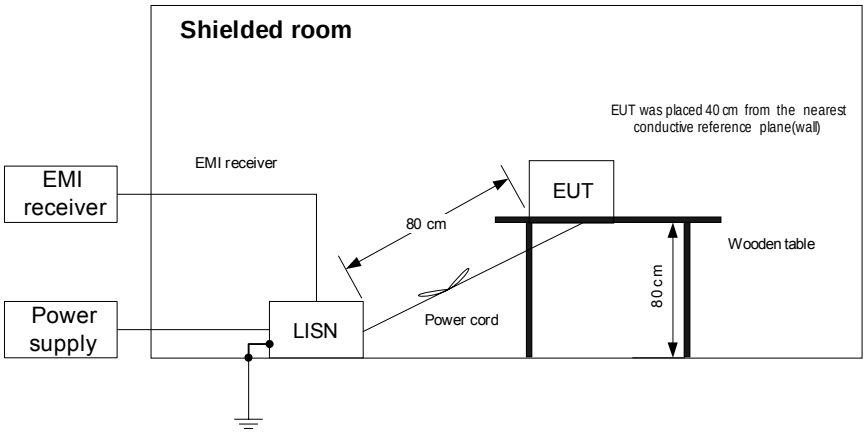
7.7.2.1 The EUT was set up as shown in Figure 7.7.1, energized and the performance check was conducted.

7.7.2.2 The measurements were performed at power terminals with the LISN, connected to a spectrum analyzer while unused coaxial connector of the LISN was terminated with 50 Ohm.

7.7.2.3 The position of the device cables was varied to determine maximum emission level.

7.7.2.4 The worst test results (the lowest margins) were recorded in Table 7.7.2 and shown in the associated plots.

Figure 7.7.1 Setup for conducted emission measurements, table-top equipment



Test specification:	**FCC part 15 section 15.207(a), RSS-Gen section 7.2.2, Conducted emission**		
Test procedure:	ANSI C63.4, Section 13.1.3		
Test mode:	Compliance	**Verdict:**	PASS
Date:	12/28/2008		
Temperature: 21ºC	**Air Pressure:** 1012 hPa	**Relative Humidity:** 44 %	**Power Supply:** 120 VAC
Remarks:			

Table 7.7.2 Conducted emission test results

LINE: AC mains

EUT OPERATING MODE: Transmit @5580 MHz, 20 MHz, CBW 130 Mbps at maximum power

EUT SET UP: TABLE-TOP

TEST SITE: SHIELDED ROOM

FREQUENCY RANGE: 150 kHz - 30 MHz

RESOLUTION BANDWIDTH: 9 kHz

Frequency, MHz	Peak emission, dB(µV)	Quasi-peak			Average			Line ID	Verdict
		Measured emission, dB(µV)	Limit, dB(µV)	Margin, dB*	Measured emission, dB(µV)	Limit, dB(µV)	Margin, dB*		
0.154650	43.37	39.31	65.77	-26.46	36.02	55.77	-19.75	L1	Pass
0.531245	31.55	30.87	56.00	-25.13	30.60	46.00	-15.40		
3.109260	33.22	32.06	56.00	-23.94	31.04	46.00	-14.96		
3.791626	33.21	32.36	56.00	-23.64	30.87	46.00	-15.13		
0.154780	44.36	39.41	65.77	-26.36	34.66	55.77	-21.11	L2	Pass
0.530325	32.69	31.91	56.00	-24.09	31.46	46.00	-14.54		
1.971482	32.37	31.93	56.00	-24.07	31.25	46.00	-14.75		
3.109233	32.86	32.12	56.00	-23.88	31.17	46.00	-14.83		

*****- Margin = Measured emission - specification limit.

Reference numbers of test equipment used

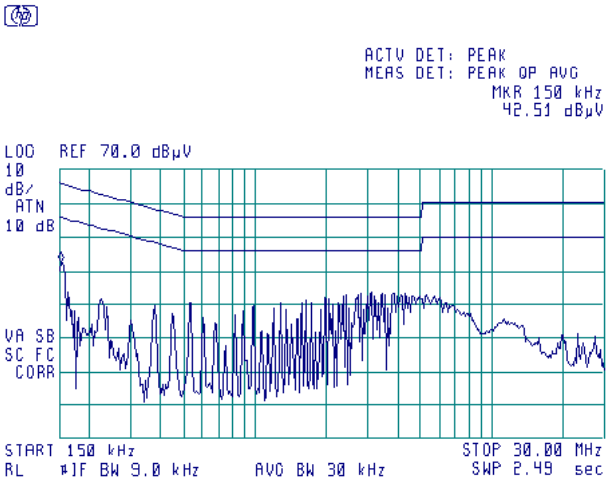
HL 0580	HL 1430	HL 1513	HL 2888	HL 3612			

Full description is given in Appendix A.

Test specification:	FCC part 15 section 15.207(a), RSS-Gen section 7.2.2, Conducted emission		
Test procedure:	ANSI C63.4, Section 13.1.3		
Test mode:	Compliance	Verdict:	PASS
Date:	12/28/2008		
Temperature: 21ºC	Air Pressure: 1012 hPa	Relative Humidity: 44 %	Power Supply: 120 VAC
Remarks:			

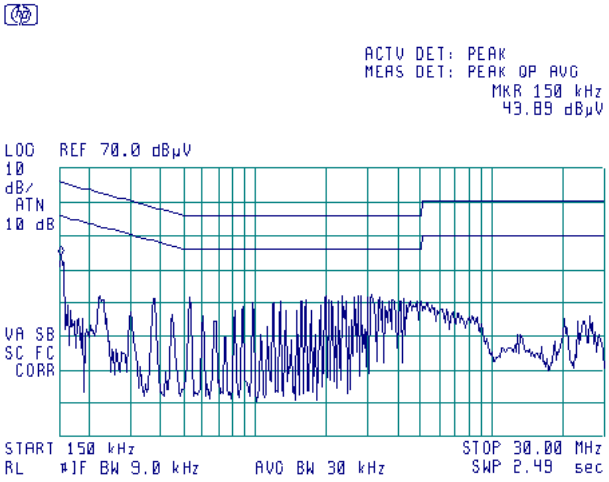
Plot 7.7.1 Conducted emission measurements

LINE: L1
EUT OPERATING MODE: Transmit
LIMIT: QUASI-PEAK, AVERAGE
DETECTOR: PEAK



Plot 7.7.2 Conducted emission measurements

LINE: L2
EUT OPERATING MODE: Transmit
LIMIT: QUASI-PEAK, AVERAGE
DETECTOR: PEAK



Test specification:	RSS-Gen sections 6, 7.2.3.2, spurious radiated emission		
Test procedure:	ANSI C63.4, Section 13.1.3		
Test mode:	Compliance	Verdict:	PASS
Date:	12/28/2008		
Temperature: 21ºC	Air Pressure: 1012 hPa	Relative Humidity: 44 %	Power Supply: 120 VAC
Remarks:			

7.8 Receiver radiated spurious emission measurements

7.8.1 General

This test was performed to measure radiated emissions from the EUT enclosure. Specification test limits are given in Table 7.8.1.

Table 7.8.1 Radiated emission limits

Frequency, MHz	Field strength limit at 3 m test distance, dB(μV/m)
30 - 88	40.0
88 - 216	43.5
216 - 960	46.0
Above 960 -3rd harmonic*	54.0

* - harmonic of the highest frequency the EUT generates, uses, operates or tunes to.

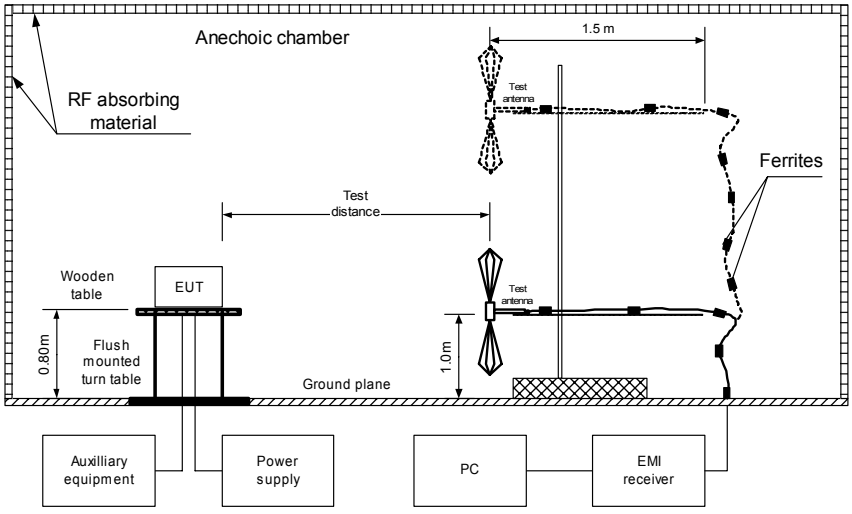
7.8.2 Test procedure

7.8.2.1 The EUT was set up as shown in Figure 7.8.1, energized and the performance check was conducted.

7.8.2.2 The specified frequency range was investigated with biconilog antenna connected to EMI receiver. To find maximum radiation the turntable was rotated 360^0, the measuring antenna height was changed from 1 to 4 m, its polarization was switched from vertical to horizontal and the EUT cables position was varied.

7.8.2.3 The worst test results (the lowest margins) were provided in the associated tables and plots.

Figure 7.8.1 Setup for radiated emission measurements in anechoic chamber, table-top equipment



Test specification:	**RSS-Gen sections 6, 7.2.3.2, spurious radiated emission**		
Test procedure:	ANSI C63.4, Section 13.1.3		
Test mode:	Compliance	**Verdict:**	PASS
Date:	12/28/2008		
Temperature: 21ºC	**Air Pressure:** 1012 hPa	**Relative Humidity:** 44 %	**Power Supply:** 120 VAC
Remarks: EUT with 22.5 dBi antenna assembly gain			

Table 7.8.2 Radiated emission test results

EUT SET UP: TABLE-TOP
EUT OPERATING MODE: Receive
TEST SITE: SEMI ANECHOIC CHAMBER
TEST DISTANCE: 3 m
FREQUENCY RANGE: 30 MHz – 1000 MHz
RESOLUTION BANDWIDTH: 120 kHz

Frequency, MHz	Peak emission, dB(µV/m)	Quasi-peak			Antenna polarization	Antenna height, m	Turn-table position**, degrees	Verdict
		Measured emission, dB(µV/m)	Limit, dB(µV/m)	Margin, dB*				
Mid Rx channel (5580 MHz)								Pass
No emissions were found								

TEST SITE: SEMI ANECHOIC CHAMBER
TEST DISTANCE: 3 m
FREQUENCY RANGE: 1000 MHz – 17500 MHz
RESOLUTION BANDWIDTH: 1000 kHz

Frequency, MHz	Peak emission, dB(µV/m)	Average			Antenna polarization	Antenna height, m	Turn-table position**, degrees	Verdict
		Measured emission, dB(µV/m)	Limit, dB(µV/m)	Margin, dB*				
Mid Rx channel (5580 MHz)								Pass
No emissions were found								

*****- Margin = Measured emission - specification limit.
******- EUT front panel refer to 0 degrees position of turntable.

Reference numbers of test equipment used

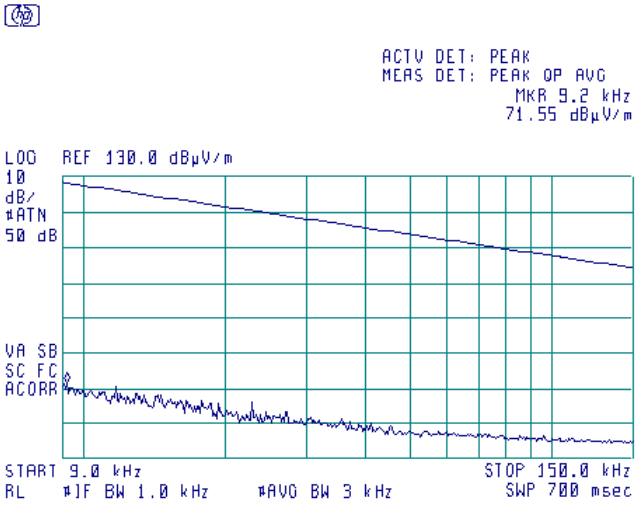
HL 0446	HL 0521	HL 0589	HL 0604	HL 1425	HL 1556	HL 1947	HL 1984
HL 2009	HL 2909						

Full description is given in Appendix A.

Test specification:	RSS-Gen sections 6, 7.2.3.2, spurious radiated emission		
Test procedure:	ANSI C63.4, Section 13.1.3		
Test mode:	Compliance	Verdict:	PASS
Date:	12/28/2008		
Temperature: 21ºC	Air Pressure: 1012 hPa	Relative Humidity: 44 %	Power Supply: 120 VAC
Remarks: EUT with 22.5 dBi antenna assembly gain			

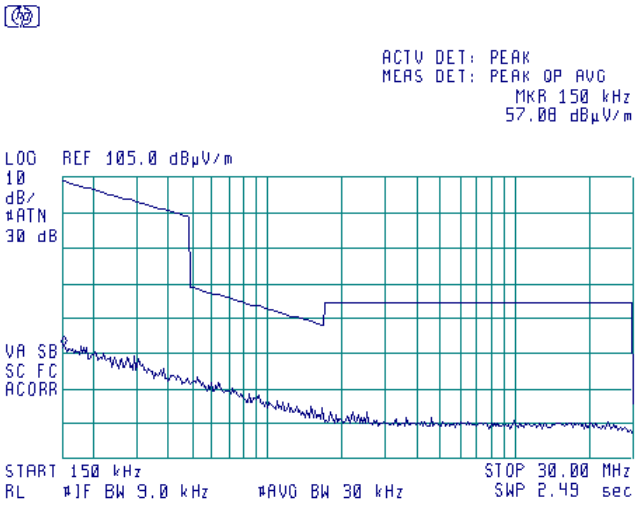
Plot 7.8.1 Radiated emission measurements from 9 to 150 kHz at the mid Rx channel frequency

TEST SITE: Anechoic chamber
TEST DISTANCE: 3 m
ANTENNA POLARIZATION: Vertical and Horizontal



Plot 7.8.2 Radiated emission measurements from 0.15 MHz to 30 MHz at the mid Rx channel frequency

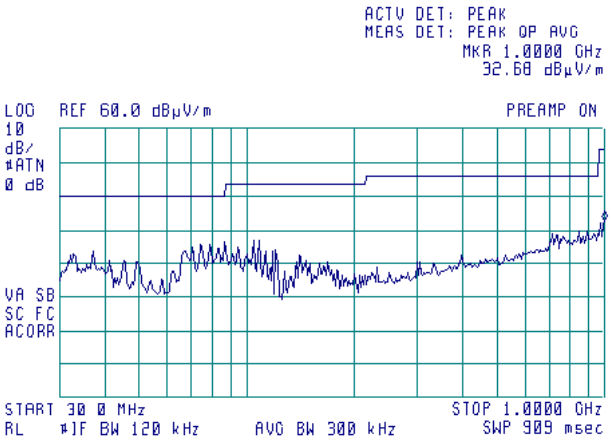
TEST SITE: Anechoic chamber
TEST DISTANCE: 3 m
ANTENNA POLARIZATION: Vertical and Horizontal



Test specification:	**RSS-Gen sections 6, 7.2.3.2, spurious radiated emission**		
Test procedure:	ANSI C63.4, Section 13.1.3		
Test mode:	Compliance	**Verdict:**	PASS
Date:	12/28/2008		
Temperature: 21ºC	**Air Pressure:** 1012 hPa	**Relative Humidity:** 44 %	**Power Supply:** 120 VAC
Remarks: EUT with 22.5 dBi antenna assembly gain			

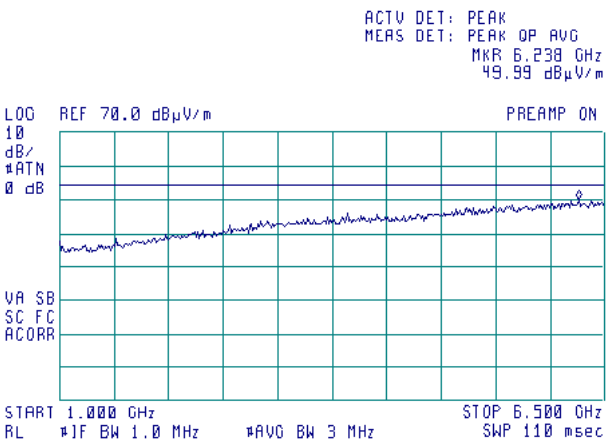
Plot 7.8.3 Radiated emission measurements from 30 MHz to 1000 MHz at the mid Rx channel frequency

TEST SITE: Anechoic chamber
TEST DISTANCE: 3 m
ANTENNA POLARIZATION: Vertical and Horizontal



Plot 7.8.4 Radiated emission measurements from 1.0 to 6.5 GHz at the mid Rx channel frequency

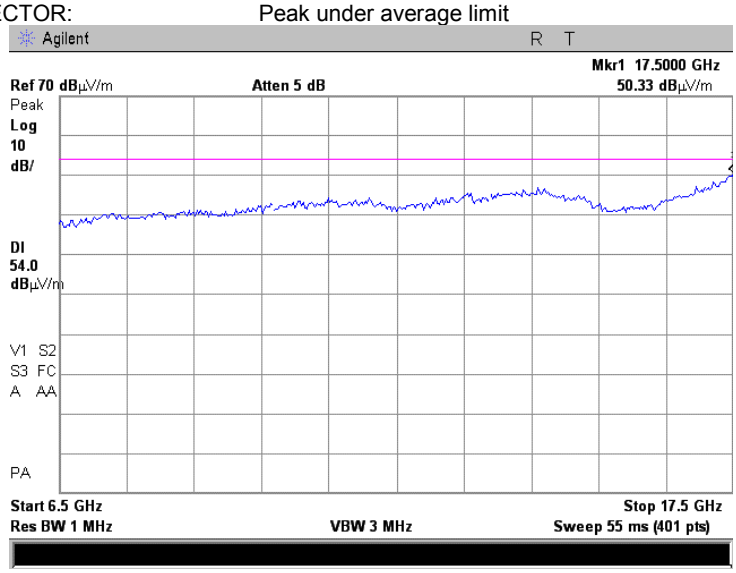
TEST SITE: Anechoic chamber
TEST DISTANCE: 3 m
ANTENNA POLARIZATION: Vertical and Horizontal
DETECTOR: Peak under average limit



Test specification:	RSS-Gen sections 6, 7.2.3.2, spurious radiated emission		
Test procedure:	ANSI C63.4, Section 13.1.3		
Test mode:	Compliance	Verdict:	PASS
Date:	12/28/2008		
Temperature: 21ºC	Air Pressure: 1012 hPa	Relative Humidity: 44 %	Power Supply: 120 VAC
Remarks: EUT with 22.5 dBi antenna assembly gain			

Plot 7.8.5 Radiated emission measurements from 6.5 to 17.5 GHz at the mid Rx channel frequency

TEST SITE: Anechoic chamber
TEST DISTANCE: 3 m
ANTENNA POLARIZATION: Vertical and Horizontal
DETECTOR: Peak under average limit



Test specification:	**RSS-Gen sections 6, 7.2.3.2, spurious radiated emission**		
Test procedure:	ANSI C63.4, Section 13.1.3		
Test mode:	Compliance	**Verdict:**	PASS
Date:	12/28/2008		
Temperature: 21ºC	**Air Pressure:** 1012 hPa	**Relative Humidity:** 44 %	**Power Supply:** 120 VAC
Remarks: EUT with 28 dBi antenna assembly gain			

Table 7.8.3 Radiated emission test results

EUT SET UP: TABLE-TOP
EUT OPERATING MODE: Receive
TEST SITE: SEMI ANECHOIC CHAMBER
TEST DISTANCE: 3 m
FREQUENCY RANGE: 30 MHz – 1000 MHz
RESOLUTION BANDWIDTH: 120 kHz

Frequency, MHz	Peak, dB(uV/m)	Quasi-peak dB(µV/m)			Antenna polariz.	Antenna height, m	Turntable position**, degrees	Verdict
		Measured emission, dB(µV/m)	Limit, dB(µV/m)	Margin, dB*				
Mid Rx channel (5580 MHz)								Pass
79.255	28.30	23.70	40.0	-16.30	V	1.2	270	

TEST SITE: SEMI ANECHOIC CHAMBER
TEST DISTANCE: 3 m
FREQUENCY RANGE: 1000 MHz – 17500 MHz
RESOLUTION BANDWIDTH: 1000 kHz

Frequency, MHz	Peak emission, dB(µV/m)	Average			Antenna polarization	Antenna height, m	Turn-table position**, degrees	Verdict
		Measured emission, dB(µV/m)	Limit, dB(µV/m)	Margin, dB*				
Mid Rx channel (5580 MHz)								Pass
1000.930	42.90	35.60	54.0	-18.40	V	1.2	090	

*****- Margin = Measured emission - specification limit.
******- EUT front panel refer to 0 degrees position of turntable.

Reference numbers of test equipment used

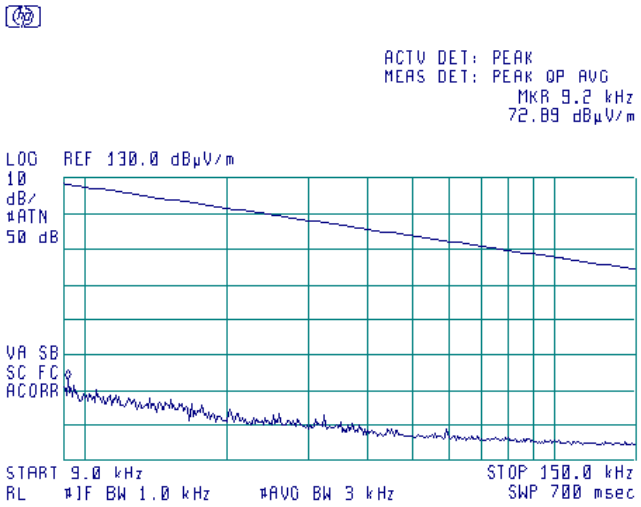
HL 0446	HL 0521	HL 0589	HL 0604	HL 1425	HL 1556	HL 1947	HL 1984
HL 2009	HL 2909						

Full description is given in Appendix A.

Test specification:	RSS-Gen sections 6, 7.2.3.2, spurious radiated emission		
Test procedure:	ANSI C63.4, Section 13.1.3		
Test mode:	Compliance	Verdict:	PASS
Date:	12/28/2008		
Temperature: 21ºC	Air Pressure: 1012 hPa	Relative Humidity: 44 %	Power Supply: 120 VAC
Remarks: EUT with 28 dBi antenna assembly gain			

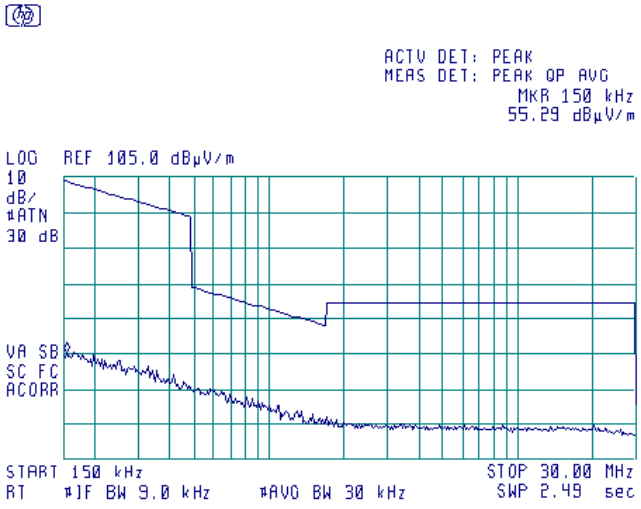
Plot 7.8.6 Radiated emission measurements from 9 to 150 kHz at the mid Rx carrier frequency

TEST SITE: Anechoic chamber
TEST DISTANCE: 3 m
ANTENNA POLARIZATION: Vertical and Horizontal



Plot 7.8.7 Radiated emission measurements from 0.15 MHz to 30 MHz at the mid Rx channel frequency

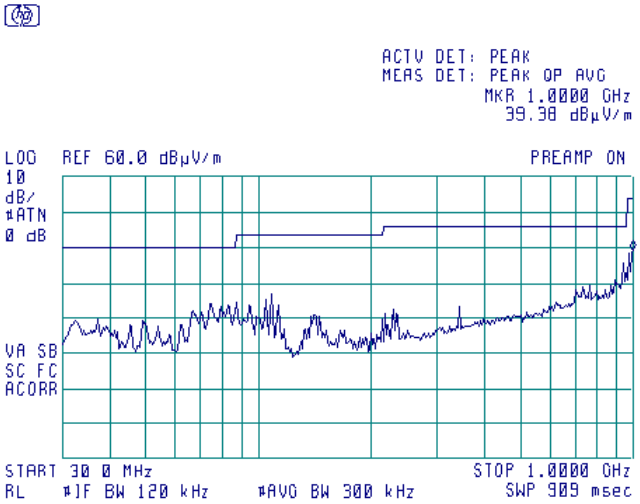
TEST SITE: Anechoic chamber
TEST DISTANCE: 3 m
ANTENNA POLARIZATION: Vertical and Horizontal



Test specification:	RSS-Gen sections 6, 7.2.3.2, spurious radiated emission		
Test procedure:	ANSI C63.4, Section 13.1.3		
Test mode:	Compliance	Verdict:	PASS
Date:	12/28/2008		
Temperature: 21ºC	Air Pressure: 1012 hPa	Relative Humidity: 44 %	Power Supply: 120 VAC
Remarks: EUT with 28 dBi antenna assembly gain			

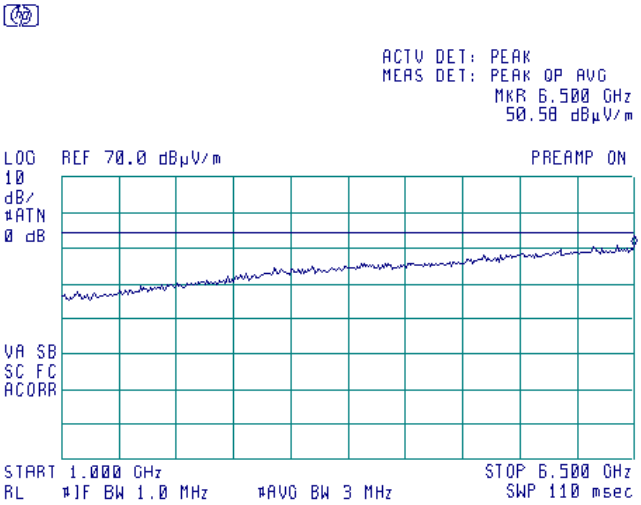
Plot 7.8.8 Radiated emission measurements from 30 MHz to 1000 MHz at the mid Rx channel frequency

TEST SITE: Anechoic chamber
TEST DISTANCE: 3 m
ANTENNA POLARIZATION: Vertical and Horizontal



Plot 7.8.9 Radiated emission measurements from 1.0 to 6.5 GHz at the mid Rx channel frequency

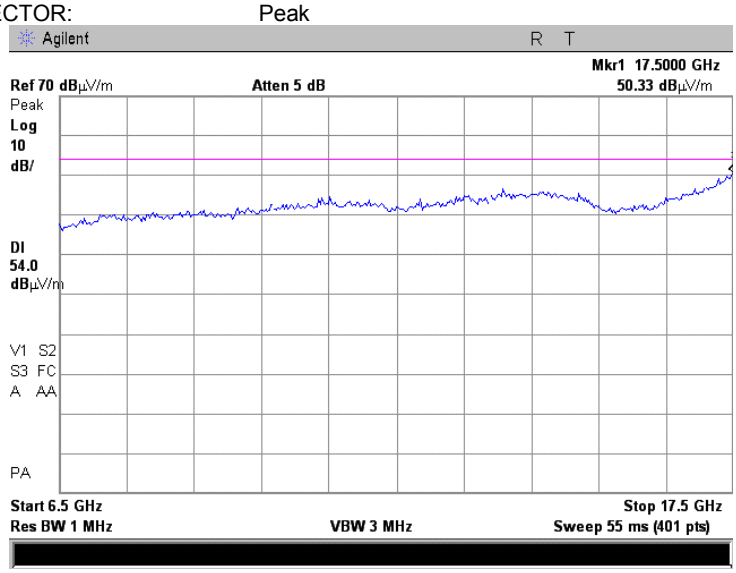
TEST SITE: Anechoic chamber
TEST DISTANCE: 3 m
ANTENNA POLARIZATION: Vertical and Horizontal
DETECTOR: Peak under average limit



Test specification:	RSS-Gen sections 6, 7.2.3.2, spurious radiated emission		
Test procedure:	ANSI C63.4, Section 13.1.3		
Test mode:	Compliance	Verdict:	PASS
Date:	12/28/2008		
Temperature: 21ºC	Air Pressure: 1012 hPa	Relative Humidity: 44 %	Power Supply: 120 VAC
Remarks: EUT with 28 dBi antenna assembly gain			

Plot 7.8.10 Radiated emission measurements from 6.5 to 17.5 GHz at the mid Rx channel frequency

TEST SITE: Anechoic chamber
TEST DISTANCE: 3 m
ANTENNA POLARIZATION: Vertical and Horizontal
DETECTOR: Peak



8 APPENDIX A Test equipment and ancillaries used for tests

HL No	Description	Manufacturer	Model	Ser. No.	Last Cal.	Due Cal.
0446	Antenna, Loop, Active, 10 kHz - 30 MHz	EMCO	6502	2857	29-Jun-08	29-Jun-09
0493	Temperature Chamber -45…175 deg C	Thermotron	S-1.2 Mini-Max	14016	19-May-08	19-May-09
0521	EMI Receiver (Spectrum Analyzer) with RF filter section 9 kHz-6.5 GHz	Hewlett Packard Co	8546A	3617A 00319, 3448A002 53	29-Aug-08	29-Aug-09
0580	DC block adaptor 10 kHz - 2.2 GHz	Anritsu	MA8601 A	580	23-Nov-08	23-Nov-09
0589	Cable Coaxial, GORE A2P01POL118, 2.3 m, 6.5 GHz	Hermon Laboratories	GORE-3	176	01-Jan-08	01-Jan-09
0604	Antenna BiconiLog Log-Periodic/T Bow-TIE, 26 - 2000 MHz	EMCO	3141	9611-1011	10-Jan-08	10-Jan-09
1194	Variac, 220 V/ 2.5 A	Matsunaga		2962	06-Jan-08	06-Jan-09
1425	EMI Receiver, 9 kHz - 2.9 GHz, System: HL1426, HL1427	Agilent Technologies	8542E	3710A002 22, 3705A002 04	03-Sep-08	03-Sep-09
1430	EMI Receiver, 9 kHz - 2.9 GHz, System: HL1431, HL1432	Agilent Technologies	8542E	3807A002 62,3705A0 0217	31-Aug-08	31-Aug-09
1513	Cable RF, 8 m, BNC/BNC	Belden	M17/167 MIL-C-17	1513	03-Sep-08	03-Sep-09
1556	Cable RF, 0.5 m	Telequis	MIL-C-17F-RG 058 CU	1556	01-Jan-08	01-Jan-09
1947	Cable 18GHz, 6.5 m, blue	Rhophase Microwave Limited	NPS-1803A-6500-NPS	T4974	01-Jan-08	01-Jan-09
1984	Antenna, Double-Ridged Waveguide Horn, 1-18 GHz, 300 W	EMC Test Systems	3115	9911-5964	03-Mar-08	03-Mar-09
2009	Cable RF, 8 m	Alpha Wire	RG-214	C-56	01-Jan-08	01-Jan-09
2780	EMC analyzer, 100 Hz to 26.5 GHz	Agilent Technologies	E7405A	MY451024 6	11-Jun-07	11-Jun-09
2883	Cable, 18 GHz N-type, M-F, 3 m	Bird	TC-MNFN-3.0	211539 003	07-Dec-08	07-Dec-09
2888	LISN Two-line V-Network 50 Ohm / 50 uH + 5 Ohm, 16A, MIL STD 461E, CISPR 16-1	Rolf Heine	NNB-2/16Z	02/10018	09-Jul-08	09-Jul-09
2909	Spectrum analyzer, ESA-E, 100 Hz to 26.5 GHz	Agilent Technologies	E4407B	MY414447 62	07-May-07	07-May-09
3175	Attenuator, N-type, 10 dB, DC to 18 GHz, 5 W	Mini-Circuits	BW-N10W5+	0708	07-May-08	07-May-09
3176	Attenuator, N-type, 10 dB, DC to 18 GHz, 5 W	Mini-Circuits	BW-N10W5+	0708	07-May-08	07-May-09
3179	Attenuator, N-type, 20 dB, DC to 18 GHz, 5 W	Mini-Circuits	BW-N20W5+	0651	07-May-08	07-May-09
3180	Attenuator, N-type, 20 dB, DC to 18 GHz, 5 W	Mini-Circuits	BW-N20W5+	0651	07-May-08	07-May-09
3233	Multimeter	Fluke	115C	93771523	15-Jul-08	15-Jul-09
3286	Temperature Chamber, (-40 to +170) °C	Thermotron	EL-8-CH-1-1-CO2	21-9048	09-Sep-08	09-Sep-09
3612	Cable RF, 17.5 m, N type-N type	Teldor	RG-214/U	NA	17-Nov-08	17-Nov-09

9 APPENDIX B Measurement uncertainties

Expanded uncertainty at 95% confidence in Hermon Labs EMC measurements

Test description	Expanded uncertainty
Conducted carrier power at RF antenna connector	Below 12.4 GHz: ± 1.7 dB 12.4 GHz to 40 GHz: ± 2.3 dB
Conducted emissions at RF antenna connector	9 kHz to 2.9 GHz: ± 2.6 dB 2.9 GHz to 6.46 GHz: ± 3.5 dB 6.46 GHz to 13.2 GHz: ± 4.3 dB 13.2 GHz to 22.0 GHz: ± 5.0 dB 22.0 GHz to 26.8 GHz: ± 5.5 dB 26.8 GHz to 40.0 GHz: ± 4.8 dB
Occupied bandwidth	± 8.0 %
Conducted emissions with LISN	9 kHz to 150 kHz: ± 3.9 dB 150 kHz to 30 MHz: ± 3.8 dB
Radiated emissions at 3 m measuring distance Horizontal polarization Vertical polarization	 Biconilog antenna: ± 5.3 dB Biconical antenna: ± 5.0 dB Log periodic antenna: ± 5.3 dB Double ridged horn antenna: ± 5.3 dB Biconilog antenna: ± 6.0 dB Biconical antenna: ± 5.7 dB Log periodic antenna: ± 6.0 dB Double ridged horn antenna: ± 6.0 dB

Hermon Laboratories is accredited by A2LA for calibration according to present requirements of ISO/IEC 17025 and NCSL Z540-1. The accreditation is granted to perform calibration of parameters that are listed in the Scope of Hermon Laboratories Accreditation.

Hermon Laboratories calibrates its reference and transfer standards by calibration laboratories accredited to ISO/IEC 17025 by a mutually recognized Accreditation Body or by a recognized national metrology institute. All reference and transfer standards used in the calibration system are traceable to national or international standards.

In-house calibration of all test and measurement equipment is performed on a regular basis according to Hermon Laboratories calibration procedures, manufacturer calibration/verification procedures or procedures defined in the relevant standards. The Hermon Laboratories test and measurement equipment is calibrated within the tolerances specified by the manufacturers and/or by the relevant standards.

10 APPENDIX C Test laboratory description

Tests were performed at Hermon Laboratories Ltd., which is a fully independent, private, EMC, safety, environmental and telecommunication testing facility. Hermon Laboratories is listed by the Federal Communications Commission (USA) for all parts of Code of Federal Regulations 47 (CFR 47) and by Industry Canada for electromagnetic emissions (file numbers IC 2186A-1 for OATS and IC 2186A-2 for anechoic chamber), certified by VCCI, Japan (the registration numbers are R-808 for OATS, R-1082 for anechoic chamber, C-845 for conducted emissions site), assessed by TNO Certification EP&S (Netherlands) for a number of EMC, telecommunications, environmental, safety standards, and by AMTAC (UK) for safety of medical devices. The laboratory is accredited by American Association for Laboratory Accreditation (USA) according to ISO/IEC 17025 for electromagnetic compatibility, product safety, telecommunications testing and environmental simulation (for exact scope please refer to Certificate No. 839.01).

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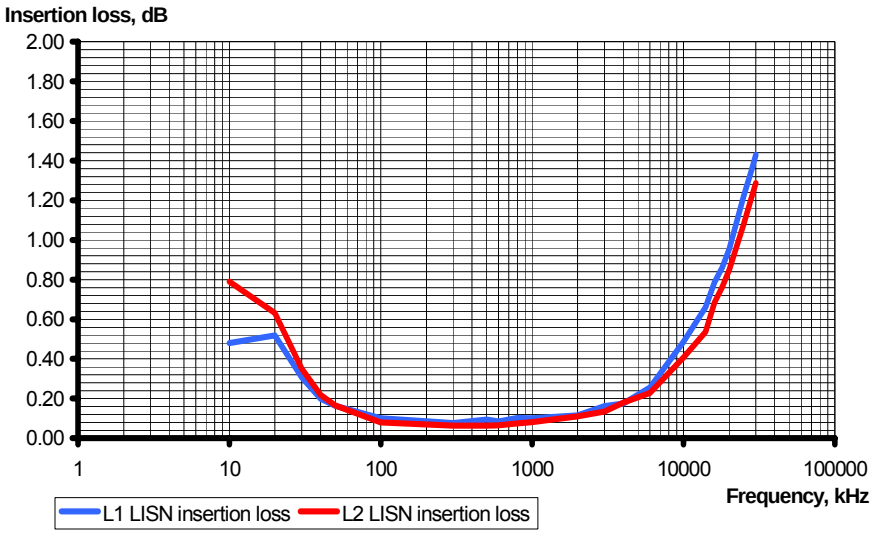
11 APPENDIX D Specification references

47CFR part 15: 2007	Radio Frequency Devices.
FCC Public Notice DA 02-2138 August 30, 2002	Measurement procedure updated for peak transmit power in U-NII bands
ANSI C63.2: 1996	American National Standard for Instrumentation-Electromagnetic Noise and Field Strength, 10 kHz to 40 GHz-Specifications.
ANSI C63.4: 2003	American National Standard for Methods of Measurement of Radio-Noise Emissions from Low-Voltage Electrical and Electronic Equipment in the Range of 9 kHz to 40 GHz.
RSS-210 Issue 7: 2007	Low Power Licence- Exempt Radiocommunication Devices (All frequency bands), Category I Equipment
RSS-Gen Issue 2: 2007	General Requirements and Information for the Certification of Radiocommunication Equipment

12 APPENDIX E Test equipment correction factors

Correction factor
Line impedance stabilization network
Model NNB-2/16Z, Rolf Heine, HL 2888

Frequency, kHz	Insertion loss,dB		Measurement Uncertainty, dB
	L1	N	
10	0.48	0.79	±0.6
20	0.52	0.63	
30	0.31	0.35	
40	0.20	0.22	
50	0.16	0.17	
100	0.10	0.08	
300	0.08	0.06	
500	0.10	0.06	
600	0.09	0.07	
800	0.10	0.07	
1000	0.10	0.08	
2000	0.12	0.11	
3000	0.16	0.14	
4000	0.17	0.18	
6000	0.26	0.23	
10000	0.49	0.41	
14000	0.66	0.54	
16000	0.79	0.69	
18000	0.86	0.76	
20000	0.96	0.85	
25000	1.22	1.08	
28000	1.35	1.21	
30000	1.43	1.29	



Antenna Factor
Active Loop Antenna
EMC Test Systems, model 6502, serial number 2857, HL 0446

Frequency, MHz	Magnetic Antenna Factor, dB(S/m)	Electric Antenna Factor, dB(1/m)
0.009	-32.8	18.7
0.010	-33.8	17.7
0.020	-38.3	13.2
0.050	-41.1	10.4
0.075	-41.3	10.2
0.100	-41.6	9.9
0.150	-41.7	9.8
0.250	-41.6	9.9
0.500	-41.8	9.7
0.750	-41.9	9.6
1.000	-41.4	10.1
2.000	-41.5	10.0
3.000	-41.4	10.1
4.000	-41.4	10.1
5.000	-41.5	10.0
10.000	-41.9	9.6
15.000	-41.9	9.6
20.000	-42.2	9.3
25.000	-42.8	8.7
30.000	-44.0	7.5

Antenna factor in dB(S/m) is to be added to receiver meter reading in dB(μV) to convert it into field intensity in dB(μA/m).

Antenna factor

Biconilog antenna EMCO, model 3141, serial number 1011, HL 0604

Frequency, MHz	Antenna factor, dB(1/m)	Frequency, MHz	Antenna factor, dB(1/m)	Frequency, MHz	Antenna factor, dB(1/m)
26	7.8	560	19.8	1300	27.0
28	7.8	580	20.6	1320	27.8
30	7.8	600	21.3	1340	28.3
40	7.2	620	21.5	1360	28.2
60	7.1	640	21.2	1380	27.9
70	8.5	660	21.4	1400	27.9
80	9.4	680	21.9	1420	27.9
90	9.8	700	22.2	1440	27.8
100	9.7	720	22.2	1460	27.8
110	9.3	740	22.1	1480	28.0
120	8.8	760	22.3	1500	28.5
130	8.7	780	22.6	1520	28.9
140	9.2	800	22.7	1540	29.6
150	9.8	820	22.9	1560	29.8
160	10.2	840	23.1	1580	29.6
170	10.4	860	23.4	1600	29.5
180	10.4	880	23.8	1620	29.3
190	10.3	900	24.1	1640	29.2
200	10.6	920	24.1	1660	29.4
220	11.6	940	24.0	1680	29.6
240	12.4	960	24.1	1700	29.8
260	12.8	980	24.5	1720	30.3
280	13.7	1000	24.9	1740	30.8
300	14.7	1020	25.0	1760	31.1
320	15.2	1040	25.2	1780	31.0
340	15.4	1060	25.4	1800	30.9
360	16.1	1080	25.6	1820	30.7
380	16.4	1100	25.7	1840	30.6
400	16.6	1120	26.0	1860	30.6
420	16.7	1140	26.4	1880	30.6
440	17.0	1160	27.0	1900	30.6
460	17.7	1180	27.0	1920	30.7
480	18.1	1200	26.7	1940	30.9
500	18.5	1220	26.5	1960	31.2
520	19.1	1240	26.5	1980	31.6
540	19.5	1260	26.5	2000	32.0
		1280	26.6		

Antenna factor in dB(1/m) is to be added to receiver meter reading in dB(μV) to convert it into field intensity in dB(μV/m).

Antenna factor
Double-ridged wave guide horn antenna
EMC Test Systems, model 3115, serial no: 9911-5964, HL 1984

Frequency, MHz	Antenna gain, dBi	Antenna factor. dB(1/m)
1000.0	5.8	24.5
1500.0	9.0	24.8
2000.0	8.6	27.7
2500.0	9.5	28.7
3000.0	8.9	30.8
3500.0	8.2	32.9
4000.0	9.6	32.7
4500.0	11.2	32.1
5000.0	10.6	33.6
5500.0	9.8	35.3
6000.0	10.1	35.7
6500.0	10.7	35.8
7000.0	10.9	36.2
7500.0	10.5	37.2
8000.0	11.1	37.2
8500.0	10.8	38.1
9000.0	10.7	38.6
9500.0	11.5	38.3
10000.0	11.8	38.4
10500.0	12.3	38.3
11000.0	12.3	38.8
11500.0	11.5	39.9
12000.0	12.2	39.6
12500.0	12.6	39.5
13000.0	12.0	40.5
13500.0	11.7	41.1
14000.0	11.7	41.5
14500.0	12.7	40.8
15000.0	14.2	39.5
15500.0	16.0	38.1
16000.0	16.2	38.1
16500.0	14.5	40.1
17000.0	12.2	42.6
17500.0	9.7	45.4
18000.0	6.6	48.7

Antenna factor is to be added to receiver meter reading in dB(μV) to convert it into field intensity in dB(μV/m).

Cable loss
Cable Coaxial, GORE A2P01POL118, 2.3 m, model:GORE-3, HL 0589
+ Cable Coaxial, ANDREW PSWJ4, 6m, model: ANDREW-6, HL 1004

No.	Frequency, MHz	Cable loss, dB	Tolerance (Specification), dB	Measurement uncertainty, dB
1	30	0.33	≤ 6.5	±0.12
2	50	0.40		
3	100	0.57		
4	300	0.97		
5	500	1.25		
6	800	1.59		
7	1000	1.81		
8	1200	1.97		
9	1400	2.15		
10	1600	2.28		
11	1800	2.43		
12	2000	2.61		
13	2200	2.75		
14	2400	2.89		
15	2600	2.97		
16	2800	3.21	≤ 6.5	±0.12
17	3000	3.32		
18	3300	3.47		
19	3600	3.62		
20	3900	3.84		
21	4200	3.92		±0.17
22	4500	4.07		
23	4800	4.36		
24	5100	4.62		
25	5400	4.78		
26	5700	5.16		
27	6000	5.67		
28	6500	5.99		

Cable loss
Cable RF, 2m, model: Sucoflex 104PE, S/N 13094/4PE, HL 1566

No.	Frequency, MHz	Cable loss, dB	Tolerance, dB	Measurement uncertainty, dB
1	30	0.10	≤ 5.0	±0.12
2	50	0.13		
3	100	0.20		
4	300	0.33		
5	500	0.45		
6	800	0.60		
7	1000	0.65		
8	1500	0.91		
9	2000	1.08		
10	2500	1.19		
11	3000	1.28		
12	3500	1.49		
13	4000	1.63		
14	4500	1.63	≤ 5.0	±0.17
15	5000	1.66		
16	5500	1.88		
17	6000	1.96		
18	6500	1.93		
19	7000	2.07		
20	7500	2.37		
21	8000	2.34		
22	8500	2.64		
23	9000	2.68		
24	9500	2.64		
25	10000	2.70		
26	10500	2.84		
27	11000	2.88		
28	11500	3.19		
29	12000	3.15		
30	12500	3.20	≤ 5.0	±0.26
31	13000	3.22		
32	13500	3.47		
33	14000	3.41		
34	14500	3.59		
35	15000	3.79		
36	15500	4.24		
37	16000	4.12		
38	16500	4.46		
39	17000	4.50		
40	17500	4.49		
41	18000	4.45		

Cable loss
Cable 18 GHz, 6.5 m, blue, model: NPS-1803A-6500-NPS, S/N T4974, HL 1947

Frequency, GHz	Cable loss, dB
0.03	0.30
0.05	0.38
0.10	0.53
0.20	0.74
0.30	0.91
0.40	1.05
0.50	1.18
0.60	1.29
0.70	1.40
0.80	1.50
0.90	1.59
1.00	1.68
1.10	1.77
1.20	1.86
1.30	1.94
1.40	2.01
1.50	2.08
1.60	2.16
1.70	2.22
1.80	2.29
1.90	2.36
2.00	2.42
2.10	2.48
2.20	2.54
2.30	2.60
2.40	2.66
2.50	2.71
2.60	2.77
2.70	2.83
2.80	2.89
2.90	2.95
3.10	3.06
3.30	3.17
3.50	3.28
3.70	3.39
3.90	3.51
4.10	3.62
4.30	3.76
4.50	3.87
4.70	4.01
4.90	4.10
5.10	4.21
5.30	4.31
5.50	4.43
5.70	4.56
5.90	4.71

Frequency, GHz	Cable loss, dB
6.10	4.87
6.30	4.95
6.50	4.94
6.70	4.88
6.90	4.87
7.10	4.83
7.30	4.85
7.50	4.86
7.70	4.91
7.90	4.96
8.10	5.03
8.30	5.08
8.50	5.13
8.70	5.21
8.90	5.22
9.10	5.34
9.30	5.35
9.50	5.52
9.70	5.51
9.90	5.66
10.10	5.70
10.30	5.78
10.50	5.79
10.70	5.82
10.90	5.86
11.10	5.94
11.30	6.06
11.50	6.21
11.70	6.44
11.90	6.61
12.10	6.76
12.40	6.68
13.00	6.66
13.50	6.81
14.00	6.90
14.50	6.90
15.00	6.97
15.50	7.17
16.00	7.28
16.50	7.27
17.00	7.38
17.50	7.68
18.00	7.92

Cable loss
RF cable 8 m, model RG-214, HL 2009

No.	Frequency, MHz	Cable loss, dB	Tolerance (Specification), dB	Measurement uncertainty, dB
1	1	0.10	NA	±0.12
2	10	0.14		
3	30	0.25		
4	50	0.34		
5	100	0.53		
6	300	0.99		
7	500	1.31		
8	800	1.73		
9	1000	1.98		
10	1100	2.11		
11	1200	2.21		
12	1300	2.35		
13	1400	2.46		
14	1500	2.55		
15	1600	2.68		
16	1700	2.78		
17	1800	2.88		
18	1900	2.98		
19	2000	3.09		

13 APPENDIX F Abbreviations and acronyms

A	ampere
AC	alternating current
A/m	ampere per meter
AM	amplitude modulation
AVRG	average (detector)
cm	centimeter
dB	decibel
dBm	decibel referred to one milliwatt
dB(μV)	decibel referred to one microvolt
dB(μV/m)	decibel referred to one microvolt per meter
dB(μA)	decibel referred to one microampere
dBΩ	decibel referred to one Ohm
DC	direct current
DTS	digital transmission system
EIRP	equivalent isotropically radiated power
ERP	effective radiated power
EUT	equipment under test
F	frequency
FHSS	frequency hopping spread spectrum
GHz	gigahertz
GND	ground
H	height
HL	Hermon laboratories
Hz	hertz
ITE	information technology equipment
k	kilo
kHz	kilohertz
LISN	line impedance stabilization network
LO	local oscillator
m	meter
MHz	megahertz
min	minute
mm	millimeter
ms	millisecond
μs	microsecond
NA	not applicable
NT	not tested
OATS	open area test site
Ω	Ohm
PCB	printed circuit board
PM	pulse modulation
PS	power supply
ppm	part per million (10^{-6})
QP	quasi-peak
RE	radiated emission
RF	radio frequency
rms	root mean square
Rx	receive
s	second
T	temperature
Tx	transmit
V	volt
VA	volt-ampere

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