

EMISSIONS TEST REPORT FOR A LOW POWER TRANSMITTER**I. GENERAL INFORMATION**

Requirement: Federal Communications Commissions
Class 2 permissive change

Test Requirements: 15.205, 15.207, 15.209, 15.247

Applicant: RapidWave Networks
6296A San Ignacio Ave.
San Jose CA 95119

Product ID: FCC ID: SAMWIRL54BR1
Original Grant dated: 24 June 2004

II. DESCRIPTION OF EQUIPMENT UNDER TEST (EUT)

The RapidWave RL 54 is a high speed wireless bridge.

RF Specifications

RF Frequency Band	5745-5825 MHz
RF Signal Bandwidth	16.5 MHz Standard (99%BW) 33.5 MHz Turbo (99% BW)
Transmitter Output Power	+23.6 dBm peak maximum 16.11 dBm average maximum
Antennas	See table page 3 below

Model DesignationsBase Stations with Sector Antennas

RL 54-BS-1660 - 60 deg sector antennas
RL 54-BS-1790 – 90 deg sector antennas

CPE or Subscriber Units

RL 54-SU-22 – 22 dBi panel antenna
RL 54-SU-23 – 23 dBi panel antenna
RL 54-SU-26 - 26 dBi panel antenna
RL 54-SU-28 – 28 dBi panel antenna

III. TEST LOCATION

All emissions tests were performed at:

Compliance Certification Services
571F Monterey Road
Morgan Hill, CA 95037

T.N. Cokenias
EMC Consultant/Agent for Aperto Networks Inc.

22 March 2005

TEST PROCEDURES

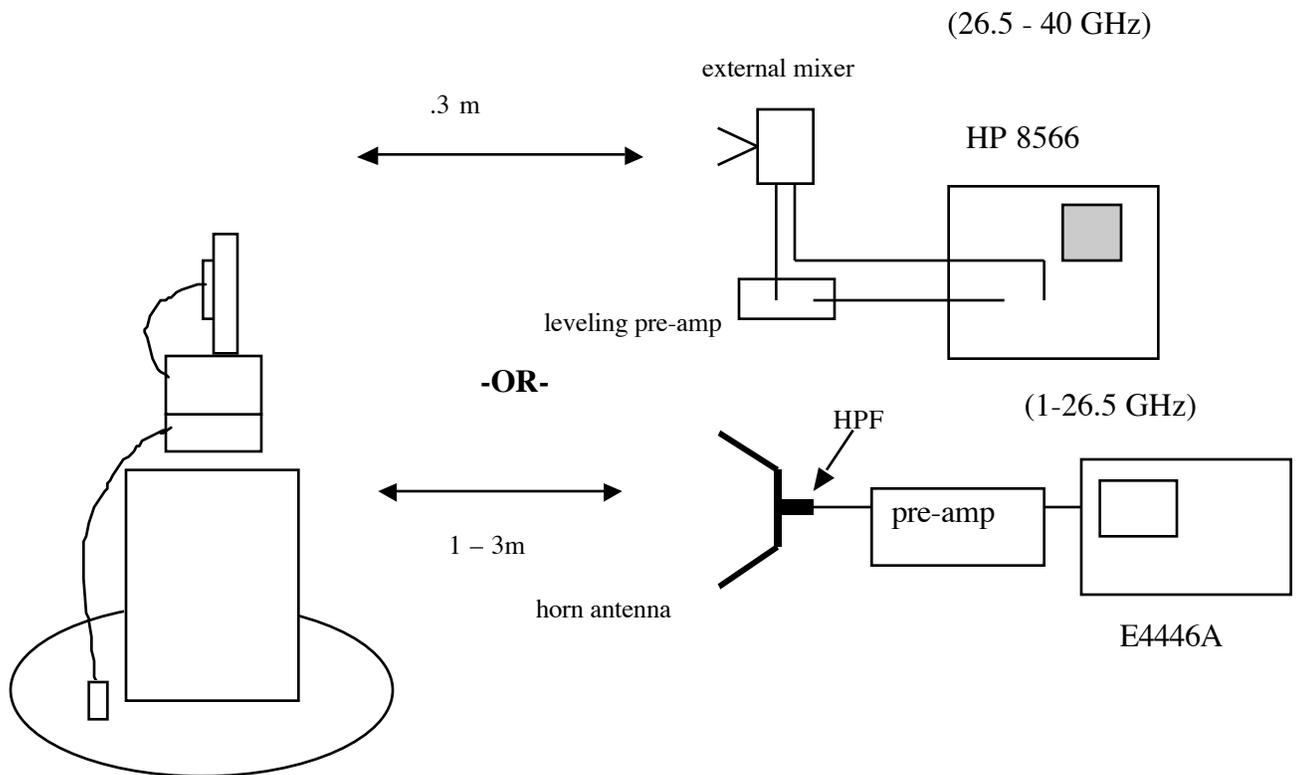
Measurement Equipment Used:

Agilent E4446A spectrum analyzer
 EMCO 3115 Horn antenna, 1-18 GHz
 ARA MWH-1826/B Horn antenna, 18 - 26 GHz
 ARA MWH-2640/B Horn antenna, 26 - 40 GHz
 Miteq NSP2600-SP preamplifier, 1 - 26 GHz
 Miteq NSP4000-SP preamplifier, 26 - 40 GHz
 Low loss coaxial cables

Radiated Emissions Above 1 GHz

Test Requirement: 15.109, 15.205, 15.209, 15.247

Test Set-Up



2. The turntable was slowly rotated to locate the direction of maximum emission at each emission falling in the restricted bands of 15.205.
3. Radiated emissions were investigated for a LOW channel, a MID channel, and HIGH channel. Emissions were investigated to the 10th harmonic. (Note: preliminary testing at 10 cm separation indicated no emissions from EUT in 26-40 GHz range).
4. Once maximum direction was determined, the search antenna was raised and lowered in both vertical and horizontal polarizations. The maximum readings so obtained are recorded in the data listed below.

Channel Frequency, MHz

Low 5745
 Mid 5785
 High 5825

Radiated emissions were performed at each frequency for 6 different transmitter antennas.

Antennas tested:

Antenna Type	Deployment	Gain	Antenna Mfr.	Model
Panel antenna	Point to Point	28 dBi	Mti	MT-2004
60 deg. Sector	Point to Multipoint	17 dBi	Mars antenna	MA-WC50-5X
60 deg sector	Point to Multipoint	17 dBi	Mti	MT-484033/NV
90 deg. Sector	Point to Mulitpoint	16 dBi	Mars Antenna	MA-WD50-6X
90 deg. Sedctor	Point to Multipoint	17 dBi	Hi Gain	HG5817P-090
90 deg sector	Point to Multipoint	17 dBi	Mti	MT-484032/NV

Test Results: Worst case results are presented. Refer to attached spread sheets.

03/15/05 **High Frequency Measurement**
Compliance Certification Services, Morgan Hill Open Field Site

Test Engr: Thanh Nguyen
 Project #: 05U3337-1
 Company: RAPID WAVE
 EUT Descrip.: 802.11a HIGH RATE POINT TO POINT WIRELESS BRIDGE w/ 28dBi PANEL Antenna MT-2004
 EUT M/N: RAPIDLINK 54_17dBi_18dBm POWER OUTPUT
 Test Target: FCC15.247
 Mode Oper: TX LOW / MID / HI CHANNELS

Test Equipment:

EMCO Horn 1-18GHz T73; S/N: 6717 @3m Hi Frequency Cables	Pre-amplifier 1-26GHz T86 Miteq 924341	Pre-amplifier 26-40GHz	Horn >18GHz
2 foot cable 2_Thanh	3 foot cable	4 foot cable	12 foot cable 12_Thanh
HPF HPF_7.6GHz	Reject Filter	Peak Measurements RBW=VBW=1MHz Average Measurements RBW=1MHz ; VBW=10Hz	

f GHz	Dist (m)	Read Pk dBuV	Read Avg. dBuV	AF dB/m	CL dB	Amp dB	D Corr dB	Filtr dB	Peak dBuV/m	Avg dBuV/m	Pk Lim dBuV/m	Avg Lim dBuV/m	Pk Mar dB	Avg Mar dB	Notes (V/H)
Tx Low channel 5.745GHz															
11.490	3.0	55.3	41.6	38.3	5.5	-43.7	0.0	0.7	56.1	42.4	74	54	-17.9	-11.6	V
17.232	3.0	52.3	40.5	42.7	6.9	-45.9	0.0	0.6	56.7	44.9	74	54	-17.3	-9.1	V
11.490	3.0	49.4	37.8	38.3	5.5	-43.7	0.0	0.7	50.2	38.6	74	54	-23.8	-15.4	H
17.235	3.0	53.1	40.2	42.7	6.9	-45.9	0.0	0.6	57.5	44.6	74	54	-16.5	-9.4	H
No other harmonic and spurious emissions above 3rd Harmonic.															
Tx MID Channel 5.785GHz															
11.570	3.0	58.6	46.6	38.3	5.5	-43.7	0.0	0.7	59.4	47.4	74	54	-14.6	-6.6	H
17.355	3.0	50.1	40.1	43.4	6.9	-45.8	0.0	0.6	55.3	45.3	74	54	-18.7	-8.7	H
11.570	3.0	58.6	46.6	38.3	5.5	-43.7	0.0	0.7	59.4	47.4	74	54	-14.6	-6.6	V
17.355	3.0	53.0	41.4	43.4	6.9	-45.8	0.0	0.6	58.2	46.6	74	54	-15.8	-7.4	V
No other harmonic and spurious emissions above 3rd Harmonic.															
Tx High Channel 5.825GHz															
11.650	3.0	60.8	48.8	38.4	5.5	-43.7	0.0	0.7	61.6	49.7	74	54	-12.4	-4.3	V
17.475	3.0	52.6	41.2	44.1	7.0	-45.8	0.0	0.6	58.5	47.1	74	54	-15.5	-6.9	V
11.650	3.0	54.6	43.6	38.4	5.5	-43.7	0.0	0.7	55.5	44.5	74	54	-18.5	-9.5	H
17.475	3.0	53.1	41.0	44.1	7.0	-45.8	0.0	0.6	59.0	46.9	74	54	-15.0	-7.1	H
No other harmonic and spurious emissions above 3rd Harmonic.															
TX TURBO Mode															
5760MHz															
11.520	3.0	50.0	40.2	38.3	5.5	-43.7	0.0	0.7	50.8	41.0	74	54	-23.2	-13.0	H
17.280	3.0	53.9	43.6	43.0	6.9	-45.9	0.0	0.6	58.6	48.3	74	54	-15.4	-5.7	H
11.520	3.0	49.6	40.1	38.3	5.5	-43.7	0.0	0.7	50.4	40.9	74	54	-23.6	-13.1	V
17.280	3.0	53.5	40.5	43.0	6.9	-45.9	0.0	0.6	58.2	45.2	74	54	-15.8	-8.8	V
No other harmonic and spurious emissions above 3rd Harmonic.															

f	Measurement Frequency	Amp	Preamp Gain	Avg Lim	Average Field Strength Limit
Dist	Distance to Antenna	D Corr	Distance Correct to 3 meters	Pk Lim	Peak Field Strength Limit
Read	Analyzer Reading	Avg	Average Field Strength @ 3 m	Avg Mar	Margin vs. Average Limit
AF	Antenna Factor	Peak	Calculated Peak Field Strength	Pk Mar	Margin vs. Peak Limit
CL	Cable Loss	HPF	High Pass Filter		

03/15/05 **High Frequency Measurement**
Compliance Certification Services, Morgan Hill Open Field Site

Test Engr: Thanh Nguyen
 Project #: 05U3337-1
 Company: RAPID WAVE
 EUT Descr.: 802.11a HIGH RATE POINT TO MULTIPOINT WIRELESS BRIDGE w/90 deg sector Antenna MT-484032/NV
 EUT M/N: RAPIDLINK 54_17dBi_18dBm POWER OUTPUT
 Test Target: FCC15.247
 Mode Oper: TX LOW / MID / HI CHANNELS

Test Equipment:

EMCO Horn 1-18GHz T73; S/N: 6717 @3m Hi Frequency Cables	Pre-amplifier 1-26GHz T86 Miteq 924341	Pre-amplifier 26-40GHz	Horn > 18GHz
2 foot cable 2_Thanh	3 foot cable	4 foot cable	12 foot cable 12_Thanh
HPF HPF_7.6GHz	Reject Filter	Peak Measurements RBW=VBW=1MHz Average Measurements RBW=1MHz ; VBW=10Hz	

f GHz	Dist (m)	Read Pk dBuV	Read Avg. dBuV	AF dB/m	CL dB	Amp dB	D Corr dB	Filtr dB	Peak dBuV/m	Avg dBuV/m	Pk Lim dBuV/m	Avg Lim dBuV/m	Pk Mar dB	Avg Mar dB	Notes (V/H)
Tx Low channel 5.745GHz															
11.490	3.0	57.7	45.7	38.3	5.5	-43.7	0.0	0.7	58.5	46.5	74	54	-15.5	-7.5	V
17.232	3.0	54.7	40.5	42.7	6.9	-45.9	0.0	0.6	59.1	44.9	74	54	-14.9	-9.1	V
11.490	3.0	51.7	40.0	38.3	5.5	-43.7	0.0	0.7	52.5	40.8	74	54	-21.5	-13.2	H
17.235	3.0	54.0	41.2	42.7	6.9	-45.9	0.0	0.6	58.4	45.6	74	54	-15.6	-8.4	H
No other harmonic and spurious emissions above 3rd Harmonic.															
Tx MID Channel 5.785GHz															
11.570	3.0	52.3	38.4	38.3	5.5	-43.7	0.0	0.7	53.1	39.3	74	54	-20.9	-14.7	H
17.355	3.0	53.9	40.5	43.4	6.9	-45.8	0.0	0.6	59.1	45.7	74	54	-14.9	-8.3	H
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17.355	3.0	52.8	40.1	43.4	6.9	-45.8	0.0	0.6	58.0	45.2	74	54	-16.0	-8.8	V
No other harmonic and spurious emissions above 3rd Harmonic.															
Tx High Channel 5.825GHz															
11.650	3.0	62.4	49.9	38.4	5.5	-43.7	0.0	0.7	63.3	50.8	74	54	-10.7	-3.2	V
17.475	3.0	52.9	40.1	44.1	7.0	-45.8	0.0	0.6	58.7	46.0	74	54	-15.3	-8.0	V
11.650	3.0	54.1	44.1	38.4	5.5	-43.7	0.0	0.7	55.0	45.0	74	54	-19.0	-9.0	H
17.475	3.0	52.1	40.1	44.1	7.0	-45.8	0.0	0.6	58.0	46.0	74	54	-16.0	-8.0	H
No other harmonic and spurious emissions above 3rd Harmonic.															
TX TURBO Mode 5760MHz															
11.520	3.0	52.3	44.2	38.3	5.5	-43.7	0.0	0.7	53.1	45.0	74	54	-20.9	-9.0	H
17.280	3.0	53.6	42.2	43.0	6.9	-45.9	0.0	0.6	58.3	46.9	74	54	-15.7	-7.1	H
11.520	3.0	52.8	43.2	38.3	5.5	-43.7	0.0	0.7	53.6	44.0	74	54	-20.4	-10.0	V
17.280	3.0	53.4	40.3	43.0	6.9	-45.9	0.0	0.6	58.1	45.0	74	54	-15.9	-9.0	V
No other harmonic and spurious emissions above 3rd Harmonic.															

f	Measurement Frequency	Amp	Preamp Gain	Avg Lim	Average Field Strength Limit
Dist	Distance to Antenna	D Corr	Distance Correct to 3 meters	Pk Lim	Peak Field Strength Limit
Read	Analyzer Reading	Avg	Average Field Strength @ 3 m	Avg Mar	Margin vs. Average Limit
AF	Antenna Factor	Peak	Calculated Peak Field Strength	Pk Mar	Margin vs. Peak Limit
CL	Cable Loss	HPF	High Pass Filter		

03/15/05 **High Frequency Measurement**
Compliance Certification Services, Morgan Hill Open Field Site

Test Engr: Thanh Nguyen
 Project #: 05U3337-1
 Company: RAPID WAVE
 EUT Descr.: 802.11a HIGH RATE POINT TO MULTIPOINT WIRELESS BRIDGE w/ 60 deg Sector Antenna MT-484033
 EUT M/N: RAPIDLINK 54_17dBi_18dBm POWER OUTPUT
 Test Target: FCC15.247
 Mode Oper: TX LOW / MID / HI CHANNELS

Test Equipment:

EMCO Horn 1-18GHz T73; S/N: 6717 @3m Hi Frequency Cables	Pre-amplifier 1-26GHz T86 Miteq 924341	Pre-amplifier 26-40GHz	Horn > 18GHz
2 foot cable 2_Thanh	3 foot cable	4 foot cable	12 foot cable 12_Thanh
HPF HPF_7.6GHz	Reject Filter	Peak Measurements RBW=VBW=1MHz Average Measurements RBW=1MHz ; VBW=10Hz	

f GHz	Dist (m)	Read Pk dBuV	Read Avg. dBuV	AF dB/m	CL dB	Amp dB	D Corr dB	Filtr dB	Peak dBuV/m	Avg dBuV/m	Pk Lim dBuV/m	Avg Lim dBuV/m	Pk Mar dB	Avg Mar dB	Notes (V/H)
Tx Low channel 5.745GHz															
11.490	3.0	56.2	44.3	38.3	5.5	-43.7	0.0	0.7	57.0	45.1	74	54	-17.0	-8.9	V
17.232	3.0	53.4	40.3	42.7	6.9	-45.9	0.0	0.6	57.8	44.7	74	54	-16.2	-9.3	V
11.490	3.0	54.3	38.6	38.3	5.5	-43.7	0.0	0.7	55.1	39.4	74	54	-18.9	-14.6	H
17.235	3.0	55.3	44.8	42.7	6.9	-45.9	0.0	0.6	59.8	49.2	74	54	-14.2	-4.8	H
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Tx MID Channel 5.785GHz															
11.570	3.0	59.6	45.9	38.3	5.5	-43.7	0.0	0.7	60.4	46.7	74	54	-13.6	-7.3	H
17.355	3.0	54.8	40.7	43.4	6.9	-45.8	0.0	0.6	60.0	45.9	74	54	-14.0	-8.1	H
11.570	3.0	59.2	45.5	38.3	5.5	-43.7	0.0	0.7	60.0	46.3	74	54	-14.0	-7.7	V
17.355	3.0	53.8	41.2	43.4	6.9	-45.8	0.0	0.6	59.0	46.4	74	54	-15.0	-7.6	V
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Tx High Channel 5.825GHz															
11.650	3.0	57.5	44.0	38.4	5.5	-43.7	0.0	0.7	58.4	44.9	74	54	-15.6	-9.1	V
17.475	3.0	54.1	41.2	44.1	7.0	-45.8	0.0	0.6	60.0	47.1	74	54	-14.0	-6.9	V
11.650	3.0	58.3	44.9	38.4	5.5	-43.7	0.0	0.7	59.2	45.8	74	54	-14.8	-8.2	H
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No other harmonic and spurious emissions above 3rd Harmonic.															
TX TURBO Mode															
5760MHz															
11.520	3.0	56.9	45.2	38.3	5.5	-43.7	0.0	0.7	57.7	46.0	74	54	-16.3	-8.0	H
17.280	3.0	53.2	42.3	43.0	6.9	-45.9	0.0	0.6	57.9	47.0	74	54	-16.1	-7.0	H
11.520	3.0	58.6	46.3	38.3	5.5	-43.7	0.0	0.7	59.4	47.1	74	54	-14.6	-6.9	V
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f	Measurement Frequency	Amp	Preamp Gain	Avg Lim	Average Field Strength Limit
Dist	Distance to Antenna	D Corr	Distance Correct to 3 meters	Pk Lim	Peak Field Strength Limit
Read	Analyzer Reading	Avg	Average Field Strength @ 3 m	Avg Mar	Margin vs. Average Limit
AF	Antenna Factor	Peak	Calculated Peak Field Strength	Pk Mar	Margin vs. Peak Limit
CL	Cable Loss	HPF	High Pass Filter		

03/15/05 **High Frequency Measurement**
Compliance Certification Services, Morgan Hill Open Field Site

Test Engr: Thanh Nguyen
 Project #: 05U3337-1
 Company: RAPID WAVE
 EUT Descr.: 802.11a HIGH RATE POINT TO MULTIPPOINT WIRELESS BRIDGE w/ 90 Degree PANEL Hi Gain HG5817P-090
 EUT M/N: RAPIDLINK 54_15.5dBi_19dBm POWER OUTPUT
 Test Target: FCC15.247
 Mode Oper: TX LOW / MID / HI CHANNELS

Test Equipment:

EMCO Horn 1-18GHz T73; S/N: 6717 @3m Hi Frequency Cables	Pre-amplifier 1-26GHz T86 Miteq 924341	Pre-amplifier 26-40GHz	Horn > 18GHz
2 foot cable 2_Thanh	3 foot cable	4 foot cable	12 foot cable 12_Thanh
HPF HPF_7.6GHz	Reject Filter	Peak Measurements RBW=VBW=1MHz Average Measurements RBW=1MHz ; VBW=10Hz	

f GHz	Dist (m)	Read Pk dBuV	Read Avg. dBuV	AF dB/m	CL dB	Amp dB	D Corr dB	Filtr dB	Peak dBuV/m	Avg dBuV/m	Pk Lim dBuV/m	Avg Lim dBuV/m	Pk Mar dB	Avg Mar dB	Notes (V/H)
Tx Low channel 5.745GHz															
11.490	3.0	55.7	42.7	38.3	5.5	-43.7	0.0	0.7	56.5	43.4	74	54	-17.5	-10.6	V
17.232	3.0	55.1	40.5	42.7	6.9	-45.9	0.0	0.6	59.5	44.9	74	54	-14.5	-9.1	V
11.490	3.0	58.3	44.0	38.3	5.5	-43.7	0.0	0.7	59.1	44.8	74	54	-14.9	-9.2	H
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Dist	Distance to Antenna	D Corr	Distance Correct to 3 meters	Pk Lim	Peak Field Strength Limit
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Compliance Certification Services, Morgan Hill Open Field Site

Test Engr: Thanh Nguyen
 Project #: 05U3337-1
 Company: RAPID WAVE
 EUT Descrip.: 802.11a HIGH RATE POINT TO MULTIPOINT WIRELESS BRIDGE Mars Antenna MA-WD50-6X 90 deg sector
 EUT M/N: RAPIDLINK 54_16dBi_19dBm POWER OUTPUT
 Test Target: FCC15.247
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No other harmonic and spurious emissions above 3rd Harmonic.															
Tx MID Channel 5.785GHz															
11.570	3.0	56.4	43.9	38.3	5.5	-43.7	0.0	0.7	57.2	44.8	74	54	-16.8	-9.2	H
17.355	3.0	52.7	40.0	43.4	6.9	-45.8	0.0	0.6	57.8	45.1	74	54	-16.2	-8.9	H
11.570	3.0	58.9	44.7	38.3	5.5	-43.7	0.0	0.7	59.8	45.5	74	54	-14.2	-8.5	V
17.355	3.0	54.3	40.1	43.4	6.9	-45.8	0.0	0.6	59.4	45.3	74	54	-14.6	-8.7	V
No other harmonic and spurious emissions above 3rd Harmonic.															
Tx MID Channel 5.825GHz															
11.650	3.0	57.8	44.4	38.4	5.5	-43.7	0.0	0.7	58.7	45.3	74	54	-15.3	-8.7	V
17.475	3.0	52.9	40.0	44.1	7.0	-45.8	0.0	0.6	58.8	45.9	74	54	-15.2	-8.1	V
11.650	3.0	52.8	39.5	38.4	5.5	-43.7	0.0	0.7	53.7	40.4	74	54	-20.3	-13.6	H
17.475	3.0	52.8	41.4	44.1	7.0	-45.8	0.0	0.6	58.7	47.3	74	54	-15.3	-6.7	H
No other harmonic and spurious emissions above 3rd Harmonic.															
TX TURBO Mode															
5760MHz															
11.520	3.0	56.7	42.8	38.3	5.5	-43.7	0.0	0.7	57.5	43.6	74	54	-16.5	-10.4	H
17.280	3.0	54.5	40.0	43.0	6.9	-45.9	0.0	0.6	59.2	44.6	74	54	-14.8	-9.4	H
11.520	3.0	57.9	44.8	38.3	5.5	-43.7	0.0	0.7	58.7	45.6	74	54	-15.3	-8.4	V
17.280	3.0	53.1	40.1	43.0	6.9	-45.9	0.0	0.6	57.8	44.8	74	54	-16.2	-9.2	V
No other harmonic and spurious emissions above 3rd Harmonic.															
															H
															H
															H
															H
															H

f	Measurement Frequency	Amp	Preamp Gain	Avg Lim	Average Field Strength Limit
Dist	Distance to Antenna	D Corr	Distance Correct to 3 meters	Pk Lim	Peak Field Strength Limit
Read	Analyzer Reading	Avg	Average Field Strength @ 3 m	Avg Mar	Margin vs. Average Limit
AF	Antenna Factor	Peak	Calculated Peak Field Strength	Pk Mar	Margin vs. Peak Limit
CL	Cable Loss	HPF	High Pass Filter		

03/15/05 **High Frequency Measurement**
Compliance Certification Services, Morgan Hill Open Field Site

Test Engr: Thanh Nguyen
 Project #: 05U3337-1
 Company: RAPID WAVE
 EUT Descr.: 802.11a HIGH RATE POINT TO MULTIPOINT WIRELESS BRIDGE w/ 60 Degree Sector Antenna Mars Antenna MAC50-5X
 EUT M/N: RAPIDLINK 54_15.5dBi_19dBm POWER OUTPUT
 Test Target: FCC15.247
 Mode Oper: TX LOW / MID / HI CHANNELS

Test Equipment:

EMCO Horn 1-18GHz T73; S/N: 6717 @3m Hi Frequency Cables	Pre-amplifier 1-26GHz T86 Miteq 924341	Pre-amplifier 26-40GHz	Horn > 18GHz
2 foot cable 2_Thanh	3 foot cable	4 foot cable	12 foot cable 12_Thanh
HPF HPF_7.6GHz	Reject Filter	Peak Measurements RBW=VBW=1MHz Average Measurements RBW=1MHz ; VBW=10Hz	

f GHz	Dist (m)	Read Pk dBuV	Read Avg. dBuV	AF dB/m	CL dB	Amp dB	D Corr dB	Filtr dB	Peak dBuV/m	Avg dBuV/m	Pk Lim dBuV/m	Avg Lim dBuV/m	Pk Mar dB	Avg Mar dB	Notes (V/H)
Tx Low channel 5.745GHz															
11.490	3.0	56.6	44.0	38.3	5.5	-43.7	0.0	0.7	57.4	44.8	74	54	-16.6	-9.2	V
17.232	3.0	53.0	40.2	42.7	6.9	-45.9	0.0	0.6	57.4	44.6	74	54	-16.6	-9.4	V
11.490	3.0	58.3	45.5	38.3	5.5	-43.7	0.0	0.7	59.1	46.3	74	54	-14.9	-7.7	H
17.235	3.0	53.5	40.2	42.7	6.9	-45.9	0.0	0.6	57.9	44.6	74	54	-16.1	-9.4	H
No other harmonic and spurious emissions above 3rd Harmonic.															
Tx MID Channel 5.785GHz															
11.570	3.0	56.8	45.1	38.3	5.5	-43.7	0.0	0.7	57.6	45.9	74	54	-16.4	-8.1	H
17.355	3.0	53.5	40.0	43.4	6.9	-45.8	0.0	0.6	58.7	45.1	74	54	-15.3	-8.9	H
11.570	3.0	59.2	46.3	38.3	5.5	-43.7	0.0	0.7	60.0	47.2	74	54	-14.0	-6.8	V
17.355	3.0	54.6	40.3	43.4	6.9	-45.8	0.0	0.6	59.8	45.5	74	54	-14.2	-8.5	V
No other harmonic and spurious emissions above 3rd Harmonic.															
Tx MID Channel 5.825GHz															
11.650	3.0	56.5	41.3	38.4	5.5	-43.7	0.0	0.7	57.4	42.2	74	54	-16.6	-11.8	V
17.475	3.0	52.8	40.2	44.1	7.0	-45.8	0.0	0.6	58.7	46.1	74	54	-15.3	-7.9	V
11.650	3.0	55.7	42.5	38.4	5.5	-43.7	0.0	0.7	56.6	43.3	74	54	-17.4	-10.7	H
17.475	3.0	52.5	40.6	44.1	7.0	-45.8	0.0	0.6	58.4	46.5	74	54	-15.6	-7.5	H
No other harmonic and spurious emissions above 3rd Harmonic.															
TX TURBO Mode															
5760MHz															
11.520	3.0	53.3	39.6	38.3	5.5	-43.7	0.0	0.7	54.0	40.4	74	54	-20.0	-13.6	H
17.280	3.0	53.6	39.8	43.0	6.9	-45.9	0.0	0.6	58.3	44.5	74	54	-15.7	-9.5	H
11.520	3.0	54.1	40.3	38.3	5.5	-43.7	0.0	0.7	54.9	41.1	74	54	-19.1	-12.9	V
17.280	3.0	54.4	39.7	43.0	6.9	-45.9	0.0	0.6	59.1	44.4	74	54	-14.9	-9.6	V
No other harmonic and spurious emissions above 3rd Harmonic.															
															H
															H
															H
															H
															H

f	Measurement Frequency	Amp	Preamp Gain	Avg Lim	Average Field Strength Limit
Dist	Distance to Antenna	D Corr	Distance Correct to 3 meters	Pk Lim	Peak Field Strength Limit
Read	Analyzer Reading	Avg	Average Field Strength @ 3 m	Avg Mar	Margin vs. Average Limit
AF	Antenna Factor	Peak	Calculated Peak Field Strength	Pk Mar	Margin vs. Peak Limit
CL	Cable Loss	HPF	High Pass Filter		

RF Power Output**Test Requirement: 15.247(b)****Measurement Equipment Used:**

Agilent E4416A power meter
Agilent E9327A RF sensor
20 dB attenuator

Test Procedures

1. The EUT was configured on a test bench. The power meter was zeroed and calibrated. The control software was activated and power was set to produce the same output power levels tested for the original application (power setting = 19).
2. The 20 dB attenuator was connected to the antenna port of the EUT. The power meter head was connected to the other end of the attenuator. Peak power was read directly off the meter, accounting for the 20 dB attenuator.
3. The process in (1) and (2) was repeated for MID channel and HIGH channel.

Test Results

Power level readings converted to dBm are shown below.

Channel	Frequency MHz	PEAK Power dBm	AVE Power dBm
LOW	5745	22.86	15.3
MID	5785	23.6	16.11
HIGH	5825	22.71	15.74

Maximum output power output variation within 0.1 dBm of original measurement.