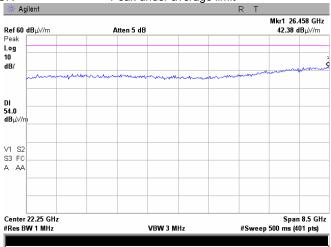


Test specification:	FCC section 15.407(b), R	FCC section 15.407(b), RSS-210 Annex 9, section A9.2						
	Unwanted radiated emiss	Unwanted radiated emissions						
Test procedure:	Public notice DA 00-705 / AN	Public notice DA 00-705 / ANSI C63.4, Section 13.1.4						
Test mode:	Compliance	Verdict:	PASS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

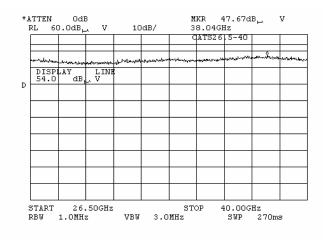
Plot 7.3.33 Radiated emission measurements from 18 to 26.5 GHz at the high carrier frequency

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

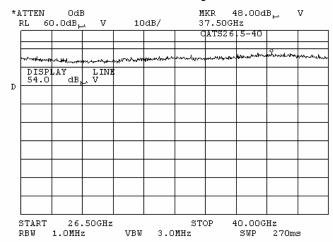




Test specification:		FCC section 15.407(b), RSS-210 Annex 9, section A9.2 Unwanted radiated emissions							
Test procedure:	Public notice DA 00-705 / ANS	Public notice DA 00-705 / ANSI C63.4, Section 13.1.4							
Test mode:	Compliance	Verdict:	PASS						
Date:	12/08/2009	verdict.	PASS						
Temperature: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

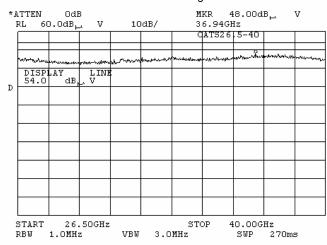
Plot 7.3.35 Radiated emission measurements from 26.5 to 40 GHz at the mid carrier frequency

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

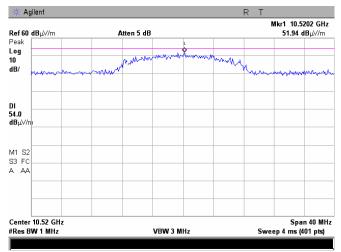




Test specification:		FCC section 15.407(b), RSS-210 Annex 9, section A9.2 Unwanted radiated emissions							
Test procedure:	Public notice DA 00-705 / ANS	Public notice DA 00-705 / ANSI C63.4, Section 13.1.4							
Test mode:	Compliance	Verdict:	PASS						
Date:	12/08/2009	verdict.	PASS						
Temperature: 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

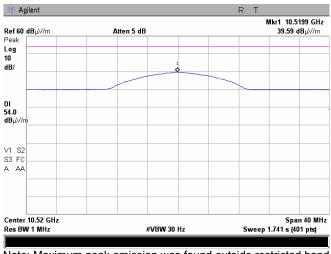
DETECTOR Peak under average limit



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



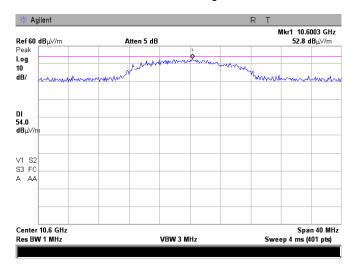
Note: Maximum peak emission was found outside restricted band



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

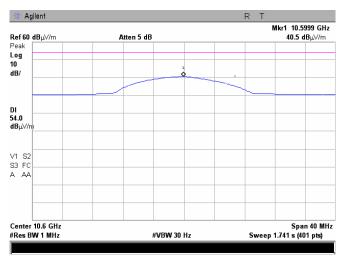
Plot 7.3.39 Radiated emission measurements at the second harmonic of the mid carrier frequency

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

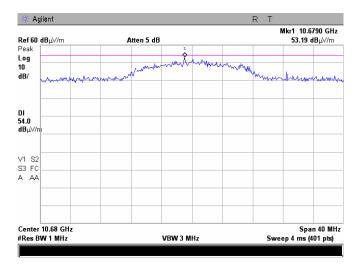




Test specification:		FCC section 15.407(b), RSS-210 Annex 9, section A9.2 Unwanted radiated emissions							
Test procedure:	Public notice DA 00-705 / ANS	Public notice DA 00-705 / ANSI C63.4, Section 13.1.4							
Test mode:	Compliance	Verdict:	PASS						
Date:	12/08/2009	verdict.	FASS						
Temperature: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

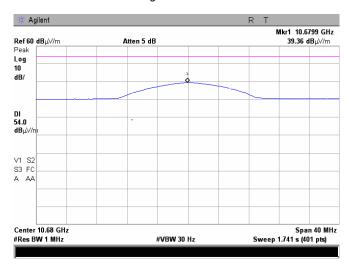
Plot 7.3.41 Radiated emission measurements at the second harmonic of high carrier frequency

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 / ANS	Public notice DA 00-705 / ANSI C63.4, Section 13.1.4						
Test mode:	Compliance	Verdict:	PASS					
Date:	12/08/2009	verdict.	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								

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 (130 kHz – 30 MHz) 120 kHz (30 MHz – 1000 MHz) > Resolution bandwidth

TEST ANTENNA TYPE: Active loop (9 kHz – 30 MHz)
Biconilog (30 MHz – 1000 MHz)

Double ridged guide (above 1000 MHz)

		Quas	i-peak dB(μV/m				Turntable			
Frequency, MHz	Peak, dΒ(μV/m)	Measured emission, dB(μV/m)	Limit, dB(µV/m)	Margin, dB*	Antenna polariz.	Antenna height, m	position**, degrees	Verdict		
Low channel (5260 MHz)										
37.538250	34.24	30.82	40.0	-9.18	Vert	1.2	0			
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	Pass		
111.597500	36.44	33.22	43.5	-10.28	Vert	1.0	318	1 433		
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.

Reference numbers of test equipment used

Reference numbers of test equipment used												
HL 0446	HL 0521	HL 0604	HL 3123	HL 3616								

Full description is given in Appendix A.

VIDEO BANDWIDTH:

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



Test specification:	FCC section 15.407(b), RSS-210 Annex 9, section A9.2 Unwanted radiated emissions							
Test procedure:	Public notice DA 00-705 / ANS	Public notice DA 00-705 / ANSI C63.4, Section 13.1.4						
Test mode:	Compliance	Verdict:	PASS					
Date:	12/08/2009	verdict.	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								

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)

12017((1112)					Double	agoa gala	C (GDCVC	1000 1111 12		
	Pe	Peak, dB(μV/m)		Ave	rage dB(µV/ı	n)		Ant.	Turntable	
Frequency, MHz	Measured emission, dB(μV/m)	Limit, dB(µV/m)	Margin, dB*	Measured emission, dB(μV/m)	Limit, dB(µV/m)	Margin, dB*	Ant. polariz.	height, m	position**, degrees	Verdict
Low channe	l (5485 MHz)									
		All emission	ons were fo	und more thar	n 20 dB belov	v the specifi	ied limit			
First mid ch	annel (5585 N	ЛHz)								Pass
All emissions were found more than 20 dB below the specified limit									1 033	
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.

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	ADUVE 30.0

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

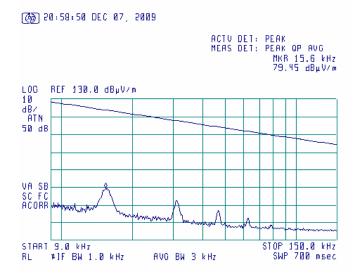


Test specification:	FCC section 15.407(b), RSS-210 Annex 9, section A9.2 Unwanted radiated emissions			
Test procedure:	Public notice DA 00-705 / ANS	Public notice DA 00-705 / ANSI C63.4, Section 13.1.4		
Test mode:	Compliance	Verdict:	PASS	
Date:	12/08/2009	verdict: PASS		
Temperature: 18°C	Air Pressure: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

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

TEST DISTANCE: 3 m

ANTENNA POLARIZATION: Vertical and Horizontal

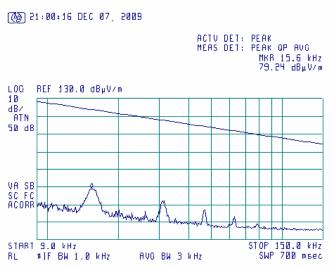


Plot 7.3.44 Radiated emission measurements from 9 to 150 kHz at the mid carrier frequency

TEST SITE: Anechoic chamber

TEST DISTANCE: 3 m

ANTENNA POLARIZATION: Vertical and Horizontal



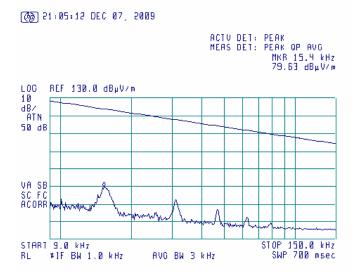


Test specification:	FCC section 15.407(b), RSS-210 Annex 9, section A9.2 Unwanted radiated emissions			
Test procedure:	Public notice DA 00-705 / ANS	Public notice DA 00-705 / ANSI C63.4, Section 13.1.4		
Test mode:	Compliance	Verdict:	PASS	
Date:	12/08/2009	verdict: PASS		
Temperature: 18°C	Air Pressure: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

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

TEST DISTANCE: 3 m

ANTENNA POLARIZATION: Vertical and Horizontal

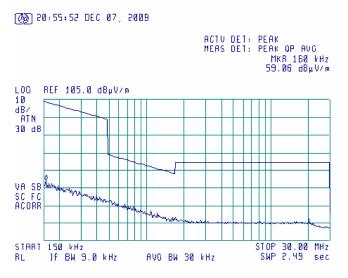


Plot 7.3.46 Radiated emission measurements from 0.15 MHz to 30 MHz at the low carrier frequency

TEST SITE: Anechoic chamber

TEST DISTANCE: 3 m

ANTENNA POLARIZATION: Vertical and Horizontal



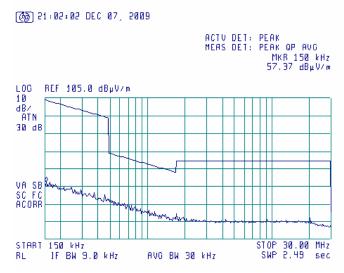


Test specification:	FCC section 15.407(b), RSS-210 Annex 9, section A9.2 Unwanted radiated emissions			
Test procedure:	Public notice DA 00-705 / ANS	Public notice DA 00-705 / ANSI C63.4, Section 13.1.4		
Test mode:	Compliance	Verdict:	PASS	
Date:	12/08/2009	verdict: PASS		
Temperature: 18°C	Air Pressure: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

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

TEST DISTANCE: 3 m

ANTENNA POLARIZATION: Vertical and Horizontal

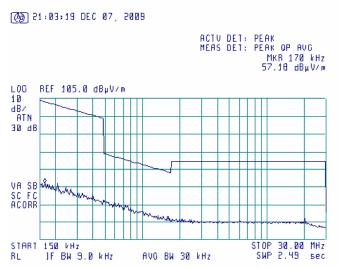


Plot 7.3.48 Radiated emission measurements from 0.15 MHz to 30 MHz at the high carrier frequency

TEST SITE: Anechoic chamber

TEST DISTANCE: 3 m

ANTENNA POLARIZATION: Vertical and Horizontal



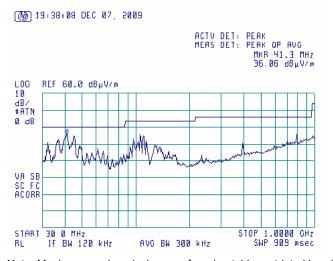


Test specification:	FCC section 15.407(b), RSS-210 Annex 9, section A9.2 Unwanted radiated emissions			
Test procedure:	Public notice DA 00-705 / ANS	Public notice DA 00-705 / ANSI C63.4, Section 13.1.4		
Test mode:	Compliance	Verdict:	PASS	
Date:	12/08/2009	verdict.	PASS	
Temperature: 18°C	Air Pressure: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

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

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

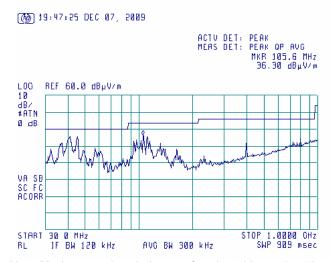


Test specification:	FCC section 15.407(b), RSS-210 Annex 9, section A9.2 Unwanted radiated emissions			
Test procedure:	Public notice DA 00-705 / ANS	Public notice DA 00-705 / ANSI C63.4, Section 13.1.4		
Test mode:	Compliance	Verdict:	PASS	
Date:	12/08/2009	verdict.	PASS	
Temperature: 18°C	Air Pressure: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

Plot 7.3.51 Radiated emission measurements from 30 MHz to 1000 MHz at the high carrier frequency

TEST DISTANCE: 3 m

ANTENNA POLARIZATION: Vertical and Horizontal



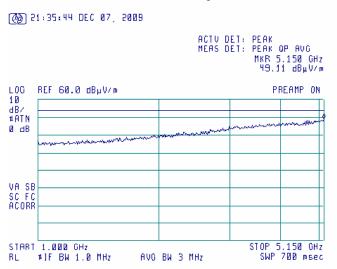
Note: Maximum peak emission was found outside restricted band

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: Vertical and Horizontal Peak under average limit



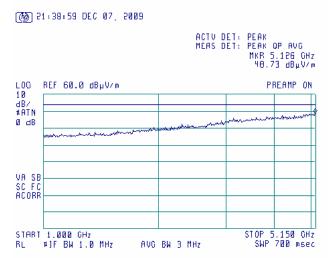


Test specification:	FCC section 15.407(b), RSS-210 Annex 9, section A9.2 Unwanted radiated emissions		
Test procedure:	Public notice DA 00-705 / ANSI C63.4, Section 13.1.4		
Test mode:	Compliance	Verdict:	PASS
Date:	12/08/2009	verdict. PASS	
Temperature: 18°C	Air Pressure: 1015 hPa	Relative Humidity: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

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

TEST DISTANCE: 3 m

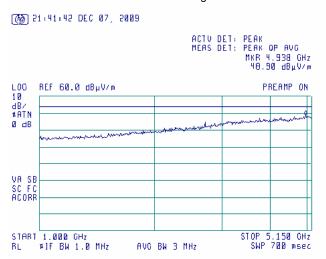
ANTENNA POLARIZATION: Vertical and Horizontal DETECTOR: Peak under average limit



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





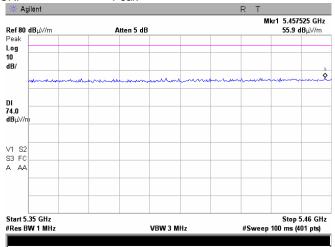
Test specification:	FCC section 15.407(b), RSS-210 Annex 9, section A9.2 Unwanted radiated emissions			
Test procedure:	Public notice DA 00-705 / ANS	Public notice DA 00-705 / ANSI C63.4, Section 13.1.4		
Test mode:	Compliance	Verdict:	PASS	
Date:	12/08/2009	verdict: PASS		
Temperature: 18°C	Air Pressure: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

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

TEST DISTANCE: 3 m

ANTENNA POLARIZATION: Vertical and Horizontal

DETECTOR: Peak

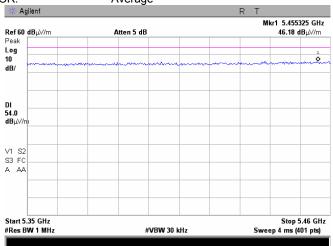


Plot 7.3.56 Radiated emission measurements from 5.35 to 5.46 GHz at the low carrier frequency

TEST SITE: Anechoic chamber

TEST DISTANCE: 3 m

ANTENNA POLARIZATION: Vertical and Horizontal





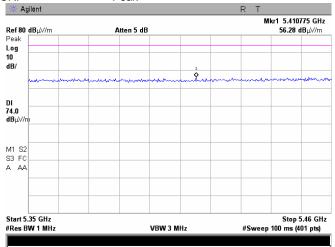
Test specification:	FCC section 15.407(b), RSS-210 Annex 9, section A9.2 Unwanted radiated emissions			
Test procedure:	Public notice DA 00-705 / ANS	Public notice DA 00-705 / ANSI C63.4, Section 13.1.4		
Test mode:	Compliance	Verdict:	PASS	
Date:	12/08/2009	verdict: PASS		
Temperature: 18°C	Air Pressure: 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 DISTANCE: 3 m

ANTENNA POLARIZATION: Vertical and Horizontal

DETECTOR: Peak

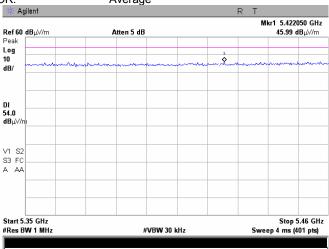


Plot 7.3.58 Radiated emission measurements from 5.35 to 5.46 GHz at the mid carrier frequency

TEST SITE: Anechoic chamber

TEST DISTANCE: 3 m

ANTENNA POLARIZATION: Vertical and Horizontal





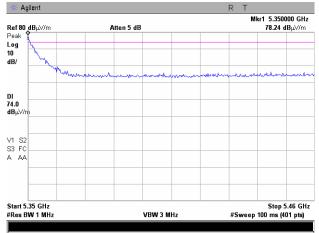
Test specification:	FCC section 15.407(b), RSS-210 Annex 9, section A9.2 Unwanted radiated emissions		
Test procedure:	Public notice DA 00-705 / ANSI C63.4, Section 13.1.4		
Test mode:	Compliance	Verdict:	PASS
Date:	12/08/2009	Verdict. PASS	
Temperature: 18°C	Air Pressure: 1015 hPa	Relative Humidity: 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 DISTANCE: 3 m

ANTENNA POLARIZATION: Vertical and Horizontal

DETECTOR: Peak



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

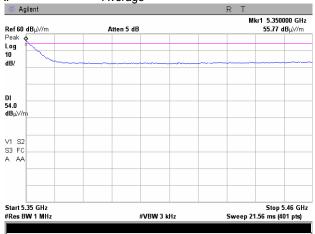
Plot 7.3.60 Radiated emission measurements from 5.35 to 5.46 GHz at the high carrier frequency

TEST SITE: Anechoic chamber

TEST DISTANCE: 3 m

ANTENNA POLARIZATION: Vertical and Horizontal

DETECTOR: Average



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

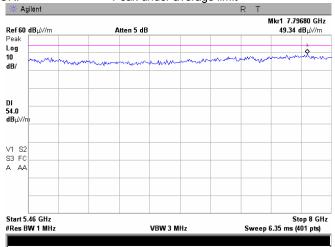


Test specification:	FCC section 15.407(b), RSS-210 Annex 9, section A9.2 Unwanted radiated emissions			
Test procedure:	Public notice DA 00-705 / ANS	Public notice DA 00-705 / ANSI C63.4, Section 13.1.4		
Test mode:	Compliance	Verdict:	PASS	
Date:	12/08/2009	verdict: PASS		
Temperature: 18°C	Air Pressure: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

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

TEST DISTANCE: 3 m

ANTENNA POLARIZATION: Vertical and Horizontal DETECTOR: Vertical and Horizontal Peak under average limit

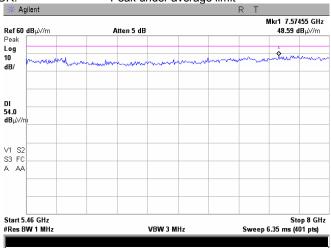


Plot 7.3.62 Radiated emission measurements from 5.46 to 8 GHz at the mid carrier frequency

TEST SITE: Anechoic chamber

TEST DISTANCE: 3 m

ANTENNA POLARIZATION: Vertical and Horizontal DETECTOR: Vertical and Horizontal Peak under average limit





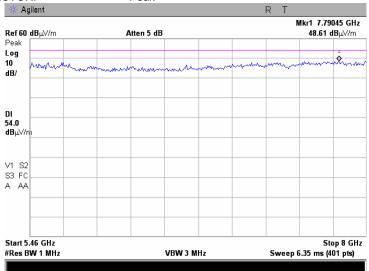
Test specification:	FCC section 15.407(b), RSS-210 Annex 9, section A9.2 Unwanted radiated emissions		
Test procedure:	Public notice DA 00-705 / ANSI C63.4, Section 13.1.4		
Test mode:	Compliance	Verdict:	PASS
Date:	12/08/2009	verdict. PASS	
Temperature: 18°C	Air Pressure: 1015 hPa	Relative Humidity: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

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

TEST DISTANCE: 3 m

ANTENNA POLARIZATION: Vertical and Horizontal

DETECTOR: Peak





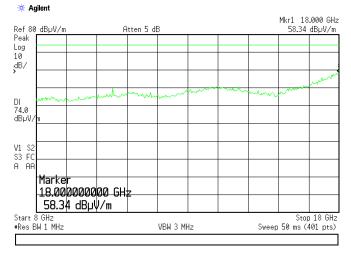
Test specification:	FCC section 15.407(b), RSS-210 Annex 9, section A9.2 Unwanted radiated emissions			
Test procedure:	Public notice DA 00-705 / AN	Public notice DA 00-705 / ANSI C63.4, Section 13.1.4		
Test mode:	Compliance	Verdict: PASS	PASS	
Date:	12/08/2009	Verdict. PASS		
Temperature: 18°C	Air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

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

TEST DISTANCE: 3 m

ANTENNA POLARIZATION: Vertical and Horizontal

DETECTOR: Peak

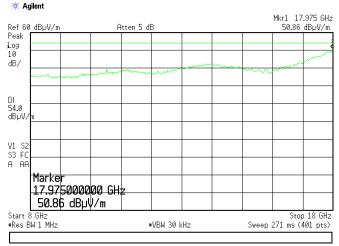


Plot 7.3.65 Radiated emission measurements from 8 to 18 GHz at the low carrier frequency

TEST SITE: Anechoic chamber

TEST DISTANCE: 3 m

ANTENNA POLARIZATION: Vertical and Horizontal



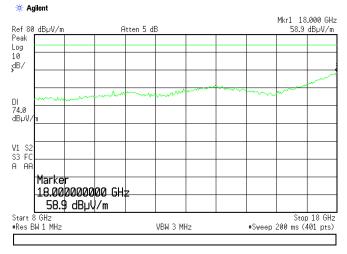


Test specification:	FCC section 15.407(b), RSS-210 Annex 9, section A9.2 Unwanted radiated emissions			
Test procedure:	Public notice DA 00-705 / ANS	Public notice DA 00-705 / ANSI C63.4, Section 13.1.4		
Test mode:	Compliance	Verdict:	PASS	
Date:	12/08/2009	verdict.	PASS	
Temperature: 18°C	Air Pressure: 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

ANTENNA POLARIZATION: Vertical and Horizontal

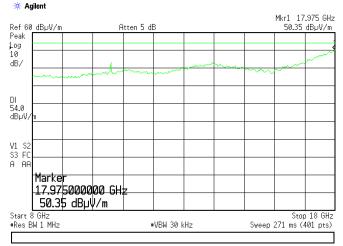
DETECTOR: Peak



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



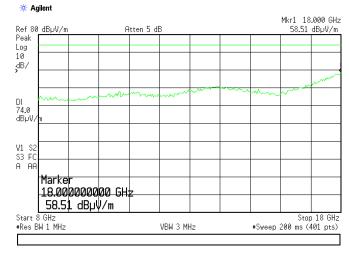


Test specification:	FCC section 15.407(b), RSS-210 Annex 9, section A9.2 Unwanted radiated emissions			
Test procedure:	Public notice DA 00-705 / ANS	Public notice DA 00-705 / ANSI C63.4, Section 13.1.4		
Test mode:	Compliance	Verdict:	PASS	
Date:	12/08/2009	verdict.	PASS	
Temperature: 18°C	Air Pressure: 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

ANTENNA POLARIZATION: Vertical and Horizontal

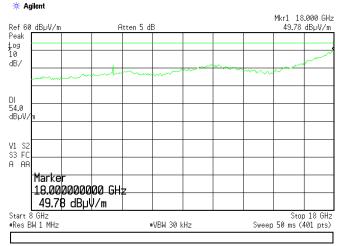
DETECTOR: Peak



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

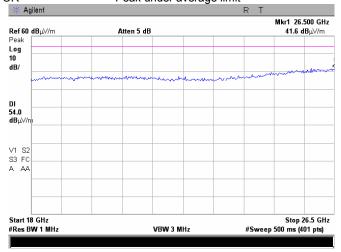




Test specification:	FCC section 15.407(b), RSS-210 Annex 9, section A9.2 Unwanted radiated emissions		
Test procedure:	Public notice DA 00-705 / ANSI C63.4, Section 13.1.4		
Test mode:	Compliance	Verdict: PASS	PASS
Date:	12/08/2009	verdict.	PASS
Temperature: 18°C	Air Pressure: 1015 hPa	Relative Humidity: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

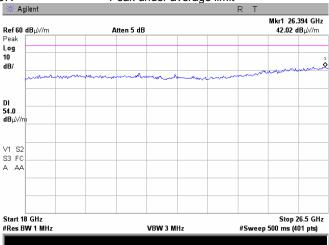
Plot 7.3.70 Radiated emission measurements from 18 to 26.5 GHz at the low carrier frequency

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

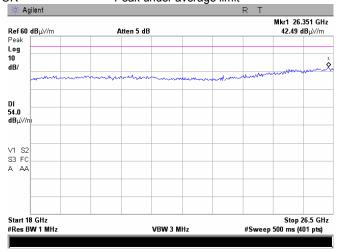




Test specification:	FCC section 15.407(b), RSS-210 Annex 9, section A9.2 Unwanted radiated emissions			
Test procedure:	Public notice DA 00-705 / AN	Public notice DA 00-705 / ANSI C63.4, Section 13.1.4		
Test mode:	Compliance	Verdict: PASS	PASS	
Date:	12/08/2009	verdict.	PASS	
Temperature: 18°C	Air Pressure: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

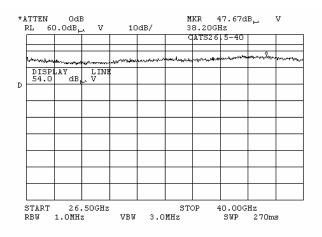
Plot 7.3.72 Radiated emission measurements from 18 to 26.5 GHz at the high carrier frequency

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

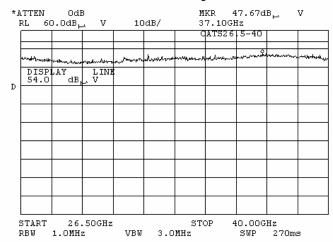




Test specification:	FCC section 15.407(b), RSS-210 Annex 9, section A9.2 Unwanted radiated emissions			
Test procedure:	Public notice DA 00-705 / ANS	Public notice DA 00-705 / ANSI C63.4, Section 13.1.4		
Test mode:	Compliance	Verdict:	PASS	
Date:	12/08/2009	verdict.	PASS	
Temperature: 18°C	Air Pressure: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

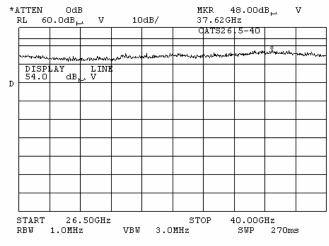
Plot 7.3.74 Radiated emission measurements from 26.5 to 40 GHz at the mid carrier frequency

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

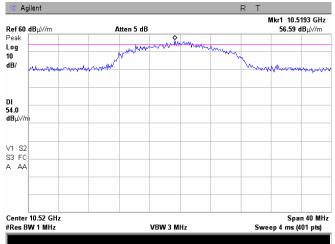




Test specification:	FCC section 15.407(b), RSS-210 Annex 9, section A9.2 Unwanted radiated emissions			
Test procedure:	Public notice DA 00-705 / ANS	Public notice DA 00-705 / ANSI C63.4, Section 13.1.4		
Test mode:	Compliance	Verdict:	PASS	
Date:	12/08/2009	verdict.	PASS	
Temperature: 18°C	Air Pressure: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

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

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



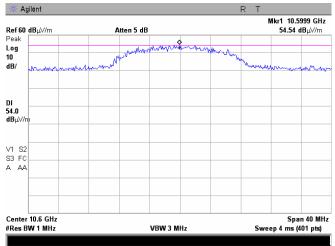
Note: Maximum peak emission was found outside restricted band



Test specification:	FCC section 15.407(b), RSS-210 Annex 9, section A9.2 Unwanted radiated emissions			
Test procedure:	Public notice DA 00-705 / ANS	Public notice DA 00-705 / ANSI C63.4, Section 13.1.4		
Test mode:	Compliance	Verdict:	PASS	
Date:	12/08/2009	verdict.	FASS	
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

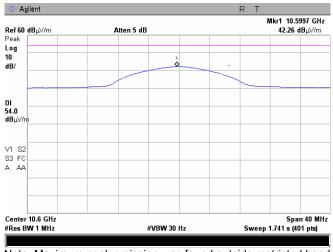
DETECTOR Peak under average limit



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

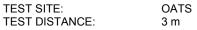


Note: Maximum peak emission was found outside restricted band

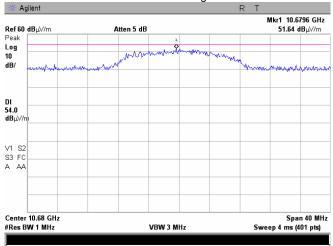


Test specification:	FCC section 15.407(b), RSS-210 Annex 9, section A9.2 Unwanted radiated emissions			
Test procedure:	Public notice DA 00-705 / ANS	Public notice DA 00-705 / ANSI C63.4, Section 13.1.4		
Test mode:	Compliance	Verdict:	PASS	
Date:	12/08/2009	verdict.	PASS	
Temperature: 18°C	Air Pressure: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

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

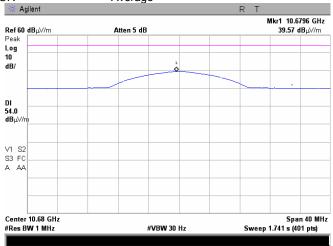


DETECTOR Peak under average limit



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	verdict.	PASS
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.

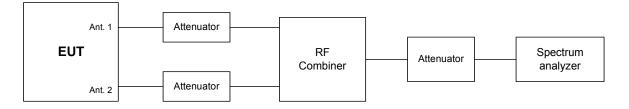
Table 7.4.1 Spurious emission test limits

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:	PASS
Date:	11/26/2009	verdict.	FASS
Temperature: 23.7°C	Air Pressure: 1013 hPa	Relative Humidity: 47 %	Power Supply: 48 VDC
Remarks:			

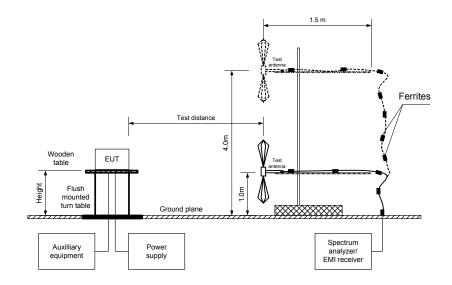
7.4.3 Test procedure for radiated spurious emission measurements

- **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(μV/m)***	
r requericy, wiriz	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 / ANS	Public notice DA 00-705 / ANSI C63.4, Section 13.1.4					
Test mode:	Compliance	Verdict: PASS					
Date:	11/26/2009	Verdict. 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

VIDEO BANDWIDTH:

MODULATING SIGNAL:

MODULATION:

EMISSION BANDWIDTH

1000 kHz

3000 kHz

OFDM

BPSK/64QAM

EMISSION BANDWIDTH

40/20/10/5 MHz

LIVIIOSION	BANDWIDIT			70/2	.0/10/3 MITZ				
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 freque	ncy 5275 MH	z							
5250.000	BPSK	27	40	-54.17	22.5	-31.67	-27.0	-4.67	Pass
5250.000	64QAM	270	40	-54.69	22.5	-32.19	-27.0	-5.19	Pass
Low freque	ncy 5285 MH	z							
5249.950	BPSK	27	40	-49.66	22.5	-27.16	-27.0	-0.16	Pass
5249.925	64QAM	270	40	-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	20	-54.19	22.5	-31.69	-27.0	-4.69	Pass
Low freque	ncy 5260 MH	z							
5250.000	BPSK	6.5	10	-54.25	22.5	-31.75	-27.0	-4.75	Pass
5250.000	64QAM	65	10	-54.17	22.5	-31.67	-27.0	-4.67	Pass
Low freque	ncy 5257.5 M	Hz							
5215.750	BPSK	3.25		-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	5	-58.00	22.5	-35.50	-27.0	-8.50	Pass
5215.750	64QAM	32.5	J	-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

Reference numbers of test equipment used

		• •			
HL 2909	HL 2952	HL 3435	HL 3437		

Full description is given in Appendix A.

^{**-} Margin = EIRP –limit.



Test specification:	FCC section 15.407(b), RSS-210 Annex 9, section A9.2 Conducted emissions at band edges						
Test procedure:	Public notice DA 00-705 / ANS	Public notice DA 00-705 / ANSI C63.4, Section 13.1.4					
Test mode:	Compliance	Verdict:	PASS				
Date:	11/26/2009	- Verdict: 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:

TRANSMITTER OUTPUT POWER:

DETECTOR USED:

RESOLUTION BANDWIDTH:

BPSK/64QAM

Maximum

Peak

1000 kHz

TEST ANTENNA TYPE: Double ridged guide

Frequency	Bit rate.	Anten	na	Azimuth.	Pe	ak field streng	th	Averag	je field strer	ngth	
MHz	Mbps	Polarization	Height, m	degrees*	Measured, dB(μV/m)	Limit, dB(μV/m)	Margin, dB**	Measured, dB(μV/m)	Limit, dB(µV/m)	Margin, dB**	Verdict
High frequ	ency 531	5.0 MHz EBW	40 MHz I	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 frequ	ency 532	5.0 MHz EBW	40 MHz I	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 frequ	ency 533	5.0 MHz EBW	20 MHz I	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 frequ	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 frequ	ency 534	2.5 MHz EBW	5 MHz E	BW							
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.

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.

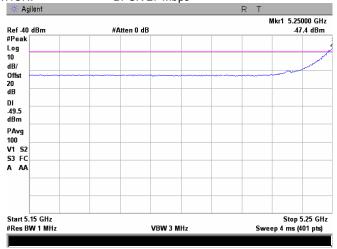
^{**-} EUT front panel refers to 0 degrees position of turntable.



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 / ANS	Public notice DA 00-705 / ANSI C63.4, Section 13.1.4					
Test mode:	Compliance	Verdict: PASS					
Date:	11/26/2009	- Verdict: 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 7.4.1 Conducted spurious emission measurements at the 5150 - 5250 MHz range

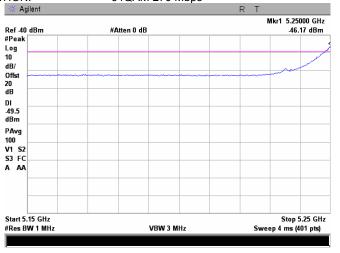
CARRIER FREQUENCY
CHANNEL BANDWIDTH
MODULATION:
5275 MHz
40 MHz
BPSK 27 Mbps



Plot 7.4.2 Conducted spurious emission measurements 5150 - 5250 MHz range

CARRIER FREQUENCY
CHANNEL BANDWIDTH
MODULATION:

5275 MHz
40 MHz
64QAM 270 Mbps

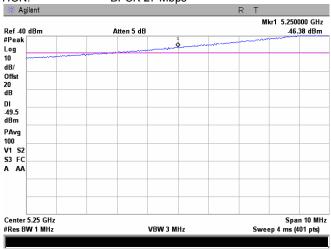




Test specification:	FCC section 15.407(b), RSS-210 Annex 9, section A9.2 Conducted emissions at band edges						
Test procedure:	Public notice DA 00-705 / ANS	Public notice DA 00-705 / ANSI C63.4, Section 13.1.4					
Test mode:	Compliance	Verdict:	PASS				
Date:	11/26/2009	- Verdict: PASS					
Temperature: 23.7°C Air Pressure: 1013 hPa Relative Humidity: 47 % Power Supply: 120 VAC							
Remarks: EUT with 22.5 dBi antenna assembly gain							

Plot 7.4.3 Conducted spurious emission measurements at the band edges

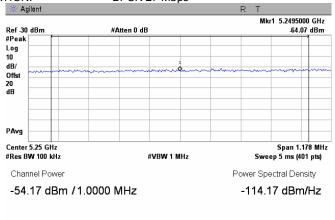
CARRIER FREQUENCY 5275 MHz
CHANNEL BANDWIDTH 40 MHz
MODULATION: BPSK 27 Mbps



Plot 7.4.4 Conducted spurious emission measurements at the band edges

CARRIER FREQUENCY
CHANNEL BANDWIDTH
MODULATION:

5275 MHz
40 MHz
BPSK 27 Mbps



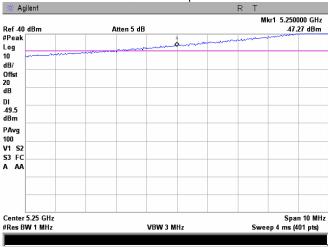


Test specification:	FCC section 15.407(b), RSS-210 Annex 9, section A9.2 Conducted emissions at band edges						
Test procedure:	e: Public notice DA 00-705 / ANSI C63.4, Section 13.1.4						
Test mode:	Compliance	Verdict:	PASS				
Date:	11/26/2009	T Verdict: PASS					
Temperature: 23.7°C	Air Pressure: 1013 hPa	Relative Humidity: 47 %	Power Supply: 120 VAC				
Remarks: EUT with 22.5 dBi antenna assembly gain							

Plot 7.4.5 Conducted spurious emission measurements at the band edges

CARRIER FREQUENCY 5275 MHz CHANNEL BANDWIDTH 40 MHz

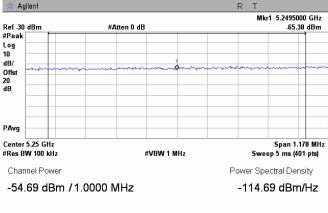
MODULATION: 64QAM 270 Mbps



Plot 7.4.6 Conducted spurious emission measurements at the band edges

CARRIER FREQUENCY 5275 MHz CHANNEL BANDWIDTH 40 MHz

MODULATION: 64QAM 270 Mbps



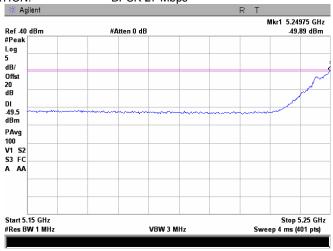


Test specification:	FCC section 15.407(b), RSS-210 Annex 9, section A9.2 Conducted emissions at band edges						
Test procedure:	Public notice DA 00-705 / ANS	Public notice DA 00-705 / ANSI C63.4, Section 13.1.4					
Test mode:	Compliance	Verdict:	PASS				
Date:	11/26/2009	- Verdict: PASS					
Temperature: 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
CHANNEL BANDWIDTH
MODULATION:

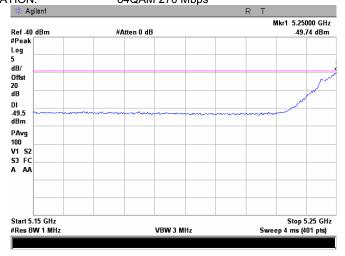
5285 MHz
40 MHz
BPSK 27 Mbps



Plot 7.4.8 Conducted spurious emission measurements 5150 – 5250 MHz range

CARRIER FREQUENCY
CHANNEL BANDWIDTH
MODULATION:

5285 MHz
40 MHz
64QAM 270 Mbps

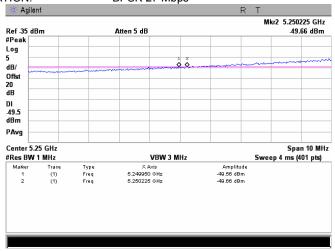




Test specification:	FCC section 15.407(b), RSS-210 Annex 9, section A9.2 Conducted emissions at band edges						
Test procedure:	Public notice DA 00-705 / ANSI C63.4, Section 13.1.4						
Test mode:	Compliance	Verdict:	PASS				
Date:	11/26/2009	T Verdict: PASS					
Temperature: 23.7°C	Air Pressure: 1013 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
CHANNEL BANDWIDTH
MODULATION:

5285 MHz
40 MHz
64QAM 270 Mbps

Mkr1 5.249925 GHz Ref -35 dBm #Peak Atten 5 dB -50.04 dBm Log 5 dB/ Offst 20 dB DI -49.5 dBm PAvg Center 5.25 GHz Span 10 MHz Sweep 4 ms (401 pts) #Res BW 1 MHz VBW 3 MHz Amplitude -50.04 dBm -49.58 dBm Type Freq Freq X Axis 5.249925 GHz 5.250500 GHz

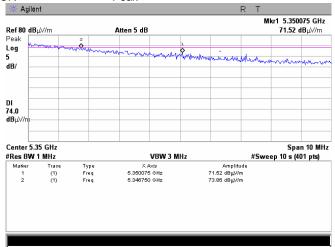


Test specification:	FCC section 15.407(b), RSS-210 Annex 9, section A9.2 Conducted emissions at band edges		
Test procedure:	Public notice DA 00-705 / ANSI C63.4, Section 13.1.4		
Test mode:	Compliance	Verdict:	PASS
Date:	11/26/2009	verdict: PASS	
Temperature: 23.7°C	Air Pressure: 1013 hPa	Relative Humidity: 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

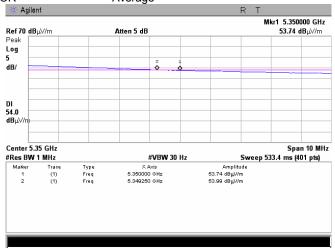
CARRIER FREQUENCY 5315 MHz
CHANNEL BANDWIDTH 40 MHz
MODULATION: BPSK 27 Mbps

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





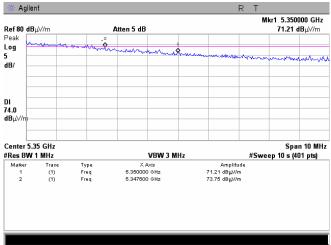
Test specification:	FCC section 15.407(b), RSS-210 Annex 9, section A9.2 Conducted emissions at band edges		
Test procedure:	Public notice DA 00-705 / ANSI C63.4, Section 13.1.4		
Test mode:	Compliance	Verdict:	PASS
Date:	11/26/2009	verdict: PASS	
Temperature: 23.7°C	Air Pressure: 1013 hPa	Relative Humidity: 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

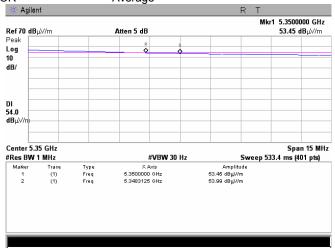


Plot 7.4.14 Radiated spurious emission measurements at the band edges

CARRIER FREQUENCY 5315 MHz CHANNEL BANDWIDTH 40 MHz

MODULATION: 64QAM 270 Mbps

DETECTOR Average



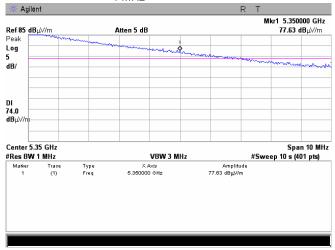


Test specification:	FCC section 15.407(b), RSS-210 Annex 9, section A9.2 Conducted emissions at band edges			
Test procedure:	Public notice DA 00-705 / ANS	Public notice DA 00-705 / ANSI C63.4, Section 13.1.4		
Test mode:	Compliance	Verdict:	PASS	
Date:	11/26/2009	verdict.	PASS	
Temperature: 23.7°C	Air Pressure: 1013 hPa	Relative Humidity: 47 %	Power Supply: 120 VAC	
Remarks: EUT with 22.5 dBi antenna assembly gain				

Plot 7.4.15 Radiated spurious emission measurements at the band edges

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

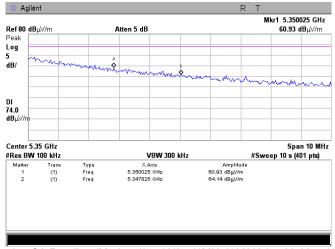
RBW 1 MHz



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

DETECTOR Peak RBW 100 kHz



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

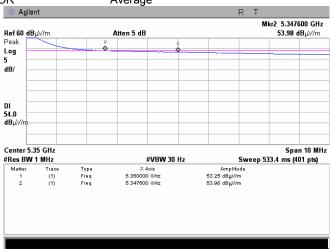


Test specification:	FCC section 15.407(b), RSS-210 Annex 9, section A9.2 Conducted emissions at band edges		
Test procedure:	Public notice DA 00-705 / ANSI C63.4, Section 13.1.4		
Test mode:	Compliance	Verdict:	PASS
Date:	11/26/2009	verdict.	PASS
Temperature: 23.7°C	Air Pressure: 1013 hPa	Relative Humidity: 47 %	Power Supply: 120 VAC
Remarks: EUT with 22.5 dBi antenna assembly gain			

Plot 7.4.17 Radiated spurious emission measurements at the band edges

CARRIER FREQUENCY
CHANNEL BANDWIDTH
MODULATION:
DETECTOR

5325 MHz
40 MHz
BPSK 27 Mbps
Average





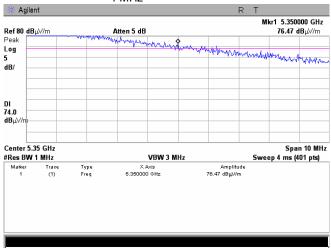
Test specification:	FCC section 15.407(b), RSS-210 Annex 9, section A9.2 Conducted emissions at band edges			
Test procedure:	Public notice DA 00-705 / ANS	Public notice DA 00-705 / ANSI C63.4, Section 13.1.4		
Test mode:	Compliance	Verdict:	PASS	
Date:	11/26/2009	verdict.	PASS	
Temperature: 23.7°C	Air Pressure: 1013 hPa	Relative Humidity: 47 %	Power Supply: 120 VAC	
Remarks: EUT with 22.5 dBi antenna assembly gain				

Plot 7.4.18 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

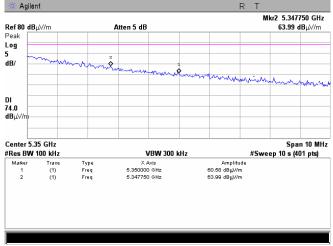


Plot 7.4.19 Radiated spurious emission measurements at the band edges

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 dBuV



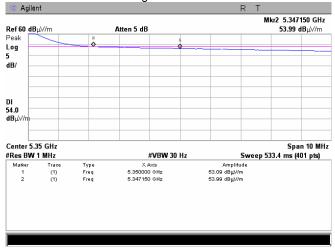
Test specification:	FCC section 15.407(b), RSS-210 Annex 9, section A9.2 Conducted emissions at band edges		
Test procedure:	Public notice DA 00-705 / ANSI C63.4, Section 13.1.4		
Test mode:	Compliance	Verdict:	PASS
Date:	11/26/2009	verdict: PASS	
Temperature: 23.7°C	Air Pressure: 1013 hPa	Relative Humidity: 47 %	Power Supply: 120 VAC
Remarks: EUT with 22.5 dBi antenna assembly gain			

Plot 7.4.20 Radiated spurious emission measurements at the band edges

CARRIER FREQUENCY 5325 MHz CHANNEL BANDWIDTH 40 MHz

MODULATION: 64QAM 270 Mbps

DETECTOR Average



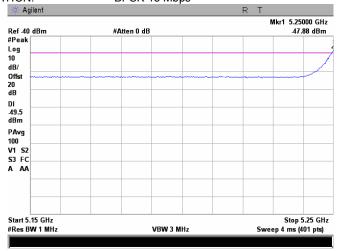


Test specification:	FCC section 15.407(b), RSS-210 Annex 9, section A9.2 Conducted emissions at band edges		
Test procedure:	Public notice DA 00-705 / ANSI C63.4, Section 13.1.4		
Test mode:	Compliance	Verdict:	PASS
Date:	11/26/2009	verdict: PASS	
Temperature: 23.7°C	Air Pressure: 1013 hPa	Relative Humidity: 47 %	Power Supply: 120 VAC
Remarks: EUT with 22.5 dBi antenna assembly gain			

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

CARRIER FREQUENCY
CHANNEL BANDWIDTH
MODULATION:

5265 MHz
20 MHz
BPSK 13 Mbps



Plot 7.4.22 Conducted spurious emission measurements 5150 – 5250 MHz range

CARRIER FREQUENCY
CHANNEL BANDWIDTH
MODULATION:

5265 MHz
20 MHz
64QAM 130 Mbps

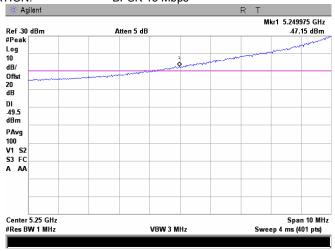


Test specification:	FCC section 15.407(b), RSS-210 Annex 9, section A9.2 Conducted emissions at band edges			
Test procedure:	Public notice DA 00-705 / ANS	Public notice DA 00-705 / ANSI C63.4, Section 13.1.4		
Test mode:	Compliance	Verdict:	PASS	
Date:	11/26/2009	verdict.	PASS	
Temperature: 23.7°C	Air Pressure: 1013 hPa	Relative Humidity: 47 %	Power Supply: 120 VAC	
Remarks: EUT with 22.5 dBi antenna assembly gain				

Plot 7.4.23 Conducted spurious emission measurements at the band edges

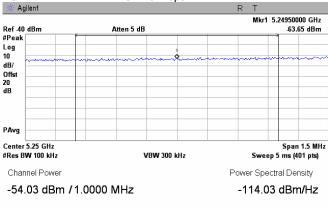
CARRIER FREQUENCY
CHANNEL BANDWIDTH
MODULATION:

5265 MHz
20 MHz
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



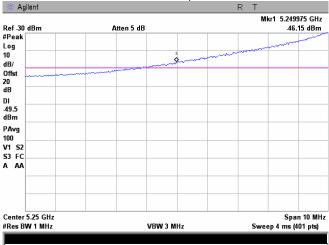


Test specification:	FCC section 15.407(b), RSS-210 Annex 9, section A9.2 Conducted emissions at band edges			
Test procedure:	Public notice DA 00-705 / ANS	Public notice DA 00-705 / ANSI C63.4, Section 13.1.4		
Test mode:	Compliance	Verdict:	PASS	
Date:	11/26/2009	verdict: PASS		
Temperature: 23.7°C	Air Pressure: 1013 hPa	Relative Humidity: 47 %	Power Supply: 120 VAC	
Remarks: EUT with 22.5 dBi antenna assembly gain				

Plot 7.4.25 Conducted spurious emission measurements at the band edges

CARRIER FREQUENCY 5265 MHz CHANNEL BANDWIDTH 20 MHz

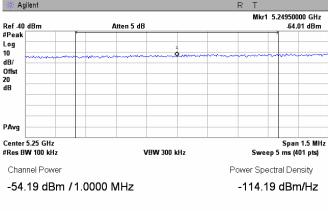
MODULATION: 64QAM 130 Mbps



Plot 7.4.26 Conducted spurious emission measurements at the band edges

CARRIER FREQUENCY 5265 MHz CHANNEL BANDWIDTH 20 MHz

MODULATION: 64QAM 130 Mbps



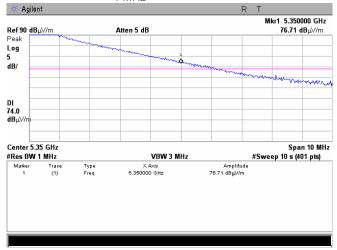


Test specification:	FCC section 15.407(b), RSS-210 Annex 9, section A9.2 Conducted emissions at band edges			
Test procedure:	Public notice DA 00-705 / ANS	Public notice DA 00-705 / ANSI C63.4, Section 13.1.4		
Test mode:	Compliance	Verdict:	PASS	
Date:	11/26/2009	verdict.	PASS	
Temperature: 23.7°C	Air 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

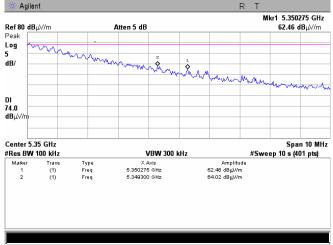
RBW 1 MHz



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

DETECTOR Peak RBW 100 kHz



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

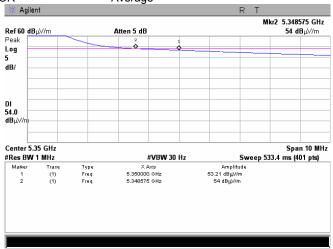


Test specification:	FCC section 15.407(b), RSS-210 Annex 9, section A9.2 Conducted emissions at band edges		
Test procedure:	Public notice DA 00-705 / ANSI C63.4, Section 13.1.4		
Test mode:	Compliance	Verdict:	PASS
Date:	11/26/2009	verdict: PASS	
Temperature: 23.7°C	Air Pressure: 1013 hPa	Relative Humidity: 47 %	Power Supply: 120 VAC
Remarks: EUT with 22.5 dBi antenna assembly gain			

Plot 7.4.29 Radiated spurious emission measurements at the band edges

CARRIER FREQUENCY
CHANNEL BANDWIDTH
MODULATION:
DETECTOR

5335 MHz
20 MHz
BPSK 13 Mbps
Average





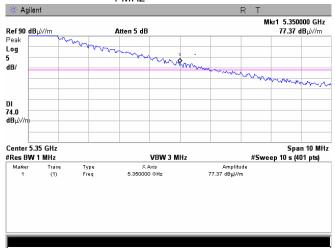
Test specification:	FCC section 15.407(b), RSS-210 Annex 9, section A9.2 Conducted emissions at band edges			
Test procedure:	Public notice DA 00-705 / ANS	Public notice DA 00-705 / ANSI C63.4, Section 13.1.4		
Test mode:	Compliance	Verdict:	PASS	
Date:	11/26/2009	verdict: PASS		
Temperature: 23.7°C	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

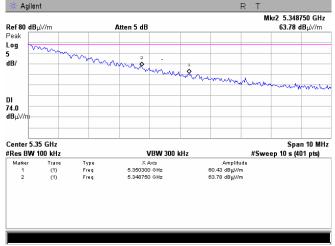


Plot 7.4.31 Radiated spurious emission measurements at the band edges

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



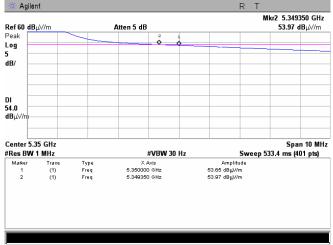
Test specification:	FCC section 15.407(b), RSS-210 Annex 9, section A9.2 Conducted emissions at band edges		
Test procedure:	Public notice DA 00-705 / ANSI C63.4, Section 13.1.4		
Test mode:	Compliance	Verdict:	PASS
Date:	11/26/2009	verdict: PASS	
Temperature: 23.7°C	Air Pressure: 1013 hPa	Relative Humidity: 47 %	Power Supply: 120 VAC
Remarks: EUT with 22.5 dBi antenna assembly gain			

Plot 7.4.32 Radiated spurious emission measurements at the band edges

CARRIER FREQUENCY 5335 MHz CHANNEL BANDWIDTH 20 MHz

MODULATION: 64QAM 130 Mbps

DETECTOR Average



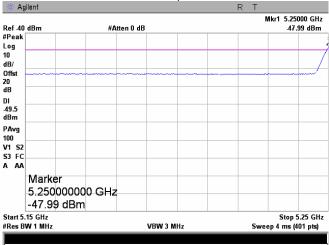


Test specification:	FCC section 15.407(b), RSS-210 Annex 9, section A9.2 Conducted emissions at band edges			
Test procedure:	Public notice DA 00-705 / ANS	Public notice DA 00-705 / ANSI C63.4, Section 13.1.4		
Test mode:	Compliance	Verdict:	PASS	
Date:	11/26/2009	verdict: PASS		
Temperature: 23.7°C	Air Pressure: 1013 hPa	Relative Humidity: 47 %	Power Supply: 120 VAC	
Remarks: EUT with 22.5 dBi antenna assembly gain				

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

CARRIER FREQUENCY
CHANNEL BANDWIDTH
MODULATION:

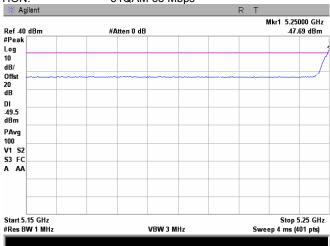
5260 MHz
10 MHz
BPSK 6.5 Mbps



Plot 7.4.34 Conducted spurious emission measurements 5150 – 5250 MHz range

CARRIER FREQUENCY
CHANNEL BANDWIDTH
MODULATION:

5260 MHz
10 MHz
64QAM 65 Mbps



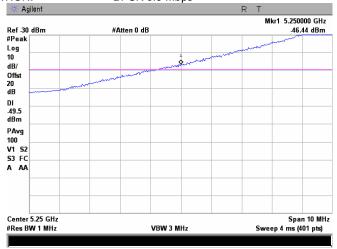


Test specification:	FCC section 15.407(b), RSS-210 Annex 9, section A9.2 Conducted emissions at band edges		
Test procedure:	Public notice DA 00-705 / ANSI C63.4, Section 13.1.4		
Test mode:	Compliance	Verdict:	PASS
Date:	11/26/2009	verdict: PASS	
Temperature: 23.7°C	Air Pressure: 1013 hPa	Relative Humidity: 47 %	Power Supply: 120 VAC
Remarks: EUT with 22.5 dBi antenna assembly gain			

Plot 7.4.35 Conducted spurious emission measurements at the band edges

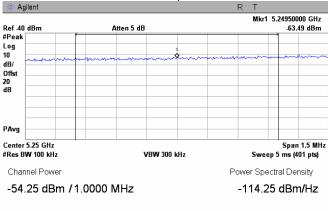
CARRIER FREQUENCY
CHANNEL BANDWIDTH
MODULATION:

5260 MHz
10 MHz
BPSK 6.5 Mbps



Plot 7.4.36 Conducted spurious emission measurements at the band edges

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



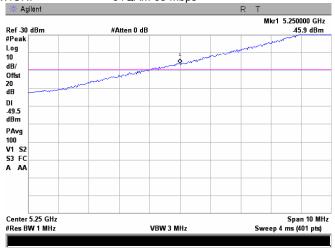


Test specification:	FCC section 15.407(b), RSS-210 Annex 9, section A9.2 Conducted emissions at band edges		
Test procedure:	Public notice DA 00-705 / ANSI C63.4, Section 13.1.4		
Test mode:	Compliance	Verdict:	PASS
Date:	11/26/2009	verdict: PASS	
Temperature: 23.7°C	Air Pressure: 1013 hPa	Relative Humidity: 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

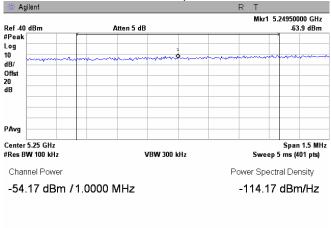
CARRIER FREQUENCY
CHANNEL BANDWIDTH
MODULATION:

5260 MHz
10 MHz
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





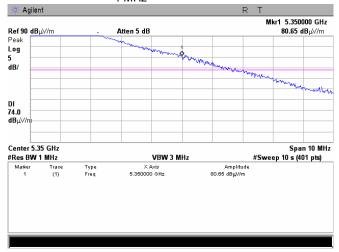
Test specification:	FCC section 15.407(b), RSS-210 Annex 9, section A9.2 Conducted emissions at band edges			
Test procedure:	Public notice DA 00-705 / ANS	Public notice DA 00-705 / ANSI C63.4, Section 13.1.4		
Test mode:	Compliance	Verdict:	PASS	
Date:	11/26/2009	verdict.	PASS	
Temperature: 23.7°C	Air 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
CHANNEL BANDWIDTH
MODULATION:
DETECTOR

5340 MHz
10 MHz
BPSK 6.5 Mbps
Peak

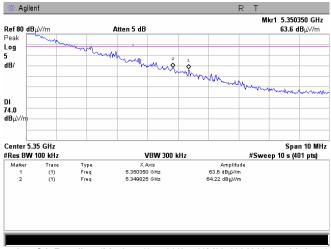
RBW 1 MHz



Plot 7.4.40 Radiated spurious emission measurements at the band edges

CARRIER FREQUENCY
CHANNEL BANDWIDTH
MODULATION:
DETECTOR
RBW

5340 MHz
10 MHz
BPSK 6.5 Mbps
Peak
100 kHz



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

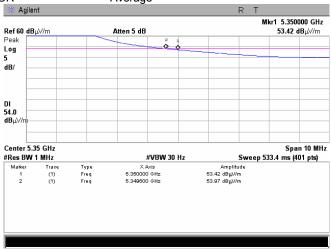


Test specification:	FCC section 15.407(b), RSS-210 Annex 9, section A9.2 Conducted emissions at band edges		
Test procedure:	Public notice DA 00-705 / ANSI C63.4, Section 13.1.4		
Test mode:	Compliance	Verdict:	PASS
Date:	11/26/2009	verdict: PASS	
Temperature: 23.7°C	Air Pressure: 1013 hPa	Relative Humidity: 47 %	Power Supply: 120 VAC
Remarks: EUT with 22.5 dBi antenna assembly gain			

Plot 7.4.41 Radiated spurious emission measurements at the band edges

CARRIER FREQUENCY
CHANNEL BANDWIDTH
MODULATION:
DETECTOR

5340 MHz
10 MHz
BPSK 6.5 Mbps
Average





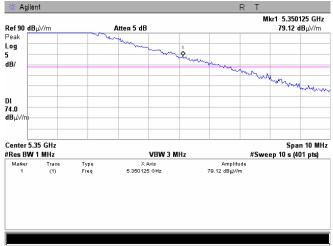
Test specification:	FCC section 15.407(b), RSS-210 Annex 9, section A9.2 Conducted emissions at band edges		
Test procedure:	Public notice DA 00-705 / ANSI C63.4, Section 13.1.4		
Test mode:	Compliance	Verdict:	PASS
Date:	11/26/2009	7 Verdict: PASS	
Temperature: 23.7°C	Air Pressure: 1013 hPa	Relative 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
CHANNEL BANDWIDTH
MODULATION:
DETECTOR

5340 MHz
10 MHz
64QAM 65 Mbps
Peak

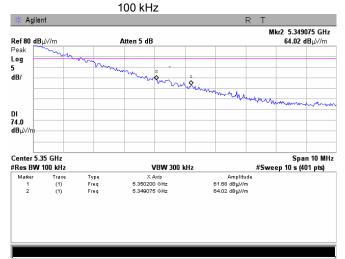
RBW 1 MHz



Plot 7.4.43 Radiated spurious emission measurements at the band edges

CARRIER FREQUENCY
CHANNEL BANDWIDTH
MODULATION:
DETECTOR
RBW

5340 MHz
10 MHz
64QAM 65 Mbps
Peak
100 kHz



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

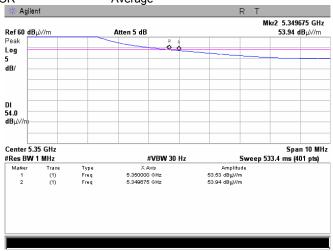


Test specification:	FCC section 15.407(b), RSS-210 Annex 9, section A9.2 Conducted emissions at band edges		
Test procedure:	Public notice DA 00-705 / ANSI C63.4, Section 13.1.4		
Test mode:	Compliance	Verdict:	PASS
Date:	11/26/2009	verdict: PASS	
Temperature: 23.7°C	Air Pressure: 1013 hPa	Relative Humidity: 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
CHANNEL BANDWIDTH
MODULATION:
DETECTOR

5340 MHz
10 MHz
64QAM 65 Mbps
Average



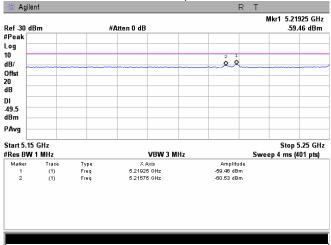


Test specification:	FCC section 15.407(b), RSS-210 Annex 9, section A9.2 Conducted emissions at band edges		
Test procedure:	Public notice DA 00-705 / ANSI C63.4, Section 13.1.4		
Test mode:	Compliance	Verdict:	PASS
Date:	11/26/2009	TASS	
Temperature: 23.7°C	Air Pressure: 1013 hPa	Relative Humidity: 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

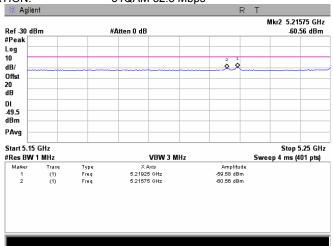
MODULATION: BPSK 3.25 Mbps



Plot 7.4.46 Conducted spurious emission measurements 5150 - 5250 MHz range

CARRIER FREQUENCY
CHANNEL BANDWIDTH
MODULATION:

5257.5 MHz
5 MHz
64QAM 32.5 Mbps



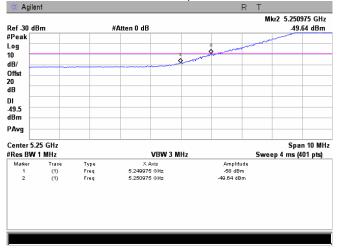


Test specification:	FCC section 15.407(b), RSS-210 Annex 9, section A9.2 Conducted emissions at band edges			
Test procedure:	Public notice DA 00-705 / ANS	Public notice DA 00-705 / ANSI C63.4, Section 13.1.4		
Test mode:	Compliance	Verdict:	PASS	
Date:	11/26/2009	verdict.	PASS	
Temperature: 23.7°C	Air 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

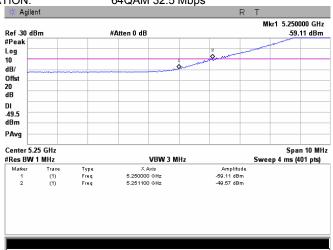
MODULATION: BPSK 3.25 Mbps



Plot 7.4.48 Conducted spurious emission measurements at the band edges

CARRIER FREQUENCY
CHANNEL BANDWIDTH
MODULATION:

5257.5 MHz
5 MHz
64QAM 32.5 Mbps





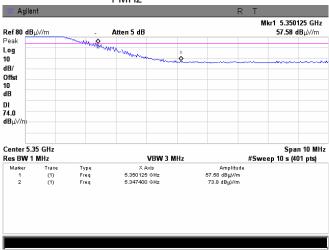
Test specification:	FCC section 15.407(b), RSS-210 Annex 9, section A9.2 Conducted emissions at band edges			
Test procedure:	Public notice DA 00-705 / ANS	Public notice DA 00-705 / ANSI C63.4, Section 13.1.4		
Test mode:	Compliance	Verdict:	PASS	
Date:	11/26/2009	verdict.	PASS	
Temperature: 23.7°C	Air Pressure: 1013 hPa	Relative Humidity: 47 %	Power Supply: 120 VAC	
Remarks: EUT with 22.5 dBi antenna assembly gain				

Plot 7.4.49 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

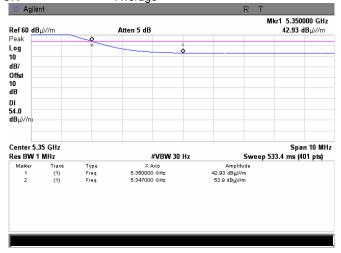


Plot 7.4.50 Radiated spurious emission measurements at the band edges

CARRIER FREQUENCY 5342.5 MHz
CHANNEL BANDWIDTH 5 MHz

MODULATION: BPSK 3.25 Mbps

DETECTOR Average





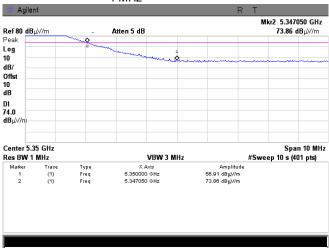
Test specification:	FCC section 15.407(b), RSS-210 Annex 9, section A9.2 Conducted emissions at band edges			
Test procedure:	Public notice DA 00-705 / ANS	Public notice DA 00-705 / ANSI C63.4, Section 13.1.4		
Test mode:	Compliance	Verdict:	PASS	
Date:	11/26/2009	verdict.	PASS	
Temperature: 23.7°C	Air 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

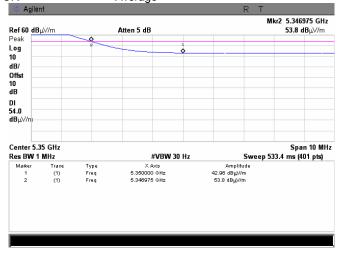


Plot 7.4.52 Radiated spurious emission measurements at the band edges

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 / ANS	Public notice DA 00-705 / ANSI C63.4, Section 13.1.4					
Test mode:	Compliance	Verdict:	PASS				
Date:	12/10/2009	verdict.	PASS				
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

EWIGGION BANDWIDTH 40/20/10/3 WINZ									
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 freque	ncy 5275MHz	2							
5250.000	BPSK	27	40	-55.23	28.0	-27.23	-27.0	-0.23	Pass
5250.000	64QAM	270	40	-55.81	28.0	-27.81	-27.0	-0.81	Pass
Low freque	ncy 5285MHz	<u>z</u>							
5249.950	BPSK	27	40	-56.01	28.0	-28.01	-27.0	-1.01	Pass
5249.925	64QAM	270	40	-55.39	28.0	-27.39	-27.0	-0.39	Pass
Low freque	Low frequency 5265MHz								
5250.000	BPSK	13	20	-55.57	28.0	-27.57	-27.0	-0.57	Pass
5250.000	64QAM	130	20	-55.64	28.0	-27.64	-27.0	-0.64	Pass
Low freque	ncy 5260MHz	2							
5250.000	BPSK	6.5	10	-55.92	28.0	-27.92	-27.0	-0.92	Pass
5250.000	64QAM	65	10	-55.78	28.0	-27.78	-27.0	-0.78	Pass
Low freque	Low frequency 5257.5MHz								
5215.750	BPSK	3.25		-62.04	28.0	-34.04	-27.0	-7.04	Pass
5219.250	BPSK	3.25	5	-61.47	28.0	-33.47	-27.0	-6.47	Pass
5219.250	64QAM	32.5	S	-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

Reference numbers of test equipment used

HL 2780	HL 2883	HL 3176							

Full description is given in Appendix A.

^{**-} Margin = EIRP -limit.



Test specification:	FCC section 15.407(b), RSS-210 Annex 9, section A9.2 Conducted emissions at band edges					
Test procedure:	Public notice DA 00-705 / ANS	Public notice DA 00-705 / ANSI C63.4, Section 13.1.4				
Test mode:	Compliance	Verdict:	PASS			
Date:	12/10/2009	verdict.	PASS			
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:

TRANSMITTER OUTPUT POWER:

DETECTOR USED:

RESOLUTION BANDWIDTH:

BPSK/64QAM

Maximum

Peak

1000 kHz

TEST ANTENNA TYPE: Double ridged guide

Frequency	Bit	Anten		Azimuth.		ak field streng	th	Averag	je field strer	gth	
Frequency, MHz	rate, Mbps	Polarization	Height, m	degrees*	Measured, dB(μV/m)	Limit, dB(μV/m)	Margin, dB**	Measured, dB(μV/m)	Limit, dB(μV/m)	Margin, dB**	Verdict
High frequer	ncy 5315	5.0 MHz EBW	40 MHz E	BW							
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 frequer	ncy 5325	5.0 MHz EBW	40 MHz E	BW							
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	7
High frequer	ncy 5335	5.0 MHz EBW	20 MHz E	BW							
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 frequer	ncy 5340	0.0 MHz EBW	10 MHz E	BW							
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.

Reference numbers of test equipment used

		1				
HL 05	54 HL 1984	HL 2780	HL 3122	HL 3123		

Full description is given in Appendix A.

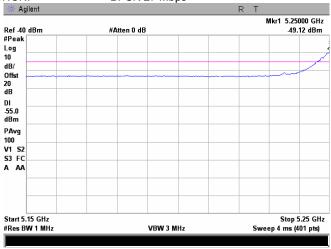
^{**-} EUT front panel refers to 0 degrees position of turntable.



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 / ANS	Public notice DA 00-705 / ANSI C63.4, Section 13.1.4				
Test mode:	Compliance	Verdict:	PASS			
Date:	12/10/2009	verdict.	PASS			
Temperature: 22°C	Air Pressure: 1010 hPa	Relative Humidity: 54 %	Power Supply: 120 VAC			
Remarks: EUT with 28 dBi antenna assembly gain						

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

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



Plot 7.4.54 Conducted spurious emission measurements 5150 – 5250 MHz range

CARRIER FREQUENCY
CHANNEL BANDWIDTH
MODULATION:

5275 MHz
40 MHz
64QAM 270 Mbps

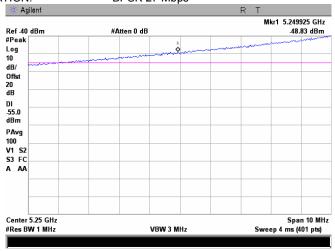
Ref 40 dBm #Atten 0 dB 49.68 dBm #Peak Log 10 dB/ 49.68 dBm #Deak Log 10 dB/ 49.68 dBm #Peak Log 10 dB/ 49.68 dBm #Deak Log 10 dB



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 / ANS	Public notice DA 00-705 / ANSI C63.4, Section 13.1.4					
Test mode:	Compliance	Verdict:	PASS				
Date:	12/10/2009	verdict.	PASS				
Temperature: 22°C	Air Pressure: 1010 hPa	Relative Humidity: 54 %	Power Supply: 120 VAC				
Remarks: EUT with 28 dBi antenna assembly gain							

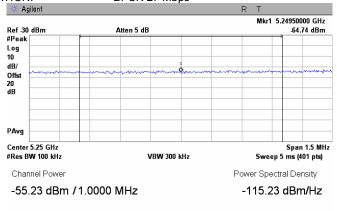
Plot 7.4.55 Conducted spurious emission measurements at the band edges

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



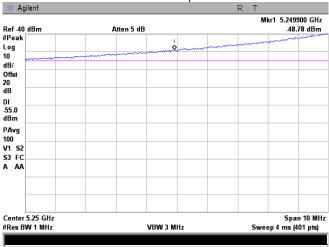


Test specification:	FCC section 15.407(b), RSS-210 Annex 9, section A9.2 Conducted emissions at band edges					
Test procedure:	Public notice DA 00-705 / ANS	Public notice DA 00-705 / ANSI C63.4, Section 13.1.4				
Test mode:	Compliance	Verdict:	PASS			
Date:	12/10/2009	verdict.	FASS			
Temperature: 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

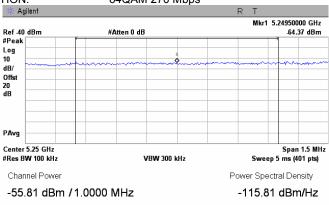
MODULATION: 64QAM 270 Mbps



Plot 7.4.58 Conducted spurious emission measurements at the band edges

CARRIER FREQUENCY 5275 MHz
CHANNEL BANDWIDTH 40 MHz

MODULATION: 64QAM 270 Mbps

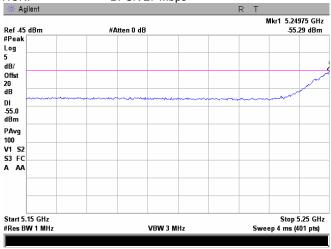




Test specification:	FCC section 15.407(b), RSS-210 Annex 9, section A9.2 Conducted emissions at band edges					
Test procedure:	Public notice DA 00-705 / ANS	Public notice DA 00-705 / ANSI C63.4, Section 13.1.4				
Test mode:	Compliance	Verdict:	PASS			
Date:	12/10/2009	verdict.	PASS			
Temperature: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

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

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



Plot 7.4.60 Conducted spurious emission measurements 5150 - 5250 MHz range

CARRIER FREQUENCY
CHANNEL BANDWIDTH
MODULATION:

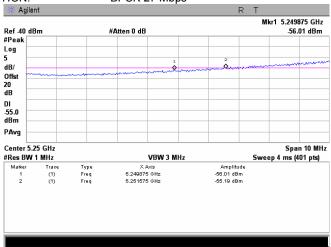
5285 MHz
40 MHz
64QAM 270 Mbps



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 / ANS	Public notice DA 00-705 / ANSI C63.4, Section 13.1.4				
Test mode:	Compliance	Verdict:	PASS			
Date:	12/10/2009	verdict.	PASS			
Temperature: 22°C	Air Pressure: 1010 hPa	Relative Humidity: 54 %	Power Supply: 120 VAC			
Remarks: EUT with 28 dBi antenna assembly gain						

Plot 7.4.61 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

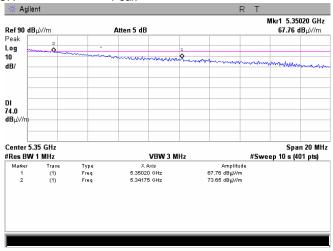


Test specification:	FCC section 15.407(b), RSS-210 Annex 9, section A9.2 Conducted emissions at band edges						
Test procedure:	Public notice DA 00-705 / AN	Public notice DA 00-705 / ANSI C63.4, Section 13.1.4					
Test mode:	Compliance	Verdict:	PASS				
Date:	12/10/2009	verdict.	PASS				
Temperature: 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

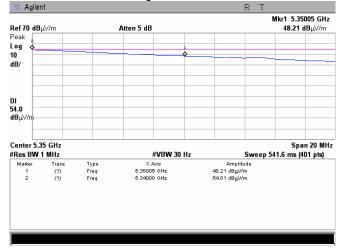
DETECTOR Peak



Plot 7.4.64 Radiated spurious emission measurements at the band edges

CARRIER FREQUENCY
CHANNEL BANDWIDTH
MODULATION:
DETECTOR

5315 MHz
40 MHz
BPSK 27 Mbps
Average





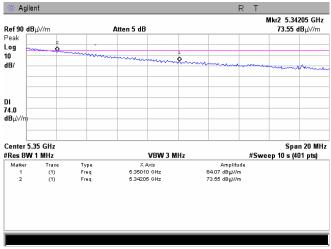
Test specification:	FCC section 15.407(b), RSS-210 Annex 9, section A9.2			
	Conducted emissions at	Conducted emissions at band edges		
Test procedure:	Public notice DA 00-705 / ANS	Public notice DA 00-705 / ANSI C63.4, Section 13.1.4		
Test mode:	Compliance	Verdict:	PASS	
Date:	12/10/2009			
Temperature: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

Plot 7.4.65 Radiated spurious emission measurements at the band edges

CARRIER FREQUENCY 5315 MHz CHANNEL BANDWIDTH 40 MHz

MODULATION: 64QAM 270 Mbps

DETECTOR Peak

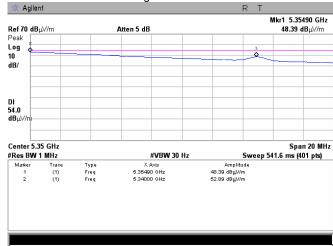


Plot 7.4.66 Radiated spurious emission measurements at the band edges

CARRIER FREQUENCY 5315 MHz CHANNEL BANDWIDTH 40 MHz

MODULATION: 64QAM 270 Mbps

DETECTOR Average

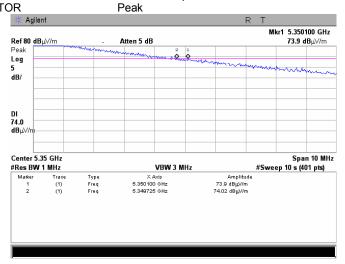




Test specification:	FCC section 15.407(b), RSS-210 Annex 9, section A9.2 Conducted emissions at band edges			
Test procedure:	Public notice DA 00-705 / ANSI C63.4, Section 13.1.4			
Test mode:	Compliance	Verdict:	PASS	
Date:	12/10/2009	verdict.		
Temperature: 22°C	Air Pressure: 1010 hPa	Relative Humidity: 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

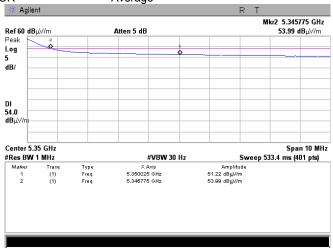
CARRIER FREQUENCY 5325 MHz
CHANNEL BANDWIDTH 40 MHz
MODULATION: BPSK 27 Mbps
DETECTOR Peak



Plot 7.4.68 Radiated spurious emission measurements at the band edges

CARRIER FREQUENCY
CHANNEL BANDWIDTH
MODULATION:
DETECTOR

5325 MHz
40 MHz
BPSK 27 Mbps
Average





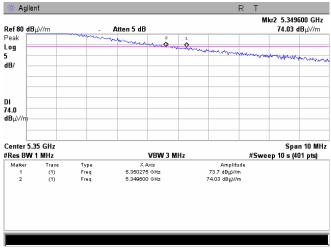
Test specification:	FCC section 15.407(b), RSS-210 Annex 9, section A9.2 Conducted emissions at band edges			
Test procedure:	Public notice DA 00-705 / ANSI C63.4, Section 13.1.4			
Test mode:	Compliance	Verdict:	PASS	
Date:	12/10/2009	verdict.		
Temperature: 22°C	Air Pressure: 1010 hPa	Relative Humidity: 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

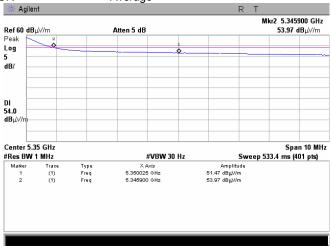


Plot 7.4.70 Radiated spurious emission measurements at the band edges

CARRIER FREQUENCY 5325 MHz CHANNEL BANDWIDTH 40 MHz

MODULATION: 64QAM 270 Mbps

DETECTOR Average



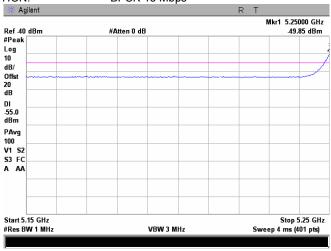


Test specification:	FCC section 15.407(b), RSS-210 Annex 9, section A9.2 Conducted emissions at band edges			
Test procedure:	Public notice DA 00-705 / ANSI C63.4, Section 13.1.4			
Test mode:	Compliance	Verdict:	PASS	
Date:	12/10/2009	verdict.		
Temperature: 22°C	Air Pressure: 1010 hPa	Relative Humidity: 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
CHANNEL BANDWIDTH
MODULATION:

5265 MHz
20 MHz
BPSK 13 Mbps



Plot 7.4.72 Conducted spurious emission measurements 5150 – 5250 MHz range

CARRIER FREQUENCY
CHANNEL BANDWIDTH
MODULATION:

5265 MHz
20 MHz
64QAM 130 Mbps

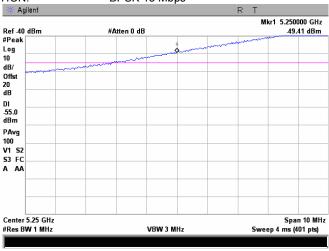


Test specification:	FCC section 15.407(b), RSS-210 Annex 9, section A9.2 Conducted emissions at band edges			
Test procedure:	Public notice DA 00-705 / ANS	Public notice DA 00-705 / ANSI C63.4, Section 13.1.4		
Test mode:	Compliance	Verdict:	PASS	
Date:	12/10/2009	verdict.	PASS	
Temperature: 22°C	Air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

Plot 7.4.73 Conducted spurious emission measurements at the band edges

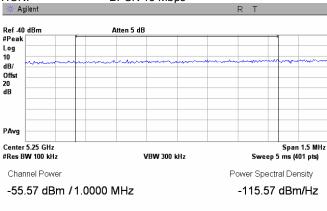
CARRIER FREQUENCY
CHANNEL BANDWIDTH
MODULATION:

5265 MHz
20 MHz
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

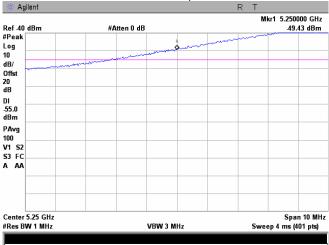




Test specification:	FCC section 15.407(b), RSS-210 Annex 9, section A9.2 Conducted emissions at band edges			
Test procedure:	Public notice DA 00-705 / ANS	Public notice DA 00-705 / ANSI C63.4, Section 13.1.4		
Test mode:	Compliance	Verdict:	PASS	
Date:	12/10/2009		PASS	
Temperature: 22°C	Air Pressure: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

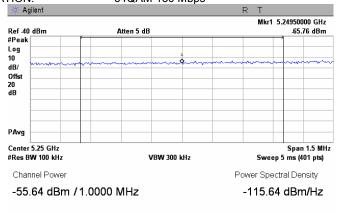
Plot 7.4.75 Conducted spurious emission measurements at the band edges

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



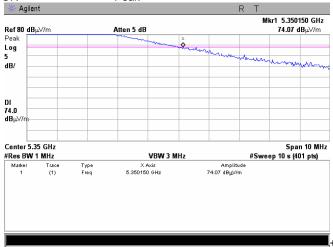


Test specification:	FCC section 15.407(b), RSS-210 Annex 9, section A9.2 Conducted emissions at band edges			
Test procedure:	Public notice DA 00-705 / ANS	Public notice DA 00-705 / ANSI C63.4, Section 13.1.4		
Test mode:	Compliance	Verdict:	PASS	
Date:	12/10/2009	verdict.	PASS	
Temperature: 22°C	Air 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

MODULATION: 64QAM 130 Mbps

DETECTOR Peak

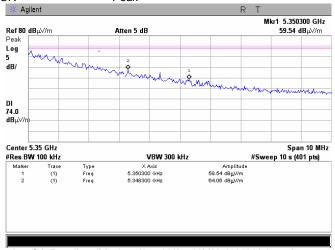


Plot 7.4.78 Radiated spurious emission measurements at the band edges, RBW=100 kHz

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

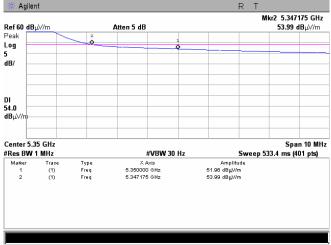


Test specification:	FCC section 15.407(b), RSS-210 Annex 9, section A9.2 Conducted emissions at band edges		
Test procedure:	Public notice DA 00-705 / ANSI C63.4, Section 13.1.4		
Test mode:	Compliance	Verdict:	PASS
Date:	12/10/2009	T Verdict: PASS	
Temperature: 22°C	Air Pressure: 1010 hPa	Relative Humidity: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

Plot 7.4.79 Radiated spurious emission measurements at the band edges

MODULATION: 64QAM 130 Mbps

DETECTOR Average



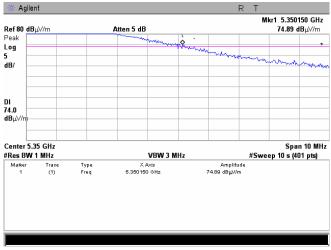


Test specification:	FCC section 15.407(b), RSS-210 Annex 9, section A9.2 Conducted emissions at band edges		
Test procedure:	Public notice DA 00-705 / ANSI C63.4, Section 13.1.4		
Test mode:	Compliance	Verdict:	PASS
Date:	12/10/2009	verdict.	PASS
Temperature: 22°C	Air Pressure: 1010 hPa	Relative Humidity: 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

MODULATION: 64QAM 130 Mbps

DETECTOR Peak

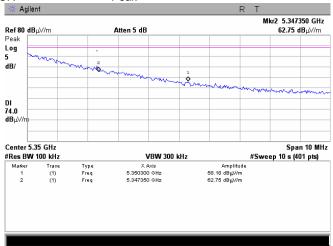


Plot 7.4.81 Radiated spurious emission measurements at the band edges RBW= 100 kHz

CARRIER FREQUENCY 5335 MHz CHANNEL BANDWIDTH 20 MHz

MODULATION: 64QAM 130 Mbps

DETECTOR Peak



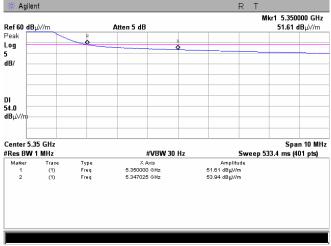


Test specification:	FCC section 15.407(b), RSS-210 Annex 9, section A9.2 Conducted emissions at band edges			
Test procedure:	Public notice DA 00-705 / ANS	Public notice DA 00-705 / ANSI C63.4, Section 13.1.4		
Test mode:	Compliance	Verdict:	PASS	
Date:	12/10/2009		PASS	
Temperature: 22°C	Air Pressure: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

Plot 7.4.82 Radiated spurious emission measurements at the band edges

MODULATION: 64QAM 130 Mbps

DETECTOR Average



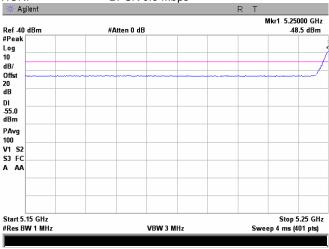


Test specification:	FCC section 15.407(b), RSS-210 Annex 9, section A9.2 Conducted emissions at band edges			
Test procedure:	Public notice DA 00-705 / ANS	Public notice DA 00-705 / ANSI C63.4, Section 13.1.4		
Test mode:	Compliance	Verdict:	PASS	
Date:	12/10/2009	verdict.	PASS	
Temperature: 22°C	Air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

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

CARRIER FREQUENCY
CHANNEL BANDWIDTH
MODULATION:

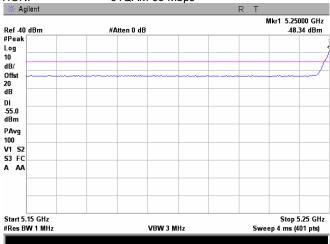
5260 MHz
10 MHz
BPSK 6.5 Mbps



Plot 7.4.84 Conducted spurious emission measurements 5150 - 5250 MHz range

CARRIER FREQUENCY
CHANNEL BANDWIDTH
MODULATION:

5260 MHz
10 MHz
64QAM 65 Mbps

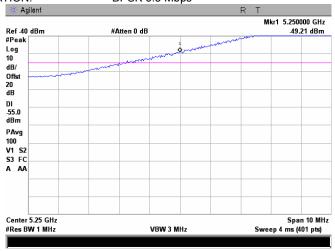




Test specification:	FCC section 15.407(b), RSS-210 Annex 9, section A9.2 Conducted emissions at band edges			
Test procedure:	Public notice DA 00-705 / ANS	Public notice DA 00-705 / ANSI C63.4, Section 13.1.4		
Test mode:	Compliance	Verdict:	PASS	
Date:	12/10/2009	verdict.	PASS	
Temperature: 22°C	Air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

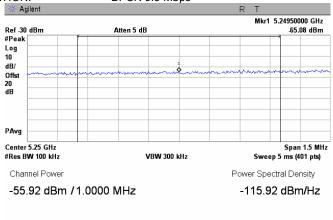
Plot 7.4.85 Conducted spurious emission measurements at the band edges

CARRIER FREQUENCY
CHANNEL BANDWIDTH
MODULATION:
5260 MHz
10 MHz
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

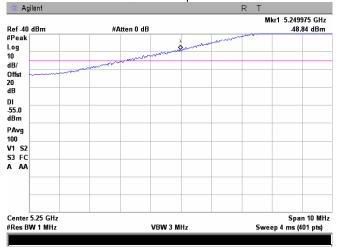




Test specification:	FCC section 15.407(b), RSS-210 Annex 9, section A9.2 Conducted emissions at band edges			
Test procedure:	Public notice DA 00-705 / ANS	Public notice DA 00-705 / ANSI C63.4, Section 13.1.4		
Test mode:	Compliance	Verdict:	PASS	
Date:	12/10/2009		PASS	
Temperature: 22°C	Air Pressure: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

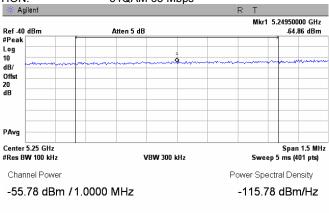
Plot 7.4.87 Conducted spurious emission measurements at the band edges

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



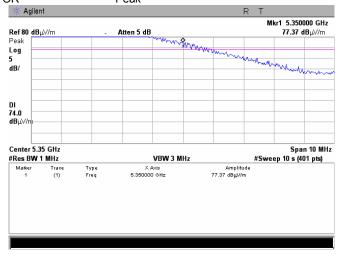


Test specification:	FCC section 15.407(b), RSS-210 Annex 9, section A9.2 Conducted emissions at band edges			
Test procedure:	Public notice DA 00-705 / ANS	Public notice DA 00-705 / ANSI C63.4, Section 13.1.4		
Test mode:	Compliance	Verdict:	PASS	
Date:	12/10/2009	verdict.	PASS	
Temperature: 22°C	Air 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
CHANNEL BANDWIDTH
MODULATION:
DETECTOR

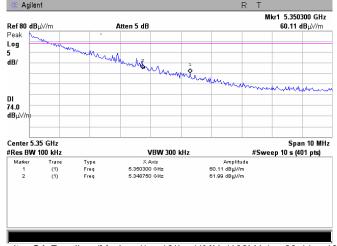
5340 MHz
10 MHz
BPSK 6.5 Mbps
Peak



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

CARRIER FREQUENCY
CHANNEL BANDWIDTH
MODULATION:
DETECTOR

5340 MHz
10 MHz
BPSK 6.5 Mbps
Peak



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

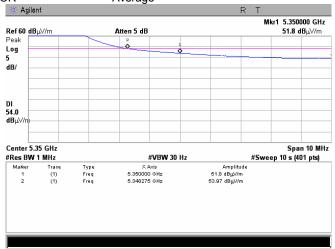


Test specification:	FCC section 15.407(b), RSS-210 Annex 9, section A9.2 Conducted emissions at band edges			
Test procedure:	Public notice DA 00-705 / ANS	Public notice DA 00-705 / ANSI C63.4, Section 13.1.4		
Test mode:	Compliance	Verdict:	PASS	
Date:	12/10/2009		PASS	
Temperature: 22°C	Air Pressure: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

Plot 7.4.91 Radiated spurious emission measurements at the band edges

CARRIER FREQUENCY
CHANNEL BANDWIDTH
MODULATION:
DETECTOR

5340 MHz
10 MHz
BPSK 6.5 Mbps
Average

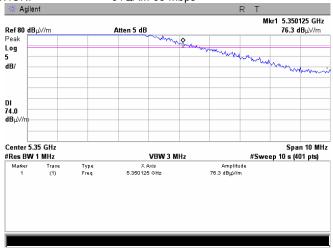




Test specification:	FCC section 15.407(b), RSS-210 Annex 9, section A9.2 Conducted emissions at band edges			
Test procedure:	Public notice DA 00-705 / ANS	Public notice DA 00-705 / ANSI C63.4, Section 13.1.4		
Test mode:	Compliance	Verdict:	PASS	
Date:	12/10/2009	verdict.	PASS	
Temperature: 22°C	Air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

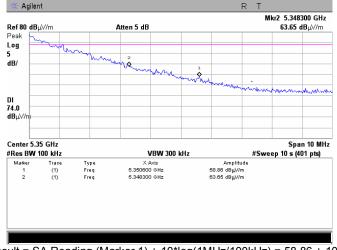
Plot 7.4.92 Radiated spurious emission measurements at the band edges RBW=1MHz

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



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

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



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

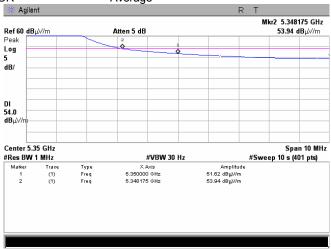


Test specification:	FCC section 15.407(b), RSS-210 Annex 9, section A9.2 Conducted emissions at band edges						
Test procedure:	Public notice DA 00-705 / ANS	Public notice DA 00-705 / ANSI C63.4, Section 13.1.4					
Test mode:	Compliance	Verdict:	PASS				
Date:	12/10/2009	verdict.	PASS				
Temperature: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

Plot 7.4.94 Radiated spurious emission measurements at the band edges

CARRIER FREQUENCY
CHANNEL BANDWIDTH
MODULATION:
DETECTOR

5340 MHz
10 MHz
64QAM 65 Mbps
Average

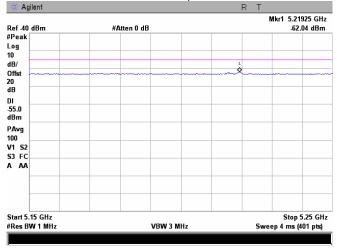




Test specification:	FCC section 15.407(b), RSS-210 Annex 9, section A9.2 Conducted emissions at band edges						
Test procedure:	Public notice DA 00-705 / ANS	Public notice DA 00-705 / ANSI C63.4, Section 13.1.4					
Test mode:	Compliance	Verdict:	PASS				
Date:	12/10/2009	verdict.	PASS				
Temperature: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

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

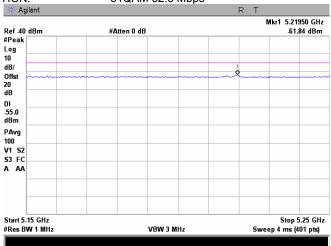
MODULATION: BPSK 3.25 Mbps



Plot 7.4.96 Conducted spurious emission measurements 5150 - 5250 MHz range

CARRIER FREQUENCY
CHANNEL BANDWIDTH
MODULATION:

5257.5 MHz
5 MHz
64QAM 32.5 Mbps

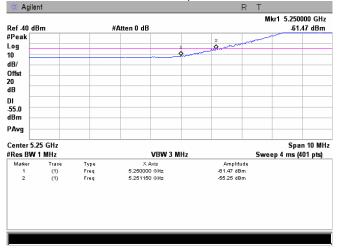




Test specification:	FCC section 15.407(b), RSS-210 Annex 9, section A9.2 Conducted emissions at band edges						
Test procedure:	Public notice DA 00-705 / ANS	Public notice DA 00-705 / ANSI C63.4, Section 13.1.4					
Test mode:	Compliance	Verdict:	PASS				
Date:	12/10/2009	verdict.	PASS				
Temperature: 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

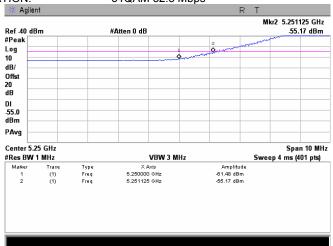
MODULATION: BPSK 3.25 Mbps



Plot 7.4.98 Conducted spurious emission measurements at the band edges

CARRIER FREQUENCY
CHANNEL BANDWIDTH
MODULATION:

5257.5 MHz
5 MHz
64QAM 32.5 Mbps



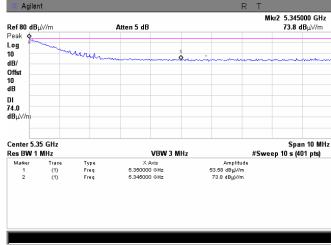


Test specification:	FCC section 15.407(b), RSS-210 Annex 9, section A9.2 Conducted emissions at band edges						
Test procedure:	Public notice DA 00-705 / ANS	Public notice DA 00-705 / ANSI C63.4, Section 13.1.4					
Test mode:	Compliance	Verdict:	PASS				
Date:	12/10/2009	verdict.	PASS				
Temperature: 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

MODULATION: BPSK 3.25 Mbps

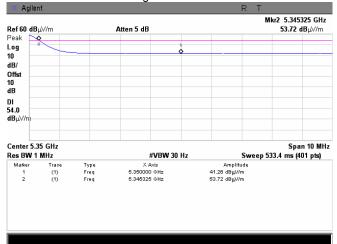
DETECTOR Peak



Plot 7.4.100 Radiated spurious emission measurements at the band edges

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

DETECTOR Average



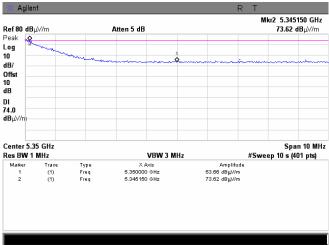


Test specification:	FCC section 15.407(b), RSS-210 Annex 9, section A9.2 Conducted emissions at band edges						
Test procedure:	Public notice DA 00-705 / ANS	Public notice DA 00-705 / ANSI C63.4, Section 13.1.4					
Test mode:	Compliance	Verdict:	PASS				
Date:	12/10/2009	verdict.	PASS				
Temperature: 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

MODULATION: BPSK 3.25 Mbps

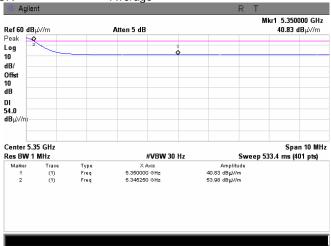
DETECTOR Peak



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 / ANS	Public notice DA 00-705 / ANSI C63.4, Section 13.1.4						
Test mode:	Compliance	Verdict:	PASS					
Date:	12/10/2009	verdict.	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

MODULATIO	JIN.			BPS	SK/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	40	-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	40	-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	20	-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	20	-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	10	-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	10	-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	3	-34.08	6	-28.08	-27.0	-1.08	Pass
5 MHz EBW I	n Band								
5218.250	BPSK	3.25		-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	5	-48.20	6	-42.20	-27.0	-15.20	Pass
5218.250	64QAM	32.5	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	1	-50.30	6	-44.30	-27.0	-17.30	Pass

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

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.

^{**-} Margin = EIRP -limit.



Test specification:	FCC section 15.407(b), RSS-210 Annex 9, section A9.2 Conducted emissions at band edges						
Test procedure:	Public notice DA 00-705 / ANS	Public notice DA 00-705 / ANSI C63.4, Section 13.1.4					
Test mode:	Compliance	Verdict:	PASS				
Date:	12/10/2009	verdict.	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:

TRANSMITTER OUTPUT POWER:

DETECTOR USED:

RESOLUTION BANDWIDTH:

Maximum

Peak

1000 kHz

TEST ANTENNA TYPE: Double ridged guide

		TVV 111 E. Bouble Haged guide									
Frequency	Bit rate.	Anten	na	Azimuth.	Pe	ak field streng	th		e field stren	gth	
MHz	1	Polarization	Height, m	degrees*	Measured, dB(μV/m)	Limit, dB(μV/m)	Margin, dB**	Measured, dB(μV/m)	Limit, dB(μV/m)	Margin, dB**	Verdict
40 MHz EB	W In Ban	ıd									
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 EB	W 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 EB	W In Ban	ıd									
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 EB	W 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 EB	W In Ban	ıd									
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 EB	W Band										
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 EBV											
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 EBV											_
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.

Reference numbers of test equipment used

		• •				
HL 0554	HL 1984	HL 2780	HL 3122	HL 3123		

Full description is given in Appendix A.

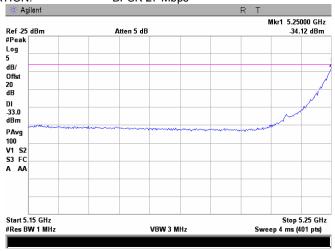
^{**-} EUT front panel refers to 0 degrees position of turntable.



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 / ANS	Public notice DA 00-705 / ANSI C63.4, Section 13.1.4						
Test mode:	Compliance	Verdict:	PASS					
Date:	12/10/2009	verdict.	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

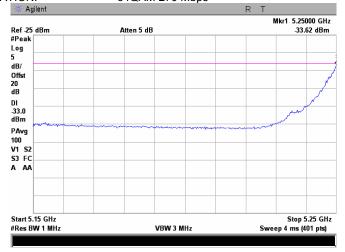
CARRIER FREQUENCY 5275 MHz CHANNEL BANDWIDTH 40 MHz MODULATION: BPSK 27 Mbps



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

CARRIER FREQUENCY 5275 MHz 40 MHz **CHANNEL BANDWIDTH**

MODULATION: 64QAM 270 Mbps

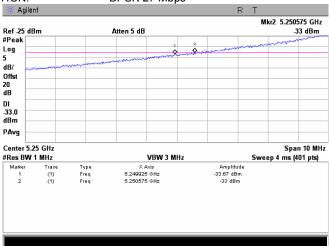




Test specification:	FCC section 15.407(b), RSS-210 Annex 9, section A9.2 Conducted emissions at band edges			
Test procedure:	Public notice DA 00-705 / AN	Public notice DA 00-705 / ANSI C63.4, Section 13.1.4		
Test mode:	Compliance	Verdict:	PASS	
Date:	12/10/2009		PASS	
Temperature: 22°C	Air Pressure: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

Plot 7.4.105 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
CHANNEL BANDWIDTH
MODULATION:

5275 MHz
40 MHz
64QAM 270 Mbps

Mkr1 5.249950 GHz Ref -25 dBm #Peak Atten 5 dB -33.5 dBm Log 5 dB/ Offst 20 dB DI -33.0 dBm PAvg Center 5.25 GHz Span 10 MHz Sweep 4 ms (401 pts) #Res BW 1 MHz VBW 3 MHz Amplitude -33.5 dBm -33.22 dBm Type Freq Freq X Axis 5.249950 GHz 5.250375 GHz (1) (1)

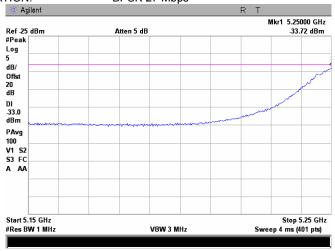


Test specification:	FCC section 15.407(b), RSS-210 Annex 9, section A9.2 Conducted emissions at band edges			
Test procedure:	Public notice DA 00-705 / AN	Public notice DA 00-705 / ANSI C63.4, Section 13.1.4		
Test mode:	Compliance	Verdict:	PASS	
Date:	12/10/2009		PASS	
Temperature: 22°C	Air Pressure: 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
CHANNEL BANDWIDTH
MODULATION:

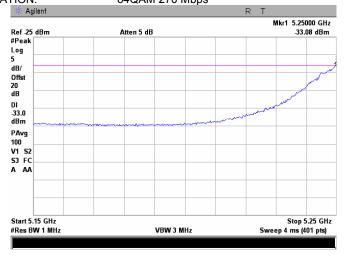
5285 MHz
40 MHz
BPSK 27 Mbps



Plot 7.4.108 Conducted spurious emission measurements 5150 – 5250 MHz range

CARRIER FREQUENCY
CHANNEL BANDWIDTH
MODULATION:

5285 MHz
40 MHz
64QAM 270 Mbps

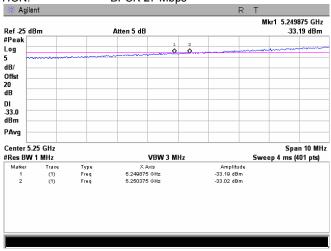




Test specification:	FCC section 15.407(b), RSS-210 Annex 9, section A9.2 Conducted emissions at band edges		
Test procedure:	Public notice DA 00-705 / ANSI C63.4, Section 13.1.4		
Test mode:	Compliance	Verdict:	PASS
Date:	12/10/2009	verdict.	PASS
Temperature: 22°C	Air Pressure: 1010 hPa	Relative Humidity: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

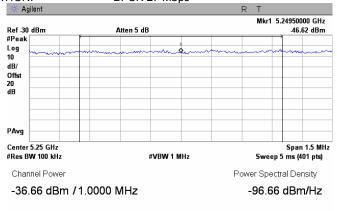
Plot 7.4.109 Conducted spurious emission measurements at the band edges

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

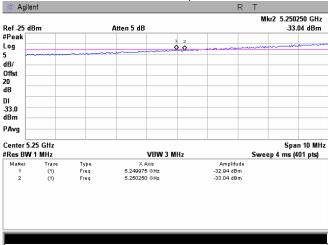




Test specification:	FCC section 15.407(b), RSS-210 Annex 9, section A9.2 Conducted emissions at band edges		
Test procedure:	Public notice DA 00-705 / ANSI C63.4, Section 13.1.4		
Test mode:	Compliance	Verdict:	PASS
Date:	12/10/2009	verdict.	PASS
Temperature: 22°C	Air Pressure: 1010 hPa	Relative Humidity: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

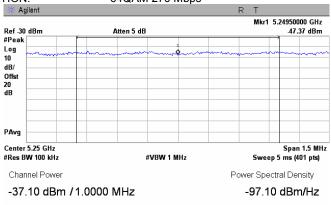
Plot 7.4.111 Conducted spurious emission measurements at the band edges

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



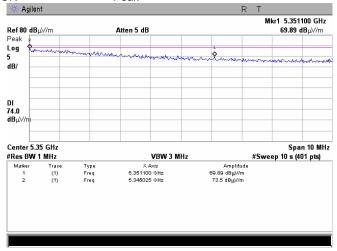


Test specification:	FCC section 15.407(b), RSS-210 Annex 9, section A9.2 Conducted emissions at band edges		
Test procedure:	Public notice DA 00-705 / ANSI C63.4, Section 13.1.4		
Test mode:	Compliance	Verdict:	PASS
Date:	12/10/2009	verdict: PASS	
Temperature: 22°C	Air Pressure: 1010 hPa	Relative Humidity: 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

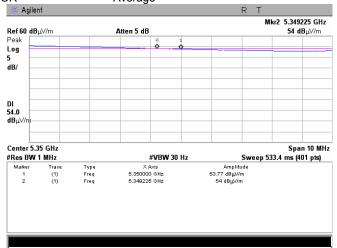
CARRIER FREQUENCY 5315 MHz
CHANNEL BANDWIDTH 40 MHz
MODULATION: BPSK 27 Mbps

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



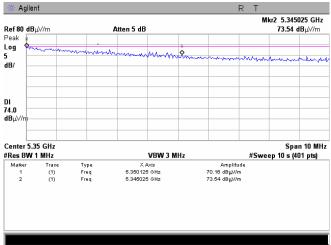


Test specification:	FCC section 15.407(b), RSS-210 Annex 9, section A9.2 Conducted emissions at band edges		
Test procedure:	Public notice DA 00-705 / ANSI C63.4, Section 13.1.4		
Test mode:	Compliance	Verdict:	PASS
Date:	12/10/2009	Verdict. PASS	
Temperature: 22°C	Air Pressure: 1010 hPa	Relative Humidity: 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

MODULATION: 64QAM 270 Mbps

DETECTOR Peak

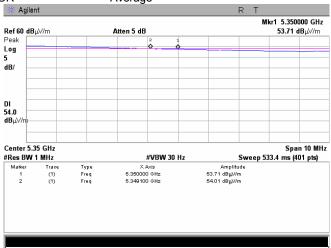


Plot 7.4.116 Radiated spurious emission measurements at the band edges

CARRIER FREQUENCY 5315 MHz CHANNEL BANDWIDTH 40 MHz

MODULATION: 64QAM 270 Mbps

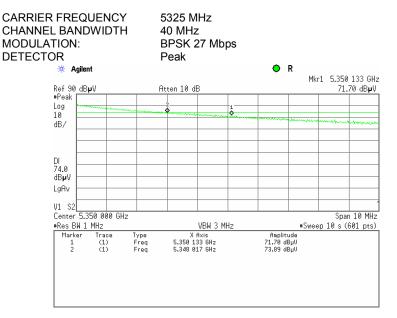
DETECTOR Average



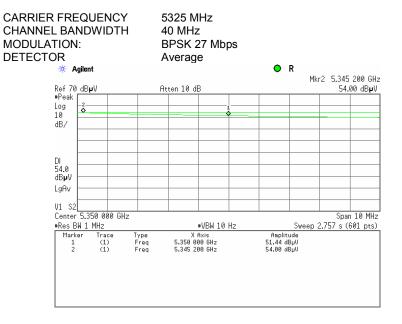


Test specification:	FCC section 15.407(b), RSS-210 Annex 9, section A9.2 Conducted emissions at band edges		
Test procedure:	Public notice DA 00-705 / ANSI C63.4, Section 13.1.4		
Test mode:	Compliance	Verdict:	PASS
Date:	12/10/2009	verdict: PASS	
Temperature: 22°C	Air Pressure: 1010 hPa	Relative Humidity: 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



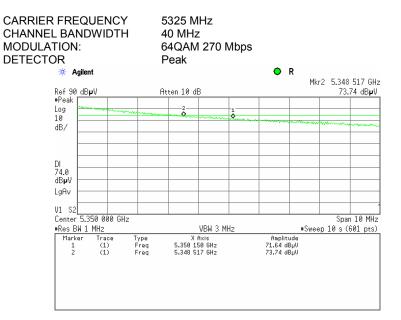
Plot 7.4.118 Radiated spurious emission measurements at the band edges



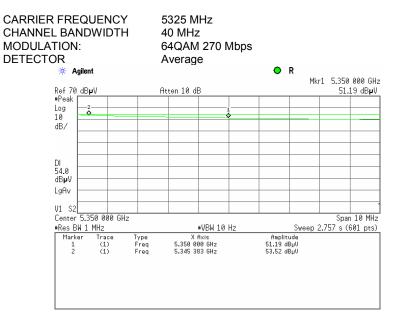


Test specification:	FCC section 15.407(b), RSS-210 Annex 9, section A9.2 Conducted emissions at band edges		
Test procedure:	Public notice DA 00-705 / ANSI C63.4, Section 13.1.4		
Test mode:	Compliance	Verdict:	PASS
Date:	12/10/2009	verdict.	PASS
Temperature: 22°C	Air Pressure: 1010 hPa	Relative Humidity: 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

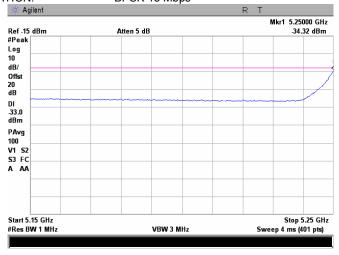




Test specification:	FCC section 15.407(b), RSS-210 Annex 9, section A9.2 Conducted emissions at band edges		
Test procedure:	Public notice DA 00-705 / ANSI C63.4, Section 13.1.4		
Test mode:	Compliance	Verdict:	PASS
Date:	12/10/2009	verdict: PASS	
Temperature: 22°C	Air Pressure: 1010 hPa	Relative Humidity: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

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

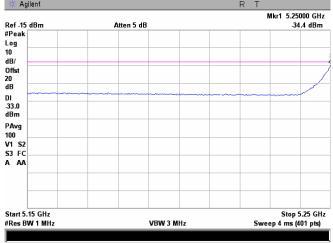
CARRIER FREQUENCY 5265 MHz CHANNEL BANDWIDTH 20 MHz MODULATION: BPSK 13 Mbps



Plot 7.4.122 Conducted spurious emission measurements 5150 - 5250 MHz range

CARRIER FREQUENCY 5265 MHz CHANNEL BANDWIDTH 20 MHz

MODULATION: 64QAM 130 Mbps

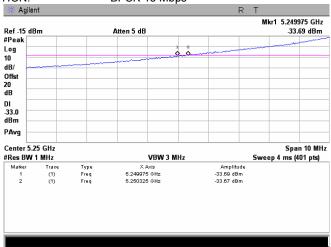




Test specification:	FCC section 15.407(b), RSS-210 Annex 9, section A9.2 Conducted emissions at band edges		
Test procedure:	Public notice DA 00-705 / ANSI C63.4, Section 13.1.4		
Test mode:	Compliance	Verdict:	PASS
Date:	12/10/2009	verdict.	PASS
Temperature: 22°C	Air Pressure: 1010 hPa	Relative Humidity: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

Plot 7.4.123 Conducted spurious emission measurements at the band edges

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

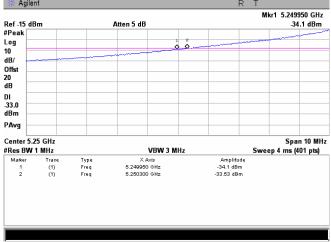


Plot 7.4.124 Conducted spurious emission measurements at the band edges

CARRIER FREQUENCY
CHANNEL BANDWIDTH
MODULATION:

5265 MHz
20 MHz
64QAM 130 Mbps

Agilent



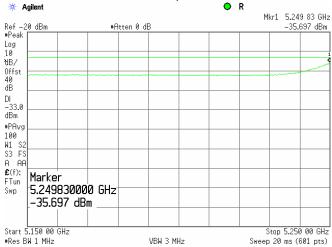


Test specification:	FCC section 15.407(b), RSS-210 Annex 9, section A9.2 Conducted emissions at band edges		
Test procedure:	Public notice DA 00-705 / ANSI C63.4, Section 13.1.4		
Test mode:	Compliance	Verdict:	PASS
Date:	12/10/2009	verdict.	PASS
Temperature: 22°C	Air Pressure: 1010 hPa	Relative Humidity: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

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

CARRIER FREQUENCY
CHANNEL BANDWIDTH
MODULATION:
** Agilent

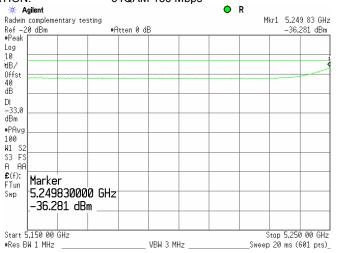
5275 MHz
20 MHz
BPSK 13 Mbps



Plot 7.4.126 Conducted spurious emission measurements 5150 - 5250 MHz range

CARRIER FREQUENCY
CHANNEL BANDWIDTH
MODULATION:

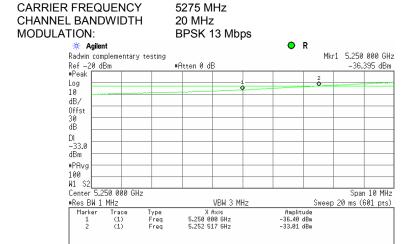
5275 MHz
20 MHz
64QAM 130 Mbps





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

Plot 7.4.127 Conducted spurious emission measurements at the band edges

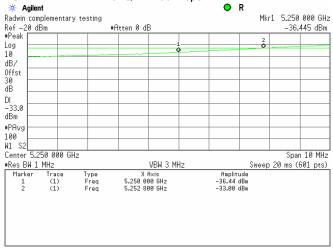


Plot 7.4.128 Conducted spurious emission measurements at the band edges

CARRIER FREQUENCY
CHANNEL BANDWIDTH
MODULATION:

4 Allert

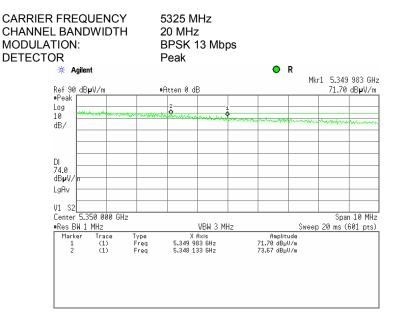
5275 MHz
20 MHz
64QAM 130 Mbps



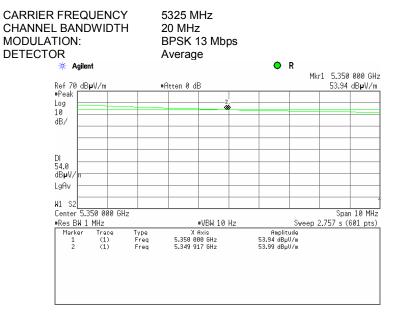


Test specification:	FCC section 15.407(b), RSS-210 Annex 9, section A9.2 Conducted emissions at band edges			
Test procedure:	Public notice DA 00-705 / ANSI C63.4, Section 13.1.4			
Test mode:	Compliance	Verdict:	PASS	
Date:	12/10/2009	verdict.		
Temperature: 22°C	Air Pressure: 1010 hPa	Relative Humidity: 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



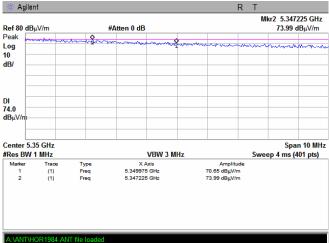


Test specification:	FCC section 15.407(b), RSS-210 Annex 9, section A9.2 Conducted emissions at band edges			
Test procedure:	Public notice DA 00-705 / ANSI C63.4, Section 13.1.4			
Test mode:	Compliance	Verdict:	PASS	
Date:	12/10/2009	verdict.		
Temperature: 22°C	Air Pressure: 1010 hPa	Relative Humidity: 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

MODULATION: 64QAM 130 Mbps

DETECTOR Peak

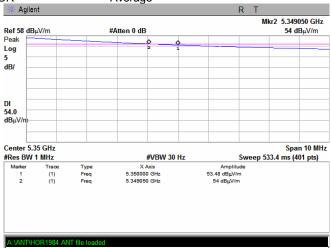


Plot 7.4.132 Radiated spurious emission measurements at the band edges

CARRIER FREQUENCY 5325 MHz CHANNEL BANDWIDTH 20 MHz

MODULATION: 64QAM 130 Mbps

DETECTOR Average

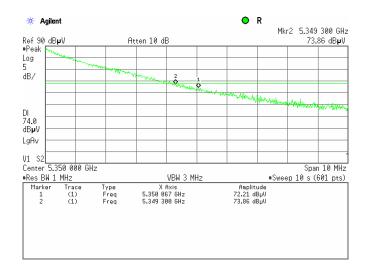




Test specification:	FCC section 15.407(b), RSS-210 Annex 9, section A9.2 Conducted emissions at band edges			
Test procedure:	Public notice DA 00-705 / ANSI C63.4, Section 13.1.4			
Test mode:	Compliance	Verdict:	PASS	
Date:	12/10/2009	verdict.		
Temperature: 22°C	Air Pressure: 1010 hPa	Relative Humidity: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

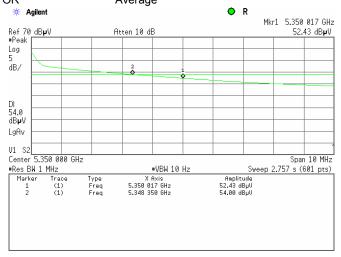
Plot 7.4.133 Radiated spurious emission measurements at the band edges

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

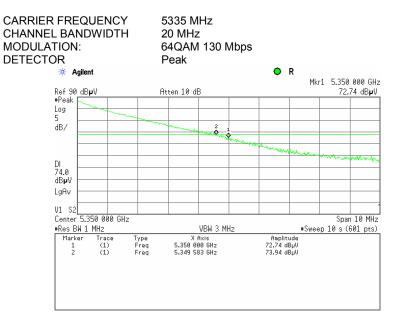
CARRIER FREQUENCY 5335 MHz
CHANNEL BANDWIDTH 20 MHz
MODULATION: BPSK 13 Mbps
DETECTOR Average



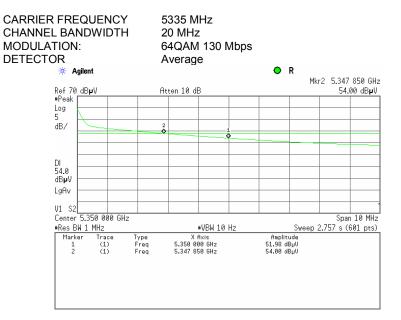


Test specification:	FCC section 15.407(b), RSS-210 Annex 9, section A9.2 Conducted emissions at band edges			
Test procedure:	Public notice DA 00-705 / ANSI C63.4, Section 13.1.4			
Test mode:	Compliance	Verdict:	PASS	
Date:	12/10/2009	verdict.		
Temperature: 22°C	Air Pressure: 1010 hPa	Relative Humidity: 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



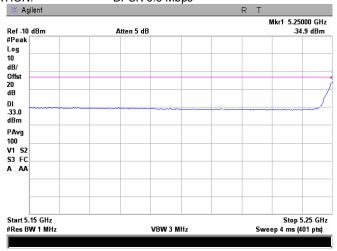


Test specification:	FCC section 15.407(b), RSS-210 Annex 9, section A9.2 Conducted emissions at band edges			
Test procedure:	Public notice DA 00-705 / ANS	Public notice DA 00-705 / ANSI C63.4, Section 13.1.4		
Test mode:	Compliance	Verdict:	PASS	
Date:	12/10/2009	verdict.	PASS	
Temperature: 22°C	Air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

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

CARRIER FREQUENCY
CHANNEL BANDWIDTH
MODULATION:

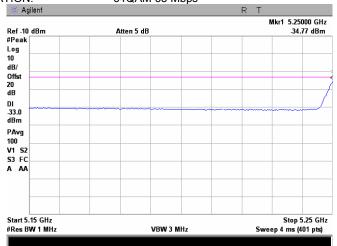
5260 MHz
10 MHz
BPSK 6.5 Mbps



Plot 7.4.138 Conducted spurious emission measurements 5150 - 5250 MHz range

CARRIER FREQUENCY
CHANNEL BANDWIDTH
MODULATION:

5260 MHz
10 MHz
64QAM 65 Mbps

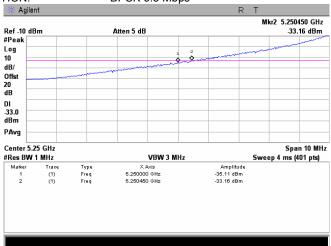




Test specification:	FCC section 15.407(b), RSS-210 Annex 9, section A9.2 Conducted emissions at band edges			
Test procedure:	Public notice DA 00-705 / ANS	Public notice DA 00-705 / ANSI C63.4, Section 13.1.4		
Test mode:	Compliance	Verdict:	PASS	
Date:	12/10/2009	verdict.	PASS	
Temperature: 22°C	Air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

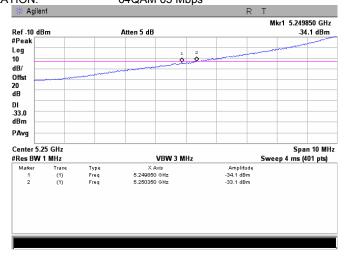
Plot 7.4.139 Conducted spurious emission measurements at the band edges

CARRIER FREQUENCY
CHANNEL BANDWIDTH
MODULATION:
5260 MHz
10 MHz
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



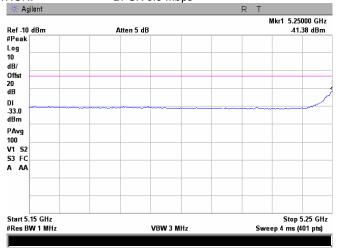


Test specification:	FCC section 15.407(b), RSS-210 Annex 9, section A9.2 Conducted emissions at band edges		
Test procedure:	Public notice DA 00-705 / ANSI C63.4, Section 13.1.4		
Test mode:	Compliance	Verdict:	PASS
Date:	12/10/2009	T Verdict: PASS	
Temperature: 22°C	Air Pressure: 1010 hPa	Relative Humidity: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

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

CARRIER FREQUENCY
CHANNEL BANDWIDTH
MODULATION:

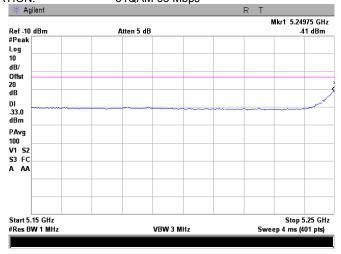
5265 MHz
10 MHz
BPSK 6.5 Mbps



Plot 7.4.142 Conducted spurious emission measurements 5150 – 5250 MHz range

CARRIER FREQUENCY
CHANNEL BANDWIDTH
MODULATION:

5265 MHz
10 MHz
64QAM 65 Mbps

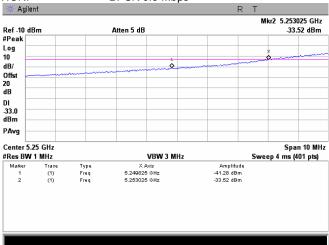




Test specification:	FCC section 15.407(b), RSS-210 Annex 9, section A9.2 Conducted emissions at band edges			
Test procedure:	Public notice DA 00-705 / AN	Public notice DA 00-705 / ANSI C63.4, Section 13.1.4		
Test mode:	Compliance	Verdict:	PASS	
Date:	12/10/2009		PASS	
Temperature: 22°C	Air Pressure: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

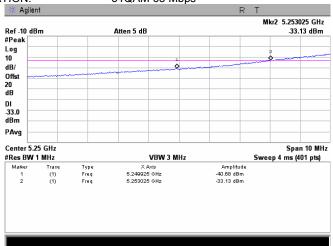
Plot 7.4.143 Conducted spurious emission measurements at the band edges

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

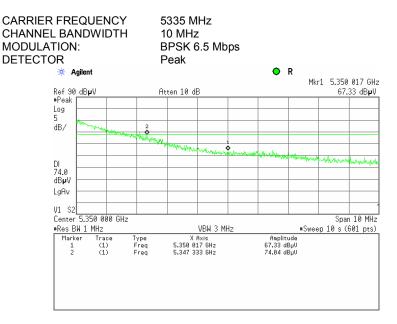
CARRIER FREQUENCY 5265 MHz
CHANNEL BANDWIDTH 10 MHz
MODULATION: 64QAM 65 Mbps



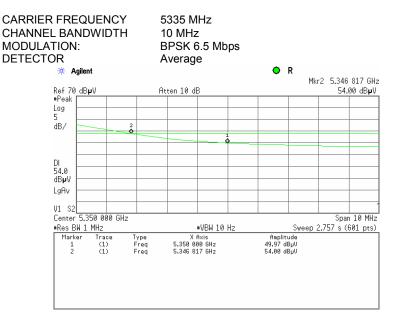


Test specification:	FCC section 15.407(b), RSS-210 Annex 9, section A9.2 Conducted emissions at band edges			
Test procedure:	Public notice DA 00-705 / ANS	Public notice DA 00-705 / ANSI C63.4, Section 13.1.4		
Test mode:	Compliance	Verdict:	PASS	
Date:	12/10/2009	verdict.	PASS	
Temperature: 22°C	Air 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



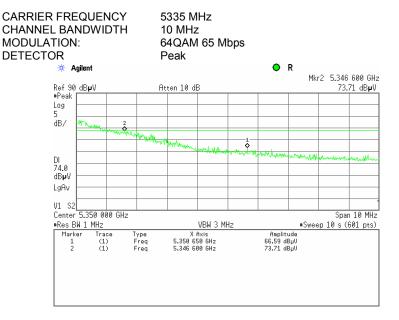
Plot 7.4.146 Radiated spurious emission measurements at the band edges



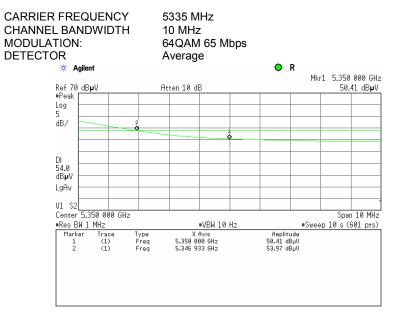


Test specification:	FCC section 15.407(b), RSS-210 Annex 9, section A9.2 Conducted emissions at band edges			
Test procedure:	Public notice DA 00-705 / ANS	Public notice DA 00-705 / ANSI C63.4, Section 13.1.4		
Test mode:	Compliance	Verdict:	PASS	
Date:	12/10/2009	verdict.	PASS	
Temperature: 22°C	Air 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



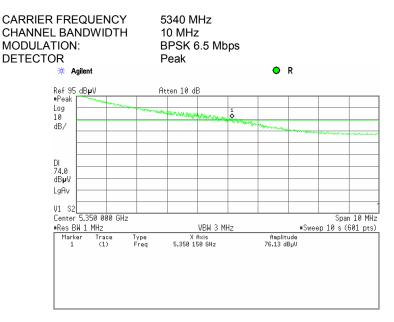
Plot 7.4.148 Radiated spurious emission measurements at the band edges



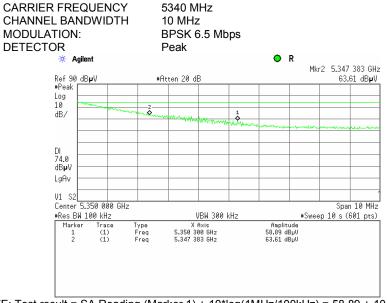


Test specification:	FCC section 15.407(b), RSS-210 Annex 9, section A9.2 Conducted emissions at band edges			
Test procedure:	Public notice DA 00-705 / ANS	Public notice DA 00-705 / ANSI C63.4, Section 13.1.4		
Test mode:	Compliance	Verdict:	PASS	
Date:	12/10/2009	verdict.	PASS	
Temperature: 22°C	Air 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

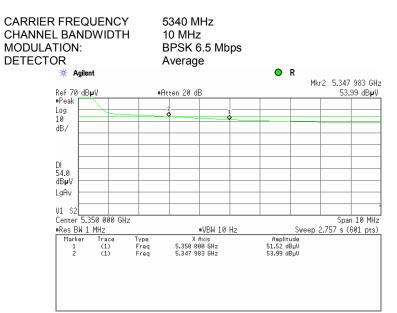


NOTE: Test result = SA Reading (Marker 1) + 10*log(1MHz/100kHz) = 58.89 + 10 = 68.89 dBuV



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	T Verdict: PASS	
Temperature: 22°C	Air Pressure: 1010 hPa	Relative Humidity: 54 %	Power Supply: 120 VAC
Remarks: EUT with 6 dBi antenna assembly gain			

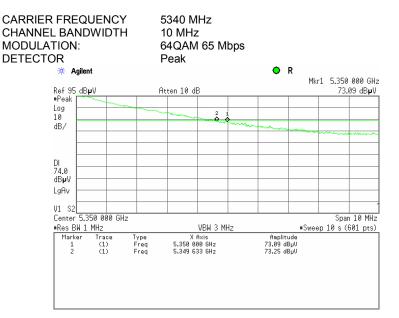
Plot 7.4.151 Radiated spurious emission measurements at the band edges





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 / ANS	Public notice DA 00-705 / ANSI C63.4, Section 13.1.4		
Test mode:	Compliance	Verdict:	PASS	
Date:	12/10/2009	verdict.	PASS	
Temperature: 22°C	Air Pressure: 1010 hPa	Relative Humidity: 54 %	Power Supply: 120 VAC	
Remarks: EUT with 6 dBi antenna assembly gain				

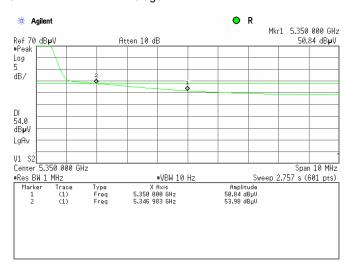
Plot 7.4.152 Radiated spurious emission measurements at the band edges



Plot 7.4.153 Radiated spurious emission measurements at the band edges

CARRIER FREQUENCY
CHANNEL BANDWIDTH
MODULATION:
DETECTOR

5340 MHz
10 MHz
64QAM 65 Mbps
Average

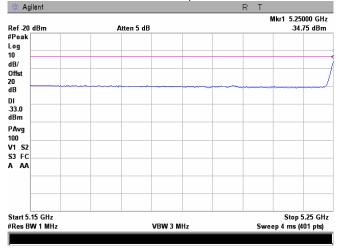




Test specification:	FCC section 15.407(b), RSS-210 Annex 9, section A9.2 Conducted emissions at band edges		
Test procedure:	Public notice DA 00-705 / ANSI C63.4, Section 13.1.4		
Test mode:	Compliance	Verdict:	PASS
Date:	12/10/2009	Verdict: PASS	
Temperature: 22°C	Air Pressure: 1010 hPa	Relative Humidity: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

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

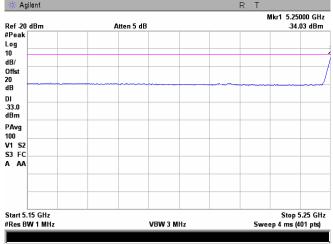
MODULATION: BPSK 3.25 Mbps



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

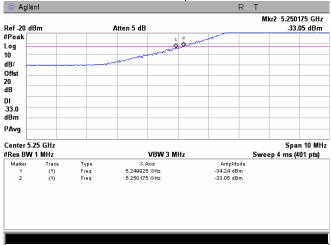




Test specification:	FCC section 15.407(b), RSS-210 Annex 9, section A9.2 Conducted emissions at band edges		
Test procedure:	Public notice DA 00-705 / ANSI C63.4, Section 13.1.4		
Test mode:	Compliance	Verdict:	PASS
Date:	12/10/2009	T Verdict: PASS	
Temperature: 22°C	Air Pressure: 1010 hPa	Relative Humidity: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

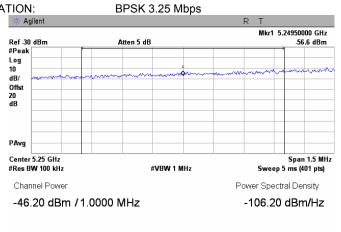
Plot 7.4.156 Conducted spurious emission measurements at the band edges

MODULATION: BPSK 3.25 Mbps



Plot 7.4.157 Conducted spurious emission measurements at the band edges

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

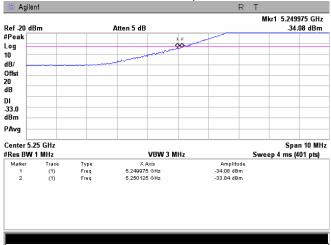




Test specification:	FCC section 15.407(b), RSS-210 Annex 9, section A9.2 Conducted emissions at band edges		
Test procedure:	Public notice DA 00-705 / ANSI C63.4, Section 13.1.4		
Test mode:	Compliance	Verdict:	PASS
Date:	12/10/2009		FASS
Temperature: 22°C	Air Pressure: 1010 hPa	Relative Humidity: 54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

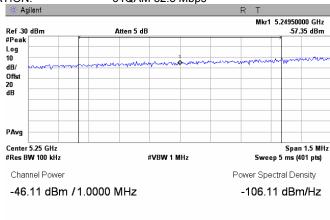
MODULATION: 64QAM 32.5 Mbps



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

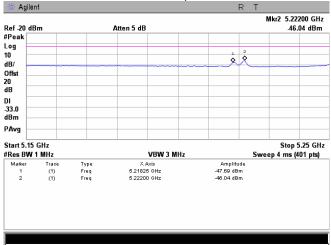




Test specification:	FCC section 15.407(b), RSS-210 Annex 9, section A9.2 Conducted emissions at band edges						
Test procedure:	Public notice DA 00-705 / AN	Public notice DA 00-705 / ANSI C63.4, Section 13.1.4					
Test mode:	Compliance	Verdict: PASS					
Date:	12/10/2009	verdict: PASS					
Temperature: 22°C	Air Pressure: 1010 hPa	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

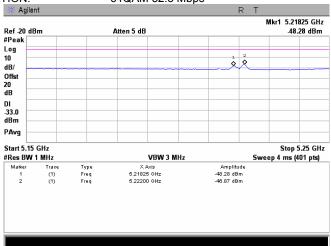
MODULATION: BPSK 3.25 Mbps



Plot 7.4.161 Conducted spurious emission measurements 5150 - 5250 MHz range

CARRIER FREQUENCY 5260 MHz 5 MHz **CHANNEL BANDWIDTH**

64QAM 32.5 Mbps MODULATION:

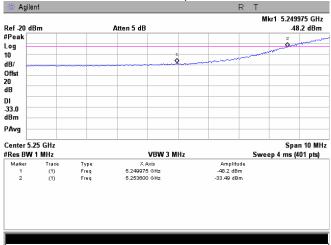




Test specification:	FCC section 15.407(b), RSS-210 Annex 9, section A9.2 Conducted emissions at band edges						
Test procedure:	Public notice DA 00-705 / ANS	Public notice DA 00-705 / ANSI C63.4, Section 13.1.4					
Test mode:	Compliance	Verdict: PASS					
Date:	12/10/2009						
Temperature: 22°C	Air 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

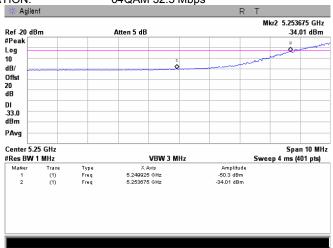
MODULATION: BPSK 3.25 Mbps



Plot 7.4.163 Conducted spurious emission measurements at the band edges

CARRIER FREQUENCY 5260 MHz **CHANNEL BANDWIDTH** 5 MHz

64QAM 32.5 Mbps MODULATION:



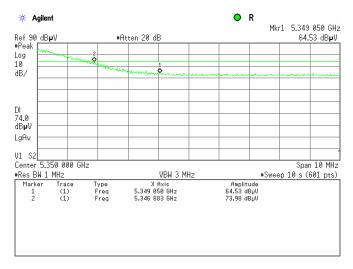


Test specification:	FCC section 15.407(b), RSS-210 Annex 9, section A9.2 Conducted emissions at band edges						
Test procedure:	Public notice DA 00-705 / AN	Public notice DA 00-705 / ANSI C63.4, Section 13.1.4					
Test mode:	Compliance	Verdict: PASS					
Date:	12/10/2009	verdict: PASS					
Temperature: 22°C	Air Pressure: 1010 hPa	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

MODULATION: BPSK 3.25 Mbps

DETECTOR Peak

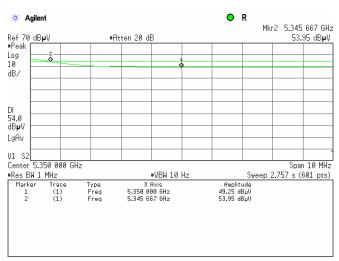


Plot 7.4.165 Radiated spurious emission measurements at the band edges

CARRIER FREQUENCY 5340 MHz
CHANNEL BANDWIDTH 5 MHz

MODULATION: BPSK 3.25 Mbps

DETECTOR Average



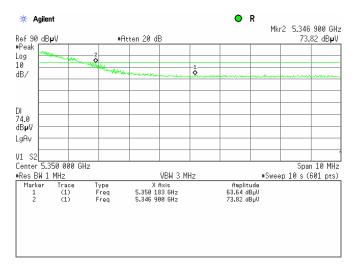


Test specification:	FCC section 15.407(b), R	FCC section 15.407(b), RSS-210 Annex 9, section A9.2					
	Conducted emissions at	Conducted emissions at band edges					
Test procedure:	Public notice DA 00-705 / AN	Public notice DA 00-705 / ANSI C63.4, Section 13.1.4					
Test mode:	Compliance	Verdict: PASS					
Date:	12/10/2009	verdict. PASS					
Temperature: 22°C	Air Pressure: 1010 hPa	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

MODULATION: 64QAM 32.5 Mbps

DETECTOR Peak

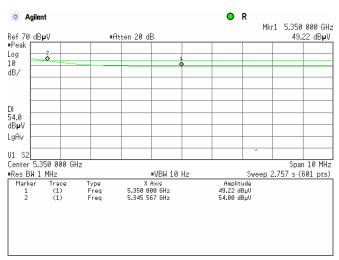


Plot 7.4.167 Radiated spurious emission measurements at the band edges

CARRIER FREQUENCY 5340 MHz
CHANNEL BANDWIDTH 5 MHz

MODULATION: 64QAM 32.5 Mbps

DETECTOR Average



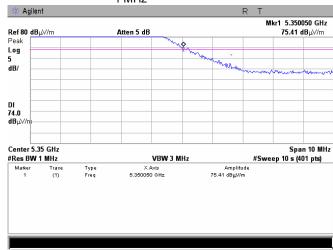


Test specification:	FCC section 15.407(b), RSS-210 Annex 9, section A9.2 Conducted emissions at band edges						
Test procedure:	Public notice DA 00-705 / AN	SI C63.4, Section 13.1.4					
Test mode:	Compliance	Verdict: PASS					
Date:	12/10/2009	Verdict: PASS					
Temperature: 22°C	Air Pressure: 1010 hPa	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

MODULATION: BPSK 3.25 Mbps

DETECTOR Peak RBW 1 MHz

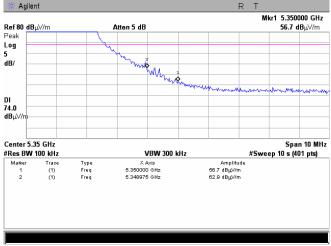


Plot 7.4.169 Radiated spurious emission measurements at the band edges

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 dBuV

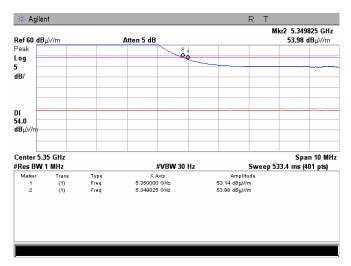


Test specification:	FCC section 15.407(b), RSS-210 Annex 9, section A9.2 Conducted emissions at band edges						
Test procedure:	Public notice DA 00-705 / ANS	Public notice DA 00-705 / ANSI C63.4, Section 13.1.4					
Test mode:	Compliance	Verdict: PASS					
Date:	12/10/2009						
Temperature: 22°C	Air 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

MODULATION: BPSK 3.25 Mbps

DETECTOR Average



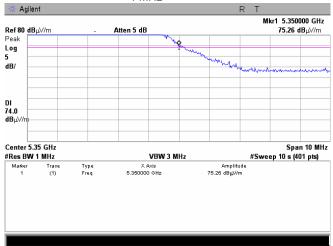


Test specification:	FCC section 15.407(b), RSS-210 Annex 9, section A9.2 Conducted emissions at band edges						
Test procedure:	Public notice DA 00-705 / AN	SI C63.4, Section 13.1.4					
Test mode:	Compliance	Verdict: PASS					
Date:	12/10/2009	Verdict: PASS					
Temperature: 22°C	Air Pressure: 1010 hPa	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

MODULATION: 64QAM 32.5 Mbps

DETECTOR Peak RBW 1 MHz

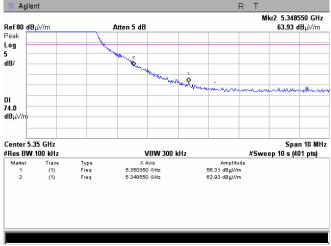


Plot 7.4.172 Radiated spurious emission measurements at the band edges

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

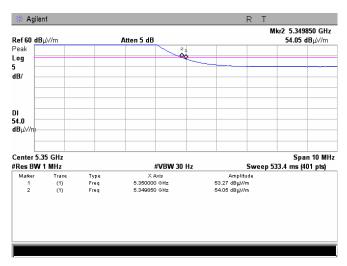


Test specification:	FCC section 15.407(b), RSS-210 Annex 9, section A9.2 Conducted emissions at band edges							
Test procedure:	Public notice DA 00-705 / ANS	Public notice DA 00-705 / ANSI C63.4, Section 13.1.4						
Test mode:	Compliance	Verdict: PASS						
Date:	12/10/2009							
Temperature: 22°C	Air Pressure: 1010 hPa	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

MODULATION: 64QAM 32.5 Mbps

DETECTOR Average





Test specification:	FCC section 15.407(g), F	FCC section 15.407(g), Frequency stability				
Test procedure:	Section 2.1055					
Test mode:	Compliance	Verdict: PASS				
Date:	12/20/2009	verdict.	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.

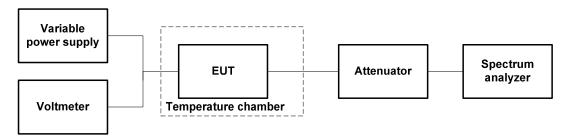
Table 7.5.1 Frequency stability limits

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), F	FCC section 15.407(g), Frequency stability				
Test procedure:	Section 2.1055					
Test mode:	Compliance	Verdict:	PASS			
Date:	12/20/2009	verdict.	PASS			
Temperature: 22°C	Air Pressure: 1012 hPa	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,	Voltage,		Frequen	ıcy, MHz		Band edge	Margin	Verdict
°C	V	Start up	2 nd min	5 th min	10 th min	limit, MHz	, Hz*	veraici
Low frequence	y Band Edge							
-35	Nominal	5250.400138	5250.412880	5250.412912	5250.412480		0	
20	Nominal +15%	5250.373798	5250.378538	5250.379129	5250.379704		-1202	
20	Nominal	5250.372908	5250.373990	5250.374383	5250.375000	5250	-2092	Pass
20	Nominal -15%	5250.383779	5250.374154	5250.374203	5250.374292		-846	
60	Nominal	5250.384613	5250.469313	5250.488813	5250.497913		0	
Low frequence	y In Band							
-35	Nominal	5250.275138	5250.287880	5250.287912	5250.287480		0	
20	Nominal +15%	5250.248798	5250.253538	5250.254129	5250.254704		-1202	
20	Nominal	5250.247908	5250.248990	5250.249383	5250.250000	5250	-2092	Pass
20	Nominal -15%	5250.258779	5250.249154	5250.249203	5250.249292		-846	
60	Nominal	5250.259613	5250.344313	5250.363813	5250.372913		0	
High frequence	cy In Band							
-35	Nominal	5349.258233	5349.257805	5349.257663	5349.257592		32592	
20	Nominal +15%	5349.219315	5349.221233	5349.222680	5349.223661		0	
20	Nominal	5349.219771	5349.222112	5349.224482	5349.225000	5350	0	Pass
20	Nominal -15%	5349.218997	5349.219829	5349.219964	5349.219608		0	
60	Nominal	5349.283133	5349.345533	5349.356858	5349.360283		135283	
High frequence	cy Band Edge							
-35	Nominal	5345.416233	5345.415805	5345.415663	5345.415592		32592	
20	Nominal +15%	5345.377315	5345.379233	5345.380680	5345.381661		0	
20	Nominal	5345.377771	5345.380112	5345.382482	5345.383000	5350	0	Pass
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), F	FCC section 15.407(g), Frequency stability			
Test procedure:	Section 2.1055				
Test mode:	Compliance	Verdict:	PASS		
Date:	12/20/2009	verdict.	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

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: 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,	Voltage,			ıcy, MHz	ago toot, ooo pioto	Band edge	Margin	Verdict
°C	V	Start up	2 nd min	5 th min	10 th min	limit, MHz	, Hz*	verdict
Low frequence	y Band Edge							
-35	Nominal	5250.325138	5250.337880	5250.337912	5250.337480		0	
20	Nominal +15%	5250.298798	5250.303538	5250.304129	5250.304704		-1202	
20	Nominal	5250.297908	5250.298990	5250.299383	5250.300000	5250	-2092	Pass
20	Nominal -15%	5250.308779	5250.299154	5250.299203	5250.299292		-846	
60	Nominal	5250.309613	5250.394313	5250.413813	5250.422913		0	
Low frequence	y In Band							
-35	Nominal	5250.325138	5250.337880	5250.337912	5250.337480		0	
20	Nominal +15%	5250.298798	5250.303538	5250.304129	5250.304704		-1202	
20	Nominal	5250.297908	5250.298990	5250.299383	5250.300000	5250	-2092	Pass
20	Nominal -15%	5250.308779	5250.299154	5250.299203	5250.299292		-846	
60	Nominal	5250.309613	5250.394313	5250.413813	5250.422913		0	
High frequence	cy In Band							
-35	Nominal	5349.658233	5349.657805	5349.657663	5349.657592		32592	
20	Nominal +15%	5349.619315	5349.621233	5349.622680	5349.623661		0	
20	Nominal	5349.619771	5349.622112	5349.624482	5349.625000	5350	0	Pass
20	Nominal -15%	5349.618997	5349.619829	5349.619964	5349.619608		0	
60	Nominal	5349.683133	5349.745533	5349.756858	5349.760283		135283	
High frequence	High frequency Band Edge							
-35	Nominal	5349.616233	5349.615805	5349.615663	5349.615592		32592	
20	Nominal +15%	5349.577315	5349.579233	5349.580680	5349.581661		0	
20	Nominal	5349.577771	5349.580112	5349.582482	5349.583000	5350	0	Pass
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:	PASS	
Date:	12/20/2009	verdict.	FASS	
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

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: 10 MHZ / 64QAM, 65 Mbps (at the low and high band edge);

(As worst case in band edge test, see plots)

			(7 10 110)	ot case in band c	ago toot, ooo pioto	')		
Temperature,	Voltage,		Frequen	ıcy, MHz		Band edge	Margin	Verdict
°C	V	Start up	2 nd min	5 th min	10 th min	limit, MHz	, Hz*	verdict
Low frequence	y Band Edge							
-35	Nominal	5250.375138	5250.387880	5250.387912	5250.387480		1075	
20	Nominal +15%	5250.348798	5250.353538	5250.354129	5250.354704		975	
20	Nominal	5250.347908	5250.348990	5250.349383	5250.350000	5250	825	Pass
20	Nominal -15%	5250.358779	5250.349154	5250.349203	5250.349292		925	
60	Nominal	5250.359613	5250.444313	5250.463813	5250.472913		1550	
High frequence	cy Band Edge							
-35	Nominal	5349.766233	5349.765805	5349.765663	5349.765592		32592	
20	Nominal +15%	5349.727315	5349.729233	5349.730680	5349.731661		0	
20	Nominal	5349.727771	5349.730112	5349.732482	5349.733000	5350	0	Pass
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), F	FCC section 15.407(g), Frequency stability			
Test procedure:	Section 2.1055				
Test mode:	Compliance	Verdict: PASS			
Date:	12/20/2009	verdict.	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

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: 5 MHZ / 64QAM, 32.5 Mbps (at the low and high band edge);

(As worst case in band edge test, see plots)

			(7 to Wol	ist case in pand e	age test, see plots	')		
Temperature,	Voltage,		Frequen	ıcy, MHz		Band edge	Margin	Verdict
°C	V	Start up	2 nd min	5 th min	10 th min	limit, MHz	, Hz*	verdict
Low frequence	y Band Edge							
-35	Nominal	5250.150138	5250.162880	5250.162912	5250.162480		1075	
20	Nominal +15%	5250.123798	5250.128538	5250.129129	5250.129704		975	
20	Nominal	5250.122908	5250.123990	5250.124383	5250.125000	5250	825	Pass
20	Nominal -15%	5250.133779	5250.124154	5250.124203	5250.124292		925	
60	Nominal	5250.134613	5250.219313	5250.238813	5250.247913		1550	
High frequence	cy Band Edge							
-35	Nominal	5349.883233	5349.882805	5349.882663	5349.882592		32592	
20	Nominal +15%	5349.844315	5349.846233	5349.847680	5349.848661		0	
20	Nominal	5349.844771	5349.847112	5349.849482	5349.850000	5350	0	Pass
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	
112 0 100	112 1101	112 2000	112 017 0	11L 0200	112 0000	

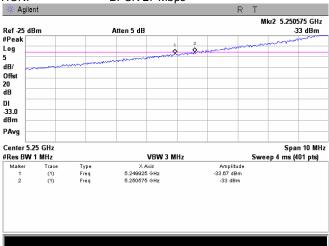
Full description is given in Appendix A.



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

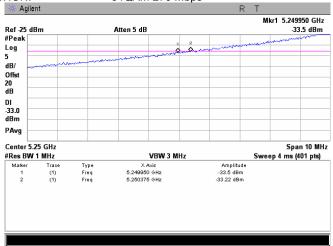
Plot 7.5.1 Conducted spurious emission measurements at the low band edge

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

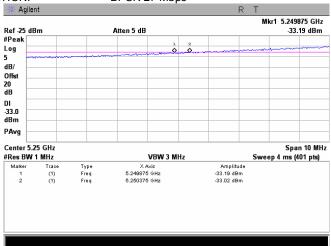




Test specification:	FCC section 15.407(g), F	FCC section 15.407(g), Frequency stability			
Test procedure:	Section 2.1055				
Test mode:	Compliance	Verdict: PASS			
Date:	12/20/2009	verdict.	PASS		
Temperature: 22°C	Air Pressure: 1012 hPa	Relative Humidity: 51 %	Power Supply: 120 VAC		
Remarks: EUT with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

Plot 7.5.3 Conducted spurious emission measurements at the low band edge

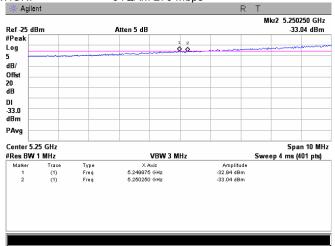
CARRIER FREQUENCY 5285 MHz
CHANNEL BANDWIDTH 40 MHz
MODULATION: BPSK 27 Mbps



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



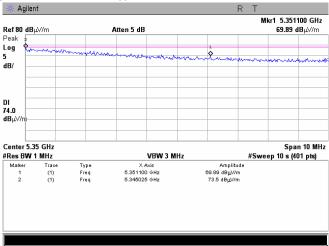


Test specification:	FCC section 15.407(g), Fr	FCC section 15.407(g), Frequency stability			
Test procedure:	Section 2.1055				
Test mode:	Compliance	Verdict:	PASS		
Date:	12/20/2009	verdict.	FASS		
Temperature: 22°C	Air Pressure: 1012 hPa	Relative Humidity: 51 %	Power Supply: 120 VAC		
Remarks: EUT with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

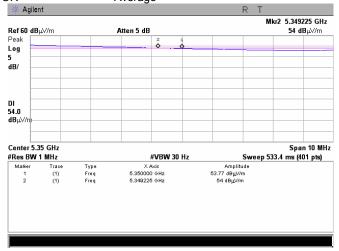
DETECTOR Peak



Plot 7.5.6 Radiated spurious emission measurements at the high band edge

CARRIER FREQUENCY
CHANNEL BANDWIDTH
MODULATION:
DETECTOR

5315 MHz
40 MHz
BPSK 27 Mbps
Average



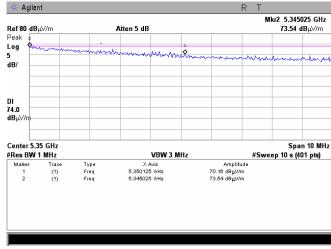


Test specification:	FCC section 15.407(g), F	FCC section 15.407(g), Frequency stability				
Test procedure:	Section 2.1055					
Test mode:	Compliance	Verdict: PASS				
Date:	12/20/2009	verdict.	PASS			
Temperature: 22°C	Air Pressure: 1012 hPa	Relative Humidity: 51 %	Power Supply: 120 VAC			
Remarks: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

Plot 7.5.7 Radiated spurious emission measurements at the high band edge

MODULATION: 64QAM 270 Mbps

DETECTOR Peak

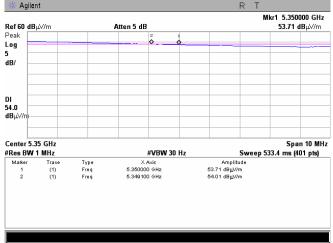


Plot 7.5.8 Radiated spurious emission measurements at the high band edge

CARRIER FREQUENCY 5315 MHz CHANNEL BANDWIDTH 40 MHz

MODULATION: 64QAM 270 Mbps

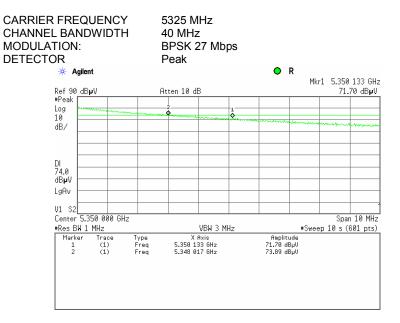
DETECTOR Average



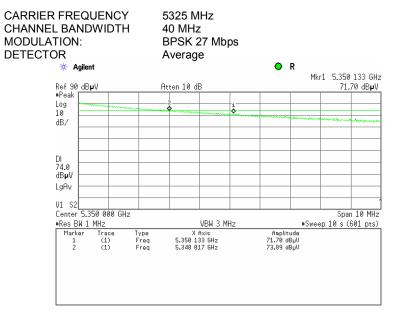


Test specification:	FCC section 15.407(g), F	FCC section 15.407(g), Frequency stability				
Test procedure:	Section 2.1055					
Test mode:	Compliance	Verdict: PASS				
Date:	12/20/2009	verdict.	PASS			
Temperature: 22°C	Air Pressure: 1012 hPa	Relative Humidity: 51 %	Power Supply: 120 VAC			
Remarks: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

Plot 7.5.9 Radiated spurious emission measurements at the band edges



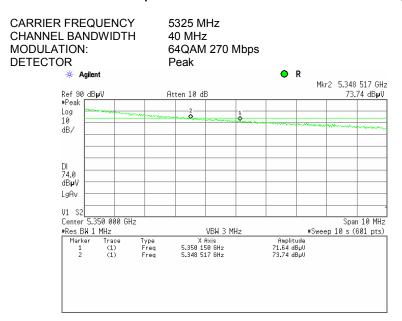
Plot 7.5.10 Radiated spurious emission measurements at the band edges



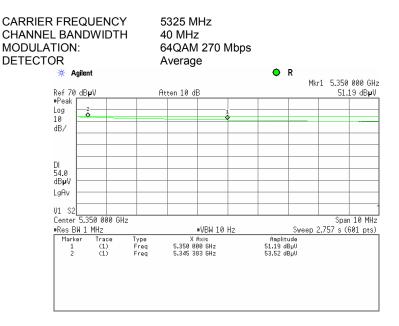


Test specification:	FCC section 15.407(g), Frequency stability		
Test procedure:	Section 2.1055		
Test mode:	Compliance	Verdict:	PASS
Date:	12/20/2009		FASS
Temperature: 22°C	Air Pressure: 1012 hPa	Relative Humidity: 51 %	Power Supply: 120 VAC
Remarks: EUT with 6 dBi antenna assembly gain			

Plot 7.5.11 Radiated spurious emission measurements at the band edges



Plot 7.5.12 Radiated spurious emission measurements at the band edges

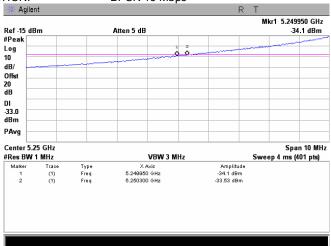




Test specification:	FCC section 15.407(g), Frequency stability		
Test procedure:	Section 2.1055		
Test mode:	Compliance	Verdict:	PASS
Date:	12/20/2009	verdict.	FASS
Temperature: 22°C	Air Pressure: 1012 hPa	Relative Humidity: 51 %	Power Supply: 120 VAC
Remarks: EUT with 6 dBi antenna assembly gain			

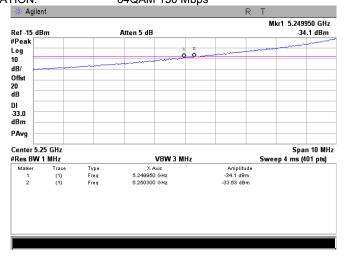
Plot 7.5.13 Conducted spurious emission measurements at the band edges

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

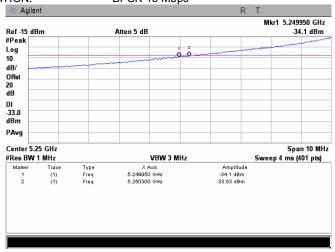




Test specification:	FCC section 15.407(g), Frequency stability		
Test procedure:	Section 2.1055		
Test mode:	Compliance	Verdict:	PASS
Date:	12/20/2009	verdict.	FASS
Temperature: 22°C	Air Pressure: 1012 hPa	Relative Humidity: 51 %	Power Supply: 120 VAC
Remarks: EUT with 6 dBi antenna assembly gain			

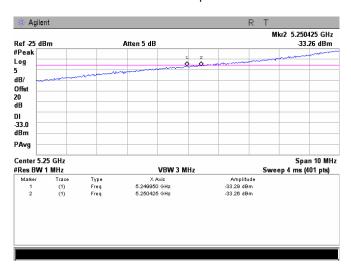
Plot 7.5.15 Conducted spurious emission measurements at the band edges

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



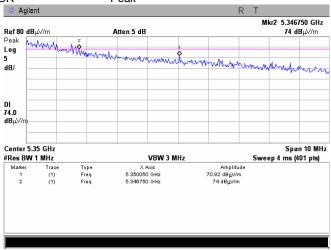


Test specification:	FCC section 15.407(g), Frequency stability		
Test procedure:	Section 2.1055		
Test mode:	Compliance	Verdict: PAS	DASS
Date:	12/20/2009		FASS
Temperature: 22°C	Air Pressure: 1012 hPa	Relative Humidity: 51 %	Power Supply: 120 VAC
Remarks: EUT with 6 dBi antenna assembly gain			

Plot 7.5.17 Radiated spurious emission measurements at the band edges

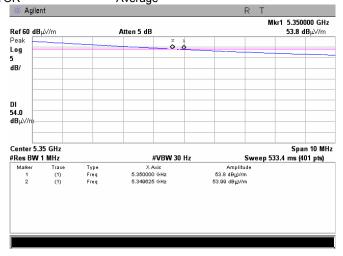
CARRIER FREQUENCY 5330 MHz
CHANNEL BANDWIDTH 20 MHz
MODULATION: BPSK 13 Mbps

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



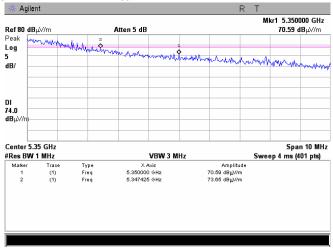


Test specification:	FCC section 15.407(g), Frequency stability		
Test procedure:	Section 2.1055		
Test mode:	Compliance	Verdict: PAS	DACC
Date:	12/20/2009		FASS
Temperature: 22°C	Air Pressure: 1012 hPa	Relative Humidity: 51 %	Power Supply: 120 VAC
Remarks: EUT with 6 dBi antenna assembly gain			

Plot 7.5.19 Radiated spurious emission measurements at the band edges

MODULATION: 64QAM 130 Mbps

DETECTOR Peak

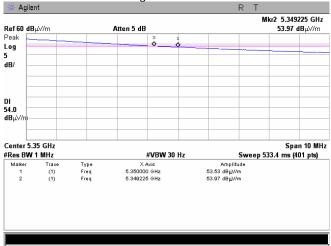


Plot 7.5.20 Radiated spurious emission measurements at the band edges

CARRIER FREQUENCY 5330 MHz
CHANNEL BANDWIDTH 20 MHz

MODULATION: 64QAM 130 Mbps

DETECTOR Average

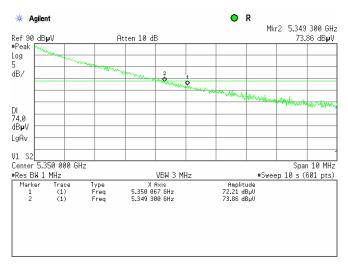




Test specification:	FCC section 15.407(g), Frequency stability		
Test procedure:	Section 2.1055		
Test mode:	Compliance	Verdict:	PASS
Date:	12/20/2009		FASS
Temperature: 22°C	Air Pressure: 1012 hPa	Relative Humidity: 51 %	Power Supply: 120 VAC
Remarks: EUT with 6 dBi antenna assembly gain			

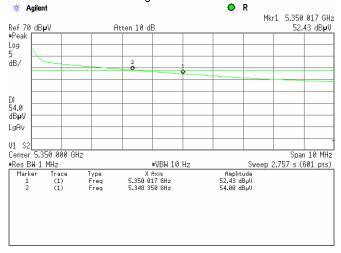
Plot 7.5.21 Radiated spurious emission measurements at the band edges

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

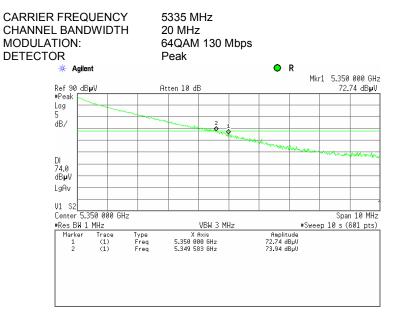
CARRIER FREQUENCY 5335 MHz CHANNEL BANDWIDTH 20 MHz MODULATION: BPSK 13 Mbps **DETECTOR** Average



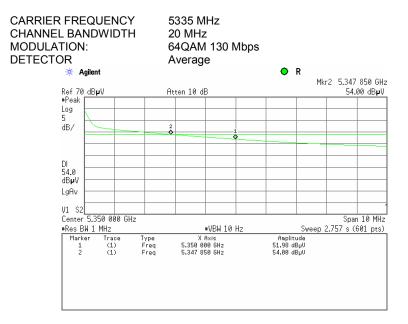


Test specification:	FCC section 15.407(g), F	FCC section 15.407(g), Frequency stability		
Test procedure:	Section 2.1055			
Test mode:	Compliance	Verdict: PASS		
Date:	12/20/2009	verdict.	PASS	
Temperature: 22°C	Air Pressure: 1012 hPa	Relative Humidity: 51 %	Power Supply: 120 VAC	
Remarks: EUT with 6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

Plot 7.5.23 Radiated spurious emission measurements at the band edges



Plot 7.5.24 Radiated spurious emission measurements at the band edges

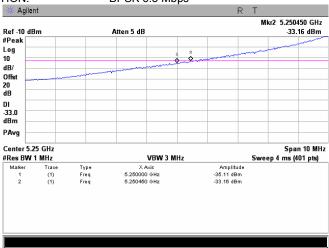




Test specification:	FCC section 15.407(g), F	FCC section 15.407(g), Frequency stability		
Test procedure:	Section 2.1055			
Test mode:	Compliance	Verdict: PASS		
Date:	12/20/2009	verdict.	PASS	
Temperature: 22°C	Air Pressure: 1012 hPa	Relative Humidity: 51 %	Power Supply: 120 VAC	
Remarks: EUT with 6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

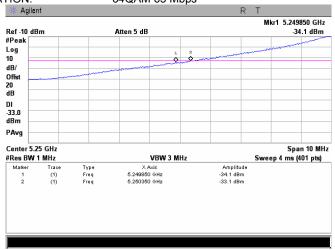
Plot 7.5.25 Conducted spurious emission measurements at the band edges

CARRIER FREQUENCY
CHANNEL BANDWIDTH
MODULATION:
5260 MHz
10 MHz
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



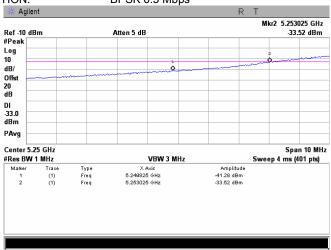


Test specification:	FCC section 15.407(g), F	FCC section 15.407(g), Frequency stability		
Test procedure:	Section 2.1055			
Test mode:	Compliance	Verdict: PASS		
Date:	12/20/2009			
Temperature: 22°C	Air Pressure: 1012 hPa	Relative Humidity: 51 %	Power Supply: 120 VAC	
Remarks: EUT with 6 dBi antenna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

Plot 7.5.27 Conducted spurious emission measurements at the band edges

CARRIER FREQUENCY
CHANNEL BANDWIDTH
MODULATION:

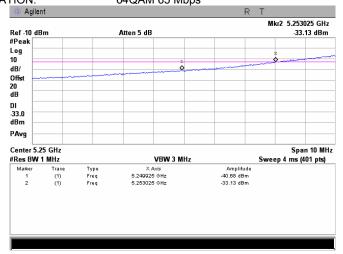
5265 MHz
10 MHz
BPSK 6.5 Mbps



Plot 7.5.28 Conducted spurious emission measurements at the band edges

CARRIER FREQUENCY
CHANNEL BANDWIDTH
MODULATION:

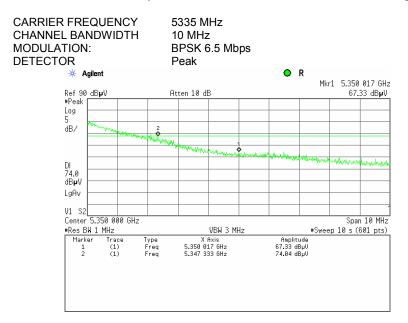
5265 MHz
10 MHz
64QAM 65 Mbps



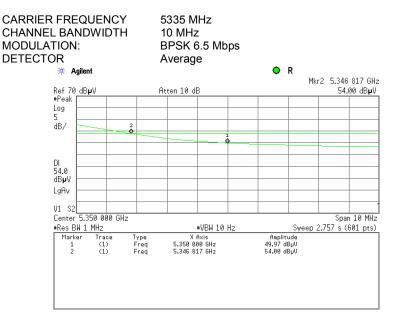


Test specification:	FCC section 15.407(g), F	FCC section 15.407(g), Frequency stability		
Test procedure:	Section 2.1055			
Test mode:	Compliance	Verdict:	PASS	
Date:	12/20/2009	verdict.	FASS	
Temperature: 22°C	Air Pressure: 1012 hPa	Relative Humidity: 51 %	Power Supply: 120 VAC	
Remarks: EUT with 6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

Plot 7.5.29 Radiated spurious emission measurements at the band edges



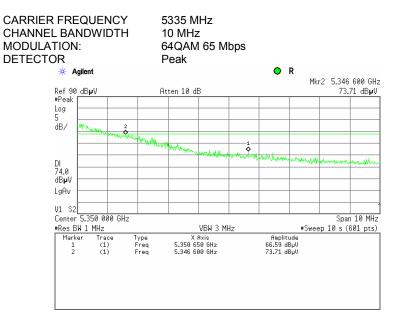
Plot 7.5.30 Radiated spurious emission measurements at the band edges



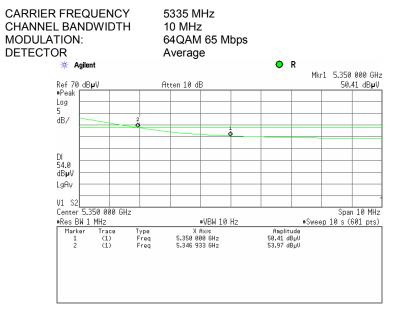


Test specification:	FCC section 15.407(g), F	FCC section 15.407(g), Frequency stability		
Test procedure:	Section 2.1055			
Test mode:	Compliance	Verdict: PASS		
Date:	12/20/2009	verdict.	PASS	
Temperature: 22°C	Air Pressure: 1012 hPa	Relative Humidity: 51 %	Power Supply: 120 VAC	
Remarks: EUT with 6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

Plot 7.5.31 Radiated spurious emission measurements at the band edges



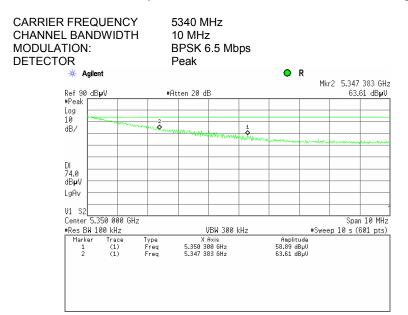
Plot 7.5.32 Radiated spurious emission measurements at the band edges



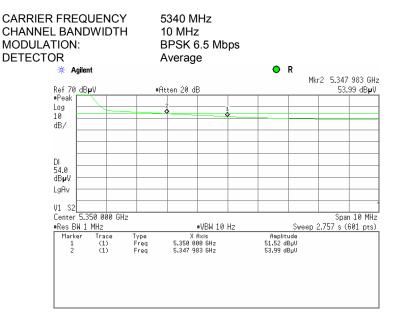


Test specification:	FCC section 15.407(g), F	FCC section 15.407(g), Frequency stability		
Test procedure:	Section 2.1055			
Test mode:	Compliance	Verdict: PASS		
Date:	12/20/2009	verdict.	PASS	
Temperature: 22°C	Air Pressure: 1012 hPa	Relative Humidity: 51 %	Power Supply: 120 VAC	
Remarks: EUT with 6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

Plot 7.5.33 Radiated spurious emission measurements at the band edges



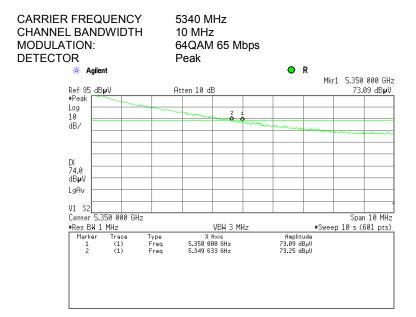
Plot 7.5.34 Radiated spurious emission measurements at the band edges



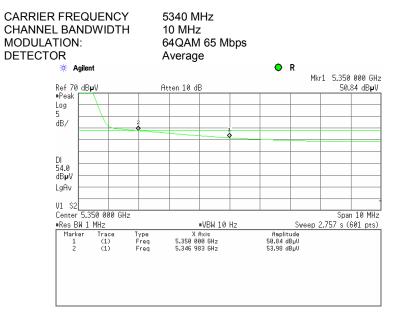


Test specification:	FCC section 15.407(g), F	FCC section 15.407(g), Frequency stability		
Test procedure:	Section 2.1055			
Test mode:	Compliance	Verdict: PASS		
Date:	12/20/2009	verdict.	PASS	
Temperature: 22°C	Air Pressure: 1012 hPa	Relative Humidity: 51 %	Power Supply: 120 VAC	
Remarks: EUT with 6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

Plot 7.5.35 Radiated spurious emission measurements at the band edges



Plot 7.5.36 Radiated spurious emission measurements at the band edges



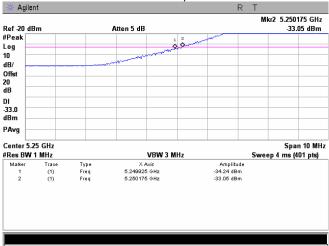


Test specification:	FCC section 15.407(g), F	FCC section 15.407(g), Frequency stability		
Test procedure:	Section 2.1055			
Test mode:	Compliance	Verdict: PASS		
Date:	12/20/2009			
Temperature: 22°C	Air Pressure: 1012 hPa	Relative Humidity: 51 %	Power Supply: 120 VAC	
Remarks: EUT with 6 dBi antenna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

Plot 7.5.37 Conducted spurious emission measurements at the band edges

CARRIER FREQUENCY 5255 MHz
CHANNEL BANDWIDTH 5 MHz

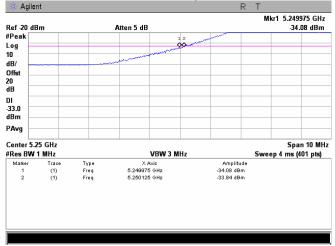
MODULATION: BPSK 3.25 Mbps



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



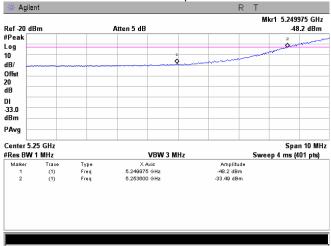


Test specification:	FCC section 15.407(g), F	FCC section 15.407(g), Frequency stability		
Test procedure:	Section 2.1055			
Test mode:	Compliance	Verdict: PASS		
Date:	12/20/2009	verdict.	PASS	
Temperature: 22°C	Air Pressure: 1012 hPa	Relative Humidity: 51 %	Power Supply: 120 VAC	
Remarks: EUT with 6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

Plot 7.5.39 Conducted spurious emission measurements at the band edges

CARRIER FREQUENCY 5260 MHz
CHANNEL BANDWIDTH 5 MHz

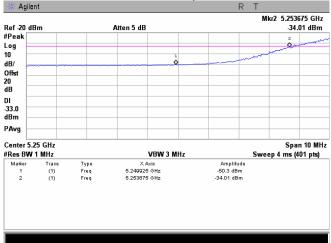
MODULATION: BPSK 3.25 Mbps



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





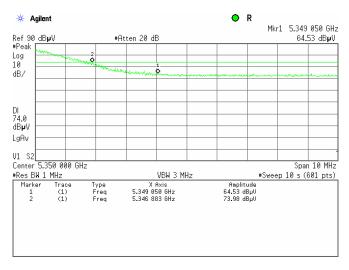
Test specification:	FCC section 15.407(g), F	FCC section 15.407(g), Frequency stability		
Test procedure:	Section 2.1055			
Test mode:	Compliance	Verdict: PASS		
Date:	12/20/2009	verdict.	PASS	
Temperature: 22°C	Air Pressure: 1012 hPa	Relative Humidity: 51 %	Power Supply: 120 VAC	
Remarks: EUT with 6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

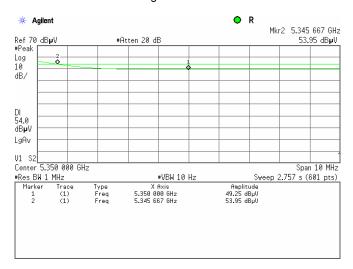
DETECTOR Peak



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





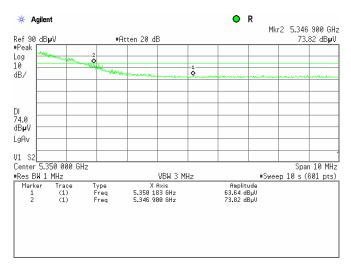
Test specification:	FCC section 15.407(g), F	FCC section 15.407(g), Frequency stability		
Test procedure:	Section 2.1055			
Test mode:	Compliance	Verdict: PASS		
Date:	12/20/2009	verdict.	PASS	
Temperature: 22°C	Air Pressure: 1012 hPa	Relative Humidity: 51 %	Power Supply: 120 VAC	
Remarks: EUT with 6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

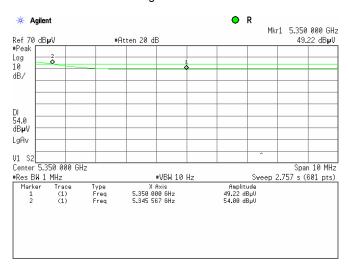
DETECTOR Peak



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





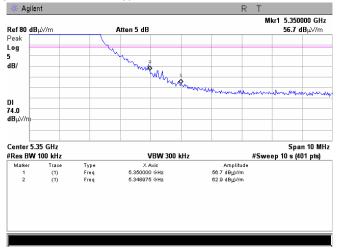
Test specification:	FCC section 15.407(g), Fr	FCC section 15.407(g), Frequency stability		
Test procedure:	Section 2.1055			
Test mode:	Compliance	Verdict: PASS		
Date:	12/20/2009	verdict.	FASS	
Temperature: 22°C	Air Pressure: 1012 hPa	Relative Humidity: 51 %	Power Supply: 120 VAC	
Remarks: EUT with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

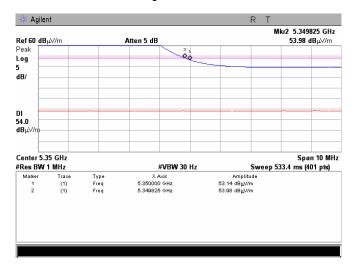
DETECTOR Peak



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





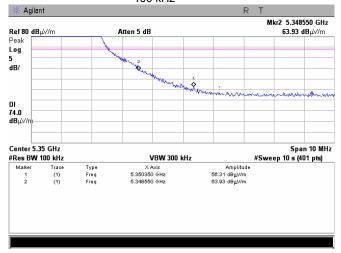
Test specification:	FCC section 15.407(g), F	FCC section 15.407(g), Frequency stability			
Test procedure:	Section 2.1055				
Test mode:	Compliance	Verdict:	PASS		
Date:	12/20/2009	verdict.	PASS		
Temperature: 22°C	Air Pressure: 1012 hPa	Relative Humidity: 51 %	Power Supply: 120 VAC		
Remarks: EUT with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

Plot 7.5.47 Radiated spurious emission measurements at the band edges

CARRIER FREQUENCY 5345 MHz
CHANNEL BANDWIDTH 5 MHz

MODULATION: 64QAM 32.5 Mbps

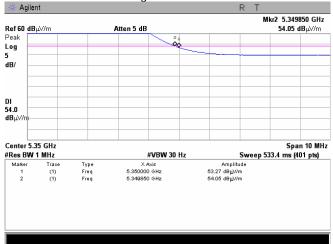
DETECTOR Peak RBW 100 kHz



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





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	- Verdict: PASS				
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	
The transmitter employs a unique antenna connector	NA	Comply
The transmitter requires professional installation (external)	Visual inspection	



Test specification:	FCC part 15 section 15.20	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	verdict.	PASS			
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

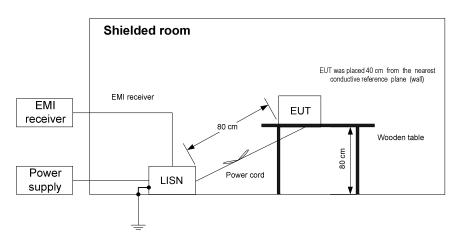
Frequency,	Class B limit, dB(μV)					
MHz	QP AVRG					
0.15 - 0.5	66 - 56*	56 - 46*				
0.5 - 5.0	56	46				
5.0 - 30	60	50				

^{* -} 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 15.20	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	verdict.	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

	Peak	Qı	Quasi-peak Average						
Frequency, MHz	emission, dB(μV)	Measured emission, dB(μV)	Limit, dB(μV)	Margin, dB*	Measured emission, dB(μV)	Limit, dB(μV)	Margin, dB*	Line ID	Verdict
0.159505	57.59	56.62	65.54	-8.92	44.87	55.54	-10.67		
0.211995	51.53	50.89	63.19	-12.30	41.77	53.19	-11.42	L1	Pass
2.702598	50.14	48.87	56.00	-7.13	41.71	46.00	-4.29	LI	Fass
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	L2	Pass
4.874015	52.02	51.05	56.00	-4.95	43.55	46.00	-2.45	LZ	F 455
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		

Full description is given in Appendix A.



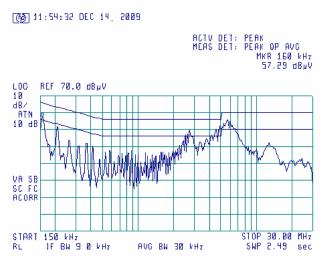
Test specification:	FCC part 15 section 15.207(a), RSS-Gen section 7.2.4, Conducted emission			
Test procedure:	ANSI C63.4, Section 13.1.3			
Test mode:	Compliance	Verdict:	PASS	
Date:	12/14/2009	verdict.	FASS	
Temperature: 23°C	Air Pressure: 1019 hPa	Relative Humidity: 49 %	Power Supply: 120 VAC	
Remarks:				

Plot 7.7.1 Conducted emission measurements

LINE: L1 EUT OPERATING MODE: Transmit

LIMIT: QUASI-PEAK, AVERAGE

DETECTOR: PEAK

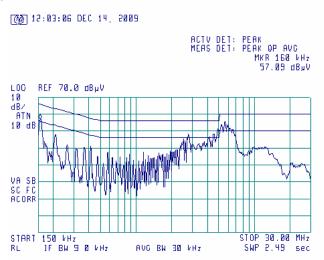


Plot 7.7.2 Conducted emission measurements

LINE: L2
EUT OPERATING MODE: Transmit

LIMIT: QUASI-PEAK, AVERAGE

DETECTOR: PEAK





Test specification:	RSS-Gen section 4.6.1,	RSS-Gen section 4.6.1, occupied bandwidth				
Test procedure:	RSS-Gen section 4.6.1	RSS-Gen section 4.6.1				
Test mode:	Compliance	Verdict: PASS				
Date:	12/20/2009	verdict.	FASS			
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,	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	verdict.	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:

MODULATION ENVELOPE REFERENCE POINTS:

MODULATING SIGNAL:

TRANSMITTER POWER:

3 times RBW
99% power
PRBS
Maximum

EMISSION BANDWIDTH

Frequency, MHz	Modulation	Bit rate, Mbps	99% emission bandwidth, MHz
5255	BPSK	3.25	4.4172
3233	64QAM	32.5	4.3964
5300	BPSK	3.25	4.4556
3300	64QAM	32.5	4.4221
5345	BPSK	3.25	4.3989
3343	64QAM	32.5	4.4290

5MHz

EMISSION BANDWIDTH 10MHz

Frequency, MHz	Modulation	Bit rate, Mbps	99% emission bandwidth, MHz
5260	BPSK	6.5	8.9423
3200	64QAM	65	8.9412
5300	BPSK	6.5	8.9464
3300	64QAM	65	8.9453
5340	BPSK	6.5	8.9305
3340	64QAM	65	8.8044

EMISSION BANDWIDTH 20MHz

Frequency, MHz	Modulation	Bit rate, Mbps	99% emission bandwidth, MHz
5265	BPSK	13	17.7543
3203	64QAM	130	17.5603
5300	BPSK	13	17.8045
5500	64QAM	130	17.6538
5335	BPSK	13	17.5056
3335	64QAM	130	17.5364

EMISSION BANDWIDTH 40MHz

Frequency, MHz	Modulation	Bit rate, Mbps	99% emission bandwidth, MHz
5275	BPSK	27	35.8106
3213	64QAM	270	36.0599
5300	BPSK	27	35.6469
9300	64QAM	270	35.4306
5325	BPSK	27	36.1993
5525	64QAM	270	36.0247

Reference numbers of test equipment used

HL 2952 HL 3440 HL 3784 HL 3818	
---------------------------------	--

Full description is given in Appendix A.



Test specification:	RSS-Gen section 4.6.1,	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	verdict.	FASS		
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 Genera

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

Table 8.2.1 Radiated emission limits

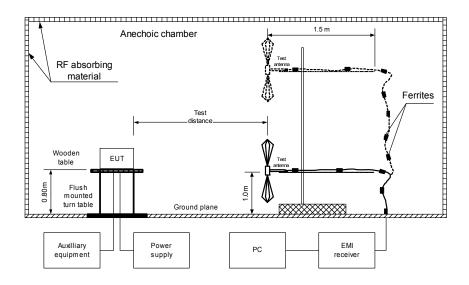
Frequency, MHz	Field strength limit at 3 m test distance, dB(μV/m)
30 - 88	40.0
88 - 216	43.5
216 - 960	46.0
Above 960 -3 rd harmonic*	54.0

^{* -} 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 biconilog 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	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	verdict.	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) 1000 kHz above 1 GHz

VIDEO BANDWIDTH: > Resolution bandwidth
TEST ANTENNA TYPE: Biconilog (30 MHz – 1000 MHz)
Double ridged guide (above 1000 MHz)

		Qua	si-peak dB(μV/	m)			Turntable	_
Frequency, MHz	Peak, dB(μV/m)	Measured emission, dB(μV/m)	Limit, dB(μV/m)	Margin, dB*	Antenna polarization	Antenna height, m	position**, degrees	Verdict
Mid Rx (5300	MHz)							
32.600000	34.69	31.57	40.00	-8.43	Vertical	1.0	53	
36.871900	38.25	35.47	40.00	-4.53	Vertical	1.0	178	Pass
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.

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.

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

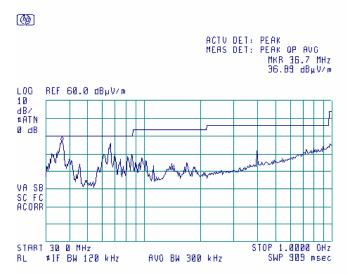


Test specification:	RSS-Gen sections 6, 4.10	RSS-Gen sections 6, 4.10, spurious radiated emission			
Test procedure:	ANSI C63.4, Section 13.1.3				
Test mode:	Compliance	Verdict:	PASS		
Date:	12/06/2009	verdict.	FASS		
Temperature: 23°C	Air Pressure: 1013 hPa	Relative Humidity: 40 %	Power Supply: 120 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 DISTANCE: 3 m

ANTENNA POLARIZATION: Vertical and Horizontal

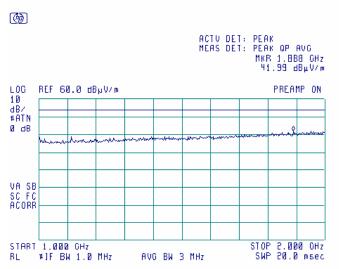


Plot 8.2.2 Radiated emission measurements from 1.0 to 2.0 GHz at the mid Rx channel frequency

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

TEST DISTANCE: 3 m

ANTENNA POLARIZATION: Vertical and Horizontal DETECTOR: Vertical and Horizontal Peak under average limit

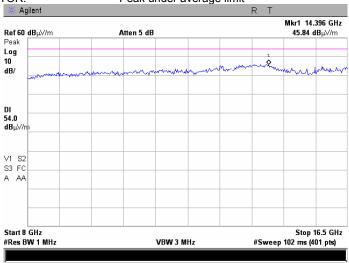


Plot 8.2.4 Radiated emission measurements from 8 to 16.5 GHz at the mid Rx channel frequency

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	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	verdict.	FASS		
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:

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)

200010 11000 1011 1010 1111 127								
		Quasi-peak dB(μV/m)				Antenna	Turntable	
Frequency, MHz	Peak, dB(μV/m)	Measured emission, dB(μV/m)	Limit, dB(μV/m)	Margin, dB*	Antenna polarization	height, m	position**, degrees	Verdict
Mid Rx (5300	MHz)							
41.60480	35.6	33.1	40.0	-6.9	Vertical	1.0	132	
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	Pass
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.

Reference numbers of test equipment used

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

Full description is given in Appendix A.

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

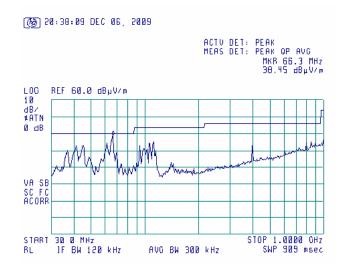


Test specification:	RSS-Gen sections 6, 4.10	RSS-Gen sections 6, 4.10, spurious radiated emission				
Test procedure:	ANSI C63.4, Section 13.1.3	ANSI C63.4, Section 13.1.3				
Test mode:	Compliance	Verdict:	PASS			
Date:	12/06/2009	verdict.	FASS			
Temperature: 23°C Air Pressure: 1013 hPa Relative Humidity: 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 DISTANCE: 3 m

ANTENNA POLARIZATION: Vertical and Horizontal

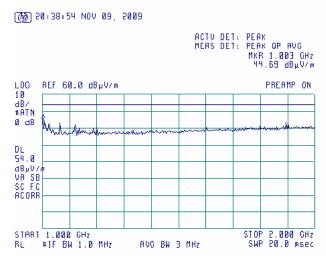


Plot 8.2.6 Radiated emission measurements from 1.0 to 2.0 GHz at the mid Rx channel frequency

TEST SITE: Anechoic chamber

TEST DISTANCE: 3 m

ANTENNA POLARIZATION: Vertical and Horizontal DETECTOR: Vertical and Horizontal Peak under average limit



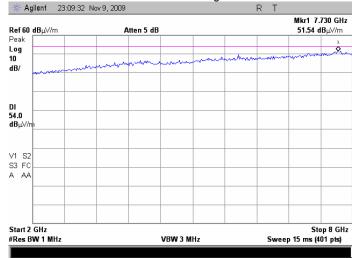


Test specification:	RSS-Gen sections 6, 4.10	RSS-Gen sections 6, 4.10, spurious radiated emission					
Test procedure:	ANSI C63.4, Section 13.1.3	ANSI C63.4, Section 13.1.3					
Test mode:	Compliance	Verdict:	PASS				
Date:	12/06/2009	verdict.	FASS				
Temperature: 23°C Air Pressure: 1013 hPa Relative 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 DISTANCE: 3 m

ANTENNA POLARIZATION: Vertical and Horizontal DETECTOR: Peak under average limit

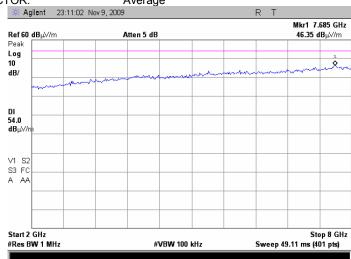


Plot 8.2.8 Radiated emission measurements from 2.0 to 8.0 GHz at the mid Rx channel frequency

TEST SITE: Anechoic chamber

TEST DISTANCE: 3 m

ANTENNA POLARIZATION: Vertical and Horizontal



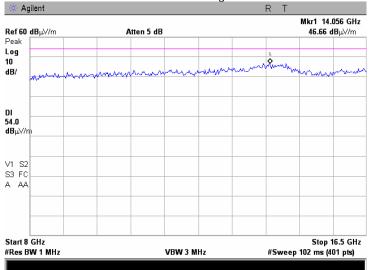


Test specification:	RSS-Gen sections 6, 4.10	RSS-Gen sections 6, 4.10, spurious radiated emission					
Test procedure:	ANSI C63.4, Section 13.1.3	ANSI C63.4, Section 13.1.3					
Test mode:	Compliance	Verdict:	PASS				
Date:	12/06/2009	verdict.	FASS				
Temperature: 23°C Air Pressure: 1013 hPa Relative 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 DISTANCE: 3 m

ANTENNA POLARIZATION: Vertical and Horizontal DETECTOR: Vertical and Horizontal 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 -	066	05-Nov-09	05-Nov-10
0493	Temperature Chamber -45175 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	111590020 02	06-Dec-09	06-Dec-10
3533	Amplifier, low noise, 6 to 18 GHz	Quinstar Technology	QLJ- 06184040 -J0	111590010 01	06-Dec-09	06-Dec-10
3535	Amplifier, low noise, 18 to 40 GHz	Quinstar Technology	QLJ- 18404537 -J0	111590030 01	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	MY482502 88	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
Madhadada 2 ataa	Double ridged horn antenna: ± 5.3 dB
Vertical polarization	Biconilog antenna: ± 6.0 dB
	Biconical antenna: ± 5.7 dB
	Log periodic antenna: ± 6.0 dB
	Double ridged horn antenna: ± 6.0 dB

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

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

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



11 APPENDIX C Test laboratory description

Tests were performed at Hermon Laboratories Ltd., which is a fully independent, private, EMC, safety, environmental and telecommunication testing facility.

Hermon Laboratories is listed by the Federal Communications Commission (USA) for all parts of Code of Federal Regulations 47 (CFR 47), Registration Numbers 90624 for OATS and 90623 for the anechoic chamber; by Industry Canada for electromagnetic emissions (file numbers IC 2186A-1 for OATS, IC 2186A-2 for anechoic chamber, IC 2186A-3 for full-anechoic chamber for RE measurements above 1 GHz), certified by VCCI, Japan (the registration numbers are R-808 for OATS, R-1082 for anechoic chamber, G-27 for full-anechoic chamber for RE measurements above 1 GHz, C-845 for conducted emissions site, T-1606 for conducted emissions at telecommunication ports), has a status of a Telefication - Listed Testing Laboratory, Certificate No. L138/00. The laboratory is accredited by American Association for Laboratory Accreditation (USA) according to ISO/IEC 17025 for electromagnetic compatibility, product safety, telecommunications testing and environmental simulation (for exact scope please refer to Certificate No. 839.01). The FCC Designation Number is US1003.

Address: P.O. Box 23, Binyamina 30500, Israel.

Telephone: +972 4628 8001 Fax: +972 4628 8277 e-mail: mail@hermonlabs.com website: www.hermonlabs.com

Person for contact: Mr. Alex Usoskin, CEO.

12 APPENDIX D Specification references

47CFR part 15: 2009 Radio Frequency Devices.

FCC Public Notice DA 02-2138 Measurement procedure updated for peak transmit power in U-NII bands

August 30, 2002

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
E40	10.5	1260	26.5	2000	22.0
540	19.5	1280	26.6	2000	32.0

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 $dB(\mu V)$ to convert it into field intensity in $dB(\mu V/m)$.



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	1	
12	2000	2.61		
13	2200	2.75	1	
14	2400	2.89		
15	2600	2.97	1	
16	2800	3.21	≤ 6.5	±0.12
17	3000	3.32		
18	3300	3.47		
19	3600	3.62	1	
20	3900	3.84	1	
21	4200	3.92		±0.17
22	4500	4.07	7	
23	4800	4.36	1	
24	5100	4.62	7	
25	5400	4.78	1	
26	5700	5.16	1	
27	6000	5.67	1	
28	6500	5.99	7	



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 3.28		
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 <th>Frequency,</th> <th>Cable loss,</th>	Frequency,	Cable loss,
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 <th>GHz</th> <th>dB</th>	GHz	dB
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 <td>0.03</td> <td>0.30</td>	0.03	0.30
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 <td>0.05</td> <td></td>	0.05	
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 <td>0.10</td> <td>0.53</td>	0.10	0.53
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	0.20	0.74
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 <td>0.30</td> <td>0.91</td>	0.30	0.91
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 <td>0.40</td> <td>1.05</td>	0.40	1.05
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 <td>0.50</td> <td>1.18</td>	0.50	1.18
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	0.60	1.29
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	0.70	1.40
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	0.80	1.50
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		1.59
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	1.00	
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	1.10	1.77
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	1.20	1.86
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	1.30	1.94
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	1.40	2.01
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	1.50	2.08
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	1.60	2.16
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	1.70	2.22
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	1.80	2.29
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	1.90	2.36
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	2.00	2.42
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	2.10	
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	2.20	2.54
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	2.30	2.60
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		
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	2.50	2.71
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	2.60	2.77
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	2.70	2.83
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	2.80	2.89
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	2.90	2.95
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	3.10	3.06
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	3.30	3.17
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	3.50	3.28
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	3.70	3.39
4.30 3.76 4.50 3.87 4.70 4.01 4.90 4.10 5.10 4.21 5.30 4.31	3.90	3.51
4.50 3.87 4.70 4.01 4.90 4.10 5.10 4.21 5.30 4.31	4.10	3.62
4.50 3.87 4.70 4.01 4.90 4.10 5.10 4.21 5.30 4.31	4.30	3.76
4.70 4.01 4.90 4.10 5.10 4.21 5.30 4.31		
5.10 4.21 5.30 4.31		
5.30 4.31	4.90	4.10
5.30 4.31	5.10	
	5.30	
5.70 4.56		4.56
5.90 4.71	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 8.30	5.03 5.08
8.50	5.08
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		
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	NA	±0.12
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	Frequency, MHz	Cable loss, dB	Frequency, MHz	Cable loss, dB	Frequency, MHz	Cable loss, dB	Frequency, MHz	Cable loss, dB
10	0.11	3600	1.97	7400	3.12	11200	3.90	15100	4.74
30	0.17	3700	1.97	7500	3.13	11300	3.93	15200	4.70
50	0.25	3800	2.03	7600	3.16	11400	3.88	15300	4.73
100	0.32	3900	2.04	7700	3.18	11500	3.87	15400	4.78
200	0.46	4000	2.10	7800	3.20	11600	3.90	15500	4.75
300	0.58	4100	1.97	7900	3.23	11700	3.86	15600	4.76
400	0.65	4200	1.97	8000	3.25	11800	3.88	15700	4.75
500	0.74	4300	2.03	8100	3.26	11900	3.86	15800	4.78
600	0.82	4400	2.04	8200	3.28	12000	3.89	15900	4.79
700	0.89	4500	2.10	8300	3.31	12100	3.94	16000	4.73
800	0.95	4600	1.97	8400	3.31	12200	3.92	16100	4.78
900	1.01	4700	1.97	8500	3.32	12300	3.96	16200	4.84
1000	1.07	4800	2.03	8600	3.34	12400	4.01	16300	4.90
1100	1.11	4900	2.04	8700	3.35	12500	4.07	16400	4.87
1200	1.17	5000	2.10	8800	3.37	12600	4.08	16500	4.90
1300	1.22	5100	2.53	8900	3.39	12700	4.17	16600	4.98
1400	1.27	5200	2.55	9000	3.42	12800	4.26	16700	5.05
1500	1.29	5300	2.60	9100	3.43	12900	4.16	16800	5.04
1600	1.35	5400	2.61	9200	3.51	13000	4.21	16900	5.02
1700	1.40	5500	2.64	9300	3.52	13100	4.24	17000	5.09
1800	1.44	5600	2.70	9400	3.54	13200	4.27	17100	5.07
1900	1.51	5700	2.67	9500	3.63	13300	4.31	17200	5.10
2000	1.49	5800	2.71	9600	3.61	13400	4.33	17300	5.13
2100	1.55	5900	2.74	9700	3.71	13500	4.25	17400	5.23
2200	1.58	6000	2.80	9800	3.66	13600	4.27	17500	5.21
2300	1.62	6100	2.79	9900	3.77	13700	4.33	17600	5.22
2400	1.72	6200	2.81	10000	3.75	13800	4.33	17700	5.36
2500	1.76	6300	2.83	10100	3.77	13900	4.31	17800	5.35
2600	1.78	6400	2.86	10200	3.80	14000	4.30	17900	5.45
2700	1.80	6500	2.88	10300	3.79	14100	4.30	18000	5.43
2800	1.86	6600	2.90	10400	3.87	14200	4.31		
2900	1.90	6700	2.92	10500	3.83	14300	4.37		
3000	1.90	6800	2.98	10600	3.88	14400	4.35		
3100	1.97	6900	2.98	10700	3.86	14600	4.53		
3200	1.97	7000	3.00	10800	3.87	14700	4.50		
3300	2.03	7100	3.02	10900	3.90	14800	4.62		
3400	2.04	7200	3.04	11000	3.84	14900	4.65		
3500	2.10	7300	3.06	11100	3.88	15000	4.79		



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

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



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

Frequency, MHz	Cable loss,	Frequency, MHz	Cable loss,	Frequency, MHz	Cable loss, dB	Frequency, MHz	Cable loss,
10	0.13	1750	2.66	3550	4.44	5350	6.08
30	0.15	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	0.71	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	1.14	2300	3.10	4100	5.04	5900	6.71
550	1.30	2350	3.26	4150	5.10	5950	6.70
600	1.37	2400	3.31	4200	5.10	6000	6.75
	1.37	2450	3.35		5.06		6.74
650				4250		6050	
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 $dB(\mu V)$ decibel referred to one microvolt

 $dB(\mu V/m)$ decibel referred to one microvolt per meter $dB(\mu A)$ decibel referred to one microampere

 $\begin{array}{ll} \text{dB}\Omega & \text{decibel referred to one Ohm} \\ \text{DC} & \text{direct current} \end{array}$

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

min minute
mm millimeter
ms millisecond

µs microsecond

NA not applicable

NT not tested

OATS open area test site

 Ω Ohm

PCB printed circuit board PM pulse modulation PS power supply

ppm part per million (10⁻⁶)

QP quasi-peak
RE radiated emission
RF radio frequency
rms root mean square

 Rx
 receive

 s
 second

 T
 temperature

 Tx
 transmit

 V
 volt

 VA
 volt-ampere

END OF TEST REPORT

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

RADWIN

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	Туре	Antenna Frequency [GHz]	Antenna Assembly Gain at 5250-5350 MHz [dBi]	Channel Frequency [MHz]	Channel Bandwidth [MHz]	Outpu 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
				5275, 5325	40	14.4
RW-9611-4958INT	FP Dual Pole Integrated	4.9 - 6.0	23.5	5257.5, 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
	FP Dual Pole External	5.15 - 6.09	22.5*	5257.5, 5300, 5342.5	5	2.5
				5260, 5300, 5340	10	3.9
				5270, 5300, 5330	20	7.4
RW-9611-4958				5265, 5335	20	1.5
				5285, 5300, 5315	40	7.4
				5275, 5325	40	1.5
RW-9611-4958	FP Dual Pole External	5.15 - 6.09	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
				5275, 5325	40	14.4

^{*} Antenna assembly gain = Antenna Gain - Feeder Loss

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16 APPENDIX H RADWIN 5000 Antenna List and Power Settings

RADWIN

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	Туре	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
RW-9061-5001	FP Dual Pole External	4.9 - 5.95	6*	5260, 5300, 5340	5	18.9
				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
RW-9061-5002	FP Dual Pole External	4.9 - 6.06	6*	5260, 5300, 5340	5	18.9
				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

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