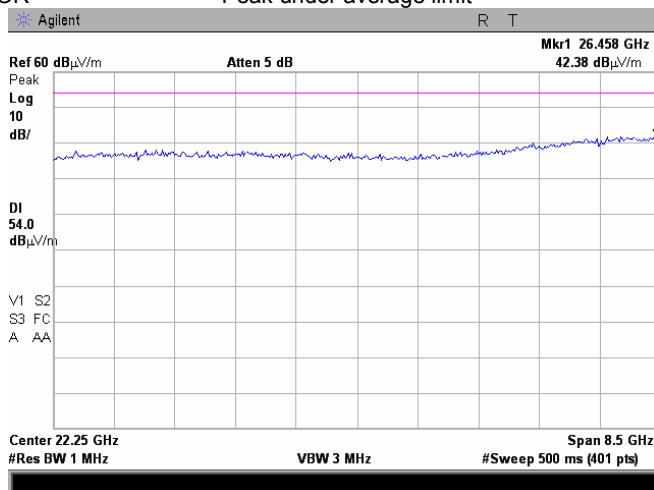


Test specification:	FCC section 15.407(b), RSS-210 Annex 9, section A9.2 Unwanted radiated emissions		
Test procedure:	Public notice DA 00-705 / ANSI C63.4, Section 13.1.4		
Test mode:	Compliance	Verdict: PASS	
Date:	12/08/2009		
Temperature: 18°C	Air Pressure: 1015 hPa	Relative Humidity: 75 %	Power Supply: 120 VAC
Remarks: EUT with 6 dBi antenna assembly gain, flat antenna			

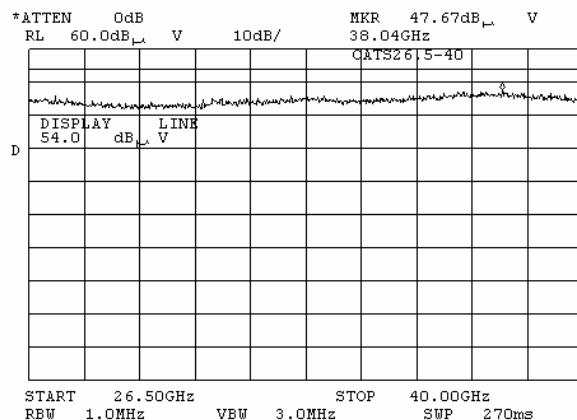
Plot 7.3.33 Radiated emission measurements from 18 to 26.5 GHz at the high carrier frequency

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



Plot 7.3.34 Radiated emission measurements from 26.5 to 40 GHz at the low carrier frequency

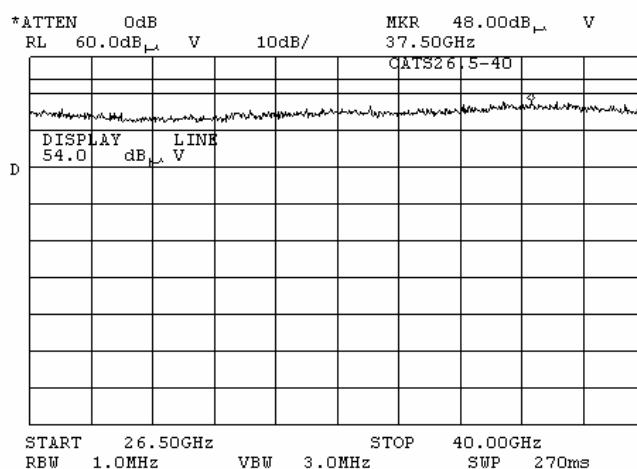
TEST SITE: OATS
TEST DISTANCE: 3 m
ANTENNA POLARIZATION: Vertical and Horizontal
DETECTOR Peak under average limit



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:	12/08/2009		
Temperature: 18°C	Air Pressure: 1015 hPa	Relative Humidity: 75 %	Power Supply: 120 VAC
Remarks: EUT with 6 dBi antenna assembly gain, flat antenna			

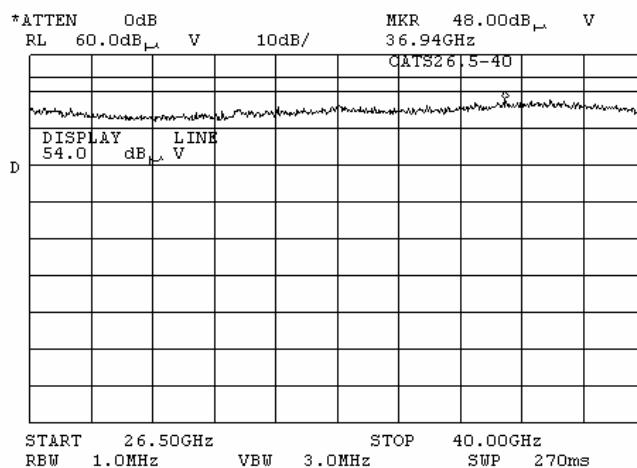
Plot 7.3.35 Radiated emission measurements from 26.5 to 40 GHz at the mid carrier frequency

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



Plot 7.3.36 Radiated emission measurements from 26.5 to 40 GHz at the high carrier frequency

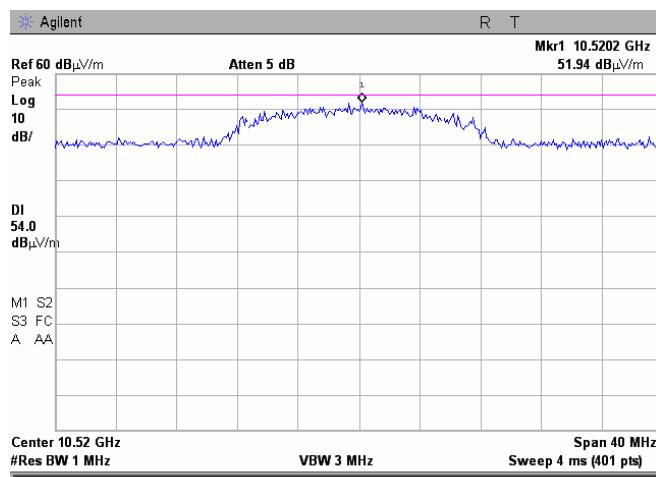
TEST SITE: OATS
 TEST DISTANCE: 3 m
 ANTENNA POLARIZATION: Vertical and Horizontal
 DETECTOR Peak under average limit



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:	12/08/2009		
Temperature: 18°C	Air Pressure: 1015 hPa	Relative Humidity: 75 %	Power Supply: 120 VAC
Remarks: EUT with 6 dBi antenna assembly gain, flat antenna			

Plot 7.3.37 Radiated emission measurements at the second harmonic of low carrier frequency

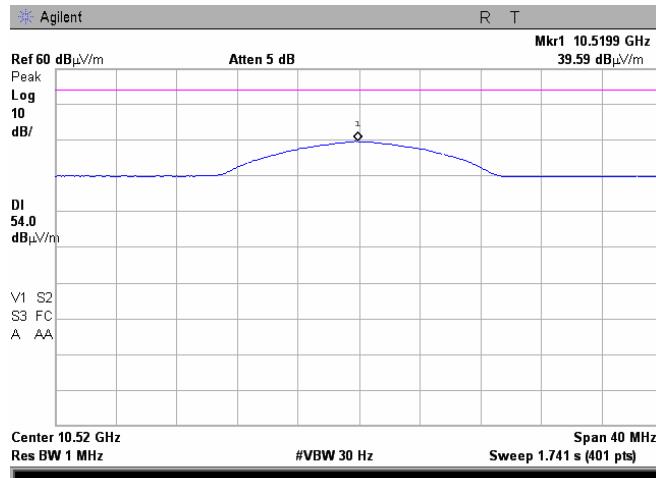
TEST SITE: OATS
TEST DISTANCE: 3 m
DETECTOR Peak under average limit



Note: Maximum peak emission was found outside restricted band

Plot 7.3.38 Radiated emission measurements at the second harmonic of low carrier frequency

TEST SITE: OATS
TEST DISTANCE: 3 m
DETECTOR Average

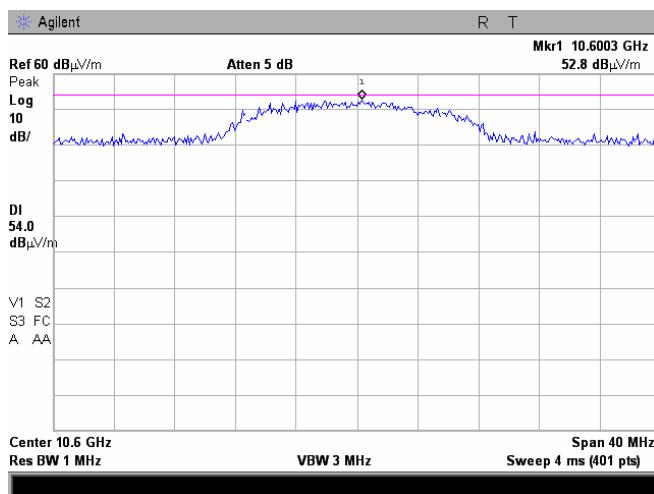


Note: Maximum peak emission was found outside restricted band

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:	12/08/2009		
Temperature: 18°C	Air Pressure: 1015 hPa	Relative Humidity: 75 %	Power Supply: 120 VAC
Remarks: EUT with 6 dBi antenna assembly gain, flat antenna			

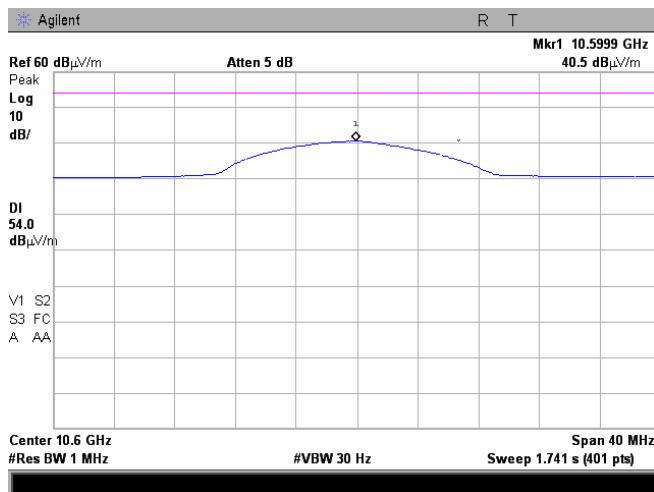
Plot 7.3.39 Radiated emission measurements at the second harmonic of the mid carrier frequency

TEST SITE: OATS
TEST DISTANCE: 3 m
DETECTOR Peak under average limit



Plot 7.3.40 Radiated emission measurements at the second harmonic of the mid carrier frequency

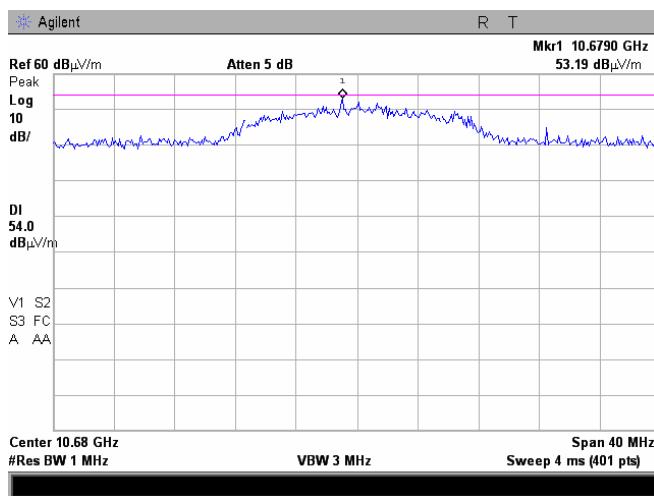
TEST SITE: OATS
TEST DISTANCE: 3 m
DETECTOR Average



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:	12/08/2009		
Temperature: 18°C	Air Pressure: 1015 hPa	Relative Humidity: 75 %	Power Supply: 120 VAC
Remarks: EUT with 6 dBi antenna assembly gain, flat antenna			

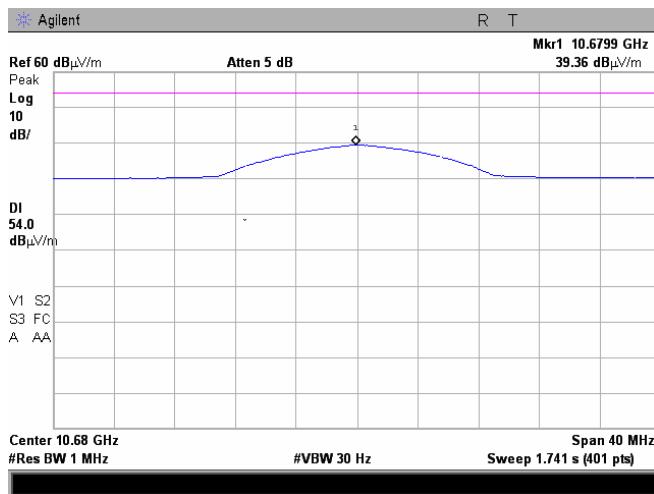
Plot 7.3.41 Radiated emission measurements at the second harmonic of high carrier frequency

TEST SITE: OATS
TEST DISTANCE: 3 m
DETECTOR Peak under average limit



Plot 7.3.42 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 Unwanted radiated emissions		
Test procedure:	Public notice DA 00-705 / ANSI C63.4, Section 13.1.4		
Test mode:	Compliance	Verdict: PASS	
Date:	12/08/2009		
Temperature: 18°C	Air Pressure: 1015 hPa	Relative Humidity: 75 %	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:	5250 - 5350 MHz
INVESTIGATED FREQUENCY RANGE:	0.009 - 1000 MHz
TEST SITE	Semi Anechoic Chamber
TEST DISTANCE:	3 m
MODULATION:	OFDM, 64QAM
BIT RATE:	65 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)

Frequency, MHz	Peak, dB(µV/m)	Quasi-peak dB(µV/m)			Antenna polariz.	Antenna height, m	Turntable position**, degrees	Verdict	
		Measured emission, dB(µV/m)	Limit, dB(µV/m)	Margin, dB*					
Low channel (5260 MHz)									
37.538250	34.24	30.82	40.0	-9.18	Vert	1.2	0	Pass	
111.597500	36.10	32.54	43.5	-10.96	Vert	1.0	318		
400.006000	37.68	34.28	46.0	-11.72	Vert	1.1	184		
Mid channel (5300 MHz)									
37.538250	34.23	30.96	40.0	-9.04	Vert	1.0	0		
111.597500	36.44	33.22	43.5	-10.28	Vert	1.0	318		
400.006000	37.13	34.27	46.0	-11.73	Vert	1.1	184		
High channel (5340 MHz)									
37.538250	34.20	31.27	40.0	-8.73	Vert	1.0	0		
111.597500	36.32	33.21	43.5	-10.29	Vert	1.0	318		
400.006000	37.22	34.25	46.0	-11.75	Vert	1.1	184		

*- 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			
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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:	12/08/2009		
Temperature: 18°C	Air Pressure: 1015 hPa	Relative Humidity: 75 %	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: 5250 - 5350 MHz
 INVESTIGATED FREQUENCY RANGE: 1000 - 40000 MHz
 TEST SITE: Semi Anechoic Chamber
 TEST DISTANCE: 3 m
 MODULATION: OFDM, 64QAM
 BIT RATE: 65 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)

Frequency, MHz	Peak, dB(µV/m)			Average dB(µV/m)			Ant. polariz.	Ant. height, m	Turntable position**, degrees	Verdict						
Low channel (5485 MHz)										Pass						
All emissions were found more than 20 dB below the specified limit										Pass						
First mid channel (5585 MHz)										Pass						
All emissions were found more than 20 dB below the specified limit										Pass						
High channel (5710 MHz)																
10679.60	51.64	74.0	-22.36	39.57	54.0	-14.43	Vert	1.0	180							

*- 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 1424	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.

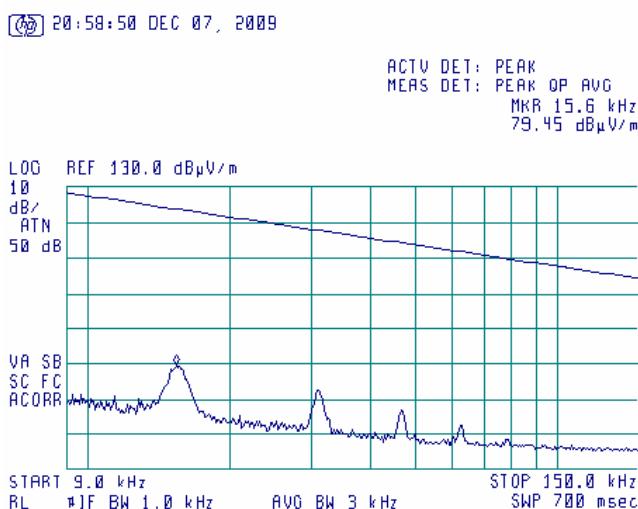
Table 7.3.8 Restricted bands

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:	12/08/2009		
Temperature: 18°C	Air Pressure: 1015 hPa	Relative Humidity: 75 %	Power Supply: 120 VAC
Remarks: EUT with 6 dBi antenna assembly gain, dish antenna			

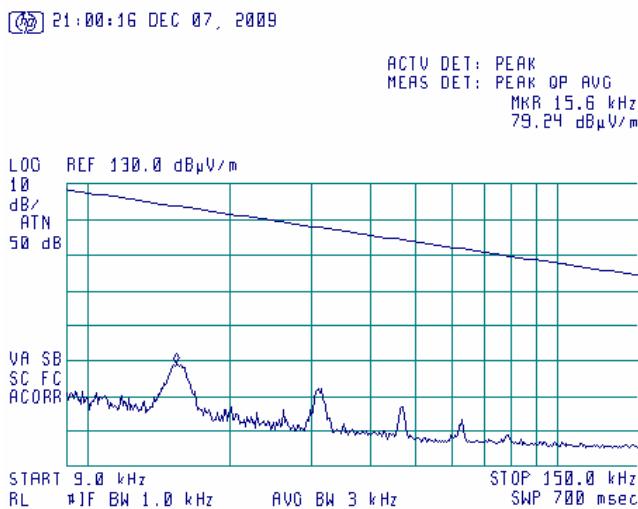
Plot 7.3.43 Radiated emission measurements from 9 to 150 kHz at the low carrier frequency

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



Plot 7.3.44 Radiated emission measurements from 9 to 150 kHz at the mid carrier frequency

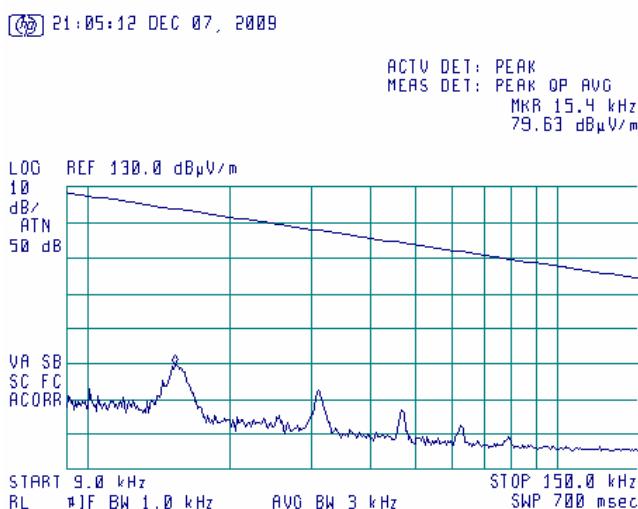
TEST SITE: Anechoic chamber
 TEST DISTANCE: 3 m
 ANTENNA POLARIZATION: Vertical and Horizontal



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:	12/08/2009		
Temperature: 18°C	Air Pressure: 1015 hPa	Relative Humidity: 75 %	Power Supply: 120 VAC
Remarks:	EUT with 6 dBi antenna assembly gain, dish antenna		

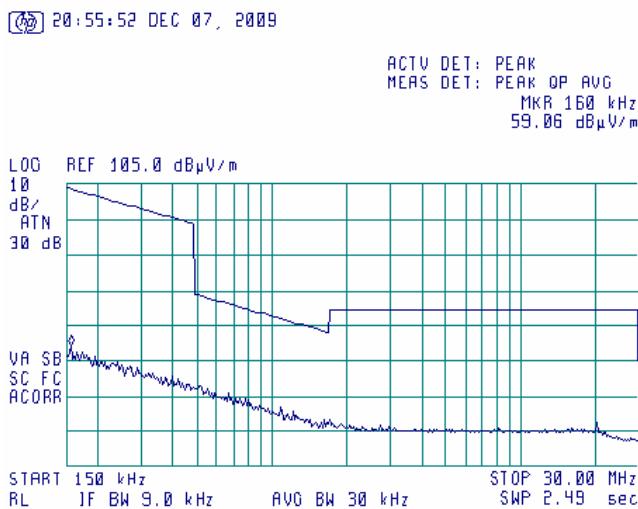
Plot 7.3.45 Radiated emission measurements from 9 to 150 kHz at the high carrier frequency

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



Plot 7.3.46 Radiated emission measurements from 0.15 MHz to 30 MHz at the low carrier frequency

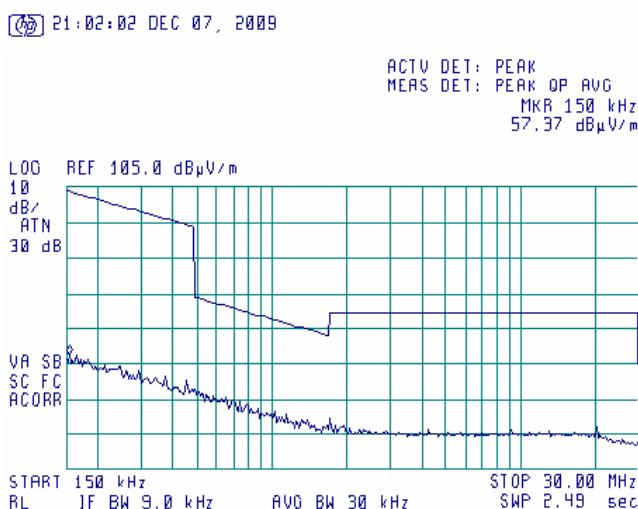
TEST SITE: Anechoic chamber
 TEST DISTANCE: 3 m
 ANTENNA POLARIZATION: Vertical and Horizontal



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:	12/08/2009		
Temperature: 18°C	Air Pressure: 1015 hPa	Relative Humidity: 75 %	Power Supply: 120 VAC
Remarks: EUT with 6 dBi antenna assembly gain, dish antenna			

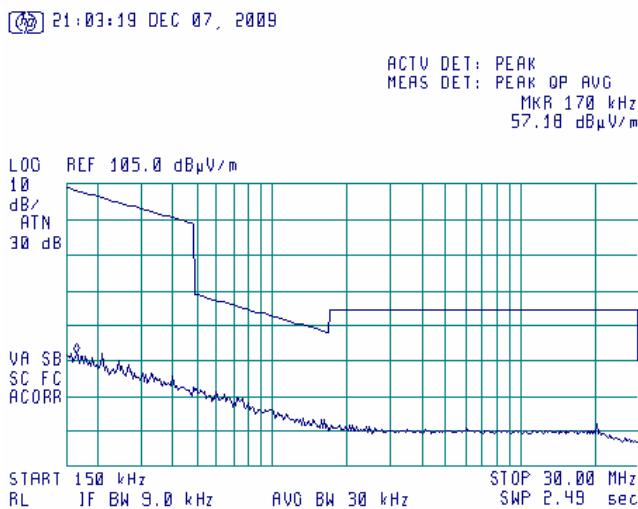
Plot 7.3.47 Radiated emission measurements from 0.15 MHz to 30 MHz at the mid carrier frequency

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



Plot 7.3.48 Radiated emission measurements from 0.15 MHz to 30 MHz at the high carrier frequency

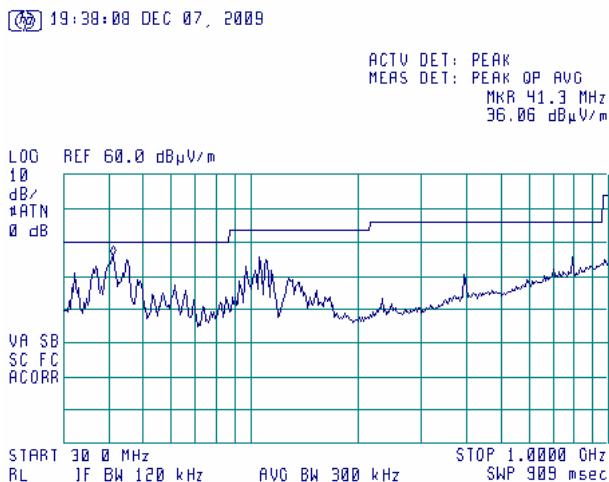
TEST SITE: Anechoic chamber
TEST DISTANCE: 3 m
ANTENNA POLARIZATION: Vertical and Horizontal



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:	12/08/2009		
Temperature: 18°C	Air Pressure: 1015 hPa	Relative Humidity: 75 %	Power Supply: 120 VAC
Remarks: EUT with 6 dBi antenna assembly gain, dish antenna			

Plot 7.3.49 Radiated emission measurements from 30 MHz to 1000 MHz at the low carrier frequency

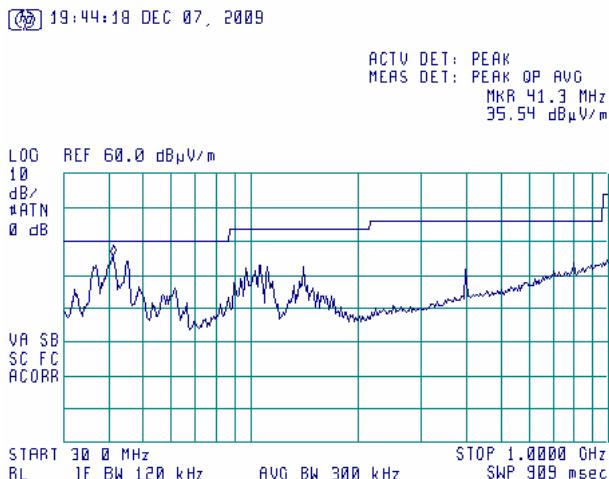
TEST SITE: Semi Anechoic chamber
TEST DISTANCE: 3 m
ANTENNA POLARIZATION: Vertical and Horizontal



Note: Maximum peak emission was found outside restricted band

Plot 7.3.50 Radiated emission measurements from 30 MHz to 1000 MHz at the mid carrier frequency

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



Note: Maximum peak emission was found outside restricted band

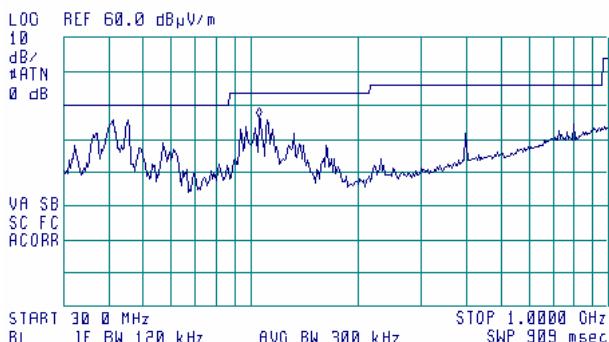
Test specification:	FCC section 15.407(b), RSS-210 Annex 9, section A9.2 Unwanted radiated emissions		
Test procedure:	Public notice DA 00-705 / ANSI C63.4, Section 13.1.4		
Test mode:	Compliance	Verdict: PASS	
Date:	12/08/2009		
Temperature: 18°C	Air Pressure: 1015 hPa	Relative Humidity: 75 %	Power Supply: 120 VAC
Remarks: EUT with 6 dBi antenna assembly gain, dish antenna			

Plot 7.3.51 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

⌚ 19:47:25 DEC 07, 2009

ACTV DET: PEAK
MEAS DET: PEAK OP AVG
MKR 105.6 MHz
36.38 dB μ V/m



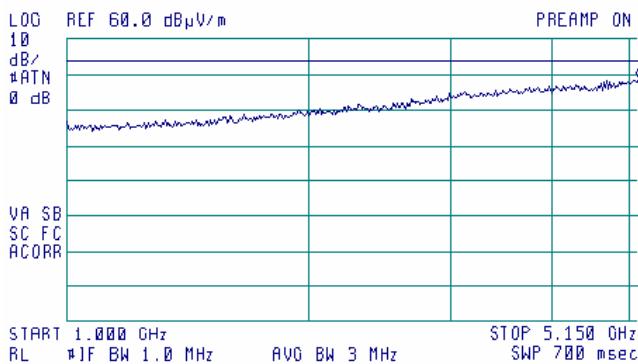
Note: Maximum peak emission was found outside restricted band

Plot 7.3.52 Radiated emission measurements from 1.0 to 5.15 GHz at the low carrier frequency

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

⌚ 21:35:44 DEC 07, 2009

ACTV DET: PEAK
MEAS DET: PEAK OP AVG
MKR 5.150 GHz
49.11 dB μ V/m

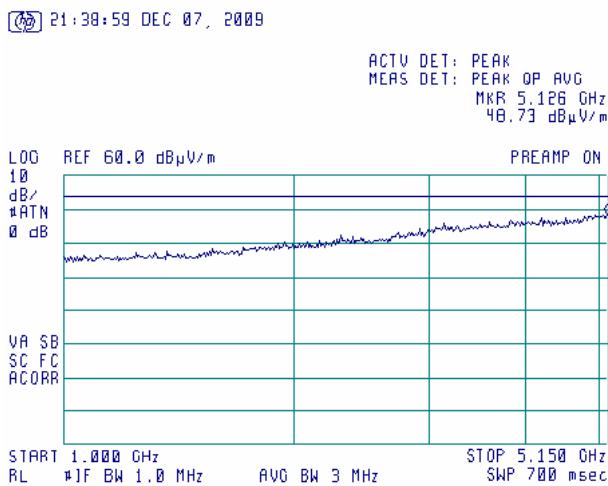




Test specification:	FCC section 15.407(b), RSS-210 Annex 9, section A9.2 Unwanted radiated emissions		
Test procedure:	Public notice DA 00-705 / ANSI C63.4, Section 13.1.4		
Test mode:	Compliance	Verdict: PASS	
Date:	12/08/2009		
Temperature: 18°C	Air Pressure: 1015 hPa	Relative Humidity: 75 %	Power Supply: 120 VAC
Remarks: EUT with 6 dBi antenna assembly gain, dish antenna			

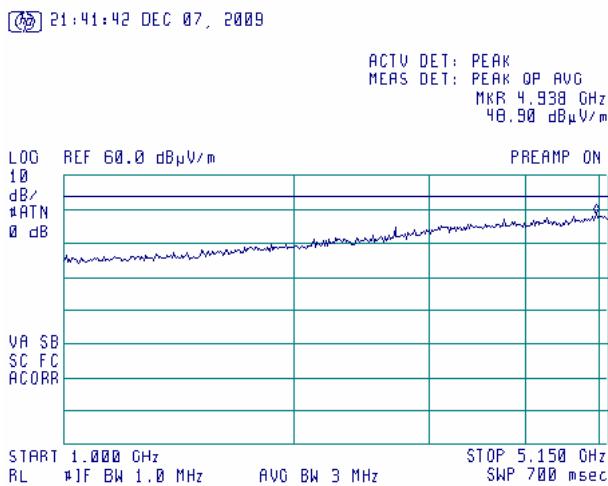
Plot 7.3.53 Radiated emission measurements from 1.0 to 5.15 GHz at the mid carrier frequency

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



Plot 7.3.54 Radiated emission measurements from 1.0 to 5.15 GHz at the high carrier frequency

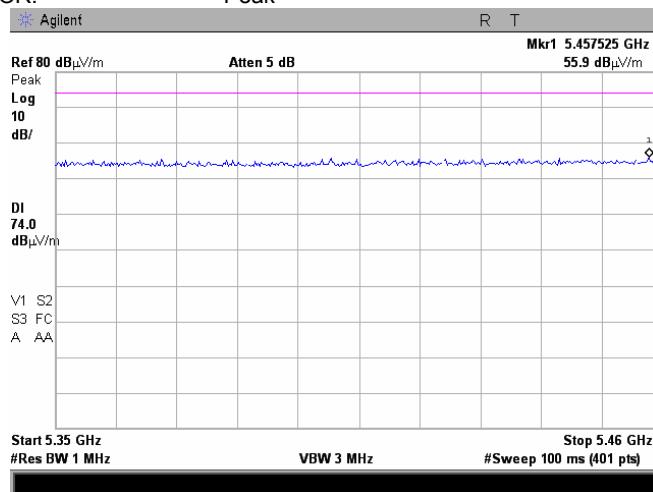
TEST SITE: Anechoic chamber
TEST DISTANCE: 3 m
ANTENNA POLARIZATION: Vertical and Horizontal
DETECTOR: Peak under average limit



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:	12/08/2009		
Temperature: 18°C	Air Pressure: 1015 hPa	Relative Humidity: 75 %	Power Supply: 120 VAC
Remarks: EUT with 6 dBi antenna assembly gain, dish antenna			

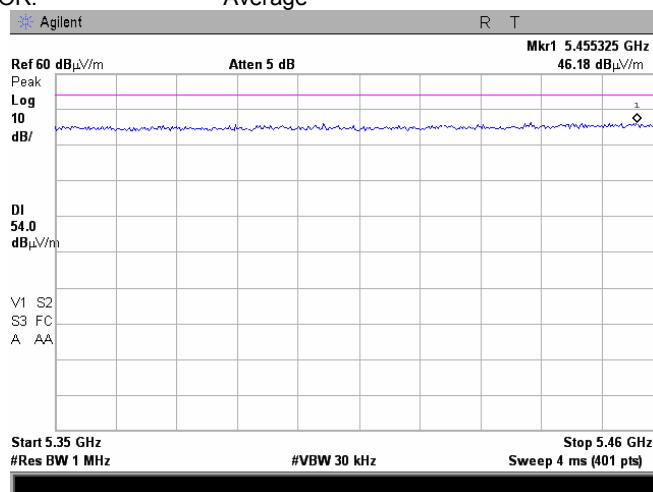
Plot 7.3.55 Radiated emission measurements from 5.35 to 5.46 GHz at the low carrier frequency

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



Plot 7.3.56 Radiated emission measurements from 5.35 to 5.46 GHz at the low carrier frequency

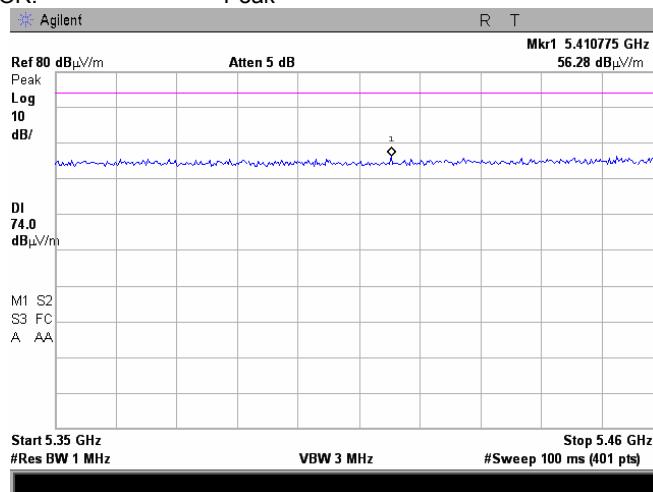
TEST SITE: Anechoic chamber
 TEST DISTANCE: 3 m
 ANTENNA POLARIZATION: Vertical and Horizontal
 DETECTOR: Average



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:	
Date:	12/08/2009	PASS	
Temperature: 18°C	Air Pressure: 1015 hPa	Relative Humidity: 75 %	Power Supply: 120 VAC
Remarks: EUT with 6 dBi antenna assembly gain, dish antenna			

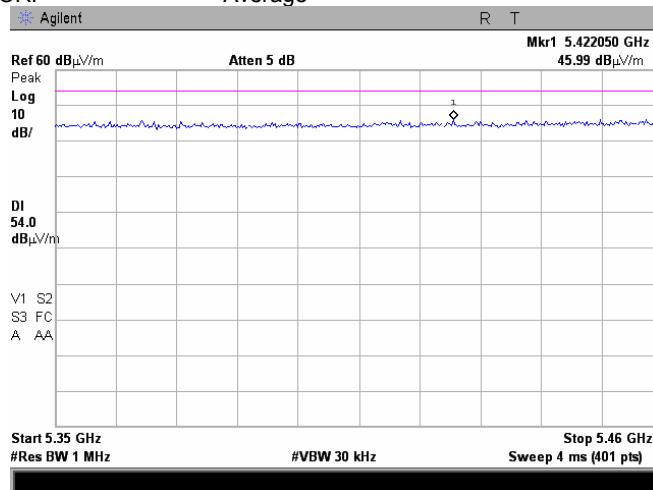
Plot 7.3.57 Radiated emission measurements from 5.35 to 5.46 GHz at the mid carrier frequency

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



Plot 7.3.58 Radiated emission measurements from 5.35 to 5.46 GHz at the mid carrier frequency

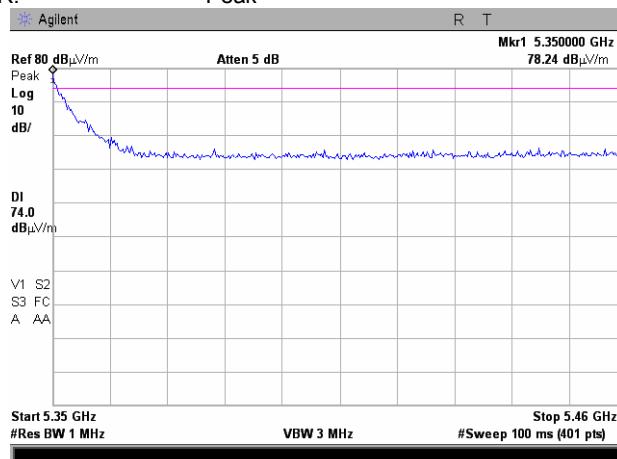
TEST SITE: Anechoic chamber
TEST DISTANCE: 3 m
ANTENNA POLARIZATION: Vertical and Horizontal
DETECTOR: Average



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:	
Date:	12/08/2009	PASS	
Temperature: 18°C	Air Pressure: 1015 hPa	Relative Humidity: 75 %	Power Supply: 120 VAC
Remarks: EUT with 6 dBi antenna assembly gain, dish antenna			

Plot 7.3.59 Radiated emission measurements from 5.35 to 5.46 GHz at the high carrier frequency

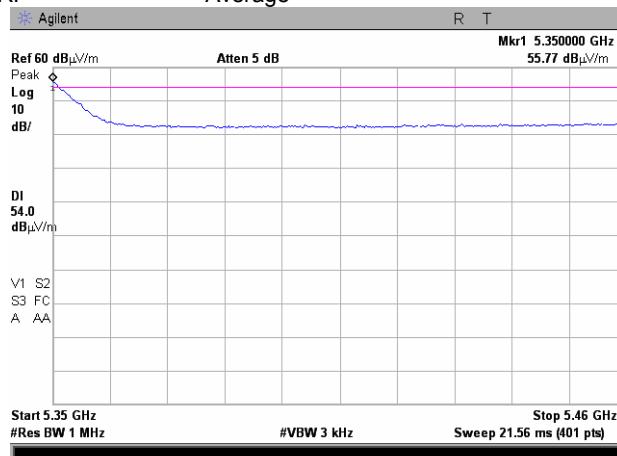
TEST SITE: Anechoic chamber
TEST DISTANCE: 3 m
ANTENNA POLARIZATION: Vertical and Horizontal
DETECTOR: Peak



NOTE: Band edge radiated emission compliance with 74 dB μ V limit was demonstrated by measurements as referred in plots of section 7.4.

Plot 7.3.60 Radiated emission measurements from 5.35 to 5.46 GHz at the high carrier frequency

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

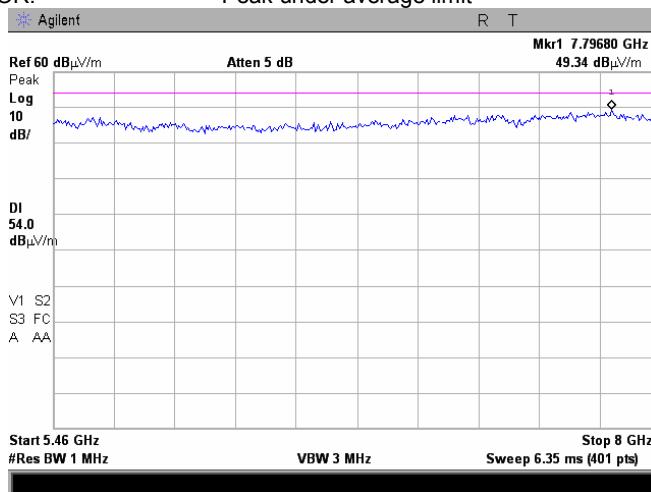


NOTE: Band edge radiated emission compliance with 54 dB μ V limit was demonstrated by measurements as referred in plots of section 7.4.

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:	12/08/2009		
Temperature: 18°C	Air Pressure: 1015 hPa	Relative Humidity: 75 %	Power Supply: 120 VAC
Remarks: EUT with 6 dBi antenna assembly gain, dish antenna			

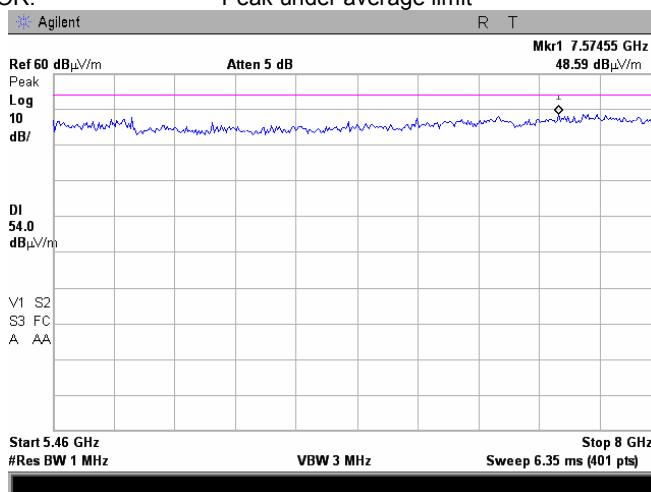
Plot 7.3.61 Radiated emission measurements from 5.46 to 8 GHz at the low carrier frequency

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



Plot 7.3.62 Radiated emission measurements from 5.46 to 8 GHz at the mid carrier frequency

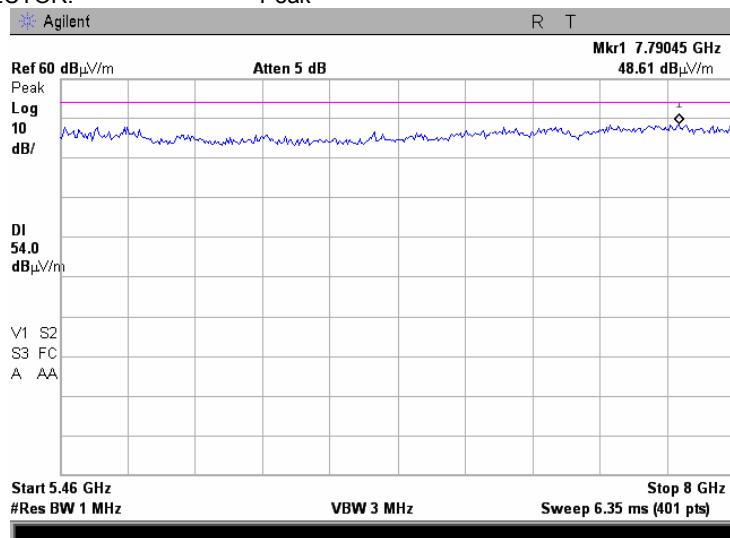
TEST SITE: Anechoic chamber
TEST DISTANCE: 3 m
ANTENNA POLARIZATION: Vertical and Horizontal
DETECTOR: Peak under average limit



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:	12/08/2009		
Temperature: 18°C	Air Pressure: 1015 hPa	Relative Humidity: 75 %	Power Supply: 120 VAC
Remarks:	EUT with 6 dBi antenna assembly gain, dish antenna		

Plot 7.3.63 Radiated emission measurements from 5.46 to 8 GHz at the high carrier frequency

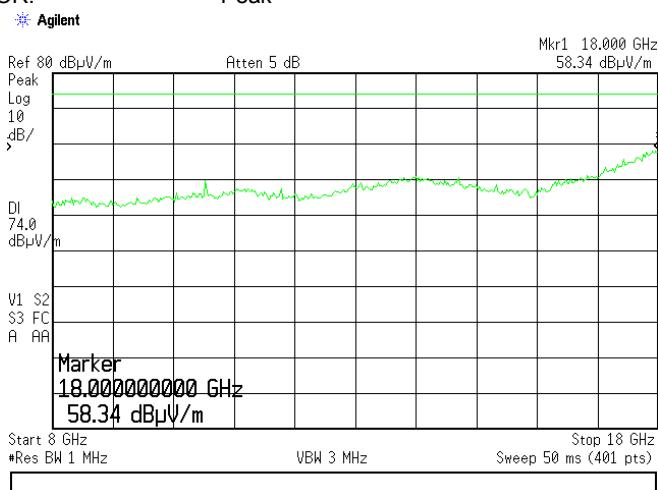
TEST SITE: Anechoic chamber
 TEST DISTANCE: 3 m
 ANTENNA POLARIZATION: Vertical and Horizontal
 DETECTOR: Peak



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:	12/08/2009		
Temperature: 18°C	Air Pressure: 1015 hPa	Relative Humidity: 75 %	Power Supply: 120 VAC
Remarks: EUT with 6 dBi antenna assembly gain, dish antenna			

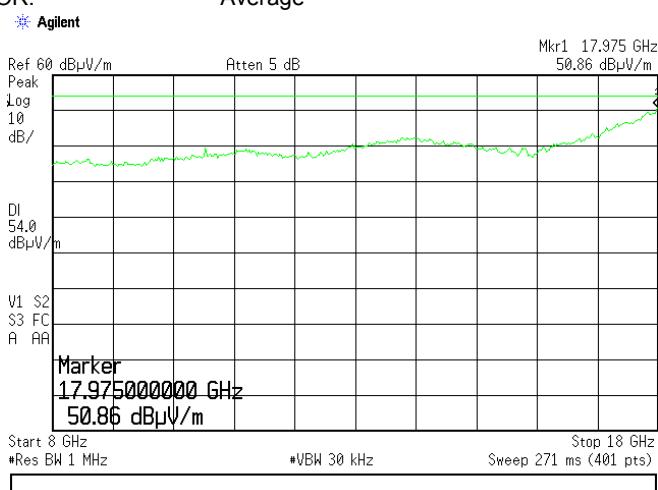
Plot 7.3.64 Radiated emission measurements from 8 to 18 GHz at the low carrier frequency

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



Plot 7.3.65 Radiated emission measurements from 8 to 18 GHz at the low carrier frequency

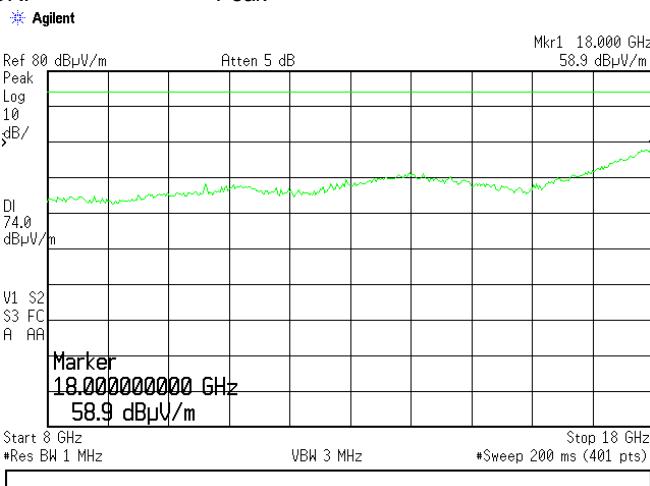
TEST SITE: Anechoic chamber
TEST DISTANCE: 3 m
ANTENNA POLARIZATION: Vertical and Horizontal
DETECTOR: Average



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:	
Date:	12/08/2009	PASS	
Temperature: 18°C	Air Pressure: 1015 hPa	Relative Humidity: 75 %	Power Supply: 120 VAC
Remarks: EUT with 6 dBi antenna assembly gain, dish antenna			

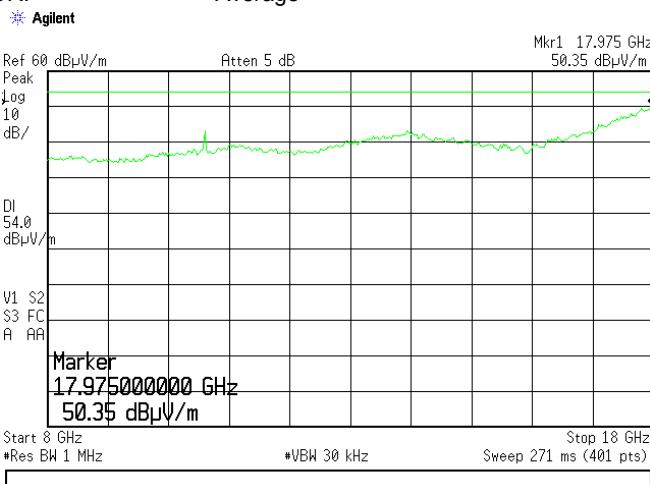
Plot 7.3.66 Radiated emission measurements from 8 to 18 GHz at the mid carrier frequency

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



Plot 7.3.67 Radiated emission measurements from 8 to 18 GHz at the mid carrier frequency

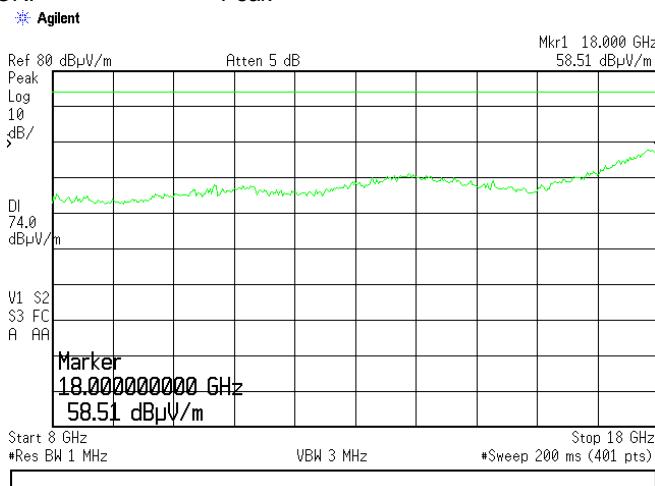
TEST SITE: OATS
 TEST DISTANCE: 3 m
 ANTENNA POLARIZATION: Vertical and Horizontal
 DETECTOR: Average



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:	
Date:	12/08/2009	PASS	
Temperature: 18°C	Air Pressure: 1015 hPa	Relative Humidity: 75 %	Power Supply: 120 VAC
Remarks: EUT with 6 dBi antenna assembly gain, dish antenna			

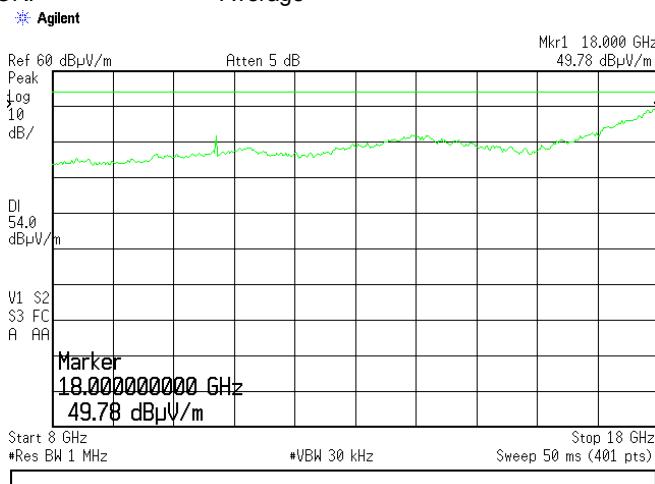
Plot 7.3.68 Radiated emission measurements from 8 to 18 GHz at the high carrier frequency

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



Plot 7.3.69 Radiated emission measurements from 8 to 18 GHz at the high carrier frequency

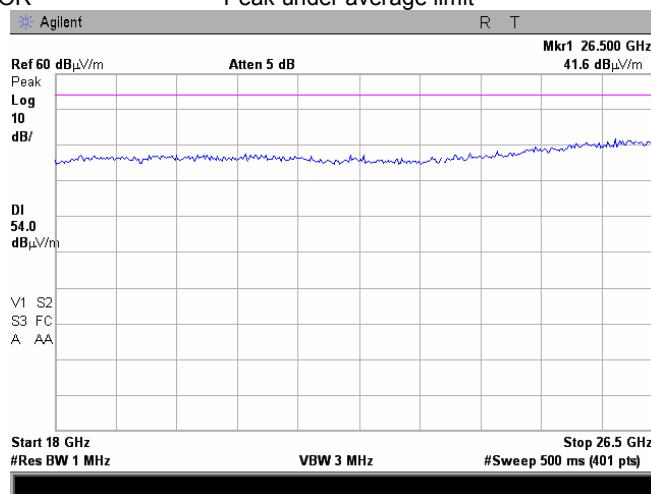
TEST SITE: OATS
TEST DISTANCE: 3 m
ANTENNA POLARIZATION: Vertical and Horizontal
DETECTOR: Average



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:	12/08/2009		
Temperature: 18°C	Air Pressure: 1015 hPa	Relative Humidity: 75 %	Power Supply: 120 VAC
Remarks: EUT with 6 dBi antenna assembly gain, dish antenna			

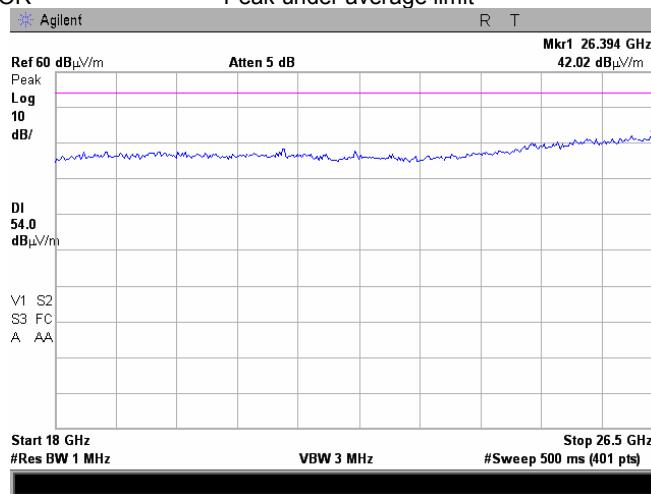
Plot 7.3.70 Radiated emission measurements from 18 to 26.5 GHz at the low carrier frequency

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



Plot 7.3.71 Radiated emission measurements from 18 to 26.5 GHz at the mid carrier frequency

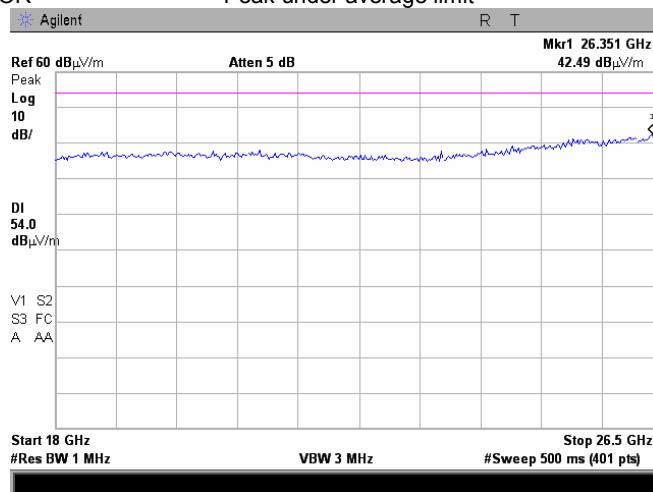
TEST SITE: OATS
 TEST DISTANCE: 3 m
 ANTENNA POLARIZATION: Vertical and Horizontal
 DETECTOR Peak under average limit



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:	12/08/2009		
Temperature: 18°C	Air Pressure: 1015 hPa	Relative Humidity: 75 %	Power Supply: 120 VAC
Remarks: EUT with 6 dBi antenna assembly gain, dish antenna			

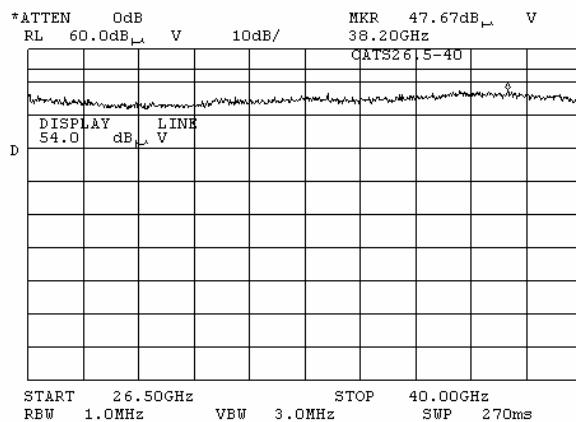
Plot 7.3.72 Radiated emission measurements from 18 to 26.5 GHz at the high carrier frequency

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



Plot 7.3.73 Radiated emission measurements from 26.5 to 40 GHz at the low carrier frequency

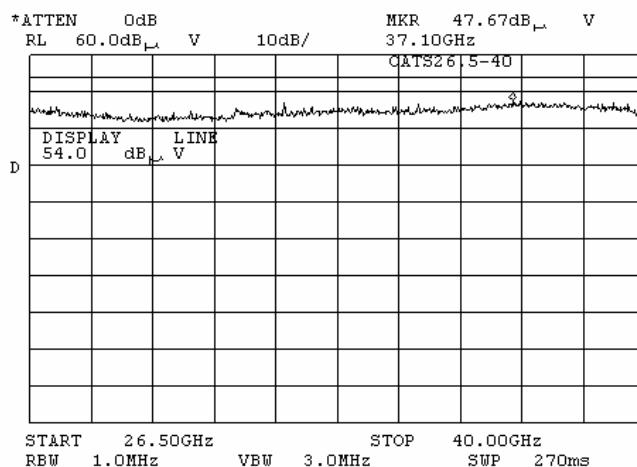
TEST SITE: OATS
TEST DISTANCE: 3 m
ANTENNA POLARIZATION: Vertical and Horizontal
DETECTOR Peak under average limit



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:	12/08/2009		
Temperature: 18°C	Air Pressure: 1015 hPa	Relative Humidity: 75 %	Power Supply: 120 VAC
Remarks: EUT with 6 dBi antenna assembly gain, dish antenna			

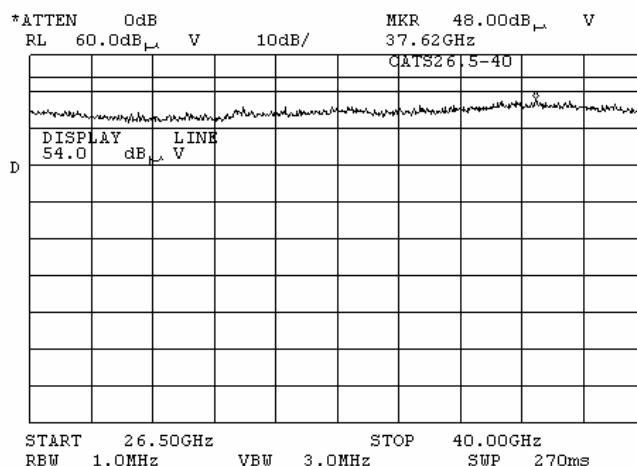
Plot 7.3.74 Radiated emission measurements from 26.5 to 40 GHz at the mid carrier frequency

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



Plot 7.3.75 Radiated emission measurements from 26.5 to 40 GHz at the high carrier frequency

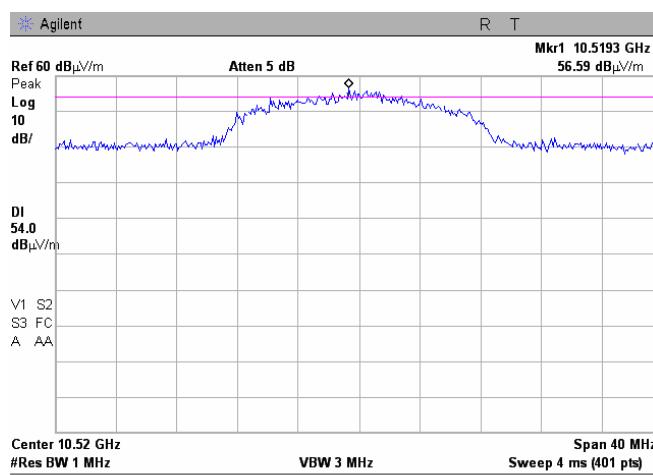
TEST SITE: OATS
TEST DISTANCE: 3 m
ANTENNA POLARIZATION: Vertical and Horizontal
DETECTOR Peak under average limit



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:	12/08/2009		
Temperature: 18°C	Air Pressure: 1015 hPa	Relative Humidity: 75 %	Power Supply: 120 VAC
Remarks: EUT with 6 dBi antenna assembly gain, dish antenna			

Plot 7.3.76 Radiated emission measurements at the second harmonic of low carrier frequency

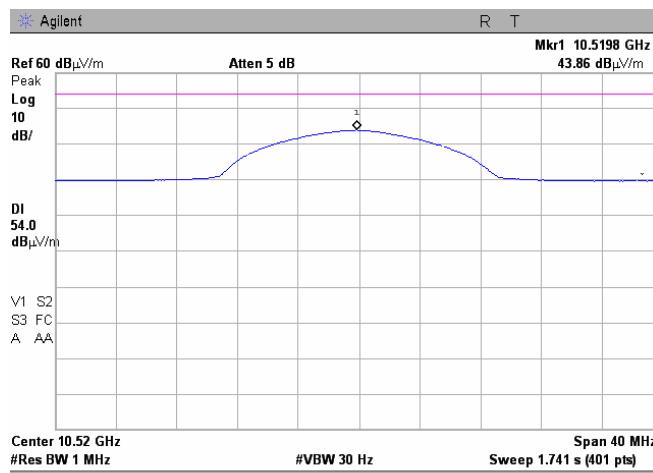
TEST SITE: OATS
TEST DISTANCE: 3 m
DETECTOR Peak under average limit



Note: Maximum peak emission was found outside restricted band

Plot 7.3.77 Radiated emission measurements at the second harmonic of low carrier frequency

TEST SITE: OATS
TEST DISTANCE: 3 m
DETECTOR Average

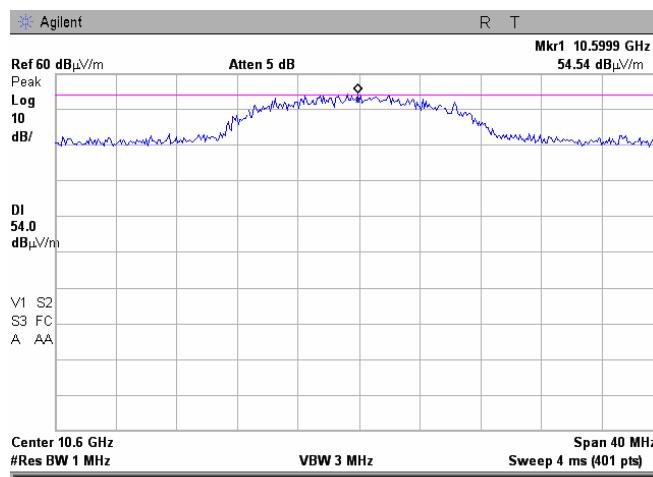


Note: Maximum peak emission was found outside restricted band

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:	12/08/2009		
Temperature: 18°C	Air Pressure: 1015 hPa	Relative Humidity: 75 %	Power Supply: 120 VAC
Remarks: EUT with 6 dBi antenna assembly gain, dish antenna			

Plot 7.3.78 Radiated emission measurements at the second harmonic of the mid carrier frequency

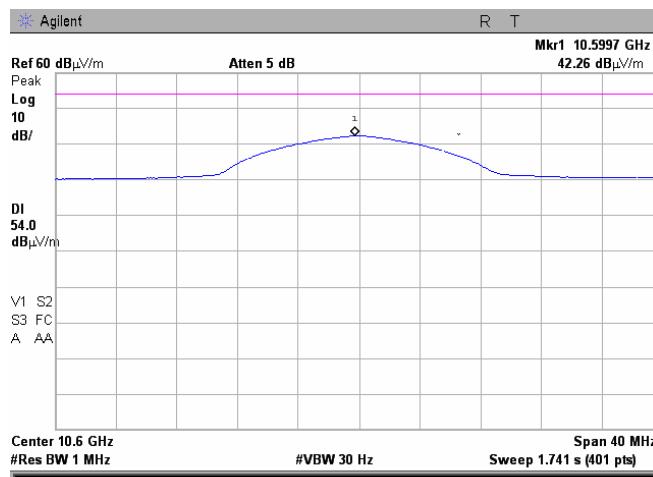
TEST SITE: OATS
TEST DISTANCE: 3 m
DETECTOR Peak under average limit



Note: Maximum peak emission was found outside restricted band

Plot 7.3.79 Radiated emission measurements at the second harmonic of the mid carrier frequency

TEST SITE: OATS
TEST DISTANCE: 3 m
DETECTOR Average

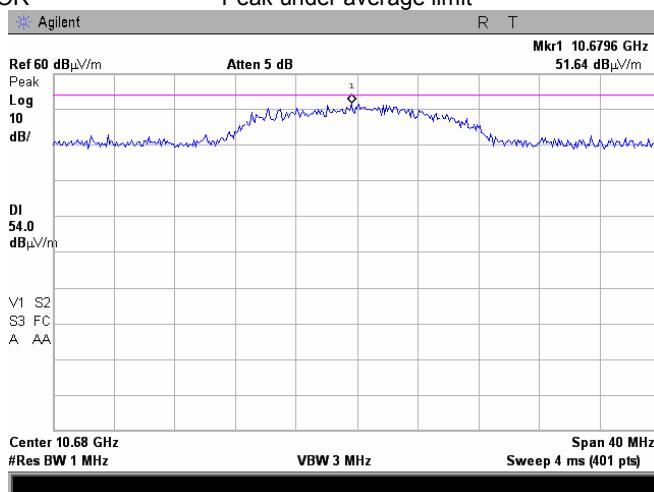


Note: Maximum peak emission was found outside restricted band

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:	12/08/2009		
Temperature: 18°C	Air Pressure: 1015 hPa	Relative Humidity: 75 %	Power Supply: 120 VAC
Remarks: EUT with 6 dBi antenna assembly gain, dish antenna			

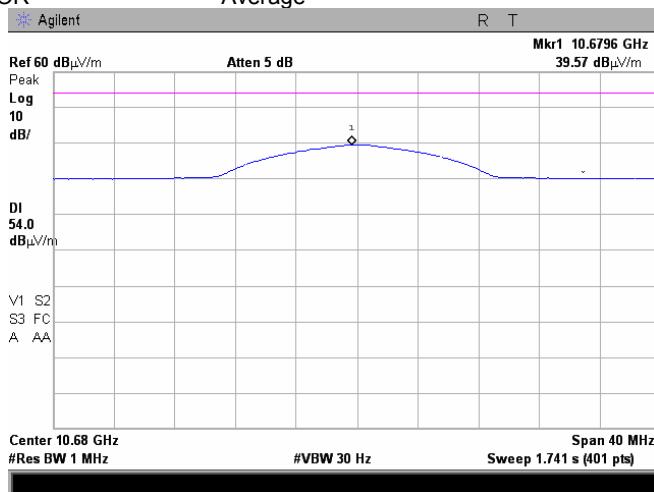
Plot 7.3.80 Radiated emission measurements at the second harmonic of high carrier frequency

TEST SITE: OATS
TEST DISTANCE: 3 m
DETECTOR: Peak under average limit



Plot 7.3.81 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:	11/26/2009		
Temperature: 23.7°C	Air Pressure: 1013 hPa	Relative Humidity: 47 %	Power Supply: 120 VAC
Remarks:			

7.4 Band edges spurious emission measurements

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.

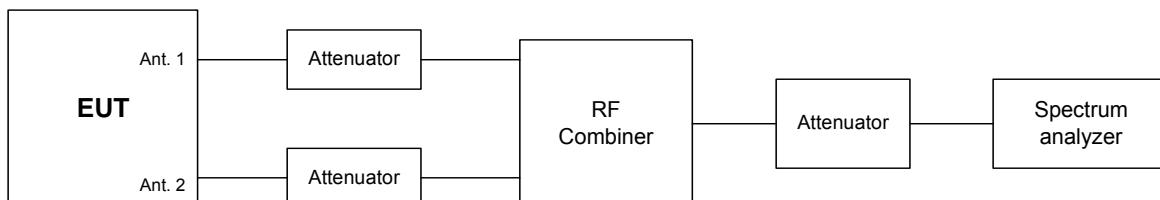
Table 7.4.1 Spurious emission test limits

Assigned frequency range, MHz	EIRP of spurious, dBm/MHz	Antenna assembly gain, dBi	Resolution bandwidth, kHz
5250 - 5350	-27	22.5	1000
5250 - 5350	-27	28	1000
5250 - 5350	-27	6	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 associated tables and 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:	
Date:	11/26/2009	PASS	
Temperature: 23.7°C	Air Pressure: 1013 hPa	Relative Humidity: 47 %	Power Supply: 48 VDC
Remarks:			

7.4.3 Test procedure for radiated spurious emission measurements

7.4.3.1 This test was performed to measure radiated spurious emission from the EUT near the band edge within the restricted bands. Specification test limits are given in Table 7.4.2.

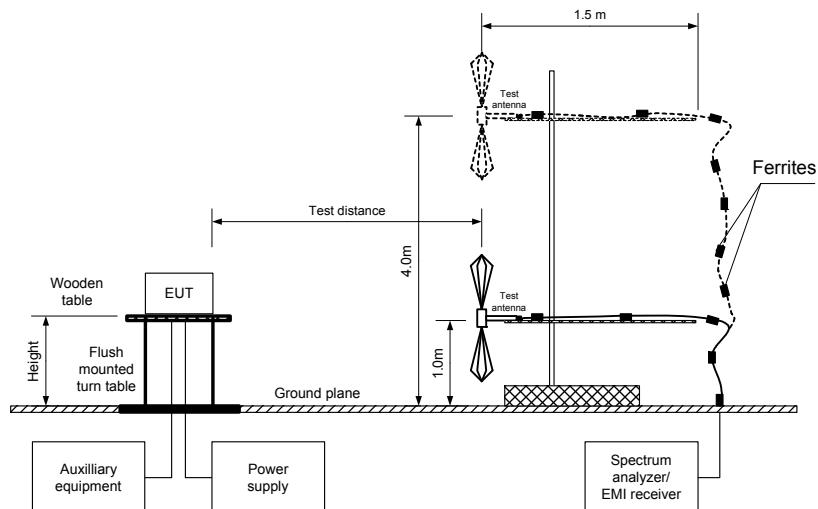
7.4.3.2 The EUT and measurement equipment were arranged as shown in Figure 7.4.2.

7.4.3.3 Test results are shown in the associated tables and plots.

Table 7.4.2 Radiated spurious emissions limits within restricted bands

Frequency, MHz	Field strength at 3 m, dB(μ V/m)***	
	Peak	Average
Above 1000	74.0	54.0

Figure 7.4.2 Setup for spurious emission field strength measurements above 1000 MHz



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:	
Date:	11/26/2009	PASS	
Temperature: 23.7°C	Air Pressure: 1013 hPa	Relative Humidity: 47 %	Power Supply: 120 VAC
Remarks: EUT with 22.5 dBi antenna assembly gain			

Table 7.4.3 Conducted band edge emission test results

ASSIGNED FREQUENCY RANGE: 5250 – 5350 MHz
 DETECTOR USED: Peak, 100 Power averaging
 RESOLUTION BANDWIDTH: 1000 kHz
 VIDEO BANDWIDTH: 3000 kHz
 MODULATING SIGNAL: OFDM
 MODULATION: BPSK/64QAM
 EMISSION BANDWIDTH: 40/20/10/5 MHz

Frequency, MHz	Modulation	Bit rate, Mbps	CBW, MHz	SA reading, dBm	Antenna assembly gain, dBi	EIRP,* dBm/MHz	Limit, dBm/MHz	Margin**, dB	Verdict
Low frequency 5275 MHz									
5250.000	BPSK	27	40	-54.17	22.5	-31.67	-27.0	-4.67	Pass
5250.000	64QAM	270		-54.69	22.5	-32.19	-27.0	-5.19	Pass
Low frequency 5285 MHz									
5249.950	BPSK	27	40	-49.66	22.5	-27.16	-27.0	-0.16	Pass
5249.925	64QAM	270		-50.04	22.5	-27.54	-27.0	-0.54	Pass
Low frequency 5265 MHz									
5250.000	BPSK	13	20	-54.03	22.5	-31.53	-27.0	-4.53	Pass
5250.000	64QAM	130		-54.19	22.5	-31.69	-27.0	-4.69	Pass
Low frequency 5260 MHz									
5250.000	BPSK	6.5	10	-54.25	22.5	-31.75	-27.0	-4.75	Pass
5250.000	64QAM	65		-54.17	22.5	-31.67	-27.0	-4.67	Pass
Low frequency 5257.5 MHz									
5215.750	BPSK	3.25	5	-60.53	22.5	-38.03	-27.0	-11.03	Pass
5219.250	BPSK	3.25		-59.46	22.5	-36.96	-27.0	-9.96	Pass
5249.975	BPSK	3.25		-58.00	22.5	-35.50	-27.0	-8.50	Pass
5215.750	64QAM	32.5		-60.56	22.5	-38.06	-27.0	-11.06	Pass
5219.250	64QAM	32.5		-59.58	22.5	-37.08	-27.0	-10.08	Pass
5250.000	64QAM	32.5		-59.11	22.5	-36.61	-27.0	-9.61	Pass

* - EIRP = SA reading (dBm) + Antenna assembly

**- Margin = EIRP – limit.

Reference numbers of test equipment used

HL 2909	HL 2952	HL 3435	HL 3437			
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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:	
Date:	11/26/2009	PASS	
Temperature: 23.7°C	Air Pressure: 1013 hPa	Relative Humidity: 47 %	Power Supply: 120 VAC
Remarks: EUT with 22.5 dBi antenna assembly gain			

Table 7.4.4 Field strength of spurious emissions at high edge

ASSIGNED FREQUENCY: 5250 – 5350 MHz
 TEST DISTANCE: 3 m
 MODULATION: BPSK/64QAM
 TRANSMITTER OUTPUT POWER: Maximum
 DETECTOR USED: Peak
 RESOLUTION BANDWIDTH: 1000 kHz
 TEST ANTENNA TYPE: Double ridged guide

Frequency MHz	Bit rate, Mbps	Antenna			Azimuth, degrees*	Peak field strength			Average field strength			Verdict
		Polarization	Height, m	Measured, dB(µV/m)		Limit, dB(µV/m)	Margin, dB**	Measured, dB(µV/m)	Limit, dB(µV/m)	Margin, dB**		
High frequency 5315.0 MHz EBW 40 MHz EBW												
5350.000	27	Vertical	1.0	0	71.52	74.00	-2.48	53.74	54	-0.26	Pass	
5350.000	270	Vertical	1.0	0	71.21	74.00	-2.79	53.46	54	-0.54		
High frequency 5325.0 MHz EBW 40 MHz EBW												
5350.000	27	Vertical	1.0	0	70.93	74.00	-3.07	53.25	54	-0.75	Pass	
5350.000	270	Vertical	1.0	0	70.58	74.00	-3.42	53.09	54	-0.91		
High frequency 5335.0 MHz EBW 20 MHz EBW												
5350.275	13	Vertical	1.0	0	72.46	74.00	-1.54	53.21	54	-0.79	Pass	
5350.000	130	Vertical	1.0	0	70.43	74.00	-3.57	53.65	54	-0.35		
High frequency 5340.0 MHz EBW 10 MHz EBW												
5350.000	6.5	Vertical	1.0	0	73.60	74.00	-0.4	53.42	54	-0.58	Pass	
5350.000	65	Vertical	1.0	0	71.68	74.00	-2.32	53.53	54	-0.47		
High frequency 5342.5 MHz EBW 5 MHz EBW												
5350.000	3.25	Vertical	1.0	0	57.58	74.00	-16.42	42.93	54	-11.07	Pass	
5350.000	32.5	Vertical	1.0	0	56.91	74.00	-17.09	42.96	54	-11.04		

*- Margin = Measured emission – specification limit.

**- EUT front panel refers to 0 degrees position of turntable.

Reference numbers of test equipment used

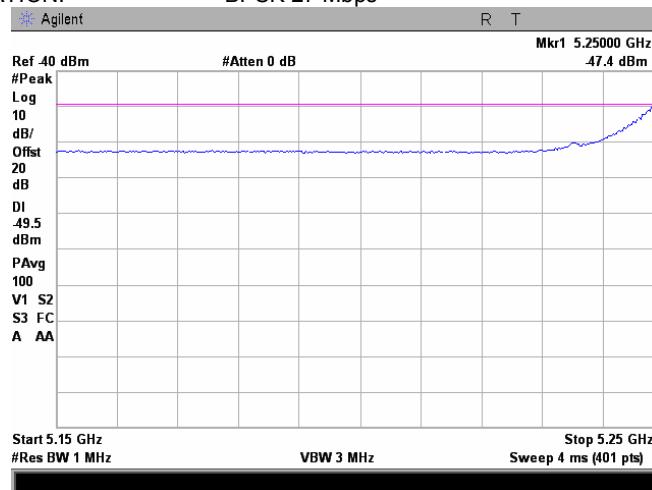
HL 0554	HL 1984	HL 2780	HL 3122	HL 3123		
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Full description is given in Appendix A.

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:	11/26/2009		
Temperature: 23.7°C	Air Pressure: 1013 hPa	Relative Humidity: 47 %	Power Supply: 120 VAC
Remarks: EUT with 22.5 dBi antenna assembly gain			

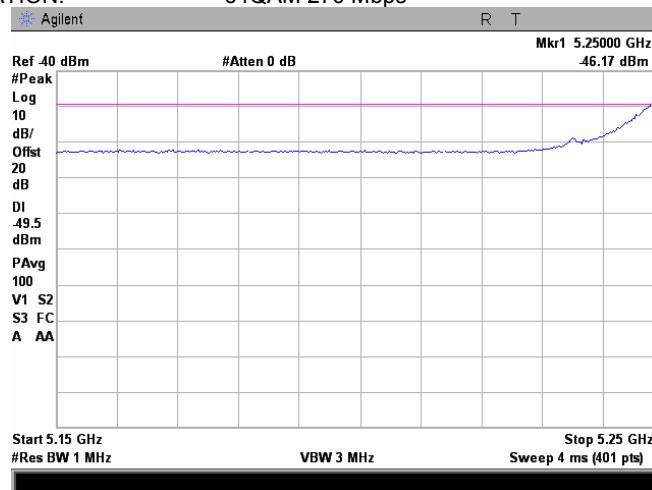
Plot 7.4.1 Conducted spurious emission measurements at the 5150 – 5250 MHz range

CARRIER FREQUENCY 5275 MHz
 CHANNEL BANDWIDTH 40 MHz
 MODULATION: BPSK 27 Mbps



Plot 7.4.2 Conducted spurious emission measurements 5150 – 5250 MHz range

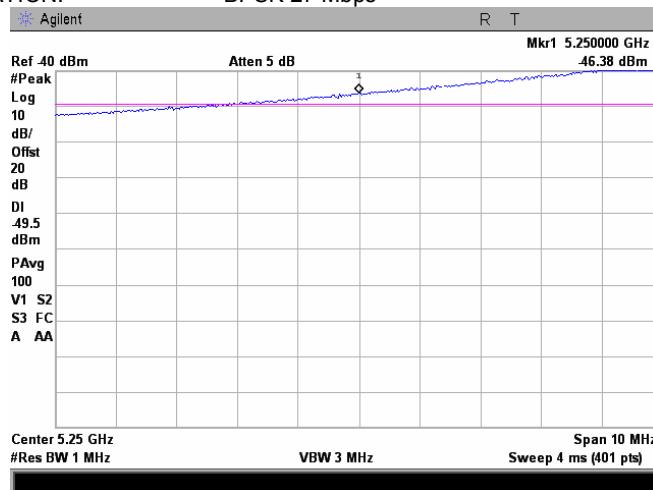
CARRIER FREQUENCY 5275 MHz
 CHANNEL BANDWIDTH 40 MHz
 MODULATION: 64QAM 270 Mbps



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:	11/26/2009		
Temperature: 23.7°C	Air Pressure: 1013 hPa	Relative Humidity: 47 %	Power Supply: 120 VAC
Remarks: EUT with 22.5 dBi antenna assembly gain			

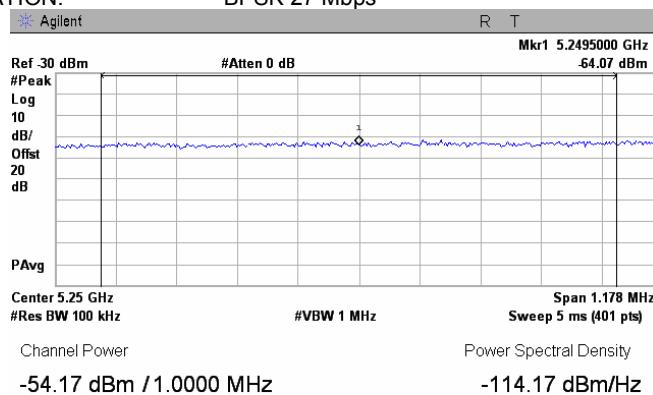
Plot 7.4.3 Conducted spurious emission measurements at the band edges

CARRIER FREQUENCY 5275 MHz
CHANNEL BANDWIDTH 40 MHz
MODULATION: BPSK 27 Mbps



Plot 7.4.4 Conducted spurious emission measurements at the band edges

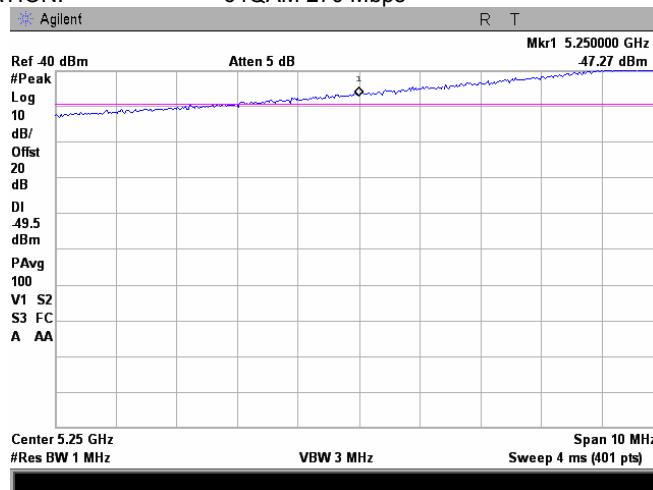
CARRIER FREQUENCY 5275 MHz
CHANNEL BANDWIDTH 40 MHz
MODULATION: BPSK 27 Mbps



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:	11/26/2009		
Temperature: 23.7°C	Air Pressure: 1013 hPa	Relative Humidity: 47 %	Power Supply: 120 VAC
Remarks: EUT with 22.5 dBi antenna assembly gain			

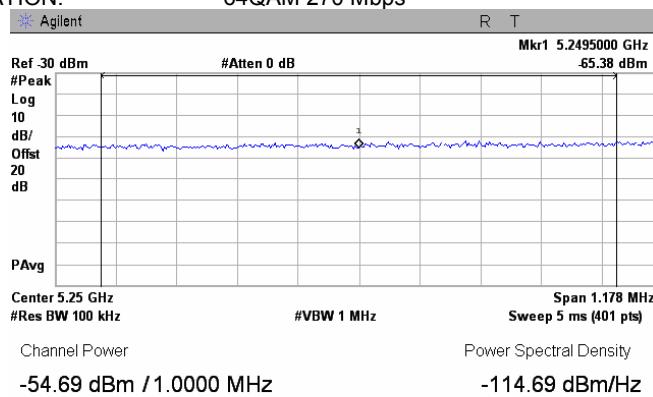
Plot 7.4.5 Conducted spurious emission measurements at the band edges

CARRIER FREQUENCY 5275 MHz
CHANNEL BANDWIDTH 40 MHz
MODULATION: 64QAM 270 Mbps



Plot 7.4.6 Conducted spurious emission measurements at the band edges

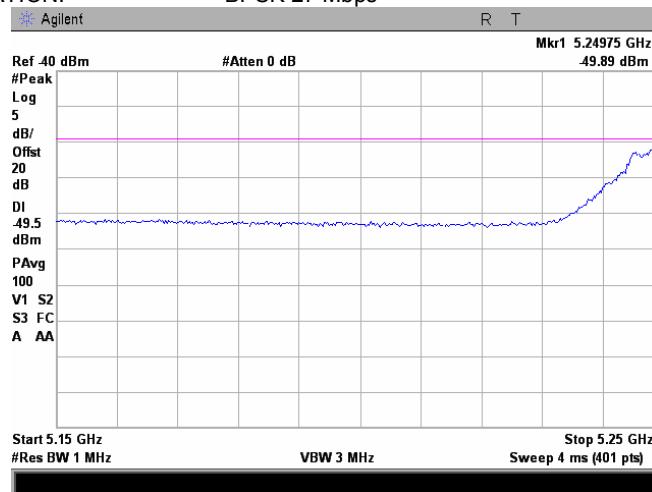
CARRIER FREQUENCY 5275 MHz
CHANNEL BANDWIDTH 40 MHz
MODULATION: 64QAM 270 Mbps



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:	
Date:	11/26/2009	PASS	
Temperature: 23.7°C	Air Pressure: 1013 hPa	Relative Humidity: 47 %	Power Supply: 120 VAC
Remarks: EUT with 22.5 dBi antenna assembly gain			

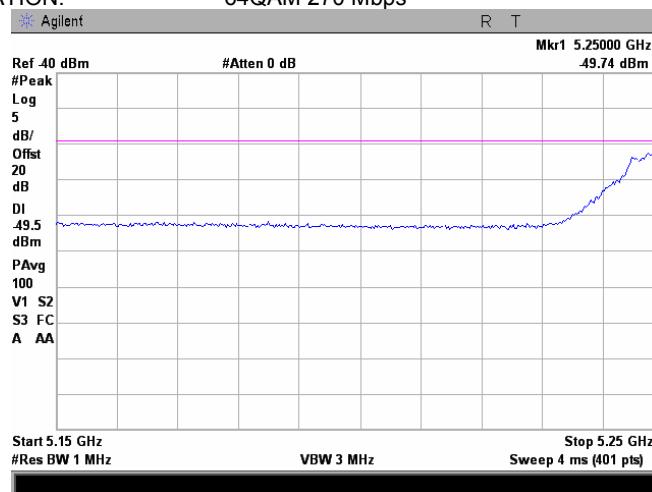
Plot 7.4.7 Conducted spurious emission measurements at the 5150 – 5250 MHz range

CARRIER FREQUENCY 5285 MHz
 CHANNEL BANDWIDTH 40 MHz
 MODULATION: BPSK 27 Mbps



Plot 7.4.8 Conducted spurious emission measurements 5150 – 5250 MHz range

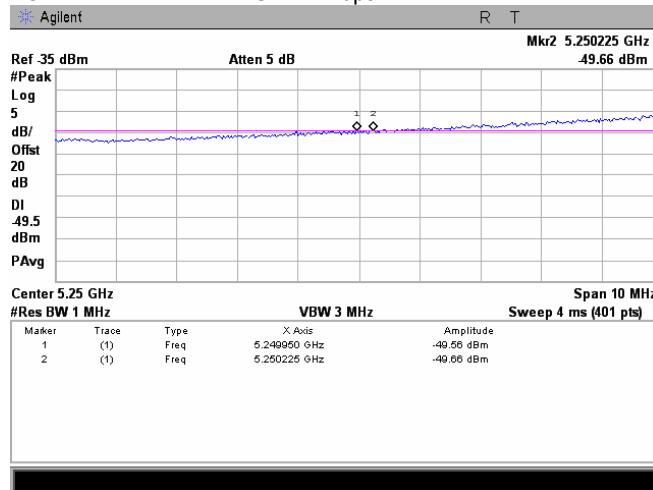
CARRIER FREQUENCY 5285 MHz
 CHANNEL BANDWIDTH 40 MHz
 MODULATION: 64QAM 270 Mbps



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:	
Date:	11/26/2009	PASS	
Temperature: 23.7°C	Air Pressure: 1013 hPa	Relative Humidity: 47 %	Power Supply: 120 VAC
Remarks: EUT with 22.5 dBi antenna assembly gain			

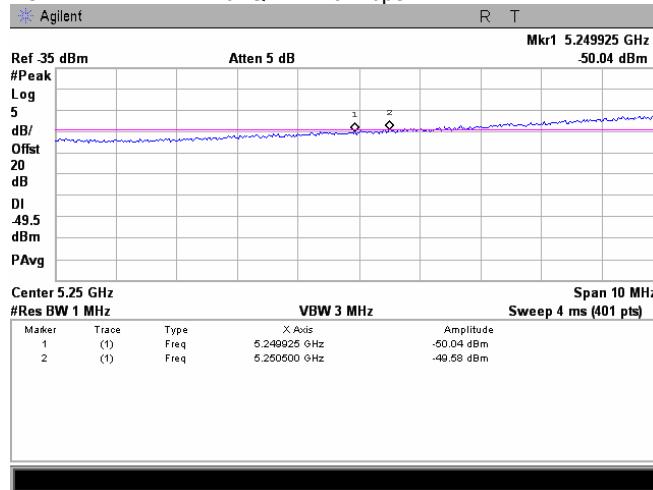
Plot 7.4.9 Conducted spurious emission measurements at the band edges

CARRIER FREQUENCY 5285 MHz
CHANNEL BANDWIDTH 40 MHz
MODULATION: BPSK 27 Mbps



Plot 7.4.10 Conducted spurious emission measurements at the band edges

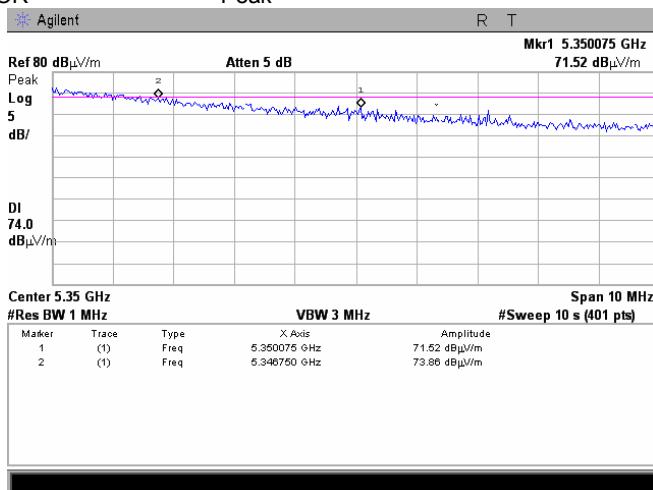
CARRIER FREQUENCY 5285 MHz
CHANNEL BANDWIDTH 40 MHz
MODULATION: 64QAM 270 Mbps



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:	
Date:	11/26/2009	PASS	
Temperature: 23.7°C	Air Pressure: 1013 hPa	Relative Humidity: 47 %	Power Supply: 120 VAC
Remarks: EUT with 22.5 dBi antenna assembly gain			

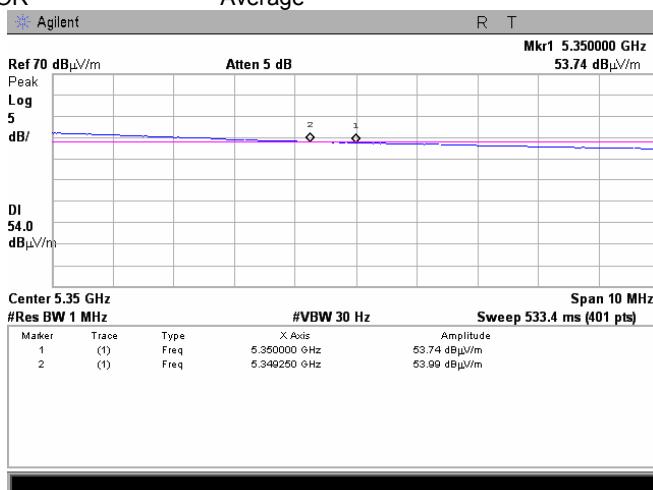
Plot 7.4.11 Radiated spurious emission measurements at the band edges

CARRIER FREQUENCY 5315 MHz
CHANNEL BANDWIDTH 40 MHz
MODULATION: BPSK 27 Mbps
DETECTOR Peak



Plot 7.4.12 Radiated spurious emission measurements at the band edges

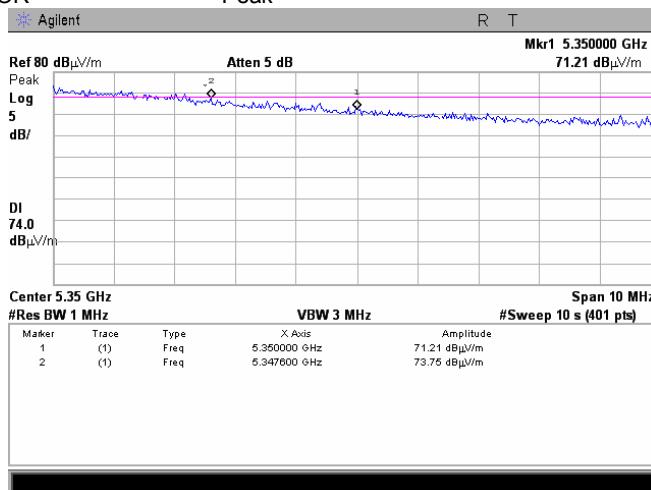
CARRIER FREQUENCY 5315 MHz
CHANNEL BANDWIDTH 40 MHz
MODULATION: BPSK 27 Mbps
DETECTOR Average



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:	
Date:	11/26/2009	PASS	
Temperature: 23.7°C	Air Pressure: 1013 hPa	Relative Humidity: 47 %	Power Supply: 120 VAC
Remarks: EUT with 22.5 dBi antenna assembly gain			

Plot 7.4.13 Radiated spurious emission measurements at the band edges

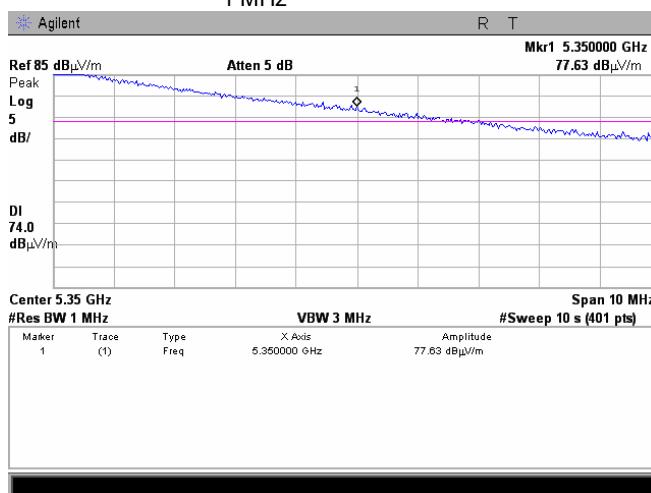
CARRIER FREQUENCY 5315 MHz
CHANNEL BANDWIDTH 40 MHz
MODULATION: 64QAM 270 Mbps
DETECTOR Peak



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:	11/26/2009		
Temperature: 23.7°C	Air Pressure: 1013 hPa	Relative Humidity: 47 %	Power Supply: 120 VAC
Remarks: EUT with 22.5 dBi antenna assembly gain			

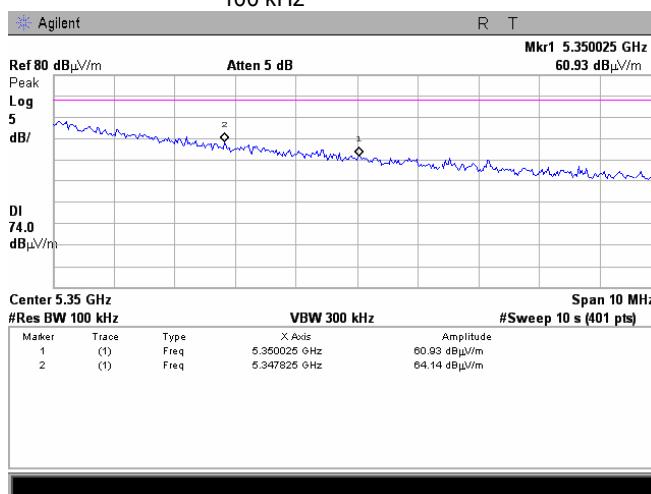
Plot 7.4.15 Radiated spurious emission measurements at the band edges

CARRIER FREQUENCY 5325 MHz
CHANNEL BANDWIDTH 40 MHz
MODULATION: BPSK 27 Mbps
DETECTOR Peak
RBW 1 MHz



Plot 7.4.16 Radiated spurious emission measurements at the band edges

CARRIER FREQUENCY 5325 MHz
CHANNEL BANDWIDTH 40 MHz
MODULATION: BPSK 27 Mbps
DETECTOR Peak
RBW 100 kHz

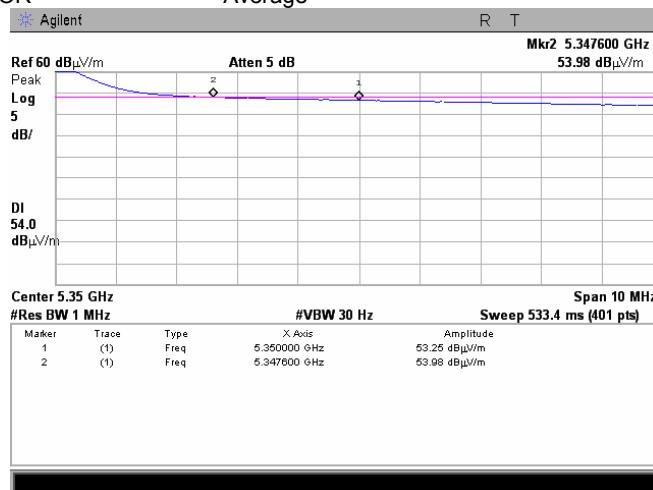


NOTE: Test result = SA Reading (Marker 1) + 10*log(1MHz/100kHz) = 60.93 + 10 = 70.93 dBuV

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:	11/26/2009		
Temperature: 23.7°C	Air Pressure: 1013 hPa	Relative Humidity: 47 %	Power Supply: 120 VAC
Remarks: EUT with 22.5 dBi antenna assembly gain			

Plot 7.4.17 Radiated spurious emission measurements at the band edges

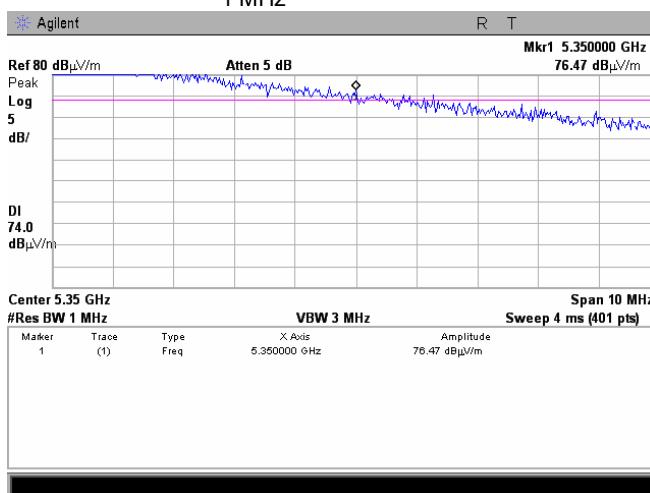
CARRIER FREQUENCY 5325 MHz
 CHANNEL BANDWIDTH 40 MHz
 MODULATION: BPSK 27 Mbps
 DETECTOR Average



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:	11/26/2009		
Temperature: 23.7°C	Air Pressure: 1013 hPa	Relative Humidity: 47 %	Power Supply: 120 VAC
Remarks: EUT with 22.5 dBi antenna assembly gain			

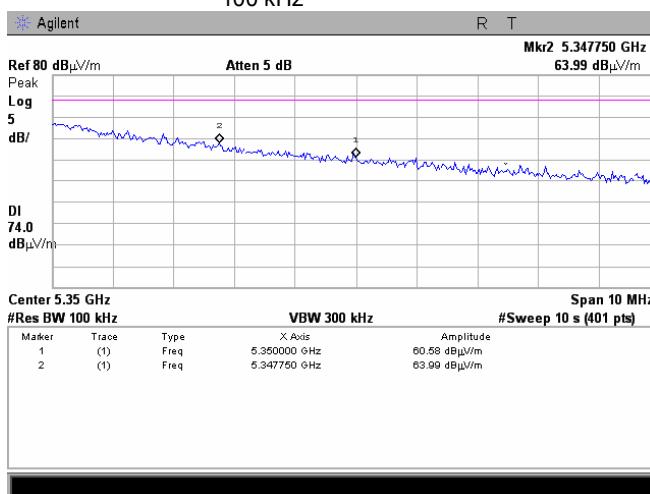
Plot 7.4.18 Radiated spurious emission measurements at the band edges

CARRIER FREQUENCY 5325 MHz
CHANNEL BANDWIDTH 40 MHz
MODULATION: 64QAM 270 Mbps
DETECTOR Peak
RBW 1 MHz



Plot 7.4.19 Radiated spurious emission measurements at the band edges

CARRIER FREQUENCY 5325 MHz
CHANNEL BANDWIDTH 40 MHz
MODULATION: 64QAM 270 Mbps
DETECTOR Peak
RBW 100 kHz

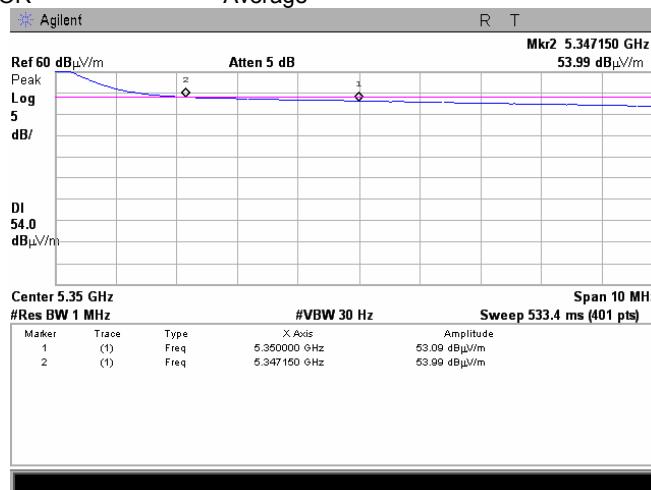


NOTE: Test result = SA Reading (Marker 1) + 10*log(1MHz/100kHz) = 60.58 + 10 = 70.58 dB μ V

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:	11/26/2009		
Temperature: 23.7°C	Air Pressure: 1013 hPa	Relative Humidity: 47 %	Power Supply: 120 VAC
Remarks: EUT with 22.5 dBi antenna assembly gain			

Plot 7.4.20 Radiated spurious emission measurements at the band edges

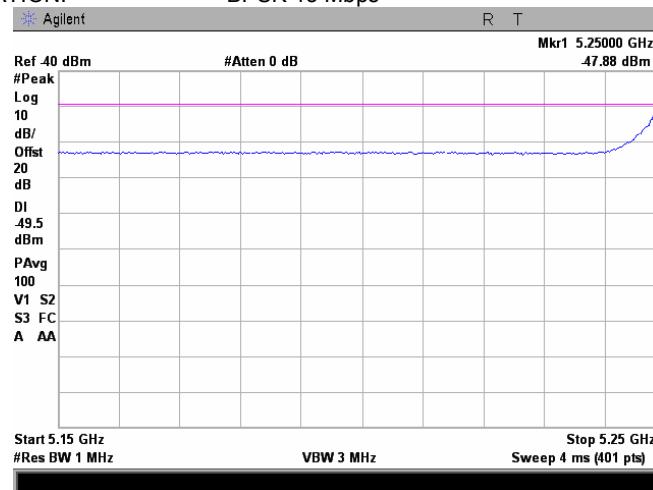
CARRIER FREQUENCY 5325 MHz
 CHANNEL BANDWIDTH 40 MHz
 MODULATION: 64QAM 270 Mbps
 DETECTOR Average



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:	11/26/2009		
Temperature: 23.7°C	Air Pressure: 1013 hPa	Relative Humidity: 47 %	Power Supply: 120 VAC
Remarks: EUT with 22.5 dBi antenna assembly gain			

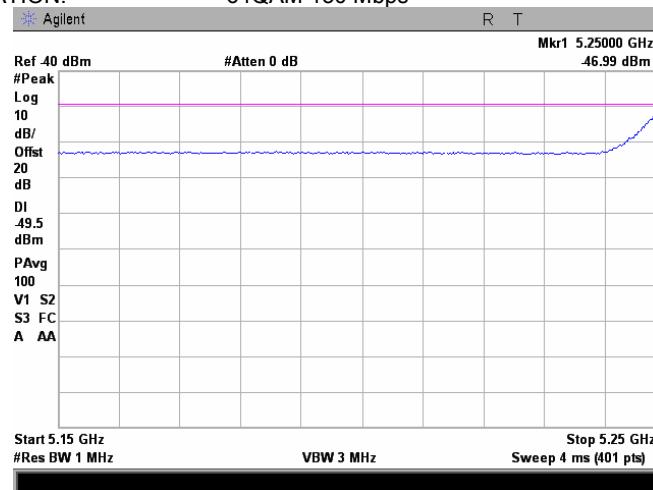
Plot 7.4.21 Conducted spurious emission measurements at the 5150 – 5250 MHz range

CARRIER FREQUENCY 5265 MHz
 CHANNEL BANDWIDTH 20 MHz
 MODULATION: BPSK 13 Mbps



Plot 7.4.22 Conducted spurious emission measurements 5150 – 5250 MHz range

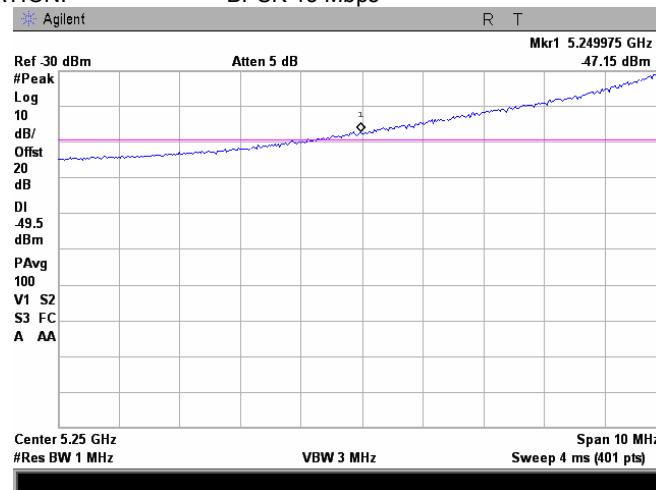
CARRIER FREQUENCY 5265 MHz
 CHANNEL BANDWIDTH 20 MHz
 MODULATION: 64QAM 130 Mbps



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:	11/26/2009		
Temperature: 23.7°C	Air Pressure: 1013 hPa	Relative Humidity: 47 %	Power Supply: 120 VAC
Remarks: EUT with 22.5 dBi antenna assembly gain			

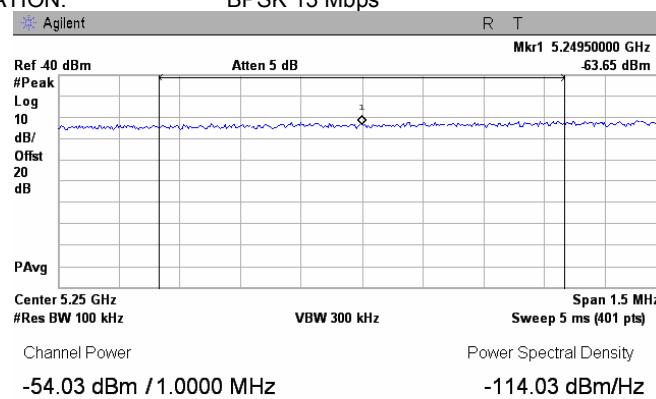
Plot 7.4.23 Conducted spurious emission measurements at the band edges

CARRIER FREQUENCY 5265 MHz
CHANNEL BANDWIDTH 20 MHz
MODULATION: BPSK 13 Mbps



Plot 7.4.24 Conducted spurious emission measurements at the band edges

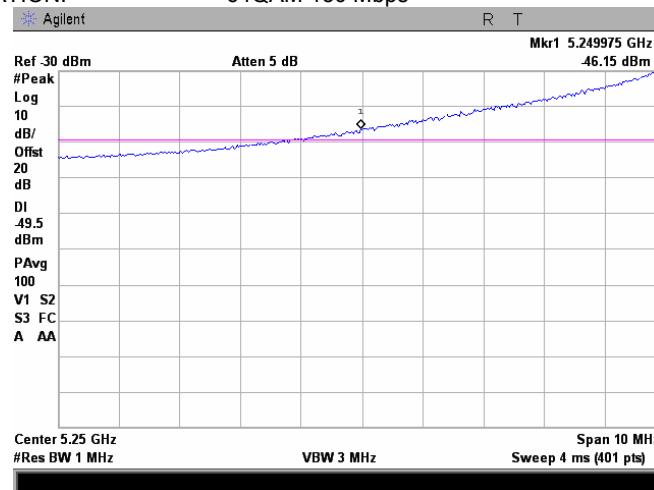
CARRIER FREQUENCY 5265 MHz
CHANNEL BANDWIDTH 20 MHz
MODULATION: BPSK 13 Mbps



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:	11/26/2009		
Temperature: 23.7°C	Air Pressure: 1013 hPa	Relative Humidity: 47 %	Power Supply: 120 VAC
Remarks: EUT with 22.5 dBi antenna assembly gain			

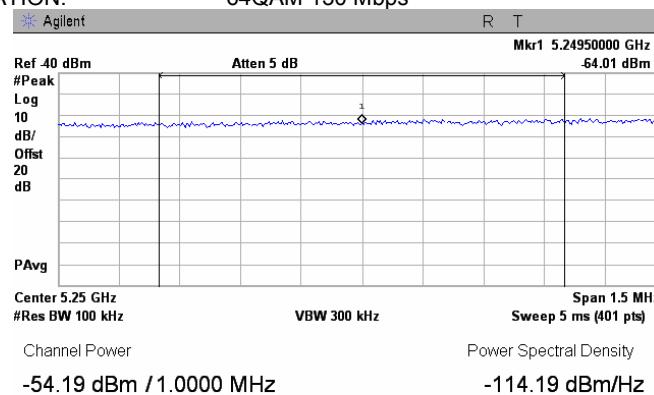
Plot 7.4.25 Conducted spurious emission measurements at the band edges

CARRIER FREQUENCY 5265 MHz
 CHANNEL BANDWIDTH 20 MHz
 MODULATION: 64QAM 130 Mbps



Plot 7.4.26 Conducted spurious emission measurements at the band edges

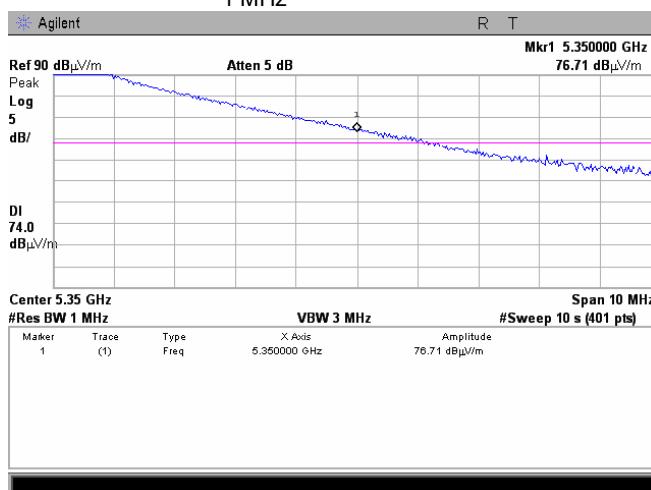
CARRIER FREQUENCY 5265 MHz
 CHANNEL BANDWIDTH 20 MHz
 MODULATION: 64QAM 130 Mbps



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:	
Date:	11/26/2009	PASS	
Temperature: 23.7°C	Air Pressure: 1013 hPa	Relative Humidity: 47 %	Power Supply: 120 VAC
Remarks: EUT with 22.5 dBi antenna assembly gain			

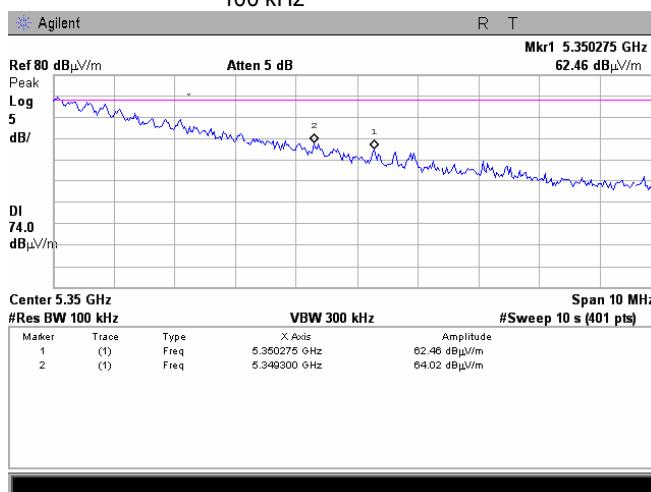
Plot 7.4.27 Radiated spurious emission measurements at the band edges

CARRIER FREQUENCY 5335 MHz
CHANNEL BANDWIDTH 20 MHz
MODULATION: BPSK 13 Mbps
DETECTOR Peak
RBW 1 MHz



Plot 7.4.28 Radiated spurious emission measurements at the band edges

CARRIER FREQUENCY 5335 MHz
CHANNEL BANDWIDTH 20 MHz
MODULATION: BPSK 13 Mbps
DETECTOR Peak
RBW 100 kHz

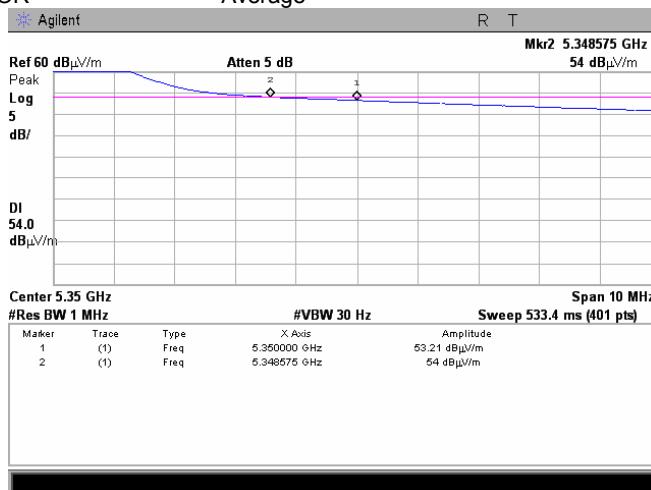


NOTE: Test result = SA Reading (Marker 1) + 10*log(1MHz/100kHz) = 62.46 + 10 = 72.46 dB μ V

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:	11/26/2009		
Temperature: 23.7°C	Air Pressure: 1013 hPa	Relative Humidity: 47 %	Power Supply: 120 VAC
Remarks: EUT with 22.5 dBi antenna assembly gain			

Plot 7.4.29 Radiated spurious emission measurements at the band edges

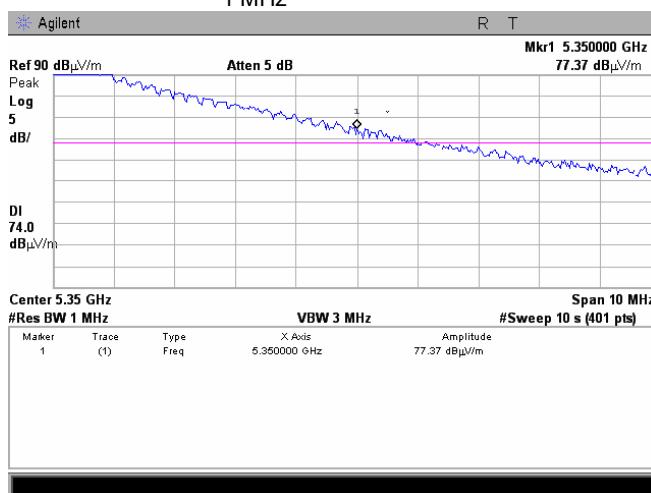
CARRIER FREQUENCY 5335 MHz
 CHANNEL BANDWIDTH 20 MHz
 MODULATION: BPSK 13 Mbps
 DETECTOR Average



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:	
Date:	11/26/2009	PASS	
Temperature: 23.7°C	Air Pressure: 1013 hPa	Relative Humidity: 47 %	Power Supply: 120 VAC
Remarks: EUT with 22.5 dBi antenna assembly gain			

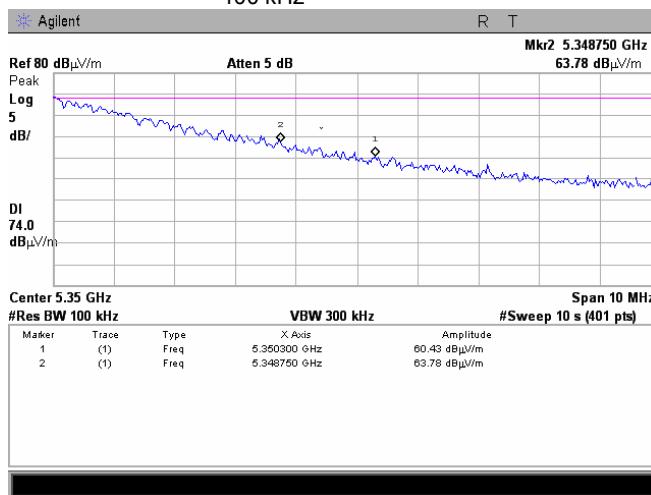
Plot 7.4.30 Radiated spurious emission measurements at the band edges

CARRIER FREQUENCY 5335 MHz
CHANNEL BANDWIDTH 20 MHz
MODULATION: 64QAM 130 Mbps
DETECTOR Peak
RBW 1 MHz



Plot 7.4.31 Radiated spurious emission measurements at the band edges

CARRIER FREQUENCY 5335 MHz
CHANNEL BANDWIDTH 20 MHz
MODULATION: 64QAM 130 Mbps
RBW 100 kHz

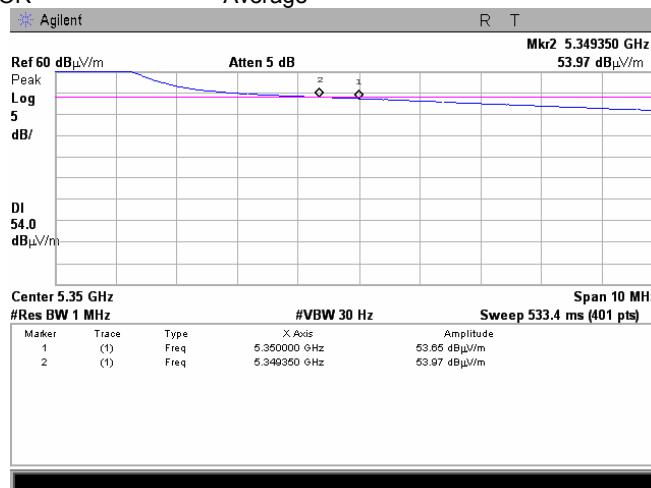


NOTE: Test result = SA Reading (Marker 1) + 10*log(1MHz/100kHz) = 60.43 + 10 = 70.43 dBuV

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:	11/26/2009		
Temperature: 23.7°C	Air Pressure: 1013 hPa	Relative Humidity: 47 %	Power Supply: 120 VAC
Remarks: EUT with 22.5 dBi antenna assembly gain			

Plot 7.4.32 Radiated spurious emission measurements at the band edges

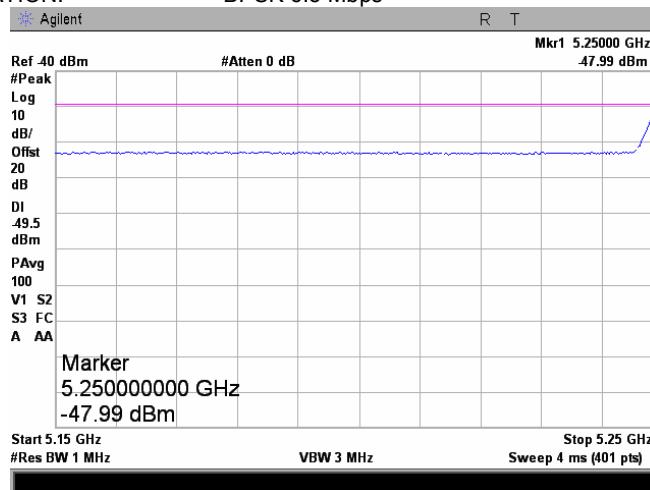
CARRIER FREQUENCY 5335 MHz
 CHANNEL BANDWIDTH 20 MHz
 MODULATION: 64QAM 130 Mbps
 DETECTOR Average



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:	11/26/2009		
Temperature: 23.7°C	Air Pressure: 1013 hPa	Relative Humidity: 47 %	Power Supply: 120 VAC
Remarks: EUT with 22.5 dBi antenna assembly gain			

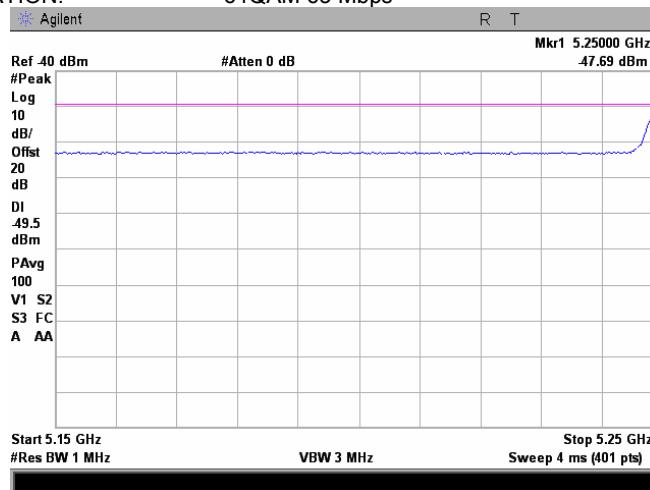
Plot 7.4.33 Conducted spurious emission measurements at the 5150 – 5250 MHz range

CARRIER FREQUENCY 5260 MHz
 CHANNEL BANDWIDTH 10 MHz
 MODULATION: BPSK 6.5 Mbps



Plot 7.4.34 Conducted spurious emission measurements 5150 – 5250 MHz range

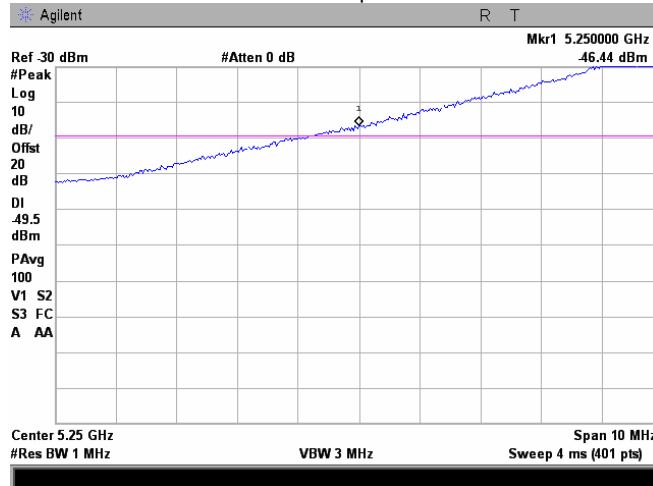
CARRIER FREQUENCY 5260 MHz
 CHANNEL BANDWIDTH 10 MHz
 MODULATION: 64QAM 65 Mbps



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:	11/26/2009		
Temperature: 23.7°C	Air Pressure: 1013 hPa	Relative Humidity: 47 %	Power Supply: 120 VAC
Remarks: EUT with 22.5 dBi antenna assembly gain			

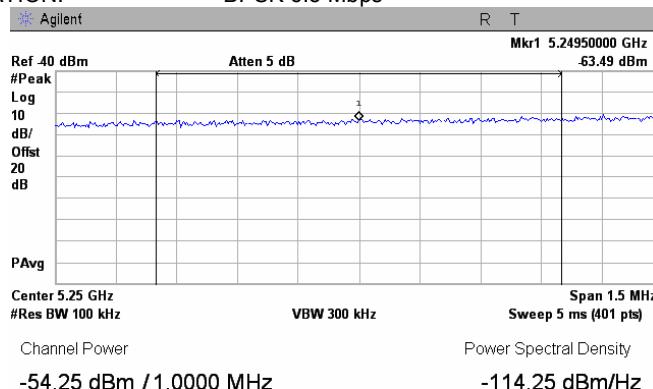
Plot 7.4.35 Conducted spurious emission measurements at the band edges

CARRIER FREQUENCY 5260 MHz
 CHANNEL BANDWIDTH 10 MHz
 MODULATION: BPSK 6.5 Mbps



Plot 7.4.36 Conducted spurious emission measurements at the band edges

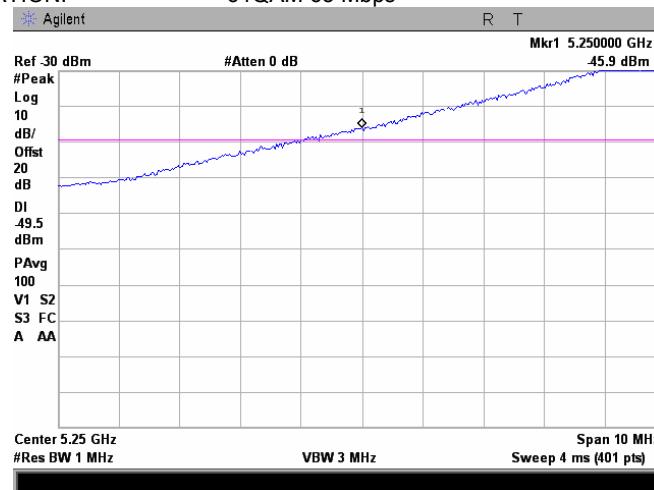
CARRIER FREQUENCY 5260 MHz
 CHANNEL BANDWIDTH 10 MHz
 MODULATION: BPSK 6.5 Mbps



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:	
Date:	11/26/2009	PASS	
Temperature: 23.7°C	Air Pressure: 1013 hPa	Relative Humidity: 47 %	Power Supply: 120 VAC
Remarks: EUT with 22.5 dBi antenna assembly gain			

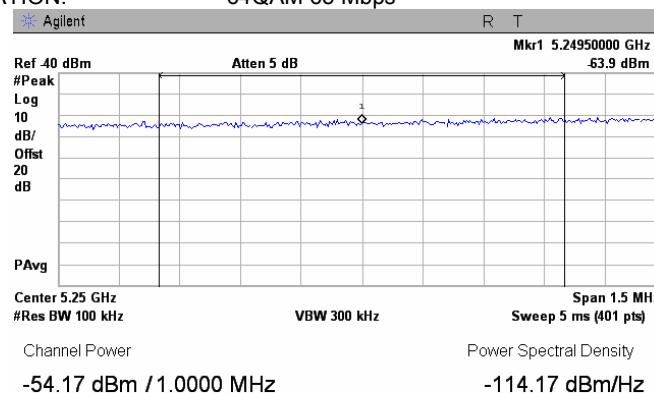
Plot 7.4.37 Conducted spurious emission measurements at the band edges

CARRIER FREQUENCY 5260 MHz
CHANNEL BANDWIDTH 10 MHz
MODULATION: 64QAM 65 Mbps



Plot 7.4.38 Conducted spurious emission measurements at the band edges

CARRIER FREQUENCY 5260 MHz
CHANNEL BANDWIDTH 10 MHz
MODULATION: 64QAM 65 Mbps



Channel Power

-54.17 dBm / 1.0000 MHz

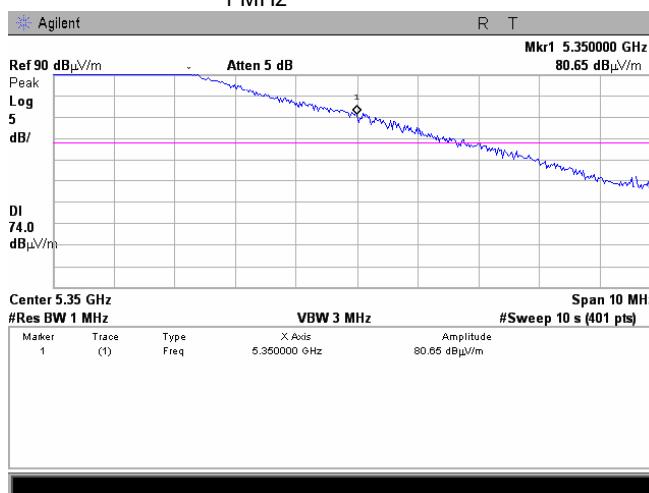
Power Spectral Density

-114.17 dBm/Hz

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:	
Date:	11/26/2009	PASS	
Temperature: 23.7°C	Air Pressure: 1013 hPa	Relative Humidity: 47 %	Power Supply: 120 VAC
Remarks: EUT with 22.5 dBi antenna assembly gain			

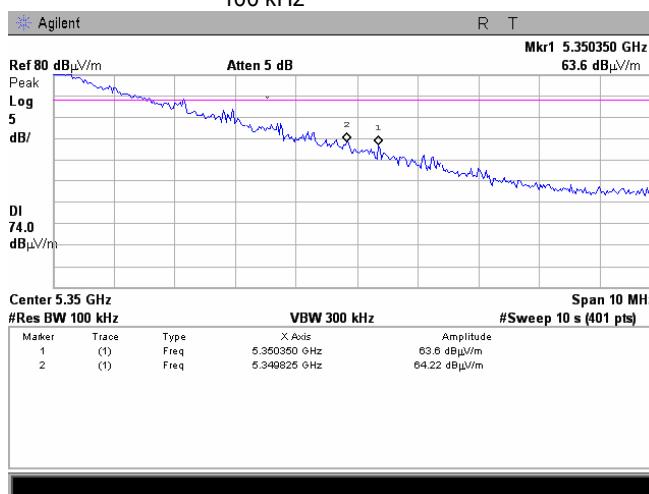
Plot 7.4.39 Radiated spurious emission measurements at the band edges

CARRIER FREQUENCY 5340 MHz
CHANNEL BANDWIDTH 10 MHz
MODULATION: BPSK 6.5 Mbps
DETECTOR Peak
RBW 1 MHz



Plot 7.4.40 Radiated spurious emission measurements at the band edges

CARRIER FREQUENCY 5340 MHz
CHANNEL BANDWIDTH 10 MHz
MODULATION: BPSK 6.5 Mbps
DETECTOR Peak
RBW 100 kHz

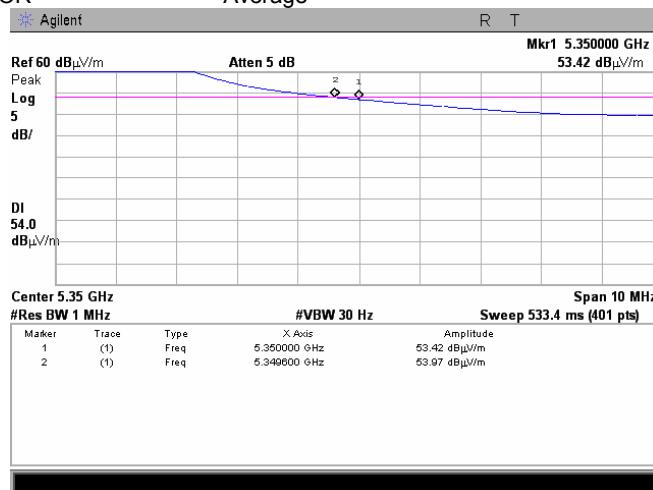


NOTE: Test result = SA Reading (Marker 1) + 10*log(1MHz/100kHz) = 63.6 + 10 = 73.6 dB μ V

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:	11/26/2009		
Temperature: 23.7°C	Air Pressure: 1013 hPa	Relative Humidity: 47 %	Power Supply: 120 VAC
Remarks: EUT with 22.5 dBi antenna assembly gain			

Plot 7.4.41 Radiated spurious emission measurements at the band edges

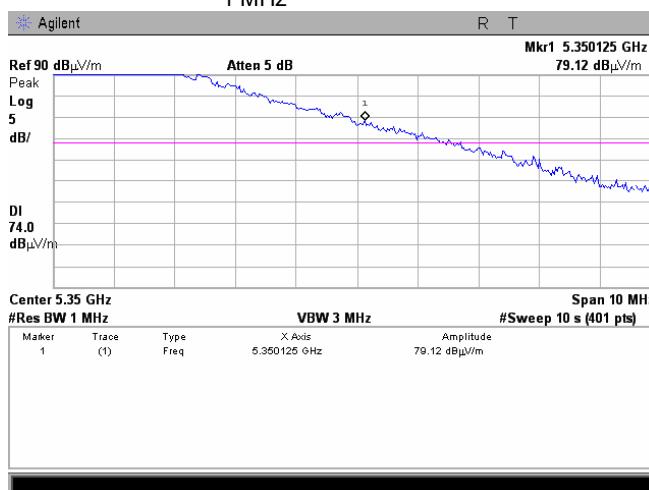
CARRIER FREQUENCY 5340 MHz
 CHANNEL BANDWIDTH 10 MHz
 MODULATION: BPSK 6.5 Mbps
 DETECTOR Average



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:	
Date:	11/26/2009	PASS	
Temperature: 23.7°C	Air Pressure: 1013 hPa	Relative Humidity: 47 %	Power Supply: 120 VAC
Remarks: EUT with 22.5 dBi antenna assembly gain			

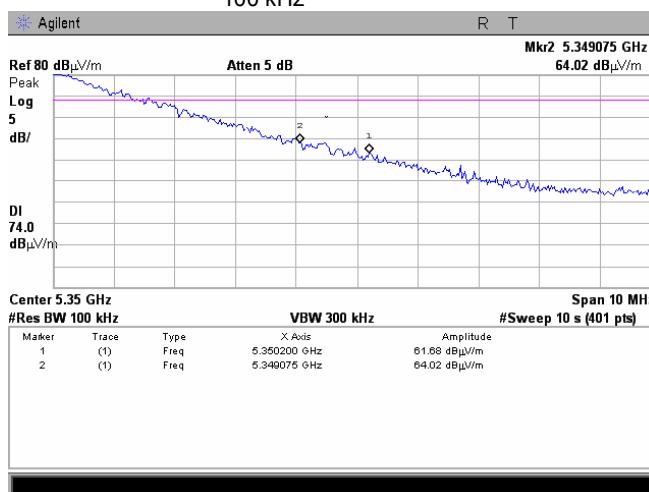
Plot 7.4.42 Radiated spurious emission measurements at the band edges

CARRIER FREQUENCY 5340 MHz
CHANNEL BANDWIDTH 10 MHz
MODULATION: 64QAM 65 Mbps
DETECTOR Peak
RBW 1 MHz



Plot 7.4.43 Radiated spurious emission measurements at the band edges

CARRIER FREQUENCY 5340 MHz
CHANNEL BANDWIDTH 10 MHz
MODULATION: 64QAM 65 Mbps
DETECTOR Peak
RBW 100 kHz

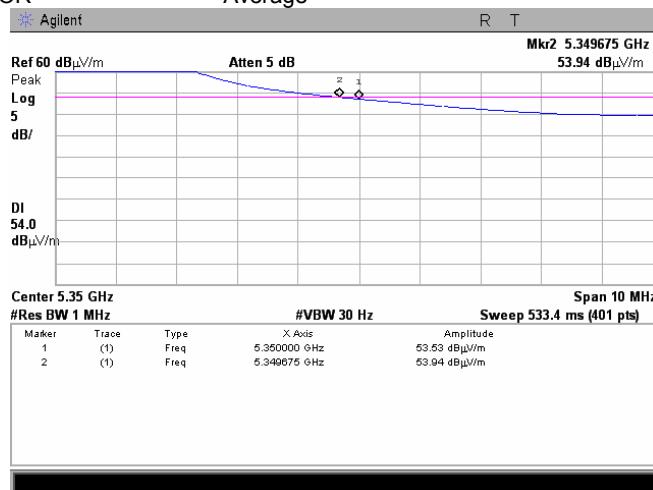


NOTE: Test result = SA Reading (Marker 1) + 10*log(1MHz/100kHz) = 61.68 + 10 = 71.68 dBuV

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:	
Date:	11/26/2009	PASS	
Temperature: 23.7°C	Air Pressure: 1013 hPa	Relative Humidity: 47 %	Power Supply: 120 VAC
Remarks: EUT with 22.5 dBi antenna assembly gain			

Plot 7.4.44 Radiated spurious emission measurements at the band edges

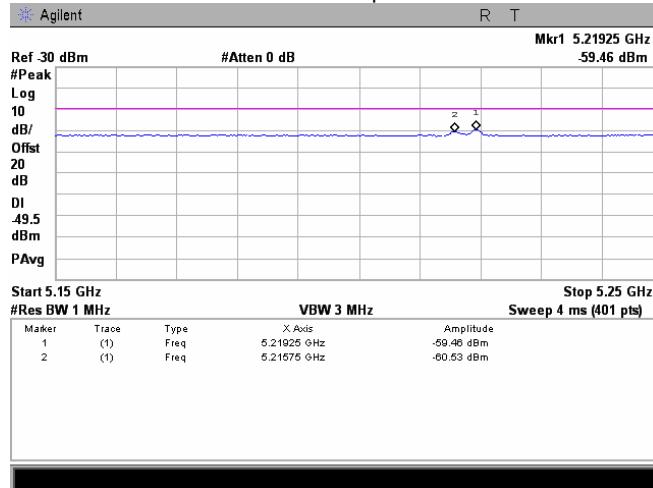
CARRIER FREQUENCY 5340 MHz
 CHANNEL BANDWIDTH 10 MHz
 MODULATION: 64QAM 65 Mbps
 DETECTOR Average



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:	11/26/2009		
Temperature: 23.7°C	Air Pressure: 1013 hPa	Relative Humidity: 47 %	Power Supply: 120 VAC
Remarks: EUT with 22.5 dBi antenna assembly gain			

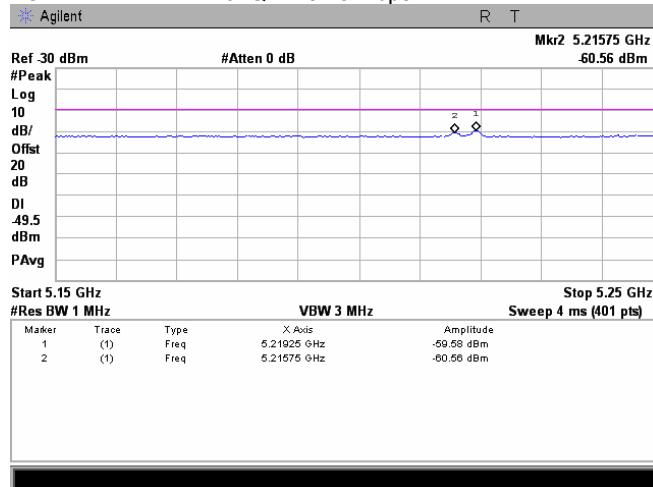
Plot 7.4.45 Conducted spurious emission measurements at the 5150 – 5250 MHz range

CARRIER FREQUENCY 5257.5 MHz
CHANNEL BANDWIDTH 5 MHz
MODULATION: BPSK 3.25 Mbps



Plot 7.4.46 Conducted spurious emission measurements 5150 – 5250 MHz range

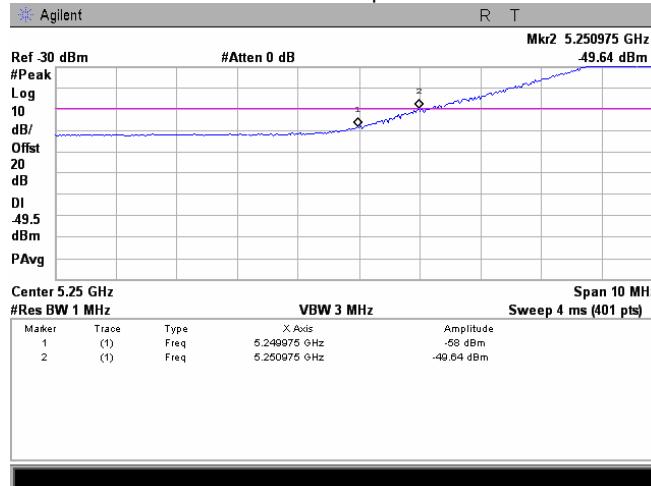
CARRIER FREQUENCY 5257.5 MHz
CHANNEL BANDWIDTH 5 MHz
MODULATION: 64QAM 32.5 Mbps



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:	
Date:	11/26/2009	PASS	
Temperature: 23.7°C	Air Pressure: 1013 hPa	Relative Humidity: 47 %	Power Supply: 120 VAC
Remarks: EUT with 22.5 dBi antenna assembly gain			

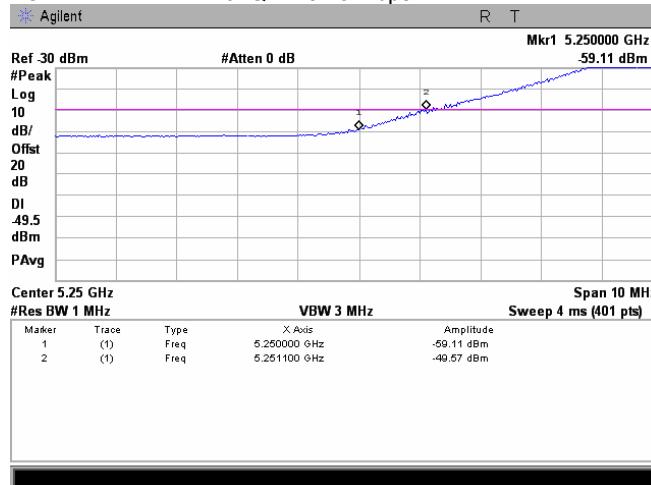
Plot 7.4.47 Conducted spurious emission measurements at the band edges

CARRIER FREQUENCY 5257.5 MHz
CHANNEL BANDWIDTH 5 MHz
MODULATION: BPSK 3.25 Mbps



Plot 7.4.48 Conducted spurious emission measurements at the band edges

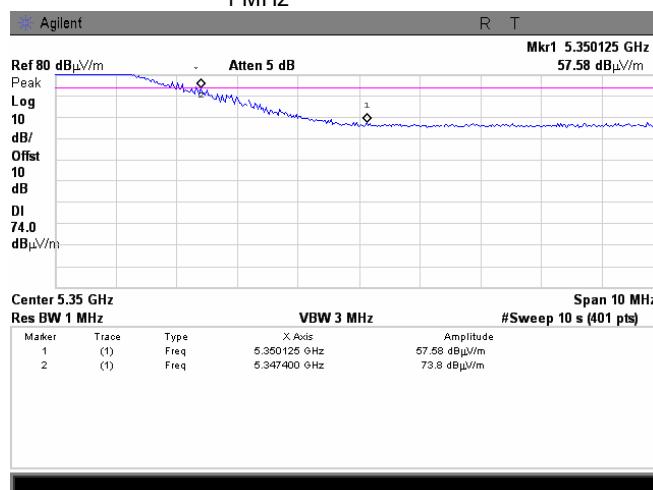
CARRIER FREQUENCY 5257.5 MHz
CHANNEL BANDWIDTH 5 MHz
MODULATION: 64QAM 32.5 Mbps



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:	11/26/2009		
Temperature: 23.7°C	Air Pressure: 1013 hPa	Relative Humidity: 47 %	Power Supply: 120 VAC
Remarks: EUT with 22.5 dBi antenna assembly gain			

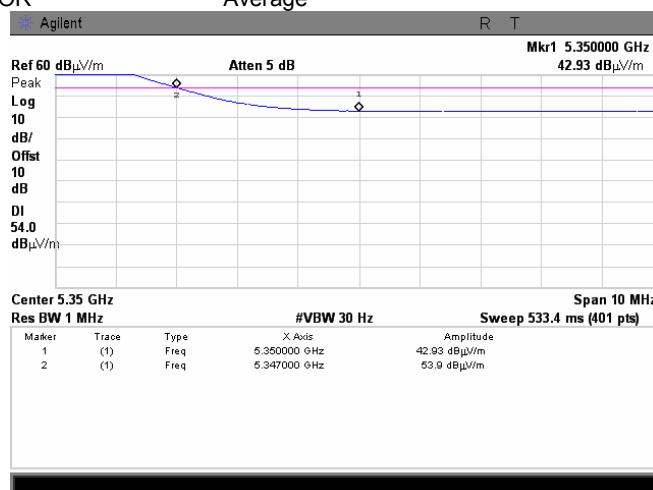
Plot 7.4.49 Radiated spurious emission measurements at the band edges

CARRIER FREQUENCY 5342.5 MHz
CHANNEL BANDWIDTH 5 MHz
MODULATION: BPSK 3.25 Mbps
DETECTOR Peak
RBW 1 MHz



Plot 7.4.50 Radiated spurious emission measurements at the band edges

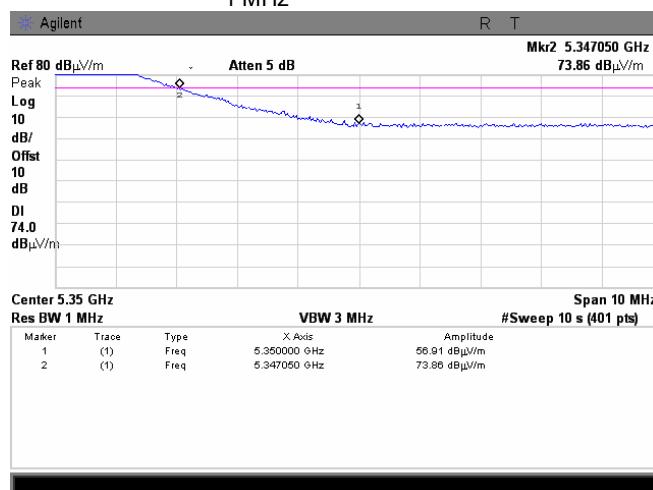
CARRIER FREQUENCY 5342.5 MHz
CHANNEL BANDWIDTH 5 MHz
MODULATION: BPSK 3.25 Mbps
DETECTOR Average



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:	
Date:	11/26/2009	PASS	
Temperature: 23.7°C	Air Pressure: 1013 hPa	Relative Humidity: 47 %	Power Supply: 120 VAC
Remarks: EUT with 22.5 dBi antenna assembly gain			

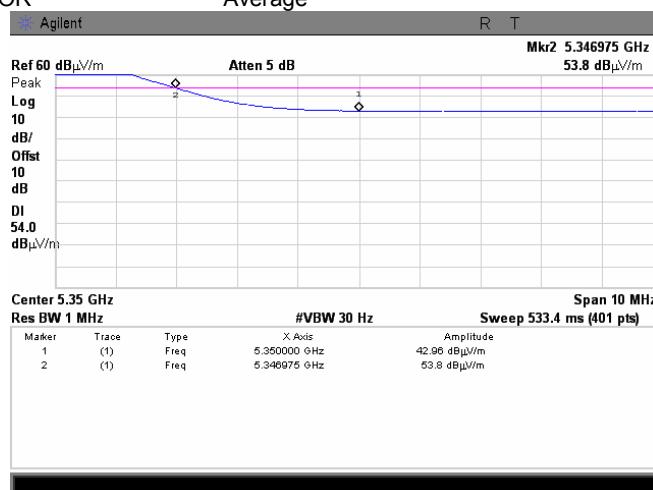
Plot 7.4.51 Radiated spurious emission measurements at the band edges

CARRIER FREQUENCY 5342.5 MHz
CHANNEL BANDWIDTH 5 MHz
MODULATION: 64QAM 32.5 Mbps
DETECTOR Peak
RBW 1 MHz



Plot 7.4.52 Radiated spurious emission measurements at the band edges

CARRIER FREQUENCY 5342.5 MHz
CHANNEL BANDWIDTH 5 MHz
MODULATION: 64QAM 32.5 Mbps
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:	12/10/2009		
Temperature: 22°C	Air Pressure: 1010 hPa	Relative Humidity: 54 %	Power Supply: 120 VAC
Remarks: EUT with 28 dBi antenna assembly gain			

Table 7.4.5 Conducted spurious emission test results

ASSIGNED FREQUENCY RANGE: 5250 – 5350 MHz
 DETECTOR USED: Peak, 100 Power averaging
 TRANSMITTER OUTPUT POWER: Maximum
 RESOLUTION BANDWIDTH: 1000 kHz
 VIDEO BANDWIDTH: 3000 kHz
 MODULATING SIGNAL: OFDM
 MODULATION: BPSK/64QAM
 EMISSION BANDWIDTH: 40/20/10/5 MHz

Frequency, MHz	Modulation	Bit rate, Mbps	CBW, MHz	SA reading, dBm	Antenna assembly gain, dBi	EIRP, * dBm/MHz	Limit, dBm/MHz	Margin**, dB	Verdict
Low frequency 5275MHz									
5250.000	BPSK	27	40	-55.23	28.0	-27.23	-27.0	-0.23	Pass
5250.000	64QAM	270		-55.81	28.0	-27.81	-27.0	-0.81	Pass
Low frequency 5285MHz									
5249.950	BPSK	27	40	-56.01	28.0	-28.01	-27.0	-1.01	Pass
5249.925	64QAM	270		-55.39	28.0	-27.39	-27.0	-0.39	Pass
Low frequency 5265MHz									
5250.000	BPSK	13	20	-55.57	28.0	-27.57	-27.0	-0.57	Pass
5250.000	64QAM	130		-55.64	28.0	-27.64	-27.0	-0.64	Pass
Low frequency 5260MHz									
5250.000	BPSK	6.5	10	-55.92	28.0	-27.92	-27.0	-0.92	Pass
5250.000	64QAM	65		-55.78	28.0	-27.78	-27.0	-0.78	Pass
Low frequency 5257.5MHz									
5215.750	BPSK	3.25	5	-62.04	28.0	-34.04	-27.0	-7.04	Pass
5219.250	BPSK	3.25		-61.47	28.0	-33.47	-27.0	-6.47	Pass
5219.250	64QAM	32.5		-61.84	28.0	-33.84	-27.0	-6.84	Pass
5250.000	64QAM	32.5		-61.48	28.0	-33.48	-27.0	-6.48	Pass

* - EIRP = SA reading (dBm) + Antenna assembly

**- Margin = EIRP – limit.

Reference numbers of test equipment used

HL 2780	HL 2883	HL 3176					
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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:	12/10/2009		
Temperature: 22°C	Air Pressure: 1010 hPa	Relative Humidity: 54 %	Power Supply: 120 VAC
Remarks: EUT with 28 dBi antenna assembly gain			

Table 7.4.6 Field strength of spurious emissions at high edge

ASSIGNED FREQUENCY: 5250 – 5350 MHz
 TEST DISTANCE: 3 m
 MODULATION: BPSK/64QAM
 TRANSMITTER OUTPUT POWER: Maximum
 DETECTOR USED: Peak
 RESOLUTION BANDWIDTH: 1000 kHz
 TEST ANTENNA TYPE: Double ridged guide

Frequency, MHz	Bit rate, Mbps	Antenna		Azimuth, degrees*	Peak field strength			Average field strength			Verdict
		Polarization	Height, m		Measured, dB(µV/m)	Limit, dB(µV/m)	Margin, dB**	Measured, dB(µV/m)	Limit, dB(µV/m)	Margin, dB**	
High frequency 5315.0 MHz EBW 40 MHz EBW											
5350.000	27	Vertical	1.0	0	67.76	74.0	-6.24	48.21	54.0	-5.79	Pass
5350.000	270	Vertical	1.0	0	64.07	74.0	-9.93	48.39	54.0	-5.61	
High frequency 5325.0 MHz EBW 40 MHz EBW											
5350.000	27	Vertical	1.0	0	73.90	74.0	-0.10	51.22	54.0	-2.78	Pass
5350.000	270	Vertical	1.0	0	73.70	74.0	-0.30	51.47	54.0	-2.53	
High frequency 5335.0 MHz EBW 20 MHz EBW											
5350.275	13	Vertical	1.0	0	69.54	74.0	-4.46	51.96	54.0	-2.04	Pass
5350.000	130	Vertical	1.0	0	68.18	74.0	-5.82	51.61	54.0	-2.39	
High frequency 5340.0 MHz EBW 10 MHz EBW											
5350.000	6.5	Vertical	1.0	0	70.11	74.0	-3.89	51.80	54.0	-2.20	Pass
5350.000	65	Vertical	1.0	0	68.86	74.0	-5.14	51.62	54.0	-2.38	
High frequency 5342.5 MHz EBW 5 MHz EBW											
5350.000	3.25	Vertical	1.0	0	53.58	74.0	-20.42	41.26	54.0	-12.74	Pass
5350.000	32.5	Vertical	1.0	0	53.66	74.0	-20.34	40.83	54.0	-13.17	

*- Margin = Measured emission – specification limit.

**- EUT front panel refers to 0 degrees position of turntable.

Reference numbers of test equipment used

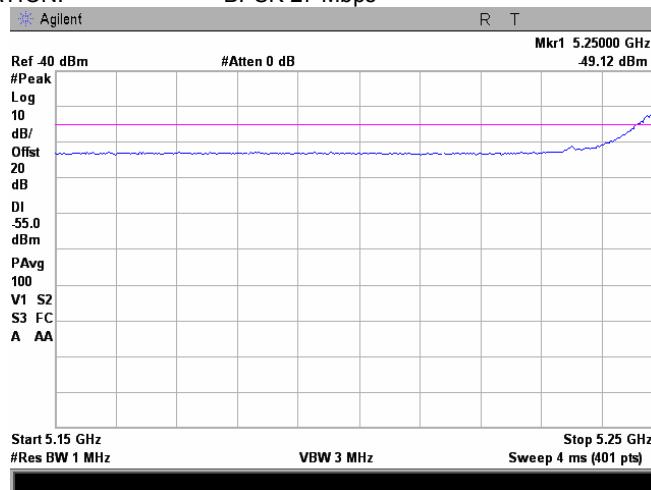
HL 0554	HL 1984	HL 2780	HL 3122	HL 3123		
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Full description is given in Appendix A.

Test specification:	FCC section 15.407(b), RSS-210 Annex 9, section A9.2 <u>Conducted emissions at band edges</u>		
Test procedure:	Public notice DA 00-705 / ANSI C63.4, Section 13.1.4		
Test mode:	Compliance	Verdict: PASS	
Date:	12/10/2009		
Temperature: 22°C	Air Pressure: 1010 hPa	Relative Humidity: 54 %	Power Supply: 120 VAC
Remarks: EUT with 28 dBi antenna assembly gain			

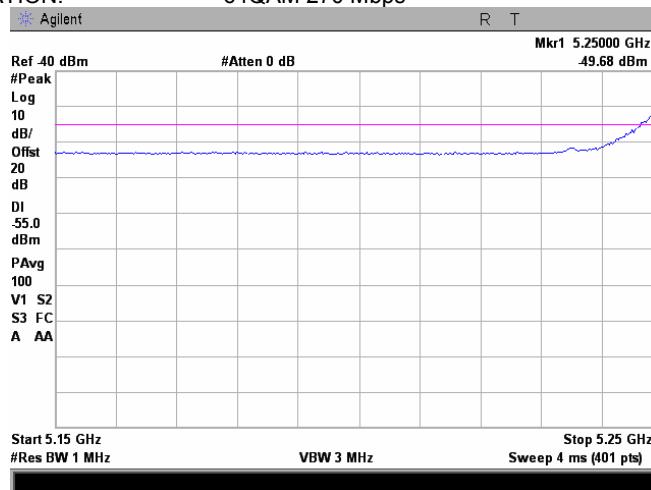
Plot 7.4.53 Conducted spurious emission measurements at the 5150 – 5250 MHz range

CARRIER FREQUENCY 5275 MHz
 CHANNEL BANDWIDTH 40 MHz
 MODULATION: BPSK 27 Mbps



Plot 7.4.54 Conducted spurious emission measurements 5150 – 5250 MHz range

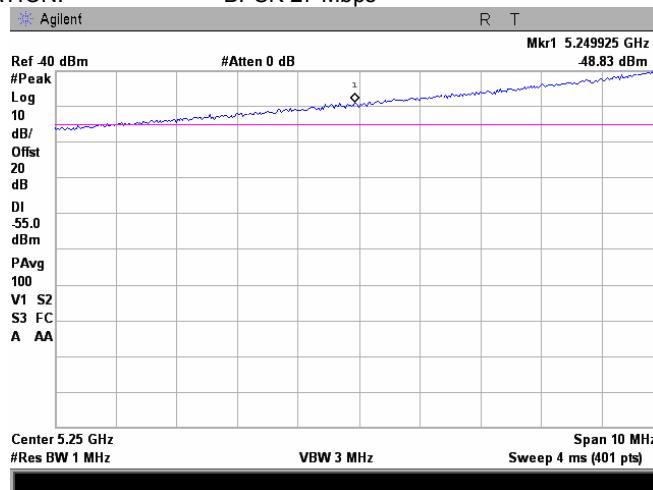
CARRIER FREQUENCY 5275 MHz
 CHANNEL BANDWIDTH 40 MHz
 MODULATION: 64QAM 270 Mbps



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:	
Date:	12/10/2009	PASS	
Temperature: 22°C	Air Pressure: 1010 hPa	Relative Humidity: 54 %	Power Supply: 120 VAC
Remarks: EUT with 28 dBi antenna assembly gain			

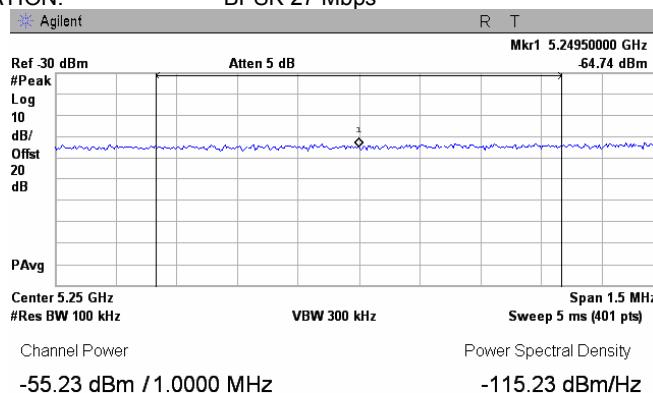
Plot 7.4.55 Conducted spurious emission measurements at the band edges

CARRIER FREQUENCY 5275 MHz
 CHANNEL BANDWIDTH 40 MHz
 MODULATION: BPSK 27 Mbps



Plot 7.4.56 Conducted spurious emission measurements at the band edges

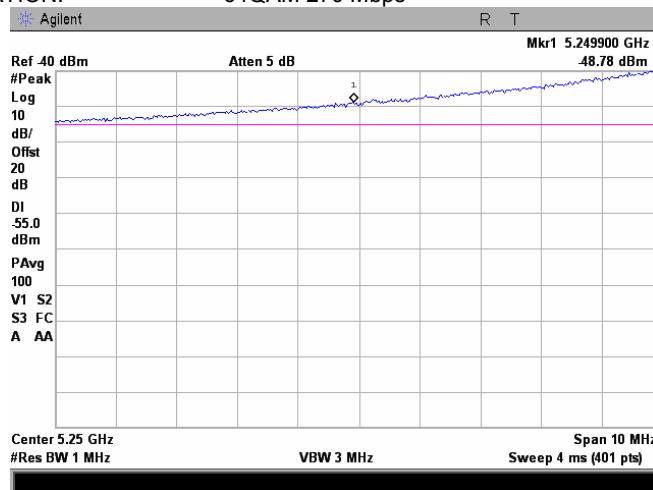
CARRIER FREQUENCY 5275 MHz
 CHANNEL BANDWIDTH 40 MHz
 MODULATION: BPSK 27 Mbps



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:	12/10/2009		
Temperature: 22°C	Air Pressure: 1010 hPa	Relative Humidity: 54 %	Power Supply: 120 VAC
Remarks: EUT with 28 dBi antenna assembly gain			

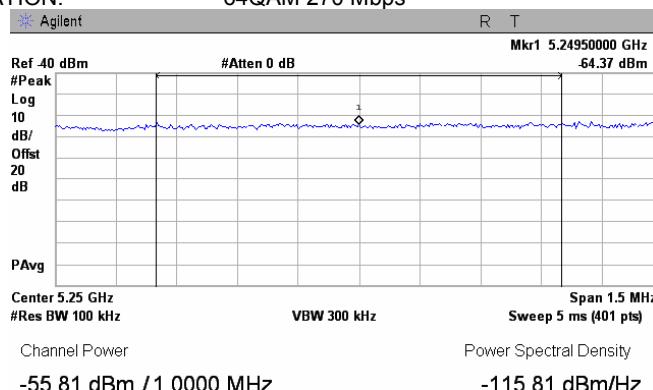
Plot 7.4.57 Conducted spurious emission measurements at the band edges

CARRIER FREQUENCY 5275 MHz
CHANNEL BANDWIDTH 40 MHz
MODULATION: 64QAM 270 Mbps



Plot 7.4.58 Conducted spurious emission measurements at the band edges

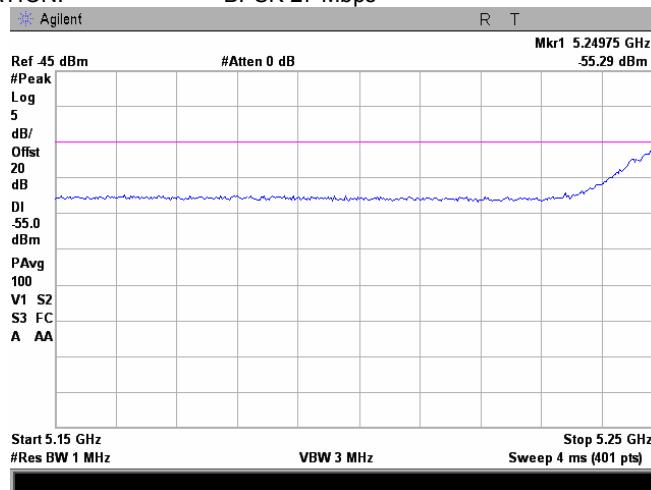
CARRIER FREQUENCY 5275 MHz
CHANNEL BANDWIDTH 40 MHz
MODULATION: 64QAM 270 Mbps



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:	12/10/2009		
Temperature: 22°C	Air Pressure: 1010 hPa	Relative Humidity: 54 %	Power Supply: 120 VAC
Remarks: EUT with 28 dBi antenna assembly gain			

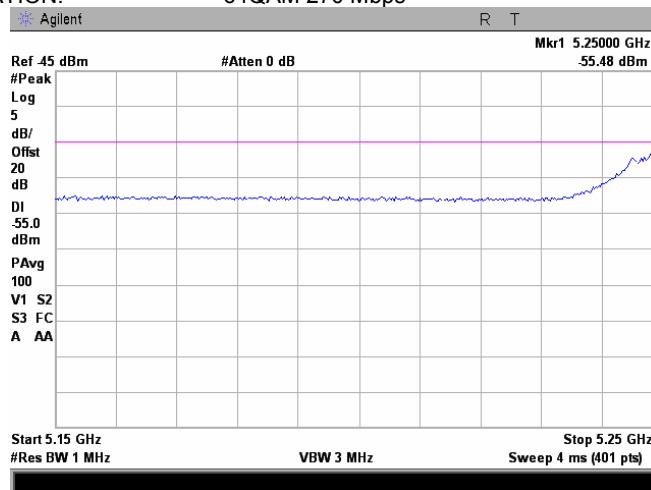
Plot 7.4.59 Conducted spurious emission measurements at the 5150 – 5250 MHz range

CARRIER FREQUENCY 5285 MHz
CHANNEL BANDWIDTH 40 MHz
MODULATION: BPSK 27 Mbps



Plot 7.4.60 Conducted spurious emission measurements 5150 – 5250 MHz range

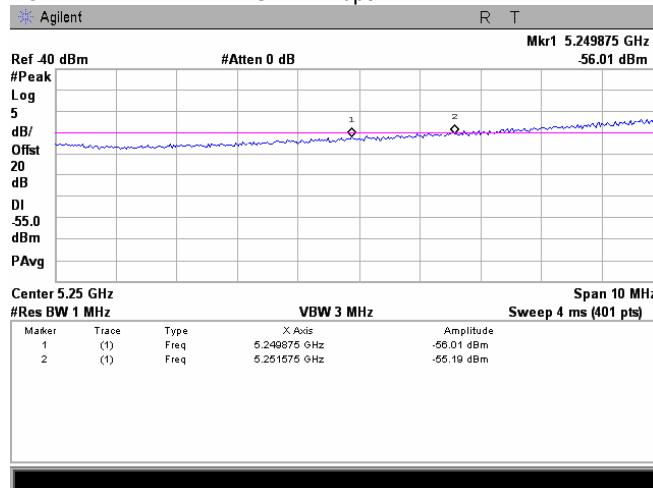
CARRIER FREQUENCY 5285 MHz
CHANNEL BANDWIDTH 40 MHz
MODULATION: 64QAM 270 Mbps



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:	12/10/2009		
Temperature: 22°C	Air Pressure: 1010 hPa	Relative Humidity: 54 %	Power Supply: 120 VAC
Remarks: EUT with 28 dBi antenna assembly gain			

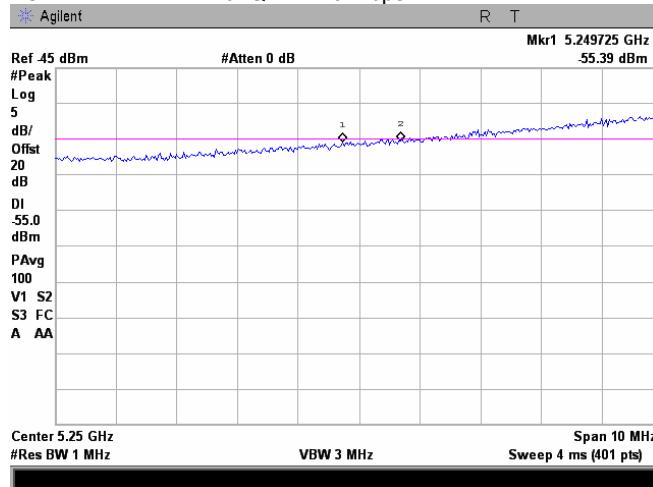
Plot 7.4.61 Conducted spurious emission measurements at the band edges

CARRIER FREQUENCY 5285 MHz
CHANNEL BANDWIDTH 40 MHz
MODULATION: BPSK 27 Mbps



Plot 7.4.62 Conducted spurious emission measurements at the band edges

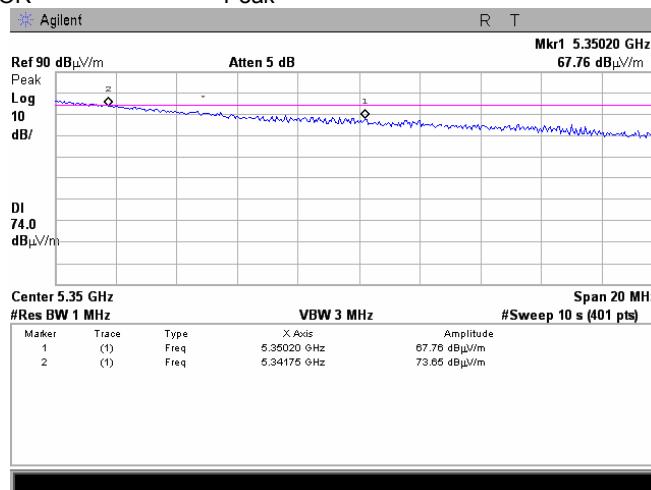
CARRIER FREQUENCY 5285 MHz
CHANNEL BANDWIDTH 40 MHz
MODULATION: 64QAM 270 Mbps



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:	
Date:	12/10/2009	PASS	
Temperature: 22°C	Air Pressure: 1010 hPa	Relative Humidity: 54 %	Power Supply: 120 VAC
Remarks: EUT with 28 dBi antenna assembly gain			

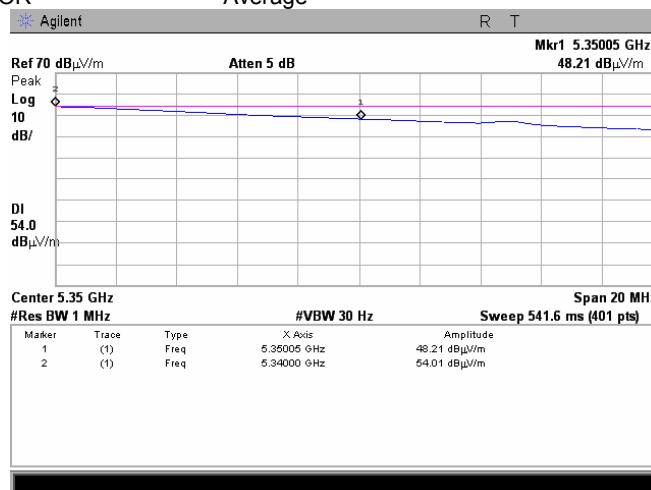
Plot 7.4.63 Radiated spurious emission measurements at the band edges

CARRIER FREQUENCY 5315 MHz
CHANNEL BANDWIDTH 40 MHz
MODULATION: BPSK 27 Mbps
DETECTOR Peak



Plot 7.4.64 Radiated spurious emission measurements at the band edges

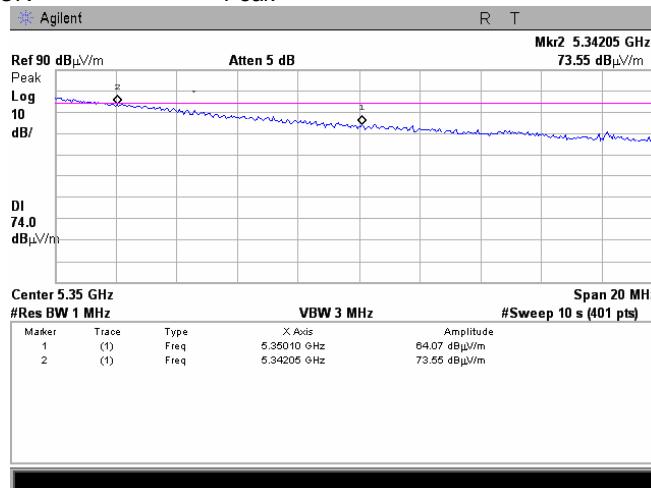
CARRIER FREQUENCY 5315 MHz
CHANNEL BANDWIDTH 40 MHz
MODULATION: BPSK 27 Mbps
DETECTOR Average



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:	
Date:	12/10/2009	PASS	
Temperature: 22°C	Air Pressure: 1010 hPa	Relative Humidity: 54 %	Power Supply: 120 VAC
Remarks: EUT with 28 dBi antenna assembly gain			

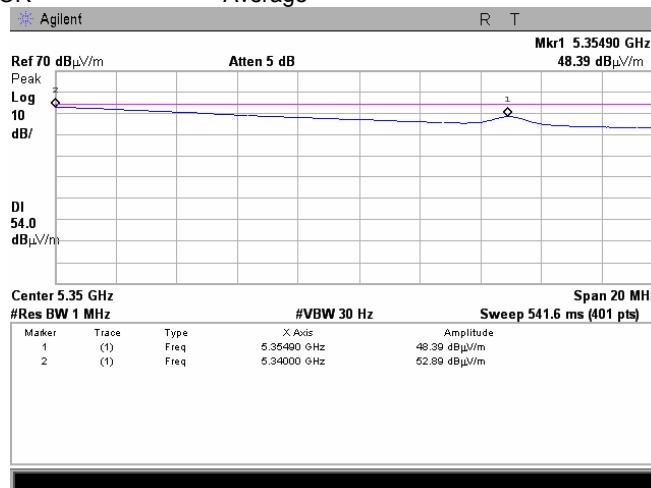
Plot 7.4.65 Radiated spurious emission measurements at the band edges

CARRIER FREQUENCY 5315 MHz
CHANNEL BANDWIDTH 40 MHz
MODULATION: 64QAM 270 Mbps
DETECTOR Peak



Plot 7.4.66 Radiated spurious emission measurements at the band edges

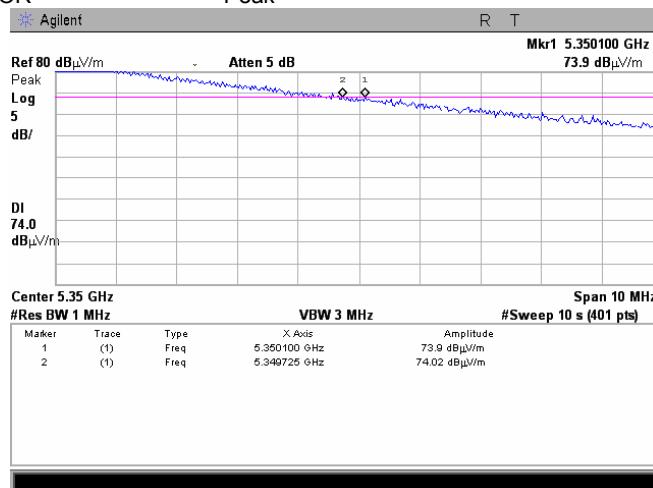
CARRIER FREQUENCY 5315 MHz
CHANNEL BANDWIDTH 40 MHz
MODULATION: 64QAM 270 Mbps
DETECTOR Average



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:	
Date:	12/10/2009	PASS	
Temperature: 22°C	Air Pressure: 1010 hPa	Relative Humidity: 54 %	Power Supply: 120 VAC
Remarks: EUT with 28 dBi antenna assembly gain			

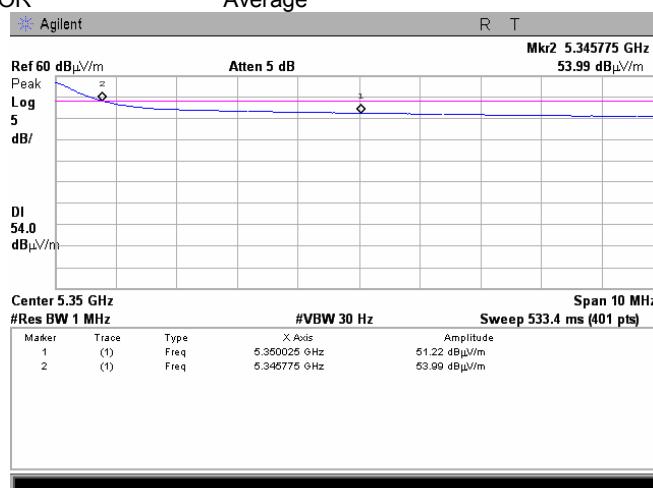
Plot 7.4.67 Radiated spurious emission measurements at the band edges

CARRIER FREQUENCY 5325 MHz
CHANNEL BANDWIDTH 40 MHz
MODULATION: BPSK 27 Mbps
DETECTOR Peak



Plot 7.4.68 Radiated spurious emission measurements at the band edges

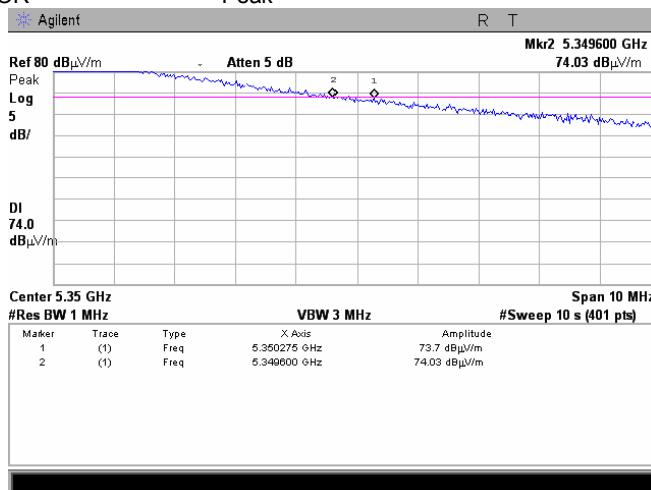
CARRIER FREQUENCY 5325 MHz
CHANNEL BANDWIDTH 40 MHz
MODULATION: BPSK 27 Mbps
DETECTOR Average



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:	
Date:	12/10/2009	PASS	
Temperature: 22°C	Air Pressure: 1010 hPa	Relative Humidity: 54 %	Power Supply: 120 VAC
Remarks: EUT with 28 dBi antenna assembly gain			

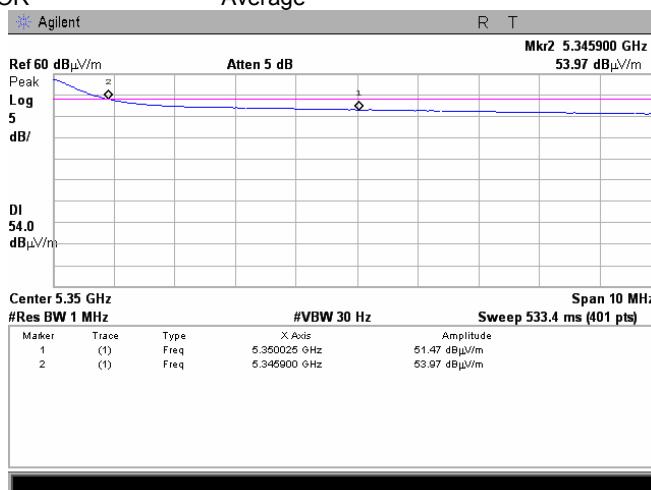
Plot 7.4.69 Radiated spurious emission measurements at the band edges

CARRIER FREQUENCY 5325 MHz
CHANNEL BANDWIDTH 40 MHz
MODULATION: 64QAM 270 Mbps
DETECTOR Peak



Plot 7.4.70 Radiated spurious emission measurements at the band edges

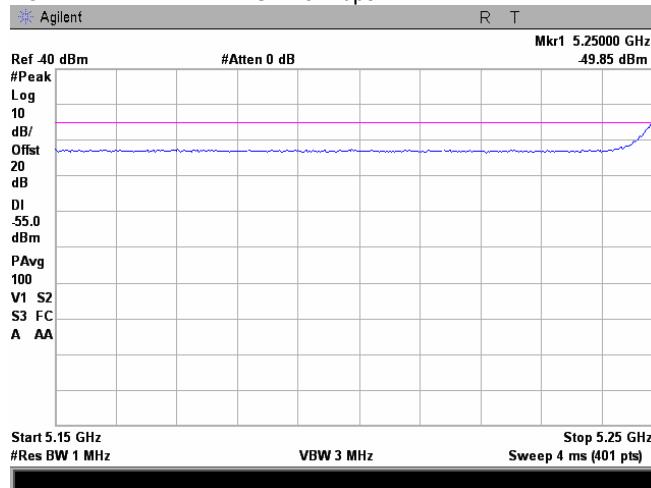
CARRIER FREQUENCY 5325 MHz
CHANNEL BANDWIDTH 40 MHz
MODULATION: 64QAM 270 Mbps
DETECTOR Average



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:	12/10/2009		
Temperature: 22°C	Air Pressure: 1010 hPa	Relative Humidity: 54 %	Power Supply: 120 VAC
Remarks: EUT with 28 dBi antenna assembly gain			

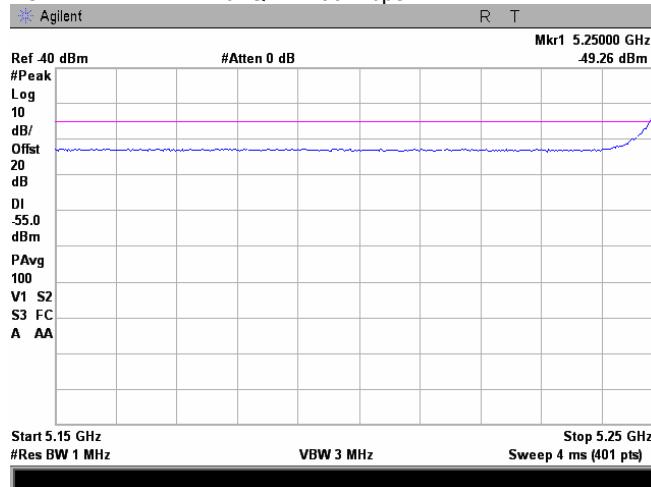
Plot 7.4.71 Conducted spurious emission measurements at the 5150 – 5250 MHz range

CARRIER FREQUENCY 5265 MHz
CHANNEL BANDWIDTH 20 MHz
MODULATION: BPSK 13 Mbps



Plot 7.4.72 Conducted spurious emission measurements 5150 – 5250 MHz range

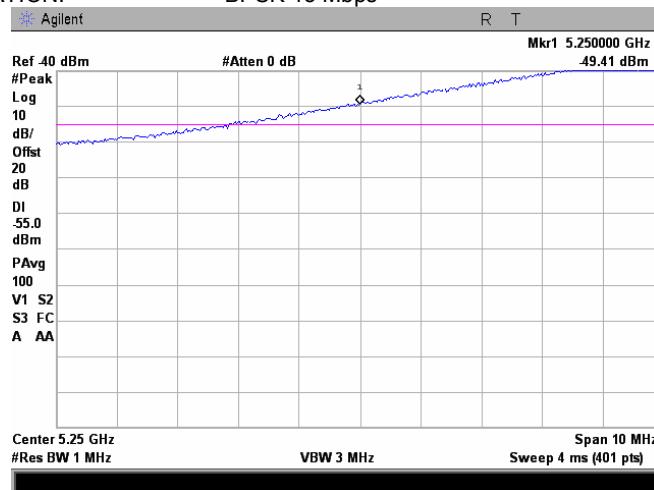
CARRIER FREQUENCY 5265 MHz
CHANNEL BANDWIDTH 20 MHz
MODULATION: 64QAM 130 Mbps



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:	12/10/2009		
Temperature: 22°C	Air Pressure: 1010 hPa	Relative Humidity: 54 %	Power Supply: 120 VAC
Remarks: EUT with 28 dBi antenna assembly gain			

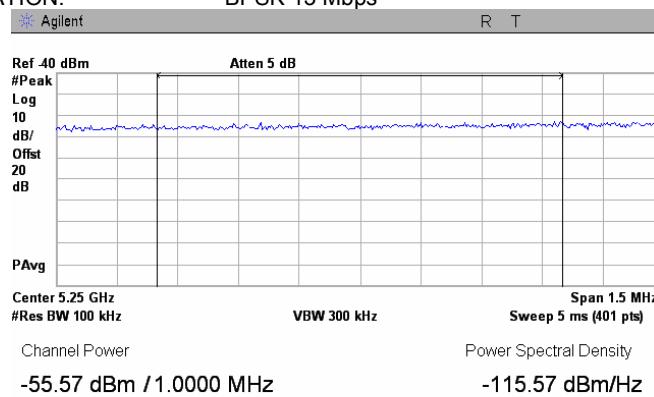
Plot 7.4.73 Conducted spurious emission measurements at the band edges

CARRIER FREQUENCY 5265 MHz
 CHANNEL BANDWIDTH 20 MHz
 MODULATION: BPSK 13 Mbps



Plot 7.4.74 Conducted spurious emission measurements at the band edges

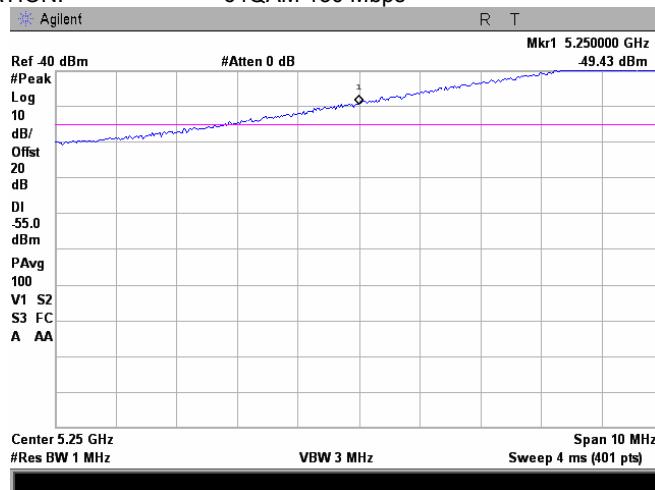
CARRIER FREQUENCY 5265 MHz
 CHANNEL BANDWIDTH 20 MHz
 MODULATION: BPSK 13 Mbps



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:	
Date:	12/10/2009	PASS	
Temperature: 22°C	Air Pressure: 1010 hPa	Relative Humidity: 54 %	Power Supply: 120 VAC
Remarks: EUT with 28 dBi antenna assembly gain			

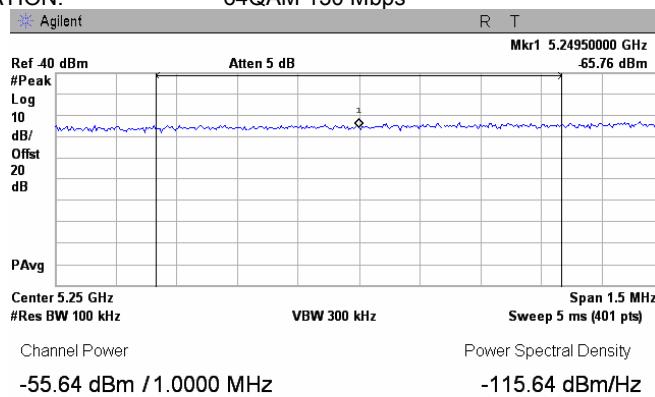
Plot 7.4.75 Conducted spurious emission measurements at the band edges

CARRIER FREQUENCY 5265 MHz
CHANNEL BANDWIDTH 20 MHz
MODULATION: 64QAM 130 Mbps



Plot 7.4.76 Conducted spurious emission measurements at the band edges

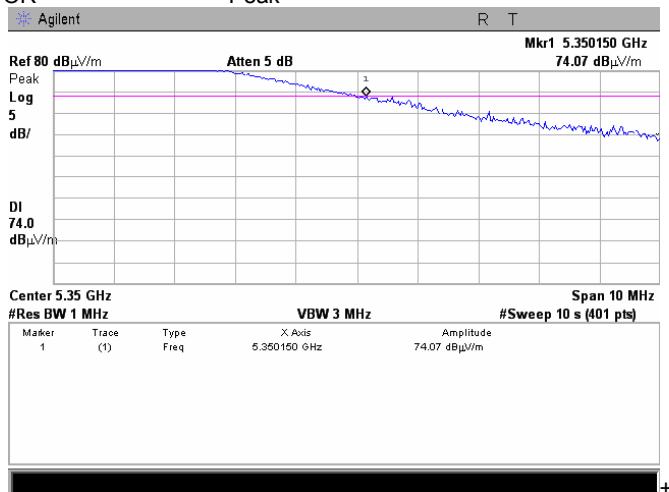
CARRIER FREQUENCY 5265 MHz
CHANNEL BANDWIDTH 20 MHz
MODULATION: 64QAM 130 Mbps



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:	
Date:	12/10/2009	PASS	
Temperature: 22°C	Air Pressure: 1010 hPa	Relative Humidity: 54 %	Power Supply: 120 VAC
Remarks: EUT with 28 dBi antenna assembly gain			

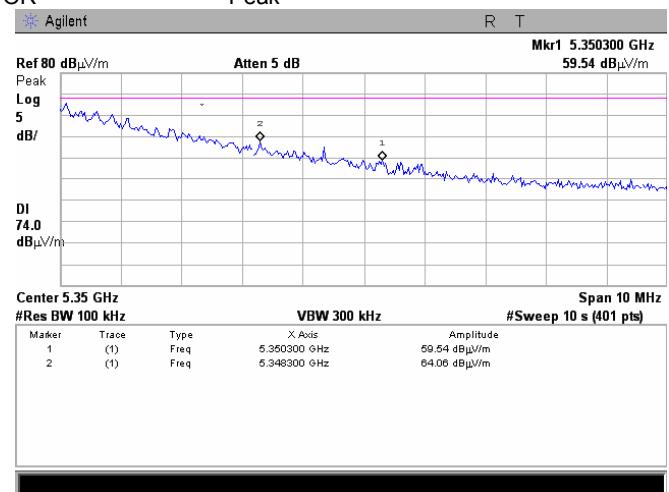
Plot 7.4.77 Radiated spurious emission measurements at the band edges, RBW=1MHz

CARRIER FREQUENCY 5335 MHz
CHANNEL BANDWIDTH 20 MHz
MODULATION: 64QAM 130 Mbps
DETECTOR Peak



Plot 7.4.78 Radiated spurious emission measurements at the band edges, RBW=100 kHz

CARRIER FREQUENCY 5335 MHz
CHANNEL BANDWIDTH 20 MHz
MODULATION: 64QAM 130 Mbps
DETECTOR Peak

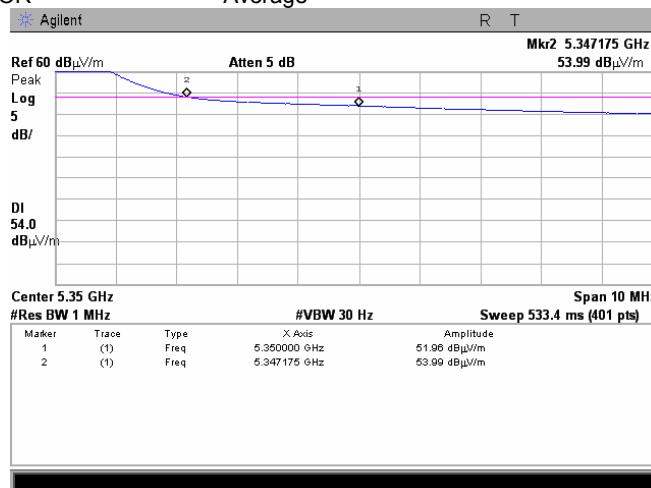


NOTE: Test result = SA Reading (Marker 1) + 10*log(1MHz/100kHz) = 59.54 + 10 = 69.54 dBuV

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:	12/10/2009		
Temperature: 22°C	Air Pressure: 1010 hPa	Relative Humidity: 54 %	Power Supply: 120 VAC
Remarks: EUT with 28 dBi antenna assembly gain			

Plot 7.4.79 Radiated spurious emission measurements at the band edges

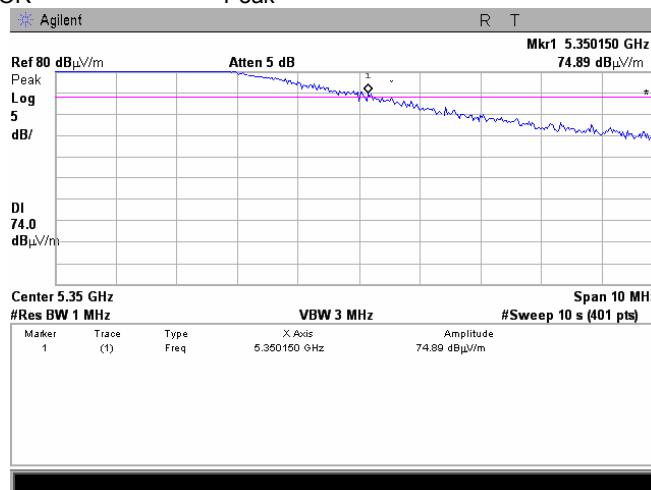
CARRIER FREQUENCY 5335 MHz
 CHANNEL BANDWIDTH 20 MHz
 MODULATION: 64QAM 130 Mbps
 DETECTOR Average



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:	
Date:	12/10/2009	PASS	
Temperature: 22°C	Air Pressure: 1010 hPa	Relative Humidity: 54 %	Power Supply: 120 VAC
Remarks: EUT with 28 dBi antenna assembly gain			

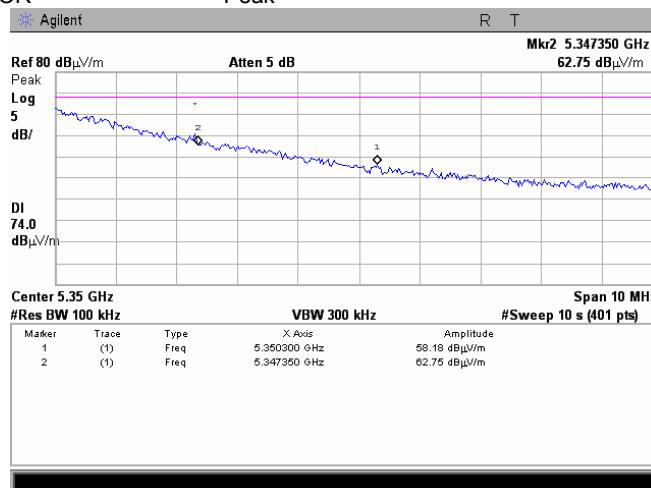
Plot 7.4.80 Radiated spurious emission measurements at the band edges RBW=1MHz

CARRIER FREQUENCY 5335 MHz
CHANNEL BANDWIDTH 20 MHz
MODULATION: 64QAM 130 Mbps
DETECTOR Peak



Plot 7.4.81 Radiated spurious emission measurements at the band edges RBW= 100 kHz

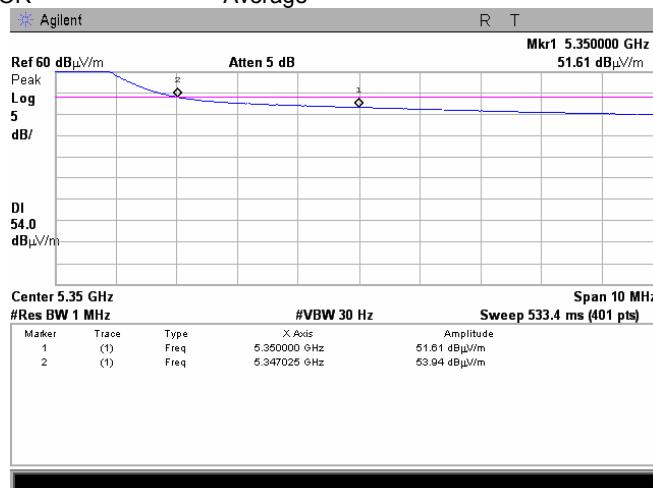
CARRIER FREQUENCY 5335 MHz
CHANNEL BANDWIDTH 20 MHz
MODULATION: 64QAM 130 Mbps
DETECTOR Peak



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:	12/10/2009		
Temperature: 22°C	Air Pressure: 1010 hPa	Relative Humidity: 54 %	Power Supply: 120 VAC
Remarks: EUT with 28 dBi antenna assembly gain			

Plot 7.4.82 Radiated spurious emission measurements at the band edges

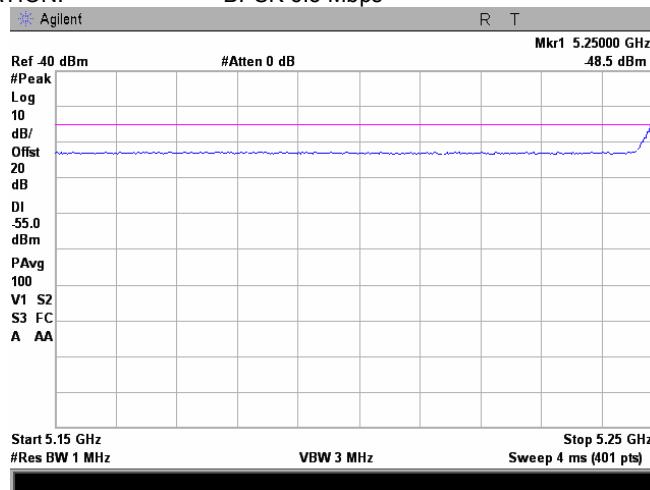
CARRIER FREQUENCY 5335 MHz
 CHANNEL BANDWIDTH 20 MHz
 MODULATION: 64QAM 130 Mbps
 DETECTOR Average



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:	12/10/2009		
Temperature: 22°C	Air Pressure: 1010 hPa	Relative Humidity: 54 %	Power Supply: 120 VAC
Remarks: EUT with 28 dBi antenna assembly gain			

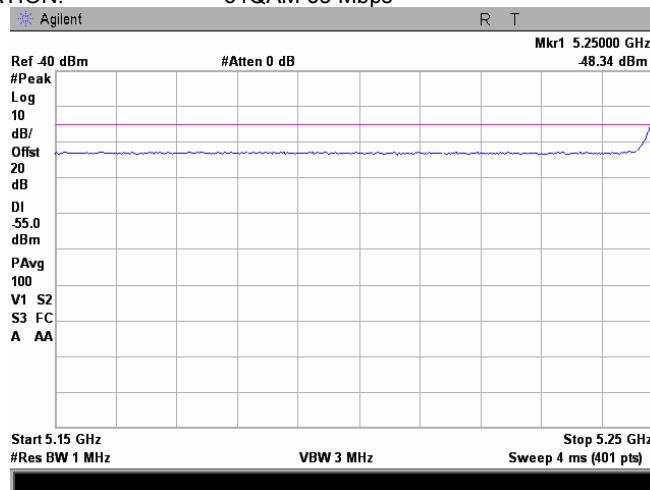
Plot 7.4.83 Conducted spurious emission measurements at the 5150 – 5250 MHz range

CARRIER FREQUENCY 5260 MHz
 CHANNEL BANDWIDTH 10 MHz
 MODULATION: BPSK 6.5 Mbps



Plot 7.4.84 Conducted spurious emission measurements 5150 – 5250 MHz range

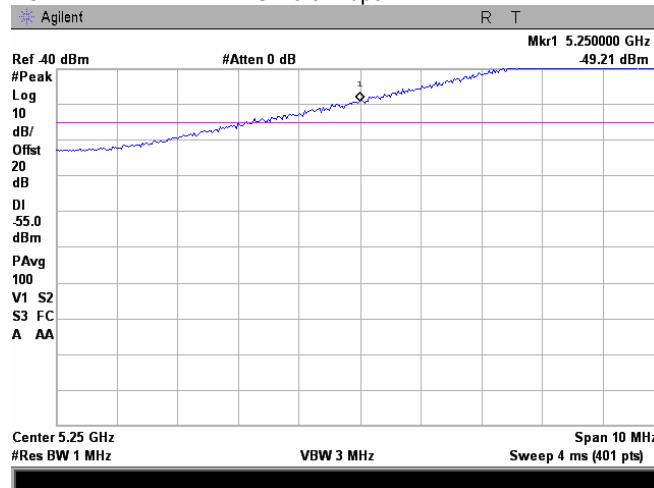
CARRIER FREQUENCY 5260 MHz
 CHANNEL BANDWIDTH 10 MHz
 MODULATION: 64QAM 65 Mbps



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:	
Date:	12/10/2009	PASS	
Temperature: 22°C	Air Pressure: 1010 hPa	Relative Humidity: 54 %	Power Supply: 120 VAC
Remarks: EUT with 28 dBi antenna assembly gain			

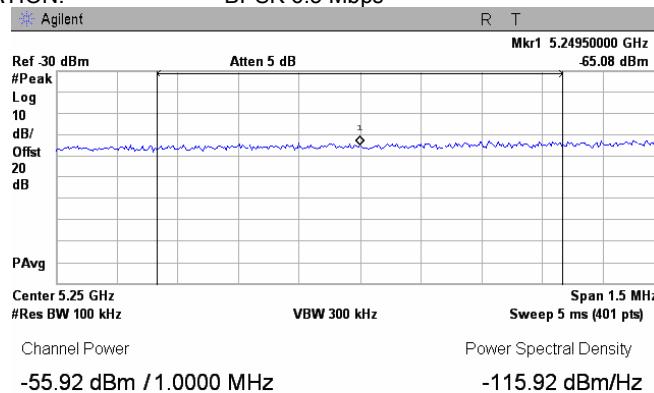
Plot 7.4.85 Conducted spurious emission measurements at the band edges

CARRIER FREQUENCY 5260 MHz
CHANNEL BANDWIDTH 10 MHz
MODULATION: BPSK 6.5 Mbps



Plot 7.4.86 Conducted spurious emission measurements at the band edges

CARRIER FREQUENCY 5260 MHz
CHANNEL BANDWIDTH 10 MHz
MODULATION: BPSK 6.5 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:	12/10/2009		
Temperature: 22°C	Air Pressure: 1010 hPa	Relative Humidity: 54 %	Power Supply: 120 VAC
Remarks: EUT with 28 dBi antenna assembly gain			

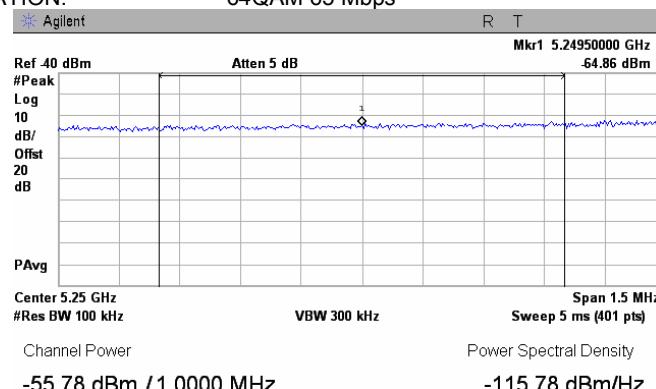
Plot 7.4.87 Conducted spurious emission measurements at the band edges

CARRIER FREQUENCY 5260 MHz
CHANNEL BANDWIDTH 10 MHz
MODULATION: 64QAM 65 Mbps



Plot 7.4.88 Conducted spurious emission measurements at the band edges

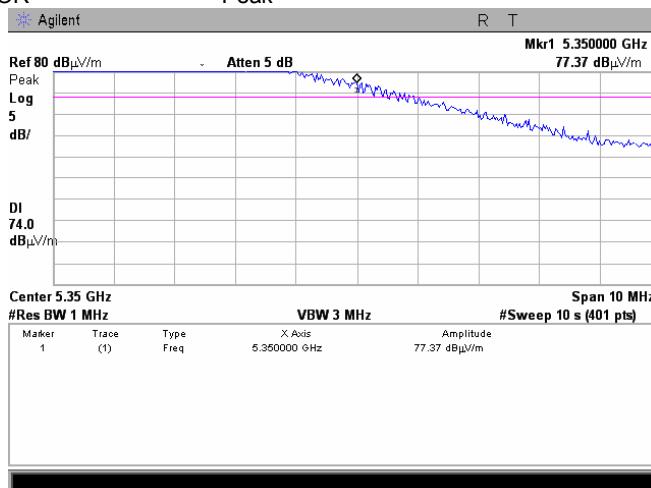
CARRIER FREQUENCY 5260 MHz
CHANNEL BANDWIDTH 10 MHz
MODULATION: 64QAM 65 Mbps



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:	
Date:	12/10/2009	PASS	
Temperature: 22°C	Air Pressure: 1010 hPa	Relative Humidity: 54 %	Power Supply: 120 VAC
Remarks: EUT with 28 dBi antenna assembly gain			

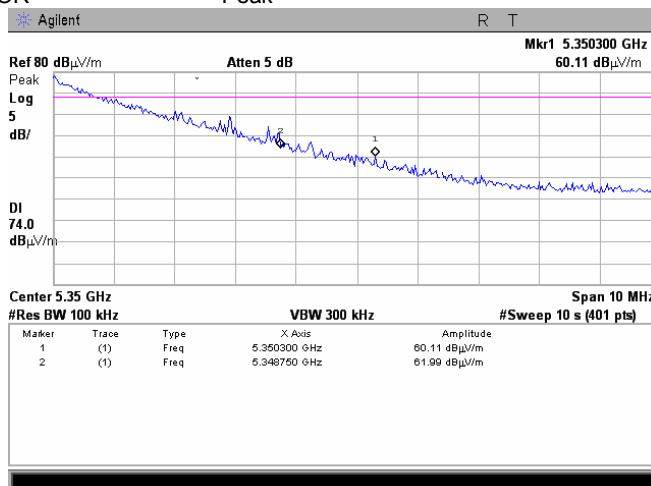
Plot 7.4.89 Radiated spurious emission measurements at the band edges RBW=1MHz

CARRIER FREQUENCY 5340 MHz
CHANNEL BANDWIDTH 10 MHz
MODULATION: BPSK 6.5 Mbps
DETECTOR Peak



Plot 7.4.90 Radiated spurious emission measurements at the band edges RBW=VBW=100 kHz

CARRIER FREQUENCY 5340 MHz
CHANNEL BANDWIDTH 10 MHz
MODULATION: BPSK 6.5 Mbps
DETECTOR Peak

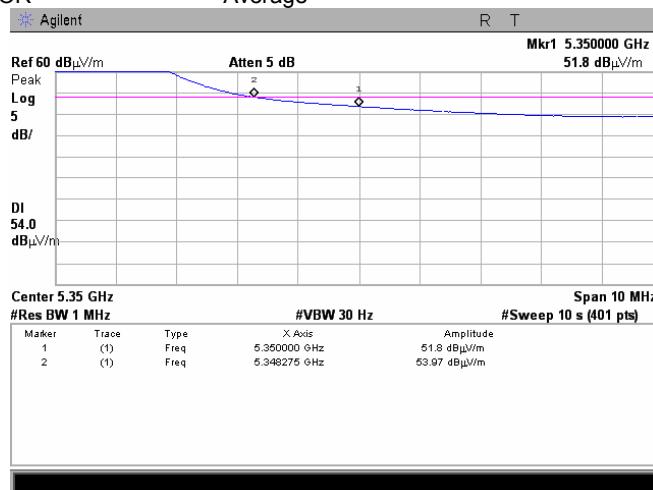


NOTE: Test result = SA Reading (Marker 1) + 10*log(1MHz/100kHz) = 60.11 + 10 = 70.11 dB μ V

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:	12/10/2009		
Temperature: 22°C	Air Pressure: 1010 hPa	Relative Humidity: 54 %	Power Supply: 120 VAC
Remarks: EUT with 28 dBi antenna assembly gain			

Plot 7.4.91 Radiated spurious emission measurements at the band edges

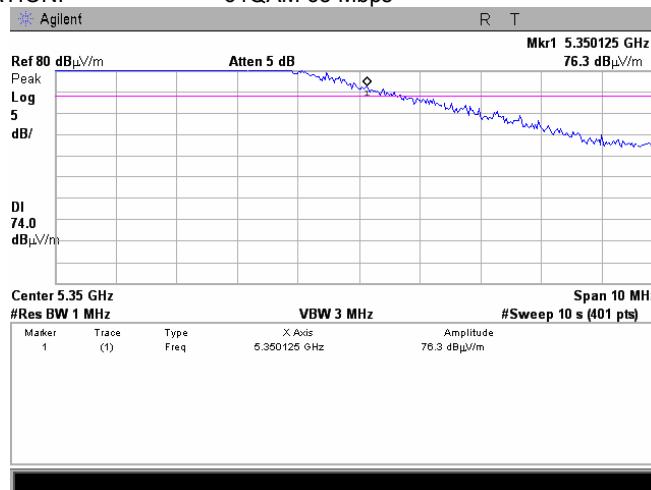
CARRIER FREQUENCY 5340 MHz
 CHANNEL BANDWIDTH 10 MHz
 MODULATION: BPSK 6.5 Mbps
 DETECTOR Average



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:	
Date:	12/10/2009	PASS	
Temperature: 22°C	Air Pressure: 1010 hPa	Relative Humidity: 54 %	Power Supply: 120 VAC
Remarks: EUT with 28 dBi antenna assembly gain			

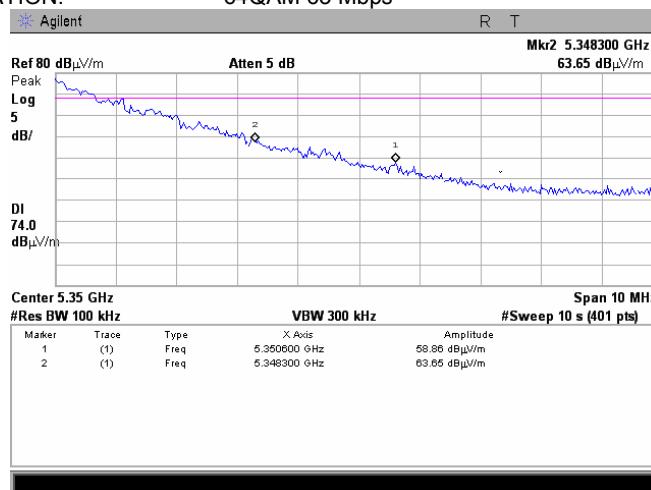
Plot 7.4.92 Radiated spurious emission measurements at the band edges RBW=1MHz

CARRIER FREQUENCY 5340 MHz
CHANNEL BANDWIDTH 10 MHz
MODULATION: 64QAM 65 Mbps



Plot 7.4.93 Radiated spurious emission measurements at the band edges RBW=100 kHz

CARRIER FREQUENCY 5340 MHz
CHANNEL BANDWIDTH 10 MHz
MODULATION: 64QAM 65 Mbps

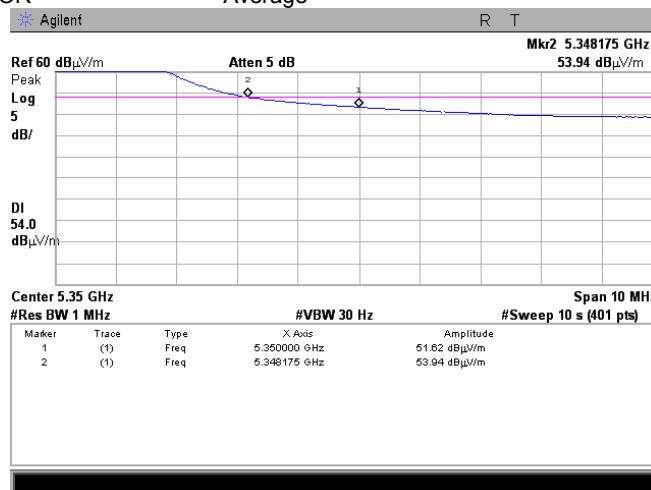


NOTE: Test result = SA Reading (Marker 1) + 10*log(1MHz/100kHz) = 58.86 + 10 = 68.86 dBuV

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:	12/10/2009		
Temperature: 22°C	Air Pressure: 1010 hPa	Relative Humidity: 54 %	Power Supply: 120 VAC
Remarks: EUT with 28 dBi antenna assembly gain			

Plot 7.4.94 Radiated spurious emission measurements at the band edges

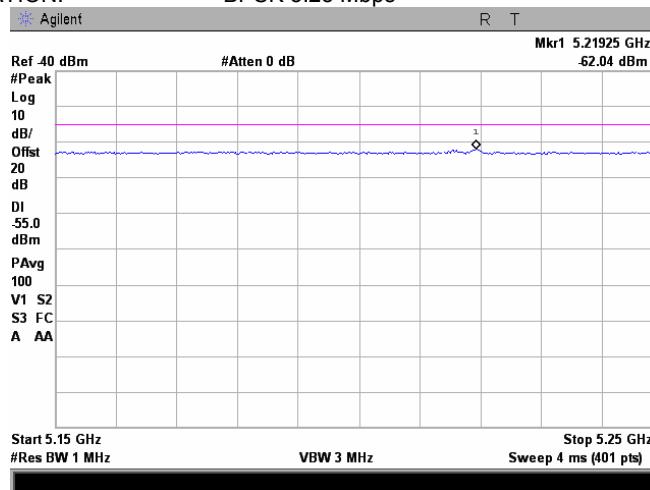
CARRIER FREQUENCY 5340 MHz
 CHANNEL BANDWIDTH 10 MHz
 MODULATION: 64QAM 65 Mbps
 DETECTOR Average



Test specification:	FCC section 15.407(b), RSS-210 Annex 9, section A9.2 <u>Conducted emissions at band edges</u>		
Test procedure:	Public notice DA 00-705 / ANSI C63.4, Section 13.1.4		
Test mode:	Compliance	Verdict: PASS	
Date:	12/10/2009		
Temperature: 22°C	Air Pressure: 1010 hPa	Relative Humidity: 54 %	Power Supply: 120 VAC
Remarks: EUT with 28 dBi antenna assembly gain			

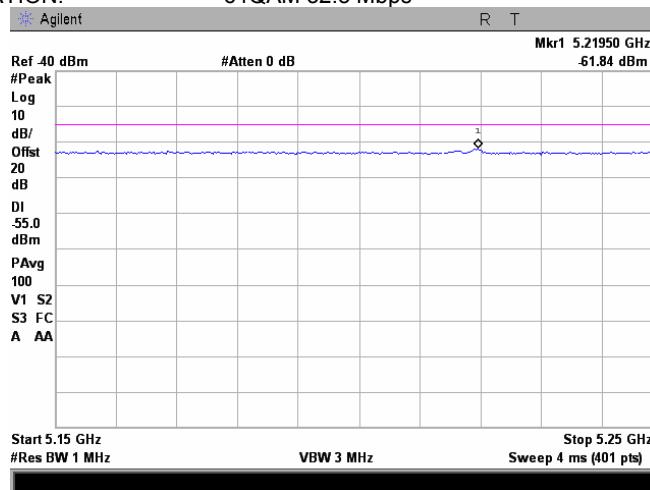
Plot 7.4.95 Conducted spurious emission measurements at the 5150 – 5250 MHz range

CARRIER FREQUENCY 5257.5 MHz
 CHANNEL BANDWIDTH 5 MHz
 MODULATION: BPSK 3.25 Mbps



Plot 7.4.96 Conducted spurious emission measurements 5150 – 5250 MHz range

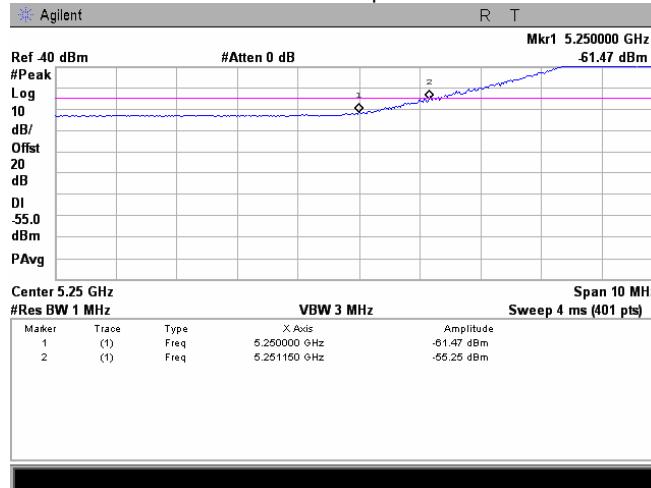
CARRIER FREQUENCY 5257.5 MHz
 CHANNEL BANDWIDTH 5 MHz
 MODULATION: 64QAM 32.5 Mbps



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:	
Date:	12/10/2009	PASS	
Temperature: 22°C	Air Pressure: 1010 hPa	Relative Humidity: 54 %	Power Supply: 120 VAC
Remarks: EUT with 28 dBi antenna assembly gain			

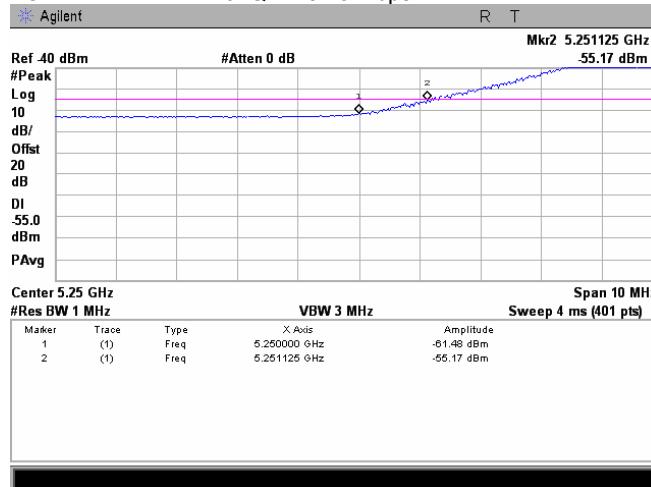
Plot 7.4.97 Conducted spurious emission measurements at the band edges

CARRIER FREQUENCY 5257.5 MHz
CHANNEL BANDWIDTH 5 MHz
MODULATION: BPSK 3.25 Mbps



Plot 7.4.98 Conducted spurious emission measurements at the band edges

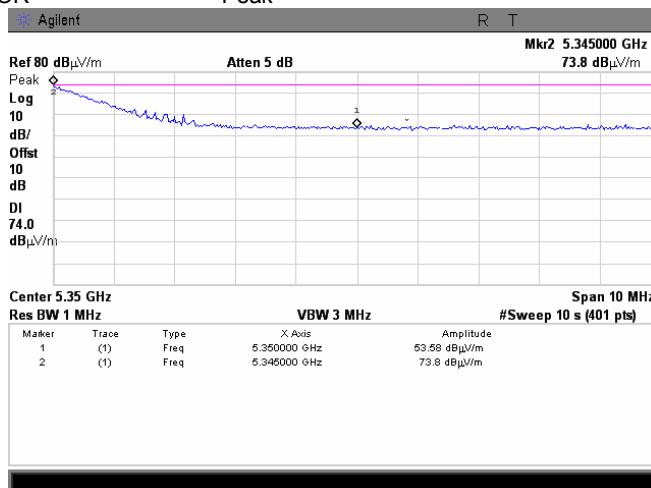
CARRIER FREQUENCY 5257.5 MHz
CHANNEL BANDWIDTH 5 MHz
MODULATION: 64QAM 32.5 Mbps



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:	
Date:	12/10/2009	PASS	
Temperature: 22°C	Air Pressure: 1010 hPa	Relative Humidity: 54 %	Power Supply: 120 VAC
Remarks: EUT with 28 dBi antenna assembly gain			

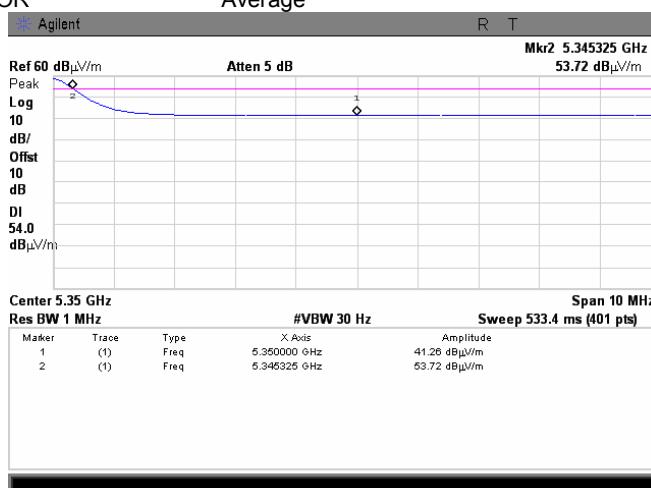
Plot 7.4.99 Radiated spurious emission measurements at the band edges

CARRIER FREQUENCY 5342.5 MHz
CHANNEL BANDWIDTH 5 MHz
MODULATION: BPSK 3.25 Mbps
DETECTOR Peak



Plot 7.4.100 Radiated spurious emission measurements at the band edges

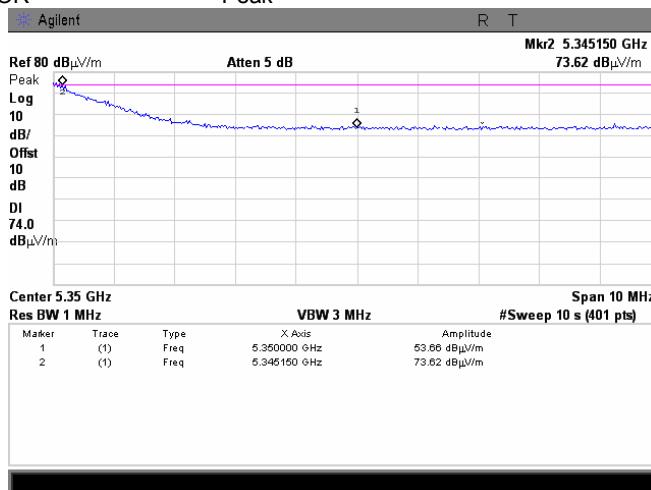
CARRIER FREQUENCY 5342.5 MHz
CHANNEL BANDWIDTH 5 MHz
MODULATION: BPSK 3.25 Mbps
DETECTOR Average



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:	
Date:	12/10/2009	PASS	
Temperature: 22°C	Air Pressure: 1010 hPa	Relative Humidity: 54 %	Power Supply: 120 VAC
Remarks: EUT with 28 dBi antenna assembly gain			

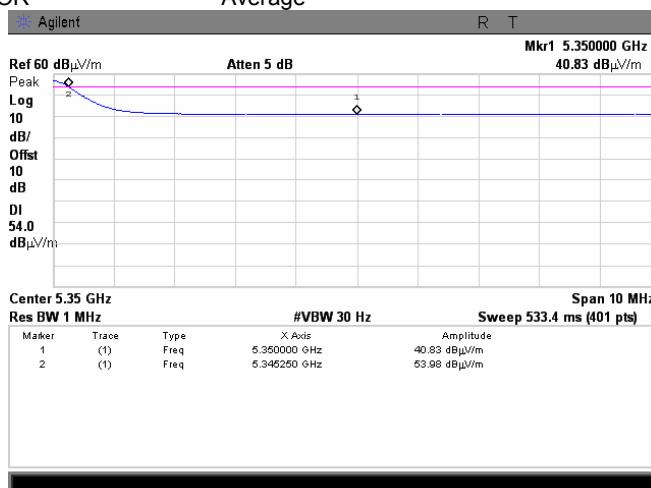
Plot 7.4.101 Radiated spurious emission measurements at the band edges

CARRIER FREQUENCY 5342.5 MHz
 CHANNEL BANDWIDTH 5 MHz
 MODULATION: BPSK 3.25 Mbps
 DETECTOR Peak



Plot 7.4.102 Radiated spurious emission measurements at the band edges

CARRIER FREQUENCY 5342.5 MHz
 CHANNEL BANDWIDTH 5 MHz
 MODULATION: BPSK 3.25 Mbps
 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:	
Date:	12/10/2009	PASS	
Temperature: 22°C	Air Pressure: 1010 hPa	Relative Humidity: 54 %	Power Supply: 120 VAC
Remarks: EUT with 6 dBi antenna assembly gain			

Table 7.4.7 Conducted spurious emission test results

ASSIGNED FREQUENCY RANGE: 5250 – 5350 MHz
 DETECTOR USED: Peak, 100 Power averaging
 TRANSMITTER OUTPUT POWER: Maximum
 RESOLUTION BANDWIDTH: 1000 kHz
 VIDEO BANDWIDTH: 3000 kHz
 MODULATING SIGNAL: OFDM
 MODULATION: BPSK/64QAM

Frequency, MHz	Modulation	Bit rate, Mbps	CBW, MHz	SA reading, dBm	Antenna assembly gain, dBi	EIRP,* dBm/MHz	Limit, dBm/MHz	Margin**, dB	Verdict
40 MHz EBW Band Edge									
5249.925	BPSK	27	40	-33.67	6	-27.67	-27.0	-0.67	Pass
5249.950	64QAM	270		-33.50	6	-27.50	-27.0	-0.50	Pass
40 MHz EBW In Band									
5250.000	BPSK	27	40	-36.66	6	-30.66	-27.0	-3.66	Pass
5249.875	64QAM	270		-37.10	6	-31.10	-27.0	-4.10	Pass
20 MHz EBW Band Edge									
5249.975	BPSK	13	20	-33.69	6	-27.69	-27.0	-0.69	Pass
5249.950	64QAM	130		-34.10	6	-28.10	-27.0	-1.10	Pass
20 MHz EBW In Band									
5249.950	BPSK	13	20	-36.40	6	-30.40	-27.0	-3.40	Pass
5249.950	64QAM	130		-36.45	6	-30.45	-27.0	-3.45	Pass
10 MHz EBW Band Edge									
5250.000	BPSK	6.5	10	-35.11	6	-29.11	-27.0	-2.11	Pass
5249.850	64QAM	65		-34.10	6	-28.10	-27.0	-1.10	Pass
10 MHz EBW In Band									
5249.825	BPSK	6.5	10	-41.28	6	-35.28	-27.0	-8.28	Pass
5249.925	64QAM	65		-40.68	6	-34.68	-27.0	-7.68	Pass
5 MHz EBW Band Edge									
5249.975	BPSK	3.25	5	-34.24	6	-28.24	-27.0	-1.24	Pass
5249.925	BPSK	3.25		-34.08	6	-28.08	-27.0	-1.08	Pass
5 MHz EBW In Band									
5218.250	BPSK	3.25	5	-47.69	6	-41.69	-27.0	-14.69	Pass
5222.000	BPSK	3.25		-46.04	6	-40.04	-27.0	-13.04	Pass
5249.975	BPSK	3.25		-48.20	6	-42.20	-27.0	-15.20	Pass
5218.250	64QAM	32.5		-48.28	6	-42.28	-27.0	-15.28	Pass
5222.000	64QAM	32.5		-46.87	6	-40.87	-27.0	-13.87	Pass
5249.925	64QAM	32.5		-50.30	6	-44.30	-27.0	-17.30	Pass

* - EIRP = SA reading (dBm) + Antenna assembly

**- Margin = EIRP –limit.

Reference numbers of test equipment used

HL 2952	HL 3435	HL 3437	HL 3818			
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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:	
Date:	12/10/2009	PASS	
Temperature: 22°C	Air Pressure: 1010 hPa	Relative Humidity: 54 %	Power Supply: 120 VAC
Remarks: EUT with 6 dBi antenna assembly gain			

Table 7.4.8 Field strength of spurious emissions at high edge

ASSIGNED FREQUENCY: 5.25-5.35 GHz
 TEST DISTANCE: 3 m
 MODULATION: BPSK/64QAM
 TRANSMITTER OUTPUT POWER: Maximum
 DETECTOR USED: Peak
 RESOLUTION BANDWIDTH: 1000 kHz
 TEST ANTENNA TYPE: Double ridged guide

Frequency MHz	Bit rate, Mbps	Antenna		Azimuth, degrees*	Peak field strength			Average field strength			Verdict
		Polarization	Height, m		Measured, dB(µV/m)	Limit, dB(µV/m)	Margin, dB**	Measured, dB(µV/m)	Limit, dB(µV/m)	Margin, dB**	
40 MHz EBW In Band											
5350.033	27	Vertical	1.0	0	69.89	74.00	-4.11	53.77	54.0	-0.23	Pass
5350.000	270	Vertical	1.0	0	70.16	74.00	-3.84	53.71	54.0	-0.29	
40 MHz EBW Band Edge											
5350.000	27	Vertical	1.0	0	71.70	74.00	-2.30	51.44	54.0	-2.56	Pass
5350.000	270	Vertical	1.0	0	71.64	74.00	-2.36	51.19	54.0	-2.81	
20 MHz EBW In Band											
5350.000	13	Vertical	1.0	0	71.70	74.00	-2.30	53.94	54.0	-0.06	Pass
5350.000	130	Vertical	1.0	0	70.39	74.00	-3.61	53.48	54.0	-0.52	
20 MHz EBW Band Edge											
5350.017	13	Vertical	1.0	0	72.21	74.00	-1.79	52.43	54.0	-1.57	Pass
5350.000	130	Vertical	1.0	0	72.74	74.00	-1.26	51.98	54.0	-2.02	
10 MHz EBW In Band											
5350.000	6.5	Vertical	1.0	0	67.33	74.00	-6.67	49.97	54.0	-4.03	Pass
5350.000	65	Vertical	1.0	0	66.59	74.00	-7.41	50.41	54.0	-3.59	
10 MHz EBW Band Edge											
5350.000	6.5	Vertical	1.0	0	68.89	74.00	-5.11	51.52	54.0	-2.48	Pass
5350.000	65	Vertical	1.0	0	73.09	74.00	-0.91	50.84	54.0	-3.16	
5 MHz EBW In Band											
5350.000	3.25	Vertical	1.0	0	64.53	74.00	-9.47	49.25	54.0	-4.75	Pass
5350.150	32.5	Vertical	1.0	0	63.64	74.00	-10.36	49.22	54.0	-4.78	
5 MHz EBW Band Edge											
5350.000	3.25	Vertical	1.0	0	66.70	74.00	-7.30	53.14	54.0	-0.86	Pass
5350.000	32.5	Vertical	1.0	0	66.31	74.00	-7.69	53.27	54.0	-0.73	

*- Margin = Measured emission – specification limit.

**- EUT front panel refers to 0 degrees position of turntable.

Reference numbers of test equipment used

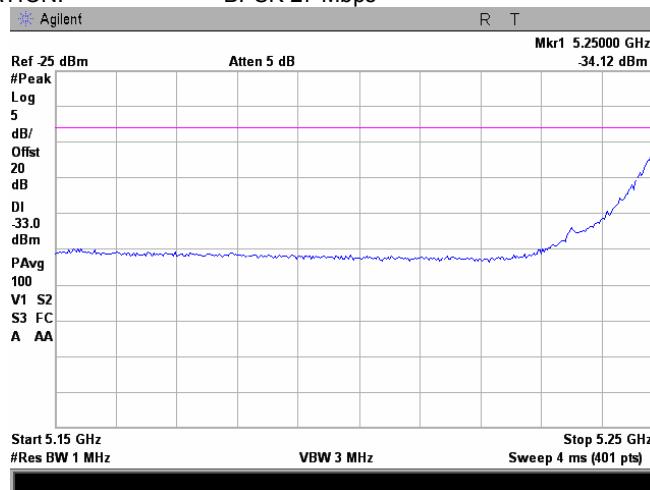
HL 0554	HL 1984	HL 2780	HL 3122	HL 3123			
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Full description is given in Appendix A.

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:	
Date:	12/10/2009	PASS	
Temperature: 22°C	Air Pressure: 1010 hPa	Relative Humidity: 54 %	Power Supply: 120 VAC
Remarks: EUT with 6 dBi antenna assembly gain			

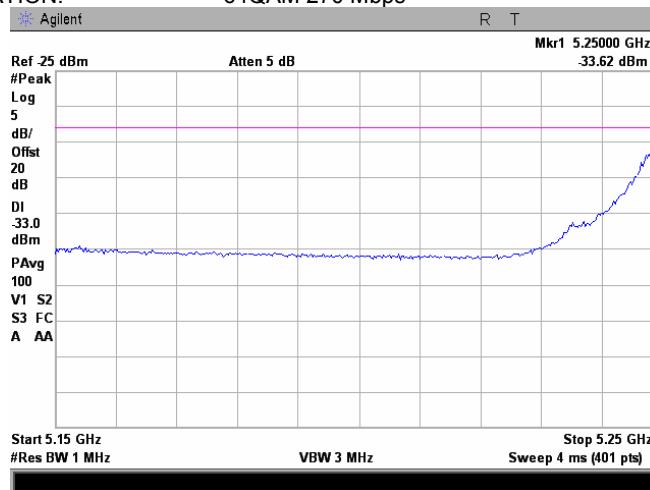
Plot 7.4.103 Conducted spurious emission measurements at the 5150 – 5250 MHz range

CARRIER FREQUENCY 5275 MHz
 CHANNEL BANDWIDTH 40 MHz
 MODULATION: BPSK 27 Mbps



Plot 7.4.104 Conducted spurious emission measurements at the 5150 – 5250 MHz range

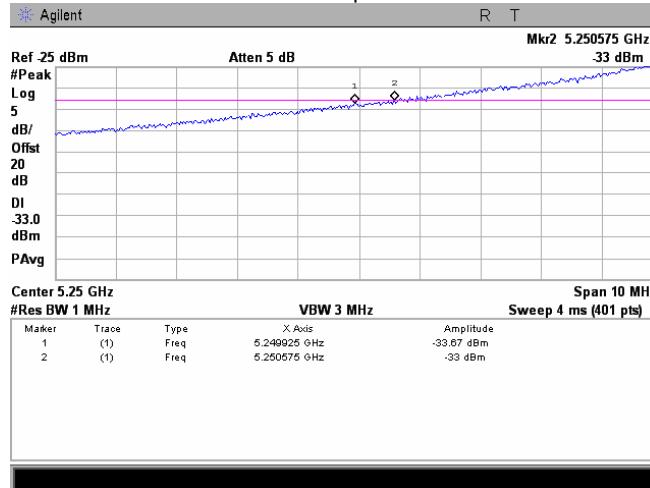
CARRIER FREQUENCY 5275 MHz
 CHANNEL BANDWIDTH 40 MHz
 MODULATION: 64QAM 270 Mbps



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:	12/10/2009		
Temperature: 22°C	Air Pressure: 1010 hPa	Relative Humidity: 54 %	Power Supply: 120 VAC
Remarks: EUT with 6 dBi antenna assembly gain			

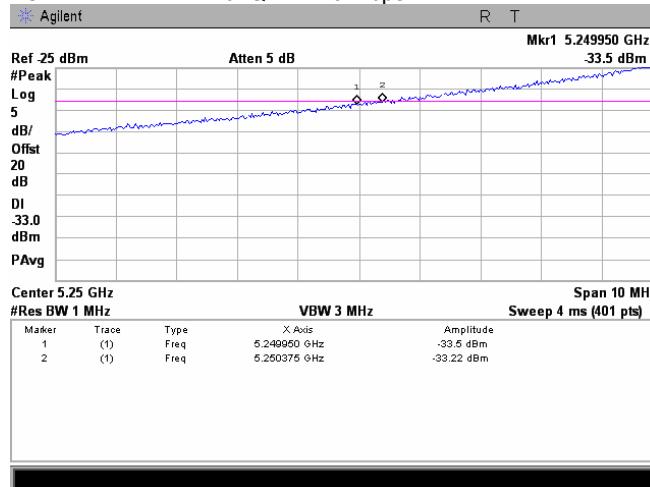
Plot 7.4.105 Conducted spurious emission measurements at the band edges

CARRIER FREQUENCY 5275 MHz
CHANNEL BANDWIDTH 40 MHz
MODULATION: BPSK 27 Mbps



Plot 7.4.106 Conducted spurious emission measurements at the band edges

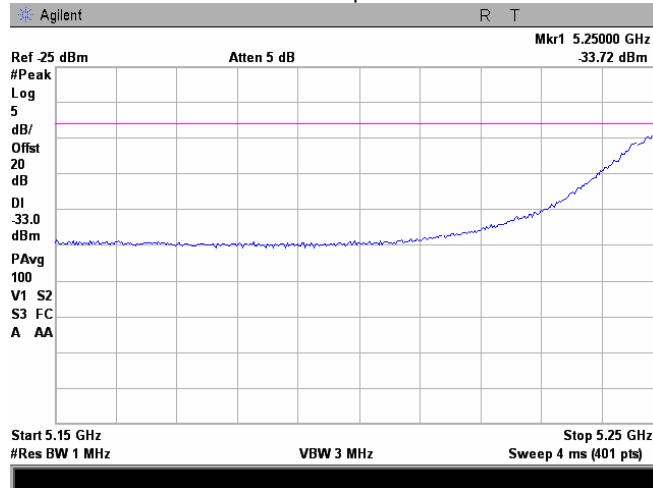
CARRIER FREQUENCY 5275 MHz
CHANNEL BANDWIDTH 40 MHz
MODULATION: 64QAM 270 Mbps



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:	
Date:	12/10/2009	PASS	
Temperature: 22°C	Air Pressure: 1010 hPa	Relative Humidity: 54 %	Power Supply: 120 VAC
Remarks: EUT with 6 dBi antenna assembly gain			

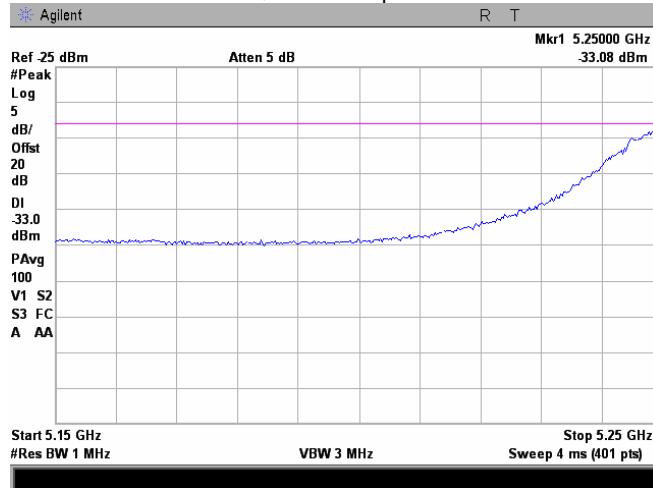
Plot 7.4.107 Conducted spurious emission measurements at the 5150 – 5250 MHz range

CARRIER FREQUENCY 5285 MHz
CHANNEL BANDWIDTH 40 MHz
MODULATION: BPSK 27 Mbps



Plot 7.4.108 Conducted spurious emission measurements 5150 – 5250 MHz range

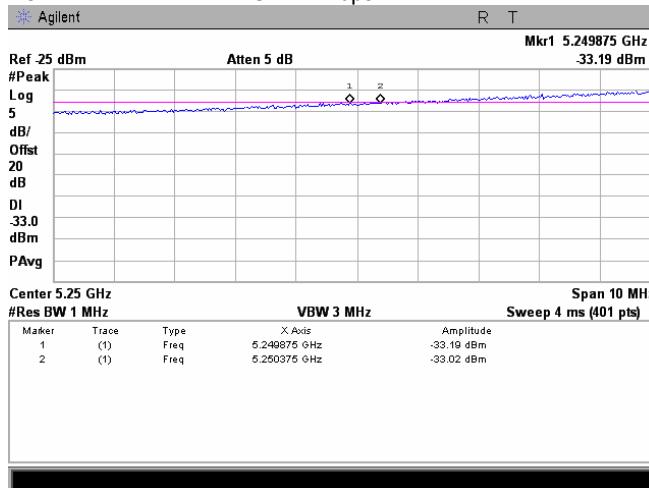
CARRIER FREQUENCY 5285 MHz
CHANNEL BANDWIDTH 40 MHz
MODULATION: 64QAM 270 Mbps



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:	12/10/2009		
Temperature: 22°C	Air Pressure: 1010 hPa	Relative Humidity: 54 %	Power Supply: 120 VAC
Remarks: EUT with 6 dBi antenna assembly gain			

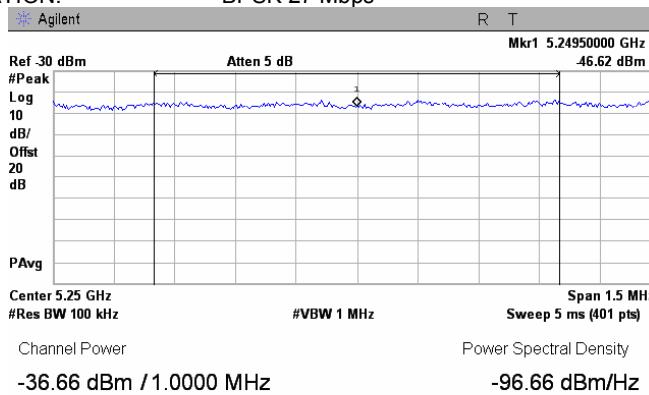
Plot 7.4.109 Conducted spurious emission measurements at the band edges

CARRIER FREQUENCY 5285 MHz
CHANNEL BANDWIDTH 40 MHz
MODULATION: BPSK 27 Mbps



Plot 7.4.110 Conducted spurious emission measurements at the band edges

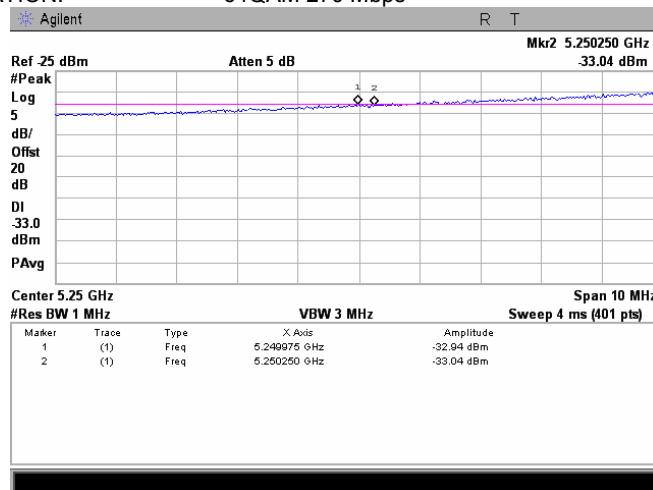
CARRIER FREQUENCY 5285 MHz
CHANNEL BANDWIDTH 40 MHz
MODULATION: BPSK 27 Mbps



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:	12/10/2009		
Temperature: 22°C	Air Pressure: 1010 hPa	Relative Humidity: 54 %	Power Supply: 120 VAC
Remarks: EUT with 6 dBi antenna assembly gain			

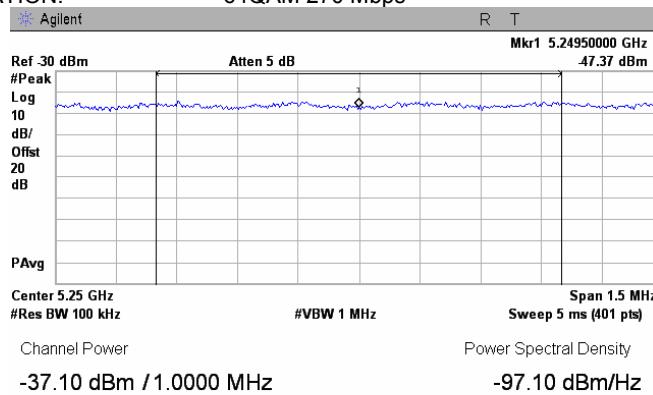
Plot 7.4.111 Conducted spurious emission measurements at the band edges

CARRIER FREQUENCY 5285 MHz
 CHANNEL BANDWIDTH 40 MHz
 MODULATION: 64QAM 270 Mbps



Plot 7.4.112 Conducted spurious emission measurements at the band edges

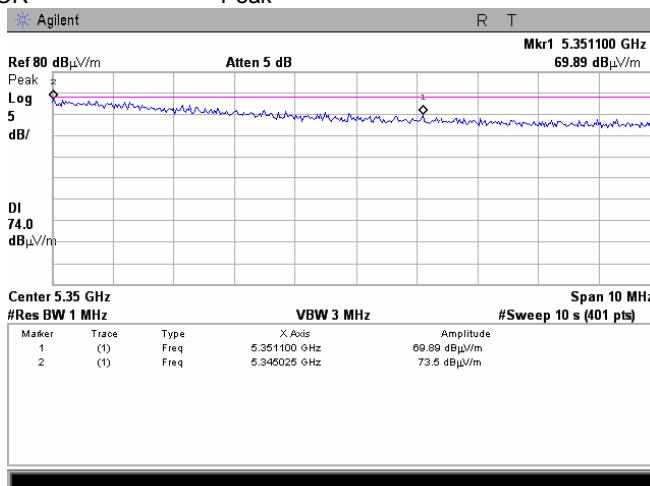
CARRIER FREQUENCY 5285 MHz
 CHANNEL BANDWIDTH 40 MHz
 MODULATION: 64QAM 270 Mbps



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:	
Date:	12/10/2009	PASS	
Temperature: 22°C	Air Pressure: 1010 hPa	Relative Humidity: 54 %	Power Supply: 120 VAC
Remarks: EUT with 6 dBi antenna assembly gain			

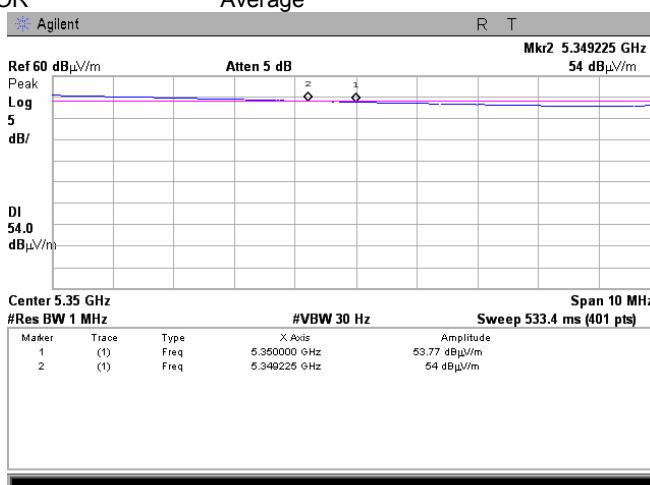
Plot 7.4.113 Radiated spurious emission measurements at the band edges

CARRIER FREQUENCY 5315 MHz
CHANNEL BANDWIDTH 40 MHz
MODULATION: BPSK 27 Mbps
DETECTOR Peak



Plot 7.4.114 Radiated spurious emission measurements at the band edges

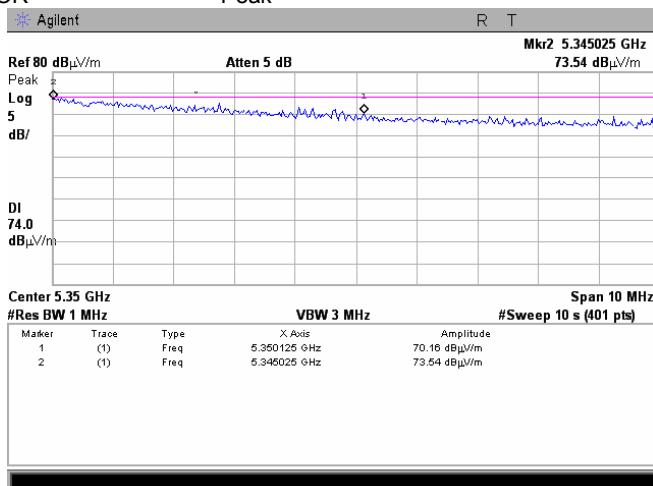
CARRIER FREQUENCY 5315 MHz
CHANNEL BANDWIDTH 40 MHz
MODULATION: BPSK 27 Mbps
DETECTOR Average



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:	
Date:	12/10/2009	PASS	
Temperature: 22°C	Air Pressure: 1010 hPa	Relative Humidity: 54 %	Power Supply: 120 VAC
Remarks: EUT with 6 dBi antenna assembly gain			

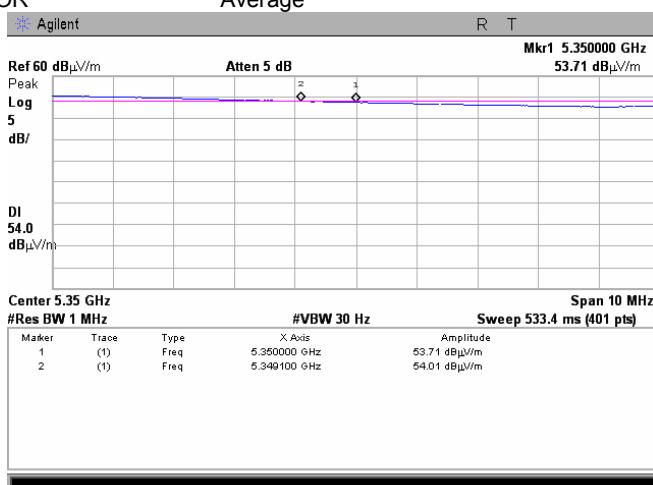
Plot 7.4.115 Radiated spurious emission measurements at the band edges

CARRIER FREQUENCY 5315 MHz
CHANNEL BANDWIDTH 40 MHz
MODULATION: 64QAM 270 Mbps
DETECTOR Peak



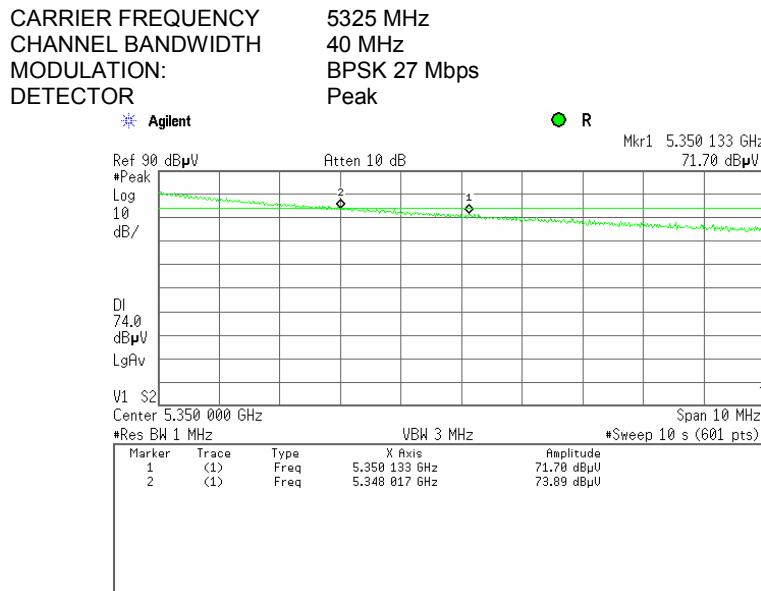
Plot 7.4.116 Radiated spurious emission measurements at the band edges

CARRIER FREQUENCY 5315 MHz
CHANNEL BANDWIDTH 40 MHz
MODULATION: 64QAM 270 Mbps
DETECTOR Average

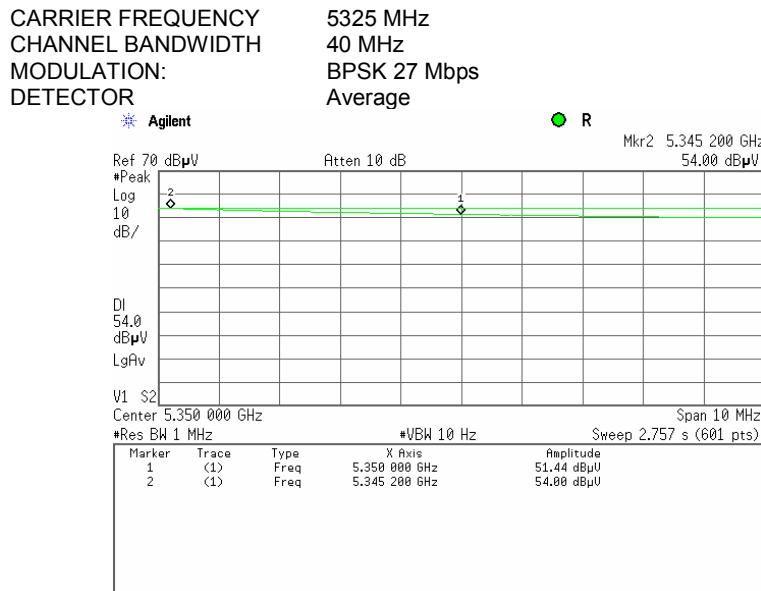


Test specification:	FCC section 15.407(b), RSS-210 Annex 9, section A9.2 Conducted emissions at band edges		
Test procedure:	Public notice DA 00-705 / ANSI C63.4, Section 13.1.4		
Test mode:	Compliance	Verdict:	
Date:	12/10/2009	PASS	
Temperature: 22°C	Air Pressure: 1010 hPa	Relative Humidity: 54 %	Power Supply: 120 VAC
Remarks: EUT with 6 dBi antenna assembly gain			

Plot 7.4.117 Radiated spurious emission measurements at the band edges

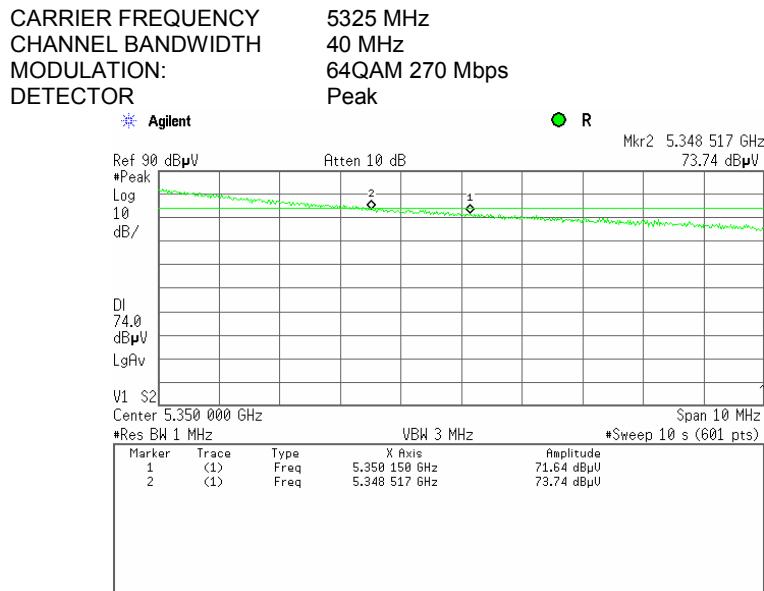


Plot 7.4.118 Radiated spurious emission measurements at the band edges

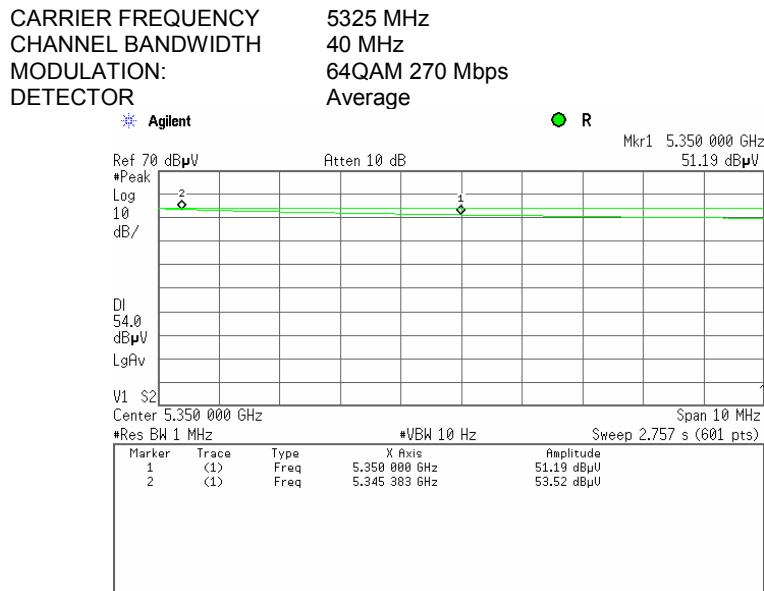


Test specification:	FCC section 15.407(b), RSS-210 Annex 9, section A9.2 Conducted emissions at band edges		
Test procedure:	Public notice DA 00-705 / ANSI C63.4, Section 13.1.4		
Test mode:	Compliance	Verdict:	
Date:	12/10/2009	PASS	
Temperature: 22°C	Air Pressure: 1010 hPa	Relative Humidity: 54 %	Power Supply: 120 VAC
Remarks: EUT with 6 dBi antenna assembly gain			

Plot 7.4.119 Radiated spurious emission measurements at the band edges



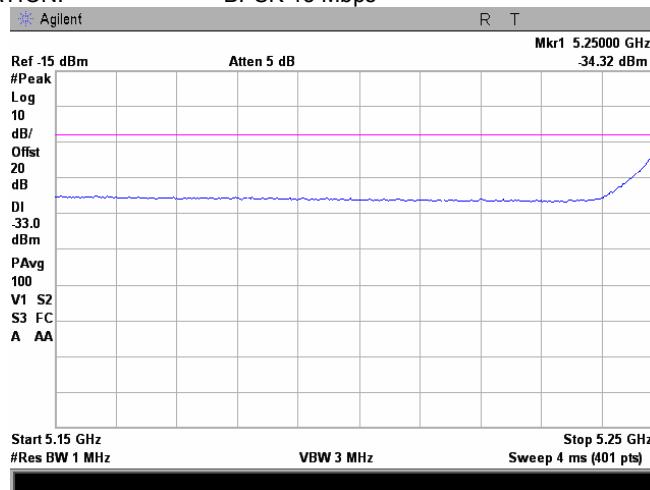
Plot 7.4.120 Radiated spurious emission measurements at the band edges



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:	12/10/2009		
Temperature: 22°C	Air Pressure: 1010 hPa	Relative Humidity: 54 %	Power Supply: 120 VAC
Remarks: EUT with 6 dBi antenna assembly gain			

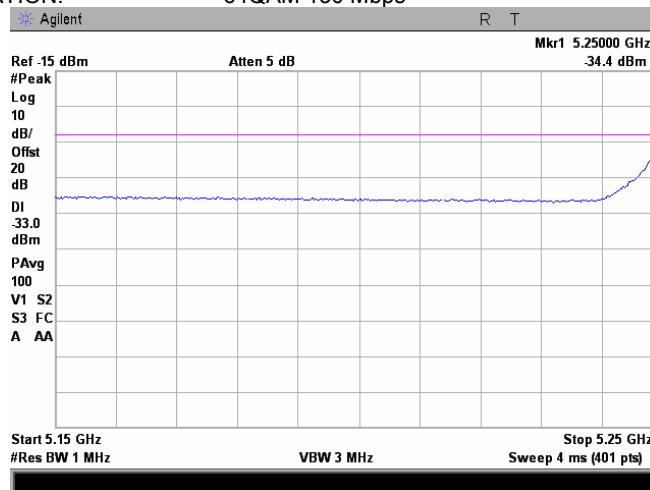
Plot 7.4.121 Conducted spurious emission measurements at the 5150 – 5250 MHz range

CARRIER FREQUENCY 5265 MHz
 CHANNEL BANDWIDTH 20 MHz
 MODULATION: BPSK 13 Mbps



Plot 7.4.122 Conducted spurious emission measurements 5150 – 5250 MHz range

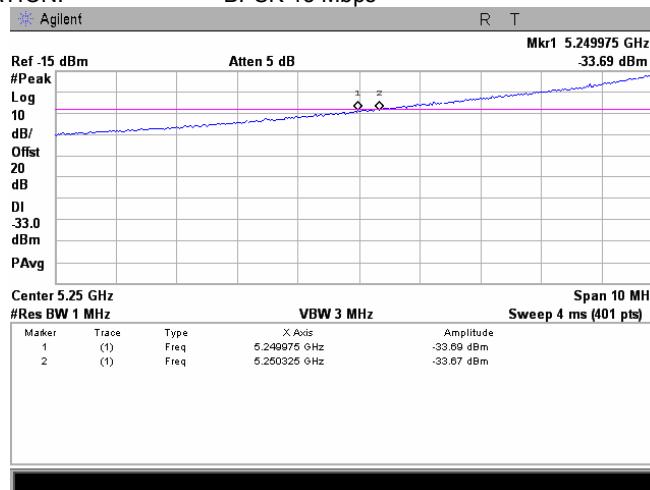
CARRIER FREQUENCY 5265 MHz
 CHANNEL BANDWIDTH 20 MHz
 MODULATION: 64QAM 130 Mbps



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:	12/10/2009		
Temperature: 22°C	Air Pressure: 1010 hPa	Relative Humidity: 54 %	Power Supply: 120 VAC
Remarks: EUT with 6 dBi antenna assembly gain			

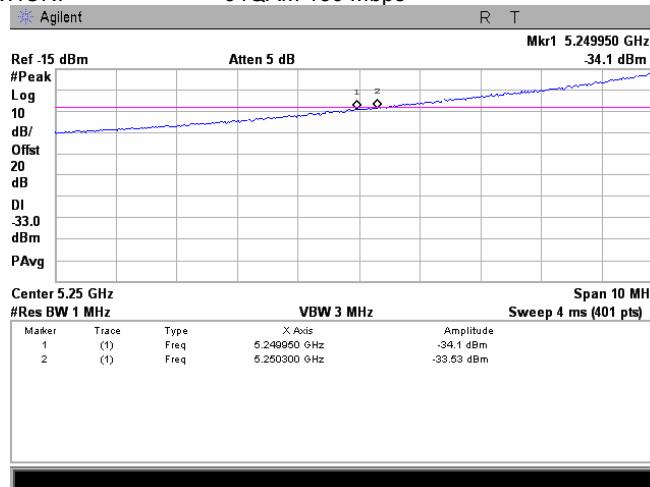
Plot 7.4.123 Conducted spurious emission measurements at the band edges

CARRIER FREQUENCY 5265 MHz
CHANNEL BANDWIDTH 20 MHz
MODULATION: BPSK 13 Mbps



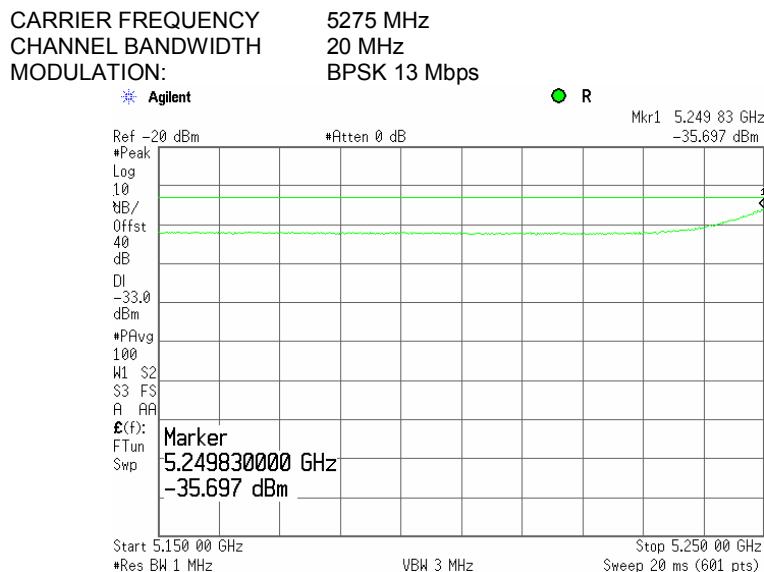
Plot 7.4.124 Conducted spurious emission measurements at the band edges

CARRIER FREQUENCY 5265 MHz
CHANNEL BANDWIDTH 20 MHz
MODULATION: 64QAM 130 Mbps

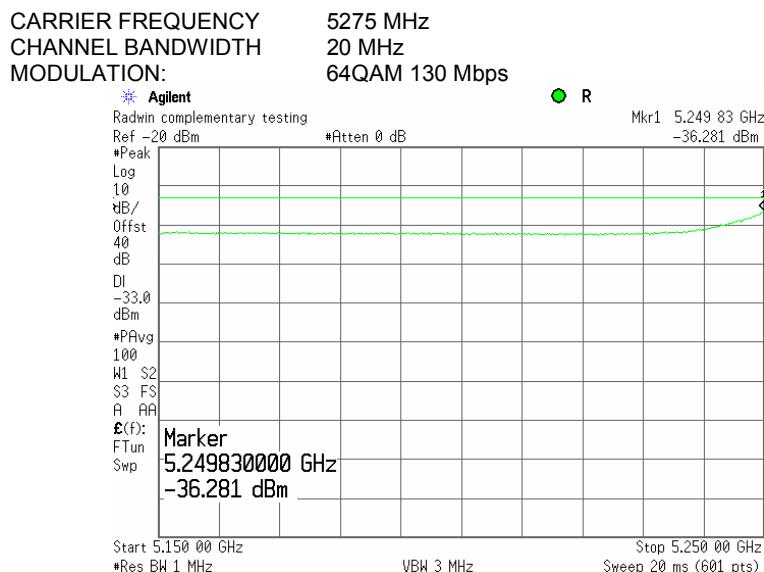


Test specification:	FCC section 15.407(b), RSS-210 Annex 9, section A9.2 Conducted emissions at band edges		
Test procedure:	Public notice DA 00-705 / ANSI C63.4, Section 13.1.4		
Test mode:	Compliance	Verdict: PASS	
Date:	12/10/2009		
Temperature: 22°C	Air Pressure: 1010 hPa	Relative Humidity: 54 %	Power Supply: 120 VAC
Remarks: EUT with 6 dBi antenna assembly gain			

Plot 7.4.125 Conducted spurious emission measurements at the 5150 – 5250 MHz range

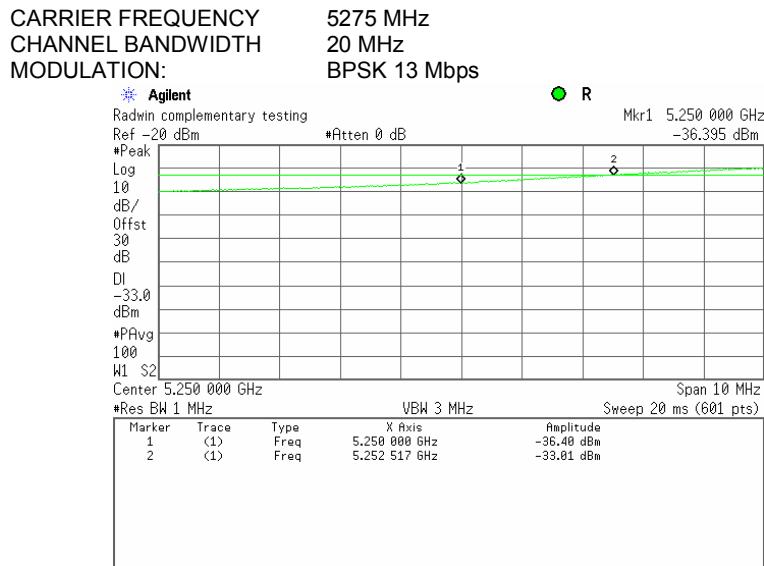


Plot 7.4.126 Conducted spurious emission measurements 5150 – 5250 MHz range

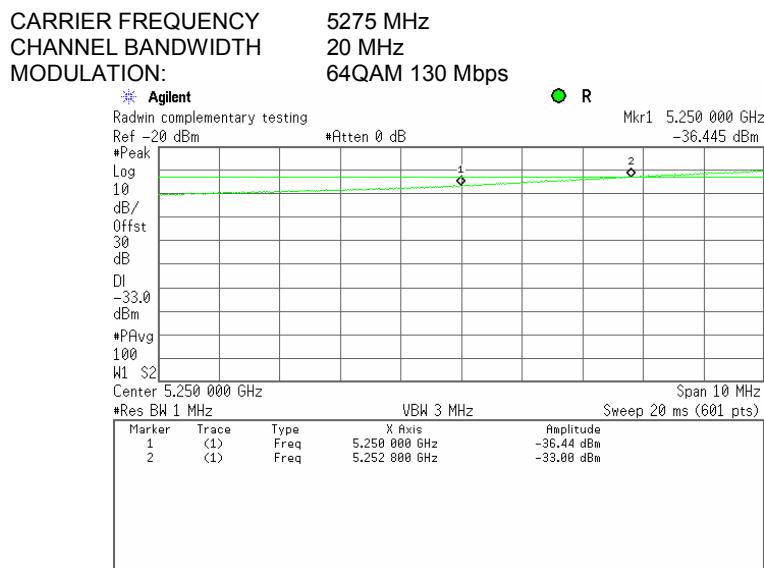


Test specification:	FCC section 15.407(b), RSS-210 Annex 9, section A9.2 Conducted emissions at band edges		
Test procedure:	Public notice DA 00-705 / ANSI C63.4, Section 13.1.4		
Test mode:	Compliance	Verdict: PASS	
Date:	12/10/2009		
Temperature: 22°C	Air Pressure: 1010 hPa	Relative Humidity: 54 %	Power Supply: 120 VAC
Remarks: EUT with 6 dBi antenna assembly gain			

Plot 7.4.127 Conducted spurious emission measurements at the band edges

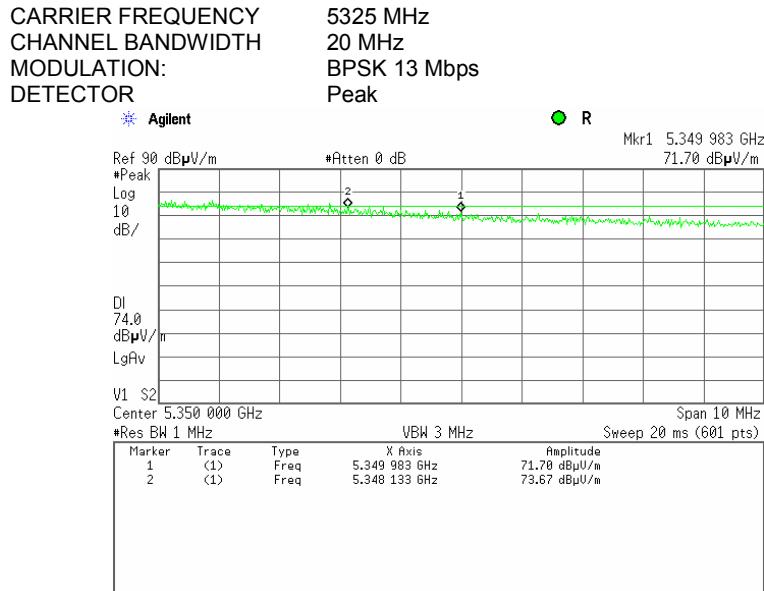


Plot 7.4.128 Conducted spurious emission measurements at the band edges

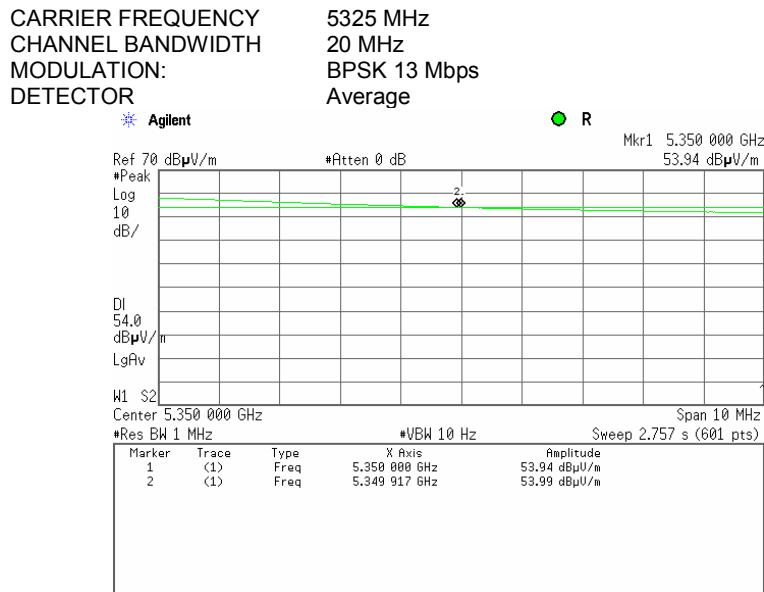


Test specification:	FCC section 15.407(b), RSS-210 Annex 9, section A9.2 Conducted emissions at band edges		
Test procedure:	Public notice DA 00-705 / ANSI C63.4, Section 13.1.4		
Test mode:	Compliance	Verdict:	
Date:	12/10/2009	PASS	
Temperature: 22°C	Air Pressure: 1010 hPa	Relative Humidity: 54 %	Power Supply: 120 VAC
Remarks: EUT with 6 dBi antenna assembly gain			

Plot 7.4.129 Radiated spurious emission measurements at the band edges



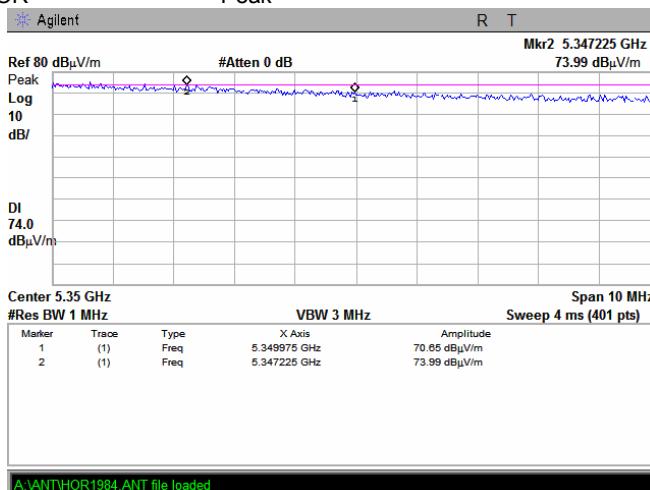
Plot 7.4.130 Radiated spurious emission measurements at the band edges



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:	
Date:	12/10/2009	PASS	
Temperature: 22°C	Air Pressure: 1010 hPa	Relative Humidity: 54 %	Power Supply: 120 VAC
Remarks: EUT with 6 dBi antenna assembly gain			

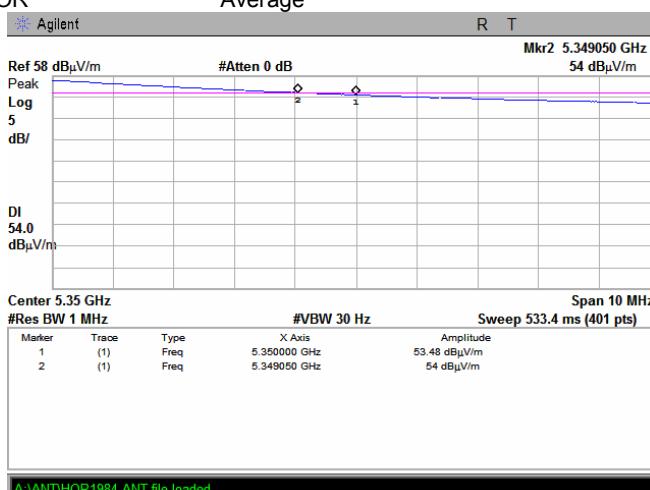
Plot 7.4.131 Radiated spurious emission measurements at the band edges

CARRIER FREQUENCY 5325 MHz
CHANNEL BANDWIDTH 20 MHz
MODULATION: 64QAM 130 Mbps
DETECTOR Peak



Plot 7.4.132 Radiated spurious emission measurements at the band edges

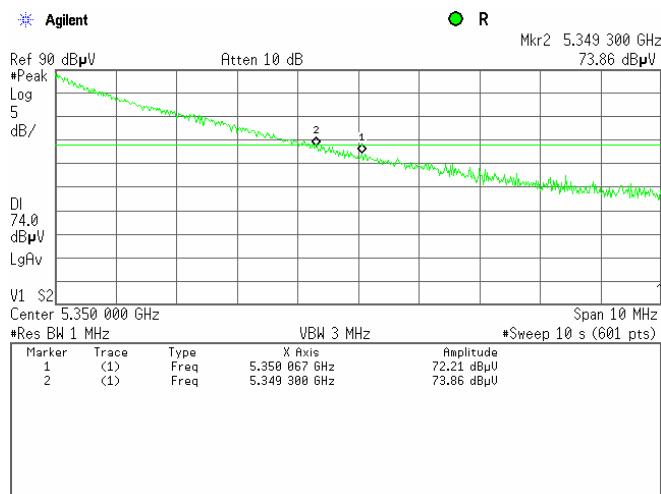
CARRIER FREQUENCY 5325 MHz
CHANNEL BANDWIDTH 20 MHz
MODULATION: 64QAM 130 Mbps
DETECTOR Average



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:	
Date:	12/10/2009	PASS	
Temperature: 22°C	Air Pressure: 1010 hPa	Relative Humidity: 54 %	Power Supply: 120 VAC
Remarks: EUT with 6 dBi antenna assembly gain			

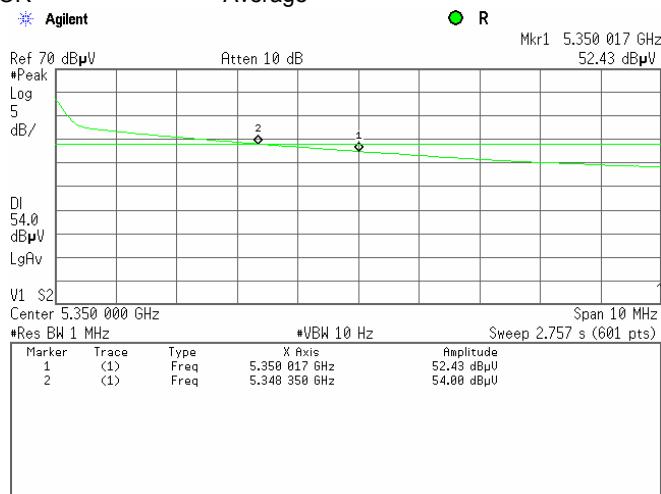
Plot 7.4.133 Radiated spurious emission measurements at the band edges

CARRIER FREQUENCY 5335 MHz
 CHANNEL BANDWIDTH 20 MHz
 MODULATION: BPSK 13 Mbps
 DETECTOR Peak



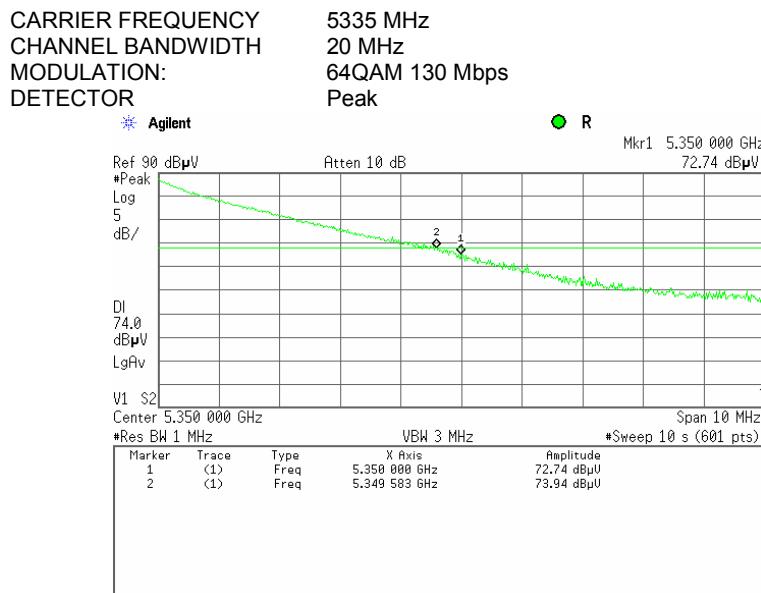
Plot 7.4.134 Radiated spurious emission measurements at the band edges

CARRIER FREQUENCY 5335 MHz
 CHANNEL BANDWIDTH 20 MHz
 MODULATION: BPSK 13 Mbps
 DETECTOR Average

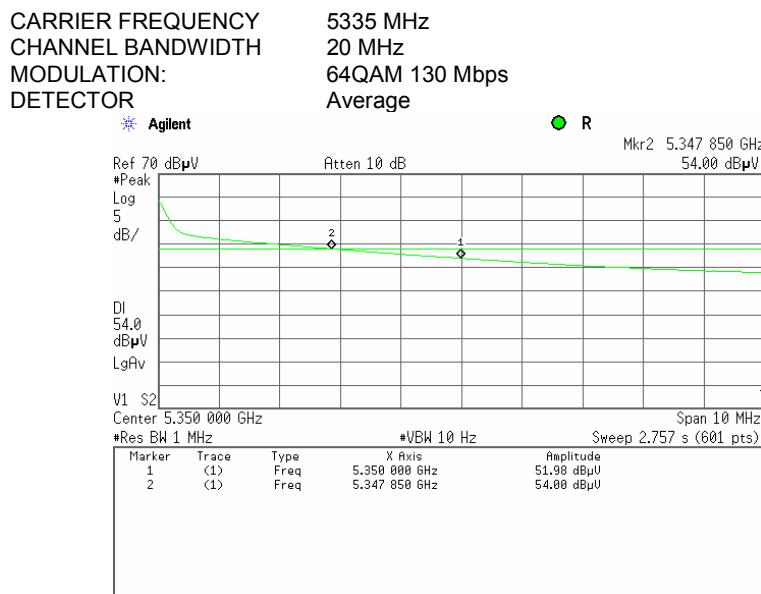


Test specification:	FCC section 15.407(b), RSS-210 Annex 9, section A9.2 Conducted emissions at band edges		
Test procedure:	Public notice DA 00-705 / ANSI C63.4, Section 13.1.4		
Test mode:	Compliance	Verdict: PASS	
Date:	12/10/2009		
Temperature: 22°C	Air Pressure: 1010 hPa	Relative Humidity: 54 %	Power Supply: 120 VAC
Remarks: EUT with 6 dBi antenna assembly gain			

Plot 7.4.135 Radiated spurious emission measurements at the band edges



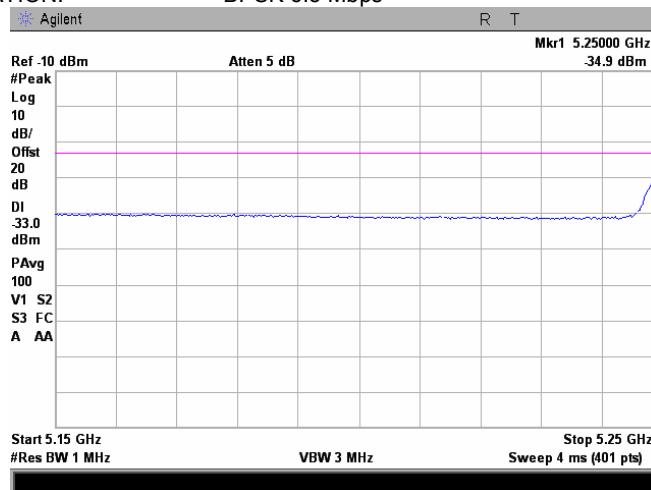
Plot 7.4.136 Radiated spurious emission measurements at the band edges



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:	12/10/2009		
Temperature: 22°C	Air Pressure: 1010 hPa	Relative Humidity: 54 %	Power Supply: 120 VAC
Remarks: EUT with 6 dBi antenna assembly gain			

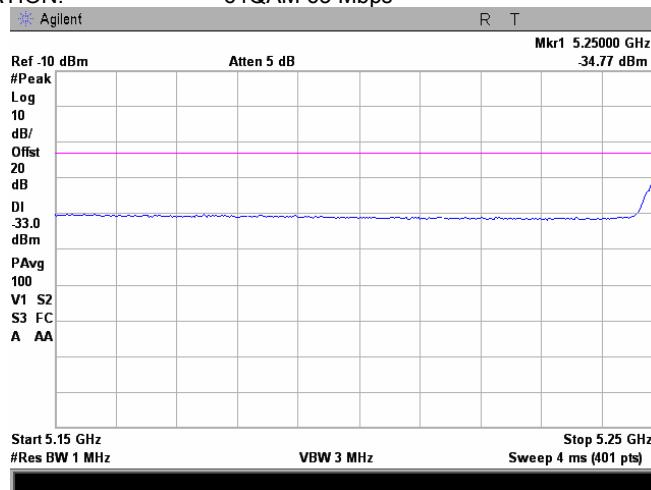
Plot 7.4.137 Conducted spurious emission measurements at the 5150 – 5250 MHz range

CARRIER FREQUENCY 5260 MHz
 CHANNEL BANDWIDTH 10 MHz
 MODULATION: BPSK 6.5 Mbps



Plot 7.4.138 Conducted spurious emission measurements 5150 – 5250 MHz range

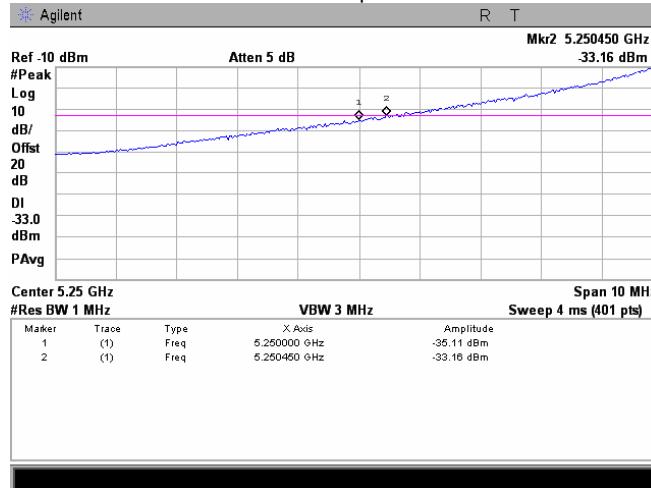
CARRIER FREQUENCY 5260 MHz
 CHANNEL BANDWIDTH 10 MHz
 MODULATION: 64QAM 65 Mbps



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:	12/10/2009		
Temperature: 22°C	Air Pressure: 1010 hPa	Relative Humidity: 54 %	Power Supply: 120 VAC
Remarks: EUT with 6 dBi antenna assembly gain			

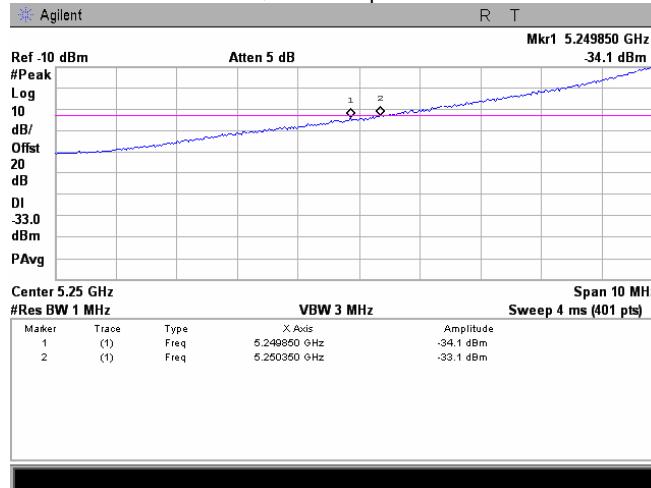
Plot 7.4.139 Conducted spurious emission measurements at the band edges

CARRIER FREQUENCY 5260 MHz
CHANNEL BANDWIDTH 10 MHz
MODULATION: BPSK 6.5 Mbps



Plot 7.4.140 Conducted spurious emission measurements at the band edges

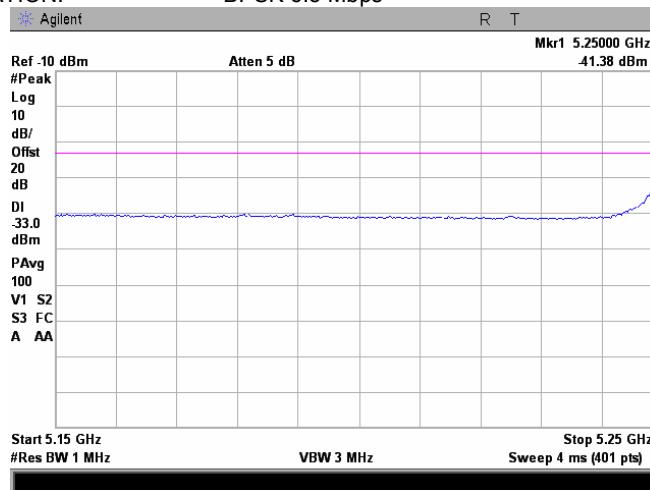
CARRIER FREQUENCY 5260 MHz
CHANNEL BANDWIDTH 10 MHz
MODULATION: 64QAM 65 Mbps



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:	12/10/2009		
Temperature: 22°C	Air Pressure: 1010 hPa	Relative Humidity: 54 %	Power Supply: 120 VAC
Remarks: EUT with 6 dBi antenna assembly gain			

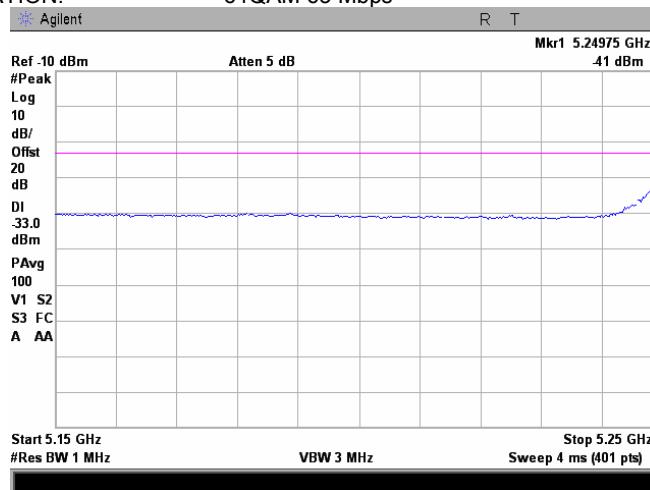
Plot 7.4.141 Conducted spurious emission measurements at the 5150 – 5250 MHz range

CARRIER FREQUENCY 5265 MHz
 CHANNEL BANDWIDTH 10 MHz
 MODULATION: BPSK 6.5 Mbps



Plot 7.4.142 Conducted spurious emission measurements 5150 – 5250 MHz range

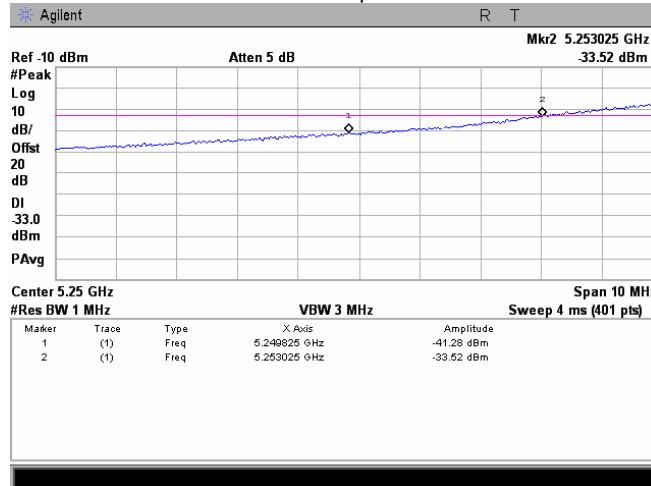
CARRIER FREQUENCY 5265 MHz
 CHANNEL BANDWIDTH 10 MHz
 MODULATION: 64QAM 65 Mbps



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:	12/10/2009		
Temperature: 22°C	Air Pressure: 1010 hPa	Relative Humidity: 54 %	Power Supply: 120 VAC
Remarks: EUT with 6 dBi antenna assembly gain			

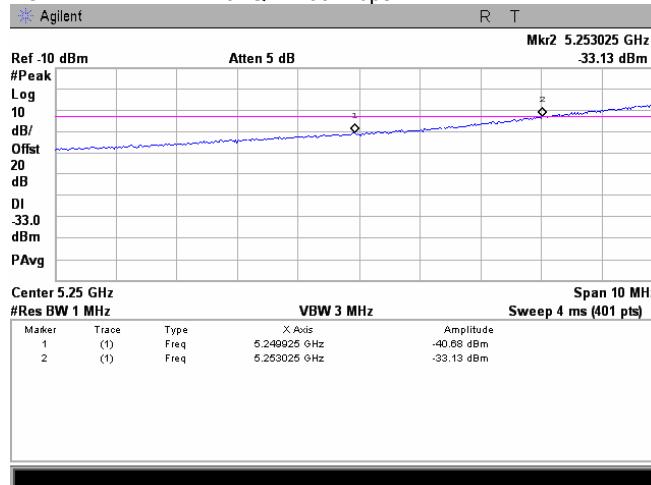
Plot 7.4.143 Conducted spurious emission measurements at the band edges

CARRIER FREQUENCY 5265 MHz
CHANNEL BANDWIDTH 10 MHz
MODULATION: BPSK 6.5 Mbps



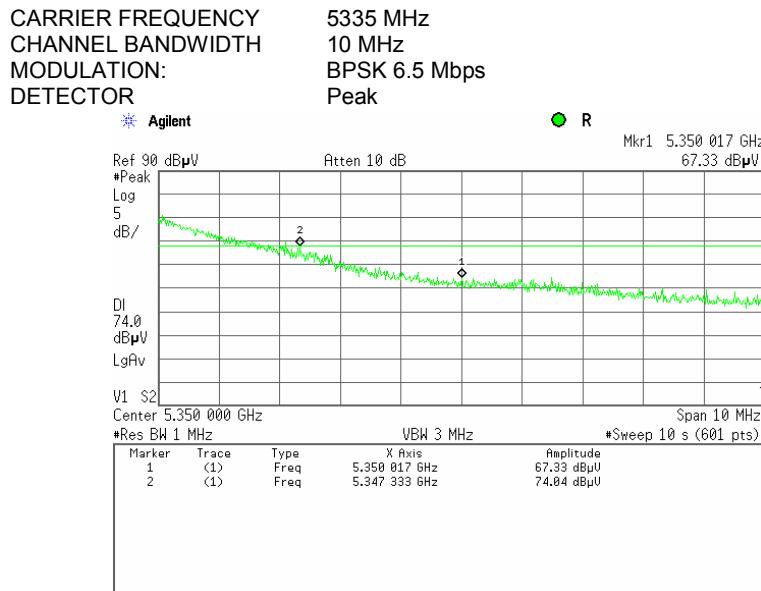
Plot 7.4.144 Conducted spurious emission measurements at the band edges

CARRIER FREQUENCY 5265 MHz
CHANNEL BANDWIDTH 10 MHz
MODULATION: 64QAM 65 Mbps

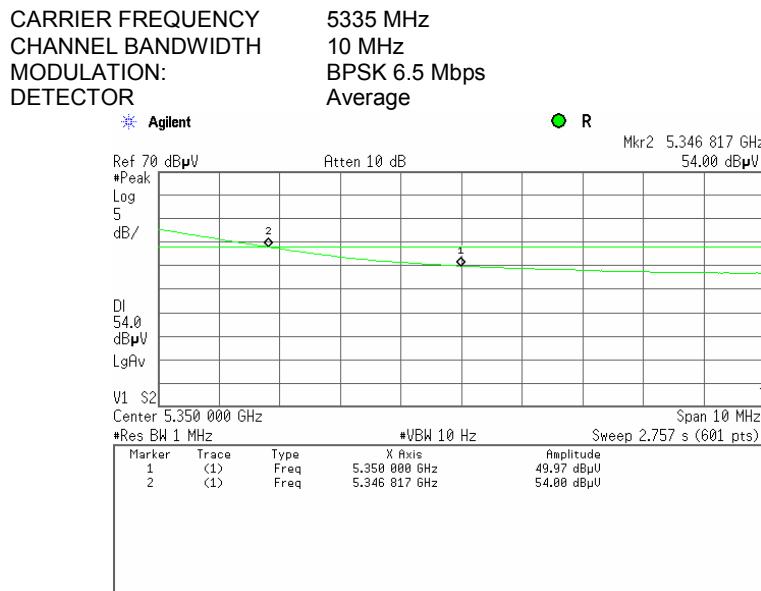


Test specification:	FCC section 15.407(b), RSS-210 Annex 9, section A9.2 Conducted emissions at band edges		
Test procedure:	Public notice DA 00-705 / ANSI C63.4, Section 13.1.4		
Test mode:	Compliance	Verdict:	
Date:	12/10/2009	PASS	
Temperature: 22°C	Air Pressure: 1010 hPa	Relative Humidity: 54 %	Power Supply: 120 VAC
Remarks: EUT with 6 dBi antenna assembly gain			

Plot 7.4.145 Radiated spurious emission measurements at the band edges

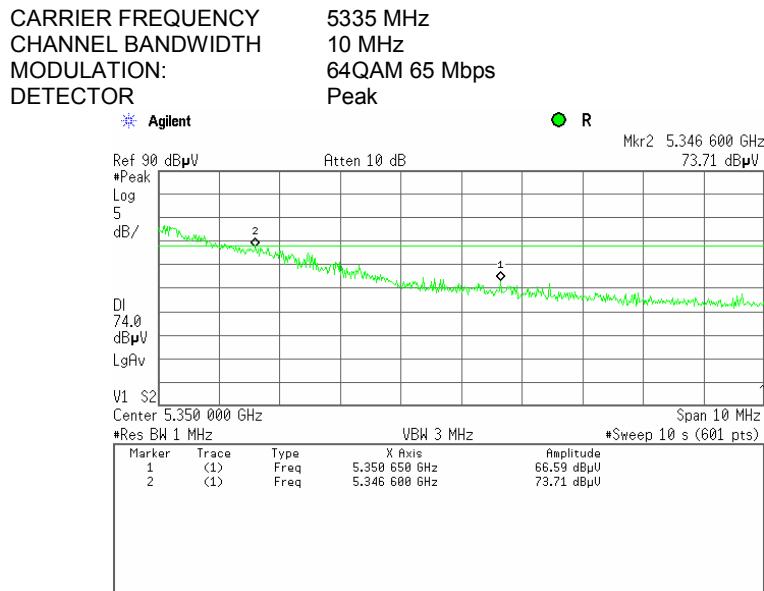


Plot 7.4.146 Radiated spurious emission measurements at the band edges

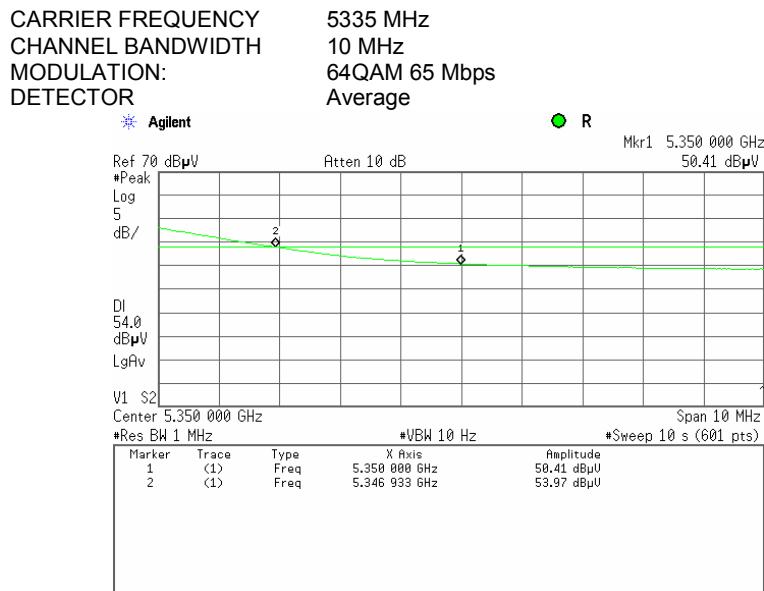


Test specification:	FCC section 15.407(b), RSS-210 Annex 9, section A9.2 Conducted emissions at band edges		
Test procedure:	Public notice DA 00-705 / ANSI C63.4, Section 13.1.4		
Test mode:	Compliance	Verdict:	
Date:	12/10/2009	PASS	
Temperature: 22°C	Air Pressure: 1010 hPa	Relative Humidity: 54 %	Power Supply: 120 VAC
Remarks: EUT with 6 dBi antenna assembly gain			

Plot 7.4.147 Radiated spurious emission measurements at the band edges

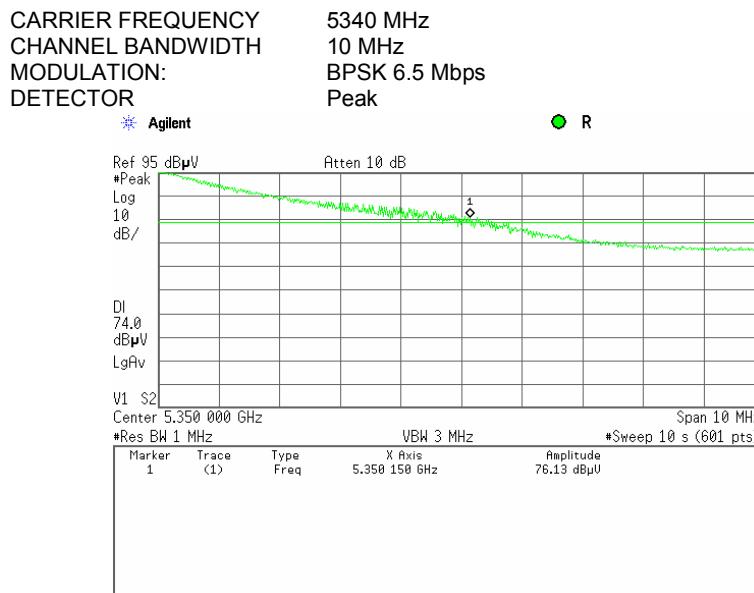


Plot 7.4.148 Radiated spurious emission measurements at the band edges

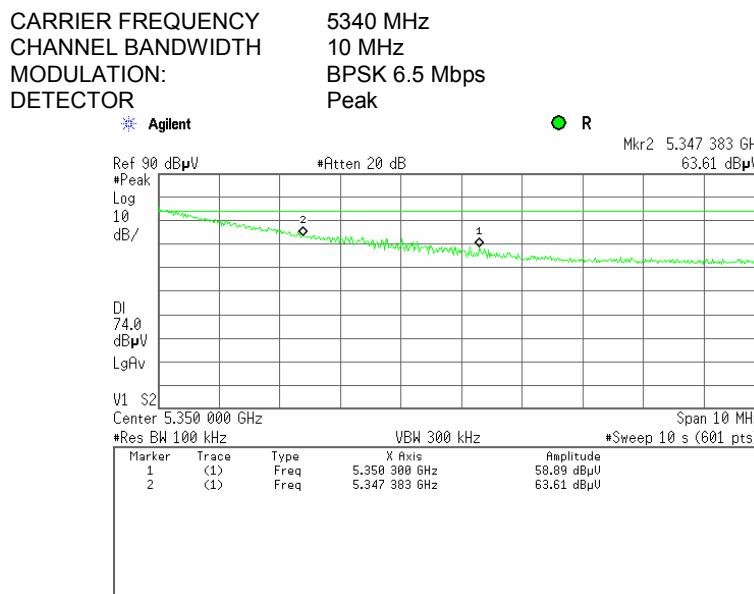


Test specification:	FCC section 15.407(b), RSS-210 Annex 9, section A9.2 Conducted emissions at band edges		
Test procedure:	Public notice DA 00-705 / ANSI C63.4, Section 13.1.4		
Test mode:	Compliance	Verdict:	
Date:	12/10/2009	PASS	
Temperature: 22°C	Air Pressure: 1010 hPa	Relative Humidity: 54 %	Power Supply: 120 VAC
Remarks: EUT with 6 dBi antenna assembly gain			

Plot 7.4.149 Radiated spurious emission measurements at the band edges, RBW=1 MHz



Plot 7.4.150 Radiated spurious emission measurements at the band edges, RBW=100 kHz

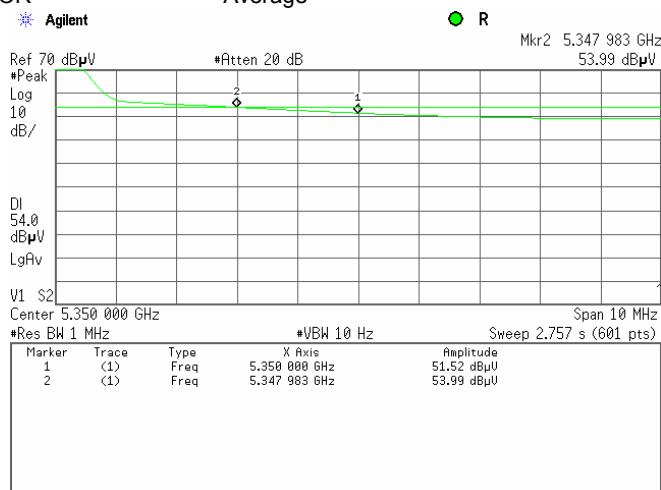


NOTE: Test result = SA Reading (Marker 1) + 10*log(1MHz/100kHz) = 58.89 + 10 = 68.89 dBuV

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:	12/10/2009		
Temperature: 22°C	Air Pressure: 1010 hPa	Relative Humidity: 54 %	Power Supply: 120 VAC
Remarks: EUT with 6 dBi antenna assembly gain			

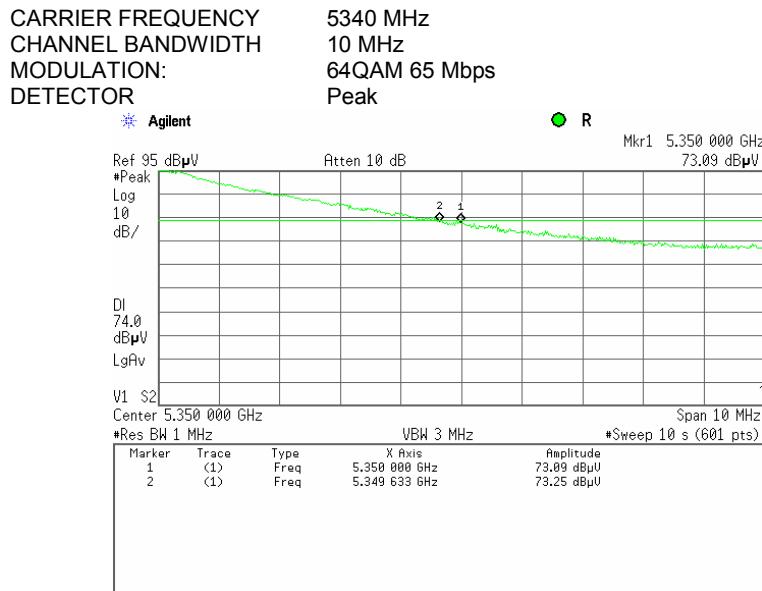
Plot 7.4.151 Radiated spurious emission measurements at the band edges

CARRIER FREQUENCY 5340 MHz
 CHANNEL BANDWIDTH 10 MHz
 MODULATION: BPSK 6.5 Mbps
 DETECTOR Average

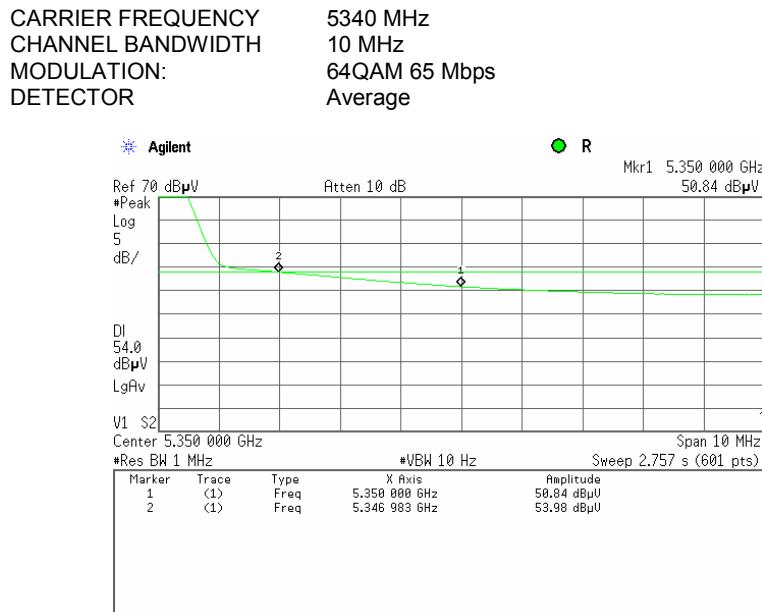


Test specification:	FCC section 15.407(b), RSS-210 Annex 9, section A9.2 Conducted emissions at band edges		
Test procedure:	Public notice DA 00-705 / ANSI C63.4, Section 13.1.4		
Test mode:	Compliance	Verdict: PASS	
Date:	12/10/2009		
Temperature: 22°C	Air Pressure: 1010 hPa	Relative Humidity: 54 %	Power Supply: 120 VAC
Remarks: EUT with 6 dBi antenna assembly gain			

Plot 7.4.152 Radiated spurious emission measurements at the band edges



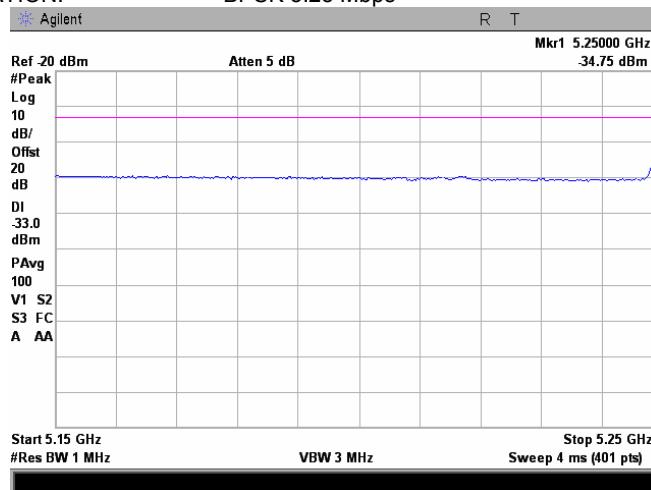
Plot 7.4.153 Radiated spurious emission measurements at the band edges



Test specification:	FCC section 15.407(b), RSS-210 Annex 9, section A9.2 <u>Conducted emissions at band edges</u>		
Test procedure:	Public notice DA 00-705 / ANSI C63.4, Section 13.1.4		
Test mode:	Compliance	Verdict: PASS	
Date:	12/10/2009		
Temperature: 22°C	Air Pressure: 1010 hPa	Relative Humidity: 54 %	Power Supply: 120 VAC
Remarks: EUT with 6 dBi antenna assembly gain			

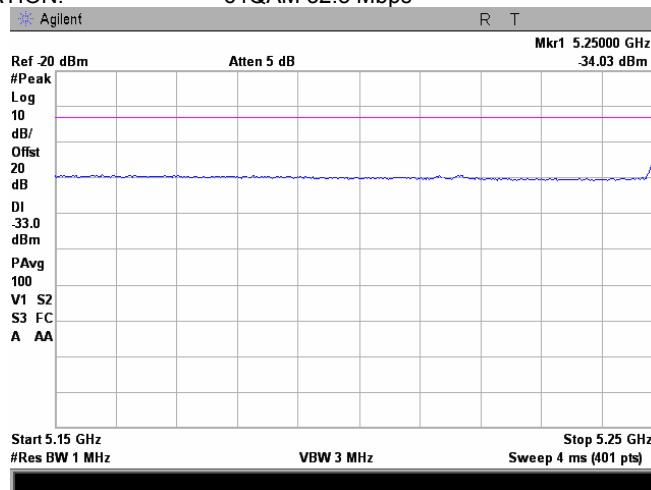
Plot 7.4.154 Conducted spurious emission measurements at the 5150 – 5250 MHz range

CARRIER FREQUENCY 5255 MHz
 CHANNEL BANDWIDTH 5 MHz
 MODULATION: BPSK 3.25 Mbps



Plot 7.4.155 Conducted spurious emission measurements 5150 – 5250 MHz range

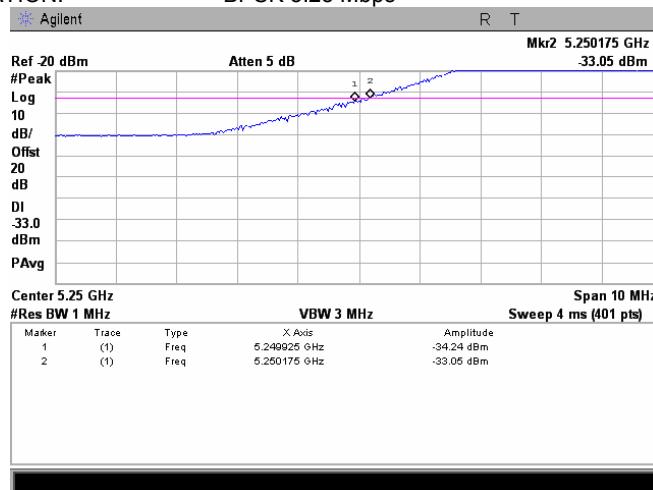
CARRIER FREQUENCY 5255 MHz
 CHANNEL BANDWIDTH 5 MHz
 MODULATION: 64QAM 32.5 Mbps



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:	12/10/2009		
Temperature: 22°C	Air Pressure: 1010 hPa	Relative Humidity: 54 %	Power Supply: 120 VAC
Remarks: EUT with 6 dBi antenna assembly gain			

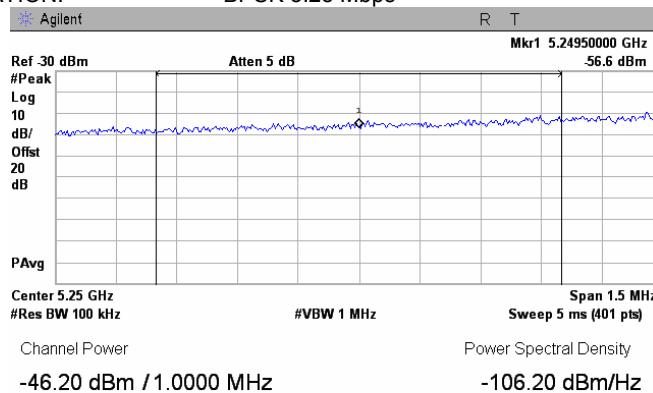
Plot 7.4.156 Conducted spurious emission measurements at the band edges

CARRIER FREQUENCY 5255 MHz
CHANNEL BANDWIDTH 5 MHz
MODULATION: BPSK 3.25 Mbps



Plot 7.4.157 Conducted spurious emission measurements at the band edges

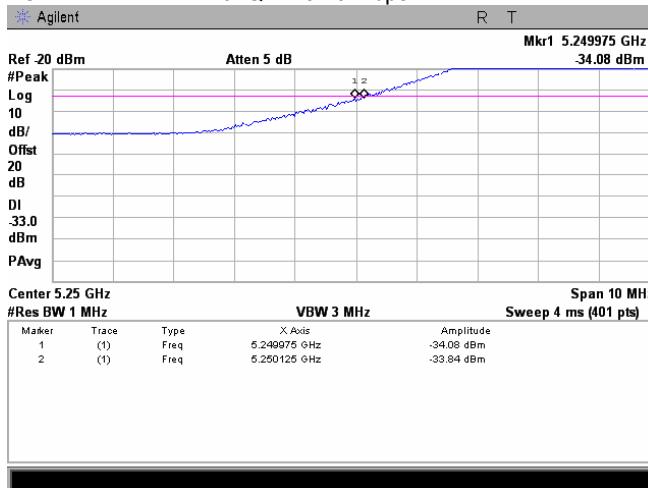
CARRIER FREQUENCY 5255 MHz
CHANNEL BANDWIDTH 5 MHz
MODULATION: BPSK 3.25 Mbps



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:	12/10/2009		
Temperature: 22°C	Air Pressure: 1010 hPa	Relative Humidity: 54 %	Power Supply: 120 VAC
Remarks: EUT with 6 dBi antenna assembly gain			

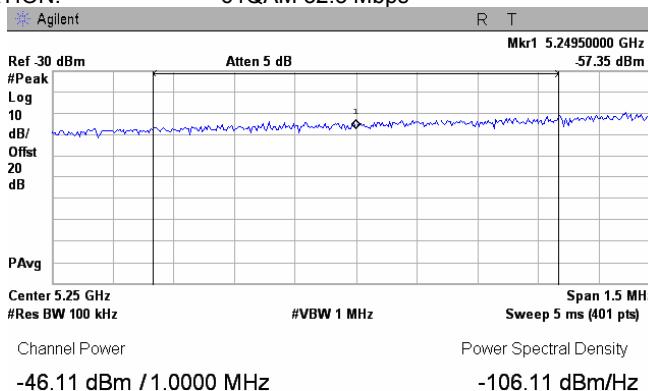
Plot 7.4.158 Conducted spurious emission measurements at the band edges, RBW=1 MHz

CARRIER FREQUENCY 5255 MHz
CHANNEL BANDWIDTH 5 MHz
MODULATION: 64QAM 32.5 Mbps



Plot 7.4.159 Conducted spurious emission measurements at the band edges, RBW=100 kHz

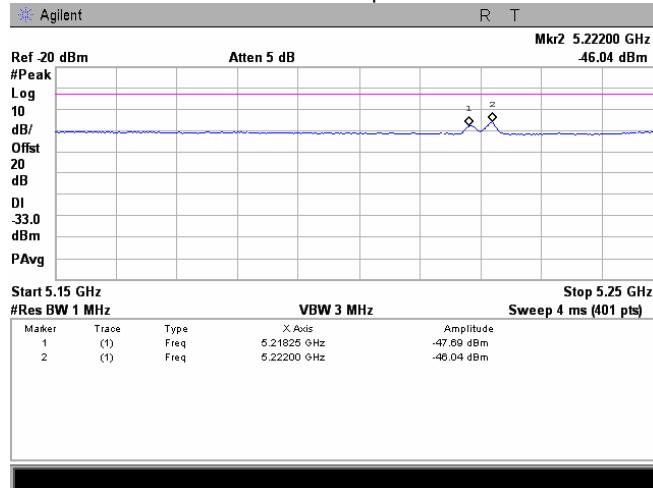
CARRIER FREQUENCY 5255 MHz
CHANNEL BANDWIDTH 5 MHz
MODULATION: 64QAM 32.5 Mbps



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:	12/10/2009		
Temperature: 22°C	Air Pressure: 1010 hPa	Relative Humidity: 54 %	Power Supply: 120 VAC
Remarks: EUT with 6 dBi antenna assembly gain			

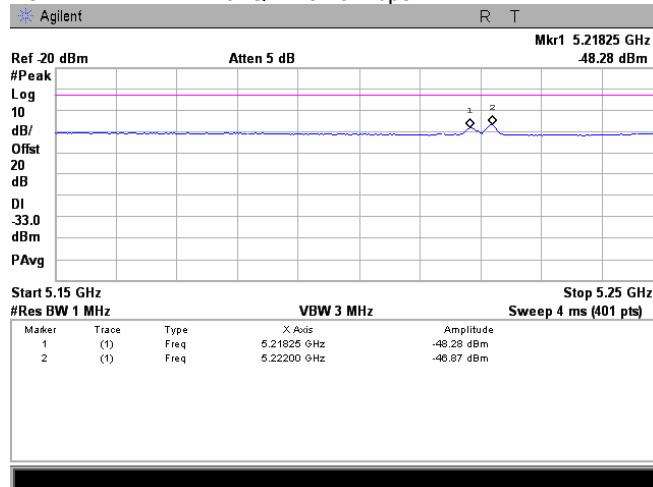
Plot 7.4.160 Conducted spurious emission measurements at the 5150 – 5250 MHz range

CARRIER FREQUENCY 5260 MHz
CHANNEL BANDWIDTH 5 MHz
MODULATION: BPSK 3.25 Mbps



Plot 7.4.161 Conducted spurious emission measurements 5150 – 5250 MHz range

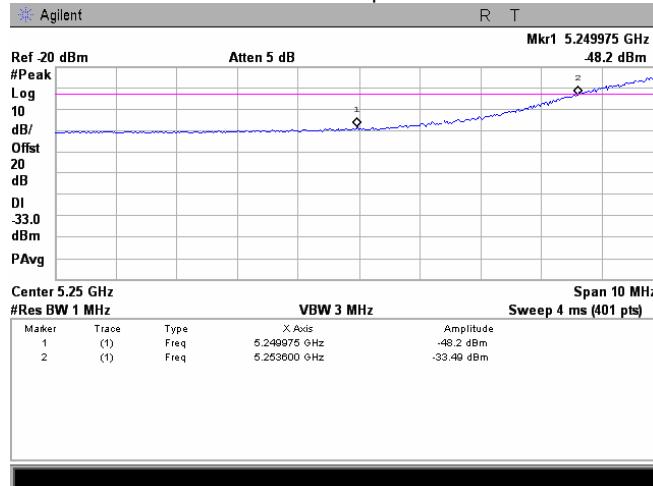
CARRIER FREQUENCY 5260 MHz
CHANNEL BANDWIDTH 5 MHz
MODULATION: 64QAM 32.5 Mbps



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:	12/10/2009		
Temperature: 22°C	Air Pressure: 1010 hPa	Relative Humidity: 54 %	Power Supply: 120 VAC
Remarks: EUT with 6 dBi antenna assembly gain			

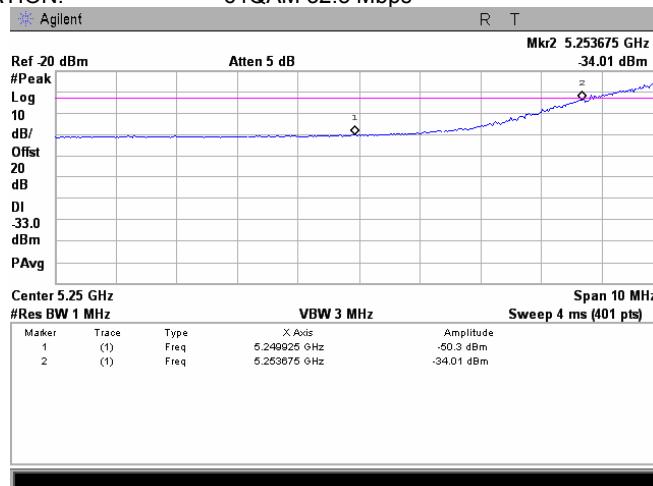
Plot 7.4.162 Conducted spurious emission measurements at the band edges

CARRIER FREQUENCY 5260 MHz
 CHANNEL BANDWIDTH 5 MHz
 MODULATION: BPSK 3.25 Mbps



Plot 7.4.163 Conducted spurious emission measurements at the band edges

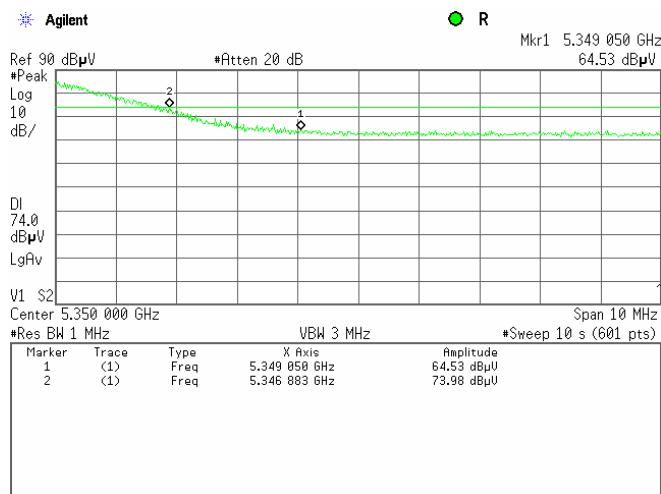
CARRIER FREQUENCY 5260 MHz
 CHANNEL BANDWIDTH 5 MHz
 MODULATION: 64QAM 32.5 Mbps



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:	12/10/2009		
Temperature: 22°C	Air Pressure: 1010 hPa	Relative Humidity: 54 %	Power Supply: 120 VAC
Remarks: EUT with 6 dBi antenna assembly gain			

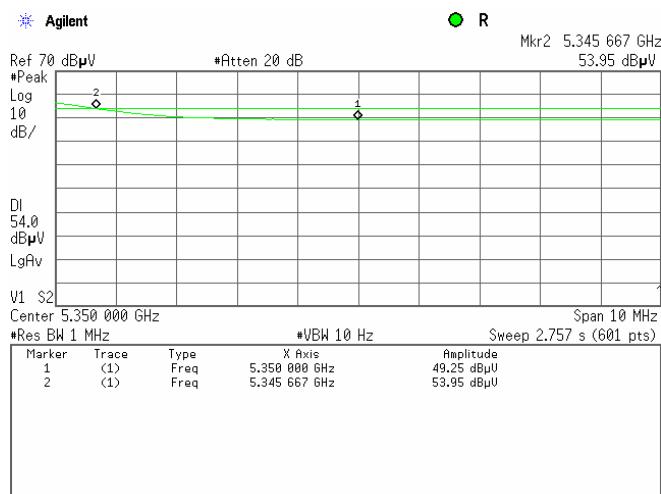
Plot 7.4.164 Radiated spurious emission measurements at the band edges

CARRIER FREQUENCY 5340 MHz
CHANNEL BANDWIDTH 5 MHz
MODULATION: BPSK 3.25 Mbps
DETECTOR Peak



Plot 7.4.165 Radiated spurious emission measurements at the band edges

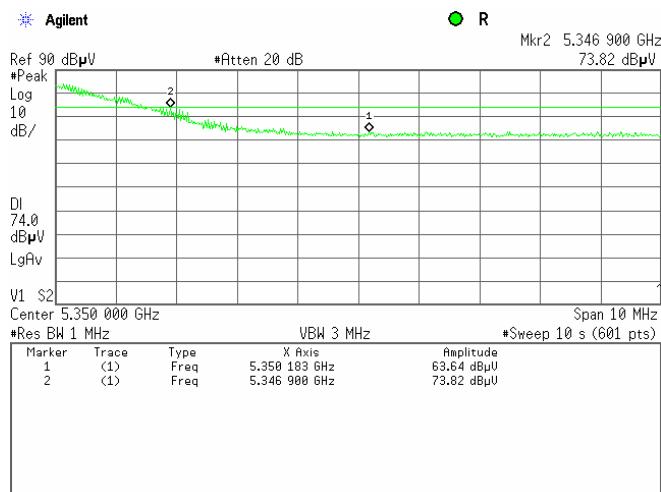
CARRIER FREQUENCY 5340 MHz
CHANNEL BANDWIDTH 5 MHz
MODULATION: BPSK 3.25 Mbps
DETECTOR Average



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:	12/10/2009		
Temperature: 22°C	Air Pressure: 1010 hPa	Relative Humidity: 54 %	Power Supply: 120 VAC
Remarks: EUT with 6 dBi antenna assembly gain			

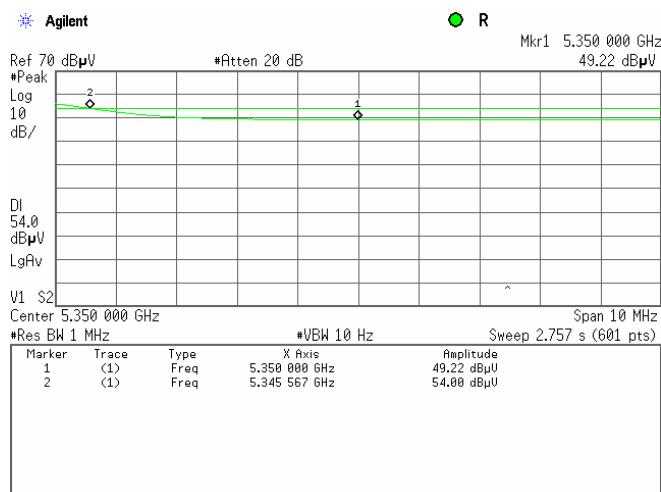
Plot 7.4.166 Radiated spurious emission measurements at the band edges

CARRIER FREQUENCY 5340 MHz
 CHANNEL BANDWIDTH 5 MHz
 MODULATION: 64QAM 32.5 Mbps
 DETECTOR Peak



Plot 7.4.167 Radiated spurious emission measurements at the band edges

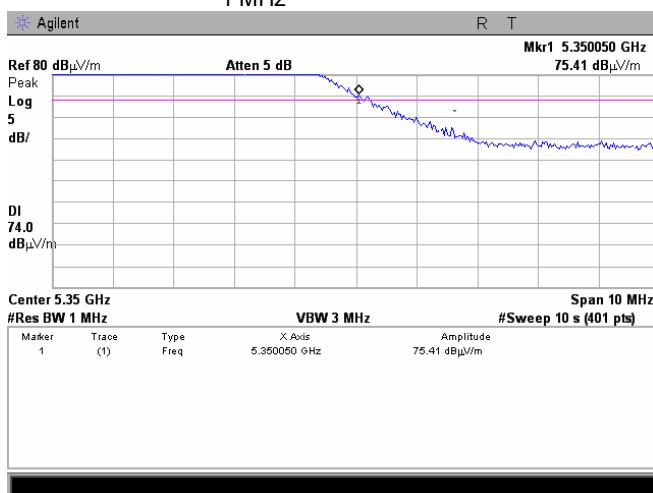
CARRIER FREQUENCY 5340 MHz
 CHANNEL BANDWIDTH 5 MHz
 MODULATION: 64QAM 32.5 Mbps
 DETECTOR Average



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:	
Date:	12/10/2009	PASS	
Temperature: 22°C	Air Pressure: 1010 hPa	Relative Humidity: 54 %	Power Supply: 120 VAC
Remarks: EUT with 6 dBi antenna assembly gain			

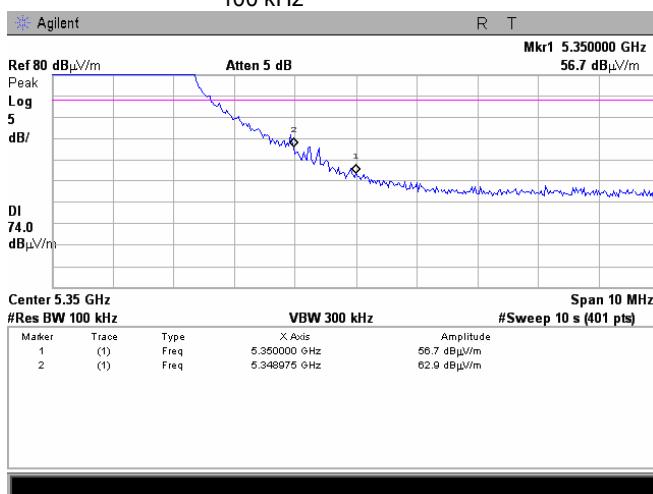
Plot 7.4.168 Radiated spurious emission measurements at the band edges

CARRIER FREQUENCY 5345 MHz
CHANNEL BANDWIDTH 5 MHz
MODULATION: BPSK 3.25 Mbps
DETECTOR Peak
RBW 1 MHz



Plot 7.4.169 Radiated spurious emission measurements at the band edges

CARRIER FREQUENCY 5345 MHz
CHANNEL BANDWIDTH 5 MHz
MODULATION: BPSK 3.25 Mbps
DETECTOR Peak
RBW 100 kHz

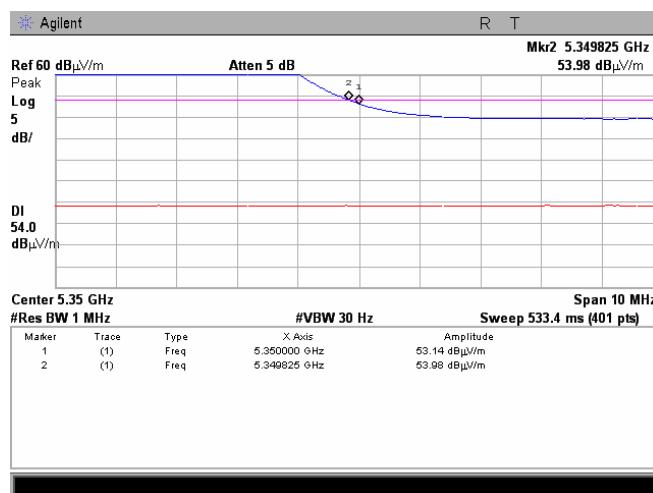


NOTE: Test result = SA Reading (Marker 1) + 10*log(1MHz/100kHz) = 56.7 + 10 = 66.7 dB μ V

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:	12/10/2009		
Temperature: 22°C	Air Pressure: 1010 hPa	Relative Humidity: 54 %	Power Supply: 120 VAC
Remarks: EUT with 6 dBi antenna assembly gain			

Plot 7.4.170 Radiated spurious emission measurements at the band edges

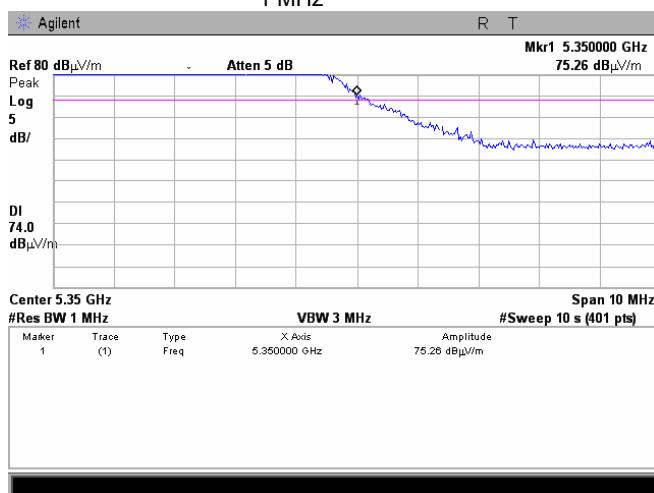
CARRIER FREQUENCY 5345 MHz
 CHANNEL BANDWIDTH 5 MHz
 MODULATION: BPSK 3.25 Mbps
 DETECTOR Average



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:	12/10/2009		
Temperature: 22°C	Air Pressure: 1010 hPa	Relative Humidity: 54 %	Power Supply: 120 VAC
Remarks: EUT with 6 dBi antenna assembly gain			

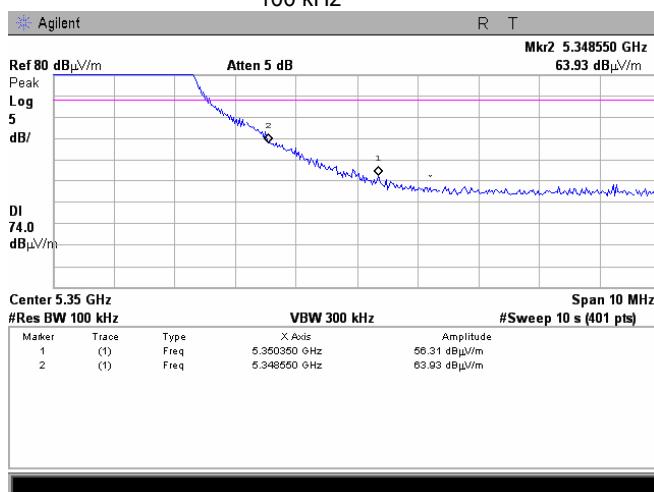
Plot 7.4.171 Radiated spurious emission measurements at the band edges

CARRIER FREQUENCY 5345 MHz
CHANNEL BANDWIDTH 5 MHz
MODULATION: 64QAM 32.5 Mbps
DETECTOR Peak
RBW 1 MHz



Plot 7.4.172 Radiated spurious emission measurements at the band edges

CARRIER FREQUENCY 5345 MHz
CHANNEL BANDWIDTH 5 MHz
MODULATION: 64QAM 32.5 Mbps
DETECTOR Peak
RBW 100 kHz

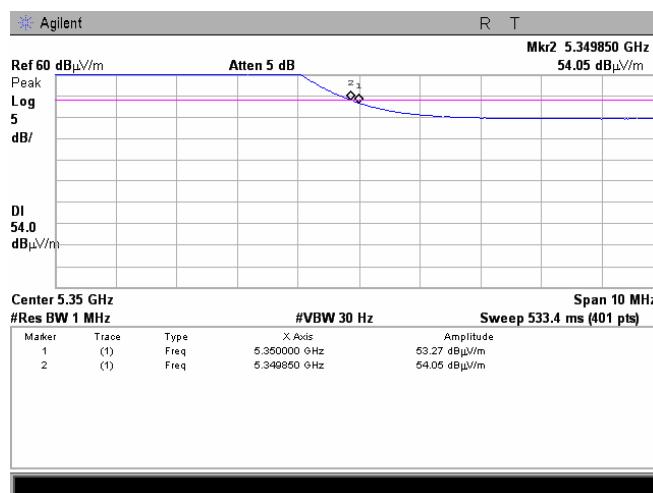


NOTE: Test result = SA Reading (Marker 1) + 10*log(1MHz/100kHz) = 56.31 + 10 = 66.31 dBuV

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:	12/10/2009		
Temperature: 22°C	Air Pressure: 1010 hPa	Relative Humidity: 54 %	Power Supply: 120 VAC
Remarks: EUT with 6 dBi antenna assembly gain			

Plot 7.4.173 Radiated spurious emission measurements at the band edges

CARRIER FREQUENCY 5345 MHz
 CHANNEL BANDWIDTH 5 MHz
 MODULATION: 64QAM 32.5 Mbps
 DETECTOR Average



Test specification:	FCC section 15.407(g), Frequency stability		
Test procedure:	Section 2.1055		
Test mode:	Compliance	Verdict:	
Date:	12/20/2009	PASS	
Temperature: 22°C	Air Pressure: 1012 hPa	Relative Humidity: 51 %	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.

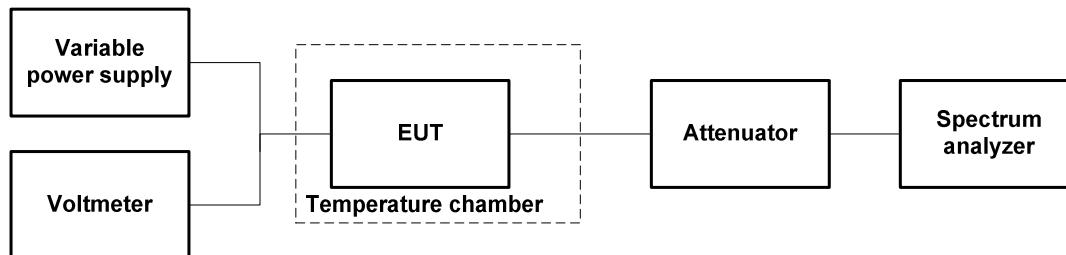
Table 7.5.1 Frequency stability limits

Assigned frequency band, MHz	Maximum allowed frequency displacement
5250 - 5350	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, Table 7.5.4, Table 7.5.5.
- 7.5.2.5 Frequency displacement was calculated and compared with the limit as provided in Table 7.5.2, Table 7.5.3, Table 7.5.4, Table 7.5.5.

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:	
Date:	12/20/2009	PASS	
Temperature: 22°C	Air Pressure: 1012 hPa	Relative Humidity: 51 %	Power Supply: 120 VAC
Remarks: EUT with 6 dBi antenna assembly gain			

Table 7.5.2 Frequency stability test results

ASSIGNID FREQUENCY BAND: 5250 - 5350 MHz
 NOMINAL POWER VOLTAGE: 120 VAC
 TEMPERATURE STABILIZATION PERIOD: 20 min
 POWER DURING TEMPERATURE TRANSITION: Off
 SPECTRUM ANALYZER MODE: Counter
 RESOLUTION BANDWIDTH: 1 kHz
 VIDEO BANDWIDTH: 3 kHz
 CHANNEL BANDWIDTH / MODULATION: 40 MHz / 64QAM, 27 Mbps (at the low band edge);
 40 MHz / BPSK, 270 Mbps (at the high band edge)
 (As worst case in band edge test, see plots)

Temperature, °C	Voltage, V	Frequency, MHz				Band edge limit, MHz	Margin, Hz*	Verdict
		Start up	2 nd min	5 th min	10 th min			
Low frequency Band Edge								
-35	Nominal	5250.400138	5250.412880	5250.412912	5250.412480	5250	0	Pass
20	Nominal +15%	5250.373798	5250.378538	5250.379129	5250.379704		-1202	
20	Nominal	5250.372908	5250.373990	5250.374383	5250.375000		-2092	
20	Nominal -15%	5250.383779	5250.374154	5250.374203	5250.374292		-846	
60	Nominal	5250.384613	5250.469313	5250.488813	5250.497913		0	
Low frequency In Band								
-35	Nominal	5250.275138	5250.287880	5250.287912	5250.287480	5250	0	Pass
20	Nominal +15%	5250.248798	5250.253538	5250.254129	5250.254704		-1202	
20	Nominal	5250.247908	5250.248990	5250.249383	5250.250000		-2092	
20	Nominal -15%	5250.258779	5250.249154	5250.249203	5250.249292		-846	
60	Nominal	5250.259613	5250.344313	5250.363813	5250.372913		0	
High frequency In Band								
-35	Nominal	5349.258233	5349.257805	5349.257663	5349.257592	5350	32592	Pass
20	Nominal +15%	5349.219315	5349.221233	5349.222680	5349.223661		0	
20	Nominal	5349.219771	5349.222112	5349.224482	5349.225000		0	
20	Nominal -15%	5349.218997	5349.219829	5349.219964	5349.219608		0	
60	Nominal	5349.283133	5349.345533	5349.356858	5349.360283		135283	
High frequency Band Edge								
-35	Nominal	5345.416233	5345.415805	5345.415663	5345.415592	5350	32592	Pass
20	Nominal +15%	5345.377315	5345.379233	5345.380680	5345.381661		0	
20	Nominal	5345.377771	5345.380112	5345.382482	5345.383000		0	
20	Nominal -15%	5345.376997	5345.377829	5345.377964	5345.377608		0	
60	Nominal	5345.441133	5345.503533	5345.514858	5345.518283		135283	

* - 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

Test specification:	FCC section 15.407(g), Frequency stability		
Test procedure:	Section 2.1055		
Test mode:	Compliance	Verdict:	
Date:	12/20/2009	PASS	
Temperature: 22°C	Air Pressure: 1012 hPa	Relative Humidity: 51 %	Power Supply: 120 VAC
Remarks: EUT with 6 dBi antenna assembly gain			

Table 7.5.3 Frequency stability test results

ASSIGNED FREQUENCY BAND: 5250 - 5350 MHz
 NOMINAL POWER VOLTAGE: 120 VAC
 TEMPERATURE STABILIZATION PERIOD: 20 min
 POWER DURING TEMPERATURE TRANSITION: Off
 SPECTRUM ANALYZER MODE: Counter
 RESOLUTION BANDWIDTH: 1 kHz
 VIDEO BANDWIDTH: 3 kHz
 CHANNEL BANDWIDTH / MODULATION: 20 MHz / 64QAM, 13 Mbps (at the low band edge);
 20 MHz / BPSK, 130 Mbps (at the high band edge)
 (As worst case in band edge test, see plots)

Temperature, °C	Voltage, V	Frequency, MHz				Band edge limit, MHz	Margin, Hz*	Verdict
		Start up	2 nd min	5 th min	10 th min			
Low frequency Band Edge								
-35	Nominal	5250.325138	5250.337880	5250.337912	5250.337480	5250	0	Pass
20	Nominal +15%	5250.298798	5250.303538	5250.304129	5250.304704		-1202	
20	Nominal	5250.297908	5250.298990	5250.299383	5250.300000		-2092	
20	Nominal -15%	5250.308779	5250.299154	5250.299203	5250.299292		-846	
60	Nominal	5250.309613	5250.394313	5250.413813	5250.422913		0	
Low frequency In Band								
-35	Nominal	5250.325138	5250.337880	5250.337912	5250.337480	5250	0	Pass
20	Nominal +15%	5250.298798	5250.303538	5250.304129	5250.304704		-1202	
20	Nominal	5250.297908	5250.298990	5250.299383	5250.300000		-2092	
20	Nominal -15%	5250.308779	5250.299154	5250.299203	5250.299292		-846	
60	Nominal	5250.309613	5250.394313	5250.413813	5250.422913		0	
High frequency In Band								
-35	Nominal	5349.658233	5349.657805	5349.657663	5349.657592	5350	32592	Pass
20	Nominal +15%	5349.619315	5349.621233	5349.622680	5349.623661		0	
20	Nominal	5349.619771	5349.622112	5349.624482	5349.625000		0	
20	Nominal -15%	5349.618997	5349.619829	5349.619964	5349.619608		0	
60	Nominal	5349.683133	5349.745533	5349.756858	5349.760283		135283	
High frequency Band Edge								
-35	Nominal	5349.616233	5349.615805	5349.615663	5349.615592	5350	32592	Pass
20	Nominal +15%	5349.577315	5349.579233	5349.580680	5349.581661		0	
20	Nominal	5349.577771	5349.580112	5349.582482	5349.583000		0	
20	Nominal -15%	5349.576997	5349.577829	5349.577964	5349.577608		0	
60	Nominal	5349.641133	5349.703533	5349.714858	5349.718283		135283	

* - 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

Test specification:	FCC section 15.407(g), Frequency stability		
Test procedure:	Section 2.1055		
Test mode:	Compliance	Verdict:	
Date:	12/20/2009	PASS	
Temperature: 22°C	Air Pressure: 1012 hPa	Relative Humidity: 51 %	Power Supply: 120 VAC
Remarks: EUT with 6 dBi antenna assembly gain			

Table 7.5.4 Frequency stability test results

ASSIGNED FREQUENCY BAND: 5250 - 5350 MHz
 NOMINAL POWER VOLTAGE: 120 VAC
 TEMPERATURE STABILIZATION PERIOD: 20 min
 POWER DURING TEMPERATURE TRANSITION: Off
 SPECTRUM ANALYZER MODE: Counter
 RESOLUTION BANDWIDTH: 1 kHz
 VIDEO BANDWIDTH: 3 kHz
 CHANNEL BANDWIDTH / MODULATION: 10 MHZ / 64QAM, 65 Mbps (at the low and high band edge);
 (As worst case in band edge test, see plots)

Temperature, °C	Voltage, V	Frequency, MHz				Band edge limit, MHz	Margin, Hz*	Verdict
		Start up	2 nd min	5 th min	10 th min			
Low frequency Band Edge								
-35	Nominal	5250.375138	5250.387880	5250.387912	5250.387480	5250	1075	Pass
20	Nominal +15%	5250.348798	5250.353538	5250.354129	5250.354704		975	
20	Nominal	5250.347908	5250.348990	5250.349383	5250.350000		825	
20	Nominal -15%	5250.358779	5250.349154	5250.349203	5250.349292		925	
60	Nominal	5250.359613	5250.444313	5250.463813	5250.472913		1550	
High frequency Band Edge								
-35	Nominal	5349.766233	5349.765805	5349.765663	5349.765592	5350	32592	Pass
20	Nominal +15%	5349.727315	5349.729233	5349.730680	5349.731661		0	
20	Nominal	5349.727771	5349.730112	5349.732482	5349.733000		0	
20	Nominal -15%	5349.726997	5349.727829	5349.727964	5349.727608		0	
60	Nominal	5349.791133	5349.853533	5349.864858	5349.868283		135283	

* - 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

Test specification:	FCC section 15.407(g), Frequency stability		
Test procedure:	Section 2.1055		
Test mode:	Compliance	Verdict:	
Date:	12/20/2009	PASS	
Temperature: 22°C	Air Pressure: 1012 hPa	Relative Humidity: 51 %	Power Supply: 120 VAC
Remarks: EUT with 6 dBi antenna assembly gain			

Table 7.5.5 Frequency stability test results

ASSIGNED FREQUENCY BAND: 5250 - 5350 MHz
 NOMINAL POWER VOLTAGE: 120 VAC
 TEMPERATURE STABILIZATION PERIOD: 20 min
 POWER DURING TEMPERATURE TRANSITION: Off
 SPECTRUM ANALYZER MODE: Counter
 RESOLUTION BANDWIDTH: 1 kHz
 VIDEO BANDWIDTH: 3 kHz
 CHANNEL BANDWIDTH / MODULATION: 5 MHZ / 64QAM, 32.5 Mbps (at the low and high band edge);
 (As worst case in band edge test, see plots)

Temperature, °C	Voltage, V	Frequency, MHz				Band edge limit, MHz	Margin, Hz*	Verdict
		Start up	2 nd min	5 th min	10 th min			
Low frequency Band Edge								
-35	Nominal	5250.150138	5250.162880	5250.162912	5250.162480	5250	1075	Pass
20	Nominal +15%	5250.123798	5250.128538	5250.129129	5250.129704		975	
20	Nominal	5250.122908	5250.123990	5250.124383	5250.125000		825	
20	Nominal -15%	5250.133779	5250.124154	5250.124203	5250.124292		925	
60	Nominal	5250.134613	5250.219313	5250.238813	5250.247913		1550	
High frequency Band Edge								
-35	Nominal	5349.883233	5349.882805	5349.882663	5349.882592	5350	32592	Pass
20	Nominal +15%	5349.844315	5349.846233	5349.847680	5349.848661		0	
20	Nominal	5349.844771	5349.847112	5349.849482	5349.850000		0	
20	Nominal -15%	5349.843997	5349.844829	5349.844964	5349.844608		0	
60	Nominal	5349.908133	5349.970533	5349.981858	5349.985283		135283	

* - 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

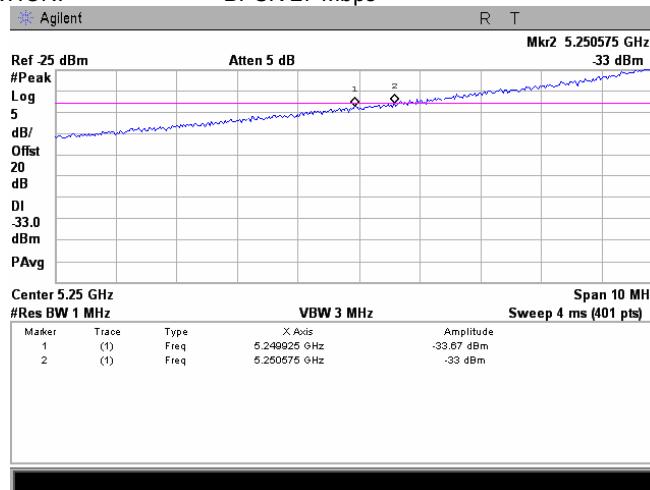
HL 0493	HL 1194	HL 2909	HL 3179	HL 3233	HL 3386	
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Full description is given in Appendix A.

Test specification:	FCC section 15.407(g), Frequency stability		
Test procedure:	Section 2.1055		
Test mode:	Compliance	Verdict:	PASS
Date:	12/20/2009		
Temperature: 22°C	Air Pressure: 1012 hPa	Relative Humidity: 51 %	Power Supply: 120 VAC
Remarks: EUT with 6 dBi antenna assembly gain			

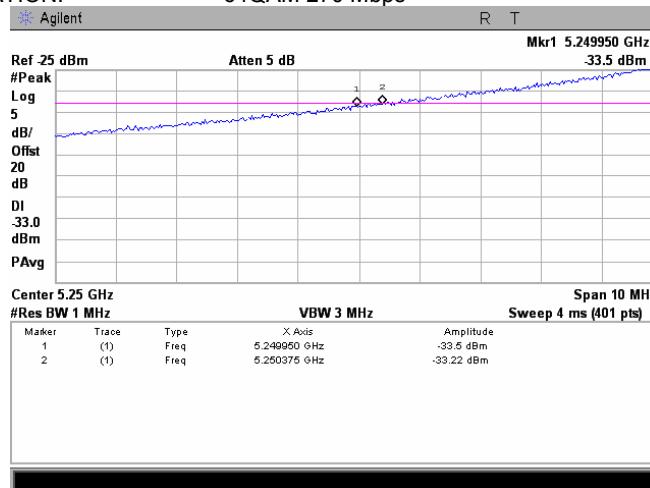
Plot 7.5.1 Conducted spurious emission measurements at the low band edge

CARRIER FREQUENCY 5275 MHz
CHANNEL BANDWIDTH 40 MHz
MODULATION: BPSK 27 Mbps



Plot 7.5.2 Conducted spurious emission measurements at the low band edge

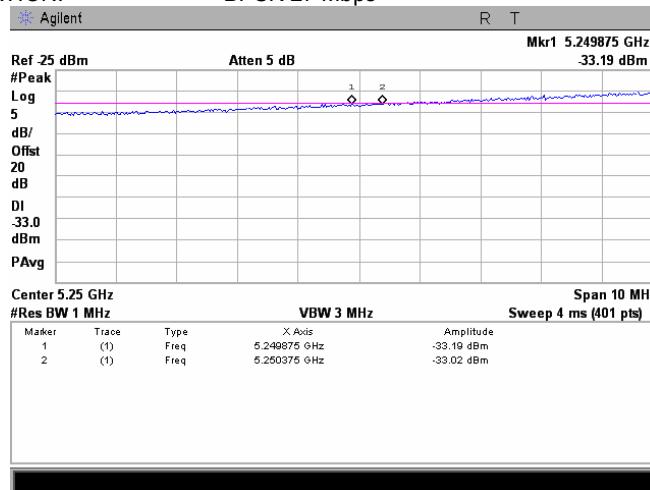
CARRIER FREQUENCY 5275 MHz
CHANNEL BANDWIDTH 40 MHz
MODULATION: 64QAM 270 Mbps



Test specification:	FCC section 15.407(g), Frequency stability		
Test procedure:	Section 2.1055		
Test mode:	Compliance	Verdict:	PASS
Date:	12/20/2009		
Temperature: 22°C	Air Pressure: 1012 hPa	Relative Humidity: 51 %	Power Supply: 120 VAC
Remarks: EUT with 6 dBi antenna assembly gain			

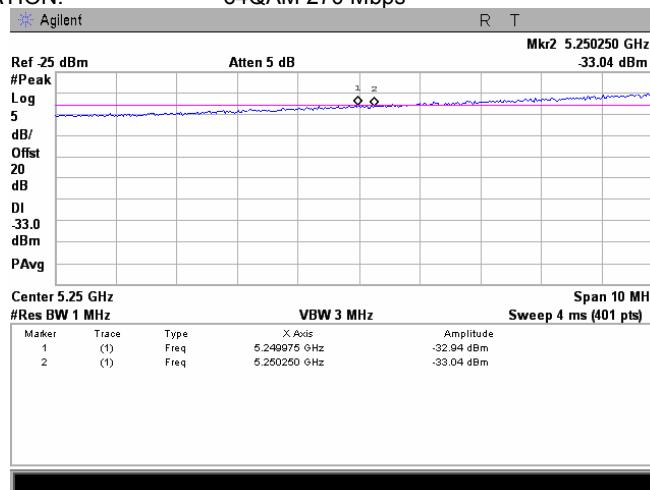
Plot 7.5.3 Conducted spurious emission measurements at the low band edge

CARRIER FREQUENCY 5285 MHz
 CHANNEL BANDWIDTH 40 MHz
 MODULATION: BPSK 27 Mbps



Plot 7.5.4 Conducted spurious emission measurements at the low band edge

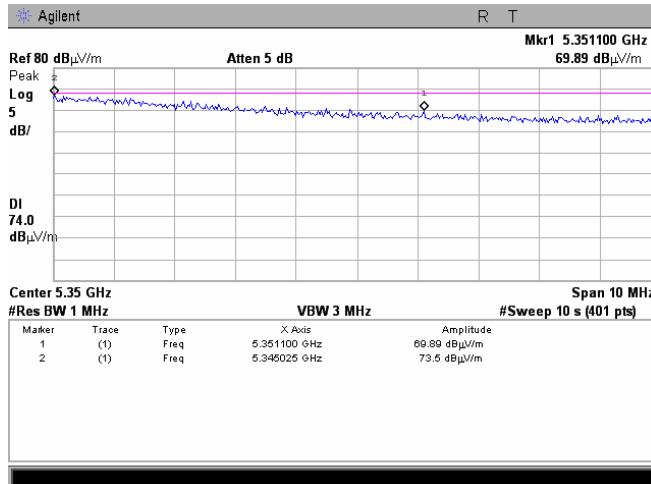
CARRIER FREQUENCY 5285 MHz
 CHANNEL BANDWIDTH 40 MHz
 MODULATION: 64QAM 270 Mbps



Test specification:	FCC section 15.407(g), Frequency stability		
Test procedure:	Section 2.1055		
Test mode:	Compliance	Verdict:	PASS
Date:	12/20/2009		
Temperature: 22°C	Air Pressure: 1012 hPa	Relative Humidity: 51 %	Power Supply: 120 VAC
Remarks: EUT with 6 dBi antenna assembly gain			

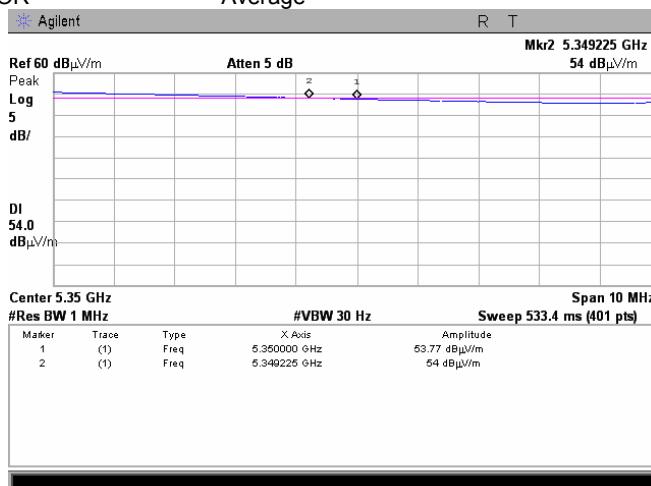
Plot 7.5.5 Radiated spurious emission measurements at the high band edge

CARRIER FREQUENCY 5315 MHz
CHANNEL BANDWIDTH 40 MHz
MODULATION: BPSK 27 Mbps
DETECTOR Peak



Plot 7.5.6 Radiated spurious emission measurements at the high band edge

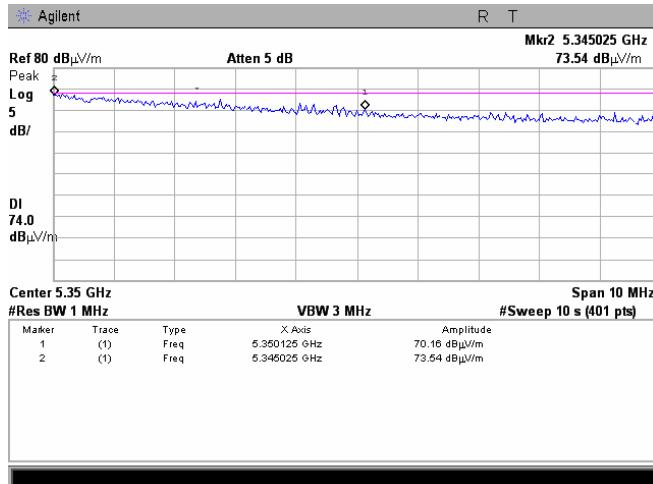
CARRIER FREQUENCY 5315 MHz
CHANNEL BANDWIDTH 40 MHz
MODULATION: BPSK 27 Mbps
DETECTOR Average



Test specification:	FCC section 15.407(g), Frequency stability		
Test procedure:	Section 2.1055		
Test mode:	Compliance	Verdict:	PASS
Date:	12/20/2009		
Temperature: 22°C	Air Pressure: 1012 hPa	Relative Humidity: 51 %	Power Supply: 120 VAC
Remarks: EUT with 6 dBi antenna assembly gain			

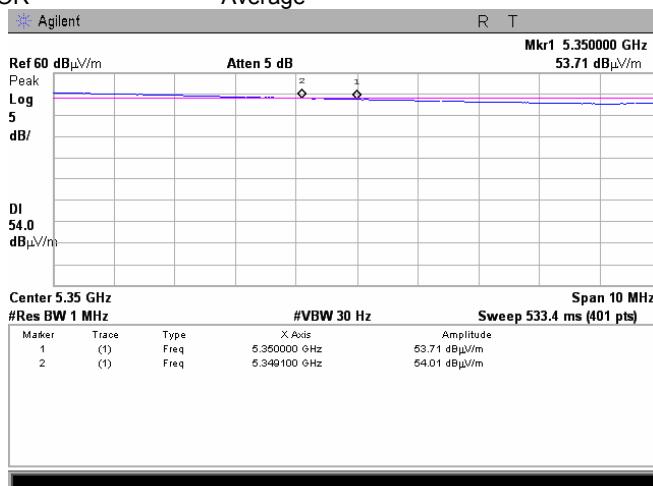
Plot 7.5.7 Radiated spurious emission measurements at the high band edge

CARRIER FREQUENCY 5315 MHz
CHANNEL BANDWIDTH 40 MHz
MODULATION: 64QAM 270 Mbps
DETECTOR Peak



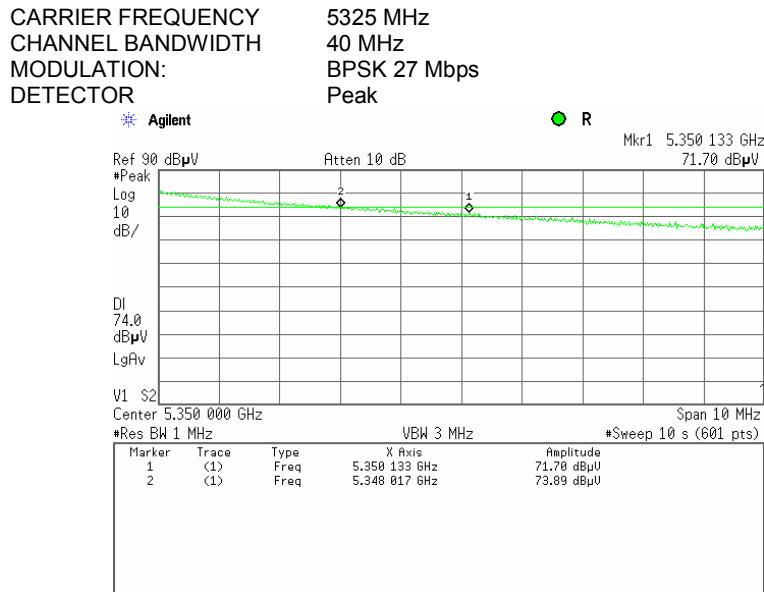
Plot 7.5.8 Radiated spurious emission measurements at the high band edge

CARRIER FREQUENCY 5315 MHz
CHANNEL BANDWIDTH 40 MHz
MODULATION: 64QAM 270 Mbps
DETECTOR Average

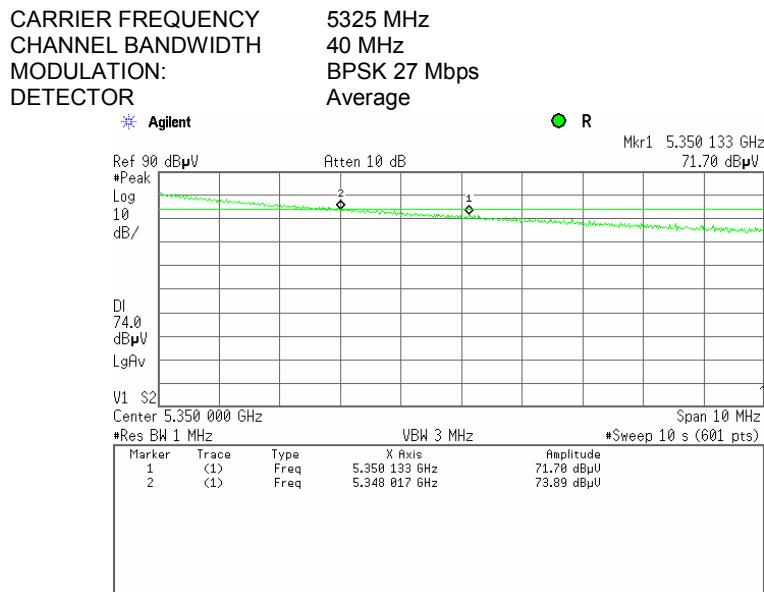


Test specification:	FCC section 15.407(g), Frequency stability		
Test procedure:	Section 2.1055		
Test mode:	Compliance	Verdict:	
Date:	12/20/2009	PASS	
Temperature: 22°C	Air Pressure: 1012 hPa	Relative Humidity: 51 %	Power Supply: 120 VAC
Remarks: EUT with 6 dBi antenna assembly gain			

Plot 7.5.9 Radiated spurious emission measurements at the band edges

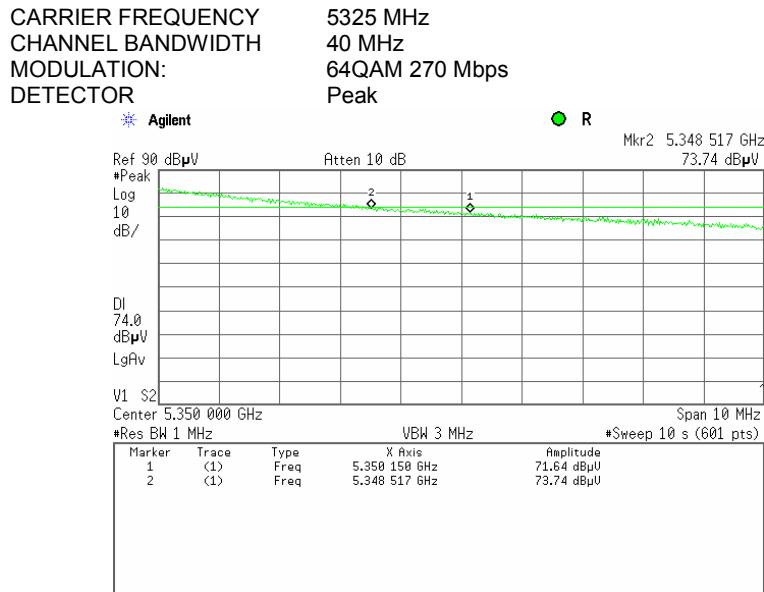


Plot 7.5.10 Radiated spurious emission measurements at the band edges

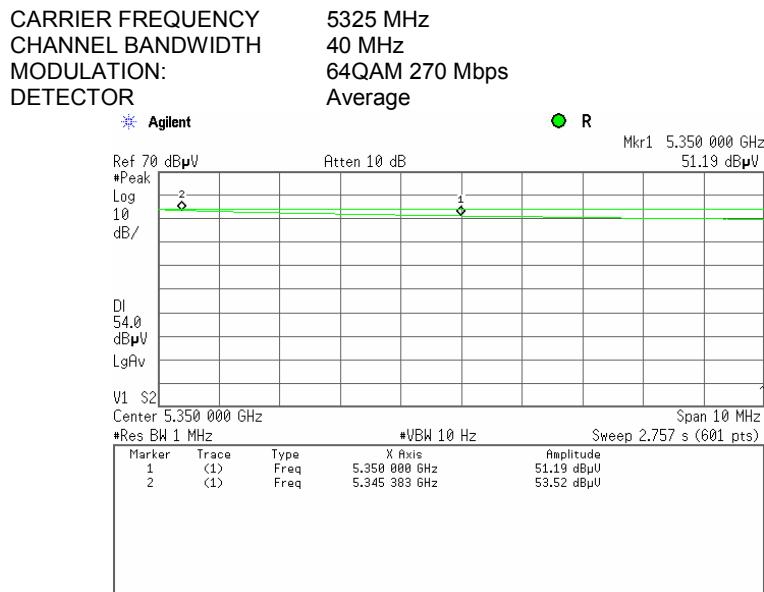


Test specification:	FCC section 15.407(g), Frequency stability		
Test procedure:	Section 2.1055		
Test mode:	Compliance	Verdict:	
Date:	12/20/2009	PASS	
Temperature: 22°C	Air Pressure: 1012 hPa	Relative Humidity: 51 %	Power Supply: 120 VAC
Remarks: EUT with 6 dBi antenna assembly gain			

Plot 7.5.11 Radiated spurious emission measurements at the band edges



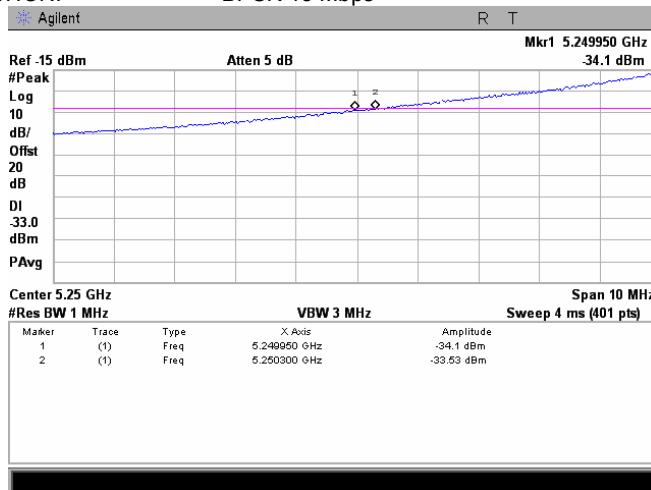
Plot 7.5.12 Radiated spurious emission measurements at the band edges



Test specification:	FCC section 15.407(g), Frequency stability		
Test procedure:	Section 2.1055		
Test mode:	Compliance	Verdict:	PASS
Date:	12/20/2009		
Temperature: 22°C	Air Pressure: 1012 hPa	Relative Humidity: 51 %	Power Supply: 120 VAC
Remarks: EUT with 6 dBi antenna assembly gain			

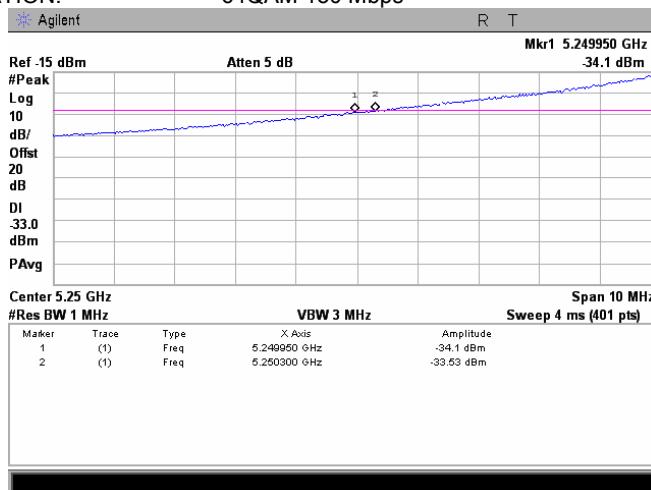
Plot 7.5.13 Conducted spurious emission measurements at the band edges

CARRIER FREQUENCY 5265 MHz
CHANNEL BANDWIDTH 20 MHz
MODULATION: BPSK 13 Mbps



Plot 7.5.14 Conducted spurious emission measurements at the band edges

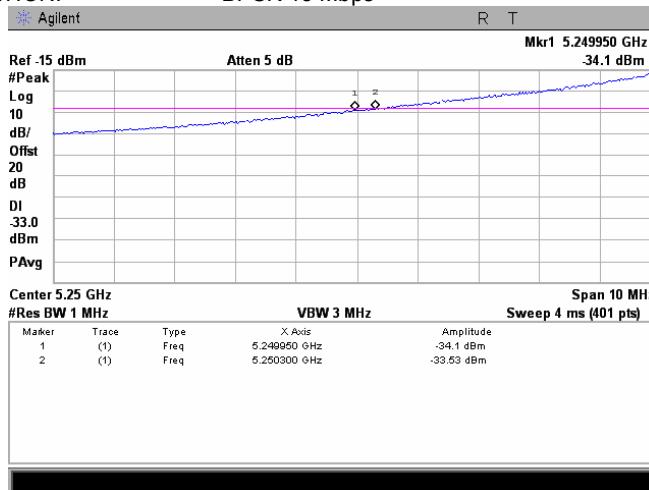
CARRIER FREQUENCY 5265 MHz
CHANNEL BANDWIDTH 20 MHz
MODULATION: 64QAM 130 Mbps



Test specification:	FCC section 15.407(g), Frequency stability		
Test procedure:	Section 2.1055		
Test mode:	Compliance	Verdict:	PASS
Date:	12/20/2009		
Temperature: 22°C	Air Pressure: 1012 hPa	Relative Humidity: 51 %	Power Supply: 120 VAC
Remarks: EUT with 6 dBi antenna assembly gain			

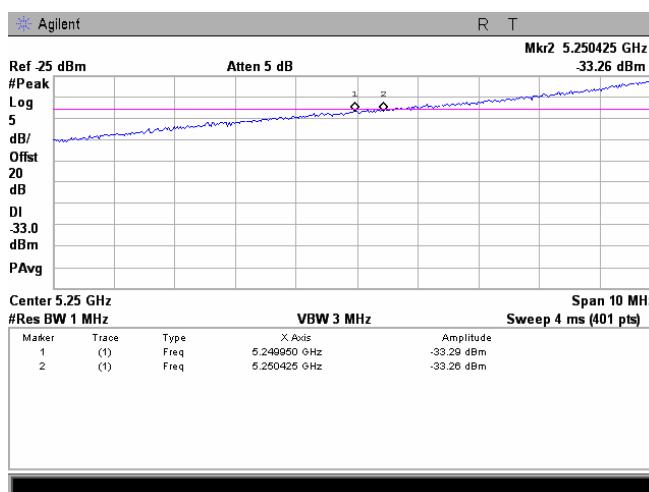
Plot 7.5.15 Conducted spurious emission measurements at the band edges

CARRIER FREQUENCY 5270 MHz
 CHANNEL BANDWIDTH 20 MHz
 MODULATION: BPSK 13 Mbps



Plot 7.5.16 Conducted spurious emission measurements at the band edges

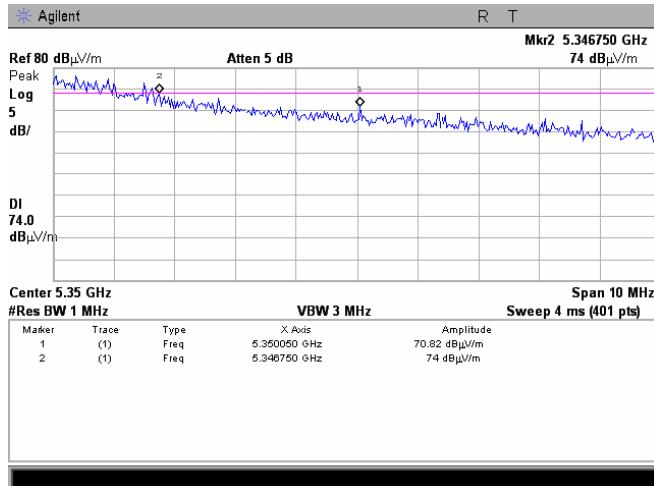
CARRIER FREQUENCY 5270 MHz
 CHANNEL BANDWIDTH 20 MHz
 MODULATION: 64QAM 130 Mbps



Test specification:	FCC section 15.407(g), Frequency stability		
Test procedure:	Section 2.1055		
Test mode:	Compliance	Verdict:	
Date:	12/20/2009	PASS	
Temperature: 22°C	Air Pressure: 1012 hPa	Relative Humidity: 51 %	Power Supply: 120 VAC
Remarks: EUT with 6 dBi antenna assembly gain			

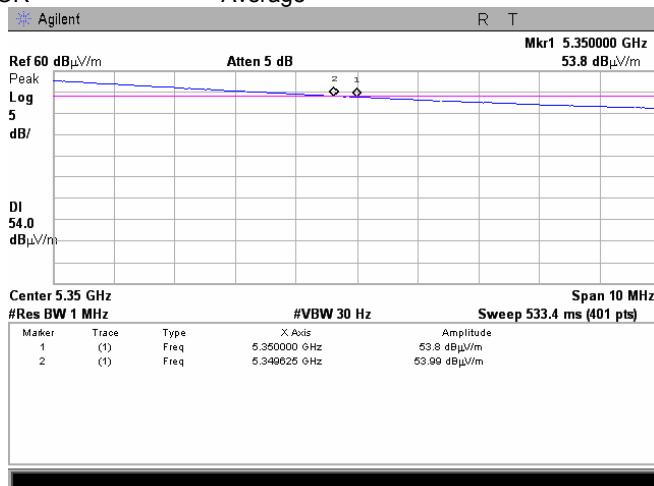
Plot 7.5.17 Radiated spurious emission measurements at the band edges

CARRIER FREQUENCY 5330 MHz
CHANNEL BANDWIDTH 20 MHz
MODULATION: BPSK 13 Mbps
DETECTOR Peak



Plot 7.5.18 Radiated spurious emission measurements at the band edges

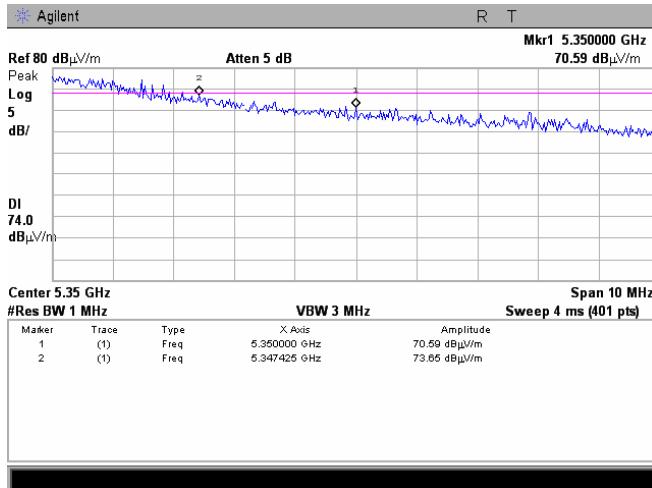
CARRIER FREQUENCY 5330 MHz
CHANNEL BANDWIDTH 20 MHz
MODULATION: BPSK 13 Mbps
DETECTOR Average



Test specification:	FCC section 15.407(g), Frequency stability		
Test procedure:	Section 2.1055		
Test mode:	Compliance	Verdict:	
Date:	12/20/2009	PASS	
Temperature: 22°C	Air Pressure: 1012 hPa	Relative Humidity: 51 %	Power Supply: 120 VAC
Remarks: EUT with 6 dBi antenna assembly gain			

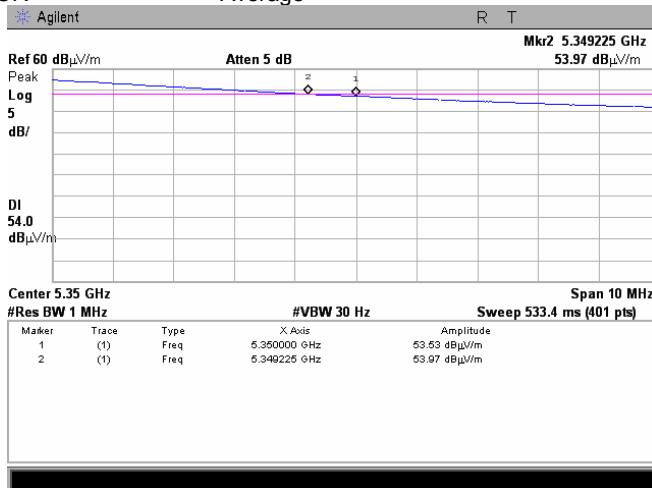
Plot 7.5.19 Radiated spurious emission measurements at the band edges

CARRIER FREQUENCY 5330 MHz
CHANNEL BANDWIDTH 20 MHz
MODULATION: 64QAM 130 Mbps
DETECTOR Peak



Plot 7.5.20 Radiated spurious emission measurements at the band edges

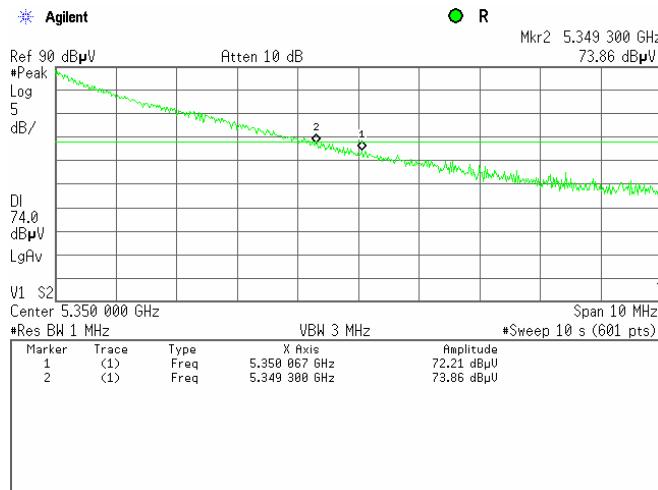
CARRIER FREQUENCY 5330 MHz
CHANNEL BANDWIDTH 20 MHz
MODULATION: 64QAM 130 Mbps
DETECTOR Average



Test specification:	FCC section 15.407(g), Frequency stability		
Test procedure:	Section 2.1055		
Test mode:	Compliance	Verdict:	
Date:	12/20/2009	PASS	
Temperature: 22°C	Air Pressure: 1012 hPa	Relative Humidity: 51 %	Power Supply: 120 VAC
Remarks: EUT with 6 dBi antenna assembly gain			

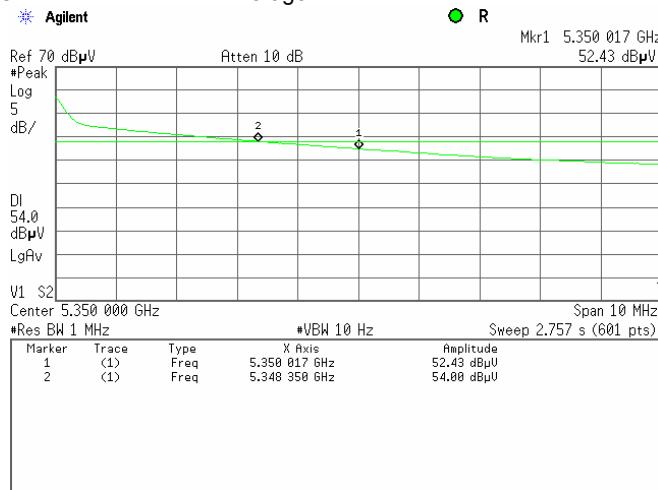
Plot 7.5.21 Radiated spurious emission measurements at the band edges

CARRIER FREQUENCY 5335 MHz
CHANNEL BANDWIDTH 20 MHz
MODULATION: BPSK 13 Mbps
DETECTOR Peak



Plot 7.5.22 Radiated spurious emission measurements at the band edges

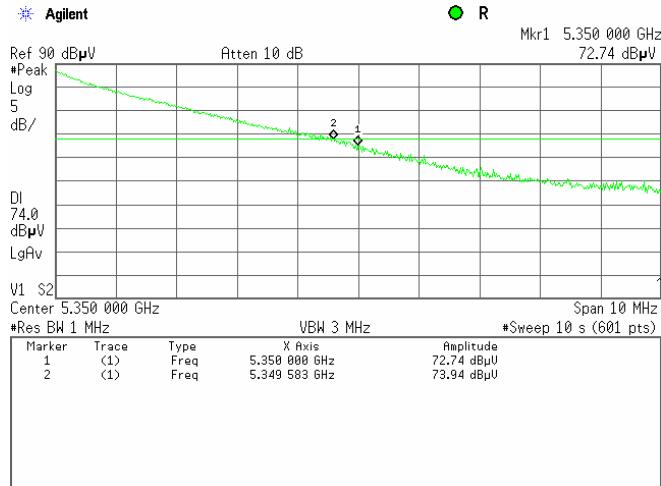
CARRIER FREQUENCY 5335 MHz
CHANNEL BANDWIDTH 20 MHz
MODULATION: BPSK 13 Mbps
DETECTOR Average



Test specification:	FCC section 15.407(g), Frequency stability		
Test procedure:	Section 2.1055		
Test mode:	Compliance	Verdict:	
Date:	12/20/2009	PASS	
Temperature: 22°C	Air Pressure: 1012 hPa	Relative Humidity: 51 %	Power Supply: 120 VAC
Remarks: EUT with 6 dBi antenna assembly gain			

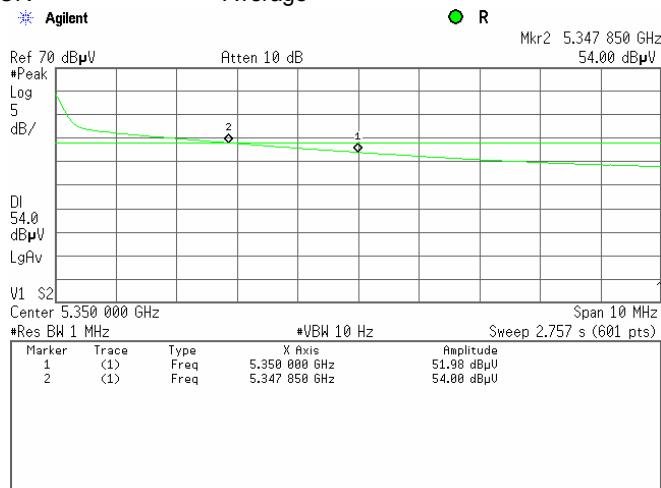
Plot 7.5.23 Radiated spurious emission measurements at the band edges

CARRIER FREQUENCY 5335 MHz
CHANNEL BANDWIDTH 20 MHz
MODULATION: 64QAM 130 Mbps
DETECTOR Peak



Plot 7.5.24 Radiated spurious emission measurements at the band edges

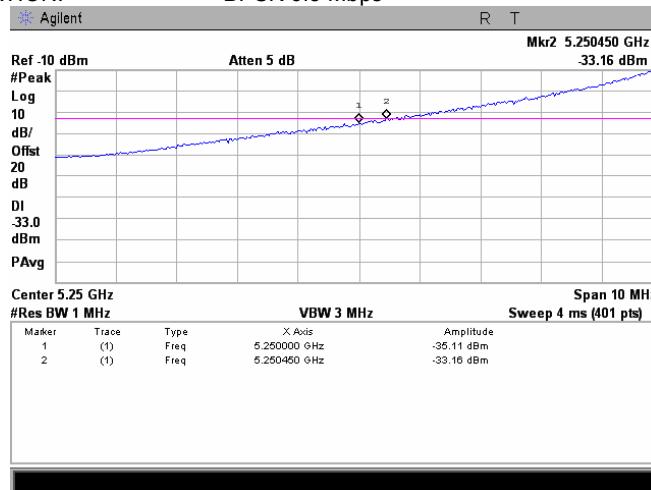
CARRIER FREQUENCY 5335 MHz
CHANNEL BANDWIDTH 20 MHz
MODULATION: 64QAM 130 Mbps
DETECTOR Average



Test specification:	FCC section 15.407(g), Frequency stability		
Test procedure:	Section 2.1055		
Test mode:	Compliance	Verdict:	
Date:	12/20/2009	PASS	
Temperature: 22°C	Air Pressure: 1012 hPa	Relative Humidity: 51 %	Power Supply: 120 VAC
Remarks: EUT with 6 dBi antenna assembly gain			

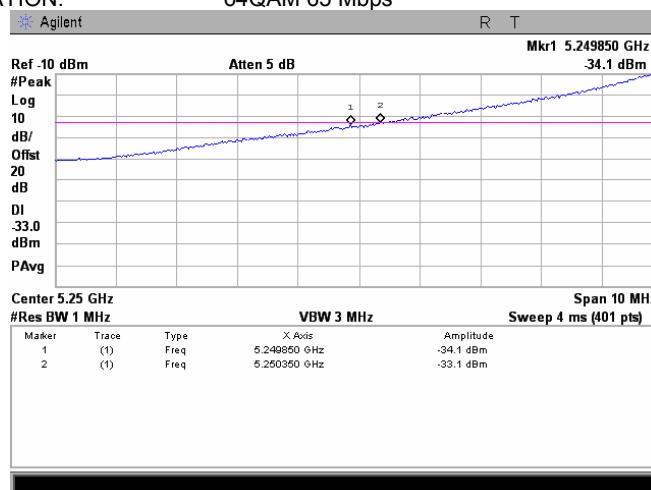
Plot 7.5.25 Conducted spurious emission measurements at the band edges

CARRIER FREQUENCY 5260 MHz
CHANNEL BANDWIDTH 10 MHz
MODULATION: BPSK 6.5 Mbps



Plot 7.5.26 Conducted spurious emission measurements at the band edges

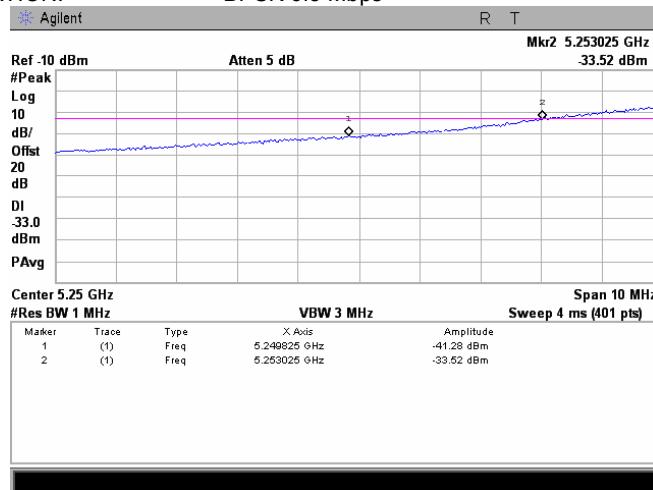
CARRIER FREQUENCY 5260 MHz
CHANNEL BANDWIDTH 10 MHz
MODULATION: 64QAM 65 Mbps



Test specification:	FCC section 15.407(g), Frequency stability		
Test procedure:	Section 2.1055		
Test mode:	Compliance	Verdict:	
Date:	12/20/2009	PASS	
Temperature: 22°C	Air Pressure: 1012 hPa	Relative Humidity: 51 %	Power Supply: 120 VAC
Remarks: EUT with 6 dBi antenna assembly gain			

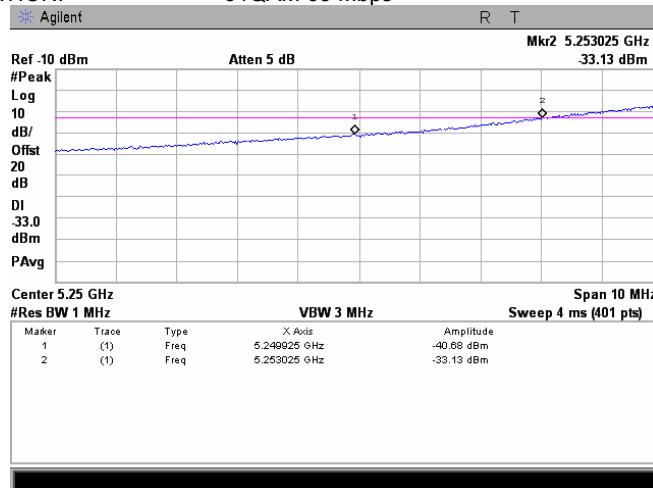
Plot 7.5.27 Conducted spurious emission measurements at the band edges

CARRIER FREQUENCY 5265 MHz
CHANNEL BANDWIDTH 10 MHz
MODULATION: BPSK 6.5 Mbps



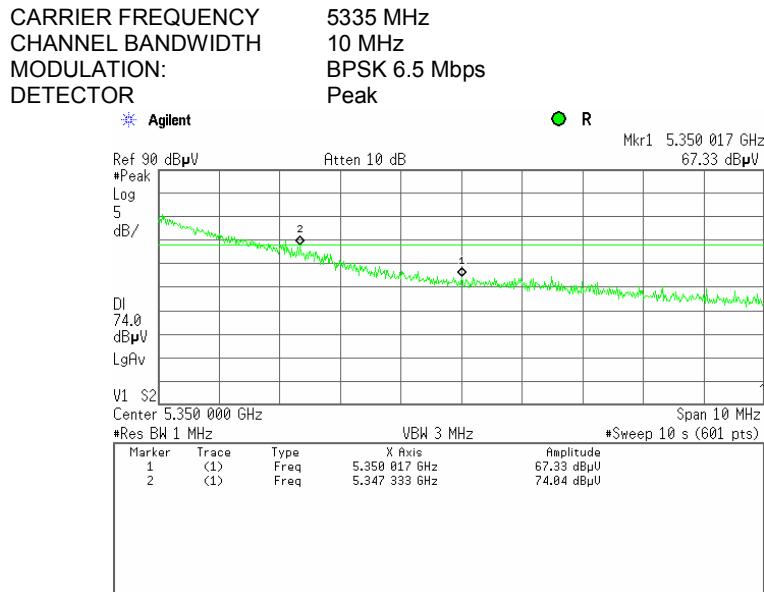
Plot 7.5.28 Conducted spurious emission measurements at the band edges

CARRIER FREQUENCY 5265 MHz
CHANNEL BANDWIDTH 10 MHz
MODULATION: 64QAM 65 Mbps

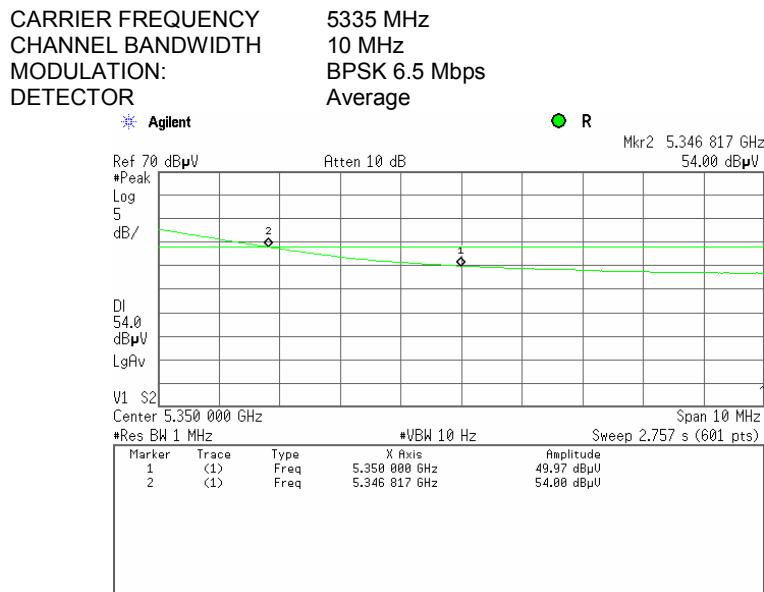


Test specification:	FCC section 15.407(g), Frequency stability		
Test procedure:	Section 2.1055		
Test mode:	Compliance	Verdict:	
Date:	12/20/2009	PASS	
Temperature: 22°C	Air Pressure: 1012 hPa	Relative Humidity: 51 %	Power Supply: 120 VAC
Remarks: EUT with 6 dBi antenna assembly gain			

Plot 7.5.29 Radiated spurious emission measurements at the band edges

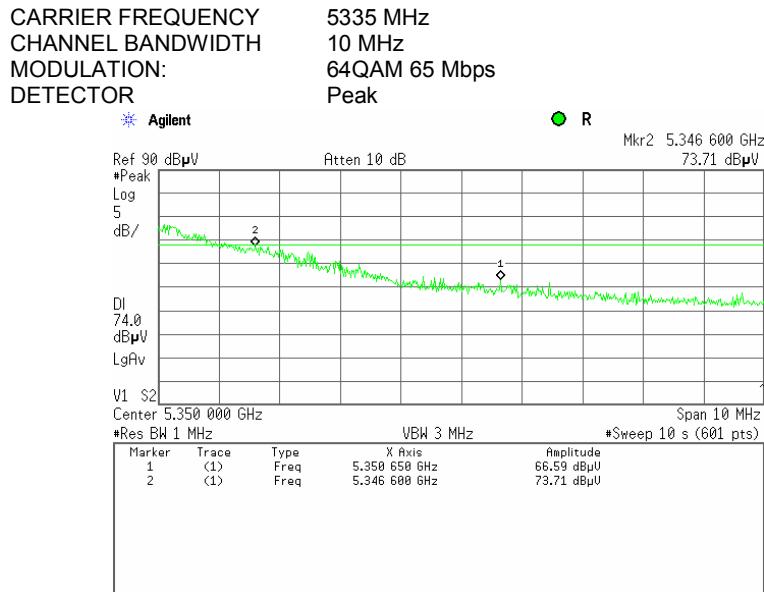


Plot 7.5.30 Radiated spurious emission measurements at the band edges

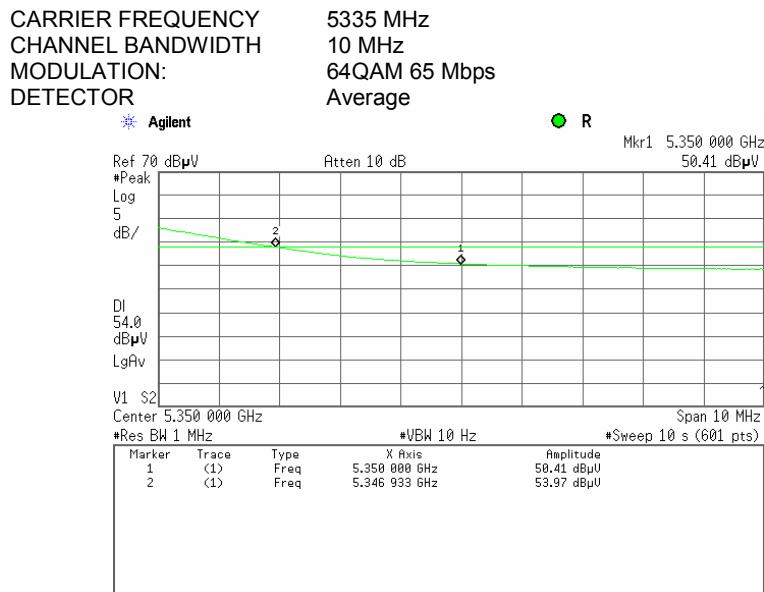


Test specification:	FCC section 15.407(g), Frequency stability		
Test procedure:	Section 2.1055		
Test mode:	Compliance	Verdict:	
Date:	12/20/2009	PASS	
Temperature: 22°C	Air Pressure: 1012 hPa	Relative Humidity: 51 %	Power Supply: 120 VAC
Remarks: EUT with 6 dBi antenna assembly gain			

Plot 7.5.31 Radiated spurious emission measurements at the band edges

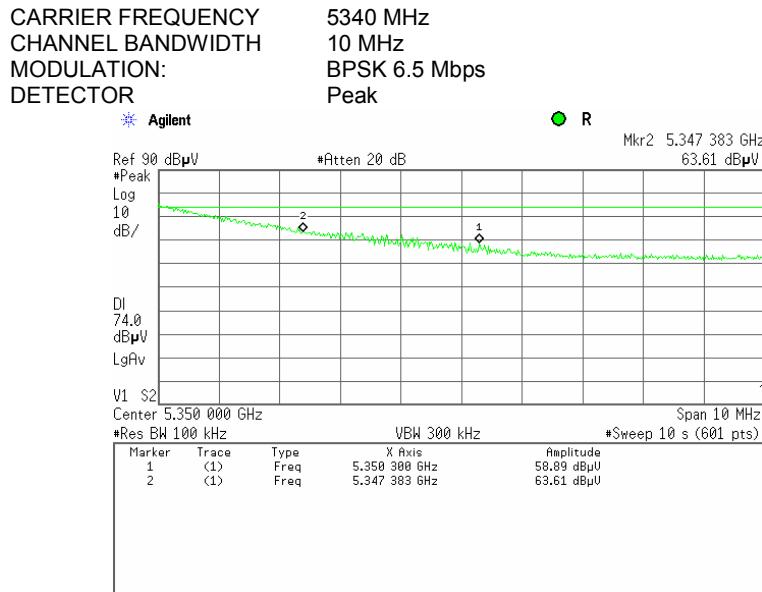


Plot 7.5.32 Radiated spurious emission measurements at the band edges

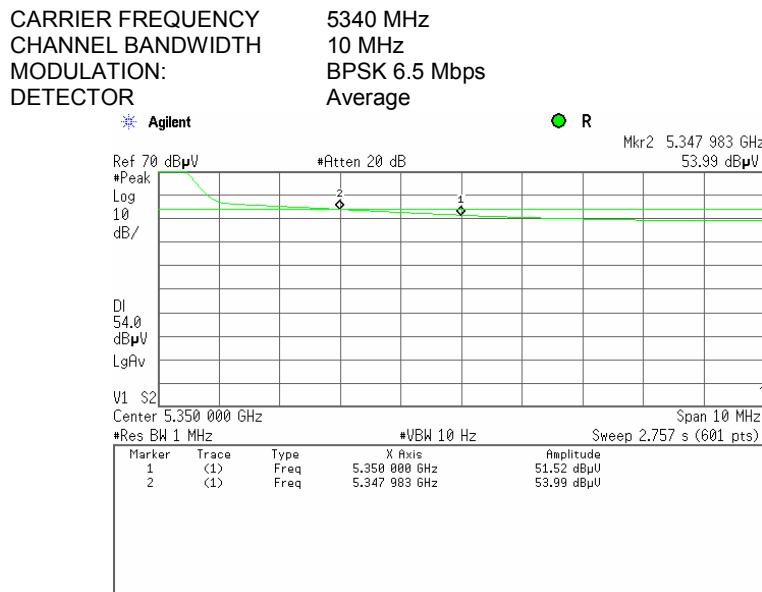


Test specification:	FCC section 15.407(g), Frequency stability		
Test procedure:	Section 2.1055		
Test mode:	Compliance	Verdict:	
Date:	12/20/2009	PASS	
Temperature: 22°C	Air Pressure: 1012 hPa	Relative Humidity: 51 %	Power Supply: 120 VAC
Remarks: EUT with 6 dBi antenna assembly gain			

Plot 7.5.33 Radiated spurious emission measurements at the band edges



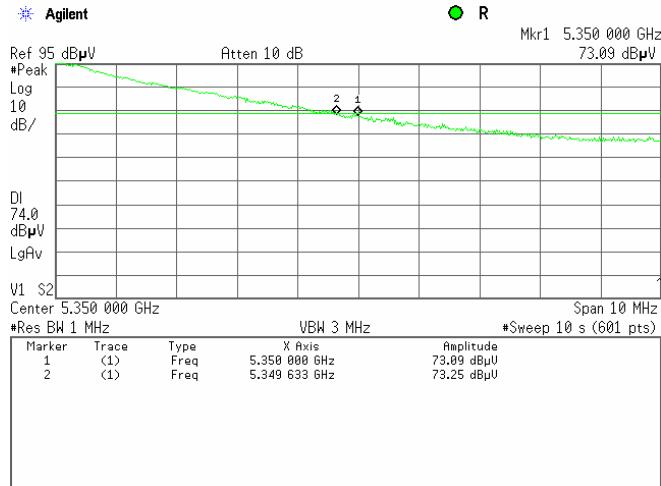
Plot 7.5.34 Radiated spurious emission measurements at the band edges



Test specification:	FCC section 15.407(g), Frequency stability		
Test procedure:	Section 2.1055		
Test mode:	Compliance	Verdict:	
Date:	12/20/2009	PASS	
Temperature: 22°C	Air Pressure: 1012 hPa	Relative Humidity: 51 %	Power Supply: 120 VAC
Remarks: EUT with 6 dBi antenna assembly gain			

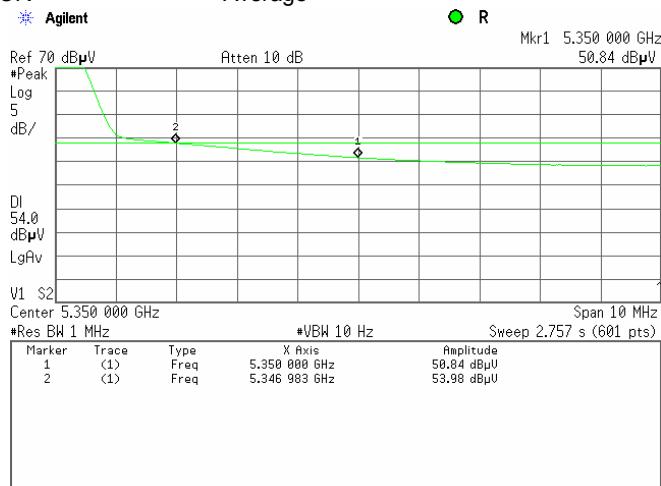
Plot 7.5.35 Radiated spurious emission measurements at the band edges

CARRIER FREQUENCY 5340 MHz
CHANNEL BANDWIDTH 10 MHz
MODULATION: 64QAM 65 Mbps
DETECTOR Peak



Plot 7.5.36 Radiated spurious emission measurements at the band edges

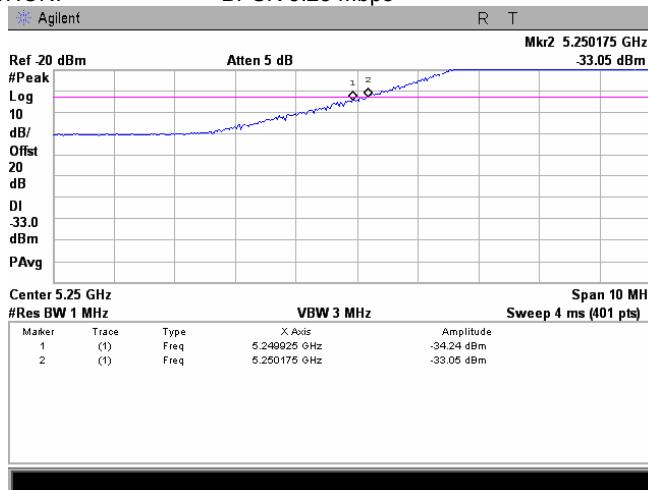
CARRIER FREQUENCY 5340 MHz
CHANNEL BANDWIDTH 10 MHz
MODULATION: 64QAM 65 Mbps
DETECTOR Average



Test specification:	FCC section 15.407(g), Frequency stability		
Test procedure:	Section 2.1055		
Test mode:	Compliance	Verdict:	PASS
Date:	12/20/2009		
Temperature: 22°C	Air Pressure: 1012 hPa	Relative Humidity: 51 %	Power Supply: 120 VAC
Remarks: EUT with 6 dBi antenna assembly gain			

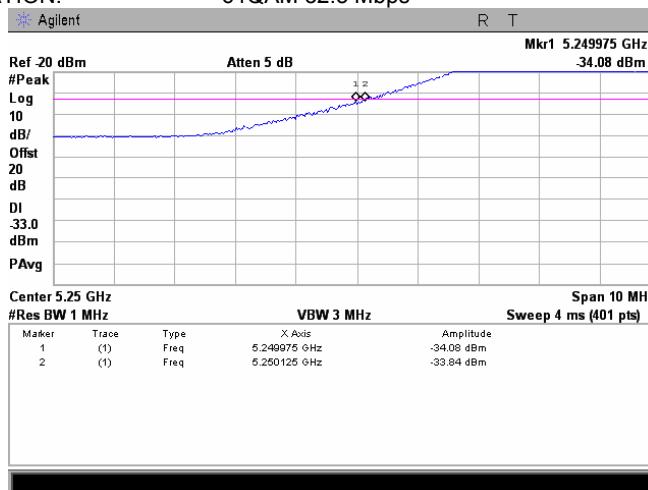
Plot 7.5.37 Conducted spurious emission measurements at the band edges

CARRIER FREQUENCY 5255 MHz
 CHANNEL BANDWIDTH 5 MHz
 MODULATION: BPSK 3.25 Mbps



Plot 7.5.38 Conducted spurious emission measurements at the band edges

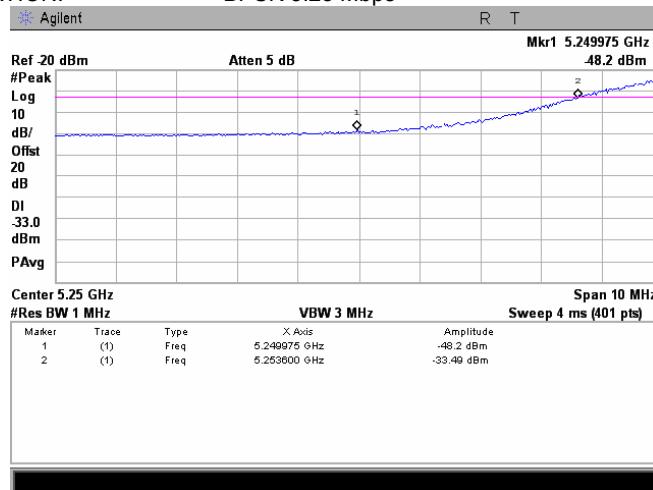
CARRIER FREQUENCY 5255 MHz
 CHANNEL BANDWIDTH 5 MHz
 MODULATION: 64QAM 32.5 Mbps



Test specification:	FCC section 15.407(g), Frequency stability		
Test procedure:	Section 2.1055		
Test mode:	Compliance	Verdict:	
Date:	12/20/2009	PASS	
Temperature: 22°C	Air Pressure: 1012 hPa	Relative Humidity: 51 %	Power Supply: 120 VAC
Remarks: EUT with 6 dBi antenna assembly gain			

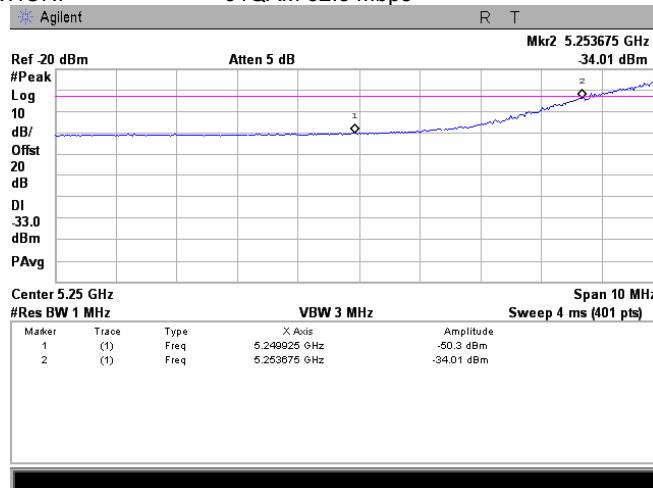
Plot 7.5.39 Conducted spurious emission measurements at the band edges

CARRIER FREQUENCY 5260 MHz
 CHANNEL BANDWIDTH 5 MHz
 MODULATION: BPSK 3.25 Mbps



Plot 7.5.40 Conducted spurious emission measurements at the band edges

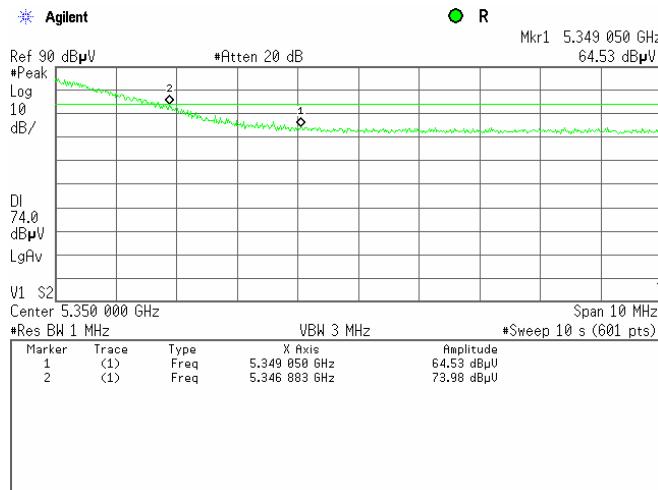
CARRIER FREQUENCY 5260 MHz
 CHANNEL BANDWIDTH 5 MHz
 MODULATION: 64QAM 32.5 Mbps



Test specification:	FCC section 15.407(g), Frequency stability		
Test procedure:	Section 2.1055		
Test mode:	Compliance	Verdict:	
Date:	12/20/2009	PASS	
Temperature: 22°C	Air Pressure: 1012 hPa	Relative Humidity: 51 %	Power Supply: 120 VAC
Remarks: EUT with 6 dBi antenna assembly gain			

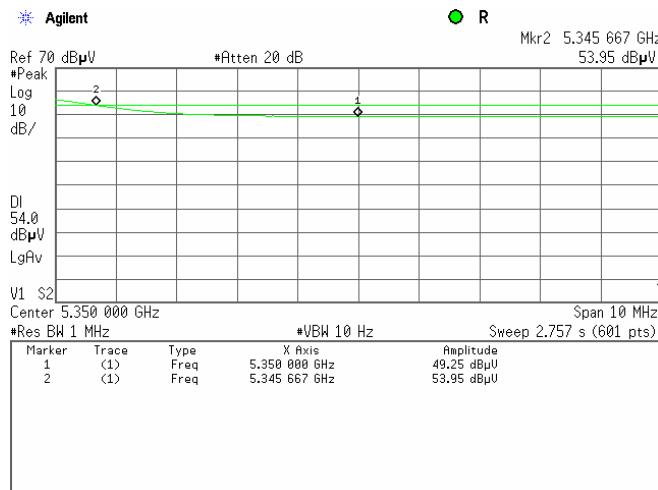
Plot 7.5.41 Radiated spurious emission measurements at the band edges

CARRIER FREQUENCY 5340 MHz
CHANNEL BANDWIDTH 5 MHz
MODULATION: BPSK 3.25 Mbps
DETECTOR Peak



Plot 7.5.42 Radiated spurious emission measurements at the band edges

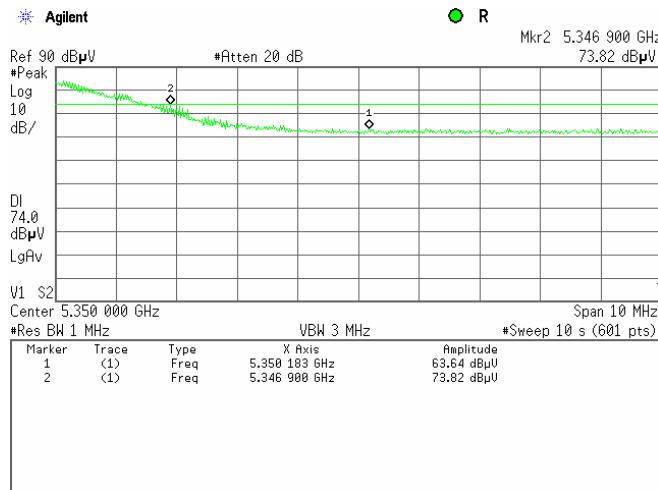
CARRIER FREQUENCY 5340 MHz
CHANNEL BANDWIDTH 5 MHz
MODULATION: BPSK 3.25 Mbps
DETECTOR Average



Test specification:	FCC section 15.407(g), Frequency stability		
Test procedure:	Section 2.1055		
Test mode:	Compliance	Verdict:	
Date:	12/20/2009	PASS	
Temperature: 22°C	Air Pressure: 1012 hPa	Relative Humidity: 51 %	Power Supply: 120 VAC
Remarks: EUT with 6 dBi antenna assembly gain			

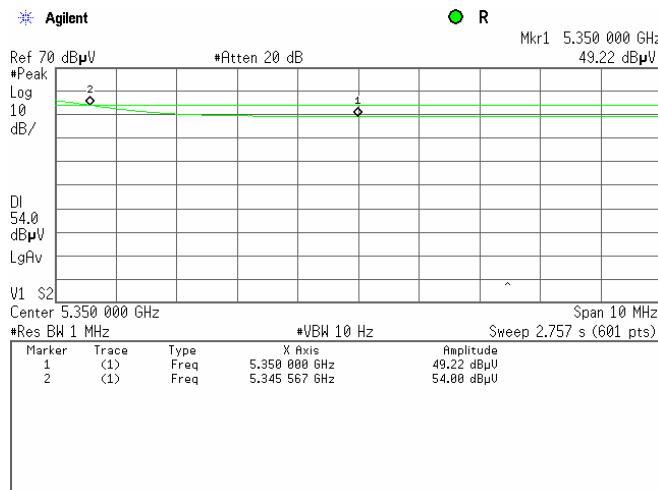
Plot 7.5.43 Radiated spurious emission measurements at the band edges

CARRIER FREQUENCY 5340 MHz
CHANNEL BANDWIDTH 5 MHz
MODULATION: 64QAM 32.5 Mbps
DETECTOR Peak



Plot 7.5.44 Radiated spurious emission measurements at the band edges

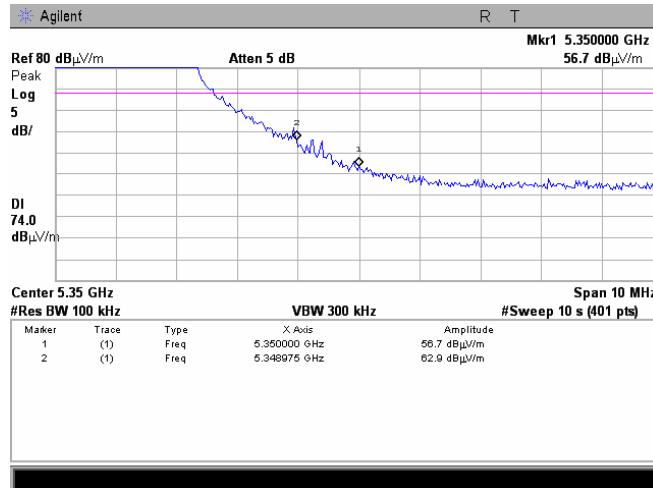
CARRIER FREQUENCY 5340 MHz
CHANNEL BANDWIDTH 5 MHz
MODULATION: 64QAM 32.5 Mbps
DETECTOR Average



Test specification:	FCC section 15.407(g), Frequency stability		
Test procedure:	Section 2.1055		
Test mode:	Compliance	Verdict:	
Date:	12/20/2009	PASS	
Temperature: 22°C	Air Pressure: 1012 hPa	Relative Humidity: 51 %	Power Supply: 120 VAC
Remarks: EUT with 6 dBi antenna assembly gain			

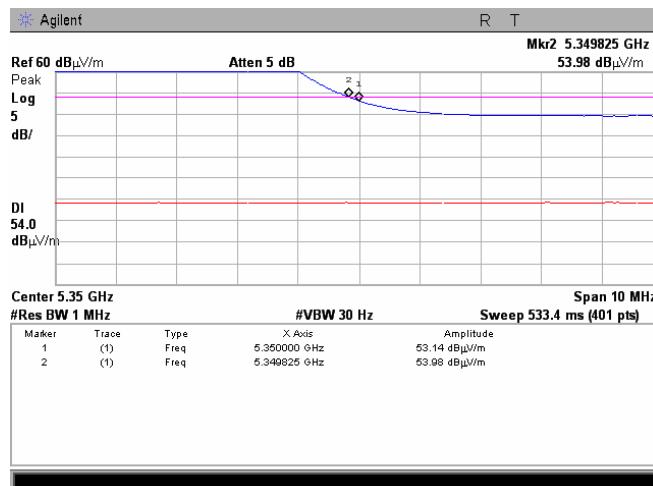
Plot 7.5.45 Radiated spurious emission measurements at the band edges

CARRIER FREQUENCY 5345 MHz
CHANNEL BANDWIDTH 5 MHz
MODULATION: BPSK 3.25 Mbps
DETECTOR Peak



Plot 7.5.46 Radiated spurious emission measurements at the band edges

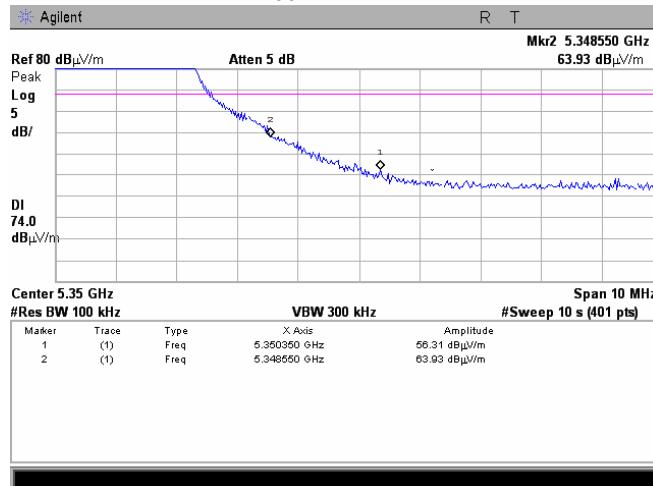
CARRIER FREQUENCY 5345 MHz
CHANNEL BANDWIDTH 5 MHz
MODULATION: BPSK 3.25 Mbps
DETECTOR Average



Test specification:	FCC section 15.407(g), Frequency stability		
Test procedure:	Section 2.1055		
Test mode:	Compliance	Verdict:	PASS
Date:	12/20/2009		
Temperature: 22°C	Air Pressure: 1012 hPa	Relative Humidity: 51 %	Power Supply: 120 VAC
Remarks: EUT with 6 dBi antenna assembly gain			

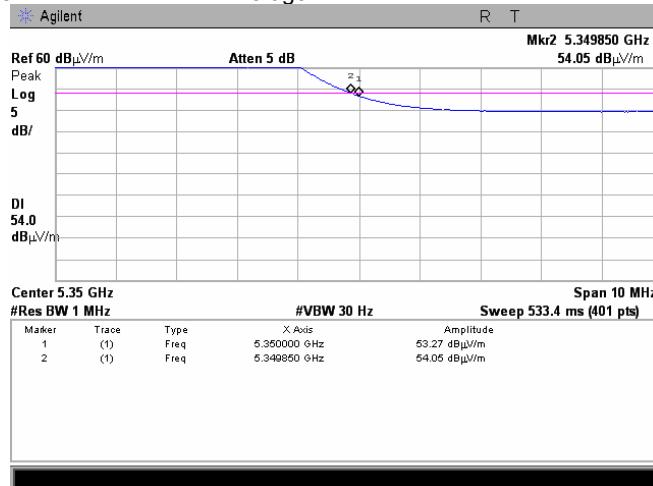
Plot 7.5.47 Radiated spurious emission measurements at the band edges

CARRIER FREQUENCY 5345 MHz
 CHANNEL BANDWIDTH 5 MHz
 MODULATION: 64QAM 32.5 Mbps
 DETECTOR Peak
 RBW 100 kHz



Plot 7.5.48 Radiated spurious emission measurements at the band edges

CARRIER FREQUENCY 5345 MHz
 CHANNEL BANDWIDTH 5 MHz
 MODULATION: 64QAM 32.5 Mbps
 DETECTOR Average



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: 23°C	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:	12/14/2009		
Temperature: 23°C	Air Pressure: 1019 hPa	Relative Humidity: 49 %	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

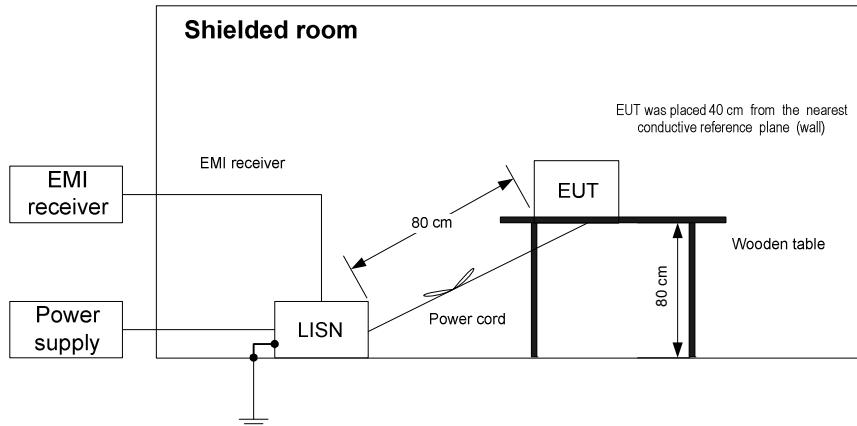
Frequency, MHz	Class B limit, dB(μ V)	
	QP	AVRG
0.15 - 0.5	66 - 56*	56 - 46*
0.5 - 5.0	56	46
5.0 - 30	60	50

* - 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:	
Date:	12/14/2009	PASS	
Temperature: 23°C	Air Pressure: 1019 hPa	Relative Humidity: 49 %	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*		
0.159505	57.59	56.62	65.54	-8.92	44.87	55.54	-10.67	L1	Pass
0.211995	51.53	50.89	63.19	-12.30	41.77	53.19	-11.42		
2.702598	50.14	48.87	56.00	-7.13	41.71	46.00	-4.29		
5.670755	56.90	55.34	60.00	-4.66	46.90	50.00	-3.10		
0.159010	57.27	56.29	65.56	-9.27	45.61	55.56	-9.95		
2.754920	48.86	47.65	56.00	-8.35	41.21	46.00	-4.79		
4.504300	48.50	46.88	56.00	-9.12	40.08	46.00	-5.92		
4.874015	52.02	51.05	56.00	-4.95	43.55	46.00	-2.45		
5.190270	53.71	51.66	60.00	-8.34	44.65	50.00	-5.35		
5.666040	56.39	54.97	60.00	-5.03	46.78	50.00	-3.22		

*- Margin = Measured emission - specification limit.

Reference numbers of test equipment used

HL 0447	HL 0887	HL 1430	HL 1511	HL 3612			
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Full description is given in Appendix A.

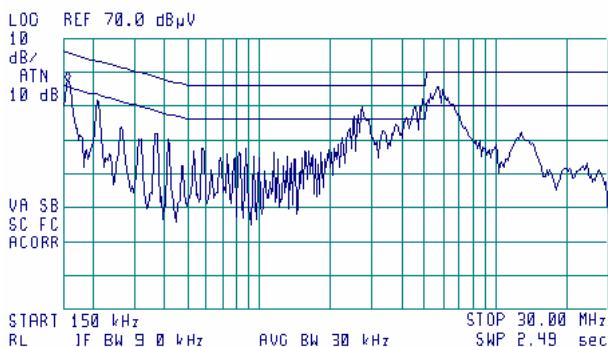


Test specification:	FCC part 15 section 15.207(a), RSS-Gen section 7.2.4, Conducted emission		
Test procedure:	ANSI C63.4, Section 13.1.3		
Test mode:	Compliance	Verdict:	
Date:	12/14/2009	PASS	
Temperature: 23°C	Air Pressure: 1019 hPa	Relative Humidity: 49 %	Power Supply: 120 VAC
Remarks:			

Plot 7.7.1 Conducted emission measurements

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

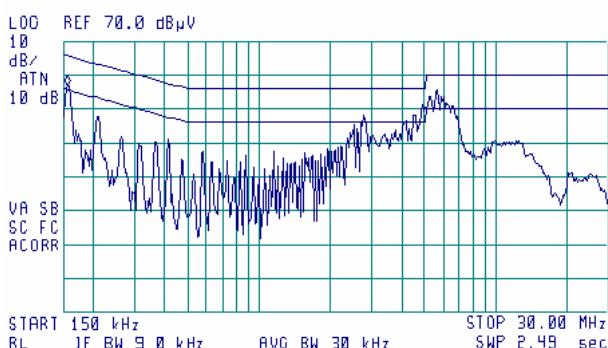
⌚ 11:54:32 DEC 14, 2009
ACTV DET: PEAK
MEAS DET: PEAK QP AVG
MKR 160 kHz
57.29 dB μ V



Plot 7.7.2 Conducted emission measurements

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

⌚ 12:03:06 DEC 14, 2009
ACTV DET: PEAK
MEAS DET: PEAK QP AVG
MKR 160 kHz
57.09 dB μ V



Test specification:	RSS-Gen section 4.6.1, occupied bandwidth		
Test procedure:	RSS-Gen section 4.6.1		
Test mode:	Compliance	Verdict:	PASS
Date:	12/20/2009		
Temperature: 22°C	Air Pressure: 1012 hPa	Relative Humidity: 51 %	Power Supply: 120 VAC
Remarks:			

8 Tests according to RSS-Gen requirements

8.1 Occupied bandwidth

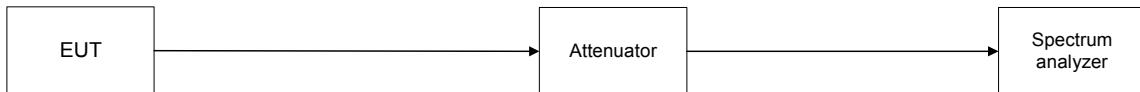
8.1.1 General

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:	
Date:	12/20/2009	PASS	
Temperature: 22°C	Air Pressure: 1012 hPa	Relative Humidity: 51 %	Power Supply: 120 VAC
Remarks:			

Table 8.1.1 The 99% power occupied bandwidth test results

ASSIGNED FREQUENCY BAND:	5250 – 5350 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
5255	BPSK	3.25	4.4172
	64QAM	32.5	4.3964
5300	BPSK	3.25	4.4556
	64QAM	32.5	4.4221
5345	BPSK	3.25	4.3989
	64QAM	32.5	4.4290

EMISSION BANDWIDTH 10MHz			
Frequency, MHz	Modulation	Bit rate, Mbps	99% emission bandwidth, MHz
5260	BPSK	6.5	8.9423
	64QAM	65	8.9412
5300	BPSK	6.5	8.9464
	64QAM	65	8.9453
5340	BPSK	6.5	8.9305
	64QAM	65	8.8044

EMISSION BANDWIDTH 20MHz			
Frequency, MHz	Modulation	Bit rate, Mbps	99% emission bandwidth, MHz
5265	BPSK	13	17.7543
	64QAM	130	17.5603
5300	BPSK	13	17.8045
	64QAM	130	17.6538
5335	BPSK	13	17.5056
	64QAM	130	17.5364

EMISSION BANDWIDTH 40MHz			
Frequency, MHz	Modulation	Bit rate, Mbps	99% emission bandwidth, MHz
5275	BPSK	27	35.8106
	64QAM	270	36.0599
5300	BPSK	27	35.6469
	64QAM	270	35.4306
5325	BPSK	27	36.1993
	64QAM	270	36.0247

Reference numbers of test equipment used

HL 2952	HL 3440	HL 3784	HL 3818				
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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:	
Date:	12/20/2009	PASS	
Temperature: 22°C	Air Pressure: 1012 hPa	Relative Humidity: 51 %	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

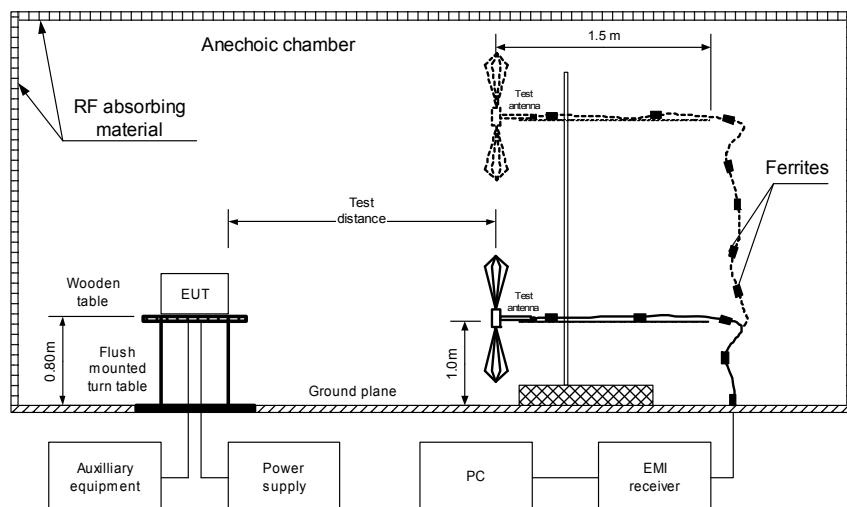
Frequency, MHz	Field strength limit at 3 m test distance, dB(μ V/m)
30 - 88	40.0
88 - 216	43.5
216 - 960	46.0
Above 960 - 3 rd harmonic*	54.0

* - 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 biconiclog antenna connected to EMI receiver. To find maximum radiation the turntable was rotated 360°, 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:	
Date:	12/06/2009	PASS	
Temperature: 23°C	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 RANGE: 5250 - 5350 MHz
 INVESTIGATED FREQUENCY RANGE: 0.009 - 16500 MHz
 TEST SITE: Semi Anechoic Chamber
 TEST DISTANCE: 3 m
 RESOLUTION BANDWIDTH: 120 kHz (30 MHz – 1000 MHz)
 VIDEO BANDWIDTH: 1000 kHz above 1 GHz
 > Resolution bandwidth
 TEST ANTENNA TYPE: 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 (5300 MHz)								
32.600000	34.69	31.57	40.00	-8.43	Vertical	1.0	53	Pass
36.871900	38.25	35.47	40.00	-4.53	Vertical	1.0	178	
61.963900	34.11	30.21	40.00	-9.79	Vertical	1.0	23	
66.285400	37.18	33.38	40.00	-6.62	Vertical	1.3	180	

*- Margin = Measured emission – specification limit.

**- EUT front panel refers to 0 degrees position of turntable.

Reference numbers of test equipment used

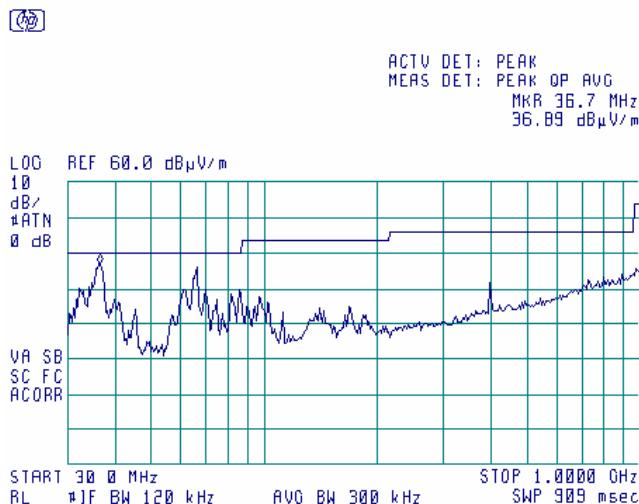
HL 0521	HL 0589	HL 0604	HL 1425	HL 1556	HL 1984	HL 1947	HL 2009
HL 2909							

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:	
Date:	12/06/2009	PASS	
Temperature: 23°C	Air Pressure: 1013 hPa	Relative Humidity: 40 %	Power Supply: 120 VAC
Remarks: EUT with 6 dBi antenna assembly gain, flat antenna			

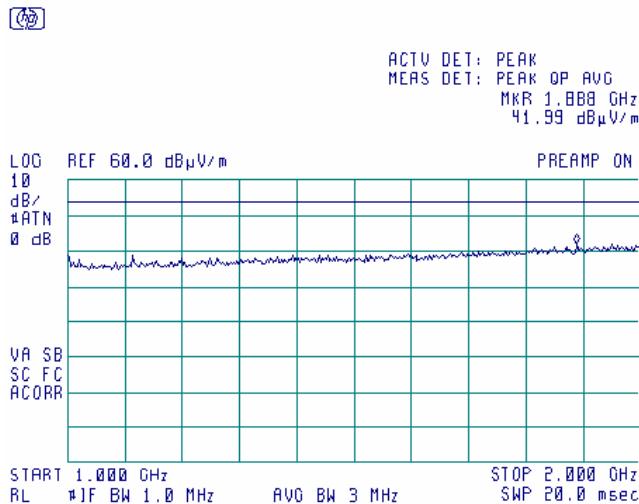
Plot 8.2.1 Radiated emission measurements from 30 MHz to 1000 MHz at the mid Rx channel frequency

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



Plot 8.2.2 Radiated emission measurements from 1.0 to 2.0 GHz at the mid Rx channel frequency

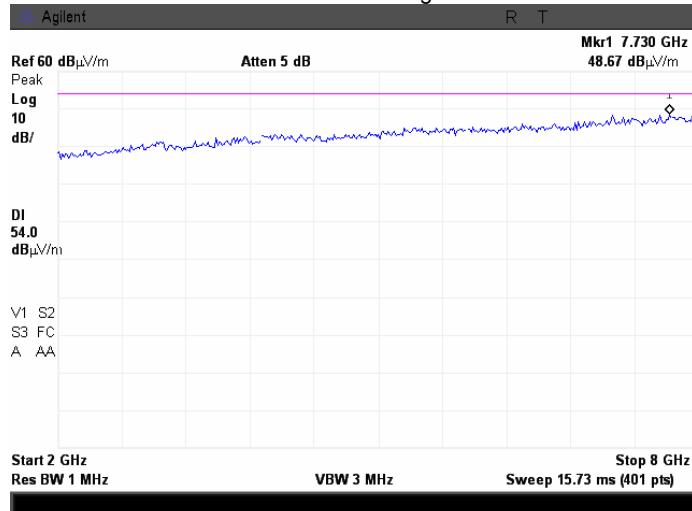
TEST SITE: Anechoic chamber
TEST DISTANCE: 3 m
ANTENNA POLARIZATION: Vertical and Horizontal
DETECTOR: Peak under average limit



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:	12/06/2009		
Temperature: 23°C	Air Pressure: 1013 hPa	Relative Humidity: 40 %	Power Supply: 120 VAC
Remarks: EUT with 6 dBi antenna assembly gain, flat antenna			

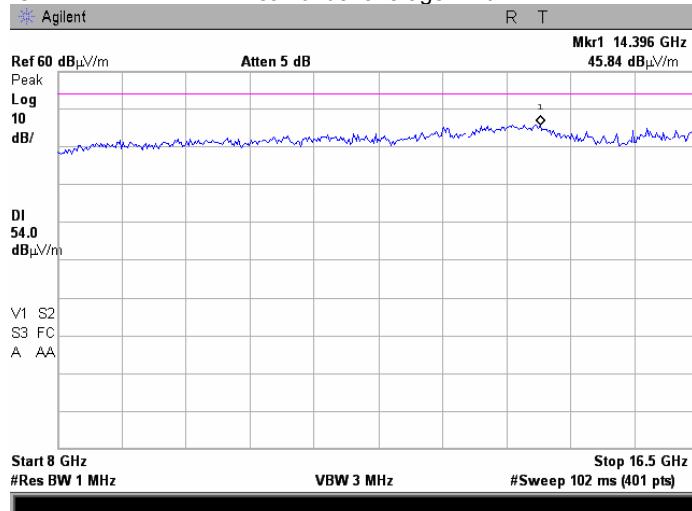
Plot 8.2.3 Radiated emission measurements from 2.0 to 8.0 GHz at the mid Rx channel frequency

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



Plot 8.2.4 Radiated emission measurements from 8 to 16.5 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:	12/06/2009		
Temperature: 23°C	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 RANGE: 5250 - 5350 MHz
 INVESTIGATED FREQUENCY RANGE: 0.009 - 16500 MHz
 TEST SITE: Semi Anechoic Chamber
 TEST DISTANCE: 3 m
 RESOLUTION BANDWIDTH: 120 kHz (30 MHz – 1000 MHz)
 1000 kHz above 1 GHz
 VIDEO BANDWIDTH: > Resolution bandwidth
 TEST ANTENNA TYPE: 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 (5300 MHz)								
41.60480	35.6	33.1	40.0	-6.9	Vertical	1.0	132	Pass
45.27020	35.6	32.5	40.0	-7.5	Vertical	1.0	176	
61.62500	33.5	29.7	40.0	-10.3	Vertical	1.0	113	
66.28875	41.9	38.3	40.0	-1.7	Vertical	1.0	200	
106.70610	40.1	36.8	43.5	-6.7	Vertical	1.0	107	
111.61233	39.0	35.8	43.5	-7.7	Vertical	1.0	250	
400.00000	34.2	31.6	46.0	-14.4	Horizontal	1.0	28	
799.99150	42.2	39.1	46.0	-6.9	Vertical	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
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Full description is given in Appendix A.

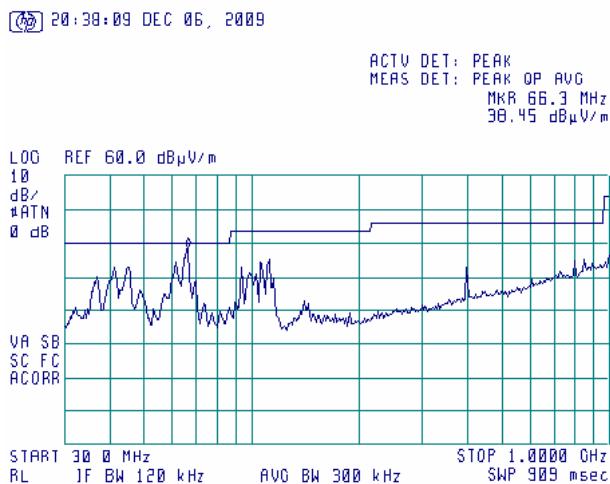


HERMON LABORATORIES

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:	12/06/2009		
Temperature: 23°C	Air Pressure: 1013 hPa	Relative Humidity: 40 %	Power Supply: 120 VAC
Remarks: EUT with 6 dBi antenna assembly gain, dish antenna			

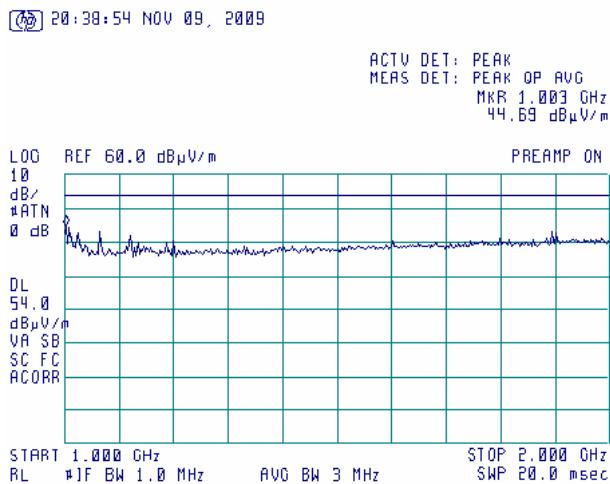
Plot 8.2.5 Radiated emission measurements from 30 MHz to 1000 MHz at the mid Rx channel frequency

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



Plot 8.2.6 Radiated emission measurements from 1.0 to 2.0 GHz at the mid Rx channel frequency

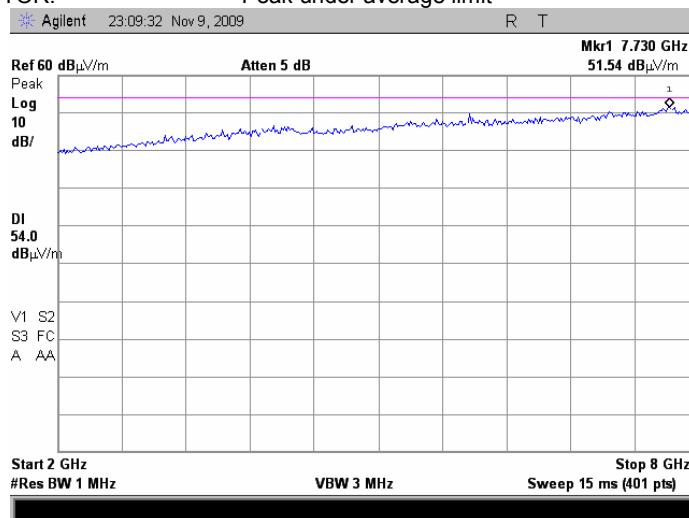
TEST SITE: Anechoic chamber
 TEST DISTANCE: 3 m
 ANTENNA POLARIZATION: Vertical and Horizontal
 DETECTOR: Peak under average limit



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:	12/06/2009		
Temperature: 23°C	Air Pressure: 1013 hPa	Relative Humidity: 40 %	Power Supply: 120 VAC
Remarks: EUT with 6 dBi antenna assembly gain, dish antenna			

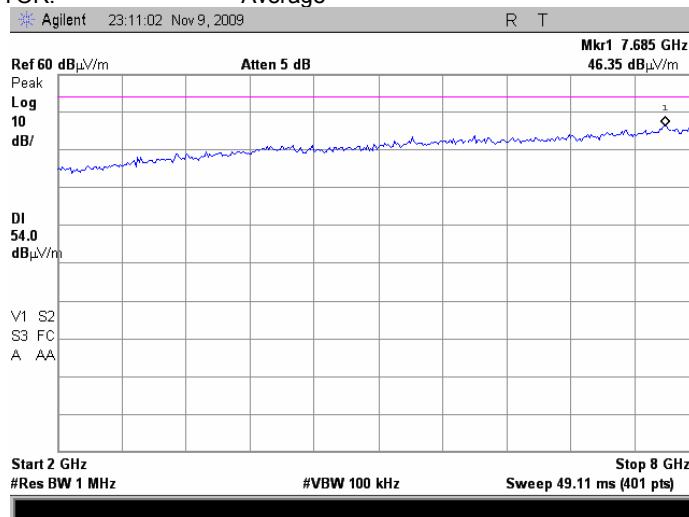
Plot 8.2.7 Radiated emission measurements from 2.0 to 8.0 GHz at the mid Rx channel frequency

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



Plot 8.2.8 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



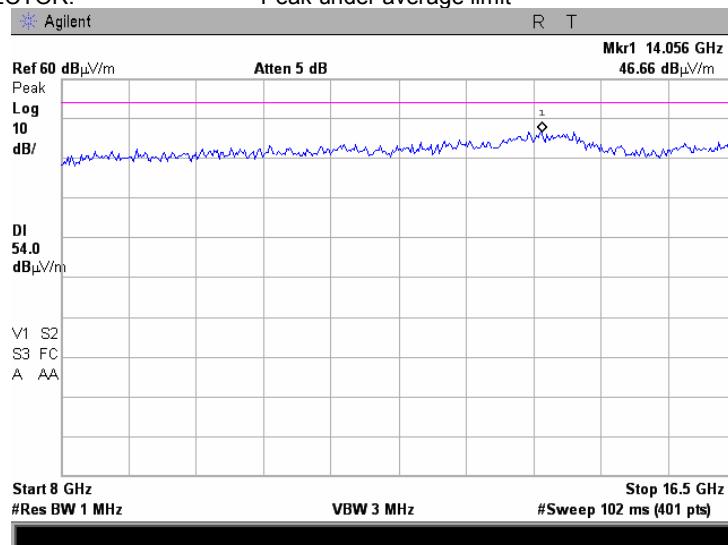


HERMON LABORATORIES

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:	12/06/2009		
Temperature: 23°C	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 8 to 16.5 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



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
0554	Amplifier, 2-18 GHz RF	Miteq	AFD4	104300	01-Jan-10	01-Jan-11
0589	Cable Coaxial, GORE A2P01POL118, 2.3 m, 6.5 GHz	Hermon Laboratories	GORE-3	176	01-Jan-10	01-Jan-11
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-10	01-Jan-11
1424	Spectrum Analyzer, 30 Hz- 40 GHz	Agilent Technologies	8564EC	3946A002 19	28-Aug-09	28-Aug-10
1425	EMI Receiver, 9 kHz - 2.9 GHz, System: HL1426, HL1427	Agilent Technologies	8542E	3710A002 22, 3705A002 04	28-Aug-09	28-Aug-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-10	01-Jan-11
1556	Cable RF, 0.5 m	Telequis	MIL-C-17F-RG 058 CU	1556	01-Jan-10	01-Jan-11
1947	Cable 18GHz, 6.5 m, blue	Rhophase Microwave Limited	NPS-1803A-6500-NPS	T4974	01-Jan-10	01-Jan-11
1984	Antenna, Double-Ridged Waveguide Horn, 1-18 GHz, 300 W	EMC Test Systems	3115	9911-5964	24-Aug-09	24-Aug-10
2009	Cable RF, 8 m	Alpha Wire	RG-214	C-56	01-Jan-10	01-Jan-11
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



HL No	Description	Manufacturer	Model	Ser. No.	Last Cal.	Due Cal.
3121	Microwave Cable Assembly, 18 GHz, 6.4 m, SMA - SMA	Huber-Suhner	198-9155-00	3121	01-Jan-10	01-Jan-11
3122	Microwave Cable Assembly, 18 GHz, 6.4 m, SMA - SMA	Huber-Suhner	198-9155-00	3122	01-Jan-10	01-Jan-11
3123	Microwave Cable Assembly, 18 GHz, 6.4 m, SMA - SMA	Huber-Suhner	198-9155-00	3123	01-Jan-10	01-Jan-11
3176	Attenuator, N-type, 10 dB, DC to 18 GHz, 5 W	Mini-Circuits	BW-N10W5+	NA	07-May-09	07-May-10
3179	Attenuator, N-type, 20 dB, DC to 18 GHz, 5 W	Mini-Circuits	BW-N20W5+	NA	01-Jan-10	01-Jan-11
3233	Multimeter	Fluke	115C	93771523	05-Jul-09	05-Jul-10
3386	Microwave Cable Assembly, 26.5 GHz, 1.0 m, N type/N type	Suhner Sucoflex	104EA	3386	04-Feb-09	04-Feb-10
3435	Precision Fixed Attenuator, 50 Ohm, 5 W, 10 dB, DC to 18 GHz	Mini-Circuits	BW-S10W5+	NA	08-Mar-09	08-Mar-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
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	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
Vertical polarization	

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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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 C63.4:2003	American National Standard for Methods of Measurement of Radio-Noise Emissions from Low-Voltage Electrical and Electronic Equipment in the Range of 9 kHz to 40 GHz.
RSS-210 Issue 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(μ V) to convert it into field intensity in dB(μ A/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(μ V) to convert it into field intensity in dB(μ V/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(μ V) to convert it into field intensity in dB(μ V/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(μ V) to convert it into field intensity in dB(μ V/m).

Cable loss

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

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

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

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

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

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

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

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								
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 3122

Frequency, MHz	Cable loss, dB								
10	0.11	3600	2.08	7400	3.07	11200	3.92	15100	4.61
30	0.17	3700	2.12	7500	3.09	11300	3.95	15200	4.58
50	0.23	3800	2.15	7600	3.14	11400	3.93	15300	4.62
100	0.32	3900	2.18	7700	3.15	11500	3.93	15400	4.62
200	0.47	4000	2.21	7800	3.19	11600	3.94	15500	4.65
300	0.58	4100	2.24	7900	3.22	11700	3.97	15600	4.66
400	0.66	4200	2.27	8000	3.20	11800	3.98	15700	4.66
500	0.74	4300	2.31	8100	3.21	11900	4.08	15800	4.72
600	0.81	4400	2.31	8200	3.24	12000	4.03	15900	4.78
700	0.88	4500	2.36	8300	3.27	12100	4.06	16000	4.89
800	0.95	4600	2.37	8400	3.32	12200	4.05	16100	4.95
900	1.00	4700	2.40	8500	3.35	12300	4.16	16200	4.92
1000	1.06	4800	2.43	8600	3.35	12400	4.18	16300	4.95
1100	1.11	4900	2.45	8700	3.33	12500	4.20	16400	5.02
1200	1.16	5000	2.50	8800	3.37	12600	4.22	16500	5.04
1300	1.21	5100	2.51	8900	3.39	12700	4.23	16600	5.06
1400	1.26	5200	2.55	9000	3.45	12800	4.28	16700	5.17
1500	1.31	5300	2.56	9100	3.46	12900	4.26	16800	5.16
1600	1.35	5400	2.59	9200	3.47	13000	4.28	16900	5.19
1700	1.39	5500	2.62	9300	3.46	13100	4.28	17000	5.23
1800	1.44	5600	2.65	9400	3.50	13200	4.28	17100	5.30
1900	1.47	5700	2.67	9500	3.50	13300	4.29	17200	5.26
2000	1.52	5800	2.71	9600	3.53	13400	4.34	17300	5.30
2100	1.55	5900	2.72	9700	3.52	13500	4.31	17400	5.30
2200	1.60	6000	2.73	9800	3.54	13600	4.35	17500	5.36
2300	1.63	6100	2.76	9900	3.56	13700	4.36	17600	5.40
2400	1.67	6200	2.78	10000	3.57	13800	4.37	17700	5.47
2500	1.70	6300	2.81	10100	3.60	13900	4.41	17800	5.56
2600	1.74	6400	2.85	10200	3.69	14000	4.42	17900	5.45
2700	1.78	6500	2.87	10300	3.69	14100	4.45	18000	5.47
2800	1.83	6600	2.87	10400	3.67	14200	4.49		
2900	1.85	6700	2.90	10500	3.70	14300	4.55		
3000	1.89	6800	2.91	10600	3.70	14400	4.62		
3100	1.92	6900	2.96	10700	3.76	14600	4.54		
3200	1.96	7000	2.99	10800	3.88	14700	4.58		
3300	1.99	7100	3.01	10900	3.88	14800	4.57		
3400	2.03	7200	3.04	11000	3.85	14900	4.65		
3500	2.06	7300	3.08	11100	3.85	15000	4.64		

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								
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						
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



FCC ID: Q3KRW2054, IC: 5100A-RW2054

The following tables contain the antennas that are provided with the RADWIN 1000/2000 models operating in the 5250-5350 MHz and 5470-5725 MHz bands according to FCC Part 15 Subpart E Section 407 and IC Radio Standard Specification RSS-210. The output power ascribed to each antenna assembly gain is the maximum transmission power allowed to keep compliance with the standards mentioned.

5250 – 5350 MHz Band

Part Number	Type	Antenna Frequency [GHz]	Antenna Assembly Gain at 5250-5350 MHz [dBi]	Channel Frequency [MHz]	Channel Bandwidth [MHz]	Output Power [dBm]
RW-9721-5158	Dish - Dual Pole	4.9 - 6.06	28*	5257.5, 5300, 5342.5	5	-2.9
				5265, 5300, 5335	10	0
				5260, 5340	10	-0.4
				5270, 5300, 5330	20	1.9
				5265, 5335	20	-0.6
				5285, 5300, 5315	40	1.8
				5275, 5325	40	-1.1
RW-9721-5158	Dish - Dual Pole	4.9 - 6.06	6*	5260, 5300, 5340	5	18.9
				5255, 5345	5	9.4
				5265, 5300, 5335	10	21.8
				5260, 5340	10	14
				5275, 5300, 5325	20	23.5
				5265, 5335	20	15.4
				5285, 5300, 5315	40	22.4
RW-9611-4958INT	FP Dual Pole Integrated	4.9 - 6.0	23.5	5275.5, 5300, 5342.5	5	1.8
				5260, 5300, 5340	10	3
				5270, 5300, 5330	20	6.5
				5265, 5335	20	0.8
				5285, 5300, 5315	40	7.4
				5275, 5325	40	1.5
				5257.5, 5300, 5342.5	5	2.5
RW-9611-4958	FP Dual Pole External	5.15 - 6.09	22.5*	5260, 5300, 5340	10	3.9
				5270, 5300, 5330	20	7.4
				5265, 5335	20	1.5
				5285, 5300, 5315	40	7.4
				5275, 5325	40	1.5
				5260, 5300, 5340	5	18.9
				5255, 5345	5	9.4
RW-9611-4958	FP Dual Pole External	5.15 - 6.09	6*	5265, 5300, 5335	10	21.8
				5260, 5340	10	14
				5275, 5300, 5325	20	23.5
				5265, 5335	20	15.4
				5285, 5300, 5315	40	22.4
				5275, 5325	40	14.4

* Antenna assembly gain = Antenna Gain - Feeder Loss

16 APPENDIX H RADWIN 5000 Antenna List and Power Settings



FCC ID: Q3KRW2054, IC: 5100A-RW2054

The following tables contain the antennas that are provided with the RADWIN 5000 model operating in the 5250-5350 MHz and 5470-5725 MHz bands according to FCC Part 15 Subpart E Section 407 and IC Radio Standard Specification RSS-210. The output power ascribed to each antenna assembly gain is the maximum transmission power allowed to keep compliance with the standards mentioned.

5250 - 5350 MHz Band

Part Number	Type	Antenna Frequency [GHz]	Antenna Assembly Gain at 5250-5350 MHz [dBi]	Channel Frequency [MHz]	Channel Bandwidth [MHz]	Output Power [dBm]
RW-9061-5001	FP Dual Pole External	4.9 - 5.95	13*	5257.5, 5300, 5342.5	5	2.5
				5260, 5300, 5340	10	3.9
				5270, 5300, 5330	20	7.4
				5265, 5335	20	1.5
				5285, 5300, 5315	40	7.4
				5275, 5325	40	1.5
				5260, 5300, 5340	5	18.9
RW-9061-5001	FP Dual Pole External	4.9 - 5.95	6*	5255, 5345	5	9.4
				5265, 5300, 5335	10	21.7
				5260, 5340	10	14
				5275, 5300, 5325	20	23.5
				5265, 5335	20	15.4
				5285, 5300, 5315	40	22.3
				5275, 5325	40	14.4
RW-9061-5002	FP Dual Pole External	4.9 - 6.06	14.5*	5257.5, 5300, 5342.5	5	2.5
				5260, 5300, 5340	10	3.9
				5270, 5300, 5330	20	7.4
				5265, 5335	20	1.5
				5285, 5300, 5315	40	7.4
				5275, 5325	40	1.5
				5260, 5300, 5340	5	18.9
RW-9061-5002	FP Dual Pole External	4.9 - 6.06	6*	5255, 5345	5	9.4
				5265, 5300, 5335	10	21.7
				5260, 5340	10	14
				5275, 5300, 5325	20	23.5
				5265, 5335	20	15.4
				5285, 5300, 5315	40	22.3
				5275, 5325	40	14.4

* Antenna assembly gain = Antenna Gain - Feeder Loss