Test specification:	**FCC section 15.407(b), RSS-210 Annex 9, section A9.2 Unwanted radiated emissions**		
Test procedure:	Public notice DA 00-705 / ANSI C63.4, Section 13.1.4		
Test mode:	Compliance	**Verdict:**	PASS
Date:	11/09/2009		
Temperature: 24ºC	**Air Pressure:** 1015 hPa	**Relative Humidity:** 47 %	**Power Supply:** 120 VAC
Remarks: EUT with 6 dBi antenna assembly gain, dish antenna			

Table 7.3.6 Field strength of spurious emissions below 1 GHz within restricted bands

ASSIGNED FREQUENCY RANGE:	5470 - 5725 MHz
INVESTIGATED FREQUENCY RANGE:	0.009 - 1000 MHz
TEST SITE	Semi Anechoic Chamber
TEST DISTANCE:	3 m
MODULATION:	OFDM, BPSK
BIT RATE:	6.5 Mbps
DUTY CYCLE:	100 %
TRANSMITTER OUTPUT POWER	Maximum
RESOLUTION BANDWIDTH:	1.0 kHz (9 kHz – 150 kHz) 9.0 kHz (150 kHz – 30 MHz) 120 kHz (30 MHz – 1000 MHz)
VIDEO BANDWIDTH:	> Resolution bandwidth
TEST ANTENNA TYPE:	Active loop (9 kHz – 30 MHz) Biconilog (30 MHz – 1000 MHz) Double ridged guide (above 1000 MHz)
NOTE:	Worst case 10 MHz EBW

Frequency, MHz	Peak, dB(µV/m)	Quasi-peak dB(µV/m)			Antenna polarization	Antenna height, m	Turntable position**, degrees	Verdict
		Measured emission, dB(µV/m)	Limit, dB(µV/m)	Margin, dB*				
Low channel (5485 MHz)								
37.6405	40.4	36.7	40.0	-3.30	Vertical	1.0	52	
111.61335	39.6	37.0	43.5	-6.50	Vertical	1.0	170	
974.67540	45.4	43.8	54.0	-10.20	Vertical	1.1	330	
First mid channel (5585 MHz)								
37.6405	40.3	36.7	40.0	-3.30	Vertical	1.0	52	
111.61335	39.8	38.2	43.5	-5.30	Vertical	1.0	170	
974.67540	45.3	43.8	54.0	-10.20	Vertical	1.1	330	
Second mid channel (5665 MHz)								Pass
37.6405	39.8	36.8	40.0	-3.2	Vertical	1.0	52	
111.61335	39.9	37.3	43.5	-6.2	Vertical	1.0	170	
974.67540	45.4	43.9	54.0	-10.1	Vertical	1.1	330	
High channel (5710 MHz)								
37.6405	39.9	36.9	40.0	-3.1	Vertical	1.0	52	
111.61335	39.8	37.4	43.5	-6.1	Vertical	1.0	170	
974.67540	45.3	43.8	54.0	-10.2	Vertical	1.1	330	

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

Reference numbers of test equipment used

HL 0446	HL 0521	HL 0604	HL 3123	HL 3616			

Full description is given in Appendix A.

Test specification:	FCC section 15.407(b), RSS-210 Annex 9, section A9.2 Unwanted radiated emissions		
Test procedure:	Public notice DA 00-705 / ANSI C63.4, Section 13.1.4		
Test mode:	Compliance	**Verdict:**	PASS
Date:	11/09/2009		
Temperature: 24ºC	**Air Pressure:** 1015 hPa	**Relative Humidity:** 47 %	**Power Supply:** 120 VAC
Remarks: EUT with 6 dBi antenna assembly gain, dish antenna			

Table 7.3.7 Field strength of spurious emissions above 1 GHz within restricted bands

ASSIGNED FREQUENCY RANGE:	5470 - 5725 MHz
INVESTIGATED FREQUENCY RANGE:	0.009 - 40000 MHz
TEST SITE	Semi Anechoic Chamber
TEST DISTANCE:	3 m
MODULATION:	OFDM, BPSK
BIT RATE:	6.5 Mbps
DUTY CYCLE:	100 %
TRANSMITTER OUTPUT POWER	Maximum
RESOLUTION BANDWIDTH:	1000 kHz
VIDEO BANDWIDTH:	> Resolution bandwidth
TEST ANTENNA TYPE:	Double ridged guide (above 1000 MHz)
NOTE:	Worst case 10 MHz EBW

Frequency, MHz	Peak, dB(µV/m)			Average dB(µV/m)			Ant. polariz.	Ant. height, m	Turntable position**, degrees	Verdict
	Measured emission, dB(µV/m)	Limit, dB(µV/m)	Margin, dB*	Measured emission, dB(µV/m)	Limit, dB(µV/m)	Margin, dB*				
First mid channel (5585 MHz)										
11170.58	49.54	74.0	-24.46	37.26	54.0	-16.74	Vertical	1.0	350	Pass
Second mid channel (5665 MHz)										
11329.58	52.29	74.0	-21.71	39.40	54.0	-14.60	Vertical	1.0	350	
High channel (5710 MHz)										
11420.08	52.57	74.0	-21.43	39.03	54.0	-14.97	Vertical	1.0	80	

For band edge emission results refer to section 7.4 of this test report.

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

Reference numbers of test equipment used

HL 0446	HL 0521	HL 0604	HL 0768	HL 0769	HL 1984	HL 2254	HL 2387
HL 2871	HL 2909	HL 2952	HL 3123	HL 3531	HL 3533	HL 3535	HL 3616
HL 3818							

Full description is given in Appendix A.

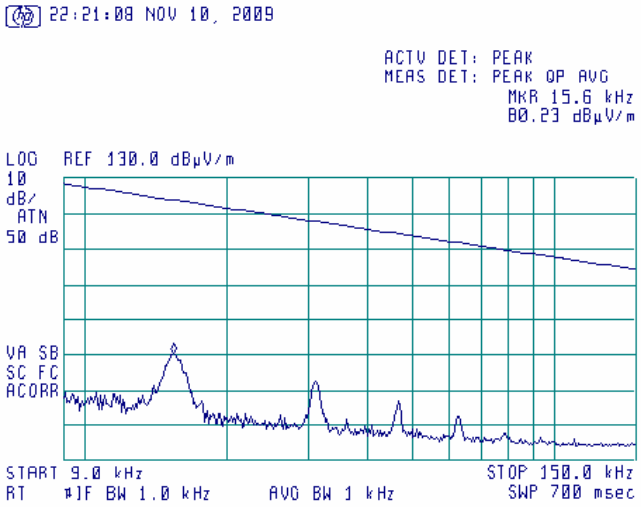
Table 7.3.8 Restricted bands

MHz	MHz	MHz	MHz	MHz	GHz
0.09 - 0.11	8.37625 - 8.38675	73 - 74.6	399.9 - 410	2690 - 2900	10.6 - 12.7
0.495 - 0.505	8.41425 - 8.41475	74.8 - 75.2	608 - 614	3260 - 3267	13.25 - 13.4
2.1735 - 2.1905	12.29 - 12.293	108 - 121.94	960 - 1240	3332 - 3339	14.47 - 14.5
4.125 - 4.128	12.51975 - 12.52025	123 - 138	1300 - 1427	3345.8 - 3358	15.35 - 16.2
4.17725 - 4.17775	12.57675 - 12.57725	149.9 - 150.05	1435 - 1626.5	3600 - 4400	17.7 - 21.4
4.20725 - 4.20775	13.36 - 13.41	156.52475 - 156.52525	1645.5 - 1646.5	4500 - 5150	22.01 - 23.12
6.215 - 6.218	16.42 - 16.423	156.7 - 156.9	1660 - 1710	5350 – 5460	23.6 - 24
6.26775 - 6.26825	16.69475 - 16.69525	162.0125 - 167.17	1718.8 - 1722.2	7250 - 7750	31.2 - 31.8
6.31175 - 6.31225	16.80425 - 16.80475	167.72 - 173.2	2200 - 2300	8025 – 8500	36.43 - 36.5
8.291 - 8.294	25.5 - 25.67	240 - 285	2310 - 2390	9000 - 9200	Above 38.6
8.362 - 8.366	37.5 - 38.25	322 - 335.4	2483.5 - 2500	9300 - 9500	

Test specification:	FCC section 15.407(b), RSS-210 Annex 9, section A9.2 Unwanted radiated emissions		
Test procedure:	Public notice DA 00-705 / ANSI C63.4, Section 13.1.4		
Test mode:	Compliance	**Verdict:**	PASS
Date:	11/09/2009		
Temperature: 24ºC	**Air Pressure:** 1015 hPa	**Relative Humidity:** 47 %	**Power Supply:** 120 VAC
Remarks: EUT with 6 dBi antenna assembly gain, dish antenna			

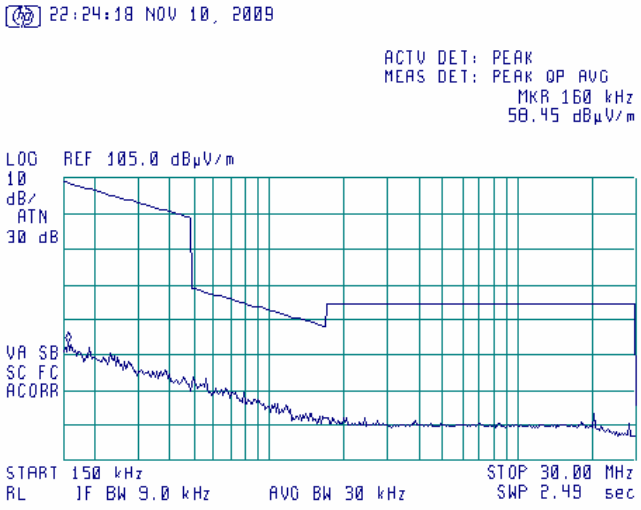
Plot 7.3.52 Radiated emission measurements from 9 to 150 kHz at the low carrier frequency

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



Plot 7.3.53 Radiated emission measurements from 9 to 150 kHz at the first mid carrier frequency

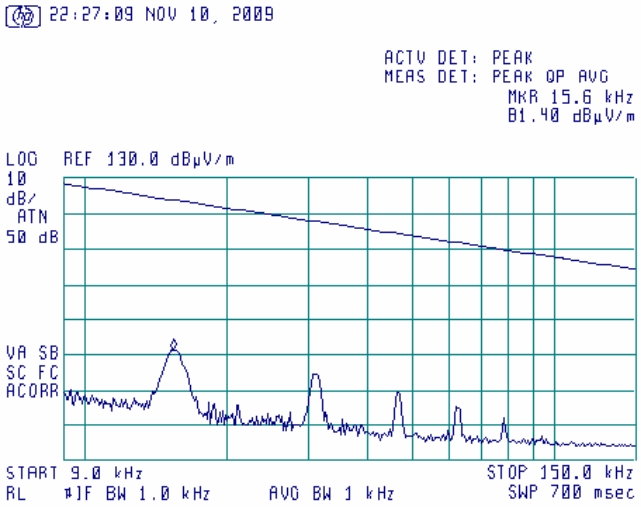
TEST SITE: Anechoic chamber
TEST DISTANCE: 3 m
ANTENNA POLARIZATION: Vertical and Horizontal



Test specification:	FCC section 15.407(b), RSS-210 Annex 9, section A9.2 Unwanted radiated emissions		
Test procedure:	Public notice DA 00-705 / ANSI C63.4, Section 13.1.4		
Test mode:	Compliance	**Verdict:**	PASS
Date:	11/09/2009		
Temperature: 24ºC	**Air Pressure:** 1015 hPa	**Relative Humidity:** 47 %	**Power Supply:** 120 VAC
Remarks: EUT with 6 dBi antenna assembly gain, dish antenna			

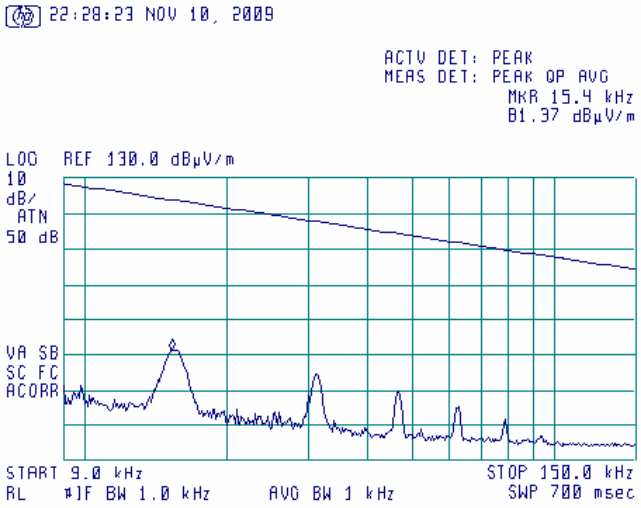
Plot 7.3.54 Radiated emission measurements from 9 to 150 kHz at the second mid carrier frequency

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



Plot 7.3.55 Radiated emission measurements from 9 to 150 kHz at the high carrier frequency

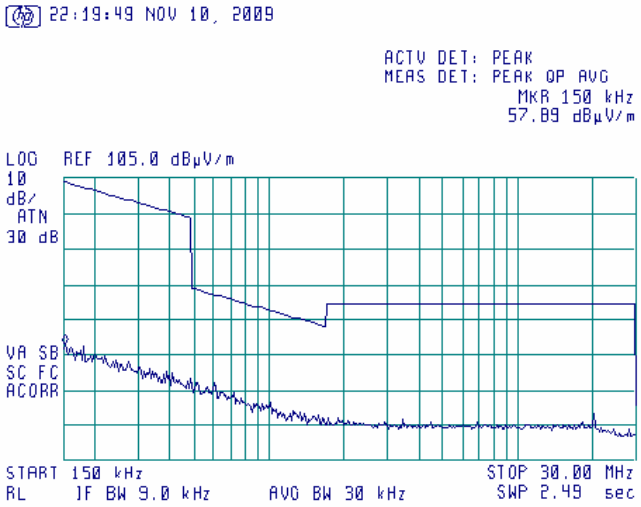
TEST SITE: Anechoic chamber
TEST DISTANCE: 3 m
ANTENNA POLARIZATION: Vertical and Horizontal



Test specification:	FCC section 15.407(b), RSS-210 Annex 9, section A9.2 Unwanted radiated emissions		
Test procedure:	Public notice DA 00-705 / ANSI C63.4, Section 13.1.4		
Test mode:	Compliance	**Verdict:**	PASS
Date:	11/09/2009		
Temperature: 24ºC	**Air Pressure:** 1015 hPa	**Relative Humidity:** 47 %	**Power Supply:** 120 VAC
Remarks: EUT with 6 dBi antenna assembly gain, dish antenna			

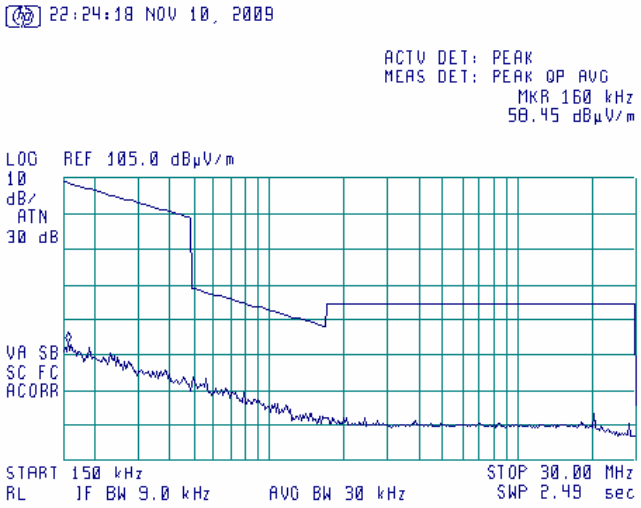
Plot 7.3.56 Radiated emission measurements from 0.15 MHz to 30 MHz at the low carrier frequency

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



Plot 7.3.57 Radiated emission measurements from 0.15 MHz to 30 MHz at the first mid carrier frequency

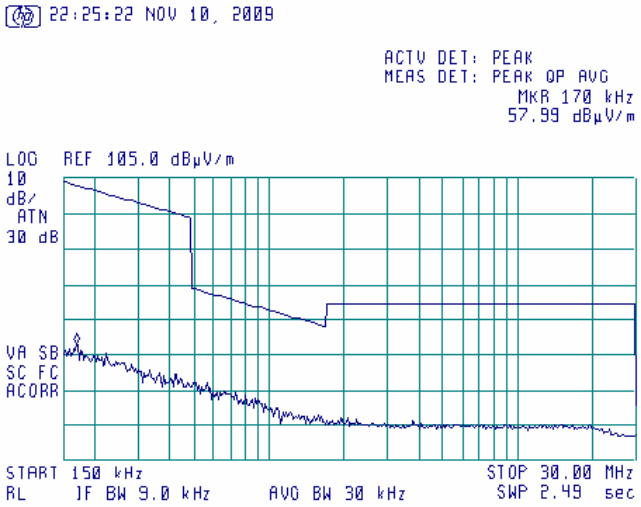
TEST SITE: Anechoic chamber
TEST DISTANCE: 3 m
ANTENNA POLARIZATION: Vertical and Horizontal



Test specification:	FCC section 15.407(b), RSS-210 Annex 9, section A9.2 Unwanted radiated emissions		
Test procedure:	Public notice DA 00-705 / ANSI C63.4, Section 13.1.4		
Test mode:	Compliance	**Verdict:**	PASS
Date:	11/09/2009		
Temperature: 24ºC	**Air Pressure:** 1015 hPa	**Relative Humidity:** 47 %	**Power Supply:** 120 VAC
Remarks: EUT with 6 dBi antenna assembly gain, dish antenna			

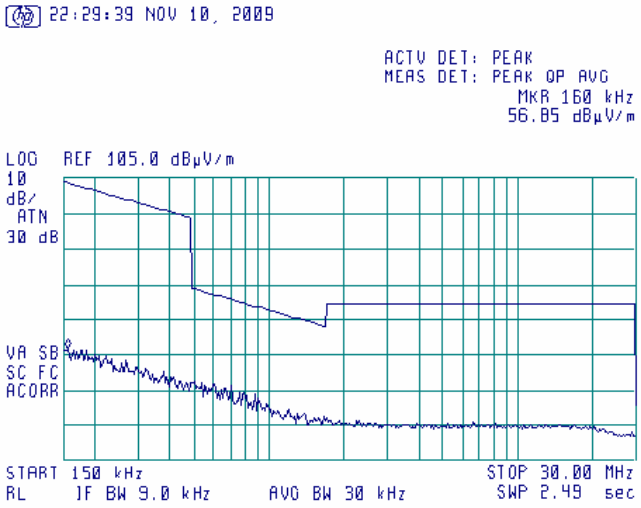
Plot 7.3.58 Radiated emission measurements from 0.15 MHz to 30 MHz at the second mid carrier frequency

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



Plot 7.3.59 Radiated emission measurements from 0.15 MHz to 30 MHz at the high carrier frequency

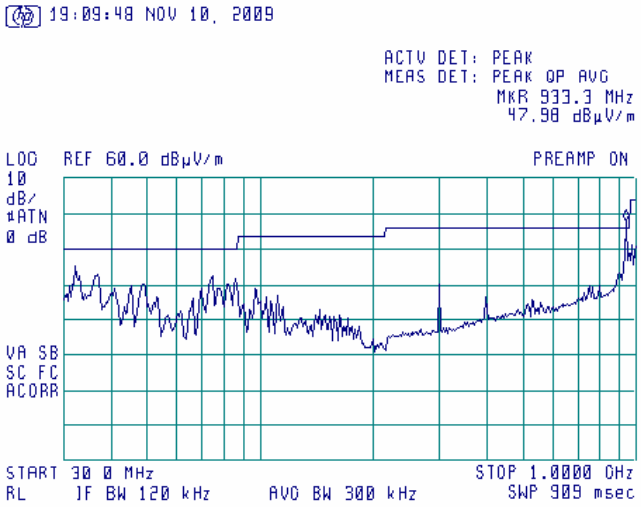
TEST SITE: Anechoic chamber
TEST DISTANCE: 3 m
ANTENNA POLARIZATION: Vertical and Horizontal



Test specification:	FCC section 15.407(b), RSS-210 Annex 9, section A9.2 Unwanted radiated emissions		
Test procedure:	Public notice DA 00-705 / ANSI C63.4, Section 13.1.4		
Test mode:	Compliance	**Verdict:**	PASS
Date:	11/09/2009		
Temperature: 24ºC	**Air Pressure:** 1015 hPa	**Relative Humidity:** 47 %	**Power Supply:** 120 VAC
Remarks: EUT with 6 dBi antenna assembly gain, dish antenna			

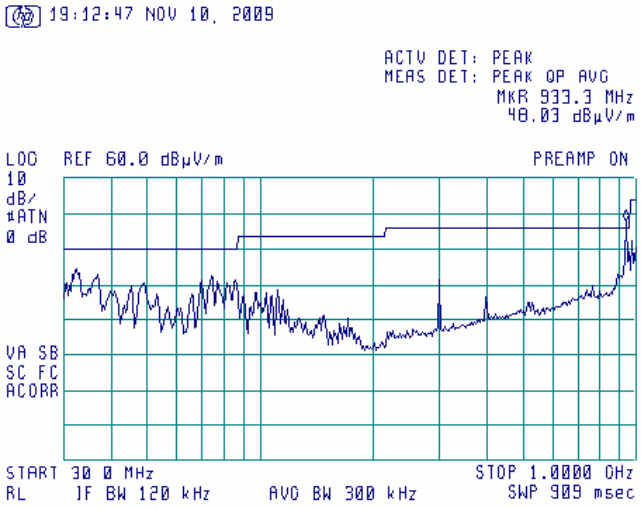
Plot 7.3.60 Radiated emission measurements from 30 MHz to 1000 MHz at the low carrier frequency

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



Plot 7.3.61 Radiated emission measurements from 30 MHz to 1000 MHz at the first mid carrier frequency

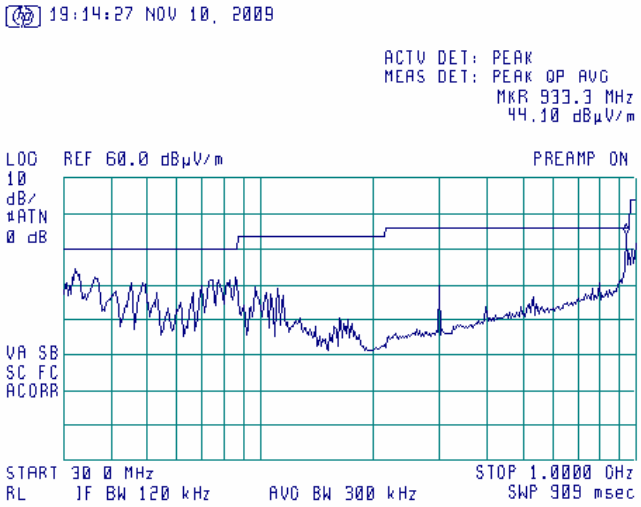
TEST SITE: Anechoic chamber
TEST DISTANCE: 3 m
ANTENNA POLARIZATION: Vertical and Horizontal



Test specification:	FCC section 15.407(b), RSS-210 Annex 9, section A9.2 Unwanted radiated emissions		
Test procedure:	Public notice DA 00-705 / ANSI C63.4, Section 13.1.4		
Test mode:	Compliance	**Verdict:**	PASS
Date:	11/09/2009		
Temperature: 24ºC	**Air Pressure:** 1015 hPa	**Relative Humidity:** 47 %	**Power Supply:** 120 VAC
Remarks: EUT with 6 dBi antenna assembly gain, dish antenna			

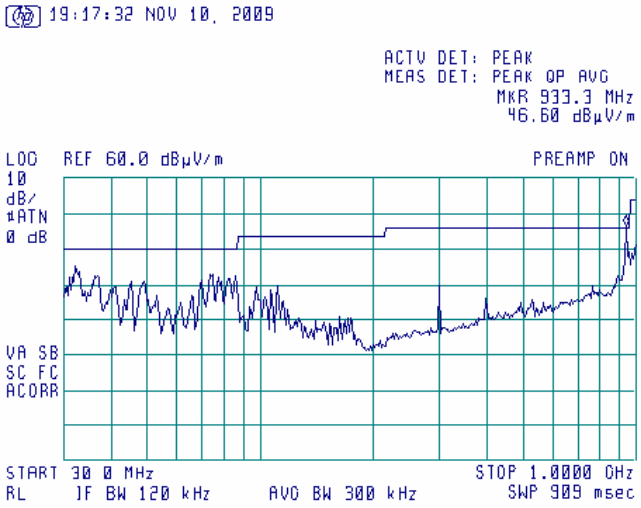
Plot 7.3.62 Radiated emission measurements from 30 MHz to 1000 MHz at the second mid carrier frequency

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



Plot 7.3.63 Radiated emission measurements from 30 MHz to 1000 MHz at the high carrier frequency

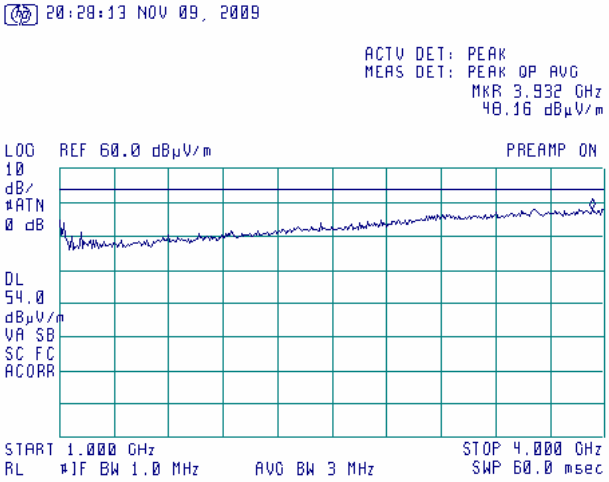
TEST SITE: Anechoic chamber
TEST DISTANCE: 3 m
ANTENNA POLARIZATION: Vertical and Horizontal



Test specification:	FCC section 15.407(b), RSS-210 Annex 9, section A9.2 Unwanted radiated emissions		
Test procedure:	Public notice DA 00-705 / ANSI C63.4, Section 13.1.4		
Test mode:	Compliance	**Verdict:**	PASS
Date:	11/09/2009		
Temperature: 24ºC	**Air Pressure:** 1015 hPa	**Relative Humidity:** 47 %	**Power Supply:** 120 VAC
Remarks: EUT with 6 dBi antenna assembly gain, dish antenna			

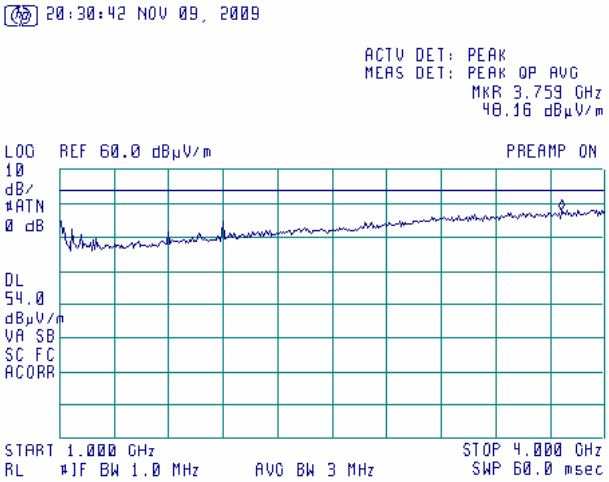
Plot 7.3.64 Radiated emission measurements from 1.0 to 4.0 GHz at the low carrier frequency

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



Plot 7.3.65 Radiated emission measurements from 1.0 to 4.0 GHz at the first mid carrier frequency

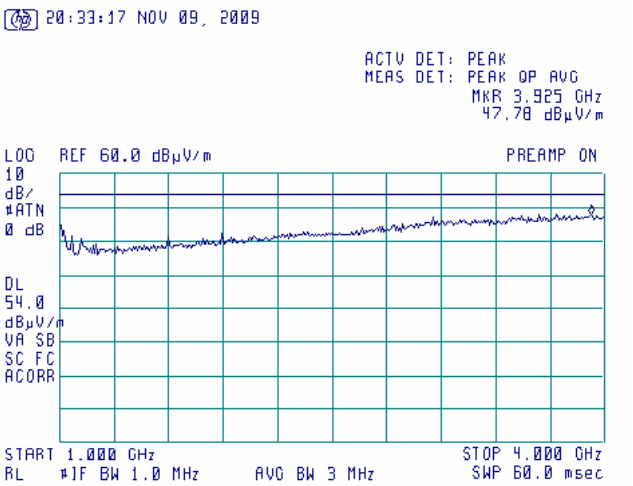
TEST SITE: Anechoic chamber
TEST DISTANCE: 3 m
ANTENNA POLARIZATION: Vertical and Horizontal
DETECTOR: Peak under average limit



Test specification:	FCC section 15.407(b), RSS-210 Annex 9, section A9.2 Unwanted radiated emissions		
Test procedure:	Public notice DA 00-705 / ANSI C63.4, Section 13.1.4		
Test mode:	Compliance	**Verdict:**	PASS
Date:	11/09/2009		
Temperature: 24ºC	**Air Pressure:** 1015 hPa	**Relative Humidity:** 47 %	**Power Supply:** 120 VAC
Remarks: EUT with 6 dBi antenna assembly gain, dish antenna			

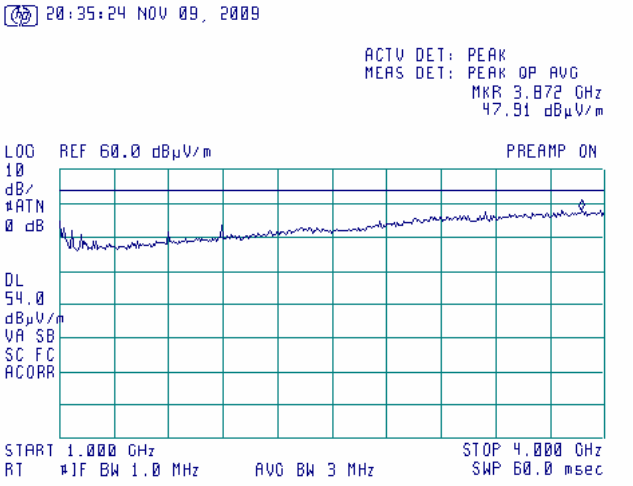
Plot 7.3.66 Radiated emission measurements from 1.0 to 4.0 GHz at the second mid carrier frequency

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



Plot 7.3.67 Radiated emission measurements from 1.0 to 4.0 GHz at the high carrier frequency

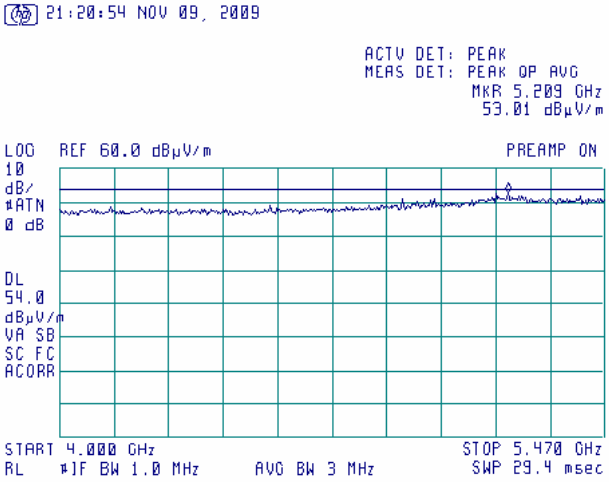
TEST SITE: Anechoic chamber
TEST DISTANCE: 3 m
ANTENNA POLARIZATION: Vertical and Horizontal
DETECTOR: Peak under average limit



Test specification:	**FCC section 15.407(b), RSS-210 Annex 9, section A9.2** **Unwanted radiated emissions**		
Test procedure:	Public notice DA 00-705 / ANSI C63.4, Section 13.1.4		
Test mode:	Compliance	**Verdict:**	PASS
Date:	11/09/2009		
Temperature: 24ºC	**Air Pressure:** 1015 hPa	**Relative Humidity:** 47 %	**Power Supply:** 120 VAC
Remarks: EUT with 6 dBi antenna assembly gain, dish antenna			

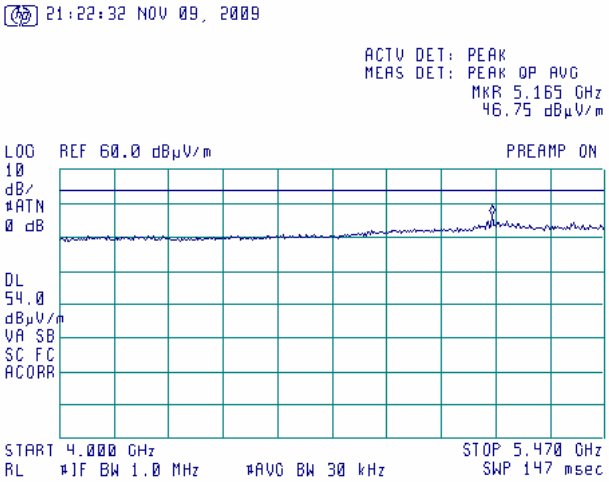
Plot 7.3.68 Radiated emission measurements from 4.0 to 5.47 GHz at the low carrier frequency

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



Plot 7.3.69 Radiated emission measurements from 4.0 to 5.47 GHz at the low carrier frequency

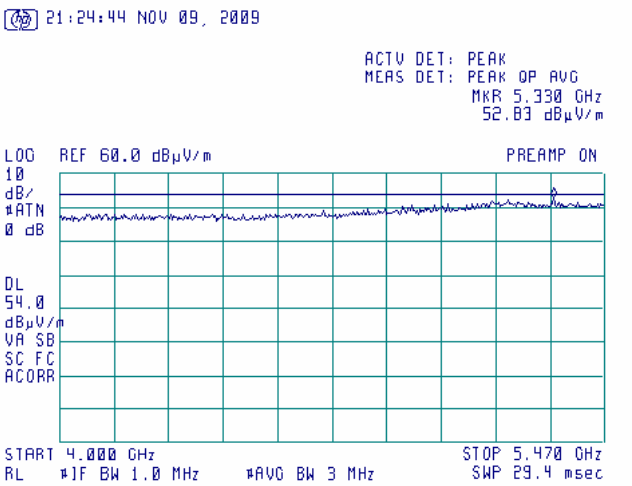
TEST SITE: Anechoic chamber
TEST DISTANCE: 3 m
ANTENNA POLARIZATION: Vertical and Horizontal
DETECTOR: Average



Test specification:	FCC section 15.407(b), RSS-210 Annex 9, section A9.2 Unwanted radiated emissions		
Test procedure:	Public notice DA 00-705 / ANSI C63.4, Section 13.1.4		
Test mode:	Compliance	**Verdict:**	PASS
Date:	11/09/2009		
Temperature: 24ºC	**Air Pressure:** 1015 hPa	**Relative Humidity:** 47 %	**Power Supply:** 120 VAC
Remarks: EUT with 6 dBi antenna assembly gain, dish antenna			

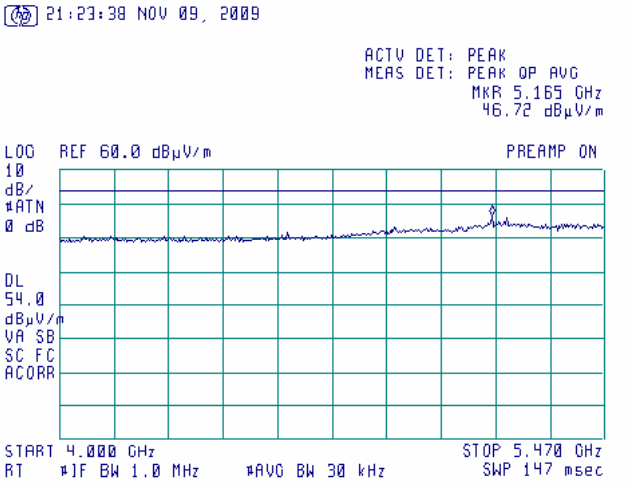
Plot 7.3.70 Radiated emission measurements from 4.0 to 5.47 GHz at the first mid carrier frequency

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



Plot 7.3.71 Radiated emission measurements from 4.0 to 5.47 GHz at the first mid carrier frequency

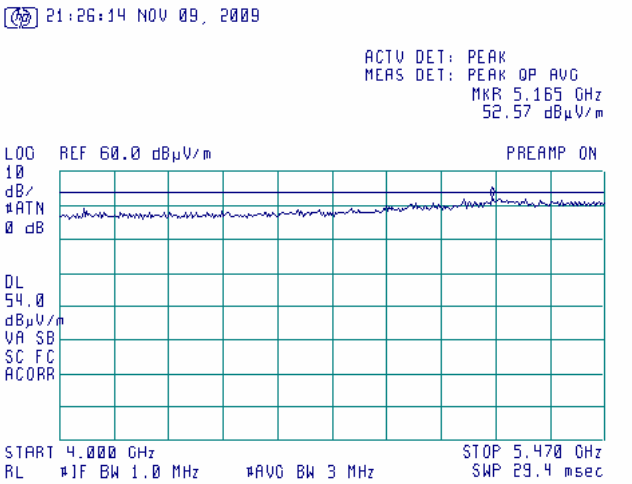
TEST SITE: Anechoic chamber
TEST DISTANCE: 3 m
ANTENNA POLARIZATION: Vertical and Horizontal
DETECTOR: Average



Test specification:	FCC section 15.407(b), RSS-210 Annex 9, section A9.2 Unwanted radiated emissions		
Test procedure:	Public notice DA 00-705 / ANSI C63.4, Section 13.1.4		
Test mode:	Compliance	**Verdict:**	PASS
Date:	11/09/2009		
Temperature: 24ºC	**Air Pressure:** 1015 hPa	**Relative Humidity:** 47 %	**Power Supply:** 120 VAC
Remarks: EUT with 6 dBi antenna assembly gain, dish antenna			

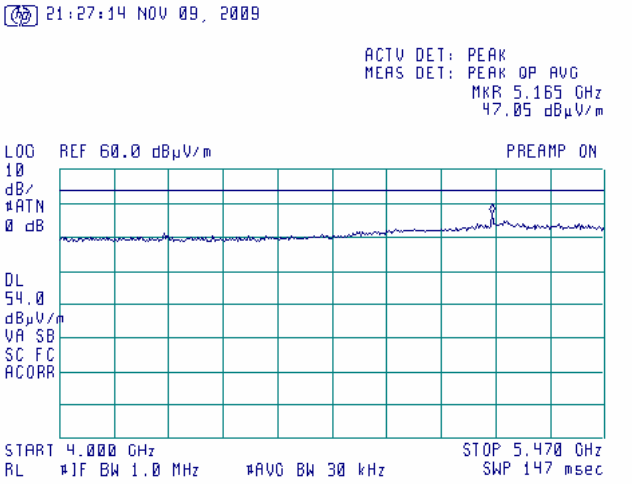
Plot 7.3.72 Radiated emission measurements from 4.0 to 5.47 GHz at the second mid carrier frequency

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



Plot 7.3.73 Radiated emission measurements from 4.0 to 5.47 GHz at the second mid carrier frequency

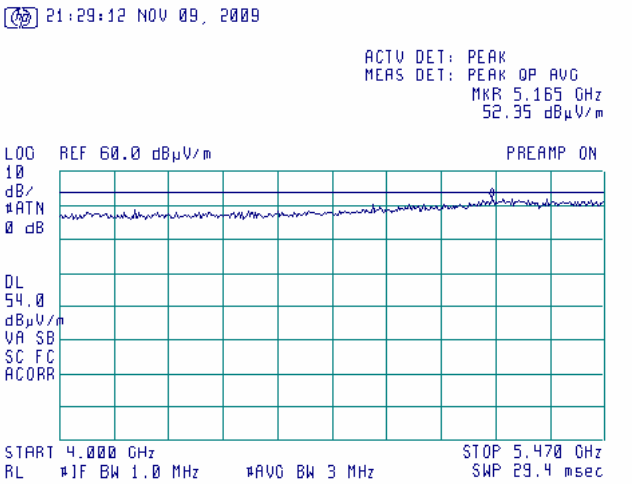
TEST SITE: Anechoic chamber
TEST DISTANCE: 3 m
ANTENNA POLARIZATION: Vertical and Horizontal
DETECTOR: Average



Test specification:	FCC section 15.407(b), RSS-210 Annex 9, section A9.2 Unwanted radiated emissions		
Test procedure:	Public notice DA 00-705 / ANSI C63.4, Section 13.1.4		
Test mode:	Compliance	**Verdict:**	PASS
Date:	11/09/2009		
Temperature: 24ºC	**Air Pressure:** 1015 hPa	**Relative Humidity:** 47 %	**Power Supply:** 120 VAC
Remarks: EUT with 6 dBi antenna assembly gain, dish antenna			

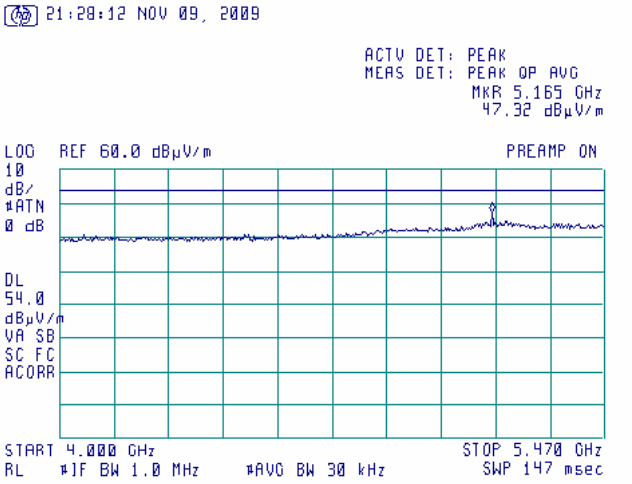
Plot 7.3.74 Radiated emission measurements from 4.0 to 5.47 GHz at the high carrier frequency

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



Plot 7.3.75 Radiated emission measurements from 4.0 to 5.47 GHz at the high carrier frequency

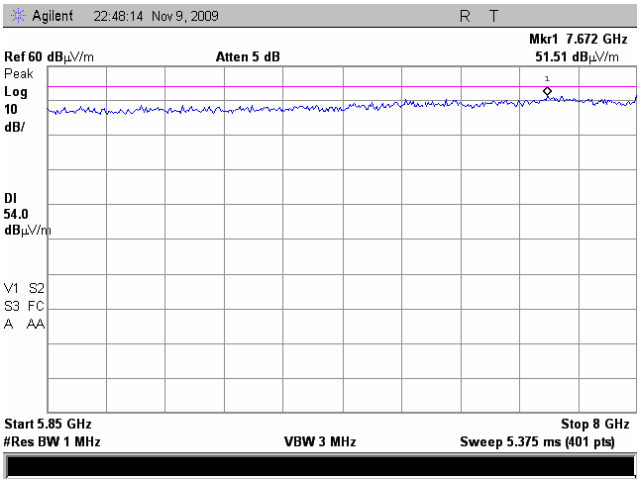
TEST SITE: Anechoic chamber
TEST DISTANCE: 3 m
ANTENNA POLARIZATION: Vertical and Horizontal
DETECTOR: Average



Test specification:	FCC section 15.407(b), RSS-210 Annex 9, section A9.2 Unwanted radiated emissions		
Test procedure:	Public notice DA 00-705 / ANSI C63.4, Section 13.1.4		
Test mode:	Compliance	**Verdict:**	PASS
Date:	11/09/2009		
Temperature: 24ºC	**Air Pressure:** 1015 hPa	**Relative Humidity:** 47 %	**Power Supply:** 120 VAC
Remarks: EUT with 6 dBi antenna assembly gain, dish antenna			

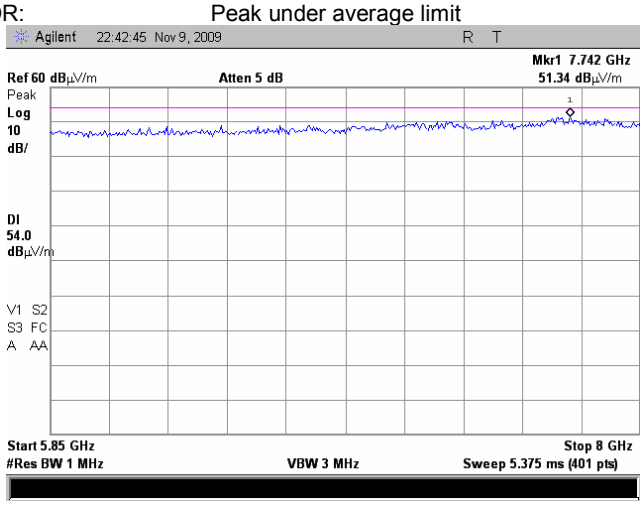
Plot 7.3.76 Radiated emission measurements from 5.85 to 8 GHz at the low carrier frequency

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



Plot 7.3.77 Radiated emission measurements from 5.85 to 8 GHz at the first mid carrier frequency

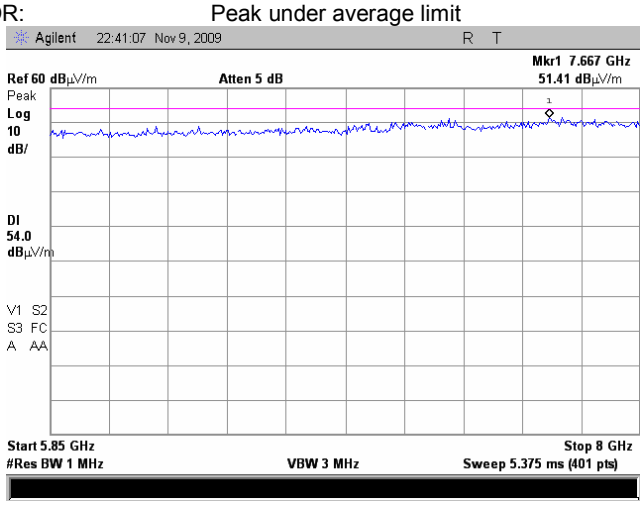
TEST SITE: Anechoic chamber
TEST DISTANCE: 3 m
ANTENNA POLARIZATION: Vertical and Horizontal
DETECTOR: Peak under average limit



Test specification:	**FCC section 15.407(b), RSS-210 Annex 9, section A9.2** **Unwanted radiated emissions**		
Test procedure:	Public notice DA 00-705 / ANSI C63.4, Section 13.1.4		
Test mode:	Compliance	**Verdict:**	PASS
Date:	11/09/2009		
Temperature: 24ºC	**Air Pressure:** 1015 hPa	**Relative Humidity:** 47 %	**Power Supply:** 120 VAC
Remarks: EUT with 6 dBi antenna assembly gain, dish antenna			

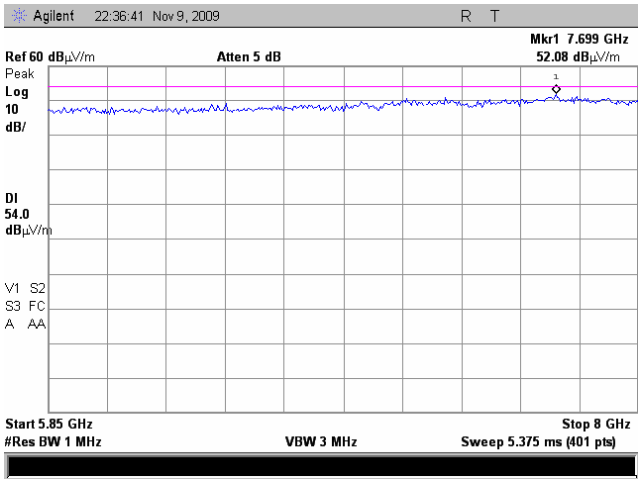
Plot 7.3.78 Radiated emission measurements from 5.85 to 8 GHz at the second mid carrier frequency

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



Plot 7.3.79 Radiated emission measurements from 5.85 to 8 GHz at the high carrier frequency

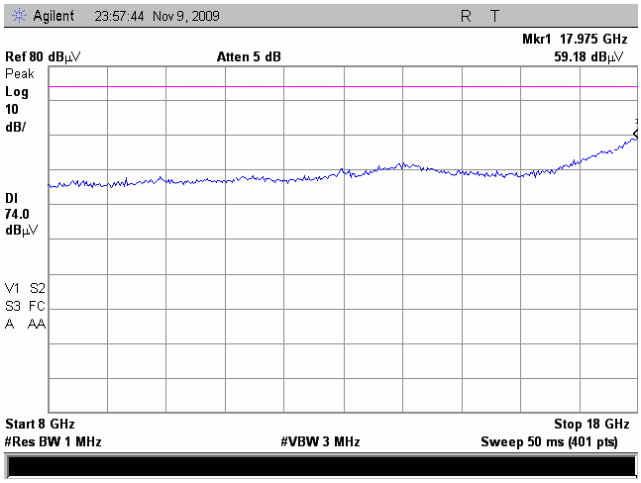
TEST SITE: Anechoic chamber
TEST DISTANCE: 3 m
ANTENNA POLARIZATION: Vertical and Horizontal
DETECTOR: Peak



Test specification:	FCC section 15.407(b), RSS-210 Annex 9, section A9.2 Unwanted radiated emissions		
Test procedure:	Public notice DA 00-705 / ANSI C63.4, Section 13.1.4		
Test mode:	Compliance	**Verdict:**	PASS
Date:	11/09/2009		
Temperature: 24ºC	**Air Pressure:** 1015 hPa	**Relative Humidity:** 47 %	**Power Supply:** 120 VAC
Remarks: EUT with 6 dBi antenna assembly gain, dish antenna			

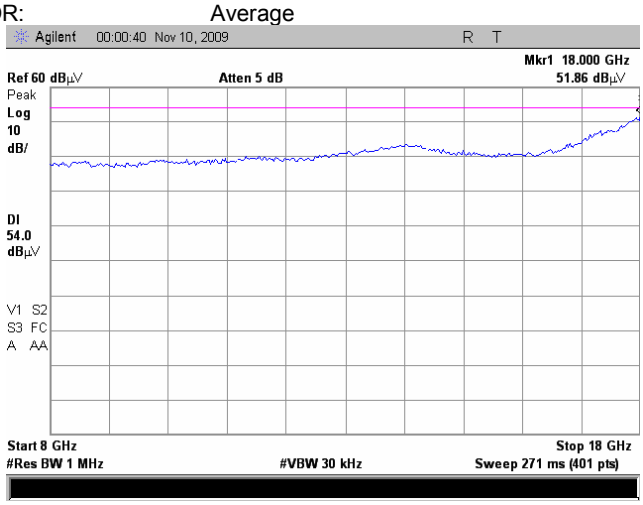
Plot 7.3.80 Radiated emission measurements from 8 to 18 GHz at the low carrier frequency

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



Plot 7.3.81 Radiated emission measurements from 8 to 18 GHz at the low carrier frequency

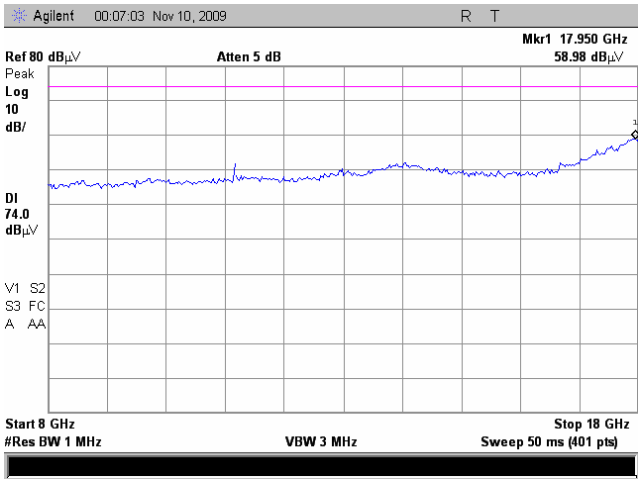
TEST SITE: Anechoic chamber
TEST DISTANCE: 3 m
ANTENNA POLARIZATION: Vertical and Horizontal
DETECTOR: Average



Test specification:	**FCC section 15.407(b), RSS-210 Annex 9, section A9.2** **Unwanted radiated emissions**		
Test procedure:	Public notice DA 00-705 / ANSI C63.4, Section 13.1.4		
Test mode:	Compliance	**Verdict:**	PASS
Date:	11/09/2009		
Temperature: 24ºC	**Air Pressure:** 1015 hPa	**Relative Humidity:** 47 %	**Power Supply:** 120 VAC
Remarks: EUT with 6 dBi antenna assembly gain, dish antenna			

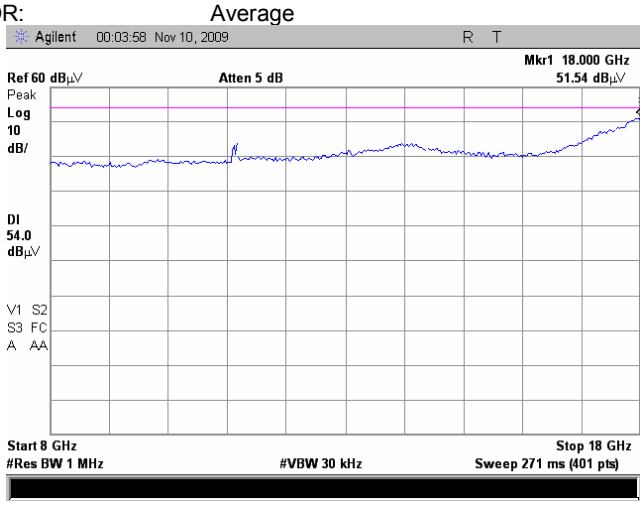
Plot 7.3.82 Radiated emission measurements from 8 to 18 GHz at the first mid carrier frequency

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



Plot 7.3.83 Radiated emission measurements from 8 to 18 GHz at the first mid carrier frequency

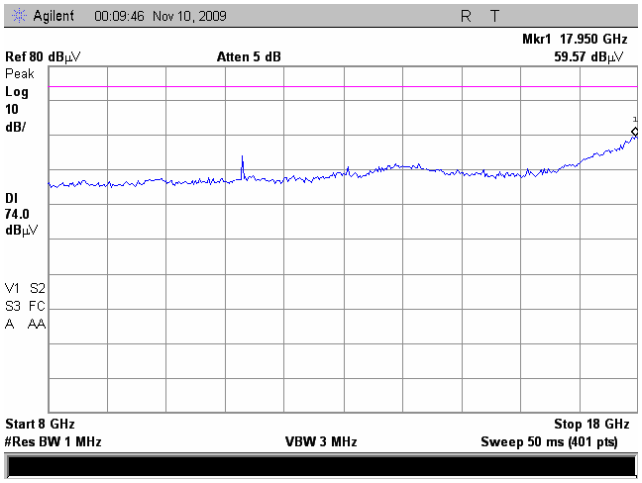
TEST SITE: OATS
TEST DISTANCE: 3 m
ANTENNA POLARIZATION: Vertical and Horizontal
DETECTOR: Average



Test specification:	FCC section 15.407(b), RSS-210 Annex 9, section A9.2 Unwanted radiated emissions		
Test procedure:	Public notice DA 00-705 / ANSI C63.4, Section 13.1.4		
Test mode:	Compliance	**Verdict:**	PASS
Date:	11/09/2009		
Temperature: 24ºC	**Air Pressure:** 1015 hPa	**Relative Humidity:** 47 %	**Power Supply:** 120 VAC
Remarks: EUT with 6 dBi antenna assembly gain, dish antenna			

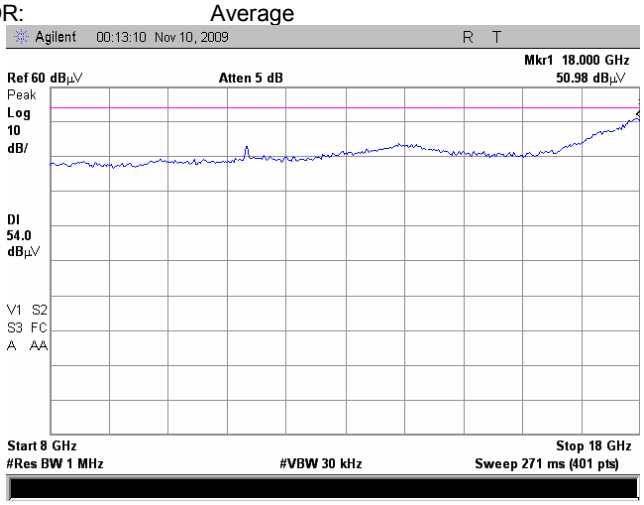
Plot 7.3.84 Radiated emission measurements from 8 to 18 GHz at the second mid carrier frequency

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



Plot 7.3.85 Radiated emission measurements from 8 to 18 GHz at the second mid carrier frequency

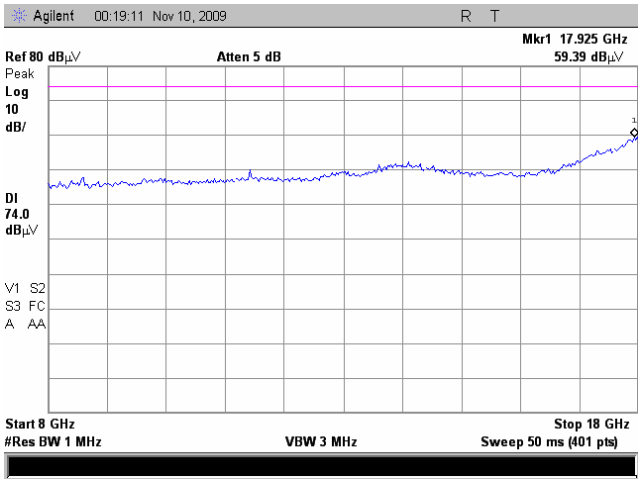
TEST SITE: OATS
TEST DISTANCE: 3 m
ANTENNA POLARIZATION: Vertical and Horizontal
DETECTOR: Average



Test specification:	FCC section 15.407(b), RSS-210 Annex 9, section A9.2 Unwanted radiated emissions		
Test procedure:	Public notice DA 00-705 / ANSI C63.4, Section 13.1.4		
Test mode:	Compliance	**Verdict:**	PASS
Date:	11/09/2009		
Temperature: 24ºC	**Air Pressure:** 1015 hPa	**Relative Humidity:** 47 %	**Power Supply:** 120 VAC
Remarks: EUT with 6 dBi antenna assembly gain, dish antenna			

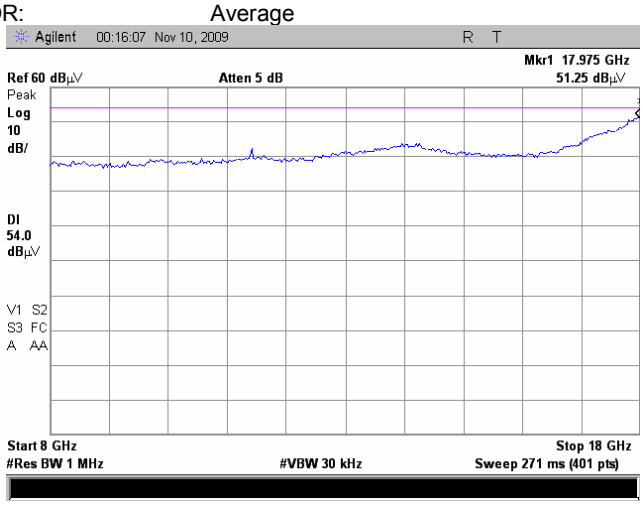
Plot 7.3.86 Radiated emission measurements from 8 to 18 GHz at the high carrier frequency

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



Plot 7.3.87 Radiated emission measurements from 8 to 18 GHz at the high carrier frequency

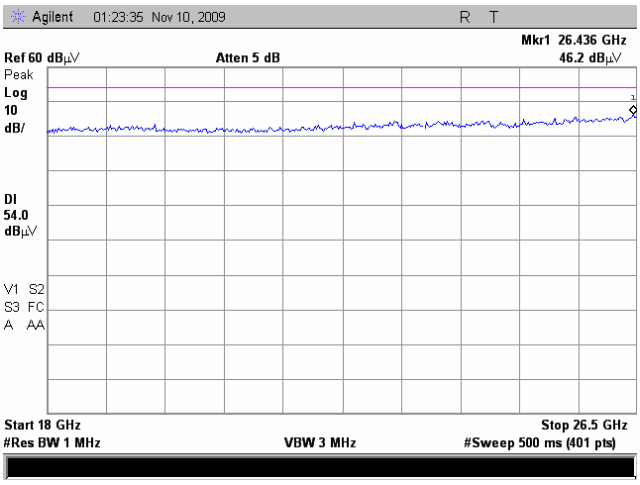
TEST SITE: OATS
TEST DISTANCE: 3 m
ANTENNA POLARIZATION: Vertical and Horizontal
DETECTOR: Average



Test specification:	FCC section 15.407(b), RSS-210 Annex 9, section A9.2 Unwanted radiated emissions		
Test procedure:	Public notice DA 00-705 / ANSI C63.4, Section 13.1.4		
Test mode:	Compliance	Verdict:	PASS
Date:	11/09/2009		
Temperature: 24ºC	Air Pressure: 1015 hPa	Relative Humidity: 47 %	Power Supply: 120 VAC
Remarks: EUT with 6 dBi antenna assembly gain, dish antenna			

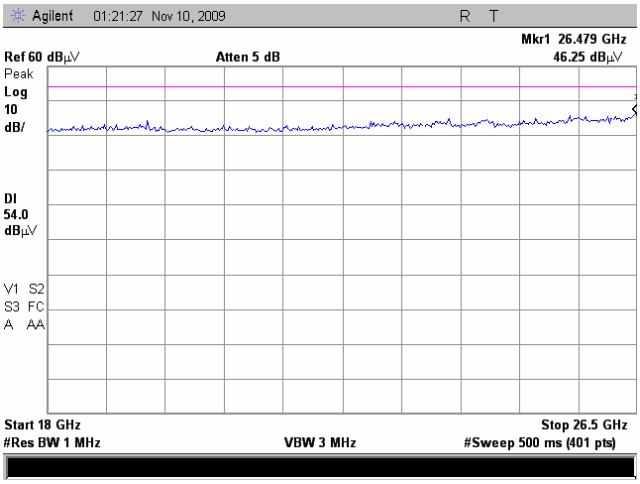
Plot 7.3.88 Radiated emission measurements from 18 to 26.5 GHz at the low carrier frequency

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



Plot 7.3.89 Radiated emission measurements from 18 to 26.5 GHz at the first mid carrier frequency

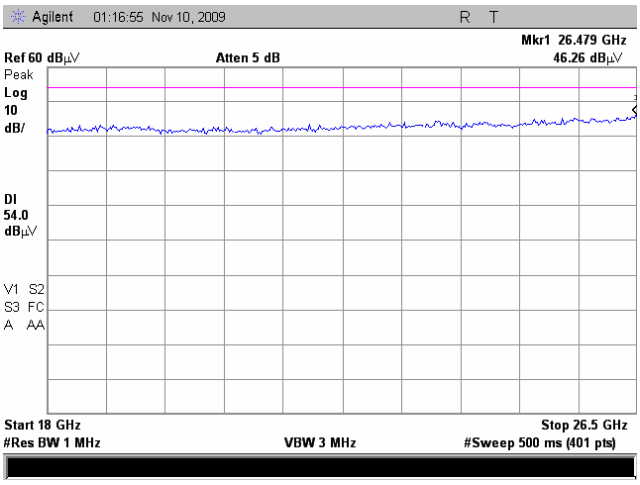
TEST SITE: OATS
TEST DISTANCE: 3 m
ANTENNA POLARIZATION: Vertical and Horizontal
DETECTOR Peak under average limit



Test specification:	FCC section 15.407(b), RSS-210 Annex 9, section A9.2 Unwanted radiated emissions		
Test procedure:	Public notice DA 00-705 / ANSI C63.4, Section 13.1.4		
Test mode:	Compliance	**Verdict:**	PASS
Date:	11/09/2009		
Temperature: 24ºC	**Air Pressure:** 1015 hPa	**Relative Humidity:** 47 %	**Power Supply:** 120 VAC
Remarks: EUT with 6 dBi antenna assembly gain, dish antenna			

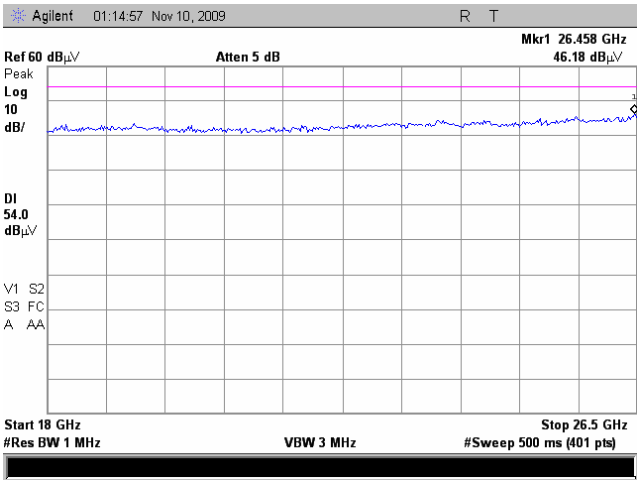
Plot 7.3.90 Radiated emission measurements from 18 to 26.5 GHz at the second mid carrier frequency (5665 MHz)

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



Plot 7.3.91 Radiated emission measurements from 18 to 26.5 GHz at the high carrier frequency (5710 MHz)

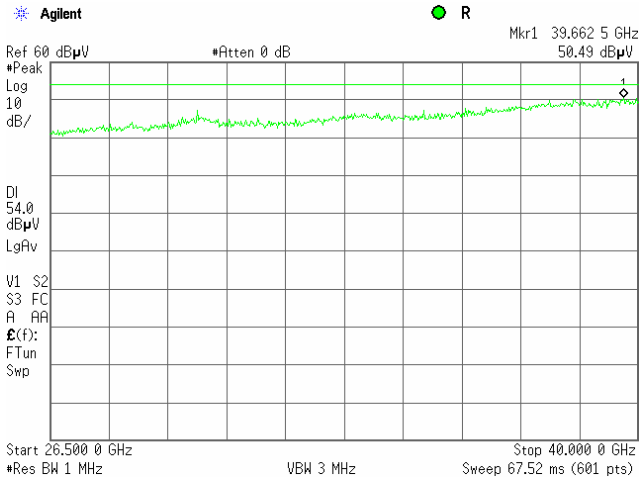
TEST SITE: OATS
TEST DISTANCE: 3 m
ANTENNA POLARIZATION: Vertical and Horizontal
DETECTOR Peak under average limit



Test specification:	FCC section 15.407(b), RSS-210 Annex 9, section A9.2 Unwanted radiated emissions		
Test procedure:	Public notice DA 00-705 / ANSI C63.4, Section 13.1.4		
Test mode:	Compliance	**Verdict:**	PASS
Date:	11/09/2009		
Temperature: 24ºC	**Air Pressure:** 1015 hPa	**Relative Humidity:** 47 %	**Power Supply:** 120 VAC
Remarks: EUT with 6 dBi antenna assembly gain, dish antenna			

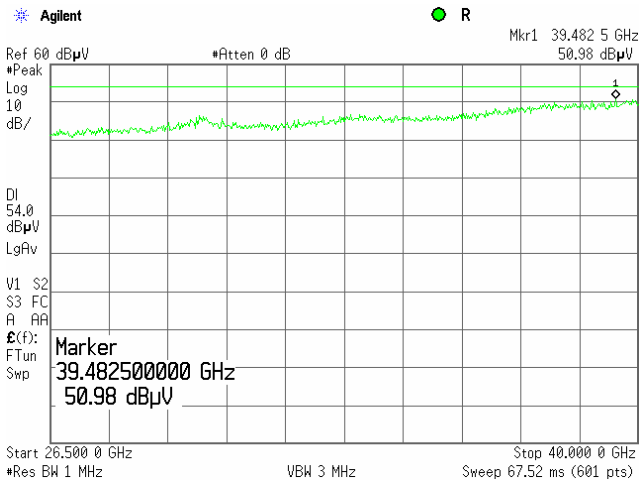
Plot 7.3.92 Radiated emission measurements from 26.5 to 40 GHz at the low carrier frequency

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



Plot 7.3.93 Radiated emission measurements from 26.5 to 40 GHz at the first mid carrier frequency

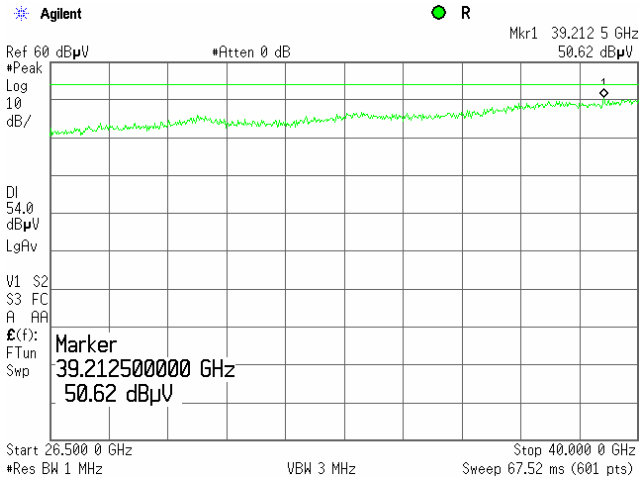
TEST SITE: OATS
TEST DISTANCE: 3 m
ANTENNA POLARIZATION: Vertical and Horizontal
DETECTOR Peak



Test specification:	FCC section 15.407(b), RSS-210 Annex 9, section A9.2 Unwanted radiated emissions		
Test procedure:	Public notice DA 00-705 / ANSI C63.4, Section 13.1.4		
Test mode:	Compliance	**Verdict:**	PASS
Date:	11/09/2009		
Temperature: 24ºC	**Air Pressure:** 1015 hPa	**Relative Humidity:** 47 %	**Power Supply:** 120 VAC
Remarks: EUT with 6 dBi antenna assembly gain, dish antenna			

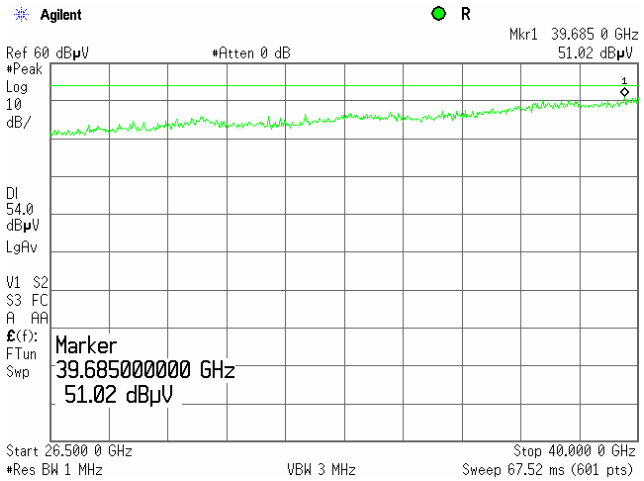
Plot 7.3.94 Radiated emission measurements from 26.5 to 40 GHz at the second mid carrier frequency

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



Plot 7.3.95 Radiated emission measurements from 26.5 to 40 GHz at the high carrier frequency

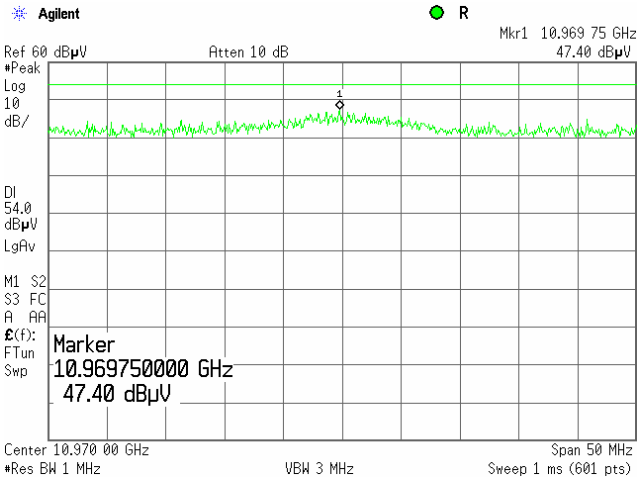
TEST SITE: OATS
TEST DISTANCE: 3 m
ANTENNA POLARIZATION: Vertical and Horizontal
DETECTOR Peak



Test specification:	FCC section 15.407(b), RSS-210 Annex 9, section A9.2 Unwanted radiated emissions		
Test procedure:	Public notice DA 00-705 / ANSI C63.4, Section 13.1.4		
Test mode:	Compliance	**Verdict:**	PASS
Date:	11/09/2009		
Temperature: 24ºC	**Air Pressure:** 1015 hPa	**Relative Humidity:** 47 %	**Power Supply:** 120 VAC
Remarks: EUT with 6 dBi antenna assembly gain, dish antenna			

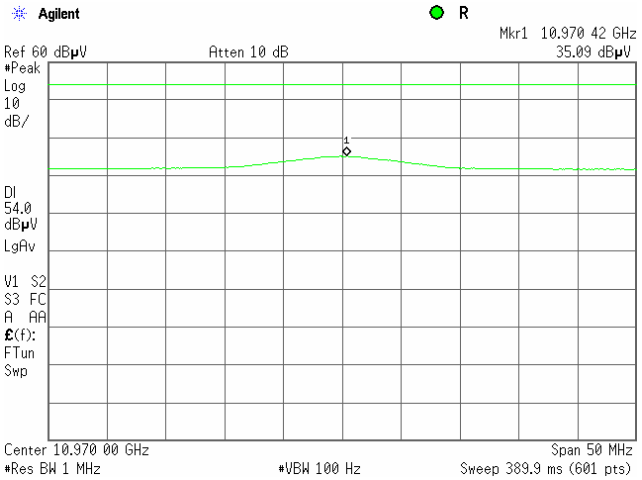
Plot 7.3.96 Radiated emission measurements at the second harmonic of low carrier frequency

TEST SITE: OATS
TEST DISTANCE: 3 m
DETECTOR Peak



Plot 7.3.97 Radiated emission measurements at the second harmonic of low carrier frequency

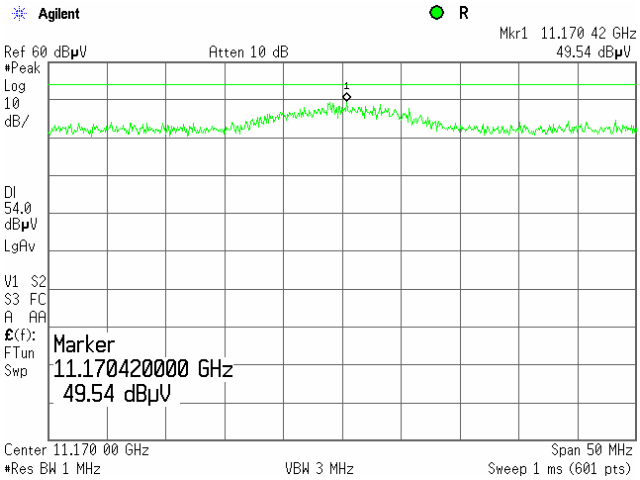
TEST SITE: OATS
TEST DISTANCE: 3 m
DETECTOR Average



Test specification:	FCC section 15.407(b), RSS-210 Annex 9, section A9.2 Unwanted radiated emissions		
Test procedure:	Public notice DA 00-705 / ANSI C63.4, Section 13.1.4		
Test mode:	Compliance	**Verdict:**	PASS
Date:	11/09/2009		
Temperature: 24ºC	**Air Pressure:** 1015 hPa	**Relative Humidity:** 47 %	**Power Supply:** 120 VAC
Remarks: EUT with 6 dBi antenna assembly gain, dish antenna			

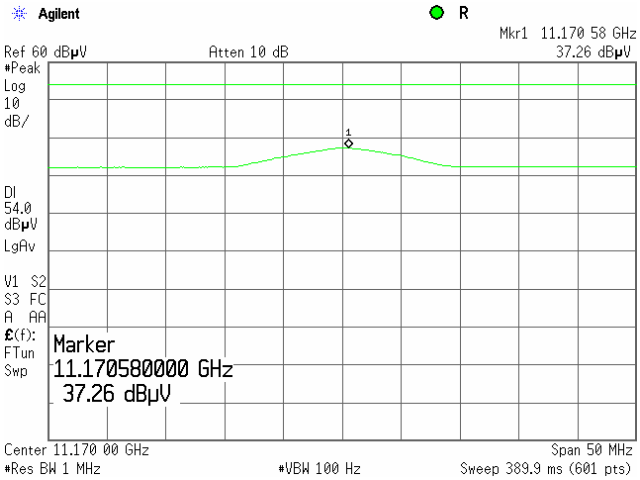
Plot 7.3.98 Radiated emission measurements at the second harmonic of the first mid carrier frequency

TEST SITE: OATS
TEST DISTANCE: 3 m
DETECTOR Peak



Plot 7.3.99 Radiated emission measurements at the second harmonic of the first mid carrier frequency

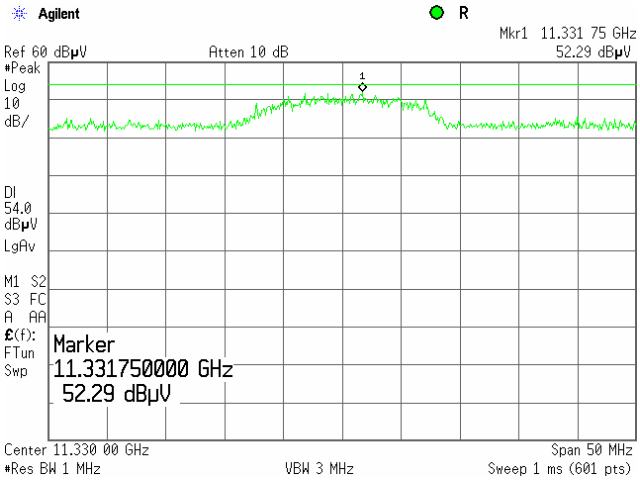
TEST SITE: OATS
TEST DISTANCE: 3 m
DETECTOR Average



Test specification:	FCC section 15.407(b), RSS-210 Annex 9, section A9.2 Unwanted radiated emissions		
Test procedure:	Public notice DA 00-705 / ANSI C63.4, Section 13.1.4		
Test mode:	Compliance	**Verdict:**	PASS
Date:	11/09/2009		
Temperature: 24ºC	**Air Pressure:** 1015 hPa	**Relative Humidity:** 47 %	**Power Supply:** 120 VAC
Remarks: EUT with 6 dBi antenna assembly gain, dish antenna			

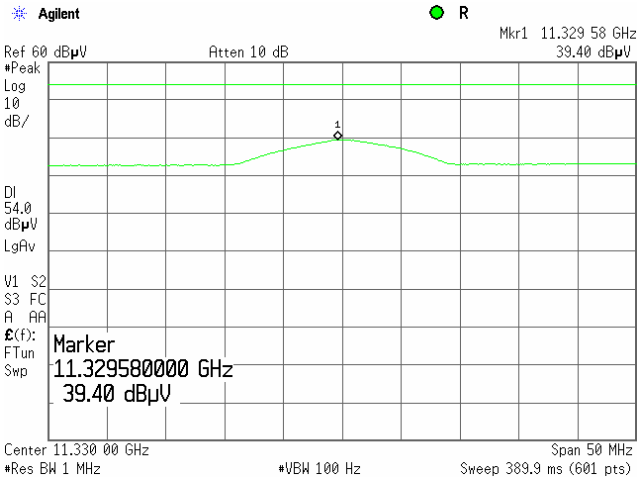
Plot 7.3.100 Radiated emission measurements at the second harmonic of second mid carrier frequency

TEST SITE: OATS
TEST DISTANCE: 3 m
DETECTOR Peak



Plot 7.3.101 Radiated emission measurements at the second harmonic of mid carrier frequency

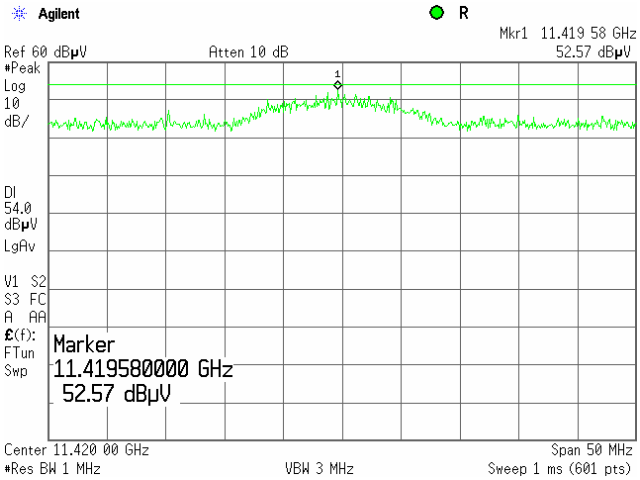
TEST SITE: OATS
TEST DISTANCE: 3 m
DETECTOR Average



Test specification:	FCC section 15.407(b), RSS-210 Annex 9, section A9.2 Unwanted radiated emissions		
Test procedure:	Public notice DA 00-705 / ANSI C63.4, Section 13.1.4		
Test mode:	Compliance	**Verdict:**	PASS
Date:	11/09/2009		
Temperature: 24ºC	**Air Pressure:** 1015 hPa	**Relative Humidity:** 47 %	**Power Supply:** 120 VAC
Remarks: EUT with 6 dBi antenna assembly gain, dish antenna			

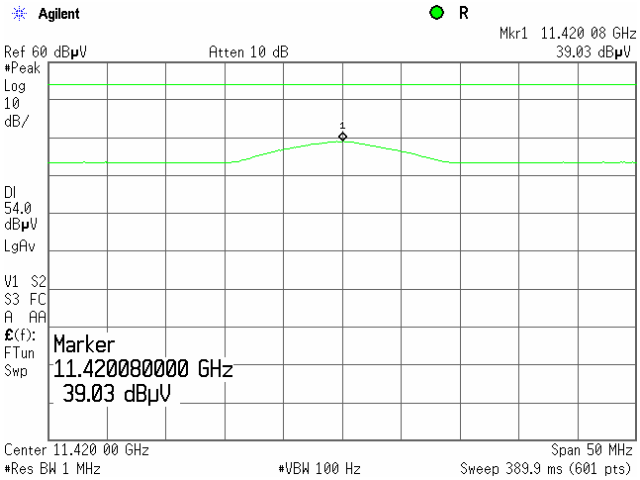
Plot 7.3.102 Radiated emission measurements at the second harmonic of high carrier frequency

TEST SITE: OATS
TEST DISTANCE: 3 m
DETECTOR Peak



Plot 7.3.103 Radiated emission measurements at the second harmonic of high carrier frequency

TEST SITE: OATS
TEST DISTANCE: 3 m
DETECTOR Average



Test specification:	FCC section 15.407(b), RSS-210 Annex 9, section A9.2 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:	11/03/2009		
Temperature: 24.5ºC	**Air Pressure:** 1009 hPa	**Relative Humidity:** 50 %	**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.

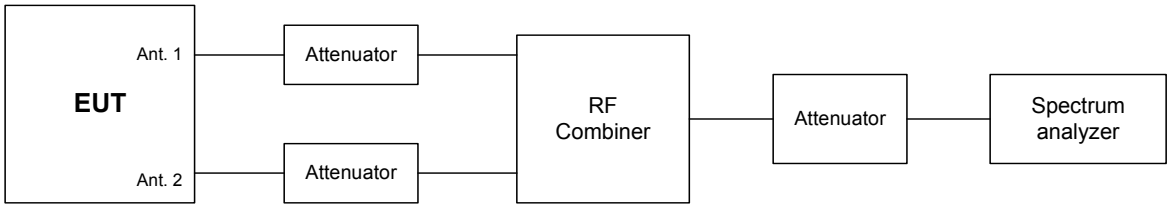
7.4.2.3 The spectrum analyzer span was set to capture the carrier frequency and associated modulation products. The resolution bandwidth was set to 1 MHz.

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 to Table 7.4.7 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



Test specification:	**FCC section 15.407(b), RSS-210 Annex 9, section A9.2 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:	11/03/2009		
Temperature: 24.5ºC	**Air Pressure:** 1009 hPa	**Relative Humidity:** 50 %	**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
TRANSMITTER OUTPUT POWER SETTINGS: "13.5 dBm" at 40 MHz channel bandwidth In-Band
"10.0 dBm" at 40 MHz channel bandwidth Not In-Band

Frequency, MHz		Modulation	Bit rate, Mbps	CBW, MHz	SA reading, dBm	Antenna assembly gain. dBi	EIRP, dBm/MHz	Limit*, dBm/MHz	Margin**, dB	Verdict
Edge	Channel									
Low channel In-Band										
5469.967	5505	BPSK	27	40	-53.85	22.5	-31.35	-27.0	-4.35	Pass
5465.133					-55.51	22.5	-33.01	-27.0	-6.01	Pass
5469.833		64QAM	270		-52.58	22.5	-30.08	-27.0	-3.08	Pass
5464.950					-54.48	22.5	-31.98	-27.0	-4.98	Pass
Low channel										
5469.967	5500	BPSK	27	40	-50.25	22.5	-27.75	-27.0	-0.75	Pass
5469.933		64QAM	270		-49.87	22.5	-27.37	-27.0	-0.37	Pass
First mid channel In-Band										
5600.000	5565	BPSK	27	40	-54.66	22.5	-32.16	-27.0	-5.16	Pass
5605.000					-56.27	22.5	-33.77	-27.0	-6.77	Pass
5600.000		64QAM	270		-54.78	22.5	-32.28	-27.0	-5.28	Pass
5684.920					-56.32	22.5	-33.82	-27.0	-6.82	Pass
First mid channel										
5600.000	5570	BPSK	27	40	-51.53	22.5	-29.03	-27.0	-2.03	Pass
5610.080					-58.68	22.5	-36.18	-27.0	-9.18	Pass
5600.080		64QAM	270		-50.81	22.5	-28.31	-27.0	-1.31	Pass
5610.000					-58.52	22.5	-36.02	-27.0	-9.02	Pass
Second mid channel (for IC only) In-Band										
5649.830	5685	BPSK	27	40	-56.29	22.5	-33.79	-27.0	-6.79	Pass
5645.080					-57.84	22.5	-35.34	-27.0	-8.34	Pass
5650.000		64QAM	270		-56.26	22.5	-33.76	-27.0	-6.76	Pass
5644.920					-57.91	22.5	-35.41	-27.0	-8.41	Pass
Second mid channel (for IC only)										
5649.830	5680	BPSK	27	40	-52.51	22.5	-30.01	-27.0	-3.01	Pass
5640.080					-59.42	22.5	-36.92	-27.0	-9.92	Pass
5649.830		64QAM	270		-52.55	22.5	-30.05	-27.0	-3.05	Pass
5640.000					-59.44	22.5	-36.94	-27.0	-9.94	Pass
High channel In-Band										
5725.183	5690	BPSK	27	40	-56.51	22.5	22.5	-34.01	-27.0	Pass
5729.983					-58.38	22.5	22.5	-35.88	-27.0	Pass
5725.400		64QAM	270		-56.62	22.5	22.5	-34.12	-27.0	Pass
5729.917					-57.42	22.5	22.5	-34.92	-27.0	Pass
High channel										
5725.200	5695	BPSK	27	40	-53.13	22.5	-30.63	-27.0	-3.63	Pass
5725.033		64QAM	270		-52.71	22.5	-30.21	-27.0	-3.21	Pass

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

Reference numbers of test equipment used

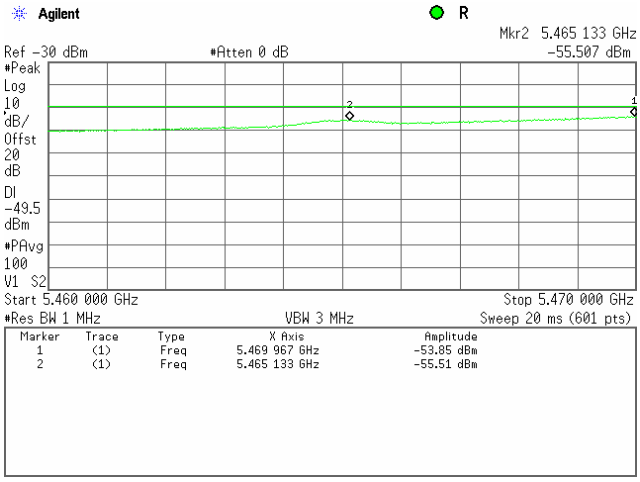
HL 2909	HL 2952	HL 3437	HL 3442				

Full description is given in Appendix A.

Test specification:	**FCC section 15.407(b), RSS-210 Annex 9, section A9.2** **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:	11/03/2009		
Temperature: 24.5ºC	**Air Pressure:** 1009 hPa	**Relative Humidity:** 50 %	**Power Supply:** 120 VAC
Remarks: EUT with 22.5 dBi antenna assembly gain			

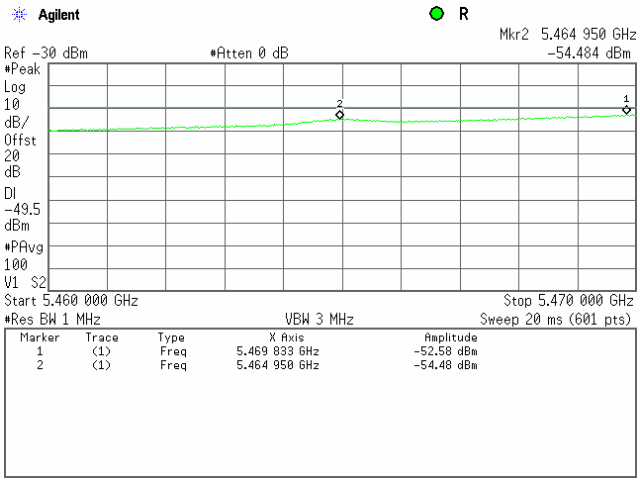
Plot 7.4.1 Conducted spurious emission measurements at the band edges

CARRIER FREQUENCY 5505 MHz
CHANNEL BANDWIDTH 40 MHz
MODULATION: BPSK 27 Mbps



Plot 7.4.2 Conducted spurious emission measurements at the band edges

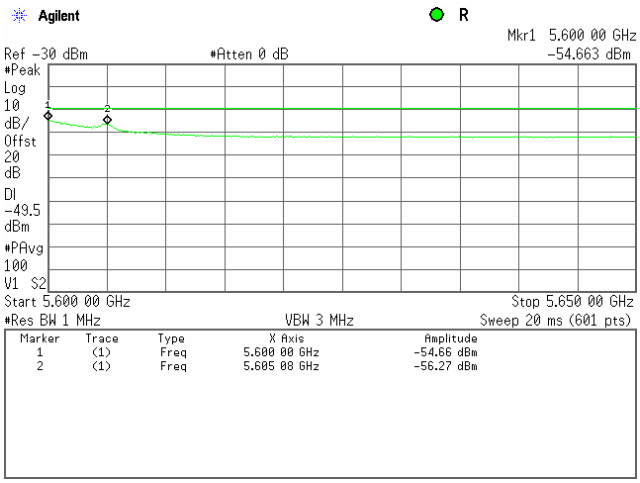
CARRIER FREQUENCY 5505 MHz
CHANNEL BANDWIDTH 40 MHz
MODULATION: 64QAM 270 Mbps



Test specification:	FCC section 15.407(b), RSS-210 Annex 9, section A9.2 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:	11/03/2009		
Temperature: 24.5ºC	**Air Pressure:** 1009 hPa	**Relative Humidity:** 50 %	**Power Supply:** 120 VAC
Remarks: EUT with 22.5 dBi antenna assembly gain			

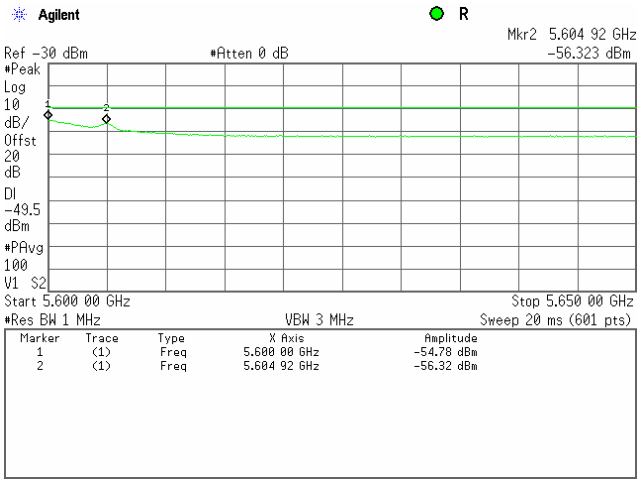
Plot 7.4.3 Conducted spurious emission measurements at the band edges

CARRIER FREQUENCY 5565 MHz
CHANNEL BANDWIDTH 40 MHz
MODULATION: BPSK 27 Mbps



Plot 7.4.4 Conducted spurious emission measurements at the band edges

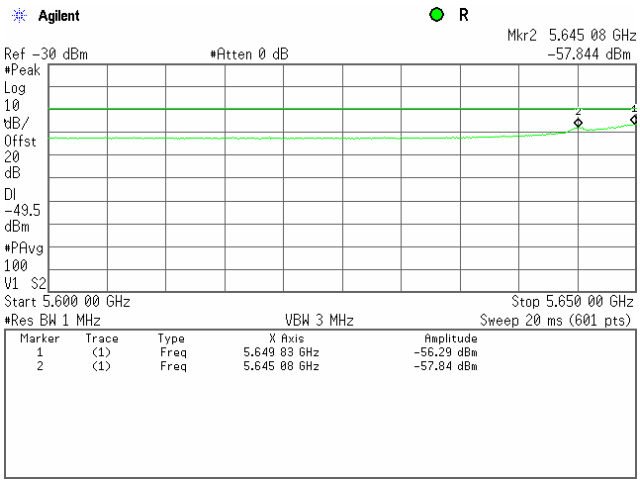
CARRIER FREQUENCY 5565 MHz
CHANNEL BANDWIDTH 40 MHz
MODULATION: 64QAM 270 Mbps



Test specification:	FCC section 15.407(b), RSS-210 Annex 9, section A9.2 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:	11/03/2009		
Temperature: 24.5ºC	**Air Pressure:** 1009 hPa	**Relative Humidity:** 50 %	**Power Supply:** 120 VAC
Remarks: EUT with 22.5 dBi antenna assembly gain			

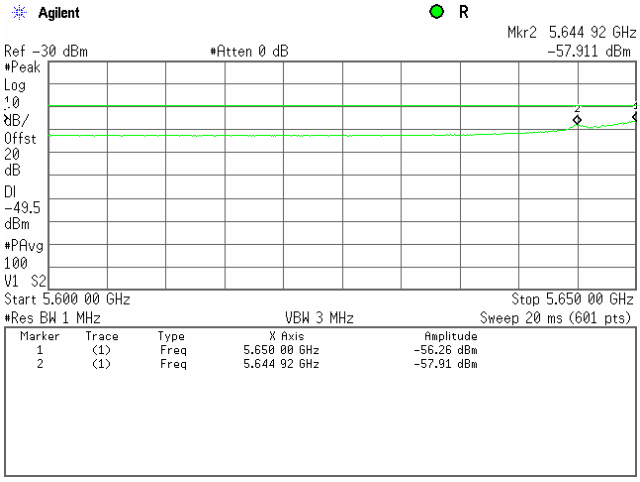
Plot 7.4.5 Conducted spurious emission measurements at the band edges

CARRIER FREQUENCY 5685 MHz
CHANNEL BANDWIDTH 40 MHz
MODULATION: BPSK 27 Mbps



Plot 7.4.6 Conducted spurious emission measurements at the band edges

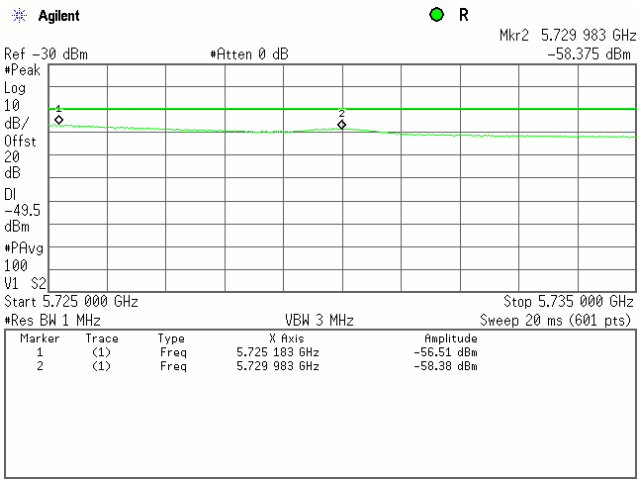
CARRIER FREQUENCY 5685 MHz
CHANNEL BANDWIDTH 40 MHz
MODULATION: 64QAM 270 Mbps



Test specification:	FCC section 15.407(b), RSS-210 Annex 9, section A9.2 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:	11/03/2009		
Temperature: 24.5ºC	**Air Pressure:** 1009 hPa	**Relative Humidity:** 50 %	**Power Supply:** 120 VAC
Remarks: EUT with 22.5 dBi antenna assembly gain			

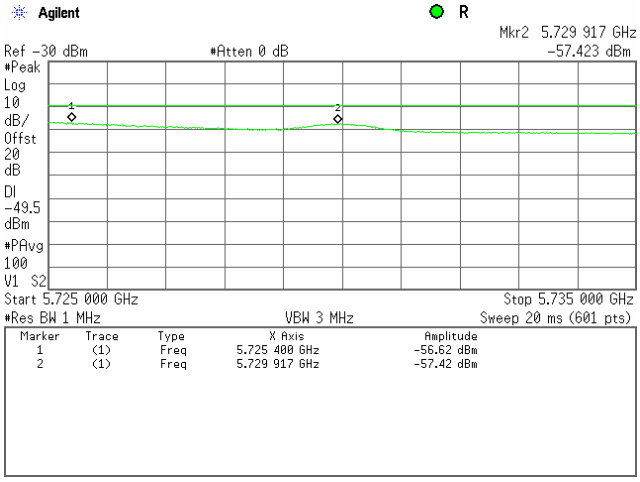
Plot 7.4.7 Conducted spurious emission measurements at the band edges

CARRIER FREQUENCY 5690 MHz
CHANNEL BANDWIDTH 40 MHz
MODULATION: BPSK 27 Mbps



Plot 7.4.8 Conducted spurious emission measurements at the band edges

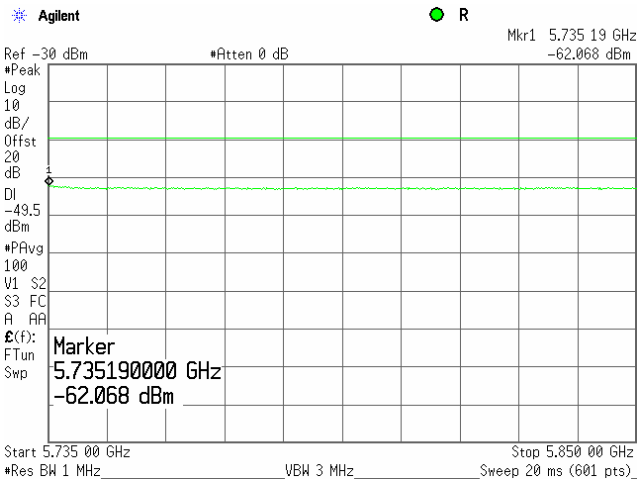
CARRIER FREQUENCY 5690 MHz
CHANNEL BANDWIDTH 40 MHz
MODULATION: 64QAM 270 Mbps



Test specification:	FCC section 15.407(b), RSS-210 Annex 9, section A9.2 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:	11/03/2009		
Temperature: 24.5ºC	**Air Pressure:** 1009 hPa	**Relative Humidity:** 50 %	**Power Supply:** 120 VAC
Remarks: EUT with 22.5 dBi antenna assembly gain			

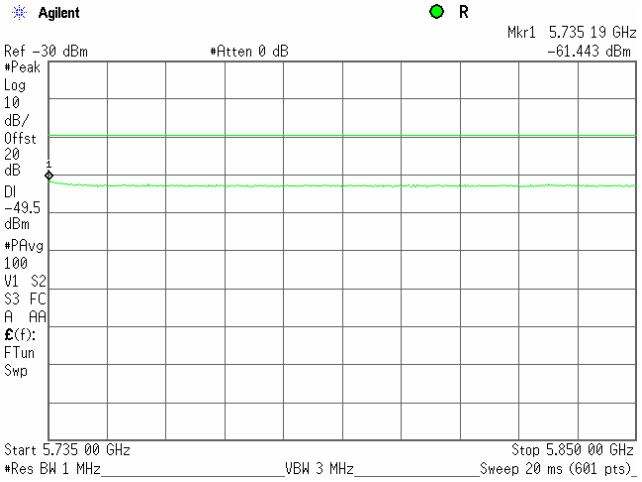
Plot 7.4.9 Conducted spurious emission measurements in the frequency range 5735 – 5850 MHz

CARRIER FREQUENCY 5690 MHz
CHANNEL BANDWIDTH 40 MHz
MODULATION: BPSK 27 Mbps



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

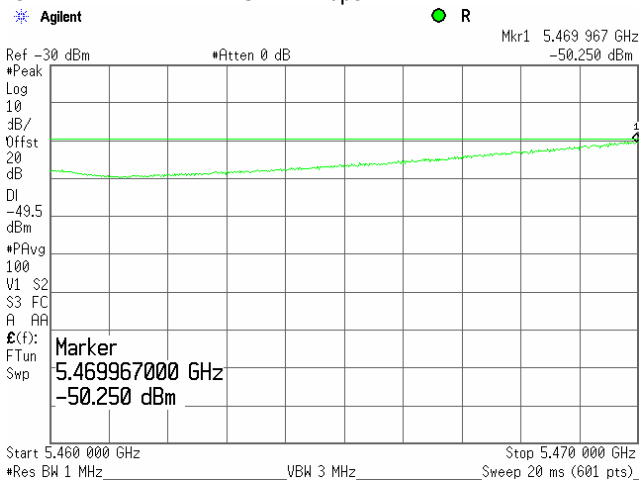
CARRIER FREQUENCY 5690 MHz
CHANNEL BANDWIDTH 40 MHz
MODULATION: 64QAM 270 Mbps



Test specification:	FCC section 15.407(b), RSS-210 Annex 9, section A9.2 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:	11/03/2009		
Temperature: 24.5ºC	**Air Pressure:** 1009 hPa	**Relative Humidity:** 50 %	**Power Supply:** 120 VAC
Remarks: EUT with 22.5 dBi antenna assembly gain			

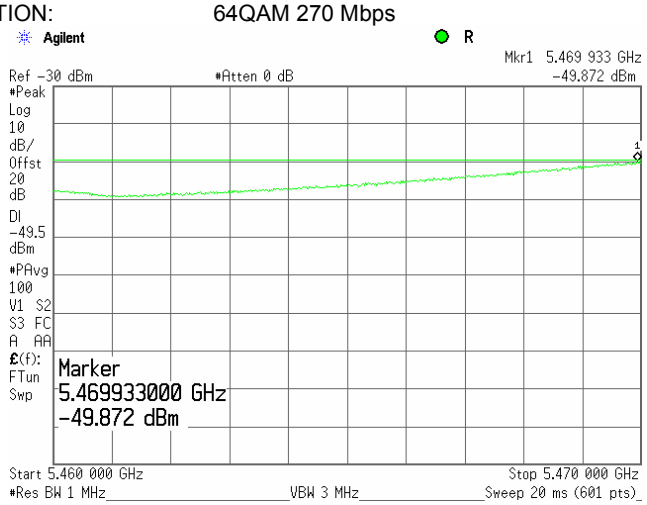
Plot 7.4.11 Conducted spurious emission measurements at the band edges

CARRIER FREQUENCY 5500 MHz
CHANNEL BANDWIDTH 40 MHz
MODULATION: BPSK 27 Mbps



Plot 7.4.12 Conducted spurious emission measurements at the band edges

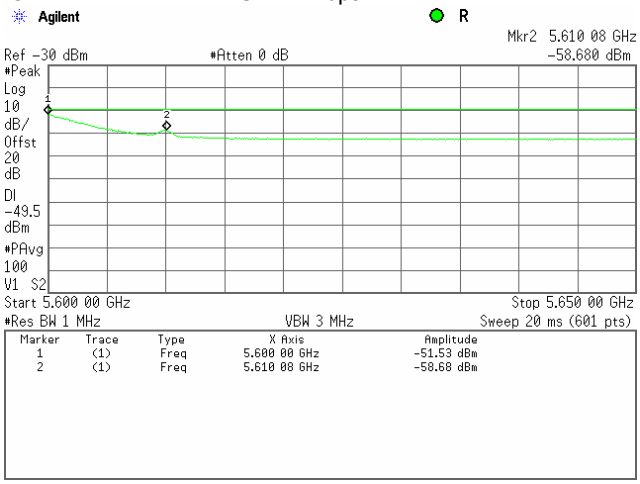
CARRIER FREQUENCY 5500 MHz
CHANNEL BANDWIDTH 40 MHz
MODULATION: 64QAM 270 Mbps



Test specification:	**FCC section 15.407(b), RSS-210 Annex 9, section A9.2** **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:	11/03/2009		
Temperature: 24.5ºC	**Air Pressure:** 1009 hPa	**Relative Humidity:** 50 %	**Power Supply:** 120 VAC
Remarks: EUT with 22.5 dBi antenna assembly gain			

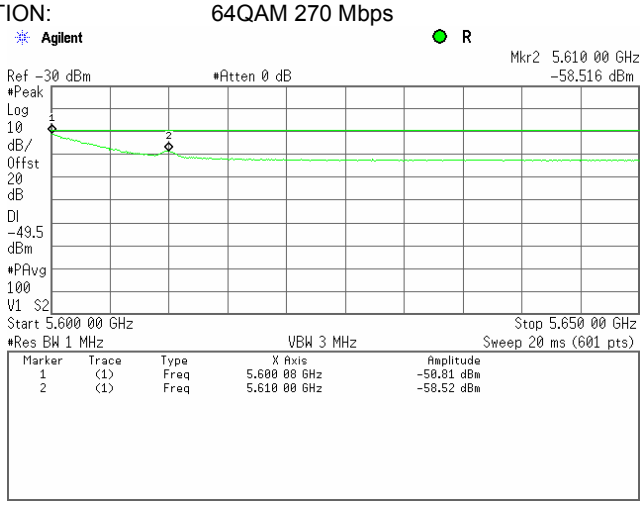
Plot 7.4.13 Conducted spurious emission measurements at the band edges

CARRIER FREQUENCY 5570 MHz
CHANNEL BANDWIDTH 40 MHz
MODULATION: BPSK 27 Mbps



Plot 7.4.14 Conducted spurious emission measurements at the band edges

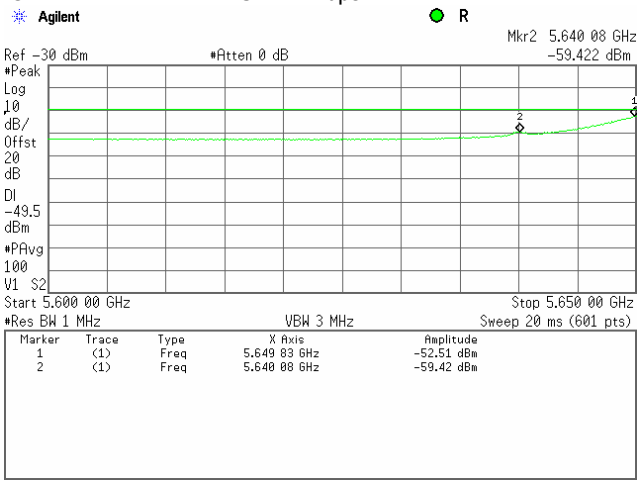
CARRIER FREQUENCY 5570 MHz
CHANNEL BANDWIDTH 40 MHz
MODULATION: 64QAM 270 Mbps



Test specification:	FCC section 15.407(b), RSS-210 Annex 9, section A9.2 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:	11/03/2009		
Temperature: 24.5ºC	**Air Pressure:** 1009 hPa	**Relative Humidity:** 50 %	**Power Supply:** 120 VAC
Remarks: EUT with 22.5 dBi antenna assembly gain			

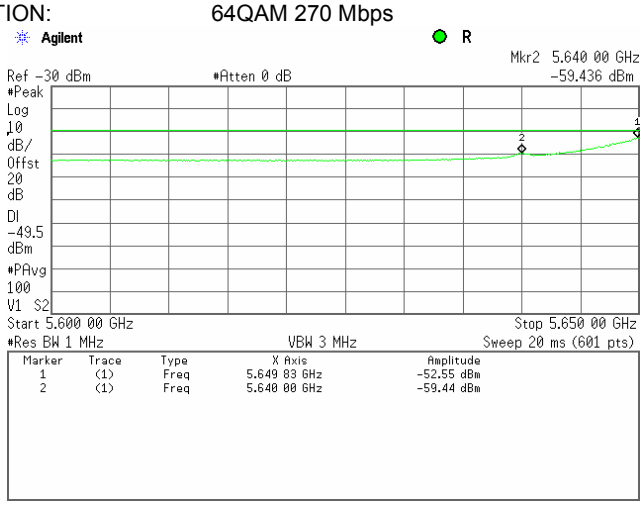
Plot 7.4.15 Conducted spurious emission measurements at the band edges

CARRIER FREQUENCY 5680 MHz
CHANNEL BANDWIDTH 40 MHz
MODULATION: BPSK 27 Mbps



Plot 7.4.16 Conducted spurious emission measurements at the band edges

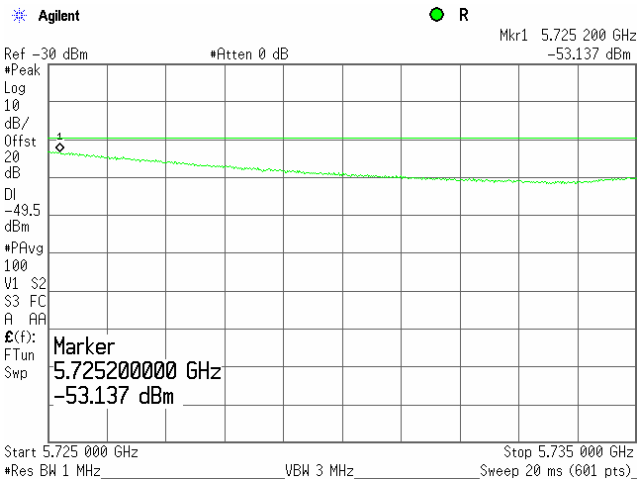
CARRIER FREQUENCY 5680 MHz
CHANNEL BANDWIDTH 40 MHz
MODULATION: 64QAM 270 Mbps



Test specification:	FCC section 15.407(b), RSS-210 Annex 9, section A9.2 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:	11/03/2009		
Temperature: 24.5ºC	**Air Pressure:** 1009 hPa	**Relative Humidity:** 50 %	**Power Supply:** 120 VAC
Remarks: EUT with 22.5 dBi antenna assembly gain			

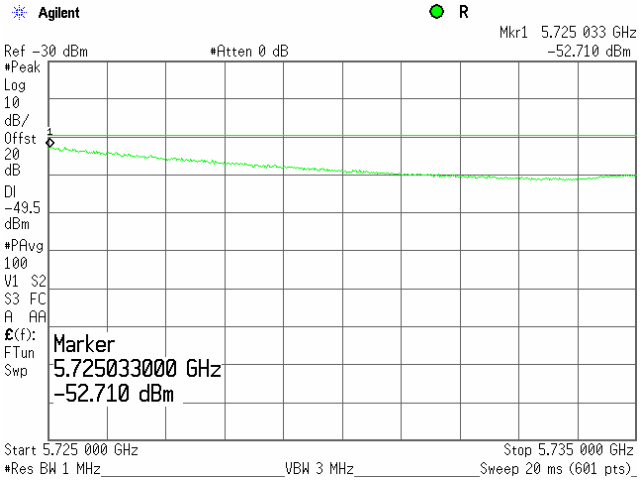
Plot 7.4.17 Conducted spurious emission measurements at the band edges

CARRIER FREQUENCY 5695 MHz
CHANNEL BANDWIDTH 40 MHz
MODULATION: BPSK 27 Mbps



Plot 7.4.18 Conducted spurious emission measurements at the band edges

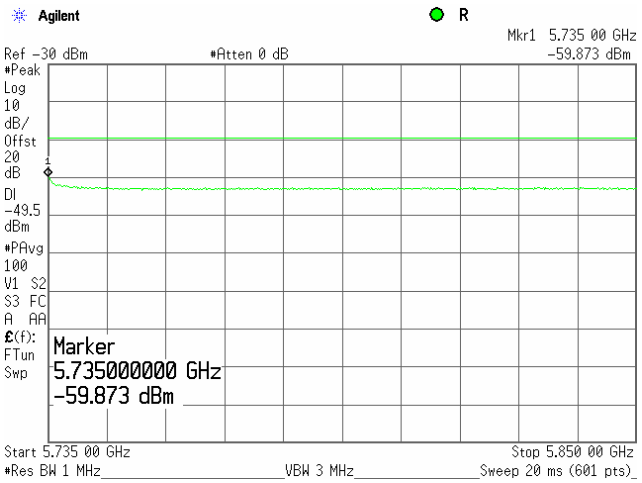
CARRIER FREQUENCY 5695 MHz
CHANNEL BANDWIDTH 40 MHz
MODULATION: 64QAM 270 Mbps



Test specification:	FCC section 15.407(b), RSS-210 Annex 9, section A9.2 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:	11/03/2009		
Temperature: 24.5ºC	**Air Pressure:** 1009 hPa	**Relative Humidity:** 50 %	**Power Supply:** 120 VAC
Remarks: EUT with 22.5 dBi antenna assembly gain			

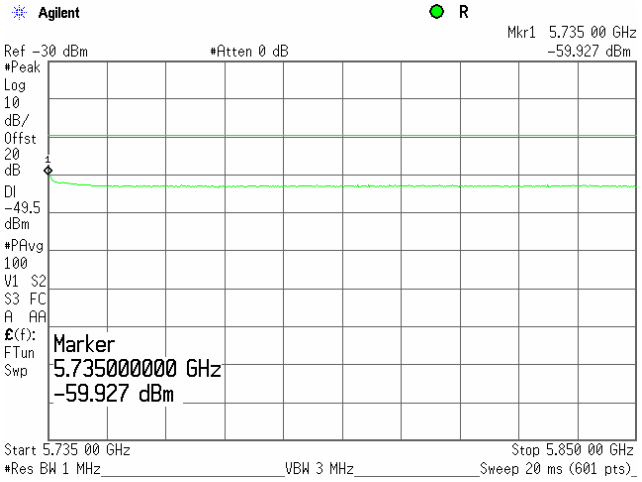
Plot 7.4.19 Conducted spurious emission measurements in the frequency range 5735 – 5850 MHz

CARRIER FREQUENCY 5695 MHz
CHANNEL BANDWIDTH 40 MHz
MODULATION: BPSK 27 Mbps



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

CARRIER FREQUENCY 5695 MHz
CHANNEL BANDWIDTH 40 MHz
MODULATION: 64QAM 270 Mbps



Test specification:	**FCC section 15.407(b), RSS-210 Annex 9, section A9.2 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:	11/03/2009		
Temperature: 24.5ºC	**Air Pressure:** 1009 hPa	**Relative Humidity:** 50 %	**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
TRANSMITTER OUTPUT POWER SETTINGS: "7.5 dBm" at 40 MHz channel bandwidth In-Band
"5.0 dBm" at 40 MHz channel bandwidth Not In-Band

Frequency, MHz		Modulation	Bit rate, Mbps	CBW, MHz	SA reading, dBm	Antenna assembly gain. dBi	EIRP, dBm/MHz	Limit*, dBm/MHz	Margin**, dB	Verdict
Edge	**Channel**									
Low channel In-Band										
5469.950	5505	BPSK	27	40	-58.35	28.0	-30.35	-27.0	-3.35	Pass
5465.000					-60.42	28.0	-32.42	-27.0	-5.42	
5469.9267		64QAM	270		-58.93	28.0	-30.93	-27.0	-3.93	Pass
5465.000					-61.02	28.0	-33.02	-27.0	-6.02	
Low channel										
5469.850	5500	BPSK	27	40	-55.17	28.0	-27.17	-27.0	-0.17	Pass
5469.830		64QAM	270		-55.49	28.0	-27.49	-27.0	-0.49	Pass
First mid channel In-Band										
5600.080	5565	BPSK	27	40	-60.28	28.0	-32.28	-27.0	-5.28	Pass
5605.000					-62.26	28.0	-34.26	-27.0	-7.26	Pass
5600.080		64QAM	270		-59.50	28.0	-31.50	-27.0	-4.50	Pass
5605.080					-61.90	28.0	-33.90	-27.0	-6.90	Pass
First mid channel										
5600.000	5570	BPSK	27	40	-55.93	28.0	-27.93	-27.0	-0.93	Pass
5609.830					-65.04	28.0	-37.04	-27.0	-10.04	Pass
5600.080		64QAM	270		-55.45	28.0	-27.45	-27.0	-0.45	Pass
5609.830					-64.43	28.0	-36.43	-27.0	-9.43	Pass
Second mid channel (for IC only) In-Band										
5649.830	5685	BPSK	27	40	-61.78	28.0	-33.78	-27.0	-6.78	Pass
5645.000					-63.54	28.0	-35.54	-27.0	-8.54	Pass
5649.920		64QAM	270		-62.16	28.0	-34.16	-27.0	-7.16	Pass
5644.920					-63.69	28.0	-35.69	-27.0	-8.69	Pass
Second mid channel (for IC only)										
5650.000	5680	BPSK	27	40	-57.69	28.0	-29.69	-27.0	-2.69	Pass
5639.830					-66.11	28.0	-38.11	-27.0	-11.11	Pass
5650.000		64QAM	270		-57.29	28.0	-29.29	-27.0	-2.29	Pass
5640.080					-65.74	28.0	-37.74	-27.0	-10.74	Pass
High channel In-Band										
5725.050	5690	BPSK	27	40	-61.29	28.0	-33.29	-27.0	-6.29	Pass
5729.950					-63.06	28.0	-35.06	-27.0	-8.06	Pass
5725.050		64QAM	270		-61.63	28.0	-33.63	-27.0	-6.63	Pass
5730.033					-64.11	28.0	-36.11	-27.0	-9.11	Pass
High channel										
5725.000	5695	BPSK	27	40	-57.32	28.0	-29.32	-27.0	-2.32	Pass
5735.000					-65.85	28.0	-37.85	-27.0	-10.85	Pass
5725.083		64QAM	270		-57.25	28.0	-29.25	-27.0	-2.25	Pass
5735.000					-66.23	28.0	-38.23	-27.0	-11.23	Pass

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

Reference numbers of test equipment used

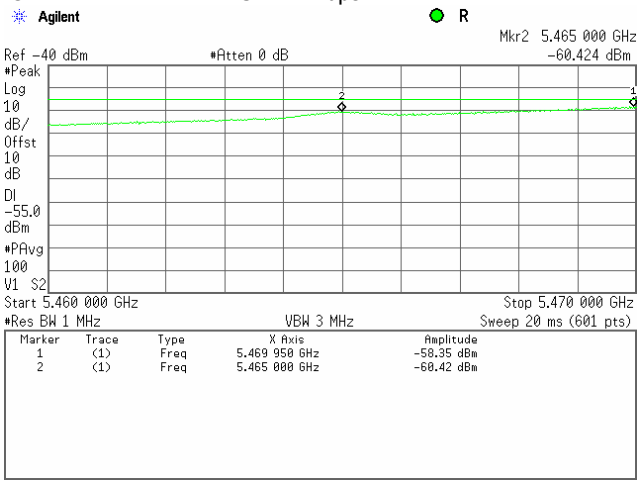
HL 2780	HL 2883	HL 3176					

Full description is given in Appendix A.

Test specification:	FCC section 15.407(b), RSS-210 Annex 9, section A9.2 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:	11/03/2009		
Temperature: 24.5ºC	**Air Pressure:** 1009 hPa	**Relative Humidity:** 50 %	**Power Supply:** 120 VAC
Remarks: EUT with 28 dBi antenna assembly gain			

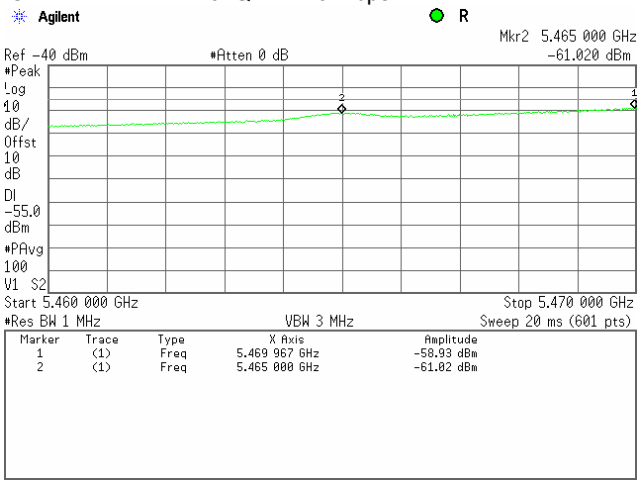
Plot 7.4.21 Conducted spurious emission measurements at the band edges

CARRIER FREQUENCY 5505 MHz
CHANNEL BANDWIDTH 40 MHz
MODULATION: BPSK 27 Mbps



Plot 7.4.22 Conducted spurious emission measurements at the band edges

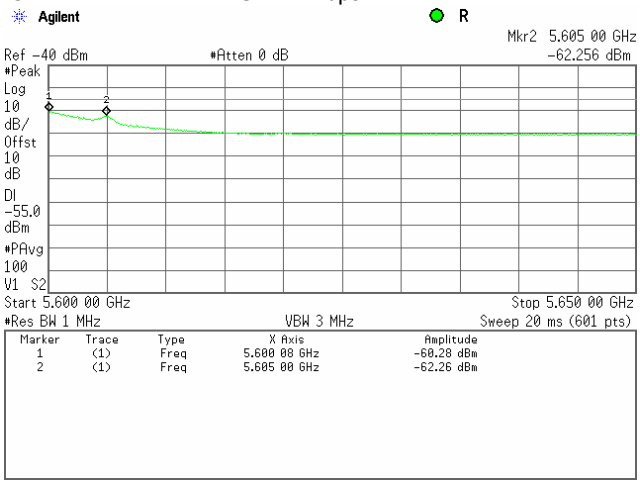
CARRIER FREQUENCY 5505 MHz
CHANNEL BANDWIDTH 40 MHz
MODULATION: 64QAM 270 Mbps



Test specification:	**FCC section 15.407(b), RSS-210 Annex 9, section A9.2** **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:	11/03/2009		
Temperature: 24.5ºC	**Air Pressure:** 1009 hPa	**Relative Humidity:** 50 %	**Power Supply:** 120 VAC
Remarks: EUT with 28 dBi antenna assembly gain			

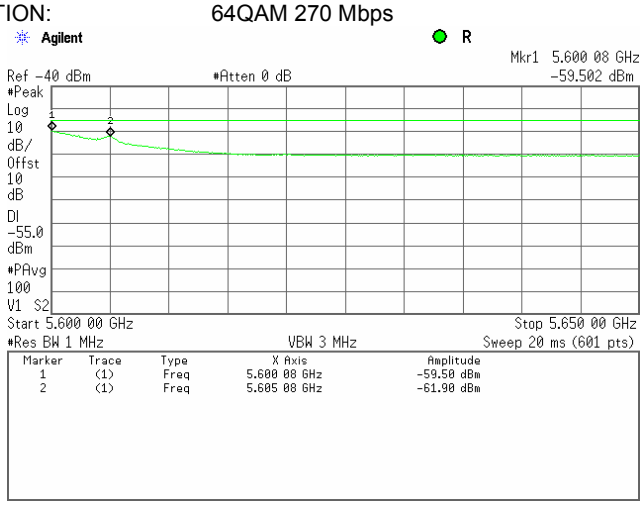
Plot 7.4.23 Conducted spurious emission measurements at the band edges

CARRIER FREQUENCY 5565 MHz
CHANNEL BANDWIDTH 40 MHz
MODULATION: BPSK 27 Mbps



Plot 7.4.24 Conducted spurious emission measurements at the band edges

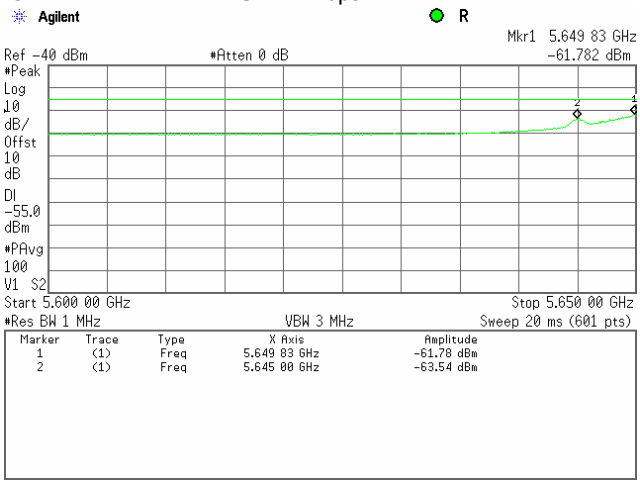
CARRIER FREQUENCY 5565 MHz
CHANNEL BANDWIDTH 40 MHz
MODULATION: 64QAM 270 Mbps



Test specification:	**FCC section 15.407(b), RSS-210 Annex 9, section A9.2** **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:	11/03/2009		
Temperature: 24.5ºC	**Air Pressure:** 1009 hPa	**Relative Humidity:** 50 %	**Power Supply:** 120 VAC
Remarks: EUT with 28 dBi antenna assembly gain			

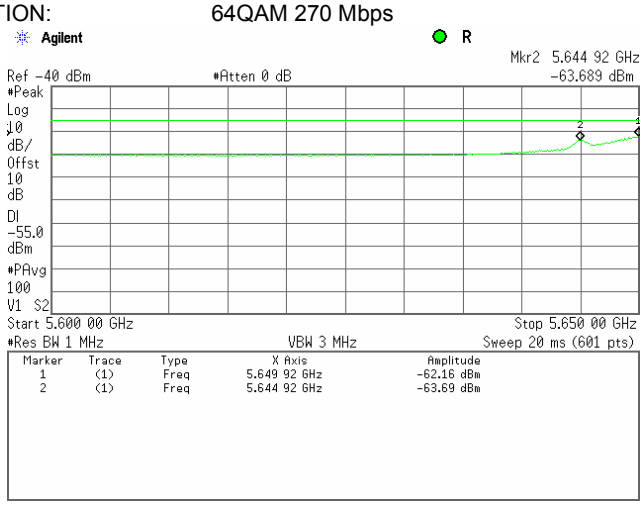
Plot 7.4.25 Conducted spurious emission measurements at the band edges

CARRIER FREQUENCY 5685 MHz
CHANNEL BANDWIDTH 40 MHz
MODULATION: BPSK 27 Mbps



Plot 7.4.26 Conducted spurious emission measurements at the band edges

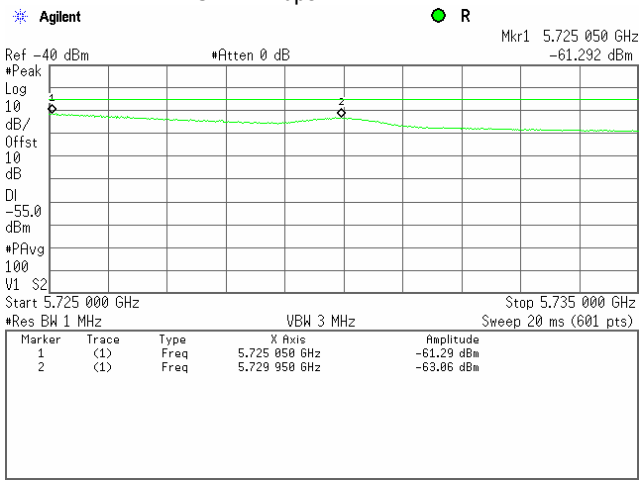
CARRIER FREQUENCY 5685 MHz
CHANNEL BANDWIDTH 40 MHz
MODULATION: 64QAM 270 Mbps



Test specification:	**FCC section 15.407(b), RSS-210 Annex 9, section A9.2** **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:	11/03/2009		
Temperature: 24.5ºC	**Air Pressure:** 1009 hPa	**Relative Humidity:** 50 %	**Power Supply:** 120 VAC
Remarks: EUT with 28 dBi antenna assembly gain			

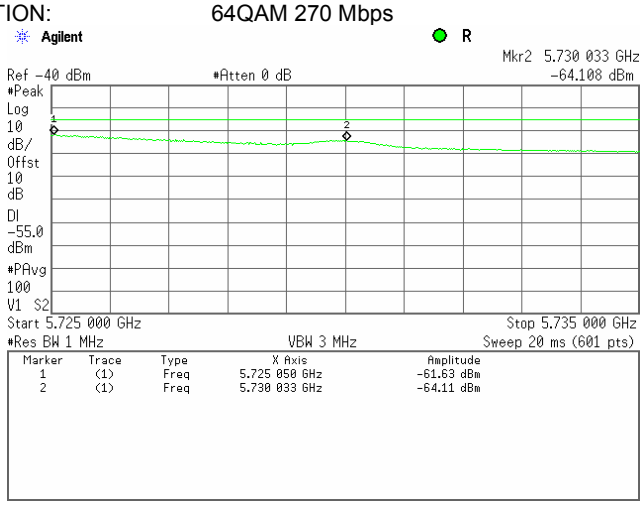
Plot 7.4.27 Conducted spurious emission measurements at the band edges

CARRIER FREQUENCY 5690 MHz
CHANNEL BANDWIDTH 40 MHz
MODULATION: BPSK 27 Mbps



Plot 7.4.28 Conducted spurious emission measurements at the band edges

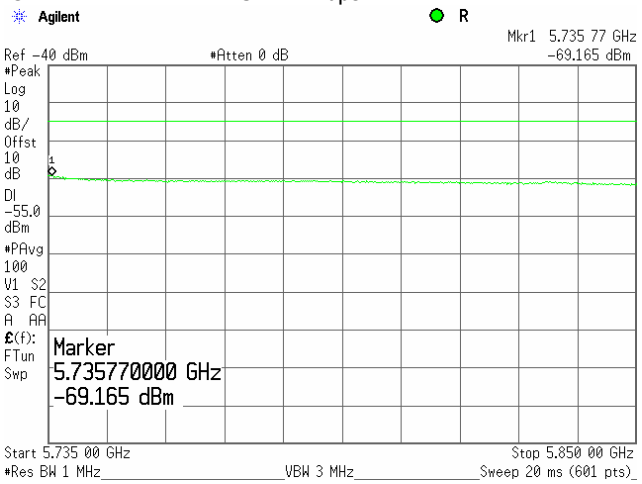
CARRIER FREQUENCY 5690 MHz
CHANNEL BANDWIDTH 40 MHz
MODULATION: 64QAM 270 Mbps



Test specification:	FCC section 15.407(b), RSS-210 Annex 9, section A9.2 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:	11/03/2009		
Temperature: 24.5ºC	**Air Pressure:** 1009 hPa	**Relative Humidity:** 50 %	**Power Supply:** 120 VAC
Remarks: EUT with 28 dBi antenna assembly gain			

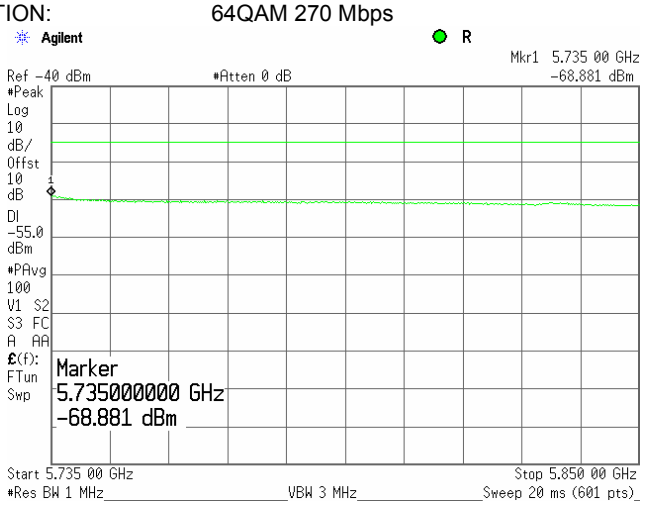
Plot 7.4.29 Conducted spurious emission measurements in the frequency range 5735 – 5850 MHz

CARRIER FREQUENCY 5690 MHz
CHANNEL BANDWIDTH 40 MHz
MODULATION: BPSK 27 Mbps



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

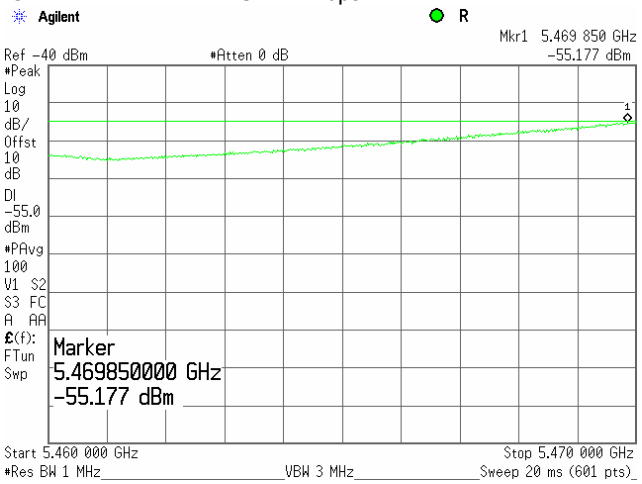
CARRIER FREQUENCY 5690 MHz
CHANNEL BANDWIDTH 40 MHz
MODULATION: 64QAM 270 Mbps



Test specification:	FCC section 15.407(b), RSS-210 Annex 9, section A9.2 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:	11/03/2009		
Temperature: 24.5ºC	**Air Pressure:** 1009 hPa	**Relative Humidity:** 50 %	**Power Supply:** 120 VAC
Remarks: EUT with 28 dBi antenna assembly gain			

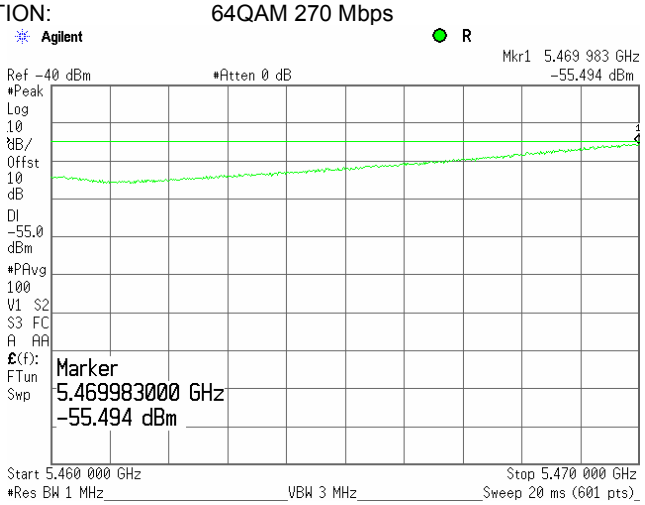
Plot 7.4.31 Conducted spurious emission measurements at the band edges

CARRIER FREQUENCY 5500 MHz
CHANNEL BANDWIDTH 40 MHz
MODULATION: BPSK 27 Mbps



Plot 7.4.32 Conducted spurious emission measurements at the band edges

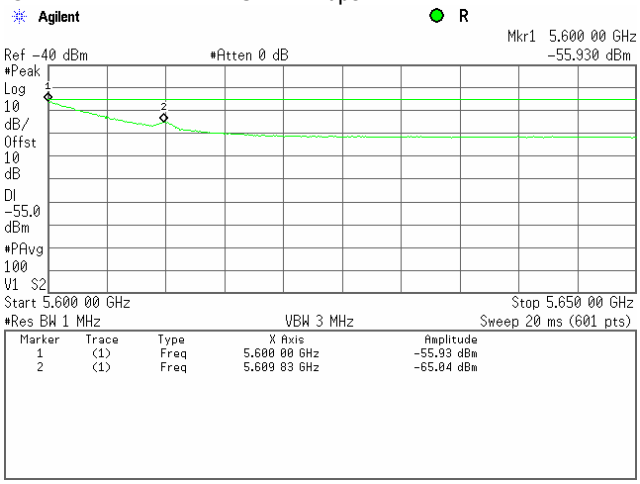
CARRIER FREQUENCY 5500 MHz
CHANNEL BANDWIDTH 40 MHz
MODULATION: 64QAM 270 Mbps



Test specification:	**FCC section 15.407(b), RSS-210 Annex 9, section A9.2** **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:	11/03/2009		
Temperature: 24.5ºC	**Air Pressure:** 1009 hPa	**Relative Humidity:** 50 %	**Power Supply:** 120 VAC
Remarks: EUT with 28 dBi antenna assembly gain			

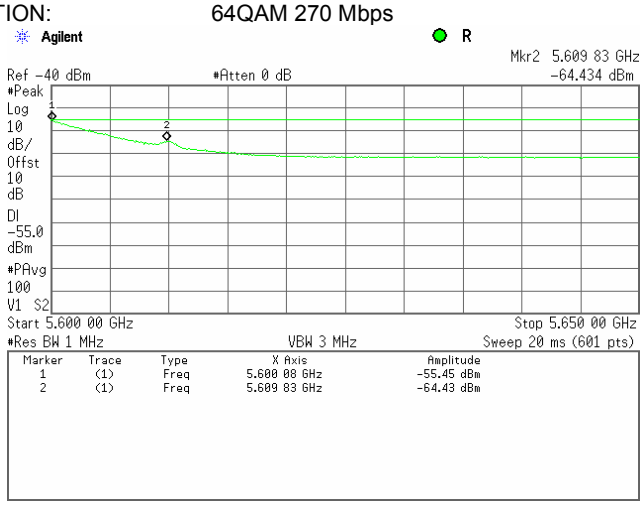
Plot 7.4.33 Conducted spurious emission measurements at the band edges

CARRIER FREQUENCY 5570 MHz
CHANNEL BANDWIDTH 40 MHz
MODULATION: BPSK 27 Mbps



Plot 7.4.34 Conducted spurious emission measurements at the band edges

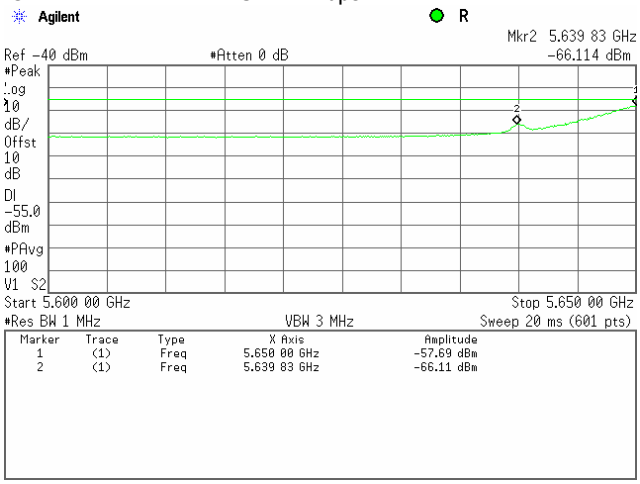
CARRIER FREQUENCY 5570 MHz
CHANNEL BANDWIDTH 40 MHz
MODULATION: 64QAM 270 Mbps



Test specification:	FCC section 15.407(b), RSS-210 Annex 9, section A9.2 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:	11/03/2009		
Temperature: 24.5ºC	**Air Pressure:** 1009 hPa	**Relative Humidity:** 50 %	**Power Supply:** 120 VAC
Remarks: EUT with 28 dBi antenna assembly gain			

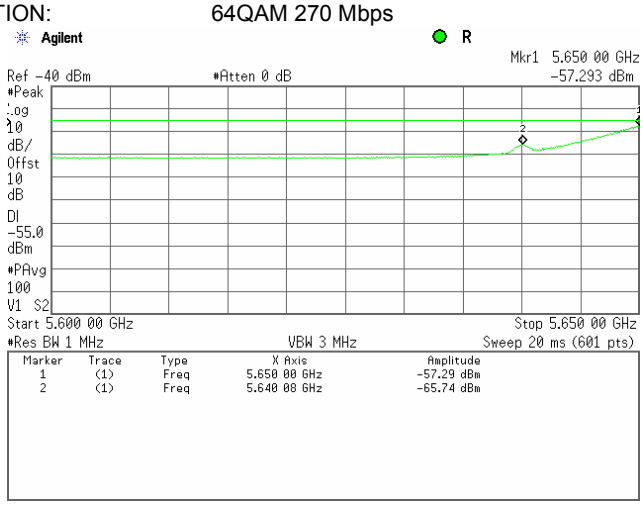
Plot 7.4.35 Conducted spurious emission measurements at the band edges

CARRIER FREQUENCY 5680 MHz
CHANNEL BANDWIDTH 40 MHz
MODULATION: BPSK 27 Mbps



Plot 7.4.36 Conducted spurious emission measurements at the band edges

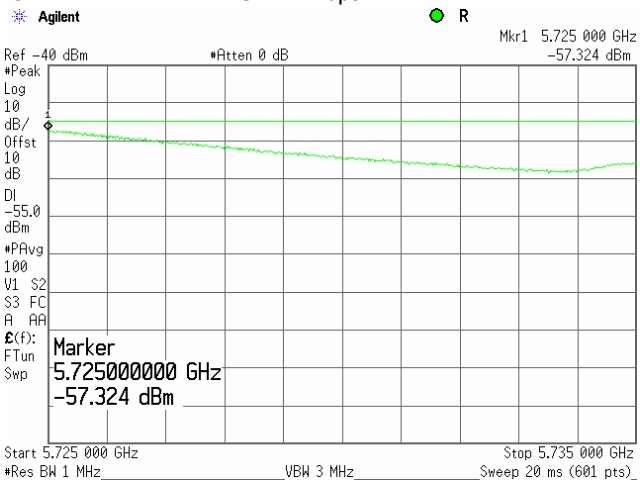
CARRIER FREQUENCY 5680 MHz
CHANNEL BANDWIDTH 40 MHz
MODULATION: 64QAM 270 Mbps



Test specification:	FCC section 15.407(b), RSS-210 Annex 9, section A9.2 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:	11/03/2009		
Temperature: 24.5ºC	**Air Pressure:** 1009 hPa	**Relative Humidity:** 50 %	**Power Supply:** 120 VAC
Remarks: EUT with 28 dBi antenna assembly gain			

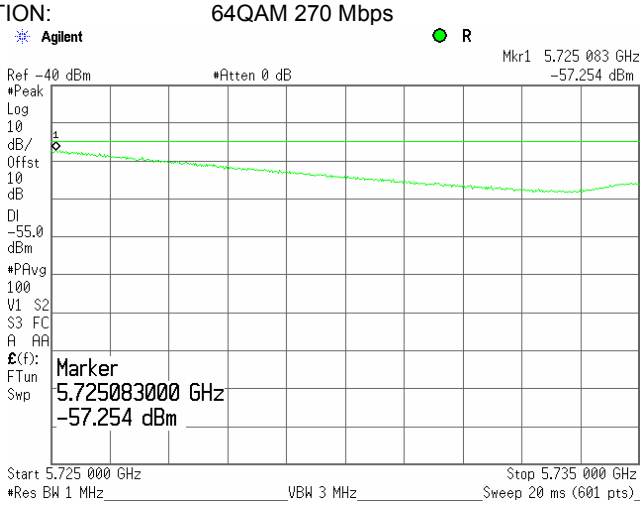
Plot 7.4.37 Conducted spurious emission measurements at the band edges

CARRIER FREQUENCY 5695 MHz
CHANNEL BANDWIDTH 40 MHz
MODULATION: BPSK 27 Mbps



Plot 7.4.38 Conducted spurious emission measurements at the band edges

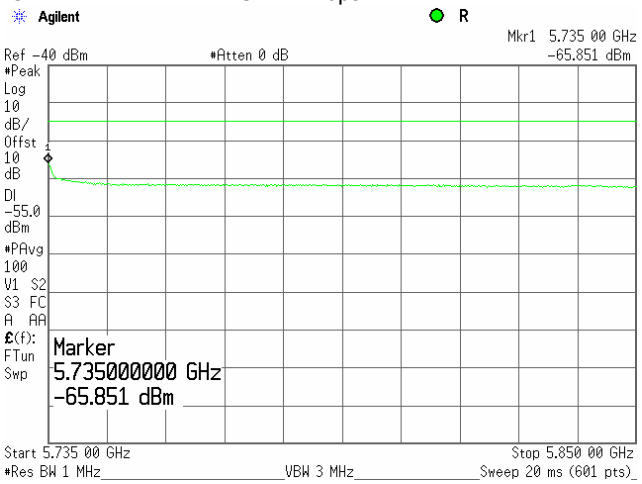
CARRIER FREQUENCY 5695 MHz
CHANNEL BANDWIDTH 40 MHz
MODULATION: 64QAM 270 Mbps



Test specification:	FCC section 15.407(b), RSS-210 Annex 9, section A9.2 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:	11/03/2009		
Temperature: 24.5ºC	**Air Pressure:** 1009 hPa	**Relative Humidity:** 50 %	**Power Supply:** 120 VAC
Remarks: EUT with 28 dBi antenna assembly gain			

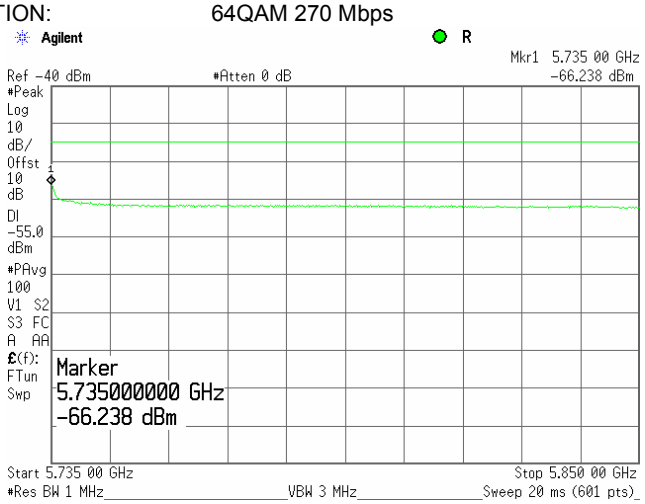
Plot 7.4.39 Conducted spurious emission measurements in the frequency range 5735 – 5850 MHz

CARRIER FREQUENCY 5695 MHz
CHANNEL BANDWIDTH 40 MHz
MODULATION: BPSK 27 Mbps



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

CARRIER FREQUENCY 5695 MHz
CHANNEL BANDWIDTH 40 MHz
MODULATION: 64QAM 270 Mbps



Test specification:	**FCC section 15.407(b), RSS-210 Annex 9, section A9.2 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:	11/03/2009		
Temperature: 24.5ºC	**Air Pressure:** 1009 hPa	**Relative Humidity:** 50 %	**Power Supply:** 120 VAC
Remarks: EUT with 6 dBi antenna assembly gain			

Table 7.4.4 Conducted spurious emission test results

ASSIGNED FREQUENCY RANGE: 5470 – 5725 MHz
DETECTOR USED: Peak
RESOLUTION BANDWIDTH 1000 kHz
VIDEO BANDWIDTH: 3000 kHz
TRANSMITTER OUTPUT POWER SETTINGS: "15 dBm" at 40 MHz channel bandwidth In-Band
"11.5 dBm" at 40 MHz channel bandwidth Not In-Band

Frequency, MHz		Modulation	Bit rate, Mbps	CBW, MHz	SA reading, dBm	Antenna assembly gain. dBi	EIRP, dBm/MHz	Limit*, dBm/MHz	Margin**, dB	Verdict
Edge	**Channel**									
Low channel In-Band										
5469.875	5505	BPSK	27	40	-33.61	6.0	-27.61	-27.0	-0.61	Pass
5469.775		64QAM	270		-33.22	6.0	-27.22	-27.0	-0.22	Pass
Low channel										
5469.925	5500	BPSK	27	40	-34.02	6.0	-28.02	-27.0	-1.02	Pass
5469.900		64QAM	270		-34.01	6.0	-28.01	-27.0	-1.01	
First mid channel In-Band										
5600.000	5565	BPSK	27	40	-39.11	6.0	-33.11	-27.0	-6.11	Pass
5605.000					-41.10	6.0	-35.10	-27.0	-8.10	Pass
5600.000		64QAM	270		-37.89	6.0	-31.89	-27.0	-4.89	Pass
5605.000					-38.96	6.0	-32.96	-27.0	-5.96	Pass
First mid channel										
5600.000	5570	BPSK	27	40	-36.35	6.0	-30.35	-27.0	-3.35	Pass
5610.125					-44.67	6.0	-38.67	-27.0	-11.67	Pass
5600.125		64QAM	270		-36.56	6.0	-30.56	-27.0	-3.56	Pass
5610.000					-44.79	6.0	-38.79	-27.0	-11.79	Pass
Second mid channel (for IC only) In-Band										
5649.750	5685	BPSK	27	40	-38.53	6.0	-32.53	-27.0	-5.53	Pass
5645.000					-40.40	6.0	-34.40	-27.0	-7.40	Pass
5649.875		64QAM	270		-38.17	6.0	-32.17	-27.0	-5.17	Pass
5645.000					-40.52	6.0	-34.52	-27.0	-7.52	Pass
Second mid channel (for IC only)										
5649.750	5680	BPSK	27	40	-36.84	6.0	-30.84	-27.0	-3.84	Pass
5640.250					-44.82	6.0	-38.82	-27.0	-11.82	Pass
5649.750		64QAM	270		-37.10	6.0	-31.10	-27.0	-4.10	Pass
5640.000					-45.08	6.0	-39.08	-27.0	-12.08	Pass
High channel In-Band										
5725.025	5690	BPSK	27	40	-38.71	6.0	-32.71	-27.0	-5.71	Pass
5729.875					-40.11	6.0	-34.11	-27.0	-7.11	Pass
5725.000		64QAM	270		-38.90	6.0	-32.90	-27.0	-5.90	Pass
5730.000					-40.97	6.0	-34.97	-27.0	-7.97	Pass
High channel										
5725.175	5695	BPSK	27	40	-37.65	6.0	-31.65	-27.0	-4.65	Pass
5735.000					-47.65	6.0	-41.65	-27.0	-14.65	Pass
5725.075		64QAM	270		-37.16	6.0	-31.16	-27.0	-4.16	Pass
5735.000					-47.29	6.0	-41.29	-27.0	-14.29	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 A9.2 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:	11/03/2009		
Temperature: 24.5ºC	**Air Pressure:** 1009 hPa	**Relative Humidity:** 50 %	**Power Supply:** 120 VAC
Remarks: EUT with 6 dBi antenna assembly gain			

Table 7.4.5 Conducted spurious emission test results

ASSIGNED FREQUENCY RANGE: 5470 – 5725 MHz
DETECTOR USED: Peak
RESOLUTION BANDWIDTH 1000 kHz
VIDEO BANDWIDTH: 3000 kHz
TRANSMITTER OUTPUT POWER SETTINGS: "17.5 dBm" at 20 MHz channel bandwidth

Frequency, MHz		Modulation	Bit rate, Mbps	CBW, MHz	SA reading, dBm	Antenna assembly gain. dBi	EIRP, dBm/MHz	Limit*, dBm/MHz	Margin**, dB	Verdict
Edge	Channel									
Low channel In-Band										
5469.875	5490	BPSK	13	20	-33.21	6.0	-27.21	-27.0	-0.21	Pass
5469.875		64QAM	130		-34.19	6.0	-28.19	-27.0	-1.19	Pass
First mid channel In-Band										
5600.125	5580	BPSK	13	20	-38.40	6.0	-32.40	-27.0	-5.40	Pass
5600.250		64QAM	130	20	-38.35	6.0	-32.35	-27.0	-5.35	Pass
Second mid channel (for IC only) In-Band										
5649.875	5670	BPSK	13	20	-38.77	6.0	-32.77	-27.0	-5.77	Pass
5650.000		64QAM	130		-36.73	6.0	-30.73	-27.0	-3.73	Pass
High channel In-Band										
5725.000	5705	BPSK	13	20	-40.49	6.0	-34.49	-27.0	-7.49	Pass
5725.025		64QAM	130		-40.09	6.0	-34.09	-27.0	-7.09	Pass

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

Table 7.4.6 Conducted spurious emission test results

ASSIGNED FREQUENCY RANGE: 5470 – 5725 MHz
DETECTOR USED: Peak
RESOLUTION BANDWIDTH 1000 kHz
VIDEO BANDWIDTH: 3000 kHz
TRANSMITTER OUTPUT POWER SETTINGS: "16.0 dBm" at 10 MHz channel bandwidth

Frequency, MHz		Modulation	Bit rate, Mbps	CBW, MHz	SA reading, dBm	Antenna assembly gain. dBi	EIRP, dBm/MHz	Limit*, dBm/MHz	Margin**, dB	Verdict
Edge	Channel									
Low channel In-Band										
5470.000	5485	BPSK	6.5	10	-42.66	6.0	-36.66	-27.0	-9.66	Pass
5469.925		64QAM	65		-43.47	6.0	-37.47	-27.0	-10.47	Pass
First mid channel In-Band										
5600.250	5585	BPSK	6.5	10	-47.42	6.0	-41.42	-27.0	-14.42	Pass
5600.000		64QAM	65	10	-48.42	6.0	-42.42	-27.0	-15.42	Pass
Second mid channel (for IC only) In-Band										
5650.000	5665	BPSK	6.5	10	-47.85	6.0	-41.85	-27.0	-14.85	Pass
5650.000		64QAM	65		-47.71	6.0	-41.71	-27.0	-14.71	Pass
High channel In-Band										
5725.050	5710	BPSK	6.5	10	-49.54	6.0	-43.54	-27.0	-16.54	Pass
5725.000		64QAM	65		-49.94	6.0	-43.94	-27.0	-16.94	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 A9.2 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:	11/03/2009		
Temperature: 24.5ºC	**Air Pressure:** 1009 hPa	**Relative Humidity:** 50 %	**Power Supply:** 120 VAC
Remarks: EUT with 6 dBi antenna assembly gain			

Table 7.4.7 Conducted spurious emission test results

ASSIGNED FREQUENCY RANGE: 5470 – 5725 MHz
DETECTOR USED: Peak
RESOLUTION BANDWIDTH 1000 kHz
VIDEO BANDWIDTH: 3000 kHz
TRANSMITTER OUTPUT POWER SETTINGS: "13.0 dBm" at 5 MHz channel bandwidth

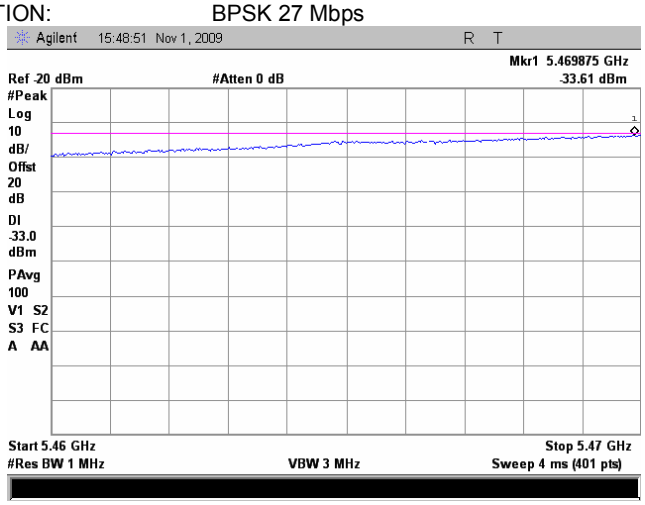
Frequency, MHz		Modulation	Bit rate, Mbps	CBW, MHz	SA reading, dBm	Antenna assembly gain. dBi	EIRP, dBm/MHz	Limit*, dBm/MHz	Margin**, dB	Verdict
Edge	Channel									
Low channel In-Band										
5469.675	5480	BPSK	3.25	5	-49.59	6.0	-43.59	-27.0	-16.59	Pass
5469.325		BPSK	3.25		-49.63	6.0	-43.63	-27.0	-16.63	Pass
First mid channel In-Band										
5628.125	5590	BPSK	3.25	5	-47.90	6.0	-41.90	-27.0	-14.90	Pass
5631.750					-49.60	6.0	-43.60	-27.0	-16.60	Pass
5628.375		64QAM	32.5	5	-47.47	6.0	-41.47	-27.0	-14.47	Pass
5631.625					-49.41	6.0	-43.41	-27.0	-16.41	Pass
Second mid channel (for IC only) In-Band										
5618.250	5660	BPSK	3.25	5	-49.99	6.0	-43.99	-27.0	-16.99	Pass
5621.750					-48.08	6.0	-42.08	-27.0	-15.08	Pass
5618.250		64QAM	32.5		-50.59	6.0	-44.59	-27.0	-17.59	Pass
5621.875					-47.91	6.0	-41.91	-27.0	-14.91	Pass
High channel In-Band										
5725.025	5715	BPSK	3.25	5	-51.48	6.0	-45.48	-27.0	-18.48	Pass
5753.110		BPSK	3.25		-47.86	6.0	-41.86	-27.0	-14.86	Pass
5756.850		BPSK	3.25		-49.73	6.0	-43.73	-27.0	-16.73	Pass
5725.150		64QAM	32.5		-51.13	6.0	-45.13	-27.0	-18.13	Pass
5753.400		64QAM	32.5		-48.44	6.0	-42.44	-27.0	-15.44	Pass
5756.560		64QAM	32.5		-50.36	6.0	-44.36	-27.0	-17.36	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 A9.2 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:	11/03/2009		
Temperature: 24.5ºC	**Air Pressure:** 1009 hPa	**Relative Humidity:** 50 %	**Power Supply:** 120 VAC
Remarks: EUT with 6 dBi antenna assembly gain			

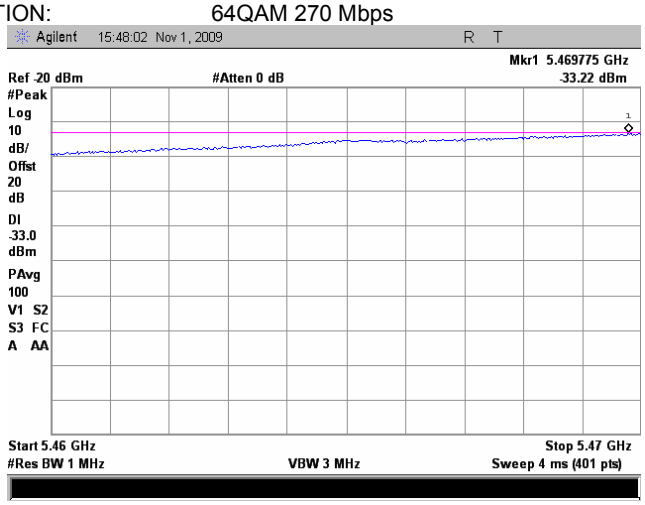
Plot 7.4.41 Conducted spurious emission measurements at the band edges

CARRIER FREQUENCY 5505 MHz
CHANNEL BANDWIDTH 40 MHz
MODULATION: BPSK 27 Mbps



Plot 7.4.42 Conducted spurious emission measurements at the band edges

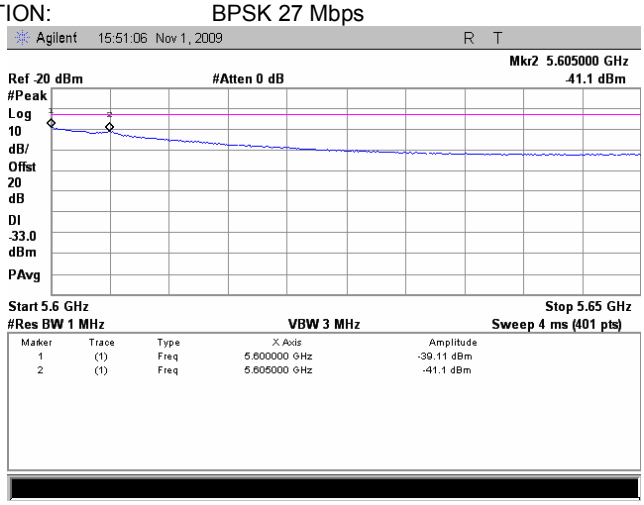
CARRIER FREQUENCY 5505 MHz
CHANNEL BANDWIDTH 40 MHz
MODULATION: 64QAM 270 Mbps



Test specification:	FCC section 15.407(b), RSS-210 Annex 9, section A9.2 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:	11/03/2009		
Temperature: 24.5ºC	**Air Pressure:** 1009 hPa	**Relative Humidity:** 50 %	**Power Supply:** 120 VAC
Remarks: EUT with 6 dBi antenna assembly gain			

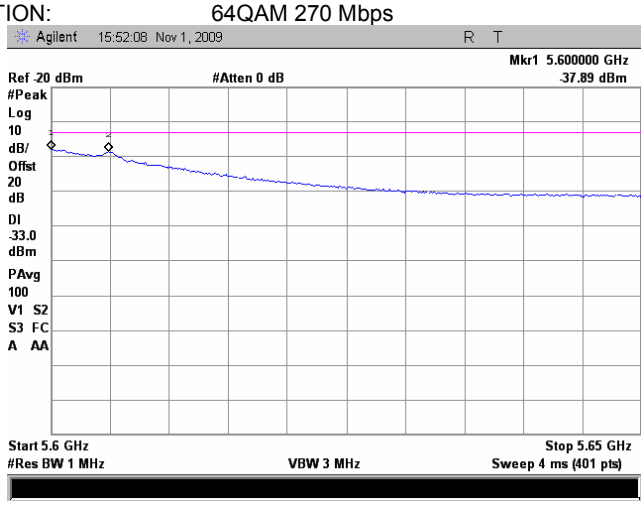
Plot 7.4.43 Conducted spurious emission measurements at the band edges

CARRIER FREQUENCY 5565 MHz
CHANNEL BANDWIDTH 40 MHz
MODULATION: BPSK 27 Mbps



Plot 7.4.44 Conducted spurious emission measurements at the band edges

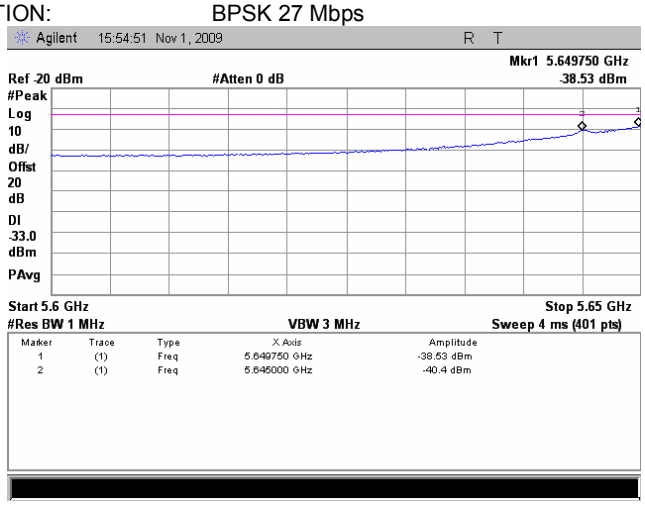
CARRIER FREQUENCY 5565 MHz
CHANNEL BANDWIDTH 40 MHz
MODULATION: 64QAM 270 Mbps



Test specification:	FCC section 15.407(b), RSS-210 Annex 9, section A9.2 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:	11/03/2009		
Temperature: 24.5ºC	**Air Pressure:** 1009 hPa	**Relative Humidity:** 50 %	**Power Supply:** 120 VAC
Remarks: EUT with 6 dBi antenna assembly gain			

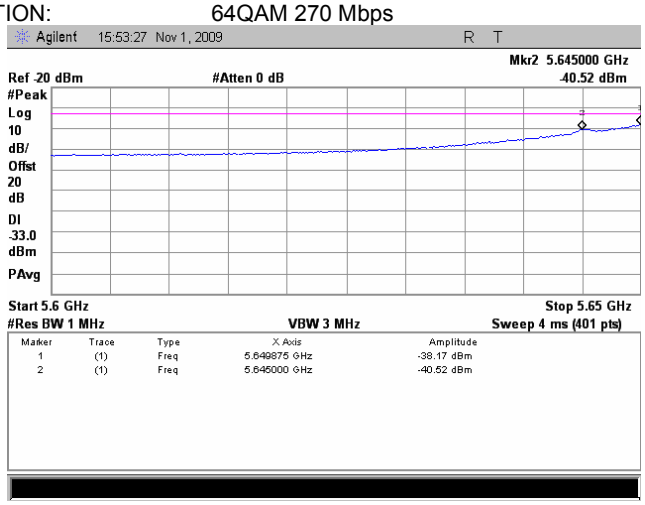
Plot 7.4.45 Conducted spurious emission measurements at the band edges

CARRIER FREQUENCY 5685 MHz
CHANNEL BANDWIDTH 40 MHz
MODULATION: BPSK 27 Mbps



Plot 7.4.46 Conducted spurious emission measurements at the band edges

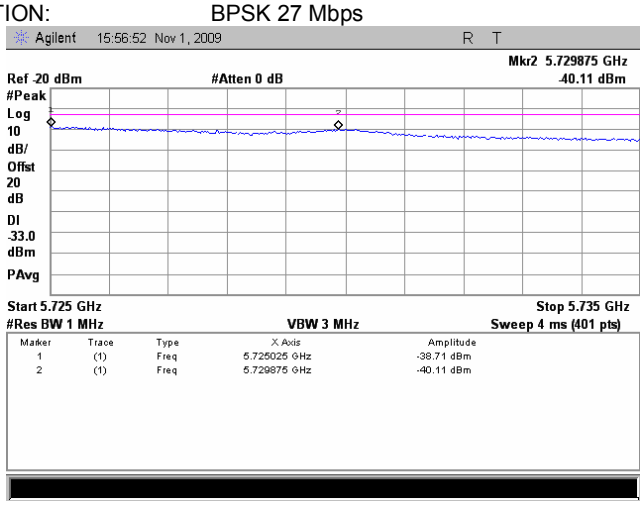
CARRIER FREQUENCY 5685 MHz
CHANNEL BANDWIDTH 40 MHz
MODULATION: 64QAM 270 Mbps



Test specification:	FCC section 15.407(b), RSS-210 Annex 9, section A9.2 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:	11/03/2009		
Temperature: 24.5ºC	**Air Pressure:** 1009 hPa	**Relative Humidity:** 50 %	**Power Supply:** 120 VAC
Remarks: EUT with 6 dBi antenna assembly gain			

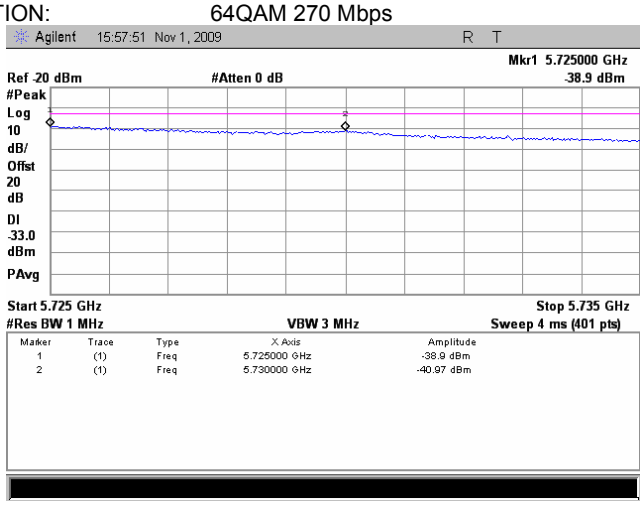
Plot 7.4.47 Conducted spurious emission measurements at the band edges

CARRIER FREQUENCY 5690 MHz
CHANNEL BANDWIDTH 40 MHz
MODULATION: BPSK 27 Mbps



Plot 7.4.48 Conducted spurious emission measurements at the band edges

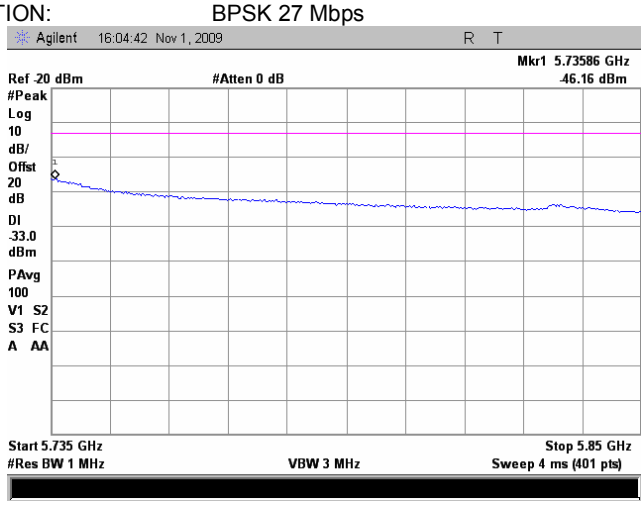
CARRIER FREQUENCY 5690 MHz
CHANNEL BANDWIDTH 40 MHz
MODULATION: 64QAM 270 Mbps



Test specification:	FCC section 15.407(b), RSS-210 Annex 9, section A9.2 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:	11/03/2009		
Temperature: 24.5ºC	**Air Pressure:** 1009 hPa	**Relative Humidity:** 50 %	**Power Supply:** 120 VAC
Remarks: EUT with 6 dBi antenna assembly gain			

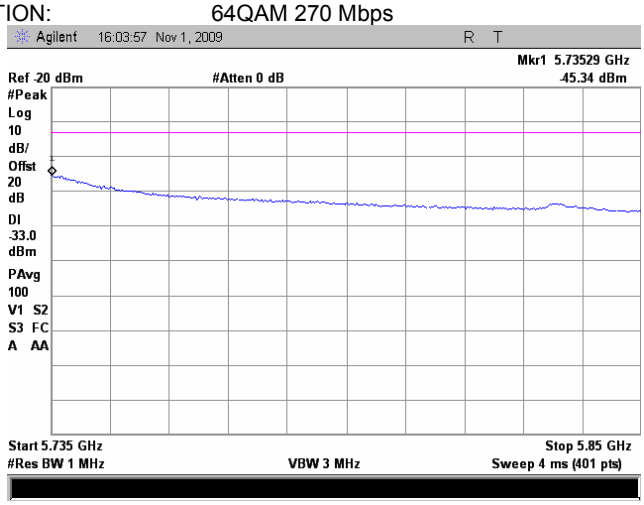
Plot 7.4.49 Conducted spurious emission measurements in the frequency range 5735 – 5850 MHz

CARRIER FREQUENCY 5690 MHz
CHANNEL BANDWIDTH 40 MHz
MODULATION: BPSK 27 Mbps



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

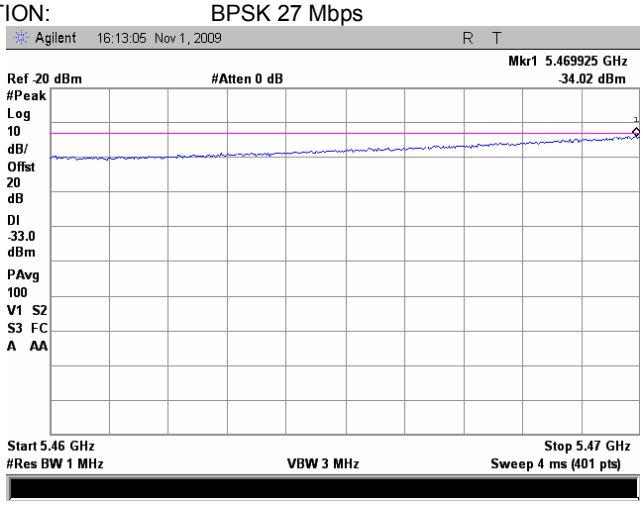
CARRIER FREQUENCY 5690 MHz
CHANNEL BANDWIDTH 40 MHz
MODULATION: 64QAM 270 Mbps



Test specification:	FCC section 15.407(b), RSS-210 Annex 9, section A9.2 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:	11/03/2009		
Temperature: 24.5ºC	**Air Pressure:** 1009 hPa	**Relative Humidity:** 50 %	**Power Supply:** 120 VAC
Remarks: EUT with 6 dBi antenna assembly gain			

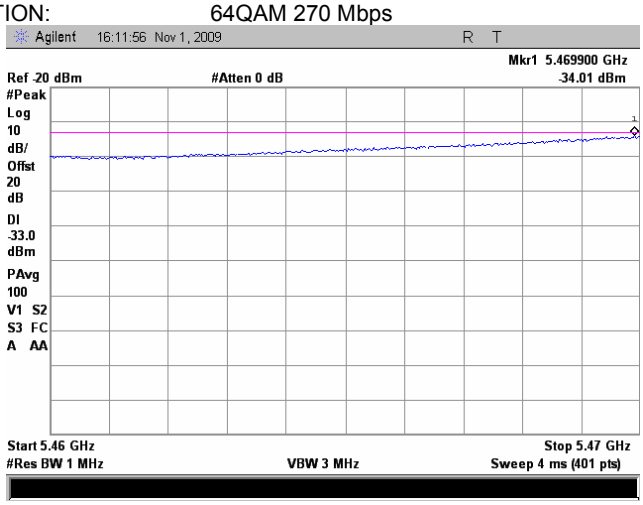
Plot 7.4.51 Conducted spurious emission measurements at the band edges

CARRIER FREQUENCY 5500 MHz
CHANNEL BANDWIDTH 40 MHz
MODULATION: BPSK 27 Mbps



Plot 7.4.52 Conducted spurious emission measurements at the band edges

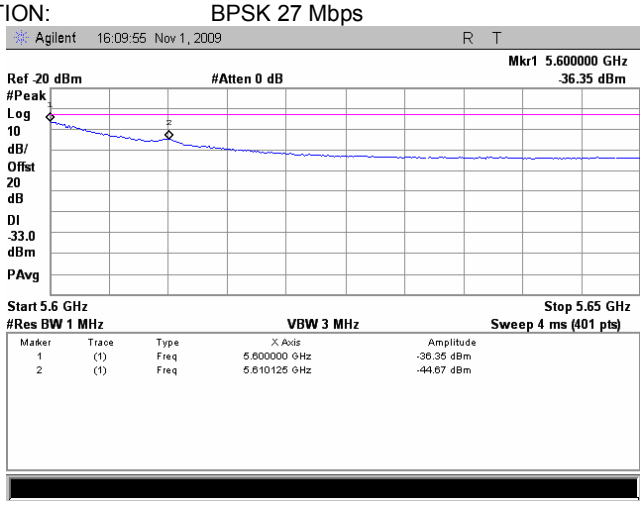
CARRIER FREQUENCY 5500 MHz
CHANNEL BANDWIDTH 40 MHz
MODULATION: 64QAM 270 Mbps



Test specification:	FCC section 15.407(b), RSS-210 Annex 9, section A9.2 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:	11/03/2009		
Temperature: 24.5ºC	**Air Pressure:** 1009 hPa	**Relative Humidity:** 50 %	**Power Supply:** 120 VAC
Remarks: EUT with 6 dBi antenna assembly gain			

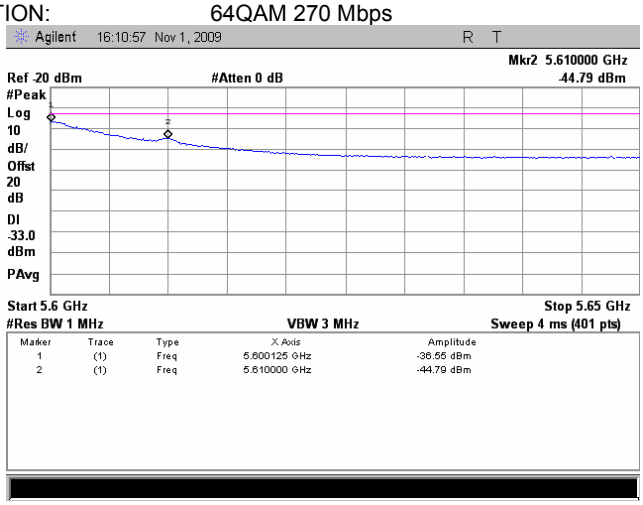
Plot 7.4.53 Conducted spurious emission measurements at the band edges

CARRIER FREQUENCY 5570 MHz
CHANNEL BANDWIDTH 40 MHz
MODULATION: BPSK 27 Mbps



Plot 7.4.54 Conducted spurious emission measurements at the band edges

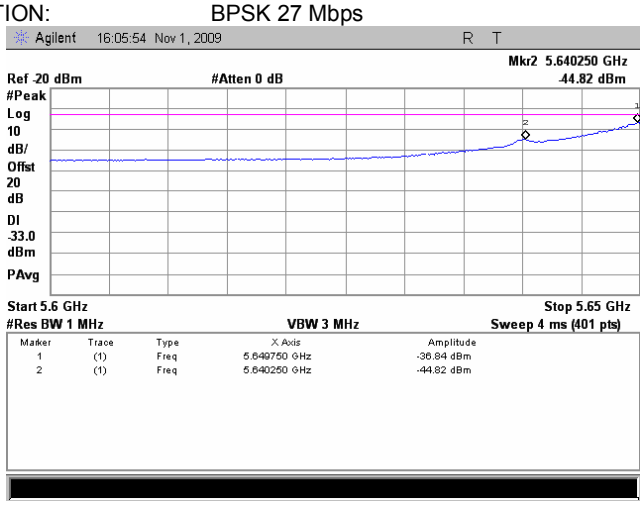
CARRIER FREQUENCY 5570 MHz
CHANNEL BANDWIDTH 40 MHz
MODULATION: 64QAM 270 Mbps



Test specification:	FCC section 15.407(b), RSS-210 Annex 9, section A9.2 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:	11/03/2009		
Temperature: 24.5ºC	**Air Pressure:** 1009 hPa	**Relative Humidity:** 50 %	**Power Supply:** 120 VAC
Remarks: EUT with 6 dBi antenna assembly gain			

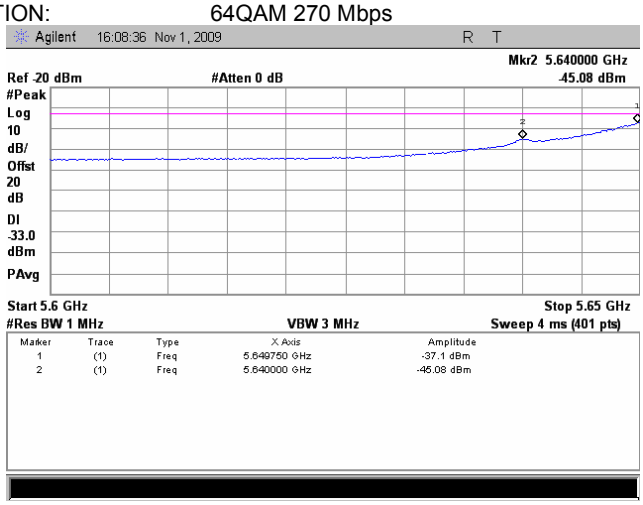
Plot 7.4.55 Conducted spurious emission measurements at the band edges

CARRIER FREQUENCY 5680 MHz
CHANNEL BANDWIDTH 40 MHz
MODULATION: BPSK 27 Mbps



Plot 7.4.56 Conducted spurious emission measurements at the band edges

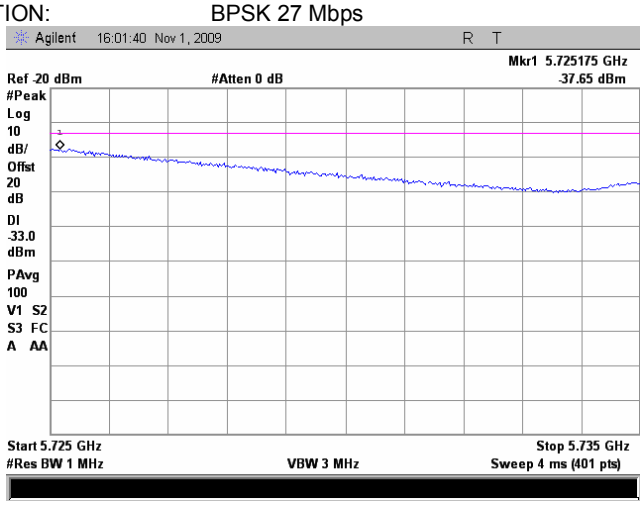
CARRIER FREQUENCY 5680 MHz
CHANNEL BANDWIDTH 40 MHz
MODULATION: 64QAM 270 Mbps



Test specification:	FCC section 15.407(b), RSS-210 Annex 9, section A9.2 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:	11/03/2009		
Temperature: 24.5ºC	**Air Pressure:** 1009 hPa	**Relative Humidity:** 50 %	**Power Supply:** 120 VAC
Remarks: EUT with 6 dBi antenna assembly gain			

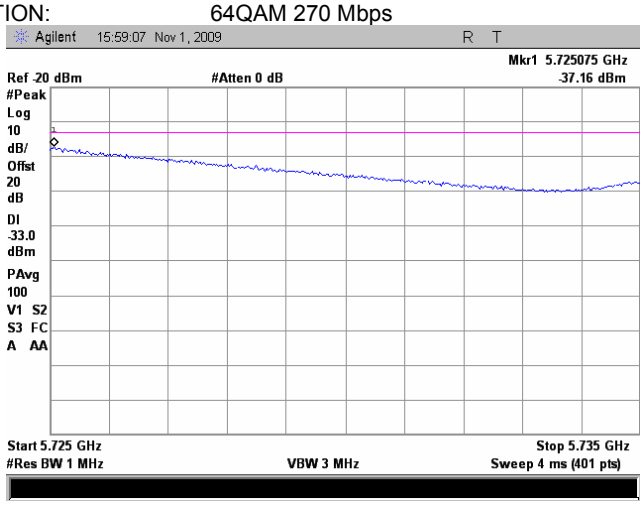
Plot 7.4.57 Conducted spurious emission measurements at the band edges

CARRIER FREQUENCY 5695 MHz
CHANNEL BANDWIDTH 40 MHz
MODULATION: BPSK 27 Mbps



Plot 7.4.58 Conducted spurious emission measurements at the band edges

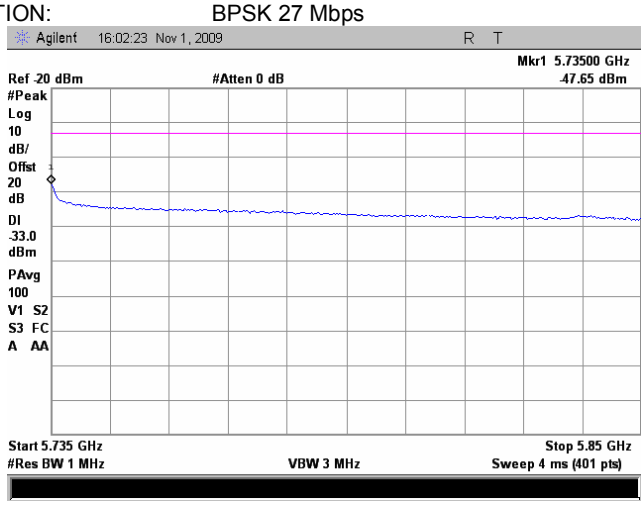
CARRIER FREQUENCY 5695 MHz
CHANNEL BANDWIDTH 40 MHz
MODULATION: 64QAM 270 Mbps



Test specification:	FCC section 15.407(b), RSS-210 Annex 9, section A9.2 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:	11/03/2009		
Temperature: 24.5ºC	**Air Pressure:** 1009 hPa	**Relative Humidity:** 50 %	**Power Supply:** 120 VAC
Remarks: EUT with 6 dBi antenna assembly gain			

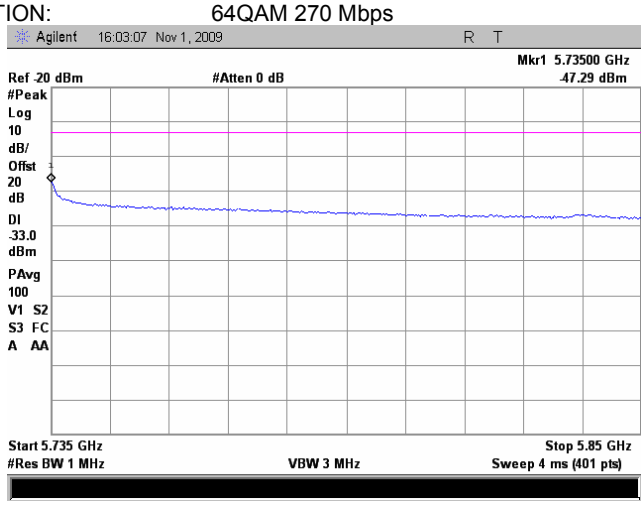
Plot 7.4.59 Conducted spurious emission measurements in the frequency range 5735 – 5850 MHz

CARRIER FREQUENCY 5695 MHz
CHANNEL BANDWIDTH 40 MHz
MODULATION: BPSK 27 Mbps



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

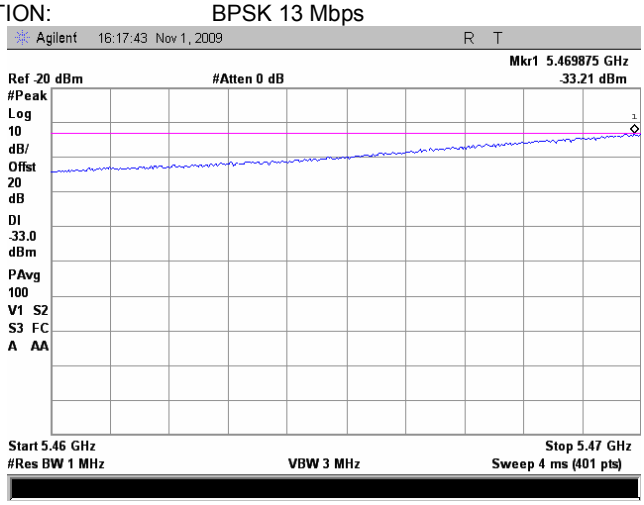
CARRIER FREQUENCY 5695 MHz
CHANNEL BANDWIDTH 40 MHz
MODULATION: 64QAM 270 Mbps



Test specification:	FCC section 15.407(b), RSS-210 Annex 9, section A9.2 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:	11/03/2009		
Temperature: 24.5ºC	**Air Pressure:** 1009 hPa	**Relative Humidity:** 50 %	**Power Supply:** 120 VAC
Remarks: EUT with 6 dBi antenna assembly gain			

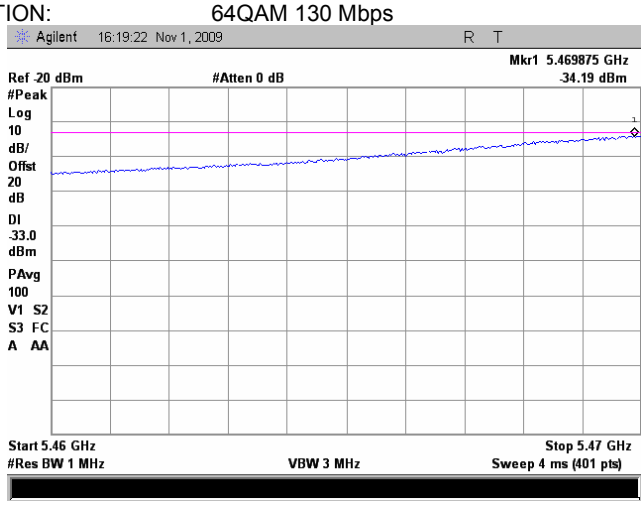
Plot 7.4.61 Conducted spurious emission measurements at the band edges

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



Plot 7.4.62 Conducted spurious emission measurements at the band edges

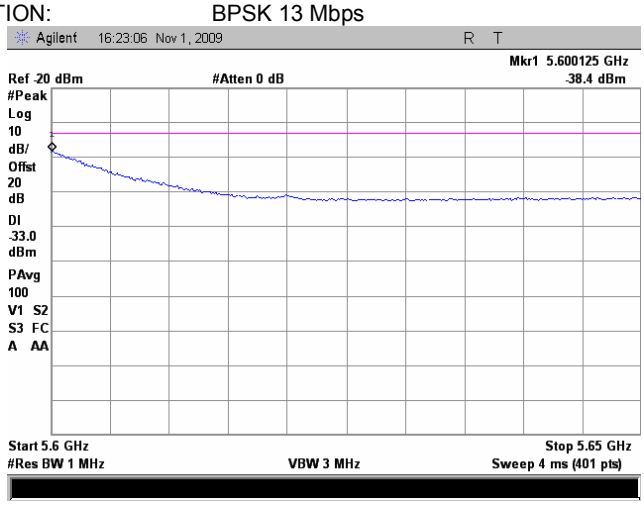
CARRIER FREQUENCY 5490 MHz
CHANNEL BANDWIDTH 20 MHz
MODULATION: 64QAM 130 Mbps



Test specification:	FCC section 15.407(b), RSS-210 Annex 9, section A9.2 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:	11/03/2009		
Temperature: 24.5ºC	**Air Pressure:** 1009 hPa	**Relative Humidity:** 50 %	**Power Supply:** 120 VAC
Remarks: EUT with 6 dBi antenna assembly gain			

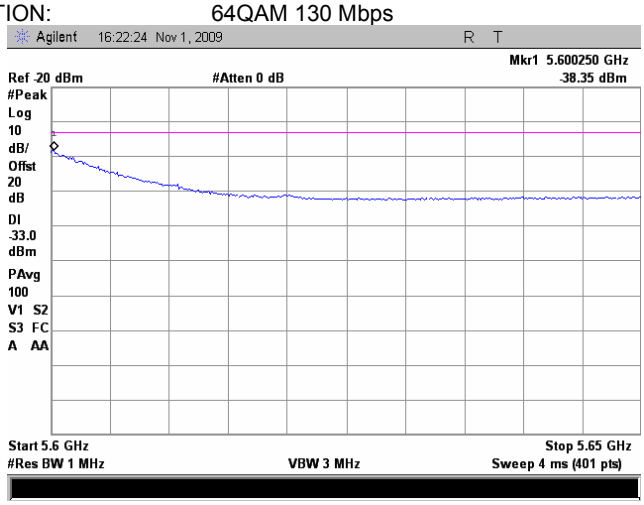
Plot 7.4.63 Conducted spurious emission measurements at the band edges

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



Plot 7.4.64 Conducted spurious emission measurements at the band edges

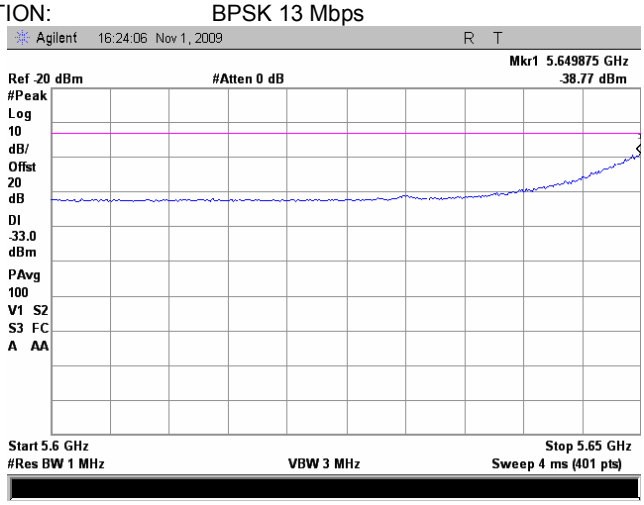
CARRIER FREQUENCY 5580 MHz
CHANNEL BANDWIDTH 20 MHz
MODULATION: 64QAM 130 Mbps



Test specification:	FCC section 15.407(b), RSS-210 Annex 9, section A9.2 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:	11/03/2009		
Temperature: 24.5ºC	**Air Pressure:** 1009 hPa	**Relative Humidity:** 50 %	**Power Supply:** 120 VAC
Remarks: EUT with 6 dBi antenna assembly gain			

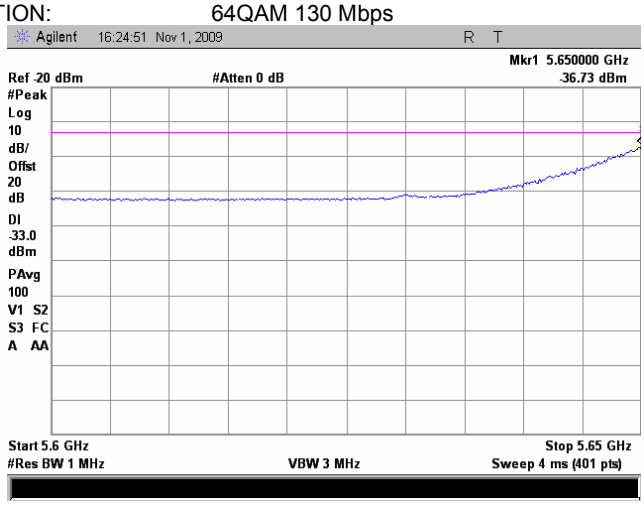
Plot 7.4.65 Conducted spurious emission measurements at the band edges

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



Plot 7.4.66 Conducted spurious emission measurements at the band edges

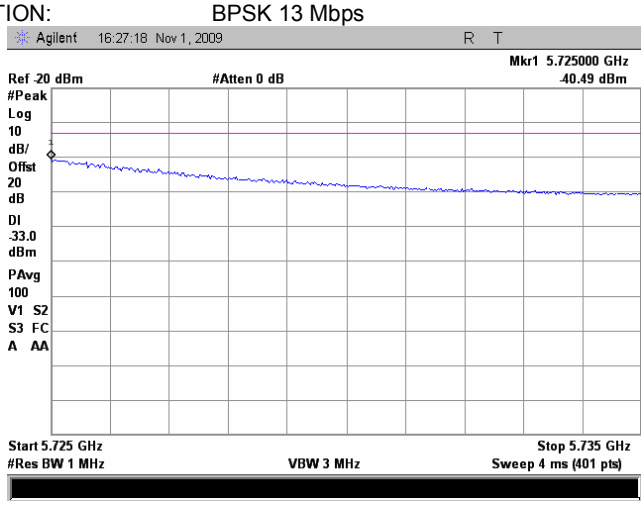
CARRIER FREQUENCY 5670 MHz
CHANNEL BANDWIDTH 20 MHz
MODULATION: 64QAM 130 Mbps



Test specification:	FCC section 15.407(b), RSS-210 Annex 9, section A9.2 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:	11/03/2009		
Temperature: 24.5ºC	**Air Pressure:** 1009 hPa	**Relative Humidity:** 50 %	**Power Supply:** 120 VAC
Remarks: EUT with 6 dBi antenna assembly gain			

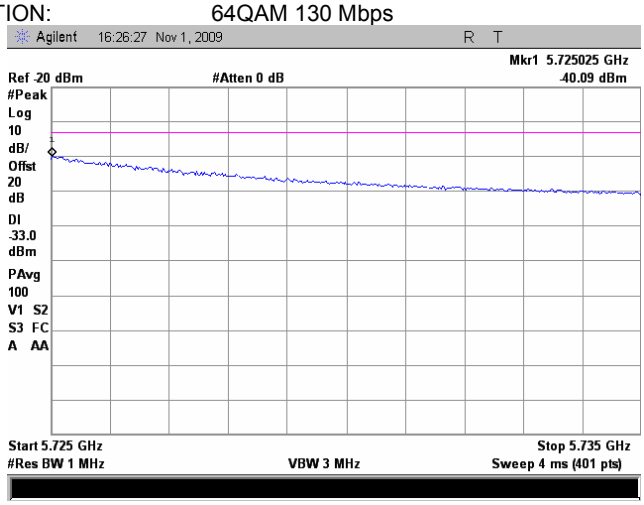
Plot 7.4.67 Conducted spurious emission measurements at the band edges

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



Plot 7.4.68 Conducted spurious emission measurements at the band edges

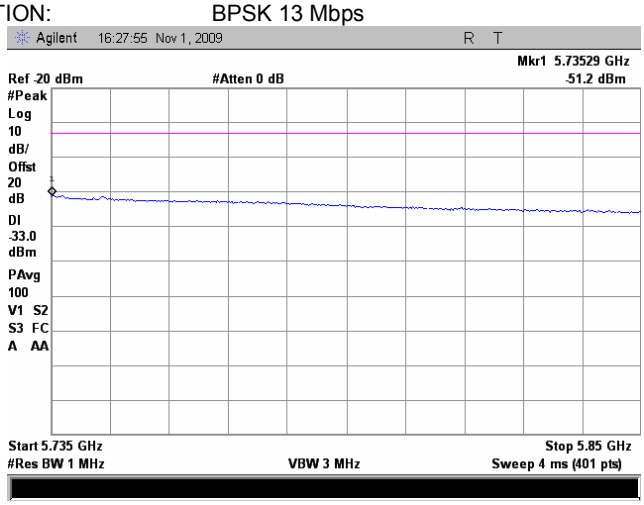
CARRIER FREQUENCY 5705 MHz
CHANNEL BANDWIDTH 20 MHz
MODULATION: 64QAM 130 Mbps



Test specification:	FCC section 15.407(b), RSS-210 Annex 9, section A9.2 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:	11/03/2009		
Temperature: 24.5ºC	**Air Pressure:** 1009 hPa	**Relative Humidity:** 50 %	**Power Supply:** 120 VAC
Remarks: EUT with 6 dBi antenna assembly gain			

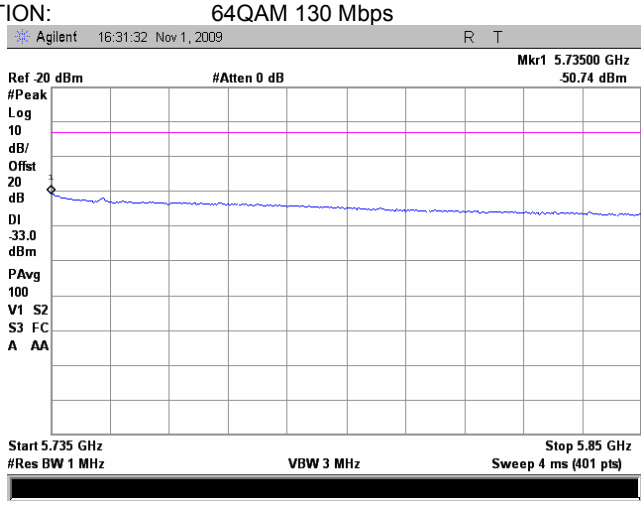
Plot 7.4.69 Conducted spurious emission measurements in the frequency range 5735 – 5850 MHz

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



Plot 7.4.70 Conducted spurious emission measurements in the frequency range 5735 – 5850 MHz

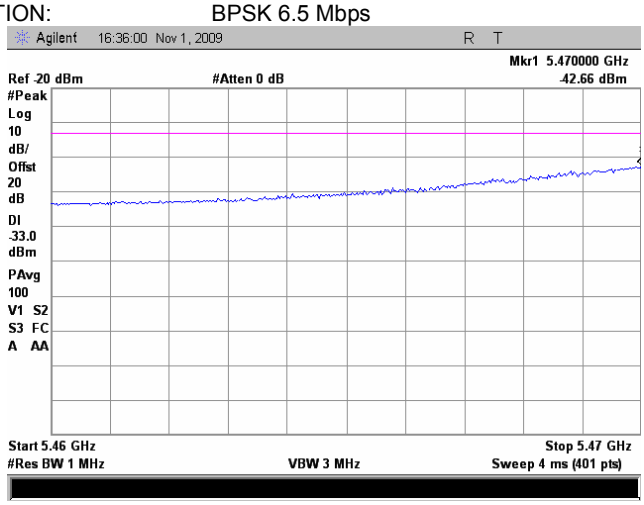
CARRIER FREQUENCY 5705 MHz
CHANNEL BANDWIDTH 20 MHz
MODULATION: 64QAM 130 Mbps



Test specification:	FCC section 15.407(b), RSS-210 Annex 9, section A9.2 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:	11/03/2009		
Temperature: 24.5ºC	**Air Pressure:** 1009 hPa	**Relative Humidity:** 50 %	**Power Supply:** 120 VAC
Remarks: EUT with 6 dBi antenna assembly gain			

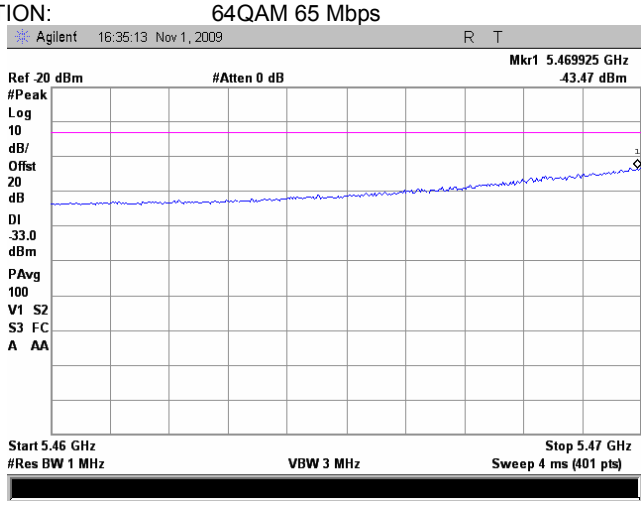
Plot 7.4.71 Conducted spurious emission measurements at the band edges

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



Plot 7.4.72 Conducted spurious emission measurements at the band edges

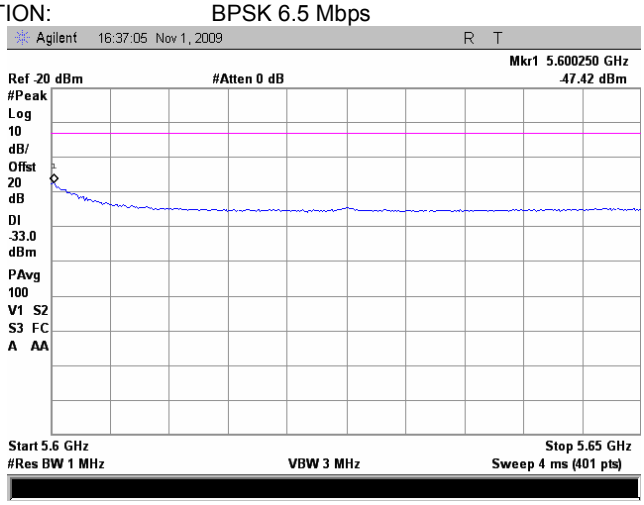
CARRIER FREQUENCY 5485 MHz
CHANNEL BANDWIDTH 10 MHz
MODULATION: 64QAM 65 Mbps



Test specification:	FCC section 15.407(b), RSS-210 Annex 9, section A9.2 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:	11/03/2009		
Temperature: 24.5ºC	**Air Pressure:** 1009 hPa	**Relative Humidity:** 50 %	**Power Supply:** 120 VAC
Remarks: EUT with 6 dBi antenna assembly gain			

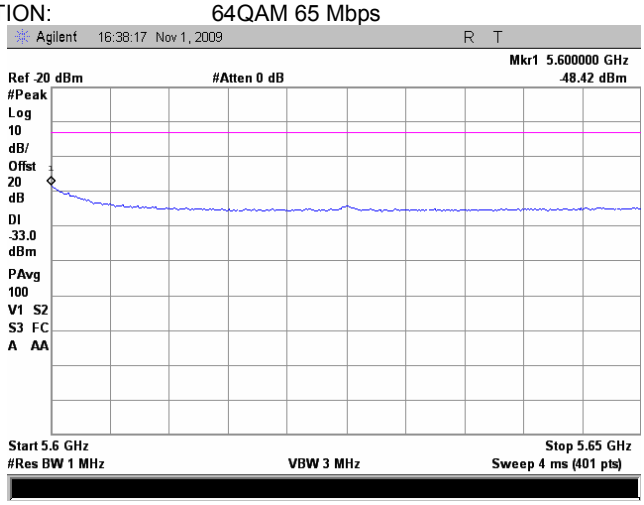
Plot 7.4.73 Conducted spurious emission measurements at the band edges

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



Plot 7.4.74 Conducted spurious emission measurements at the band edges

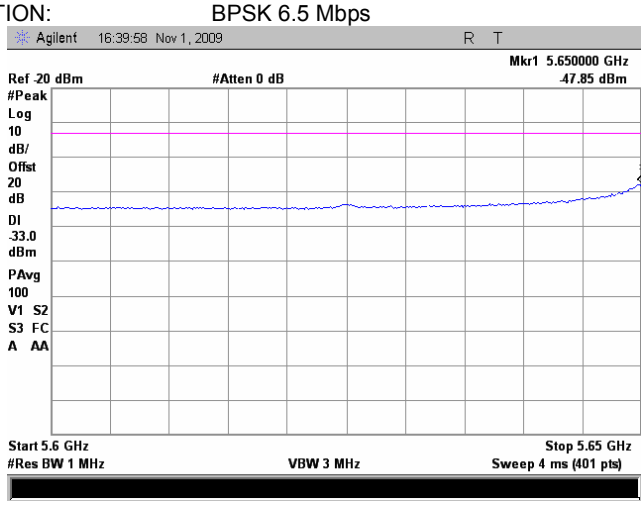
CARRIER FREQUENCY 5585 MHz
CHANNEL BANDWIDTH 10 MHz
MODULATION: 64QAM 65 Mbps



Test specification:	FCC section 15.407(b), RSS-210 Annex 9, section A9.2 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:	11/03/2009		
Temperature: 24.5ºC	**Air Pressure:** 1009 hPa	**Relative Humidity:** 50 %	**Power Supply:** 120 VAC
Remarks: EUT with 6 dBi antenna assembly gain			

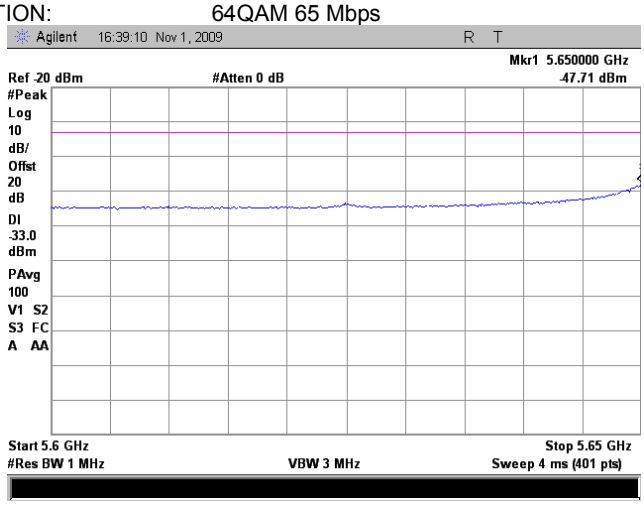
Plot 7.4.75 Conducted spurious emission measurements at the band edges

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



Plot 7.4.76 Conducted spurious emission measurements at the band edges

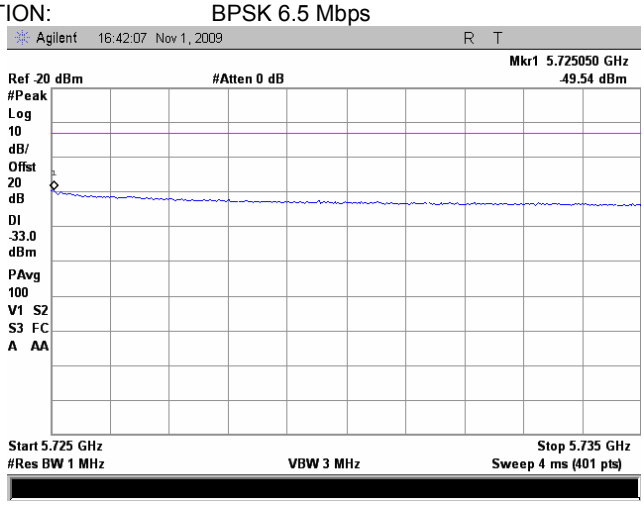
CARRIER FREQUENCY 5665 MHz
CHANNEL BANDWIDTH 10 MHz
MODULATION: 64QAM 65 Mbps



Test specification:	FCC section 15.407(b), RSS-210 Annex 9, section A9.2 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:	11/03/2009		
Temperature: 24.5ºC	**Air Pressure:** 1009 hPa	**Relative Humidity:** 50 %	**Power Supply:** 120 VAC
Remarks: EUT with 6 dBi antenna assembly gain			

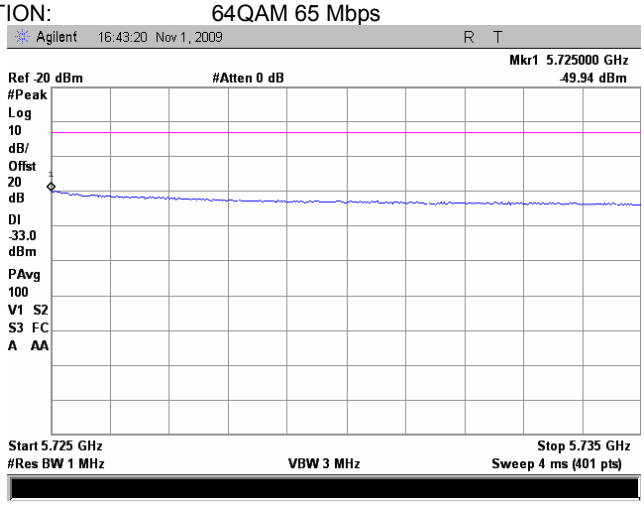
Plot 7.4.77 Conducted spurious emission measurements at the band edges

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



Plot 7.4.78 Conducted spurious emission measurements at the band edges

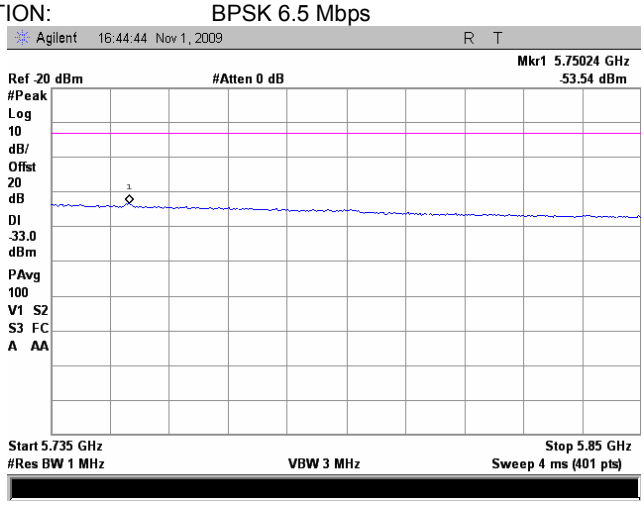
CARRIER FREQUENCY 5710 MHz
CHANNEL BANDWIDTH 10 MHz
MODULATION: 64QAM 65 Mbps



Test specification:	FCC section 15.407(b), RSS-210 Annex 9, section A9.2 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:	11/03/2009		
Temperature: 24.5ºC	**Air Pressure:** 1009 hPa	**Relative Humidity:** 50 %	**Power Supply:** 120 VAC
Remarks: EUT with 6 dBi antenna assembly gain			

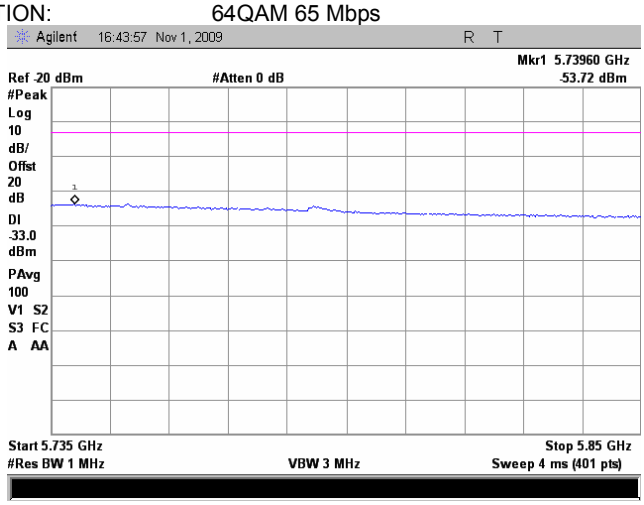
Plot 7.4.79 Conducted spurious emission measurements in the frequency range 5735 – 5850 MHz

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



Plot 7.4.80 Conducted spurious emission measurements in the frequency range 5735 – 5850 MHz

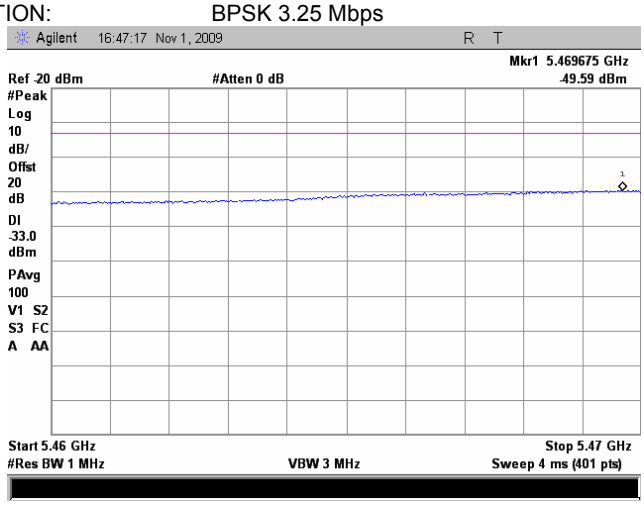
CARRIER FREQUENCY 5710 MHz
CHANNEL BANDWIDTH 10 MHz
MODULATION: 64QAM 65 Mbps



Test specification:	FCC section 15.407(b), RSS-210 Annex 9, section A9.2 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:	11/03/2009		
Temperature: 24.5ºC	**Air Pressure:** 1009 hPa	**Relative Humidity:** 50 %	**Power Supply:** 120 VAC
Remarks: EUT with 6 dBi antenna assembly gain			

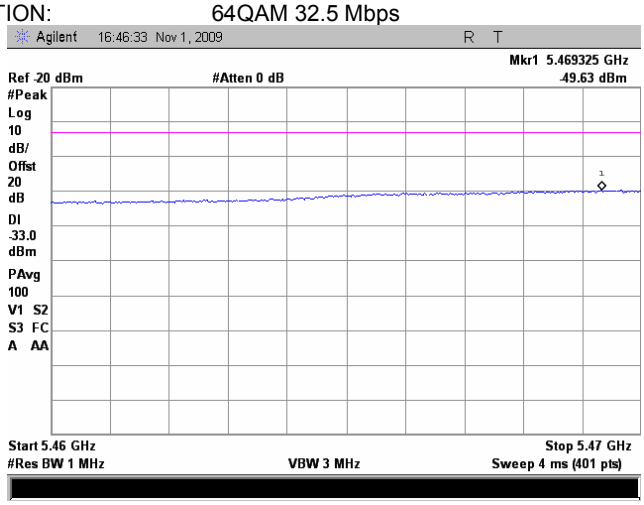
Plot 7.4.81 Conducted spurious emission measurements at the band edges

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



Plot 7.4.82 Conducted spurious emission measurements at the band edges

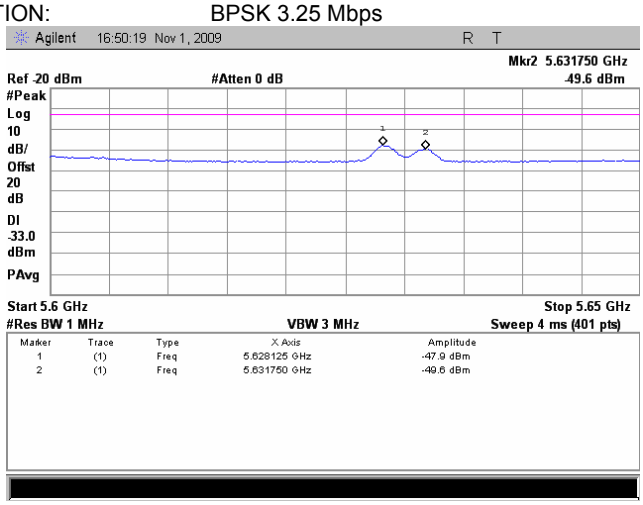
CARRIER FREQUENCY 5480 MHz
CHANNEL BANDWIDTH 5 MHz
MODULATION: 64QAM 32.5 Mbps



Test specification:	FCC section 15.407(b), RSS-210 Annex 9, section A9.2 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:	11/03/2009		
Temperature: 24.5ºC	**Air Pressure:** 1009 hPa	**Relative Humidity:** 50 %	**Power Supply:** 120 VAC
Remarks: EUT with 6 dBi antenna assembly gain			

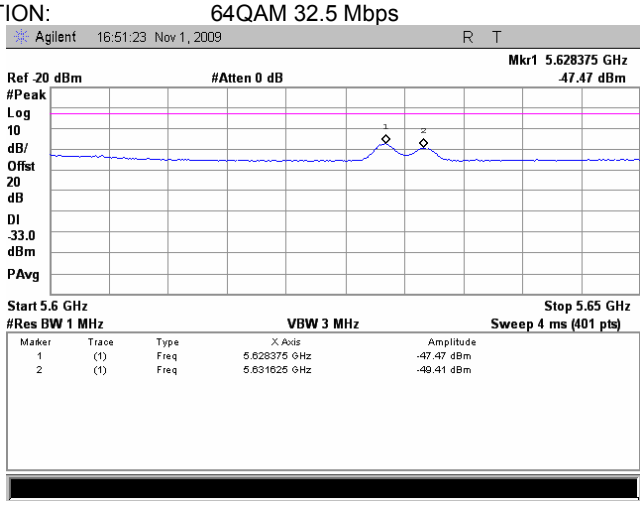
Plot 7.4.83 Conducted spurious emission measurements at the band edges

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



Plot 7.4.84 Conducted spurious emission measurements at the band edges

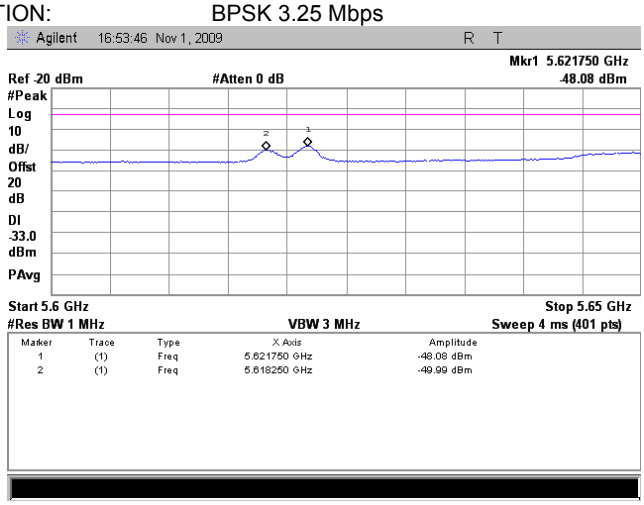
CARRIER FREQUENCY 5590 MHz
CHANNEL BANDWIDTH 5 MHz
MODULATION: 64QAM 32.5 Mbps



Test specification:	FCC section 15.407(b), RSS-210 Annex 9, section A9.2 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:	11/03/2009		
Temperature: 24.5ºC	**Air Pressure:** 1009 hPa	**Relative Humidity:** 50 %	**Power Supply:** 120 VAC
Remarks: EUT with 6 dBi antenna assembly gain			

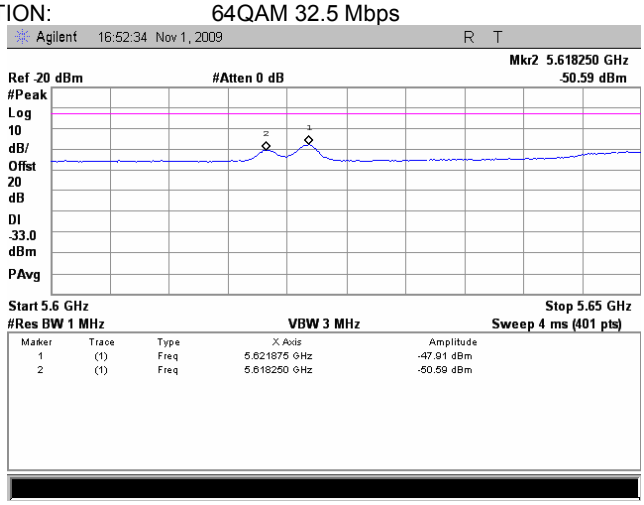
Plot 7.4.85 Conducted spurious emission measurements at the band edges

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



Plot 7.4.86 Conducted spurious emission measurements at the band edges

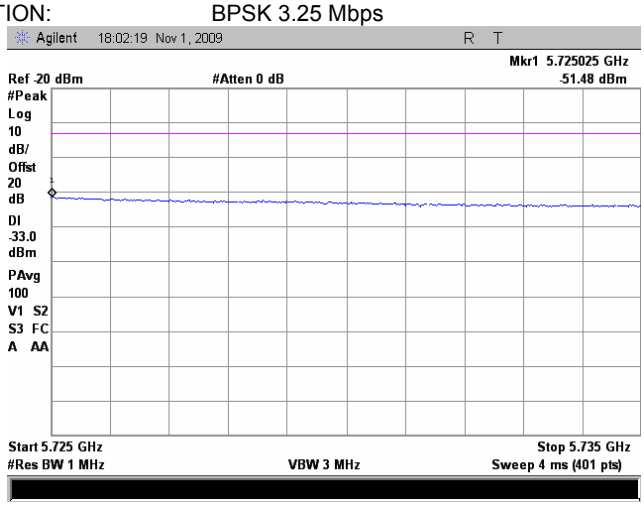
CARRIER FREQUENCY 5660 MHz
CHANNEL BANDWIDTH 5 MHz
MODULATION: 64QAM 32.5 Mbps



Test specification:	FCC section 15.407(b), RSS-210 Annex 9, section A9.2 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:	11/03/2009		
Temperature: 24.5ºC	**Air Pressure:** 1009 hPa	**Relative Humidity:** 50 %	**Power Supply:** 120 VAC
Remarks: EUT with 6 dBi antenna assembly gain			

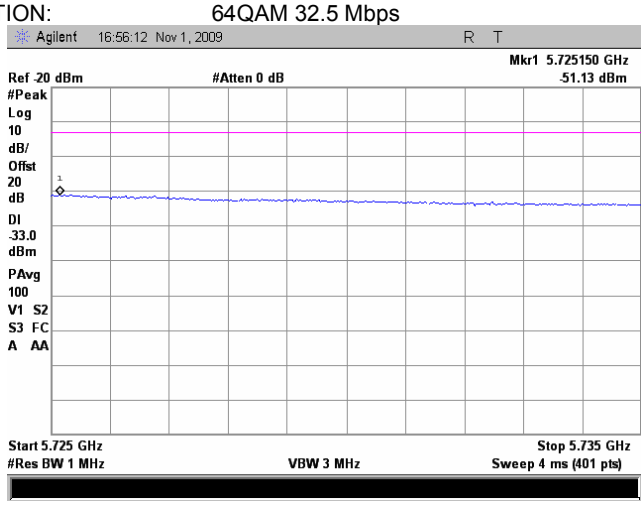
Plot 7.4.87 Conducted spurious emission measurements at the band edges

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



Plot 7.4.88 Conducted spurious emission measurements at the band edges

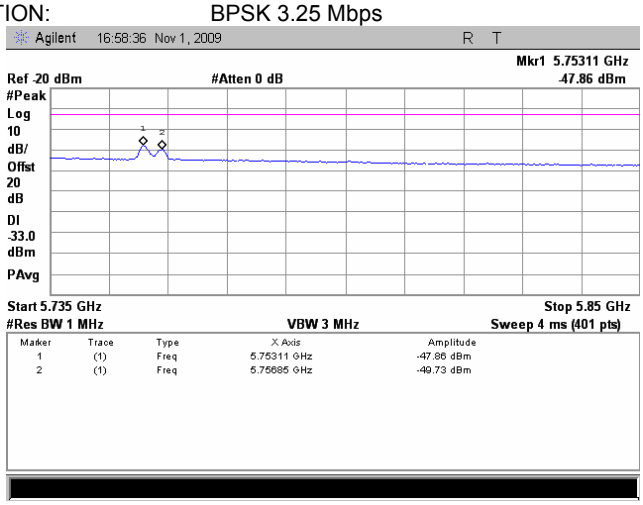
CARRIER FREQUENCY 5715 MHz
CHANNEL BANDWIDTH 5 MHz
MODULATION: 64QAM 32.5 Mbps



Test specification:	FCC section 15.407(b), RSS-210 Annex 9, section A9.2 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:	11/03/2009		
Temperature: 24.5ºC	**Air Pressure:** 1009 hPa	**Relative Humidity:** 50 %	**Power Supply:** 120 VAC
Remarks: EUT with 6 dBi antenna assembly gain			

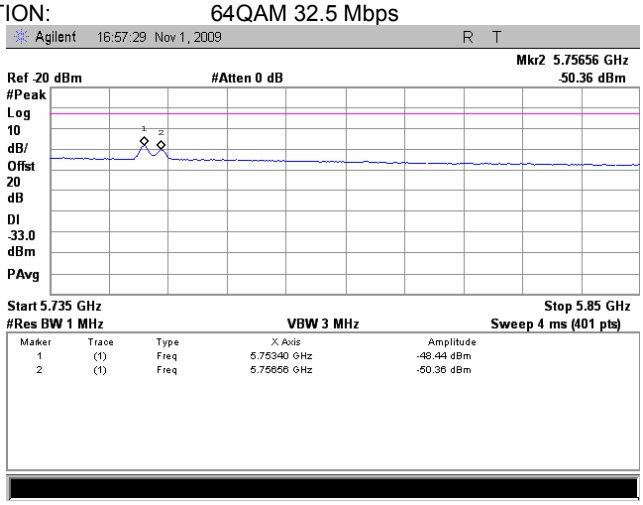
Plot 7.4.89 Conducted spurious emission measurements in the frequency range 5735 – 5850 MHz

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



Plot 7.4.90 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), Frequency stability		
Test procedure:	Section 2.1055		
Test mode:	Compliance	Verdict:	PASS
Date:	12/03/2009		
Temperature: 24ºC	Air Pressure: 1015 hPa	Relative Humidity: 47 %	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.

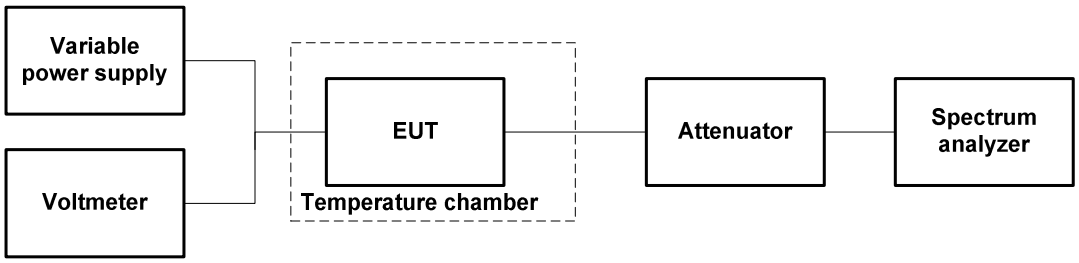
7.5.2.2 The EUT power was turned off. Temperature within test chamber was set to the required one and a period of time sufficient to stabilize all of the oscillator circuit components was allowed.

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), Frequency stability**		
Test procedure:	Section 2.1055		
Test mode:	Compliance	**Verdict:**	PASS
Date:	12/03/2009		
Temperature: 24ºC	**Air Pressure:** 1015 hPa	**Relative Humidity:** 47 %	**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
TRANSMITTER OUTPUT POWER SETTINGS: "13.5 dBm" at 40 MHz channel bandwidth In-Band
"10.0 dBm" at 40 MHz channel bandwidth Band Edge
CHANNEL BANDWIDTH / MODULATION: 40 MHz / 64QAM, 27Mbps Band Edge frequency (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	5470.3250	5470.7250	5470.5750	5470.4375	5470	-0.3250	Pass
20	Nominal +15%	5470.4500	5470.4625	5470.7625	5470.8875		-0.4500	
20	Nominal	5470.2625	5470.3375	5470.3500	5470.3750		-0.2625	
20	Nominal -15%	5470.5625	5471.0375	5470.9750	5471.1375		-0.5625	
60	Nominal	5471.0750	5471.2750	5471.3625	5471.6125		-1.0750	
Mid frequency:								
-35	Nominal	5599.8625	5599.5625	5599.7875	5599.6875	5600	0.1375	Pass
20	Nominal +15%	5599.1375	5598.6875	5598.5750	5598.5000		0.8625	
20	Nominal	5598.5000	5598.5500	5598.4250	5598.5625		1.4500	
20	Nominal -15%	5598.7000	5597.6000	5597.0375	5597.2375		1.3000	
60	Nominal	5598.0750	5597.6000	5597.5875	5597.7125		1.9250	
Mid frequency:								
-35	Nominal	5651.0000	5651.0875	5651.2625	5651.4000	5650	-1.0000	Pass
20	Nominal +15%	5652.1500	5652.2625	5652.3625	5652.4375		-2.1500	
20	Nominal	5652.6250	5652.9250	5652.9000	5652.7250		-2.6250	
20	Nominal -15%	5652.4250	5652.7125	5652.1375	5652.3500		-2.1375	
60	Nominal	5652.0375	5652.4750	5652.6250	5652.7750		-2.0375	
High frequency:								
-35	Nominal	5724.8750	5724.6500	5724.3625	5724.2500	5725	0.1250	Pass
20	Nominal +15%	5722.0250	5722.8375	5722.5625	5722.3125		2.9750	
20	Nominal	5722.8875	5722.4875	5722.4750	5722.6125		2.1125	
20	Nominal -15%	5722.3375	5722.4625	5722.3250	5722.2750		2.6625	
60	Nominal	5722.5125	5722.3125	5722.2375	5722.2750		2.4875	

* - 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

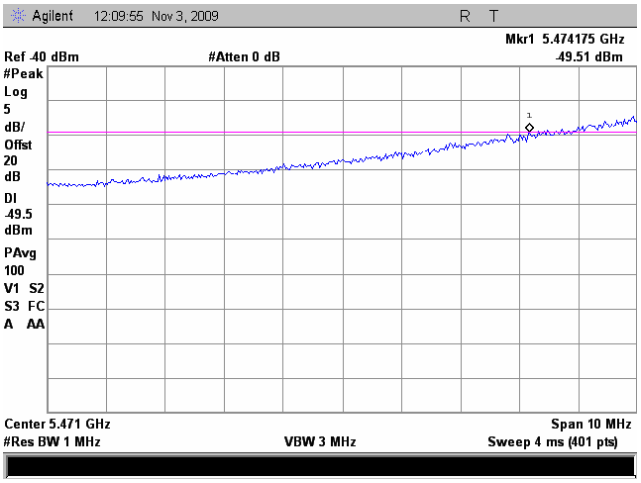
HL 0493	HL 1194	HL 2780	HL 3175	HL 3233	HL 3286		

Full description is given in Appendix A.

Test specification:	FCC section 15.407(g), Frequency stability		
Test procedure:	Section 2.1055		
Test mode:	Compliance	Verdict:	PASS
Date:	12/03/2009		
Temperature: 24ºC	Air Pressure: 1015 hPa	Relative Humidity: 47 %	Power Supply: 120 VAC
Remarks: EUT with 22.5 dBi antenna assembly gain			

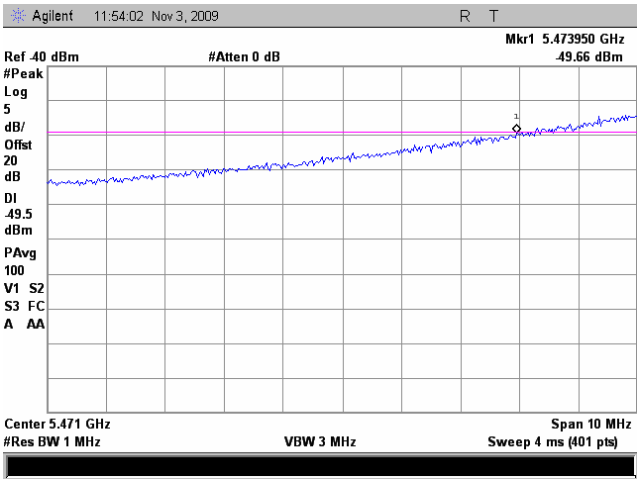
Plot 7.5.1 Band edge emissions at normal conditions at 10th minute

FREQUENCY EDGE	5470
CHANNEL BANDWIDTH	40 MHz
MODULATION / BIT RATE	BPSK / 27 Mbps
NOTE	In-band



Plot 7.5.2 Band edge emissions at normal conditions 10th minute

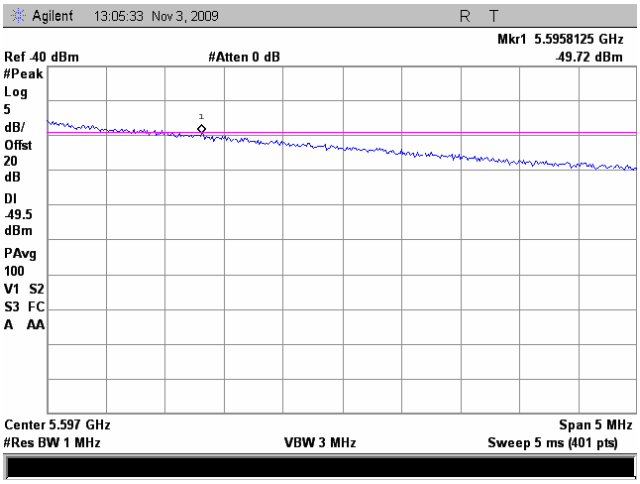
FREQUENCY EDGE	5470
CHANNEL BANDWIDTH	40 MHz
MODULATION / BIT RATE	64QAM / 270 Mbps
NOTE	In-band



Test specification:	FCC section 15.407(g), Frequency stability		
Test procedure:	Section 2.1055		
Test mode:	Compliance	Verdict:	PASS
Date:	12/03/2009		
Temperature: 24ºC	Air Pressure: 1015 hPa	Relative Humidity: 47 %	Power Supply: 120 VAC
Remarks: EUT with 22.5 dBi antenna assembly gain			

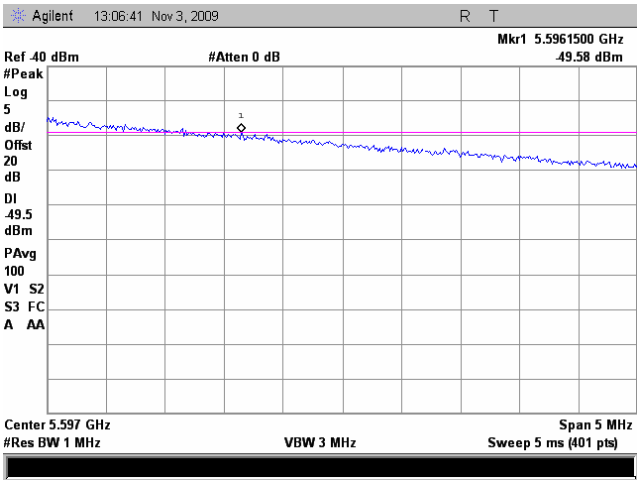
Plot 7.5.3 Band edge emissions at normal conditions at 10th minute

FREQUENCY EDGE	5600
CHANNEL BANDWIDTH	40 MHz
MODULATION / BIT RATE	BPSK / 27 Mbps
NOTE	In-band



Plot 7.5.4 Band edge emissions at normal conditions 10th minute

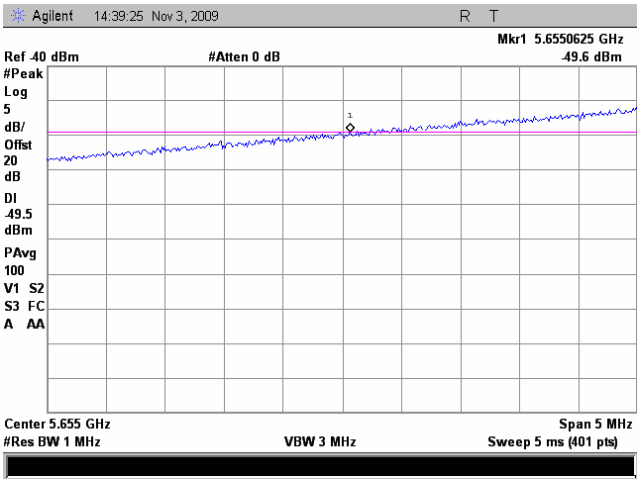
FREQUENCY EDGE	5600
CHANNEL BANDWIDTH	40 MHz
MODULATION / BIT RATE	64QAM / 270 Mbps
NOTE	In-band



Test specification:	FCC section 15.407(g), Frequency stability		
Test procedure:	Section 2.1055		
Test mode:	Compliance	Verdict:	PASS
Date:	12/03/2009		
Temperature: 24ºC	Air Pressure: 1015 hPa	Relative Humidity: 47 %	Power Supply: 120 VAC
Remarks: EUT with 22.5 dBi antenna assembly gain			

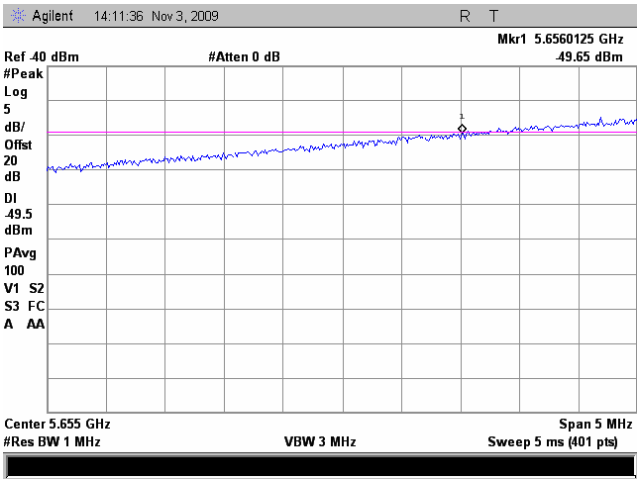
Plot 7.5.5 Band edge emissions at normal conditions at 10th minute

FREQUENCY EDGE	5650
CHANNEL BANDWIDTH	40 MHz
MODULATION / BIT RATE	BPSK / 27 Mbps
NOTE	In-band



Plot 7.5.6 Band edge emissions at normal conditions 10th minute

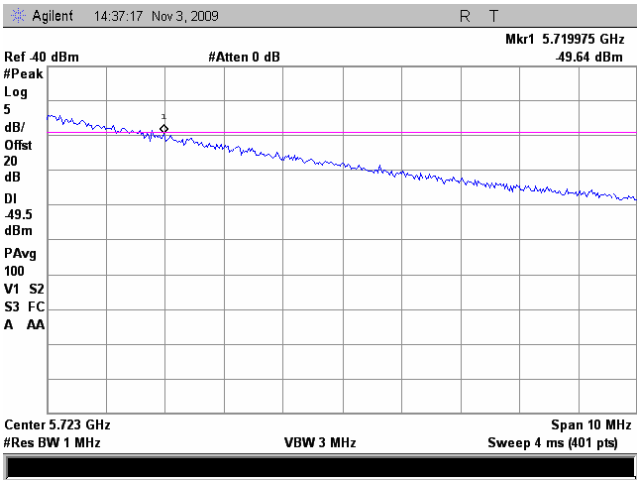
FREQUENCY EDGE	5650
CHANNEL BANDWIDTH	40 MHz
MODULATION / BIT RATE	64QAM / 270 Mbps
NOTE	In-band



Test specification:	**FCC section 15.407(g), Frequency stability**		
Test procedure:	Section 2.1055		
Test mode:	Compliance	**Verdict:**	PASS
Date:	12/03/2009		
Temperature: 24ºC	**Air Pressure:** 1015 hPa	**Relative Humidity:** 47 %	**Power Supply:** 120 VAC
Remarks: EUT with 22.5 dBi antenna assembly gain			

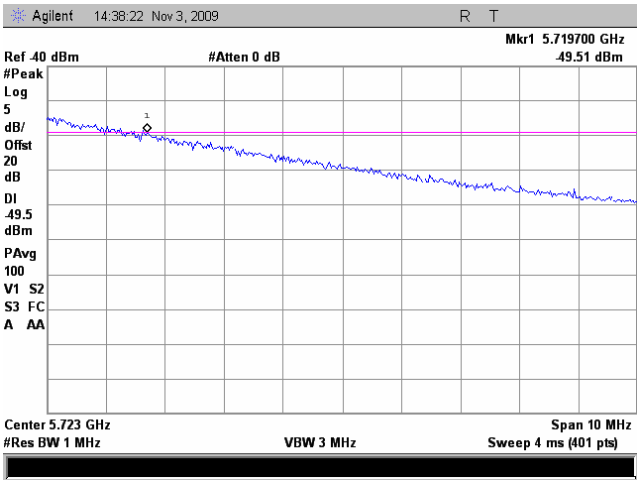
Plot 7.5.7 Band edge emissions at normal conditions at 10th minute

FREQUENCY EDGE	5725
CHANNEL BANDWIDTH	40 MHz
MODULATION / BIT RATE	BPSK / 27 Mbps
NOTE	In-band



Plot 7.5.8 Band edge emissions at normal conditions 10th minute

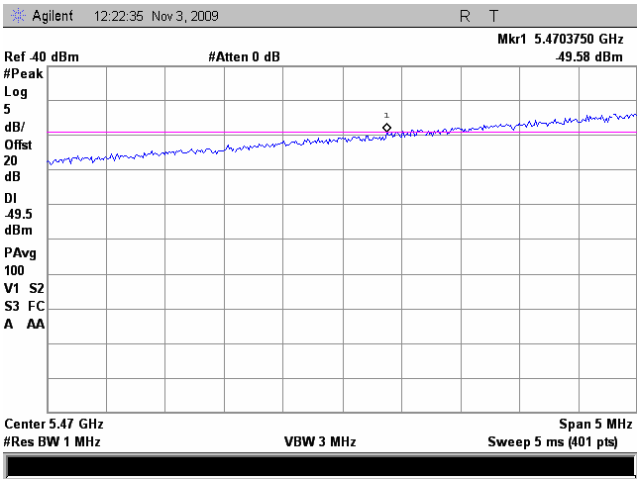
FREQUENCY EDGE	5725
CHANNEL BANDWIDTH	40 MHz
MODULATION / BIT RATE	64QAM / 270 Mbps
NOTE	In-band



Test specification:	FCC section 15.407(g), Frequency stability		
Test procedure:	Section 2.1055		
Test mode:	Compliance	Verdict:	PASS
Date:	12/03/2009		
Temperature: 24ºC	Air Pressure: 1015 hPa	Relative Humidity: 47 %	Power Supply: 120 VAC
Remarks: EUT with 22.5 dBi antenna assembly gain			

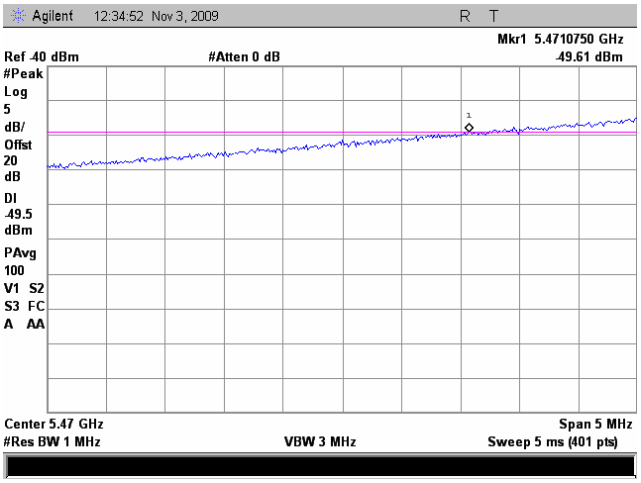
Plot 7.5.9 Band edge emissions at normal conditions at 10th minute

FREQUENCY EDGE	5470
CHANNEL BANDWIDTH	40 MHz
MODULATION / BIT RATE	BPSK / 27 Mbps
NOTE	Band Edge



Plot 7.5.10 Band edge emissions at normal conditions 10th minute

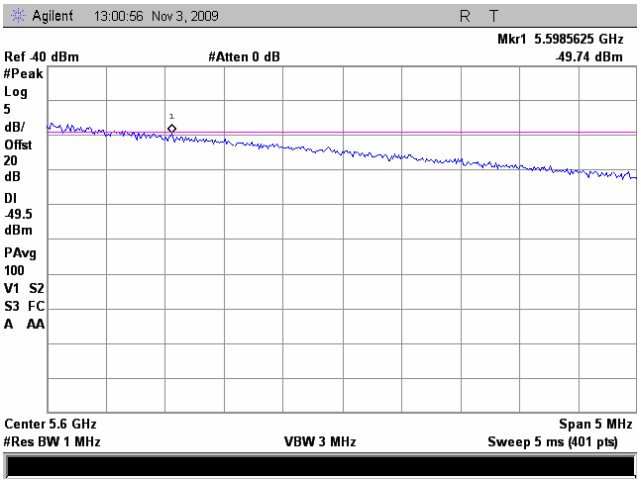
FREQUENCY EDGE	5470
CHANNEL BANDWIDTH	40 MHz
MODULATION / BIT RATE	64QAM / 270 Mbps
NOTE	Band Edge



Test specification:	FCC section 15.407(g), Frequency stability		
Test procedure:	Section 2.1055		
Test mode:	Compliance	Verdict:	PASS
Date:	12/03/2009		
Temperature: 24ºC	Air Pressure: 1015 hPa	Relative Humidity: 47 %	Power Supply: 120 VAC
Remarks: EUT with 22.5 dBi antenna assembly gain			

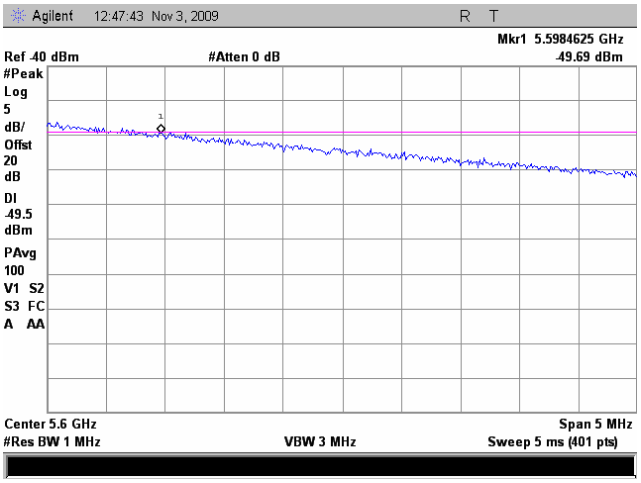
Plot 7.5.11 Band edge emissions at normal conditions at 10th minute

FREQUENCY EDGE	5600
CHANNEL BANDWIDTH	40 MHz
MODULATION / BIT RATE	BPSK / 27 Mbps
NOTE	Band Edge



Plot 7.5.12 Band edge emissions at normal conditions 10th minute

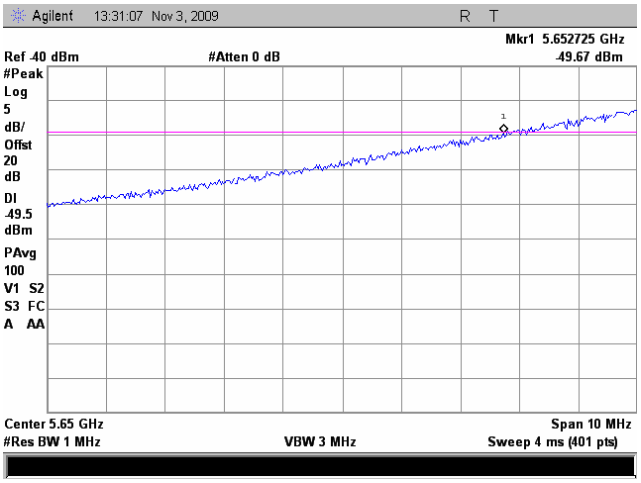
FREQUENCY EDGE	5600
CHANNEL BANDWIDTH	40 MHz
MODULATION / BIT RATE	64QAM / 270 Mbps
NOTE	Band Edge



Test specification:	FCC section 15.407(g), Frequency stability		
Test procedure:	Section 2.1055		
Test mode:	Compliance	Verdict:	PASS
Date:	12/03/2009		
Temperature: 24ºC	Air Pressure: 1015 hPa	Relative Humidity: 47 %	Power Supply: 120 VAC
Remarks: EUT with 22.5 dBi antenna assembly gain			

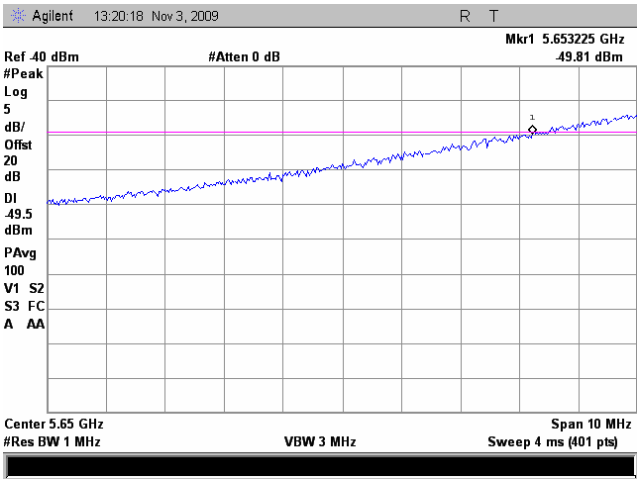
Plot 7.5.13 Band edge emissions at normal conditions at 10th minute

FREQUENCY EDGE	5650
CHANNEL BANDWIDTH	40 MHz
MODULATION / BIT RATE	BPSK / 27 Mbps
NOTE	Band Edge



Plot 7.5.14 Band edge emissions at normal conditions 10th minute

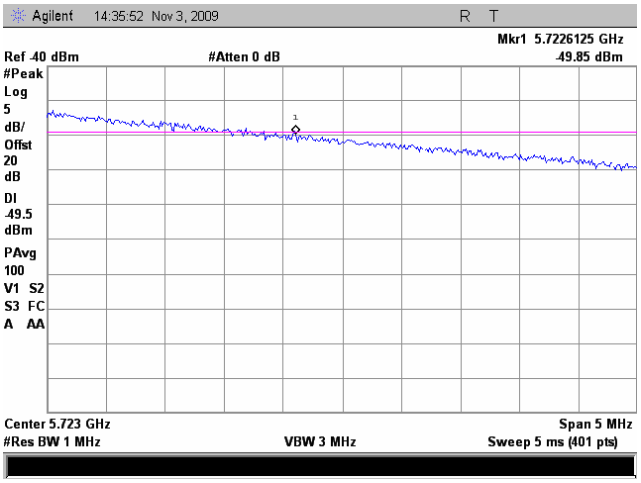
FREQUENCY EDGE	5650
CHANNEL BANDWIDTH	40 MHz
MODULATION / BIT RATE	64QAM / 270 Mbps
NOTE	Band Edge



Test specification:	FCC section 15.407(g), Frequency stability		
Test procedure:	Section 2.1055		
Test mode:	Compliance	Verdict:	PASS
Date:	12/03/2009		
Temperature: 24ºC	Air Pressure: 1015 hPa	Relative Humidity: 47 %	Power Supply: 120 VAC
Remarks: EUT with 22.5 dBi antenna assembly gain			

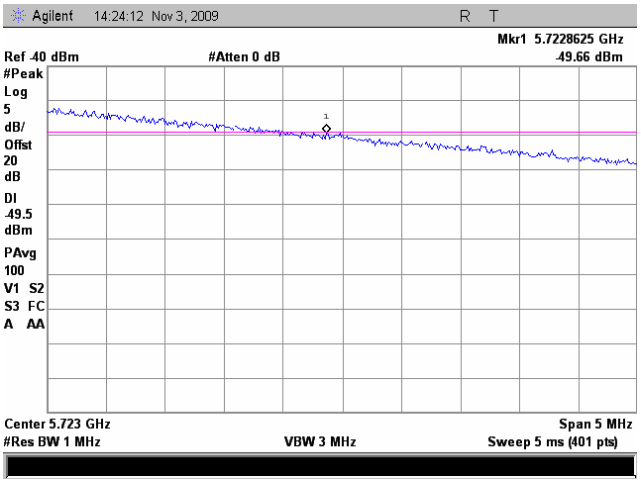
Plot 7.5.15 Band edge emissions at normal conditions at 10th minute

FREQUENCY EDGE	5725
CHANNEL BANDWIDTH	40 MHz
MODULATION / BIT RATE	BPSK / 27 Mbps
NOTE	Band Edge



Plot 7.5.16 Band edge emissions at normal conditions 10th minute

FREQUENCY EDGE	5725
CHANNEL BANDWIDTH	40 MHz
MODULATION / BIT RATE	64QAM / 270 Mbps
NOTE	Band Edge



Test specification:	**FCC section 15.407(g), Frequency stability**		
Test procedure:	Section 2.1055		
Test mode:	Compliance	**Verdict:**	PASS
Date:	12/03/2009		
Temperature: 24ºC	**Air Pressure:** 1015 hPa	**Relative Humidity:** 47 %	**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: 40 MHZ / 64QAM, 270Mbps Band Edge frequency (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	5470.0375	5470.0625	5470.1250	5470.0750	5470	-0.0375	Pass
20	Nominal +15%	5470.0875	5470.1500	5470.1250	5470.1375		-0.0875	
20	Nominal	5470.0250	5470.0375	5470.1375	5470.1000		-0.0250	
20	Nominal -15%	5470.0650	5470.0750	5470.2250	5470.2750		-0.0650	
60	Nominal	5470.5375	5470.6625	5470.7250	5470.7625		-0.5375	
Mid frequency:								
-35	Nominal	5599.9625	5599.9500	5599.9875	5599.9925	5600	0.0075	Pass
20	Nominal +15%	5599.3000	5599.2125	5599.1250	5599.1750		0.8250	
20	Nominal	5599.5750	5599.3125	5599.3375	5599.5250		0.4750	
20	Nominal -15%	5599.1625	5599.2155	5599.5250	5599.4625		0.5375	
60	Nominal	5599.9625	5599.9500	5599.9875	5599.9950		0.0050	
Mid frequency:								
-35	Nominal	5650.1750	5650.2875	5650.4750	5650.4625	5650	-0.1750	Pass
20	Nominal +15%	5651.4375	5651.4750	5651.5000	5651.5125		-1.4375	
20	Nominal	5650.9750	5951.4000	5651.4000	5651.5625		-0.9750	
20	Nominal -15%	5651.3125	5651.3500	5651.5125	5651.3875		-1.3125	
60	Nominal	5651.3250	5651.5375	5651.6625	5651.8625		-1.3250	
High frequency:								
-35	Nominal	5724.9750	5724.9375	5724.9500	5724.9125	5725	0.0250	Pass
20	Nominal +15%	5723.5375	5723.5025	5723.4625	5723.4375		1.4625	
20	Nominal	5723.8125	5723.6500	5723.6375	5723.4875		1.1875	
20	Nominal -15%	5723.2000	5723.2825	5723.3875	5723.2375		1.6125	
60	Nominal	5723.2750	5723.1625	5723.2125	5723.0375		1.7250	

* - 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

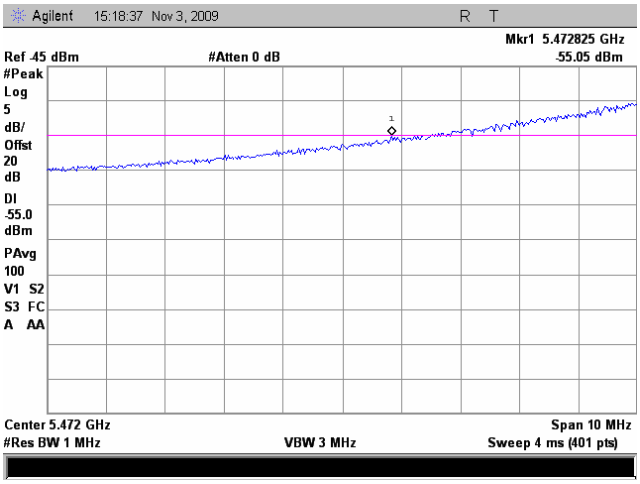
HL 0493	HL 1194	HL 2780	HL 3175	HL 3233	HL 3286		

Full description is given in Appendix A.

Test specification:	FCC section 15.407(g), Frequency stability		
Test procedure:	Section 2.1055		
Test mode:	Compliance	Verdict:	PASS
Date:	12/03/2009		
Temperature: 24ºC	Air Pressure: 1015 hPa	Relative Humidity: 47 %	Power Supply: 120 VAC
Remarks: EUT with 28 dBi antenna assembly gain			

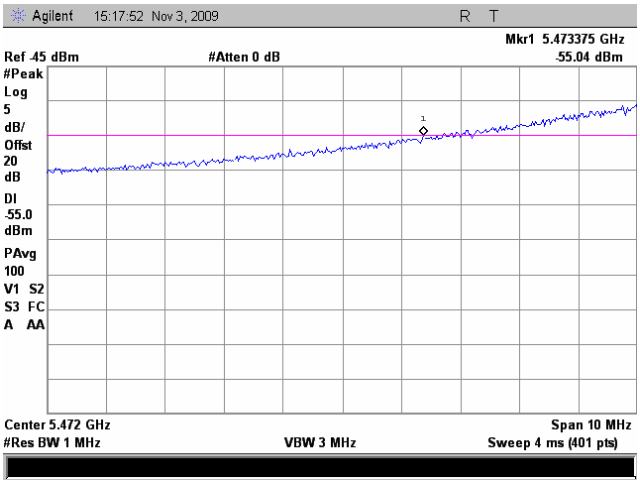
Plot 7.5.17 Band edge emissions at normal conditions at 10th minute

FREQUENCY EDGE	5470
CHANNEL BANDWIDTH	40 MHz
MODULATION / BIT RATE	BPSK / 27 Mbps
NOTE	In-band



Plot 7.5.18 Band edge emissions at normal conditions 10th minute

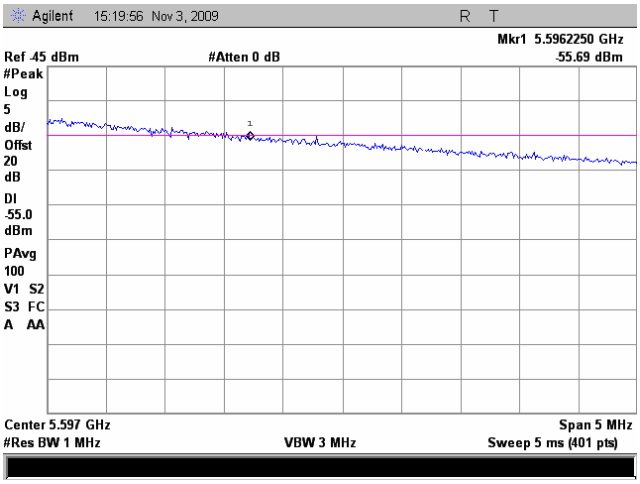
FREQUENCY EDGE	5470
CHANNEL BANDWIDTH	40 MHz
MODULATION / BIT RATE	64QAM / 270 Mbps
NOTE	In-band



Test specification:	FCC section 15.407(g), Frequency stability		
Test procedure:	Section 2.1055		
Test mode:	Compliance	Verdict:	PASS
Date:	12/03/2009		
Temperature: 24ºC	Air Pressure: 1015 hPa	Relative Humidity: 47 %	Power Supply: 120 VAC
Remarks: EUT with 28 dBi antenna assembly gain			

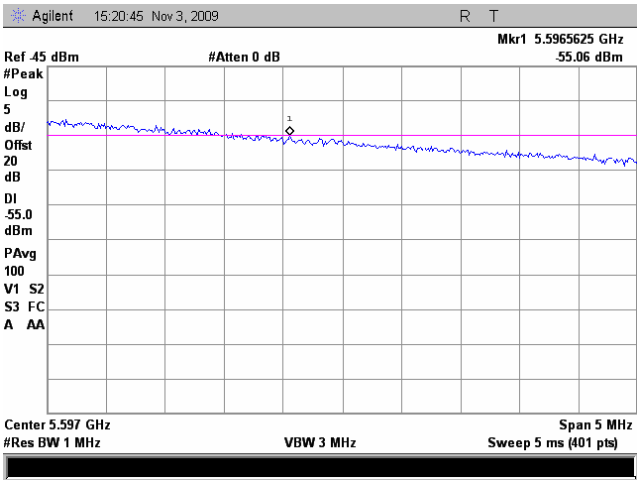
Plot 7.5.19 Band edge emissions at normal conditions at 10th minute

FREQUENCY EDGE	5600
CHANNEL BANDWIDTH	40 MHz
MODULATION / BIT RATE	BPSK / 27 Mbps
NOTE	In-band



Plot 7.5.20 Band edge emissions at normal conditions 10th minute

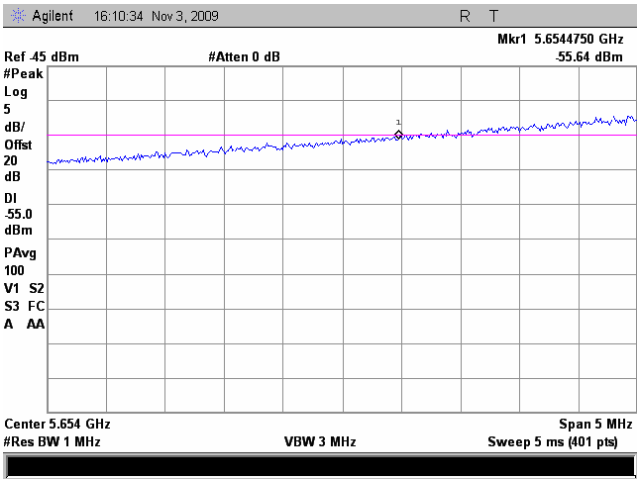
FREQUENCY EDGE	5600
CHANNEL BANDWIDTH	40 MHz
MODULATION / BIT RATE	64QAM / 270 Mbps
NOTE	In-band



Test specification:	FCC section 15.407(g), Frequency stability		
Test procedure:	Section 2.1055		
Test mode:	Compliance	Verdict:	PASS
Date:	12/03/2009		
Temperature: 24ºC	Air Pressure: 1015 hPa	Relative Humidity: 47 %	Power Supply: 120 VAC
Remarks: EUT with 28 dBi antenna assembly gain			

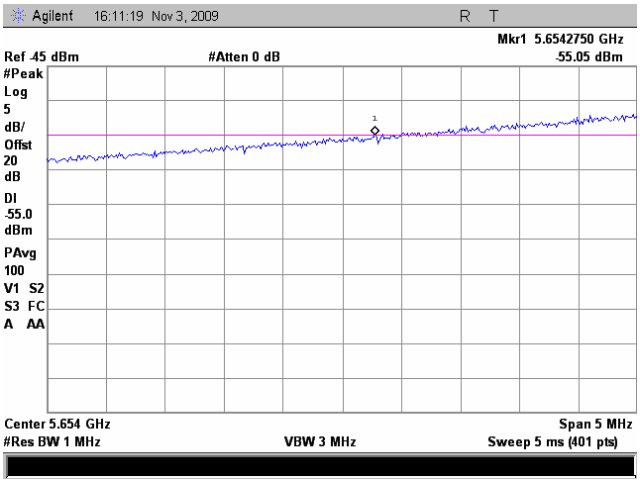
Plot 7.5.21 Band edge emissions at normal conditions at 10th minute

FREQUENCY EDGE	5650
CHANNEL BANDWIDTH	40 MHz
MODULATION / BIT RATE	BPSK / 27 Mbps
NOTE	In-band



Plot 7.5.22 Band edge emissions at normal conditions 10th minute

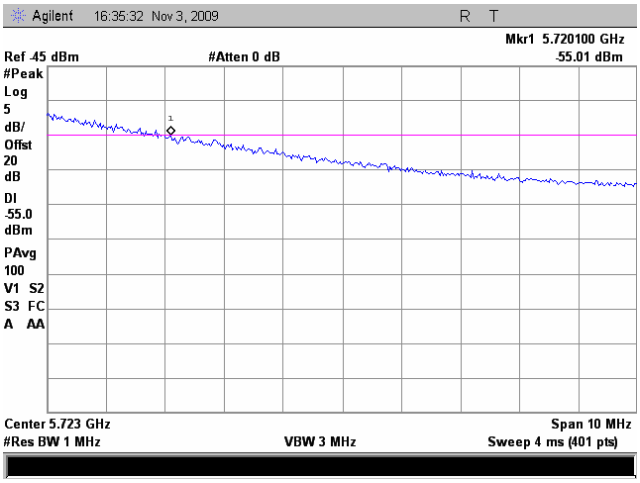
FREQUENCY EDGE	5650
CHANNEL BANDWIDTH	40 MHz
MODULATION / BIT RATE	64QAM / 270 Mbps
NOTE	In-band



Test specification:	FCC section 15.407(g), Frequency stability		
Test procedure:	Section 2.1055		
Test mode:	Compliance	Verdict:	PASS
Date:	12/03/2009		
Temperature: 24ºC	Air Pressure: 1015 hPa	Relative Humidity: 47 %	Power Supply: 120 VAC
Remarks: EUT with 28 dBi antenna assembly gain			

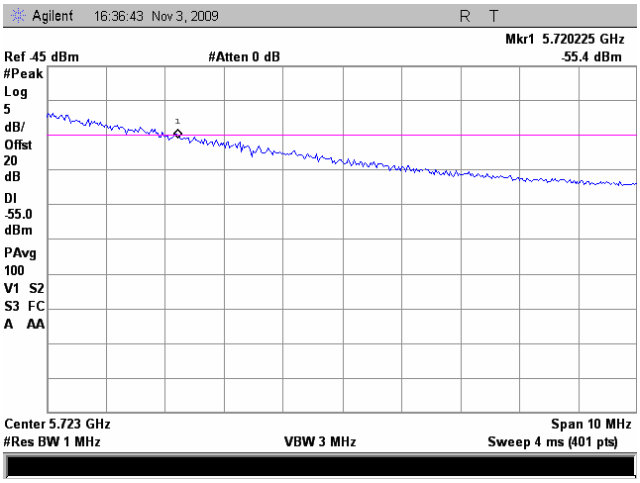
Plot 7.5.23 Band edge emissions at normal conditions at 10th minute

FREQUENCY EDGE	5725
CHANNEL BANDWIDTH	40 MHz
MODULATION / BIT RATE	BPSK / 27 Mbps
NOTE	In-band



Plot 7.5.24 Band edge emissions at normal conditions 10th minute

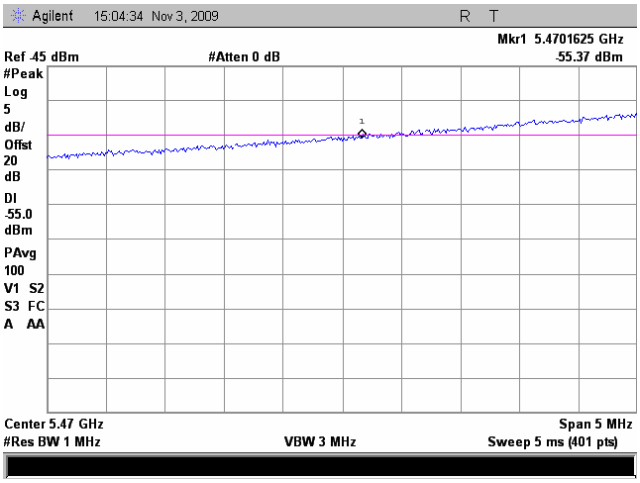
FREQUENCY EDGE	5725
CHANNEL BANDWIDTH	40 MHz
MODULATION / BIT RATE	64QAM / 270 Mbps
NOTE	In-band



Test specification:	FCC section 15.407(g), Frequency stability		
Test procedure:	Section 2.1055		
Test mode:	Compliance	Verdict:	PASS
Date:	12/03/2009		
Temperature: 24ºC	Air Pressure: 1015 hPa	Relative Humidity: 47 %	Power Supply: 120 VAC
Remarks: EUT with 28 dBi antenna assembly gain			

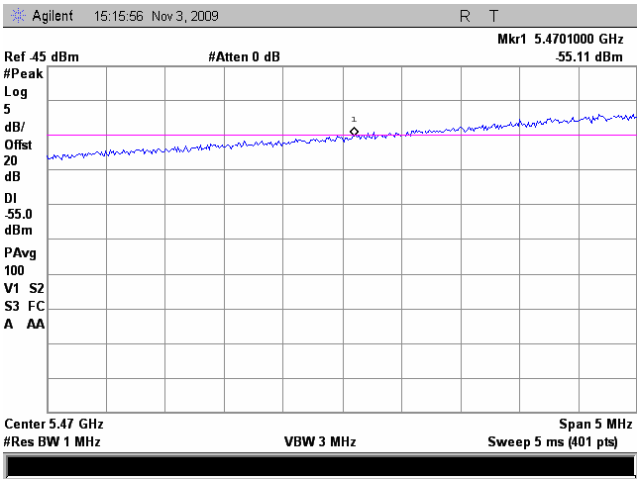
Plot 7.5.25 Band edge emissions at normal conditions at 10th minute

FREQUENCY EDGE	5470
CHANNEL BANDWIDTH	40 MHz
MODULATION / BIT RATE	BPSK / 27 Mbps
NOTE	Band Edge



Plot 7.5.26 Band edge emissions at normal conditions 10th minute

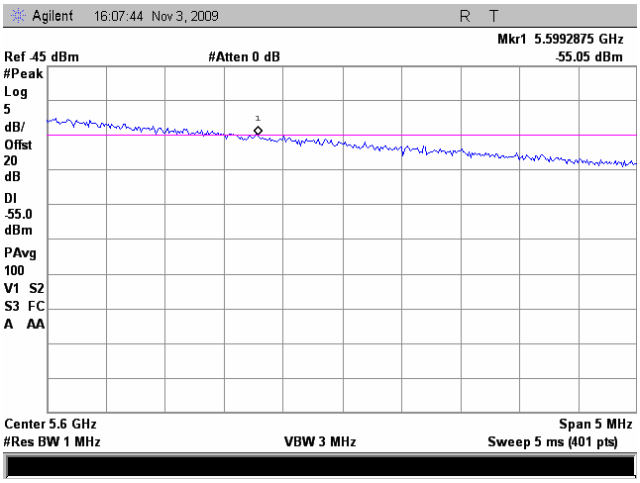
FREQUENCY EDGE	5470
CHANNEL BANDWIDTH	40 MHz
MODULATION / BIT RATE	64QAM / 270 Mbps
NOTE	Band Edge



Test specification:	FCC section 15.407(g), Frequency stability		
Test procedure:	Section 2.1055		
Test mode:	Compliance	Verdict:	PASS
Date:	12/03/2009		
Temperature: 24ºC	Air Pressure: 1015 hPa	Relative Humidity: 47 %	Power Supply: 120 VAC
Remarks: EUT with 28 dBi antenna assembly gain			

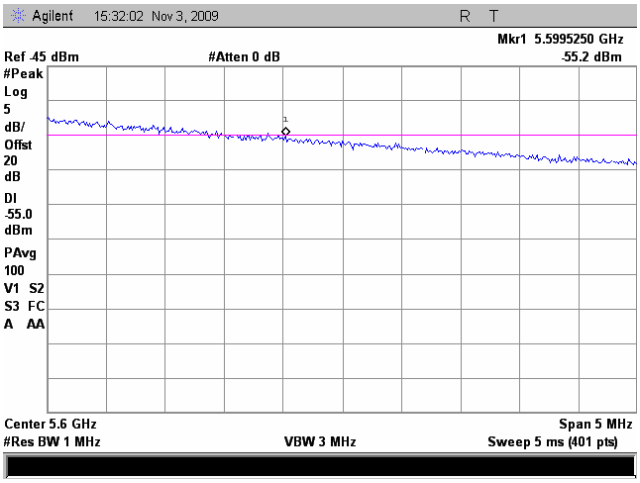
Plot 7.5.27 Band edge emissions at normal conditions at 10th minute

FREQUENCY EDGE	5600
CHANNEL BANDWIDTH	40 MHz
MODULATION / BIT RATE	BPSK / 27 Mbps
NOTE	Band Edge



Plot 7.5.28 Band edge emissions at normal conditions 10th minute

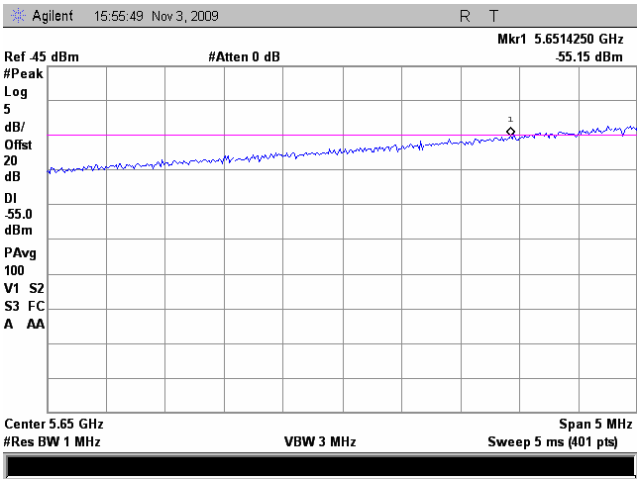
FREQUENCY EDGE	5600
CHANNEL BANDWIDTH	40 MHz
MODULATION / BIT RATE	64QAM / 270 Mbps
NOTE	Band Edge



Test specification:	FCC section 15.407(g), Frequency stability		
Test procedure:	Section 2.1055		
Test mode:	Compliance	Verdict:	PASS
Date:	12/03/2009		
Temperature: 24ºC	Air Pressure: 1015 hPa	Relative Humidity: 47 %	Power Supply: 120 VAC
Remarks: EUT with 28 dBi antenna assembly gain			

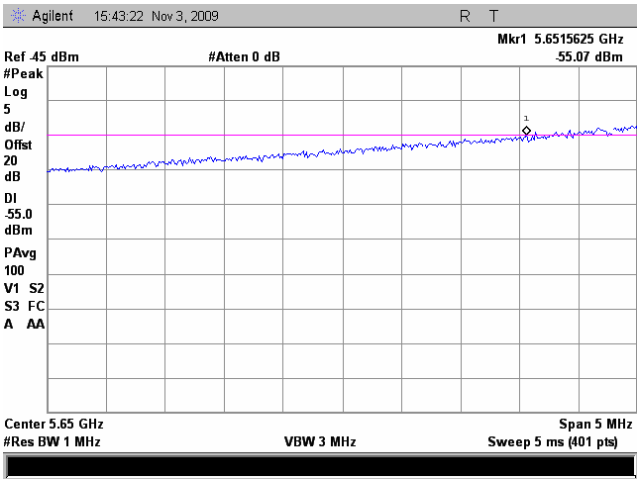
Plot 7.5.29 Band edge emissions at normal conditions at 10th minute

FREQUENCY EDGE	5650
CHANNEL BANDWIDTH	40 MHz
MODULATION / BIT RATE	BPSK / 27 Mbps
NOTE	Band Edge



Plot 7.5.30 Band edge emissions at normal conditions 10th minute

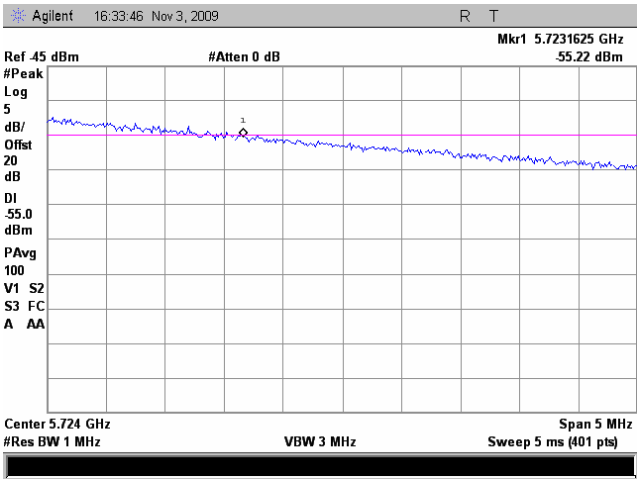
FREQUENCY EDGE	5650
CHANNEL BANDWIDTH	40 MHz
MODULATION / BIT RATE	64QAM / 270 Mbps
NOTE	Band Edge



Test specification:	FCC section 15.407(g), Frequency stability		
Test procedure:	Section 2.1055		
Test mode:	Compliance	Verdict:	PASS
Date:	12/03/2009		
Temperature: 24ºC	Air Pressure: 1015 hPa	Relative Humidity: 47 %	Power Supply: 120 VAC
Remarks: EUT with 28 dBi antenna assembly gain			

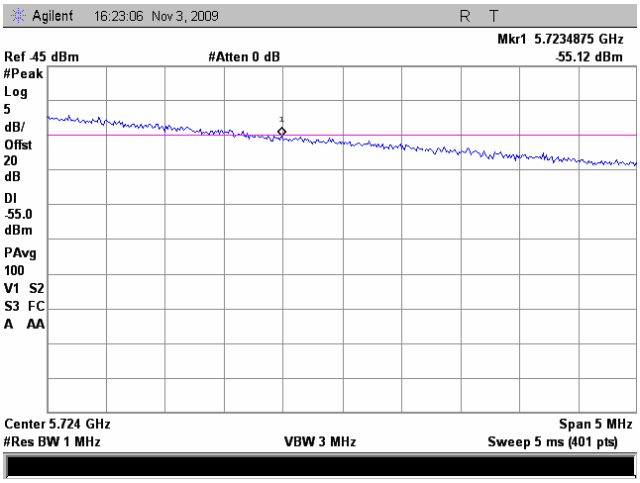
Plot 7.5.31 Band edge emissions at normal conditions at 10th minute

FREQUENCY EDGE	5725
CHANNEL BANDWIDTH	40 MHz
MODULATION / BIT RATE	BPSK / 27 Mbps
NOTE	Band Edge



Plot 7.5.32 Band edge emissions at normal conditions 10th minute

FREQUENCY EDGE	5725
CHANNEL BANDWIDTH	40 MHz
MODULATION / BIT RATE	64QAM / 270 Mbps
NOTE	Band Edge



Test specification:	**FCC section 15.407(g), Frequency stability**		
Test procedure:	Section 2.1055		
Test mode:	Compliance	**Verdict:**	PASS
Date:	12/03/2009		
Temperature: 24ºC	**Air Pressure:** 1015 hPa	**Relative Humidity:** 47 %	**Power Supply:** 120 VAC
Remarks: EUT with 6 dBi antenna assembly gain			

Table 7.5.4 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: 40 MHZ / 64QAM, 270Mbps (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	5470.6500	5470.2875	5470.1250	5470.3375	5470	-0.1250	Pass
20	Nominal +15%	5470.1250	5470.4000	5470.3750	5470.4375		-0.1250	
20	Nominal	5470.0875	5470.1250	5470.1125	5470.2375		-0.0875	
20	Nominal -15%	5470.0525	5470.0625	5470.1500	5470.4625		-0.0525	
60	Nominal	5470.1250	5470.0750	5470.0250	5470.1000		-0.0250	
Mid frequency:								
-35	Nominal	5599.1250	5598.6875	5598.4875	5598.6750	5600	0.8750	Pass
20	Nominal +15%	5598.8375	5598.5375	5598.4875	5598.4125		1.1625	
20	Nominal	5598.3750	5597.9000	5597.7500	5597.9250		1.6250	
20	Nominal -15%	5598.7000	5598.5125	5598.6125	5598.4750		1.3000	
60	Nominal	5598.3875	5598.0500	5597.8375	5597.8250		1.6125	
Mid frequency:								
-35	Nominal	5651.5125	5652.2375	5652.4500	5652.7125	5650	-1.5125	Pass
20	Nominal +15%	5651.5500	5651.8250	5652.0750	5652.0875		-1.5500	
20	Nominal	5651.7375	5652.1250	5652.2500	5652.2375		-1.7375	
20	Nominal -15%	5651.4375	5651.6000	5651.8750	5652.3125		-1.4375	
60	Nominal	5652.1500	5652.5750	5652.5500	5652.7125		-2.1500	
High frequency:								
-35	Nominal	5724.8750	5724.6875	5724.5500	5724.2000	5725	0.1250	Pass
20	Nominal +15%	5722.8125	5722.8500	5722.8375	5722.7000		2.1500	
20	Nominal	5722.8375	5722.6000	5722.4500	5722.5875		2.1625	
20	Nominal -15%	5722.8000	5722.7625	5722.5625	5722.4500		2.2000	
60	Nominal	5723.0750	5722.7750	5722.7625	5722.6750		1.9250	

* - 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

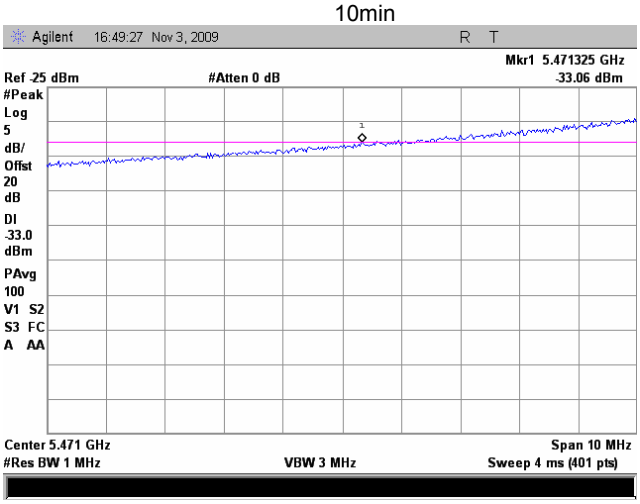
HL 0493	HL 1194	HL 2780	HL 3175	HL 3233	HL 3286		

Full description is given in Appendix A.

Test specification:	**FCC section 15.407(g), Frequency stability**		
Test procedure:	Section 2.1055		
Test mode:	Compliance	**Verdict:**	PASS
Date:	12/03/2009		
Temperature: 24ºC	**Air Pressure:** 1015 hPa	**Relative Humidity:** 47 %	**Power Supply:** 120 VAC
Remarks: EUT with 6 dBi antenna assembly gain			

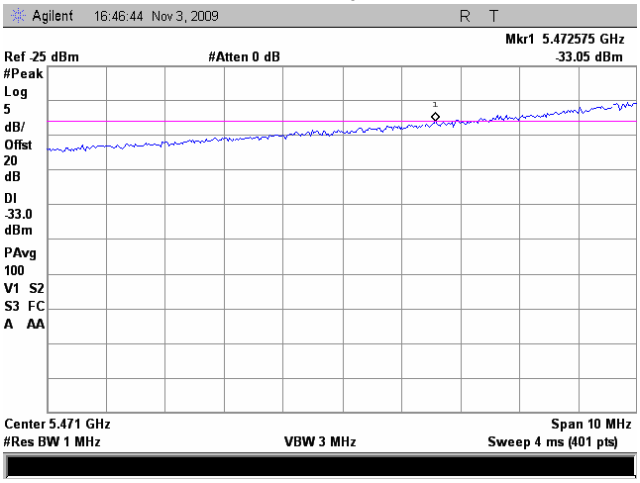
Plot 7.5.33 Band edge emissions at normal conditions at 10th minute

FREQUENCY EDGE	5470
CHANNEL BANDWIDTH	40 MHz
MODULATION / BIT RATE	BPSK / 27 Mbps
NOTE	In-band
	10min



Plot 7.5.34 Band edge emissions at normal conditions 10th minute

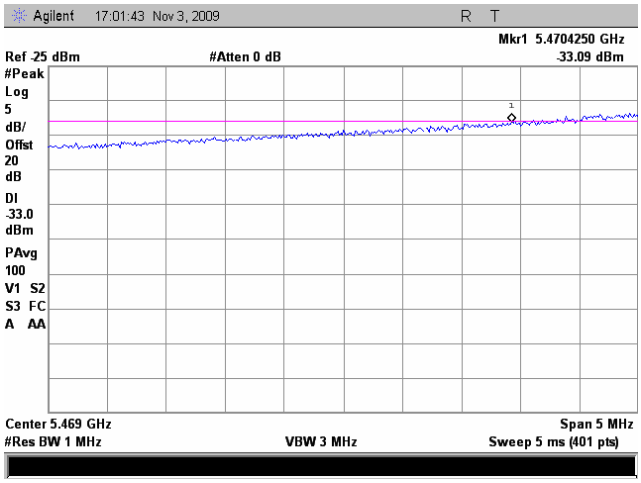
FREQUENCY EDGE	5470
CHANNEL BANDWIDTH	40 MHz
MODULATION / BIT RATE	64QAM / 270 Mbps
NOTE	In-band
	10min



Test specification:	FCC section 15.407(g), Frequency stability		
Test procedure:	Section 2.1055		
Test mode:	Compliance	Verdict:	PASS
Date:	12/03/2009		
Temperature: 24ºC	Air Pressure: 1015 hPa	Relative Humidity: 47 %	Power Supply: 120 VAC
Remarks: EUT with 6 dBi antenna assembly gain			

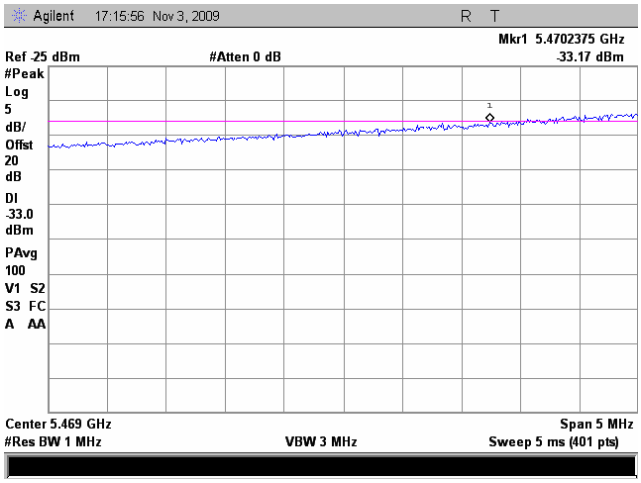
Plot 7.5.35 Band edge emissions at normal conditions at 10th minute

FREQUENCY EDGE	5470
CHANNEL BANDWIDTH	40 MHz
MODULATION / BIT RATE	BPSK / 27 Mbps



Plot 7.5.36 Band edge emissions at normal conditions 10th minute

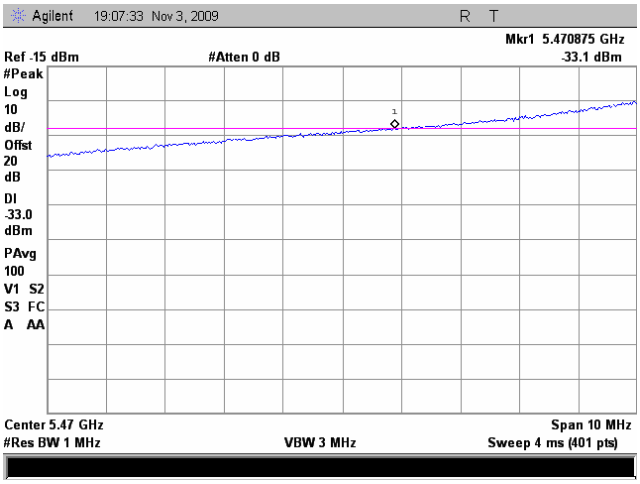
FREQUENCY EDGE	5470
CHANNEL BANDWIDTH	40 MHz
MODULATION / BIT RATE	64QAM / 270 Mbps



Test specification:	FCC section 15.407(g), Frequency stability		
Test procedure:	Section 2.1055		
Test mode:	Compliance	Verdict:	PASS
Date:	12/03/2009		
Temperature: 24ºC	Air Pressure: 1015 hPa	Relative Humidity: 47 %	Power Supply: 120 VAC
Remarks: EUT with 6 dBi antenna assembly gain			

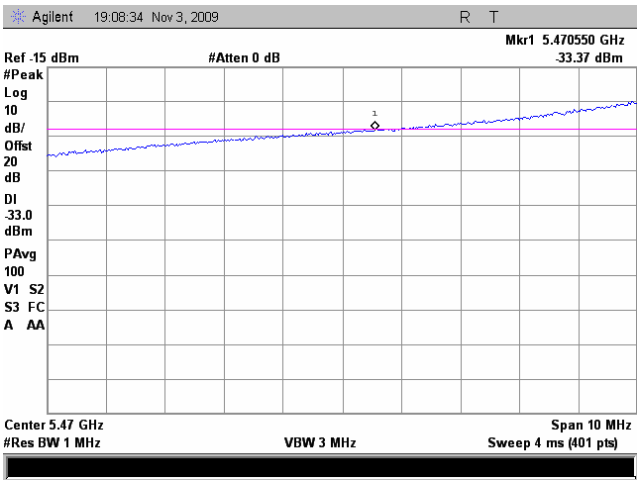
Plot 7.5.37 Band edge emissions at normal conditions at 10th minute

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



Plot 7.5.38 Band edge emissions at normal conditions 10th minute

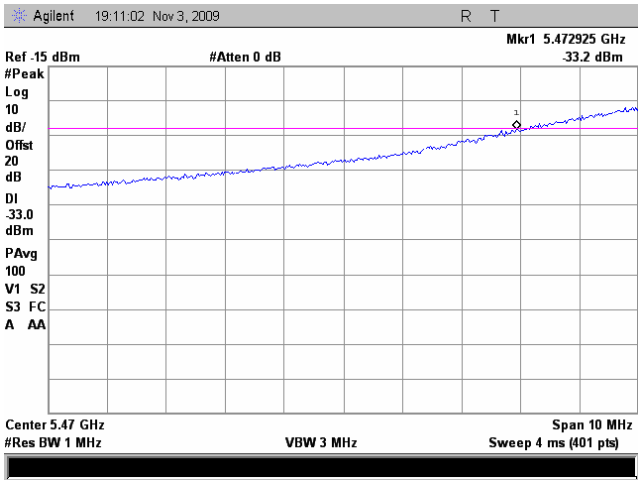
FREQUENCY EDGE	5470
CHANNEL BANDWIDTH	20 MHz
MODULATION / BIT RATE	64QAM / 130 Mbps



Test specification:	FCC section 15.407(g), Frequency stability		
Test procedure:	Section 2.1055		
Test mode:	Compliance	Verdict:	PASS
Date:	12/03/2009		
Temperature: 24ºC	Air Pressure: 1015 hPa	Relative Humidity: 47 %	Power Supply: 120 VAC
Remarks: EUT with 6 dBi antenna assembly gain			

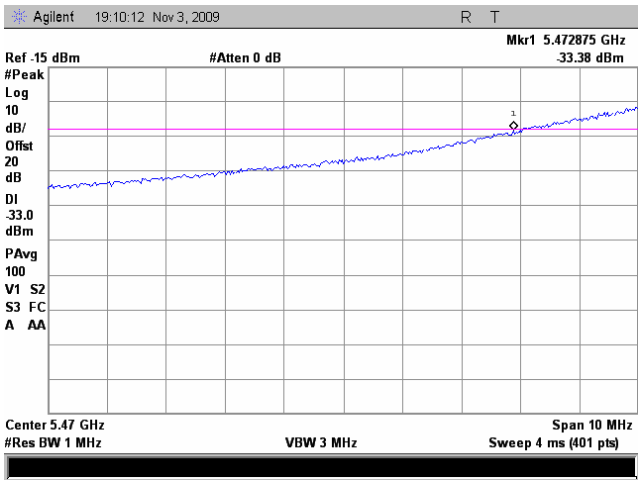
Plot 7.5.39 Band edge emissions at normal conditions 10th minute

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



Plot 7.5.40 Band edge emissions at normal conditions 10th minute

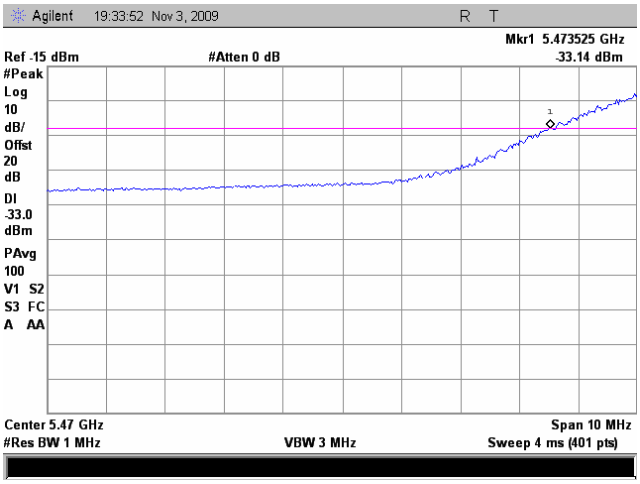
FREQUENCY EDGE	5470
CHANNEL BANDWIDTH	10 MHz
MODULATION / BIT RATE	64QAM / 65 Mbps



Test specification:	FCC section 15.407(g), Frequency stability		
Test procedure:	Section 2.1055		
Test mode:	Compliance	Verdict:	PASS
Date:	12/03/2009		
Temperature: 24ºC	Air Pressure: 1015 hPa	Relative Humidity: 47 %	Power Supply: 120 VAC
Remarks: EUT with 6 dBi antenna assembly gain			

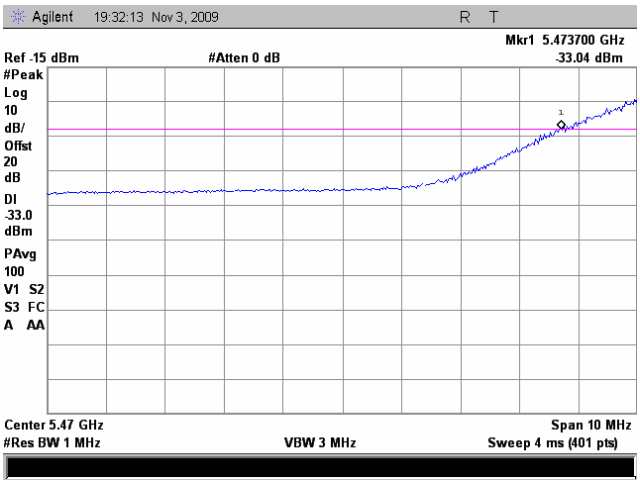
Plot 7.5.41 Band edge emissions at normal conditions 10th minute

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



Plot 7.5.42 Band edge emissions at normal conditions 10th minute

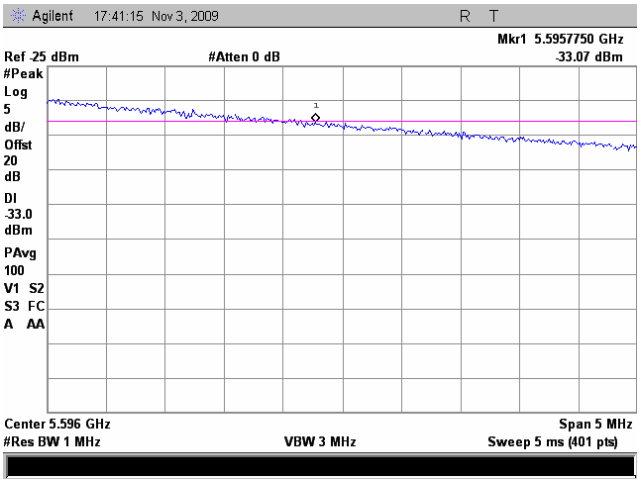
FREQUENCY EDGE	5470
CHANNEL BANDWIDTH	5 MHz
MODULATION / BIT RATE	64QAM / 32.5 Mbps



Test specification:	FCC section 15.407(g), Frequency stability		
Test procedure:	Section 2.1055		
Test mode:	Compliance	Verdict:	PASS
Date:	12/03/2009		
Temperature: 24ºC	Air Pressure: 1015 hPa	Relative Humidity: 47 %	Power Supply: 120 VAC
Remarks: EUT with 6 dBi antenna assembly gain			

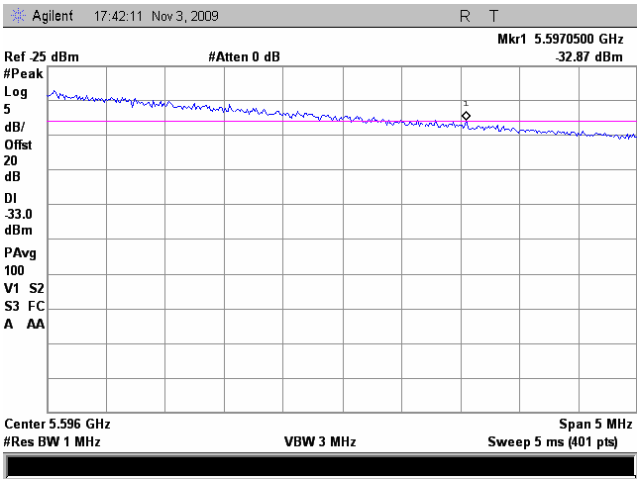
Plot 7.5.43 Band edge emissions at normal conditions at 10th minute

FREQUENCY EDGE	5600
CHANNEL BANDWIDTH	40 MHz
MODULATION / BIT RATE	BPSK / 27 Mbps
NOTE	In-band



Plot 7.5.44 Band edge emissions at normal conditions 10th minute

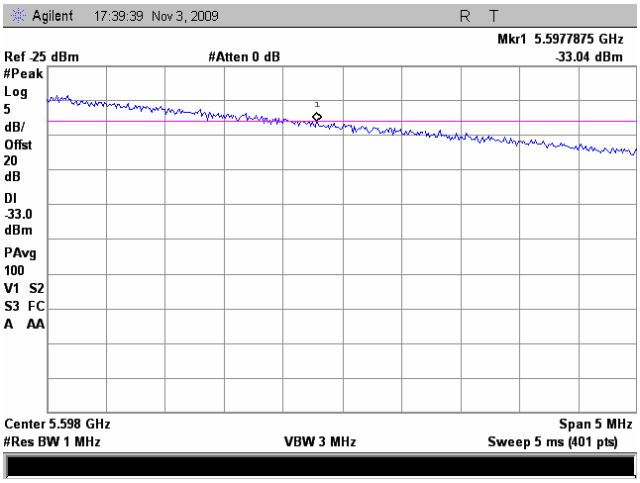
FREQUENCY EDGE	5600
CHANNEL BANDWIDTH	40 MHz
MODULATION / BIT RATE	64QAM / 270 Mbps
NOTE	In-band



Test specification:	FCC section 15.407(g), Frequency stability		
Test procedure:	Section 2.1055		
Test mode:	Compliance	Verdict:	PASS
Date:	12/03/2009		
Temperature: 24ºC	Air Pressure: 1015 hPa	Relative Humidity: 47 %	Power Supply: 120 VAC
Remarks: EUT with 6 dBi antenna assembly gain			

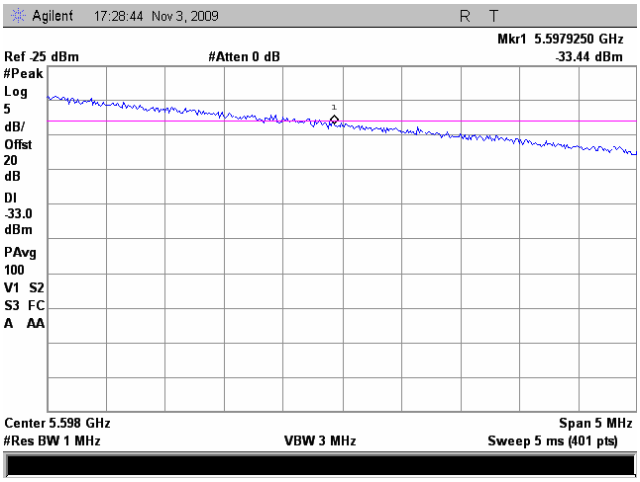
Plot 7.5.45 Band edge emissions at normal conditions at 10th minute

FREQUENCY EDGE	5600
CHANNEL BANDWIDTH	40 MHz
MODULATION / BIT RATE	BPSK / 27 Mbps



Plot 7.5.46 Band edge emissions at normal conditions 10th minute

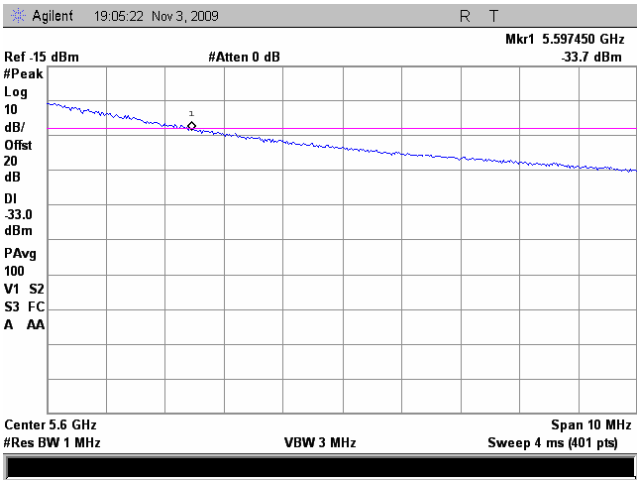
FREQUENCY EDGE	5600
CHANNEL BANDWIDTH	40 MHz
MODULATION / BIT RATE	64QAM / 270 Mbps



Test specification:	FCC section 15.407(g), Frequency stability		
Test procedure:	Section 2.1055		
Test mode:	Compliance	Verdict:	PASS
Date:	12/03/2009		
Temperature: 24ºC	Air Pressure: 1015 hPa	Relative Humidity: 47 %	Power Supply: 120 VAC
Remarks: EUT with 6 dBi antenna assembly gain			

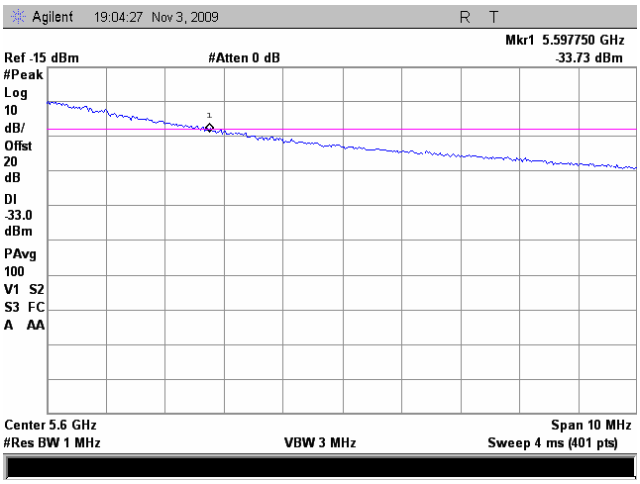
Plot 7.5.47 Band edge emissions at normal conditions at 10th minute

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



Plot 7.5.48 Band edge emissions at normal conditions 10th minute

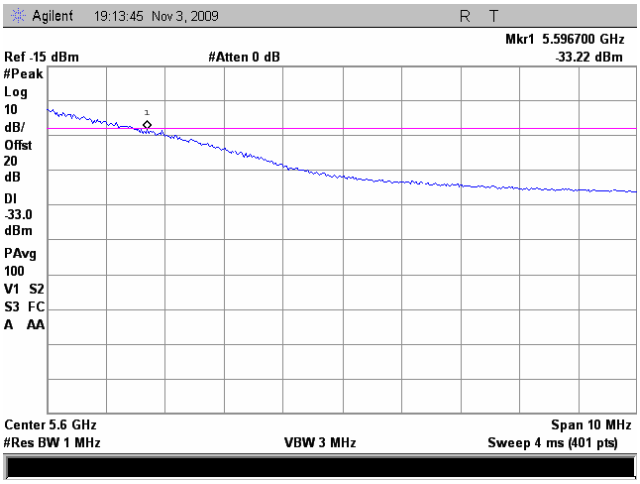
FREQUENCY EDGE	5600
CHANNEL BANDWIDTH	20 MHz
MODULATION / BIT RATE	64QAM / 130 Mbps



Test specification:	FCC section 15.407(g), Frequency stability		
Test procedure:	Section 2.1055		
Test mode:	Compliance	Verdict:	PASS
Date:	12/03/2009		
Temperature: 24ºC	Air Pressure: 1015 hPa	Relative Humidity: 47 %	Power Supply: 120 VAC
Remarks: EUT with 6 dBi antenna assembly gain			

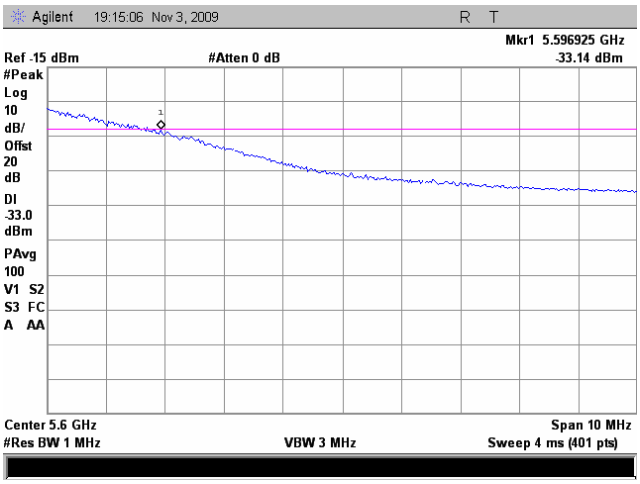
Plot 7.5.49 Band edge emissions at normal conditions 10th minute

FREQUENCY EDGE	5600
CHANNEL BANDWIDTH	10 MHz
MODULATION / BIT RATE	BPSK / 6.5 Mbps



Plot 7.5.50 Band edge emissions at normal conditions 10th minute

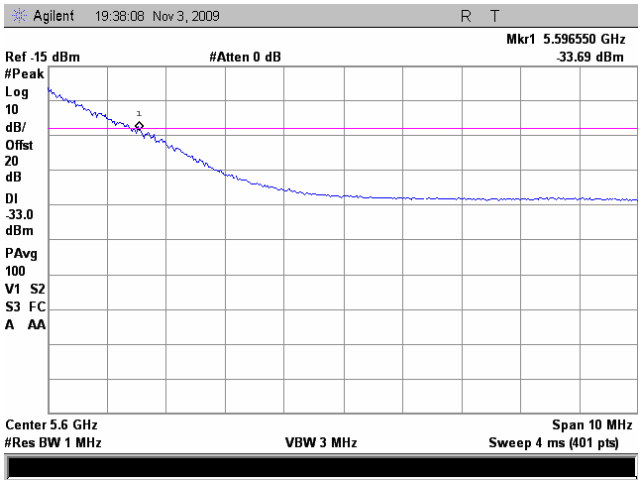
FREQUENCY EDGE	5600
CHANNEL BANDWIDTH	10 MHz
MODULATION / BIT RATE	64QAM / 65 Mbps



Test specification:	FCC section 15.407(g), Frequency stability		
Test procedure:	Section 2.1055		
Test mode:	Compliance	Verdict:	PASS
Date:	12/03/2009		
Temperature: 24ºC	Air Pressure: 1015 hPa	Relative Humidity: 47 %	Power Supply: 120 VAC
Remarks: EUT with 6 dBi antenna assembly gain			

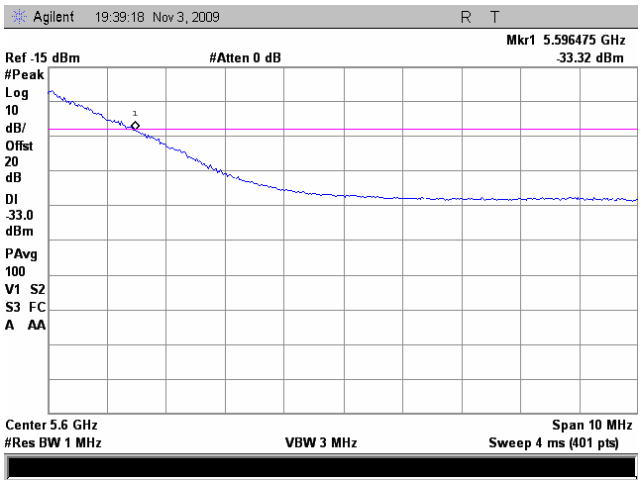
Plot 7.5.51 Band edge emissions at normal conditions 10th minute

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



Plot 7.5.52 Band edge emissions at normal conditions 10th minute

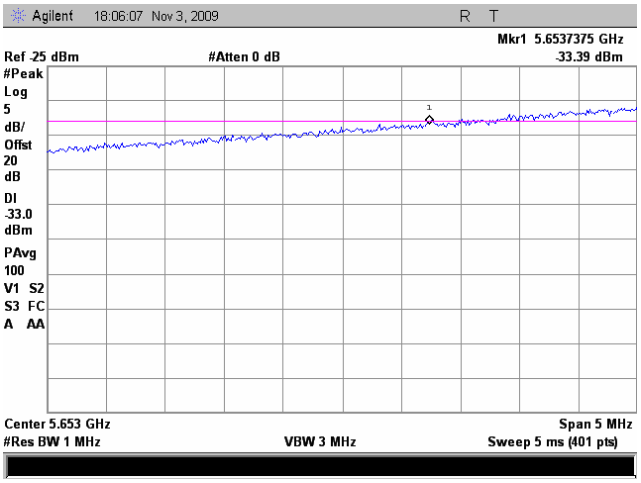
FREQUENCY EDGE	5600
CHANNEL BANDWIDTH	5 MHz
MODULATION / BIT RATE	64QAM / 32.5 Mbps



Test specification:	FCC section 15.407(g), Frequency stability		
Test procedure:	Section 2.1055		
Test mode:	Compliance	Verdict:	PASS
Date:	12/03/2009		
Temperature: 24ºC	Air Pressure: 1015 hPa	Relative Humidity: 47 %	Power Supply: 120 VAC
Remarks: EUT with 6 dBi antenna assembly gain			

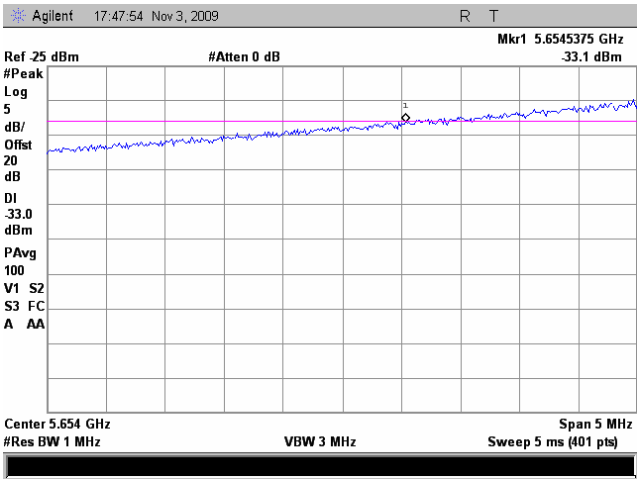
Plot 7.5.53 Band edge emissions at normal conditions at 10th minute

FREQUENCY EDGE	5650
CHANNEL BANDWIDTH	40 MHz
MODULATION / BIT RATE	BPSK / 27 Mbps
NOTE	In-band



Plot 7.5.54 Band edge emissions at normal conditions 10th minute

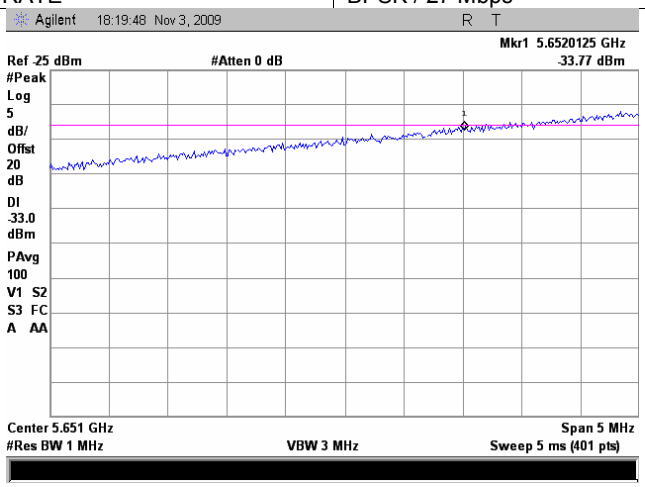
FREQUENCY EDGE	5650
CHANNEL BANDWIDTH	40 MHz
MODULATION / BIT RATE	64QAM / 270 Mbps
NOTE	In-band



Test specification:	FCC section 15.407(g), Frequency stability		
Test procedure:	Section 2.1055		
Test mode:	Compliance	Verdict:	PASS
Date:	12/03/2009		
Temperature: 24ºC	Air Pressure: 1015 hPa	Relative Humidity: 47 %	Power Supply: 120 VAC
Remarks: EUT with 6 dBi antenna assembly gain			

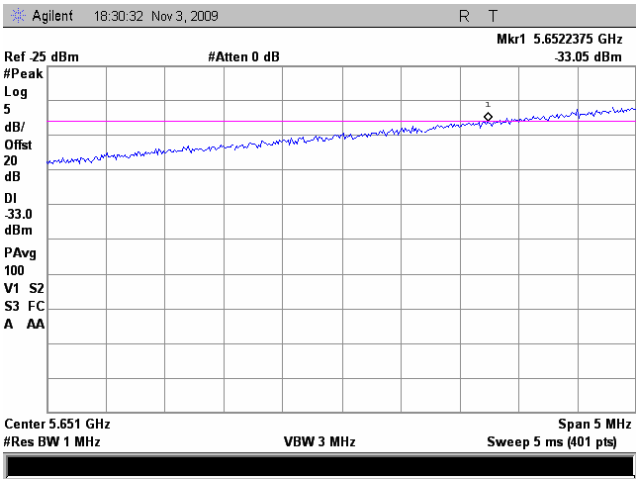
Plot 7.5.55 Band edge emissions at normal conditions at 10th minute

FREQUENCY EDGE	5650
CHANNEL BANDWIDTH	40 MHz
MODULATION / BIT RATE	BPSK / 27 Mbps



Plot 7.5.56 Band edge emissions at normal conditions 10th minute

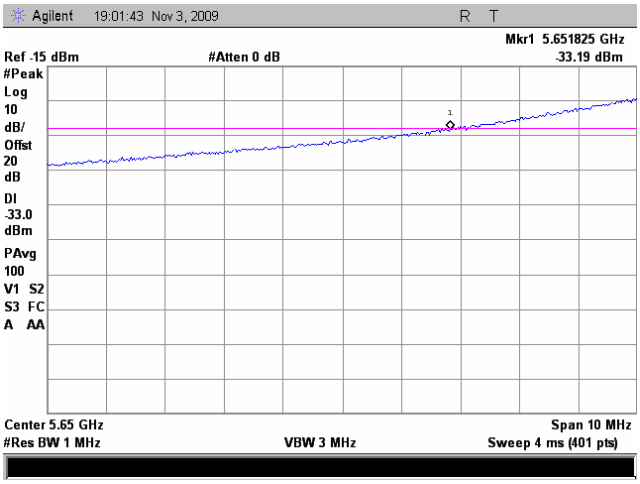
FREQUENCY EDGE	5650
CHANNEL BANDWIDTH	40 MHz
MODULATION / BIT RATE	64QAM / 270 Mbps



Test specification:	FCC section 15.407(g), Frequency stability		
Test procedure:	Section 2.1055		
Test mode:	Compliance	Verdict:	PASS
Date:	12/03/2009		
Temperature: 24ºC	Air Pressure: 1015 hPa	Relative Humidity: 47 %	Power Supply: 120 VAC
Remarks: EUT with 6 dBi antenna assembly gain			

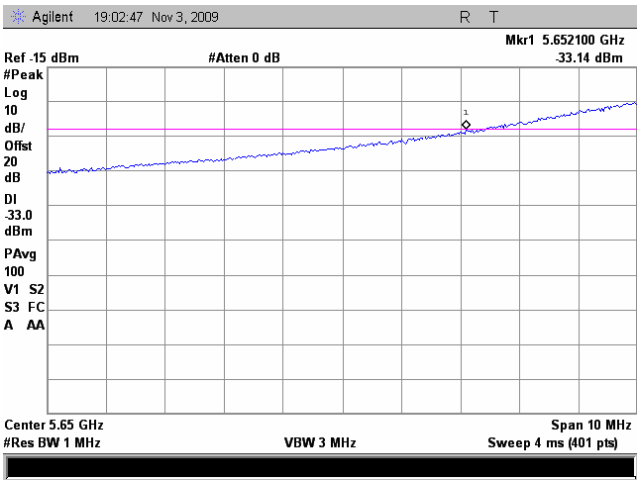
Plot 7.5.57 Band edge emissions at normal conditions at 10th minute

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



Plot 7.5.58 Band edge emissions at normal conditions 10th minute

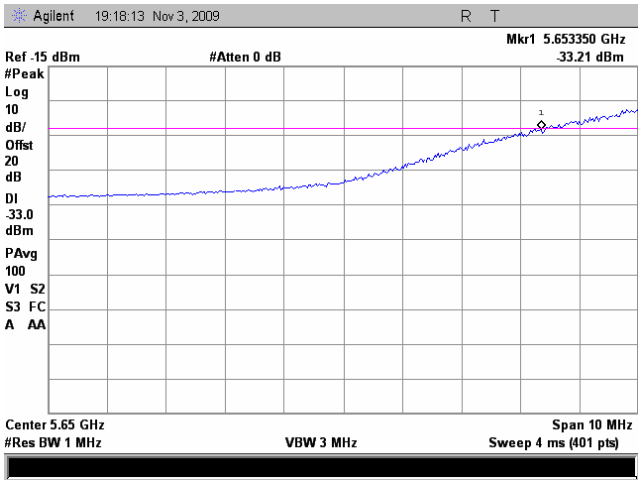
FREQUENCY EDGE	5650
CHANNEL BANDWIDTH	20 MHz
MODULATION / BIT RATE	64QAM / 130 Mbps



Test specification:	FCC section 15.407(g), Frequency stability		
Test procedure:	Section 2.1055		
Test mode:	Compliance	Verdict:	PASS
Date:	12/03/2009		
Temperature: 24ºC	Air Pressure: 1015 hPa	Relative Humidity: 47 %	Power Supply: 120 VAC
Remarks: EUT with 6 dBi antenna assembly gain			

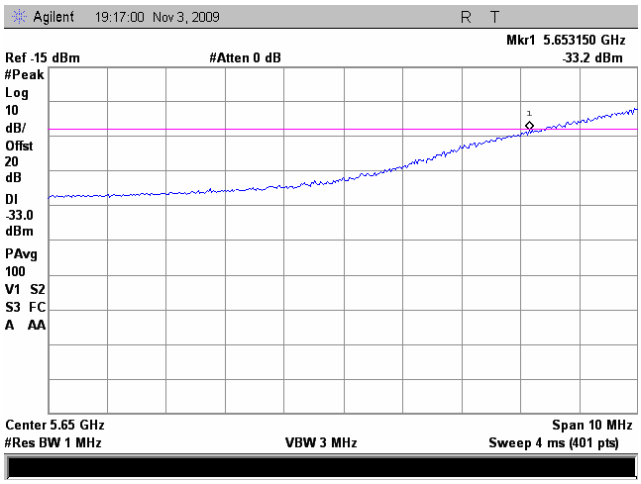
Plot 7.5.59 Band edge emissions at normal conditions 10th minute

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



Plot 7.5.60 Band edge emissions at normal conditions 10th minute

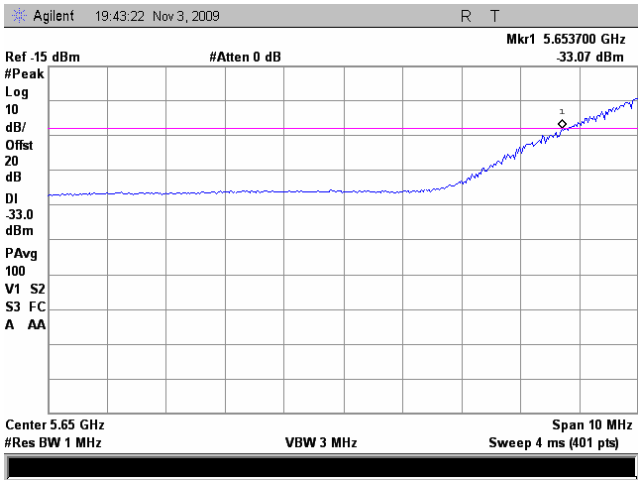
FREQUENCY EDGE	5650
CHANNEL BANDWIDTH	10 MHz
MODULATION / BIT RATE	64QAM / 65 Mbps



Test specification:	FCC section 15.407(g), Frequency stability		
Test procedure:	Section 2.1055		
Test mode:	Compliance	Verdict:	PASS
Date:	12/03/2009		
Temperature: 24ºC	Air Pressure: 1015 hPa	Relative Humidity: 47 %	Power Supply: 120 VAC
Remarks: EUT with 6 dBi antenna assembly gain			

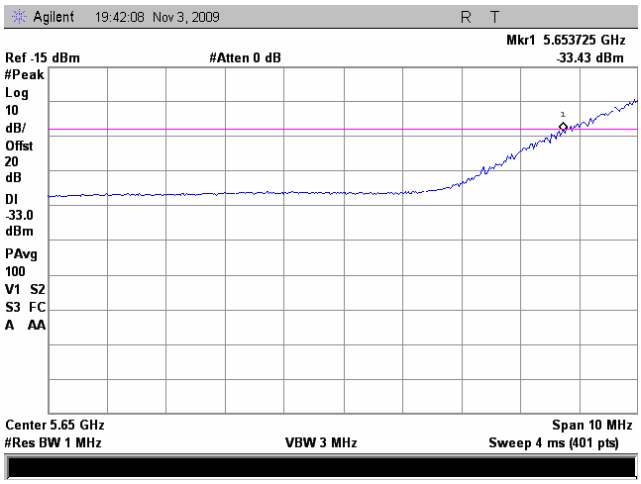
Plot 7.5.61 Band edge emissions at normal conditions 10th minute

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



Plot 7.5.62 Band edge emissions at normal conditions 10th minute

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

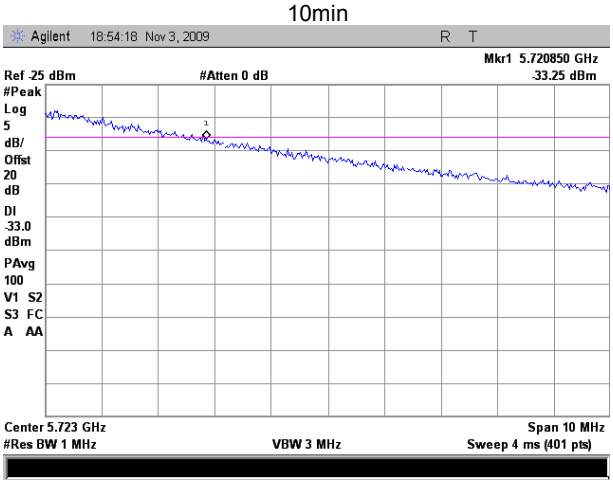


Test specification:	FCC section 15.407(g), Frequency stability		
Test procedure:	Section 2.1055		
Test mode:	Compliance	Verdict:	PASS
Date:	12/03/2009		
Temperature: 24ºC	Air Pressure: 1015 hPa	Relative Humidity: 47 %	Power Supply: 120 VAC
Remarks: EUT with 6 dBi antenna assembly gain			

Plot 7.5.63 Band edge emissions at normal conditions at 10th minute

FREQUENCY EDGE	5725
CHANNEL BANDWIDTH	40 MHz
MODULATION / BIT RATE	BPSK / 27 Mbps
NOTE	In-band

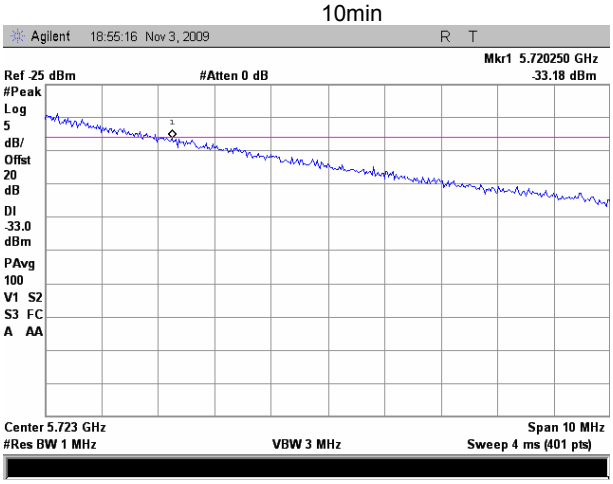
10min



Plot 7.5.64 Band edge emissions at normal conditions 10th minute

FREQUENCY EDGE	5725
CHANNEL BANDWIDTH	40 MHz
MODULATION / BIT RATE	64QAM / 270 Mbps
NOTE	In-band

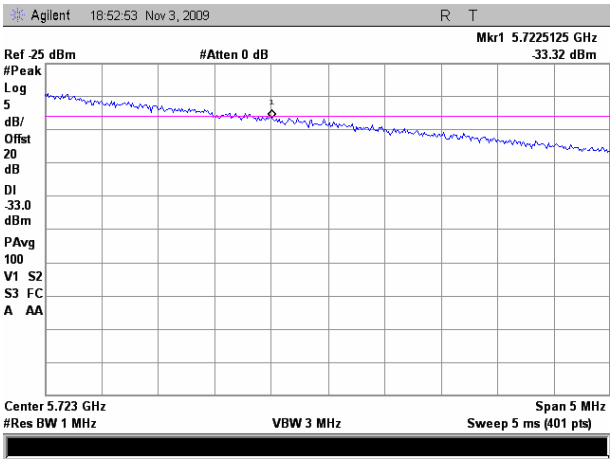
10min



Test specification:	FCC section 15.407(g), Frequency stability		
Test procedure:	Section 2.1055		
Test mode:	Compliance	Verdict:	PASS
Date:	12/03/2009		
Temperature: 24ºC	Air Pressure: 1015 hPa	Relative Humidity: 47 %	Power Supply: 120 VAC
Remarks: EUT with 6 dBi antenna assembly gain			

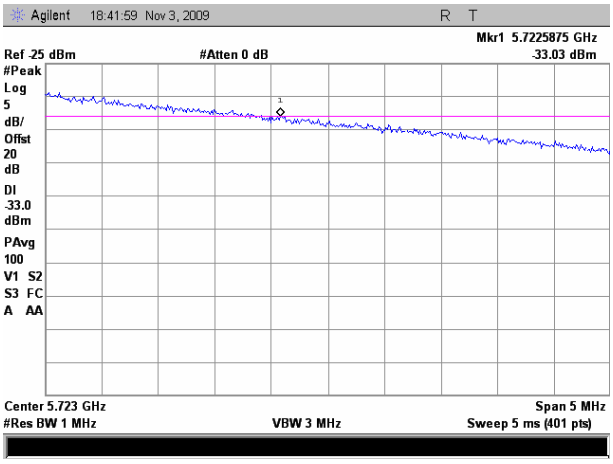
Plot 7.5.65 Band edge emissions at normal conditions at 10th minute

FREQUENCY EDGE	5725
CHANNEL BANDWIDTH	40 MHz
MODULATION / BIT RATE	BPSK / 27 Mbps



Plot 7.5.66 Band edge emissions at normal conditions 10th minute

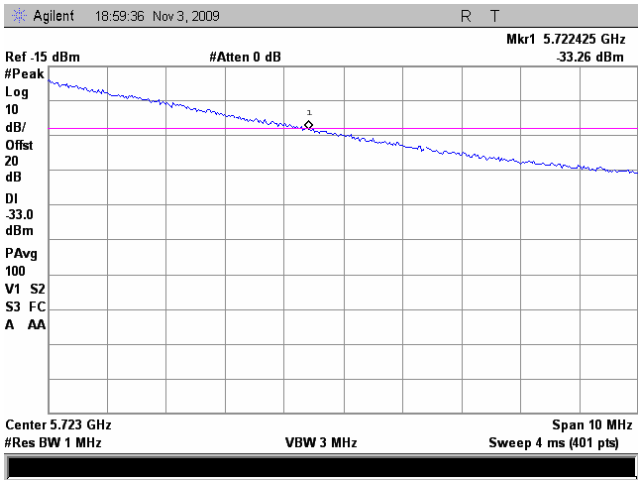
FREQUENCY EDGE	5725
CHANNEL BANDWIDTH	40 MHz
MODULATION / BIT RATE	64QAM / 270 Mbps



Test specification:	FCC section 15.407(g), Frequency stability		
Test procedure:	Section 2.1055		
Test mode:	Compliance	Verdict:	PASS
Date:	12/03/2009		
Temperature: 24ºC	Air Pressure: 1015 hPa	Relative Humidity: 47 %	Power Supply: 120 VAC
Remarks: EUT with 6 dBi antenna assembly gain			

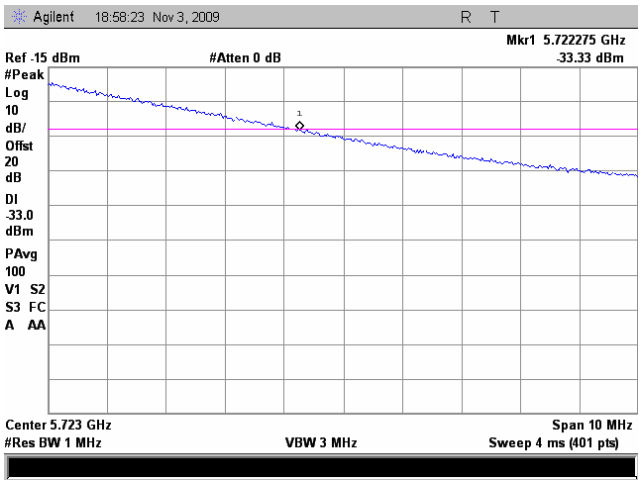
Plot 7.5.67 Band edge emissions at normal conditions at 10th minute

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



Plot 7.5.68 Band edge emissions at normal conditions 10th minute

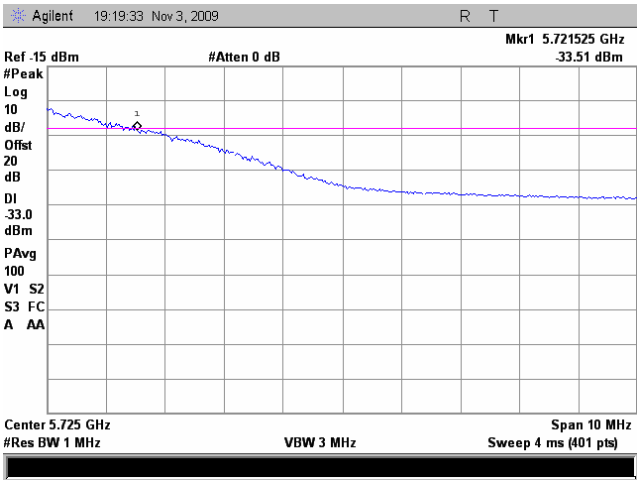
FREQUENCY EDGE	5725
CHANNEL BANDWIDTH	20 MHz
MODULATION / BIT RATE	64QAM / 130 Mbps



Test specification:	FCC section 15.407(g), Frequency stability		
Test procedure:	Section 2.1055		
Test mode:	Compliance	Verdict:	PASS
Date:	12/03/2009		
Temperature: 24ºC	Air Pressure: 1015 hPa	Relative Humidity: 47 %	Power Supply: 120 VAC
Remarks: EUT with 6 dBi antenna assembly gain			

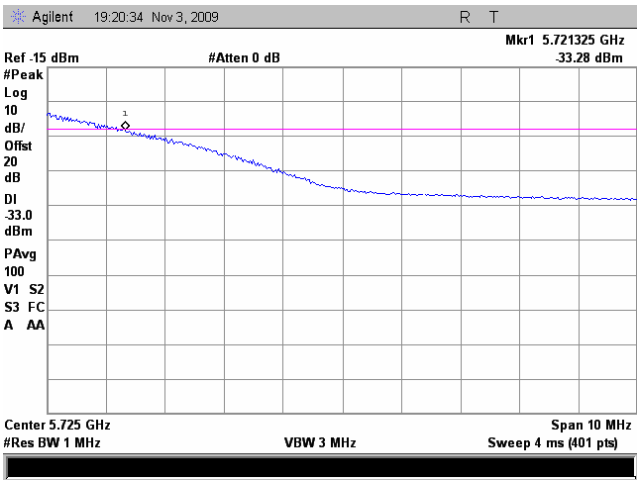
Plot 7.5.69 Band edge emissions at normal conditions 10th minute

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



Plot 7.5.70 Band edge emissions at normal conditions 10th minute

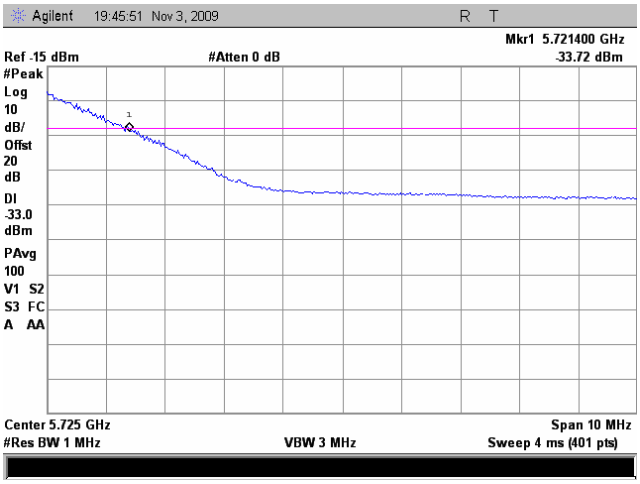
FREQUENCY EDGE	5725
CHANNEL BANDWIDTH	10 MHz
MODULATION / BIT RATE	64QAM / 65 Mbps



Test specification:	FCC section 15.407(g), Frequency stability		
Test procedure:	Section 2.1055		
Test mode:	Compliance	Verdict:	PASS
Date:	12/03/2009		
Temperature: 24ºC	Air Pressure: 1015 hPa	Relative Humidity: 47 %	Power Supply: 120 VAC
Remarks: EUT with 6 dBi antenna assembly gain			

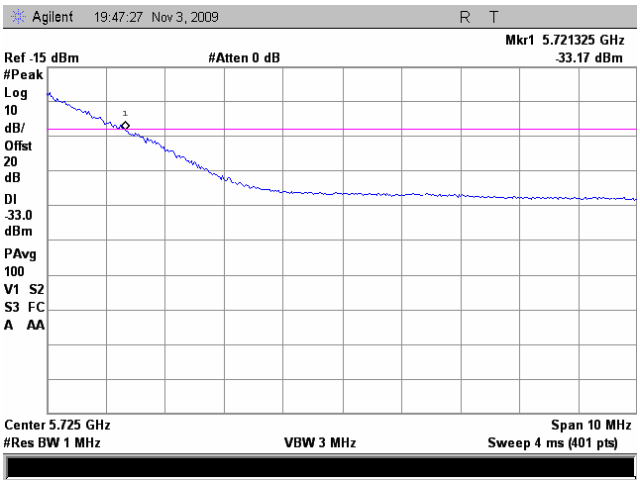
Plot 7.5.71 Band edge emissions at normal conditions 10th minute

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



Plot 7.5.72 Band edge emissions at normal conditions 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 7.1.2, Antenna requirements		
Test procedure:	Visual inspection / supplier declaration		
Test mode:	Compliance	Verdict:	PASS
Date:	12/08/2009		
Temperature: 24ºC	Air Pressure: 1009 hPa	Relative Humidity: 50 %	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 7.2.4, 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

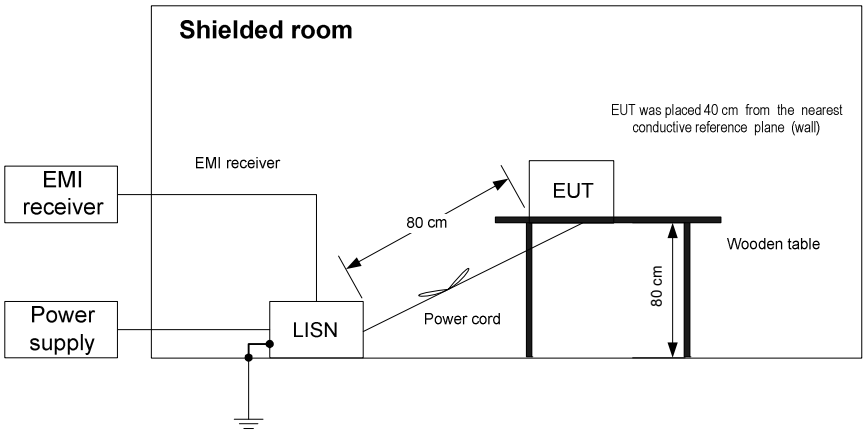
7.7.2.1 The EUT was set up as shown in Figure 7.7.1, energized and the performance check was conducted.

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 7.2.4, 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
EUT SET UP: TABLE-TOP
TEST SITE: SHIELDED ROOM
DETECTORS USED: PEAK / QUASI-PEAK / AVERAGE
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*		
0.156920	56.89	55.98	65.66	-9.68	43.93	55.66	-11.73	L1	Pass
0.784440	44.51	43.83	56.00	-12.17	41.31	46.00	-4.69		
2.402968	46.98	44.31	56.00	-11.69	31.54	46.00	-14.46		
2.663883	50.29	48.01	56.00	-7.99	31.67	46.00	-14.33		
6.479475	51.66	49.93	60.00	-10.07	42.07	50.00	-7.93		
7.210905	51.76	49.89	60.00	-10.11	41.04	50.00	-8.96		
0.157975	56.41	55.41	65.61	-10.20	43.88	55.61	-11.73	L2	Pass
0.784100	44.55	43.83	56.00	-12.17	41.61	46.00	-4.39		
2.769280	49.56	47.03	56.00	-8.97	34.87	46.00	-11.13		
4.913053	46.38	44.40	56.00	-11.60	37.44	46.00	-8.56		
6.535718	51.91	49.49	60.00	-10.51	41.20	50.00	-8.80		
7.263433	52.45	50.01	60.00	-9.99	41.12	50.00	-8.88		

*- Margin = Measured emission - specification limit.

Reference numbers of test equipment used

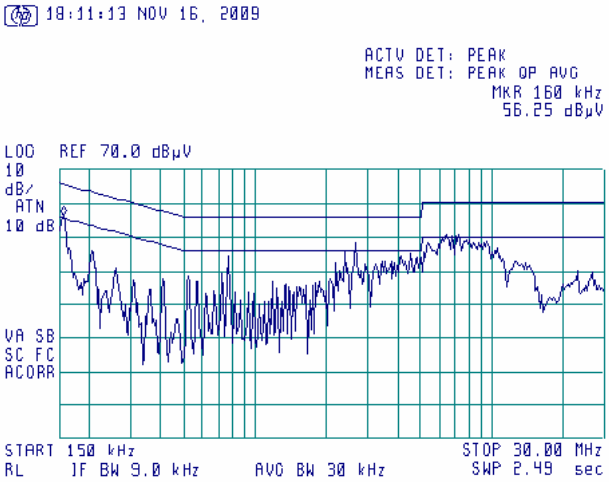
HL 0447	HL 0887	HL 1430	HL 1511	HL 3612			

Full description is given in Appendix A.

Test specification:	FCC part 15 section 15.207(a), RSS-Gen section 7.2.4, 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:			

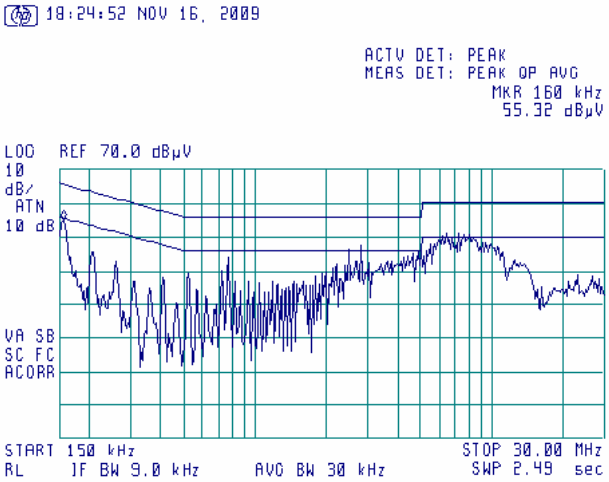
Plot 7.7.1 Conducted emission measurements

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 section 4.6.1, occupied bandwidth		
Test procedure:	RSS-Gen section 4.6.1		
Test mode:	Compliance	Verdict:	PASS
Date:	12/28/2008		
Temperature: 21ºC	Air Pressure: 1012 hPa	Relative Humidity: 44 %	Power Supply: 120 VAC
Remarks:			

8 Tests according to RSS-Gen requirements

8.1 Occupied bandwidth

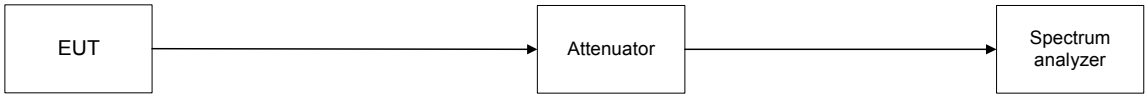
8.1.1 General

This test was performed to measure 99% power occupied bandwidth of the EUT carrier frequency.

8.1.2 Test procedure

8.1.2.1 The EUT was set up as shown in Figure 8.1.1, energized and its proper operation was checked.
8.1.2.2 The EUT was set to transmit modulated carrier.
8.1.2.3 The transmitter minimum 99% emission bandwidth was measured with spectrum analyzer as frequency delta between reference points on modulation envelope and provided in Table 8.1.1.

Figure 8.1.1 The 99% power occupied bandwidth test setup



Test specification:	RSS-Gen section 4.6.1, occupied bandwidth		
Test procedure:	RSS-Gen section 4.6.1		
Test mode:	Compliance	Verdict:	PASS
Date:	12/28/2008		
Temperature: 21ºC	Air Pressure: 1012 hPa	Relative Humidity: 44 %	Power Supply: 120 VAC
Remarks:			

Table 8.1.1 The 99% power occupied bandwidth test results

ASSIGNED FREQUENCY BAND:	5475 - 5725 MHz
DETECTOR USED:	Sample
SWEEP MODE:	Single, 1s
RESOLUTION BANDWIDTH:	1-3 % of approximate emission width
VIDEO BANDWIDTH:	3 times RBW
MODULATION ENVELOPE REFERENCE POINTS:	99% power
MODULATING SIGNAL:	PRBS
TRANSMITTER POWER:	Maximum

EMISSION BANDWIDTH 5MHz

Frequency, MHz	Modulation	Bit rate, Mbps	99% emission bandwidth, MHz
5480	BPSK	3.25	4.4220
	64QAM	32.5	4.4291
5590	BPSK	3.25	4.4298
	64QAM	32.5	4.4403
5660	BPSK	3.25	4.4583
	64QAM	32.5	4.4323
5715	BPSK	3.25	4.4245
	64QAM	32.5	4.4350

EMISSION BANDWIDTH 10MHz

Frequency, MHz	Modulation	Bit rate, Mbps	99% emission bandwidth, MHz
5485	BPSK	6.5	8.7935
	64QAM	65	8.8986
5585	BPSK	6.5	8.9397
	64QAM	65	8.9243
5665	BPSK	6.5	8.7595
	64QAM	65	8.8566
5710	BPSK	6.5	8.9216
	64QAM	65	8.8763

EMISSION BANDWIDTH 20MHz

Frequency, MHz	Modulation	Bit rate, Mbps	99% emission bandwidth, MHz
5490	BPSK	13	17.9418
	64QAM	130	17.6811
5580	BPSK	13	17.7295
	64QAM	130	17.5530
5670	BPSK	13	17.7103
	64QAM	130	17.7016
5705	BPSK	13	17.7668
	64QAM	130	17.7386

Test specification:	RSS-Gen section 4.6.1, occupied bandwidth		
Test procedure:	RSS-Gen section 4.6.1		
Test mode:	Compliance	Verdict:	PASS
Date:	12/28/2008		
Temperature: 21ºC	Air Pressure: 1012 hPa	Relative Humidity: 44 %	Power Supply: 120 VAC
Remarks:			

Table 8.1.1 The 99% power occupied bandwidth test results (continued)

ASSIGNED FREQUENCY BAND:	5475 - 5725 MHz
DETECTOR USED:	Sample
SWEEP MODE:	Single, 1s
RESOLUTION BANDWIDTH:	1-3 % of approximate emission width
VIDEO BANDWIDTH:	3 times RBW
MODULATION ENVELOPE REFERENCE POINTS:	99% power
MODULATING SIGNAL:	PRBS
TRANSMITTER POWER:	Maximum

EMISSION BANDWIDTH 40MHz

Frequency, MHz	Modulation	Bit rate, Mbps	99% emission bandwidth, MHz
5500	BPSK	27	36.2899
	64QAM	270	35.9370
5570	BPSK	27	36.2008
	64QAM	270	36.3654
5680	BPSK	27	35.9465
	64QAM	270	35.9934
5695	BPSK	27	35.5585
	64QAM	270	36.1901

Reference numbers of test equipment used

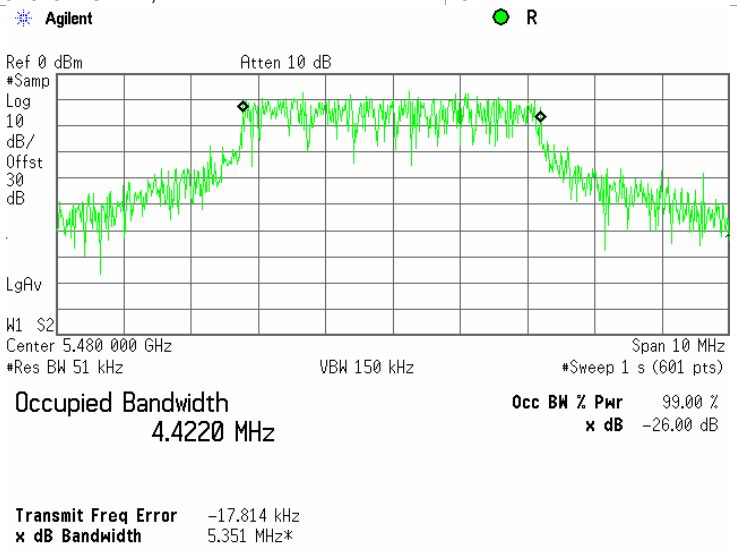
HL 2952	HL 3440	HL 3784	HL 3818					

Full description is given in Appendix A.

Test specification:	RSS-Gen section 4.6.1, occupied bandwidth		
Test procedure:	RSS-Gen section 4.6.1		
Test mode:	Compliance	Verdict:	PASS
Date:	12/28/2008		
Temperature: 21°C	Air Pressure: 1012 hPa	Relative Humidity: 44 %	Power Supply: 120 VAC
Remarks:			

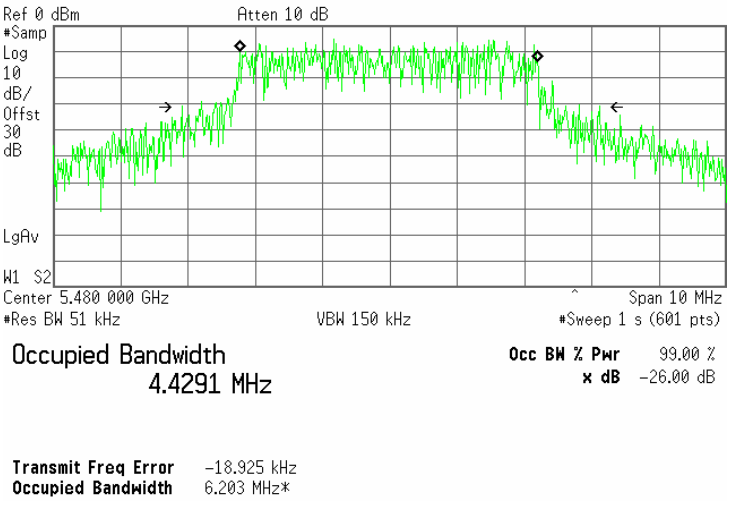
Plot 8.1.1 The 99%power bandwidth test result at low frequency, BPSK modulation

Frequency, MHz:	5480
Nominal channel BW, MHz	5



Plot 8.1.2 The 99%power bandwidth test result at low frequency, 64QAM modulation

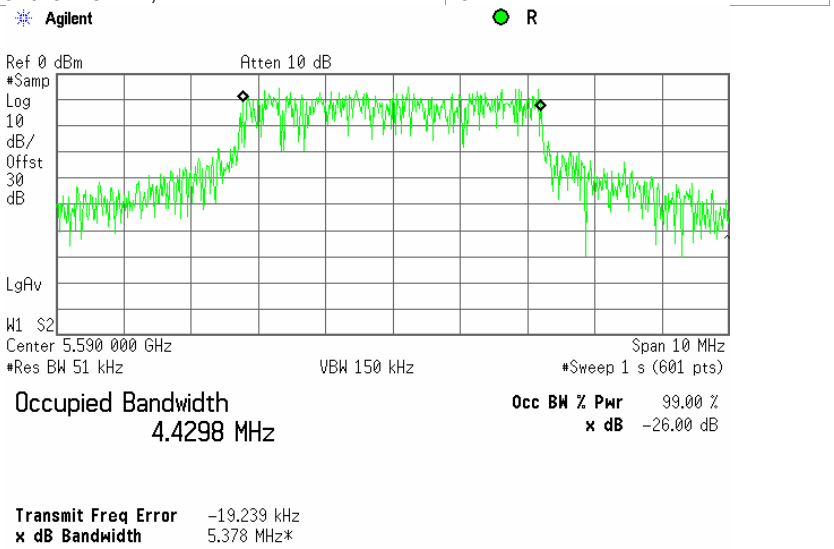
Frequency, MHz:	5480
Nominal channel BW, MHz	5



Test specification:	RSS-Gen section 4.6.1, occupied bandwidth		
Test procedure:	RSS-Gen section 4.6.1		
Test mode:	Compliance	Verdict:	PASS
Date:	12/28/2008		
Temperature: 21°C	Air Pressure: 1012 hPa	Relative Humidity: 44 %	Power Supply: 120 VAC
Remarks:			

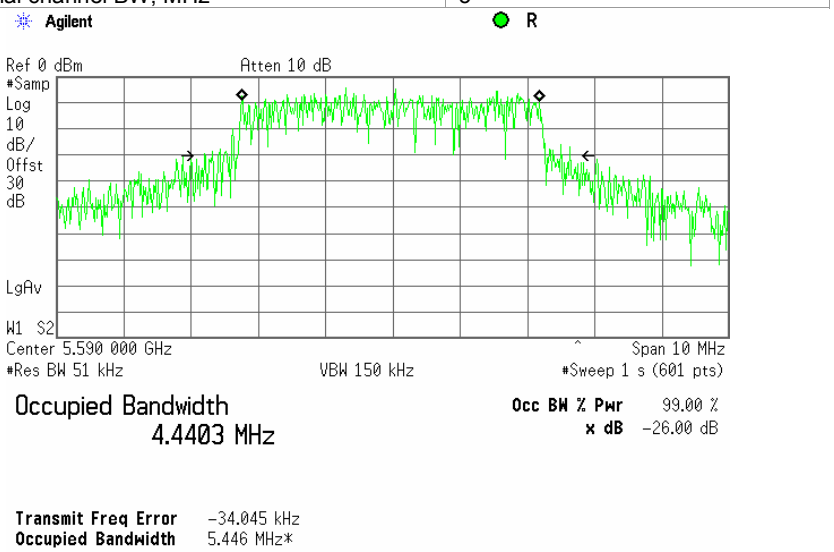
Plot 8.1.3 The 99%power bandwidth test result at mid1 frequency, BPSK modulation

Frequency, MHz:	5590
Nominal channel BW, MHz	5



Plot 8.1.4 The 99%power bandwidth test result at mid1 frequency, 64QAM modulation

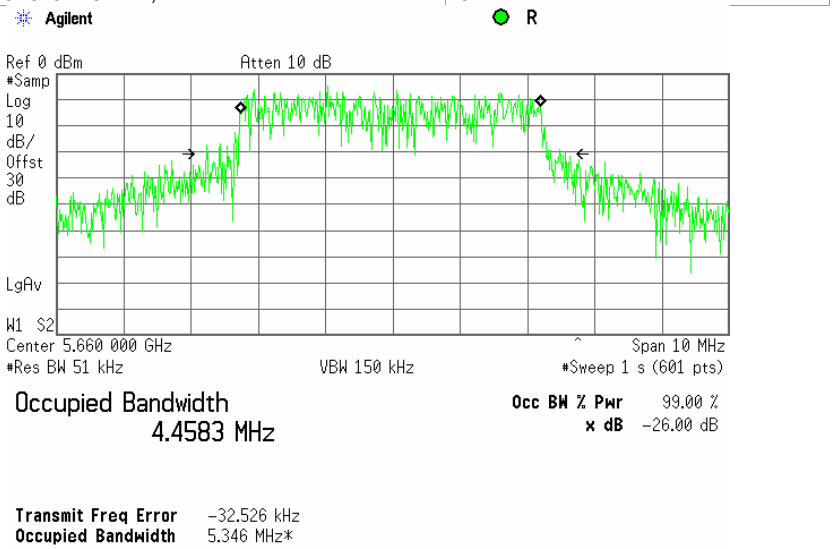
Frequency, MHz:	5590
Nominal channel BW, MHz	5



Test specification:	RSS-Gen section 4.6.1, occupied bandwidth		
Test procedure:	RSS-Gen section 4.6.1		
Test mode:	Compliance	Verdict:	PASS
Date:	12/28/2008		
Temperature: 21°C	Air Pressure: 1012 hPa	Relative Humidity: 44 %	Power Supply: 120 VAC
Remarks:			

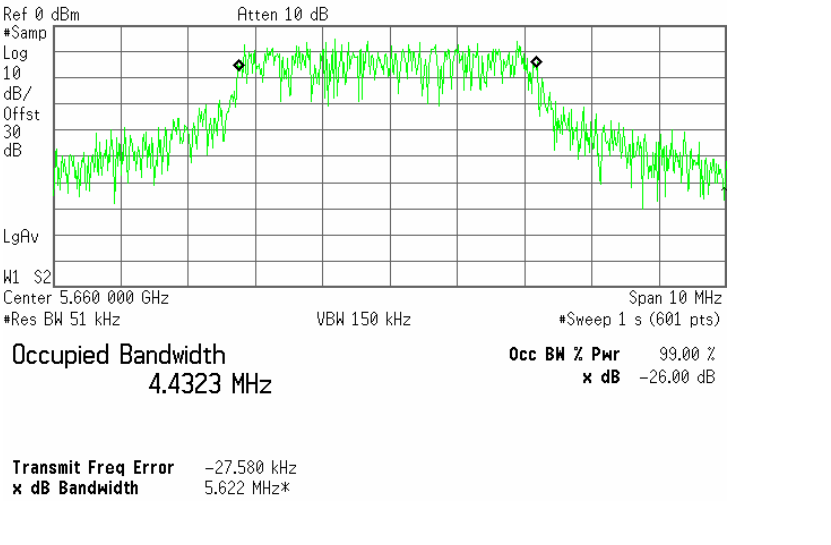
Plot 8.1.5 The 99%power bandwidth test result at mid2 frequency, BPSK modulation

Frequency, MHz:	5660
Nominal channel BW, MHz	5



Plot 8.1.6 The 99%power bandwidth test result at mid2 frequency, 64QAM modulation

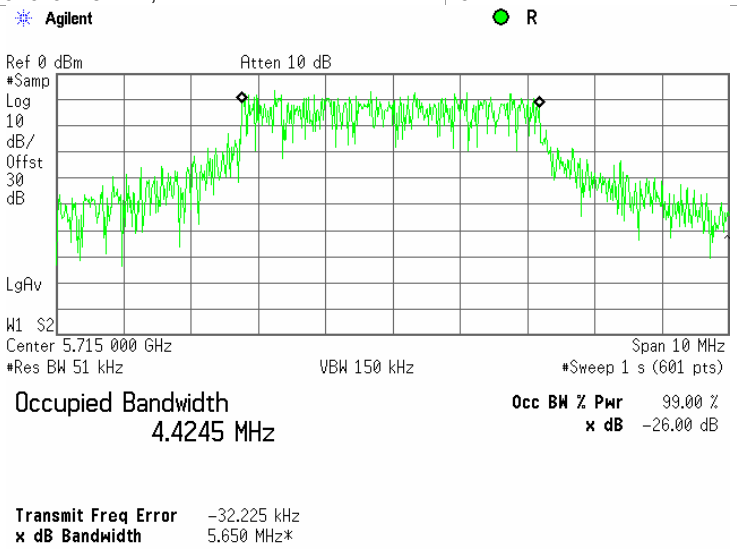
Frequency, MHz:	5660
Nominal channel BW, MHz	5



Test specification:	RSS-Gen section 4.6.1, occupied bandwidth		
Test procedure:	RSS-Gen section 4.6.1		
Test mode:	Compliance	Verdict:	PASS
Date:	12/28/2008		
Temperature: 21ºC	Air Pressure: 1012 hPa	Relative Humidity: 44 %	Power Supply: 120 VAC
Remarks:			

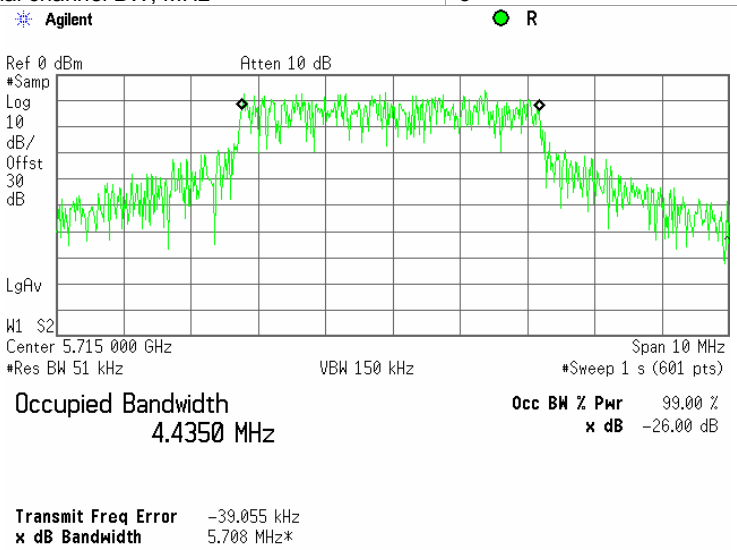
Plot 8.1.7 The 99%power bandwidth test result at high frequency, BPSK modulation

Frequency, MHz:	5715
Nominal channel BW, MHz	5



Plot 8.1.8 The 99%power bandwidth test result at high frequency, 64QAM modulation

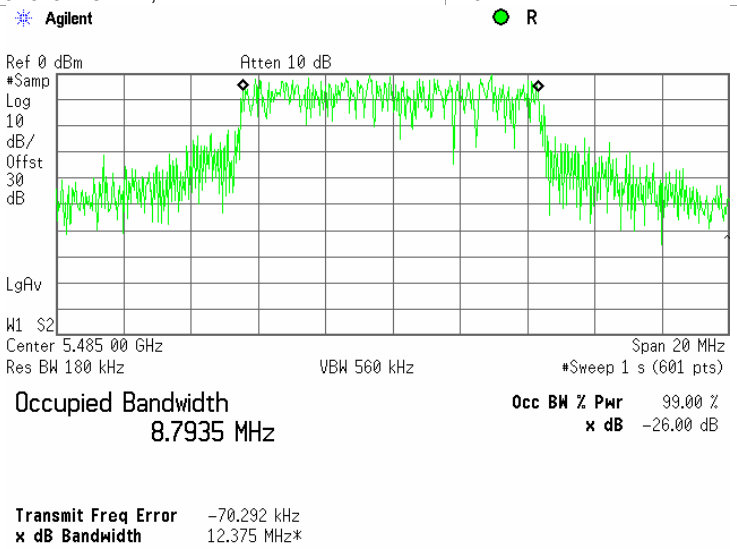
Frequency, MHz:	5715
Nominal channel BW, MHz	5



Test specification:	RSS-Gen section 4.6.1, occupied bandwidth		
Test procedure:	RSS-Gen section 4.6.1		
Test mode:	Compliance	Verdict:	PASS
Date:	12/28/2008		
Temperature: 21°C	Air Pressure: 1012 hPa	Relative Humidity: 44 %	Power Supply: 120 VAC
Remarks:			

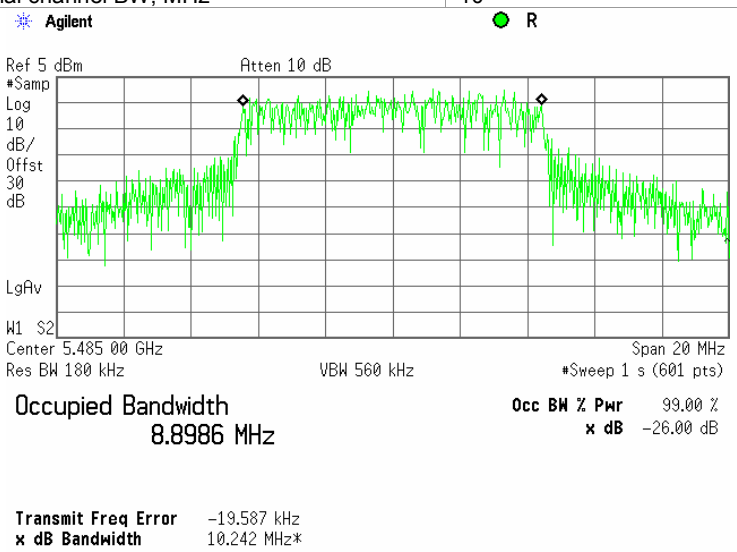
Plot 8.1.9 The 99%power bandwidth test result at low frequency, BPSK modulation

Frequency, MHz:	5485
Nominal channel BW, MHz	10



Plot 8.1.10 The 99%power bandwidth test result at low frequency, 64QAM modulation

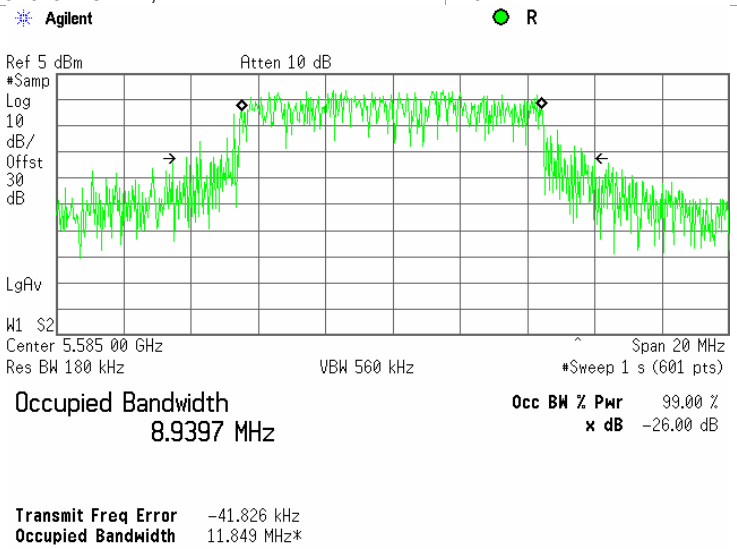
Frequency, MHz:	5485
Nominal channel BW, MHz	10



Test specification:	RSS-Gen section 4.6.1, occupied bandwidth		
Test procedure:	RSS-Gen section 4.6.1		
Test mode:	Compliance	Verdict:	PASS
Date:	12/28/2008		
Temperature: 21°C	Air Pressure: 1012 hPa	Relative Humidity: 44 %	Power Supply: 120 VAC
Remarks:			

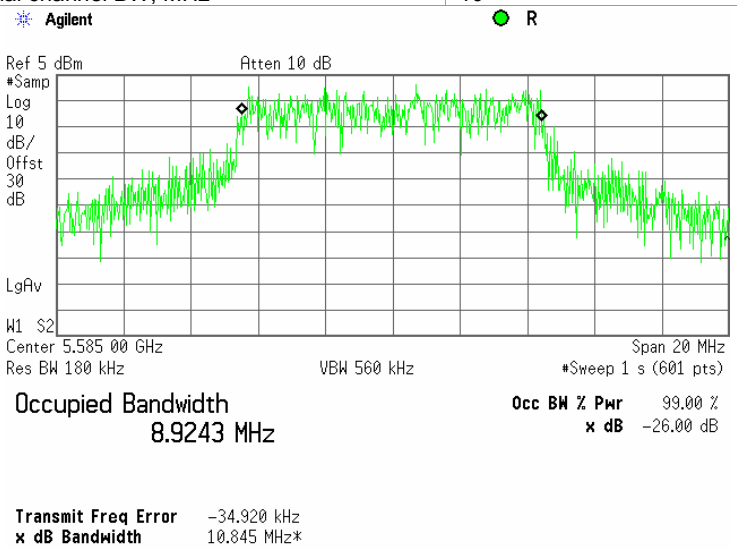
Plot 8.1.11 The 99%power bandwidth test result at mid1 frequency, BPSK modulation

Frequency, MHz:	5585
Nominal channel BW, MHz	10



Plot 8.1.12 The 99%power bandwidth test result at mid1 frequency, 64QAM modulation

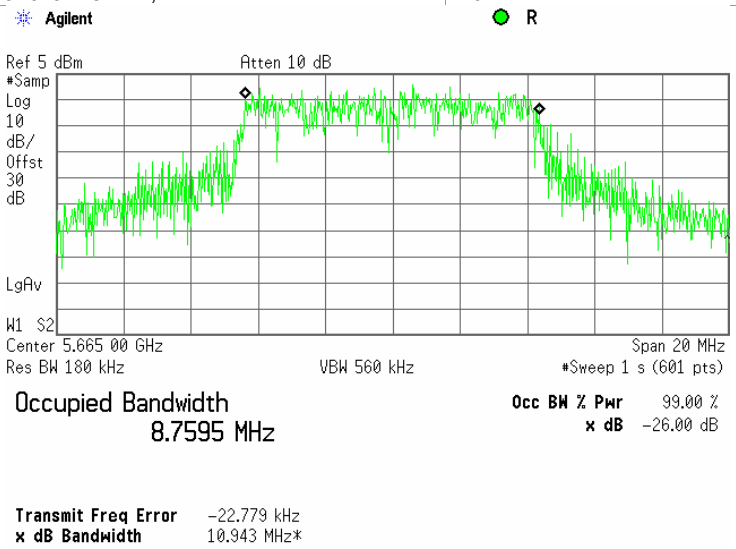
Frequency, MHz:	5585
Nominal channel BW, MHz	10



Test specification:	RSS-Gen section 4.6.1, occupied bandwidth		
Test procedure:	RSS-Gen section 4.6.1		
Test mode:	Compliance	Verdict:	PASS
Date:	12/28/2008		
Temperature: 21°C	Air Pressure: 1012 hPa	Relative Humidity: 44 %	Power Supply: 120 VAC
Remarks:			

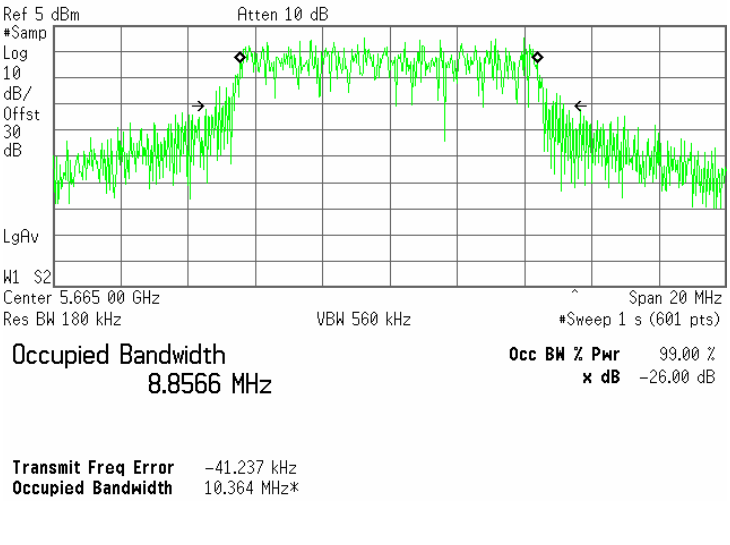
Plot 8.1.13 The 99%power bandwidth test result at mid2 frequency, BPSK modulation

Frequency, MHz:	5665
Nominal channel BW, MHz	10



Plot 8.1.14 The 99%power bandwidth test result at mid2 frequency, 64QAM modulation

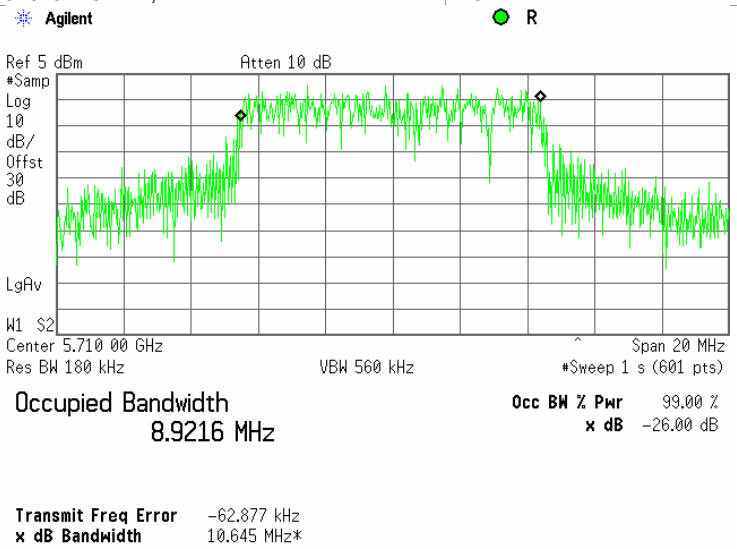
Frequency, MHz:	5665
Nominal channel BW, MHz	10



Test specification:	RSS-Gen section 4.6.1, occupied bandwidth		
Test procedure:	RSS-Gen section 4.6.1		
Test mode:	Compliance	Verdict:	PASS
Date:	12/28/2008		
Temperature: 21°C	Air Pressure: 1012 hPa	Relative Humidity: 44 %	Power Supply: 120 VAC
Remarks:			

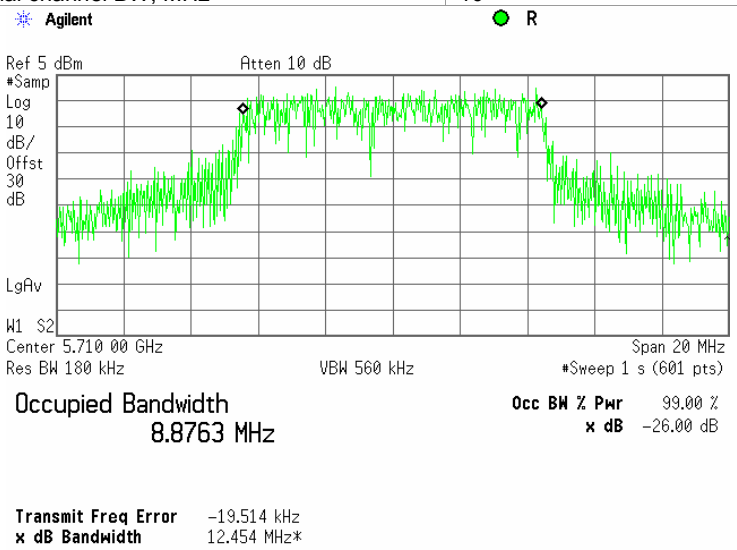
Plot 8.1.15 The 99%power bandwidth test result at high frequency, BPSK modulation

Frequency, MHz:	5710
Nominal channel BW, MHz	10



Plot 8.1.16 The 99%power bandwidth test result at high frequency, 64QAM modulation

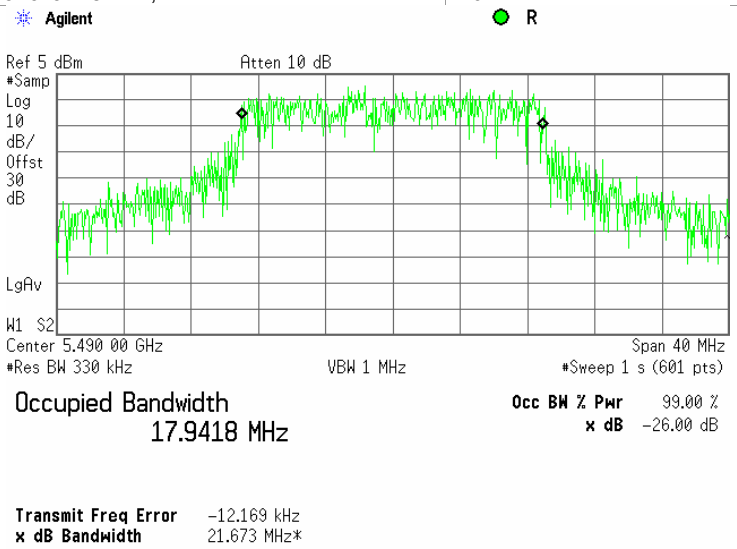
Frequency, MHz:	5710
Nominal channel BW, MHz	10



Test specification:	RSS-Gen section 4.6.1, occupied bandwidth		
Test procedure:	RSS-Gen section 4.6.1		
Test mode:	Compliance	Verdict:	PASS
Date:	12/28/2008		
Temperature: 21°C	Air Pressure: 1012 hPa	Relative Humidity: 44 %	Power Supply: 120 VAC
Remarks:			

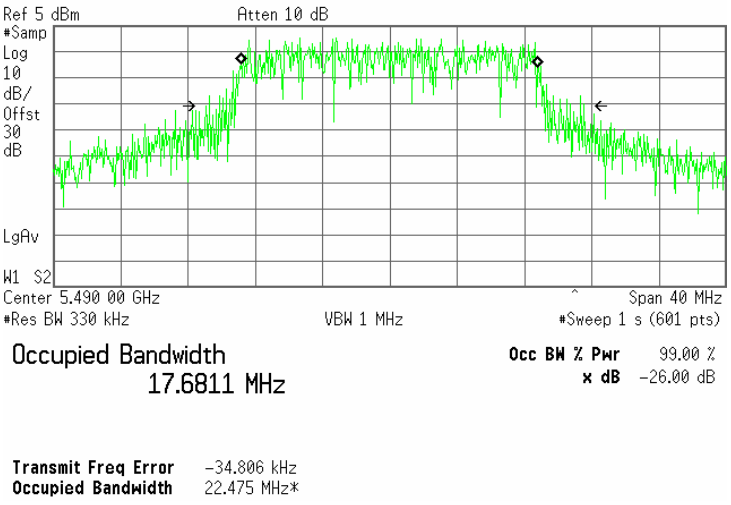
Plot 8.1.17 The 99%power bandwidth test result at low frequency, BPSK modulation

Frequency, MHz:	5490
Nominal channel BW, MHz	20



Plot 8.1.18 The 99%power bandwidth test result at low frequency, 64QAM modulation

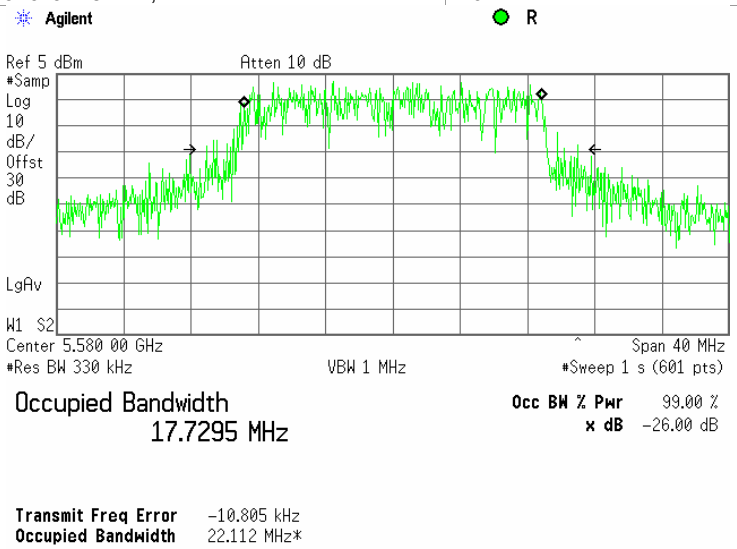
Frequency, MHz:	5490
Nominal channel BW, MHz	20



Test specification:	RSS-Gen section 4.6.1, occupied bandwidth		
Test procedure:	RSS-Gen section 4.6.1		
Test mode:	Compliance	Verdict:	PASS
Date:	12/28/2008		
Temperature: 21°C	Air Pressure: 1012 hPa	Relative Humidity: 44 %	Power Supply: 120 VAC
Remarks:			

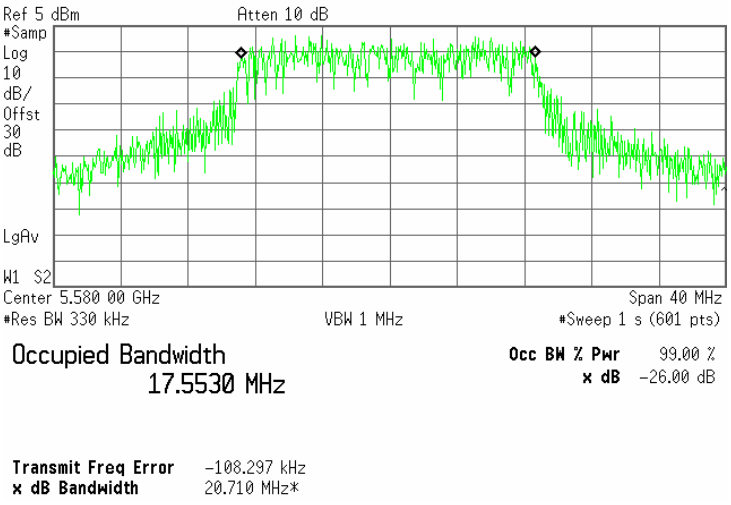
Plot 8.1.19 The 99%power bandwidth test result at mid1 frequency, BPSK modulation

Frequency, MHz:	5580
Nominal channel BW, MHz	20



Plot 8.1.20 The 99%power bandwidth test result at mid1 frequency, 64QAM modulation

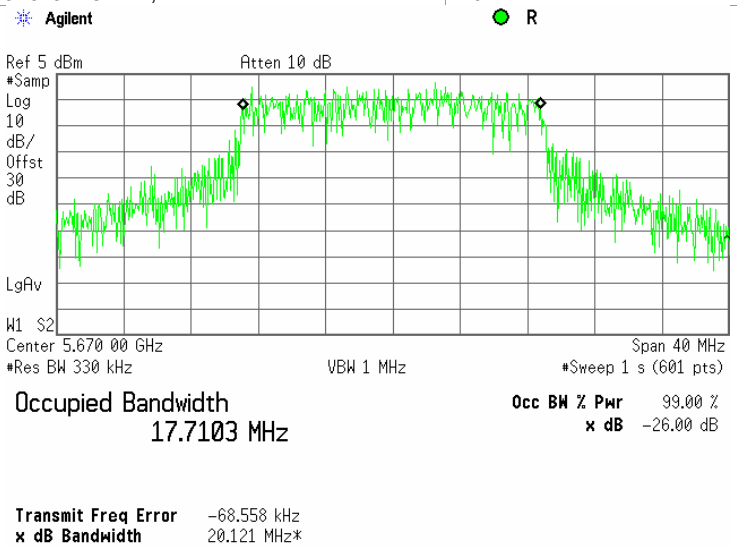
Frequency, MHz:	5580
Nominal channel BW, MHz	20



Test specification:	RSS-Gen section 4.6.1, occupied bandwidth		
Test procedure:	RSS-Gen section 4.6.1		
Test mode:	Compliance	Verdict:	PASS
Date:	12/28/2008		
Temperature: 21°C	Air Pressure: 1012 hPa	Relative Humidity: 44 %	Power Supply: 120 VAC
Remarks:			

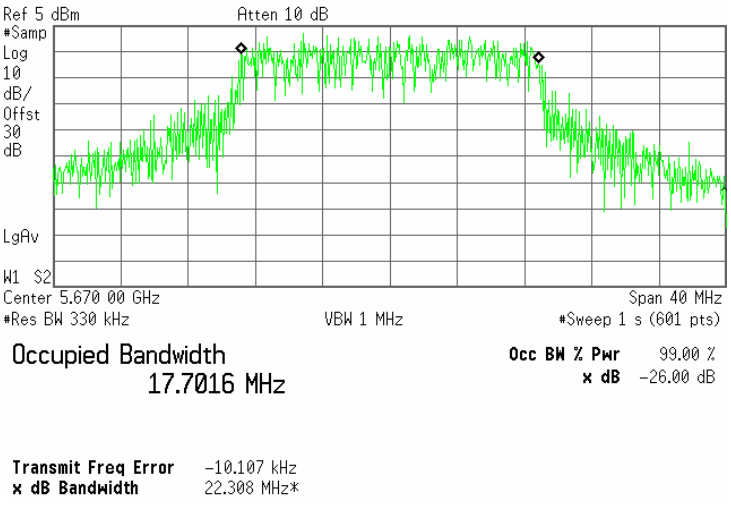
Plot 8.1.21 The 99%power bandwidth test result at mid2 frequency, BPSK modulation

Frequency, MHz:	5665
Nominal channel BW, MHz	20



Plot 8.1.22 The 99%power bandwidth test result at mid2 frequency, 64QAM modulation

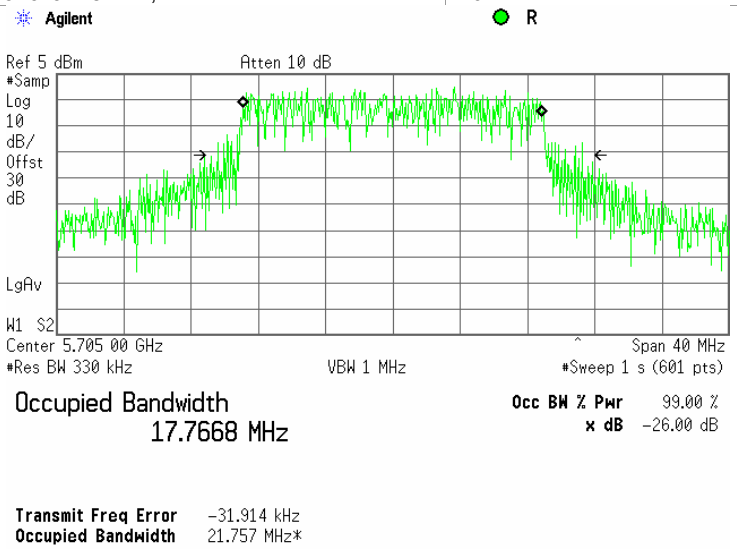
Frequency, MHz:	5665
Nominal channel BW, MHz	20



Test specification:	RSS-Gen section 4.6.1, occupied bandwidth		
Test procedure:	RSS-Gen section 4.6.1		
Test mode:	Compliance	Verdict:	PASS
Date:	12/28/2008		
Temperature: 21°C	Air Pressure: 1012 hPa	Relative Humidity: 44 %	Power Supply: 120 VAC
Remarks:			

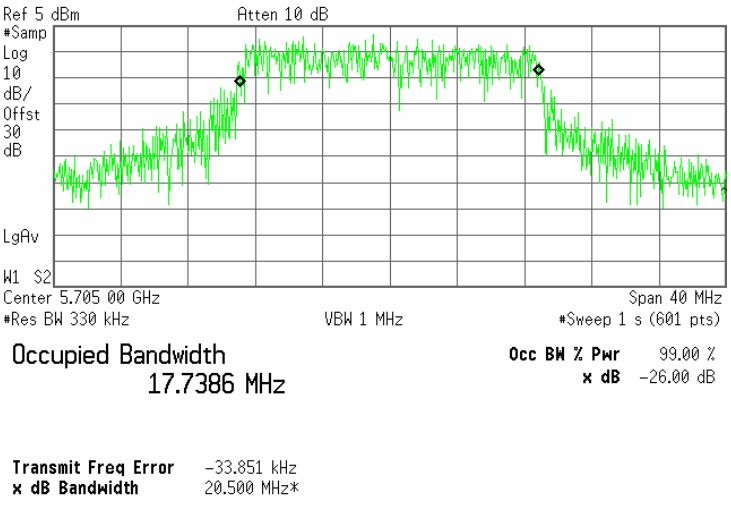
Plot 8.1.23 The 99%power bandwidth test result at high frequency, BPSK modulation

Frequency, MHz:	5705
Nominal channel BW, MHz	20



Plot 8.1.24 The 99%power bandwidth test result at high frequency, 64QAM modulation

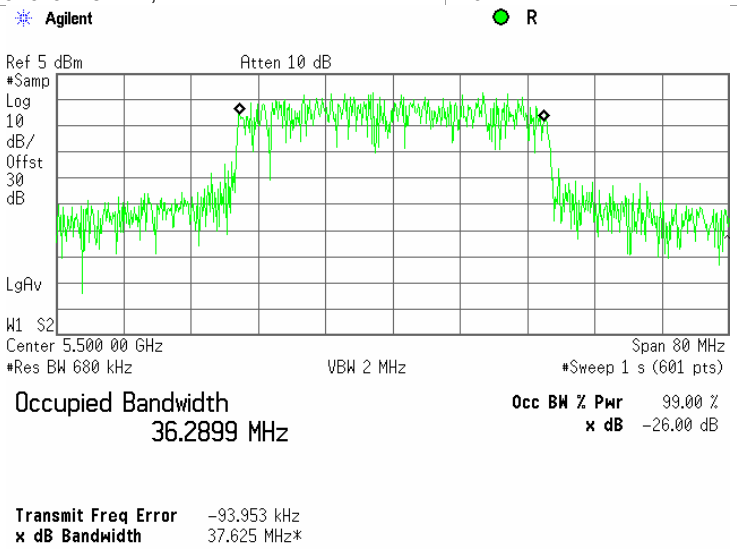
Frequency, MHz:	5705
Nominal channel BW, MHz	20



Test specification:	RSS-Gen section 4.6.1, occupied bandwidth		
Test procedure:	RSS-Gen section 4.6.1		
Test mode:	Compliance	Verdict:	PASS
Date:	12/28/2008		
Temperature: 21°C	Air Pressure: 1012 hPa	Relative Humidity: 44 %	Power Supply: 120 VAC
Remarks:			

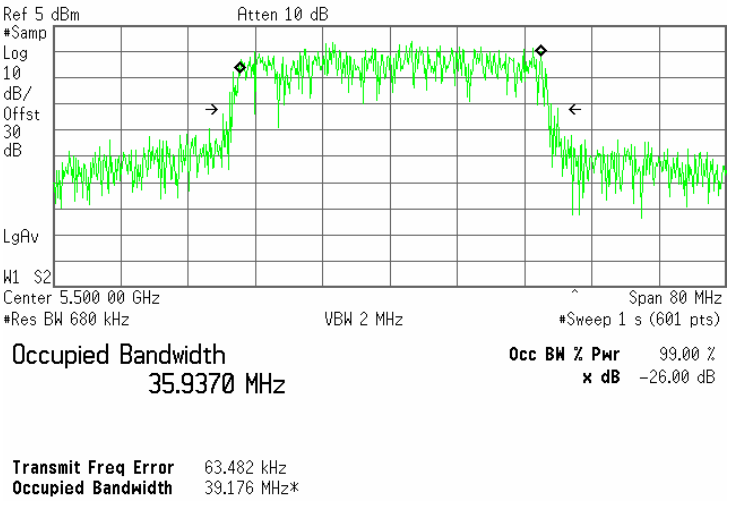
Plot 8.1.25 The 99%power bandwidth test result at low frequency, BPSK modulation

Frequency, MHz:	5500
Nominal channel BW, MHz	40



Plot 8.1.26 The 99%power bandwidth test result at low frequency, 64QAM modulation

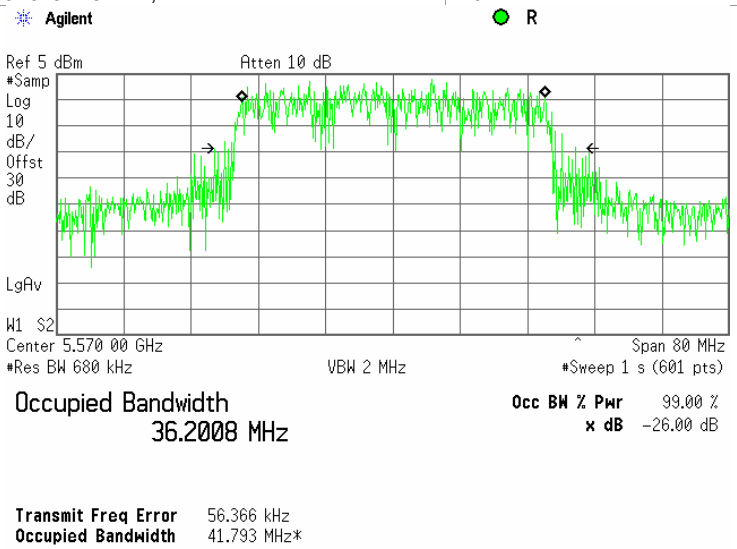
Frequency, MHz:	5500
Nominal channel BW, MHz	40



Test specification:	RSS-Gen section 4.6.1, occupied bandwidth		
Test procedure:	RSS-Gen section 4.6.1		
Test mode:	Compliance	Verdict:	PASS
Date:	12/28/2008		
Temperature: 21°C	Air Pressure: 1012 hPa	Relative Humidity: 44 %	Power Supply: 120 VAC
Remarks:			

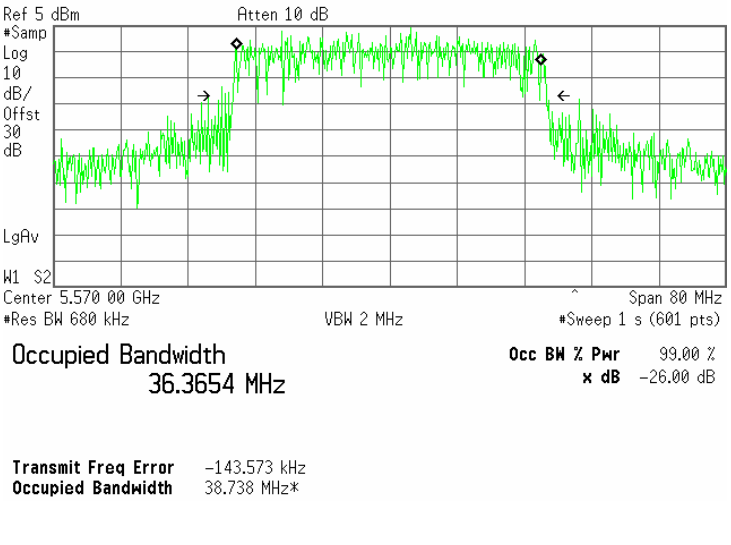
Plot 8.1.27 The 99%power bandwidth test result at mid1 frequency, BPSK modulation

Frequency, MHz:	5570
Nominal channel BW, MHz	40



Plot 8.1.28 The 99%power bandwidth test result at mid1 frequency, 64QAM modulation

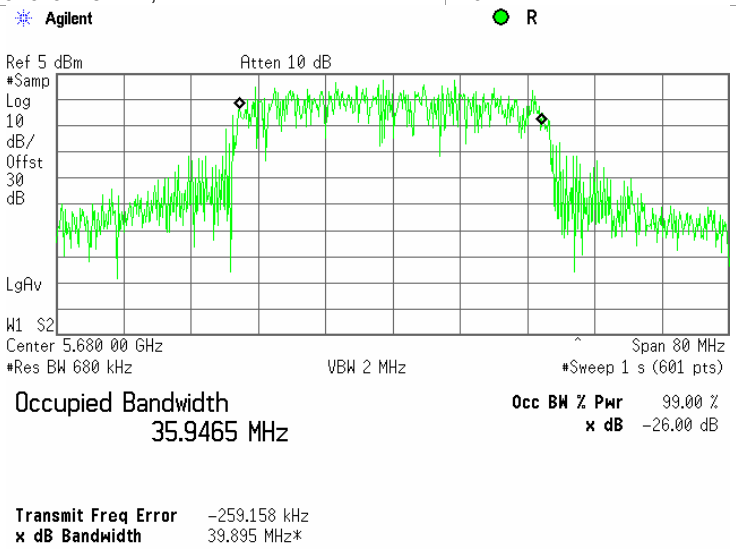
Frequency, MHz:	5570
Nominal channel BW, MHz	40



Test specification:	RSS-Gen section 4.6.1, occupied bandwidth		
Test procedure:	RSS-Gen section 4.6.1		
Test mode:	Compliance	Verdict:	PASS
Date:	12/28/2008		
Temperature: 21°C	Air Pressure: 1012 hPa	Relative Humidity: 44 %	Power Supply: 120 VAC
Remarks:			

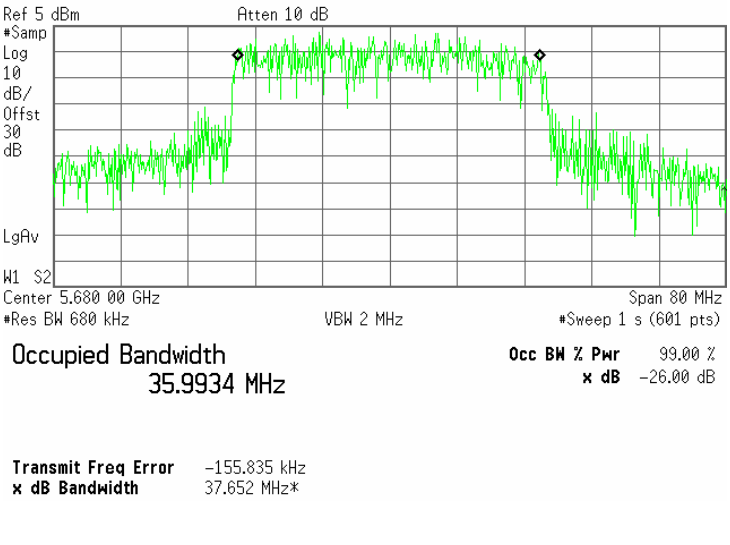
Plot 8.1.29 The 99%power bandwidth test result at mid2 frequency, BPSK modulation

Frequency, MHz:	5680
Nominal channel BW, MHz	40



Plot 8.1.30 The 99%power bandwidth test result at mid2 frequency, 64QAM modulation

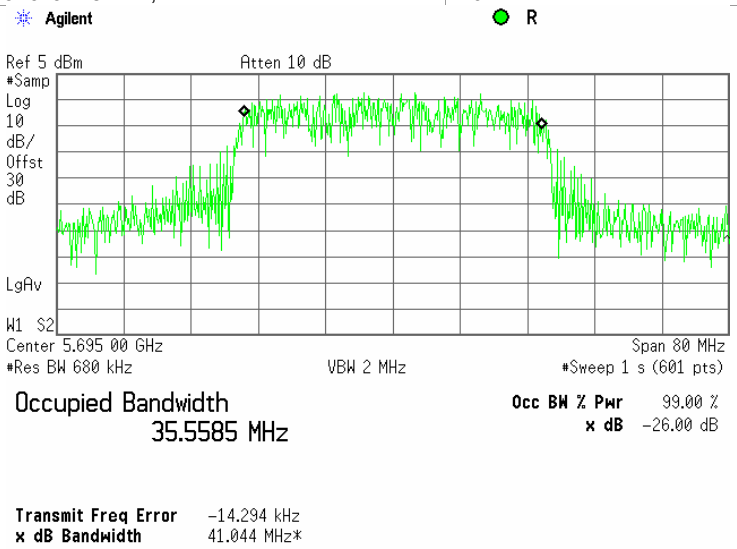
Frequency, MHz:	5680
Nominal channel BW, MHz	40



Test specification:	RSS-Gen section 4.6.1, occupied bandwidth		
Test procedure:	RSS-Gen section 4.6.1		
Test mode:	Compliance	Verdict:	PASS
Date:	12/28/2008		
Temperature: 21°C	Air Pressure: 1012 hPa	Relative Humidity: 44 %	Power Supply: 120 VAC
Remarks:			

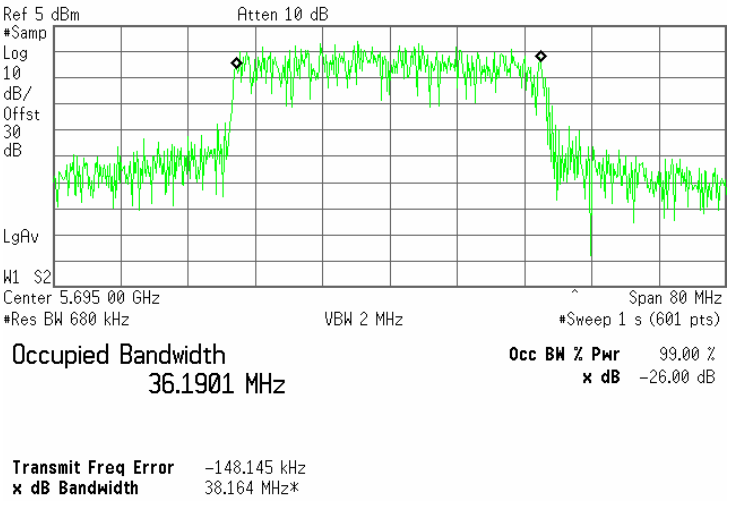
Plot 8.1.31 The 99%power bandwidth test result at high frequency, BPSK modulation

Frequency, MHz:	5695
Nominal channel BW, MHz	40



Plot 8.1.32 The 99%power bandwidth test result at high frequency, 64QAM modulation

Frequency, MHz:	5695
Nominal channel BW, MHz	40



Test specification:	RSS-Gen sections 6, 4.10, spurious radiated emission		
Test procedure:	ANSI C63.4, Section 13.1.3		
Test mode:	Compliance	Verdict:	PASS
Date:	11/16/2009		
Temperature: 23ºC	Air Pressure: 1013 hPa	Relative Humidity: 40 %	Power Supply: 120 VAC
Remarks:			

8.2 Receiver radiated spurious emission measurements

8.2.1 General

This test was performed to measure radiated emissions from the EUT enclosure. Specification test limits are given in Table 8.2.1.

Table 8.2.1 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.

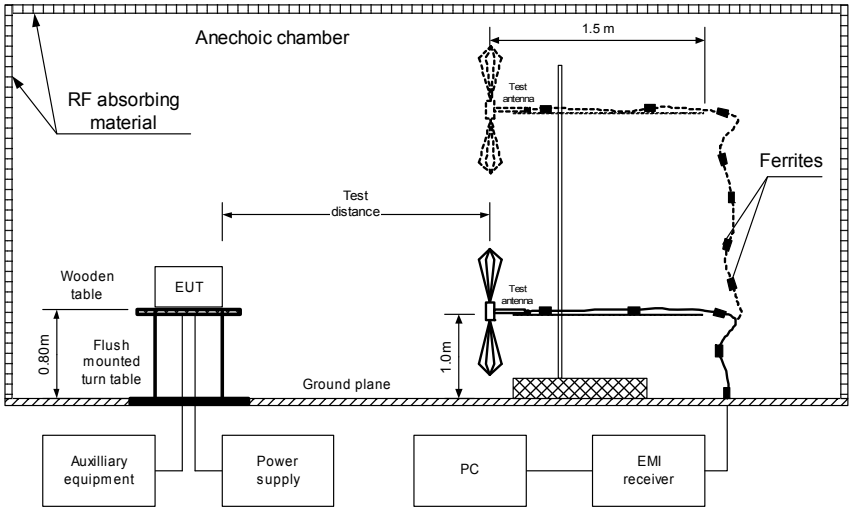
8.2.2 Test procedure

8.2.2.1 The EUT was set up as shown in Figure 8.2.1, energized and the performance check was conducted.

8.2.2.2 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.

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

Figure 8.2.1 Setup for radiated emission measurements in anechoic chamber, table-top equipment



Test specification:	**RSS-Gen sections 6, 4.10, spurious radiated emission**		
Test procedure:	ANSI C63.4, Section 13.1.3		
Test mode:	Compliance	**Verdict:**	PASS
Date:	11/16/2009		
Temperature: 23ºC	**Air Pressure:** 1013 hPa	**Relative Humidity:** 40 %	**Power Supply:** 120 VAC
Remarks: EUT with 6 dBi antenna assembly gain, flat antenna			

Table 8.2.2 Radiated emission test results

ASSIGNED FREQUENCY: 5470 - 5725 MHz
INVESTIGATED FREQUENCY RANGE: 0.009 - 17500 MHz
TEST SITE Semi Anechoic Chamber
TEST DISTANCE: 3 m
RESOLUTION BANDWIDTH: 1 kHz (9 kHz – 150 kHz)
9.0 kHz (150 kHz – 30 MHz)
120 kHz (30 MHz – 1000 MHz)
VIDEO BANDWIDTH: > Resolution bandwidth
TEST ANTENNA TYPE: Active loop (9 kHz – 30 MHz)
Biconilog (30 MHz – 1000 MHz)
Double ridged guide (above 1000 MHz)

Frequency, MHz	Peak, dB(µV/m)	Quasi-peak dB(µV/m)			Antenna polarization	Antenna height, m	Turntable position**, degrees	Verdict
		Measured emission, dB(µV/m)	Limit, dB(µV/m)	Margin, dB*				
Mid Rx (5580 MHz)								
32.600000	34.53	31.21	40.00	-8.79	Vert	1.0	53	Pass
36.879100	38.40	35.26	40.00	-4.74	Vert	1.0	178	
61.963900	34.35	30.68	40.00	-9.32	Vert	1.0	23	
66.295000	37.48	33.65	40.00	-6.35	Vert	1.3	180	

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

Reference numbers of test equipment used

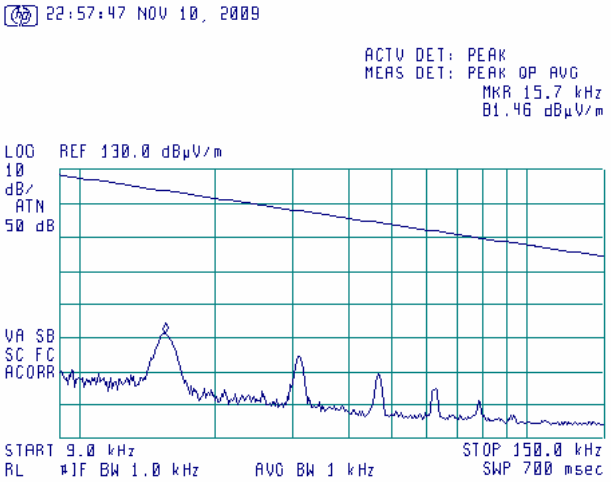
HL 0521	HL 0604	HL 1984	HL 2871	HL 2909	HL 3121	HL 3616	

Full description is given in Appendix A.

Test specification:	**RSS-Gen sections 6, 4.10, spurious radiated emission**		
Test procedure:	ANSI C63.4, Section 13.1.3		
Test mode:	Compliance	**Verdict:**	PASS
Date:	11/16/2009		
Temperature: 23ºC	**Air Pressure:** 1013 hPa	**Relative Humidity:** 40 %	**Power Supply:** 120 VAC
Remarks: EUT with 6 dBi antenna assembly gain, flat antenna			

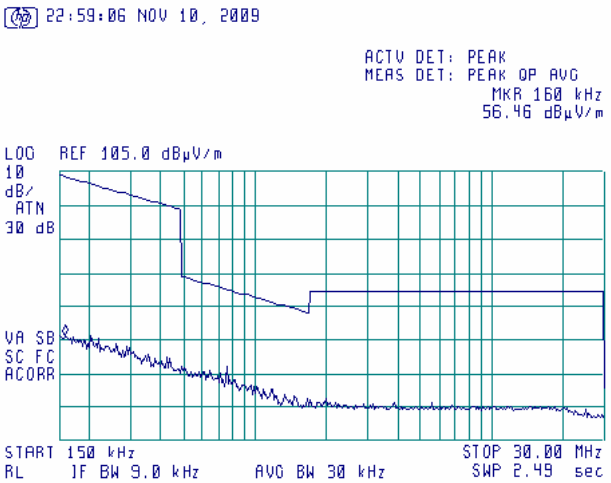
Plot 8.2.1 Radiated emission measurements from 9 to 150 kHz at the mid Rx Channel frequency

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



Plot 8.2.2 Radiated emission measurements from 0.15 MHz to 30 MHz at the mid Rx Channel frequency

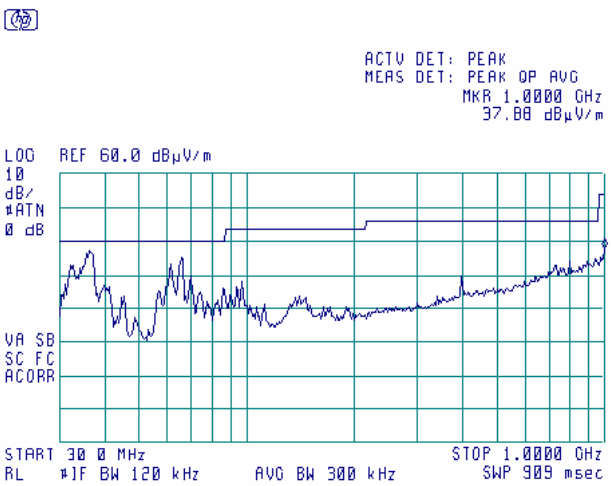
TEST SITE: Anechoic chamber
TEST DISTANCE: 3 m
ANTENNA POLARIZATION: Vertical and Horizontal



Test specification:	RSS-Gen sections 6, 4.10, spurious radiated emission		
Test procedure:	ANSI C63.4, Section 13.1.3		
Test mode:	Compliance	Verdict:	PASS
Date:	11/16/2009		
Temperature: 23ºC	Air Pressure: 1013 hPa	Relative Humidity: 40 %	Power Supply: 120 VAC
Remarks: EUT with 6 dBi antenna assembly gain, flat antenna			

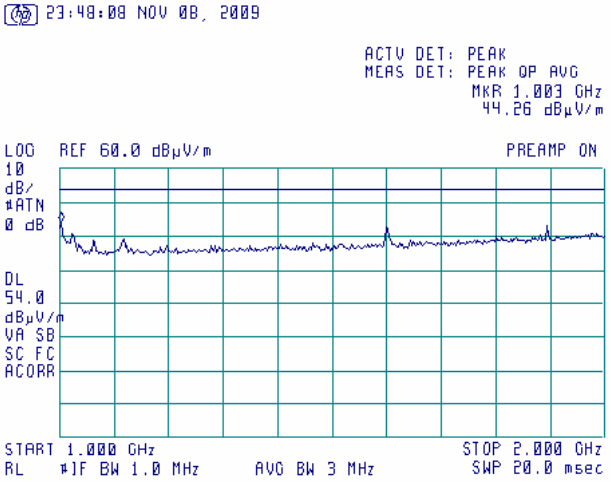
Plot 8.2.3 Radiated emission measurements from 30 MHz to 1000 MHz at the mid Rx Channel frequency

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



Plot 8.2.4 Radiated emission measurements from 1.0 to 2.0 GHz at the mid Rx Channel frequency

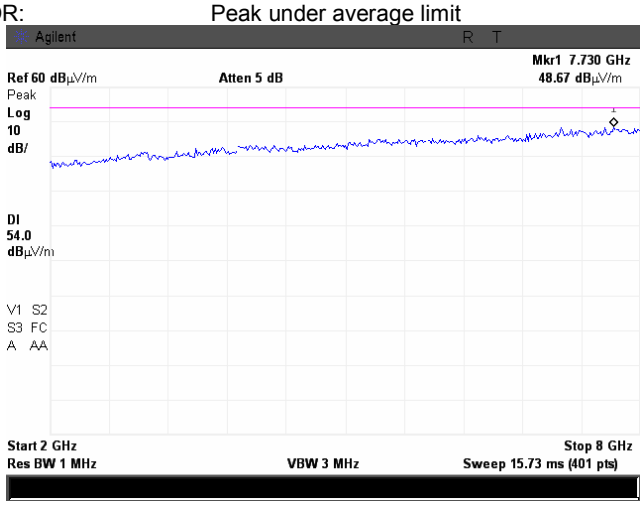
TEST SITE: Anechoic chamber
TEST DISTANCE: 3 m
ANTENNA POLARIZATION: Vertical and Horizontal
DETECTOR: Peak under average limit



Test specification:	RSS-Gen sections 6, 4.10, spurious radiated emission		
Test procedure:	ANSI C63.4, Section 13.1.3		
Test mode:	Compliance	Verdict:	PASS
Date:	11/16/2009		
Temperature: 23ºC	Air Pressure: 1013 hPa	Relative Humidity: 40 %	Power Supply: 120 VAC
Remarks: EUT with 6 dBi antenna assembly gain, flat antenna			

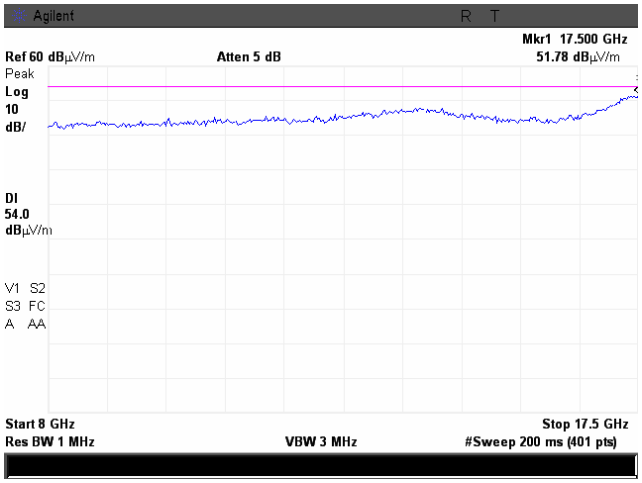
Plot 8.2.5 Radiated emission measurements from 2.0 to 8.0 GHz at the mid Rx Channel frequency

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



Plot 8.2.6 Radiated emission measurements from 8 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, 4.10, spurious radiated emission**		
Test procedure:	ANSI C63.4, Section 13.1.3		
Test mode:	Compliance	**Verdict:**	PASS
Date:	11/16/2009		
Temperature: 23ºC	**Air Pressure:** 1013 hPa	**Relative Humidity:** 40 %	**Power Supply:** 120 VAC
Remarks: EUT with 6 dBi antenna assembly gain, dish antenna			

Table 8.2.3 Radiated emission test results

ASSIGNED FREQUENCY: 5470 - 5725 MHz
INVESTIGATED FREQUENCY RANGE: 0.009 - 1000 MHz
TEST SITE Semi Anechoic Chamber
TEST DISTANCE: 3 m
RESOLUTION BANDWIDTH: 1 kHz (9 kHz – 150 kHz)
9.0 kHz (150 kHz – 30 MHz)
120 kHz (30 MHz – 1000 MHz)
VIDEO BANDWIDTH: > Resolution bandwidth
TEST ANTENNA TYPE: Active loop (9 kHz – 30 MHz)
Biconilog (30 MHz – 1000 MHz)
Double ridged guide (above 1000 MHz)

Frequency, MHz	**Peak, dB(□V/m)**	**Quasi-peak dB(□V/m)**			**Antenna polarization**	**Antenna height, m**	**Turntable position**, degrees**	**Verdict**
		Measured emission, dB(□V/m)	**Limit, dB(□V/m)**	**Margin, dB***				
Mid Rx (5580 MHz)								
41.60480	35.5	33.1	40.0	-6.9	Vert	1.0	132	
45.27020	35.5	32.5	40.0	-7.5	Vert	1.0	176	
61.62500	33.4	29.5	40.0	-10.5	Vert	1.0	113	
66.28875	40.9	37.6	40.0	-2.4	Vert	1.0	200	Pass
106.70610	40.1	36.9	43.5	-6.6	Vert	1.0	107	
111.61233	38.8	35.8	43.5	-7.7	Vert	1.0	250	
400.00000	34.1	31.6	46.0	-14.4	Vert	1.0	28	
799.99150	41.9	38.5	46.0	-7.5	Vert	1.0	251	

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

Reference numbers of test equipment used

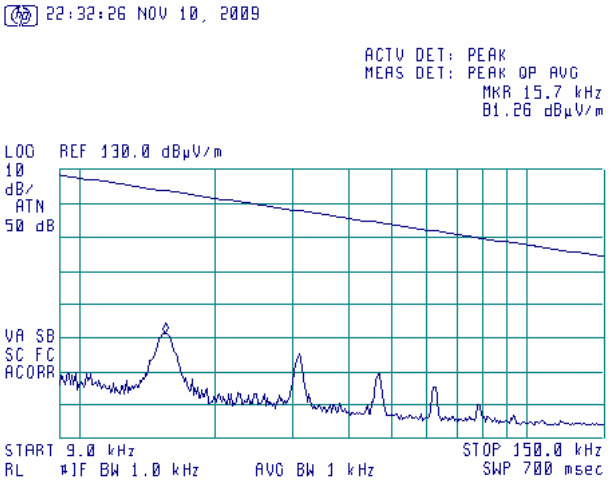
HL 0521	HL 0604	HL 1984	HL 2871	HL 2909	HL 3121	HL 3616	

Full description is given in Appendix A.

Test specification:	RSS-Gen sections 6, 4.10, spurious radiated emission		
Test procedure:	ANSI C63.4, Section 13.1.3		
Test mode:	Compliance	Verdict:	PASS
Date:	11/16/2009		
Temperature: 23ºC	Air Pressure: 1013 hPa	Relative Humidity: 40 %	Power Supply: 120 VAC
Remarks: EUT with 6 dBi antenna assembly gain, dish antenna			

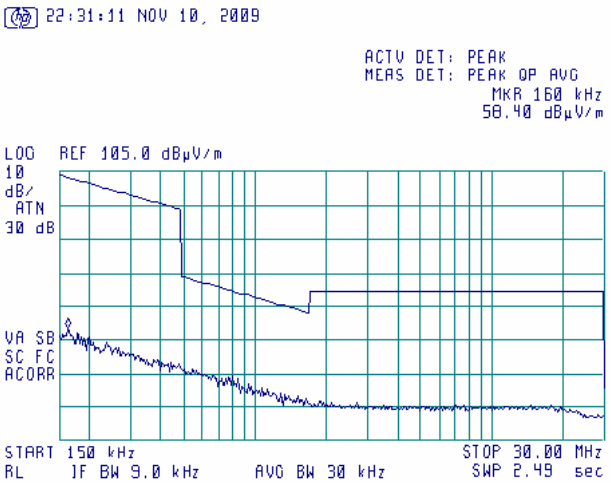
Plot 8.2.7 Radiated emission measurements from 9 to 150 kHz at the mid Rx Channel frequency

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



Plot 8.2.8 Radiated emission measurements from 0.15 MHz to 30 MHz at the mid Rx Channel frequency

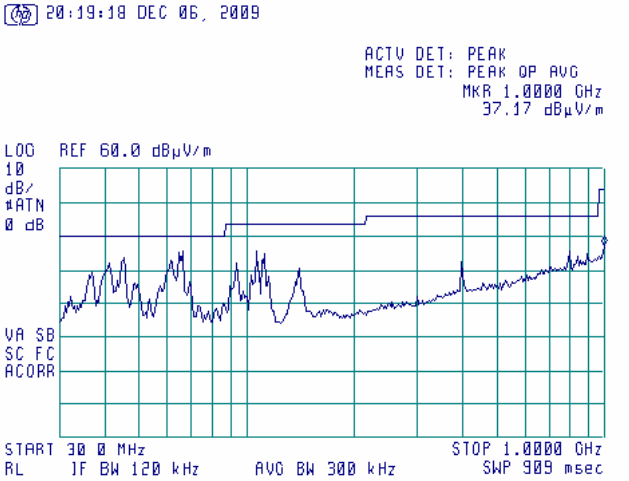
TEST SITE: Anechoic chamber
TEST DISTANCE: 3 m
ANTENNA POLARIZATION: Vertical and Horizontal



Test specification:	RSS-Gen sections 6, 4.10, spurious radiated emission		
Test procedure:	ANSI C63.4, Section 13.1.3		
Test mode:	Compliance	Verdict:	PASS
Date:	11/16/2009		
Temperature: 23ºC	Air Pressure: 1013 hPa	Relative Humidity: 40 %	Power Supply: 120 VAC
Remarks: EUT with 6 dBi antenna assembly gain, dish antenna			

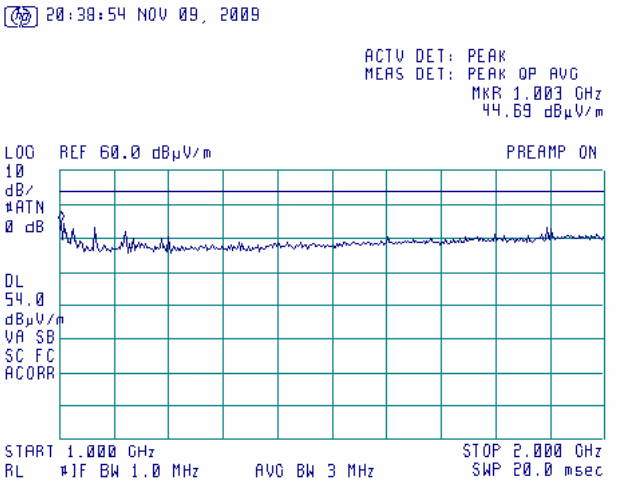
Plot 8.2.9 Radiated emission measurements from 30 MHz to 1000 MHz at the mid Rx Channel frequency

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



Plot 8.2.10 Radiated emission measurements from 1.0 to 2.0 GHz at the mid Rx Channel frequency

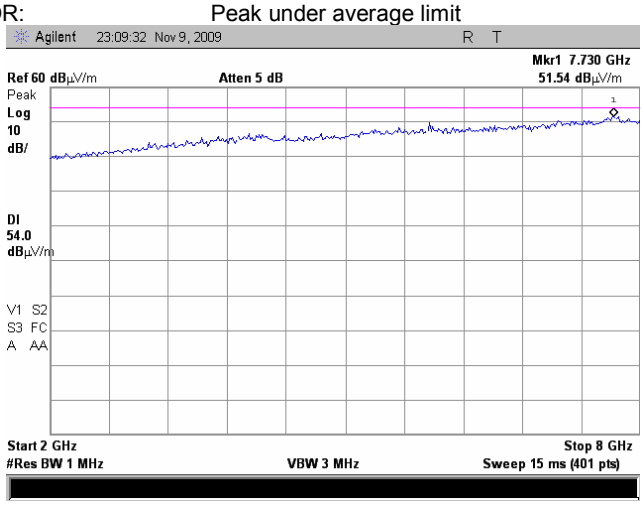
TEST SITE: Anechoic chamber
TEST DISTANCE: 3 m
ANTENNA POLARIZATION: Vertical and Horizontal
DETECTOR: Peak under average limit



Test specification:	RSS-Gen sections 6, 4.10, spurious radiated emission		
Test procedure:	ANSI C63.4, Section 13.1.3		
Test mode:	Compliance	Verdict:	PASS
Date:	11/16/2009		
Temperature: 23ºC	Air Pressure: 1013 hPa	Relative Humidity: 40 %	Power Supply: 120 VAC
Remarks: EUT with 6 dBi antenna assembly gain, dish antenna			

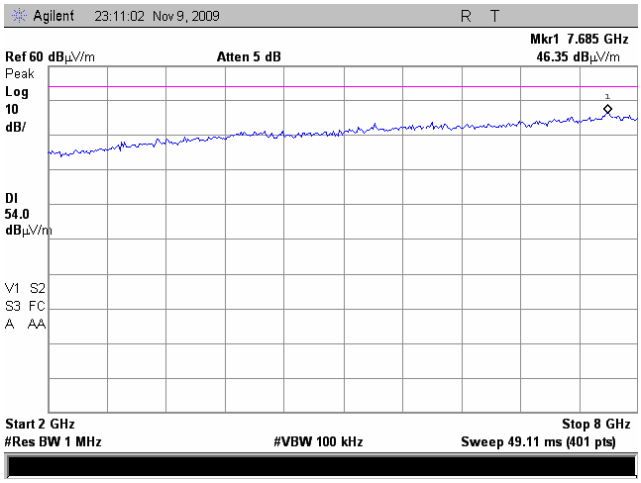
Plot 8.2.11 Radiated emission measurements from 2.0 to 8.0 GHz at the mid Rx Channel frequency

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



Plot 8.2.12 Radiated emission measurements from 2.0 to 8.0 GHz at the mid Rx Channel frequency

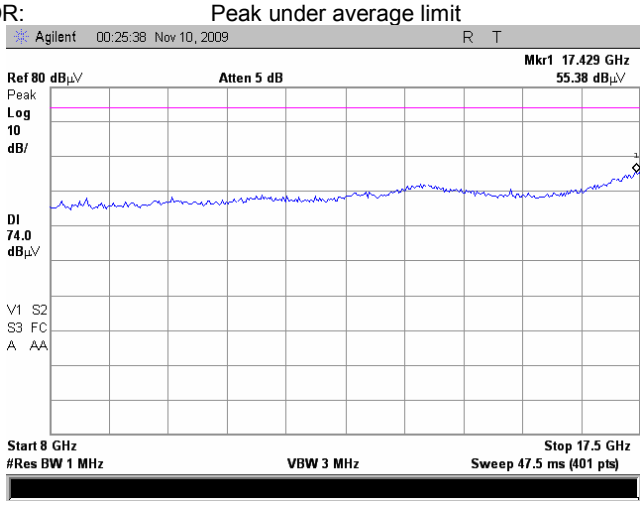
TEST SITE: Anechoic chamber
TEST DISTANCE: 3 m
ANTENNA POLARIZATION: Vertical and Horizontal
DETECTOR: Average



Test specification:	RSS-Gen sections 6, 4.10, spurious radiated emission		
Test procedure:	ANSI C63.4, Section 13.1.3		
Test mode:	Compliance	Verdict:	PASS
Date:	11/16/2009		
Temperature: 23ºC	Air Pressure: 1013 hPa	Relative Humidity: 40 %	Power Supply: 120 VAC
Remarks: EUT with 6 dBi antenna assembly gain, dish antenna			

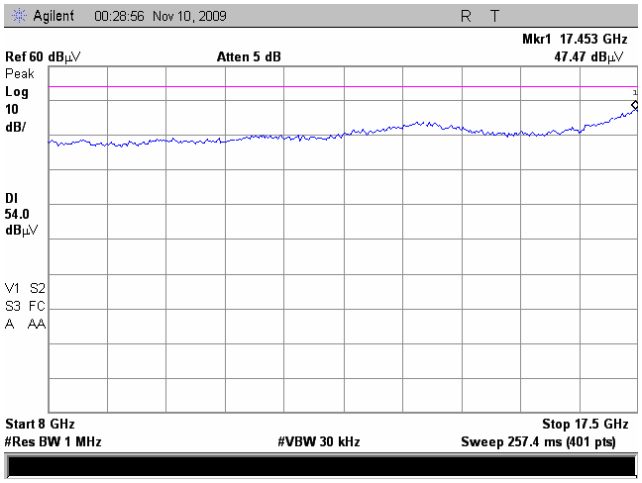
Plot 8.2.13 Radiated emission measurements from 8 to 17.5 GHz at the mid Rx Channel frequency

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



Plot 8.2.14 Radiated emission measurements from 8 to 17.5 GHz at the mid Rx Channel frequency

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



9 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-09	29-Jun-10
0447	LISN, 16/2, 300V RMS, 50 Ohm/50 uH + 5 Ohm, STD CISPR 16-1	Hermon Laboratories	LISN 16 - 1	066	05-Nov-09	05-Nov-10
0493	Temperature Chamber -45…175 deg C	Thermotron	S-1.2 Mini-Max	14016	20-May-09	20-May-10
0521	EMI Receiver (Spectrum Analyzer) with RF filter section 9 kHz-6.5 GHz	Hewlett Packard	8546A	3617A 00319, 3448A002 53	27-Aug-09	27-Aug-10
0604	Antenna BiconiLog Log-Periodic/T Bow-TIE, 26 - 2000 MHz	EMCO	3141	9611-1011	11-Jan-09	11-Jan-10
0768	Antenna Standard Gain Horn,18-26.5 GHz, WR-42, 25 dB gain	Quinstar Technology	QWH-4200-BA	110	23-Dec-08	23-Dec-11
0769	Antenna Standard Gain Horn, 26.5-40 GHz, WR28, 25 dB gain	Quinstar Technology	QWH-2800-BA	112	23-Dec-08	23-Dec-11
0887	Attenuator Coaxial, 30 dB, 100 W, 50 Ohm .	Bird	8323	1639	03-Feb-09	03-Feb-10
1194	Variac, 220 V/ 2.5 A	Matsunaga		2962	01-Jan-09	01-Jan-10
1430	EMI Receiver, 9 kHz - 2.9 GHz, System: HL1431, HL1432	Agilent Technologies	8542E	3807A002 62,3705A0 0217	31-Aug-09	31-Aug-10
1511	Cable RF, 8 m, BNC/BNC	Belden	M17/167 MIL-C-17	1511	01-Jan-09	01-Jan-10
1984	Antenna, Double-Ridged Waveguide Horn, 1-18 GHz, 300 W	EMC Test Systems	3115	9911-5964	24-Aug-09	24-Aug-10
2254	Cable 40 GHz, 0.8 m, blue	Rhophase Microwave Limited	KPS-1503A-800-KPS	W4907	11-Jun-09	11-Jun-10
2387	Filter Bandpass, 8-14 GHz	Hermon Laboratories	FBP8-14	2387	05-Oct-09	05-Oct-11
2780	EMC analyzer, 100 Hz to 26.5 GHz	Agilent Technologies	E7405A	MY451024 6	05-Jul-09	05-Jul-10
2871	Microwave Cable Assembly, 18 GHz, 6.4 m, SMA - SMA	Huber-Suhner	198-8155-00	2871	16-Sep-09	16-Sep-10
2883	Cable, 18 GHz N-type, M-F, 3 m	Bird	TC-MNFN-3.0	211539 003	01-Dec-09	01-Dec-10
2909	Spectrum analyzer, ESA-E, 100 Hz to 26.5 GHz	Agilent Technologies	E4407B	MY414447 62	07-May-09	07-May-10
2952	Cable, RF, 18 GHz, 1.2 m, SMA-SMA	Gore	10020014	NA	05-Oct-09	05-Oct-10
3121	Microwave Cable Assembly, 18 GHz, 6.4 m, SMA - SMA	Huber-Suhner	198-9155-00	3121	01-Jan-09	01-Jan-10
3123	Microwave Cable Assembly, 18 GHz, 6.4 m, SMA - SMA	Huber-Suhner	198-9155-00	3123	01-Jan-09	01-Jan-10
3175	Attenuator, N-type, 10 dB, DC to 18 GHz, 5 W	Mini-Circuits	BW-N10W5+	NA	01-Jan-09	01-Jan-10
3176	Attenuator, N-type, 10 dB, DC to 18 GHz, 5 W	Mini-Circuits	BW-N10W5+	NA	07-May-09	07-May-10
3233	Multimeter	Fluke	115C	93771523	05-Jul-09	05-Jul-10
3286	Temperature Chamber, (-40 to +170) °C	Thermotron	EL-8-CH-1-1-CO2	21-9048	09-Sep-09	09-Sep-10
3437	Precision Fixed Attenuator, 50 Ohm, 5 W, 10 dB, DC to 18 GHz	Mini-Circuits	BW-S10W5+	NA	08-Mar-09	08-Mar-10
3442	Precision Fixed Attenuator, 50 Ohm, 5 W, 20 dB, DC to 18 GHz	Mini-Circuits	BW-S20W5+	NA	08-Mar-09	08-Mar-10

HL No	Description	Manufacturer	Model	Ser. No.	Last Cal.	Due Cal.
3531	Amplifier, low noise, 2 to 8 GHz	Quinstar Technology	QLJ-02084040-J0	11159002002	06-Dec-09	06-Dec-10
3533	Amplifier, low noise, 6 to 18 GHz	Quinstar Technology	QLJ-06184040-J0	11159001001	06-Dec-09	06-Dec-10
3535	Amplifier, low noise, 18 to 40 GHz	Quinstar Technology	QLJ-18404537-J0	11159003001	06-Dec-09	06-Dec-10
3612	Cable RF, 17.5 m, N type-N type	Teldor	RG-214/U	NA	02-Dec-09	02-Dec-10
3616	Cable RF, 6.5 m, N type-N type, DC-6.5 GHz	Suhner Switzerland	Rg 214/U	NA	02-Dec-09	02-Dec-10
3818	PSA Series Spectrum Analyzer, 3 Hz- 44 GHz	Agilent Technologies	E4446A	MY48250288	25-Sep-09	25-Sep-10

10 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.

11 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), Registration Numbers 90624 for OATS and 90623 for the anechoic chamber; by Industry Canada for electromagnetic emissions (file numbers IC 2186A-1 for OATS, IC 2186A-2 for anechoic chamber, IC 2186A-3 for full-anechoic chamber for RE measurements above 1 GHz), certified by VCCI, Japan (the registration numbers are R-808 for OATS, R-1082 for anechoic chamber, G-27 for full-anechoic chamber for RE measurements above 1 GHz, C-845 for conducted emissions site, T-1606 for conducted emissions at telecommunication ports), has a status of a Telefication - Listed Testing Laboratory, Certificate No. L138/00. 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). The FCC Designation Number is US1003.

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Person for contact: Mr. Alex Usoskin, CEO.

12 APPENDIX D Specification references

47CFR part 15: 2009	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: 2009	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 8: 2010	Low Power Licence- Exempt Radiocommunication Devices
RSS-Gen Issue 3: 2010	General Requirements and Information for the certification of Radiocommunication Equipment

13 APPENDIX E Test equipment correction factors

Correction factor
Line impedance stabilization network
Model LISN 16 - 1
Hermon Laboratories, HL 0447

Frequency, kHz	Correction factor, dB
10	4.9
15	2.86
20	1.83
25	1.25
30	0.91
35	0.69
40	0.53
50	0.35
60	0.25
70	0.18
80	0.14
90	0.11
100	0.09
125	0.06
150	0.04

The correction factor in dB is to be added to meter readings of an interference analyzer or a spectrum analyzer.

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
Standard gain horn antenna
Quinstar Technology
Model QWH
Ser.No.110/112, HL 0768, 0769

Frequency min, GHz	Frequency max, GHz	Antenna factor, dB(1/m)
18.000	26.500	32.01
26.500	40.000	35.48
40.000	60.000	39.03
60.000	90.000	42.55
90.000	140.000	46.23
140.000	220.000	50.11

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

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 40 GHz, 0.8 m, blue, model: KPS-1503A-800-KPS, S/N W4907, HL 2254

Frequency, GHz	Cable loss, dB	Frequency, GHz	Cable loss, dB	Frequency, GHz	Cable loss, dB
0.03	0.04	5.10	0.80	15.00	1.49
0.05	0.07	5.30	0.83	15.50	1.49
0.10	0.09	5.50	0.83	16.00	1.46
0.20	0.15	5.70	0.84	16.50	1.47
0.30	0.19	5.90	0.87	17.00	1.50
0.40	0.25	6.10	0.86	17.50	1.57
0.50	0.29	6.30	0.89	18.00	1.63
0.60	0.33	6.50	0.90	18.50	1.57
0.70	0.37	6.70	0.89	19.00	1.63
0.80	0.41	6.90	0.93	19.50	1.65
0.90	0.44	7.10	0.92	20.00	1.64
1.00	0.45	7.30	0.95	20.50	1.75
1.10	0.48	7.50	0.96	21.00	1.72
1.20	0.51	7.70	0.97	21.50	1.78
1.30	0.53	7.90	1.01	22.00	1.76
1.40	0.54	8.10	1.00	22.50	1.72
1.50	0.57	8.30	1.05	23.00	1.83
1.60	0.59	8.50	1.04	23.50	1.80
1.70	0.04	8.70	1.07	24.00	1.90
1.80	0.07	8.90	1.11	24.50	1.81
1.90	0.09	9.10	1.09	25.00	1.98
2.00	0.15	9.30	1.14	25.50	1.91
2.10	0.19	9.50	1.12	26.00	2.02
2.20	0.25	9.70	1.15	26.50	1.92
2.30	0.29	9.90	1.16	27.00	1.97
2.40	0.33	10.10	1.16	28.00	2.02
2.50	0.37	10.30	1.19	29.00	1.95
2.60	0.41	10.50	1.14	30.00	1.94
2.70	0.44	10.70	1.19	31.00	2.11
2.80	0.45	10.90	1.17	32.00	2.17
2.90	0.48	11.10	1.13	33.00	2.27
3.10	0.61	11.30	1.20	34.00	2.27
3.30	0.64	11.50	1.13	35.00	2.29
3.50	0.65	11.70	1.20	36.00	2.35
3.70	0.68	11.90	1.18	37.00	2.37
3.90	0.69	12.10	1.14	38.00	2.40
4.10	0.71	12.40	1.19	39.00	2.57
4.30	0.73	13.00	1.34	40.00	2.36
4.50	0.75	13.50	1.33		
4.70	0.77	14.00	1.48		
4.90	0.79	14.50	1.45		

Cable loss
Cable coaxial, Huber-Suhner, 18 GHz, 6.4 m, SMA - SMA, model 198-8155-00, HL 2871

Frequency, MHz	Cable loss, dB	Frequency, MHz	Cable loss, dB	Frequency, MHz	Cable loss, dB
10	0.12	5750	2.34	12000	3.55
30	0.14	6000	2.39	12250	3.61
100	0.27	6250	2.46	12500	3.67
250	0.45	6500	2.52	12750	3.74
500	0.63	6750	2.58	13000	3.79
750	0.76	7000	2.64	13250	3.82
1000	0.89	7250	2.68	13500	3.83
1250	1.01	7500	2.73	13750	3.83
1500	1.12	7750	2.78	14000	3.88
1750	1.23	8000	2.83	14250	3.93
2000	1.32	8250	2.88	14500	3.96
2250	1.41	8500	2.94	14750	4.01
2500	1.49	8750	2.97	15000	4.00
2750	1.58	9000	3.02	15250	4.01
3000	1.66	9250	3.07	15500	4.00
3250	1.73	9500	3.13	15750	4.13
3500	1.80	9750	3.18	16000	4.22
3750	1.87	10000	3.21	16250	4.29
4000	1.93	10250	3.26	16500	4.29
4250	2.01	10500	3.30	16750	4.32
4500	2.06	10750	3.36	17000	4.37
4750	2.12	11000	3.39	17250	4.45
5000	2.17	11250	3.44	17500	4.49
5250	2.24	11500	3.48	17750	4.53
5500	2.29	11750	3.52	18000	4.55

Cable loss
Cable coaxial, Bird, 18 GHz, N-type, M-F, model TC-MNFN-3.0, S/N 211539 003
HL 2883

Frequency, MHz	Cable loss, dB	Frequency, MHz	Cable loss, dB	Frequency, MHz	Cable loss, dB
10	0.06	5750	1.70	12000	2.46
30	0.12	6000	1.75	12250	2.48
100	0.21	6250	1.80	12500	2.52
250	0.34	6500	1.81	12750	2.50
500	0.47	6750	1.86	13000	2.54
750	0.59	7000	1.86	13250	2.48
1000	0.67	7250	1.92	13500	2.63
1250	0.76	7500	1.96	13750	2.65
1500	0.84	7750	1.98	14000	2.72
1750	0.92	8000	2.02	14250	2.67
2000	0.98	8250	2.03	14500	2.70
2250	1.05	8500	2.05	14750	2.72
2500	1.12	8750	2.11	15000	2.79
2750	1.17	9000	2.17	15250	2.80
3000	1.22	9250	2.17	15500	2.83
3250	1.27	9500	2.20	15750	2.75
3500	1.33	9750	2.19	16000	2.82
3750	1.38	10000	2.22	16250	2.85
4000	1.42	10250	2.25	16500	2.90
4250	1.46	10500	2.30	16750	2.89
4500	1.51	10750	2.28	17000	2.88
4750	1.54	11000	2.32	17250	2.85
5000	1.59	11250	2.34	17500	2.96
5250	1.62	11500	2.39	17750	3.04
5500	1.65	11750	2.42	18000	3.04

Cable loss
Cable coaxial, Gore, 18 GHz, 1.2 m, SMA-SMA, S/N 10020014
HL 2952

Frequency, MHz	Cable loss, dB	Frequency, MHz	Cable loss, dB	Frequency, MHz	Cable loss, dB
10	0.03	5750	0.97	12000	1.50
30	0.05	6000	1.01	12250	1.45
100	0.11	6250	1.03	12500	1.48
250	0.19	6500	1.06	12750	1.57
500	0.26	6750	1.08	13000	1.51
750	0.32	7000	1.10	13250	1.64
1000	0.38	7250	1.13	13500	1.60
1250	0.43	7500	1.13	13750	1.63
1500	0.47	7750	1.21	14000	1.59
1750	0.53	8000	1.20	14250	1.66
2000	0.55	8250	1.24	14500	1.60
2250	0.59	8500	1.29	14750	1.65
2500	0.63	8750	1.23	15000	1.72
2750	0.66	9000	1.27	15250	1.68
3000	0.69	9250	1.27	15500	1.73
3250	0.72	9500	1.29	15750	1.70
3500	0.75	9750	1.30	16000	1.82
3750	0.78	10000	1.38	16250	1.79
4000	0.82	10250	1.44	16500	1.81
4250	0.84	10500	1.47	16750	1.91
4500	0.86	10750	1.45	17000	1.92
4750	0.90	11000	1.50	17250	1.98
5000	0.91	11250	1.46	17500	2.05
5250	0.94	11500	1.47	17750	2.04
5500	0.96	11750	1.44	18000	2.05

Cable loss
Microwave Cable Assembly, 18 GHz, 6.4 m, SMA – SMA, Huber-Suhner, model 198-9155-00
HL 3121

Frequency, MHz	Cable loss, dB	Frequency, MHz	Cable loss, dB	Frequency, MHz	Cable loss, dB	Frequency, MHz	Cable loss, dB	Frequency, MHz	Cable loss, dB
10	0.08	3600	2.10	7400	3.08	11200	3.85	15100	4.58
30	0.18	3700	2.14	7500	3.11	11300	3.85	15200	4.60
50	0.26	3800	2.18	7600	3.14	11400	3.86	15300	4.63
100	0.34	3900	2.19	7700	3.16	11500	3.86	15400	4.65
200	0.47	4000	2.25	7800	3.18	11600	3.87	15500	4.71
300	0.59	4100	2.25	7900	3.20	11700	3.85	15600	4.70
400	0.66	4200	2.28	8000	3.22	11800	3.96	15700	4.69
500	0.75	4300	2.35	8100	3.26	11900	3.92	15800	4.71
600	0.83	4400	2.35	8200	3.27	12000	3.92	15900	4.74
700	0.90	4500	2.38	8300	3.29	12100	3.94	16000	4.69
800	0.96	4600	2.43	8400	3.30	12200	3.94	16100	4.72
900	1.02	4700	2.43	8500	3.31	12300	3.99	16200	4.71
1000	1.07	4800	2.45	8600	3.33	12400	4.02	16300	4.74
1100	1.12	4900	2.48	8700	3.35	12500	4.10	16400	4.74
1200	1.15	5000	2.55	8800	3.36	12600	4.09	16500	4.75
1300	1.22	5100	2.54	8900	3.38	12700	4.15	16600	4.78
1400	1.28	5200	2.56	9000	3.40	12800	4.15	16700	4.86
1500	1.29	5300	2.58	9100	3.41	12900	4.08	16800	4.84
1600	1.36	5400	2.61	9200	3.45	13000	4.21	16900	4.83
1700	1.40	5500	2.64	9300	3.48	13100	4.19	17000	4.86
1800	1.45	5600	2.69	9400	3.52	13200	4.29	17100	4.83
1900	1.51	5700	2.67	9500	3.54	13300	4.24	17200	4.90
2000	1.50	5800	2.71	9600	3.59	13400	4.26	17300	4.91
2100	1.56	5900	2.73	9700	3.59	13500	4.26	17400	4.94
2200	1.59	6000	2.75	9800	3.62	13600	4.29	17500	4.93
2300	1.63	6100	2.81	9900	3.70	13700	4.35	17600	4.93
2400	1.73	6200	2.80	10000	3.70	13800	4.31	17700	5.00
2500	1.73	6300	2.82	10100	3.72	13900	4.29	17800	5.01
2600	1.78	6400	2.85	10200	3.73	14000	4.32	17900	5.00
2700	1.84	6500	2.87	10300	3.75	14100	4.33	18000	5.00
2800	1.84	6600	2.90	10400	3.76	14200	4.34		
2900	1.91	6700	2.91	10500	3.77	14300	4.36		
3000	1.91	6800	2.94	10600	3.79	14400	4.38		
3100	1.97	6900	2.96	10700	3.80	14600	4.42		
3200	1.98	7000	2.98	10800	3.81	14700	4.42		
3300	2.04	7100	3.01	10900	3.81	14800	4.55		
3400	2.04	7200	3.02	11000	3.83	14900	4.55		
3500	2.10	7300	3.04	11100	3.84	15000	4.55		

Cable loss
Microwave Cable Assembly, 18 GHz, 6.4 m, SMA – SMA, Huber-Suhner, model 198-9155-00
HL 3123

Frequency, MHz	Cable loss, dB	Frequency, MHz	Cable loss, dB	Frequency, MHz	Cable loss, dB	Frequency, MHz	Cable loss, dB	Frequency, MHz	Cable loss, dB
10	0.11	3600	1.97	7400	3.12	11200	3.90	15100	4.74
30	0.17	3700	1.97	7500	3.13	11300	3.93	15200	4.70
50	0.25	3800	2.03	7600	3.16	11400	3.88	15300	4.73
100	0.32	3900	2.04	7700	3.18	11500	3.87	15400	4.78
200	0.46	4000	2.10	7800	3.20	11600	3.90	15500	4.75
300	0.58	4100	1.97	7900	3.23	11700	3.86	15600	4.76
400	0.65	4200	1.97	8000	3.25	11800	3.88	15700	4.75
500	0.74	4300	2.03	8100	3.26	11900	3.86	15800	4.78
600	0.82	4400	2.04	8200	3.28	12000	3.89	15900	4.79
700	0.89	4500	2.10	8300	3.31	12100	3.94	16000	4.73
800	0.95	4600	1.97	8400	3.31	12200	3.92	16100	4.78
900	1.01	4700	1.97	8500	3.32	12300	3.96	16200	4.84
1000	1.07	4800	2.03	8600	3.34	12400	4.01	16300	4.90
1100	1.11	4900	2.04	8700	3.35	12500	4.07	16400	4.87
1200	1.17	5000	2.10	8800	3.37	12600	4.08	16500	4.90
1300	1.22	5100	2.53	8900	3.39	12700	4.17	16600	4.98
1400	1.27	5200	2.55	9000	3.42	12800	4.26	16700	5.05
1500	1.29	5300	2.60	9100	3.43	12900	4.16	16800	5.04
1600	1.35	5400	2.61	9200	3.51	13000	4.21	16900	5.02
1700	1.40	5500	2.64	9300	3.52	13100	4.24	17000	5.09
1800	1.44	5600	2.70	9400	3.54	13200	4.27	17100	5.07
1900	1.51	5700	2.67	9500	3.63	13300	4.31	17200	5.10
2000	1.49	5800	2.71	9600	3.61	13400	4.33	17300	5.13
2100	1.55	5900	2.74	9700	3.71	13500	4.25	17400	5.23
2200	1.58	6000	2.80	9800	3.66	13600	4.27	17500	5.21
2300	1.62	6100	2.79	9900	3.77	13700	4.33	17600	5.22
2400	1.72	6200	2.81	10000	3.75	13800	4.33	17700	5.36
2500	1.76	6300	2.83	10100	3.77	13900	4.31	17800	5.35
2600	1.78	6400	2.86	10200	3.80	14000	4.30	17900	5.45
2700	1.80	6500	2.88	10300	3.79	14100	4.30	18000	5.43
2800	1.86	6600	2.90	10400	3.87	14200	4.31		
2900	1.90	6700	2.92	10500	3.83	14300	4.37		
3000	1.90	6800	2.98	10600	3.88	14400	4.35		
3100	1.97	6900	2.98	10700	3.86	14600	4.53		
3200	1.97	7000	3.00	10800	3.87	14700	4.50		
3300	2.03	7100	3.02	10900	3.90	14800	4.62		
3400	2.04	7200	3.04	11000	3.84	14900	4.65		
3500	2.10	7300	3.06	11100	3.88	15000	4.79		

Cable loss
Cable coaxial, RG-214/U, N type-N type, 17 m
Teldor, HL 3612

Frequency, GHz	Cable loss, dB
0.1	0.05
0.5	0.07
1	0.10
3	0.22
5	0.29
10	0.39
30	0.68
50	0.90
100	1.27
150	1.58
200	1.80
250	2.12
300	2.36
350	2.60
400	2.82
450	2.99
500	3.23
550	3.40
600	3.56
650	3.71
700	3.90
750	4.04
800	4.23
850	4.39
900	4.55
950	4.65
1000	4.79

Cable loss
Cable coaxial, RG-214/U, N type-N type, 6.5 m
Suhner Switzerland, HL 3616

Frequency, MHz	Cable loss, dB	Frequency, MHz	Cable loss, dB	Frequency, MHz	Cable loss, dB	Frequency, MHz	Cable loss, dB
10	0.13	1750	2.66	3550	4.44	5350	6.08
30	0.25	1800	2.72	3600	4.46	5400	6.12
50	0.32	1850	2.78	3650	4.59	5450	6.17
100	0.48	1900	2.81	3700	4.60	5500	6.25
150	0.60	1950	2.86	3750	4.72	5550	6.31
200	0.71	2000	2.94	3800	4.72	5600	6.35
250	0.81	2050	2.97	3850	4.86	5650	6.41
300	0.91	2100	3.01	3900	4.85	5700	6.50
350	1.00	2150	3.06	3950	4.99	5750	6.52
400	1.07	2200	3.11	4000	4.90	5800	6.57
450	1.14	2250	3.16	4050	5.04	5850	6.61
500	1.23	2300	3.21	4100	5.01	5900	6.71
550	1.30	2350	3.26	4150	5.10	5950	6.70
600	1.37	2400	3.31	4200	5.08	6000	6.75
650	1.44	2450	3.35	4250	5.18	6050	6.74
700	1.50	2500	3.39	4300	5.14	6100	6.84
750	1.58	2550	3.46	4350	5.22	6150	6.87
800	1.64	2600	3.48	4400	5.21	6200	6.93
850	1.69	2650	3.55	4450	5.29	6250	6.96
900	1.77	2700	3.59	4500	5.31	6300	7.02
950	1.79	2750	3.66	4550	5.39	6350	7.04
1000	1.87	2800	3.68	4600	5.41	6400	7.10
1050	1.92	2850	3.75	4650	5.49	6450	7.11
1100	1.98	2900	3.79	4700	5.52	6500	7.19
1150	2.05	2950	3.86	4750	5.60		
1200	2.09	3000	3.89	4800	5.64		
1250	2.15	3050	3.94	4850	5.73		
1300	2.21	3100	3.98	4900	5.70		
1350	2.27	3150	4.03	4950	5.73		
1400	2.33	3200	4.06	5000	5.75		
1450	2.38	3250	4.12	5050	5.83		
1500	2.44	3300	4.14	5100	5.82		
1550	2.48	3350	4.22	5150	5.91		
1600	2.52	3400	4.24	5200	5.92		
1650	2.56	3450	4.31	5250	5.98		
1700	2.62	3500	4.35	5300	6.01		

14 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

END OF TEST REPORT

15 APPENDIX G RADWIN 1000/2000 Antenna List and Power Settings

RADWIN

5470 – 5725 MHz Band

Part Number	Type	Antenna Frequency [GHz]	Antenna Assembly Gain at 5470-5725 MHz [dBi]	Channel Frequency [MHz]	Channel Bandwidth [MHz]	Output Power [dBm]
RW-9721-5158	Dish - Dual Pole	4.9 - 6.06	28*	5480, 5590, 5660, 5715	5	-3.3
				5485, 5585, 5665, 5710	10	0
				5490, 5580, 5670, 5705	20	1.3
				5505, 5565, 5685, 5690	40	1.7
				5500, 5570, 5680, 5695	40	-0.7
RW-9721-5158	Dish - Dual Pole	4.9 - 6.06	6*	5480, 5590, 5660, 5715	5	18.2
				5485, 5585, 5665, 5710	10	21.9
				5490, 5580, 5670, 5705	20	23.5
				5505, 5565, 5685, 5690	40	23.7
				5500, 5570, 5680, 5695	40	20.7
RW-9611-4958INT	FP Dual Pole Integrated	4.9 - 6.0	23.5	5480, 5590, 5660, 5715	5	0.7
				5485, 5585, 5665, 5710	10	3.4
				5490, 5580, 5670, 5705	20	6.3
				5505, 5565, 5685, 5690	40	5.7
				5500, 5570, 5680, 5695	40	2.8
RW-9611-4958	FP Dual Pole External	5.15 - 6.09	22.5*	5480, 5590, 5660, 5715	5	1.7
				5485, 5585, 5665, 5710	10	4.4
				5490, 5580, 5670, 5705	20	7.3
				5505, 5565, 5685, 5690	40	6.7
				5500, 5570, 5680, 5695	40	3.8
RW-9611-4958	FP Dual Pole External	5.15 - 6.09	6*	5480, 5590, 5660, 5715	5	18.2
				5485, 5585, 5665, 5710	10	21.9
				5490, 5580, 5670, 5705	20	23.5
				5505, 5565, 5685, 5690	40	23.7
				5500, 5570, 5680, 5695	40	20.7

* Antenna assembly gain = Antenna Gain - Feeder Loss

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16 APPENDIX H RADWIN 5000 Antenna List and Power Settings

RADWIN

5470 – 5725 MHz Band

Part Number	Type	Antenna Frequency [GHz]	Antenna Assembly Gain at 5470-5725 MHz [dBi]	Channel Frequency [MHz]	Channel Bandwidth [MHz]	Output Power [dBm]
RW-9061-5001	FP Dual Pole External	4.9 - 5.95	13*	5480, 5590, 5660, 5715	5	1.6
				5485, 5585, 5665, 5710	10	4.4
				5490, 5580, 5670, 5705	20	7.2
				5505, 5565, 5685, 5690	40	6.7
				5500, 5570, 5680, 5695	40	3.8
RW-9061-5001	FP Dual Pole External	4.9 - 5.95	6*	5480, 5590, 5660, 5715	5	18.2
				5485, 5585, 5665, 5710	10	21.9
				5490, 5580, 5670, 5705	20	23.5
				5505, 5565, 5685, 5690	40	23.7
				5500, 5570, 5680, 5695	40	20.7
RW-9061-5002	FP Dual Pole External	4.9 - 6.06	15.5*	5480, 5590, 5660, 5715	5	1.6
				5485, 5585, 5665, 5710	10	4.4
				5490, 5580, 5670, 5705	20	7.2
				5505, 5565, 5685, 5690	40	6.7
				5500, 5570, 5680, 5695	40	3.8
RW-9061-5002	FP Dual Pole External	4.9 - 6.06	6*	5480, 5590, 5660, 5715	5	18.2
				5485, 5585, 5665, 5710	10	21.9
				5490, 5580, 5670, 5705	20	23.5
				5505, 5565, 5685, 5690	40	23.7
				5500, 5570, 5680, 5695	40	20.7

* Antenna assembly gain = Antenna Gain - Feeder Loss

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