



360 Herndon Parkway
Suite 1400
Herndon, VA 20170
<http://www.rheintech.com>

Work Order / Quote Number: 2001329
Dates of Tests 12/04/2001
FCC Part 15 Certification &

CERTIFICATE OF COMPLIANCE
FCC PART 15.247 PERMISSIVE CHANGE CERTIFICATION & INDUSTRY CANADA CERTIFICATION

Test Lab: Rhein Tech Laboratories, Inc. 360 Herndon Parkway Suite 1400 Herndon, VA 20170	Phone: 703-689-0368 Fax: 703-689-2056 Web Site: www.rheintech.com	Applicant Information CISCO Systems, Inc. 3875 Embassy Parkway Suite 350 Akron, OH 44333 330-664-7362 (Jim Nicholson)
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FCC Classification:	DSS – Spread Spectrum Transmitter
FCC Rule Part(s):	Part 15.247: Operation within the bands 920-928 MHz, 2400-2483.5 MHz and 5725-5850 MHz ☐ Frequency Hopping System ☒ Direct Sequence System ☐ Hybrid System
Industry Canada Standard:	RSS-210: Low Power Licence-Exempt Radiocommunication Devices (All Frequency Bands)

FCC ID:	LDK 102042	MAX. RF OUTPUT POWER:	0.1W
FRN Number:	0004-9689-39.	Frequency Tolerance:	N/A
Equipment Type:	Mini-PCI card	Emission Designator:	N/A
Tx Frequency Range:	2412-2462	Date of Test Report:	February 12, 2002
Rx Frequency Range:	2412-2462		
Model(s):	AIR-MPI 352 series		

We, the undersigned, hereby declare that the equipment tested and referenced in this report conforms to the identified standard(s) as described in this test report. No modifications were made to the equipment during testing in order to achieve compliance with these standards.

Furthermore, there was no deviation from, additions to or exclusions from the FCC Part 2, FCC Part 15, Industry Canada RSS-210, ANSI C63.4, ANSI/TIA/EIA603 and ANSI/TIA/EIA 603-1.

Signature: 

Date: January 23, 2002

Typed/Printed Name: Desmond A. Fraser

Position: President
(NVLAP Signatory)



Accredited by the National Voluntary Accreditation Program for the specific scope of accreditation under Lab Code 200061-0.

Note: This report may not be used by the client to claim product endorsement by NVLAP or any agency of the U.S. Government.



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1 GENERAL INFORMATION

1.1 SCOPE

FCC Rules Part 15.247: Frequency Hopping, Direct Spread Spectrum and Hybrid Systems that are in operation within the bands of 902-928 MHz, 2400-2483.5 MHz and 5725-5850 MHz.

IC RSS-210 Section 6.2.2(o): Frequency Hopping, Direct Spread Spectrum and Hybrid Systems that are in operation within the bands of 902-928 MHz, 2400-2483.5 MHz and 5725-5850 MHz.

A direct sequence (DS) system is a spread spectrum (SS) system in which the carrier has been modulated by a high speed spreading code and an information data stream. The high-speed code sequence dominates the "modulating function" and is the direct cause of the wide spreading of the transmitted signal.

1.2 TEST FACILITY

The open area test site and conducted measurement facility used to collect the radiated data is located at 360 Herndon Parkway, Suite 1400, Herndon, Virginia 20170. This site has been fully described in a report and approved by the Federal Communication Commission to perform AC line conducted and radiated emissions testing (ANSI C63.4 1992).

1.3 RELATED SUBMITAL(S)/GRANT(S)

This application is a permissive change concerning the Venus Mini-PCI card FCC ID: LDK102042. A DoC report is on file for the receiver section and digital interface for the EUT. The IF, LO and up to the 2nd LO were investigated.

1.4 PERMISSIVE CHANGE INFORMATION/OVERVIEW

This Permissive Change Application is adding antennas to this modular approved Mini-PCI Card (FCC ID: LDK102042). Please refer to the Antenna Specifications for each model and specifications.



2 EQUIPMENT INFORMATION

2.1 APPLICANT AND EQUIPMENT INFORMATION

FCC Classification:	DSS – Spread Spectrum Transmitter
FCC Rule Part(s):	Part 15.247: Operation within the bands 920-928 MHz, 2400-2483.5 MHz and 5725-5850 MHz ☐ Frequency Hopping System ☒ Direct Sequence System ☐ Hybrid System
Industry Canada Standard:	RSS-210: Low Power Licence-Exempt Radiocommunication Devices (All Frequency Bands) RSS-210 Section 6.2.2(o): 902-928 MHz, 2400-2483.5 MHz and 5725-5850 MHz

FCC ID:	LDK 102042	MAX. RF OUTPUT POWER:	0.1W
FRN Number:	0004-9689-39.	Frequency Tolerance:	N/A
Equipment Type:	Mini-PCI card	Emission Designator:	N/A
Tx Frequency Range:	2412-2462	Date of Test Report:	February 12, 2002
Rx Frequency Range:	2412-2462		
Model(s):	AIR-MPI 352 series		

2.2 JUSTIFICATION

The EUT was tested in all three orthogonal planes in order to determine worst-case emissions. Channel 1 at 2412 MHz, Channel 6 at 2437 MHz and channel 11 at 2462 MHz were tested and investigated from 9 kHz to 24 GHz. Data for all three channels are presented in this report.

The EUT has been tested with 10 types of antenna, in order to complete the configuration required, the transmitter was tested in a full computer with an extender in order to have the Mini-PCI card outside the host computer, with its external antenna..

The EUT was investigated with the highest gain antenna from each type of antenna and from each manufacturer. The worst-case data taken in this report represents the highest data rate at 11 MBPS. Data rates of 5.5 MBPS, 2 MBPS and 1 MBPS were investigated and found to be in compliance. The change in envelope did not cause the EUT to be non-compliant in any of the aforementioned modes.

2.3 EXERCISING THE EUT

The EUT was provided with the software to continuously transmit during testing. The carrier was also checked to verify that the information was being transmitted.



2.4 TEST SYSTEM DETAILS

The FCC Identifiers for all equipment, plus descriptions of all cables used in the tested system are:

TABLE 2-1: EQUIPMENT UNDER TEST (EUT)

PART	MANUFACTURER	MODEL	SERIAL NUMBER	FCC ID	CABLE DESCRIPTION	RTL BAR CODE
MINI-PCI WLAN	CISCO	VENUS	N/A	LDK 102042	N/A	N/A
EXTENDER	CATALYST	MINI PCI TYPE III	N/A	N/A	N/A	14057

TABLE 2-2: ANTENNA UNDER TEST

PART	MANUFACTURER	MODEL	GAIN dBi	CABLE TYPE	CABLE LENGTH	RTL BAR CODE
AIR-ANT1949	TELEX	YAGI	13.5	RG58	36"	
AIR-ANT4121	MOBILE MARK	OMNI-DIRECTECTIONAL	12.0	RG8	12"	
AIR-ANT3549	CENTURION	PATCH	8.5	RG-58	36"	
AIR-ANT2012	CUSHCRAFT	SPATIAL DIVERSITY	6.5	RG58		
AIR-ANT1729	CUSHCRAFT	PATCH	6.0	RG58	36"	
AIR-ANT2506	CUSHCRAFT	OMNI-DIRECTECTIONAL	5.1	RG-58	36"	
AIR-ANT3213	TELEX	OMNI-DIRECTECTIONAL	5.0	RG-58	6"	
AIR-ANT1728	CUSHCRAFT	OMNI-DIRECTECTIONAL	5.0	RG-58	6"	
AIR-ANT3195	CUSHCRAFT	PATCH	3.0	RG-58		
AIR-ANT5959	CUSHCRAFT	OMNI-DIRECTECTIONAL	2.0	RG-58	N/A	

TABLE 2-3: EXTERNAL COMPONENTS IN TEST CONFIGURATION

PART	MANUFACTURER	MODEL	SERIAL NUMBER	FCC ID	CABLE DESCRIPTION	RTL BAR CODE
COMPUTER	ACER	T457WN	MNVYP23R	DOC	N/A	014040



2.5 CONFIGURATION OF TESTED SYSTEM

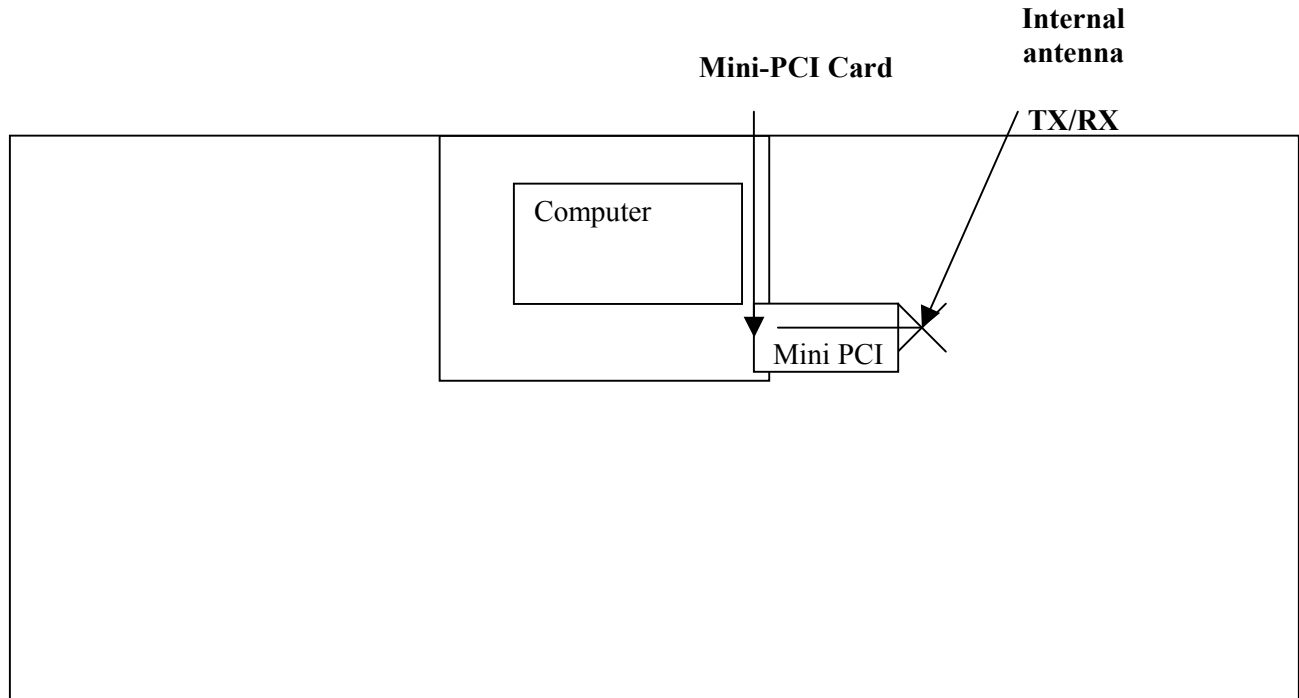


FIGURE 2-1: WORST CASE CONFIGURATION OF SYSTEM UNDER TEST



3 COMPLIANCE WITH THE RESTRICTED BAND EDGE - §15.205

3.1 TEST PROCEDURE

Compliance with the band edges was performed using the FCC's "Radiated Measurement at a Band Edge" guidance document. The final data derived below were from radiated measurements only. The data taken in this report represents the worst case at 11 MBPS. Data rates of 5.5MBPS, 2 MBPS and 1 MBPS were investigated and found to be in compliance.

3.2 COMPLIANCE WITH THE RESTRICTED BAND EDGE TEST DATA FOR AIR-ANT1949

TABLE 3-1: COMPLIANCE WITH THE RESTRICTED BAND EDGE TEST DATA AIR-ANT1949

PART	MODEL	GAIN DBI
AIR-ANT1949	YAGI	13.5

CHANNEL SET TO	FREQUENCY TESTED MHZ	DETECTOR	FIELD STRENGTH LEVEL (dB μ V/M)	LEVEL CORRECTED (dB μ V/M)	FCC LIMIT (dB μ V/M)	FCC MARGIN (dB)
1	2390.0	ABSOLUTE MEASUREMENT	44.8	50.4	54.0	-3.6
11	2483.5	ABSOLUTE MEASUREMENT	47.2	52.8	54.0	-1.2

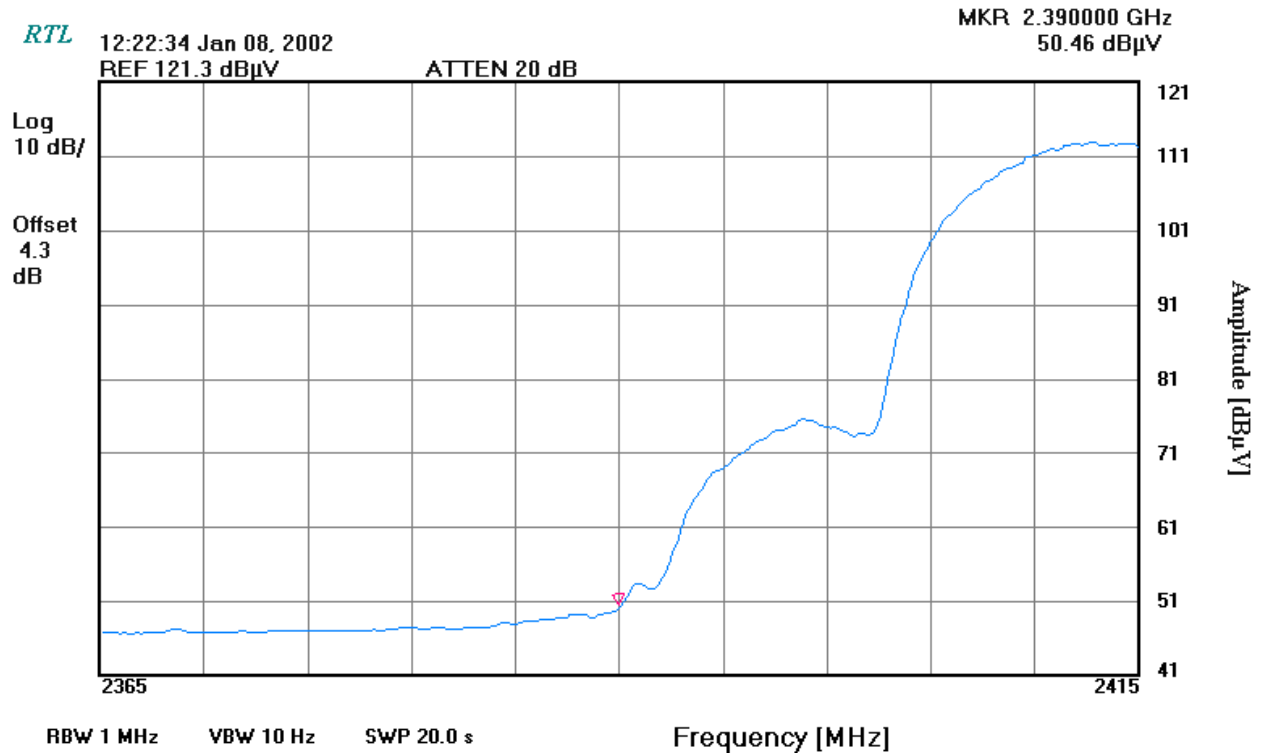


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CHANNEL NUMBER: 1
CHANNEL FREQUENCY: 2412
RESOLUTION :BANDWIDTH 1MHZ
VIDEO BANDWIDTH: 10HZ
SWEEP TIME: 20.0S

PLOT 3-1: BAND EDGE: AVERAGE MEASUREMENT FOR CHANNEL 1



TEST PERSONNEL:

RACHID SEHB
TEST TECHNICIAN/ENGINEER

SIGNATURE

12/04/2001
DATE OF TEST

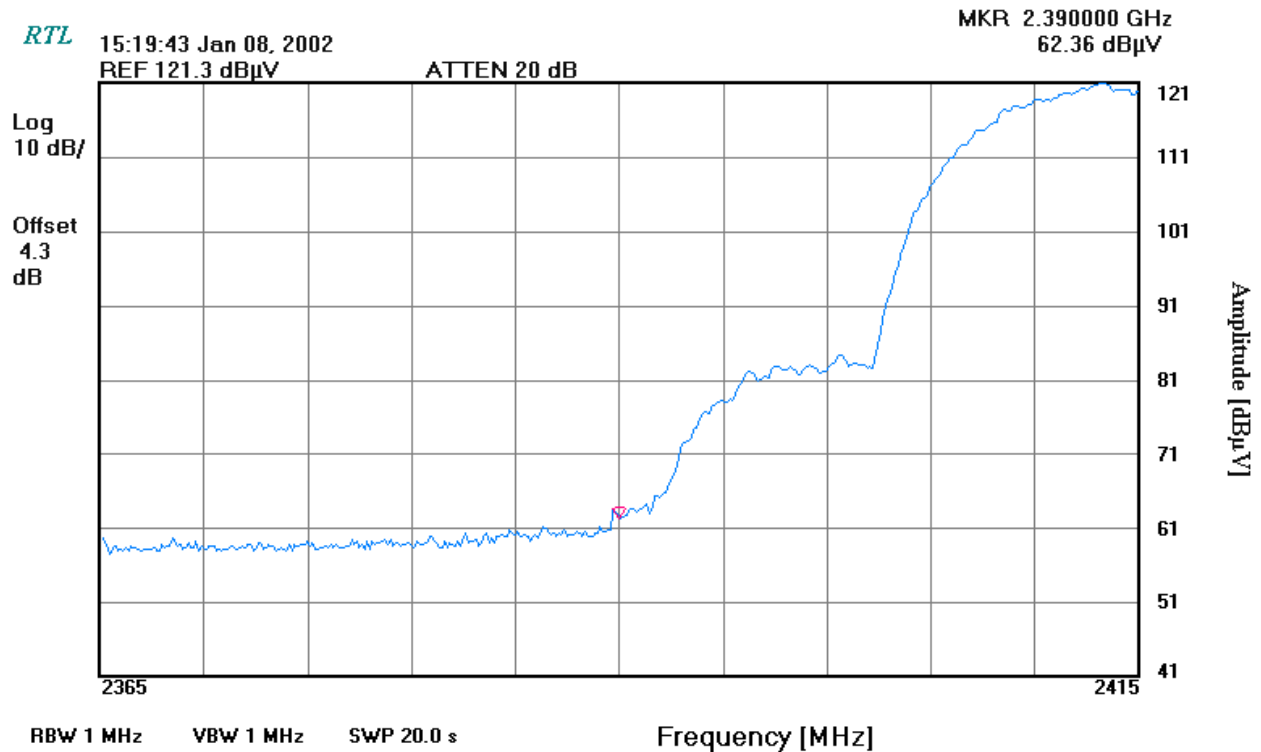


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CHANNEL NUMBER: 1
CHANNEL FREQUENCY: 2412
RESOLUTION :BANDWIDTH 1MHZ
VIDEO BANDWIDTH: 1MHZ
SWEEP TIME: 20.0S

PLOT 3-2: BAND EDGE: PEAK MEASUREMENT FOR CHANNEL 1



TEST PERSONNEL:

RACHID SEHB
TEST TECHNICIAN/ENGINEER

SIGNATURE

12/04/2001
DATE OF TEST

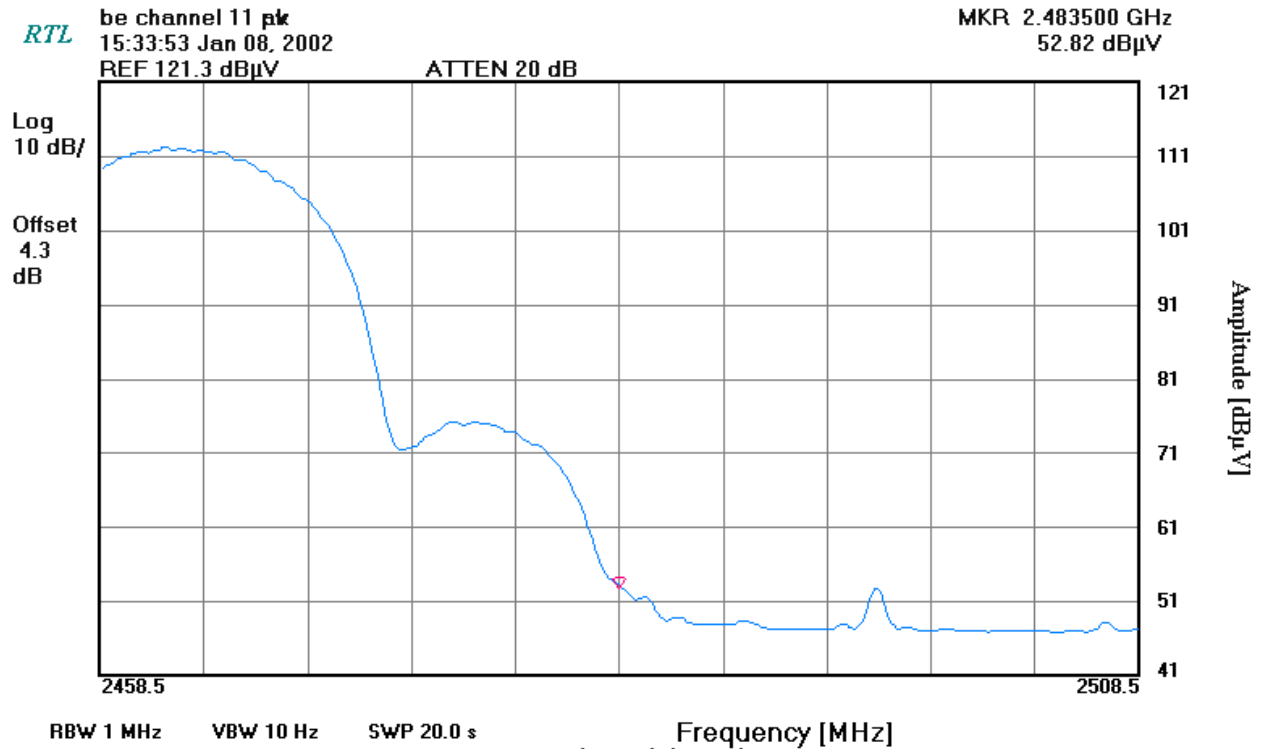


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CHANNEL NUMBER: 11
CHANNEL FREQUENCY: 2462
RESOLUTION :BANDWIDTH 1MHZ
VIDEO BANDWIDTH: 10HZ
SWEEP TIME: 20.0S

PLOT 3-3: BAND EDGE: AVERAGE MEASUREMENT FOR CHANNEL 11



TEST PERSONNEL:

RACHID SEHB
TEST TECHNICIAN/ENGINEER

SIGNATURE

12/04/2001
DATE OF TEST

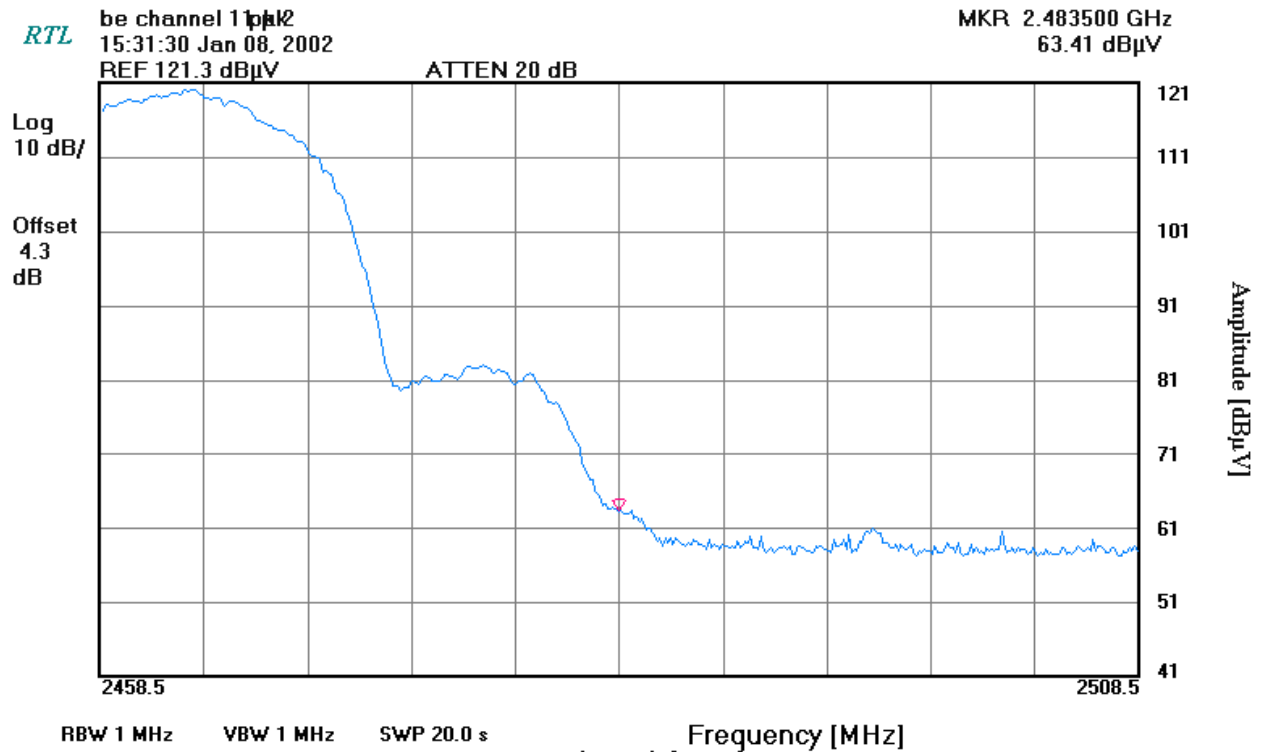


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CHANNEL NUMBER: 11
CHANNEL FREQUENCY: 2462
RESOLUTION :BANDWIDTH 1MHZ
VIDEO BANDWIDTH: 1MHZ
SWEEP TIME: 20.0S

PLOT 3-4: BAND EDGE: PEAK MEASUREMENT FOR CHANNEL 11



TEST PERSONNEL:

RACHID SEHB
TEST TECHNICIAN/ENGINEER

SIGNATURE

12/04/2001
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3.3 COMPLIANCE WITH THE RESTRICTED BAND EDGE TEST DATA FOR AIR-ANT4121

TABLE 3-2: COMPLIANCE WITH THE RESTRICTED BAND EDGE TEST DATA FOR AIR-ANT4121

AIR-ANT4121	OMNI-DIRECTECTIONAL	12.0
-------------	---------------------	------

CHANNEL SET TO	FREQUENCY TESTED MHZ	DETECTOR	FIELD STRENGTH LEVEL (dB μ V/M)	LEVEL CORRECTED (dB μ V/M)	FCC LIMIT (dB μ V/M)	FCC MARGIN (dB)
1	2390.0	ABSOLUTE MEASUREMENT	38.9	44.5	54.0	-9.5
11	2483.5	ABSOLUTE MEASUREMENT	45.8	51.4	54.0	-2.6

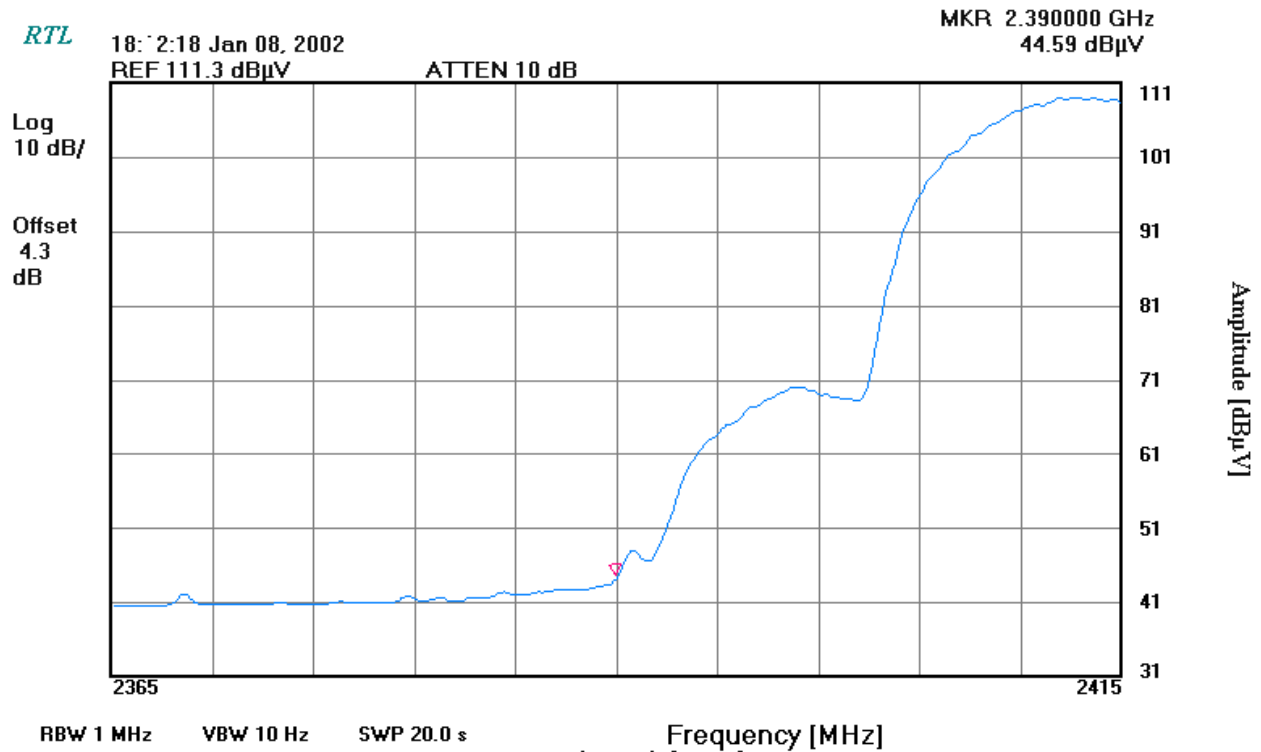


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CHANNEL NUMBER: 1
CHANNEL FREQUENCY: 2412
RESOLUTION :BANDWIDTH 1MHZ
VIDEO BANDWIDTH: 10HZ
SWEEP TIME: 20.0S

PLOT 3-5: BAND EDGE: AVERAGE MEASUREMENT FOR CHANNEL 1



TEST PERSONNEL:

RACHID SEHB
TEST TECHNICIAN/ENGINEER

SIGNATURE

12/04/2001
DATE OF TEST

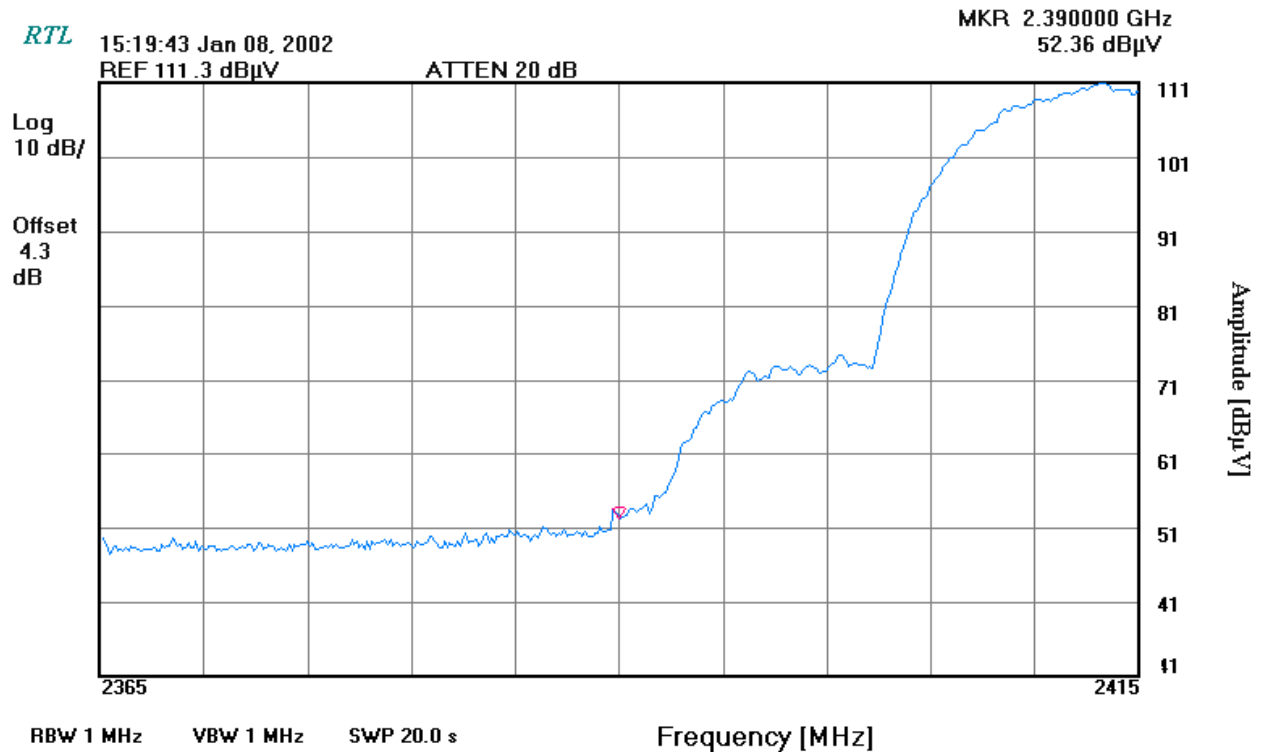


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CHANNEL NUMBER: 1
CHANNEL FREQUENCY: 2412
RESOLUTION :BANDWIDTH 1MHZ
VIDEO BANDWIDTH: 1MHZ
SWEEP TIME: 20.0S

PLOT 3-6: BAND EDGE: PEAK MEASUREMENT FOR CHANNEL 1



TEST PERSONNEL:

RACHID SEHB
TEST TECHNICIAN/ENGINEER

SIGNATURE

12/04/2001
DATE OF TEST

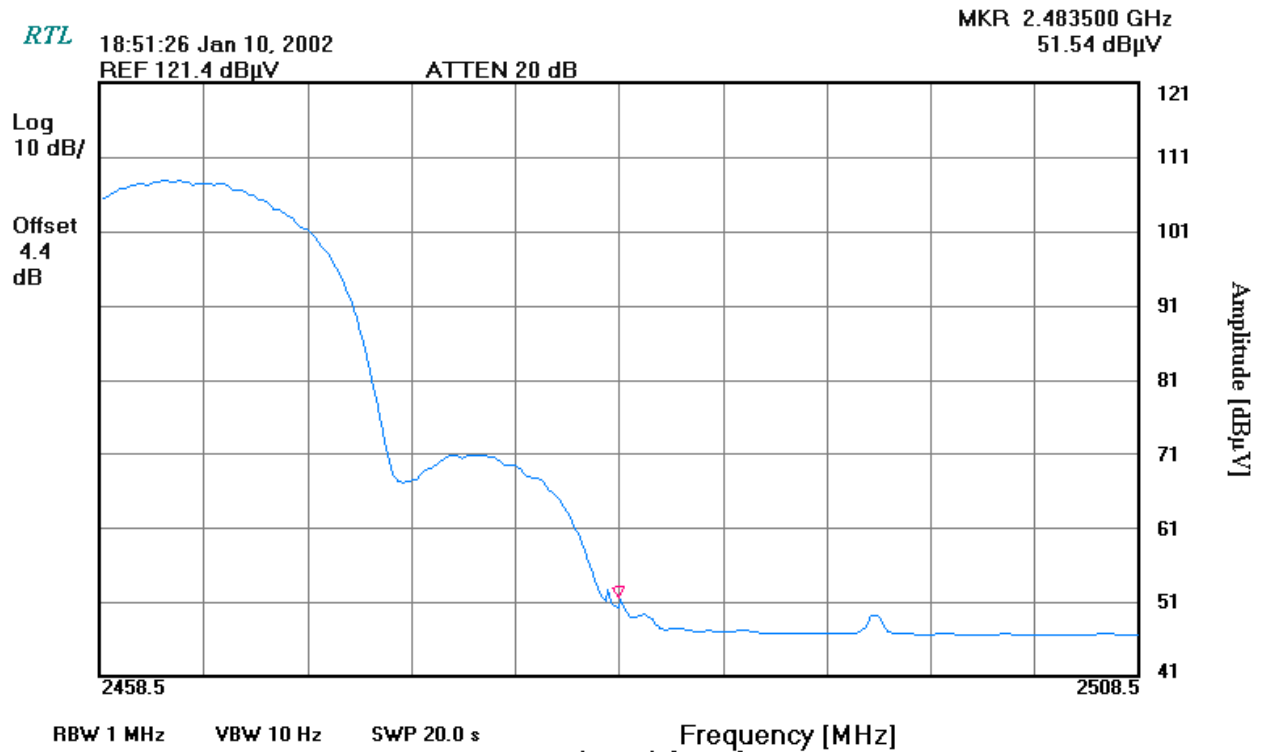


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CHANNEL NUMBER: 11
CHANNEL FREQUENCY: 2462
RESOLUTION :BANDWIDTH 1MHZ
VIDEO BANDWIDTH: 10HZ
SWEEP TIME: 20.0S

PLOT 3-7: BAND EDGE: AVERAGE MEASUREMENT FOR CHANNEL 11



TEST PERSONNEL:

RACHID SEHB
TEST TECHNICIAN/ENGINEER

SIGNATURE

12/04/2001
DATE OF TEST

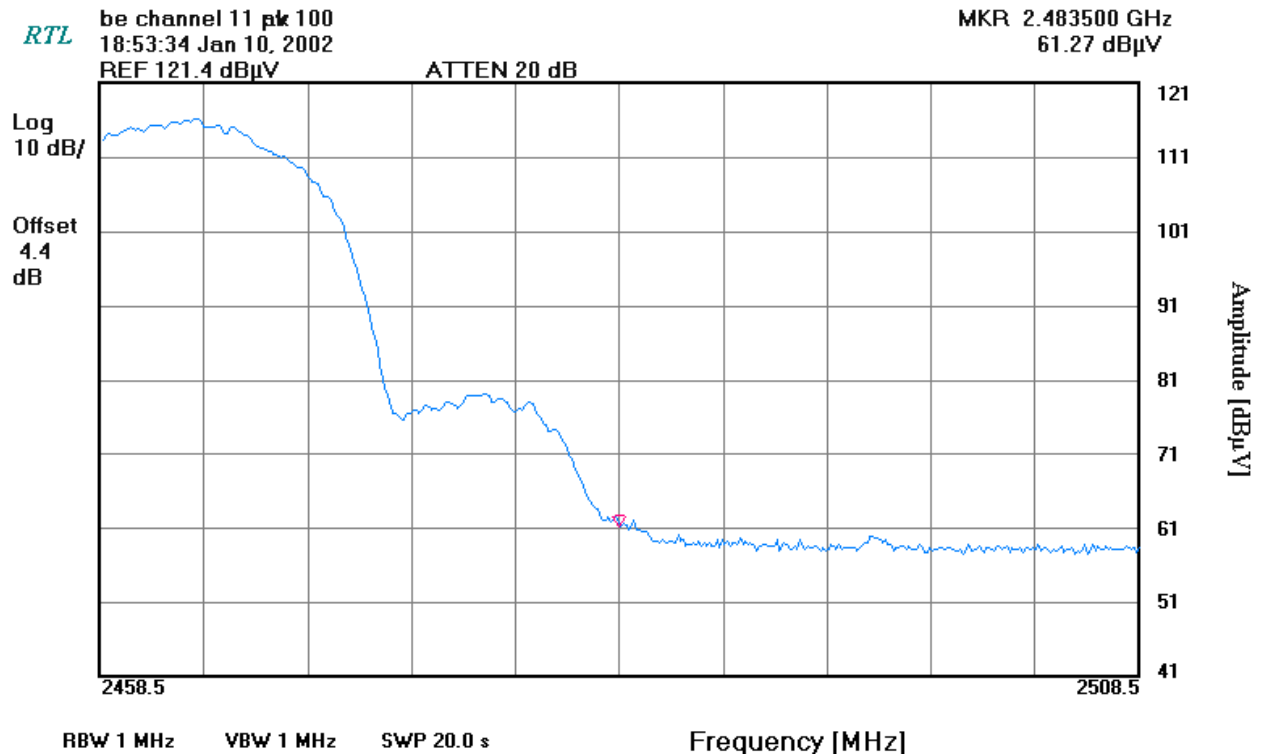


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CHANNEL NUMBER: 11
CHANNEL FREQUENCY: 2462
RESOLUTION :BANDWIDTH 1MHZ
VIDEO BANDWIDTH: 1MHZ
SWEEP TIME: 20.0S

PLOT 3-8: BAND EDGE: PEAK MEASUREMENT FOR CHANNEL 11



TEST PERSONNEL:

RACHID SEHB
TEST TECHNICIAN/ENGINEER

SIGNATURE

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3.4 COMPLIANCE WITH THE RESTRICTED BAND EDGE TEST DATA FOR AIR-ANT3549

TABLE 3-3: COMPLIANCE WITH THE RESTRICTED BAND EDGE TEST DATA FOR AIR-ANT3549

AIR-ANT3549 PATCH 8.5						
CHANNEL SET TO	FREQUENCY TESTED MHZ	DETECTOR	FIELD STRENGTH LEVEL (dBμV/M)	LEVEL CORRECTED (dBμV/M)	FCC LIMIT (dBμV/M)	FCC MARGIN (dB)
1	2390.0	ABSOLUTE MEASUREMENT	34.2	39.8	54.0	-14.2
11	2483.5	ABSOLUTE MEASUREMENT	35.8	41.4	54.0	-12.6

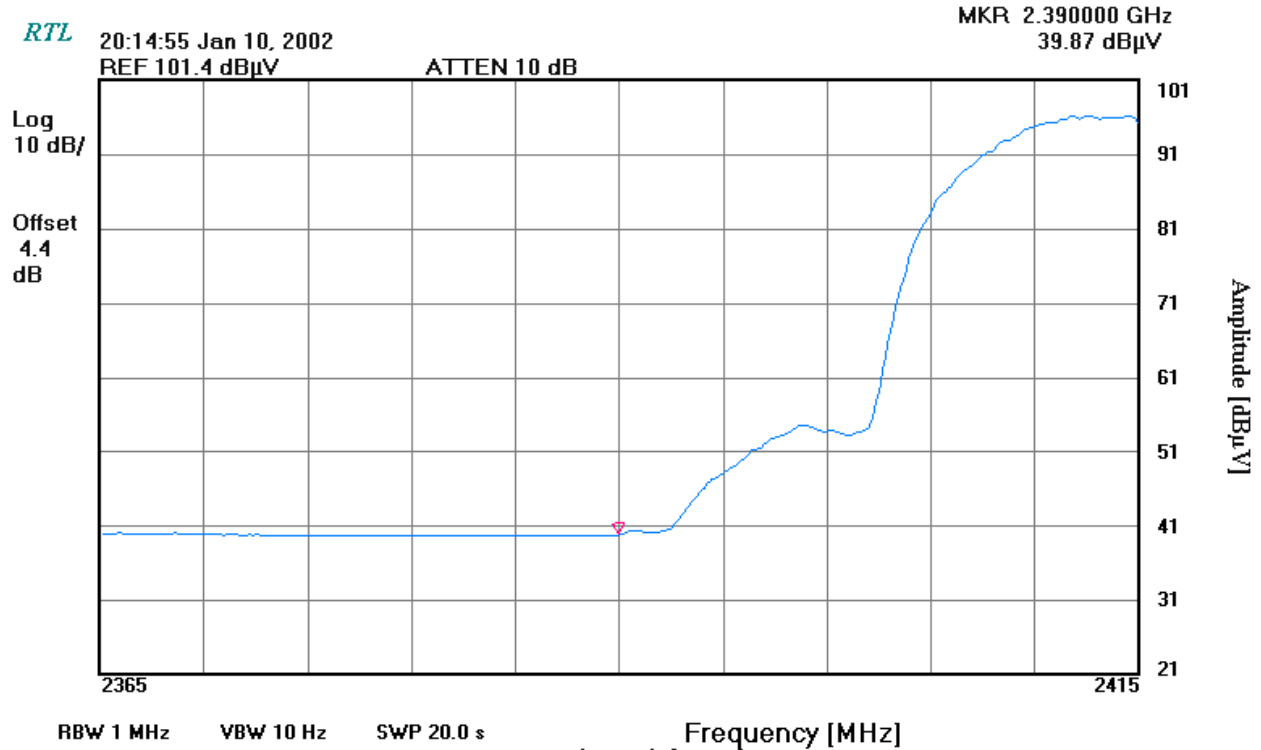


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CHANNEL NUMBER: 1
CHANNEL FREQUENCY: 2412
RESOLUTION :BANDWIDTH 1MHZ
VIDEO BANDWIDTH: 10HZ
SWEEP TIME: 20.0S

PLOT 3-9: BAND EDGE: AVERAGE MEASUREMENT FOR CHANNEL 1



TEST PERSONNEL:

RACHID SEHB
TEST TECHNICIAN/ENGINEER

SIGNATURE

12/04/2001
DATE OF TEST

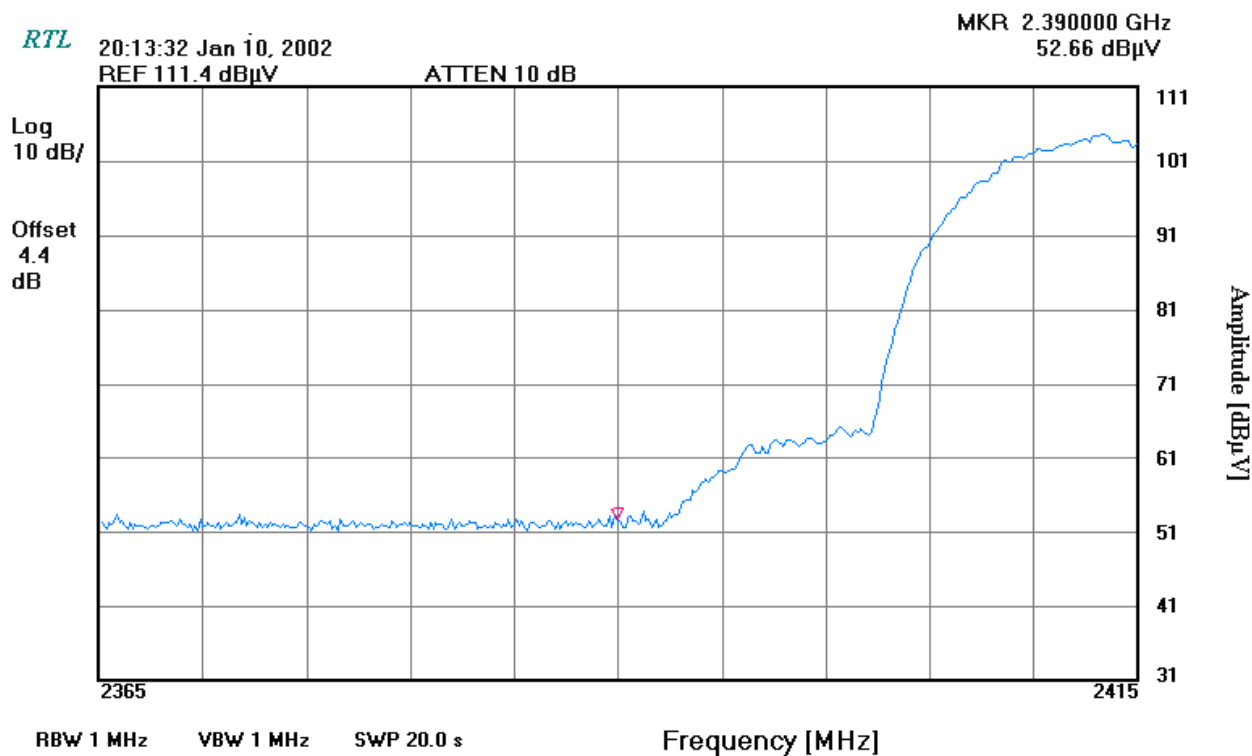


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CHANNEL NUMBER: 1
CHANNEL FREQUENCY: 2412
RESOLUTION :BANDWIDTH 1MHZ
VIDEO BANDWIDTH: 1MHZ
SWEEP TIME: 20.0S

PLOT 3-10: BAND EDGE: PEAK MEASUREMENT FOR CHANNEL 1



TEST PERSONNEL:

RACHID SEHB
TEST TECHNICIAN/ENGINEER

SIGNATURE

12/04/2001
DATE OF TEST

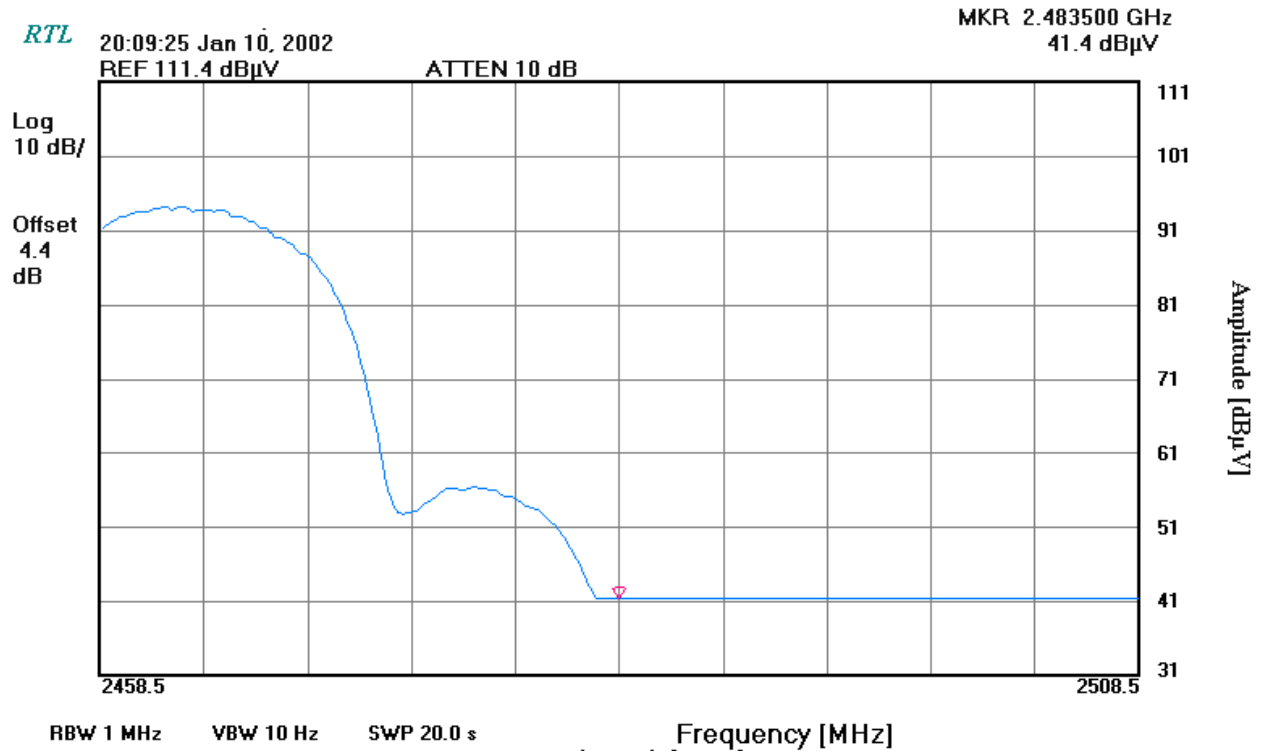


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CHANNEL NUMBER: 11
CHANNEL FREQUENCY: 2462
RESOLUTION :BANDWIDTH 1MHZ
VIDEO BANDWIDTH: 10HZ
SWEEP TIME: 20.0S

PLOT 3-11: BAND EDGE: AVERAGE MEASUREMENT FOR CHANNEL 11



TEST PERSONNEL:

RACHID SEHB
TEST TECHNICIAN/ENGINEER

SIGNATURE

12/04/2001
DATE OF TEST

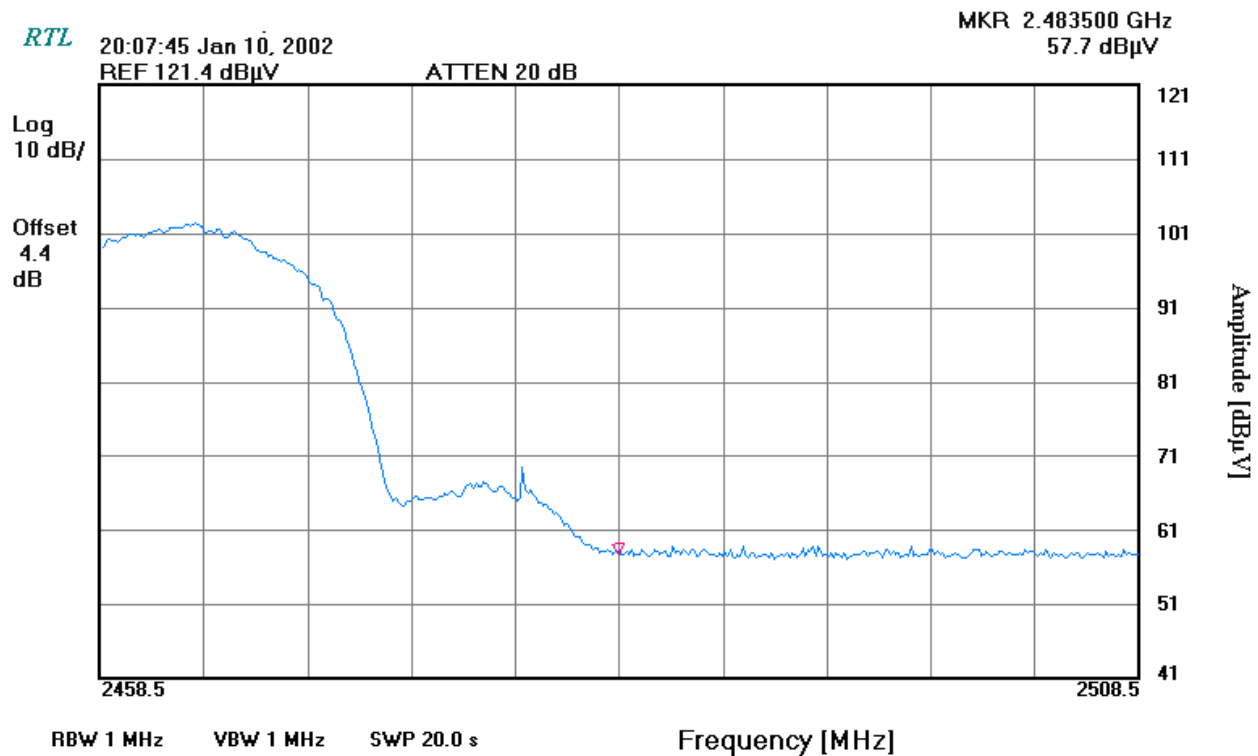


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CHANNEL NUMBER: 11
CHANNEL FREQUENCY: 2462
RESOLUTION :BANDWIDTH 1MHZ
VIDEO BANDWIDTH: 1MHZ
SWEEP TIME: 20.0S

PLOT 3-12: BAND EDGE: PEAK MEASUREMENT FOR CHANNEL 11



TEST PERSONNEL:

RACHID SEHB
TEST TECHNICIAN/ENGINEER

SIGNATURE

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3.5 COMPLIANCE WITH THE RESTRICTED BAND EDGE TEST DATA FOR AIR-ANT2012

TABLE 3-4: COMPLIANCE WITH THE RESTRICTED BAND EDGE TEST DATA FOR AIR-ANT2012

AIR-ANT2012	SPATIAL DIVERSITY	6.5
-------------	-------------------	-----

CHANNEL SET TO	FREQUENCY TESTED MHZ	DETECTOR	FIELD STRENGTH LEVEL (dB μ V/M)	LEVEL CORRECTED (dB μ V/M)	FCC LIMIT (dB μ V/M)	FCC MARGIN (dB)
1	2390.0	ABSOLUTE MEASUREMENT	34.9	40.5	54.0	-13.5
11	2483.5	ABSOLUTE MEASUREMENT	35.3	40.9	54.0	-13.1

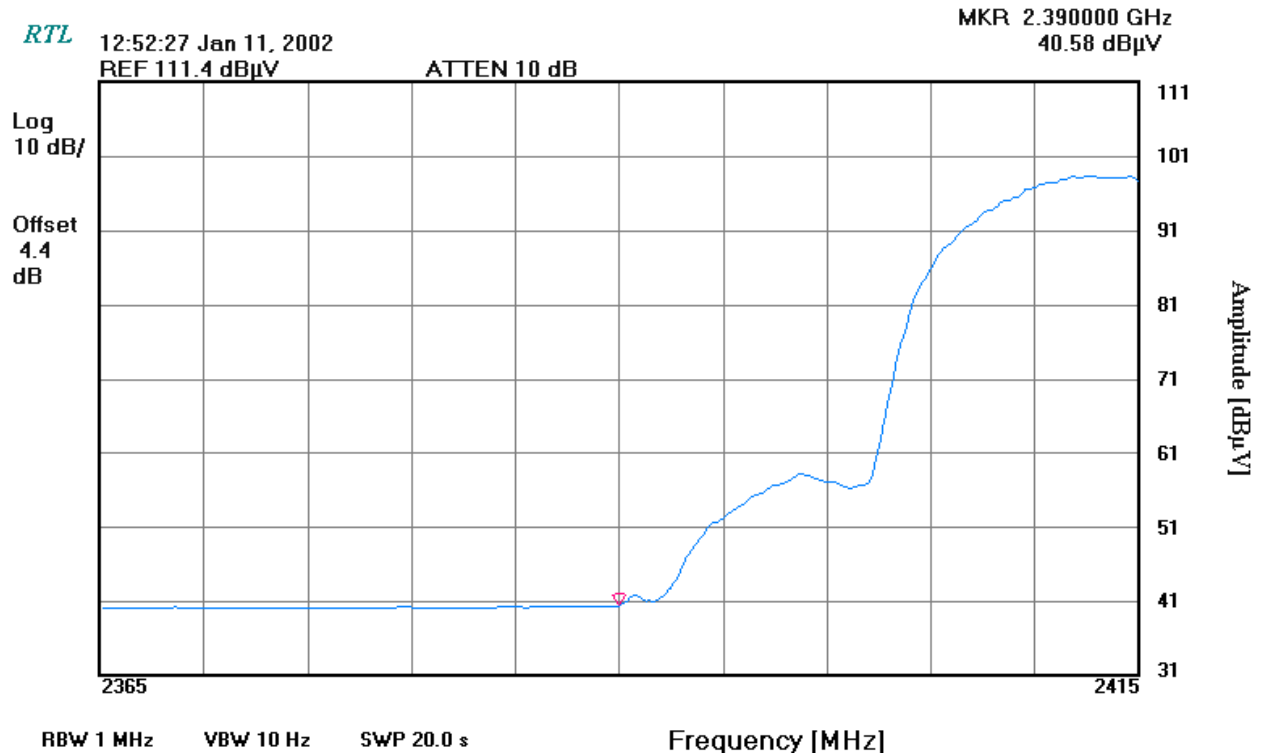


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CHANNEL NUMBER: 1
CHANNEL FREQUENCY: 2412
RESOLUTION :BANDWIDTH 1MHZ
VIDEO BANDWIDTH: 10HZ
SWEEP TIME: 20.0S

PLOT 3-13: BAND EDGE: AVERAGE MEASUREMENT FOR CHANNEL 1



TEST PERSONNEL:

RACHID SEHB
TEST TECHNICIAN/ENGINEER

SIGNATURE

12/04/2001
DATE OF TEST

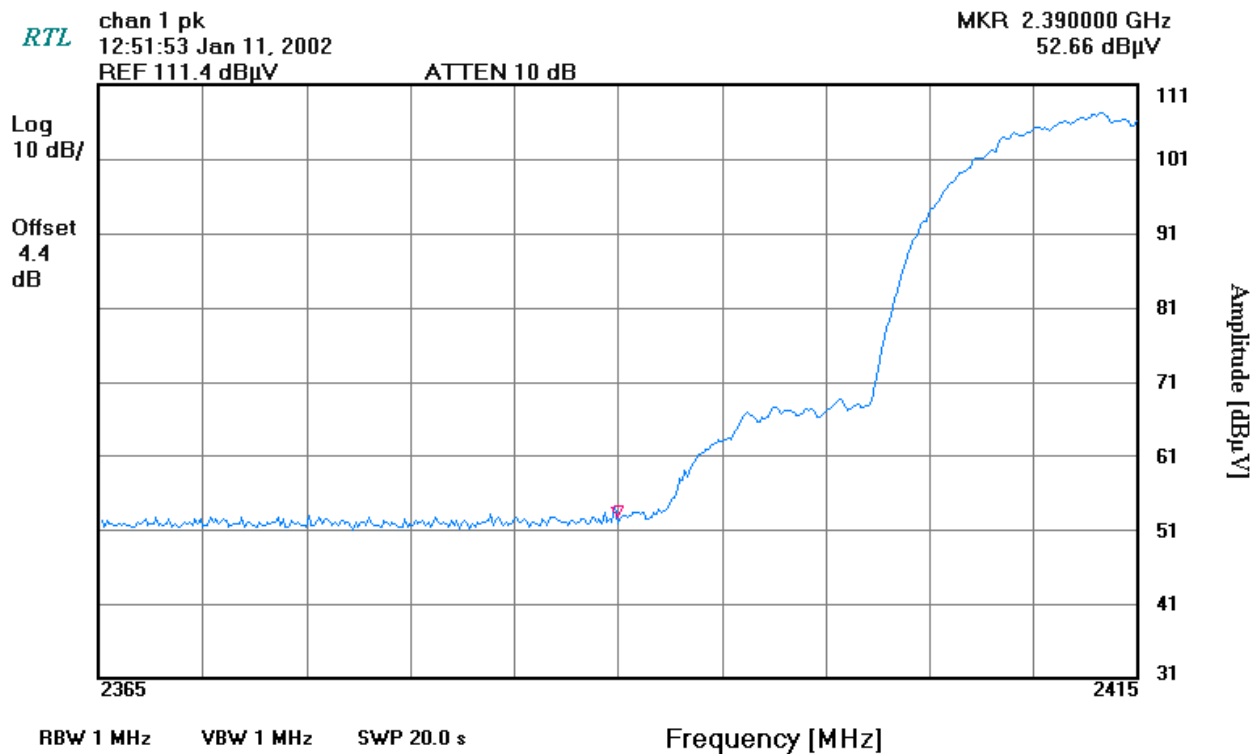


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CHANNEL NUMBER: 1
CHANNEL FREQUENCY: 2412
RESOLUTION :BANDWIDTH 1MHZ
VIDEO BANDWIDTH: 1MHZ
SWEEP TIME: 20.0S

PLOT 3-14: BAND EDGE: PEAK MEASUREMENT FOR CHANNEL 1



TEST PERSONNEL:

RACHID SEHB
TEST TECHNICIAN/ENGINEER

SIGNATURE

12/04/2001
DATE OF TEST

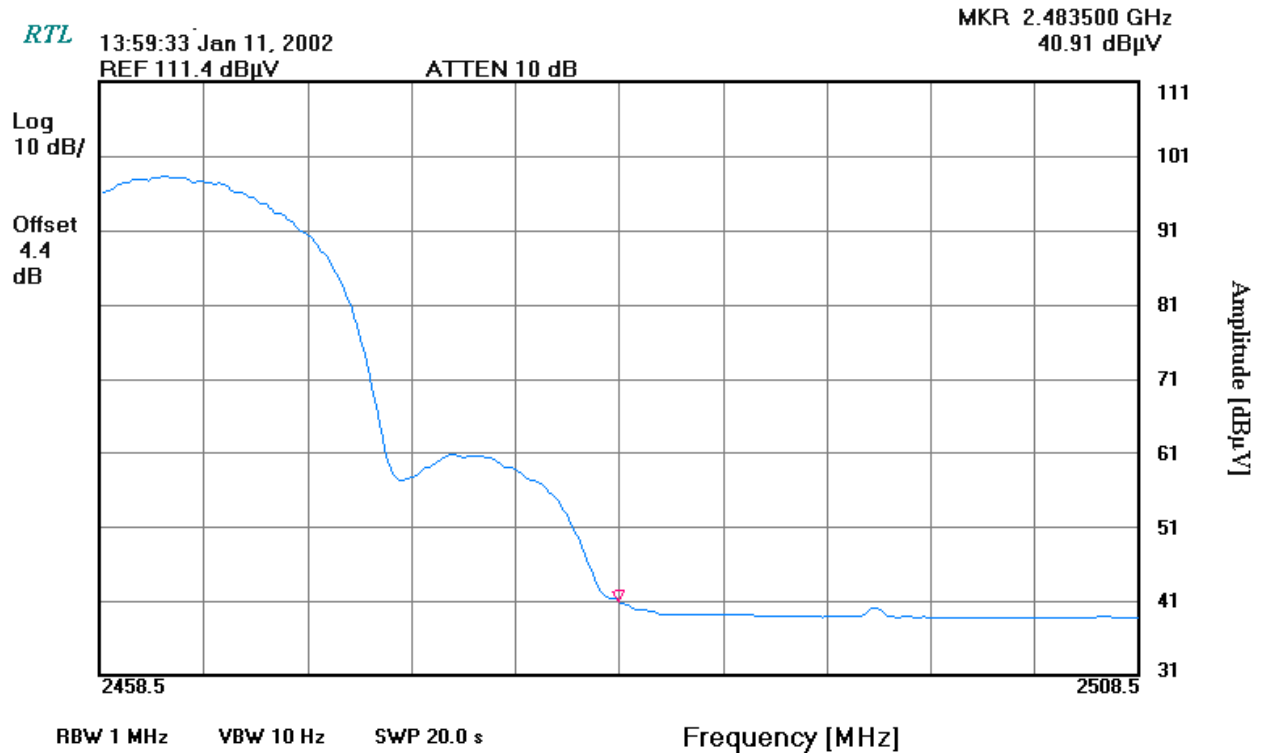


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CHANNEL NUMBER: 11
CHANNEL FREQUENCY: 2462
RESOLUTION :BANDWIDTH 1MHZ
VIDEO BANDWIDTH: 10HZ
SWEEP TIME: 20.0S

PLOT 3-15: BAND EDGE: AVERAGE MEASUREMENT FOR CHANNEL 11



TEST PERSONNEL:

RACHID SEHB
TEST TECHNICIAN/ENGINEER

SIGNATURE

12/04/2001
DATE OF TEST

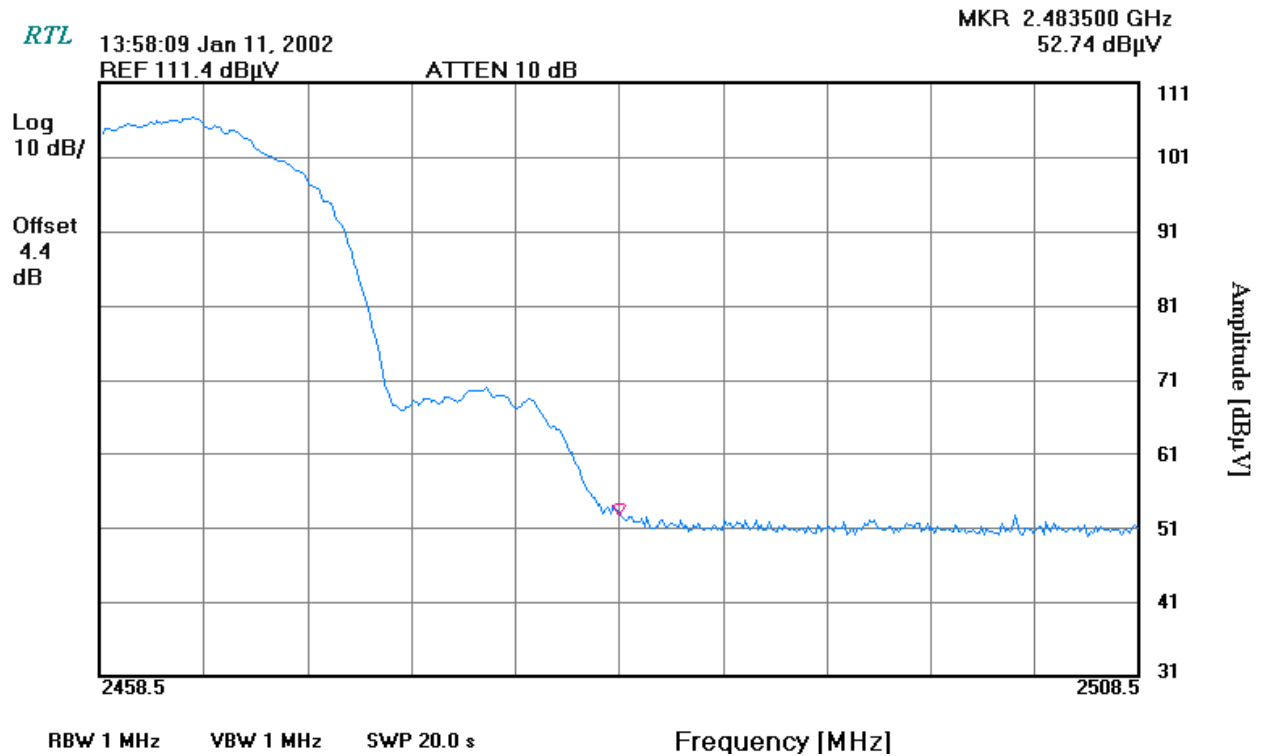


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CHANNEL NUMBER: 11
CHANNEL FREQUENCY: 2462
RESOLUTION :BANDWIDTH 1MHZ
VIDEO BANDWIDTH: 1MHZ
SWEEP TIME: 20.0S

PLOT 3-16: BAND EDGE: PEAK MEASUREMENT FOR CHANNEL 11



TEST PERSONNEL:

RACHID SEHB
TEST TECHNICIAN/ENGINEER

SIGNATURE

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3.6 COMPLIANCE WITH THE RESTRICTED BAND EDGE TEST DATA FOR AIR-ANT1729

TABLE 3-5: COMPLIANCE WITH THE RESTRICTED BAND EDGE TEST DATA FOR AIR-ANT1729

AIR-ANT1729 PATCH 6.0						
CHANNEL SET TO	FREQUENCY TESTED MHZ	DETECTOR	FIELD STRENGTH LEVEL (dBμV/M)	LEVEL CORRECTED (dBμV/M)	FCC LIMIT (dBμV/M)	FCC MARGIN (dB)
1	2390.0	ABSOLUTE MEASUREMENT	34.6	40.2	54.0	-13.8
11	2483.5	ABSOLUTE MEASUREMENT	34.1	39.7	54.0	-14.3

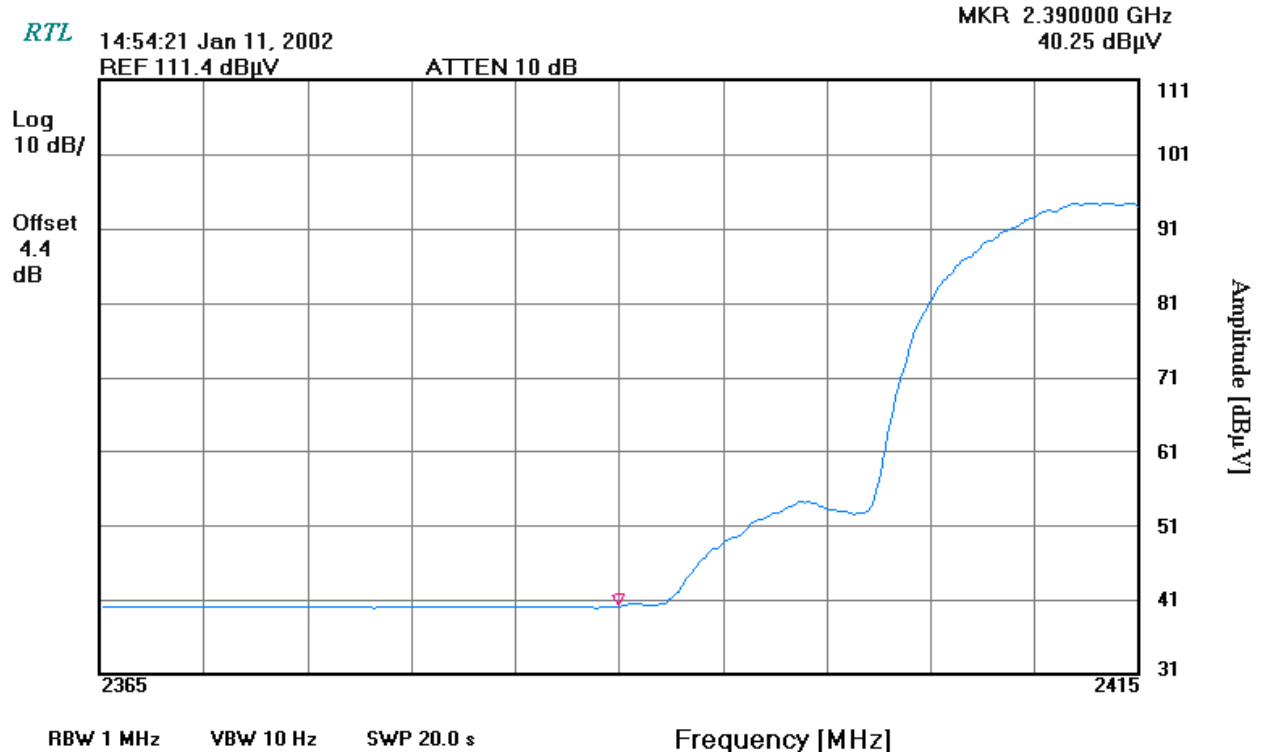


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CHANNEL NUMBER: 1
CHANNEL FREQUENCY: 2412
RESOLUTION :BANDWIDTH 1MHZ
VIDEO BANDWIDTH: 10HZ
SWEEP TIME: 20.0S

PLOT 3-17: BAND EDGE: AVERAGE MEASUREMENT FOR CHANNEL 1



TEST PERSONNEL:

RACHID SEHB
TEST TECHNICIAN/ENGINEER

SIGNATURE

12/04/2001
DATE OF TEST

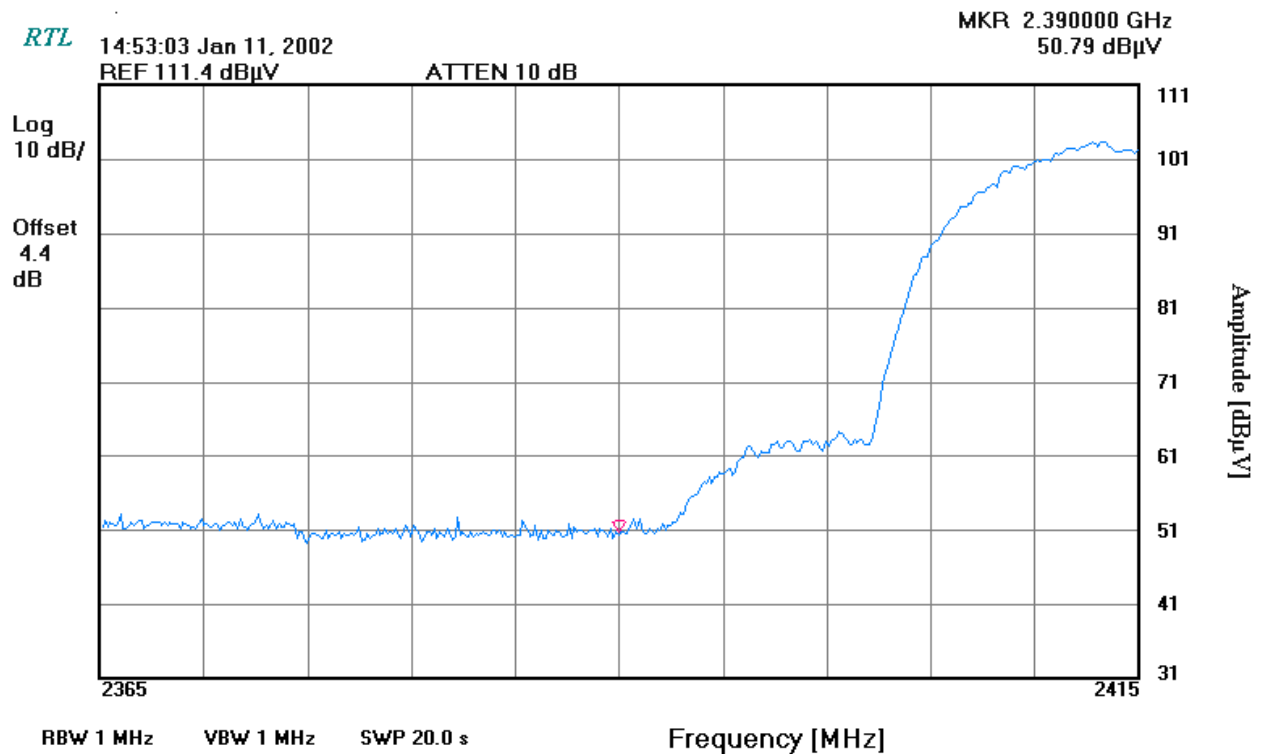


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CHANNEL NUMBER: 1
CHANNEL FREQUENCY: 2412
RESOLUTION :BANDWIDTH 1MHZ
VIDEO BANDWIDTH: 1MHZ
SWEEP TIME: 20.0S

PLOT 3-18: BAND EDGE: PEAK MEASUREMENT FOR CHANNEL 1



TEST PERSONNEL:

RACHID SEHB
TEST TECHNICIAN/ENGINEER

SIGNATURE

12/04/2001
DATE OF TEST

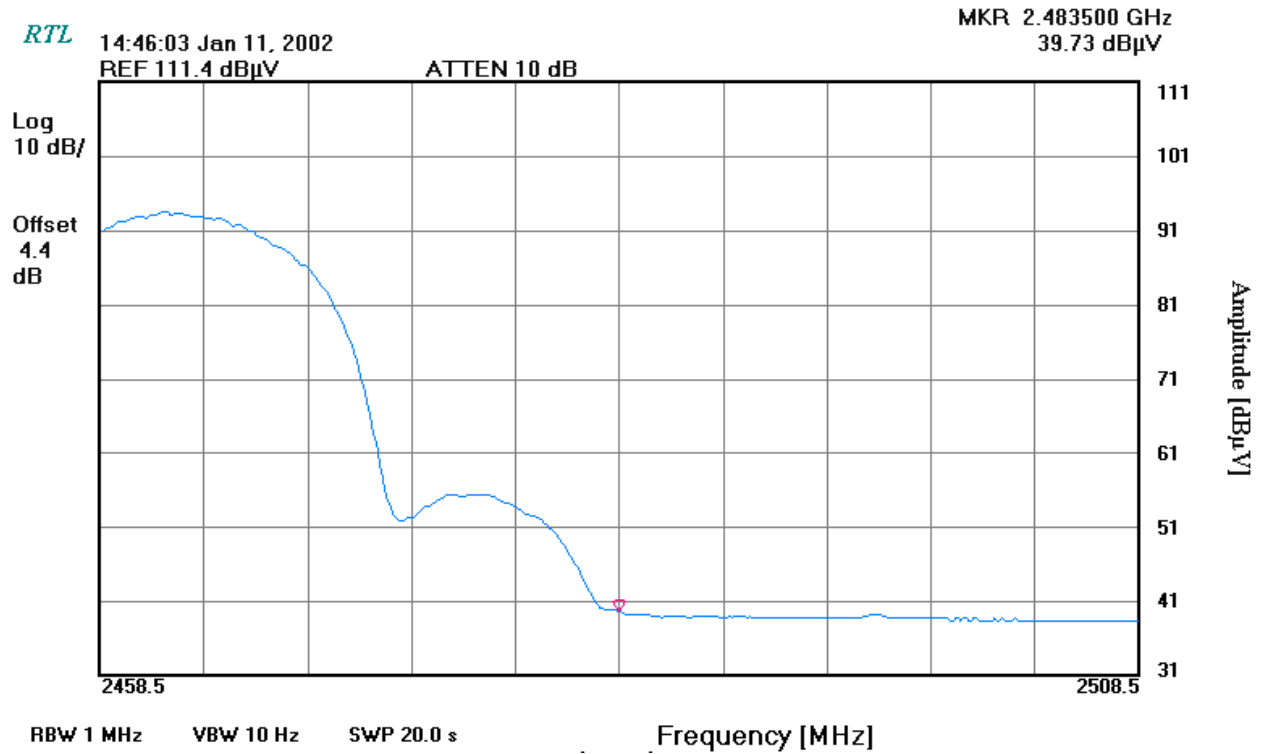


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CHANNEL NUMBER: 11
CHANNEL FREQUENCY: 2462
RESOLUTION :BANDWIDTH 1MHZ
VIDEO BANDWIDTH: 10HZ
SWEEP TIME: 20.0S

PLOT 3-19: BAND EDGE: AVERAGE MEASUREMENT FOR CHANNEL 11



TEST PERSONNEL:

RACHID SEHB
TEST TECHNICIAN/ENGINEER

SIGNATURE

12/04/2001
DATE OF TEST

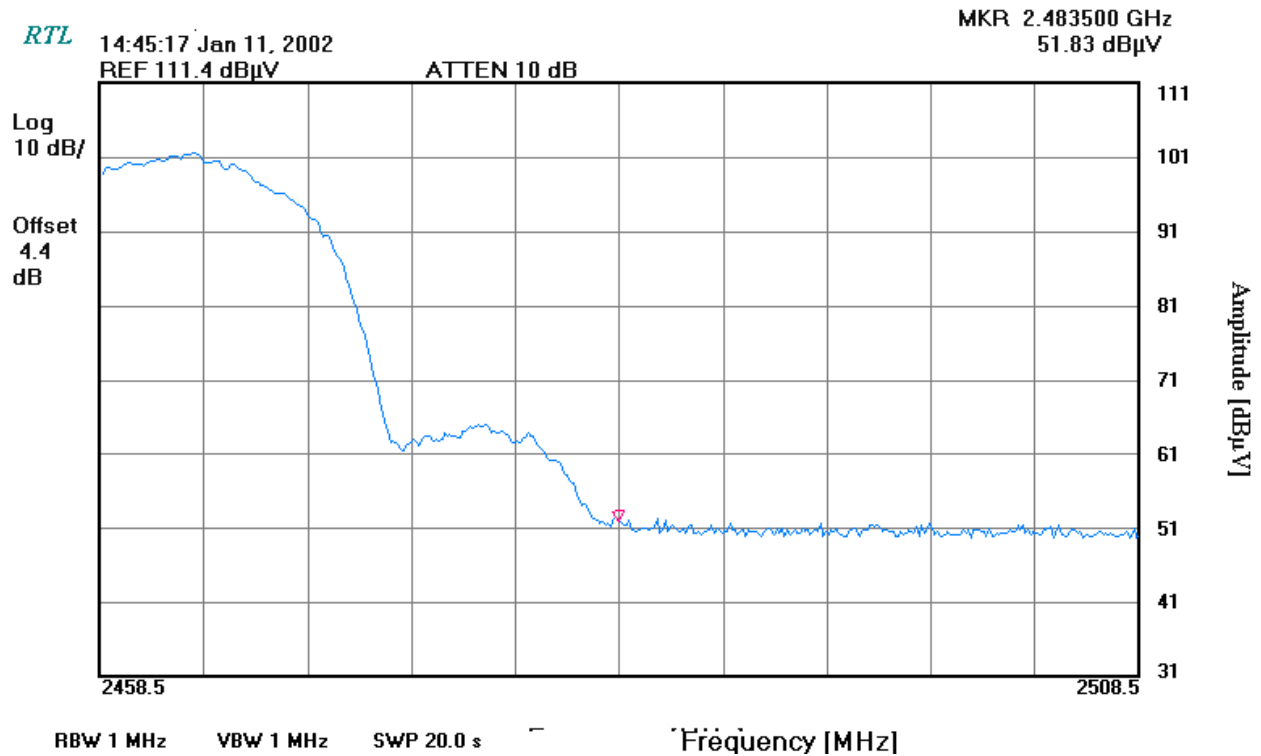


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CHANNEL NUMBER: 11
CHANNEL FREQUENCY: 2462
RESOLUTION :BANDWIDTH 1MHZ
VIDEO BANDWIDTH: 1MHZ
SWEEP TIME: 20.0S

PLOT 3-20: BAND EDGE: PEAK MEASUREMENT FOR CHANNEL 11



TEST PERSONNEL:

RACHID SEHB
TEST TECHNICIAN/ENGINEER

SIGNATURE

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3.7 COMPLIANCE WITH THE RESTRICTED BAND EDGE TEST DATA FOR AIR-ANT2505

TABLE 3-6: COMPLIANCE WITH THE RESTRICTED BAND EDGE TEST DATA FOR AIR-ANT2505

AIR-ANT2505	OMNI-DIRECTECTIONAL	5.1
-------------	---------------------	-----

CHANNEL SET TO	FREQUENCY TESTED MHZ	DETECTOR	FIELD STRENGTH LEVEL (dBμV/M)	LEVEL CORRECTED (dBμV/M)	FCC LIMIT (dBμV/M)	FCC MARGIN (dB)
1	2390.0	ABSOLUTE MEASUREMENT	43.1	48.7	54.0	-5.3
11	2483.5	ABSOLUTE MEASUREMENT	45.2	50.8	54.0	-3.2

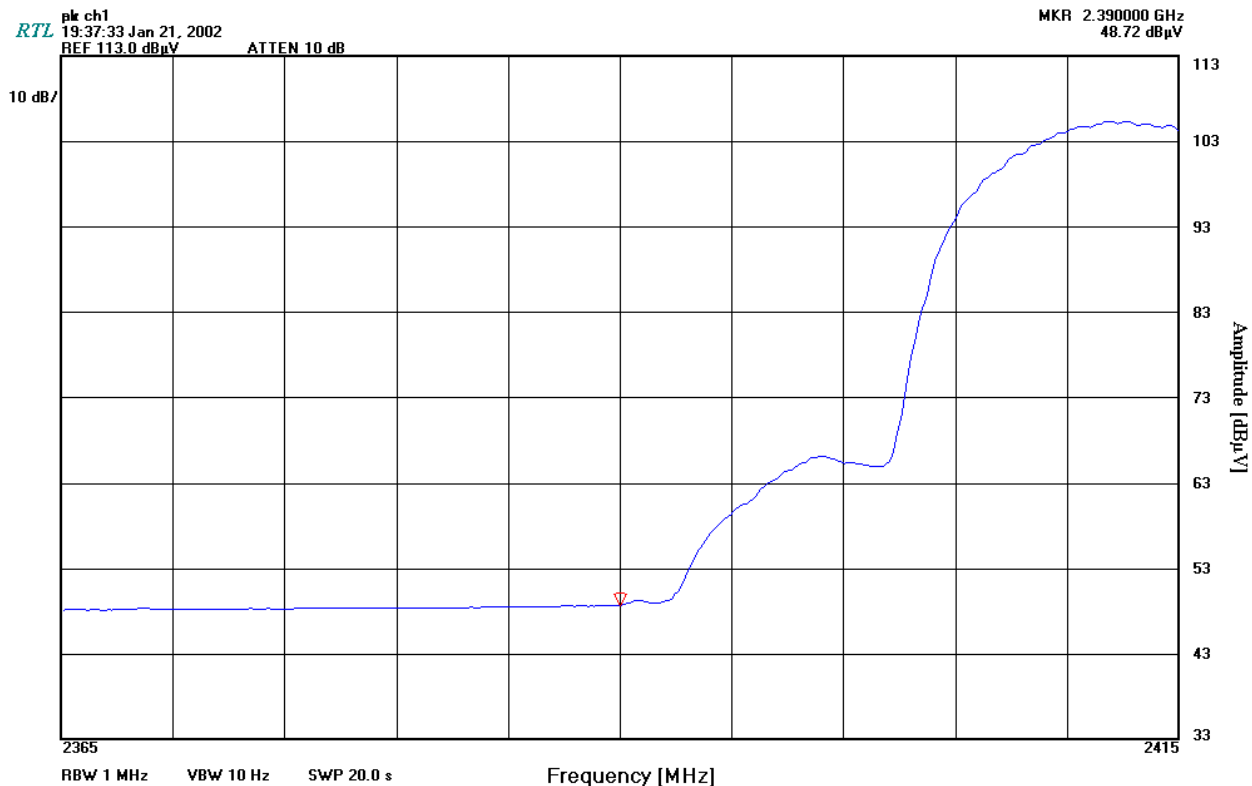


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CHANNEL NUMBER: 1
CHANNEL FREQUENCY: 2412
RESOLUTION :BANDWIDTH 1MHZ
VIDEO BANDWIDTH: 10HZ
SWEEP TIME: 20.0S

PLOT 3-21: BAND EDGE: AVERAGE MEASUREMENT FOR CHANNEL 1



TEST PERSONNEL:

RACHID SEHB
TEST TECHNICIAN/ENGINEER

SIGNATURE

12/04/2001
DATE OF TEST

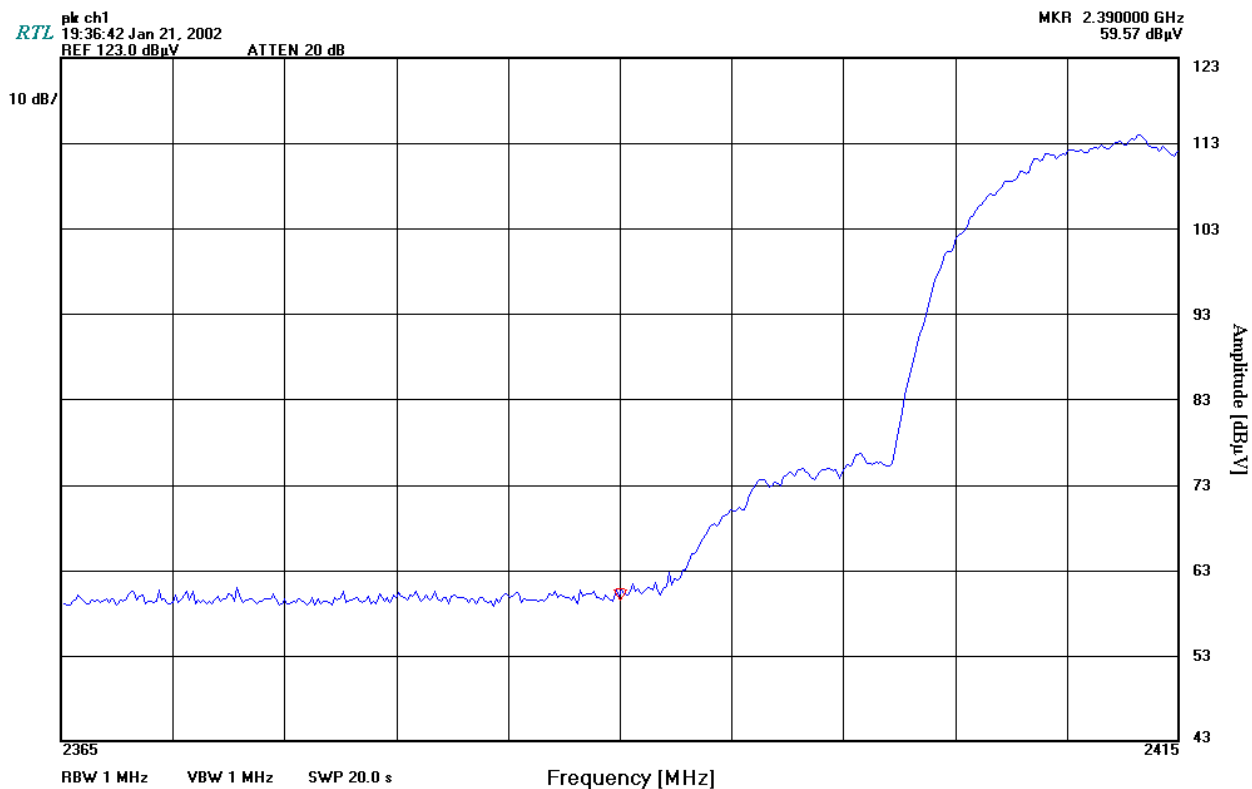


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CHANNEL NUMBER: 1
CHANNEL FREQUENCY: 2412
RESOLUTION :BANDWIDTH 1MHZ
VIDEO BANDWIDTH: 1MHZ
SWEEP TIME: 20.0S

PLOT 3-22: BAND EDGE: PEAK MEASUREMENT FOR CHANNEL 1



TEST PERSONNEL:

RACHID SEHB
TEST TECHNICIAN/ENGINEER

SIGNATURE

12/04/2001
DATE OF TEST

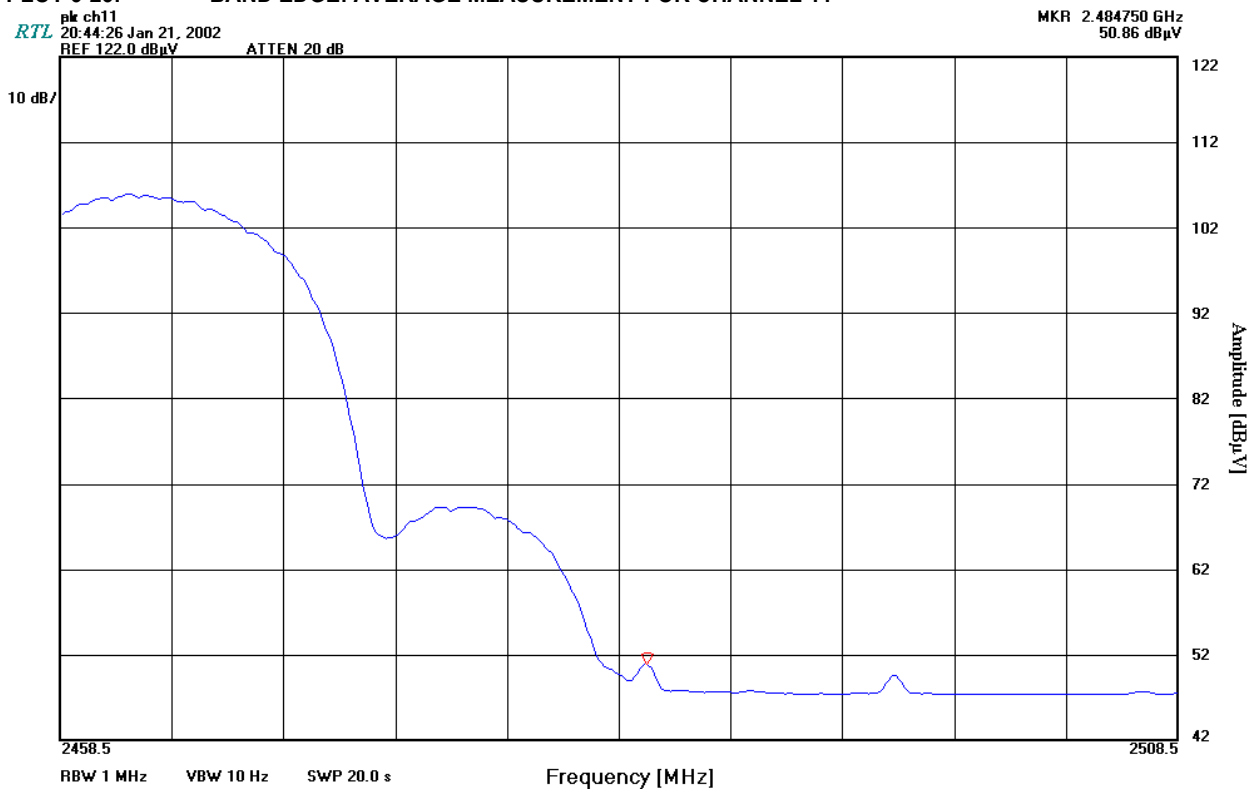


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CHANNEL NUMBER: 11
CHANNEL FREQUENCY: 2462
RESOLUTION :BANDWIDTH 1MHZ
VIDEO BANDWIDTH: 10HZ
SWEEP TIME: 20.0S

PLOT 3-23: BAND EDGE: AVERAGE MEASUREMENT FOR CHANNEL 11



TEST PERSONNEL:

RACHID SEHB
TEST TECHNICIAN/ENGINEER

SIGNATURE

12/04/2001
DATE OF TEST

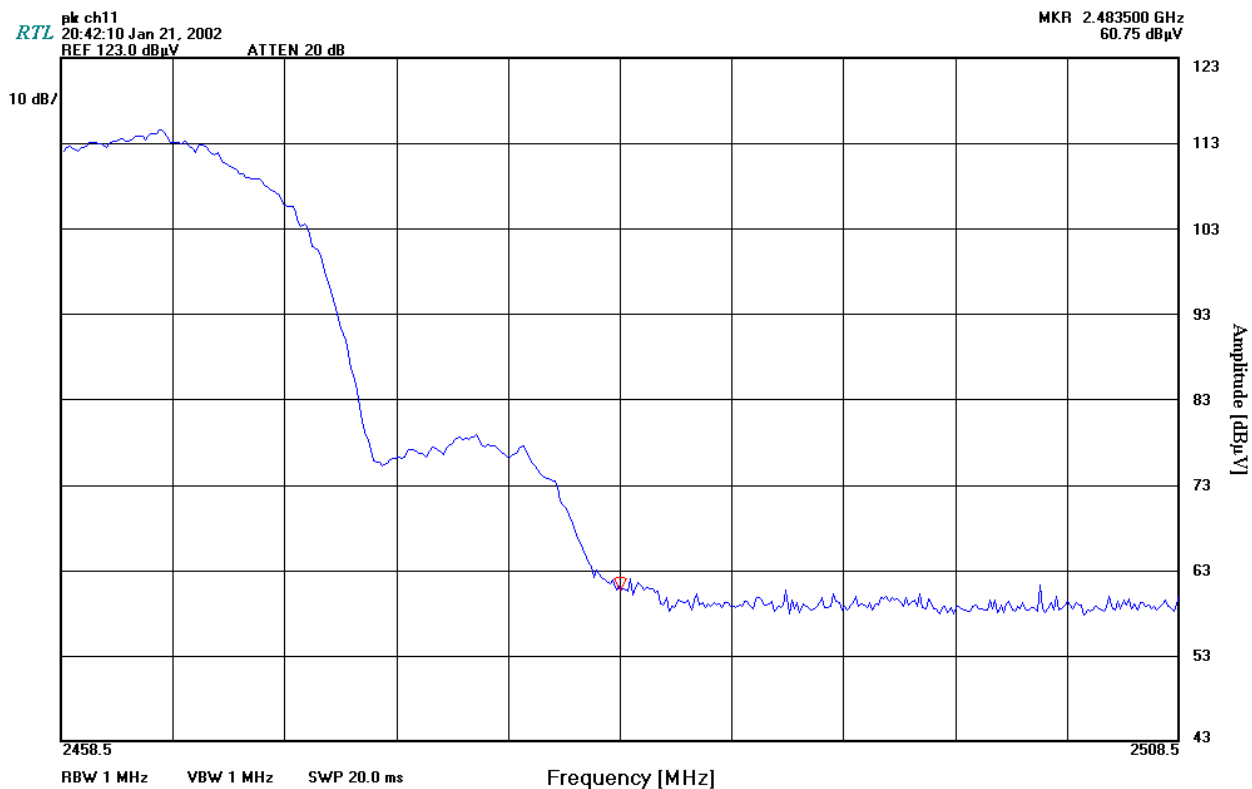


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CHANNEL NUMBER: 11
CHANNEL FREQUENCY: 2462
RESOLUTION :BANDWIDTH 1MHZ
VIDEO BANDWIDTH: 1MHZ
SWEEP TIME: 20.0S

PLOT 3-24: BAND EDGE: PEAK MEASUREMENT FOR CHANNEL 11



TEST PERSONNEL:

RACHID SEHB
TEST TECHNICIAN/ENGINEER

SIGNATURE

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3.8 COMPLIANCE WITH THE RESTRICTED BAND EDGE TEST DATA FOR AIR-ANT3213

TABLE 3-7: COMPLIANCE WITH THE RESTRICTED BAND EDGE TEST DATA FOR AIR-ANT3213

AIR-ANT3213	OMNI-DIRECTECTIONAL	5.0
-------------	---------------------	-----

CHANNEL SET TO	FREQUENCY TESTED MHZ	DETECTOR	FIELD STRENGTH LEVEL (dB μ V/M)	LEVEL CORRECTED (dB μ V/M)	FCC LIMIT (dB μ V/M)	FCC MARGIN (dB)
1	2390.0	ABSOLUTE MEASUREMENT	42.7	48.3	54.0	-5.7
11	2483.5	ABSOLUTE MEASUREMENT	43.8	49.4	54.0	-4.6

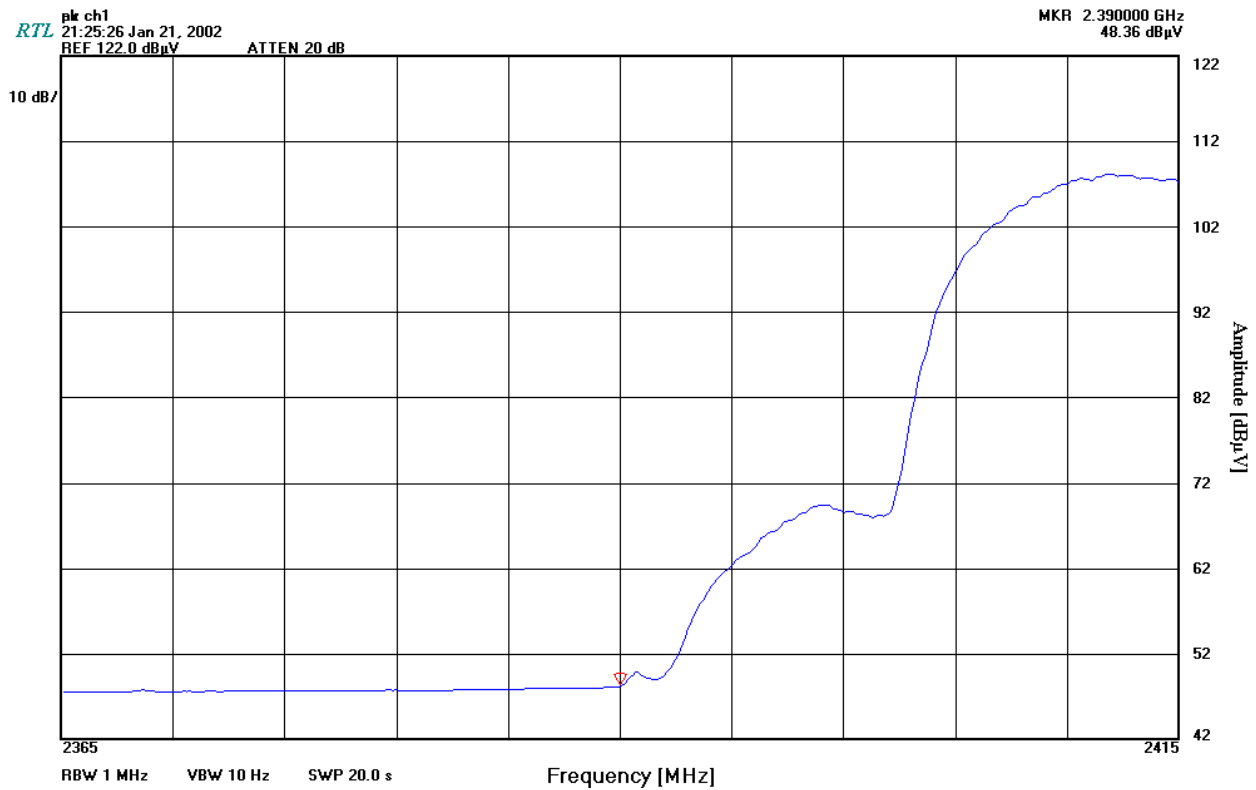


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CHANNEL NUMBER: 1
CHANNEL FREQUENCY: 2412
RESOLUTION :BANDWIDTH 1MHZ
VIDEO BANDWIDTH: 10HZ
SWEEP TIME: 20.0S

PLOT 3-25: BAND EDGE: AVERAGE MEASUREMENT FOR CHANNEL 1



TEST PERSONNEL:

RACHID SEHB
TEST TECHNICIAN/ENGINEER

SIGNATURE

12/04/2001
DATE OF TEST

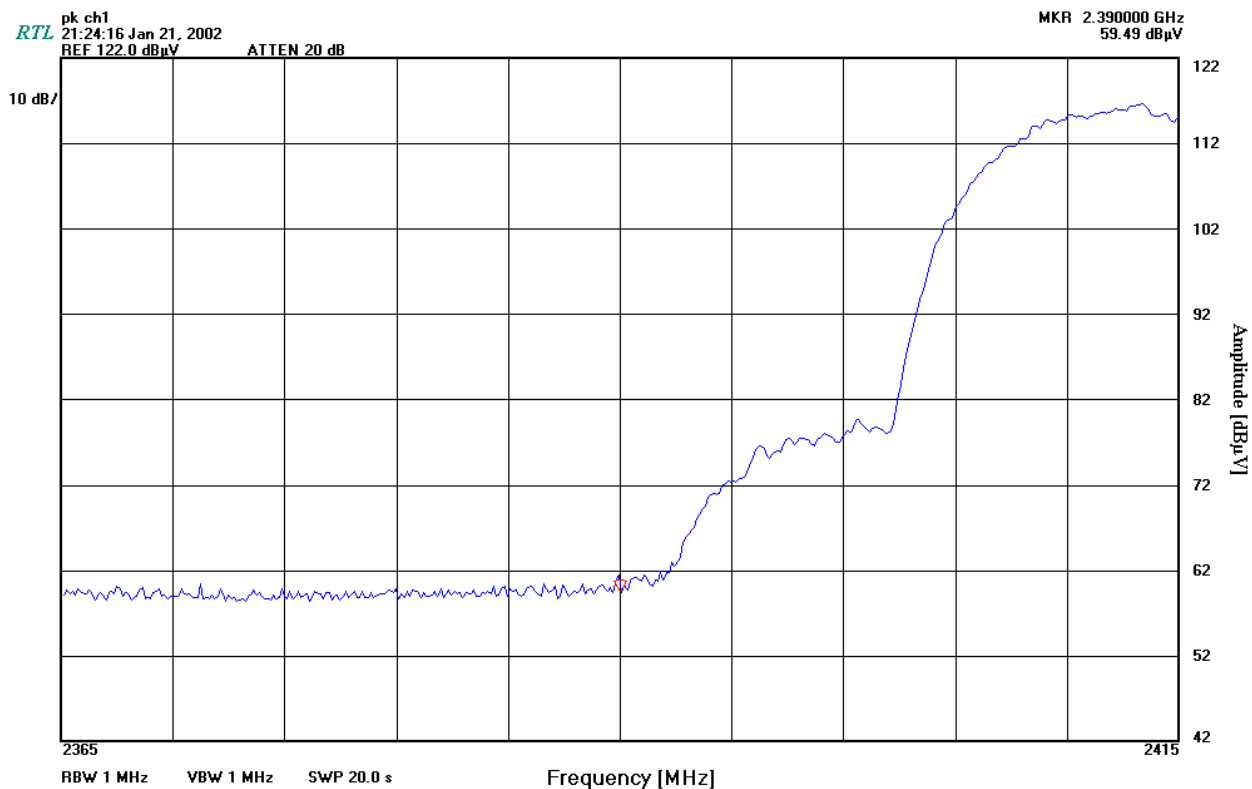


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CHANNEL NUMBER: 1
CHANNEL FREQUENCY: 2412
RESOLUTION :BANDWIDTH 1MHZ
VIDEO BANDWIDTH: 1MHZ
SWEEP TIME: 20.0S

PLOT 3-26: BAND EDGE: PEAK MEASUREMENT FOR CHANNEL 1



TEST PERSONNEL:

RACHID SEHB
TEST TECHNICIAN/ENGINEER

SIGNATURE

12/04/2001
DATE OF TEST

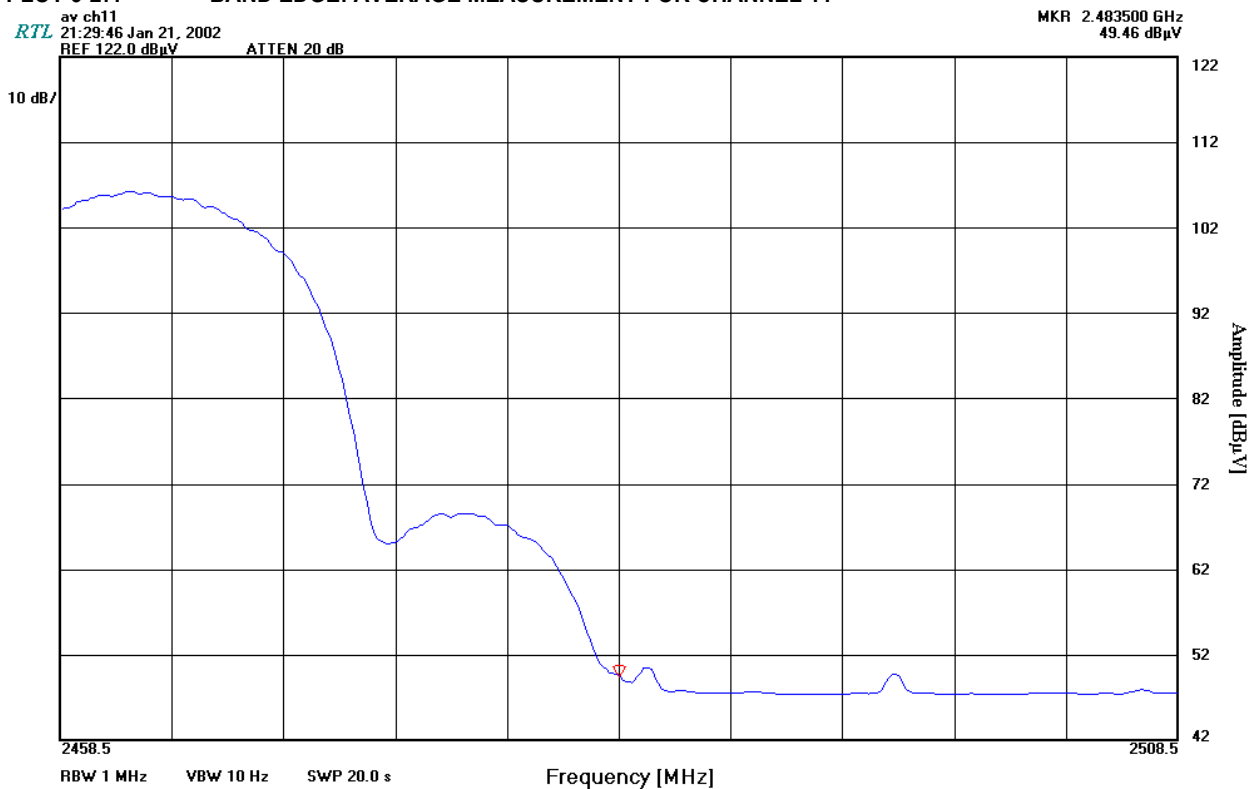


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CHANNEL NUMBER: 11
CHANNEL FREQUENCY: 2462
RESOLUTION :BANDWIDTH 1MHZ
VIDEO BANDWIDTH: 10HZ
SWEEP TIME: 20.0S

PLOT 3-27: BAND EDGE: AVERAGE MEASUREMENT FOR CHANNEL 11



TEST PERSONNEL:

RACHID SEHB
TEST TECHNICIAN/ENGINEER

SIGNATURE

12/04/2001
DATE OF TEST

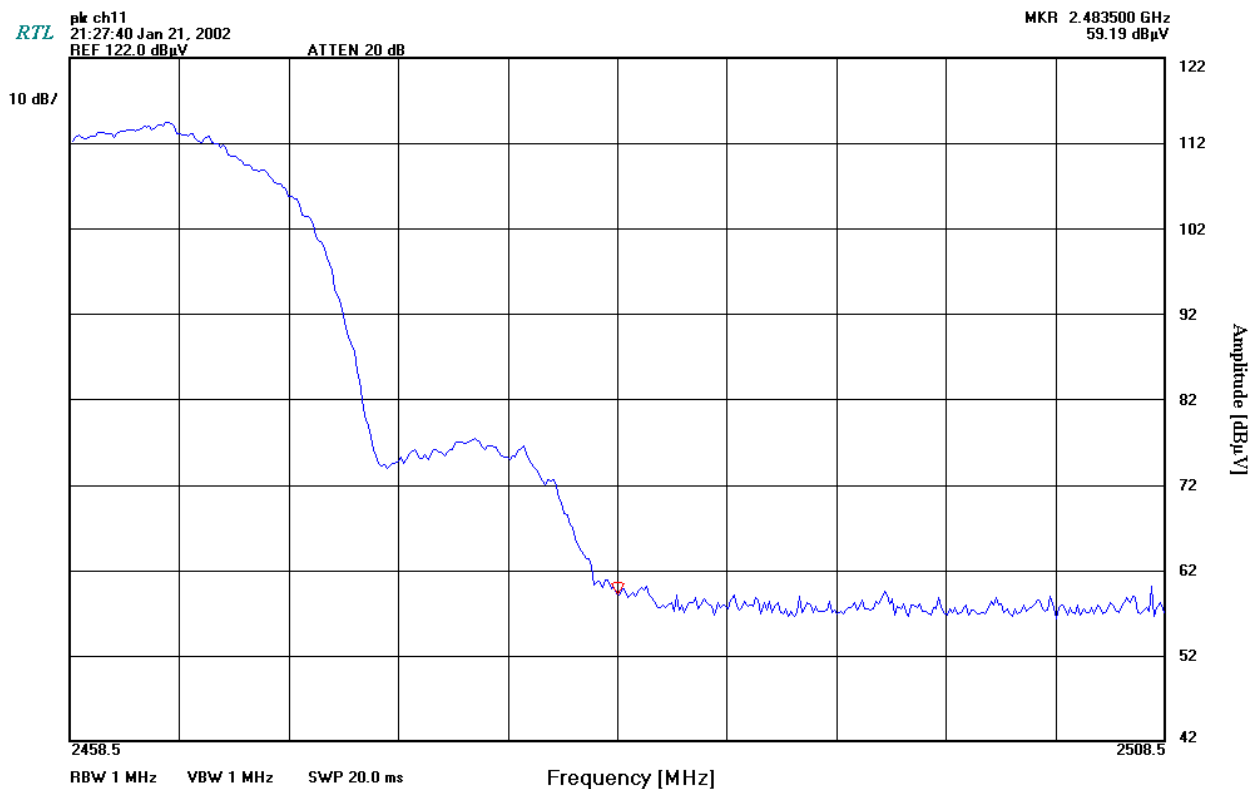


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CHANNEL NUMBER: 11
CHANNEL FREQUENCY: 2462
RESOLUTION :BANDWIDTH 1MHZ
VIDEO BANDWIDTH: 1MHZ
SWEEP TIME: 20.0S

PLOT 3-28: BAND EDGE: PEAK MEASUREMENT FOR CHANNEL 11



TEST PERSONNEL:

RACHID SEHB
TEST TECHNICIAN/ENGINEER

SIGNATURE

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3.9 COMPLIANCE WITH THE RESTRICTED BAND EDGE TEST DATA FOR AIR-ANT1728

TABLE 3-8: COMPLIANCE WITH THE RESTRICTED BAND EDGE TEST DATA FOR AIR-ANT1728

AIR-ANT1728	OMNI-DIRECTECTIONAL	5.0
-------------	---------------------	-----

CHANNEL SET TO	FREQUENCY TESTED MHZ	DETECTOR	FIELD STRENGTH LEVEL (dB μ V/M)	LEVEL CORRECTED (dB μ V/M)	FCC LIMIT (dB μ V/M)	FCC MARGIN (dB)
1	2390.0	ABSOLUTE MEASUREMENT	36.8	42.4	54.0	-11.6
11	2483.5	ABSOLUTE MEASUREMENT	43.2	48.8	54.0	-5.2

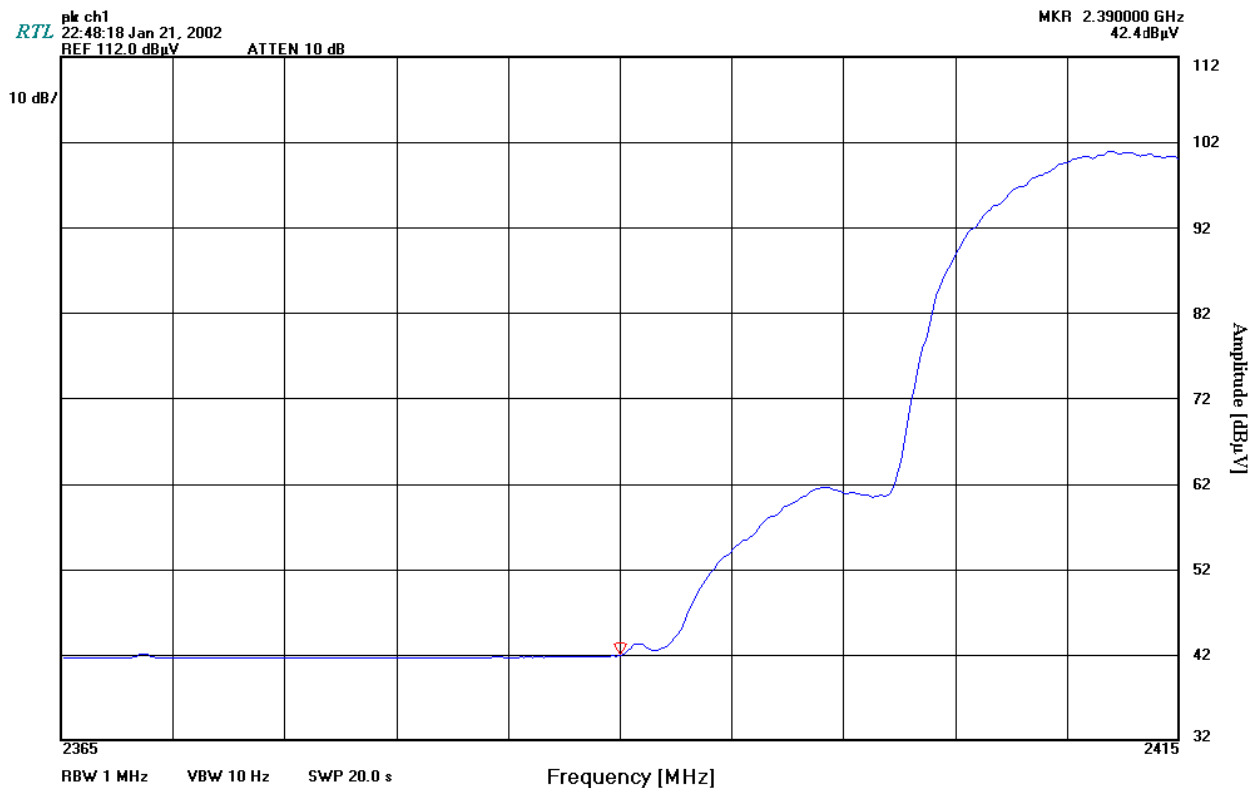


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CHANNEL NUMBER: 1
CHANNEL FREQUENCY: 2412
RESOLUTION :BANDWIDTH 1MHZ
VIDEO BANDWIDTH: 10HZ
SWEEP TIME: 20.0S

PLOT 3-29: BAND EDGE: AVERAGE MEASUREMENT FOR CHANNEL 1



TEST PERSONNEL:

RACHID SEHB
TEST TECHNICIAN/ENGINEER

SIGNATURE

12/04/2001
DATE OF TEST

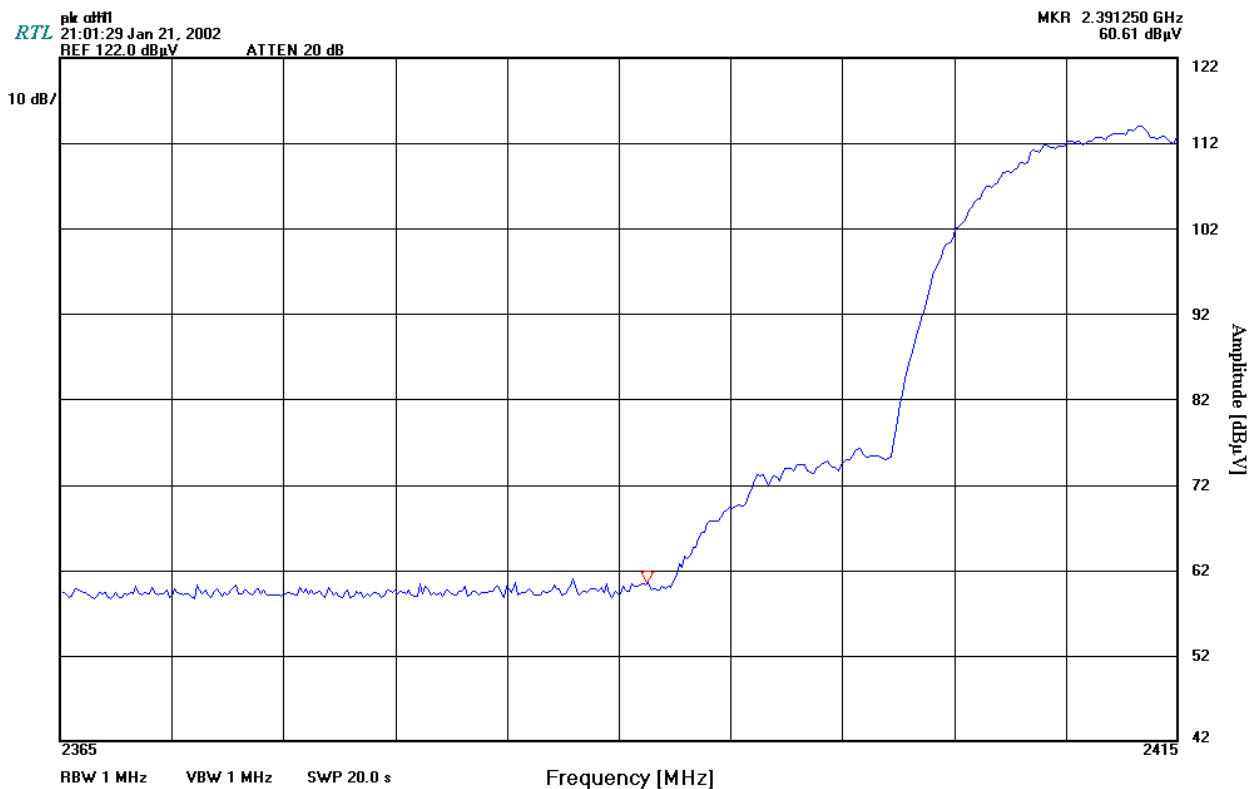


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Dates of Tests 12/04/2001 and 12/05/2001
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Industry Canada RSS-210

CHANNEL NUMBER: 1
CHANNEL FREQUENCY: 2412
RESOLUTION :BANDWIDTH 1MHZ
VIDEO BANDWIDTH: 1MHZ
SWEEP TIME: 20.0S

PLOT 3-30: BAND EDGE: PEAK MEASUREMENT FOR CHANNEL 1



TEST PERSONNEL:

RACHID SEHB
TEST TECHNICIAN/ENGINEER

SIGNATURE

12/04/2001
DATE OF TEST

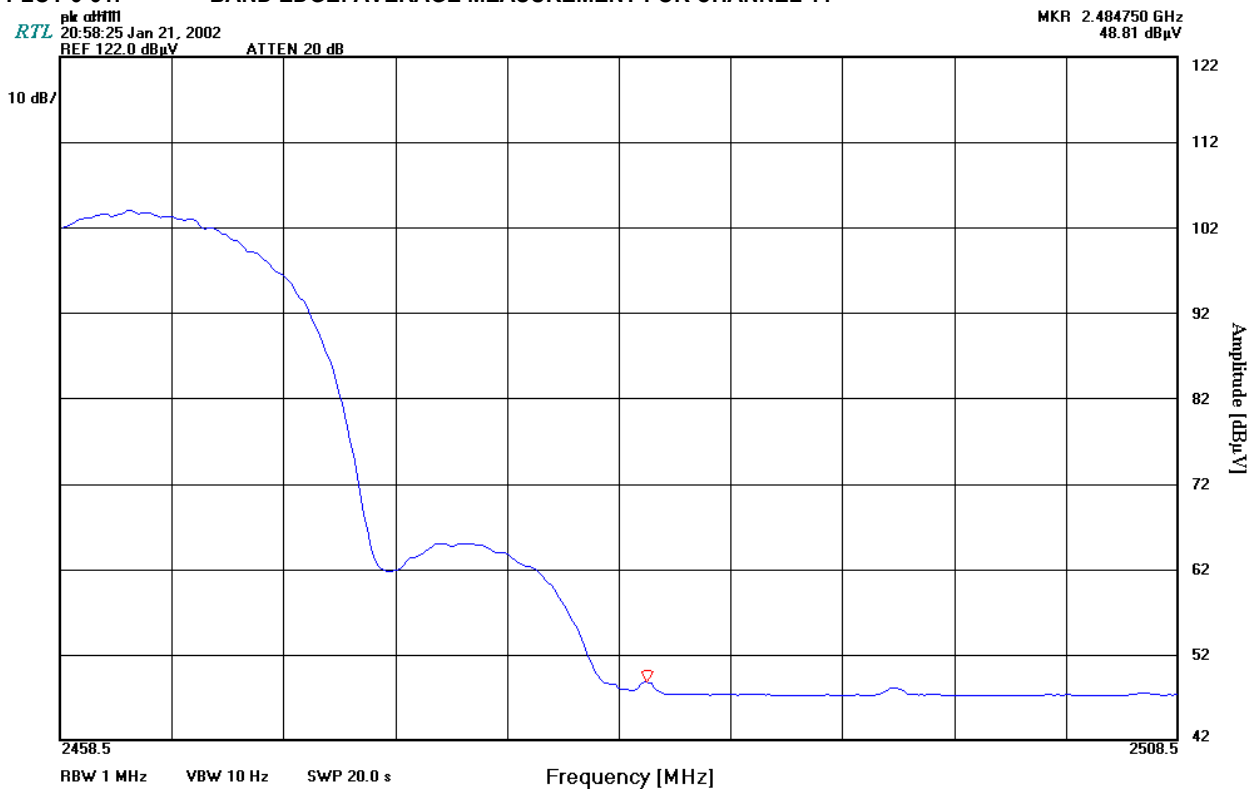


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2001326 / QRTL01-367
Dates of Tests 12/04/2001 and 12/05/2001
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Industry Canada RSS-210

CHANNEL NUMBER: 11
CHANNEL FREQUENCY: 2462
RESOLUTION :BANDWIDTH 1MHZ
VIDEO BANDWIDTH: 10HZ
SWEEP TIME: 20.0S

PLOT 3-31: BAND EDGE: AVERAGE MEASUREMENT FOR CHANNEL 11



TEST PERSONNEL:

RACHID SEHB
TEST TECHNICIAN/ENGINEER

SIGNATURE

12/04/2001
DATE OF TEST

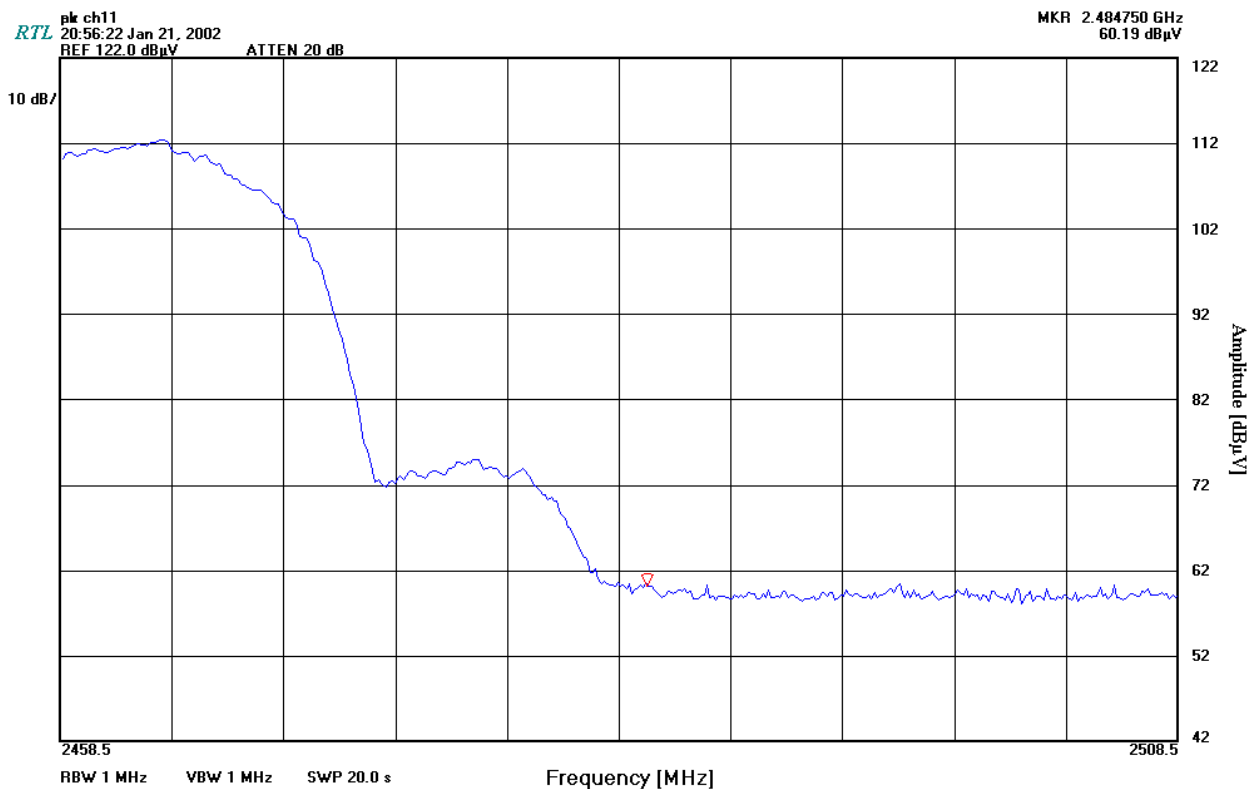


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CHANNEL NUMBER: 11
CHANNEL FREQUENCY: 2462
RESOLUTION :BANDWIDTH 1MHZ
VIDEO BANDWIDTH: 1MHZ
SWEEP TIME: 20.0S

PLOT 3-32: BAND EDGE: PEAK MEASUREMENT FOR CHANNEL 11



TEST PERSONNEL:

RACHID SEHB
TEST TECHNICIAN/ENGINEER

SIGNATURE

12/04/2001
DATE OF TEST



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3.10 COMPLIANCE WITH THE RESTRICTED BAND EDGE TEST DATA FOR AIR-ANT5959

TABLE 3-9: COMPLIANCE WITH THE RESTRICTED BAND EDGE TEST DATA FOR AIR-ANT5959

AIR-ANT5959	OMNI-DIRECTECTIONAL	2.0
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CHANNEL SET TO	FREQUENCY TESTED MHZ	DETECTOR	FIELD STRENGTH LEVEL (dB μ V/M)	LEVEL CORRECTED (dB μ V/M)	FCC LIMIT (dB μ V/M)	FCC MARGIN (dB)
1	2390.0	ABSOLUTE MEASUREMENT	36.4	42	54.0	-12.0
11	2483.5	ABSOLUTE MEASUREMENT	38.9	44.5	54.0	-9.5

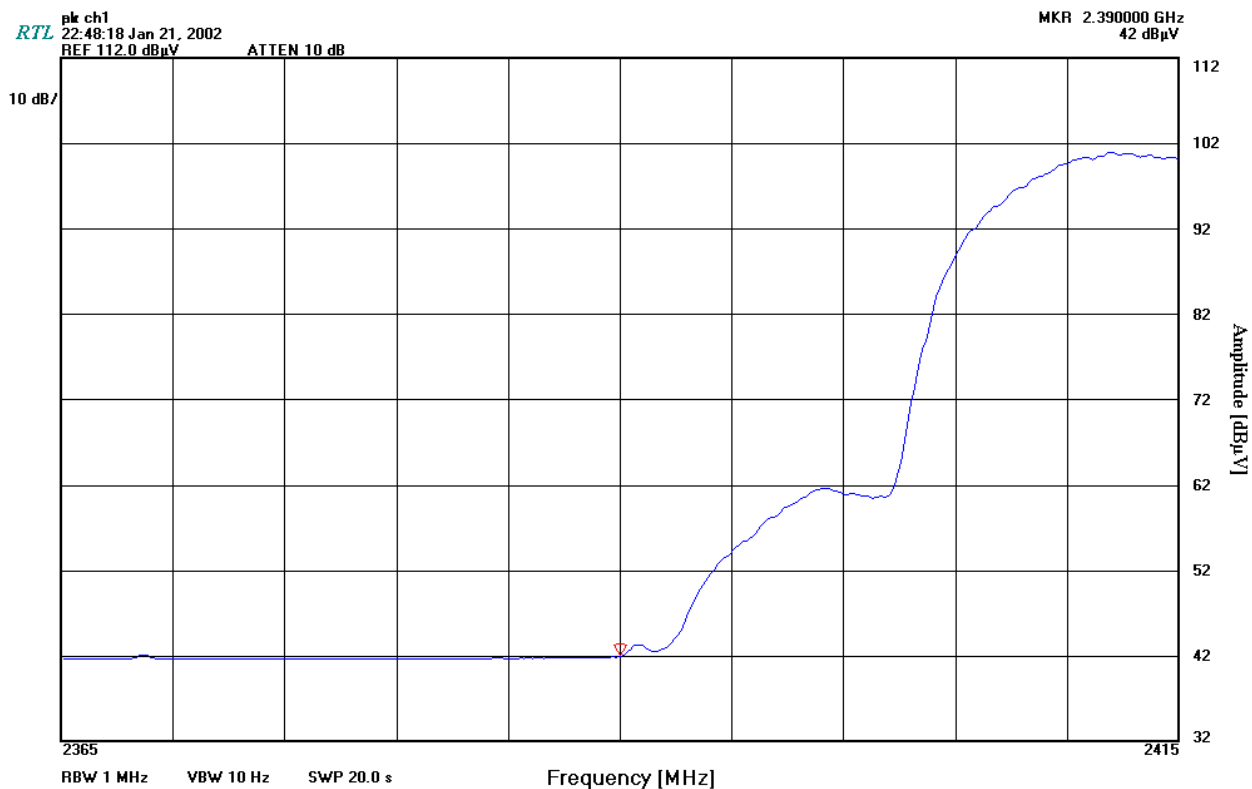


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CHANNEL NUMBER: 1
CHANNEL FREQUENCY: 2412
RESOLUTION :BANDWIDTH 1MHZ
VIDEO BANDWIDTH: 10HZ
SWEEP TIME: 20.0S

PLOT 3-33: BAND EDGE: AVERAGE MEASUREMENT FOR CHANNEL 1



TEST PERSONNEL:

RACHID SEHB
TEST TECHNICIAN/ENGINEER

SIGNATURE

12/04/2001
DATE OF TEST

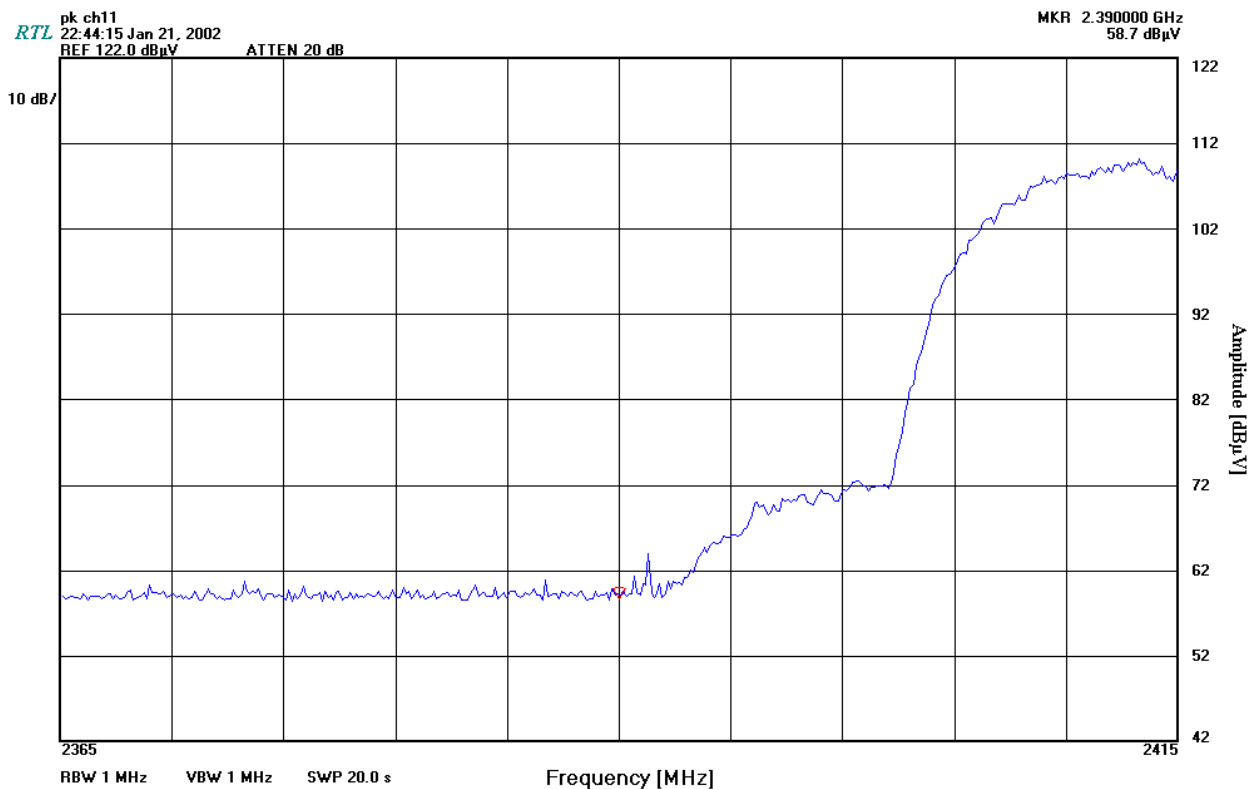


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Channel Number: 1
Channel Frequency: 2412
Resolution :Bandwidth 1MHz
Video Bandwidth: 1MHz
Sweep Time: 20.0s

PLOT 3-34: BAND EDGE: PEAK MEASUREMENT FOR CHANNEL 1



TEST PERSONNEL:

Rachid Sehb
Test Technician/Engineer

Signature

12/04/2001
Date Of Test

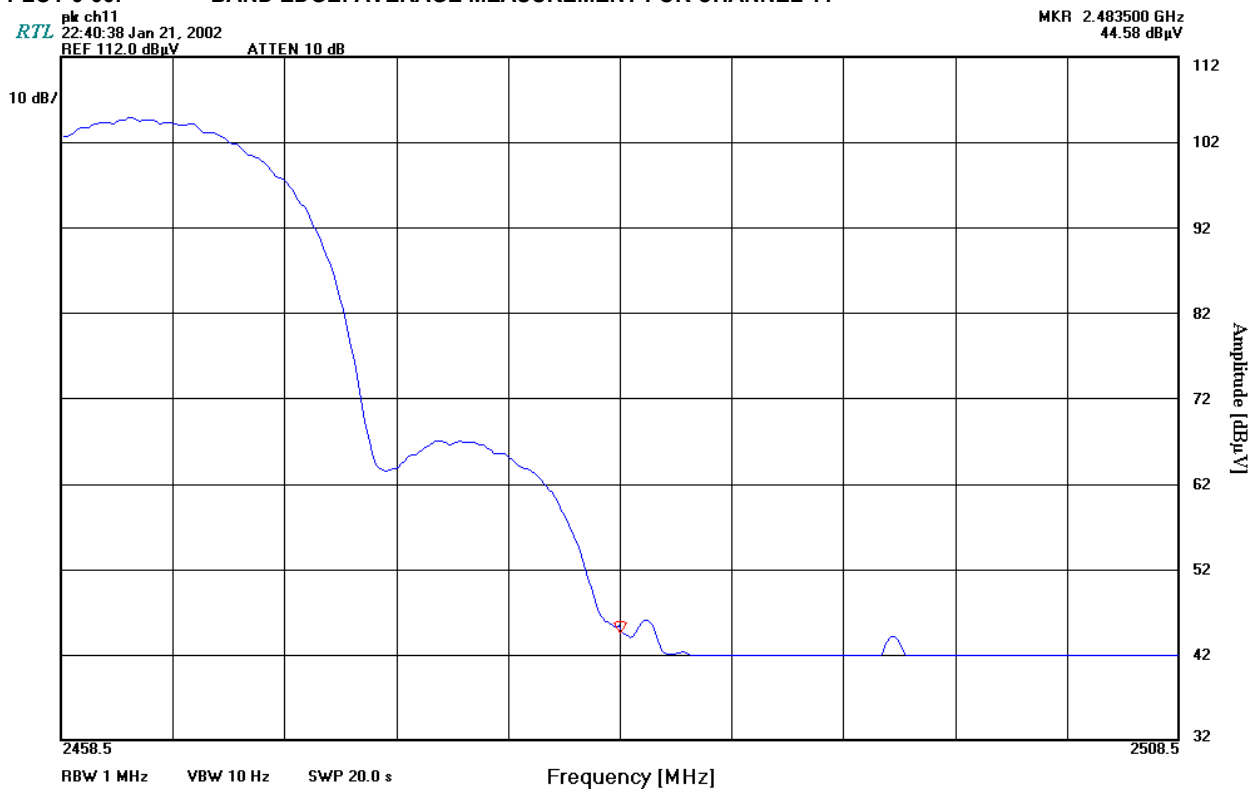


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Channel Number: 11
Channel Frequency: 2462
Resolution :Bandwidth 1MHz
Video Bandwidth: 10Hz
Sweep Time: 20.0s

PLOT 3-35: BAND EDGE: AVERAGE MEASUREMENT FOR CHANNEL 11



TEST PERSONNEL:

Rachid Sehb
Test Technician/Engineer

Signature

12/04/2001
Date Of Test

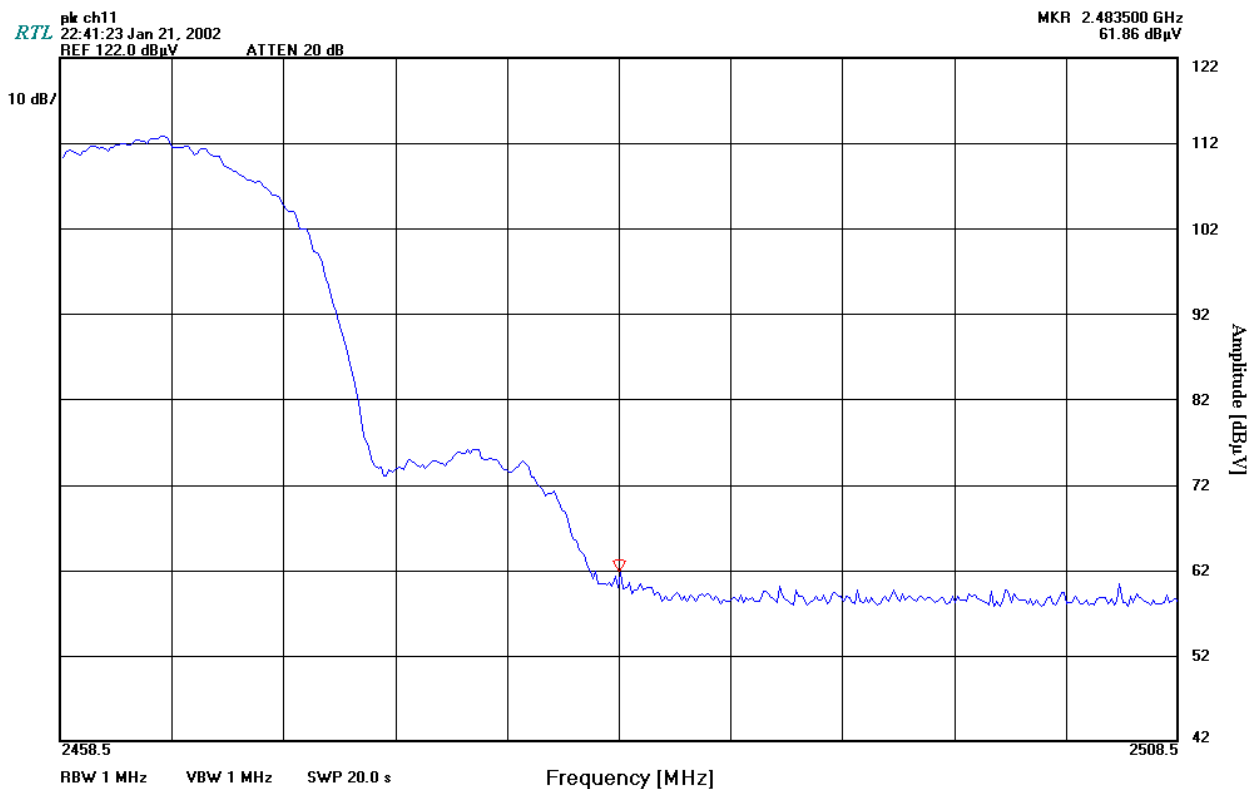


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Channel Number: 11
Channel Frequency: 2462
Resolution :Bandwidth 1MHz
Video Bandwidth: 1MHz
Sweep Time: 20.0s

PLOT 3-36: BAND EDGE: PEAK MEASUREMENT FOR CHANNEL 11



TEST PERSONNEL:

Rachid Sehb
Test Technician/Engineer

Signature

12/04/2001
Date Of Test



4 CONDUCTED LIMITS - §15.207

This device was tested and is compliant. Test results are available upon request.

5 RADIATED EMISSION LIMITS (GENERAL REQUIREMENTS) - §15.209

5.1 RADIATED EMISSION LIMITS TEST PROCEDURE

Radiated Spurious Emissions applies to harmonics and spurious emissions that fall in the restricted and non-restricted bands. The restricted bands are listed in Part 15.205. The maximum permitted average field strength for the restricted band is listed in Part 15.209. The EUT was tested in the X-Y, X-Z and Y-Z orthogonal plane.

5.2 TEST EQUIPMENT USED FOR TESTING

TABLE 5-1: RADIATED SPURIOUS EMISSIONS TEST EQUIPMENT

RTL ASSET #	MANUFACTURER	MODEL	PART TYPE	SERIAL NUMBER
900931	HP	8566B	Spectrum Analyzer (100Hz – 22 GHz)	3138A07771
900772	EMCO	3161-02	Horn ANTENNA (2-4 GHz)	900772
900321	EMCO	3161-03	Horn Antennas (4-8,2GHz)	9508-1020
900323	EMCO	3160-7	Horn Antennas (8,2-12,4 GHz)	9605-1054
900325	EMCO	3160-9	Horn Antennas (18 - 26.5 GHz)	9605-1051
900723	Miteq	NA	AMP 100MHz-26GHz	NA
900791	Schaffner - Chase	CBL6112	Antenna (25 MHz - 2 GHz)	2099



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5.3 RADIATED EMISSION LIMITS TEST DATA

Operating Frequency (MHz): 2412

Channel: 1

Antenna AIR-ANT1949

Measured EIRP (dBm): 15.0

Measured Cond. Pwr. (dBm): 19.4

TABLE 5-2: RADIATED EMISSIONS HARMONICS/SPURIOUS (CHANNEL 1) AIR-ANT1949

Emission Frequency (MHz)	Test Detector	Antenna Polarity (H/V)	Turntable Azimuth (deg)	Antenna Height (m)	Analyzer Reading (dBuV)	Site Correction Factor (dB/m)	Emission Level (dBuV/m)	Limit (dBuV/m)
2346.62	Av	V	10	1.4	32.8	5.6	38.4	54
2346.62	Pk	V	10	1.4	40.4	5.6	46.0	
2357.88	Av	V	10	1.4	34.0	5.6	39.6	54
2357.60	Pk	V	10	1.4	41.1	5.6	46.7	
2368.72	Av	V	20	1.4	35.7	5.6	41.3	54
2369.13	Pk	V	20	1.4	43.0	5.6	48.6	
2411.63	Av	V	90	1.4	100.7	5.6	106.3	Fundamental
2412.58	Pk	V	90	1.4	109.5	5.6	115.1	Fundamental
4826.10	Av	V	70	1.4	32.2	12.3	44.5	54
4824.20	Pk	V	70	1.4	45.8	12.3	58.1	
7237.80	Av	V	90	1.4	35.6	17.8	53.4	54
7237.00	Pk	V	90	1.4	46.6	17.8	64.4	
9648	Av	V	10	1.4	<20 dB			54
12060	Av	V	10	1.4	<20 dB			54
14472	Av	V	10	1.4	<20 dB			54
16884	Av	V	10	1.4	<20 dB			54
19296	Av	V	10	1.4	<20 dB			54
21708	Av	V	10	1.4	<20 dB			54
24120	Av	V	10	1.4	<20 dB			54

PEAK: RES. =1 MHz, VID= 1MHz; AVERAGE: RES. =1 MHz, VID= 10Hz; NF = NOISE FLOOR

TEST PERSONNEL:

Rachid Sehb
Test Technician/Engineer

Signature

12/14/2001
Date Of Test



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Operating Frequency (MHz): 2437
Channel: 6
Antenna: AIR-ANT1949

Measured EIRP (dBm): 20.3
Measured Cond. Pwr. (dBm): 20.4

TABLE 5-3: RADIATED EMISSIONS HARMONICS/SPURIOUS (CHANNEL 6) AIR-ANT1949

Emission Frequency (MHz)	Test Detector	Antenna Polarity (H/V)	Turntable Azimuth (deg)	Antenna Height (m)	Analyzer Reading (dBuV)	Site Correction Factor (dB/m)	Emission Level (dBuV/m)	Limit (dBuV/m)
2371.74	Av	V	10	1.4	37.6	5.6	43.2	54
2372.24	Pk	V	10	1.4	44.0	5.6	49.6	
2383.04	Av	V	10	1.4	37.2	5.6	42.8	54
2382.84	Pk	V	10	1.4	42.4	5.6	48.0	
2436.66	Av	V	90	1.4	104.2	5.6	109.8	Fundamental
2437.95	Pk	V	90	1.4	112.1	5.6	117.7	Fundamental
2492.60	Av	V	20	1.4	34.3	5.6	39.9	54
2492.60	Pk	V	20	1.4	44.8	5.6	50.4	
2515.20	Av	V	20	1.4	33.7	5.6	39.3	54
2515.90	Pk	V	20	1.4	44.1	5.6	49.7	
2579.60	Av	V	70	1.4	30.4	5.6	36.0	54
2579.40	Pk	V	70	1.4	41.7	5.6	47.3	
4876.34	Av	V	100	1.4	29.8	12.3	42.1	54
4875.00	Pk	V	100	1.4	40.8	12.3	53.1	
7312.95	Av	V	100	1.4	35.1	17.8	52.9	54
7311.83	Pk	V	100	1.4	47.1	17.8	64.9	
9748	Av	V	10	1.4	<20 dB			54
12185	Av	V	10	1.4	<20 dB			54
14622	Av	V	10	1.4	<20 dB			54
17059	Av	V	10	1.4	<20 dB			54
19496	Av	V	10	1.4	<20 dB			54
21933	Av	V	10	1.4	<20 dB			54
24370	Av	V	10	1.4	<20 dB			54

PEAK: RES. =1 MHz; VID= 1MHz; AVERAGE: RES. =1 MHz; VID= 10Hz; NF = NOISE FLOOR

TEST PERSONNEL:

Rachid Sehb
Test Technician/Engineer


Signature

12/14/2001
Date Of Test



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Operating Frequency (MHz): 2462
Channel: 11
Antenna: AIR-ANT1949

Measured EIRP (dBm): 20.5
Measured Cond. Pwr. (dBm): 18.4

TABLE 5-4: RADIATED EMISSIONS HARMONICS/SPURIOUS (CHANNEL 11) AIR-ANT1949

Emission Frequency (MHz)	Test Detector	Antenna Polarity (H/V)	Turntable Azimuth (deg)	Antenna Height (m)	Analyzer Reading (dBuV)	Site Correction Factor (dB/m)	Emission Level (dBuV/m)	Limit (dBuV/m)
2364.07	Av	V	10	1.4	38.9	5.6	44.5	54
2364.07	Pk	V	10	1.4	45.9	5.6	51.5	
2374.87	Av	V	10	1.4	38.9	5.6	44.5	54
2374.87	Pk	V	10	1.4	47.5	5.6	53.1	
2461.38	Av	V	90	1.4	102.0	5.6	107.6	Fundamental
2463.18	Pk	V	90	1.4	111.0	5.6	116.6	Fundamental
2495.80	Av	V	20	1.4	45.0	5.6	50.6	54
2495.90	Pk	V	20	1.4	50.0	5.6	55.6	
2506.80	Av	V	20	1.4	38.7	5.6	44.3	54
2506.90	Pk	V	20	1.4	46.0	5.6	51.6	
4926.00	Av	V	70	1.4	29.9	12.3	42.2	54
4924.11	Pk	V	70	1.4	41.3	12.3	53.6	
7388.70	Av	V	100	1.4	32.6	17.8	50.4	54
7390.60	Pk	V	100	1.4	47.1	17.8	64.9	
9848.0	Av	V	10	1.4	<20 dB			54
12310.0	Av	V	10	1.4	<20 dB			
14772.0	Av	V	10	1.4	<20 dB			54
17234.0	Av	V	10	1.4	<20 dB			54
19696.0	Av	V	10	1.4	<20 dB			54
22158.0	Av	V	10	1.4	<20 dB			54
24620.0	Av	V	10	1.4	<20 dB			54

PEAK: RES. =1 MHz, VID= 1MHz; AVERAGE: RES. =1 MHz, VID= 10Hz; NF = NOISE FLOOR

TEST PERSONNEL:

Rachid Sehb
Test Technician/Engineer


Signature

12/04/2001
Date Of Test



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5.4 RADIATED EMISSION LIMITS TEST DATA

Operating Frequency (MHz): 2412
Channel: 1
Antenna AIR-ANT4121

Measured EIRP (dBm): 15.0
Measured Cond. Pwr. (dBm): 19.4

TABLE 5-5: RADIATED EMISSIONS HARMONICS/SPURIOUS (CHANNEL 1) AIR-ANT4121

Emission Frequency (MHz)	Test Detector	Antenna Polarity (H/V)	Turntable Azimuth (deg)	Antenna Height (m)	Analyzer Reading (dBuV)	Site Correction Factor (dB/m)	Emission Level (dBuV/m)	Limit (dBuV/m)
2357.41	Av	V	80	1.2	31.5	5.6	37.1	54
2357.67	Pk	V	80	1.2	39.9	5.6	45.5	
2368.83	Av	V	50	1.2	31.9	5.6	37.5	54
2368.77	Pk	V	50	1.2	40.9	5.6	46.5	
2412.34	Av	V	10	1.2	101.0	5.6	106.6	Fundamental
2412.65	Pk	V	10	1.2	105.0	5.6	110.6	Fundamental
2484.52	Av	V	10	1.2	30.7	5.6	36.3	54
2484.91	Pk	V	10	1.2	39.9	5.6	45.5	
2548.66	Av	V	10	1.2	27.9	5.6	33.5	54
2548.92	Pk	V	10	1.2	36.0	5.6	41.6	
4824.25	Av	V	10	1.1	26.7	12.3	39.0	54
4823.80	Pk	V	10	1.1	38.7	12.3	51.0	
7238.20	Av	V	20	1.1	31.9	17.8	49.7	54
7237.50	Pk	V	20	1.1	40.2	17.8	58.0	
9648	Av	V	10	1.1	<20 dB			54
12060	Av	V	10	1.1	<20 dB			54
14472	Av	V	10	1.1	<20 dB			54
16884	Av	V	10	1.1	<20 dB			54
19296	Av	V	10	1.1	<20 dB			54
21708	Av	V	10	1.1	<20 dB			54
24120	Av	V	10	1.1	<20 dB			54

PEAK: RES. =1 MHz, VID= 1MHz; AVERAGE: RES. =1 MHz, VID= 10Hz; NF = NOISE FLOOR

TEST PERSONNEL:

Rachid Sehb
Test Technician/Engineer


Signature

12/14/2001
Date Of Test



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Operating Frequency (MHz): 2437
Channel: 6
Antenna: AIR-ANT4121

Measured EIRP (dBm): 20.3
Measured Cond. Pwr. (dBm): 20.4

TABLE 5-6: RADIATED EMISSIONS HARMONICS/SPURIOUS (CHANNEL 6) AIR-ANT4121

Emission Frequency (MHz)	Test Detector	Antenna Polarity (H/V)	Turntable Azimuth (deg)	Antenna Height (m)	Analyzer Reading (dBuV)	Site Correction Factor (dB/m)	Emission Level (dBuV/m)	Limit (dBuV/m)
2370.81	Av	V	20	1.2	33.9	5.6	39.5	54
2371.21	Pk	V	20	1.2	40.7	5.6	46.3	
2381.89	Av	V	10	1.2	33.3	5.6	38.9	54
2382.09	Pk	V	10	1.2	41.0	5.6	46.6	
2435.89	Av	V	10	1.2	98.7	5.6	104.3	Fundamental
2437.23	Pk	V	10	1.2	106.2	5.6	111.8	Fundamental
4871.91	Av	V	20	1.2	27.6	12.3	39.9	54
4871.58	Pk	V	20	1.2	38.9	12.3	51.2	
7308.65	Av	V	20	1.2	33.2	17.8	51.0	54
7307.98	Pk	V	20	1.2	40.0	17.8	57.8	
9748	Av	V	10	1.1	<20 dB			54
12185	Av	V	10	1.1	<20 dB			54
14622	Av	V	10	1.1	<20 dB			54
17059	Av	V	10	1.1	<20 dB			54
19496	Av	V	10	1.1	<20 dB			54
21933	Av	V	10	1.1	<20 dB			54
24370	Av	V	10	1.1	<20 dB			54

PEAK: RES. =1 MHz, VID= 1MHz; AVERAGE: RES. =1 MHz, VID= 10Hz; NF = NOISE FLOOR

TEST PERSONNEL:

Rachid Sehb
Test Technician/Engineer

Signature

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Date Of Test



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Operating Frequency (MHz): 2462
Channel: 11
Measured Cond. Pwr. (dBm): 19.0

Measured EIRP (dBm): 20.5
Antenna: AIR-ANT4121

TABLE 5-7: RADIATED EMISSIONS HARMONICS/SPURIOUS (CHANNEL 11) AIR-ANT4121

Emission Frequency (MHz)	Test Detector	Antenna Polarity (H/V)	Turntable Azimuth (deg)	Antenna Height (m)	Analyzer Reading (dBuV)	Site Correction Factor (dB/m)	Emission Level (dBuV/m)	Limit (dBuV/m)
2363.54	Av	V	20	1.2	30.8	5.6	36.4	54
2363.54	Pk	V	20	1.2	39.9	5.6	45.5	
2374.77	Av	V	20	1.2	30.8	5.6	36.4	54
2374.77	Pk	V	20	1.2	40.5	5.6	46.1	
2462.15	Av	V	20	1.2	96.5	5.6	102.1	Fundamental
2462.82	Pk	V	20	1.2	105.2	5.6	110.8	Fundamental
2484.17	Av	V	10	1.2	43.1	5.6	48.7	54
2484.69	Pk	V	10	1.2	47.1	5.6	52.7	
2495.57	Av	V	10	1.2	37.3	5.6	42.9	54
2495.35	Pk	V	10	1.2	43.1	5.6	48.7	
2506.75	Av	V	20	1.2	30.5	5.6	36.1	54
2506.68	Pk	V	20	1.2	39.9	5.6	45.5	
4926.00	Av	V	10	1.2	30.6	12.3	42.9	54
4926.20	Pk	V	10	1.2	37.4	12.3	49.7	
7388.20	Av		10	1.2	30.4	17.8	48.2	54
7386.40	Pk	V	10	1.2	41.2	17.8	59.0	
9848.0	Av	V	10	1.1	<20 dB			54
12310.0	Av	V	10	1.1	<20 dB			54
14772.0	Av	V	10	1.1	<20 dB			54
17234.0	Av	V	10	1.1	<20 dB			54
19696.0	Av	V	10	1.1	<20 dB			54
22158.0	Av	V	10	1.1	<20 dB			54
24620.0	Av	V	10	1.1	<20 dB			54

PEAK: RES. =1 MHz, VID= 1MHz; AVERAGE: RES. =1 MHz, VID= 10Hz; NF = NOISE FLOOR

TEST PERSONNEL:

Rachid Sehb
Test Technician/Engineer


Signature

12/04/2001
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5.5 RADIATED EMISSION LIMITS TEST DATA

Operating Frequency (MHz): 2412

Channel: 1

Measured Cond. Pwr. (dBm): 20.3

Measured EIRP (dBm): 15.0

Antenna AIR-ANT3549

TABLE 5-8: RADIATED EMISSIONS HARMONICS/SPURIOUS (CHANNEL 1) AIR-ANT3549

Emission Frequency (MHz)	Test Detector	Antenna Polarity (H/V)	Turntable Azimuth (deg)	Antenna Height (m)	Analyzer Reading (dBuV)	Site Correction Factor (dB/m)	Emission Level (dBuV/m)	Limit (dBuV/m)
2368.54	Av	V	20	1.1	29.9	5.6	35.5	54
2367.76	Pk	V	20	1.1	41.1	5.6	46.7	
2379.54	Av	V	10	1.1	30.4	5.6	36.0	54
2379.90	Pk	V	10	1.1	41.5	5.6	47.1	
2412.16	Av	V	20	1.1	95.5	5.6	101.1	Fundamental
2412.44	Pk	V	20	1.1	102.4	5.6	108.0	Fundamental
2533.94	Av	V	10	1.1	28.9	5.6	34.5	54
2533.81	Pk	V	10	1.1	37.9	5.6	43.5	
2548.28	Av	V	30	1.1	29.7	5.6	35.3	54
2548.28	Pk	V	30	1.1	37.6	5.6	43.2	
4827.57	Av	V	10	1.1	27.2	12.3	39.5	54
4828.89	Pk	V	10	1.1	40.6	12.3	52.9	
7237.89	Av	V	20	1.1	27.9	17.8	45.7	54
7238.12	Pk	V	20	1.1	41.3	17.8	59.1	
9648	Av	V	10	1.1	<20 dB			54
12060	Av	V	10	1.1	<20 dB			54
14472	Av	V	10	1.1	<20 dB			54
16884	Av	V	10	1.1	<20 dB			54
19296	Av	V	10	1.1	<20 dB			54
21708	Av	V	10	1.1	<20 dB			54
24120	Av	V	10	1.1	<20 dB			54

PEAK: RES. =1 MHz, VID= 1MHz; AVERAGE: RES. =1 MHz, VID= 10Hz; NF = NOISE FLOOR

TEST PERSONNEL:

Rachid Sehb
Test Technician/Engineer


Signature

12/14/2001
Date Of Test



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Operating Frequency (MHz): 2437
Channel: 6
Measured Cond. Pwr. (dBm): 19.0

Measured EIRP (dBm): 20.3
Antenna AIR-ANT3549

TABLE 5-9: RADIATED EMISSIONS HARMONICS/SPURIOUS (CHANNEL 6) AIR-ANT3549

Emission Frequency (MHz)	Test Detector	Antenna Polarity (H/V)	Turntable Azimuth (deg)	Antenna Height (m)	Analyzer Reading (dBuV)	Site Correction Factor (dB/m)	Emission Level (dBuV/m)	Limit (dBuV/m)
2370.68	Av	V	20	1.2	30.7	5.6	36.3	54
2370.56	Pk	V	20	1.2	40.7	5.6	46.3	
2381.66	Av	V	10	1.2	31.0	5.6	36.6	54
2381.72	Pk	V	10	1.2	39.9	5.6	45.5	
2435.48	Av	V	10	1.2	97.2	5.6	102.8	Fundamental
2437.19	Pk	V	10	1.2	105.1	5.6	110.7	Fundamental
2513.84	Av	V	20	1.2	29.7	5.6	35.3	54
2514.10	Pk	V	20	1.2	38.3	5.6	43.9	
2578.62	Av	V	20	1.2	27.6	5.6	33.2	54
2578.88	Pk	V	20	1.2	36.7	5.6	42.3	
4873.95	Av	V	30	1.2	32.8	12.3	45.1	54
4871.81	Pk	V	30	1.2	46.5	12.3	58.8	
7309.14	Av	V	20	1.2	29.9	17.8	47.7	54
7309.81	Pk	V	20	1.2	42.2	17.8	60.0	
9748	Av	V	10	1.1	<20 dB			54
12185	Av	V	10	1.1	<20 dB			54
14622	Av	V	10	1.1	<20 dB			54
17059	Av	V	10	1.1	<20 dB			54
19496	Av	V	10	1.1	<20 dB			54
21933	Av	V	10	1.1	<20 dB			54
24370	Av	V	10	1.1	<20 dB			54

PEAK: RES. =1 MHz, VID= 1MHz; AVERAGE: RES. =1 MHz, VID= 10Hz; NF = NOISE FLOOR

TEST PERSONNEL:

Rachid Sehb
Test Technician/Engineer


Signature

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Operating Frequency (MHz): 2462
Channel: 11
Measured Cond. Pwr. (dBm): 19.0

Measured EIRP (dBm): 20.5
Antenna: AIR-ANT3549

TABLE 5-10: RADIATED EMISSIONS HARMONICS/SPURIOUS (CHANNEL 11) AIR-ANT3549

Emission Frequency (MHz)	Test Detector	Antenna Polarity (H/V)	Turntable Azimuth (deg)	Antenna Height (m)	Analyzer Reading (dBuV)	Site Correction Factor (dB/m)	Emission Level (dBuV/m)	Limit (dBuV/m)
2363.71	Av	V	20	1.2	29.3	5.6	34.9	54
2364.15	Pk	V	20	1.2	39.8	5.6	45.4	
2374.52	Av	V	20	1.2	29.6	5.6	35.2	54
2374.52	Pk	V	20	1.2	40.6	5.6	46.2	
2462.28	Av	V	20	1.2	96.4	5.6	102.0	Fundamental
2463.12	Pk	V	20	1.2	103.7	5.6	109.3	Fundamental
2484.65	Av	V	10	1.2	35.6	5.6	41.2	54
2484.65	Pk	V	10	1.2	44.9	5.6	50.5	
2495.53	Av	V	10	1.2	33.0	5.6	38.6	54
2495.66	Pk	V	10	1.2	42.3	5.6	47.9	
2545.34	Av	V	20	1.2	29.3	5.6	34.9	54
2545.85	Pk	V	20	1.2	40.3	5.6	45.9	
4925.97	Av	V	10	1.2	29.2	12.3	41.5	54
4924.07	Pk	V	10	1.2	42.2	12.3	54.5	
7360.63	Av		10	1.2	28.6	17.8	46.4	54
7359.35	Pk	V	10	1.2	41.6	17.8	59.4	
9848.0	Av	V	10	1.1	<20 dB			54
12310.0	Av	V	10	1.1	<20 dB			54
14772.0	Av	V	10	1.1	<20 dB			54
17234.0	Av	V	10	1.1	<20 dB			54
19696.0	Av	V	10	1.1	<20 dB			54
22158.0	Av	V	10	1.1	<20 dB			54
24620.0	Av	V	10	1.1	<20 dB			54

PEAK: RES. =1 MHz, VID= 1MHz; AVERAGE: RES. =1 MHz, VID= 10Hz; NF = NOISE FLOOR

TEST PERSONNEL:

Rachid Sehb
Test Technician/Engineer


Signature

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5.6 RADIATED EMISSION LIMITS TEST DATA

Operating Frequency (MHz): 2412
Channel: 1
Measured Cond. Pwr. (dBm): 20.3

Measured EIRP (dBm): 15.0
Antenna AIR-ANT2012

TABLE 5-11: RADIATED EMISSIONS HARMONICS/SPURIOUS (CHANNEL 1) AIR-ANT2012

Emission Frequency (MHz)	Test Detector	Antenna Polarity (H/V)	Turntable Azimuth (deg)	Antenna Height (m)	Analyzer Reading (dBuV)	Site Correction Factor (dB/m)	Emission Level (dBuV/m)	Limit (dBuV/m)
2357.63	Av	V	10	1.1	30.1	5.6	35.7	54
2357.10	Pk	V	10	1.1	42.6	5.6	48.2	
2368.51	Av	V	30	1.1	29.9	5.6	35.5	54
2368.64	Pk	V	30	1.1	42.2	5.6	47.8	
2379.52	Av	V	30	1.1	30.1	5.6	35.7	54
2379.58	Pk	V	30	1.1	41.6	5.6	47.2	
2412.56	Av	V	40	1.1	93.9	5.6	99.5	Fundamental
2413.12	Pk	V	40	1.1	102.9	5.6	108.5	Fundamental
2484.78	Av	V	20	1.1	30.7	5.6	36.3	54
2484.52	Pk	V	20	1.1	40.7	5.6	46.3	
2548.40	Av	V	20	1.1	30.1	5.6	35.7	54
2548.40	Pk	V	20	1.1	39.5	5.6	45.1	
2787.80	Av	V	20	1.1	29.9	5.6	35.5	54
2785.70	Pk	V	20	1.1	41.9	5.6	47.5	
4833.47	Av	V	30	1.1	24.7	12.3	37.0	54
4824.61	Pk	V	30	1.1	39.1	12.3	51.4	
7263.49	Av	V	40	1.1	28.0	17.8	45.8	54
7262.77	Pk	V	40	1.1	40.9	17.8	58.7	
9648	Av	V	10	1.1	<20 dB			54
12060	Av	V	10	1.1	<20 dB			54
14472	Av	V	10	1.1	<20 dB			54
16884	Av	V	10	1.1	<20 dB			54
19296	Av	V	10	1.1	<20 dB			54
21708	Av	V	10	1.1	<20 dB			54
24120	Av	V	10	1.1	<20 dB			54

PEAK: RES. =1 MHz, VID= 1MHz; AVERAGE: RES. =1 MHz, VID= 10Hz; NF = NOISE FLOOR

TEST PERSONNEL:

Rachid Sehb
Test Technician/Engineer


Signature

12/14/2001
Date Of Test



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Operating Frequency (MHz): 2437
Channel: 6
Measured Cond. Pwr. (dBm): 19.0

Measured EIRP (dBm): 20.3
Antenna AIR-ANT2012

TABLE 5-12: RADIATED EMISSIONS HARMONICS/SPURIOUS (CHANNEL 6) AIR-ANT2012

Emission Frequency (MHz)	Test Detector	Antenna Polarity (H/V)	Turntable Azimuth (deg)	Antenna Height (m)	Analyzer Reading (dBuV)	Site Correction Factor (dB/m)	Emission Level (dBuV/m)	Limit (dBuV/m)
2435.53	Av	V	60	1.1	96.8	5.6	102.4	Fundamental
2436.80	Pk	V	60	1.1	105.9	5.6	111.5	Fundamental
2480.00	Av	V	10	1.2	30.2	5.6	35.8	54
2480.00	Pk	V	10	1.2	41.3	5.6	46.9	
2513.84	Av	V	30	1.1	30.1	5.6	35.7	54
2514.10	Pk	V	30	1.1	40.3	5.6	45.9	
2578.24	Av	V	10	1.1	27.1	5.6	32.7	54
2578.49	Pk	V	10	1.1	37.9	5.6	43.5	
4870.27	Av	V	30	1.2	28.3	12.3	40.6	54
4871.94	Pk	V	30	1.2	40.7	12.3	53.0	
7309.23	Av	V	30	1.2	43.6	17.8	61.4	54
7310.39	Pk	V	30	1.2	31.0	17.8	48.8	
9748	Av	V	10	1.1	<20 dB			54
12185	Av	V	10	1.1	<20 dB			54
14622	Av	V	10	1.1	<20 dB			54
17059	Av	V	10	1.1	<20 dB			54
19496	Av	V	10	1.1	<20 dB			54
21933	Av	V	10	1.1	<20 dB			54
24370	Av	V	10	1.1	<20 dB			54

PEAK: RES. =1 MHz; VID= 1MHz; AVERAGE: RES. =1 MHz; VID= 10Hz; NF = NOISE FLOOR

TEST PERSONNEL:

Rachid Sehb
Test Technician/Engineer


Signature

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Operating Frequency (MHz): 2462
Channel: 11
Measured Cond. Pwr. (dBm): 19.0

Measured EIRP (dBm): 20.5
Antenna: AIR-ANT2012

TABLE 5-13: RADIATED EMISSIONS HARMONICS/SPURIOUS (CHANNEL 11) AIR-ANT2012

Emission Frequency (MHz)	Test Detector	Antenna Polarity (H/V)	Turntable Azimuth (deg)	Antenna Height (m)	Analyzer Reading (dBuV)	Site Correction Factor (dB/m)	Emission Level (dBuV/m)	Limit (dBuV/m)
2363.63	Av	V	10	1.2	29.6	5.6	35.2	54
2363.70	Pk	V	10	1.2	40.6	5.6	46.2	
2374.55	Av	V	20	1.2	30.2	5.6	35.8	54
2374.61	Pk	V	20	1.2	41.8	5.6	47.4	
2461.83	Av	V	40	1.2	96.8	5.6	102.4	Fundamental
2463.01	Pk	V	40	1.2	105.0	5.6	110.6	Fundamental
2483.63	Av	V	30	1.2	36.3	5.6	41.9	54
2483.76	Pk	V	30	1.2	47.1	5.6	52.7	
2495.56	Av	V	50	1.2	42.2	5.6	47.8	54
2495.56	Pk	V	50	1.2	32.1	5.6	37.7	
2545.51	Av	V	20	1.2	28.9	5.6	34.5	54
2545.77	Pk	V	20	1.2	40.0	5.6	45.6	
4914.47	Av	V	10	1.1	25.3	12.3	37.6	54
4914.47	Pk	V	10	1.1	37.5	12.3	49.8	
7360.63	Av	V	10	1.1	28.9	17.8	46.7	54
7350.35	Pk	V	10	1.1	43.6	17.8	61.4	
9848.0	Av	V	10	1.1	<20 dB			54
12310.0	Av	V	10	1.1	<20 dB			54
14772.0	Av	V	10	1.1	<20 dB			54
17234.0	Av	V	10	1.1	<20 dB			54
19696.0	Av	V	10	1.1	<20 dB			54
22158.0	Av	V	10	1.1	<20 dB			54
24620.0	Av	V	10	1.1	<20 dB			54

PEAK: RES. =1 MHz, VID= 1MHz; AVERAGE: RES. =1 MHz, VID= 10Hz; NF = NOISE FLOOR

TEST PERSONNEL:

Rachid Sehb
Test Technician/Engineer


Signature

12/04/2001
Date Of Test



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5.7 RADIATED EMISSION LIMITS TEST DATA

Operating Frequency (MHz): 2412
Channel: 1
Measured Cond. Pwr. (dBm): 20.3

Measured EIRP (dBm): 15.0
Antenna AIR-ANT1729

TABLE 5-14: RADIATED EMISSIONS HARMONICS/SPURIOUS (CHANNEL 1) AIR-ANT1729

Emission Frequency (MHz)	Test Detector	Antenna Polarity (H/V)	Turntable Azimuth (deg)	Antenna Height (m)	Analyzer Reading (dBuV)	Site Correction Factor (dB/m)	Emission Level (dBuV/m)	Limit (dBuV/m)
2368.56	Av	V	20	1.1	29.9	5.6	35.5	54
2368.56	Pk	V	20	1.1	42.1	5.6	47.7	
2379.63	Av	V	10	1.1	30.4	5.6	36.0	54
2379.63	Pk	V	10	1.1	42.5	5.6	48.1	
2411.97	Av	V	30	1.1	93.9	5.6	99.5	Fundamental
2412.91	Pk	V	30	1.1	102.0	5.6	107.6	Fundamental
2484.30	Av	V	80	1.1	30.2	5.6	35.8	54
2484.56	Pk	V	80	1.1	40.3	5.6	45.9	
2548.41	Av	V	30	1.1	29.0	5.6	34.6	54
2548.41	Pk	V	30	1.1	40.2	5.6	45.8	
2787.20	Av	V	10	1.1	28.5	5.6	34.1	54
2785.40	Pk	V	10	1.1	38.9	5.6	44.5	
4826.52	Av	V	20	1.1	28.5	12.3	40.8	54
4826.72	Pk	V	20	1.1	40.3	12.3	52.6	
7238.51	Av	V	40	1.1	29.5	17.8	47.3	54
7238.40	Pk	V	40	1.1	40.9	17.8	58.7	
9648	Av	V	10	1.1	<20 dB			54
12060	Av	V	10	1.1	<20 dB			54
14472	Av	V	10	1.1	<20 dB			54
16884	Av	V	10	1.1	<20 dB			54
19296	Av	V	10	1.1	<20 dB			54
21708	Av	V	10	1.1	<20 dB			54
24120	Av	V	10	1.1	<20 dB			54

PEAK: RES. =1 MHz, VID= 1MHz; AVERAGE: RES. =1 MHz, VID= 10Hz; NF = NOISE FLOOR

TEST PERSONNEL:

Rachid Sehb
Test Technician/Engineer


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Operating Frequency (MHz): 2437
Channel: 6
Measured Cond. Pwr. (dBm): 19.0

Measured EIRP (dBm): 20.3
Antenna AIR-ANT1729

TABLE 5-15: RADIATED EMISSIONS HARMONICS/SPURIOUS (CHANNEL 6) AIR-ANT1729

Emission Frequency (MHz)	Test Detector	Antenna Polarity (H/V)	Turntable Azimuth (deg)	Antenna Height (m)	Analyzer Reading (dBuV)	Site Correction Factor (dB/m)	Emission Level (dBuV/m)	Limit (dBuV/m)
2370.82	Av	V	20	1.2	31.1	5.6	36.7	54
2369.97	Pk	V	20	1.2	47.0	5.6	52.6	
2381.80	Av	V	10	1.2	31.0	5.6	36.6	54
2381.34	Pk	V	10	1.2	48.2	5.6	53.8	
2435.22	Av	V	20	1.2	96.9	5.6	102.5	Fundamental
2437.06	Pk	V	20	1.2	105.2	5.6	110.8	Fundamental
2514.06	Av	V	10	1.2	30.5	5.6	36.1	54
2513.28	Pk	V	10	1.2	41.2	5.6	46.8	
2807.65	Av	V	20	1.2	30.3	5.6	35.9	54
2807.15	Pk	V	20	1.2	40.4	5.6	46.0	
4869.96	Av	V	30	1.2	29.20	12.3	41.5	54
4871.91	Pk	V	30	1.2	41.80	12.3	54.1	
7311.67	Av	V	20	1.2	29.90	17.8	47.7	54
7312.23	Pk	V	20	1.2	41.70	17.8	59.5	
9748	Av	V	10	1.1	<20 dB			54
12185	Av	V	10	1.1	<20 dB			54
14622	Av	V	10	1.1	<20 dB			54
17059	Av	V	10	1.1	<20 dB			54
19496	Av	V	10	1.1	<20 dB			54
21933	Av	V	10	1.1	<20 dB			54
24370	Av	V	10	1.1	<20 dB			54

PEAK: RES. =1 MHz; VID= 1MHz; AVERAGE: RES. =1 MHz; VID= 10Hz; NF = NOISE FLOOR

TEST PERSONNEL:

Rachid Sehb
Test Technician/Engineer


Signature

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Operating Frequency (MHz): 2462
Channel: 11
Measured Cond. Pwr. (dBm): 19.0

Measured EIRP (dBm): 20.5
Antenna: AIR-ANT1729

TABLE 5-16: RADIATED EMISSIONS HARMONICS/SPURIOUS (CHANNEL 11) AIR-ANT1729

Emission Frequency (MHz)	Test Detector	Antenna Polarity (H/V)	Turntable Azimuth (deg)	Antenna Height (m)	Analyzer Reading (dBuV)	Site Correction Factor (dB/m)	Emission Level (dBuV/m)	Limit (dBuV/m)
2363.62	Av	V	20	1.2	29.4	5.6	35.0	54
2363.31	Pk	V	20	1.2	40.5	5.6	46.1	
2374.77	Av	V	20	1.2	30.1	5.6	35.7	54
2374.77	Pk	V	20	1.2	40.5	5.6	46.1	
2462.28	Av	V	10	1.2	94.0	5.6	99.6	Fundamental
2462.90	Pk	V	10	1.2	102.9	5.6	108.5	Fundamental
2484.67	Av	V	20	1.2	34.4	5.6	40.0	54
2484.28	Pk	V	20	1.2	45.1	5.6	50.7	
2495.95	Av	V	10	1.2	30.4	5.6	36.0	54
2495.70	Pk	V	10	1.2	41.8	5.6	47.4	
4927.83	Av	V	20	1.2	25.70	12.3	38.0	54
4927.81	Pk	V	20	1.2	38.30	12.3	50.6	
7390.55	Av	V	10	1.2	29.00	17.8	46.8	54
7390.73	Pk	V	10	1.2	40.20	17.8	58.0	
9848.0	Av	V	10	1.1	<20 dB			54
12310.0	Av	V	10	1.1	<20 dB			54
14772.0	Av	V	10	1.1	<20 dB			54
17234.0	Av	V	10	1.1	<20 dB			54
19696.0	Av	V	10	1.1	<20 dB			54
22158.0	Av	V	10	1.1	<20 dB			54
24620.0	Av	V	10	1.1	<20 dB			54

PEAK: RES. =1 MHz, VID= 1MHz; AVERAGE: RES. =1 MHz, VID= 10Hz; NF = NOISE FLOOR

TEST PERSONNEL:

Rachid Sehb
Test Technician/Engineer


Signature

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5.8 RADIATED EMISSION LIMITS TEST DATA

Operating Frequency (MHz): 2412

Channel: 1

Measured Cond. Pwr. (dBm): 20.3

Measured EIRP (dBm): 15.0

Antenna AIR-ANT2506

TABLE 5-17: RADIATED EMISSIONS HARMONICS/SPURIOUS (CHANNEL 1) AIR-ANT2506

Emission Frequency (MHz)	Test Detector	Antenna Polarity (H/V)	Turntable Azimuth (deg)	Antenna Height (m)	Analyzer Reading (dBuV)	Site Correction Factor (dB/m)	Emission Level (dBuV/m)	Limit (dBuV/m)
2368.56	Av	V	20	1.2	29.9	5.6	35.5	54
2367.76	Pk	V	20	1.2	41.1	5.6	46.7	
2379.53	Av	V	40	1.2	30.4	5.6	36.0	54
2379.89	Pk	V	40	1.2	41.5	5.6	47.1	
2412.16	Av	V	30	1.2	93.5	5.6	99.1	Fundamental
2412.34	Pk	V	30	1.2	102.4	5.6	108.0	Fundamental
4826.45	Av	V	20	1.1	25.4	12.3	37.7	54
4826.55	Pk	V	20	1.1	38.6	12.3	50.9	
7238.60	Av	V	30	1.1	27.9	17.8	45.7	54
7238.50	Pk	V	30	1.1	40	17.8	57.8	
9648	Av	V	10	1.1	<20 dB			54
12060	Av	V	10	1.1	<20 dB			54
14472	Av	V	10	1.1	<20 dB			54
16884	Av	V	10	1.1	<20 dB			54
19296	Av	V	10	1.1	<20 dB			54
21708	Av	V	10	1.1	<20 dB			54
24120	Av	V	10	1.1	<20 dB			54

PEAK: RES. =1 MHz, VID= 1MHz; AVERAGE: RES. =1 MHz, VID= 10Hz; NF = NOISE FLOOR

TEST PERSONNEL:

Rachid Sehb
Test Technician/Engineer

Signature

12/14/2001
Date Of Test



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Operating Frequency (MHz): 2437
Channel: 6
Measured Cond. Pwr. (dBm): 19.0

Measured EIRP (dBm): 20.3
Antenna AIR-ANT2506

TABLE 5-18: RADIATED EMISSIONS HARMONICS/SPURIOUS (CHANNEL 6) AIR-ANT2506

Emission Frequency (MHz)	Test Detector	Antenna Polarity (H/V)	Turntable Azimuth (deg)	Antenna Height (m)	Analyzer Reading (dBuV)	Site Correction Factor (dB/m)	Emission Level (dBuV/m)	Limit (dBuV/m)
2370.54	Av	V	20	1.2	30.4	5.6	36.0	54
2370.62	Pk	V	20	1.2	41.5	5.6	47.1	
2381.60	Av	V	10	1.2	30.7	5.6	36.3	54
2381.60	Pk	V	10	1.2	41.2	5.6	46.8	
2435.72	Av	V	30	1.2	94.2	5.6	99.8	Fundamental
2437.06	Pk	V	30	1.2	102.4	5.6	108.0	Fundamental
2513.60	Av	V	20	1.2	28.8	5.6	34.4	54
2513.60	Pk	V	20	1.2	40.0	5.6	45.6	
2578.34	Av	V	20	1.2	27.0	5.6	32.6	54
2577.82	Pk	V	20	1.2	38.9	5.6	44.5	
4873.26	Av	V	40	1.2	26.6	12.3	38.9	54
4873.86	Pk	V	40	1.2	40	12.3	52.3	
7310.04	Av	V	20	1.2	30.6	17.8	48.4	54
7309.99	Pk	V	20	1.2	42.2	17.8	60.0	
9748	Av	V	10	1.1	<20 dB			54
12185	Av	V	10	1.1	<20 dB			54
14622	Av	V	10	1.1	<20 dB			54
17059	Av	V	10	1.1	<20 dB			54
19496	Av	V	10	1.1	<20 dB			54
21933	Av	V	10	1.1	<20 dB			54
24370	Av	V	10	1.1	<20 dB			54

PEAK: RES. =1 MHz; VID= 1MHz; AVERAGE: RES. =1 MHz; VID= 10Hz; NF = NOISE FLOOR

TEST PERSONNEL:

Rachid Sehb
Test Technician/Engineer


Signature

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Operating Frequency (MHz): 2462
Channel: 11
Measured Cond. Pwr. (dBm): 19.0

Measured EIRP (dBm): 20.5
Antenna: AIR-ANT2506

TABLE 5-19: RADIATED EMISSIONS HARMONICS/SPURIOUS (CHANNEL 11) AIR-ANT2506

Emission Frequency (MHz)	Test Detector	Antenna Polarity (H/V)	Turntable Azimuth (deg)	Antenna Height (m)	Analyzer Reading (dBuV)	Site Correction Factor (dB/m)	Emission Level (dBuV/m)	Limit (dBuV/m)
2374.77	Av	V	30	1.2	28.9	5.6	34.5	54
2374.38	Pk	V	30	1.2	41.3	5.6	46.9	
2461.85	Av	V	10	1.2	92.6	5.6	98.2	Fundamental
2462.50	Pk	V	10	1.2	100.3	5.6	105.9	Fundamental
2484.78	Av	V	30	1.2	33.0	5.6	38.6	54
2485.55	Pk	V	30	1.2	43.5	5.6	49.1	
2495.92	Av	V	10	1.2	30.3	5.6	35.9	54
2495.66	Pk	V	10	1.2	40.9	5.6	46.5	
4925.45	Av	V	10	1.2	25.1	12.3	37.4	54
4924.65	Pk	V	10	1.2	37.7	12.3	50.0	
7390.71	Av	V	20	1.2	29.2	17.8	47.0	54
7390.11	Pk	V	20	1.2	40.6	17.8	58.4	
9848.0	Av	V	10	1.1	<20 dB			54
12310.0	Av	V	10	1.1	<20 dB			54
14772.0	Av	V	10	1.1	<20 dB			54
17234.0	Av	V	10	1.1	<20 dB			54
19696.0	Av	V	10	1.1	<20 dB			54
22158.0	Av	V	10	1.1	<20 dB			54
24620.0	Av	V	10	1.1	<20 dB			54

PEAK: RES. =1 MHz, VID= 1MHz; AVERAGE: RES. =1 MHz, VID= 10Hz; NF = NOISE FLOOR

TEST PERSONNEL:

Rachid Sehb
Test Technician/Engineer


Signature

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5.9 RADIATED EMISSION LIMITS TEST DATA

Operating Frequency (MHz): 2412

Channel: 1

Measured Cond. Pwr. (dBm): 20.3

Measured EIRP (dBm): 15.0

Antenna AIR-ANT3213

TABLE 5-20: RADIATED EMISSIONS HARMONICS/SPURIOUS (CHANNEL 1) AIR-ANT3213

Emission Frequency (MHz)	Test Detector	Antenna Polarity (H/V)	Turntable Azimuth (deg)	Antenna Height (m)	Analyzer Reading (dBuV)	Site Correction Factor (dB/m)	Emission Level (dBuV/m)	Limit (dBuV/m)
2379.69	Av	V	10	1.1	28.4	5.6	34.0	54
2379.69	Pk	V	10	1.1	41.5	5.6	47.1	
2413.81	Av	V	20	1.1	90.4	5.6	96.0	Fundamental
2412.86	Pk	V	20	1.1	99.4	5.6	105.0	Fundamental
2484.67	Av	V	10	1.1	28.0	5.6	33.6	54
2485.06	Pk	V	10	1.1	40.0	5.6	45.6	
2548.50	Av	V	20	1.1	26.7	5.6	32.3	54
2547.72	Pk	V	20	1.1	38.4	5.6	44.0	
4826.72	Av	V	10	1.1	<20 dB			54
7238.40	Av	V	10	1.1	<20 dB			54
9648	Av	V	10	1.1	<20 dB			54
12060	Av	V	10	1.1	<20 dB			54
14472	Av	V	10	1.1	<20 dB			54
16884	Av	V	10	1.1	<20 dB			54
19296	Av	V	10	1.1	<20 dB			54
21708	Av	V	10	1.1	<20 dB			54
24120	Av	V	10	1.1	<20 dB			54

PEAK: RES. =1 MHz, VID= 1MHz; AVERAGE: RES. =1 MHz, VID= 10Hz; NF = NOISE FLOOR

TEST PERSONNEL:

Rachid Sehb
Test Technician/Engineer

Signature

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Operating Frequency (MHz): 2437
Channel: 6
Measured Cond. Pwr. (dBm): 19.0

Measured EIRP (dBm): 20.3
Antenna AIR-ANT3213

TABLE 5-21: RADIATED EMISSIONS HARMONICS/SPURIOUS (CHANNEL 6) AIR-ANT3213

Emission Frequency (MHz)	Test Detector	Antenna Polarity (H/V)	Turntable Azimuth (deg)	Antenna Height (m)	Analyzer Reading (dBuV)	Site Correction Factor (dB/m)	Emission Level (dBuV/m)	Limit (dBuV/m)
2370.69	Av	V	20	1.2	29.4	5.6	35.0	54
2370.54	Pk	V	20	1.2	41.5	5.6	47.1	
2436.50	Av	V	20	1.2	94.3	5.6	99.9	Fundamental
2436.84	Pk	V	20	1.2	102.7	5.6	108.3	Fundamental
2513.99	Av	V	10	1.2	28.3	5.6	33.9	54
2512.82	Pk	V	10	1.2	39.0	5.6	44.6	
4873.26	Av	V	10	1.2	<20 dB			54
7310.04	Av	V	20	1.2	<20 dB			54
9748	Av	V	10	1.1	<20 dB			54
12185	Av	V	10	1.1	<20 dB			54
14622	Av	V	10	1.1	<20 dB			54
17059	Av	V	10	1.1	<20 dB			54
19496	Av	V	10	1.1	<20 dB			54
21933	Av	V	10	1.1	<20 dB			54
24370	Av	V	10	1.1	<20 dB			54

PEAK: RES. =1 MHz; VID= 1MHz; AVERAGE: RES. =1 MHz; VID= 10Hz; NF = NOISE FLOOR

TEST PERSONNEL:

Rachid Sehb
Test Technician/Engineer

Signature

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Operating Frequency (MHz): 2462
Channel: 11
Measured Cond. Pwr. (dBm): 19.0

Measured EIRP (dBm): 20.5
Antenna: AIR-ANT3213

TABLE 5-22: RADIATED EMISSIONS HARMONICS/SPURIOUS (CHANNEL 11) AIR-ANT3213

Emission Frequency (MHz)	Test Detector	Antenna Polarity (H/V)	Turntable Azimuth (deg)	Antenna Height (m)	Analyzer Reading (dBuV)	Site Correction Factor (dB/m)	Emission Level (dBuV/m)	Limit (dBuV/m)
2374.54	Av	V	30	1.1	29.4	5.6	35.0	54
2374.54	Pk	V	30	1.1	40.7	5.6	46.3	
2461.72	Av	V	10	1.1	92.3	5.6	97.9	Fundamental
2462.62	Pk	V	20	1.1	100.3	5.6	105.9	Fundamental
2484.93	Av	V	10	1.1	31.9	5.6	37.5	54
2484.40	Pk	V	10	1.1	42.6	5.6	48.2	
2496.05	Av	V	20	1.1	30.4	5.6	36.0	54
2495.92	Pk	V	20	1.1	40.7	5.6	46.3	
4925.45	Av	V	10	1.1	<20 dB			54
7390.71	Av	V	20	1.1	<20 dB			54
9848.0	Av	V	10	1.1	<20 dB			54
12310.0	Av	V	10	1.1	<20 dB			54
14772.0	Av	V	10	1.1	<20 dB			54
17234.0	Av	V	10	1.1	<20 dB			54
19696.0	Av	V	10	1.1	<20 dB			54
22158.0	Av	V	10	1.1	<20 dB			54
24620.0	Av	V	10	1.1	<20 dB			54

PEAK: RES. =1 MHz, VID= 1MHz; AVERAGE: RES. =1 MHz, VID= 10Hz; NF = NOISE FLOOR

TEST PERSONNEL:

Rachid Sehb
Test Technician/Engineer

Signature

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5.10 RADIATED EMISSION LIMITS TEST DATA

Operating Frequency (MHz): 2412

Channel: 1

Measured Cond. Pwr. (dBm): 20.3

Measured EIRP (dBm): 15.0

Antenna AIR-ANT1728

TABLE 5-23: RADIATED EMISSIONS HARMONICS/SPURIOUS (CHANNEL 1) AIR-ANT1728

Emission Frequency (MHz)	Test Detector	Antenna Polarity (H/V)	Turntable Azimuth (deg)	Antenna Height (m)	Analyzer Reading (dBuV)	Site Correction Factor (dB/m)	Emission Level (dBuV/m)	Limit (dBuV/m)
2412.60	Av	V	10	1.1	93.8	5.6	99.4	Fundamental
2412.93	Pk	V	10	1.1	102.1	5.6	107.7	Fundamental
2484.67	Av	V	20	1.1	29.9	5.6	35.5	54
2484.67	Pk	V	20	1.1	40.8	5.6	46.4	
2548.76	Av	V	10	1.1	27.9	5.6	33.5	54
2547.98	Pk	V	10	1.1	39.8	5.6	45.4	
4826.72	Av	V	10	1.1	<20 dB			54
7238.40	Av	V	10	1.1	<20 dB			54
9648	Av	V	10	1.1	<20 dB			54
12060	Av	V	10	1.1	<20 dB			54
14472	Av	V	10	1.1	<20 dB			54
16884	Av	V	10	1.1	<20 dB			54
19296	Av	V	10	1.1	<20 dB			54
21708	Av	V	10	1.1	<20 dB			54
24120	Av	V	10	1.1	<20 dB			54

PEAK: RES. =1 MHz, VID= 1MHz; AVERAGE: RES. =1 MHz, VID= 10Hz; NF = NOISE FLOOR

TEST PERSONNEL:

Rachid Sehb
Test Technician/Engineer

Signature

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Operating Frequency (MHz): 2437
Channel: 6
Measured Cond. Pwr. (dBm): 19.0

Measured EIRP (dBm): 20.3
Antenna AIR-ANT1728

TABLE 5-24: RADIATED EMISSIONS HARMONICS/SPURIOUS (CHANNEL 6) AIR-ANT1728

Emission Frequency (MHz)	Test Detector	Antenna Polarity (H/V)	Turntable Azimuth (deg)	Antenna Height (m)	Analyzer Reading (dBuV)	Site Correction Factor (dB/m)	Emission Level (dBuV/m)	Limit (dBuV/m)
2370.51	Av	V	20	1.2	29.2	5.6	34.8	54
2370.43	Pk	V	20	1.2	41.5	5.6	47.1	
2381.66	Av	V	20	1.2	29.3	5.6	34.9	54
2381.58	Pk	V	20	1.2	41.3	5.6	46.9	
2436.30	Av	V	10	1.2	94.4	5.6	100.0	Fundamental
2436.80	Pk	V	10	1.2	102.7	5.6	108.3	Fundamental
2513.86	Av	V	30	1.2	29.0	5.6	34.6	54
2513.86	Pk	V	30	1.2	37.2	5.6	42.8	
2578.59	Av	V	20	1.2	27.3	5.6	32.9	54
2578.08	Pk	V	20	1.2	37.6	5.6	43.2	
4873.26	Av	V	10	1.2	<20 dB			54
7310.04	Av	V	20	1.2	<20 dB			54
9748	Av	V	10	1.1	<20 dB			54
12185	Av	V	10	1.1	<20 dB			54
14622	Av	V	10	1.1	<20 dB			54
17059	Av	V	10	1.1	<20 dB			54
19496	Av	V	10	1.1	<20 dB			54
21933	Av	V	10	1.1	<20 dB			54
24370	Av	V	10	1.1	<20 dB			54

PEAK: RES. =1 MHz, VID= 1MHz; AVERAGE: RES. =1 MHz, VID= 10Hz; NF = NOISE FLOOR

TEST PERSONNEL:

Rachid Sehb
Test Technician/Engineer


Signature

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Operating Frequency (MHz): 2462
Channel: 11
Measured Cond. Pwr. (dBm): 19.0

Measured EIRP (dBm): 20.5
Antenna: AIR-ANT1728

TABLE 5-25: RADIATED EMISSIONS HARMONICS/SPURIOUS (CHANNEL 11) AIR-ANT1728

Emission Frequency (MHz)	Test Detector	Antenna Polarity (H/V)	Turntable Azimuth (deg)	Antenna Height (m)	Analyzer Reading (dBuV)	Site Correction Factor (dB/m)	Emission Level (dBuV/m)	Limit (dBuV/m)
2374.80	Av	V	30	1.1	29.2	5.6	34.8	54
2374.80	Pk	V	30	1.1	41.1	5.6	46.7	
2461.94	Av	V	20	1.1	93.5	5.6	99.1	Fundamental
2462.90	Pk	V	20	1.1	102.7	5.6	108.3	Fundamental
2484.65	Av	V	20	1.1	34.3	5.6	39.9	54
2484.40	Pk	V	20	1.1	44.2	5.6	49.8	
2495.92	Av	V	20	1.1	32.2	5.6	37.8	54
2495.15	Pk	V	20	1.1	41.7	5.6	47.3	
4925.45	Av	V	10	1.1	<20 dB			54
7390.71	Av	V	20	1.1	<20 dB			54
9848.0	Av	V	10	1.1	<20 dB			54
12310.0	Av	V	10	1.1	<20 dB			54
14772.0	Av	V	10	1.1	<20 dB			54
17234.0	Av	V	10	1.1	<20 dB			54
19696.0	Av	V	10	1.1	<20 dB			54
22158.0	Av	V	10	1.1	<20 dB			54
24620.0	Av	V	10	1.1	<20 dB			54

PEAK: RES. =1 MHz, VID= 1MHz; AVERAGE: RES. =1 MHz, VID= 10Hz; NF = NOISE FLOOR

TEST PERSONNEL:

Rachid Sehb
Test Technician/Engineer

Signature

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5.11 RADIATED EMISSION LIMITS TEST DATA

Operating Frequency (MHz): 2412

Channel: 1

Measured Cond. Pwr. (dBm): 20.3

Measured EIRP (dBm): 15.0

Antenna AIR-ANT5959

TABLE 5-26: RADIATED EMISSIONS HARMONICS/SPURIOUS (CHANNEL 1) AIR-ANT5959

Emission Frequency (MHz)	Test Detector	Antenna Polarity (H/V)	Turntable Azimuth (deg)	Antenna Height (m)	Analyzer Reading (dBuV)	Site Correction Factor (dB/m)	Emission Level (dBuV/m)	Limit (dBuV/m)
2380.00	Av	V	10	1.1	29.3	5.6	34.9	54
2380.54	Pk	V	10	1.1	40.7	5.6	46.3	
2412.45	Av	V	20	1.1	89.7	5.6	95.3	Fundamental
2412.78	Pk	V	20	1.1	99.2	5.6	104.8	Fundamental
2484.40	Av	V	20	1.1	28.3	5.6	33.9	54
2485.29	Pk	V	20	1.1	40.6	5.6	46.2	
2547.90	Av	V	40	1.1	27.1	5.6	32.7	54
2547.90	Pk	V	40	1.1	38.2	5.6	43.8	
4826.72	Av	V	10	1.1	<20 dB			54
7238.40	Av	V	10	1.1	<20 dB			54
9648	Av	V	10	1.1	<20 dB			54
12060	Av	V	10	1.1	<20 dB			54
14472	Av	V	10	1.1	<20 dB			54
16884	Av	V	10	1.1	<20 dB			54
19296	Av	V	10	1.1	<20 dB			54
21708	Av	V	10	1.1	<20 dB			54
24120	Av	V	10	1.1	<20 dB			54

PEAK: RES. =1 MHz, VID= 1MHz; AVERAGE: RES. =1 MHz, VID= 10Hz; NF = NOISE FLOOR

TEST PERSONNEL:

Rachid Sehb
Test Technician/Engineer

Signature

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Operating Frequency (MHz): 2437
Channel: 6
Measured Cond. Pwr. (dBm): 19.0

Measured EIRP (dBm): 20.3
Antenna AIR-ANT5959

TABLE 5-27: RADIATED EMISSIONS HARMONICS/SPURIOUS (CHANNEL 6) AIR-ANT5959

Emission Frequency (MHz)	Test Detector	Antenna Polarity (H/V)	Turntable Azimuth (deg)	Antenna Height (m)	Analyzer Reading (dBuV)	Site Correction Factor (dB/m)	Emission Level (dBuV/m)	Limit (dBuV/m)
2370.75	Av	V	20	1.2	28.6	5.6	34.2	54
2371.21	Pk	V	20	1.2	40.6	5.6	46.2	
2381.89	Av	V	20	1.2	29.0	5.6	34.6	54
2381.89	Pk	V	20	1.2	40.7	5.6	46.3	
2436.41	Av	V	10	1.2	90.8	5.6	96.4	Fundamental
2436.97	Pk	V	10	1.2	99.4	5.6	105.0	Fundamental
2513.99	Av	V	30	1.2	27.3	5.6	32.9	54
2513.99	Pk	V	30	1.2	38.6	5.6	44.2	
4873.26	Av	V	10	1.2	<20 dB			54
7310.04	Av	V	20	1.2	<20 dB			54
9748	Av	V	10	1.1	<20 dB			54
12185	Av	V	10	1.1	<20 dB			54
14622	Av	V	10	1.1	<20 dB			54
17059	Av	V	10	1.1	<20 dB			54
19496	Av	V	10	1.1	<20 dB			54
21933	Av	V	10	1.1	<20 dB			54
24370	Av	V	10	1.1	<20 dB			54

PEAK: RES. =1 MHz, VID= 1MHz; AVERAGE: RES. =1 MHz, VID= 10Hz; NF = NOISE FLOOR

TEST PERSONNEL:

Rachid Sehb
Test Technician/Engineer

Signature

12/14/2001
Date Of Test



360 Herndon Parkway
Suite 1400
Herndon, VA 20170
<http://www.rheintech.com>

2001326 / QRTL01-367
Dates of Tests 12/04/2001 and 12/05/2001
FCC Part 15 Certification &
Industry Canada RSS-210

Operating Frequency (MHz): 2462
Channel: 11
Measured Cond. Pwr. (dBm): 19.0

Measured EIRP (dBm): 20.5
Antenna: AIR-ANT5959

TABLE 5-28: RADIATED EMISSIONS HARMONICS/SPURIOUS (CHANNEL 11) AIR-ANT5959

Emission Frequency (MHz)	Test Detector	Antenna Polarity (H/V)	Turntable Azimuth (deg)	Antenna Height (m)	Analyzer Reading (dBuV)	Site Correction Factor (dB/m)	Emission Level (dBuV/m)	Limit (dBuV/m)
2462.11	Av	V	30	1.1	88.4	5.6	94.0	Fundamental
2462.95	Pk	V	30	1.1	96.6	5.6	102.2	Fundamental
2485.42	Av	V	20	1.1	32.3	5.6	37.9	54
2484.54	Pk	V	20	1.1	41.2	5.6	46.8	
2497.39	Av	V	30	1.1	33.4	5.6	39.0	54
2495.79	Pk	V	30	1.1	40.7	5.6	46.3	
4925.45	Av	V	10	1.1	<20 dB			54
7390.71	Av	V	10	1.1	<20 dB			54
9848.00	Av	V	10	1.1	<20 dB			54
12310.00	Av	V	10	1.1	<20 dB			54
14772.00	Av	V	10	1.1	<20 dB			54
17234.00	Av	V	10	1.1	<20 dB			54
19696.00	Av	V	10	1.1	<20 dB			54
22158.00	Av	V	10	1.1	<20 dB			54
24620.00	Av	V	10	1.1	<20 dB			54

PEAK: RES. =1 MHz, VID= 1MHz; AVERAGE: RES. =1 MHz, VID= 10Hz; NF = NOISE FLOOR

TEST PERSONNEL:

Rachid Sehb
Test Technician/Engineer

Signature

12/04/2001
Date Of Test



6 POWER OUTPUT - §15.247(B)

6.1 POWER OUTPUT TEST PROCEDURE

The power output per FCC 15.247(b) was measured on the EUT using an HP peak power meter. EIRP measurement was performed as a radiated test using the substitution method.

6.2 TEST EQUIPMENT USED FOR TESTING

TABLE 6-1: TEST EQUIPMENT USED FOR TESTING (RADIATED RF OUTPUT – EIRP)

RTL Asset #	Manufacturer	Model	Part Type	Serial Number
900931	HP	8566B	Spectrum Analyzer (100Hz – 22 GHz)	3138A07771
901186	Agilent Technologies	E9323A (50MHz-6GHz)	Peak & Avg. Power Sensor	US40410380
901184	Agilent Technologies	E4416A	EPM-P Power Meter, single channel	GB41050573
900772	EMCO	3161-02	Horn ANTENNA (2-4 GHz)	900772
900723	Miteq	NA	AMP 100M Hz-26GHz	NA
900814	Electro-Metrics	RGA-60	Double Ridges Guide Antenna (1-18 GHz)	2310

6.3 POWER OUTPUT TEST DATA

TABLE 6-2: POWER OUTPUT TEST DATA

Operating Frequency (MHz): 2412MHz, 2436MHz, 2462MHz
Channel: 1, 6 & 11
Measured Cond. Pwr. (dBm): 19.4, 20.4 & 18.4

TABLE 6-3: POWER OUTPUT TEST DATA

CHANNEL	EIRP (dBm)* AIR- ANT1949	EIRP (dBm)* AIR- ANT4121	EIRP (dBm)* AIR- ANT3549	EIRP (dBm)* AIR- ANT1729	EIRP (dBm)* AIR- ANT1729	EIRP (dBm)* AIR- ANT2506	EIRP (dBm)* AIR- ANT3213	EIRP (dBm)* AIR- ANT1728	EIRP (dBm)* AIR- ANT5959	POWER CONDUCTED OUTPUT (dBm)
1	27.5	23	20.4	20.9	20	20.4	17.4	20.1	17.2	19.4
6	30.1	24.2	23.1	23.9	23.2	20.4	20.7	20.7	17.4	20.4
11	29	23.2	21.7	23.0	20.9	18.3	18.3	20.7	16.6	18.4

*Measurement accuracy is +/- 1.5 dB

TEST PERSONNEL:

Rachid Sehb
Test Technician/Engineer


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Industry Canada RSS-210

7 CONCLUSION

The data in this measurement report shows that the, **Model: AIR-MPI 352** complies with all the requirements of Parts 2 and 22.901 of the FCC Rules and Industry Canada RSS-128.