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TEST REPORT

ACCORDING TO: FCC part 15 subpart E and RSS-210 Issue 7, Annex 9

FOR:

RadWin Ltd.

Outdoor radio unit operating in the 5.3 GHz band

Model: F54/FCC/CMB/INT, F54/IC/CMB/INT, F54/FCC/CMB/EXT, F54/IC/CMB/EXT

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1 Applicant information

Client name:	RadWin Ltd.
Address:	32 Habarzel str., Tel Aviv, Israel, 69710
Telephone:	+972 3766 2988
Fax:	+972 3766 2922
E-mail:	shlomo_weiss@radwin.com
Contact name:	Mr. Shlomo Weiss

2 Equipment under test attributes

Product name:	Outdoor radio unit operating in the 5.3 GHz band
Product type:	Point to point transceiver
Model(s):	F54/FCC/CMB/INT, F54/IC/CMB/INT, F54/FCC/CMB/EXT, F54/IC/CMB/EXT
Receipt date	4/07/2008

3 Manufacturer information

Manufacturer name:	RadWin Ltd.
Address:	32 Habarzel str., Tel Aviv, Israel, 69710
Telephone:	+972 3766 2988
Fax:	+972 3766 2922
E-Mail:	shlomo_weiss@radwin.com
Contact name:	Mr. Shlomo Weiss

4 Test details

Project ID:	18686
Location:	Hermon Laboratories Ltd. P.O.Box 23, Binyamina 30500, Israel
Test started:	4/07/2008
Test completed:	8/13/2008
Test specification(s):	FCC part 15 subpart E; RSS-210 Issue 7:2007, Annex 9 RSS-Gen Issue 2:2007



5 Tests summary

Test	Status
Transmitter characteristics	
FCC Section 15.407(a)(3) / RSS-Gen, Section 4.6, Occupied 26 dB bandwidth	Measured
FCC Section 15.407(a)(3) / RSS-210, Section A9.2, Maximum peak output power	Pass
FCC Section 15.407(a)(3) / RSS-210, Section A9.2, Peak power spectral density	Pass
FCC Section 15.407(a)(6), Ratio of the peak excursion of the modulation envelope	Pass
to the peak transmit power	
FCC Section 15.407(b) / RSS-210, Section A9.3, Unwanted radiated emission	Pass
FCC Section 15.407(f), / RSS-Gen, Section 5.5, RF exposure	Provided in documentation for Application
FCC Section 15.407(g), / RSS-210, Section A9.5, Frequency stability	Pass

Testing was completed against all relevant requirements of the test standard. Results obtained indicate that the product under test complies in full with the requirements tested.

The test results relate only to the items tested. Pass/ fail decision was based on nominal values.

	Name and Title	Date	Signature
Tested by:	Mr. E. Plotnichenko, test engineer	August 13, 2008	Front
Reviewed by:	Mrs. M. Cherniavsky, certification engineer	September 14, 2008	Chur
Approved by:	Mr. M. Nikishin, EMC and radio group manager	September 16, 2008	Sty of



EUT description 6

6.1 **General information**

The EUT is an outdoor unit radio unit. The EUT provides high capacity connectivity of up to 54 Mbps. The ODU may be used with integral or external antenna.

6.2 **Ports and lines**

Port	Port	Connected		Connector	Q-ty	Cable	Cable	Indoor /
type	description	From	То	type		type	length, m	outdoor
Power	-48 VDC	AC/DC adapter	IDU	Terminal block	1	unshielded	1.5	Indoor
Power	AC power	mains	AC/DC adapter	IEC 60320	1	unshielded	1.5	Indoor
RF	Antenna	EUT	antenna	N-type	1	shielded	1	Outdoor*
Signal	DC+ Ethernet	IDU	EUT	RJ45	1	shielded	20	Outdoor
Signal	Sync	EUT	Laptop	RJ45	1	unshielded	1.5	Indoor**
Signal	Ethernet	IDU	Laptop	RJ45	1	FTP	20	Indoor

 * - for external antenna configuration only, 1 dB loss ** - for configuration prior the test

6.3 Support and test equipment

Description	Manufacturer	Model number	Serial number
Laptop	Dell	Latitude/D530	NA
IDU (for configuration with ODU)	RadWin Ltd.	IDU-E	DE2E2000123
AC/DC	YCL	WMB480042-5G	S0714002271

6.4 Changes made in the EUT

No changes were implemented.



6.5 Test configuration





6.6 Transmitter characteristics

Type of equipment							
X Stand-alone (Equ	ipment w	/ith or v	without its own contr	ol provisions)			
Intended use Condition of use							
X fixed	Always a	at a dist	tance more than 2 m	from all people			
Assigned frequency rar	nge	5250	- 5350 MHz				
Operating frequency ra	nge	5255	- 5345 MHz				
		Aver	verage (conducted)		1.3 3 c	1.3 dBm with integral antenna 3 dBm with external antenna	
Maximum rated output	power	Peak	(conducted)		13 13	13.63 dBm with integral antenna 13.55 dBm with external antenna	
		Softv	vare nower setting	\$	8 0	8 dBm with integral antenna	
		••••	ina pono ocung	-	90	dBm with external antenna	
Antenna connection							
unique coupling	Х	stand type	lard connector, N-	integral	Х	with temporary RF connector without temporary RF connector	
Antenna/s technical cha	aracteris	tics					
Туре	Manufa	acturer		Model number		Gain	
Flat Panel (integral)	SmartA	nt Tele	lecom Co. Ltd. ALA06-200350			22 dBi	
Planar Array (external)	MTI Ltc	l.	MT – 485045/N			22 dBi	
Transmitter 99% powe	er bandw	vidth	Transmitter age	regate data rate/s, MBps		Type of modulation (OFDM)	
5 MHz			1.5; 2.25 3; 4.5 6; 9 12; 13.5			BPSK QPSK 16QAM 64QAM	
10 MHz			3, 4.5 6; 9 12; 18 24; 27			BPSK QPSK 16QAM 64QAM	
20 MHz			6; 9 12; 18 24; 36 48; 54			BPSK QPSK 16QAM 64QAM	
Type of multiplexing			NA				
Modulating test signal (Modulating test signal (baseband) NA						
Maximum transmitter duty cycle in normal use 40%							
Transmitter duty cycle supplied for test 100%							

Table 6.6.1 Measurement frequencies according to FCC part 15 subpart E requirements

Channel bandwidth, MHz	Channel frequency, MHz				
	Low	Mid	High		
5	5255	5300	5345		
10	5257.5	5300	5340		
20	5262.5	5300	5332.5		



Test specification:	Section 15. 407(a)(1-3), RSS-210 Annex 9, section A9.2 Peak output power and peak power spectral density				
Test procedure:	FCC Public Notice DA 02-2138, Appendix A				
Test mode:	Compliance	Vardiati DACC			
Date:	6/15/2008	Verdict: PASS			
Temperature: 23 °C	Air Pressure: 1012 hPa	Relative Humidity: 52 %	Power Supply: 120 VAC		
Remarks:					

7 Transmitter tests according to 47CFR part 15 subpart E and RSS-210 Annex 9 requirements

7.1 Peak output power and peak spectral power density

7.1.1 General

This test was performed to measure the maximum peak output power and the peak spectral power density at the transmitter RF antenna connector. Specification test limits are given in Table 7.1.1.

Table 7.1.1 Peak ou	tput power a	and peak spe	ectral power de	nsity limits
---------------------	--------------	--------------	-----------------	--------------

Assigned frequency	Maximum peak transmit power*,	Peak spectral power	Measurement bandwidth, MHz
range, MHz	dBm	density*, dBm	
5250 - 5350	The lesser of 250 mW or 11 dBm +10 log B**	11.0	1.0

*Note 1: due to 22 dBi antenna gain the limits of peak output power and peak power spectral density shall be reduced by 16 dB

**Note 2: "B" is the 26-dB emission bandwidth in MHz.

7.1.2 Test procedure

- 7.1.2.1 The EUT was set up as shown in Figure 7.1.1, energized and its proper operation was checked.
- 7.1.2.2 The EUT was set to transmit modulated carrier at maximum data rate.
- **7.1.2.3** The measurements were performed in continuous transmission mode of operation for carrier (channel) frequencies at low and high edges and at the middle of the frequency range shown in Table 7.1.1. The transmitter 26 dB bandwidth was measured with spectrum analyzer as frequency delta between reference points on modulation envelope and provided in Table 7.1.2, Table 7.1.4 and associated plots.
- 7.1.2.4 The EUT was adjusted to produce maximum available for end user RF output power.
- **7.1.2.5** The peak output power measurements were performed in continuous transmission mode of operation for carrier (channel) frequency at low, mid and high edges with a sample detector. The power was computed by integrating the spectrum across the 26 dB bandwidth of the signal as provided in Table 7.1.2, Table 7.1.4 and associated plots.
- **7.1.2.6** The peak power spectral density was measured using a sample detector and power averaging mode to find the highest level across the emission in any 1-MHz band after 100 sweeps of averaging. The test results are provided in Table 7.1.2, Table 7.1.4 and associated plots.

Figure 7.1.1 Peak output power test setup





Test specification:	Section 15. 407(a)(1-3), RSS-210 Annex 9, section A9.2 Peak output power and peak power spectral density					
Test procedure:	FCC Public Notice DA 02-2138, Appendix A					
Test mode:	Compliance	Vordict	DASS			
Date:	6/15/2008	veruict.	FA33			
Temperature: 23 °C	Air Pressure: 1012 hPa	Relative Humidity: 52 %	Power Supply: 120 VAC			
Remarks:						

7.1.3 Test procedure for measurements with power meter

- 7.1.3.1 The EUT was set up as shown in Figure 7.1.2, energized and its proper operation was checked.
- 7.1.3.2 The EUT was adjusted to produce maximum available to the end user RF output power.
- **7.1.3.3** The peak output power was measured with thermocouple power meter as provided in Table 7.1.3, Table 7.1.5.

Figure 7.1.2 Peak output power test setup





Test specification:	FCC section 15. 407(a)(1-3), RSS-210 Annex 9, section A9.2 Peak output power and peak power spectral density						
Test procedure:	FCC Public Notice DA 02-213	FCC Public Notice DA 02-2138, Appendix A					
Test mode:	Compliance	Vordict	DASS				
Date:	6/15/2008	verdict.	FA33				
Temperature: 23 °C	Air Pressure: 1012 hPa	Relative Humidity: 52 %	Power Supply: 120 VAC				
Remarks: EUT with internal antenna							

Table 7.1.2 Average output power and peak power density test results

2

ASSIGNED FREQUENCY: TRANSMITTER OUTPUT POWER SETTINGS:

DETECTOR USED: RESOLUTION BANDWIDTH: VIDEO BANDWIDTH: METHOD OF POWER MEASUREMENTS: METHOD OF POWER DENSITY MEASUREMENTS: 5250 - 5350 MHz "2 dBm" at 5 MHz channel bandwidth "5 dBm" at 10 MHz channel bandwidth "8 dBm" at 20 MHz channel bandwidth Sample 1 MHz 3 MHz 1

Frequency	26 dB	Dit rate		Out	tput powe	r	Peak	power dens	ity	
MHz	bandwidth	MBps	Modulation	Measured, dBm	Limit, dBm	Margin, dB*	Measured, dBm/MHz	Limit, dBm/MHz	Margin, dB**	Verdict
Low channel, CBW 20 MHz										
5262.5	23.20	6	BPSK	0.88	8.00	-7.12	-12.91	-5	-7.91	Pass
5262.5	21.60	18	QPSK	1.31	8.00	-6.69	-12.03	-5	-7.03	Pass
5262.5	21.50	24	16QAM	0.71	8.00	-7.29	-12.62	-5	-7.62	Pass
5262.5	23.20	54	64QAM	1.10	8.00	-6.90	-12.55	-5	-7.55	Pass
Low channe	el, CBW 10 M	Hz								
5257.5	12.50	3	BPSK	-1.60	5.97	-7.57	-12.63	-5	-7.63	Pass
5257.5	9.60	9	QPSK	0.45	4.82	-4.37	-9.37	-5	-4.37	Pass
5257.5	9.64	12	16QAM	0.23	4.84	-4.61	-9.61	-5	-4.61	Pass
5257.5	9.53	27	64QAM	-0.15	4.79	-4.94	-9.94	-5	-4.94	Pass
Low channe	el, CBW 5 MH	z								
5255	6.25	1.5	BPSK	-4.40	2.96	-7.36	-12.35	-5	-7.35	Pass
5255	4.88	4.5	QPSK	-3.65	1.89	-5.54	-10.54	-5	-5.54	Pass
5255	5.06	6.0	16QAM	-3.76	2.04	-5.80	-10.80	-5	-5.8	Pass
5255	4.83	13.5	64QAM	-3.83	1.84	-5.67	-10.67	-5	-5.67	Pass
Mid channe	I, CBW 20 M⊦	Iz								
5300	23.40	6	BPSK	0.21	8.00	-7.79	-13.48	-5	-8.48	Pass
5300	21.90	18	QPSK	1.15	8.00	-6.85	-12.26	-5	-7.26	Pass
5300	21.60	24	16QAM	1.03	8.00	-6.97	-12.31	-5	-7.31	Pass
5300	23.10	54	64QAM	0.95	8.00	-7.05	-12.69	-5	-7.69	Pass
Mid channe	I, CBW 10 MH	lz								
5300	12.11	3	BPSK	-3.07	5.83	-8.90	-13.91	-5	-8.91	Pass
5300	9.68	9	QPSK	-0.97	4.86	-5.83	-10.83	-5	-5.83	Pass
5300	9.71	12	16QAM	-1.08	4.87	-5.95	-10.95	-5	-5.95	Pass
5300	9.49	27	64QAM	-1.44	4.77	-6.21	-11.21	-5	-6.21	Pass
Mid channe	I, CBW 5 MHz	2								
5300	6.14	1.5	BPSK	-5.80	2.88	-8.68	-13.68	-5	-8.68	Pass
5300	4.92	4.5	QPSK	-5.05	1.92	-6.97	-11.97	-5	-6.97	Pass
5300	4.94	6.0	16QAM	-5.17	1.94	-7.11	-12.11	-5	-7.11	Pass
5300	4.86	13.5	64QAM	-5.07	1.87	-6.94	-11.93	-5	-6.93	Pass

Note 1: due to 22 dBi antenna gain the limits of peak output power and peak power spectral density shall be reduced by 16 dB

Note 2: Measurement plots are in dBm/Hz, in order to convert to dBm/MHz a 60dB factor was added

* - Margin = Measured output power – specification limit

** - Margin = Measured peak power density - specification limit.



Test specification:	FCC section 15. 407(a)(1-3), RSS-210 Annex 9, section A9.2 Peak output power and peak power spectral density					
Test procedure:	FCC Public Notice DA 02-2138, Appendix A					
Test mode:	Compliance	Vordict	DAGG			
Date:	6/15/2008	verdict.	FA33			
Temperature: 23 °C	Air Pressure: 1012 hPa	Relative Humidity: 52 %	Power Supply: 120 VAC			
Remarks: EUT with internal antenna						

Table 7.1.2 Average output power and peak power density test results (continued)

Frequency	26 dB	Bit rate		Out	put powe	r	Peak	power dens	ity	Verdict
MHz	bandwidth	MBps	Modulation	Measured, dBm	Limit, dBm	Margin, dB*	Measured, dBm/MHz	Limit, dBm/MHz	Margin, dB**	
High channe	el, CBW 20 M	Hz								
5332.5	23.00	6	BPSK	0.70	8.00	-7.3	-12.92	-5	-7.92	Pass
5332.5	21.90	18	QPSK	1.17	8.00	-6.83	-12.23	-5	-7.23	Pass
5332.5	21.80	24	16QAM	1.09	8.00	-6.91	-12.29	-5	-7.29	Pass
5332.5	23.40	54	64QAM	0.60	8.00	-7.40	-13.09	-5	-8.09	Pass
High chann	el, CBW 10 M	lHz								
5340	12.11	3	BPSK	-3.75	5.83	-9.58	-14.58	-5	-9.58	Pass
5340	9.68	9	QPSK	-0.94	4.86	-5.80	-10.79	-5	-5.79	Pass
5340	9.60	12	16QAM	-1.13	4.82	-5.95	-10.95	-5	-5.95	Pass
5340	9.45	27	64QAM	-1.60	4.75	-6.35	-11.36	-5	-6.36	Pass
High chann	el, CBW 5 MH	łz								
5345	6.09	1.5	BPSK	-5.85	2.85	-8.70	-13.69	-5	-8.69	Pass
5345	4.94	4.5	QPSK	-5.14	1.93	-7.07	-12.07	-5	-7.07	Pass
5345	4.99	6.0	16QAM	-5.25	1.98	-7.23	-12.19	-5	-7.19	Pass
5345	4.87	13.5	64QAM	-5.19	1.87	-7.06	-12.06	-5	-7.06	Pass

Note 1: due to 22 dBi antenna gain the limits of peak output power and peak power spectral density shall be reduced by 16 dB

Note 2: Measurement plots are in dBm/Hz, in order to convert to dBm/MHz a 60dB factor was added

* - Margin = Measured output power - specification limit

** - Margin = Measured peak power density – specification limit.

Reference numbers of test equipment used

HL 2909	HL 3208	HL 3439								
Eull des signifiers										

Full description is given in Appendix A.



Test specification:	FCC section 15. 407(a)(1-3), RSS-210 Annex 9, section A9.2 Peak output power and peak power spectral density					
Test procedure:	FCC Public Notice DA 02-2138, Appendix A					
Test mode:	Compliance	Vordict	DASS			
Date:	6/15/2008	verdict.	FA33			
Temperature: 23 °C	Air Pressure: 1012 hPa	Relative Humidity: 52 %	Power Supply: 120 VAC			
Remarks: EUT with internal antenna						

Table 7.1.3 Peak output power test results measured with peak power meter

Frequency MHz	requency MHz Bit rate Mbps Modulation Power meter reading dBm						
VIDEO BANDWIDTH:			3 MHz				
RESOLUTION BAND	WIDTH:		1 MHz				
DETECTOR USED:			Peak				
			"5 dBm" at 10 MHz channel bandwidth; "8 dBm" at 20 MHz channel bandwidth				
TRANSMITTER OUT	PUT POWER SET	TINGS:	"2 dBm" at 5 MHz channel bandwidth,				
MODULATING SIGN	AL:		OFDM				
ASSIGNED FREQUE	NCY:		5250 - 5350 MHz				

Frequency, MHz	Bit rate, Mbps	Modulation	Power meter reading, dBm	Feeder loss, dB	Peak output power, dBm
Low channel					
5262.5	6	BPSK	13.55	0	13.55
5262.5	18	QPSK	12.78	0	12.78
5262.5	24	16QAM	13.63	0	13.63
5262.5	54	64QAM	13.10	0	13.10
5257.5	3	BPSK	12.13	0	12.13
5257.5	9	QPSK	11.22	0	11.22
5257.5	12	16QAM	12.13	0	12.13
5257.5	27	64QAM	11.63	0	11.63
5255	1.5	BPSK	8.59	0	8.59
5255	4.5	QPSK	7.70	0	7.70
5255	6	16QAM	8.69	0	8.69
5255	13.5	64QAM	8.45	0	8.45
Mid channel					
5300	6	BPSK	12.42	0	12.42
5300	18	QPSK	12.45	0	12.45
5300	24	16QAM	13.30	0	13.30
5300	54	64QAM	12.55	0	12.55
5300	3	BPSK	11.55	0	11.55
5300	9	QPSK	10.81	0	10.81
5300	12	16QAM	11.64	0	11.64
5300	27	64QAM	11.08	0	11.08
5300	1.5	BPSK	8.52	0	8.52
5300	4.5	QPSK	7.17	0	7.17
5300	6	16QAM	8.07	0	8.07
5300	13.5	64QAM	7.46	0	7.46
High channel					
5332.5	6	BPSK	11.75	0	11.75
5332.5	18	QPSK	12.00	0	12.00
5332.5	24	16QAM	12.90	0	12.90
5332.5	54	64QAM	12.62	0	12.62
5340	3	BPSK	11.25	0	11.25
5340	9	QPSK	10.48	0	10.48
5340	12	16QAM	11.41	0	11.41
5340	27	64QAM	10.70	0	10.70
5345	1.5	BPSK	7.72	0	7.72
5345	4.5	QPSK	6.85	0	6.85
5345	6	16QAM	7.15	0	7.15
5345	13.5	64QAM	7.12	0	7.12

HL 2909 HL 3208 HL 3439

Full description is given in Appendix A.



Test specification:	FCC section 15. 407(a)(1-3), RSS-210 Annex 9, section A9.2 Peak output power and peak power spectral density					
Test procedure:	FCC Public Notice DA 02-213	FCC Public Notice DA 02-2138, Appendix A				
Test mode:	Compliance	Vordict	DASS			
Date:	6/15/2008	verdict.	FA33			
Temperature: 23 °C	Air Pressure: 1012 hPa	Relative Humidity: 52 %	Power Supply: 120 VAC			
Remarks: EUT with internal antenna						

Plot 7.1.1 The 26 dB emission bandwidth

Frequency:	5262.5 MHz
Channel BW:	20 MHz
Modulation parameters:	BPSK, 6 Mbps



Note: The real center frequency is 5262.5 MHz (SA display limitations)

Plot 7.1.2 Power and power density, low frequency

Frequency:	5262.5 MHz
Channel BW:	20 MHz
Modulation parameters:	BPSK, 6 Mbps





Test specification:	FCC section 15. 407(a)(1-3), RSS-210 Annex 9, section A9.2 Peak output power and peak power spectral density		
Test procedure:	FCC Public Notice DA 02-2138, Appendix A		
Test mode:	Compliance	Vordict	DAGG
Date:	6/15/2008	verdict.	FA33
Temperature: 23 °C	Air Pressure: 1012 hPa	Relative Humidity: 52 %	Power Supply: 120 VAC
Remarks: EUT with internal antenna			

Plot 7.1.3 The 26 dB emission bandwidth, low frequency





Note: The real center frequency is 5262.5 MHz (SA display limitations)

Plot 7.1.4 Power and power density, low frequency

Frequency:	5262.5 MHz
Channel BW:	20 MHz
Modulation parameters:	QPSK, 18 Mbps





Test specification:	FCC section 15. 407(a)(1-3), RSS-210 Annex 9, section A9.2 Peak output power and peak power spectral density		
Test procedure:	FCC Public Notice DA 02-2138, Appendix A		
Test mode:	Compliance	Vordict	DASS
Date:	6/15/2008	verdict.	FA33
Temperature: 23 °C	Air Pressure: 1012 hPa	Relative Humidity: 52 %	Power Supply: 120 VAC
Remarks: EUT with internal antenna			

Plot 7.1.5 The 26 dB emission bandwidth, low frequency





Note: The real center frequency is 5262.5 MHz (SA display limitations)

Plot 7.1.6 Power and power density, low frequency

Frequency:	5262.5 MHz
Channel BW:	20 MHz
Modulation parameters:	16QAM, 24 Mbps





Test specification:	FCC section 15. 407(a)(1-3), RSS-210 Annex 9, section A9.2 Peak output power and peak power spectral density		
Test procedure:	FCC Public Notice DA 02-2138, Appendix A		
Test mode:	Compliance	Vordict	DASS
Date:	6/15/2008	verdict.	FA33
Temperature: 23 °C	Air Pressure: 1012 hPa	Relative Humidity: 52 %	Power Supply: 120 VAC
Remarks: EUT with internal antenna			

Plot 7.1.7 The 26 dB emission bandwidth, low frequency





Note: The real center frequency is 5262.5 MHz (SA display limitations)

Plot 7.1.8 Power and power density, low frequency

Frequency:	5262.5 MHz
Channel BW:	20 MHz
Modulation parameters:	64QAM, 54 Mbps





Test specification:	FCC section 15. 407(a)(1-3), RSS-210 Annex 9, section A9.2 Peak output power and peak power spectral density		
Test procedure:	FCC Public Notice DA 02-2138, Appendix A		
Test mode:	Compliance	Verdiet: DAC	DAGG
Date:	6/15/2008	verdict.	FA33
Temperature: 23 °C	Air Pressure: 1012 hPa	Relative Humidity: 52 %	Power Supply: 120 VAC
Remarks: EUT with internal antenna			

Plot 7.1.9 The 26 dB emission bandwidth, low frequency





Note: The real center frequency is 5257.5 MHz (SA display limitations)

Plot 7.1.10 Power and power density, low frequency

Frequency:	5257.5 MHz
Channel BW:	10 MHz
Modulation parameters:	BPSK, 3 Mbps





Test specification:	FCC section 15. 407(a)(1-3), RSS-210 Annex 9, section A9.2 Peak output power and peak power spectral density		
Test procedure:	FCC Public Notice DA 02-2138, Appendix A		
Test mode:	Compliance	Vordict	DAGG
Date:	6/15/2008	verdict.	FA33
Temperature: 23 °C	Air Pressure: 1012 hPa	Relative Humidity: 52 %	Power Supply: 120 VAC
Remarks: EUT with internal antenna			

Plot 7.1.11 The 26 dB emission bandwidth, low frequency

Frequency:	5257.5 MHz
Channel BW:	10 MHz
Modulation parameters:	QPSK, 9 Mbps



Note: The real center frequency is 5257.5 MHz (SA display limitations)

Plot 7.1.12 Power and power density, low frequency

Frequency:	5257.5 MHz
Channel BW:	10 MHz
Modulation parameters:	QPSK, 9 Mbps





Test specification:	FCC section 15. 407(a)(1-3), RSS-210 Annex 9, section A9.2 Peak output power and peak power spectral density		
Test procedure:	FCC Public Notice DA 02-2138, Appendix A		
Test mode:	Compliance	Verdict:	DASS
Date:	6/15/2008		FA33
Temperature: 23 °C	Air Pressure: 1012 hPa	Relative Humidity: 52 %	Power Supply: 120 VAC
Remarks: EUT with internal antenna			

Plot 7.1.13 The 26 dB emission bandwidth, low frequency

Frequency:	5257.5 MHz
Channel BW:	10 MHz
Modulation parameters:	16QAM, 12 Mbps



Note: The real center frequency is 5257.5 MHz (SA display limitations)

Plot 7.1.14 Power and power density, low frequency

Frequency:	5257.5 MHz
Channel BW:	10 MHz
Modulation parameters:	16QAM, 12 Mbps





Test specification:	FCC section 15. 407(a)(1-3), RSS-210 Annex 9, section A9.2 Peak output power and peak power spectral density		
Test procedure:	FCC Public Notice DA 02-2138, Appendix A		
Test mode:	Compliance	Vordiot	DASS
Date:	6/15/2008	verdict.	FA33
Temperature: 23 °C	Air Pressure: 1012 hPa	Relative Humidity: 52 %	Power Supply: 120 VAC
Remarks: EUT with internal antenna			

Plot 7.1.15 The 26 dB emission bandwidth, low frequency

Frequency:	5257.5 MHz
Channel BW:	10 MHz
Modulation parameters:	64QAM, 27 Mbps



Note: The real center frequency is 5257.5 MHz (SA display limitations)

Plot 7.1.16 Power and power density, low frequency

Frequency:	5257.5 MHz
Channel BW:	10 MHz
Modulation parameters:	64QAM, 27 Mbps





Test specification:	FCC section 15. 407(a)(1-3), RSS-210 Annex 9, section A9.2 Peak output power and peak power spectral density		
Test procedure:	FCC Public Notice DA 02-2138, Appendix A		
Test mode:	Compliance	Vordiot	DASS
Date:	6/15/2008	verdict.	FA33
Temperature: 23 °C	Air Pressure: 1012 hPa	Relative Humidity: 52 %	Power Supply: 120 VAC
Remarks: EUT with internal antenna			

Plot 7.1.17 The 26 dB emission bandwidth, low frequency

Frequency:	5255 MHz
Channel BW:	5 MHz
Modulation parameters:	BPSK, 1.5 Mbps



Plot 7.1.18 Power and power density, low frequency





Test specification:	FCC section 15. 407(a)(1-3), RSS-210 Annex 9, section A9.2 Peak output power and peak power spectral density		
Test procedure:	FCC Public Notice DA 02-2138, Appendix A		
Test mode:	Compliance	Vordiot	DASS
Date:	6/15/2008	verdict.	FA33
Temperature: 23 °C	Air Pressure: 1012 hPa	Relative Humidity: 52 %	Power Supply: 120 VAC
Remarks: EUT with internal antenna			

Plot 7.1.19 The 26 dB emission bandwidth, low frequency

Frequency:	5255 MHz
Channel BW:	5 MHz
Modulation parameters:	QPSK, 4.5 Mbps



Plot 7.1.20 Power and power density, low frequency





Test specification:	FCC section 15. 407(a)(1-3), RSS-210 Annex 9, section A9.2 Peak output power and peak power spectral density		
Test procedure:	FCC Public Notice DA 02-2138, Appendix A		
Test mode:	Compliance	Vordiot	DASS
Date:	6/15/2008	verdict.	FA33
Temperature: 23 °C	Air Pressure: 1012 hPa	Relative Humidity: 52 %	Power Supply: 120 VAC
Remarks: EUT with internal antenna			

Plot 7.1.21 The 26 dB emission bandwidth, low frequency





Plot 7.1.22 Power and power density, low frequency





Test specification:	FCC section 15. 407(a)(1-3), RSS-210 Annex 9, section A9.2 Peak output power and peak power spectral density		
Test procedure:	FCC Public Notice DA 02-2138, Appendix A		
Test mode:	Compliance	Vordiot	DAGG
Date:	6/15/2008	verdict.	FA33
Temperature: 23 °C	Air Pressure: 1012 hPa	Relative Humidity: 52 %	Power Supply: 120 VAC
Remarks: EUT with internal	antenna		

Plot 7.1.23 The 26 dB emission bandwidth, low frequency

Frequency:	5255 MHz
Channel BW:	5 MHz
Modulation parameters:	64QAM, 13.5 Mbps



Plot 7.1.24 Power and power density, low frequency





Test specification:	FCC section 15. 407(a)(1-3), RSS-210 Annex 9, section A9.2 Peak output power and peak power spectral density		
Test procedure:	FCC Public Notice DA 02-2138, Appendix A		
Test mode:	Compliance	Vordiot	DASS
Date:	6/15/2008	verdict.	FA33
Temperature: 23 °C	Air Pressure: 1012 hPa	Relative Humidity: 52 %	Power Supply: 120 VAC
Remarks: EUT with internal	antenna		

Plot 7.1.25 The 26 dB emission bandwidth, mid frequency

Frequency:	5300 MHz
Channel BW:	20 MHz
Modulation parameters:	BPSK, 6 Mbps



Plot 7.1.26 Power and power density, mid frequency





-73.48 dBm/Hz



Test specification:	FCC section 15. 407(a)(1-3), RSS-210 Annex 9, section A9.2 Peak output power and peak power spectral density		
Test procedure:	FCC Public Notice DA 02-2138, Appendix A		
Test mode:	Compliance	Vordiet	DASS
Date:	6/15/2008	verdict.	FA33
Temperature: 23 °C	Air Pressure: 1012 hPa	Relative Humidity: 52 %	Power Supply: 120 VAC
Remarks: EUT with internal antenna			

Plot 7.1.27 The 26 dB emission bandwidth, mid frequency

Frequency:	5300 MHz
Channel BW:	20 MHz
Modulation parameters:	QPSK, 18 Mbps



Plot 7.1.28 Power and power density, mid frequency





Test specification:	FCC section 15. 407(a)(1-3), RSS-210 Annex 9, section A9.2 Peak output power and peak power spectral density		
Test procedure:	FCC Public Notice DA 02-2138, Appendix A		
Test mode:	Compliance	Vordiet	DASS
Date:	6/15/2008	verdict.	FA33
Temperature: 23 °C	Air Pressure: 1012 hPa	Relative Humidity: 52 %	Power Supply: 120 VAC
Remarks: EUT with internal antenna			

Plot 7.1.29 The 26 dB emission bandwidth, mid frequency

Frequency:	5300 MHz
Channel BW:	20 MHz
Modulation parameters:	16QAM, 24 Mbps



Plot 7.1.30 Power and power density, mid frequency





Test specification:	FCC section 15. 407(a)(1-3), RSS-210 Annex 9, section A9.2 Peak output power and peak power spectral density		
Test procedure:	FCC Public Notice DA 02-2138, Appendix A		
Test mode:	Compliance	Vordiot	DASS
Date:	6/15/2008	verdict.	FA33
Temperature: 23 °C	Air Pressure: 1012 hPa	Relative Humidity: 52 %	Power Supply: 120 VAC
Remarks: EUT with internal	antenna		

Plot 7.1.31 The 26 dB emission bandwidth, mid frequency

Frequency:	5300 MHz
Channel BW:	20 MHz
Modulation parameters:	64QAM, 54 Mbps



Plot 7.1.32 Power and power density, mid frequency





Test specification:	FCC section 15. 407(a)(1-3), RSS-210 Annex 9, section A9.2 Peak output power and peak power spectral density		
Test procedure:	FCC Public Notice DA 02-2138, Appendix A		
Test mode:	Compliance	Vordiot	DASS
Date:	6/15/2008	verdict.	FA33
Temperature: 23 °C	Air Pressure: 1012 hPa	Relative Humidity: 52 %	Power Supply: 120 VAC
Remarks: EUT with internal	antenna		

Plot 7.1.33 The 26 dB emission bandwidth, mid frequency

Frequency:	5300 MHz
Channel BW:	10 MHz
Modulation parameters:	BPSK, 3 Mbps



Plot 7.1.34 Power and power density, mid frequency





Test specification:	FCC section 15. 407(a)(1-3), RSS-210 Annex 9, section A9.2 Peak output power and peak power spectral density			
Test procedure:	FCC Public Notice DA 02-2138, Appendix A			
Test mode:	Compliance	Vordict	DAGG	
Date:	6/15/2008	Verdict: PASS		
Temperature: 23 °C	Air Pressure: 1012 hPa	Relative Humidity: 52 %	Power Supply: 120 VAC	
Remarks: EUT with internal antenna				

Plot 7.1.35 The 26 dB emission bandwidth, mid frequency

Frequency:	5300 MHz
Channel BW:	10 MHz
Modulation parameters:	QPSK, 9 Mbps



Plot 7.1.36 Power and power density, mid frequency





Test specification:	FCC section 15. 407(a)(1-3), RSS-210 Annex 9, section A9.2 Peak output power and peak power spectral density			
Test procedure:	FCC Public Notice DA 02-2138, Appendix A			
Test mode:	Compliance	Verdict: PASS		
Date:	6/15/2008			
Temperature: 23 °C	Air Pressure: 1012 hPa	Relative Humidity: 52 %	Power Supply: 120 VAC	
Remarks: EUT with internal antenna				

Plot 7.1.37 The 26 dB emission bandwidth, mid frequency

Frequency:	5300 MHz
Channel BW:	10 MHz
Modulation parameters:	16QAM, 12 Mbps



Plot 7.1.38 Power and power density, mid frequency





Test specification:	FCC section 15. 407(a)(1-3), RSS-210 Annex 9, section A9.2 Peak output power and peak power spectral density			
Test procedure:	FCC Public Notice DA 02-2138, Appendix A			
Test mode:	Compliance	Vordict	DASS	
Date:	6/15/2008	Verdict: PASS		
Temperature: 23 °C	Air Pressure: 1012 hPa	Relative Humidity: 52 %	Power Supply: 120 VAC	
Remarks: EUT with internal antenna				

Plot 7.1.39 The 26 dB emission bandwidth, mid frequency

Frequency:	5300 MHz
Channel BW:	10 MHz
Modulation parameters:	64QAM, 27 Mbps



Plot 7.1.40 Power and power density, mid frequency





Test specification:	FCC section 15. 407(a)(1-3), RSS-210 Annex 9, section A9.2 Peak output power and peak power spectral density			
Test procedure:	FCC Public Notice DA 02-2138, Appendix A			
Test mode:	Compliance	Vordict	DAGG	
Date:	6/15/2008	Verdict: PASS		
Temperature: 23 °C	Air Pressure: 1012 hPa	Relative Humidity: 52 %	Power Supply: 120 VAC	
Remarks: EUT with internal antenna				

Plot 7.1.41 The 26 dB emission bandwidth, mid frequency





Plot 7.1.42 Power and power density, mid frequency

equency:		5300 MH	Z		
hannel BW:		5 MHz			
odulation param	eters:	BPSK, 1.5	5 Mbps		-
•					
🔆 Agilent			RΤ		
Ref -5 dBm	Atten 5 dB		Mk	r1 5.300612 GHz -10.84 dBm	:
#Samp		~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~			
10				~	_
dB/					_
21					~
dB					
					_
PAvg		-5.8			_
Center 5.3 GHz #Res BW 1 MHz	#VBV	dBm	#Sweep	Span 10.2 MH 20 ms (401 pts)	z
Channel Power			Power Spe	ctral Density	
-5.80 dBm /6	6.1400 MHz		-73.6	8 dBm/Hz	



Test specification:	FCC section 15. 407(a)(1-3), RSS-210 Annex 9, section A9.2 Peak output power and peak power spectral density			
Test procedure:	FCC Public Notice DA 02-2138, Appendix A			
Test mode:	Compliance	Vordict	DAGG	
Date:	6/15/2008	Verdict: PASS		
Temperature: 23 °C	Air Pressure: 1012 hPa	Relative Humidity: 52 %	Power Supply: 120 VAC	
Remarks: EUT with internal antenna				

Plot 7.1.43 The 26 dB emission bandwidth, mid frequency





Plot 7.1.44 Power and power density, mid frequency





Test specification:	FCC section 15. 407(a)(1-3), RSS-210 Annex 9, section A9.2 Peak output power and peak power spectral density			
Test procedure:	FCC Public Notice DA 02-2138, Appendix A			
Test mode:	Compliance	Vordict	DASS	
Date:	6/15/2008	Verdict: PASS		
Temperature: 23 °C	Air Pressure: 1012 hPa	Relative Humidity: 52 %	Power Supply: 120 VAC	
Remarks: EUT with internal antenna				

Plot 7.1.45 The 26 dB emission bandwidth, mid frequency





Plot 7.1.46 Power and power density, mid frequency





Test specification:	FCC section 15. 407(a)(1-3), RSS-210 Annex 9, section A9.2 Peak output power and peak power spectral density			
Test procedure:	FCC Public Notice DA 02-2138, Appendix A			
Test mode:	Compliance	Vordict	DAGG	
Date:	6/15/2008	Verdict: PASS		
Temperature: 23 °C	Air Pressure: 1012 hPa	Relative Humidity: 52 %	Power Supply: 120 VAC	
Remarks: EUT with internal antenna				

Plot 7.1.47 The 26 dB emission bandwidth, mid frequency





Plot 7.1.48 Power and power density, mid frequency




Test specification:	FCC section 15. 407(a)(1-3), RSS-210 Annex 9, section A9.2 Peak output power and peak power spectral density		
Test procedure:	FCC Public Notice DA 02-2138, Appendix A		
Test mode:	Compliance	Vardiat: DASS	DAGG
Date:	6/15/2008	verdict.	FA33
Temperature: 23 °C	Air Pressure: 1012 hPa	Relative Humidity: 52 %	Power Supply: 120 VAC
Remarks: EUT with interna	antenna		

Plot 7.1.49 The 26 dB emission bandwidth, high frequency





Plot 7.1.50 Power and power density, high frequency





Test specification:	FCC section 15. 407(a)(1-3), RSS-210 Annex 9, section A9.2 Peak output power and peak power spectral density		
Test procedure:	FCC Public Notice DA 02-2138, Appendix A		
Test mode:	Compliance	Vardiat: DASS	DAGG
Date:	6/15/2008	verdict.	FA33
Temperature: 23 °C	Air Pressure: 1012 hPa	Relative Humidity: 52 %	Power Supply: 120 VAC
Remarks: EUT with interna	antenna		

Plot 7.1.51 The 26 dB emission bandwidth, high frequency

Frequency:	5332.5 MHz
Channel BW:	20 MHz
Modulation parameters:	QPSK, 18 Mbps



Plot 7.1.52 Power and power density, high frequency





Test specification:	FCC section 15. 407(a)(1-3), RSS-210 Annex 9, section A9.2 Peak output power and peak power spectral density		
Test procedure:	FCC Public Notice DA 02-2138, Appendix A		
Test mode:	Compliance	Vardiat: DASS	DAGG
Date:	6/15/2008	verdict.	FA33
Temperature: 23 °C	Air Pressure: 1012 hPa	Relative Humidity: 52 %	Power Supply: 120 VAC
Remarks: EUT with internal	antenna		

Plot 7.1.53 The 26 dB emission bandwidth, high frequency

Frequency:	5332.5 MHz
Channel BW:	20 MHz
Modulation parameters:	16QAM, 24 Mbps



Plot 7.1.54 Power and power density, high frequency





Test specification:	FCC section 15. 407(a)(1-3), RSS-210 Annex 9, section A9.2 Peak output power and peak power spectral density		
Test procedure:	FCC Public Notice DA 02-2138, Appendix A		
Test mode:	Compliance	Vordiet: DAC	DASS
Date:	6/15/2008	verdict.	FA33
Temperature: 23 °C	Air Pressure: 1012 hPa	Relative Humidity: 52 %	Power Supply: 120 VAC
Remarks: EUT with internal	antenna		

Plot 7.1.55 The 26 dB emission bandwidth, high frequency





Plot 7.1.56 Power and power density, high frequency





Test specification:	FCC section 15. 407(a)(1-3), RSS-210 Annex 9, section A9.2 Peak output power and peak power spectral density		
Test procedure:	FCC Public Notice DA 02-2138, Appendix A		
Test mode:	Compliance	Vardiat: DASS	DAGG
Date:	6/15/2008	verdict.	FA33
Temperature: 23 °C	Air Pressure: 1012 hPa	Relative Humidity: 52 %	Power Supply: 120 VAC
Remarks: EUT with internal	antenna		

Plot 7.1.57 The 26 dB emission bandwidth, high frequency

Frequency:	5340 MHz
Channel BW:	10 MHz
Modulation parameters:	BPSK, 3 Mbps



Plot 7.1.58 Power and power density, high frequency





Test specification:	FCC section 15. 407(a)(1-3), RSS-210 Annex 9, section A9.2 Peak output power and peak power spectral density		
Test procedure:	FCC Public Notice DA 02-2138, Appendix A		
Test mode:	Compliance	Vordiot	DASS
Date:	6/15/2008	verdict.	FA33
Temperature: 23 °C	Air Pressure: 1012 hPa	Relative Humidity: 52 %	Power Supply: 120 VAC
Remarks: EUT with internal antenna			

Plot 7.1.59 The 26 dB emission bandwidth, high frequency

Frequency:	5340 MHz
Channel BW:	10 MHz
Modulation parameters:	QPSK, 9 Mbps



Plot 7.1.60 Power and power density, high frequency





Test specification:	FCC section 15. 407(a)(1-3), RSS-210 Annex 9, section A9.2 Peak output power and peak power spectral density		
Test procedure:	FCC Public Notice DA 02-2138, Appendix A		
Test mode:	Compliance	Vardiat: DASS	DAGG
Date:	6/15/2008	verdict.	FA33
Temperature: 23 °C	Air Pressure: 1012 hPa	Relative Humidity: 52 %	Power Supply: 120 VAC
Remarks: EUT with interna	antenna		

Plot 7.1.61 The 26 dB emission bandwidth, high frequency

Frequency:	5340 MHz
Channel BW:	10 MHz
Modulation parameters:	16QAM, 12 Mbps



Plot 7.1.62 Power and power density, high frequency





Test specification:	FCC section 15. 407(a)(1-3), RSS-210 Annex 9, section A9.2 Peak output power and peak power spectral density					
Test procedure:	FCC Public Notice DA 02-2138, Appendix A					
Test mode:	Compliance	Verdict: PASS				
Date:	6/15/2008					
Temperature: 23 °C	Air Pressure: 1012 hPa Relative Humidity: 52 % Power Supply: 120 VAC					
Remarks: EUT with internal antenna						

Plot 7.1.63 The 26 dB emission bandwidth, high frequency

Frequency:	5340 MHz
Channel BW:	10 MHz
Modulation parameters:	64QAM, 27 Mbps



Plot 7.1.64 Power and power density, high frequency





Test specification:	FCC section 15. 407(a)(1-3), RSS-210 Annex 9, section A9.2 Peak output power and peak power spectral density						
Test procedure:	FCC Public Notice DA 02-2138, Appendix A						
Test mode:	Compliance	Verdict: PASS					
Date:	6/15/2008						
Temperature: 23 °C	Air Pressure: 1012 hPa Relative Humidity: 52 % Power Supply: 120 VAC						
Remarks: EUT with internal antenna							

Plot 7.1.65 The 26 dB emission bandwidth, high frequency

Frequency:	5345 MHz
Channel BW:	5 MHz
Modulation parameters:	BPSK, 1.5 Mbps



Plot 7.1.66 Power and power density, high frequency





Test specification:	FCC section 15. 407(a)(1-3), RSS-210 Annex 9, section A9.2 Peak output power and peak power spectral density							
Test procedure:	FCC Public Notice DA 02-2138, Appendix A							
Test mode:	Compliance	Verdict: PASS						
Date:	6/15/2008							
Temperature: 23 °C	Air Pressure: 1012 hPa	Air Pressure: 1012 hPa Relative Humidity: 52 % Power Supply: 120 VAC						
Remarks: EUT with internal antenna								

Plot 7.1.67 The 26 dB emission bandwidth, high frequency





Plot 7.1.68 Power and power density, high frequency





Test specification:	FCC section 15. 407(a)(1-3), RSS-210 Annex 9, section A9.2 Peak output power and peak power spectral density						
Test procedure:	FCC Public Notice DA 02-2138, Appendix A						
Test mode:	Compliance	Verdict: PASS					
Date:	6/15/2008						
Temperature: 23 °C	Air Pressure: 1012 hPa Relative Humidity: 52 % Power Supply: 120 VAC						
Remarks: EUT with internal antenna							

Plot 7.1.69 The 26 dB emission bandwidth, high frequency





Plot 7.1.70 Power and power density, high frequency





Test specification:	FCC section 15. 407(a)(1-3), RSS-210 Annex 9, section A9.2 Peak output power and peak power spectral density						
Test procedure:	FCC Public Notice DA 02-2138, Appendix A						
Test mode:	Compliance	Verdict: PASS					
Date:	6/15/2008						
Temperature: 23 °C	Air Pressure: 1012 hPa Relative Humidity: 52 % Power Supply: 120 VAC						
Remarks: EUT with internal antenna							

Plot 7.1.71 The 26 dB emission bandwidth, high frequency





Plot 7.1.72 Power and power density, high frequency





Test specification:	FCC section 15. 407(a)(1-3), RSS-210 Annex 9, section A9.2 Peak output power and peak power spectral density					
Test procedure:	FCC Public Notice DA 02-2138, Appendix A					
Test mode:	Compliance	Verdict: PASS				
Date:	6/03/2008					
Temperature: 24°C	Air Pressure: 1010 hPa	Relative Humidity: 54 %	Power Supply: 120 VAC			
Remarks: EUT with external antenna						

Table 7.1.4 Average output power and peak power spectral density test results

ASSIGNED FREQUENCY: TRANSMITTER OUTPUT POWER SETTINGS:	5250 - 5350 MHz "3 dBm" at 5 MHz channel bandwidth "6 dBm" at 10 MHz channel bandwidth
DETECTOR USED:	Sample
VIDEO BANDWIDTH:	3 MHz
METHOD OF POWER MEASUREMENTS: METHOD OF POWER DENSITY MEASUREMENTS:	1 2

Froguopov	26 dB	Dit rate		Out	tput powe	r	Peak power density			
MHz	bandwidth	MBps	Modulation	Measured, dBm	Limit, dBm	Margin, dB*	Measured, dBm/MHz	Limit, dBm/MHz	Margin, dB**	Verdict
Low frequer	ncy, CBW 20	MHz								
5262.5	23.10	6	BPSK	1.77	8	-6.23	-12.86	-5	-7.86	Pass
5262.5	21.80	18	QPSK	2.20	8	-5.8	-11.18	-5	-6.18	Pass
5262.5	21.80	24	16QAM	2.97	8	-5.03	-10.41	-5	-5.41	Pass
5262.5	23.40	54	64QAM	2.51	8	-5.49	-11.19	-5	-6.19	Pass
Low freque	ncy, CBW 10	MHz								
5257.5	12.34	3	BPSK	-0.60	5.81	-6.41	-11.52	-5	-6.52	Pass
5257.5	9.56	9	QPSK	0.98	4.82	-3.84	-8.83	-5	-3.83	Pass
5257.5	9.53	12	16QAM	1.14	4.82	-3.68	-8.65	-5	-3.65	Pass
5257.5	9.49	27	64QAM	-0.04	4.81	-4.85	-9.81	-5	-4.81	Pass
Low freque	ncy, CBW 5 N	/IHz								
5255	6.09	1.5	BPSK	-3.47	2.85	-6.32	-11.32	-5	-6.32	Pass
5255	4.85	4.5	QPSK	-2.77	1.86	-4.63	-9.63	-5	-4.63	Pass
5255	4.87	6	16QAM	-2.89	1.87	-4.76	-9.76	-5	-4.76	Pass
5255	4.85	13.5	64QAM	-3.92	1.86	-5.78	-10.78	-5	-5.78	Pass
Mid channe	I, CBW 20 MH	lz								
5300	23.33	6	BPSK	0.67	8.00	-7.33	-13.48	-5	-8.48	Pass
5300	21.90	18	QPSK	2.03	8.00	-5.97	-11.37	-5	-6.37	Pass
5300	21.53	24	16QAM	1.93	8.00	-6.07	-11.40	-5	-6.40	Pass
5300	23.10	54	64QAM	1.91	8.00	-6.09	-11.73	-5	-6.73	Pass
Mid channe	I, CBW 10 MF	lz								
5300	12.04	3	BPSK	-1.76	5.81	-7.57	-12.56	-5	-7.56	Pass
5300	9.64	9	QPSK	0.01	4.84	-4.83	-9.82	-5	-4.82	Pass
5300	9.75	12	16QAM	-0.08	4.89	-4.97	-9.97	-5	-4.97	Pass
5300	9.41	27	64QAM	-0.50	4.74	-5.24	-10.24	-5	-5.24	Pass
Mid channe	I, CBW 5 MHz	z								
5300	6.14	1.5	BPSK	-4.83	2.88	-7.71	-12.26	-5	-7.26	Pass
5300	4.88	4.5	QPSK	-4.12	1.88	-6.00	-11.00	-5	-6.00	Pass
5300	5.00	6	16QAM	-4.18	1.99	-6.17	-11.17	-5	-6.17	Pass
5300	4.88	13.5	64QAM	-3.68	1.88	-5.56	-10.56	-5	-5.56	Pass

Note 1: due to 22 dBi antenna gain the limits of peak output power and peak power spectral density shall be reduced by 16 dB

Note 2: Measurement plots are in dBm/Hz, in order to convert to dBm/MHz a 60dB factor was added

* - Margin = Measured output power – specification limit

** - Margin = Measured peak power density - specification limit.



Test specification:	FCC section 15. 407(a)(1-3), RSS-210 Annex 9, section A9.2 Peak output power and peak power spectral density					
Test procedure:	FCC Public Notice DA 02-2138, Appendix A					
Test mode:	Compliance	Vordict	DASS			
Date:	6/03/2008	Verdict: PASS				
Temperature: 24°C	Air Pressure: 1010 hPa	Relative Humidity: 54 %	Power Supply: 120 VAC			
Remarks: EUT with external antenna						

Table 7.1.3 Average output power and peak power density test results (continued)

Frequency	26 dB	Bit rate		Out	put powe	r	Peak	power den	sity	
MHz	bandwidth	MBps	Modulation	Measured, dBm	Limit, dBm	Margin, dB*	Measured, dBm/MHz	Limit, dBm/MHz	Margin, dB**	Verdict
High channe	el, CBW 20 M	Hz								
5332.5	23.40	6	BPSK	1.49	8	-6.51	-12.20	-5	-7.20	Pass
5332.5	21.80	18	QPSK	2.06	8	-5.94	-11.32	-5	-6.32	Pass
5332.5	21.40	24	16QAM	1.66	8	-6.34	-11.64	-5	-6.64	Pass
5332.5	23.10	54	64QAM	2.01	8	-5.99	-11.63	-5	-6.63	Pass
High chann	el, CBW 10 M	Hz								
5340	12.04	3	BPSK	-2.34	5.97	-8.31	-13.15	-5	-8.15	Pass
5340	9.60	9	QPSK	-0.15	4.82	-4.97	-9.97	-5	-4.97	Pass
5340	9.60	12	16QAM	-0.23	4.84	-5.07	-10.06	-5	-5.06	Pass
5340	9.56	27	64QAM	-0.65	4.79	-5.44	-10.46	-5	-5.46	Pass
High chann	el, CBW 5 MH	lz								
5345	6.18	1.5	BPSK	-5.25	2.91	-8.16	-13.15	-5	-8.15	Pass
5345	4.92	4.5	QPSK	-3.66	1.92	-5.58	-10.58	-5	-5.58	Pass
5345	4.85	6	16QAM	-3.97	1.86	-5.83	-10.82	-5	-5.82	Pass
5345	4.90	13.5	64QAM	-3.84	1.90	-5.74	-10.74	-5	-5.74	Pass

Note 1: due to 22 dBi antenna gain the limits of peak output power and peak power spectral density shall be reduced by 16 dB

Note 2: Measurement plots are in dBm/Hz, in order to convert to dBm/MHz a 60dB factor was added

* - Margin = Measured output power - specification limit

** - Margin = Measured peak power density – specification limit.

Reference numbers of test equipment used

HL 2909	HL 2952	HL 3208	HL 3439		

Full description is given in Appendix A.



Test specification:	FCC section 15. 407(a)(1-3), RSS-210 Annex 9, section A9.2 Peak output power and peak power spectral density			
Test procedure:	FCC Public Notice DA 02-2138, Appendix A			
Test mode:	Compliance	Vordict	DAGG	
Date:	6/03/2008	verdict.	FA33	
Temperature: 24°C	Air Pressure: 1010 hPa Relative Humidity: 54 % Power Supply: 120 VAC			
Remarks: EUT with external antenna				

Table 7.1.5 Peak output power test results measured with power meter

5250 - 5350 MHz OFDM
TINGS: "3 dBm" at 5 MHz channel bandwidth
"6 dBm" at 10 MHz channel bandwidth
"9 dBm" at 20 MHz channel bandwidth
Peak / Average
1 MHz
3 MHz
1

Frequency, MHz	Bit rate, Mbps	Modulation	Power meter reading, dBm	Feeder loss, dB	Peak output power, dBm
Low channel					
5262.5	6	BPSK	14.45	1	13.45
5262.5	18	QPSK	14.55	1	13.55
5262.5	24	16QAM	14.44	1	13.44
5262.5	54	64QAM	14.38	1	13.38
5257.5	3	BPSK	12.14	1	11.14
5257.5	9	QPSK	10.85	1	9.85
5257.5	12	16QAM	11.65	1	10.65
5257.5	27	64QAM	11.18	1	10.18
5255	1.5	BPSK	9.56	1	8.56
5255	4.5	QPSK	9.09	1	8.09
5255	6	16QAM	9.60	1	8.60
5255	13.5	64QAM	8.98	1	7.98
Mid channel	·				
5300	6	BPSK	13.85	1	12.85
5300	18	QPSK	13.35	1	12.35
5300	24	16QAM	14.17	1	13.17
5300	54	64QAM	13.05	1	12.05
5300	3	BPSK	11.09	1	10.09
5300	9	QPSK	11.55	1	10.55
5300	12	16QAM	11.71	1	10.71
5300	27	64QAM	11.02	1	10.02
5300	1.5	BPSK	9.46	1	8.46
5300	4.5	QPSK	8.07	1	7.07
5300	6	16QAM	9.49	1	8.49
5300	13.5	64QAM	8.38	1	7.38
High channel					
5332.5	6	BPSK	13.45	1	12.45
5332.5	18	QPSK	13.45	1	12.45
5332.5	24	16QAM	14.45	1	13.45
5332.5	54	64QAM	13.46	1	12.46
5340	3	BPSK	11.19	1	10.19
5340	9	QPSK	10.47	1	9.47
5340	12	16QAM	11.58	1	10.58
5340	27	64QAM	10.54	1	9.54
5345	1.5	BPSK	9.08	1	8.08
5345	4.5	QPSK	8.25	1	7.25
5345	6	16QAM	8.62	1	7.62
5345	13.5	64QAM	8.05	1	7.05

Reference numbers of test equipment used

HL 2909 HL 3208 HL 3439

Full description is given in Appendix A.



Test specification:	FCC section 15. 407(a)(1-3), RSS-210 Annex 9, section A9.2 Peak output power and peak power spectral density			
Test procedure:	FCC Public Notice DA 02-213	8, Appendix A		
Test mode:	Compliance	Vordict	DASS	
Date:	6/03/2008	verdict.	FA33	
Temperature: 24°C	Air Pressure: 1010 hPa	Relative Humidity: 54 %	Power Supply: 120 VAC	
Remarks: EUT with external antenna				

Plot 7.1.73 The 26 dB emission bandwidth

Frequency:	5262.5 MHz
Channel BW:	20 MHz
Modulation parameters:	BPSK, 6 Mbps



Note: The real center frequency is 5262.5 MHz (SA display limitations)

Plot 7.1.74 Pov	ver and power	density,	low frequency
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Frequency:	5262.5 MHz
Channel BW:	20 MHz
Modulation parameters:	BPSK, 6 Mbps





Test specification:	FCC section 15. 407(a)(1-3), RSS-210 Annex 9, section A9.2 Peak output power and peak power spectral density			
Test procedure:	FCC Public Notice DA 02-2138, Appendix A			
Test mode:	Compliance	Vordict	DASS	
Date:	6/03/2008	verdict.	FA33	
Temperature: 24°C	Air Pressure: 1010 hPa	Relative Humidity: 54 %	Power Supply: 120 VAC	
Remarks: EUT with external antenna				

Plot 7.1.75 The 26 dB emission bandwidth, low frequency

Frequency:	5262.5 MHz
Channel BW:	20 MHz
Modulation parameters:	QPSK, 18 Mbps



Note: The real center frequency is 5262.5 MHz (SA display limitations)

Plot 7.1.76 Power and power density, low frequency

Frequency:	5262.5 MHz
Channel BW:	20 MHz
Modulation parameters:	QPSK, 18 Mbps
Acilant	РТ





Test specification:	FCC section 15. 407(a)(1-3), RSS-210 Annex 9, section A9.2 Peak output power and peak power spectral density			
Test procedure:	FCC Public Notice DA 02-2138, Appendix A			
Test mode:	Compliance	Vordict	DASS	
Date:	6/03/2008	verdict.	FA33	
Temperature: 24°C	Air Pressure: 1010 hPa	Relative Humidity: 54 %	Power Supply: 120 VAC	
Remarks: EUT with external antenna				

Plot 7.1.77 The 26 dB emission bandwidth, low frequency

Frequency:	5262.5 MHz
Channel BW:	20 MHz
Modulation parameters:	16QAM, 24 Mbps



Note: The real center frequency is 5262.5 MHz (SA display limitations)

Plot 7.1.78 Power and power density, low frequency

Frequency:	5262.5 MHz
Channel BW:	20 MHz
Modulation parameters:	16QAM, 24 Mbps





Test specification:	FCC section 15. 407(a)(1-3), RSS-210 Annex 9, section A9.2 Peak output power and peak power spectral density		
Test procedure:	FCC Public Notice DA 02-2138, Appendix A		
Test mode:	Compliance	Vardiate	
Date:	6/03/2008	verdict.	FA33
Temperature: 24°C	Air Pressure: 1010 hPa	Relative Humidity: 54 %	Power Supply: 120 VAC
Remarks: EUT with external antenna			

Plot 7.1.79 The 26 dB emission bandwidth, low frequency

Frequency:	5262.5 MHz
Channel BW:	20 MHz
Modulation parameters:	64QAM, 54 Mbps



Note: The real center frequency is 5262.5 MHz (SA display limitations)

Plot 7.1.80 Power and power density, low frequency

Frequency:	5262.5 MHz
Channel BW:	20 MHz
Modulation parameters:	64QAM, 54 Mbps





Test specification:	FCC section 15. 407(a)(1-3), RSS-210 Annex 9, section A9.2 Peak output power and peak power spectral density		
Test procedure:	FCC Public Notice DA 02-213	38, Appendix A	
Test mode:	Compliance	Vardiat: DASS	
Date:	6/03/2008	veruict.	FA33
Temperature: 24°C	Air Pressure: 1010 hPa	Relative Humidity: 54 %	Power Supply: 120 VAC
Remarks: EUT with external antenna			

Plot 7.1.81 The 26 dB emission bandwidth, low frequency

ĺ	Frequency:	5257.5 MHz
	Channel BW:	10 MHz
	Modulation parameters:	BPSK, 3 Mbps



Note: The real center frequency is 5257.5 MHz (SA display limitations)

Plot 7.1.82 Power and power density, low frequency

quency:		5257.5	MHz	
annel BW:		10 MHz	2	
dulation parar	meters:	BPSK,	3 Mbps	
🔆 Agilent			R T	
Ref 0 dBm	Atten ⁴	dB		
#Samp				
Log				
dB/				
Offst				
dB				
ΡΔνα		0.6		
		dBm		
Center 5.258 GHz #Res BW 1 MHz		#VBW 3 MHz	5pan 18.5 #Sween 20.04 ms (401	1 MHz nts)
			#3WCCP 20.04 m3 (401	μωj
Channel Power			Power Spectral Densi	ty
-0.60 dBm	/ 12 3375 MH	7	-71 52 dBm/	Hz



Test specification:	FCC section 15. 407(a)(1-3), RSS-210 Annex 9, section A9.2 Peak output power and peak power spectral density		
Test procedure:	FCC Public Notice DA 02-213	8, Appendix A	
Test mode:	Compliance	Vordict	DASS
Date:	6/03/2008	verdict.	FA33
Temperature: 24°C	Air Pressure: 1010 hPa	Relative Humidity: 54 %	Power Supply: 120 VAC
Remarks: EUT with external antenna			

Frequency: Channel BW: 5257.5 MHz 10 MHz QPSK, 9 Mbps Modulation parameters: e Agilent Mkr1 ∆ 9.5625 MHz 0.07 dB Ref -5 dBm Atten 5 dB #Peak mm manna mamman MAN Log 10 dB/ Offst 21 dB DI -10.0 dBm MMMM NAMA W1 S2 S3 FS AA Span 15 MHz #Sweep 100 ms (401 pts) Center 5.258 GHz #Res BW 100 kHz VBW 300 kHz

Plot 7.1.83 The 26 dB emission bandwidth, low frequency

Note: The real center frequency is 5257.5 MHz (SA display limitations)

Plot 7.1.84 Power and power density, low frequency

Frequency:	5257.5 MHz
Channel BW:	10 MHz
Modulation parameters:	QPSK, 9 Mbps





Test specification:	FCC section 15. 407(a)(1-3), RSS-210 Annex 9, section A9.2 Peak output power and peak power spectral density		
Test procedure:	FCC Public Notice DA 02-213	8, Appendix A	
Test mode:	Compliance	Vardiat: DASS	
Date:	6/03/2008	verdict.	FA33
Temperature: 24°C	Air Pressure: 1010 hPa	Relative Humidity: 54 %	Power Supply: 120 VAC
Remarks: EUT with external antenna			

Plot 7.1.85 The 26 dB emission bandwidth, low frequency

Frequency:	5257.5 MHz
Channel BW:	10 MHz
Modulation parameters:	16QAM, 12 Mbps



Note: The real center frequency is 5257.5 MHz (SA display limitations)

Plot 7.1.86 Power and power density, low frequency

Frequency:		5257.5 MHz	
Channel BW:		10 MHz	
Modulation parar	neters:	16QAM, 12 Mbps	
ir Agilent		RT	
Ref 0 dBm	Atten 5 dB		
Von Log 10 dB/ Offst 21 dB			
PAvg	Image:	1.1 dBm	
Center 5.258 GHz #Res BW 1 MHz	#VBW	3 MHz #Sweep 20.	Span 14.29 MHz 04 ms (401 pts)
Channel Power		Power Spec	tral Density
1.14 dBm	9.5250 MHz	-68.65	5 dBm/Hz



Test specification:	FCC section 15. 407(a)(1-3), RSS-210 Annex 9, section A9.2 Peak output power and peak power spectral density		
Test procedure:	FCC Public Notice DA 02-2138, Appendix A		
Test mode:	Compliance	Vordict	DASS
Date:	6/03/2008	Verdici. PASS	FA33
Temperature: 24°C	Air Pressure: 1010 hPa	Relative Humidity: 54 %	Power Supply: 120 VAC
Remarks: EUT with external antenna			

Plot 7.1.87 The 26 dB emission bandwidth, low frequency

Frequency:	5257.5 MHz
Channel BW:	10 MHz
Modulation parameters:	64QAM, 27 Mbps



Note: The real center frequency is 5257.5 MHz (SA display limitations)

Plot 7.1.88 Power and power density, low frequency

Frequency:		5257.5 MHz	
Channel BW:		10 MHz	
Modulation para	meters:	64QAM, 27 Mb	ops
🔆 Agilent		R	Т
Ref 0 dBm	Atten 5 dB		
#Samp			~~~
Log			
dB/	″		
Offst			
21 dB			
PAVg		0.7 dBm	
Center 5.258 GHz	10 (5)		Span 14.23 MHz
#Res BW 1 MHz	#VBV	V 3 MHz #Swe	ep 20.04 ms (401 pts)
Channel Power		Powe	r Spectral Density
0.70 dBm	/9.4875 MHz	-6	69.07 dBm/Hz



Test specification:	FCC section 15. 407(a)(1-3), RSS-210 Annex 9, section A9.2 Peak output power and peak power spectral density		
Test procedure:	FCC Public Notice DA 02-2138, Appendix A		
Test mode:	Compliance	Vordict	DAGG
Date:	6/03/2008	Verdici. PASS	FA33
Temperature: 24°C	Air Pressure: 1010 hPa	Relative Humidity: 54 %	Power Supply: 120 VAC
Remarks: EUT with external antenna			

Plot 7.1.89 The 26 dB emission bandwidth, low frequency

Frequency:	5255 MHz
Channel BW:	5 MHz
Modulation parameters:	BPSK, 1.5 Mbps



Plot 7.1.90 Power and power density, low frequency

Frequency:	5255 MHz
Channel BW:	5 MHz
Modulation parameters:	BPSK, 1.5 Mbps





Test specification:	FCC section 15. 407(a)(1-3), RSS-210 Annex 9, section A9.2 Peak output power and peak power spectral density		
Test procedure:	FCC Public Notice DA 02-2138, Appendix A		
Test mode:	Compliance	Vordict	DAGG
Date:	6/03/2008	Verdici. PASS	FA33
Temperature: 24°C	Air Pressure: 1010 hPa	Relative Humidity: 54 %	Power Supply: 120 VAC
Remarks: EUT with external antenna			

Plot 7.1.91 The 26 dB emission bandwidth, low frequency

Frequency:	5255 MHz
Channel BW:	5 MHz
Modulation parameters:	QPSK, 4.5 Mbps



Plot 7.1.92 Power and power density, low frequency

Frequency:	5255 MHz
Channel BW:	5 MHz
Modulation parameters:	QPSK, 4.5 Mbps





Test specification:	FCC section 15. 407(a)(1-3), RSS-210 Annex 9, section A9.2 Peak output power and peak power spectral density		
Test procedure:	FCC Public Notice DA 02-2138, Appendix A		
Test mode:	Compliance	Vordict	DAGG
Date:	6/03/2008	Verdici. PASS	FA33
Temperature: 24°C	Air Pressure: 1010 hPa	Relative Humidity: 54 %	Power Supply: 120 VAC
Remarks: EUT with external antenna			

Plot 7.1.93 The 26 dB emission bandwidth, low frequency

Frequency:	5255 MHz
Channel BW:	5 MHz
Modulation parameters:	16QAM, 6 Mbps



Plot 7.1.94 Power and power density, low frequency

Frequency:	5255 MHz
Channel BW:	5 MHz
Modulation parameters:	16QAM, 6 Mbps





Test specification:	FCC section 15. 407(a)(1-3), RSS-210 Annex 9, section A9.2 Peak output power and peak power spectral density		
Test procedure:	FCC Public Notice DA 02-2138, Appendix A		
Test mode:	Compliance		DAGG
Date:	6/03/2008	verdict.	FA33
Temperature: 24°C	Air Pressure: 1010 hPa	Relative Humidity: 54 %	Power Supply: 120 VAC
Remarks: EUT with external antenna			

Plot 7.1.95 The 26 dB emission bandwidth, low frequency

ĺ	Frequency:	5255 MHz
	Channel BW:	5 MHz
	Modulation parameters:	64QAM, 13.5 Mbps



Plot 7.1.96 Power and power density, low frequency

Frequency:	5255 MHz
Channel BW:	5 MHz
Modulation parameters:	64QAM, 13.5 Mbps





Test specification:	FCC section 15. 407(a)(1-3), RSS-210 Annex 9, section A9.2 Peak output power and peak power spectral density		
Test procedure:	FCC Public Notice DA 02-213	38, Appendix A	
Test mode:	Compliance	Vordict:	DASS
Date:	6/03/2008	veruict.	FA33
Temperature: 24°C	Air Pressure: 1010 hPa	Relative Humidity: 54 %	Power Supply: 120 VAC
Remarks: EUT with external antenna			

Plot 7.1.97 The 26 dB emission bandwidth, mid frequency

Frequency:	5300 MHz
Channel BW:	20 MHz
Modulation parameters:	BPSK, 6 Mbps



Plot 7.1.98 Power and power density, mid frequency

Frequency:	5300 MHz
Channel BW:	20 MHz
Modulation parameters:	BPSK, 6 Mbps





Test specification:	FCC section 15. 407(a)(1-3), RSS-210 Annex 9, section A9.2 Peak output power and peak power spectral density		
Test procedure:	FCC Public Notice DA 02-213	8, Appendix A	
Test mode:	Compliance		DAGG
Date:	6/03/2008	verdict.	FA33
Temperature: 24°C	Air Pressure: 1010 hPa	Relative Humidity: 54 %	Power Supply: 120 VAC
Remarks: EUT with external antenna			

Plot 7.1.99 The 26 dB emission bandwidth, mid frequency

Frequency:	5300 MHz
Channel BW:	20 MHz
Modulation parameters:	QPSK, 18 Mbps



Plot 7.1.100 Power and power density, mid frequency

Frequency:	5300 MHz
Channel BW:	20 MHz
Modulation parameters:	QPSK, 18 Mbps





Test specification:	FCC section 15. 407(a)(1-3), RSS-210 Annex 9, section A9.2 Peak output power and peak power spectral density		
Test procedure:	FCC Public Notice DA 02-213	8, Appendix A	
Test mode:	Compliance	Verdiet: DACC	DAGG
Date:	6/03/2008	verdict.	FA33
Temperature: 24°C	Air Pressure: 1010 hPa	Relative Humidity: 54 %	Power Supply: 120 VAC
Remarks: EUT with external antenna			

Plot 7.1.101 The 26 dB emission bandwidth, mid frequency

Frequency:	5300 MHz
Channel BW:	20 MHz
Modulation parameters:	16QAM, 24 Mbps



Plot 7.1.102 Power and power density, mid frequency

Frequency:	5300 MHz
Channel BW:	20 MHz
Modulation parameters:	16QAM, 24 Mbps





Test specification:	FCC section 15. 407(a)(1-3), RSS-210 Annex 9, section A9.2 Peak output power and peak power spectral density		
Test procedure:	FCC Public Notice DA 02-2138, Appendix A		
Test mode:	Compliance	Vordict	DASS
Date:	6/03/2008	verdict.	FA33
Temperature: 24°C	Air Pressure: 1010 hPa	Relative Humidity: 54 %	Power Supply: 120 VAC
Remarks: EUT with external antenna			

Plot 7.1.103 The 26 dB emission bandwidth, mid frequency

Frequency:	5300 MHz
Channel BW:	20 MHz
Modulation parameters:	64QAM, 54 Mbps



Plot 7.1.104 Power and power density, mid frequency

Frequency:	5300 MHz
Channel BW:	20 MHz
Modulation parameters:	64QAM, 54 Mbps





Test specification:	FCC section 15. 407(a)(1-3), RSS-210 Annex 9, section A9.2 Peak output power and peak power spectral density		
Test procedure:	FCC Public Notice DA 02-2138, Appendix A		
Test mode:	Compliance	Vordict:	DASS
Date:	6/03/2008	veruict.	FA33
Temperature: 24°C	Air Pressure: 1010 hPa	Relative Humidity: 54 %	Power Supply: 120 VAC
Remarks: EUT with external antenna			

Plot 7.1.105 The 26 dB emission bandwidth, mid frequency

Frequency:	5300 MHz
Channel BW:	10 MHz
Modulation parameters:	BPSK, 3 Mbps



Plot 7.1.106 Power and power density, mid frequency

Frequency:	5300 MHz
Channel BW:	10 MHz
Modulation parameters:	BPSK, 3 Mbps





Test specification:	FCC section 15. 407(a)(1-3), RSS-210 Annex 9, section A9.2 Peak output power and peak power spectral density		
Test procedure:	FCC Public Notice DA 02-2138, Appendix A		
Test mode:	Compliance	Vordict:	DASS
Date:	6/03/2008	veruict.	FA33
Temperature: 24°C	Air Pressure: 1010 hPa	Relative Humidity: 54 %	Power Supply: 120 VAC
Remarks: EUT with external antenna			

Plot 7.1.107 The 26 dB emission bandwidth, mid frequency

Frequency:	5300 MHz
Channel BW:	10 MHz
Modulation parameters:	QPSK, 9 Mbps



Plot 7.1.108 Power and power density, mid frequency

Frequency:	5300 MHz
Channel BW:	10 MHz
Modulation parameters:	QPSK, 9 Mbps





Test specification:	FCC section 15. 407(a)(1-3), RSS-210 Annex 9, section A9.2 Peak output power and peak power spectral density		
Test procedure:	FCC Public Notice DA 02-2138, Appendix A		
Test mode:	Compliance	Vordict	DAGG
Date:	6/03/2008	verdict.	FA33
Temperature: 24°C	Air Pressure: 1010 hPa	Relative Humidity: 54 %	Power Supply: 120 VAC
Remarks: EUT with external antenna			

Plot 7.1.109 The 26 dB emission bandwidth, mid frequency

Frequency:	5300 MHz
Channel BW:	10 MHz
Modulation parameters:	16QAM, 12 Mbps



Plot 7.1.110 Power and power density, mid frequency

Frequency:	5300 MHz
Channel BW:	10 MHz
Modulation parameters:	16QAM, 12 Mbps





Test specification:	FCC section 15. 407(a)(1-3), RSS-210 Annex 9, section A9.2 Peak output power and peak power spectral density		
Test procedure:	FCC Public Notice DA 02-2138, Appendix A		
Test mode:	Compliance	Verdict:	DAGG
Date:	6/03/2008		PASS
Temperature: 24°C	Air Pressure: 1010 hPa	Relative Humidity: 54 %	Power Supply: 120 VAC
Remarks: EUT with external antenna			

Plot 7.1.111 The 26 dB emission bandwidth, mid frequency

Frequency:	5300 MHz
Channel BW:	10 MHz
Modulation parameters:	64QAM, 27 Mbps



Plot 7.1.112 Power and power density, mid frequency

Frequency:	5300 MHz
Channel BW:	10 MHz
Modulation parameters:	64QAM, 27 Mbps





Test specification:	FCC section 15. 407(a)(1-3), RSS-210 Annex 9, section A9.2 Peak output power and peak power spectral density		
Test procedure:	FCC Public Notice DA 02-2138, Appendix A		
Test mode:	Compliance	Verdict: PASS	DAGG
Date:	6/03/2008		FA33
Temperature: 24°C	Air Pressure: 1010 hPa	Relative Humidity: 54 %	Power Supply: 120 VAC
Remarks: EUT with external antenna			

Plot 7.1.113 The 26 dB emission bandwidth, mid frequency

Frequency:	5300 MHz
Channel BW:	5 MHz
Modulation parameters:	BPSK, 1.5 Mbps



Plot 7.1.114 Power and power density, mid frequency

Frequency:	5300 MHz
Channel BW:	5 MHz
Modulation parameters:	BPSK, 1.5 Mbps




Test specification:	FCC section 15. 407(a)(1-3), RSS-210 Annex 9, section A9.2 Peak output power and peak power spectral density		
Test procedure:	FCC Public Notice DA 02-2138, Appendix A		
Test mode:	Compliance	Vardiat: DASS	DASS
Date:	6/03/2008	verdict.	FA33
Temperature: 24°C	Air Pressure: 1010 hPa	Relative Humidity: 54 %	Power Supply: 120 VAC
Remarks: EUT with external antenna			

Plot 7.1.115 The 26 dB emission bandwidth, mid frequency

Frequency:	5300 MHz
Channel BW:	5 MHz
Modulation parameters:	QPSK, 4.5 Mbps



Plot 7.1.116 Power and power density, mid frequency

Frequency:	5300 MHz
Channel BW:	5 MHz
Modulation parameters:	QPSK, 4.5 Mbps





Test specification:	FCC section 15. 407(a)(1-3), RSS-210 Annex 9, section A9.2 Peak output power and peak power spectral density		
Test procedure:	FCC Public Notice DA 02-2138, Appendix A		
Test mode:	Compliance	Vardiati DAC	DAGG
Date:	6/03/2008	verdict.	FA33
Temperature: 24°C	Air Pressure: 1010 hPa	Relative Humidity: 54 %	Power Supply: 120 VAC
Remarks: EUT with external antenna			

Plot 7.1.117 The 26 dB emission bandwidth, mid frequency

Frequency:	5300 MHz
Channel BW:	5 MHz
Modulation parameters:	16QAM, 6 Mbps



Plot 7.1.118 Power and power density, mid frequency

Frequency:	5300 MHz
Channel BW:	5 MHz
Modulation parameters:	16QAM, 6 Mbps





Test specification:	FCC section 15. 407(a)(1-3), RSS-210 Annex 9, section A9.2 Peak output power and peak power spectral density		
Test procedure:	FCC Public Notice DA 02-2138, Appendix A		
Test mode:	Compliance	Vordiate	DASS
Date:	6/03/2008	verdict.	FA33
Temperature: 24°C	Air Pressure: 1010 hPa	Relative Humidity: 54 %	Power Supply: 120 VAC
Remarks: EUT with external antenna			

Plot 7.1.119 The 26 dB emission bandwidth, mid frequency

Frequency:	5300 MHz
Channel BW:	5 MHz
Modulation parameters:	64QAM, 13.5 Mbps



Plot 7.1.120 Power and power density, mid frequency

Frequency:	5300 MHz
Channel BW:	5 MHz
Modulation parameters:	64QAM, 13.5 Mbps





Test specification:	FCC section 15. 407(a)(1-3), RSS-210 Annex 9, section A9.2 Peak output power and peak power spectral density		
Test procedure:	FCC Public Notice DA 02-2138, Appendix A		
Test mode:	Compliance	Vardiati DAC	DAGG
Date:	6/03/2008	verdict.	FA33
Temperature: 24°C	Air Pressure: 1010 hPa	Relative Humidity: 54 %	Power Supply: 120 VAC
Remarks: EUT with external antenna			

Plot 7.1.121 The 26 dB emission bandwidth, high frequency

Frequency:	5332.5 MHz
Channel BW:	20 MHz
Modulation parameters:	BPSK, 6 Mbps



Plot 7.1.122 Power and power density, high frequency

Frequency:	5332.5 MHz
Channel BW:	20 MHz
Modulation parameters:	BPSK, 6 Mbps





Test specification:	FCC section 15. 407(a)(1-3), RSS-210 Annex 9, section A9.2 Peak output power and peak power spectral density		
Test procedure:	FCC Public Notice DA 02-2138, Appendix A		
Test mode:	Compliance		DAGG
Date:	6/03/2008	verdict.	FA33
Temperature: 24°C	Air Pressure: 1010 hPa	Relative Humidity: 54 %	Power Supply: 120 VAC
Remarks: EUT with external antenna			

Plot 7.1.123 The 26 dB emission bandwidth, high frequency

Frequency:	5332.5 MHz
Channel BW:	20 MHz
Modulation parameters:	QPSK, 18 Mbps



Plot 7.1.124 Power and power density, high frequency

Frequency:	5332.5 MHz
Channel BW:	20 MHz
Modulation parameters:	QPSK, 18 Mbps





Test specification:	FCC section 15. 407(a)(1-3), RSS-210 Annex 9, section A9.2 Peak output power and peak power spectral density		
Test procedure:	FCC Public Notice DA 02-2138, Appendix A		
Test mode:	Compliance	Verdiet: DACC	DASS
Date:	6/03/2008	veruict.	FA33
Temperature: 24°C	Air Pressure: 1010 hPa	Relative Humidity: 54 %	Power Supply: 120 VAC
Remarks: EUT with external antenna			

Plot 7.1.125 The 26 dB emission bandwidth, high frequency

Frequency:	5332.5 MHz
Channel BW:	20 MHz
Modulation parameters:	16QAM, 24 Mbps



Plot 7.1.126 Power and power density, high frequency

Frequency:	5332.5 MHz
Channel BW:	20 MHz
Modulation parameters:	16QAM, 24 Mbps





Test specification:	FCC section 15. 407(a)(1-3), RSS-210 Annex 9, section A9.2 Peak output power and peak power spectral density		
Test procedure:	FCC Public Notice DA 02-2138, Appendix A		
Test mode:	Compliance	Verdiet: DACC	DASS
Date:	6/03/2008	veruict.	FA33
Temperature: 24°C	Air Pressure: 1010 hPa	Relative Humidity: 54 %	Power Supply: 120 VAC
Remarks: EUT with external antenna			

Plot 7.1.127 The 26 dB emission bandwidth, high frequency

Frequency:	5332.5 MHz
Channel BW:	20 MHz
Modulation parameters:	64QAM, 54 Mbps



Plot 7.1.128 Power and power density, high frequency

Frequency:	5332.5 MHz
Channel BW:	20 MHz
Modulation parameters:	64QAM, 54 Mbps





Test specification:	FCC section 15. 407(a)(1-3), RSS-210 Annex 9, section A9.2 Peak output power and peak power spectral density		
Test procedure:	FCC Public Notice DA 02-2138, Appendix A		
Test mode:	Compliance	Verdiet: DACC	DASS
Date:	6/03/2008	veruict.	FA33
Temperature: 24°C	Air Pressure: 1010 hPa	Relative Humidity: 54 %	Power Supply: 120 VAC
Remarks: EUT with external antenna			

Plot 7.1.129 The 26 dB emission bandwidth, high frequency

Frequency:	5340 MHz
Channel BW:	10 MHz
Modulation parameters:	BPSK, 3 Mbps



Plot 7.1.130 Power and power density, high frequency

Frequency:	5340 MHz
Channel BW:	10 MHz
Modulation parameters:	BPSK, 3 Mbps





Test specification:	FCC section 15. 407(a)(1-3), RSS-210 Annex 9, section A9.2 Peak output power and peak power spectral density		
Test procedure:	FCC Public Notice DA 02-2138, Appendix A		
Test mode:	Compliance	Verdict: PASS	DAGG
Date:	6/03/2008		FA33
Temperature: 24°C	Air Pressure: 1010 hPa	Relative Humidity: 54 %	Power Supply: 120 VAC
Remarks: EUT with external antenna			

Plot 7.1.131 The 26 dB emission bandwidth, high frequency

Frequency:	5340 MHz
Channel BW:	10 MHz
Modulation parameters:	QPSK, 9 Mbps



Plot 7.1.132 Power and power density, high frequency

Frequency:	5340 MHz
Channel BW:	10 MHz
Modulation parameters:	QPSK, 9 Mbps





Test specification:	FCC section 15. 407(a)(1-3), RSS-210 Annex 9, section A9.2 Peak output power and peak power spectral density		
Test procedure:	FCC Public Notice DA 02-2138, Appendix A		
Test mode:	Compliance	Vordict	DASS
Date:	6/03/2008	Verdict: PASS	FA33
Temperature: 24°C	Air Pressure: 1010 hPa	Relative Humidity: 54 %	Power Supply: 120 VAC
Remarks: EUT with external antenna			

Plot 7.1.133 The 26 dB emission bandwidth, high frequency

Frequency:	5340 MHz
Channel BW:	10 MHz
Modulation parameters:	16QAM, 12 Mbps



Plot 7.1.134 Power and power density, high frequency

Frequency:	5340 MHz
Channel BW:	10 MHz
Modulation parameters:	16QAM, 12 Mbps





Test specification:	FCC section 15. 407(a)(1-3), RSS-210 Annex 9, section A9.2 Peak output power and peak power spectral density		
Test procedure:	FCC Public Notice DA 02-2138, Appendix A		
Test mode:	Compliance	Vordict	DASS
Date:	6/03/2008	Verdict: PASS	FA33
Temperature: 24°C	Air Pressure: 1010 hPa	Relative Humidity: 54 %	Power Supply: 120 VAC
Remarks: EUT with external antenna			

Plot 7.1.135 The 26 dB emission bandwidth, high frequency

ĺ	Frequency:	5340 MHz
	Channel BW:	10 MHz
	Modulation parameters:	64QAM, 27 Mbps



Plot 7.1.136 Power and power density, high frequency

Frequency:	5340 MHz
Channel BW:	10 MHz
Modulation parameters:	64QAM, 27 Mbps





Test specification:	FCC section 15. 407(a)(1-3), RSS-210 Annex 9, section A9.2 Peak output power and peak power spectral density		
Test procedure:	FCC Public Notice DA 02-2138, Appendix A		
Test mode:	Compliance	Vordict	DASS
Date:	6/03/2008	Verdict: PASS	FA33
Temperature: 24°C	Air Pressure: 1010 hPa	Relative Humidity: 54 %	Power Supply: 120 VAC
Remarks: EUT with external antenna			

Plot 7.1.137 The 26 dB emission bandwidth, high frequency

Frequency:	5345 MHz
Channel BW:	5 MHz
Modulation parameters:	BPSK, 1.5 Mbps



Plot 7.1.138 Power and power density, high frequency

Frequency:	5345 MHz
Channel BW:	5 MHz
Modulation parameters:	BPSK, 1.5 Mbps





Test specification:	FCC section 15. 407(a)(1-3), RSS-210 Annex 9, section A9.2 Peak output power and peak power spectral density			
Test procedure:	FCC Public Notice DA 02-2138, Appendix A			
Test mode:	Compliance	Vordiot	DASS	
Date:	6/03/2008	verdict.	FA33	
Temperature: 24°C	Air Pressure: 1010 hPa	Relative Humidity: 54 %	Power Supply: 120 VAC	
Remarks: EUT with external antenna				

Plot 7.1.139 The 26 dB emission bandwidth, high frequency

Frequency:	5345 MHz
Channel BW:	5 MHz
Modulation parameters:	QPSK, 4.5 Mbps



Plot 7.1.140 Power and power density, high frequency

Frequency:	5345 MHz
Channel BW:	5 MHz
Modulation parameters:	QPSK, 4.5 Mbps





Test specification:	FCC section 15. 407(a)(1-3), RSS-210 Annex 9, section A9.2 Peak output power and peak power spectral density			
Test procedure:	FCC Public Notice DA 02-2138, Appendix A			
Test mode:	Compliance	Vordiot	DASS	
Date:	6/03/2008	verdict.	FA33	
Temperature: 24°C	Air Pressure: 1010 hPa	Relative Humidity: 54 %	Power Supply: 120 VAC	
Remarks: EUT with external antenna				

Plot 7.1.141 The 26 dB emission bandwidth, high frequency

Frequency:	5345 MHz
Channel BW:	5 MHz
Modulation parameters:	16QAM, 6 Mbps



Plot 7.1.142 Power and power density, high frequency

Frequency:	5345 MHz
Channel BW:	5 MHz
Modulation parameters:	16QAM, 6 Mbps





Test specification:	FCC section 15. 407(a)(1-3), RSS-210 Annex 9, section A9.2 Peak output power and peak power spectral density			
Test procedure:	FCC Public Notice DA 02-2138, Appendix A			
Test mode:	Compliance	Vardiate	DASS	
Date:	6/03/2008	veruict.	FA33	
Temperature: 24°C	Air Pressure: 1010 hPa	Relative Humidity: 54 %	Power Supply: 120 VAC	
Remarks: EUT with external antenna				

Plot 7.1.143 The 26 dB emission bandwidth, high frequency

Frequency:	5345 MHz
Channel BW:	5 MHz
Modulation parameters:	64QAM, 13.5 Mbps



Plot 7.1.144 Power and power density, high frequency

Frequency:	5345 MHz
Channel BW:	5 MHz
Modulation parameters:	64QAM, 13.5 Mbps





Test specification:	Section 15.407(a)(6), Ratio of the peak excursion of the modulation envelope to the peak transmit power		
Test procedure:	FCC Public Notice DA 02-2138, Appendix A		
Test mode:	Compliance	Verdict:	PASS
Date:	6/15/2008		
Temperature: 23 °C	Air Pressure: 1012 hPa	Relative Humidity: 52 %	Power Supply: 120 VAC
Remarks:			

7.2 Ratio of the peak excursion of the modulation envelope to the peak transmit power

7.2.1 General

This test was performed to measure the ratio of the peak excursion of the modulation envelope to the peak transmit power at RF antenna connector. Specification test limits are given in Table 7.2.1.

Table 7.2.1 Peak excursion limits

Assigned frequency, MHz	Maximum peak excursion, dB/MHz	
5250 - 5350	13.0	

7.2.2 Test procedure

- 7.2.2.1 The EUT was set up as shown in Figure 7.2.1, energized and its proper operation was checked.
- 7.2.2.2 The EUT was adjusted to produce maximum available to end user RF output power.
- **7.2.2.3** The measurements were performed in continuous transmission mode of operation for carrier (channel) frequency at low and high edges and at the middle of the frequency range.
- 7.2.2.4 The maximum peak excursion of modulation envelope was measured as a difference between 2 traces.
- 7.2.2.5 The test results were recorded in Table 7.2.2, Table 7.2.3 and shown in the associated plots.

Figure 7.2.1 Peak excursion test setup





Test specification:	Section 15.407(a)(6), Ratio of the peak excursion of the modulation envelope to the peak transmit power		
Test procedure:	FCC Public Notice DA 02-2138, Appendix A		
Test mode:	Compliance	Verdict:	PASS
Date:	6/15/2008		
Temperature: 23 °C	Air Pressure: 1012 hPa	Relative Humidity: 52 %	Power Supply: 120 VAC
Remarks: EUT with internal antenna			

Table 7.2.2 Peak excursion test results

ASSIGNED FREQUENCY RANGE: DETECTOR USED:

TRANSMITTER OUTPUT POWER SETTINGS:

5250 – 5350 MHz 1-st trace : Peak, Max Hold 2-nd trace : Sample, 100 Power Averaging "2 dBm" at 5 MHz channel bandwidth "5 dBm" at 10 MHz channel bandwidth "8 dBm" at 20 MHz channel bandwidth 1 MHz 3 MHz

RESOLUTION BANDWIDTH: VIDEO BANDWIDTH:

Frequency, MHz	Bit Rate, MBps	1-st trace, dBm	2-nd trace, dBm	Peak excursion, dB	Limit, dB	Margin, dB	Verdict
Low channel, C	BW 20 MHz						
5262.5	6	0.461	-9.335	9.796	13	-3.204	Pass
5262.5	18	0.931	-8.241	9.172	13	-3.828	Pass
5262.5	24	2.23	-8.043	10.273	13	-2.727	Pass
5262.5	54	2.044	-8.839	10.883	13	-2.117	Pass
Low channel, C	BW 10 MHz						
5257.5	3	0.767	-9.504	10.271	13	-2.729	Pass
5257.5	9	2.989	-7.319	10.308	13	-2.692	Pass
5257.5	12	4.131	-7.374	11.505	13	-1.495	Pass
5257.5	27	3.663	-7.793	11.456	13	-1.544	Pass
Low channel, C	BW 5 MHz						
5255	1.5	0.065	-9.852	9.917	13	-3.083	Pass
5255	4.5	1.954	-8.684	10.638	13	-2.362	Pass
5255	6	2.732	-8.646	11.378	13	-1.622	Pass
5255	13.5	2.732	-8.354	11.086	13	-1.914	Pass
Mid channel, Cl	BW 20 MHz			-			
5300	6	-0.811	-11.050	10.239	13	-2.761	Pass
5300	18	0.191	-9.254	9.445	13	-3.555	Pass
5300	24	0.296	-9.684	9.98	13	-3.020	Pass
5300	54	2.008	-8.256	10.264	13	-2.736	Pass
Mid channel, C	BW 10 MHz					-	
5300	3	0.087	-10.260	10.347	13	-2.653	Pass
5300	9	2.277	-7.908	10.185	13	-2.815	Pass
5300	12	3.372	-8.279	11.651	13	-1.349	Pass
5300	27	3.257	-8.455	11.712	13	-1.288	Pass
Mid channel, C	BW 5 MHz						
5300	1.5	0.888	-9.95	10.838	13	-2.162	Pass
5300	4.5	1.172	-9.268	10.44	13	-2.56	Pass
5300	6	2.598	-8.936	11.534	13	-1.466	Pass
5300	13.5	1.931	-9.128	11.059	13	-1.941	Pass

*- Margin = Peak excursion – specification limit.



Test specification:	Section 15.407(a)(6), Ratio of the peak excursion of the modulation envelope to the peak transmit power			
Test procedure:	FCC Public Notice DA 02-2138, Appendix A			
Test mode:	Compliance	Verdict: PASS		
Date:	6/15/2008			
Temperature: 23 °CAir Pressure: 1012 hPaRelative Humidity: 52 %Power Supply: 120 V				
Remarks: EUT with internal antenna				

Table 7.2.2 Peak excursion test results (continued)

Frequency, MHz	Bit Rate, MBps	1-st trace, dBm	2-nd trace, dBm	Peak excursion, dB	Limit, dB	Margin, dB	Verdict
High channel, (CBW 20 MHz						
5332.5	6	-0.942	-11.630	10.688	13	-2.312	Pass
5332.5	18	0.612	-8.716	9.328	13	-3.672	Pass
5332.5	24	1.501	-8.820	10.321	13	-2.679	Pass
5332.5	54	2.891	-8.258	11.149	13	-1.851	Pass
High channel,	High channel, CBW 10 MHz						
5340	3	-0.169	-10.450	10.281	13	-2.719	Pass
5340	9	2.033	-8.400	10.433	13	-2.567	Pass
5340	12	3.597	-7.960	11.557	13	-1.443	Pass
5340	27	2.565	-7.596	10.161	13	-2.839	Pass
High channel, (CBW 5 MHz						
5345	1.5	-0.965	-9.987	9.022	13	-3.978	Pass
5345	4.5	1.015	-9.196	10.211	13	-2.789	Pass
5345	6	1.601	-10.030	11.631	13	-1.369	Pass
5345	13.5	1.604	-9.773	11.377	13	-1.623	Pass

*- Margin = Peak excursion – specification limit.

Reference numbers of test equipment used

HL 2909	HL 2951	HL 3179			

Full description is given in Appendix A.



Test specification:	Section 15.407(a)(6), Ratio of the peak excursion of the modulation envelope to the peak transmit power			
Test procedure:	FCC Public Notice DA 02-2138, Appendix A			
Test mode:	Compliance	Verdict: PASS		
Date:	6/15/2008			
Temperature: 23 °C Air Pressure: 1012 hPa Relative Humidity: 52 % Power Supply: 120 VAC				
Remarks: EUT with internal antenna				

Plot 7.2.1 Peak excursion measurements



Plot.7.2.2 Peak excursion measurement

		1 101.7.2.2		Sion measure	ciliciti
requer Channe Aodulat	ncy: I BW: tion p	arameters		5262.5 MHz 20 MHz QPSK; 18 ME	3ps
🔆 Agili	ent			F	К Т
Ref 5 dB	m		Atten 5 dB		Mkr1 5.2646875 GH 0.037 dBi
#Samp Log 10 - dB/ - Offst - dB - dB - PAvg -					
Start 5.2	5 GHz				Stop 5 275 G
#Res BW	/ 1 MHz		VBW 3 I	MHz	#Sweep 20 ms (401 pts)
Marker 1 2	Trace (1) (2)	e Type Freq Freq	X Axis 5.2646875 GHz 5.2646875 GHz	Amplitud 0.037 dBr -8.746 dBn	de n n



Test specification:	Section 15.407(a)(6), Ratio of the peak excursion of the modulation envelope to the peak transmit power			
Test procedure:	FCC Public Notice DA 02-2138, Appendix A			
Test mode:	Compliance	Vardiat: DASS		
Date:	6/15/2008	Verdict: PASS		
Cemperature: 23 °C Air Pressure: 1012 hPa Relative Humidity: 52 % Power Supply: 120 VAC				
Remarks: EUT with internal antenna				

Plot.7.2.3 Peak excursion measurement

Frequency:	5262.5 MHz
Channel BW:	20 MHz
Modulation parameters:	16QAM; 24 MBps



Plot.7.2.4 Peak excursion measurement

Frequency:	5262.5 MHz
Channel BW:	20 MHz
Modulation parameters:	64QAM; 54 MBps





Test specification:	Section 15.407(a)(6), Ratio of the peak excursion of the modulation envelope to the peak transmit power			
Test procedure:	FCC Public Notice DA 02-2138, Appendix A			
Test mode:	Compliance	Vardiat: DASS		
Date:	6/15/2008	Verdict: PASS		
Temperature: 23 °C Air Pressure: 1012 hPa Relative Humidity: 52 % Power Supply: 120 VAC				
Remarks: EUT with internal antenna				

Plot 7.2.5 Peak excursion measurement

Frequency:	5257.5 MHz
Channel BW:	10 MHz
Modulation parameters:	BPSK; 3 MBps



Plot 7.2.6 Peak excursion measurement

Frequency:	5257.5 MHz
Channel BW:	10 MHz
Modulation parameters:	QPSK; 9 MBps





Test specification:	Section 15.407(a)(6), Ratio of the peak excursion of the modulation envelope to the peak transmit power		
Test procedure:	FCC Public Notice DA 02-2138, Appendix A		
Test mode:	Compliance	Vordict	DASS
Date:	6/15/2008	veruict.	FA33
Temperature: 23 °C	Air Pressure: 1012 hPa	Relative Humidity: 52 %	Power Supply: 120 VAC
Remarks: EUT with internal antenna			

Plot 7.2.7 Peak excursion measurement

Frequency:	5257.5 MHz
Channel BW:	10 MHz
Modulation parameters:	16QAM; 12 MBps



Plot 7.2.8 Peak excursion measurement

Frequency:	5257.5 MHz
Channel BW:	10 MHz
Modulation parameters:	64QAM; 27 MBps





Test specification:	Section 15.407(a)(6), Ratio of the peak excursion of the modulation envelope to the peak transmit power		
Test procedure:	FCC Public Notice DA 02-2138, Appendix A		
Test mode:	Compliance	Vordict	DASS
Date:	6/15/2008	veruict.	FA33
Temperature: 23 °C	Air Pressure: 1012 hPa	Relative Humidity: 52 %	Power Supply: 120 VAC
Remarks: EUT with internal antenna			

Plot 7.2.9 Peak excursion measurement

Frequency:	5255 MHz
Channel BW:	5 MHz
Modulation parameters:	BPSK; 1.5 MBps



Plot 7.2.10 Peak excursion measurement

Snannei Bvv: 5 MH	z
Modulation parameters: QPS	K; 4.5 MBps





Test specification:	Section 15.407(a)(6), Ratio of the peak excursion of the modulation envelope to the peak transmit power		
Test procedure:	FCC Public Notice DA 02-2138, Appendix A		
Test mode:	Compliance	Vordict	DAGG
Date:	6/15/2008	verdict.	FA33
Temperature: 23 °C	Air Pressure: 1012 hPa	Relative Humidity: 52 %	Power Supply: 120 VAC
Remarks: EUT with internal antenna			

Plot 7.2.11 Peak excursion measurement

Frequency:	5255 MHz
Channel BW:	5 MHz
Modulation parameters:	16QAM; 6 MBps



Plot 7.2.12 Peak excursion measurement

	equency:
	annel BW:
3.5 MBps	odulation parameters:
3.5 MBps	odulation parameters:





Test specification:	Section 15.407(a)(6), Ratio of the peak excursion of the modulation envelope to the peak transmit power		
Test procedure:	FCC Public Notice DA 02-2138, Appendix A		
Test mode:	Compliance	Vordict	DASS
Date:	6/15/2008	veruict.	FA33
Temperature: 23 °C	Air Pressure: 1012 hPa	Relative Humidity: 52 %	Power Supply: 120 VAC
Remarks: EUT with internal antenna			

Plot 7.2.13 Peak excursion measurement

Frequency:	5300 MHz
Channel BW:	20 MHz
Modulation parameters:	BPSK; 6 MBps



Plot 7.2.14 Peak excursion measurement

Frequency:	5300 MHz
Channel BW:	20 MHz
Modulation parameters:	QPSK; 18 MBps





Test specification:	Section 15.407(a)(6), Ratio of the peak excursion of the modulation envelope to the peak transmit power		
Test procedure:	FCC Public Notice DA 02-2138, Appendix A		
Test mode:	Compliance	Vardiat: DACC	DASS
Date:	6/15/2008	veruict.	FA33
Temperature: 23 °C	Air Pressure: 1012 hPa	Relative Humidity: 52 %	Power Supply: 120 VAC
Remarks: EUT with interna	l antenna		

Plot 7.2.15 Peak excursion measurement

Frequency:	5300 MHz
Channel BW:	20 MHz
Modulation parameters:	16QAM; 24 MBps



Plot 7.2.16 Peak excursion measurement

Frequency:	5300 MHz
Channel BW:	20 MHz
Modulation parameters:	64QAM; 54 MBps





Test specification:	Section 15.407(a)(6), Ratio of the peak excursion of the modulation envelope to the peak transmit power		
Test procedure:	FCC Public Notice DA 02-2138, Appendix A		
Test mode:	Compliance	Vardiat: DACC	DASS
Date:	6/15/2008	veruict.	FA33
Temperature: 23 °C	Air Pressure: 1012 hPa	Relative Humidity: 52 %	Power Supply: 120 VAC
Remarks: EUT with interna	l antenna		

Plot 7.2.17 Peak excursion measurement

Frequency:	5300 MHz
Channel BW:	10 MHz
Modulation parameters:	BPSK; 3 MBps



Plot 7.2.18 Peak excursion measurement

Frequency:	5300 MHz
Channel BW:	10 MHz
Modulation parameters:	QPSK; 9 MBps





Test specification:	Section 15.407(a)(6), Ratio of the peak excursion of the modulation envelope to the peak transmit power		
Test procedure:	FCC Public Notice DA 02-2138, Appendix A		
Test mode:	Compliance	Vardiat: DASS	DAGG
Date:	6/15/2008	verdict.	FA33
Temperature: 23 °C	Air Pressure: 1012 hPa	Relative Humidity: 52 %	Power Supply: 120 VAC
Remarks: EUT with interna	al antenna		

Plot 7.2.19 Peak excursion measurement

Frequency:	5300 MHz
Channel BW:	10 MHz
Modulation parameters:	16QAM; 12 MBps



Plot 7.2.20 Peak excursion measurement

Frequency:	5300 MHz
Channel BW:	10 MHz
Modulation parameters:	64QAM; 27 MBps
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Test specification:	Section 15.407(a)(6), Ratio of the peak excursion of the modulation envelope to the peak transmit power		
Test procedure:	FCC Public Notice DA 02-2138, Appendix A		
Test mode:	Compliance	Vordict	DAGG
Date:	6/15/2008	verdict.	FA33
Temperature: 23 °C	Air Pressure: 1012 hPa	Relative Humidity: 52 %	Power Supply: 120 VAC
Remarks: EUT with interna	al antenna		

Plot 7.2.21 Peak excursion measurement

Frequency:	5300 MHz
Channel BW:	5 MHz
Modulation parameters:	BPSK; 1.5 MBps



Plot 7.2.22 Peak excursion measurement

Frequency:	5300 MHz
Channel BW:	5 MHz
Modulation parameters:	QPSK; 4.5 MBps





Test specification:	Section 15.407(a)(6), Ratio of the peak excursion of the modulation envelope to the peak transmit power		
Test procedure:	FCC Public Notice DA 02-2138, Appendix A		
Test mode:	Compliance	Vordict	DASS
Date:	6/15/2008	veraict.	FA33
Temperature: 23 °C	Air Pressure: 1012 hPa	Relative Humidity: 52 %	Power Supply: 120 VAC
Remarks: EUT with internal antenna			

Plot 7.2.23 Peak excursion measurement

Frequency:	5300 MHz
Channel BW:	5 MHz
Modulation parameters:	16QAM; 6 MBps



Plot 7.2.24 Peak excursion measurement

Frequency:	5300 MHz
Channel BW:	5 MHz
Modulation parameters:	64QAM; 13.5 MBps
🔆 Agilent	R T





Test specification:	Section 15.407(a)(6), Ratio of the peak excursion of the modulation envelope to the peak transmit power		
Test procedure:	FCC Public Notice DA 02-2138, Appendix A		
Test mode:	Compliance	Vordict	DASS
Date:	6/15/2008	veraict.	FA33
Temperature: 23 °C	Air Pressure: 1012 hPa	Relative Humidity: 52 %	Power Supply: 120 VAC
Remarks: EUT with internal antenna			

Plot 7.2.25 Peak excursion measurement

Frequency:	5332.5 MHz
Channel BW:	20 MHz
Modulation parameters:	BPSK; 6 MBps



Plot 7.2.26 Peak excursion measurement

Frequency:	5332.5 MHz
Channel BW:	20 MHz
Modulation parameters:	QPSK; 18 MBps





Test specification:	Section 15.407(a)(6), Ratio of the peak excursion of the modulation envelope to the peak transmit power		
Test procedure:	FCC Public Notice DA 02-2138, Appendix A		
Test mode:	Compliance	Vordict	DASS
Date:	6/15/2008	veraict.	FA33
Temperature: 23 °C	Air Pressure: 1012 hPa	Relative Humidity: 52 %	Power Supply: 120 VAC
Remarks: EUT with internal antenna			

Plot 7.2.27 Peak excursion measurement

Frequency:	5332.5 MHz
Channel BW:	20 MHz
Modulation parameters:	16QAM; 24 MBps



Plot 7.2.28 Peak excursion measurement

Frequency:	5332.5 MHz
Channel BW:	20 MHz
Modulation parameters:	64QAM; 54 MBps





Test specification:	Section 15.407(a)(6), Ratio of the peak excursion of the modulation envelope to the peak transmit power		
Test procedure:	FCC Public Notice DA 02-2138, Appendix A		
Test mode:	Compliance	Vordict	DASS
Date:	6/15/2008	veraict.	FA33
Temperature: 23 °C	Air Pressure: 1012 hPa	Relative Humidity: 52 %	Power Supply: 120 VAC
Remarks: EUT with internal antenna			

Plot 7.2.29 Peak excursion measurement

Frequency:	5340 MHz
Channel BW:	10 MHz
Modulation parameters:	BPSK; 3 MBps



Plot 7.2.30 Peak excursion measurement

Frequency:	5340 MHz
Channel BW:	10 MHz
Modulation parameters:	QPSK; 9 MBps





Test specification:	Section 15.407(a)(6), Ratio of the peak excursion of the modulation envelope to the peak transmit power		
Test procedure:	FCC Public Notice DA 02-2138, Appendix A		
Test mode:	Compliance	Verdict: PASS	DASS
Date:	6/15/2008		FA33
Temperature: 23 °C	Air Pressure: 1012 hPa	Relative Humidity: 52 %	Power Supply: 120 VAC
Remarks: EUT with internal antenna			

Plot 7.2.31 Peak excursion measurement

Frequency:	5340 MHz
Channel BW:	10 MHz
Modulation parameters:	16QAM; 12 MBps



Plot 7.2.32 Peak excursion measurement

riequency.	5340 MHZ
Channel BW:	10 MHz
Modulation parameters:	64QAM; 27 MBps





Test specification:	Section 15.407(a)(6), Ratio of the peak excursion of the modulation envelope to the peak transmit power		
Test procedure:	FCC Public Notice DA 02-2138, Appendix A		
Test mode:	Compliance	Verdict: PASS	DASS
Date:	6/15/2008		FA33
Temperature: 23 °C	Air Pressure: 1012 hPa	Relative Humidity: 52 %	Power Supply: 120 VAC
Remarks: EUT with internal antenna			

Plot 7.2.33 Peak excursion measurement

Frequency:	5345 MHz
Channel BW:	5 MHz
Modulation parameters:	BPSK; 1.5 MBps



Plot 7.2.34 Peak excursion measurement

Frequency:	5345 MHz
Channel BW:	5 MHz
Modulation parameters:	QPSK; 4.5 MBps





Test specification:	Section 15.407(a)(6), Ratio of the peak excursion of the modulation envelope to the peak transmit power		
Test procedure:	FCC Public Notice DA 02-2138, Appendix A		
Test mode:	Compliance	Verdict: PASS	DASS
Date:	6/15/2008		FA33
Temperature: 23 °C	Air Pressure: 1012 hPa	Relative Humidity: 52 %	Power Supply: 120 VAC
Remarks: EUT with internal antenna			

Plot 7.2.35 Peak excursion measurement

Frequency:	5345 MHz
Channel BW:	5 MHz
Modulation parameters:	16QAM; 6 MBps



Plot 7.2.36 Peak excursion measurement

Frequency:	5345 MHz
Channel BW:	5 MHz
Modulation parameters:	64QAM; 13.5 MBps
🔆 Agilent	R T




Test specification:	Section 15.407(a)(6), Ratio of the peak excursion of the modulation envelope to the peak transmit power				
Test procedure:	FCC Public Notice DA 02-2138, Appendix A				
Test mode:	Compliance	Vordict	DAGG		
Date:	6/15/2008	Verdici. PASS			
Temperature: 23 °C	Air Pressure: 1012 hPa	Relative Humidity: 52 %	Power Supply: 120 VAC		
Remarks: EUT with external antenna					

Table 7.2.3 Peak excursion test results

ASSIGNED FREQUENCY RANGE: DETECTOR USED:

TRANSMITTER OUTPUT POWER SETTINGS:

5250-5350 MHz 1-st trace : Peak, Max Hold 2-nd trace : Sample, 100 Power Averaging "3 dBm" at 5 MHz channel bandwidth "6 dBm" at 10 MHz channel bandwidth "9 dBm" at 20 MHz channel bandwidth 1 MHz 3 MHz

RESOLUTION BANDWIDTH: VIDEO BANDWIDTH:

Frequency, MHz	Bit Rate, MBps	1-st trace, dBm	2-nd trace, dBm	Peak excursion, dB	Limit, dB	Margin, dB	Verdict
Low channel, C	BW 20 MHz						
5262.5	6	-0.385	-10.650	10.265	13	-2.735	Pass
5262.5	18	0.037	-8.746	8.783	13	-4.217	Pass
5262.5	24	1.311	-9.196	10.507	13	-2.493	Pass
5262.5	54	1.585	-9.391	10.976	13	-2.024	Pass
Low channel, C	BW 10 MHz						
5257.5	3	-0.74	-10.660	9.92	13	-3.08	Pass
5257.5	9	2.075	-7.876	9.951	13	-3.049	Pass
5257.5	12	3.149	-8.313	11.462	13	-1.538	Pass
5257.5	27	2.3	-8.439	10.739	13	-2.261	Pass
Low channel, C	BW 5 MHz						
5255	1.5	-1.32	-10.850	9.53	13	-3.47	Pass
5255	4.5	0.985	-9.410	10.395	13	-2.605	Pass
5255	6	1.722	-9.541	11.263	13	-1.737	Pass
5255	13.5	1.561	-9.396	10.957	13	-2.043	Pass
Mid channel, Cl	BW 20 MHz			-			
5300	6	-1.125	-11.380	10.255	13	-2.745	Pass
5300	18	-0.284	-9.438	9.154	13	-3.846	Pass
5300	24	-0.195	-10.060	9.865	13	-3.135	Pass
5300	54	0.966	-9.841	10.807	13	-2.193	Pass
Mid channel, C	BW 10 MHz					-	
5300	3	-1.343	-11.580	10.237	13	-2.763	Pass
5300	9	0.899	-9.577	10.476	13	-2.524	Pass
5300	12	2.382	-8.538	10.92	13	-2.08	Pass
5300	27	1.76	-8.99	10.75	13	-2.25	Pass
Mid channel, C	BW 5 MHz					r	
5300	1.5	-1.946	-10.8	8.854	13	-4.146	Pass
5300	4.5	-0.336	-11.160	10.824	13	-2.176	Pass
5300	6	0.911	-10.390	11.301	13	-1.699	Pass
5300	13.5	0.922	-9.425	10.347	13	-2.653	Pass

*- Margin = Peak excursion – specification limit.



Test specification:	Section 15.407(a)(6), Ratio of the peak excursion of the modulation envelope to the peak transmit power				
Test procedure:	FCC Public Notice DA 02-2138, Appendix A				
Test mode:	Compliance	Vordict	DAGG		
Date:	6/15/2008	Verdici. PASS			
Temperature: 23 °C	Air Pressure: 1012 hPa	Relative Humidity: 52 %	Power Supply: 120 VAC		
Remarks: EUT with external antenna					

Table 7.2.3 Peak excursion test results (continued)

Frequency, MHz	Bit Rate, MBps	1-st trace, dBm	2-nd trace, dBm	Peak excursion, dB	Limit, dB	Margin, dB	Verdict
High channel, (CBW 20 MHz						
5332.5	6	-1.429	-12.070	10.641	13	-2.359	Pass
5332.5	18	-0.444	-10.050	9.606	13	-3.394	Pass
5332.5	24	0.66	-8.982	9.642	13	-3.358	Pass
5332.5	54	1.603	-9.001	10.604	13	-2.396	Pass
High channel,	CBW 10 MHz						
5340	3	-0.761	-11.870	11.109	13	-1.891	Pass
5340	9	0.93	-8.989	9.919	13	-3.081	Pass
5340	12	2.596	-9.356	11.952	13	-1.048	Pass
5340	27	1.611	-9.381	10.992	13	-2.008	Pass
High channel, (CBW 5 MHz						
5345	1.5	-2.566	-11.730	9.164	13	-3.836	Pass
5345	4.5	-0.144	-10.090	9.946	13	-3.054	Pass
5345	6	0.198	-11.180	11.378	13	-1.622	Pass
5345	13.5	0.537	-10.38	10.917	13	-2.083	Pass

*- Margin = Peak excursion – specification limit.

Reference numbers of test equipment used

HL 2909	HL 2951	HL 3179			

Full description is given in Appendix A.



Test specification:	Section 15.407(a)(6), Ratio of the peak excursion of the modulation envelope to the peak transmit power				
Test procedure:	FCC Public Notice DA 02-2138, Appendix A				
Test mode:	Compliance	Vordict	DAGG		
Date:	6/15/2008	verdict.	FA33		
Temperature: 23 °C	Air Pressure: 1012 hPa	Relative Humidity: 52 %	Power Supply: 120 VAC		
Remarks: EUT with external antenna					

Plot 7.2.37 Peak excursion measurements



Plot.7.2.38 Peak excursion measurement





Test specification:	Section 15.407(a)(6), Ratio of the peak excursion of the modulation envelope to the peak transmit power				
Test procedure:	FCC Public Notice DA 02-213	FCC Public Notice DA 02-2138, Appendix A			
Test mode:	Compliance	Vordict	DASS		
Date:	6/15/2008	Verdici. PASS			
Temperature: 23 °C	Air Pressure: 1012 hPa	Relative Humidity: 52 %	Power Supply: 120 VAC		
Remarks: EUT with external antenna					

Plot.7.2.39 Peak excursion measurement

Frequency:	5262.5 MHz
Channel BW:	20 MHz
Modulation parameters:	16QAM; 24 MBps



Plot.7.2.40 Peak excursion measurement

Frequency:	5262.5 MHz
Channel BW:	20 MHz
Modulation parameters:	64QAM; 54 MBps





Test specification:	Section 15.407(a)(6), Ratio of the peak excursion of the modulation envelope to the peak transmit power				
Test procedure:	FCC Public Notice DA 02-2138, Appendix A				
Test mode:	Compliance	Vordict:	DASS		
Date:	6/15/2008	Verdict. PASS			
Temperature: 23 °C	Air Pressure: 1012 hPa	Relative Humidity: 52 %	Power Supply: 120 VAC		
Remarks: EUT with external antenna					

Plot 7.2.41 Peak excursion measurement

Frequency:	5257.5 MHz
Channel BW:	10 MHz
Modulation parameters:	BPSK; 3 MBps



Plot 7.2.42 Peak excursion measurement

Frequency:	5257.5 MHz
Channel BW:	10 MHz
Modulation parameters:	QPSK; 9 MBps





Test specification:	Section 15.407(a)(6), Ratio of the peak excursion of the modulation envelope to the peak transmit power		
Test procedure:	FCC Public Notice DA 02-2138, Appendix A		
Test mode:	Compliance	Verdict: PASS	DASS
Date:	6/15/2008		FA33
Temperature: 23 °C	Air Pressure: 1012 hPa	Relative Humidity: 52 %	Power Supply: 120 VAC
Remarks: EUT with external antenna			

Plot 7.2.43 Peak excursion measurement

Frequency:	5257.5 MHz
Channel BW:	10 MHz
Modulation parameters:	16QAM; 12 MBps



Plot 7.2.44 Peak excursion measurement

Frequency:	5257.5 MHz
Channel BW:	10 MHz
Modulation parameters:	64QAM; 27 MBps





Test specification:	Section 15.407(a)(6), Ratio of the peak excursion of the modulation envelope to the peak transmit power		
Test procedure:	FCC Public Notice DA 02-2138, Appendix A		
Test mode:	Compliance	Verdict: PASS	DAGG
Date:	6/15/2008		FA33
Temperature: 23 °C	Air Pressure: 1012 hPa	Relative Humidity: 52 %	Power Supply: 120 VAC
Remarks: EUT with external antenna			

Plot 7.2.45 Peak excursion measurement

Frequency:	5255 MHz
Channel BW:	5 MHz
Modulation parameters:	BPSK; 1.5 MBps



Plot 7.2.46 Peak excursion measurement

Frequency:	5255 MHz
Channel BW:	5 MHz
Modulation parameters:	QPSK; 4.5 MBps





Test specification:	Section 15.407(a)(6), Ratio of the peak excursion of the modulation envelope to the peak transmit power		
Test procedure:	FCC Public Notice DA 02-2138, Appendix A		
Test mode:	Compliance	Verdict: PASS	DASS
Date:	6/15/2008		FA33
Temperature: 23 °C	Air Pressure: 1012 hPa	Relative Humidity: 52 %	Power Supply: 120 VAC
Remarks: EUT with external antenna			

Plot 7.2.47 Peak excursion measurement

Frequency:	5255 MHz
Channel BW:	5 MHz
Modulation parameters:	16QAM; 6 MBps



Plot 7.2.48 Peak excursion measurement

Frequency:	5255 MHz
Channel BW:	5 MHz
Modulation parameters:	64QAM; 13.5 MBps





Test specification:	Section 15.407(a)(6), Ratio of the peak excursion of the modulation envelope to the peak transmit power		
Test procedure:	FCC Public Notice DA 02-2138, Appendix A		
Test mode:	Compliance	Verdict: PASS	DASS
Date:	6/15/2008		FA33
Temperature: 23 °C	Air Pressure: 1012 hPa	Relative Humidity: 52 %	Power Supply: 120 VAC
Remarks: EUT with external antenna			

Plot 7.2.49 Peak excursion measurement

Frequency:	5300 MHz
Channel BW:	20 MHz
Modulation parameters:	BPSK; 6 MBps



Plot 7.2.50 Peak excursion measurement

Frequency:	5300 MHz
Channel BW:	20 MHz
Modulation parameters:	QPSK; 18 MBps





Test specification:	Section 15.407(a)(6), Ratio of the peak excursion of the modulation envelope to the peak transmit power		
Test procedure:	FCC Public Notice DA 02-2138, Appendix A		
Test mode:	Compliance	Vordict	DASS
Date:	6/15/2008	Verdici. PASS	FA33
Temperature: 23 °C	Air Pressure: 1012 hPa	Relative Humidity: 52 %	Power Supply: 120 VAC
Remarks: EUT with external antenna			

Plot 7.2.51 Peak excursion measurement

Frequency:	5300 MHz
Channel BW:	20 MHz
Modulation parameters:	16QAM; 24 MBps



Plot 7.2.52 Peak excursion measurement

Frequency:	5300 MHz
Channel BW:	20 MHz
Modulation parameters:	64QAM; 54 MBps





Test specification:	Section 15.407(a)(6), Ratio of the peak excursion of the modulation envelope to the peak transmit power		
Test procedure:	FCC Public Notice DA 02-2138, Appendix A		
Test mode:	Compliance	Vordict	DASS
Date:	6/15/2008	Verdici. PASS	FA33
Temperature: 23 °C	Air Pressure: 1012 hPa	Relative Humidity: 52 %	Power Supply: 120 VAC
Remarks: EUT with external antenna			

Plot 7.2.53 Peak excursion measurement

Frequency:	5300 MHz	
Channel BW:	10 MHz	
Modulation parameter	s: BPSK; 3 MBps	



Plot 7.2.54 Peak excursion measurement

Frequency:	5300 MHz
Channel BW:	10 MHz
Modulation parameters:	QPSK; 9 MBps





Test specification:	Section 15.407(a)(6), Ratio of the peak excursion of the modulation envelope to the peak transmit power		
Test procedure:	FCC Public Notice DA 02-2138, Appendix A		
Test mode:	Compliance	Vordict	DASS
Date:	6/15/2008	Verdici. PASS	FA33
Temperature: 23 °C	Air Pressure: 1012 hPa	Relative Humidity: 52 %	Power Supply: 120 VAC
Remarks: EUT with external antenna			

Plot 7.2.55 Peak excursion measurement

Frequency:	5300 MHz
Channel BW:	10 MHz
Modulation parameters:	16QAM; 12 MBps



Plot 7.2.56 Peak excursion measurement

Frequency:	5300 MHz
Channel BW:	10 MHz
Modulation parameters:	64QAM; 27 MBps





Test specification:	Section 15.407(a)(6), Ratio of the peak excursion of the modulation envelope to the peak transmit power		
Test procedure:	FCC Public Notice DA 02-2138, Appendix A		
Test mode:	Compliance	Vordict	DAGG
Date:	6/15/2008	veraict.	FA33
Temperature: 23 °C	Air Pressure: 1012 hPa	Relative Humidity: 52 %	Power Supply: 120 VAC
Remarks: EUT with external antenna			

Plot 7.2.57 Peak excursion measurement

Frequency:	5300 MHz
Channel BW:	5 MHz
Modulation parameters:	BPSK; 1.5 MBps



Plot 7.2.58 Peak excursion measurement

Frequency:	5300 MHz
Channel BW:	5 MHz
Modulation parameters:	QPSK; 4.5 MBps





Test specification:	Section 15.407(a)(6), Ratio of the peak excursion of the modulation envelope to the peak transmit power		
Test procedure:	FCC Public Notice DA 02-2138, Appendix A		
Test mode:	Compliance	Vardiat: DASS	DV66
Date:	6/15/2008	verdict.	FA33
Temperature: 23 °C	Air Pressure: 1012 hPa	Relative Humidity: 52 %	Power Supply: 120 VAC
Remarks: EUT with external antenna			

Plot 7.2.59 Peak excursion measurement

Frequency:	5300 MHz
Channel BW:	5 MHz
Modulation parameters:	16QAM; 6 MBps



Plot 7.2.60 Peak excursion measurement

Channel BW: 5 MHz	
Modulation parameters: 64QAM	/i; 13.5 MBps





Test specification:	Section 15.407(a)(6), Ratio of the peak excursion of the modulation envelope to the peak transmit power		
Test procedure:	FCC Public Notice DA 02-2138, Appendix A		
Test mode:	Compliance	Vordict	DAGG
Date:	6/15/2008	Verdict. PASS	FA33
Temperature: 23 °C	Air Pressure: 1012 hPa	Relative Humidity: 52 %	Power Supply: 120 VAC
Remarks: EUT with external antenna			

Plot 7.2.61 Peak excursion measurement

Frequency:	5332.5 MHz
Channel BW:	20 MHz
Modulation parameters:	BPSK; 6 MBps



Plot 7.2.62 Peak excursion measurement

Frequency:	5332.5 MHz
Channel BW:	20 MHz
Modulation parameters:	QPSK; 18 MBps





Test specification:	Section 15.407(a)(6), Ratio of the peak excursion of the modulation envelope to the peak transmit power		
Test procedure:	FCC Public Notice DA 02-2138, Appendix A		
Test mode:	Compliance	Verdict: PASS	DASS
Date:	6/15/2008		FA33
Temperature: 23 °C	Air Pressure: 1012 hPa	Relative Humidity: 52 %	Power Supply: 120 VAC
Remarks: EUT with external antenna			

Plot 7.2.63 Peak excursion measurement

Frequency:	5332.5 MHz
Channel BW:	20 MHz
Modulation parameters:	16QAM; 24 MBps



Plot 7.2.64 Peak excursion measurement

Frequency:	5332.5 MHz
Channel BW:	20 MHz
Modulation parameters:	64QAM; 54 MBps





Test specification:	Section 15.407(a)(6), Ratio of the peak excursion of the modulation envelope to the peak transmit power		
Test procedure:	FCC Public Notice DA 02-2138, Appendix A		
Test mode:	Compliance	Vordict	DASS
Date:	6/15/2008	veruict.	FA33
Temperature: 23 °C	Air Pressure: 1012 hPa	Relative Humidity: 52 %	Power Supply: 120 VAC
Remarks: EUT with external antenna			

Plot 7.2.65 Peak excursion measurement

Frequency:	5340 MHz
Channel BW:	10 MHz
Modulation parameters:	BPSK; 3 MBps



Plot 7.2.66 Peak excursion measurement

Frequency:	5340 MHz
Channel BW:	10 MHz
Modulation parameters:	QPSK; 9 MBps





Test specification:	Section 15.407(a)(6), Ratio of the peak excursion of the modulation envelope to the peak transmit power				
Test procedure:	FCC Public Notice DA 02-2138, Appendix A				
Test mode:	Compliance	Vardiet: DACC			
Date:	6/15/2008	Verdict: PASS			
Temperature: 23 °C	Air Pressure: 1012 hPa	Relative Humidity: 52 %	Power Supply: 120 VAC		
Remarks: EUT with external antenna					

Plot 7.2.67 Peak excursion measurement

Frequency:	5340 MHz	
Channel BW:	10 MHz	
Modulation parameters:	16QAM; 12 MBps	



Plot 7.2.68 Peak excursion measurement

Frequency:	5340 MHz
Channel BW:	10 MHz
Modulation parameters:	64QAM; 27 MBps





Test specification:	Section 15.407(a)(6), Ratio of the peak excursion of the modulation envelope to the peak transmit power			
Test procedure:	FCC Public Notice DA 02-2138, Appendix A			
Test mode:	Compliance	Verdiet: DACC		
Date:	6/15/2008	Verdict. PASS		
Temperature: 23 °C	Air Pressure: 1012 hPa	Relative Humidity: 52 %	Power Supply: 120 VAC	
Remarks: EUT with external antenna				

Plot 7.2.69 Peak excursion measurement

Frequency:	5345 MHz
Channel BW:	5 MHz
Modulation parameters:	BPSK; 1.5 MBps



Plot 7.2.70 Peak excursion measurement

Frequency:	5345 MHz
Channel BW:	5 MHz
Modulation parameters:	QPSK; 4.5 MBps





Test specification:	Section 15.407(a)(6), Ratio of the peak excursion of the modulation envelope to the peak transmit power			
Test procedure:	FCC Public Notice DA 02-2138, Appendix A			
Test mode:	Compliance	Verdiet: DACC		
Date:	6/15/2008	Verdict. PASS		
Temperature: 23 °C	Air Pressure: 1012 hPa	Relative Humidity: 52 %	Power Supply: 120 VAC	
Remarks: EUT with external antenna				

Plot 7.2.71 Peak excursion measurement

Frequency:	5345 MHz
Channel BW:	5 MHz
Modulation parameters:	16QAM; 6 MBps



Plot 7.2.72 Peak excursion measurement

Frequency:	5345 MHz	
Channel BW:	5 MHz	
Modulation parameters:	64QAM; 13.5 MBps	
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Test specification:	Section 15.407(b), RSS-210 Annex 9, section A9.3 Out of band undesirable emissions			
Test procedure:	Public notice DA02-2138			
Test mode:	Compliance	Vordict	DV66	
Date:	7/16/2008	Veruici. PASS		
Temperature: 24°C	Air Pressure: 1012 hPa	Relative Humidity: 48 %	Power Supply: 120 VAC	
Remarks:				

7.3 Band edge spurious emissions

This test was performed to measure radiated spurious emissions from the EUT. Specification test limits are given in Table 7.3.1, Table 7.3.2.

Table 7.3.1 Radiated	spurious	emission	test	limits
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Assigned frequency	EIRP of spurious,	Resolution	Equivalent field strength limit @ 3m,
range, MHz	dBm/MHz	bandwidth, kHz	dB(μV/m)*
5250 - 5350	-27	1000	68.23

 Equivalent field strength limit was calculated from maximum allowed ERP of spurious as follows: E=20×log(sqrt(30×P×1.64)/r) – 2.15, where P is EIRP in Watts, 1.64 is numeric gain of ideal dipole and r is antenna to EUT distance in meters

Table 7.3.2 Radiated spurious emissions limits within restricted bands above 1 GHz

Frequency, MHz	Field stro	Field strength at 3 m, dB(μV/m)				
	Peak	Average				
Above 1000	74.0	54.0				

7.3.1 Test procedure for spurious emission field strength measurements

- 7.3.1.1 The EUT was set up as shown in Figure 7.3.1, energized and the performance check was conducted.
- **7.3.1.2** The specified frequency range was investigated with antenna connected to spectrum analyzer. To find maximum radiation the turntable was rotated 360⁰ and the measuring antenna height was swept from 1 to 4 m in both, vertical and horizontal, polarizations.
- **7.3.1.3** The band-edge emission measurements were performed by marker-delta method.
- **7.3.1.4** The worst test results (the lowest margins) were recorded in Table 7.3.3, Table 7.3.6 and shown in the associated plots.

7.3.2 Test procedure for substitution EIRP measurements of spurious

- **7.3.2.1** The test equipment was set up as shown in Figure 7.3.2 and energized.
- **7.3.2.2** RF signal generator was set to the frequency of investigated spurious emission and the RF output level was preliminary adjusted to produce the same field strength as it was measured from the EUT.
- **7.3.2.3** The test antenna height was swept from 1 to 4 m to find maximum emission from substitution antenna and RF signal generator output was fine adjusted to produce the same field strength as it was measured from the EUT.
- **7.3.2.4** The above procedure was performed in both, horizontal and vertical, polarizations of the test and substitution antennas.
- **7.3.2.5** The EIRP of spurious emissions was calculated as a sum of signal generator output power in dBm and antenna gain in dBi reduced by cable loss in dB.
- 7.3.2.6 The above procedure was repeated at the rest of investigated frequencies.
- **7.3.2.7** The worst test results (the lowest margins) were recorded in Table 7.3.4, Table 7.3.7 and shown in the associated plots.



Test specification:	Section 15.407(b), RSS-210 Annex 9, section A9.3 Out of band undesirable emissions					
Test procedure:	Public notice DA02-2138					
Test mode:	Compliance	Vordict	DASS			
Date:	7/16/2008	verdict.	PA33			
Temperature: 24°C	Air Pressure: 1012 hPa	Relative Humidity: 48 %	Power Supply: 120 VAC			
Remarks:						





Figure 7.3.2 Setup for substitution ERP measurements of spurious





Test specification:	Section 15.407(b), RSS-210 Annex 9, section A9.3 Out of band undesirable emissions						
Test procedure:	Public notice DA02-2138						
Test mode:	Compliance	Vordict	DASS				
Date:	7/16/2008	Verdict: PASS					
Temperature: 24°C	Air Pressure: 1012 hPa	Relative Humidity: 48 %	Power Supply: 120 VAC				
Remarks: EUT with internal antenna							

Table 7.3.3 Bandedge emission field strength test results

ASSIGNED FREQUENCY RANGE: TEST DISTANCE: TEST SITE: EUT HEIGHT: DETECTOR USED: TRANSMITTER OUTPUT POWER SETTINGS:

RBW: VIDEO BANDWIDTH: TEST ANTENNA TYPE: MODULATION: 5250 – 5350 MHz 3 m OATS 0.8 m Peak "2 dBm" at 5 MHz channel bandwidth "5 dBm" at 10 MHz channel bandwidth "8 dBm" at 20 MHz channel bandwidth 1 MHz > Resolution bandwidth Double ridged guide (above 1000 MHz) BPSK/64QAM

Freque	ency, MHz		Bit		Output	Field				Antenna	
Edge	Channel	Modulation	rate, Mbps	CBW, MHz	power settings, dBm	strength dBuV/m	Limit, dBuV/m	Margin*, dB	Antenna polarity	height, m	l I**, degree
5250	5255	BPSK	1.5	5	2	48.94	68.23	-19.29	Vertical	1.0	0
5250	5255	64QAM	13.5	5	2	48.64	68.23	-19.59	Vertical	1.0	0
5250	5257.5	BPSK	3	10	5	66.20	68.23	-2.03	Vertical	1.0	0
5250	5257.5	64QAM	27	10	5	59.06	68.23	-9.17	Vertical	1.0	0
5250	5262.5	BPSK	6	20	8	68.33	68.23	0.10	Vertical	1.0	0
5250	5262.5	64QAM	54	20	8	61.61	68.23	-12.96	Vertical	1.0	0

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

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

Table 7.3.4 Substitution EIRP of bandedge emission test results

ASSIGNED FREQUENCY RANGE: TEST SITE: TEST DISTANCE: SUBSTITUTION ANTENNA HEIGHT: DETECTOR USED: RBW: VIDEO BANDWIDTH: SUBSTITUTION ANTENNA TYPE:				5 () 3 () 5 () 5 () 5 () 5 () 5 () 5 ()	5250 – 535 DATS 3 m).8 m Peak I MHz > Resolutic Double ridg	i0 MHz on bandwidth ged guide				
Frequen	icy, MHz	Field	Antenna	Ant gain,	Cable	RF generator	EIRP,	Limit,	Margin,	Verdict
Edge	Channel	dB(μV/m)	polariz.	dBi	loss, dB	dBm	dBm/MHz	dBm/MHz	dB*	Verdict

-52.29

-52.59

-35.06

-42.19

-33.9

-46.96

-46.36

-46.66

-29.13

-36.29

-27.92

-40.98

-27.0

-27.0

-27.0

-27.0

-27.0

-27.0

4.28

4.28

4.28

4.28

4.28

4.28

5250.00	5262.5	61.67	Vertical	10.26			
*- Margin = Spurious emission – specification limit.							

48.94

48.64

66.20

59.06

68.33

Vertical

Vertical

Vertical

Vertical

Vertical

10.21

10.21

10.21

10.21

10.26

5250.00

5250.00

5250.00

5250.00

5250.00

5255.0

5255.0

5257.5

5257.5

5262.5

-19.36

-19.66

-2.13

-9.29

-0.92

-13.98

Pass



Test specification:	Section 15.407(b), RSS-210 Annex 9, section A9.3						
		61113310113					
Test procedure:	Public notice DA02-2138						
Test mode:	Compliance	Vordiot	DASS				
Date:	7/16/2008	verdict.	PA33				
Temperature: 24°C	Air Pressure: 1012 hPa	Relative Humidity: 48 %	Power Supply: 120 VAC				
Remarks: EUT with internal antenna							

Table 7.3.5 Field strength of bandedge emissions within restricted bands

ASSIGNED FREQUENCY RANGE: TEST DISTANCE: MODULATION: TRANSMITTER OUTPUT POWER SETTINGS: 5250 -5350 MHz 3 m BPSK/64QAM "2 dBm" at 5 MHz channel bandwidth "5 dBm" at 10 MHz channel bandwidth "8 dBm" at 20 MHz channel bandwidth Peak 1000 kHz Double ridged guide

DETECTOR USED: RESOLUTION BANDWIDTH: TEST ANTENNA TYPE

Frequency, Bit rate Antenna		na	\zimuth	Peak field strength zimuth (VBW=3 MHz)			Average field strength (VBW=300 Hz)			Vordict	
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
20 MHz EBV	N										
5350	6	Vertical	1.0	0	59.84	74.0	-14.16	41.16	54.00	-12.84	Pass
5350	54	Vertical	1.0	0	71.24	74.0	-2.76	51.78	54.00	-2.22	
10 MHz EBV	N										
5350	3	Vertical	1.0	0	63.33	74.0	-10.67	49.83	54.00	-4.17	Pass
5350	27	Vertical	1.0	0	73.50	74.0	-0.50	53.83	54.00	-0.17	
5 MHz EBW											
5350	1.5	Vertical	1.0	0	66.81	74.0	-5.19	46.58	54.00	-7.42	Pass
5350	13.5	Vertical	1.0	0	72.03	74.0	-1.97	52.51	54.00	-1.49	

*- Margin = Measured emission - specification limit.

Reference numbers of test equipment used

HL 0521	HL 0661	HL 1947	HL 1984	HL 2432	HL 3120	HL 3121	

Full description is given in Appendix A.



Test specification:	Section 15.407(b), RSS-210 Annex 9, section A9.3 Out of band undesirable emissions					
Test procedure:	Public notice DA02-2138					
Test mode:	Compliance	Vordict:	DASS			
Date:	7/16/2008	Verdict: PASS				
Temperature: 24°C	Air Pressure: 1012 hPa	Relative Humidity: 48 %	Power Supply: 120 VAC			
Remarks: EUT with internal antenna						

Plot 7.3.1 Radiated emission measurements at low edge (5 MHz EBW)

TEST SITE:	Anechoic chamber
TEST DISTANCE:	3 m
ANTENNA POLARIZATION:	Vertical and Horizontal
DETECTOR	Peak
MODULATION:	BPSK 1.5 Mbps





TEST SITE:	Anechoic chamber
TEST DISTANCE:	3 m
ANTENNA POLARIZATION:	Vertical and Horizontal
DETECTOR	Average
MODULATION:	BPSK 1.5 Mbps



 ACTU DET: PEAK MEAS DET: PEAK OP AVG MKR 5.25000 GHz V0.94 dBµV/m

 LOO 10 dB/ ATN 10 dB DL GB.2 dBµV/m
 PREAMP ON

 DL GB.2 dBµV/m
 0

 CFC ACORR
 0

 START 5.23000 GHz RL
 ¥00 BM 10 Hz



Test specification:	Section 15.407(b), RSS-210 Annex 9, section A9.3 Out of band undesirable emissions		
Test procedure:	Public notice DA02-2138		
Test mode:	Compliance	Vardiate	DASS
Date:	7/16/2008	verdict.	PA33
Temperature: 24°C	Air Pressure: 1012 hPa	Relative Humidity: 48 %	Power Supply: 120 VAC
Remarks: EUT with internal antenna			

Plot 7.3.3 Radiated emission measurements at low edge (5 MHz EBW)

Anechoic chamber
3 m
Vertical and Horizontal
Peak
64QAM 13.5 Mbps





TEST SITE:	Anechoic chamber
ANTENNA POLARIZATION:	Vertical and Horizontal
DETECTOR	Average
MODULATION:	64QAM 13.5 Mbps



LOC 10 dB≠ ATN 10 dB

DL 6B.2 dBµV/ VA SB SC FC ACORR

ACTV DET: РЕАК MEAS DET: РЕАК ОР АVG MKR 5.25000 GHz 40.64 dBµV/m REF OFFST -2.4 dB REF 75.0 dBµV/m PREAMP ON STOP 5.25000 OHz SWP 6.00 sec START 5.23000 GHz RL #JF BW 1.0 MHz

#AVO BW 10 Hz



Test specification:	Section 15.407(b), RSS-210 Annex 9, section A9.3 Out of band undesirable emissions		
Test procedure:	Public notice DA02-2138		
Test mode:	Compliance	Vordiot	DACC
Date:	7/16/2008	verdict.	FA33
Temperature: 24°C	Air Pressure: 1012 hPa	Relative Humidity: 48 %	Power Supply: 120 VAC
Remarks: EUT with internal antenna			

Plot 7.3.5 Radiated emission measurements at low edge (10 MHz EBW)

choic chamber
tical and Horizontal
ık
SK 3 Mbps



Plot 7.3.6 Radiated emission measurements at low edge (10 MHz EBW)

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



 ACTU DET:
 PEAK MEAS DET:
 PEAK PEAK OP AVG MKR 5.25000 GHz B6.20 dBµV/m

 LOO REF 85.6 dBµV/m
 PREAMP ON

 10 dB/ #ATN 20 dB
 PREAMP ON

 0L GB.2 dBµV/m
 0

 0L GB.2 dBµV/m
 0



Test specification:	Section 15.407(b), RSS-210 Annex 9, section A9.3 Out of band undesirable emissions		
Test procedure:	Public notice DA02-2138		
Test mode:	Compliance	Vordiot	DACC
Date:	7/16/2008	verdict.	FA33
Temperature: 24°C	Air Pressure: 1012 hPa	Relative Humidity: 48 %	Power Supply: 120 VAC
Remarks: EUT with internal antenna			

Plot 7.3.7 Radiated emission measurements at low edge (10 MHz EBW)

TEST SITE:	Anechoic chamber
TEST DISTANCE:	3 m
ANTENNA POLARIZATION:	Vertical and Horizontal
DETECTOR	Peak
MODULATION:	64QAM 27 Mbps





TEST SITE: TEST DISTANCE:	Anechoic chamber 3 m
ANTENNA POLARIZATION:	Vertical and Horizontal
DETECTOR	Average
MODULATION:	64QAM 27 Mbps







Test specification:	Section 15.407(b), RSS-210 Annex 9, section A9.3 Out of band undesirable emissions		
Test procedure:	Public notice DA02-2138		
Test mode:	Compliance	Vordiot	DASS
Date:	7/16/2008	verdict.	FA33
Temperature: 24°C	Air Pressure: 1012 hPa	Relative Humidity: 48 %	Power Supply: 120 VAC
Remarks: EUT with internal antenna			

Plot 7.3.9 Radiated emission measurements at low edge at low edge (20 MHz EBW) by delta method



The field strength determined by delta method is equal to $63.33 \text{ dB}\mu\text{V/m}$



Test specification:	Section 15.407(b), RSS-210 Annex 9, section A9.3 Out of band undesirable emissions		
Test procedure:	Public notice DA02-2138		
Test mode:	Compliance	Vordiot	DACC
Date:	7/16/2008	verdict.	FA33
Temperature: 24°C	Air Pressure: 1012 hPa	Relative Humidity: 48 %	Power Supply: 120 VAC
Remarks: EUT with internal antenna			

Plot 7.3.10 Radiated emission measurements at low edge (20 MHz EBW)









Test specification:	Section 15.407(b), RSS-210 Annex 9, section A9.3 Out of band undesirable emissions		
Test procedure:	Public notice DA02-2138		
Test mode:	Compliance	Vordiot	DASS
Date:	7/16/2008	verdict.	FA33
Temperature: 24°C	Air Pressure: 1012 hPa	Relative Humidity: 48 %	Power Supply: 120 VAC
Remarks: EUT with internal antenna			

Plot 7.3.12 Radiated emission measurements at high edge (5 MHz EBW)

TEST SITE:	Anechoic chamber
TEST DISTANCE:	3 m
ANTENNA POLARIZATION:	Vertical and Horizontal
DETECTOR	Peak
MODULATION:	BPSK 1.5 Mbps





TEST SITE:	Anechoic chamber
TEST DISTANCE:	3 m
ANTENNA POLARIZATION:	Vertical and Horizontal
DETECTOR	Average
MODULATION:	BPSK 1.5 Mbps





Test specification:	Section 15.407(b), RSS-210 Annex 9, section A9.3 Out of band undesirable emissions		
Test procedure:	Public notice DA02-2138		
Test mode:	Compliance	Verdict:	DASS
Date:	7/16/2008		PA33
Temperature: 24°C	Air Pressure: 1012 hPa	Relative Humidity: 48 %	Power Supply: 120 VAC
Remarks: EUT with internal antenna			

Plot 7.3.14 Radiated emission measurements at high edge (5 MHz EBW)

TEST SITE:	Anechoic chamber
TEST DISTANCE:	3 m
ANTENNA POLARIZATION:	Vertical and Horizontal
DETECTOR	Peak
MODULATION:	BPSK 1.5 Mbps





TEST SITE:	Anechoic chamber
TEST DISTANCE:	3 m
ANTENNA POLARIZATION:	Vertical and Horizontal
DETECTOR	Average
MODULATION:	BPSK 1.5 Mbps



 ACTU DET: PEAK MEAS DET: PEAK OP AVG MKR 5.3500 GHz 46.76 dBµV/m

 LOO 10 dB/ 4B/ 4ATN 0L 54.0 dBµV/m
 PREANP ON PREANP ON AB/ 4AT

 0L 54.0 dBµV/m
 0 4 4AT

 0L 54.0 dBµV/m
 0 54.0 dBµV/m

 0L 54.0 dBµV/m
 0 54.0 dBµV/m



Test specification:	Section 15.407(b), RSS-210 Annex 9, section A9.3 Out of band undesirable emissions		
Test procedure:	Public notice DA02-2138		
Test mode:	Compliance	Verdict:	
Date:	7/16/2008		FA33
Temperature: 24°C	Air Pressure: 1012 hPa	Relative Humidity: 48 %	Power Supply: 120 VAC
Remarks: EUT with internal antenna			

Plot 7.3.16 Radiated emission measurements at high edge (5 MHz EBW)



5366.0 MHz: 66.17 dBuV/m





The field strength determined by delta method is equal to 72.03 dB μ V/m



Test specification:	Section 15.407(b), RSS-210 Annex 9, section A9.3 Out of band undesirable emissions		
Test procedure:	Public notice DA02-2138		
Test mode:	Compliance	Verdict:	DASS
Date:	7/16/2008		PA33
Temperature: 24°C	Air Pressure: 1012 hPa	Relative Humidity: 48 %	Power Supply: 120 VAC
Remarks: EUT with internal antenna			





5366.0 MHz: 51.00 dBuV/m @ VBW 10Hz



Plot 7.3.19 Radiated emission measurements at high edge by delta method

The field strength determined by delta method is equal to 52.51 dBµV/m



Test specification:	Section 15.407(b), RSS-210 Annex 9, section A9.3 Out of band undesirable emissions		
Test procedure:	Public notice DA02-2138		
Test mode:	Compliance	Verdict:	DASS
Date:	7/16/2008		FA33
Temperature: 24°C	Air Pressure: 1012 hPa	Relative Humidity: 48 %	Power Supply: 120 VAC
Remarks: EUT with internal antenna			

Plot 7.3.20 Radiated emission measurements at high edge (10 MHz EBW)



Plot 7.3.21 Radiated emission measurements at high edge (10 MHz EBW)

Ø

ACTU DET: PEAK MEAS DET: PEAK OP AVG MKR 5.3574 GHz 66.30 dBµV/m





Test specification:	Section 15.407(b), RSS-210 Annex 9, section A9.3 Out of band undesirable emissions		
Test procedure:	Public notice DA02-2138		
Test mode:	Compliance	Verdict:	DASS
Date:	7/16/2008		FA33
Temperature: 24°C	Air Pressure: 1012 hPa	Relative Humidity: 48 %	Power Supply: 120 VAC
Remarks: EUT with internal antenna			

Plot 7.3.22 Radiated emission measurements at high edge (10 MHz EBW)



Plot 7.3.23 Radiated emission measurements at high edge (10 MHz EBW)

Ø

АСТИ DET: РЕАК MEAS DET: РЕАК ОР АУС MKR **5.3500** GHz 40.26 dBµV/m




Test specification:	Section 15.407(b), RSS-210 Annex 9, section A9.3 Out of band undesirable emissions		
Test procedure:	Public notice DA02-2138		
Test mode:	Compliance	Vordiot	DASS
Date:	7/16/2008	verdict.	FA33
Temperature: 24°C	Air Pressure: 1012 hPa	Relative Humidity: 48 %	Power Supply: 120 VAC
Remarks: EUT with internal antenna			





The field strength determined by delta method is equal to 73.5 $dB\mu V/m$



Test specification:	Section 15.407(b), RSS-210 Annex 9, section A9.3 Out of band undesirable emissions		
Test procedure:	Public notice DA02-2138		
Test mode:	Compliance	Verdict:	PASS
Date:	7/16/2008		
Temperature: 24°C	Air Pressure: 1012 hPa	Relative Humidity: 48 %	Power Supply: 120 VAC
Remarks: EUT with internal antenna			

Plot 7.3.25 Radiated emission measurements at high edge (10 MHz EBW)



Plot 7.3.26 Radiated emission measurements at high edge (10 MHz EBW)



5359.5 MHz: 50.17 dBuV/m @ VBW 10Hz 5381.5 MHz: 47.83 dBuV/m @ VBW 10Hz



Test specification:	Section 15.407(b), RSS-210 Annex 9, section A9.3 Out of band undesirable emissions		
Test procedure:	Public notice DA02-2138		
Test mode:	Compliance	Vordiot	DACC
Date:	7/16/2008	verdict.	FA33
Temperature: 24°C	Air Pressure: 1012 hPa	Relative Humidity: 48 %	Power Supply: 120 VAC
Remarks: EUT with internal antenna			

Plot 7.3.27 Radiated emission measurements at high edge (20 MHz EBW)

TEST SITE:	Anechoic chamber
TEST DISTANCE:	3 m
ANTENNA POLARIZATION:	Vertical and Horizontal
DETECTOR	Peak
MODULATION:	BPSK 6 Mbps





TEST SITE:	Anechoic chamber
TEST DISTANCE:	3 m
ANTENNA POLARIZATION:	Vertical and Horizontal
DETECTOR	Peak
MODULATION:	BPSK 6 Mbps





Test specification:	Section 15.407(b), RSS-210 Annex 9, section A9.3 Out of band undesirable emissions		
Test procedure:	Public notice DA02-2138		
Test mode:	Compliance	Verdict:	PASS
Date:	7/16/2008		
Temperature: 24°C	Air Pressure: 1012 hPa	Relative Humidity: 48 %	Power Supply: 120 VAC
Remarks: EUT with internal antenna			

Plot 7.3.29 Radiated emission measurements at high edge (20 MHz EBW)

TEST SITE:	Anechoic chamber
TEST DISTANCE:	3 m
ANTENNA POLARIZATION:	Vertical and Horizontal
DETECTOR	Average
MODULATION:	BPSK 6 Mbps





TEST SITE:	Anechoic chamber
TEST DISTANCE:	3 m
ANTENNA POLARIZATION:	Vertical and Horizontal
DETECTOR	Average
MODULATION:	BPSK 6 Mbps



ACTV DET: PEAK MEAS DET: PEAK OP AVG MKR 5.3500 CHz 41.47 dBµV/m REF OFFST -2.4 dB REF 55.0 dBµV/m L00 10 dB/ #ATN PREAMP ON Ø dB DL 54.0 dBµV/ VA SB SC FC ACORR START 5.3500 GHz RL #JF BW 1.0 MHz STOP 5.4600 OHz SWP 3.30 sec #AVO BW 100 Hz



Test specification:	Section 15.407(b), RSS-210 Annex 9, section A9.3 Out of band undesirable emissions		
Test procedure:	Public notice DA02-2138		
Test mode:	Compliance	Verdict:	PASS
Date:	7/16/2008		
Temperature: 24°C	Air Pressure: 1012 hPa	Relative Humidity: 48 %	Power Supply: 120 VAC
Remarks: EUT with internal antenna			

Plot 7.3.31 Radiated emission measurements at high edge (20 MHz EBW)

TEST SITE:	Anechoic chamber
TEST DISTANCE:	3 m
ANTENNA POLARIZATION:	Vertical and Horizontal
DETECTOR	Peak
MODULATION:	64QAM 54 Mbps





TEST SITE:	Anechoic chamber
TEST DISTANCE:	3 m
ANTENNA POLARIZATION:	Vertical and Horizontal
DETECTOR	Peak
MODULATION:	64QAM 54 Mbps







Test specification:	Section 15.407(b), RSS-210 Annex 9, section A9.3 Out of band undesirable emissions		
Test procedure:	Public notice DA02-2138		
Test mode:	Compliance	Verdict:	PASS
Date:	7/16/2008		
Temperature: 24°C	Air Pressure: 1012 hPa	Relative Humidity: 48 %	Power Supply: 120 VAC
Remarks: EUT with internal antenna			

Plot 7.3.33 Radiated emission measurements at high edge (20 MHz EBW)





TEST SITE: TEST DISTANCE: ANTENNA POLARIZATION:	Anechoic chamber 3 m Vertical and Horizontal
DETECTOR	Average
MODULATION:	64QAM 54 Mbps





Test specification:	Section 15.407(b), RSS-210 Annex 9, section A9.3 Out of band undesirable emissions							
Test procedure:	Public notice DA02-2138							
Test mode:	Compliance	Vordict	DASS					
Date:	7/16/2008	verdict.	FA33					
Temperature: 24°C	Air Pressure: 1012 hPa	Relative Humidity: 48 %	Power Supply: 120 VAC					
Remarks: EUT with external antenna								

Table 7.3.6 Bandedge emission field strength test results

ASSIGNED FREQUENCY RANGE:	5250 – 5350 MHz
TEST DISTANCE:	3 m
TEST SITE:	OATS
EUT HEIGHT:	0.8 m
DETECTOR USED:	Peak
TRANSMITTER OUTPUT POWER SETTINGS:	"3 dBm" at 5 MHz channel b
	"6 dBm" at 10 MHz channel
	"9 dBm" at 20 MHz channel
RBW [.]	1 MH z

RBW: VIDEO BANDWIDTH: TEST ANTENNA TYPE: MODULATION: 3 m OATS 0.8 m Peak "3 dBm" at 5 MHz channel bandwidth "6 dBm" at 10 MHz channel bandwidth "9 dBm" at 20 MHz channel bandwidth 1 MHz > Resolution bandwidth Double ridged guide (above 1000 MHz) BPSK/64QAM

Frequ	requency, MHz		z Bit		Output	Field				Antenna	
Edge	Channel	Modulation	rate, Mbps	CBW, MHz	power settings, dBm	strength dBuV/m	Limit, dBuV/m	Margin*, dB	Antenna polarity	height, m	degree
Low ed	Low edge										
5250	5255	BPSK	1.5	5	3	55.67	68.23	-12.46	Vertical	1.0	0
5250	5255	64QAM	13.5	5	3	56.00	68.23	-12.23	Vertical	1.0	0
5250	5257.5	BPSK	3	10	6	66.00	68.23	-2.23	Vertical	1.0	0
5250	5257.5	64QAM	27	10	6	56.00	68.23	-12.23	Vertical	1.0	0
5250	5262.5	BPSK	6	20	9	67.00	68.23	-1.00	Vertical	1.0	0
5250	5262.5	64QAM	54	20	9	61.67	68.23	-6.46	Vertical	1.0	0

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

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

Table 7.3.7 Substitution EIRP of bandedge emissions test results

VIDEO BANDWIE SUBSTITUTION A	OTH: ANTENNA T`	YPE:	 > Resoluti Double rid	ion bandwidth Iged guide			
RBW:			1 MHz				
DETECTOR USE	D:		Peak				
SUBSTITUTION A	ANTENNA H	EIGHT:	0.8 m				
TEST DISTANCE	:		3 m				
TEST SITE:			OATS				
ASSIGNED FREC	QUENCY RAI	NGE:	5250 – 5350 MHz				

Frequen	ncy, MHz	Field	Antenna	Ant gain,	Cable	RF generator	EIRP,	Limit,	Margin,	Verdict
Edge	Channel dB(µV/m)		annel dB(μV/m) polariz. dBi los		loss, dB	loss, dB dBm		dBm/MHz	dB*	Verdict
5250.00	5255	55.67	Vertical	10.26	4.28	-46.46	-40.48	-27.0	-13.48	
5250.00	5255	56.00	Vertical	10.26	4.28	-46.23	-40.25	-27.0	-13.25	
5250.00	5257.5	66.00	Vertical	10.26	4.28	-36.23	-30.25	-27.0	-3.25	Pass
5250.00	5257.5	56.00	Vertical	10.26	4.28	-46.23	-40.25	-27.0	-13.25	1 435
5250.00	5262.5	67.00	Vertical	10.26	4.28	-29.02	-29.92	-27.0	-2.92	
5250.00	5262.5	61.67	Vertical	10.26	4.28	-40.46	-34.48	-27.0	-7.48	

*- Margin = Spurious emission - specification limit.

T



Test specification:	Section 15.407(b), RSS-210 Annex 9, section A9.3 Out of band undesirable emissions							
Test procedure:	Public notice DA02-2138							
Test mode:	Compliance	Vordict	DASS					
Date:	7/16/2008	verdict.	FA33					
Temperature: 24°C	Air Pressure: 1012 hPa	Relative Humidity: 48 %	Power Supply: 120 VAC					
Remarks: EUT with external antenna								

Table 7.3.8 Field strength of bandedge emissions within restricted bands

ASSIGNED FREQUENCY RANGE: TEST DISTANCE: MODULATION: TRANSMITTER OUTPUT POWER SETTINGS: 5250 - 5350 MHz 3 m BPSK/64QAM "3 dBm" at 5 MHz channel bandwidth "6 dBm" at 10 MHz channel bandwidth "9 dBm" at 20 MHz channel bandwidth Peak 1000 kHz Double ridged guide

DETECTOR LISED
RESOLUTION BANDWIDTH:
TEST ANTENNA TYPE

						Double	nagea gai	40			
Frequency,	Frequency, Bit		it Antenna		Peak field strength (VBW 3 MHz)			verage field strength (VBW 10 Hz			Vardiat
MHz N	Mbps	Polarization	leight m	degrees	Measured, dB(μV/m)	Limit, dB(µV/m)	Margin*, dB	Measured, dB(μV/m)	Limit, dB(µV/m)	Margin*, dB	Vertilet
20 MHz EB	N										
5350	6	Vertical	1.0	0	61.00	74.0	-12.00	47.83	54.00	-6.17	Pass
5350	54	Vertical	1.0	0	71.33	74.0	-2.67	51.83	54.00	-2.17	
10 MHz EB	N										
5350	3	Vertical	1.0	0	65.17	74.0	-8.83	51.17	54.00	-2.83	Pass
5350	27	Vertical	1.0	0	71.66	74.0	-2.34	50.83	54.00	-3.17	
5 MHz EBW	1										
5350	1.5	Vertical	1.0	0	67.00	74.0	-7.00	49.81	54.00	-4.19	Pass
5350	13.5	Vertical	1.0	0	70.50	74.0	-3.50	52.50	54.00	-1.50	

*- Margin = Measured emission – specification limit.

Reference numbers of test equipment used

HL 0521	HL 0661	HL 1947	HL 1984	HL 2432	HL 3120	HL 3121	
F H H H H H H H H H H		I ¹ - A					

Full description is given in Appendix A.



Test specification:	Section 15.407(b), RSS-210 Annex 9, section A9.3 Out of band undesirable emissions							
Test procedure:	Public notice DA02-2138							
Test mode:	Compliance	Vordict	DASS					
Date:	7/16/2008	verdict.	FA33					
Temperature: 24°C	Air Pressure: 1012 hPa	Relative Humidity: 48 %	Power Supply: 120 VAC					
Remarks: EUT with external antenna								

Plot 7.3.35 Radiated emission measurements at low edge (5 MHz EBW)









Test specification:	Section 15.407(b), RSS-210 Annex 9, section A9.3 Out of band undesirable emissions		
Test procedure:	Public notice DA02-2138		
Test mode:	Compliance	Vardiate	DASS
Date:	7/16/2008	veruict.	FA33
Temperature: 24°C	Air Pressure: 1012 hPa	Relative Humidity: 48 %	Power Supply: 120 VAC
Remarks: EUT with external antenna			

Plot 7.3.37 Radiated emission measurements at low edge (5 MHz EBW)









Test specification:	Section 15.407(b), RSS-210 Annex 9, section A9.3 Out of band undesirable emissions		
Test procedure:	Public notice DA02-2138		
Test mode:	Compliance	Vordict	DASS
Date:	7/16/2008	verdict.	FA33
Temperature: 24°C	Air Pressure: 1012 hPa	Relative Humidity: 48 %	Power Supply: 120 VAC
Remarks: EUT with external antenna			

Plot 7.3.39 Radiated emission measurements at low edge (10 MHz EBW)









Test specification:	Section 15.407(b), RSS-210 Annex 9, section A9.3 Out of band undesirable emissions		
Test procedure:	Public notice DA02-2138		
Test mode:	Compliance	Vardiate	DASS
Date:	7/16/2008	verdict.	FA33
Temperature: 24°C	Air Pressure: 1012 hPa	Relative Humidity: 48 %	Power Supply: 120 VAC
Remarks: EUT with external antenna			

Plot 7.3.41 Radiated emission measurements at low edge (10 MHz EBW)





TEST SITE:	Anechoic chamber
TEST DISTANCE:	3 m
ANTENNA POLARIZATION:	Vertical and Horizontal
DETECTOR	Average
MODULATION:	64QAM 27 Mbps





Test specification:	Section 15.407(b), RSS-210 Annex 9, section A9.3 Out of band undesirable emissions		
Test procedure:	Public notice DA02-2138		
Test mode:	Compliance	Vordict	DASS
Date:	7/16/2008	verdict.	FA33
Temperature: 24°C	Air Pressure: 1012 hPa	Relative Humidity: 48 %	Power Supply: 120 VAC
Remarks: EUT with external antenna			

Plot 7.3.43 Radiated emission measurements at low edge by delta method (20 MHz EBW)







Test specification:	Section 15.407(b), RSS-210 Annex 9, section A9.3 Out of band undesirable emissions		
Test procedure:	Public notice DA02-2138		
Test mode:	Compliance	Vordict	DASS
Date:	7/16/2008	verdict.	FA33
Temperature: 24°C	Air Pressure: 1012 hPa	Relative Humidity: 48 %	Power Supply: 120 VAC
Remarks: EUT with external antenna			

Plot 7.3.44 Radiated emission measurements at low edge (20 MHz EBW)









Test specification:	Section 15.407(b), RSS-210 Annex 9, section A9.3 Out of band undesirable emissions		
Test procedure:	Public notice DA02-2138		
Test mode:	Compliance	Vardiate	DASS
Date:	7/16/2008	verdict.	FA33
Temperature: 24°C	Air Pressure: 1012 hPa	Relative Humidity: 48 %	Power Supply: 120 VAC
Remarks: EUT with external antenna			

Plot 7.3.46 Radiated emission measurements at high edge (5 MHz EBW)









Test specification:	Section 15.407(b), RSS-210 Annex 9, section A9.3 Out of band undesirable emissions		
Test procedure:	Public notice DA02-2138		
Test mode:	Compliance	Vardiate	DACC
Date:	7/16/2008	verdict.	FA33
Temperature: 24°C	Air Pressure: 1012 hPa	Relative Humidity: 48 %	Power Supply: 120 VAC
Remarks: EUT with external antenna			

Plot 7.3.48 Radiated emission measurements at high edge (5 MHz EBW) by delta method



The field strength determined by delta method is equal to 49.81 $dB\mu\text{V/m}$



Test specification:	Section 15.407(b), RSS-210 Annex 9, section A9.3 Out of band undesirable emissions		
Test procedure:	Public notice DA02-2138		
Test mode:	Compliance	Vordict:	DASS
Date:	7/16/2008	verdict.	FA33
Temperature: 24°C	Air Pressure: 1012 hPa	Relative Humidity: 48 %	Power Supply: 120 VAC
Remarks: EUT with external antenna			

Plot 7.3.49 Radiated emission measurements at high edge (5 MHz EBW) by delta method

TEST SITE:	Anechoic chamber
TEST DISTANCE:	3 m
ANTENNA POLARIZATION:	Vertical and Horizontal
DETECTOR	Peak
MODULATION:	64QAM 13.5 Mbps



The field strength determined by delta method is equal to 70.5 dB μ V/m - Peak measurement



Test specification:	Section 15.407(b), RSS-210 Annex 9, section A9.3 Out of band undesirable emissions		
Test procedure:	Public notice DA02-2138		
Test mode:	Compliance	Vordict	DASS
Date:	7/16/2008	verdict.	FA33
Temperature: 24°C	Air Pressure: 1012 hPa	Relative Humidity: 48 %	Power Supply: 120 VAC
Remarks: EUT with external antenna			

Plot 7.3.50 Radiated emission measurements at high edge (10 MHz EBW)









Test specification:	Section 15.407(b), RSS-210 Annex 9, section A9.3 Out of band undesirable emissions		
Test procedure:	Public notice DA02-2138		
Test mode:	Compliance	Vordict	DASS
Date:	7/16/2008	verdict.	FA33
Temperature: 24°C	Air Pressure: 1012 hPa	Relative Humidity: 48 %	Power Supply: 120 VAC
Remarks: EUT with external antenna			

Plot 7.3.52 Radiated emission measurements at high edge (10 MHz EBW) by delta method

TEST SITE:	Anechoic chamber
TEST DISTANCE:	3 m
ANTENNA POLARIZATION:	Vertical and Horizontal
DETECTOR	Peak
MODULATION:	64QAM 27 Mbps



The field strength determined by delta method is equal to 71.66 $dB\mu V/m$



Test specification:	Section 15.407(b), RSS-210 Annex 9, section A9.3 Out of band undesirable emissions					
Test procedure:	Public notice DA02-2138	Public notice DA02-2138				
Test mode:	Compliance	Verdiet: DACC				
Date:	7/16/2008	2008 Verdict: PASS				
Temperature: 24°C	Air Pressure: 1012 hPa Relative Humidity: 48 % Power Supply: 120 VAC					
Remarks: EUT with external antenna						

Plot 7.3.53 Radiated emission measurements at high edge (20 MHz EBW)









Test specification:	Section 15.407(b), RSS-210 Annex 9, section A9.3 Out of band undesirable emissions					
Test procedure:	Public notice DA02-2138					
Test mode:	Compliance	Verdiet: DACC				
Date:	7/16/2008	16/2008 Verdict: PASS				
Temperature: 24°C	Air Pressure: 1012 hPa Relative Humidity: 48 % Power Supply: 120 VAC					
Remarks: EUT with external antenna						

Plot 7.3.55 Radiated emission measurements at high edge (20 MHz EBW)





TEST SITE:	Anechoic chamber
TEST DISTANCE:	3 m
ANTENNA POLARIZATION:	Vertical and Horizontal
DETECTOR	Average
MODULATION:	64QAM 54 Mbps





Test specification:	Section 15.407(b), RSS-210 Annex 9, section A9.3					
	Out of band undesirable	emissions				
Test procedure:	Public notice DA02-2138	Public notice DA02-2138				
Test mode:	Compliance	Vardiate DACC				
Date:	7/16/2008	7/16/2008 Verdict: PASS				
Temperature: 24°C	Air Pressure: 1012 hPa Relative Humidity: 48 % Power Supply: 120 VAC					
Remarks: EUT with external antenna						

Plot 7.3.57 Radiated emission measurements from 5.35 to 5.46 GHz at the high carrier frequency (5345 MHz)



Plot 7.3.58 Radiated emission measurements from 5.35 to 5.46 GHz at the high carrier frequency (5345 MHz)





Test specification:	Section 15.407(b), RSS-210 Annex 9, section A9.3 Out of band undesirable emissions					
Test procedure:	Public notice DA02-2138	Public notice DA02-2138				
Test mode:	Compliance	Verdiet: DACC				
Date:	7/16/2008					
Temperature: 24°C	Air Pressure: 1012 hPa Relative Humidity: 48 % Power Supply: 120 VAC					
Remarks: EUT with external antenna						

Plot 7.3.59 Radiated emission measurements from 5.35 to 5.46 GHz at the high carrier frequency (5340 MHz)



⁵³⁵⁷ MHz: 63.83 dBuV/m

Plot 7.3.60 Radiated emission measurements from 5.35 to 5.46 GHz at the high carrier frequency (5340 MHz)



⁵³⁵⁷ MHz – 50.83 dBuV/m



Test specification:	Section 15.407(b), RSS-210 Annex 9, section A9.3 Out of band undesirable emissions					
Test procedure:	Public notice DA02-2138	Public notice DA02-2138				
Test mode:	Compliance	Verdiet: DACC				
Date:	7/16/2008					
Temperature: 24°C	Air Pressure: 1012 hPa Relative Humidity: 48 % Power Supply: 120 VAC					
Remarks: EUT with external antenna						

Plot 7.3.61 Radiated emission measurements from 5.35 to 5.46 GHz at the high carrier frequency (5332.5 MHz)



Plot 7.3.62 Radiated emission measurements from 5.35 to 5.46 GHz at the high carrier frequency (5332.5 MHz)





Test specification:	Section 15.407(b), RSS-210 Annex 9, section A9.3 Unwanted radiated emissions					
Test procedure:	Public notice DA 00-705 / ANSI C63.4, Section 13.1.4					
Test mode:	Compliance	Compliance Vordiet: DASS				
Date:	6/22/2008	6/22/2008 Verdict: PASS				
Temperature: 24°C	Prature: 24°C Air Pressure: 1009 hPa Relative Humidity: 58 % Power Supply: 120 VAC					
Remarks: EUT with internal antenna, measurements below 1 GHz						

7.4 Field strength of spurious emissions

7.4.1 General

This test was performed to measure field strength of spurious emissions from the EUT. Specification test limits are given in Table 7.4.1.

T - I - I -	7 4 4	Dedleted			1	In a Later A				le ave de		4 011-
i anie	141	Radiated	SUILINIS	emissions	limits	neiow 1	(HZ and	within	restricted	nands	anove	1 (5H7
I UNIC		Itualutou	opunous	011110010110		NO1011		*****	100010000	Sanao	unove	

Frequency MHz	Field strength at 3 m, dB(μV/m)***				
Trequency, with	Peak	Quasi Peak	Average		
0.009 - 0.490*		128.5 – 93.8**			
0.490 – 1.705*		73.8 - 63.0**			
1.705 – 30.0*		69.5**			
30 – 88	NA	40.0	NA		
88 – 216		43.5			
216 – 960		46.0			
960 - 1000		54.0			
Above 1000	74.0	NA	54.0		

*- The limit for 3 m test distance was calculated using the inverse square distance extrapolation factor as follows: LimS2 = LimS1 + 40 log (S1/S2),

where S1 and S2 - standard defined and test distance respectively in meters.

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

*** - The field strength limits applied from the lowest radio frequency generated in the device, without going below 9 kHz up to the tenth harmonic of the highest fundamental frequency.

Table 7.4.2 EIRP of undesirable emissions limits outside restricted bands (above 1 GHz)

Frequency band, GHz	Out of band EIRP, dBm/MHz	Field strength at 3 m, dB(μV/m)
5.47 - 5.725	-27	68.23

7.4.2 Test procedure for spurious emission field strength measurements in 9 kHz to 30 MHz band

7.4.2.1 The EUT was set up as shown in Figure 7.4.1, energized and the performance check was conducted.

- **7.4.2.2** The specified frequency range was investigated with antenna connected to spectrum analyzer/ EMI receiver. To find maximum radiation the turntable was rotated 360⁰ and the measuring antenna was rotated around its vertical axis.
- 7.4.2.3 The worst test results (the lowest margins) were recorded and shown in the associated plots.

7.4.3 Test procedure for spurious emission field strength measurements above 30 MHz

- 7.4.3.1 The EUT was set up as shown in Figure 7.4.2, energized and the performance check was conducted.
- **7.4.3.2** The specified frequency range was investigated with antenna connected to spectrum analyzer/ EMI receiver. To find maximum radiation the turntable was rotated 360⁰, the measuring antenna height was changed from 1 to 4 m, its polarization was switched from vertical to horizontal.
- 7.4.3.3 The worst test results (the lowest margins) were recorded and shown in the associated plots.



Test specification:	Section 15.407(b), RSS-210 Annex 9, section A9.3 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	Vordict	DASS			
Date:	6/22/2008	6/22/2008 Verdici: PASS				
Temperature: 24°C	emperature: 24°C Air Pressure: 1009 hPa Relative Humidity: 58 % Power Supply: 120 VAC					
Remarks: EUT with internal antenna. measurements below 1 GHz						

Figure 7.4.1 Setup for spurious emission field strength measurements below 30 MHz



Figure 7.4.2 Setup for spurious emission field strength measurements above 30 MHz





Test specification:	Section 15.407(b), RSS-210 Annex 9, section A9.3 Unwanted radiated emissions				
Test procedure:	Public notice DA 00-705 / ANS	I C63.4, Section 13.1.4			
Test mode:	Compliance	Vardiat: DASS			
Date:	6/22/2008	Verdici. PASS			
Temperature: 24°C	Air Pressure: 1009 hPa Relative Humidity: 58 % Power Supply: 120 VAC				
Remarks: EUT with internal antenna, measurements below 1 GHz					

Table 7.4.3 Field strength of spurious emissions below 1 GHz

ASSIGNED FREQUENCY RANGE: INVESTIGATED FREQUENCY RANGE: TEST DISTANCE: MODULATION: BIT RATE:

DUTY CYCLE: TRANSMITTER OUTPUT POWER SETTINGS:

RESOLUTION BANDWIDTH:

VIDEO BANDWIDTH:

	0,00			
TEST	ANT	ENN	ΑT	YPE:

5250 - 5350 MHz 0.009 – 1000 MHz
3 m
BPSK
1.5Mbps at 5 MHz EBW; 3 Mbps at 10 MHz EBW;
6 Mbps at 20 MHz EBW
100 %
"2 dBm" at 5 MHz channel bandwidth
"5 dBm" at 10 MHz channel bandwidth
"8 dBm" at 20 MHz channel bandwidth
0.2 kHz (9 kHz – 150 kHz)
9.0 kHz (150 kHz – 30 MHz)
120 kHz (30 MHz – 1000 MHz)
> Resolution bandwidth

Active loop (9 kHz - 30 MHz); Biconilog (30 MHz - 1000 MHz)

Frequer	ncy, MHz		(Quasi-peak				Turn-table	
Channel	Spurious	Peak, dB(V/m)	Measured emission, dB(μV/m)	Limit, dB(µV/m)	Margin, dB*	Antenna polarization	Antenna height, m	position**, degrees	Verdict
5 MHz cha	nnel bandwic	lth							
5255	107.58	31.70	30.50	40.00	-9.50	Vertical	1.0	135	
5255	666.60	30.10	28.90	46.00	-17.10	Vertical	1.0	90	
5255	933.30	40.80	39.90	46.00	-6.10	Vertical	1.0	225	
5300	69.21	28.90	27.50	40.00	-12.50	Vertical	1.0	90	Pass
5300	462.30	29.90	28.80	46.00	-17.20	Vertical	1.0	90	1 455
5300	933.30	42.90	42.10	46.00	-3.90	Vertical	1.0	225	
5345	107.45	31.20	30.10	40.00	-9.90	Vertical	1.0	180	
5345	666.60	29.90	28.30	46.00	-17.70	Vertical	1.0	90	
5345	933.30	42.80	41.90	46.00	-4.10	Vertical	1.0	225	
10 MHz channel bandwidth									
5257.5	72.95	30.10	28.90	40.00	-11.10	Vertical	1.0	0	
5257.5	108.70	31.20	30.40	43.50	-13.10	Vertical	1.0	45	
5257.5	933.30	43.80	42.50	46.00	-3.50	Vertical	1.0	225	
5300	69.20	29.50	27.80	40.00	-12.20	Vertical	1.0	90	Pass
5300	666.60	29.70	26.90	46.00	-19.10	Vertical	1.0	90	1 435
5300	933.30	42.90	42.00	46.00	-4.00	Vertical	1.0	225	
5340	73.25	28.70	26.10	40.00	-13.90	Vertical	1.0	180	
5340	666.60	29.10	27.50	46.00	-18.50	Vertical	1.0	90	
5340	933.30	42.50	41.70	46.00	-4.30	Vertical	1.0	225	
20 MHz ch	annel bandw	idth							
5262.5	108.75	32.30	31.10	43.50	-12.40	Vertical	1.0	180	
5262.5	666.60	29.80	27.90	46.00	-18.10	Vertical	1.0	180	
5262.5	933.30	43.50	42.30	46.00	-3.70	Vertical	1.0	270	
5300	107.65	33.20	31.80	43.50	-11.70	Vertical	1.0	180	Pass
5300	933.30	43.10	42.20	46.00	-3.80	Vertical	1.0	225	
5332.5	108.75	31.10	30.00	43.50	-13.50	Vertical	1.0	45	
5332.5	666.60	29.60	28.50	46.00	-17.50	Vertical	1.0	180	
5332.5	933.33	44.90	44.10	46.00	-1.90	Vertical	1.0	270	

*- Margin = Measured emission - specification limit.

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

Reference numbers of test equipment used

HL 0446	HL 0521	HL 0589	HL 0604	HL 1425	HL 1556	HL 1947	HL 1984
HL 2909	HL 2910	HL 3123					

Full description is given in Appendix A.



Test specification:	Section 15.407(b), RSS-210 Annex 9, section A9.3 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	mpliance Vardiate DACC				
Date:	6/22/2008	Verdict. PASS				
Temperature: 24°C	rature: 24°C Air Pressure: 1009 hPa Relative Humidity: 58 % Power Supply: 120 VAC					
Remarks: EUT with internal antenna, measurements below 1 GHz						

Plot 7.4.1 Radiated emission measurements from 9 to 150 kHz at the low carrier frequency (5255 MHz)



Plot 7.4.2 Radiated emission measurements from 9 to 150 kHz at the low carrier frequency (5257.5 MHz)







Test specification:	Section 15.407(b), RSS-210 Annex 9, section A9.3 Unwanted radiated emissions				
Test procedure:	Public notice DA 00-705 / ANS	SI C63.4, Section 13.1.4			
Test mode:	Compliance	Compliance Verdict: DACC			
Date:	6/22/2008	/22/2008 Verdici. PASS			
Cemperature: 24°C Air Pressure: 1009 hPa Relative Humidity: 58 % Power Supply: 120 VAC					
Remarks: EUT with internal antenna, measurements below 1 GHz					

Plot 7.4.3 Radiated emission measurements from 9 to 150 kHz at the low carrier frequency (5262.5 MHz)



Plot 7.4.4 Radiated emission measurements from 0.15 to 30 MHz at the low carrier frequency (5255 MHz)





Test specification:	Section 15.407(b), RSS-210 Annex 9, section A9.3 Unwanted radiated emissions					
Test procedure:	Public notice DA 00-705 / ANS	I C63.4, Section 13.1.4				
Test mode:	Compliance	Vardiat: DASS				
Date:	6/22/2008	/2008 Verdici. PASS				
Temperature: 24°C Air Pressure: 1009 hPa Relative Humidity: 58 % Power Supply: 120 VAC						
Remarks: EUT with internal antenna, measurements below 1 GHz						

Plot 7.4.5 Radiated emission measurements from 0.15 to 30 MHz at the low carrier frequency (5257.5 MHz)



Plot 7.4.6 Radiated emission measurements from 0.15 to 30 MHz at the low carrier frequency (5262.5 MHz)





Test specification:	Section 15.407(b), RSS-210 Annex 9, section A9.3 Unwanted radiated emissions				
Test procedure:	Public notice DA 00-705 / ANS	SI C63.4, Section 13.1.4			
Test mode:	Compliance				
Date:	6/22/2008	Verdict. PASS			
Temperature: 24°C Air Pressure: 1009 hPa Relative Humidity: 58 % Power Supply: 120 VAC					
Remarks: EUT with internal antenna, measurements below 1 GHz					

Plot 7.4.7 Radiated emission measurements from 30 to 1000 MHz at the low carrier frequency (5255 MHz)





Plot 7.4.8 Radiated emission measurements from 30 to 1000 MHz at the low carrier frequency (5257.5 MHz)

