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839.01
Electrical

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TEST REPORT

ACCORDING TO: FCC 47CFR part 15 subpart C § 15.247 and RSS-210 issue 7

FOR:

RadWin Ltd.

Outdoor radio unit operating in the 5.8 GHz band

Model: RADWIN 1000, RADWIN 2000

Table of contents

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 5.8 GHz band
Product type:	Point to point transceiver
Model(s):	RADWIN 2000
Receipt date	9/21/2009

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:	20038
Location:	Hermon Laboratories Ltd. Harakevet Industrial Zone, Binyamina 30500, Israel
Test started:	9/21/2009
Test completed:	10/18/2009
Test specification(s):	FCC 47CFR part 15:2008, subpart C §§15.247; RSS-210 issue 7:2007, annex 8

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5 Tests summary

Test	Status
Transmitter characteristics	
FCC section 15.247(a)(2), RSS-210 section A8.2(a), 6 dB bandwidth	Pass
FCC section 15.247(b)(3), RSS-210 section A8.4(4), Peak output power	Pass
FCC section 15.247(i), RSS-Gen section 5.5, RF exposure	Pass, the exhibit to the application of certification is provided
FCC section 15.247(d), RSS-210 section A8.5, Conducted spurious emissions	Pass
FCC section 15.247(d), RSS-210 section A8.5, Radiated spurious emissions	Pass
FCC section 15.247(e), RSS-210 section A8.2(b), Peak power density	Pass
FCC section 15.207(a), RSS-210 section 7.2.2, Conducted emission	Pass
FCC section 15.203, RSS-210 section 7.1.4, Antenna requirement	Pass

Testing was completed against all relevant requirements of the test standard. The 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. S. Samokha, test engineer	October 18, 2009	
Reviewed by:	Mrs. M. Cherniavsky, certification engineer	October 21, 2009	
Approved by:	Mr. M. Nikishin, EMC and Radio group manager	October 22, 2009	

6 EUT description

6.1 General information

RADWIN 1000/RADWIN 2000 is an outdoor radio unit (ODU). The power and the Ethernet communication are supplied by an indoor unit (IDU) or PoE device. It has 2 antenna configurations – integrated and connectorized that can support dual pole antenna type. RADWIN 1000 activates one RF port and RADWIN 2000 – two ports, hence, RADWIN 2000 was tested.

6.2 Ports and lines

Port type	Port description	Conn. from	Conn. to	Qty.	Cable type	Cable length	Indoor / outdoor
Power	DC Power+ Ethernet	IDU	EUT	1	Shielded	20	Outdoor
RF1	RF1 (Antenna 1)	EUT	Antenna	1	Coax	1	Outdoor*
RF2	RF2 (Antenna 2)	EUT	Antenna	1	Coax	1	Outdoor*
Power	DC Power	AC/DC adaptor	IDU	1	Unshielded	1.5	Indoor
Power	AC Power	mains	AC/DC adaptor	1	Unshielded	1.5	Indoor
Signal	Ethernet	Laptop	IDU	1	Shielded	1	Indoor

* - for external antenna configuration only

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	DE000201267
AC/DC	YCL	WMB480042-5G	S0714002271

6.4 Changes made in the EUT

No changes were implemented.

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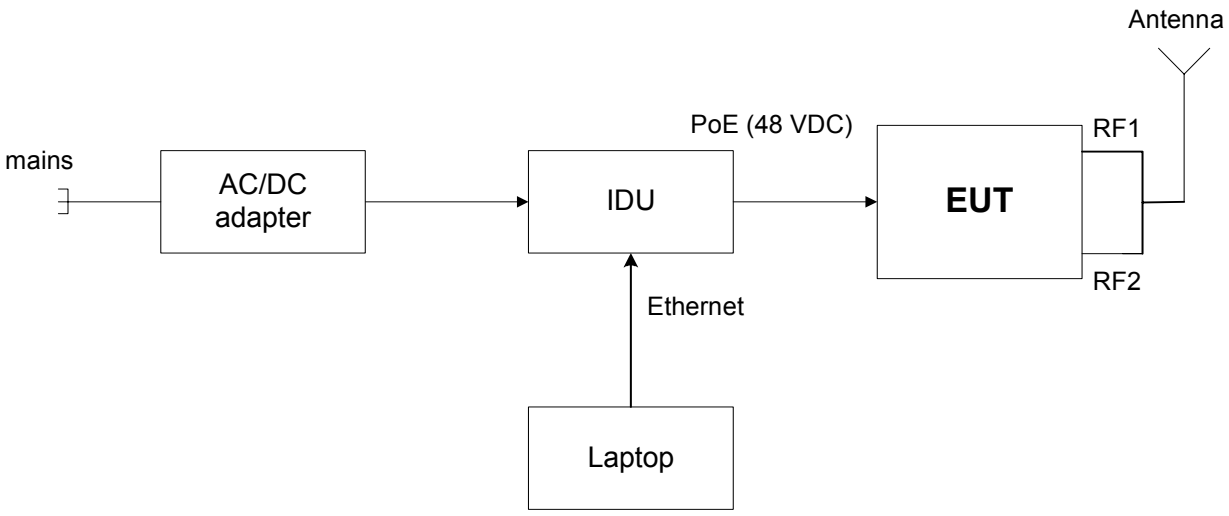
6.5 Test configuration



6.6 Transmitter characteristics

Type of equipment	
V	Stand-alone (Equipment with or without its own control provisions)
	Combined equipment (Equipment where the radio part is fully integrated within another type of equipment)
	Plug-in card (Equipment intended for a variety of host systems)

Intended use		Condition of use
V	Fixed	Always at a distance more than 2 m from all people
	mobile	Always at a distance more than 20 cm from all people
	portable	May operate at a distance closer than 20 cm to human body

Assigned frequency range	5725 - 5850 MHz
Operating frequency range	5730 - 5845 MHz, 5745 - 5830 MHz
RF channel bandwidth	10 MHz, 40 MHz
Maximum rated output power	At transmitter 50 Ω RF output connector — 28.6 dBm

Is transmitter output power variable?	V	No		
		Yes		continuous variable
				stepped variable with stepsize
			minimum RF power	
			maximum RF power	

Antenna connection				
unique coupling	V	standard connector	Integral	with temporary RF connector
				without temporary RF connector

Antenna/s technical characteristics			
Type	Manufacturer	Model number	Antenna assembly gain
Dish – Dual polarized External	Radwin Ltd.	RW-9721-5158	28.9 dBi (min)
Flat Panel – Dual polarized Integrated	Radwin Ltd.	RW-9611-4958INT	Port H – 22.5 dBi, port V – 24 dBi (min)
Flat Panel – Dual polarized external	Radwin Ltd.	RW-9611-4958	23 dBi (min)

Transmitter 99% power bandwidth	Transmitter aggregate data rate/s, MBps	Type of modulation (OFDM)
10 MHz	6.5	BPSK
	13	BPSK
	19.5	QPSK
	26	QPSK
	39	16QAM
	52	16QAM
	58.5	64QAM
	65	64QAM
40 MHz	27	BPSK
	54	BPSK
	81	QPSK
	108	QPSK
	162	16QAM
	216	16QAM
	243	64QAM
	270	64QAM

Modulating test signal (baseband)	OFDM					
Maximum transmitter duty cycle in normal use	50%					
Maximum transmitter duty cycle for test purposes	100%					

Transmitter power source						
		Nominal rated voltage		Battery type		
V	DC (PoE)	**Nominal rated voltage**	48 VDC from IDU unit powered by 120 VAC			
	AC mains	**Nominal rated voltage**		Frequency	Hz	

Common power source for transmitter and receiver	**V**	yes	no

Test specification:	Section 15.247(a)(2), RSS-210 section A8.2(a), 6 dB bandwidth		
Test procedure:	FCC New Guidance on Measurements for DTS in section 15.247(a)(2)		
Test mode:	Compliance	Verdict:	PASS
Date & Time:	10/5/2009 8:53:46 AM		
Temperature: 25.7 ºC	Air Pressure: 1013 hPa	Relative Humidity: 37 %	Power Supply: 120VAC
Remarks: 40 MHz EBW			

7 Transmitter tests according to 47CFR part 15 subpart C and RSS-210 section A.8 requirements

7.1 Minimum 6 dB bandwidth

7.1.1 General

This test was performed to measure 6 dB bandwidth of the EUT carrier frequency. Specification test limits are given in Table 7.1.1.

Table 7.1.1 The 6 dB bandwidth limits

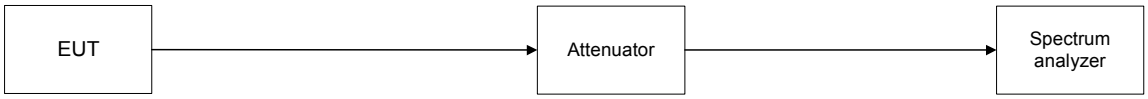
Assigned frequency, MHz	Modulation envelope reference points*, dBc	Minimum bandwidth, kHz
902.0 – 928.0	6.0	500.0
2400.0 – 2483.5		
5725.0 – 5850.0		

* - Modulation envelope reference points provided in terms of attenuation below the peak of modulated carrier.

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.
7.1.2.3 The transmitter minimum 6 dB bandwidth was measured with spectrum analyzer RBW=100 kHz as frequency delta between reference points on modulation envelope and provided in Table 7.1.2 and associated plot.

Figure 7.1.1 The 6 dB bandwidth test setup



Test specification:	**Section 15.247(a)(2), RSS-210 section A8.2(a), 6 dB bandwidth**		
Test procedure:	FCC New Guidance on Measurements for DTS in section 15.247(a)(2)		
Test mode:	Compliance	**Verdict:**	PASS
Date & Time:	10/5/2009 8:53:46 AM		
Temperature: 25.7 ºC	**Air Pressure:** 1013 hPa	**Relative Humidity:** 37 %	**Power Supply:** 120VAC
Remarks: 40 MHz EBW			

Table 7.1.2 The 6 dB bandwidth test results, Antenna 1 (RF1)

ASSIGNED FREQUENCY BAND:	5725 – 5850 MHz
DETECTOR USED:	Peak
SWEEP MODE:	Single
RESOLUTION BANDWIDTH:	100 kHz
VIDEO BANDWIDTH:	300 kHz
MODULATION ENVELOPE REFERENCE POINTS:	6.0 dBc
MODULATING SIGNAL:	PRBS
EMISSION BANDWIDTH	40MHz

Modulation	Bit rate, Mbps	6 dB bandwidth, kHz	Limit, kHz	Margin, kHz	Verdict
Low frequency, 5745 MHz					
BPSK	27	35400	500	-34900	Pass
64QAM	270	34900	500	-34400	Pass
Mid frequency, 5780 MHz					
BPSK	27	35200	500	-34700	Pass
64QAM	270	35800	500	-35300	Pass
High frequency, 5830 MHz					
BPSK	27	35300	500	-34800	Pass
64QAM	270	35200	500	-34700	Pass

Table 7.1.3 The 6 dB bandwidth test results, Antenna 2 (RF2)

ASSIGNED FREQUENCY BAND:	5725 – 5850 MHz
DETECTOR USED:	Peak
SWEEP MODE:	Single
RESOLUTION BANDWIDTH:	100 kHz
VIDEO BANDWIDTH:	300 kHz
MODULATION ENVELOPE REFERENCE POINTS:	6.0 dBc
MODULATING SIGNAL:	PRBS
EMISSION BANDWIDTH	40MHz

Modulation	Bit rate, Mbps	6 dB bandwidth, kHz	Limit, kHz	Margin, kHz	Verdict
Low frequency, 5745 MHz					
BPSK	27	35500	500	-35000	Pass
64QAM	270	35200	500	-34700	Pass
Mid frequency, 5780 MHz					
BPSK	27	35800	500	-35300	Pass
64QAM	270	35800	500	-35300	Pass
High frequency, 5830 MHz					
BPSK	27	35400	500	-34900	Pass
64QAM	270	36100	500	-35600	Pass

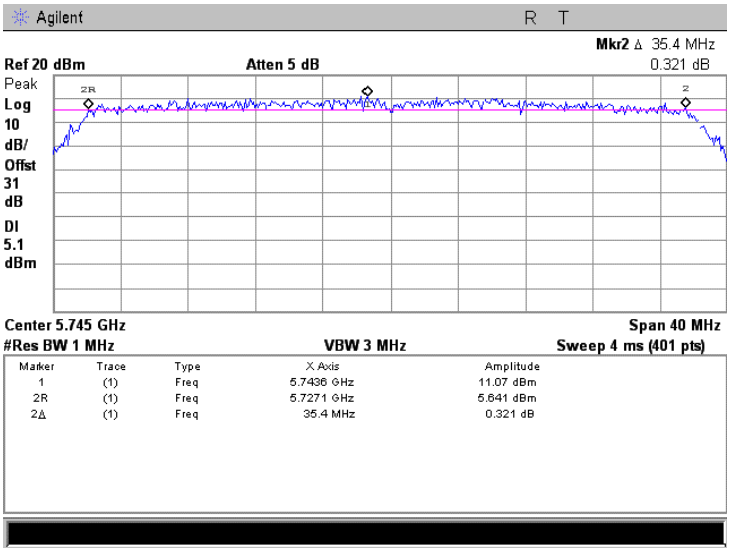
Reference numbers of test equipment used

HL 1906	HL 2909	HL 2953	HL 3435	HL 3437	HL 3440	HL 3473	HL 3474	

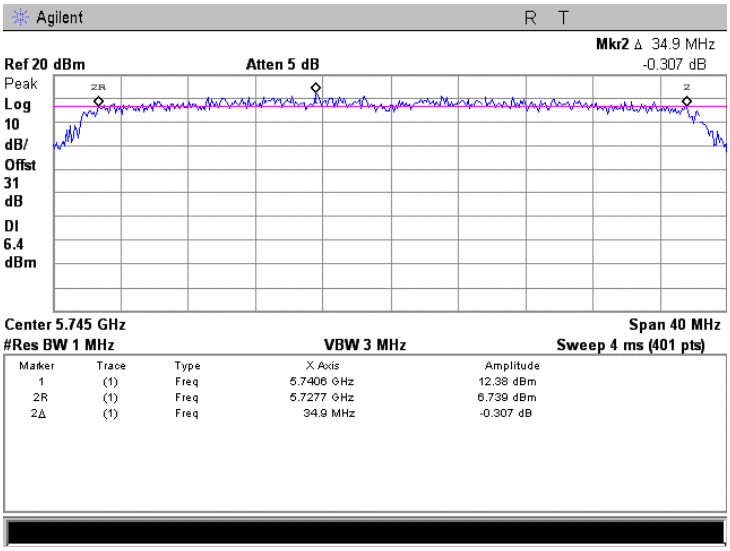
Full description is given in Appendix A.

Test specification:	Section 15.247(a)(2), RSS-210 section A8.2(a), 6 dB bandwidth		
Test procedure:	FCC New Guidance on Measurements for DTS in section 15.247(a)(2)		
Test mode:	Compliance	Verdict:	PASS
Date & Time:	10/5/2009 8:53:46 AM		
Temperature: 25.7 ºC	Air Pressure: 1013 hPa	Relative Humidity: 37 %	Power Supply: 120VAC
Remarks: 40 MHz EBW			

Plot 7.1.1 The 6 dB bandwidth test result at low frequency, BPSK modulation, Antenna 1

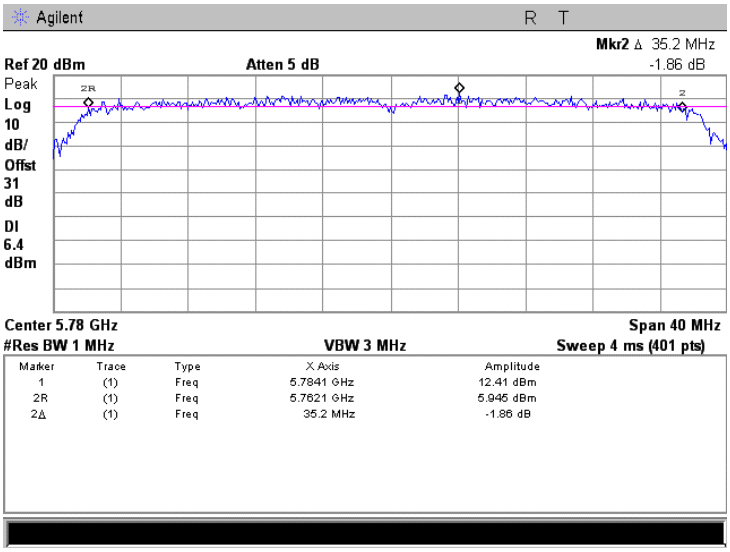


Plot 7.1.2 The 6 dB bandwidth test result at low frequency, 64QAM modulation, Antenna 1

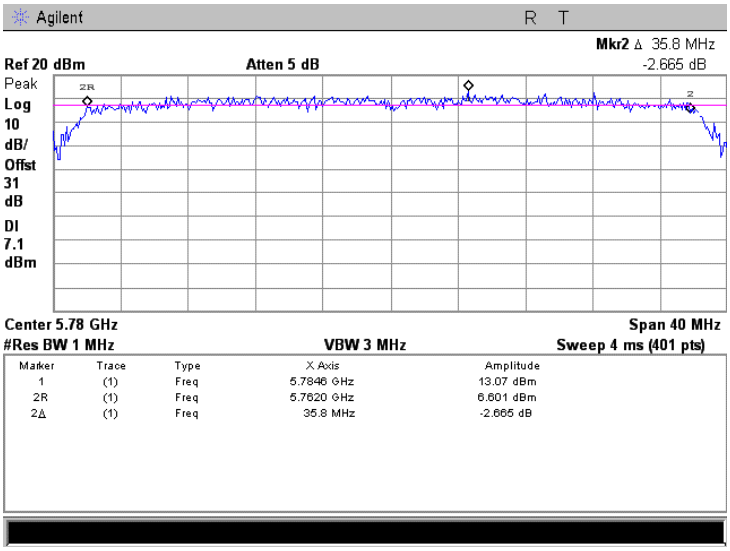


Test specification:	Section 15.247(a)(2), RSS-210 section A8.2(a), 6 dB bandwidth		
Test procedure:	FCC New Guidance on Measurements for DTS in section 15.247(a)(2)		
Test mode:	Compliance	Verdict:	PASS
Date & Time:	10/5/2009 8:53:46 AM		
Temperature: 25.7 ºC	Air Pressure: 1013 hPa	Relative Humidity: 37 %	Power Supply: 120VAC
Remarks: 40 MHz EBW			

Plot 7.1.3 The 6 dB bandwidth test result at mid frequency, BPSK modulation, Antenna 1

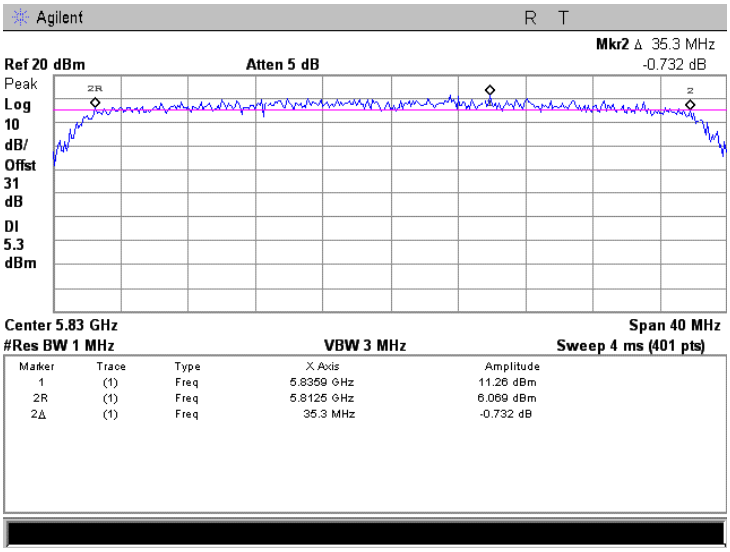


Plot 7.1.4 The 6 dB bandwidth test result at mid frequency, 64QAM modulation, Antenna 1

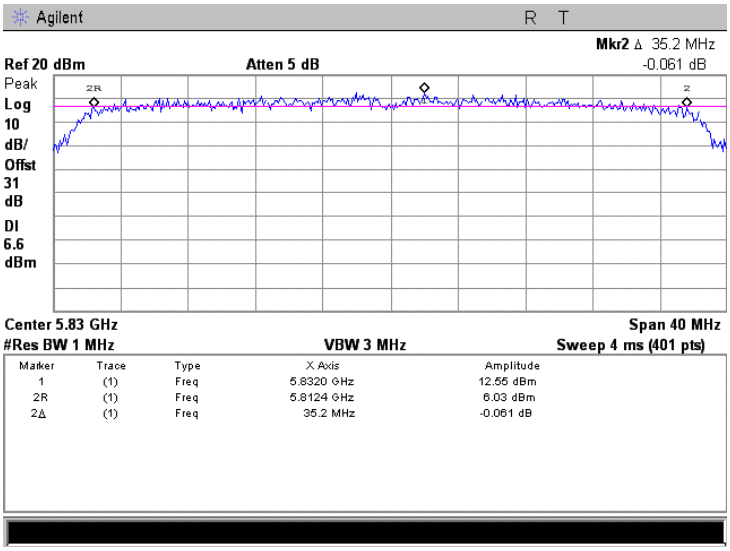


Test specification:	Section 15.247(a)(2), RSS-210 section A8.2(a), 6 dB bandwidth		
Test procedure:	FCC New Guidance on Measurements for DTS in section 15.247(a)(2)		
Test mode:	Compliance	Verdict:	PASS
Date & Time:	10/5/2009 8:53:46 AM		
Temperature: 25.7 ºC	Air Pressure: 1013 hPa	Relative Humidity: 37 %	Power Supply: 120VAC
Remarks: 40 MHz EBW			

Plot 7.1.5 The 6 dB bandwidth test result at high frequency, BPSK modulation, Antenna 1

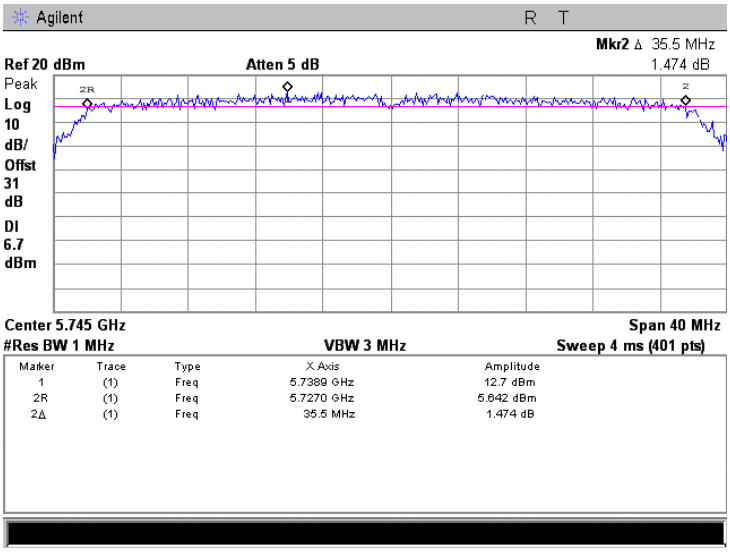


Plot 7.1.6 The 6 dB bandwidth test result at high frequency, 64QAM modulation, Antenna 1

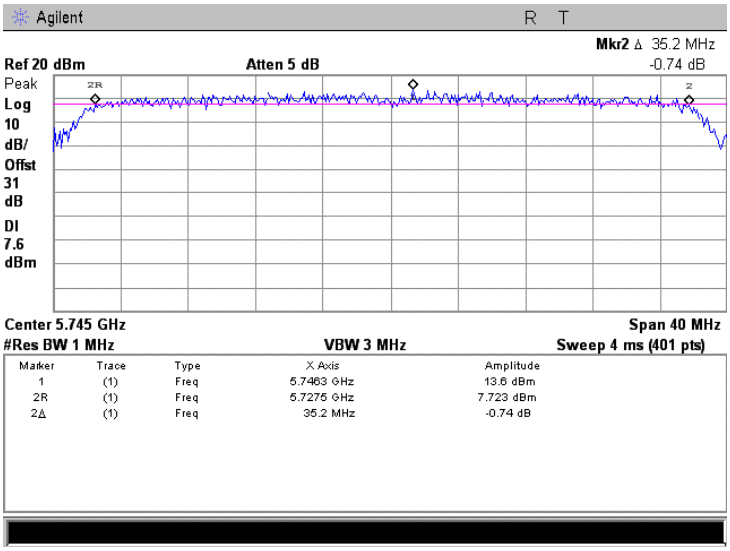


Test specification:	Section 15.247(a)(2), RSS-210 section A8.2(a), 6 dB bandwidth		
Test procedure:	FCC New Guidance on Measurements for DTS in section 15.247(a)(2)		
Test mode:	Compliance	Verdict:	PASS
Date & Time:	10/5/2009 8:53:46 AM		
Temperature: 25.7 ºC	Air Pressure: 1013 hPa	Relative Humidity: 37 %	Power Supply: 120VAC
Remarks: 40 MHz EBW			

Plot 7.1.7 The 6 dB bandwidth test result at low frequency, BPSK modulation, Antenna 2

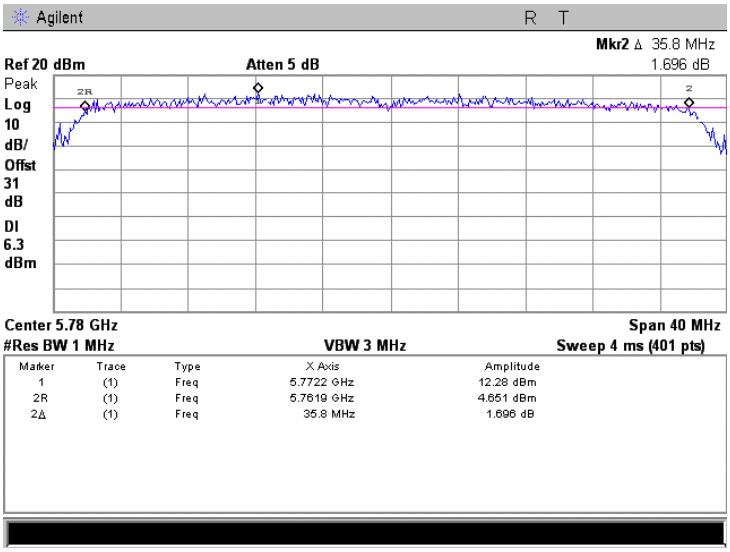


Plot 7.1.8 The 6 dB bandwidth test result at low frequency, 64QAM modulation, Antenna 2

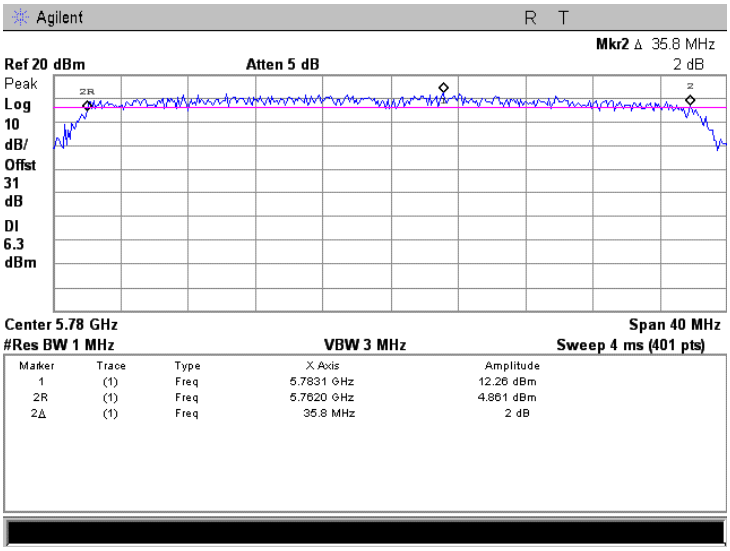


Test specification:	Section 15.247(a)(2), RSS-210 section A8.2(a), 6 dB bandwidth		
Test procedure:	FCC New Guidance on Measurements for DTS in section 15.247(a)(2)		
Test mode:	Compliance	Verdict:	PASS
Date & Time:	10/5/2009 8:53:46 AM		
Temperature: 25.7 ºC	Air Pressure: 1013 hPa	Relative Humidity: 37 %	Power Supply: 120VAC
Remarks: 40 MHz EBW			

Plot 7.1.9 The 6 dB bandwidth test result at mid frequency, BPSK modulation, Antenna 2

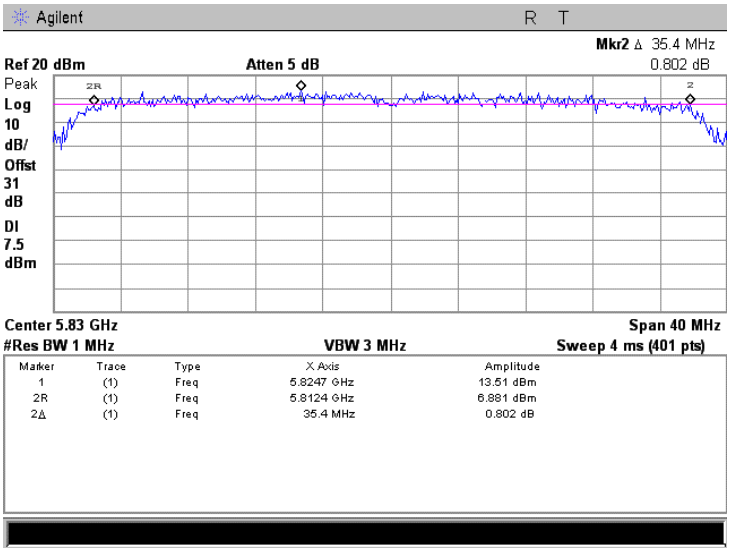


Plot 7.1.10 The 6 dB bandwidth test result at mid frequency, 64QAM modulation, Antenna 2

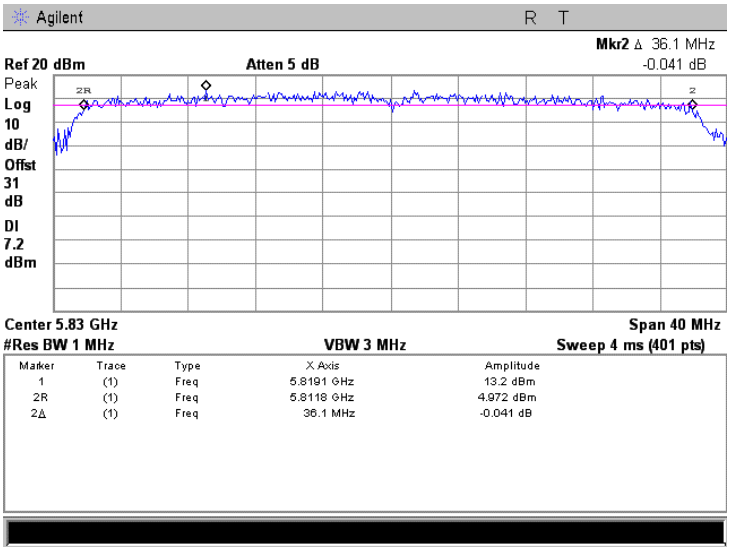


Test specification:	Section 15.247(a)(2), RSS-210 section A8.2(a), 6 dB bandwidth		
Test procedure:	FCC New Guidance on Measurements for DTS in section 15.247(a)(2)		
Test mode:	Compliance	Verdict:	PASS
Date & Time:	10/5/2009 8:53:46 AM		
Temperature: 25.7 ºC	Air Pressure: 1013 hPa	Relative Humidity: 37 %	Power Supply: 120VAC
Remarks: 40 MHz EBW			

Plot 7.1.11 The 6 dB bandwidth test result at high frequency, BPSK modulation, Antenna 2



Plot 7.1.12 The 6 dB bandwidth test result at high frequency, 64QAM modulation, Antenna 2



Test specification:	**Section 15.247(a)(2), RSS-210 section A8.2(a), 6 dB bandwidth**		
Test procedure:	FCC New Guidance on Measurements for DTS in section 15.247(a)(2)		
Test mode:	Compliance	**Verdict:**	PASS
Date & Time:	10/5/2009 8:56:26 AM		
Temperature: 24.8 ºC	**Air Pressure:** 1013 hPa	**Relative Humidity:** 40 %	**Power Supply:** 120VAC
Remarks: 10 MHz EBW			

Table 7.1.4 The 6 dB bandwidth test results, Antenna 1 (RF1)

ASSIGNED FREQUENCY BAND:	5725 – 5850 MHz
DETECTOR USED:	Peak
SWEEP MODE:	Single
RESOLUTION BANDWIDTH:	100 kHz
VIDEO BANDWIDTH:	300 kHz
MODULATION ENVELOPE REFERENCE POINTS:	6.0 dBc
MODULATING SIGNAL:	PRBS
EMISSION BANDWIDTH	10MHz

Modulation	Bit rate, Mbps	6 dB bandwidth, kHz	Limit, kHz	Margin, kHz	Verdict
Low frequency, 5730 MHz					
BPSK	6.5	8825	500	-8325	Pass
64QAM	65	8825	500	-8325	Pass
Mid frequency, 5780 MHz					
BPSK	6.5	8900	500	-8400	Pass
64QAM	65	8775	500	-8275	Pass
High frequency, 5845 MHz					
BPSK	6.5	8825	500	-8325	Pass
64QAM	65	8825	500	-8325	Pass

Table 7.1.5 The 6 dB bandwidth test results, Antenna 2 (RF2)

ASSIGNED FREQUENCY BAND:	5725 – 5850 MHz
DETECTOR USED:	Peak
SWEEP MODE:	Single
RESOLUTION BANDWIDTH:	100 kHz
VIDEO BANDWIDTH:	300 kHz
MODULATION ENVELOPE REFERENCE POINTS:	6.0 dBc
MODULATING SIGNAL:	PRBS
EMISSION BANDWIDTH	10MHz

Modulation	Bit rate, Mbps	6 dB bandwidth, kHz	Limit, kHz	Margin, kHz	Verdict
Low frequency, 5730 MHz					
BPSK	6.5	8875	500	-8375	Pass
64QAM	65	8675	500	-8175	Pass
Mid frequency, 5780 MHz					
BPSK	6.5	8925	500	-8425	Pass
64QAM	65	8750	500	-8250	Pass
High frequency, 5845 MHz					
BPSK	6.5	8850	500	-8350	Pass
64QAM	65	8875	500	-8375	Pass

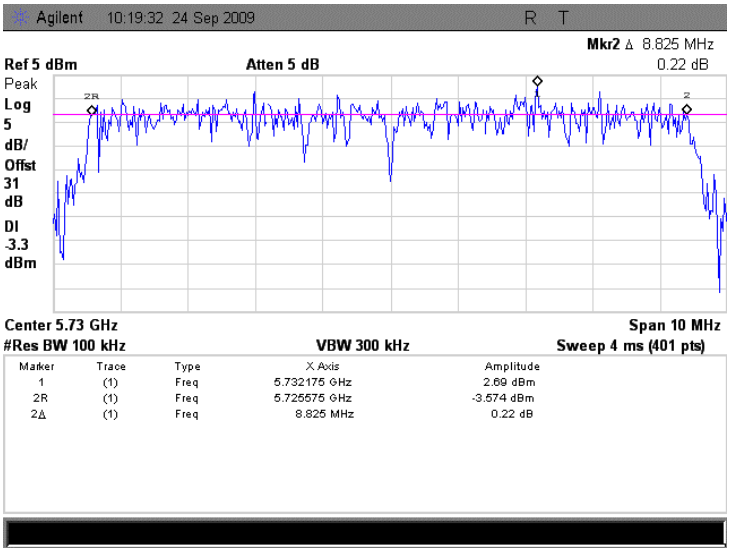
Reference numbers of test equipment used

HL 1906	HL 2909	HL 2953	HL 3435	HL 3437	HL 3440	HL 3473	HL 3474	

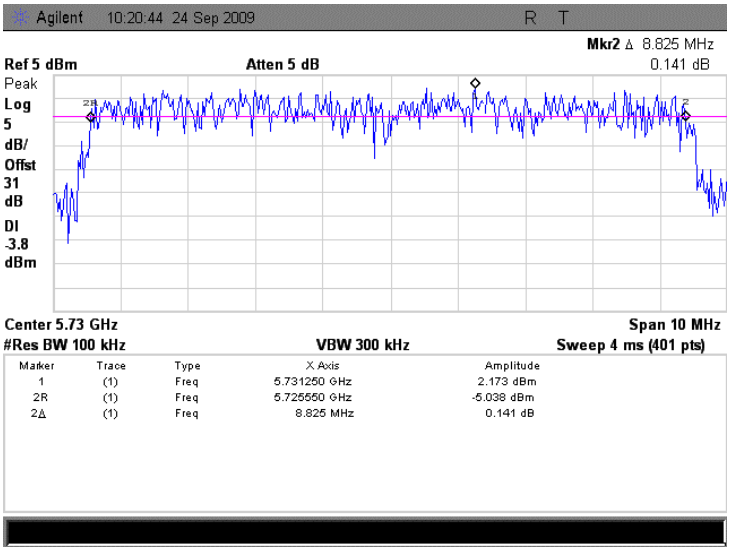
Full description is given in Appendix A.

Test specification:	Section 15.247(a)(2), RSS-210 section A8.2(a), 6 dB bandwidth		
Test procedure:	FCC New Guidance on Measurements for DTS in section 15.247(a)(2)		
Test mode:	Compliance	Verdict:	PASS
Date & Time:	10/5/2009 8:56:26 AM		
Temperature: 24.8 ºC	Air Pressure: 1013 hPa	Relative Humidity: 40 %	Power Supply: 120VAC
Remarks: 10 MHz EBW			

Plot 7.1.13 The 6 dB bandwidth test result at low frequency, BPSK modulation, Antenna 1

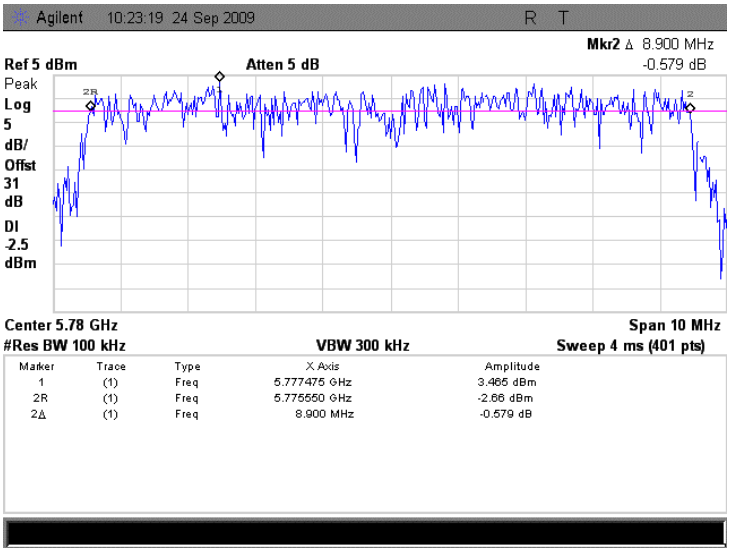


Plot 7.1.14 The 6 dB bandwidth test result at low frequency, 64QAM modulation, Antenna 1

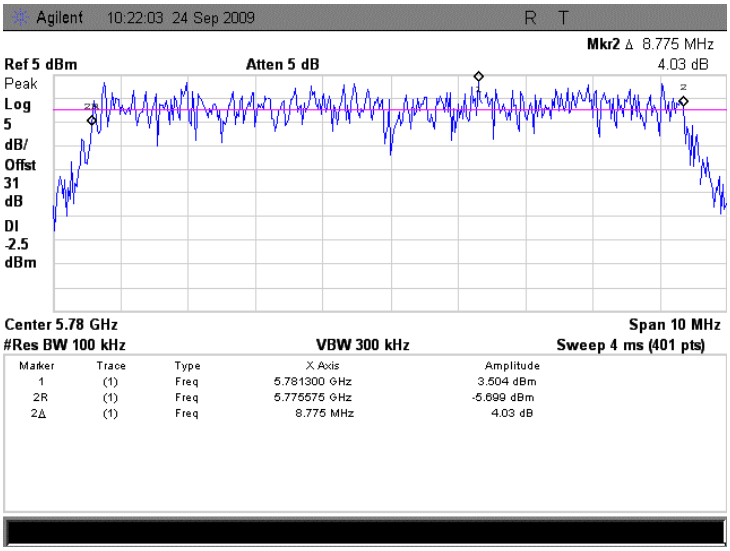


Test specification:	Section 15.247(a)(2), RSS-210 section A8.2(a), 6 dB bandwidth		
Test procedure:	FCC New Guidance on Measurements for DTS in section 15.247(a)(2)		
Test mode:	Compliance	Verdict:	PASS
Date & Time:	10/5/2009 8:56:26 AM		
Temperature: 24.8 ºC	Air Pressure: 1013 hPa	Relative Humidity: 40 %	Power Supply: 120VAC
Remarks: 10 MHz EBW			

Plot 7.1.15 The 6 dB bandwidth test result at mid frequency, BPSK modulation, Antenna 1

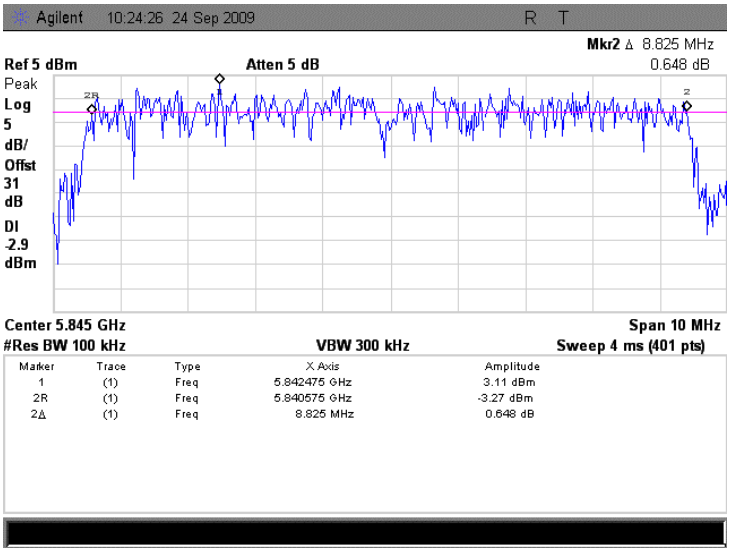


Plot 7.1.16 The 6 dB bandwidth test result at mid frequency, 64QAM modulation, Antenna 1

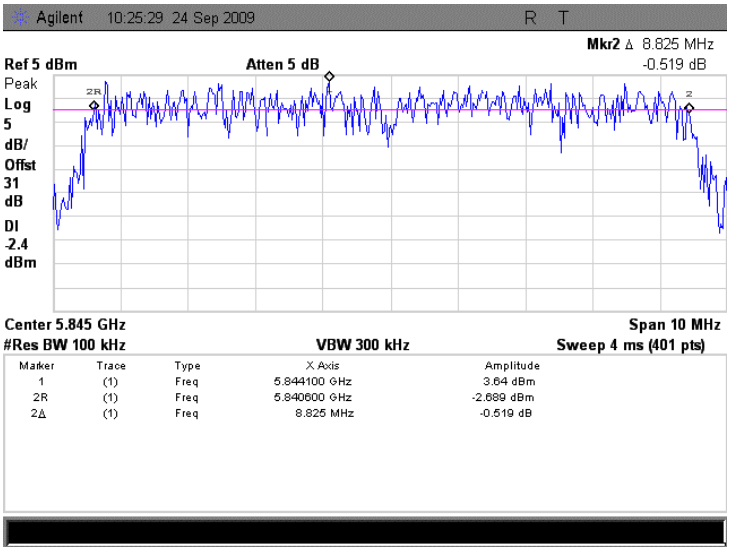


Test specification:	Section 15.247(a)(2), RSS-210 section A8.2(a), 6 dB bandwidth		
Test procedure:	FCC New Guidance on Measurements for DTS in section 15.247(a)(2)		
Test mode:	Compliance	Verdict:	PASS
Date & Time:	10/5/2009 8:56:26 AM		
Temperature: 24.8 ºC	Air Pressure: 1013 hPa	Relative Humidity: 40 %	Power Supply: 120VAC
Remarks: 10 MHz EBW			

Plot 7.1.17 The 6 dB bandwidth test result at high frequency, BPSK modulation, Antenna 1

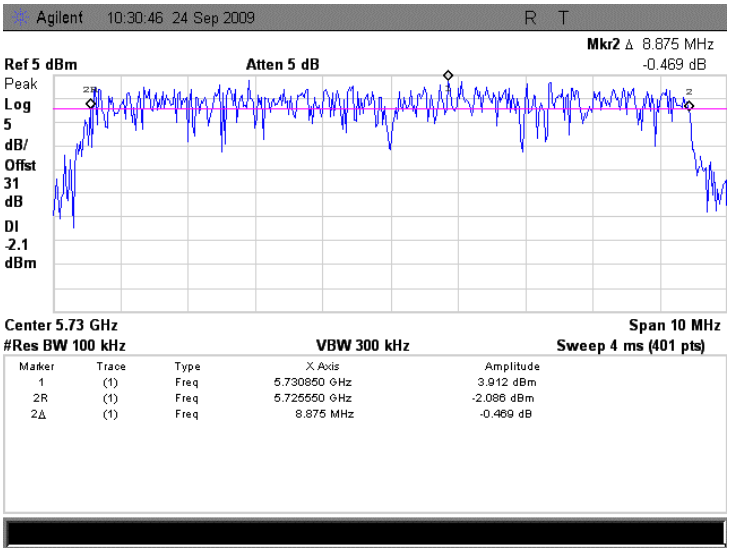


Plot 7.1.18 The 6 dB bandwidth test result at high frequency, 64QAM modulation, Antenna 1

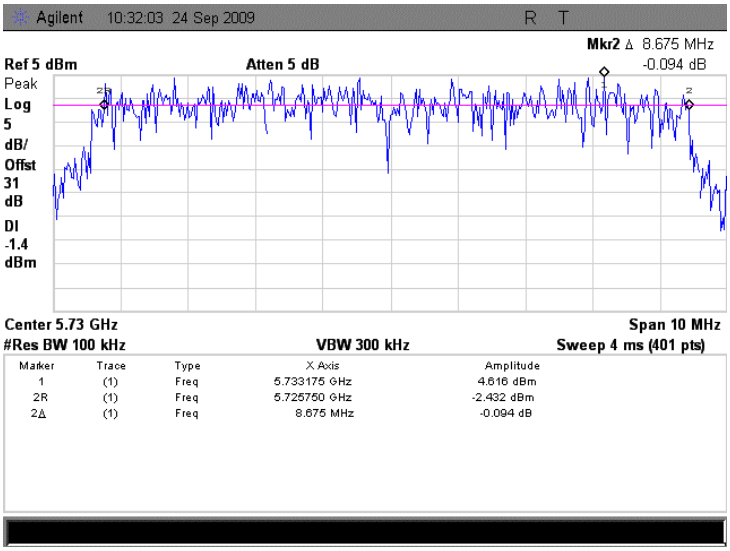


Test specification:	Section 15.247(a)(2), RSS-210 section A8.2(a), 6 dB bandwidth		
Test procedure:	FCC New Guidance on Measurements for DTS in section 15.247(a)(2)		
Test mode:	Compliance	Verdict:	PASS
Date & Time:	10/5/2009 8:56:26 AM		
Temperature: 24.8 ºC	Air Pressure: 1013 hPa	Relative Humidity: 40 %	Power Supply: 120VAC
Remarks: 10 MHz EBW			

Plot 7.1.19 The 6 dB bandwidth test result at low frequency, BPSK modulation, Antenna 2

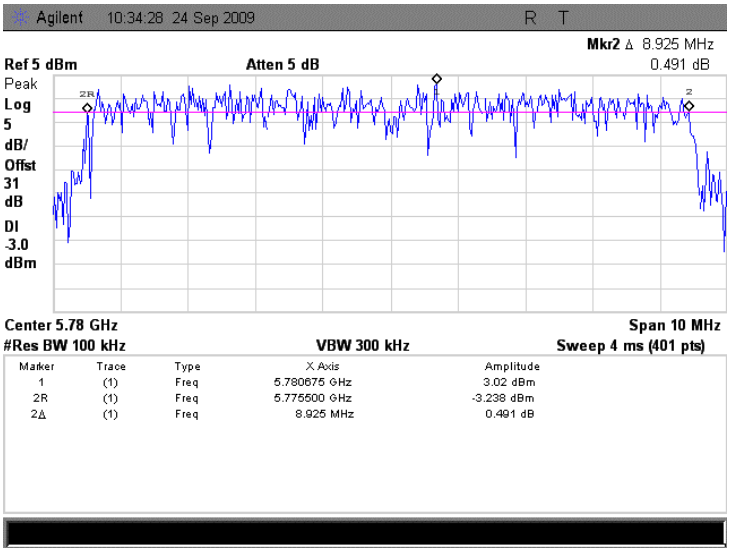


Plot 7.1.20 The 6 dB bandwidth test result at low frequency, 64QAM modulation, Antenna 2

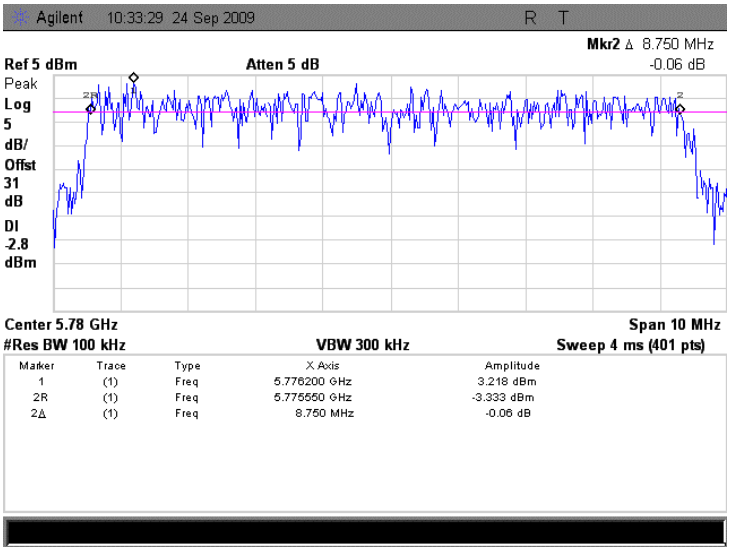


Test specification:	Section 15.247(a)(2), RSS-210 section A8.2(a), 6 dB bandwidth		
Test procedure:	FCC New Guidance on Measurements for DTS in section 15.247(a)(2)		
Test mode:	Compliance	Verdict:	PASS
Date & Time:	10/5/2009 8:56:26 AM		
Temperature: 24.8 ºC	Air Pressure: 1013 hPa	Relative Humidity: 40 %	Power Supply: 120VAC
Remarks: 10 MHz EBW			

Plot 7.1.21 The 6 dB bandwidth test result at mid frequency, BPSK modulation, Antenna 2

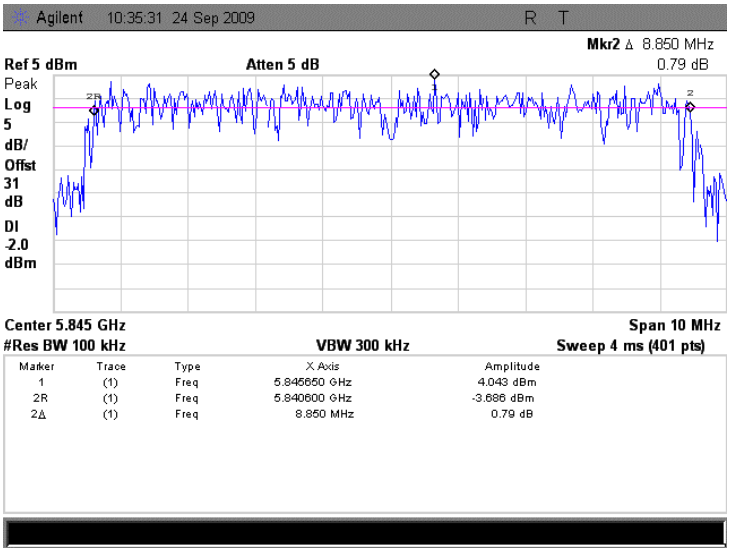


Plot 7.1.22 The 6 dB bandwidth test result at mid frequency, 64QAM modulation, Antenna 2

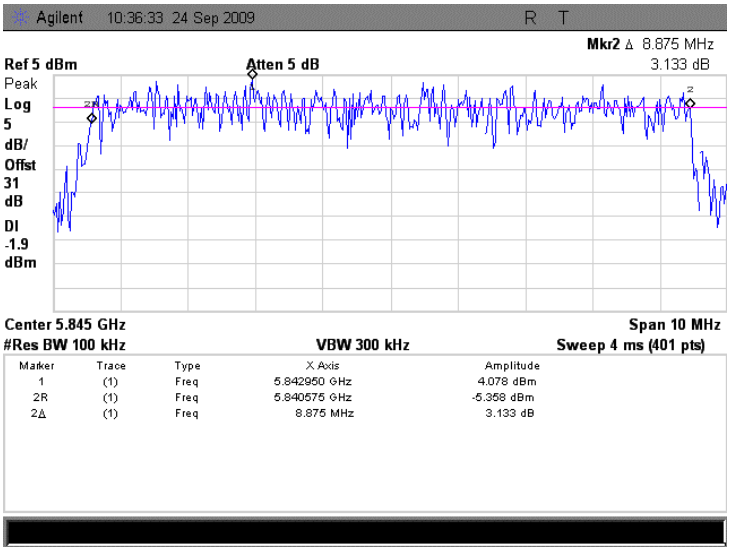


Test specification:	Section 15.247(a)(2), RSS-210 section A8.2(a), 6 dB bandwidth		
Test procedure:	FCC New Guidance on Measurements for DTS in section 15.247(a)(2)		
Test mode:	Compliance	Verdict:	PASS
Date & Time:	10/5/2009 8:56:26 AM		
Temperature: 24.8 ºC	Air Pressure: 1013 hPa	Relative Humidity: 40 %	Power Supply: 120VAC
Remarks: 10 MHz EBW			

Plot 7.1.23 The 6 dB bandwidth test result at high frequency, BPSK modulation, Antenna 2



Plot 7.1.24 The 6 dB bandwidth test result at high frequency, 64QAM modulation, Antenna 2



Test specification:	Section 15.247(b)(3), RSS-210 section A8.4(4), Peak output power		
Test procedure:	FCC New Guidance on Measurements for DTS in section 15.247(b), Option 2, Method #3		
Test mode:	Compliance	Verdict:	PASS
Date & Time:	10/13/2009 5:30:10 PM		
Temperature: 24.7 ºC	Air Pressure: 1016 hPa	Relative Humidity: 39 %	Power Supply: 120VAC
Remarks: 10 MHz EBW			

7.2 Peak output power

7.2.1 General

This test was performed to measure the maximum peak output power at the transmitter RF antenna connector. Specification test limits are given in Table 7.2.1.

Table 7.2.1 Peak output power limits

Assigned frequency range, MHz	Maximum antenna gain, dBi	Peak output power*	
		W	dBm
902.0 – 928.0	6.0	1.0	30.0
2400.0 – 2483.5			
5725.0 – 5850.0			

*- If transmitting antennas of directional gain greater than 6 dBi are used, the peak output power limit shall be reduced below the stated value as follows:

by 1 dB for every 3 dB that the directional gain of antenna exceeds 6 dBi for fixed point-to-point transmitters operate in 2400-2483.5 MHz band;

without any corresponding reduction for fixed point-to-point transmitters operate in 5725-5850 MHz band;

by the amount in dB that the directional gain of antenna exceeds 6 dBi for the rest of transmitters.

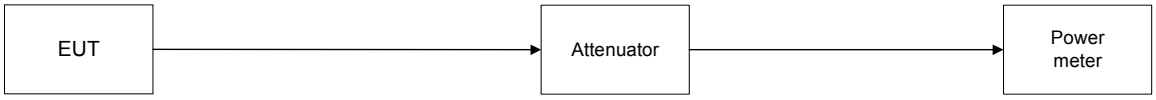
7.2.2 Test procedure

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 for end user RF output power.

7.2.2.3 The peak power meter was used and the maximum peak output power was measured as provided in Table 7.2.2 to Table 7.2.7.

Figure 7.2.1 Peak output power test setup



Test specification:	Section 15.247(b)(3), RSS-210 section A8.4(4), Peak output power		
Test procedure:	FCC New Guidance on Measurements for DTS in section 15.247(b), Option 2, Method #3		
Test mode:	Compliance	Verdict:	PASS
Date & Time:	10/13/2009 5:30:10 PM		
Temperature: 24.7 ºC	Air Pressure: 1016 hPa	Relative Humidity: 39 %	Power Supply: 120VAC
Remarks: 10 MHz EBW			

Table 7.2.2 Peak output power test results, Antenna 1 (RF1)

ASSIGNED FREQUENCY RANGE: 5725 – 5850 MHz
MODULATING SIGNAL: PRBS
TRANSMITTER OUTPUT POWER: Maximum
DETECTOR USED: Peak

Modulation, Bit rate, Mbps	Power meter reading, mW	External attenuation, dB	Total peak output power, mW	Limit, mW	Margin*, mW	Verdict
10 MHz BW, Low channel (5730 MHz)						
BPSK, 6.5	294	Included	294	1000	-706	Pass
64QAM, 65	317	Included	317	1000	-683	Pass
10 MHz BW, Mid channel (5780 MHz)						
BPSK, 6.5	305	Included	305	1000	-695	Pass
64QAM, 65	321	Included	321	1000	-679	Pass
10 MHz BW, High channel (5845 MHz)						
BPSK, 6.5	294	Included	294	1000	-706	Pass
64QAM, 65	317	Included	317	1000	-683	Pass

* - Margin = Peak output power – specification limit.

Table 7.2.3 Peak output power test results Antenna 2 (RF2)

ASSIGNED FREQUENCY RANGE: 5725 – 5850 MHz
MODULATING SIGNAL: PRBS
TRANSMITTER OUTPUT POWER: Maximum
DETECTOR USED: Peak

Modulation, Bit rate, Mbps	Power meter reading, mW	External attenuation, dB	Total peak output power, mW	Limit, mW	Margin*, mW	Verdict
10 MHz BW, Low channel (5730 MHz)						
BPSK, 6.5	379	Included	379	1000	-621	Pass
64QAM, 65	385	Included	385	1000	-615	Pass
10 MHz BW, Mid channel (5780 MHz)						
BPSK, 6.5	308	Included	308	1000	-692	Pass
64QAM, 65	305	Included	305	1000	-695	Pass
10 MHz BW, High channel (5845 MHz)						
BPSK, 6.5	307	Included	307	1000	-693	Pass
64QAM, 65	301	Included	301	1000	-699	Pass

* - Margin = Peak output power – specification limit.

Test specification:	**Section 15.247(b)(3), RSS-210 section A8.4(4), Peak output power**		
Test procedure:	FCC New Guidance on Measurements for DTS in section 15.247(b), Option 2, Method #3		
Test mode:	Compliance	**Verdict:**	PASS
Date & Time:	10/13/2009 5:30:10 PM		
Temperature: 24.7 ºC	**Air Pressure:** 1016 hPa	**Relative Humidity:** 39 %	**Power Supply:** 120VAC
Remarks: 10 MHz EBW			

Table 7.2.4 Peak output power test results, Antenna 1+ Antenna 2

ASSIGNED FREQUENCY RANGE: 5725 – 5850 MHz
MODULATING SIGNAL: PRBS
TRANSMITTER OUTPUT POWER: Maximum
DETECTOR USED: Peak

Modulation, Bit rate, Mbps	Power meter reading, mW		Total peak output power, mW**	Limit, mW	Margin*, mW	Verdict
	Antenna 1	Antenna 2				
10 MHz BW, Low channel (5730 MHz)						
BPSK, 6.5	294	379	673	1000	-327	Pass
64QAM, 65	317	385	702	1000	-298	Pass
10 MHz BW, Mid channel (5780 MHz)						
BPSK, 6.5	305	308	613	1000	-387	Pass
64QAM, 65	321	305	626	1000	-374	Pass
10 MHz BW, High channel (5845 MHz)						
BPSK, 6.5	294	307	601	1000	-399	Pass
64QAM, 65	317	301	618	1000	-382	Pass

* - Margin = Peak output power – specification limit.
** - The total peak output power is the sum of power, measured at 2 antenna outputs.

Reference numbers of test equipment used

HL 1906	HL 3301	HL 3440	HL 3472	HL 3473			

Full description is given in Appendix A.

Test specification:	Section 15.247(b)(3), RSS-210 section A8.4(4), Peak output power		
Test procedure:	FCC New Guidance on Measurements for DTS in section 15.247(b), Option 2, Method #3		
Test mode:	Compliance	Verdict:	PASS
Date & Time:	10/13/2009 10:07:32 PM		
Temperature: 24.7 ºC	Air Pressure: 1016 hPa	Relative Humidity: 39 %	Power Supply: 120VAC
Remarks: 40MHz EBW			

Table 7.2.5 Peak output power test results, Antenna 1 (RF1)

ASSIGNED FREQUENCY RANGE: 5725 – 5850 MHz
MODULATING SIGNAL: PRBS
TRANSMITTER OUTPUT POWER: Maximum
DETECTOR USED: Peak

Modulation, Bit rate, Mbps	Power meter reading, mW	External attenuation, dB	Total peak output power, mW**	Limit, mW	Margin*, mW	Verdict
40 MHz BW, Low channel (5745 MHz)						
BPSK, 27	347	Included	347	1000	-653	Pass
64QAM, 270	329	Included	329	1000	-671	Pass
40 MHz BW, Mid channel (5780 MHz)						
BPSK, 27	351	Included	351	1000	-649	Pass
64QAM, 270	349	Included	349	1000	-651	Pass
40 MHz BW, High channel (5830 MHz)						
BPSK, 27	318	Included	318	1000	-682	Pass
64QAM, 270	351	Included	351	1000	-649	Pass

* - Margin = Peak output power – specification limit.

Table 7.2.6 Peak output power test results Antenna 2 (RF2)

ASSIGNED FREQUENCY RANGE: 5725 – 5850 MHz
MODULATING SIGNAL: PRBS
TRANSMITTER OUTPUT POWER: Maximum
DETECTOR USED: Peak

Modulation, Bit rate, Mbps	Power meter reading, mW	External attenuation, dB	Total peak output power, mW**	Limit, mW	Margin*, mW	Verdict
40 MHz BW, Low channel (5745 MHz)						
BPSK, 27	370	Included	370	1000	-630	Pass
64QAM, 270	368	Included	368	1000	-632	Pass
40 MHz BW, Mid channel (5780 MHz)						
BPSK, 27	293	Included	293	1000	-707	Pass
64QAM, 270	302	Included	302	1000	-698	Pass
40 MHz BW, High channel (5830 MHz)						
BPSK, 27	304	Included	304	1000	-696	Pass
64QAM, 270	300	Included	300	1000	-700	Pass

* - Margin = Peak output power – specification limit.

Test specification:	**Section 15.247(b)(3), RSS-210 section A8.4(4), Peak output power**		
Test procedure:	FCC New Guidance on Measurements for DTS in section 15.247(b), Option 2, Method #3		
Test mode:	Compliance	**Verdict:**	PASS
Date & Time:	10/13/2009 10:07:32 PM		
Temperature: 24.7 ºC	**Air Pressure:** 1016 hPa	**Relative Humidity:** 39 %	**Power Supply:** 120VAC
Remarks: 40MHz EBW			

Table 7.2.7 Peak output power test results, Antenna 1+ Antenna 2

ASSIGNED FREQUENCY RANGE: 5725 – 5850 MHz
MODULATING SIGNAL: PRBS
TRANSMITTER OUTPUT POWER: Maximum
DETECTOR USED: Peak

Modulation, Bit rate, Mbps	Power meter reading, mW		Total peak output power, mW**	Limit, mW	Margin*, mW	Verdict
	Antenna 1	Antenna 2				
40 MHz BW, Low channel (5745 MHz)						
BPSK, 27	347	370	717	1000	-283	Pass
64QAM, 270	329	368	697	1000	-303	Pass
40 MHz BW, Mid channel (5780 MHz)						
BPSK, 27	351	293	644	1000	-356	Pass
64QAM, 270	349	302	651	1000	-349	Pass
40 MHz BW, High channel (5830 MHz)						
BPSK, 27	318	304	622	1000	-378	Pass
64QAM, 270	351	300	651	1000	-349	Pass

* - Margin = Peak output power – specification limit.
** - The total peak output power is the sum of power, measured at 2 antenna outputs.

Reference numbers of test equipment used

HL 1906	HL 3301	HL 3435	HL 3437	HL 3440	HL 3442	HL 3473	HL 3474

Full description is given in Appendix A.

Test specification:	Section 15.247(d), RSS-210 section A8.5, Conducted spurious emissions		
Test procedure:	FCC New Guidance on Measurements for DTS in section 15.247(c)		
Test mode:	Compliance	Verdict:	PASS
Date & Time:	10/13/2009 9:37:09 PM		
Temperature: 24.7 ºC	Air Pressure: 1016 hPa	Relative Humidity: 39 %	Power Supply: 120VAC
Remarks: 10MHz EBW			

7.3 Spurious emissions at RF antenna connector

7.3.1 General

This test was performed to measure spurious emissions at RF antenna connector. Specification test limits are given in Table 7.3.1.

Table 7.3.1 Spurious emission limits

Frequency*, MHz	Attenuation below carrier*, dBc
0.009 – 10th harmonic	20.0 (30.0)

* - The above 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.
** - Spurious emission limit is provided in terms of attenuation below the peak of modulated carrier measured with the same resolution bandwidth.

7.3.2 Test procedure

7.3.2.1 The EUT was set up as shown in Figure 7.3.1, energized and its proper operation was checked.
7.3.2.2 The EUT was adjusted to produce maximum available to end user RF output power.
7.3.2.3 The highest emission level within the authorized band was measured.
7.3.2.4 The spurious emission was measured with spectrum analyzer as provided in Table 7.3.2, Table 7.3.3, Table 7.3.6, Table 7.3.7 and the associated plots, and referenced to the highest emission level measured within the authorized band.

7.3.3 Test procedure for combined chain testing

7.3.3.1 The EUT was set up as shown in Figure 7.3.2, energized and its proper operation was checked.
7.3.3.2 The EUT was adjusted to produce maximum available to end user RF output power.
7.3.3.3 The highest emission level within the authorized band was measured.
7.3.3.4 The spurious emission was measured with spectrum analyzer as provided in Table 7.3.4, Table 7.3.5 and the associated plots, and referenced to the highest emission level measured within the authorized band.

Figure 7.3.1 Spurious emission test setup- individual Tx chain

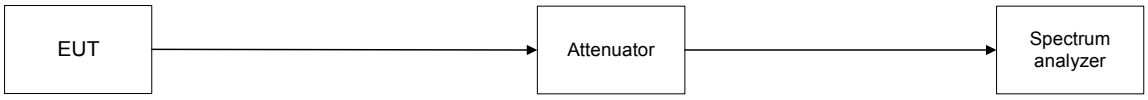
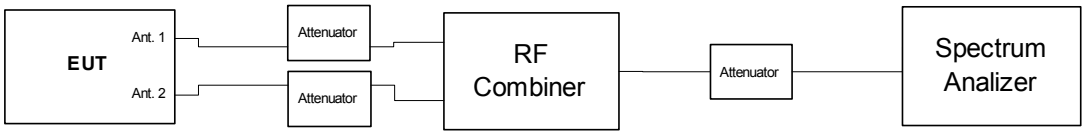


Figure 7.3.2 Spurious emission test setup – combined Tx chains



Test specification:	Section 15.247(d), RSS-210 section A8.5, Conducted spurious emissions		
Test procedure:	FCC New Guidance on Measurements for DTS in section 15.247(c)		
Test mode:	Compliance	Verdict:	PASS
Date & Time:	10/13/2009 9:37:09 PM		
Temperature: 24.7 ºC	Air Pressure: 1016 hPa	Relative Humidity: 39 %	Power Supply: 120VAC
Remarks: 10MHz EBW			

Table 7.3.2 Spurious emission test results, Antenna 2

ASSIGNED FREQUENCY RANGE:	5725 – 5850 MHz
INVESTIGATED FREQUENCY RANGE:	0.009 - 40000 MHz
DETECTOR USED:	Peak
RESOLUTION BANDWIDTH:	100 kHz
VIDEO BANDWIDTH:	300 kHz
MODULATION:	64QAM
MODULATING SIGNAL:	PRBS
BIT RATE:	65 Mbps
TRANSMITTER OUTPUT POWER SETTINGS:	Maximum
TRANSMITTER OUTPUT POWER:	385 mW at low carrier frequency 305 mW at mid carrier frequency 301 mW at high carrier frequency
EMISSION BANDWIDTH:	10 MHz (Worst case)

Frequency, MHz	Modulation	Spurious emission, dBm	Emission at carrier, dBm	Attenuation below carrier, dBc	Limit, dBc	Margin, dB*	Verdict
Low carrier frequency 5730 MHz							
5725.0	BPSK, 6.5	-13.52	8.59	22.11	20.0	-2.11	Pass
5725.0	BPSK, 13	-12.50	7.93	20.43		-0.43	Pass
5725.0	QPSK, 19.5	-13.37	7.59	20.96		-0.96	Pass
5725.0	QPSK, 26	-11.46	9.38	20.84		-0.84	Pass
5725.0	16QAM, 39	-13.58	8.35	21.93		-1.93	Pass
5725.0	16QAM, 52	-13.85	8.17	22.02		-2.02	Pass
5725.0	64QAM, 58.5	-14.10	6.40	20.50		-0.50	Pass
5725.0	64QAM, 65	-14.10	8.08	22.18		-2.18	Pass
Mid carrier frequency 5780 MHz							
No emissions were found							Pass
High carrier frequency 5845.0 MHz							
5850.0	BPSK, 6.5	-14.39	7.24	21.63	20.0	-1.63	Pass
5850.0	BPSK, 13	-13.57	7.87	21.44		-1.44	Pass
5850.0	QPSK, 19.5	-12.74	7.92	20.66		-0.66	Pass
5850.0	QPSK, 26	-12.64	8.48	21.12		-1.12	Pass
5850.0	16QAM, 39	-11.72	9.77	21.49		-1.49	Pass
5850.0	16QAM, 52	-13.94	8.60	22.54		-2.54	Pass
5850.0	64QAM, 58.5	-12.88	8.60	21.48		-1.48	Pass
5850.0	64QAM, 65	-14.37	8.41	22.77		-2.77	Pass

*- Margin = Attenuation below carrier – specification limit.

Test specification:	Section 15.247(d), RSS-210 section A8.5, Conducted spurious emissions		
Test procedure:	FCC New Guidance on Measurements for DTS in section 15.247(c)		
Test mode:	Compliance	Verdict:	PASS
Date & Time:	10/13/2009 9:37:09 PM		
Temperature: 24.7 ºC	Air Pressure: 1016 hPa	Relative Humidity: 39 %	Power Supply: 120VAC
Remarks: 10MHz EBW			

Table 7.3.3 Spurious emission test results, Antenna 1

ASSIGNED FREQUENCY RANGE:	5725 – 5850 MHz
INVESTIGATED FREQUENCY RANGE:	0.009 - 40000 MHz
DETECTOR USED:	Peak
RESOLUTION BANDWIDTH:	100 kHz
VIDEO BANDWIDTH:	300 kHz
MODULATION:	64QAM
MODULATING SIGNAL:	PRBS
BIT RATE:	65 Mbps
TRANSMITTER OUTPUT POWER SETTINGS:	Maximum
TRANSMITTER OUTPUT POWER:	317 mW at low carrier frequency 321 mW at mid carrier frequency 317 mW at high carrier frequency
EMISSION BANDWIDTH	10 MHz (Worst case)

Frequency, MHz	Modulation	Spurious emission, dBm	Emission at carrier, dBm	Attenuation below carrier, dBc	Limit, dBc	Margin, dB*	Verdict
Low carrier frequency 5730 MHz							
5725.0	BPSK, 6.5	-14.58	6.30	20.88	20.0	-0.88	Pass
5725.0	BPSK, 13	-15.90	5.50	21.40		-1.40	Pass
5725.0	QPSK, 19.5	-15.56	5.80	21.36		-1.36	Pass
5725.0	QPSK, 26	-15.40	6.47	21.87		-1.87	Pass
5725.0	16QAM, 39	-15.96	6.17	22.13		-2.13	Pass
5725.0	16QAM, 52	-15.55	6.25	21.80		-1.80	Pass
5725.0	64QAM, 58.5	-15.67	6.18	21.85		-1.85	Pass
5725.0	64QAM, 65	-17.15	5.36	22.51		-2.51	Pass
High carrier frequency 5845.0 MHz							
5850.0	BPSK, 6.5	-13.64	7.61	21.25	20.0	-1.25	Pass
5850.0	BPSK, 13	-15.81	6.18	21.99		-1.99	Pass
5850.0	QPSK, 19.5	-15.47	6.41	21.88		-1.88	Pass
5850.0	QPSK, 26	-15.07	6.83	21.90		-1.90	Pass
5850.0	16QAM, 39	-15.07	7.20	22.27		-2.27	Pass
5850.0	16QAM, 52	-14.48	8.18	22.66		-2.66	Pass
5850.0	64QAM, 58.5	-12.90	7.27	20.17		-0.17	Pass
5850.0	64QAM, 65	-16.03	6.33	22.36		-2.36	Pass

*- Margin = Attenuation below carrier – specification limit.

Test specification:	**Section 15.247(d), RSS-210 section A8.5, Conducted spurious emissions**		
Test procedure:	FCC New Guidance on Measurements for DTS in section 15.247(c)		
Test mode:	Compliance	**Verdict:**	PASS
Date & Time:	10/13/2009 9:37:09 PM		
Temperature: 24.7 ºC	**Air Pressure:** 1016 hPa	**Relative Humidity:** 39 %	**Power Supply:** 120VAC
Remarks: 10MHz EBW			

Table 7.3.4 Spurious emission test results, combined

ASSIGNED FREQUENCY RANGE: 5725 – 5850 MHz
INVESTIGATED FREQUENCY RANGE: 0.009 - 40000 MHz
DETECTOR USED: Peak
RESOLUTION BANDWIDTH: 100 kHz
VIDEO BANDWIDTH: 300 kHz
MODULATION: 64QAM
MODULATING SIGNAL: PRBS
BIT RATE: 65 Mbps
TRANSMITTER OUTPUT POWER SETTINGS: Maximum
TRANSMITTER OUTPUT POWER: 702 mW at low carrier frequency
626 mW at mid carrier frequency
618 mW at high carrier frequency
EMISSION BANDWIDTH: 10 MHz (Worst case)
NOTE: Antenna 1+ Antenna 2

Frequency, MHz	Modulation	Spurious emission, dBm	Emission at carrier, dBm	Attenuation below carrier, dBc	Limit, dBc	Margin, dB*	Verdict
Low carrier frequency 5730 MHz							
5725.0	BPSK, 6.5	-10.53	9.62	20.15	20.0	-0.15	Pass
5725.0	BPSK, 13	-10.68	9.47	20.15		-0.15	Pass
5725.0	QPSK, 19.5	-11.31	9.97	21.28		-1.28	Pass
5725.0	QPSK, 26	-10.69	10.12	20.81		-0.81	Pass
5725.0	16QAM, 39	-10.40	10.13	20.53		-0.53	Pass
5725.0	16QAM, 52	-10.53	10.19	20.72		-0.72	Pass
5725.0	64QAM, 58.5	-9.94	10.71	20.65		-0.65	Pass
5725.0	64QAM, 65	-12.81	8.95	21.76		-1.76	Pass
Mid carrier frequency 5780 MHz							
No emissions were found							Pass
High carrier frequency 5845.0 MHz							
5850.0	BPSK, 6.5	-12.23	9.73	21.96	20.0	-1.96	Pass
5850.0	BPSK, 13	-10.51	10.23	20.74		-0.74	Pass
5850.0	QPSK, 19.5	-12.16	9.82	21.98		-1.98	Pass
5850.0	QPSK, 26	-10.98	10.36	20.81		-1.34	Pass
5850.0	16QAM, 39	-10.86	10.86	21.72		-1.72	Pass
5850.0	16QAM, 52	-10.25	10.67	20.92		-0.92	Pass
5850.0	64QAM, 58.5	-10.71	11.33	22.04		-2.04	Pass
5850.0	64QAM, 65	-10.64	10.60	21.24		-1.24	Pass

*- Margin = Attenuation below carrier – specification limit.

Reference numbers of test equipment used

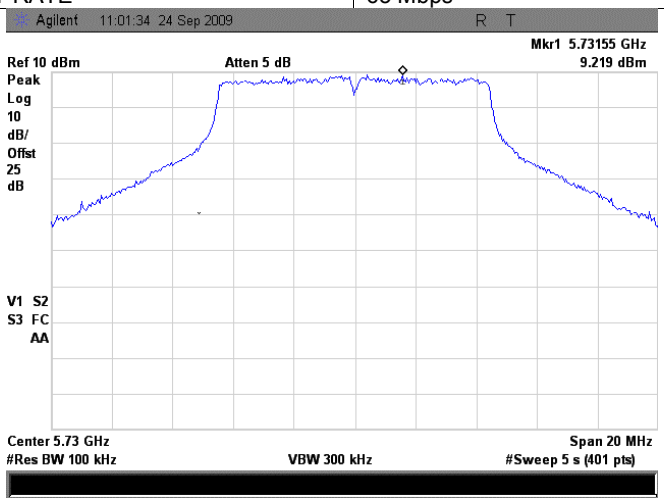
HL 1906	HL 1424	HL 2254	HL 2909	HL 2953	HL 3435	HL 3437	HL 3440
HL 3455	HL 3473						

Full description is given in Appendix A.

Test specification:	Section 15.247(d), RSS-210 section A8.5, Conducted spurious emissions		
Test procedure:	FCC New Guidance on Measurements for DTS in section 15.247(c)		
Test mode:	Compliance	Verdict:	PASS
Date & Time:	10/13/2009 9:37:09 PM		
Temperature: 24.7 ºC	Air Pressure: 1016 hPa	Relative Humidity: 39 %	Power Supply: 120VAC
Remarks: 10MHz EBW			

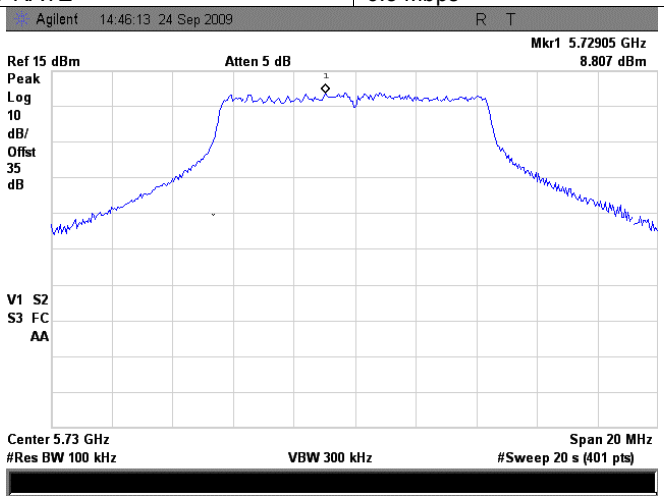
Plot 7.3.1 The highest emission level within the assigned band at low carrier frequency, combined

CHANNEL BANDWIDTH	10 MHz
MODULATION	64QAM
BIT RATE	65 Mbps



Plot 7.3.2 The highest emission level within the assigned band at low carrier frequency, combined

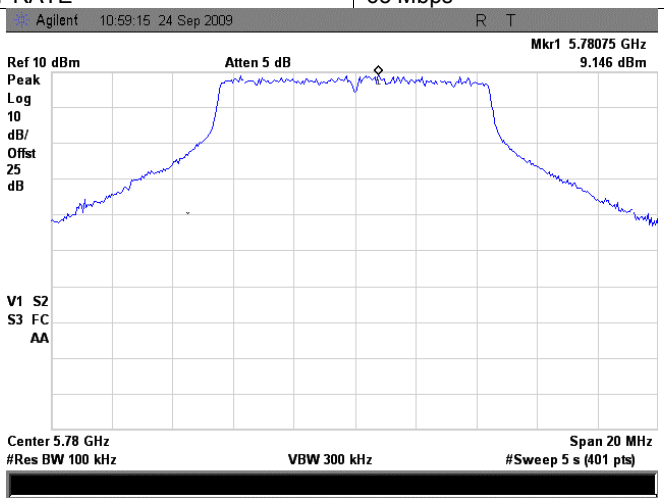
CHANNEL BANDWIDTH	10 MHz
MODULATION	BPSK
BIT RATE	6.5 Mbps



Test specification:	Section 15.247(d), RSS-210 section A8.5, Conducted spurious emissions		
Test procedure:	FCC New Guidance on Measurements for DTS in section 15.247(c)		
Test mode:	Compliance	Verdict:	PASS
Date & Time:	10/13/2009 9:37:09 PM		
Temperature: 24.7 ºC	Air Pressure: 1016 hPa	Relative Humidity: 39 %	Power Supply: 120VAC
Remarks: 10MHz EBW			

Plot 7.3.3 The highest emission level within the assigned band at mid carrier frequency, combined

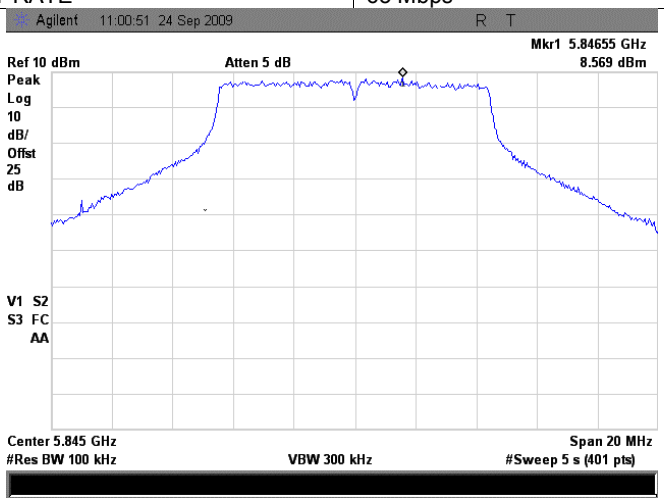
CHANNEL BANDWIDTH	10 MHz
MODULATION	64QAM
BIT RATE	65 Mbps



Test specification:	Section 15.247(d), RSS-210 section A8.5, Conducted spurious emissions		
Test procedure:	FCC New Guidance on Measurements for DTS in section 15.247(c)		
Test mode:	Compliance	Verdict:	PASS
Date & Time:	10/13/2009 9:37:09 PM		
Temperature: 24.7 ºC	Air Pressure: 1016 hPa	Relative Humidity: 39 %	Power Supply: 120VAC
Remarks: 10MHz EBW			

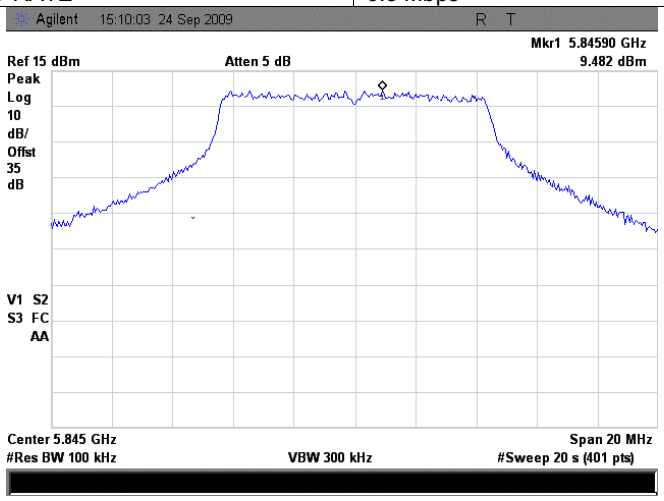
Plot 7.3.4 The highest emission level within the assigned band at high carrier frequency, combined

CHANNEL BANDWIDTH	10 MHz
MODULATION	64QAM
BIT RATE	65 Mbps



Plot 7.3.5 The highest emission level within the assigned band at high carrier frequency, combined

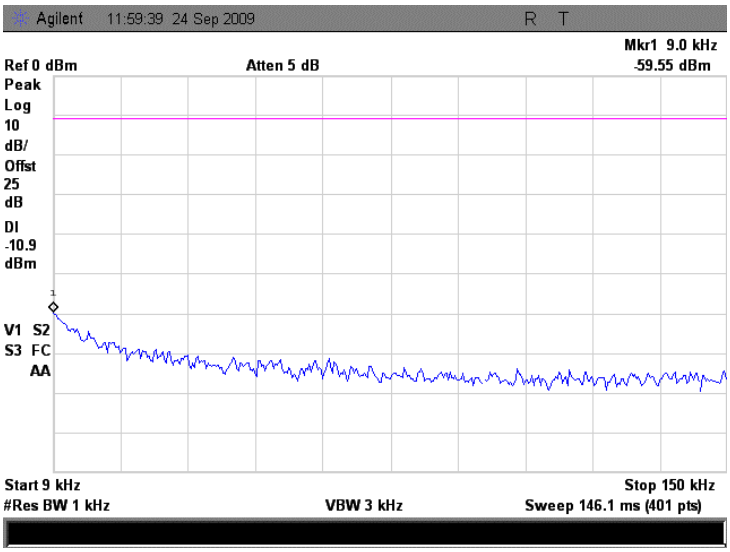
CHANNEL BANDWIDTH	10 MHz
MODULATION	BPSK
BIT RATE	6.5 Mbps



Test specification:	Section 15.247(d), RSS-210 section A8.5, Conducted spurious emissions		
Test procedure:	FCC New Guidance on Measurements for DTS in section 15.247(c)		
Test mode:	Compliance	Verdict:	PASS
Date & Time:	10/13/2009 9:37:09 PM		
Temperature: 24.7 ºC	Air Pressure: 1016 hPa	Relative Humidity: 39 %	Power Supply: 120VAC
Remarks: 10MHz EBW			

Plot 7.3.6 Spurious emission measurements in 9 - 150 kHz range at low carrier frequency, combined

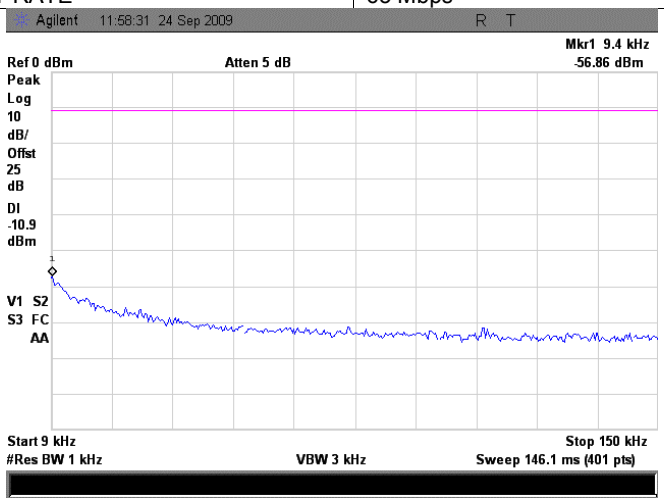
CHANNEL BANDWIDTH	10 MHz
MODULATION	64QAM
BIT RATE	65 Mbps



Test specification:	Section 15.247(d), RSS-210 section A8.5, Conducted spurious emissions		
Test procedure:	FCC New Guidance on Measurements for DTS in section 15.247(c)		
Test mode:	Compliance	Verdict:	PASS
Date & Time:	10/13/2009 9:37:09 PM		
Temperature: 24.7 ºC	Air Pressure: 1016 hPa	Relative Humidity: 39 %	Power Supply: 120VAC
Remarks: 10MHz EBW			

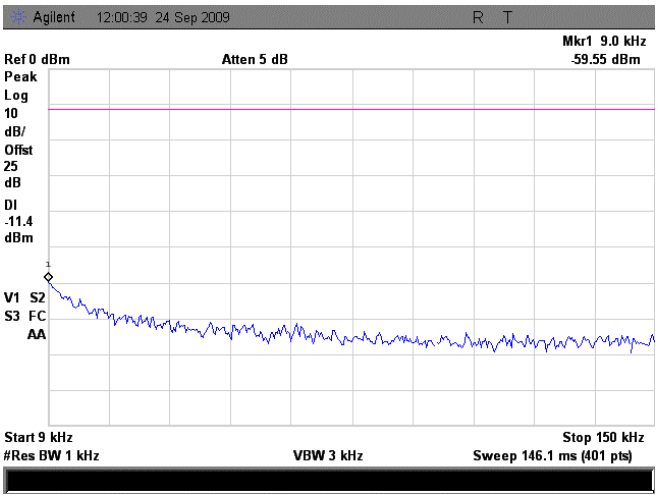
Plot 7.3.7 Spurious emission measurements in 9 - 150 kHz range at mid carrier frequency, combined

CHANNEL BANDWIDTH	10 MHz
MODULATION	64QAM
BIT RATE	65 Mbps



Plot 7.3.8 Spurious emission measurements in 9 - 150 kHz range at high carrier frequency, combined

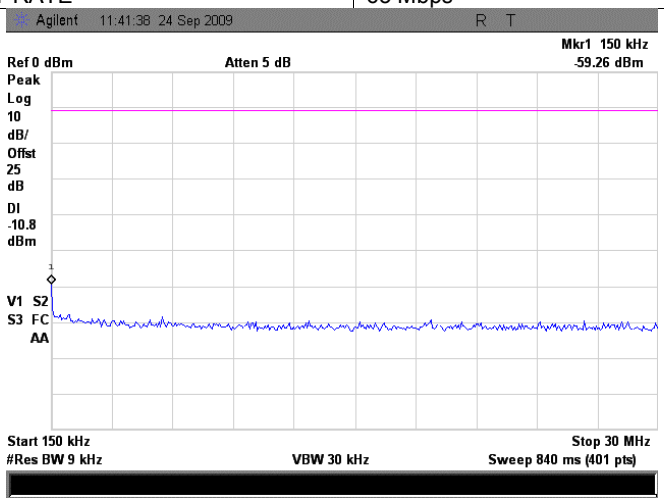
CHANNEL BANDWIDTH	10 MHz
MODULATION	64QAM
BIT RATE	65 Mbps



Test specification:	Section 15.247(d), RSS-210 section A8.5, Conducted spurious emissions		
Test procedure:	FCC New Guidance on Measurements for DTS in section 15.247(c)		
Test mode:	Compliance	Verdict:	PASS
Date & Time:	10/13/2009 9:37:09 PM		
Temperature: 24.7 ºC	Air Pressure: 1016 hPa	Relative Humidity: 39 %	Power Supply: 120VAC
Remarks: 10MHz EBW			

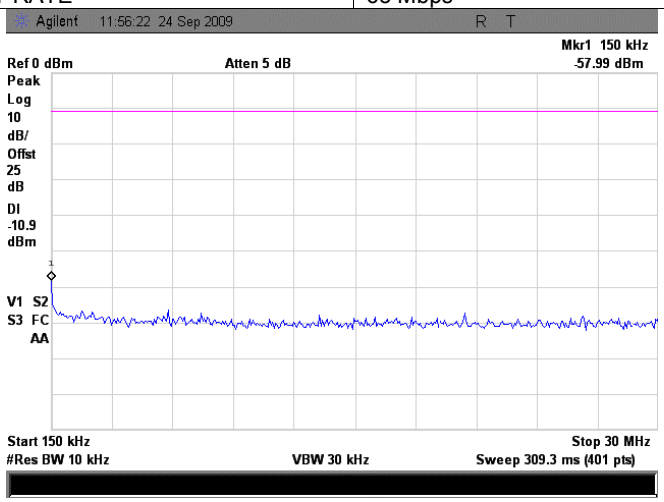
Plot 7.3.9 Spurious emission measurements in 0.15 - 30 MHz range at low carrier frequency, combined

CHANNEL BANDWIDTH	10 MHz
MODULATION	64QAM
BIT RATE	65 Mbps



Plot 7.3.10 Spurious emission measurements in 0.15 - 30 MHz range at mid carrier frequency, combined

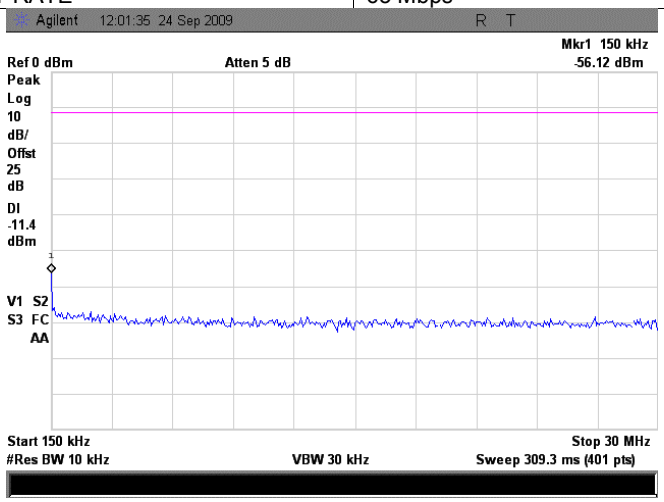
CHANNEL BANDWIDTH	10 MHz
MODULATION	64QAM
BIT RATE	65 Mbps



Test specification:	Section 15.247(d), RSS-210 section A8.5, Conducted spurious emissions		
Test procedure:	FCC New Guidance on Measurements for DTS in section 15.247(c)		
Test mode:	Compliance	Verdict:	PASS
Date & Time:	10/13/2009 9:37:09 PM		
Temperature: 24.7 ºC	Air Pressure: 1016 hPa	Relative Humidity: 39 %	Power Supply: 120VAC
Remarks: 10MHz EBW			

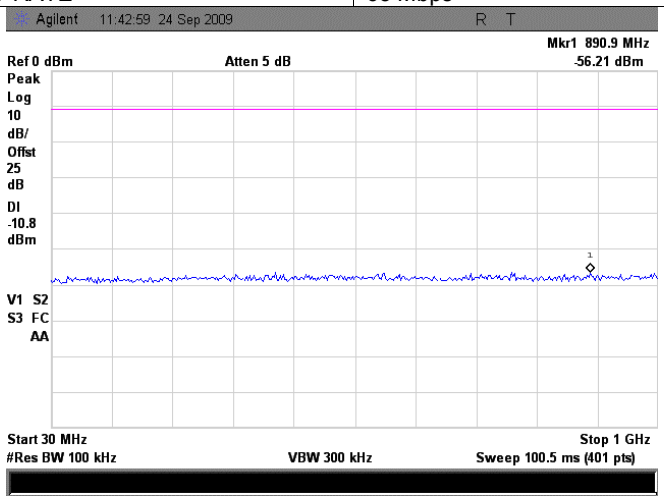
Plot 7.3.11 Spurious emission measurements in 0.15 - 30 MHz range at high carrier frequency, combined

CHANNEL BANDWIDTH	10 MHz
MODULATION	64QAM
BIT RATE	65 Mbps



Plot 7.3.12 Spurious emission measurements in 30 - 1000 MHz range at low carrier frequency, combined

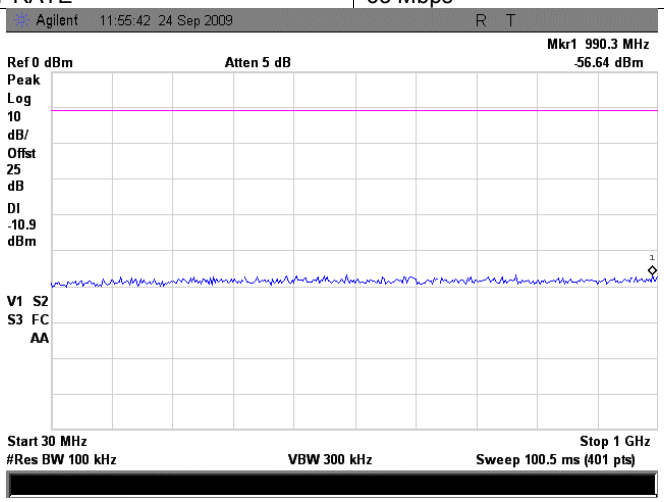
CHANNEL BANDWIDTH	10 MHz
MODULATION	64QAM
BIT RATE	65 Mbps



Test specification:	Section 15.247(d), RSS-210 section A8.5, Conducted spurious emissions		
Test procedure:	FCC New Guidance on Measurements for DTS in section 15.247(c)		
Test mode:	Compliance	Verdict:	PASS
Date & Time:	10/13/2009 9:37:09 PM		
Temperature: 24.7 ºC	Air Pressure: 1016 hPa	Relative Humidity: 39 %	Power Supply: 120VAC
Remarks: 10MHz EBW			

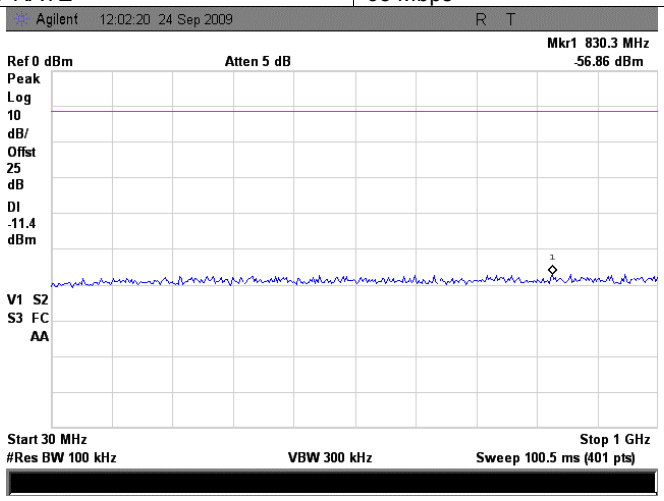
Plot 7.3.13 Spurious emission measurements in 30 - 1000 MHz range at mid carrier frequency, combined

CHANNEL BANDWIDTH	10 MHz
MODULATION	64QAM
BIT RATE	65 Mbps



Plot 7.3.14 Spurious emission measurements in 30 - 1000 MHz range at high carrier frequency, combined

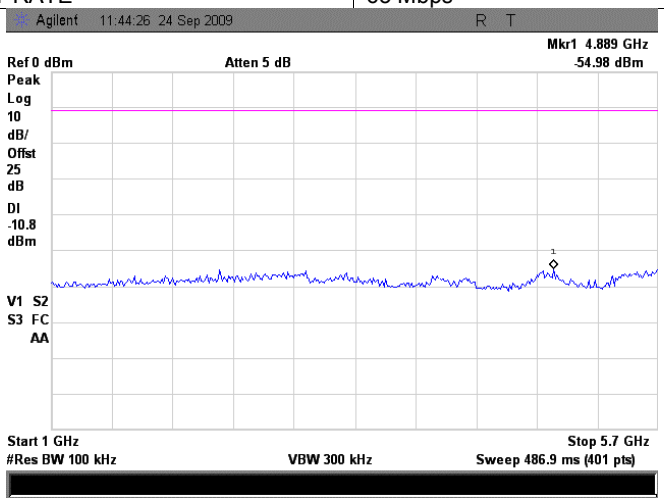
CHANNEL BANDWIDTH	10 MHz
MODULATION	64QAM
BIT RATE	65 Mbps



Test specification:	Section 15.247(d), RSS-210 section A8.5, Conducted spurious emissions		
Test procedure:	FCC New Guidance on Measurements for DTS in section 15.247(c)		
Test mode:	Compliance	Verdict:	PASS
Date & Time:	10/13/2009 9:37:09 PM		
Temperature: 24.7 ºC	Air Pressure: 1016 hPa	Relative Humidity: 39 %	Power Supply: 120VAC
Remarks: 10MHz EBW			

Plot 7.3.15 Spurious emission measurements in 1000 – 5700 MHz range at low carrier frequency, combined

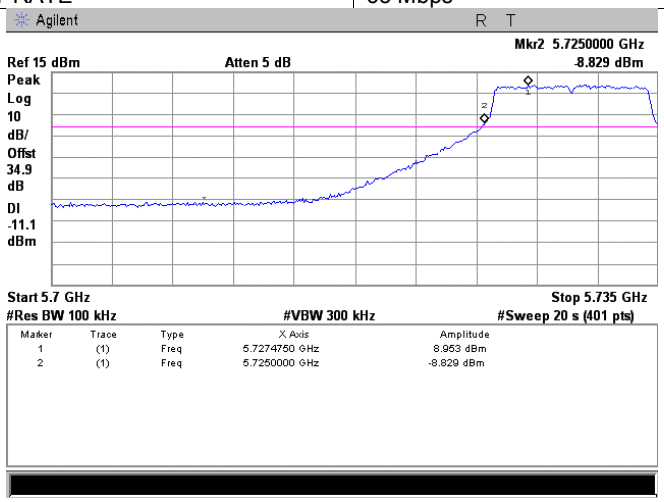
CHANNEL BANDWIDTH	10MHz
MODULATION	64QAM
BIT RATE	65 Mbps



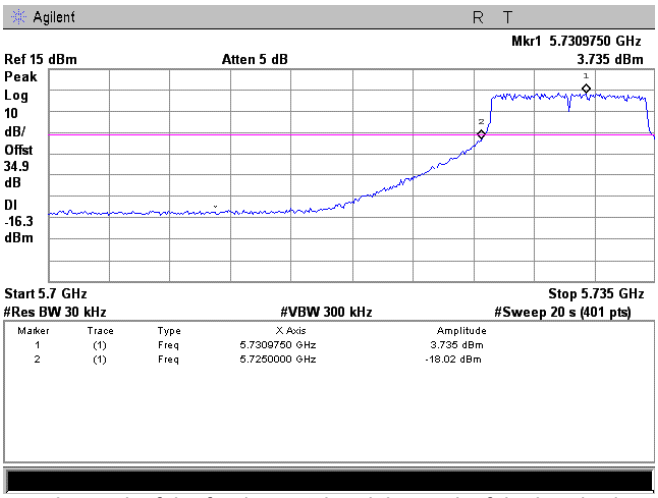
Test specification:	Section 15.247(d), RSS-210 section A8.5, Conducted spurious emissions		
Test procedure:	FCC New Guidance on Measurements for DTS in section 15.247(c)		
Test mode:	Compliance	Verdict:	PASS
Date & Time:	10/13/2009 9:37:09 PM		
Temperature: 24.7 ºC	Air Pressure: 1016 hPa	Relative Humidity: 39 %	Power Supply: 120VAC
Remarks: 10MHz EBW			

Plot 7.3.16 Spurious emission measurements in 5700 – 5725 MHz range at low carrier frequency, combined

CHANNEL BANDWIDTH	10MHz
MODULATION	64QAM
BIT RATE	65 Mbps



Spurious Emission at Band Edge = Amplitude Mrk1 – Delta from Plot below = 8.95 – 21.76 = -12.81 dBm

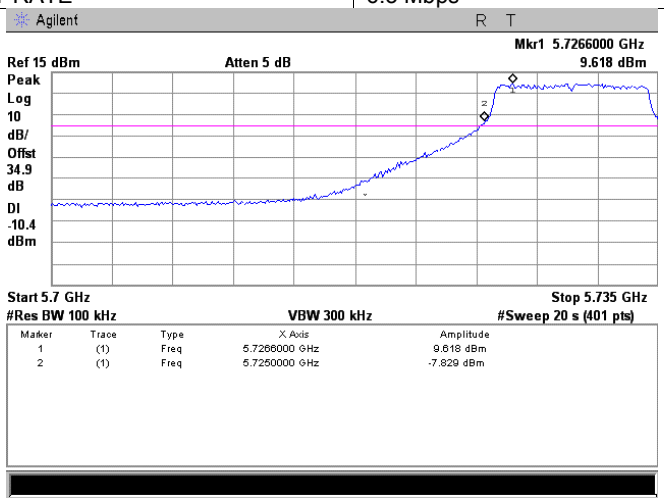


Delta between the peak of the fundamental and the peak of the band-edge emission = Amplitude Mrk1 – Amplitude Mrk2 = 3.74 – (-18.02) = 21.76 dBc

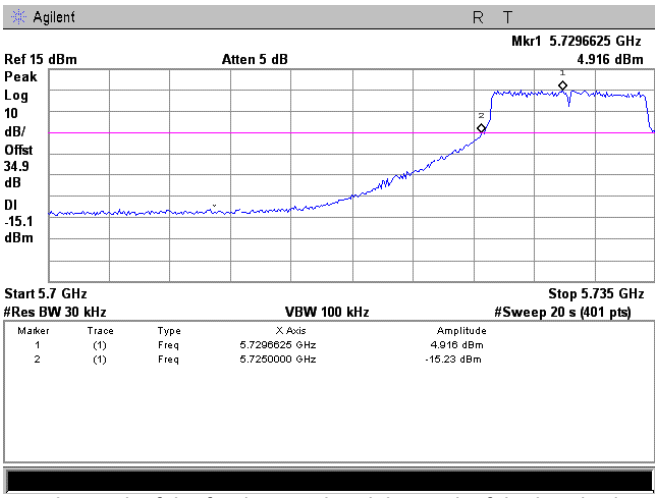
Test specification:	Section 15.247(d), RSS-210 section A8.5, Conducted spurious emissions		
Test procedure:	FCC New Guidance on Measurements for DTS in section 15.247(c)		
Test mode:	Compliance	Verdict:	PASS
Date & Time:	10/13/2009 9:37:09 PM		
Temperature: 24.7 ºC	Air Pressure: 1016 hPa	Relative Humidity: 39 %	Power Supply: 120VAC
Remarks: 10MHz EBW			

Plot 7.3.17 Spurious emission measurements in 5700 – 5725 MHz range at low carrier frequency, combined

CHANNEL BANDWIDTH	10MHz
MODULATION	BPSK
BIT RATE	6.5 Mbps



Spurious Emission at Band Edge = Amplitude Mrk1 – Delta from Plot below = 9.62 – 20.15 = -10.53 dBm

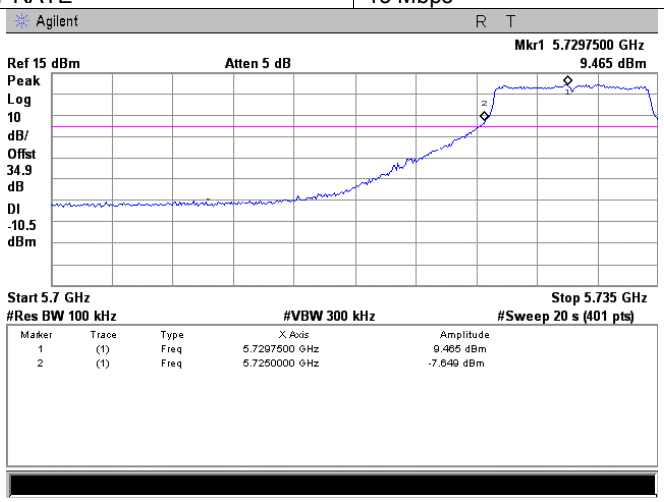


Delta between the peak of the fundamental and the peak of the band-edge emission = Amplitude Mrk1 – Amplitude Mrk2 = 4.92 – (-15.23) = 20.15 dBc

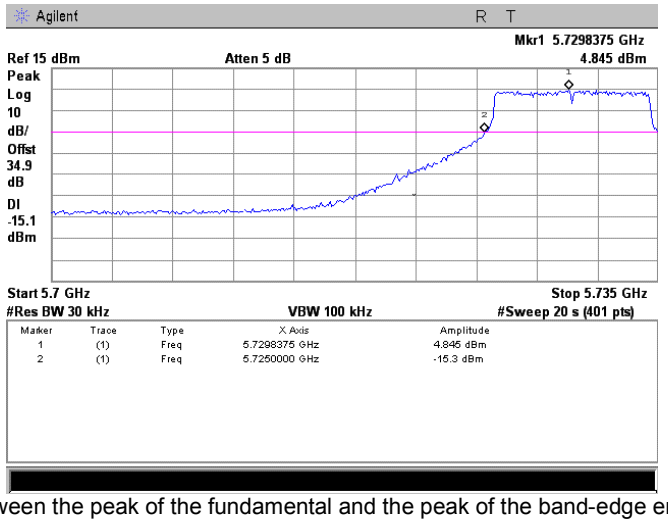
Test specification:	Section 15.247(d), RSS-210 section A8.5, Conducted spurious emissions		
Test procedure:	FCC New Guidance on Measurements for DTS in section 15.247(c)		
Test mode:	Compliance	Verdict:	PASS
Date & Time:	10/13/2009 9:37:09 PM		
Temperature: 24.7 ºC	Air Pressure: 1016 hPa	Relative Humidity: 39 %	Power Supply: 120VAC
Remarks: 10MHz EBW			

Plot 7.3.18 Spurious emission measurements in 5700 – 5725 MHz range at low carrier frequency, combined

CHANNEL BANDWIDTH	10MHz
MODULATION	BPSK
BIT RATE	13 Mbps



Spurious Emission at Band Edge = Amplitude Mrk1 – Delta from Plot below = 8.95 – 21.75 = -12.80 dBm

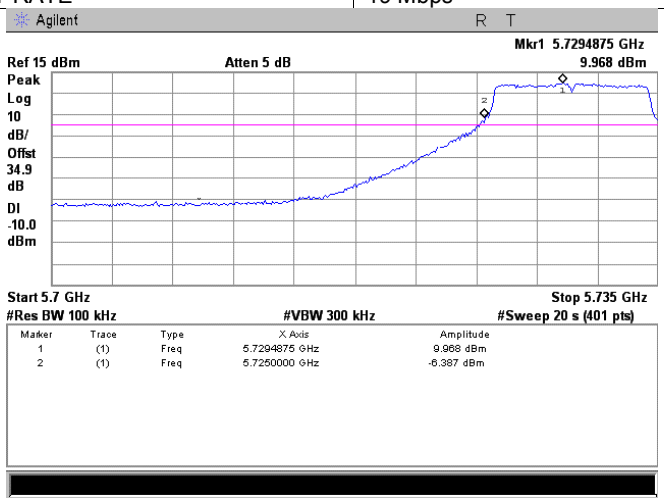


Delta between the peak of the fundamental and the peak of the band-edge emission = Amplitude Mrk1 – Amplitude Mrk2 = 4.85 – (-15.30) = 20.15 dBc

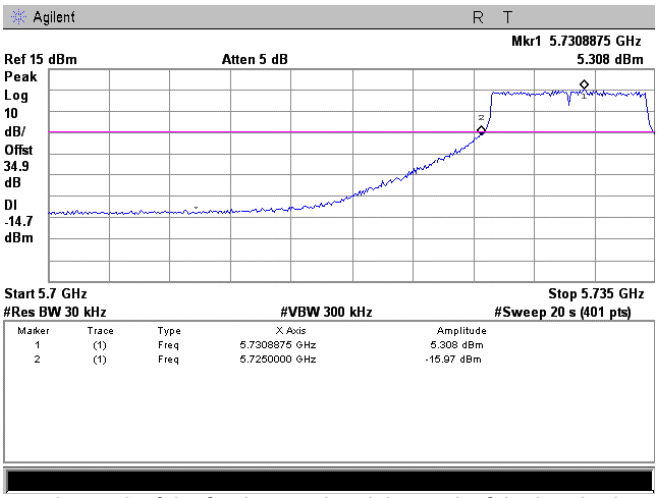
Test specification:	Section 15.247(d), RSS-210 section A8.5, Conducted spurious emissions		
Test procedure:	FCC New Guidance on Measurements for DTS in section 15.247(c)		
Test mode:	Compliance	Verdict:	PASS
Date & Time:	10/13/2009 9:37:09 PM		
Temperature: 24.7 ºC	Air Pressure: 1016 hPa	Relative Humidity: 39 %	Power Supply: 120VAC
Remarks: 10MHz EBW			

Plot 7.3.19 Spurious emission measurements in 5700 – 5725 MHz range at low carrier frequency, combined

CHANNEL BANDWIDTH	10MHz
MODULATION	QPSK
BIT RATE	19 Mbps



Spurious Emission at Band Edge = Amplitude Mrk1 – Delta from Plot below = 9.97 – 21.28 = - 11.31dBm

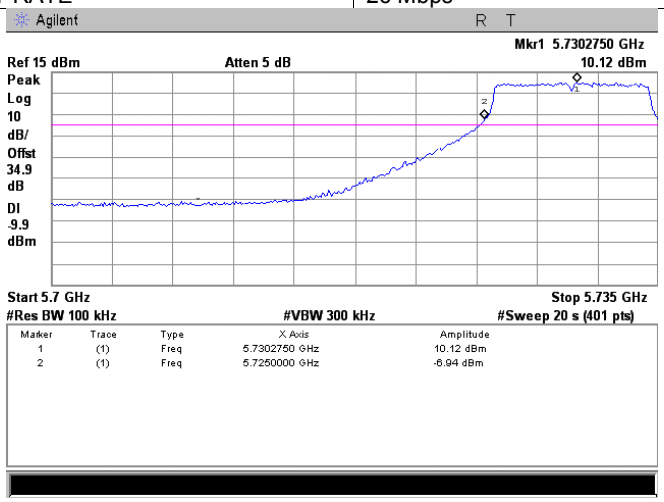


Delta between the peak of the fundamental and the peak of the band-edge emission = Amplitude Mrk1 – Amplitude Mrk2 = 5.31 – (-15.97) = 21.28 dBc

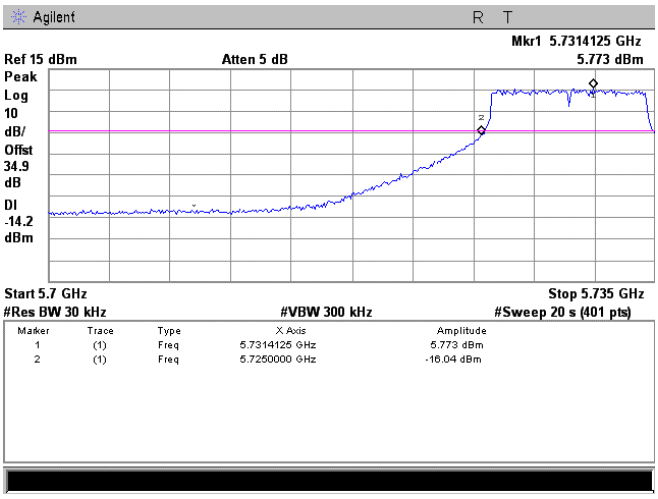
Test specification:	Section 15.247(d), RSS-210 section A8.5, Conducted spurious emissions		
Test procedure:	FCC New Guidance on Measurements for DTS in section 15.247(c)		
Test mode:	Compliance	Verdict:	PASS
Date & Time:	10/13/2009 9:37:09 PM		
Temperature: 24.7 ºC	Air Pressure: 1016 hPa	Relative Humidity: 39 %	Power Supply: 120VAC
Remarks: 10MHz EBW			

Plot 7.3.20 Spurious emission measurements in 5700 – 5725 MHz range at low carrier frequency, combined

CHANNEL BANDWIDTH	10MHz
MODULATION	QPSK
BIT RATE	26 Mbps



Spurious Emission at Band Edge = Amplitude Mrk1 – Delta from Plot below = 10.12 – 20.81 = - 10.69dBm

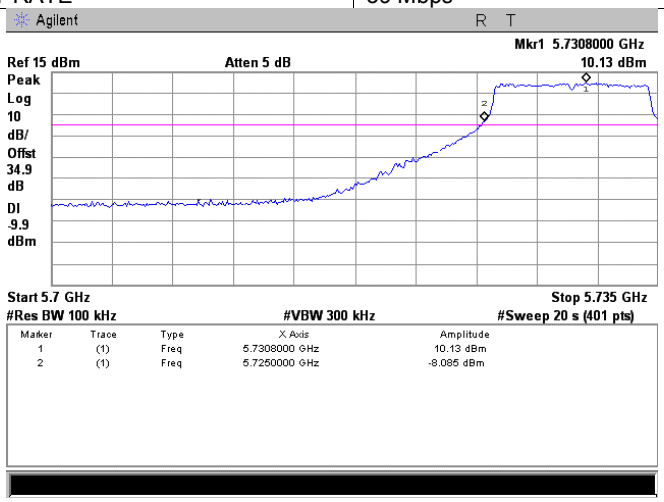


Delta between the peak of the fundamental and the peak of the band-edge emission =
Amplitude Mrk1 – Amplitude Mrk2 = 5.77 – (-15.04) = 20.81 dBc

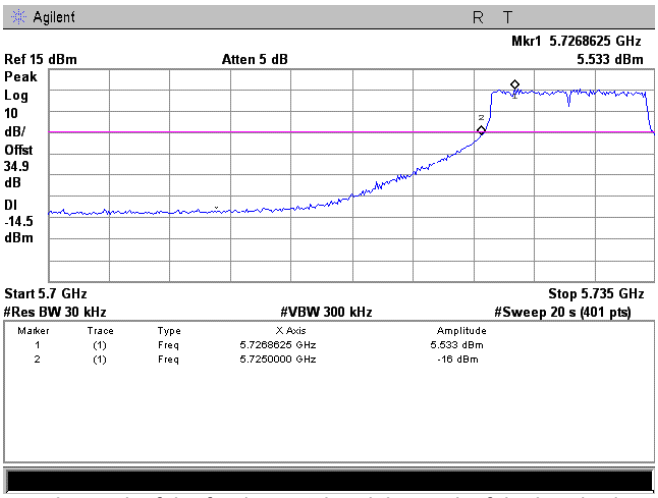
Test specification:	Section 15.247(d), RSS-210 section A8.5, Conducted spurious emissions		
Test procedure:	FCC New Guidance on Measurements for DTS in section 15.247(c)		
Test mode:	Compliance	Verdict:	PASS
Date & Time:	10/13/2009 9:37:09 PM		
Temperature: 24.7 ºC	Air Pressure: 1016 hPa	Relative Humidity: 39 %	Power Supply: 120VAC
Remarks: 10MHz EBW			

Plot 7.3.21 Spurious emission measurements in 5700 – 5725 MHz range at low carrier frequency, combined

CHANNEL BANDWIDTH	10MHz
MODULATION	16QAM
BIT RATE	39 Mbps



Spurious Emission at Band Edge = Amplitude Mrk1 – Delta from Plot below = 10.13 – 20.53 = - 10.40dBm

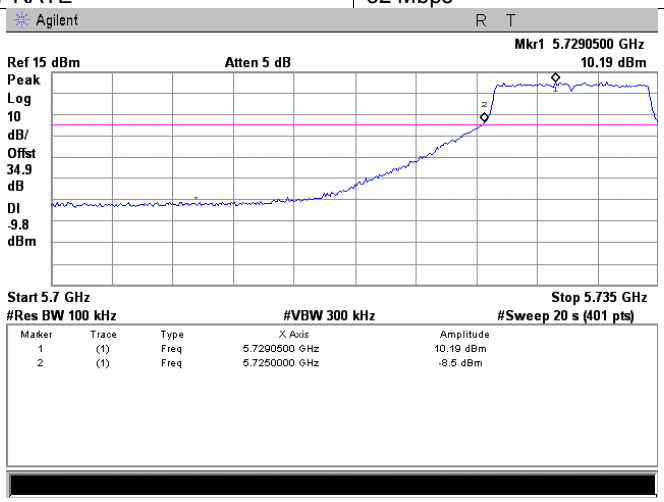


Delta between the peak of the fundamental and the peak of the band-edge emission = Amplitude Mrk1 – Amplitude Mrk2 = 5.53 – (-15.00) = 20.53 dBc

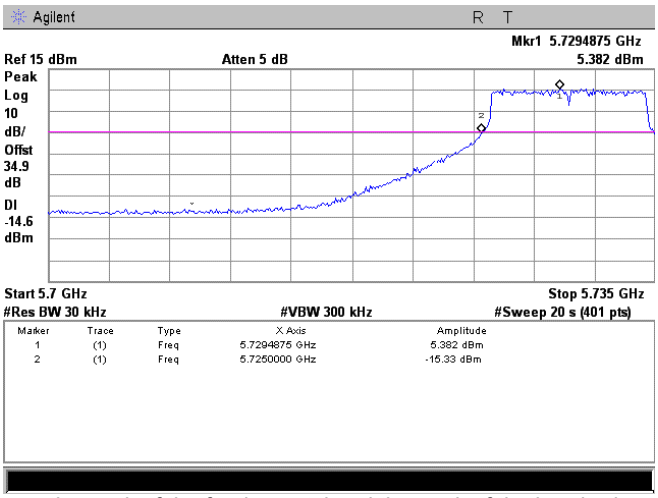
Test specification:	Section 15.247(d), RSS-210 section A8.5, Conducted spurious emissions		
Test procedure:	FCC New Guidance on Measurements for DTS in section 15.247(c)		
Test mode:	Compliance	Verdict:	PASS
Date & Time:	10/13/2009 9:37:09 PM		
Temperature: 24.7 ºC	Air Pressure: 1016 hPa	Relative Humidity: 39 %	Power Supply: 120VAC
Remarks: 10MHz EBW			

Plot 7.3.22 Spurious emission measurements in 5700 – 5725 MHz range at low carrier frequency, combined

CHANNEL BANDWIDTH	10MHz
MODULATION	16QAM
BIT RATE	52 Mbps



Spurious Emission at Band Edge = Amplitude Mrk1 – Delta from Plot below = 10.19 – 20.72 = - 10.53dBm

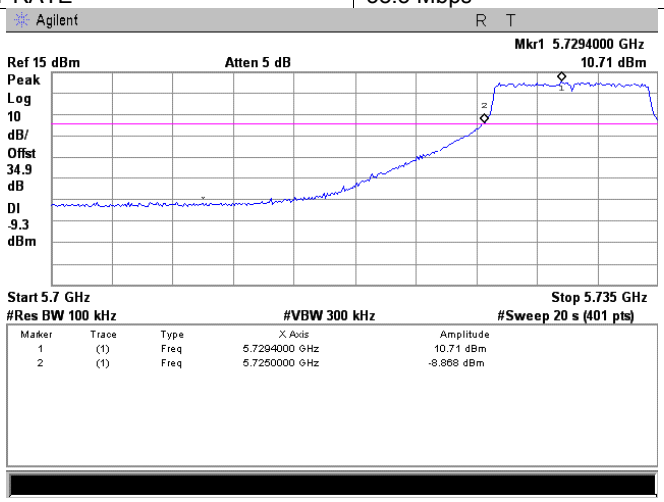


Delta between the peak of the fundamental and the peak of the band-edge emission = Amplitude Mrk1 – Amplitude Mrk2 = 5.39 – (-15.33) = 20.72 dBc

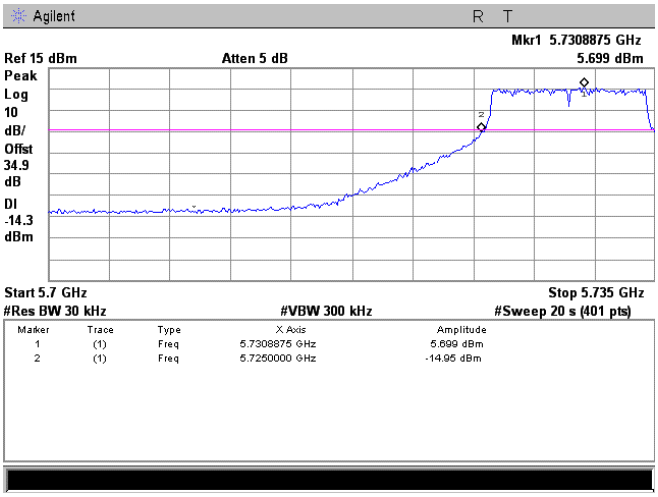
Test specification:	Section 15.247(d), RSS-210 section A8.5, Conducted spurious emissions		
Test procedure:	FCC New Guidance on Measurements for DTS in section 15.247(c)		
Test mode:	Compliance	Verdict:	PASS
Date & Time:	10/13/2009 9:37:09 PM		
Temperature: 24.7 ºC	Air Pressure: 1016 hPa	Relative Humidity: 39 %	Power Supply: 120VAC
Remarks: 10MHz EBW			

Plot 7.3.23 Spurious emission measurements in 5700 – 5725 MHz range at low carrier frequency, combined

CHANNEL BANDWIDTH	10MHz
MODULATION	64QAM
BIT RATE	58.5 Mbps



Spurious Emission at Band Edge = Amplitude Mrk1 – Delta from Plot below = 10.71 – 20.65 = - 9.94dBm

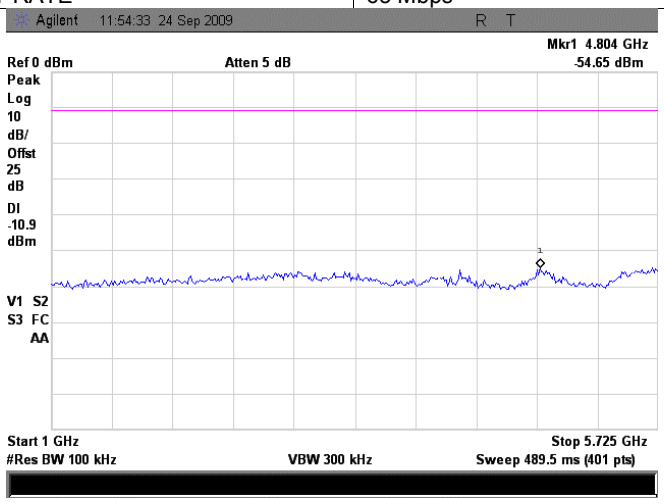


Delta between the peak of the fundamental and the peak of the band-edge emission =
Amplitude Mrk1 – Amplitude Mrk2 = 5.70 – (-14.95) = 20.65 dBc

Test specification:	Section 15.247(d), RSS-210 section A8.5, Conducted spurious emissions		
Test procedure:	FCC New Guidance on Measurements for DTS in section 15.247(c)		
Test mode:	Compliance	Verdict:	PASS
Date & Time:	10/13/2009 9:37:09 PM		
Temperature: 24.7 ºC	Air Pressure: 1016 hPa	Relative Humidity: 39 %	Power Supply: 120VAC
Remarks: 10MHz EBW			

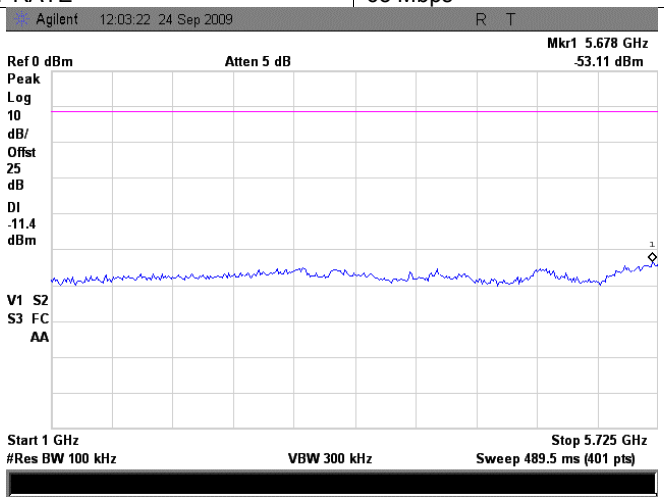
Plot 7.3.24 Spurious emission measurements in 1000 – 5725 MHz range at mid carrier frequency, combined

CHANNEL BANDWIDTH	10MHz
MODULATION	64QAM
BIT RATE	65 Mbps



Plot 7.3.25 Spurious emission measurements in 1000 – 5725 MHz range at high carrier frequency, combined Tx chains testing

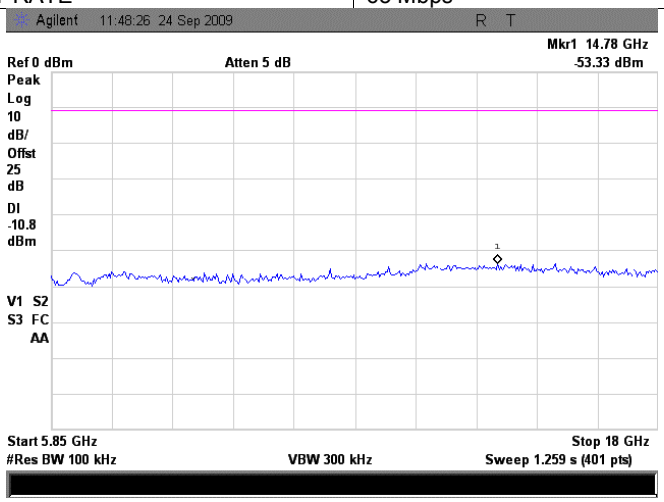
CHANNEL BANDWIDTH	10MHz
MODULATION	64QAM
BIT RATE	65 Mbps



Test specification:	Section 15.247(d), RSS-210 section A8.5, Conducted spurious emissions		
Test procedure:	FCC New Guidance on Measurements for DTS in section 15.247(c)		
Test mode:	Compliance	Verdict:	PASS
Date & Time:	10/13/2009 9:37:09 PM		
Temperature: 24.7 ºC	Air Pressure: 1016 hPa	Relative Humidity: 39 %	Power Supply: 120VAC
Remarks: 10MHz EBW			

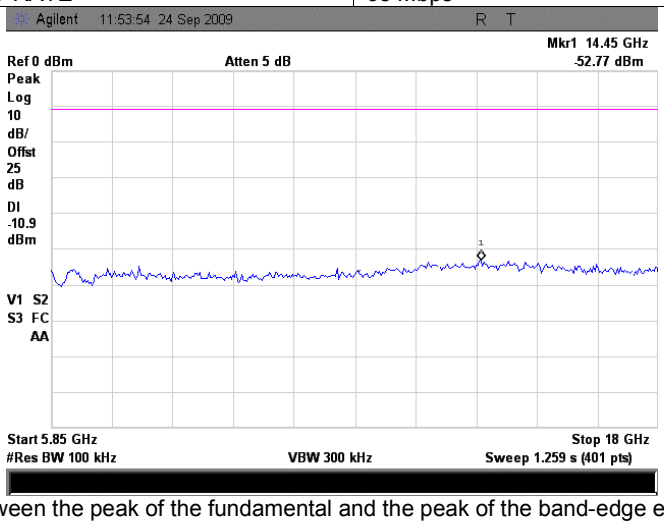
Plot 7.3.26 Spurious emission measurements in 5850 – 18000 MHz range at low carrier frequency, combined

CHANNEL BANDWIDTH	10 MHz
MODULATION	64QAM
BIT RATE	65 Mbps



Plot 7.3.27 Spurious emission measurements in 5850 – 18000 MHz range at mid carrier frequency, combined

CHANNEL BANDWIDTH	10 MHz
MODULATION	64QAM
BIT RATE	65 Mbps

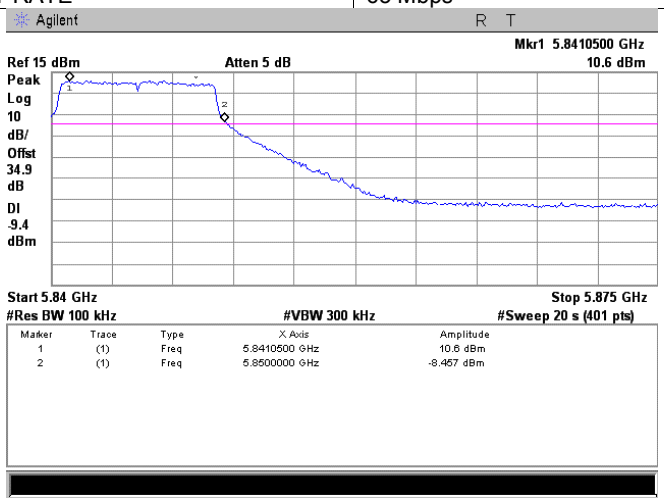


Delta between the peak of the fundamental and the peak of the band-edge emission =
Amplitude Mrk1 – Amplitude Mrk2 = – (-15.30) = 2 dBc

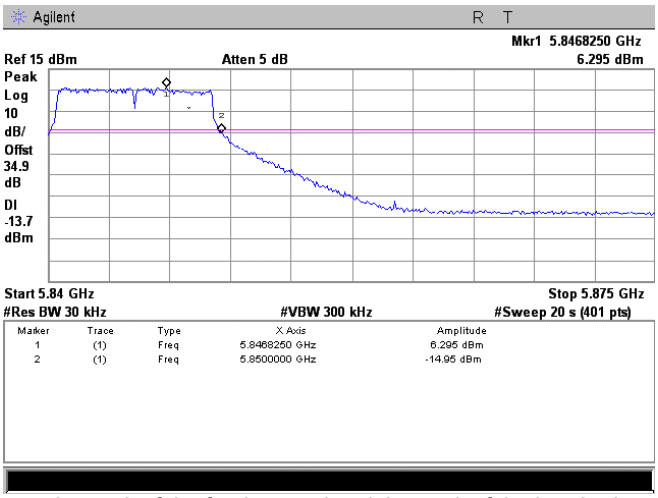
Test specification:	Section 15.247(d), RSS-210 section A8.5, Conducted spurious emissions		
Test procedure:	FCC New Guidance on Measurements for DTS in section 15.247(c)		
Test mode:	Compliance	Verdict:	PASS
Date & Time:	10/13/2009 9:37:09 PM		
Temperature: 24.7 ºC	Air Pressure: 1016 hPa	Relative Humidity: 39 %	Power Supply: 120VAC
Remarks: 10MHz EBW			

Plot 7.3.28 Spurious emission measurements in 5850 – 6000 MHz range at high carrier frequency, combined

CHANNEL BANDWIDTH	10 MHz
MODULATION	64QAM
BIT RATE	65 Mbps



Spurious Emission at Band Edge = Amplitude Mrk1 – Delta from Plot below = 10.6 – 21.24 = - 10.64dBm

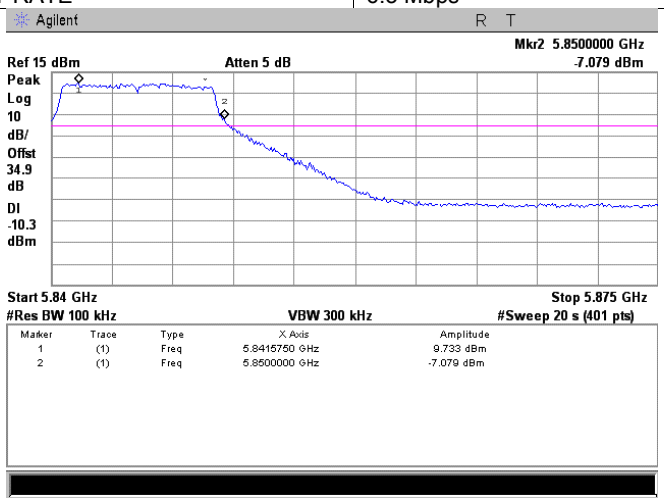


Delta between the peak of the fundamental and the peak of the band-edge emission = Amplitude Mrk1 – Amplitude Mrk2 = 6.29 – (-15.30) = 21.24 dBc

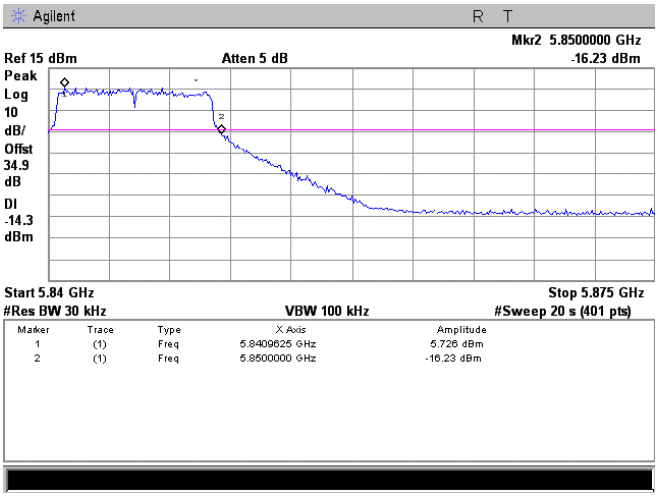
Test specification:	Section 15.247(d), RSS-210 section A8.5, Conducted spurious emissions		
Test procedure:	FCC New Guidance on Measurements for DTS in section 15.247(c)		
Test mode:	Compliance	Verdict:	PASS
Date & Time:	10/13/2009 9:37:09 PM		
Temperature: 24.7 ºC	Air Pressure: 1016 hPa	Relative Humidity: 39 %	Power Supply: 120VAC
Remarks: 10MHz EBW			

Plot 7.3.29 Spurious emission measurements in 5850 – 6000 MHz range at high carrier frequency, combined

CHANNEL BANDWIDTH	10 MHz
MODULATION	BPSK
BIT RATE	6.5 Mbps



Spurious Emission at Band Edge = Amplitude Mrk1 – Delta from Plot below = 9.73 – 21.96 = - 12.23dBm

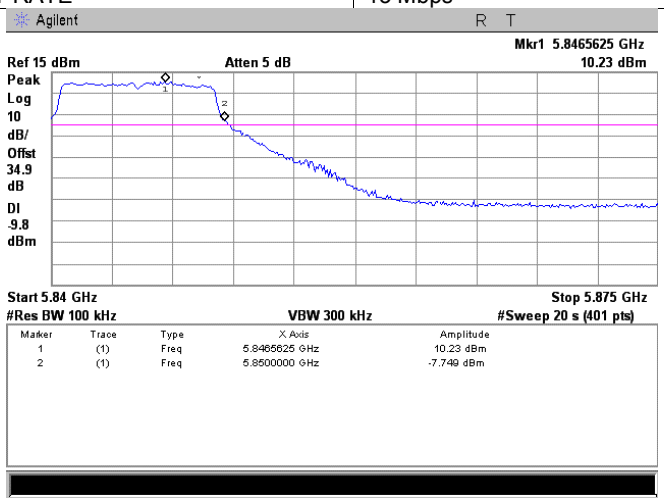


Delta between the peak of the fundamental and the peak of the band-edge emission = Amplitude Mrk1 – Amplitude Mrk2 = 5.73 – (-16.23) = 21.96 dBc

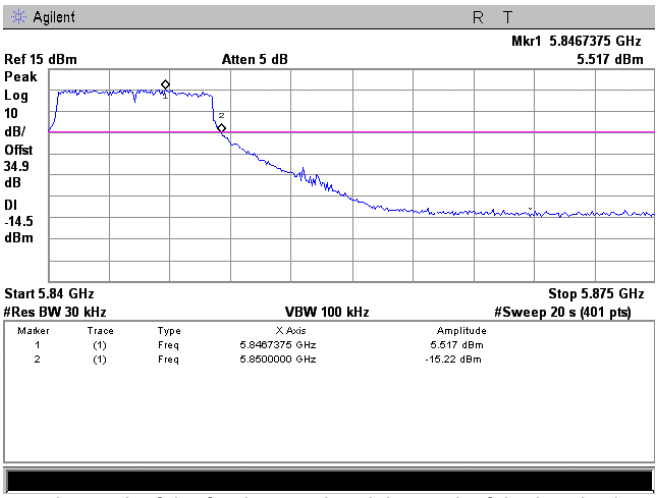
Test specification:	Section 15.247(d), RSS-210 section A8.5, Conducted spurious emissions		
Test procedure:	FCC New Guidance on Measurements for DTS in section 15.247(c)		
Test mode:	Compliance	Verdict:	PASS
Date & Time:	10/13/2009 9:37:09 PM		
Temperature: 24.7 ºC	Air Pressure: 1016 hPa	Relative Humidity: 39 %	Power Supply: 120VAC
Remarks: 10MHz EBW			

Plot 7.3.30 Spurious emission measurements in 5850 – 6000 MHz range at high carrier frequency, combined

CHANNEL BANDWIDTH	10 MHz
MODULATION	BPSK
BIT RATE	13 Mbps



Spurious Emission at Band Edge = Amplitude Mrk1 – Delta from Plot below = 10.23 – 20.74 = - 10.51dBm

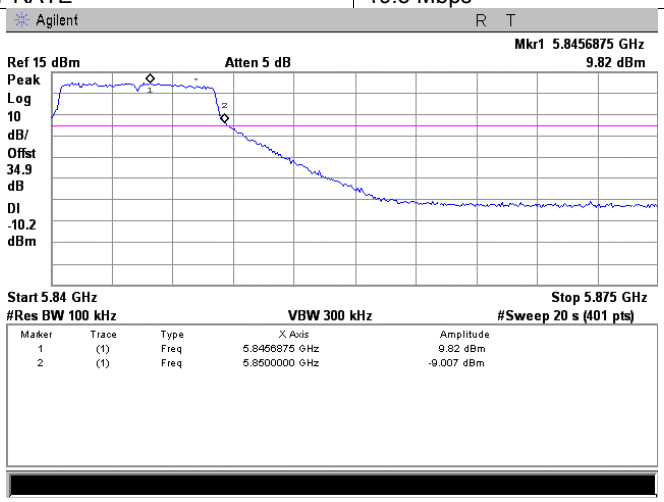


Delta between the peak of the fundamental and the peak of the band-edge emission = Amplitude Mrk1 – Amplitude Mrk2 = 5.52 – (-15.22) = 20.74 dBc

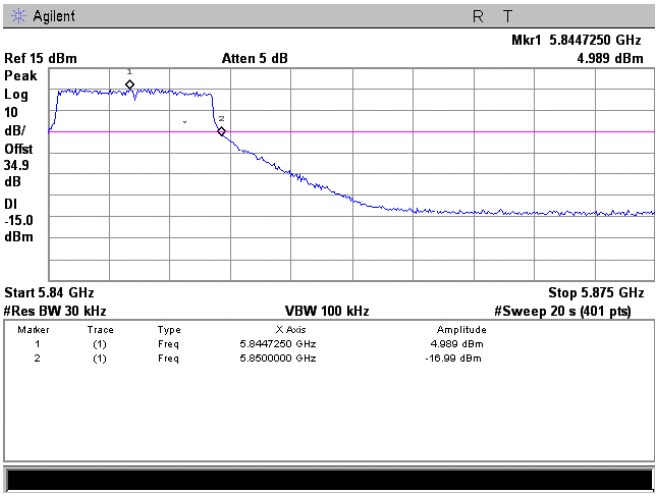
Test specification:	Section 15.247(d), RSS-210 section A8.5, Conducted spurious emissions		
Test procedure:	FCC New Guidance on Measurements for DTS in section 15.247(c)		
Test mode:	Compliance	Verdict:	PASS
Date & Time:	10/13/2009 9:37:09 PM		
Temperature: 24.7 ºC	Air Pressure: 1016 hPa	Relative Humidity: 39 %	Power Supply: 120VAC
Remarks: 10MHz EBW			

Plot 7.3.31 Spurious emission measurements in 5850 – 6000 MHz range at high carrier frequency, combined

CHANNEL BANDWIDTH	10 MHz
MODULATION	QPSK
BIT RATE	19.5 Mbps



Spurious Emission at Band Edge = Amplitude Mrk1 – Delta from Plot below = 9.82 – 21.98 = - 12.16dBm

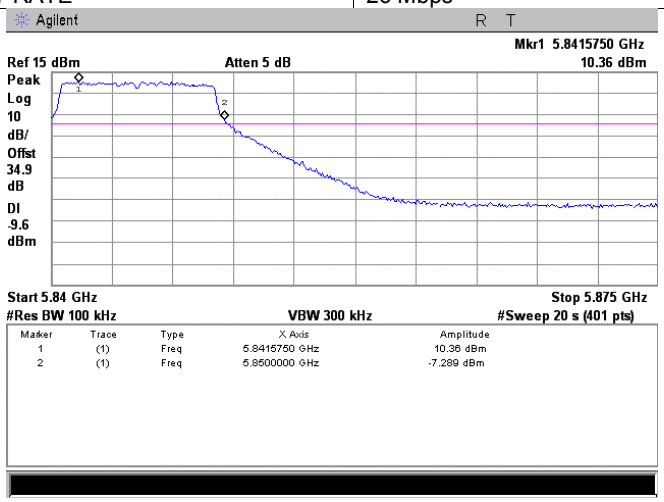


Delta between the peak of the fundamental and the peak of the band-edge emission = Amplitude Mrk1 – Amplitude Mrk2 = 4.99 – (-16.99) = 21.98 dBc

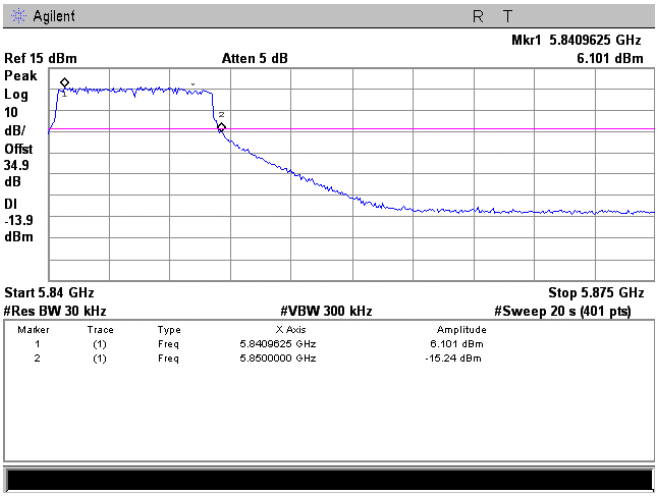
Test specification:	Section 15.247(d), RSS-210 section A8.5, Conducted spurious emissions		
Test procedure:	FCC New Guidance on Measurements for DTS in section 15.247(c)		
Test mode:	Compliance	Verdict:	PASS
Date & Time:	10/13/2009 9:37:09 PM		
Temperature: 24.7 ºC	Air Pressure: 1016 hPa	Relative Humidity: 39 %	Power Supply: 120VAC
Remarks: 10MHz EBW			

Plot 7.3.32 Spurious emission measurements in 5850 – 6000 MHz range at high carrier frequency, combined

CHANNEL BANDWIDTH	10 MHz
MODULATION	QPSK
BIT RATE	26 Mbps



Spurious Emission at Band Edge = Amplitude Mrk1 – Delta from Plot below = 10.36 – 20.81 = - 10.98dBm

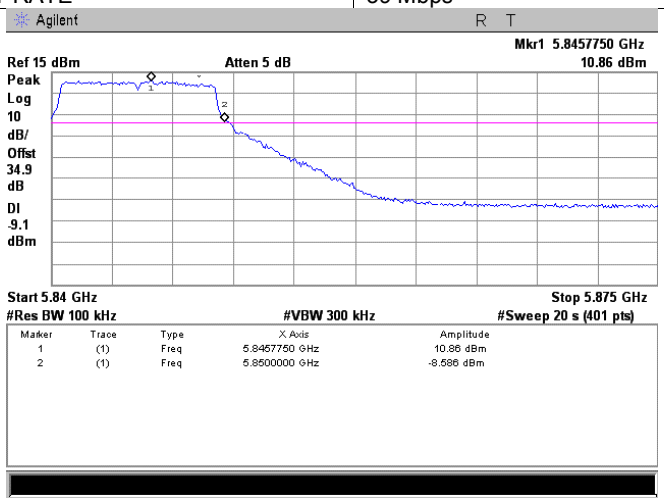


Delta between the peak of the fundamental and the peak of the band-edge emission = Amplitude Mrk1 – Amplitude Mrk2 = 6.10 – (-15.24) = 20.81 dBc

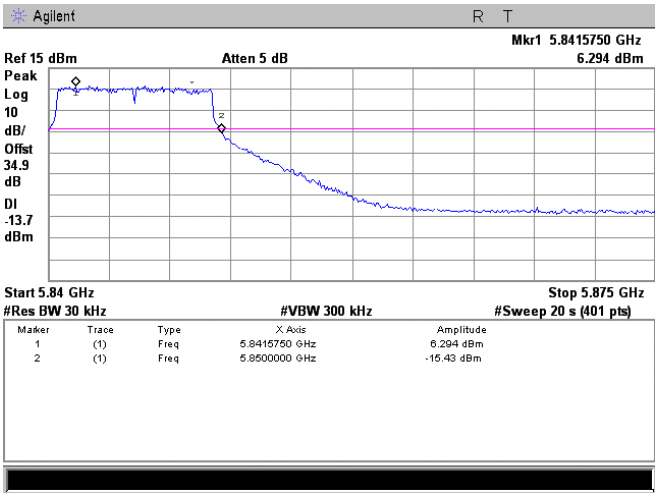
Test specification:	Section 15.247(d), RSS-210 section A8.5, Conducted spurious emissions		
Test procedure:	FCC New Guidance on Measurements for DTS in section 15.247(c)		
Test mode:	Compliance	Verdict:	PASS
Date & Time:	10/13/2009 9:37:09 PM		
Temperature: 24.7 ºC	Air Pressure: 1016 hPa	Relative Humidity: 39 %	Power Supply: 120VAC
Remarks: 10MHz EBW			

Plot 7.3.33 Spurious emission measurements in 5850 – 6000 MHz range at high carrier frequency, combined

CHANNEL BANDWIDTH	10 MHz
MODULATION	16QAM
BIT RATE	39 Mbps



Spurious Emission at Band Edge = Amplitude Mrk1 – Delta from Plot below = 10.86 – 21.72 = - 10.86dBm

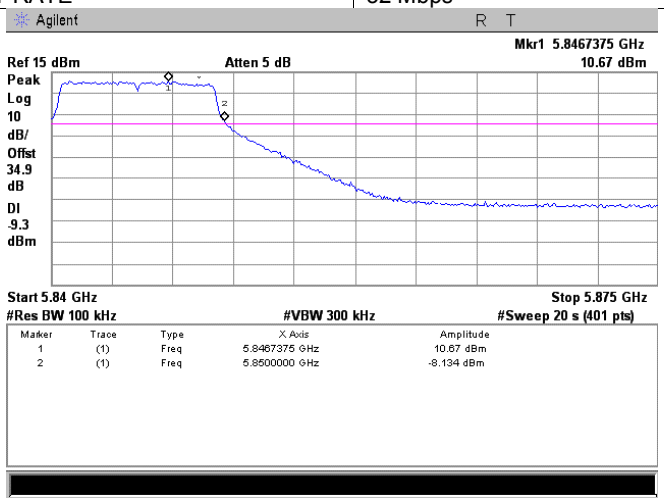


Delta between the peak of the fundamental and the peak of the band-edge emission = Amplitude Mrk1 – Amplitude Mrk2 = 6.29 – (-15.30) = 21.72 dBc

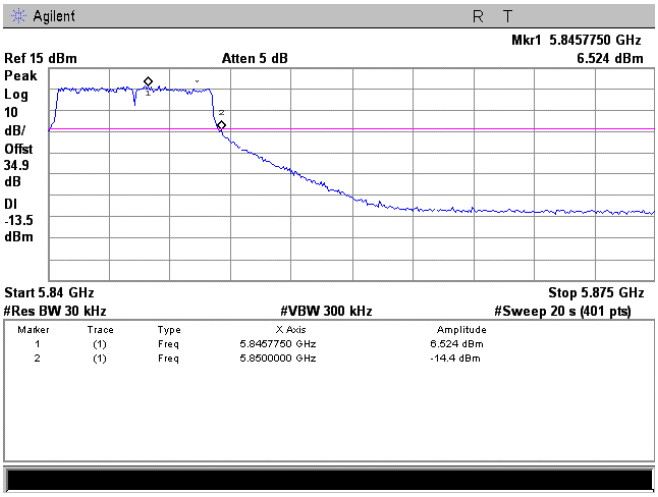
Test specification:	Section 15.247(d), RSS-210 section A8.5, Conducted spurious emissions		
Test procedure:	FCC New Guidance on Measurements for DTS in section 15.247(c)		
Test mode:	Compliance	Verdict:	PASS
Date & Time:	10/13/2009 9:37:09 PM		
Temperature: 24.7 ºC	Air Pressure: 1016 hPa	Relative Humidity: 39 %	Power Supply: 120VAC
Remarks: 10MHz EBW			

Plot 7.3.34 Spurious emission measurements in 5850 – 6000 MHz range at high carrier frequency, combined

CHANNEL BANDWIDTH	10 MHz
MODULATION	16QAM
BIT RATE	52 Mbps



Spurious Emission at Band Edge = Amplitude Mrk1 – Delta from Plot below = 10.67 – 20.92 = - 10.25dBm

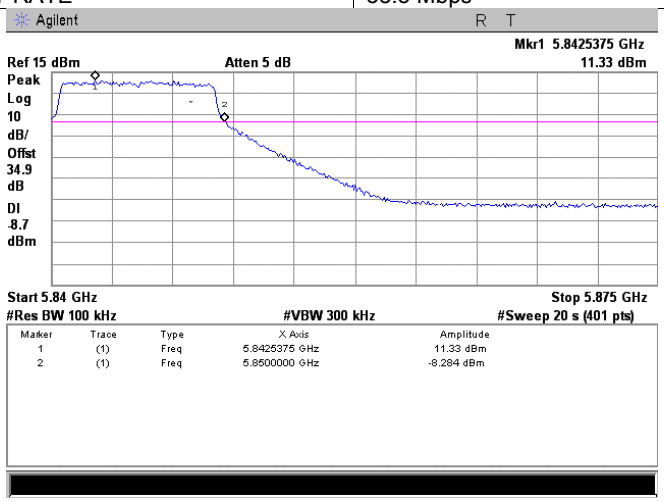


Delta between the peak of the fundamental and the peak of the band-edge emission = Amplitude Mrk1 – Amplitude Mrk2 = 6.52 – (-14.4) = 20.92 dBc

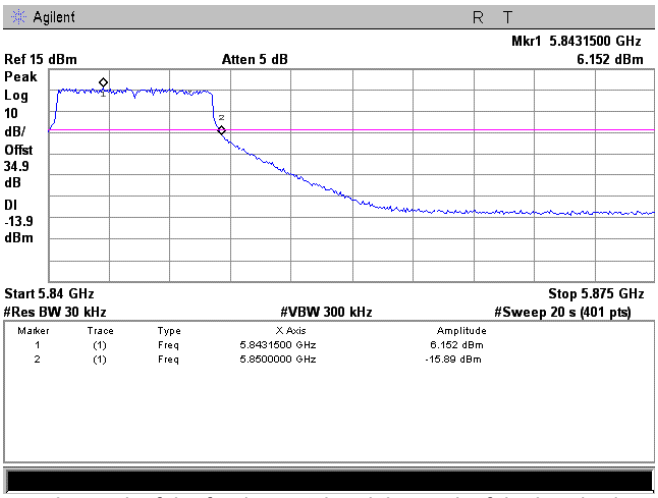
Test specification:	Section 15.247(d), RSS-210 section A8.5, Conducted spurious emissions		
Test procedure:	FCC New Guidance on Measurements for DTS in section 15.247(c)		
Test mode:	Compliance	Verdict:	PASS
Date & Time:	10/13/2009 9:37:09 PM		
Temperature: 24.7 ºC	Air Pressure: 1016 hPa	Relative Humidity: 39 %	Power Supply: 120VAC
Remarks: 10MHz EBW			

Plot 7.3.35 Spurious emission measurements in 5850 – 6000 MHz range at high carrier frequency, combined

CHANNEL BANDWIDTH	10 MHz
MODULATION	64QAM
BIT RATE	58.5 Mbps



Spurious Emission at Band Edge = Amplitude Mrk1 – Delta from Plot below = 11.33 – 22.04 = - 10.71dBm

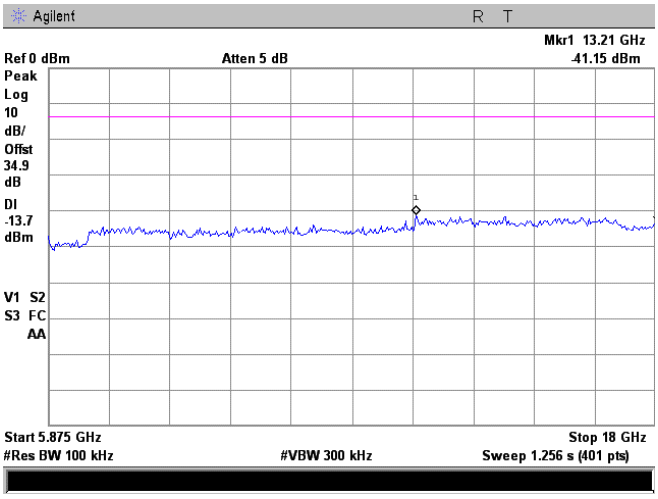


Delta between the peak of the fundamental and the peak of the band-edge emission = Amplitude Mrk1 – Amplitude Mrk2 = 6.15 – (-15.89) = 22.04 dBc

Test specification:	Section 15.247(d), RSS-210 section A8.5, Conducted spurious emissions		
Test procedure:	FCC New Guidance on Measurements for DTS in section 15.247(c)		
Test mode:	Compliance	Verdict:	PASS
Date & Time:	10/13/2009 9:37:09 PM		
Temperature: 24.7 ºC	Air Pressure: 1016 hPa	Relative Humidity: 39 %	Power Supply: 120VAC
Remarks: 10MHz EBW			

Plot 7.3.36 Spurious emission measurements in 6000 – 18000 MHz range at high carrier frequency, combined

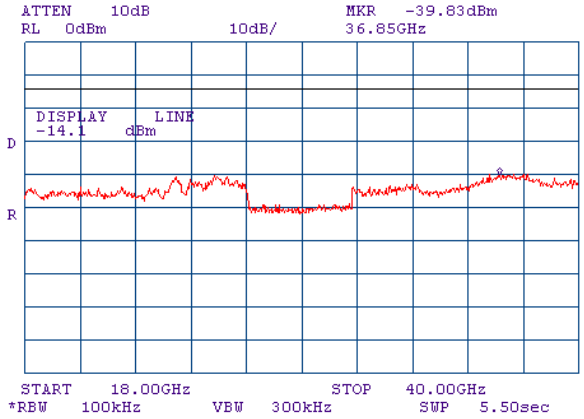
CHANNEL BANDWIDTH	10 MHz
MODULATION	64QAM
BIT RATE	65 Mbps



Test specification:	Section 15.247(d), RSS-210 section A8.5, Conducted spurious emissions		
Test procedure:	FCC New Guidance on Measurements for DTS in section 15.247(c)		
Test mode:	Compliance	Verdict:	PASS
Date & Time:	10/13/2009 9:37:09 PM		
Temperature: 24.7 ºC	Air Pressure: 1016 hPa	Relative Humidity: 39 %	Power Supply: 120VAC
Remarks: 10MHz EBW			

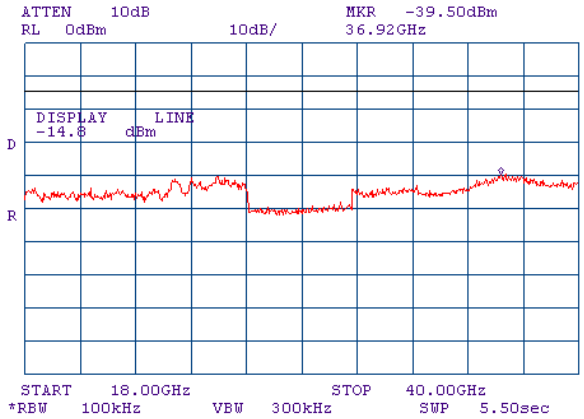
Plot 7.3.37 Spurious emission measurements in 18000 – 40000 MHz range at low carrier frequency, Antenna 1

CHANNEL BANDWIDTH	10 MHz
MODULATION	64QAM
BIT RATE	65 Mbps



Plot 7.3.38 Spurious emission measurements in 18000 – 40000 MHz range at mid carrier frequency, Antenna 1

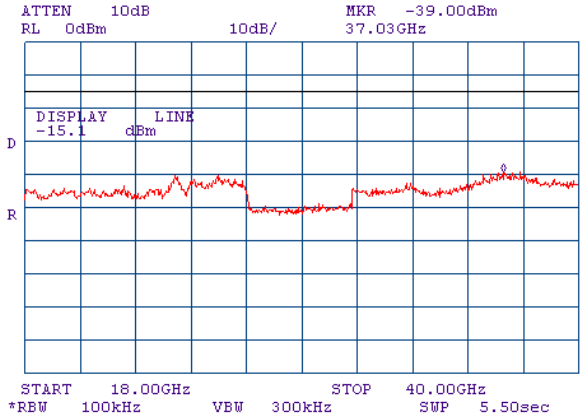
CHANNEL BANDWIDTH	10 MHz
MODULATION	64QAM
BIT RATE	65 Mbps



Test specification:	Section 15.247(d), RSS-210 section A8.5, Conducted spurious emissions		
Test procedure:	FCC New Guidance on Measurements for DTS in section 15.247(c)		
Test mode:	Compliance	Verdict:	PASS
Date & Time:	10/13/2009 9:37:09 PM		
Temperature: 24.7 ºC	Air Pressure: 1016 hPa	Relative Humidity: 39 %	Power Supply: 120VAC
Remarks: 10MHz EBW			

Plot 7.3.39 Spurious emission measurements in 18000 – 40000 MHz range at high carrier frequency, Antenna 1

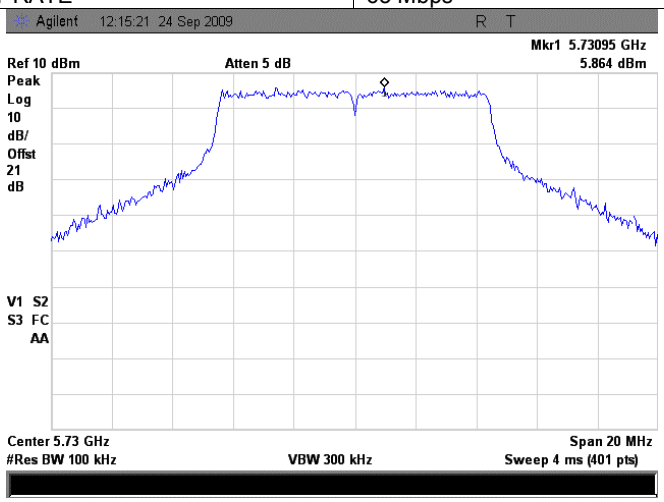
CHANNEL BANDWIDTH	10 MHz
MODULATION	64QAM
BIT RATE	65 Mbps



Test specification:	Section 15.247(d), RSS-210 section A8.5, Conducted spurious emissions		
Test procedure:	FCC New Guidance on Measurements for DTS in section 15.247(c)		
Test mode:	Compliance	Verdict:	PASS
Date & Time:	10/13/2009 9:37:09 PM		
Temperature: 24.7 ºC	Air Pressure: 1016 hPa	Relative Humidity: 39 %	Power Supply: 120VAC
Remarks: 10MHz EBW			

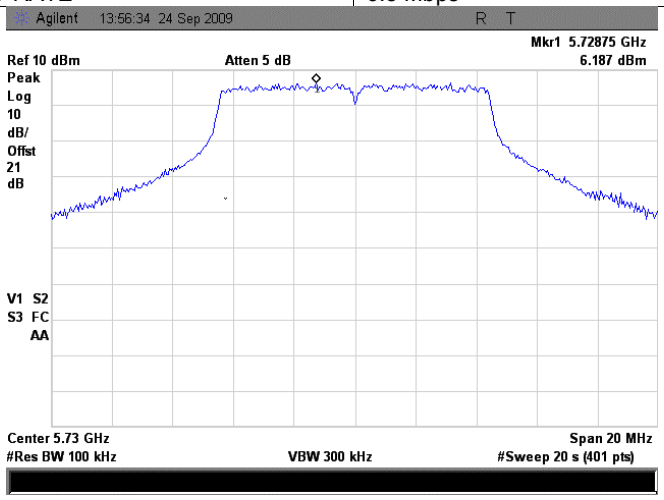
Plot 7.3.40 The highest emission level within the assigned band at low carrier frequency, Antenna 2

CHANNEL BANDWIDTH	10 MHz
MODULATION	64QAM
BIT RATE	65 Mbps



Plot 7.3.41 The highest emission level within the assigned band at low carrier frequency, Antenna 2

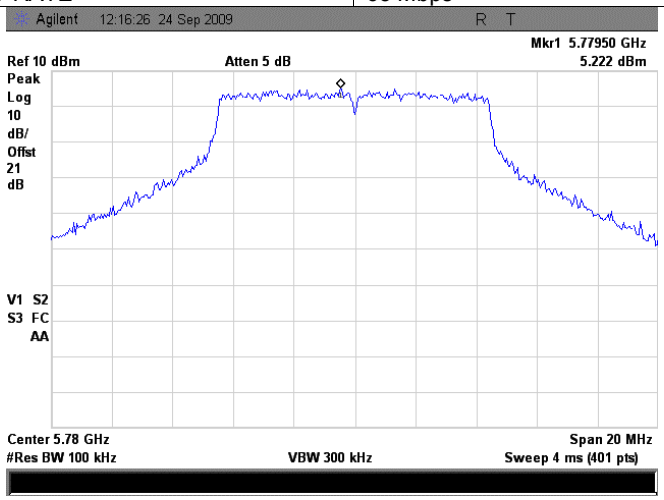
CHANNEL BANDWIDTH	10 MHz
MODULATION	BPSK
BIT RATE	6.5 Mbps



Test specification:	Section 15.247(d), RSS-210 section A8.5, Conducted spurious emissions		
Test procedure:	FCC New Guidance on Measurements for DTS in section 15.247(c)		
Test mode:	Compliance	Verdict:	PASS
Date & Time:	10/13/2009 9:37:09 PM		
Temperature: 24.7 ºC	Air Pressure: 1016 hPa	Relative Humidity: 39 %	Power Supply: 120VAC
Remarks: 10MHz EBW			

Plot 7.3.42 The highest emission level within the assigned band at mid carrier frequency, Antenna 2

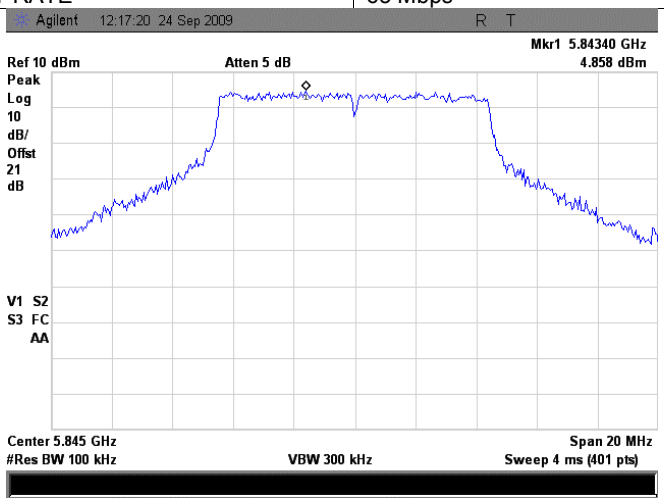
CHANNEL BANDWIDTH	10 MHz
MODULATION	64QAM
BIT RATE	65 Mbps



Test specification:	Section 15.247(d), RSS-210 section A8.5, Conducted spurious emissions		
Test procedure:	FCC New Guidance on Measurements for DTS in section 15.247(c)		
Test mode:	Compliance	Verdict:	PASS
Date & Time:	10/13/2009 9:37:09 PM		
Temperature: 24.7 ºC	Air Pressure: 1016 hPa	Relative Humidity: 39 %	Power Supply: 120VAC
Remarks: 10MHz EBW			

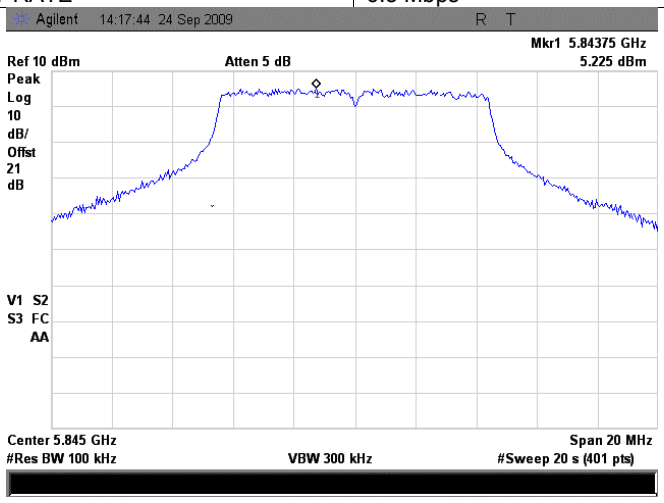
Plot 7.3.43 The highest emission level within the assigned band at high carrier frequency, Antenna 2

CHANNEL BANDWIDTH	10 MHz
MODULATION	64QAM
BIT RATE	65 Mbps



Plot 7.3.44 The highest emission level within the assigned band at high carrier frequency, Antenna 2

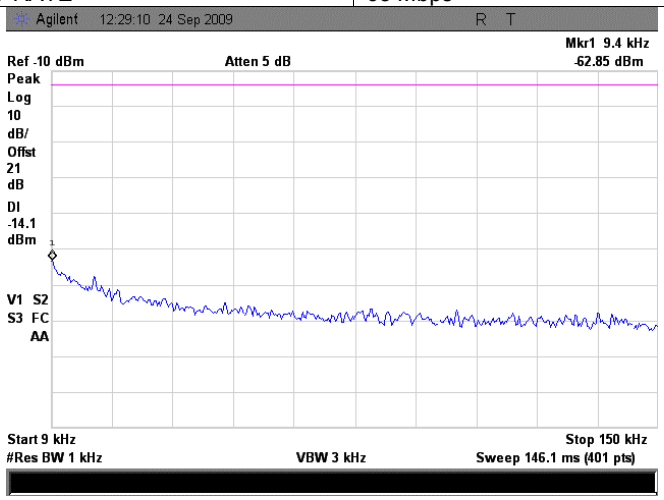
CHANNEL BANDWIDTH	10 MHz
MODULATION	BPSK
BIT RATE	6.5 Mbps



Test specification:	Section 15.247(d), RSS-210 section A8.5, Conducted spurious emissions		
Test procedure:	FCC New Guidance on Measurements for DTS in section 15.247(c)		
Test mode:	Compliance	Verdict:	PASS
Date & Time:	10/13/2009 9:37:09 PM		
Temperature: 24.7 ºC	Air Pressure: 1016 hPa	Relative Humidity: 39 %	Power Supply: 120VAC
Remarks: 10MHz EBW			

Plot 7.3.45 Spurious emission measurements in 9 - 150 kHz range at low carrier frequency, Antenna 2

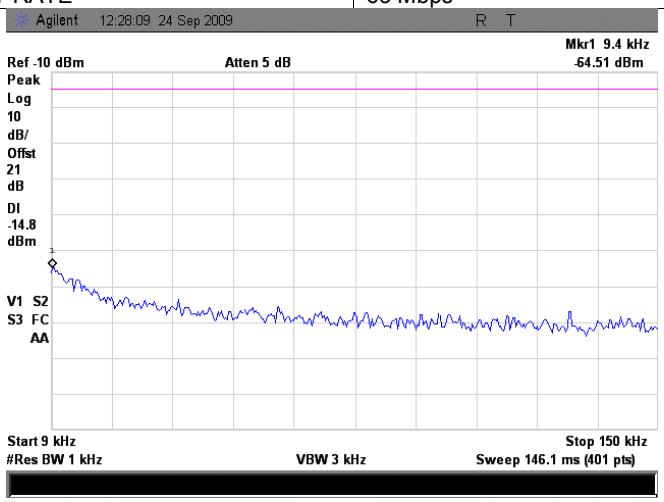
CHANNEL BANDWIDTH	10 MHz
MODULATION	64QAM
BIT RATE	65 Mbps



Test specification:	Section 15.247(d), RSS-210 section A8.5, Conducted spurious emissions		
Test procedure:	FCC New Guidance on Measurements for DTS in section 15.247(c)		
Test mode:	Compliance	Verdict:	PASS
Date & Time:	10/13/2009 9:37:09 PM		
Temperature: 24.7 ºC	Air Pressure: 1016 hPa	Relative Humidity: 39 %	Power Supply: 120VAC
Remarks: 10MHz EBW			

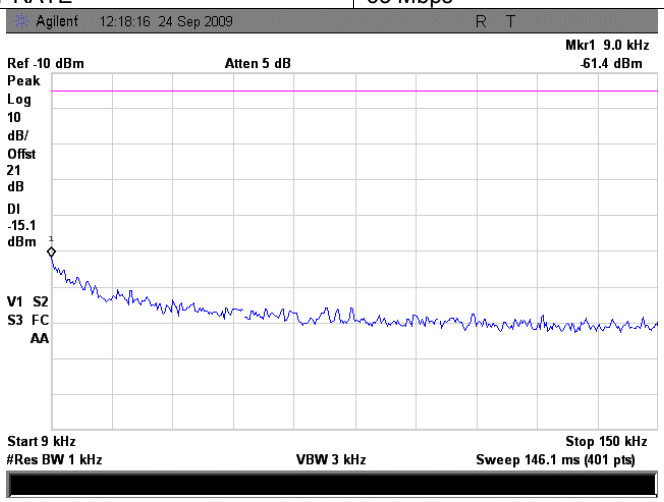
Plot 7.3.46 Spurious emission measurements in 9 - 150 kHz range at mid carrier frequency, Antenna 2

CHANNEL BANDWIDTH	10 MHz
MODULATION	64QAM
BIT RATE	65 Mbps



Plot 7.3.47 Spurious emission measurements in 9 - 150 kHz range at high carrier frequency, Antenna 2

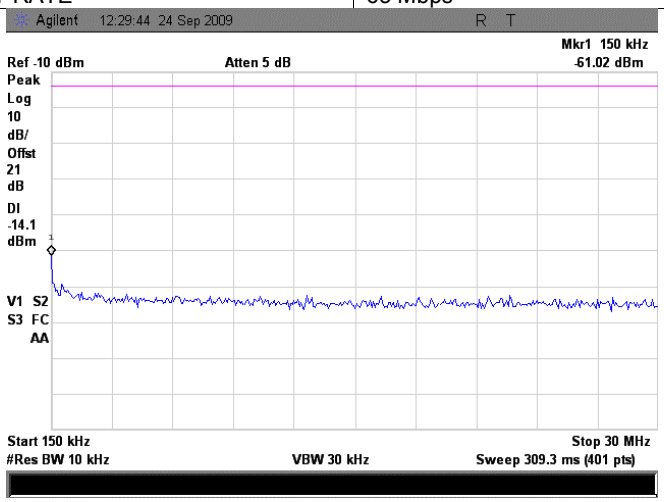
CHANNEL BANDWIDTH	10 MHz
MODULATION	64QAM
BIT RATE	65 Mbps



Test specification:	Section 15.247(d), RSS-210 section A8.5, Conducted spurious emissions		
Test procedure:	FCC New Guidance on Measurements for DTS in section 15.247(c)		
Test mode:	Compliance	Verdict:	PASS
Date & Time:	10/13/2009 9:37:09 PM		
Temperature: 24.7 ºC	Air Pressure: 1016 hPa	Relative Humidity: 39 %	Power Supply: 120VAC
Remarks: 10MHz EBW			

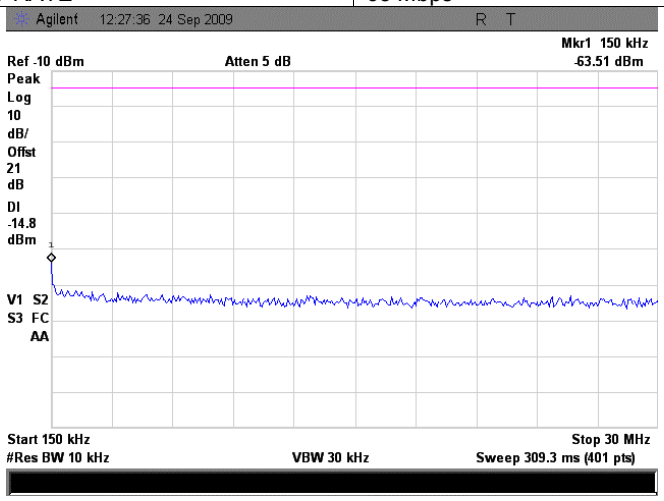
Plot 7.3.48 Spurious emission measurements in 0.15 - 30 MHz range at low carrier frequency, Antenna 2

CHANNEL BANDWIDTH	10 MHz
MODULATION	64QAM
BIT RATE	65 Mbps



Plot 7.3.49 Spurious emission measurements in 0.15 - 30 MHz range at mid carrier frequency, Antenna 2

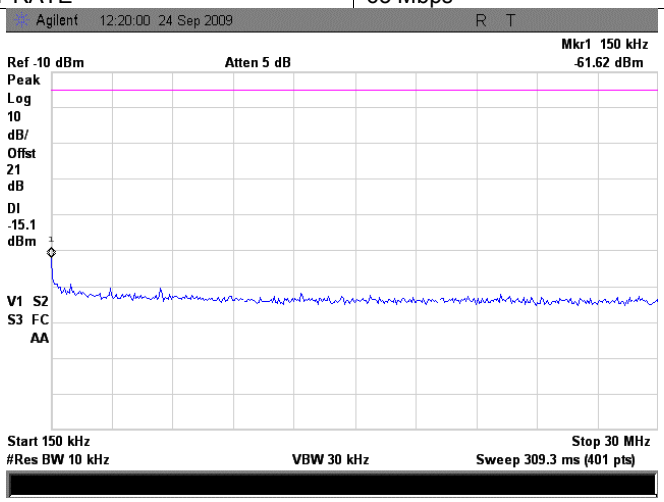
CHANNEL BANDWIDTH	10 MHz
MODULATION	64QAM
BIT RATE	65 Mbps



Test specification:	Section 15.247(d), RSS-210 section A8.5, Conducted spurious emissions		
Test procedure:	FCC New Guidance on Measurements for DTS in section 15.247(c)		
Test mode:	Compliance	Verdict:	PASS
Date & Time:	10/13/2009 9:37:09 PM		
Temperature: 24.7 ºC	Air Pressure: 1016 hPa	Relative Humidity: 39 %	Power Supply: 120VAC
Remarks: 10MHz EBW			

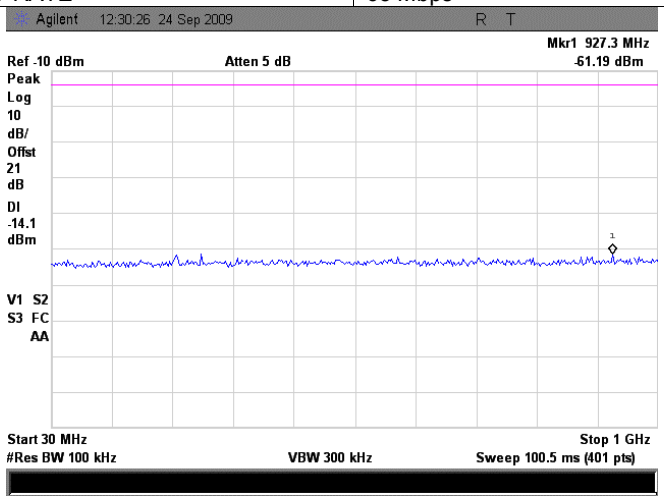
Plot 7.3.50 Spurious emission measurements in 0.15 - 30 MHz range at high carrier frequency, Antenna 2

CHANNEL BANDWIDTH	10 MHz
MODULATION	64QAM
BIT RATE	65 Mbps



Plot 7.3.51 Spurious emission measurements in 30 - 1000 MHz range at low carrier frequency, Antenna 2

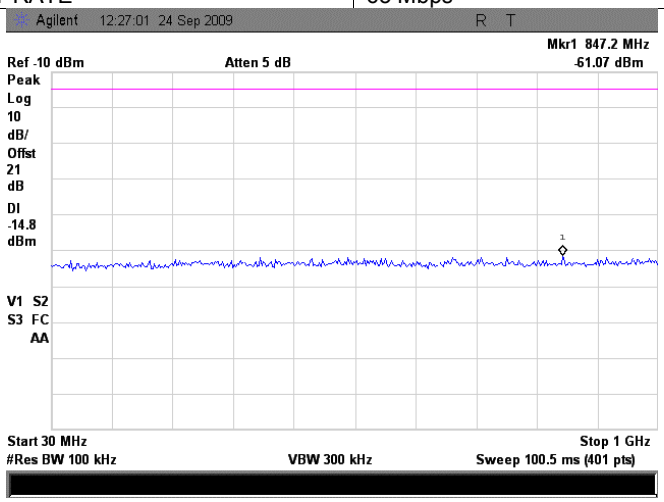
CHANNEL BANDWIDTH	10 MHz
MODULATION	64QAM
BIT RATE	65 Mbps



Test specification:	Section 15.247(d), RSS-210 section A8.5, Conducted spurious emissions		
Test procedure:	FCC New Guidance on Measurements for DTS in section 15.247(c)		
Test mode:	Compliance	Verdict:	PASS
Date & Time:	10/13/2009 9:37:09 PM		
Temperature: 24.7 ºC	Air Pressure: 1016 hPa	Relative Humidity: 39 %	Power Supply: 120VAC
Remarks: 10MHz EBW			

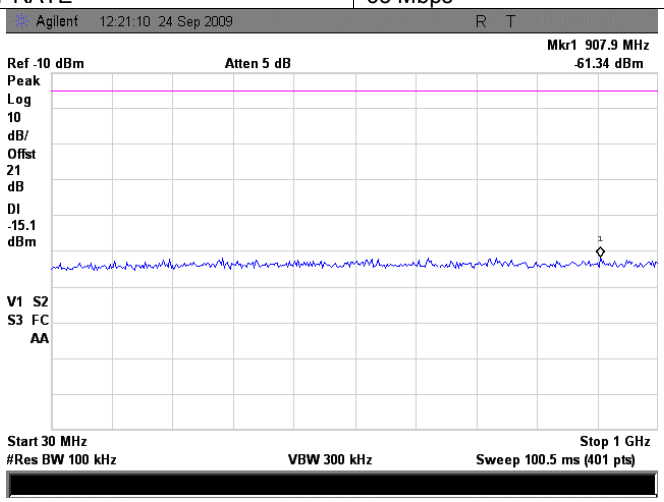
Plot 7.3.52 Spurious emission measurements in 30 - 1000 MHz range at mid carrier frequency, Antenna 2

CHANNEL BANDWIDTH	10 MHz
MODULATION	64QAM
BIT RATE	65 Mbps



Plot 7.3.53 Spurious emission measurements in 30 - 1000 MHz range at high carrier frequency, Antenna 2

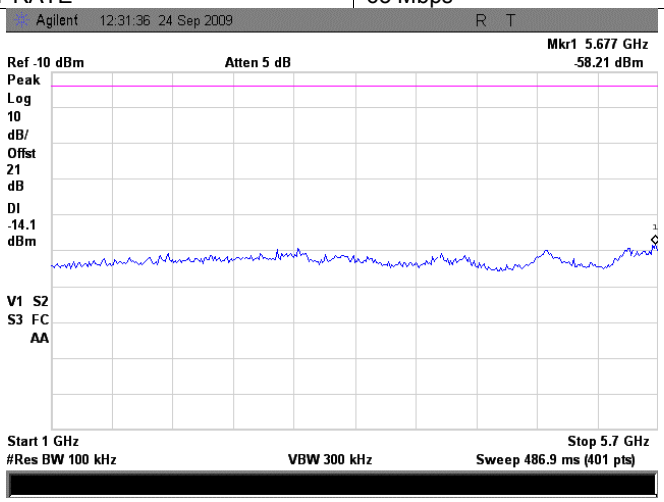
CHANNEL BANDWIDTH	10 MHz
MODULATION	64QAM
BIT RATE	65 Mbps



Test specification:	Section 15.247(d), RSS-210 section A8.5, Conducted spurious emissions		
Test procedure:	FCC New Guidance on Measurements for DTS in section 15.247(c)		
Test mode:	Compliance	Verdict:	PASS
Date & Time:	10/13/2009 9:37:09 PM		
Temperature: 24.7 ºC	Air Pressure: 1016 hPa	Relative Humidity: 39 %	Power Supply: 120VAC
Remarks: 10MHz EBW			

Plot 7.3.54 Spurious emission measurements in 1000 – 5700 MHz range at low carrier frequency, Antenna 2

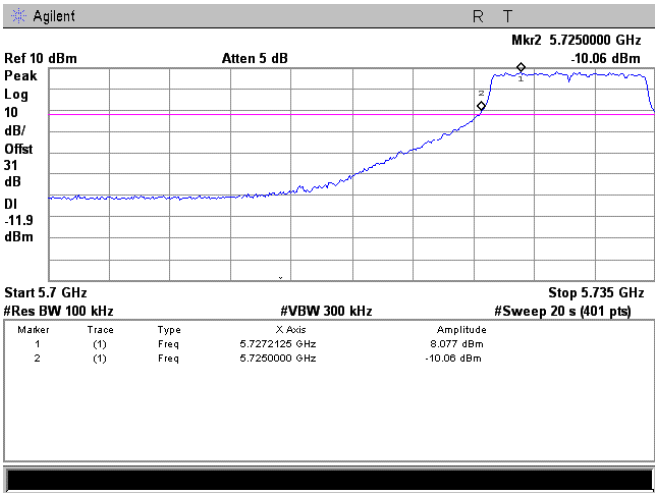
CHANNEL BANDWIDTH	10MHz
MODULATION	64QAM
BIT RATE	65 Mbps



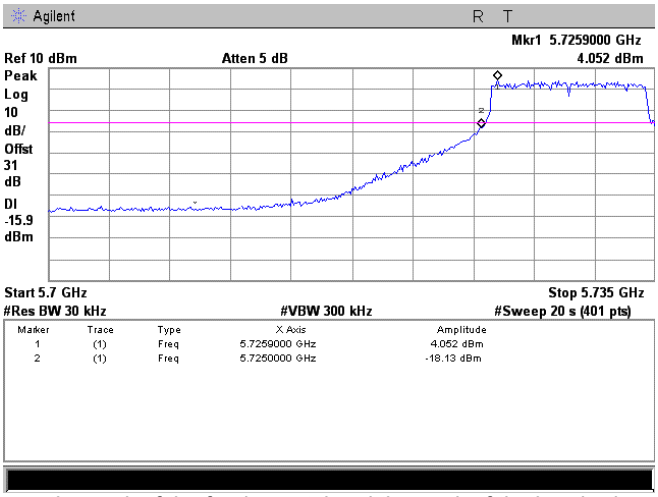
Test specification:	Section 15.247(d), RSS-210 section A8.5, Conducted spurious emissions		
Test procedure:	FCC New Guidance on Measurements for DTS in section 15.247(c)		
Test mode:	Compliance	Verdict:	PASS
Date & Time:	10/13/2009 9:37:09 PM		
Temperature: 24.7 ºC	Air Pressure: 1016 hPa	Relative Humidity: 39 %	Power Supply: 120VAC
Remarks: 10MHz EBW			

Plot 7.3.55 Spurious emission measurements in 5700 – 5725 MHz range at low carrier frequency, Antenna 2

CHANNEL BANDWIDTH	10MHz
MODULATION	64QAM
BIT RATE	65 Mbps



Spurious Emission at Band Edge = Amplitude Mrk1 – Delta from Plot below = 8.08 – 22.18 = - 14.10dBm

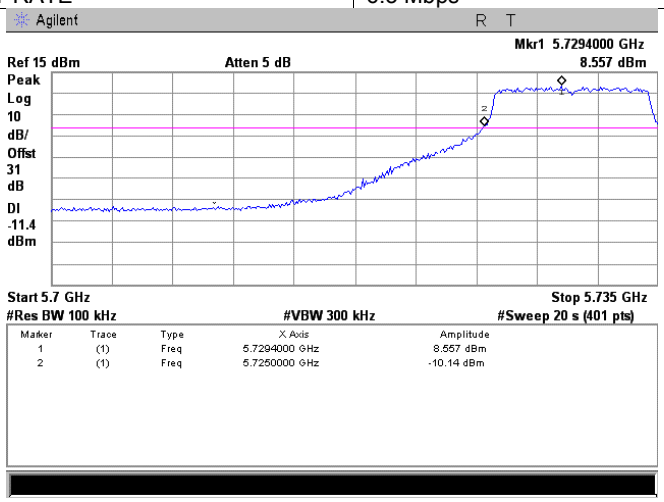


Delta between the peak of the fundamental and the peak of the band-edge emission = Amplitude Mrk1 – Amplitude Mrk2 = 4.05 – (-18.13) = 22.18 dBc

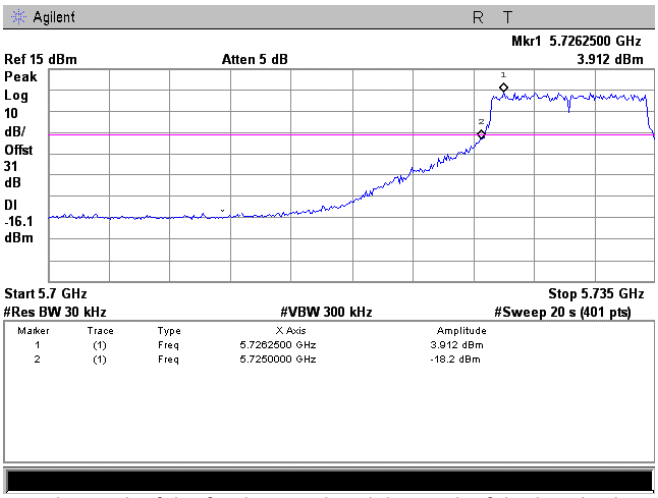
Test specification:	Section 15.247(d), RSS-210 section A8.5, Conducted spurious emissions		
Test procedure:	FCC New Guidance on Measurements for DTS in section 15.247(c)		
Test mode:	Compliance	Verdict:	PASS
Date & Time:	10/13/2009 9:37:09 PM		
Temperature: 24.7 ºC	Air Pressure: 1016 hPa	Relative Humidity: 39 %	Power Supply: 120VAC
Remarks: 10MHz EBW			

Plot 7.3.56 Spurious emission measurements in 5700 – 5725 MHz range at low carrier frequency, Antenna 2

CHANNEL BANDWIDTH	10MHz
MODULATION	BPSK
BIT RATE	6.5 Mbps



Spurious Emission at Band Edge = Amplitude Mrk1 – Delta from Plot below = 8.59 – 22.11 = - 13.52dBm

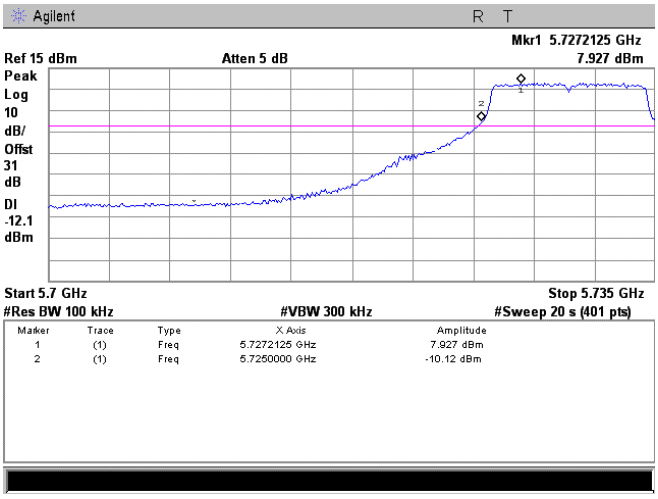


Delta between the peak of the fundamental and the peak of the band-edge emission = Amplitude Mrk1 – Amplitude Mrk2 = 3.91 – (-18.20) = 22.11 dBc

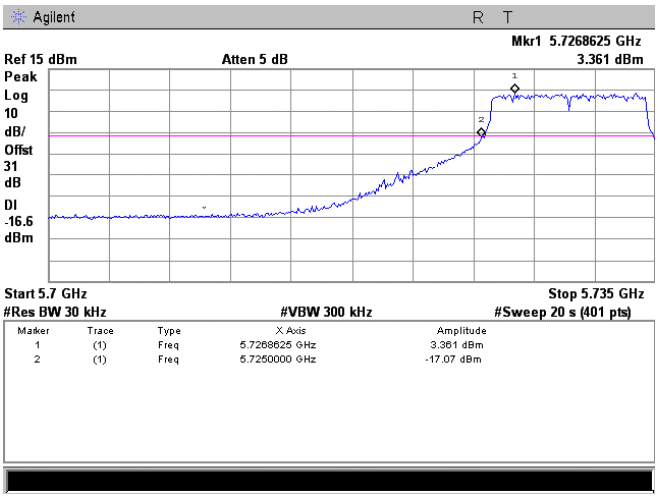
Test specification:	Section 15.247(d), RSS-210 section A8.5, Conducted spurious emissions		
Test procedure:	FCC New Guidance on Measurements for DTS in section 15.247(c)		
Test mode:	Compliance	Verdict:	PASS
Date & Time:	10/13/2009 9:37:09 PM		
Temperature: 24.7 ºC	Air Pressure: 1016 hPa	Relative Humidity: 39 %	Power Supply: 120VAC
Remarks: 10MHz EBW			

Plot 7.3.57 Spurious emission measurements in 5700 – 5725 MHz range at low carrier frequency, Antenna 2

CHANNEL BANDWIDTH	10MHz
MODULATION	BPSK
BIT RATE	13 Mbps



Spurious Emission at Band Edge = Amplitude Mrk1 – Delta from Plot below = 7.93 – 20.43 = - 12.50dBm

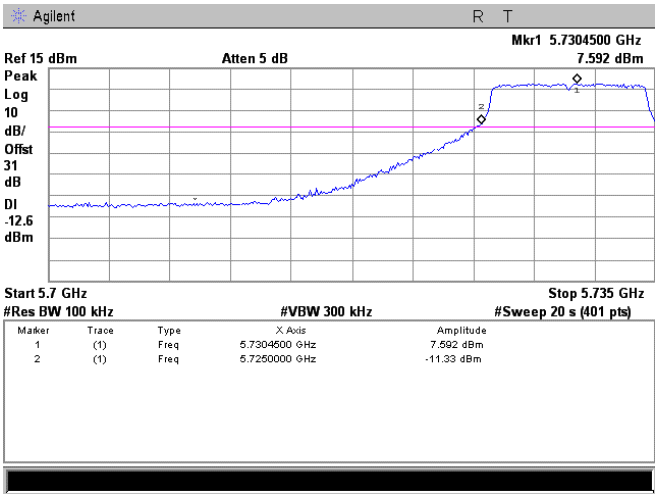


Delta between the peak of the fundamental and the peak of the band-edge emission = Amplitude Mrk1 – Amplitude Mrk2 = 3.36 – (-17.07) = 20.43 dBc

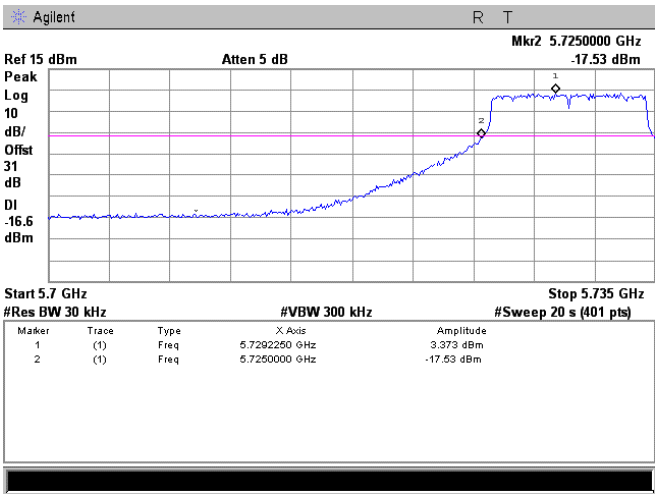
Test specification:	Section 15.247(d), RSS-210 section A8.5, Conducted spurious emissions		
Test procedure:	FCC New Guidance on Measurements for DTS in section 15.247(c)		
Test mode:	Compliance	Verdict:	PASS
Date & Time:	10/13/2009 9:37:09 PM		
Temperature: 24.7 ºC	Air Pressure: 1016 hPa	Relative Humidity: 39 %	Power Supply: 120VAC
Remarks: 10MHz EBW			

Plot 7.3.58 Spurious emission measurements in 5700 – 5725 MHz range at low carrier frequency, Antenna 2

CHANNEL BANDWIDTH	10MHz
MODULATION	QPSK
BIT RATE	19 Mbps



Spurious Emission at Band Edge = Amplitude Mrk1 – Delta from Plot below = 7.59 – 20.96 = - 13.37dBm

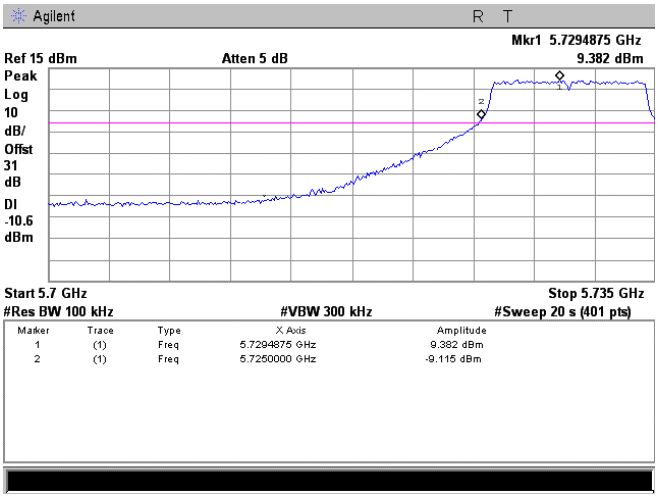


Delta between the peak of the fundamental and the peak of the band-edge emission = Amplitude Mrk1 – Amplitude Mrk2 = 3.37 – (-17.59) = 20.96 dBc

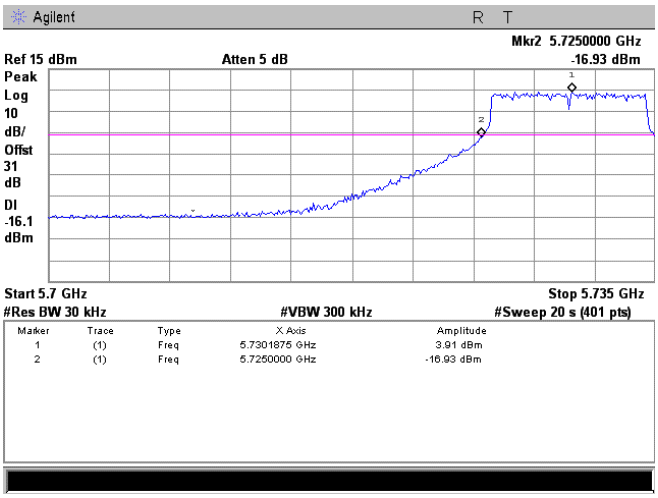
Test specification:	Section 15.247(d), RSS-210 section A8.5, Conducted spurious emissions		
Test procedure:	FCC New Guidance on Measurements for DTS in section 15.247(c)		
Test mode:	Compliance	Verdict:	PASS
Date & Time:	10/13/2009 9:37:09 PM		
Temperature: 24.7 ºC	Air Pressure: 1016 hPa	Relative Humidity: 39 %	Power Supply: 120VAC
Remarks: 10MHz EBW			

Plot 7.3.59 Spurious emission measurements in 5700 – 5725 MHz range at low carrier frequency, Antenna 2

CHANNEL BANDWIDTH	10MHz
MODULATION	QPSK
BIT RATE	26 Mbps



Spurious Emission at Band Edge = Amplitude Mrk1 – Delta from Plot below = 9.38 – 20.84 = - 11.46dBm

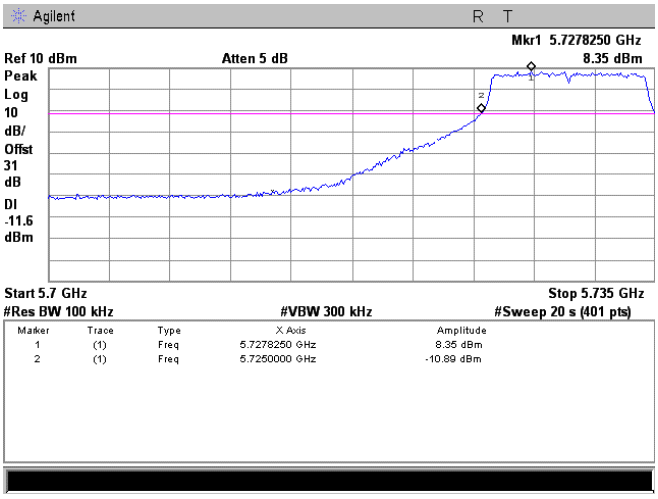


Delta between the peak of the fundamental and the peak of the band-edge emission = Amplitude Mrk1 – Amplitude Mrk2 = 3.91 – (-16.93) = 20.84 dBc

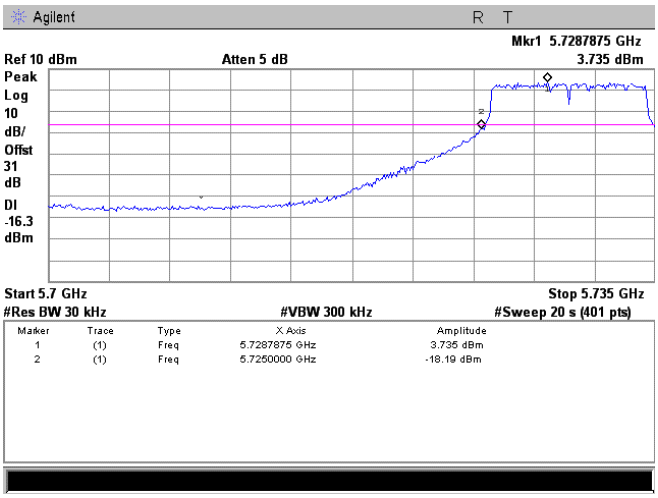
Test specification:	Section 15.247(d), RSS-210 section A8.5, Conducted spurious emissions		
Test procedure:	FCC New Guidance on Measurements for DTS in section 15.247(c)		
Test mode:	Compliance	Verdict:	PASS
Date & Time:	10/13/2009 9:37:09 PM		
Temperature: 24.7 ºC	Air Pressure: 1016 hPa	Relative Humidity: 39 %	Power Supply: 120VAC
Remarks: 10MHz EBW			

Plot 7.3.60 Spurious emission measurements in 5700 – 5725 MHz range at low carrier frequency, Antenna 2

CHANNEL BANDWIDTH	10MHz
MODULATION	16QAM
BIT RATE	39 Mbps



Spurious Emission at Band Edge = Amplitude Mrk1 – Delta from Plot below = 8.35 – 21.93 = - 13.58dBm

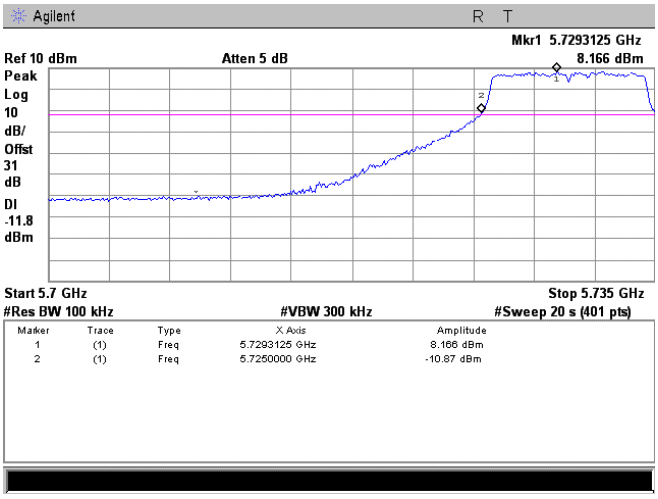


Delta between the peak of the fundamental and the peak of the band-edge emission = Amplitude Mrk1 – Amplitude Mrk2 = 3.74 – (-18.19) = 21.93 dBc

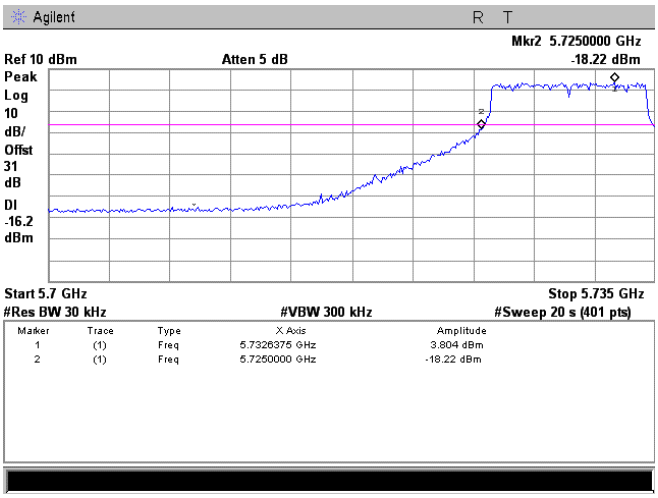
Test specification:	Section 15.247(d), RSS-210 section A8.5, Conducted spurious emissions		
Test procedure:	FCC New Guidance on Measurements for DTS in section 15.247(c)		
Test mode:	Compliance	Verdict:	PASS
Date & Time:	10/13/2009 9:37:09 PM		
Temperature: 24.7 ºC	Air Pressure: 1016 hPa	Relative Humidity: 39 %	Power Supply: 120VAC
Remarks: 10MHz EBW			

Plot 7.3.61 Spurious emission measurements in 5700 – 5725 MHz range at low carrier frequency, Antenna 2

CHANNEL BANDWIDTH	10MHz
MODULATION	16QAM
BIT RATE	52 Mbps



Spurious Emission at Band Edge = Amplitude Mrk1 – Delta from Plot below = 8.17 – 22.02 = - 13.85dBm

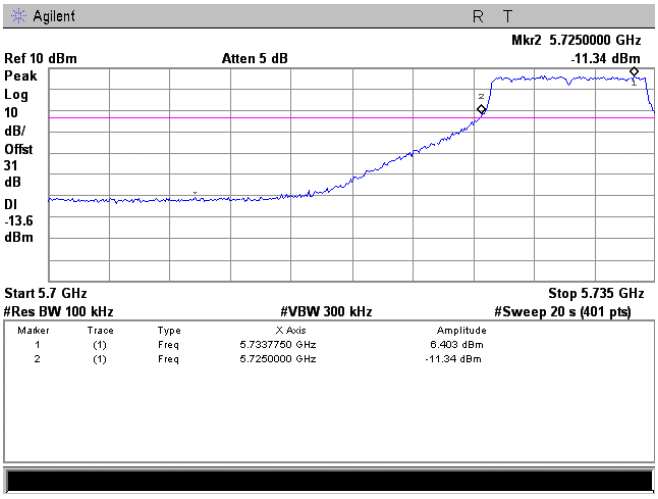


Delta between the peak of the fundamental and the peak of the band-edge emission = Amplitude Mrk1 – Amplitude Mrk2 = 3.80 – (-18.22) = 22.02 dBc

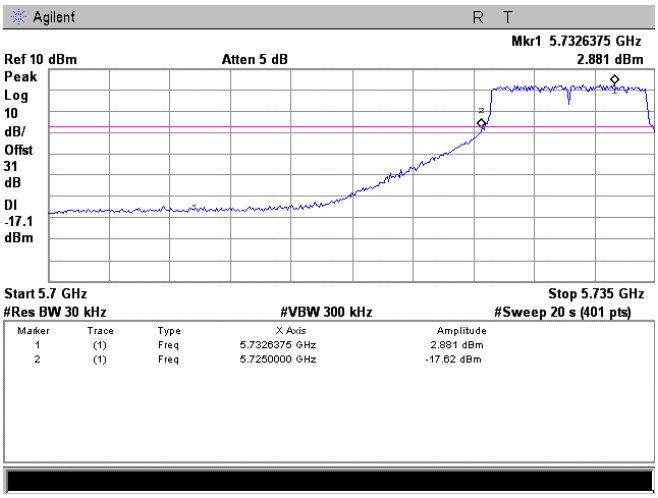
Test specification:	Section 15.247(d), RSS-210 section A8.5, Conducted spurious emissions		
Test procedure:	FCC New Guidance on Measurements for DTS in section 15.247(c)		
Test mode:	Compliance	Verdict:	PASS
Date & Time:	10/13/2009 9:37:09 PM		
Temperature: 24.7 ºC	Air Pressure: 1016 hPa	Relative Humidity: 39 %	Power Supply: 120VAC
Remarks: 10MHz EBW			

Plot 7.3.62 Spurious emission measurements in 5700 – 5725 MHz range at low carrier frequency, Antenna 2

CHANNEL BANDWIDTH	10MHz
MODULATION	64QAM
BIT RATE	58.5 Mbps



Spurious Emission at Band Edge = Amplitude Mrk1 – Delta from Plot below = 6.40 – 20.50 = - 14.10dBm

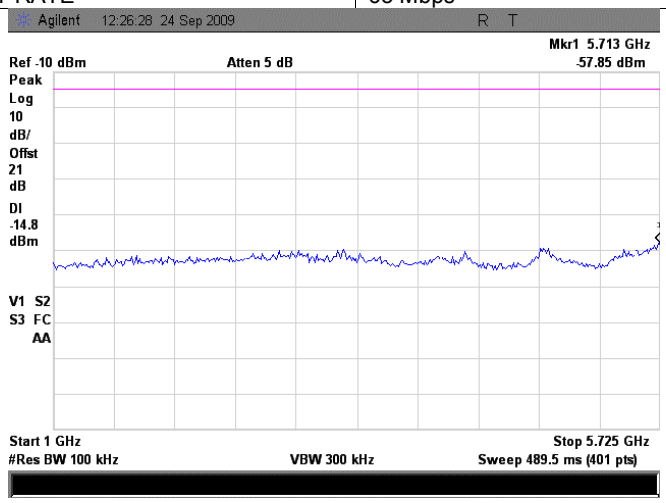


Delta between the peak of the fundamental and the peak of the band-edge emission = Amplitude Mrk1 – Amplitude Mrk2 = 2.88 – (-17.62) = 20.50 dBc

Test specification:	Section 15.247(d), RSS-210 section A8.5, Conducted spurious emissions		
Test procedure:	FCC New Guidance on Measurements for DTS in section 15.247(c)		
Test mode:	Compliance	Verdict:	PASS
Date & Time:	10/13/2009 9:37:09 PM		
Temperature: 24.7 ºC	Air Pressure: 1016 hPa	Relative Humidity: 39 %	Power Supply: 120VAC
Remarks: 10MHz EBW			

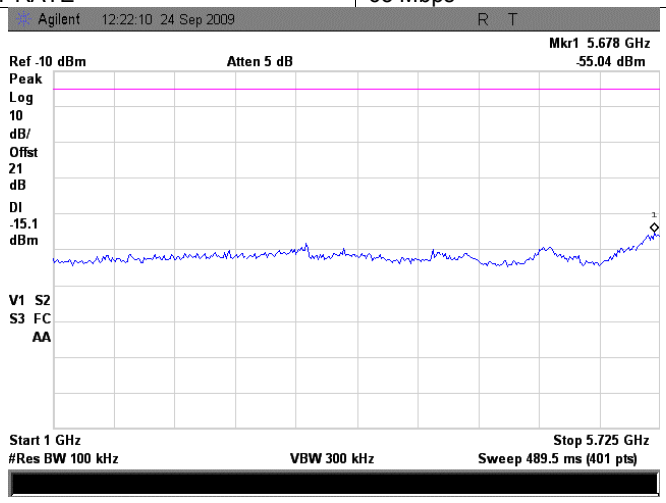
Plot 7.3.63 Spurious emission measurements in 1000 – 5725 MHz range at mid carrier frequency, Antenna 2

CHANNEL BANDWIDTH	10MHz
MODULATION	64QAM
BIT RATE	65 Mbps



Plot 7.3.64 Spurious emission measurements in 1000 – 5725 MHz range at high carrier frequency, Antenna 2

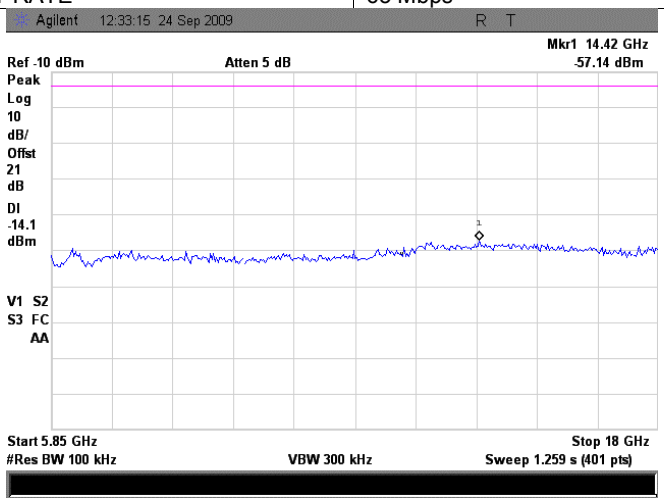
CHANNEL BANDWIDTH	10MHz
MODULATION	64QAM
BIT RATE	65 Mbps



Test specification:	Section 15.247(d), RSS-210 section A8.5, Conducted spurious emissions		
Test procedure:	FCC New Guidance on Measurements for DTS in section 15.247(c)		
Test mode:	Compliance	Verdict:	PASS
Date & Time:	10/13/2009 9:37:09 PM		
Temperature: 24.7 ºC	Air Pressure: 1016 hPa	Relative Humidity: 39 %	Power Supply: 120VAC
Remarks: 10MHz EBW			

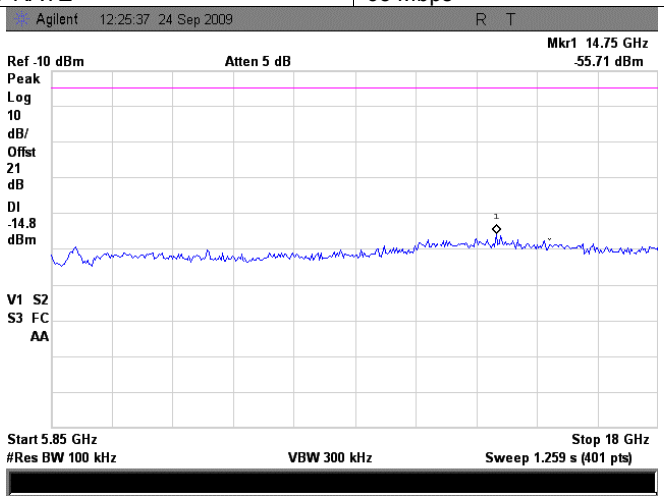
Plot 7.3.65 Spurious emission measurements in 5850 – 18000 MHz range at low carrier frequency, Antenna 2

CHANNEL BANDWIDTH	10 MHz
MODULATION	64QAM
BIT RATE	65 Mbps



Plot 7.3.66 Spurious emission measurements in 5850 – 18000 MHz range at mid carrier frequency, Antenna 2

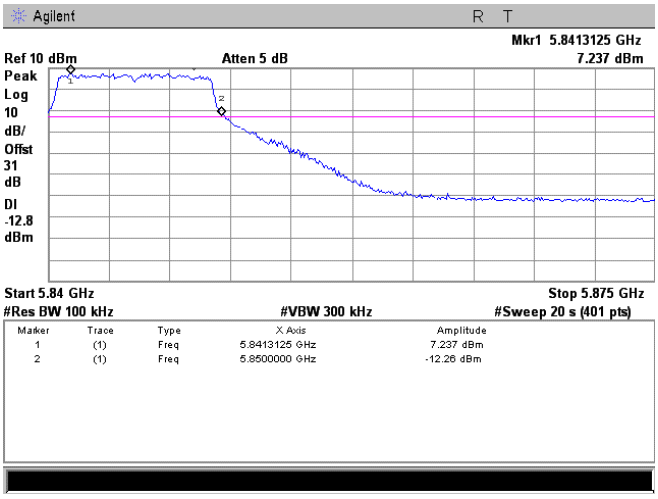
CHANNEL BANDWIDTH	10 MHz
MODULATION	64QAM
BIT RATE	65 Mbps



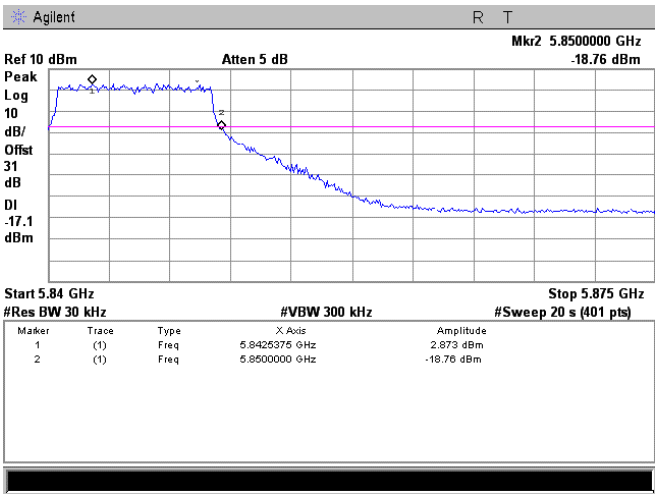
Test specification:	Section 15.247(d), RSS-210 section A8.5, Conducted spurious emissions		
Test procedure:	FCC New Guidance on Measurements for DTS in section 15.247(c)		
Test mode:	Compliance	Verdict:	PASS
Date & Time:	10/13/2009 9:37:09 PM		
Temperature: 24.7 ºC	Air Pressure: 1016 hPa	Relative Humidity: 39 %	Power Supply: 120VAC
Remarks: 10MHz EBW			

Plot 7.3.67 Spurious emission measurements in 5850 – 6000 MHz range at high carrier frequency, Antenna 2

CHANNEL BANDWIDTH	10 MHz
MODULATION	BPSK
BIT RATE	6.5 Mbps



Spurious Emission at Band Edge = Amplitude Mrk1 – Delta from Plot below = 7.24 – 21.63 = - 14.39dBm

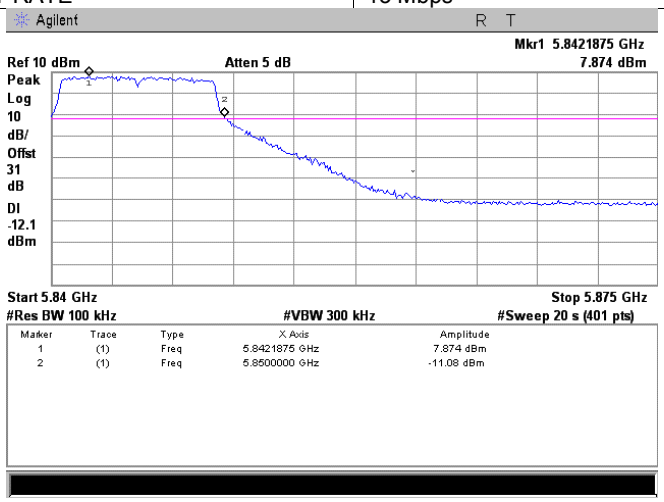


Delta between the peak of the fundamental and the peak of the band-edge emission = Amplitude Mrk1 – Amplitude Mrk2 = 2.87 – (-18.76) = 21.63 dBc

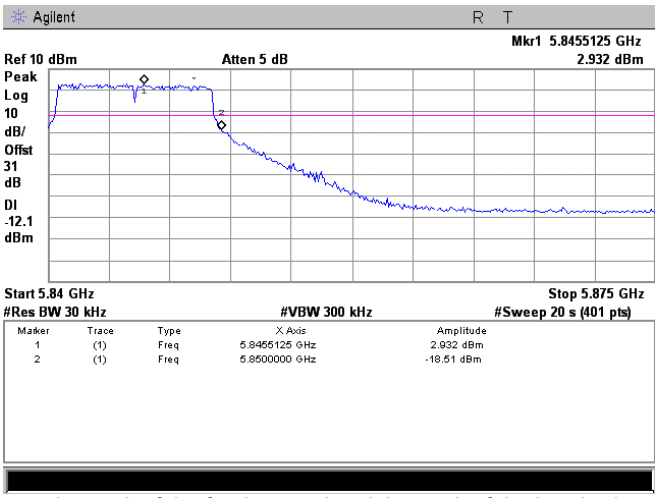
Test specification:	Section 15.247(d), RSS-210 section A8.5, Conducted spurious emissions		
Test procedure:	FCC New Guidance on Measurements for DTS in section 15.247(c)		
Test mode:	Compliance	Verdict:	PASS
Date & Time:	10/13/2009 9:37:09 PM		
Temperature: 24.7 ºC	Air Pressure: 1016 hPa	Relative Humidity: 39 %	Power Supply: 120VAC
Remarks: 10MHz EBW			

Plot 7.3.68 Spurious emission measurements in 5850 – 6000 MHz range at high carrier frequency, Antenna 2

CHANNEL BANDWIDTH	10 MHz
MODULATION	BPSK
BIT RATE	13 Mbps



Spurious Emission at Band Edge = Amplitude Mrk1 – Delta from Plot below = 7.87 – 21.44 = - 13.57dBm

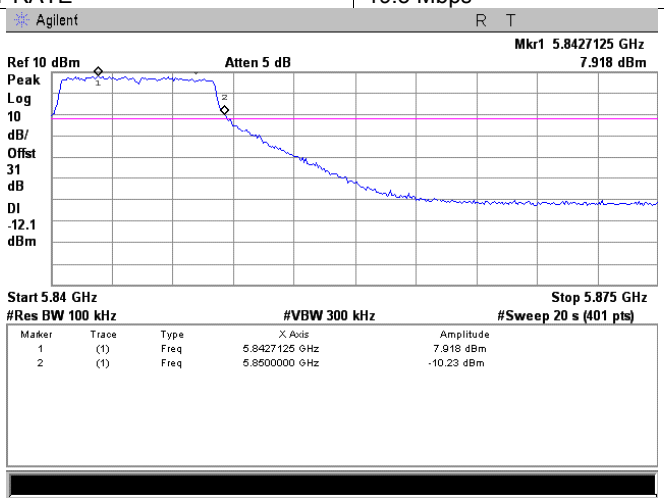


Delta between the peak of the fundamental and the peak of the band-edge emission = Amplitude Mrk1 – Amplitude Mrk2 = 2.93 – (-18.51) = 21.44 dBc

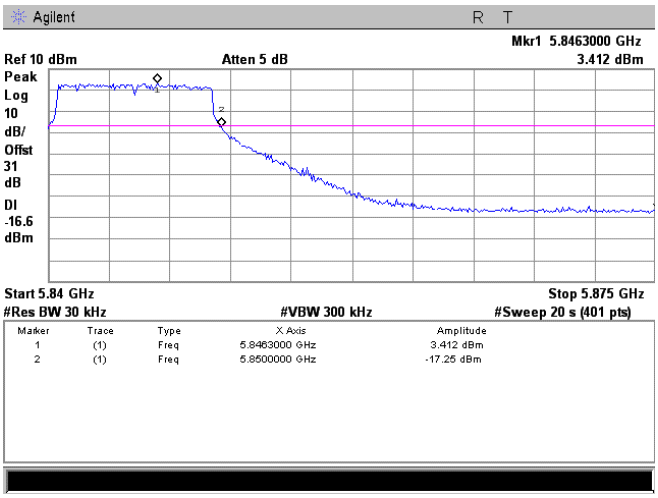
Test specification:	Section 15.247(d), RSS-210 section A8.5, Conducted spurious emissions		
Test procedure:	FCC New Guidance on Measurements for DTS in section 15.247(c)		
Test mode:	Compliance	Verdict:	PASS
Date & Time:	10/13/2009 9:37:09 PM		
Temperature: 24.7 ºC	Air Pressure: 1016 hPa	Relative Humidity: 39 %	Power Supply: 120VAC
Remarks: 10MHz EBW			

Plot 7.3.69 Spurious emission measurements in 5850 – 6000 MHz range at high carrier frequency, Antenna 2

CHANNEL BANDWIDTH	10 MHz
MODULATION	QPSK
BIT RATE	19.5 Mbps



Spurious Emission at Band Edge = Amplitude Mrk1 – Delta from Plot below = 7.92 – 20.66 = - 12.74dBm

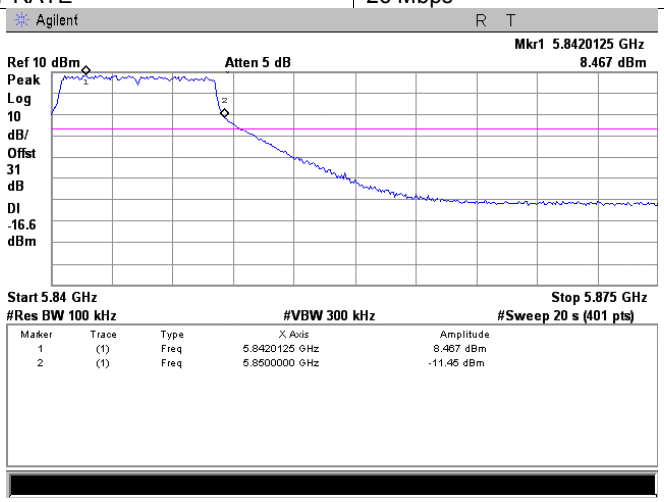


Delta between the peak of the fundamental and the peak of the band-edge emission =
Amplitude Mrk1 – Amplitude Mrk2 = 3.41 – (-17.25) = 20.66 dBc

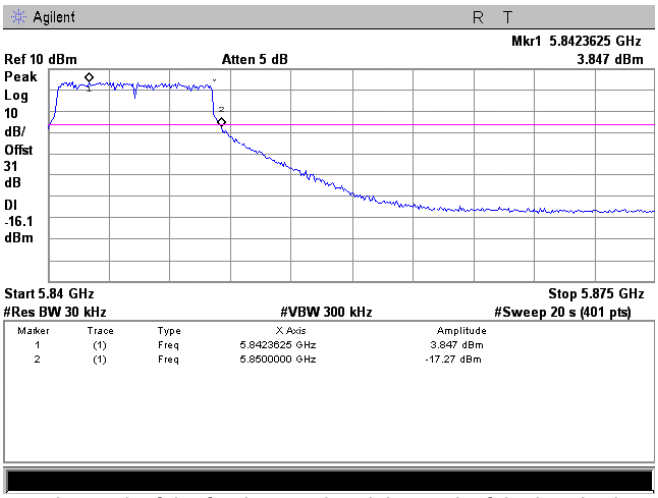
Test specification:	Section 15.247(d), RSS-210 section A8.5, Conducted spurious emissions		
Test procedure:	FCC New Guidance on Measurements for DTS in section 15.247(c)		
Test mode:	Compliance	Verdict:	PASS
Date & Time:	10/13/2009 9:37:09 PM		
Temperature: 24.7 ºC	Air Pressure: 1016 hPa	Relative Humidity: 39 %	Power Supply: 120VAC
Remarks: 10MHz EBW			

Plot 7.3.70 Spurious emission measurements in 5850 – 6000 MHz range at high carrier frequency, Antenna 2

CHANNEL BANDWIDTH	10 MHz
MODULATION	QPSK
BIT RATE	26 Mbps



Spurious Emission at Band Edge = Amplitude Mrk1 – Delta from Plot below = 8.48 – 21.12 = - 12.64dBm

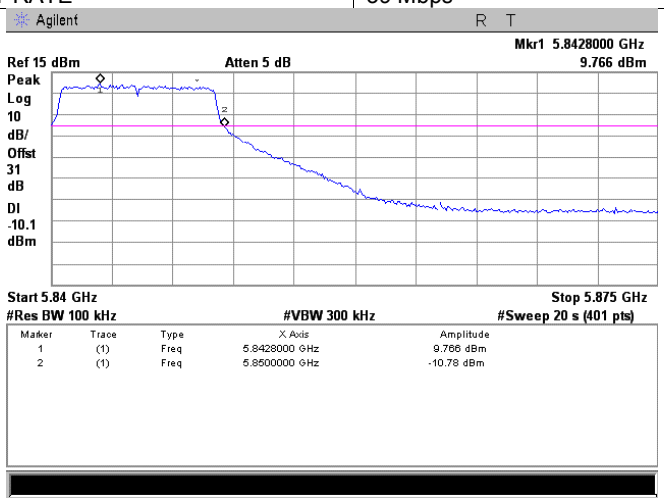


Delta between the peak of the fundamental and the peak of the band-edge emission = Amplitude Mrk1 – Amplitude Mrk2 = 3.85 – (-17.27) = 21.12 dBc

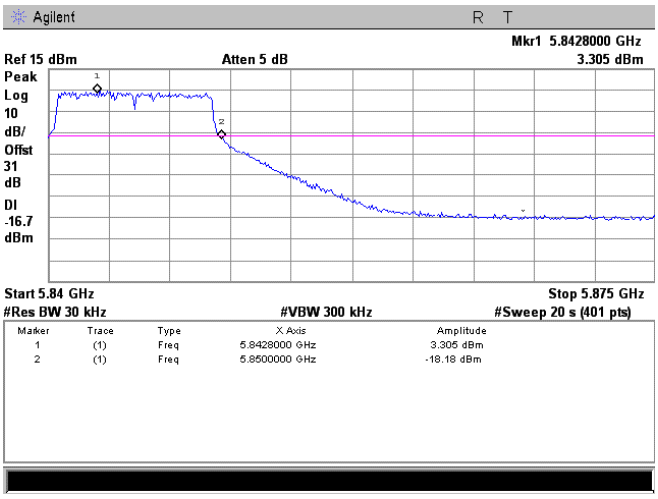
Test specification:	**Section 15.247(d), RSS-210 section A8.5, Conducted spurious emissions**		
Test procedure:	FCC New Guidance on Measurements for DTS in section 15.247(c)		
Test mode:	Compliance	**Verdict:**	PASS
Date & Time:	10/13/2009 9:37:09 PM		
Temperature: 24.7 ºC	**Air Pressure:** 1016 hPa	**Relative Humidity:** 39 %	**Power Supply:** 120VAC
Remarks: 10MHz EBW			

Plot 7.3.71 Spurious emission measurements in 5850 – 6000 MHz range at high carrier frequency, Antenna 2

CHANNEL BANDWIDTH	10 MHz
MODULATION	16QAM
BIT RATE	39 Mbps



Spurious Emission at Band Edge = Amplitude Mrk1 – Delta from Plot below = 9.77 – 21.49 = - 11.72dBm

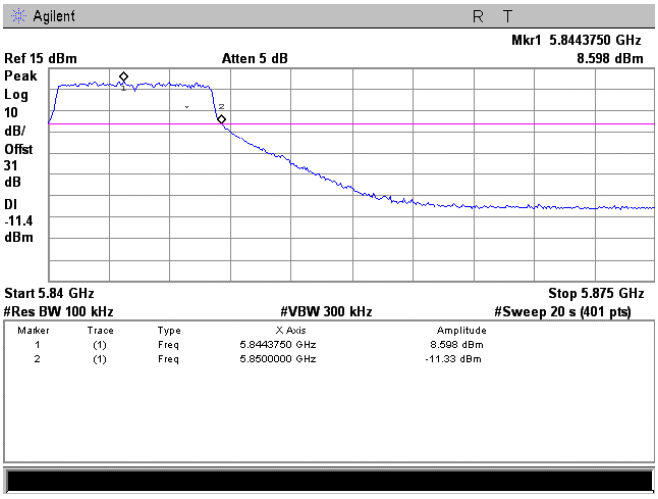


Delta between the peak of the fundamental and the peak of the band-edge emission =
Amplitude Mrk1 – Amplitude Mrk2 = 3.31 – (-18.18) = 21.49 dBc

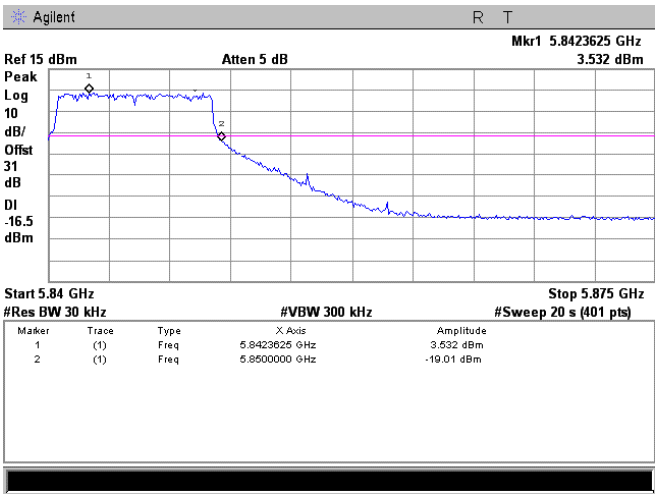
Test specification:	Section 15.247(d), RSS-210 section A8.5, Conducted spurious emissions		
Test procedure:	FCC New Guidance on Measurements for DTS in section 15.247(c)		
Test mode:	Compliance	Verdict:	PASS
Date & Time:	10/13/2009 9:37:09 PM		
Temperature: 24.7 ºC	Air Pressure: 1016 hPa	Relative Humidity: 39 %	Power Supply: 120VAC
Remarks: 10MHz EBW			

Plot 7.3.72 Spurious emission measurements in 5850 – 6000 MHz range at high carrier frequency, Antenna 2

CHANNEL BANDWIDTH	10 MHz
MODULATION	16QAM
BIT RATE	52 Mbps



Spurious Emission at Band Edge = Amplitude Mrk1 – Delta from Plot below = 8.60 – 22.54 = - 13.94dBm

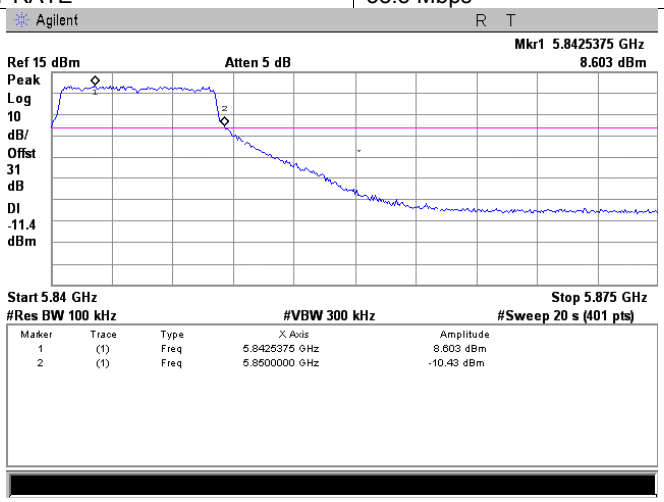


Delta between the peak of the fundamental and the peak of the band-edge emission = Amplitude Mrk1 – Amplitude Mrk2 = 3.53 – (-19.01) = 22.54 dBc

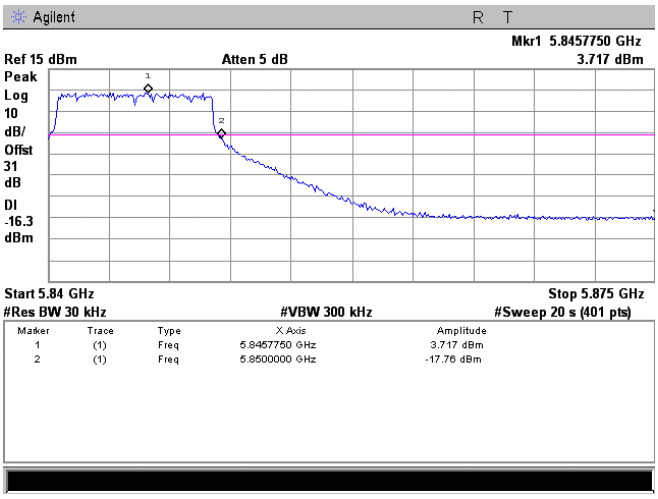
Test specification:	Section 15.247(d), RSS-210 section A8.5, Conducted spurious emissions		
Test procedure:	FCC New Guidance on Measurements for DTS in section 15.247(c)		
Test mode:	Compliance	Verdict:	PASS
Date & Time:	10/13/2009 9:37:09 PM		
Temperature: 24.7 ºC	Air Pressure: 1016 hPa	Relative Humidity: 39 %	Power Supply: 120VAC
Remarks: 10MHz EBW			

Plot 7.3.73 Spurious emission measurements in 5850 – 6000 MHz range at high carrier frequency, Antenna 2

CHANNEL BANDWIDTH	10 MHz
MODULATION	64QAM
BIT RATE	58.5 Mbps



Spurious Emission at Band Edge = Amplitude Mrk1 – Delta from Plot below = 8.60 – 21.48 = - 12.88dBm

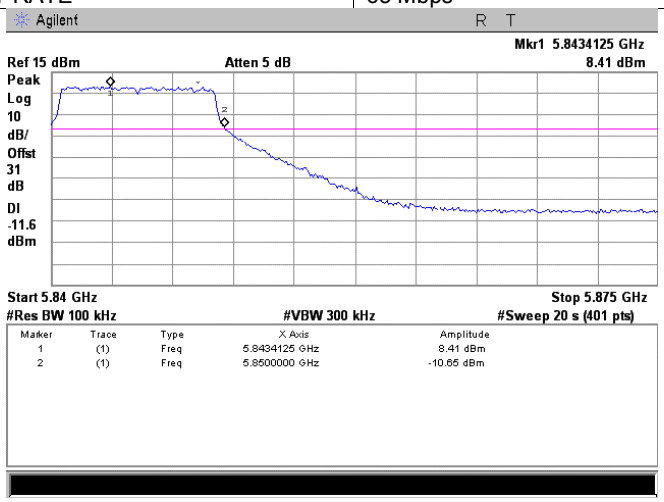


Delta between the peak of the fundamental and the peak of the band-edge emission =
Amplitude Mrk1 – Amplitude Mrk2 = 3.72 – (-17.76) = 21.48 dBc

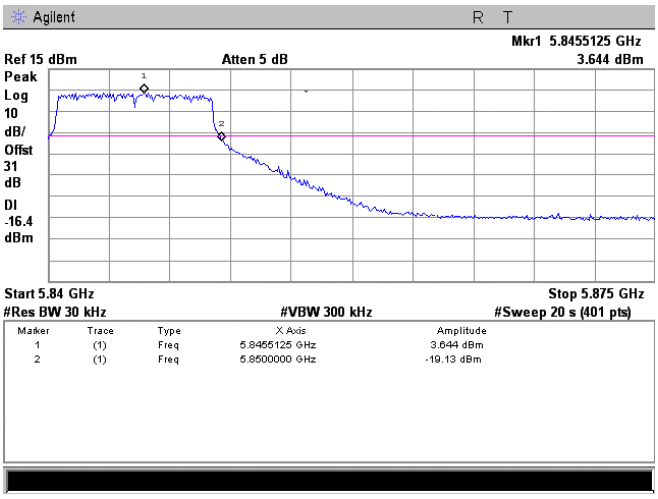
Test specification:	Section 15.247(d), RSS-210 section A8.5, Conducted spurious emissions		
Test procedure:	FCC New Guidance on Measurements for DTS in section 15.247(c)		
Test mode:	Compliance	Verdict:	PASS
Date & Time:	10/13/2009 9:37:09 PM		
Temperature: 24.7 ºC	Air Pressure: 1016 hPa	Relative Humidity: 39 %	Power Supply: 120VAC
Remarks: 10MHz EBW			

Plot 7.3.74 Spurious emission measurements in 5850 – 6000 MHz range at high carrier frequency, Antenna 2

CHANNEL BANDWIDTH	10 MHz
MODULATION	64QAM
BIT RATE	65 Mbps



Spurious Emission at Band Edge = Amplitude Mrk1 – Delta from Plot below = 8.41 – 22.77 = - 14.37dBm

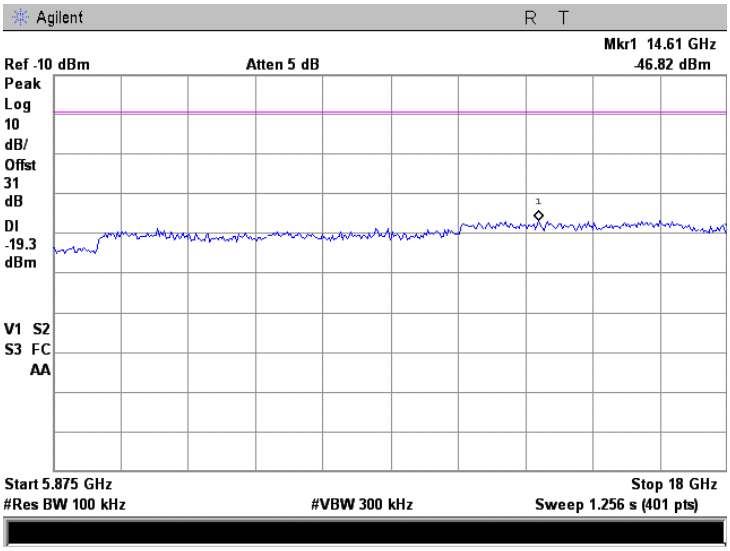


Delta between the peak of the fundamental and the peak of the band-edge emission =
Amplitude Mrk1 – Amplitude Mrk2 = 3.64 – (-19.13) = 22.77 dBc

Test specification:	Section 15.247(d), RSS-210 section A8.5, Conducted spurious emissions		
Test procedure:	FCC New Guidance on Measurements for DTS in section 15.247(c)		
Test mode:	Compliance	Verdict:	PASS
Date & Time:	10/13/2009 9:37:09 PM		
Temperature: 24.7 ºC	Air Pressure: 1016 hPa	Relative Humidity: 39 %	Power Supply: 120VAC
Remarks: 10MHz EBW			

Plot 7.3.75 Spurious emission measurements in 5875 – 18000 MHz range at high carrier frequency, Antenna 2

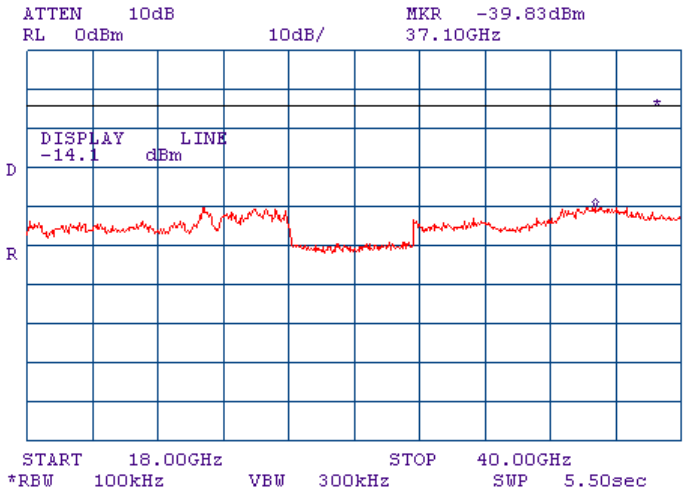
CHANNEL BANDWIDTH	10 MHz
MODULATION	64QAM
BIT RATE	65 Mbps



Test specification:	Section 15.247(d), RSS-210 section A8.5, Conducted spurious emissions		
Test procedure:	FCC New Guidance on Measurements for DTS in section 15.247(c)		
Test mode:	Compliance	Verdict:	PASS
Date & Time:	10/13/2009 9:37:09 PM		
Temperature: 24.7 ºC	Air Pressure: 1016 hPa	Relative Humidity: 39 %	Power Supply: 120VAC
Remarks: 10MHz EBW			

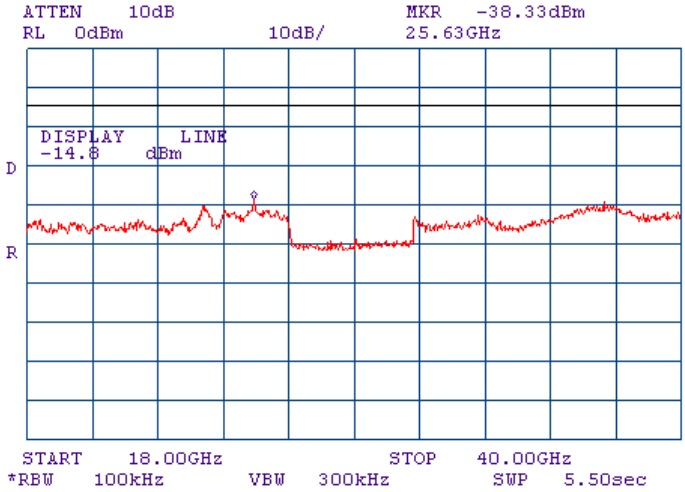
Plot 7.3.76 Spurious emission measurements in 18000 – 40000 MHz range at low carrier frequency, Antenna 2

CHANNEL BANDWIDTH	10 MHz
MODULATION	64QAM
BIT RATE	65 Mbps



Plot 7.3.77 Spurious emission measurements in 18000 – 40000 MHz range at mid carrier frequency, Antenna 2

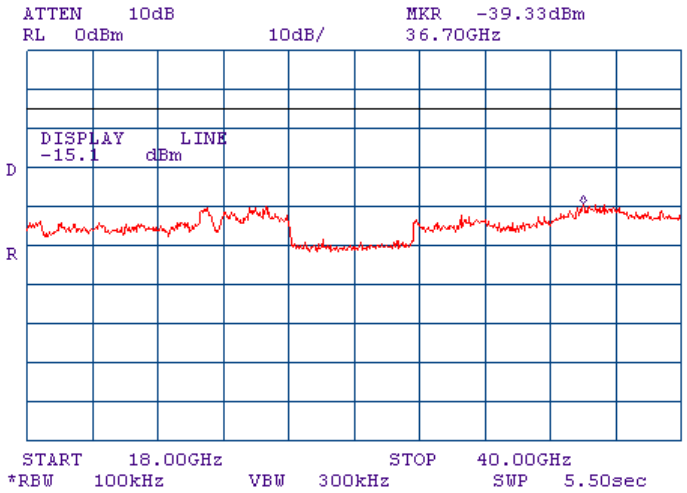
CHANNEL BANDWIDTH	10 MHz
MODULATION	64QAM
BIT RATE	65 Mbps



Test specification:	Section 15.247(d), RSS-210 section A8.5, Conducted spurious emissions		
Test procedure:	FCC New Guidance on Measurements for DTS in section 15.247(c)		
Test mode:	Compliance	Verdict:	PASS
Date & Time:	10/13/2009 9:37:09 PM		
Temperature: 24.7 ºC	Air Pressure: 1016 hPa	Relative Humidity: 39 %	Power Supply: 120VAC
Remarks: 10MHz EBW			

Plot 7.3.78 Spurious emission measurements in 18000 – 40000 MHz range at high carrier frequency, Antenna 2

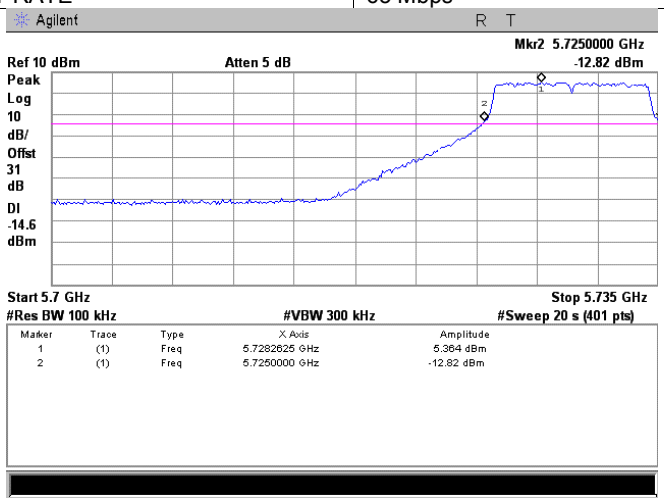
CHANNEL BANDWIDTH	10 MHz
MODULATION	64QAM
BIT RATE	65 Mbps



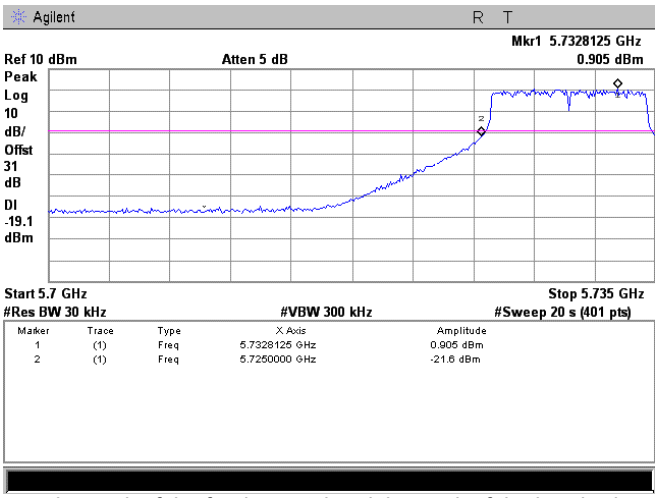
Test specification:	Section 15.247(d), RSS-210 section A8.5, Conducted spurious emissions		
Test procedure:	FCC New Guidance on Measurements for DTS in section 15.247(c)		
Test mode:	Compliance	Verdict:	PASS
Date & Time:	10/13/2009 9:37:09 PM		
Temperature: 24.7 ºC	Air Pressure: 1016 hPa	Relative Humidity: 39 %	Power Supply: 120VAC
Remarks: 10MHz EBW			

Plot 7.3.79 Spurious emission measurements in 5700 – 5725 MHz range at low carrier frequency, Antenna 1

CHANNEL BANDWIDTH	10MHz
MODULATION	64QAM
BIT RATE	65 Mbps



Spurious Emission at Band Edge = Amplitude Mrk1 – Delta from Plot below = 5.36 – 22.51 = - 17.15dBm

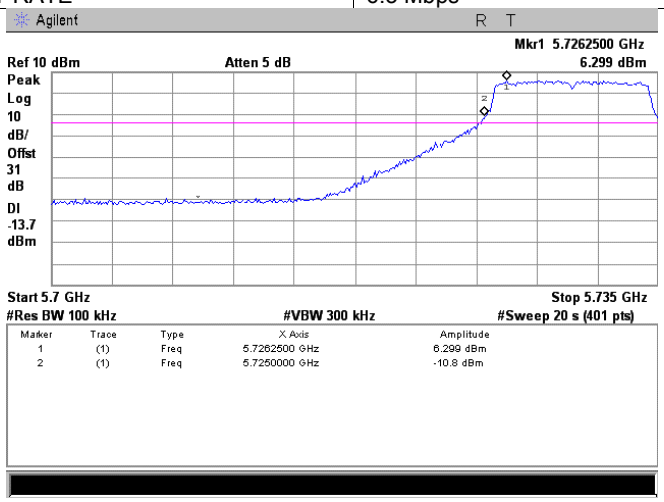


Delta between the peak of the fundamental and the peak of the band-edge emission = Amplitude Mrk1 – Amplitude Mrk2 = 0.91 – (-21.60) = 22.51 dBc

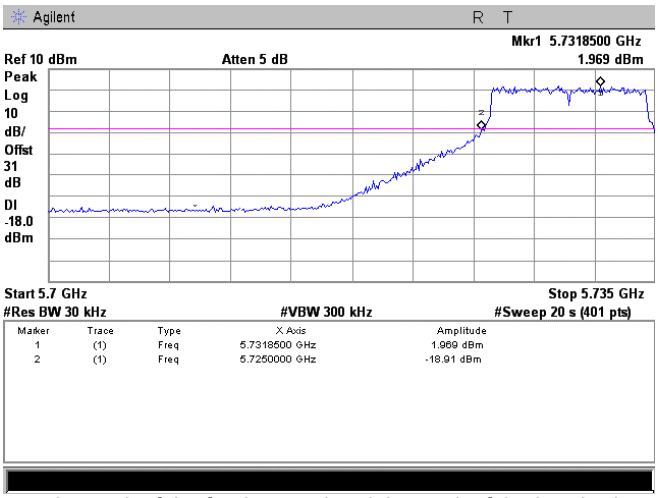
Test specification:	Section 15.247(d), RSS-210 section A8.5, Conducted spurious emissions		
Test procedure:	FCC New Guidance on Measurements for DTS in section 15.247(c)		
Test mode:	Compliance	Verdict:	PASS
Date & Time:	10/13/2009 9:37:09 PM		
Temperature: 24.7 ºC	Air Pressure: 1016 hPa	Relative Humidity: 39 %	Power Supply: 120VAC
Remarks: 10MHz EBW			

Plot 7.3.80 Spurious emission measurements in 5700 – 5725 MHz range at low carrier frequency, Antenna 1

CHANNEL BANDWIDTH	10MHz
MODULATION	BPSK
BIT RATE	6.5 Mbps



Spurious Emission at Band Edge = Amplitude Mrk1 – Delta from Plot below = 6.30 – 20.88 = - 14.58dBm

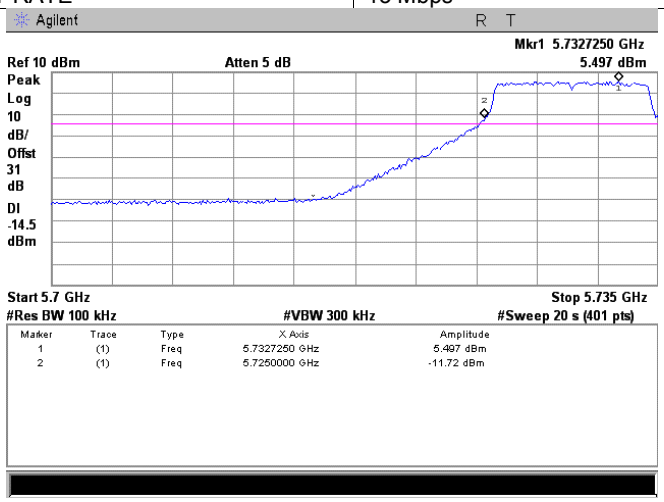


Delta between the peak of the fundamental and the peak of the band-edge emission = Amplitude Mrk1 – Amplitude Mrk2 = 1.97 – (-15.30) = 20.88 dBc

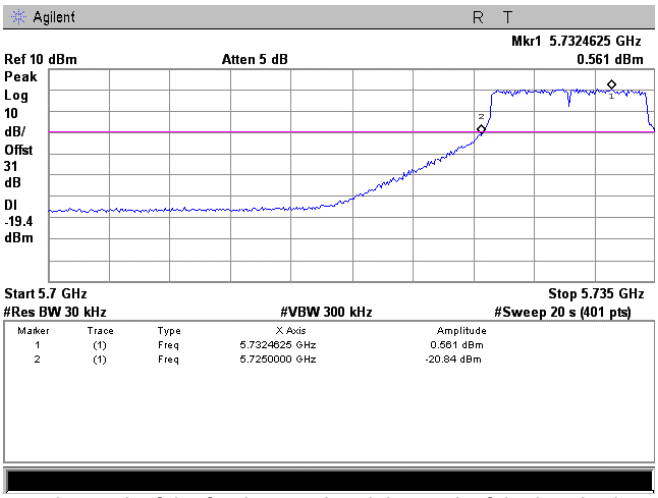
Test specification:	Section 15.247(d), RSS-210 section A8.5, Conducted spurious emissions		
Test procedure:	FCC New Guidance on Measurements for DTS in section 15.247(c)		
Test mode:	Compliance	Verdict:	PASS
Date & Time:	10/13/2009 9:37:09 PM		
Temperature: 24.7 ºC	Air Pressure: 1016 hPa	Relative Humidity: 39 %	Power Supply: 120VAC
Remarks: 10MHz EBW			

Plot 7.3.81 Spurious emission measurements in 5700 – 5725 MHz range at low carrier frequency, Antenna 1

CHANNEL BANDWIDTH	10MHz
MODULATION	BPSK
BIT RATE	13 Mbps



Spurious Emission at Band Edge = Amplitude Mrk1 – Delta from Plot below = 5.50 – 21.40 = - 15.90dBm

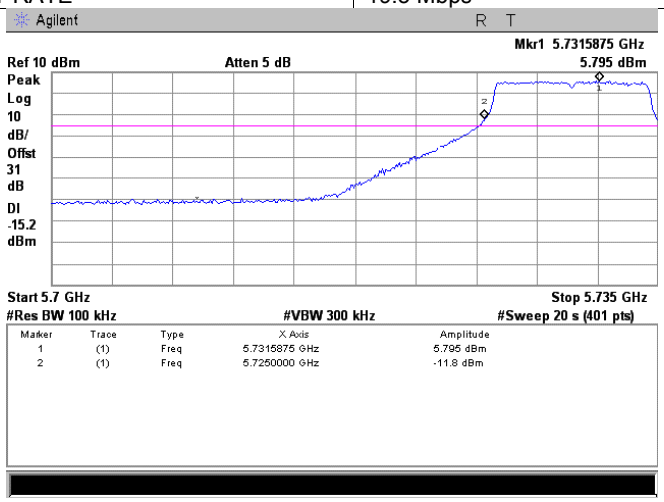


Delta between the peak of the fundamental and the peak of the band-edge emission = Amplitude Mrk1 – Amplitude Mrk2 = 0.56 – (-20.84) = 21.40 dBc

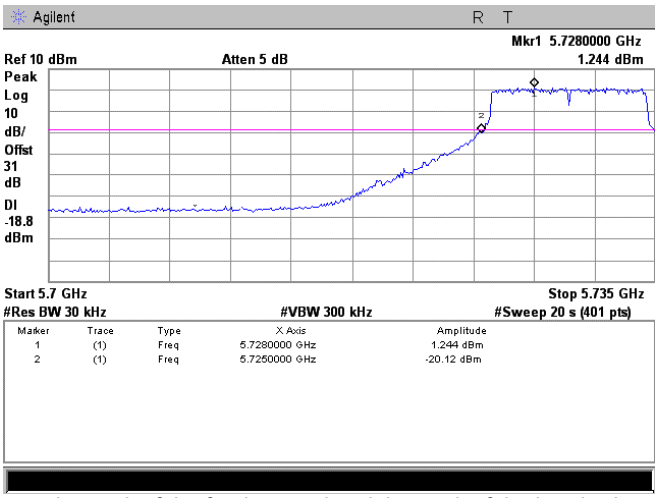
Test specification:	Section 15.247(d), RSS-210 section A8.5, Conducted spurious emissions		
Test procedure:	FCC New Guidance on Measurements for DTS in section 15.247(c)		
Test mode:	Compliance	Verdict:	PASS
Date & Time:	10/13/2009 9:37:09 PM		
Temperature: 24.7 ºC	Air Pressure: 1016 hPa	Relative Humidity: 39 %	Power Supply: 120VAC
Remarks: 10MHz EBW			

Plot 7.3.82 Spurious emission measurements in 5700 – 5725 MHz range at low carrier frequency, Antenna 1

CHANNEL BANDWIDTH	10MHz
MODULATION	QPSK
BIT RATE	19.5 Mbps



Spurious Emission at Band Edge = Amplitude Mrk1 – Delta from Plot below = 5.80 – 21.36 = - -15.56dBm

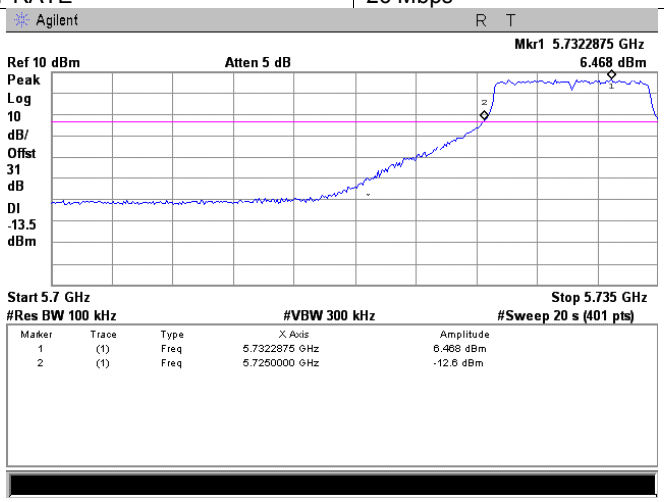


Delta between the peak of the fundamental and the peak of the band-edge emission = Amplitude Mrk1 – Amplitude Mrk2 = 1.24 – (-20.12= 21.36 dBc

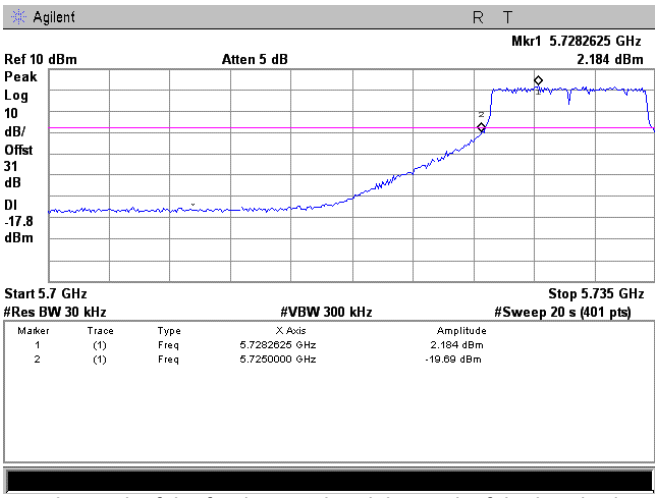
Test specification:	Section 15.247(d), RSS-210 section A8.5, Conducted spurious emissions		
Test procedure:	FCC New Guidance on Measurements for DTS in section 15.247(c)		
Test mode:	Compliance	Verdict:	PASS
Date & Time:	10/13/2009 9:37:09 PM		
Temperature: 24.7 ºC	Air Pressure: 1016 hPa	Relative Humidity: 39 %	Power Supply: 120VAC
Remarks: 10MHz EBW			

Plot 7.3.83 Spurious emission measurements in 5700 – 5725 MHz range at low carrier frequency, Antenna 1

CHANNEL BANDWIDTH	10MHz
MODULATION	QPSK
BIT RATE	26 Mbps



Spurious Emission at Band Edge = Amplitude Mrk1 – Delta from Plot below = 6.47 – 21.87 = - 15.40dBm

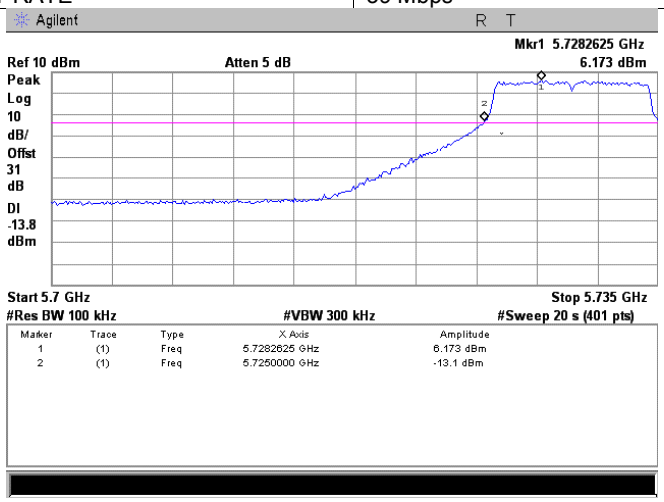


Delta between the peak of the fundamental and the peak of the band-edge emission = Amplitude Mrk1 – Amplitude Mrk2 = 2.18 – (-19.69) = 21.87 dBc

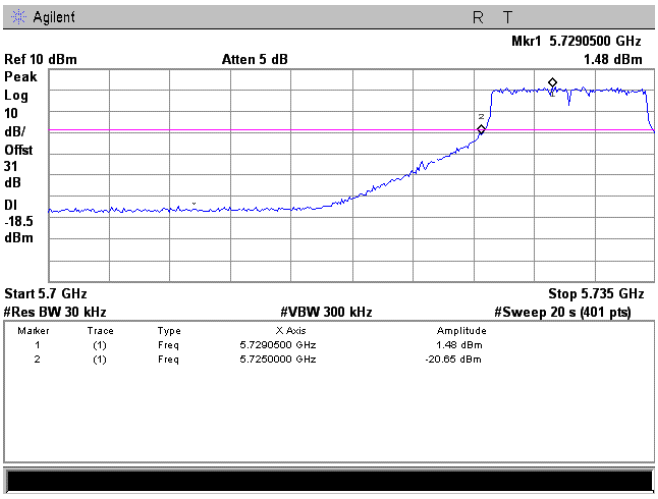
Test specification:	Section 15.247(d), RSS-210 section A8.5, Conducted spurious emissions		
Test procedure:	FCC New Guidance on Measurements for DTS in section 15.247(c)		
Test mode:	Compliance	Verdict:	PASS
Date & Time:	10/13/2009 9:37:09 PM		
Temperature: 24.7 ºC	Air Pressure: 1016 hPa	Relative Humidity: 39 %	Power Supply: 120VAC
Remarks: 10MHz EBW			

Plot 7.3.84 Spurious emission measurements in 5700 – 5725 MHz range at low carrier frequency, Antenna 1

CHANNEL BANDWIDTH	10MHz
MODULATION	16QAM
BIT RATE	39 Mbps



Spurious Emission at Band Edge = Amplitude Mrk1 – Delta from Plot below = 6.17 – 22.13 = - 15.96dBm

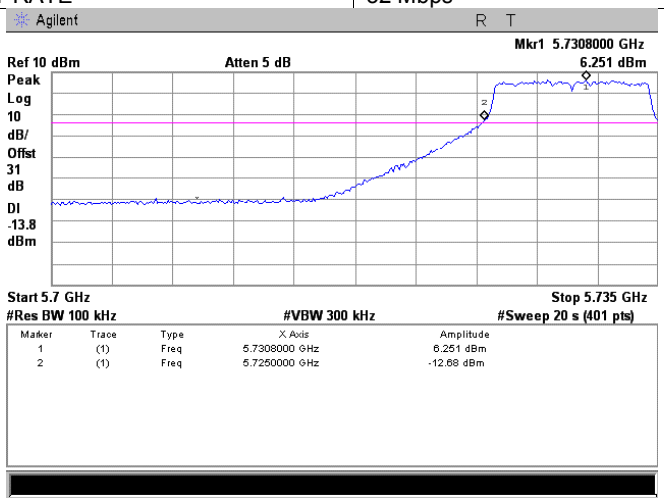


Delta between the peak of the fundamental and the peak of the band-edge emission =
Amplitude Mrk1 – Amplitude Mrk2 = 1.48 – (-20.65) = 22.13 dBc

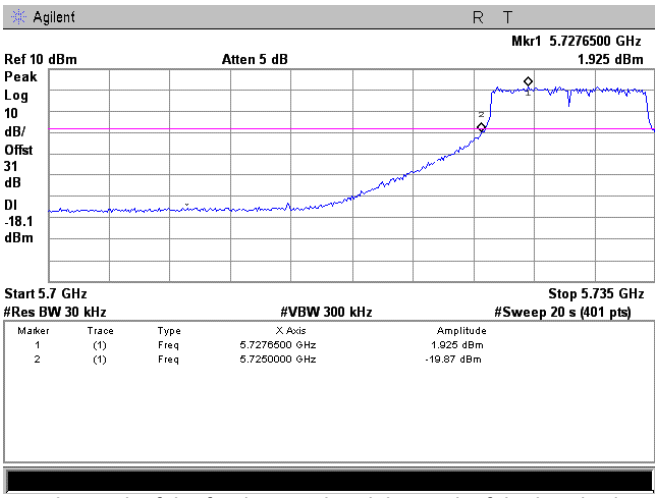
Test specification:	Section 15.247(d), RSS-210 section A8.5, Conducted spurious emissions		
Test procedure:	FCC New Guidance on Measurements for DTS in section 15.247(c)		
Test mode:	Compliance	Verdict:	PASS
Date & Time:	10/13/2009 9:37:09 PM		
Temperature: 24.7 ºC	Air Pressure: 1016 hPa	Relative Humidity: 39 %	Power Supply: 120VAC
Remarks: 10MHz EBW			

Plot 7.3.85 Spurious emission measurements in 5700 – 5725 MHz range at low carrier frequency, Antenna 1

CHANNEL BANDWIDTH	10MHz
MODULATION	16QAM
BIT RATE	52 Mbps



Spurious Emission at Band Edge = Amplitude Mrk1 – Delta from Plot below = 6.25 – 21.80 = - 15.55dBm

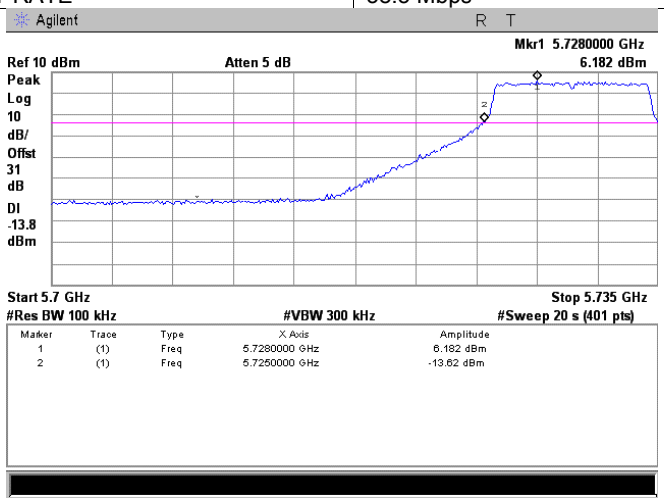


Delta between the peak of the fundamental and the peak of the band-edge emission = Amplitude Mrk1 – Amplitude Mrk2 = 1.93 – (-19.87) = 21.80 dBc

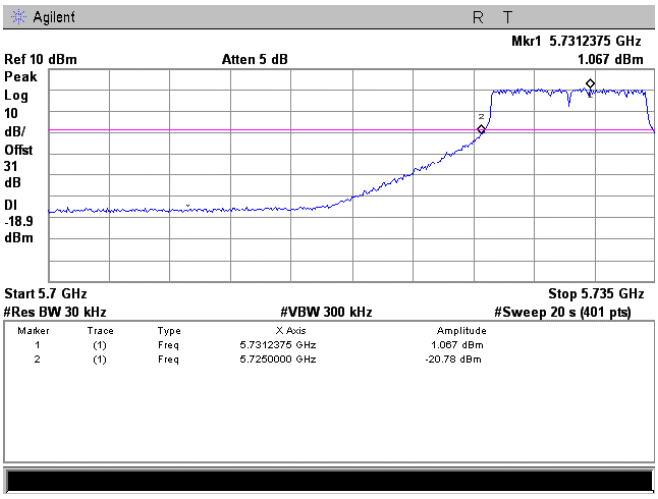
Test specification:	Section 15.247(d), RSS-210 section A8.5, Conducted spurious emissions		
Test procedure:	FCC New Guidance on Measurements for DTS in section 15.247(c)		
Test mode:	Compliance	Verdict:	PASS
Date & Time:	10/13/2009 9:37:09 PM		
Temperature: 24.7 ºC	Air Pressure: 1016 hPa	Relative Humidity: 39 %	Power Supply: 120VAC
Remarks: 10MHz EBW			

Plot 7.3.86 Spurious emission measurements in 5700 – 5725 MHz range at low carrier frequency, Antenna 1

CHANNEL BANDWIDTH	10MHz
MODULATION	64QAM
BIT RATE	58.5 Mbps



Spurious Emission at Band Edge = Amplitude Mrk1 – Delta from Plot below = 6.18 – 21.85 = - 15.67dBm

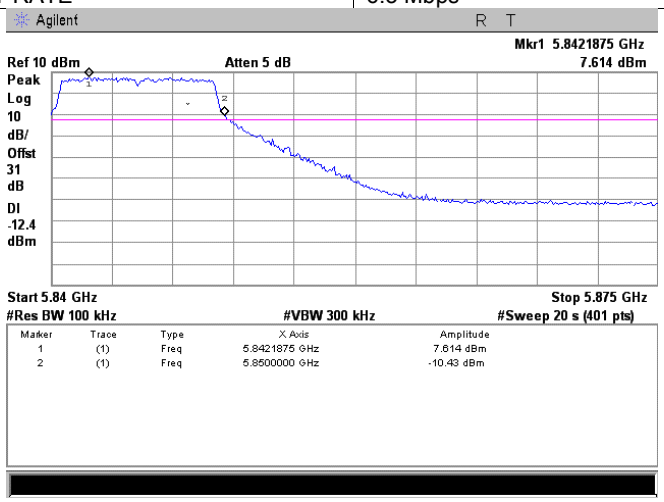


Delta between the peak of the fundamental and the peak of the band-edge emission =
Amplitude Mrk1 – Amplitude Mrk2 = 1.07 – (-20.78) = 21.85 dBc

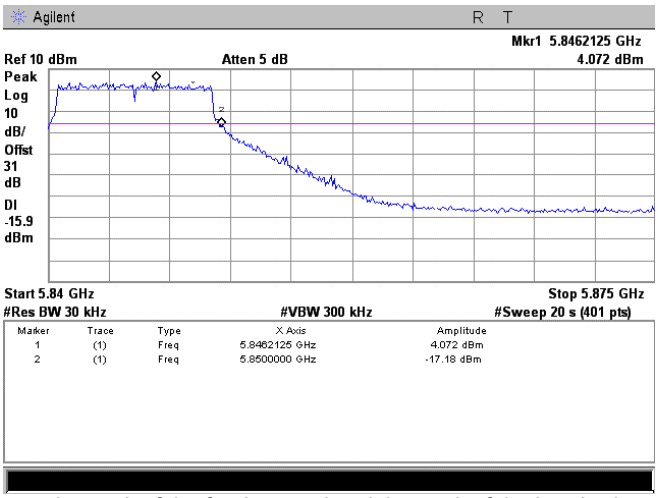
Test specification:	Section 15.247(d), RSS-210 section A8.5, Conducted spurious emissions		
Test procedure:	FCC New Guidance on Measurements for DTS in section 15.247(c)		
Test mode:	Compliance	Verdict:	PASS
Date & Time:	10/13/2009 9:37:09 PM		
Temperature: 24.7 ºC	Air Pressure: 1016 hPa	Relative Humidity: 39 %	Power Supply: 120VAC
Remarks: 10MHz EBW			

Plot 7.3.87 Spurious emission measurements in 5850 – 6000 MHz range at high carrier frequency, Antenna 1

CHANNEL BANDWIDTH	10 MHz
MODULATION	BPSK
BIT RATE	6.5 Mbps



Spurious Emission at Band Edge = Amplitude Mrk1 – Delta from Plot below = 7.61 – 21.25 = - 13.64dBm

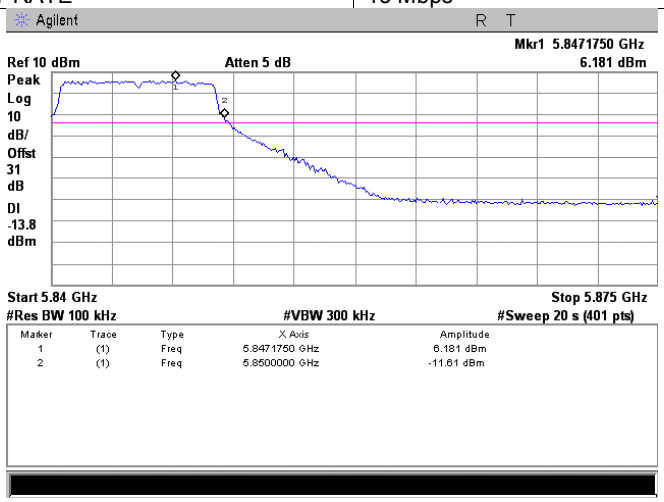


Delta between the peak of the fundamental and the peak of the band-edge emission = Amplitude Mrk1 – Amplitude Mrk2 = 4.07 – (-17.18) = 21.25 dBc

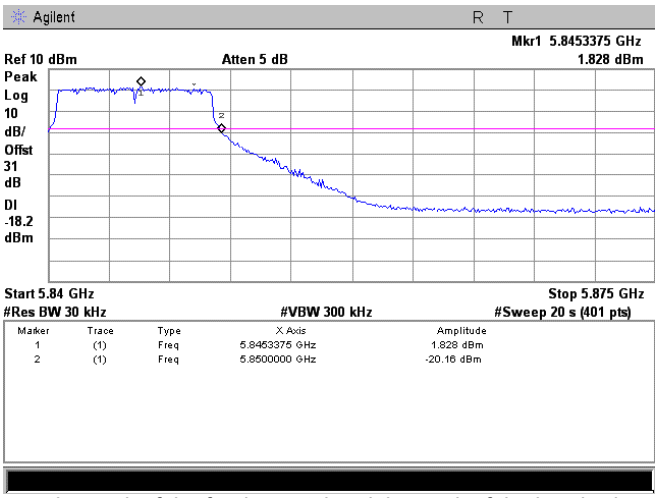
Test specification:	Section 15.247(d), RSS-210 section A8.5, Conducted spurious emissions		
Test procedure:	FCC New Guidance on Measurements for DTS in section 15.247(c)		
Test mode:	Compliance	Verdict:	PASS
Date & Time:	10/13/2009 9:37:09 PM		
Temperature: 24.7 ºC	Air Pressure: 1016 hPa	Relative Humidity: 39 %	Power Supply: 120VAC
Remarks: 10MHz EBW			

Plot 7.3.88 Spurious emission measurements in 5850 – 6000 MHz range at high carrier frequency, Antenna 1

CHANNEL BANDWIDTH	10 MHz
MODULATION	BPSK
BIT RATE	13 Mbps



Spurious Emission at Band Edge = Amplitude Mrk1 – Delta from Plot below = 6.18 – 21.99 = - 15.81dBm

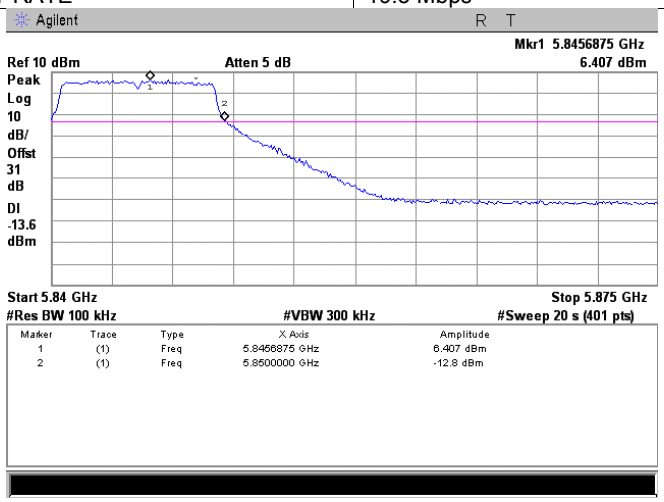


Delta between the peak of the fundamental and the peak of the band-edge emission = Amplitude Mrk1 – Amplitude Mrk2 = 1.83 – (-20.16) = 21.99 dBc

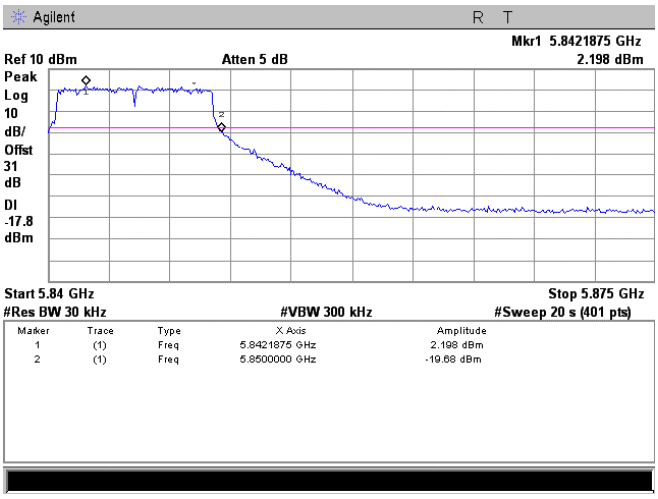
Test specification:	Section 15.247(d), RSS-210 section A8.5, Conducted spurious emissions		
Test procedure:	FCC New Guidance on Measurements for DTS in section 15.247(c)		
Test mode:	Compliance	Verdict:	PASS
Date & Time:	10/13/2009 9:37:09 PM		
Temperature: 24.7 ºC	Air Pressure: 1016 hPa	Relative Humidity: 39 %	Power Supply: 120VAC
Remarks: 10MHz EBW			

Plot 7.3.89 Spurious emission measurements in 5850 – 6000 MHz range at high carrier frequency, Antenna 1

CHANNEL BANDWIDTH	10 MHz
MODULATION	QPSK
BIT RATE	19.5 Mbps



Spurious Emission at Band Edge = Amplitude Mrk1 – Delta from Plot below = 6.41 – 21.88 = - 15.47dBm

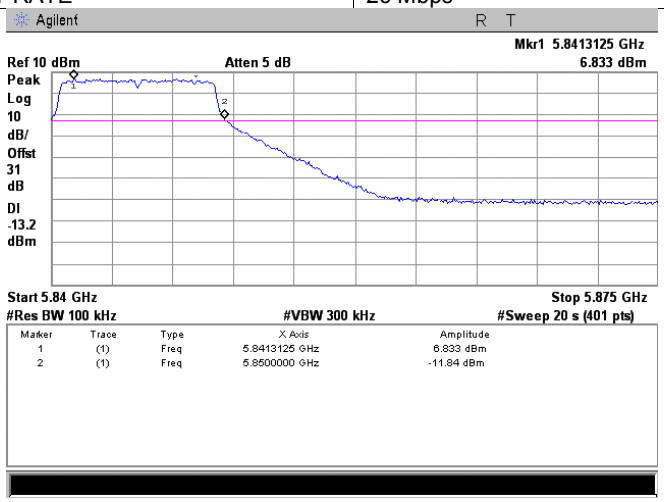


Delta between the peak of the fundamental and the peak of the band-edge emission =
Amplitude Mrk1 – Amplitude Mrk2 = 2.20 – (-19.68) = 21.88 dBc

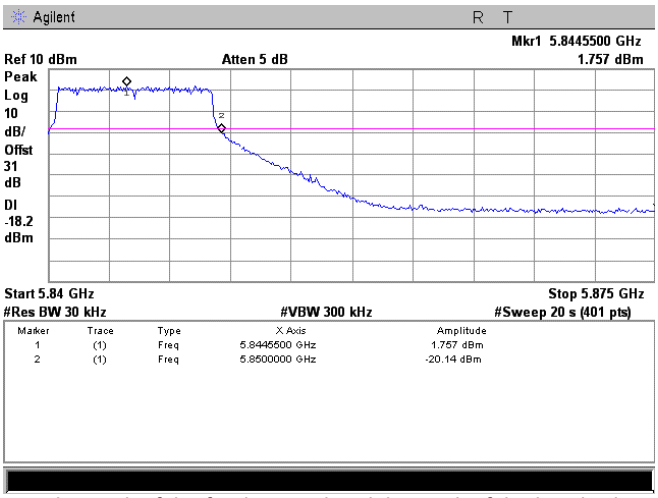
Test specification:	Section 15.247(d), RSS-210 section A8.5, Conducted spurious emissions		
Test procedure:	FCC New Guidance on Measurements for DTS in section 15.247(c)		
Test mode:	Compliance	Verdict:	PASS
Date & Time:	10/13/2009 9:37:09 PM		
Temperature: 24.7 ºC	Air Pressure: 1016 hPa	Relative Humidity: 39 %	Power Supply: 120VAC
Remarks: 10MHz EBW			

Plot 7.3.90 Spurious emission measurements in 5850 – 6000 MHz range at high carrier frequency, Antenna 1

CHANNEL BANDWIDTH	10 MHz
MODULATION	QPSK
BIT RATE	26 Mbps



Spurious Emission at Band Edge = Amplitude Mrk1 – Delta from Plot below = 6.83 – 21.90 = - 15.07dBm

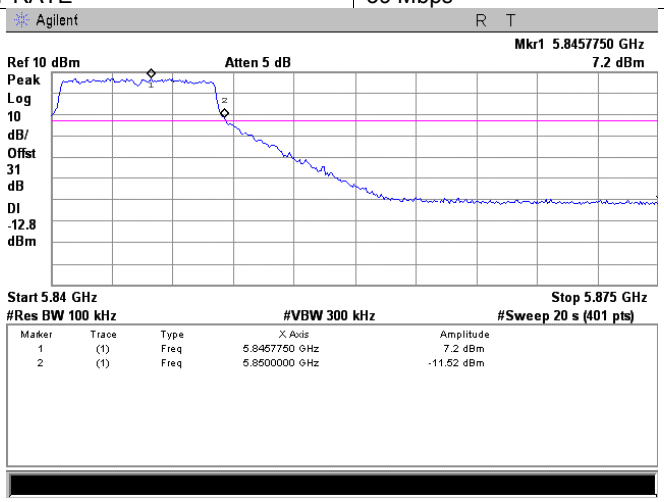


Delta between the peak of the fundamental and the peak of the band-edge emission = Amplitude Mrk1 – Amplitude Mrk2 = 1.76 – (-20.14) = 21.90 dBc

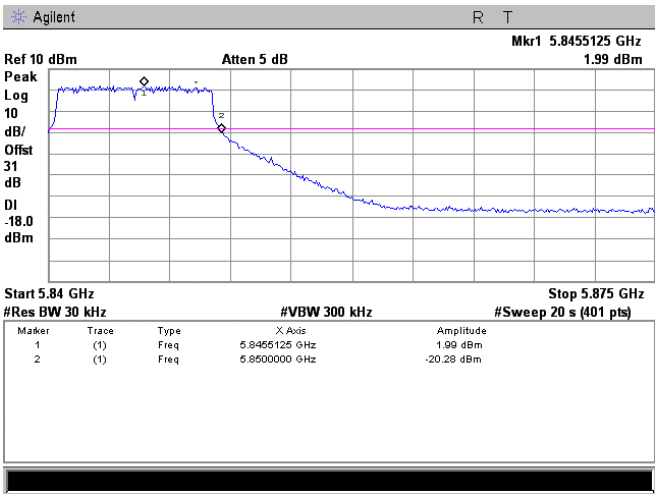
Test specification:	Section 15.247(d), RSS-210 section A8.5, Conducted spurious emissions		
Test procedure:	FCC New Guidance on Measurements for DTS in section 15.247(c)		
Test mode:	Compliance	Verdict:	PASS
Date & Time:	10/13/2009 9:37:09 PM		
Temperature: 24.7 ºC	Air Pressure: 1016 hPa	Relative Humidity: 39 %	Power Supply: 120VAC
Remarks: 10MHz EBW			

Plot 7.3.91 Spurious emission measurements in 5850 – 6000 MHz range at high carrier frequency, Antenna 1

CHANNEL BANDWIDTH	10 MHz
MODULATION	16QAM
BIT RATE	39 Mbps



Spurious Emission at Band Edge = Amplitude Mrk1 – Delta from Plot below = 7.20 – 22.27 = - 15.07dBm

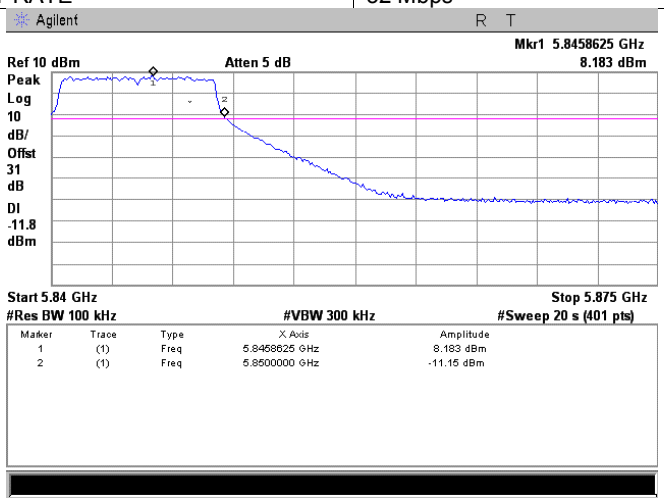


Delta between the peak of the fundamental and the peak of the band-edge emission = Amplitude Mrk1 – Amplitude Mrk2 = 1.99 – (-20.28) = 22.27 dBc

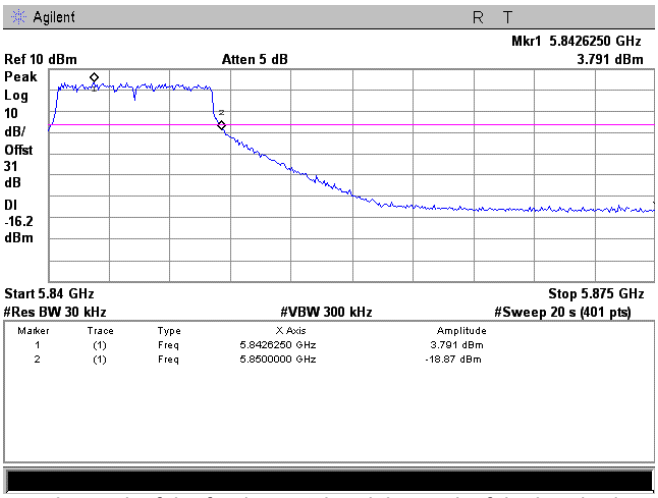
Test specification:	Section 15.247(d), RSS-210 section A8.5, Conducted spurious emissions		
Test procedure:	FCC New Guidance on Measurements for DTS in section 15.247(c)		
Test mode:	Compliance	Verdict:	PASS
Date & Time:	10/13/2009 9:37:09 PM		
Temperature: 24.7 ºC	Air Pressure: 1016 hPa	Relative Humidity: 39 %	Power Supply: 120VAC
Remarks: 10MHz EBW			

Plot 7.3.92 Spurious emission measurements in 5850 – 6000 MHz range at high carrier frequency, Antenna 1

CHANNEL BANDWIDTH	10 MHz
MODULATION	16QAM
BIT RATE	52 Mbps



Spurious Emission at Band Edge = Amplitude Mrk1 – Delta from Plot below = 8.18 – 22.66 = - 14.48dBm

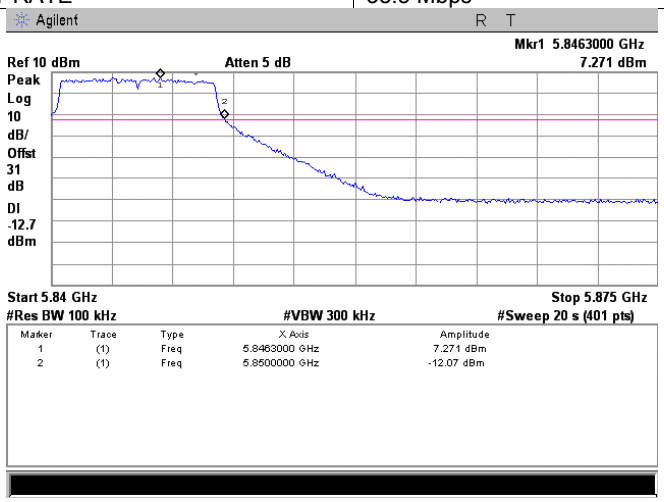


Delta between the peak of the fundamental and the peak of the band-edge emission = Amplitude Mrk1 – Amplitude Mrk2 = 3.79 – (-18.87) = 22.66 dBc

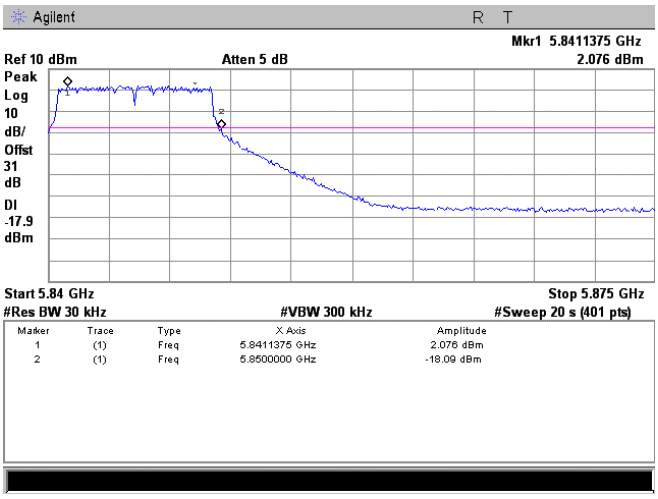
Test specification:	Section 15.247(d), RSS-210 section A8.5, Conducted spurious emissions		
Test procedure:	FCC New Guidance on Measurements for DTS in section 15.247(c)		
Test mode:	Compliance	Verdict:	PASS
Date & Time:	10/13/2009 9:37:09 PM		
Temperature: 24.7 ºC	Air Pressure: 1016 hPa	Relative Humidity: 39 %	Power Supply: 120VAC
Remarks: 10MHz EBW			

Plot 7.3.93 Spurious emission measurements in 5850 – 6000 MHz range at high carrier frequency, Antenna 1

CHANNEL BANDWIDTH	10 MHz
MODULATION	64QAM
BIT RATE	58.5 Mbps



Spurious Emission at Band Edge = Amplitude Mrk1 – Delta from Plot below = 7.27 – 20.17 = - 12.90dBm

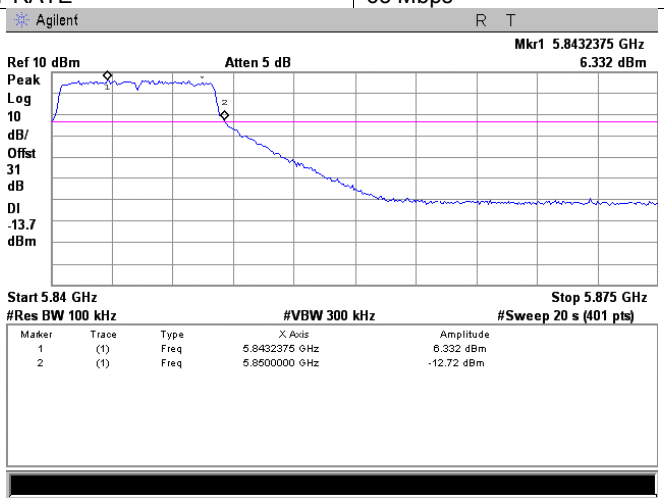


Delta between the peak of the fundamental and the peak of the band-edge emission =
Amplitude Mrk1 – Amplitude Mrk2 = 2.08 – (-18.09) = 20.17 dBc

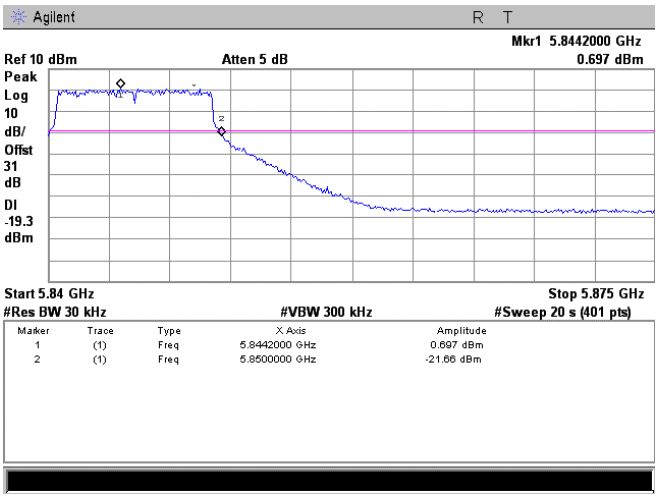
Test specification:	Section 15.247(d), RSS-210 section A8.5, Conducted spurious emissions		
Test procedure:	FCC New Guidance on Measurements for DTS in section 15.247(c)		
Test mode:	Compliance	Verdict:	PASS
Date & Time:	10/13/2009 9:37:09 PM		
Temperature: 24.7 ºC	Air Pressure: 1016 hPa	Relative Humidity: 39 %	Power Supply: 120VAC
Remarks: 10MHz EBW			

Plot 7.3.94 Spurious emission measurements in 5850 – 6000 MHz range at high carrier frequency, Antenna 1

CHANNEL BANDWIDTH	10 MHz
MODULATION	64QAM
BIT RATE	65 Mbps



Spurious Emission at Band Edge = Amplitude Mrk1 – Delta from Plot below = 6.33 – 22.36 = - 16.03dBm



Delta between the peak of the fundamental and the peak of the band-edge emission =
Amplitude Mrk1 – Amplitude Mrk2 = 0.70 – (-21.66) = 22.36 dBc

Test specification:	Section 15.247(d), RSS-210 section A8.5, Conducted spurious emissions		
Test procedure:	FCC New Guidance on Measurements for DTS in section 15.247(c)		
Test mode:	Compliance	Verdict:	PASS
Date & Time:	10/13/2009 10:16:47 PM		
Temperature: 24.7 ºC	Air Pressure: 1016 hPa	Relative Humidity: 39 %	Power Supply: 120VAC
Remarks: 40 MHz EBW			

Table 7.3.5 Spurious emission test results, combined

ASSIGNED FREQUENCY RANGE: 5725 – 5850 MHz
INVESTIGATED FREQUENCY RANGE: 0.009 - 40000 MHz
DETECTOR USED: Peak
RESOLUTION BANDWIDTH: 100 kHz
VIDEO BANDWIDTH: 300 kHz
MODULATING SIGNAL: PRBS
BIT RATE: 27 Mbps
TRANSMITTER OUTPUT POWER SETTINGS: Maximum
TRANSMITTER OUTPUT POWER: 717 mW at low carrier frequency
644 mW at mid carrier frequency
622 mW at high carrier frequency
NOTE: Antenna 1+ Antenna 2

Frequency, MHz	Modulation, Bit rate	Spurious emission, dBm	Emission at carrier, dBm	Attenuation below carrier, dBc	Limit, dBc	Margin, dB*	Verdict
Low carrier frequency 5745 MHz							
2725.0	BPSK, 27 Mbps	-17.98	6.82	24.80	20.0	-4.80	Pass
2725.0	BPSK, 54 Mbps	-16.93	6.67	23.60		-3.60	
2725.0	QPSK, 81 Mbps	-16.72	7.48	24.20		-4.20	
2725.0	QPSK, 108 Mbps	-18.20	7.58	25.78		-5.78	
2725.0	16QAM, 162 Mbps	-18.51	6.65	25.16		-5.16	
2725.0	16QAM, 216 Mbps	-18.22	7.01	25.23		-5.23	
2725.0	64QAM, 243 Mbps	-17.80	7.61	25.41		-5.41	
2725.0	64QAM, 270 Mbps	-17.36	7.73	25.09		-5.09	
Mid carrier frequency 5780 MHz							
No emissions were found							Pass
High carrier frequency 5830 MHz							
5850.0	BPSK, 27 Mbps	-18.61	7.48	26.09	20.0	-6.09	Pass
5850.0	BPSK, 54 Mbps	-17.85	7.10	24.95		-4.95	
5850.0	QPSK, 81 Mbps	-16.89	7.12	24.01		-4.01	
5850.0	QPSK, 108 Mbps	-19.27	7.67	26.94		-6.94	
5850.0	16QAM, 162 Mbps	-18.33	8.05	26.38		-6.38	
5850.0	16QAM, 216 Mbps	-18.71	7.85	26.56		-6.56	
5850.0	64QAM, 243 Mbps	-18.55	7.79	26.34		-6.34	
5850.0	64QAM, 270 Mbps	-19.91	7.10	27.01		-7.01	

*- Margin = Attenuation below carrier – specification limit.

Test specification:	Section 15.247(d), RSS-210 section A8.5, Conducted spurious emissions		
Test procedure:	FCC New Guidance on Measurements for DTS in section 15.247(c)		
Test mode:	Compliance	Verdict:	PASS
Date & Time:	10/13/2009 10:16:47 PM		
Temperature: 24.7 ºC	Air Pressure: 1016 hPa	Relative Humidity: 39 %	Power Supply: 120VAC
Remarks: 40 MHz EBW			

Table 7.3.6 Spurious emission test results, Antenna 1

ASSIGNED FREQUENCY RANGE: 5725 – 5850 MHz
INVESTIGATED FREQUENCY RANGE: 0.009 - 40000 MHz
DETECTOR USED: Peak
RESOLUTION BANDWIDTH: 100 kHz
VIDEO BANDWIDTH: 300 kHz
MODULATING SIGNAL: PRBS
BIT RATE: 27 Mbps
TRANSMITTER OUTPUT POWER SETTINGS: Maximum
TRANSMITTER OUTPUT POWER: 347 mW at low carrier frequency
351 mW at mid carrier frequency
318 mW at high carrier frequency

Frequency, MHz	Modulation, Bit rate	Spurious emission, dBm	Emission at carrier, dBm	Attenuation below carrier, dBc	Limit, dBc	Margin, dB*	Verdict
Low carrier frequency 5745 MHz							
2725.0	BPSK, 27 Mbps	-20.92	3.97	24.89	20.0	-4.89	Pass
2725.0	BPSK, 54 Mbps	-21.53	3.33	24.86		-4.86	
2725.0	QPSK, 81 Mbps	-20.00	3.73	23.73		-3.73	
2725.0	QPSK, 108 Mbps	-20.89	5.39	26.28		-6.28	
2725.0	16QAM, 162 Mbps	-19.77	4.89	24.66		-4.66	
2725.0	16QAM, 216 Mbps	-20.88	4.41	25.29		-5.29	
2725.0	64QAM, 243 Mbps	-20.17	4.84	25.01		-5.01	
2725.0	64QAM, 270 Mbps	-20.88	4.60	25.48		-5.48	
Mid carrier frequency 5780 MHz							
No emissions were found							Pass
High carrier frequency 5830 MHz							
5850.0	BPSK, 27 Mbps	-20.20	4.65	24.85	20.0	-4.85	Pass
5850.0	BPSK, 54 Mbps	-21.62	3.92	25.54		-5.54	
5850.0	QPSK, 81 Mbps	-22.43	3.42	25.85		-5.85	
5850.0	QPSK, 108 Mbps	-21.02	5.34	26.36		-6.36	
5850.0	16QAM, 162 Mbps	-20.85	4.44	25.29		-5.29	
5850.0	16QAM, 216 Mbps	-22.33	4.03	26.36		-6.36	
5850.0	64QAM, 243 Mbps	-20.70	5.42	26.12		-6.12	
5850.0	64QAM, 270 Mbps	-19.61	5.22	24.83		-4.83	

*- Margin = Attenuation below carrier – specification limit.

Test specification:	Section 15.247(d), RSS-210 section A8.5, Conducted spurious emissions		
Test procedure:	FCC New Guidance on Measurements for DTS in section 15.247(c)		
Test mode:	Compliance	Verdict:	PASS
Date & Time:	10/13/2009 10:16:47 PM		
Temperature: 24.7 ºC	Air Pressure: 1016 hPa	Relative Humidity: 39 %	Power Supply: 120VAC
Remarks: 40 MHz EBW			

Table 7.3.7 Spurious emission test results, Antenna 2

ASSIGNED FREQUENCY RANGE: 5725 – 5850 MHz
INVESTIGATED FREQUENCY RANGE: 0.009 - 40000 MHz
DETECTOR USED: Peak
RESOLUTION BANDWIDTH: 100 kHz
VIDEO BANDWIDTH: 300 kHz
MODULATING SIGNAL: PRBS
BIT RATE: 27 Mbps
TRANSMITTER OUTPUT POWER SETTINGS: Maximum
TRANSMITTER OUTPUT POWER: 370 mW at low carrier frequency
293 mW at mid carrier frequency
304 mW at high carrier frequency

Frequency, MHz	Modulation, Bit rate	Spurious emission, dBm	Emission at carrier, dBm	Attenuation below carrier, dBc	Limit, dBc	Margin, dB*	Verdict
Low carrier frequency 5745 MHz							
2725.0	BPSK, 27 Mbps	-18.97	5.18	24.15	20.0	-4.15	Pass
2725.0	BPSK, 54 Mbps	-20.53	4.86	25.39		-5.39	
2725.0	QPSK, 81 Mbps	-20.34	4.31	24.65		-4.65	
2725.0	QPSK, 108 Mbps	-19.62	4.89	24.51		-4.51	
2725.0	16QAM, 162 Mbps	-19.76	5.59	25.35		-5.35	
2725.0	16QAM, 216 Mbps	-19.13	5.19	24.32		-4.32	
2725.0	64QAM, 243 Mbps	-19.41	5.16	24.57		-4.57	
2725.0	64QAM, 270 Mbps	-20.12	5.27	25.39		-5.39	
Mid carrier frequency 5780 MHz							
No emissions were found							Pass
High carrier frequency 5830 MHz							
5850.0	BPSK, 27 Mbps	-21.27	4.21	25.48	20.0	-5.48	Pass
5850.0	BPSK, 54 Mbps	-22.04	4.52	26.56		-6.56	
5850.0	QPSK, 81 Mbps	-21.96	3.82	25.78		-5.78	
5850.0	QPSK, 108 Mbps	-22.50	4.31	26.81		-6.81	
5850.0	16QAM, 162 Mbps	-21.82	4.80	26.62		-6.62	
5850.0	16QAM, 216 Mbps	-20.24	4.49	24.73		-4.73	
5850.0	64QAM, 243 Mbps	-21.13	5.10	26.23		-6.23	
5850.0	64QAM, 270 Mbps	-21.78	4.93	26.71		-6.71	

*- Margin = Attenuation below carrier – specification limit.

Reference numbers of test equipment used

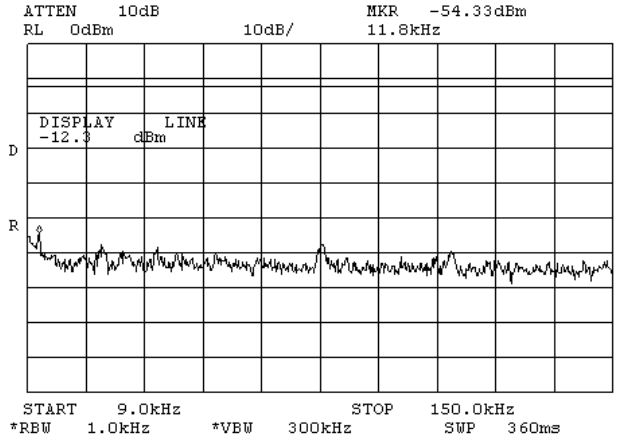
HL 1424	HL 2953	HL 3437	HL 3442	HL 3435	HL 3440	HL 1906	HL 3474
HL 3473	HL 3447						

Full description is given in Appendix A.

Test specification:	Section 15.247(d), RSS-210 section A8.5, Conducted spurious emissions		
Test procedure:	FCC New Guidance on Measurements for DTS in section 15.247(c)		
Test mode:	Compliance	Verdict:	PASS
Date & Time:	10/13/2009 10:16:47 PM		
Temperature: 24.7 ºC	Air Pressure: 1016 hPa	Relative Humidity: 39 %	Power Supply: 120VAC
Remarks: 40 MHz EBW			

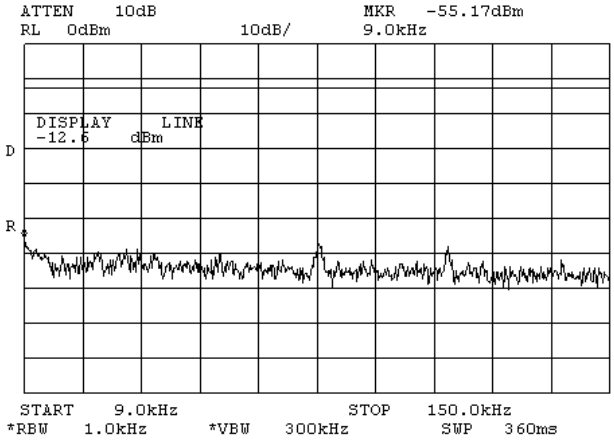
Plot 7.3.95 Spurious emission measurements in 9 - 150 kHz range at low carrier frequency, combined

CHANNEL BANDWIDTH	40 MHz
MODULATION	64QAM
BIT RATE	270 Mbps



Plot 7.3.96 Spurious emission measurements in 9 - 150 kHz range at mid carrier frequency, combined

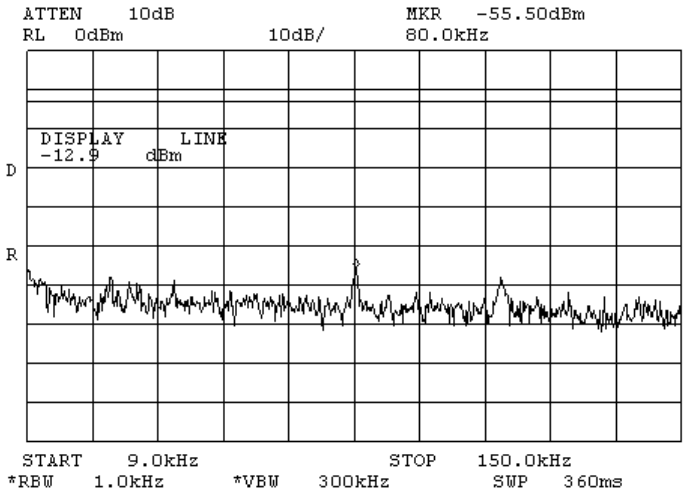
CHANNEL BANDWIDTH	40 MHz
MODULATION	64QAM
BIT RATE	270 Mbps



Test specification:	Section 15.247(d), RSS-210 section A8.5, Conducted spurious emissions		
Test procedure:	FCC New Guidance on Measurements for DTS in section 15.247(c)		
Test mode:	Compliance	Verdict:	PASS
Date & Time:	10/13/2009 10:16:47 PM		
Temperature: 24.7 ºC	Air Pressure: 1016 hPa	Relative Humidity: 39 %	Power Supply: 120VAC
Remarks: 40 MHz EBW			

Plot 7.3.97 Spurious emission measurements in 9 - 150 kHz range at high carrier frequency, combined

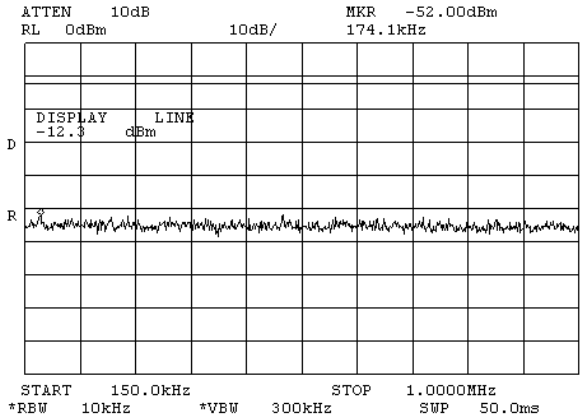
CHANNEL BANDWIDTH	40 MHz
MODULATION	64QAM
BIT RATE	270 Mbps



Test specification:	Section 15.247(d), RSS-210 section A8.5, Conducted spurious emissions		
Test procedure:	FCC New Guidance on Measurements for DTS in section 15.247(c)		
Test mode:	Compliance	Verdict:	PASS
Date & Time:	10/13/2009 10:16:47 PM		
Temperature: 24.7 ºC	Air Pressure: 1016 hPa	Relative Humidity: 39 %	Power Supply: 120VAC
Remarks: 40 MHz EBW			

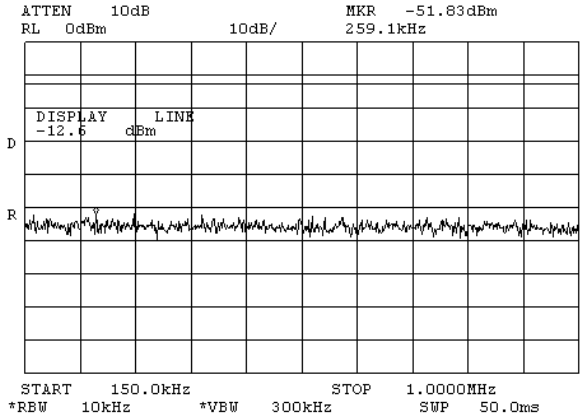
Plot 7.3.98 Spurious emission measurements in 0.15 - 1 MHz range at low carrier frequency, combined

CHANNEL BANDWIDTH	40 MHz
MODULATION	64QAM
BIT RATE	270 Mbps



Plot 7.3.99 Spurious emission measurements in 0.15 - 1 MHz range at mid carrier frequency, combined

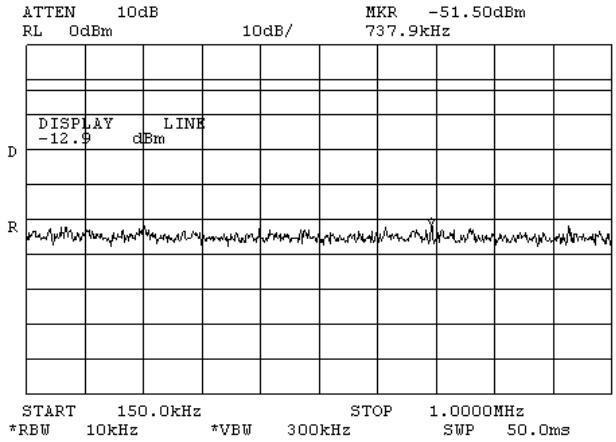
CHANNEL BANDWIDTH	40 MHz
MODULATION	64QAM
BIT RATE	270 Mbps



Test specification:	Section 15.247(d), RSS-210 section A8.5, Conducted spurious emissions		
Test procedure:	FCC New Guidance on Measurements for DTS in section 15.247(c)		
Test mode:	Compliance	Verdict:	PASS
Date & Time:	10/13/2009 10:16:47 PM		
Temperature: 24.7 ºC	Air Pressure: 1016 hPa	Relative Humidity: 39 %	Power Supply: 120VAC
Remarks: 40 MHz EBW			

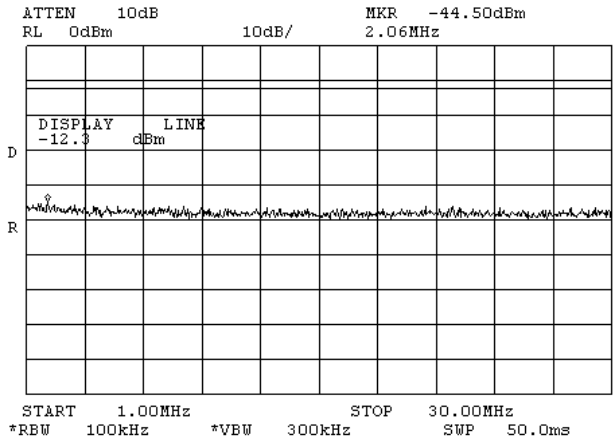
Plot 7.3.100 Spurious emission measurements in 0.15 - 1 MHz range at high carrier frequency, combined

CHANNEL BANDWIDTH	40 MHz
MODULATION	64QAM
BIT RATE	270 Mbps



Plot 7.3.101 Spurious emission measurements in 1 - 30 MHz range at low carrier frequency, combined

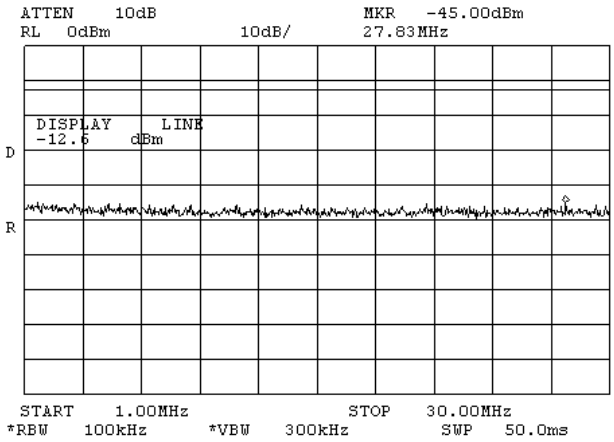
CHANNEL BANDWIDTH	40 MHz
MODULATION	64QAM
BIT RATE	270 Mbps



Test specification:	Section 15.247(d), RSS-210 section A8.5, Conducted spurious emissions		
Test procedure:	FCC New Guidance on Measurements for DTS in section 15.247(c)		
Test mode:	Compliance	Verdict:	PASS
Date & Time:	10/13/2009 10:16:47 PM		
Temperature: 24.7 ºC	Air Pressure: 1016 hPa	Relative Humidity: 39 %	Power Supply: 120VAC
Remarks: 40 MHz EBW			

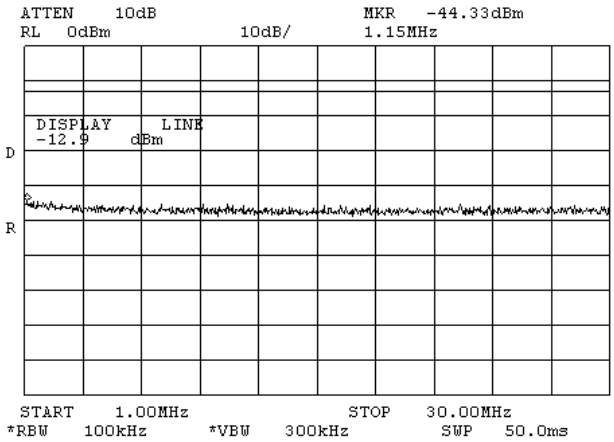
Plot 7.3.102 Spurious emission measurements in 1 - 30MHz range at mid carrier frequency, combined

CHANNEL BANDWIDTH	40 MHz
MODULATION	64QAM
BIT RATE	270 Mbps



Plot 7.3.103 Spurious emission measurements in 1 - 30 MHz range at high carrier frequency, combined

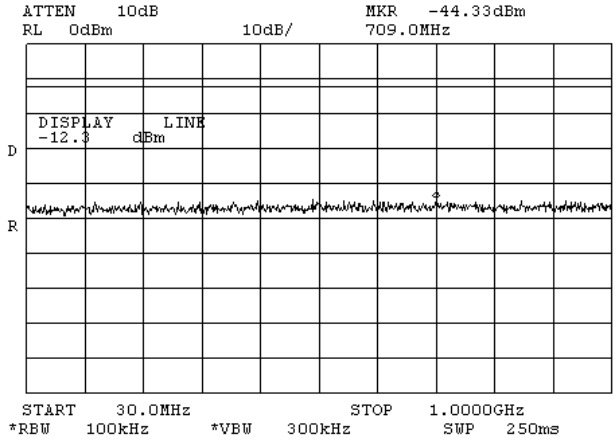
CHANNEL BANDWIDTH	40 MHz
MODULATION	64QAM
BIT RATE	270 Mbps



Test specification:	Section 15.247(d), RSS-210 section A8.5, Conducted spurious emissions		
Test procedure:	FCC New Guidance on Measurements for DTS in section 15.247(c)		
Test mode:	Compliance	Verdict:	PASS
Date & Time:	10/13/2009 10:16:47 PM		
Temperature: 24.7 ºC	Air Pressure: 1016 hPa	Relative Humidity: 39 %	Power Supply: 120VAC
Remarks: 40 MHz EBW			

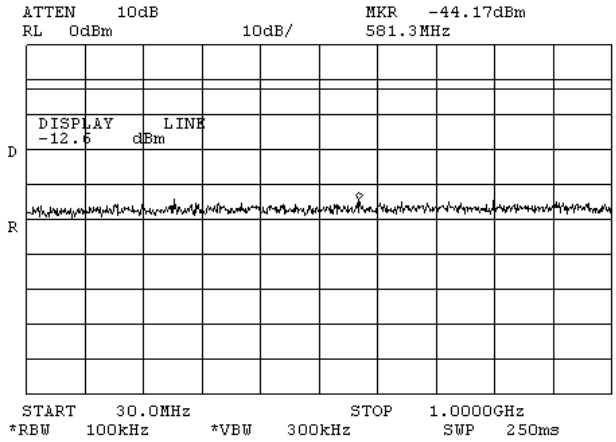
Plot 7.3.104 Spurious emission measurements in 30 - 1000 MHz range at low carrier frequency, combined

CHANNEL BANDWIDTH	40 MHz
MODULATION	64QAM
BIT RATE	270 Mbps



Plot 7.3.105 Spurious emission measurements in 30 - 1000 MHz range at mid carrier frequency, combined

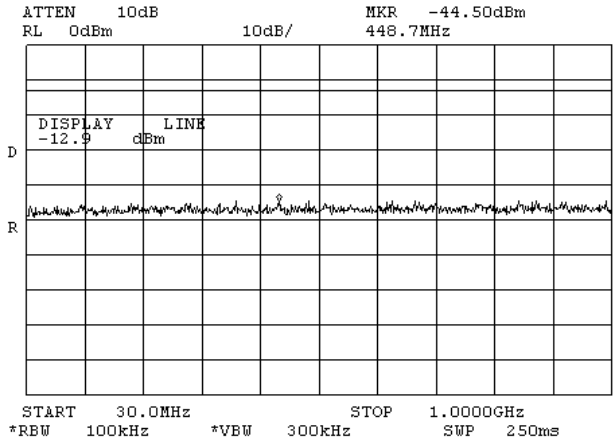
CHANNEL BANDWIDTH	40 MHz
MODULATION	64QAM
BIT RATE	270 Mbps



Test specification:	Section 15.247(d), RSS-210 section A8.5, Conducted spurious emissions		
Test procedure:	FCC New Guidance on Measurements for DTS in section 15.247(c)		
Test mode:	Compliance	Verdict:	PASS
Date & Time:	10/13/2009 10:16:47 PM		
Temperature: 24.7 ºC	Air Pressure: 1016 hPa	Relative Humidity: 39 %	Power Supply: 120VAC
Remarks: 40 MHz EBW			

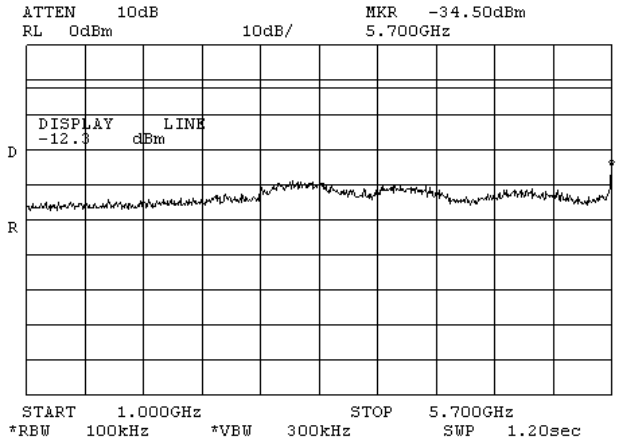
Plot 7.3.106 Spurious emission measurements in 30 - 1000 MHz range at high carrier frequency, combined

CHANNEL BANDWIDTH	40 MHz
MODULATION	64QAM
BIT RATE	270 Mbps



Plot 7.3.107 Spurious emission measurements in 1000 – 5700 MHz range at low carrier frequency, combined

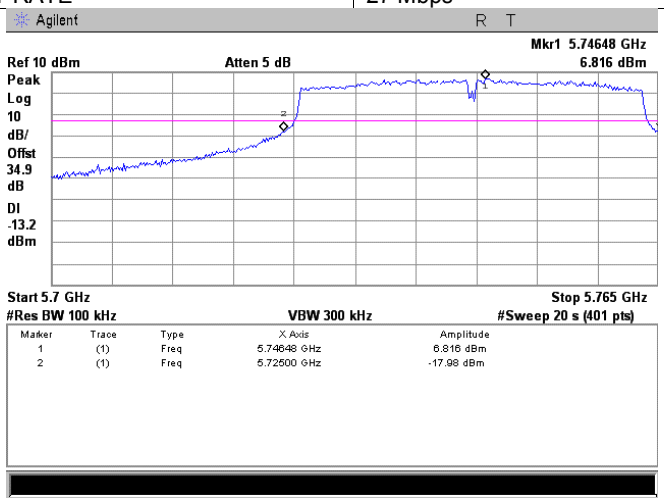
CHANNEL BANDWIDTH	40 MHz
MODULATION	64QAM
BIT RATE	270 Mbps



Test specification:	Section 15.247(d), RSS-210 section A8.5, Conducted spurious emissions		
Test procedure:	FCC New Guidance on Measurements for DTS in section 15.247(c)		
Test mode:	Compliance	Verdict:	PASS
Date & Time:	10/13/2009 10:16:47 PM		
Temperature: 24.7 ºC	Air Pressure: 1016 hPa	Relative Humidity: 39 %	Power Supply: 120VAC
Remarks: 40 MHz EBW			

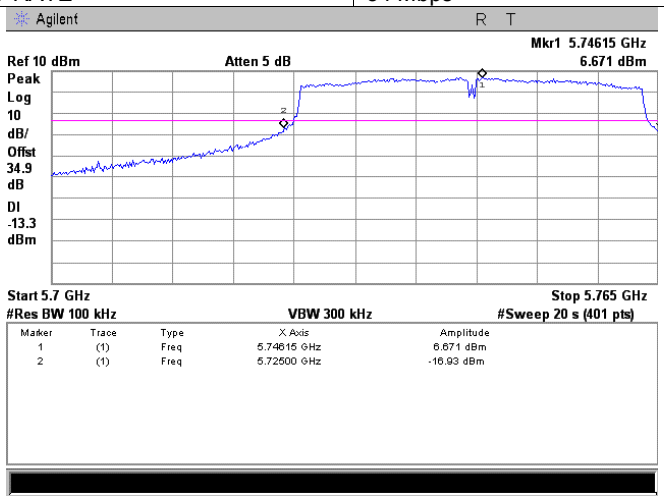
Plot 7.3.108 Spurious emission measurements in 5700 – 5725 MHz range at low carrier frequency, combined

CHANNEL BANDWIDTH	40MHz
MODULATION	64QAM
BIT RATE	27 Mbps



Plot 7.3.109 Spurious emission measurements in 5700 – 5725 MHz range at low carrier frequency, combined

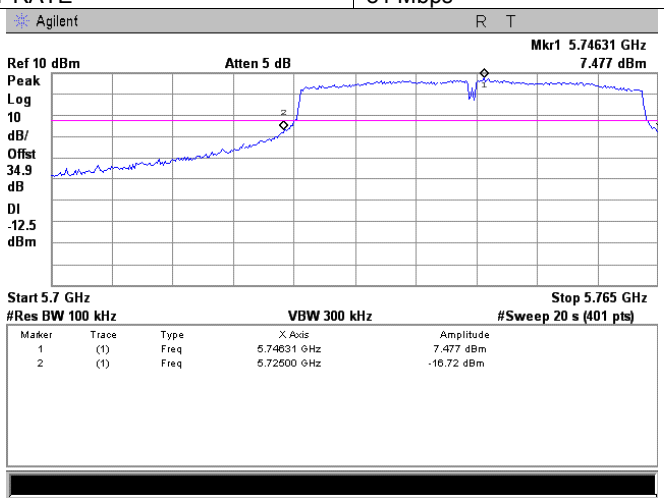
CHANNEL BANDWIDTH	40MHz
MODULATION	BPSK
BIT RATE	54 Mbps



Test specification:	Section 15.247(d), RSS-210 section A8.5, Conducted spurious emissions		
Test procedure:	FCC New Guidance on Measurements for DTS in section 15.247(c)		
Test mode:	Compliance	Verdict:	PASS
Date & Time:	10/13/2009 10:16:47 PM		
Temperature: 24.7 ºC	Air Pressure: 1016 hPa	Relative Humidity: 39 %	Power Supply: 120VAC
Remarks: 40 MHz EBW			

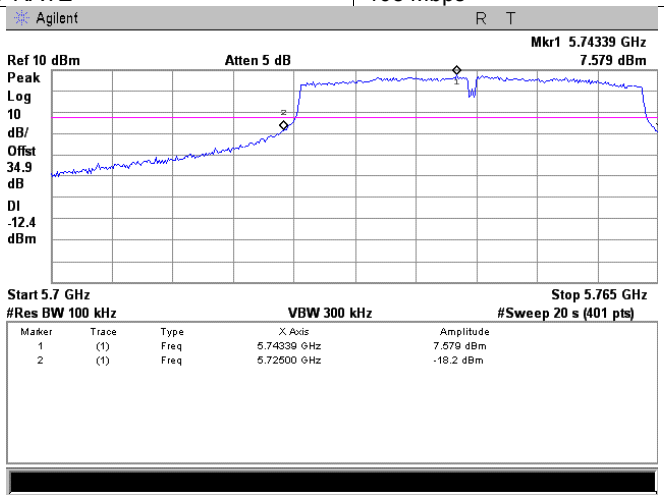
Plot 7.3.110 Spurious emission measurements in 5700 – 5725 MHz range at low carrier frequency, combined

CHANNEL BANDWIDTH	40MHz
MODULATION	QPSK
BIT RATE	81 Mbps



Plot 7.3.111 Spurious emission measurements in 5700 – 5725 MHz range at low carrier frequency, combined

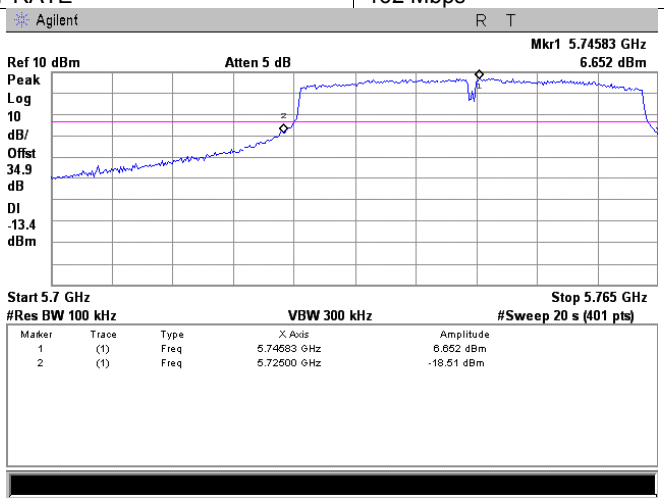
CHANNEL BANDWIDTH	40MHz
MODULATION	QPSK
BIT RATE	108 Mbps



Test specification:	Section 15.247(d), RSS-210 section A8.5, Conducted spurious emissions		
Test procedure:	FCC New Guidance on Measurements for DTS in section 15.247(c)		
Test mode:	Compliance	Verdict:	PASS
Date & Time:	10/13/2009 10:16:47 PM		
Temperature: 24.7 ºC	Air Pressure: 1016 hPa	Relative Humidity: 39 %	Power Supply: 120VAC
Remarks: 40 MHz EBW			

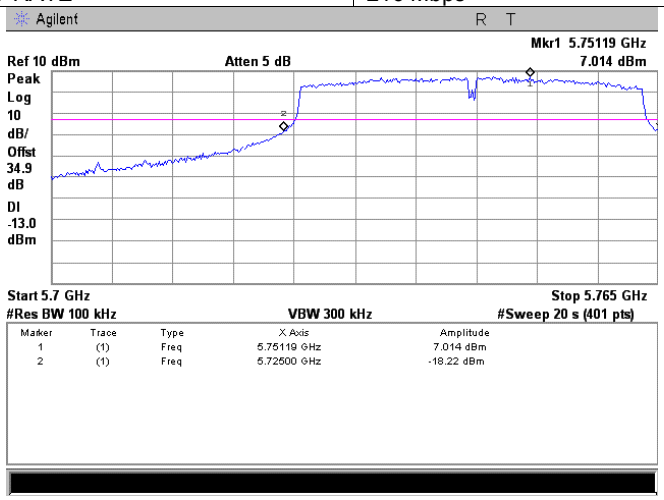
Plot 7.3.112 Spurious emission measurements in 5700 – 5725 MHz range at low carrier frequency, combined

CHANNEL BANDWIDTH	40MHz
MODULATION	16QAM
BIT RATE	162 Mbps



Plot 7.3.113 Spurious emission measurements in 5700 – 5725 MHz range at low carrier frequency, combined

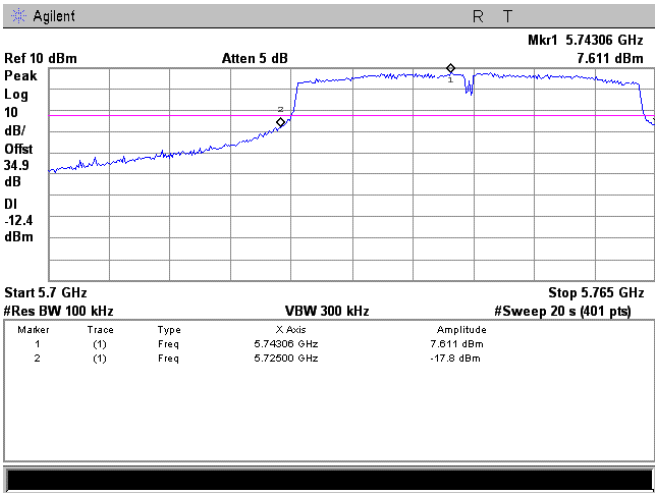
CHANNEL BANDWIDTH	40MHz
MODULATION	16QAM
BIT RATE	216 Mbps



Test specification:	Section 15.247(d), RSS-210 section A8.5, Conducted spurious emissions		
Test procedure:	FCC New Guidance on Measurements for DTS in section 15.247(c)		
Test mode:	Compliance	Verdict:	PASS
Date & Time:	10/13/2009 10:16:47 PM		
Temperature: 24.7 ºC	Air Pressure: 1016 hPa	Relative Humidity: 39 %	Power Supply: 120VAC
Remarks: 40 MHz EBW			

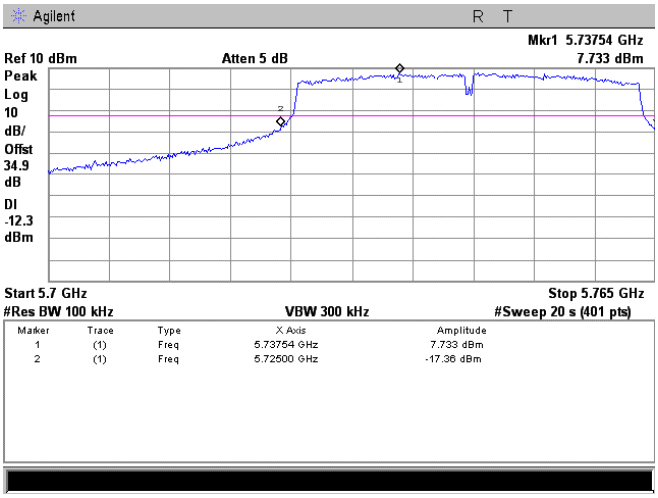
Plot 7.3.114 Spurious emission measurements in 5700 – 5725 MHz range at low carrier frequency, combined

CHANNEL BANDWIDTH	40MHz
MODULATION	64QAM
BIT RATE	243 Mbps



Plot 7.3.115 Spurious emission measurements in 5700 – 5725 MHz range at low carrier frequency, combined

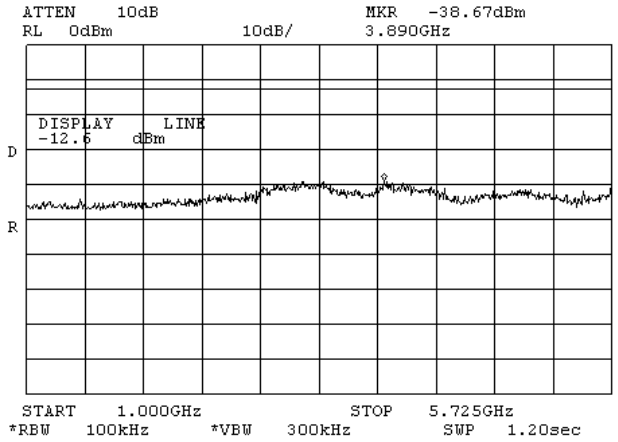
CHANNEL BANDWIDTH	40MHz
MODULATION	64QAM
BIT RATE	270 Mbps



Test specification:	Section 15.247(d), RSS-210 section A8.5, Conducted spurious emissions		
Test procedure:	FCC New Guidance on Measurements for DTS in section 15.247(c)		
Test mode:	Compliance	Verdict:	PASS
Date & Time:	10/13/2009 10:16:47 PM		
Temperature: 24.7 ºC	Air Pressure: 1016 hPa	Relative Humidity: 39 %	Power Supply: 120VAC
Remarks: 40 MHz EBW			

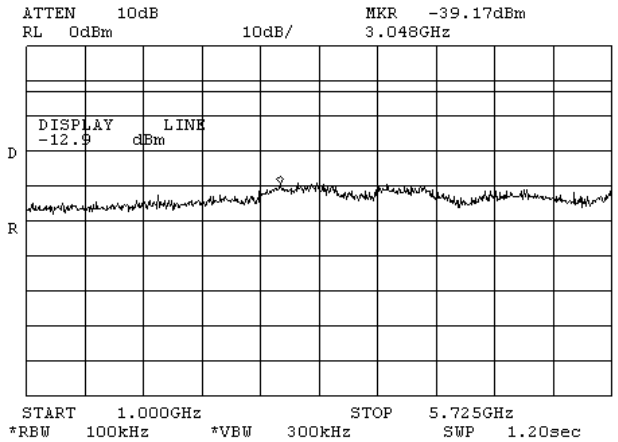
Plot 7.3.116 Spurious emission measurements in 1000 – 5725 MHz range at mid carrier frequency, combined

CHANNEL BANDWIDTH	40 MHz
MODULATION	64 QAM
BIT RATE	270 Mbps



Plot 7.3.117 Spurious emission measurements in 1000 – 5725 MHz range at high carrier frequency, combined

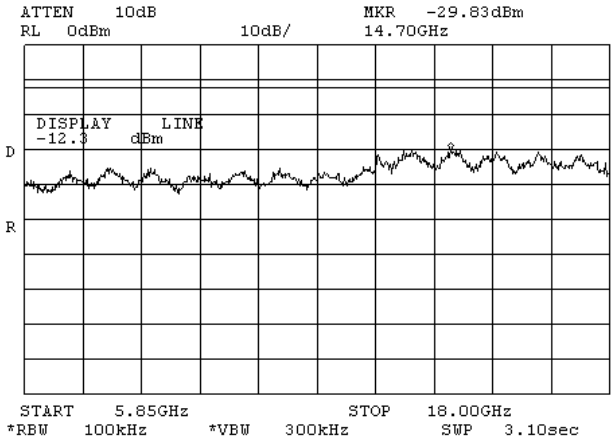
CHANNEL BANDWIDTH	40 MHz
MODULATION	64 QAM
BIT RATE	270 Mbps



Test specification:	Section 15.247(d), RSS-210 section A8.5, Conducted spurious emissions		
Test procedure:	FCC New Guidance on Measurements for DTS in section 15.247(c)		
Test mode:	Compliance	Verdict:	PASS
Date & Time:	10/13/2009 10:16:47 PM		
Temperature: 24.7 ºC	Air Pressure: 1016 hPa	Relative Humidity: 39 %	Power Supply: 120VAC
Remarks: 40 MHz EBW			

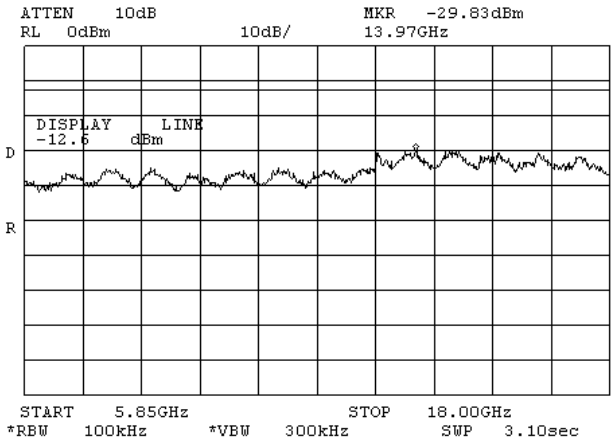
Plot 7.3.118 Spurious emission measurements in 5850 – 18000 MHz range at low carrier frequency, combined

CHANNEL BANDWIDTH	40 MHz
MODULATION	64 QAM
BIT RATE	270 Mbps



Plot 7.3.119 Spurious emission measurements in 5850 – 18000 MHz range at mid carrier frequency, combined

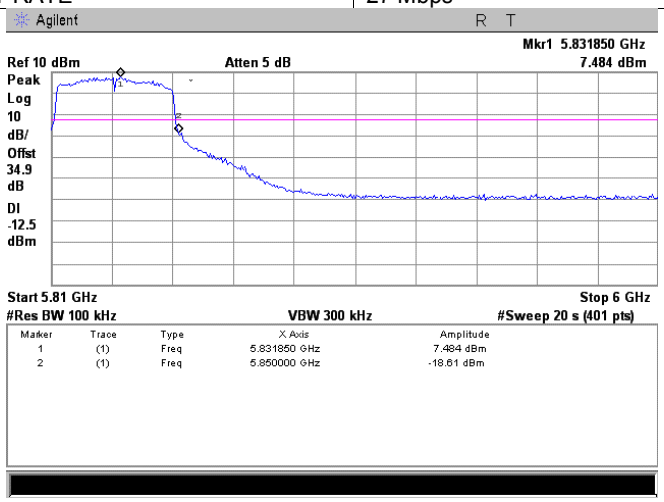
CHANNEL BANDWIDTH	40 MHz
MODULATION	64 QAM
BIT RATE	270 Mbps



Test specification:	Section 15.247(d), RSS-210 section A8.5, Conducted spurious emissions		
Test procedure:	FCC New Guidance on Measurements for DTS in section 15.247(c)		
Test mode:	Compliance	Verdict:	PASS
Date & Time:	10/13/2009 10:16:47 PM		
Temperature: 24.7 ºC	Air Pressure: 1016 hPa	Relative Humidity: 39 %	Power Supply: 120VAC
Remarks: 40 MHz EBW			

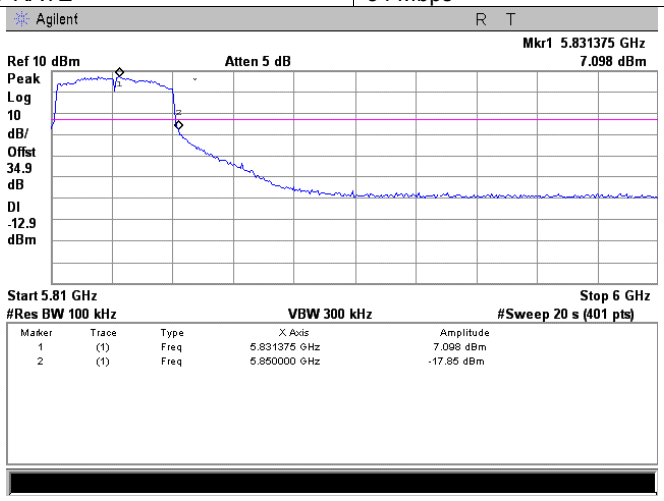
Plot 7.3.120 Spurious emission measurements in 5850 – 6000 MHz range at high carrier frequency, combined

CHANNEL BANDWIDTH	40 MHz
MODULATION	BPSK
BIT RATE	27 Mbps



Plot 7.3.121 Spurious emission measurements in 5850 – 6000 MHz range at high carrier frequency, combined

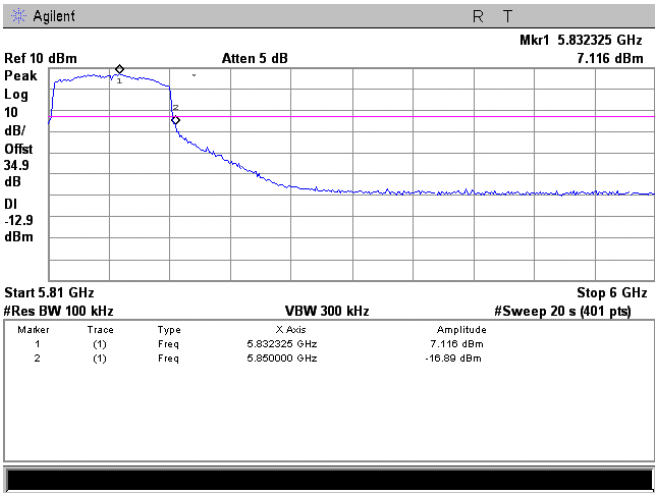
CHANNEL BANDWIDTH	40 MHz
MODULATION	BPSK
BIT RATE	54 Mbps



Test specification:	Section 15.247(d), RSS-210 section A8.5, Conducted spurious emissions		
Test procedure:	FCC New Guidance on Measurements for DTS in section 15.247(c)		
Test mode:	Compliance	Verdict:	PASS
Date & Time:	10/13/2009 10:16:47 PM		
Temperature: 24.7 ºC	Air Pressure: 1016 hPa	Relative Humidity: 39 %	Power Supply: 120VAC
Remarks: 40 MHz EBW			

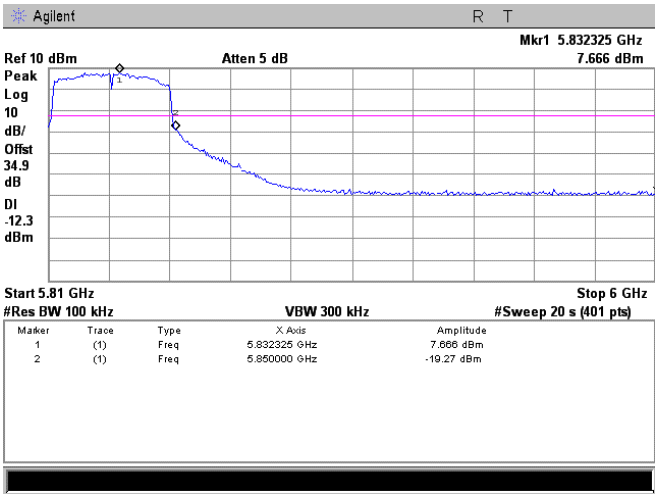
Plot 7.3.122 Spurious emission measurements in 5850 – 6000 MHz range at high carrier frequency, combined

CHANNEL BANDWIDTH	40 MHz
MODULATION	QPSK
BIT RATE	81 Mbps



Plot 7.3.123 Spurious emission measurements in 5850 – 6000 MHz range at high carrier frequency, combined

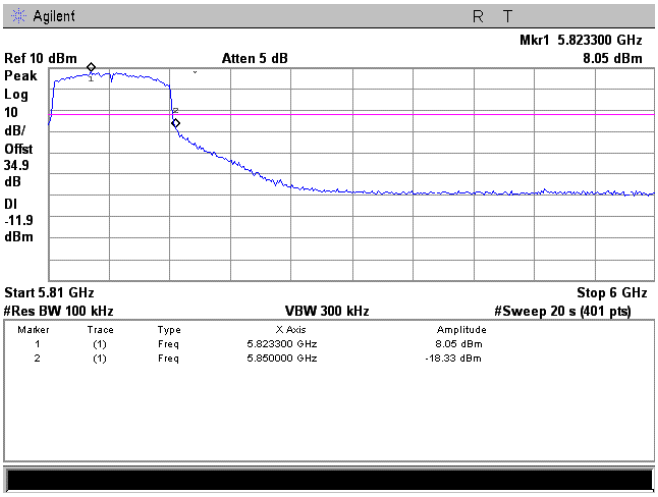
CHANNEL BANDWIDTH	40 MHz
MODULATION	QPSK
BIT RATE	108 Mbps



Test specification:	Section 15.247(d), RSS-210 section A8.5, Conducted spurious emissions		
Test procedure:	FCC New Guidance on Measurements for DTS in section 15.247(c)		
Test mode:	Compliance	Verdict:	PASS
Date & Time:	10/13/2009 10:16:47 PM		
Temperature: 24.7 ºC	Air Pressure: 1016 hPa	Relative Humidity: 39 %	Power Supply: 120VAC
Remarks: 40 MHz EBW			

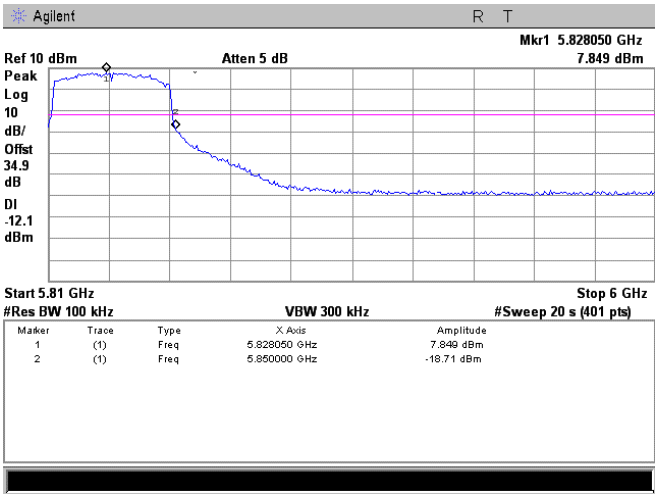
Plot 7.3.124 Spurious emission measurements in 5850 – 6000 MHz range at high carrier frequency, combined

CHANNEL BANDWIDTH	40 MHz
MODULATION	16QAM
BIT RATE	162 Mbps



Plot 7.3.125 Spurious emission measurements in 5850 – 6000 MHz range at high carrier frequency, combined

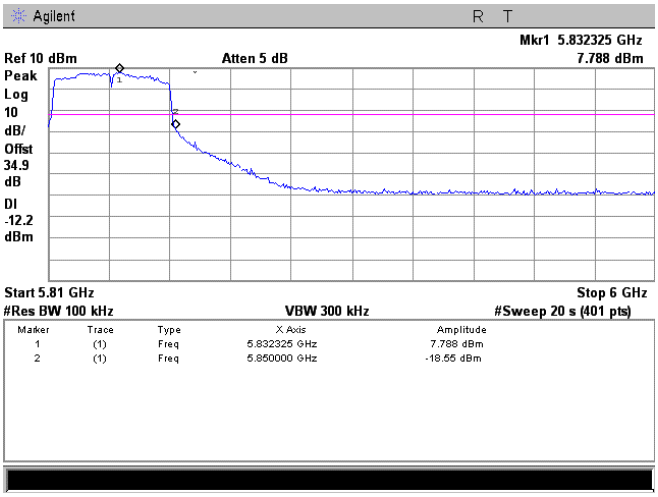
CHANNEL BANDWIDTH	40 MHz
MODULATION	16QAM
BIT RATE	216 Mbps



Test specification:	Section 15.247(d), RSS-210 section A8.5, Conducted spurious emissions		
Test procedure:	FCC New Guidance on Measurements for DTS in section 15.247(c)		
Test mode:	Compliance	Verdict:	PASS
Date & Time:	10/13/2009 10:16:47 PM		
Temperature: 24.7 ºC	Air Pressure: 1016 hPa	Relative Humidity: 39 %	Power Supply: 120VAC
Remarks: 40 MHz EBW			

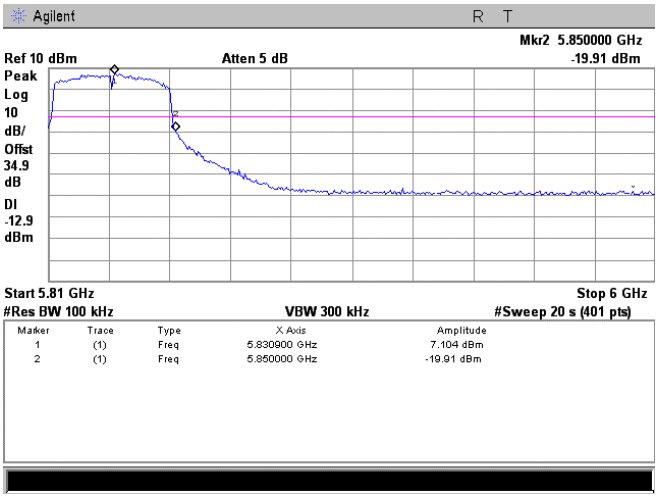
Plot 7.3.126 Spurious emission measurements in 5850 – 6000 MHz range at high carrier frequency, combined

CHANNEL BANDWIDTH	40 MHz
MODULATION	64QAM
BIT RATE	243 Mbps



Plot 7.3.127 Spurious emission measurements in 5850 – 6000 MHz range at high carrier frequency, combined

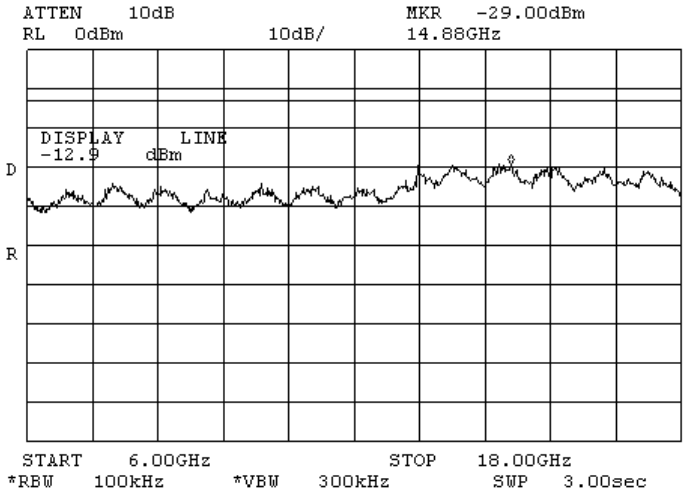
CHANNEL BANDWIDTH	40 MHz
MODULATION	64QAM
BIT RATE	270 Mbps



Test specification:	Section 15.247(d), RSS-210 section A8.5, Conducted spurious emissions		
Test procedure:	FCC New Guidance on Measurements for DTS in section 15.247(c)		
Test mode:	Compliance	Verdict:	PASS
Date & Time:	10/13/2009 10:16:47 PM		
Temperature: 24.7 ºC	Air Pressure: 1016 hPa	Relative Humidity: 39 %	Power Supply: 120VAC
Remarks: 40 MHz EBW			

Plot 7.3.128 Spurious emission measurements in 6000 – 18000 MHz range at high carrier frequency, combined

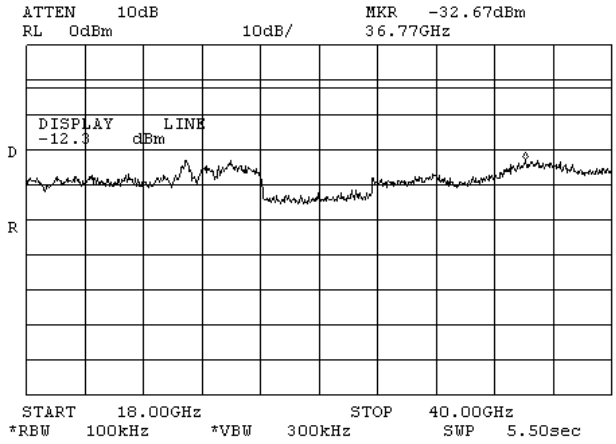
CHANNEL BANDWIDTH	40 MHz
MODULATION	64 QAM
BIT RATE	270 Mbps



Test specification:	Section 15.247(d), RSS-210 section A8.5, Conducted spurious emissions		
Test procedure:	FCC New Guidance on Measurements for DTS in section 15.247(c)		
Test mode:	Compliance	Verdict:	PASS
Date & Time:	10/13/2009 10:16:47 PM		
Temperature: 24.7 ºC	Air Pressure: 1016 hPa	Relative Humidity: 39 %	Power Supply: 120VAC
Remarks: 40 MHz EBW			

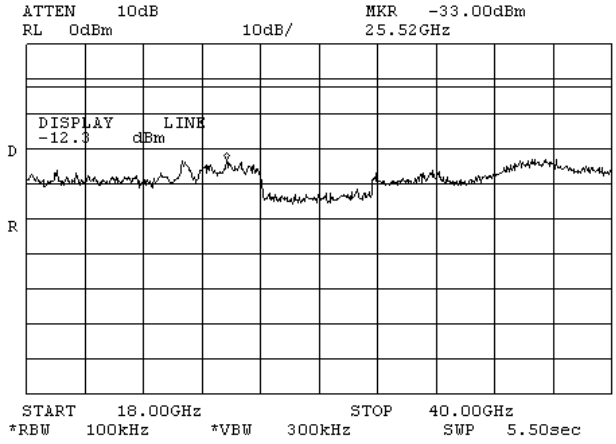
Plot 7.3.129 Spurious emission measurements in 18000 – 40000 MHz range at low carrier frequency, combined

CHANNEL BANDWIDTH	40 MHz
MODULATION	64 QAM
BIT RATE	270 Mbps



Plot 7.3.130 Spurious emission measurements in 18000 – 40000 MHz range at mid carrier frequency, combined

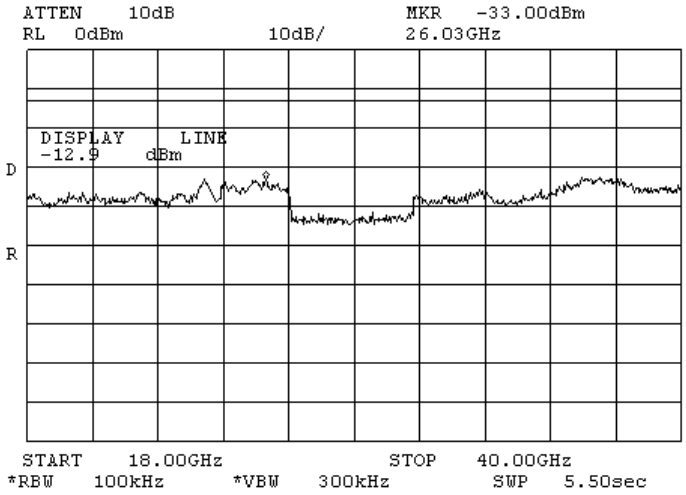
CHANNEL BANDWIDTH	40 MHz
MODULATION	64 QAM
BIT RATE	270 Mbps



Test specification:	Section 15.247(d), RSS-210 section A8.5, Conducted spurious emissions		
Test procedure:	FCC New Guidance on Measurements for DTS in section 15.247(c)		
Test mode:	Compliance	Verdict:	PASS
Date & Time:	10/13/2009 10:16:47 PM		
Temperature: 24.7 ºC	Air Pressure: 1016 hPa	Relative Humidity: 39 %	Power Supply: 120VAC
Remarks: 40 MHz EBW			

Plot 7.3.131 Spurious emission measurements in 18000 – 40000 MHz range at high carrier frequency, combined

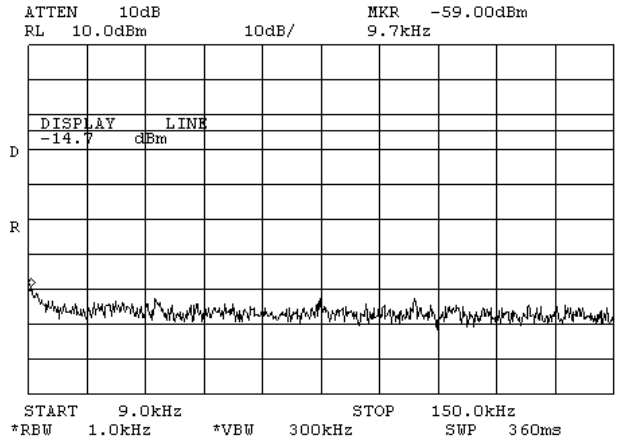
CHANNEL BANDWIDTH	40 MHz
MODULATION	64 QAM
BIT RATE	270 Mbps



Test specification:	Section 15.247(d), RSS-210 section A8.5, Conducted spurious emissions		
Test procedure:	FCC New Guidance on Measurements for DTS in section 15.247(c)		
Test mode:	Compliance	Verdict:	PASS
Date & Time:	10/13/2009 10:16:47 PM		
Temperature: 24.7 ºC	Air Pressure: 1016 hPa	Relative Humidity: 39 %	Power Supply: 120VAC
Remarks: 40 MHz EBW			

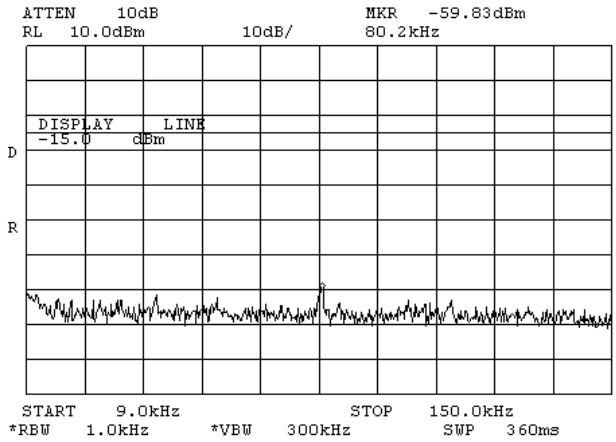
Plot 7.3.132 Spurious emission measurements in 9 - 150 kHz range at low carrier frequency, Antenna 2

CHANNEL BANDWIDTH	40 MHz
MODULATION	64 QAM
BIT RATE	270 Mbps



Plot 7.3.133 Spurious emission measurements in 9 - 150 kHz range at mid carrier frequency, Antenna 2

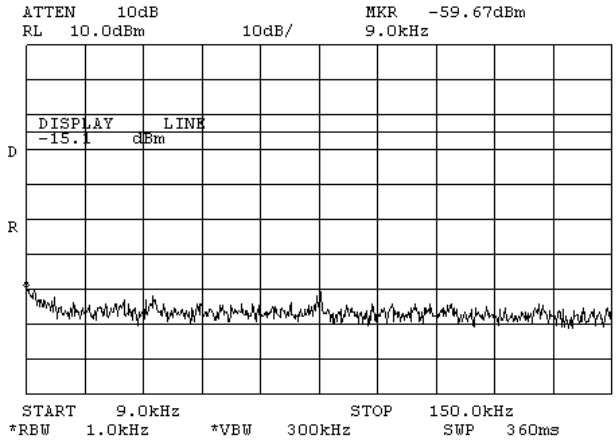
CHANNEL BANDWIDTH	40 MHz
MODULATION	64 QAM
BIT RATE	270 Mbps



Test specification:	Section 15.247(d), RSS-210 section A8.5, Conducted spurious emissions		
Test procedure:	FCC New Guidance on Measurements for DTS in section 15.247(c)		
Test mode:	Compliance	Verdict:	PASS
Date & Time:	10/13/2009 10:16:47 PM		
Temperature: 24.7 ºC	Air Pressure: 1016 hPa	Relative Humidity: 39 %	Power Supply: 120VAC
Remarks: 40 MHz EBW			

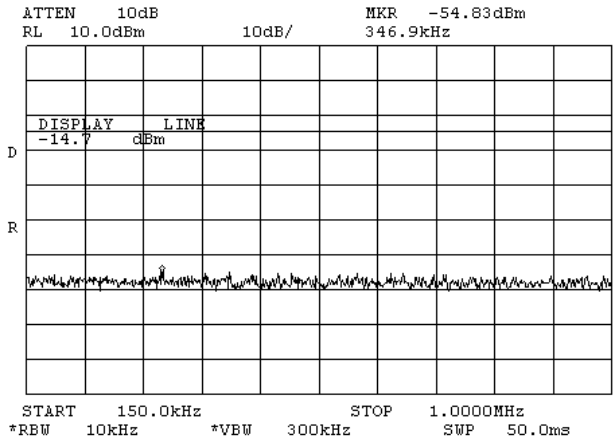
Plot 7.3.134 Spurious emission measurements in 9 - 150 kHz range at high carrier frequency, Antenna 2

CHANNEL BANDWIDTH	40 MHz
MODULATION	64 QAM
BIT RATE	270 Mbps



Plot 7.3.135 Spurious emission measurements in 0.15 - 1 MHz range at low carrier frequency, Antenna 2

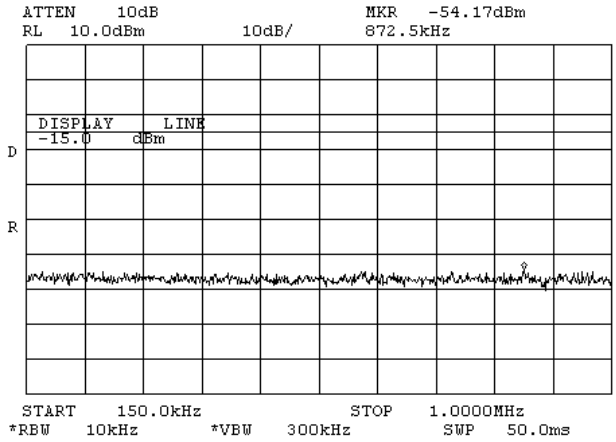
CHANNEL BANDWIDTH	40 MHz
MODULATION	64 QAM
BIT RATE	270 Mbps



Test specification:	Section 15.247(d), RSS-210 section A8.5, Conducted spurious emissions		
Test procedure:	FCC New Guidance on Measurements for DTS in section 15.247(c)		
Test mode:	Compliance	Verdict:	PASS
Date & Time:	10/13/2009 10:16:47 PM		
Temperature: 24.7 ºC	Air Pressure: 1016 hPa	Relative Humidity: 39 %	Power Supply: 120VAC
Remarks: 40 MHz EBW			

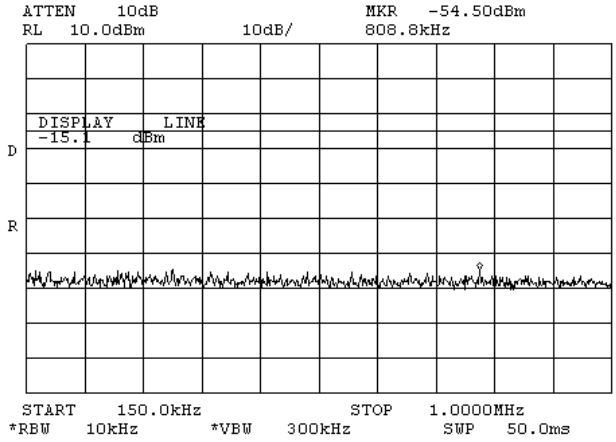
Plot 7.3.136 Spurious emission measurements in 0.15 - 1 MHz range at mid carrier frequency, Antenna 2

CHANNEL BANDWIDTH	40 MHz
MODULATION	64 QAM
BIT RATE	270 Mbps



Plot 7.3.137 Spurious emission measurements in 0.15 - 1 MHz range at high carrier frequency, Antenna 2

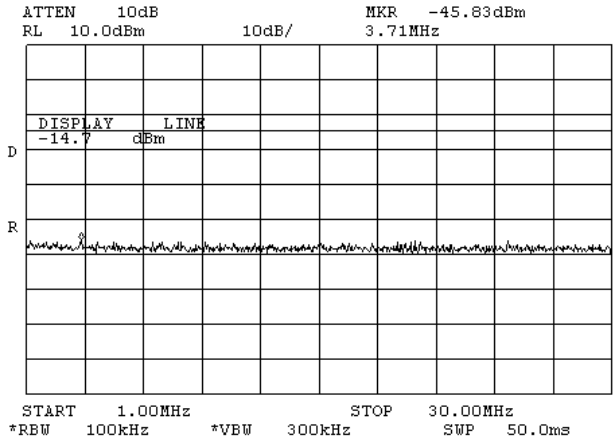
CHANNEL BANDWIDTH	40 MHz
MODULATION	64 QAM
BIT RATE	270 Mbps



Test specification:	Section 15.247(d), RSS-210 section A8.5, Conducted spurious emissions		
Test procedure:	FCC New Guidance on Measurements for DTS in section 15.247(c)		
Test mode:	Compliance	Verdict:	PASS
Date & Time:	10/13/2009 10:16:47 PM		
Temperature: 24.7 ºC	Air Pressure: 1016 hPa	Relative Humidity: 39 %	Power Supply: 120VAC
Remarks: 40 MHz EBW			

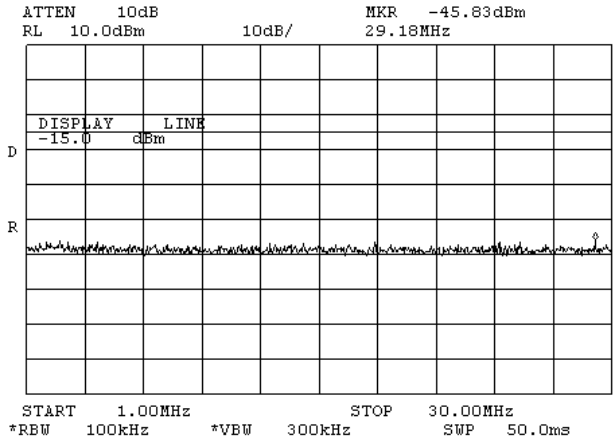
Plot 7.3.138 Spurious emission measurements in 1 - 30 MHz range at low carrier frequency, Antenna 2

CHANNEL BANDWIDTH	40 MHz
MODULATION	64 QAM
BIT RATE	270 Mbps



Plot 7.3.139 Spurious emission measurements in 1 - 30 MHz range at mid carrier frequency, Antenna 2

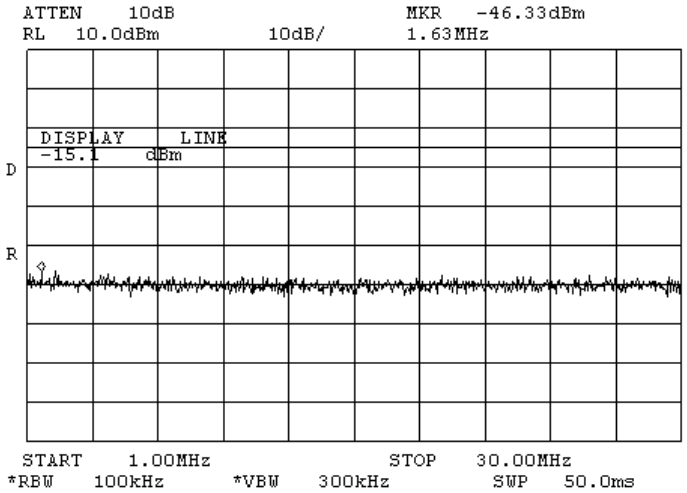
CHANNEL BANDWIDTH	40 MHz
MODULATION	64 QAM
BIT RATE	270 Mbps



Test specification:	Section 15.247(d), RSS-210 section A8.5, Conducted spurious emissions		
Test procedure:	FCC New Guidance on Measurements for DTS in section 15.247(c)		
Test mode:	Compliance	Verdict:	PASS
Date & Time:	10/13/2009 10:16:47 PM		
Temperature: 24.7 ºC	Air Pressure: 1016 hPa	Relative Humidity: 39 %	Power Supply: 120VAC
Remarks: 40 MHz EBW			

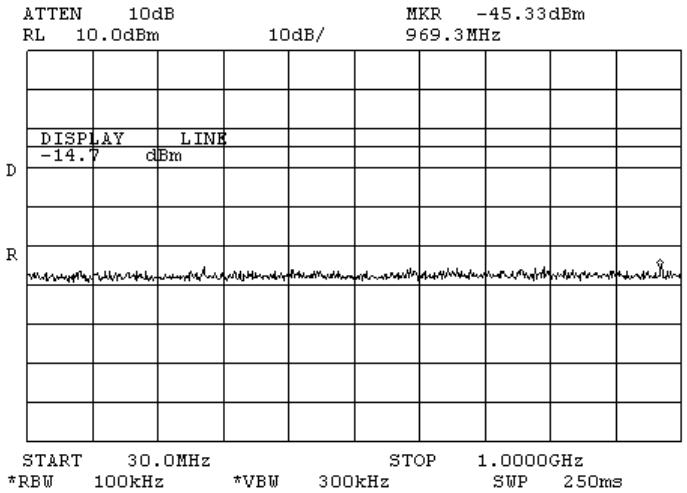
Plot 7.3.140 Spurious emission measurements in 1 - 30 MHz range at high carrier frequency, Antenna 2

CHANNEL BANDWIDTH	40 MHz
MODULATION	64 QAM
BIT RATE	270 Mbps



Plot 7.3.141 Spurious emission measurements in 30 - 1000 MHz range at low carrier frequency, Antenna 2

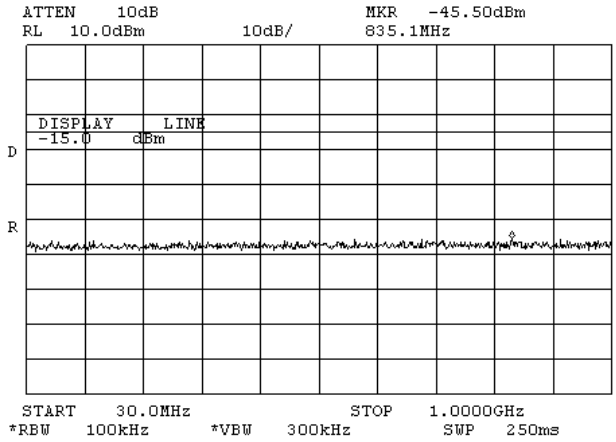
CHANNEL BANDWIDTH	40 MHz
MODULATION	64 QAM
BIT RATE	270 Mbps



Test specification:	Section 15.247(d), RSS-210 section A8.5, Conducted spurious emissions		
Test procedure:	FCC New Guidance on Measurements for DTS in section 15.247(c)		
Test mode:	Compliance	Verdict:	PASS
Date & Time:	10/13/2009 10:16:47 PM		
Temperature: 24.7 ºC	Air Pressure: 1016 hPa	Relative Humidity: 39 %	Power Supply: 120VAC
Remarks: 40 MHz EBW			

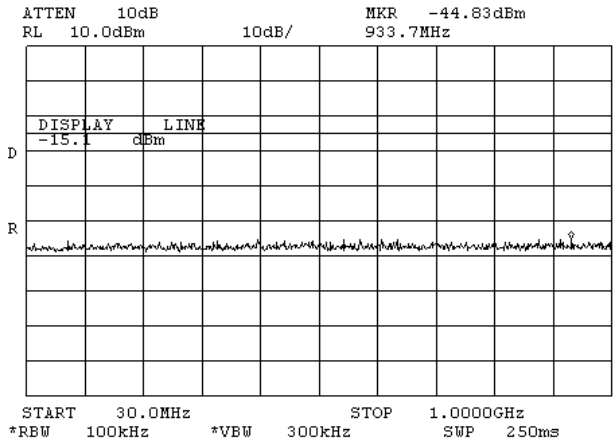
Plot 7.3.142 Spurious emission measurements in 30 - 1000 MHz range at mid carrier frequency, Antenna 2

CHANNEL BANDWIDTH	40 MHz
MODULATION	64 QAM
BIT RATE	270 Mbps



Plot 7.3.143 Spurious emission measurements in 30 - 1000 MHz range at high carrier frequency, Antenna 2

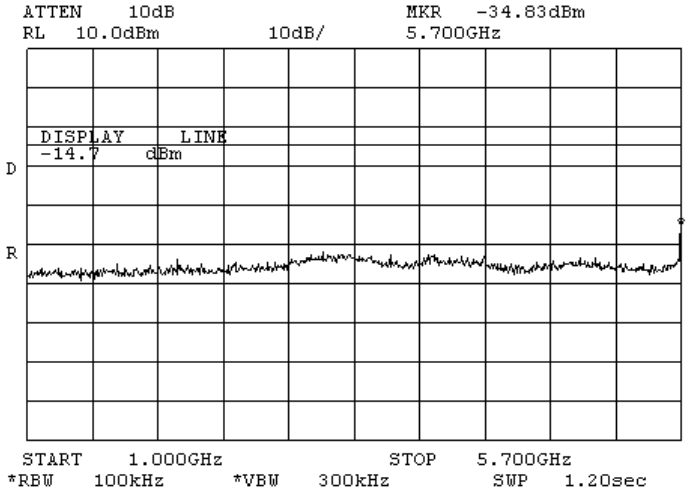
CHANNEL BANDWIDTH	40 MHz
MODULATION	64 QAM
BIT RATE	270 Mbps



Test specification:	Section 15.247(d), RSS-210 section A8.5, Conducted spurious emissions		
Test procedure:	FCC New Guidance on Measurements for DTS in section 15.247(c)		
Test mode:	Compliance	Verdict:	PASS
Date & Time:	10/13/2009 10:16:47 PM		
Temperature: 24.7 ºC	Air Pressure: 1016 hPa	Relative Humidity: 39 %	Power Supply: 120VAC
Remarks: 40 MHz EBW			

Plot 7.3.144 Spurious emission measurements in 1000 – 5700 MHz range at low carrier frequency, Antenna 2

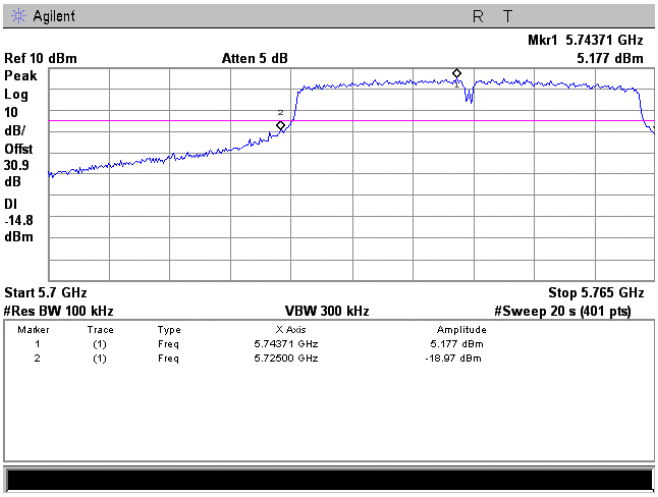
CHANNEL BANDWIDTH	40 MHz
MODULATION	64 QAM
BIT RATE	270 Mbps



Test specification:	Section 15.247(d), RSS-210 section A8.5, Conducted spurious emissions		
Test procedure:	FCC New Guidance on Measurements for DTS in section 15.247(c)		
Test mode:	Compliance	Verdict:	PASS
Date & Time:	10/13/2009 10:16:47 PM		
Temperature: 24.7 ºC	Air Pressure: 1016 hPa	Relative Humidity: 39 %	Power Supply: 120VAC
Remarks: 40 MHz EBW			

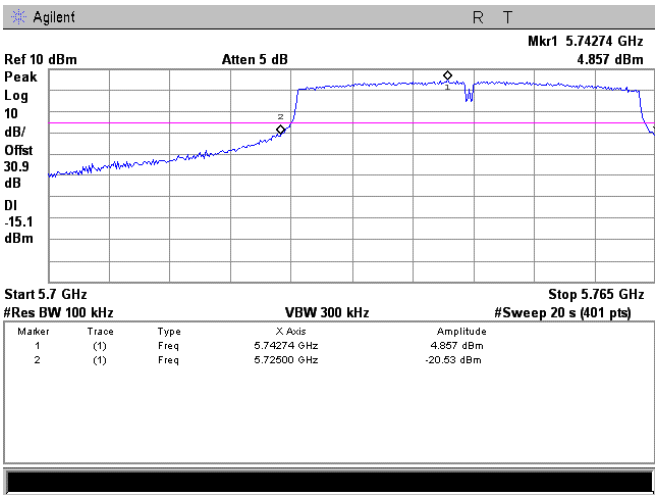
Plot 7.3.145 Spurious emission measurements in 5700 – 5725 MHz range at low carrier frequency, Antenna 2

CHANNEL BANDWIDTH	40MHz
MODULATION	64QAM
BIT RATE	27 Mbps



Plot 7.3.146 Spurious emission measurements in 5700 – 5725 MHz range at low carrier frequency, Antenna 2

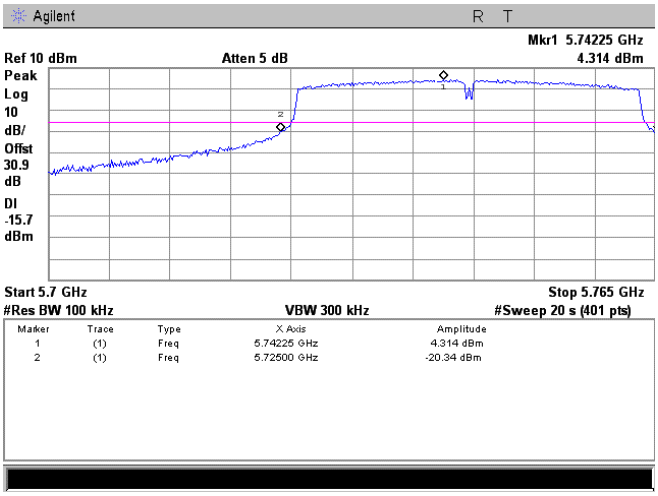
CHANNEL BANDWIDTH	40MHz
MODULATION	BPSK
BIT RATE	54 Mbps



Test specification:	Section 15.247(d), RSS-210 section A8.5, Conducted spurious emissions		
Test procedure:	FCC New Guidance on Measurements for DTS in section 15.247(c)		
Test mode:	Compliance	Verdict:	PASS
Date & Time:	10/13/2009 10:16:47 PM		
Temperature: 24.7 ºC	Air Pressure: 1016 hPa	Relative Humidity: 39 %	Power Supply: 120VAC
Remarks: 40 MHz EBW			

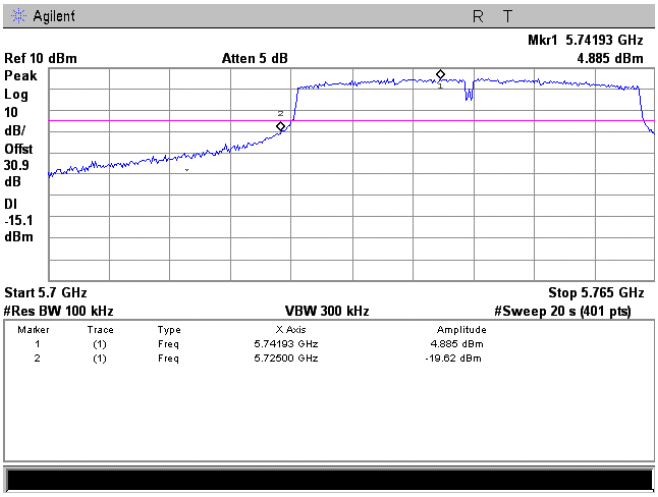
Plot 7.3.147 Spurious emission measurements in 5700 – 5725 MHz range at low carrier frequency, Antenna 2

CHANNEL BANDWIDTH	40MHz
MODULATION	QPSK
BIT RATE	81 Mbps



Plot 7.3.148 Spurious emission measurements in 5700 – 5725 MHz range at low carrier frequency, Antenna 2

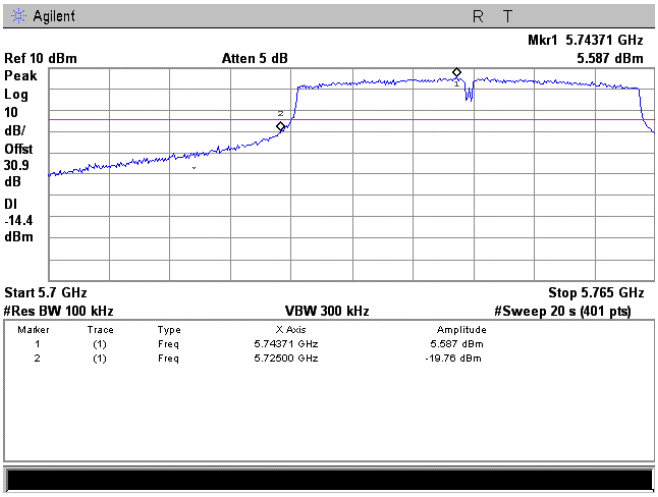
CHANNEL BANDWIDTH	40MHz
MODULATION	QPSK
BIT RATE	108 Mbps



Test specification:	Section 15.247(d), RSS-210 section A8.5, Conducted spurious emissions		
Test procedure:	FCC New Guidance on Measurements for DTS in section 15.247(c)		
Test mode:	Compliance	Verdict:	PASS
Date & Time:	10/13/2009 10:16:47 PM		
Temperature: 24.7 ºC	Air Pressure: 1016 hPa	Relative Humidity: 39 %	Power Supply: 120VAC
Remarks: 40 MHz EBW			

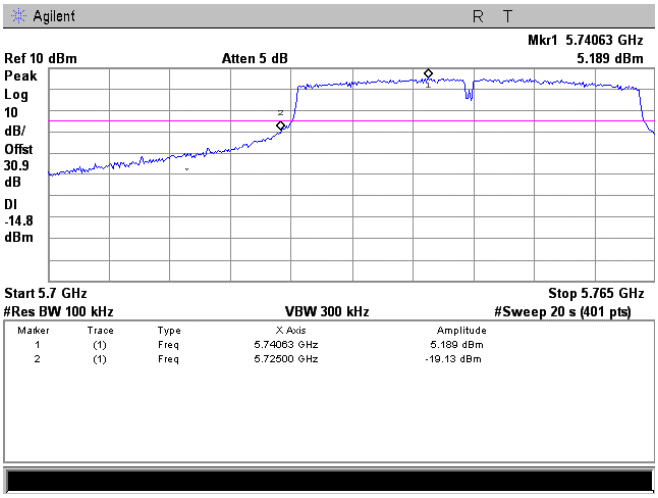
Plot 7.3.149 Spurious emission measurements in 5700 – 5725 MHz range at low carrier frequency, Antenna 2

CHANNEL BANDWIDTH	40MHz
MODULATION	16QAM
BIT RATE	162 Mbps



Plot 7.3.150 Spurious emission measurements in 5700 – 5725 MHz range at low carrier frequency, Antenna 2

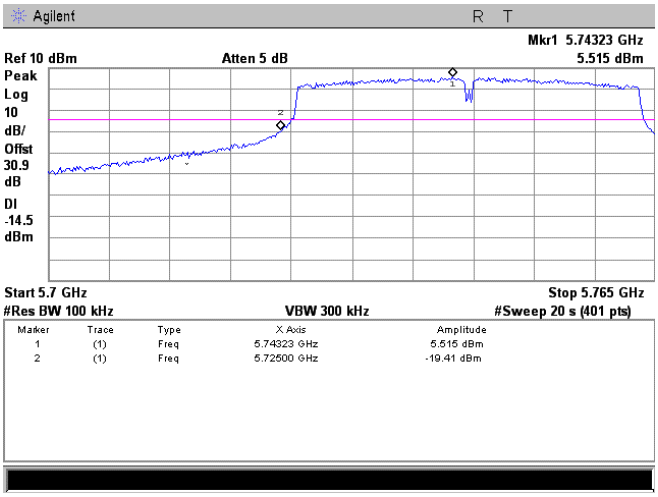
CHANNEL BANDWIDTH	40MHz
MODULATION	16QAM
BIT RATE	216 Mbps



Test specification:	Section 15.247(d), RSS-210 section A8.5, Conducted spurious emissions		
Test procedure:	FCC New Guidance on Measurements for DTS in section 15.247(c)		
Test mode:	Compliance	Verdict:	PASS
Date & Time:	10/13/2009 10:16:47 PM		
Temperature: 24.7 ºC	Air Pressure: 1016 hPa	Relative Humidity: 39 %	Power Supply: 120VAC
Remarks: 40 MHz EBW			

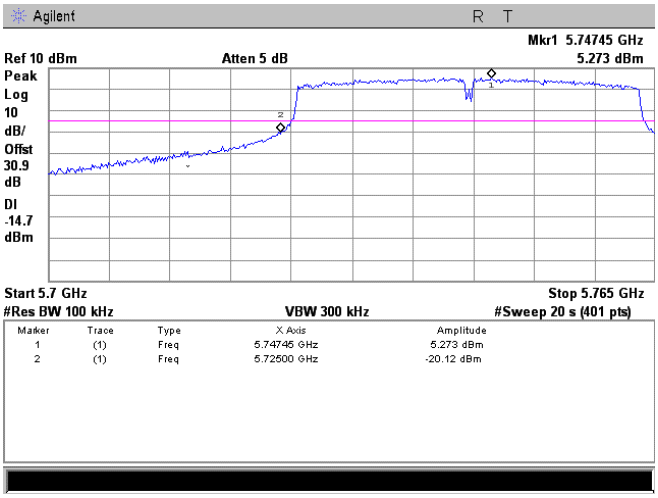
Plot 7.3.151 Spurious emission measurements in 5700 – 5725 MHz range at low carrier frequency, Antenna 2

CHANNEL BANDWIDTH	40MHz
MODULATION	64QAM
BIT RATE	243 Mbps



Plot 7.3.152 Spurious emission measurements in 5700 – 5725 MHz range at low carrier frequency, Antenna 2

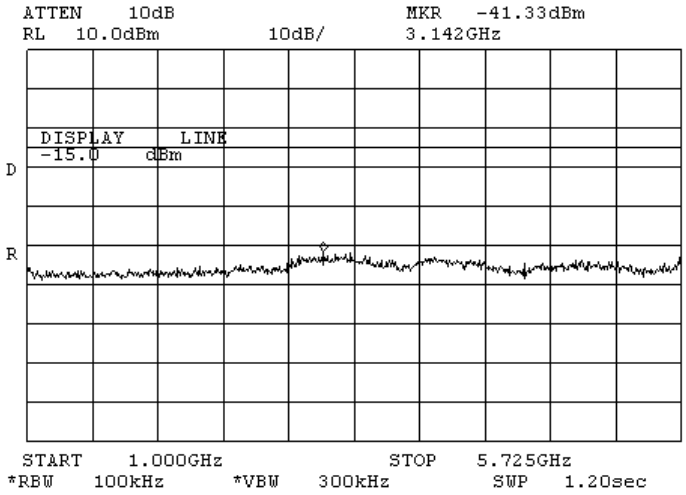
CHANNEL BANDWIDTH	40MHz
MODULATION	64QAM
BIT RATE	270 Mbps



Test specification:	Section 15.247(d), RSS-210 section A8.5, Conducted spurious emissions		
Test procedure:	FCC New Guidance on Measurements for DTS in section 15.247(c)		
Test mode:	Compliance	Verdict:	PASS
Date & Time:	10/13/2009 10:16:47 PM		
Temperature: 24.7 ºC	Air Pressure: 1016 hPa	Relative Humidity: 39 %	Power Supply: 120VAC
Remarks: 40 MHz EBW			

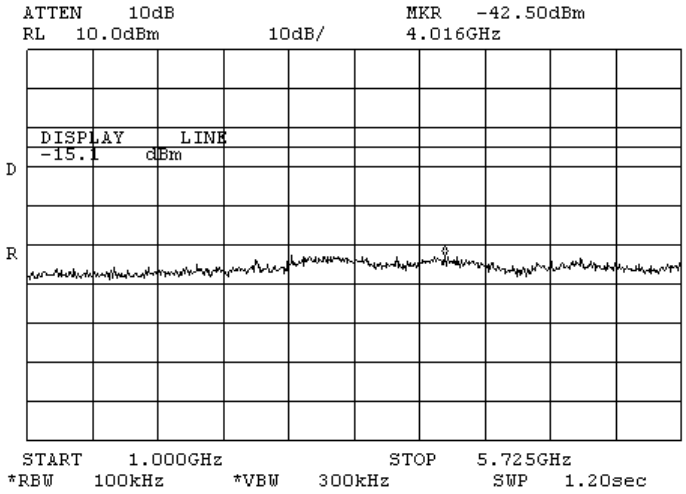
Plot 7.3.153 Spurious emission measurements in 1000 – 5725 MHz range at mid carrier frequency, Antenna 2

CHANNEL BANDWIDTH	40 MHz
MODULATION	64 QAM
BIT RATE	270 Mbps



Plot 7.3.154 Spurious emission measurements in 1000 – 5725 MHz range at high carrier frequency, Antenna 2

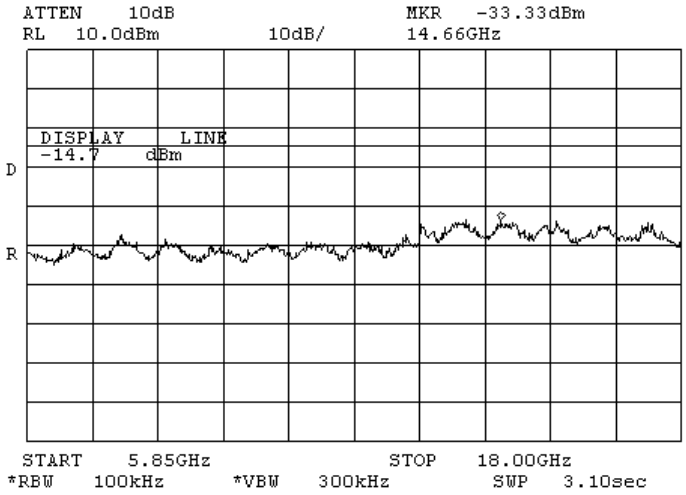
CHANNEL BANDWIDTH	40 MHz
MODULATION	64 QAM
BIT RATE	270 Mbps



Test specification:	Section 15.247(d), RSS-210 section A8.5, Conducted spurious emissions		
Test procedure:	FCC New Guidance on Measurements for DTS in section 15.247(c)		
Test mode:	Compliance	Verdict:	PASS
Date & Time:	10/13/2009 10:16:47 PM		
Temperature: 24.7 ºC	Air Pressure: 1016 hPa	Relative Humidity: 39 %	Power Supply: 120VAC
Remarks: 40 MHz EBW			

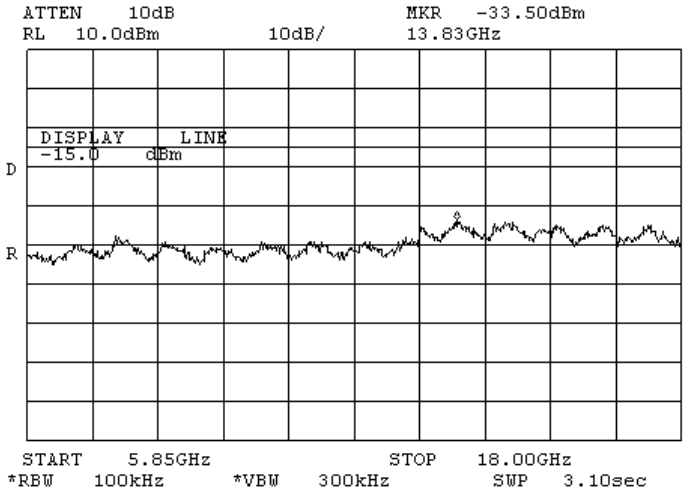
Plot 7.3.155 Spurious emission measurements in 5850 – 18000 MHz range at low carrier frequency, Antenna 2

CHANNEL BANDWIDTH	40 MHz
MODULATION	64 QAM
BIT RATE	270 Mbps



Plot 7.3.156 Spurious emission measurements in 5850 – 18000 MHz range at mid carrier frequency, Antenna 2

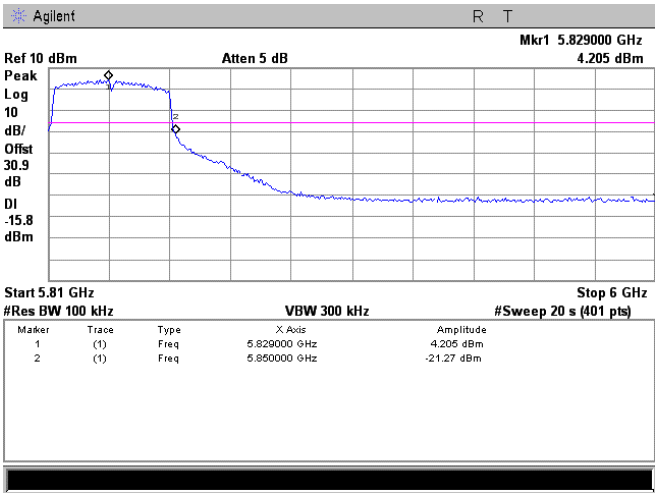
CHANNEL BANDWIDTH	40 MHz
MODULATION	64 QAM
BIT RATE	270 Mbps



Test specification:	Section 15.247(d), RSS-210 section A8.5, Conducted spurious emissions		
Test procedure:	FCC New Guidance on Measurements for DTS in section 15.247(c)		
Test mode:	Compliance	Verdict:	PASS
Date & Time:	10/13/2009 10:16:47 PM		
Temperature: 24.7 ºC	Air Pressure: 1016 hPa	Relative Humidity: 39 %	Power Supply: 120VAC
Remarks: 40 MHz EBW			

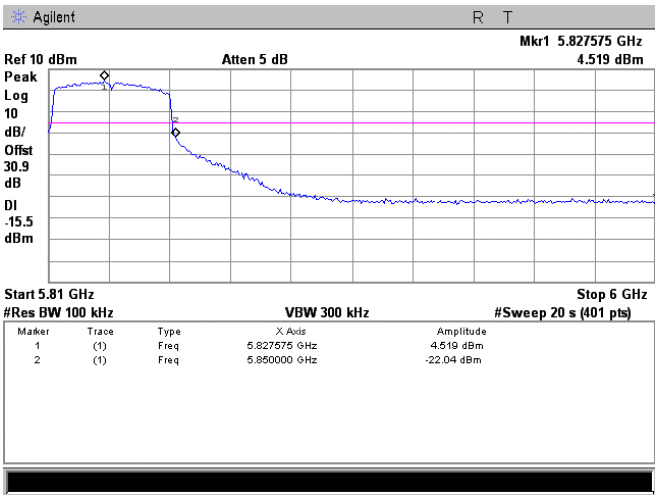
Plot 7.3.157 Spurious emission measurements in 5850 – 6000 MHz range at high carrier frequency, Antenna 2

CHANNEL BANDWIDTH	40 MHz
MODULATION	BPSK
BIT RATE	27 Mbps



Plot 7.3.158 Spurious emission measurements in 5850 – 6000 MHz range at high carrier frequency, Antenna 2

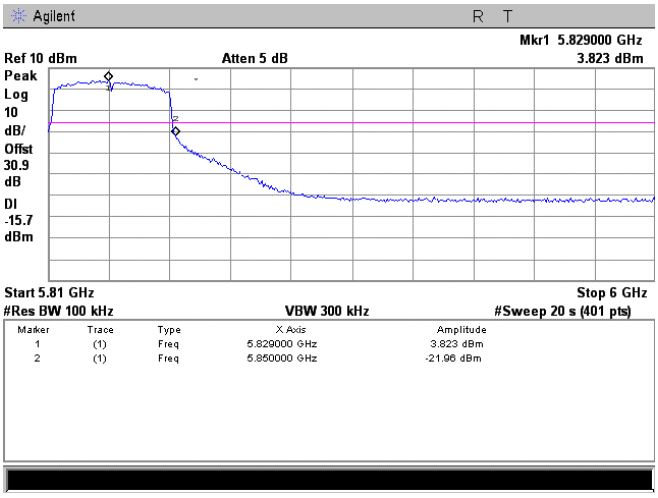
CHANNEL BANDWIDTH	40 MHz
MODULATION	BPSK
BIT RATE	54 Mbps



Test specification:	Section 15.247(d), RSS-210 section A8.5, Conducted spurious emissions		
Test procedure:	FCC New Guidance on Measurements for DTS in section 15.247(c)		
Test mode:	Compliance	Verdict:	PASS
Date & Time:	10/13/2009 10:16:47 PM		
Temperature: 24.7 ºC	Air Pressure: 1016 hPa	Relative Humidity: 39 %	Power Supply: 120VAC
Remarks: 40 MHz EBW			

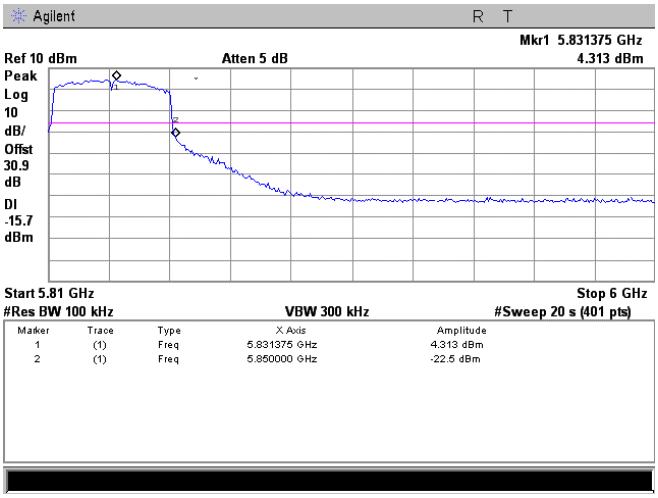
Plot 7.3.159 Spurious emission measurements in 5850 – 6000 MHz range at high carrier frequency, Antenna 2

CHANNEL BANDWIDTH	40 MHz
MODULATION	QPSK
BIT RATE	81 Mbps



Plot 7.3.160 Spurious emission measurements in 5850 – 6000 MHz range at high carrier frequency, Antenna 2

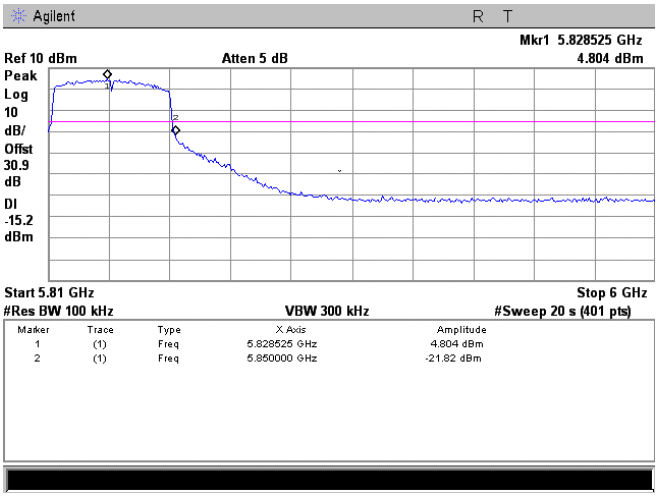
CHANNEL BANDWIDTH	40 MHz
MODULATION	QPSK
BIT RATE	108 Mbps



Test specification:	Section 15.247(d), RSS-210 section A8.5, Conducted spurious emissions		
Test procedure:	FCC New Guidance on Measurements for DTS in section 15.247(c)		
Test mode:	Compliance	Verdict:	PASS
Date & Time:	10/13/2009 10:16:47 PM		
Temperature: 24.7 ºC	Air Pressure: 1016 hPa	Relative Humidity: 39 %	Power Supply: 120VAC
Remarks: 40 MHz EBW			

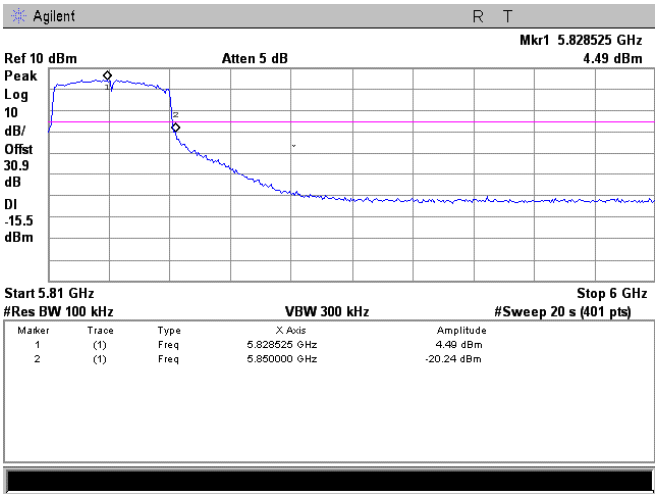
Plot 7.3.161 Spurious emission measurements in 5850 – 6000 MHz range at high carrier frequency, Antenna 2

CHANNEL BANDWIDTH	40 MHz
MODULATION	16QAM
BIT RATE	162 Mbps



Plot 7.3.162 Spurious emission measurements in 5850 – 6000 MHz range at high carrier frequency, Antenna 2

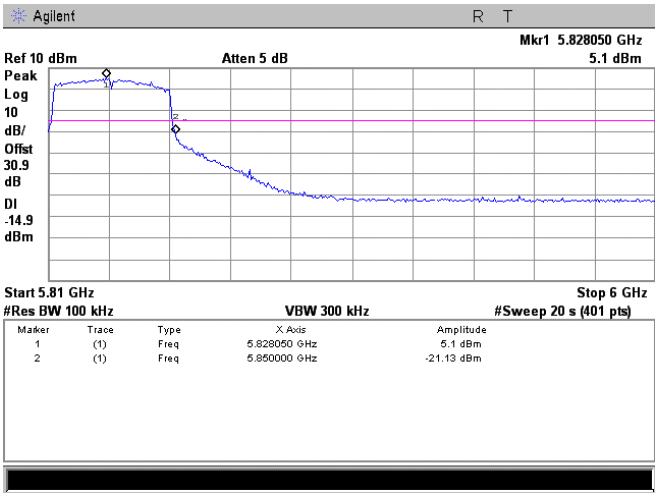
CHANNEL BANDWIDTH	40 MHz
MODULATION	16QAM
BIT RATE	216 Mbps



Test specification:	Section 15.247(d), RSS-210 section A8.5, Conducted spurious emissions		
Test procedure:	FCC New Guidance on Measurements for DTS in section 15.247(c)		
Test mode:	Compliance	Verdict:	PASS
Date & Time:	10/13/2009 10:16:47 PM		
Temperature: 24.7 ºC	Air Pressure: 1016 hPa	Relative Humidity: 39 %	Power Supply: 120VAC
Remarks: 40 MHz EBW			

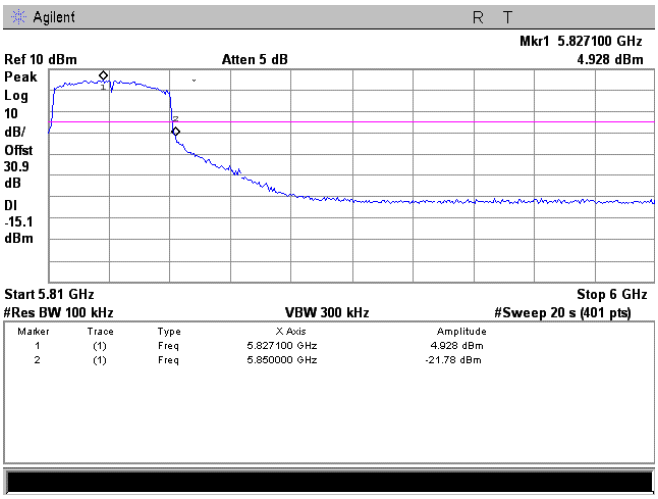
Plot 7.3.163 Spurious emission measurements in 5850 – 6000 MHz range at high carrier frequency, Antenna 2

CHANNEL BANDWIDTH	40 MHz
MODULATION	64QAM
BIT RATE	243 Mbps



Plot 7.3.164 Spurious emission measurements in 5850 – 6000 MHz range at high carrier frequency, Antenna 2

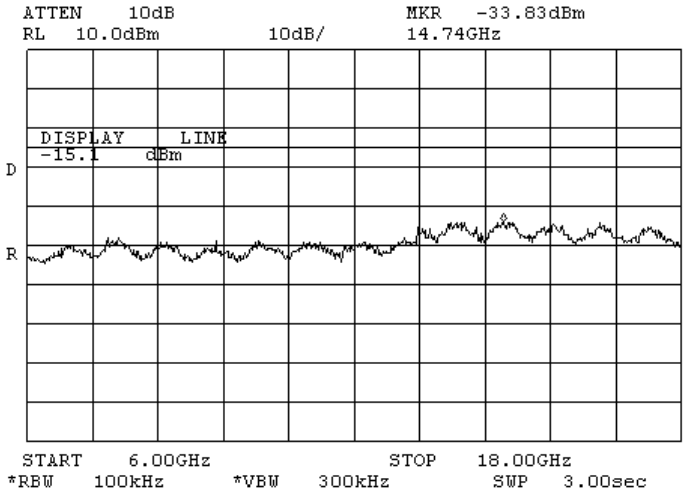
CHANNEL BANDWIDTH	40 MHz
MODULATION	64QAM
BIT RATE	270 Mbps



Test specification:	Section 15.247(d), RSS-210 section A8.5, Conducted spurious emissions		
Test procedure:	FCC New Guidance on Measurements for DTS in section 15.247(c)		
Test mode:	Compliance	Verdict:	PASS
Date & Time:	10/13/2009 10:16:47 PM		
Temperature: 24.7 ºC	Air Pressure: 1016 hPa	Relative Humidity: 39 %	Power Supply: 120VAC
Remarks: 40 MHz EBW			

Plot 7.3.165 Spurious emission measurements in 6000 – 18000 MHz range at high carrier frequency, Antenna 2

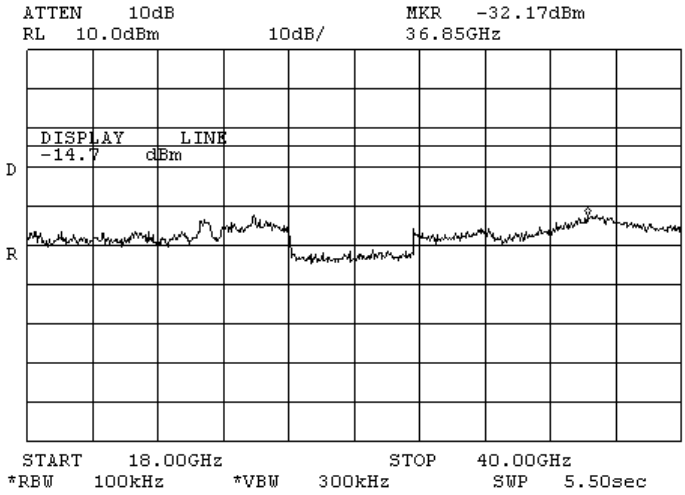
CHANNEL BANDWIDTH	40 MHz
MODULATION	64 QAM
BIT RATE	270 Mbps



Test specification:	Section 15.247(d), RSS-210 section A8.5, Conducted spurious emissions		
Test procedure:	FCC New Guidance on Measurements for DTS in section 15.247(c)		
Test mode:	Compliance	Verdict:	PASS
Date & Time:	10/13/2009 10:16:47 PM		
Temperature: 24.7 ºC	Air Pressure: 1016 hPa	Relative Humidity: 39 %	Power Supply: 120VAC
Remarks: 40 MHz EBW			

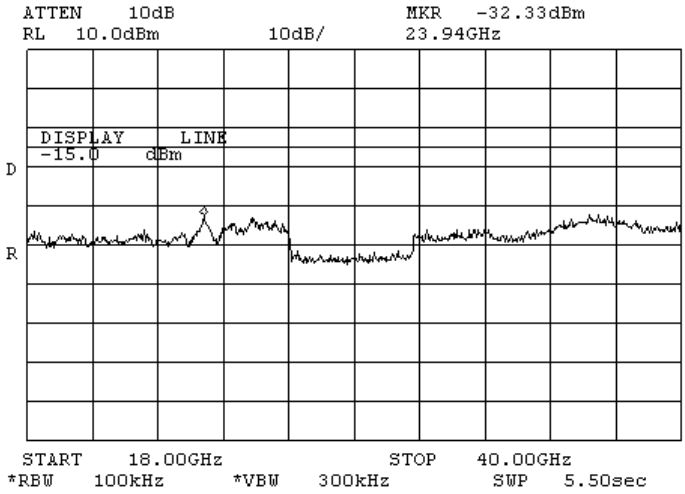
Plot 7.3.166 Spurious emission measurements in 18000 – 40000 MHz range at low carrier frequency, Antenna 2

CHANNEL BANDWIDTH	40 MHz
MODULATION	64 QAM
BIT RATE	270 Mbps



Plot 7.3.167 Spurious emission measurements in 18000 – 40000 MHz range at mid carrier frequency, Antenna 2

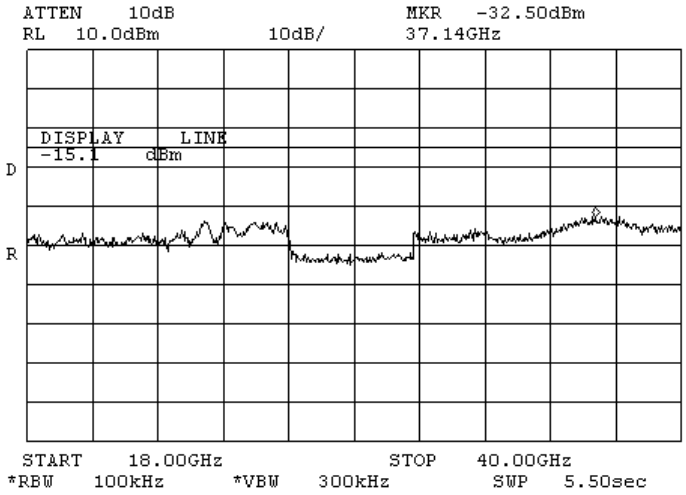
CHANNEL BANDWIDTH	40 MHz
MODULATION	64 QAM
BIT RATE	270 Mbps



Test specification:	Section 15.247(d), RSS-210 section A8.5, Conducted spurious emissions		
Test procedure:	FCC New Guidance on Measurements for DTS in section 15.247(c)		
Test mode:	Compliance	Verdict:	PASS
Date & Time:	10/13/2009 10:16:47 PM		
Temperature: 24.7 ºC	Air Pressure: 1016 hPa	Relative Humidity: 39 %	Power Supply: 120VAC
Remarks: 40 MHz EBW			

Plot 7.3.168 Spurious emission measurements in 18000 – 40000 MHz range at high carrier frequency, Antenna 2

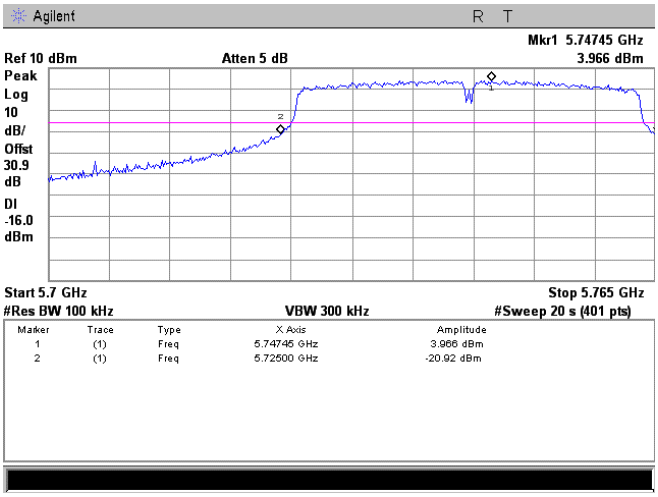
CHANNEL BANDWIDTH	40 MHz
MODULATION	64 QAM
BIT RATE	270 Mbps



Test specification:	Section 15.247(d), RSS-210 section A8.5, Conducted spurious emissions		
Test procedure:	FCC New Guidance on Measurements for DTS in section 15.247(c)		
Test mode:	Compliance	Verdict:	PASS
Date & Time:	10/13/2009 10:16:47 PM		
Temperature: 24.7 ºC	Air Pressure: 1016 hPa	Relative Humidity: 39 %	Power Supply: 120VAC
Remarks: 40 MHz EBW			

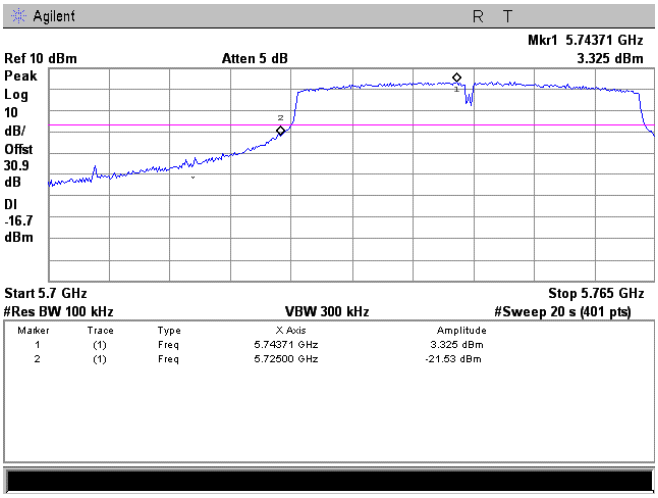
Plot 7.3.169 Spurious emission measurements in 5700 – 5725 MHz range at low carrier frequency, Antenna 1

CHANNEL BANDWIDTH	40MHz
MODULATION	64QAM
BIT RATE	27 Mbps



Plot 7.3.170 Spurious emission measurements in 5700 – 5725 MHz range at low carrier frequency, Antenna 1

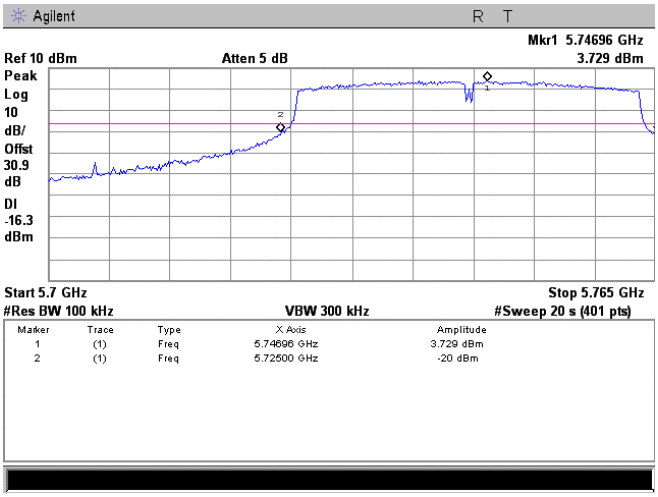
CHANNEL BANDWIDTH	40MHz
MODULATION	BPSK
BIT RATE	54 Mbps



Test specification:	Section 15.247(d), RSS-210 section A8.5, Conducted spurious emissions		
Test procedure:	FCC New Guidance on Measurements for DTS in section 15.247(c)		
Test mode:	Compliance	Verdict:	PASS
Date & Time:	10/13/2009 10:16:47 PM		
Temperature: 24.7 ºC	Air Pressure: 1016 hPa	Relative Humidity: 39 %	Power Supply: 120VAC
Remarks: 40 MHz EBW			

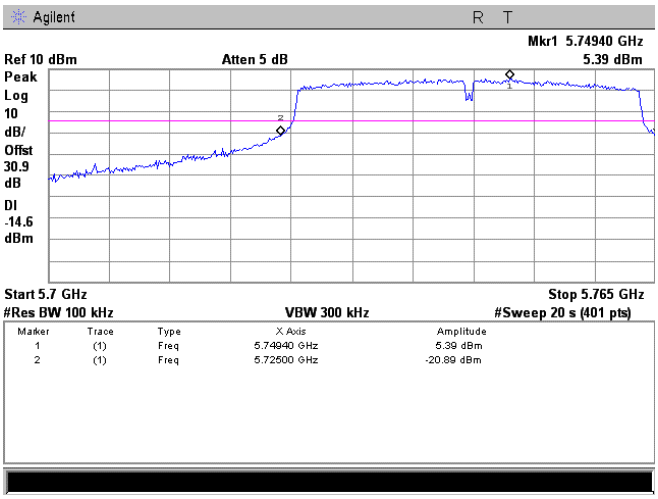
Plot 7.3.171 Spurious emission measurements in 5700 – 5725 MHz range at low carrier frequency, Antenna 1

CHANNEL BANDWIDTH	40MHz
MODULATION	QPSK
BIT RATE	81 Mbps



Plot 7.3.172 Spurious emission measurements in 5700 – 5725 MHz range at low carrier frequency, Antenna 1

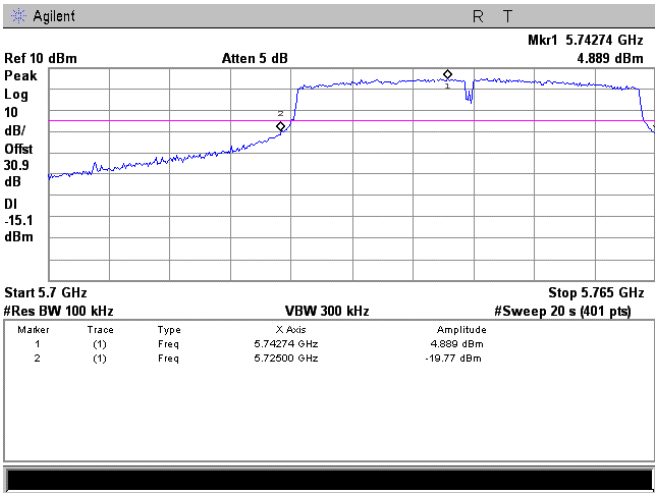
CHANNEL BANDWIDTH	40MHz
MODULATION	QPSK
BIT RATE	108 Mbps



Test specification:	Section 15.247(d), RSS-210 section A8.5, Conducted spurious emissions		
Test procedure:	FCC New Guidance on Measurements for DTS in section 15.247(c)		
Test mode:	Compliance	Verdict:	PASS
Date & Time:	10/13/2009 10:16:47 PM		
Temperature: 24.7 ºC	Air Pressure: 1016 hPa	Relative Humidity: 39 %	Power Supply: 120VAC
Remarks: 40 MHz EBW			

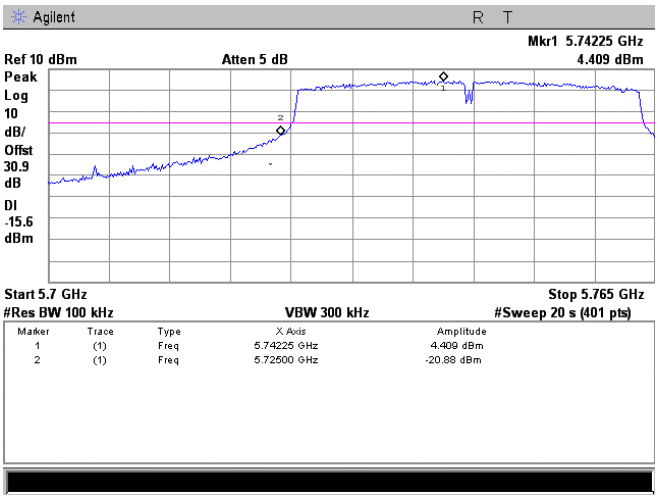
Plot 7.3.173 Spurious emission measurements in 5700 – 5725 MHz range at low carrier frequency, Antenna 1

CHANNEL BANDWIDTH	40MHz
MODULATION	16QAM
BIT RATE	162 Mbps



Plot 7.3.174 Spurious emission measurements in 5700 – 5725 MHz range at low carrier frequency, Antenna 1

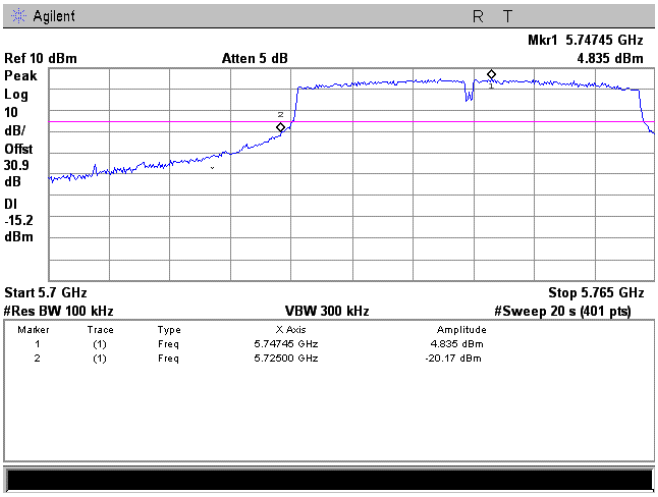
CHANNEL BANDWIDTH	40MHz
MODULATION	16QAM
BIT RATE	216 Mbps



Test specification:	Section 15.247(d), RSS-210 section A8.5, Conducted spurious emissions		
Test procedure:	FCC New Guidance on Measurements for DTS in section 15.247(c)		
Test mode:	Compliance	Verdict:	PASS
Date & Time:	10/13/2009 10:16:47 PM		
Temperature: 24.7 ºC	Air Pressure: 1016 hPa	Relative Humidity: 39 %	Power Supply: 120VAC
Remarks: 40 MHz EBW			

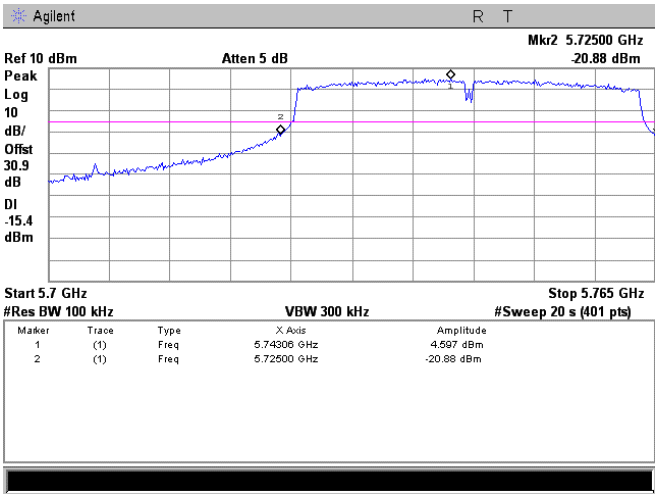
Plot 7.3.175 Spurious emission measurements in 5700 – 5725 MHz range at low carrier frequency, Antenna 1

CHANNEL BANDWIDTH	40MHz
MODULATION	64QAM
BIT RATE	243 Mbps



Plot 7.3.176 Spurious emission measurements in 5700 – 5725 MHz range at low carrier frequency, Antenna 1

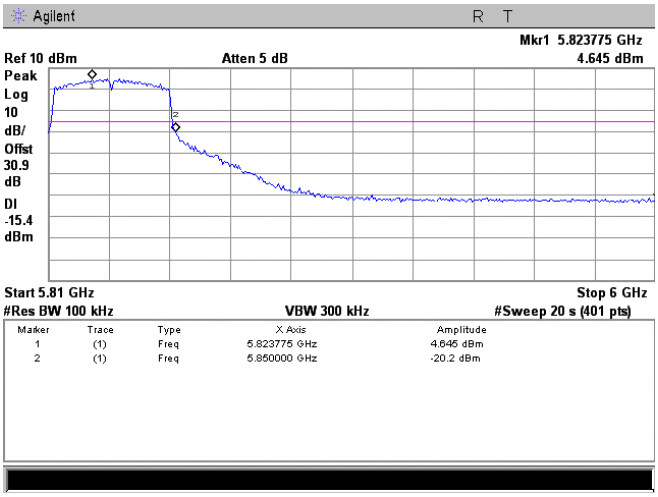
CHANNEL BANDWIDTH	40MHz
MODULATION	64QAM
BIT RATE	270 Mbps



Test specification:	Section 15.247(d), RSS-210 section A8.5, Conducted spurious emissions		
Test procedure:	FCC New Guidance on Measurements for DTS in section 15.247(c)		
Test mode:	Compliance	Verdict:	PASS
Date & Time:	10/13/2009 10:16:47 PM		
Temperature: 24.7 ºC	Air Pressure: 1016 hPa	Relative Humidity: 39 %	Power Supply: 120VAC
Remarks: 40 MHz EBW			

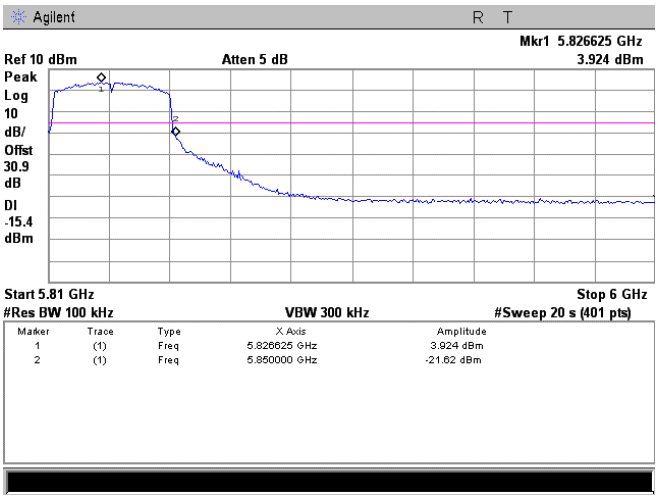
Plot 7.3.177 Spurious emission measurements in 5850 – 6000 MHz range at high carrier frequency, Antenna 1

CHANNEL BANDWIDTH	40 MHz
MODULATION	BPSK
BIT RATE	27 Mbps



Plot 7.3.178 Spurious emission measurements in 5850 – 6000 MHz range at high carrier frequency, Antenna 1

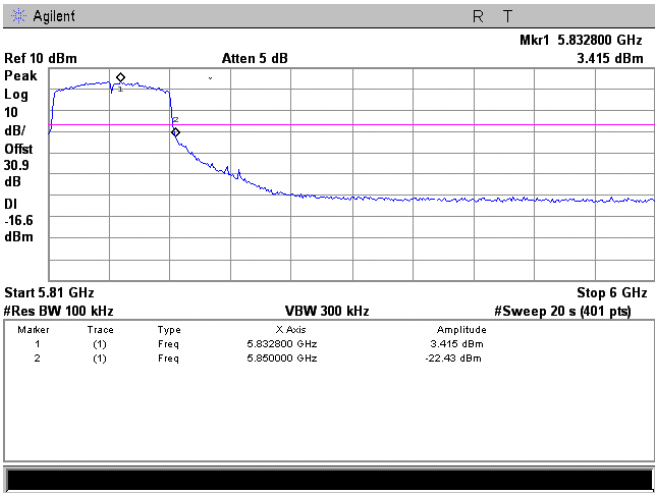
CHANNEL BANDWIDTH	40 MHz
MODULATION	BPSK
BIT RATE	54 Mbps



Test specification:	Section 15.247(d), RSS-210 section A8.5, Conducted spurious emissions		
Test procedure:	FCC New Guidance on Measurements for DTS in section 15.247(c)		
Test mode:	Compliance	Verdict:	PASS
Date & Time:	10/13/2009 10:16:47 PM		
Temperature: 24.7 ºC	Air Pressure: 1016 hPa	Relative Humidity: 39 %	Power Supply: 120VAC
Remarks: 40 MHz EBW			

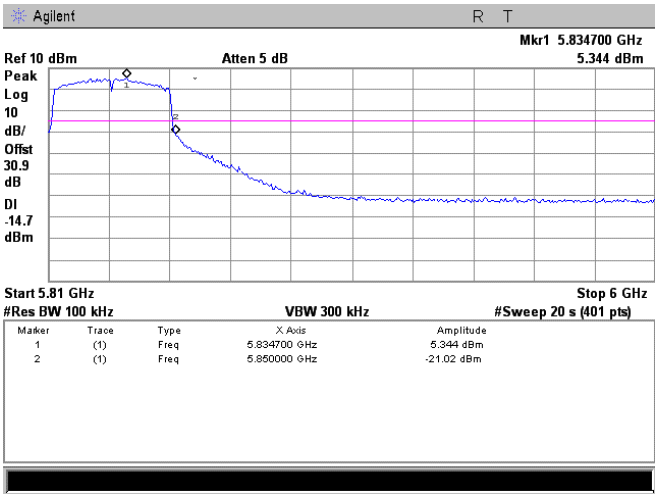
Plot 7.3.179 Spurious emission measurements in 5850 – 6000 MHz range at high carrier frequency, Antenna 1

CHANNEL BANDWIDTH	40 MHz
MODULATION	QPSK
BIT RATE	81 Mbps



Plot 7.3.180 Spurious emission measurements in 5850 – 6000 MHz range at high carrier frequency, Antenna 1

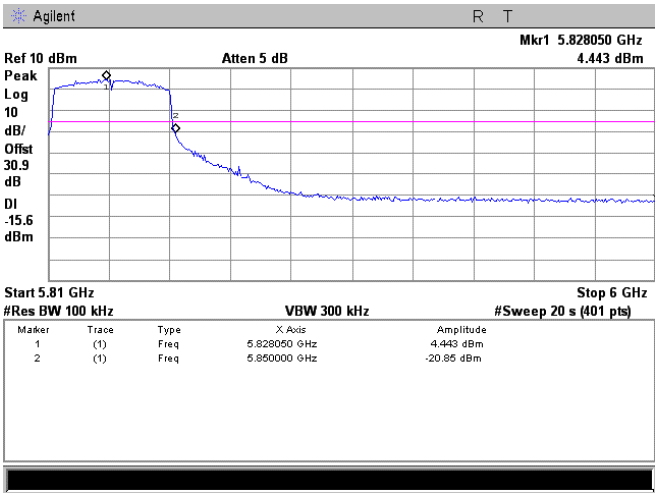
CHANNEL BANDWIDTH	40 MHz
MODULATION	QPSK
BIT RATE	108 Mbps



Test specification:	Section 15.247(d), RSS-210 section A8.5, Conducted spurious emissions		
Test procedure:	FCC New Guidance on Measurements for DTS in section 15.247(c)		
Test mode:	Compliance	Verdict:	PASS
Date & Time:	10/13/2009 10:16:47 PM		
Temperature: 24.7 ºC	Air Pressure: 1016 hPa	Relative Humidity: 39 %	Power Supply: 120VAC
Remarks: 40 MHz EBW			

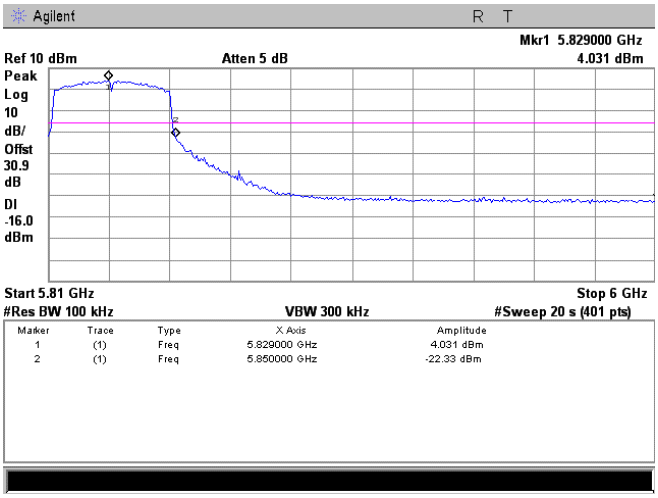
Plot 7.3.181 Spurious emission measurements in 5850 – 6000 MHz range at high carrier frequency, Antenna 1

CHANNEL BANDWIDTH	40 MHz
MODULATION	16QAM
BIT RATE	162 Mbps



Plot 7.3.182 Spurious emission measurements in 5850 – 6000 MHz range at high carrier frequency, Antenna 1

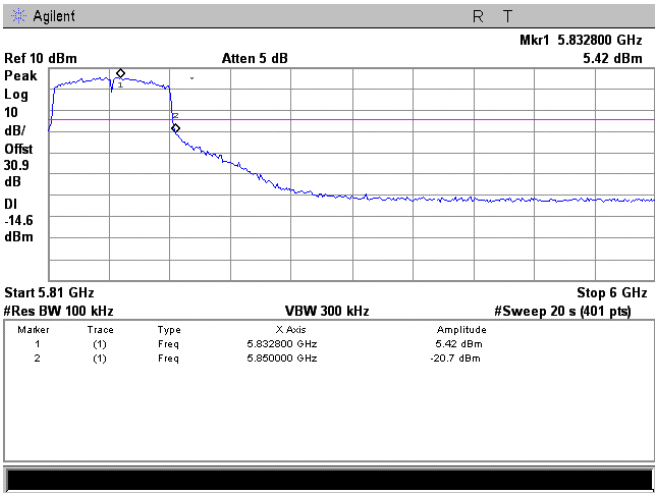
CHANNEL BANDWIDTH	40 MHz
MODULATION	16QAM
BIT RATE	216 Mbps



Test specification:	Section 15.247(d), RSS-210 section A8.5, Conducted spurious emissions		
Test procedure:	FCC New Guidance on Measurements for DTS in section 15.247(c)		
Test mode:	Compliance	Verdict:	PASS
Date & Time:	10/13/2009 10:16:47 PM		
Temperature: 24.7 ºC	Air Pressure: 1016 hPa	Relative Humidity: 39 %	Power Supply: 120VAC
Remarks: 40 MHz EBW			

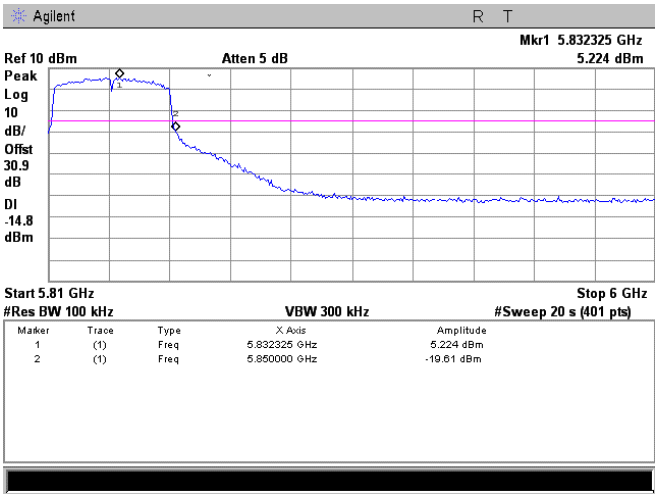
Plot 7.3.183 Spurious emission measurements in 5850 – 6000 MHz range at high carrier frequency, Antenna 1

CHANNEL BANDWIDTH	40 MHz
MODULATION	64QAM
BIT RATE	243 Mbps



Plot 7.3.184 Spurious emission measurements in 5850 – 6000 MHz range at high carrier frequency, Antenna 1

CHANNEL BANDWIDTH	40 MHz
MODULATION	64QAM
BIT RATE	270 Mbps



Test specification:	Section 15.247(d), RSS-210 section A8.5, Radiated spurious emissions		
Test procedure:	FCC New Guidance on Measurements for DTS in section 15.247(c)/ANSI C63.4, Section 13.1.4		
Test mode:	Compliance	Verdict:	PASS
Date & Time:	10/14/2009 5:28:18 PM		
Temperature: 25.7 ºC	Air Pressure: 1013 hPa	Relative Humidity: 37 %	Power Supply: 120VAC
Remarks: External dish antenna with 29 dBi gain			

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.

Table 7.4.1 Radiated spurious emissions limits

Frequency, MHz	Field strength at 3 m within restricted bands, dB(μV/m)*			Attenuation of field strength of spurious versus carrier outside restricted bands, dBc***
	Peak	Quasi Peak	Average	
0.009 – 0.090	148.5 – 128.5	NA	128.5 – 108.5**	20.0
0.090 – 0.110	NA	108.5 – 106.8**	NA	
0.110 – 0.490	126.8 – 113.8	NA	106.8 – 93.8**	
0.490 – 1.705	NA	73.8 – 63.0**	NA	
1.705 – 30.0*		69.5		
30 – 88		40.0		
88 – 216		43.5		
216 – 960		46.0		
960 - 1000		54.0		
1000 – 10th harmonic	74.0	NA	54.0	

*- The limit for 3 m test distance was calculated using the inverse square distance extrapolation factor as follows:

$$Lim_{S2} = Lim_{S1} + 40 \log (S_1/S_2),$$

where S_1 and S_2 – 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.

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 360^0 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 360^0, 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 15.247(d), RSS-210 section A8.5, Radiated spurious emissions		
Test procedure:	FCC New Guidance on Measurements for DTS in section 15.247(c)/ANSI C63.4, Section 13.1.4		
Test mode:	Compliance	Verdict:	PASS
Date & Time:	10/14/2009 5:28:18 PM		
Temperature: 25.7 ºC	Air Pressure: 1013 hPa	Relative Humidity: 37 %	Power Supply: 120VAC
Remarks: External dish antenna with 29 dBi gain			

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

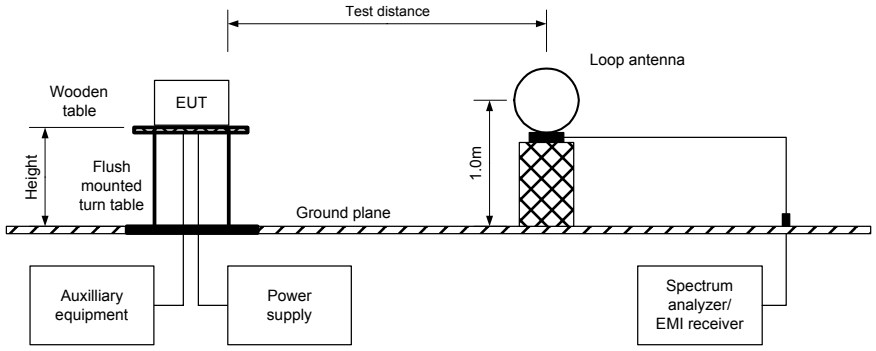
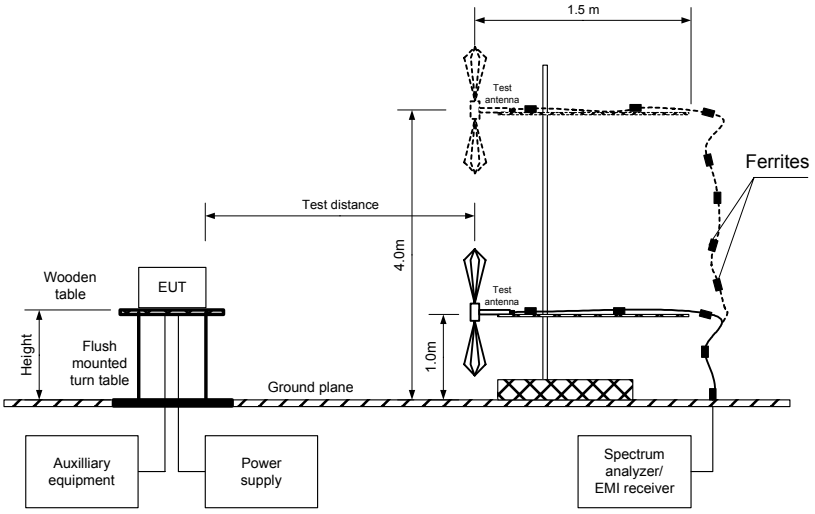


Figure 7.4.2 Setup for spurious emission field strength measurements above 30 MHz



Test specification:	Section 15.247(d), RSS-210 section A8.5, Radiated spurious emissions		
Test procedure:	FCC New Guidance on Measurements for DTS in section 15.247(c)/ANSI C63.4, Section 13.1.4		
Test mode:	Compliance	Verdict:	PASS
Date & Time:	10/14/2009 5:28:18 PM		
Temperature: 25.7 ºC	Air Pressure: 1013 hPa	Relative Humidity: 37 %	Power Supply: 120VAC
Remarks: External dish antenna with 29 dBi gain			

Table 7.4.2 Field strength of emissions outside restricted bands

ASSIGNED FREQUENCY:	5725 - 5850 MHz
INVESTIGATED FREQUENCY RANGE:	0.009 - 40000 MHz
TEST DISTANCE:	3 m
MODULATION:	64QAM
MODULATING SIGNAL:	PRBS
BIT RATE:	65 Mbps
DUTY CYCLE:	100 %
TRANSMITTER OUTPUT POWER SETTINGS:	Maximum
TRANSMITTER OUTPUT POWER:	702 mW at low carrier frequency 626 mW at mid carrier frequency 618 mW at high carrier frequency
DETECTOR USED:	Peak
RESOLUTION BANDWIDTH:	100 kHz
VIDEO BANDWIDTH:	300 kHz
TEST ANTENNA TYPE:	Active loop (9 kHz – 30 MHz) Biconilog (30 MHz – 1000 MHz) Double ridged guide (above 1000 MHz)

Frequency MHz	Field strengtl of spurious, dB(µV/m)	Antenna polarization	Antenna height, m	Azimuth, degrees*	Field strengtl of carrier, dB(µV/m)	Attenuation below carrier, dBc	Limit, dBc	Margin, dB**	Verdict
Low carrier frequency									
All emission were more than 20 dB below the limit									Pass
Mid carrier frequency									
5705.100	62.36	Vert	1.0	0	116.0	53.64	20.0	33.64	Pass
High carrier frequency									
5725.000	67.27	Vert	1.0	0	116.0	48.73	20.0	28.73	Pass

*- EUT front panel refers to 0 degrees position of turntable.
**- Margin = Attenuation below carrier – specification limit.

Test specification:	Section 15.247(d), RSS-210 section A8.5, Radiated spurious emissions		
Test procedure:	FCC New Guidance on Measurements for DTS in section 15.247(c)/ANSI C63.4, Section 13.1.4		
Test mode:	Compliance	Verdict:	PASS
Date & Time:	10/14/2009 5:28:18 PM		
Temperature: 25.7 ºC	Air Pressure: 1013 hPa	Relative Humidity: 37 %	Power Supply: 120VAC
Remarks: External dish antenna with 29 dBi gain			

Table 7.4.3 Field strength of spurious emissions above 1 GHz within restricted bands

ASSIGNED FREQUENCY:	5725 - 5850 MHz
INVESTIGATED FREQUENCY RANGE:	1000 - 40000 MHz
TEST DISTANCE:	3 m
MODULATION:	64QAM
MODULATING SIGNAL:	PRBS
BIT RATE:	65 Mbps
DUTY CYCLE:	100 %
TRANSMITTER OUTPUT POWER SETTINGS:	Maximum
TRANSMITTER OUTPUT POWER:	702 mW at low carrier frequency 626 mW at mid carrier frequency 618 mW at high carrier frequency
DETECTOR USED:	Peak
RESOLUTION BANDWIDTH:	1000 kHz
TEST ANTENNA TYPE:	Double ridged guide

Frequency MHz	Antenna Polarization	Antenna Height m	Azimuth degrees*	Peak field strength(VBW=3 MHz Measured dB(µV/m)	Peak field strength(VBW=3 MHz Limit, dB(µV/m	Peak field strength(VBW=3 MHz Margin, dB**	Average field strength(VBW=10 Hz) Measured dB(µV/m)	Average field strength(VBW=10 Hz) Calculated dB(µV/m)	Average field strength(VBW=10 Hz) Limit, dB(µV/m	Average field strength(VBW=10 Hz) Margin dB***	Verdict
Low carrier frequency											
11460.5	Hor	1.0	0	64.81	74.0	-9.19	50.50	50.50	54.0	-3.50	Pass
22911.7	Vert	1.0	0	60.21	74.0	-13.79	41.12	41.12	54.0	-12.88	
Mid carrier frequency											
11555	Hor	1.0	0	65.61	74.0	-8.39	53.44	53.44	54.0	-0.56	Pass
High carrier frequency											
11690	Hor	1.0	0	66.89	74.0	-7.11	53.25	53.25	54.0	-0.75	Pass

*- EUT front panel refers to 0 degrees position of turntable.
**- Margin = Measured field strength - specification limit.
***- Margin = Calculated field strength - specification limit,
where Calculated field strength = Measured field strength + average factor.

Table 7.4.4 Average factor calculation

Transmission pulse		Transmission burst		Transmission train duration, ms	Average factor, dB
Duration, ms	Period, ms	Duration, ms	Period, ms		
Duty cycle 100%					0

*- Average factor was calculated as follows

for pulse train shorter than 100 ms: $$Average\ factor = 20 \times \log_{10}\left(\frac{Pulse\ duration}{Pulse\ period} \times \frac{Burst\ duration}{Train\ duration} \times Number\ of\ bursts\ within\ pulse\ train\right)$$

for pulse train longer than 100 ms: $$Average\ factor = 20 \times \log_{10}\left(\frac{Pulse\ duration}{Pulse\ period} \times \frac{Burst\ duration}{100\,ms} \times Number\ of\ bursts\ within\ 100\,ms\right)$$

Test specification:	Section 15.247(d), RSS-210 section A8.5, Radiated spurious emissions		
Test procedure:	FCC New Guidance on Measurements for DTS in section 15.247(c)/ANSI C63.4, Section 13.1.4		
Test mode:	Compliance	Verdict:	PASS
Date & Time:	10/14/2009 5:28:18 PM		
Temperature: 25.7 ºC	Air Pressure: 1013 hPa	Relative Humidity: 37 %	Power Supply: 120VAC
Remarks: External dish antenna with 29 dBi gain			

Table 7.4.5 Field strength of spurious emissions below 1 GHz within restricted bands

ASSIGNED FREQUENCY:	5725 - 5850 MHz
INVESTIGATED FREQUENCY RANGE:	0.009 – 1000 MHz
TEST DISTANCE:	3 m
MODULATION:	64QAM
MODULATING SIGNAL:	PRBS
BIT RATE:	65 Mbps
DUTY CYCLE:	100 %
TRANSMITTER OUTPUT POWER SETTINGS:	Maximum
TRANSMITTER OUTPUT POWER:	702 mW at low carrier frequency 626 mW at mid carrier frequency 618 mW at high carrier frequency
RESOLUTION BANDWIDTH:	1 kHz (9 kHz – 150 kHz) 9.0 kHz (150 kHz – 30 MHz) 120 kHz (30 MHz – 1000 MHz)
VIDEO BANDWIDTH:	> Resolution bandwidth
TEST ANTENNA TYPE:	Active loop (9 kHz – 30 MHz) Biconilog (30 MHz – 1000 MHz)

Frequency MHz	Peak emission, dB(µV/m)	Quasi-peak			Antenna polarization	Antenna height, m	Turn-table position**, degrees	Verdict
		Measured emission, dB(µV/m)	Limit, dB(µV/m)	Margin, dB*				
Low carrier frequency								
974.63550	47.1	45.4	54.0	-8.60	Vert	1.1	330	Pass
Mid carrier frequency								
974.63550	46.8	45.2	54.0	-8.80	Vert	1.1	330	Pass
High carrier frequency								
974.63550	47.2	45.6	54.0	-8.40	Vert	1.1	330	Pass

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

Table 7.4.6 Restricted bands

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

Reference numbers of test equipment used

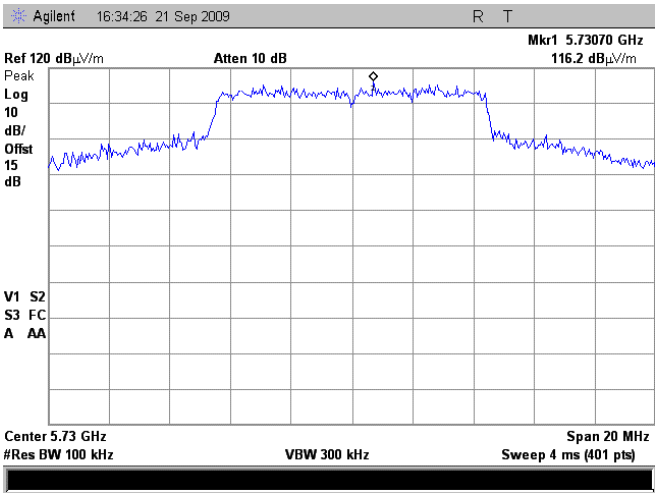
HL 0446	HL 0521	HL 0604	HL 0768	HL 0769	HL 1424	HL 1984	HL 2254
HL 2780	HL 2882	HL 3123	HL 3531	HL 3533	HL 3535	HL 3616	

Full description is given in Appendix A.

Test specification:	Section 15.247(d), RSS-210 section A8.5, Radiated spurious emissions		
Test procedure:	FCC New Guidance on Measurements for DTS in section 15.247(c)/ANSI C63.4, Section 13.1.4		
Test mode:	Compliance	Verdict:	PASS
Date & Time:	10/14/2009 5:28:18 PM		
Temperature: 25.7 ºC	Air Pressure: 1013 hPa	Relative Humidity: 37 %	Power Supply: 120VAC
Remarks: External dish antenna with 29 dBi gain			

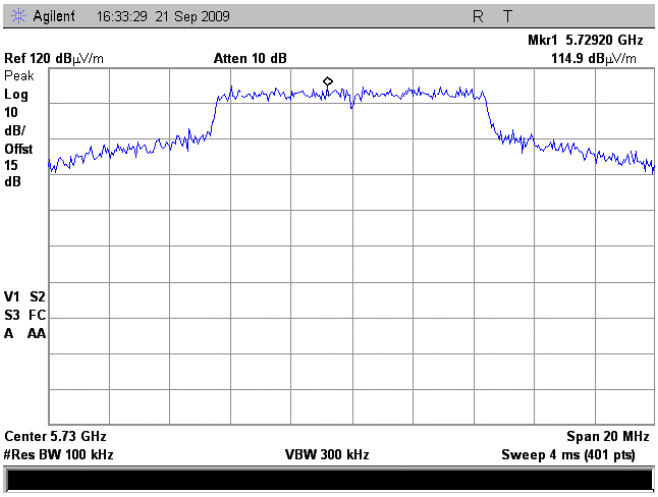
Plot 7.4.1 Radiated emission measurements at the low carrier frequency

TEST SITE: OATS
TEST DISTANCE: 3 m
ANTENNA POLARIZATION: Vertical
MODULATION/BIT RATE: 64QAM, 65 Mbps



Plot 7.4.2 Radiated emission measurements at the low carrier frequency

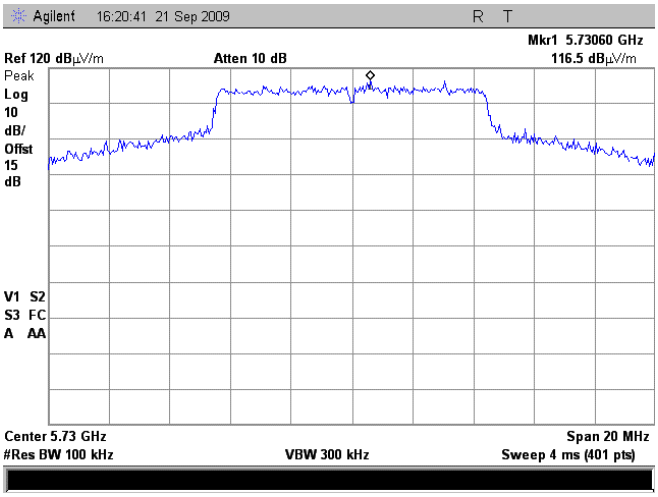
TEST SITE: OATS
TEST DISTANCE: 3 m
ANTENNA POLARIZATION: Vertical
MODULATION/BIT RATE: BPSK, 6.5 Mbps



Test specification:	Section 15.247(d), RSS-210 section A8.5, Radiated spurious emissions		
Test procedure:	FCC New Guidance on Measurements for DTS in section 15.247(c)/ANSI C63.4, Section 13.1.4		
Test mode:	Compliance	Verdict:	PASS
Date & Time:	10/14/2009 5:28:18 PM		
Temperature: 25.7 ºC	Air Pressure: 1013 hPa	Relative Humidity: 37 %	Power Supply: 120VAC
Remarks: External dish antenna with 29 dBi gain			

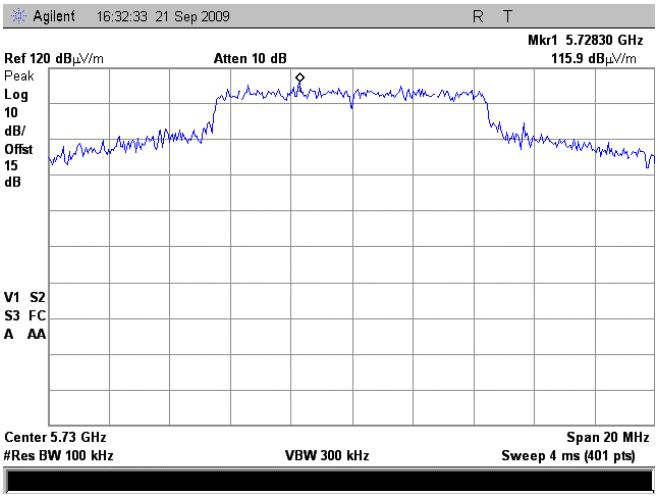
Plot 7.4.3 Radiated emission measurements at the low carrier frequency

TEST SITE: OATS
TEST DISTANCE: 3 m
ANTENNA POLARIZATION: Horizontal
MODULATION/BIT RATE: 64QAM, 65 Mbps



Plot 7.4.4 Radiated emission measurements at the low carrier frequency

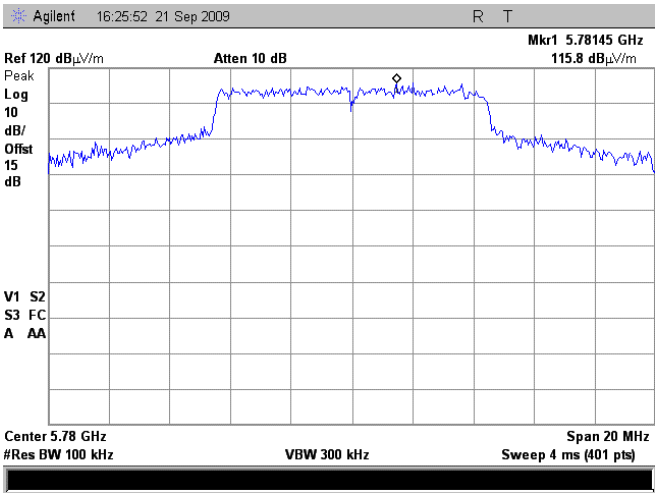
TEST SITE: OATS
TEST DISTANCE: 3 m
ANTENNA POLARIZATION: Horizontal
MODULATION/BIT RATE: BPSK, 6.5 Mbps



Test specification:	Section 15.247(d), RSS-210 section A8.5, Radiated spurious emissions		
Test procedure:	FCC New Guidance on Measurements for DTS in section 15.247(c)/ANSI C63.4, Section 13.1.4		
Test mode:	Compliance	Verdict:	PASS
Date & Time:	10/14/2009 5:28:18 PM		
Temperature: 25.7 ºC	Air Pressure: 1013 hPa	Relative Humidity: 37 %	Power Supply: 120VAC
Remarks: External dish antenna with 29 dBi gain			

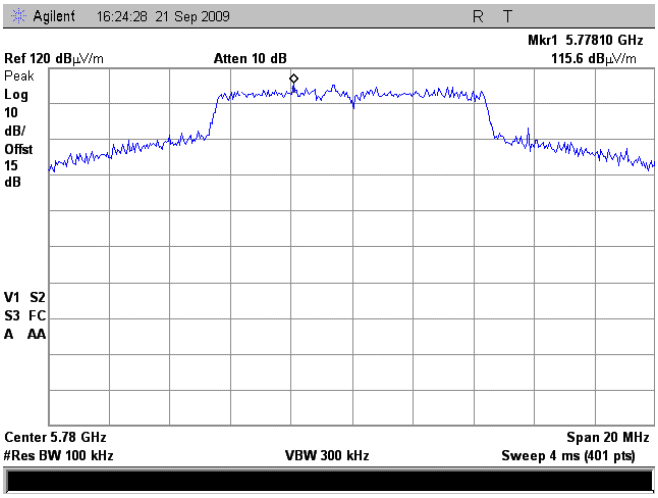
Plot 7.4.5 Radiated emission measurements at the mid carrier frequency

TEST SITE: OATS
TEST DISTANCE: 3 m
ANTENNA POLARIZATION: Vertical
MODULATION/BIT RATE: 64QAM, 65 Mbps



Plot 7.4.6 Radiated emission measurements at the mid carrier frequency

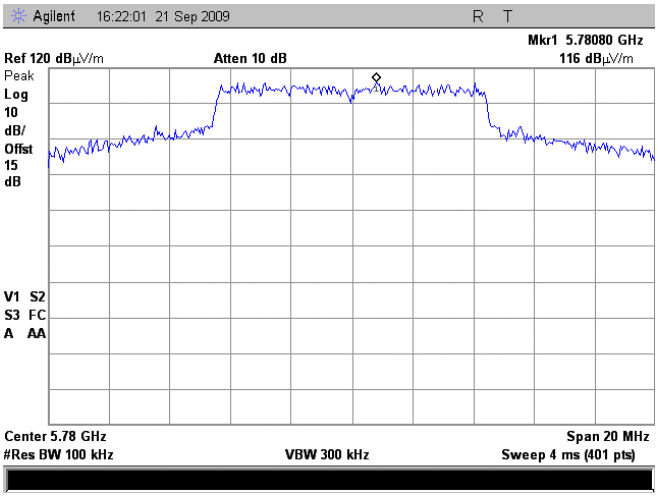
TEST SITE: OATS
TEST DISTANCE: 3 m
ANTENNA POLARIZATION: Vertical
MODULATION/BIT RATE: BPSK, 6.5 Mbps



Test specification:	Section 15.247(d), RSS-210 section A8.5, Radiated spurious emissions		
Test procedure:	FCC New Guidance on Measurements for DTS in section 15.247(c)/ANSI C63.4, Section 13.1.4		
Test mode:	Compliance	Verdict:	PASS
Date & Time:	10/14/2009 5:28:18 PM		
Temperature: 25.7 ºC	Air Pressure: 1013 hPa	Relative Humidity: 37 %	Power Supply: 120VAC
Remarks: External dish antenna with 29 dBi gain			

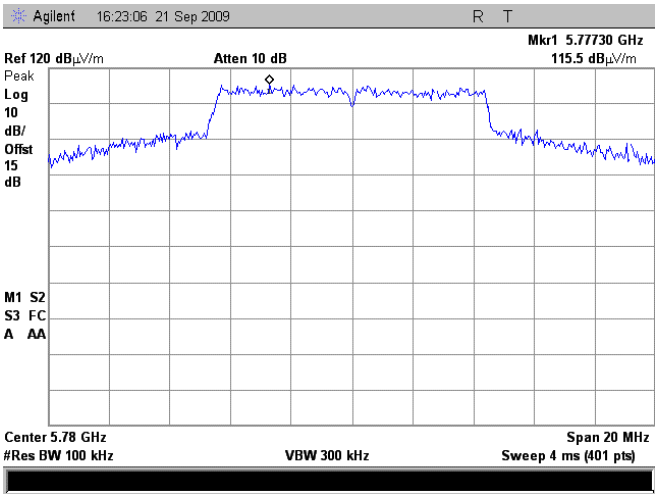
Plot 7.4.7 Radiated emission measurements at the mid carrier frequency

TEST SITE: OATS
TEST DISTANCE: 3 m
ANTENNA POLARIZATION: Horizontal
MODULATION/BIT RATE: 64QAM, 65 Mbps



Plot 7.4.8 Radiated emission measurements at the mid carrier frequency

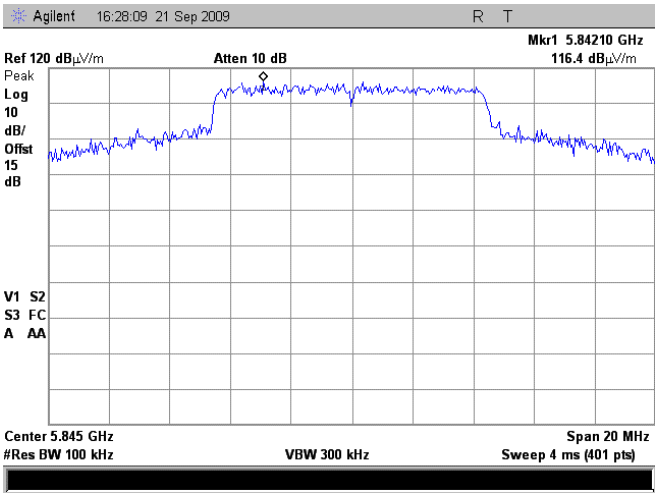
TEST SITE: OATS
TEST DISTANCE: 3 m
ANTENNA POLARIZATION: Horizontal
MODULATION/BIT RATE: BPSK, 6.5 Mbps



Test specification:	Section 15.247(d), RSS-210 section A8.5, Radiated spurious emissions		
Test procedure:	FCC New Guidance on Measurements for DTS in section 15.247(c)/ANSI C63.4, Section 13.1.4		
Test mode:	Compliance	Verdict:	PASS
Date & Time:	10/14/2009 5:28:18 PM		
Temperature: 25.7 ºC	Air Pressure: 1013 hPa	Relative Humidity: 37 %	Power Supply: 120VAC
Remarks: External dish antenna with 29 dBi gain			

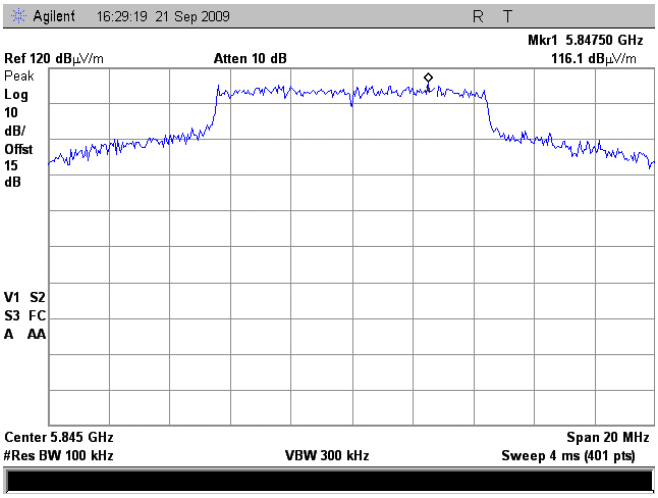
Plot 7.4.9 Radiated emission measurements at the high carrier frequency

TEST SITE: OATS
TEST DISTANCE: 3 m
ANTENNA POLARIZATION: Vertical
MODULATION/BIT RATE: 64QAM, 65 Mbps



Plot 7.4.10 Radiated emission measurements at the high carrier frequency

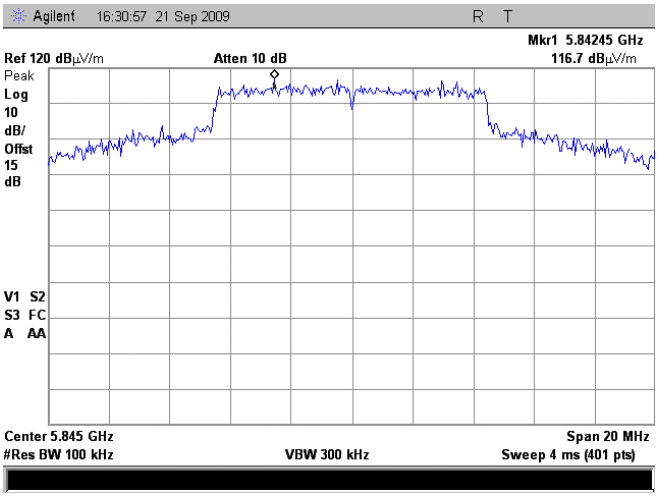
TEST SITE: OATS
TEST DISTANCE: 3 m
ANTENNA POLARIZATION: Vertical
MODULATION/BIT RATE: BPSK, 6.5 Mbps



Test specification:	Section 15.247(d), RSS-210 section A8.5, Radiated spurious emissions		
Test procedure:	FCC New Guidance on Measurements for DTS in section 15.247(c)/ANSI C63.4, Section 13.1.4		
Test mode:	Compliance	Verdict:	PASS
Date & Time:	10/14/2009 5:28:18 PM		
Temperature: 25.7 ºC	Air Pressure: 1013 hPa	Relative Humidity: 37 %	Power Supply: 120VAC
Remarks: External dish antenna with 29 dBi gain			

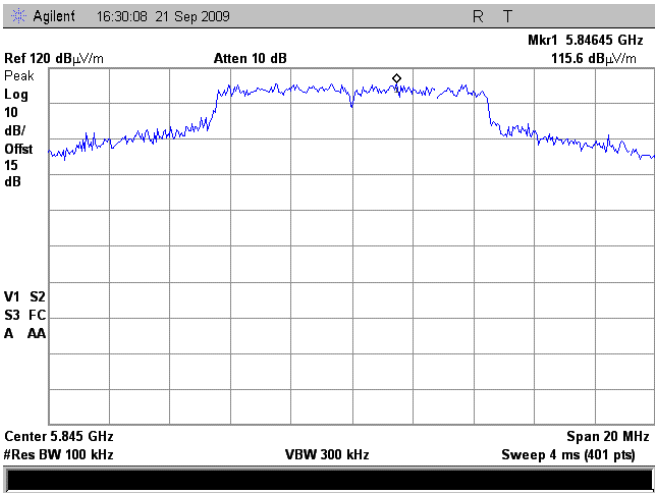
Plot 7.4.11 Radiated emission measurements at the high carrier frequency

TEST SITE: OATS
TEST DISTANCE: 3 m
ANTENNA POLARIZATION: Horizontal
MODULATION/BIT RATE: 64QAM, 65 Mbps



Plot 7.4.12 Radiated emission measurements at the high carrier frequency

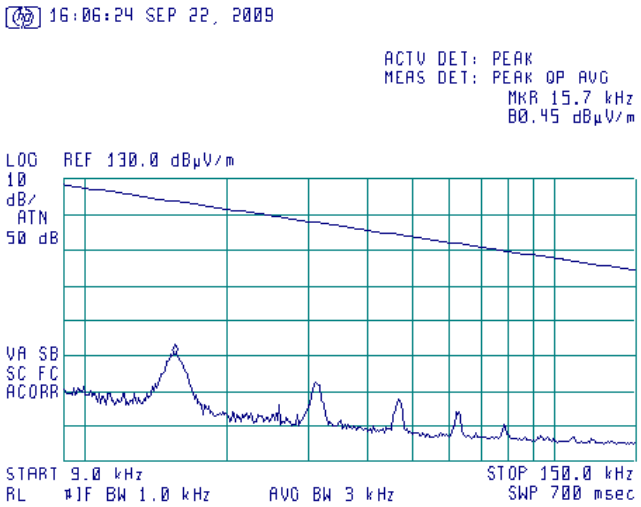
TEST SITE: OATS
TEST DISTANCE: 3 m
ANTENNA POLARIZATION: Horizontal
MODULATION/BIT RATE: BPSK, 6.5 Mbps



Test specification:	Section 15.247(d), RSS-210 section A8.5, Radiated spurious emissions		
Test procedure:	FCC New Guidance on Measurements for DTS in section 15.247(c)/ANSI C63.4, Section 13.1.4		
Test mode:	Compliance	Verdict:	PASS
Date & Time:	10/14/2009 5:28:18 PM		
Temperature: 25.7 ºC	Air Pressure: 1013 hPa	Relative Humidity: 37 %	Power Supply: 120VAC
Remarks: External dish antenna with 29 dBi gain			

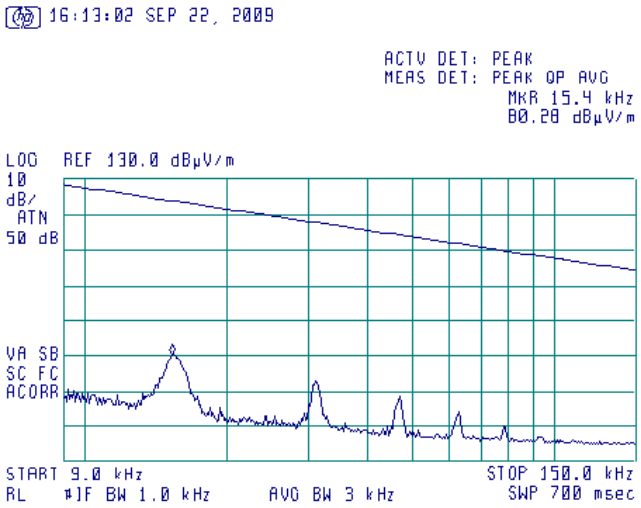
Plot 7.4.13 Radiated emission measurements from 9 to 150 kHz at the low carrier frequency

TEST SITE: Semi anechoic chamber
TEST DISTANCE: 3 m
ANTENNA POLARIZATION: Vertical



Plot 7.4.14 Radiated emission measurements from 9 to 150 kHz at the mid carrier frequency

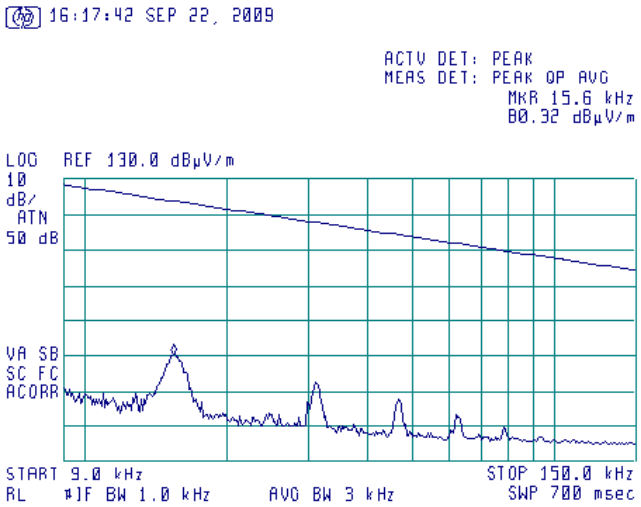
TEST SITE: Semi anechoic chamber
TEST DISTANCE: 3 m
ANTENNA POLARIZATION: Vertical



Test specification:	Section 15.247(d), RSS-210 section A8.5, Radiated spurious emissions		
Test procedure:	FCC New Guidance on Measurements for DTS in section 15.247(c)/ANSI C63.4, Section 13.1.4		
Test mode:	Compliance	Verdict:	PASS
Date & Time:	10/14/2009 5:28:18 PM		
Temperature: 25.7 ºC	Air Pressure: 1013 hPa	Relative Humidity: 37 %	Power Supply: 120VAC
Remarks: External dish antenna with 29 dBi gain			

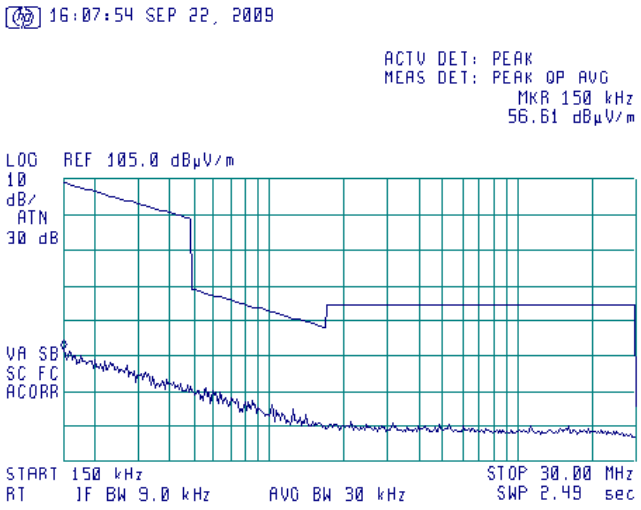
Plot 7.4.15 Radiated emission measurements from 9 to 150 kHz at the high carrier frequency

TEST SITE: Semi anechoic chamber
TEST DISTANCE: 3 m
ANTENNA POLARIZATION: Vertical



Plot 7.4.16 Radiated emission measurements from 0.15 to 30 MHz at the low carrier frequency

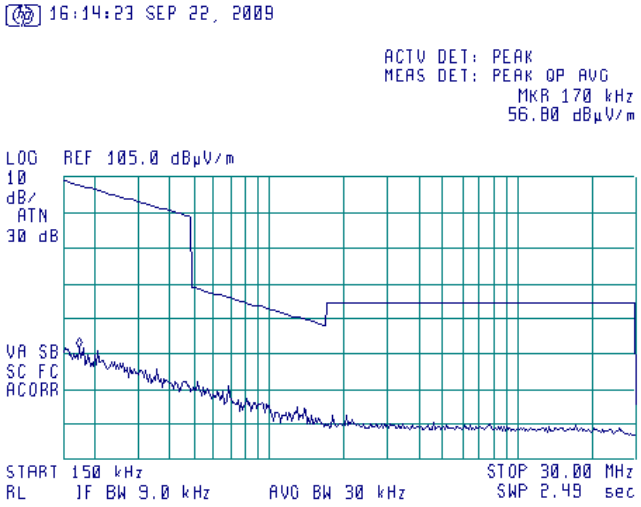
TEST SITE: Semi anechoic chamber
TEST DISTANCE: 3 m
ANTENNA POLARIZATION: Vertical



Test specification:	Section 15.247(d), RSS-210 section A8.5, Radiated spurious emissions		
Test procedure:	FCC New Guidance on Measurements for DTS in section 15.247(c)/ANSI C63.4, Section 13.1.4		
Test mode:	Compliance	Verdict:	PASS
Date & Time:	10/14/2009 5:28:18 PM		
Temperature: 25.7 ºC	Air Pressure: 1013 hPa	Relative Humidity: 37 %	Power Supply: 120VAC
Remarks: External dish antenna with 29 dBi gain			

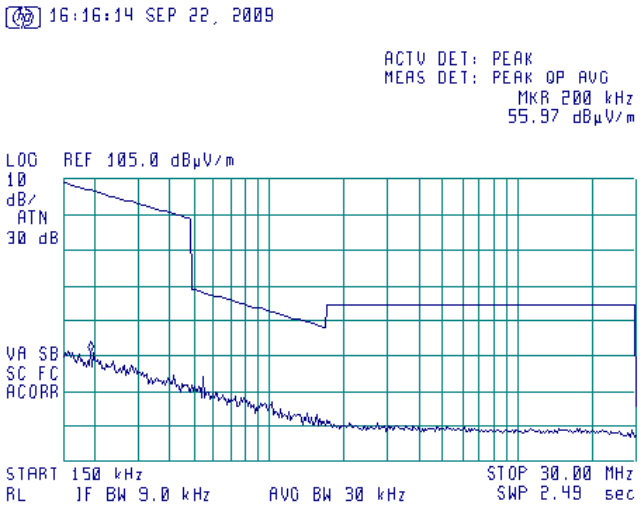
Plot 7.4.17 Radiated emission measurements from 0.15 to 30 MHz at the mid carrier frequency

TEST SITE: Semi anechoic chamber
TEST DISTANCE: 3 m
ANTENNA POLARIZATION: Vertical



Plot 7.4.18 Radiated emission measurements from 0.15 to 30 MHz at the high carrier frequency

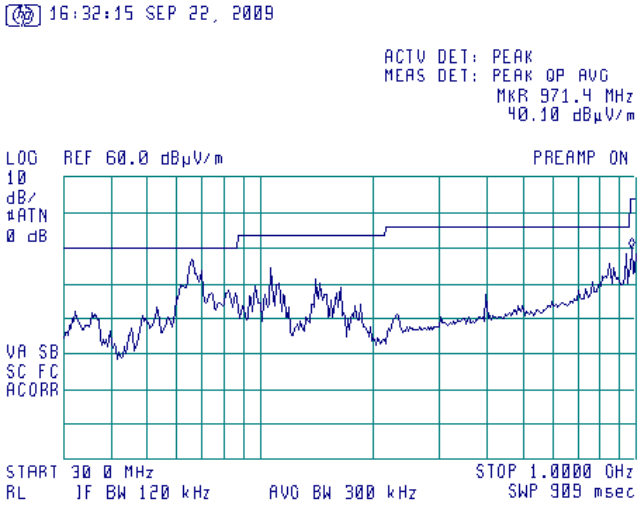
TEST SITE: Semi anechoic chamber
TEST DISTANCE: 3 m
ANTENNA POLARIZATION: Vertical



Test specification:	Section 15.247(d), RSS-210 section A8.5, Radiated spurious emissions		
Test procedure:	FCC New Guidance on Measurements for DTS in section 15.247(c)/ANSI C63.4, Section 13.1.4		
Test mode:	Compliance	Verdict:	PASS
Date & Time:	10/14/2009 5:28:18 PM		
Temperature: 25.7 ºC	Air Pressure: 1013 hPa	Relative Humidity: 37 %	Power Supply: 120VAC
Remarks: External dish antenna with 29 dBi gain			

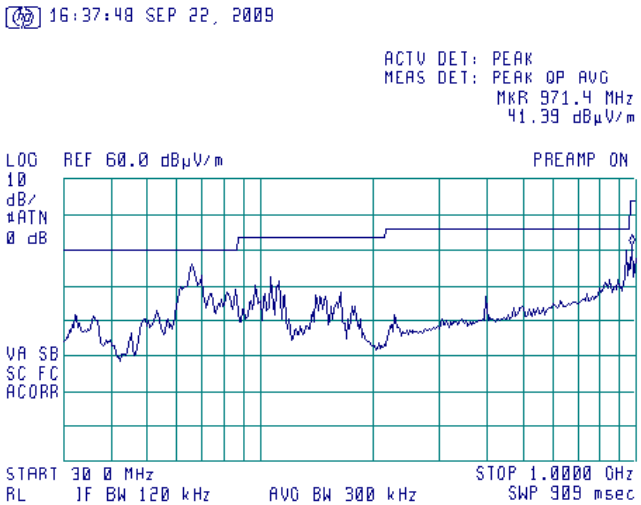
Plot 7.4.19 Radiated emission measurements from 30 to 1000 MHz at the low carrier frequency

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



Plot 7.4.20 Radiated emission measurements from 30 to 1000 MHz at the mid carrier frequency

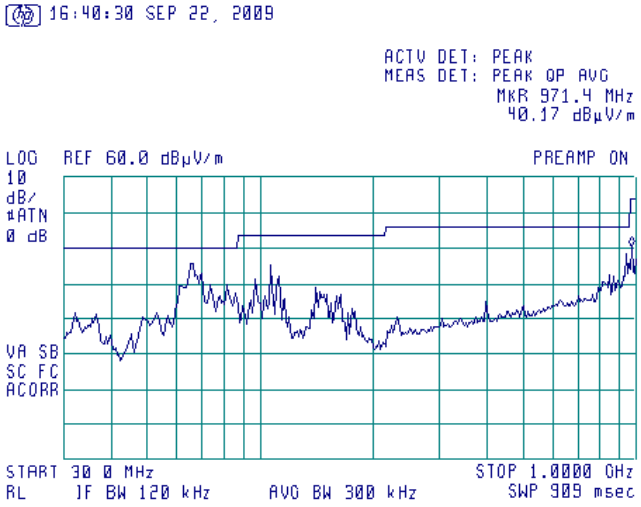
TEST SITE: Semi anechoic chamber
TEST DISTANCE: 3 m
ANTENNA POLARIZATION: Vertical and Horizontal



Test specification:	Section 15.247(d), RSS-210 section A8.5, Radiated spurious emissions		
Test procedure:	FCC New Guidance on Measurements for DTS in section 15.247(c)/ANSI C63.4, Section 13.1.4		
Test mode:	Compliance	Verdict:	PASS
Date & Time:	10/14/2009 5:28:18 PM		
Temperature: 25.7 ºC	Air Pressure: 1013 hPa	Relative Humidity: 37 %	Power Supply: 120VAC
Remarks: External dish antenna with 29 dBi gain			

Plot 7.4.21 Radiated emission measurements from 30 to 1000 MHz at the high carrier frequency

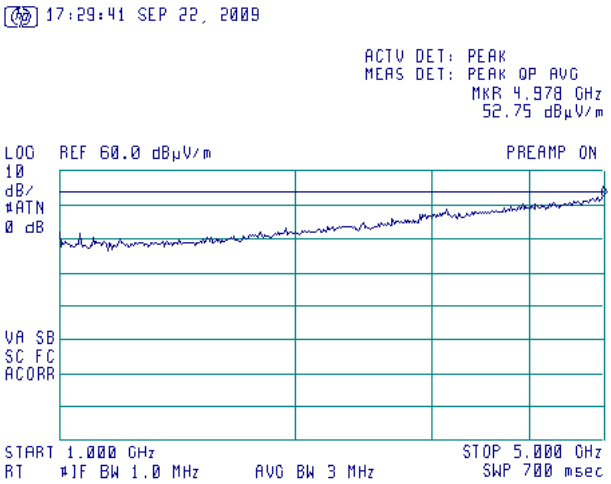
TEST SITE: Semi anechoic chamber
TEST DISTANCE: 3 m
ANTENNA POLARIZATION: Vertical and Horizontal



Test specification:	Section 15.247(d), RSS-210 section A8.5, Radiated spurious emissions		
Test procedure:	FCC New Guidance on Measurements for DTS in section 15.247(c)/ANSI C63.4, Section 13.1.4		
Test mode:	Compliance	Verdict:	PASS
Date & Time:	10/14/2009 5:28:18 PM		
Temperature: 25.7 ºC	Air Pressure: 1013 hPa	Relative Humidity: 37 %	Power Supply: 120VAC
Remarks: External dish antenna with 29 dBi gain			

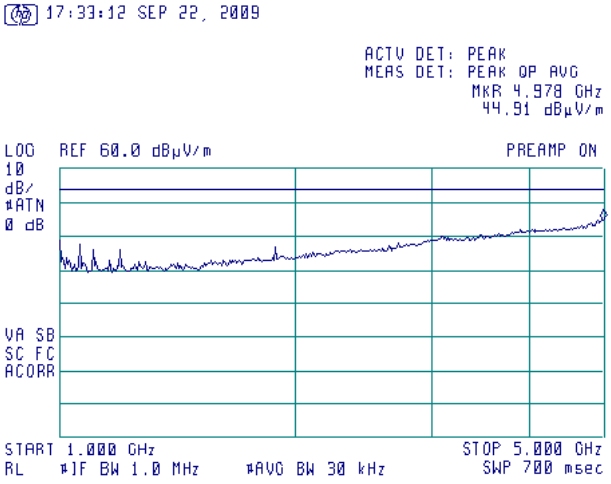
Plot 7.4.22 Radiated emission measurements from 1000 to 5000 MHz at the low carrier frequency

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



Plot 7.4.23 Radiated emission measurements from 1000 to 5000 MHz at the low carrier frequency

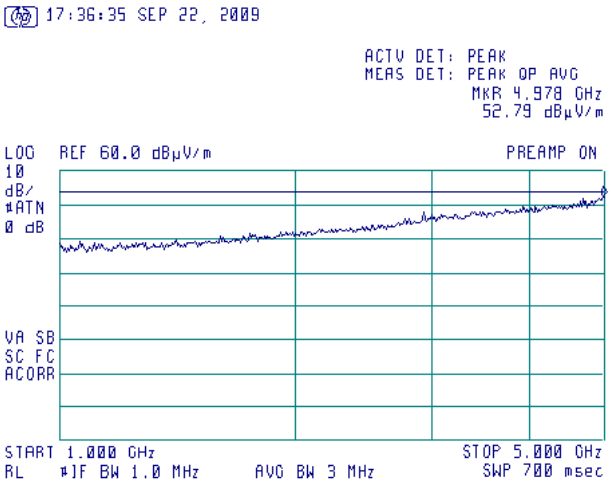
TEST SITE: Semi anechoic chamber
TEST DISTANCE: 3 m
ANTENNA POLARIZATION: Vertical and Horizontal
DETECTOR Average



Test specification:	Section 15.247(d), RSS-210 section A8.5, Radiated spurious emissions		
Test procedure:	FCC New Guidance on Measurements for DTS in section 15.247(c)/ANSI C63.4, Section 13.1.4		
Test mode:	Compliance	Verdict:	PASS
Date & Time:	10/14/2009 5:28:18 PM		
Temperature: 25.7 ºC	Air Pressure: 1013 hPa	Relative Humidity: 37 %	Power Supply: 120VAC
Remarks: External dish antenna with 29 dBi gain			

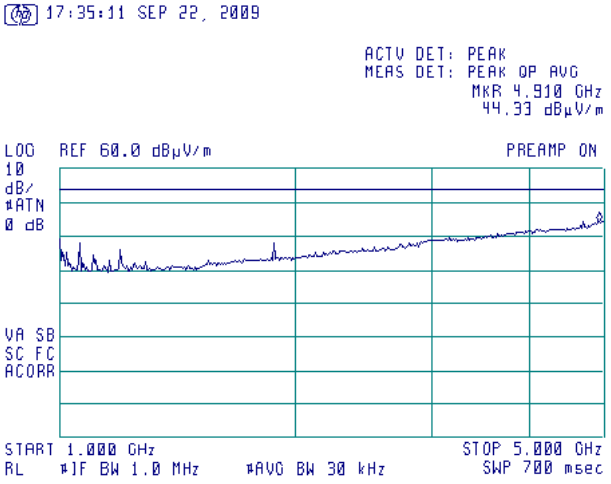
Plot 7.4.24 Radiated emission measurements from 1000 to 5000 MHz at the mid carrier frequency

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



Plot 7.4.25 Radiated emission measurements from 1000 to 5000 MHz at the mid carrier frequency

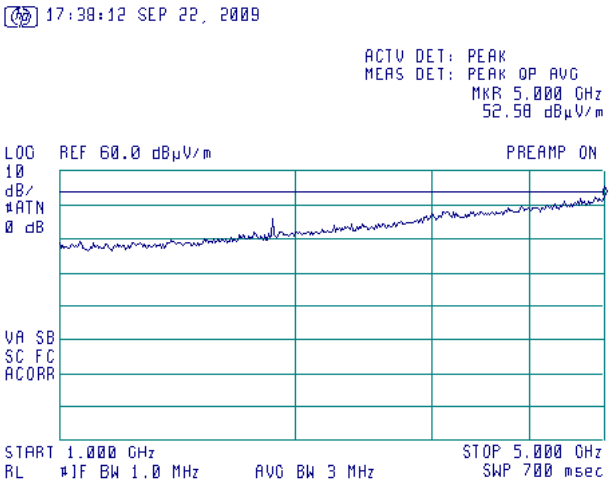
TEST SITE: Semi anechoic chamber
TEST DISTANCE: 3 m
ANTENNA POLARIZATION: Vertical and Horizontal
DETECTOR Average



Test specification:	Section 15.247(d), RSS-210 section A8.5, Radiated spurious emissions		
Test procedure:	FCC New Guidance on Measurements for DTS in section 15.247(c)/ANSI C63.4, Section 13.1.4		
Test mode:	Compliance	Verdict:	PASS
Date & Time:	10/14/2009 5:28:18 PM		
Temperature: 25.7 ºC	Air Pressure: 1013 hPa	Relative Humidity: 37 %	Power Supply: 120VAC
Remarks: External dish antenna with 29 dBi gain			

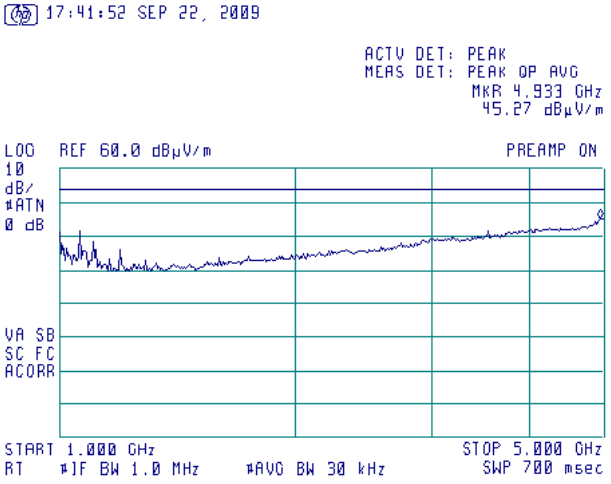
Plot 7.4.26 Radiated emission measurements from 1000 to 5000 MHz at the high carrier frequency

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



Plot 7.4.27 Radiated emission measurements from 1000 to 5000 MHz at the high carrier frequency

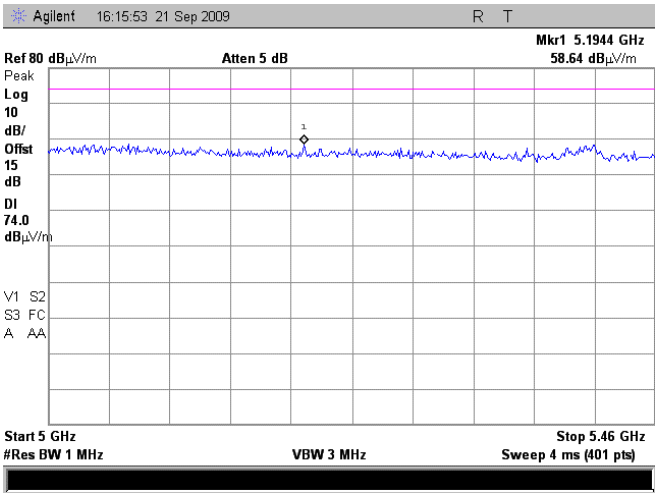
TEST SITE: Semi anechoic chamber
TEST DISTANCE: 3 m
ANTENNA POLARIZATION: Vertical and Horizontal
DETECTOR Average



Test specification:	Section 15.247(d), RSS-210 section A8.5, Radiated spurious emissions		
Test procedure:	FCC New Guidance on Measurements for DTS in section 15.247(c)/ANSI C63.4, Section 13.1.4		
Test mode:	Compliance	Verdict:	PASS
Date & Time:	10/14/2009 5:28:18 PM		
Temperature: 25.7 ºC	Air Pressure: 1013 hPa	Relative Humidity: 37 %	Power Supply: 120VAC
Remarks: External dish antenna with 29 dBi gain			

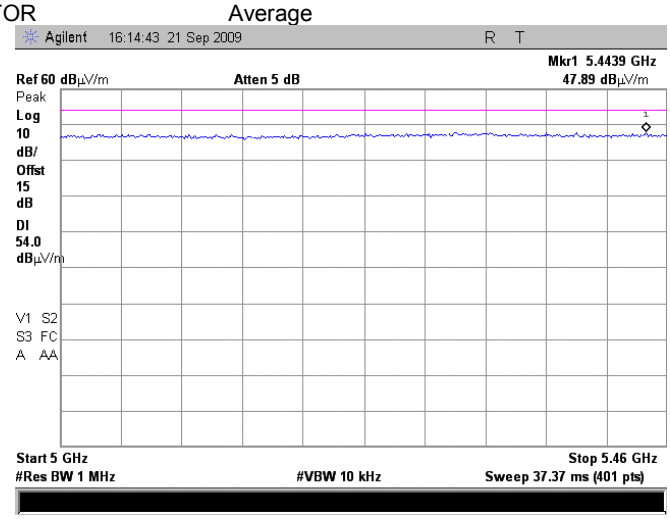
Plot 7.4.28 Radiated emission measurements from 5000 to 5460` MHz at the low carrier frequency

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



Plot 7.4.29 Radiated emission measurements from 5000 to 5460` MHz at the low carrier frequency

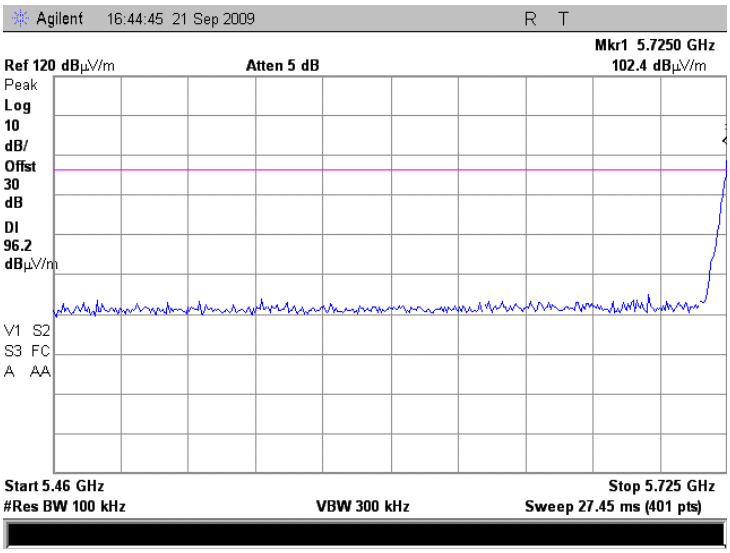
TEST SITE: OATS
TEST DISTANCE: 3 m
ANTENNA POLARIZATION: Vertical and Horizontal
DETECTOR Average



Test specification:	Section 15.247(d), RSS-210 section A8.5, Radiated spurious emissions		
Test procedure:	FCC New Guidance on Measurements for DTS in section 15.247(c)/ANSI C63.4, Section 13.1.4		
Test mode:	Compliance	Verdict:	PASS
Date & Time:	10/14/2009 5:28:18 PM		
Temperature: 25.7 ºC	Air Pressure: 1013 hPa	Relative Humidity: 37 %	Power Supply: 120VAC
Remarks: External dish antenna with 29 dBi gain			

Plot 7.4.30 Radiated emission measurements from 5460 to 5725 MHz at the low carrier frequency

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

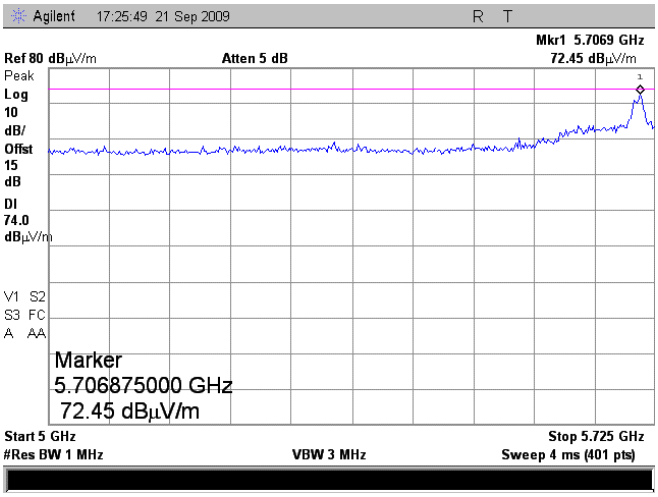


NOTE: The band edge emission compliance with 20 dBc limit was demonstrated by delta method as referred in plots 7.3.16 – 7.3.23

Test specification:	Section 15.247(d), RSS-210 section A8.5, Radiated spurious emissions		
Test procedure:	FCC New Guidance on Measurements for DTS in section 15.247(c)/ANSI C63.4, Section 13.1.4		
Test mode:	Compliance	Verdict:	PASS
Date & Time:	10/14/2009 5:28:18 PM		
Temperature: 25.7 ºC	Air Pressure: 1013 hPa	Relative Humidity: 37 %	Power Supply: 120VAC
Remarks: External dish antenna with 29 dBi gain			

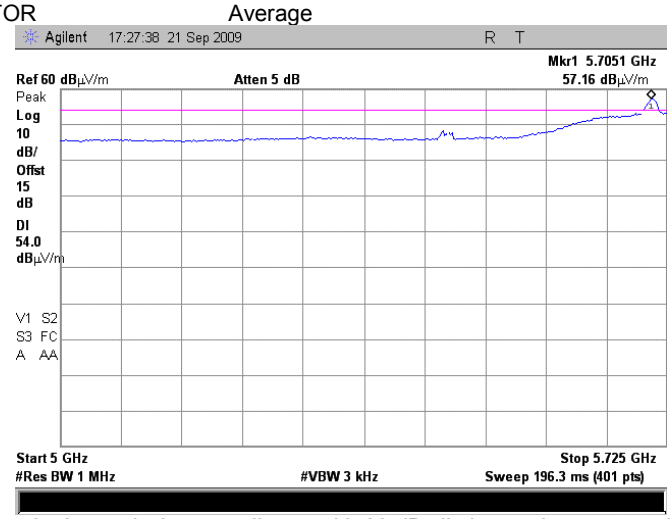
Plot 7.4.31 Radiated emission measurements from 5000 to 5725 MHz at the mid carrier frequency

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



Plot 7.4.32 Radiated emission measurements from 5000 to 5725 MHz at the mid carrier frequency

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

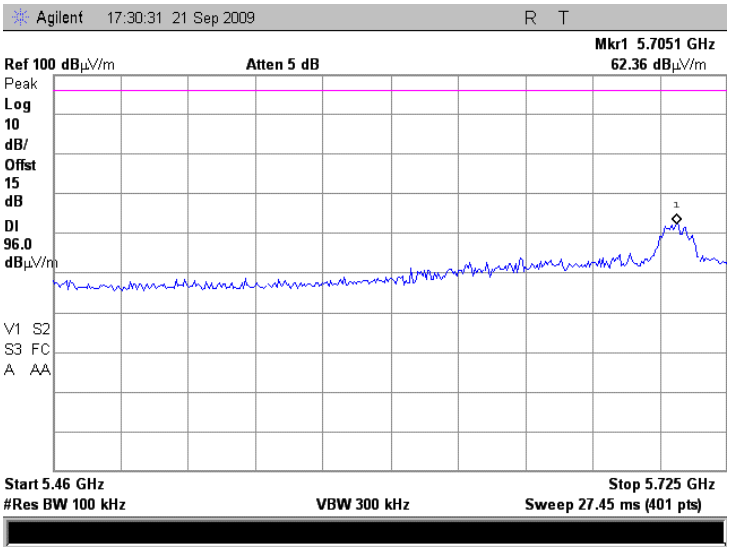


NOTE: The band edge emission compliance with 20 dBc limit was demonstrated in plot 7.3.24.

Test specification:	Section 15.247(d), RSS-210 section A8.5, Radiated spurious emissions		
Test procedure:	FCC New Guidance on Measurements for DTS in section 15.247(c)/ANSI C63.4, Section 13.1.4		
Test mode:	Compliance	Verdict:	PASS
Date & Time:	10/14/2009 5:28:18 PM		
Temperature: 25.7 ºC	Air Pressure: 1013 hPa	Relative Humidity: 37 %	Power Supply: 120VAC
Remarks: External dish antenna with 29 dBi gain			

Plot 7.4.33 Radiated emission measurements from 5460 to 5725 MHz at the mid carrier frequency

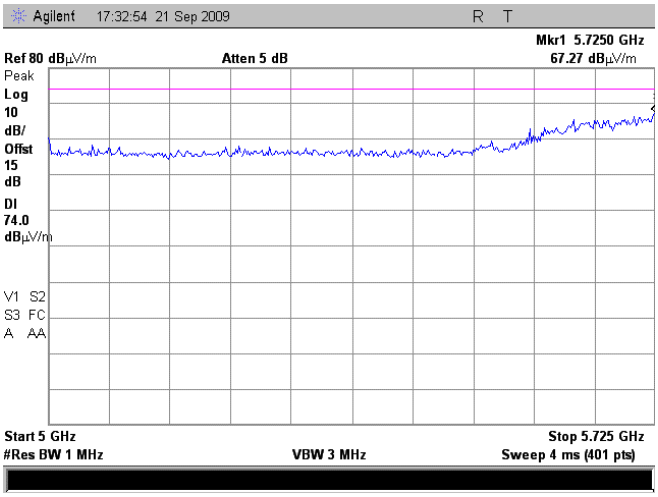
TEST SITE: OATS
TEST DISTANCE: 3 m
ANTENNA POLARIZATION: Vertical and Horizontal



Test specification:	Section 15.247(d), RSS-210 section A8.5, Radiated spurious emissions		
Test procedure:	FCC New Guidance on Measurements for DTS in section 15.247(c)/ANSI C63.4, Section 13.1.4		
Test mode:	Compliance	Verdict:	PASS
Date & Time:	10/14/2009 5:28:18 PM		
Temperature: 25.7 ºC	Air Pressure: 1013 hPa	Relative Humidity: 37 %	Power Supply: 120VAC
Remarks: External dish antenna with 29 dBi gain			

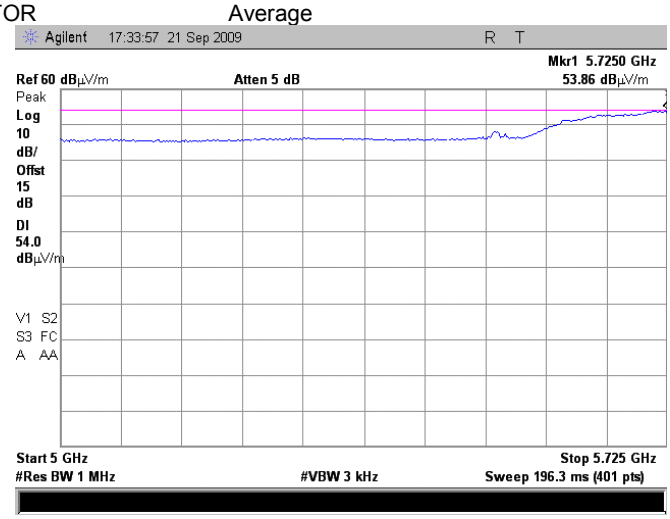
Plot 7.4.34 Radiated emission measurements from 5000 to 5725 MHz at the high carrier frequency

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



Plot 7.4.35 Radiated emission measurements from 5000 to 5725 MHz at the high carrier frequency

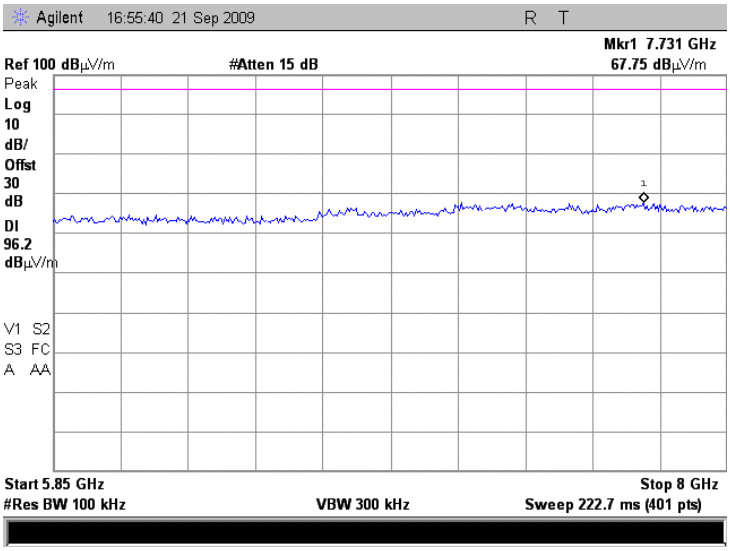
TEST SITE: OATS
TEST DISTANCE: 3 m
ANTENNA POLARIZATION: Vertical and Horizontal
DETECTOR Average



Test specification:	Section 15.247(d), RSS-210 section A8.5, Radiated spurious emissions		
Test procedure:	FCC New Guidance on Measurements for DTS in section 15.247(c)/ANSI C63.4, Section 13.1.4		
Test mode:	Compliance	Verdict:	PASS
Date & Time:	10/14/2009 5:28:18 PM		
Temperature: 25.7 ºC	Air Pressure: 1013 hPa	Relative Humidity: 37 %	Power Supply: 120VAC
Remarks: External dish antenna with 29 dBi gain			

Plot 7.4.36 Radiated emission measurements from 5850 to 8000 MHz at the low carrier frequency

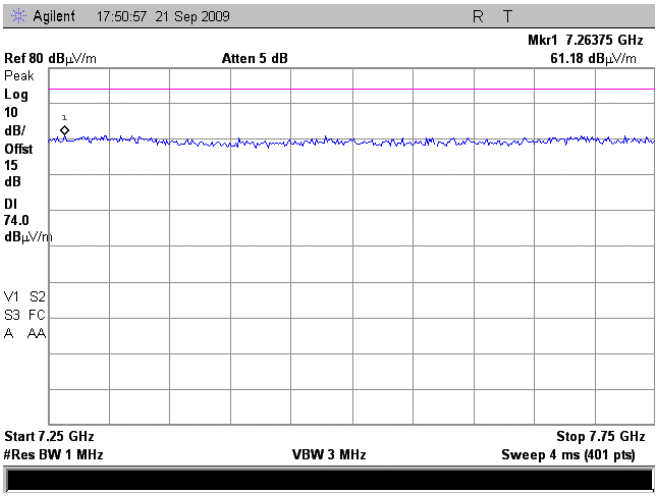
TEST SITE: OATS
TEST DISTANCE: 3 m
ANTENNA POLARIZATION: Vertical and Horizontal



Test specification:	Section 15.247(d), RSS-210 section A8.5, Radiated spurious emissions		
Test procedure:	FCC New Guidance on Measurements for DTS in section 15.247(c)/ANSI C63.4, Section 13.1.4		
Test mode:	Compliance	Verdict:	PASS
Date & Time:	10/14/2009 5:28:18 PM		
Temperature: 25.7 ºC	Air Pressure: 1013 hPa	Relative Humidity: 37 %	Power Supply: 120VAC
Remarks: External dish antenna with 29 dBi gain			

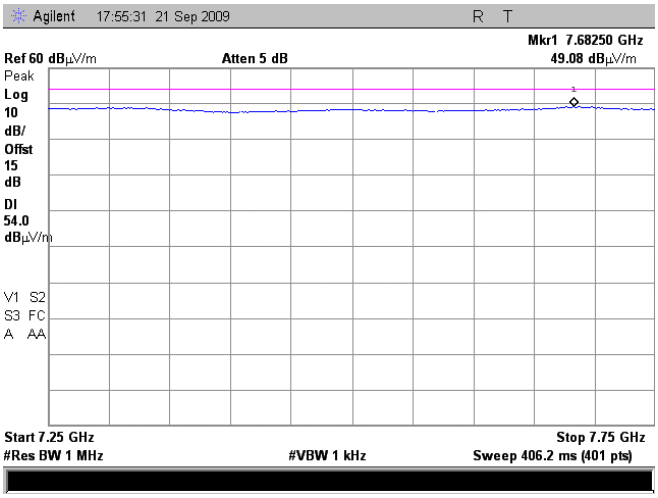
Plot 7.4.37 Radiated emission measurements from 7250 to 7750 MHz at the low carrier frequency

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



Plot 7.4.38 Radiated emission measurements from 7250 to 7750 MHz at the low carrier frequency

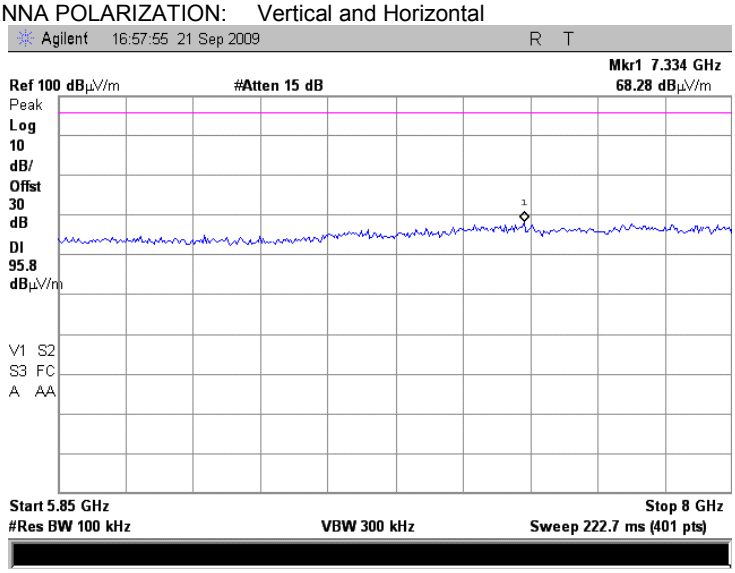
TEST SITE: OATS
TEST DISTANCE: 3 m
ANTENNA POLARIZATION: Vertical and Horizontal
DETECTOR Average



Test specification:	Section 15.247(d), RSS-210 section A8.5, Radiated spurious emissions		
Test procedure:	FCC New Guidance on Measurements for DTS in section 15.247(c)/ANSI C63.4, Section 13.1.4		
Test mode:	Compliance	Verdict:	PASS
Date & Time:	10/14/2009 5:28:18 PM		
Temperature: 25.7 ºC	Air Pressure: 1013 hPa	Relative Humidity: 37 %	Power Supply: 120VAC
Remarks: External dish antenna with 29 dBi gain			

Plot 7.4.39 Radiated emission measurements from 5850 to 8000 MHz at the mid carrier frequency

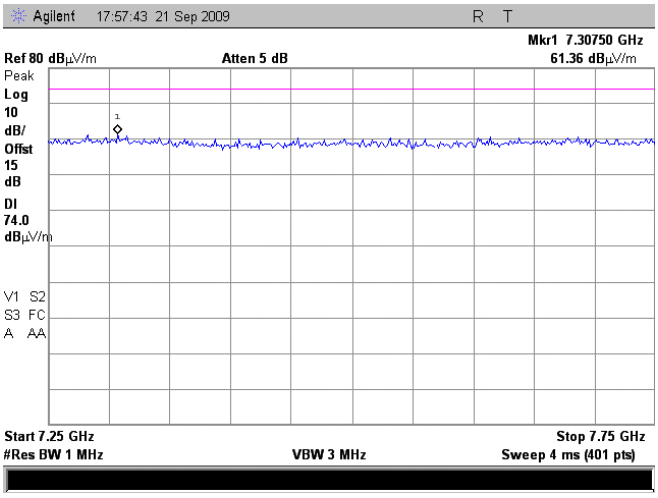
TEST SITE: OATS
TEST DISTANCE: 3 m
ANTENNA POLARIZATION: Vertical and Horizontal



Test specification:	Section 15.247(d), RSS-210 section A8.5, Radiated spurious emissions		
Test procedure:	FCC New Guidance on Measurements for DTS in section 15.247(c)/ANSI C63.4, Section 13.1.4		
Test mode:	Compliance	Verdict:	PASS
Date & Time:	10/14/2009 5:28:18 PM		
Temperature: 25.7 ºC	Air Pressure: 1013 hPa	Relative Humidity: 37 %	Power Supply: 120VAC
Remarks: External dish antenna with 29 dBi gain			

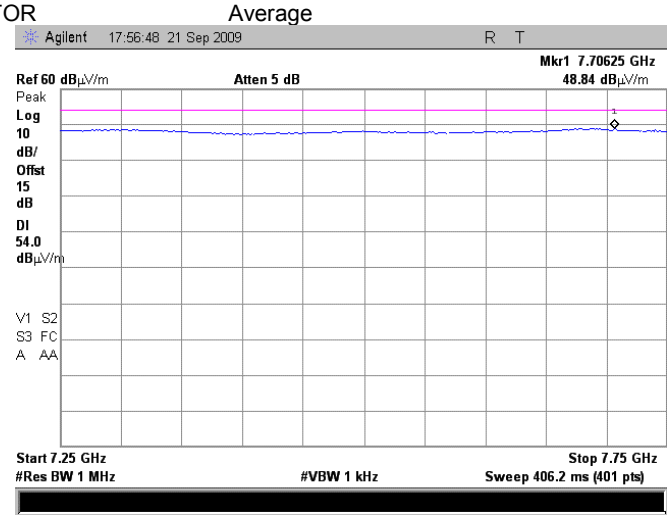
Plot 7.4.40 Radiated emission measurements from 7250 to 7750 MHz at the mid carrier frequency

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



Plot 7.4.41 Radiated emission measurements from 7250 to 7750 MHz at the mid carrier frequency

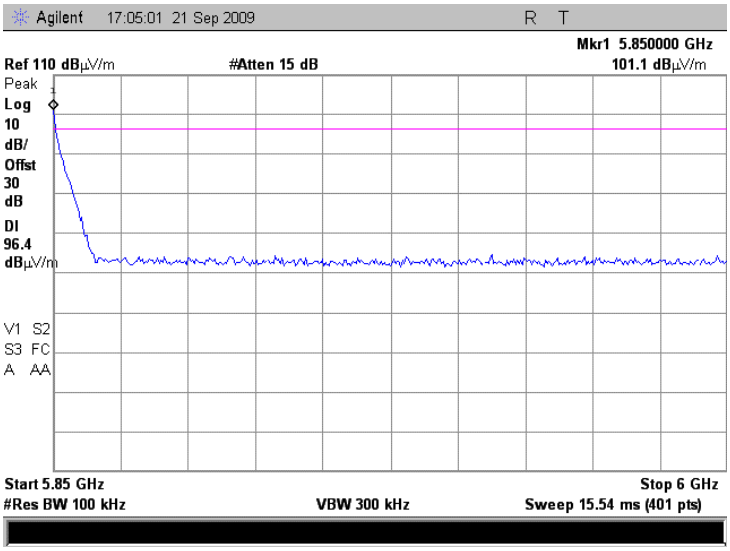
TEST SITE: OATS
TEST DISTANCE: 3 m
ANTENNA POLARIZATION: Vertical and Horizontal
DETECTOR Average



Test specification:	Section 15.247(d), RSS-210 section A8.5, Radiated spurious emissions		
Test procedure:	FCC New Guidance on Measurements for DTS in section 15.247(c)/ANSI C63.4, Section 13.1.4		
Test mode:	Compliance	Verdict:	PASS
Date & Time:	10/14/2009 5:28:18 PM		
Temperature: 25.7 ºC	Air Pressure: 1013 hPa	Relative Humidity: 37 %	Power Supply: 120VAC
Remarks: External dish antenna with 29 dBi gain			

Plot 7.4.42 Radiated emission measurements from 5850 to 6000 MHz at the high carrier frequency

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

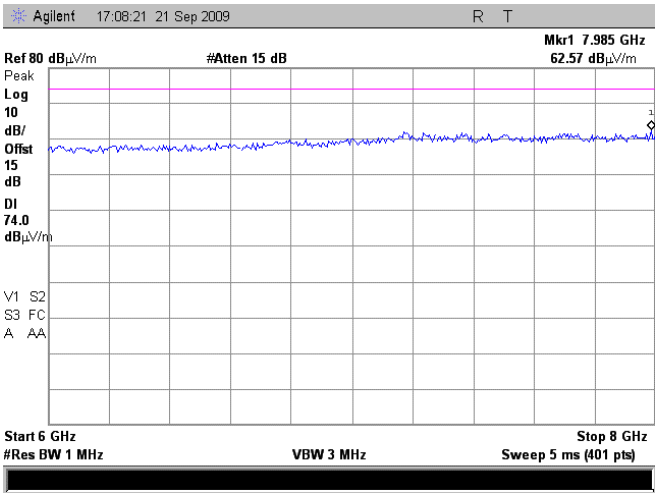


NOTE: The band edge emission compliance with 20 dBc limit was demonstrated by delta method as referred in plots 7.3.28 – 7.3.35.

Test specification:	Section 15.247(d), RSS-210 section A8.5, Radiated spurious emissions		
Test procedure:	FCC New Guidance on Measurements for DTS in section 15.247(c)/ANSI C63.4, Section 13.1.4		
Test mode:	Compliance	Verdict:	PASS
Date & Time:	10/14/2009 5:28:18 PM		
Temperature: 25.7 ºC	Air Pressure: 1013 hPa	Relative Humidity: 37 %	Power Supply: 120VAC
Remarks: External dish antenna with 29 dBi gain			

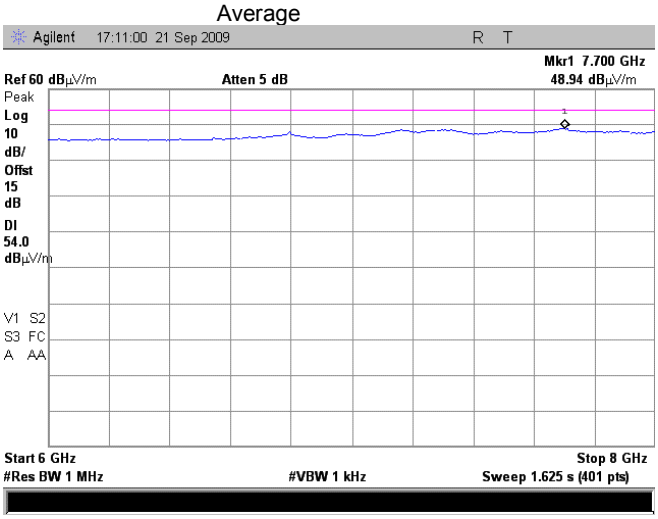
Plot 7.4.43 Radiated emission measurements from 6000 to 8000 MHz at the high carrier frequency

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



Plot 7.4.44 Radiated emission measurements from 6000 to 8000 MHz at the high carrier frequency

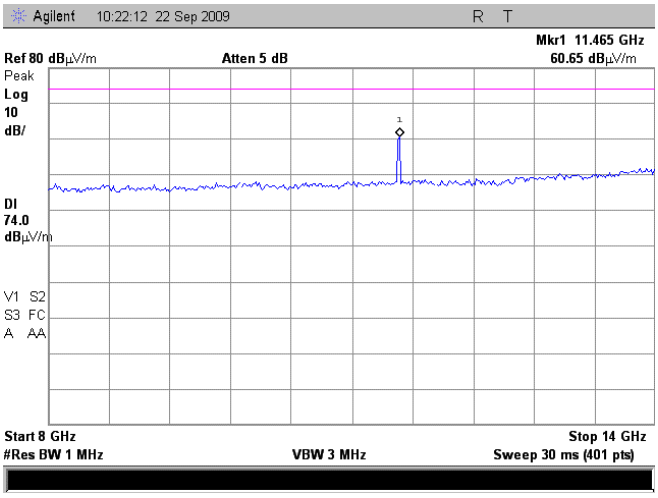
TEST SITE: OATS
TEST DISTANCE: 3 m
ANTENNA POLARIZATION: Vertical and Horizontal
Average



Test specification:	Section 15.247(d), RSS-210 section A8.5, Radiated spurious emissions		
Test procedure:	FCC New Guidance on Measurements for DTS in section 15.247(c)/ANSI C63.4, Section 13.1.4		
Test mode:	Compliance	Verdict:	PASS
Date & Time:	10/14/2009 5:28:18 PM		
Temperature: 25.7 ºC	Air Pressure: 1013 hPa	Relative Humidity: 37 %	Power Supply: 120VAC
Remarks: External dish antenna with 29 dBi gain			

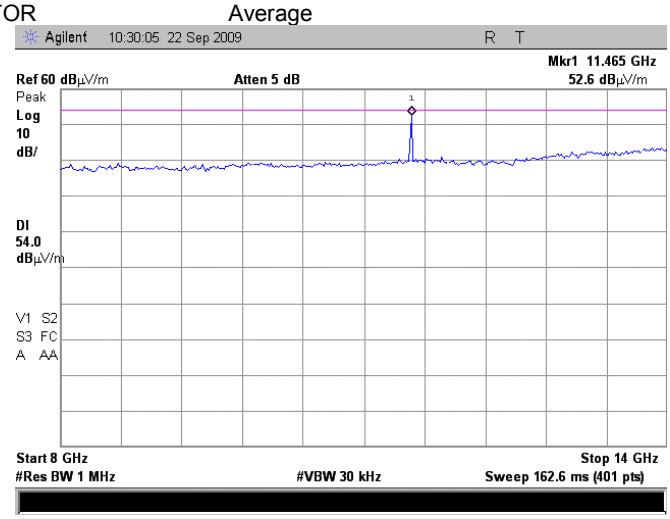
Plot 7.4.45 Radiated emission measurements from 8000 to 14000 MHz at the low carrier frequency

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



Plot 7.4.46 Radiated emission measurements from 8000 to 14000 MHz at the low carrier frequency

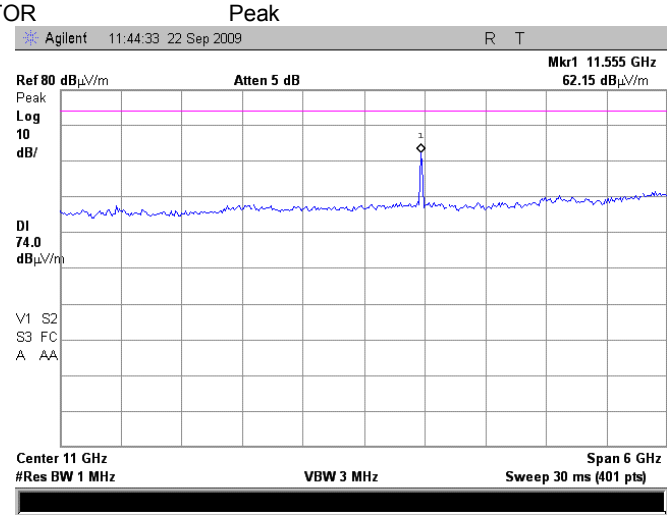
TEST SITE: Semi anechoic chamber
TEST DISTANCE: 3 m
ANTENNA POLARIZATION: Vertical and Horizontal
DETECTOR Average



Test specification:	Section 15.247(d), RSS-210 section A8.5, Radiated spurious emissions		
Test procedure:	FCC New Guidance on Measurements for DTS in section 15.247(c)/ANSI C63.4, Section 13.1.4		
Test mode:	Compliance	Verdict:	PASS
Date & Time:	10/14/2009 5:28:18 PM		
Temperature: 25.7 ºC	Air Pressure: 1013 hPa	Relative Humidity: 37 %	Power Supply: 120VAC
Remarks: External dish antenna with 29 dBi gain			

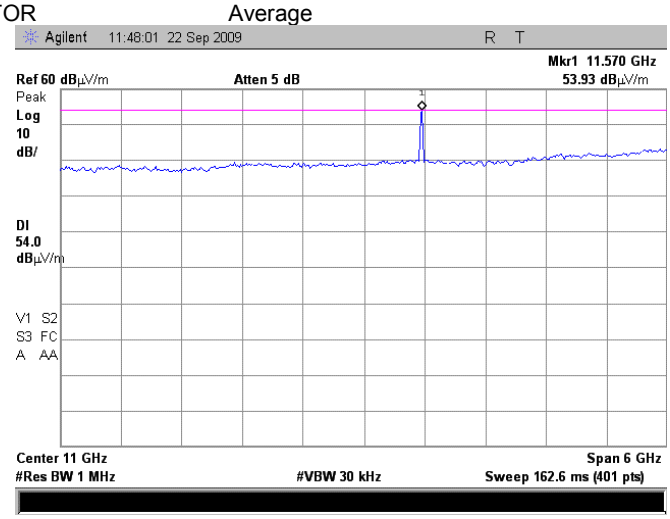
Plot 7.4.47 Radiated emission measurements from 8000 to 14000 MHz at the mid carrier frequency

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



Plot 7.4.48 Radiated emission measurements from 8000 to 14000 MHz at the mid carrier frequency

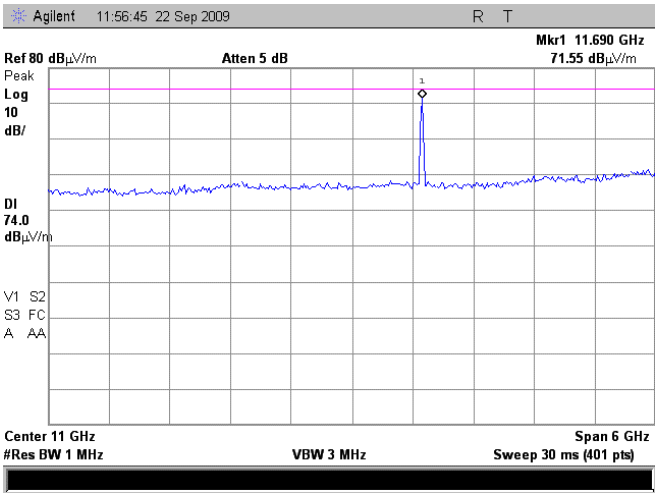
TEST SITE: Semi anechoic chamber
TEST DISTANCE: 3 m
ANTENNA POLARIZATION: Vertical and Horizontal
DETECTOR Average



Test specification:	Section 15.247(d), RSS-210 section A8.5, Radiated spurious emissions		
Test procedure:	FCC New Guidance on Measurements for DTS in section 15.247(c)/ANSI C63.4, Section 13.1.4		
Test mode:	Compliance	Verdict:	PASS
Date & Time:	10/14/2009 5:28:18 PM		
Temperature: 25.7 ºC	Air Pressure: 1013 hPa	Relative Humidity: 37 %	Power Supply: 120VAC
Remarks: External dish antenna with 29 dBi gain			

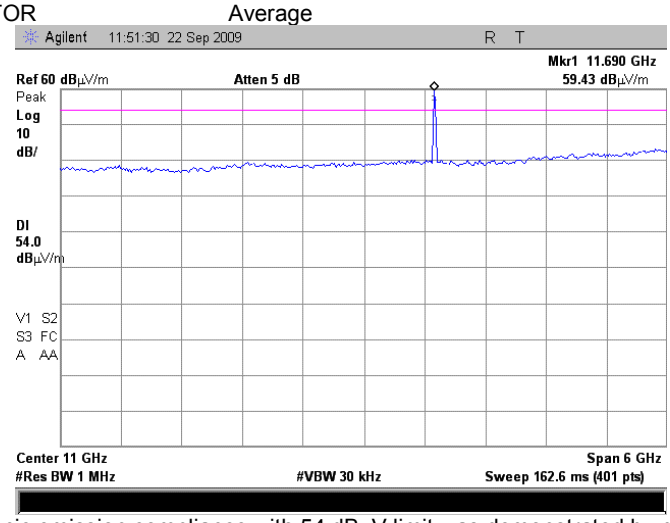
Plot 7.4.49 Radiated emission measurements from 8000 to 14000 MHz at the high carrier frequency

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



Plot 7.4.50 Radiated emission measurements from 8000 to 14000 MHz at the high carrier frequency

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

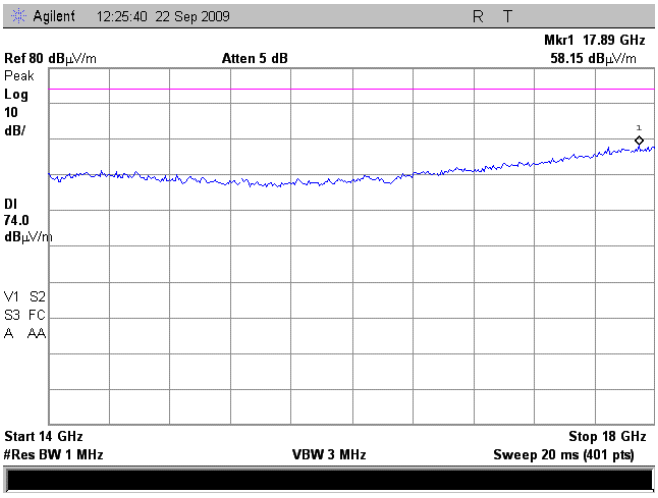


NOTE: The 2-nd harmonic emission compliance with 54 dBuV limit was demonstrated by measurement as referred in plots 7.4.70 – 7.4.71.

Test specification:	Section 15.247(d), RSS-210 section A8.5, Radiated spurious emissions		
Test procedure:	FCC New Guidance on Measurements for DTS in section 15.247(c)/ANSI C63.4, Section 13.1.4		
Test mode:	Compliance	Verdict:	PASS
Date & Time:	10/14/2009 5:28:18 PM		
Temperature: 25.7 ºC	Air Pressure: 1013 hPa	Relative Humidity: 37 %	Power Supply: 120VAC
Remarks: External dish antenna with 29 dBi gain			

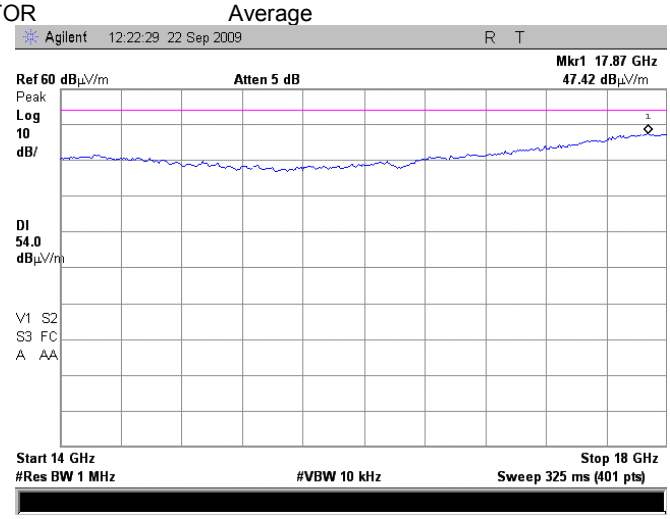
Plot 7.4.51 Radiated emission measurements from 14000 to 18000 MHz at the low carrier frequency

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



Plot 7.4.52 Radiated emission measurements from 14000 to 18000 MHz at the low carrier frequency

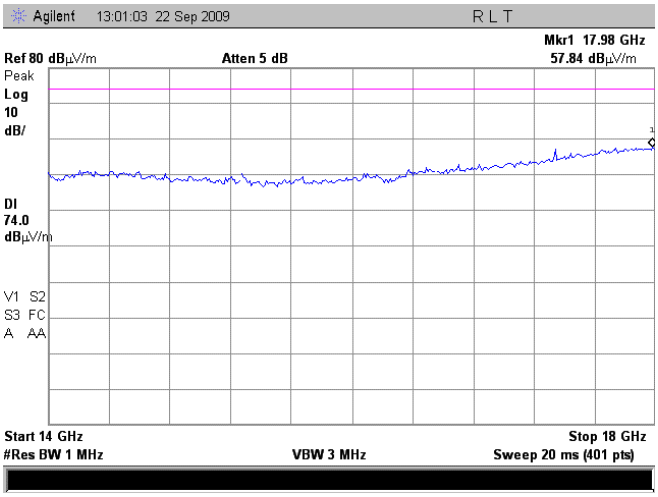
TEST SITE: Semi anechoic chamber
TEST DISTANCE: 3 m
ANTENNA POLARIZATION: Vertical and Horizontal
DETECTOR Average



Test specification:	Section 15.247(d), RSS-210 section A8.5, Radiated spurious emissions		
Test procedure:	FCC New Guidance on Measurements for DTS in section 15.247(c)/ANSI C63.4, Section 13.1.4		
Test mode:	Compliance	Verdict:	PASS
Date & Time:	10/14/2009 5:28:18 PM		
Temperature: 25.7 ºC	Air Pressure: 1013 hPa	Relative Humidity: 37 %	Power Supply: 120VAC
Remarks: External dish antenna with 29 dBi gain			

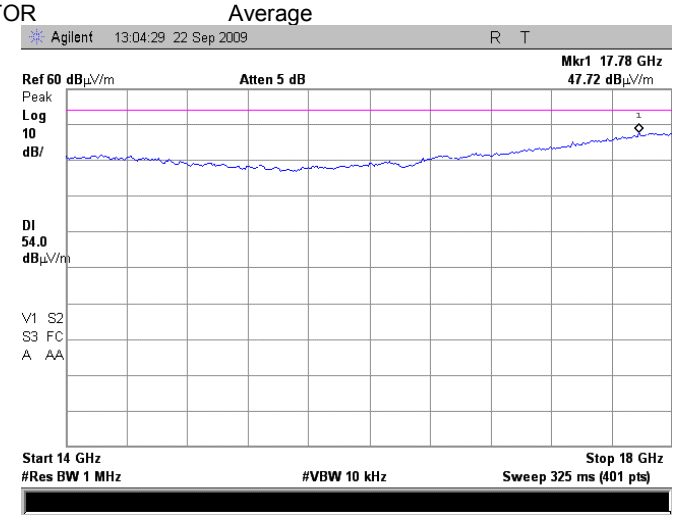
Plot 7.4.53 Radiated emission measurements from 14000 to 18000 MHz at the mid carrier frequency

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



Plot 7.4.54 Radiated emission measurements from 14000 to 18000 MHz at the mid carrier frequency

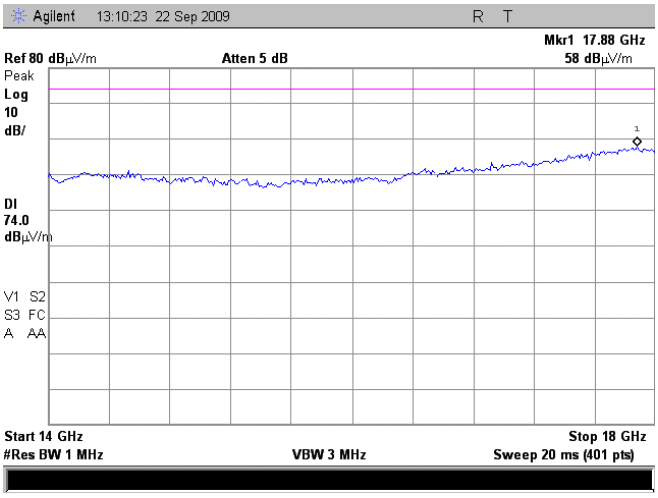
TEST SITE: Semi anechoic chamber
TEST DISTANCE: 3 m
ANTENNA POLARIZATION: Vertical and Horizontal
DETECTOR Average



Test specification:	Section 15.247(d), RSS-210 section A8.5, Radiated spurious emissions		
Test procedure:	FCC New Guidance on Measurements for DTS in section 15.247(c)/ANSI C63.4, Section 13.1.4		
Test mode:	Compliance	Verdict:	PASS
Date & Time:	10/14/2009 5:28:18 PM		
Temperature: 25.7 ºC	Air Pressure: 1013 hPa	Relative Humidity: 37 %	Power Supply: 120VAC
Remarks: External dish antenna with 29 dBi gain			

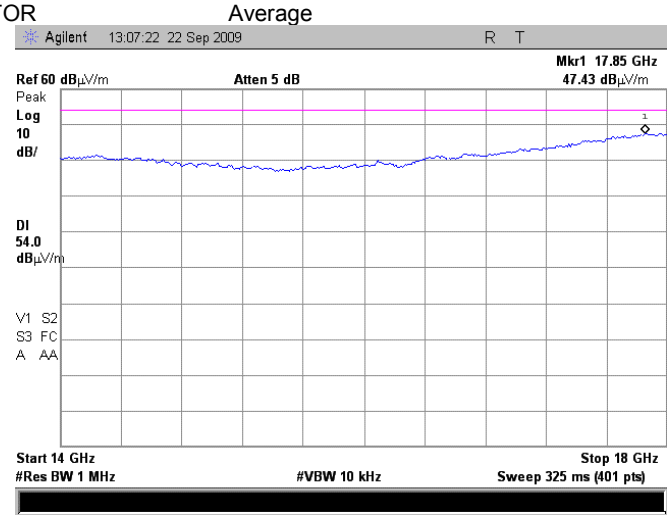
Plot 7.4.55 Radiated emission measurements from 14000 to 18000 MHz at the high carrier frequency

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



Plot 7.4.56 Radiated emission measurements from 14000 to 18000 MHz at the high carrier frequency

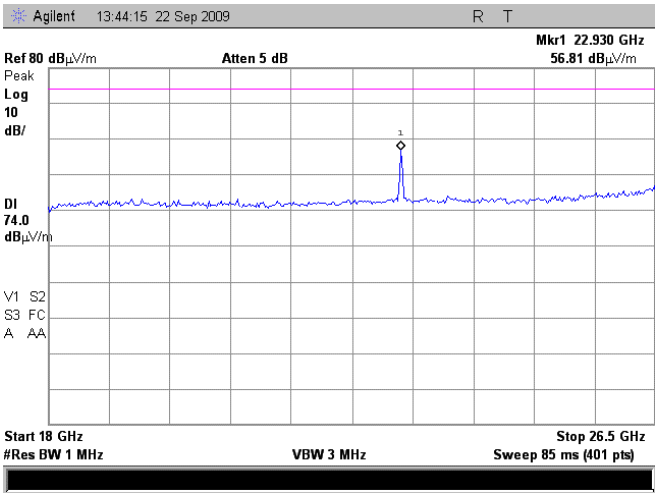
TEST SITE: Semi anechoic chamber
TEST DISTANCE: 3 m
ANTENNA POLARIZATION: Vertical and Horizontal
DETECTOR Average



Test specification:	Section 15.247(d), RSS-210 section A8.5, Radiated spurious emissions		
Test procedure:	FCC New Guidance on Measurements for DTS in section 15.247(c)/ANSI C63.4, Section 13.1.4		
Test mode:	Compliance	Verdict:	PASS
Date & Time:	10/14/2009 5:28:18 PM		
Temperature: 25.7 ºC	Air Pressure: 1013 hPa	Relative Humidity: 37 %	Power Supply: 120VAC
Remarks: External dish antenna with 29 dBi gain			

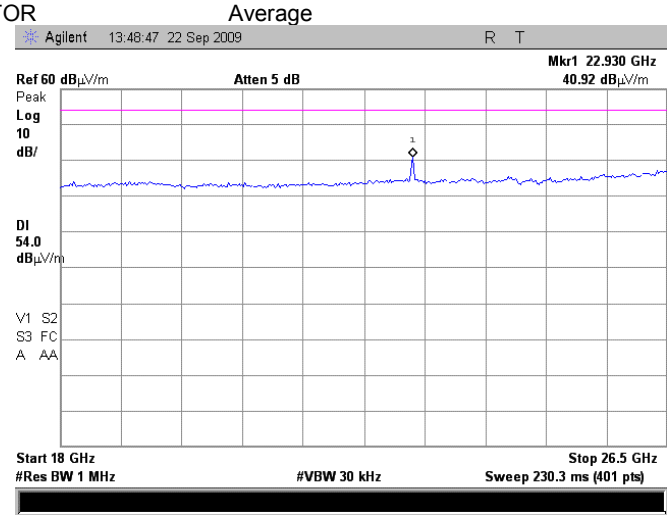
Plot 7.4.57 Radiated emission measurements from 18000 to 26500 MHz at the low carrier frequency

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



Plot 7.4.58 Radiated emission measurements from 18000 to 26500 MHz at the low carrier frequency

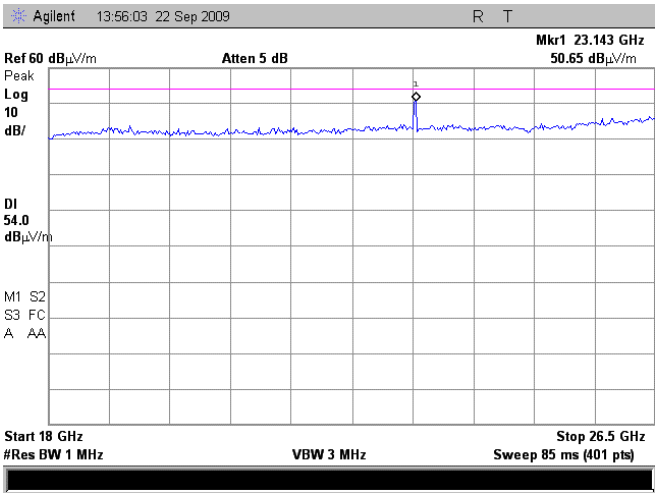
TEST SITE: Semi anechoic chamber
TEST DISTANCE: 3 m
ANTENNA POLARIZATION: Vertical and Horizontal
DETECTOR Average



Test specification:	Section 15.247(d), RSS-210 section A8.5, Radiated spurious emissions		
Test procedure:	FCC New Guidance on Measurements for DTS in section 15.247(c)/ANSI C63.4, Section 13.1.4		
Test mode:	Compliance	Verdict:	PASS
Date & Time:	10/14/2009 5:28:18 PM		
Temperature: 25.7 ºC	Air Pressure: 1013 hPa	Relative Humidity: 37 %	Power Supply: 120VAC
Remarks: External dish antenna with 29 dBi gain			

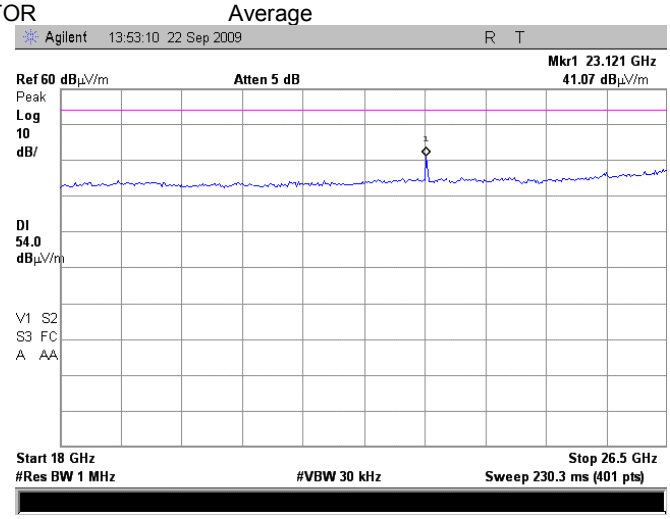
Plot 7.4.59 Radiated emission measurements from 18000 to 26500 MHz at the mid carrier frequency

TEST SITE: Anechoic chamber / OATS / Semi anechoic chamber
TEST DISTANCE: 3 m
ANTENNA POLARIZATION: Vertical and Horizontal
DETECTOR Peak



Plot 7.4.60 Radiated emission measurements from 18000 to 26500 MHz at the mid carrier frequency

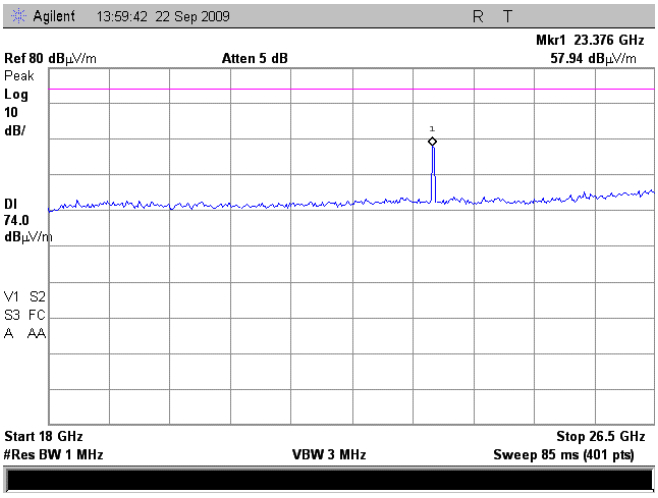
TEST SITE: Anechoic chamber / OATS / Semi anechoic chamber
TEST DISTANCE: 3 m
ANTENNA POLARIZATION: Vertical and Horizontal
DETECTOR Average



Test specification:	Section 15.247(d), RSS-210 section A8.5, Radiated spurious emissions		
Test procedure:	FCC New Guidance on Measurements for DTS in section 15.247(c)/ANSI C63.4, Section 13.1.4		
Test mode:	Compliance	Verdict:	PASS
Date & Time:	10/14/2009 5:28:18 PM		
Temperature: 25.7 ºC	Air Pressure: 1013 hPa	Relative Humidity: 37 %	Power Supply: 120VAC
Remarks: External dish antenna with 29 dBi gain			

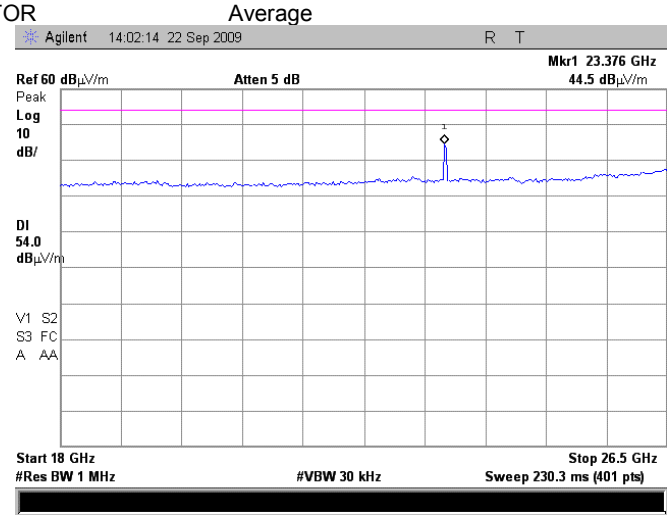
Plot 7.4.61 Radiated emission measurements from 18000 to 26500 MHz at the high carrier frequency

TEST SITE: Anechoic chamber / OATS / Semi anechoic chamber
TEST DISTANCE: 3 m
ANTENNA POLARIZATION: Vertical and Horizontal
DETECTOR Peak



Plot 7.4.62 Radiated emission measurements from 18000 to 26500 MHz at the high carrier frequency

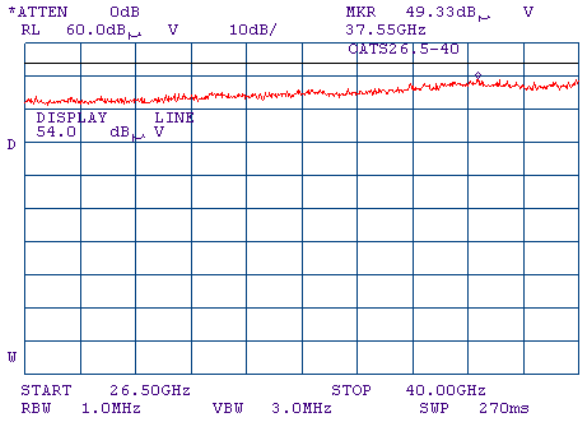
TEST SITE: Anechoic chamber / OATS / Semi anechoic chamber
TEST DISTANCE: 3 m
ANTENNA POLARIZATION: Vertical and Horizontal
DETECTOR Average



Test specification:	Section 15.247(d), RSS-210 section A8.5, Radiated spurious emissions		
Test procedure:	FCC New Guidance on Measurements for DTS in section 15.247(c)/ANSI C63.4, Section 13.1.4		
Test mode:	Compliance	Verdict:	PASS
Date & Time:	10/14/2009 5:28:18 PM		
Temperature: 25.7 ºC	Air Pressure: 1013 hPa	Relative Humidity: 37 %	Power Supply: 120VAC
Remarks: External dish antenna with 29 dBi gain			

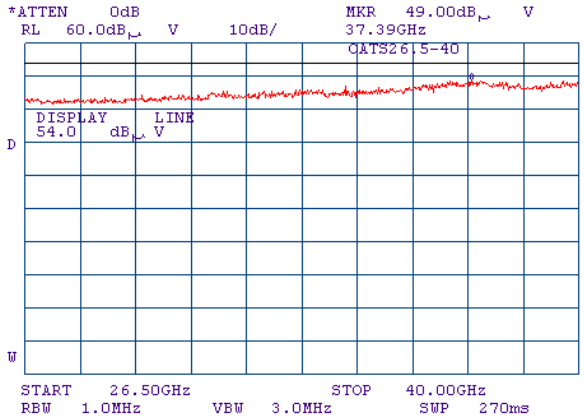
Plot 7.4.63 Radiated emission measurements from 26500 to 40000 MHz at the low carrier frequency

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



Plot 7.4.64 Radiated emission measurements from 26500 to 40000 MHz at the mid carrier frequency

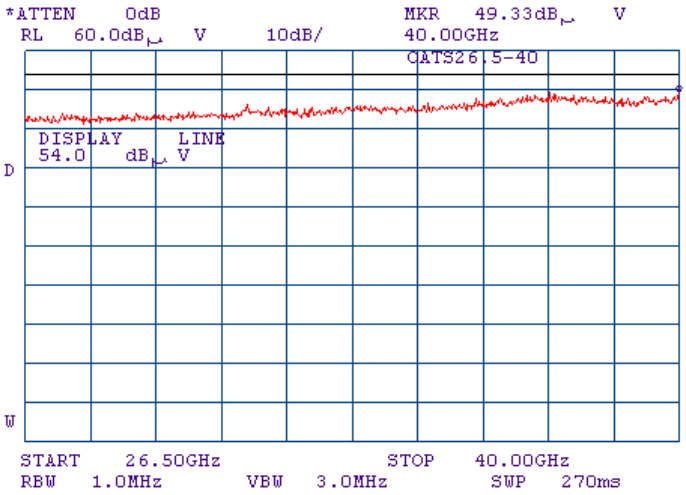
TEST SITE: OATS
TEST DISTANCE: 3 m
ANTENNA POLARIZATION: Vertical and Horizontal



Test specification:	Section 15.247(d), RSS-210 section A8.5, Radiated spurious emissions		
Test procedure:	FCC New Guidance on Measurements for DTS in section 15.247(c)/ANSI C63.4, Section 13.1.4		
Test mode:	Compliance	Verdict:	PASS
Date & Time:	10/14/2009 5:28:18 PM		
Temperature: 25.7 ºC	Air Pressure: 1013 hPa	Relative Humidity: 37 %	Power Supply: 120VAC
Remarks: External dish antenna with 29 dBi gain			

Plot 7.4.65 Radiated emission measurements from 26500 to 40000 MHz at the high carrier frequency

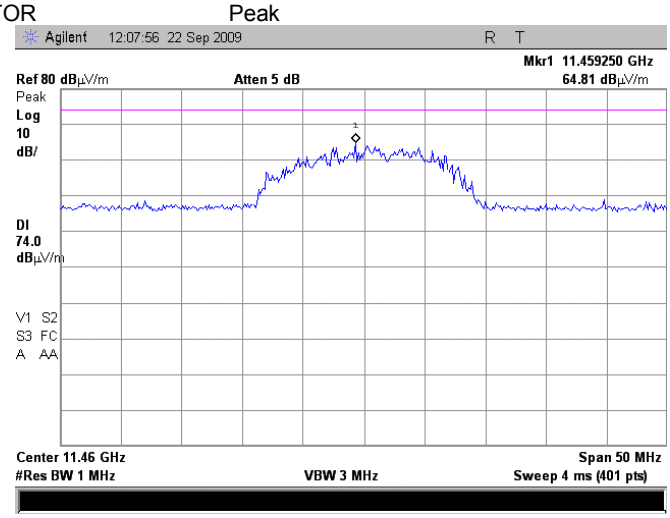
TEST SITE: OATS
TEST DISTANCE: 3 m
ANTENNA POLARIZATION: Vertical and Horizontal



Test specification:	Section 15.247(d), RSS-210 section A8.5, Radiated spurious emissions		
Test procedure:	FCC New Guidance on Measurements for DTS in section 15.247(c)/ANSI C63.4, Section 13.1.4		
Test mode:	Compliance	Verdict:	PASS
Date & Time:	10/14/2009 5:28:18 PM		
Temperature: 25.7 ºC	Air Pressure: 1013 hPa	Relative Humidity: 37 %	Power Supply: 120VAC
Remarks: External dish antenna with 29 dBi gain			

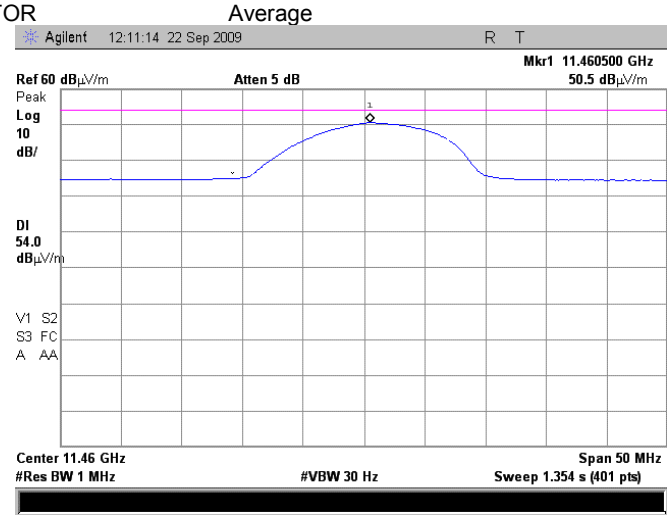
Plot 7.4.66 Radiated emission measurements at the second harmonic of low carrier frequency

TEST SITE: OATS
TEST DISTANCE: 3 m
DETECTOR Peak



Plot 7.4.67 Radiated emission measurements at the second harmonic of low carrier frequency

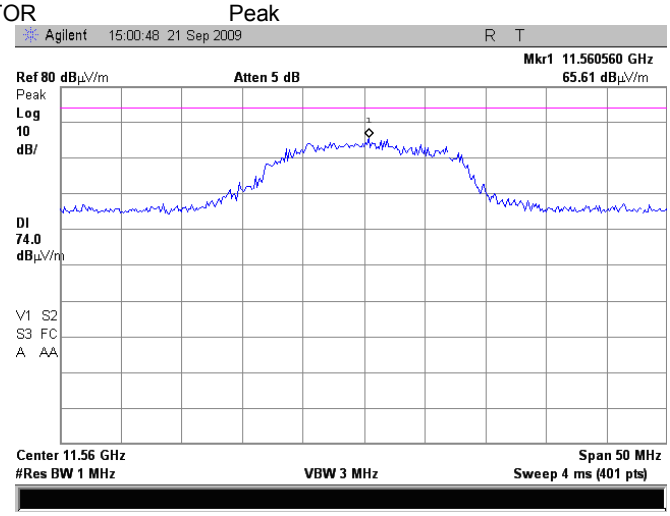
TEST SITE: OATS
TEST DISTANCE: 3 m
DETECTOR Average



Test specification:	Section 15.247(d), RSS-210 section A8.5, Radiated spurious emissions		
Test procedure:	FCC New Guidance on Measurements for DTS in section 15.247(c)/ANSI C63.4, Section 13.1.4		
Test mode:	Compliance	Verdict:	PASS
Date & Time:	10/14/2009 5:28:18 PM		
Temperature: 25.7 ºC	Air Pressure: 1013 hPa	Relative Humidity: 37 %	Power Supply: 120VAC
Remarks: External dish antenna with 29 dBi gain			

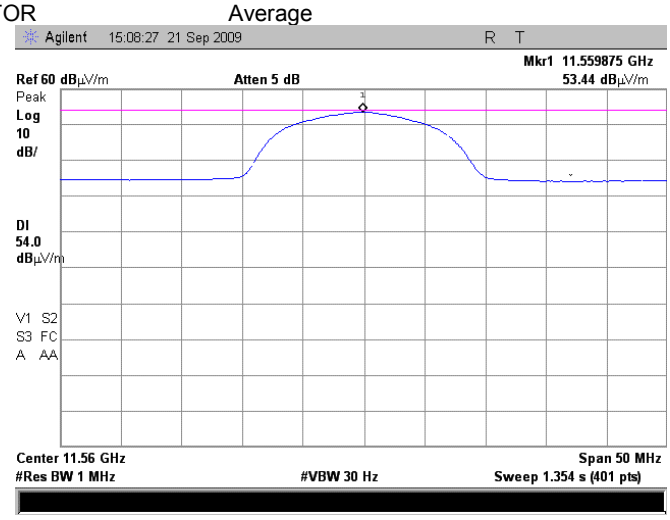
Plot 7.4.68 Radiated emission measurements at the second harmonic of mid carrier frequency

TEST SITE: OATS
TEST DISTANCE: 3 m
DETECTOR Peak



Plot 7.4.69 Radiated emission measurements at the second harmonic of mid carrier frequency

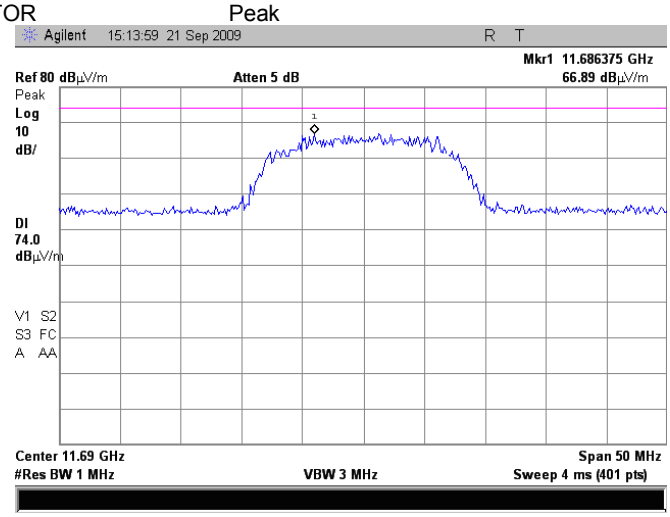
TEST SITE: OATS
TEST DISTANCE: 3 m
DETECTOR Average



Test specification:	Section 15.247(d), RSS-210 section A8.5, Radiated spurious emissions		
Test procedure:	FCC New Guidance on Measurements for DTS in section 15.247(c)/ANSI C63.4, Section 13.1.4		
Test mode:	Compliance	Verdict:	PASS
Date & Time:	10/14/2009 5:28:18 PM		
Temperature: 25.7 ºC	Air Pressure: 1013 hPa	Relative Humidity: 37 %	Power Supply: 120VAC
Remarks: External dish antenna with 29 dBi gain			

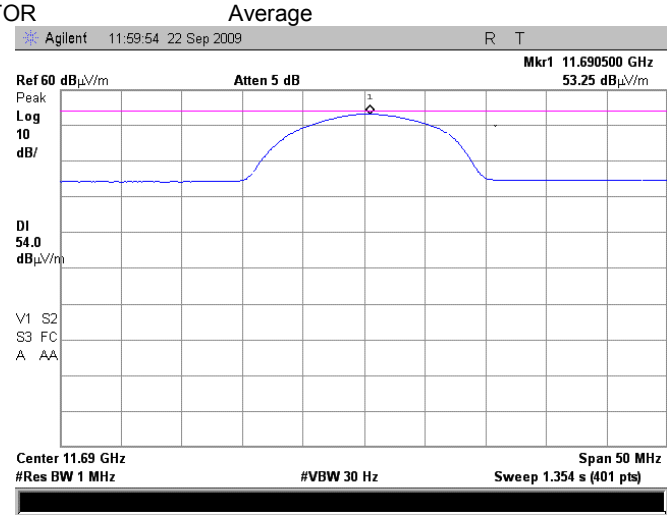
Plot 7.4.70 Radiated emission measurements at the second harmonic of high carrier frequency

TEST SITE: OATS
TEST DISTANCE: 3 m
DETECTOR Peak



Plot 7.4.71 Radiated emission measurements at the second harmonic of high carrier frequency

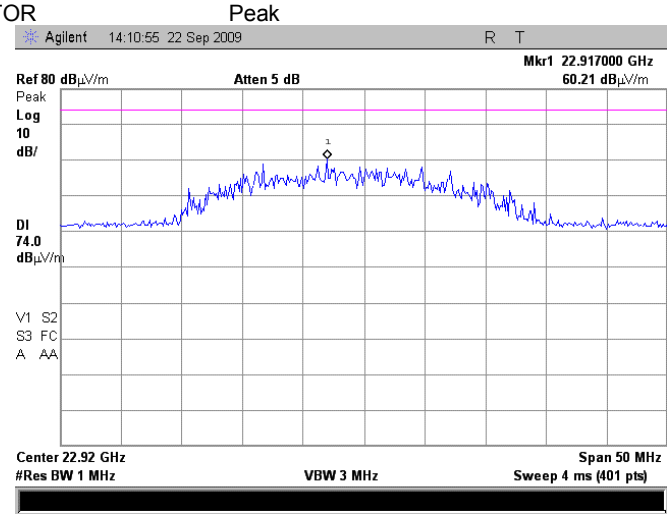
TEST SITE: OATS
TEST DISTANCE: 3 m
DETECTOR Average



Test specification:	Section 15.247(d), RSS-210 section A8.5, Radiated spurious emissions		
Test procedure:	FCC New Guidance on Measurements for DTS in section 15.247(c)/ANSI C63.4, Section 13.1.4		
Test mode:	Compliance	Verdict:	PASS
Date & Time:	10/14/2009 5:28:18 PM		
Temperature: 25.7 ºC	Air Pressure: 1013 hPa	Relative Humidity: 37 %	Power Supply: 120VAC
Remarks: External dish antenna with 29 dBi gain			

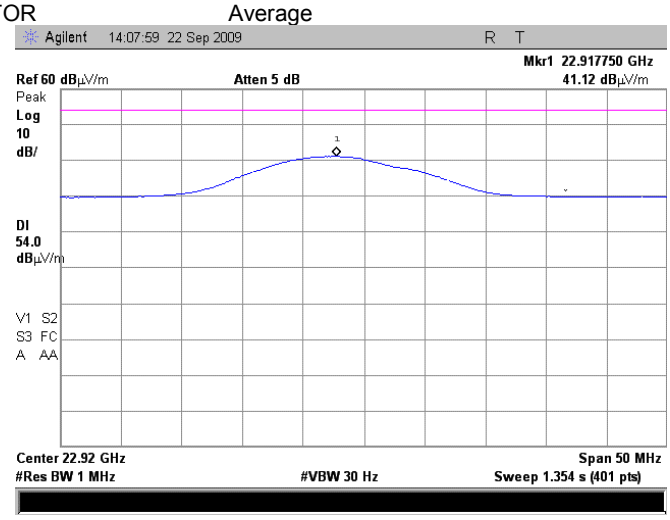
Plot 7.4.72 Radiated emission measurements at the fourth harmonic of low carrier frequency

TEST SITE: OATS
TEST DISTANCE: 3 m
DETECTOR Peak



Plot 7.4.73 Radiated emission measurements at the fourth harmonic of low carrier frequency

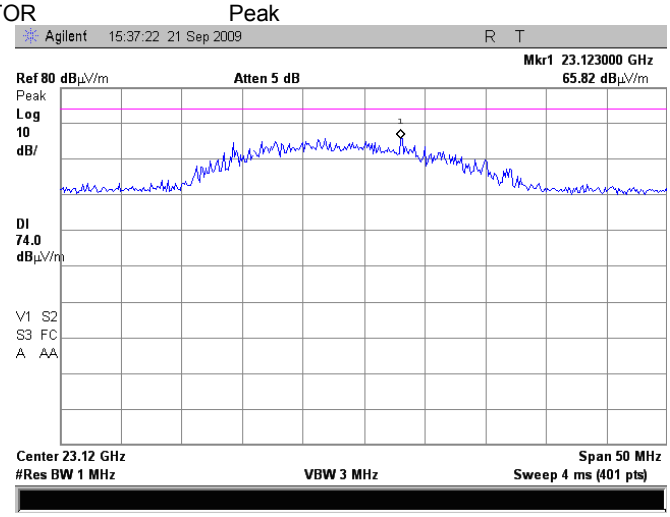
TEST SITE: OATS
TEST DISTANCE: 3 m
DETECTOR Average



Test specification:	Section 15.247(d), RSS-210 section A8.5, Radiated spurious emissions		
Test procedure:	FCC New Guidance on Measurements for DTS in section 15.247(c)/ANSI C63.4, Section 13.1.4		
Test mode:	Compliance	Verdict:	PASS
Date & Time:	10/14/2009 5:28:18 PM		
Temperature: 25.7 ºC	Air Pressure: 1013 hPa	Relative Humidity: 37 %	Power Supply: 120VAC
Remarks: External dish antenna with 29 dBi gain			

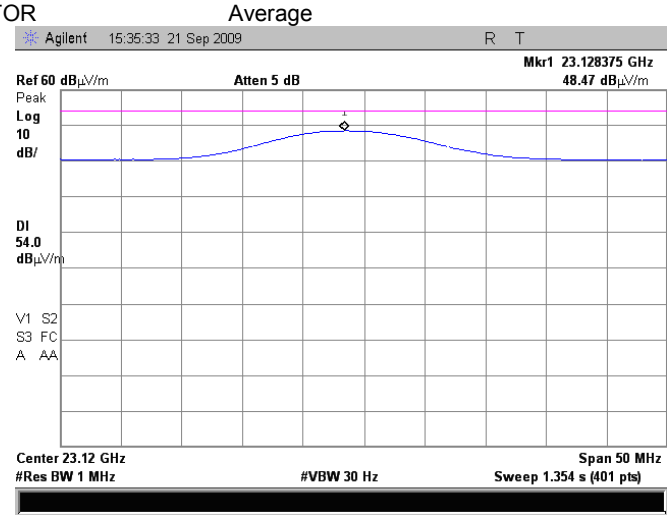
Plot 7.4.74 Radiated emission measurements at the fourth harmonic of mid carrier frequency

TEST SITE: OATS
TEST DISTANCE: 3 m
DETECTOR Peak



Plot 7.4.75 Radiated emission measurements at the fourth harmonic of mid carrier frequency

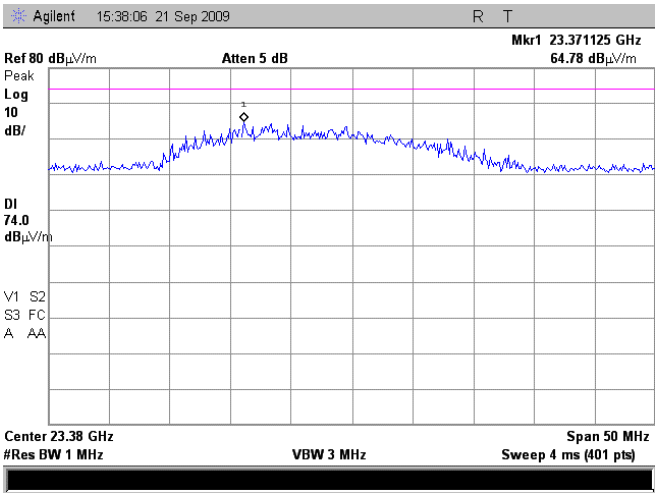
TEST SITE: OATS
TEST DISTANCE: 3 m
DETECTOR Average



Test specification:	Section 15.247(d), RSS-210 section A8.5, Radiated spurious emissions		
Test procedure:	FCC New Guidance on Measurements for DTS in section 15.247(c)/ANSI C63.4, Section 13.1.4		
Test mode:	Compliance	Verdict:	PASS
Date & Time:	10/14/2009 5:28:18 PM		
Temperature: 25.7 ºC	Air Pressure: 1013 hPa	Relative Humidity: 37 %	Power Supply: 120VAC
Remarks: External dish antenna with 29 dBi gain			

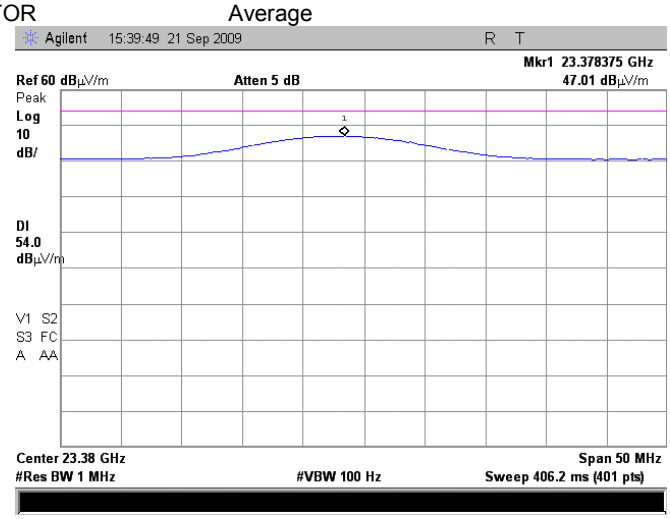
Plot 7.4.76 Radiated emission measurements at the fourth harmonic of high carrier frequency

TEST SITE: OATS
TEST DISTANCE: 3 m
DETECTOR Peak



Plot 7.4.77 Radiated emission measurements at the fourth harmonic of high carrier frequency

TEST SITE: OATS
TEST DISTANCE: 3 m
DETECTOR Average



Test specification:	Section 15.247(d), RSS-210 section A8.5, Radiated spurious emissions		
Test procedure:	FCC New Guidance on Measurements for DTS in section 15.247(c)/ANSI C63.4, Section 13.1.4		
Test mode:	Compliance	Verdict:	PASS
Date & Time:	10/14/2009 5:44:25 PM		
Temperature: 22.7 ºC	Air Pressure: 1014 hPa	Relative Humidity: 57 %	Power Supply: 120VAC
Remarks: Internal flat antenna with 24 dBi gain			

7.5 Field strength of spurious emissions

7.5.1 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.

Table 7.5.1 Radiated spurious emissions limits

Frequency, MHz	Field strength at 3 m within restricted bands, dB(μV/m)*			Attenuation of field strength of spurious versus carrier outside restricted bands, dBc***
	Peak	Quasi Peak	Average	
0.009 – 0.090	148.5 – 128.5	NA	128.5 – 108.5**	20.0
0.090 – 0.110	NA	108.5 – 106.8**	NA	
0.110 – 0.490	126.8 – 113.8	NA	106.8 – 93.8**	
0.490 – 1.705	NA	73.8 – 63.0**	NA	
1.705 – 30.0*		69.5		
30 – 88		40.0		
88 – 216		43.5		
216 – 960		46.0		
960 - 1000		54.0		
1000 – 10th harmonic	74.0	NA	54.0	

*- The limit for 3 m test distance was calculated using the inverse square distance extrapolation factor as follows:

$$Lim_{S2} = Lim_{S1} + 40 \log (S_1/S_2),$$

where S_1 and S_2 – 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.

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

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

7.5.2.2 The specified frequency range was investigated with antenna connected to spectrum analyzer/ EMI receiver. To find maximum radiation the turntable was rotated 360^0 and the measuring antenna was rotated around its vertical axis.

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

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

7.5.3.1 The EUT was set up as shown in Figure 7.4.2, energized and the performance check was conducted.

7.5.3.2 The specified frequency range was investigated with antenna connected to spectrum analyzer/ EMI receiver. To find maximum radiation the turntable was rotated 360^0, the measuring antenna height was changed from 1 to 4 m, its polarization was switched from vertical to horizontal.

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

Test specification:	Section 15.247(d), RSS-210 section A8.5, Radiated spurious emissions		
Test procedure:	FCC New Guidance on Measurements for DTS in section 15.247(c)/ANSI C63.4, Section 13.1.4		
Test mode:	Compliance	Verdict:	PASS
Date & Time:	10/14/2009 5:44:25 PM		
Temperature: 22.7 ºC	Air Pressure: 1014 hPa	Relative Humidity: 57 %	Power Supply: 120VAC
Remarks: Internal flat antenna with 24 dBi gain			

Figure 7.5.1 Setup for spurious emission field strength measurements below 30 MHz

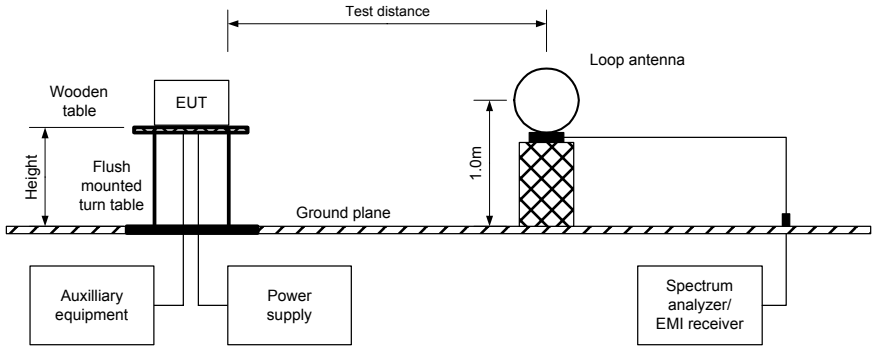
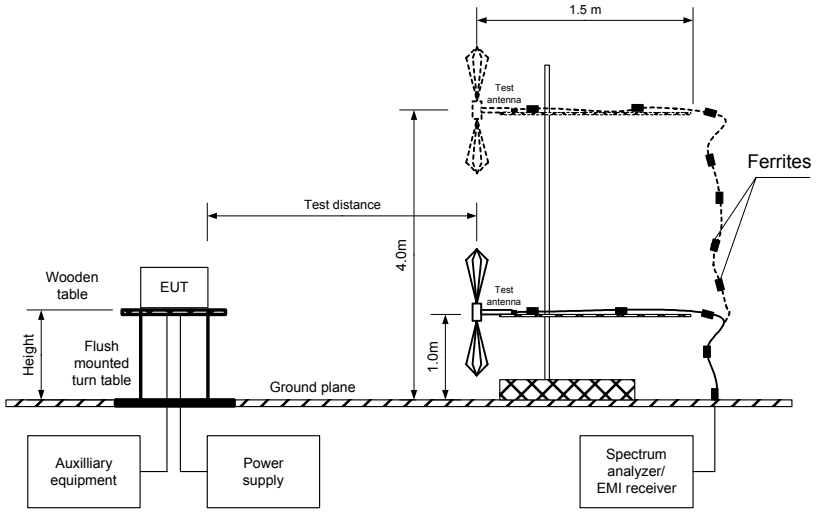


Figure 7.5.2 Setup for spurious emission field strength measurements above 30 MHz



Test specification:	Section 15.247(d), RSS-210 section A8.5, Radiated spurious emissions		
Test procedure:	FCC New Guidance on Measurements for DTS in section 15.247(c)/ANSI C63.4, Section 13.1.4		
Test mode:	Compliance	Verdict:	PASS
Date & Time:	10/14/2009 5:44:25 PM		
Temperature: 22.7 ºC	Air Pressure: 1014 hPa	Relative Humidity: 57 %	Power Supply: 120VAC
Remarks: Internal flat antenna with 24 dBi gain			

Table 7.5.2 Field strength of emissions outside restricted bands

ASSIGNED FREQUENCY:	5725 - 5850 MHz
INVESTIGATED FREQUENCY RANGE:	0.009 - 40000 MHz
TEST DISTANCE:	3 m
MODULATION:	64QAM
MODULATING SIGNAL:	PRBS
BIT RATE:	65 Mbps
DUTY CYCLE:	100 %
TRANSMITTER OUTPUT POWER SETTINGS:	Maximum
TRANSMITTER OUTPUT POWER:	702 mW at low carrier frequency 626 mW at mid carrier frequency 618 mW at high carrier frequency
DETECTOR USED:	Peak
RESOLUTION BANDWIDTH:	100 kHz
VIDEO BANDWIDTH:	300 kHz
TEST ANTENNA TYPE:	Active loop (9 kHz – 30 MHz) Biconilog (30 MHz – 1000 MHz) Double ridged guide (above 1000 MHz)

Frequency MHz	Field strengtl of spurious, dB(µV/m)	Antenna polarization	Antenna height, m	Azimuth, degrees*	Field strengtl of carrier, dB(µV/m)	Attenuation below carrier, dBc	Limit, dBc	Margin, dB**	Verdict
Low carrier frequency									
All emission were more than 20 dB below the limit									Pass
Mid carrier frequency									
All emission were more than 20 dB below the limit									Pass
High carrier frequency									
All emission were more than 20 dB below the limit									Pass

*- EUT front panel refers to 0 degrees position of turntable.
**- Margin = Attenuation below carrier – specification limit.

Test specification:	Section 15.247(d), RSS-210 section A8.5, Radiated spurious emissions		
Test procedure:	FCC New Guidance on Measurements for DTS in section 15.247(c)/ANSI C63.4, Section 13.1.4		
Test mode:	Compliance	Verdict:	PASS
Date & Time:	10/14/2009 5:44:25 PM		
Temperature: 22.7 ºC	Air Pressure: 1014 hPa	Relative Humidity: 57 %	Power Supply: 120VAC
Remarks: Internal flat antenna with 24 dBi gain			

Table 7.5.3 Field strength of spurious emissions above 1 GHz within restricted bands

ASSIGNED FREQUENCY:	5725 - 5850 MHz
INVESTIGATED FREQUENCY RANGE:	1000 - 40000 MHz
TEST DISTANCE:	3 m
MODULATION:	64QAM
MODULATING SIGNAL:	PRBS
BIT RATE:	65 Mbps
DUTY CYCLE:	100 %
TRANSMITTER OUTPUT POWER SETTINGS:	Maximum
TRANSMITTER OUTPUT POWER:	702 mW at low carrier frequency 626 mW at mid carrier frequency 618 mW at high carrier frequency
DETECTOR USED:	Peak
RESOLUTION BANDWIDTH:	1000 kHz
TEST ANTENNA TYPE:	Double ridged guide

Frequency MHz	Antenna Polarization	Antenna Height m	Azimuth degrees*	Peak field strength(VBW=3 MHz Measured dB(µV/m)	Peak field strength(VBW=3 MHz Limit, dB(µV/m	Peak field strength(VBW=3 MHz Margin, dB**	Average field strength(VBW=10 Hz) Measured dB(µV/m)	Average field strength(VBW=10 Hz) Calculated dB(µV/m)	Average field strength(VBW=10 Hz) Limit, dB(µV/m	Average field strength(VBW=10 Hz) Margin dB***	Verdict
Low carrier frequency											
11460.0	Hor	1.0	0	56.95	74.0	-17.05	43.68	43.68	54.0	-10.32	Pass
Mid carrier frequency											
11560.3	Hor	1.0	0	56.50	74.0	-17.50	43.27	43.27	54.0	-10.73	Pass
High carrier frequency											
11689.7	Hor	1.0	0	63.41	74.0	-10.59	51.52	49.15	54.0	--4.85	Pass

*- EUT front panel refers to 0 degrees position of turntable.
**- Margin = Measured field strength - specification limit.
***- Margin = Calculated field strength - specification limit,
where Calculated field strength = Measured field strength + average factor.

Table 7.5.4 Average factor calculation

Transmission pulse		Transmission burst		Transmission train duration, ms	Average factor, dB
Duration, ms	Period, ms	Duration, ms	Period, ms		
Duty cycle 100%					0

*- Average factor was calculated as follows

for pulse train shorter than 100 ms: $$Average\ factor = 20 \times \log_{10}\left(\frac{Pulse\ duration}{Pulse\ period} \times \frac{Burst\ duration}{Train\ duration} \times Number\ of\ bursts\ within\ pulse\ train\right)$$

for pulse train longer than 100 ms: $$Average\ factor = 20 \times \log_{10}\left(\frac{Pulse\ duration}{Pulse\ period} \times \frac{Burst\ duration}{100\,ms} \times Number\ of\ bursts\ within\ 100\,ms\right)$$

Test specification:	Section 15.247(d), RSS-210 section A8.5, Radiated spurious emissions		
Test procedure:	FCC New Guidance on Measurements for DTS in section 15.247(c)/ANSI C63.4, Section 13.1.4		
Test mode:	Compliance	Verdict:	PASS
Date & Time:	10/14/2009 5:44:25 PM		
Temperature: 22.7 ºC	Air Pressure: 1014 hPa	Relative Humidity: 57 %	Power Supply: 120VAC
Remarks: Internal flat antenna with 24 dBi gain			

Table 7.5.5 Field strength of spurious emissions below 1 GHz within restricted bands

ASSIGNED FREQUENCY:	5725 - 5850 MHz
INVESTIGATED FREQUENCY RANGE:	0.009 – 1000 MHz
TEST DISTANCE:	3 m
MODULATION:	64QAM
MODULATING SIGNAL:	PRBS
BIT RATE:	65 Mbps
DUTY CYCLE:	100 %
TRANSMITTER OUTPUT POWER SETTINGS:	Maximum
RESOLUTION BANDWIDTH:	1 kHz (9 kHz – 150 kHz) 9.0 kHz (150 kHz – 30 MHz) 120 kHz (30 MHz – 1000 MHz)
VIDEO BANDWIDTH:	> Resolution bandwidth
TEST ANTENNA TYPE:	Active loop (9 kHz – 30 MHz) Biconilog (30 MHz – 1000 MHz)

Frequency MHz	Peak emission, dB(µV/m)	Quasi-peak			Antenna polarization	Antenna height, m	Turn-table position**, degrees	Verdict
		Measured emission, dB(µV/m)	Limit, dB(µV/m)	Margin, dB*				
Low carrier frequency								
137.17700	31.8	25.9	43.5	-17.60	Vert	1.1	290	Pass
974.63320	44.7	42.8	54.0	-11.20	Vert	1.1	330	Pass
Mid carrier frequency								
137.17700	31.4	26.7	43.5	-16.80	Vert	1.1	290	Pass
974.63320	44.5	42.7	54.0	-11.30	Vert	1.1	330	Pass
High carrier frequency								
137.17700	30.8	25.5	43.5	-18.00	Vert	1.1	290	Pass
974.63320	44.6	42.9	54.0	-11.10	Vert	1.1	330	Pass

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

Table 7.5.6 Restricted bands

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

Reference numbers of test equipment used

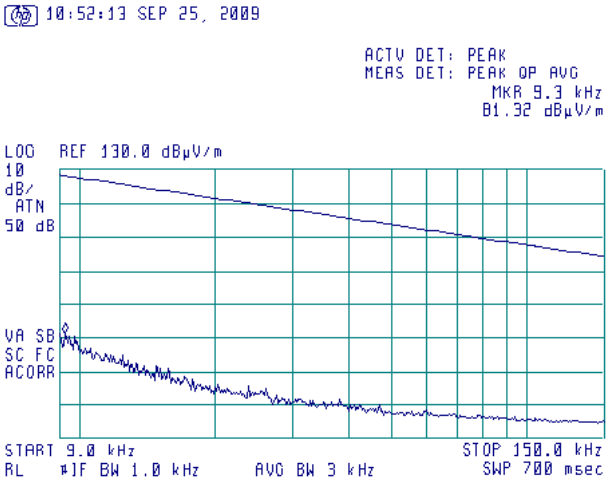
HL 0446	HL 0521	HL 0604	HL 0768	HL 0769	HL 1424	HL 1553	HL 1984
HL 2254	HL 2697	HL 2780	HL 2882	HL 2883	HL 3123	HL 3531	HL 3533
HL 3535	HL 3616						

Full description is given in Appendix A.

Test specification:	Section 15.247(d), RSS-210 section A8.5, Radiated spurious emissions		
Test procedure:	FCC New Guidance on Measurements for DTS in section 15.247(c)/ANSI C63.4, Section 13.1.4		
Test mode:	Compliance	Verdict:	PASS
Date & Time:	10/14/2009 5:44:25 PM		
Temperature: 22.7 ºC	Air Pressure: 1014 hPa	Relative Humidity: 57 %	Power Supply: 120VAC
Remarks: Internal flat antenna with 24 dBi gain			

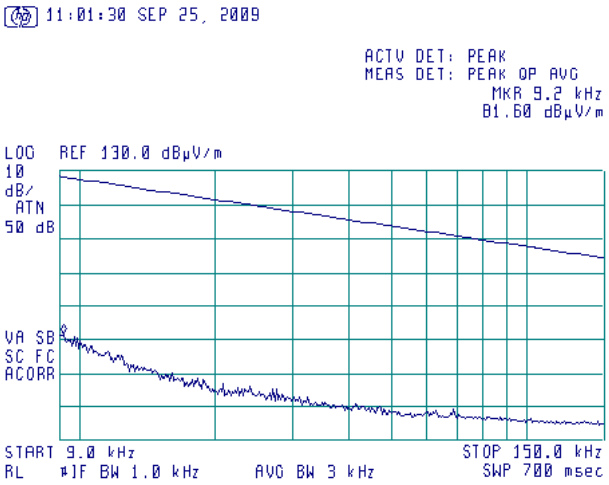
Plot 7.5.1 Radiated emission measurements from 9 to 150 kHz at the low carrier frequency

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



Plot 7.5.2 Radiated emission measurements from 9 to 150 kHz at the mid carrier frequency

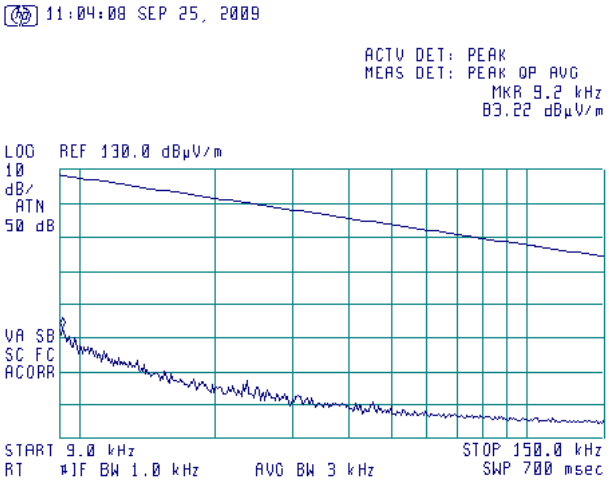
TEST SITE: Anechoic chamber
TEST DISTANCE: 3 m
ANTENNA POLARIZATION: Vertical



Test specification:	Section 15.247(d), RSS-210 section A8.5, Radiated spurious emissions		
Test procedure:	FCC New Guidance on Measurements for DTS in section 15.247(c)/ANSI C63.4, Section 13.1.4		
Test mode:	Compliance	Verdict:	PASS
Date & Time:	10/14/2009 5:44:25 PM		
Temperature: 22.7 ºC	Air Pressure: 1014 hPa	Relative Humidity: 57 %	Power Supply: 120VAC
Remarks: Internal flat antenna with 24 dBi gain			

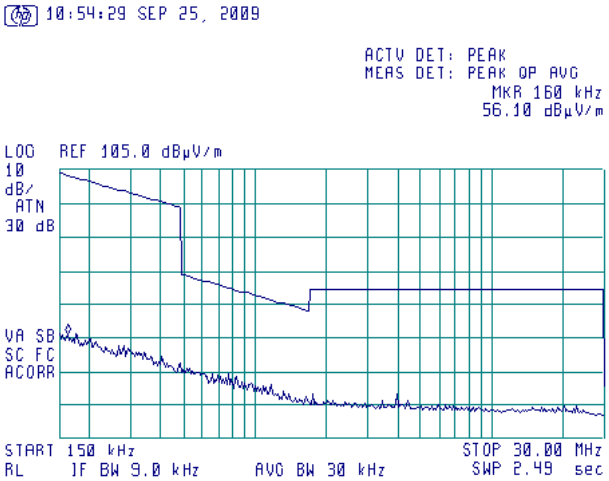
Plot 7.5.3 Radiated emission measurements from 9 to 150 kHz at the high carrier frequency

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



Plot 7.5.4 Radiated emission measurements from 0.15 to 30 MHz at the low carrier frequency

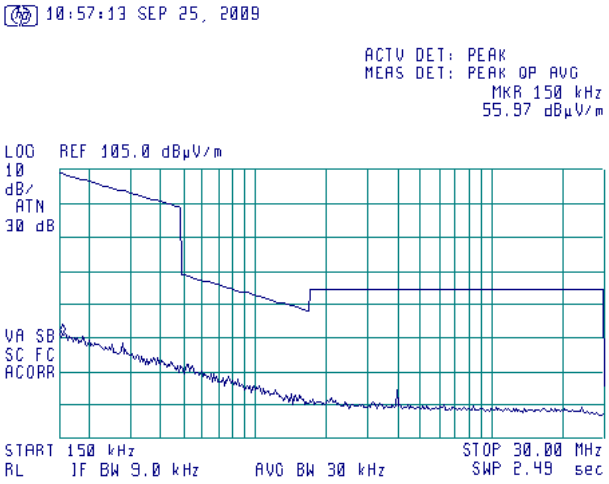
TEST SITE: Anechoic chamber
TEST DISTANCE: 3 m
ANTENNA POLARIZATION: Vertical



Test specification:	Section 15.247(d), RSS-210 section A8.5, Radiated spurious emissions		
Test procedure:	FCC New Guidance on Measurements for DTS in section 15.247(c)/ANSI C63.4, Section 13.1.4		
Test mode:	Compliance	Verdict:	PASS
Date & Time:	10/14/2009 5:44:25 PM		
Temperature: 22.7 ºC	Air Pressure: 1014 hPa	Relative Humidity: 57 %	Power Supply: 120VAC
Remarks: Internal flat antenna with 24 dBi gain			

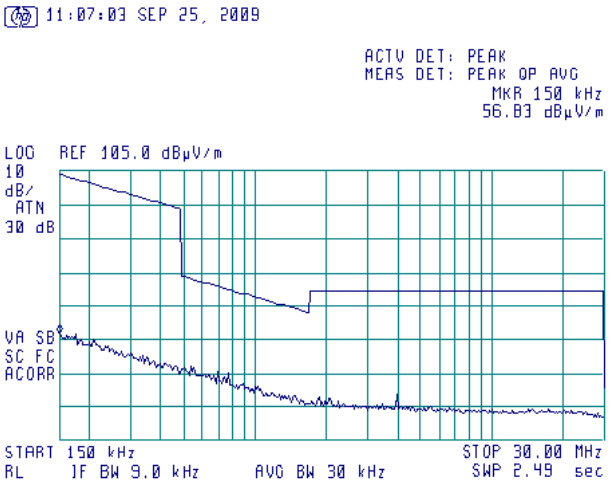
Plot 7.5.5 Radiated emission measurements from 0.15 to 30 MHz at the mid carrier frequency

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



Plot 7.5.6 Radiated emission measurements from 0.15 to 30 MHz at the high carrier frequency

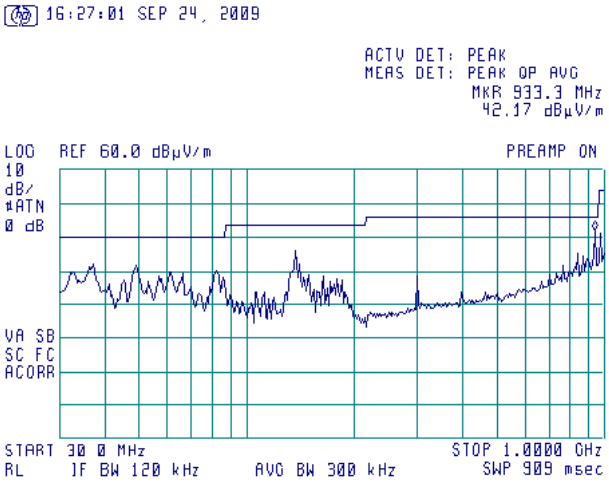
TEST SITE: Anechoic chamber
TEST DISTANCE: 3 m
ANTENNA POLARIZATION: Vertical



Test specification:	Section 15.247(d), RSS-210 section A8.5, Radiated spurious emissions		
Test procedure:	FCC New Guidance on Measurements for DTS in section 15.247(c)/ANSI C63.4, Section 13.1.4		
Test mode:	Compliance	Verdict:	PASS
Date & Time:	10/14/2009 5:44:25 PM		
Temperature: 22.7 ºC	Air Pressure: 1014 hPa	Relative Humidity: 57 %	Power Supply: 120VAC
Remarks: Internal flat antenna with 24 dBi gain			

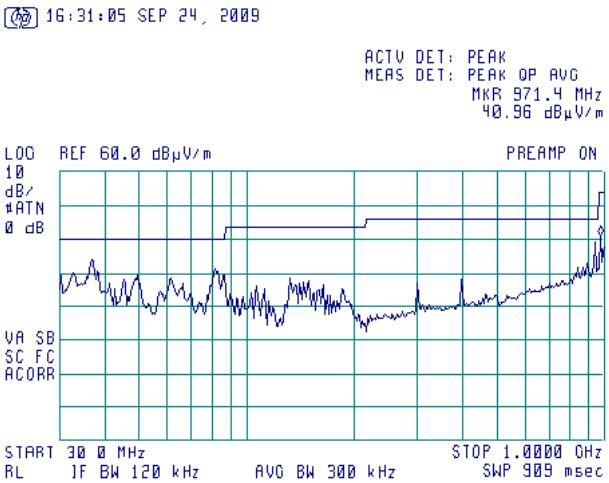
Plot 7.5.7 Radiated emission measurements from 30 to 1000 MHz at the low carrier frequency

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



Plot 7.5.8 Radiated emission measurements from 30 to 1000 MHz at the mid carrier frequency

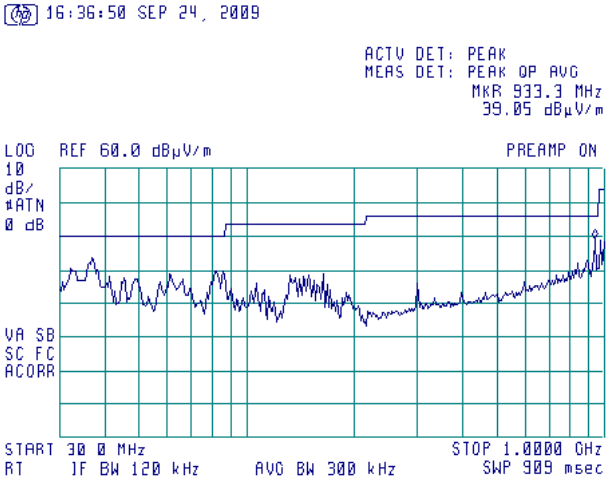
TEST SITE: Semi anechoic chamber
TEST DISTANCE: 3 m
ANTENNA POLARIZATION: Vertical and Horizontal



Test specification:	Section 15.247(d), RSS-210 section A8.5, Radiated spurious emissions		
Test procedure:	FCC New Guidance on Measurements for DTS in section 15.247(c)/ANSI C63.4, Section 13.1.4		
Test mode:	Compliance	Verdict:	PASS
Date & Time:	10/14/2009 5:44:25 PM		
Temperature: 22.7 ºC	Air Pressure: 1014 hPa	Relative Humidity: 57 %	Power Supply: 120VAC
Remarks: Internal flat antenna with 24 dBi gain			

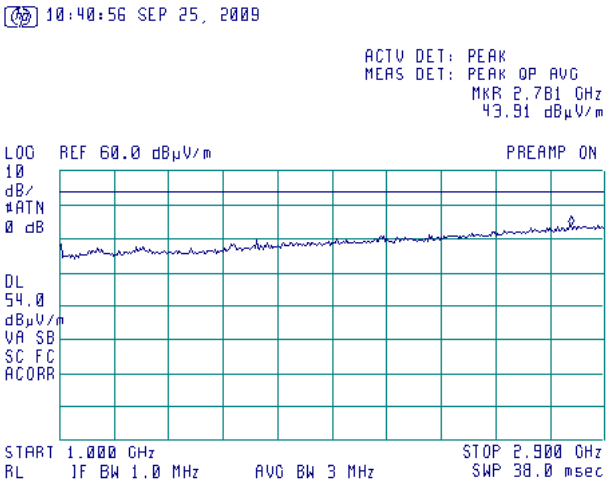
Plot 7.5.9 Radiated emission measurements from 30 to 1000 MHz at the high carrier frequency

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



Plot 7.5.10 Radiated emission measurements from 1000 to 2900 MHz at the low carrier frequency

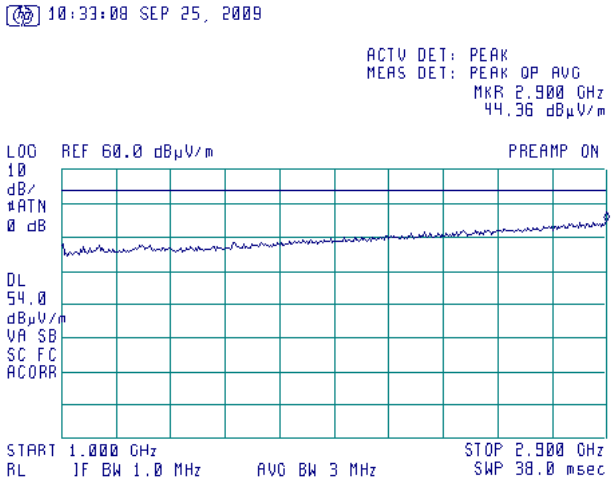
TEST SITE: Anechoic chamber
TEST DISTANCE: 3 m
ANTENNA POLARIZATION: Vertical and Horizontal



Test specification:	Section 15.247(d), RSS-210 section A8.5, Radiated spurious emissions		
Test procedure:	FCC New Guidance on Measurements for DTS in section 15.247(c)/ANSI C63.4, Section 13.1.4		
Test mode:	Compliance	Verdict:	PASS
Date & Time:	10/14/2009 5:44:25 PM		
Temperature: 22.7 ºC	Air Pressure: 1014 hPa	Relative Humidity: 57 %	Power Supply: 120VAC
Remarks: Internal flat antenna with 24 dBi gain			

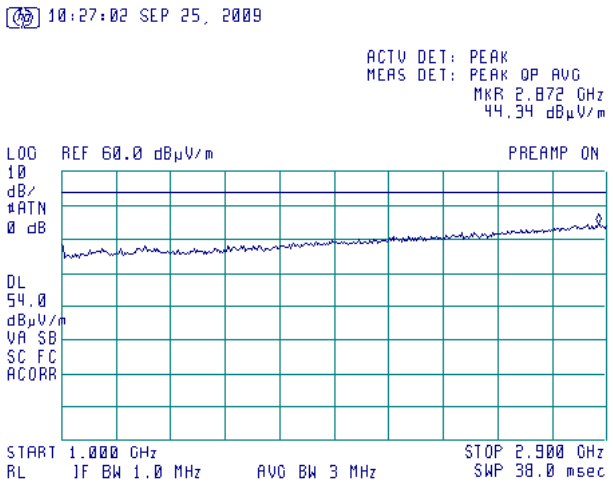
Plot 7.5.11 Radiated emission measurements from 1000 to 2900 MHz at the mid carrier frequency

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



Plot 7.5.12 Radiated emission measurements from 1000 to 2900 MHz at the high carrier frequency

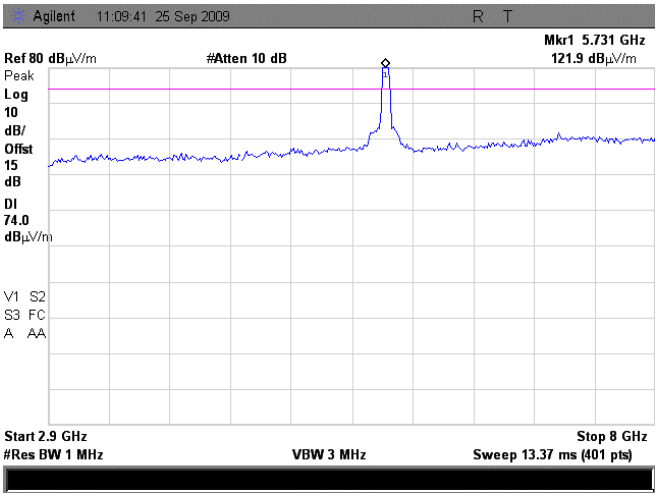
TEST SITE: Anechoic chamber
TEST DISTANCE: 3 m
ANTENNA POLARIZATION: Vertical and Horizontal



Test specification:	Section 15.247(d), RSS-210 section A8.5, Radiated spurious emissions		
Test procedure:	FCC New Guidance on Measurements for DTS in section 15.247(c)/ANSI C63.4, Section 13.1.4		
Test mode:	Compliance	Verdict:	PASS
Date & Time:	10/14/2009 5:44:25 PM		
Temperature: 22.7 ºC	Air Pressure: 1014 hPa	Relative Humidity: 57 %	Power Supply: 120VAC
Remarks: Internal flat antenna with 24 dBi gain			

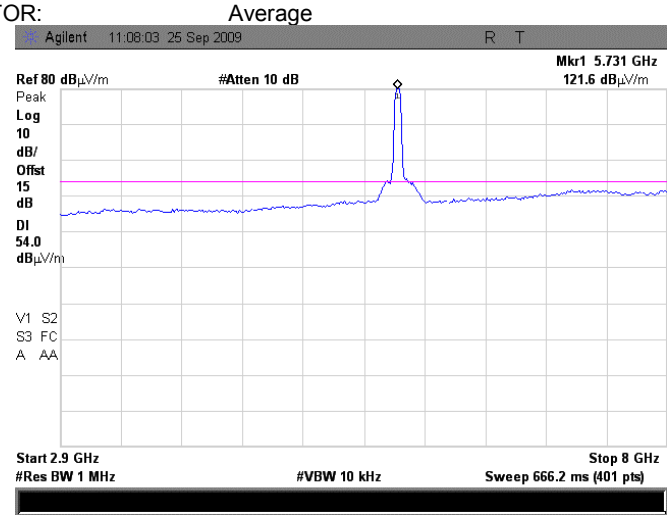
Plot 7.5.13 Radiated emission measurements from 2900 to 8000 MHz at the low carrier frequency

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



Plot 7.5.14 Radiated emission measurements from 2900 to 8000 MHz at the low carrier frequency

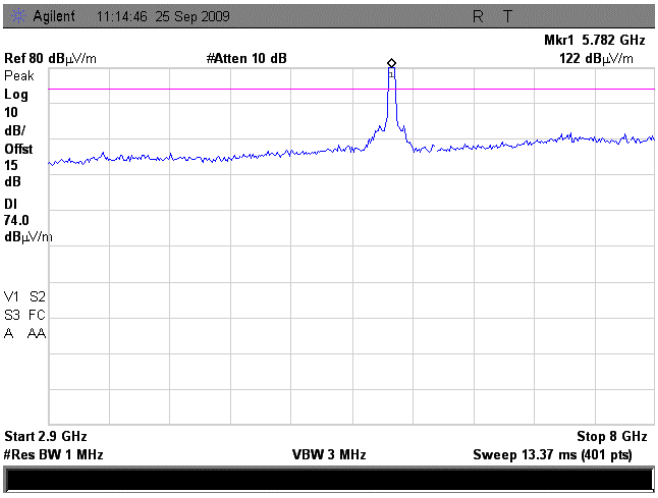
TEST SITE: Anechoic chamber
TEST DISTANCE: 3 m
ANTENNA POLARIZATION: Vertical and Horizontal
DETECTOR: Average



Test specification:	Section 15.247(d), RSS-210 section A8.5, Radiated spurious emissions		
Test procedure:	FCC New Guidance on Measurements for DTS in section 15.247(c)/ANSI C63.4, Section 13.1.4		
Test mode:	Compliance	Verdict:	PASS
Date & Time:	10/14/2009 5:44:25 PM		
Temperature: 22.7 ºC	Air Pressure: 1014 hPa	Relative Humidity: 57 %	Power Supply: 120VAC
Remarks: Internal flat antenna with 24 dBi gain			

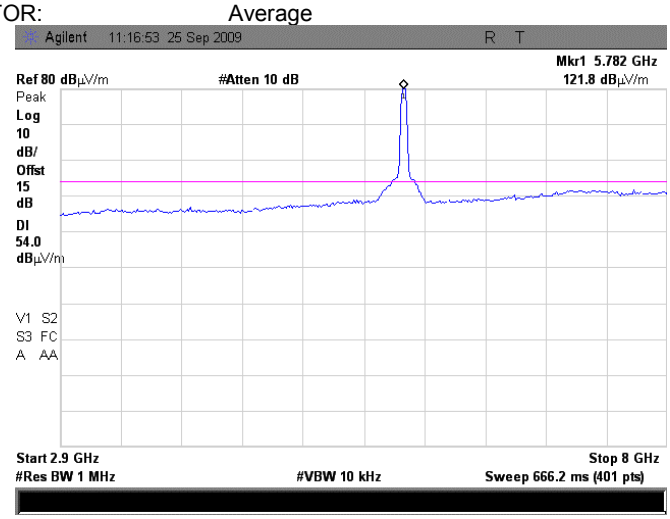
Plot 7.5.15 Radiated emission measurements from 2900 to 8000 MHz at the mid carrier frequency

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



Plot 7.5.16 Radiated emission measurements from 2900 to 8000 MHz at the mid carrier frequency

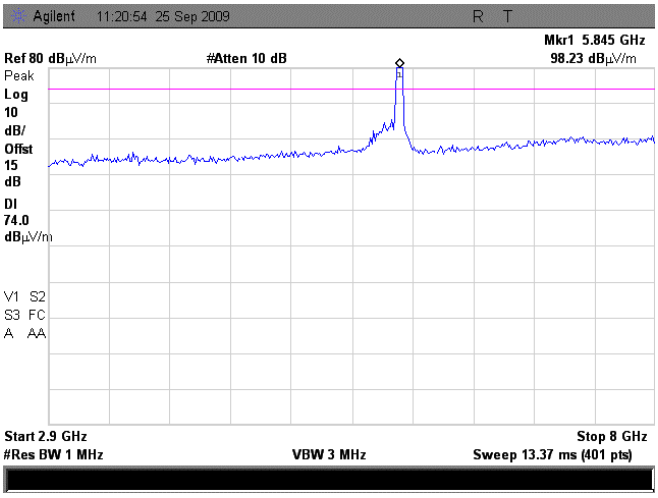
TEST SITE: Anechoic chamber
TEST DISTANCE: 3 m
ANTENNA POLARIZATION: Vertical and Horizontal
DETECTOR: Average



Test specification:	Section 15.247(d), RSS-210 section A8.5, Radiated spurious emissions		
Test procedure:	FCC New Guidance on Measurements for DTS in section 15.247(c)/ANSI C63.4, Section 13.1.4		
Test mode:	Compliance	Verdict:	PASS
Date & Time:	10/14/2009 5:44:25 PM		
Temperature: 22.7 ºC	Air Pressure: 1014 hPa	Relative Humidity: 57 %	Power Supply: 120VAC
Remarks: Internal flat antenna with 24 dBi gain			

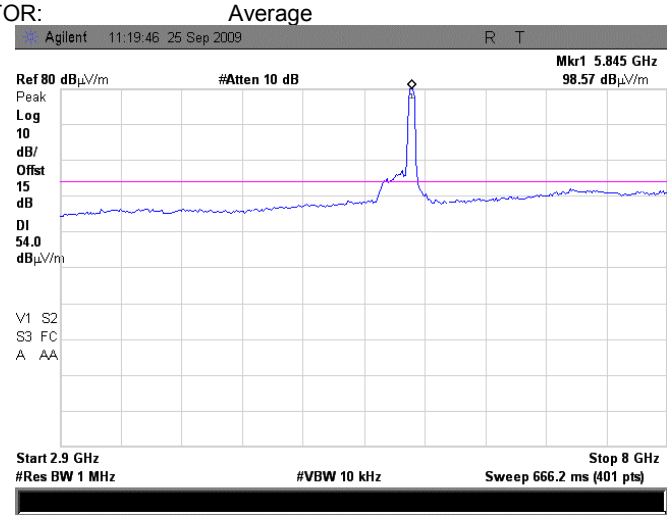
Plot 7.5.17 Radiated emission measurements from 2900 to 8000 MHz at the high carrier frequency

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



Plot 7.5.18 Radiated emission measurements from 2900 to 8000 MHz at the high carrier frequency

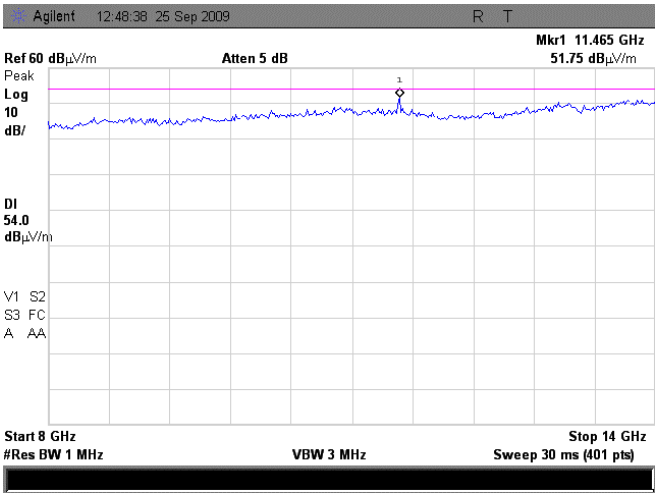
TEST SITE: Anechoic chamber
TEST DISTANCE: 3 m
ANTENNA POLARIZATION: Vertical and Horizontal
DETECTOR: Average



Test specification:	Section 15.247(d), RSS-210 section A8.5, Radiated spurious emissions		
Test procedure:	FCC New Guidance on Measurements for DTS in section 15.247(c)/ANSI C63.4, Section 13.1.4		
Test mode:	Compliance	Verdict:	PASS
Date & Time:	10/14/2009 5:44:25 PM		
Temperature: 22.7 ºC	Air Pressure: 1014 hPa	Relative Humidity: 57 %	Power Supply: 120VAC
Remarks: Internal flat antenna with 24 dBi gain			

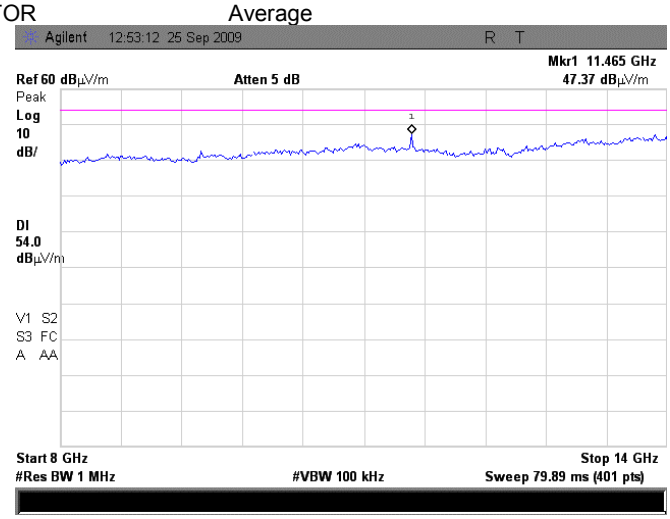
Plot 7.5.19 Radiated emission measurements from 8000 to 14000 MHz at the low carrier frequency

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



Plot 7.5.20 Radiated emission measurements from 8000 to 14000 MHz at the low carrier frequency

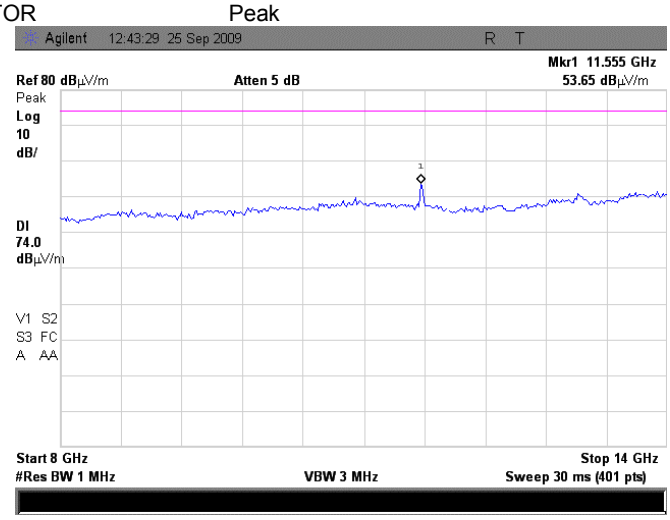
TEST SITE: Semi anechoic chamber
TEST DISTANCE: 3 m
ANTENNA POLARIZATION: Vertical and Horizontal
DETECTOR Average



Test specification:	Section 15.247(d), RSS-210 section A8.5, Radiated spurious emissions		
Test procedure:	FCC New Guidance on Measurements for DTS in section 15.247(c)/ANSI C63.4, Section 13.1.4		
Test mode:	Compliance	Verdict:	PASS
Date & Time:	10/14/2009 5:44:25 PM		
Temperature: 22.7 ºC	Air Pressure: 1014 hPa	Relative Humidity: 57 %	Power Supply: 120VAC
Remarks: Internal flat antenna with 24 dBi gain			

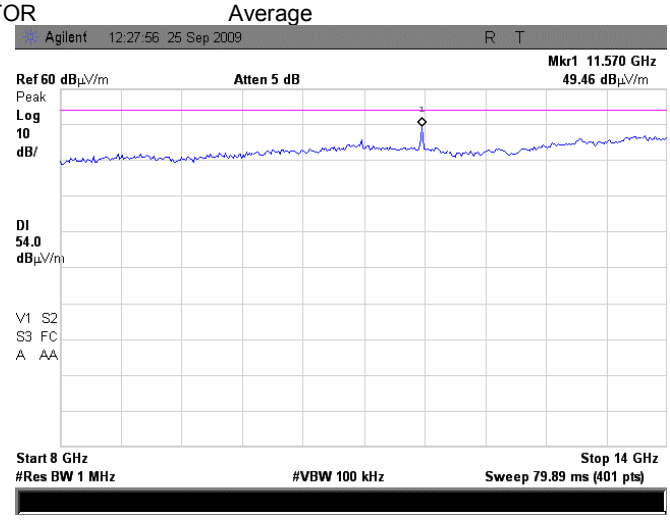
Plot 7.5.21 Radiated emission measurements from 8000 to 14000 MHz at the mid carrier frequency

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



Plot 7.5.22 Radiated emission measurements from 8000 to 14000 MHz at the mid carrier frequency

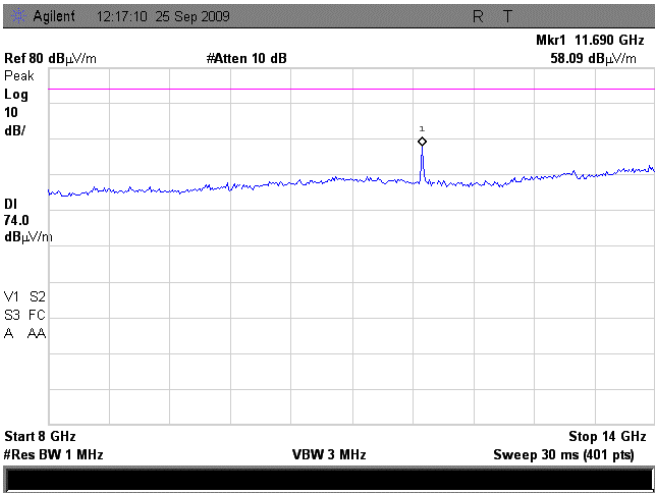
TEST SITE: Semi anechoic chamber
TEST DISTANCE: 3 m
ANTENNA POLARIZATION: Vertical and Horizontal
DETECTOR Average



Test specification:	Section 15.247(d), RSS-210 section A8.5, Radiated spurious emissions		
Test procedure:	FCC New Guidance on Measurements for DTS in section 15.247(c)/ANSI C63.4, Section 13.1.4		
Test mode:	Compliance	Verdict:	PASS
Date & Time:	10/14/2009 5:44:25 PM		
Temperature: 22.7 ºC	Air Pressure: 1014 hPa	Relative Humidity: 57 %	Power Supply: 120VAC
Remarks: Internal flat antenna with 24 dBi gain			

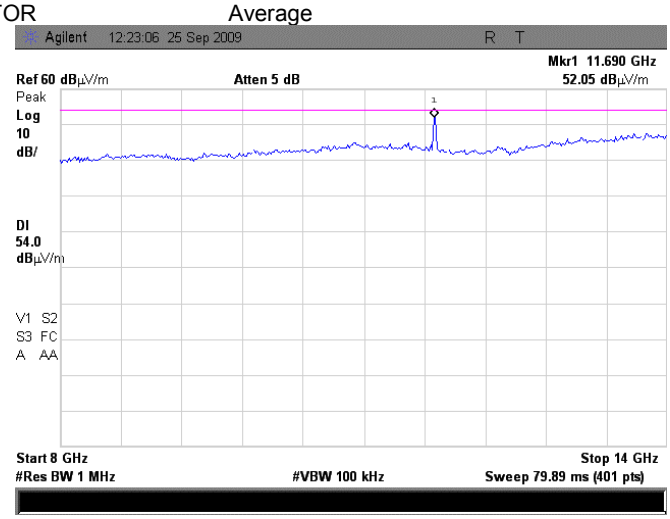
Plot 7.5.23 Radiated emission measurements from 8000 to 14000 MHz at the high carrier frequency

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



Plot 7.5.24 Radiated emission measurements from 8000 to 14000 MHz at the high carrier frequency

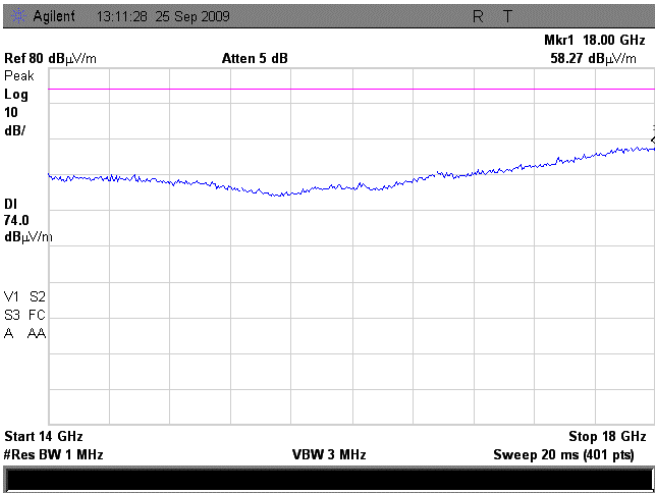
TEST SITE: Anechoic chamber
TEST DISTANCE: 3 m
ANTENNA POLARIZATION: Vertical and Horizontal
DETECTOR Average



Test specification:	Section 15.247(d), RSS-210 section A8.5, Radiated spurious emissions		
Test procedure:	FCC New Guidance on Measurements for DTS in section 15.247(c)/ANSI C63.4, Section 13.1.4		
Test mode:	Compliance	Verdict:	PASS
Date & Time:	10/14/2009 5:44:25 PM		
Temperature: 22.7 ºC	Air Pressure: 1014 hPa	Relative Humidity: 57 %	Power Supply: 120VAC
Remarks: Internal flat antenna with 24 dBi gain			

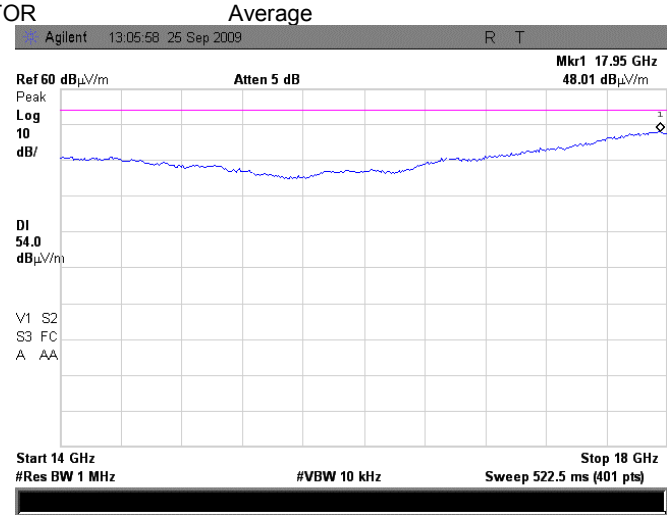
Plot 7.5.25 Radiated emission measurements from 14000 to 18000 MHz at the low carrier frequency

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



Plot 7.5.26 Radiated emission measurements from 14000 to 18000 MHz at the low carrier frequency

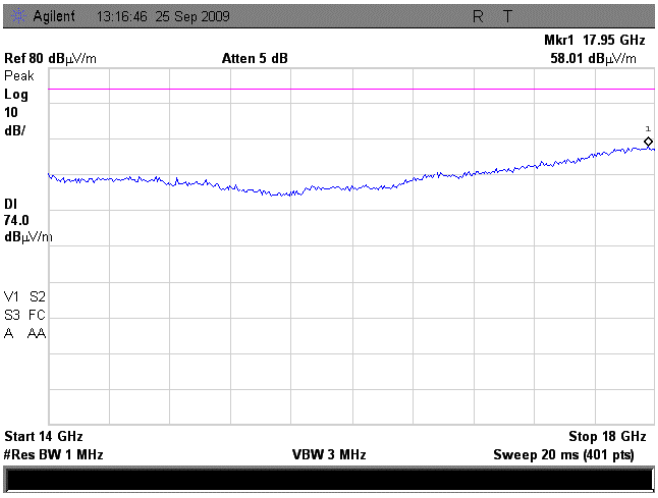
TEST SITE: Anechoic chamber
TEST DISTANCE: 3 m
ANTENNA POLARIZATION: Vertical and Horizontal
DETECTOR Average



Test specification:	Section 15.247(d), RSS-210 section A8.5, Radiated spurious emissions		
Test procedure:	FCC New Guidance on Measurements for DTS in section 15.247(c)/ANSI C63.4, Section 13.1.4		
Test mode:	Compliance	Verdict:	PASS
Date & Time:	10/14/2009 5:44:25 PM		
Temperature: 22.7 ºC	Air Pressure: 1014 hPa	Relative Humidity: 57 %	Power Supply: 120VAC
Remarks: Internal flat antenna with 24 dBi gain			

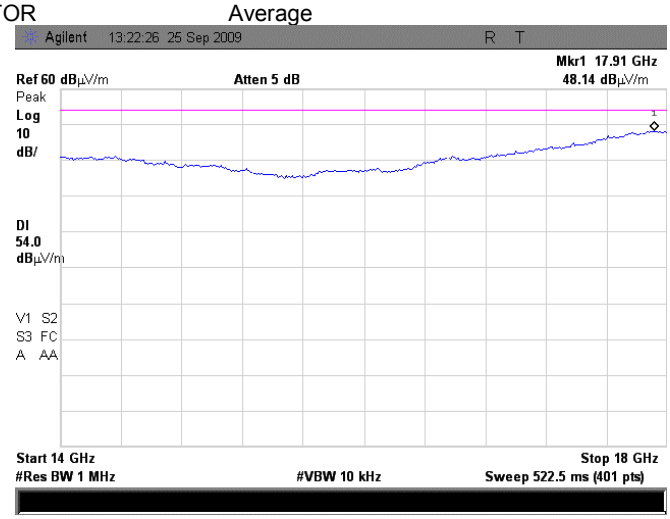
Plot 7.5.27 Radiated emission measurements from 14000 to 18000 MHz at the mid carrier frequency

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



Plot 7.5.28 Radiated emission measurements from 14000 to 18000 MHz at the mid carrier frequency

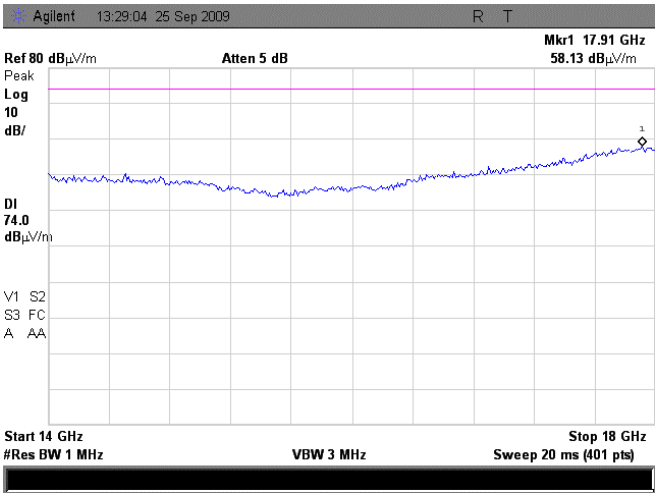
TEST SITE: Anechoic chamber
TEST DISTANCE: 3 m
ANTENNA POLARIZATION: Vertical and Horizontal
DETECTOR Average



Test specification:	Section 15.247(d), RSS-210 section A8.5, Radiated spurious emissions		
Test procedure:	FCC New Guidance on Measurements for DTS in section 15.247(c)/ANSI C63.4, Section 13.1.4		
Test mode:	Compliance	Verdict:	PASS
Date & Time:	10/14/2009 5:44:25 PM		
Temperature: 22.7 ºC	Air Pressure: 1014 hPa	Relative Humidity: 57 %	Power Supply: 120VAC
Remarks: Internal flat antenna with 24 dBi gain			

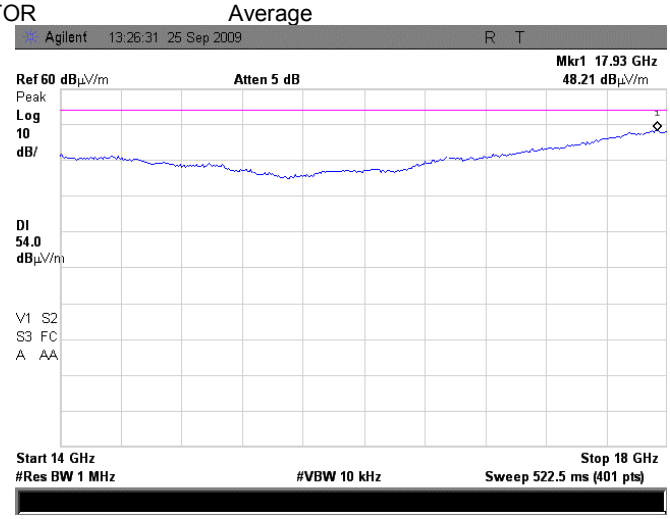
Plot 7.5.29 Radiated emission measurements from 14000 to 18000 MHz at the high carrier frequency

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



Plot 7.5.30 Radiated emission measurements from 14000 to 18000 MHz at the high carrier frequency

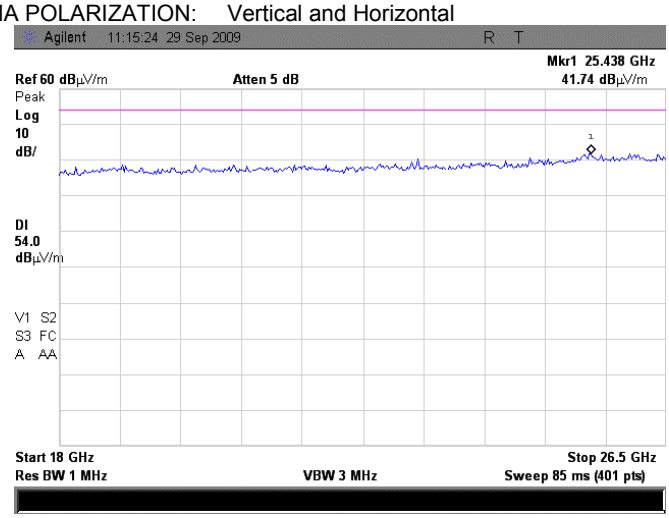
TEST SITE: Anechoic chamber
TEST DISTANCE: 3 m
ANTENNA POLARIZATION: Vertical and Horizontal
DETECTOR Average



Test specification:	Section 15.247(d), RSS-210 section A8.5, Radiated spurious emissions		
Test procedure:	FCC New Guidance on Measurements for DTS in section 15.247(c)/ANSI C63.4, Section 13.1.4		
Test mode:	Compliance	Verdict:	PASS
Date & Time:	10/14/2009 5:44:25 PM		
Temperature: 22.7 ºC	Air Pressure: 1014 hPa	Relative Humidity: 57 %	Power Supply: 120VAC
Remarks: Internal flat antenna with 24 dBi gain			

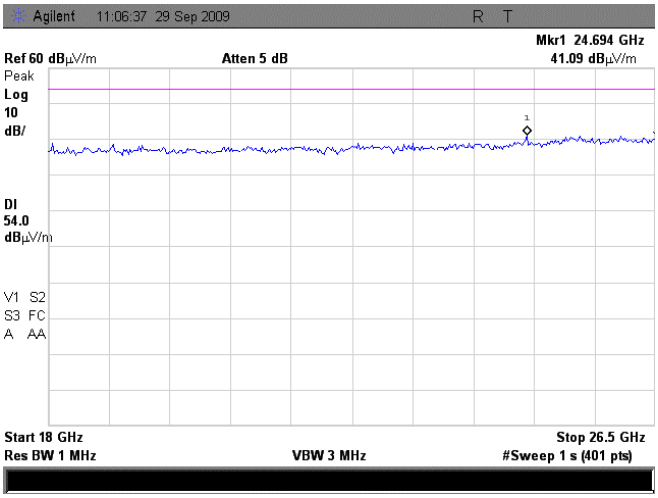
Plot 7.5.31 Radiated emission measurements from 18000 to 26500 MHz at the low carrier frequency

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



Plot 7.5.32 Radiated emission measurements from 18000 to 26500 MHz at the mid carrier frequency

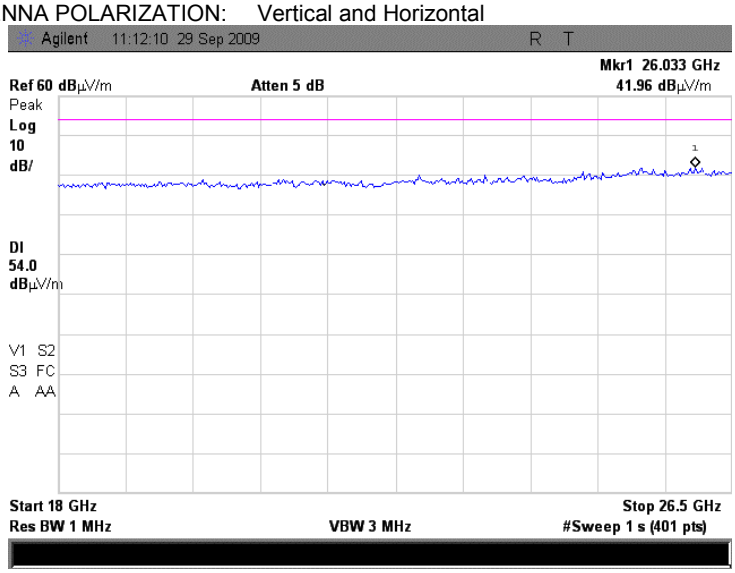
TEST SITE: OATS
TEST DISTANCE: 3 m
ANTENNA POLARIZATION: Vertical and Horizontal



Test specification:	Section 15.247(d), RSS-210 section A8.5, Radiated spurious emissions		
Test procedure:	FCC New Guidance on Measurements for DTS in section 15.247(c)/ANSI C63.4, Section 13.1.4		
Test mode:	Compliance	Verdict:	PASS
Date & Time:	10/14/2009 5:44:25 PM		
Temperature: 22.7 ºC	Air Pressure: 1014 hPa	Relative Humidity: 57 %	Power Supply: 120VAC
Remarks: Internal flat antenna with 24 dBi gain			

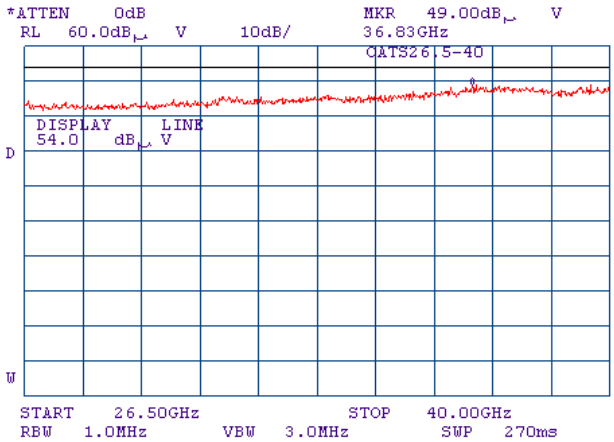
Plot 7.5.33 Radiated emission measurements from 18000 to 26500 MHz at the high carrier frequency

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



Plot 7.5.34 Radiated emission measurements from 26500 to 40000 MHz at the low carrier frequency

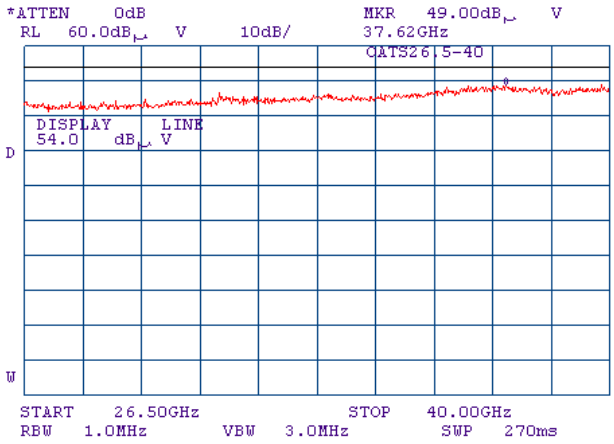
TEST SITE: OATS
TEST DISTANCE: 3 m
ANTENNA POLARIZATION: Vertical and Horizontal



Test specification:	Section 15.247(d), RSS-210 section A8.5, Radiated spurious emissions		
Test procedure:	FCC New Guidance on Measurements for DTS in section 15.247(c)/ANSI C63.4, Section 13.1.4		
Test mode:	Compliance	Verdict:	PASS
Date & Time:	10/14/2009 5:44:25 PM		
Temperature: 22.7 ºC	Air Pressure: 1014 hPa	Relative Humidity: 57 %	Power Supply: 120VAC
Remarks: Internal flat antenna with 24 dBi gain			

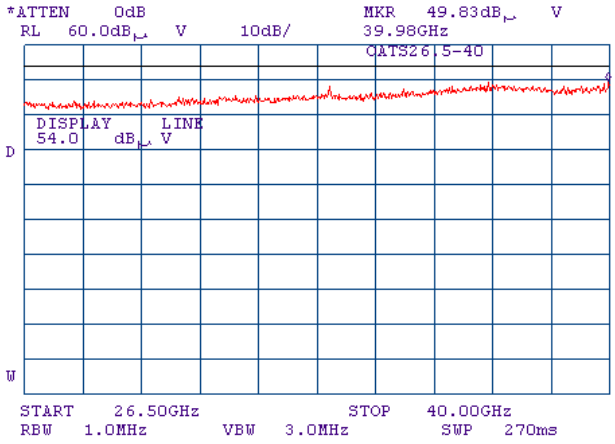
Plot 7.5.35 Radiated emission measurements from 26500 to 40000 MHz at the mid carrier frequency

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



Plot 7.5.36 Radiated emission measurements from 26500 to 40000 MHz at the high carrier frequency

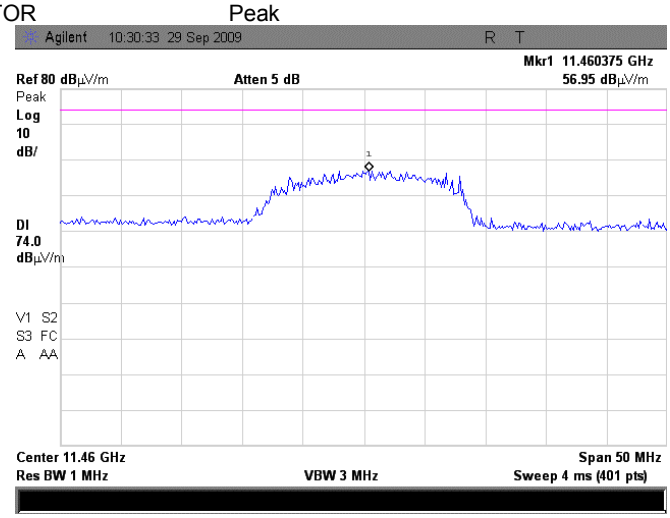
TEST SITE: OATS
TEST DISTANCE: 3 m
ANTENNA POLARIZATION: Vertical and Horizontal



Test specification:	Section 15.247(d), RSS-210 section A8.5, Radiated spurious emissions		
Test procedure:	FCC New Guidance on Measurements for DTS in section 15.247(c)/ANSI C63.4, Section 13.1.4		
Test mode:	Compliance	Verdict:	PASS
Date & Time:	10/14/2009 5:44:25 PM		
Temperature: 22.7 ºC	Air Pressure: 1014 hPa	Relative Humidity: 57 %	Power Supply: 120VAC
Remarks: Internal flat antenna with 24 dBi gain			

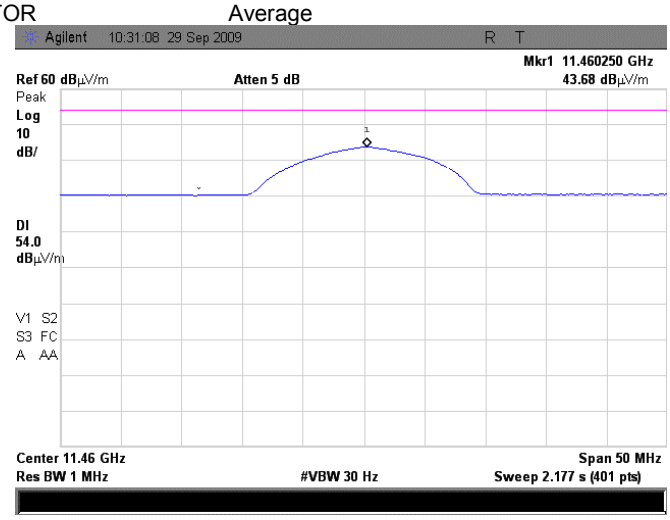
Plot 7.5.37 Radiated emission measurements at the second harmonic of low carrier frequency

TEST SITE: OATS
TEST DISTANCE: 3 m
DETECTOR Peak



Plot 7.5.38 Radiated emission measurements at the second harmonic of low carrier frequency

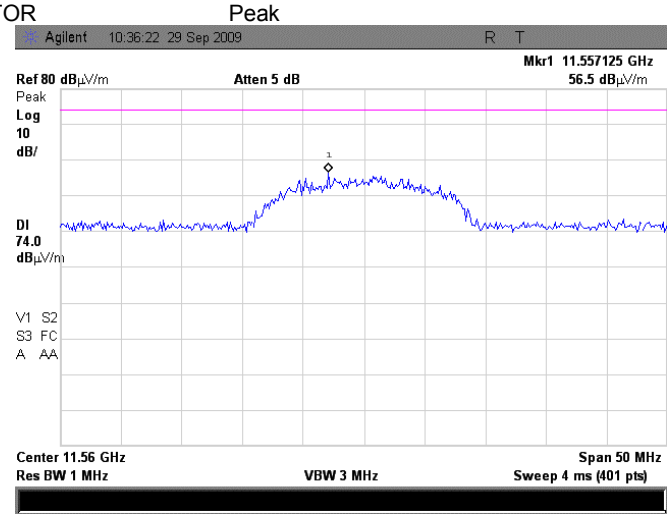
TEST SITE: OATS
TEST DISTANCE: 3 m
DETECTOR Average



Test specification:	Section 15.247(d), RSS-210 section A8.5, Radiated spurious emissions		
Test procedure:	FCC New Guidance on Measurements for DTS in section 15.247(c)/ANSI C63.4, Section 13.1.4		
Test mode:	Compliance	Verdict:	PASS
Date & Time:	10/14/2009 5:44:25 PM		
Temperature: 22.7 ºC	Air Pressure: 1014 hPa	Relative Humidity: 57 %	Power Supply: 120VAC
Remarks: Internal flat antenna with 24 dBi gain			

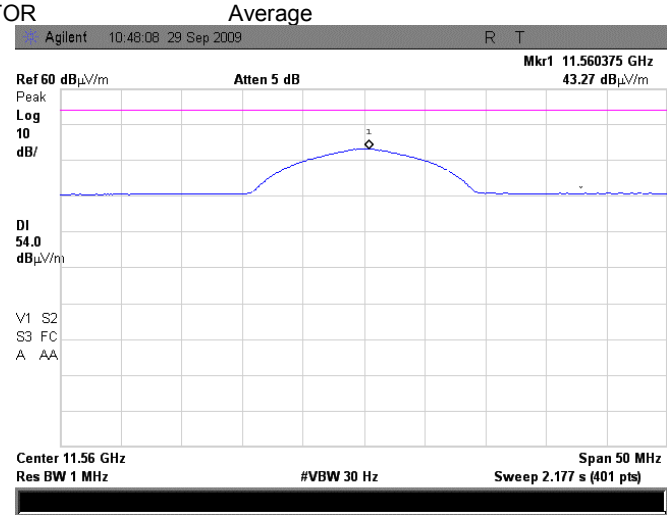
Plot 7.5.39 Radiated emission measurements at the second harmonic of mid carrier frequency

TEST SITE: OATS
TEST DISTANCE: 3 m
DETECTOR Peak



Plot 7.5.40 Radiated emission measurements at the second harmonic of mid carrier frequency

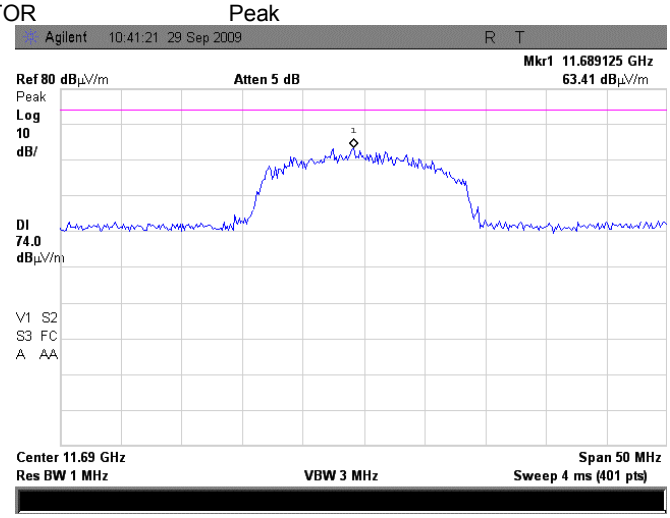
TEST SITE: OATS
TEST DISTANCE: 3 m
DETECTOR Average



Test specification:	Section 15.247(d), RSS-210 section A8.5, Radiated spurious emissions		
Test procedure:	FCC New Guidance on Measurements for DTS in section 15.247(c)/ANSI C63.4, Section 13.1.4		
Test mode:	Compliance	Verdict:	PASS
Date & Time:	10/14/2009 5:44:25 PM		
Temperature: 22.7 ºC	Air Pressure: 1014 hPa	Relative Humidity: 57 %	Power Supply: 120VAC
Remarks: Internal flat antenna with 24 dBi gain			

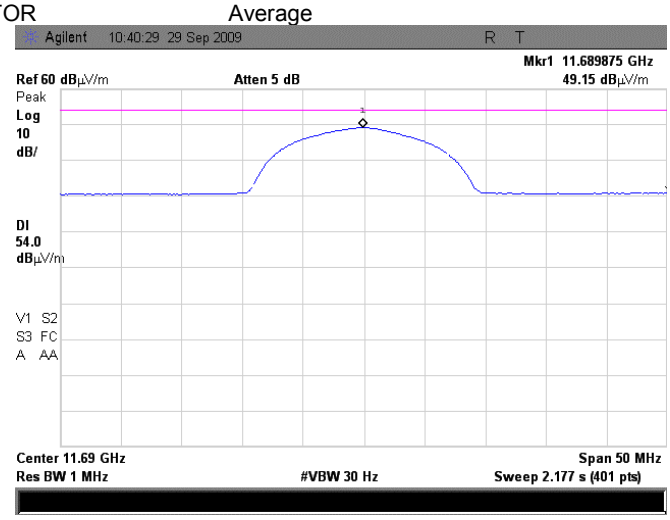
Plot 7.5.41 Radiated emission measurements at the second harmonic of high carrier frequency

TEST SITE: OATS
TEST DISTANCE: 3 m
DETECTOR Peak



Plot 7.5.42 Radiated emission measurements at the second harmonic of high carrier frequency

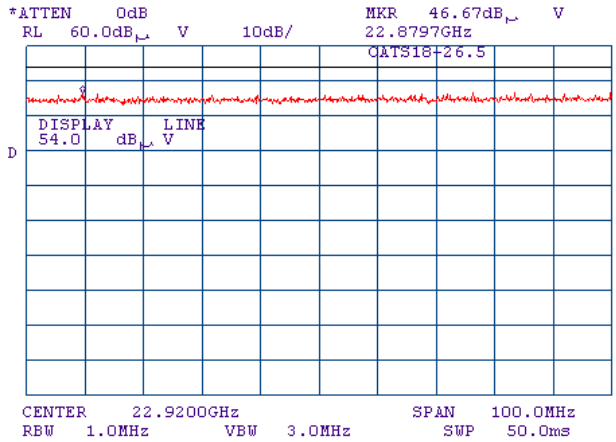
TEST SITE: OATS
TEST DISTANCE: 3 m
DETECTOR Average



Test specification:	Section 15.247(d), RSS-210 section A8.5, Radiated spurious emissions		
Test procedure:	FCC New Guidance on Measurements for DTS in section 15.247(c)/ANSI C63.4, Section 13.1.4		
Test mode:	Compliance	Verdict:	PASS
Date & Time:	10/14/2009 5:44:25 PM		
Temperature: 22.7 ºC	Air Pressure: 1014 hPa	Relative Humidity: 57 %	Power Supply: 120VAC
Remarks: Internal flat antenna with 24 dBi gain			

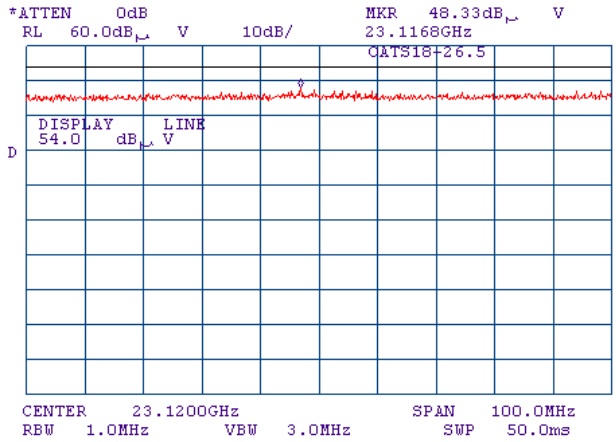
Plot 7.5.43 Radiated emission measurements at the fourth harmonic of low carrier frequency

TEST SITE: OATS
TEST DISTANCE: 3 m



Plot 7.5.44 Radiated emission measurements at the fourth harmonic of mid carrier frequency

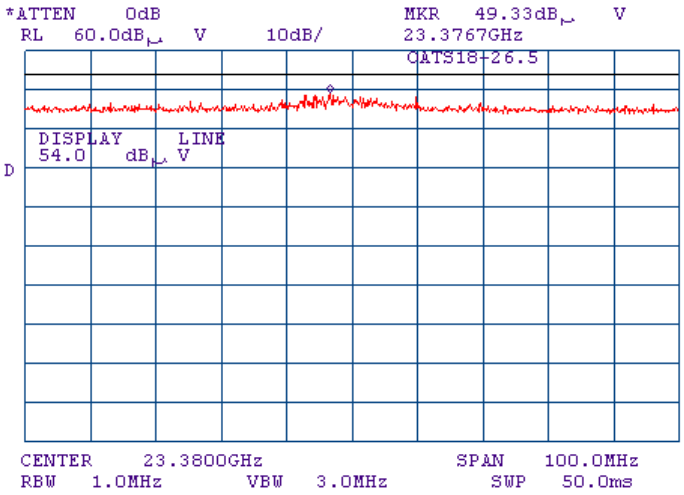
TEST SITE: OATS
TEST DISTANCE: 3 m



Test specification:	Section 15.247(d), RSS-210 section A8.5, Radiated spurious emissions		
Test procedure:	FCC New Guidance on Measurements for DTS in section 15.247(c)/ANSI C63.4, Section 13.1.4		
Test mode:	Compliance	Verdict:	PASS
Date & Time:	10/14/2009 5:44:25 PM		
Temperature: 22.7 ºC	Air Pressure: 1014 hPa	Relative Humidity: 57 %	Power Supply: 120VAC
Remarks: Internal flat antenna with 24 dBi gain			

Plot 7.5.45 Radiated emission measurements at the fourth harmonic of high carrier frequency

TEST SITE: OATS
TEST DISTANCE: 3 m



Test specification:	Section 15.247(e), RSS-210 section A8.2(b), Peak power density		
Test procedure:	FCC New Guidance on Measurements for DTS in section 15.247(d), Option 2		
Test mode:	Compliance	Verdict:	PASS
Date & Time:	10/13/2009 8:54:33 PM		
Temperature: 24.7 ºC	Air Pressure: 1016 hPa	Relative Humidity: 39 %	Power Supply: 120VAC
Remarks: 10 MHz EBW			

7.6 Peak spectral power density

7.6.1 General

This test was performed to measure the peak spectral power density at the transmitter RF antenna connector. Specification test limits are given in Table 7.6.1.

Table 7.6.1 Peak spectral power density limits

Assigned frequency range, MHz	Measurement bandwidth, kHz	Peak spectral power density, dBm
5725.0 – 5850.0	3.0	8.0

7.6.2 Test procedure

7.6.2.1 The EUT was set up as shown inFigure 7.6.1, energized and its proper operation was checked.

7.6.2.2 The EUT was adjusted to produce maximum available to end user RF output power.

7.6.2.3 The frequency span of spectrum analyzer was set to capture the entire 6 dB band of the transmitter, in peak hold mode with resolution bandwidth set to 3.0 kHz, video bandwidth wider than resolution bandwidth, auto sweep time and sufficient number of sweeps was allowed for trace stabilization. The spectrum lines spacing was verified to be wider than 3 kHz. Otherwise the resolution bandwidth was reduced until individual spectrum lines were resolved and the power of individual spectrum lines was integrated over 3 kHz band.

7.6.2.4 The peak of emission was zoomed with span set just wide enough to capture the emission peak area and sweep time was set equal to span width divided by resolution bandwidth. Spectrum analyzer was set in peak hold mode, sufficient number of sweeps was allowed for trace stabilization and peak spectral power density was measured as provided in Table 7.6.2 and the associated plots.

Figure 7.6.1 Peak spectral power density test setup

Test specification:	Section 15.247(e), RSS-210 section A8.2(b), Peak power density		
Test procedure:	FCC New Guidance on Measurements for DTS in section 15.247(d), Option 2		
Test mode:	Compliance	Verdict:	PASS
Date & Time:	10/13/2009 8:54:33 PM		
Temperature: 24.7 ºC	Air Pressure: 1016 hPa	Relative Humidity: 39 %	Power Supply: 120VAC
Remarks: 10 MHz EBW			

Table 7.6.2 Peak spectral power density test results

ASSIGNED FREQUENCY: 5725 - 5850 MHz
MODULATING SIGNAL: PRBS
TRANSMITTER OUTPUT POWER SETTINGS: Maximum
DETECTOR USED: Peak
RESOLUTION BANDWIDTH: 3 kHz
VIDEO BANDWIDTH: 10 kHz

Carrier frequency, MHz	Spectrum analyzer reading, dBm	External attenuation, dB	Peak power density, dB(mW/3 kHz)	Total peak power density, dB(mW/3 kHz)	Limit, dBm	Margin*, dB	Verdict
Antenna 1							
10 MHz BW, Low channel (5730 MHz)							
BPSK, 6.5	-7.06	included	-7.06	-7.06	8.00	-15.06	Pass
64QAM, 65	-6.65	included	-6.65	-6.65	8.00	-14.65	Pass
10 MHz BW, Mid channel (5780 MHz)							
BPSK, 6.5	-7.02	included	-7.02	-7.02	8.00	-15.02	Pass
64QAM, 65	-7.47	included	-7.47	-7.47	8.00	-15.47	Pass
10 MHz BW, High channel (5845 MHz)							
BPSK, 6.5	-7.16	included	-7.16	-7.16	8.00	-15.16	Pass
64QAM, 65	-8.33	included	-8.33	-8.33	8.00	-16.33	Pass
Antenna 2							
10 MHz BW, Low channel (5730 MHz)							
BPSK, 6.5	-6.73	included	-6.73	-6.73	8.00	-14.73	Pass
64QAM, 65	-5.57	included	-5.57	-5.57	8.00	-13.57	Pass
10 MHz BW, Mid channel (5780 MHz)							
BPSK, 6.5	-6.23	included	-6.23	-6.23	8.00	-14.23	Pass
64QAM, 65	-6.83	included	-6.83	-6.83	8.00	-14.83	Pass
10 MHz BW, High channel (5845 MHz)							
BPSK, 6.5	-6.73	included	-6.73	-6.73	8.00	-14.73	Pass
64QAM, 65	-6.88	included	-6.88	-6.88	8.00	-14.88	Pass

* - Margin = Peak power density – specification limit.

Test specification:	Section 15.247(e), RSS-210 section A8.2(b), Peak power density		
Test procedure:	FCC New Guidance on Measurements for DTS in section 15.247(d), Option 2		
Test mode:	Compliance	Verdict:	PASS
Date & Time:	10/13/2009 8:54:33 PM		
Temperature: 24.7 ºC	Air Pressure: 1016 hPa	Relative Humidity: 39 %	Power Supply: 120VAC
Remarks: 10 MHz EBW			

Table 7.6.3 Peak spectral power density test results

ASSIGNED FREQUENCY: 5725 - 5850 MHz
TRANSMITTER OUTPUT POWER SETTINGS: Maximum
DETECTOR USED: Peak
RESOLUTION BANDWIDTH: 3 kHz
VIDEO BANDWIDTH: 10 kHz

Modulation, Bit rate, Mbps	Spectrum analyzer reading, dBm		Total power density, dBm**	Limit, dBm	Margin**, dB	Verdict
	Antenna 1	Antenna 2				
10 MHz BW, Low channel (5730 MHz)						
BPSK, 6.5	-7.06	-6.73	-3.88	8.0	-11.88	Pass
64QAM, 65	-6.65	-5.57	-3.07	8.0	-11.07	Pass
10 MHz BW, Mid channel (5780 MHz)						
BPSK, 6.5	-7.02	-6.23	-3.60	8.0	-9.71	Pass
64QAM, 65	-7.47	-6.83	-4.13	8.0	-10.26	Pass
10 MHz BW, High channel (5845 MHz)						
BPSK, 6.5	-7.16	-6.73	-3.93	8.0	-11.93	Pass
64QAM, 65	-8.33	-6.88	-4.53	8.0	-12.53	Pass

* - Margin = Total power density – specification limit.
** - The total power density is the sum of power, measured at 2 antenna outputs

Reference numbers of test equipment used

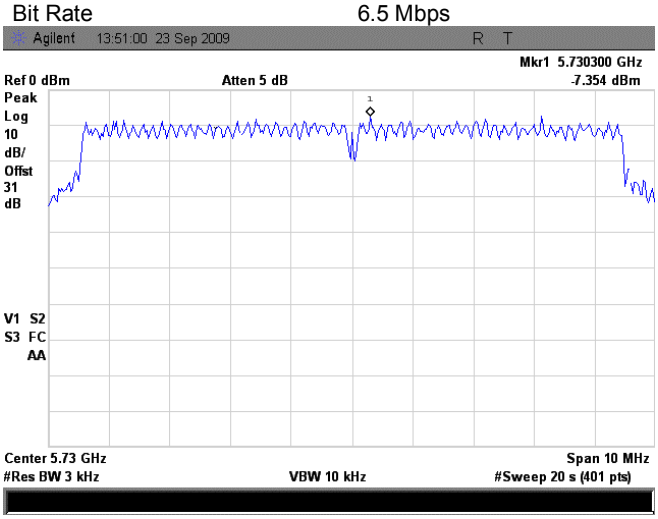
HL 1906	HL 2780	HL 2953	HL 3435	HL 3440	HL 3472	HL 3473	

Full description is given in Appendix A.

Test specification:	Section 15.247(e), RSS-210 section A8.2(b), Peak power density		
Test procedure:	FCC New Guidance on Measurements for DTS in section 15.247(d), Option 2		
Test mode:	Compliance	Verdict:	PASS
Date & Time:	10/13/2009 8:54:33 PM		
Temperature: 24.7 ºC	Air Pressure: 1016 hPa	Relative Humidity: 39 %	Power Supply: 120VAC
Remarks: 10 MHz EBW			

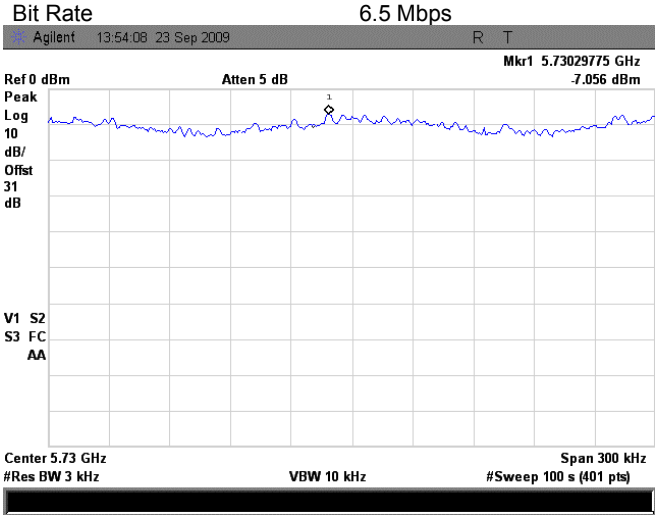
Plot 7.6.1 Peak spectral power density at low frequency within 6 dB band, Antenna 1

Channel bandwidth	10 MHz
Modulation	BPSK
Bit Rate	6.5 Mbps



Plot 7.6.2 Peak spectral power density at low frequency zoomed at the peak, Antenna 1

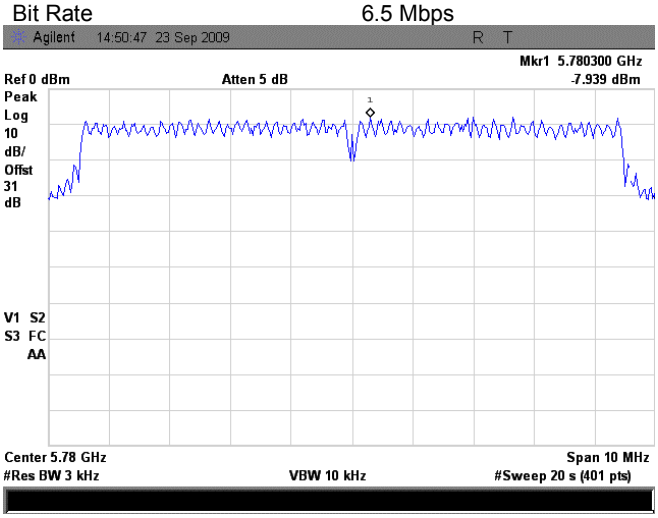
Channel bandwidth	10 MHz
Modulation	BPSK
Bit Rate	6.5 Mbps



Test specification:	Section 15.247(e), RSS-210 section A8.2(b), Peak power density		
Test procedure:	FCC New Guidance on Measurements for DTS in section 15.247(d), Option 2		
Test mode:	Compliance	Verdict:	PASS
Date & Time:	10/13/2009 8:54:33 PM		
Temperature: 24.7 ºC	Air Pressure: 1016 hPa	Relative Humidity: 39 %	Power Supply: 120VAC
Remarks: 10 MHz EBW			

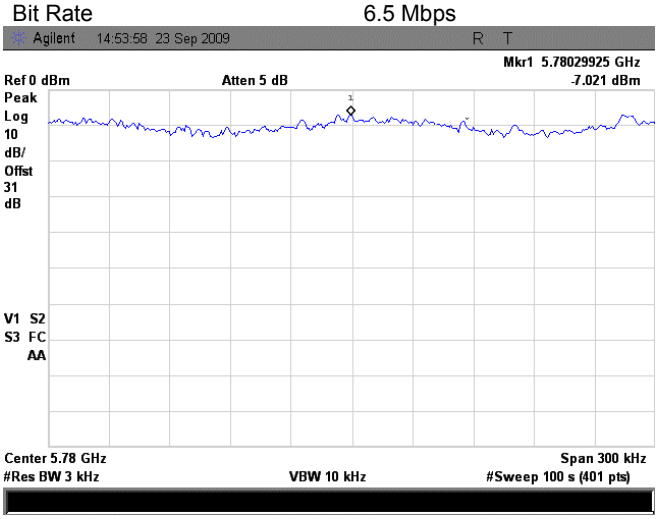
Plot 7.6.3 Peak spectral power density at mid frequency within 6 dB band, Antenna 1

Channel bandwidth	10 MHz
Modulation	BPSK
Bit Rate	6.5 Mbps



Plot 7.6.4 Peak spectral power density at mid frequency zoomed at the peak, Antenna 1

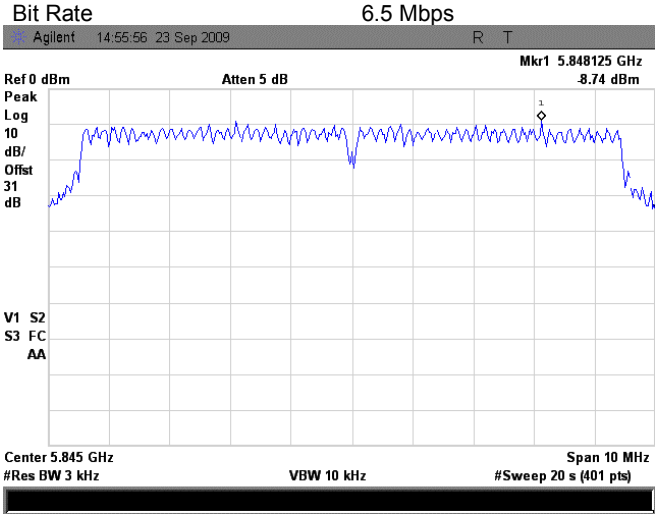
Channel bandwidth	10 MHz
Modulation	BPSK
Bit Rate	6.5 Mbps



Test specification:	Section 15.247(e), RSS-210 section A8.2(b), Peak power density		
Test procedure:	FCC New Guidance on Measurements for DTS in section 15.247(d), Option 2		
Test mode:	Compliance	Verdict:	PASS
Date & Time:	10/13/2009 8:54:33 PM		
Temperature: 24.7 ºC	Air Pressure: 1016 hPa	Relative Humidity: 39 %	Power Supply: 120VAC
Remarks: 10 MHz EBW			

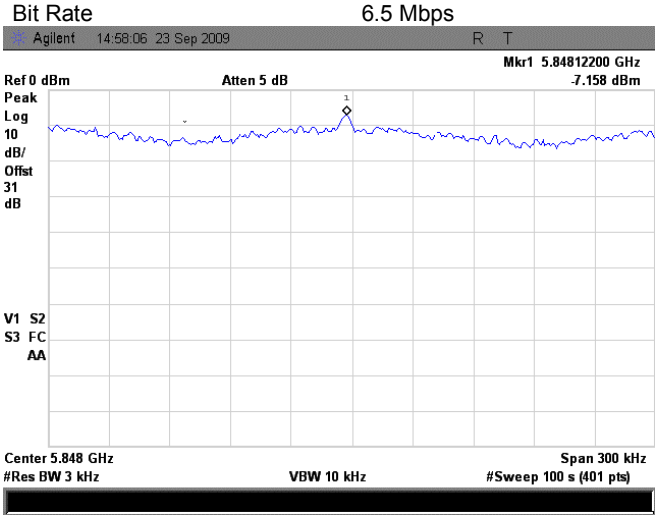
Plot 7.6.5 Peak spectral power density at high frequency within 6 dB band, Antenna 1

Channel bandwidth	10 MHz
Modulation	BPSK
Bit Rate	6.5 Mbps



Plot 7.6.6 Peak spectral power density at high frequency zoomed at the peak, Antenna 1

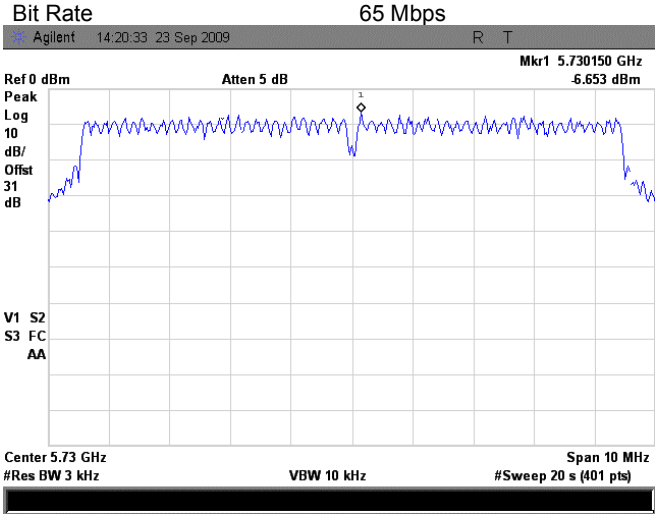
Channel bandwidth	10 MHz
Modulation	BPSK
Bit Rate	6.5 Mbps



Test specification:	Section 15.247(e), RSS-210 section A8.2(b), Peak power density		
Test procedure:	FCC New Guidance on Measurements for DTS in section 15.247(d), Option 2		
Test mode:	Compliance	Verdict:	PASS
Date & Time:	10/13/2009 8:54:33 PM		
Temperature: 24.7 ºC	Air Pressure: 1016 hPa	Relative Humidity: 39 %	Power Supply: 120VAC
Remarks: 10 MHz EBW			

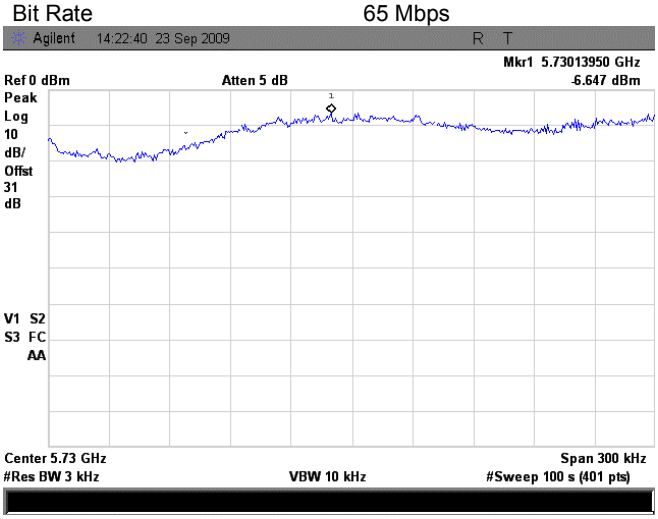
Plot 7.6.7 Peak spectral power density at low frequency within 6 dB band, Antenna 1

Channel bandwidth	10 MHz
Modulation	64QAM
Bit Rate	65 Mbps



Plot 7.6.8 Peak spectral power density at low frequency zoomed at the peak, Antenna 1

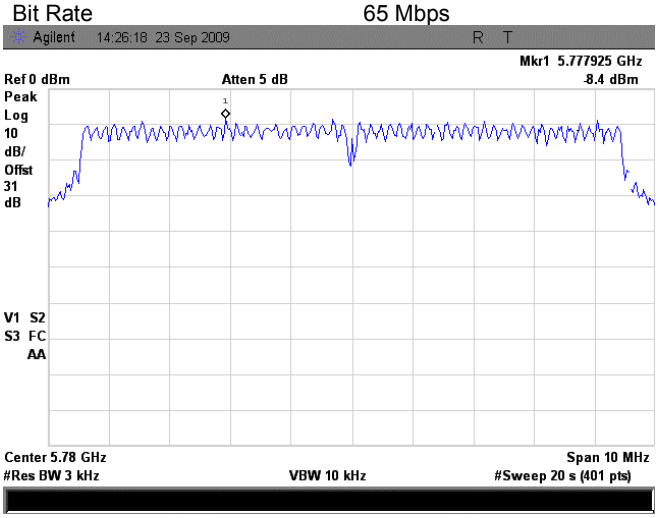
Channel bandwidth	10 MHz
Modulation	64QAM
Bit Rate	65 Mbps



Test specification:	Section 15.247(e), RSS-210 section A8.2(b), Peak power density		
Test procedure:	FCC New Guidance on Measurements for DTS in section 15.247(d), Option 2		
Test mode:	Compliance	Verdict:	PASS
Date & Time:	10/13/2009 8:54:33 PM		
Temperature: 24.7 ºC	Air Pressure: 1016 hPa	Relative Humidity: 39 %	Power Supply: 120VAC
Remarks: 10 MHz EBW			

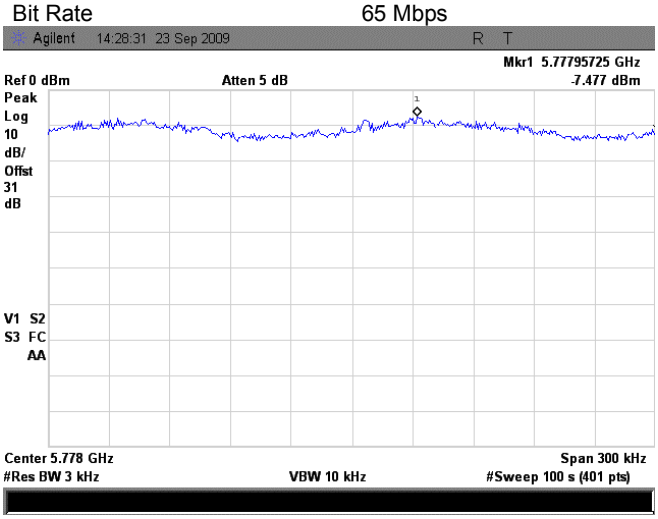
Plot 7.6.9 Peak spectral power density at mid frequency within 6 dB band, Antenna 1

Channel bandwidth	10 MHz
Modulation	64QAM
Bit Rate	65 Mbps



Plot 7.6.10 Peak spectral power density at mid frequency zoomed at the peak, Antenna 1

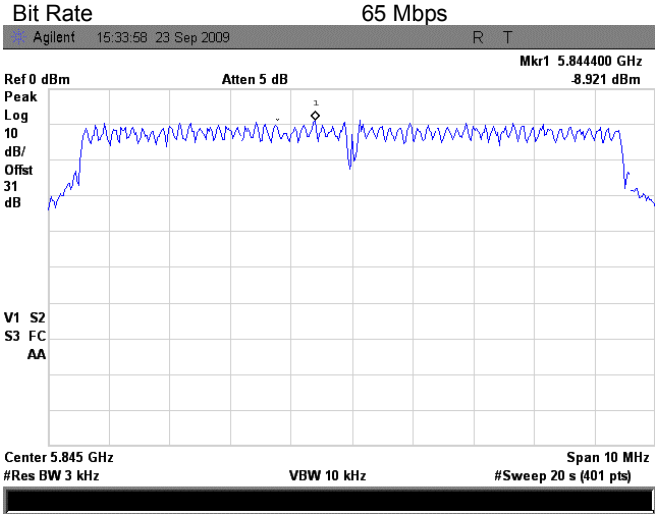
Channel bandwidth	10 MHz
Modulation	64QAM
Bit Rate	65 Mbps



Test specification:	Section 15.247(e), RSS-210 section A8.2(b), Peak power density		
Test procedure:	FCC New Guidance on Measurements for DTS in section 15.247(d), Option 2		
Test mode:	Compliance	Verdict:	PASS
Date & Time:	10/13/2009 8:54:33 PM		
Temperature: 24.7 ºC	Air Pressure: 1016 hPa	Relative Humidity: 39 %	Power Supply: 120VAC
Remarks: 10 MHz EBW			

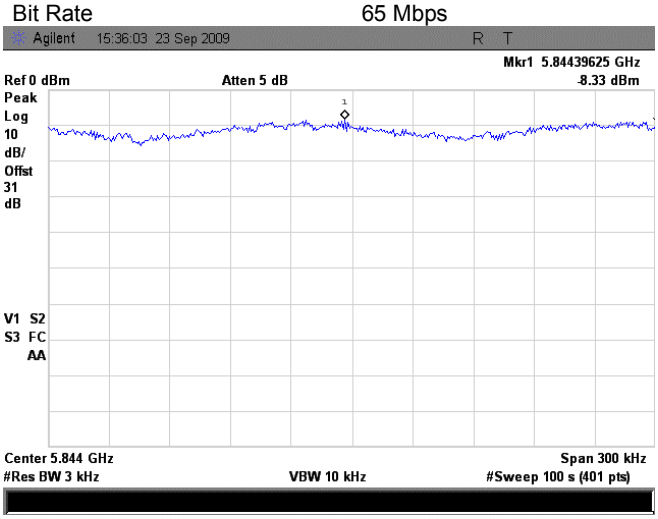
Plot 7.6.11 Peak spectral power density at high frequency within 6 dB band, Antenna 1

Channel bandwidth	10 MHz
Modulation	64QAM
Bit Rate	65 Mbps



Plot 7.6.12 Peak spectral power density at high frequency zoomed at the peak, Antenna 1

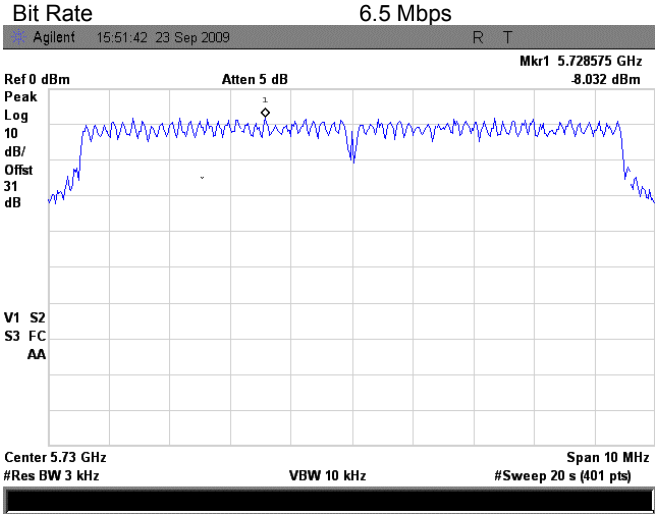
Channel bandwidth	10 MHz
Modulation	64QAM
Bit Rate	65 Mbps



Test specification:	Section 15.247(e), RSS-210 section A8.2(b), Peak power density		
Test procedure:	FCC New Guidance on Measurements for DTS in section 15.247(d), Option 2		
Test mode:	Compliance	Verdict:	PASS
Date & Time:	10/13/2009 8:54:33 PM		
Temperature: 24.7 ºC	Air Pressure: 1016 hPa	Relative Humidity: 39 %	Power Supply: 120VAC
Remarks: 10 MHz EBW			

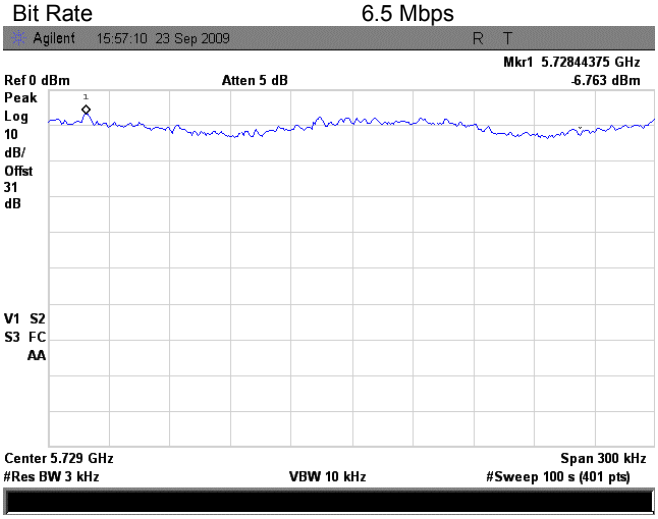
Plot 7.6.13 Peak spectral power density at low frequency within 6 dB band, Antenna 2

Channel bandwidth	10 MHz
Modulation	BPSK
Bit Rate	6.5 Mbps



Plot 7.6.14 Peak spectral power density at low frequency zoomed at the peak, Antenna 2

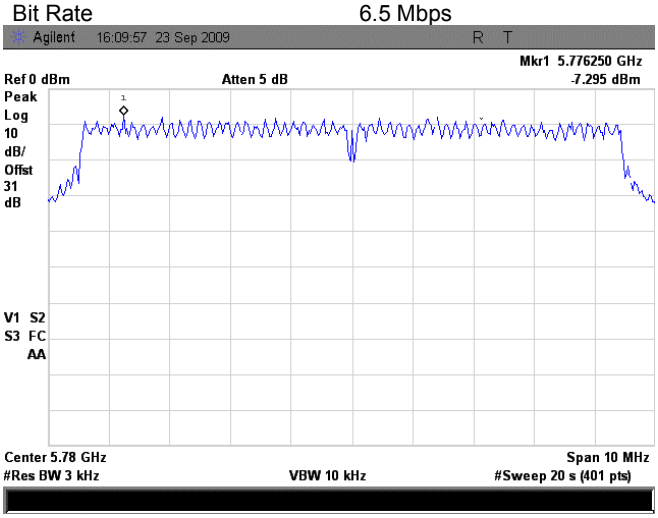
Channel bandwidth	10 MHz
Modulation	BPSK
Bit Rate	6.5 Mbps



Test specification:	Section 15.247(e), RSS-210 section A8.2(b), Peak power density		
Test procedure:	FCC New Guidance on Measurements for DTS in section 15.247(d), Option 2		
Test mode:	Compliance	Verdict:	PASS
Date & Time:	10/13/2009 8:54:33 PM		
Temperature: 24.7 ºC	Air Pressure: 1016 hPa	Relative Humidity: 39 %	Power Supply: 120VAC
Remarks: 10 MHz EBW			

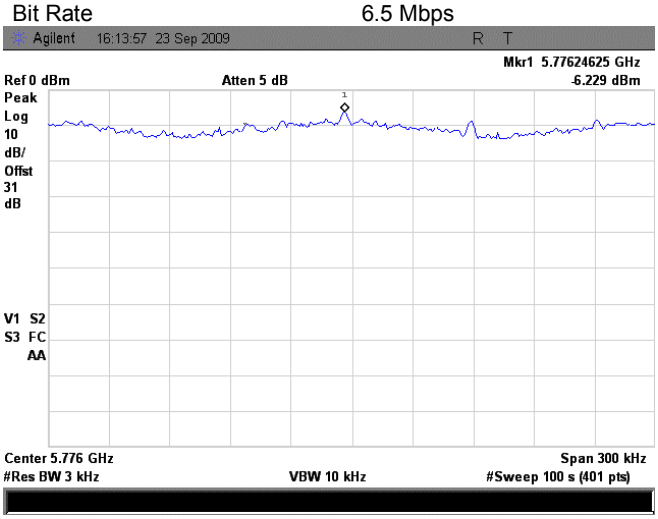
Plot 7.6.15 Peak spectral power density at mid frequency within 6 dB band, Antenna 2

Channel bandwidth	10 MHz
Modulation	BPSK
Bit Rate	6.5 Mbps



Plot 7.6.16 Peak spectral power density at mid frequency zoomed at the peak, Antenna 2

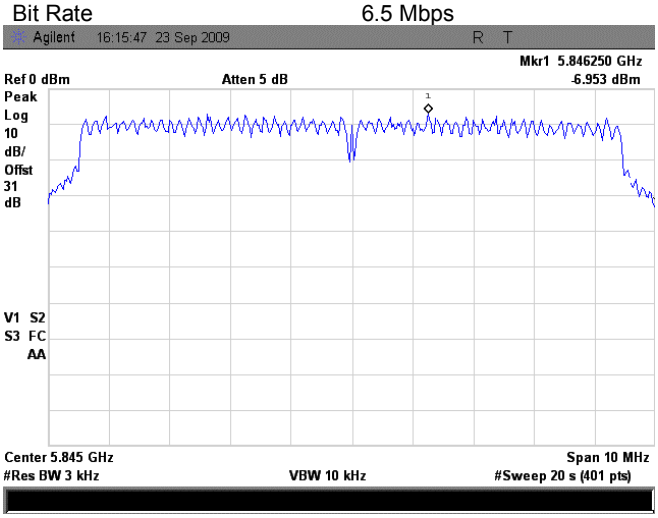
Channel bandwidth	10 MHz
Modulation	BPSK
Bit Rate	6.5 Mbps



Test specification:	Section 15.247(e), RSS-210 section A8.2(b), Peak power density		
Test procedure:	FCC New Guidance on Measurements for DTS in section 15.247(d), Option 2		
Test mode:	Compliance	Verdict:	PASS
Date & Time:	10/13/2009 8:54:33 PM		
Temperature: 24.7 ºC	Air Pressure: 1016 hPa	Relative Humidity: 39 %	Power Supply: 120VAC
Remarks: 10 MHz EBW			

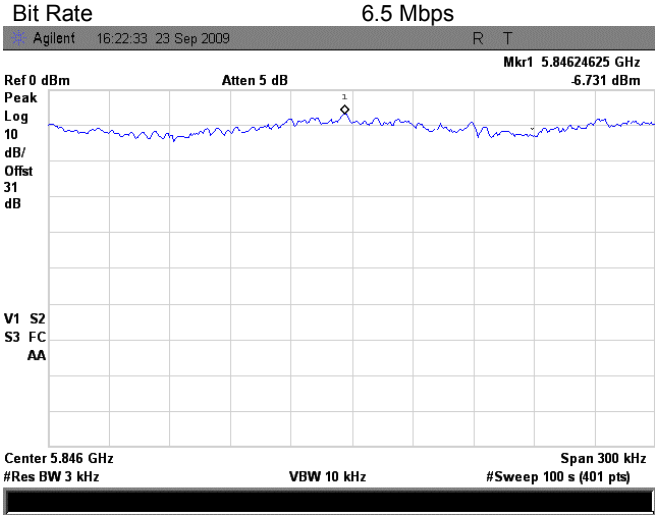
Plot 7.6.17 Peak spectral power density at high frequency within 6 dB band, Antenna 2

Channel bandwidth	10 MHz
Modulation	BPSK
Bit Rate	6.5 Mbps



Plot 7.6.18 Peak spectral power density at high frequency zoomed at the peak, Antenna 2

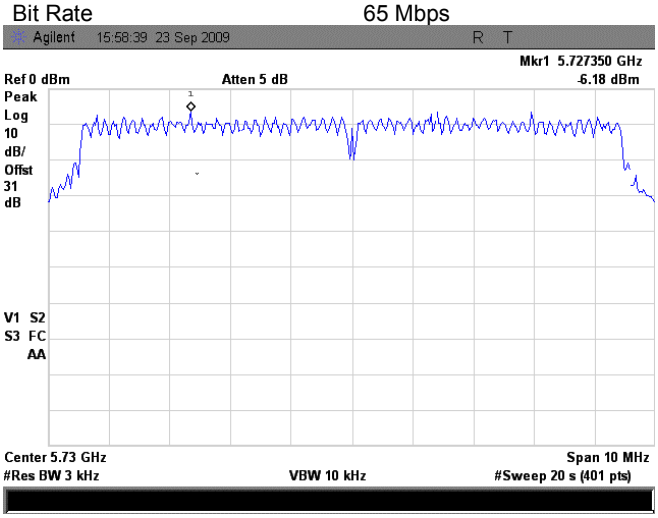
Channel bandwidth	10 MHz
Modulation	BPSK
Bit Rate	6.5 Mbps



Test specification:	Section 15.247(e), RSS-210 section A8.2(b), Peak power density		
Test procedure:	FCC New Guidance on Measurements for DTS in section 15.247(d), Option 2		
Test mode:	Compliance	Verdict:	PASS
Date & Time:	10/13/2009 8:54:33 PM		
Temperature: 24.7 ºC	Air Pressure: 1016 hPa	Relative Humidity: 39 %	Power Supply: 120VAC
Remarks: 10 MHz EBW			

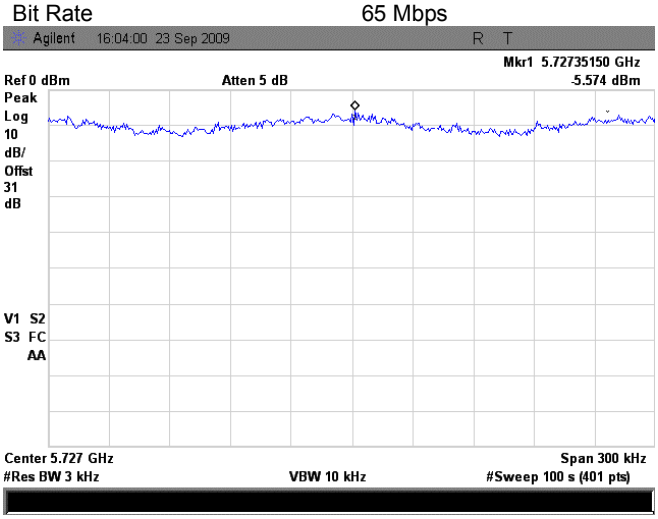
Plot 7.6.19 Peak spectral power density at low frequency within 6 dB band, Antenna 2

Channel bandwidth	10 MHz
Modulation	64QAM
Bit Rate	65 Mbps



Plot 7.6.20 Peak spectral power density at low frequency zoomed at the peak, Antenna 2

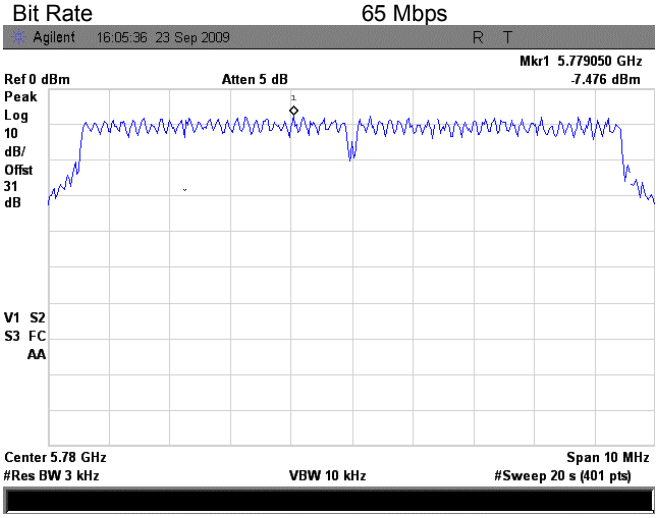
Channel bandwidth	10 MHz
Modulation	64QAM
Bit Rate	65 Mbps



Test specification:	Section 15.247(e), RSS-210 section A8.2(b), Peak power density		
Test procedure:	FCC New Guidance on Measurements for DTS in section 15.247(d), Option 2		
Test mode:	Compliance	Verdict:	PASS
Date & Time:	10/13/2009 8:54:33 PM		
Temperature: 24.7 ºC	Air Pressure: 1016 hPa	Relative Humidity: 39 %	Power Supply: 120VAC
Remarks: 10 MHz EBW			

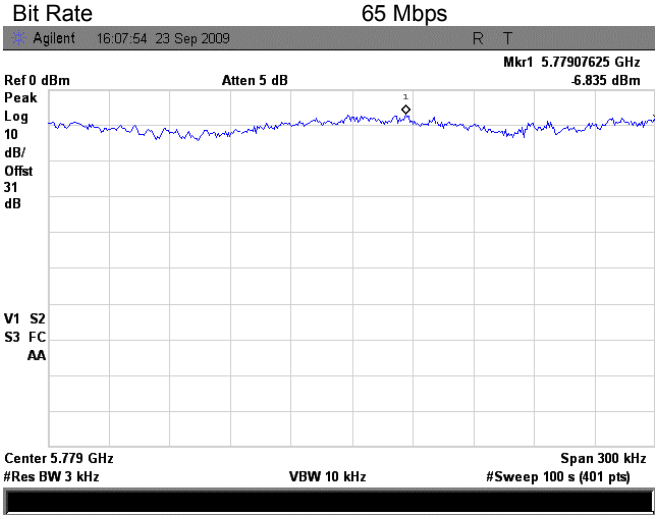
Plot 7.6.21 Peak spectral power density at mid frequency within 6 dB band, Antenna 2

Channel bandwidth	10 MHz
Modulation	64QAM
Bit Rate	65 Mbps



Plot 7.6.22 Peak spectral power density at mid frequency zoomed at the peak, Antenna 2

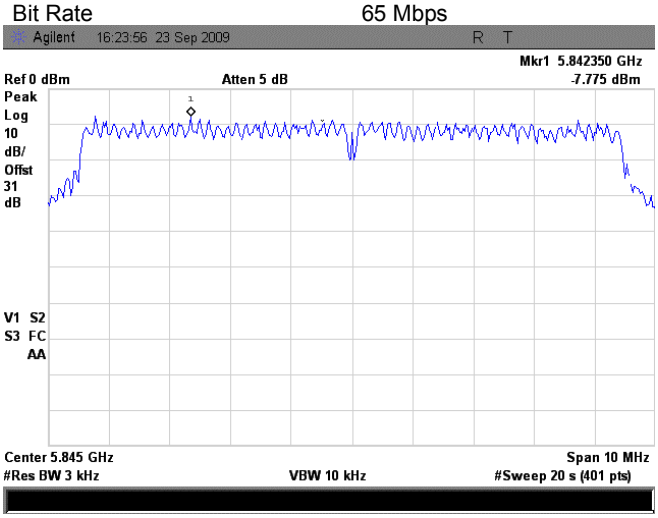
Channel bandwidth	10 MHz
Modulation	64QAM
Bit Rate	65 Mbps



Test specification:	Section 15.247(e), RSS-210 section A8.2(b), Peak power density		
Test procedure:	FCC New Guidance on Measurements for DTS in section 15.247(d), Option 2		
Test mode:	Compliance	Verdict:	PASS
Date & Time:	10/13/2009 8:54:33 PM		
Temperature: 24.7 ºC	Air Pressure: 1016 hPa	Relative Humidity: 39 %	Power Supply: 120VAC
Remarks: 10 MHz EBW			

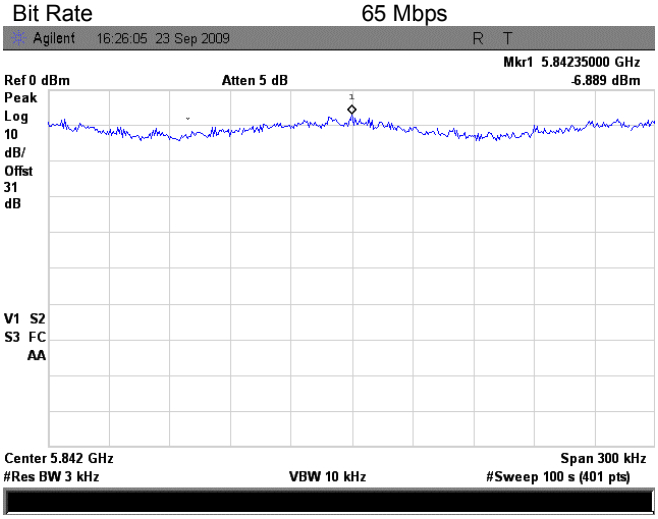
Plot 7.6.23 Peak spectral power density at high frequency within 6 dB band, Antenna 2

Channel bandwidth	10 MHz
Modulation	64QAM
Bit Rate	65 Mbps



Plot 7.6.24 Peak spectral power density at high frequency zoomed at the peak, Antenna 2

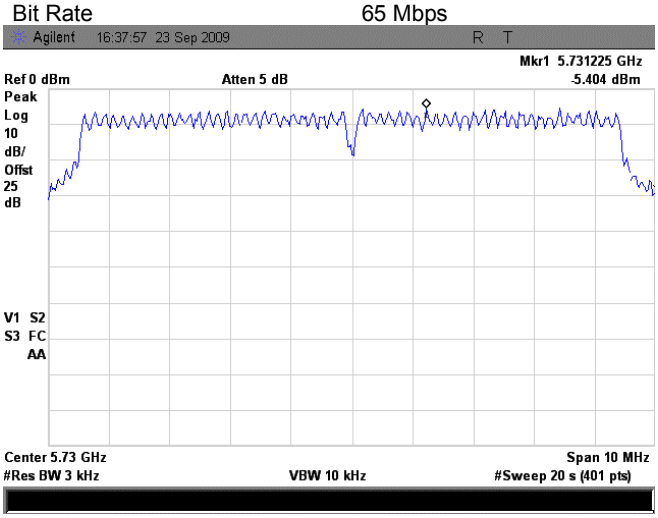
Channel bandwidth	10 MHz
Modulation	64QAM
Bit Rate	65 Mbps



Test specification:	Section 15.247(e), RSS-210 section A8.2(b), Peak power density		
Test procedure:	FCC New Guidance on Measurements for DTS in section 15.247(d), Option 2		
Test mode:	Compliance	Verdict:	PASS
Date & Time:	10/13/2009 8:54:33 PM		
Temperature: 24.7 ºC	Air Pressure: 1016 hPa	Relative Humidity: 39 %	Power Supply: 120VAC
Remarks: 10 MHz EBW			

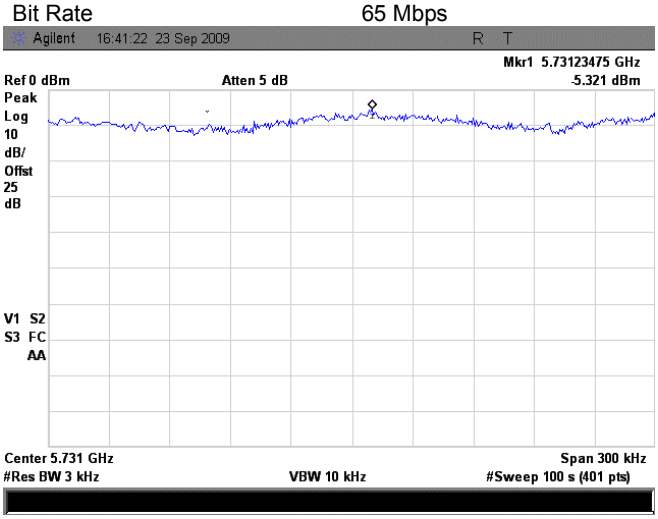
Plot 7.6.25 Peak spectral power density at low frequency within 6 dB band, Antenna 2

Channel bandwidth	10 MHz
Modulation	64QAM
Bit Rate	65 Mbps



Plot 7.6.26 Peak spectral power density at low frequency zoomed at the peak, Antenna 2

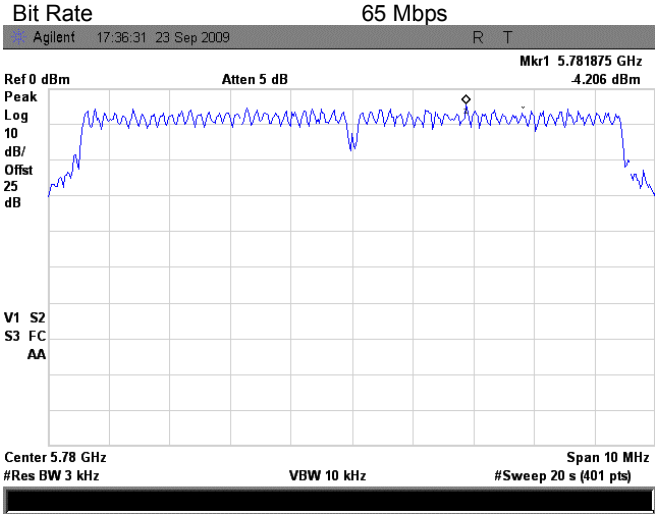
Channel bandwidth	10 MHz
Modulation	64QAM
Bit Rate	65 Mbps



Test specification:	Section 15.247(e), RSS-210 section A8.2(b), Peak power density		
Test procedure:	FCC New Guidance on Measurements for DTS in section 15.247(d), Option 2		
Test mode:	Compliance	Verdict:	PASS
Date & Time:	10/13/2009 8:54:33 PM		
Temperature: 24.7 ºC	Air Pressure: 1016 hPa	Relative Humidity: 39 %	Power Supply: 120VAC
Remarks: 10 MHz EBW			

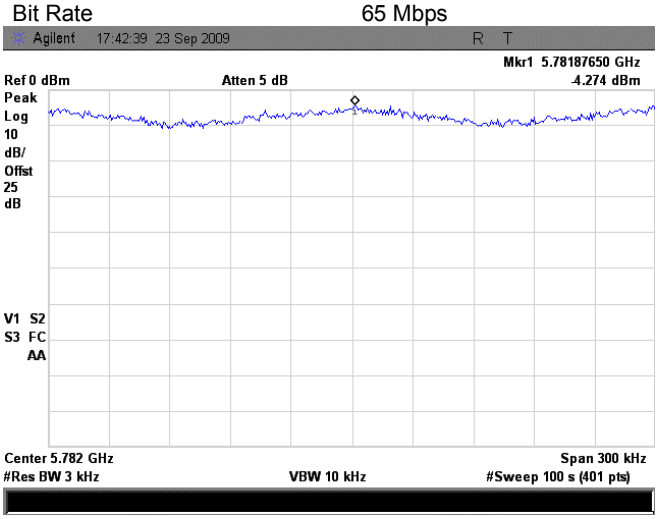
Plot 7.6.27 Peak spectral power density at mid frequency within 6 dB band, Antenna 2

Channel bandwidth	10 MHz
Modulation	64QAM
Bit Rate	65 Mbps



Plot 7.6.28 Peak spectral power density at mid frequency zoomed at the peak, Antenna 2

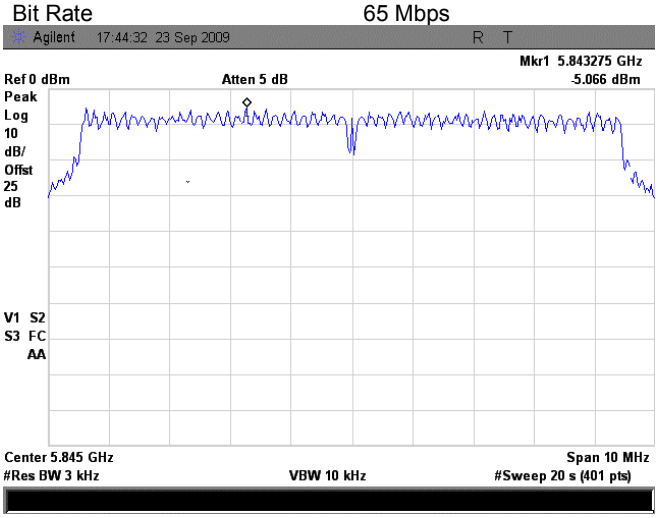
Channel bandwidth	10 MHz
Modulation	64QAM
Bit Rate	65 Mbps



Test specification:	Section 15.247(e), RSS-210 section A8.2(b), Peak power density		
Test procedure:	FCC New Guidance on Measurements for DTS in section 15.247(d), Option 2		
Test mode:	Compliance	Verdict:	PASS
Date & Time:	10/13/2009 8:54:33 PM		
Temperature: 24.7 ºC	Air Pressure: 1016 hPa	Relative Humidity: 39 %	Power Supply: 120VAC
Remarks: 10 MHz EBW			

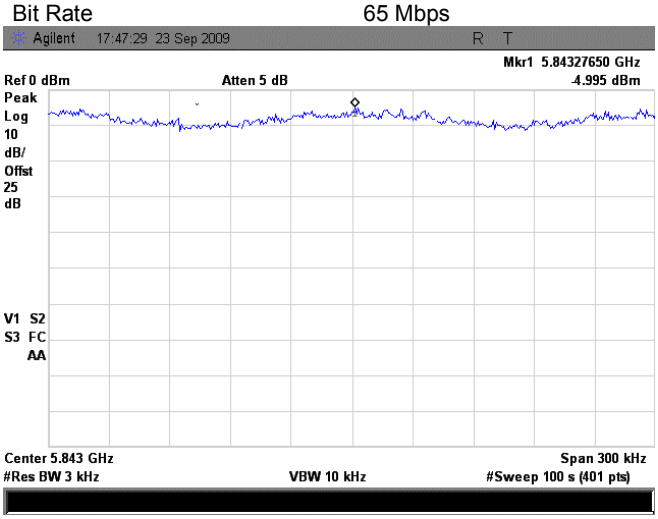
Plot 7.6.29 Peak spectral power density at high frequency within 6 dB band, Antenna 2

Channel bandwidth	10 MHz
Modulation	64QAM
Bit Rate	65 Mbps



Plot 7.6.30 Peak spectral power density at high frequency zoomed at the peak, Antenna 2

Channel bandwidth	10 MHz
Modulation	64QAM
Bit Rate	65 Mbps



Test specification:	Section 15.247(e), RSS-210 section A8.2(b), Peak power density		
Test procedure:	FCC New Guidance on Measurements for DTS in section 15.247(d), Option 2		
Test mode:	Compliance	Verdict:	PASS
Date & Time:	10/13/2009 9:24:21 PM		
Temperature: 24.7 ºC	Air Pressure: 1016 hPa	Relative Humidity: 39 %	Power Supply: 120VAC
Remarks: 40 MHz EBW			

Table 7.6.4 Peak spectral power density test results

ASSIGNED FREQUENCY: 5725 - 5850 MHz
MODULATING SIGNAL: PRBS
TRANSMITTER OUTPUT POWER SETTINGS: Maximum
DETECTOR USED: Peak
RESOLUTION BANDWIDTH: 3 kHz
VIDEO BANDWIDTH: 10 kHz

Carrier frequency, MHz	Spectrum analyzer reading, dBm	External attenuation, dB	Peak power density, dB(mW/3 kHz)	Total peak power density, dB(mW/3 kHz)	Limit, dBm	Margin*, dB	Verdict
Antenna 1							
40 MHz BW, Low channel (5745 MHz)							
BPSK, 27	-4.19	included	-4.19	-4.19	8.00	-12.19	Pass
64QAM, 270	-4.29	included	-4.29	-4.29	8.00	-12.29	Pass
40 MHz BW, Mid channel (5780 MHz)							
BPSK, 27	-5.01	included	-5.01	-5.01	8.00	-13.01	Pass
64QAM, 270	-4.99	included	-4.99	-4.99	8.00	-12.99	Pass
40 MHz BW, High channel (5830 MHz)							
BPSK, 27	-4.48	included	-4.48	-4.48	8.00	-12.48	Pass
64QAM, 270	-5.12	included	-5.12	-5.12	8.00	-13.12	Pass
Antenna 2							
40 MHz BW, Low channel (5745 MHz)							
BPSK, 27	-3.52	included	-3.52	-3.52	8.00	-11.52	Pass
64QAM, 270	-7.28	included	-7.28	-7.28	8.00	-15.28	Pass
40 MHz BW, Mid channel (5780 MHz)							
BPSK, 27	-4.97	included	-4.97	-4.97	8.00	-12.97	Pass
64QAM, 270	-5.13	included	-5.13	-5.13	8.00	-13.13	Pass
40 MHz BW, High channel (5830 MHz)							
BPSK, 27	-5.90	included	-5.90	-5.90	8.00	-13.90	Pass
64QAM, 270	-6.04	included	-6.04	-6.04	8.00	-14.04	Pass

* - Margin = Peak power density – specification limit.

Test specification:	**Section 15.247(e), RSS-210 section A8.2(b), Peak power density**		
Test procedure:	FCC New Guidance on Measurements for DTS in section 15.247(d), Option 2		
Test mode:	Compliance	**Verdict:**	PASS
Date & Time:	10/13/2009 9:24:21 PM		
Temperature: 24.7 ºC	**Air Pressure:** 1016 hPa	**Relative Humidity:** 39 %	**Power Supply:** 120VAC
Remarks: 40 MHz EBW			

Table 7.6.5 Peak spectral power density test results

ASSIGNED FREQUENCY: 5725.00 – 5850.00 MHz
MODULATING SIGNAL: PRBS
TRANSMITTER OUTPUT POWER SETTINGS: Maximum
DETECTOR USED: Peak
RESOLUTION BANDWIDTH: 3 kHz
VIDEO BANDWIDTH: 300 kHz

Modulation, Bit rate, Mbps	Spectrum analyzer reading, dBm		Total power density, dBm**	Limit, dBm	Margin**, dB	Verdict
	Antenna 1	Antenna 2				
40 MHz BW, Low channel (5730 MHz)						
BPSK, 6.5	-4.19	-3.52	-0.83	8.0	-8.83	Pass
64QAM, 65	-4.29	-7.28	-2.52	8.0	-10.52	Pass
40 MHz BW, Mid channel (5780 MHz)						
BPSK, 6.5	-5.01	-4.97	-1.98	8.0	-9.98	Pass
64QAM, 65	-4.99	-5.13	-2.05	8.0	-10.05	Pass
40 MHz BW, High channel (5845 MHz)						
BPSK, 6.5	-4.48	-5.90	-2.12	8.0	-10.12	Pass
64QAM, 65	-5.12	-6.04	-2.55	8.0	-10.55	Pass

* - Margin = Total power density – specification limit.
** - The total power density is the sum of power, measured at 2 antenna outputs

Reference numbers of test equipment used

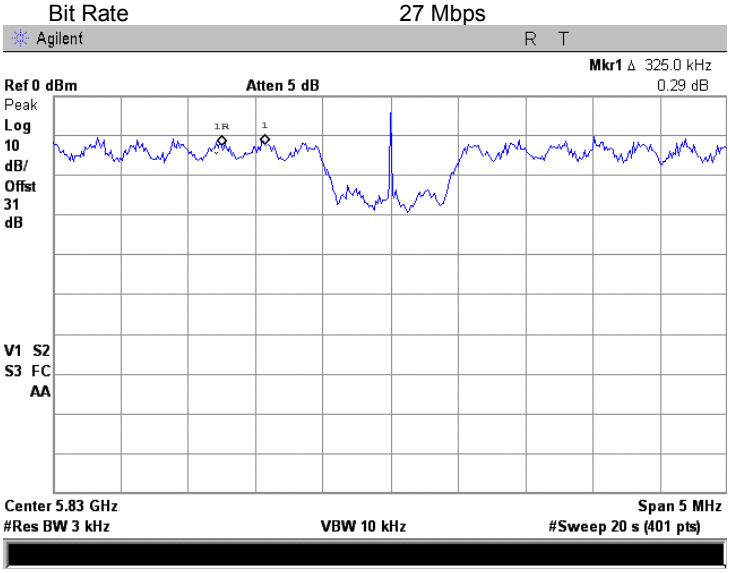
HL 1906	HL 3301	HL 3435	HL 3437	HL 3440	HL 3442	HL 3473	HL 3474

Full description is given in Appendix A.

Test specification:	Section 15.247(e), RSS-210 section A8.2(b), Peak power density		
Test procedure:	FCC New Guidance on Measurements for DTS in section 15.247(d), Option 2		
Test mode:	Compliance	Verdict:	PASS
Date & Time:	10/13/2009 9:24:21 PM		
Temperature: 24.7 ºC	Air Pressure: 1016 hPa	Relative Humidity: 39 %	Power Supply: 120VAC
Remarks: 40 MHz EBW			

Plot 7.6.31 Peak spectral power density at low frequency zoomed, Antenna 1

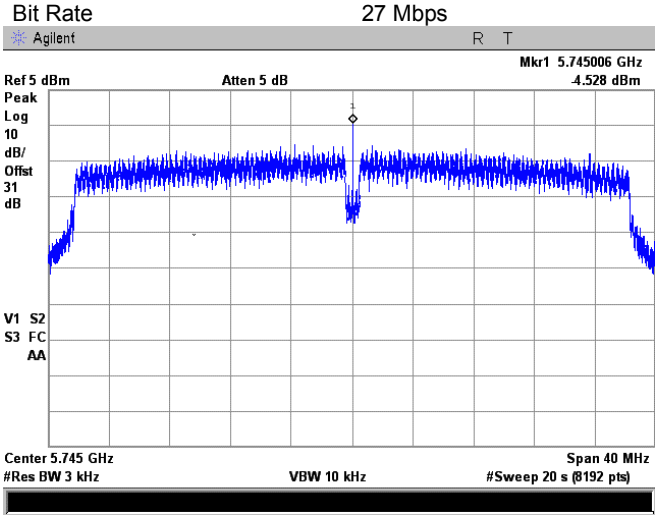
Channel bandwidth	40 MHz
Modulation	BPSK
Bit Rate	27 Mbps



Test specification:	Section 15.247(e), RSS-210 section A8.2(b), Peak power density		
Test procedure:	FCC New Guidance on Measurements for DTS in section 15.247(d), Option 2		
Test mode:	Compliance	Verdict:	PASS
Date & Time:	10/13/2009 9:24:21 PM		
Temperature: 24.7 ºC	Air Pressure: 1016 hPa	Relative Humidity: 39 %	Power Supply: 120VAC
Remarks: 40 MHz EBW			

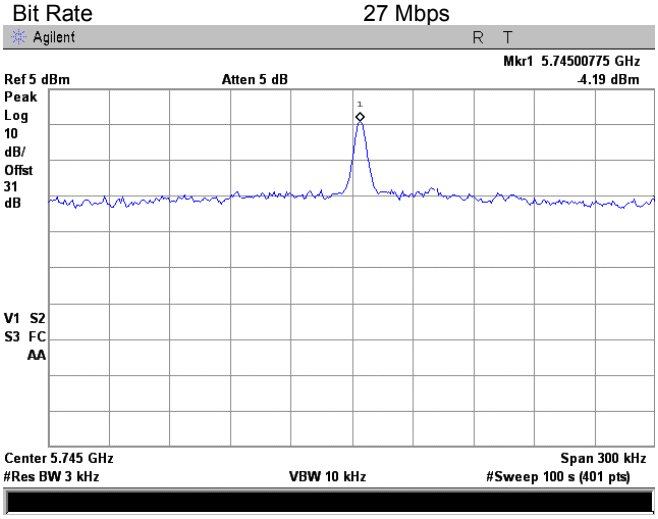
Plot 7.6.32 Peak spectral power density at low frequency within 6 dB band, Antenna 1

Channel bandwidth	40 MHz
Modulation	BPSK
Bit Rate	27 Mbps



Plot 7.6.33 Peak spectral power density at low frequency zoomed at the peak, Antenna 1

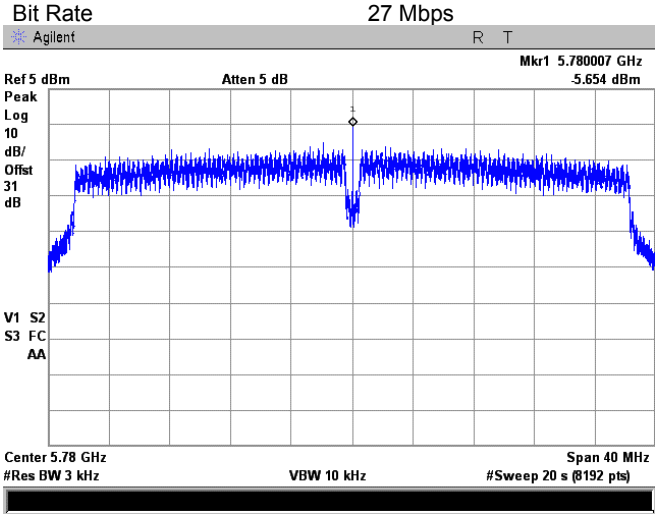
Channel bandwidth	40 MHz
Modulation	BPSK
Bit Rate	27 Mbps



Test specification:	Section 15.247(e), RSS-210 section A8.2(b), Peak power density		
Test procedure:	FCC New Guidance on Measurements for DTS in section 15.247(d), Option 2		
Test mode:	Compliance	Verdict:	PASS
Date & Time:	10/13/2009 9:24:21 PM		
Temperature: 24.7 ºC	Air Pressure: 1016 hPa	Relative Humidity: 39 %	Power Supply: 120VAC
Remarks: 40 MHz EBW			

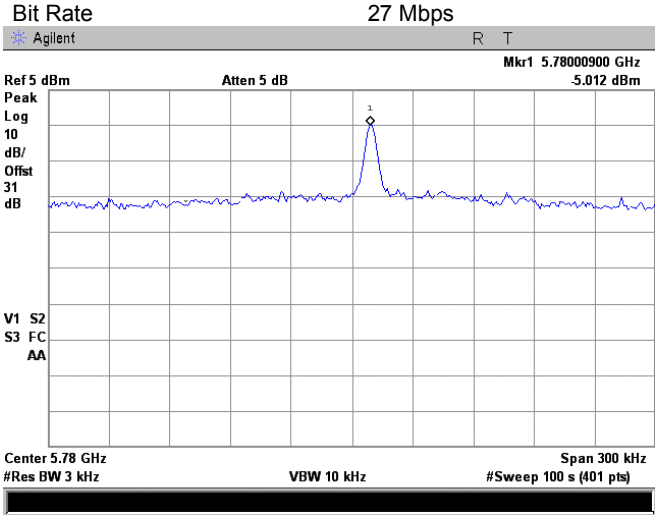
Plot 7.6.34 Peak spectral power density at mid frequency within 6 dB band, Antenna 1

Channel bandwidth	40 MHz
Modulation	BPSK
Bit Rate	27 Mbps



Plot 7.6.35 Peak spectral power density at mid frequency zoomed at the peak, Antenna 1

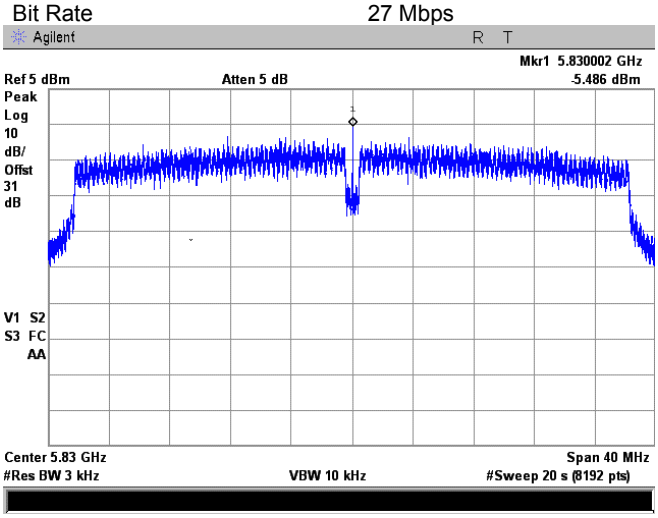
Channel bandwidth	40 MHz
Modulation	BPSK
Bit Rate	27 Mbps



Test specification:	Section 15.247(e), RSS-210 section A8.2(b), Peak power density		
Test procedure:	FCC New Guidance on Measurements for DTS in section 15.247(d), Option 2		
Test mode:	Compliance	Verdict:	PASS
Date & Time:	10/13/2009 9:24:21 PM		
Temperature: 24.7 ºC	Air Pressure: 1016 hPa	Relative Humidity: 39 %	Power Supply: 120VAC
Remarks: 40 MHz EBW			

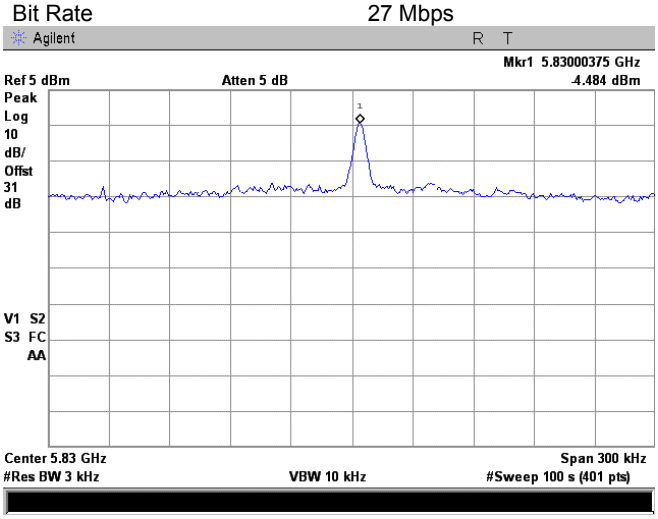
Plot 7.6.36 Peak spectral power density at high frequency within 6 dB band, Antenna 1

Channel bandwidth	40 MHz
Modulation	BPSK
Bit Rate	27 Mbps



Plot 7.6.37 Peak spectral power density at high frequency zoomed at the peak, Antenna 1

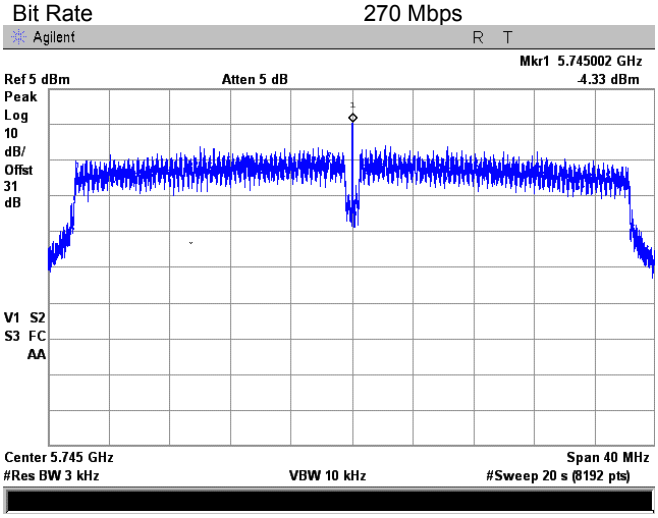
Channel bandwidth	40 MHz
Modulation	BPSK
Bit Rate	27 Mbps



Test specification:	Section 15.247(e), RSS-210 section A8.2(b), Peak power density		
Test procedure:	FCC New Guidance on Measurements for DTS in section 15.247(d), Option 2		
Test mode:	Compliance	Verdict:	PASS
Date & Time:	10/13/2009 9:24:21 PM		
Temperature: 24.7 ºC	Air Pressure: 1016 hPa	Relative Humidity: 39 %	Power Supply: 120VAC
Remarks: 40 MHz EBW			

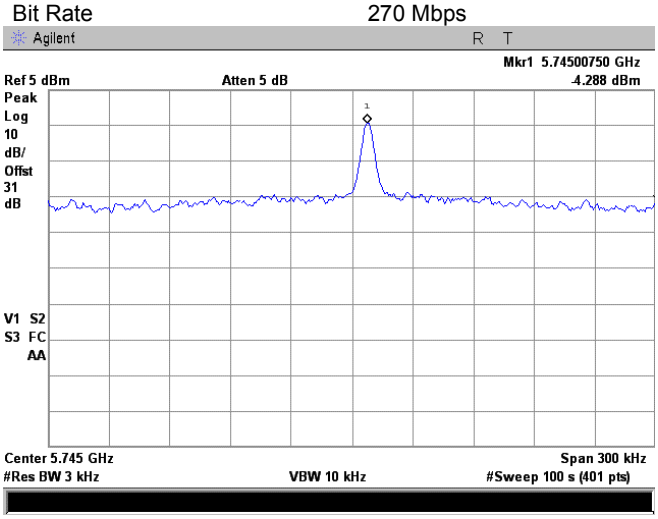
Plot 7.6.38 Peak spectral power density at low frequency within 6 dB band, Antenna 1

Channel bandwidth	40 MHz
Modulation	64QAM
Bit Rate	270 Mbps



Plot 7.6.39 Peak spectral power density at low frequency zoomed at the peak, Antenna 1

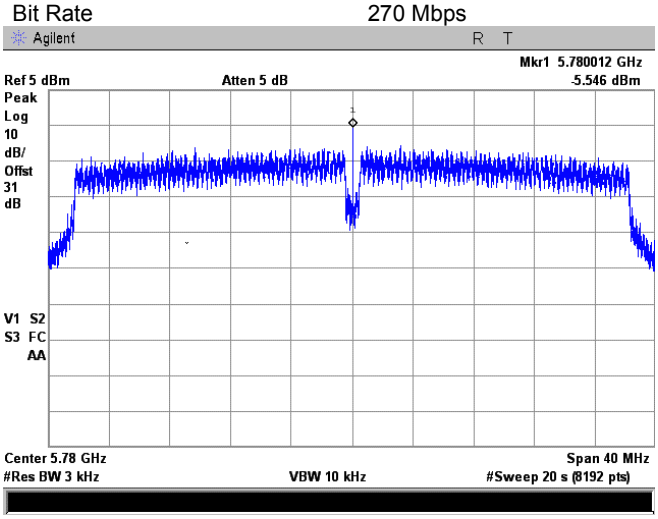
Channel bandwidth	40 MHz
Modulation	64QAM
Bit Rate	270 Mbps



Test specification:	Section 15.247(e), RSS-210 section A8.2(b), Peak power density		
Test procedure:	FCC New Guidance on Measurements for DTS in section 15.247(d), Option 2		
Test mode:	Compliance	Verdict:	PASS
Date & Time:	10/13/2009 9:24:21 PM		
Temperature: 24.7 ºC	Air Pressure: 1016 hPa	Relative Humidity: 39 %	Power Supply: 120VAC
Remarks: 40 MHz EBW			

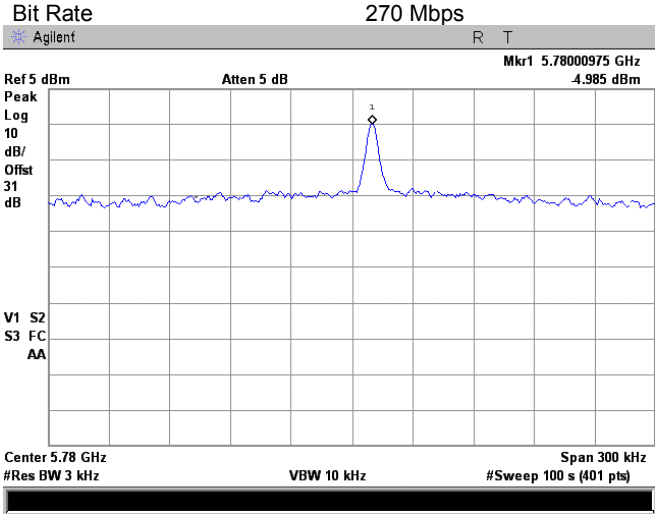
Plot 7.6.40 Peak spectral power density at mid frequency within 6 dB band, Antenna 1

Channel bandwidth	40 MHz
Modulation	64QAM
Bit Rate	270 Mbps



Plot 7.6.41 Peak spectral power density at mid frequency zoomed at the peak, Antenna 1

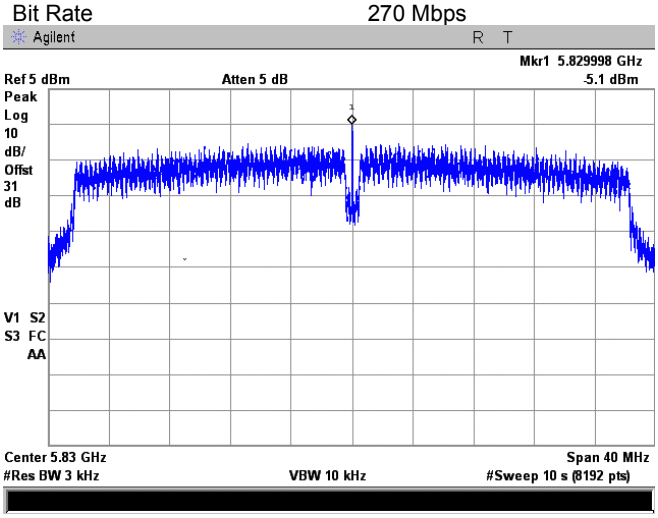
Channel bandwidth	40 MHz
Modulation	64QAM
Bit Rate	270 Mbps



Test specification:	Section 15.247(e), RSS-210 section A8.2(b), Peak power density		
Test procedure:	FCC New Guidance on Measurements for DTS in section 15.247(d), Option 2		
Test mode:	Compliance	Verdict:	PASS
Date & Time:	10/13/2009 9:24:21 PM		
Temperature: 24.7 ºC	Air Pressure: 1016 hPa	Relative Humidity: 39 %	Power Supply: 120VAC
Remarks: 40 MHz EBW			

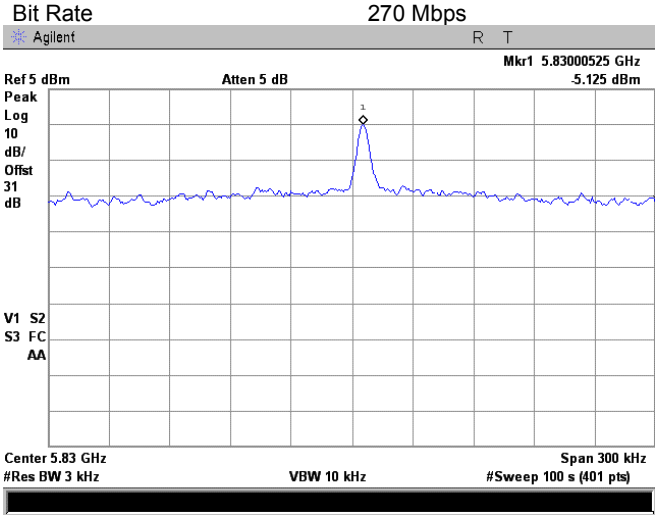
Plot 7.6.42 Peak spectral power density at high frequency within 6 dB band, Antenna 1

Channel bandwidth	40 MHz
Modulation	64QAM
Bit Rate	270 Mbps



Plot 7.6.43 Peak spectral power density at high frequency zoomed at the peak, Antenna 1

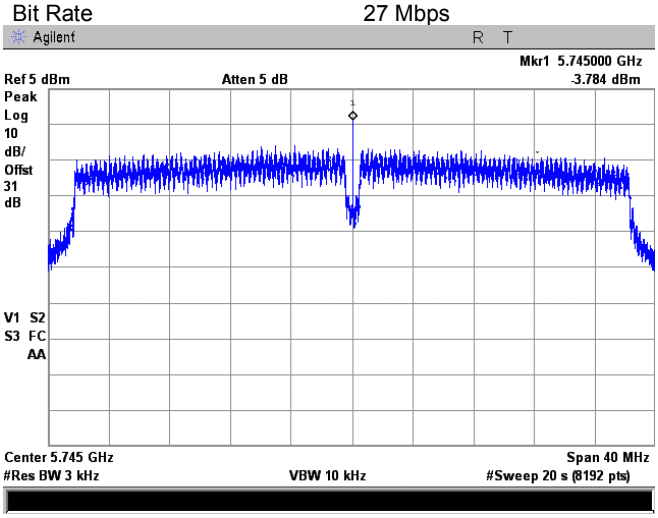
Channel bandwidth	40 MHz
Modulation	64QAM
Bit Rate	270 Mbps



Test specification:	Section 15.247(e), RSS-210 section A8.2(b), Peak power density		
Test procedure:	FCC New Guidance on Measurements for DTS in section 15.247(d), Option 2		
Test mode:	Compliance	Verdict:	PASS
Date & Time:	10/13/2009 9:24:21 PM		
Temperature: 24.7 ºC	Air Pressure: 1016 hPa	Relative Humidity: 39 %	Power Supply: 120VAC
Remarks: 40 MHz EBW			

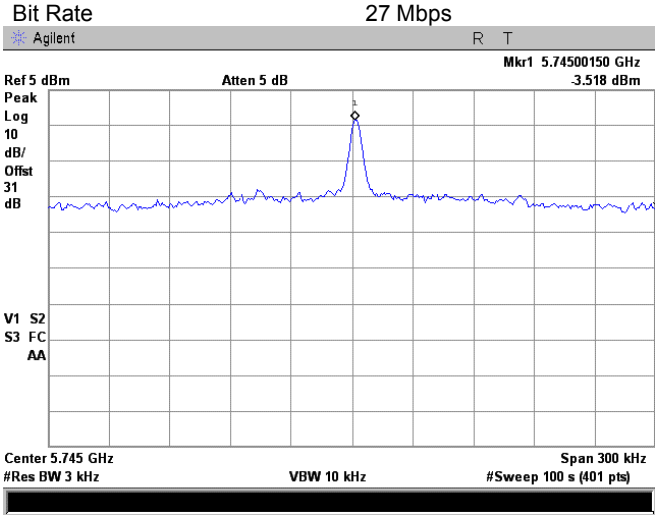
Plot 7.6.44 Peak spectral power density at low frequency within 6 dB band, Antenna 2

Channel bandwidth	40 MHz
Modulation	BPSK
Bit Rate	27 Mbps



Plot 7.6.45 Peak spectral power density at low frequency zoomed at the peak, Antenna 2

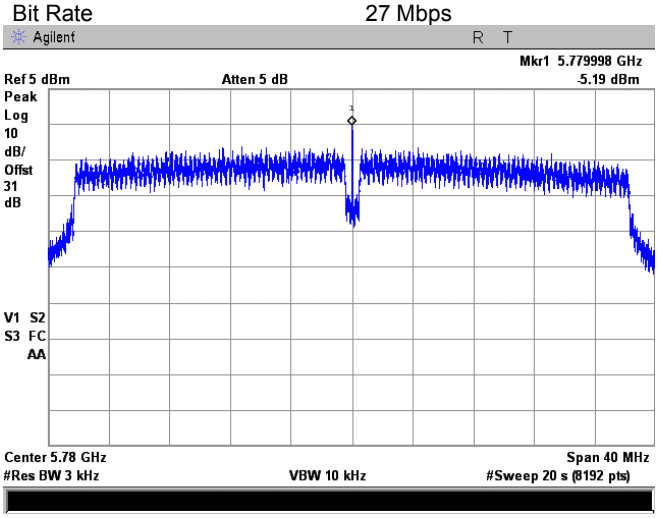
Channel bandwidth	40 MHz
Modulation	BPSK
Bit Rate	27 Mbps



Test specification:	Section 15.247(e), RSS-210 section A8.2(b), Peak power density		
Test procedure:	FCC New Guidance on Measurements for DTS in section 15.247(d), Option 2		
Test mode:	Compliance	Verdict:	PASS
Date & Time:	10/13/2009 9:24:21 PM		
Temperature: 24.7 ºC	Air Pressure: 1016 hPa	Relative Humidity: 39 %	Power Supply: 120VAC
Remarks: 40 MHz EBW			

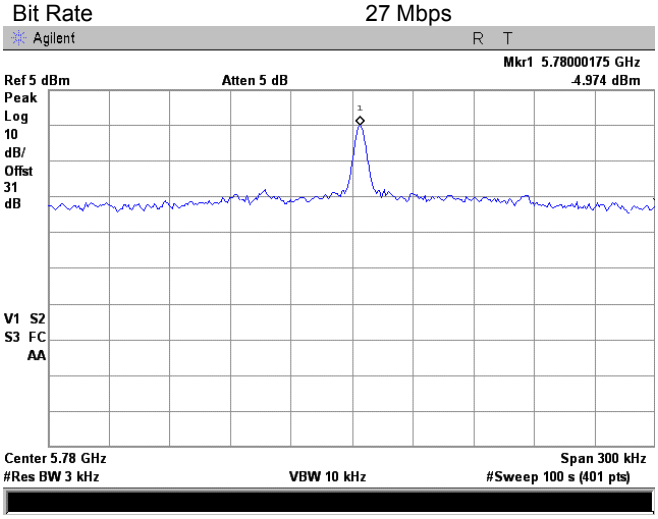
Plot 7.6.46 Peak spectral power density at mid frequency within 6 dB band, Antenna 2

Channel bandwidth	40 MHz
Modulation	BPSK
Bit Rate	27 Mbps



Plot 7.6.47 Peak spectral power density at mid frequency zoomed at the peak, Antenna 2

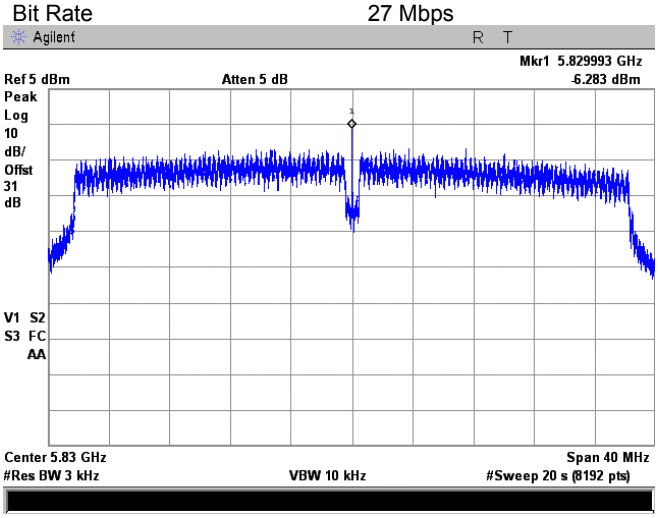
Channel bandwidth	40 MHz
Modulation	BPSK
Bit Rate	27 Mbps



Test specification:	Section 15.247(e), RSS-210 section A8.2(b), Peak power density		
Test procedure:	FCC New Guidance on Measurements for DTS in section 15.247(d), Option 2		
Test mode:	Compliance	Verdict:	PASS
Date & Time:	10/13/2009 9:24:21 PM		
Temperature: 24.7 ºC	Air Pressure: 1016 hPa	Relative Humidity: 39 %	Power Supply: 120VAC
Remarks: 40 MHz EBW			

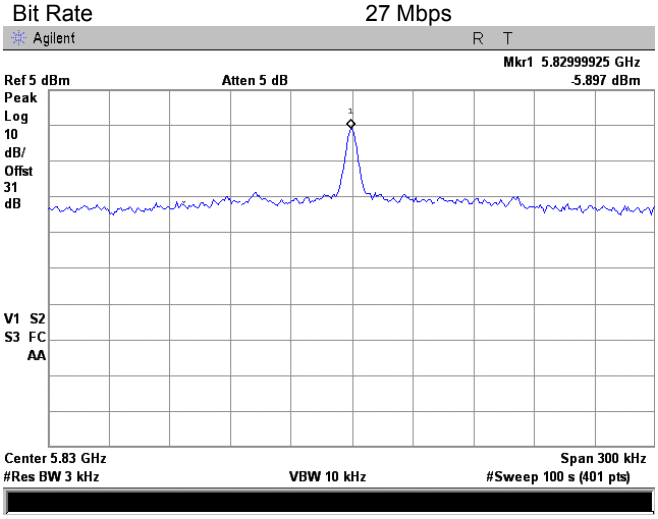
Plot 7.6.48 Peak spectral power density at high frequency within 6 dB band, Antenna 2

Channel bandwidth	40 MHz
Modulation	BPSK
Bit Rate	27 Mbps



Plot 7.6.49 Peak spectral power density at high frequency zoomed at the peak, Antenna 2

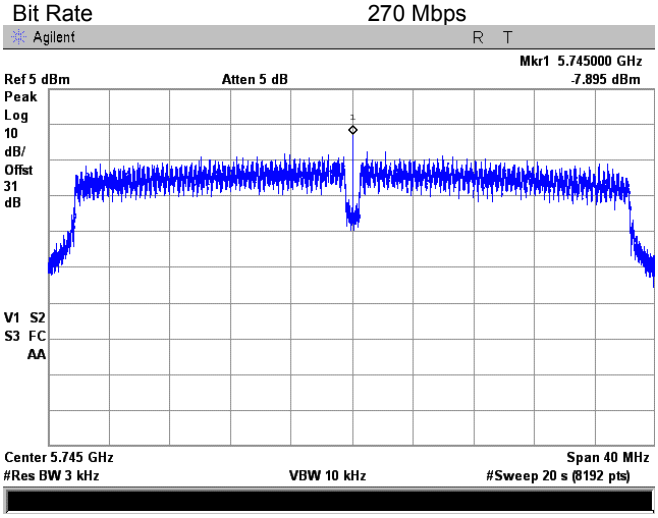
Channel bandwidth	40 MHz
Modulation	BPSK
Bit Rate	27 Mbps



Test specification:	Section 15.247(e), RSS-210 section A8.2(b), Peak power density		
Test procedure:	FCC New Guidance on Measurements for DTS in section 15.247(d), Option 2		
Test mode:	Compliance	Verdict:	PASS
Date & Time:	10/13/2009 9:24:21 PM		
Temperature: 24.7 ºC	Air Pressure: 1016 hPa	Relative Humidity: 39 %	Power Supply: 120VAC
Remarks: 40 MHz EBW			

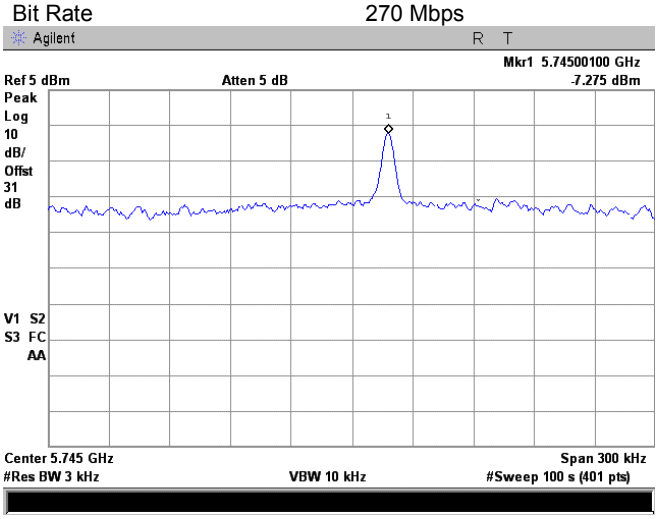
Plot 7.6.50 Peak spectral power density at low frequency within 6 dB band, Antenna 2

Channel bandwidth	40 MHz
Modulation	64QAM
Bit Rate	270 Mbps



Plot 7.6.51 Peak spectral power density at low frequency zoomed at the peak, Antenna 2

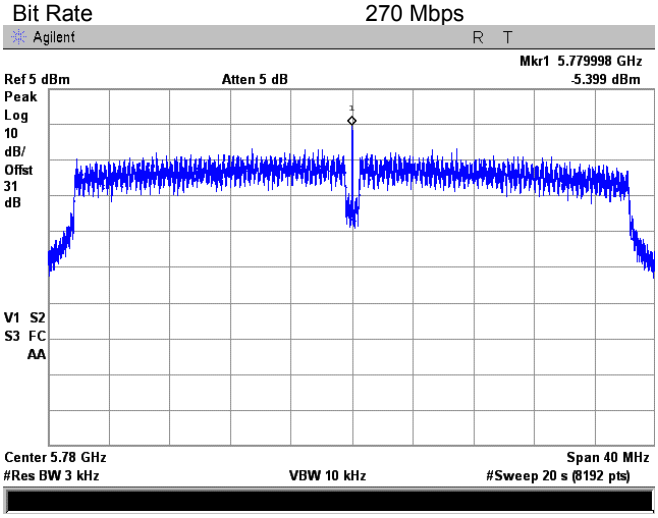
Channel bandwidth	40 MHz
Modulation	64QAM
Bit Rate	270 Mbps



Test specification:	Section 15.247(e), RSS-210 section A8.2(b), Peak power density		
Test procedure:	FCC New Guidance on Measurements for DTS in section 15.247(d), Option 2		
Test mode:	Compliance	Verdict:	PASS
Date & Time:	10/13/2009 9:24:21 PM		
Temperature: 24.7 ºC	Air Pressure: 1016 hPa	Relative Humidity: 39 %	Power Supply: 120VAC
Remarks: 40 MHz EBW			

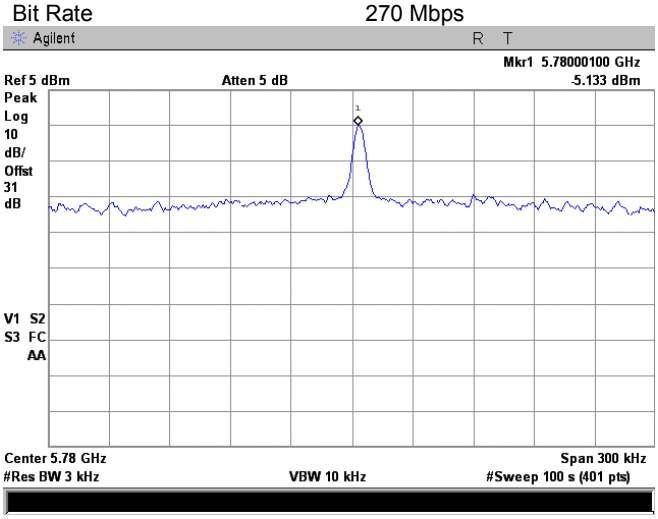
Plot 7.6.52 Peak spectral power density at mid frequency within 6 dB band, Antenna 2

Channel bandwidth	40 MHz
Modulation	64QAM
Bit Rate	270 Mbps



Plot 7.6.53 Peak spectral power density at mid frequency zoomed at the peak, Antenna 2

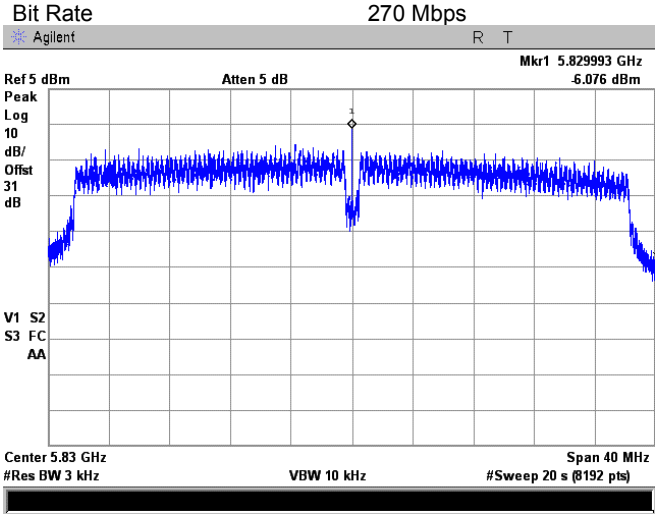
Channel bandwidth	40 MHz
Modulation	64QAM
Bit Rate	270 Mbps



Test specification:	Section 15.247(e), RSS-210 section A8.2(b), Peak power density		
Test procedure:	FCC New Guidance on Measurements for DTS in section 15.247(d), Option 2		
Test mode:	Compliance	Verdict:	PASS
Date & Time:	10/13/2009 9:24:21 PM		
Temperature: 24.7 ºC	Air Pressure: 1016 hPa	Relative Humidity: 39 %	Power Supply: 120VAC
Remarks: 40 MHz EBW			

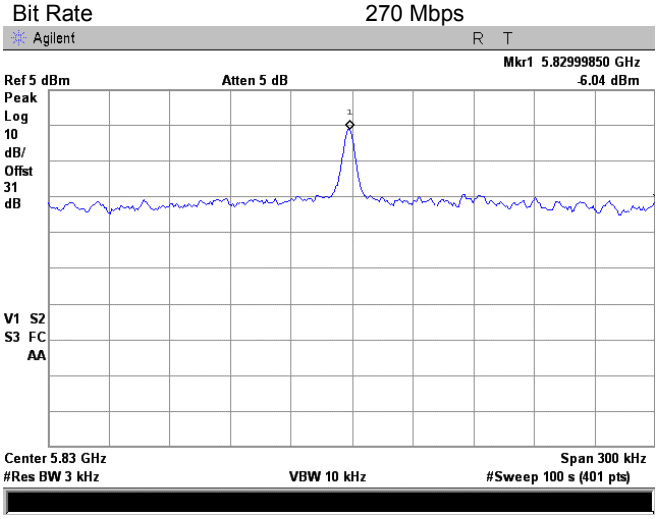
Plot 7.6.54 Peak spectral power density at high frequency within 6 dB band, Antenna 2

Channel bandwidth	40 MHz
Modulation	64QAM
Bit Rate	270 Mbps



Plot 7.6.55 Peak spectral power density at high frequency zoomed at the peak, Antenna 2

Channel bandwidth	40 MHz
Modulation	64QAM
Bit Rate	270 Mbps



Test specification:	Section 15.207(a), RSS-Gen section 7.2.2, Conducted emission		
Test procedure:	ANSI C63.4, Section 13.1.3		
Test mode:	Compliance	Verdict:	PASS
Date & Time:	10/5/2009 5:59:16 PM		
Temperature: 24.7 ºC	Air Pressure: 1013 hPa	Relative Humidity: 40 %	Power Supply: 120VAC
Remarks:			

7.7 Conducted emissions

7.7.1 General

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

Table 7.7.1 Limits for conducted emissions

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

* The limit decreases linearly with the logarithm of frequency.

7.7.2 Test procedure

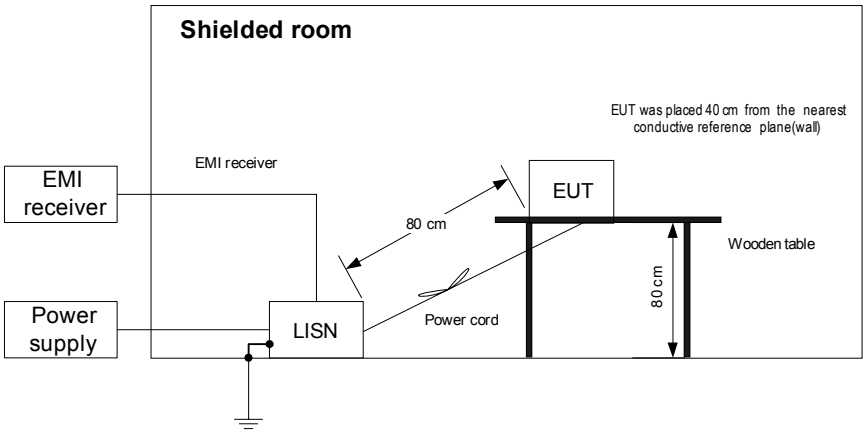
7.7.2.1 The EUT was set up as shown in Figure 7.7.1 and associated photographs, energized and the performance check was conducted.

7.7.2.2 The measurements were performed at power terminals with the LISN, connected to a spectrum analyzer in the frequency range referred to in Table 7.7.2. Unused coaxial connector of the LISN was terminated with 50 Ohm. Quasi-peak and average detectors were used throughout the testing.

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

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

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



Test specification:	**Section 15.207(a), RSS-Gen section 7.2.2, Conducted emission**		
Test procedure:	ANSI C63.4, Section 13.1.3		
Test mode:	Compliance	**Verdict:**	PASS
Date & Time:	10/5/2009 5:59:16 PM		
Temperature: 24.7 ºC	**Air Pressure:** 1013 hPa	**Relative Humidity:** 40 %	**Power Supply:** 120VAC
Remarks:			

Table 7.7.2 Conducted emission test results

LINE: AC mains
EUT OPERATING MODE: Transmit
EUT SET UP: TABLE-TOP
TEST SITE: SHIELDED ROOM
DETECTORS USED: PEAK / QUASI-PEAK / AVERAGE
FREQUENCY RANGE: 150 kHz - 30 MHz
RESOLUTION BANDWIDTH: 9 kHz

Frequency, MHz	Peak emission, dB(µV)	Quasi-peak			Average			Line ID	Verdict
		Measured emission, dB(µV)	Limit, dB(µV)	Margin, dB*	Measured emission, dB(µV)	Limit, dB(µV)	Margin, dB*		
0.156075	57.13	56.11	65.70	-9.59	44.16	55.70	-11.54	L1	Pass
0.209000	47.44	46.05	63.31	-17.26	35.32	53.31	-17.99		
4.542073	49.91	48.10	56.00	-7.90	40.30	46.00	-5.70		
4.751180	51.22	49.07	56.00	-6.93	41.23	46.00	-4.77		
5.482245	53.86	52.34	60.00	-7.66	44.37	50.00	-5.63		
6.212098	56.24	54.05	60.00	-5.95	46.46	50.00	-3.54		
6.629303	55.37	53.83	60.00	-6.17	46.01	50.00	-3.99		
0.156825	56.49	55.65	65.67	-10.02	44.81	55.67	-10.86	L2	Pass
2.663243	51.14	48.59	56.00	-7.41	36.02	46.00	-9.98		
3.602415	44.00	42.73	56.00	-13.27	38.32	46.00	-7.68		
3.914303	46.96	45.24	56.00	-10.76	38.11	46.00	-7.89		
5.481340	53.89	52.31	60.00	-7.69	44.37	50.00	-5.63		
5.690225	54.48	52.44	60.00	-7.56	45.24	50.00	-4.76		
6.423698	54.94	52.25	60.00	-7.75	45.11	50.00	-4.89		

*- Margin = Measured emission - specification limit.

Reference numbers of test equipment used

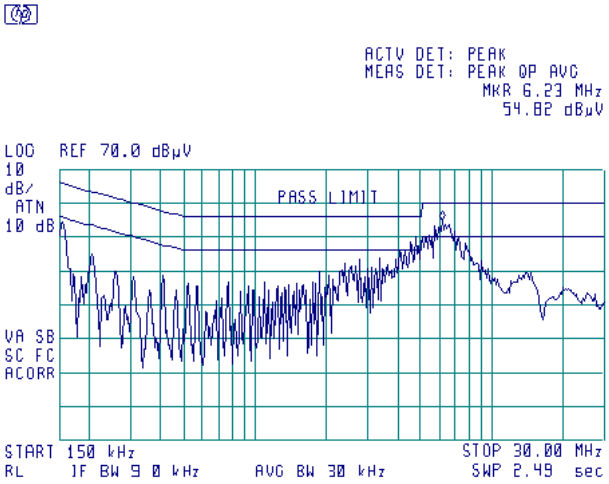
HL 0447	HL 0887	HL 1430	HL 1513	HL 3612			

Full description is given in Appendix A.

Test specification:	Section 15.207(a), RSS-Gen section 7.2.2, Conducted emission		
Test procedure:	ANSI C63.4, Section 13.1.3		
Test mode:	Compliance	Verdict:	PASS
Date & Time:	10/5/2009 5:59:16 PM		
Temperature: 24.7 ºC	Air Pressure: 1013 hPa	Relative Humidity: 40 %	Power Supply: 120VAC
Remarks:			

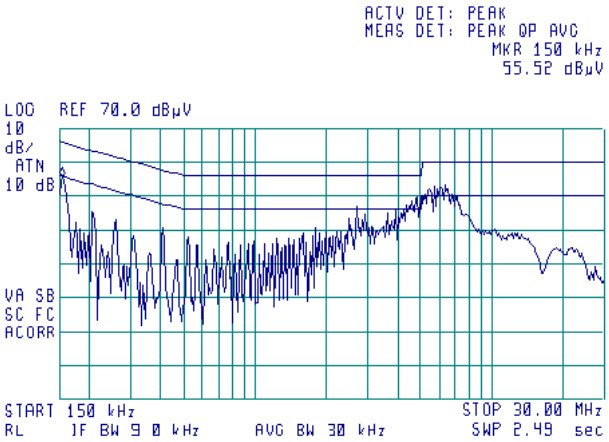
Plot 7.7.1 Conducted emission measurements

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



Plot 7.7.2 Conducted emission measurements

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



Test specification:	Section 15.203, RSS-Gen section 7.1.4, Antenna requirement		
Test procedure:	Visual inspection		
Test mode:	Compliance	Verdict:	PASS
Date & Time:	10/14/2009 12:08:26 AM		
Temperature: 22.7 ºC	Air Pressure: 1014 hPa	Relative Humidity: 57 %	Power Supply: 120VAC
Remarks:			

7.8 Antenna requirements

The EUT was verified for compliance with antenna requirements. A transmitter shall be designed to ensure that no antenna other than that furnished by the responsible party will be used with the device. It may be either permanently attached or employs a unique antenna connector for every antenna proposed for use with the EUT. This requirement does not apply to professionally installed transmitters.
The rationale for compliance with the above requirements was either visual inspection results or supplier declaration. The summary of results is provided in Table 7.8.1.

Table 7.8.1 Antenna requirements

Requirement	Rationale	Verdict
The transmitter requires professional installation	Supplier declaration	Comply

Photograph 7.8.1 Antenna assembly, integrated

Photograph 7.8.2 Antenna assembly, external

8 APPENDIX A Test equipment and ancillaries used for tests

HL No	Description	Manufacturer	Model	Ser. No.	Last Cal.	Due Cal.
0446	Antenna, Loop, Active, 10 kHz - 30 MHz	EMCO	6502	2857	29-Jun-09	29-Jun-10
0447	LISN, 16/2, 300V RMS, 50 Ohm/50 uH + 5 Ohm, STD CISPR 16-1	Hermon Laboratories	LISN 16 - 1	066	04-Nov-08	04-Nov-09
0521	EMI Receiver (Spectrum Analyzer) with RF filter section 9 kHz-6.5 GHz	Hewlett Packard	8546A	3617A 00319, 3448A002 53	27-Aug-09	27-Aug-10
0604	Antenna BiconiLog Log-Periodic/T Bow-TIE, 26 - 2000 MHz	EMCO	3141	9611-1011	11-Jan-09	11-Jan-10
0768	Antenna Standard Gain Horn,18-26.5 GHz, WR-42, 25 dB gain	Quinstar Technology	QWH-4200-BA	110	23-Dec-08	23-Dec-11
0769	Antenna Standard Gain Horn, 26.5-40 GHz, WR28, 25 dB gain	Quinstar Technology	QWH-2800-BA	112	23-Dec-08	23-Dec-11
0887	Attenuator Coaxial, 30 dB, 100 W, 50 Ohm	Bird	8323	1639	03-Feb-09	03-Feb-10
1424	Spectrum Analyzer, 30 Hz- 40 GHz	Agilent Technologies	8564EC	3946A002 19	28-Aug-09	28-Aug-10
1430	EMI Receiver, 9 kHz - 2.9 GHz, System: HL1431, HL1432	Agilent Technologies	8542E	3807A002 62,3705A0 0217	31-Aug-09	31-Aug-10
1513	Cable RF, 8 m, BNC/BNC	Belden	M17/167 MIL-C-17	1513	01-Sep-09	01-Sep-10
1553	Cable RF, 3.5 m, N/N-type	Alpha Wire	RG-214	1553	01-Jan-09	01-Jan-10
1906	Power Divider, 0.5-18.0 GHz, 80 W	Omni Spectra	2090-6204-00	1906	01-Dec-08	01-Dec-09
1984	Antenna, Double-Ridged Waveguide Horn, 1-18 GHz, 300 W	EMC Test Systems	3115	9911-5964	23-Jan-09	23-Jan-10
2254	Cable 40 GHz, 0.8 m, blue	Rhophase Microwave Limited	KPS-1503A-800-KPS	W4907	11-Jun-09	11-Jun-10
2697	Antenna, 30 MHz - 3.0 GHz	Sunol Sciences. Corp. Pleasanton, California USA	JB3	A022805	11-Jan-09	11-Jan-10
2780	EMC analyzer, 100 Hz to 26.5 GHz	Agilent Technologies	E7405A	MY451024 6	05-Jul-09	05-Jul-10
2882	Cable, 18 GHz N-type, M-F, 3 m	Bird	TC-MNFN-3.0	211539 001	04-Feb-09	04-Feb-10
2883	Cable, 18 GHz N-type, M-F, 3 m	Bird	TC-MNFN-3.0	211539 003	07-Dec-08	07-Dec-09
2909	Spectrum analyzer, ESA-E, 100 Hz to 26.5 GHz	Agilent Technologies	E4407B	MY414447 62	07-May-09	07-May-10
2953	Cable, RF, 18 GHz, 1.2 m, SMA-SMA	Gore	10020014	NA	05-Oct-09	05-Oct-10
3123	Microwave Cable Assembly, 18 GHz, 6.4 m, SMA - SMA	Huber-Suhner	198-9155-00	3123	01-Jan-09	01-Jan-10
3301	Power Meter, P-series, 50 MHz to 40 GHz	Agilent Technologies	N1911A	MY451010 57	03-Dec-08	03-Dec-09
3435	Precision Fixed Attenuator, 50 Ohm, 5 W, 10 dB, DC to 18 GHz	Mini-Circuits	BW-S10W5+	NA	08-Mar-09	08-Mar-10
3437	Precision Fixed Attenuator, 50 Ohm, 5 W, 10 dB, DC to 18 GHz	Mini-Circuits	BW-S10W5+	NA	08-Mar-09	08-Mar-10
3440	Precision Fixed Attenuator, 50 Ohm, 5 W, 20 dB, DC to 18 GHz	Mini-Circuits	BW-S20W5+	NA	08-Mar-09	08-Mar-10

HL No	Description	Manufacturer	Model	Ser. No.	Last Cal.	Due Cal.
3442	Precision Fixed Attenuator, 50 Ohm, 5 W, 20 dB, DC to 18 GHz	Mini-Circuits	BW-S20W5+	NA	08-Mar-09	08-Mar-10
3447	Power splitter, DC to 500 MHz	HP	11652	NA	09-Mar-08	09-Mar-10
3455	Medium Power Fixed Coaxial Attenuator DC to 40 GHz, 20 dB, 5 W	Aeroflex / Weinschel	75A-20-12	1182	17-Mar-09	17-Mar-10
3472	Cable, Coax, Microwave, DC-18 GHz, SMA-SMA, 1.0 m	Gore	GORE 65474	1003478	10-May-09	10-May-10
3473	Cable, Coax, Microwave, DC-18 GHz, SMA-SMA, 0.6 m	Gore	GORE 65474	1003478	10-May-09	10-May-10
3474	Cable, Coax, Microwave, DC-18 GHz, SMA-SMA, 0.6 m	Gore	GORE 65475	1640102	10-May-09	10-May-10
3531	Amplifier, low noise, 2 to 8 GHz	Quinstar Technology	QLJ-02084040-J0	11159002002	07-Dec-08	07-Dec-09
3533	Amplifier, low noise, 6 to 18 GHz	Quinstar Technology	QLJ-06184040-J0	11159001001	07-Dec-08	07-Dec-09
3535	Amplifier, low noise, 18 to 40 GHz	Quinstar Technology	QLJ-18404537-J0	11159003001	07-Dec-08	07-Dec-09
3612	Cable RF, 17.5 m, N type-N type	Teldor	RG-214/U	NA	17-Nov-08	17-Nov-09
3616	Cable RF, 6.5 m, N type-N type, DC-6.5 GHz	Suhner Switzerland	Rg 214/U	NA	07-Dec-08	07-Dec-09

9 APPENDIX B Measurement uncertainties

Expanded uncertainty at 95% confidence in Hermon Labs EMC measurements

Test description	Expanded uncertainty
Conducted carrier power at RF antenna connector	Below 12.4 GHz: ± 1.7 dB 12.4 GHz to 40 GHz: ± 2.3 dB
Conducted emissions at RF antenna connector	9 kHz to 2.9 GHz: ± 2.6 dB 2.9 GHz to 6.46 GHz: ± 3.5 dB 6.46 GHz to 13.2 GHz: ± 4.3 dB 13.2 GHz to 22.0 GHz: ± 5.0 dB 22.0 GHz to 26.8 GHz: ± 5.5 dB 26.8 GHz to 40.0 GHz: ± 4.8 dB
Occupied bandwidth	± 8.0 %
Duty cycle, timing (Tx ON / OFF) and average factor measurements	± 1.0 %
Conducted emissions with LISN	9 kHz to 150 kHz: ± 3.9 dB 150 kHz to 30 MHz: ± 3.8 dB
Radiated emissions at 3 m measuring distance Horizontal polarization Vertical polarization	 Biconilog antenna: ± 5.3 dB Biconical antenna: ± 5.0 dB Log periodic antenna: ± 5.3 dB Double ridged horn antenna: ± 5.3 dB Biconilog antenna: ± 6.0 dB Biconical antenna: ± 5.7 dB Log periodic antenna: ± 6.0 dB Double ridged horn antenna: ± 6.0 dB

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

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

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

10 APPENDIX C Test laboratory description

Tests were performed at Hermon Laboratories Ltd., which is a fully independent, private, EMC, safety, environmental and telecommunication testing facility.
Hermon Laboratories is listed by the Federal Communications Commission (USA) for all parts of Code of Federal Regulations 47 (CFR 47), Registration Numbers 90624 for OATS and 90623 for the anechoic chamber; by Industry Canada for electromagnetic emissions (file numbers IC 2186A-1 for OATS and IC 2186A-2 for anechoic chamber), certified by VCCI, Japan (the registration numbers are R-808 for OATS, R-1082 for anechoic chamber, C-845 for conducted emissions site), has a status of a Telefication - Listed Testing Laboratory, Certificate No. L138/00. The laboratory is accredited by American Association for Laboratory Accreditation (USA) according to ISO/IEC 17025 for electromagnetic compatibility, product safety, telecommunications testing and environmental simulation (for exact scope please refer to Certificate No. 839.01).

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11 APPENDIX D Specification references

FCC 47CFR part 15: 2008	Radio Frequency Devices.
FR Vol.62	Federal Register, Volume 62, May 13, 1997
FCC New Guidance:2004	FCC New Guidance on Measurements for DTS
ANSI C63.2: 1996	American National Standard for Instrumentation-Electromagnetic Noise and Field Strength, 10 kHz to 40 GHz-Specifications.
ANSI C63.4: 2003	American National Standard for Methods of Measurement of Radio-Noise Emissions from Low-Voltage Electrical and Electronic Equipment in the Range of 9 kHz to 40 GHz.

12 APPENDIX E Test equipment correction factors

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

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

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

Antenna Factor
Active Loop Antenna
EMC Test Systems, model 6502, S/N 2857, HL 0446

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

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

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

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

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

Antenna factor

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

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

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

Antenna factor
Double-ridged wave guide horn antenna
Model 3115, S/N 9911-5964, HL1984

Frequency, MHz	Antenna factor, dB(1/m)
1000.0	24.7
1500.0	25.7
2000.0	27.6
2500.0	28.9
3000.0	31.2
3500.0	32.0
4000.0	32.5
4500.0	32.7
5000.0	33.6
5500.0	35.1
6000.0	35.4
6500.0	34.9
7000.0	36.1
7500.0	37.8
8000.0	38.0
8500.0	38.1
9000.0	39.1
9500.0	38.3
10000.0	38.6
10500.0	38.2
11000.0	38.7
11500.0	39.5
12000.0	40.0
12500.0	40.4
13000.0	40.5
13500.0	41.1
14000.0	41.6
14500.0	41.7
15000.0	38.7
15500.0	38.2
16000.0	38.8
16500.0	40.5
17000.0	42.5
17500.0	45.9
18000.0	49.4

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

Antenna calibration
Sunol Sciences Inc., model JB3, serial number A022805, HL 2697

Frequency, MHz	ACF, dB	Gain, dBi	Num gain	Frequency, MHz	ACF, dB	Gain, dBi	Num gain	Frequency, MHz	ACF, dB	Gain, dBi	Num gain	Frequency, MHz	ACF, dB	Gain, dBi	Num gain	Frequency, MHz	ACF, dB	Gain, dBi	Num gain
30	22.2	-22.5	0.01	620	19.7	6.3	4.27	1215	24.9	7.0	5.05	1810	28.3	7.1	5.08	2405	30.9	6.9	4.93
35	18.5	-17.4	0.02	625	19.7	6.5	4.42	1220	24.9	7.0	4.99	1815	28.5	6.9	4.91	2410	30.9	6.9	4.89
40	14.7	-12.5	0.06	630	19.6	6.6	4.57	1225	25.1	6.9	4.91	1820	28.6	6.8	4.74	2415	31.0	6.9	4.85
45	11.3	-8.1	0.16	635	19.7	6.5	4.48	1230	25.2	6.8	4.82	1825	28.7	6.8	4.75	2420	31.0	6.8	4.82
45	11.3	-8.1	0.16	640	19.9	6.4	4.40	1235	25.1	7.0	4.96	1830	28.7	6.8	4.76	2425	31.1	6.8	4.81
50	8.9	-4.7	0.34	645	19.9	6.5	4.45	1240	25.0	7.1	5.09	1835	28.7	6.7	4.72	2430	31.0	6.9	4.87
55	7.9	-2.8	0.52	650	19.9	6.5	4.51	1245	25.0	7.1	5.12	1840	28.8	6.7	4.69	2435	31.0	6.9	4.88
60	7.8	-2.1	0.62	655	19.9	6.6	4.60	1250	25.0	7.1	5.15	1845	28.6	6.9	4.90	2440	31.2	6.8	4.74
65	8.5	-2.0	0.63	660	19.9	6.7	4.69	1255	25.0	7.2	5.25	1850	28.4	7.1	5.12	2445	31.1	6.9	4.91
70	9.0	-1.9	0.64	665	19.9	6.7	4.70	1260	24.9	7.3	5.36	1855	28.5	7.0	5.07	2450	31.0	7.0	4.96
75	8.8	-1.1	0.78	670	20.0	6.7	4.71	1265	25.0	7.3	5.31	1860	28.6	7.0	5.01	2455	31.0	7.0	5.01
80	8.4	-0.2	0.97	675	20.1	6.7	4.71	1270	25.1	7.2	5.26	1865	28.5	7.1	5.17	2460	30.9	7.2	5.19
85	8.0	0.8	1.20	680	20.1	6.7	4.71	1275	25.3	7.0	5.05	1870	28.4	7.3	5.33	2465	31.1	6.9	4.95
90	8.2	1.1	1.29	685	20.1	6.8	4.79	1280	25.5	6.8	4.84	1875	28.4	7.2	5.28	2470	31.3	6.8	4.76
95	9.2	0.5	1.13	690	20.1	6.9	4.88	1285	25.4	7.0	4.97	1880	28.5	7.2	5.22	2475	31.4	6.7	4.69
100	10.6	-0.4	0.92	695	20.2	6.8	4.82	1290	25.3	7.1	5.10	1885	28.5	7.2	5.22	2480	31.3	6.8	4.79
110	12.6	-1.6	0.70	705	20.4	6.8	4.75	1300	25.2	7.3	5.33	1895	28.6	7.2	5.24	2490	31.1	7.0	4.99
120	13.9	-2.1	0.62	715	20.5	6.8	4.80	1310	25.5	7.1	5.09	1905	28.5	7.3	5.36	2500	30.9	7.2	5.27
125	14.2	-2.0	0.63	720	20.5	6.9	4.85	1315	25.4	7.2	5.23	1910	28.5	7.4	5.45	2505	31.1	7.1	5.15
130	14.2	-1.7	0.68	725	20.6	6.8	4.81	1320	25.3	7.3	5.36	1915	28.5	7.3	5.38	2510	31.0	7.2	5.22
140	13.4	-0.3	0.94	735	20.9	6.7	4.65	1330	25.6	7.0	5.06	1925	28.6	7.3	5.35	2520	31.2	7.0	5.05
150	12.9	0.8	1.21	745	21.0	6.6	4.59	1340	25.7	7.1	5.09	1935	28.5	7.4	5.54	2530	31.0	7.3	5.37
160	12.7	1.6	1.44	755	21.0	6.8	4.74	1350	25.7	7.1	5.17	1945	28.5	7.5	5.59	2540	31.2	7.1	5.09
165	12.5	2.0	1.59	760	21.0	6.8	4.83	1355	25.8	7.0	5.06	1950	28.6	7.4	5.48	2545	31.0	7.3	5.43
170	12.2	2.6	1.83	765	21.1	6.8	4.73	1360	25.9	6.9	4.95	1955	28.6	7.5	5.57	2550	31.0	7.3	5.39
175	11.8	3.3	2.13	770	21.3	6.7	4.64	1365	26.0	6.9	4.95	1960	28.6	7.5	5.65	2555	31.1	7.2	5.30
180	11.6	3.7	2.36	775	21.3	6.7	4.68	1370	26.0	7.0	4.96	1965	28.7	7.4	5.47	2560	31.0	7.4	5.47
185	11.5	4.0	2.54	780	21.3	6.7	4.72	1375	26.0	7.0	5.01	1970	28.9	7.2	5.29	2565	30.8	7.6	5.70
190	11.6	4.2	2.61	785	21.3	6.8	4.77	1380	26.0	7.0	5.06	1975	28.9	7.2	5.22	2570	31.1	7.3	5.37
200	13.1	3.2	2.07	795	21.4	6.8	4.79	1390	26.1	6.9	4.92	1985	29.1	7.1	5.11	2580	31.6	6.9	4.87
205	12.0	4.4	2.76	800	21.5	6.8	4.77	1395	26.2	6.9	4.94	1990	29.1	7.0	5.06	2585	31.6	6.8	4.79
210	11.0	5.6	3.66	805	21.6	6.7	4.71	1400	26.2	7.0	4.96	1995	29.1	7.1	5.09	2590	31.6	6.9	4.88
215	11.3	5.6	3.59	810	21.7	6.7	4.65	1405	26.1	7.0	5.02	2000	29.1	7.1	5.11	2595	31.5	7.0	4.97
220	11.6	5.5	3.52	815	21.7	6.7	4.72	1410	26.1	7.1	5.09	2005	29.1	7.1	5.16	2600	31.6	6.9	4.86
225	11.7	5.5	3.55	820	21.7	6.8	4.80	1415	26.2	7.0	5.02	2010	29.1	7.1	5.15	2605	31.3	7.2	5.30
230	11.9	5.5	3.57	825	21.7	6.8	4.82	1420	26.3	7.0	4.96	2015	29.2	7.1	5.13	2610	31.4	7.1	5.15
235	12.1	5.5	3.56	830	21.7	6.9	4.85	1425	26.2	7.1	5.10	2020	29.2	7.1	5.18	2615	31.7	6.9	4.88
240	12.3	5.5	3.54	835	21.8	6.8	4.82	1430	26.1	7.2	5.25	2025	29.3	7.1	5.08	2620	31.6	7.0	4.97
245	12.3	5.7	3.71	840	21.9	6.8	4.80	1435	26.1	7.2	5.24	2030	29.3	7.0	5.05	2625	31.4	7.1	5.17
250	12.3	5.9	3.88	845	21.9	6.8	4.83	1440	26.2	7.2	5.24	2035	29.3	7.1	5.07	2630	31.6	7.0	5.00
255	12.5	5.9	3.85	850	21.9	6.9	4.86	1445	26.3	1	5.11	2040	29.3	7.1	5.13	2635	31.8	6.8	4.82
260	12.7	5.8	3.83	855	22.0	6.8	4.80	1450	26.5	7.0	4.98	2045	29.2	7.2	5.23	2640	31.7	7.0	4.98
265	13.2	5.5	3.54	860	22.1	6.8	4.74	1455	26.4	7.1	5.07	2050	29.2	7.2	5.27	2645	31.7	6.9	4.93
270	13.7	5.2	3.27	865	22.0	6.9	4.92	1460	26.4	7.1	5.17	2055	29.3	7.2	5.21	2650	31.8	6.9	4.85
275	13.7	5.3	3.39	870	21.9	7.1	5.11	1465	26.4	7.2	5.19	2060	29.5	7.0	5.02	2655	31.8	6.9	4.85
280	13.7	5.4	3.50	875	22.0	7.1	5.08	1470	26.4	7.2	5.22	2065	29.4	7.1	5.08	2660	31.7	7.0	5.02
285	13.7	5.6	3.61	880	22.1	7.0	5.05	1475	26.4	7.1	5.17	2070	29.4	7.1	5.10	2665	32.0	6.7	4.71
290	13.7	5.7	3.72	885	22.1	7.0	5.06	1480	26.5	7.1	5.12	2075	29.5	7.0	5.01	2670	32.0	6.7	4.67
295	13.8	5.8	3.77	890	22.1	7.0	5.06	1485	26.5	7.1	5.14	2080	29.8	6.8	4.76	2675	31.9	6.8	4.81
300	13.9	5.8	3.81	895	22.2	7.1	5.09	1490	26.5	7.1	5.17	2085	29.7	6.9	4.89	2680	31.7	7.0	5.04
305	14.0	5.9	3.85	900	22.2	7.1	5.12	1495	26.5	7.2	5.24	2090	29.7	6.9	4.86	2685	31.9	6.8	4.83
310	14.1	5.9	3.88	905	22.3	7.1	5.09	1500	26.5	7.2	5.31	2095	29.8	6.8	4.78	2690	32.1	6.7	4.72
315	14.3	5.9	3.89	910	22.3	7.0	5.05	1505	26.5	7.2	5.27	2100	29.9	6.8	4.75	2695	32.1	6.7	4.71
320	14.4	5.9	3.90	915	22.4	7.0	4.99	1510	26.6	7.2	5.23	2105	29.8	6.8	4.81	2700	32.0	6.8	4.81
325	14.5	5.9	3.92	920	22.6	6.9	4.92	1515	26.6	7.2	5.30	2110	29.9	6.8	4.78	2705	32.0	6.8	4.80
330	14.6	5.9	3.93	925	22.7	6.9	4.85	1520	26.5	7.3	5.38	2115	29.9	6.8	4.76	2710	32.1	6.8	4.79
335	14.7	6.0	4.02	930	22.8	6.8	4.77	1525	26.6	7.3	5.37	2120	29.9	6.8	4.84	2715	32.1	6.7	4.71
340	14.7	6.2	4.12	935	22.8	6.8	4.83	1530	26.6	7.3	5.36	2125	29.9	6.9	4.89	2720	32.4	6.5	4.47
345	14.9	6.1	4.06	940	22.8	6.9	4.89	1535	26.6	7.4	5.44	2130	29.9	6.9	4.90	2725	32.2	6.7	4.63
350	15.1	6.0	3.99	945	22.8	6.9	4.87	1540	26.5	7.4	5.53	2135	29.8	6.9	4.94	2730	31.9	7.0	5.05
355	15.3	5.9	3.88	950	22.9	6.9	4.85	1545	26.5	7.5	5.58	2140	29.8	7.1	5.08	2735	31.6	7.4	5.44
360	15.6	5.8	3.78	955	23.0	6.8	4.81	1550	26.5	7.5	5.63	2145	29.9	6.9	4.92	2740	31.6	7.1	5.46
365	15.5	5.9	3.89	960	23.1	6.8	4.77	1555	26.7	7.3	5.39	2150	29.9	7.0	4.98	2745	31.9	7.0	5.06
370	15.5	6.0	4.01	965	23.1	6.7	4.73	1560	26.9	7.1	5.16	2155	29.8	7.1	5.10	2750	32.0	6.9	4.94
375	15.6	6.1	4.03	970	23.2	6.7	4.69	1565	26.9	7.2	5.23	2160	29.8	7.1	5.09	2755	32.0	7.0	4.98
380	15.7	6.1	4.05	975	23.3	6.6	4.62	1570	26.9	7.2	5.30	2165	29.9	7.0	5.00	2760	32.0	7.0	5.06
385	15.7	6.2	4.15	980	23.5	6.6	4.54	1575	27.0	7.2	5.23	2170	29.9	7.1	5.07	2765	32.2	6.8	4.80
390	15.7	6.3	4.25	985	23.5	6.6	4.52	1580	27.0	7.1	5.17	2175	29.8	7.2	5.20	2770	32.3	6.8	4.73
395	15.9	6.3	4.22	990	23.6	6.5	4.50	1585	27.0	7.2	5.20	2180	29.8	7.2	5.27	2775	32.3	6.8	4.77
400	16.0	6.2	4.18	995	23.6	6.5	4.48	1590	27.0	7.2	5.22	2185	29.8	7.2	5.27	2780	32.3	6.8	4.82
405	16.3	6.1	4.07	1000	23.7	6.5	4.46	1595	27.0	7.2	5.29	2190	29.8	7.2	5.28	2785	32.7	6.4	4.41
410	16.5	6.0	3.96	1005	23.7	6.5	4.51	1600	27.0	7.3	5.36	2195	29.8	7.2	5.30	2790	32.8	6.3	4.25
415	16.5	6.0	4.00	1010	23.7	6.6	4.57	1605	27.0	7.3	5.38	2200	29.7	7.3	5.38	2795	32.8	6.4	4.33
420	16.6	6.1	4.03	1015	23.7	6.6	4.55	1610	27.0	7.3	5.41	2205	29.7	7.3	5.41	2800	32.5	6.7	4.66
425	16.6	6.1	4.10	1020	23.8	6.6	4.54	1615	27.1	7.3	5.33	2210	29.7	7.4	5.47	2805	32.5	6.6	4.62
430	16.7	6.2	4.16	1025	23.8	6.6	4.62	1620	27.2	7.2	5.27	2215	29.7	7.4	5.54	2810	32.5	6.7	4.70
435	16.9	6.1	4.05	1030	23.7	6.7	4.70	1625	27.2	7.2	5.30	2220	29.7	7.5	5.57	2815	32.3	6.9	4.85
440	17.1	5.9	3.93	1035	23.7	6.8	4.81	1630	27.2	7.3	5.33	2225	29.8	7.3	5.43	2820	32.2	7.0	5.01
445	17.2	6.0	3.97	1040	23.6	6.9	4.92	1635	27.2	7.3	5.35	2230	29.8	7.4	5.45	2825	32.3	7.0	4.96
450	17.2	6.0	4.00	1045	23.7	6.9	4.91	1640	27.2	7.3	5.36	2235	29.7	7.5	5.61	2830	32.4	6.8	4.80
455	17.3	6.1	4.04	1050	23.7	6.9	4.91	1645	27.3	7.2	5.22	2240	29.5	7.7	5.86	2835	32.5	6.7	4.68
460	17.4	6.1	4.07	1055	23.7	7.0	5.01	1650	27.5	7.1	5.09	2245	29.8	7.4	5.53	2840	32.5	6.8	4.78
465	17.5	6.1	4.05	1060	23.6	7.1	5.11	1655	27.5	7.1	5.11	2250	30.0	7.3	5.35	2845	32.6	6.6	4.62
470	17.6	6.1	4.04	1065	23.7	7.0	5.06	1660	27.5	7.1	5.13	2255	30.0	7.2	5.28	2850	32.6	6.7	4.70
475	17.7	6.0	3.99	1070	23.8	7.0	5.01	1665	27.6	7.0	5.06	2260	30.1	7.2	5.24	2855	32.4	6.9	4.88
480	17.9	5.9	3.93	1075	23.8	7.0	5.01	1670	27.7	7.0	4.99	2265	30.1	7.2	5.20	2860	32.4	7.0	4.98
485	18.0	5.9	3.88	1080	23.9	7.0	5.01	1675	27.7	7.0	5.02	2270	30.2	7.1	5.12	2865	32.8	6.5	4.52
490	18.2	5.8	3.82	1085	24.0	7.0	4.96	1680	27.7	7.0	5.05	2275	30.3	7.0	5.05	2870	33.0	6.3	4.30
495	18.0	6.0	4.02	1090	24.0	6.9	4.91	1685	27.7	7.0	5.01	2280	30.0	7.0	5.06	2875	33.0	6.4	4.38
500	17.9	6.3	4.23	1095	24.1	6.9	4.86	1690	27.8	7.0	4.98	2285	30.3	7.0	5.05	2880	32.5	6.9	4.87
505	17.9	6.3	4.29	1100	24.2	6.8	4.82	1695	27.8	7.0	5.01	2290	30.3	7.1	5.07	2885	33.0	6.4	4.40
510	18.0	6.4	4.36	1105	24.3	6.8	4.80	1700	27.8	7.0	5.03	2295	30.3	7.1	5.13	2890	33.1	6.3	4.28
515	18.1	6.4	4.34	1110	24.3	6.8	4.78	1705	27.8	7.1	5.09	2300	30.2	7.2	5.23	2895	33.1	6.4	4.34
520	18.2	6.4	4.32	1115	24.3	6.8	4.79	1710	27.7	7.1	5.16	2305	30.3	7.2	5.20	2900	33.0	6.4	4.41
525	18.2	6.4	4.36	1120	24.4	6.8	4.80	1715	27.8	7.1	5.08	2310	30.2	7.3	5.35	2905	32.9	6.6	4.58
530	18.3	6.4	4.39	1125	24.3	6.9	4.90	1720	27.9	7.0	5.00	2315	30.1	7.4	5.45	2910	32.9	6.5	4.51
535	18.3	6.4	4.41	1130	24.3	7.0	5.00	1725	28.0	7.0	4.99	2320	30.3	7.2	5.27	2915	33.1	6.4	4.33
540	18.4	6.4	4.41	1135	24.4	6.9	4.90	1730	28.0	7.0	4.98	2325	304	7.2	5.22	2920	33.3	6.2	4.16
545	18.4	6.5	4.47	1140	24.5	6.8	4.81	1735	28.0	7.0	5.02	2330	30.4	7.1	5.13	2925	33.0	6.5	4.45
550	18.4	6.6	4.53	1145	24.6	6.8	4.76	1740	28.0	7.1	5.07	2335	30.5	7.0	5.07	2930	33.0	6.5	4.51
555	18.6	6.5	4.45	1150	24.7	6.7	4.71	1745	28.0	7.0	5.04	2340	30.5	7.1	5.11	2935	33.0	6.5	4.48
560	18.8	6.4	4.37	1155	24.7	6.8	4.76	1750	28.1	7.0	5.01	2345	30.6	7.0	5.07	2940	33.0	6.5	4.52
565	18.9	6.4	4.33	1160	24.7	6.8	4.80	1755	27.9	7.1	5.17	2350	30.5	7.1	5.12	2945	33.1	6.5	4.42
570	19.0	6.3	4.28	1165	24.7	6.8	4.81	1760	27.8	7.3	5.34	2355	30.6	7.1	5.08	2950	33.2	6.4	4.32
575	19.1	6.3	4.31	1170	24.7	6.8	4.81	1765	27.9	7.3	5.31	2360	30.9	6.8	4.79	2955	33.3	6.3	4.27
580	19.1	6.4	4.33	1175	24.8	6.8	4.84	1770	27.9	7.2	5.28	2365	31.0	6.7	4.66	2960	33.3	6.3	4.30
590	19.1	6.6	4.52	1185	24.8	6.9	4.92	1780	27.9	7.3	5.35	2375	31.1	6.6	4.60	2970	33.3	6.4	4.36
595	19.0	6.6	4.62	1190	24.7	7.0	4.99	1785	28.1	7.2	5.21	2380	31.1	6.6	4.61	2975	33.0	6.6	4.60
600	19.0	6.7	4.72	1195	24.7	7.0	5.02	1790	28.2	7.0	5.07	2385	31.1	6.7	4.62	2980	32.9	6.8	4.74
610	19.1	6.8	4.76	1205	24.08	7.1	5.08	1800	28.3	7.0	5.06	2395	31.2	6.6	4.60	2990	32.9	6.8	4.82
615	19.4	6.5	4.51	1210	24.8	7.1	5.11	1805	28.3	7.1	5.07	2400	30.9	6.9	4.93	3000	33.4	6.4	4.33

Cable loss
RF cable 3.5 m, Alpha Wire, model RG-214, S/N 149, HL 1553

No.	Frequency, MHz	Cable loss, dB	Measurement uncertainty, dB
1	1	0.01	±0.05
2	10	0.07	
3	30	0.12	
4	50	0.22	
5	100	0.26	
6	200	0.40	
7	300	0.52	
8	400	0.60	
9	500	0.70	
10	600	0.77	
11	700	0.84	
12	800	1.00	
13	900	1.00	
14	1000	1.05	
15	2000	1.70	

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

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

Cable loss
Cable coaxial, Bird, 18 GHz, N-type, M-F, model TC-MNFN-3.0, S/N 211539 001
HL 2882

Frequency, MHz	Cable loss, dB	Frequency, MHz	Cable loss, dB	Frequency, MHz	Cable loss, dB
10	0.08	5750	1.78	12000	2.57
30	0.12	6000	1.84	12250	2.62
100	0.22	6250	1.87	12500	2.66
250	0.35	6500	1.92	12750	2.68
500	0.49	6750	1.96	13000	2.67
750	0.60	7000	2.01	13250	2.75
1000	0.68	7250	2.08	13500	2.77
1250	0.78	7500	2.12	13750	2.90
1500	0.85	7750	2.19	14000	3.00
1750	0.92	8000	2.22	14250	3.12
2000	0.98	8250	2.28	14500	2.98
2250	1.06	8500	2.29	14750	3.03
2500	1.11	8750	2.27	15000	2.99
2750	1.19	9000	2.28	15250	2.99
3000	1.25	9250	2.26	15500	2.98
3250	1.30	9500	2.29	15750	2.98
3500	1.34	9750	2.33	16000	2.99
3750	1.40	10000	2.34	16250	3.05
4000	1.45	10250	2.41	16500	3.11
4250	1.51	10500	2.46	16750	3.18
4500	1.54	10750	2.48	17000	3.23
4750	1.59	11000	2.48	17250	3.21
5000	1.63	11250	2.52	17500	3.22
5250	1.68	11500	2.53	17750	3.22
5500	1.72	11750	2.56	18000	3.25

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

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

Cable loss
Cable coaxial, Gore, 25.5 GHz, 1.2 m, SMA-SMA, S/N 10020014
HL 2953

Frequency, MHz	Cable loss, dB	Frequency, MHz	Cable loss, dB	Frequency, MHz	Cable loss, dB
10	0.06	8750	1.28	18000	1.84
30	0.06	9000	1.30	18250	1.91
100	0.12	9250	1.35	18500	1.94
250	0.19	9500	1.34	18750	1.92
500	0.27	9750	1.36	19000	1.95
750	0.34	10000	1.33	19250	2.00
1000	0.40	10250	1.38	19500	1.96
1250	0.45	10500	1.39	19750	2.02
1500	0.50	10750	1.39	20000	1.92
1750	0.54	11000	1.43	20250	2.04
2000	0.57	11250	1.42	20500	2.00
2250	0.60	11500	1.48	20750	2.09
2500	0.64	11750	1.49	21000	2.01
2750	0.67	12000	1.59	21250	2.07
3000	0.70	12250	1.50	21500	2.20
3250	0.74	12500	1.55	21750	2.10
3500	0.76	12750	1.55	22000	2.24
3750	0.80	13000	1.61	22250	2.25
4000	0.83	13250	1.62	22500	2.12
4250	0.85	13500	1.56	22750	2.05
4500	0.87	13750	1.61	23000	2.10
4750	0.91	14000	1.57	23250	2.03
5000	0.92	14250	1.66	23500	2.08
5250	0.96	14500	1.58	23750	2.14
5500	0.99	14750	1.69	24000	2.16
5750	0.99	15000	1.71	24250	2.25
6000	1.03	15250	1.74	24500	2.17
6250	1.05	15500	1.75	24750	2.32
6500	1.07	15750	1.72	25000	2.32
6750	1.08	16000	1.89	25250	2.32
7000	1.12	16250	1.79	25500	2.41
7250	1.13	16500	1.84	25750	2.31
7500	1.15	16750	1.82	26000	2.28
7750	1.20	17000	1.79	26250	2.32
8000	1.20	17250	1.78	26500	2.29
8250	1.23	17500	1.85		
8500	1.27	17750	1.83		

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

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

Cable loss
Cable coaxial, Microwave, SMA-SMA, 18 GHz, 1.0 m
Gore, HL 3472

Frequency, MHz	Cable loss, dB	Frequency, MHz	Cable loss, dB	Frequency, MHz	Cable loss, dB	Frequency, MHz	Cable loss, dB
10	0.01	5000	0.47	10200	0.72	15500	0.75
30	0.03	5100	0.47	10300	0.67	15600	0.89
50	0.04	5200	0.47	10400	0.77	15700	0.82
100	0.04	5300	0.47	10500	0.67	15800	0.89
200	0.08	5400	0.49	10600	0.74	15900	0.89
300	0.11	5500	0.48	10700	0.81	16000	0.93
400	0.11	5600	0.49	10800	0.77	16100	0.90
500	0.12	5700	0.49	10900	0.82	16200	0.92
600	0.14	5800	0.51	11000	0.86	16300	0.90
700	0.15	5900	0.50	11100	0.78	16400	0.94
800	0.16	6000	0.51	11200	0.82	16500	0.93
900	0.18	6100	0.53	11300	0.77	16600	0.95
1000	0.17	6200	0.52	11400	0.84	16700	0.98
1100	0.19	6300	0.53	11500	0.74	16800	1.00
1200	0.22	6400	0.54	11600	0.81	16900	0.94
1300	0.21	6500	0.55	11700	0.73	17000	1.00
1400	0.22	6600	0.54	11800	0.75	17100	0.93
1500	0.23	6700	0.57	11900	0.73	17200	1.00
1600	0.24	6800	0.54	12000	0.75	17300	0.93
1700	0.24	6900	0.58	12100	0.66	17400	0.93
1800	0.25	7000	0.58	12200	0.66	17500	0.96
1900	0.26	7100	0.58	12300	0.72	17600	0.94
2000	0.28	7200	0.61	12400	0.64	17700	0.99
2100	0.27	7300	0.59	12500	0.75	17800	0.97
2200	0.29	7400	0.55	12600	0.67	17900	0.90
2300	0.29	7500	0.63	12700	0.75	18000	0.78
2400	0.30	7600	0.60	12800	0.66		
2500	0.30	7700	0.61	12900	0.81		
2600	0.32	7800	0.64	13000	0.75		
2700	0.32	7900	0.60	13100	0.80		
2800	0.33	8000	0.58	13200	0.80		
2900	0.34	8100	0.61	13300	0.81		
3000	0.34	8200	0.62	13400	0.88		
3100	0.35	8300	0.62	13500	0.82		
3200	0.35	8400	0.68	13600	1.00		
3300	0.36	8500	0.63	13700	0.93		
3400	0.37	8600	0.61	13800	0.86		
3500	0.38	8700	0.63	13900	0.84		
3600	0.38	8800	0.62	14000	1.00		
3700	0.40	8900	0.64	14100	0.86		
3800	0.40	9000	0.62	14200	0.98		
3900	0.40	9100	0.64	14300	0.99		
4000	0.40	9200	0.62	14400	0.82		
4100	0.43	9300	0.62	14600	0.89		
4200	0.43	9400	0.62	14700	0.84		
4300	0.43	9500	0.63	14800	0.90		
4400	0.44	9600	0.64	14900	0.89		
4500	0.45	9700	0.60	15000	0.89		
4600	0.45	9800	0.65	15100	0.86		
4700	0.46	9900	0.60	15200	0.87		
4800	0.46	10000	0.67	15300	0.86		
4900	0.46	10100	0.69	15400	0.87		

Cable loss
Cable coaxial, Microwave, SMA-SMA, 18 GHz, 0.6 m
Gore, HL 3473

Frequency, MHz	Cable loss, dB	Frequency, MHz	Cable loss, dB	Frequency, MHz	Cable loss, dB	Frequency, MHz	Cable loss, dB
10	0.01	5000	0.48	10200	0.72	15500	0.85
30	0.03	5100	0.48	10300	0.70	15600	0.93
50	0.04	5200	0.48	10400	0.75	15700	0.87
100	0.04	5300	0.48	10500	0.68	15800	0.88
200	0.08	5400	0.50	10600	0.77	15900	0.94
300	0.11	5500	0.48	10700	0.80	16000	0.94
400	0.12	5600	0.50	10800	0.77	16100	0.99
500	0.13	5700	0.50	10900	0.85	16200	0.96
600	0.15	5800	0.52	11000	0.83	16300	0.96
700	0.15	5900	0.51	11100	0.79	16400	0.94
800	0.17	6000	0.52	11200	0.82	16500	0.94
900	0.19	6100	0.54	11300	0.79	16600	1.03
1000	0.18	6200	0.53	11400	0.81	16700	1.04
1100	0.20	6300	0.54	11500	0.76	16800	1.07
1200	0.22	6400	0.55	11600	0.78	16900	0.94
1300	0.22	6500	0.56	11700	0.74	17000	1.05
1400	0.23	6600	0.56	11800	0.76	17100	0.96
1500	0.24	6700	0.60	11900	0.79	17200	1.07
1600	0.25	6800	0.55	12000	0.74	17300	0.98
1700	0.25	6900	0.60	12100	0.69	17400	1.16
1800	0.26	7000	0.59	12200	0.69	17500	1.05
1900	0.27	7100	0.60	12300	0.75	17600	1.13
2000	0.29	7200	0.61	12400	0.66	17700	1.05
2100	0.28	7300	0.60	12500	0.76	17800	1.22
2200	0.30	7400	0.57	12600	0.70	17900	1.02
2300	0.30	7500	0.63	12700	0.77	18000	1.04
2400	0.31	7600	0.60	12800	0.69		
2500	0.31	7700	0.63	12900	0.79		
2600	0.33	7800	0.66	13000	0.81		
2700	0.33	7900	0.61	13100	0.83		
2800	0.35	8000	0.58	13200	0.80		
2900	0.35	8100	0.62	13300	0.82		
3000	0.35	8200	0.62	13400	0.90		
3100	0.35	8300	0.63	13500	0.85		
3200	0.36	8400	0.67	13600	1.04		
3300	0.38	8500	0.63	13700	0.93		
3400	0.38	8600	0.61	13800	0.91		
3500	0.40	8700	0.64	13900	0.89		
3600	0.40	8800	0.62	14000	0.96		
3700	0.40	8900	0.64	14100	0.88		
3800	0.41	9000	0.64	14200	1.01		
3900	0.41	9100	0.64	14300	0.99		
4000	0.41	9200	0.63	14400	0.83		
4100	0.45	9300	0.63	14600	0.88		
4200	0.43	9400	0.63	14700	0.91		
4300	0.46	9500	0.64	14800	0.91		
4400	0.44	9600	0.65	14900	0.88		
4500	0.47	9700	0.62	15000	0.89		
4600	0.46	9800	0.66	15100	0.91		
4700	0.47	9900	0.61	15200	0.88		
4800	0.47	10000	0.70	15300	0.94		
4900	0.48	10100	0.70	15400	0.91		

Cable loss
Cable coaxial, Microwave, SMA-SMA, 18 GHz, 0.6 m
Gore, HL 3474

Frequency, MHz	Cable loss, dB	Frequency, MHz	Cable loss, dB	Frequency, MHz	Cable loss, dB	Frequency, MHz	Cable loss, dB
10	0.00	5000	0.44	10200	0.72	15500	0.84
30	0.02	5100	0.44	10300	0.68	15600	0.95
50	0.03	5200	0.44	10400	0.75	15700	0.82
100	0.03	5300	0.44	10500	0.64	15800	0.94
200	0.07	5400	0.46	10600	0.75	15900	0.91
300	0.10	5500	0.45	10700	0.80	16000	0.91
400	0.11	5600	0.46	10800	0.77	16100	0.86
500	0.12	5700	0.47	10900	0.80	16200	0.86
600	0.14	5800	0.48	11000	0.79	16300	0.86
700	0.14	5900	0.48	11100	0.70	16400	0.84
800	0.15	6000	0.49	11200	0.76	16500	0.83
900	0.18	6100	0.51	11300	0.70	16600	0.87
1000	0.17	6200	0.50	11400	0.73	16700	0.90
1100	0.18	6300	0.50	11500	0.67	16800	0.91
1200	0.21	6400	0.51	11600	0.74	16900	0.90
1300	0.20	6500	0.51	11700	0.64	17000	0.97
1400	0.21	6600	0.52	11800	0.68	17100	0.94
1500	0.22	6700	0.54	11900	0.67	17200	1.01
1600	0.23	6800	0.51	12000	0.71	17300	0.97
1700	0.23	6900	0.55	12100	0.64	17400	1.02
1800	0.24	7000	0.54	12200	0.64	17500	1.06
1900	0.25	7100	0.55	12300	0.71	17600	1.01
2000	0.27	7200	0.55	12400	0.62	17700	1.10
2100	0.26	7300	0.54	12500	0.80	17800	1.16
2200	0.28	7400	0.52	12600	0.69	17900	1.12
2300	0.28	7500	0.58	12700	0.85	18000	1.00
2400	0.28	7600	0.56	12800	0.67		
2500	0.29	7700	0.57	12900	0.84		
2600	0.30	7800	0.62	13000	0.76		
2700	0.31	7900	0.57	13100	0.85		
2800	0.32	8000	0.55	13200	0.77		
2900	0.32	8100	0.59	13300	0.82		
3000	0.32	8200	0.59	13400	0.79		
3100	0.33	8300	0.60	13500	0.82		
3200	0.33	8400	0.66	13600	0.91		
3300	0.35	8500	0.60	13700	0.81		
3400	0.35	8600	0.59	13800	0.76		
3500	0.36	8700	0.59	13900	0.75		
3600	0.36	8800	0.58	14000	0.81		
3700	0.37	8900	0.60	14100	0.77		
3800	0.38	9000	0.60	14200	0.89		
3900	0.38	9100	0.60	14300	0.92		
4000	0.38	9200	0.57	14400	0.78		
4100	0.41	9300	0.57	14600	0.85		
4200	0.40	9400	0.58	14700	0.83		
4300	0.41	9500	0.60	14800	0.95		
4400	0.42	9600	0.62	14900	0.89		
4500	0.43	9700	0.58	15000	0.96		
4600	0.42	9800	0.63	15100	0.90		
4700	0.44	9900	0.58	15200	0.96		
4800	0.43	10000	0.67	15300	0.90		
4900	0.44	10100	0.69	15400	0.95		

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

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

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

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

13 APPENDIX F Abbreviations and acronyms

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

END OF DOCUMENT