Nemko Test Report:	4L0041RUS1
Applicant:	Sychip, Inc. 2805 North Dallas Tollway Suite 400 Plano, TX 75093
Equipment Under Test: (E.U.T.)	WLAN6090SD
In Accordance With:	**FCC Part 15, Subpart C, 15.247** Direct Sequence Spread Spectrum Transmitters
Tested By:	Nemko Dallas Inc. 802 N. Kealy Lewisville, Texas 75057-3136
Authorized By:	 Tom Tidwell, Frontline Manager
Date:	4/27/04

Table of Contents

Section 1. Summary of Test Results

Manufacturer: Sychip, Inc.

Model No.: WLAN6090SD

Serial No.: None

General: **All measurements are traceable to national standards.**

These tests were conducted on a sample of the equipment for the purpose of demonstrating compliance with Part 15, Subpart C, Paragraph 15.247 for Direct Sequence Spread Spectrum devices. Radiated tests were conducted is accordance with ANSI C63.4-1992. Radiated emissions are made on an open area test site. A description of the test facility is on file with the FCC.

☒ New Submission ☐ Production Unit

☐ Class II Permissive Change ☒ Pre-Production Unit

THIS TEST REPORT RELATES ONLY TO THE ITEM(S) TESTED.

THE FOLLOWING DEVIATIONS FROM, ADDITIONS TO, OR EXCLUSIONS FROM THE TEST SPECIFICATIONS HAVE BEEN MADE. NONE
See " Summary of Test Data".

NVLAP LAB CODE: 100426-0

Summary Of Test Data

NAME OF TEST	PARA. NO.	SPEC.	RESULT
Powerline Conducted Emissions	15.207(a)	48 dB?V	Complies
Minimum 6 dB Bandwidth	15.247(a)(2)	>500 kHz	Complies
Maximum Peak Power Output	15.247(b)(1)	<1 Watt	Complies
Spurious Emissions (Antenna Conducted)	15.247(c)	-20 dBc/100kHz	Complies
Spurious Emissions (Restricted Bands)	15.247(c)	< 74 dBuV/m Peak < 54 dBuV/m Avg	Complies
Peak Power Spectral Density	15.247(d)	+8 dBm/3kHz	Complies

Footnotes:

Section 2. Equipment Under Test (E.U.T.)

General Equipment Information

Frequency Band:

☐ 902 – 928 MHz
☒ 2400 – 2483.5 MHz
☐ 5725 – 5850 MHz

Channel Spacing: 5 MHz

User Frequency Adjustment: Software controlled

Description of EUT

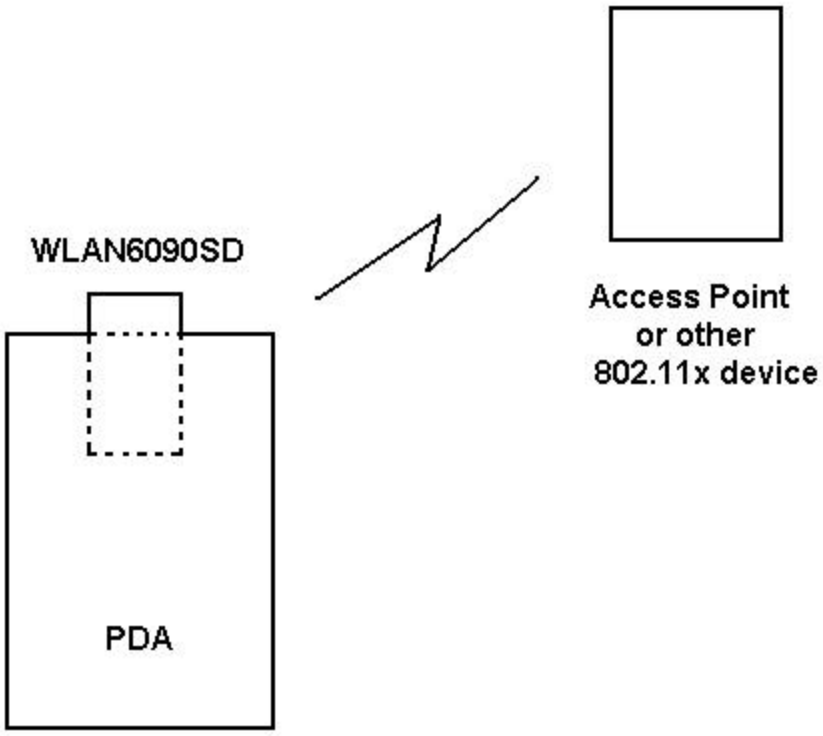
The WLAN6090SD is an SDIO card with an 802.11b radio integrated for wireless LAN communication. It is designed for use in PDA type devices. The radio has an integral antenna.

All testing was performed at 11 Mbps as this was found to be the worst-case emission configuration. Emission levels were checked at 1 Mbps, 2 Mbps, and 5.5 Mbps as well and found to be the same or less than emission levels in 11 Mbps mode. A software test mode was used to operate the equipment in the required channels and at the required power levels.

EMC testing was performed with the device installed in a PDA (Compaq iPAQ 3955, s/n. 4G29KUL190MX)

Testing was performed with fully charged batteries in the host device.

System Diagram



Section 3. Powerline Conducted Emissions

NAME OF TEST: Powerline Conducted Emissions	PARA. NO.: 15.207(a)
TESTED BY: Arturo Ruvalcaba	DATE: 2/12/04

Test Results: Complies.

Measurement Data: See attached plots.

Measurement Uncertainty: +/- 1.7 dB

Test Data – Powerline Conducted Emissions

NEMKO Dallas, Inc.

Dallas Headquarters:
802 N. Kealy
Lewisville, TX 75057
Tel: (972) 436-9600
Fax: (972) 436-2667

Conducted Emissions
Powerline Voltage Measurement

Complete X Job # : 4L0041E Test # : CEPV-01
Preliminary Page 1 of 1

Client Name : SyChip, Inc.
EUT Name : SDIO 802.11b Radio
EUT Model # : WLAN6090SD
EUT Part # : N/A
EUT Serial # : N/A
EUT Config. : Installed in PDA
Tx Full Power
Specification : CFR 47 Part 15 Subpart C, 15.207 Reference : 15.247
Transducer # : 1258 Temp. (deg. C) : 21 Date : 02/12/04
HP Filter # : 1433 Humidity (%) : 38 Time : 13:10
Cable 1 # : 1988 EUT Voltage : 115VAC Staff : Art Ruvalcaba
Cable 2 # : 1998 EUT Frequency : 60Hz Location : Lab 2
Detector 1 # : 785 Peak Bandwidth: 10kHz Photo ID: 4L0041E CEPV-01
Detector 2 # : NA QP Bandwidth 10kHz
Limiter # : NA Avg. Bandwidth 10kHz

Meas. Freq. (MHz)	EUT Test Point	Detector Type (P,QP, A)	Limit Type (QP, A)	Meter Reading (dBuV)	Path Loss (dB)	Transducer Factor (dB)	Corrected Reading (dBuV)	Spec.limit (dBuV) Q.P.	Spec.limit (dBuV) Avg.	CR/SL Diff. (dB)	Pass Fail Unc.	Comment
0.161	N	P	A	45.0	0	0	45.0	65.41	55.412	-10.4	Pass	
0.321	N	P	A	34.2	0	0	34.2	59.68	49.681	-15.5	Pass	
0.48	N	P	A	28.9	0	0	28.9	56.34	46.339	-17.4	Pass	
0.669	N	P	A	36.6	0	0	36.6	56	46	-9.4	Pass	
1.14	N	P	A	36.7	0	0	36.7	56	46	-9.3	Pass	
5	N	P	A	36.0	0	0	36.0	60	50	-14.0	Pass	
0.189	H	P	A	43.0	0	0	43.0	64.08	54.081	-11.1	Pass	
0.384	H	P	A	37.8	0	0	37.8	58.19	48.193	-10.4	Pass	
0.492	H	P	A	31.8	0	0	31.8	56.13	46.134	-14.4	Pass	
0.658	H	P	A	35.8	0	0	35.8	56	46	-10.2	Pass	
2.3	H	P	A	33.5	0	0	33.5	56	46	-12.5	Pass	
5	H	P	A	36.1	0	0	36.1	60	50	-13.9	Pass	
											Scanned .150-30MHz	

..\EMCShare\AUTOMATE\DATASHTS\CEP Voltage Rev C.xls Document Control #EMC DS EM COND VOLT

Photos – Powerline Conducted Emissions

Front

Side

Section 4. Minimum 6 dB Bandwidth

NAME OF TEST: Minimum 6 dB Bandwidth	PARA. NO.: 15.247(a)(2)
TESTED BY: David Light	DATE: 2/19/04

Test Results: Complies.

Measurement Data: See 6 dB BW plot

Measured 6 dB bandwidth: 10.17 MHz
Channel Separation: 5 MHz

Equipment Used: 1464-1463-1621

Measurement Uncertainty: +/- 1x10^{-7} ppm

Temperature: 22 ?C

Relative Humidity: 40 %

Test Data – Occupied Bandwidth

Dallas Headquarters:
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Lewisville, TX 75057
Tel: (972) 436-9600
Fax: (972) 436-2667

Nemko Dallas, Inc.

Data Plot **Occupied Bandwidth**

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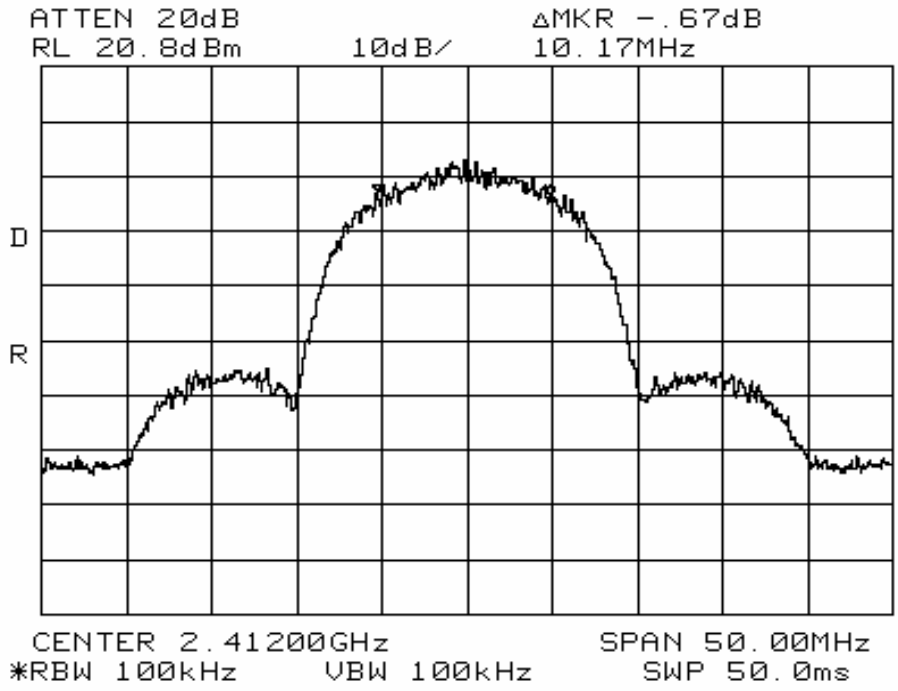
Job No.: 4L0041R Date: 2/19/2004 Preliminary:
Specification: 15.247 Temperature(°C): 22
Tested By: David Light Relative Humidity(%) 40
E.U.T.: WLAN6090SD
Configuration: TX FULL POWER
Sample Number: 1
Location: Lab 2 RBW: Refer to plots Measurement
Detector Type: Peak VBW: Refer to plots Distance: NA m

Test Equipment Used

Antenna: Directional Coupler:
Pre-Amp: Cable #1: 1621
Filter: Cable #2:
Receiver: 1464 Cable #3:
Attenuator #1 1469 Cable #4:
Attenuator #2: Mixer:
Additional equipment used:
Measurement Uncertainty: +/-1.7 dB



Notes: **6 dB BW Channel 1**

Test Data – Occupied Bandwidth

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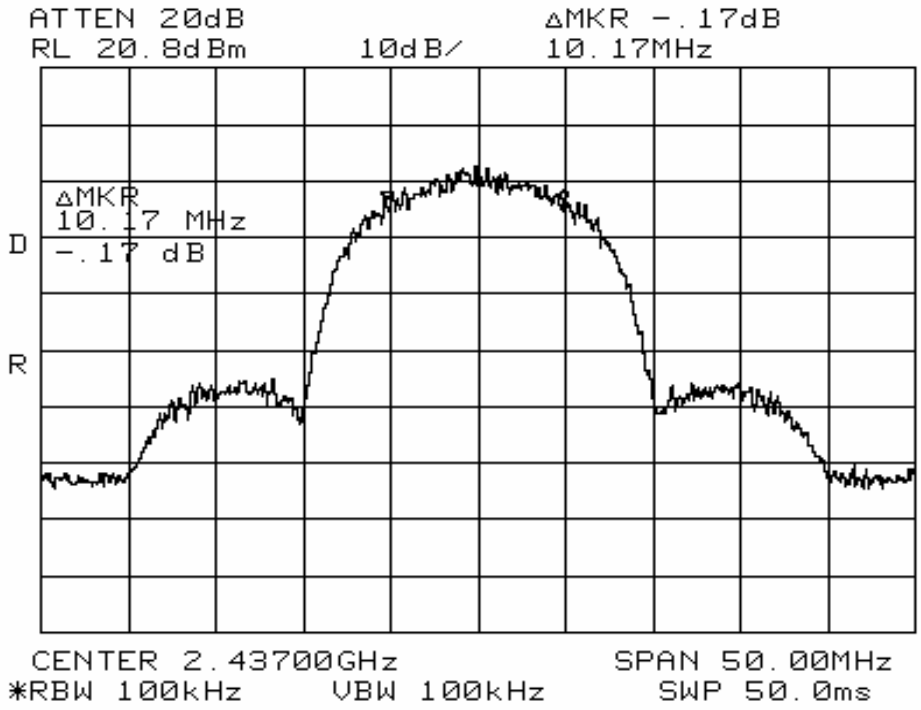
Data Plot **Occupied Bandwidth**

Page 2 of 6

Job No.:	4L0041R	Date:	2/19/2004
Specification:	15.2	Temperature(°C):	22
Tested By:	David Light	Relative Humidity(%)	40
E.U.T.:	WLAN6090SD		
Configuration:	TX FULL POWER		



Notes: **6 dB BW - Channel 6**

Test Data – Occupied Bandwidth

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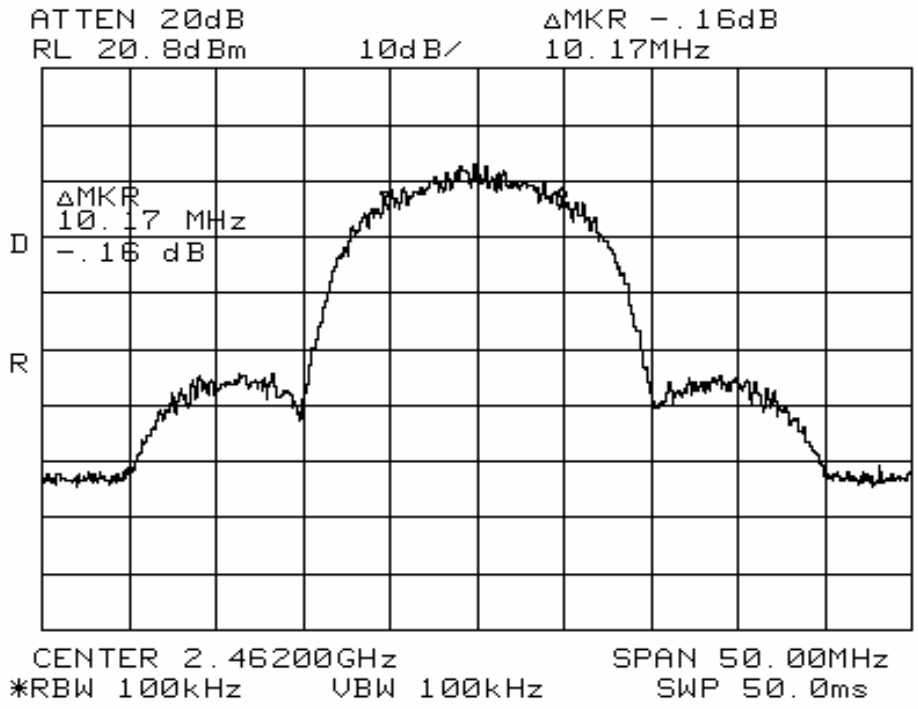
Data Plot **Occupied Bandwidth**

Page 3 of 6

Job No.: 4L0041R Date: 2/19/2004
Specification: 15.247 Temperature(°C): 22
Tested By: David Light Relative Humidity(%) 40
E.U.T.: WLAN6090SD
Configuration: TX FULL POWER



Notes: **6 dB - Channel 11**

Section 5. Maximum Peak Output Power

NAME OF TEST: Maximum Peak Output power	PARA. NO.: 15.247(b)(1)
TESTED BY: David Light	DATE: 2/19/04

Test Results: Complies.

Measurement Data:

Antennas: **Integral (3dBi max gain)**

Frequency MHz	Type	Conducted Power (dBm)	Gain (dBi)	E.I.R.P. (dBm)
2412	Integral	15	3	18
2437	Integral	15	3	18
2462	Integral	15	3	18
Peak power output at antenna port(dBm): 18 dBm / 63.1 mW				

All measurements made with fully charged batteries.

Equipment Used: 1029-1030

Measurement Uncertainty: +/- 0.7 dB

Temperature: 22 ?C

Relative Humidity: 40 %

Section 6. RF Exposure

NAME OF TEST: RF Exposure	PARA. NO.: 15.247(b)(4)
TESTED BY:	DATE:

Test Results: Complies.

Measurement Data:

Please refer to SAR report.

Section 7. Spurious Emissions (conducted)

NAME OF TEST: Spurious Emissions (conducted)	PARA. NO.: 15.247(c)
TESTED BY: David Light	DATE: 2/19/04

Test Results: Complies.

Measurement Data: See attached plots.

Test Data – Spurious Emissions at Antenna Port

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Nemko Dallas, Inc.

Data Plot **Spurious Emissions at Antenna Terminals**

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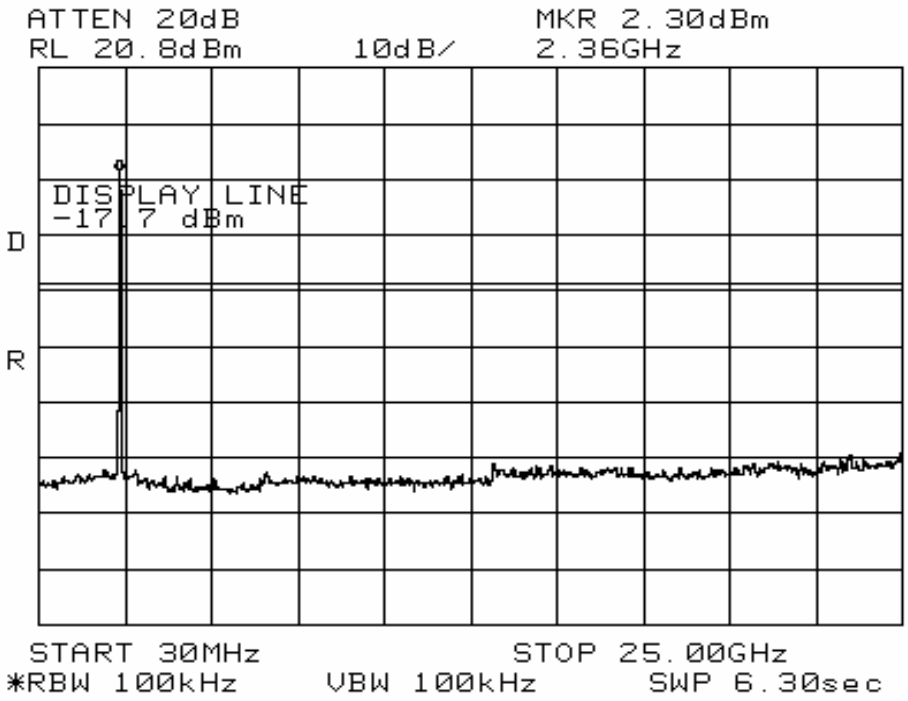
Job No.:	4L0041R	Date:	2/19/2004	Preliminary:	
Specification:	15.247	Temperature(°C):	22		
Tested By:	David Light	Relative Humidity(%)	40		
E.U.T.:	WLAN6090SD				
Configuration:	TX FULL POWER				
Sample Number:	1				
Location:	Lab 2	RBW:	Refer to plots	Measurement	
Detector Type:	Peak	VBW:	Refer to plots	Distance:	NA m

Test Equipment Used

Antenna:		Directional Coupler:	
Pre-Amp:		Cable #1:	1621
Filter:		Cable #2:	
Receiver:	1464	Cable #3:	
Attenuator #1	1469	Cable #4:	
Attenuator #2:		Mixer:	

Additional equipment used:

Measurement Uncertainty: +/-1.7 dB



Notes: **Channel 1**
Display line = -20 dBc

Test Data – Spurious Emissions at Antenna Port

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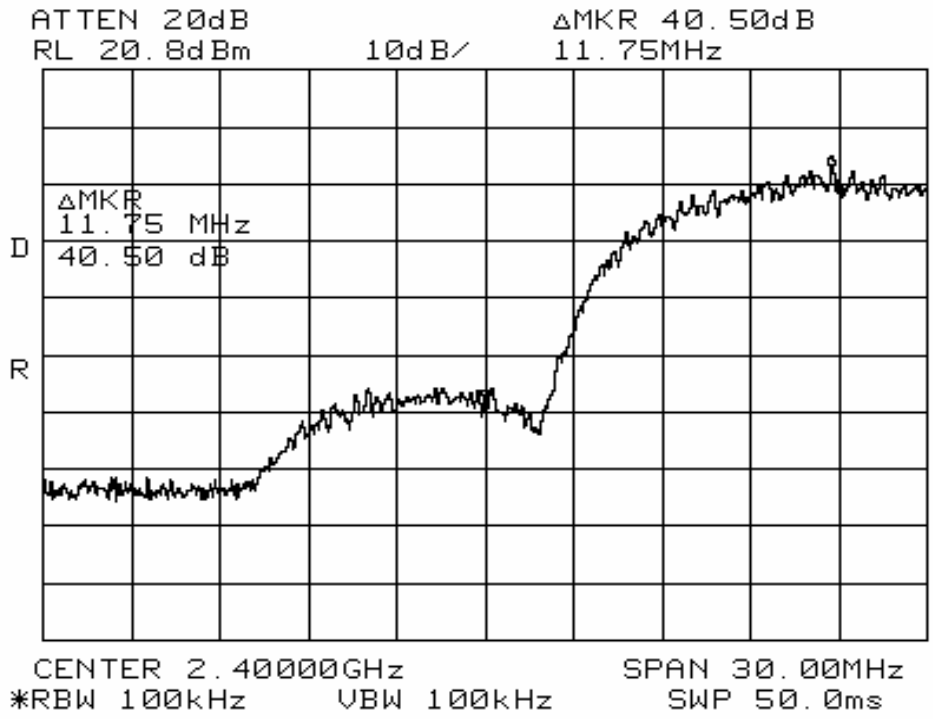
Nemko Dallas, Inc.

Data Plot **Spurious Emissions at Antenna Terminals**

Page 2 of 6

Job No.:	4L0041R	Date:	2/19/2004
Specification:	15.2	Temperature(°C):	22
Tested By:	David Light	Relative Humidity(%)	40
E.U.T.:	WLAN6090SD		
Configuration:	TX FULL POWER		



Notes: **Lower Band Edge - Channel 1**

Test Data – Spurious Emissions at Antenna Port

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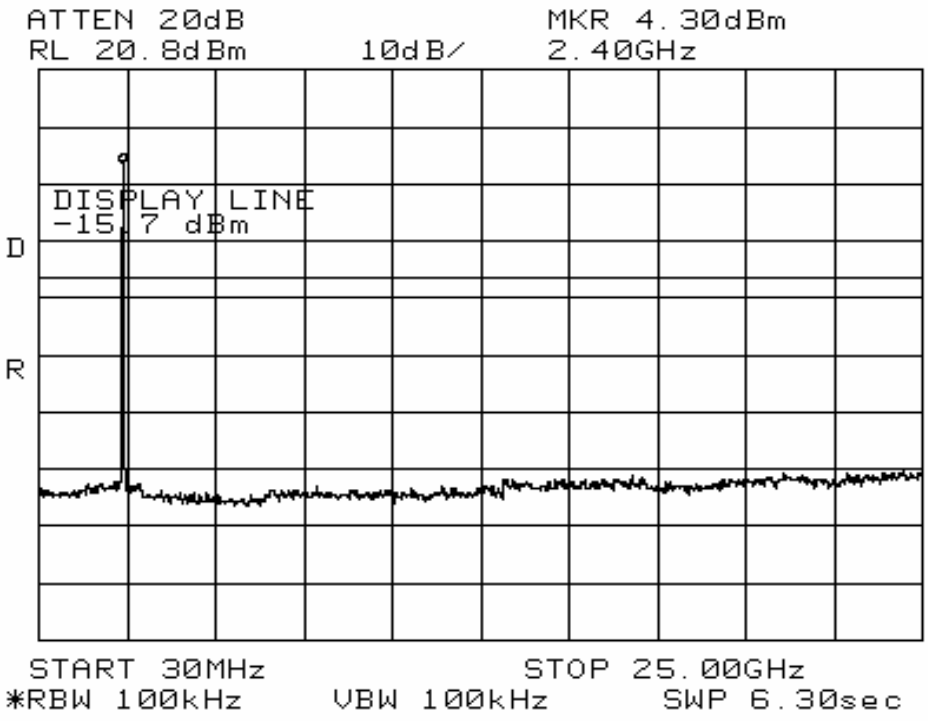
Data Plot **Spurious Emissions at Antenna Terminals**

Page 3 of 6

Job No.: 4L0041R Date: 2/19/2004
Specification: 15.247 Temperature(°C): 22
Tested By: David Light Relative Humidity(%) 40
E.U.T.: WLAN6090SD
Configuration: TX FULL POWER



Notes: **Channel 6**

Test Data – Spurious Emissions at Antenna Port

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Nemko Dallas, Inc.

Test Plot: **Spurious Emissions at Antenna Terminals**

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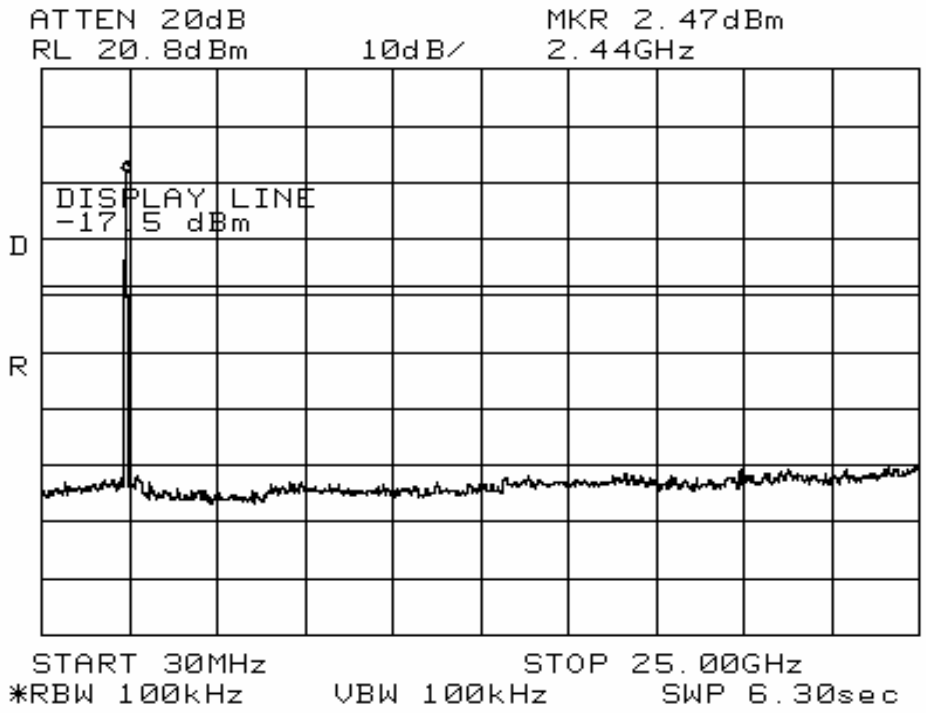
Job No.: 4L0041R Date: 2/19/2004
Specification: 15.247 Temperature(°C): 22
Tested By: David Light Relative Humidity(%) 40
E.U.T.: WLAN6090SD
Configuration: TX FULL POWER



Notes: **Channel 11**

Section 8. Spurious Emissions (radiated)

NAME OF TEST: Radiated Spurious Emissions	PARA. NO.: 15.247 (c)
TESTED BY: David Light	DATE: 2/19/04

Test Results: Complies.

Measurement Data: See attached table.

Note – The unit was tested on three orthogonal axis'.

Test Data – Radiated Spurious Emissions (Restricted Bands of Operation)

Nemko Dallas, Inc.

Dallas Headquarters:
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Tel: (972) 436-9600
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Radiated Emissions

Page 1 of 2

Job No.: 4L0041R Date: 2/19/2004
Specification: 15.15.247/15.205 Temperature(°C): 22
Tested By: David Light Relative Humidity(%) 40
E.U.T.: WLAN6090SD
Configuration: TX FULL POWER - LYING ON SIDE (WORST CASE)
Sample Number: 1
Location: AC 3 RBW: 1 MHz
Detector Type: Peak VBW: 1 MHz

Test Equipment Used

Antenna: 1304 Directional Coupler: #N/A
Pre-Amp: 1016 Cable #1: 1484
Filter: 1482 Cable #2: 1485
Receiver: 1464 Cable #3: #N/A
Attenuator #1 #N/A Cable #4: #N/A
Attenuator #2: #N/A Mixer: #N/A
Measurement Uncertainty: +/-3.7 dB

The device was tested on 3 axis' with the worst case being reported.

Frequency (GHz)	Meter Reading (dBuV)	Antenna Factor (dB)	Cable Loss (dB)	Pre-Amp Gain (dB)	Corrected Reading (dBuV/m)	Limit (dBuV/m)	Delta (dB)	Comment
								Channel 11
2483.5	29.5	28.2	3.1	0.0	60.8	74	-13.2	V - Peak
2483.5	20.5	28.2	3.1	0.0	51.8	54	-2.2	V - Avg
4924.0	46.8	33.9	4.3	32.7	52.3	54	-1.7	V - Peak
7386.0	42	36.3	5.3	32.8	50.8	54	-3.2	V - Peak
12310.0	45	39.9	7.3	34.4	57.8	74	-16.2	V - Peak
12310.0	33.7	39.9	7.3	34.4	46.5	54	-7.5	V - Avg
2483.5	31.5	28.2	3.1	0.0	62.8	74	-11.2	H - Peak
2483.5	21	28.2	3.1	0.0	52.3	54	-1.7	H - Avg
4924.0	46.2	33.9	4.3	32.7	51.7	54	-2.3	H - Peak
7386.0	42	36.3	5.3	32.8	50.8	54	-3.2	H - Peak
12310.0	43.5	39.9	7.3	34.4	56.3	74	-17.7	H - Peak
12310.0	33.3	39.9	7.3	34.4	46.1	54	-7.9	H - AHg
								Channel 6
Notes:								

Test Data – Radiated Spurious Emissions (Restricted Bands of Operation)

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Nemko Dallas, Inc.

Radiated Spurious Emissions

Page 2 of 2 **Continuation Page**

Job No.: 4L0041R Date: 2/20/2004

Specification: 15.247/15.205 Temperature(°F): 22

Tested By: #N/A Relative Humidity(%) 40

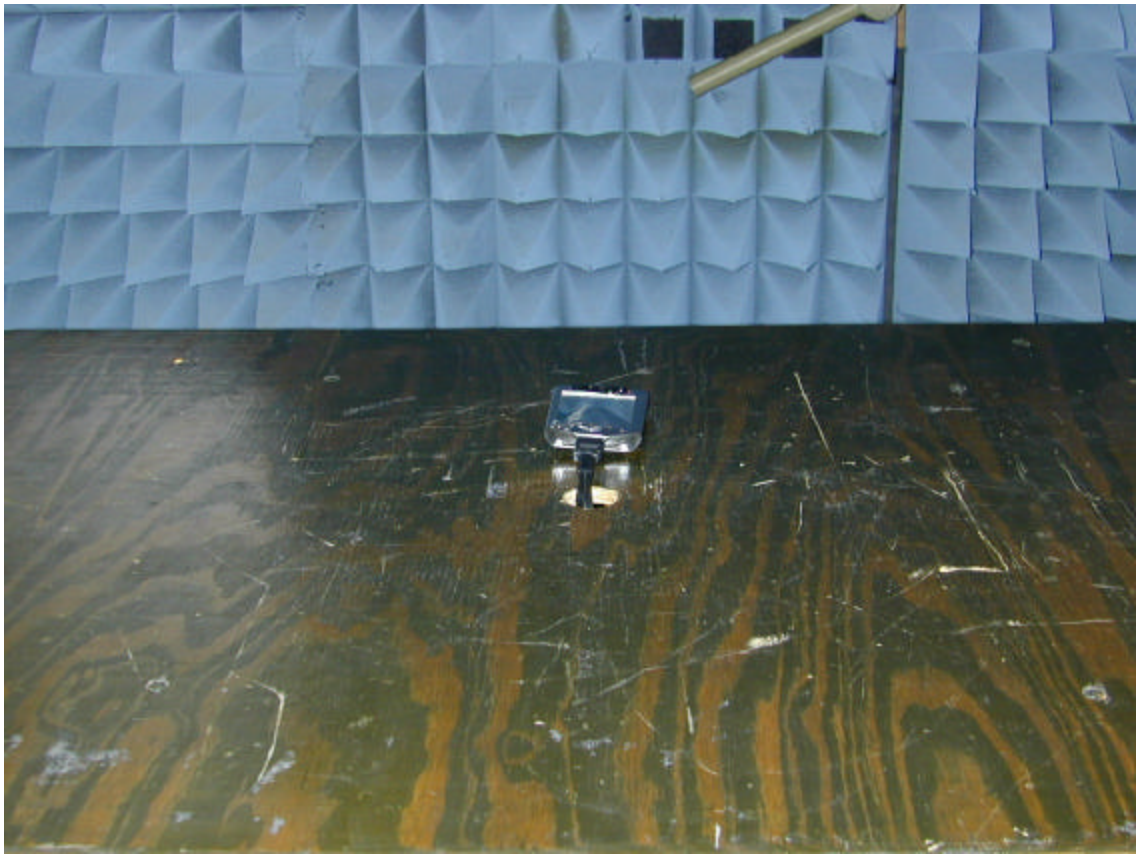
E.U.T.: WLAN6090SD

Configuration: TX FULL POWER - LYING ON SIDE (WORST CASE)

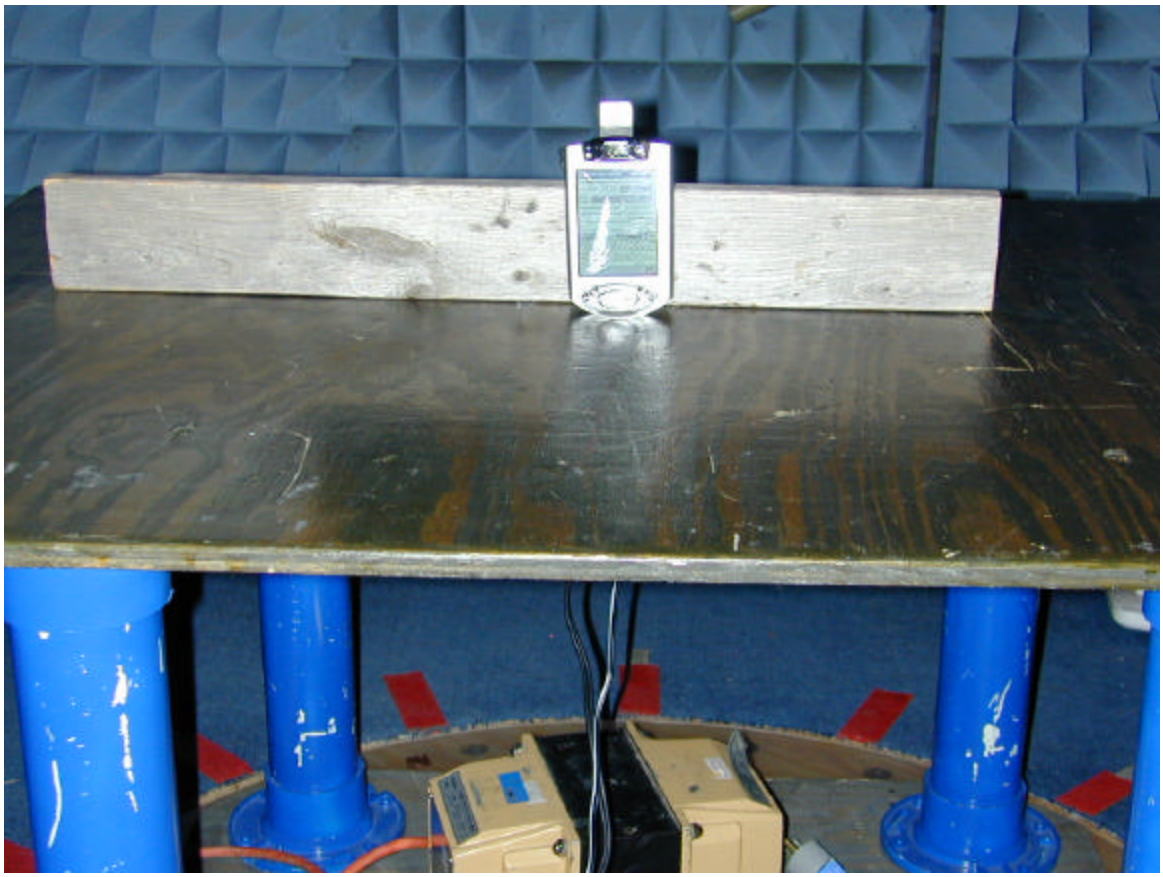
Frequency (GHz)	Meter Reading (dBuV)	Antenna Factor (dB)	Cable Loss (dB)	Pre-Amp Gain (dB)	Corrected Reading (dBuV/m)	Limit (dBuV/m)	Delta (dB)	Comment
								Channel 1
4824.0	44.2	33.9	4.3	32.7	49.7	54	-4.3	H - Peak
7236.0	42	36.3	5.3	32.8	50.8	54	-3.2	H - Peak
12060.0	44.2	39.9	7.3	34.4	57.0	74	-17.0	H - Peak
12060.0	33.7	39.9	7.3	34.4	46.5	54	-7.5	H - AHg
4824.0	44.7	33.9	4.3	32.7	50.2	54	-3.8	V - Peak
7236.0	41.7	36.3	5.3	32.8	50.5	54	-3.5	V - Peak
12060.0	44.2	39.9	7.3	34.4	57.0	74	-17.0	V - Peak
12060.0	33.7	39.9	7.3	34.4	46.5	54	-7.5	V - Avg
								Channel 6
4874.0	43.8	33.9	4.3	32.7	49.3	54	-4.7	H - Peak
7311.0	42.7	36.3	5.3	32.8	51.5	54	-2.5	H - Peak
12185.0	44.2	39.9	7.3	34.4	57.0	74	-17.0	H - Peak
12185.0	33.3	39.9	7.3	34.4	46.1	54	-7.9	H - AHg
4874.0	45.5	33.9	4.3	32.7	51.0	54	-3.0	V - Peak
7311.0	42.2	36.3	5.3	32.8	51.0	54	-3.0	V - Peak
12185.0	44.8	39.9	7.3	34.4	57.6	74	-16.4	V - Peak
12185.0	33.5	39.9	7.3	34.4	46.3	54	-7.7	V - Avg

Notes:

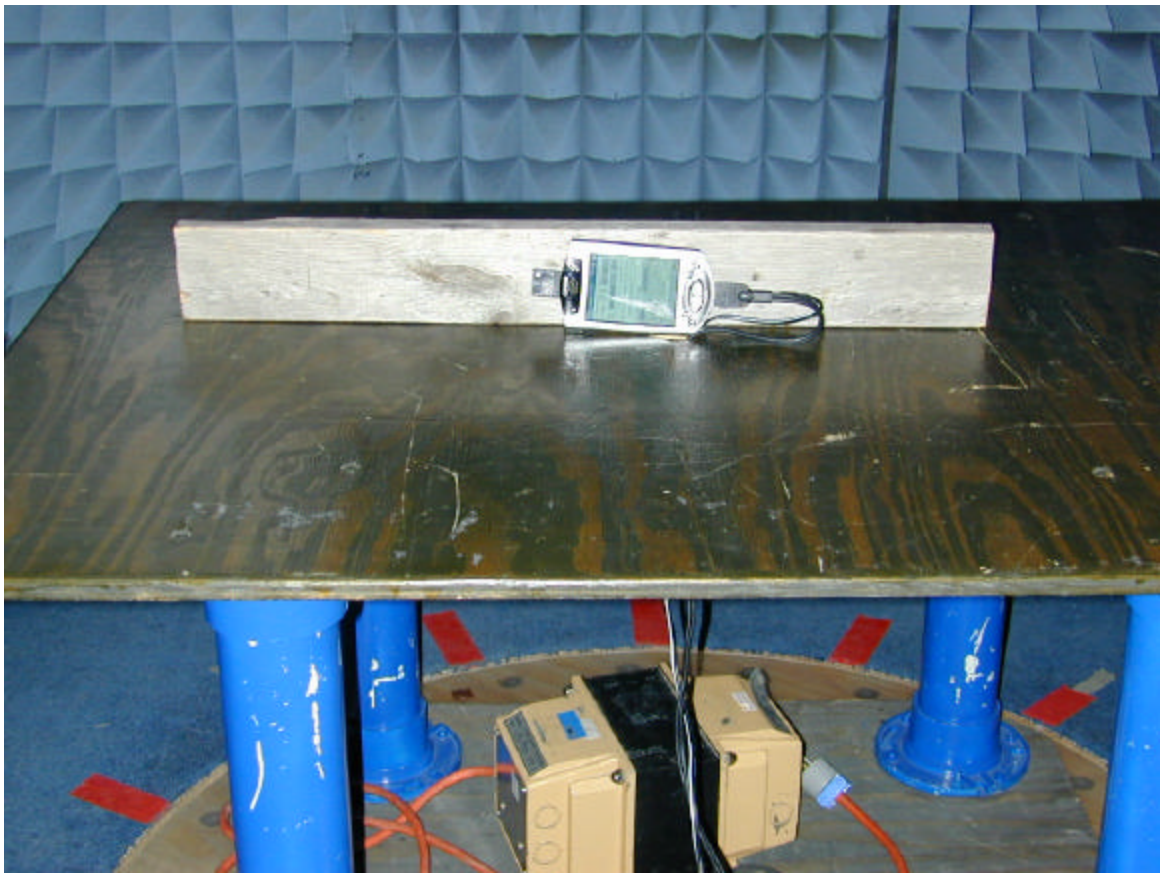
Setup Photos



Setup Photos



Setup Photos (Worst Case)



Section 9. Peak Power Spectral Density

NAME OF TEST: Peak Power Spectral Density	PARA. NO.: 15.247(d)
TESTED BY: David Light	DATE: 2/19/04

Test Results: Complies.

Measurement Data: See attached plots.

Test Data – Peak Power Spectral Density

Dallas Headquarters:
802 N. Kealy
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Fax: (972) 436-2667

Nemko Dallas, Inc.

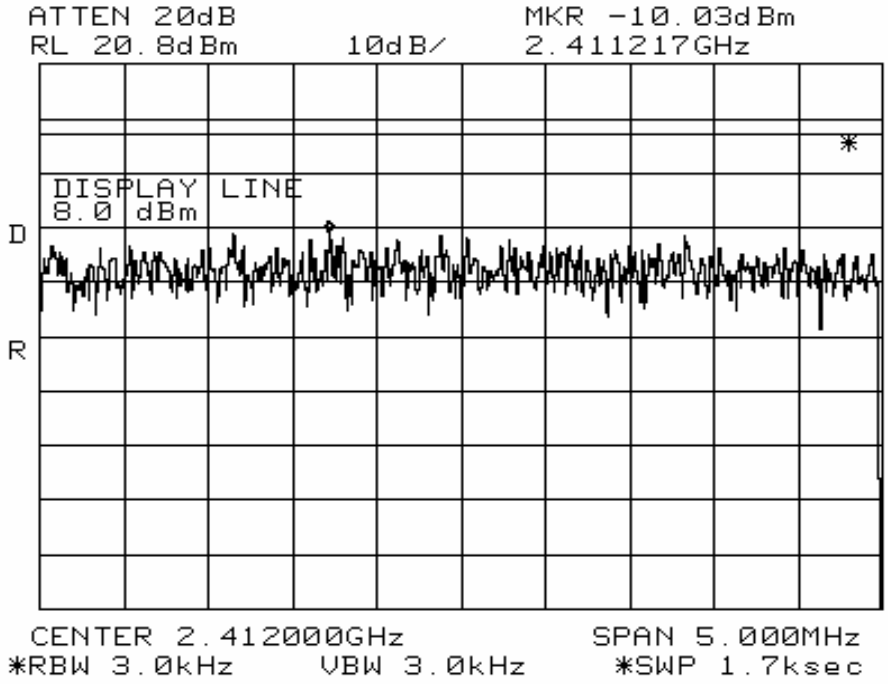
Data Plot **Peak Power Spectral Density**

Page 1 of 6 Complete X

Job No.: 4L0041R Date: 2/19/2004 Preliminary: _____
Specification: 15.247 Temperature(°C): 22
Tested By: David Light Relative Humidity(%) 40
E.U.T.: WLAN6090SD
Configuration: TX FULL POWER
Sample Number: 1
Location: Lab 2 RBW: Refer to plots Measurement
Detector Type: Peak VBW: Refer to plots Distance: NA m

Test Equipment Used

Antenna: _____ Directional Coupler: _____
Pre-Amp: _____ Cable #1: 1621
Filter: _____ Cable #2: _____
Receiver: 1464 Cable #3: _____
Attenuator #1 1469 Cable #4: _____
Attenuator #2: Mixer: _____
Additional equipment used: _____
Measurement Uncertainty: +/-1.7 dB



Notes: **Channel 1**

Test Data – Peak Power Spectral Density

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Nemko Dallas, Inc.

Data Plot **Peak Power Spectral Density**

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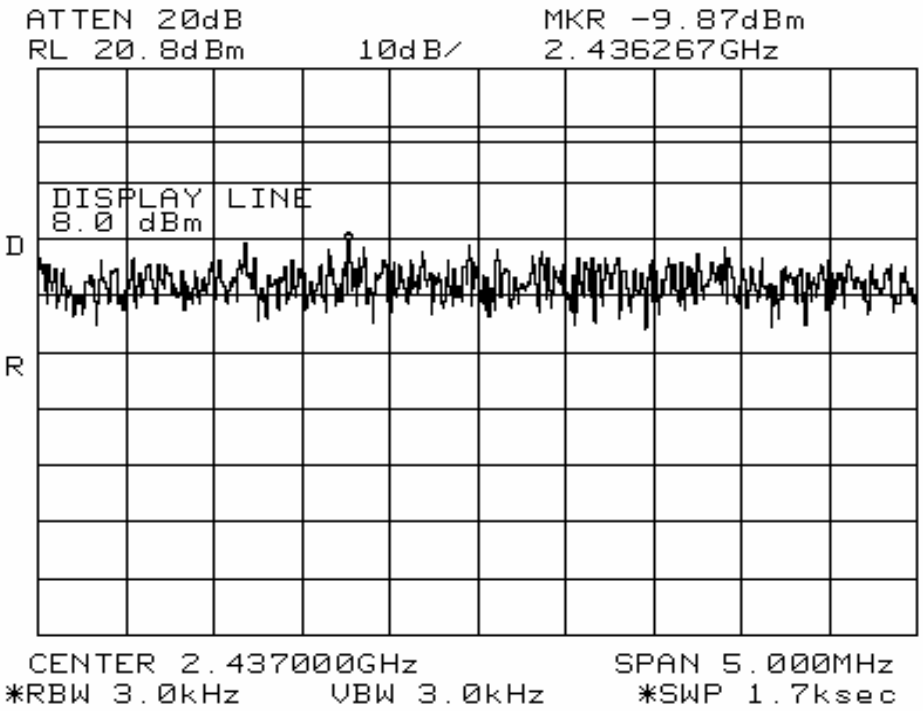
Job No.: 4L0041R Date: 2/19/2004
Specification: 15.2 Temperature(°C): 22
Tested By: David Light Relative Humidity(%) 40
E.U.T.: WLAN6090SD
Configuration: TX FULL POWER



Notes: **Channel 6**

Test Data – Peak Power Spectral Density

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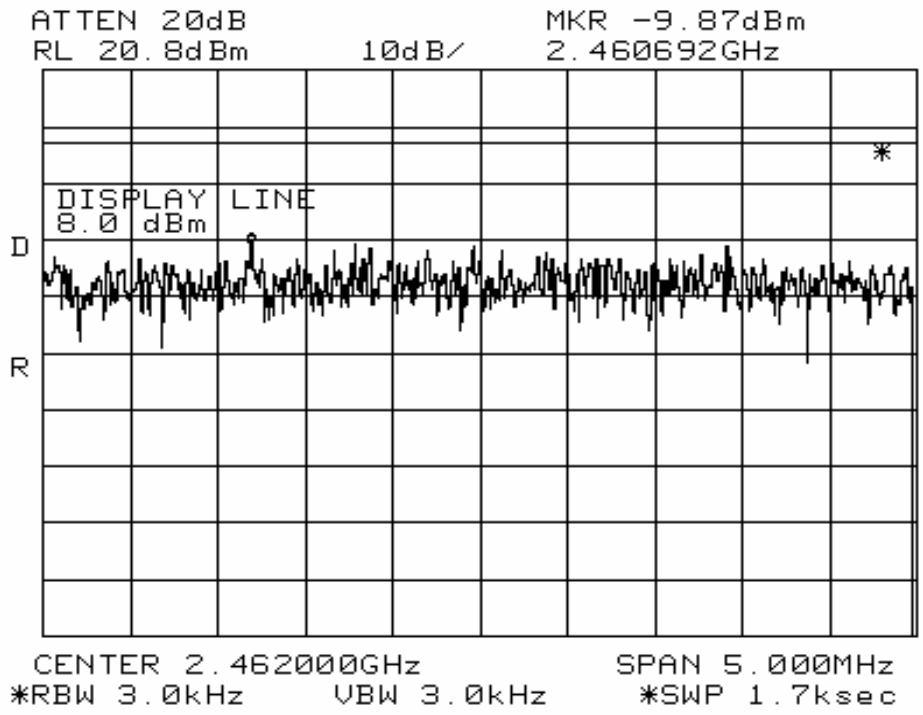
Nemko Dallas, Inc.

Data Plot **Peak Power Spectral Density**

Page 3 of 6

Job No.: 4L0041R Date: 2/19/2004
Specification: 15.247 Temperature(°C): 22
Tested By: David Light Relative Humidity(%) 40
E.U.T.: WLAN6090SD
Configuration: TX FULL POWER



Notes: **Channel 11**

Section 10. Test Equipment List

Nemko ID	Description	Manufacturer Model Number	Serial Number	Calibration Date	Calibration Due
1464	Spectrum analyzer	Hewlett Packard 8563E	3551A04428	02/11/03	02/11/05
1484	Cable 2.0-18.0 Ghz	Storm PR90-010-072	N/A	07/24/03	07/23/04
1485	Cable 2.0-18.0 Ghz	Storm PR90-010-216	N/A	07/24/03	07/23/04
1029	PEAK POWER METER	HP 8900D	3303U0012	12/23/03	12/22/04
1030	PEAK POWER SENSOR	HP 84811A	2539A03573	12/23/03	12/22/04
1469	10 db Attenuator DC 18 Ghz	MCL Inc. BW-S10W2 10db-2WDC	NONE	CBU	N/A
1628	CABLE, 6 ft	MEGAPHASE TM26 S1S5 72	N/A	03/05/03	03/04/04
1304	HORN ANTENNA	ELECTRO METRICS RGA-60	6151	09/22/03	09/22/05
1304	HORN ANTENNA	ELECTRO METRICS RGA-60	6151	09/22/03	09/22/05
1482	Band Pass Filter	K & L 11SH10-4000/T12000-0/0	2	Cal B4 Use	N/A
1258	LISN .15mhz-30mhz	EMCO 0	1305	09/15/03	09/14/04
1433	High pass filter	Solar 7930-5.0	933142	02/04/04	02/03/05
1988	CABLE, 6.8m	KTL RG223	N/A	07/02/03	07/01/04
785	ANALYZER, SPECTRUM	HP 8591E	3412A02996	04/09/03	04/08/04
480	Bilog Antenna, 30 MHz – 1 GHz	Schaffner CBL6111C	2572	5/10/03	5/10/04
791	Preamplifier	None	None	10/27/03	10/27/04

ANNEX A - TEST DETAILS

NAME OF TEST: Powerline Conducted Emissions	PARA. NO.: 15.207(a)

Minimum Standard: The R.F. that is conducted back onto the AC power line on any frequency within the band 0.45 to 30 MHz shall not exceed:

Frequency of Emission (MHz)	Emission Limit (dBµV)	
	Quasi-peak	Average
0.15 – 0.5	66 – 56*	56 – 46
0.5 – 5.0	56	46
5.0 – 30.0	60	50

*Decreases with the logarithm of the frequency.

NAME OF TEST: Minimum 6 dB bandwidth	PARA. NO.: 15.247(a)(2)

Minimum Standard: The minimum 6 dB bandwidth shall be at least 500 kHz

NAME OF TEST: Maximum Peak Output Power	PARA. NO.: 15.247(b)(1)

Minimum Standard: The maximum peak output power shall not exceed 1 watt.

If transmitting antennas of directional gain greater than 6 dBi are used, the power shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

Systems operating in the 2400-2483.5 MHz band that are used exclusively for fixed, point to point operation may employ transmitting antennas with directional gain greater than 6 dBi provided the maximum peak output power is reduced by 1 dB for every 3 dB that the directional gain of the antenna exceed 6 dBi.

Systems operating in the 5725 – 5850 MHz band that are used exclusively for fixed, point-to-point operation may employ transmitting antennas with directional gain greater than 6 dBi without any corresponding reduction in transmitter peak output power.

Direct Measurement Method For Detachable Antennas:
If the antenna is detachable, a peak power meter is used to measure the power output with the transmitter operating into a 50 ohm load. The dBi gain of the antenna(s) employed shall be reported.

EIRP Measurement for Non-Detachable Antennas:

Test Method: TIA/EIA-603-1992, Section 2.2.12

The antenna substitution method was used to determine the equivalent radiated power at spurious frequencies. The spurious emissions were measured at a distance of 3 meters. The EUT was then replaced with a reference substitution antenna with a known gain referenced to a dipole. This antenna was fed with a signal at the spurious frequency. The level of the signal was adjusted to repeat the previously measured level. The resulting erp is the signal level fed to the reference antenna corrected for gain referenced to an isotropic radiator if required.

Number of channels tested:

Tuning range	Number of channels tested	Channel location in band
1 MHz or less	1	middle
1 to 10 MHz	2	top and bottom

more than 10 MHz	3	top, middle, bottom

NAME OF TEST: RF Exposure	PARA. NO.: 15.247(b)(4)

Minimum Standard: Systems operating under the provisions of this section shall be operated in a manner that ensures the public is not exposed to radio frequency energy levels in excess of the Commission's guidelines stipulated in 1.1307(b)(1) of CFR 47.

NAME OF TEST: Spurious Emissions(conducted) PARA. NO.: 15.247(c)

Minimum Standard: In any 100kHz bandwidth outside the frequency band in which the transmitter is operating, emissions shall be at least 20 dB below the fundamental emission or shall not exceed the following field strength limits. Emissions falling in the restricted bands of 15.205 shall not exceed the following field strength limits:

Frequency (MHz)	Field Strength (? V/m @ 3m)	Field Strength (dB @ 3m)
30 - 88	100	40.0
88 - 216	150	43.5
216 - 960	200	46.0
Above 960	500	54.0

THE SPECTRUM IS SEARCHED TO THE 10th HARMONIC OF THE HIGHEST FREQUENCY GENERATED IN THE EUT.

Method Of Measurement:

30 MHz - 10th harmonic plot
RBW: 100 kHz
VBW: 300 kHz
Sweep: Auto
Display line: -20 dBc

Lower Band Edge
RBW: At least 1% of span/div.
VBW: >RBW
Span: As necessary to display any spurious at band edge.
Sweep: Auto
Center Frequency: 902 MHz, 2400 MHz, or 5725 MHz
Marker: Peak of fundamental emission
Marker ?: Peak of highest spurious level below center frequency.

Upper Band Edge
RBW: At least 1% of span/div.
VBW: >RBW
Span: As necessary to display any spurious at band edge.
Sweep: Auto
Center Frequency: 928 MHz, 2483.5 MHz, or 5850 MHz
Marker: Peak of fundamental emission
Marker ?: Peak of highest spurious level above center frequency.

Number of channels tested:

Tuning range	Number of channels tested	Channel location in band
1 MHz or less	1	middle
1 to 10 MHz	2	top and bottom
more than 10 MHz	3	top, middle, bottom

NAME OF TEST: Radiated Spurious Emissions PARA. NO.: 15.247(c)

Minimum Standard: In any 100kHz bandwidth outside the frequency band in which the transmitter is operating, emissions shall be at least 20 dB below the fundamental emission or shall not exceed the following field strength limits:

Emissions falling in the restricted bands of 15.205 shall not exceed the following field strength limits:

Frequency (MHz)	Field Strength (? V/m @ 3m)	Field Strength (dB @ 3m)
30 - 88	100	40.0
88 - 216	150	43.5
216 - 960	200	46.0
Above 960	500	54.0

THE SPECTRUM WAS SEARCHED TO THE 10th HARMONIC

15.205 Restricted Bands

MHz	MHz	MHz	GHz
0.09-0.11	16.42-16.423	399.9-410	4.5-5.25
0.495-0.505	16.69475-16.69525	608-614	5.35-5.46
2.1735-2.1905	16.80425-16.80475	960-1240	7.25-7.75
4.125-4.128	25.5-25.67	1300-1427	8.025-8.5
4.17725-4.17775	37.5-38.25	1435-1626.5	9.0-9.2
4.20725-4.20775	73-74.6	1645.5-1646.5	9.3-9.5
6.125-6.218	74.8-75.2	1660-1710	10.6-12.7
6.26775-6.26825	108-121.94	1718.8-1722.2	13.25-13.4
6.31175-6.31225	123-138	2200-2300	14.47-14.5
8.291-8.294	149.9-150.05	2310-2390	15.35-16.2
8.362-8.366	156.52475-156.52525	2483.5-2500	17.7-21.4
8.37625-8.38675	156.7-156.9	2655-2900	22.01-23.12
8.41425-8.41475	162.0125-167.17	3260-3267	23.6-24.0
12.29-12.293	167.72-173.2	3332-3339	31.2-31.8
12.51975-12.52025	240-285	3345.8-3358	36.43-36.5
12.57675-12.57725	322-335.4	3600-4400	Above 38.6
13.36-13.41	1718		

Number of channels tested:

Tuning range	Number of channels tested	Channel location in band
1 MHz or less	1	middle
1 to 10 MHz	2	top and bottom
more than 10 MHz	3	top, middle, bottom

NAME OF TEST: Transmitter Power Density	PARA. NO.: 15.247(d)

Minimum Standard: The transmitted power density averaged over any 1 second interval shall not be greater than +8 dBm in any 3 kHz bandwidth.

Method Of Measurement: The spectrum analyzer is set as follows:

RBW: 3 kHz
VBW: >3 kHz
Sweep: Span (kHz)/3 (i.e. for a span of 1.5 MHz the sweep rate is
1500/3 = 500 sec.

Note: For devices with spectrum line spacing =< 3 kHz, the RBW of the analyzer is reduced until the spectral lines are resolved. The measurement data is normalized to 3 kHz by summing the power of all the individual spectral lines within a 3 kHz band in linear power units.

For Devices With Integral Antenna:

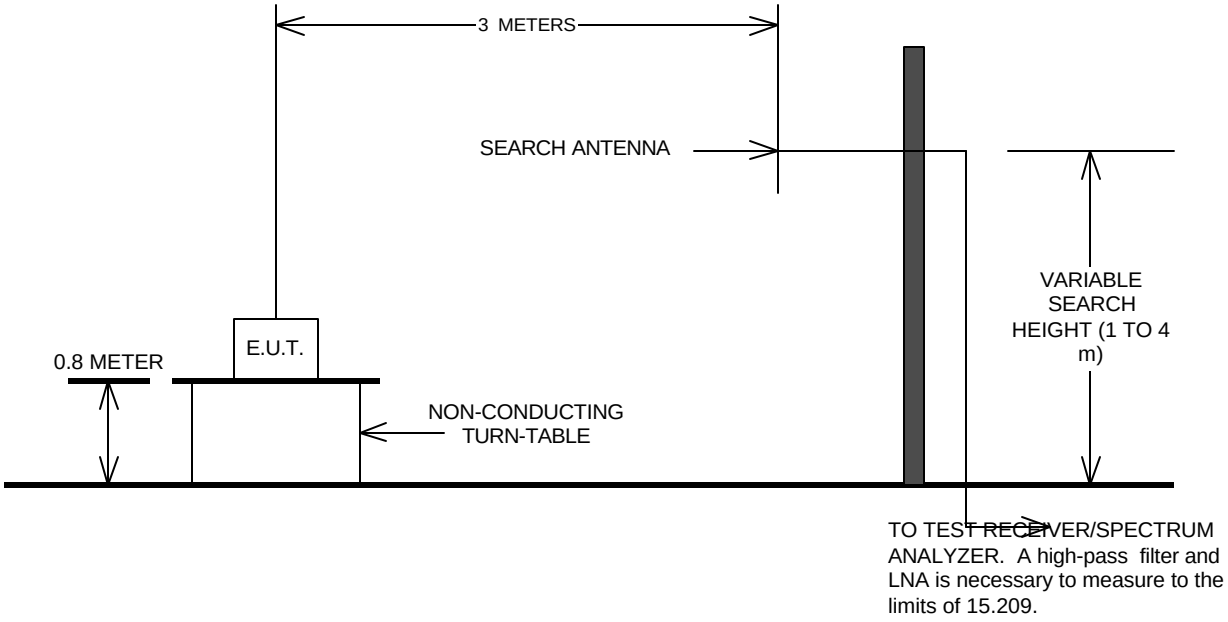
For devices with non-detachable antennas, the received field strength is peaked and the spectrum analyzer is set as above. The peak emission level is then measured and converted to a field strength by adding the appropriate antenna factor and cable loss. This field strength is then converted to an equivalent isotropic radiated power using the same method as described for Peak Power output.

Number of channels tested:

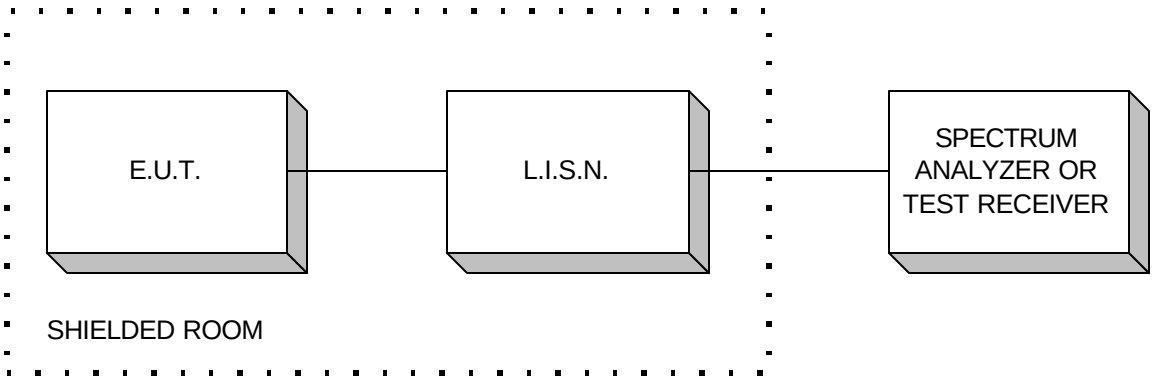
Tuning Range	Number Of Channels Tested	Channel Location In Band
1 MHz or Less	1	Middle
1 to 10 MHz	2	Top And Bottom
More Than 10 MHz	3	Top, Middle, Bottom

ANNEX B - TEST DIAGRAMS

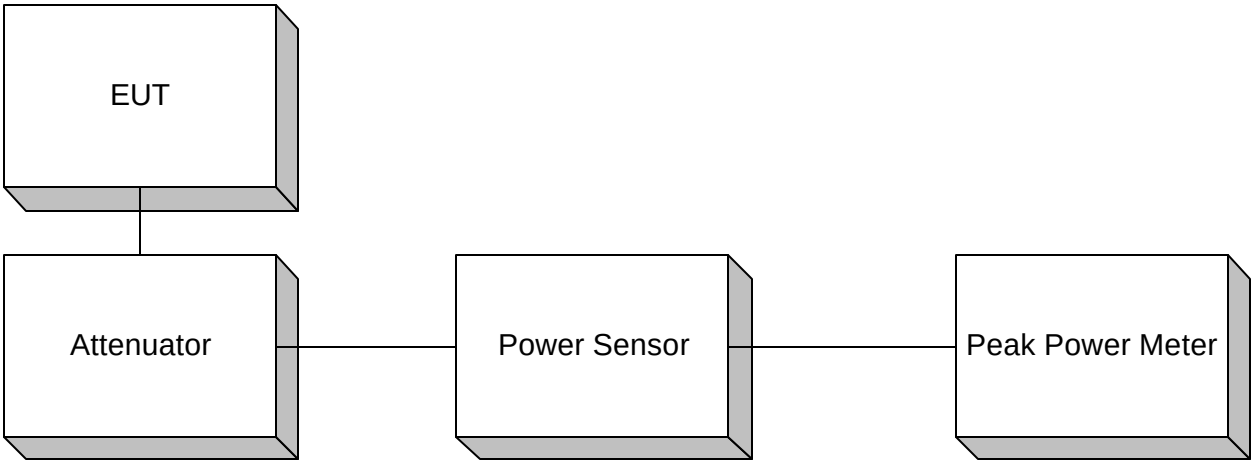
Test Site For Radiated Emissions



Conducted Emissions



Peak Power At Antenna Terminals



Minimum 6 dB Bandwidth
Peak Power Spectral Density
Spurious Emissions (conducted)