7.5. 802.11n THREE CHAINS HT40 MODE IN THE 5.2 GHz BAND

CDD MCS0

This mode is not implemented in the 5.2 GHz band and will be disabled in production devices.

Preliminary testing demonstrated that CDD MCS0 was the worst case of various HT40 modes, therefore radiated measurements in the CDD MCS0 mode were performed.

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STBC MCS0

7.5.1. 26 dB and 99% BANDWIDTH

LIMITS

None; for reporting purposes only.

TEST PROCEDURE

The transmitter outputs are connected to the spectrum analyzer via a combiner. The RBW is set to 1% to 3% of the measured bandwidth. The VBW is set to 3 times the RBW. The sweep time is coupled. The spectrum analyzer internal bandwidth function is utilized.

RESULTS

Channel	Frequency	26 dB Bandwidth	99% Bandwidth
	(MHz)	(MHz)	(MHz)
Low	5190	38.141	35.9206
High	5230	41.137	35.9690

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26 dB and 99% BANDWIDTH





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7.5.2. OUTPUT POWER

LIMITS

FCC §15.407 (a) (1)

IC RSS-210 A9.2 (1)

For the 5.15-5.25 GHz band, the maximum conducted output power over the frequency band of operation shall not exceed the lesser of 50 mW or 4 dBm + 10 log B, where B is the 26-dB emission bandwidth in MHz. If transmitting antennas of directional gain greater than 6 dBi are used, both the peak transmit power and the peak power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

TEST PROCEDURE

The test is performed in accordance with FCC Public Notice: APPENDIX A Guidelines for Assessing Unlicensed National Information Infrastructure (U-NII) Devices – Part 15, Subpart E, August 2002.

The transmitter output operates continuously therefore Method # 1 is used.

RESULTS

Limit						
Channel	Frequency	Fixed	В	4 + 10 Log B	Antenna	Limit
		Limit		Limit	Gain	
	(MHz)	(dBm)	(MHz)	(dBm)	(dBi)	(dBm)
Low	5190	16.99	38.141	19.81	6.02	16.97
High	5230	16.99	41.137	20.14	6.02	16.99

Individual Chain Results

Channel	Frequency	Chain 0	Chain 1	Chain 2	Total	Limit	Margin
		Power	Power	Power	Power		
	(MHz)	(dBm)	(dBm)	(dBm)	(dBm)	(dBm)	(dB)
Low	5190	12.01	12.04	11.96	16.77	16.97	-0.20
High	5230	11.99	11.92	11.60	16.61	16.99	-0.38

CHAIN 1 OUTPUT POWER





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CHAIN 2 OUTPUT POWER





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CHAIN 3 OUTPUT POWER





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7.5.3. PEAK POWER SPECTRAL DENSITY

LIMITS

FCC §15.407 (a) (1)

IC RSS-210 A9.2 (1)

For the 5.15-5.25 GHz band, the peak power spectral density shall not exceed 4 dBm in any 1 MHz band. If transmitting antennas of directional gain greater than 6 dBi are used, both the peak transmit power and the peak power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

The maximum antenna gain is 6.02 dBi, therefore the limit is 3.98 dBm.

TEST PROCEDURE

The test is performed in accordance with FCC Public Notice: APPENDIX A Guidelines for Assessing Unlicensed National Information Infrastructure (U-NII) Devices – Part 15, Subpart E, August 2002. PPSD method #2 was used.

RESULTS

Channel	Frequency	Chain 1	Chain 2	Chain 3		Limit	Margin
		PPSD	PPSD	PPSD	Total		
	(MHz)	(dBm)	(dBm)	(dBm)	(dBm)	(dBm)	(dB)
Low	5190	-5.095	-4.843	-5.829	-0.465	3.98	-4.44
High	5230	-4.596	-4.997	-4.783	-0.018	3.98	-4.00

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CHAIN 1 OUTPUT POWER SPECTRAL DENSITY





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CHAIN 2 OUTPUT POWER SPECTRAL DENSITY





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CHAIN 3 OUTPUT POWER SPECTRAL DENSITY





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7.5.4. PEAK EXCURSION

<u>LIMITS</u>

FCC §15.407 (a) (6)

The ratio of the peak excursion of the modulation envelope (measured using a peak hold function) to the peak transmit power (measured as specified above) shall not exceed 13 dB across any 1 MHz bandwidth or the emission bandwidth whichever is less.

TEST PROCEDURE

The transmitter outputs are connected to the spectrum analyzer via a combiner.

The test is performed in accordance with FCC Public Notice: APPENDIX A Guidelines for Assessing Unlicensed National Information Infrastructure (U-NII) Devices – Part 15, Subpart E, August 2002.

Since Method # 1 was used for peak power measurements, Method # 1 settings are used for the second PPSD trace.

RESULTS

Channel	Frequency	Peak Excursion	Limit	Margin
	(MHz)	(dB)	(dB)	(dB)
Low	5190	9.87	13	-3.13
High	5230	11.86	13	-1.14

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PEAK EXCURSION





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7.5.5. CONDUCTED SPURIOUS EMISSIONS

LIMITS

FCC §15.407 (b) (1)

IC RSS-210 A9.3 (1)

For transmitters operating in the 5.15-5.25 GHz band: all emissions outside of the 5.15-5.35 GHz band shall not exceed an EIRP of -27 dBm / MHz.

TEST PROCEDURE

Conducted RF measurements of the transmitter output are made to confirm that the EUT antenna port conducted emissions meet the specified limit and to identify any spurious signals that require further investigation or measurements on the radiated emissions site.

The transmitter output is connected to the spectrum analyzer. The resolution bandwidth is set to 1 MHz. The video bandwidth is set to 1 MHz. Peak detection measurements are compared to EIRP limit, adjusted for the maximum antenna gain.

Measurements are made over the 30 MHz to 40 GHz range with the transmitter set to the lowest, middle, and highest channels.

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SPURIOUS EMISSIONS WITH COMBINER





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SDM MCS8

7.5.6. 26 dB and 99% BANDWIDTH

LIMITS

None; for reporting purposes only.

TEST PROCEDURE

The transmitter outputs are connected to the spectrum analyzer via a combiner. The RBW is set to 1% to 3% of the measured bandwidth. The VBW is set to 3 times the RBW. The sweep time is coupled. The spectrum analyzer internal bandwidth function is utilized.

RESULTS

Channel	Frequency	26 dB Bandwidth	99% Bandwidth
	(MHz)	(MHz)	(MHz)
Low	5190	37.305	35.9491
High	5230	37.642	36.3780

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26 dB and 99% BANDWIDTH





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7.5.7. OUTPUT POWER

<u>LIMITS</u>

FCC §15.407 (a) (1)

IC RSS-210 A9.2 (1)

For the 5.15-5.25 GHz band, the maximum conducted output power over the frequency band of operation shall not exceed the lesser of 50 mW or 4 dBm + 10 log B, where B is the 26-dB emission bandwidth in MHz. If transmitting antennas of directional gain greater than 6 dBi are used, both the peak transmit power and the peak power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

TEST PROCEDURE

The test is performed in accordance with FCC Public Notice: APPENDIX A Guidelines for Assessing Unlicensed National Information Infrastructure (U-NII) Devices – Part 15, Subpart E, August 2002.

The transmitter output operates continuously therefore Method # 1 is used.

RESULTS

Channel	Frequency	Fixed	В	4 + 10 Log B	Antenna	Limit
		Limit		Limit	Gain	
	(MHz)	(dBm)	(MHz)	(dBm)	(dBi)	(dBm)
Low	5190	16.99	37.305	19.72	6.02	16.97
High	5230	16.99	37.642	19.76	6.02	16.99

Limit

Individual Chain Results

Channel	Frequency	Chain 1	Chain 2	Chain 3	Total	Limit	Margin
		Power	Power	Power	Power		
	(MHz)	(dBm)	(dBm)	(dBm)	(dBm)	(dBm)	(dB)
Low	5190	12.23	12.02	11.90	16.82	16.97	-0.15
High	5230	12.16	12.09	11.96	16.84	16.99	-0.15

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CHAIN 1 OUTPUT POWER





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CHAIN 2 OUTPUT POWER





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CHAIN 3 OUTPUT POWER





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7.5.8. PEAK POWER SPECTRAL DENSITY

LIMITS

FCC §15.407 (a) (1)

IC RSS-210 A9.2 (1)

For the 5.15-5.25 GHz band, the peak power spectral density shall not exceed 4 dBm in any 1 MHz band. If transmitting antennas of directional gain greater than 6 dBi are used, both the peak transmit power and the peak power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

The maximum antenna gain is 6.02 dBi, therefore the limit is 3.98 dBm.

TEST PROCEDURE

The test is performed in accordance with FCC Public Notice: APPENDIX A Guidelines for Assessing Unlicensed National Information Infrastructure (U-NII) Devices – Part 15, Subpart E, August 2002. PPSD method #2 was used.

RESULTS

Channel	Frequency	Chain 1	Chain 2	Chain 3		Limit	Margin
		PPSD	PPSD	PPSD	Total		
	(MHz)	(dBm)	(dBm)	(dBm)		(dBm)	(dB)
Low	5190	-4.96	-5.681	-5.733	-0.7	3.98	-4.65
High	5230	-4.101	-4.823	-4.981	0.2	3.98	-3.83

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CHAIN 1 POWER SPECTRAL DENSITY





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CHAIN 2 POWER SPECTRAL DENSITY





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CHAIN 3 POWER SPECTRAL DENSITY

PSD LOW CH, CHAIN 3	R T	Peak Search
Ch Freq 5.19 GHz	Trig Free	Next Peak
	Mkr1 5.188 740 GHz	Next Pk Right
Ref 20 dBm Atten 20 dB #Samp	-5.733 dBm	Next Pk Left
dB/ Offst		Min Search
dB	Span 63 MHz	Pk-Pk Search
#Res BW 1 MHz #VBW 3 M Channel Power	1Hz Sweep 20 ms (601 pts) Power Spectral Density	Mkr © CF
11.90 dBm /42.0000 MHz	-64.33 dBm/Hz	More 1 of 2
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7.5.9. PEAK EXCURSION

LIMITS

FCC §15.407 (a) (6)

The ratio of the peak excursion of the modulation envelope (measured using a peak hold function) to the peak transmit power (measured as specified above) shall not exceed 13 dB across any 1 MHz bandwidth or the emission bandwidth whichever is less.

TEST PROCEDURE

The transmitter outputs are connected to the spectrum analyzer via a combiner.

The test is performed in accordance with FCC Public Notice: APPENDIX A Guidelines for Assessing Unlicensed National Information Infrastructure (U-NII) Devices – Part 15, Subpart E, August 2002.

Since Method # 1 was used for peak power measurements, Method # 1 settings are used for the second PPSD trace.

RESULTS

Channel	Frequency	Peak Excursion	Limit	Margin
	(MHz)	(dB)	(dB)	(dB)
Low	5190	10.73	13	-2.27
High	5230	12.59	13	-0.41

PEAK EXCURSION





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7.5.10. CONDUCTED SPURIOUS EMISSIONS

LIMITS

FCC §15.407 (b) (1)

IC RSS-210 A9.3 (1)

For transmitters operating in the 5.15-5.25 GHz band: all emissions outside of the 5.15-5.35 GHz band shall not exceed an EIRP of -27 dBm / MHz.

TEST PROCEDURE

Conducted RF measurements of the transmitter output are made to confirm that the EUT antenna port conducted emissions meet the specified limit and to identify any spurious signals that require further investigation or measurements on the radiated emissions site.

The transmitter output is connected to the spectrum analyzer. The resolution bandwidth is set to 1 MHz. The video bandwidth is set to 1 MHz. Peak detection measurements are compared to EIRP limit, adjusted for the maximum antenna gain.

Measurements are made over the 30 MHz to 40 GHz range with the transmitter set to the lowest, middle, and highest channels.

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SPURIOUS EMISSIONS WITH COMBINER





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SDM MCS12

7.5.11. 26 dB and 99% BANDWIDTH

LIMITS

None; for reporting purposes only.

TEST PROCEDURE

The transmitter outputs are connected to the spectrum analyzer via a combiner. The RBW is set to 1% to 3% of the measured bandwidth. The VBW is set to 3 times the RBW. The sweep time is coupled. The spectrum analyzer internal bandwidth function is utilized.

RESULTS

CHAIN 1

Channel	Frequency	26 dB Bandwidth	99% Bandwidth
	(MHz)	(MHz)	(MHz)
Low	5190	37.305	35.9491
High	5230	37.642	36.378

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26 dB and 99% BANDWIDTH





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7.5.12. OUTPUT POWER

LIMITS

FCC §15.407 (a) (1)

IC RSS-210 A9.2 (1)

For the 5.15-5.25 GHz band, the maximum conducted output power over the frequency band of operation shall not exceed the lesser of 50 mW or 4 dBm + 10 log B, where B is the 26-dB emission bandwidth in MHz. If transmitting antennas of directional gain greater than 6 dBi are used, both the peak transmit power and the peak power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

TEST PROCEDURE

The test is performed in accordance with FCC Public Notice: APPENDIX A Guidelines for Assessing Unlicensed National Information Infrastructure (U-NII) Devices – Part 15, Subpart E, August 2002.

The transmitter output operates continuously therefore Method # 1 is used.

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REPORT NO: 10U13492-3 FCC ID: QDS-BRCM1055

RESULTS

SDM MCS12

Limit

Channel	Frequency	Fixed	В	4 + 10 Log B	Antenna	Limit
		Limit		Limit	Gain	
	(MHz)	(dBm)	(MHz)	(dBm)	(dBi)	(dBm)
Low	5190	16.99	37.305	19.72	6.02	16.97
High	5230	16.99	37.642	19.76	6.02	16.99

Individual Chain Results

Channel	Frequency	Chain 1	Chain 2	Chain 3	Total	Limit	Margin
		Power	Power	Power	Power		
	(MHz)	(dBm)	(dBm)	(dBm)	(dBm)	(dBm)	(dB)
Low	5190	12.17	11.82	12.01	16.77	16.97	-0.20
High	5230	12.18	12.07	11.83	16.80	16.99	-0.19

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CHAIN1 OUTPUT POWER





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CHAIN 2 OUTPUT POWER





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CHAIN 3 OUTPUT POWER





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7.5.13. PEAK POWER SPECTRAL DENSITY

LIMITS

FCC §15.407 (a) (1)

IC RSS-210 A9.2 (1)

For the 5.15-5.25 GHz band, the peak power spectral density shall not exceed 4 dBm in any 1 MHz band. If transmitting antennas of directional gain greater than 6 dBi are used, both the peak transmit power and the peak power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

The maximum antenna gain is 6.02 dBi, therefore the limit is 3.98 dBm.

TEST PROCEDURE

The test is performed in accordance with FCC Public Notice: APPENDIX A Guidelines for Assessing Unlicensed National Information Infrastructure (U-NII) Devices – Part 15, Subpart E, August 2002. PPSD method #2 was used.

RESULTS

Channel	Frequency	Chain 1	Chain 2	Chain 3		Limit	Margin
		PPSD	PPSD	PPSD	Total		
	(MHz)	(dBm)	(dBm)	(dBm)		(dBm)	(dB)
Low	5190	-13.357	-12.929	-13.378	-8.4	3.98	-12.43
High	5230	-11.059	-13.082	-12.47	-7.3	3.98	-11.33

CHAIN 1 POWER SPECTRAL DENSITY





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CHAIN 2 POWER SPECTRAL DENSITY





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CHAIN 3 POWER SPECTRAL DENSITY





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7.5.14. PEAK EXCURSION

LIMITS

FCC §15.407 (a) (6)

The ratio of the peak excursion of the modulation envelope (measured using a peak hold function) to the peak transmit power (measured as specified above) shall not exceed 13 dB across any 1 MHz bandwidth or the emission bandwidth whichever is less.

TEST PROCEDURE

The transmitter outputs are connected to the spectrum analyzer via a combiner.

The test is performed in accordance with FCC Public Notice: APPENDIX A Guidelines for Assessing Unlicensed National Information Infrastructure (U-NII) Devices – Part 15, Subpart E, August 2002.

Since Method # 1 was used for peak power measurements, Method # 1 settings are used for the second PPSD trace.

RESULTS

Channel	Frequency	Peak Excursion	Limit	Margin
	(MHz)	(dB)	(dB)	(dB)
Low	5190	10.73	13	-2.27
High	5230	12.59	13	-0.41

PEAK EXCURSION





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7.5.15. CONDUCTED SPURIOUS EMISSIONS

LIMITS

FCC §15.407 (b) (1)

IC RSS-210 A9.3 (1)

For transmitters operating in the 5.15-5.25 GHz band: all emissions outside of the 5.15-5.35 GHz band shall not exceed an EIRP of -27 dBm / MHz.

TEST PROCEDURE

Conducted RF measurements of the transmitter output are made to confirm that the EUT antenna port conducted emissions meet the specified limit and to identify any spurious signals that require further investigation or measurements on the radiated emissions site.

The transmitter output is connected to the spectrum analyzer. The resolution bandwidth is set to 1 MHz. The video bandwidth is set to 1 MHz. Peak detection measurements are compared to EIRP limit, adjusted for the maximum antenna gain.

Measurements are made over the 30 MHz to 40 GHz range with the transmitter set to the lowest, middle, and highest channels.

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RESULTS

SPURIOUS EMISSIONS COMBINER





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SDM MCS16

7.5.16. 26 dB and 99% BANDWIDTH

LIMITS

None; for reporting purposes only.

TEST PROCEDURE

The transmitter outputs are connected to the spectrum analyzer via a combiner. The RBW is set to 1% to 3% of the measured bandwidth. The VBW is set to 3 times the RBW. The sweep time is coupled. The spectrum analyzer internal bandwidth function is utilized.

RESULTS

Channel	Frequency	26 dB Bandwidth	99% Bandwidth
	(MHz)	(MHz)	(MHz)
Low	5190	38.32	36.1106
High	5230	38.531	35.9717

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26 dB and 99% BANDWIDTH



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7.5.17. OUTPUT POWER

LIMITS

FCC §15.407 (a) (1)

IC RSS-210 A9.2 (1)

For the 5.15-5.25 GHz band, the maximum conducted output power over the frequency band of operation shall not exceed the lesser of 50 mW or 4 dBm + 10 log B, where B is the 26-dB emission bandwidth in MHz. If transmitting antennas of directional gain greater than 6 dBi are used, both the peak transmit power and the peak power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

TEST PROCEDURE

The test is performed in accordance with FCC Public Notice: APPENDIX A Guidelines for Assessing Unlicensed National Information Infrastructure (U-NII) Devices – Part 15, Subpart E, August 2002.

The transmitter output operates continuously therefore Method # 1 is used.

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<u>RESULTS</u>

SDM MCS 16

Frequency	Fixed	В	4 + 10 Log B	Antenna	Limit
	Limit		Limit	Gain	
(MHz)	(dBm)	(MHz)	(dBm)	(dBi)	(dBm)
5190	16.99	38.32	19.83	6.02	16.97
5230	16.99	38.531	19.86	6.02	16.99

Chain Results

Frequency	Chain 1	Chain 2	Chain 3	Total	Limit	Margin
	Power	Power	Power	Power		
(MHz)	(dBm)	(dBm)	(dBm)	(dBm)	(dBm)	(dB)
5190	11.33	11.84	12.04	16.52	16.97	-0.45
5230	11.61	12.32	12.21	16.83	16.99	-0.16

SDM MCS16

CHAIN 1 OUTPUT POWER





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CHAIN 2 OUTPUT POWER





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CHAIN 3 OUTPUT POWER





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7.5.18. PEAK POWER SPECTRAL DENSITY

LIMITS

FCC §15.407 (a) (1)

IC RSS-210 A9.2 (1)

For the 5.15-5.25 GHz band, the peak power spectral density shall not exceed 4 dBm in any 1 MHz band. If transmitting antennas of directional gain greater than 6 dBi are used, both the peak transmit power and the peak power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

The maximum antenna gain is 6.02 dBi, therefore the limit is 3.98 dBm.

TEST PROCEDURE

The test is performed in accordance with FCC Public Notice: APPENDIX A Guidelines for Assessing Unlicensed National Information Infrastructure (U-NII) Devices – Part 15, Subpart E, August 2002. PPSD method #2 was used.

RESULTS

Channel	Frequency	Chain 1	Chain 2	Chain 3		Limit	Margin
		PPSD	PPSD	PPSD	Total		
	(MHz)	(dBm)	(dBm)	(dBm)		(dBm)	(dB)
Low	5190	-6.212	-4.763	-4.998	-0.5	3.98	-4.49
High	5230	-7.329	-6.515	-7.131	-2.2	3.98	-6.19

CHAIN 1 POWER SPECTRAL DENSITY





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CHAIN 2 POWER SPECTRAL DENSITY





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CHAIN 3 POWER SPECTRAL DENSITY





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7.5.19. PEAK EXCURSION

<u>LIMITS</u>

FCC §15.407 (a) (6)

The ratio of the peak excursion of the modulation envelope (measured using a peak hold function) to the peak transmit power (measured as specified above) shall not exceed 13 dB across any 1 MHz bandwidth or the emission bandwidth whichever is less.

TEST PROCEDURE

The transmitter outputs are connected to the spectrum analyzer via a combiner.

The test is performed in accordance with FCC Public Notice: APPENDIX A Guidelines for Assessing Unlicensed National Information Infrastructure (U-NII) Devices – Part 15, Subpart E, August 2002.

Since Method # 1 was used for peak power measurements, Method # 1 settings are used for the second PPSD trace.

RESULTS

Channel	Frequency	equency Peak Excursion		Margin
	(MHz)	(dB)	(dB)	(dB)
Low	5190	10.78	13	-2.22
High	5230	8.86	13	-4.14

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PEAK EXCURSION





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7.5.20. CONDUCTED SPURIOUS EMISSIONS

LIMITS

FCC §15.407 (b) (1)

IC RSS-210 A9.3 (1)

For transmitters operating in the 5.15-5.25 GHz band: all emissions outside of the 5.15-5.35 GHz band shall not exceed an EIRP of -27 dBm / MHz.

TEST PROCEDURE

Conducted RF measurements of the transmitter output are made to confirm that the EUT antenna port conducted emissions meet the specified limit and to identify any spurious signals that require further investigation or measurements on the radiated emissions site.

The transmitter output is connected to the spectrum analyzer. The resolution bandwidth is set to 1 MHz. The video bandwidth is set to 1 MHz. Peak detection measurements are compared to EIRP limit, adjusted for the maximum antenna gain.

Measurements are made over the 30 MHz to 40 GHz range with the transmitter set to the lowest, middle, and highest channels.

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RESULTS

SPURIOUS EMISSIONS, COMBINER





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SDM MCS21

7.5.21. 26 dB and 99% BANDWIDTH

<u>LIMITS</u>

None; for reporting purposes only.

TEST PROCEDURE

The transmitter outputs are connected to the spectrum analyzer via a combiner. The RBW is set to 1% to 3% of the measured bandwidth. The VBW is set to 3 times the RBW. The sweep time is coupled. The spectrum analyzer internal bandwidth function is utilized.

<u>RESULTS</u>

Channel	Frequency	26 dB Bandwidth	99% Bandwidth
	(MHz)	(MHz)	(MHz)
Low	5190	37.528	36.4780
High	5230	37.450	36.5108

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26 dB and 99% BANDWIDTH





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7.5.22. OUTPUT POWER

LIMITS

FCC §15.407 (a) (1)

IC RSS-210 A9.2 (1)

For the 5.15-5.25 GHz band, the maximum conducted output power over the frequency band of operation shall not exceed the lesser of 50 mW or 4 dBm + 10 log B, where B is the 26-dB emission bandwidth in MHz. If transmitting antennas of directional gain greater than 6 dBi are used, both the peak transmit power and the peak power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

TEST PROCEDURE

The test is performed in accordance with FCC Public Notice: APPENDIX A Guidelines for Assessing Unlicensed National Information Infrastructure (U-NII) Devices – Part 15, Subpart E, August 2002.

The transmitter output operates continuously therefore Method # 1 is used.

RESULTS

Limit

Channel	Frequency	Fixed	B 4 + 10 Log B		Antenna	Limit
		Limit		Limit	Gain	
	(MHz)	(dBm)	(MHz)	(dBm)	(dBi)	(dBm)
Low	5190	16.99	37.528	19.74	6.02	16.97
High	5230	16.99	37.450	19.73	6.02	16.99

Individual Chain Results

Channel	Frequency	Chain 1	Chain 2	Chain 3	Total	Limit	Margin
		Power	Power	Power	Power		
	(MHz)	(dBm)	(dBm)	(dBm)	(dBm)	(dBm)	(dB)
Low	5190	11.45	11.81	11.85	16.48	16.97	-0.49
High	5230	11.60	11.84	11.81	16.52	16.99	-0.47

CHAIN 1 OUTPUT POWER





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CHAIN 2 OUTPUT POWER





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CHAIN 3 OUTPUT POWER





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7.5.23. PEAK POWER SPECTRAL DENSITY

LIMITS

FCC §15.407 (a) (1)

IC RSS-210 A9.2 (1)

For the 5.15-5.25 GHz band, the peak power spectral density shall not exceed 4 dBm in any 1 MHz band. If transmitting antennas of directional gain greater than 6 dBi are used, both the peak transmit power and the peak power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

The maximum antenna gain is 6.02 dBi, therefore the limit is 3.98 dBm.

TEST PROCEDURE

The test is performed in accordance with FCC Public Notice: APPENDIX A Guidelines for Assessing Unlicensed National Information Infrastructure (U-NII) Devices – Part 15, Subpart E, August 2002. PPSD method #2 was used.

RESULTS

Channel	Frequency	Chain 1	Chain 2	Chain 3		Limit	Margin
		PPSD	PPSD	PPSD	Total		
	(MHz)	(dBm)	(dBm)	(dBm)		(dBm)	(dB)
Low	5190	-15.495	-14.471	-13.145	-9.5	3.98	-13.47
High	5230	-15.193	-15.611	-14.783	-10.4	3.98	-14.39

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CHAIN 1 POWER SPECTRAL DENSITY





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CHAIN 2 POWER SPECTRAL DENSITY





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CHAIN 3 POWER SPECTRAL DENSITY





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7.5.24. PEAK EXCURSION

<u>LIMITS</u>

FCC §15.407 (a) (6)

The ratio of the peak excursion of the modulation envelope (measured using a peak hold function) to the peak transmit power (measured as specified above) shall not exceed 13 dB across any 1 MHz bandwidth or the emission bandwidth whichever is less.

TEST PROCEDURE

The transmitter outputs are connected to the spectrum analyzer via a combiner.

The test is performed in accordance with FCC Public Notice: APPENDIX A Guidelines for Assessing Unlicensed National Information Infrastructure (U-NII) Devices – Part 15, Subpart E, August 2002.

Since Method # 1 was used for peak power measurements, Method # 1 settings are used for the second PPSD trace.

RESULTS

Channel	Frequency	Peak Excursion	Limit	Margin
	(MHz)	(dB)	(dB)	(dB)
Low	5190	11.78	13	-1.22
High	5230	11.51	13	-1.49

PEAK EXCURSION





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7.5.25. CONDUCTED SPURIOUS EMISSIONS

LIMITS

FCC §15.407 (b) (1)

IC RSS-210 A9.3 (1)

For transmitters operating in the 5.15-5.25 GHz band: all emissions outside of the 5.15-5.35 GHz band shall not exceed an EIRP of -27 dBm / MHz.

TEST PROCEDURE

Conducted RF measurements of the transmitter output are made to confirm that the EUT antenna port conducted emissions meet the specified limit and to identify any spurious signals that require further investigation or measurements on the radiated emissions site.

The transmitter output is connected to the spectrum analyzer. The resolution bandwidth is set to 1 MHz. The video bandwidth is set to 1 MHz. Peak detection measurements are compared to EIRP limit, adjusted for the maximum antenna gain.

Measurements are made over the 30 MHz to 40 GHz range with the transmitter set to the lowest, middle, and highest channels.

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CHAIN 1 SPURIOUS EMISSIONS - COMBINER





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7.6. 802.11a LEGACY MODE IN THE 5.3 GHz BAND

7.6.1. 26 dB and 99% BANDWIDTH

<u>LIMITS</u>

None; for reporting purposes only.

TEST PROCEDURE

The transmitter output is connected to the spectrum analyzer. The RBW is set to 1% to 3% of the measured bandwidth. The VBW is set to 3 times the RBW. The sweep time is coupled. The spectrum analyzer internal bandwidth function is utilized.

RESULTS

Channel	Frequency	26 dB Bandwidth	99% Bandwidth
	(MHz)	(MHz)	(MHz)
Low	5260	28.693	16.8521
Middle	5300	26.632	16.4965
High	5320	24.98	16.2803

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26 dB and 99% BANDWIDTH





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BANDWIDTH HIGH CH	RT	Sweep
Ch Freq 5.32 GHz Occupied Bandwidth	Trig Free	Sweep Time 20.00 ms <u>Auto Man</u>
		Sweep <u>Single Cont</u>
Ref 20 dBm Atten 20 dB #Samp Log 10		Auto Sweep Time Norm <u>Accy</u>
dB/ M A Offst M </th <th>Aler a hand a</th> <th>Gate On <u>Off</u></th>	Aler a hand a	Gate On <u>Off</u>
Center 5.320 00 GHz S #Res BW 300 kHz #Sweep 100 ms	pan 50 MHz (601 pts)	Gate Setup
Occupied Bandwidth Occ BW % Pwr 16.2803 MHz × dB	99.00 % 26.00 dB	601
Transmit Freq Error -293.174 kHz x dB Bandwidth 24.980 MHz*		
Copyright 2000-2010 Agrient Technologies		

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7.6.2. OUTPUT POWER

LIMITS

FCC §15.407 (a) (2)

IC RSS-210 A9.2 (2)

For the 5.25-5.35 GHz band, the maximum conducted output power over the frequency band of operation shall not exceed the lesser of 250 mW or 11 dBm + 10 log B, where B is the 26-dB emission bandwidth in MHz. If transmitting antennas of directional gain greater than 6 dBi are used, both the peak transmit power and the peak power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

TEST PROCEDURE

The test is performed in accordance with FCC Public Notice: APPENDIX A Guidelines for Assessing Unlicensed National Information Infrastructure (U-NII) Devices – Part 15, Subpart E, August 2002.

The transmitter output operates continuously therefore Method # 1 is used.

RESULTS

	-			-	-	
Channel	Frequency	Fixed	B 11 + 10 Log B		Antenna	Limit
		Limit		Limit	Gain	
	(MHz)	(dBm)	(MHz)	(dBm)	(dBi)	(dBm)
Low	5300	24	28.693	25.58	6.80	23.20
Mid	5300	24	26.632	25.25	6.80	23.20
High	5320	24	24.98	24.98	6.80	23.20

Limit

Results

Channel	Frequency	Power	Limit	Margin
	(MHz)	(dBm)	(dBm)	(dB)
Low	5260	18.90	23.20	-4.30
Mid	5300	18.87	23.20	-4.33
High	5320	17.92	23.20	-5.28

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OUTPUT POWER





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7.6.3. PEAK POWER SPECTRAL DENSITY

LIMITS

FCC §15.407 (a) (2)

IC RSS-210 A9.2 (2)

For the 5.25–5.35 GHz band, the peak power spectral density shall not exceed 11 dBm in any 1 MHz band. If transmitting antennas of directional gain greater than 6 dBi are used, both the peak transmit power and the peak power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

The maximum antenna gain is 6.8 dBi, therefore the limit is 10.2 dBm.

TEST PROCEDURE

The test is performed in accordance with FCC Public Notice: APPENDIX A Guidelines for Assessing Unlicensed National Information Infrastructure (U-NII) Devices – Part 15, Subpart E, August 2002. PPSD method #2 was used.

RESULTS

Channel	Frequency	PPSD	Limit	Margin
	(MHz)	(dBm)	(dBm)	(dB)
Low	5260	8.661	10.2	-1.54
Middle	5300	8.657	10.2	-1.54
High	5320	7.780	10.2	-2.42

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POWER SPECTRAL DENSITY





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PSD HIGH CH	011		RТ	Peak Search	
Ch Freq 5.32 (Channel Power	Ch Freq 5.32 GHz Trig Free				
	E	Mkr1 5.	325 475 GHz	Next Pk Right	
Ref 30 dBm Atten 20 #Samp Log) dB	-1-	7.780 dBm	Next Pk Left	
10 dB/ Offst 24.4				Min Search	
dB			Span 45 MHz	Pk-Pk Search	
#Res BW 1 MHz Channel Power	Mkr © CF				
17.92 dBm /30.00	More 1 of 2				
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7.6.4. PEAK EXCURSION

<u>LIMITS</u>

FCC §15.407 (a) (6)

The ratio of the peak excursion of the modulation envelope (measured using a peak hold function) to the peak transmit power (measured as specified above) shall not exceed 13 dB across any 1 MHz bandwidth or the emission bandwidth whichever is less.

TEST PROCEDURE

The test is performed in accordance with FCC Public Notice: APPENDIX A Guidelines for Assessing Unlicensed National Information Infrastructure (U-NII) Devices – Part 15, Subpart E, August 2002.

Since Method # 1 was used for peak power measurements, Method # 1 settings are used for the second PPSD trace.

RESULTS

Channel	Frequency	Peak Excursion	Limit	Margin
	(MHz)	(dB)	(dB)	(dB)
Low	5260	8.82	13	-4.18
Middle	5300	9.51	13	-3.49
High	5320	8.63	13	-4.37

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PEAK EXCURSION





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PEAK EXCURSION	HIGH CH			
🔆 🔆 Agilent 09:38:53 Dec 29, 2	2010		RΤ	BW/Avg
Ch Freq 5.32 (Channel Power	GHz		Trig Free	Res BW 1.0 MHz Auto <u>Man</u>
Ref 30 dBm Atten 3	0 dB	4	1 Mkr1 0 Hz 8.63 dB	Video BW 3.0 MHz Auto <u>Man</u> VBW//RBW
#Peak Log 10 dB/ Offst 11.4 dB				1.00000 Auto Man Average 100 On Off Avg/VBW Type Pwr (RMS) • Auto Man
#PAvg				Span/RBW
Center 5.320 000 GHz #Res BW 1 MHz	#VBW 3 MHz	Sweep 20 m	Span 33 MHz is (601 pts)	106 Auto Man
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7.6.5. CONDUCTED SPURIOUS EMISSIONS

LIMITS

FCC §15.407 (b) (2)

IC RSS-210 A9.3 (2)

For transmitters operating in the 5.25-5.35 GHz band: all emissions outside of the 5.25-5.35 GHz band shall not exceed an EIRP of -27 dBm / MHz.

Devices operating in the 5.25-5.35 GHz band that generate emissions in the 5.15-5.25 GHz band must meet all applicable technical requirements for operation in the 5.15-5.25 GHz band (including indoor use) or alternatively meet an out-of-band emission EIRP limit of -27 dBm/MHz in the 5.15-5.25 GHz band.

TEST PROCEDURE

Conducted RF measurements of the transmitter output are made to confirm that the EUT antenna port conducted emissions meet the specified limit and to identify any spurious signals that require further investigation or measurements on the radiated emissions site.

The transmitter output is connected to the spectrum analyzer. The resolution bandwidth is set to 1 MHz. The video bandwidth is set to 1 MHz. Peak detection measurements are compared to EIRP limit, adjusted for the maximum antenna gain.

Measurements are made over the 30 MHz to 40 GHz range with the transmitter set to the lowest, middle, and highest channels.

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RESULTS SPURIOUS EMISSIONS





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7.7. 802.11n THREE CHAINS HT20 MODE IN THE 5.3 GHz BAND

CDD MCS0

7.7.1. 26 dB and 99% BANDWIDTH

LIMITS

None; for reporting purposes only.

TEST PROCEDURE

The transmitter outputs are connected to the spectrum analyzer via a combiner. The RBW is set to 1% to 3% of the measured bandwidth. The VBW is set to 3 times the RBW. The sweep time is coupled. The spectrum analyzer internal bandwidth function is utilized.

RESULTS

Channel	Frequency	26 dB Bandwidth	99% Bandwidth
	(MHz)	(MHz)	(MHz)
Low	5260	23.711	17.6238
Middle	5300	24.948	17.6039
High	5320	24.196	17.7596

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26 dB and 99% BANDWIDTH





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7.7.2. OUTPUT POWER

LIMITS

FCC §15.407 (a) (2)

IC RSS-210 A9.2 (2)

For the 5.25-5.35 GHz band, the maximum conducted output power over the frequency band of operation shall not exceed the lesser of 250 mW or 11 dBm + 10 log B, where B is the 26-dB emission bandwidth in MHz. If transmitting antennas of directional gain greater than 6 dBi are used, both the peak transmit power and the peak power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

TEST PROCEDURE

The test is performed in accordance with FCC Public Notice: APPENDIX A Guidelines for Assessing Unlicensed National Information Infrastructure (U-NII) Devices – Part 15, Subpart E, August 2002.

The transmitter output operates continuously therefore Method # 1 is used.

RESULTS

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Channel	Frequency	Fixed	B 11 + 10 Log B		Antenna	Limit
		Limit		Limit	Gain	
	(MHz)	(dBm)	(MHz)	(dBm)	(dBi)	(dBm)
Low	5260	23.98	23.711	24.75	10.99	18.99
Mid	5300	23.98	24.948	24.97	10.99	18.99
High	5320	23.98	24.196	24.84	10.99	18.99

Limit

Individual Chain Results

Channel	Frequency	Chain 1	Chain 2	Chain 3	Total	Limit	Margin
		Power	Power	Power	Power		
	(MHz)	(dBm)	(dBm)	(dBm)	(dBm)	(dBm)	(dB)
Low	5260	12.23	12.17	12.18	16.96	18.99	-2.03
Mid	5300	12.37	12.16	11.91	16.92	18.99	-2.07
High	5320	12.21	12.19	11.85	16.86	18.99	-2.13

TPC Results

TPC Delta Power		Chain 0	Chain 1	Chain 2			
		4.67	4.45	4.28			
		Chain 0	Chain 1	Chain 2	Total	Ant Gain	EIRP
Worst-case TPC Power					Power		
Low	5260	7.56	7.72	7.90	12.50	10.99	23.49
TPC Limit (dBm)							24
Margin (dB)							-0.51

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CHAIN 1 OUTPUT POWER





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CHAIN 2 OUTPUT POWER





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CHAIN 3 OUTPUT POWER





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TPC OUTPUT POWER





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OUTPUT POWER	LOW CH, CH	AIN 2				
🔆 Agilent 19:12:43 Jan 20,	T Freq/Channel					
Ch Freq 5.26 Channel Power	ee Center Freq 5.2600000 GHz					
		•	Start Freq 5.24125000 GHz			
Ref 20 dBm Atten #Samp Log	10 dB		Stop Freq 5.27875000 GHz			
dB/ Offst 24.4			CF Step 3.7500000 MHz <u>Auto Man</u>			
dB Center 5.260 000 0 GHz		Span 37.5 M	Freq Offset 0.00000000 Hz			
#Res BW 1 MHz	#VBW 3 MHz	#Sweep 20 ms (601 pts)	Signal Track			
	On <u>Off</u>					
7.90 dBm /25.0	000 MHz	-66.08 dBm/Hz				
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7.7.3. PEAK POWER SPECTRAL DENSITY

LIMITS

FCC §15.407 (a) (2)

IC RSS-210 A9.2 (2)

For the 5.25–5.35 GHz band, the peak power spectral density shall not exceed 11 dBm in any 1 MHz band. If transmitting antennas of directional gain greater than 6 dBi are used, both the peak transmit power and the peak power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

The composite antenna gain is equal to 10.99 dBi, therefore the limit is 6.01 dBm.

TEST PROCEDURE

The test is performed in accordance with FCC Public Notice: APPENDIX A Guidelines for Assessing Unlicensed National Information Infrastructure (U-NII) Devices – Part 15, Subpart E, August 2002. PPSD method #2 was used.

RESULTS

Channel	Frequency	Chain 1	Chain 2	Chain 3	Total	Limit	Margin
		PPSD	PPSD	PPSD	PPSD		
	(MHz)	(dBm)	(dBm)	(dBm)	(dBm)	(dBm)	(dB)
Low	5260	1.242	1.159	1.243	5.99	6.01	-0.024
Middle	5300	1.199	1.115	1.118	5.92	6.01	-0.095
High	5320	1.289	1.267	1.157	6.01	6.01	-0.001

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CHAIN 1 POWER SPECTRAL DENSITY





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CHAIN 2 POWER SPECTRAL DENSITY





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CHAIN 3 POWER SPECTRAL DENSITY





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7.7.4. PEAK EXCURSION

LIMITS

FCC §15.407 (a) (6)

The ratio of the peak excursion of the modulation envelope (measured using a peak hold function) to the peak transmit power (measured as specified above) shall not exceed 13 dB across any 1 MHz bandwidth or the emission bandwidth whichever is less.

TEST PROCEDURE

The transmitter outputs are connected to the spectrum analyzer via a combiner.

The test is performed in accordance with FCC Public Notice: APPENDIX A Guidelines for Assessing Unlicensed National Information Infrastructure (U-NII) Devices – Part 15, Subpart E, August 2002.

Since Method # 1 was used for peak power measurements, Method # 1 settings are used for the second PPSD trace.

RESULTS

Channel	Frequency	Peak Excursion	Limit	Margin
	(MHz)	(dB)	(dB)	(dB)
Low	5260	9.81	13	-3.19
Middle	5300	9.97	13	-3.03
High	5320	9.42	13	-3.58

PEAK EXCURSION





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🔆 Agilent 23:27:20 Dec i	7,2010		RΤ	BW/A	٩vg
Ch Freq 5 Channel Power	.32 GHz		Trig Free	Auto	Res B ¹ 1.0 MH <u>Ma</u>
			∆ Mkr1 0 Hz	Vic : Auto	deo B\ 3.0 MH: <u>Ma</u>
Ref 30 dBm Atto #Peak Log 10	20 dB		9.42 dB	VB <u>Auto</u>	/W/RB 1.00000 <u>Ma</u>
dB/ Offst 24.4		ward and a second and a second and a second a se		Av On	erage 10(<u>01</u>
dB				Avg/VBV Pwi Auto	/ Type r (RMS) <u>Ma</u>
#PAvg					
V1 V2				Spa	in/RBV
Center 5.320 000 0 GHz #Res BW 1 MHz	#VBW 3 MHz	System Sweep 20 n	oan 37.5 MHz ns (601 pts)	<u>Auto</u>	106 <u>Ma</u>

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7.7.5. CONDUCTED SPURIOUS EMISSIONS

LIMITS

FCC §15.407 (b) (2)

IC RSS-210 A9.3 (2)

For transmitters operating in the 5.25-5.35 GHz band: all emissions outside of the 5.25-5.35 GHz band shall not exceed an EIRP of -27 dBm / MHz.

Devices operating in the 5.25-5.35 GHz band that generate emissions in the 5.15-5.25 GHz band must meet all applicable technical requirements for operation in the 5.15-5.25 GHz band (including indoor use) or alternatively meet an out-of-band emission EIRP limit of -27 dBm/MHz in the 5.15-5.25 GHz band.

TEST PROCEDURE

Conducted RF measurements of the transmitter output are made to confirm that the EUT antenna port conducted emissions meet the specified limit and to identify any spurious signals that require further investigation or measurements on the radiated emissions site.

The transmitter output is connected to the spectrum analyzer. The resolution bandwidth is set to 1 MHz. The video bandwidth is set to 1 MHz. Peak detection measurements are compared to EIRP limit, adjusted for the maximum antenna gain.

Measurements are made over the 30 MHz to 40 GHz range with the transmitter set to the lowest, middle, and highest channels.

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SPURIOUS EMISSIONS WITH COMBINER





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SDM MCS21

7.7.6. 26 dB and 99% BANDWIDTH

LIMITS

None; for reporting purposes only.

TEST PROCEDURE

The transmitter outputs are connected to the spectrum analyzer via a combiner. The RBW is set to 1% to 3% of the measured bandwidth. The VBW is set to 3 times the RBW. The sweep time is coupled. The spectrum analyzer internal bandwidth function is utilized.

RESULTS

Channel	Frequency	26 dB Bandwidth	99% Bandwidth
	(MHz)	(MHz)	(MHz)
Low	5260	19.035	17.6976
High	5300	19.144	17.5240

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26 dB and 99% BANDWIDTH





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7.7.7. OUTPUT POWER

LIMITS

FCC §15.407 (a) (2)

IC RSS-210 A9.2 (2)

For the 5.25-5.35 GHz band, the maximum conducted output power over the frequency band of operation shall not exceed the lesser of 250 mW or 11 dBm + 10 log B, where B is the 26-dB emission bandwidth in MHz. If transmitting antennas of directional gain greater than 6 dBi are used, both the peak transmit power and the peak power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

TEST PROCEDURE

The test is performed in accordance with FCC Public Notice: APPENDIX A Guidelines for Assessing Unlicensed National Information Infrastructure (U-NII) Devices – Part 15, Subpart E, August 2002.

The transmitter output operates continuously therefore Method # 1 is used.

RESULTS

Limit

Channel	Frequency	Fixed	В	11 + 10 Log B	Antenna	Limit
		Limit		Limit	Gain	
	(MHz)	(dBm)	(MHz)	(dBm)	(dBi)	(dBm)
Low	5260	23.98	19.035	23.80	6.80	23.00
High	5300	23.98	19.144	23.82	6.80	23.02

Individual Chain Results

Channel	Frequency	Chain 1	Chain 2	Chain 3	Total	Limit	Margin
		Power	Power	Power	Power		
	(MHz)	(dBm)	(dBm)	(dBm)	(dBm)	(dBm)	(dB)
Low	5260	15.69	15.66	15.53	20.40	23.00	-2.60
High	5300	15.76	15.73	15.80	20.53	23.02	-2.49

TPC Results

TPC Delta Power		Chain 0	Chain 1	Chain 2			
		4.80	4.70	4.57			
		Chain 0	Chain 1	Chain 2	Total	Ant Gain	EIRP
Worst-case TPC Power					Power		
High	5300	10.96	11.03	11.23	15.85	6.80	22.65
TPC Limit (dBm)					24		
Margin (dB)						-1.35	

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CHAIN 1 OUTPUT POWER





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CHAIN 2 OUTPUT POWER





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CHAIN 3 OUTPUT POWER





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TPC OUTPUT POWER



OUTPUT POWER HIGH CH, CHAIN 1	
🔆 Agilent 20:06:12 Jan 21, 2011 R T	Freq/Channel
Ch Freq 5.3 GHz Trig Free	Center Freq 5.3000000 GHz
	Start Freq 5.28500000 GHz
Ref 20 dBm Atten 10 dB #Samp	Stop Freq 5.3150000 GHz
10 dB/ Offst 24.4	CF Step 3.0000000 MHz <u>Auto Man</u>
dB Center 5.300 00 GHz Span 30 MHz	Freq Offset 0.00000000 Hz
#Res BW 1 MHz #VBW 3 MHz #Sweep 20 ms (601 pts) Channel Power Power Spectral Density	Signal Track ^{On <u>Off</u>}
11.03 dBm / 20.0000 MHz -61.98 dBm/Hz	
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OUTPUT POWER	MID CH, CHAI	N 2	-
🔆 Agilent 20:04:58 Jan 21,	2011	R	Freq/Channel
Ch Freq 5.3 Channel Power	GHz	Trig Fr	ee Center Freq 5.30000000 GHz
			Start Freq 5.28500000 GHz
Ref 20 dBm Atten #Samp Log	10 dB		Stop Freq 5.31500000 GHz
10 dB/ Offst 24.4			CF Step 3.0000000 MHz <u>Auto Man</u>
dB		Span 30 M	Freq Offset 0.00000000 Hz
#Res BW 1 MHz	#VBW 3 MHz	#Sweep 20 ms (601 pts)	Signal Track
Channel Power	F	Power Spectral Density	On <u>Off</u>
11.23 dBm / 20.0	0000 MHz	-61.78 dBm/Hz	
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7.7.8. PEAK POWER SPECTRAL DENSITY

LIMITS

FCC §15.407 (a) (2)

IC RSS-210 A9.2 (2)

For the 5.25–5.35 GHz band, the peak power spectral density shall not exceed 11 dBm in any 1 MHz band. If transmitting antennas of directional gain greater than 6 dBi are used, both the peak transmit power and the peak power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

The maximum antenna gain is equal to 6.80 dBi, therefore the limit is 10.20 dBm.

TEST PROCEDURE

The test is performed in accordance with FCC Public Notice: APPENDIX A Guidelines for Assessing Unlicensed National Information Infrastructure (U-NII) Devices – Part 15, Subpart E, August 2002. PPSD method #2 was used.

RESULTS

Channel	Frequency	Chain 1	Chain 2	Chain 3	Total	Limit	Margin
		PPSD	PPSD	PPSD	PPSD		
	(MHz)	(dBm)	(dBm)	(dBm)	(dBm)	(dBm)	(dB)
Low	5260	5.175	4.978	4.712	9.73	10.20	-0.47
High	5300	5.134	5.398	4.973	9.94	10.20	-0.26

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CHAIN 1 POWER SPECTRAL DENSITY





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CHAIN 2 POWER SPECTRAL DENSITY





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CHAIN 3 POWER SPECTRAL DENSITY





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7.7.9. PEAK EXCURSION

LIMITS

FCC §15.407 (a) (6)

The ratio of the peak excursion of the modulation envelope (measured using a peak hold function) to the peak transmit power (measured as specified above) shall not exceed 13 dB across any 1 MHz bandwidth or the emission bandwidth whichever is less.

TEST PROCEDURE

The transmitter outputs are connected to the spectrum analyzer via a combiner.

The test is performed in accordance with FCC Public Notice: APPENDIX A Guidelines for Assessing Unlicensed National Information Infrastructure (U-NII) Devices – Part 15, Subpart E, August 2002.

Since Method # 1 was used for peak power measurements, Method # 1 settings are used for the second PPSD trace.

RESULTS

Channel	Frequency	Peak Excursion	Limit	Margin
	(MHz)	(dB)	(dB)	(dB)
Low	5260	10.34	13	-2.66
High	5300	11.20	13	-1.80

PEAK EXCURSION





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7.7.10. CONDUCTED SPURIOUS EMISSIONS

LIMITS

FCC §15.407 (b) (2)

IC RSS-210 A9.3 (2)

For transmitters operating in the 5.25-5.35 GHz band: all emissions outside of the 5.25-5.35 GHz band shall not exceed an EIRP of -27 dBm / MHz.

Devices operating in the 5.25-5.35 GHz band that generate emissions in the 5.15-5.25 GHz band must meet all applicable technical requirements for operation in the 5.15-5.25 GHz band (including indoor use) or alternatively meet an out-of-band emission EIRP limit of -27 dBm/MHz in the 5.15-5.25 GHz band.

TEST PROCEDURE

Conducted RF measurements of the transmitter output are made to confirm that the EUT antenna port conducted emissions meet the specified limit and to identify any spurious signals that require further investigation or measurements on the radiated emissions site.

The transmitter output is connected to the spectrum analyzer. The resolution bandwidth is set to 1 MHz. The video bandwidth is set to 1 MHz. Peak detection measurements are compared to EIRP limit, adjusted for the maximum antenna gain.

Measurements are made over the 30 MHz to 40 GHz range with the transmitter set to the lowest, middle, and highest channels.

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SPURIOUS EMISSIONS WITH COMBINER





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7.8. 802.11n HT SISO 40 MODE IN THE 5.3 GHz BAND

SISO

7.8.1. 26 dB and 99% BANDWIDTH

LIMITS

None; for reporting purposes only.

TEST PROCEDURE

The transmitter output is connected to the spectrum analyzer. The RBW is set to 1% to 3% of the measured bandwidth. The VBW is set to 3 times the RBW. The sweep time is coupled. The spectrum analyzer internal bandwidth function is utilized.

RESULTS

Channel	Frequency	26 dB Bandwidth	99% Bandwidth
	(MHz)	(MHz)	(MHz)
Low	5270	59.421	36.6962
High	5310	38.691	36.4299

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26 dB and 99% BANDWIDTH





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7.8.2. OUTPUT POWER

LIMITS

FCC §15.407 (a) (2)

IC RSS-210 A9.2 (2)

For the 5.25-5.35 GHz band, the maximum conducted output power over the frequency band of operation shall not exceed the lesser of 250 mW or 11 dBm + 10 log B, where B is the 26-dB emission bandwidth in MHz. If transmitting antennas of directional gain greater than 6 dBi are used, both the peak transmit power and the peak power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

TEST PROCEDURE

The test is performed in accordance with FCC Public Notice: APPENDIX A Guidelines for Assessing Unlicensed National Information Infrastructure (U-NII) Devices – Part 15, Subpart E, August 2002.

The transmitter output operates continuously therefore Method # 1 is used.

RESULTS

Limit

Channel	Frequency	Fixed	В	11 + 10 Log B	Antenna	Limit
		Limit		Limit	Gain	
	(MHz)	(dBm)	(MHz)	(dBm)	(dBi)	(dBm)
Low	5270	24	59.421	28.74	6.80	23.20
High	5310	24	38.691	26.88	6.80	23.20

Results

Channel	Frequency	Power	Limit	Margin
	(MHz)	(dBm)	(dBm)	(dB)
Low	5270	21.52	23.20	-1.68
High	5310	14.46	23.20	-8.74

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TPC Results

TPC Delta Power		Chain 0		
		5.31		
		Chain 0	Ant Gain	EIRP
Worst-case TPC Power				
Low	5270	16.21	6.80	23.01
	24			
	-0.99			

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OUTPUT POWER





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TPC OUTPUT POWER

OUTPUT POWER	LOW CH		
🔆 Agilent 20:26:08 Jan 21,	2011	RT	Freq/Channel
Ch Freq 5.27	′ GHz	Trig Free	Center Freq 5.27000000 GHz
			Start Freq 5.22500000 GHz
Ref 20 dBm Atten #Samp	10 dB	A second and a sec	Stop Freq 5.31500000 GHz CF Step 9.00000000 MHz <u>Auto Man</u>
Center 5.270 00 GHz #Res BW 1 MHz	#VBW 3 MHz	Span 90 MHz #Sweep 20 ms (601 pts)	
Channel Power 16.21 dBm / 60.0	Signal Irack On <u>Off</u>		
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7.8.3. PEAK POWER SPECTRAL DENSITY

LIMITS

FCC §15.407 (a) (2)

IC RSS-210 A9.2 (2)

For the 5.25–5.35 GHz band, the peak power spectral density shall not exceed 11 dBm in any 1 MHz band. If transmitting antennas of directional gain greater than 6 dBi are used, both the peak transmit power and the peak power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

The maximum antenna gain is equal to 6.80 dBi, therefore the limit is 10.20dBm.

TEST PROCEDURE

The test is performed in accordance with FCC Public Notice: APPENDIX A Guidelines for Assessing Unlicensed National Information Infrastructure (U-NII) Devices – Part 15, Subpart E, August 2002. PPSD method #2 was used.

RESULTS

Channel	Frequency	PPSD	Limit	Margin
	(MHz)	(dBm)	(dBm)	(dB)
Low	5270	8.57	10.20	-1.63
High	5310	1.49	10.20	-8.71

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POWER SPECTRAL DENSITY





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7.8.4. PEAK EXCURSION

LIMITS

FCC §15.407 (a) (6)

The ratio of the peak excursion of the modulation envelope (measured using a peak hold function) to the peak transmit power (measured as specified above) shall not exceed 13 dB across any 1 MHz bandwidth or the emission bandwidth whichever is less.

TEST PROCEDURE

The test is performed in accordance with FCC Public Notice: APPENDIX A Guidelines for Assessing Unlicensed National Information Infrastructure (U-NII) Devices – Part 15, Subpart E, August 2002.

Since Method # 1 was used for peak power measurements, Method # 1 settings are used for the second PPSD trace.

RESULTS

Channel	Frequency Peak Excursi		Limit	Margin
	(MHz)	(dB)	(dB)	(dB)
Low	5270	9.93	13	-3.07
High	5310	9.73	13	-3.27

PEAK EXCURSION





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7.8.5. CONDUCTED SPURIOUS EMISSIONS

LIMITS

FCC §15.407 (b) (2)

IC RSS-210 A9.3 (2)

For transmitters operating in the 5.25-5.35 GHz band: all emissions outside of the 5.25-5.35 GHz band shall not exceed an EIRP of -27 dBm / MHz.

Devices operating in the 5.25-5.35 GHz band that generate emissions in the 5.15-5.25 GHz band must meet all applicable technical requirements for operation in the 5.15-5.25 GHz band (including indoor use) or alternatively meet an out-of-band emission EIRP limit of -27 dBm/MHz in the 5.15-5.25 GHz band.

TEST PROCEDURE

Conducted RF measurements of the transmitter output are made to confirm that the EUT antenna port conducted emissions meet the specified limit and to identify any spurious signals that require further investigation or measurements on the radiated emissions site.

The transmitter output is connected to the spectrum analyzer. The resolution bandwidth is set to 1 MHz. The video bandwidth is set to 1 MHz. Peak detection measurements are compared to EIRP limit, adjusted for the maximum antenna gain.

Measurements are made over the 30 MHz to 40 GHz range with the transmitter set to the lowest, middle, and highest channels.

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SPURIOUS EMISSIONS





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7.9. 802.11n THREE CHAINS HT40 MODE IN THE 5.3 GHz BAND

CDD MCS 0

7.9.1. 26 dB and 99% BANDWIDTH

LIMITS

None; for reporting purposes only.

TEST PROCEDURE

The transmitter outputs are connected to the spectrum analyzer via a combiner. The RBW is set to 1% to 3% of the measured bandwidth. The VBW is set to 3 times the RBW. The sweep time is coupled. The spectrum analyzer internal bandwidth function is utilized.

RESULTS

Channel	Frequency	26 dB Bandwidth	99% Bandwidth
	(MHz)	(MHz)	(MHz)
Low	5270	38.863	36.1638
High	5310	38.314	36.1672

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26 dB and 99% BANDWIDTH





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7.9.2. OUTPUT POWER

LIMITS

FCC §15.407 (a) (2)

IC RSS-210 A9.2 (2)

For the 5.25-5.35 GHz band, the maximum conducted output power over the frequency band of operation shall not exceed the lesser of 250 mW or 11 dBm + 10 log B, where B is the 26-dB emission bandwidth in MHz. If transmitting antennas of directional gain greater than 6 dBi are used, both the peak transmit power and the peak power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

TEST PROCEDURE

The test is performed in accordance with FCC Public Notice: APPENDIX A Guidelines for Assessing Unlicensed National Information Infrastructure (U-NII) Devices – Part 15, Subpart E, August 2002.

The transmitter output operates continuously therefore Method # 1 is used.

RESULTS

Limit

Channel	Frequency	Fixed	В	11 + 10 Log B	Antenna	Limit
		Limit		Limit	Gain	
	(MHz)	(dBm)	(MHz)	(dBm)	(dBi)	(dBm)
Low	5270	23.98	38.863	26.90	10.99	18.99
High	5310	23.98	38.314	26.83	10.99	18.99

Individual Chain Results

Channel	Frequency	Chain 1	Chain 2	Chain 3	Total	Limit	Margin
		Power	Power	Power	Power		
	(MHz)	(dBm)	(dBm)	(dBm)	(dBm)	(dBm)	(dB)
Low	5270	13.42	14.32	13.81	18.64	18.99	-0.35
High	5310	11.92	12.68	12.21	17.05	18.99	-1.94

TPC Results

TPC Delta Power		Chain 0	Chain 1	Chain 2			
		5.28	7.02	5.72			
		Chain 0	Chain 1	Chain 2	Total	Ant Gain	EIRP
Worst-case TPC Power					Power		
Low	5270	8.14	7.30	8.09	12.63	10.99	23.62
TPC Limit (dBm)						24	
Margin (dB)						-0.38	

CHAIN 1 OUTPUT POWER





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CHAIN 2 OUTPUT POWER





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CHAIN 3 OUTPUT POWER





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TPC OUTPUT POWER





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OUTPUT POWER	
🔆 Agilent 20:40:19 Jan 21, 2011 R T	Freq/Channel
Ch Freq 5.27 GHz Trig Free Channel Power	Center Freq 5.27000000 GHz
	Start Freq 5.24000000 GHz
Ref 20 dBm Atten 10 dB #Samp	Stop Freq 5.3000000 GHz CF Step 6.00000000 MHz Auto Man
dB Center 5.270 0 GHz #Res BW 1 MHz #VBW 3 MHz #Sweep 20 ms (601 pts)	Freq Offset 0.00000000 Hz
Channel PowerPower Spectral Density8.09 dBm/ 40.0000 MHz-67.93 dBm/Hz	Signal Irack On <u>Off</u>
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7.9.3. PEAK POWER SPECTRAL DENSITY

LIMITS

FCC §15.407 (a) (2)

IC RSS-210 A9.2 (2)

For the 5.25–5.35 GHz band, the peak power spectral density shall not exceed 11 dBm in any 1 MHz band. If transmitting antennas of directional gain greater than 6 dBi are used, both the peak transmit power and the peak power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

The composite antenna gain is equal to 10.99 dBi, therefore the limit is 6.01 dBm.

TEST PROCEDURE

The test is performed in accordance with FCC Public Notice: APPENDIX A Guidelines for Assessing Unlicensed National Information Infrastructure (U-NII) Devices – Part 15, Subpart E, August 2002. PPSD method #2 was used.

RESULTS

Channel	Frequency	Chain 1	Chain 2	Chain 3	Total	Limit	Margin
		PPSD	PPSD	PPSD	PPSD		
	(MHz)	(dBm)	(dBm)	(dBm)	(dBm)	(dBm)	(dB)
Low	5270	0.659	1.670	0.911	5.87	6.01	-0.14
High	5310	-1.000	-0.960	-0.566	3.93	6.01	-2.08

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CHAIN 1 POWER SPECTRAL DENSITY





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CHAIN 2 POWER SPECTRAL DENSITY





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CHAIN 3 POWER SPECTRAL DENSITY





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7.9.4. PEAK EXCURSION

LIMITS

FCC §15.407 (a) (6)

The ratio of the peak excursion of the modulation envelope (measured using a peak hold function) to the peak transmit power (measured as specified above) shall not exceed 13 dB across any 1 MHz bandwidth or the emission bandwidth whichever is less.

TEST PROCEDURE

The transmitter outputs are connected to the spectrum analyzer via a combiner.

The test is performed in accordance with FCC Public Notice: APPENDIX A Guidelines for Assessing Unlicensed National Information Infrastructure (U-NII) Devices – Part 15, Subpart E, August 2002.

Since Method # 1 was used for peak power measurements, Method # 1 settings are used for the second PPSD trace.

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RESULTS

Channel	Frequency	Peak Excursion	Limit	Margin
	(MHz)	(dB)	(dB)	(dB)
Low	5290	11.57	13	-1.43
High	5310	11.82	13	-1.18

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PEAK EXCURSION





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7.9.5. CONDUCTED SPURIOUS EMISSIONS

LIMITS

FCC §15.407 (b) (2)

IC RSS-210 A9.3 (2)

For transmitters operating in the 5.25-5.35 GHz band: all emissions outside of the 5.25-5.35 GHz band shall not exceed an EIRP of -27 dBm / MHz.

Devices operating in the 5.25-5.35 GHz band that generate emissions in the 5.15-5.25 GHz band must meet all applicable technical requirements for operation in the 5.15-5.25 GHz band (including indoor use) or alternatively meet an out-of-band emission EIRP limit of -27 dBm/MHz in the 5.15-5.25 GHz band.

TEST PROCEDURE

Conducted RF measurements of the transmitter output are made to confirm that the EUT antenna port conducted emissions meet the specified limit and to identify any spurious signals that require further investigation or measurements on the radiated emissions site.

The transmitter output is connected to the spectrum analyzer. The resolution bandwidth is set to 1 MHz. The video bandwidth is set to 1 MHz. Peak detection measurements are compared to EIRP limit, adjusted for the maximum antenna gain.

Measurements are made over the 30 MHz to 40 GHz range with the transmitter set to the lowest, middle, and highest channels.

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RESULTS

SPURIOUS EMISSIONS WITH COMBINER





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SDM MCS21

7.9.6. 26 dB and 99% BANDWIDTH

LIMITS

None; for reporting purposes only.

TEST PROCEDURE

The transmitter outputs are connected to the spectrum analyzer via a combiner. The RBW is set to 1% to 3% of the measured bandwidth. The VBW is set to 3 times the RBW. The sweep time is coupled. The spectrum analyzer internal bandwidth function is utilized.

RESULTS

CHAIN 1

Channel	Frequency	26 dB Bandwidth	99% Bandwidth	
	(MHz)	(MHz)	(MHz)	
Low	5270	70.052	36.4026	
High	5310	37.698	35.9207	

CHAIN 1

26 dB and 99% BANDWIDTH





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7.9.7. OUTPUT POWER

<u>LIMITS</u>

FCC §15.407 (a) (2)

IC RSS-210 A9.2 (2)

For the 5.25-5.35 GHz band, the maximum conducted output power over the frequency band of operation shall not exceed the lesser of 250 mW or 11 dBm + 10 log B, where B is the 26-dB emission bandwidth in MHz. If transmitting antennas of directional gain greater than 6 dBi are used, both the peak transmit power and the peak power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

TEST PROCEDURE

The test is performed in accordance with FCC Public Notice: APPENDIX A Guidelines for Assessing Unlicensed National Information Infrastructure (U-NII) Devices – Part 15, Subpart E, August 2002.

The transmitter output operates continuously therefore Method # 1 is used.

RESULTS

Limit

Channel	Frequency	Fixed	В	11 + 10 Log B	Antenna	Limit
		Limit		Limit	Gain	
	(MHz)	(dBm)	(MHz)	(dBm)	(dBi)	(dBm)
Low	5270	23.98	70.052	29.45	6.80	23.18
High	5310	23.98	37.698	26.76	6.80	23.18

Individual Chain Results

Channel	Frequency	Chain 1	Chain 2	Chain 3	Total	Limit	Margin
		Power	Power	Power	Power		
	(MHz)	(dBm)	(dBm)	(dBm)	(dBm)	(dBm)	(dB)
Low	5270	18.51	18.58	17.91	23.11	23.18	-0.07
High	5310	12.30	13.26	12.49	17.47	23.18	-5.71

TPC Results

Mid 5270		10.39	9.70	9.46	Power 14.64	6.80	21.44		
TPC Limit (dBm)									
Margin (dB)									

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CHAIN 1 OUTPUT POWER





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CHAIN 2 OUTPUT POWER





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CHAIN 3 OUTPUT POWER





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TPC OUTPUT POWER





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OUTPUT POWER LOW CH, CI	HAIN 2 R T	BW/Avg
Ch Freq 5.27 GHz Channel Power	Trig Free	Res BVV 1.0 MHz Auto <u>Man</u>
		Video BW 3.0 MHz Auto <u>Man</u>
Ref 20 dBm Atten 10 dB #Samp	Marthane Anno	VBW/RBW 10.00000 Auto Man Average 100 On Off Avg/VBW Type
Center 5.270 0 GHz #Res BW 1 MHz #VBW 3 MHz	Span 60 MHz #Sweep 20 ms (601 pts)	Log-Pwr (Video) * <u>Auto Man</u>
Channel Power 9.46 dBm /40.0000 MHz	Power Spectral Density -66.56 dBm/Hz	Span/RBW 106 <u>Auto Man</u>
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7.9.8. PEAK POWER SPECTRAL DENSITY

LIMITS

FCC §15.407 (a) (2)

IC RSS-210 A9.2 (2)

For the 5.25–5.35 GHz band, the peak power spectral density shall not exceed 11 dBm in any 1 MHz band. If transmitting antennas of directional gain greater than 6 dBi are used, both the peak transmit power and the peak power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

The composite antenna gain is equal to 6.80 dBi, therefore the limit is 10.20dBm.

TEST PROCEDURE

The test is performed in accordance with FCC Public Notice: APPENDIX A Guidelines for Assessing Unlicensed National Information Infrastructure (U-NII) Devices – Part 15, Subpart E, August 2002. PPSD method #2 was used.

RESULTS

Channel	Frequency	Chain 1	Chain 2	Chain 3	Total	Limit	Margin
		PPSD	PPSD	PPSD	PPSD		
	(MHz)	(dBm)	(dBm)	(dBm)	(dBm)	(dBm)	(dB)
Low	5270	5.352	5.014	4.558	9.76	10.20	-0.44
High	5310	-0.788	-0.216	-0.733	4.20	10.20	-6.00

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CHAIN 1 POWER SPECTRAL DENSITY





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CHAIN 2 POWER SPECTRAL DENSITY





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CHAIN 3 POWER SPECTRAL DENSITY





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7.9.9. PEAK EXCURSION

LIMITS

FCC §15.407 (a) (6)

The ratio of the peak excursion of the modulation envelope (measured using a peak hold function) to the peak transmit power (measured as specified above) shall not exceed 13 dB across any 1 MHz bandwidth or the emission bandwidth whichever is less.

TEST PROCEDURE

The transmitter outputs are connected to the spectrum analyzer via a combiner.

The test is performed in accordance with FCC Public Notice: APPENDIX A Guidelines for Assessing Unlicensed National Information Infrastructure (U-NII) Devices – Part 15, Subpart E, August 2002.

Since Method # 1 was used for peak power measurements, Method # 1 settings are used for the second PPSD trace.

RESULTS

Channel	Frequency	Peak Excursion	Limit	Margin
	(MHz)	(dB)	(dB)	(dB)
Low	5270	9.47	13	-3.53
High	5310	9.93	13	-3.07

PEAK EXCURSION

🔆 Agilent 07:30:33 Dec 28	, 2010	F	т	BV	WAvg
Ch Freq 5.2 Channel Power	7 GHz	Trig	Free	Auto	Res BV 1.0 MHz <u>Ma</u>
		ے ۸ Mkr1	0 Hz	Auto	Video BV 3.0 MHz <u>Ma</u>
Ref 30 dBm Atten ∛Peak _og	1 30 dB	9.4	.7 dB *_	N Auto	VBW/RB\ 1.00000 <u>Ma</u>
IB/ Dffst 11.4 un harrowship Pault al and		Martin and Martin	Anophina	On	Average 100 <u>Off</u>
IB		here here here here here here here here	harrow	Avg/VE F Auto	3W Type ⁹ wr (RMS) Ma
¢PAvg					
/1 V2				S	pan/RBV
Center 5.270 000 GHz ∉Res BW 1 MHz	#VBW 3 MHz	Span 6 Sweep 20 ms (601	3 MHz pts)	<u>Auto</u>	106 <u>Ma</u>

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	14, 2011			R	Т	B	W/Avg
Ch Freq 5 Channel Power	.31 GHz			Trig	Free	Auto	Res B∖ 1.0 MH₂ <u>Ma</u>
Ref 30 dBm Att	en 20 dB		۵	Mkr1 () Hz	Auto	Video BV 3.0 MHz <u>Ma</u>
#Peak Log 10					_*_	<u>Auto</u>	VBVV/RB 1.00000 <u>Ma</u>
dB/ Offst 24.4 dB	and a second a second second	W Martin and a				On	Average 100 <u>Of</u>
					Uthane	Avg/v Auto	Bwr (RMS) <u>Ma</u>
#PAvg V1 V2							
Center 5.310 0 GHz #Res BW 1 MHz	# VBW 3	MHz	Sweep 20 m	pan 60 s (601 p	MHz ts)	Auto (Span/RBV 108 <u>Ma</u>

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7.9.10. CONDUCTED SPURIOUS EMISSIONS

LIMITS

FCC §15.407 (b) (2)

IC RSS-210 A9.3 (2)

For transmitters operating in the 5.25-5.35 GHz band: all emissions outside of the 5.25-5.35 GHz band shall not exceed an EIRP of -27 dBm / MHz.

Devices operating in the 5.25-5.35 GHz band that generate emissions in the 5.15-5.25 GHz band must meet all applicable technical requirements for operation in the 5.15-5.25 GHz band (including indoor use) or alternatively meet an out-of-band emission EIRP limit of -27 dBm/MHz in the 5.15-5.25 GHz band.

TEST PROCEDURE

Conducted RF measurements of the transmitter output are made to confirm that the EUT antenna port conducted emissions meet the specified limit and to identify any spurious signals that require further investigation or measurements on the radiated emissions site.

The transmitter output is connected to the spectrum analyzer. The resolution bandwidth is set to 1 MHz. The video bandwidth is set to 1 MHz. Peak detection measurements are compared to EIRP limit, adjusted for the maximum antenna gain.

Measurements are made over the 30 MHz to 40 GHz range with the transmitter set to the lowest, middle, and highest channels.

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RESULTS

SPURIOUS EMISSIONS WITH COMBINER





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