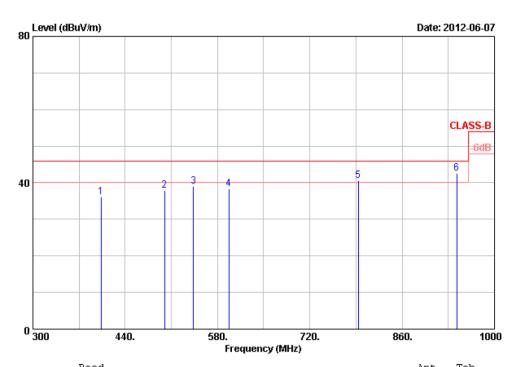
Power	:	AC 120V	Pol/Phase :	VERTICAL
Test Mode 1		802.11n HT40, CH3	Temperature :	25 °C
Adapter	:	JENTEC \ CF0605-B	Humidity :	60 %



Item	Freq	Kead Value	Factor	Result	Limit	Margin	Remark	Ant Pos	Pos	
	MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB		cm	Deg	
1	403.60	41.88	-5.76	36.12	46.00	-9.88	Peak	100	0	
2	499.50	43.07	-5.11	37.96	46.00	-8.04	Peak	100	0	
3	543.60	35.75	3.34	39.09	46.00	-6.91	Peak	100	0	
4	597.50	35.10	3.33	38.43	46.00	-7.57	Peak	100	0	
5	793.50	34.66	5.82	40.48	46.00	-5.52	Peak	100	0	
6	942.60	31.15	11.30	42.45	46.00	-3.55	Peak	100	0	

- 1. Result = Read Value + Factor
- 2. Factor = Antenna Factor + Cable Loss Amplifier
- 3. The resolution bandwidth of test receiver/spectrum analyzer is  $120 \, \text{KHz}$  and video bandwidth is  $300 \, \text{kHz}$  for Peak detection and Quasi-peak detection at frequency below  $1 \, \text{GHz}$ .
- 4. All emission below 1GHz at 802.11b/g/n mode are all the same, so the 802.11g/n mode chosen as representative in final test.
- 5. According to technical experiences, all spurious emission of 802.11g/n mode at channel 1,6,11 or 3,6,9(for HT40) are almost the same below 1GHz, so that the channel 1 or 3(for HT40) was chosen as representative in final test.
- 6. The data is worse case.

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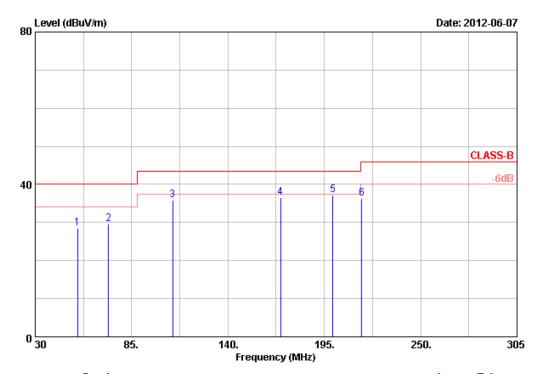
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Power	 AC 120V	Pol/Phase :	HORIZONTAL
Test Mode 1	 802.11n HT40, CH3	Temperature :	25 °C
Adapter	 JENTEC \ CF0605-B	Humidity :	60 %



		Read						Ant	Tab	
Item	Freq	Value	Factor	Result	Limit	Margin	Remark	Pos	Pos	
	$\mathtt{MHz}$	dBuV	dB/m	dBuV/m	dBuV/m	dB		cm	Deg	
1	54.20	39.87	-11.30	28.57	40.00	-11.43	Peak	100	360	
2	71.80	51.19	-21.49	29.70	40.00	-10.30	Peak	100	360	
3	108.38	54.67	-18.90	35.77	43.50	-7.73	Peak	100	360	
4	169.98	47.61	-10.97	36.64	43.50	-6.86	Peak	100	360	
5	199.95	56.06	-18.76	37.30	43.50	-6.20	Peak	100	360	
6	216.45	52.56	-16.19	36.37	46.00	-9.63	Peak	100	360	

- 1. Result = Read Value + Factor
- 2. Factor = Antenna Factor + Cable Loss Amplifier
- 3. The resolution bandwidth of test receiver/spectrum analyzer is 120KHz and video bandwidth is 300kHz for Peak detection and Quasi-peak detection at frequency below 1GHz.
- 4. All emission below 1GHz at 802.11b/g/n mode are all the same, so the 802.11g/n mode chosen as representative in final test.
- 5. According to technical experiences, all spurious emission of 802.11g/n mode at channel 1,6,11 or 3,6,9(for HT40) are almost the same below 1GHz,so that the channel 1 or 3(for HT40) was chosen as representative in final test.
- 6. The data is worse case.

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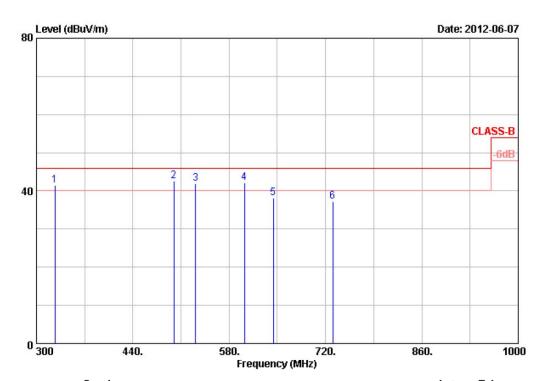
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Power	:	AC 120V	Pol/Phase	:	HORIZONTAL
Test Mode 1	:	802.11n HT40, CH3	Temperature		25 °C
Adapter	:	JENTEC \ CF0605-B	Humidity	:	60 %



Item	Freq	Read Value	Factor	Result	Limit	Margin	Remark	Ant Pos	Tab Pos	
	MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB		cm	Deg	
1	326.60	52.89	-11.37	41.52	46.00	-4.48	Peak	100	0	
2	499.50	42.67	-0.22	42.45	46.00	-3.55	QP	100	0	
3	531.00	40.28	1.71	41.99	46.00	-4.01	QP	100	0	
4	602.40	40.05	2.01	42.06	46.00	-3.94	Peak	100	0	
5	644.40	36.86	1.35	38.21	46.00	-7.79	Peak	100	0	
6	730.50	33.07	4.09	37.16	46.00	-8.84	Peak	100	0	

- 1. Result = Read Value + Factor
- 2. Factor = Antenna Factor + Cable Loss Amplifier
- The resolution bandwidth of test receiver/spectrum analyzer is 120KHz and video bandwidth is 300kHz for Peak detection and Quasi-peak detection at frequency below 1GHz.
- 4. All emission below 1GHz at 802.11b/g/n mode are all the same, so the 802.11g/n mode chosen as representative in final test.
- 5. According to technical experiences, all spurious emission of 802.11g/n mode at channel 1,6,11 or 3,6,9(for HT40) are almost the same below 1GHz, so that the channel 1 or 3(for HT40) was chosen as representative in final test.
- 6. The data is worse case.

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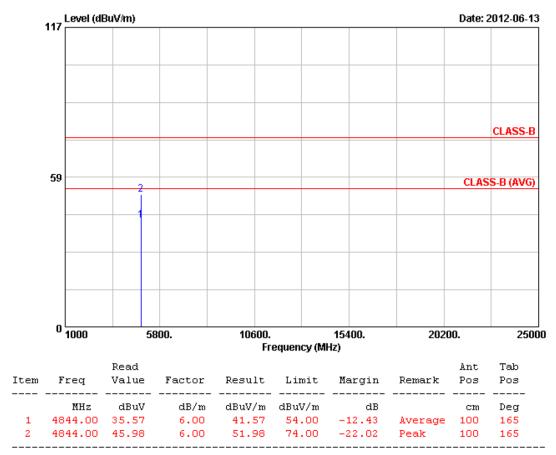
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Power	:	AC 120V	Pol/Phase :	VERTICAL
Test Mode 1		802.11n HT40, CH3	Temperature :	25 °C
Adapter	:	JENTEC \ CF0605-B	Humidity :	60 %



- 1. Result = Read Value + Factor
- 2. Factor = Antenna Factor + Cable Loss Amplifier
- The resolution bandwidth of test receiver/spectrum analyzer is 120KHz and video bandwidth is 300kHz for Peak detection and Quasi-peak detection at frequency below 1GHz.
- The resolution bandwidth of test receiver/spectrum analyzer is 1MHz and video bandwidth is 3MHz for Peak detection at frequency above 1GHz.
- The resolution bandwidth of test receiver/spectrum analyzer is 1MHz and video bandwidth is 10Hz for Average detection at frequency above 1GHz.
- 6. The other emissions is too low to be measured.
- 7. The data is worse case.

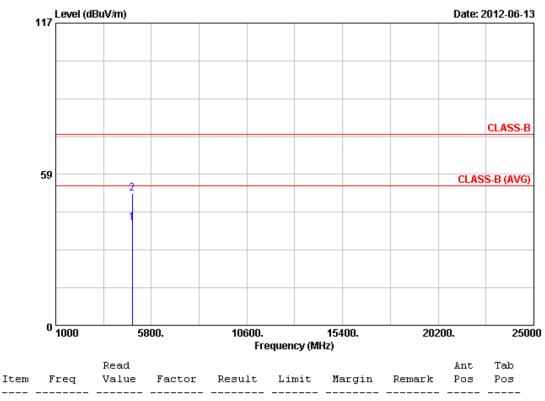
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Power	:	AC 120V	Pol/Phase	:	HORIZONTAL
Test Mode 1	:	802.11n HT40, CH3	Temperature	:	25 °C
Adapter	:	JENTEC \ CF0605-B	Humidity	:	60 %



Item	Freq	Kead Value	Factor	Result	Limit	Margin	Remark	Pos	Pos
	MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB		cm	Deg
1	4844.00	35.50	4.26	39.76	54.00	-14.24	Average	100	260
2	4844.00	46.80	4.26	51.06	74.00	-22.94	Peak	100	260

- 1. Result = Read Value + Factor
- 2. Factor = Antenna Factor + Cable Loss Amplifier
- 3. The resolution bandwidth of test receiver/spectrum analyzer is 120KHz and video bandwidth is 300kHz for Peak detection and Quasi-peak detection at frequency below 1GHz.
- 4. The resolution bandwidth of test receiver/spectrum analyzer is 1MHz and video bandwidth is 3MHz for Peak detection at frequency above  $1 \, \mathrm{GHz}$ .
- 5. The resolution bandwidth of test receiver/spectrum analyzer is 1MHz and video bandwidth is 10Hz for Average detection at frequency above  $1\,\mathrm{GHz}$ .
- 6. The other emissions is too low to be measured.
- 7. The data is worse case.

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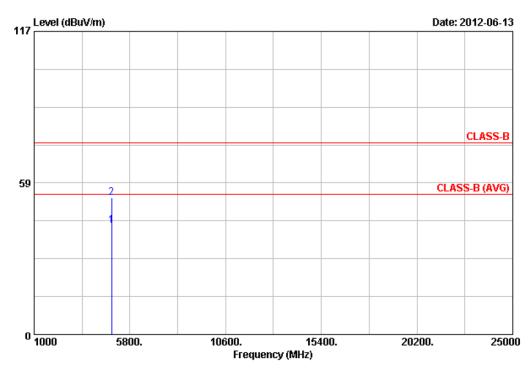
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Power	:	AC 120V	Pol/Phase :	VERTICAL
Test Mode 1		802.11n HT40, CH6	Temperature :	25 °C
Adapter	:	JENTEC \ CF0605-B	Humidity :	60 %



Item	Freq	Read Value	Factor	Result	Limit	Margin	Remark	Ant Pos	Tab Pos	
	MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB		cm	Deg	
1	4874.00	35.50	6.59	42.09	54.00	-11.91	Average	100	167	
2	4874.00	46.37	6.59	52.96	74.00	-21.04	Peak	100	167	

- 1. Result = Read Value + Factor
- 2. Factor = Antenna Factor + Cable Loss Amplifier
- 3. The resolution bandwidth of test receiver/spectrum analyzer is 120KHz and video bandwidth is 300kHz for Peak detection and Quasi-peak detection at frequency below 1GHz.
- 4. The resolution bandwidth of test receiver/spectrum analyzer is 1MHz and video bandwidth is 3MHz for Peak detection at frequency above  $1 \, \mathrm{GHz}$ .
- The resolution bandwidth of test receiver/spectrum analyzer is 1MHz and video bandwidth is 10Hz for Average detection at frequency above 1GHz.
- 6. The other emissions is too low to be measured.
- 7. The data is worse case.

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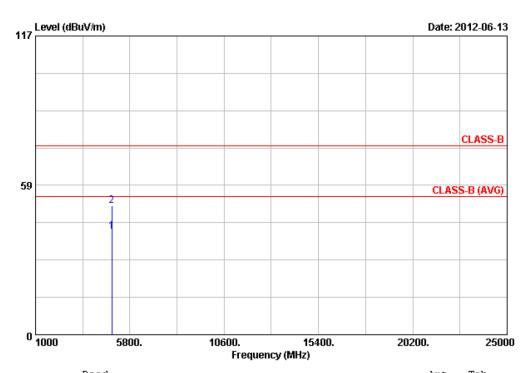
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Power	:	AC 120V	Pol/Phase :	HORIZONTAL
Test Mode 1		802.11n HT40, CH6	Temperature :	25 °C
Adapter		JENTEC \ CF0605-B	Humidity :	60 %



Item	Freq	Kead Value	Factor	Result	Limit	Margin	Remark	Ant Pos	Tab Pos	
	MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB		cm	Deg	
1	4874.00	35.62	4.73	40.35	54.00	-13.65	Average	100	219	
2	4874.00	45.73	4.73	50.46	74.00	-23.54	Peak	100	219	

- 1. Result = Read Value + Factor
- 2. Factor = Antenna Factor + Cable Loss Amplifier
- 3. The resolution bandwidth of test receiver/spectrum analyzer is 120KHz and video bandwidth is 300kHz for Peak detection and Quasi-peak detection at frequency below 1GHz.
- The resolution bandwidth of test receiver/spectrum analyzer is 1MHz and video bandwidth is 3MHz for Peak detection at frequency above 1GHz.
- The resolution bandwidth of test receiver/spectrum analyzer is 1MHz and video bandwidth is 10Hz for Average detection at frequency above 1GHz.
- 6. The other emissions is too low to be measured.
- 7. The data is worse case.

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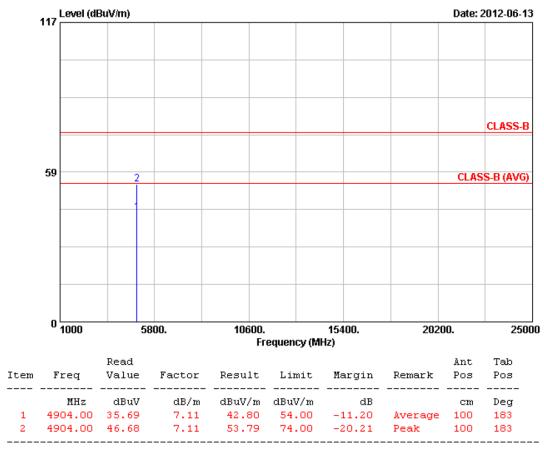
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Power	:	AC 120V	Pol/Phase :	VERTICAL
Test Mode 1	:	802.11n HT40, CH9	Temperature :	25 °C
Adapter	:	JENTEC \ CF0605-B	Humidity :	60 %



- 1. Result = Read Value + Factor
- 2. Factor = Antenna Factor + Cable Loss Amplifier
- The resolution bandwidth of test receiver/spectrum analyzer is 120KHz and video bandwidth is 300kHz for Peak detection and Quasi-peak detection at frequency below 1GHz.
- The resolution bandwidth of test receiver/spectrum analyzer is 1MHz and video bandwidth is 3MHz for Peak detection at frequency above 1GHz.
- The resolution bandwidth of test receiver/spectrum analyzer is 1MHz and video bandwidth is 10Hz for Average detection at frequency above 1GHz.
- 6. The other emissions is too low to be measured.
- 7. The data is worse case.

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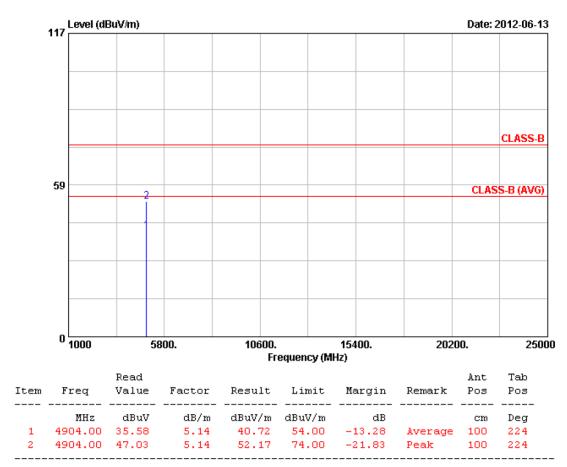
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Power	:	AC 120V	Pol/Phase :	:	HORIZONTAL
Test Mode 1		802.11n HT40, CH9	Temperature :		25 °C
Adapter		JENTEC \ CF0605-B	Humidity :	:	60 %



- 1. Result = Read Value + Factor
- 2. Factor = Antenna Factor + Cable Loss Amplifier
- The resolution bandwidth of test receiver/spectrum analyzer is 120KHz and video bandwidth is 300kHz for Peak detection and Quasi-peak detection at frequency below 1GHz.
- The resolution bandwidth of test receiver/spectrum analyzer is 1MHz and video bandwidth is 3MHz for Peak detection at frequency above 1GHz.
- The resolution bandwidth of test receiver/spectrum analyzer is 1MHz and video bandwidth is 10Hz for Average detection at frequency above 1GHz
- 6. The other emissions is too low to be measured.
- 7. The data is worse case.

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## 6. 6dB Bandwidth Measurement Data

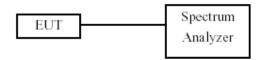
### 6.1 Test Limit

The minimum of 6dB Bandwidth Measurement is 0.5 MHz.

### 6.2 Test Procedures

- a. The transmitter output was connected to the spectrum analyzer.
- b. Set RBW of spectrum analyzer to 1~5% of the emission bandwidth and VBW ≥ 3x RBW.
- c. The 6 dB bandwidth is defined as the total spectrum the power of which is higher than peak power minus 6 dB.
- d. The 6dB Bandwidth was measured and recorded.

### 6.3 Test Setup Layout



### 6.4 Measurement Equipment

Instrument/Ancillary	Manufacturer	Model No.	Serial No.	Calibration Date	Valid Date
Spectrum Analyzer	R&S	FSP40	100219	2011/11/24	2012/11/23

#### 6.5 Test Result and Data

Test Date: Jun. 05, 2012 Temperature: 24℃ Atmospheric pressure: 1020 hPa Humidity: 65%

Modulation Standard	Channel	Frequency (MHz)	6dB Bandwidth (MHz)
	01	2412	11.1
802.11b (11Mbps)	06	2437	11.0
	11	2462	11.0
	01	2412	16.8
802.11g (54Mbps)	06	2437	16.8
	11	2462	16.9
000 44 m LITO0	01	2412	18.2
802.11n HT20 (130Mbps)	06	2437	18.3
(1301/1005)	11	2462	18.3
000 44 m LIT40	03	2422	36.6
802.11n HT40 (270Mbps)	06	2437	36.6
(27 ONIDPS)	09	2452	36.6

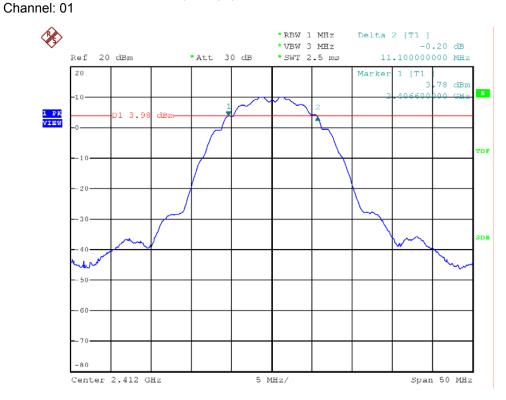
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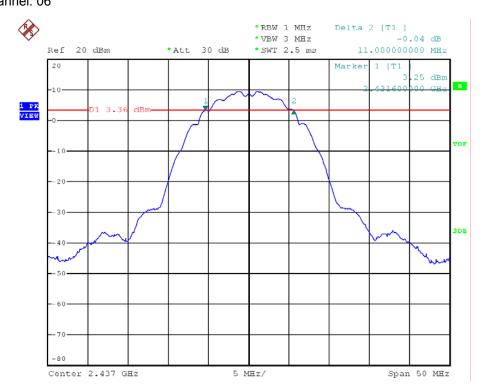
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Modulation Standard: 802.11b (11Mbps)



Modulation Standard: 802.11b (11Mbps) Channel: 06

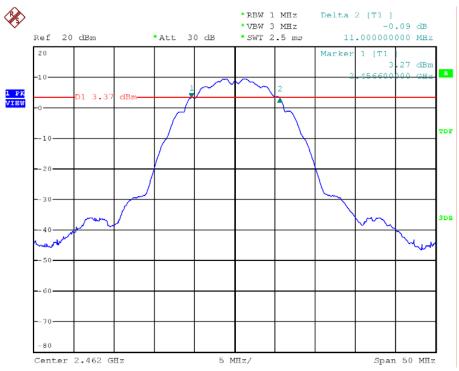


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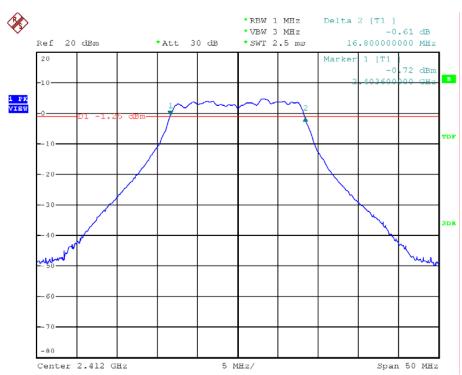


Modulation Standard: 802.11b (11Mbps) Channel: 11



Modulation Standard: 802.11g (54Mbps)





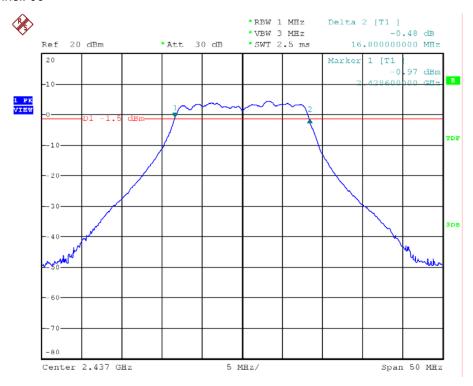
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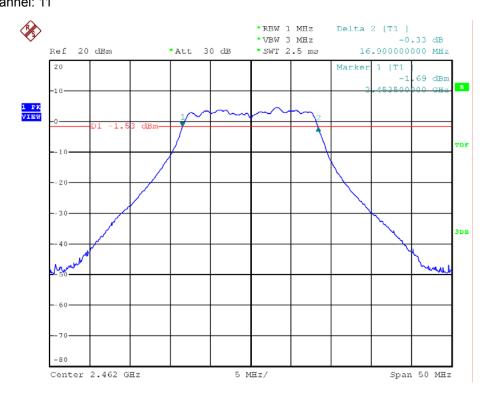
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Modulation Standard: 802.11g (54Mbps) Channel: 06



Modulation Standard: 802.11g (54Mbps) Channel: 11

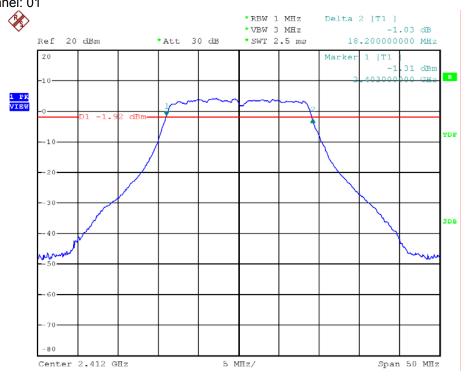


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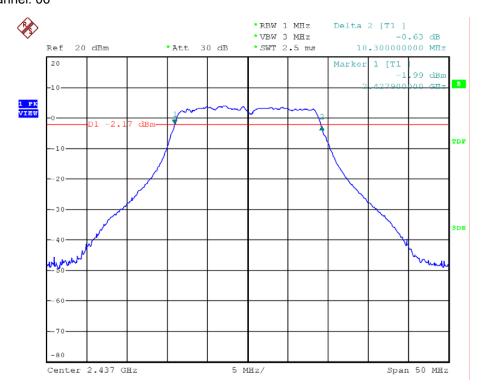
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Modulation Standard: 802.11n HT20 (130Mbps) Channel: 01



Modulation Standard: 802.11n HT20 (130Mbps) Channel: 06



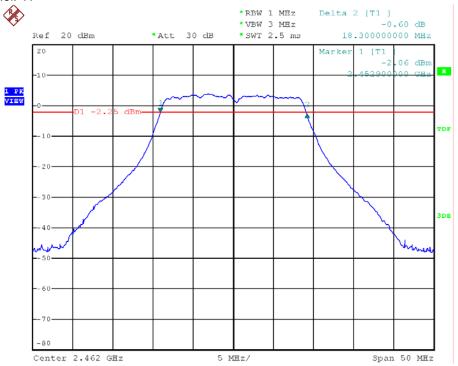
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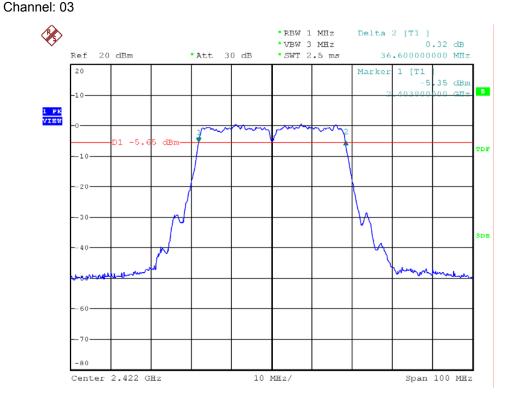
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Modulation Standard: 802.11n HT20 (130Mbps) Channel: 11



Modulation Standard: 802.11n HT40 (270Mbps)

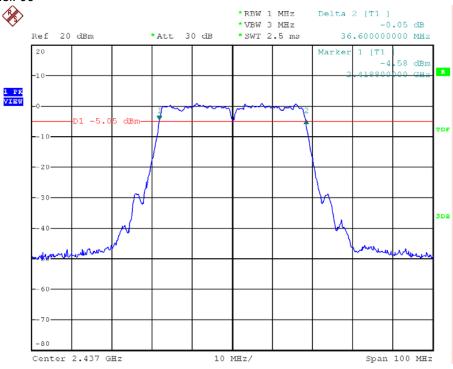


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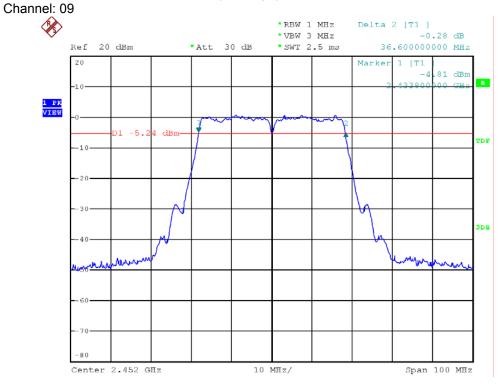
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Modulation Standard: 802.11n HT40 (270Mbps) Channel: 06



Modulation Standard: 802.11n HT40 (270Mbps)



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### 7. Maximum Peak and Average Output Power

### 7.1 Test Limit

The Maximum Peak Output Power Measurement is 30dBm.

### 7.2 Test Procedures

- a. The transmitter output was connected to the spectrum analyzer.
- b. Set RBW of spectrum analyzer to 1MHz and VBW to 3MHz.
- c. Set detector mode to peak (for peak output power) or set detector mode to RMS (for average output power). Trace averaging in power averaging (RMS) mode must be performed over a minimum of 100 traces.
- d. Use the spectrum analyzer's integrated band power measurement function with band limits set equal to the EBW band edges.
- e. The maximum peak and average output power was measured and recorded.

### 7.3 Test Setup Layout



### 7.4 Measurement Equipment

Instrument/Ancillary	Manufacturer	Model No.	Serial No.	Calibration Date	Valid Date
Spectrum Analyzer	R&S	FSP40	100219	2011/11/24	2012/11/23

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### 7.5 Test Result and Data

Test Date: Jun. 05, 2012 Temperature:  $24^{\circ}$ C Atmospheric pressure: 1020 hPa Humidity: 65%

Modulation Standard	Channel	Frequency (MHz)	Peak Power Output (dBm) Power Output (mW)					
Staridard		(1011 12)	Peak	Average	Peak	Average		
802.11b (11Mbps)	01	2412	17.28	15.08	53.5	32.2		
	06	2437	17.33	14.49	54.1	28.1		
(TTWISPS)	11	2462	17.03	14.54	50.5	28.4		
222.44	01	2412	14.17	8.23	26.1	6.7		
802.11g (54Mbps)	06	2437	14.14	8.32	25.9	6.8		
(5555)	11	2462	14.02	8.30	25.2	6.8		

Modulation Standard	Channel	Frequency (MHz)	Peak Power C	Output (dBm)	Power Out	tput (mW)
Stariuaru		(1011 12)	Peak	Average	Peak	Average
000 44 11700	01	2412	14.33	8.59	27.1	7.2
802.11n HT20 (130Mbps)	06	2437	14.38	8.64	27.4	7.3
(Toolvibps)	11	2462	14.31	8.56	27.0	7.2
000 44 11740	03	2422	14.04	7.82	25.4	6.1
802.11n HT40 (270Mbps)	06	2437	14.11	8.35	25.8	6.8
(2. 3.41560)	09	2452	14.13	8.43	25.9	7.0

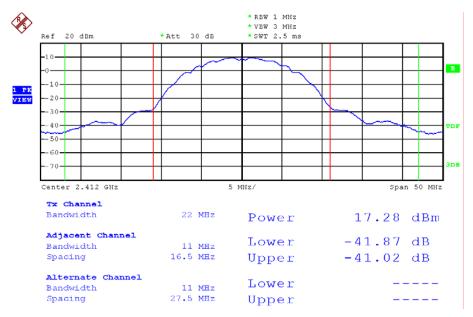
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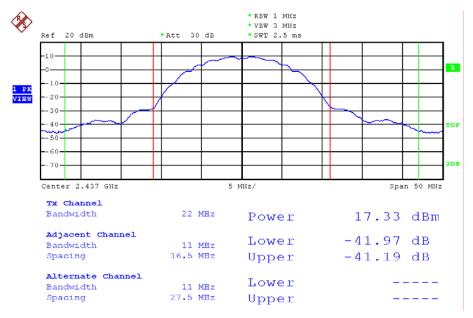
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Modulation Standard: 802.11b (11Mbps), Peak Power Output Channel: 01



Modulation Standard: 802.11b (11Mbps), Peak Power Output Channel: 06



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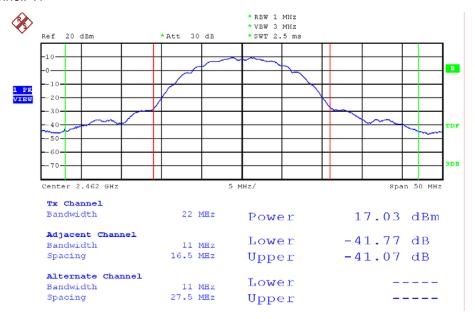
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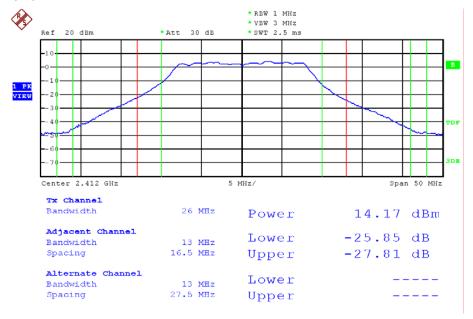
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# Modulation Standard: 802.11b (11Mbps), Peak Power Output Channel: 11



## Modulation Standard: 802.11g (54Mbps), Peak Power Output Channel: 01

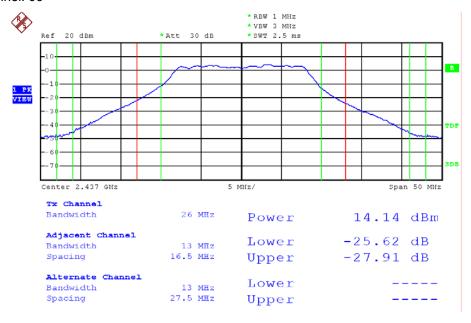


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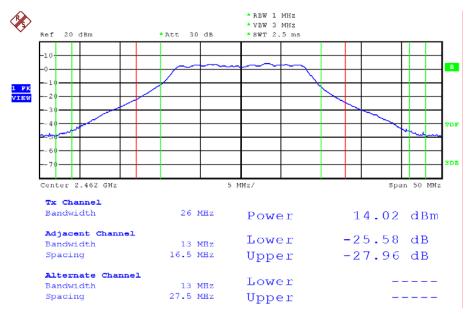
Issued date : Sep. 05, 2012
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Modulation Standard: 802.11g (54Mbps), Peak Power Output Channel: 06



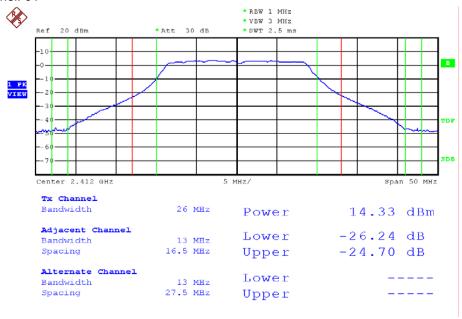
## Modulation Standard: 802.11g (54Mbps), Peak Power Output Channel: 11



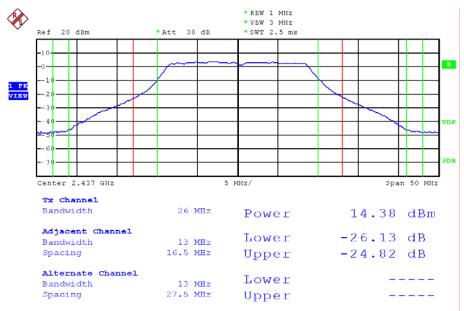
Tel:886-2-2655-8100 Fax:886-2-2655-8200

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# Modulation Standard: 802.11n HT20 (130Mbps), Peak Power Output Channel: 01



# Modulation Standard: 802.11n HT20 (130Mbps), Peak Power Output Channel: 06

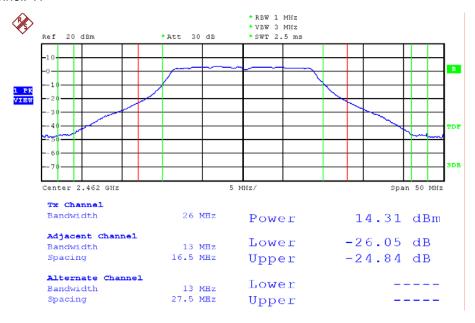


Tel:886-2-2655-8100 Fax:886-2-2655-8200

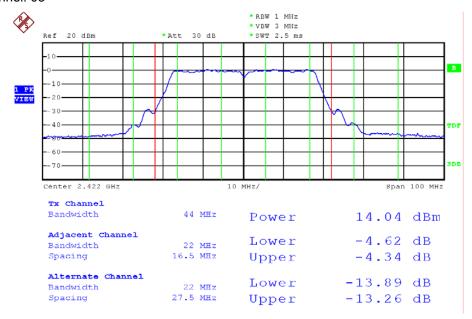
Issued date : Sep. 05, 2012
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# Modulation Standard: 802.11n HT20 (130Mbps), Peak Power Output Channel: 11



# Modulation Standard: 802.11n HT40 (270Mbps), Peak Power Output Channel: 03

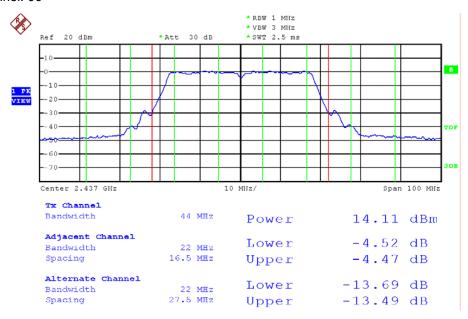


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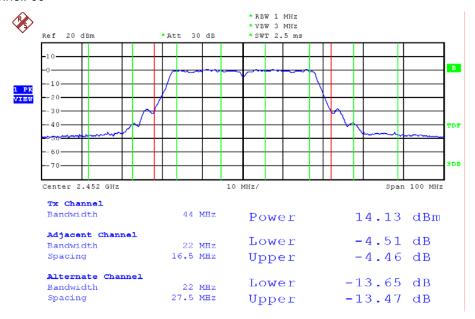
Issued date : Sep. 05, 2012
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Modulation Standard: 802.11n HT40 (270Mbps), Peak Power Output Channel: 06



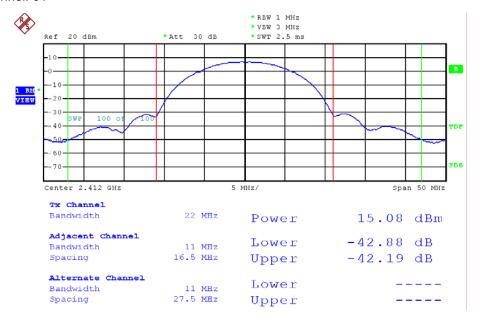
# Modulation Standard: 802.11n HT40 (270Mbps), Peak Power Output Channel: 09



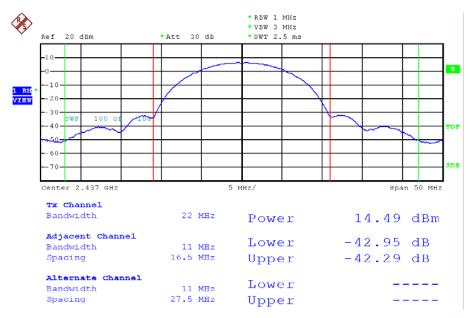
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Issued date : Sep. 05, 2012
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Modulation Standard: 802.11b (11Mbps), Average Power Output Channel: 01



Modulation Standard: 802.11b (11Mbps), Average Power Output Channel: 06



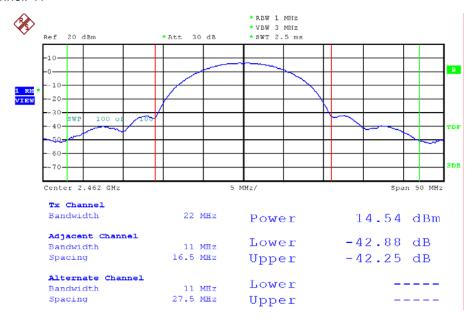
Tel:886-2-2655-8100 Fax:886-2-2655-8200

 Issued date
 : Sep. 05, 2012

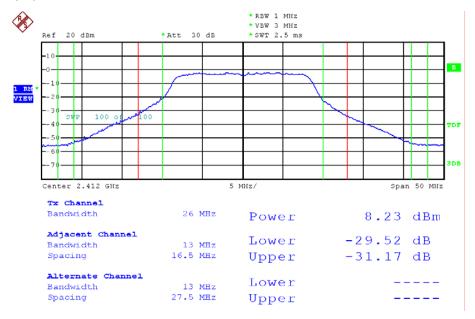
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 : WIJVVIN3587

# Modulation Standard: 802.11b (11Mbps), Average Power Output Channel: 11



# Modulation Standard: 802.11g (54Mbps), Average Power Output Channel: 01

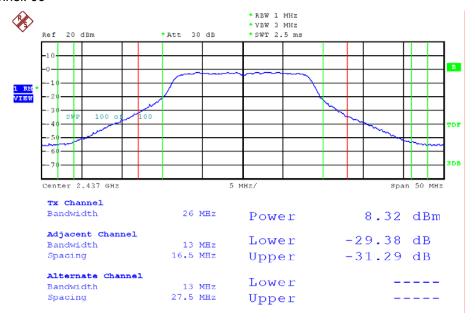


Tel:886-2-2655-8100 Fax:886-2-2655-8200

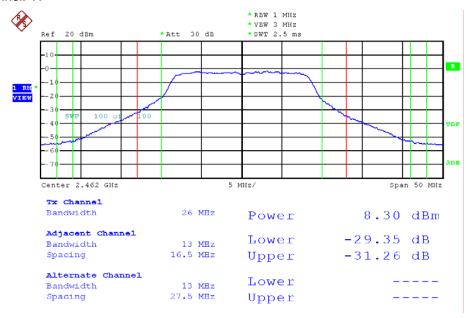
Issued date : Sep. 05, 2012
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Modulation Standard: 802.11g (54Mbps), Average Power Output Channel: 06



# Modulation Standard: 802.11g (54Mbps), Average Power Output Channel: 11

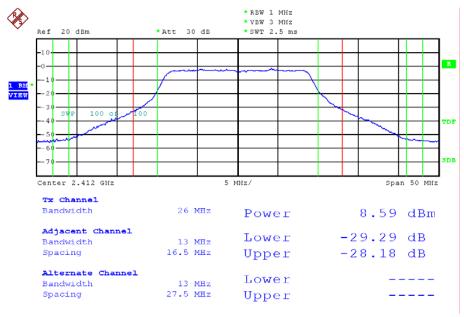


Tel:886-2-2655-8100 Fax:886-2-2655-8200

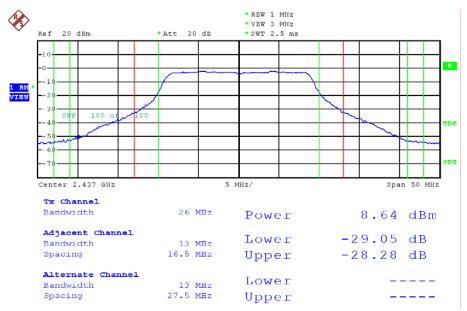
Issued date : Sep. 05, 2012
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FCC ID : WIJVVIN3587



Modulation Standard: 802.11n HT20 (130Mbps), Average Power Output Channel: 01



Modulation Standard: 802.11n HT20 (130Mbps), Average Power Output Channel: 06

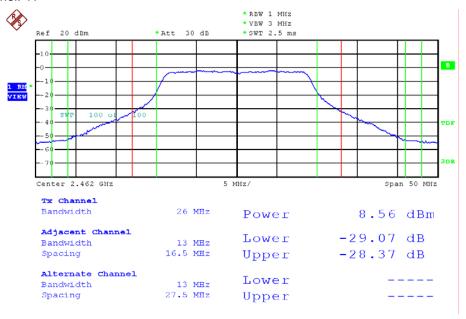


Tel:886-2-2655-8100 Fax:886-2-2655-8200

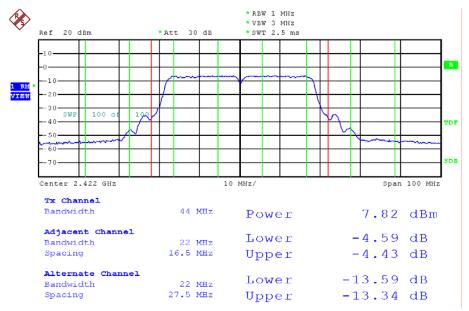
Issued date : Sep. 05, 2012
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Modulation Standard: 802.11n HT20 (130Mbps), Average Power Output Channel: 11



Modulation Standard: 802.11n HT40 (270Mbps), Average Power Output Channel: 03

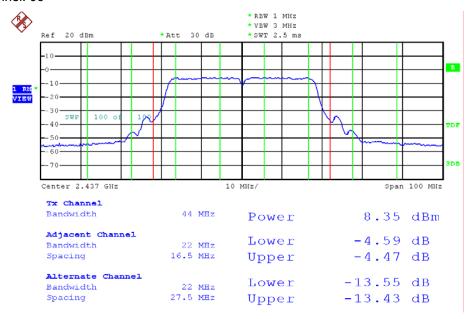


Tel:886-2-2655-8100 Fax:886-2-2655-8200

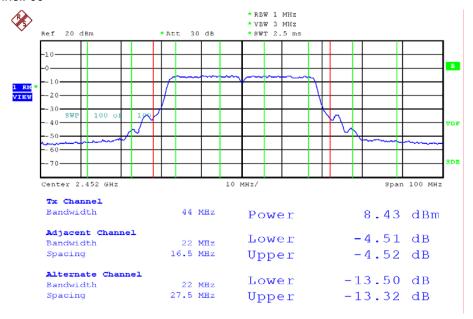
Issued date : Sep. 05, 2012
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Modulation Standard: 802.11n HT40 (270Mbps), Average Power Output Channel: 06



Modulation Standard: 802.11n HT40 (270Mbps), Average Power Output Channel: 09



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### 8. Power Spectral Density

### 8.1 Test Limit

The Maximum of Power Spectral Density Measurement is 8dBm.

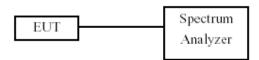
#### 8.2 Test Procedures

- a. The transmitter output was connected to spectrum analyzer.
- b. The spectrum analyzer's resolution bandwidth were set at 100KHz RBW and 300KHz VBW as that of the fundamental frequency. Set the sweep time=auto couple.

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- c. Scale the observed power level to an equivalent value in 3 kHz by adjusting the measured power by a bandwidth correction factor (BWCF) where BWCF=  $10\log (3 \text{ kHz}/100 = -15.2 \text{ dB}).$
- d. The power spectral density was measured and recorded.

### 8.3 Test Setup Layout



### 8.4 Measurement Equipment

Instrument/Ancillary	Manufacturer	Model No.	Serial No.	Calibration Date	Valid Date
Spectrum Analyzer	R&S	FSP40	100219	2011/11/24	2012/11/23

### 8.5 Test Result and Data

Temperature: 24°C Test Date: Jun. 05, 2012 Atmospheric pressure: 1020 hPa Humidity: 65%

Modulation Standard	Channel	Frequency (MHz)	Measured Power Density (dBm)	BWCF (dB)	Maximum Power Density of 3 kHz Bandwidth (dBm)
000 11h	01	2412	5.17	-15.2	-10.03
802.11b (11Mbps)	06	2437	4.23	-15.2	-10.97
(Trivibps)	11	2462	4.15	-15.2	-11.05
902 11a	01	2412	-7.15	-15.2	-22.35
802.11g (54Mbps)	06	2437	-7.04	-15.2	-22.24
	11	2462	-7.18	-15.2	-22.38

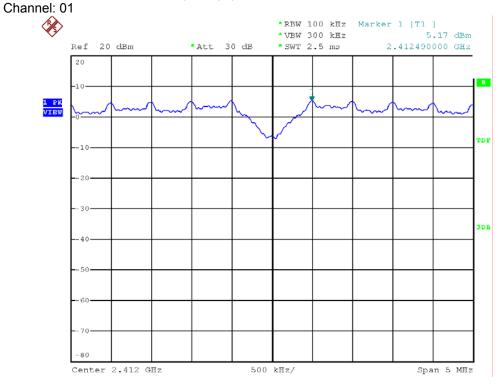
Modulation Standard	Channel	Frequency (MHz)	Measured Power Density (dBm)	BWCF (dB)	Maximum Power Density of 3 kHz Bandwidth (dBm)
000 44m LIT00	01	2412	-6.69	-15.2	-21.89
802.11n HT20 (130Mbps)	06	2437	-6.76	-15.2	-21.96
(1001/1003)	11	2462	-6.96	-15.2	-22.16
802.11n HT40 (270Mbps)	03	2422	-10.03	-15.2	-25.23
	06	2437	-9.73	-15.2	-24.93
	09	2452	-9.96	-15.2	-25.16

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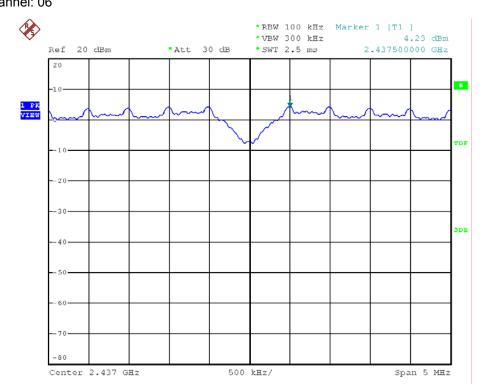
Issued date : Sep. 05, 2012 Tel:886-2-2655-8100 Fax:886-2-2655-8200 Page No. : 83 of 101 FCC ID : WIJVVIN3587



Modulation Standard: 802.11b (11Mbps)



Modulation Standard: 802.11b (11Mbps) Channel: 06

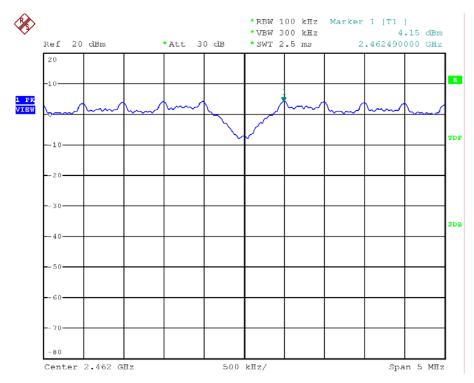


Tel:886-2-2655-8100 Fax:886-2-2655-8200

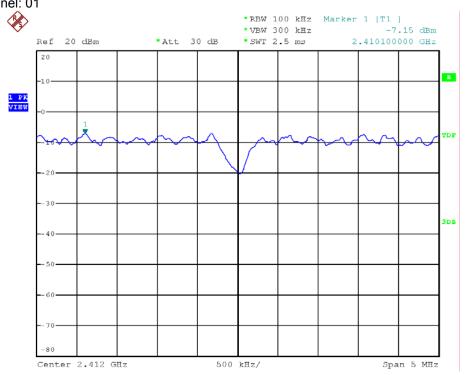
Issued date : Sep. 05, 2012
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Modulation Standard: 802.11b (11Mbps) Channel: 11



# Modulation Standard: 802.11g (54Mbps) Channel: 01

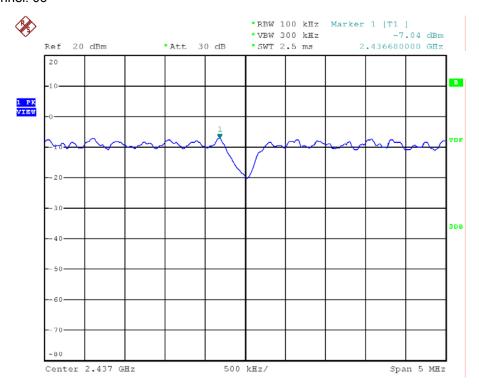


Tel:886-2-2655-8100 Fax:886-2-2655-8200

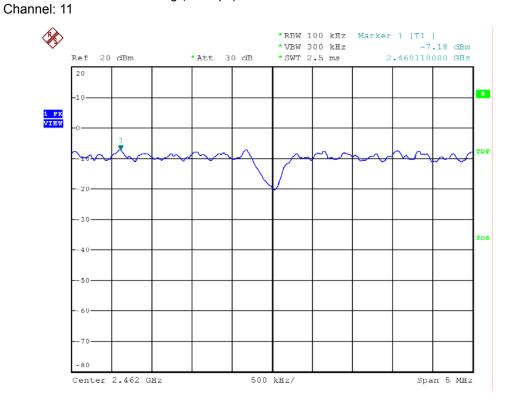
Issued date : Sep. 05, 2012
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Modulation Standard: 802.11g (54Mbps) Channel: 06



Modulation Standard: 802.11g (54Mbps)



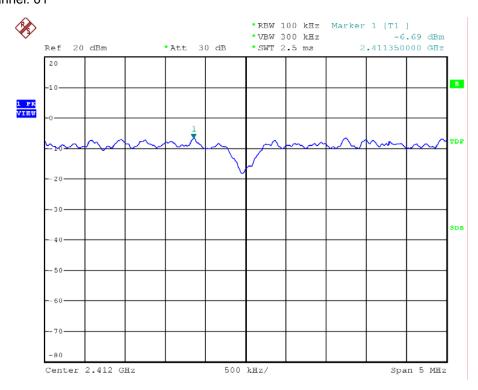
Tel:886-2-2655-8100 Fax:886-2-2655-8200

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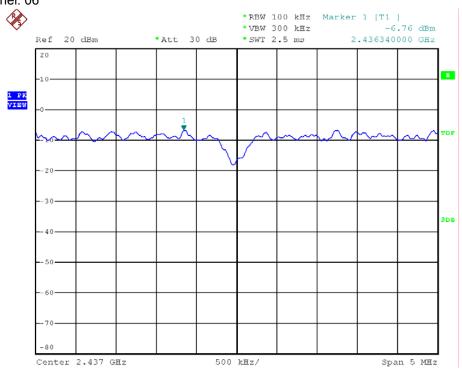


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Modulation Standard: 802.11n HT20 (130Mbps) Channel: 01



Modulation Standard: 802.11n HT20 (130Mbps) Channel: 06



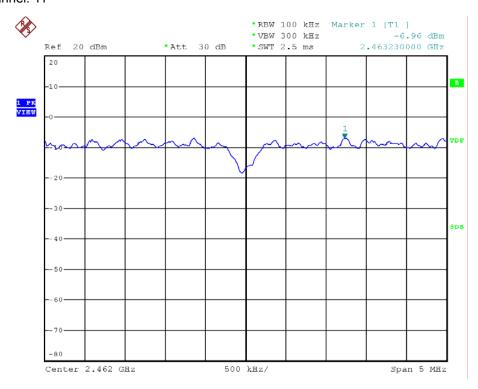
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Tel:886-2-2655-8100 Fax:886-2-2655-8200

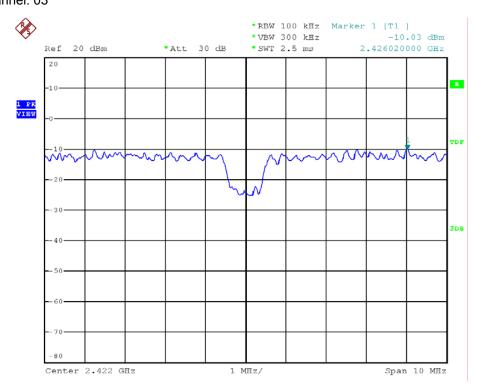
Issued date : Sep. 05, 2012 Page No. : 87 of 101 FCC ID : WIJVVIN3587



Modulation Standard: 802.11n HT20 (130Mbps) Channel: 11



Modulation Standard: 802.11n HT40 (270Mbps) Channel: 03



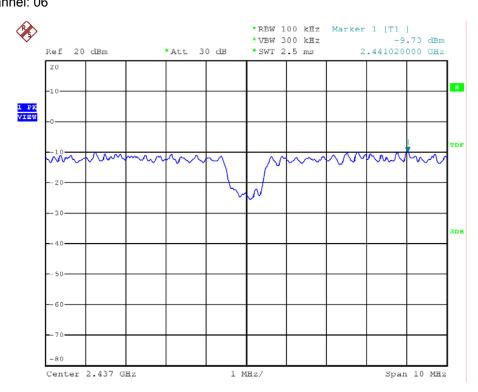
Cerpass Technology Corp.

Tel:886-2-2655-8100 Fax:886-2-2655-8200

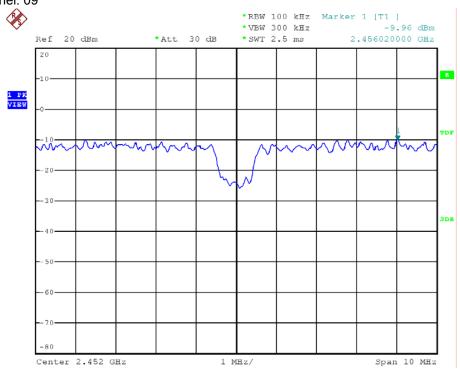
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Modulation Standard: 802.11n HT40 (270Mbps) Channel: 06



Modulation Standard: 802.11n HT40 (270Mbps) Channel: 09



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# 9. Band Edges Measurement

#### 9.1 Test Limit

Below –20dB of the highest emission level of operating band (In 100 kHz Resolution Bandwidth)

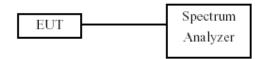
Report No.: TEFI1205257

Issued date : Sep. 05, 2012

#### 9.2 Test Procedure

- a. The transmitter output was connected to the spectrum analyzer via a low lose cable.
- b. Set RBW of spectrum analyzer to 100 KHz and VBW of spectrum analyzer to 300 KHz with convenient frequency span including 100 KHz bandwidth from band edge.
- c. Peak conducted output power measured within any 100 kHz outside the authorized frequency band shall be attenuated by at least 20dB relative to the maximum measured in-band peak PSD level.
- d. The band edges was measured and recorded.

## 9.3 Test Setup Layout



# 9.4 Measurement Equipment

Instrument/Ancillary	Manufacturer	Model No.	Serial No.	Calibration Date	Valid Date
Spectrum Analyzer	R&S	FSP40	100219	2011/11/24	2012/11/23

#### 9.5 Test Result and Data

Test Date: Jun. 05, 2012 Temperature: 24℃ Atmospheric pressure: 1020 hPa Humidity: 65%

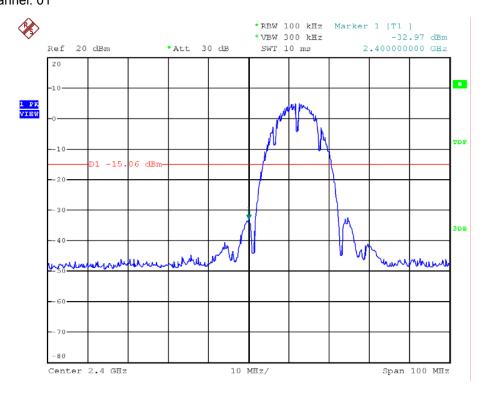
Modulation Standard	Channel	Frequency (MHz)	maximum value in frequency (MHz)	maximum value (dBm)	Limit (dBm)
802.11b	01	2412	2400.00	-32.97	-15.06
(11Mbps)	11	2462	2492.70	-45.72	-16.08
802.11g	01	2412	2399.80	-36.58	-26.15
(54Mbps)	11	2462	2525.10	-46.36	-26.49
802.11n HT20	01	2412	2400.00	-38.03	-26.86
(130Mbps)	11	2462	2532.10	-46.09	-26.57
802.11n HT40	03	2422	2398.20	-38.40	-30.24
(270Mbps)	09	2452	2506.70	-46.11	-29.94

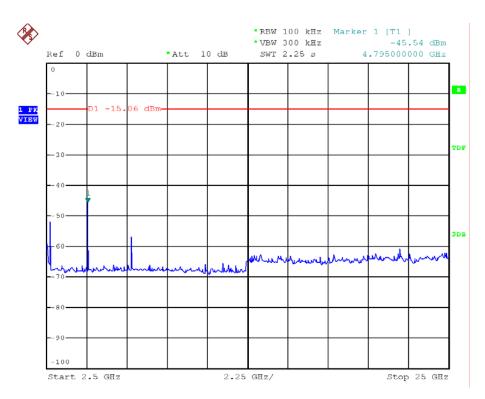
Cerpass Technology Corp.

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Modulation Standard: 802.11b (11Mbps) Channel: 01



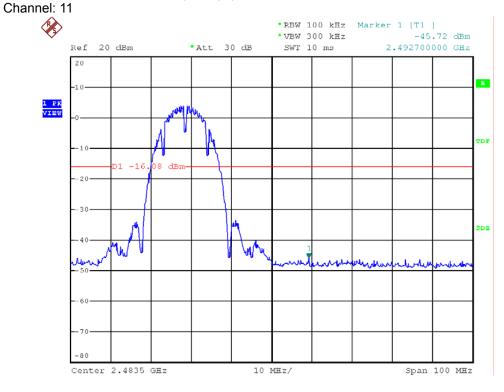


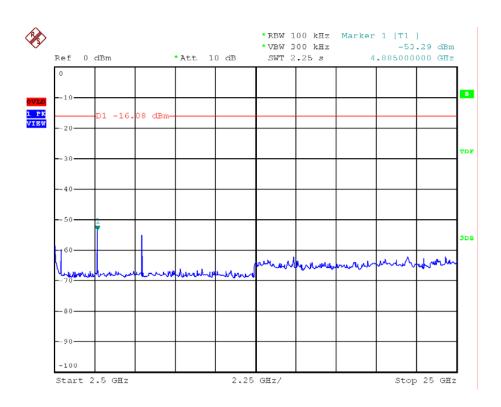
Tel:886-2-2655-8100 Fax:886-2-2655-8200

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Modulation Standard: 802.11b (11Mbps)



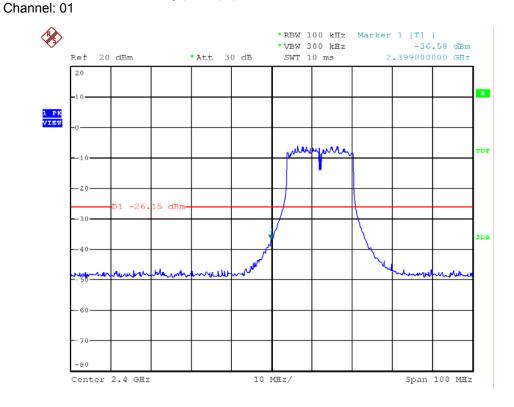


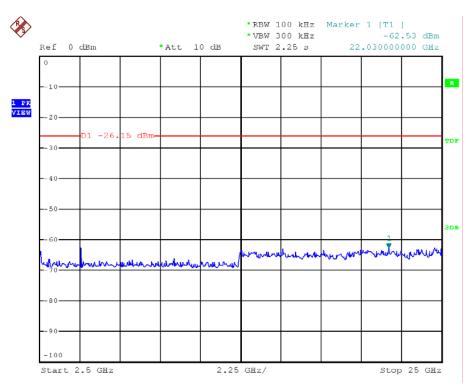
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Modulation Standard: 802.11g (54Mbps)





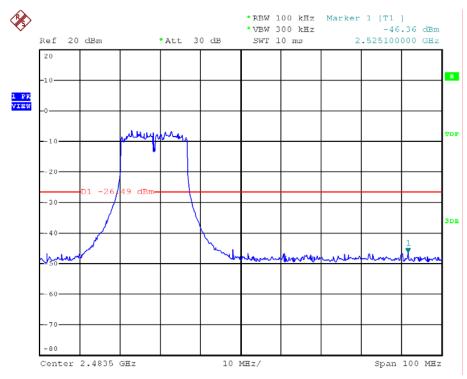
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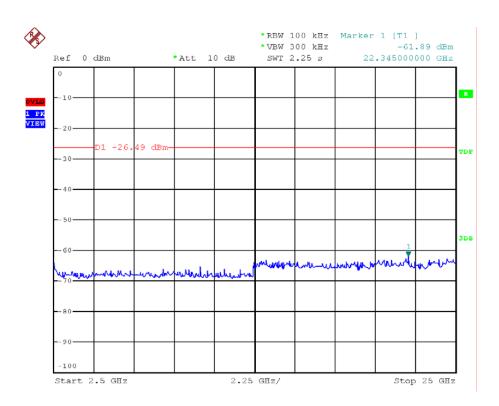
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Modulation Standard: 802.11g (54Mbps)





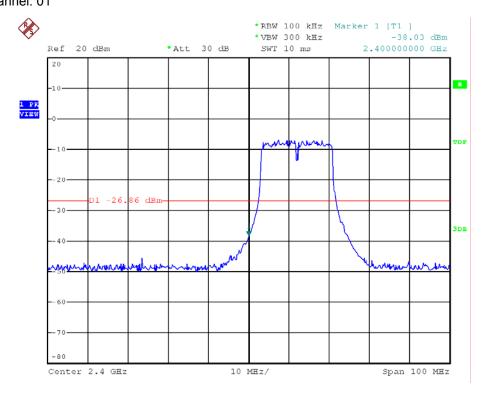


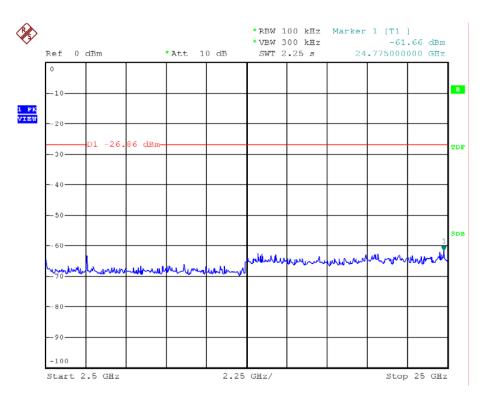
Tel:886-2-2655-8100 Fax:886-2-2655-8200

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Modulation Standard: 802.11n HT20 (130Mbps) Channel: 01



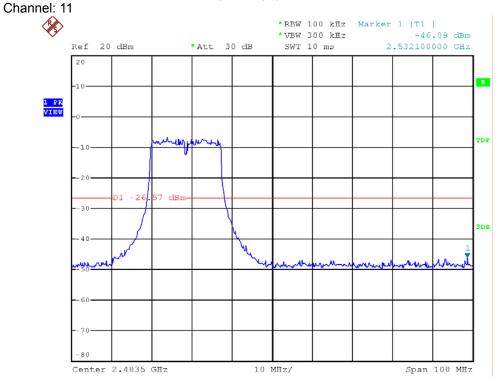


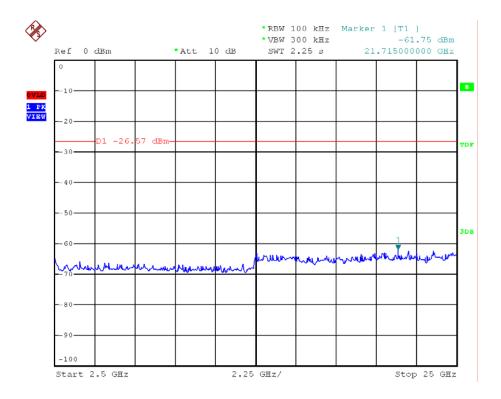
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Modulation Standard: 802.11n HT20 (130Mbps)





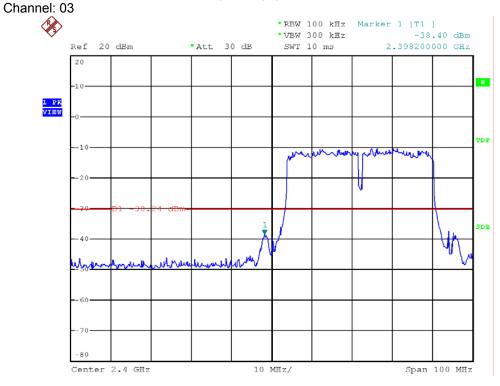
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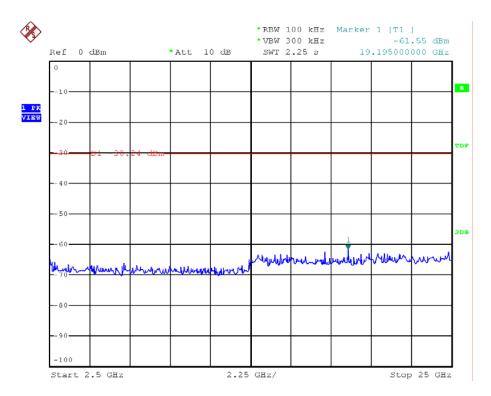
Tel:886-2-2655-8100 Fax:886-2-2655-8200

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Modulation Standard: 802.11n HT40 (270Mbps)



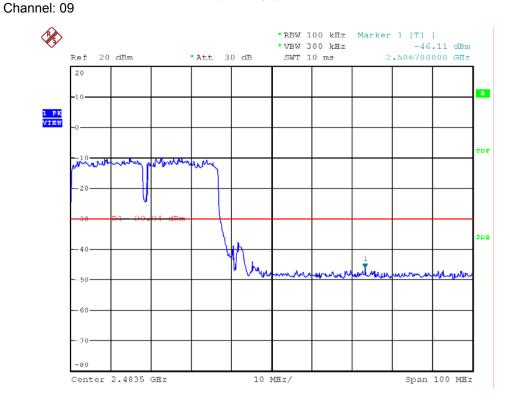


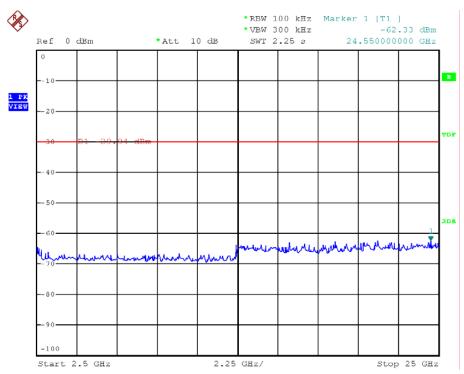
Tel:886-2-2655-8100 Fax:886-2-2655-8200

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Modulation Standard: 802.11n HT40 (270Mbps)





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### 9.6 Restrict Band Emission Measurement Data

Temperature: 25 °C Test Date: Jun. 11, 2012 Humidity: 60 %

Atmospheric pressure: 1020 hPa

Adapter: JENTEC \ CF0605-B

Modulation Standard: IEEE 802.11b (11Mbps)

\ 1 /										
Channel 1						Fu	ndamen	tal Frequ	ency: 24	112 MHz
Frequency	Ant-Pol	Meter Reading	Corrected	Result	Remark	,	BuV/m)	Margin	Table	able Ant High
(MHz)	H/V	(dBuV)	Factor (dB)	(dBuV/m)	Remark	Peak	Ave	(dB)	Deg.	(m)
2386.30	Η	52.03	1.62	53.65	Peak	74	54	-20.35	220	1.00
2386.25	Ι	40.95	1.62	42.57	Ave	74	54	-11.43	220	1.00
2386.30	٧	50.67	2.30	52.97	Peak	74	54	-21.03	118	1.00
2386.25	٧	39.72	2.31	42.03	Ave	74	54	-11.97	118	1.00
Channel 1	1					Fu	ndamen	tal Frequ	ency: 24	162 MHz
Frequency	Ant-Pol	Meter	Corrected	Result	Remark	Limit (d	Limit (dBuV/m)		Table	Ant High
(MHz)	H/V	Reading (dBuV)	Factor (dB)	(dBuV/m)	Remark	Peak	Ave	(dB)	Deg.	(m)
2483.66	Н	50.25	0.29	50.54	Peak	74	54	-23.46	242	1.00
2488.51	Н	39.15	0.22	39.37	Ave	74	54	-14.63	242	1.00
2484.42	V	51.85	-2.39	49.46	Peak	74	54	-24.54	115	1.00
2488.51	V	40.13	-2.61	37.52	Ave	74	54	-16.48	115	1.00

Modulation Standard: IEEE 802.11g (54Mbps)

Channel 1	Channel 1 Fundamental Frequency: 2412 MHz									
Frequency	Ant-Pol	Ant-Pol Reading Corrected Result Remark		BuV/m)	Margin	Table	Ant High			
(MHz)	H/V	Reading (dBuV)	Factor (dB)	(dBuV/m)	Remark	Peak	Ave	(dB)	Deg.	(m)
2389.56	Н	50.15	1.62	51.77	Peak	74	54	-22.23	228	1.00
2389.56	Н	37.98	1.62	39.60	Ave	74	54	-14.40	228	1.00
2365.59	V	49.69	2.65	52.34	Peak	74	54	-21.66	117	1.00
2389.82	V	38.65	2.25	40.90	Ave	74	54	-13.10	117	1.00
Channel 1	1					Fu	ndamen	tal Frequ	ency: 24	162 MHz
Frequency	Ant-Pol	Meter	Corrected	Result	Remark	Limit (d	Limit (dBuV/m)		Table	Ant High
(MHz)	H/V	Reading (dBuV)	Factor (dB)	(dBuV/m)	Remaik	Peak	Ave	(dB)	Deg.	(m)
2485.18	Н	49.60	0.28	49.88	Peak	74	54	-24.12	220	1.00
2483.76	Н	37.90	0.29	38.19	Ave	74	54	-15.81	220	1.00
2488.14	V	50.23	-2.59	47.64	Peak	74	54	-26.36	113	1.00
2483.57	V	38.12	-2.35	35.77	Ave	74	54	-18.23	113	1.00

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Modulation Standard: IEEE 802.11n HT20 (130Mbps)

Channel 1	Channel 1 Fundamental Frequency: 2412 MHz									
Frequency	Ant-Pol	Reading		Result	Remark	Limit (dBuV/m)		Margin	Table	Ant High
(MHz)	H/V	(dBuV)	Factor (dB)	(dBuV/m)		Peak	Ave	(dB)	Deg.	(m)
2388.74	Н	50.39	1.63	52.02	Peak	74	54	-21.98	220	1.00
2389.82	Н	38.14	1.62	39.76	Ave	74	54	-14.24	220	1.00
2369.98	V	49.67	2.57	52.24	Peak	74	54	-21.76	117	1.00
2389.56	V	37.88	2.26	40.14	Ave	74	54	-13.86	117	1.00
Channel 1	1					Fu	ndamen	tal Frequ	ency: 24	162 MHz
Frequency	Ant-Pol	Meter	Corrected	Result	Domark	Limit (d	BuV/m)	Margin	Table	Ant High
(MHz)	H/V	Reading (dBuV)	Factor (dB)	(dBuV/m)	Remark	Peak	Ave	(dB)	Deg.	(m)
2485.26	Н	49.62	0.27	49.89	Peak	74	54	-24.11	227	1.00
2483.57	Н	37.95	0.30	38.25	Ave	74	54	-15.75	227	1.00
2485.10	V	49.81	-2.43	47.38	Peak	74	54	-26.62	115	1.00
2483.66	V	38.23	-2.36	35.87	Ave	74	54	-18.13	115	1.00

Modulation Standard: IEEE 802.11n HT40 (270Mbps)

- (										
Channel 3						Fu	ndamen	tal Frequ	ency: 24	122 MHz
Frequency	Ant-Pol	Meter Reading	Corrected	Result	Remark	Limit (d	BuV/m)	.v.a.g	Table	Ant High
(MHz)	H/V	(dBuV)	Factor (dB)	(dBuV/m)		Peak	Ave	(dB)	Deg.	(m)
2384.97	Ι	49.82	1.63	51.45	Peak	74	54	-22.55	220	1.00
2389.05	Н	38.14	1.62	39.76	Ave	74	54	-14.24	220	1.00
2383.95	V	49.77	2.34	52.11	Peak	74	54	-21.89	120	1.00
2389.31	V	37.93	2.26	40.19	Ave	74	54	-13.81	120	1.00
Channel 9	)					Fur	ndament	al Freque	ency: 24	52 MHz
Frequency	Ant-Pol	Meter	Corrected	Result	Remark	Limit (d	BuV/m)	Margin	Table	Ant High
(MHz)	H/V	Reading (dBuV)	Factor (dB)	(dBuV/m)	Remark	Peak	Ave	(dB)	Deg.	(m)
2487.76	Ι	49.95	0.24	50.19	Peak	74	54	-23.81	243	1.00
2483.57	Н	38.12	0.30	38.42	Ave	74	54	-15.58	243	1.00
2493.73	V	50.17	-2.89	47.28	Peak	74	54	-26.72	113	1.00
2484.61	V	38.35	-2.40	35.95	Ave	74	54	-18.05	113	1.00

#### Notes:

1. Result = Meter Reading + Factor

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- 2. Factor = Antenna Factor + Cable Loss Amplifier
- 3. The resolution bandwidth of test receiver/spectrum analyzer is 1MHz and video bandwidth is 3 MHz (detector peak mode) for Peak detection at frequency above 1GHz.
- 4. The resolution bandwidth of test receiver/spectrum analyzer is 1MHz and video bandwidth is 3 MHz (detector sample mode) for Average detection at frequency above 1GHz.

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# 10. Restricted Bands of Operation

Only spurious emissions are permitted in any of the frequency bands listed below:

MHz	MHz	MHz	GHz
0.09000 - 0.11000	16.42000 - 16.42300	399.9 – 410.0	4.500 - 5.250
0.49500 - 0.505**	16.69475 - 16.69525	608.0 - 614.0	5.350 - 5.460
2.17350 - 2.19050	16.80425 - 16.80475	960.0 – 1240.0	7.250 – 7.750
4.12500 – 4.12800	25.50000 - 25.67000	1300.0 – 1427.0	8.025 - 8.500
4.17725 – 4.17775	37.50000 - 38.25000	1435.0 – 1626.5	9.000 - 9.200
4.20725 – 4.20775	73.00000 - 74.60000	1645.5 – 1646.5	9.300 - 9.500
6.21500 - 6.21800	74.80000 – 75.20000	1660.0 – 1710.0	10.600 – 12.700
6.26775 - 6.26825	108.00000 - 121.94000	1718.8 – 1722.2	13.250 – 13.400
6.31175 – 6.31225	123.00000 - 138.00000	2200.0 – 2300.0	14.470 – 14.500
8.29100 - 8.29400	149.90000 - 150.05000	2310.0 – 2390.0	15.350 – 16.200
8.36200 - 8.36600	156.52475 – 156.52525	2483.5 – 2500.0	17.700 – 21.400
8.37625 - 8.38675	156.70000 - 156.90000	2655.0 – 2900.0	22.010 – 23.120
8.41425 - 8.41475	162.01250 - 167.17000	3260.0 - 3267.0	23.600 – 24.000
12.29000 – 12.29300	167.72000 - 173.20000	3332.0 - 3339.0	31.200 – 31.800
12.51975 – 12.52025	240.00000 - 285.00000	3345.8 – 3358.0	36.430 - 36.500
12.57675 – 12.57725	322.00000 - 335.40000	3600.0 - 4400.0	Above 38.6
13.36000 – 13.41000			

<sup>\*\*:</sup> Until February 1, 1999, this restricted band shall be 0.490-0.510 MHz

## 10.1 Labeling Requirement

The device shall bear the following statement in a conspicuous location on the device: This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

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